EAU

FEBRUARY 2018

PROJECT ID: 1050-00-72 & 1190-10-70

WITH: N/A

COUNTY: BARRON & CHIPPEWA

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Inc. Erosion Control)
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 = 278

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1050-00-72	———	—
1190-10-70	———	—

CHIPPEWA FALLS-THORP

ON/OFF RAMPS AT TWO INTERCHANGES

STH 29

CHIPPEWA COUNTY

STATE PROJECT NUMBER

1050-00-72

CHIPPEWA FALLS-RICE LAKE

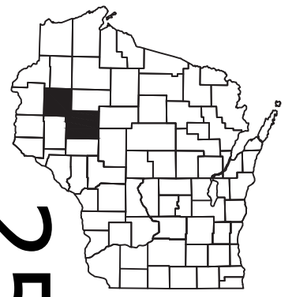
ON/OFF RAMPS AT FOUR INTERCHANGES

USH 53

BARRON & CHIPPEWA COUNTY

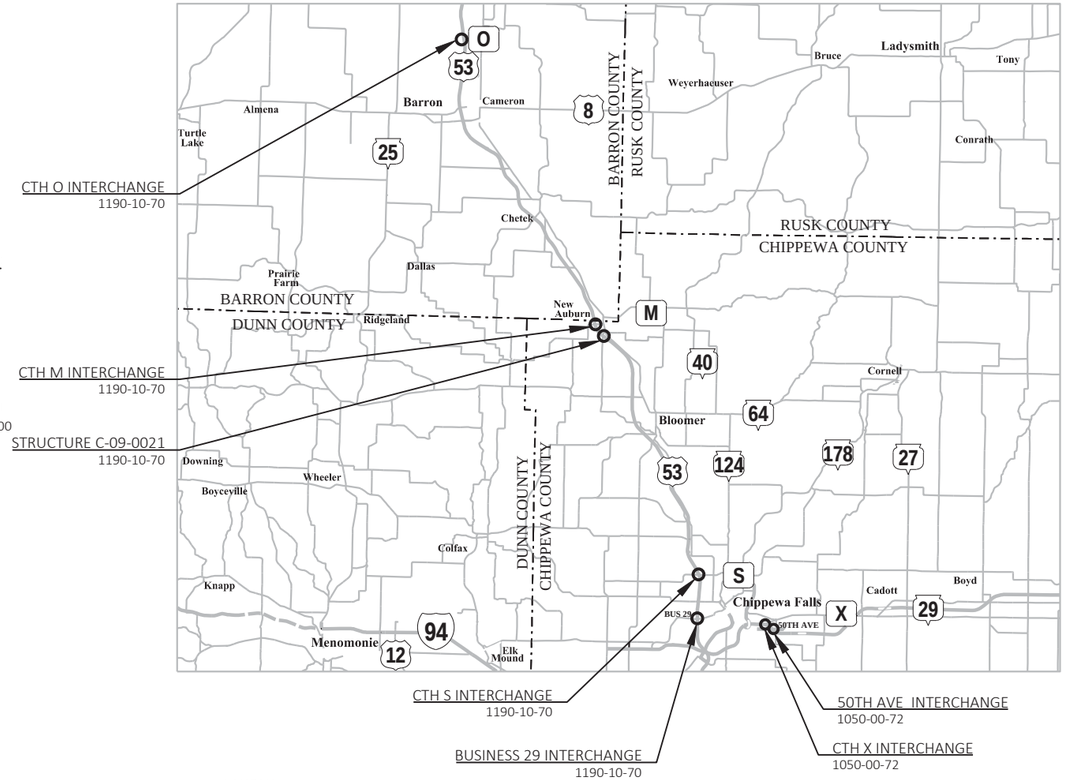
STATE PROJECT NUMBER

1190-10-70



N

DESIGN DESIGNATION			STH 29	STH 29: 50TH AVE	STH 29: CTH X	USH 53	USH 53: BUSINESS 29	USH 53: CTH S	USH 53: CTH M	USH 53: CTH O
A.A.D.T.	2018	=	20,300	1,400	1,250	18,700	6,600	5,700	2,400	12,700
A.A.D.T.	2038	=	23,300	1,600	1,500	21,500	7,400	7,500	3,200	14,200
D.H.V.		=	2,640	185	170	2300	900	910	390	1,900
D.D.		=	59/41	59/41	59/41	61/39	61/39	61/39	61/39	61/39
T.		=	5.4%	5.4%	5.4%	20.3%-31.2%	20.3%	20.3%	20.3%	31.2%
DESIGN SPEED		=	70 MPH	50 MPH	45-60 MPH	70 MPH	60 MPH	50 MPH	50 MPH	50 MPH
ESALS		=	N/A	220,000	190,000	N/A	360,000	930,000	410,000	1,900,000



CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

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

LAYOUT SCALE 0 10 MI

TOTAL NET LENGTH OF CENTERLINES:

50TH AVE INTERCHANGE = 0.374 MI
CTH X INTERCHANGE = 1.157 MI
BUSINESS 29 INTERCHANGE = 0.711 MI
CTH S INTERCHANGE = 1.176 MI
CTH M INTERCHANGE = 1.052 MI
CTH O = 0.220 MI

COORDINATES FOR THE 50TH AVE, CTH X, BUSINESS 29, CTH S, AND CTH M INTERCHANGES ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), CHIPPEWA COUNTY (NAD 83), 2011 ADJUSTMENT.

ALL ELEVATIONS FOR THE 50TH AVE, CTH X, BUSINESS 29, CTH S AND CTH M INTERCHANGES ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), 2012 ADJUSTMENT.

COORDINATES FOR THE CTH O INTERCHANGE ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), BARRON COUNTY (NAD 83), 2011 ADJUSTMENT.

ALL ELEVATIONS FOR THE CTH O INTERCHANGE ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88), 2012 ADJUSTMENT.

emcs inc

500 North 17th Avenue
Wausau, WI 54401
715.845.1081 Fax 715.845.1099

WISCONSIN
STEPHANIE G. CHRISTENSEN
E-35808
WAUSAU, WI
PROFESSIONAL ENGINEER

5-12-2017 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	EMCS, INC.
Designer	EMCS, INC.
Project Manager	TYLER RONGSTAD
Regional Examiner	TOU YANG
Regional Supervisor	TIMOTHY MASON

APPROVED FOR THE DEPARTMENT
DATE: 5/12/2017 (Signature)

E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\010101-TI.DWG

PLOT DATE : 5/9/2017 1:38 PM

PLOT BY : ERIK OLESON

PLOT NAME :

GENERAL NOTES

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

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

EXISTING RIGHT-OF-WAY SHOWN AT CTH S IS APPROXIMATE AND IS BASED ON AVAILABLE RIGHT-OF-WAY PLATS. NO WORK SHALL OCCUR OUTSIDE OF EXISTING RIGHT-OF-WAY.

WETLAND DELINEATIONS SHOWN AT CTH S INTERCHANGE AND AT STRUCTURE C-09-0021. WETLANDS MAY BE PRESENT OUTSIDE OF OTHER WORK AREAS.

AS-BUILTS USED FOR PLAN DEVELOPMENT

PROJECT NO: F020-1(33), CONSTRUCTION YEAR: 1966
PROJECT NO: 1050-07-71, CONSTRUCTION YEAR: 2005
PROJECT NO: 1191-09-73, CONSTRUCTION YEAR: 2006
PROJECT NO: 1191-09-75, CONSTRUCTION YEAR: 2005
PROJECT NO: 1191-09-76 CONSTRUCTION YEAR: 2007

ALIGNMENT DESIGNATOR SUMMARY

INTERCHANGE	DESIGNATORS				
	MAINLINE	NW RAMP	NE RAMP	SE RAMP	SW RAMP
50TH AVE/STH 29	F	FA	FB	--	--
CTH X/STH 29	--	XB	--	--	XA
BUSINESS 29/USH 53	--	BC	BB	BA	BD
CTH S/USH 53	SE	SC	SB	SA	SD
CTH M/USH 53	M	MC	MB	MA	MD
CTH O/USH 53	C	--	--	--	--

ROADWAY/INTERCHANGE NAMING CONVENTION

ROADWAYS WITHIN THE PROJECT LIMITS THAT HAVE MULTIPLE NAMES:

INTERCHANGE	NAME ON PLAN	ADDITIONAL NAME(S)
STH 29 AT 50TH AVE	50TH AVE	STILSON RD
USH 53 AT BUSINESS 29	BUSINESS 29	CTH X/W RIVER ST
USH 53 AT CTH M	CTH M	W MAIN ST
USH 53 AT CTH O	CTH O	18 ½ AVE/SOUTH ACCESS RD

ORDER OF SECTION 2 SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL
PERMANENT SIGNING AND PAVEMENT MARKING
TRAFFIC CONTROL

UTILITIES

AT & T WISCONSIN
(COMMUNICATIONS)
RICK PODOLACK
304 S. DEWEY ST
EAU CLAIRE, WI 54701
(715) 839-5565
RICK.T.PODOLAK@ATT.COM

CENTURYLINK
(COMMUNICATIONS)
KYLE SCHLAMPP
20 S. WILSON AVE
RICE LAKE, WI 54868
(715) 234-5573
KYLE.SCHLAMPP@CENTURYLINK.COM

CHARTER COMMUNICATIONS
(COMMUNICATIONS)
SHANE YODER
1201 MCCANN DR
ALTOONA, WI 54720
(715) 831-8940 EXT 51113
SHANE.YODER@CHARTER.COM

CHIPPEWA FALLS DEPT OF PUBLIC UTILITY
(SEWER & WATER)
RICHARD RUBENZER
30 W. CENTRAL ST
CHIPPEWA FALLS, WI 54727
(715) 726-2736
RRUBENZER@CHIPPEWAFALLS-WI.GOV

CINC
(COMMUNICATIONS)
DAREN BAUER
105 GARFIELD AVE
EAU CLAIRE, WI 54701
(715) 836-5286
BAUERDP@UWEC.EDU

MOSAIC TELECOM
(COMMUNICATIONS)
DENNIS RUSSETT
401 S. 1ST ST
PO BOX 664
CAMERON, WI 54822
(715) 458-5378
CTCDENNIS@MOSAICTELECOM.COM

NORTHERN NATURAL GAS COMPANY
(GAS/PETROLEUM)
JUSTIN PETERSEN
6579 420TH ST
HARRIS, MN 55032
(402) 530-3154
JUSTIN.PETERSON@NNGCO.COM

PACKERLAND BROADBAND
(COMMUNICATIONS)
WAYNE CRETTON
105 KENT ST
IRON MOUNTAIN, MI 49801
(906) 282-3768
WAYNE.CRETTON@PACKERLANDBROADBAND.COM

RICE LAKE MUNICIPALITIES WATER & ELECTRIC UTILITY
(ELECTRIC)
TIM AABY
320 W. COLEMAN ST
RICE LAKE, WI 54868
(715) 234-7004
TIMA@RICELAKEUTILITIES.COM

RICE LAKE MUNICIPALITIES WATER & ELECTRIC UTILITY
(SEWER)
MIKE MAGEE
1112 S. WISCONSIN AVE
RICE LAKE, WI 54868
(715) 234-3681
MIKEM@RICELAKEUTILITIES.COM

RICE LAKE MUNICIPALITIES WATER & ELECTRIC UTILITY
(WATER)
CHAD PAULSON
320 W. COLEMAN ST
RICE LAKE, WI 54868
(715) 234-7004
CHADP@RICELAKEUTILITIES.COM

WE ENERGIES
(GAS/PETROLEUM)
LEWIS KNAPP
104 W. SOUTH ST
RICE LAKE, WI 54868
(715) 234-9605
LEWIS.KNAPP@WE-ENERGIES.COM

XCEL ENERGY
(ELECTRIC)
DAN KLEIN
PO BOX 8
EAU CLAIRE, WI 54702-0008
(715) 737-4203
DANIEL.J.KLEIN@XCELENERGY.COM

XCEL ENERGY
(ELECTRIC)
STACEY HAUGEN
2911 S. PIONEER AVE
RICE LAKE, WI 54868
(715) 236-5721
STACY.RAETHER@XCELENERGY.COM

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

OTHER CONTACTS

DNR LIAISON
CHRIS WILLGER
1300 W CLAIRMONT ST
EAU CLAIRE, WI 54702
(715) 839-1609
CHRISTOPHERJ.WILLGER@WISCONSIN.GOV

ARMY CORPS OF ENGINEERS
DAN MUNSON
180 5TH ST EAST, SUITE 700
ST PAUL, MN 55101
(651) 290-5191
DANIEL.J.MUNSON@USACE.ARMY.MIL

WISCONSIN CENTRAL LTD (CN)
WISCONSIN CENTRAL LTD (CN)
1625 DEPOT STREET
STEVENS POINT, WI 54481
ATTN: JACQUELINE MACEWICZ
(715) 345-2503
JACKIE.MACEWICZ@CN.CA

CALL BEFORE YOU DIG
CN IS NOT PART OF DIGGERS HOTLINE
CONTACT MARY ELLEN CARMODY
(734) 783-4533

2

CTH O INTERCHANGE
1190-10-70
CONCRETE LOADING REPAIR
AND ASPHALTIC FLUME

CTH M INTERCHANGE
1190-10-70
RAMP GATES, CONCRETE SURFACE DRAIN,
AND GUARDRAIL REPLACEMENT

CTH S INTERCHANGE
1190-10-70
REMOVING CONCRETE SURFACE
PARTIAL DEPTH, SIDE SLOPE GRADING,
RAMP GATES, CONCRETE PAVEMENT
REPAIR SPECIAL, ASPHALTIC SURFACE
PATCHING, CULVERT EXTENSION, AND
GUARDRAIL REPLACEMENT

BUSINESS 29 INTERCHANGE
1190-10-70
REMOVING CONCRETE SURFACE
PARTIAL DEPTH, ASPHALTIC SURFACE
PATCHING, AND REPLACE GUARDRAIL
POSTS AND BLOCKS

STRUCTURE C-09-0021
1190-10-70
REPLACE SW WING WALL
(SEE STRUCTURE PLANS)

CTH X INTERCHANGE
1050-00-72
HMA SHOULDER PAVING

50TH AVE INTERCHANGE
1050-00-72
ASPHALTIC FLUMES AND HMA
SHOULDER PAVING

Cumberland
Almena
Barron
Cameron
Bruce
Ladysmith
Weyerhaeuser
Chetek
Dallas
Prairie Farm
New Auburn
Ridgeland
Cornell
Bloomer
Wheeler
Colfax
Chippewa Falls
Cadott
Boyd
Menomonie
Elk Mound
BUS 29
50TH AVE

BARRON COUNTY
RUSK COUNTY
DUNN COUNTY
CHIPPEWA COUNTY

48 O 53 8 25 M 40 64 124 53 178 27 S X 29 94 12

N

PRIMARY ITEMS OF WORK AT ALL INTERCHANGES
REMOVING ASPHALTIC SURFACE MILLING AND HMA PAVEMENT OVERLAY, PERMANENT SIGNING, PAVEMENT MARKING, EROSION CONTROL AND FINISHING ITEMS.

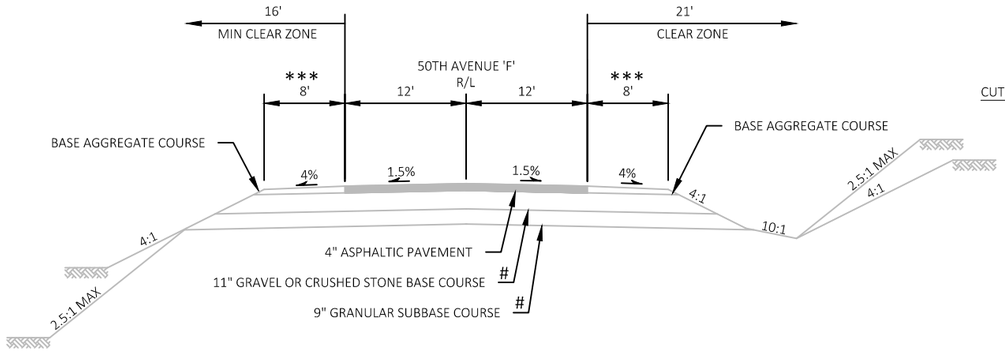
ADDITIONAL ITEMS OF WORK LISTED AT EACH SITE.

PROJECT NO: 1050-00-72/1190-10-70	HWY: STH 29/USH 53	COUNTY: CHIPPEWA & BARRON	PROJECT OVERVIEW	SHEET 3	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - 020201-po
PLOT DATE : 7/20/2017 11:51 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

2

FILL SECTION

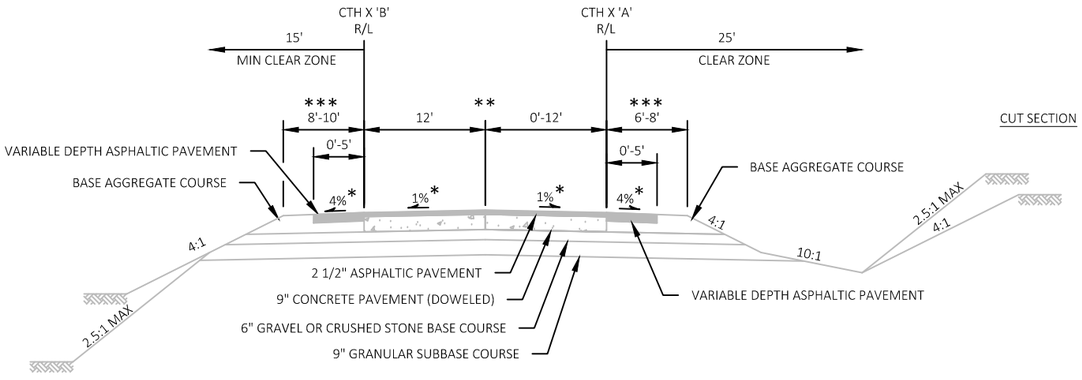


CUT SECTION

TYPICAL EXISTING SECTION
50TH AVENUE (STH 29)

STA 104'F'+59.00 - STA 107+'F'33.00 (B-09-0033)
STA 110'F'+06.00 (B-09-0033) - STA 112'F'+80.00

FILL SECTION



CUT SECTION

TYPICAL EXISTING SECTION
CTH X (STH 29)

STA 207'XA'+23.74 - STA 220'XA'+02.00 (B-09-0030)
STA 222'XA'+57.00 (B-09-0030) - STA 239'XA'+86.45
STA 226'XB'+85.00 - STA 255'XB'+30.00

NOTES

* CROSS SLOPE VARIES DUE TO SUPERELEVATION.

** NUMBER, DIRECTION, AND WIDTH OF TRAVEL LANES VARY. SEE SECTION 5 PLAN SHEETS FOR ADDITIONAL INFORMATION.

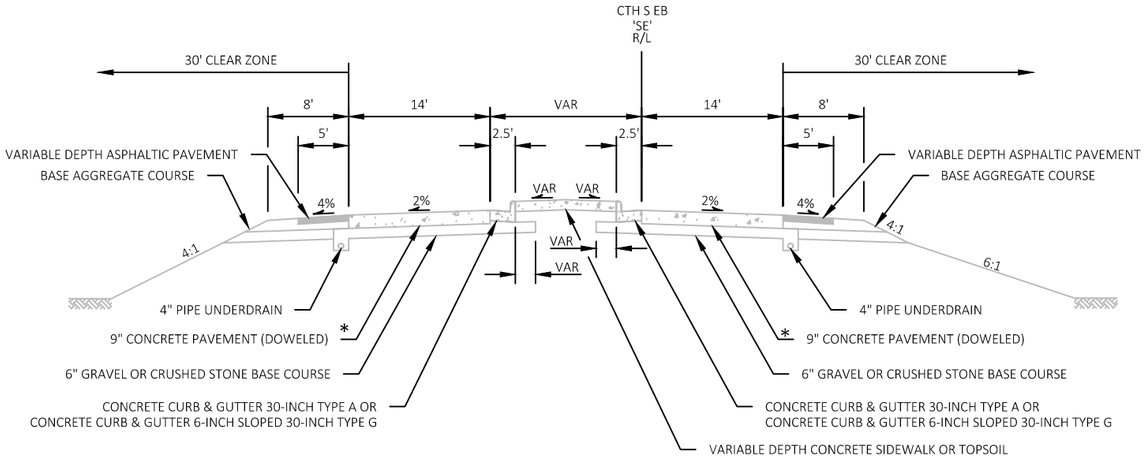
*** TOTAL ROADWAY WIDTH REDUCES TO 30' ACROSS STRUCTURES B-09-0030 AND B-09-0033.

SEE SECTION 5 PLAN SHEETS FOR EXISTING GUARDRAIL LOCATIONS.

\# PAVEMENT STRUCTURE MAY VARY BETWEEN WHAT IS SHOWN AND 4" ASPHALTIC PAVEMENT OVER 5" ASPHALTIC MILLINGS OVER 10" CRUSHED AGGREGATE BASE COURSE AT SOME LOCATIONS ON 50TH AVENUE.

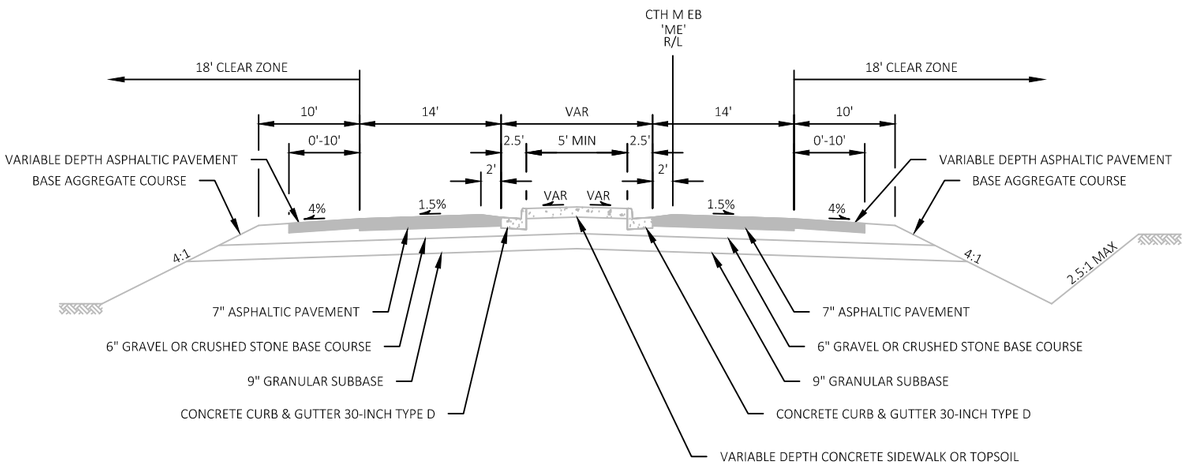
PROJECT NO: 1050-00-72	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 4	E

2



TYPICAL EXISTING SECTION
CTH S (USH 53)

STA 402'SE'+22.00 - STA 413'SE'+29.00



TYPICAL EXISTING SECTION
CTH M (USH 53)

STA 503'M'+75.00 - STA 507'M'+55.93 (B-09-0092)
STA 509'M'+94.37 (B-09-0092) - STA 513'M'+75.00

NOTES

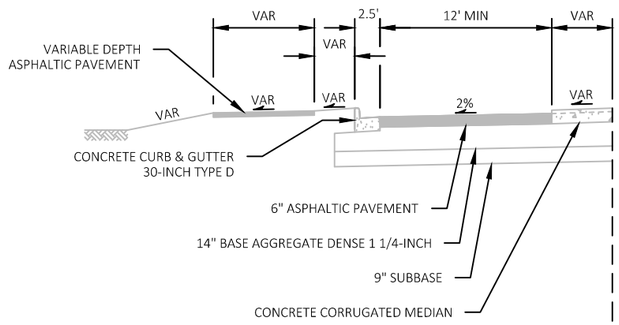
SEE SECTION 5 PLAN SHEETS FOR EXISTING GUARDRAIL LOCATIONS.

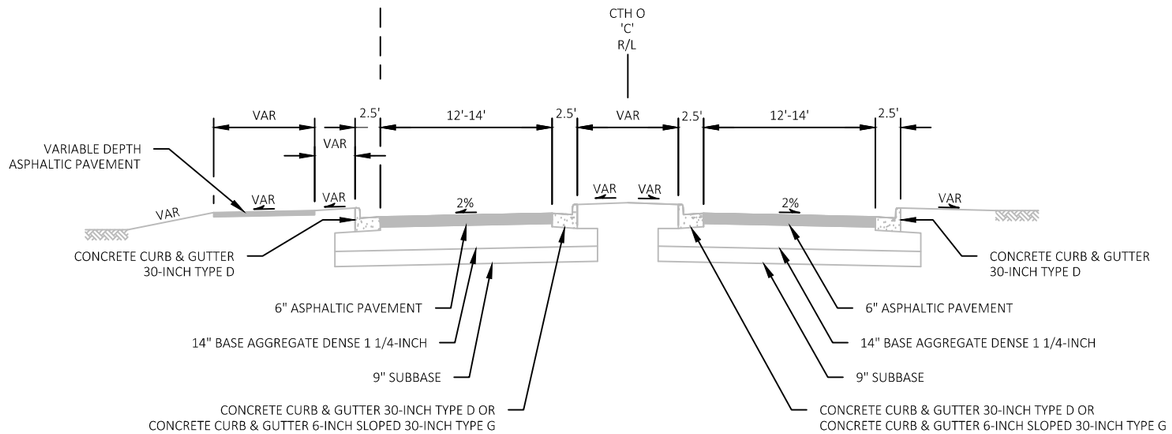
SEE SECTION 5 PLAN SHEETS FOR LOCATIONS OF TURN LANES AND VARIABLE WIDTH PAVEMENT.

* EXISTING CONCRETE PAVEMENT WAS REMOVED PARTIAL DEPTH WITH AN ASPHALT OVERLAY THROUGH THE USH 53 RAMP/CTH S INTERSECTIONS.

2

STA 611'C'+78.87 - STA 613'C'+58.31

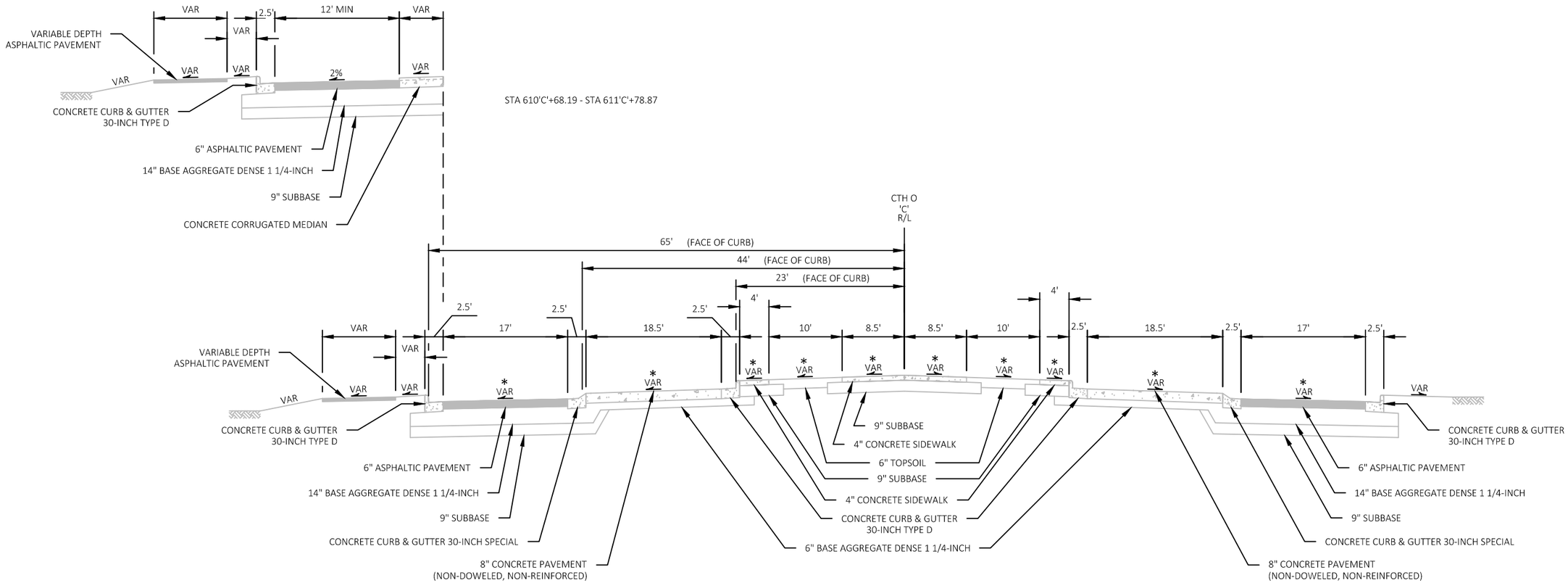




TYPICAL EXISTING SECTION
CTH O (USH 53)

STA 601'C'+99.00 - STA 603'C'+65.83
STA 604'C'+90.63 - STA 610'C'+53.98
STA 611'C'+78.87 - STA 613'C'+58.31

2

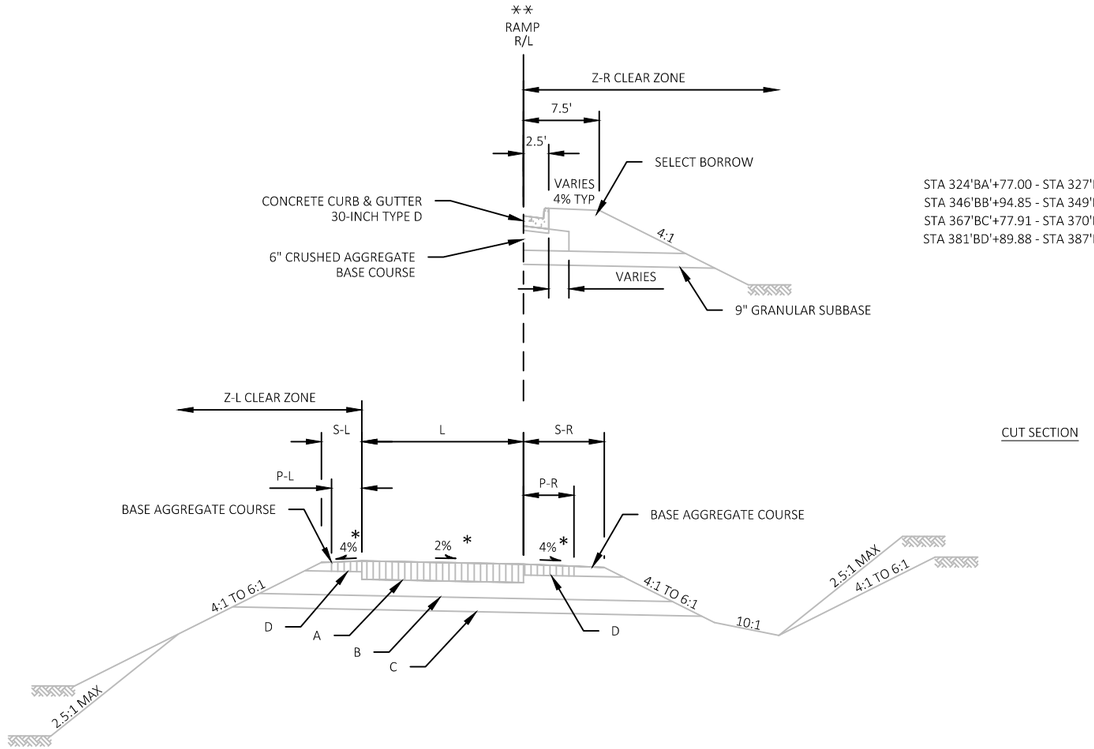


TYPICAL EXISTING SECTION
CTH O ROUNDABOUTS (USH 53)

STA 603'C'+65.83 - STA 604'C'+90.63
STA 610'C'+53.98 - STA 611'C'+78.87

NOTES
* PAVEMENT CROSS SLOPE IS TYPICALLY 2% FROM THE CENTER OF THE ROUNDABOUT.

2



STA 324'BA'+77.00 - STA 327'BA'+63.26
STA 346'BB'+94.85 - STA 349'BB'+57.00
STA 367'BC'+77.91 - STA 370'BC'+13.00
STA 381'BD'+89.88 - STA 387'BD'+22.08

FILL SECTION

CUT SECTION

TYPICAL EXISTING SECTION
RAMPS (STH 29 AND USH 53)

INTERCHANGE	STA	-	STA	DESIGNATOR	L	S-L	S-R	P-L	P-R	Z-L	Z-R	A	B	C	D	NOTES
STH 29/50TH AVENUE	124+90.00	-	128+92.53	FA	15'	8'	8'	0'	0'	14.6'	25.6'	4" ASPHALTIC PAVEMENT	11" GRAVEL OR CRUSHED STONE BASE COURSE (OR 5" ASPHALT MILLINGS)	9" GRANULAR SUBBASE COURSE (OR 10" AGGREGATE BASE COURSE)	4" ASPHALTIC PAVEMENT	--
	143+55.00	-	151+04.22	FB												
USH 53/BUS 29	324+77.00	-	327+63.26	BA (SE)	12'-15'	8'	8'	5'	5'	#30'	#30'	2" - 2 1/2" HMA PAVEMENT OVER 9" CONCRETE PAVEMENT OVER 2 1/2" ASPHALT STABILIZED BASE COURSE	9" CRUSHED AGGREGATE BASE COURSE	9" GRANULAR SUBBASE COURSE	VARIABLE DEPTH ASPHALTIC PAVEMENT	#ASSUMED CLEAR ZONE
	345+90.47	-	349+57.00	BB (NE)												
	366+30.83	-	370+13.00	BC (NW)												
	381+89.88	-	387+22.08	BD (SW)												
USH 53/CTH S	442+17.96	-	455+18.00	SB (NE)	15'	4'	8'	3'	5'	#30'	#30'	8" CONCRETE PAVEMENT	9" CRUSHED AGGREGATE BASE COURSE	--	VARIABLE DEPTH ASPHALTIC PAVEMENT	#ASSUMED CLEAR ZONE
	462+40.67	-	471+44.00	SC (NW)												
	482+06.50	-	494+26.60	SD (SW)												
	440+00.00	-	442+17.96	SB (NE)	15'	4'	8'	3'	5'	#30'	#30'	2" ASPHALTIC PAVEMENT	8" CONCRETE PAVEMENT	9" CRUSHED AGGREGATE BASE COURSE	VARIABLE DEPTH ASPHALTIC PAVEMENT	#ASSUMED CLEAR ZONE
	460+00.00	-	462+40.67	SC (NW)												
	494+26.60	-	495+66.24	SD (SW)												
	421+04.00	-	431+82.36	SA (SE)	15'	4'	8'	3'	5'	#30'	#30'	2" ASPHALTIC PAVEMENT	8" CONCRETE PAVEMENT	9" CRUSHED AGGREGATE BASE COURSE	VARIABLE DEPTH ASPHALTIC PAVEMENT	CONCRETE SWALE IN DITCH BOTTOM #ASSUMED CLEAR ZONE
USH 53/CTH M	523+11.00	-	533+47.06	MA (SE)	15'	8'	8'	5'	5'	#30'	#30'	3" HMA PAVEMENT OVER 9" CONCRETE PAVEMENT OVER 2 1/2" ASPHALT STABILIZED BASE COURSE	9" GRANULAR SUBBASE COURSE	--	VARIABLE DEPTH ASPHALTIC PAVEMENT	#ASSUMED CLEAR ZONE
	540+00.00	-	552+99.00	MB (NE)												
	560+00.00	-	572+30.00	MC (SW)												
	582+90.00	-	592+81.42	MD (NW)												

NOTES

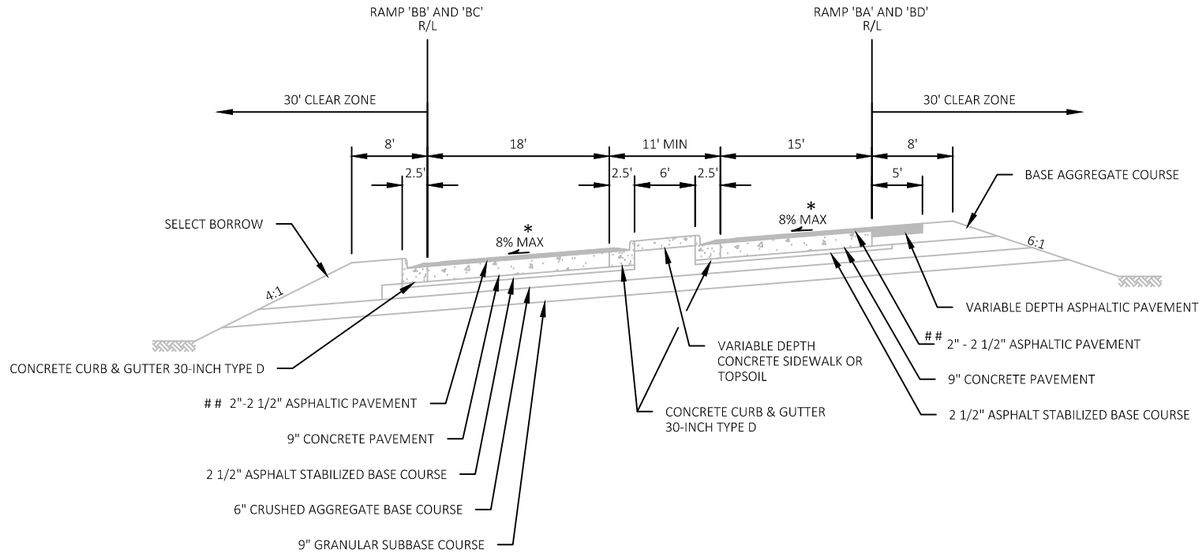
* CROSS SLOPE VARIES DUE TO SUPERELEVATION.

** R/L LOCATION SHOWN IN REFERENCE TO DIRECTION OF TRAVEL.

SEE SECTION 5 PLAN SHEETS FOR EXISTING GUARDRAIL LOCATIONS.

SEE SECTION 5 PLAN SHEETS FOR LOCATIONS OF TURN LANES AND VARIABLE WIDTH PAVEMENT.

2



TYPICAL EXISTING SECTION
BUSINESS 29 RAMPS (USH 53)

STA 327'BA'+63.26 - STA 332'BA'+68.98
STA 340'BB'+35.67 - STA 345'BB'+90.47
STA 360'BC'+37.37 - STA 366'BC'+30.83
STA 387'BD'+22.08 - STA 392'BD'+52.69

NOTES

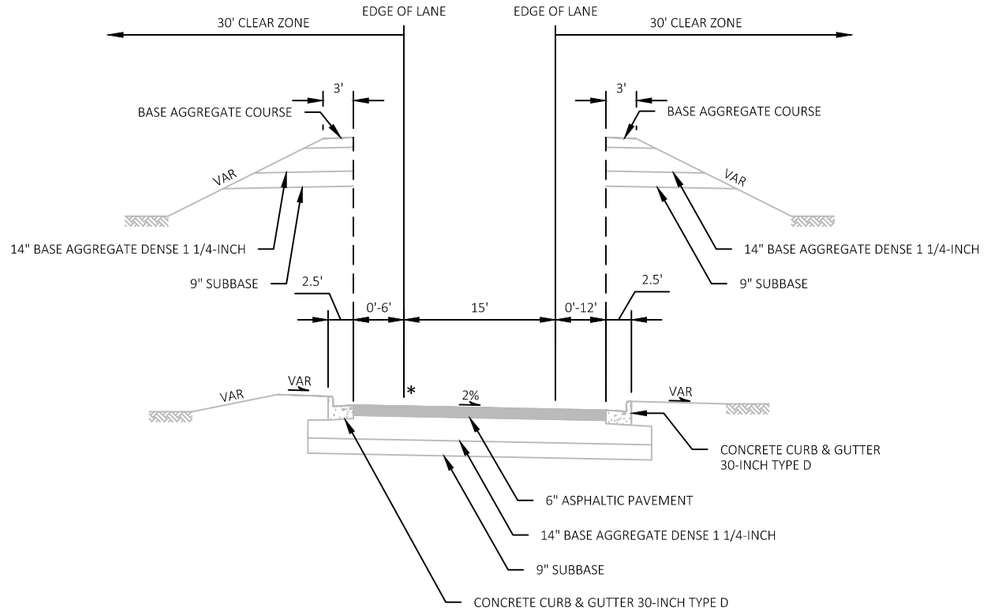
* CROSS SLOPE VARIES DUE TO SUPERELEVATION.

SEE SECTION 5 PLAN SHEETS FOR EXISTING GUARDRAIL LOCATIONS.

MIRROR BUSINESS 29 INTERCHANGE RAMP TYPICAL SECTION FOR RAMPS 'BA' AND 'BB'.

NO HMA OVERLAY WITHIN THE FOLLOWING LIMITS:
STA 331'SA'+88.13 - STA 333'SA'+04.37
STA 340'SB'+00.00 - STA 340'SB'+84.26
STA 360'SC'+00.00 - STA 361'SC'+08.92
STA 391'SD'+87.09 - STA 392'SD'+88.66

2



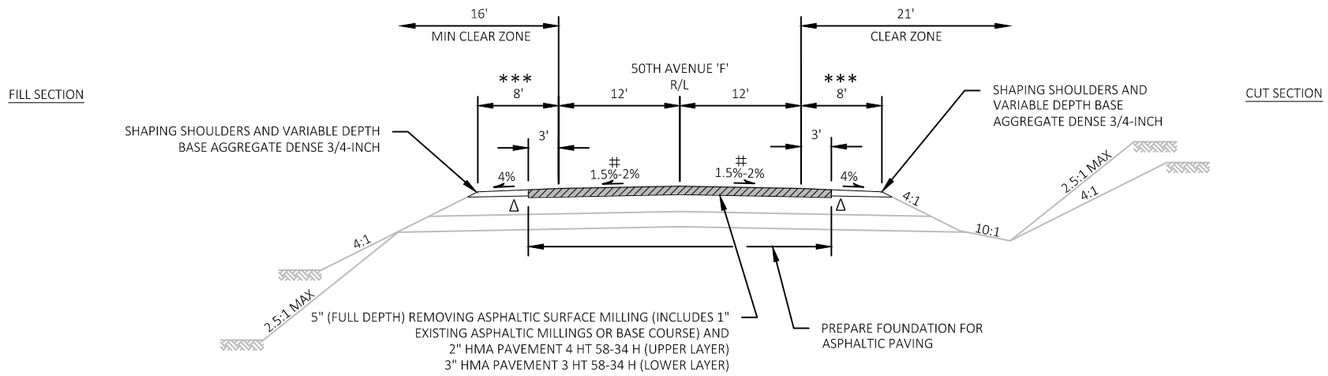
TYPICAL EXISTING SECTION
CTH O RAMPS (USH 53)

** NE RAMP, NW RAMP, SE RAMP AND SW RAMP

NOTES

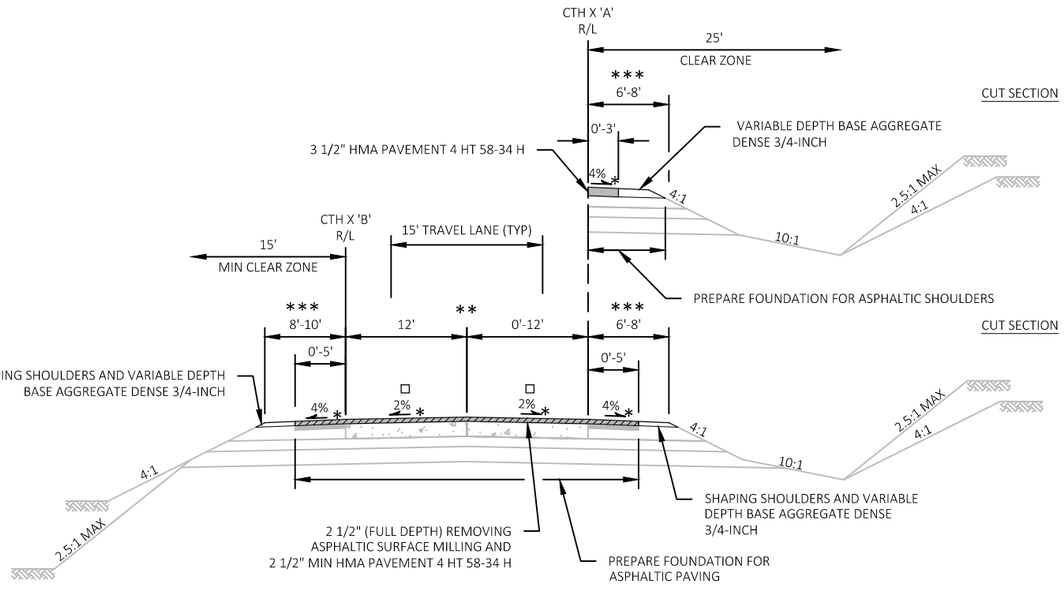
* CONCRETE CORRUGATED MEDIAN EXTENDS PARTIALLY ONTO NW RAMP. SEE SECTION 5 PLAN SHEETS FOR LOCATION.

** SEE SECTION 5 PLAN SHEETS FOR LIMITS.



TYPICAL FINISHED SECTION
50TH AVENUE (STH 29)

STA 104'F'+59.00 - STA 107'F'+33.00 (B-09-0033)
STA 110'F'+06.00 (B-09-0033) - STA 112'F'+80.00



TYPICAL FINISHED SECTION
CTH X (STH 29)

STA 207'XA'+23.74 - STA 220'XA'+02.00 (B-09-0030)
STA 222'XA'+57.00 (B-09-0030) - STA 239'XA'+86.45
STA 226'XB'+85.00 - STA 255'XB'+30.00

STA 229'XA'+80.00 - STA 239'XA'+86.45
STA 226'XB'+85.00 - STA 230'XB'+00.00

NOTES

* CROSS SLOPE VARIES DUE TO SUPERELEVATION.

** SEE PAVEMENT MARKING SHEETS FOR ADDITIONAL INFORMATION.

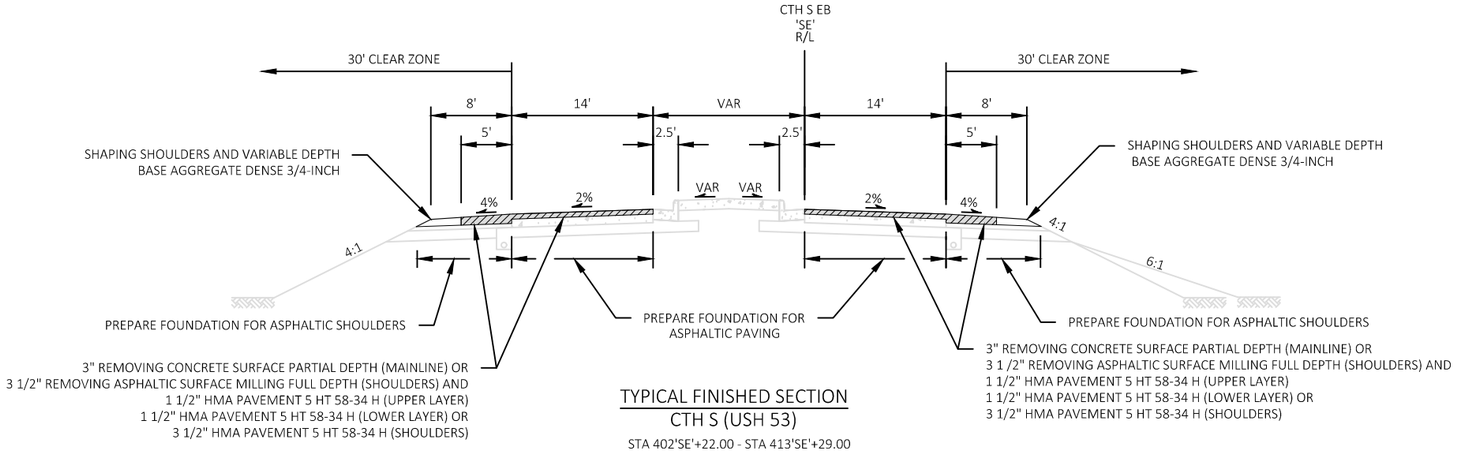
*** TOTAL ROADWAY WIDTH REDUCES TO 30' ACROSS STRUCTURES B-09-0030 AND B-09-0033.
SEE SECTION 5 PLAN SHEETS FOR PROPOSED GUARDRAIL LOCATIONS.

\# TRANSITION ROADWAY CROSS SLOPE FROM 1.5% (MATCH EXISTING ROADWAY) TO 2% (MATCH EXISTING BRIDGE DECK) OVER A MINIMUM OF 25'.

Δ PAVEMENT SAFETY EDGE REQUIRED FOR SHOULDERS LESS THAN 4'. SEE SDD "SAFETY EDGE".

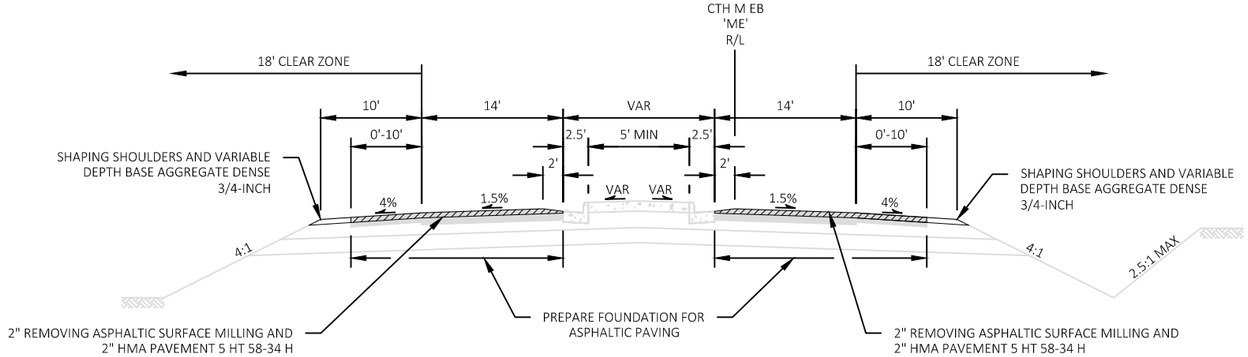
□ VARIABLE DEPTH HMA WEDGING REQUIRED TO PRODUCE PROPOSED CROSS SLOPES FOR RAMP 'XB'. HOLD LT EDGE OF PAVEMENT IN SUPERELEVATED SEGMENT AND HOLD EXISTING CENTER JOINT FOR TANGENT SEGMENT OR AS DIRECTED BY THE ENGINEER.

PROJECT NO: 1050-00-72	HWY: STH 29	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 11	E



TYPICAL FINISHED SECTION
CTH S (USH 53)

STA 402'SE'+22.00 - STA 413'SE'+29.00



TYPICAL FINISHED SECTION
CTH M (USH 53)

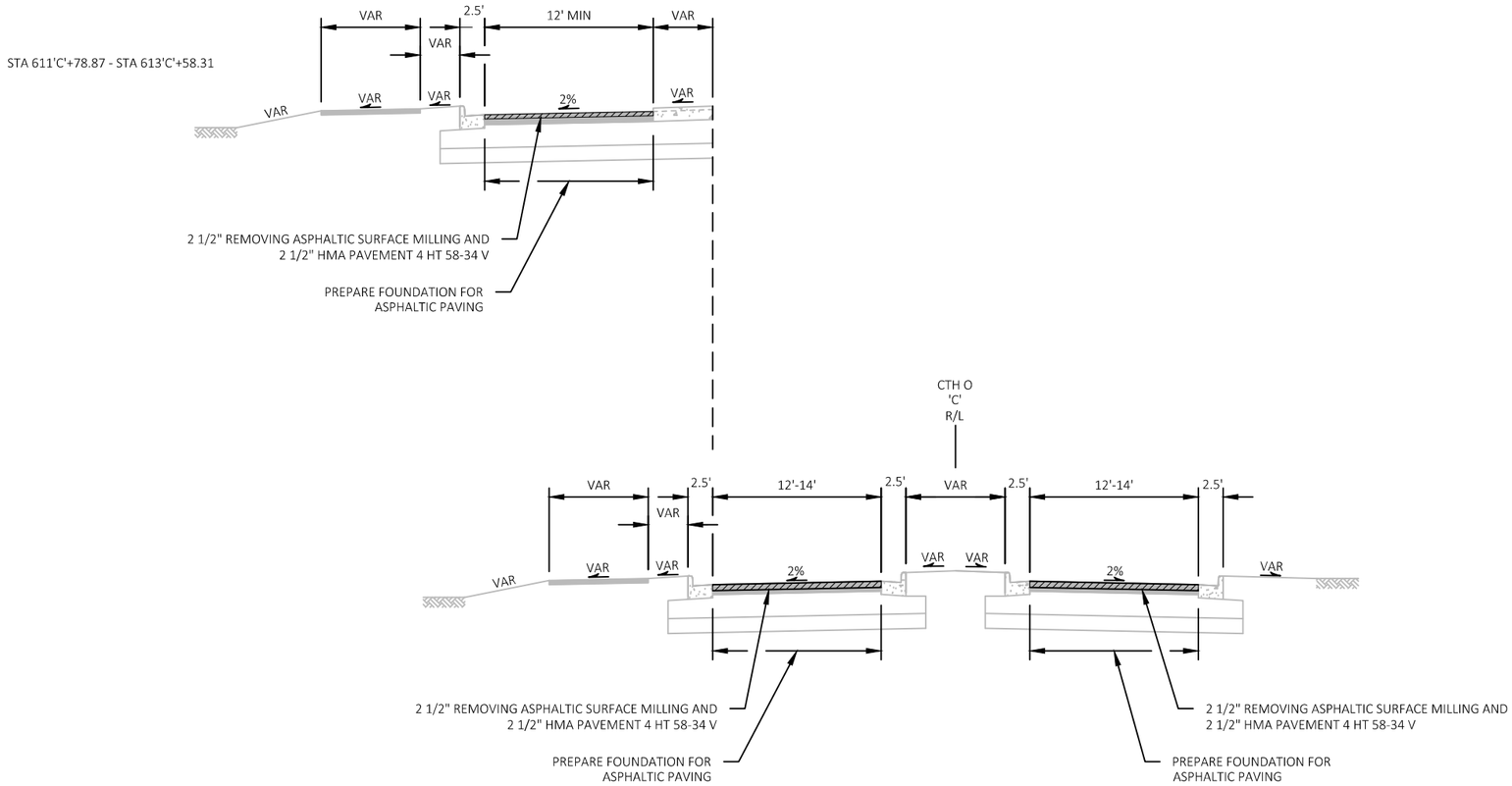
STA 503'M'+75.00 - STA 507'M'+55.93 (B-09-0092)
STA 509'M'+94.37 (B-09-0092) - STA 513'M'+75.00

NOTES

SEE SECTION 5 PLAN SHEETS FOR EXISTING GUARDRAIL LOCATIONS.

SEE SECTION 5 PLAN SHEETS FOR LOCATIONS OF TURN LANES AND VARIABLE WIDTH PAVEMENT.

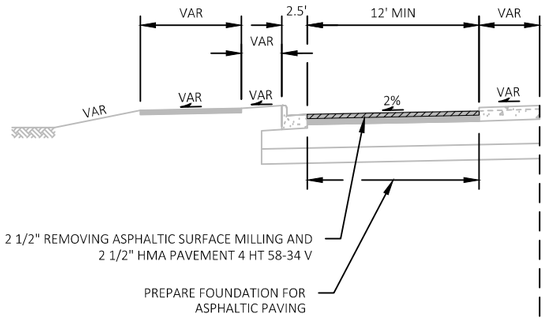
2



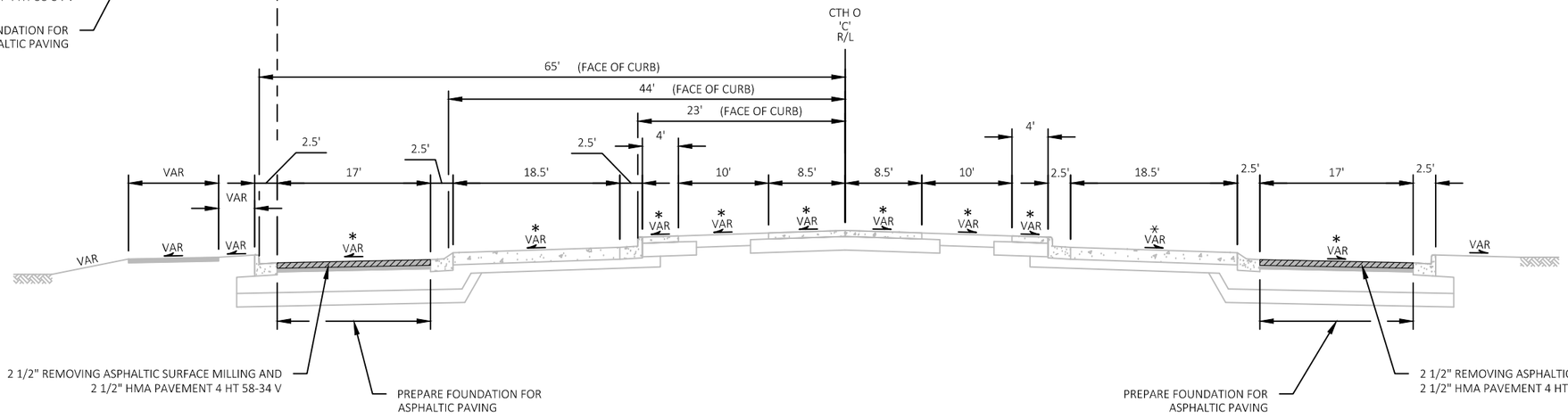
TYPICAL FINISHED SECTION
CTH O (USH 53)

STA 601'C'+99.00 - STA 603'C'+65.83
STA 604'C'+90.63 - STA 610'C'+53.98
STA 611'C'+78.87 - STA 613'C'+58.31

2



STA 610'C'+68.19 - STA 611'C'+78.87

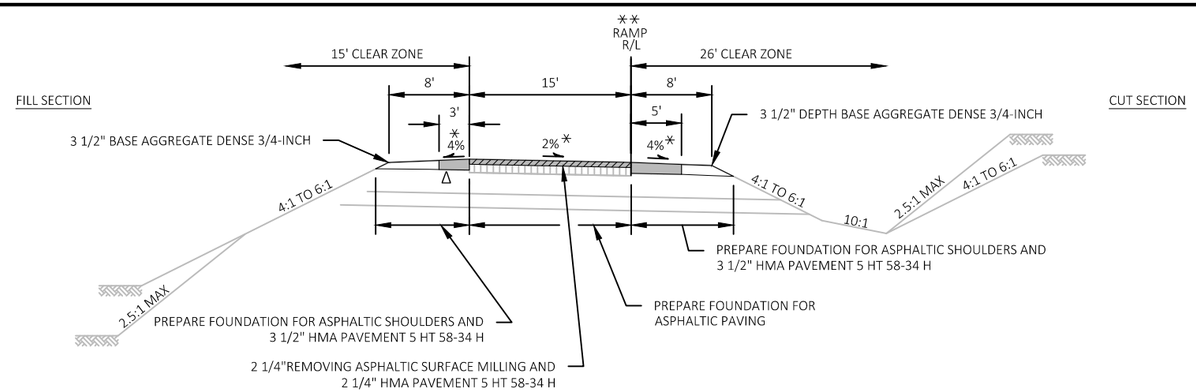


TYPICAL FINISHED SECTION
CTH O ROUNDABOUTS (USH 53)

STA 603'C'+65.83 - STA 604'C'+90.63
STA 610'C'+53.98 - STA 611'C'+78.87

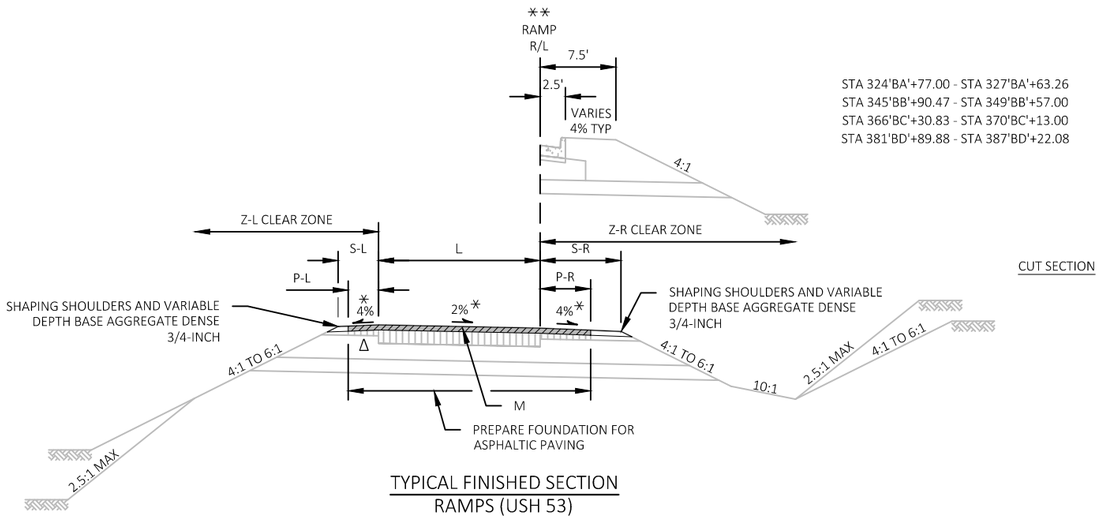
NOTE
* PAVEMENT CROSS SLOPE IS TYPICALLY 2% FROM THE CENTER OF THE ROUNDABOUT.

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 14	E



TYPICAL FINISHED SECTION
50TH AVENUE RAMPS (STH 29)

STA 124'FA'+90.00 - STA 128'FA'+92.53
STA 143'FB'+55.00 - STA 151'FB'+04.22



STA 324'BA'+77.00 - STA 327'BA'+63.26
STA 345'BB'+90.47 - STA 349'BB'+57.00
STA 366'BC'+30.83 - STA 370'BC'+13.00
STA 381'BD'+89.88 - STA 387'BD'+22.08

TYPICAL FINISHED SECTION
RAMPS (USH 53)

(MILL AND OVERLAY SEGMENTS)

INTERCHANGE	STA	-	STA	DESIGNATOR	L	S-L	S-R	P-L	P-R	Z-L	Z-R	M	NOTES
USH 53/BUS 29	324+77.00	-	327+63.26	BA (SE)	12'-15'	8'	8'	5'	5'	#30'	#30'	2 1/2" REMOVING ASPHALTIC SURFACE MILLING AND 2 1/2" HMA PAVEMENT 4 HT 58-34 H	MILL ALL EXISTING HMA PAVEMENT DOWN TO CONCRETE PAVEMENT #ASSUMED CLEAR ZONE
	345+90.47	-	349+57.00	BB (NE)									
	366+30.83	-	370+13.00	BC (NW)									
	381+89.88	-	387+22.08	BD (SW)									
USH 53/CTH S	440+00.00	-	442+17.96	SB (NE)	15'	4'	8'	3'	5'	#30'	#30'	3" REMOVING CONCRETE SURFACE PARTIAL DEPTH AND 1 1/2" HMA PAVEMENT 5 HT 58-34 H (UPPER) 1 1/2" HMA PAVEMENT 5 HT 58-34 H (LOWER)	#ASSUMED CLEAR ZONE
	460+00.00	-	462+40.67	SC (NW)									
	494+26.60	-	495+66.24	SD (SW)									
	421+04.00	-	431+82.36	SA (SE)	15'	4'	8'	3'	5'	#30'	#30'	2" REMOVING ASPHALTIC SURFACE MILLING OR 3" CONCRETE SURFACE PARTIAL DEPTH AND 1 1/2" HMA PAVEMENT 5 HT 58-34 H (UPPER) 1 1/2" HMA PAVEMENT 5 HT 58-34 H (LOWER)	#ASSUMED CLEAR ZONE LIMITS SHOWN ON CONSTRUCTION DETAILS
USH 53/CTH M	523+11.00	-	533+47.06	MA (SE)	15'	8'	8'	5'	5'	#30'	#30'	3" REMOVING ASPHALTIC SURFACE MILLING AND 1 1/2" HMA PAVEMENT 5 HT 58-34 H (UPPER) 1 1/2" HMA PAVEMENT 5 HT 58-34 H (LOWER)	#ASSUMED CLEAR ZONE
	540+00.00	-	552+99.00	MB (NE)									
	560+00.00	-	572+30.00	MC (NW)									
	582+90.00	-	592+81.42	MD (SW)									

NOTES

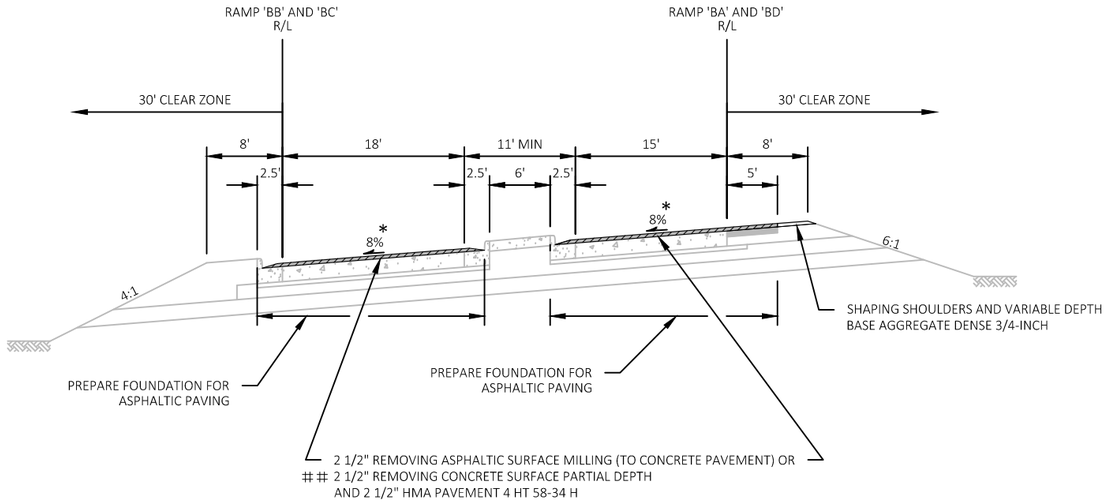
* CROSS SLOPE VARIES DUE TO SUPERELEVATION.

** R/L LOCATION SHOWN IN REFERENCE TO DIRECTION OF TRAVEL.

Δ PAVEMENT SAFETY EDGE REQUIRED FOR SHOULDERS LESS THAN 4'. SEE SDD "SAFETY EDGE".

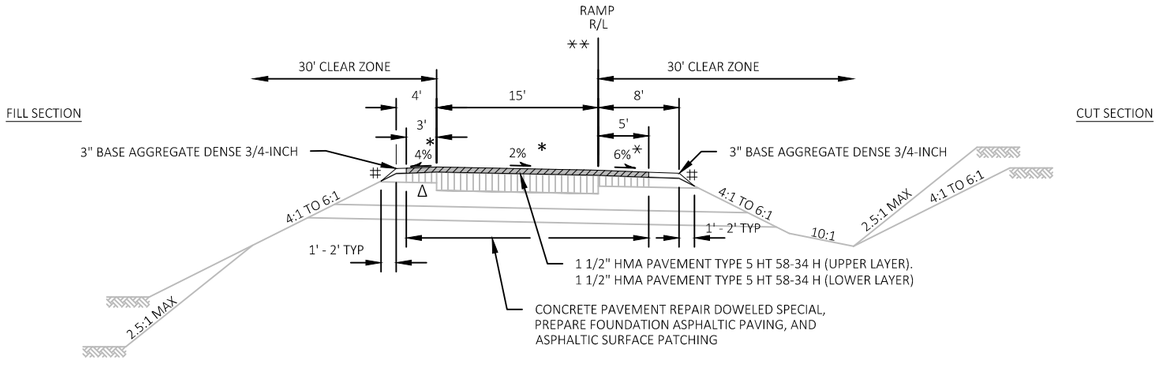
SEE SECTION 5 PLAN SHEETS FOR PROPOSED GUARDRAIL LOCATIONS.

SEE SECTION 5 PLAN SHEETS FOR LOCATIONS OF TURN LANES AND VARIABLE WIDTH PAVEMENT.



TYPICAL FINISHED SECTION
BUSINESS 29 RAMPS (USH 53)

STA 327'BA'+63.26 - STA 332'BA'+68.98
STA 340'BB'+35.67 - STA 345'BB'+90.47
STA 360'BC'+37.37 - STA 366'BC'+30.83
STA 387'BD'+22.08 - STA 392'BD'+52.69



TYPICAL FINISHED SECTION
CTH S RAMPS (USH 53)

STA 442'SB'+17.96 - STA 455'SB'+18.00
STA 462'SC'+40.67 - STA 471'SC'+44.00
STA 482'SD'+06.50 - STA 494'SD'+26.60

NOTES

* CROSS SLOPE VARIES DUE TO SUPERELEVATION.

** R/L LOCATION SHOWN N REFERENCE TO DIRECTION OF TRAVEL.

SEE SECTION 5 PLAN SHEETS FOR PROPOSED GUARDRAIL LOCATIONS.

MIRROR BUSINESS 29 INTERCHANGE RAMP TYPICAL SECTION FOR RAMPS 'BA' AND 'BB'.

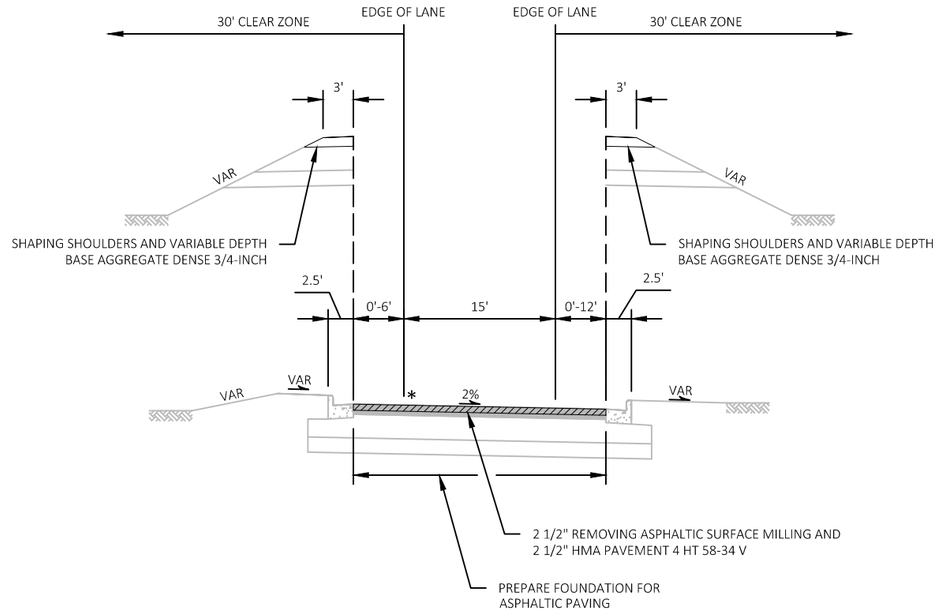
4:1 TYPICAL SIDE SLOPES. 3:1 MAXIMUM.

CONCRETE SURFACE PARTIAL DEPTH REMOVAL LIMITS:
STA 331'SA'+88.13 - STA 333'SA'+04.37
STA 340'SB'+00.00 - STA 340'SB'+84.26
STA 360'SC'+00.00 - STA 361'SC'+08.92
STA 391'SD'+87.09 - STA 392'SD'+88.66

Δ PAVEMENT SAFETY EDGE REQUIRED FOR SHOULDERS LESS THAN 4'. SEE SDD "SAFETY EDGE".

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	TYPICAL SECTIONS	SHEET 16	E

2



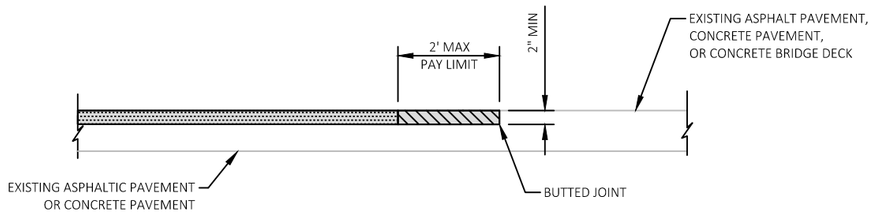
TYPICAL FINISHED SECTION
CTH O RAMPS (USH 53)

** NE RAMP, NW RAMP, SE RAMP AND SW RAMP

NOTES

* CONCRETE CORRUGATED MEDIAN EXTENDS PARTIALLY ONTO NW RAMP. SEE SECTION 5 PLAN SHEETS FOR LOCATION.

** SEE SECTION 5 PLAN SHEETS FOR LIMITS.



REMOVING ASPHALTIC SURFACE BUTT JOINTS OR REMOVING PAVEMENT BUTT JOINTS (TRAVEL LANES & SHOULDERS)
DO NOT REMOVE MATERIAL UNDER THIS ITEM UNTIL 24 HOURS BEFORE PAVING

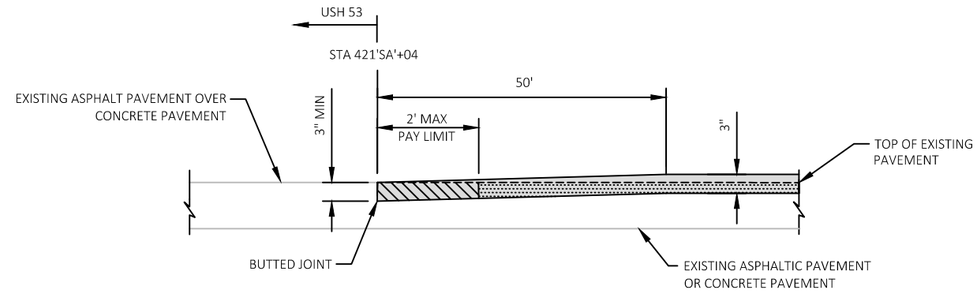
REMOVING ASPHALTIC SURFACE MILLING OR REMOVING CONCRETE SURFACE PARTIAL DEPTH

PROPOSED HMA PAVEMENT OVERLAY

50TH AVE, CTH X, BUS 29, CTH M, CTH S, AND CTH O STANDARD BUTT JOINT DETAIL

REQUIRED AT BEGIN CONSTRUCTION, END CONSTRUCTION, AND BRIDGE DECKS
(SEE PLAN SHEETS FOR LOCATIONS)

NOTE
THIS DETAIL APPLIES TO BUTT JOINT LOCATIONS WHERE MILLING OR
REMOVING CONCRETE SURFACE PARTIAL DEPTH EQUALS OVERLAY THICKNESS.



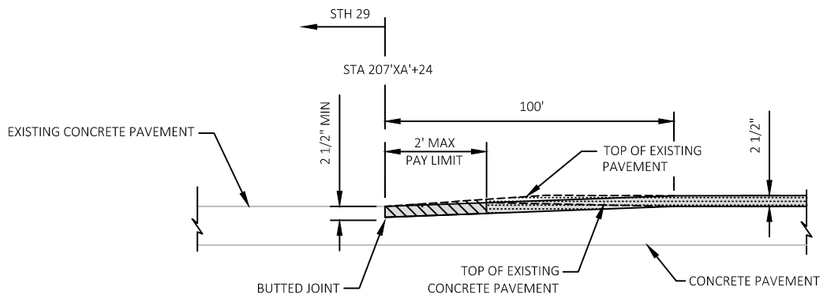
REMOVING ASPHALTIC SURFACE BUTT JOINTS(SHOULDERS) OR REMOVING PAVEMENT BUTT JOINTS (TRAVEL LANE)
DO NOT REMOVE MATERIAL UNDER THIS ITEM UNTIL 24 HOURS BEFORE PAVING

REMOVING ASPHALTIC SURFACE MILLING (TRAVEL LANES OR SHOULDERS) OR
REMOVING CONCRETE SURFACE PARTIAL DEPTH (TRAVEL LANES WITHIN 50' TRANSITION)

PROPOSED HMA PAVEMENT OVERLAY

USH 53 NB EXIT RAMP AT CTH S BUTT JOINT DETAIL

STA 421'SA'+04 - STA 421'SA'+54



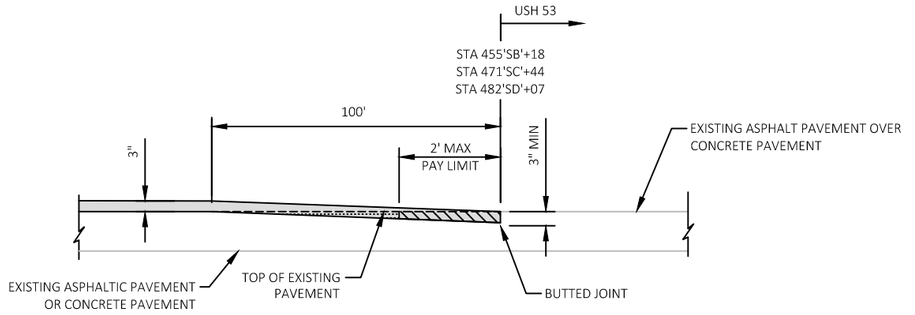
REMOVING ASPHALTIC SURFACE BUTT JOINTS (SHOULDERS) OR REMOVING PAVEMENT BUTT JOINTS (TRAVEL LANES)
DO NOT REMOVE MATERIAL UNDER THIS ITEM UNTIL 24 HOURS BEFORE PAVING

REMOVING ASPHALTIC SURFACE MILLING (TRAVEL LANES OR SHOULDERS) OR
REMOVING CONCRETE SURFACE PARTIAL DEPTH (TRAVEL LANES WITHIN 100' TRANSITION)

PROPOSED HMA PAVEMENT OVERLAY

STH 29 EB EXIT RAMP AT CTH X BUTT JOINT DETAIL

STA 207'XA'+24 - STA 208'XA'+24



PROFILE VIEW

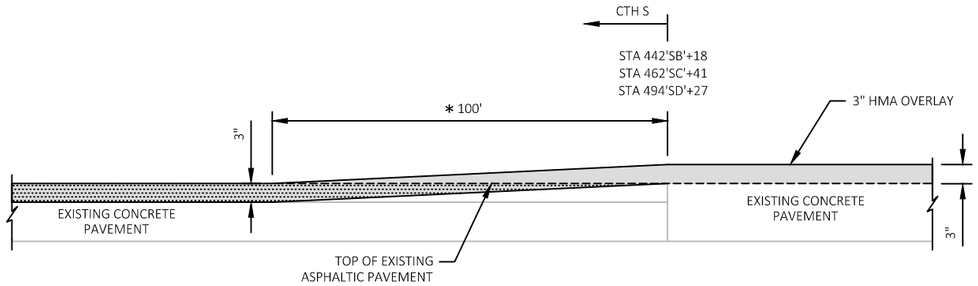
REMOVING ASPHALTIC SURFACE BUTT JOINTS (SHOULDERS) OR REMOVING PAVEMENT BUTT JOINTS (TRAVEL LANES)
DO NOT REMOVE MATERIAL UNDER THIS ITEM UNTIL 24 HOURS BEFORE PAVING

REMOVING ASPHALTIC SURFACE MILLING (SHOULDERS) OR REMOVING CONCRETE SURFACE PARTIAL DEPTH (TRAVEL LANES)

PROPOSED HMA PAVEMENT OVERLAY

USH 53 EXIT AND ENTRANCE RAMPS AT CTH S BUTT JOINT DETAIL

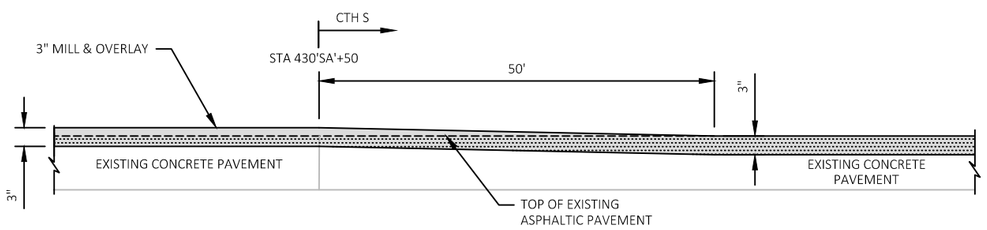
STA 454'SB'+18 - STA 455'SB'+18
STA 470'SC'+44 - STA 471'SC'+44
STA 482'SD'+07 - STA 483'SD'+07



CTH S RAMP PROFILE TRANSITION DETAIL

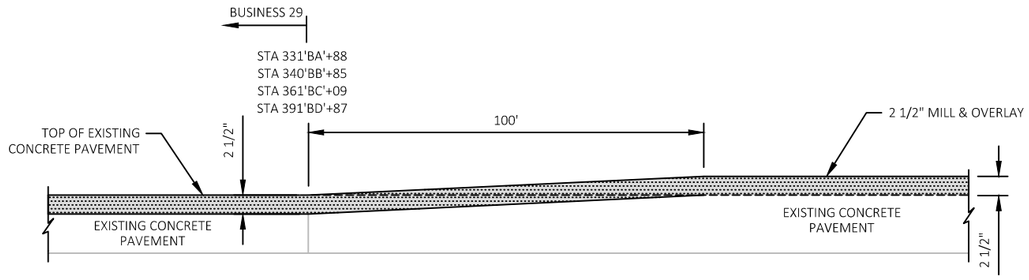
STA 441'SB'+18 - STA 442'SB'+18
STA 461'SC'+41 - STA 462'SC'+41
* STA 494'SD'+27 - STA 495'SD'+05

NOTE
* TRANSITION OVERLAY FROM END OF CURB & GUTTER TO START OF CONCRETE PAVEMENT (78-FEET).



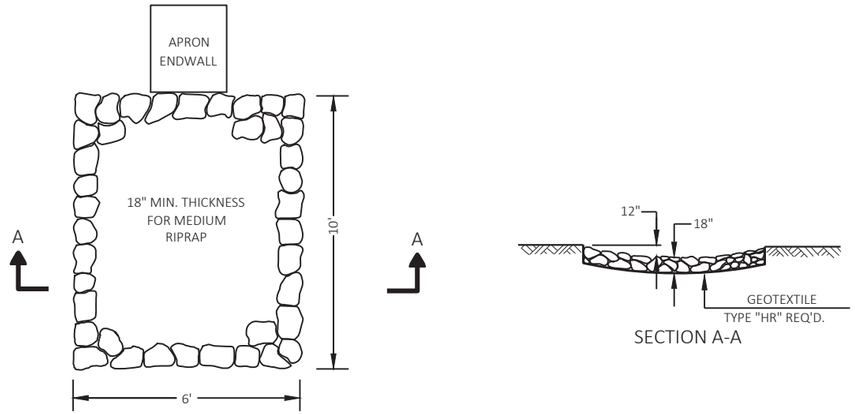
CTH S RAMP PROFILE TRANSITION DETAIL

STA 430'SA'+50 - STA 431'SA'+00



BUSINESS 29 RAMP PROFILE TRANSITION DETAIL

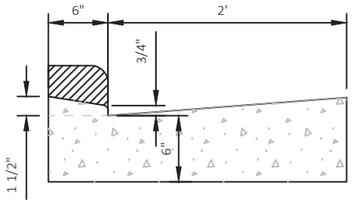
STA 330'BA'+88 - STA 331'BA'+88
STA 340'BB'+85 - STA 341'BB'+85
STA 361'BC'+09 - STA 362'BC'+09
STA 390'BD'+87 - STA 391'BD'+87



SECTION A-A

MEDIUM RIPRAP TREATMENT DETAIL AT CONCRETE SURFACE DRAINS

SEE CTH M SECTION 5 PLAN SHEETS FOR LOCATION



REMOVING CONCRETE CURB HEAD

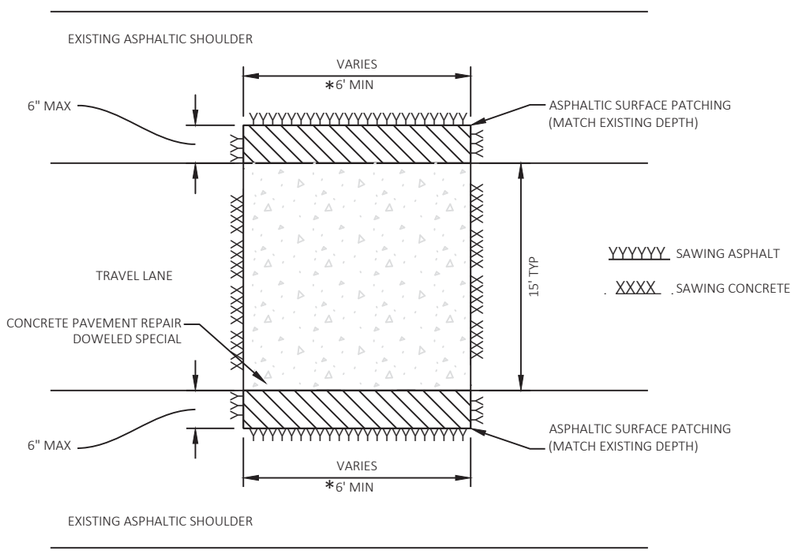
STA 348'BB'+85 - STA 349'BB'+98
STA 383'BD'+13 - STA 384'BD'+26

REMOVAL LIMITS

NOTES

CURB HEAD REMOVAL TO BE PAID UNDER THE REMOVING CURB ITEM.

TRANSITION FULL CURB HEAD TO DRIVEWAY CURB HEAD IN 6-FEET.



HMA SHOULDER DETAIL ADJACENT TO CONCRETE PAVEMENT REPAIR DOWELED SPECIAL

CTH S RAMPS, SEE TYPICAL SECTIONS FOR LOCATIONS

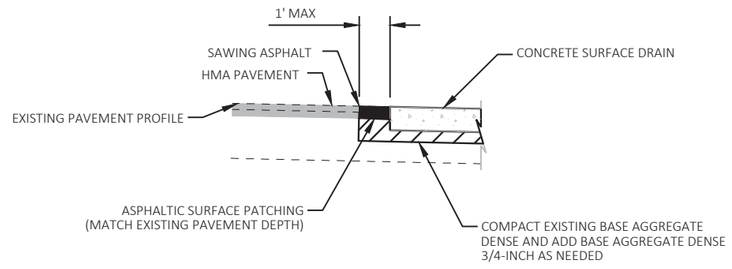
NOTES

DAMAGE TO EITHER EXISTING PAVEMENTS OR EXISTING SHOULDERS OUTSIDE OF THE LIMITS TO BE REMOVED DUE TO CONTRACTOR OPERATIONS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND NO ADDITIONAL PAYMENT WILL BE MADE.

COMPLETE CONCRETE PAVEMENT AND SHOULDER PATCHING PRIOR TO HMA OVERLAY.

PLACE ASPHALTIC PATCH BEFORE OPENING ADJACENT LANE TO TRAFFIC IN ALL AREAS.

∗ CONCRETE PAVEMENT REPAIR AREAS AT EXISTING PATCHES MAY NEED TO EXTEND 1' BEYOND JOINTS OR AS DIRECTED BY THE ENGINEER.



SECTION VIEW

DETAIL OF ASPHALTIC SURFACE PATCHING AT CONCRETE SURFACE DRAIN

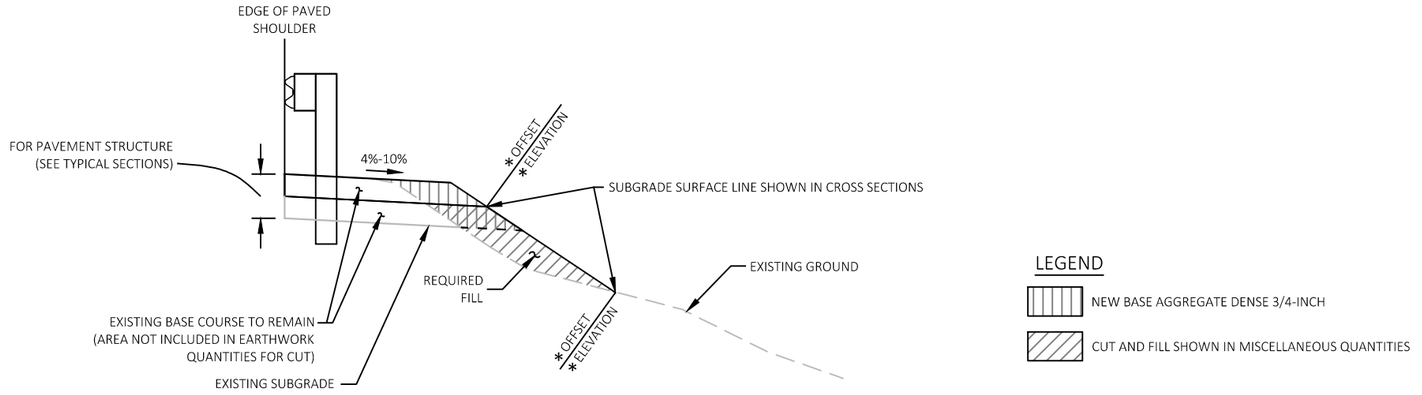
STA 509'M'+87 - STA 510'M'+25

NOTE

PLACE NEW CONCRETE SURFACE DRAIN AND ASPHALTIC SURFACE PATCHING PRIOR TO MILL AND OVERLAY.

ADDITIONAL ASPHALT REMOVAL AND PATCHING REQUIRED ADJACENT TO PROPOSED INLET, SEE SECTION 5 PLAN SHEETS FOR ADDITIONAL INFORMATION.

2



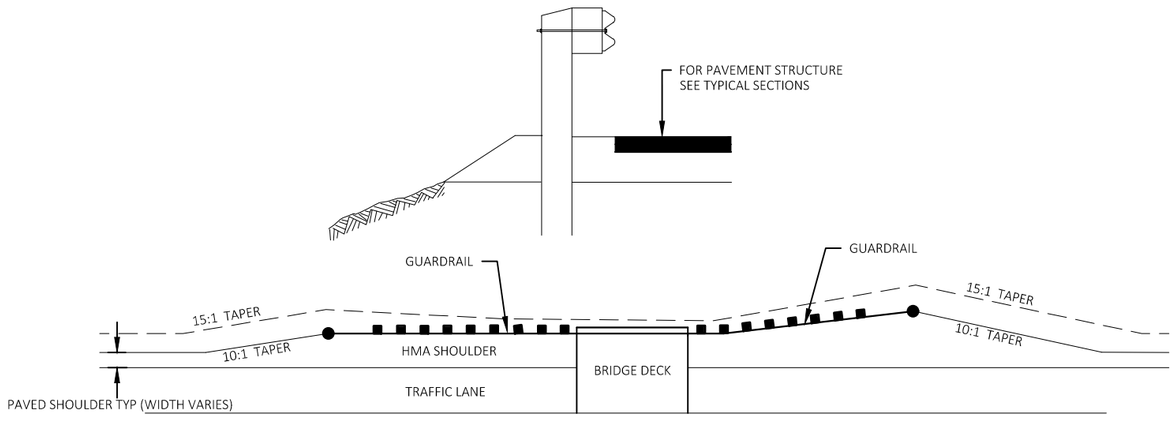
SHOULDER WIDENING EARTHWORK & BASE AGGREGATE FOR GUARDRAIL DETAIL

NOTES

ANY CUT AND FILL REQUIRED IS INCIDENTAL TO THE BARRIER SYSTEM GRADING SHAPING FINISHING ITEM.

* OFFSET AND ELEVATION PROVIDED TO THESE POINTS ON THE CROSS SECTIONS.

BENCH FILL AS REQUIRED PER STANDARD SPECIFICATION 205.3.2(4).



DETAIL FOR HMA SHOULDER AT GUARDRAIL

SEE SECTION 5 PLAN SHEETS FOR EXISTING AND PROPOSED GUARDRAIL LOCATIONS

NOTES

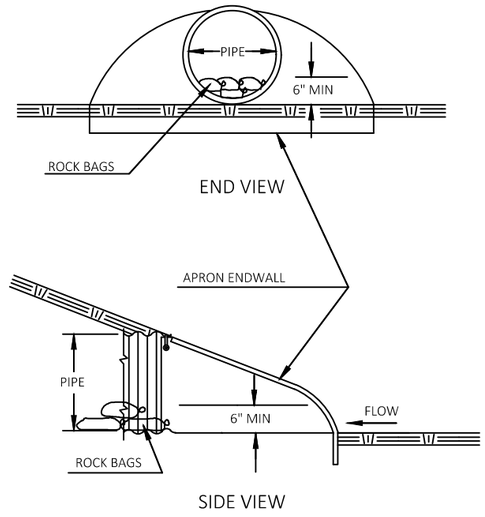
SEE SDDS FOR GUARDRAIL FOR ADDITIONAL DETAILS.

DETAIL FOR GUARDRAIL ATTACHED TO BRIDGE SHOWN, HMA SHOULDER TAPER IS THE SAME FOR FREE STANDING GUARDRAIL SECTIONS.

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											

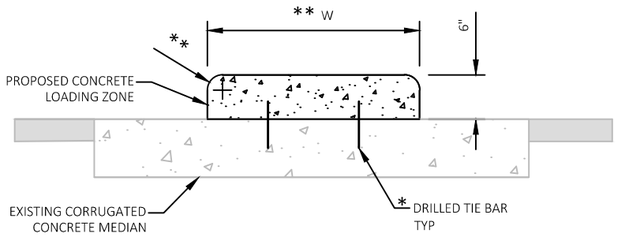
TOTAL PROJECT AREA = 520 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 160 ACRES

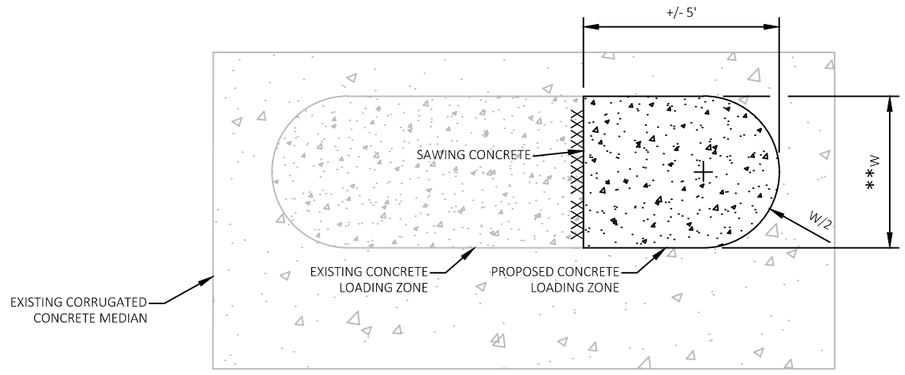


CULVERT PIPE CHECKS DETAIL

INSTALL ON INLET END
EACH ROCK BAG PAID AS CULVERT PIPE CHECKS

NOTE
SEE EROSION CONTROL PLANS FOR LOCATIONS.





NOTES

* DRILL AT LEAST FOUR 3/4-INCH DIAMETER 10-INCH DRILLED TIE BARS OR AS THE ENGINEER DIRECTS.

DO NOT DAMAGE EXISTING CORRUGATED CONCRETE MEDIAN OR LOADING ZONE TO REMAIN.

REMOVAL OF EXISTING CONCRETE LOADING ZONE TO BE PAID REMOVING CONCRETE SIDEWALK. EXISTING CONCRETE LOADING ZONE AND CORRUGATED CONCRETE MEDIAN ARE CONNECTED WITH TIE BARS.

INSTALL SIGN BOX OUT IN PROPOSED CONCRETE LOADING ZONE. SEE PERMANENT SIGNING AND PAVEMENT MARKING SHEETS.

** MATCH EXISTING DIMENSION.

DETAIL OF CONCRETE LOADING ZONE REPAIR

CTH O, STA 611'C'+75, 36' RT

2

N

UNNAMED WATERWAY

SLOPE INTERCEPT

461'SC'

USH 53 SB EXIT RAMP

SLOPE INTERCEPT

403'SE'

CTH S

404'SE'

405'SE'

PROPOSED 37-FT
RAMP CLOSURE GATE

FO

FO

FO

FO

FO

LINC
(COMMUNICATIONS)

495'SD'

STRUCTURE IDENTIFICATION
PLAQUE REQUIRED
G09-10

SLOPE INTERCEPT

AT&T WISCONSIN
(COMMUNICATIONS)

GRADING HINGELINE

XCEL ENERGY
(ELECTRIC)

T

OH

GUY

494'SD'

USH 53 SB ENTRANCE RAMP

NOTES

PRIOR TO INSTALLING STRUCTURE INDENTIFICATION PLAQUES CONFIRM LOCATION NUMBER PROVIDED BY THE DEPARTMENT.

SEE THE PERMANENT SIGNING SHEETS FOR LOCATION OF R 11-54 F SIGNS.

NOTIFY THE NORTHWEST - EAU CLAIRE ELECTRICAL UNIT AT (715) 839-3787 TO LOCATE THE RAMP GATE CONCRETE BASES AT LEAST FIVE BUSINESS DAYS PRIOR TO INSTALLING EACH RAMP GATE CONCRETE BASE.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR RAMP GATE CONSTRUCTION ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, AND SEED TO BE PAID AS GRADING, SHAPING, AND FINISHING RAMP GATES.

LEGEND

- RAMP CLOSURE GATE SOLAR
  CONCRETE BASE TYPE 5
  POLE TYPE 5 - STEEL
  TRANSFORMER BASE STANDARD 11 1/2-INCH BOLT CIRCLE
- 24"X36" PULL BOX
- SOLAR POWERED BATTERY AND CONTROLLER CABINET
  CONCRETE CONTROL CABINET BASE TYPE 10
  PEDESTAL BASE, TRAFFIC SIGNAL STANDARDS ALUMINUM
  15-FT
- RAMP CLOSURE GATE (VARYING LENGTH)
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

UNNAMED WATERWAY

USH 53 NB ENTRANCE RAMP

441'NO'SB'

PROPOSED 32-FT
RAMP CLOSURE GATE

SLOPE INTERCEPT

SLOPE INTERCEPT

STRUCTURE IDENTIFICATION
PLAQUE REQUIRED
G09-09

410'SE'

CTH S

411'SE'

412'SE'

413'SE'

USH 53 NB EXIT RAMP

LINC
(COMMUNICATIONS)

AT & T WISCONSIN
(COMMUNICATIONS)

XCEL ENERGY
(ELECTRIC)

431'SA'

430'SA'

2

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CONSTRUCTION DETAILS - RAMP CLOSURE GATE LAYOUT AT CTH S	SHEET 23	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\021002-CD.DWG
LAYOUT NAME - 021002-cd1

PLOT DATE : 4/20/2017 11:47 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

LEGEND

- RAMP CLOSURE GATE SOLAR
  CONCRETE BASE TYPE 5
  POLE TYPE 5 - STEEL
  TRANSFORMER BASE STANDARD 11 1/2-INCH BOLT CIRCLE
- 24"X36" PULL BOX
- SOLAR POWERED BATTERY AND CONTROLLER CABINET
  CONCRETE CONTROL CABINET BASE TYPE 10
  PEDESTAL BASE, TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT
- RAMP CLOSURE GATE (VARYING LENGTH)
- CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH

NOTES

PRIOR TO INSTALLING STRUCTURE INDENTIFICATION PLAQUES CONFIRM LOCATION NUMBER PROVIDED BY WISDOT.

SEE THE PERMANENT SIGNING SHEETS FOR LOCATION OF R 11-54 F SIGNS.

NOTIFY THE NORTHWEST - EAU CLAIRE ELECTRICAL UNIT AT (715) 839-3787 TO LOCATE THE RAMP GATE CONCRETE BASE AT LEAST FIVE BUSINESS DAYS PRIOR TO INSTALLING THE RAMP GATE CONCRETE BASE.

AREAS WITHIN THE RIGHT-OF-WAY DISTURBED SPECIFICALLY FOR RAMP GATE CONSTRUCTION ARE TO BE RESTORED TO THE ORIGINAL CONDITION WITH TOPSOIL, FERTILIZER, AND SEED TO BE PAID AS GRADING, SHAPING, AND FINISHING RAMP GATES.

561'MC'

USH 53 SB EXIT RAMP

CTH M

504'M'

505'M'

506'M'

STRUCTURE IDENTIFICATION PLAQUE REQUIRED

525'MD'

SLOPE INTERCEPT

EXISTING SLOPE IS 10:1 OR FLATTER, NO GRADING REQUIRED

USH 53 SB ENTRANCE RAMP

591'MD'

PACKERLAND BROADBAND (COMMUNICATIONS)

PROPOSED 40-FT RAMP CLOSURE GATE G09-12

CINC (COMMUNICATIONS)

XCEL ENERGY (ELECTRIC)

FO

OH

X

SS

E

H

SLOPE INTERCEPT

GRADING HINGELINE

PROPOSED 40-FT RAMP CLOSURE GATE G09-11

541'MB'

STRUCTURE IDENTIFICATION PLAQUE REQUIRED

545'MB'

USH 53 NB ENTRANCE RAMP

CTH M

512'M'

513'M'

514'M'

533+00'MA'

USH 53 NB EXIT RAMP

CINC (COMMUNICATIONS)

XCEL ENERGY (ELECTRIC)

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CONSTRUCTION DETAILS - RAMP CLOSURE GATE LAYOUT AT CTH M	SHEET 24	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\021002-CD.DWG
LAYOUT NAME - 021002-cd2

PLOT DATE : 4/20/2017 11:47 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : ############

WISDOT/CADDS SHEET 44

2

2

UNNAMED WATERWAY

N

462'SC'

464'SC'

C-09-0027
(TO REMAIN)

USH 53 SB EXIT RAMP

494'SD'

USH 53 SB ENTRANCE RAMP

404'SE'

404'SW'

CTH S

406'SE'

406'SW'

USH 53 SB

USH 53 NB

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- DELINEATED WETLAND BOUNDARY

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	EROSION CONTROL - CTH S	SHEET 25	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\022004-EC.DWG
LAYOUT NAME - 022004-ec1

PLOT DATE : 11/27/2017 10:58 AM PLOT BY : ERIK OLESON PLOT NAME : PLOT SCALE : ##########

2

2

USH 53 NB ENTRANCE RAMP

UNNAMED WATERWAY

C-09-0028
(TO REMAIN)

10'

77'

14'

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- DELINEATED WETLAND BOUNDARY

N

408'SW'
410'SW'
412'SW'
414'SW'
408'SE'
410'SE'
412'SE'
414'SE'

CTH S

USH 53 SB

USH 53 NB

USH 53 NB EXIT RAMP

430'SA'

10' - 14'

8'

+/- 1'

6:1

4:1

18"

GEOTEXTILE TYPE HR

MEDIUM RIPRAP DETAIL FOR DITCH

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	EROSION CONTROL - CTH S	SHEET	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\022004-EC.DWG
LAYOUT NAME - 022004-ec2

PLOT DATE : 11/27/2017 10:58 AM PLOT BY : ERIK OLESON PLOT NAME : PLOT SCALE : ##########

2

2

USH 53 SB EXIT RAMP

USH 53 SB

USH 53 NB

N

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- SILT FENCE RELIEF (ROCK BAGS)
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- DELINEATED WETLAND BOUNDARY

504'M'

506'M'

CTH M

508'M'

MSL 595

USH 53 SB ENTRANCE RAMP

SS

UNNAMED WATERWAY

SAND BAGS OR DIVERSION TECHNIQUE (INCIDENTAL TO STRUCTURE WORK)

TEMPORARY SHORING (SEE STRUCTURE PLANS)

C-09-0021

1227'NB'

USH 53 NB

1228'NB'

C-09-0021

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	EROSION CONTROL - CTH M AND C-09-0021	SHEET 27	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\022005-EC.DWG PLOT DATE : 11/27/2017 11:00 AM PLOT BY : ERIK OLESON PLOT NAME :

2

2

N

(SEE CONSTRUCTION DETAIL)

USH 53 NB ENTRANCE RAMP

547'NE'

CTH M

510'M'

512'M'

514'M'

USH 53 NB

USH 53 NB EXIT RAMP

532'MA'

LEGEND

- EROSION MAT CLASS I TYPE B
- EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE
- RIPRAP
- SLOPE INTERCEPT
- SILT FENCE RELIEF (ROCK BAGS)
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- DELINEATED WETLAND BOUNDARY

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	EROSION CONTROL - CTH M	SHEET 28	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\022005-EC.DWG PLOT DATE : 11/27/2017 11:00 AM PLOT BY : ERIK OLESON PLOT NAME :

WISDOT/CADDS SHEET 44

2

N

LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * SIGN BOX OUT REQ'D

NOTES

PAVEMENT MARKING NOT SHOWN. FOLLOW STANDARD DETAIL DRAWINGS WITHIN MILL AND OVERLAY LIMITS.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

122'FA'
124'FA'
126'FA'
128'FA'
142'FB'
144'FB'
146'FB'
148'FB'
150'FB'
102'F'
104'F'
106'F'
108'F'
110'F'
112'F'
114'F'
50TH AVE
STH 29 EB EXIT RAMP
STH 29 WB ENTRANCE RAMP
STH 29 EB
STH 29 WB

EXIT 81
TO REMAIN

1-18

TO COUNTY J
J22-1
24"X57"
1-16

WRONG WAY
R5-1A
36"X24"
1-17

1-19
WRONG WAY
R5-1A
36"X24"

1-21
DO NOT ENTER
1-20

STOP
R1-1
36"X36"
1-22

1-23
DO NOT ENTER
R5-1
30"X30"

SPEED LIMIT 45
TO REMAIN

1-24
DO NOT ENTER
R5-1
30"X30"

1-25
R3-1
24"X24"

1-5
W5-52L
12"X36"

1-8
W5-52R
12"X36"

1-29
PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
R5-57
36"X36"

1-15
Chippewa Falls
700' FROM 114'F'

1-11
WEST 29
J2-1
24"X57"

1-12
Chippewa Falls
D1-1
96"X15"

1-13
WEST 29
J2-1
24"X57"
200' FROM 114'F

1-14
JCT 29
J1-1
24"X39"
400' FROM 114'F

500' FROM 102'F'
JCT 29
1-1

SPEED LIMIT 45
TO REMAIN

JCT 29
J1-1
24"X39"
1-2

R3-2
24"X24"
1-3

DO NOT ENTER
* R5-1
30"X30"
1-28

STOP
* R1-1
36"X36"
1-26

* W12-1D
24"X24"
2' MOUNTING HEIGHT
1-27

WEST 29
J2-1
24"X57"
1-4

W5-52R
12"X36"
1-7

Chippewa Falls
D1-1
96"X15"
1-6

W5-52L
12"X36"
1-9

WEST 29
J2-1
24"X57"
1-10

TOWN OF LAFAYETTE
TO REMAIN

PROJECT NO: 1050-00-72	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING - 50TH AVE	SHEET 29	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023201-PS.DWG
LAYOUT NAME - 023201-ps
PLOT DATE : 7/21/2017 10:37 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

N

OUTSIDE EDGELINE IS 5' RT OF ALIGNMENT
INSIDE EDGELINE IS 20' RT OF ALIGNMENT
FROM STA 230+20 TO STA 250+56

MWE4
GEPOX

+20
5.0' RT

+00
3.9' RT

+00
1.8' RT

+85
RL

15'

MYE4
GEPOX

STH 29 WB ENTRANCE RAMP/CTH X

222'XB'

224'XB'

226'XB'

228'XB'

230'XB'

STH 29 WB

STH 29 EB

202'XA'

204'XA'

206'XA'

RAMP
50
MPH

TO REMAIN

EXIT
80

TO REMAIN

STH 29 EB EXIT RAMP/CTH X

208'XA'

210'XA'

212'XA'

PROPOSED OUTSIDE EDGELINE
PAVEMENT MARKING FOLLOWS
RAMP ALIGNMENT,
INSIDE PAVEMENT MARKING IS 15' LT

MYE4
GEPOX

MWE4
GEPOX

15'

W1-6
48"X24"
2-5

LEGEND

	EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY	EPOXY
	PROPOSED SIGN MOUNTED ON SINGLE POST	GEPOX	GROOVED WET REFLECTIVE EPOXY
	EXISTING SIGN MOUNTED ON MULTIPLE POSTS	MDY4	MARKING LINE 4-INCH (DOUBLE YELLOW)
	PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYE4	MARKING LINE 4-INCH (YELLOW EDGELINE)
X	SIGN - REMOVE AND REPLACE	MWE4	MARKING LINE 4-INCH (WHITE EDGELINE)
X	SIGN - PLACE NEW		
X	SIGN - REMOVE		
X	SIGN - MOVE		
*	SIGN BOX OUT REQ'D		

NOTES
PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

PROJECT NO: 1050-00-72	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING - CTH X	SHEET 30	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023202-PS.DWG
LAYOUT NAME - 023202-ps
PLOT DATE : 7/21/2017 10:38 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

NOTES
PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * SIGN BOX OUT REQ'D

- EPOXY — EPOXY
- GEPOX — GROOVED WET REFLECTIVE EPOXY
- MDY4 — MARKING LINE 4-INCH (DOUBLE YELLOW)
- MYE4 — MARKING LINE 4-INCH (YELLOW EDGELINE)
- MWE4 — MARKING LINE 4-INCH (WHITE EDGELINE)

N

OUTSIDE EDGELINE IS 5' RT OF ALIGNMENT
INSIDE EDGELINE IS 20' RT OF ALIGNMENT
FROM STA 230+20 TO STA 250+56

+20
5.0' RT

228'XB'
230'XB'
232'XB'
234'XB'
236'XB'
238'XB'
240'XB'
242'XB'

15'

STH 29 WB ENTRANCE RAMP/CTH X

MWE4
GEPOX

MYE4
GEPOX

W4-1R
36"X36"
3-7

3-8

3-10

3-9

212'XA'
214'XA'
216'XA'
218'XA'
220'XA'
222'XA'
224'XA'
226'XA'

15'

STH 29 EB EXIT RAMP/CTH X

STH 29 WB

STH 29 EB

3-2

3-1

3-3

W5-52L
12"X36"

W5-52R
12"X36"

3-4

MYE4
GEPOX

MWE4
GEPOX

3-5

40
MPH

PROPOSED OUTSIDE EDGELINE
PAVEMENT MARKING FOLLOWS
RAMP ALIGNMENT,
INSIDE PAVEMENT MARKING IS 15' LT

PROJECT NO: 1050-00-72	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING - CTH X	SHEET 31	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023202-PS.DWG
LAYOUT NAME - 023203-ps
PLOT DATE : 7/21/2017 10:38 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

N

4-20
LEFT LANE ENDS
4-19
SIS
TO REMAIN
LEFT LANE ENDS
4-4
W6-2
36"X36"
MYE4
GEPOX
MWE4
GEPOX
WRONG WAY
R5-1A
36"X24"
4-5
4-7
DO NOT ENTER
MYE4
GEPOX
MWE4
GEPOX
WRONG WAY
4-6
230'XA'
228'XA'
STH 29 EB EXIT RAMP/CTH X
SPEED LIMIT 40
4-1
W6-2
36"X36"
4-2
WRONG WAY
R5-1A
36"X24"
4-3
W1-2R
30"X30"
3-6
166TH ST
R4-7
24"X30"
4-12
4-13
W5-54S
18"X18"
4-21
FREEWAY ENTRANCE
D13-3
60"X30"
15'
15'
4-8
4-9
DO NOT ENTER
4-10
DO NOT ENTER
R5-1
30"X30"
4-11
W3-5
36"X36"
4-9
244'XB'
246'XB'
248'XB'
250'XB'
+56
5.0' RT
+00
2.8' RT
252'XB'
+00
0.9' RT
+44'XB'
YELLOW EDGE LINE/DOUBLE YELLOW
GEPOX
EPOXY
254'XB'
+00
RL
234'XA'
236'XA'
238'XA'
CTH X SERVICE RD
W6-3
36"X36"
4-14
TOWN OF LAFAYETTE
TO REMAIN
4-15
SPEED LIMIT 40
R2-1
24"X30"
168TH ST
4-16
SPEED LIMIT 55
R2-1
24"X30"
MWE4
GEPOX
MDY4
EPOXY
12'
12'
256'XB'
240'XA'
CTH X
4-18
PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
R5-57
36"X36"
SPEED LIMIT 40
4-17
CTH X SERVICE RD
169TH ST

LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	EPOXY — EPOXY
PROPOSED SIGN MOUNTED ON SINGLE POST	GEPOX — GROOVED WET REFLECTIVE EPOXY
EXISTING SIGN MOUNTED ON MULTIPLE POSTS	MDY4 — MARKING LINE 4-INCH (DOUBLE YELLOW)
PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MYE4 — MARKING LINE 4-INCH (YELLOW EDGELINE)
X — SIGN - REMOVE AND REPLACE	MWE4 — MARKING LINE 4-INCH (WHITE EDGELINE)
X — SIGN - PLACE NEW	
X — SIGN - REMOVE	
X — SIGN - MOVE	
* SIGN BOX OUT REQ'D	

NOTES

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

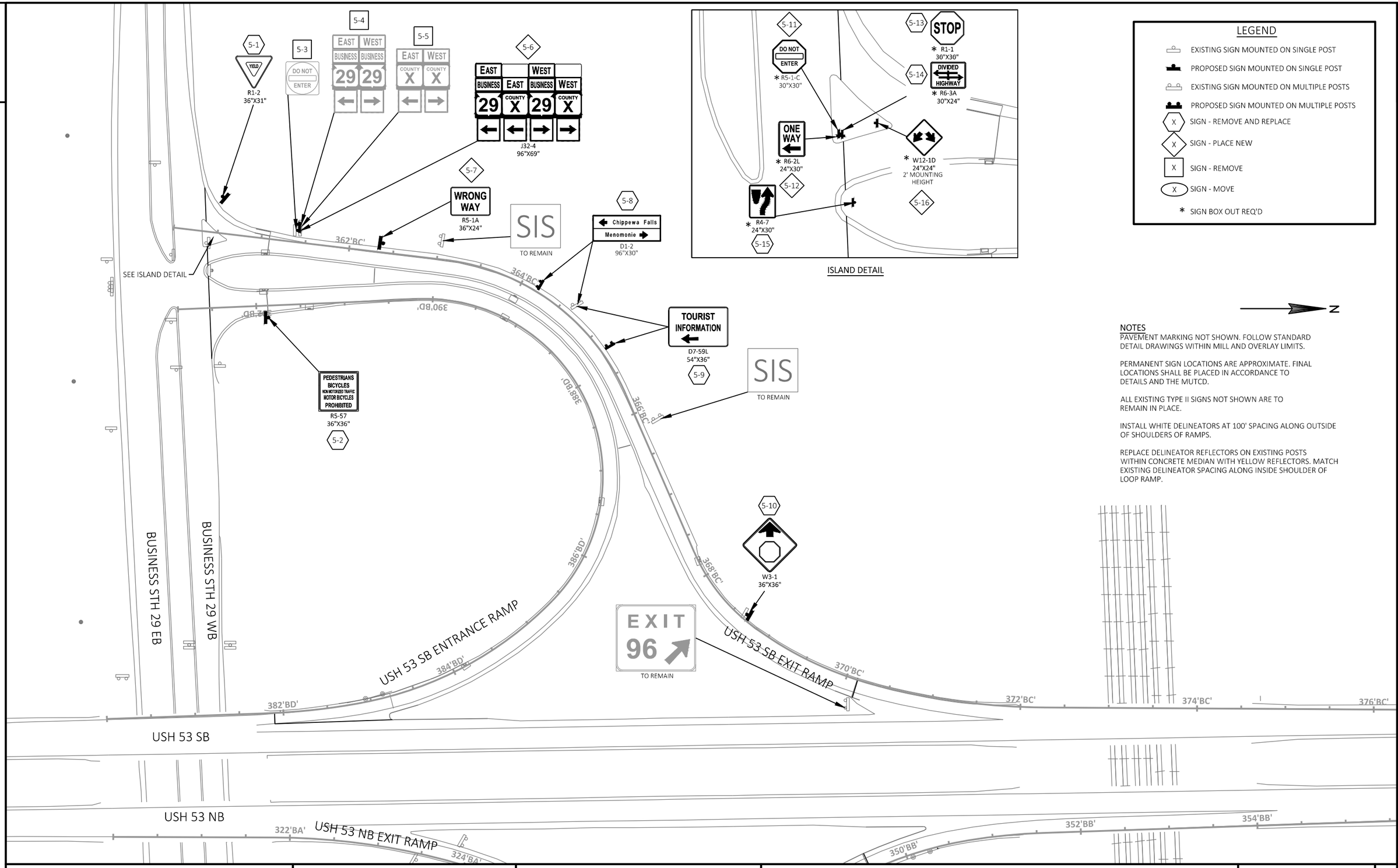
ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

PROJECT NO: 1050-00-72	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING AND PAVEMENT MARKING - CTH X	SHEET 32	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023202-PS.DWG
LAYOUT NAME - 023204-ps

PLOT DATE : 7/21/2017 10:38 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT



ISLAND DETAIL

LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * SIGN BOX OUT REQ'D

N

NOTES

PAVEMENT MARKING NOT SHOWN. FOLLOW STANDARD DETAIL DRAWINGS WITHIN MILL AND OVERLAY LIMITS.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

REPLACE DELINEATOR REFLECTORS ON EXISTING POSTS WITHIN CONCRETE MEDIAN WITH YELLOW REFLECTORS. MATCH EXISTING DELINEATOR SPACING ALONG INSIDE SHOULDER OF LOOP RAMP.

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PERMANENT SIGNING - BUSINESS 29	SHEET 33	E

2

USH 53 SB

USH 53 NB

382'BD'

372'BC'

374'BC'

376'BC'

322'BA'

USH 53 NB EXIT RAMP

324'BA'

326'BA'

328'BA'

346'BB'

348'BB'

350'BB'

352'BB'

354'BB'

USH 53 NB ENTRANCE RAMP

342'BB'

330'BA'

332'BA'

344'BB'

BUSINESS STH 29 EB

BUSINESS STH 29 WB

6-17

W3-1
36"X36"

6-5

EAST BUSINESS 29 | WEST BUSINESS 29

6-6

EAST COUNTY X | WEST COUNTY X

6-3 6-4

DO NOT ENTER

6-2

YIELD
R1-2
36"X31"

SIS
TO REMAIN

6-15

WRONG WAY

6-16

WRONG WAY

EXIT 96
TO REMAIN

6-13

Chippewa Falls
Menomonie
D1-2
96"X30"

6-14

TOURIST INFORMATION
D7-59L
54"X36"

6-7

EAST BUSINESS 29 | WEST BUSINESS 29 | EAST COUNTY X | WEST COUNTY X
J32-4
96"X69"

6-9

6-10

WRONG WAY

WRONG WAY
R5-1A
36"X24"

H
D9-2
24"X24"

6-11

6-12

MB6-1
21"X21"

SEE ISLAND DETAIL

R4-7
24"X30"

6-1

SIS
TO REMAIN

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
R5-57
36"X36"

6-8

NOTES

PAVEMENT MARKING NOT SHOWN. FOLLOW STANDARD DETAIL DRAWINGS WITHIN MILL AND OVERLAY LIMITS.

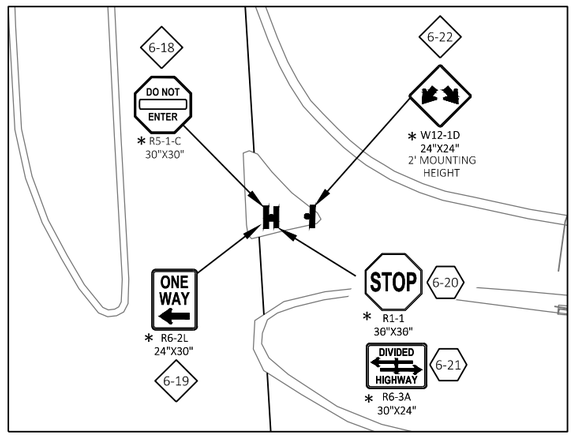
PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

REPLACE DELINEATOR REFLECTORS ON EXISTING POSTS WITHIN CONCRETE MEDIAN WITH YELLOW REFLECTORS. MATCH EXISTING DELINEATOR SPACING ALONG INSIDE SHOULDER OF LOOP RAMP.

N



ISLAND DETAIL

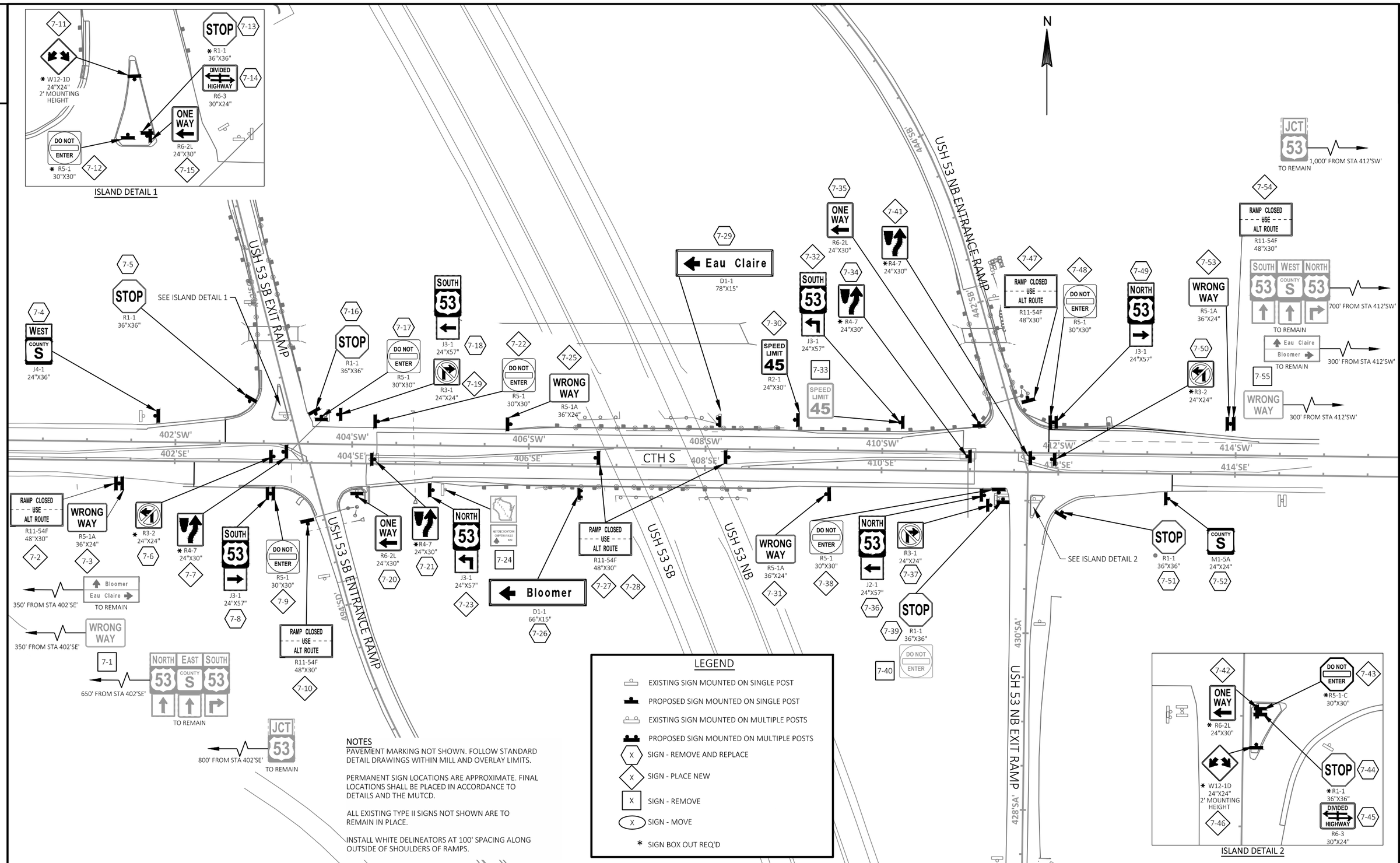
LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * SIGN BOX OUT REQ'D

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PERMANENT SIGNING - BUSINESS 29	SHEET 34	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023203-PS.DWG
LAYOUT NAME - 023206-ps
PLOT DATE : 7/21/2017 10:39 AM
PLOT BY : MICHAEL HIGGINS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2



PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PERMANENT SIGNING - CTH S	SHEET	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023204-PS.DWG
LAYOUT NAME - 023207-ps
PLOT DATE : 7/21/2017 10:41 AM
PLOT BY : MICHAEL HIGGINS
PLOT NAME :
PLOT SCALE : ##########

2

N

LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * SIGN BOX OUT REQ'D

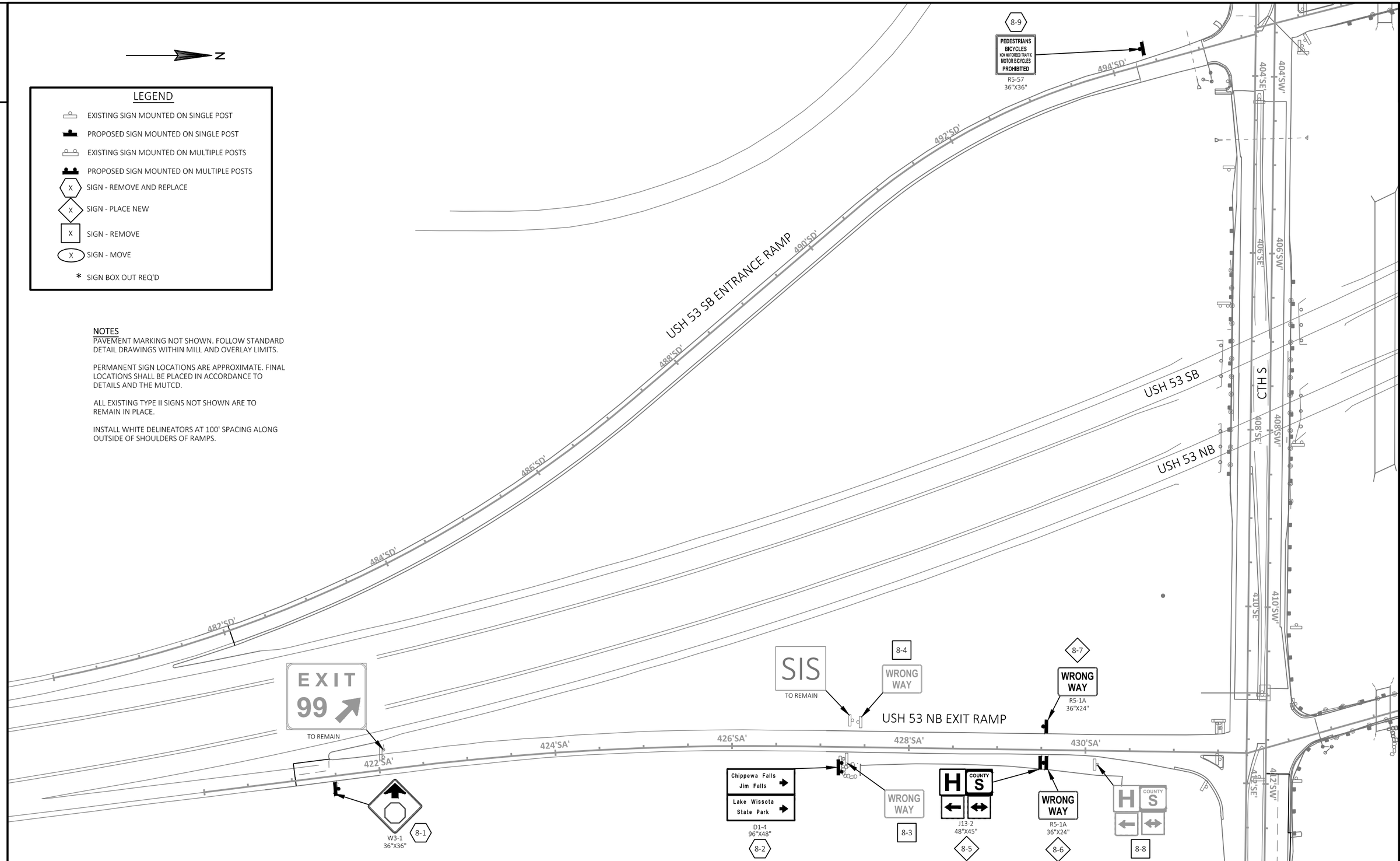
NOTES

PAVEMENT MARKING NOT SHOWN. FOLLOW STANDARD DETAIL DRAWINGS WITHIN MILL AND OVERLAY LIMITS.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.



PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PERMANENT SIGNING - CTH S	SHEET 36	E

2

2

USH 53 SB ENTRANCE RAMP

USH 53 SB EXIT RAMP

USH 53 SB

USH 53 NB

USH 53 NB ENTRANCE RAMP

CTH S

494'SD'

404'SE'

404'SW'

406'SE'

406'SW'

408'SE'

408'SW'

410'SE'

410'SW'

464'SC'

466'SC'

468'SC'

470'SC'

472'SC'

442'SB'

444'SB'

446'SB'

448'SB'

450'SB'

452'SB'

454'SB'

456'SB'

9-1

COUNTY S H

9-2

WRONG WAY
R5-1A
36"X24"

9-3

COUNTY S H
J12-2
48"X45"

9-4

WRONG WAY
R5-1A
36"X24"

9-5

WRONG WAY

9-6

WRONG WAY

9-7

Chippewa Falls
Jim Falls
Lake Wissota
State Park
D1-4
96"X48"

SIS
TO REMAIN

SIGN

9-8

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
R5-57
36"X36"

N

NOTES

PAVEMENT MARKING NOT SHOWN. FOLLOW STANDARD DETAIL DRAWINGS WITHIN MILL AND OVERLAY LIMITS.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * SIGN BOX OUT REQ'D

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PERMANENT SIGNING - CTH S	SHEET 37	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023204-PS.DWG
LAYOUT NAME - 023209-ps

PLOT DATE : 7/21/2017 10:41 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT

2

NOTES
PAVEMENT MARKING NOT SHOWN. FOLLOW STANDARD DETAIL DRAWINGS WITHIN MILL AND OVERLAY LIMITS.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

N

ISLAND DETAIL 1

10-8 STOP R1-1 36"X36"
10-9 DIVIDED HIGHWAY R6-3 30"X24"
10-11 W12-1D 24"X24" 2' MOUNTING HEIGHT
10-10 ONE WAY R6-2L 24"X30"

USH 53 SB EXIT RAMP
USH 53 SB
USH 53 NB
USH 53 NB ENTRANCE RAMP
USH 53 SB ENTRANCE RAMP
USH 53 NB EXIT RAMP
CTH M
546'NE
544'NE
542'NE
562'MW
532'MA
530'MA
504'M'
506'M'
508'M'
512'M'
514'M'
516'M'

10-4 WRONG WAY R5-1A 36"X24"
10-7 STOP R1-1 36"X36"
SEE ISLAND DETAIL 1
10-14 10-16 DO NOT ENTER R5-1 30"X30"
SOUTH 53 J2-1 24"X57"
10-17 R3-1 24"X24"
10-18
10-22
10-23 DO NOT ENTER
10-25 WRONG WAY R5-1A 36"X24"
10-29 Eau Claire D1-1 78"X15"
10-30 SOUTH 53 J2-1 24"X57"
R4-7 24"X30" 10-36
REMOVE BOTH 10-37
10-38 ONE WAY R6-2L 24"X30"
10-40
10-44 DO NOT ENTER R5-1 30"X30"
10-45 NORTH 53 J3-1 24"X57"
10-41 R4-7 24"X30"
10-42
10-43 R3-2 24"X24"
10-52 WRONG WAY R5-1A 36"X24"
10-53 SPEED LIMIT 55 R2-1 24"X30"
10-54 RAMP CLOSED USE ALT ROUTE R11-54F 48"X30"
10-55
Eau Claire / Superior TO REMAIN 450' FROM 514'M'
10-56 SOUTH 53 NORTH 53 J2-2 48"X57" 650' FROM 514'M'
JCT 53 TO REMAIN 900' FROM 514'M'
RIGHT LANE MUST TURN RIGHT R3-7R 30"X30"

10-3 RAMP CLOSED USE ALT ROUTE R11-54F 48"X30"
10-5 SOUTH 53 J3-1 24"X57"
10-6 DO NOT ENTER R5-1 30"X30"
10-12 R4-7 24"X30"
10-13
500' FROM 504'M' New Auburn / Superior / Eau Claire TO REMAIN
700' FROM 504'M' NORTH 53 SOUTH 53 J2-2 48"X57"
10-1
1,000' FROM 504'M' JCT 53 TO REMAIN
500' FROM 504'M' WRONG WAY
10-2
10-15 ONE WAY R6-2L 24"X30"
10-19 NORTH 53 J2-1 24"X57"
R4-7 24"X30"
REMOVE BOTH 10-21
10-20
10-24 Superior D1-1 66"X15"
10-26 RAMP CLOSED USE ALT ROUTE R11-54F 48"X30"
10-27 RAMP CLOSED USE ALT ROUTE R11-54F 48"X30"
10-28 WRONG WAY R5-1A 36"X24"
10-31 NORTH 53 DO NOT ENTER
10-32
10-33
10-34 DO NOT ENTER R5-1 30"X30"
NORTH 53 J2-1 24"X57"
10-35 R3-1 24"X24"
10-39 DO NOT ENTER R5-1 30"X30"
SEE ISLAND DETAIL 2
10-47 STOP R1-1 36"X36"

LEGEND
- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X SIGN - REMOVE AND REPLACE
- X SIGN - PLACE NEW
- X SIGN - REMOVE
- X SIGN - MOVE
- * SIGN BOX OUT REQ'D

ISLAND DETAIL 2

10-48 ONE WAY R6-2L 24"X30"
10-49 STOP R1-1 36"X36"
10-50 DIVIDED HIGHWAY R6-3 30"X24"
W12-1D 24"X24" 2' MOUNTING HEIGHT
10-51

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PERMANENT SIGNING - CTH M	SHEET 38	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023205-PS.DWG
LAYOUT NAME - 023210-ps
PLOT DATE : 7/21/2017 10:42 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * SIGN BOX OUT REQ'D

NOTES

PAVEMENT MARKING NOT SHOWN. FOLLOW STANDARD DETAIL DRAWINGS WITHIN MILL AND OVERLAY LIMITS.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

N

11-9
PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
R5-57
36"X36"

RAMP CLOSED
USE
ALT ROUTE
R11-54F
48"X30"
11-10

USH 53 SB ENTRANCE RAMP

578'SW' 580'SW' 582'SW' 584'SW' 586'SW' 588'SW' 590'SW' 592'SW'

USH 53 SB

USH 53 NB

CTH M

505'NW' 512'NW' 542'NE'

EXIT
118
TO REMAIN

522'MA' 524'MA' 526'MA' 528'MA' 530'MA' 532'MA'

W3-1
36"X36"
11-1

11-4
WRONG WAY

New Auburn
D1-1
84"X15"
11-2

WRONG WAY
11-3

11-7
WRONG WAY
R5-1A
36"X24"

11-8
COUNTY M
DO NOT ENTER

COUNTY M
J12-1
24"X45"
11-5

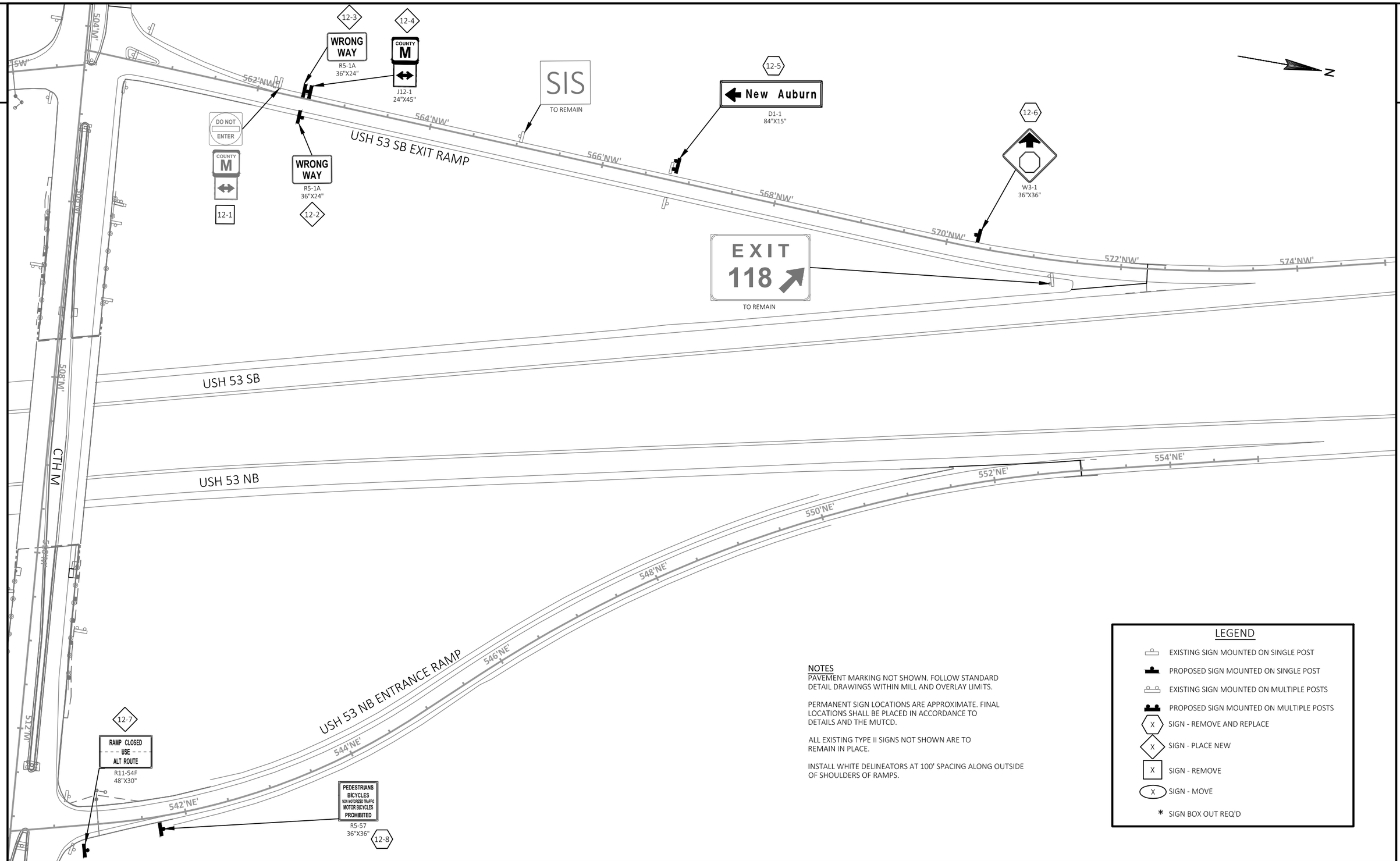
WRONG WAY
R5-1A
36"X24"
11-6

USH 53 NB EXIT RAMP

2

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PERMANENT SIGNING - CTH M	SHEET 39	E

2



NOTES

PAVEMENT MARKING NOT SHOWN. FOLLOW STANDARD DETAIL DRAWINGS WITHIN MILL AND OVERLAY LIMITS.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

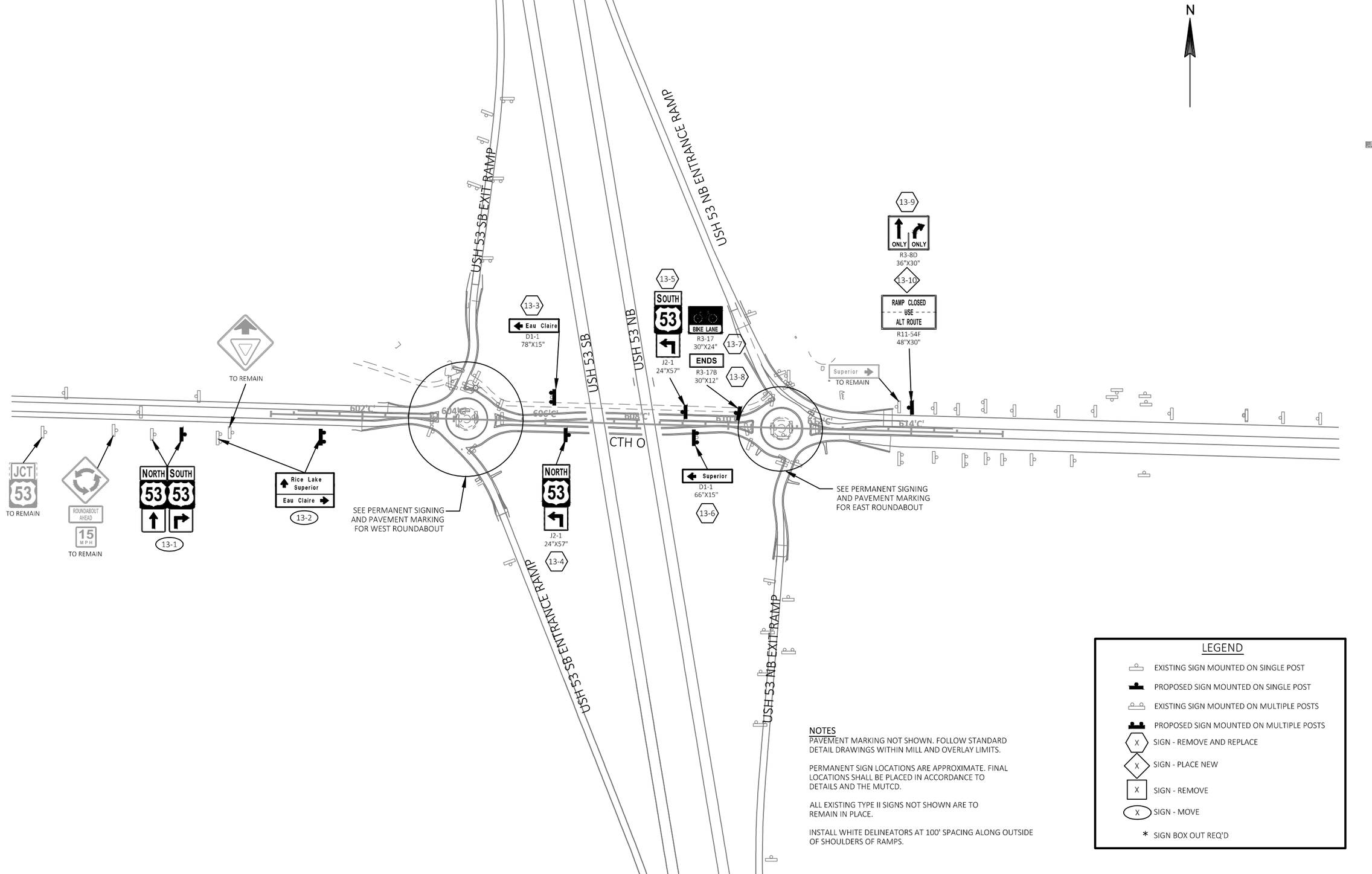
INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * SIGN BOX OUT REQ'D

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PERMANENT SIGNING - CTH M	SHEET 40	E

2



LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * SIGN BOX OUT REQ'D

NOTES

PAVEMENT MARKING NOT SHOWN. FOLLOW STANDARD DETAIL DRAWINGS WITHIN MILL AND OVERLAY LIMITS.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: BARRON	PERMANENT SIGNING - CTH O	SHEET 41	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023206-PS.DWG
LAYOUT NAME - 023213-ps
PLOT DATE : 7/21/2017 10:43 AM
PLOT BY : MICHAEL HIGGINS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

N

SEE PERMANENT SIGNING AND PAVEMENT MARKING FOR WEST ROUNDABOUT

14-14
PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
R5-57
36"X36"

USH 53 SB ENTRANCE RAMP

14-16
WRONG WAY
R5-1A
36"X24"

WRONG WAY
R5-1A
36"X24"
14-15

Wis Indianhead Tech College
UW Barron Co
TO REMAIN

14-17
Rice Lake
D1-1
72"X15"

SIS
TO REMAIN

USH 53 SB EXIT RAMP

14-18
AHEAD

14-19
W3-2
36"X36"

14-20
EAST COUNTY O
WEST COUNTY O
J2-2
48"X57"

14-21

W11-2
30"X30"
14-22
AHEAD
W16-9P
24"X12"
14-23

W2-6
30"X30"
14-24
15 MPH
W13-1
18"X18"
14-26

EXIT 140
TO REMAIN

USH 53 SB

CTH O

USH 53 NB

USH 53 NB ENTRANCE RAMP

EXIT 140
TO REMAIN

14-4
Rice Lake
Business Dist

14-10
WRONG WAY
R5-1A
36"X24"

14-11
WRONG WAY

SIS
TO REMAIN

USH 53 NB EXIT RAMP

14-1
W2-6
30"X30"
14-3
15 MPH
W13-1
18"X18"

WEST COUNTY O
EAST COUNTY O
J2-2
48"X57"
14-5

W3-2
36"X36"
14-6

Rice Lake
Business Dist
D1-1
90"X30"
14-7

Wis Indianhead Tech College
UW Barron Co
TO REMAIN

COUNTY O
14-8

WRONG WAY
R5-1A
36"X24"
14-9

SEE PERMANENT SIGNING AND PAVEMENT MARKING FOR EAST ROUNDABOUT

W4-2R
36"X36"
14-12

PEDESTRIANS
BICYCLES
NON MOTORIZED TRAFFIC
MOTOR BICYCLES
PROHIBITED
R5-57
36"X36"
14-13

LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * — SIGN BOX OUT REQ'D

NOTES

PAVEMENT MARKING NOT SHOWN. FOLLOW STANDARD DETAIL DRAWINGS WITHIN MILL AND OVERLAY LIMITS.

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: BARRON	PERMANENT SIGNING - CTH O	SHEET 42	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023206-PS.DWG
LAYOUT NAME - 023214-ps
PLOT DATE : 7/21/2017 10:43 AM
PLOT BY : MICHAEL HIGGINS
PLOT NAME :
PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

2

N

USH 53 SB EXIT RAMP

CTH O

602'C'

604'C'

606'C'

ONE WAY
15-17
R6-1R
36"X12"

R1-2
36"X31"
15-13
TO TRAFFIC FROM LEFT
R1-54
24"X15"
15-14

W11-2
30"X30"
15-15

S16-7L
24"X12"
15-16

STOP
TO REMAIN
(ON TRAIL)

MWE4 EPOXY
MWX6 EPOXY
MYE4 EPOXY

R1-2
36"X31"
15-20

STOP
TO REMAIN
(ON TRAIL)

ONE WAY
R6-2R
24"X30"
15-21

15-22
DO NOT ENTER
R5-1
30"X30"

ONE WAY
15-24
ONE WAY
R6-1R
36"X12"
15-25

R3-1
24"X24"
15-23

R6-4B
60"X24"
15-26

R1-2
36"X31"
15-27
TO TRAFFIC FROM LEFT
R1-54
24"X15"
15-28

R1-2
36"X31"
15-29
ONE WAY
R6-2R
24"X30"
15-30

R6-4B
60"X24"
15-18
15-19

WEST O
D1-1
42"X30"
15-5

MWD18 EPOXY
MWG8 EPOXY
MWE4 EPOXY
MYE4 EPOXY

R1-2
36"X31"
15-1
ONE WAY
R6-2R
24"X30"
15-2

R1-2
36"X31"
15-3
TO TRAFFIC FROM LEFT
R1-54
24"X15"
15-4

ONE WAY
15-6
ONE WAY
R6-1R
36"X12"
15-7

R6-4B
60"X24"
15-8

SOUTH 53
D1-1
42"X30"
15-9

RAMP CLOSED
USE
ALT ROUTE
R11-54F
48"X30"
15-10

SOUTH 53
15-11

NORTH EAST 53 O
D1-2
66"X30"
15-12

USH 53 SB ENTRANCE RAMP

LEGEND

EXISTING SIGN MOUNTED ON SINGLE POST	ARRW — MARKING ARROWS (WHITE) - SEE MISCELLANEOUS QUANTITIES
PROPOSED SIGN MOUNTED ON SINGLE POST	EPOXY — EPOXY
EXISTING SIGN MOUNTED ON MULTIPLE POSTS	MYE4 — MARKING LINE 4-INCH (YELLOW EDGELINE)
PROPOSED SIGN MOUNTED ON MULTIPLE POSTS	MWE4 — MARKING LINE 4-INCH (WHITE EDGELINE)
X — SIGN - REMOVE AND REPLACE	MWD18 — MARKING DOTTED EXTENSION 18-INCH (WHITE SKIP) (2' LINE, 2' GAP)
X — SIGN - PLACE NEW	MWG8 — MARKING LINE 8-INCH (WHITE CHANNELIZING LINE)
X — SIGN - REMOVE	MWX6 — MARKING CROSSWALK TRANSVERSE LINE 6-INCH (WHITE)
X — SIGN - MOVE	MCMW — MARKING CORRUGATED MEDIAN (WHITE)
* SIGN BOX OUT REQ'D	WORD — MARKING WORD (WHITE)

NOTES
PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: BARRON	PERMANENT SIGNING AND PAVEMENT MARKING - CTH O - WEST ROUNDABOUT	SHEET 43	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023206-PS.DWG
LAYOUT NAME - 023215-ps
PLOT DATE : 7/21/2017 10:43 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

N

USH 53 NB

USH 53 NB ENTRANCE RAMP

USH 53 NB EXIT RAMP

CTH O

608'C'

610'C'

612'C'

MWE4 EPOXY

MYE4 EPOXY

MWG8 EPOXY

MWX6 EPOXY

MWD18 EPOXY

MCMW EPOXY

ARRW

WORD

16-1 R1-2 36"X31" YIELD

16-2 R6-2R 24"X30" ONE WAY

16-3 R1-2 36"X31" YIELD; TO TRAFFIC FROM LEFT; R1-54 24"X15"

16-4

16-5 R3-1 24"X24"

16-6 R1-2 36"X31" YIELD

16-7 R6-2R 24"X30" ONE WAY

16-8 R5-1 30"X30" DO NOT ENTER

16-9 R1-2 36"X31" YIELD; TO TRAFFIC FROM LEFT; R1-54 24"X15"

16-10

16-11 D1-1 42"X30" EAST O

16-12 R1-2 36"X31" YIELD

16-13 R6-2R 24"X30" ONE WAY

16-14 * R1-2 36"X31" YIELD; TO TRAFFIC FROM LEFT; * R1-54 24"X15"

16-15

16-16 16-19 16-22 ONE WAY

16-17 16-20 16-23 R6-4B 60"X24"

16-18 16-21 16-24

16-25 NO MOTOR VEHICLES R5-3 24"X24"

16-26 W11-2 30"X30"; 16-27 S16-7L 24"X12"

STOP TO REMAIN (ON TRAIL)

16-28 NORTH 53

16-29 D1-1 42"X30" NORTH 53; RAMP CLOSED USE ALT ROUTE R11-54F 48"X30"

16-30

16-31 W11-2 30"X30"; 16-32 S16-7R 24"X12"

STOP (ON TRAIL) 16-33

16-34 D1-2 66"X30" SOUTH WEST 53 O

LEGEND

- EXISTING SIGN MOUNTED ON SINGLE POST
- PROPOSED SIGN MOUNTED ON SINGLE POST
- EXISTING SIGN MOUNTED ON MULTIPLE POSTS
- PROPOSED SIGN MOUNTED ON MULTIPLE POSTS
- X — SIGN - REMOVE AND REPLACE
- X — SIGN - PLACE NEW
- X — SIGN - REMOVE
- X — SIGN - MOVE
- * SIGN BOX OUT REQ'D

ARRW	MARKING ARROWS (WHITE) - SEE MISCELLANEOUS QUANTITIES
EPOXY	EPOXY
MYE4	MARKING LINE 4-INCH (YELLOW EDGELINE)
MWE4	MARKING LINE 4-INCH (WHITE EDGELINE)
MWD18	MARKING DOTTED EXTENSION 18-INCH (WHITE SKIP) (2' LINE, 2' GAP)
MWG8	MARKING LINE 8-INCH (WHITE CHANNELIZING LINE)
MWX6	MARKING CROSSWALK TRANSVERSE LINE 6-INCH (WHITE)
MCMW	MARKING CORRUGATED MEDIAN (WHITE)
WORD	MARKING WORD (WHITE)

NOTES

PERMANENT SIGN LOCATIONS ARE APPROXIMATE. FINAL LOCATIONS SHALL BE PLACED IN ACCORDANCE TO DETAILS AND THE MUTCD.

ALL EXISTING TYPE II SIGNS NOT SHOWN ARE TO REMAIN IN PLACE.

INSTALL WHITE DELINEATORS AT 100' SPACING ALONG OUTSIDE OF SHOULDERS OF RAMPS.

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: BARRON	PERMANENT SIGNING AND PAVEMENT MARKING - CTH O - EAST ROUNDABOUT	SHEET 44	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\023206-PS.DWG
LAYOUT NAME - 023216-ps
PLOT DATE : 7/21/2017 10:43 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:40 FT

TRAFFIC CONTROL GENERAL NOTES

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

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

3. ALL TYPE III BARRICADES SHALL BE EQUIPPED WITH TYPE "A" (LOW INTENSITY FLASHING) LIGHTS PER SDDS.

PCMS GENERAL NOTES

ADJUST TRAFFIC CONTROL PCMS MESSAGES AS NEEDED BASED ON CONSTRUCTION SCHEDULE.

CONSIDER GEOMETRICS WHEN LOCATING MESSAGE BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE BOARD FOR A MINIMUM OF 1,000 FEET IN FRONT OF THE MESSAGE BOARD. PLACE MESSAGE BOARDS AS FAR AWAY FROM LIVE TRAFFIC LANES AS POSSIBLE WITHOUT HAMPERING VISIBILITY.

PLACE TRAFFIC CONTROL SIGNS PCMS AND DISPLAY THE MESSAGE 7 DAYS PRIOR TO THE EXPECTED START OF THE PROPOSED WORK. ADJUST THE MESSAGE DATE ACCORDINGLY.

ADVANCED WARNING FOR LANE WIDTH RESTRICTIONS

IN ADDITION TO THE PCMS MESSAGES FOR WIDTH RESTRICTIONS FOR 50TH AVENUE WORK, PLACE THE FOLLOWING ADVANCED WARNING SIGNS DURING CONSTRUCTION OPERATIONS THAT REQUIRE SINGLE LANE FLAGGING WITH CLEAR WIDTH OF 16' OR LESS.

* POST THE WIDTH RESTRICTION AT 1' LESS THAN THE ACTUAL CLEAR WIDTH OF THE TRAFFIC LANE. DURING OPERATIONS THAT REQUIRE ONE LANE TO BE CLOSED, THE MINIMUM CLEAR WIDTH ALLOWED IS 13' WHICH WILL HAVE A POSTED WIDTH RESTRICTION OF 12'.

** INCLUDE THE WO57-52 SIGN AT LOCATIONS NOT DIRECTLY ADJACENT TO THE WIDTH RESTRICTION AREA.

* MAX. XX WIDTH — W12-52, 48"X48"

** XX MILES AHEAD — W057-52, 48"X36"

W-1 50TH AVE - 1 MILE
W-2 50TH AVE - 0.9 MILES
W-3 50TH AVE
W-4 50TH AVE
W-5 50TH AVE - 0.1 MILES
W-6 50TH AVE - 0.2 MILES

NOTES

DISPLAY THE WIDTH RESTRICTION PCMS MESSAGES AND POST THE WIDTH RESTRICTION ADVANCED WARNING SIGNS FOR 50TH AVENUE TRAFFIC AT THE LOCATIONS PROVIDED DURING WORK THAT REQUIRES A CLEAR WIDTH REDUCTION OF LESS THAN 16'.

CLOSE 50TH AVE RAMPS AND CTH X RAMPS TO COMPLETE MILL AND OVERLAY OPERATIONS. ADDITIONAL RAMP WORK MAY BE COMPLETED UNDER SHOULDER CLOSURES IN ACCORDANCE WITH SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH".

DO NOT CLOSE 50TH AVE RAMPS AND CTH X RAMPS AT THE SAME TIME. DO NOT INSTALL THE LOCAL DETOUR SIGNS FOR 50TH AVE RAMPS AND CTH X AS SHOWN BELOW AT THE SAME TIME.

COMPLETE WORK ON 50TH AVE UNDER SINGLE LANE TRAFFIC PER SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" OR UNDER SHOULDER CLOSURES PER SDD "TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY".

PLACE G20-60 SIGNS ("CLOSED") ON TYPE I SIGNS ON STH 29, COVER EXISTING GORE EXIT SIGNS, AND INSTALL R11-51 SIGNS ON EXIT RAMPS PER SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE" FOR RAMP CLOSURES.

LOCAL DETOUR FOR CTH X RAMP CLOSURES

PLACE THE FOLLOWING LOCAL DETOUR ROUTE SIGNS WHILE THE CTH X RAMPS ARE CLOSED.

DETOUR M4-8 36"X18" (DX-10) | DETOUR M4-8 36"X18" (DX-12) | M4-59R 30"X30" (DX-11) | M4-9R 30"X24" (DX-13) | M4-59L 30"X30" (DX-3, DX-5, DX-8) | M4-9L 30"X24" (DX-4, DX-6) | END DETOUR M4-8A 24"X18" (DX-7, DX-14)

COUNTY X M1-5A 36"X36" — MO5-2R 30"X30" (DX-1)

COUNTY X M1-5A 36"X36" — MO6-2 30"X30" (DX-2)

EAST COUNTY J — DETOUR M4-8 24"X12" — MO6-2 21"X21" (DX-9)

LOCAL DETOUR FOR 50TH AVE RAMP CLOSURES

PLACE THE FOLLOWING LOCAL DETOUR ROUTE SIGNS WHILE THE 50TH AVE RAMPS ARE CLOSED.

*** FIXED MESSAGE SIGN

DETOUR M4-8 36"X18" (DF-3) | DETOUR M4-8 36"X18" (DF-11) | M4-59R 30"X30" (DF-4) | M4-9R 30"X24" (DF-12) | M4-59L 30"X30" (DF-6) | M4-9L 30"X24" (DF-8) | END DETOUR M4-8A 24"X18" (DF-7) | DF-5, DF-10

50TH AVE *** 36"X30" — MO5-2R 30"X30" (DF-1)

50TH AVE *** 36"X30" — MO6-2 30"X30" (DF-2)

EAST COUNTY X — DETOUR M4-8 24"X12" — MO6-2 21"X21" (DF-9)

LEGEND

MB — TRAFFIC CONTROL SIGN PCMS

WORK ZONE

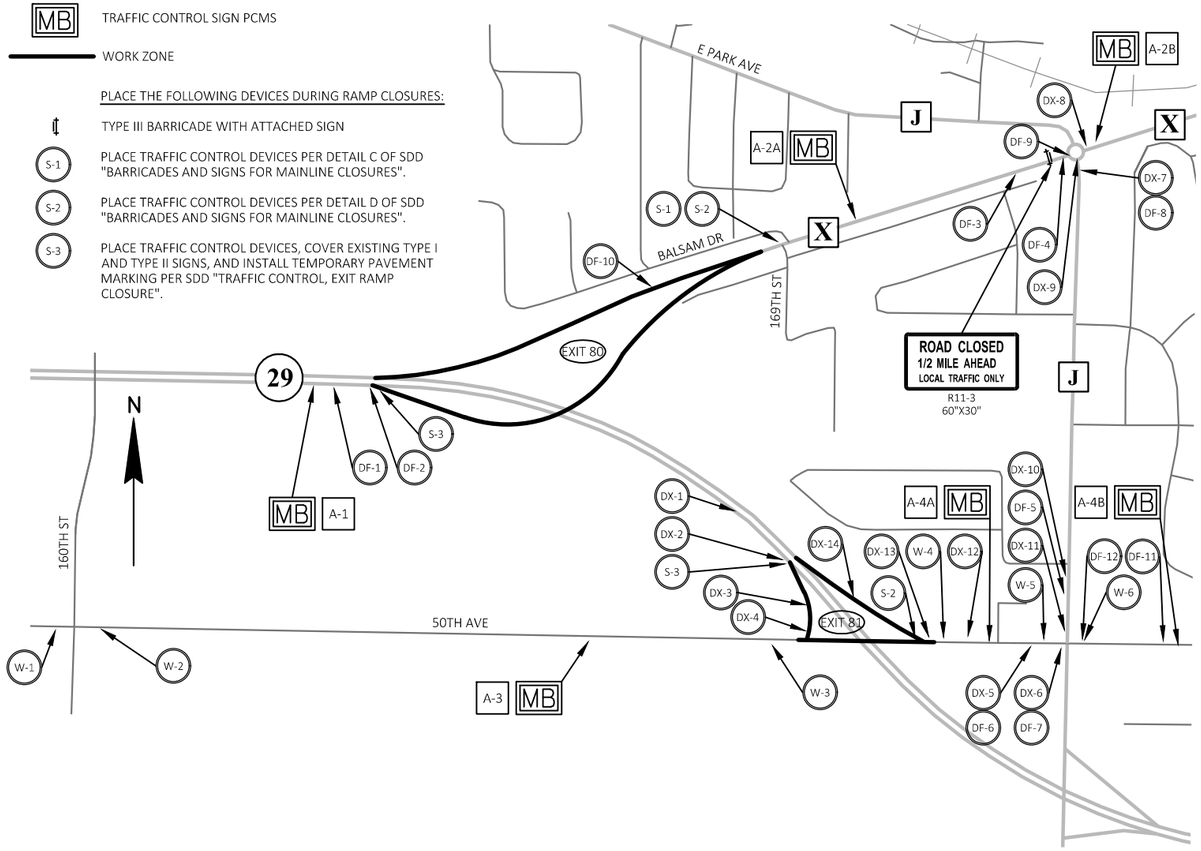
PLACE THE FOLLOWING DEVICES DURING RAMP CLOSURES:

TYPE III BARRICADE WITH ATTACHED SIGN

S-1 PLACE TRAFFIC CONTROL DEVICES PER DETAIL C OF SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES".

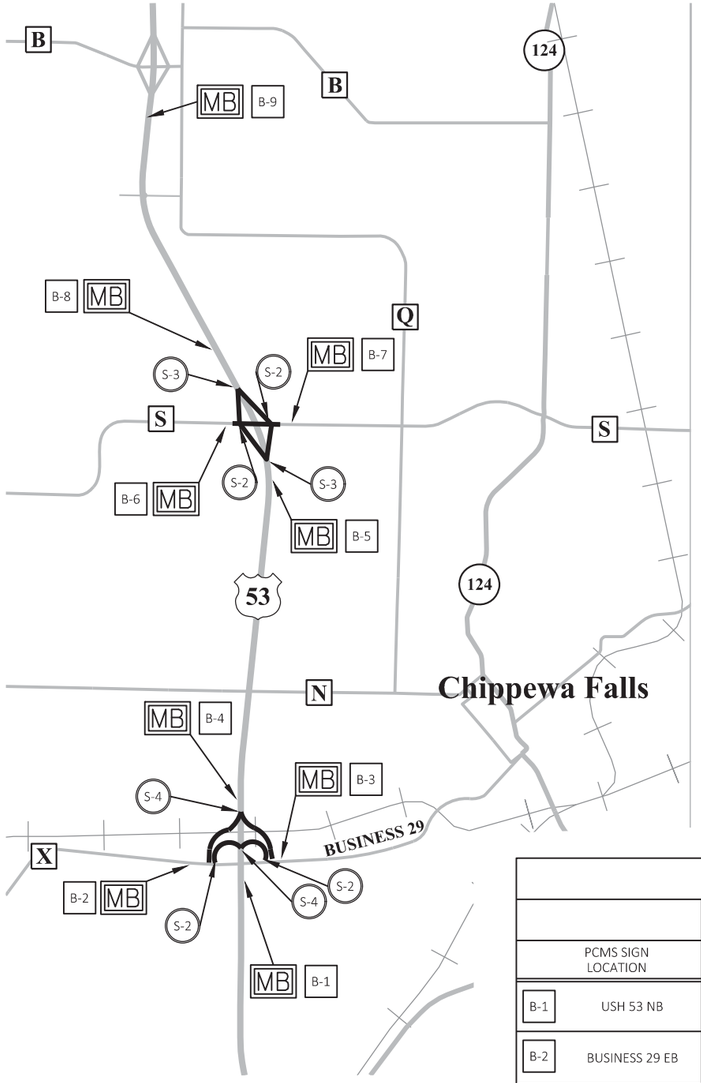
S-2 PLACE TRAFFIC CONTROL DEVICES PER DETAIL D OF SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES".

S-3 PLACE TRAFFIC CONTROL DEVICES, COVER EXISTING TYPE I AND TYPE II SIGNS, AND INSTALL TEMPORARY PAVEMENT MARKING PER SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE".



TRAFFIC CONTROL SIGNS PCMS MESSAGES (50TH AVE AND CTH X INTERCHANGES)

PCMS SIGN LOCATION	PRIOR TO CONSTRUCTION PHASE 1 (2 SEC)	PRIOR TO CONSTRUCTION PHASE 2 (2 SEC)	DURING FLAGGING OPERATIONS PHASE 1 (2 SEC)	DURING FLAGGING OPERATIONS PHASE 2 (2 SEC)	DURING WIDTH RESTRICTION PHASE 1 (2 SEC)	DURING WIDTH RESTRICTION PHASE 2 (2 SEC)	PRIOR TO RAMP CLOSURES PHASE 1 (2 SEC)	PRIOR TO RAMP CLOSURES PHASE 2 (2 SEC)	DURING CTH X RAMP CLOSURES PHASE 1 (2 SEC)	DURING CTH X RAMP CLOSURES PHASE 2 (2 SEC)	DURING 50TH AVE RAMP CLOSURES PHASE 1 (2 SEC)	DURING 50TH AVE RAMP CLOSURES PHASE 2 (2 SEC)	DURING SHOULDER CLOSURES PHASE 1 (2 SEC)	DURING SHOULDER CLOSURES PHASE 2 (2 SEC)
A-1 STH 29 EB	HWY X/50TH AVE ROAD WORK	STARTS DATE	--	--	* MAX XX' WIDTH EXIT 81	TRUCKS USE EXIT 80	HWY X/50TH AVE RAMPS CLOSURES	STARTING DATE	EXIT 80 CLOSED	USE EXIT 81	NEXT EXIT CLOSED	USE EXIT 80	RAMP WORK AHEAD	STAY IN LANE
A-2A CTH X WB	ROAD WORK	STARTS DATE	--	--	--	--	RAMP(S) CLOSURES	STARTING DATE	--	--	--	--	RAMP WORK AHEAD	STAY IN LANE
A-2B CTH X WB	--	--	--	--	--	--	--	--	HWY 29 RAMP CLOSED	FOLLOW DETOUR	--	--	--	--
A-3 50TH AVE EB	ROAD WORK	STARTS DATE	ONE LANE ROAD AHEAD	WATCH FOR FLAGGER	* MAX XX' WIDTH	50TH AVE OVER HWY 29	RAMP(S) CLOSURES	STARTING DATE	--	--	HWY 29 ENT RAMP CLOSED	FOLLOW DETOUR	RAMP WORK AHEAD	--
A-4A 50TH AVE WB	ROAD WORK	STARTS DATE	ONE LANE ROAD AHEAD	WATCH FOR FLAGGER	* MAX XX' WIDTH	50TH AVE OVER HWY 29	RAMP(S) CLOSURES	STARTING DATE	--	--	--	--	RAMP WORK AHEAD	--
A-4B 50TH AVE WB	--	--	--	--	--	--	--	--	--	--	HWY 29 RAMP CLOSED	FOLLOW DETOUR	--	--



NOTES

CLOSE BUSINESS 29 RAMPS WITH OFF-PEAK CLOSURES PER THE SPECIAL PROVISIONS TO COMPLETE ALL WORK. CLOSE NORTH SHOULDER OF BUSINESS 29 DURING WORK NEAR RAMP TERMINALS WITH TRAFFIC CONTROL DEVICES PER SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH".

CLOSE THE CTH S RAMPS TO COMPLETE CONCRETE REPAIRS, MILLING, AND HMA OVERLAY OPERATIONS. ADDITIONAL RAMP WORK MAY BE COMPLETED UNDER SHOULDER CLOSURES IN ACCORDANCE WITH SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH".

DO NOT CLOSE BUSINESS 29 RAMPS AND CTH S RAMPS AT THE SAME TIME. DO NOT CLOSE BOTH ENTRANCE OR BOTH EXIT RAMPS AT AN INTERCHANGE AT THE SAME TIME.

COMPLETE WORK ON CTH S UNDER SINGLE LANE TRAFFIC PER SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" OR UNDER SHOULDER CLOSURES PER SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH".

LEGEND

MB — TRAFFIC CONTROL SIGN PCMS

WORK ZONE

PLACE THE FOLLOWING DEVICES DURING RAMP CLOSURES:

S-2 — PLACE TRAFFIC CONTROL DEVICES PER DETAIL D OF SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES".

S-3 — PLACE TRAFFIC CONTROL DEVICES, COVER EXISTING TYPE I AND TYPE II SIGNS, AND INSTALL TEMPORARY PAVEMENT MARKING PER SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE".

S-4 — PLACE TRAFFIC CONTROL DEVICES AND COVER EXISTING TYPE II SIGNS PER SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE". TEMPORARY PAVEMENT MARKING AND COVERING OF TYPE I SIGNS ARE NOT NECESSARY FOR NIGHTLY RAMP CLOSURES.

N

TRAFFIC CONTROL SIGNS PCMS MESSAGES (BUSINESS 29 AND CTH S INTERCHANGES)

		PRIOR TO CONSTRUCTION		DURING FLAGGING OPERATIONS		PRIOR TO RAMP CLOSURES		DURING BUSINESS 29 RAMP CLOSURES (USH 53 SB)		DURING BUSINESS 29 RAMP CLOSURES (USH 53 NB)		DURING CTH S RAMP CLOSURES (USH 53 SB)		DURING CTH S RAMP CLOSURES (USH 53 NB)		DURING SHOULDER CLOSURES	
PCMS SIGN LOCATION		PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)
B-1	USH 53 NB	RAMP WORK	STARTS DATE	--	--	NIGHTLY RAMP CLOSURES	STARTING DATE 8PM - 7AM	--	--	EXIT 96 CLOSED	ALT RTE USE EXIT 99	--	--	NEXT EXIT CLOSED	CHIPPEWA FALLS EXIT NOW	RAMP WORK AHEAD	STAY IN LANE
B-2	BUSINESS 29 EB	RAMP WORK	STARTS DATE	--	--	NIGHTLY RAMP CLOSURES	STARTING DATE 8PM - 7AM	HWY 53 S ENT RAMP CLOSED	ALT RTE HWY 53 N TO HWY S	HWY 53 N ENT RAMP CLOSED	TAKE ALT ROUTE	--	--	HWY 53 N EXIT 99 CLOSED	TAKE ALT ROUTE	RAMP WORK AHEAD	--
B-3	BUSINESS 29 WB	RAMP WORK	STARTS DATE	--	--	NIGHTLY RAMP CLOSURES	STARTING DATE 8PM - 7AM	HWY 53 S ENT RAMP CLOSED	ALT RTE HWY 53 N TO HWY S	HWY 53 N ENT RAMP CLOSED	TAKE ALT ROUTE	--	--	HWY 53 N EXIT 99 CLOSED	TAKE ALT ROUTE	RAMP WORK AHEAD	--
B-4	USH 53 SB	RAMP WORK	STARTS DATE	--	--	NIGHTLY RAMP CLOSURES	STARTING DATE 8PM - 7AM	--	--	--	--	HWY S ALT RTE EXIT 96	BUS 29 EAST TO HWY 53 N	HWY 53 N ALT RTE EXIT 96	BUS 29 EAST TO HWY 53 N	RAMP WORK AHEAD	STAY IN LANE
B-5	USH 53 NB	CTH S ROAD WORK	STARTS DATE	--	--	RAMP CLOSURES	STARTING DATE	HWY 53 S ALT RTE EXIT 99	HWY S WEST TO HWY 53 S	BUS 29 ALT RTE EXIT 99	HWY S WEST TO HWY 53 S	--	--	EXIT 99 CLOSED	ALT RTE USE EXIT 102	RAMP WORK AHEAD	STAY IN LANE
B-6	CTH S EB	CTH S ROAD WORK	STARTS DATE	ONE LANE ROAD AHEAD	WATCH FOR FLAGGER	RAMP CLOSURES	STARTING DATE	HWY 53 S EXIT 96 CLOSED	TAKE ALT ROUTE	--	--	HWY 53 S ENT RAMP CLOSED	ALT RTE HWY 53 N TO HWY B	HWY 53 N ENT RAMP CLOSED	ALT RTE HWY 53 S TO BS 29	RAMP WORK AHEAD	--
B-7	CTH S WB	CTH S ROAD WORK	STARTS DATE	ONE LANE ROAD AHEAD	WATCH FOR FLAGGER	RAMP CLOSURES	STARTING DATE	HWY 53 S EXIT 96 CLOSED	TAKE ALT ROUTE	--	--	HWY 53 S ENT RAMP CLOSED	ALT RTE HWY 53 N TO HWY B	HWY 53 N ENT RAMP CLOSED	ALT RTE HWY 53 S TO BS 29	RAMP WORK AHEAD	--
B-8	USH 53 SB	CTH S ROAD WORK	STARTS DATE	--	--	RAMP CLOSURES	STARTING DATE	NEXT EXIT CLOSED	CHIPPEWA FALLS EXIT NOW	--	--	EXIT 99 CLOSED	ALT RTE USE EXIT 96	--	--	RAMP WORK AHEAD	STAY IN LANE
B-9	USH 53 NB	--	--	--	--	--	--	--	--	--	--	HWY 53 S ALT RTE EXIT 102	HWY B WEST TO HWY 53 S	CTH S ALT RTE EXIT 102	HWY B WEST TO HWY 53 S	--	--

2

ADVANCED WARNING FOR LANE WIDTH RESTRICTIONS

IN ADDITION TO THE PCMS MESSAGES FOR WIDTH RESTRICTIONS FOR CTH M RAMP WORK, PLACE THE FOLLOWING ADVANCED WARNING SIGNS DURING STAGES R1 AND R2. SEE TRAFFIC CONTROL TYPICAL SECTIONS SHEET FOR ADDITIONAL INFORMATION.

* PLACE THE 36"X36" M1-5A AND 36"X18" M4-5 ON ALL ASSEMBLIES INSTALLED ON USH 53 AND PLACE 24"X24" M1-5A AND 24"X12" M4-5 ON ASSEMBLIES ON ALL OTHER ROADWAYS.

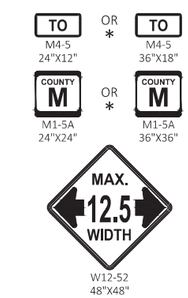
** INCLUDE THE WO57-52 SIGN AT LOCATIONS NOT DIRECTLY ADJACENT TO THE WIDTH RESTRICTION AREA.

NOTES

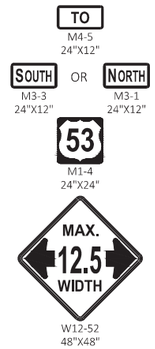
COMPLETE CTH M RAMP WORK HALF AT A TIME. SEE TRAFFIC CONTROL TYPICAL SECTIONS.

COMPLETE WORK ON CTH M UNDER SINGLE LANE TRAFFIC PER SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION" OR UNDER SHOULDER CLOSURES PER SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH".

*** FOR TRAFFIC CONTROL DEVICES FOR BOX CULVERT (C-09-0021) WING WALL REPLACEMENT SEE SDD "TRAFFIC CONTROL, LANE CLOSURE" AND SDD "TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH".



- W-1 USH 53 NB - 5 ½ MILES
- W-2 USH 53 NB - 5 MILES
- W-7 USH 53 NB - ¼ MILE
- W-11 USH 53 SB - ¼ MILE
- W-12 USH 53 SB - 9 MILES
- W-13 USH 53 SB - 9 ½ MILES



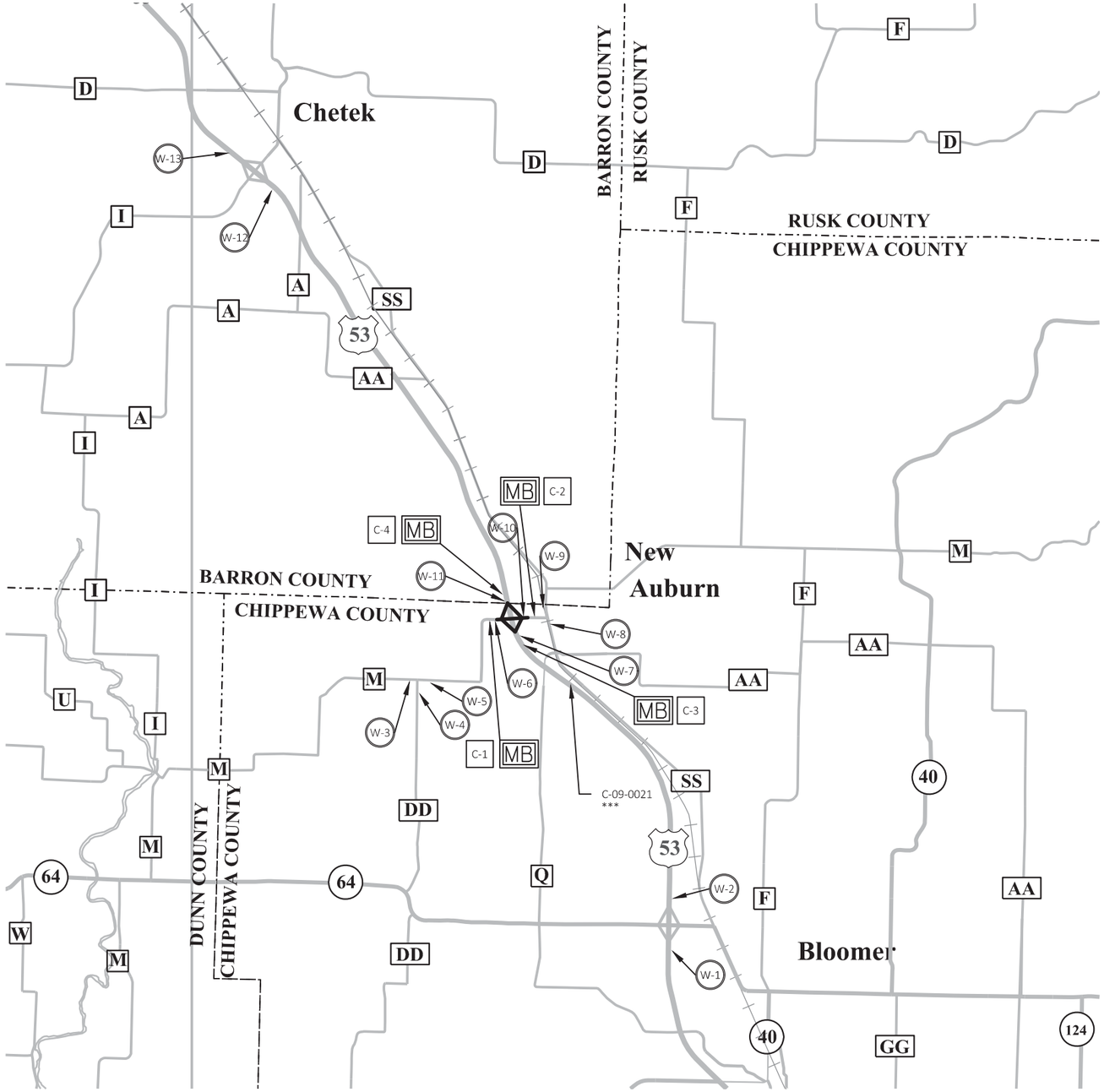
- W-3 CTH M EB - 3 MILES
- W-4 CTH DD NB - 3 MILES
- W-5 CTH M EB - 2 ¼ MILES
- W-6 CTH M EB - ¼ MILE
- W-8 CTH SS NB - ½ MILE
- W-9 CTH M/CTH SS SB - 1 MILE
- W-10 CTH M WB - ¼ MILE

N

LEGEND

MB — TRAFFIC CONTROL SIGN PCMS

— WORK ZONE



TRAFFIC CONTROL SIGNS PCMS MESSAGES (CTH M INTERCHANGE)

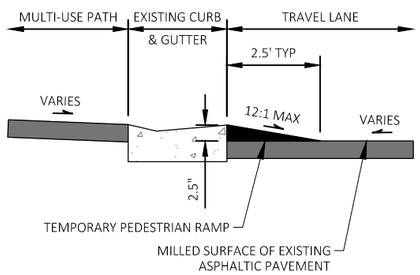
	PCMS SIGN LOCATION	PRIOR TO CONSTRUCTION PHASE 1 (2 SEC)	PRIOR TO CONSTRUCTION PHASE 2 (2 SEC)	DURING SINGLE LANE FLAGGING OPERATIONS PHASE 1 (2 SEC)	DURING SINGLE LANE FLAGGING OPERATIONS PHASE 2 (2 SEC)	DURING RAMP WIDTH RESTRICTIONS PHASE 1 (2 SEC)	DURING RAMP WIDTH RESTRICTIONS PHASE 2 (2 SEC)	DURING SHOULDER CLOSURES PHASE 1 (2 SEC)	DURING SHOULDER CLOSURES PHASE 2 (2 SEC)
C-1	CTH M EB	HWY M ROAD WORK	STARTS DATE	ONE-WAY TRAFFIC AHEAD	WATCH FOR FLAGGER	HWY M RAMPS	MAX 14.5 FT WIDTH	ROAD WORK AHEAD	RIGHT SHOULDER CLOSED
C-2	CTH M WB	HWY M RAMP WORK	STARTS DATE	--	--	HWY M RAMPS	MAX 14.5 FT WIDTH	ROAD WORK AHEAD	RIGHT SHOULDER CLOSED
C-3	USH 53 NB	HWY M RAMP WORK	STARTS DATE	--	--	HWY M RAMPS	MAX 14.5 FT WIDTH	RAMP WORK AHEAD	RIGHT SHOULDER CLOSED
C-4	USH 53 SB	HWY M ROAD WORK	START DATE	ONE-WAY TRAFFIC AHEAD	WATCH FOR FLAGGER	HWY M RAMPS	MAX 14.5 FT WIDTH	RAMP WORK AHEAD	RIGHT SHOULDER CLOSED

TRAFFIC CONTROL SIGNS PCMS MESSAGES (CTH O INTERCHANGE)						
		PRIOR TO CTH O AND RAMP CLOSURES		DURING CTH O AND RAMP CLOSURES		DURING OPEN TIMES (AFTER INITIAL CLOSURES)	
PCMS SIGN LOCATION		PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)	PHASE 1 (2 SEC)	PHASE 2 (2 SEC)
D-1	USH 53 NB	NIGHTLY RAMP CLOSURES	STARTING DATE 8PM - 7AM	EXIT 140 RAMP CLOSED	USE EXIT 143 FOR RICE LAKE	NIGHTLY RAMP CLOSURES	8PM-7AM DATE
D-2	USH 53 SB	NIGHTLY RAMP CLOSURES	STARTING DATE 8PM - 7AM	EXIT 140 RAMP CLOSED	--	NIGHTLY RAMP CLOSURES	8PM-7AM DATE
D-3	CTH O EB	NIGHTLY ROAD CLOSURES	STARTING DATE 8PM - 7AM	HWY O CLOSED	--	NIGHTLY ROAD CLOSURES	8PM-7AM DATE
D-4	CTH O WB	NIGHTLY ROAD CLOSURES	STARTING DATE 8PM - 7AM	HWY O CLOSED	--	NIGHTLY ROAD CLOSURES	8PM-7AM DATE
D-5	USH 53 SB	--	--	NEXT EXIT CLOSED	USE EXIT 143 FOR RICE LAKE	--	--
D-6	STH 48 EB	--	--	HWY 53 S EXIT 140 CLOSED	TAKE ALT ROUTE	--	--
D-7	STH 48 WB	--	--	HWY 53 S EXIT 140 CLOSED	TAKE ALT ROUTE	--	--

NOTES

CLOSE CTH O AND INTERCHANGE RAMPS TO COMPLETE MILL AND OVERLAY OPERATIONS AND ALL OTHER WORK AT THE INTERCHANGE DURING OFF-PEAK HOURS AS SPECIFIED IN THE SPECIAL PROVISIONS.

MAINTAIN PEDESTRIAN ACCESS ALONG THE MULTI-USE PATH THROUGH THE PROJECT AREA. INSTALL TEMPORARY PEDESTRIAN RAMP IF HMA OVERLAY IS NOT COMPLETED IMMEDIATELY FOLLOWING MILLING OPERATIONS. SEE DETAIL FOR ADDITIONAL CONSTRUCTION INFORMATION.



TEMPORARY PEDESTRIAN RAMP

PAID AS TEMPORARY PEDESTRIAN SURFACE ASPHALT

LEGEND

MB — TRAFFIC CONTROL SIGN PCMS

WORK ZONE

P-1 — ROAD WORK AHEAD (W20-1A, 36"X36") — PLACE ON PATH ALONG NORTH SIDE OF CTH O

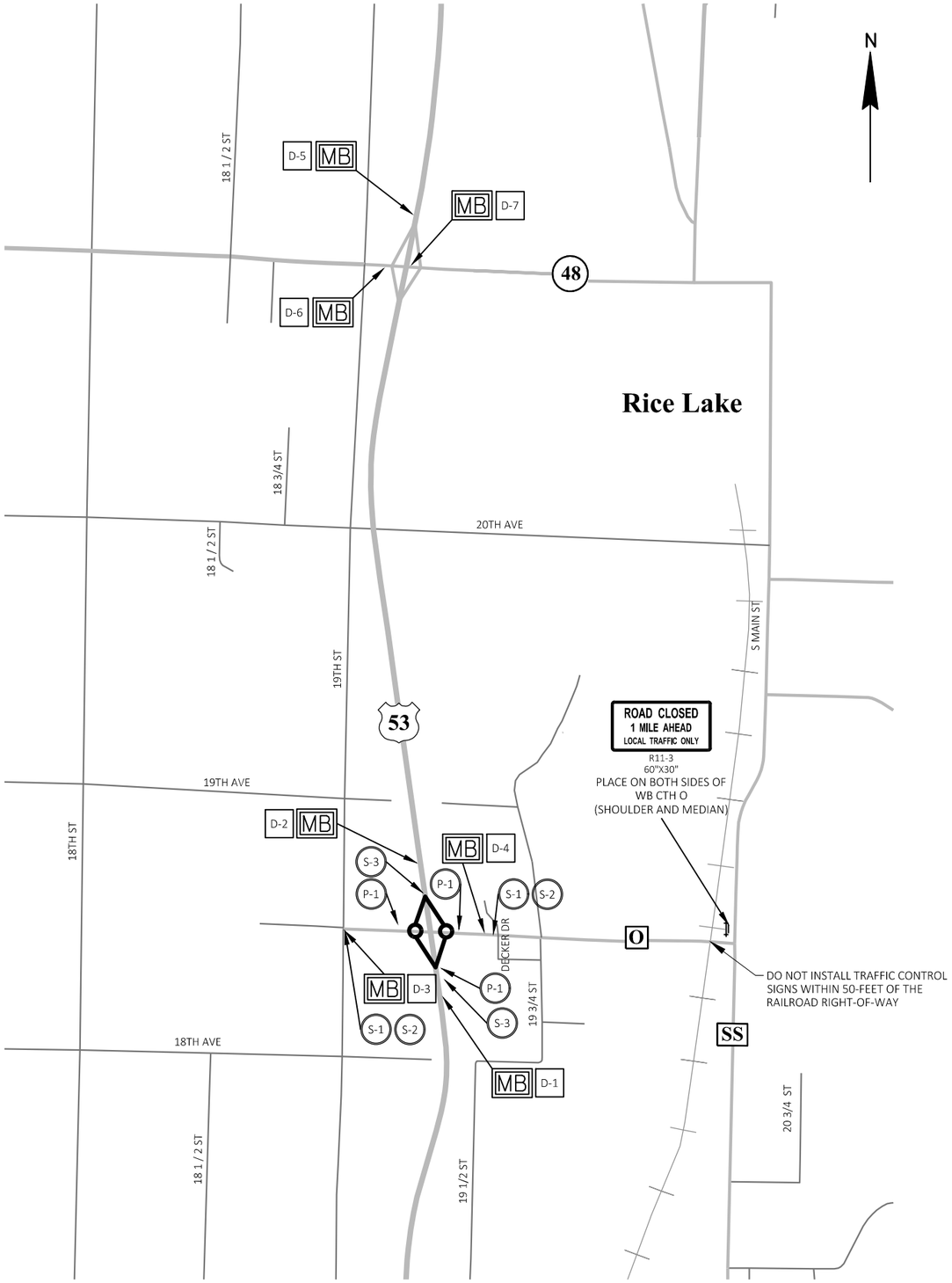
PLACE THE FOLLOWING DEVICES DURING OFF-PEAK CLOSURES OF THE CTH O INTERCHANGE:

TYPE III BARRICADE WITH ATTACHED SIGN

S-1 — PLACE TRAFFIC CONTROL DEVICES PER DETAIL C OF SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES".

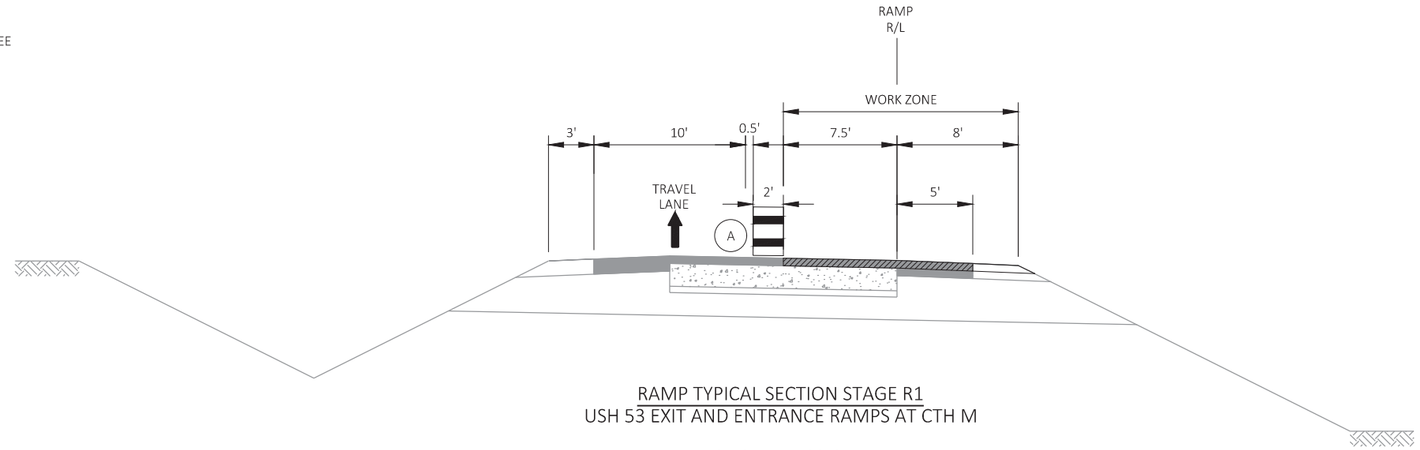
S-2 — PLACE TRAFFIC CONTROL DEVICES PER DETAIL D OF SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES".

S-4 — PLACE TRAFFIC CONTROL DEVICES AND COVER EXISTING TYPE II SIGNS PER SDD "TRAFFIC CONTROL, EXIT RAMP CLOSURE". TEMPORARY PAVEMENT MARKING AND COVERING OF TYPE I SIGNS IS NOT NECESSARY FOR NIGHTLY RAMP CLOSURES.



2

NOTES
POST WIDTH RESTRICTIONS DURING STAGES R1 AND R2. SEE TRAFFIC CONTROL OVERVIEW SHEETS.



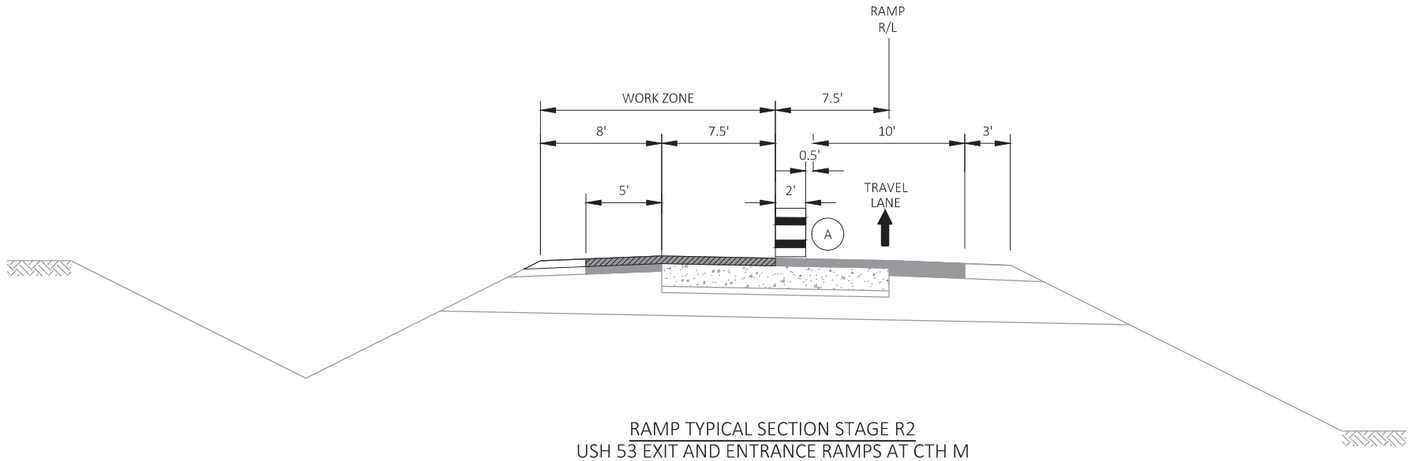
RAMP TYPICAL SECTION STAGE R1
USH 53 EXIT AND ENTRANCE RAMPS AT CTH M

USH 53 NB RAMPS SHOWN,
REVERSE FOR USH 53 SB RAMPS

(A) DRUM LOCATION SHOWN FOR AREAS NOT IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, GAP DRUMS AROUND CONSTRUCTION ACTIVITIES

PROPOSED WORK STAGE R1
WORK ON CTH M RAMP OUTSIDE HALF OF LANE AND SHOULDERS:
MILL AND OVERLAY

2



RAMP TYPICAL SECTION STAGE R2
USH 53 EXIT AND ENTRANCE RAMPS AT CTH M

USH 53 NB SHOWN,
REVERSE FOR USH 53 SB RAMPS

(A) DRUM LOCATION SHOWN FOR AREAS NOT IMMEDIATELY ADJACENT TO CONSTRUCTION ACTIVITIES, GAP DRUMS AROUND CONSTRUCTION ACTIVITIES

PROPOSED WORK STAGE R2
WORK ON CTH M RAMP INSIDE HALF OF LANE AND SHOULDERS:
MILL AND OVERLAY

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	TRAFFIC CONTROL - CTH M TYPICAL SECTIONS	SHEET 49	E

					1050-00-72	1190-10-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0002	203.0100	Removing Small Pipe Culverts	EACH	2.000		2.000
0004	203.0200	Removing Old Structure (station) 01. 1227+50	LS	1.000		1.000
0006	204.0105	Removing Pavement Butt Joints	SY	110.000	5.000	105.000
0008	204.0109.S	Removing Concrete Surface Partial Depth	SF	75,570.000	2,300.000	73,270.000
0010	204.0110	Removing Asphaltic Surface	SY	75.000		75.000
0012	204.0115	Removing Asphaltic Surface Butt Joints	SY	220.000	65.000	155.000
0014	204.0120	Removing Asphaltic Surface Milling	SY	56,330.000	18,620.000	37,710.000
0016	204.0130	Removing Curb	LF	230.000		230.000
0018	204.0150	Removing Curb & Gutter	LF	200.000		200.000
0020	204.0155	Removing Concrete Sidewalk	SY	3.000		3.000
0022	204.0180	Removing Delineators and Markers	EACH	245.000	59.000	186.000
0024	204.0185	Removing Masonry	CY	7.000		7.000
0026	204.0190	Removing Surface Drains	EACH	1.000		1.000
0028	204.0220	Removing Inlets	EACH	1.000		1.000
0030	204.0245	Removing Storm Sewer (size) 01. 12-Inch	LF	66.000		66.000
0032	206.2000	Excavation for Structures Culverts (structure) 01. C-09-0021	LS	1.000		1.000
0034	210.2500	Backfill Structure Type B	TON	20.000		20.000
0036	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1050-00-72	LS	1.000	1.000	
0038	211.0100	Prepare Foundation for Asphaltic Paving (project) 02. 1190-10-70	LS	1.000		1.000
0040	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	149.000	41.000	108.000
0042	213.0100	Finishing Roadway (project) 01. 1050-00-72	EACH	1.000	1.000	
0044	213.0100	Finishing Roadway (project) 02. 1190-10-70	EACH	1.000		1.000
0046	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,120.000	516.000	604.000
0048	305.0500	Shaping Shoulders	STA	350.000	138.000	212.000
0050	416.0610	Drilled Tie Bars	EACH	4.000		4.000
0052	416.0620	Drilled Dowel Bars	EACH	1,010.000		1,010.000
0054	416.1010	Concrete Surface Drains	CY	3.000		3.000
0056	440.4410	Incentive IRI Ride	DOL	4,000.000	4,000.000	
0058	455.0605	Tack Coat	GAL	7,690.000	1,748.000	5,942.000
0060	460.2000	Incentive Density HMA Pavement	DOL	7,480.000	2,160.000	5,320.000
0062	460.7443	HMA Pavement 3 HT 58-34 H	TON	380.000	380.000	
0064	460.7444	HMA Pavement 4 HT 58-34 H	TON	3,920.000	2,575.000	1,345.000
0066	460.7445	HMA Pavement 5 HT 58-34 H	TON	6,480.000	420.000	6,060.000
0068	460.7644	HMA Pavement 4 HT 58-34 V	TON	900.000		900.000
0070	465.0110	Asphaltic Surface Patching	TON	80.000	25.000	55.000
0072	465.0315	Asphaltic Flumes	SY	32.000	16.000	16.000
0074	502.4205	Adhesive Anchors No. 5 Bar	EACH	9.000		9.000

					1050-00-72	1190-10-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0076	504.0100	Concrete Masonry Culverts	CY	3.000		3.000
0078	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	293.000		293.000
0080	511.1200	Temporary Shoring (structure) 01. C-09-0021	SF	80.000		80.000
0082	516.0500	Rubberized Membrane Waterproofing	SY	3.000		3.000
0084	520.8000	Concrete Collars for Pipe	EACH	2.000		2.000
0086	521.1012	Apron Endwalls for Culvert Pipe Steel 12-Inch	EACH	1.000		1.000
0088	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	1.000		1.000
0090	521.1235	Apron Endwalls for Pipe Arch Steel 35x24-Inch	EACH	1.000		1.000
0092	521.3124	Culvert Pipe Corrugated Steel 24-Inch	LF	5.000		5.000
0094	521.3735	Pipe Arch Corrugated Steel 35x24-Inch	LF	8.000		8.000
0096	601.0555	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	LF	6.000		6.000
0098	602.1000	Concrete Loading Zone	SF	25.000		25.000
0100	606.0200	Riprap Medium	CY	55.000		55.000
0102	611.0654	Inlet Covers Type V	EACH	1.000		1.000
0104	611.3220	Inlets 2x2-FT	EACH	1.000		1.000
0106	612.0212	Pipe Underdrain Unperforated 12-Inch	LF	67.000		67.000
0108	614.0010	Barrier System Grading Shaping Finishing	EACH	7.000		7.000
0110	614.0115	Anchorages for Steel Plate Beam Guard Type 2	EACH	5.000		5.000
0112	614.0305	Steel Plate Beam Guard Class A	LF	712.500		712.500
0114	614.0340	Steel Plate Beam Guard Over Low-Fill Culverts Class A	LF	400.000		400.000
0116	614.0345	Steel Plate Beam Guard Short Radius	LF	125.000		125.000
0118	614.0370	Steel Plate Beam Guard Energy Absorbing Terminal	EACH	3.000		3.000
0120	614.0920	Salvaged Rail	LF	1,215.000		1,215.000
0122	614.0925	Salvaged Guardrail End Treatments	EACH	10.000		10.000
0124	614.0950	Replacing Guardrail Posts and Blocks	EACH	10.000		10.000
0126	614.2300	MGS Guardrail 3	LF	400.000		400.000
0128	614.2500	MGS Thrie Beam Transition	LF	78.800		78.800
0130	614.2610	MGS Guardrail Terminal EAT	EACH	3.000		3.000
0132	614.2620	MGS Guardrail Terminal Type 2	EACH	1.000		1.000
0134	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1050-00-72	EACH	1.000	1.000	
0136	618.0100	Maintenance And Repair of Haul Roads (project) 02. 1190-10-70	EACH	1.000		1.000
0138	619.1000	Mobilization	EACH	1.000	0.350	0.650
0140	624.0100	Water	MGAL	18.000	7.000	11.000
0142	628.1504	Silt Fence	LF	2,650.000		2,650.000
0144	628.1520	Silt Fence Maintenance	LF	2,650.000		2,650.000
0146	628.1905	Mobilizations Erosion Control	EACH	5.000	1.000	4.000
0148	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	1.000	2.000
0150	628.2004	Erosion Mat Class I Type B	SY	4,250.000		4,250.000

					1050-00-72	1190-10-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0152	628.2008	Erosion Mat Urban Class I Type B	SY	500.000		500.000
0154	628.7015	Inlet Protection Type C	EACH	40.000		40.000
0156	628.7504	Temporary Ditch Checks	LF	300.000		300.000
0158	628.7555	Culvert Pipe Checks	EACH	20.000		20.000
0160	628.7570	Rock Bags	EACH	50.000		50.000
0162	633.0100	Delineator Posts Steel	EACH	228.000	48.000	180.000
0164	633.0500	Delineator Reflectors	EACH	240.000	48.000	192.000
0166	633.5200	Markers Culvert End	EACH	5.000		5.000
0168	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	13.000	7.000	6.000
0170	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	78.000	8.000	70.000
0172	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	69.000	21.000	48.000
0174	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	28.000	5.000	23.000
0176	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	4.000		4.000
0178	637.2210	Signs Type II Reflective H	SF	1,341.560	197.920	1,143.640
0180	637.2215	Signs Type II Reflective H Folding	SF	140.000		140.000
0182	637.2230	Signs Type II Reflective F	SF	175.250	83.500	91.750
0184	638.2102	Moving Signs Type II	EACH	3.000		3.000
0186	638.2602	Removing Signs Type II	EACH	142.000	37.000	105.000
0188	638.3000	Removing Small Sign Supports	EACH	158.000	40.000	118.000
0190	638.4000	Moving Small Sign Supports	EACH	4.000		4.000
0192	642.5201	Field Office Type C	EACH	1.000		1.000
0194	643.0300	Traffic Control Drums	DAY	14,890.000	2,560.000	12,330.000
0196	643.0310.S	Temporary Portable Rumble Strips 01. 1050-00-72	LS	1.000	1.000	
0198	643.0310.S	Temporary Portable Rumble Strips 02. 1190-10-70	LS	1.000		1.000
0200	643.0420	Traffic Control Barricades Type III	DAY	1,030.000	200.000	830.000
0202	643.0705	Traffic Control Warning Lights Type A	DAY	1,610.000	320.000	1,290.000
0204	643.0715	Traffic Control Warning Lights Type C	DAY	670.000		670.000
0206	643.0800	Traffic Control Arrow Boards	DAY	190.000	40.000	150.000
0208	643.0900	Traffic Control Signs	DAY	4,885.000	1,180.000	3,705.000
0210	643.0910	Traffic Control Covering Signs Type I	EACH	120.000	40.000	80.000
0212	643.0920	Traffic Control Covering Signs Type II	EACH	110.000	20.000	90.000
0214	643.1000	Traffic Control Signs Fixed Message	SF	15.000	15.000	
0216	643.1050	Traffic Control Signs PCMS	DAY	745.000	108.000	637.000
0218	643.5000	Traffic Control	EACH	1.000	0.300	0.700
0220	644.1410.S	Temporary Pedestrian Surface Asphalt	SF	120.000		120.000
0222	645.0120	Geotextile Type HR	SY	140.000		140.000
0224	646.1020	Marking Line Epoxy 4-Inch	LF	8,500.000	2,016.000	6,484.000
0226	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	45,460.000	15,445.000	30,015.000
0228	646.3020	Marking Line Epoxy 8-Inch	LF	2,250.000	74.000	2,176.000
0230	646.5020	Marking Arrow Epoxy	EACH	14.000		14.000

					1050-00-72	1190-10-70
Line	**Item**	**Item Description**	**Unit**	**Total**	**Qty**	**Qty**
0232	646.5120	Marking Word Epoxy	EACH	2.000		2.000
0234	646.6120	Marking Stop Line Epoxy 18-Inch	LF	250.000	50.000	200.000
0236	646.6320	Marking Dotted Extension Epoxy 18-Inch	LF	100.000		100.000
0238	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	110.000		110.000
0240	646.8020	Marking Corrugated Median Epoxy	SF	750.000		750.000
0242	646.8120	Marking Curb Epoxy	LF	400.000		400.000
0244	646.8220	Marking Island Nose Epoxy	EACH	4.000		4.000
0246	646.9400	Marking Removal Plowable Raised Pavement Markers	EACH	19.000		19.000
0248	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	2,550.000	1,250.000	1,300.000
0250	650.6500	Construction Staking Structure Layout (structure) 01. C-09-0021	LS	1.000		1.000
0252	650.8000	Construction Staking Resurfacing Reference	LF	24,100.000	7,520.000	16,580.000
0254	650.9910	Construction Staking Supplemental Control (project) 01. 1050-00-72	LS	1.000	1.000	
0256	650.9910	Construction Staking Supplemental Control (project) 02. 1190-10-70	LS	1.000		1.000
0258	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	80.000		80.000
0260	653.0135	Pull Boxes Steel 24x36-Inch	EACH	4.000		4.000
0262	654.0105	Concrete Bases Type 5	EACH	4.000		4.000
0264	654.0220	Concrete Control Cabinet Bases Type 10	EACH	4.000		4.000
0266	657.0100	Pedestal Bases	EACH	4.000		4.000
0268	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	4.000		4.000
0270	657.0321	Poles Type 5-Steel	EACH	4.000		4.000
0272	657.0425	Traffic Signal Standards Aluminum 15-FT	EACH	4.000		4.000
0274	662.2032.S	Ramp Closure Gates Solar 32-FT	EACH	1.000		1.000
0276	662.2037.S	Ramp Closure Gates Solar 37-FT	EACH	1.000		1.000
0278	662.2040.S	Ramp Closure Gates Solar 40-FT	EACH	2.000		2.000
0280	662.4000.S	Ramp Closure Gate Flashers Stockpile	EACH	12.000		12.000
0282	690.0150	Sawing Asphalt	LF	1,368.000		1,368.000
0284	690.0250	Sawing Concrete	LF	2,065.000		2,065.000
0286	715.0502	Incentive Strength Concrete Structures	DOL	500.000		500.000
0288	SPV.0060	Special 01. Shaping and Finishing Wing Walls	EACH	1.000		1.000
0290	SPV.0060	Special 02. Grading, Shaping, and Finishing Ramp Gates	EACH	2.000		2.000
0292	SPV.0180	Special 01. Concrete Pavement Repair Doweled Special	SY	440.000		440.000
0294	SPV.0180	Special 02. Concrete Pavement Replacement Doweled Special	SY	440.000		440.000

3

REMOVING SMALL PIPE CULVERTS

PROJECT	STATION	OFFSET	ALIGNMENT	203.0100 REMOVING SMALL PIPE CULVERTS EACH	COMMENTS
1190-10-70					
	404+73	RT	'SE'	1	24" CPCS (AEW ONLY)
	494+89	RT	'SD'	1	35" x 24" PACS (AEW ONLY)
TOTAL				2	

REMOVING CURB & GUTTER AND REMOVING CURB ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0150 REMOVING CURB & GUTTER LF	204.0130 REMOVING CURB LF
1190-10-70							
	348+85	-	349+98	RT	'BB'	–	115
	383+13	-	384+26	LT	'BD'	–	115
	411+09	-	411+25	LT	'SE'	37	–
	411+44	-	412+55	LT	'SE'	136	–
	460+88	-	461+13	LT	'SC'	27	–
TOTALS						200	230

REMOVAL ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0105 REMOVING PAVEMENT BUTT JOINTS SY	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH SF	204.0110* REMOVING ASPHALTIC SURFACE SY	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS SY	204.0120 REMOVING ASPHALTIC SURFACE MILLING SY	646.9400 MARKING REMOVAL PLOWABLE RAISED PAVEMENT MARKERS EACH
1050-00-72											
	104+59	-	107+33	LT & RT	'F'	–	--	–	17	1,050	–
	110+06	-	112+80	LT & RT	'F'	–	--	–	18	1,070	–
	124+90	-	128+93	LT & RT	'FA'	–	--	–	3	730	–
	143+55	-	151+04	LT & RT	'FB'	–	--	–	3	1,370	–
	207+24	-	220+02	LT & RT	'XA'	5	2,300	–	5	2,960	–
	222+57	-	239+86	LT & RT	'XA'	–	--	–	9	4,160	–
	226+85	-	255+30	LT & RT	'XB'	–	--	–	10	7,280	–
PROJECT 1050-00-72 TOTALS						5	2,300	–	65	18,620	–
1190-10-70											
	324+77	-	333+04	LT & RT	'BA'	17	2,528	–	5	1,790	–
	340+00	-	349+57	LT & RT	'BB'	21	2,165	–	5	2,170	–
	360+00	-	370+13	LT & RT	'BC'	13	2,310	–	5	2,280	–
	381+90	-	392+89	LT & RT	'BD'	21	2,525	–	3	2,470	–
	402+22	-	413+29	LT & RT	'SE'	21	43,596	–	2	1,090	–
	421+04	-	431+82	LT & RT	'SA'	3	3,640	–	2	2,580	5
	440+00	-	455+18	LT & RT	'SB'	3	5,410	–	2	110	–
	460+00	-	471+44	LT & RT	'SC'	3	6,874	–	2	150	4
	482+07	-	495+66	LT & RT	'SD'	3	4,222	–	2	60	–
	503+75	-	507+56	LT & RT	'M'	–	--	–	27	2,560	–
	509+94	-	513+75	LT & RT	'M'	–	--	10	28	2,570	–
	523+11	-	533+47	LT & RT	'MA'	–	--	–	6	3,140	5
	540+00	-	552+99	LT & RT	'MB'	–	--	–	4	3,690	–
	560+00	-	572+30	LT & RT	'MC'	–	--	–	5	3,620	5
	582+90	-	592+81	LT & RT	'MD'	–	--	–	6	2,910	–
	601+99	-	613+58	LT & RT	'C'	–	--	–	51	6,520	–
PROJECT 1190-10-70 TOTALS						105	73,270	10	155	37,710	19
TOTALS						110	75,570	10	220	56,330	19

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

REMOVING MASONRY ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0185 REMOVING MASONRY CY	COMMENTS
1190-10-70							
	441+91	-	442+27	RT	'SB'	7	CONCRETE LINED DITCH
TOTAL						7	

REMOVING SURFACE DRAIN ITEMS

PROJECT	STATION	OFFSET	ALIGNMENT	204.0190 REMOVING SURFACE DRAINS EACH	204.0220 REMOVING INLETS EACH	204.0245 REMOVING STORM SEWER (12-INCH) LF
1190-10-70						
	510+11	LT	'M'	1	1	66
TOTALS				1	1	66

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

PREPARE FOUNDATION ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	211.0100.01 PREPARE FOUNDATION FOR ASPHALTIC PAVING (1050-00-72) LS	211.0100.02 PREPARE FOUNDATION FOR ASPHALTIC PAVING (1190-10-70) LS	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS STA
1050-00-72								
	124+90	-	128+93	LT & RT	'FA'	–	–	10
	143+55	-	151+04	LT & RT	'FB'	–	–	16
	229+80	-	239+86	RT	'XA'	–	–	11
	226+85	-	230+00	RT	'XB'	–	–	4
	PROJECT			–	--	1	–	--
PROJECT 1050-00-72 TOTALS						1	–	41
1190-10-70								
	402+22	-	413+29	LT & RT	'SE'	–	–	24
	440+50	-	455+18	LT & RT	'SB'	–	–	32
	460+50	-	471+44	LT & RT	'SC'	–	–	24
	482+07	-	495+40	LT & RT	'SD'	–	–	28
	PROJECT			–	--	–	1	--
PROJECT 1190-10-70 TOTALS						–	1	108
TOTALS						1	1	149

CONCRETE SURFACE DRAINS

PROJECT	STATION	OFFSET	ALIGNMENT	416.1010 CONCRETE SURFACE DRAINS CY
1190-10-70				
	510+19.46	45' LT	'M'	3
TOTAL				3

ASPHALTIC ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	455.0605 TACK COAT GAL	460.7443 HMA PAVEMENT 3 HT 58-34 H TON	460.7444 HMA PAVEMENT 4 HT 58-34 H TON	460.7445 HMA PAVEMENT 5 HT 58-34 H TON	460.7644 HMA PAVEMENT 4 HT 58-34 V TON	465.0110* ASPHALTIC SURFACE PATCHING TON	465.0315 ASPHALTIC FLUMES SY	COMMENTS
1050-00-72													
	104+59	-	107+33	LT & RT	'F'	81	190	127	–	–	–	16	
	110+06	-	112+80	LT & RT	'F'	81	190	127	–	–	–	--	
	124+90	-	128+93	LT & RT	'FA'	51	–	--	142	–	–	--	
	143+55	-	151+04	LT & RT	'FB'	93	–	--	278	–	–	--	
	207+24	-	220+02	LT & RT	'XA'	207	–	407	–	–	–	--	
	222+57	-	239+86	LT & RT	'XA'	302	–	593	–	–	–	--	
	226+85	-	255+30	LT & RT	'XB'	933	–	1,321	–	–	–	--	INCLUDES HMA WEDGING
	UNDISTRIBUTED			–	--	--	–	--	–	–	25	--	PREPARE FOUNDATION REFILLING
PROJECT 1050-00-72 TOTALS						1,748	380	2,575	420	–	25	16	
1190-10-70													
	324+77	-	333+04	LT & RT	'BA'	145	–	285	–	–	–	--	
	340+00	-	349+57	LT & RT	'BB'	169	–	331	–	–	–	--	
	360+00	-	370+13	LT & RT	'BC'	177	–	348	–	–	–	--	
	381+90	-	392+89	LT & RT	'BD'	193	–	381	–	–	–	--	
	402+22	-	413+29	LT & RT	'SE'	683	–	--	1,042	–	–	8	
	421+04	-	431+82	LT & RT	'SA'	417	–	--	496	–	–	--	
	440+00	-	455+18	LT & RT	'SB'	546	–	--	650	–	–	--	
	460+00	-	471+44	LT & RT	'SC'	439	–	--	523	–	–	--	
	482+07	-	495+66	LT & RT	'SD'	488	–	--	580	–	–	--	
	503+75	-	507+56	LT & RT	'M'	179	–	--	282	–	–	--	
	509+94	-	513+75	LT & RT	'M'	180	–	--	282	–	3	--	
	523+11	-	533+47	LT & RT	'MA'	440	–	--	520	–	–	--	
	540+00	-	552+99	LT & RT	'MB'	516	–	--	608	–	–	--	
	560+00	-	572+30	LT & RT	'MC'	506	–	--	597	–	–	--	
	582+90	-	592+81	LT & RT	'MD'	408	–	--	480	–	–	--	
	601+99	-	613+58	LT & RT	'C'	456	–	--	–	900	–	8	
	UNDISTRIBUTED			–	--	--	–	--	–	–	42	--	PREPARE FOUNDATION REFILLING
PROJECT 1190-10-70 TOTALS						5,942	–	1,345	6,060	900	45	16	
TOTALS						7,690	380	3,920	6,480	900	70	32	

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

BASE AGGREGATE ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0500 SHAPING SHOULDERS STA
1050-00-72							
	104+59	-	107+33	LT & RT	'F'	18	8
	110+06	-	112+80	LT & RT	'F'	18	6
	124+90	-	128+93	LT & RT	'FA'	61	–
	143+55	-	151+04	LT & RT	'FB'	109	–
	207+24	-	220+02	LT & RT	'XA'	50	28
	222+57	-	239+86	LT & RT	'XA'	67	36
	226+85	-	255+30	LT & RT	'XB'	193	60
PROJECT 1050-00-72 TOTALS						516	138
1190-10-70							
	324+77	-	333+04	LT & RT	'BA'	6	4
	340+00	-	349+57	LT & RT	'BB'	19	12
	360+00	-	370+13	LT & RT	'BC'	22	13
	381+90	-	392+89	LT & RT	'BD'	8	5
	402+22	-	413+29	LT & RT	'SE'	43	24
	421+04	-	431+82	LT & RT	'SA'	27	22
	440+00	-	455+18	LT & RT	'SB'	101	6
	460+00	-	471+44	LT & RT	'SC'	74	6
	482+07	-	495+66	LT & RT	'SD'	91	4
	503+75	-	507+56	LT & RT	'M'	15	10
	509+94	-	513+75	LT & RT	'M'	15	10
	523+11	-	533+47	LT & RT	'MA'	39	22
	540+00	-	552+99	LT & RT	'MB'	49	26
	560+00	-	572+30	LT & RT	'MC'	46	26
	582+90	-	592+81	LT & RT	'MD'	37	22
	601+99	-	613+58	LT & RT	'C'	12	–
PROJECT 1190-10-70 TOTALS						604	212
TOTALS						1,120	350

CONCRETE PAVEMENT ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0110* REMOVING ASPHALTIC SURFACE SY	416.0620 DRILLED DOWEL BARS EACH	465.0110* ASPHALTIC SURFACE PATCHING TON	690.0150* SAWING ASPHALT LF	690.0250* SAWING CONCRETE LF	SPV.0180.01 CONCRETE PAVEMENT REPAIR DOWELED SPECIAL SY	SPV.0180.02 CONCRETE PAVEMENT REPLACEMENT DOWELED SPECIAL SY
1190-10-70												
	421+04	-	431+82	LT & RT	'SA'	13	208	2	260	390	90	90
	440+00	-	455+18	LT & RT	'SB'	20	306	3	380	570	130	130
	460+00	-	471+44	LT & RT	'SC'	14	224	2	270	420	100	100
	482+07	-	495+66	LT & RT	'SD'	18	272	3	350	510	120	120
TOTALS						65	1010	10	1260	1890	440	440

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

CONCRETE CURB & GUTTER ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	601.0555 CONCRETE CURB & GUTTER 6-INCH SLOPED 36-INCH TYPE A LF
1190-10-70						
	460+88	-	460+94	LT	'SC'	6
TOTAL						6

CONCRETE LOADING ZONE

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0155 REMOVING CONCRETE SIDEWALK SY	416.0610 DRILLED TIE BARS EACH	602.1000 CONCRETE LOADING ZONE SF	COMMENTS
1190-10-70									
	611+74	-	611+86	LT	'C'	3	4	25	EXISTING LOADING ZONE IS TIED TO CONCRETE CORRUGATED MEDIAN
TOTALS						3	4	25	

RIPRAP MEDIUM AND GEOTEXTILE TYPE HR ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	606.0200 RIPRAP MEDIUM CY	645.0120 GEOTEXTILE TYPE HR SY
1190-10-70							
	441+63	-	442+41	RT	'SB'	53	133
	510+20			LT	'M'	2	7
TOTALS						55	140

CROSS DRAINS

PROJECT	STATION	OFFSET	ALIGNMENT	MINIMUM THICKNESS INCHES	520.8000 CONCRETE COLLARS FOR PIPE EACH	521.3124 CULVERT PIPE CORRUGATED STEEL 24-INCH LF	521.3735 PIPE ARCH CORRUGATED STEEL 35X24-INCH LF	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EACH	521.1235 APRON ENDWALLS FOR PIPE ARCH STEEL 35X24-INCH EACH	633.5200* MARKERS CULVERT END EACH
1190-10-70										
	404+73	RT	'SE'	0.064	1	5	–	1	–	2
	494+89	RT	'SD'	0.079	1	–	8	–	1	2
TOTALS					2	5	8	1	1	4

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

STORM SEWER STRUCTURES

PROJECT	STATION	OFFSET	ALIGNMENT	STRUCTURE NUMBER	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH EACH	611.0654 INLET COVERS TYPE V EACH	611.3220 INLETS 2X2-FT EACH	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH LF	633.5200* MARKERS CULVERT END EACH
1190-10-70									
	510+19.46	45' LT	'M'	1	--	1	1	67	--
	510+19.46	112' LT	'M'	2	1	–	–	--	1
TOTALS					1	1	1	67	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

BARRIER SYSTEM GRADING SHAPING FINISHING

						614.0010	**	**	**	**	**	**	
PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	BARRIER SYSTEM GRADING SHAPING FINISHING EACH	EXCAVATION COMMON CY	FILL CY	BORROW CY	TOPSOIL SY	FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 30 LB	COMMENTS
1190-10-70													
	404+20	-	408+95	RT	'SE'	1	70	95	25	742	0.5	20	INCLUDES STA 494'SD'+39 - STA 495'SD'+23, RT ON USH 53 SB ENTRANCE RAMP
	405+80	-	411+23	LT	'SE'	1	68	45	--	481	0.3	13	INCLUDES STA 440'SB'+83 - STA 442'SB'+31, LT ON USH 53 NB ENTRANCE RAMP
	411+50	-	412+77	LT	'SE'	1	39	87	48	515	0.3	14	INCLUDES STA 440'SB'+71 - STA 442'SB'+21, RT ON USH 53 NB ENTRANCE RAMP
	460+76	-	463+96	RT	'SC'	1	348	125	--	973	0.6	26	
	460+94	-	463+96	LT	'SC'	1	46	75	29	538	0.3	15	
	505+75	-	507+50	RT	'M'	1	--	1	1	67	0.1	4	
	510+00	-	511+83	LT	'M'	1	--	1	1	296	0.2	13	
TOTALS						7	571	431	103	3,612	2.3	105	

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

BEAM GUARD ITEMS

						614.0920*	614.0925*	614.0115	614.0305	614.0340	614.0345	614.0370	614.0950
PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	SALVAGED RAIL LF	SALVAGED GUARDRAIL END TREATMENTS EACH	ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2 EACH	STEEL PLATE BEAM GUARD CLASS A LF	STEEL PLATE BEAM GUARD OVER LOW-FILL CULVERTS CLASS A LF	STEEL PLATE BEAM GUARD SHORT RADIUS LF	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL EACH	REPLACING GUARDRAIL POSTS AND BLOCKS EACH
1190-10-70													
	381+78	-	383+26	LT	'BD'	–	–	–	--	--	--	–	10
	406+09	-	411+23	LT	'SE'	205	1	1	487.5	--	62.5	–	–
	411+50	-	412+77	LT	'SE'	–	–	–	25	--	62.5	1	–
	440+71	-	442+21	RT	'SB'	55	1	1	37.5	100	--	–	–
	440+83	-	442+31	LT	'SB'	55	1	1	25	100	--	–	–
	460+83	-	463+08	RT	'SC'	120	1	1	75	100	--	1	–
	460+94	-	463+04	LT	'SC'	125	1	1	62.5	100	--	1	–
TOTALS						560	5	5	712.5	400	125	3	10

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

GUARDRAIL ITEMS

						614.0920	614.0925	614.2300	614.2500	614.2610	614.2620
PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	SALVAGED RAIL LF	SALVAGED GUARDRAIL END TREATMENTS EACH	MGS GUARDRAIL 3 LF	MGS THRIE BEAM TRANSITION LF	MGS GUARDRAIL TERMINAL EAT EACH	MGS GUARDRAIL TERMINAL TYPE 2 EACH
1190-10-70											
	405+34	-	408+75	RT	'SE'	255	1	287.5	--	1	1
	505+90	-	507+40	LT	'M'	100	1	–	--	--	–
	506+01	-	507+44	RT	'M'	100	1	50	39.4	1	–
	510+04	-	511+58	LT	'M'	100	1	62.5	39.4	1	–
	510+10	-	511+60	RT	'M'	100	1	–	--	--	–
TOTALS						655	5	400	78.8	3	1

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

WATER

PROJECT	LOCATION	624.0100 MGAL
1050-00-72		
	PROJECT	7
PROJECT 1050-00-72 TOTAL		7
1190-10-70		
	PROJECT	11
PROJECT 1190-10-70 TOTAL		11
TOTAL		18

NOTE: WATER IS FOR BASE AGGREGATE AND GRADING AREAS

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

3

EROSION CONTROL ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2004 EROSION MAT CLASS I TYPE B SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EACH	628.7570 ROCK BAGS EACH	COMMENTS
1190-10-70													
	402+22	-	414+75	LT & RT	'SE'	520	520	1,270	–	84	4	–	
	440+00	-	442+60	LT & RT	'SB'	330	330	350	120	36	–	–	
	460+00	-	464+00	LT & RT	'SC'	580	580	1,290	230	84	–	–	
	494+35	-	495+66	LT & RT	'SD'	–	–	–	–	12	4	–	
	505+50	-	512+00	LT & RT	'M'	470	470	360	–	24	–	–	
	540+00	-	541+50	LT	'MB'	70	70	50	–	--	–	–	
	591+50	-	592+81	RT	'MD'	70	70	70	–	--	–	–	
	1227+25	-	1227+75	LT	'NB'	50	50	–	50	--	–	–	STRUCTURE C-09-0021
	UNDISTRIBUTED			–	--	560	560	860	100	60	12	50	
TOTALS						2,650	2,650	4,250	500	300	20	50	

EROSION CONTROL MOBILIZATION

PROJECT	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
1050-00-72			
	PROJECT	1	1
PROJECT 1050-00-72 TOTALS		1	1
1190-10-70			
	PROJECT	4	2
PROJECT 1190-10-70 TOTALS		4	2
TOTALS		5	3

DELINEATOR ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	204.0180 REMOVING DELINEATORS AND MARKERS EACH	633.0100 DELINEATOR POSTS STEEL EACH	633.0500 DELINEATOR REFLECTORS WHITE EACH	633.0500 DELINEATOR REFLECTORS YELLOW EACH
1050-00-72									
	124+90	-	128+93	RT	'FA'	8	4	4	--
	143+55	-	151+04	LT	'FB'	14	7	7	--
	207+24	-	234+25	RT	'XA'	14	14	14	--
	226+85	-	249+50	LT	'XB'	23	23	23	--
PROJECT 1050-00-72 TOTALS						59	48	48	--
								48	
1190-10-70									
	324+77	-	330+50	LT & RT	'BA'	24	24	8	16
	340+00	-	349+57	LT & RT	'BB'	23	17	9	14
	360+00	-	370+13	LT & RT	'BC'	24	18	9	15
	381+90	-	392+89	LT & RT	'BD'	24	30	10	20
	421+04	-	431+82	RT	'SA'	10	10	10	--
	440+00	-	455+18	RT	'SB'	14	14	14	--
	460+00	-	471+44	LT	'SC'	11	11	11	--
	482+07	-	495+66	LT	'SD'	13	13	13	--
	523+11	-	533+47	RT	'MA'	10	10	10	--
	540+00	-	552+99	RT	'MB'	12	12	12	--
	560+00	-	572+30	LT	'MC'	12	12	12	--
	582+90	-	592+81	LT	'MD'	9	9	9	--
PROJECT 1190-10-70 TOTALS						186	180	127	65
								192	
TOTALS						245	228	240	

INLET PROTECTION

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	628.7015 INLET PROTECTION TYPE C EACH
1190-10-70						
	324+77	-	333+04	LT & RT	'BA'	5
	340+00	-	349+57	LT & RT	'BB'	4
	360+00	-	370+13	LT & RT	'BC'	3
	381+90	-	392+89	LT & RT	'BD'	5
	402+22	-	413+29	LT & RT	'SE'	6
	503+75	-	513+75	LT & RT	'M'	6
	601+99	-	613+58	LT & RT	'C'	6
	UNDISTRIBUTED			–	–	5
TOTAL						40

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

TYPE II SIGNS AND SUPPORTS

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN	X	IN	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	634.0620 POSTS WOOD 4X6-INCH X 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	COMMENTS
1050-00-72																		
	1-1	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	1-2	J1-1	24	X	39	--	–	1	–	--	6.50	–	–	–	--	–	--	
	1-3	R3-2	24	X	24	--	1	--	–	--	4.00	–	–	–	1	1	--	
	1-4	J2-1	24	X	57	--	–	--	1	--	9.50	–	–	–	--	–	--	
	1-5	W5-52L	12	X	36	1	–	--	–	--	–	–	3.00	–	1	1	--	
	1-6	D1-1	96	X	15	--	1	1	–	--	10.00	–	–	–	1	2	--	
	1-7	W5-52R	12	X	36	1	–	--	–	--	–	–	3.00	–	1	1	--	
	1-8	W5-52R	12	X	36	1	–	--	–	--	–	–	3.00	–	1	1	--	
	1-9	W5-52L	12	X	36	1	–	--	–	--	–	–	3.00	–	1	1	--	
	1-10	J2-1	24	X	57	--	–	--	1	--	9.50	–	–	–	1	1	--	
	1-11	J2-1	24	X	57	--	–	--	1	--	9.50	–	–	–	1	1	--	
	1-12	D1-1	96	X	15	--	1	1	–	--	10.00	–	–	–	--	–	--	
	1-13	J2-1	24	X	57	--	–	--	1	--	9.50	–	–	–	--	–	--	
	1-14	J1-1	24	X	39	--	–	1	–	--	6.50	–	–	–	--	–	--	
	1-15	–	–	X	–	--	–	--	–	--	–	–	–	–	1	2	--	
	1-16	J22-1	24	X	57	--	–	--	1	--	9.50	–	–	–	1	1	--	
	1-17	R5-1A	36	X	24	--	–	--	–	--	6.00	–	–	–	--	–	--	MOUNT ON SAME POST AS 1-16
	1-18	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	1-19	R5-1A	36	X	24	--	1	--	–	--	6.00	–	–	–	--	–	--	
	1-20	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	1-21	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	1-22	R1-1	36	X	36	--	–	1	–	--	7.46	–	–	–	1	1	--	
	1-23	R5-1	30	X	30	--	–	1	–	--	6.25	–	–	–	--	–	--	
	1-24	R5-1	30	X	30	--	–	1	–	--	6.25	–	–	–	--	–	--	
	1-25	R3-1	24	X	24	--	1	--	–	--	4.00	–	–	–	1	1	--	
	1-26	R1-1	36	X	36	--	1	--	–	--	7.46	–	–	–	1	1	--	
	1-27	W12-1D	24	X	24	1	–	--	–	--	–	–	4.00	–	--	–	--	
	1-28	R5-1	30	X	30	--	1	--	–	--	6.25	–	–	–	--	–	--	
	1-29	R5-57	36	X	36	--	–	1	–	--	9.00	–	–	–	--	–	--	
	2-1	–	–	X	–	--	–	--	–	--	–	–	–	–	--	–	--	SIGN NUMBER NOT USED
	2-2	–	–	X	–	--	–	--	–	--	–	–	–	–	--	–	--	SIGN NUMBER NOT USED
	2-3	–	–	X	–	--	–	--	–	--	–	–	–	–	--	–	--	SIGN NUMBER NOT USED
	2-4	–	–	X	–	--	–	--	–	--	–	–	–	–	--	–	--	SIGN NUMBER NOT USED
	2-5	W1-6	48	X	24	--	1	--	–	--	–	–	8.00	–	1	1	--	
	3-1	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	3-2	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	3-3	W5-52L	12	X	36	1	–	--	–	--	–	–	3.00	–	1	1	--	
	3-4	W5-52R	12	X	36	1	–	--	–	--	–	–	3.00	–	1	1	--	
	3-5	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	3-6	W1-2R	30	X	30	--	–	1	–	--	–	–	6.25	–	--	–	--	SHOWN ON SIGNING SHEET 4
	3-7	W4-1R	36	X	36	--	–	1	–	--	–	–	9.00	–	--	–	--	
	3-8	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	3-9	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	3-10	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	4-1	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	4-2	W6-2	36	X	36	--	–	1	–	--		–	9.00	–	--	–	--	
	4-3	R5-1A	36	X	24	--	–	--	–	--	6.00	–	–	–	--	–	--	MOUNT ON SAME POST AS 4-2
	4-4	W6-2	36	X	36	--	–	1	–	--	–	–	9.00	–	--	–	--	
	4-5	R5-1A	36	X	24	--	–	--	–	--	6.00	–	–	–	1	1	--	MOUNT ON SAME POST AS 4-4
	4-6	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	4-7	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	4-8	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	4-9	W3-5	36	X	36	--	–	1	–	--	–	–	9.00	–	--	–	--	40 MPH
	4-10	–	–	X	–	--	–	--	–	--	–	–	–	–	--	–	--	SAME LOCATION AS 4-8
	4-11	R5-1	30	X	30	--	–	1	–	--	6.25	–	–	–	--	–	--	
	4-12	R4-7	24	X	30	--	–	1	–	--	5.00	–	–	–	1	1	--	
	4-13	W5-54S	18	X	18	--	–	--	–	--	–	–	2.25	–	--	–	--	MOUNT ON SAME POST AS 4-12
	4-14	W6-3	36	X	36	--	–	1	–	--	–	–	9.00	–	--	–	--	
	4-15	R2-1	24	X	30	--	–	1	–	--	5.00	–	–	–	--	–	--	40 MPH
	4-16	R2-1	24	X	30	--	–	1	–	--	5.00	–	–	–	1	1	--	55 MPH
	4-17	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	4-18	R5-57	36	X	36	--	–	1	–	--	9.00	–	–	–	--	–	--	
	4-19	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	4-20	–	–	X	–	--	–	--	–	--	–	–	–	–	1	1	--	
	4-21	D13-3	60	X	30	--	–	2	–	--	12.50	–	–	–	1	2	--	
PROJECT 1050-00-72 TOTALS						7	8	21	5	--	197.92	–	83.50	–	37	40	--	

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

TYPE II SIGNS AND SUPPORTS (CONT'D)

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN	X	IN	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	634.0620 POSTS WOOD 4X6-INCH X 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	COMMENTS
1190-10-70																		
	5-1	R1-2	36	X	31	–	–	1	–	--	3.88	--	–	--	1	1	–	
	5-2	R5-57	36	X	36	–	–	1	–	--	9.00	--	–	--	1	1	–	
	5-3	–	–	X	–	–	–	–	–	--	–	--	–	--	1	2	–	
	5-4	–	–	X	–	–	–	–	–	--	–	--	–	--	–	--	–	SAME LOCATION AS 5-3
	5-5	–	–	X	–	–	–	–	–	--	–	--	–	--	–	--	–	SAME LOCATION AS 5-3
	5-6	J32-4	96	X	69	–	–	–	–	2	46.00	--	–	--	–	--	–	
	5-7	R5-1A	36	X	24	–	1	–	–	--	6.00	--	–	--	–	--	–	
	5-8	D1-2	96	X	30	–	–	–	2	--	20.00	--	–	--	1	2	–	
	5-9	D7-59L	54	X	36	–	–	–	2	--	13.50	--	–	--	–	--	–	
	5-10	W3-1	36	X	36	–	–	1	–	--	–	--	9.00	--	1	1	–	
	5-11	R5-1-C	30	X	30	–	–	–	–	--	5.18	--	–	--	–	--	–	MOUNT ON SAME POST AS 5-13
	5-12	R6-2L	24	X	30	–	–	–	–	--	5.00	--	–	--	–	--	–	MOUNT ON SAME POST AS 5-13
	5-13	R1-1	36	X	36	–	–	1	–	--	7.46	--	–	--	1	1	–	
	5-14	R6-3A	30	X	24	–	–	–	–	--	5.00	--	–	--	–	--	–	MOUNT ON SAME POST AS 5-13
	5-15	R4-7	24	X	30	–	1	–	–	--	5.00	--	–	--	1	1	–	
	5-16	W12-1D	24	X	24	1	–	–	–	--	–	--	4.00	--	–	--	–	
	6-1	R4-7	24	X	30	–	1	–	–	--	5.00	--	–	--	1	1	–	
	6-2	R1-2	36	X	31	–	1	–	–	--	3.88	--	–	--	1	1	–	
	6-3	–	–	X	–	–	–	–	–	--	–	--	–	--	1	1	–	
	6-4	–	–	X	–	–	–	–	–	--	–	--	–	--	1	1	–	
	6-5	–	–	X	–	–	–	–	–	--	–	--	–	--	–	--	–	SAME LOCATION AS 6-4
	6-6	–	–	X	–	–	–	–	–	--	–	--	–	--	1	1	–	
	6-7	J32-4	96	X	69	–	–	–	1	1	46.00	--	–	--	–	--	–	
	6-8	R5-57	36	X	36	–	–	1	–	--	9.00	--	–	--	1	1	–	
	6-9	R5-1A	36	X	24	–	1	–	–	--	6.00	--	–	--	–	--	–	
	6-10	–	–	X	–	–	–	–	–	--	–	--	–	--	1	1	–	
	6-11	D9-2	24	X	24	–	1	–	–	--	4.00	--	–	--	–	--	–	
	6-12	M6-1	21	X	21	–	–	–	–	--	3.06	--	–	--	–	--	–	MOUNT ON SAME POST AS 6-11
	6-13	D1-2	96	X	30	–	–	1	1	--	20.00	--	–	--	1	2	–	
	6-14	D7-59L	54	X	36	–	–	–	–	--	13.50	--	–	--	–	--	–	MOUNT ON SAME POST AS 6-13
	6-15	–	–	X	–	–	–	–	–	--	–	--	–	--	1	1	–	
	6-16	–	–	X	–	–	–	–	–	--	–	--	–	--	1	1	–	
	6-17	W3-1	36	X	36	–	–	1	–	--	–	--	9.00	--	1	1	–	
	6-18	R5-1-C	30	X	30	–	–	–	–	--	5.18	--	–	--	–	--	–	MOUNT ON SAME POST AS 6-20
	6-19	R6-2L	24	X	30	–	–	–	–	--	5.00	--	–	--	–	--	–	MOUNT ON SAME POST AS 6-20
	6-20	R1-1	36	X	36	–	–	1	–	--	7.46	--	–	--	1	1	–	
	6-21	R6-3A	30	X	24	–	–	–	–	--	5.00	--	–	--	–	--	–	MOUNT ON SAME POST AS 6-20
	6-22	W12-1D	24	X	24	1	–	–	–	--	–	--	4.00	--	–	--	–	
	7-1	–	–	X	–	–	–	–	–	--	–	--	–	--	1	1	–	
	7-2	R11-54F	48	X	30	–	–	1	–	--	–	10.00	–	--	–	--	–	
	7-3	R5-1A	36	X	24	–	–	–	–	--	6.00	--	–	--	–	--	–	MOUNT ON SAME POST AS 7-2
	7-4	J4-1	24	X	36	–	–	1	–	--	6.00	--	–	--	1	1	–	
	7-5	R1-1	36	X	36	–	–	1	–	--	7.46	--	–	--	1	1	–	
	7-6	R3-2	24	X	24	–	1	–	–	--	4.00	--	–	--	1	1	–	
	7-7	R4-7	24	X	30	–	1	–	–	--	5.00	--	–	--	–	--	–	
	7-8	J3-1	24	X	57	–	–	1	–	--	9.50	--	–	--	1	1	–	
	7-9	R5-1	30	X	30	–	–	–	–	--	6.25	--	–	--	–	--	–	MOUNT ON SAME POST AS 7-8
	7-10	R11-54F	48	X	30	–	–	1	–	--	–	10.00	–	--	–	--	–	
	7-11	W12-1D	24	X	24	1	–	–	–	--	–	--	4.00	--	–	--	–	
	7-12	R5-1	30	X	30	–	1	–	–	--	6.25	--	–	--	–	--	–	
	7-13	R1-1	36	X	36	–	–	1	–	--	7.46	--	–	--	1	1	–	
	7-14	R6-3	30	X	24	–	–	–	–	--	5.00	--	–	--	–	--	–	MOUNT ON SAME POST AS 7-13
	7-15	R6-2L	24	X	30	–	–	–	–	--	5.00	--	–	--	–	--	–	MOUNT ON SAME POST AS 7-13
	7-16	R1-1	36	X	36	–	–	1	–	--	7.46	--	–	--	1	1	–	
	7-17	R5-1	30	X	30	–	–	1	–	--	6.25	--	–	--	1	1	–	
	7-18	J3-1	24	X	57	–	–	–	1	--	9.50	--	–	--	1	1	–	
	7-19	R3-1	24	X	24	–	–	–	–	--	4.00	--	–	--	–	--	–	MOUNT ON SAME POST AS 7-18
	7-20	R6-2L	24	X	30	–	1	–	–	--	5.00	--	–	--	1	1	–	
	7-21	R4-7	24	X	30	–	1	–	–	--	5.00	--	–	--	1	1	–	
	7-22	R5-1	30	X	30	–	–	1	–	--	6.25	--	–	--	–	--	–	
	7-23	J3-1	24	X	57	–	–	–	1	--	9.50	--	–	--	–	--	–	
	7-24	–	–	X	–	–	–	–	–	--	–	--	–	--	1	1	–	
	7-25	R5-1A	36	X	24	–	1	–	–	--	6.00	--	–	--	–	--	–	
	7-26	D1-1	66	X	15	–	2	–	–	--	6.88	--	–	--	1	2	–	
	7-27	R11-54F	48	X	30	–	1	–	–	--	–	10.00	–	--	–	--	–	
PROJECT 1190-10-70 SUBTOTALS						3	15	17	8	3	392.86	30.00	30.00	--	32	36	–	

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

TYPE II SIGNS AND SUPPORTS (CONT'D)

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN	X	IN	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	634.0620 POSTS WOOD 4X6-INCH X 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	COMMENTS
1190-10-70																		
	7-28	R11-54F	48	X	30	–	1	–	–	–	--	10.00	--	–	--	–	--	
	7-29	D1-1	78	X	15	–	2	–	–	–	8.13	–	--	–	1	2	--	
	7-30	R2-1	24	X	30	–	–	1	–	–	5.00	–	--	–	--	–	--	45 MPH
	7-31	R5-1A	36	X	24	–	1	–	–	–	6.00	–	--	–	--	–	--	
	7-32	J3-1	24	X	57	–	–	–	1	–	9.50	–	--	–	--	–	--	
	7-33	–	--	X	–	–	–	–	–	–	--	–	--	–	1	1	--	
	7-34	R4-7	24	X	30	–	1	–	–	–	5.00	–	--	–	1	1	--	
	7-35	R6-2L	24	X	30	–	1	–	–	–	5.00	–	--	–	1	1	--	
	7-36	J2-1	24	X	57	–	–	–	1	–	9.50	–	--	–	1	1	--	
	7-37	R3-1	24	X	24	–	1	–	–	–	4.00	–	--	–	1	1	--	
	7-38	R5-1	30	X	30	–	–	1	–	–	6.25	–	--	–	--	–	--	
	7-39	R1-1	36	x	36	–	–	1	–	–	7.46	–	--	–	1	1	--	
	7-40	–	--	X	–	–	–	–	–	–	--	–	--	–	--	–	--	SAME LOCATION AS 7-39
	7-41	R4-7	24	X	30	–	1	–	–	–	5.00	–	--	–	--	–	--	
	7-42	R6-2L	24	X	30	–	–	–	–	–	5.00	–	--	–	--	–	--	MOUNT ON SAME POST AS 7-44
	7-43	R5-1-C	30	X	30	–	–	–	–	–	5.18	–	--	–	--	–	--	MOUNT ON SAME POST AS 7-44
	7-44	R1-1	36	X	36	–	–	1	–	–	7.46	–	--	–	1	1	--	
	7-45	R6-3	30	X	24	–	–	–	–	–	5.00	–	--	–	--	–	--	MOUNT ON SAME POST AS 7-44
	7-46	W12-1D	24	X	24	1	–	–	–	–	--	–	4.00	–	--	–	--	
	7-47	R11-54F	48	X	30	–	–	1	–	–	--	10.00	--	–	--	–	--	
	7-48	R5-1	30	X	30	–	–	–	–	–	6.25	–	--	–	--	–	--	MOUNT ON SAME POST AS 7-49
	7-49	J3-1	24	X	57	–	–	–	–	1	9.50	–	--	–	1	1	--	
	7-50	R3-2	24	X	24	–	1	–	–	–	4.00	–	--	–	1	1	--	
	7-51	R1-1	36	X	36	–	–	1	–	–	7.46	–	--	–	1	1	--	
	7-52	M1-5A	24	X	24	–	1	–	–	–	4.00	–	--	–	1	1	--	
	7-53	R5-1A	36	X	24	–	–	–	–	–	6.00	–	--	–	--	–	--	MOUNT ON SAME POST AS 7-54
	7-54	R11-54F	48	X	30	–	–	1	–	–	--	10.00	--	–	--	–	--	
	7-55	–	--	X	–	–	–	–	–	–	--	–	--	–	1	1	--	
	8-1	W3-1	36	X	36	–	–	1	–	–	--	–	9.00	–	1	1	--	
	8-2	D1-4	96	X	48	–	–	–	2	–	32.00	–	--	–	1	2	--	
	8-3	–	--	X	–	–	–	–	–	–	--	–	--	–	1	1	--	SAME LOCATION AS 8-2
	8-4	–	--	X	–	–	–	–	–	–	--	–	--	–	1	1	--	
	8-5	J13-2	48	X	45	–	–	1	–	–	15.00	–	--	–	--	–	--	
	8-6	R5-1A	36	X	24	–	–	–	–	–	6.00	–	--	–	--	–	--	MOUNT ON SAME POST AS 8-5
	8-7	R5-1A	36	X	24	–	1	–	–	–	6.00	–	--	–	--	–	--	
	8-8	–	--	X	–	–	–	–	–	–	--	–	--	–	1	1	--	
	8-9	R5-57	36	X	36	–	–	1	–	–	9.00	–	--	–	1	1	--	
	9-1	–	--	X	–	–	–	–	–	–	--	–	--	–	1	1	--	
	9-2	R5-1A	36	X	24	–	–	–	–	–	6.00	–	--	–	--	–	--	MOUNT ON SAME POST AS 9-3
	9-3	J12-2	48	X	45	–	–	1	–	–	15.00	–	--	–	--	–	--	
	9-4	R5-1A	36	X	24	–	1	–	–	–	6.00	–	--	–	--	–	--	
	9-5	–	--	X	–	–	–	–	–	–	--	–	--	–	1	1	--	
	9-6	–	--	X	–	–	–	–	–	–	--	–	--	–	1	1	--	
	9-7	D1-4	96	X	48	–	–	–	2	–	32.00	–	--	–	1	2	--	
	9-8	R5-57	36	X	36	–	–	1	–	–	9.00	–	--	–	1	1	--	
	10-1	J2-2	48	X	57	–	–	–	1	–	19.00	–	--	–	--	–	--	
	10-2	–	--	X	–	–	–	–	–	–	--	–	--	–	1	1	--	
	10-3	R11-54F	48	X	30	–	1	–	–	–	--	10.00	--	–	--	–	--	
	10-4	R5-1A	36	X	24	–	–	–	–	–	6.00	–	--	–	--	–	--	MOUNT ON SAME POST AS 10-3
	10-5	J3-1	24	X	57	–	–	–	1	–	9.50	–	--	–	1	1	--	
	10-6	R5-1	30	X	30	–	–	–	–	–	6.25	–	--	–	--	–	--	MOUNT ON SAME POST AS 10-5
	10-7	R1-1	36	X	36	–	–	1	–	–	7.46	–	--	–	1	1	--	
	10-8	R1-1	36	X	36	–	–	1	–	–	7.46	–	--	–	1	1	--	
	10-9	R6-3	30	X	24	–	–	–	–	–	5.00	–	--	–	--	–	--	MOUNT ON SAME POST AS 10-8
	10-10	R6-2L	24	X	30	–	–	–	–	–	--	–	--	–	--	–	--	MOUNT ON SAME POST AS 10-8
	10-11	W12-1D	24	X	24	1	–	–	–	–	--	–	4.00	–	--	–	--	
	10-12	R4-7	24	X	30	–	1	–	–	–	5.00	–	--	–	1	1	--	
	10-13	–	--	X	–	–	–	–	–	–	--	–	--	–	--	–	--	SAME LOCATION AS 10-12
	10-14	R5-1	30	X	30	–	1	–	–	–	6.25	–	--	–	1	1	--	
	10-15	R6-2L	24	X	30	–	1	–	–	–	5.00	–	--	–	1	1	--	
	10-16	R5-1	30	X	30	–	–	–	–	–	6.25	–	--	–	1	1	--	MOUNT ON SAME POST AS 10-17
	10-17	J2-1	24	X	57	–	–	–	1	–	9.50	–	--	–	--	–	--	
	10-18	R3-1	24	X	24	–	–	–	–	–	4.00	–	--	–	--	–	--	MOUNT ON SAME POST AS 10-17
	10-19	R4-7	24	X	30	–	1	–	–	–	5.00	–	--	–	1	1	--	
	10-20	J2-1	24	X	57	–	–	–	1	–	9.50	–	--	–	--	–	--	
PROJECT 1190-10-70 SUBTOTALS						2	17	14	10	1	377.86	40.00	17.00	–	33	36	--	

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

TYPE II SIGNS AND SUPPORTS (CONT'D)

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W	X	H	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	634.0620 POSTS WOOD 4X6-INCH X 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	COMMENTS
1190-10-70																		
	10-21	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--	--	SAME LOCATION AS 10-19
	10-22	--	--	X	--	--	--	--	--	--	--	--	--	--	1	1	--	
	10-23	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--	--	SAME LOCATION AS 10-22
	10-24	D1-1	66	X	15	--	2	--	--	--	6.88	--	--	--	1	2	--	
	10-25	R5-1A	36	X	24	--	1	--	--	--	6.00	--	--	--	1	1	--	
	10-26	R11-54F	48	X	30	--	1	--	--	--	--	10.00	--	--	--	--	--	
	10-27	R11-54F	48	X	30	--	1	--	--	--	--	10.00	--	--	--	--	--	
	10-28	R5-1A	36	X	24	--	1	--	--	--	6.00	--	--	--	1	1	--	
	10-29	D1-1	78	X	15	--	2	--	--	--	8.13	--	--	--	1	2	--	
	10-30	J2-1	24	X	57	--	--	--	1	--	9.50	--	--	--	--	--	--	
	10-31	--	--	X	--	--	--	--	--	--	--	--	--	--	1	1	--	
	10-32	--	--	X	--	--	--	--	--	--	--	--	--	--	1	1	--	
	10-33	J2-1	24	X	57	--	--	--	1	--	9.50	--	--	--	--	--	--	
	10-34	R5-1	30	X	30	--	--	--	--	--	6.25	--	--	--	--	--	--	MOUNT ON SAME POST AS 10-33
	10-35	R3-1	24	X	24	--	1	--	--	--	4.00	--	--	--	--	--	--	
	10-36	R4-7	24	X	30	--	1	--	--	--	5.00	--	--	--	1	1	--	
	10-37	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--	--	SAME LOCATION AS 10-36
	10-38	R6-2L	24	X	30	--	1	--	--	--	5.00	--	--	--	1	1	--	
	10-39	R5-1	30	X	30	--	1	--	--	--	6.25	--	--	--	1	1	--	
	10-40	--	--	X	--	--	--	--	--	--	--	--	--	--	1	1	--	
	10-41	R4-7	24	X	30	--	1	--	--	--	5.00	--	--	--	1	1	--	
	10-42	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--	--	SAME LOCATION AS 10-41
	10-43	R3-2	24	X	24	--	--	--	--	--	4.00	--	--	--	--	--	--	MOUNT ON SAME POST AS 10-41
	10-44	R5-1	30	X	30	--	--	--	--	--	6.25	--	--	--	--	--	--	MOUNT ON SAME POST AS 10-46
	10-45	J3-1	24	X	57	--	--	--	1	--	9.50	--	--	--	1	1	--	
	10-46	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--	--	SIGN NUMBER NOT USED
	10-47	R1-1	36	X	36	--	--	1	--	--	7.46	--	--	--	1	1	--	
	10-48	R6-2L	24	X	30	--	--	--	--	--	5.00	--	--	--	--	--	--	MOUNT ON SAME POST AS 10-49
	10-49	R1-1	36	X	36	--	--	1	--	--	7.46	--	--	--	1	1	--	
	10-50	R6-3	30	X	24	--	--	--	--	--	5.00	--	--	--	--	--	--	MOUNT ON SAME POST AS 10-49
	10-51	W12-1D	24	X	24	1	--	--	--	--	--	--	4.00	--	--	--	--	
	10-52	R5-1A	36	X	24	--	--	--	--	--	6.00	--	--	--	--	--	--	MOUNT ON SAME POST AS 10-53
	10-53	R2-1	24	X	30	--	1	--	--	--	5.00	--	--	--	1	1	--	55 MPH
	10-54	R3-7R	30	X	30	--	--	1	--	--	6.25	--	--	--	--	--	--	
	10-55	R11-54F	48	X	30	--	--	--	--	--	--	10.00	--	--	--	--	--	MOUNT ON SAME POST AS 10-54
	10-56	J2-2	48	X	57	--	--	--	1	--	19.00	--	--	--	--	--	--	
	11-1	W3-1	36	X	36	--	--	1	--	--	--	--	9.00	--	1	1	--	
	11-2	D1-1	84	X	15	--	2	--	--	--	8.75	--	--	--	1	2	--	
	11-3	--	--	X	--	--	--	--	--	--	--	--	--	--	--	--	--	SAME LOCATION AS 11-2
	11-4	--	--	X	--	--	--	--	--	--	--	--	--	--	1	1	--	
	11-5	J12-1	24	X	54	--	--	--	1	--	9.00	--	--	--	--	--	--	
	11-6	R5-1A	36	X	24	--	--	--	--	--	6.00	--	--	--	--	--	--	MOUNT ON SAME POST AS 11-5
	11-7	R5-1A	36	X	24	--	1	--	--	--	6.00	--	--	--	--	--	--	
	11-8	--	--	X	--	--	--	--	--	--	--	--	--	--	1	1	--	
	11-9	R5-57	36	X	36	--	--	1	--	--	9.00	--	--	--	1	1	--	
	11-10	R11-54F	48	X	30	--	--	1	--	--	--	10.00	--	--	--	--	--	
	12-1	--	--	X	--	--	--	--	--	--	--	--	--	--	1	1	--	
	12-2	R5-1A	36	X	24	--	1	--	--	--	6.00	--	--	--	--	--	--	
	12-3	R5-1A	36	X	24	--	--	--	--	--	6.00	--	--	--	--	--	--	MOUNT ON SAME POST AS 12-4
	12-4	J12-1	24	X	45	--	--	1	--	--	7.50	--	--	--	--	--	--	
	12-5	D1-1	84	X	15	--	2	--	--	--	8.75	--	--	--	1	2	--	
	12-6	W3-1	36	X	36	--	--	1	--	--	--	--	9.00	--	1	1	--	
	12-7	R11-54F	48	X	30	--	--	1	--	--	--	10.00	--	--	--	--	--	
	12-8	R5-57	36	X	36	--	--	1	--	--	9.00	--	--	--	1	1	--	
	13-1	--	--	X	--	--	--	--	--	--	--	--	--	1	--	--	1	
	13-2	--	--	X	--	--	--	--	--	--	--	--	--	1	--	--	2	
	13-3	D1-1	78	X	15	--	2	--	--	--	8.13	--	--	--	1	2	--	
	13-4	J2-1	24	X	57	--	--	1	--	--	9.50	--	--	--	1	1	--	
	13-5	J2-1	24	X	57	--	--	1	--	--	9.50	--	--	--	1	1	--	
	13-6	D1-1	66	X	15	--	2	--	--	--	6.88	--	--	--	1	2	--	
	13-7	R3-17	30	X	24	--	1	--	--	--	5.00	--	--	--	1	1	--	
	13-8	R3-17B	30	X	12	--	--	--	--	--	2.50	--	--	--	--	--	--	MOUNT ON SAME POST AS 13-7
	13-9	R3-8D	36	X	30	--	--	1	--	--	7.50	--	--	--	1	1	--	
	13-10	R11-54F	48	X	30	--	--	--	--	--	--	10.00	--	--	--	--	--	MOUNT ON SAME POST AS 13-9
	14-1	W2-6	30	X	30	--	--	1	--	--	--	--	6.25	--	--	--	--	
PROJECT 1190-10-70 SUBTOTALS						1	25	14	5	--	283.42	60.00	28.25	2	31	37	3	

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

TYPE II SIGNS AND SUPPORTS (CONT'D)

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN		IN	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	634.0620 POSTS WOOD 4X6-INCH X 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	COMMENTS
1190-10-70																		
	14-2	–	–	X	--	–	–	--	–	--	–	--	–	--	–	–	–	SIGN NUMBER NOT USED
	14-3	W13-1	18	X	18	–	–	--	–	--	–	--	2.25	--	–	–	–	MOUNT ON SAME POST AS 14-1, 15 MPH
	14-4	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	14-5	J2-2	48	X	57	–	–	1	–	--	19.00	--	–	--	–	–	–	
	14-6	W3-2	36	X	36	–	–	1	–	--	–	--	9.00	--	1	1	–	
	14-7	D1-1	90	X	30	–	1	1	–	--	18.75	--	–	--	–	–	–	
	14-8	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	14-9	R5-1A	36	X	24	–	1	--	–	--	6.00	--	–	--	–	–	–	
	14-10	R5-1A	36	X	24	–	1	--	–	--	6.00	--	–	--	–	–	–	
	14-11	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	14-12	W4-2R	36	X	36	–	–	1	–	--	–	--	9.00	--	1	1	–	
	14-13	R5-57	36	X	36	–	–	1	–	--	9.00	--	–	--	1	1	–	
	14-14	R5-57	36	X	36	–	–	1	–	--	9.00	--	–	--	1	1	–	
	14-15	R5-1A	36	X	24	–	1	--	–	--	6.00	--	–	--	1	1	–	
	14-16	R5-1A	36	X	24	–	1	--	–	--	6.00	--	–	--	1	1	–	
	14-17	D1-1	72	X	15	–	2	--	–	--	7.50	--	–	--	1	2	–	
	14-18	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	14-19	W3-2	36	X	36	–	–	1	–	--	–	--	9.00	--	–	–	–	
	14-20	J2-2	48	X	57	–	–	1	–	--	19.00	--	–	--	–	–	–	
	14-21	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	14-22	W11-2	30	X	30	–	1	--	–	--	–	--	6.25	--	–	–	–	
	14-23	W16-9P	24	X	12	–	–	--	–	--	–	--	2.00	--	–	–	–	MOUNT ON SAME POST AS 14-22
	14-24	W2-6	30	X	30	–	–	1	–	--	–	--	6.25	--	1	1	–	
	14-25	–	–	X	--	–	–	--	–	--	–	--	–	--	–	–	–	SIGN NUMBER NOT USED
	14-26	W13-1	18	X	18	–	–	--	–	--	–	--	2.25	--	–	–	–	MOUNT ON SAME POST AS 14-24, 15 MPH
	15-1	R1-2	36	X	31	–	–	1	–	--	3.88	--	–	--	1	1	–	
	15-2	R6-2R	24	X	30	–	–	--	–	--	5.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 15-1
	15-3	R1-2	36	X	31	–	1	--	–	--	3.88	--	–	--	1	1	–	
	15-4	R1-54	24	X	15	–	–	--	–	--	2.50	--	–	--	–	–	–	MOUNT ON SAME POST AS 15-3
	15-5	D1-1	42	X	30	–	1	--	–	--	8.75	--	–	--	–	–	–	
	15-6	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	15-7	R6-1R	36	X	12	–	2	--	–	--	3.00	--	–	--	–	–	–	
	15-8	R6-4B	60	X	24	–	–	--	–	--	10.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 15-7
	15-9	D1-1	42	X	30	–	–	1	–	--	8.75	--	–	--	–	–	–	
	15-10	R11-54F	48	X	30	–	–	--	–	--	–	10.00	–	--	–	–	–	MOUNT ON SAME POST AS 15-9
	15-11	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	15-12	D1-2	66	X	30	–	2	--	–	--	13.75	--	–	--	–	–	–	
	15-13	R1-2	36	X	31	–	1	--	–	--	7.75	--	–	--	1	1	–	
	15-16	R1-54	24	X	15	–	–	--	–	--	2.50	--	–	--	–	–	–	MOUNT ON SAME POST AS 15-13
	15-15	W11-2	30	X	30	–	1	--	–	--	–	--	6.25	--	1	1	–	
	15-16	S16-7L	24	X	12	–	–	--	–	--	–	--	2.00	--	–	–	–	MOUNT ON SAME POST AS 15-15
	15-17	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	15-18	R6-1R	36	X	12	–	1	--	–	--	3.00	--	–	--	–	–	–	
	15-19	R6-4B	60	X	24	–	–	--	–	--	10.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 15-18
	15-20	R1-2	36	X	31	–	–	1	–	--	3.88	--	–	--	1	1	–	
	15-21	R6-2R	24	X	30	–	–	--	–	--	5.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 15-20
	15-22	R5-1	30	X	30	–	–	1	–	--	6.25	--	–	--	–	–	–	
	15-23	R3-1	24	X	24	–	1	--	–	--	4.00	--	–	--	–	–	–	
	15-24	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	15-25	R6-1R	36	X	12	–	1	--	–	--	3.00	--	–	--	–	–	–	
	15-26	R6-48	60	X	24	–	–	--	–	--	10.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 15-25
	15-27	R1-2	36	X	31	–	1	--	–	--	3.88	--	–	--	1	1	–	
	15-28	R1-54	24	X	15	–	–	--	–	--	2.50	--	–	--	–	–	–	MOUNT ON SAME POST AS 15-27
	15-29	R1-2	36	X	31	–	–	1	–	--	3.88	--	–	--	1	1	–	
	15-30	R6-2R	24	X	30	–	–	--	–	--	5.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 15-29
	16-1	R1-2	36	X	31	–	–	1	–	--	3.88	--	–	--	1	1	–	
	16-2	R6-2R	24	X	30	–	–	--	–	--	5.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 16-1
	16-3	R1-2	36	X	31	–	1	--	–	--	3.88	--	–	--	1	1	–	
	16-4	R1-54	24	X	15	–	–	--	–	--	2.50	--	–	--	–	–	–	MOUNT ON SAME POST AS 16-3
	16-5	R3-1	24	X	24	–	1	--	–	--	4.00	--	–	--	–	–	–	
	16-6	R1-2	36	X	31	–	–	1	–	--	3.88	--	–	--	1	1	–	
	16-7	R6-2R	24	X	30	–	–	--	–	--	5.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 16-6
	16-8	R5-1	30	X	30	–	–	1	–	--	6.25	--	–	--	–	–	–	
	16-9	R1-2	36	X	31	–	1	--	–	--	3.88	--	–	--	1	1	–	
	16-10	R1-54	24	X	15	–	–	--	–	--	2.50	--	–	--	–	–	–	MOUNT ON SAME POST AS 16-9
PROJECT 1190-10-70 SUBTOTALS						–	23	17	–	--	277.17	10.00	54.25	--	28	29	–	

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

TYPE II SIGNS AND SUPPORTS (CONT'D)

PROJECT	SIGN NUMBER	SIGN CODE	SIGN DIMENSION W X H IN	X	IN	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	634.0616 POSTS WOOD 4X6-INCH X 16-FT EACH	634.0618 POSTS WOOD 4X6-INCH X 18-FT EACH	634.0620 POSTS WOOD 4X6-INCH X 20-FT EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	COMMENTS
1190-10-70																		
	16-11	D1-1	42	X	30	–	1	--	–	--	8.75	--	–	--	–	–	–	
	16-12	R1-2	36	X	31	–	–	1	–	--	3.88	--	–	--	1	1	–	
	16-13	R6-2R	24	X	30	–	–	--	–	--	5.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 16-12
	16-14	R1-2	36	X	31	–	1	--	–	--	3.88	--	–	--	1	1	–	
	16-15	R1-54	24	X	15	–	–	--	–	--	2.50	--	–	--	–	–	–	MOUNT ON SAME POST AS 16-14
	16-16	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	16-17	R6-1R	36	X	12	–	2	--	–	--	3.00	--	–	--	–	–	–	
	16-18	R6-4B	60	X	24	–	–	--	–	--	10.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 16-17
	16-19	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	16-20	R6-1R	36	X	12	–	2	--	–	--	3.00	--	–	--	–	–	–	
	16-21	R6-4B	60	X	24	–	–	--	–	--	10.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 16-20
	16-22	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	16-23	R6-1R	36	X	12	–	2	--	–	--	3.00	--	–	--	–	–	–	
	16-24	R6-4B	60	X	24	–	–	--	–	--	10.00	--	–	--	–	–	–	MOUNT ON SAME POST AS 16-23
	16-25	R5-3	24	X	24	–	1	--	–	--	4.00	--	–	--	1	1	–	
	16-26	W11-2	30	X	30	–	1	--	–	--	–	--	6.25	--	1	1	–	
	16-27	S16-7L	24	X	12	–	–	--	–	--	–	--	2.00	--	–	–	–	MOUNT ON SAME POST AS 16-26
	16-28	–	–	X	--	–	–	--	–	--	–	--	–	--	1	1	–	
	16-29	D1-1	42	X	30	–	–	2	–	--	8.75	--	–	--	–	–	–	
	16-30	R11-54F	48	X	30	–	–	--	–	--	–	10.00	–	--	–	–	–	MOUNT ON SAME POST AS 16-29
	16-31	W11-2	30	X	30	–	1	--	–	--	–	--	6.25	--	1	1	–	
	16-32	S16-7R	24	X	12	–	–	--	–	--	–	--	2.00	--	–	–	–	MOUNT ON SAME POST AS 16-31
	16-33	–	–	X	--	–	–	--	–	--	–	--	–	1	–	–	1	
	16-34	D1-2	66	X	30	–	2	--	–	--	13.75	--	–	--	–	–	–	
PROJECT 1190-10-70 SUBTOTALS						–	13	3	–	--	89.51	10.00	16.50	1	9	9	1	
PROJECT 1190-10-70 TOTALS						6	70	48	23	4	1,143.64	140.00	91.75	3	105	118	4	
TOTALS						13	78	69	28	4	1,341.56	140.00	175.25	3	142	158	4	

TRAFFIC CONTROL

PROJECT	LOCATION	643.5000 TRAFFIC CONTROL EACH
1050-00-72		
	PROJECT	0.3
PROJECT 1050-00-72 TOTALS		0.3
1190-10-70		
	PROJECT	0.7
PROJECT 1190-10-70 TOTALS		0.7
TOTALS		1

TEMPORARY PORTABLE RUMBLE STRIPS

PROJECT	LOCATION	643.0310.S.01 TEMPORARY PORTABLE RUMBLE STRIPS (1050-00-72) LS	643.0310.S.02 TEMPORARY PORTABLE RUMBLE STRIPS (1190-10-70) LS
1050-00-72			
	PROJECT	1	–
PROJECT 1050-00-72 TOTALS		1	–
1190-10-70			
	PROJECT	–	1
PROJECT 1190-10-70 TOTALS		–	1
TOTALS		1	1

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

TRAFFIC CONTROL ITEMS

PROJECT	STAGE	LOCATION	DURATION DAYS	643.0300 TRAFFIC CONTROL DRUMS NO.	643.0300 TRAFFIC CONTROL DRUMS DAY	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO.	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO.	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C NO.	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	643.0800 TRAFFIC CONTROL ARROW BOARDS NO.	643.0800 TRAFFIC CONTROL ARROW BOARDS DAY	643.0900 TRAFFIC CONTROL SIGNS NO.	643.0900 TRAFFIC CONTROL SIGNS DAY	643.1050 TRAFFIC CONTROL SIGNS PCMS NO.	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY
1050-00-72																	
	PRIOR TO CONSTRUCTION	50TH AVE/CTH X	7	–	--	--	--	–	–	--	–	–	--	–	--	4	28
	DURING CONSTRUCTION	50TH AVE/CTH X	20	128	2,560	10	200	16	320	--	–	2	40	59	1,180	4	80
PROJECT 1050-00-72 TOTALS					2,560		200		320		–		40		1,180		108
1190-10-70																	
	PRIOR TO CONSTRUCTION	BUS 29/CTH S	7	–	--	--	--	–	–	--	–	–	--	–	--	8	56
	DURING CONSTRUCTION	BUS 29/CTH S	40	124	4,960	9	360	14	560	--	–	2	80	27	1,080	8	320
	PRIOR TO CONSTRUCTION	CTH M	7	–	--	--	--	–	–	--	–	–	--		--	4	28
	DURING CONSTRUCTION	CTH M	25	224	5,600	6	150	12	300	20	500	2	50	81	2,025	4	100
	DURING CONSTRUCTION	C-09-0021	10	45	450	2	20	4	40	17	170	2	20	12	120	--	–
	PRIOR TO CONSTRUCTION	CTH O	7	–	--	--	--	–	–	--	–	–	--		--	4	28
	DURING CONSTRUCTION	CTH O	15	88	1,320	20	300	26	390	--	–	–	--	32	480	7	105
PROJECT 1190-10-70 TOTALS					12,330		830		1,290		670		150		3,705		637
TOTALS					14,890		1,030		1,610		670		190		4,885		745

TRAFFIC CONTROL SIGNS FIXED MESSAGE

PROJECT	SIGN NUMBER	LOCATION	SIGN DIMENSION W X H IN	X	IN	643.1000 SF
1050-00-72						
	DF-1	STH 29 EB	36	X	30	7.50
	DF-2	STH 29 EB	36	X	30	7.50
TOTAL						15.00

TRAFFIC CONTROL COVERING SIGNS

CATEGORY	LOCATION	NUMBER OF CYCLES	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I NO.	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I EACH	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II NO.	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	COMMENTS
1050-00-72							
	STH 29 EB - 50TH AVE	10	1	10	–	–	EXIT 81 "1/2 MILE"
	STH 29 EB - 50TH AVE	10	1	10	–	–	EXIT 81 "ARROW"
	STH 29 EB - 50TH AVE	10	--	–	1	10	EXIT 81
	STH 29 EB - CTH X	10	1	10	–	–	EXIT 80 "1/2 MILE"
	STH 29 EB - CTH X	10	1	10	–	–	EXIT 80 "ARROW"
	STH 29 EB - CTH X	10	--	–	1	10	EXIT 80
PROJECT 1050-00-72 TOTALS				40		20	
1190-10-70							
	USH 53 NB - BUS 29	15	--	–	1	15	EXIT 96
	USH 53 SB - BUS 29	15	--	–	1	15	EXIT 96
	USH 53 NB - CTH S	20	1	20	–	–	EXIT 99 "1/2 MILE"
	USH 53 NB - CTH S	20	1	20	–	–	EXIT 99 "ARROW"
	USH 53 NB - CTH S	20	--	–	1	20	EXIT 99
	USH 53 SB - CTH S	20	1	20	–	–	EXIT 99 "1/2 MILE"
	USH 53 SB - CTH S	20	1	20	–	–	EXIT 99 "ARROW"
	USH 53 SB - CTH S	20	--	–	1	20	EXIT 99
	USH 53 NB - CTH O	10	--	–	1	10	EXIT 104
	USH 53 SB - CTH O	10	--	–	1	10	EXIT 104
PROJECT 1190-10-70 TOTALS				80		90	
TOTALS				120		110	

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

TEMPOARY PEDESTRIAN SUFACE ASPHALT

PROJECT	LOCATION	644.1410.S TEMPORARY PEDESTRIAN SURFACE ASPHALT SF
1190-10-70		
	CTH O - WEST RAMP	60
	CTH O - EAST RAMP	60
TOTAL		120

TEMPORARY PAVEMENT MARKING REMOVABLE TAPE

649.0150

PROJECT	LOCATION	TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH SOLID WHITE LF	COMMENTS
1050-00-72			
	5OTH AVE	675	EB EXIT RAMP
	CTH X	575	EB EXIT RAMP
PROJECT 1050-00-72 TOTALS		1,250	
1190-10-70			
	CTH S	610	NB EXIT RAMP
	CTH S	690	SB EXIT RAMP
PROJECT 1190-10-70 TOTALS		1,300	
TOTALS		2,550	

LONG LINE PAVEMENT MARKING ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	646.1020 MARKING LINE EPOXY 4-INCH (YELLOW) LF	646.1020 MARKING LINE EPOXY 4-INCH (WHITE) LF	646.3020 MARKING LINE EPOXY 8-INCH (WHITE) LF	646.1040 MARKING LINE GROOVED WET REF EPOXY 4-INCH (YELLOW) LF	646.1040 MARKING LINE GROOVED WET REF EPOXY 4-INCH (WHITE) LF
1050-00-72										
	104+59	-	112+80	LT & RT	'F'	1,642	--	44	–	1,360
	124+90	-	128+93	LT & RT	'FA'	–	--	30	422	405
	143+55	-	151+04	LT & RT	'FB'	–	--	–	622	798
	207+24	-	239+86	LT & RT	'XA'	187	--	–	3,065	3,264
	226+85	-	255+30	LT & RT	'XB'	187	--	–	2,662	2,847
PROJECT 1050-00-72 TOTALS						2,016	--	74	6,771	8,674
						2,016			15,445	
1190-10-70										
	324+77	-	333+04	LT & RT	'BA'	–	--	25	811	832
	340+00	-	349+57	LT & RT	'BB'	–	--	–	892	951
	360+00	-	370+13	LT & RT	'BC'	–	--	–	961	1,001
	381+90	-	392+89	LT & RT	'BD'	–	--	182	926	1,096
	402+22	-	413+29	LT & RT	'SE'	–	--	420	–	1,677
	421+04	-	431+82	LT & RT	'SA'	–	--	141	956	999
	440+00	-	455+18	LT & RT	'SB'	–	--	–	1,418	1,489
	460+00	-	471+44	LT & RT	'SC'	–	--	52	1,090	1,015
	482+07	-	495+66	LT & RT	'SD'	–	--	–	1,297	1,301
	503+75	-	513+75	LT & RT	'M'	–	--	420	1,156	1,615
	523+11	-	533+47	LT & RT	'MA'	–	--	71	997	1,031
	540+00	-	552+99	LT & RT	'MB'	–	--	194	1,015	1,291
	560+00	-	572+30	LT & RT	'MC'	–	--	211	1,042	1,208
	582+90	-	592+81	LT & RT	'MD'	–	--	–	934	1,014
	601+99	-	613+58	LT & RT	'C'	3,012	3,472	460	–	--
PROJECT 1190-10-70 TOTALS						3,012	3,472	2,176	13,495	16,520
						6,484			30,015	
TOTALS						8,500		2,250	45,460	

MISCELLANEOUS PAVEMENT MARKING ITEMS

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	646.6320 MARKING DOTTED EXTENSION EPOXY 18-INCH LF	646.5020 MARKING ARROW EPOXY EACH	646.5120 MARKING WORD EPOXY EACH	646.8120 MARKING CURB EPOXY LF	646.6120 MARKING STOP LINE EPOXY 18-INCH LF	646.8220 MARKING ISLAND NOSE EPOXY EACH	646.7420 MARKING CROSSWALK EPOXY TRANSVERSE LINE 6-INCH LF	646.8020 MARKING CORRUGATED MEDIAN EPOXY SF
1050-00-72													
	124+90	-	128+93	LT & RT	'FA'	–	–	–	–	50	–	--	–
PROJECT 1050-00-72 TOTALS						–	–	–	–	50	–	--	–
1190-10-70													
	324+77	-	333+04	LT & RT	'BA'	–	–	–	25	20	–	--	–
	340+00	-	349+57	LT & RT	'BB'	–	–	–	25	–	–	--	–
	360+00	-	370+13	LT & RT	'BC'	–	–	–	20	20	–	--	–
	381+90	-	392+89	LT & RT	'BD'	–	–	–	20	–	–	--	–
	402+22	-	413+29	LT & RT	'SE'	–	8	–	140	–	2	--	–
	421+04	-	431+82	LT & RT	'SA'	–	–	–	–	40	–	--	–
	460+00	-	471+44	LT & RT	'SC'	–	–	–	–	40	–	--	–
	503+75	-	513+75	LT & RT	'M'	–	4	–	170	–	2	--	–
	523+11	-	533+47	LT & RT	'MA'	–	–	–	–	40	–	--	–
	560+00	-	572+30	LT & RT	'MC'	–	–	–	–	40	–	--	–
	601+99	-	613+58	LT & RT	'C'	100	2	2	–	–	–	110	750
PROJECT 1190-10-70 TOTALS						100	14	2	400	200	4	110	750
TOTALS						100	14	2	400	250	4	110	750

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

3

CONSTRUCTION STAKING ITEMS

PROJECT	LOCATION	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (C-9-21) LS	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1050-00-72) LS	650.9910.02 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1190-10-70) LS
1050-00-72				
	PROJECT	–	1	–
PROJECT 1050-00-72 TOTALS		–	1	–
1190-10-70				
	PROJECT	1	--	1
PROJECT 1190-10-70 TOTALS		1	--	1
TOTALS		1	1	1

CONSTRUCTION STAKING RESURFACING REFERENCE

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF
1050-00-72						
	104+59	-	107+33	LT & RT	'F'	274
	110+06	-	112+80	LT & RT	'F'	274
	124+90	-	128+93	LT & RT	'FA'	403
	143+55	-	151+04	LT & RT	'FB'	749
	207+24	-	219+70	LT & RT	'XA'	1,246
	222+57	-	239+86	LT & RT	'XA'	1,729
	226+85	-	255+30	LT & RT	'XB'	2,845
PROJECT 1050-00-72 TOTAL						7,520
1190-10-70						
	324+77	-	333+04	LT & RT	'BA'	827
	340+00	-	349+57	LT & RT	'BB'	957
	360+00	-	370+13	LT & RT	'BC'	1,013
	381+90	-	392+89	LT & RT	'BD'	1,099
	402+22	-	413+29	LT & RT	'SE'	1,107
	421+04	-	431+82	LT & RT	'SA'	1,078
	440+00	-	455+18	LT & RT	'SB'	1,518
	460+00	-	471+44	LT & RT	'SC'	1,144
	482+07	-	495+66	LT & RT	'SD'	1,360
	503+75	-	507+56	LT & RT	'M'	381
	509+94	-	513+75	LT & RT	'M'	381
	523+11	-	533+47	LT & RT	'MA'	1,036
	540+00	-	552+99	LT & RT	'MB'	1,299
	560+00	-	572+30	LT & RT	'MC'	1,230
	582+90	-	592+81	LT & RT	'MD'	991
	601+99	-	613+58	LT & RT	'C'	1,159
PROJECT 1190-10-70 TOTAL						16,580
TOTAL						24,100

SAWING

PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	690.0150* SAWING ASPHALT LF	690.0250* SAWING CONCRETE LF
1190-10-70							
	411+09	-	413+44	LT	'SE'	88	170
	510+14	-	510+24	LT	'M'	20	–
	611+74	-	611+86	LT	'C'	–	5
TOTALS						108	175

*ADDITIONAL QUANTITIES SHOWN ELSEWHERE

SHAPING AND FINISHING WING WALLS

CATEGORY	PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	SPV.0060.01 SHAPING AND FINISHING WING WALL EACH	** TOPSOIL SY	** FERTILIZER TYPE B CWT	** SEEDING MIXTURE NO. 30 LB	COMMENTS
0020	1190-10-70	1227+52	-	1227+23	LT	'NB'	1	49	0.1	3	EARTHWORK IS INCIDENTAL EXCAVATION FOR STRUCTURES
TOTALS							1	49	0.1	3	

**NON-BID ITEM, ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY. ITEMS INCIDENTAL TO SHAPING AND FINISHING WING WALLS.

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

RAMP CLOSURE GATE ITEMS

CATEGORY	PROJECT	STATION	OFFSET	ALIGNMENT	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	653.0135 PULL BOXES STEEL 24X36-INCH EACH	654.0105 CONCRETE BASES TYPE 5 EACH	654.0220 CONCRETE CONTROL CABINET BASES TYPE 10 EACH	657.0100 PEDESTAL BASES EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0321 POLES TYPE 5-STEEL EACH	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT EACH	662.2032.S RAMP CLOSURE GATES SOLAR 32-FT EACH	662.2037.S RAMP CLOSURE GATES SOLAR 37-FT EACH	662.2040.S RAMP CLOSURE GATES SOLAR 40-FT EACH	662.4000.S RAMP CLOSURE GATE FLASHERS STOCKPILE EACH
0030	1190-10-70															
		440+85	RT	'SB'	20	1	1	1	1	1	1	1	1	–	--	3
		495+05	RT	'SD'	20	1	1	1	1	1	1	1	–	1	--	3
		541+00	LT	'MB'	20	1	1	1	1	1	1	1	–	–	1	3
		592+00	RT	'MD'	20	1	1	1	1	1	1	1	–	–	1	3
TOTALS					80	4	4	4	4	4	4	4	1	1	2	12

GRADING, SHAPING, AND FINISHING RAMP GATES

CATEGORY	PROJECT	STATION	TO	STATION	OFFSET	ALIGNMENT	SPV.0060.02 GRADING, SHAPING, AND FINISHING RAMP GATES EACH	** EXCAVATION COMMON CY	** FILL CY	** BORROW CY	** TOPSOIL SY	** FERTILIZER TYPE B CWT	** SEEDING MIXTURE NO. 30 LB	COMMENTS
0030	1190-10-70													
		440+70	-	441+05	RT	'SB'	–	–	–	–	–	–	–	QTY INCLUDED IN BARRIER SYSTEM GRADING SHAPING FINISHING ITEM
		494+38	-	495+22	RT	'SD'	–	–	–	–	–	–	–	QTY INCLUDED IN BARRIER SYSTEM GRADING SHAPING FINISHING ITEM
		540+69	-	541+48	LT	'MB'	1	–	4	4	56	0.1	4	
		591+73	-	592+20	RT	'MD'	1	–	1	1	78	0.1	4	
TOTALS							2	–	5	5	134	0.2	8	

**NON-BID ITEM, ITEMS AND QUANTITIES LISTED FOR BID INFORMATION ONLY. ITEMS INCIDENTAL TO GRADING, SHAPING, AND FINISHING RAMP GATES.

NOTE: ALL ITEMS ARE CAT 0010 UNLESS OTHERWISE NOTED

DATA TABLE

NO.	STATION LOCATION	Y	X
101	120'FA'+00.00	122,580.43	187,725.17
102	140'FB'+00.00	122,500.70	187,986.02
103	102'F'+00.00	121,839.42	187,852.69
104	105'F'+52.40 = 128'FA'+92.53	121,839.72	188,205.09
105	112'F'+14.64 = 151'FB'+04.22	121,840.28	188,867.33
106	116'F'+00.00	121,840.61	189,252.69

N

5

5

S46° 28' 20"E

101

PC: 121'FA'+21.06

CURVE FA-1
PI STA = 123+41.85
Y = 122345.00
X = 187973.03
PC STA = 121+21.06
Y=122497.06
X=187812.95
PT STA = 125+57.29
Y=122144.37
X=188065.17
DELTA = 21°48'16"
D = 4°59'54"
T = 220.79'
L = 436.23'
R = 1146.28'
SE TRANSITION (T) = 200'
RO (RUNOFF) = 156'
SE = 7.0%

122'FA'

CURVE FA-1

124'FA'

BEGIN CONSTRUCTION
STA 124'FA'+90.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

PT: 125'FA'+57.29

126'FA'

STH 29 EB EXIT RAMP

S24° 40' 04"E

128'FA'

102

S47° 05' 48"E

142'FB'

PC: 142'FB'+69.98

CURVE FB-1
PI STA = 144+02.21
Y = 122226.89
X = 188280.64
PC STA = 142+69.98
Y=122316.91
X=188183.78
PT STA = 145+33.83
Y=122154.13
X=188391.05
DELTA = 9°31'13"
D = 3°36'29"
T = 132.23'
L = 263.85'
R = 1587.95'
SE TRANSITION (T) = 230'
RO (RUNOFF) = 179'
SE = 7.0%

BEGIN CONSTRUCTION
STA 143'FB'+55.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

144'FB'

CURVE FB-1

PT: 145'FB'+33.83

146'FB'

MILL AND OVERLAY
(SEE TYPICAL SECTIONS)

S56° 37' 00"E

148'FB'

STH 29 WB ENTRANCE RAMP

150'FB'

CINC
(COMMUNICATIONS)

CP/BM #10
Y = 121922.58
X = 187802.61
ELEV = 920.46
FENO MONUMENT 1000
W/ALUMINUM CAP

BEGIN CONSTRUCTION
STA 104'F'+59.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

MILL AND OVERLAY
(SEE TYPICAL SECTIONS)

ASPHALTIC FLUME

STH 29 EB

STH 29 WB

AT&T WISCONSIN
(COMMUNICATIONS)

END CONSTRUCTION
STA 112'F'+80.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

102'F' 104'F' 106'F' N89° 57' 06"E 108'F' 50TH AVE 110'F' 112'F' 114'F' 116'F'

B-09-0033
(TO REMAIN)

103 104 105 106

MILL AND OVERLAY
(SEE TYPICAL SECTIONS)

ASPHALTIC FLUME

BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

CHARTER COMMUNICATIONS
(COMMUNICATIONS)

WALL

CP/BM #11
Y = 121787.95
X = 189281.25
ELEV = 920.82
FENO MONUMENT 1000
W/ALUMINUM CAP

PROJECT NO: 1050-00-72	HWY: STH 29	COUNTY: CHIPPEWA	PLAN - 50TH AVE	SHEET 69	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 050201-pn

PLOT DATE : 4/20/2017 11:59 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

CURVE XB-1
PI STA = 226+61.88
Y = 123604.59
X = 184915.68
PC STA = 224+33.16
Y=123599.48
X=184687.01
PT STA = 228+89.94
Y=123639.81
X=185141.68
DELTA = 7°34'41"
D = 1°39'32"
T = 228.73'
L = 456.79'
R = 3453.72'
EX SE = 2.4%
SE TRANSITION (T) = 92'
RO (RUNOFF) = 50'
PR SE = 2.4%

PC: 224'XB'+33.16

PCC: 228'XB'+89.94

222'XB' N88° 43' 15"E 224'XB' 226'XB' CURVE XB-1 228'XB' 230'XB'

STH 29 WB ENTRANCE RAMP/CTH X

202

STH 29 WB BEGIN CONSTRUCTION
STA 226'XB'+85.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

MILL AND OVERLAY
HMA WEDGING REQ'D
(SEE TYPICAL SECTIONS)

5

5

201

STH 29 EB

S88° 39' 28"E 202'XA' 204'XA' CURVE XA-1 206'XA'

PC: 201'XA'+96.38

CP/BM #20
Y = 123431.97
X = 184814.23
ELEV=951.07
FENO MONUMENT 1000
W/ALUMINUM CAP

CURVE XA-1
PI STA = 204+68.77
Y = 123470.91
X = 184544.22
PC STA = 201+96.38
Y=123477.29
X=184271.91
PT STA = 207+34.74
Y=123365.04
X=184795.20
DELTA = 21°31'47"
D = 3°59'57"
T = 272.39'
L = 538.35'
R = 1432.69'
SE TRANSITION (T) = 213'
RO (RUNOFF) = 160'
SE = 6.0%

BEGIN CONSTRUCTION
STA 207'XA'+23.74
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

PT: 207'XA'+34.74

208'XA' STH 29 EB EXIT RAMP/CTH X S67° 07' 41"E 210'XA'

MILL AND OVERLAY
(SEE TYPICAL SECTIONS)

PC: 211'XA'+05.44

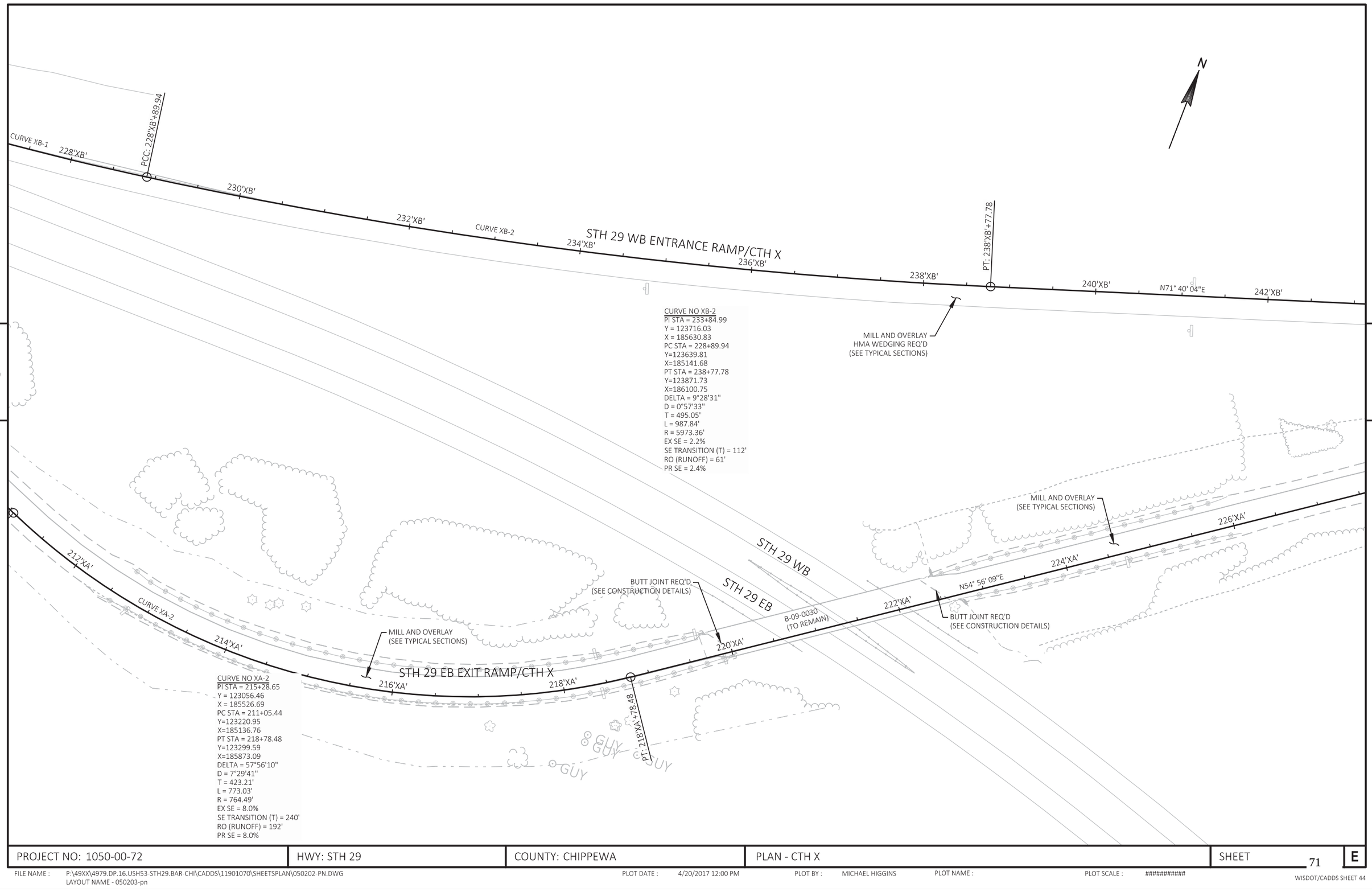
212'XA' CURVE XA-2

DATA TABLE

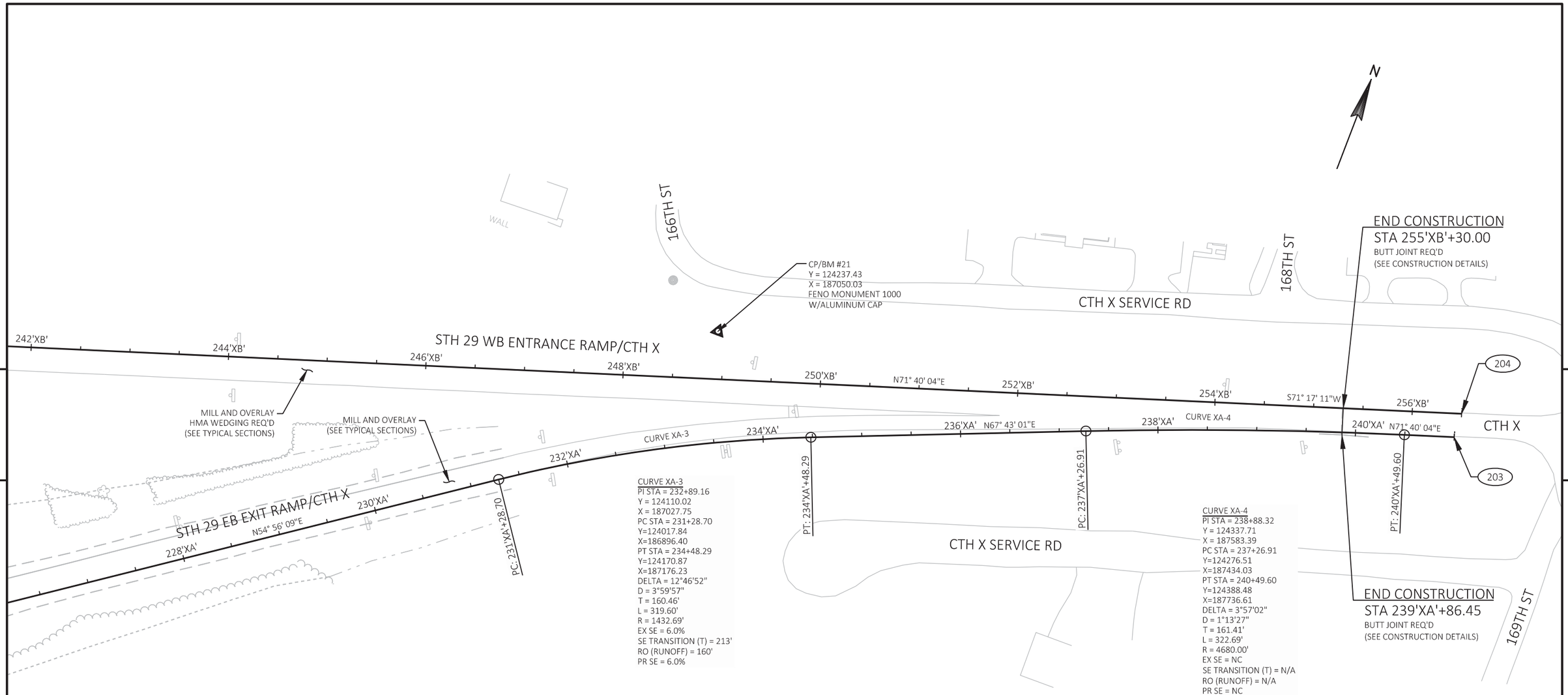
NO.	STATION LOCATION	Y	X
201	200'XA'+00.00	123,481.89	184,075.58
202	220'XB'+00.00	123,589.81	184,253.96

NOTE
REMOVE RAISED PAVEMENT MARKERS
PRIOR TO MILL AND HMA OVERLAY.

PROJECT NO: 1050-00-72	HWY: STH 29	COUNTY: CHIPPEWA	PLAN - CTH X	SHEET 70	E



PROJECT NO: 1050-00-72	HWY: STH 29	COUNTY: CHIPPEWA	PLAN - CTH X	SHEET 71	E



5

5

DATA TABLE

NO.	STATION LOCATION	Y	X
203	241'XA'+00.00	124,404.35	187,784.45
204	256'XB'+50.00	124,429.15	187,783.03

NOTE
REMOVE RAISED PAVEMENT MARKERS
PRIOR TO MILL AND HMA OVERLAY.

DATA TABLE

NO.	STATION LOCATION	Y	X
301	360'BC'+00.00	125,033.61	161,731.23
302	392'BD'+88.66	125,038.35	161,823.71
303	380'BD'+00.00	124,957.91	162,287.39
304	374'BC'+00.OO	126,191.78	162,275.46

LEGEND

REMOVING CONCRETE PARTIAL DEPTH AND HMA OVERLAY (SEE CONSTRUCTION DETAILS)

N

BEGIN CONSTRUCTION
STA 360'BC'+37.37
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

STA 361'BC'+08.92
PROFILE TRANSITION
(SEE CONSTRUCTION DETAILS)

N6° 47' 40"E

362'BC'

301

302

S2° 21' 43"E

392'BD'

STA 391'BD'+87.09
PROFILE TRANSITION
(SEE CONSTRUCTION DETAILS)

END CONSTRUCTION
STA 392'BD'+52.69
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

PC: 363'BC'+09.11

CURVE BC-1
PI STA = 364+56.35
Y = 125486.76
X = 161785.22
PC STA = 363+09.11
Y=125340.55
X=161767.80
PT STA = 365+76.40
Y=125545.34
X=161920.31
DELTA = 59°45'45"
D = 22°21'29"
T = 147.25'
L = 267.30'
R = 256.26'
SE = MATCH EXISTING

364'BC'

CURVE BC-1

PT: 365'BC'+76.40

366'BC'

USH 53 SB EXIT RAMP

N66° 33' 25"E

PC: 367'BC'+70.84

368'BC'

CURVE BC-2

PT: 368'BC'+79.05

PC: 368'BC'+82.43

N36° 39' 02"E

CURVE BC-3

370'BC'

PT: 370'BC'+31.79

PC: 370'BC'+41.26

N14° 18' 18"E

CURVE BC-4

372'BC'

PT: 372'BC'+27.42

374'BC'

N0° 20' 35"E

376'BC'

CURVE BC-2
PI STA = 368+26.20
Y = 125644.72
X = 162149.50
PC STA = 367+70.84
Y=125622.69
X=162098.70
PT STA = 368+79.05
Y=125689.14
X=162182.55
DELTA = 29°54'22"
D = 27°38'16"
T = 55.37'
L = 108.21'
R = 207.31'
SE = MATCH EXISTING

CURVE BC-3
PI STA = 369+58.08
Y = 125752.55
X = 162229.73
PC STA = 368+82.45
Y=125691.87
X=162184.58
PT STA = 370+31.79
Y=125825.84
X=162248.41
DELTA = 22°20'44"
D = 14°57'45"
T = 75.63'
L = 149.34'
R = 382.93'
SE = MATCH EXISTING

CURVE BC-4
PI STA = 371+34.80
Y = 125925.65
X = 162273.87
PC STA = 370+41.26
Y=125835.01
X=162250.75
PT STA = 372+27.42
Y=126019.19
X=162274.43
DELTA = 13°57'43"
D = 7°30'00"
T = 93.54'
L = 186.16'
R = 763.94'
SE = MATCH EXISTING

WCL RAILROAD

MILL AND OVERLAY
(SEE TYPICAL SECTIONS)

MILL AND OVERLAY
(SEE TYPICAL SECTIONS)

CURVE BD-3

386'BD'

PT: 390'BD'+17.03

390'BD'

388'BD'

CURVE BD-3
PI STA = 390+43.60
Y = 125815.30
X = 161791.66
PC STA = 385+37.61
Y=125461.84
X=162153.72
PT STA = 390+17.03
Y=125309.75
X=161812.51
DELTA = 136°40'24"
D = 28°30'29"
T = 505.98'
L = 479.42'
R = 200.98'
SE = MATCH EXISTING

CURVE BD-1
PI STA = 382+37.04
Y = 125194.80
X = 162278.88
PC STA = 381+83.74
Y=125141.53
X=162280.80
PT STA = 382+90.14
Y=125247.17
X=162268.92
DELTA = 8°42'34"
D = 8°11'06"
T = 53.31'
L = 106.41'
R = 700.00'
SE = MATCH EXISTING

CURVE BD-2
PI STA = 384+17.90
Y = 125372.68
X = 162245.06
PC STA = 382+90.61
Y=125247.63
X=162268.84
PT STA = 385+37.25
Y=125461.59
X=162153.98
DELTA = 34°55'20"
D = 14°09'32"
T = 127.29'
L = 246.64'
R = 404.66'
SE = MATCH EXISTING

PC: 385'BD'+37.61

PT: 385'BD'+37.25

PT: 382'BD'+90.14

PC: 382'BD'+90.61

PC: 381'BD'+83.74

BUSINESS 29 EB

BUSINESS 29 WB

USH 53 SB ENTRANCE RAMP

384'BD'

CURVE BD-2

CURVE BD-1

382'BD'

REMOVING CURB
(SEE CONSTRUCTION DETAILS)
STA 383'BD'+13 - STA 384'BD'+26

REPLACING GUARDRAIL POSTS AND BLOCKS

303

N2° 03' 25"W

B-09-0050
(TO REMAIN)

USH 53 SB

END CONSTRUCTION
STA 370'BC'+13.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

B-09-0052
(TO REMAIN)

304

N0° 20' 35"E

374'BC'

376'BC'

CP/BM #31
Y = 125145.64
X = 162355.54
ELEV = 842.28
NGS WHEATON MONUMENT
(DO NOT DISTURB)

NGS

BEGIN CONSTRUCTION
STA 381'BD'+89.88
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

USH 53 NB

B-09-0051
(TO REMAIN)

B-09-0053
(TO REMAIN)

322'BA'

324'BA'

350'BB'

352'BB'

354'BB'

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PLAN - BUSINESS 29	SHEET 73	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\050203-PN.DWG
LAYOUT NAME - 050206-pn

PLOT DATE : 12/8/2017 9:39 AM PLOT BY : ERIK OLESON PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44

B-09-0050
(TO REMAIN)

USH 53 SB

B-09-0052
(TO REMAIN)

CP/BM #31
Y = 125145.64
X = 162355.54
ELEV = 842.28
NGS WHEATON MONUMENT
(DO NOT DISTURB)

NGS

B-09-0051
(TO REMAIN)

USH 53 NB

BEGIN CONSTRUCTION
STA 324'BA'+77.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

PT: 323'BA'+76.92
PC: 323'BA'+78.70

PT: 350'BB'+71.79
PC: 350'BB'+72.72

PT: 351'BB'+57.60

B-09-0053
(TO REMAIN)

N0° 11' 04"E

322'BA'

CURVE BA-1

324'BA'

CURVE BA-2

N14° 45' 31"E

352'BB'

N1° 55' 31"W

354'BB'

CURVE BB-4

N9° 24' 25"W

350'BB'

305

308

PT: 325'BA'+30.14
PC: 325'BA'+30.37

PC: 348'BB'+07.21
PT: 348'BB'+04.25

USH 53 NB ENTRANCE RAMP

CURVE BB-3

CURVE BB-2

348'BB'

N45° 10' 29"W

PC: 347'BB'+53.61

REMOVING CURB
(SEE CONSTRUCTION DETAILS)
STA 348'BB'+85 - STA 349'BB'+98

PC: 321'BA'+82.60

CURVE BA-1
PI STA = 322+80.29
Y = 125245.34
X = 162421.82
PC STA = 321+82.60
Y=125147.65
X=162421.51
PT STA = 323+76.92
Y=125339.80
X=162446.71
DELTA = 14°34'27"
D = 7°30'00"
T = 97.69'
L = 194.32'
R = 763.94'
SE = MATCH EXISTING

CURVE BA-2
PI STA = 324+55.33
Y = 125415.63
X = 162466.68
PC STA = 323+78.70
Y=125341.52
X=162447.16
PT STA = 325+30.14
Y=125477.27
X=162512.22
DELTA = 21°41'33"
D = 14°19'26"
T = 76.64'
L = 151.44'
R = 400.00'
SE = MATCH EXISTING

CURVE BB-4
PI STA = 351+15.22
Y = 125975.42
X = 162417.76
PC STA = 350+72.72
Y=125933.50
X=162424.70
PT STA = 351+57.60
Y=126017.90
X=162416.33
DELTA = 7°28'54"
D = 8°48'53"
T = 42.50'
L = 84.88'
R = 650.00'
SE = MATCH EXISTING

BASE AGG
FE

WCL RAILROAD

BUSINESS 29 EB

BUSINESS 29 WB

USH 53 NB EXIT RAMP

CURVE BA-3

326'BA'

N36° 27' 04"E

CURVE BA-3
PI STA = 332+84.97
Y = 126084.43
X = 162960.69
PC STA = 325+30.37
Y=125477.46
X=162512.36
PT STA = 330+58.87
Y=125334.70
X=162875.17
DELTA = 150°03'23"
D = 28°23'35"
T = 754.60'
L = 528.50'
R = 201.79'
SE = MATCH EXISTING

END CONSTRUCTION
STA 349'BB'+57.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

CURVE BB-2
PI STA = 347+79.19
Y = 125681.12
X = 162564.45
PC STA = 347+53.61
Y=125670.39
X=162587.67
PT STA = 348+04.25
Y=125699.16
X=162546.31
DELTA = 20°00'42"
D = 39°30'52"
T = 25.58'
L = 50.64'
R = 145.00'
SE = MATCH EXISTING

CURVE BB-3
PI STA = 349+43.97
Y = 125797.66
X = 162447.21
PC STA = 348+07.21
Y=125701.25
X=162544.21
PT STA = 350+71.79
Y=125932.58
X=162424.85
DELTA = 35°46'04"
D = 13°31'07"
T = 136.76'
L = 264.58'
R = 423.83'
SE = MATCH EXISTING

END CONSTRUCTION
STA 332'BA'+68.98
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

PT: 330'BA'+58.87

328'BA'

346'BB'

N65° 11' 11"W

PT: 345'BB'+44.08

STA 331'BA'+88.13
PROFILE TRANSITION
(SEE CONSTRUCTION DETAILS)

CURVE BB-1

306

332'BA'

S6° 30' 27"W

330'BA'

344'BB'

MILL AND OVERLAY
(SEE TYPICAL SECTIONS)

N3° 27' 07"W

342'BB'

307

STA 304'BB'+84.25
PROFILE TRANSITION
(SEE CONSTRUCTION DETAILS)

PC: 342'BB'+79.53

BEGIN CONSTRUCTION
STA 340'BB'+35.67
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

CURVE BB-1
PI STA = 344+26.29
Y = 125520.87
X = 162911.06
PC STA = 342+79.53
Y=125374.38
X=162919.89
PT STA = 345+44.08
Y=125582.46
X=162777.85
DELTA = 61°44'04"
D = 23°20'08"
T = 146.76'
L = 264.55'
R = 245.53'
SE = MATCH EXISTING

DATA TABLE

NO.	STATION LOCATION	Y	X
305	320'BA'+00.00	124,965.05	162,420.92
306	333'BA'+04.7	125,090.78	162,847.35
307	340'BB'+00.00	125,095.35	162,936.73
308	354'BB'+00.00	126,260.15	162,408.19

LEGEND

REMOVING CONCRETE PARTIAL DEPTH
AND HMA OVERLAY (SEE CONSTRUCTION DETAILS)

N

5

5

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PLAN - BUSINESS 29	SHEET 74	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\050203-PN.DWG
LAYOUT NAME - 050207-pn

PLOT DATE : 12/8/2017 9:39 AM PLOT BY : ERIK OLESON PLOT NAME : PLOT SCALE : 1IN: 100 FT

LEGEND

DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

REMOVING CONCRETE PARTIAL DEPTH AND HMA OVERLAY (SEE CONSTRUCTION DETAILS)

NOTES

*REMOVE EXISTING GUARDRAIL POSTS WITH CAUTION, POSTS MAY BE CONNECTED TO EXISTING BOX CULVERTS. HARDWARE REMOVAL AND EXCAVATION REQUIRED IS INCIDENTAL TO SALVAGED RAIL.

SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING AND GRADING SHAPING AND FINISHING RAMP GATES.

PREPARING FOUNDATION FOR # ASPHALTIC SHOULDER.

(I) PERMITTED WETLAND IMPACTS

N

DATA TABLE

NO.	STATION LOCATION	Y	X
401	400'SE'+00.00	140,387.17	161,884.77
402	403'SE'+45.90 = 460'SC'+00.00	140,382.79	162,230.65
403	403'SE'+52.64 = 495'SD'+66.24	140,382.71	162,237.39
404	411'SE'+65.66 = 431'SA'+82.36	140,372.34	163,050.33
405	411'SW'+66.09 = 440'SB'+00.00	140,372.33	163,050.77
406	414'SE'+00.00	140,369.32	163,284.66
407	410'SE'+94.54 = 440'SB'+93.83	140,449.96	162,980.15
408	411'SE'+77.20 = 440'SB'+83.09	140,462.06	163,062.96
409	412'SE'+01.83 = 440'SB'+70.52	140,455.90	163,087.52

USH 53 SB EXIT RAMP

USH 53 NB ENTRANCE RAMP

USH 53 SB ENTRANCE RAMP

USH 53 NB EXIT RAMP

CTH S

120TH ST

UNNAMED WATERWAY

R/W

464'SC'

N14° 19' 54"W

+96 +56 +36 +58 +54 +91 +94 +76 +80 +57 +90 +84 +39

* SALVAGED RAIL
SALVAGED GUARDRAIL END TREATMENT
STEEL PLATE BEAM GUARD CLASS A
STEEL PLATE BEAM GUARD OVER LOW-FILL CULVERTS CLASS A
ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
STA 460'SC'+94 - STA 463'SC'+04 LT
STA 460'SC'+83 - STA 463'SC'+08 RT

STA 462'SC'+40.67
PROFILE TRANSITION
(SEE CONSTRUCTION DETAILS)

C-09-0027
(TO REMAIN)

C-09-0069
(TO REMAIN)

* SALVAGED RAIL
SALVAGED GUARDRAIL END TREATMENT
STEEL PLATE BEAM GUARD CLASS A
STEEL PLATE BEAM GUARD SHORT RADIUS
STEEL PLATE BEAM GUARD OVER LOW-FILL CULVERTS CLASS A
ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
STA 406'SE'+09 - STA 411'SE'+23 LT
STA 440'SB'+83 - STA 442'SB'+31 LT
STA 411'SE'+50 - STA 412'SE'+77 LT

REMOVING CURB & GUTTER
CONCRETE CURB & GUTTER 36-INCH TYPE A

PACKERLAND BROADBAND
(COMMUNICATIONS)

BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

PI: 403'SE'+71.68

MILL AND OVERLAY
(SEE TYPICAL SECTIONS)

B-09-0056
(TO REMAIN)

B-09-0057
(TO REMAIN)

S89° 16' 28"E

402'SE'

404'SE'

S89° 14' 20"E

406'SE'

408'SE'

410'SE'

S89° 18' 34"E

412'SE'

S89° 15' 00"E

414'SE'

401 BEGIN CONSTRUCTION
STA 402'SE'+22.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

CP/BM #40
Y = 140313.56
X = 161899.26
ELEV = 951.96
FENO MONUMENT 1000
W/ALUMINUM CAOP

403

N15° 22' 57"W

ASPHALTIC FLUME

INSTALL RAMP CLOSURE GATE
(SEE CONSTRUCTION DETAILS)

AT&T WISCONSIN
(COMMUNICATIONS)

PI: 408'SE'+23.94

+95

CINC
(COMMUNICATIONS)

404

MILL AND OVERLAY
(SEE CONSTRUCTION DETAILS)

XCEL ENERGY
(ELECTRIC)

PI: 412'SE'+12.14

406

END CONSTRUCTION
STA 413'SE'+29.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

STA 494'SB'+26.69
PROFILE TRANSITION
(SEE CONSTRUCTION DETAILS)

494'SD'

PT: 493'SD'+93.21

SALVAGED RAIL
SALVAGED GUARDRAIL END TREATMENT
MGS GUARDRAIL 3
MGS GUARDRAIL TERMINAL TYPE 2
MGS GUARDRAIL TERMINAL EAT
STA 405'SE'+34 - STA 408+75 RT

CURVE SD-2
PI STA = 492+35.16
Y = 140058.47
X = 162326.59
PC STA = 490+71.90
Y=139934.12
X=162432.36
PT STA = 493+93.21
Y=140215.88
X=162283.28
DELTA = 25°00'05"
D = 7°46'52"
T = 163.25'
L = 321.31'
R = 736.35'
SE TRANSITION (T) = 134'
RO (RUNOFF) = 95'
SE = 4.9%

CURVE SD-2

492'SD'

490'SD'

PC: 490'SD'+71.90

STA 494'SD'+89, RT
REMOVE 1-35"X24" PAAEW
CULVERT EXTENSION
1-35"X24"X8' PACS
1 AEW REQ'D
SKEW 3° LHF
CONCRETE COLLAR REQ'D
2-MARKERS FOR CULVERT END REQ'D

STA 404'SE'+73, RT
REMOVE 1-24" AEW
CULVERT EXTENSION
1-24"X5' CPCS
1 AEW REQ'D
SKEW 2° RHF
CONCRETE COLLAR REQ'D
2-MARKERS FOR CULVERT END REQ'D

BASE AGG
FE3

PT: 426'SA'+69.86

+60 +44

RIPRAP MEDIUM
(SEE EROSION CONTROL)

PC: 442'SB'+52.14

442'SB'

N15° 41' 14"W

REMOVING MASONRY

* SALVAGED RAIL
SALVAGED GUARDRAIL END TREATMENT
STEEL PLATE BEAM GUARD CLASS A
STEEL PLATE BEAM GUARD SHORT RADIUS
STEEL PLATE BEAM GUARD OVER LOW-FILL CULVERTS CLASS A
ANCHORAGES FOR STEEL PLATE BEAM GUARD TYPE 2
STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
STA 440'SB'+71 - STA 442'SB'+21 RT

STA 442'SB'+18.16
PROFILE TRANSITION
(SEE CONSTRUCTION DETAILS)

C-09-0028
(TO REMAIN)

INSTALL RAMP CLOSURE GATE
(SEE CONSTRUCTION DETAILS)

CP/BM #41
Y = 140474.49
X = 163550.42
ELEV = 945.03
FENO MONUMENT 1000
W/ALUMINUM CAP

REMOVING CURB & GUTTER

407 +28 R=28'

408 409

BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)
+89

R=28' R=32'

405 +27 END OF C&G +43 +60

430'SA'

N0° 51' 08"E

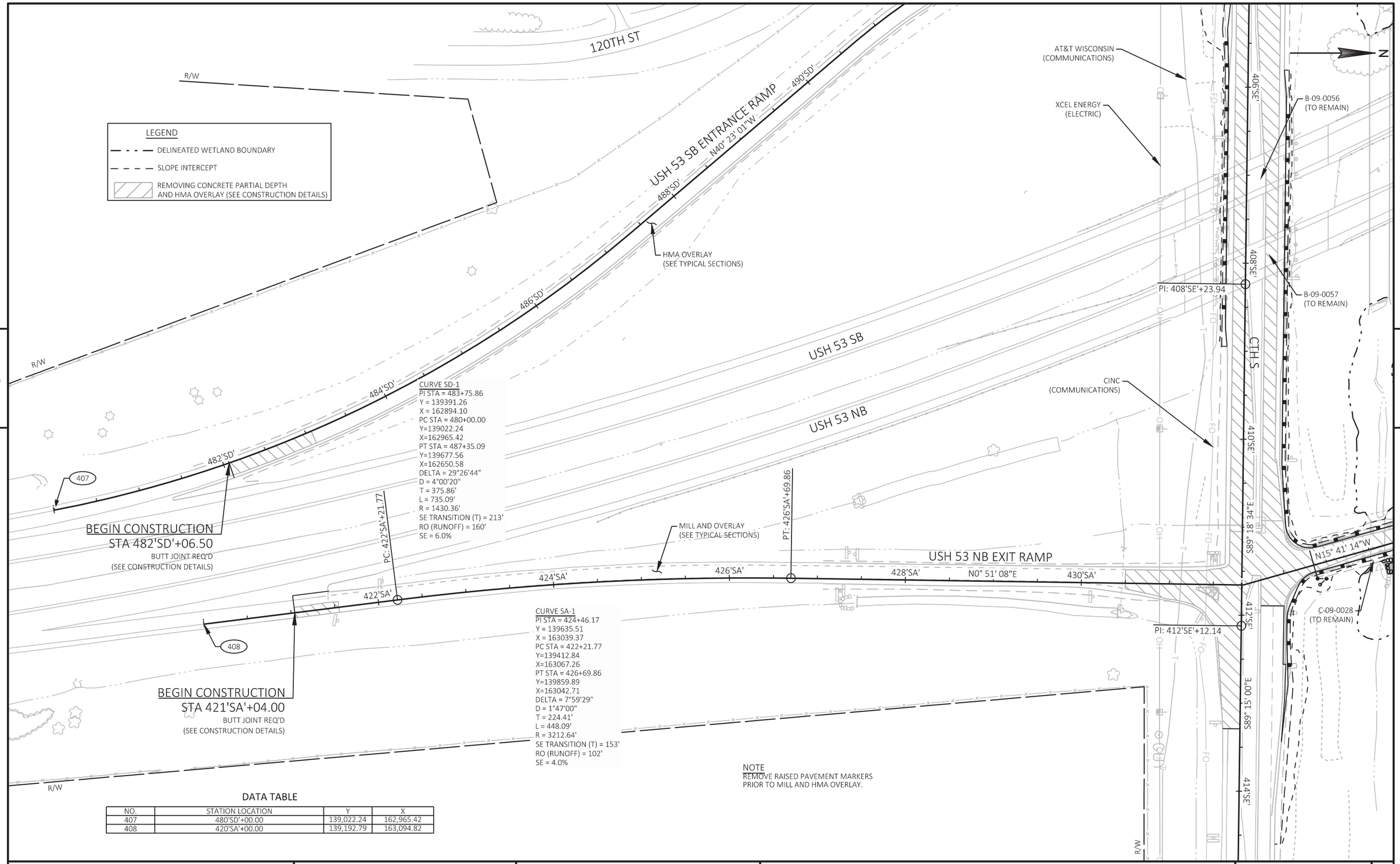
428'SA'

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PLAN - CTH S	SHEET 75 E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\050204-PN.DWG
LAYOUT NAME - 050204-pn

PLOT DATE : 5/15/2017 11:43 AM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



DATA TABLE

NO.	STATION LOCATION	Y	X
407	480'SD'+00.00	139,022.24	162,965.42
408	420'SA'+00.00	139,192.79	163,094.82

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PLAN - CTH S	SHEET 76 E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\050204-PN.DWG
LAYOUT NAME - 050204-pn (2)
PLOT DATE : 4/20/2017 12:04 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT
WISDOT/CADDS SHEET 44

LEGEND

DELINEATED WETLAND BOUNDARY

SLOPE INTERCEPT

REMOVING CONCRETE PARTIAL DEPTH AND HMA OVERLAY (SEE CONSTRUCTION DETAILS)

DATA TABLE

NO.	STATION LOCATION	Y	X
411	474'SC'+00.00	141,722.69	161,835.20
412	458'SB'+00.00	141,761.19	161,978.54

N

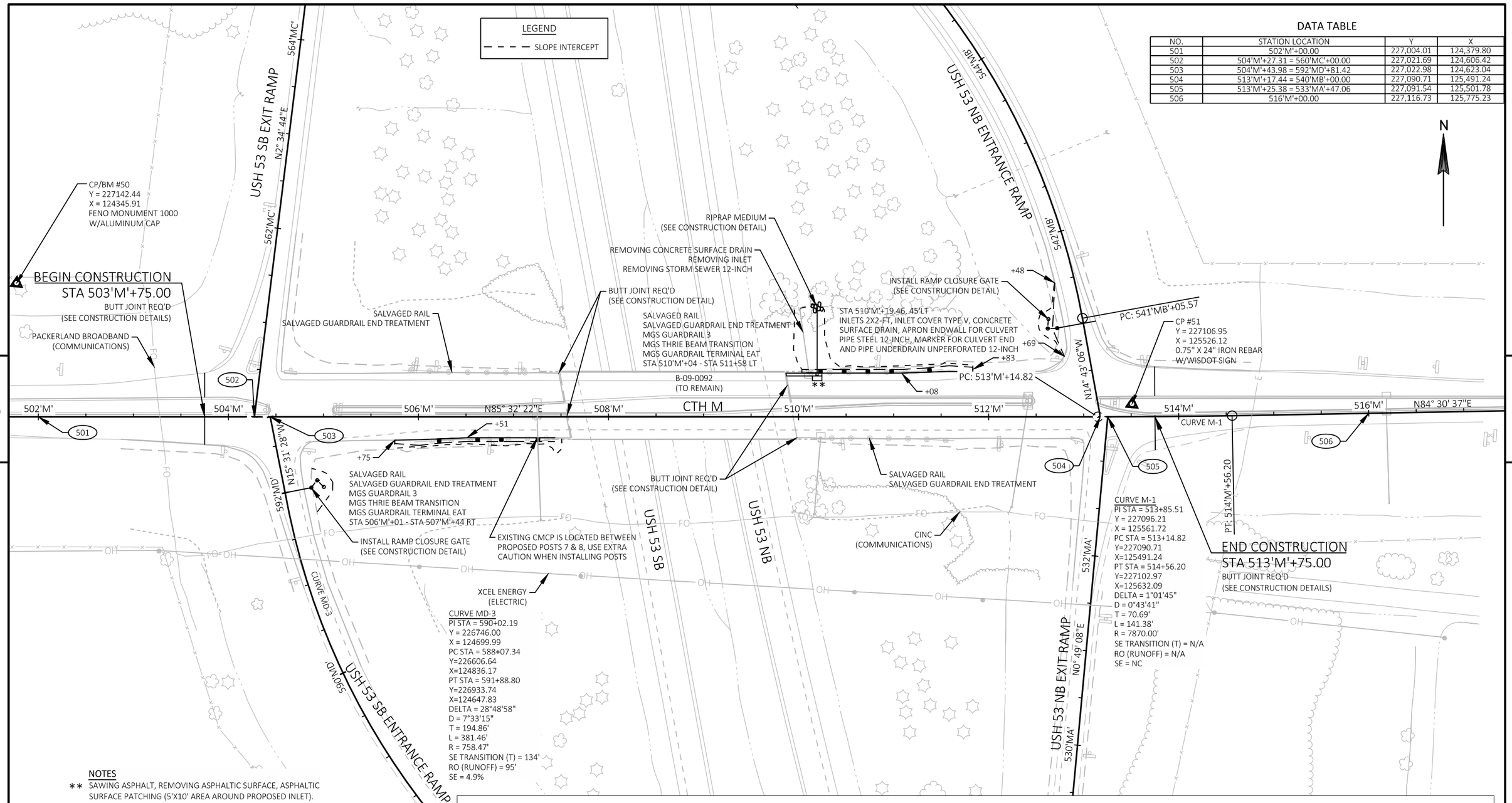
CURVE SC-1
PI STA = 471+74.33
Y = 141520.57
X = 161939.96
PC STA = 469+46.68
Y=141300.01
X=161996.31
PT STA = 474+00.00
Y=141722.68
X=161835.20
DELTA = 13°03'59"
D = 2°52'57"
T = 227.65'
L = 453.32'
R = 1987.77'
SE TRANSITION (T) = 200'
RO (RUNOFF) = 147'
SE = 5.5%

CURVE SB-1
PI STA = 445+00.41
Y = 140854.11
X = 162915.46
PC STA = 442+52.14
Y=140615.09
X=162982.59
PT STA = 447+32.03
Y=141007.24
X=162720.04
DELTA = 36°13'47"
D = 7°32'59"
T = 248.27'
L = 479.89'
R = 758.92'
SE TRANSITION (T) = 134'
RO (RUNOFF) = 95'
SE = 4.9%

CURVE SB-2
PI STA = 454+30.76
Y = 141438.22
X = 162170.06
PC STA = 451+58.86
Y=141270.51
X=162384.08
PT STA = 456+96.42
Y=141672.10
X=162031.37
DELTA = 21°14'57"
D = 3°57'10"
T = 271.90'
L = 537.56'
R = 1449.46'
SE TRANSITION (T) = 213'
RO (RUNOFF) = 160'
SE = 6.0%

NOTE
REMOVE RAISED PAVEMENT MARKERS PRIOR TO MILL AND HMA OVERLAY.

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PLAN - CTH S	SHEET 77	E



DATA TABLE

NO.	STATION LOCATION	Y	X
501	502'M'+00.00	227,004.01	124,379.80
502	504'M'+27.31 = 560'MC'+00.00	227,021.69	124,606.42
503	504'M'+43.98 = 592'MD'+81.42	227,022.98	124,623.04
504	513'M'+17.44 = 540'MB'+00.00	227,090.71	125,491.24
505	513'M'+25.38 = 533'MA'+47.06	227,091.54	125,501.78
506	516'M'+00.00	227,116.73	125,775.23

NOTES

** SAWING ASPHALT, REMOVING ASPHALTIC SURFACE, ASPHALTIC SURFACE PATCHING (5'X10' AREA AROUND PROPOSED INLET).

SEE DETAIL OF ASPHALTIC SURFACE PATCHING AT CONCRETE SURFACE DRAIN FOR MORE INFORMATION.

SEE CROSS SECTIONS FOR LIMITS OF BARRIER SYSTEM GRADING SHAPING FINISHING AND GRADING SHAPING AND FINISHING RAMP GATES.

STORM SEWER SCHEDULE

STRUCT NO.	STATION	(1) OFFSET	C-C (FT)	TO STRUCT	INLET TYPE / COVER	(2) RIM/ GRATE ELEV.	(3) T.O.S. ELEV.	(4) DEPTH (FT)	DISCHARGE PIPE CLASS	SIZE (IN)	INLET ELEV.	DISCHARGE ELEV.	(5) LENGTH (FT)	(6) SLOPE (%)	REMARKS
1	510'M'+19.46	45.00' LT	67	2	2-FT X 2-FT / V	1136.19	1134.86	4.00	--	12	1130.86	1121.14	66	VARIES	SEE SDD "CONCRETE SURFACE DRAINS DROP INLET TYPE AT STRUCTURES" FOR ADDITIONAL INFORMATION
2	510'M'+19.46	112.00' LT	--	--	--	--	--	--	--	--	--	--	--	--	APRON ENDWALL AND MARKERS CULVERT END REQ'D. (7)

(1) STRUCTURE OFFSET IS TO CENTER OF STRUCTURE
(2) RIM ELEVATION FOR INLETS 4-FT DIAMETER IS 1-INCH BELOW NORMAL CURB AND GUTTER FLOW LINE ELEVATION.
(3) TOP OF STRUCTURE ELEVATION (T.O.S.) DETERMINED BY SUBTRACTING CASTING HEIGHT AND 6-INCHES, FOR ADJUSTMENT, FROM RIM ELEVATION. A TYPE H-S AND H-D INLET CASTING IS 4 INCHES IN HEIGHT.
(4) DEPTH OF STRUCTURE MEASURED BY SUBTRACTING DISCHARGE ELEVATION FROM T.O.S.
(5) PIPE LENGTH IS MEASURED FROM INSIDE WALL OF STRUCTURE TO THE INSIDE WALL OF STRUCTURE OR END OF APRON ENDWALL, USED FOR SLOPE CALCULATION ONLY
(6) PIPE SLOPE IS CALCULATED USING PIPE LENGTH BETWEEN INSIDE WALL OF STRUCTURE TO THE INSIDE WALL OF STRUCTURE OR END OF PIPE APRON ENDWALL
(7) STATION AND OFFSET IS TO END OF APRON ENDWALL

LEGEND

— — — — SLOPE INTERCEPT

DATA TABLE

NO.	STATION LOCATION	Y	X
507	578'MD'+00.00	225,754.13	125,349.68
508	520'MA'+00.00	225,765.91	125,635.45

CURVE MD-2
PI STA = 583+67.80
Y = 226285.56
X = 125149.95
PC STA = 580+57.97
Y=225994.29
X=125255.56
PT STA = 586+68.22
Y=226507.14
X=124933.41
DELTA = 24°24'36"
D = 4°00'00"
T = 309.82'
L = 610.25'
R = 1432.39'
SE TRANSITION (T) = 213'
RO (RUNOFF) = 160'
SE = 6.0%

CURVE MD-3
PI STA = 590+02.19
Y = 226746.00
X = 124699.99
PC STA = 588+07.34
Y=226606.64
X=124836.17
PT STA = 591+88.80
Y=226933.74
X=124647.83
DELTA = 28°48'58"
D = 7°33'15"
T = 194.86'
L = 381.46'
R = 758.47'
SE TRANSITION (T) = 134'
RO (RUNOFF) = 95'
SE = 4.9%

CURVE MA-1
PI STA = 523+44.90
Y = 226077.36
X = 125487.28
PC STA = 520+00.00
Y=225765.91
X=125635.45
PT STA = 526+77.67
Y=226422.22
X=125492.21
DELTA = 26°15'44"
D = 3°52'31"
T = 344.90'
L = 677.67'
R = 1478.47'
SE TRANSITION (T) = 213'
RO (RUNOFF) = 160'
SE = 6.0%

NOTE
REMOVE RAISED PAVEMENT MARKERS
PRIOR TO MILL AND HMA OVERLAY.

BEGIN CONSTRUCTION
STA 582'MD'+90.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

BEGIN CONSTRUCTION
STA 523'MA'+11.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

EXISTING RCCP (TO REMAIN)

USH 53 SB ENTRANCE RAMP

USH 53 SB

USH 53 NB

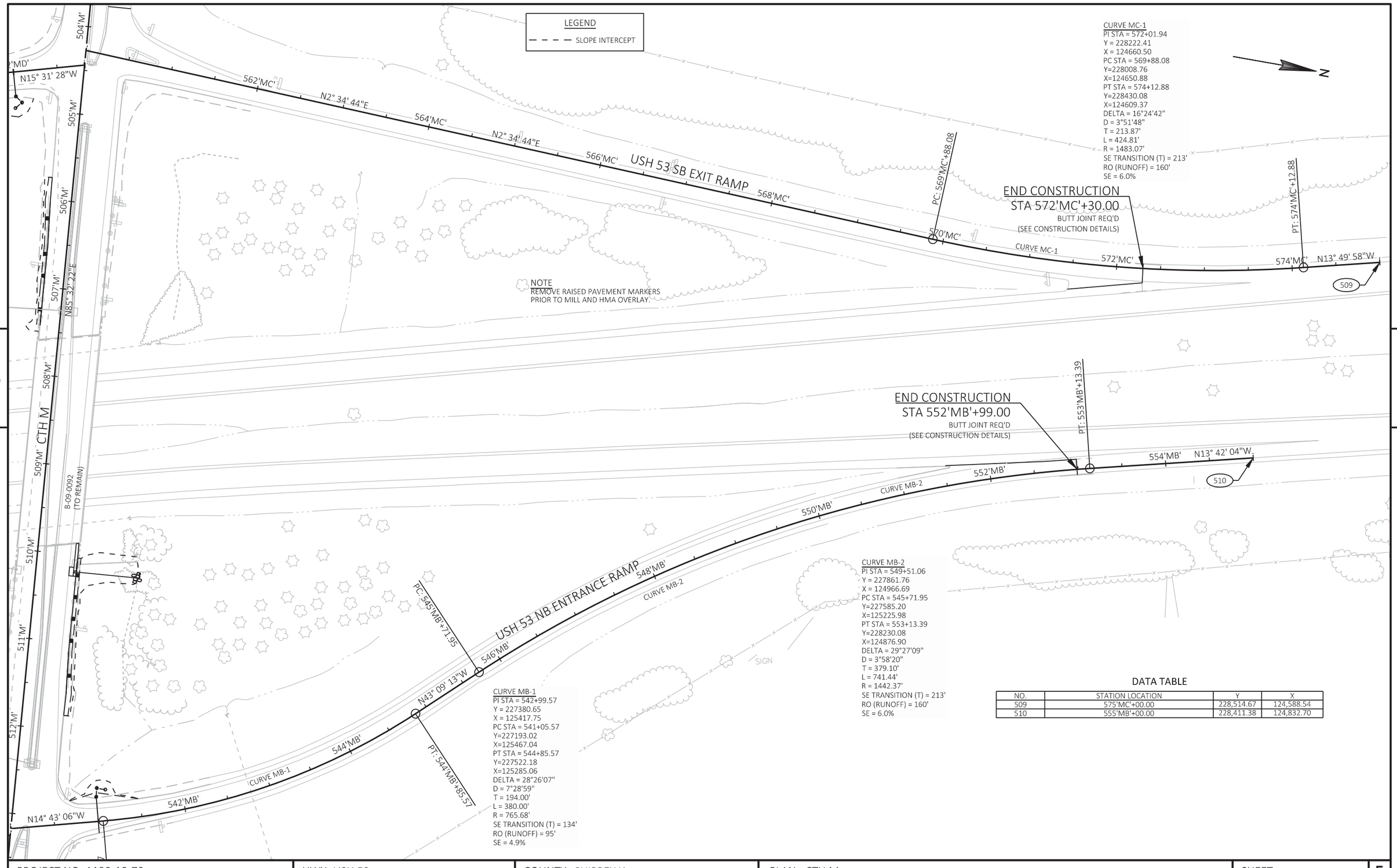
USH 53 NB EXIT RAMP

CTH M

B-09-0092 (TO REMAIN)

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PLAN - CTH M	SHEET 79	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\050205-PN.DWG
LAYOUT NAME - 050205-pn (2)
PLOT DATE : 4/20/2017 12:06 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT



DATA TABLE

NO.	STATION LOCATION	Y	X
509	575'MC'+00.00	228,514.67	124,588.54
510	555'MB'+00.00	228,411.38	124,832.70

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PLAN - CTH M	SHEET 80	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\050205-PN.DWG
LAYOUT NAME - 050205-pn (3)
PLOT DATE : 4/20/2017 12:06 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:100 FT

N

DATA TABLE

NO.	STATION LOCATION	X	Y
601	600'C'+00.00	129,374.04	328,222.31
602	614'C'+00.00	123,935.45	329,616.78

USH 53 SB EXIT RAMP

USH 53 NB ENTRANCE RAMP

604'C'+38, 295' LT
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

610'C'+06, 255' LT
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

B-03-0044
(TO REMAIN)

B-03-0045
(TO REMAIN)

SIGN

REPAIR CONCRETE LOADING ZONE
(SEE CONSTRUCTION DETAILS)

RIPRAP

ASPHALTIC FLUME

601

BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)
+55

602'C'

604'C'

606'C'

608'C'

610'C'

612'C'

614'C'

CTH O

USH 53 SB

USH 53 NB

MILL AND OVERLAY
(SEE CONSTRUCTION DETAILS)

BEGIN CONSTRUCTION
STA 601'C'+99.00
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)
+55

602

BEGIN CONSTRUCTION
STA 613'C'+58.31
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

605'C'+12, 205' RT
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

USH 53 SB ENTRANCE RAMP

611'C'+22, 281' RT
BUTT JOINT REQ'D
(SEE CONSTRUCTION DETAILS)

USH 53 NB EXIT RAMP

INL

5

5

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: BARRON	PLAN - CTH O	SHEET 81	E

Standard Detail Drawing List

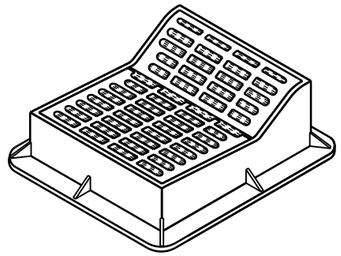
08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08C07-02	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D02-06	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-10	CONDUIT
09B04-11	PULL BOX
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C05-10	CONCRETE CONTROL CABINET BASES
09E01-14D	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 5 (30 FEET)
12A03-10	NAME PLATE (STRUCTURES)
13C09-14A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-14B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-14C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
14B15-10A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-10B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-10C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B16-04A	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B16-04B	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B24-09A	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09B	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B24-09C	STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL
14B25-01	STEEL PLATE BEAM GUARD, CLASS "A", OVER LOW FILL CULVERTS
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B29-01	SAFETY EDGE
14B42-05A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-05D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-03A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-03C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04F	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04G	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04H	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04I	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04J	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04K	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04L	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A02-09	DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS

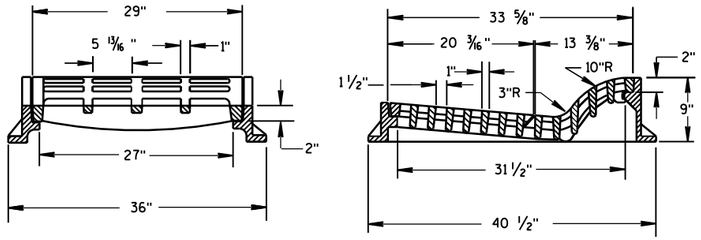
6

Standard Detail Drawing List

15C08-18A	LONGITUDINAL MARKING (MAINLINE)
15C08-18B	PAVEMENT MARKING (TURN LANES)
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C20-02	YIELD MARKING
15C27-02A	DOUBLE ARROW WARNING SIGN PLACEMENT
15C27-02B	PAVEMENT MARKING (ISLANDS)
15C31-02A	PAVEMENT MARKING (RAMPS AND GORES)
15D12-06A	TRAFFIC CONTROL, LANE CLOSURE
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D30-03A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-03B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-03C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D34-02A	RAMP GATE SOLAR POWER
15D34-02B	RAMP GATE SOLAR POWER
15D34-02C	RAMP GATE SOLAR POWER
15D34-02D	RAMP GATE SOLAR POWER

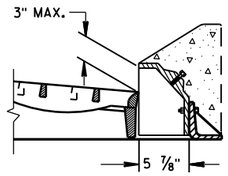
6





TYPE "F"

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



ALTERNATIVE CURB BOX FOR TYPE "HM" COVER

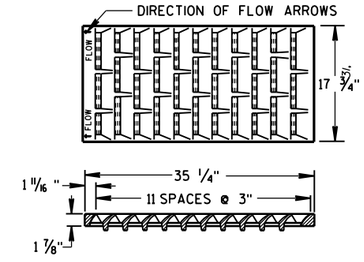
USE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLE

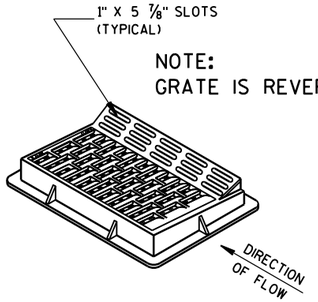
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

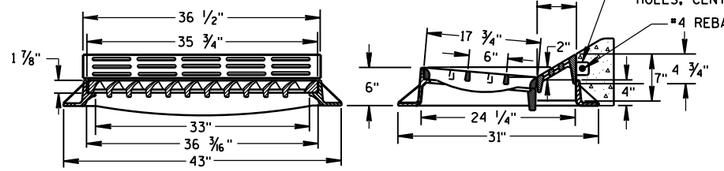
GENERAL NOTES

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

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



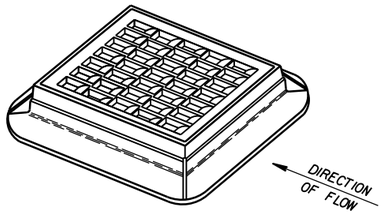


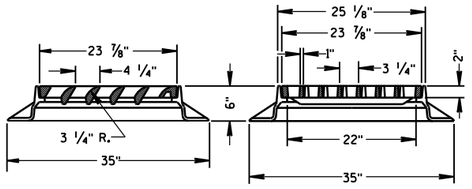


TYPE "HM"

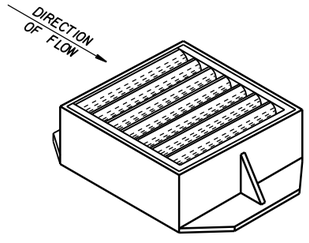
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.

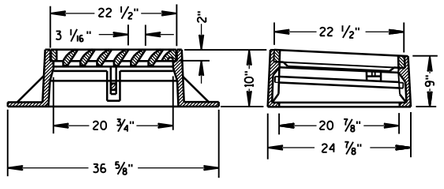
NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE



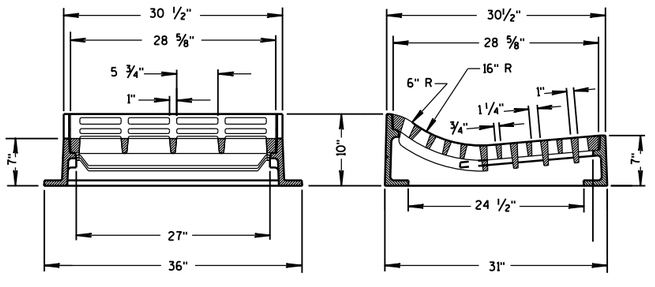


TYPE "S"



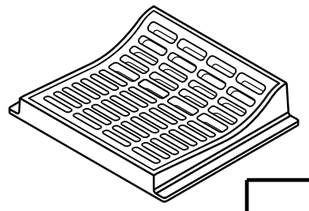


TYPE "V"



TYPE "T"

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



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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

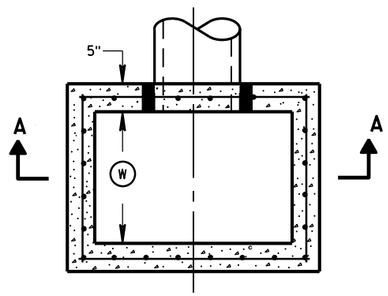
APPROVED
11/27/2013
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

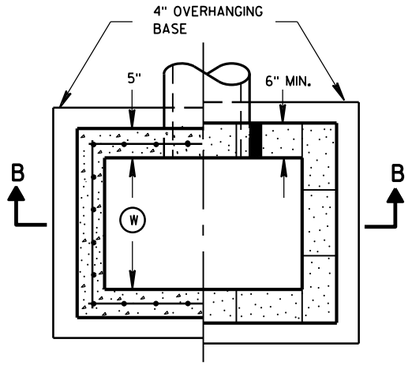
FHWA

6

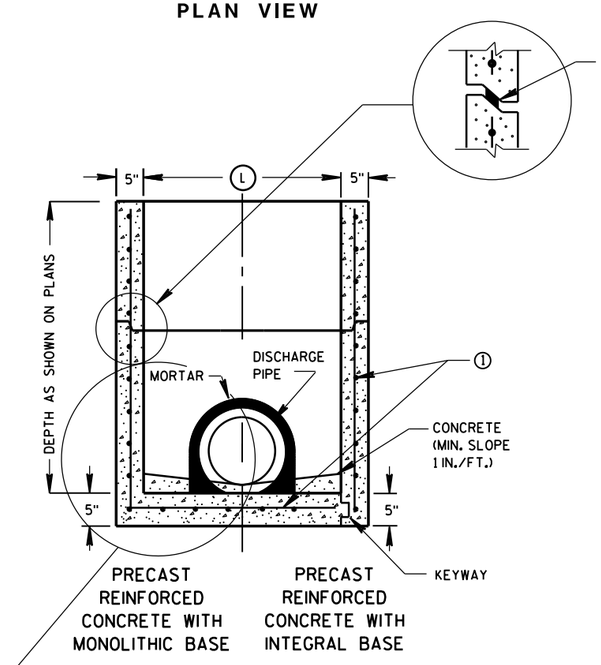
S.D.D. 8 A 5-19c



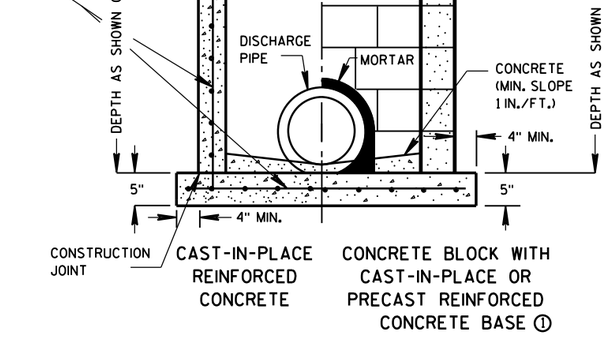
PLAN VIEW



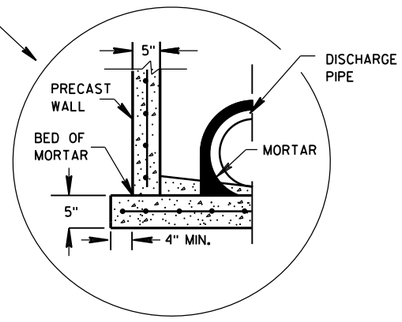
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

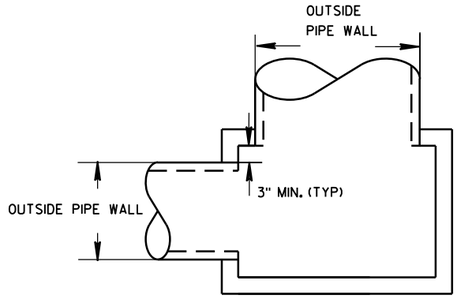
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

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

PIPE MATRIX

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



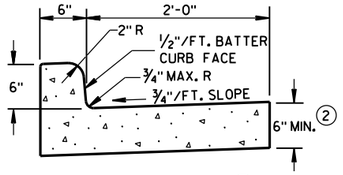
DETAIL "A"

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

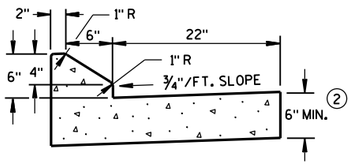
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS D IT UNIT SUPERVIS
FHWA

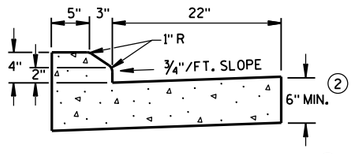
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT



TYPES A & D ①

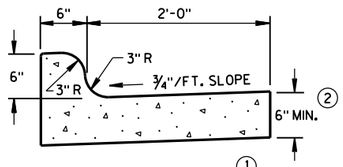


6" SLOPED CURB TYPES G & J ①

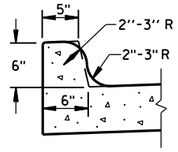


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

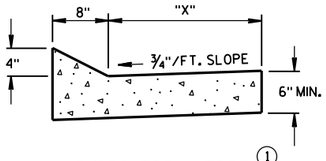


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

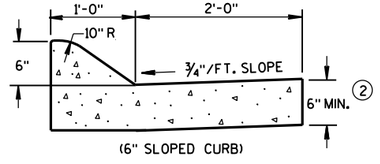
CONCRETE CURB & GUTTER 30"



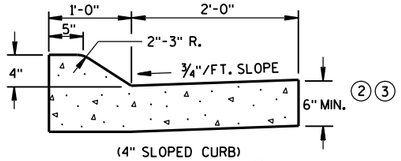
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

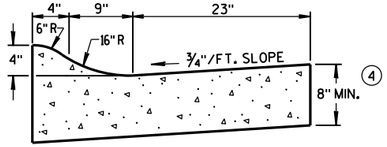


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ①⑤

CONCRETE CURB & GUTTER 36"

GENERAL NOTES

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

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

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

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

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

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

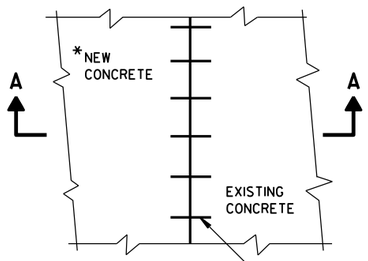
② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

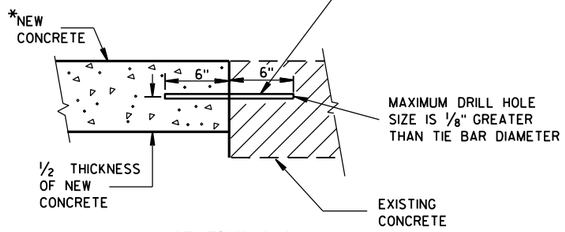
⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



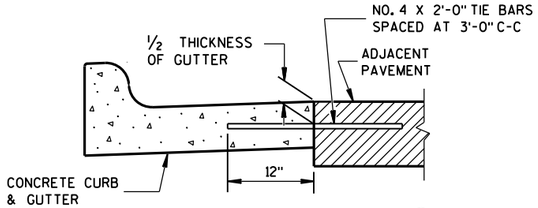
*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

PLAN VIEW

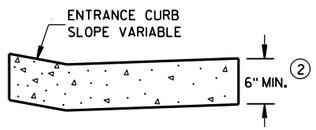


SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT

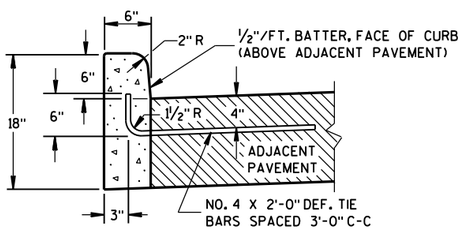


TYPICAL TIE BAR LOCATION ①

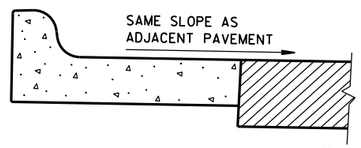


DRIVEWAY ENTRANCE CURB

(WHEN DIRECTED BY THE ENGINEER)

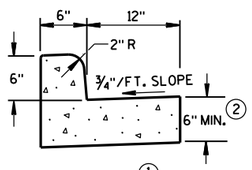


① TYPES A & D



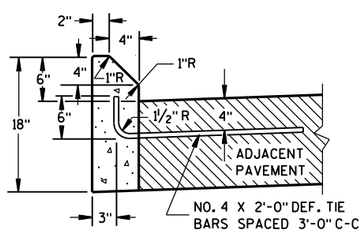
⑥ REVERSE SLOPE GUTTER

(TYPICAL FOR ALL CURB & GUTTER TYPES)



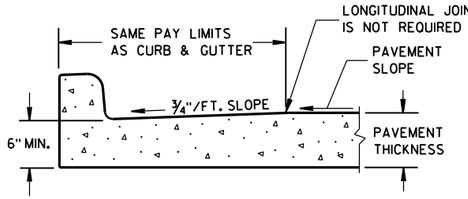
① TYPES A & D

CONCRETE CURB & GUTTER 18"

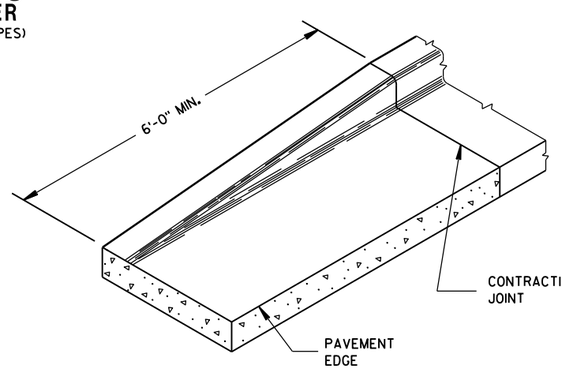


① TYPES G & J

CONCRETE CURB



PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER

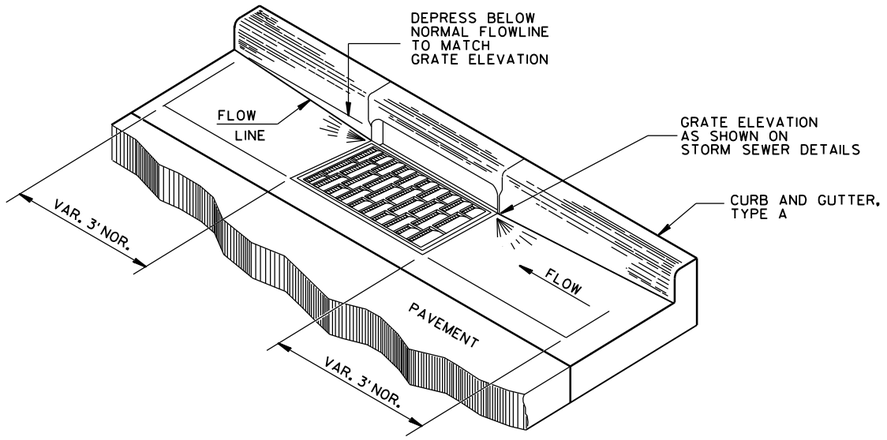
CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 D 1-19



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

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

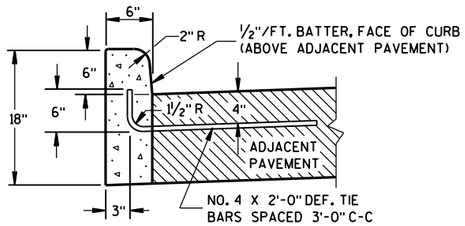
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

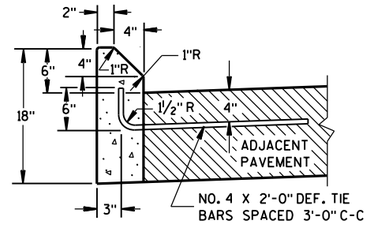
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

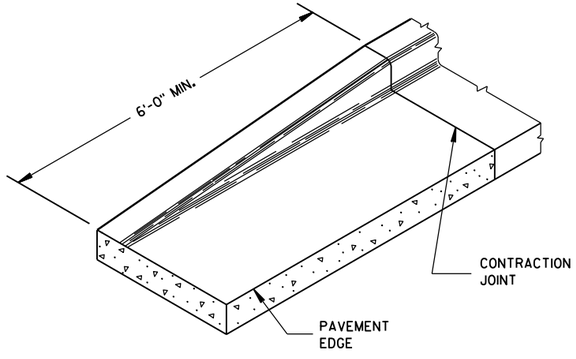


TYPES A(1) & D

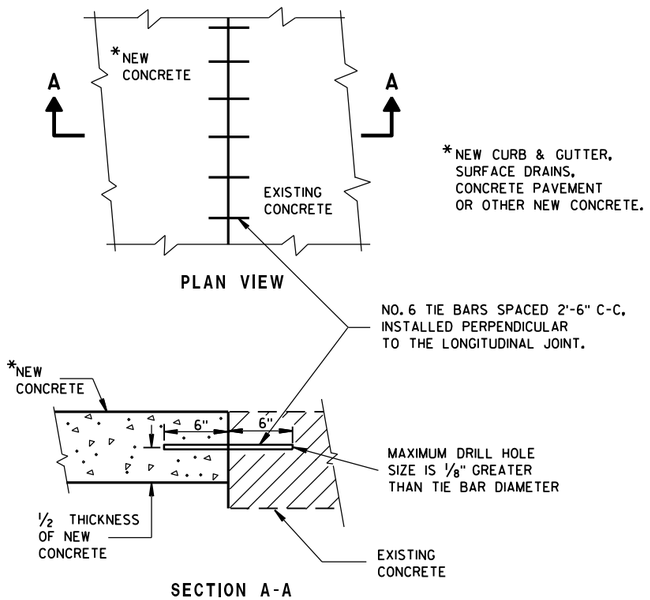


TYPES G(1) & J

CONCRETE CURB



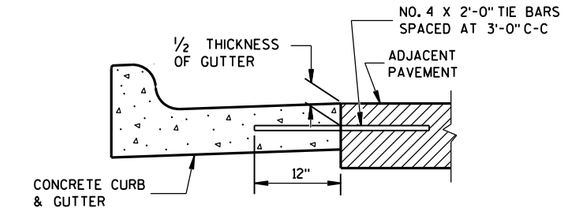
END SECTION CURB & GUTTER



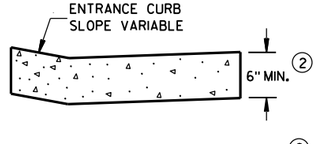
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

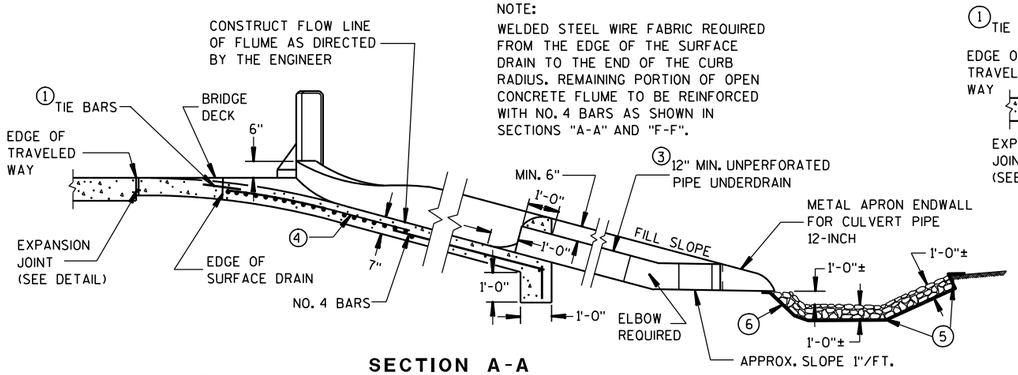
APPROVED
June, 2017 — DATE
/S/ Rodney Taylor
ROADWAY STANDARDS 87 ENT
UNIT SUPERVISOR
FHWA

6

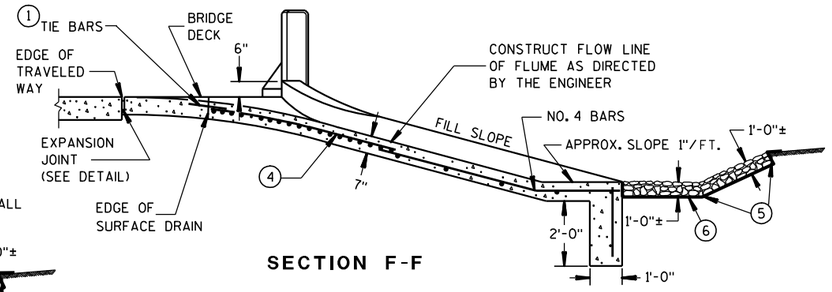
S.D.D. 8 D 1-20b

6

S.D.D. 8 D 1-20b



SECTION A-A



SECTION F-F

GENERAL NOTES

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

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

(1) NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" CENTERS TO BE USED ONLY WHEN ADJACENT TO P.C. CONCRETE.

(2) NO. 4 X 2'-0" TIE BARS SPACED AT 12" CENTERS TO BE PLACED BY BRIDGE CONTRACTOR, OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.

(3) PIPE UNDERDRAIN MAY BE ANY OF THE MATERIALS LISTED IN SECTION 612.2 OF THE STANDARD SPECIFICATIONS EXCEPT DRAIN TILE.

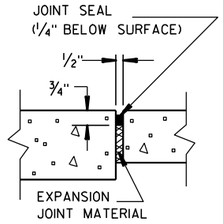
(4) MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

(5) LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.

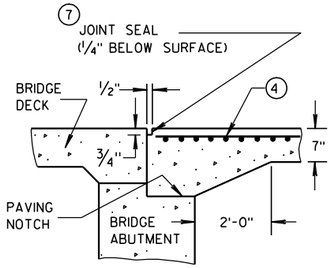
(6) GEOTEXTILE FABRIC, TYPE 'R"

(7) HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED.

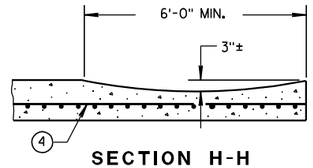
(8) THIS DIMENSION MAY VARY DEPENDING ON THE SPACING OF POSTS FOR THE STEEL PLATE BEAM GUARD. THE TYPICAL LOCATION FOR THE SURFACE DRAIN IS WHERE THE POST SPACING WIDENS TO 3'-1½".



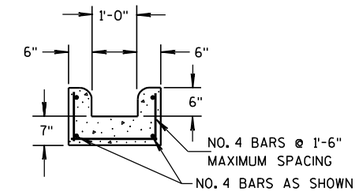
EXPANSION JOINT DETAIL



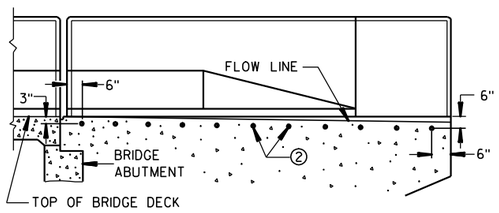
SECTION D-D



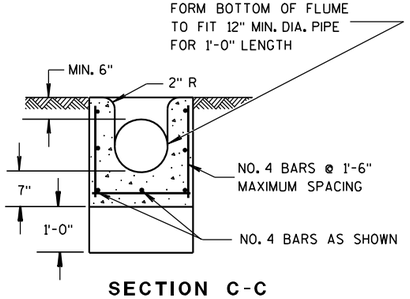
SECTION H-H



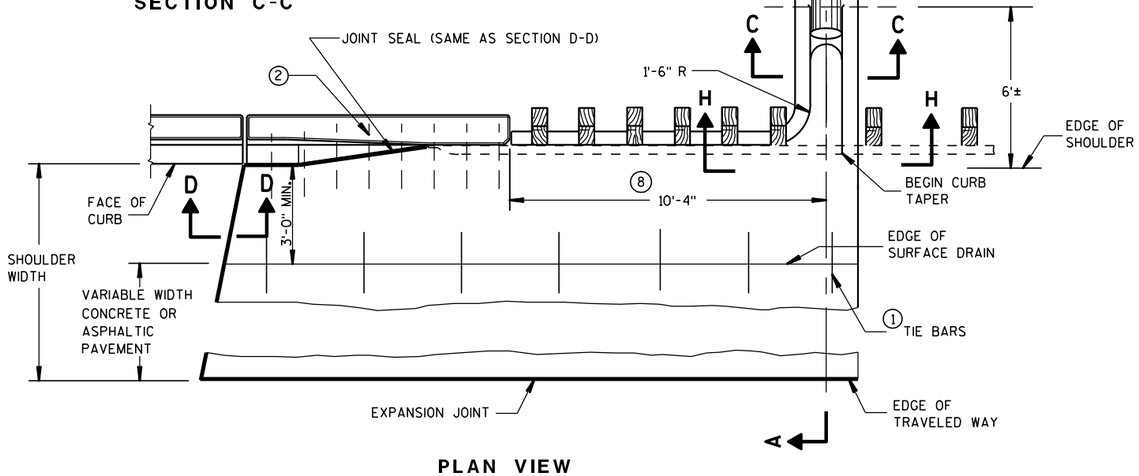
SECTION E-E



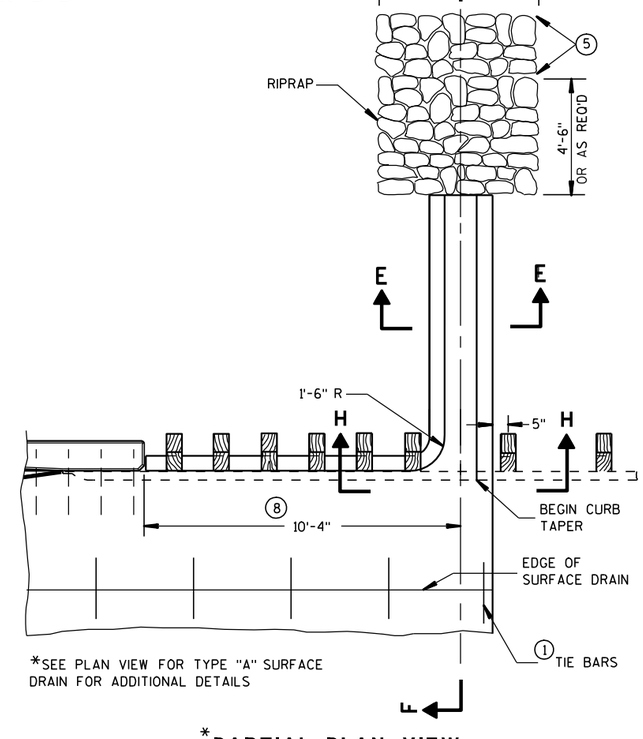
LOCATION OF TIE BARS IN WINGWALL



SECTION C-C



PLAN VIEW
SURFACE DRAIN WITH PIPE
TYPE "A"



*SEE PLAN VIEW FOR TYPE "A" SURFACE DRAIN FOR ADDITIONAL DETAILS

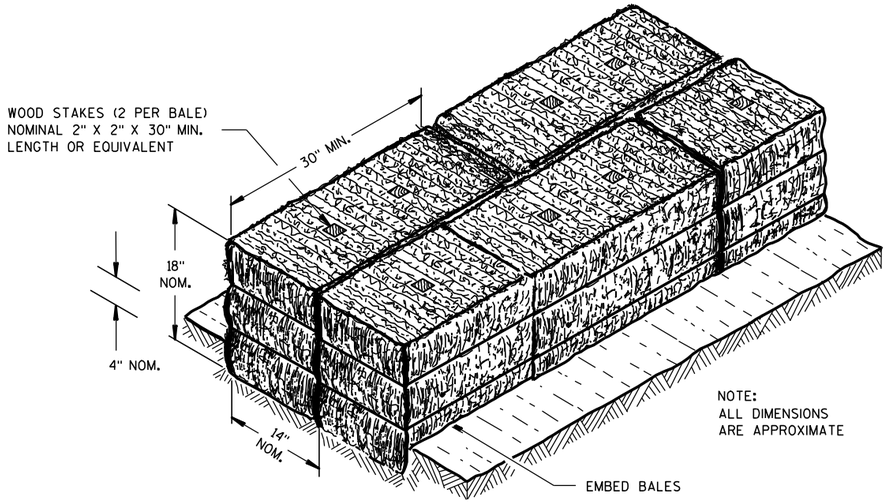
***PARTIAL PLAN VIEW**
SURFACE DRAIN WITHOUT PIPE
TYPE "B"

CONCRETE SURFACE DRAINS
FLUME TYPE
AT STRUCTURES

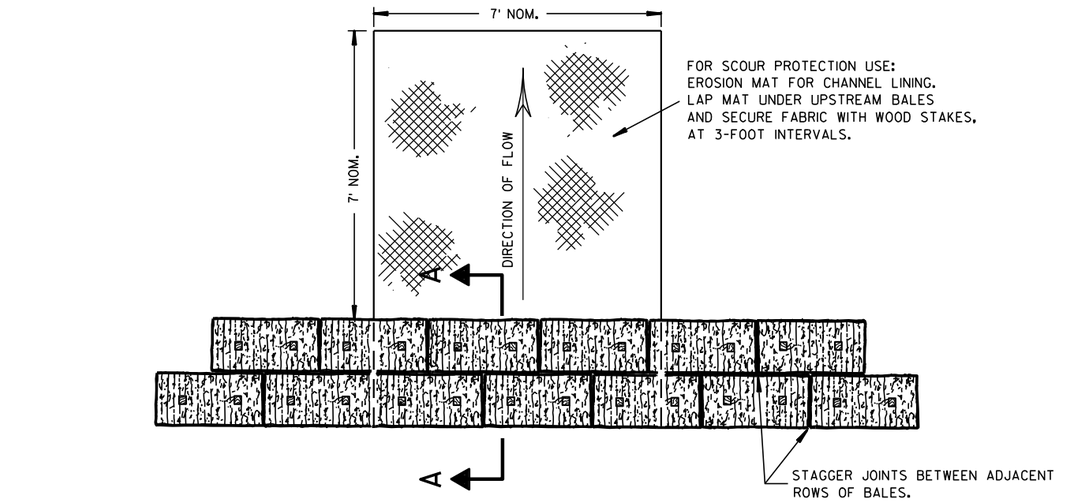
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

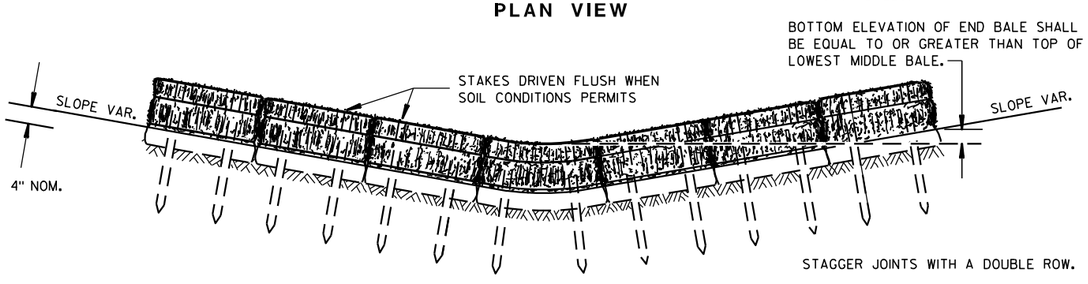
6
S.D.D. 8 D 2-6



SECTION A-A



PLAN VIEW



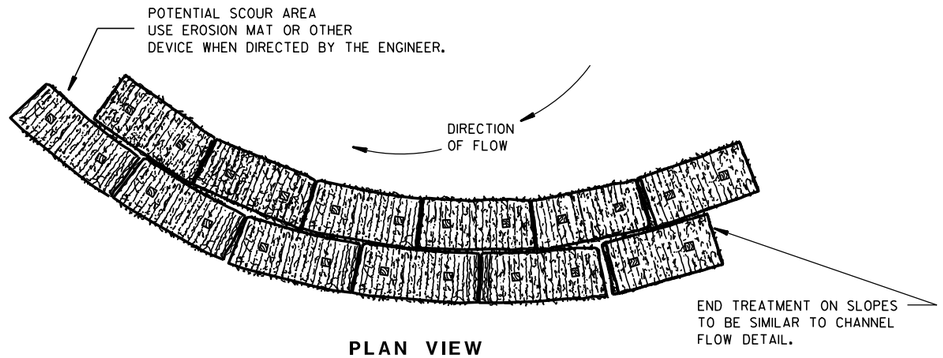
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES (1)

GENERAL NOTES

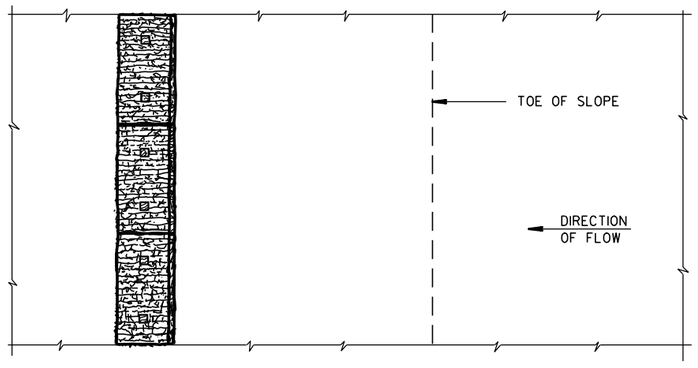
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

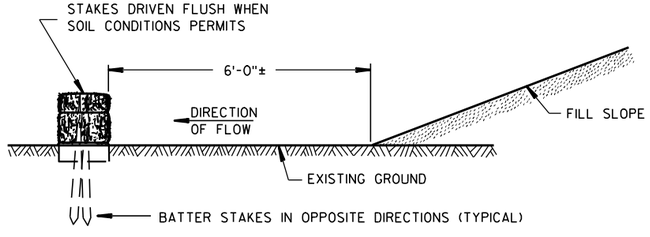


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

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

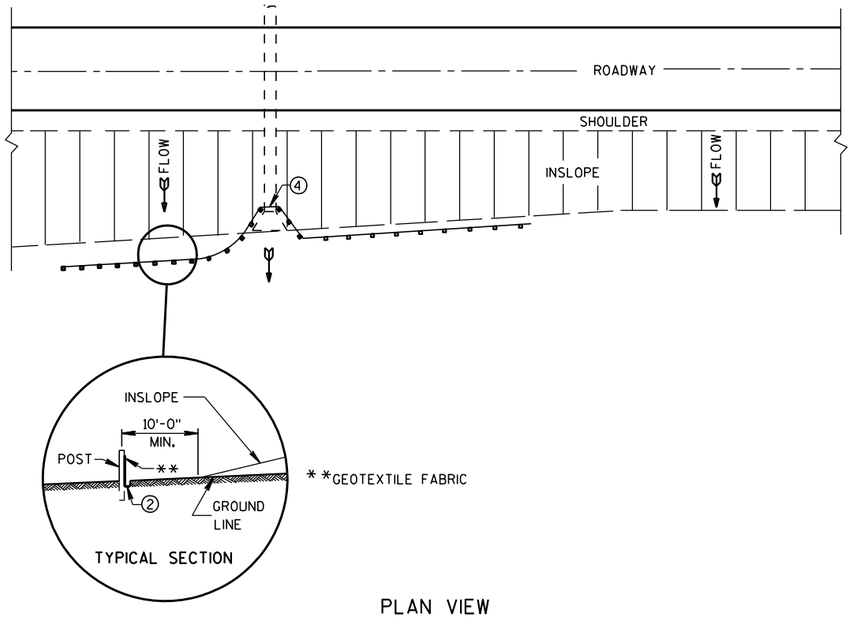
FHWA

6

S.D.D. 8 E 8-3

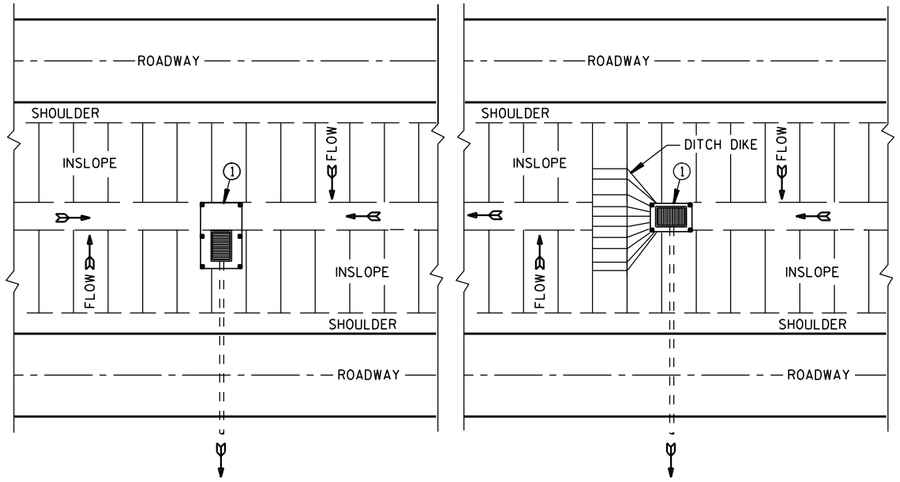
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

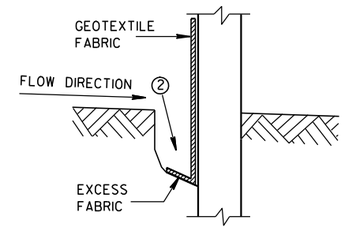
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

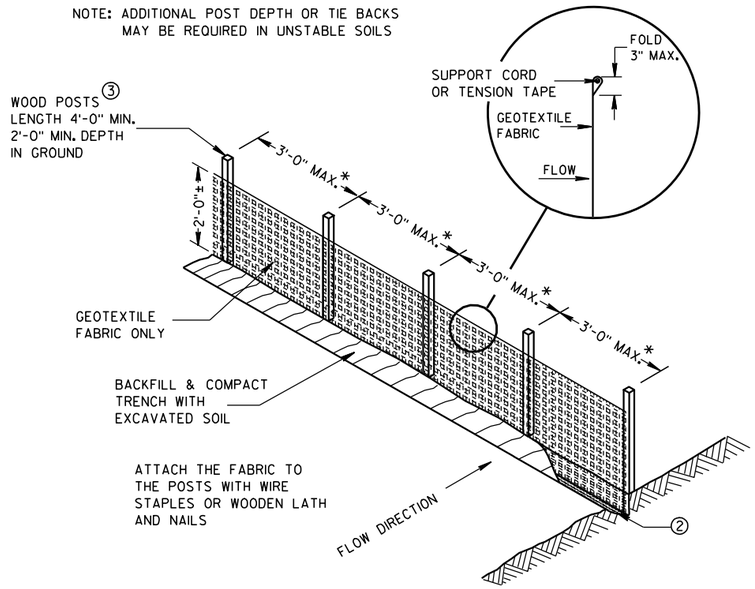
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

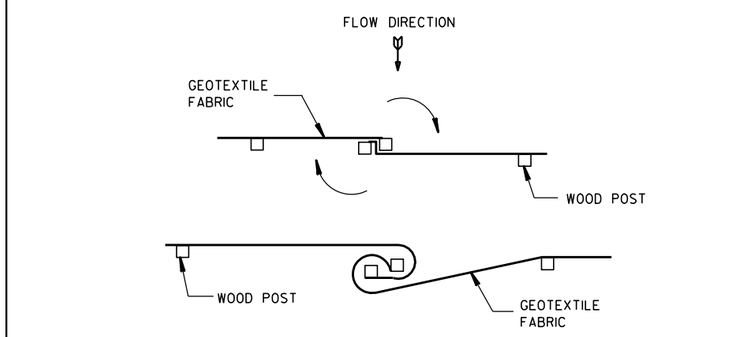
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



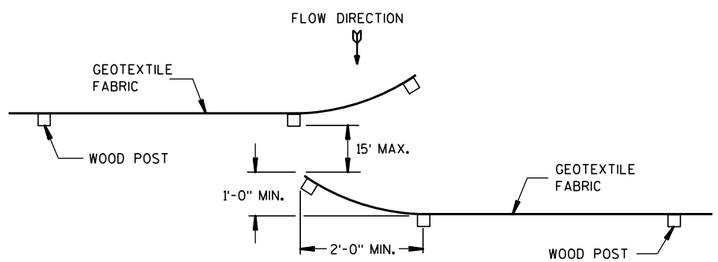
TRENCH DETAIL



SILT FENCE

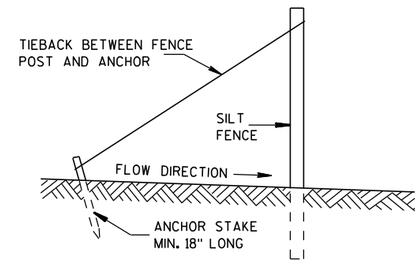


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

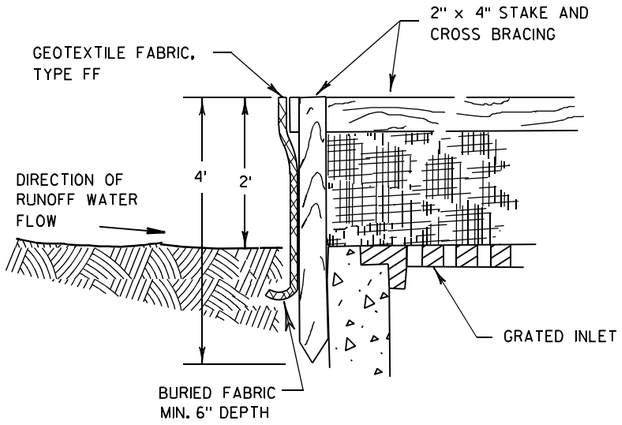
(WHEN REQUIRED BY THE ENGINEER)

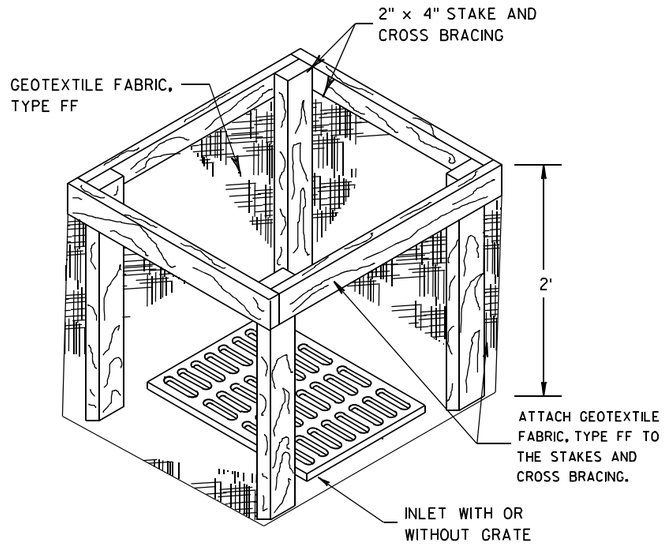
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

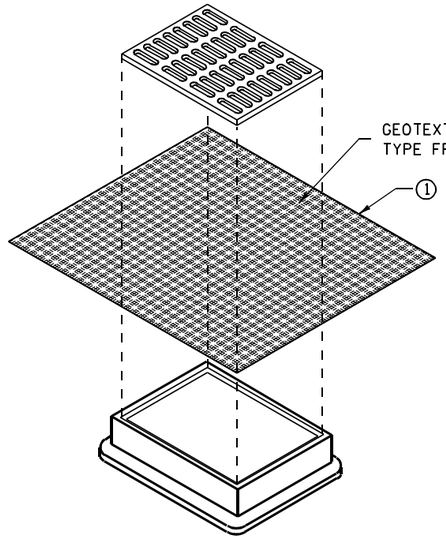
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6
S.D.D. 8 E 9-6



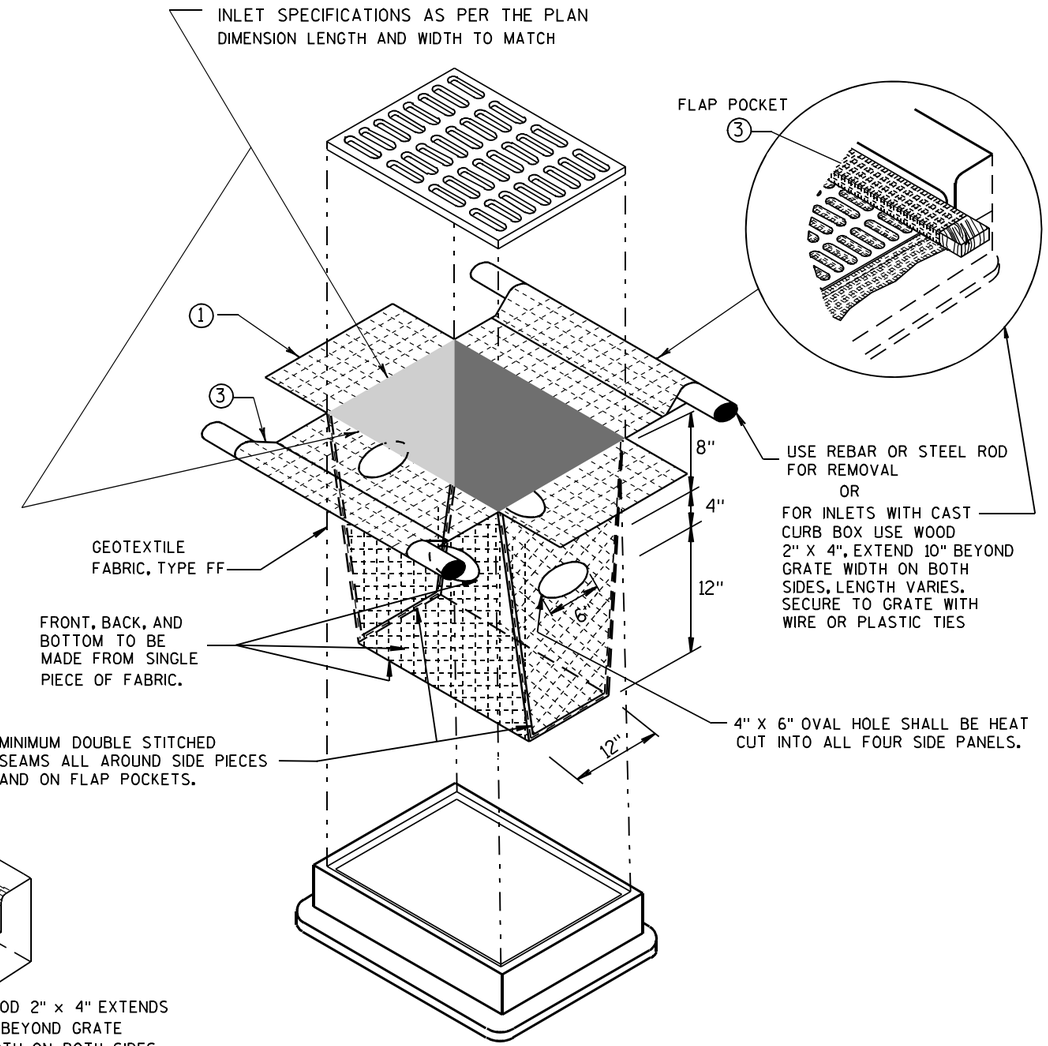


INLET PROTECTION, TYPE A



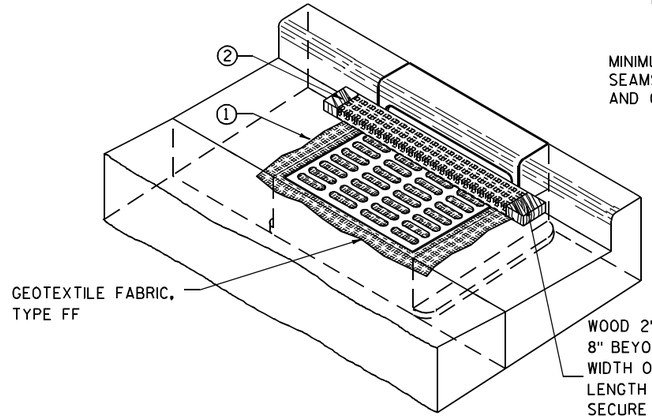
INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

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



INLET PROTECTION, TYPE D

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

GENERAL NOTES

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

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

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

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

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

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

INSTALLATION NOTES

TYPE B & C

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

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

TYPE D

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

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

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

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 E 10-2

6

S.D.D. 8 E 10-2

METAL APRON ENDWALLS

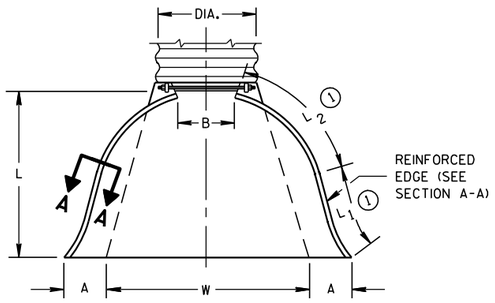
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

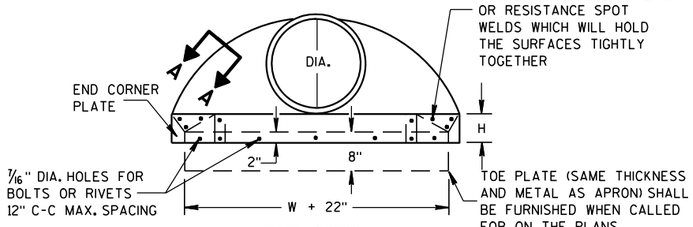
REINFORCED CONCRETE APRON ENDWALLS

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

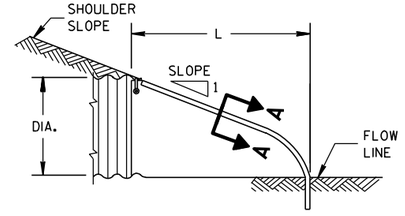
* MINIMUM
** MAXIMUM



PLAN VIEW

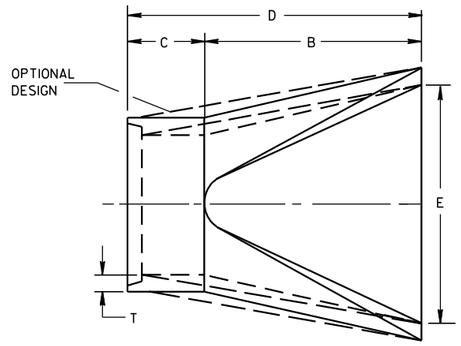


END VIEW

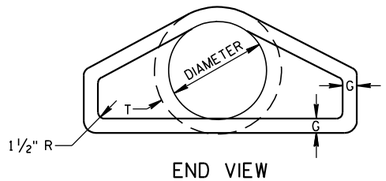


SIDE ELEVATION

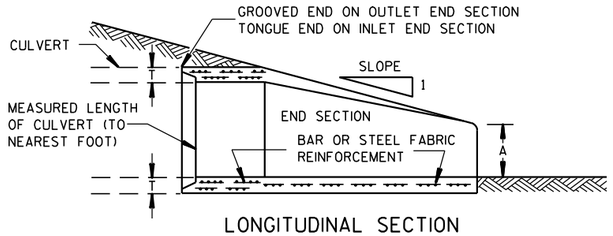
METAL ENDWALLS



PLAN

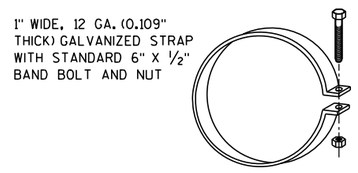


END VIEW



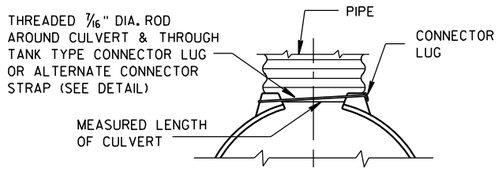
LONGITUDINAL SECTION

CONCRETE ENDWALLS

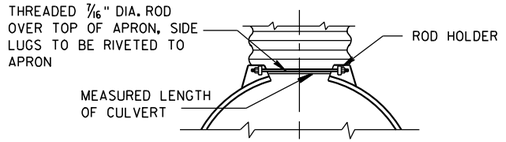


ALTERNATE FOR TYPE 1 CONNECTION

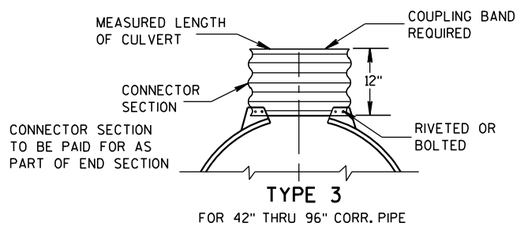
END SECTION CONNECTOR STRAP



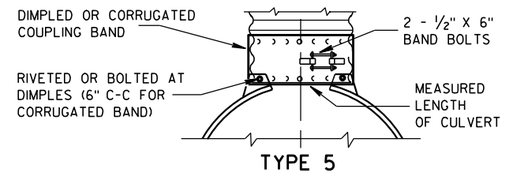
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

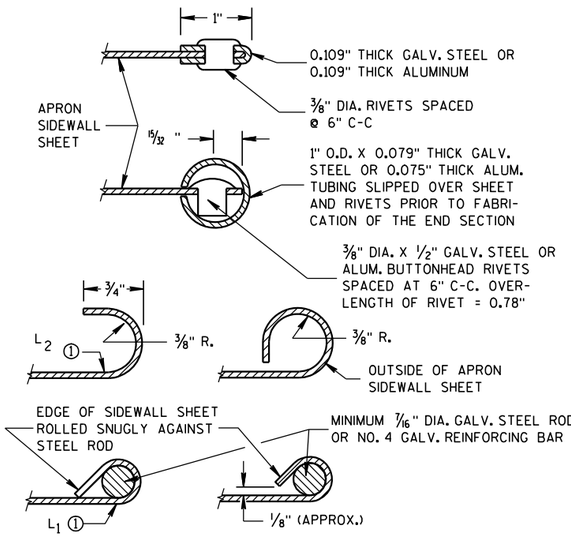
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

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

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

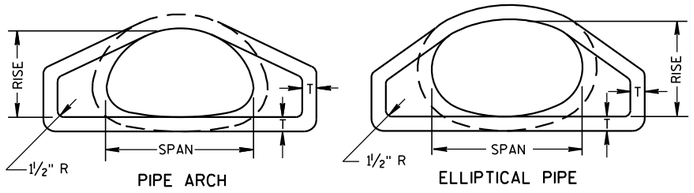
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

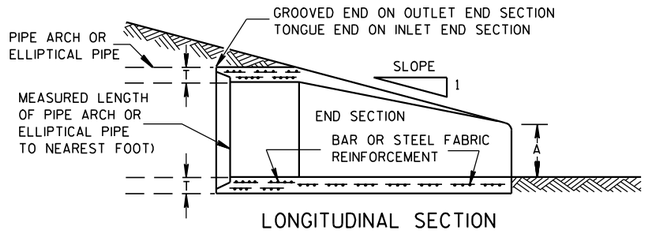
APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 F 1-11



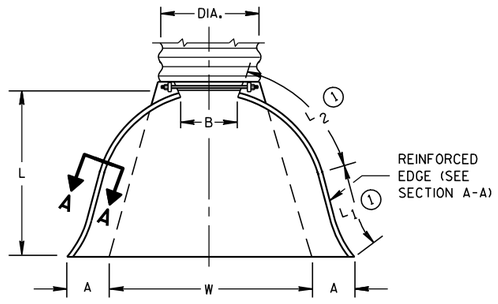
END VIEW



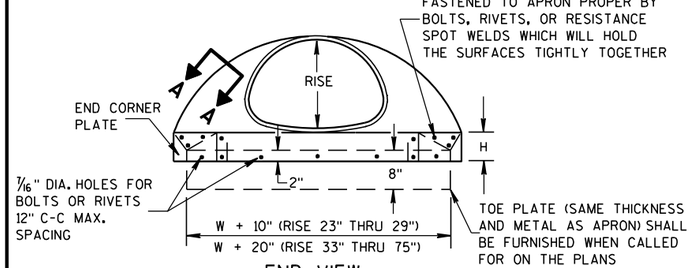
LONGITUDINAL SECTION

PLAN VIEW

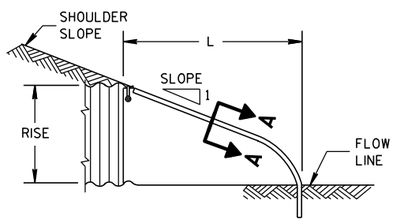
CONCRETE ENDWALLS



PLAN VIEW

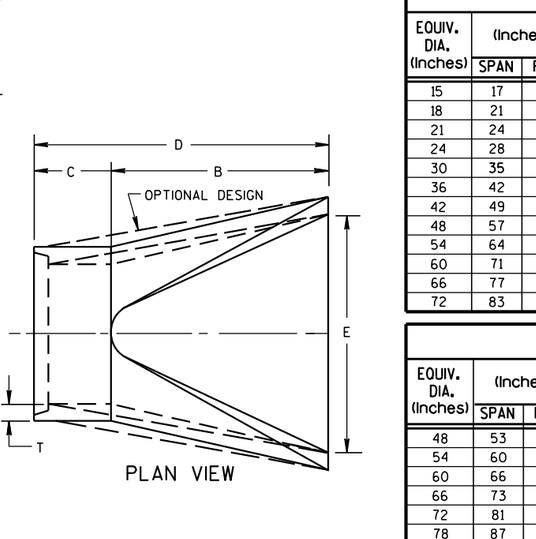


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

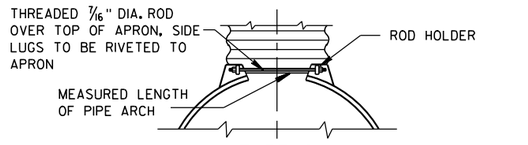
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

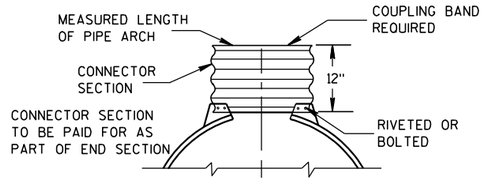
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



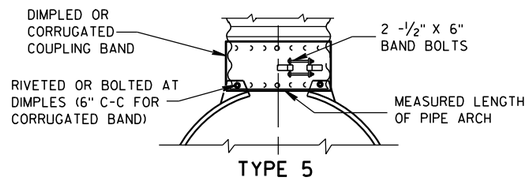
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

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

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

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

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

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

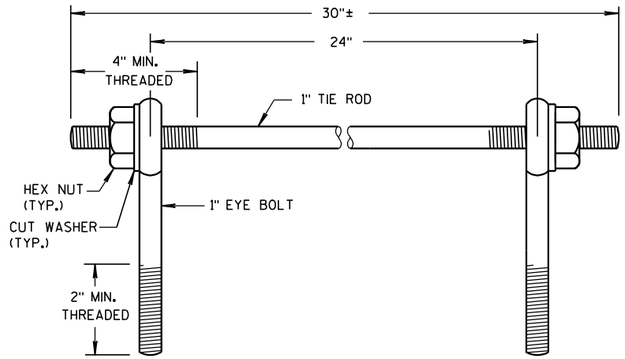
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

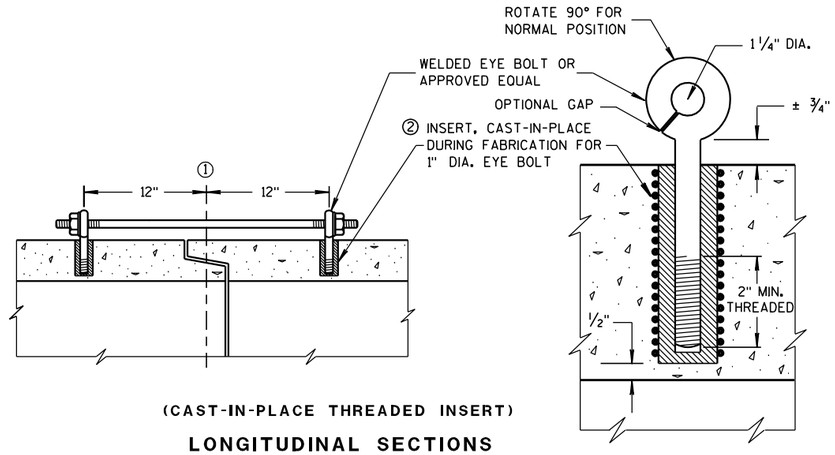
11/30/94 — DATE

/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

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

GENERAL NOTES

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

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

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

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

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

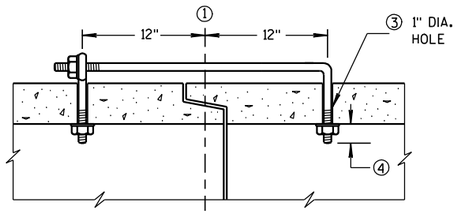
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

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

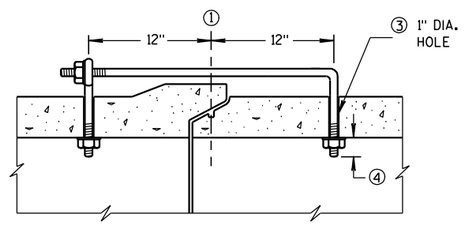
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

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



(TONGUE & GROOVE PIPE)

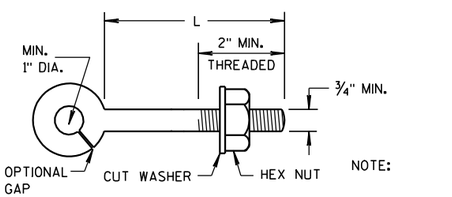


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

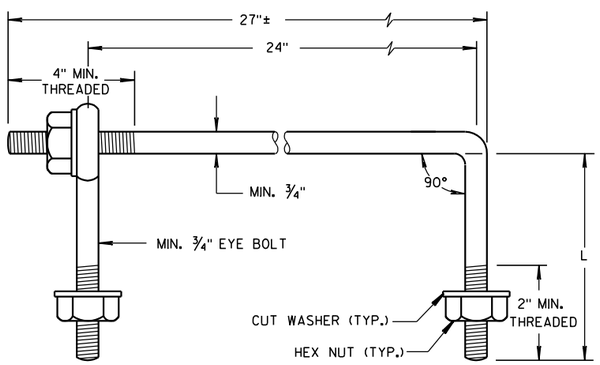
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

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



EYE BOLT AND TIE ROD

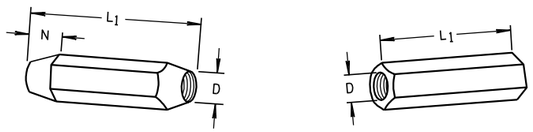
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

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

ADJUSTABLE TIE ROD TABLE

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

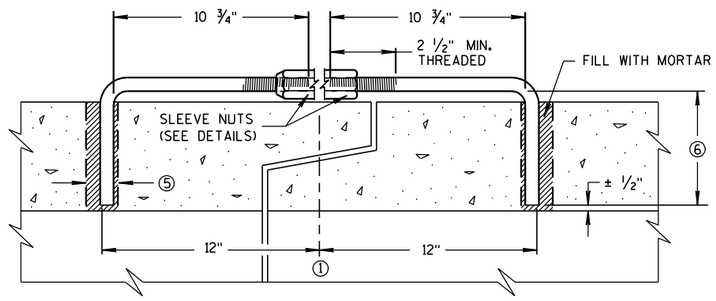
DIMENSIONS SHOWN ARE IN INCHES



TAPERED PLAIN

RIGHT AND LEFT THREADS

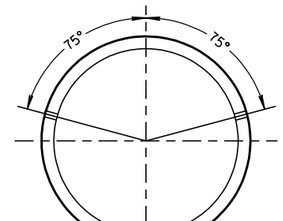
SLEEVE NUTS



LONGITUDINAL SECTION

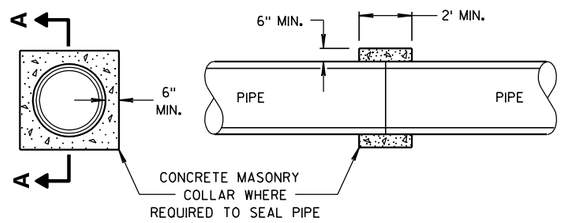
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



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

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

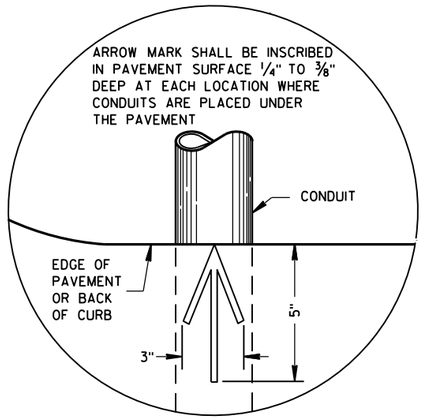
APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS 94 ENGINEER
'MENT
FHWA

6

S.D.D. 8 F 4-7

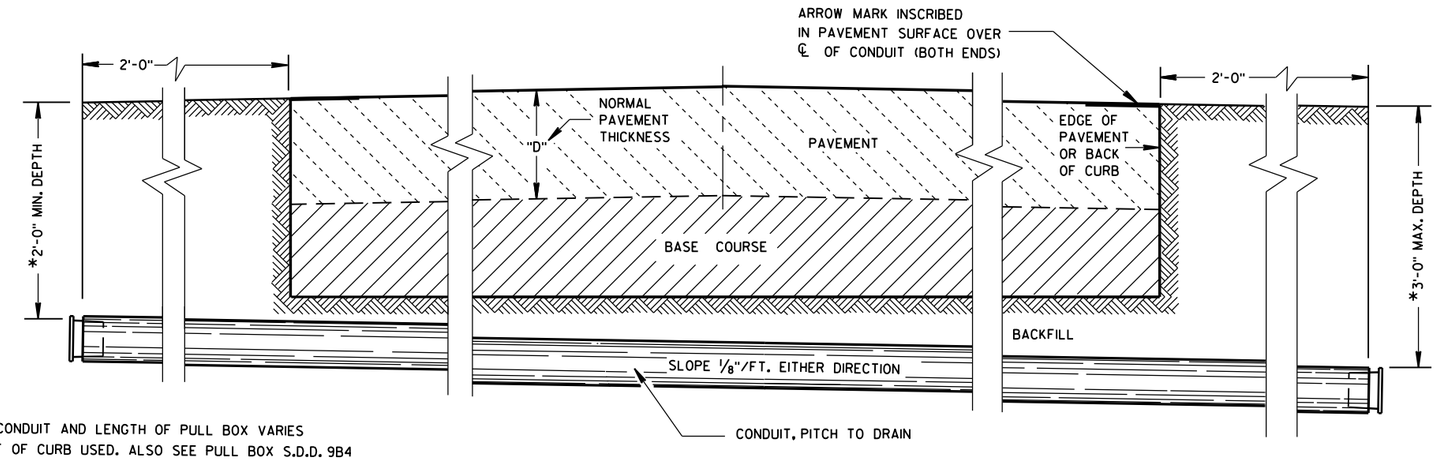
6

S.D.D. 8 F 4-7



PLAN VIEW

ARROW MARK



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 95
FHWA

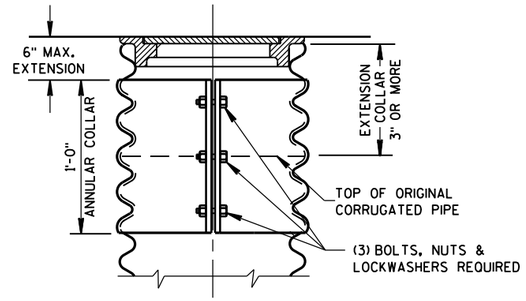
6
S.D.D. 9 B 2-10

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

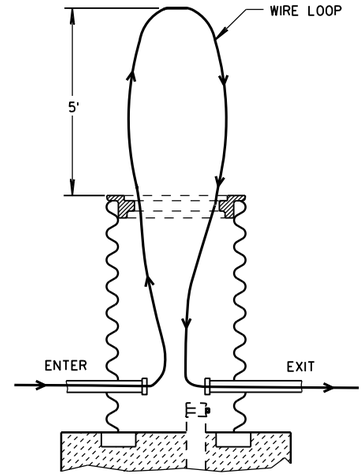
DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

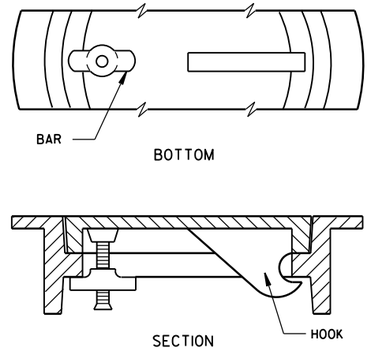
** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.



CORRUGATED PIPE EXTENDER

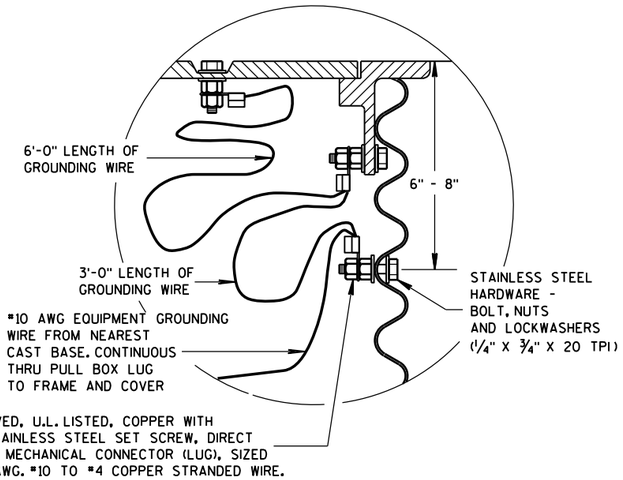


MEASUREMENT DETAIL FOR WIRE/CABLE IN THE PULL BOX

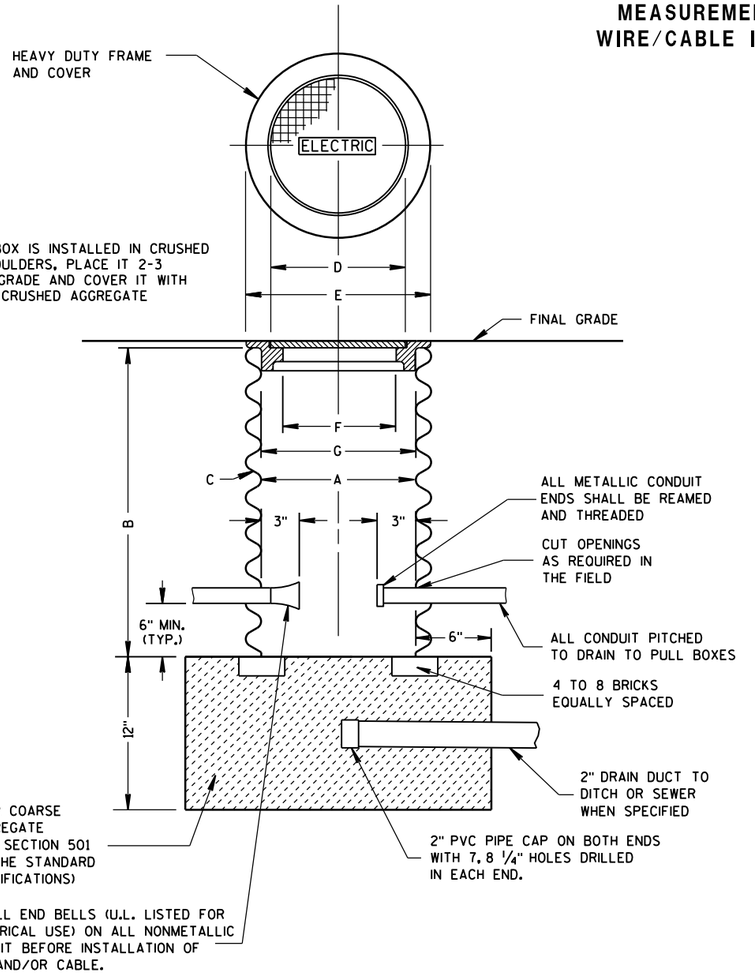


ALTERNATE COVER (LOCKING)

TIGHTENING BAR TYPE



EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES



PULL BOX

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

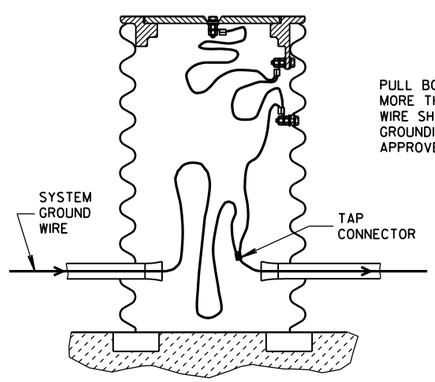
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

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

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

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

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.



PULL BOX TO NEAREST BASE DISTANCE MORE THAN 20 FEET. PULL BOX GROUND WIRE SHALL CONNECT AT SYSTEM GROUNDING WIRE. USE DEPARTMENT APPROVED TAP CONNECTOR.

EQUIPMENT GROUNDING LUG AND LOCATION IN STEEL PULL BOXES

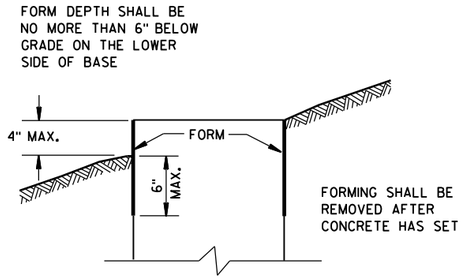
PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 B 4-11



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

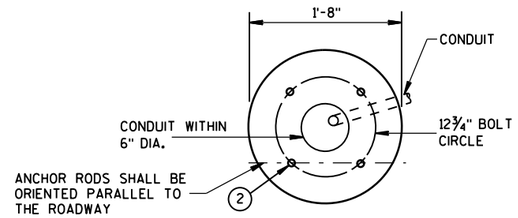
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

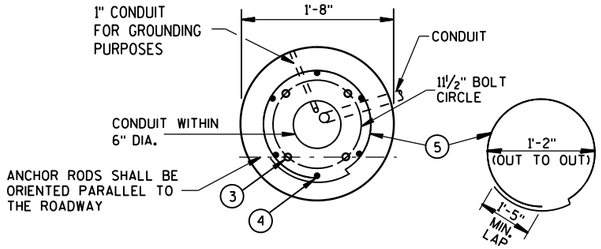
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

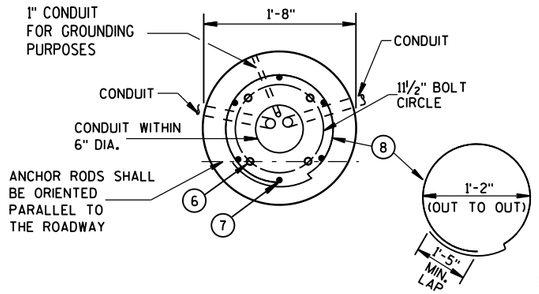
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

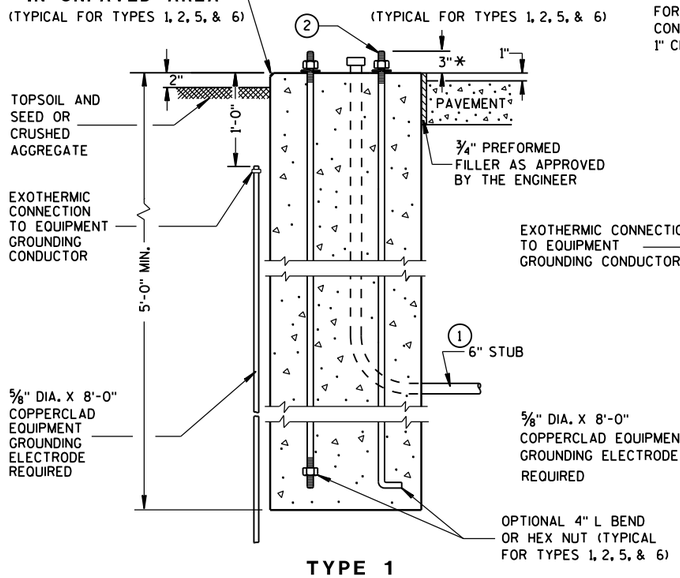




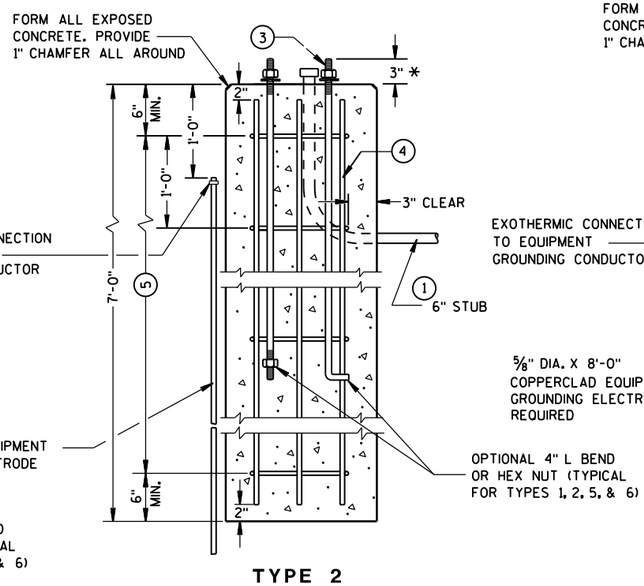


HALF SECTION IN UNPAVED AREA
(TYPICAL FOR TYPES 1, 2, 5, & 6)

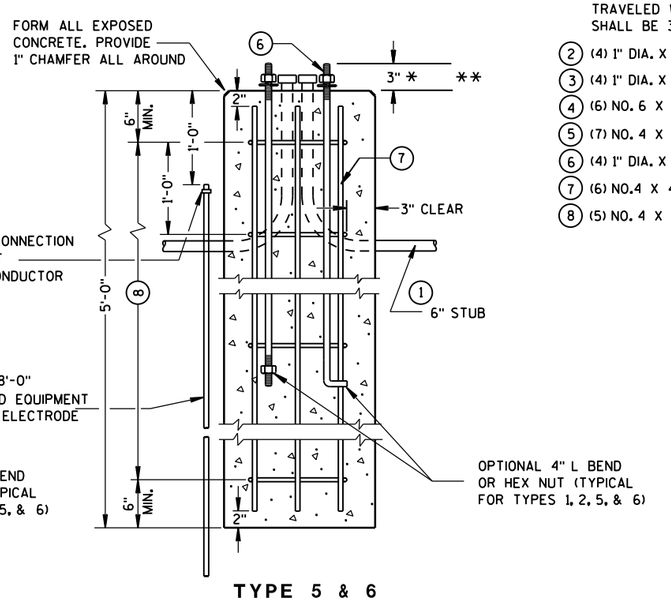
HALF SECTION IN PAVEMENT
(TYPICAL FOR TYPES 1, 2, 5, & 6)



TYPE 1



TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 97
FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

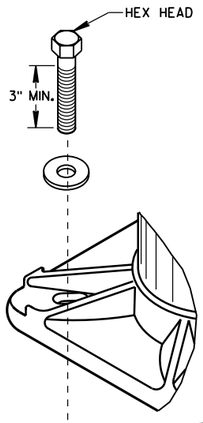
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

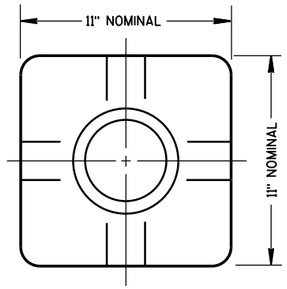
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

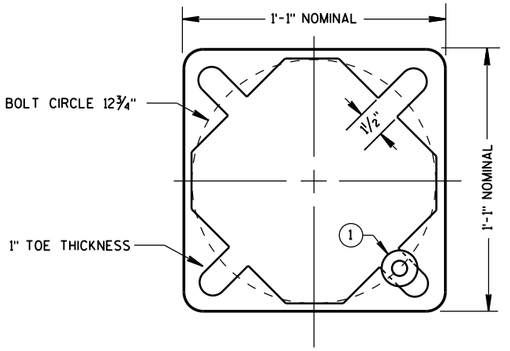
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

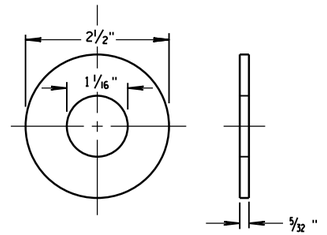




TOP VIEW
(PEDESTAL BASE)

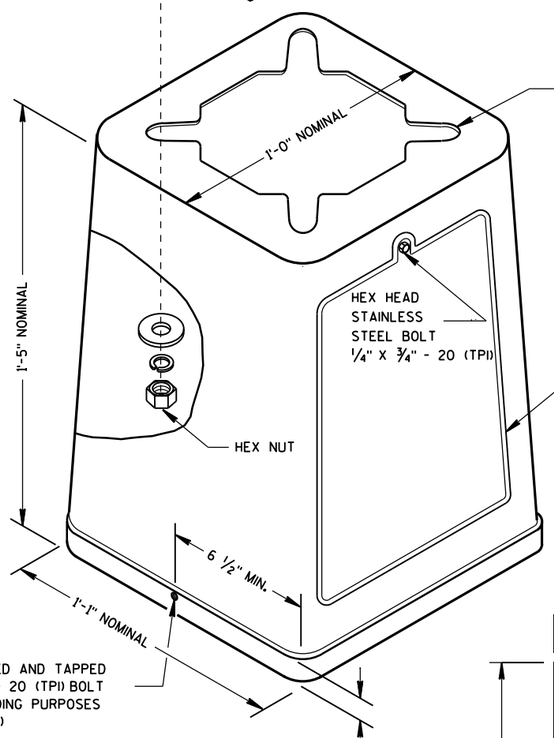


BOTTOM VIEW
(PEDESTAL BASE)

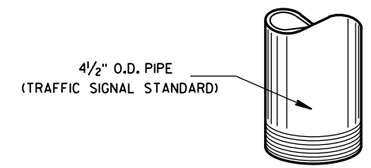


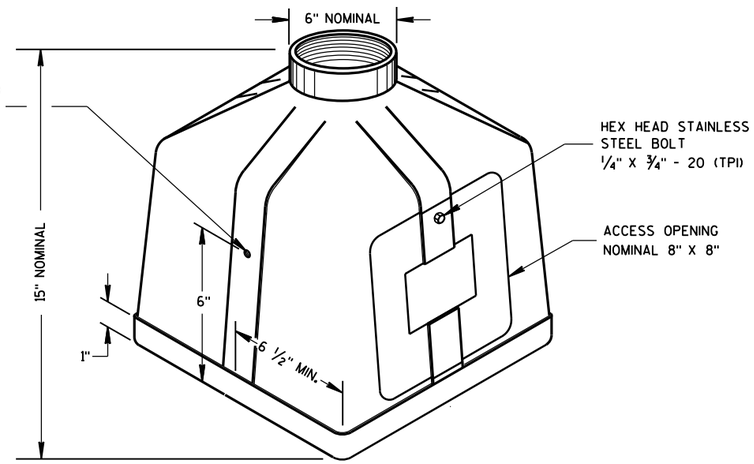
ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

PEDESTAL BASE WASHER (1)



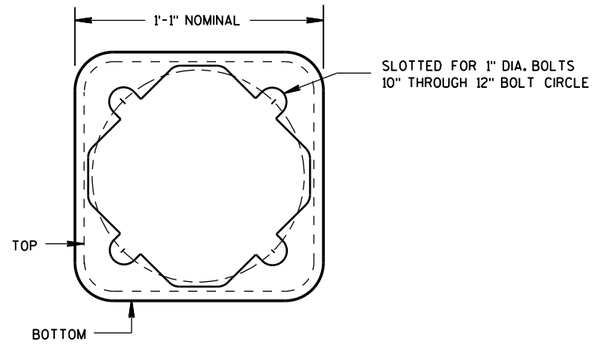
ISOMETRIC VIEW



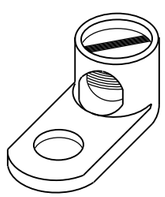


ISOMETRIC VIEW

PEDESTAL BASE



BOTTOM VIEW
(TRANSFORMER BASE)

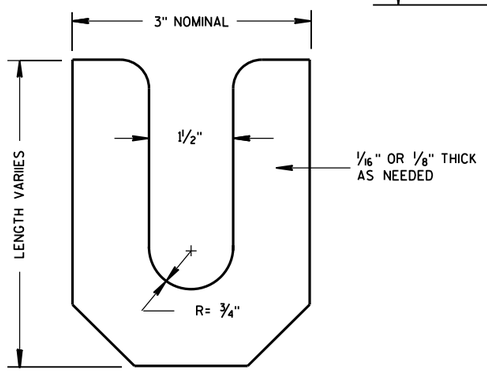


TYPICAL MECHANICAL CONNECTOR LUG

TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE

INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

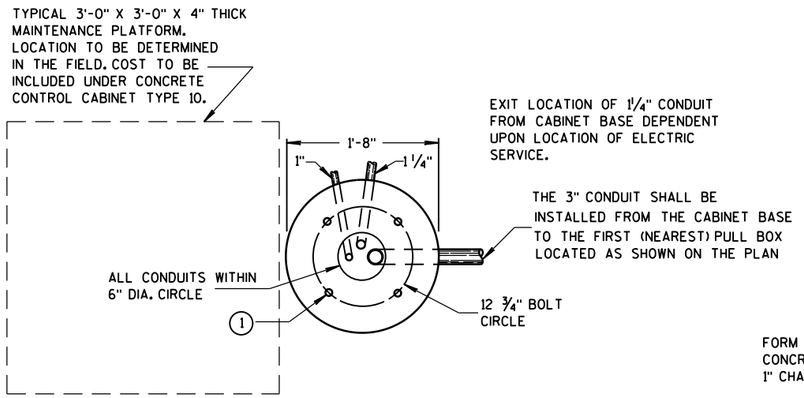
APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

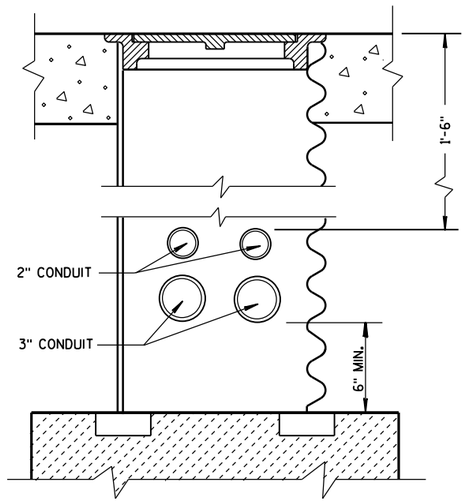
6

S.D.D. 9 C 3-4

CONTROL CABINET BASE TYPE	DIMENSIONS				C.Y. CONCRETE (APPROX.)
	H	I	J	K	
TYPE 6 - 30" CABINET	34"	60"	10"	17"	.64
TYPE 7 - 38" CABINET	42"	60"	10"	21"	.93
TYPE 8 - 38" CABINET	42"	72"	12"	21"	1.29
TYPE 9 - VARIABLE	54"	72"	14"	27"	1.56
TYPE 10 - POST MOUNT	AS SHOWN				.65 *

* INCLUDES MAINTENANCE PLATFORM.





CONDUIT LOCATIONS IN 24" X 36" PULL BOX

(LEADING TO CONTROLLER CABINET BASE TYPE 6, 7, 8 AND 9)

GENERAL NOTES

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

INSTALL FOUR ½ INCH MINIMUM DIAMETER X 4 INCH MINIMUM LENGTH APPROVED CONCRETE MASONRY ANCHORS WITH A PULLOUT STRENGTH OF 9,000 LBS. TO ANCHOR THE CABINET TO TYPE 6, 7, 8, AND 9 BASES. THE ANCHOR STUDS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

WHEN A TYPE 10 CONTROL CABINET BASE IS USED TO POST MOUNT A CONTROL CABINET, A 36" SQUARE 4" THICK CONCRETE MAINTENANCE PLATFORM SHALL BE REQUIRED ON THE DOOR SIDE OF THE CABINET. THE TOP 1 INCH SHALL BE ABOVE FINISHED GRADE AND BE BROOM FINISHED AND LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ALL FOUR (TWO INCH AND THREE INCH) CONDUIT SHALL BE INSTALLED FROM THE CABINET BASE TO THE FIRST (NEAREST PULL BOX LOCATED AS SHOWN ON THE PLANS.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

WHEN ANCHOR RODS USING THE ALTERNATE L BEND ARE FURNISHED FOR THE TYPE 10 BASE, THE 4" L BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH.

THE "L" BEND SHALL NOT BE THREADED.

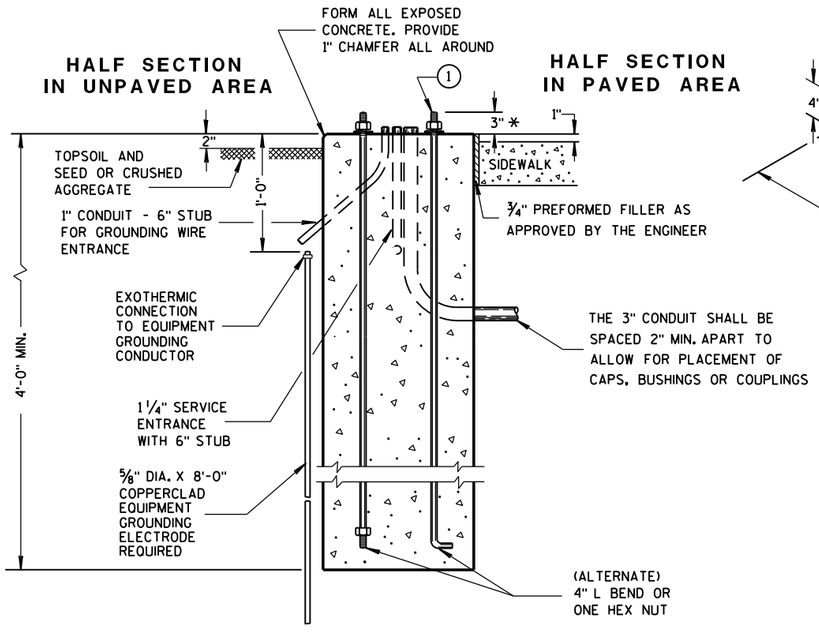
STRAIGHT ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

(1) FOUR (4) ANCHOR RODS, 1" DIA. X 3'-6". ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

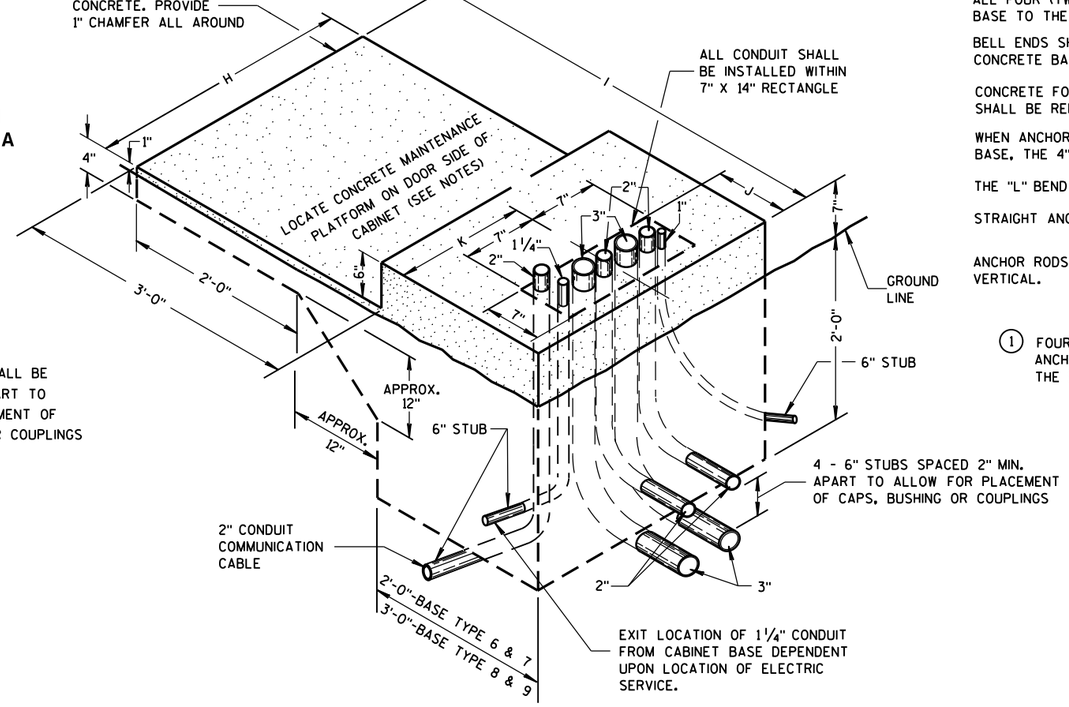
HALF SECTION IN UNPAVED AREA

HALF SECTION IN PAVED AREA



TYPE 10

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.



TYPE 6,7,8 AND 9
(ISOMETRIC VIEW)

CONCRETE CONTROL CABINET BASES

CONCRETE CONTROL CABINET BASES

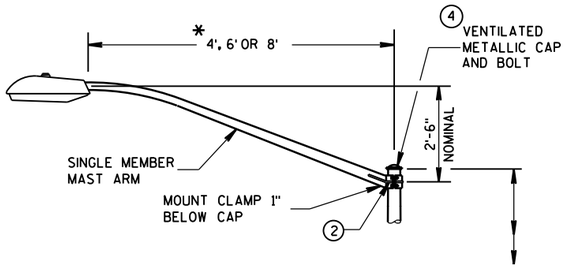
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

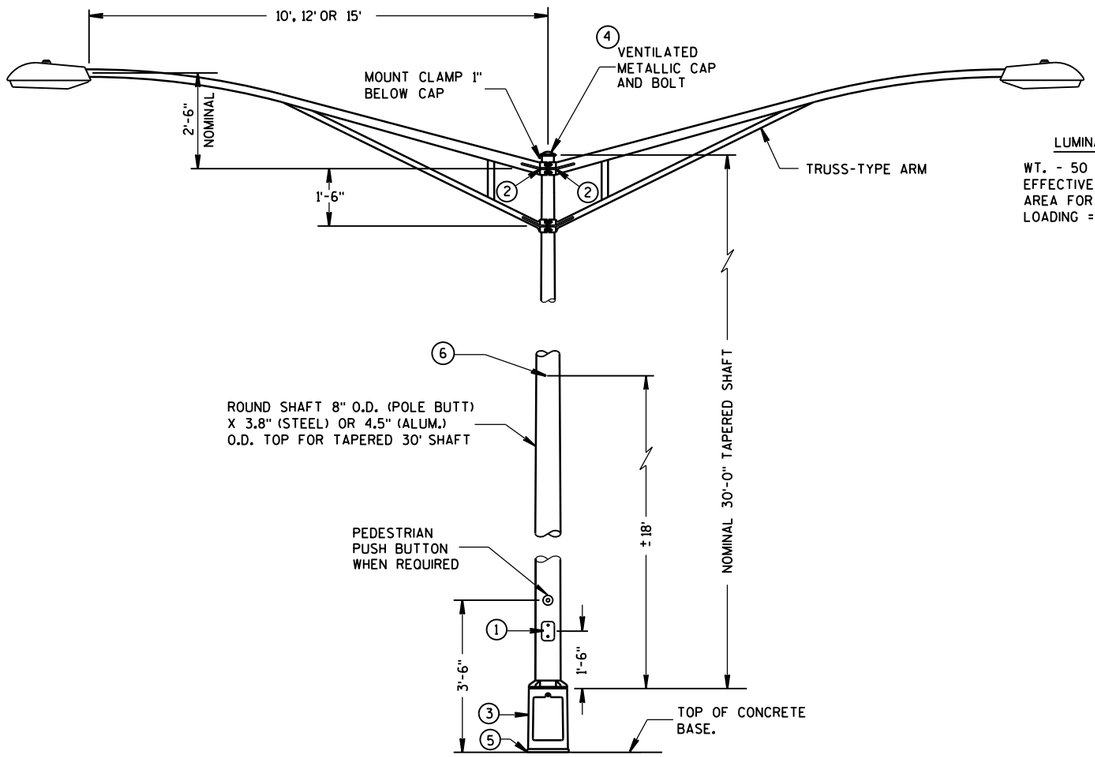
APPROVED
Sept. 2016 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

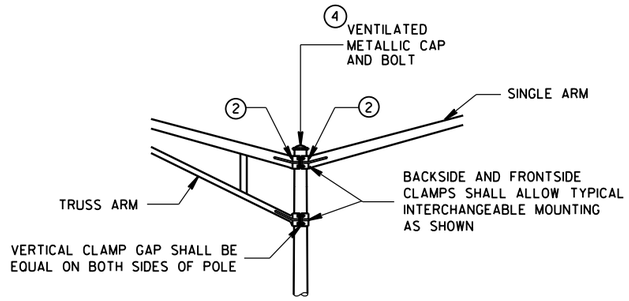
S.D.D. 9 C 5-10

*RISE FOR 4' ARM SHALL BE 2'-0".





TYPE 5 POLE MOUNTING CONFIGURATION
(MAXIMUM LOAD)
LIGHTING ONLY



INTERCHANGEABLE MOUNTING DETAIL

LUMINAIRE

WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.

GENERAL NOTES

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

ALL TYPE 5 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 5 ALUMINUM POLES SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 5 ALUMINUM POLES SHALL HAVE A MINIMUM WALL THICKNESS OF 0.188".

TYPE 5 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONEECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

6

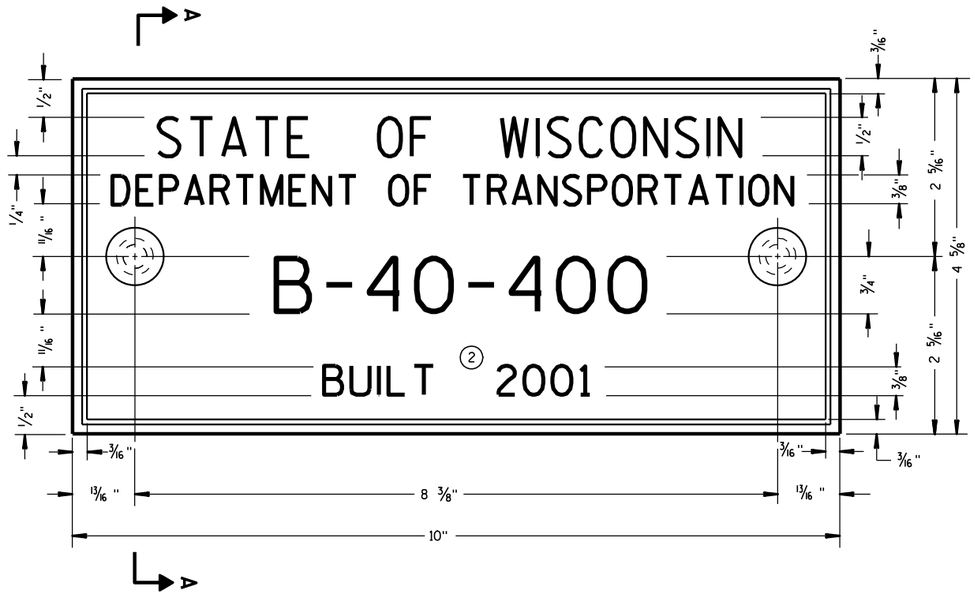
S.D.D. 9 E 1-14d

POLE MONTINGS FOR
LIGHTING UNITS, TYPE 5
(30 FEET)

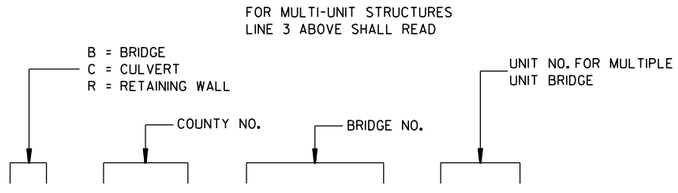
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 9 E 1-14d



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



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

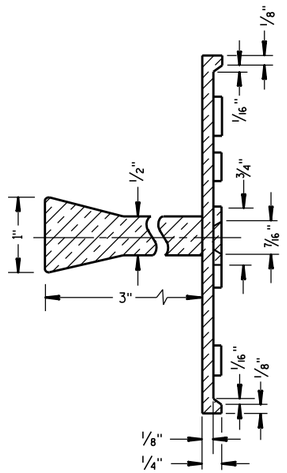
GENERAL NOTES

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

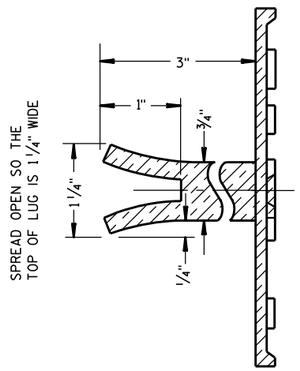
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

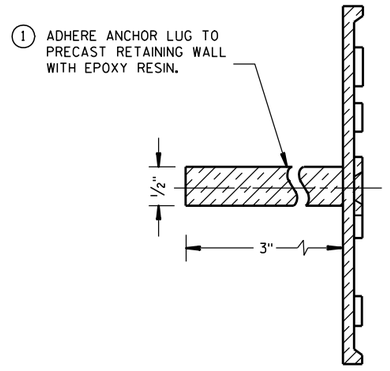
② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE — /S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

6

S.D.D. 12 A 3-10

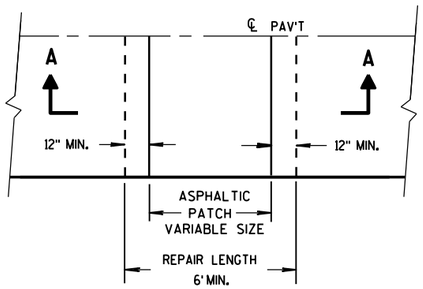
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

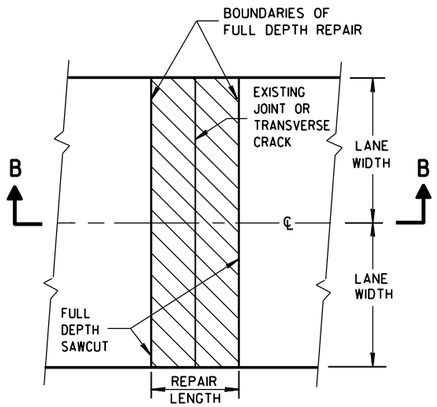
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

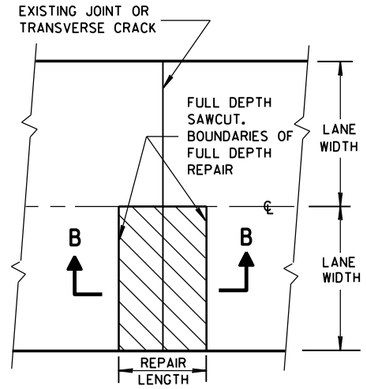
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

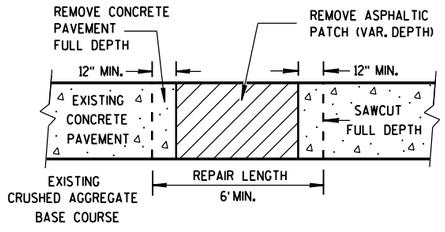


PLAN VIEW
(DOUBLE LANE REPAIR)



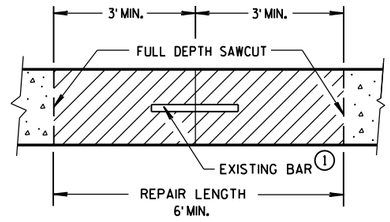
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

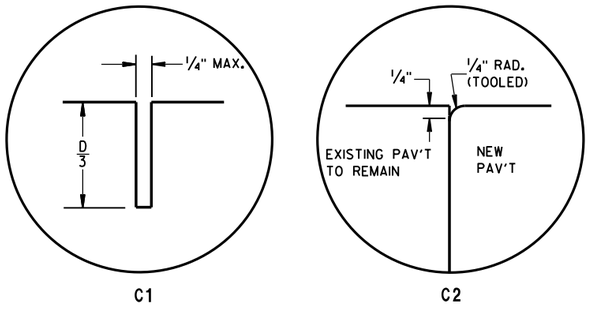
CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 C 9-14a



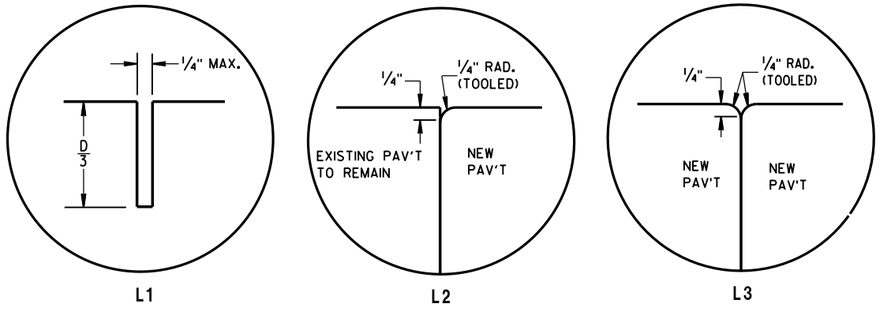
TRANSVERSE JOINTS

TIE BAR TABLE

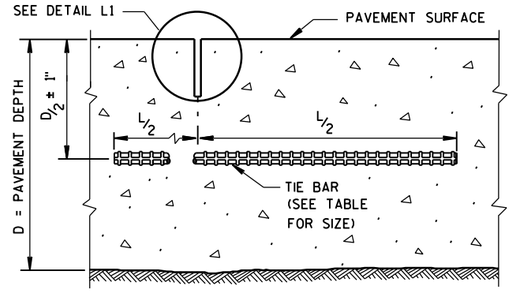
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



LONGITUDINAL JOINTS



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

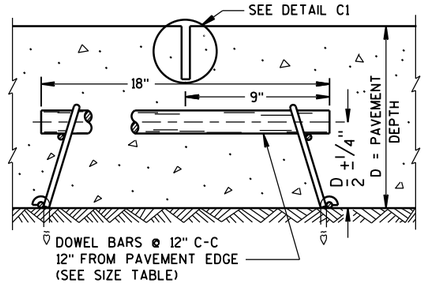
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

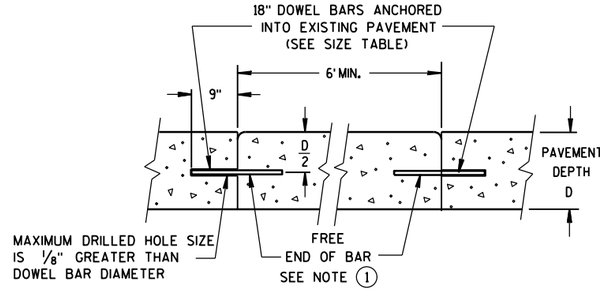
FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

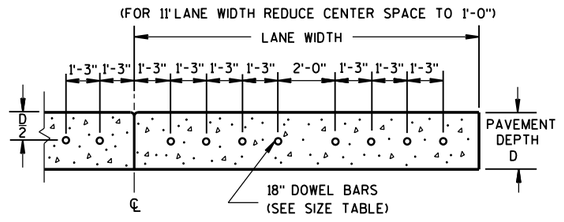


SECTION F-F

CONTRACTION JOINT



SECTION D-D

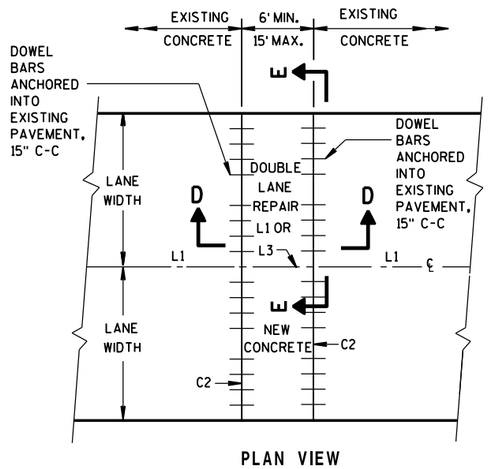


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

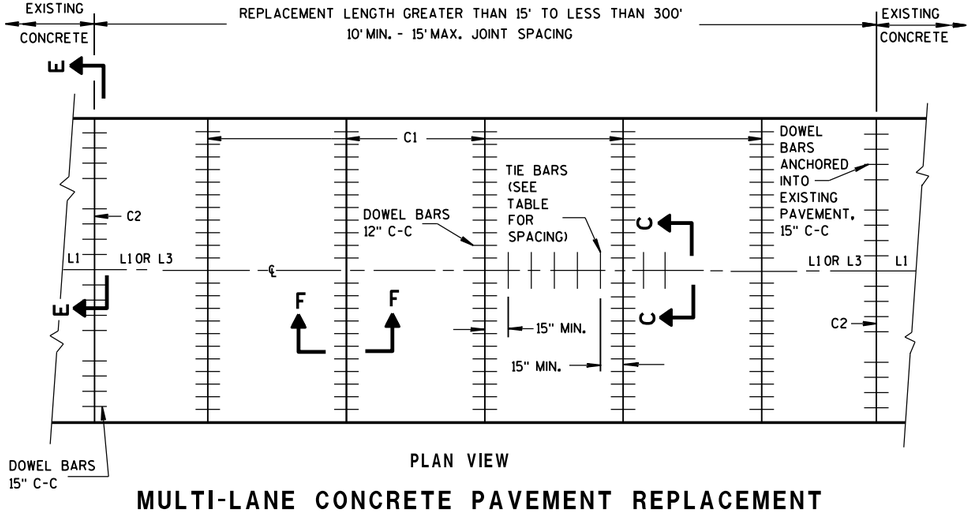
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	DRILLED DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6",6 ½"	NONE	NONE	12'
7",7 ½"	1"	1"	14'
8",8 ½"	1¼"	1¼"	15'
9",9 ½"	1¼"	1¼"	15'
10" & ABOVE	1½"	1¼"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR

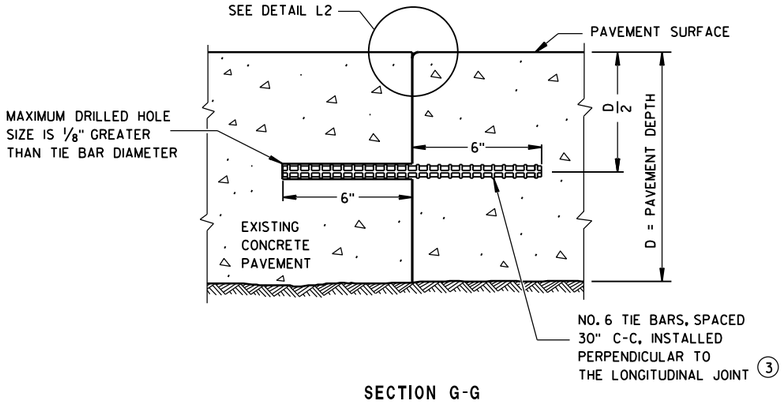


PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

6
S.D.D. 13 C 9-14b



SECTION G-G

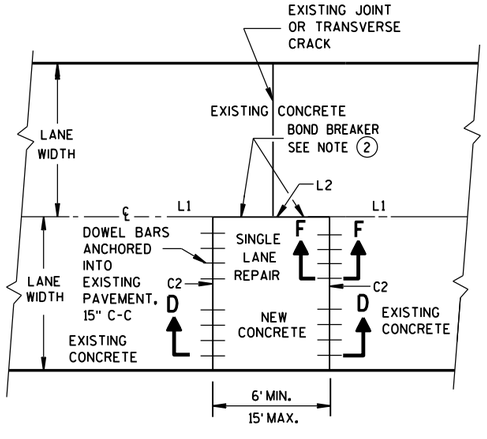
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

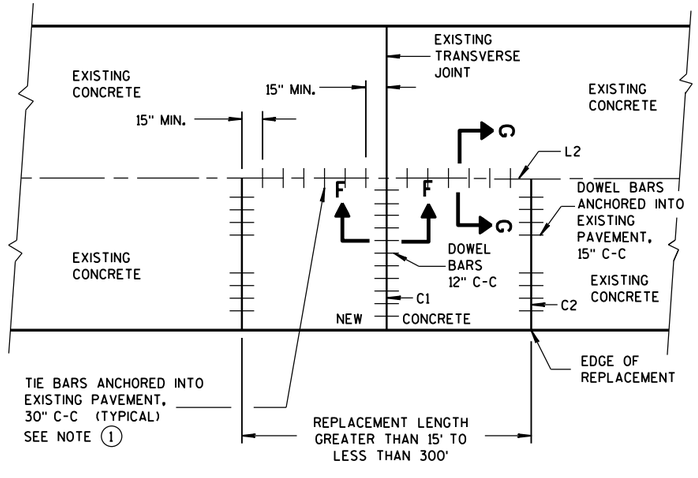
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

(3) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

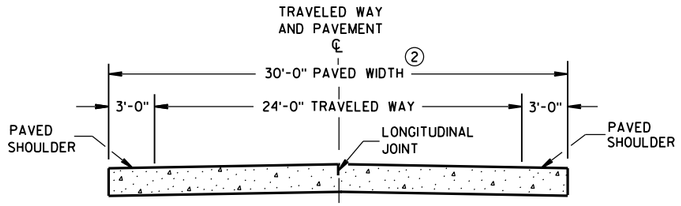
CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March, 2017 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

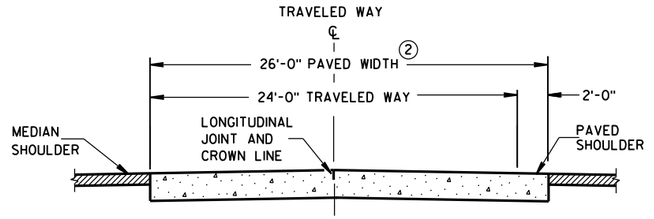
6

S.D.D. 13 C 9-14c

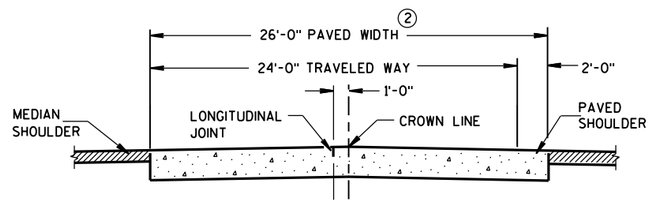


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B ①

DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

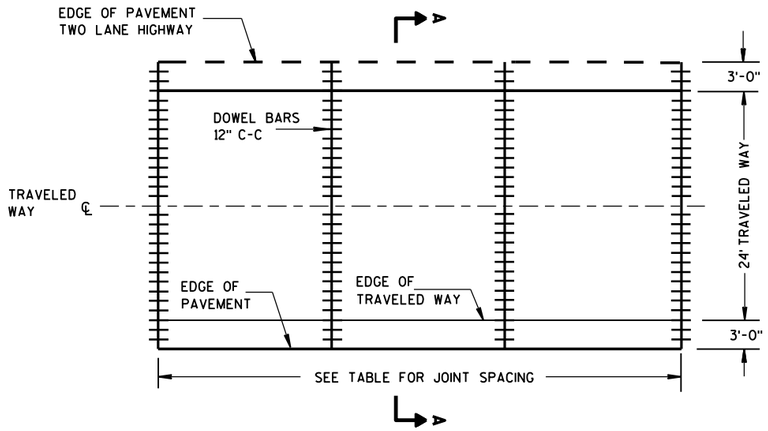
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

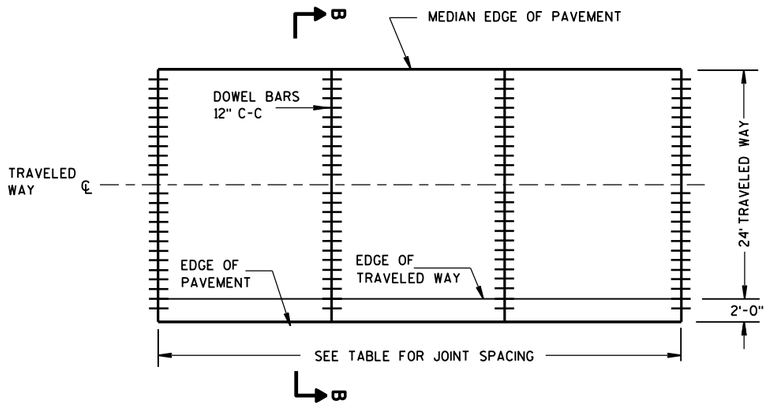
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



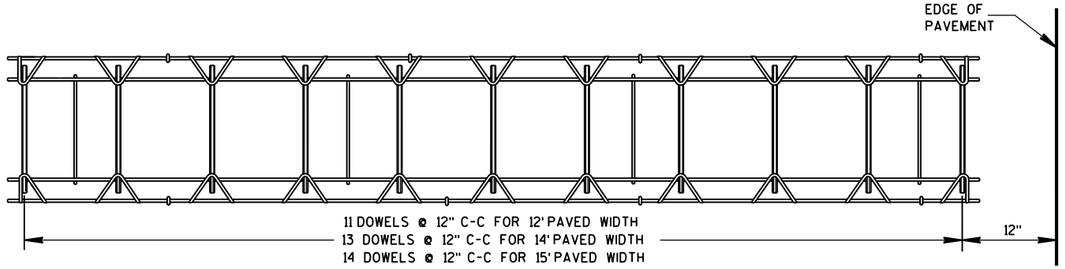
CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED
CONCRETE PAVEMENT

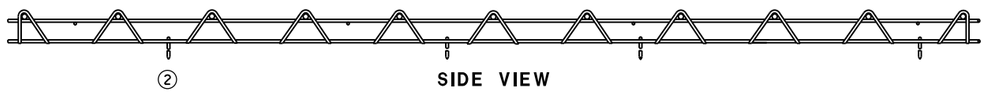
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 C 11-11a



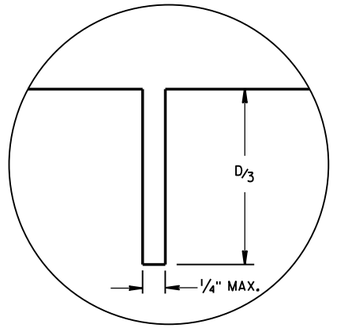
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

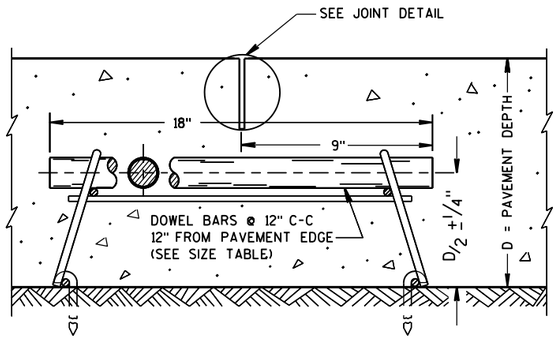
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

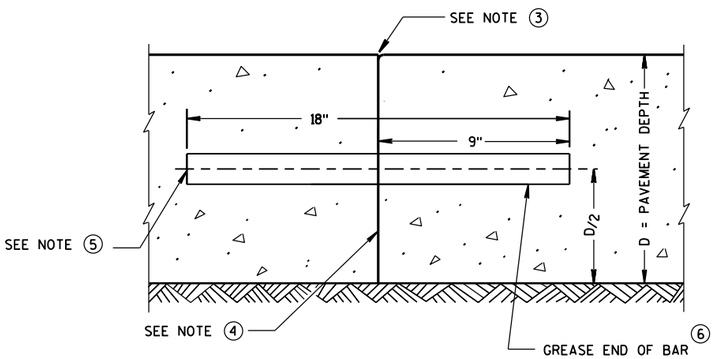
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

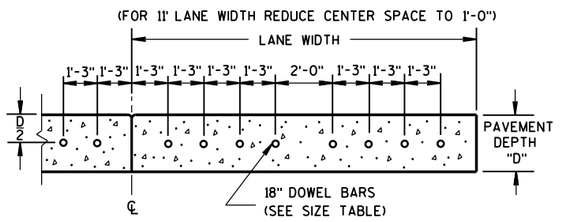
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 DATE
/S/ Deb Bischoff
PAVEMENT POLICY & DE ... NEER
FHWA

6

S.D.D. 13 C 11-11b

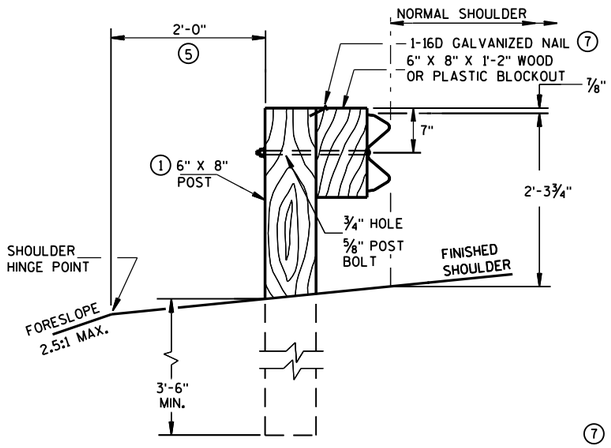
6

S.D.D. 13 C 11-11b

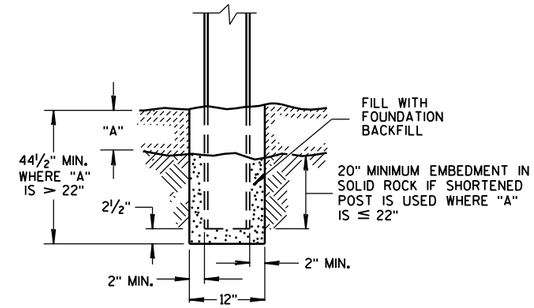
GENERAL NOTES

1. W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
   DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
2. USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
3. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
4. USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
5. IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
6. IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.
7. WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

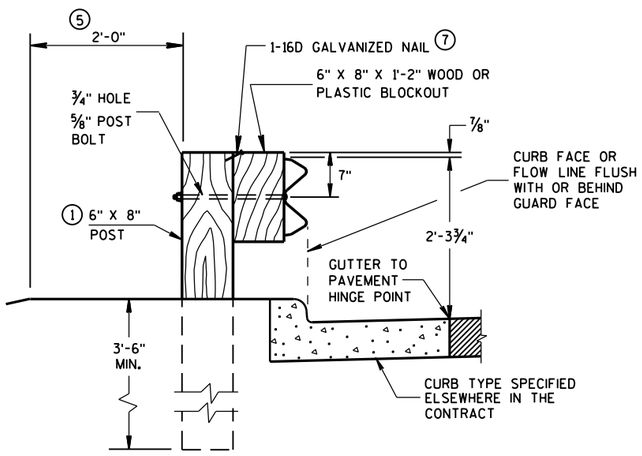
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



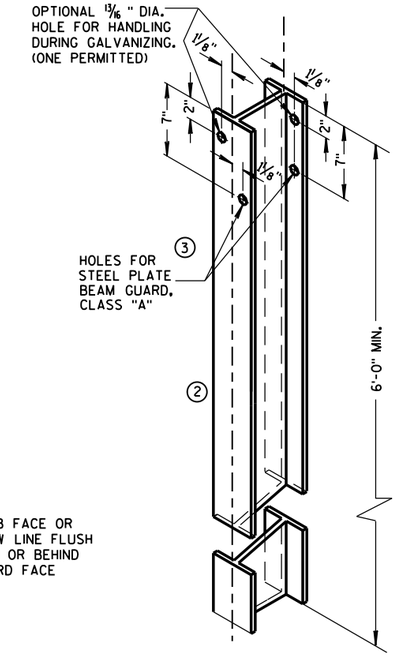
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



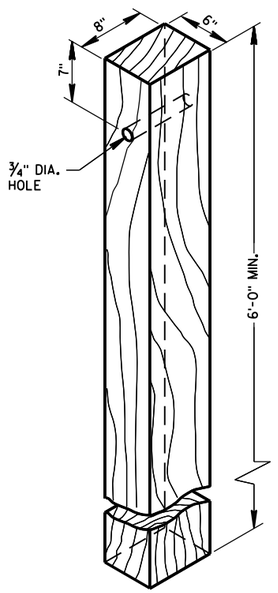
END VIEW
SETTING STEEL OR WOOD POST IN ROCK ⑥



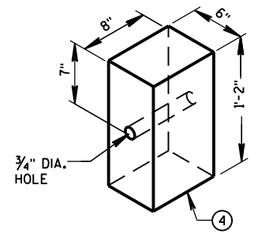
END VIEW
LOCATED ALONG A CURBED ROADWAY



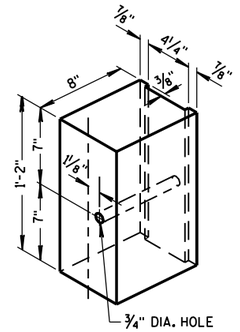
STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) ①
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



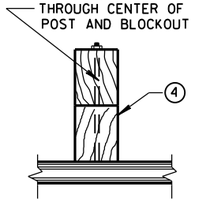
WOOD POST
(6"X8") NOMINAL



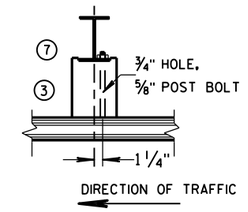
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



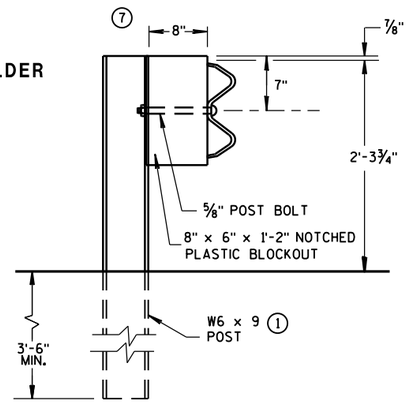
TYPICAL NOTCHED ①
PLASTIC BLOCKOUT
FOR STEEL POSTS



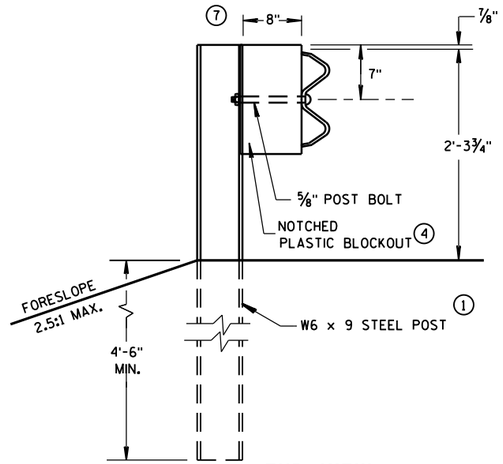
PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



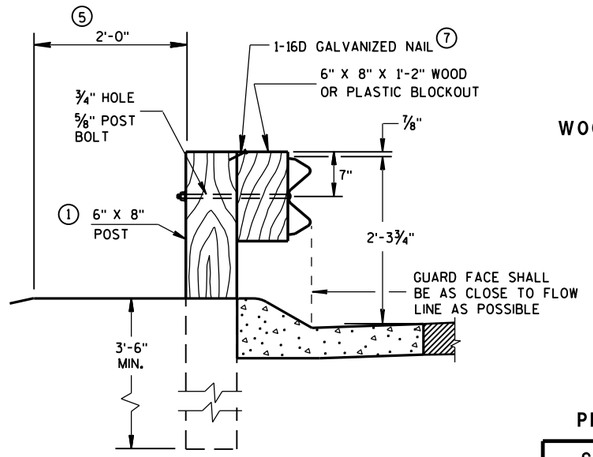
PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM



END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



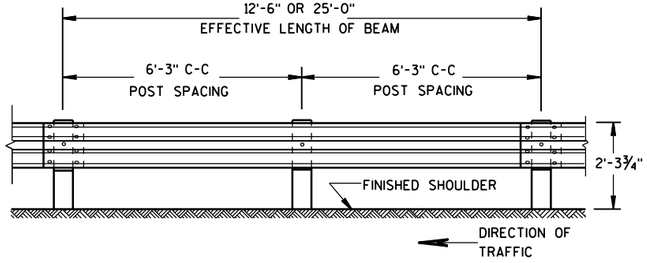
END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

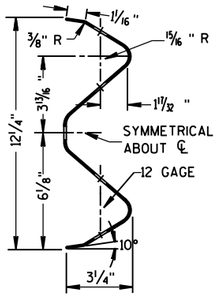
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 15-10a

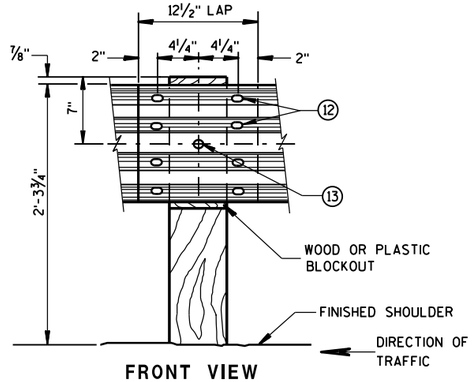


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

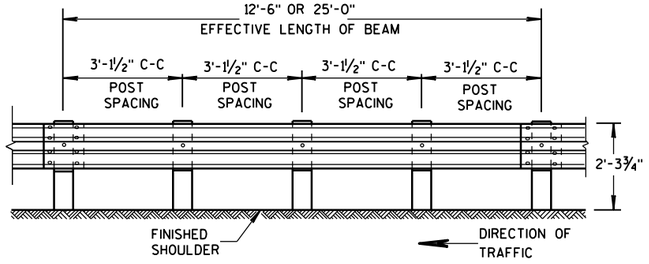
BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

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

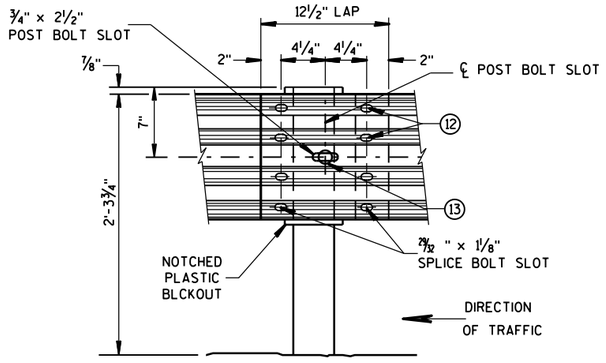
(12) 8 -⅝" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) ⅝" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH ⅝" DIA. F844 FLAT WASHER UNDER NUT.



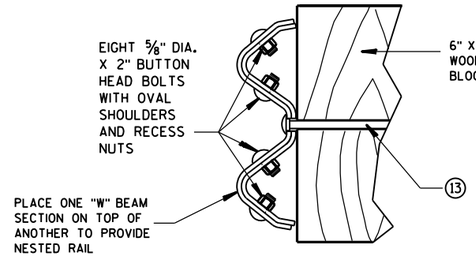
FRONT VIEW

POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

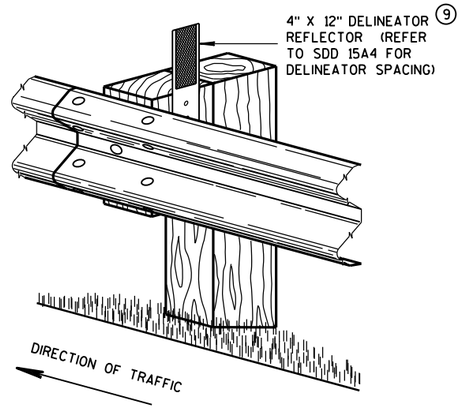
BEAM SPLICE AT STEEL POST



NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD

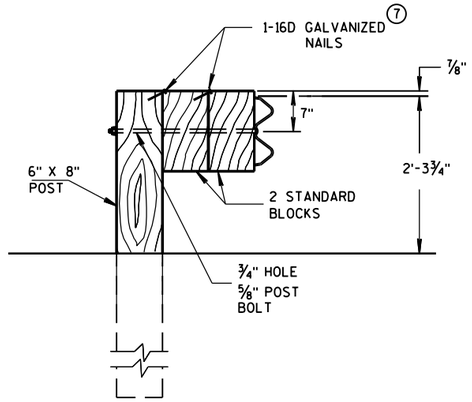


ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

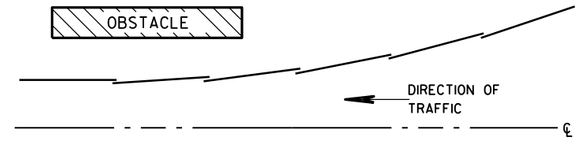
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 14 B 15-10b

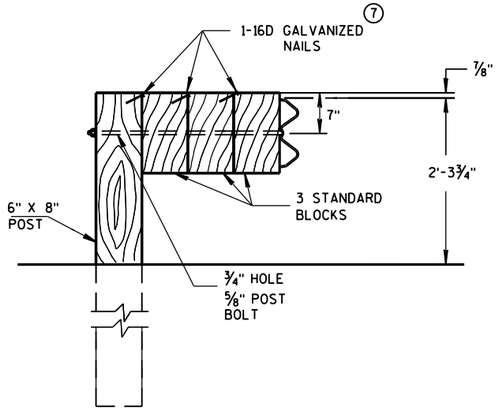


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

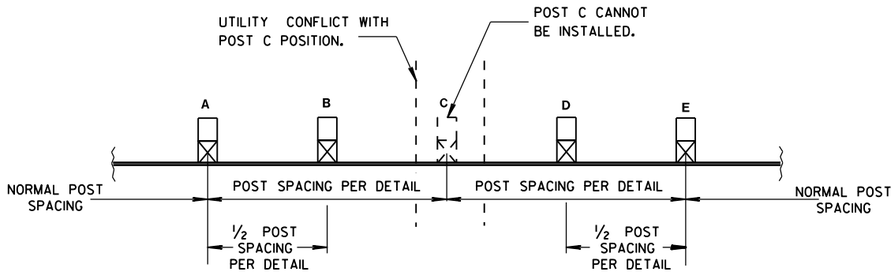


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA 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.

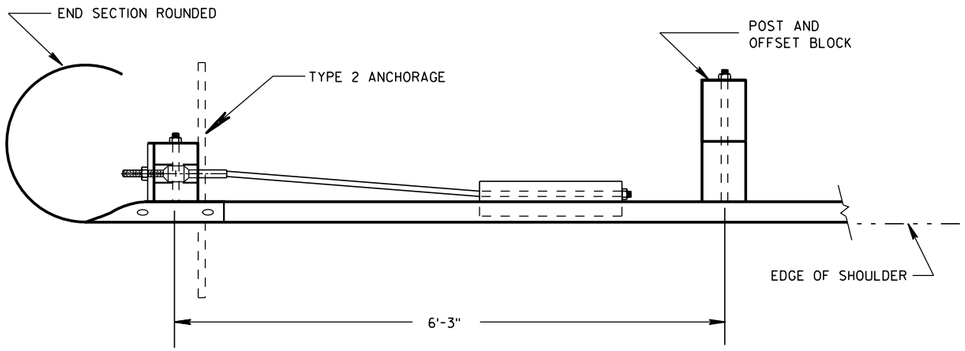
STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

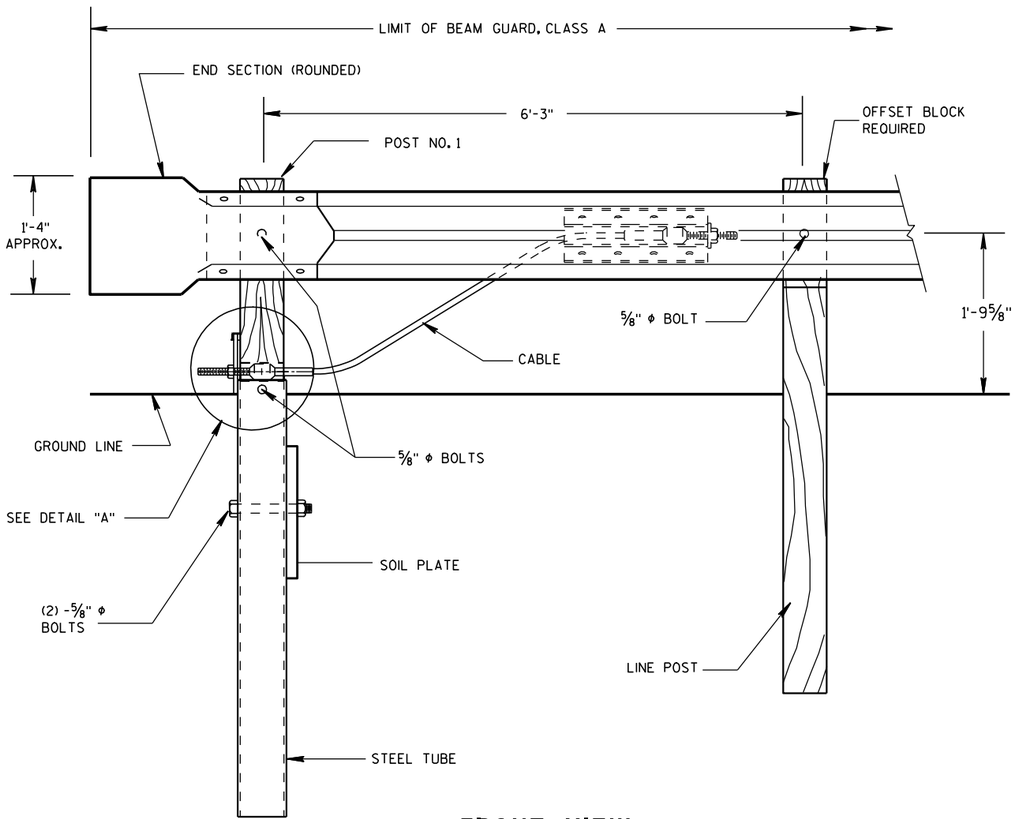
APPROVED
June 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS D UNIT SUPERVI NT
FHWA

6

S.D.D. 14 B 15-10c



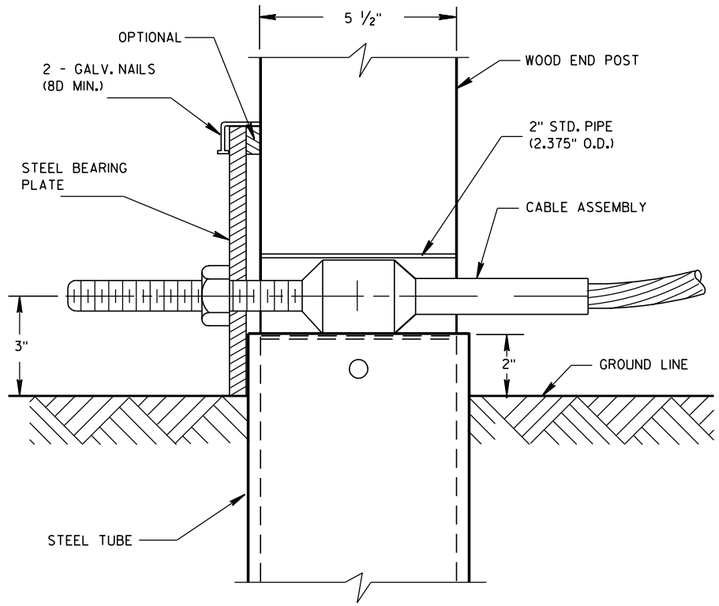
PLAN VIEW



FRONT VIEW

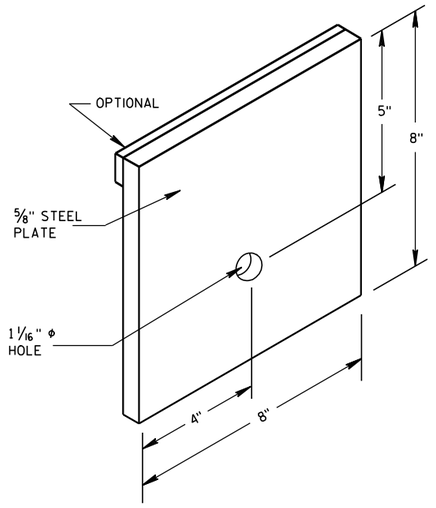
END TREATMENT WITH TYPE 2 ANCHORAGE

(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)



DETAIL "A"

POST NO. 1



STEEL BEARING PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

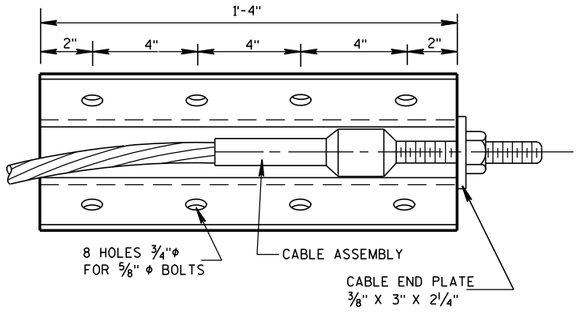
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO.....T

6

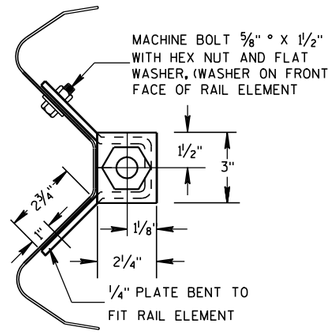
S.D.D. 14 B 16-4a

6

S.D.D. 14 B 16-4a

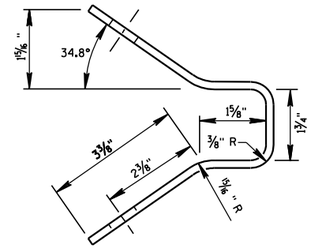


FRONT VIEW

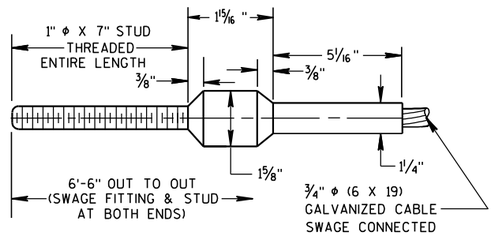


END VIEW

ANCHOR PLATE DETAIL



END VIEW OF BRACKET



CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP
A MINIMUM BREAKING STRENGTH OF 40,000 LB
(TIGHTEN UNTIL TAUT)

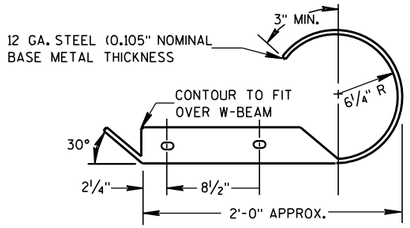
GENERAL NOTES

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

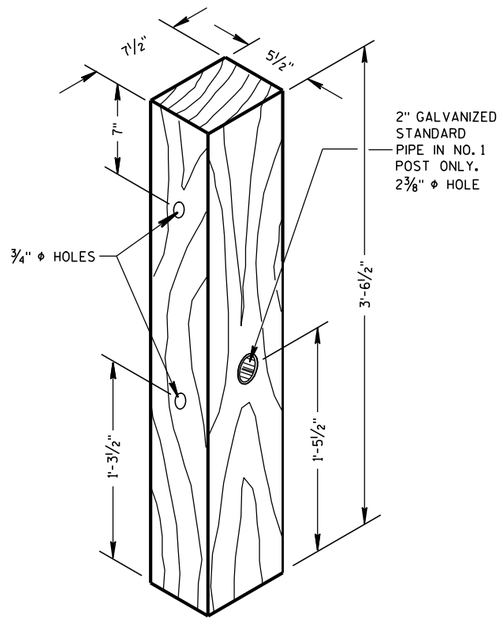
STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

POST NO. 1 SHALL BE WOOD BREAKAWAY POST INSERTED AND BOLTED INTO STEEL TUBE.

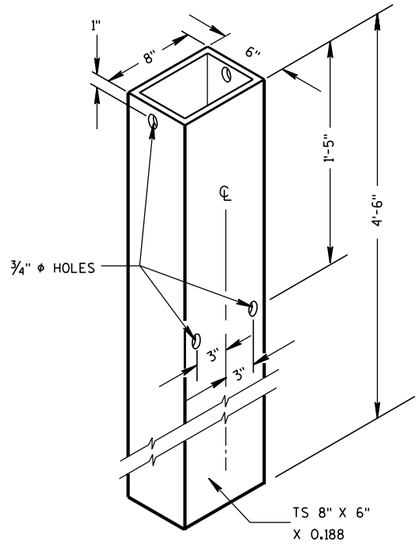
TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.



PLAN VIEW

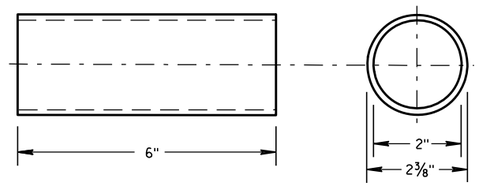


WOOD BREAKAWAY POST



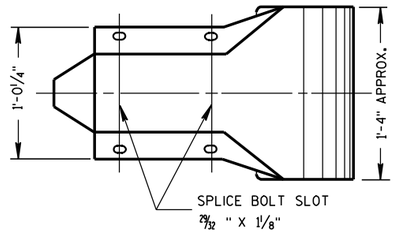
STEEL TUBE

STEEL TUBE SHALL CONFORM TO
REQUIREMENTS OF ASTM A500

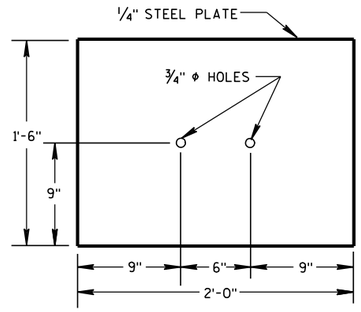


BREAKAWAY TERMINAL POST SLEEVE

GALVANIZED STANDARD STRENGTH STEEL PIPE, ASTM 53 GRADE "B"



FRONT VIEW
W BEAM END SECTION ROUNDED



SOIL PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
8/21/2007
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER
111
FHWA

6

S.D.D. 14 B 16-4b

6

S.D.D. 14 B 16-4b

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

(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.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

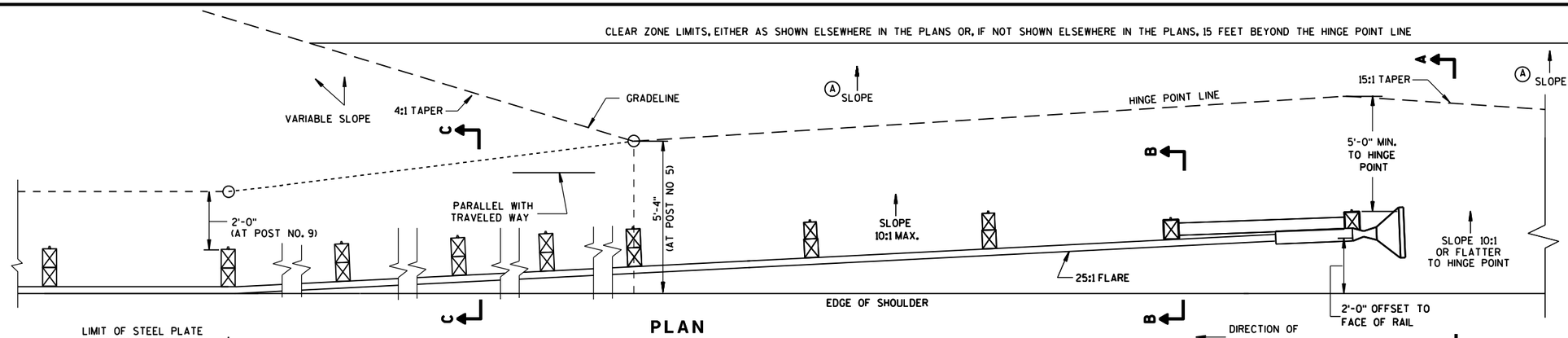
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

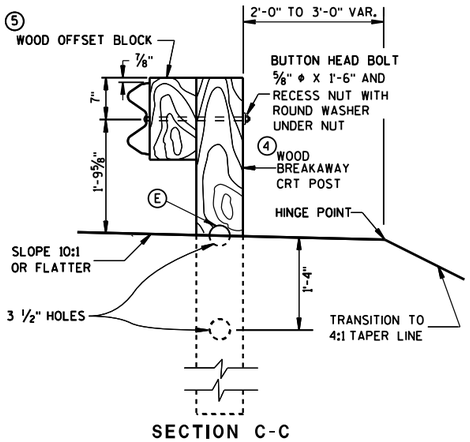
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

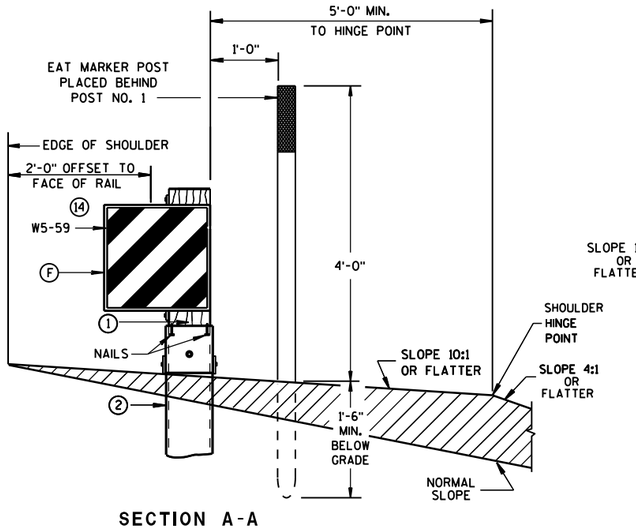
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

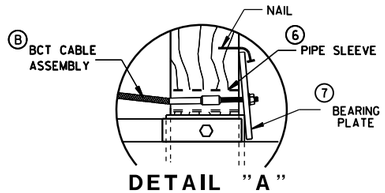




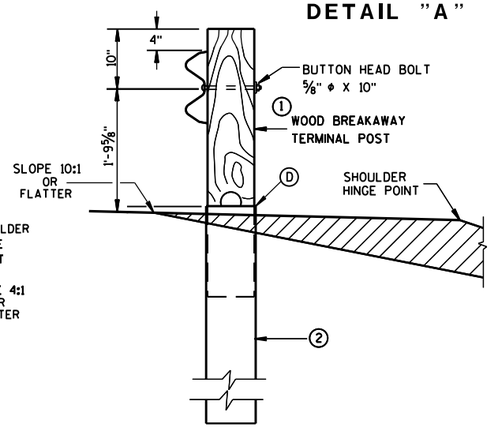
SECTION C-C
TYPICAL AT POST NOS. 6, 8



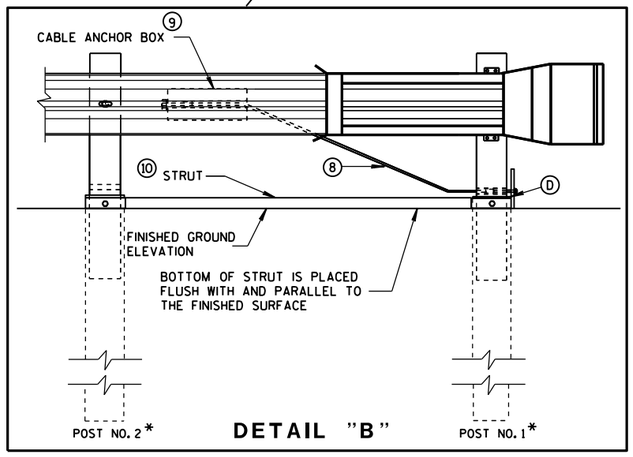
SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"



SECTION B-B
TYPICAL AT POST NO. 2*



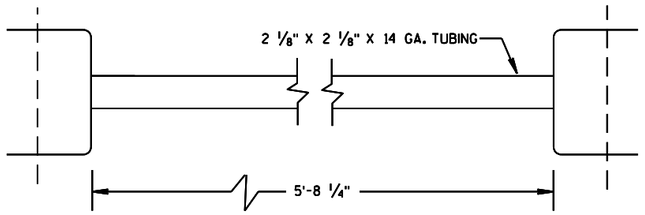
DETAIL "B"

STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

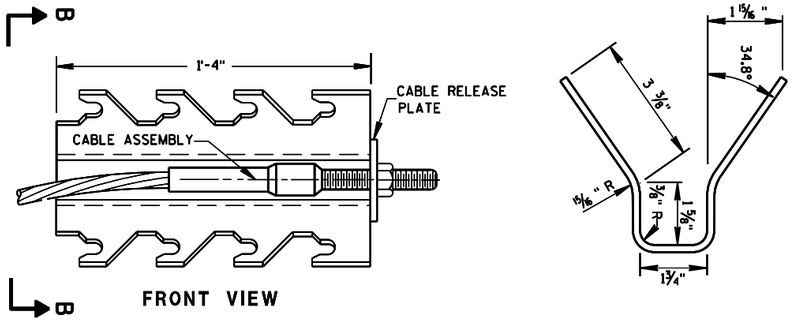
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

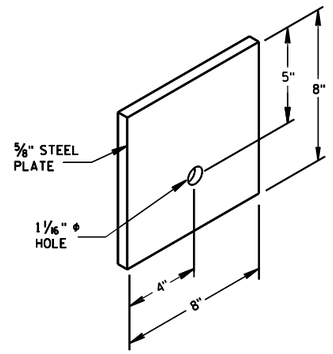
S.D.D. 14 B 24-9a



⑩ STRUT DETAIL



⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

6

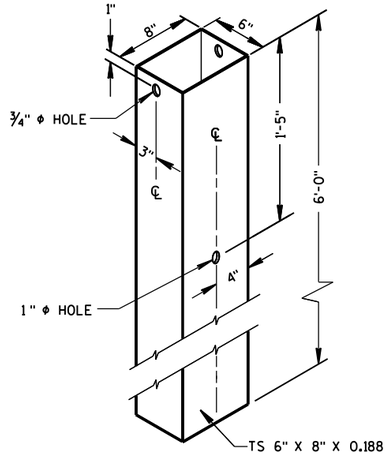
6

S.D.D. 14 B 24-9b

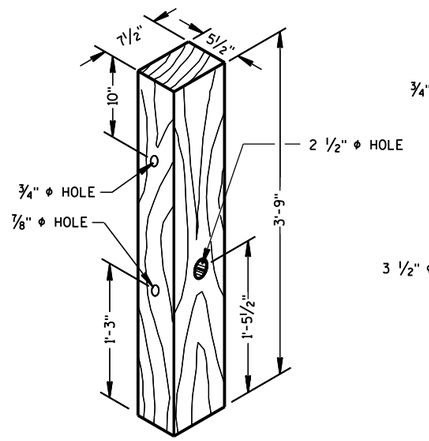
S.D.D. 14 B 24-9b

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

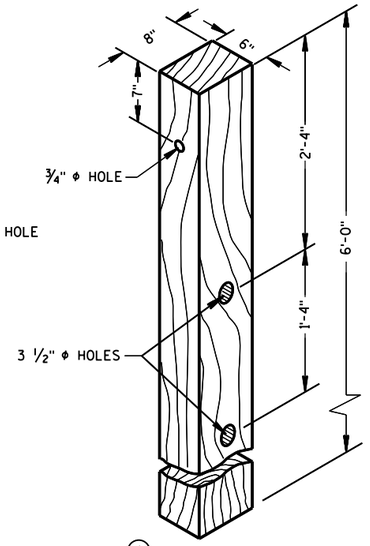
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



② 72" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST

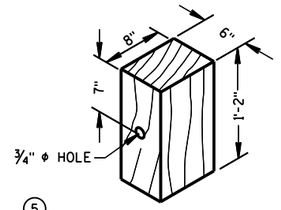


④ CRT POST
(POSTS NO'S 5-8)

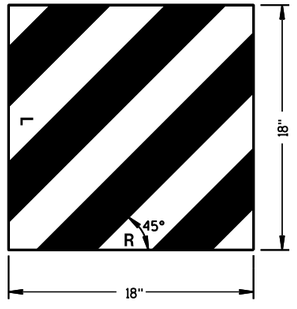
WOOD BREAKAWAY POSTS

GENERAL NOTES

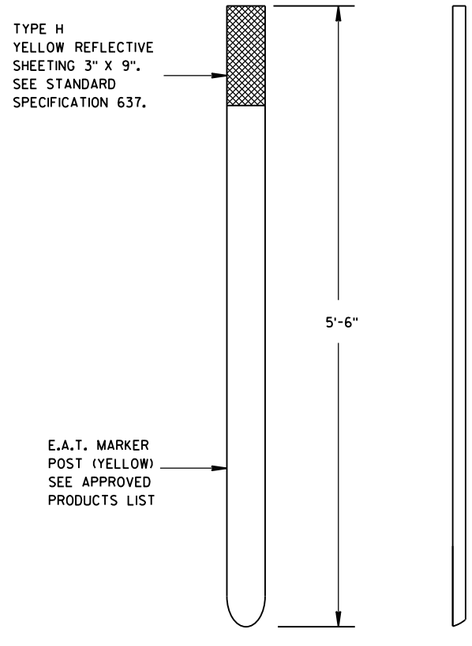
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ REFLECTIVE SHEETING DETAILS



E.A.T. MARKER POST

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERV...

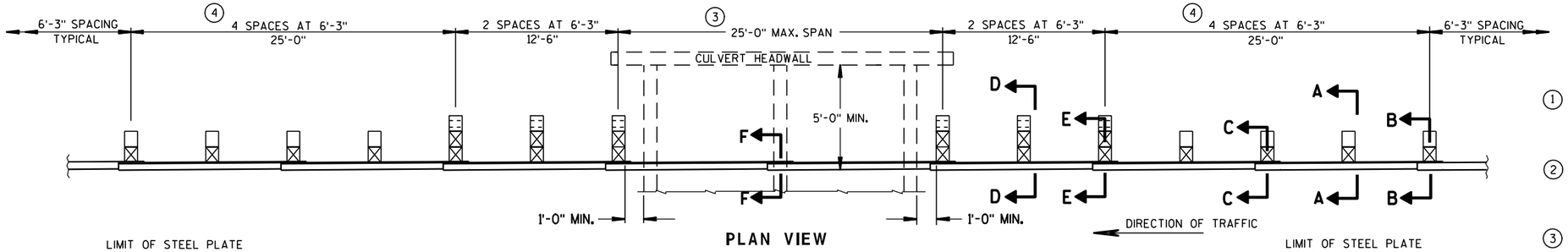
ENT

6

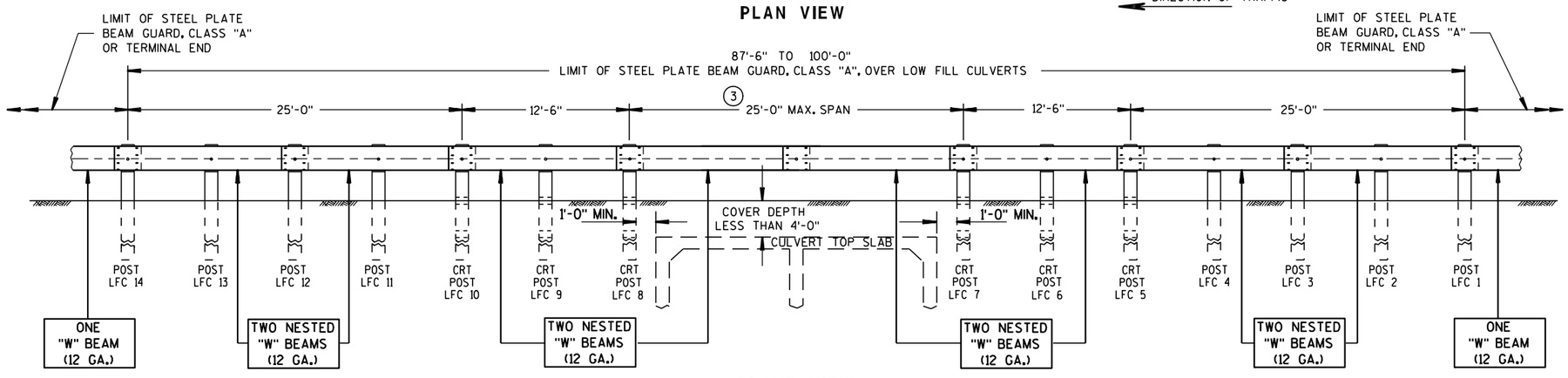
S.D.D. 14 B 24-9c

6

S.D.D. 14 B 24-9c



PLAN VIEW



FRONT VIEW

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD OVER LOW FILL CULVERTS

GENERAL NOTES

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

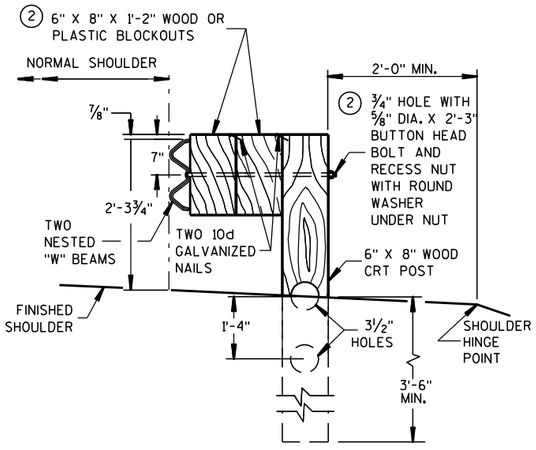
(1) MAINTAIN THE NESTING OF EACH NESTED PAIR OF "W" BEAM SECTIONS THROUGH SPLICES. ORIENTATE NESTED "W" BEAM SPLICES IN THE DIRECTION OF TRAFFIC AS THE PLAN VIEW SHOWS. SEE S.D.D. 14 B 15 FOR SPLICE INSTALLATION.

(2) THE CONTRACTOR MAY USE APPROVED PLASTIC BLOCKOUTS IN LIEU OF WOOD BLOCKOUTS. SEE S.D.D. 14 B 15 FOR TYPICAL BLOCKOUT, SPLICE AND REFLECTOR INSTALLATIONS. USE BOLT SIZES AND LENGTHS AS SHOWN ON THIS DETAIL.

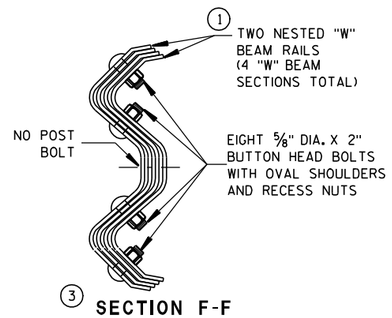
(3) PROVIDE 12'-6", 18'-9" AND 25'-0" SPANS ONLY. USE A MAXIMUM OF ONE SPLICE LOCATED ANYWHERE WITHIN THE SPAN SECTION. LOCATE ALL OTHER SPLICES AT BEAM GUARD POSTS.

(4) IN THE FIRST AND LAST 25 FOOT SECTIONS (POSTS LFC 1-4 & LFC 11-14), THE CONTRACTOR MAY USE W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS OR 6" X 8" WOOD POSTS WITH EITHER WOOD OR PLASTIC BLOCKOUTS. DO NOT MIX STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS AND WOOD POSTS WITH EITHER WOOD OR PLASTIC BLOCKOUTS IN THE SAME INSTALLATION.

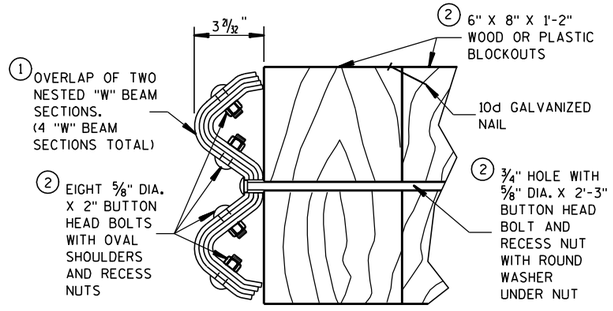
(5) WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK, THE PLAN TYPICAL SECTIONS OR DETAILS MAY SHOW, OR THE ENGINEER MAY ALLOW, THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. BUILD AS THE PLAN SHOWS OR ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST SOIL DEPTH TO 4'-6" OR MORE.



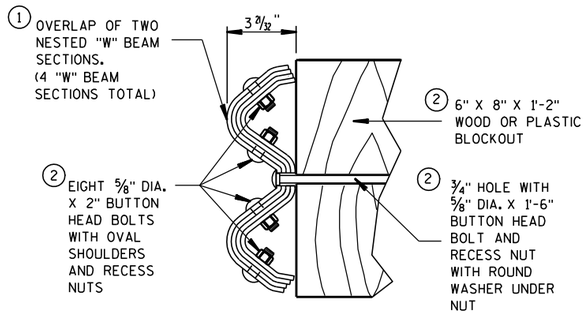
SECTION D-D
TYPICAL CRT POST LFC 6 AND 9



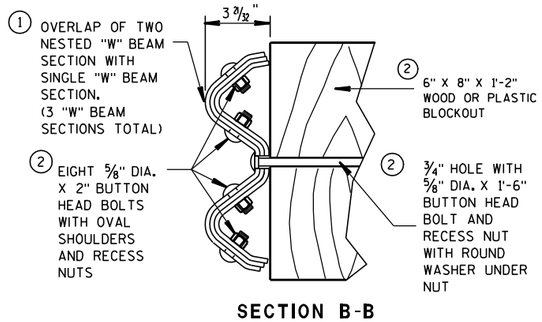
(3) SECTION F-F
BEAM SPLICE IN SPAN OVER CULVERT



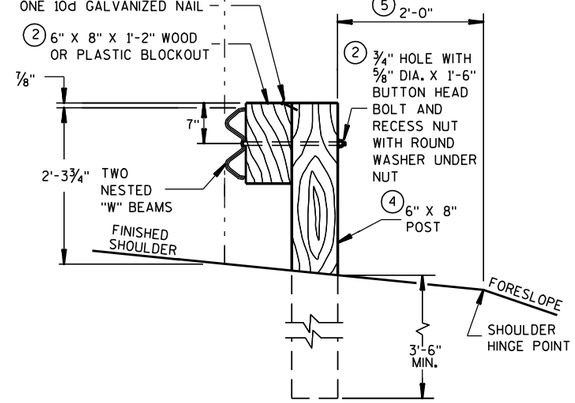
SECTION E-E
TYPICAL CRT POST LFC 5, 7, 8 AND 10



SECTION C-C
TYPICAL AT POSTS LFC 3 AND 12



SECTION B-B
TYPICAL AT POSTS LFC 1 AND 14



SECTION A-A
TYPICAL AT POST LFC 2,4,11,13

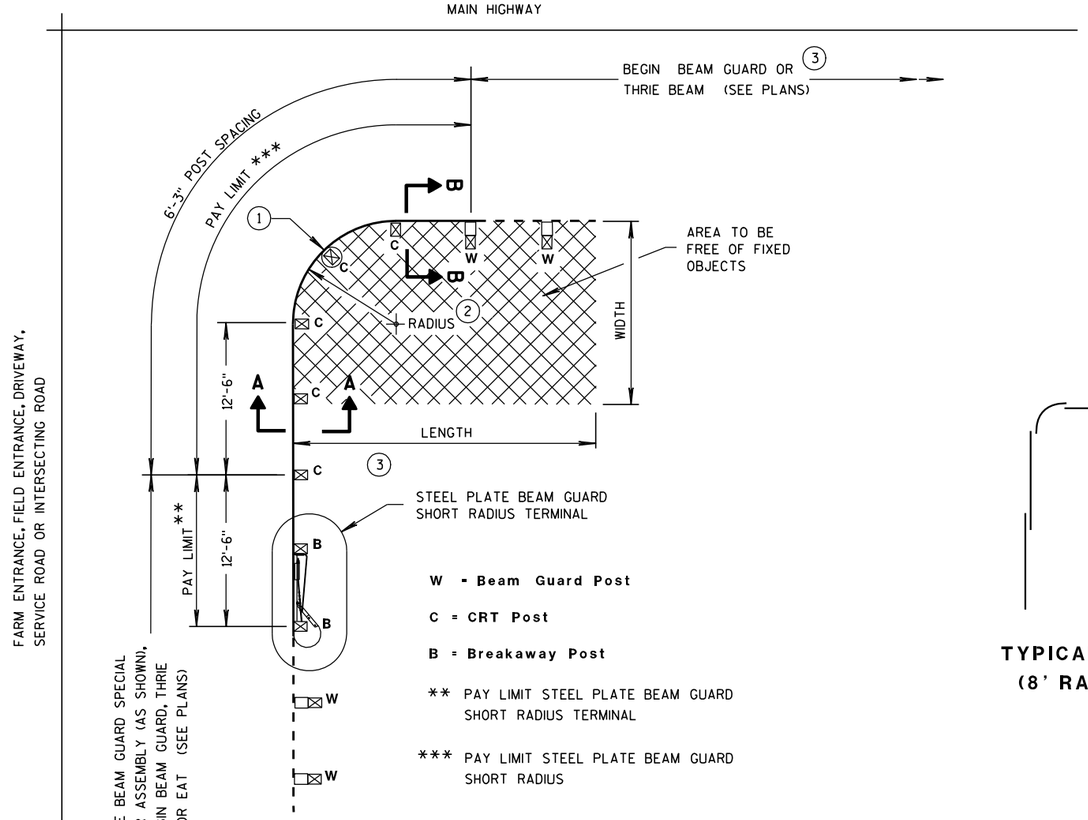
STEEL PLATE BEAM GUARD, CLASS "A", OVER LOW FILL CULVERTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

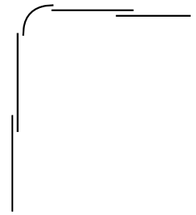
APPROVED
12/8/00 DATE
/S/ John Have... CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 25-1



TYPICAL LAYOUT
(8' RADIUS SHOWN)



TYPICAL LAP SPLICES
(8' RADIUS SHOWN)

GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2. UNLESS NOTED OTHERWISE.

SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

(1) ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.

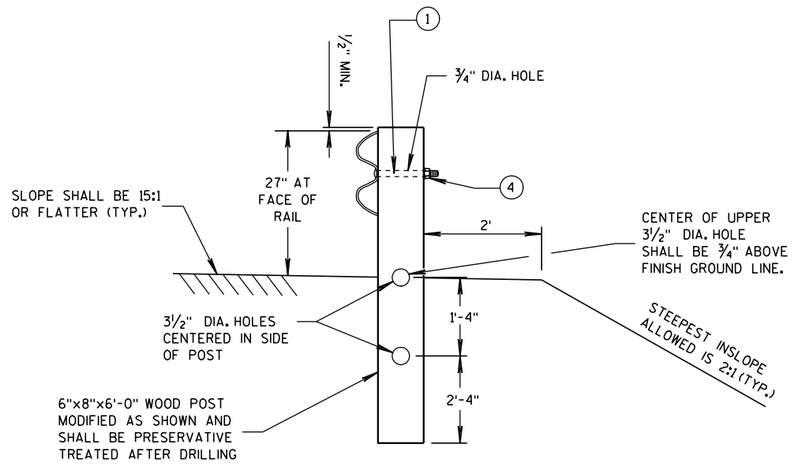
(2) RADIUS FROM 8' - 36'. SEE PLAN.

(3) HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.

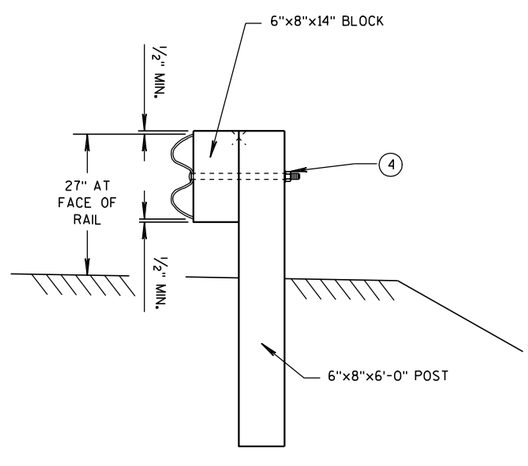
(4) 5/8" ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

RADIUS	NUMBER OF CRT POSTS	*NUMBER AND LENGTH OF CURVED RAILS	REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH)
8'	5	1 at 12.5'	25' x 15'
16'	7	1 at 25'	30' x 15'
24'	9	1 at 25' and 1 at 12.5'	40' x 20'
32'	11	2 at 25'	50' x 20'

* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.



SECTION A-A
(CRT POST)



SECTION B-B
(BEAM GUARD POST)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

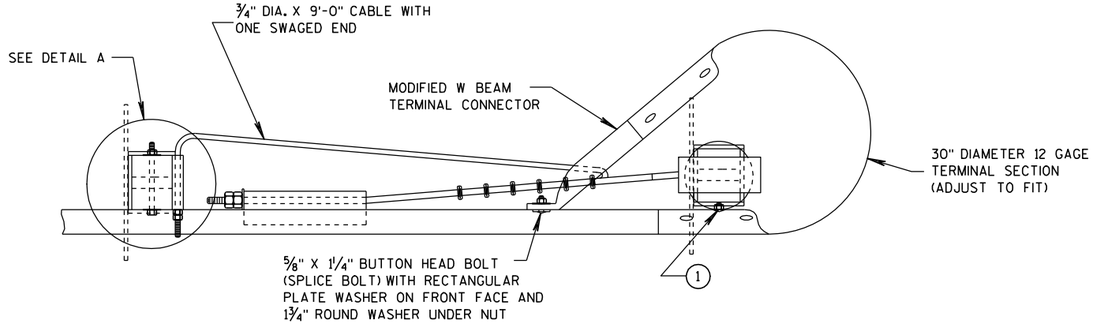
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

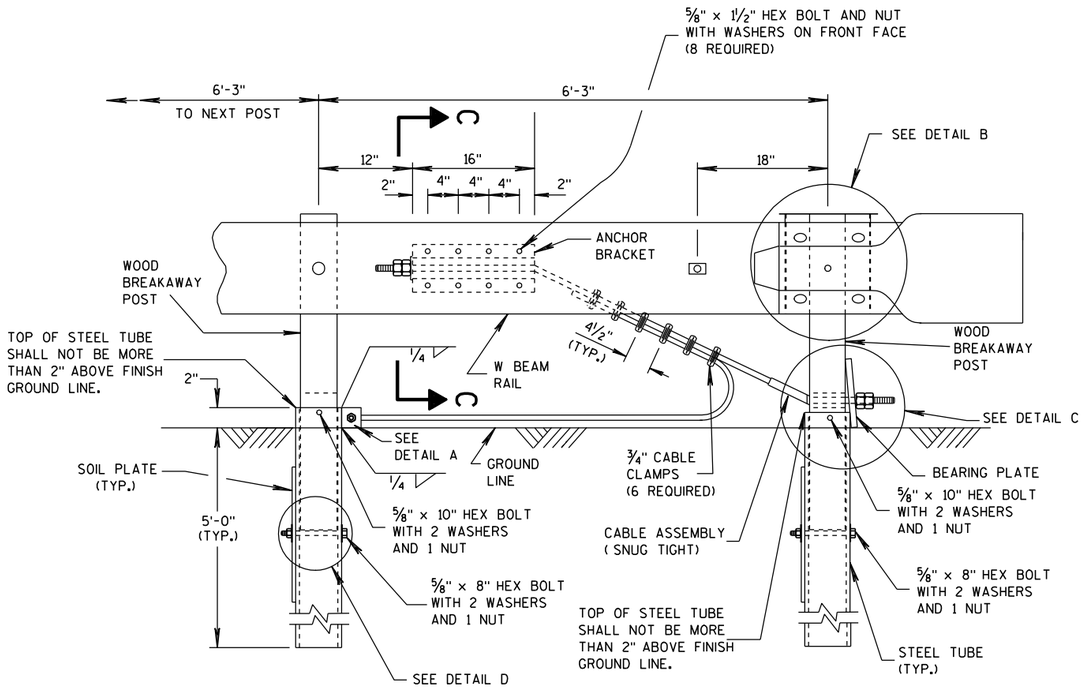
S.D.D. 14 B 27-1a

6

S.D.D. 14 B 27-1a



PLAN VIEW



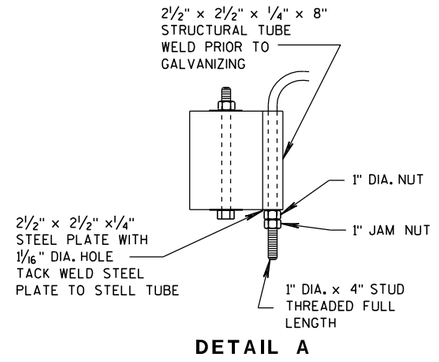
ELEVATION VIEW

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

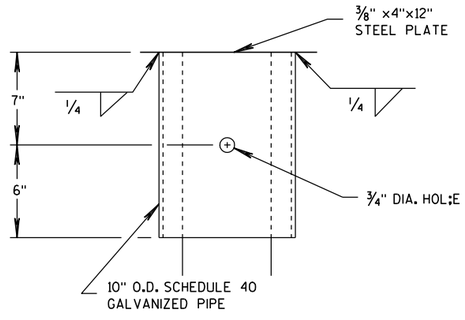
GENERAL NOTES

(1) ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A ⅝" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.

INSTALL GALVANIZED ¾" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.



DETAIL A



DETAIL B

(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

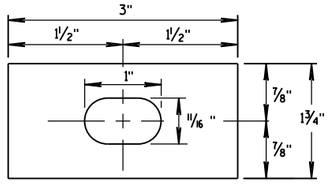
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

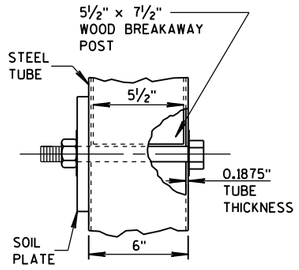
S.D.D. 14 B 27-1b

6

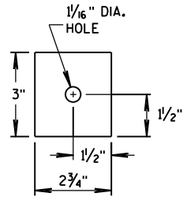
S.D.D. 14 B 27-1b



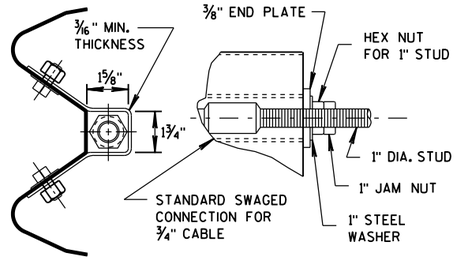
RECTANGULAR PLATE WASHER



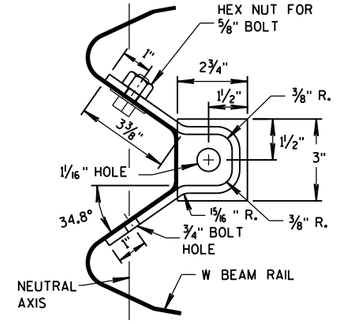
DETAIL D



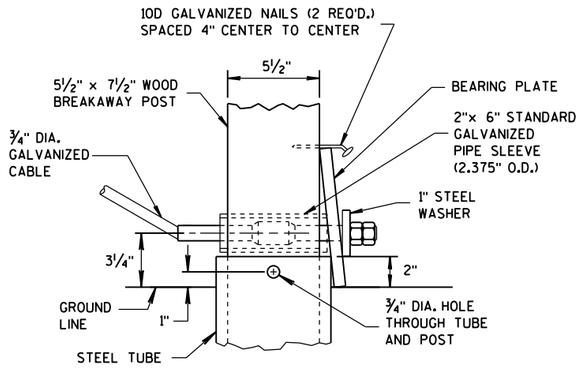
END PLATE



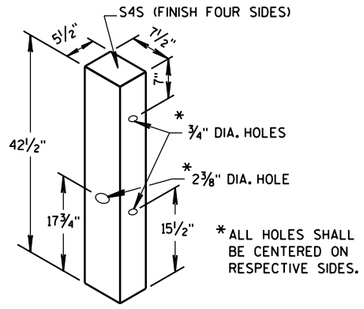
SECTION C-C
(END PLATE REMOVED)



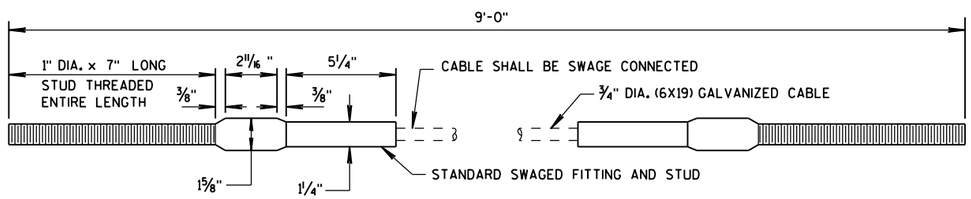
ANCHOR BRACKET



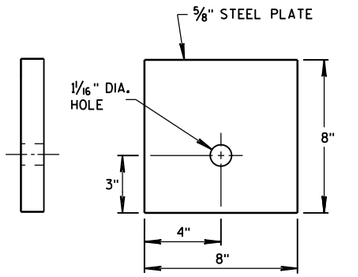
DETAIL C



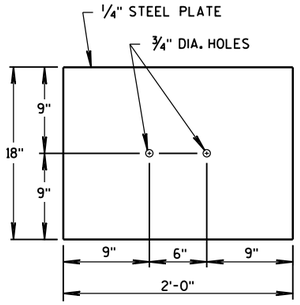
WOOD BREAKAWAY POST



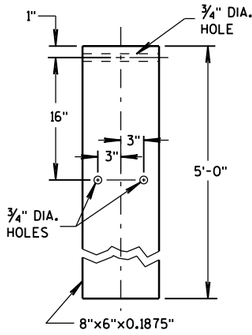
CABLE ASSEMBLY



BEARING PLATE



SOIL PLATE



STEEL TUBE

STEEL PLATE BEAM GUARD
SHORT RADIUS TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

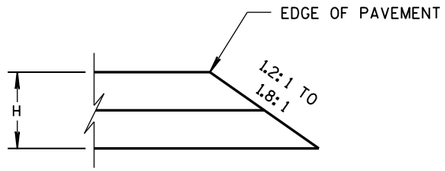
APPROVED
12/18/08 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 27-1c

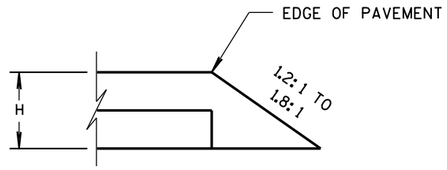
6

S.D.D. 14 B 27-1c



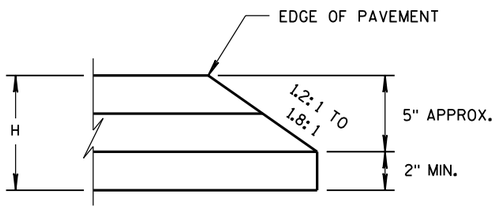
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



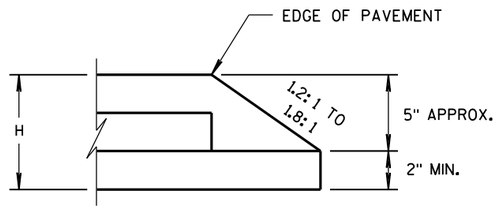
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

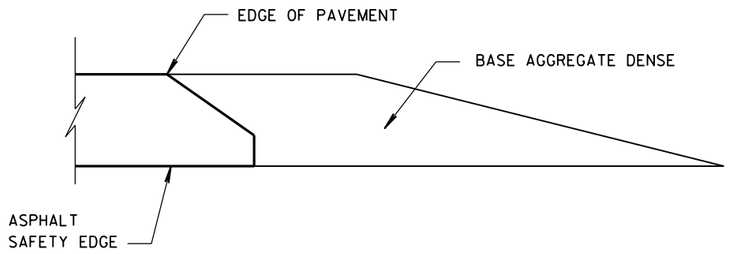
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

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

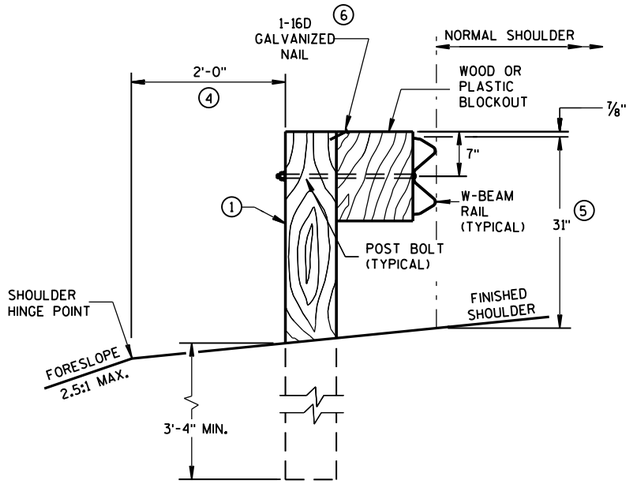
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

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

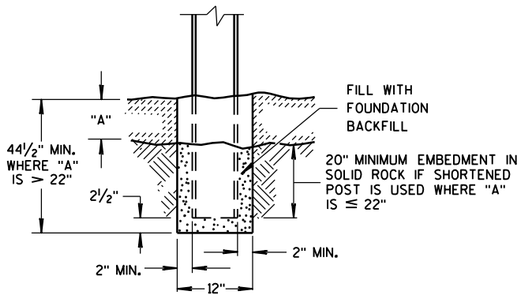
⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

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



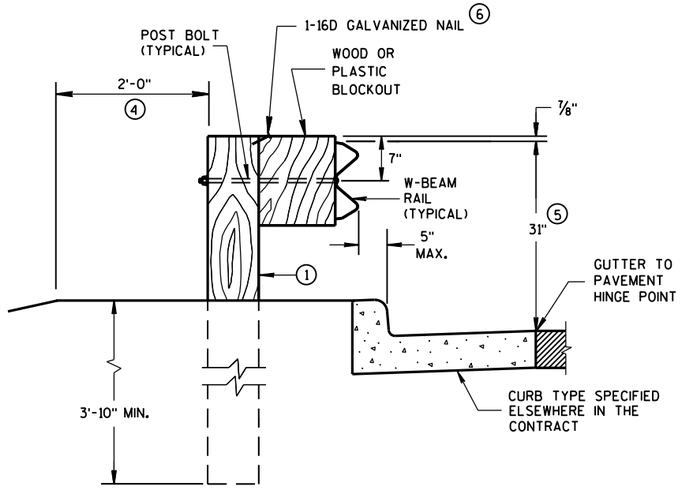
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



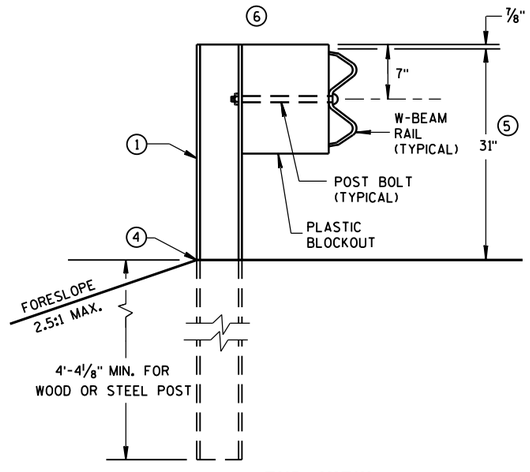
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



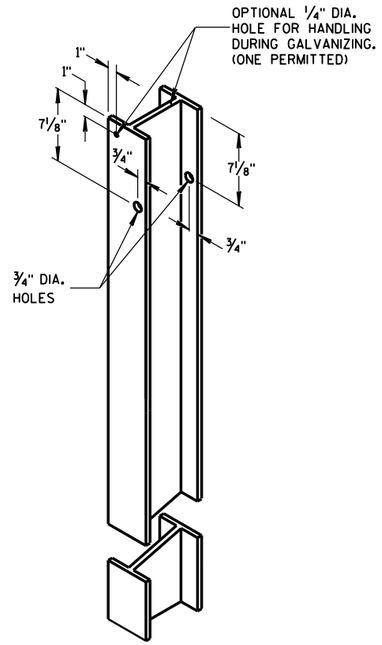
END VIEW

LOCATED ALONG A CURBED ROADWAY

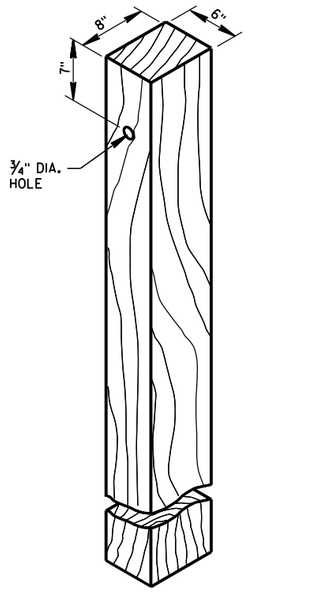


END VIEW

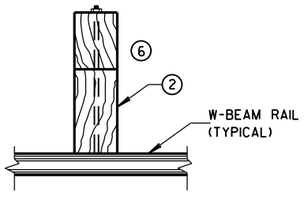
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



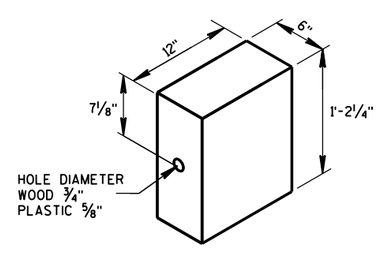
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



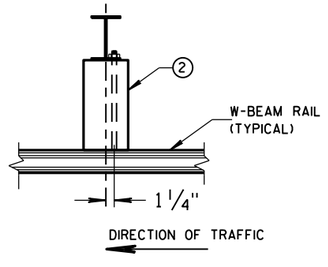
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



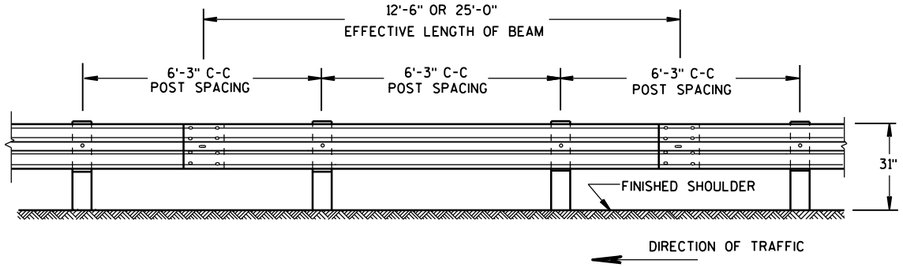
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

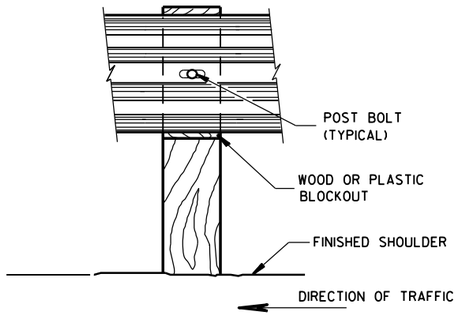
6

S.D.D. 14 B 42-5a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

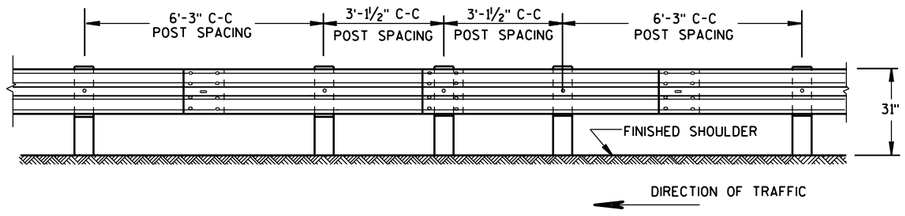
GENERAL NOTES

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

(11) 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

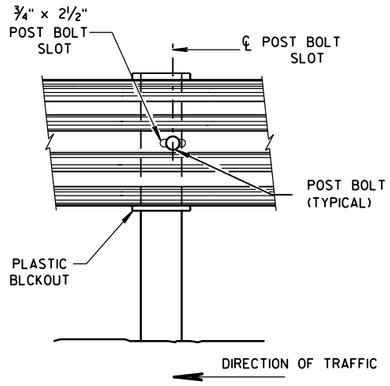
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

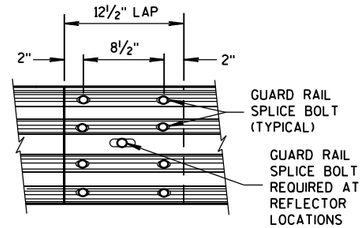


FRONT VIEW

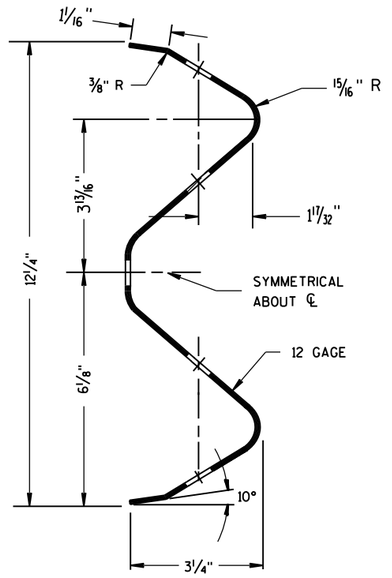
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



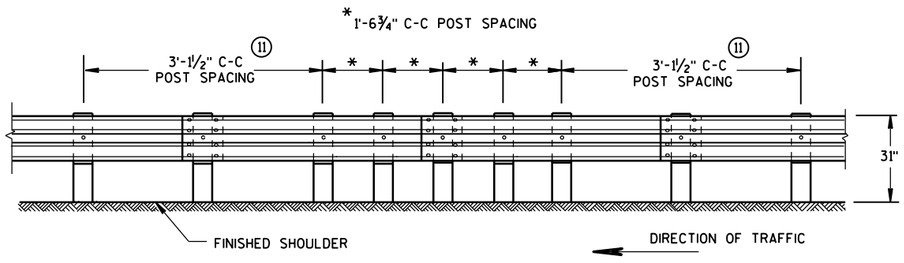
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

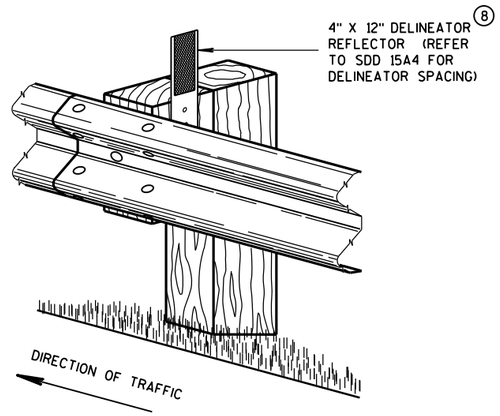


SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)



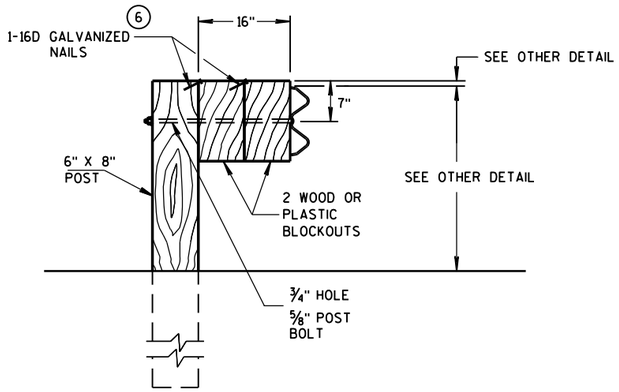
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

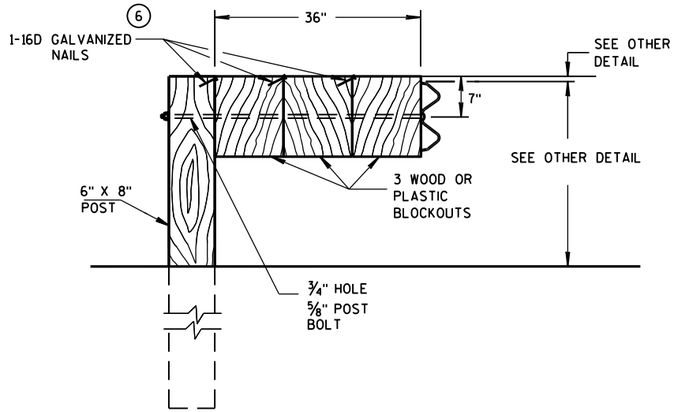
6

S.D.D. 14 B 42-5b



DETAIL FOR 16" BLOCKOUT DEPTH

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

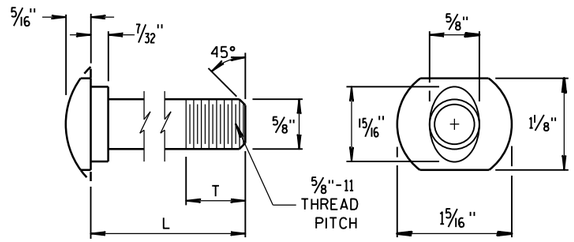


DETAIL FOR 36" BLOCKOUT DEPTH

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

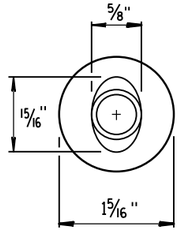
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

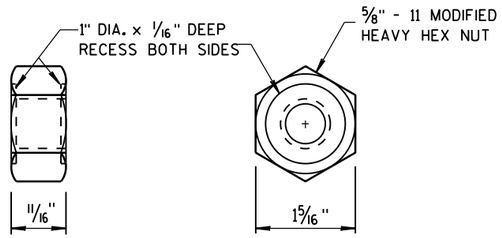


POST BOLT TABLE

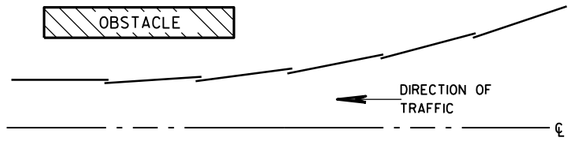
L	T (MIN.)
1¼"	1⅛"
2"	1¾"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

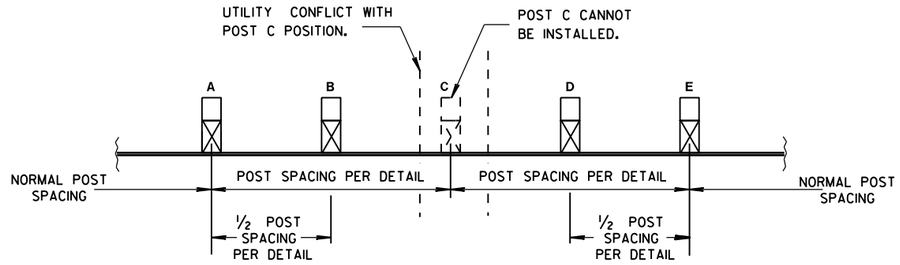


POST BOLT, SPLICE BOLT AND RECESS NUT

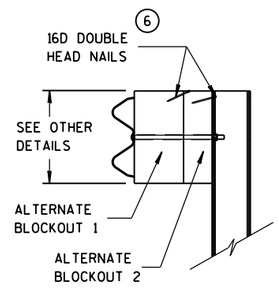


PLAN VIEW

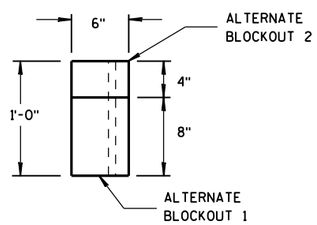
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

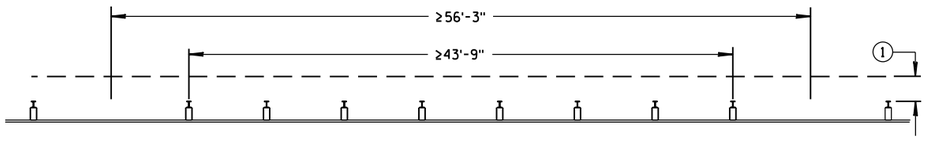
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

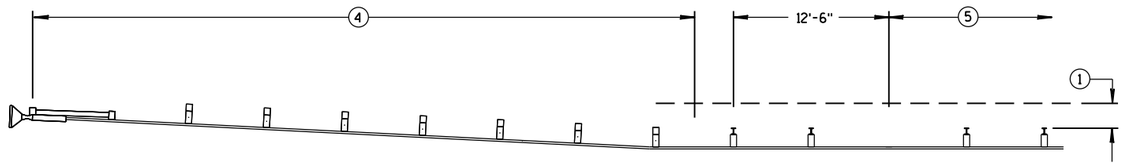
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

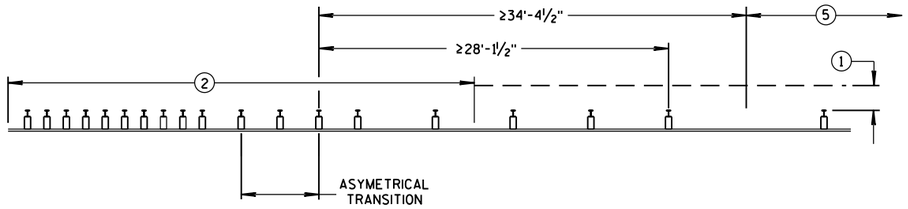
S.D.D. 14 B 42-5c



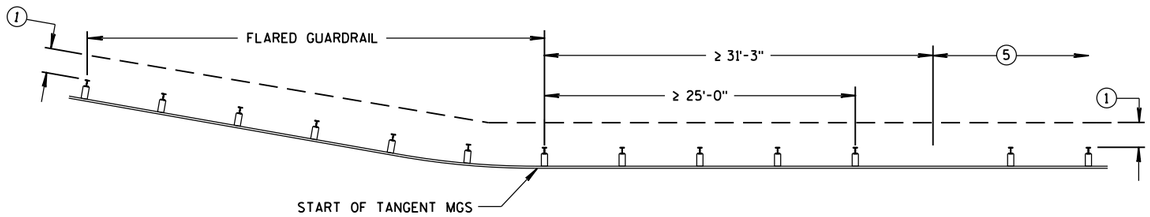
MISSING POST IN NORMAL BEAM GUARD RUN



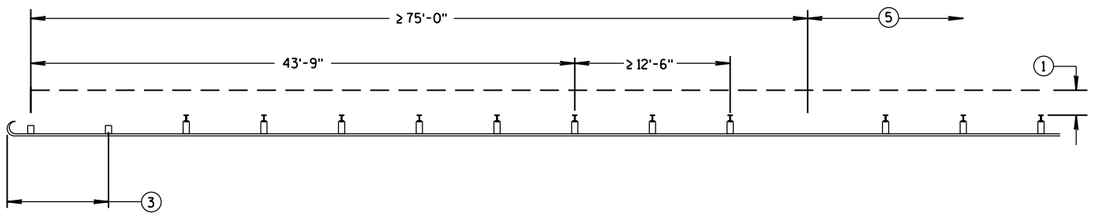
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



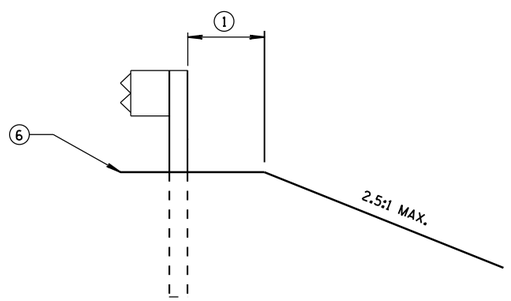
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

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

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
FHWA

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

6

S.D.D. 14 B 42-5d

6

S.D.D. 14 B 42-5d

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.

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

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

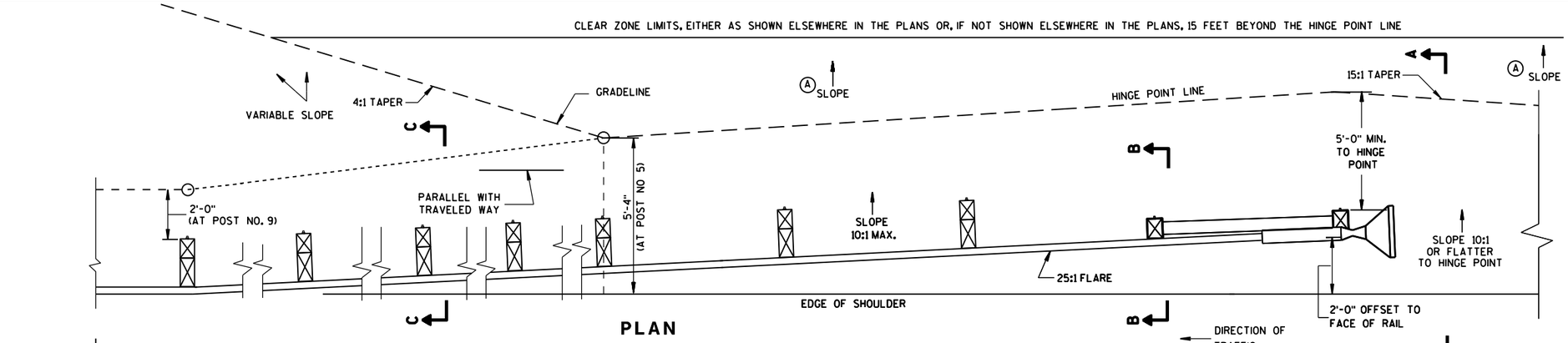
SEE SDD 14B42 FOR MORE INFORMATION.

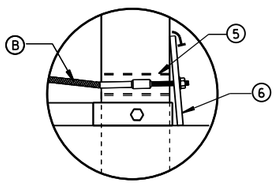
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

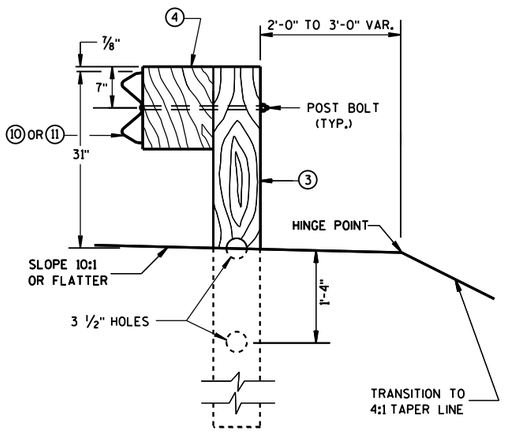
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

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

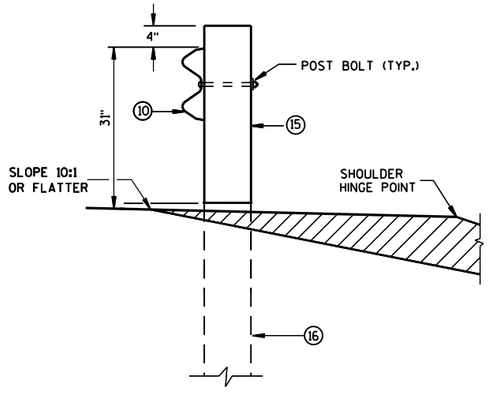
THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.



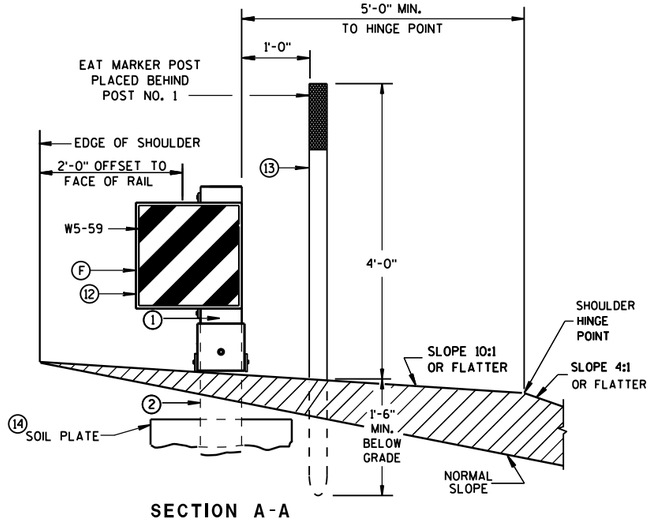




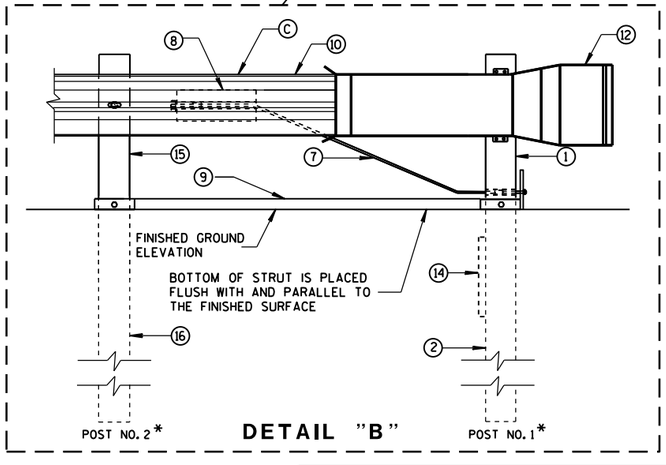
SECTION C-C
TYPICAL AT POST NOS. 3-9



SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

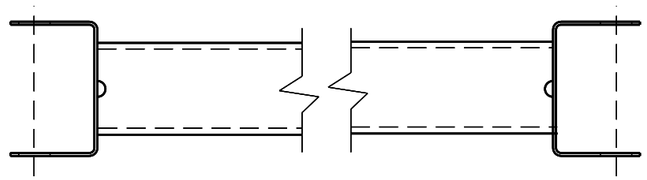
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 14 B 44-3a

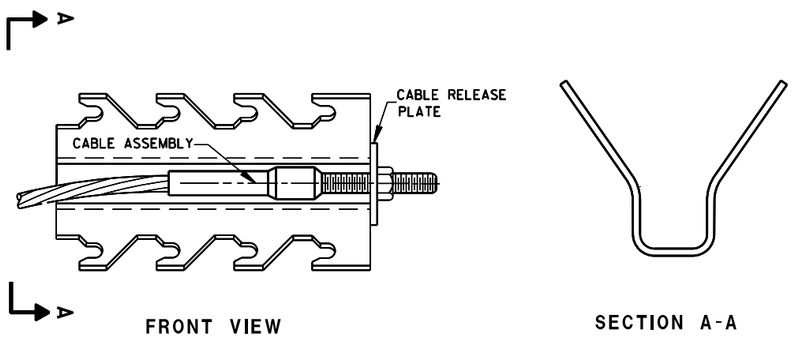
6

S.D.D. 14 B 44-3a



(9) (H)

GENERIC GROUND STRUT



FRONT VIEW

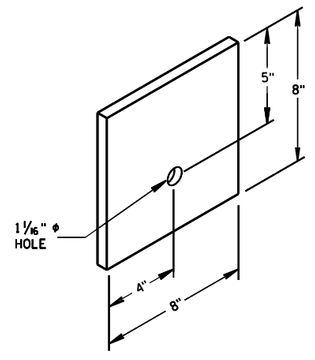
SECTION A-A

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



(6)

BEARING PLATE

6

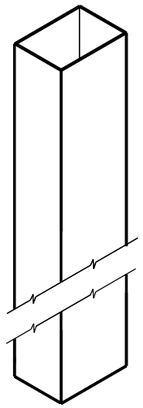
6

S.D.D. 14 B 44-3b

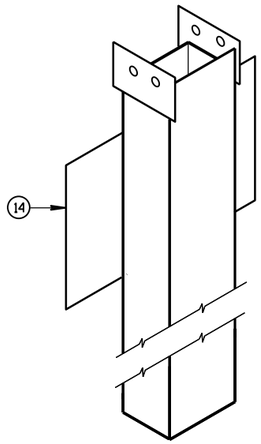
S.D.D. 14 B 44-3b

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

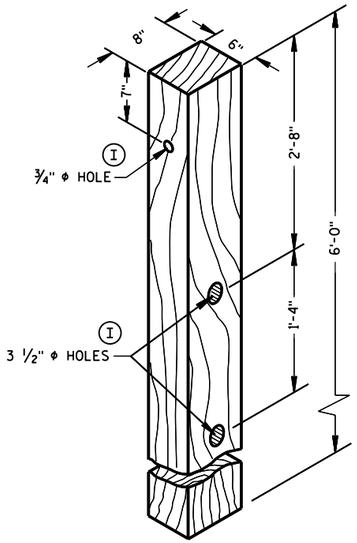
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI



UPPER POST NO. 1 (1)

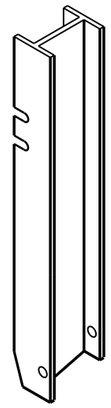


LOWER POST NO. 1 (2)

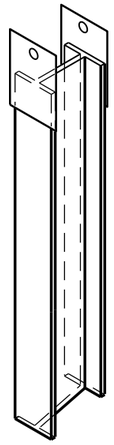


POSTS NUMBER 3-9

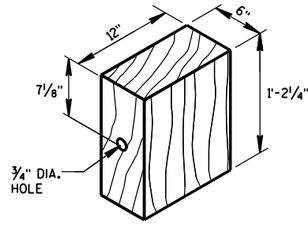
WOOD CRT POST (3)



UPPER POST NO. 2 (15)

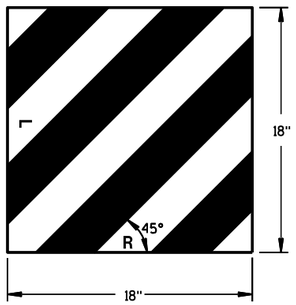


LOWER POST NO. 2 (16)



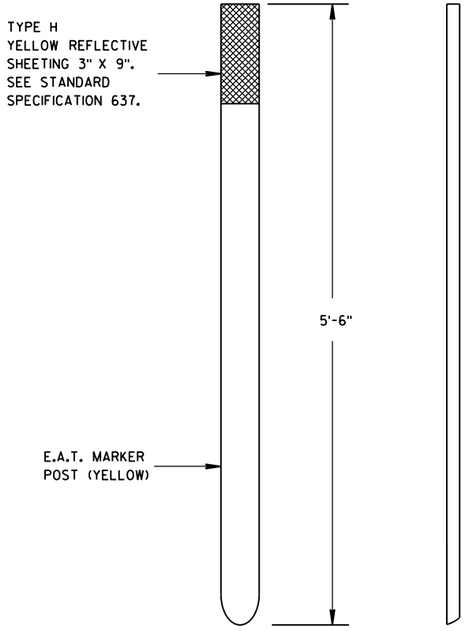
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



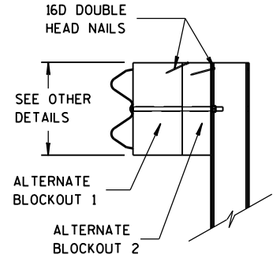
W5-59

REFLECTIVE SHEETING DETAIL (H)

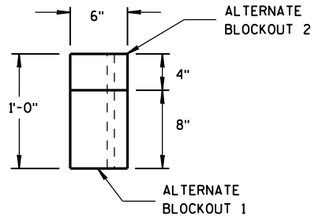


FRONT VIEW SIDE VIEW

E.A.T. MARKER POST (13)



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

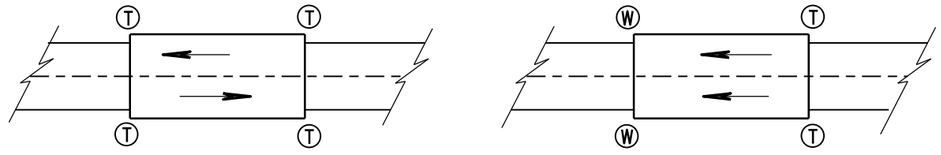
June 2017
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS
UNIT SUPERVISOR

FHWA

6

S.D.D. 14 B 44-3c



TWO WAY TRAFFIC **ONE WAY TRAFFIC**

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

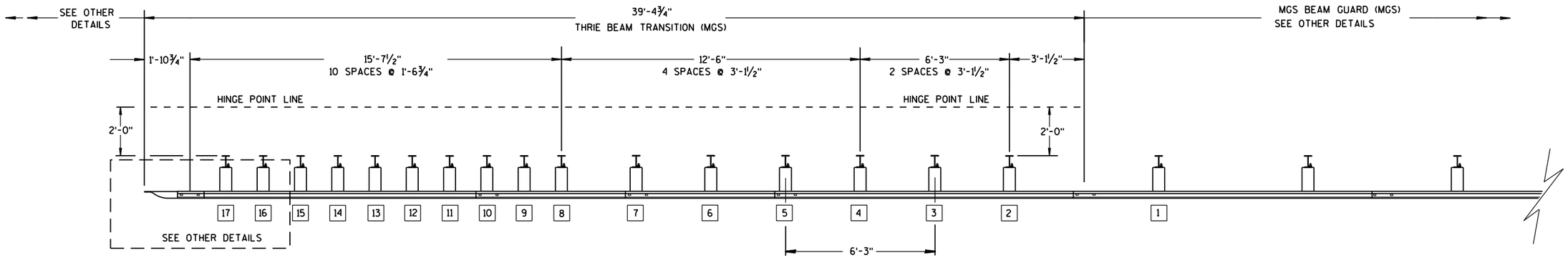
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

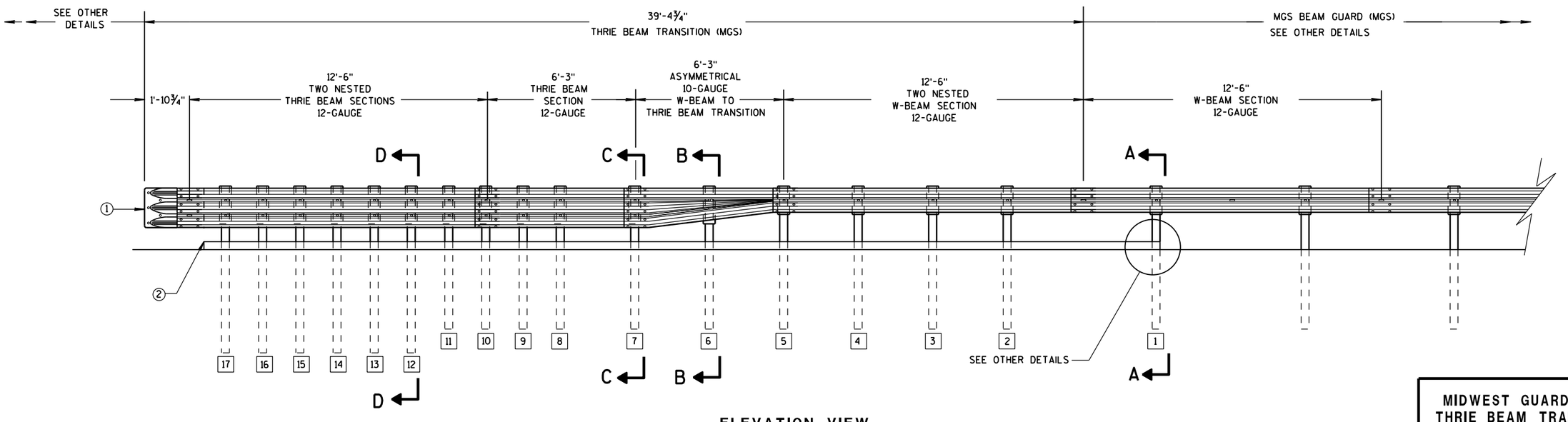
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

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

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



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4a

6

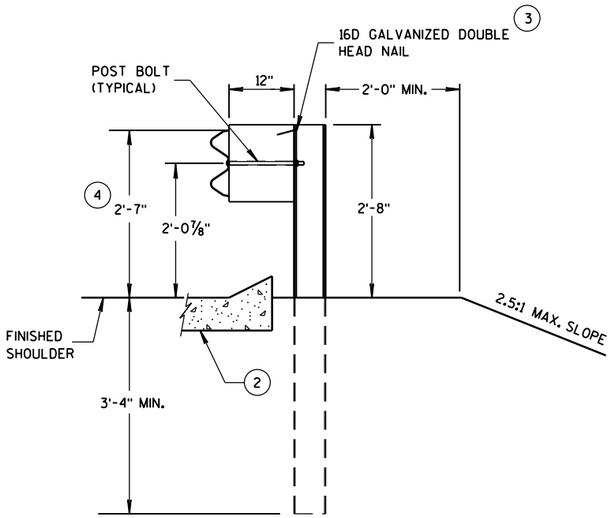
S.D.D. 14 B 45-4a

GENERAL NOTES

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

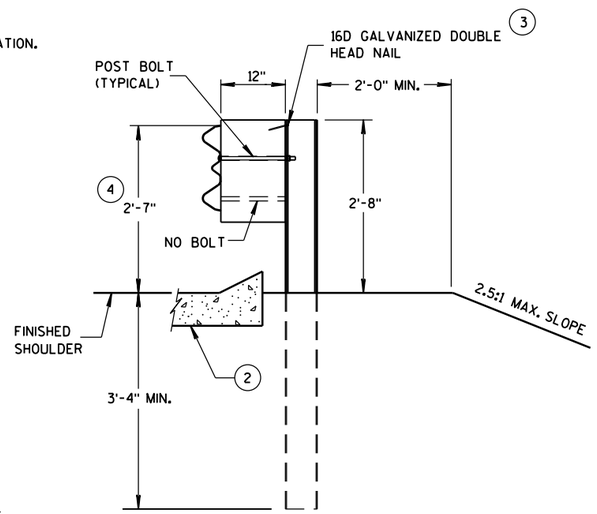
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

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



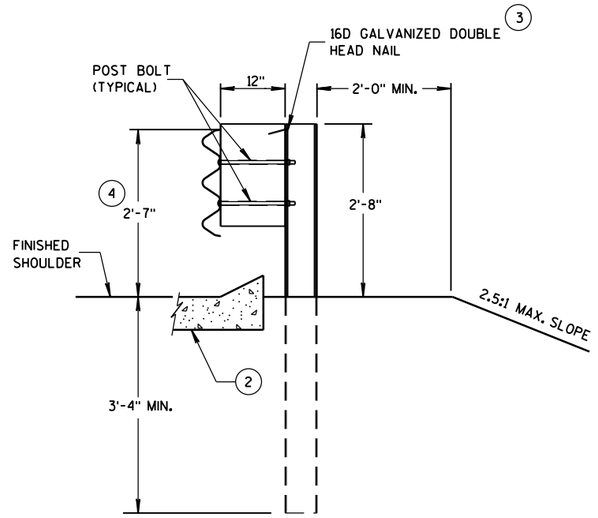
SECTION A-A

POSTS 1-5



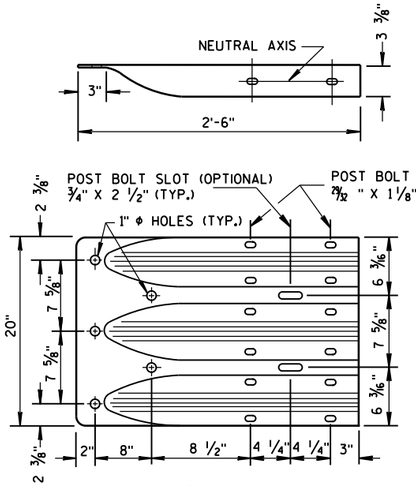
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

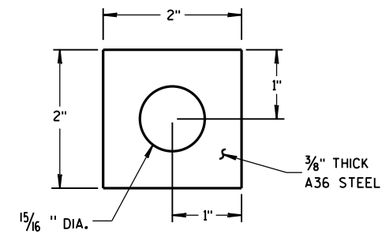
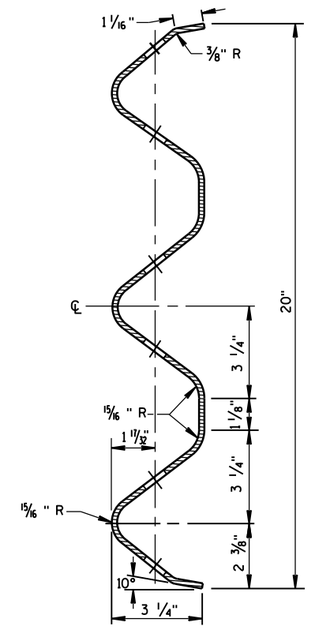
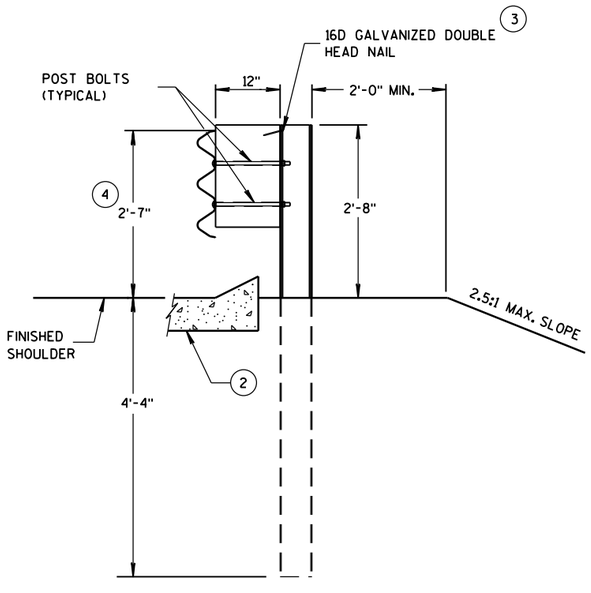


PLATE WASHER DETAIL

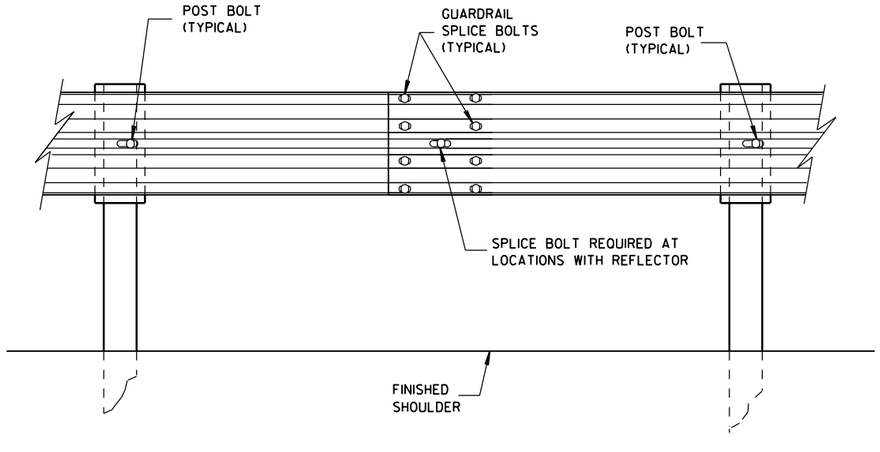


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



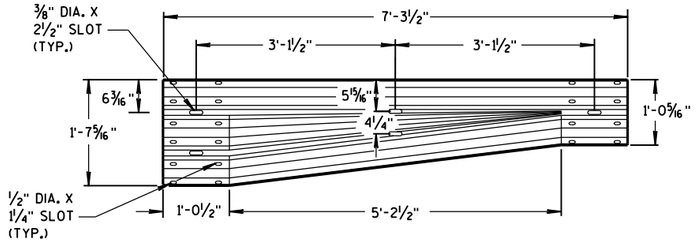
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

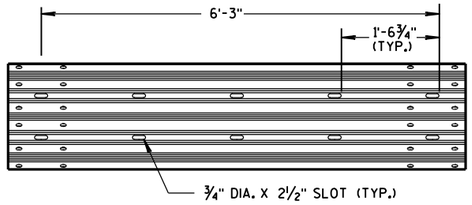
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

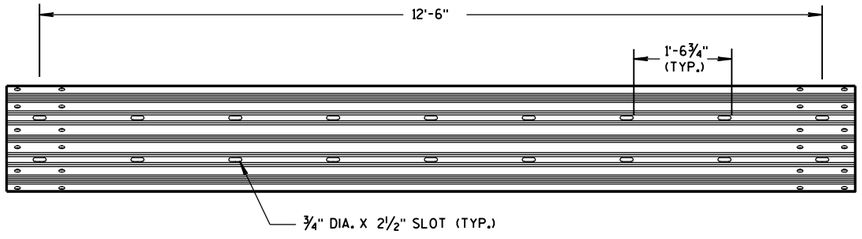
S.D.D. 14 B 45-4b



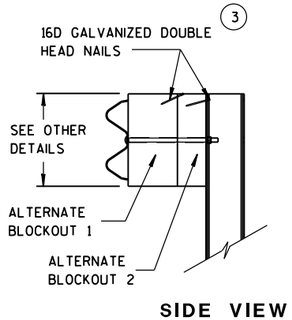
W-BEAM TO THRIE BEAM TRANSITION SECTION



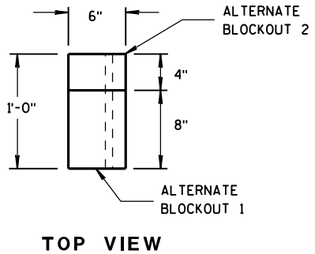
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

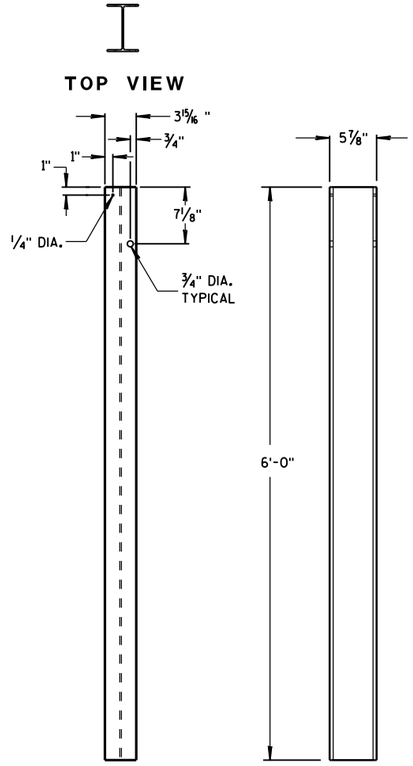


SIDE VIEW

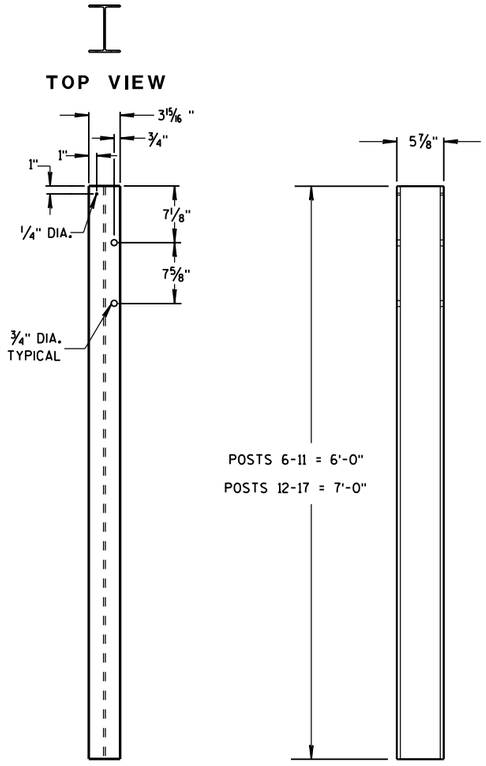


TOP VIEW

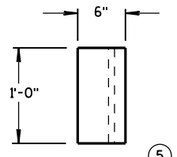
ALTERNATE WOOD BLOCKOUT DETAIL



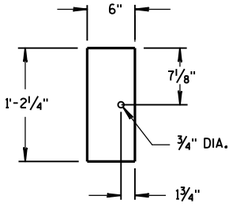
STEEL POSTS 1-5



STEEL POSTS 6-17

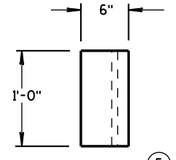


TOP VIEW (5)

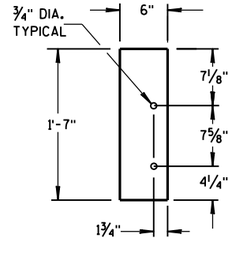


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

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

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

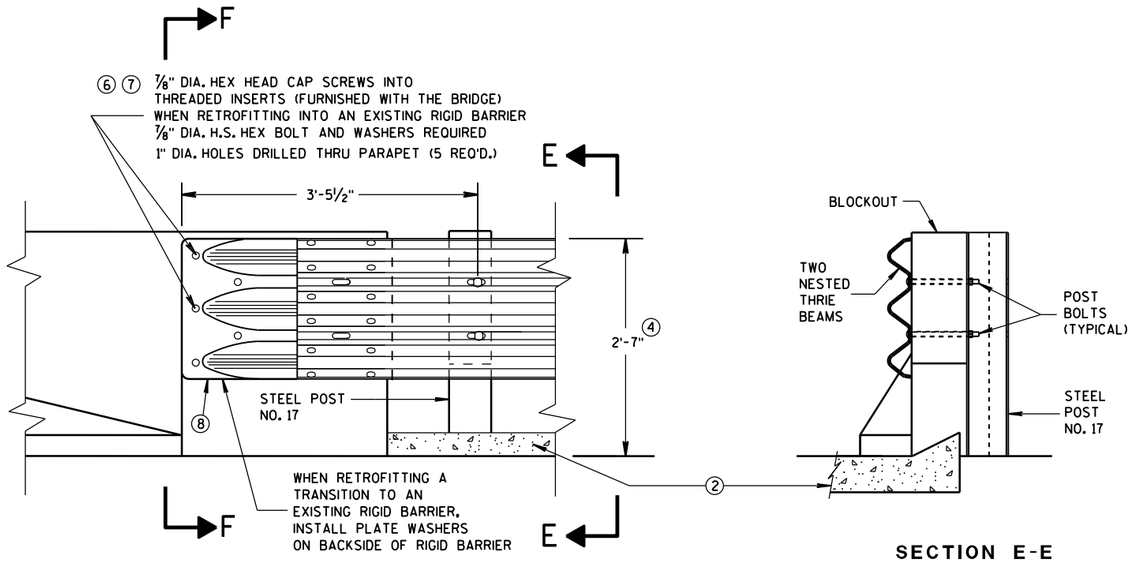
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

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

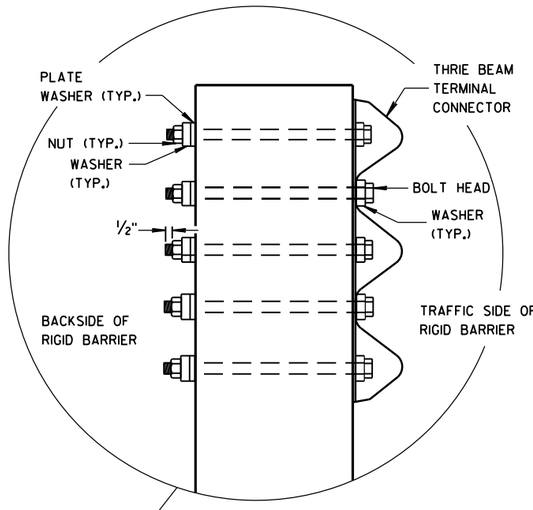
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

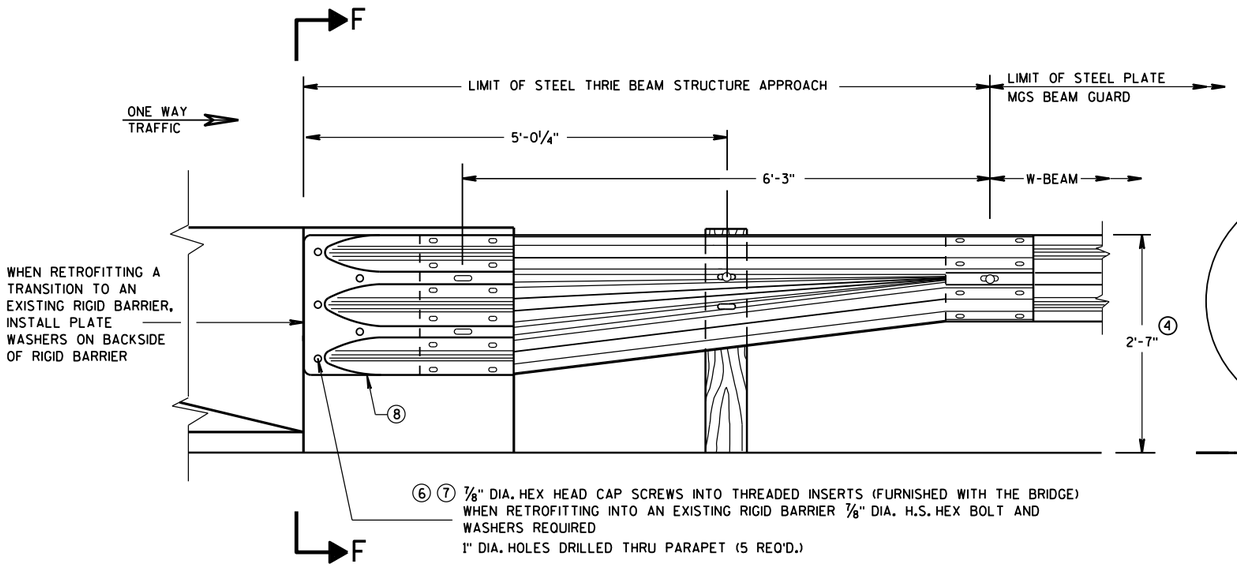
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

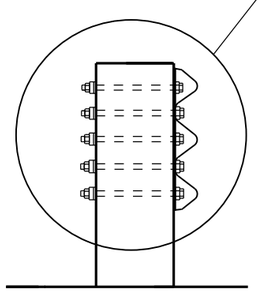
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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

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

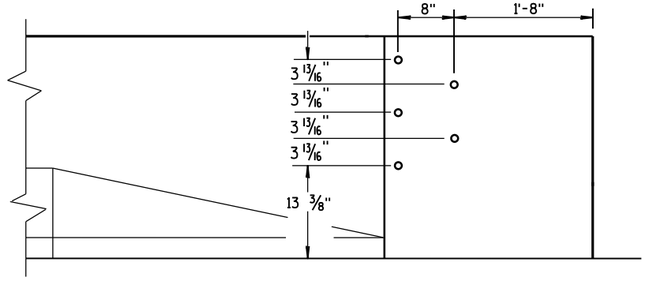




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 14 B 45-4d

6

S.D.D. 14 B 45-4d

GENERAL NOTES

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

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

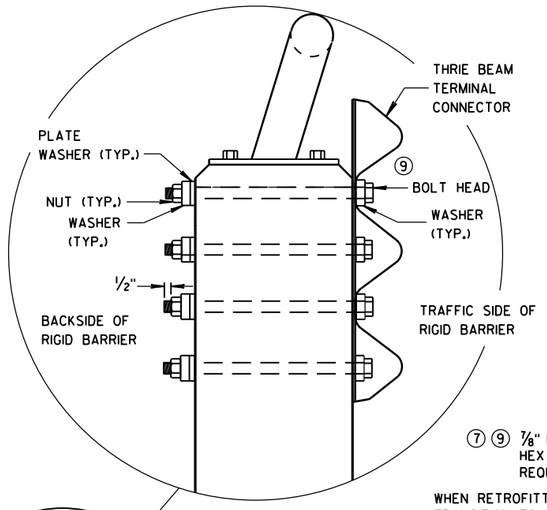
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

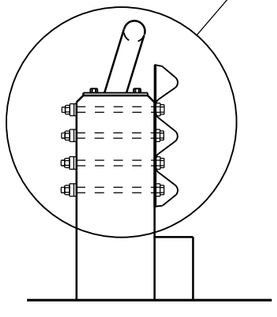
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

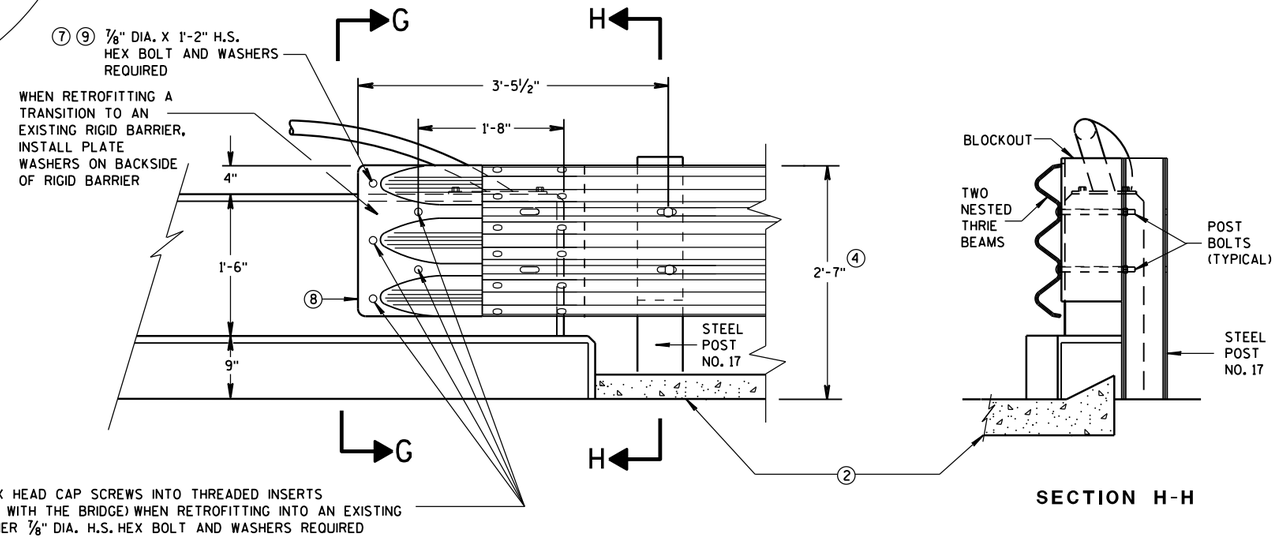
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

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





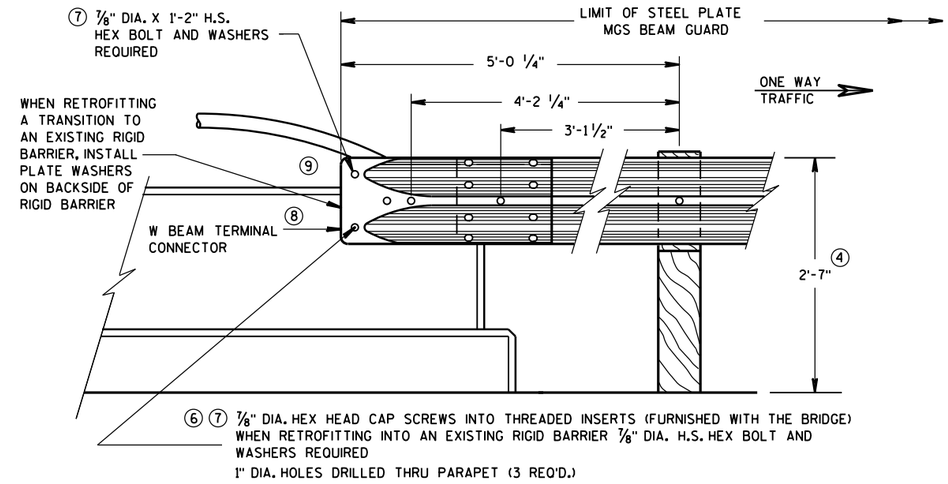
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

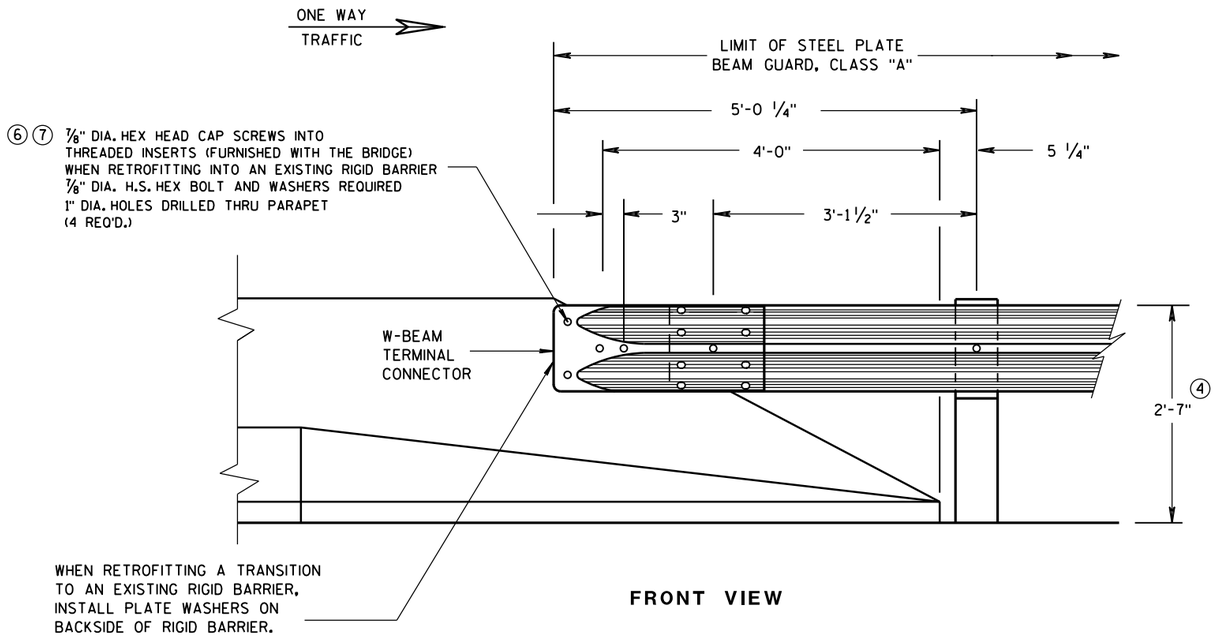
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 14 B 45-4e

6

S.D.D. 14 B 45-4e



FRONT VIEW

W BEAM CONNECTION TO PARAPETS WITH SLOPED ENDS

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

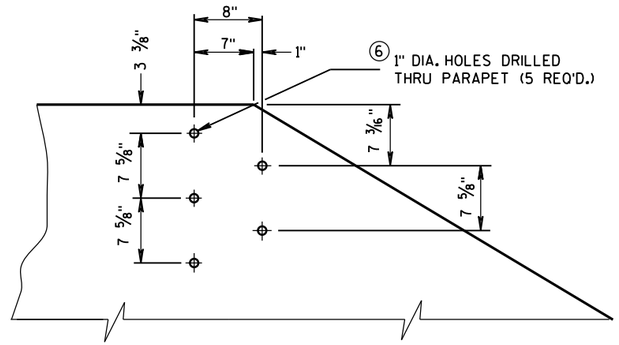
GENERAL NOTES

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

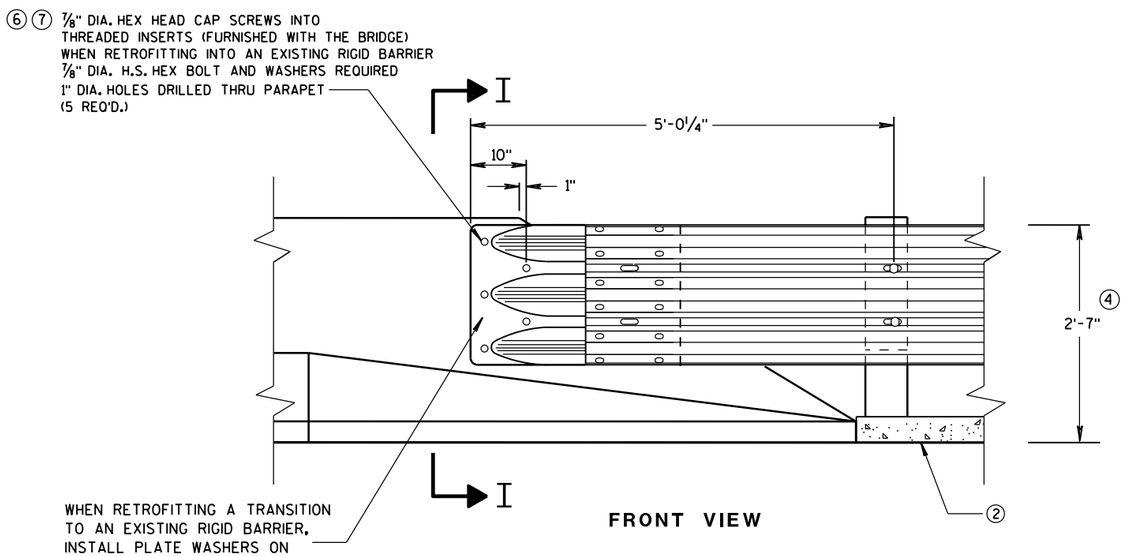
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

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

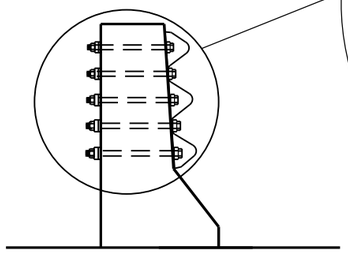
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE.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



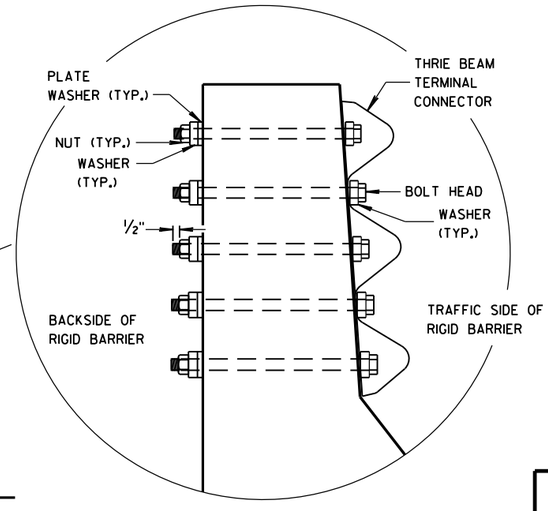
DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION



FRONT VIEW



SECTION I-I



THRIE BEAM CONNECTION TO BRIDGE PARAPETS WITH SLOPED ENDS

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

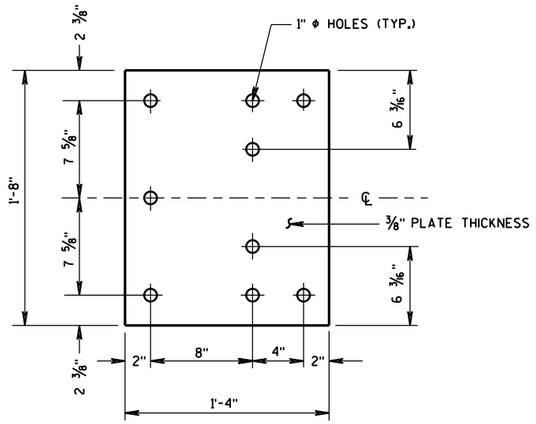
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

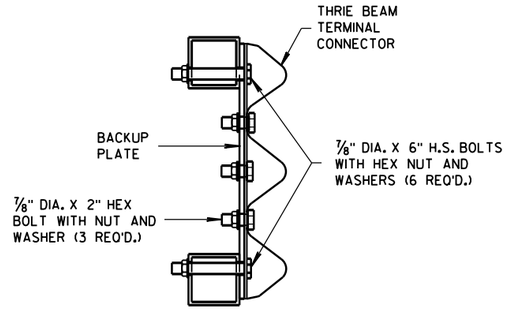
S.D.D. 14 B 45-4f

6

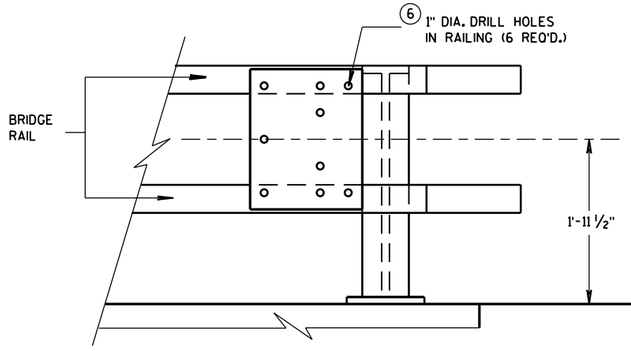
S.D.D. 14 B 45-4f



BACK-UP PLATE DETAIL



SECTION J-J

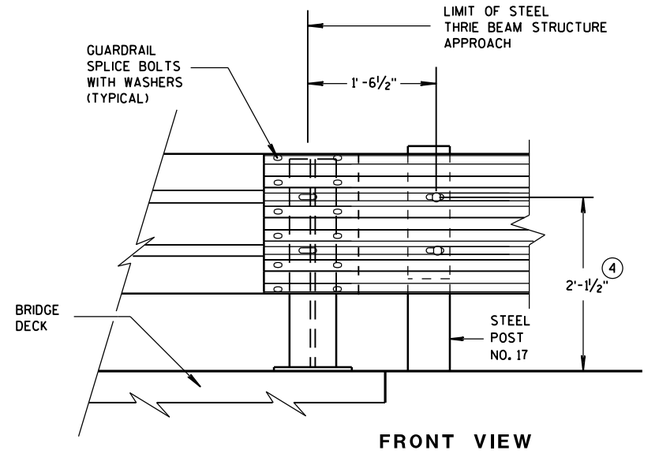


BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

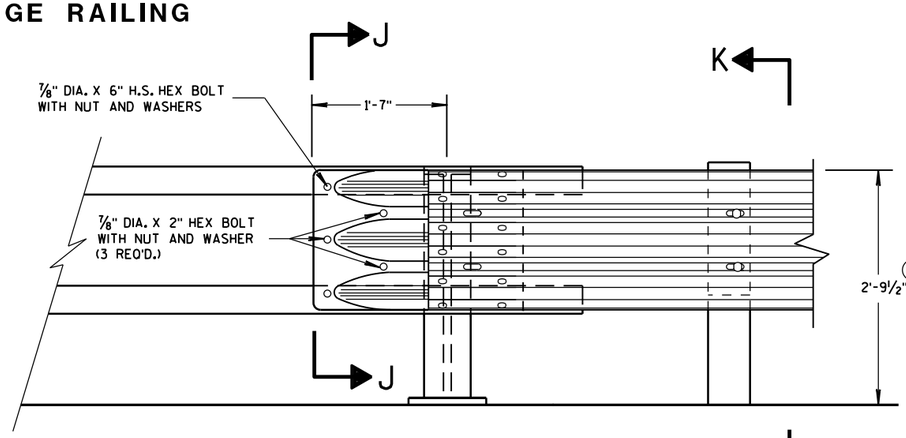
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

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

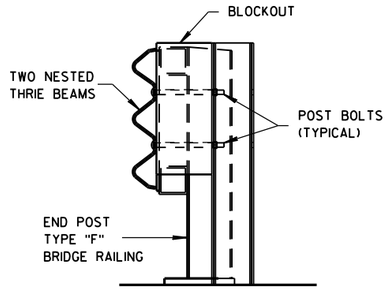


FRONT VIEW

THRIE BEAM CONNECTION TO STEEL RAILING TYPE "W"



FRONT VIEW



SECTION K-K

THRIE BEAM CONNECTION TO TUBULAR RAILING TYPE "F"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

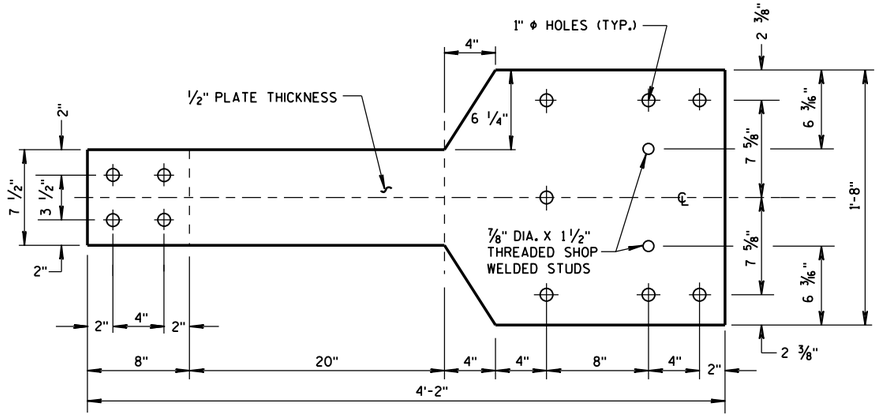
S.D.D. 14 B 45-4g

6

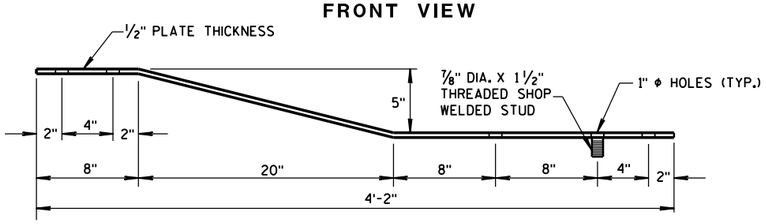
S.D.D. 14 B 45-4g

GENERAL NOTES

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

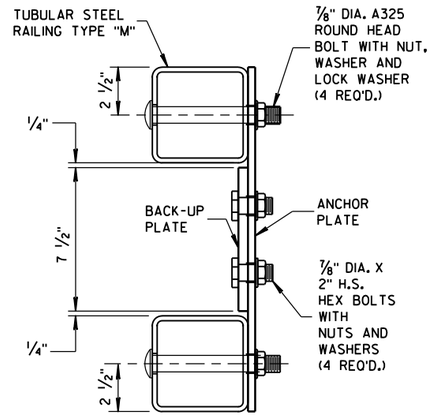


FRONT VIEW

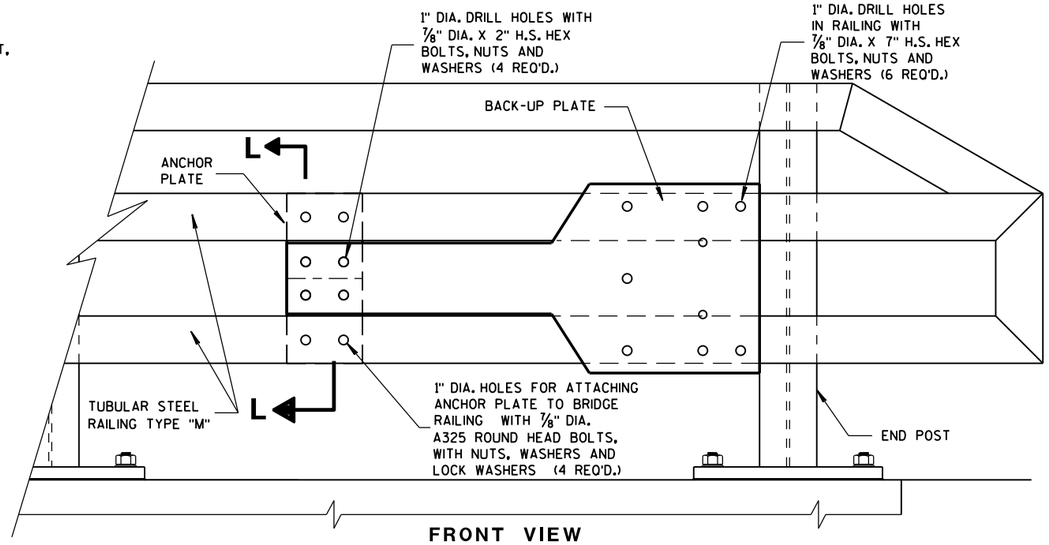


PLAN VIEW

BACK-UP PLATE DETAIL, TYPE "M"

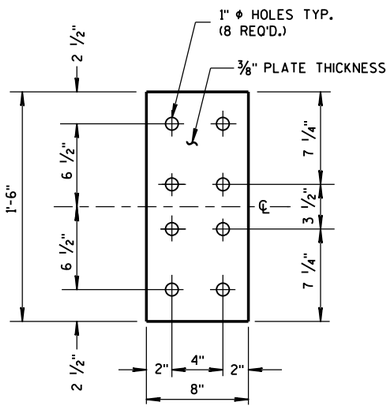


SECTION L-L



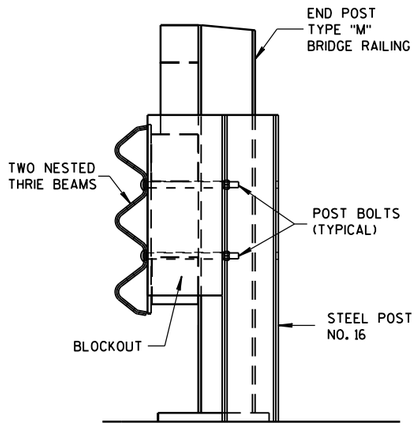
FRONT VIEW

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

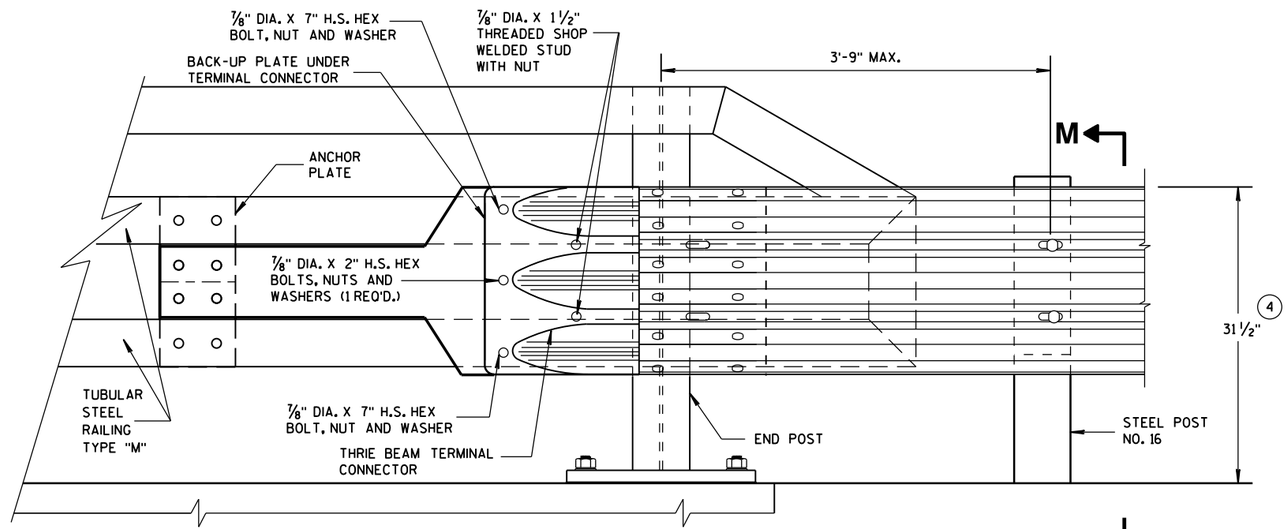


FRONT VIEW

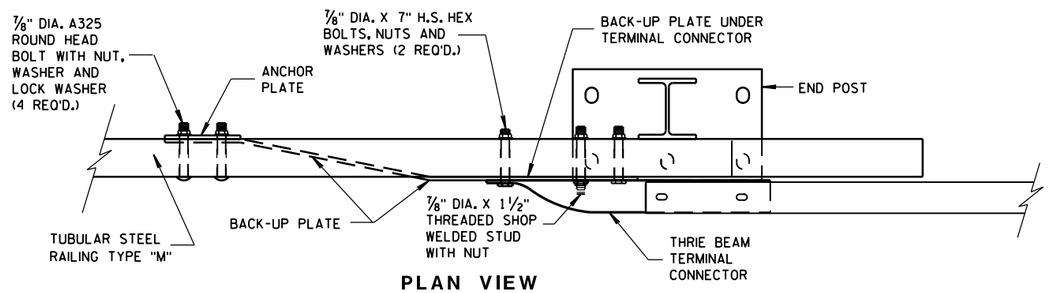
ANCHOR PLATE DETAIL, TYPE "M"



SECTION M-M



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

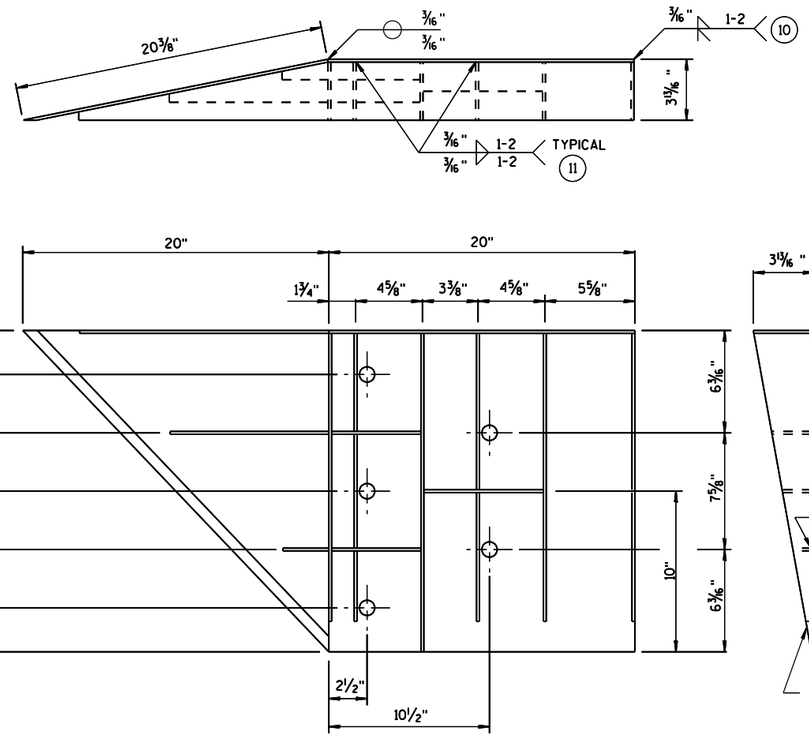
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

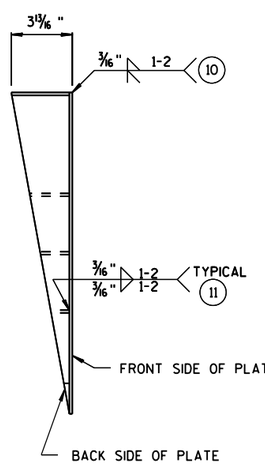
6

S.D.D. 14 B 45-4h

6

S.D.D. 14 B 45-4h





WELDING INSTRUCTION

(VIEWED FROM BACK SIDE OF PLATE)

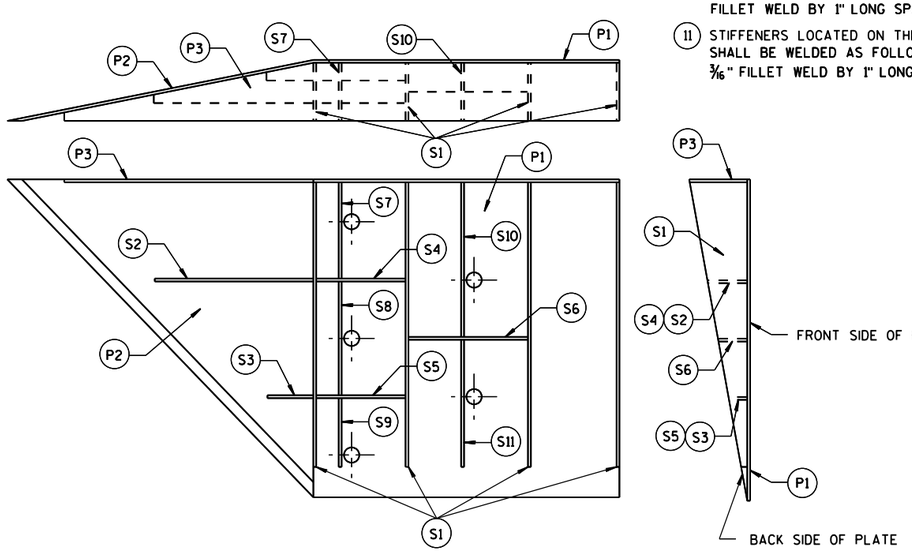


PLATE AND STIFFENER IDENTIFICATION

(VIEWED FROM BACK SIDE OF PLATE)

GENERAL NOTES

COVER PLATE PANELS ARE ⅜" THICK.

ALL STIFFENERS ARE ¼" THICK.

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

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

ALL HOLE DIAMETERS SHALL BE 1".

FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

(10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND ⅜" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.

(11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
⅜" FILLET WELD BY 1" LONG SPACED AT 2".

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)

PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	⅜"
P2	1		20" x 20" x 28⁹⁄₁₆"	⅜"
P3	1		39" x 3⅝" x 20" x 19⁵⁄₁₆"	⅜"
S1	4		18⁷⁄₁₆" x 3⅜" x 18¾"	¼"
S2	1		10¼" x 2⁷⁄₁₆" x 10⅜" x ½"	¼"
S3	1		3" x 1¹⁄₁₆" x 3⅛" x ½"	¼"
S4	1		6⅛" x 2⁷⁄₁₆"	¼"
S5	1		6⅛" x 1¹⁄₁₆"	¼"
S6	1		7¾" x 1¾"	¼"
S7	1		2⁹⁄₁₆" x 6" x 3⅝" x 5⅞"	¼"
S8	1		1³²⁄₃₂ " x 7½" x 2½" x 7⅜"	¼"
S9	1		6¹⁄₁₆" x 6³⁄₁₆" x 1³²⁄₃₂ "	¼"
S10	1		1⅛" x 9⅞" x 3⅝" x 9¹¹⁄₁₆ "	¼"
S11	1		8½" x 8¾" x 1¹³⁄₁₆ "	¼"

SINGLE SLOPE CONNECTION PLATE

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

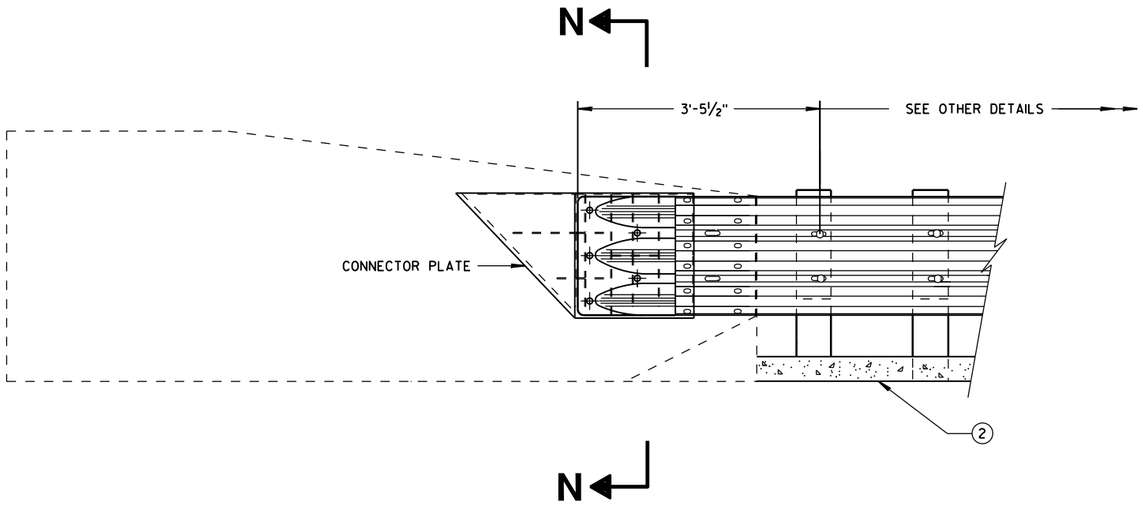
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

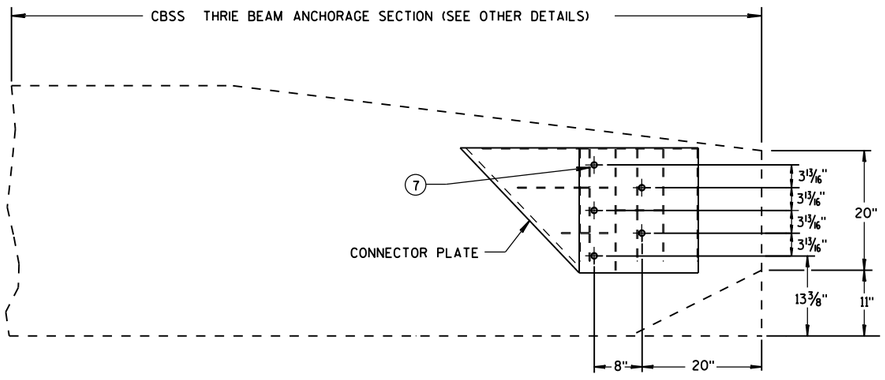
S.D.D. 14 B 45-4i

6

S.D.D. 14 B 45-4i



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



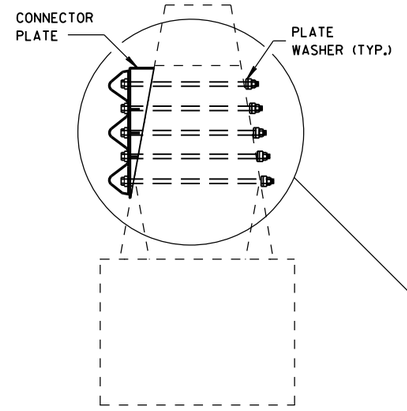
SINGLE SLOPE CONNECTION PLATE PLACEMENT

GENERAL NOTES

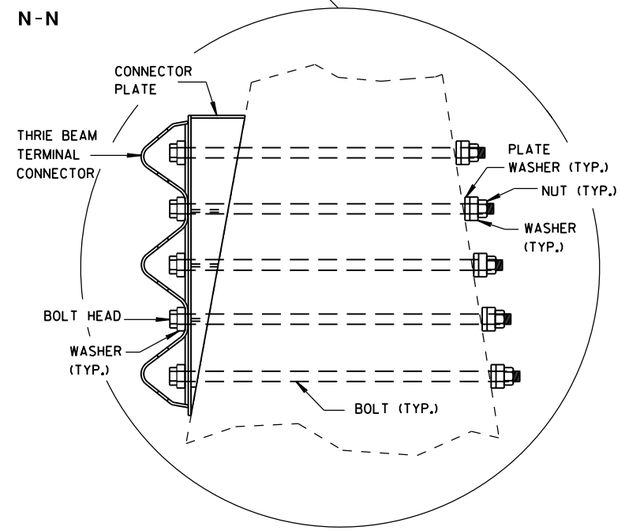
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

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



SECTION N-N



MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

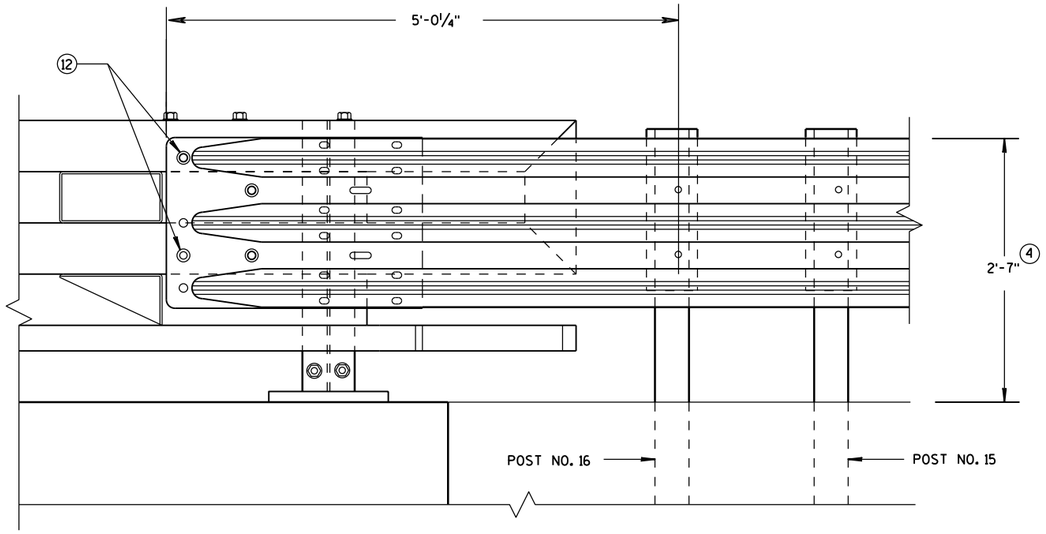
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS DEVELOPMENT ENGINEER
NT
FHWA

6

S.D.D. 14 B 45-4j

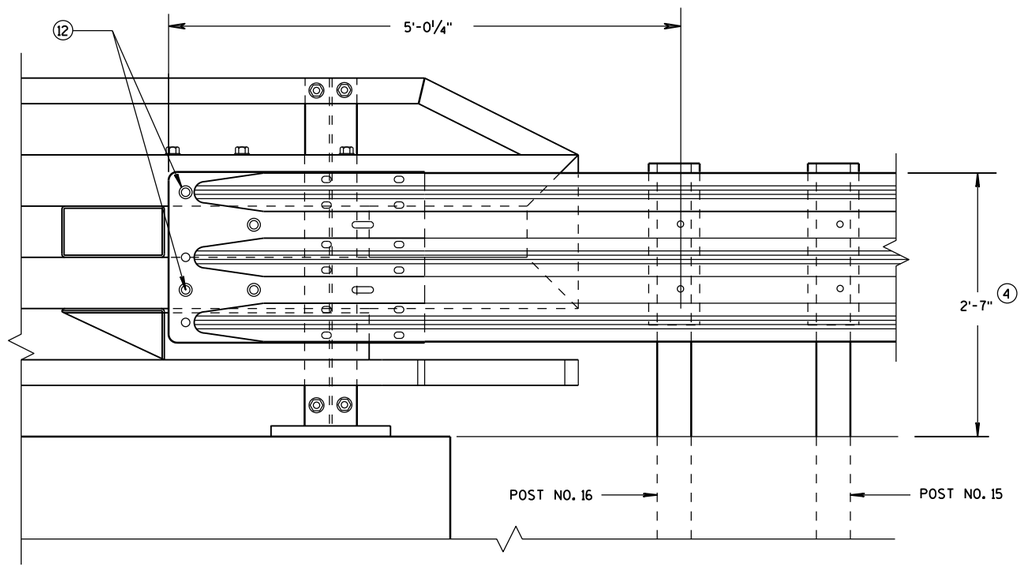
6

S.D.D. 14 B 45-4j



ELEVATION OF DETAIL AT NY3 END POST

THRIE BEAM RAIL ATTACHMENT



ELEVATION OF DETAIL AT NY4 END POST

THRIE BEAM RAIL ATTACHMENT

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

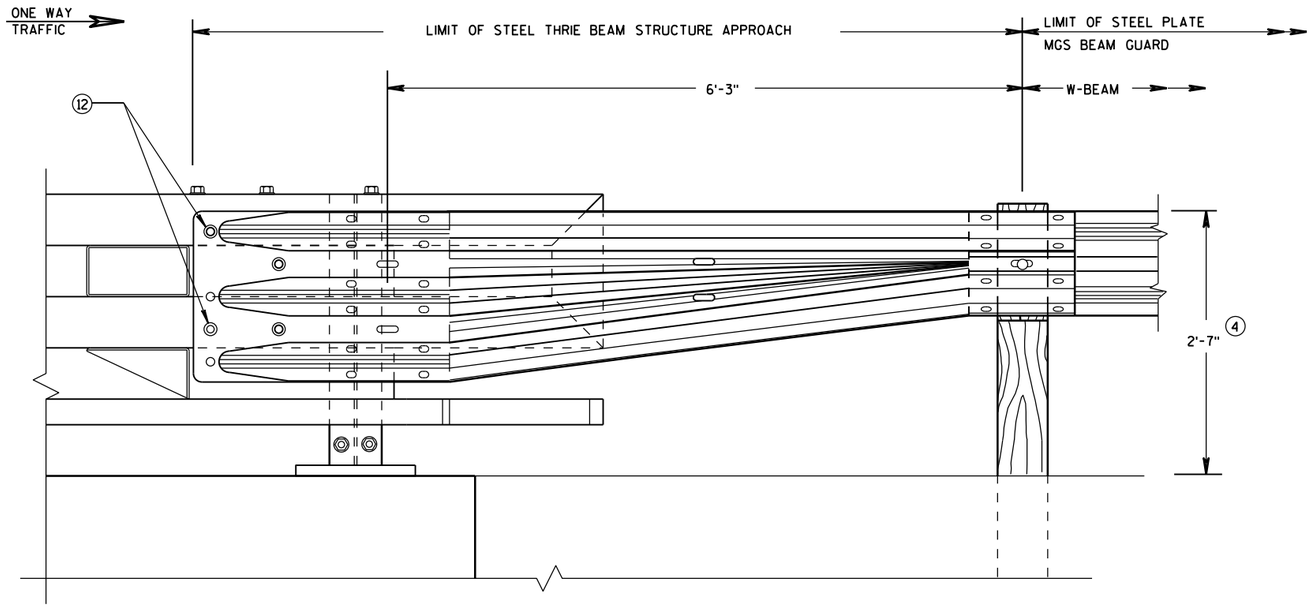
NT

6

S.D.D. 14 B 45-4k

6

S.D.D. 14 B 45-4k



FRONT VIEW

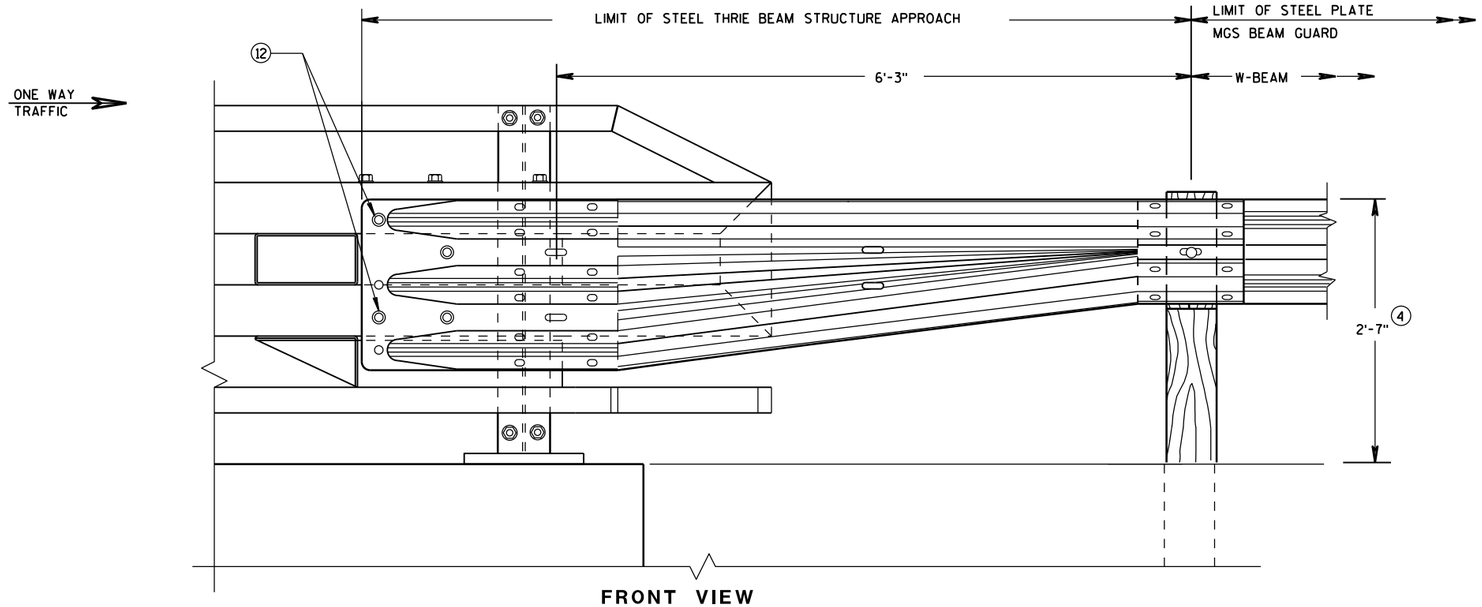
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY3"

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

GENERAL NOTES

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

(12) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND ½-INCH BEYOND NUT.



FRONT VIEW

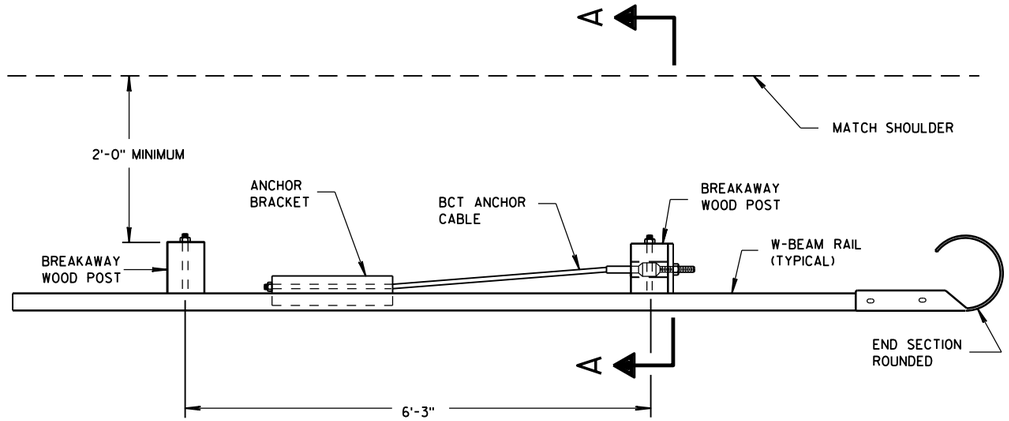
W BEAM TRANSITION AND CONNECTION TO BRIDGE RAILING TYPE "NY4"

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

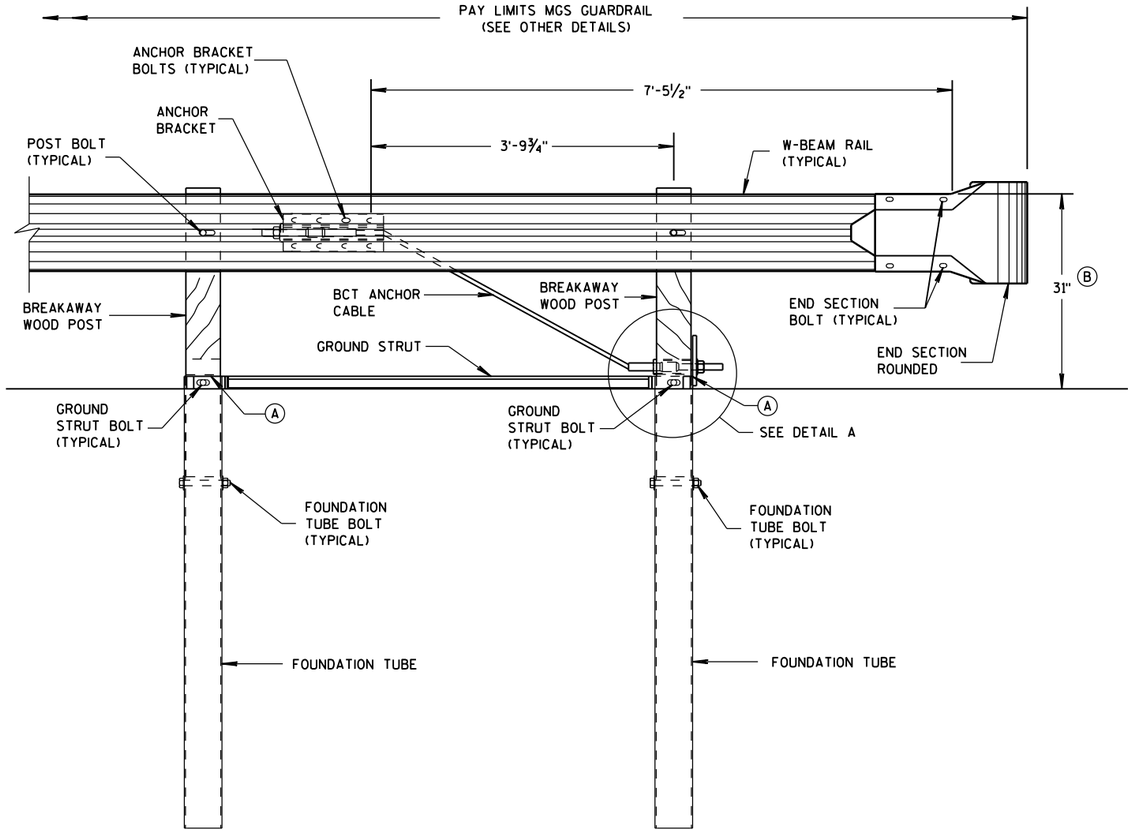
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

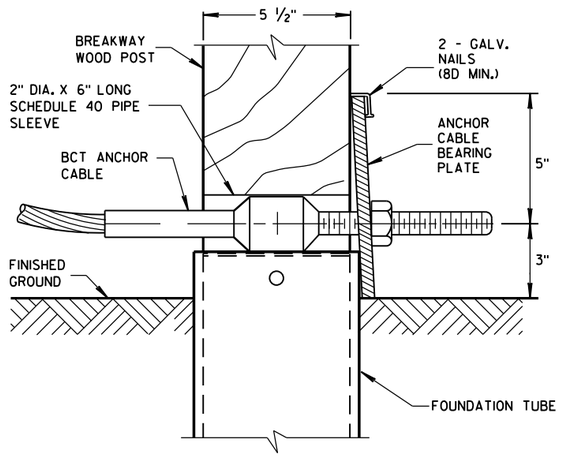


PLAN VIEW



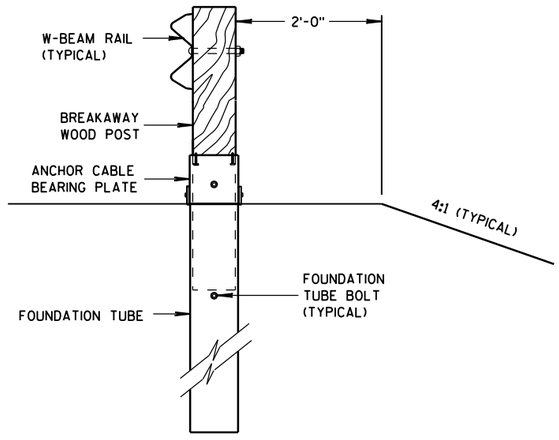
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

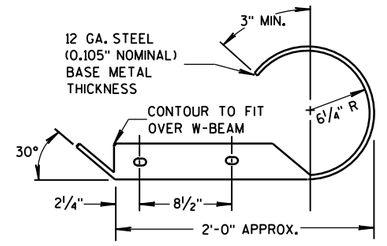
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

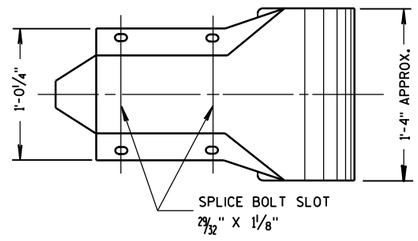
W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".



PLAN VIEW



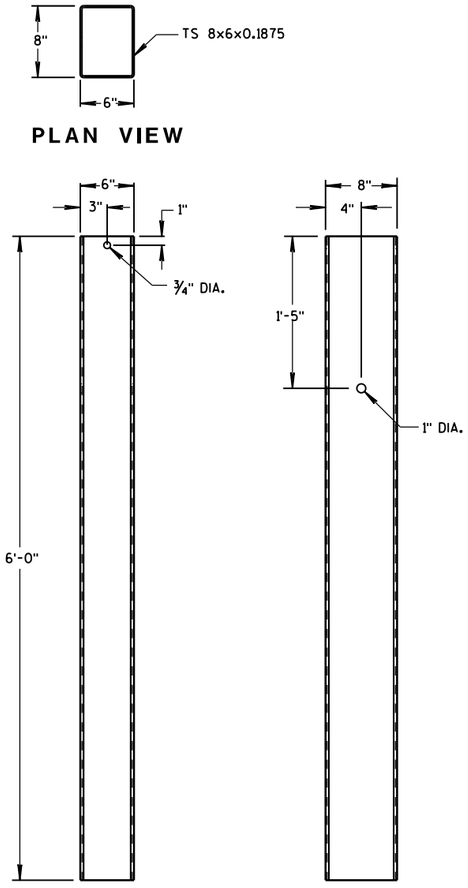
FRONT VIEW

W BEAM END SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

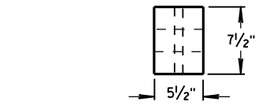
6
S.D.D. 14 B 47-2a



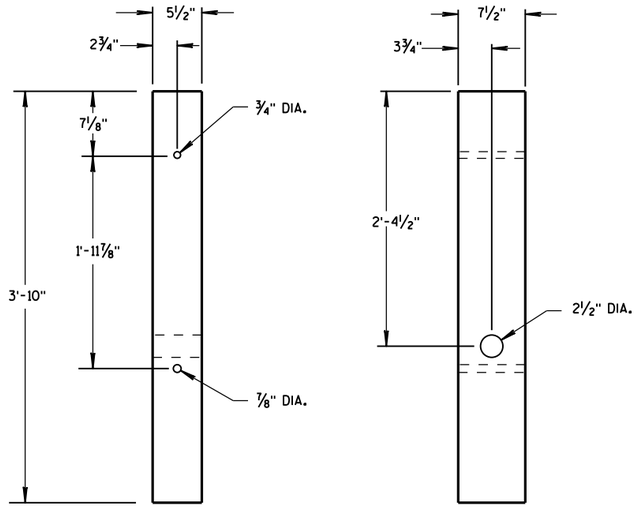
PLAN VIEW

FRONT VIEW SIDE VIEW

FOUNDATION TUBE



PLAN VIEW



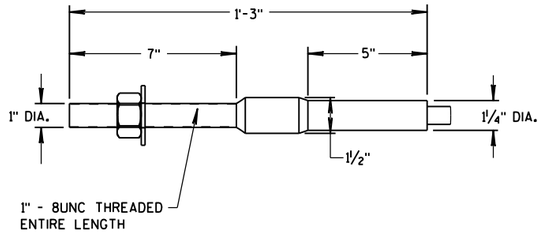
FRONT VIEW SIDE VIEW

BREAKAWAY WOOD POST

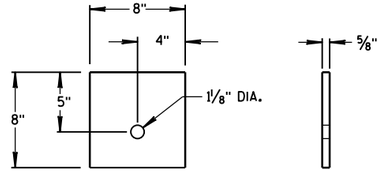
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



SIDE VIEW FRONT VIEW

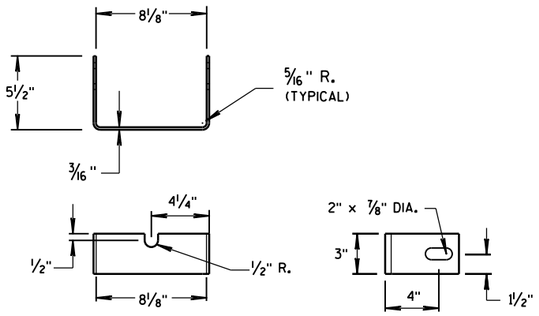
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

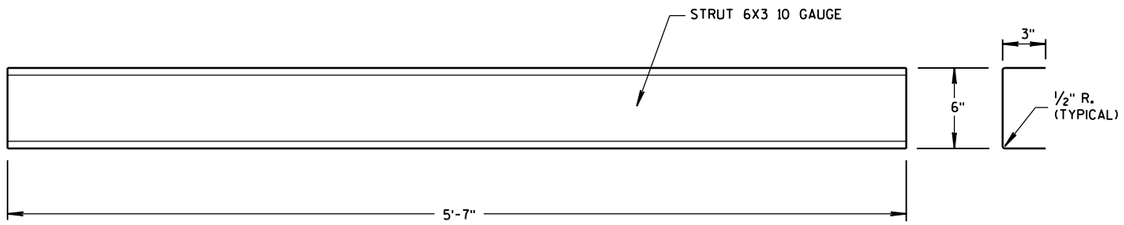
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

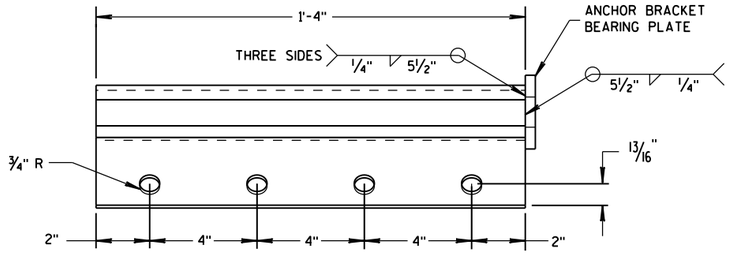
S.D.D. 14 B 47-2b

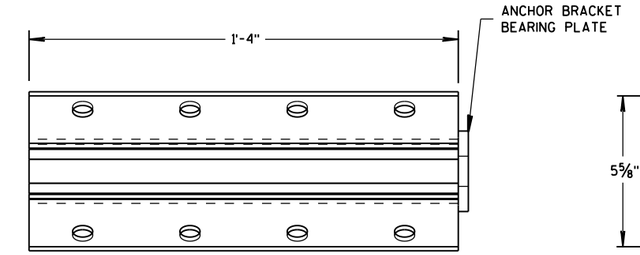


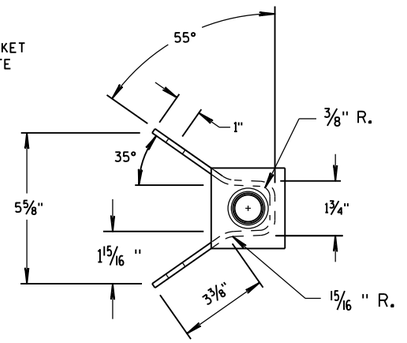
YOKE DETAIL



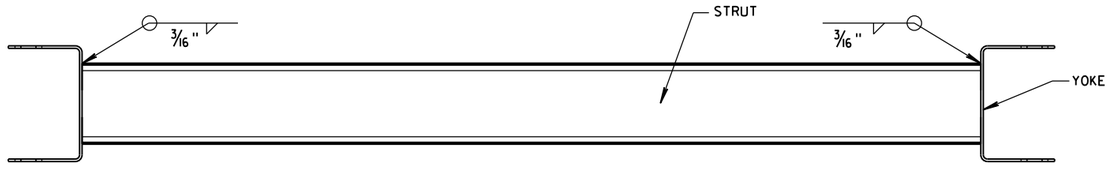
STRUT DETAIL



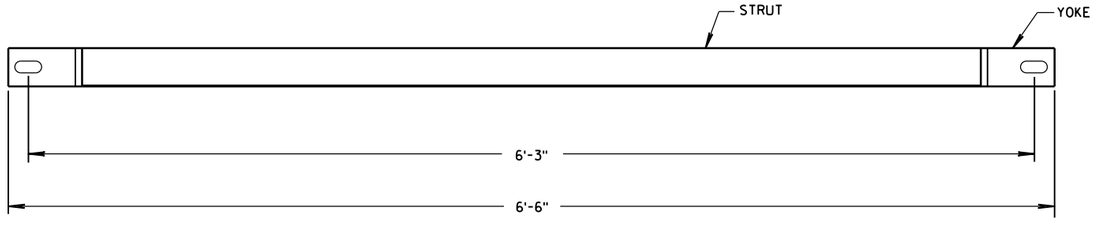




ANCHOR BRACKET

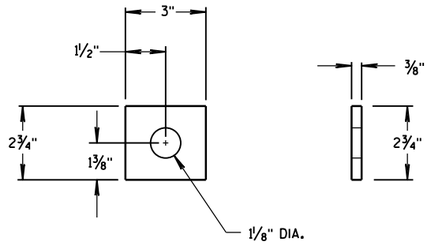


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

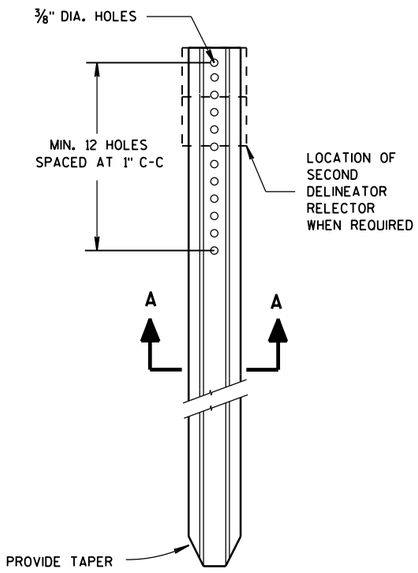
APPROVED
June 2014
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER

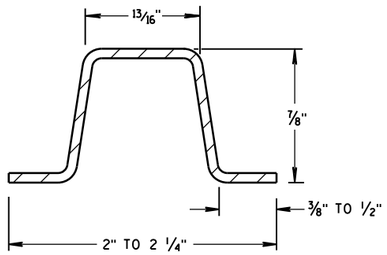
FHWA

6

S.D.D. 14 B 47-2c

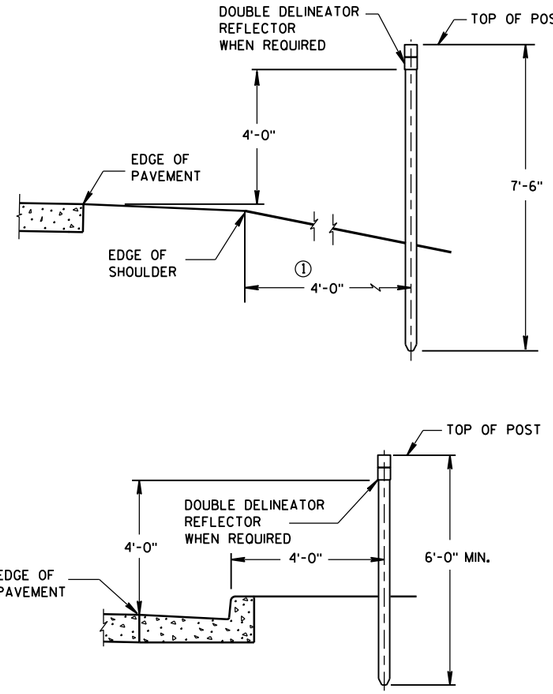


DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.

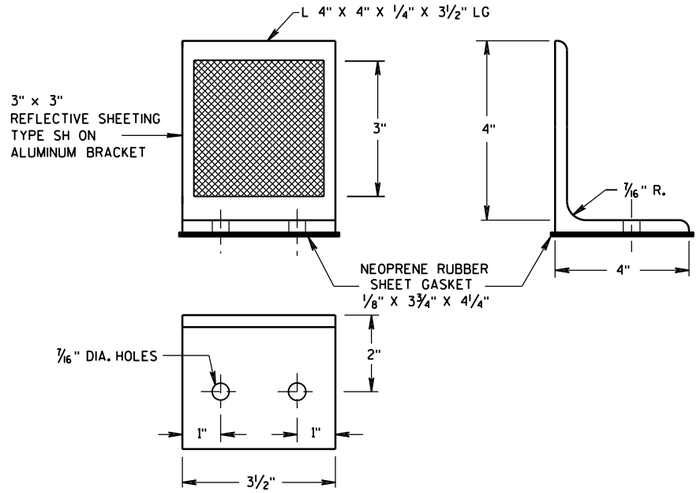


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

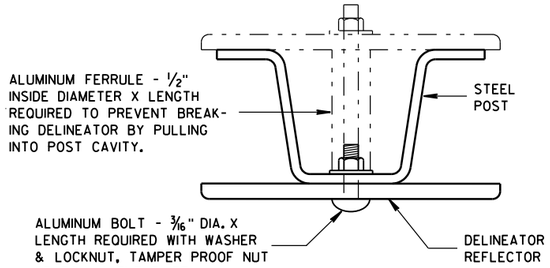
GENERAL NOTES

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

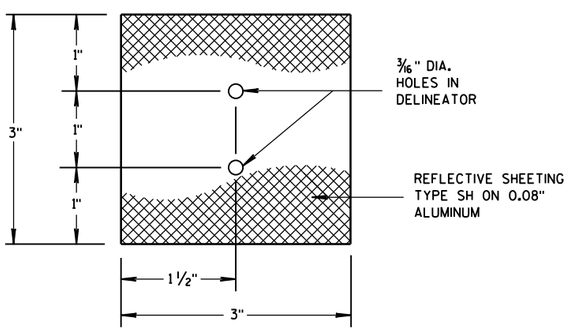
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



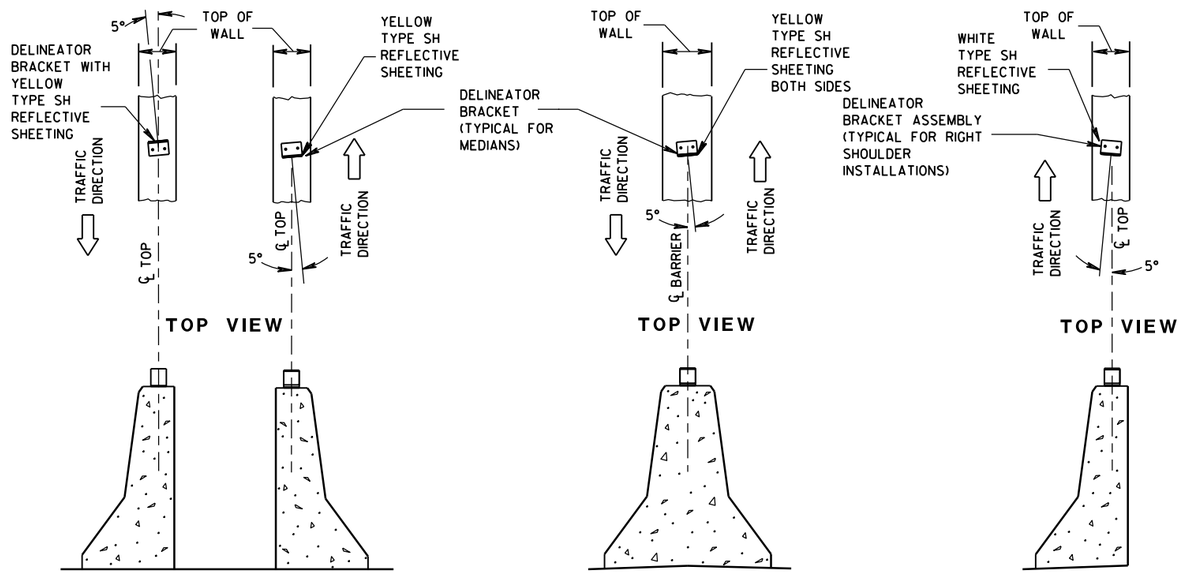
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR REFLECTOR

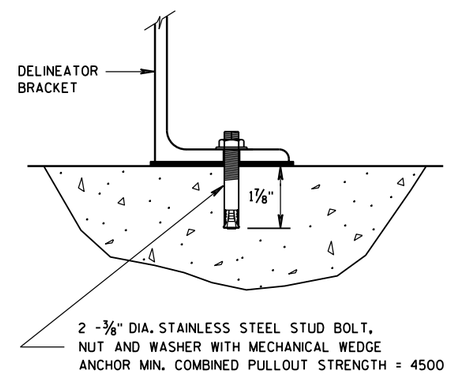


3"x 3" DELINEATOR REFLECTOR



DOUBLE BARRIERS IN MEDIAN | **MEDIAN BARRIER** | **BARRIER LOCATED TO RT. OF TRAFFIC FLOW**

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR REFLECTOR AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

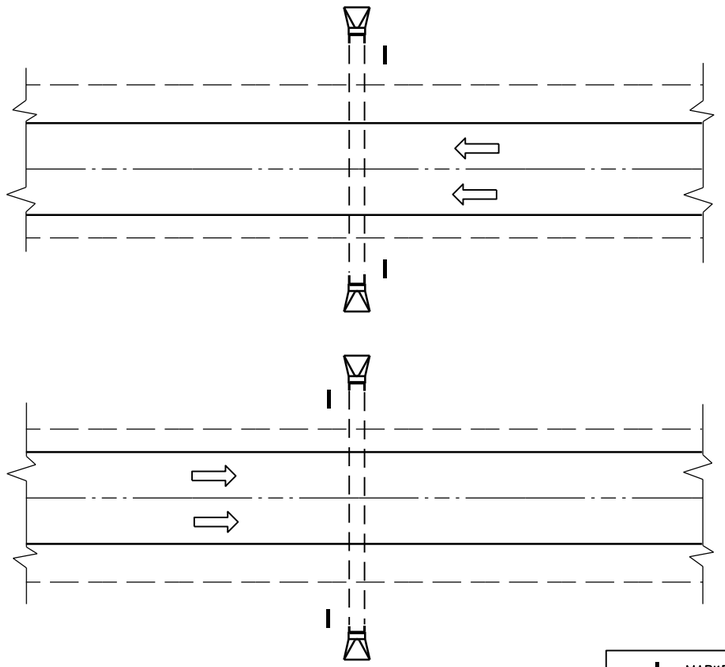
APPROVED
4-18-16 DATE
/S/ Matthew R. Rauch
STATE SIGNING AND MAR[illegible] GINEER
FHWA

6

S.D.D. 15 A 2-9

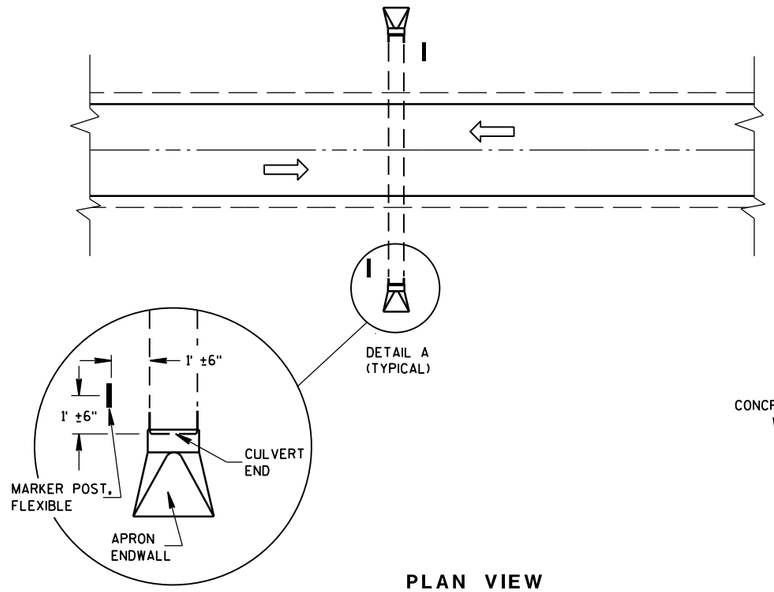
6

S.D.D. 15 A 2-9



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

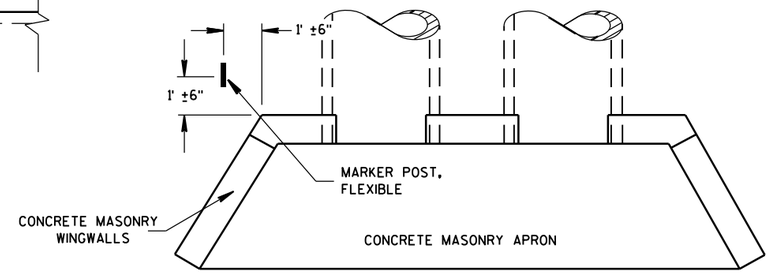
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

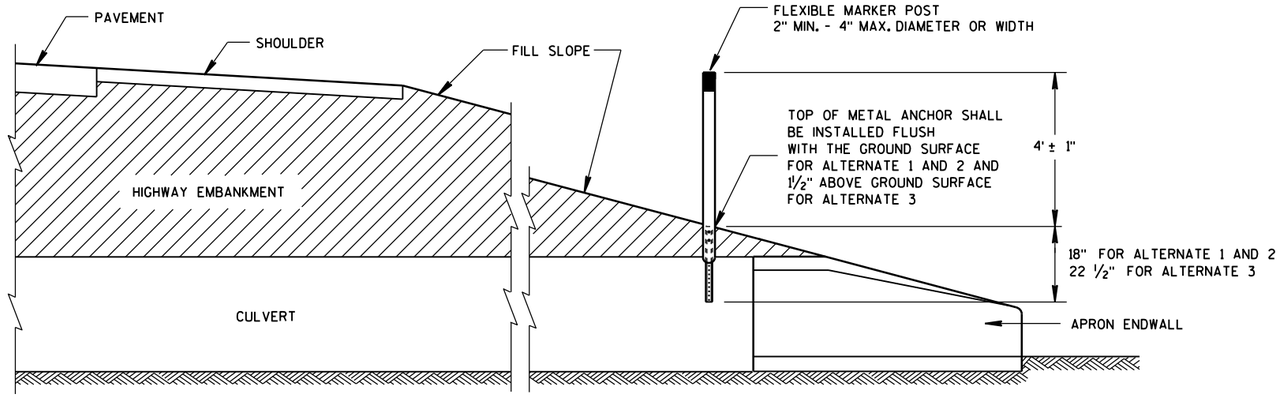
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

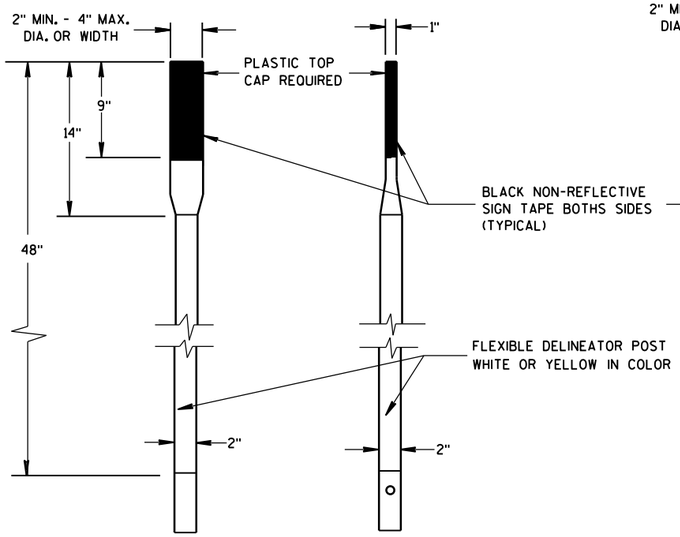
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

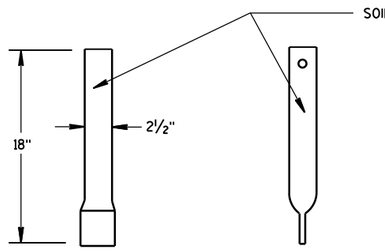
6

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

6

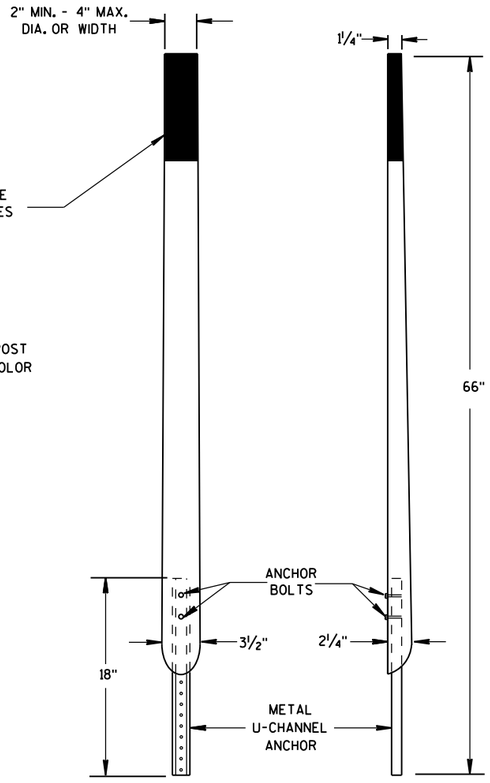
S.D.D. 15 A 3-2a





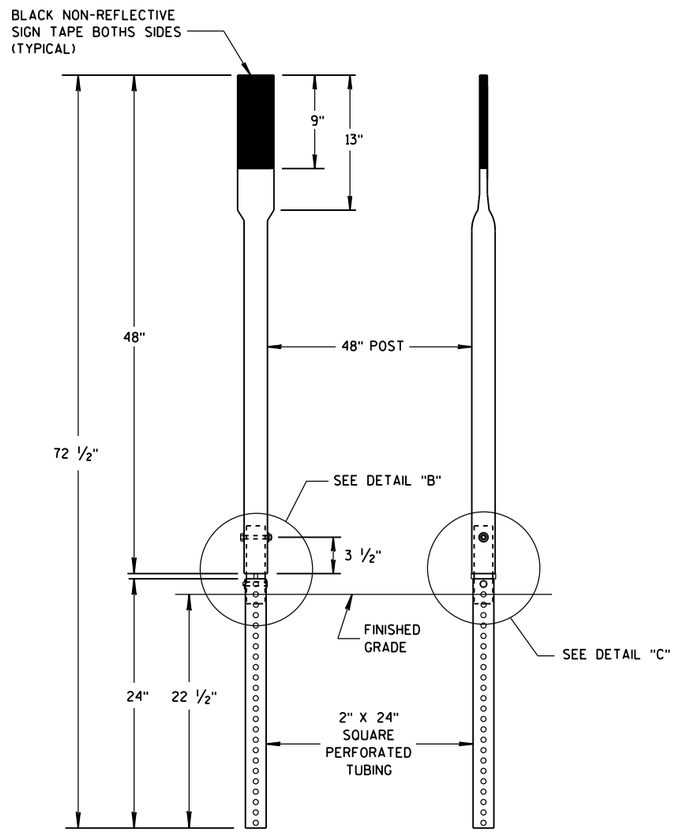
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

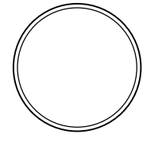
ALTERNATE 2



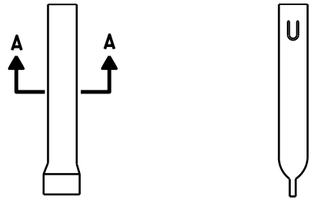
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POSTS

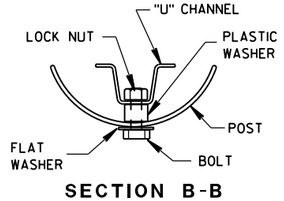


SECTION A-A

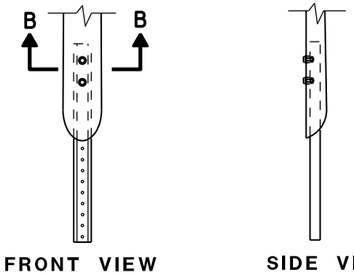


FRONT VIEW SIDE VIEW

ALTERNATE 1

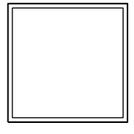


SECTION B-B

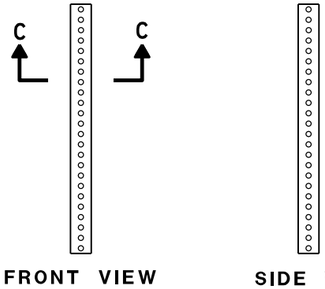


FRONT VIEW SIDE VIEW

ALTERNATE 2



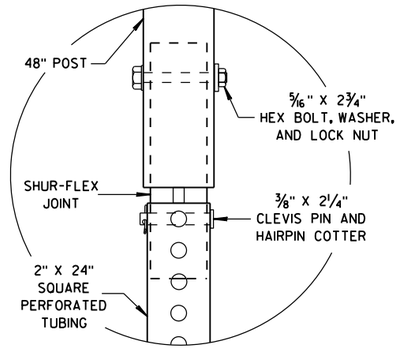
SECTION C-C



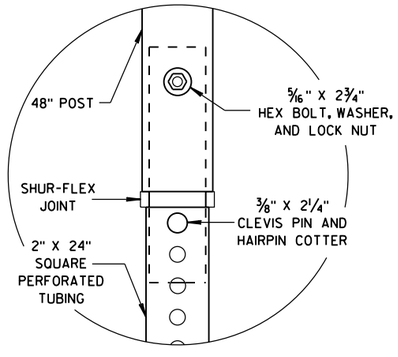
FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS



DETAIL B



DETAIL C

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

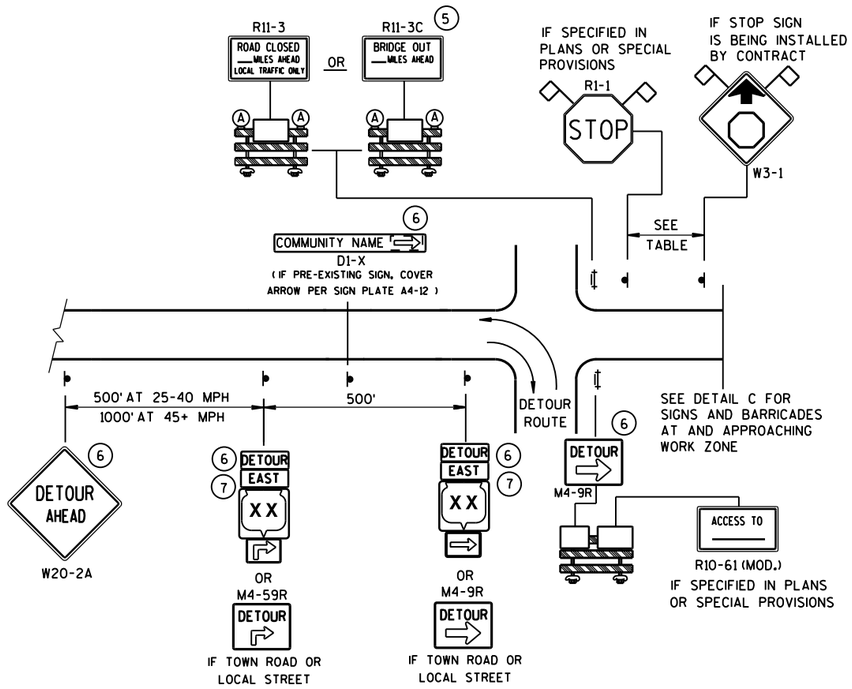
APPROVED
10/1/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

6

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

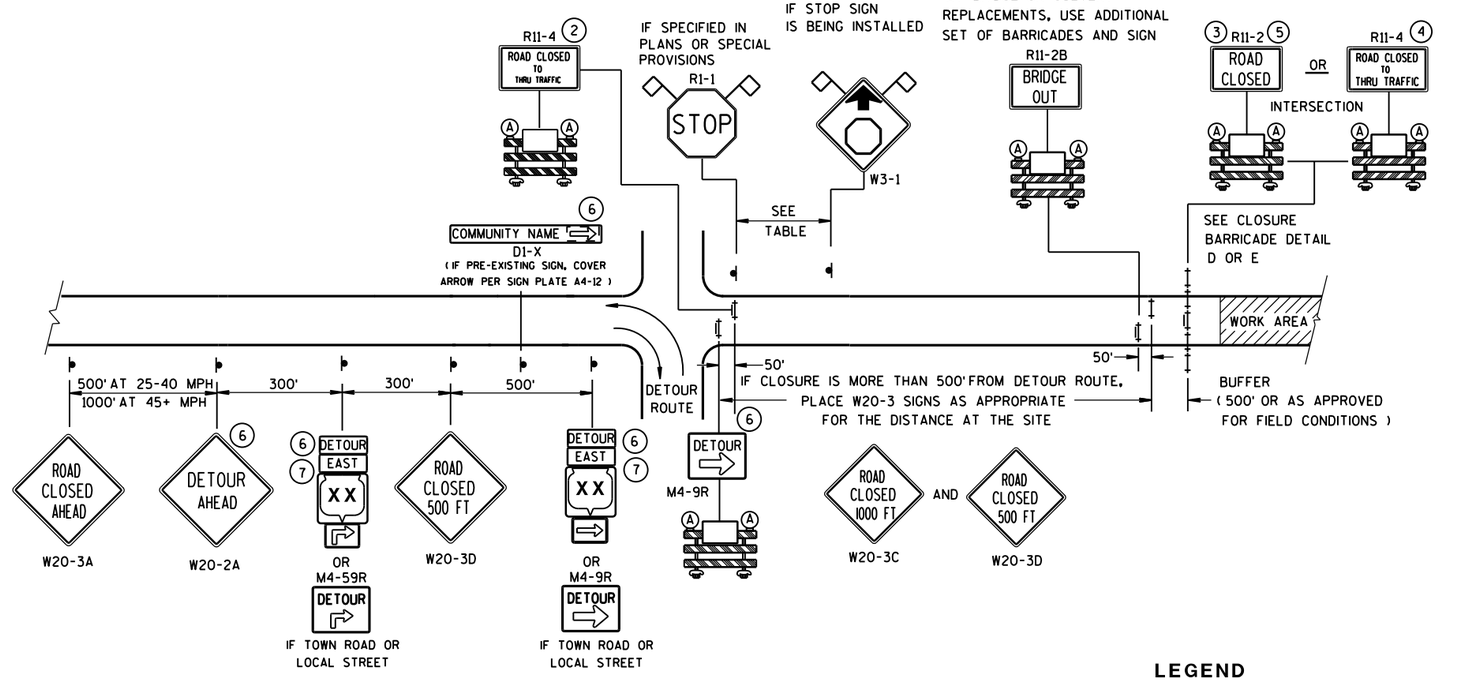
6

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



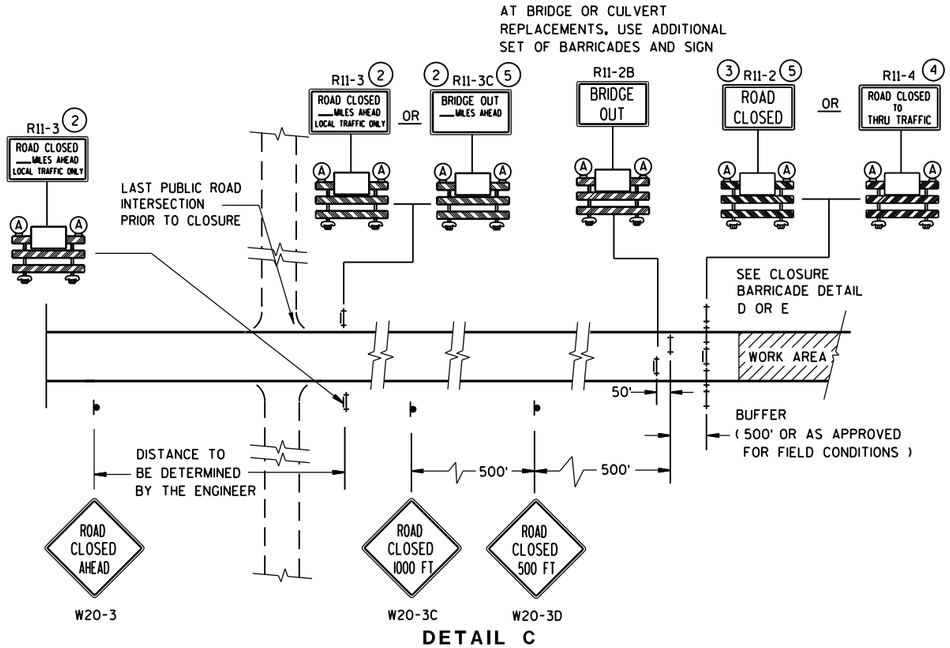
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

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



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

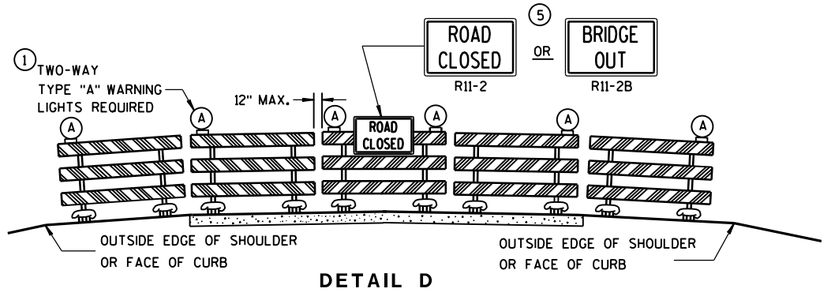
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

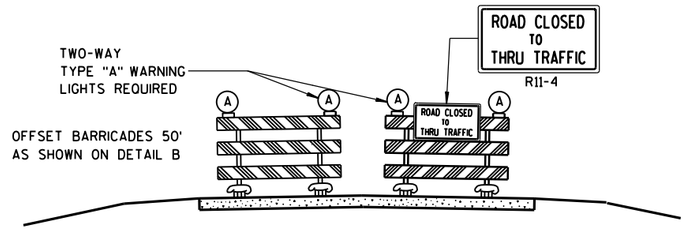
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

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

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

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

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

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

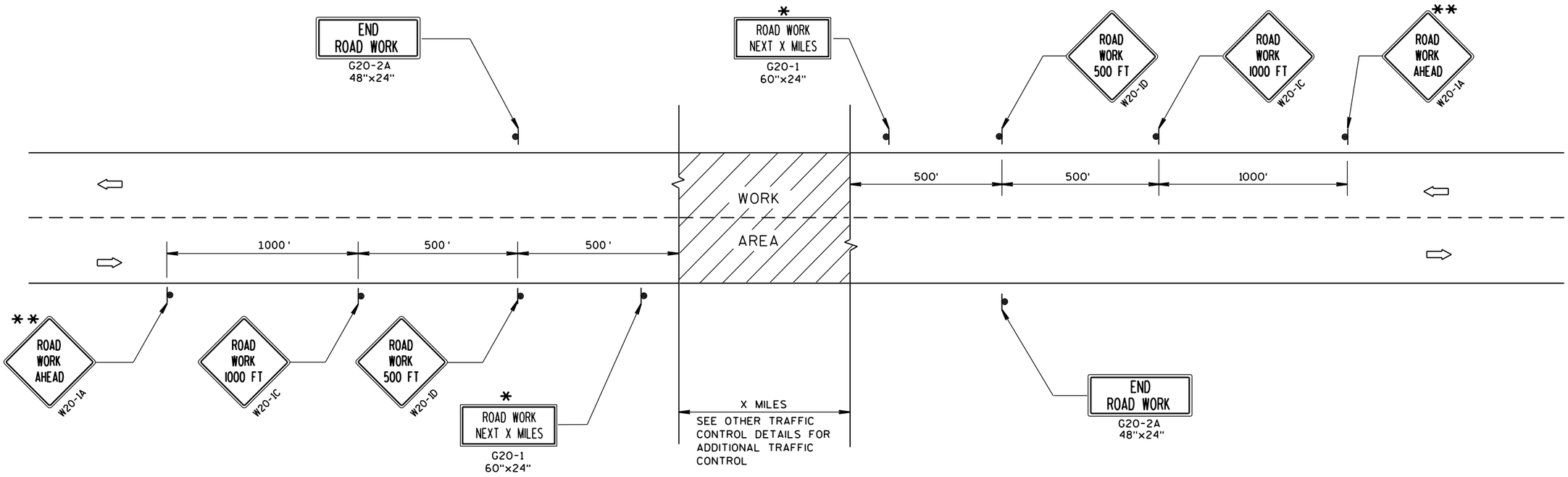
Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO SAFETY ENGI — FHWA

6

S.D.D. 15 C 2-6b

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

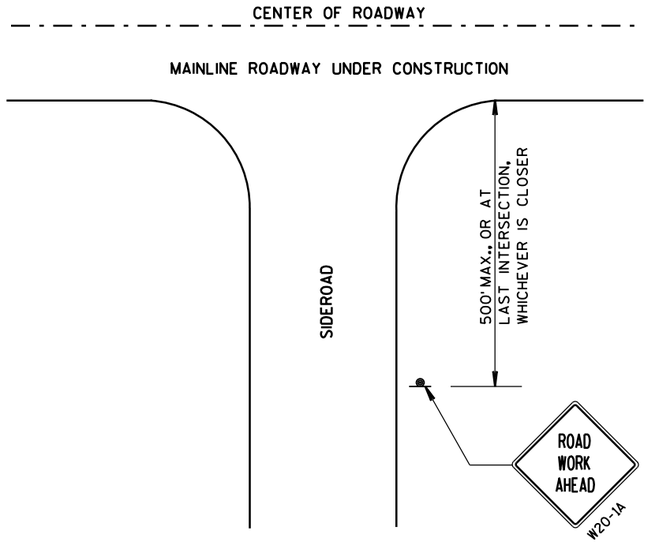
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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



LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

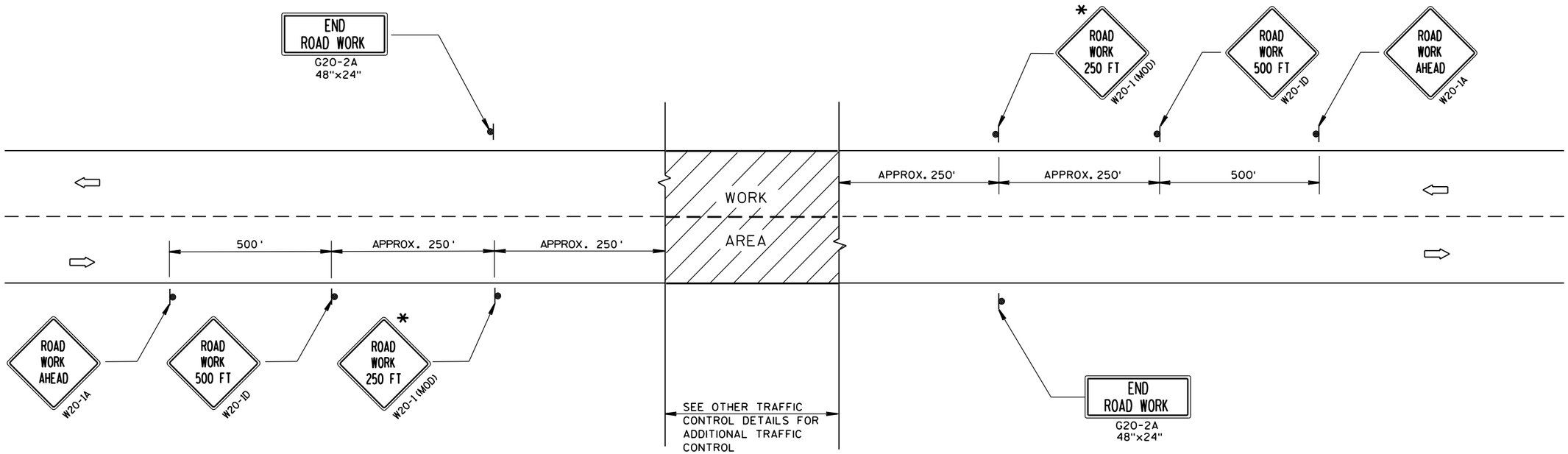
APPROVED

Sept. 2015	/S/ Peter Amakobe Atepe
DATE	STATEWIDE WORK ZONE SAFETY ENGINEER

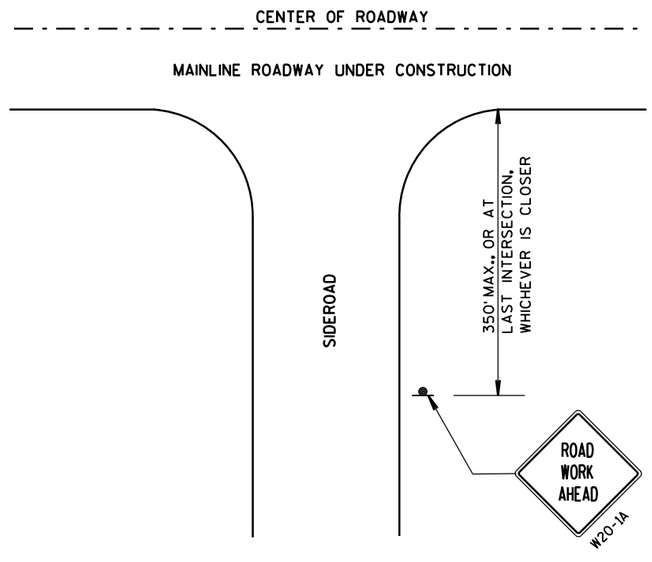
FHWA

6

S.D.D. 15 C 4-3



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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.

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

LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

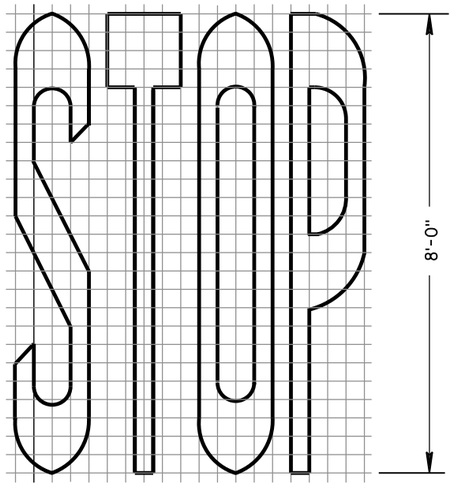
APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZOI SAFETY ENGIN IC
FHWA

6

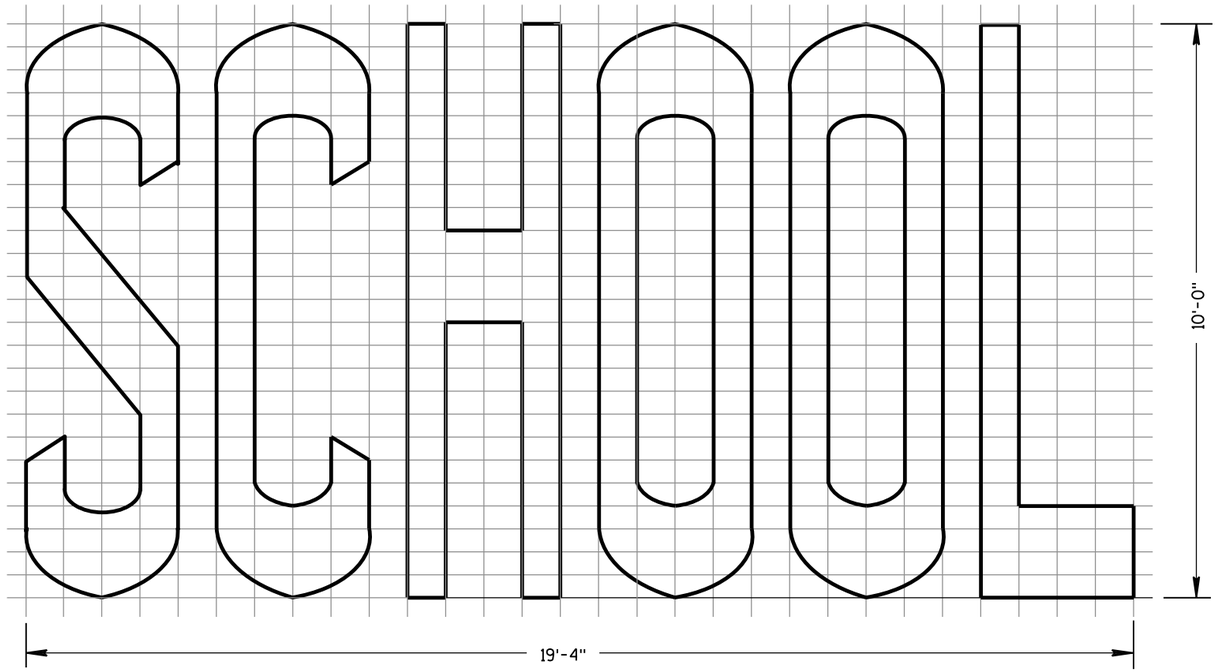
S.D.D. 15 C 5-3

GENERAL NOTES

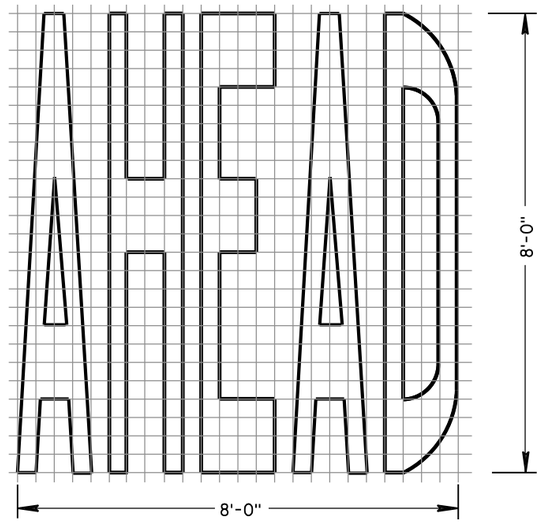
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

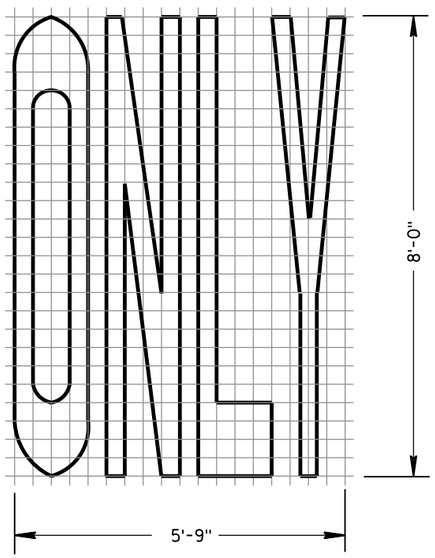


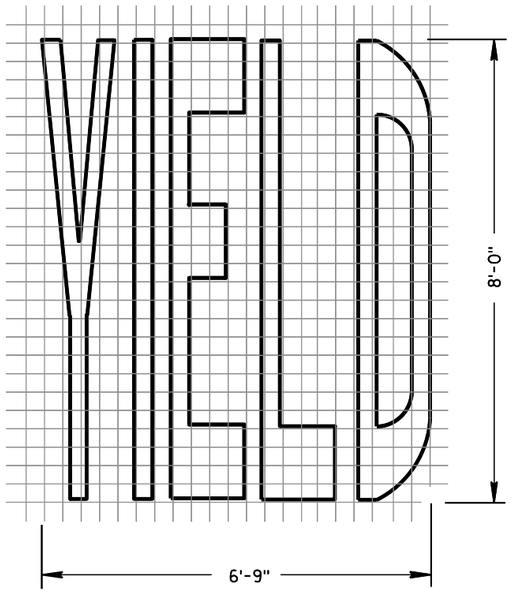


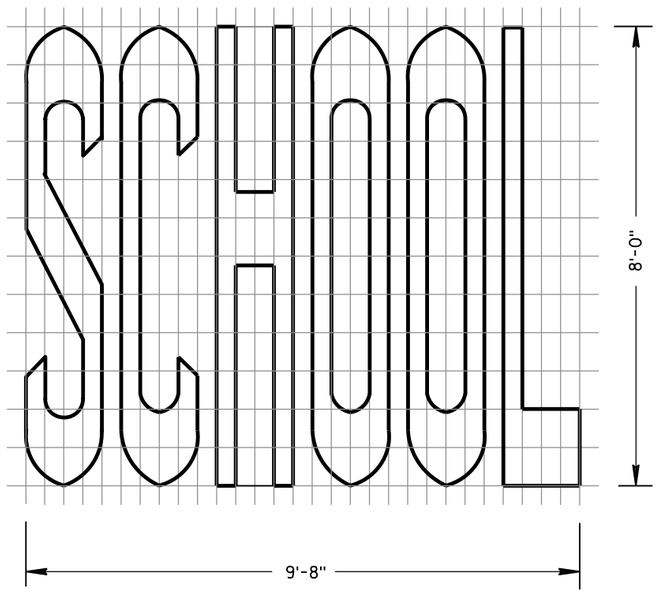


TWO-LANE









SINGLE-LANE

PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-16	/S/ Matthew R. Rauch	
DATE	STATE SIGNING AND MARK	EER

FHWA

6

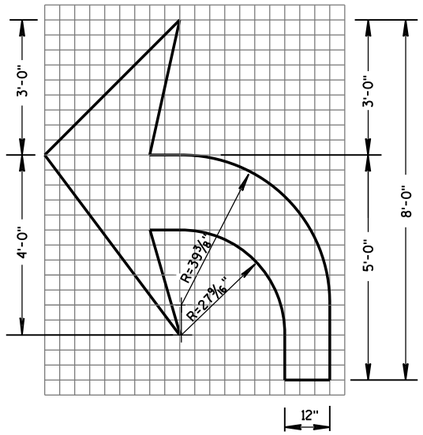
S.D.D. 15 C 7-13b

6

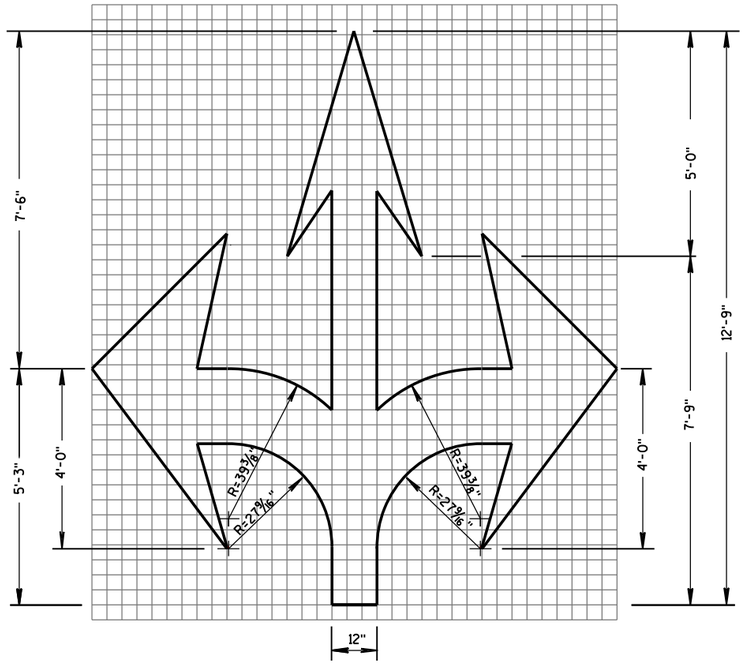
S.D.D. 15 C 7-13b

GENERAL NOTES

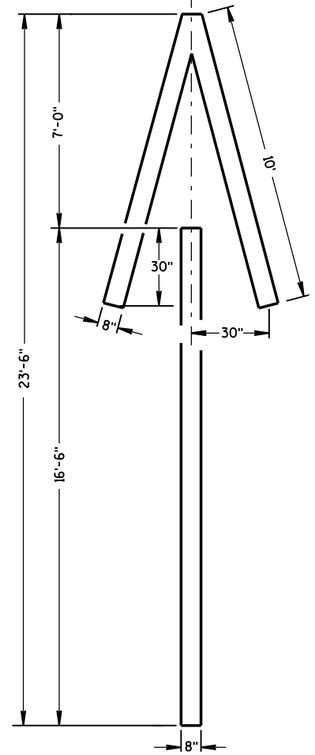
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



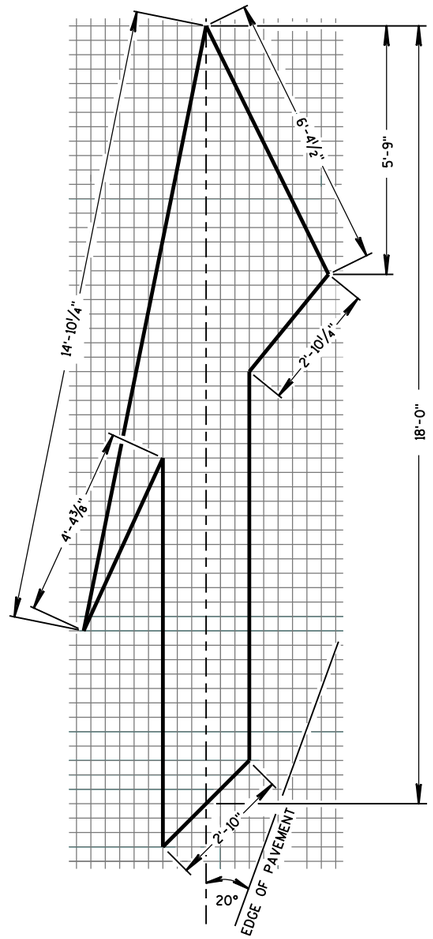
TYPE 2



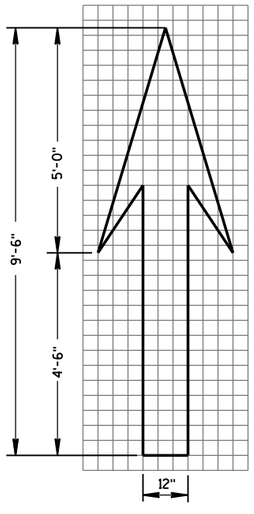
TYPE 6



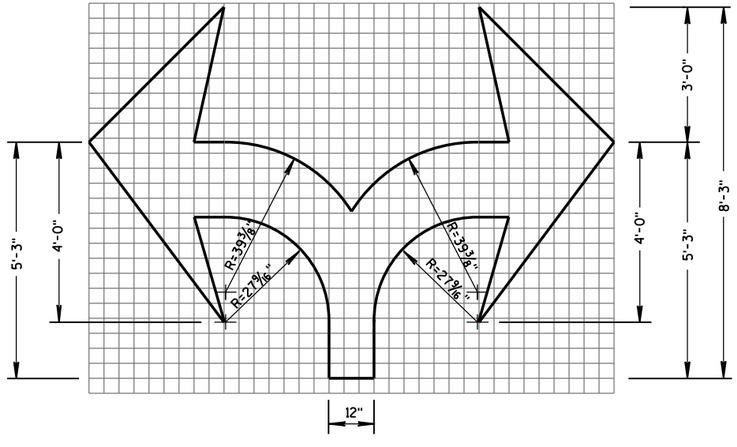
TYPE 4



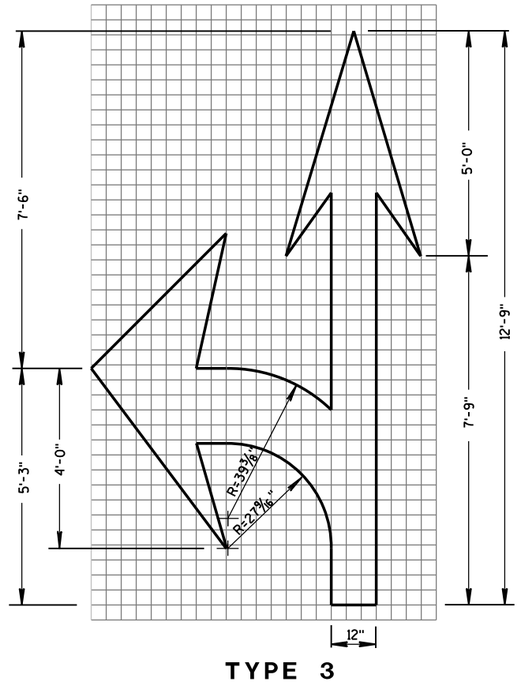
TYPE 5 LANE DROP ARROW



TYPE 1



TYPE 7



TYPE 3

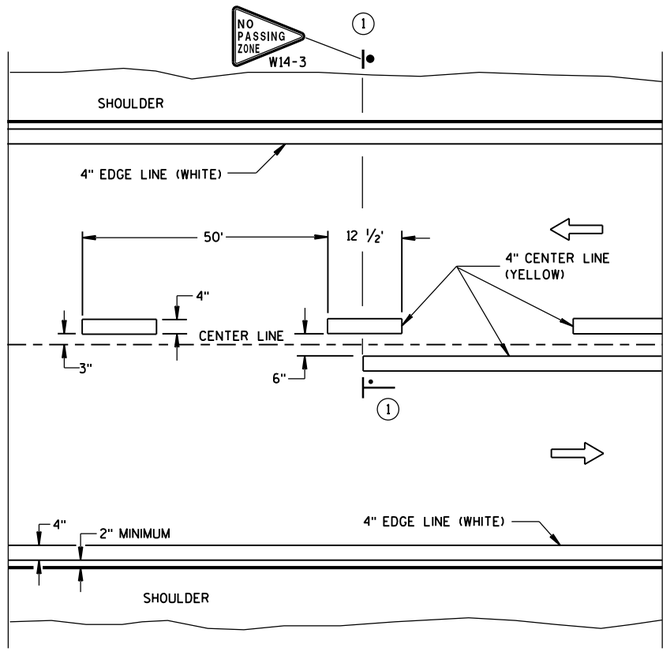
PAVEMENT MARKING ARROWS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-18-16 DATE FHWA	/S/ Matthew R. Rauch STATE SIGNING AND MAR 150 NEER

6

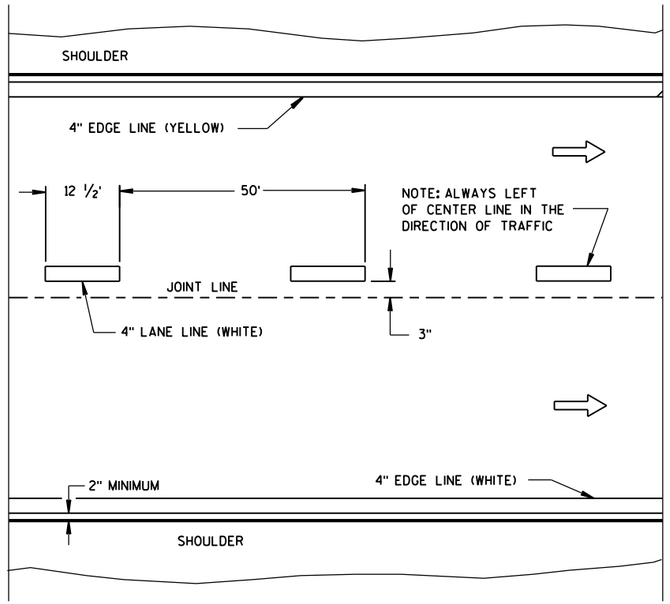
S.D.D. 15 C 7-13c

6

S.D.D. 15 C 7-13c



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

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

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

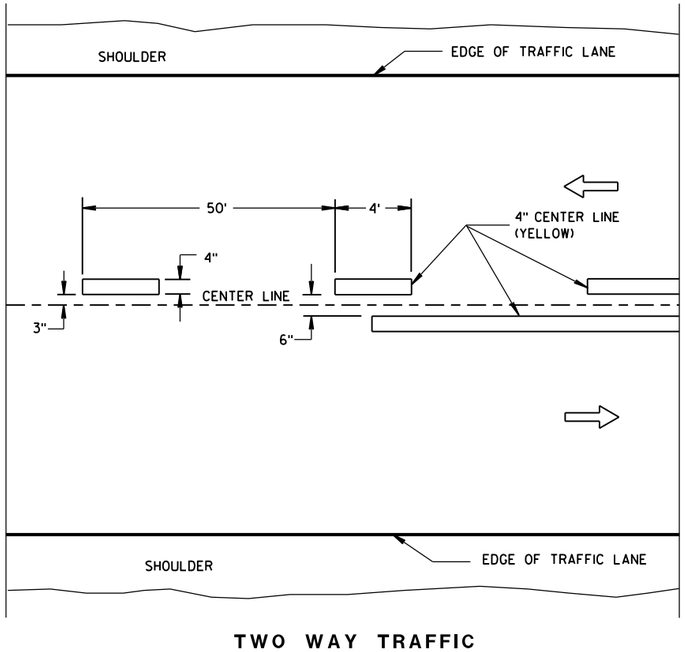
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

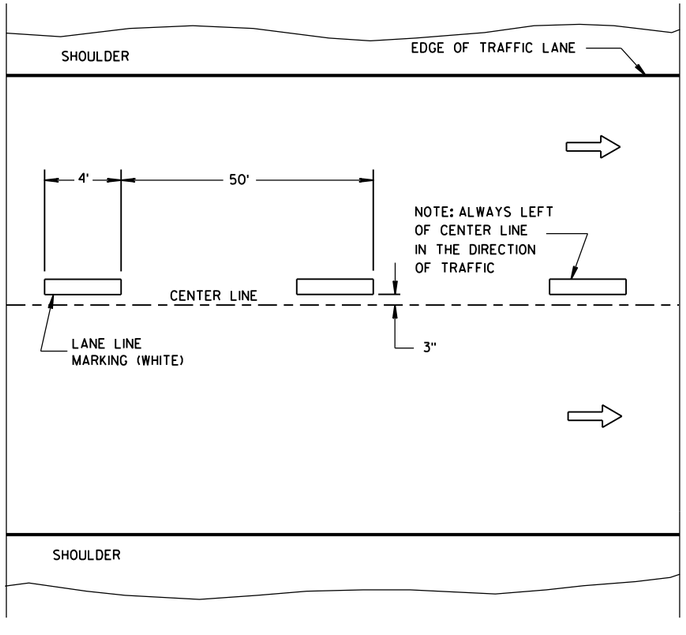
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



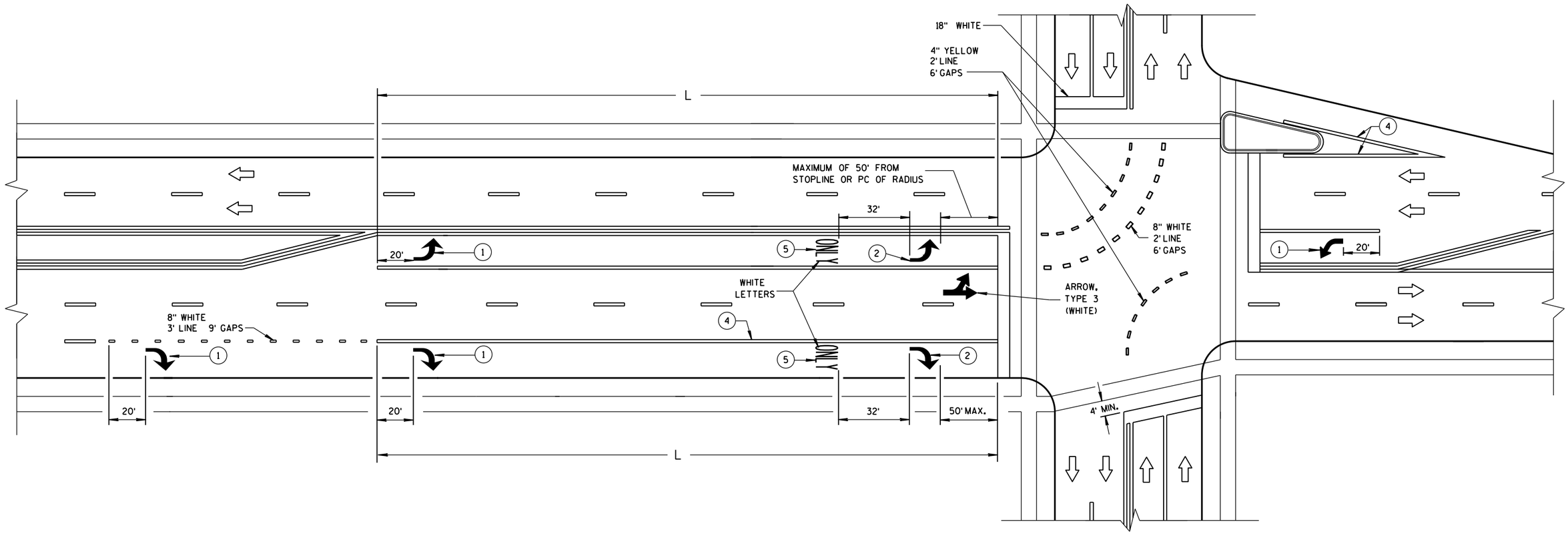
ONE WAY TRAFFIC

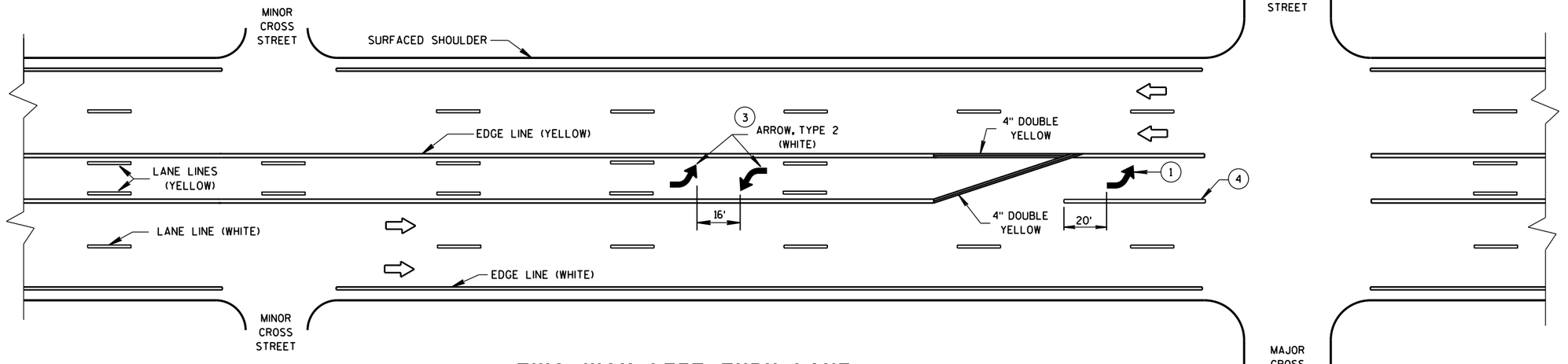
TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
June 2017 (DATE)	/S/ Matthew R. Rauch (STATE SIGNING AND MARKING ENGINEER)
FHWA	

6

S.D.D. 15 C 8-18a





GENERAL NOTES

(1) REQUIRED ARROW, TYPE 2 (WHITE).

(2) REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.

(3) A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.

(4) 8" WHITE

(5) REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL

L = LENGTH OF TURN BAY

TWO WAY LEFT TURN LANE

PAVEMENT MARKING
(TURN LANES)

6
S.D.D. 15 C 8-18b

LEGEND

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

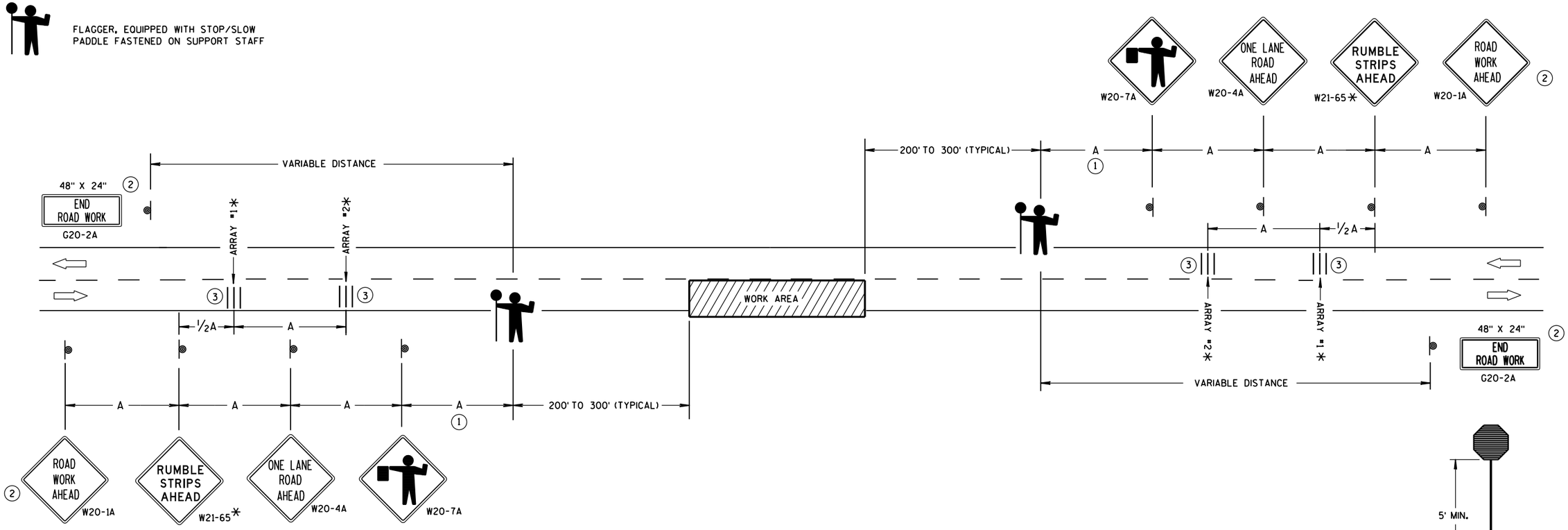
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

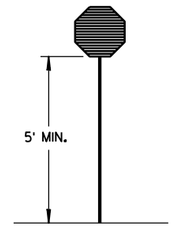


W03-4

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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION



STOP/SLOW PADDLE ON SUPPORT STAFF

GENERAL NOTES

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

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

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

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

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

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

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

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

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

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

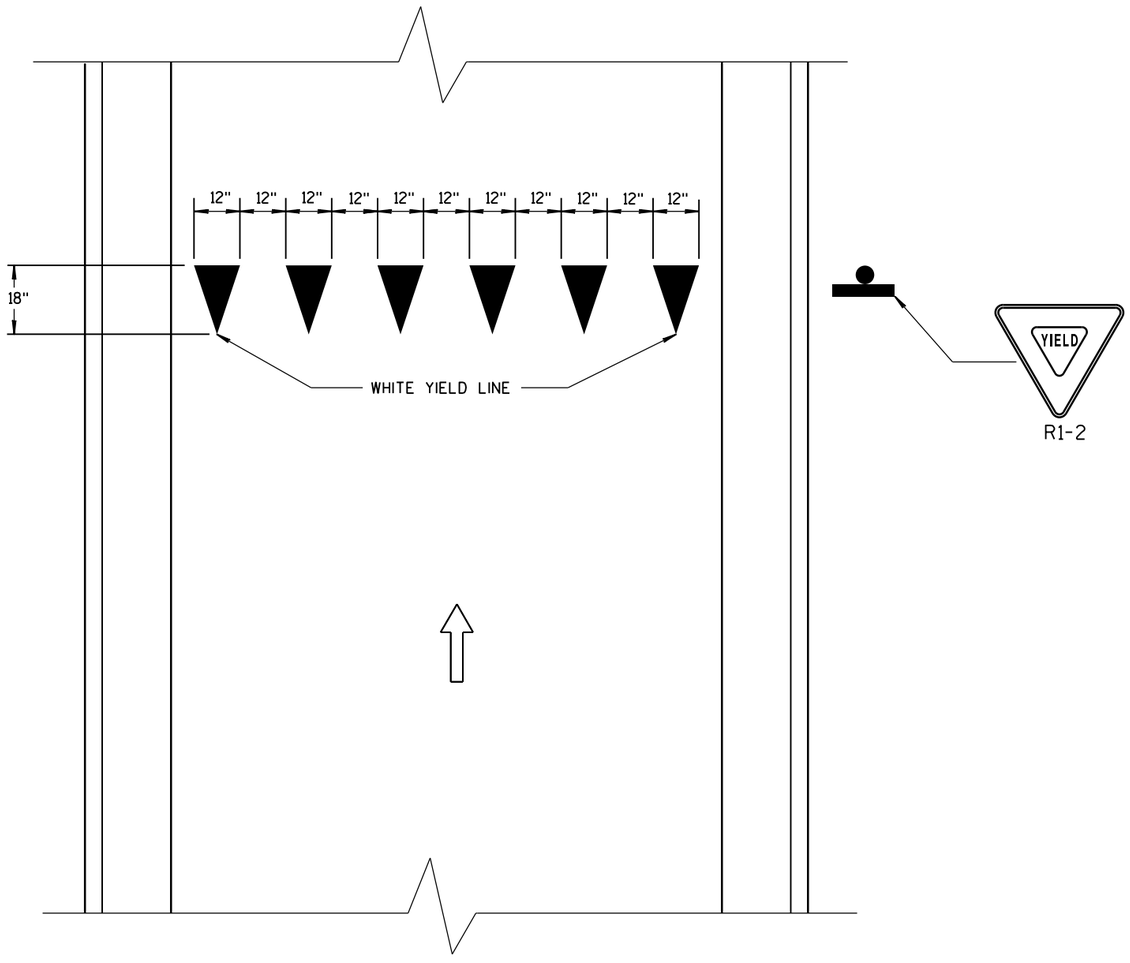
TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 15 C 12-6



R1-2

DIRECTION OF TRAVEL

YIELD LINE

6

6

S.D.D. 15 C 20-2

S.D.D. 15 C 20-2

YIELD MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARI

ENGINEER

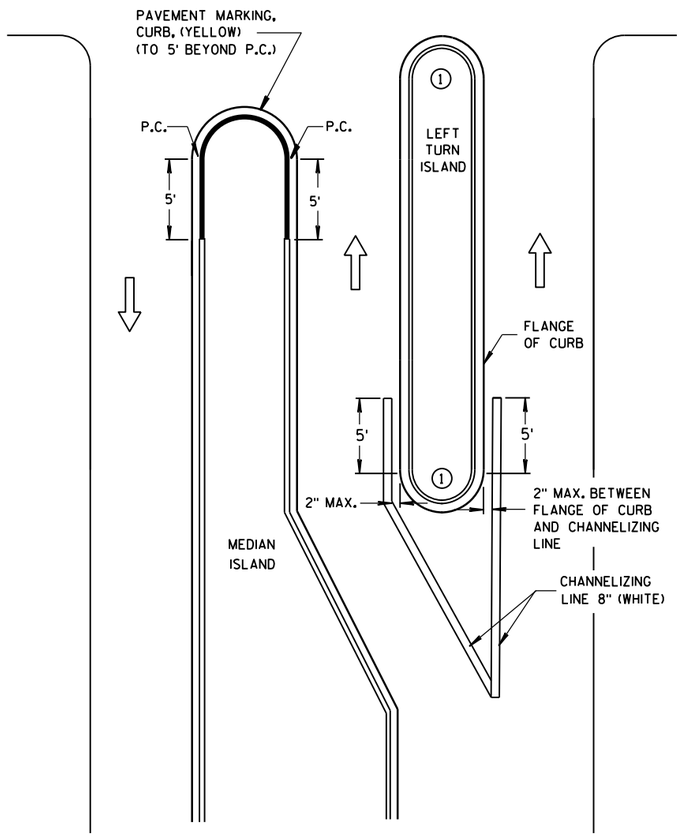
FHWA

GENERAL NOTE

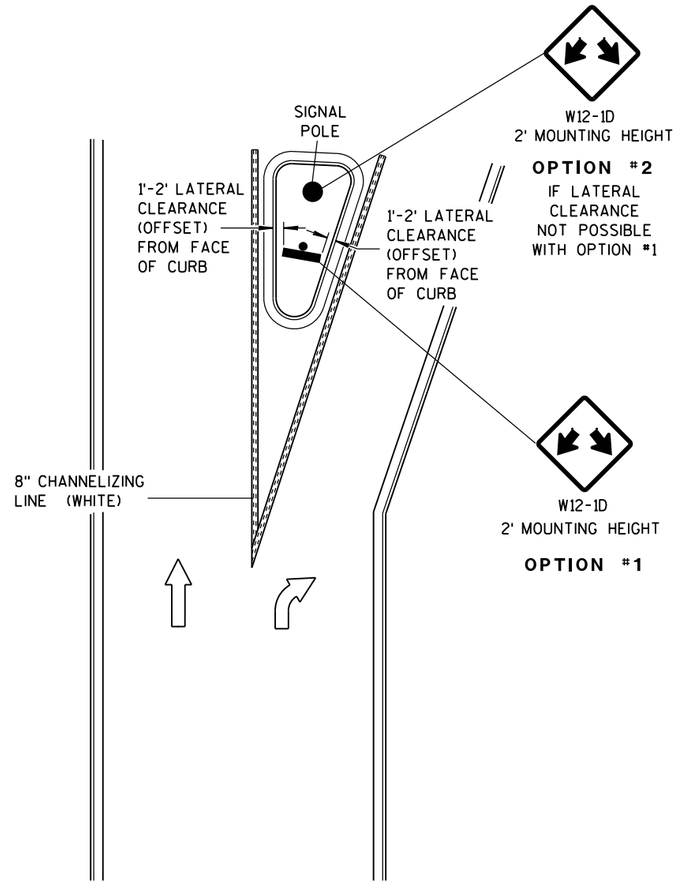
APPLIES TO ISLANDS AT LEFT TURNS AT ONE WAY ROADWAYS AS WELL.

SEE MISCELLANEOUS QUANTITIES FOR SIGN SIZE.

DIRECTION OF TRAVEL



LEFT TURN & MEDIAN ISLAND



RIGHT TURN ISLAND

DOUBLE ARROW WARNING SIGN PLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

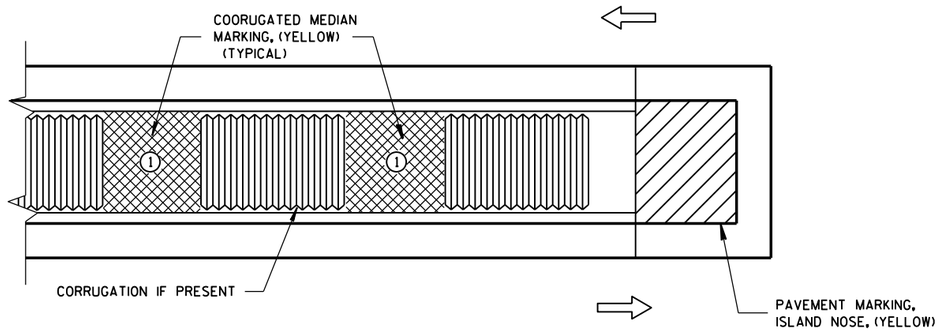
APPROVED
June 2017 — DATE
/S/ Matthew Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

6

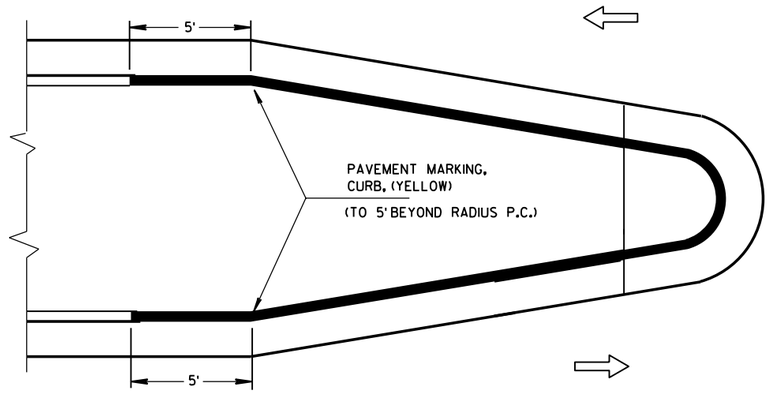
S.D.D. 15 C 27-2a

6

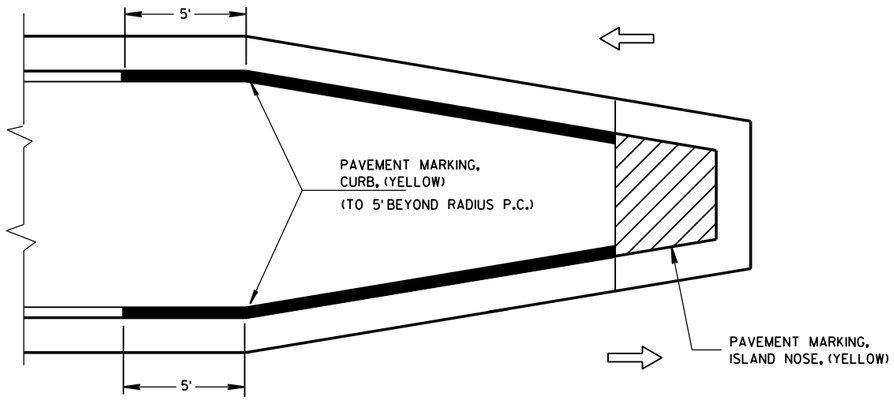
S.D.D. 15 C 27-2a



MEDIAN ISLAND WITH SQUARE BLUNT NOSE



MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS

GENERAL NOTES

(1) WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.

ISLAND NOSE MARKING

CURB MARKING

CORRUGATED MEDIAN MARKING

DIRECTION OF TRAVEL

PAVEMENT MARKING
(ISLANDS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

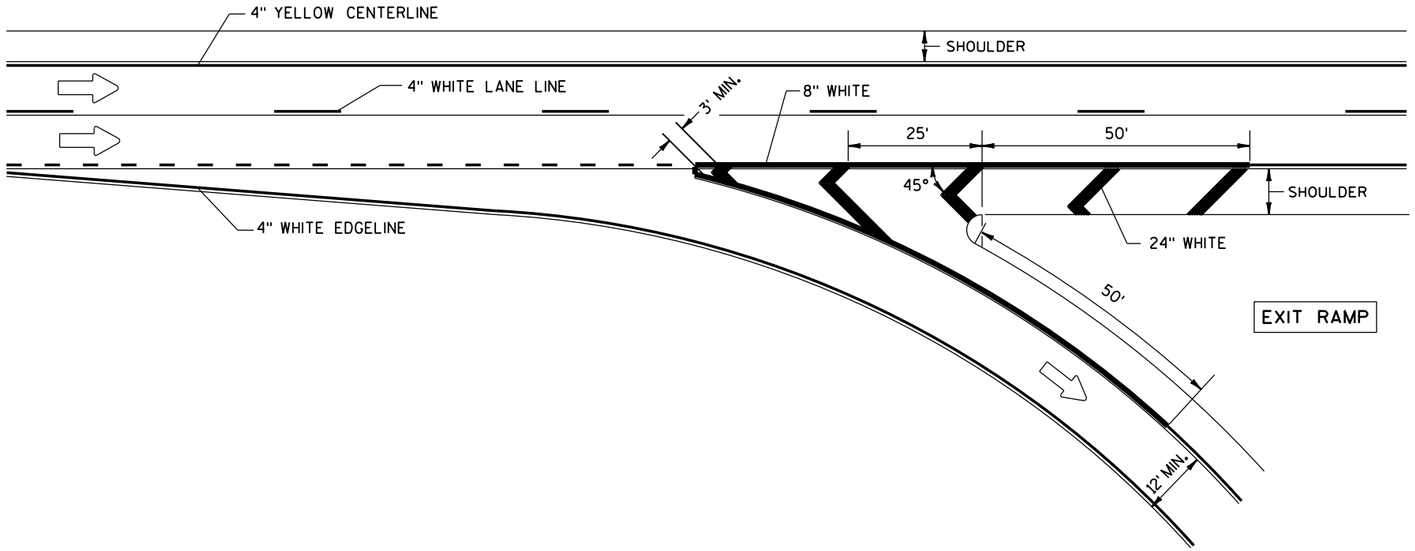
APPROVED
June 2017
DATE
/S/ Matthew Rauch
STATE SIGNING AND MARK ENGINEER
FHWA

6

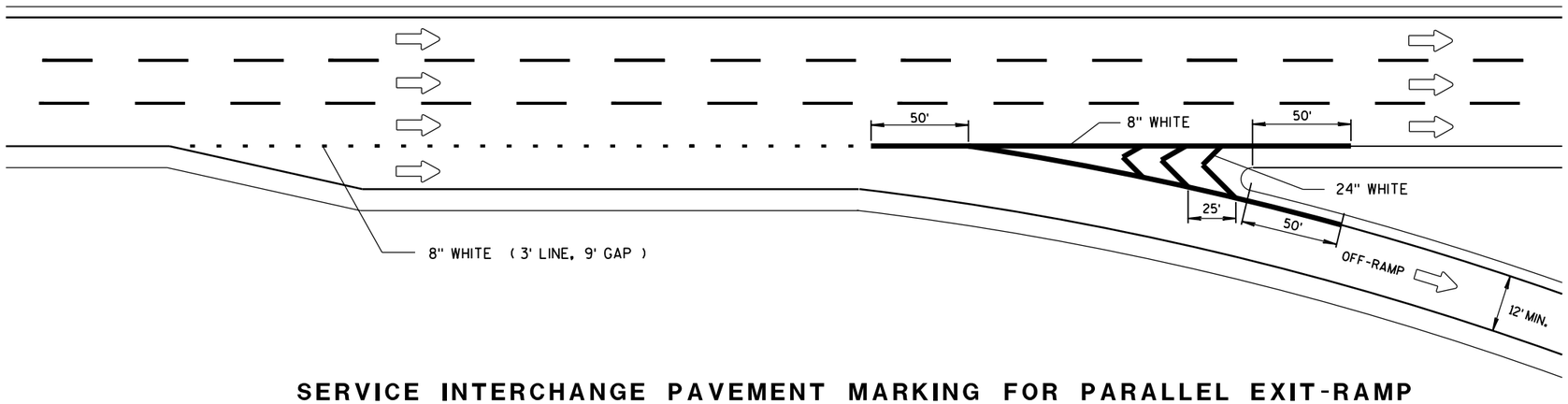
S.D.D. 15 C 27-2b

6

S.D.D. 15 C 27-2b



PAVEMENT MARKING FOR EXIT RAMP



SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

GENERAL NOTES

PLACE GROOVE 3 INCHES LEFT OF JOINT.

LEGEND

DIRECTION OF TRAVEL

6

S.D.D. 15 C 31-2a

PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

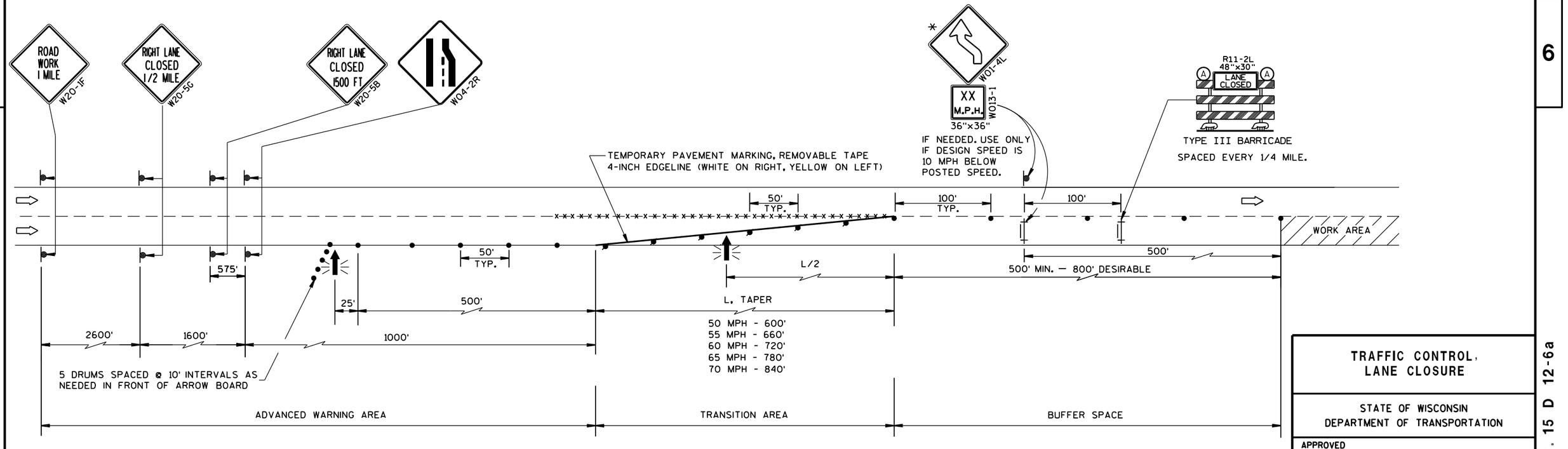
REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

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

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.



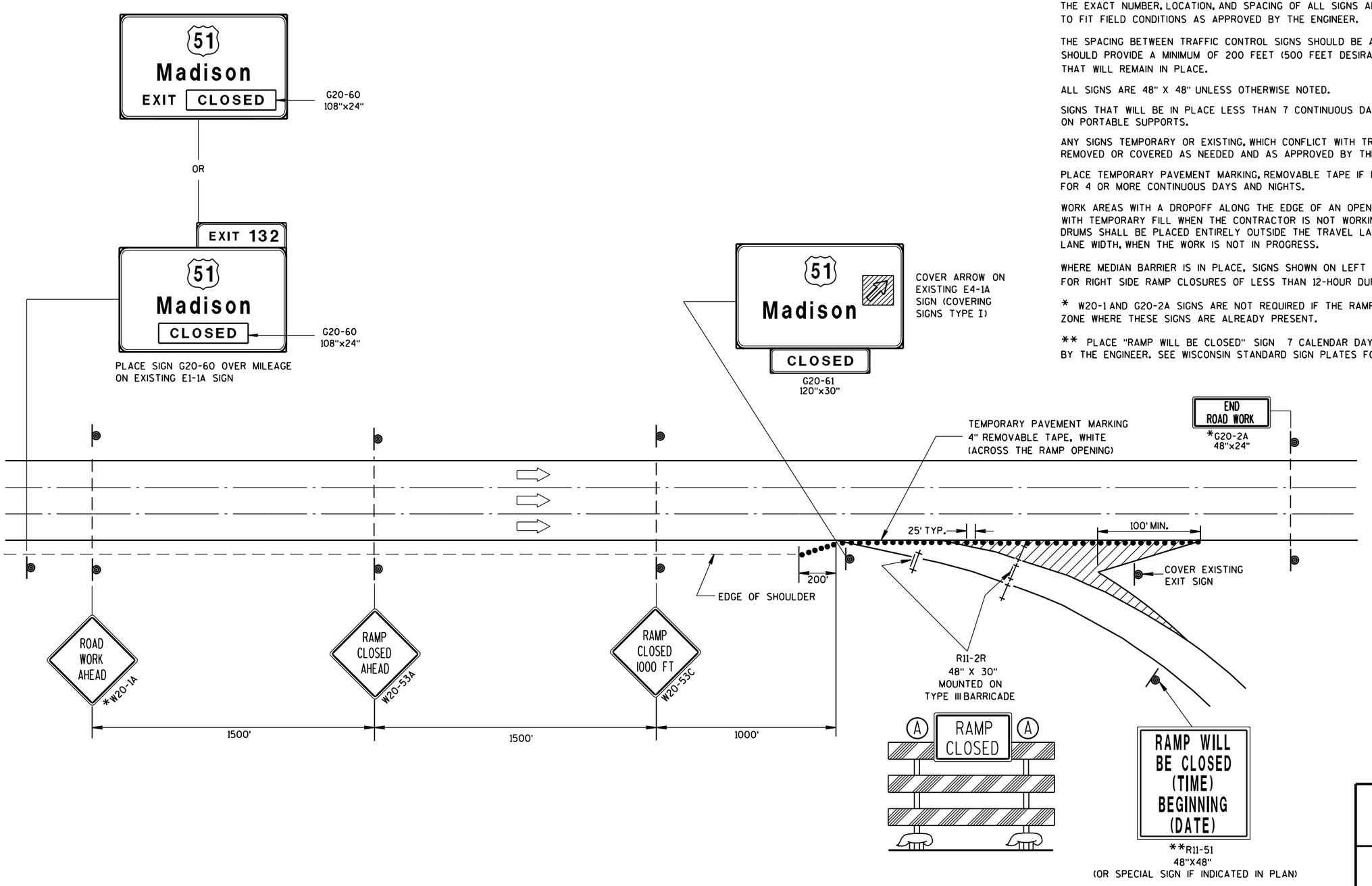
TRAFFIC CONTROL, LANE CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2016 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

6

S.D.D. 15 D 12-6a



GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

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

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

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

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

PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

* W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI FIC
FHWA

6

S.D.D. 15 D 16-3

6

S.D.D. 15 D 16-3

LEGEND

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

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

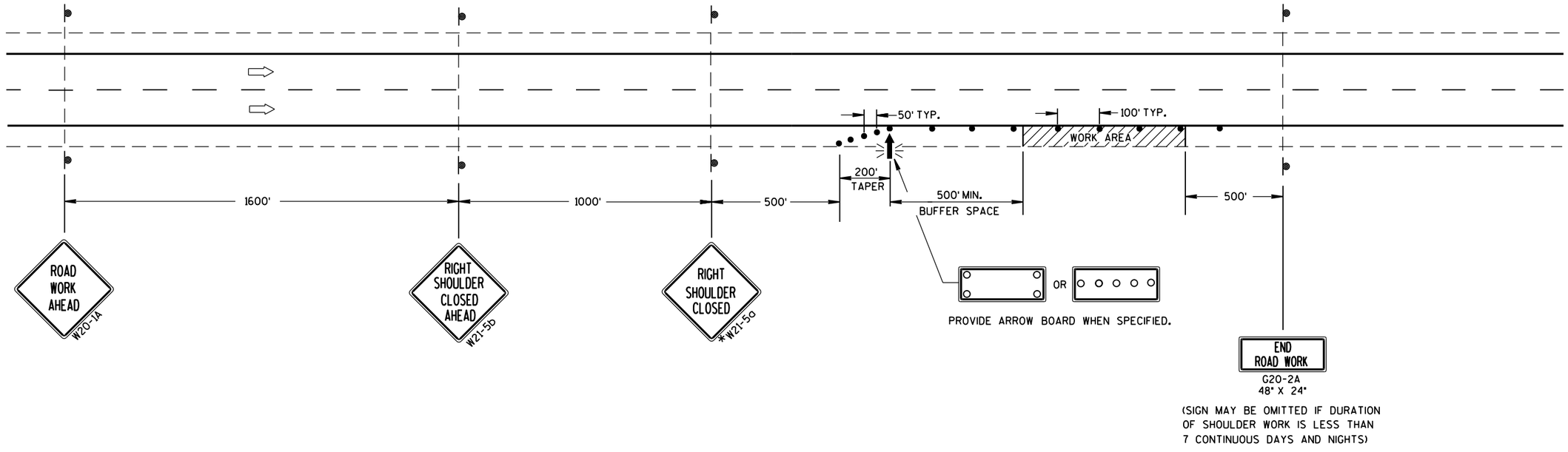
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO[illegible]IC SAFETY ENGI[illegible]

FHWA

6

S.D.D. 15 D 27-3

GENERAL NOTES

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

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

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

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

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

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

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

TABLE A

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

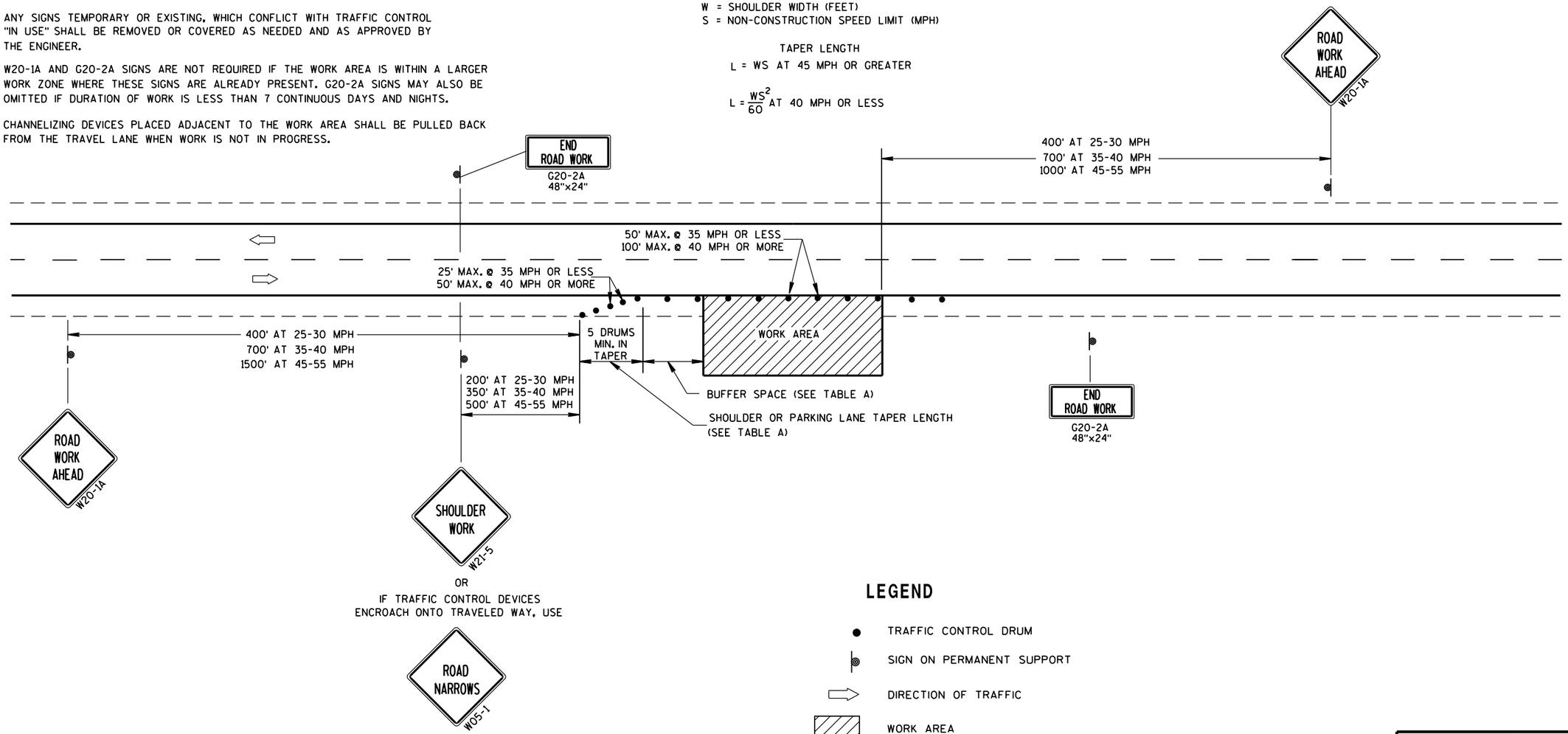
W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH

L = WS AT 45 MPH OR GREATER

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

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



LEGEND

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

July 14, 2015 — DATE

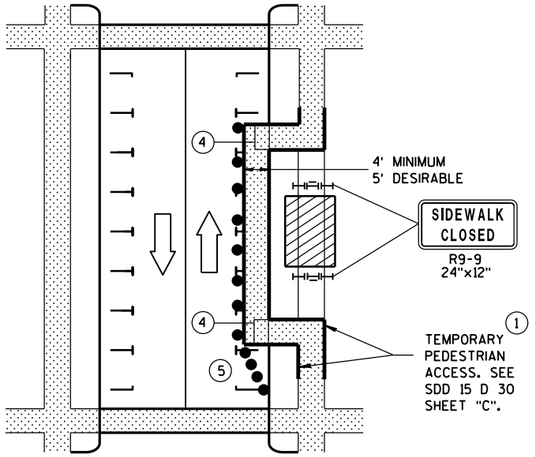
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO[illegible] SAFETY ENGI[illegible]

FHWA

6

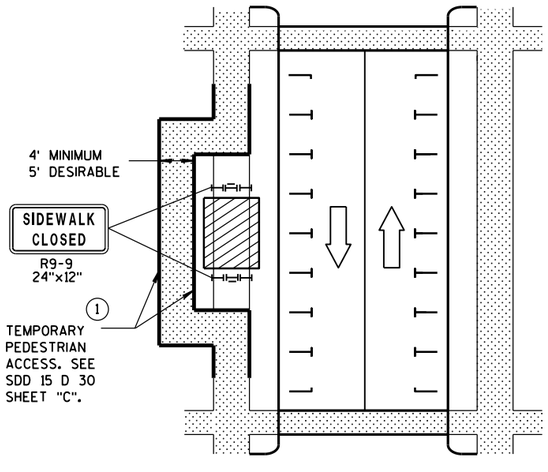
S.D.D. 15 D 28-3

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

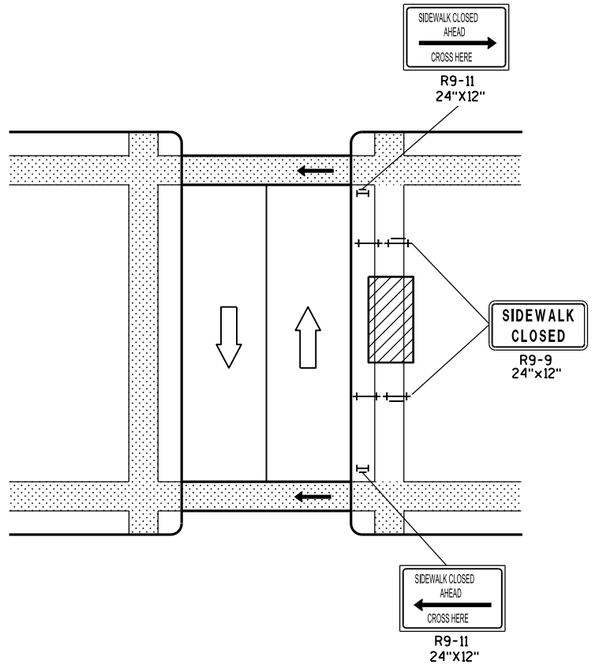


MID-BLOCK SIDEWALK CLOSURE IN PARKING LANE

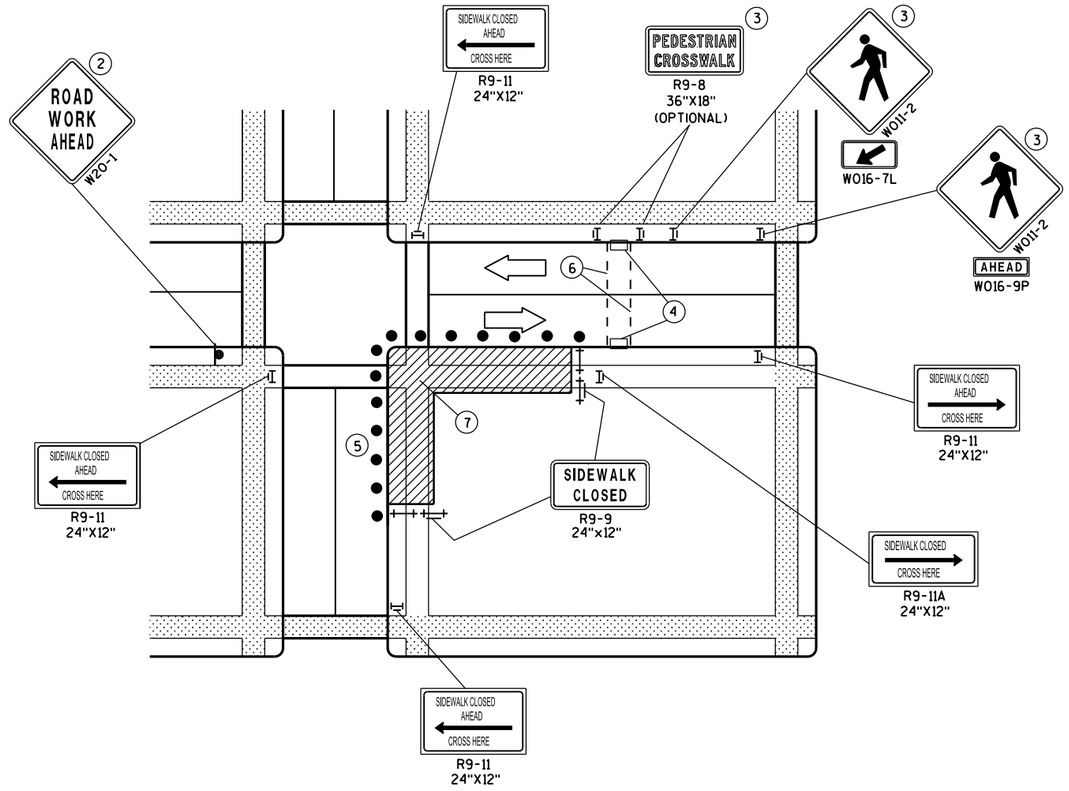
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

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

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

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

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

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

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

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

(1) IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE.

(2) "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.

(3) IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND W011-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.

(4) TEMPORARY CURB RAMPS. SEE SDD 15 D 30 SHEET "B".

(5) DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.

(6) TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.

(7) LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

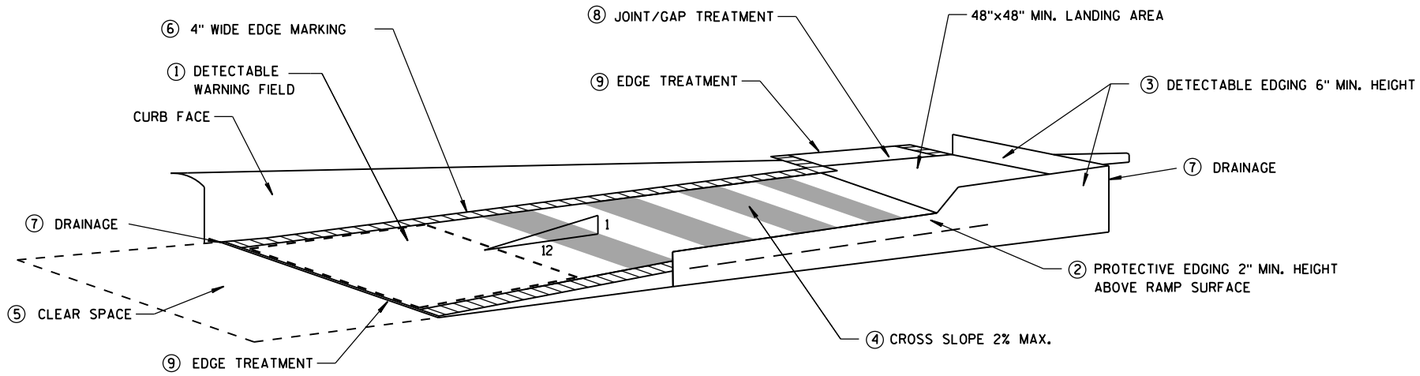
- SIGN ON PERMANENT SUPPORT
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW-INTENSITY FLASHING)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

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 30-3a



TEMPORARY CURB RAMP PARALLEL TO CURB

GENERAL NOTES

NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.

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

① CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 8D5 SHEET "E".

② PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.

③ DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).

④ CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.

⑤ CLEAR SPACE OF 48"X48" MIN. SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.

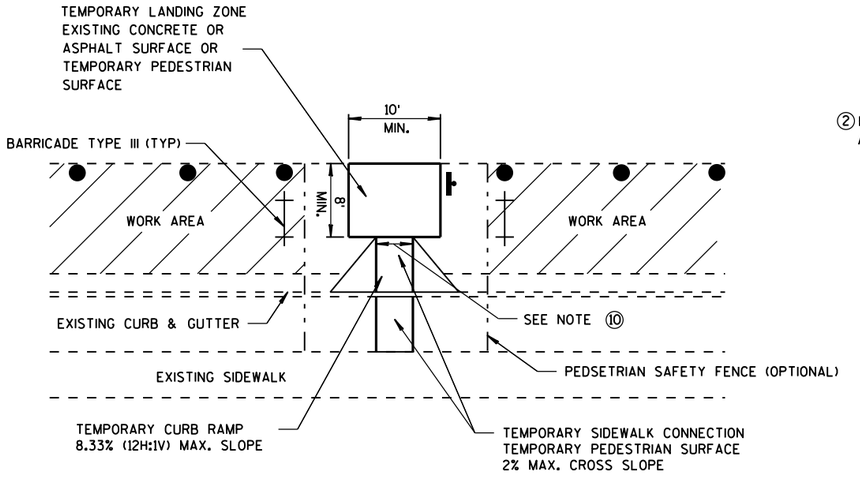
⑥ THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.

⑦ DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.

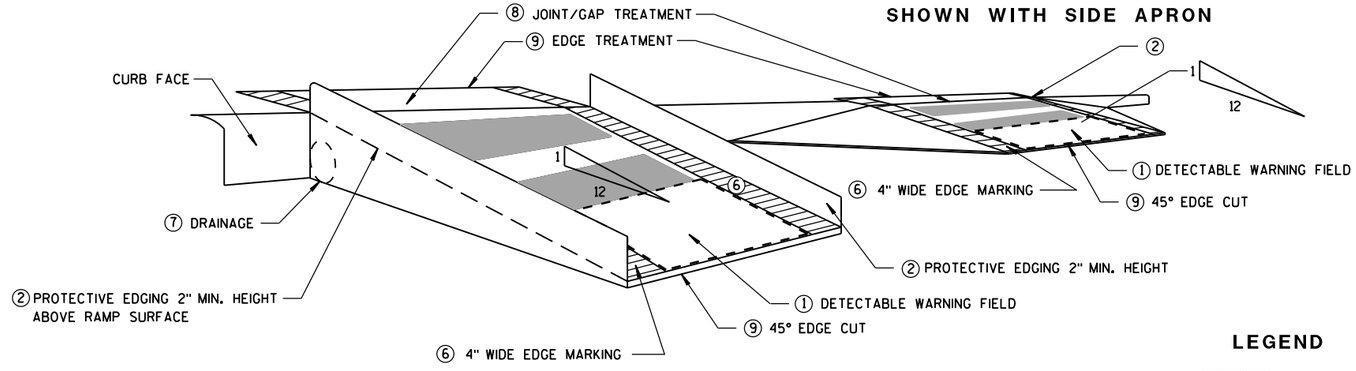
⑧ LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.

⑨ CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH, AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".

⑩ 5' WIDE MIN. WITH PEDSETRIAN SAFETY FENCE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY FENCE.



TEMPORARY BUS STOP PAD



SHOWN WITH PROTECTIVE EDGE

SHOWN WITH SIDE APRON

TEMPORARY CURB RAMP PERPENDICULAR TO CURB

LEGEND

WORK AREA

TYPE III BARRICADE

TRAFFIC CONTOL DRUM

TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June 2016 — DATE

/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI IC

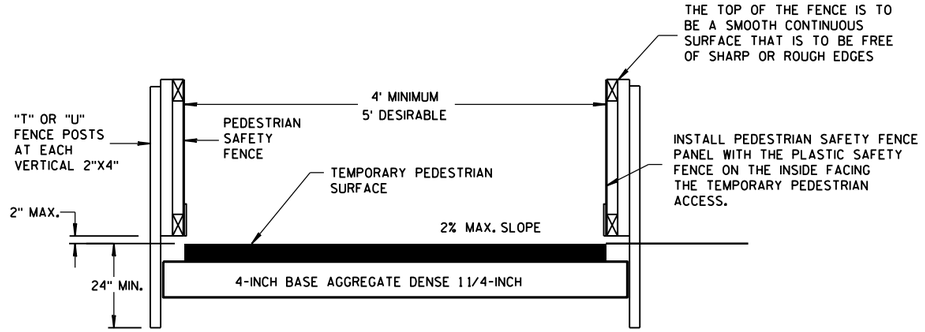
FHWA

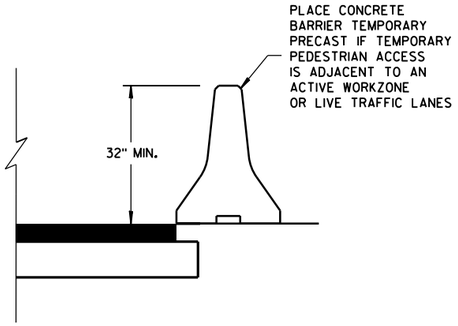
6

S.D.D. 15 D 30-3b

6

S.D.D. 15 D 30-3b

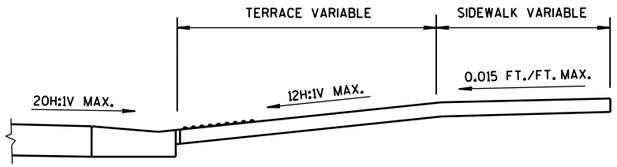




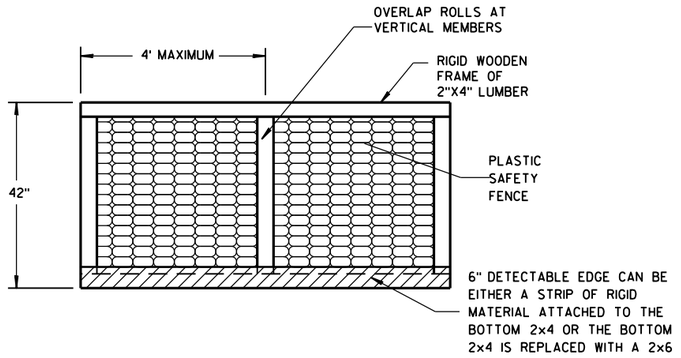
TEMPORARY PEDESTRIAN ACCESS

GENERAL NOTES

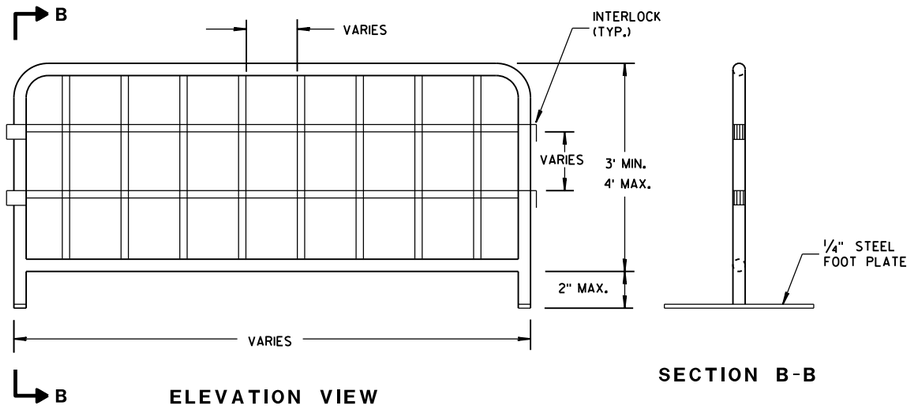
(1) INTERCHANGEABLE WITH THE PEDESTRIAN SAFETY FENCE.



SECTION A-A



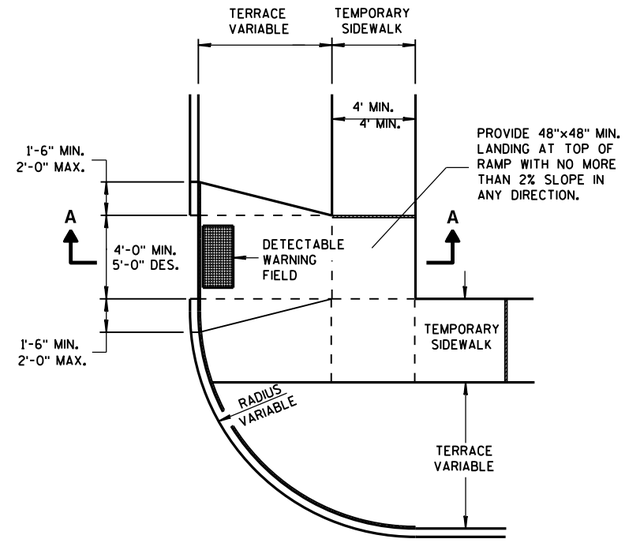
PEDESTRIAN SAFETY FENCE



ELEVATION VIEW

SECTION B-B

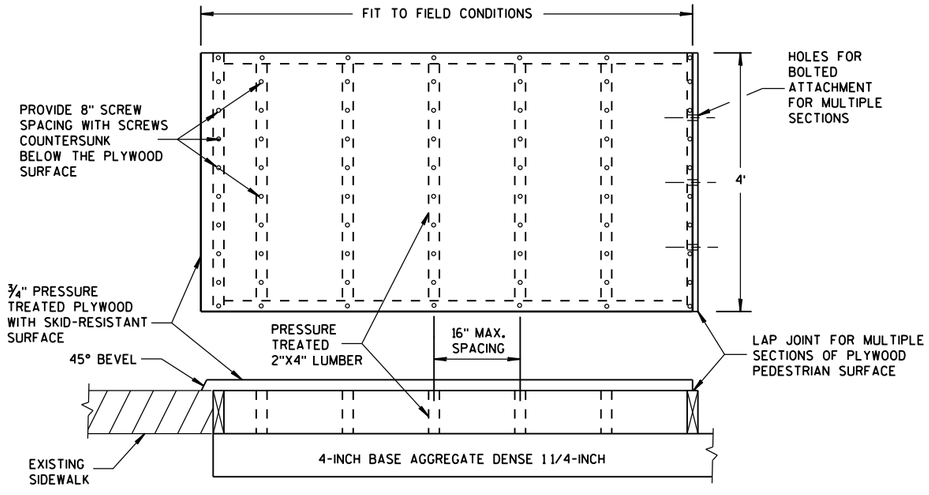
TEMPORARY PEDESTRIAN STEEL BARRICADE (1)



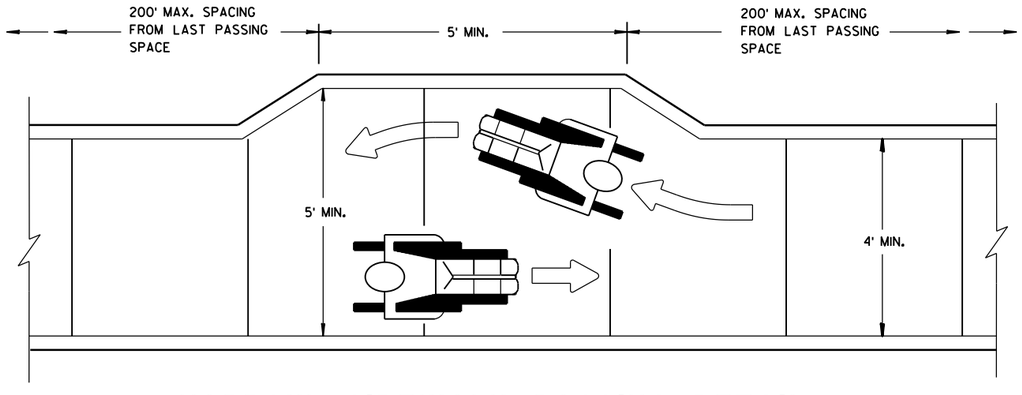
PLAN VIEW

TEMPORARY TYPE 3 RAMP

(OUTSIDE OF CROSSWALK AREA)



TEMPORARY PEDESTRIAN SURFACE PLYWOOD



NARROW SIDEWALK PASSING DETAIL

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

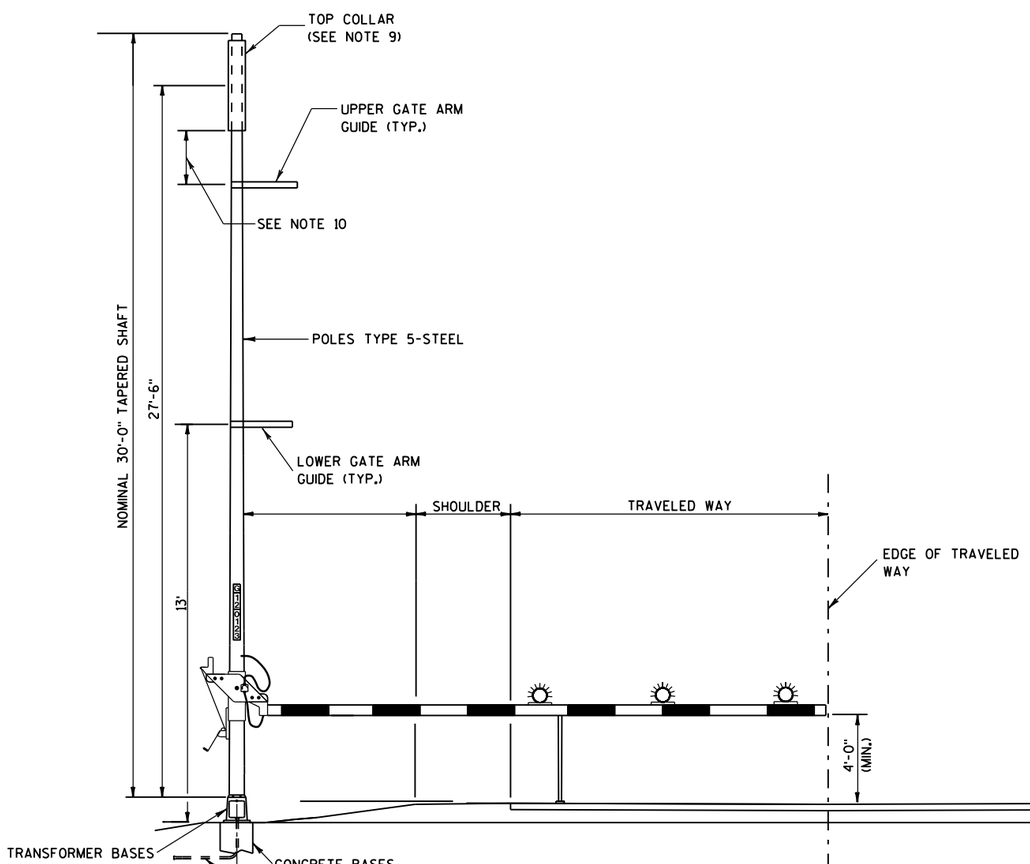
APPROVED
June 2016
DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZON IC
SAFETY ENGIN
FHWA

6

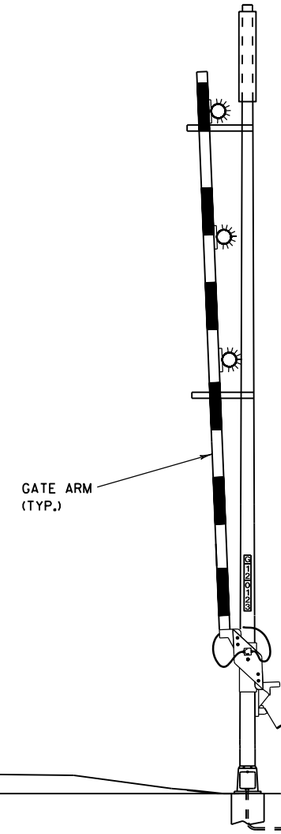
S.D.D. 15 D 30-3c

6

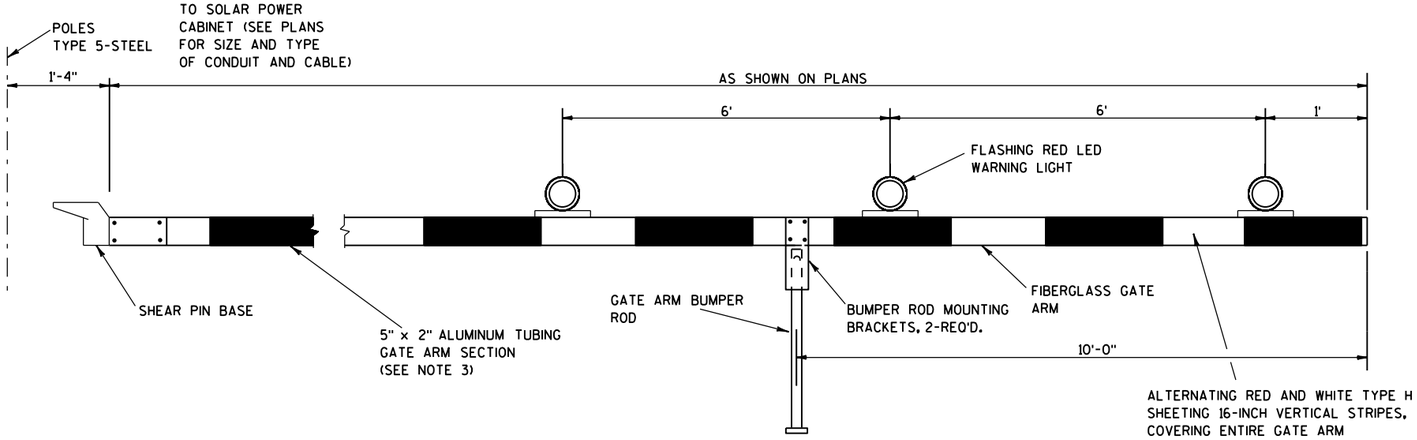
S.D.D. 15 D 30-3c



TYPICAL LOWERED POSITION



TYPICAL RAISED POSITION

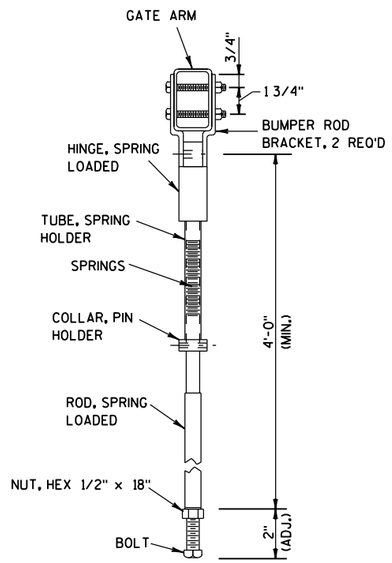


GATE DETAIL

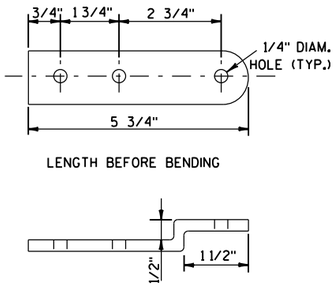
(SOLAR POWER OPTION)

GENERAL NOTES

1. THE LOCATION OF RAMP CLOSURE GATES AND MOUNTING HEIGHT OF GATE ARM PIVOT SHALL BE VERIFIED BY THE ENGINEER.
2. HEIGHT OF GATE ARM GUIDES MAY BE VARIED AS REQUIRED FOR WARNING LIGHT CLEARANCE.
3. FIBERGLASS/ALUMINUM GATE ARM AND SHEAR PIN BASE SHALL BE SUPPLIED BY THE SAME VENDOR.
4. GATE ARM TO BE MOUNTED ON PROPOSED POLE AS INDICATED ON THE PLANS. PROPOSED POLE SHALL BE TYPE 5 POLE.
5. LOCATION OF THE CONCRETE BASE AND LENGTH OF THE GATE ARM WILL BE VERIFIED BY THE ENGINEER TO ENSURE ADEQUATE COVERAGE OF THE TRAVELED LANE.
6. GATE PIVOTS, SUPPORTS AND GUIDES, AND ALL ASSOCIATED HARDWARE SHALL BE GALVANIZED. ALL ROUGH EDGES AND BURRS SHALL BE GROUND SMOOTH PRIOR TO GALVANIZING.
7. ALL EXPOSED BOLT THREADS SHALL BE PAINTED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
8. ANY FIELD DAMAGE TO THE GALVANIZING SHALL BE REPAIRED WITH TWO COATS OF ZINC RICH PAINT CONFORMING WITH THE REQUIREMENTS OF ASTM A 780.
9. A STANDARD LIGHTING LUMINAIRE ARM MAY BE MOUNTED TO THE TYPE 5 POLE IN LIEU OF THE TOP COLLAR.
10. UPPER GATE ARM GUIDE IS TO BE INSTALLED 6 TO 12-INCHES BELOW THE BOTTOM OF THE TOP COLLAR.



GATE ARM BUMPER ROD DETAIL



BUMPER ROD MOUNTING
BRACKET DETAIL

RAMP GATE
SOLAR POWER

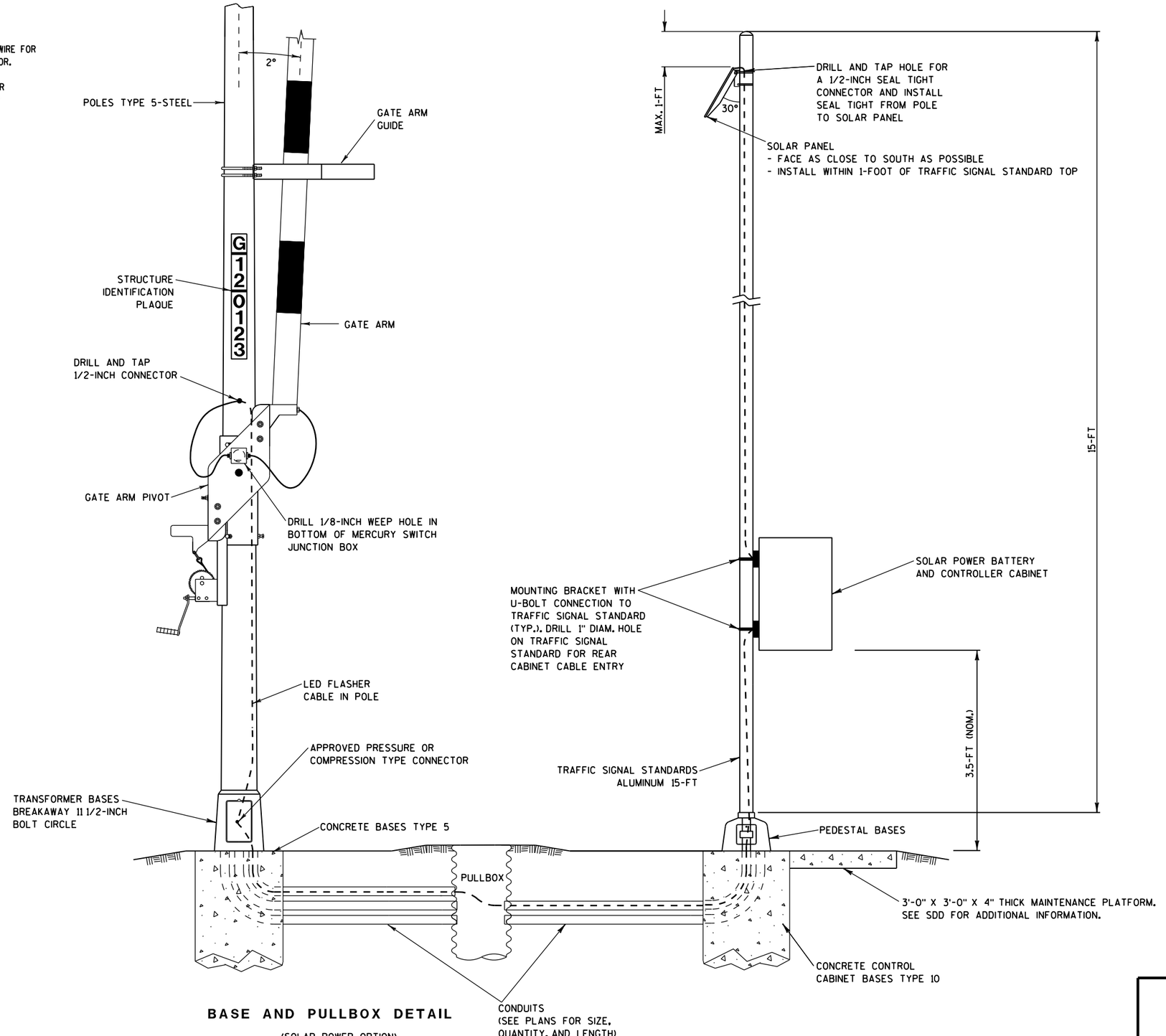
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6
S.D.D. 15 D 34-2a

WIRING NOTES

1. WIRING FROM SOLAR PANEL TO CABINET SHALL BE BLUE #10 XLP WIRE FOR POSITIVE CONDUCTOR AND WHITE #10 XLP FOR NEGATIVE CONDUCTOR.

2. WIRING FROM CABINET TO GATE ARM SHALL BE WHITE #10 XLP FOR COMMON, RED #10 XLP FOR FLASHER CIRCUIT 1, AND BLUE #10 XLP FOR FLASHER CIRCUIT 2.



BASE AND PULLBOX DETAIL

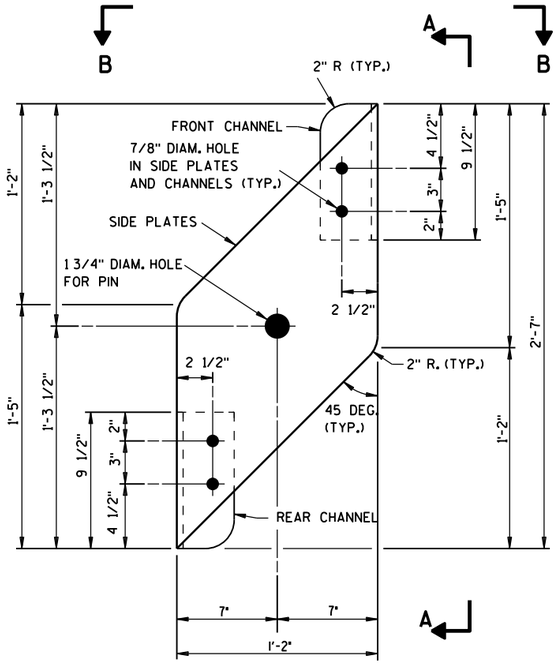
(SOLAR POWER OPTION)

RAMP GATE
SOLAR POWER

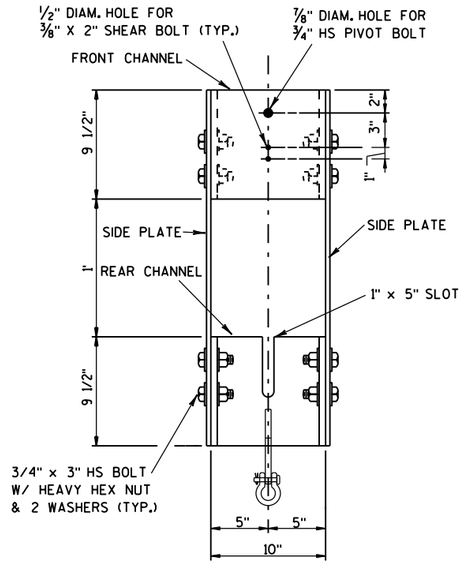
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

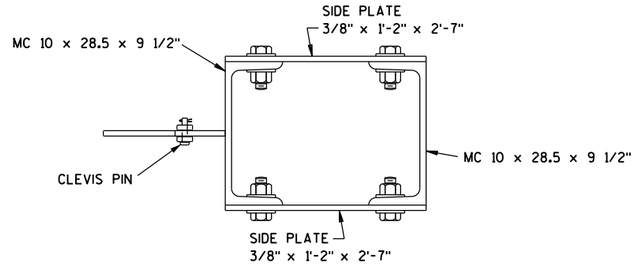
S.D.D. 15 D 34-2b



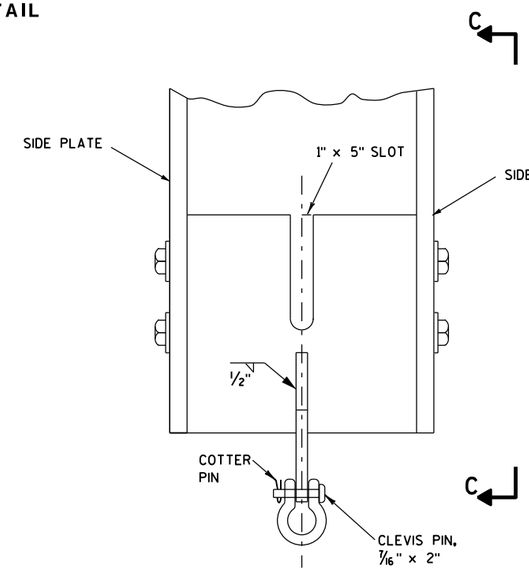
SIDE PLATE DETAIL



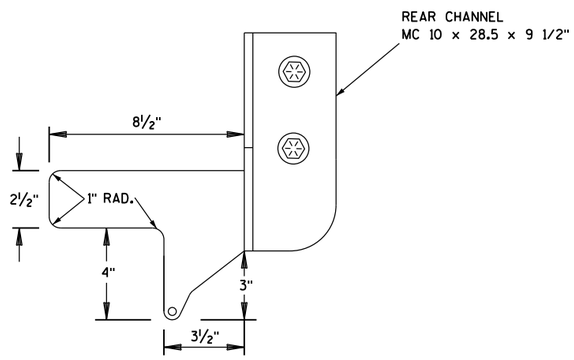
SECTION A-A



SECTION B-B



YOKE ASSEMBLY DETAIL



SECTION C-C

RAMP GATE
SOLAR POWER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 15 D 34-2c

6

S.D.D. 15 D 34-2c

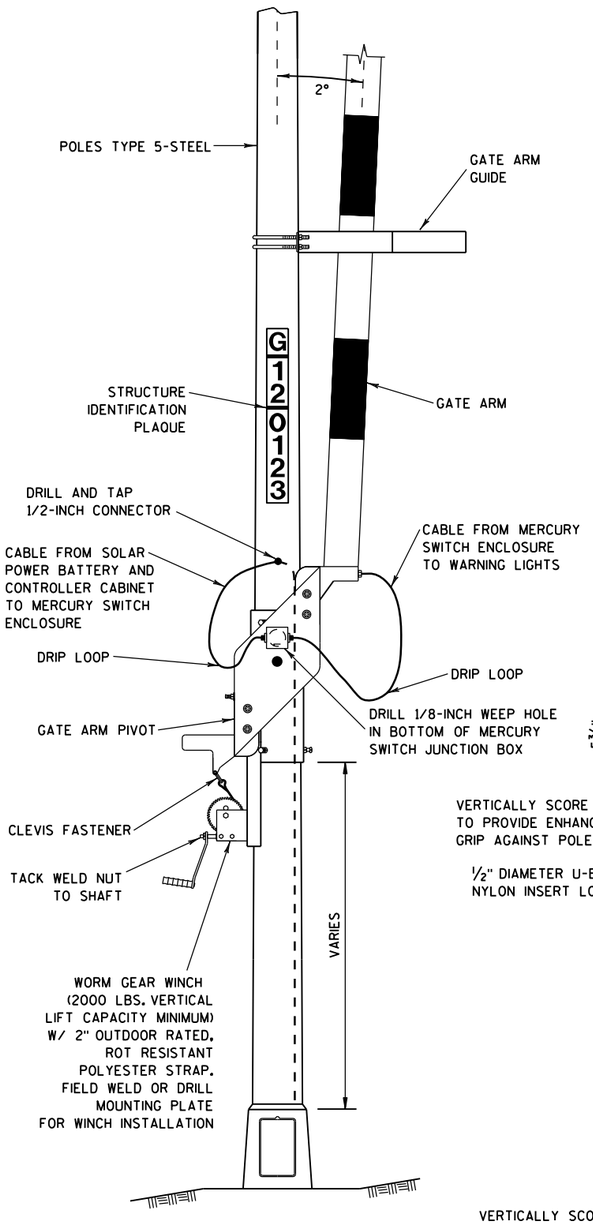
GENERAL NOTES

1. WHEN THE GATE IS FULLY RAISED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE OUTSIDE OF THE REAR CHANNEL.

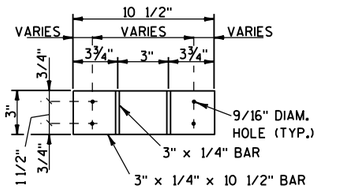
2. WHEN THE GATE IS FULLY LOWERED, THE NUT AND WASHER SHALL BE PLACED SNUGLY AGAINST THE INSIDE OF THE REAR CHANNEL.

3. ANTI-SEIZE LUBRICATING MATERIAL SHALL BE USED ON ALL BOLT THREADS BEFORE INSTALLATION.

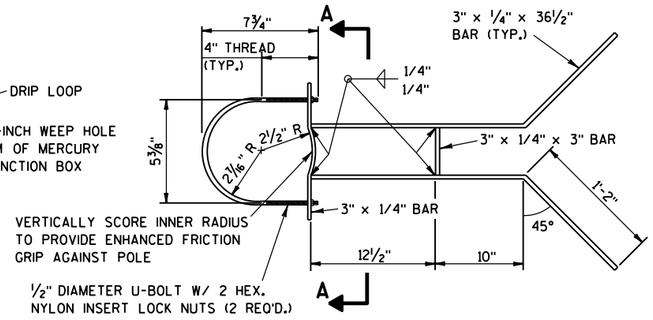
4. ALL BOLTS SHALL BE GALVANIZED AND CONFORM TO ASTM A307, GRADE A, UNLESS DESIGNATED AS HS (HIGH STRENGTH), WHICH SHALL CONFORM TO ASTM A325. BOLTS OF 1/2" NOMINAL DIAMTER OR LESS MAY BE STAINLESS STEEL.



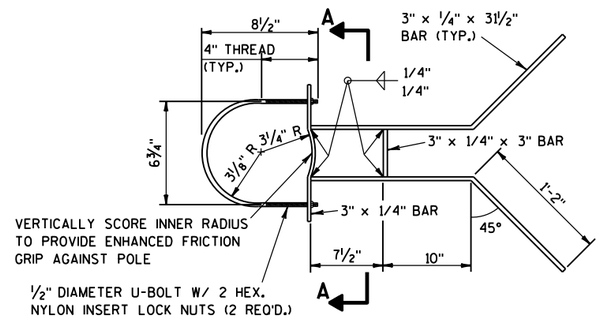
GATE PIVOT ASSEMBLY



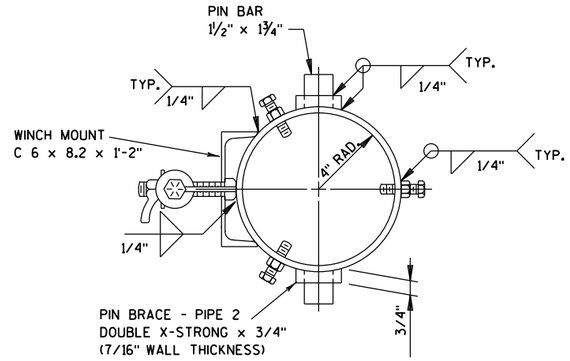
SECTION A-A
U-BOLTS NOT SHOWN



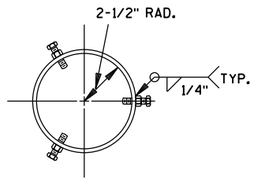
UPPER GATE ARM GUIDE DETAIL



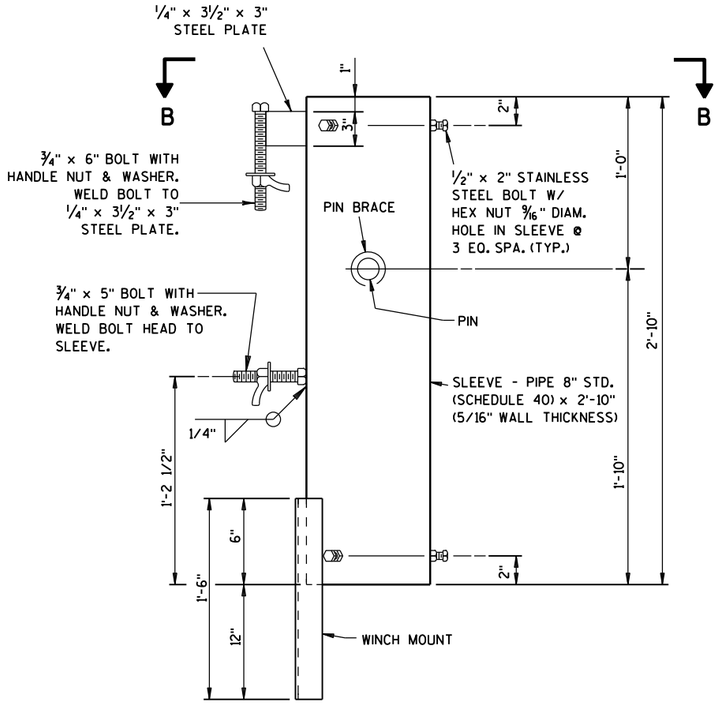
LOWER GATE ARM GUIDE DETAIL



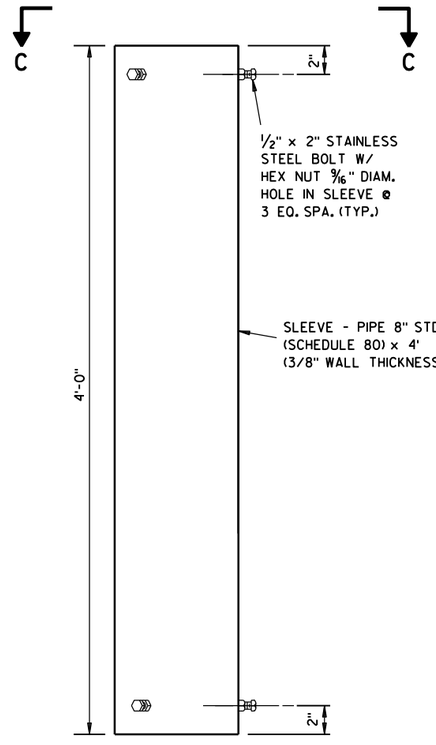
SECTION B-B



SECTION C-C



PIVOT SLEEVE DETAIL



TOP COLLAR

RAMP GATE
SOLAR POWER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRCIAL
FHWA

6

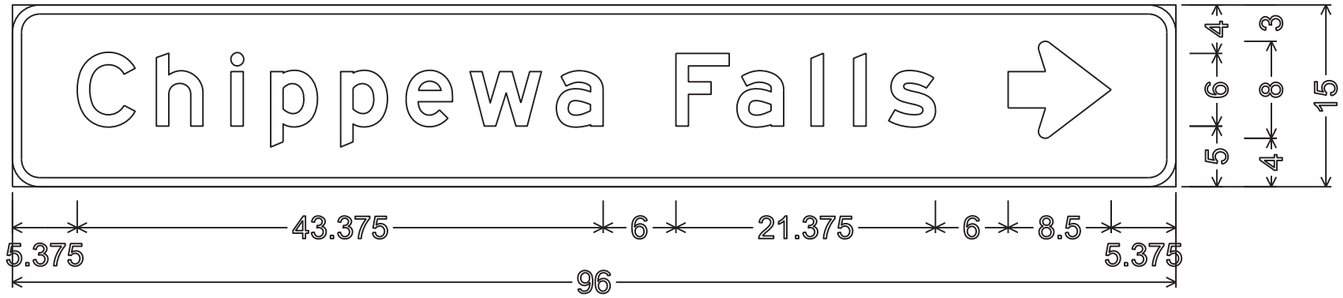
S.D.D. 15 D 34-2d

6

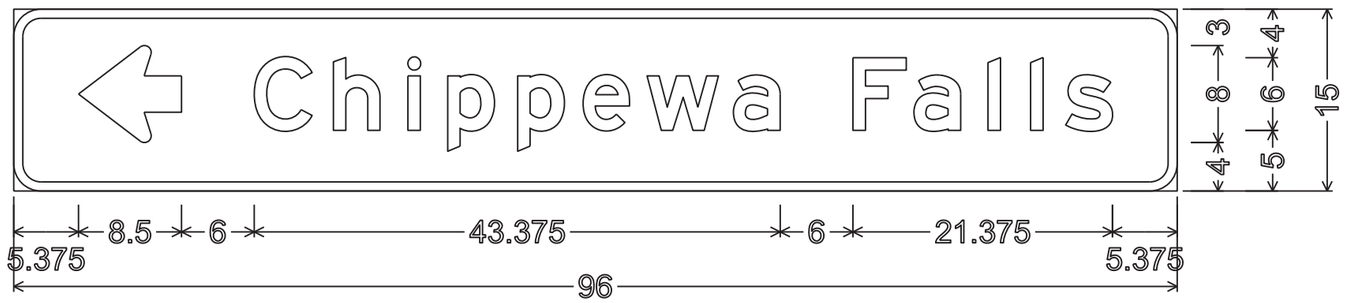
S.D.D. 15 D 34-2d

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



D1-1; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border

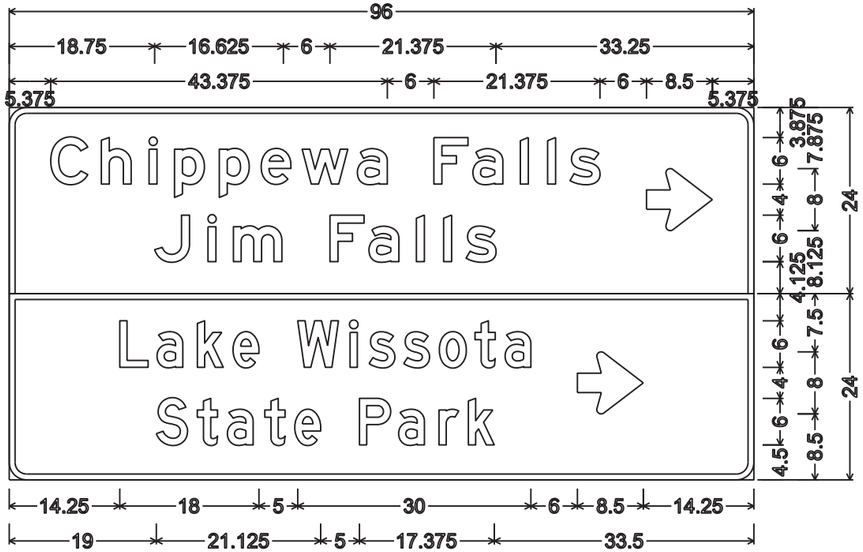
7

7

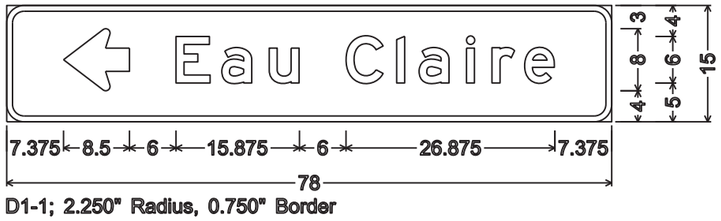
PROJECT NO: 1050-00-72	HWY: STH 29	COUNTY: CHIPPEWA	PERMANENT SIGNING	SHEET NO: 169	E

FILE NAME : C:\CAEfiles\Projects\tr_d6\6091a117.DGN PLOT DATE : 26-JAN-2017 12:14 PLOT BY : $$...plotuser...$$ PLOT NAME : PLOT SCALE : 12.499012:1.000000

WISDOT/CADDS SHEET 42



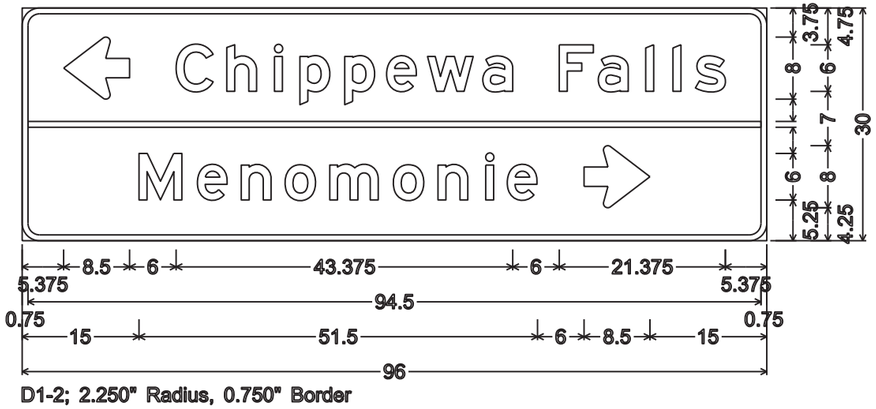
D1-4; 2.250" Radius, 0.750" Border, White on Green;
"Chippewa" E; "Falls" E; "Jim" E; "Falls" E;
2.250" Radius, 0.750" Border, White on Brown
"Lake" D; "Wissota" D; "State" D; "Park" D



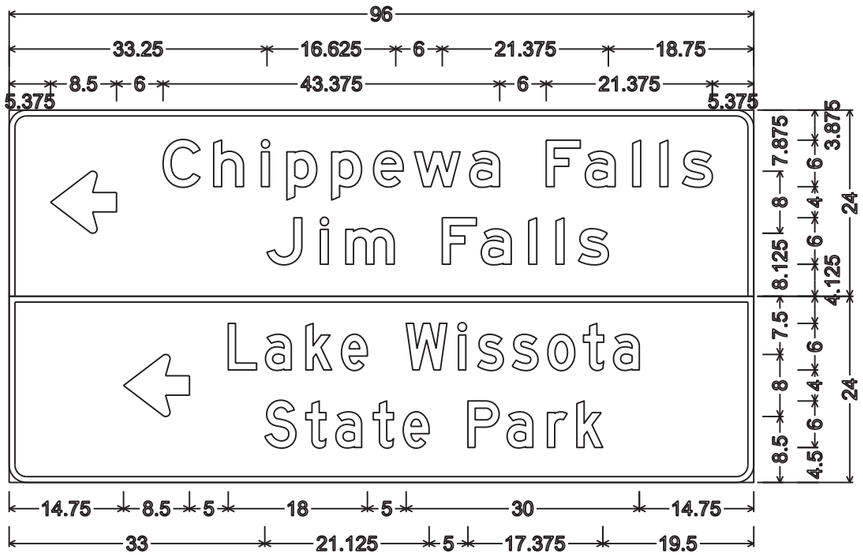
D1-1; 2.250" Radius, 0.750" Border

NOTES

1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green except as noted
   Message - White
3. Message Series - E except as noted



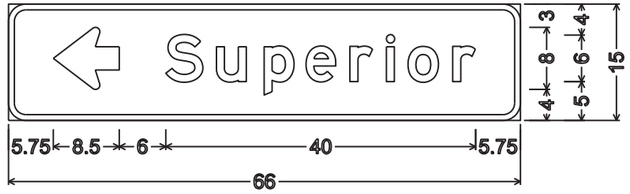
D1-2; 2.250" Radius, 0.750" Border



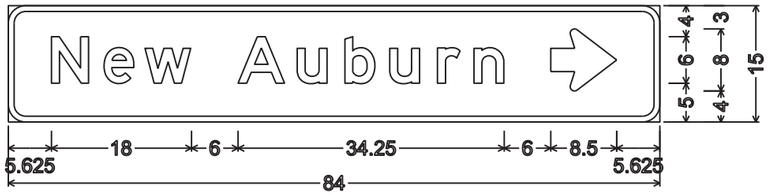
D1-4; 2.250" Radius, 0.750" Border, White on Green;
"Chippewa" E; "Falls" E; "Jim" E; "Falls" E;
2.250" Radius, 0.750" Border, White on Brown
"Lake" D; "Wissota" D; "State" D; "Park" D



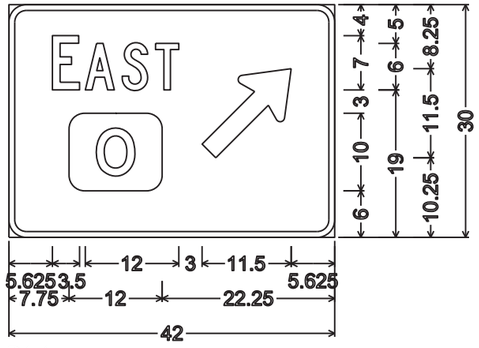
D1-1; 2.250" Radius, 0.750" Border



D1-1; 2.250" Radius, 0.750" Border



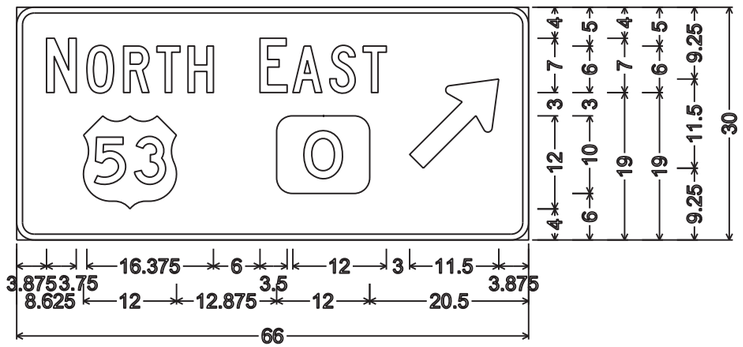
D1-1; 2.250" Radius, 0.750" Border



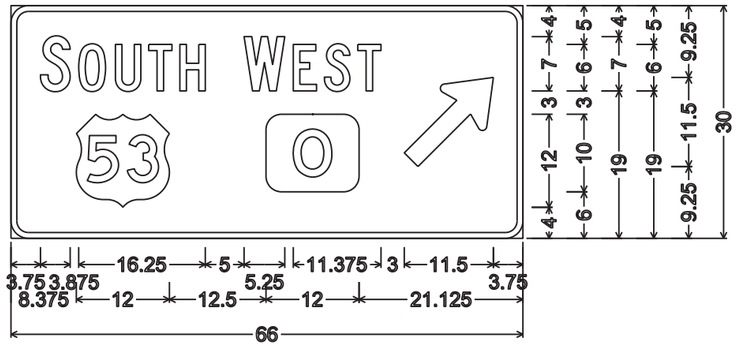
D1-1;
2.250" Radius, 0.750" Border
"EAST" C

NOTES

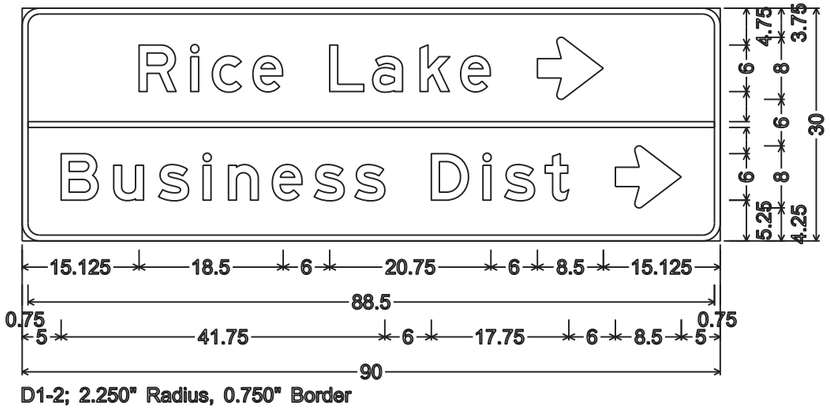
1. All Signs Type II - Type H Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E except as noted



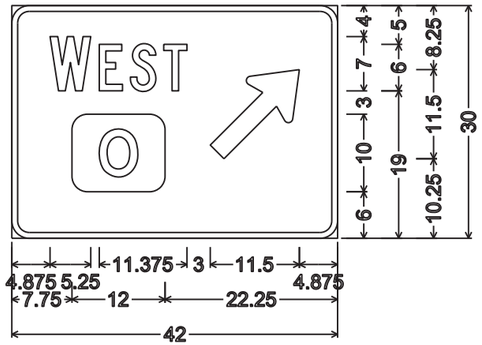
D1-2; 2.250" Radius, 0.750" Border
"NORTH" C; "EAST" C



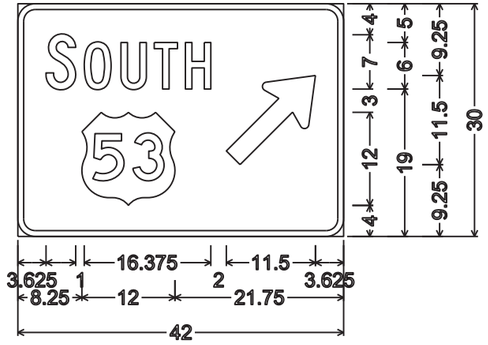
D1-2; 2.250" Radius, 0.750" Border
"SOUTH" C; "WEST" C



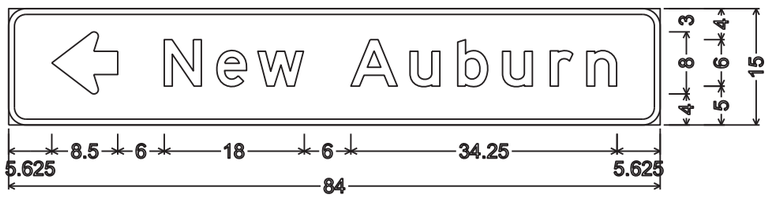
D1-2; 2.250" Radius, 0.750" Border



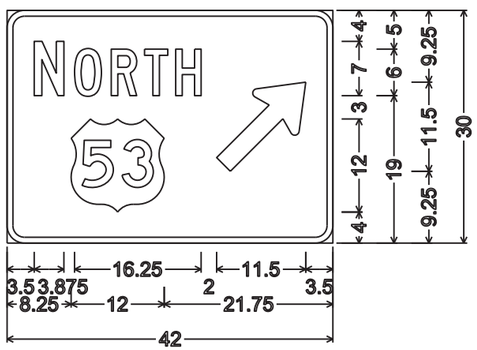
D1-1;
2.250" Radius, 0.750" Border
"WEST" C



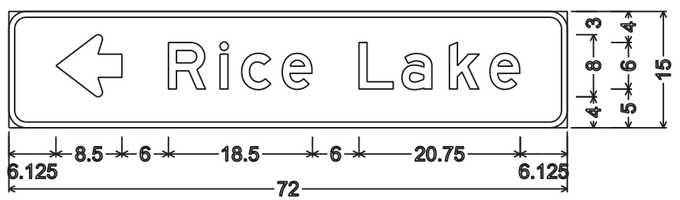
D1-1;
2.250" Radius, 0.750" Border
"SOUTH" C



D1-1; 2.250" Radius, 0.750" Border



D1-1;
2.250" Radius, 0.750" Border
"NORTH" C



D1-1; 2.250" Radius, 0.750" Border

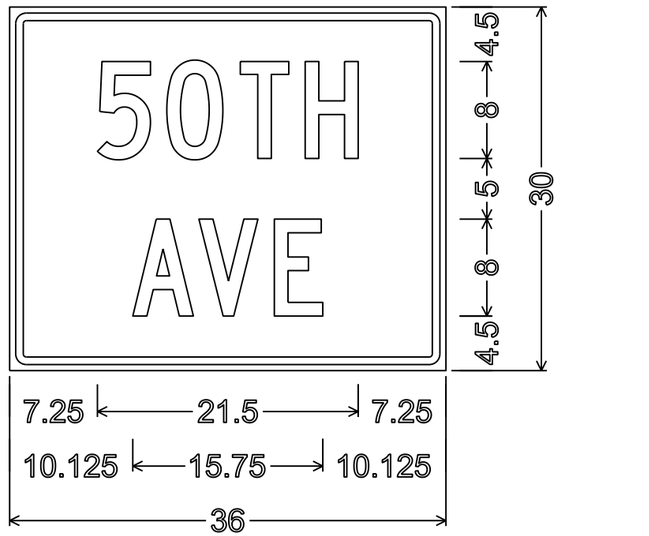
7

7

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	PERMANENT SIGNING	SHEET NO: 171	E

NOTES

1. Fixed Message Type II Signs - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C



1.375" Radius, 0.625" Border, 0.500" Indent

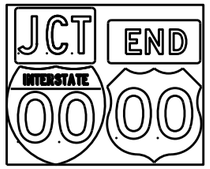
7

7

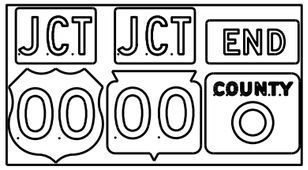
TYPICAL ASSEMBLIES



J1-1



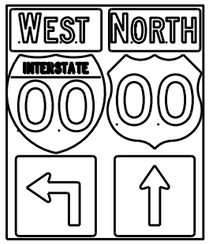
J1-2



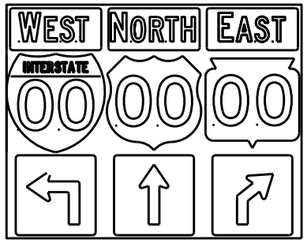
J1-3



J2-1



J2-2

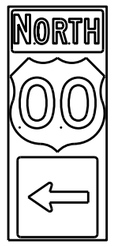


J2-3

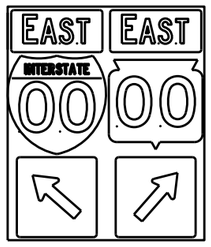


JV

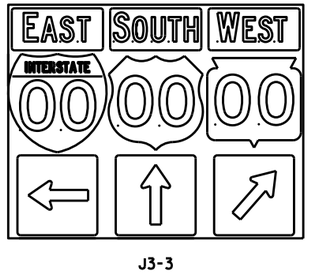
(Typical Vertical J-Assembly
See Note 10 and 11)



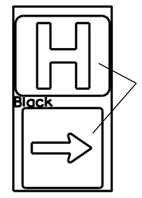
J3-1



J3-2



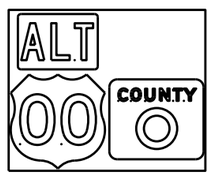
J3-3



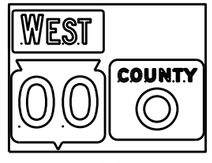
JH-1



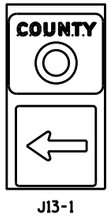
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1

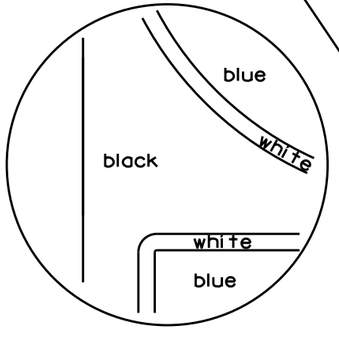


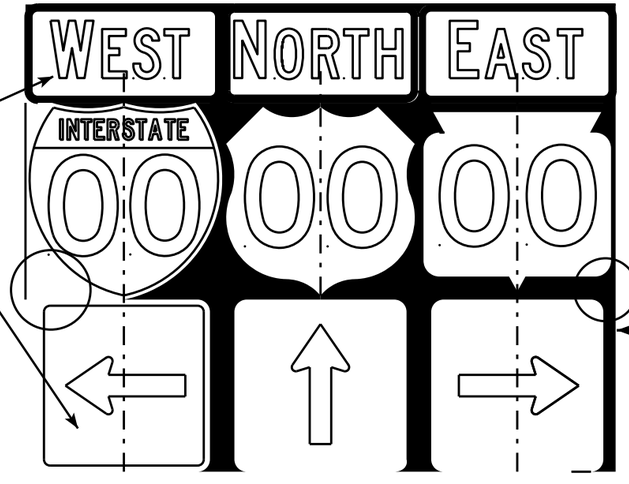
J23-1

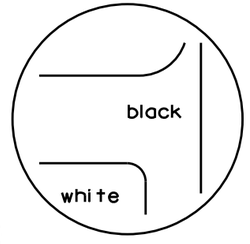


J22-1

[blue background with interstate]







[black background]

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Black Non-reflective
   Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inchs (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

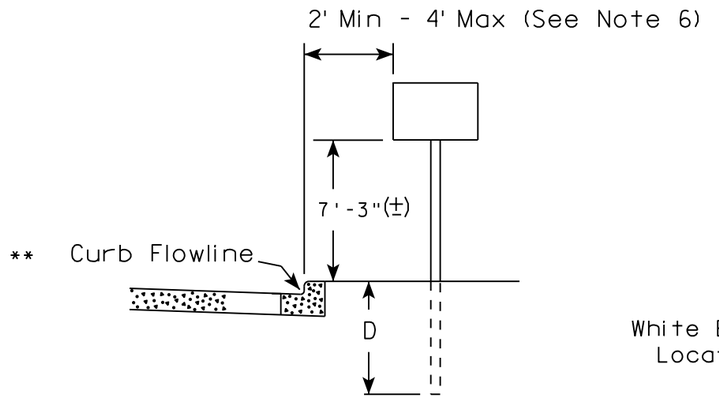
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/06/14 PL... A2-1S.8

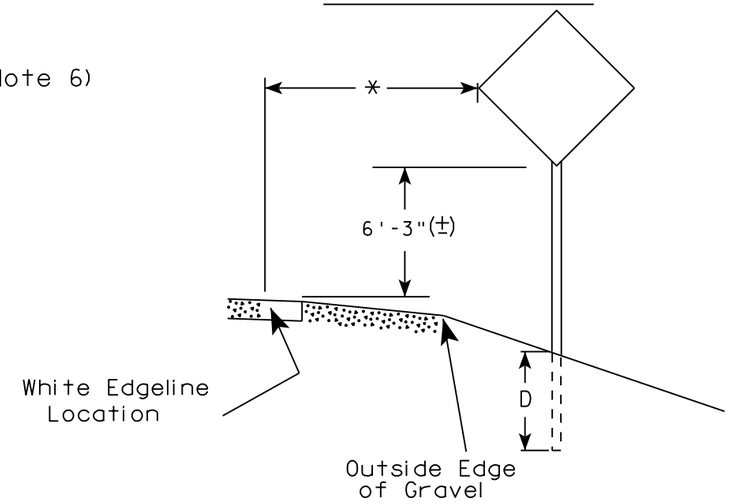
PROJECT NO: SHEET NO: E

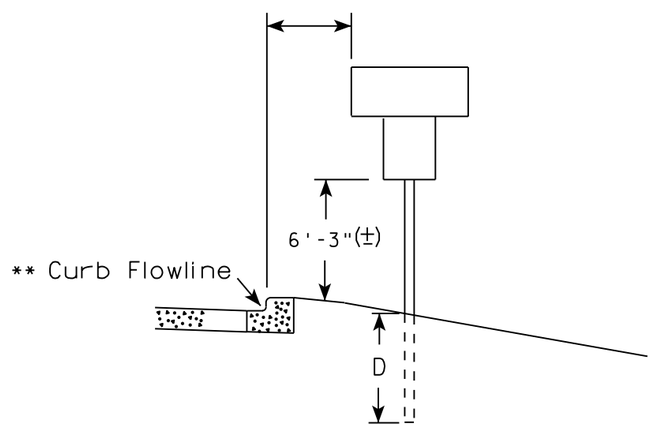
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN PLOT DATE : 06-FEB-2014 14:10 PLOT BY : mscsja PLOT NAME :
WISDOT/CADDS SHEET 42

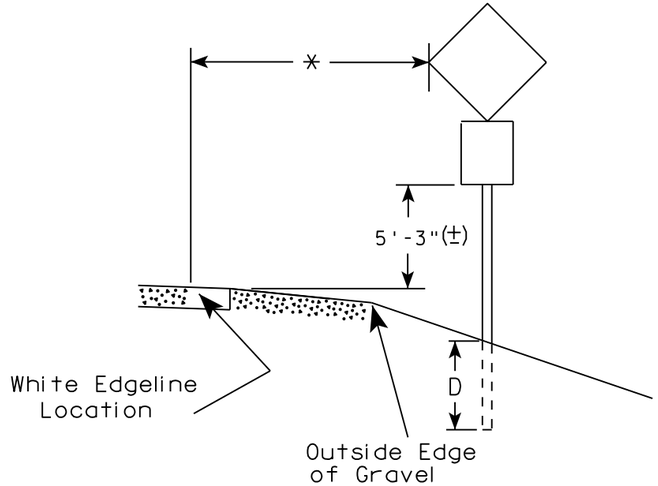
URBAN AREA



RURAL AREA (See Note 2)







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

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

POST EMBEDMENT DEPTH

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

GENERAL NOTES

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

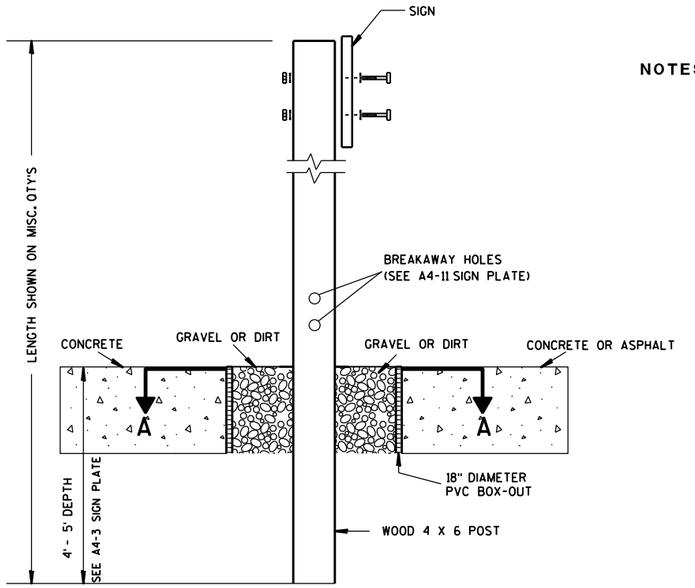
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/17 PLATE NO. A4-3.21

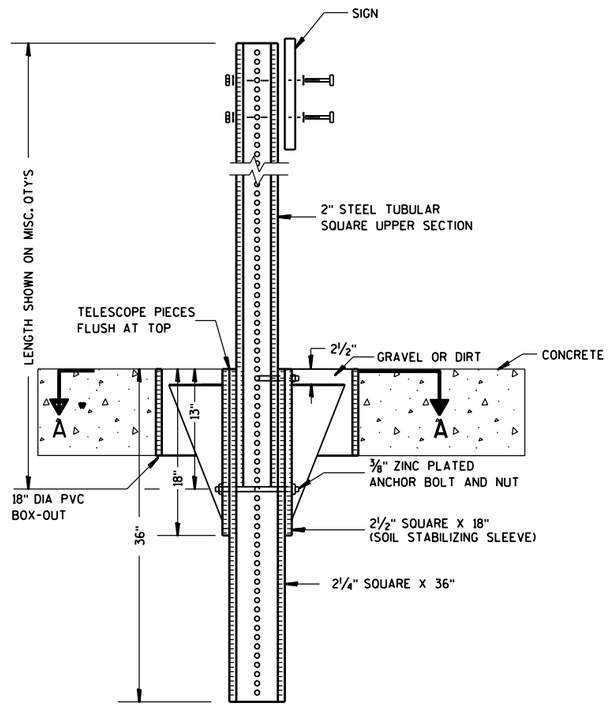
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 174	E



ELEVATION VIEW

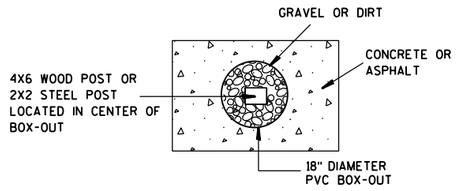
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

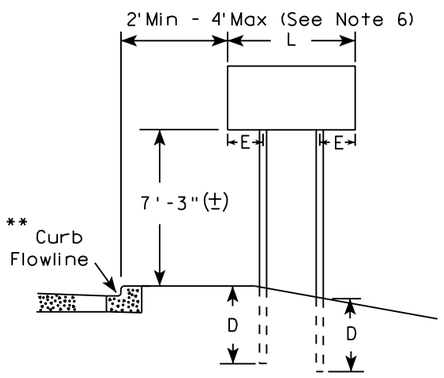
APPROVED Matthew R Rauch
for State Traffic Engineer

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

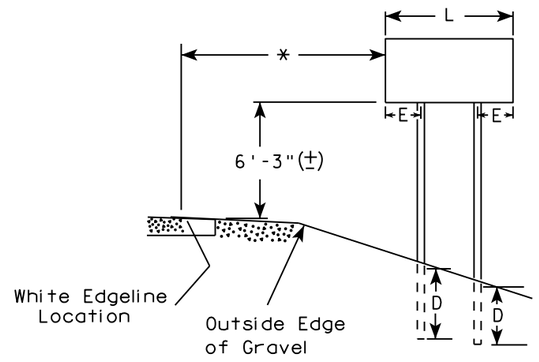
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

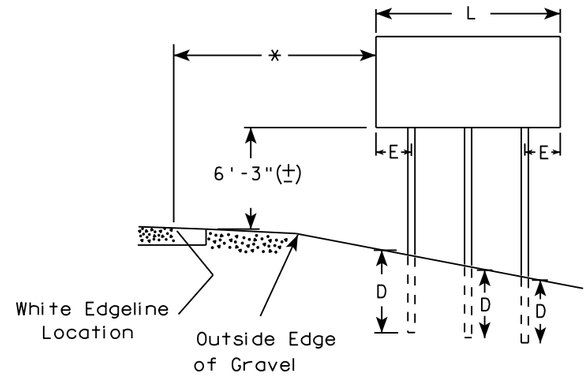
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

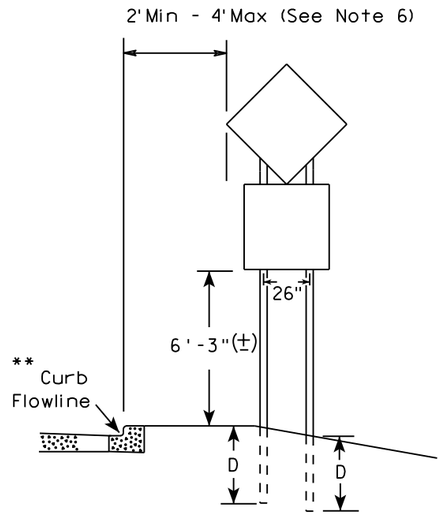
URBAN AREA



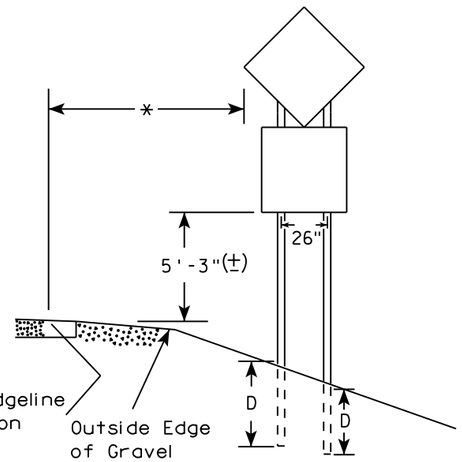
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

GENERAL NOTES

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

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

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

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

POST EMBEDMENT DEPTH

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

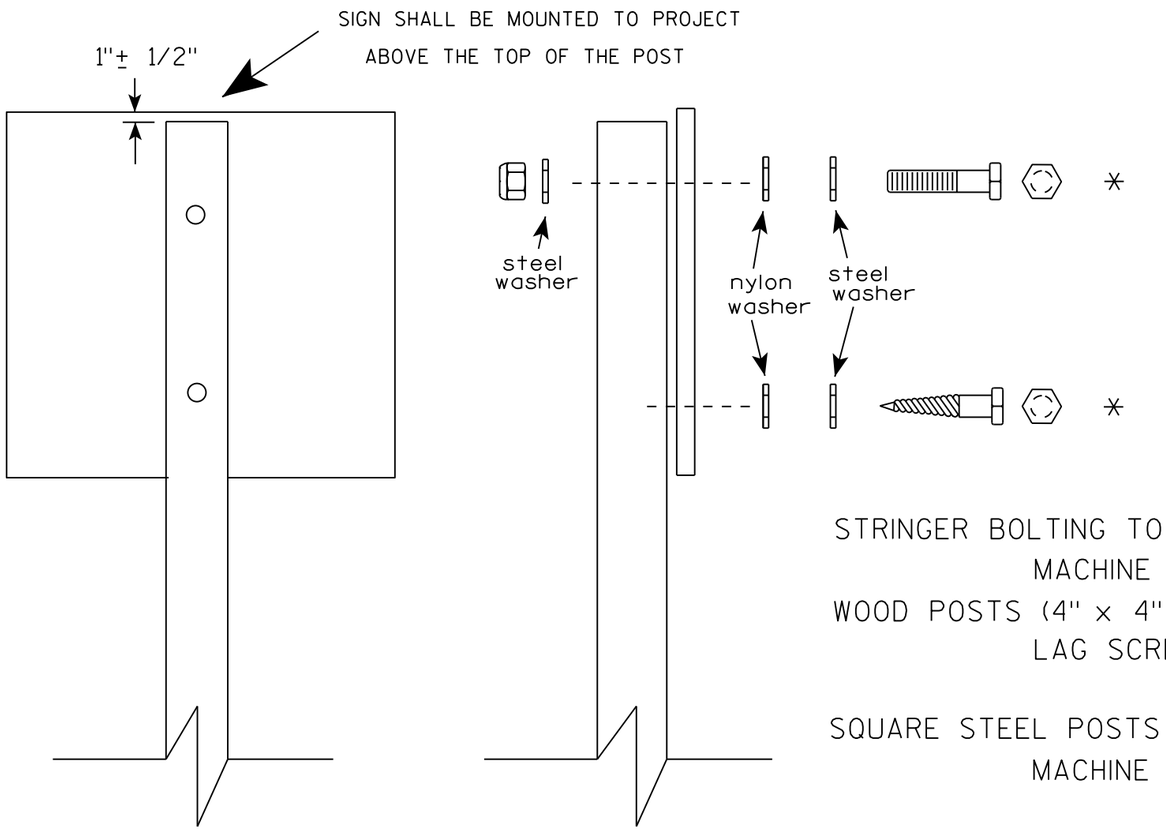
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 176	E



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

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

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

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

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

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

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

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

3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

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

3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

WASHERS (ALL POSTS) -

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

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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

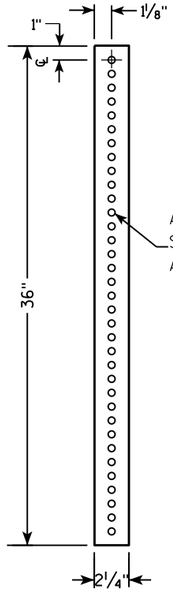
DATE 8/11/16 PLATE NO. A4-8.8

PROJECT NO: SHEET NO: E

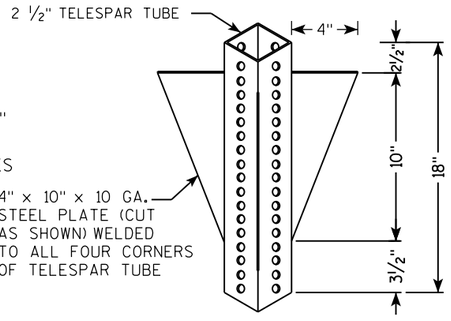
FILE NAME : C:\CADfiles\Projects\tr_stdplate\A48.DGN PLOT DATE : 11-AUG-2016 11:35 PLOT BY : $$ plotuser $$

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

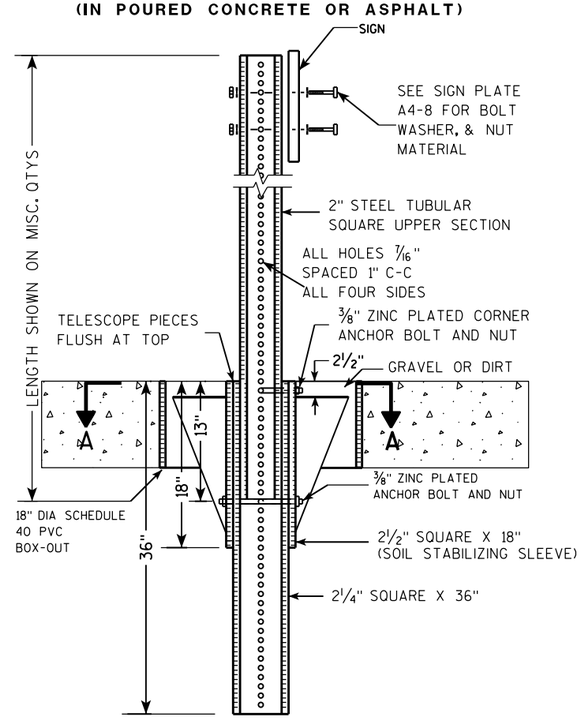
2 ¼ " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



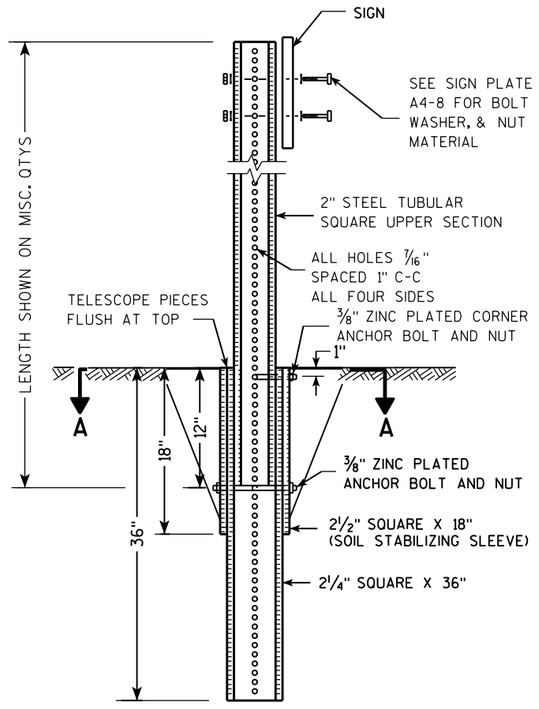
2 ½ " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

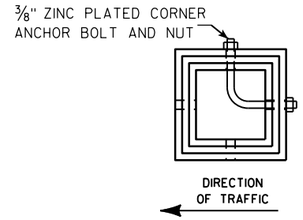


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



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





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

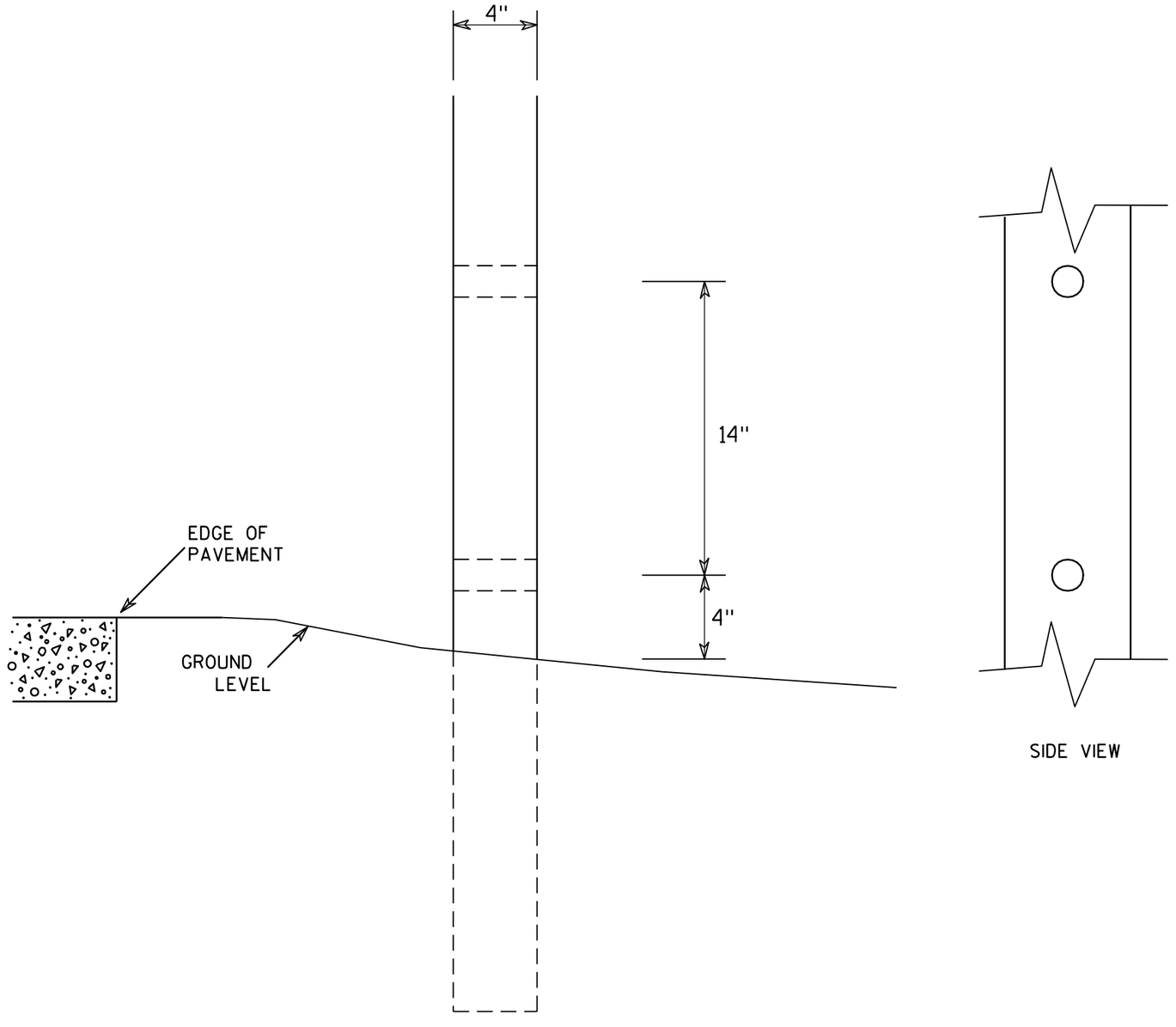
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



SIDE VIEW

GENERAL NOTES

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

7

7

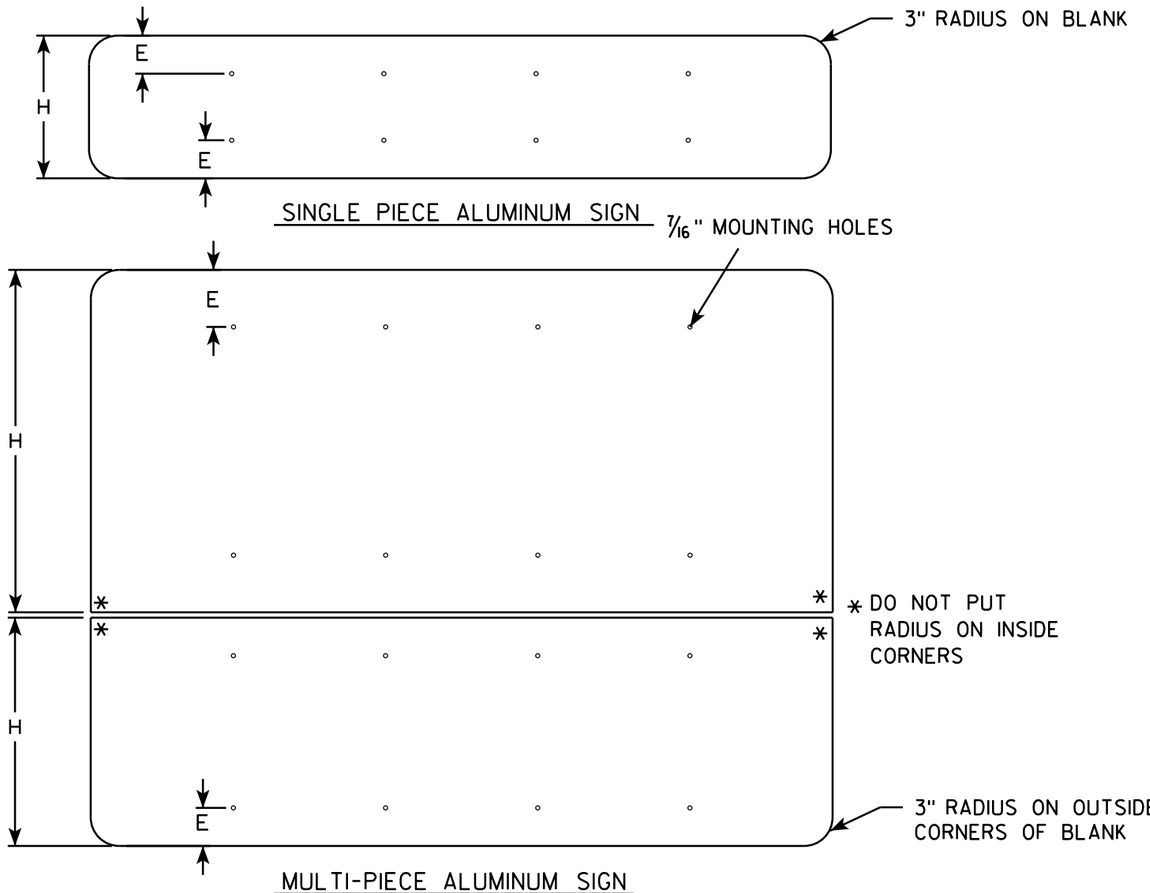
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

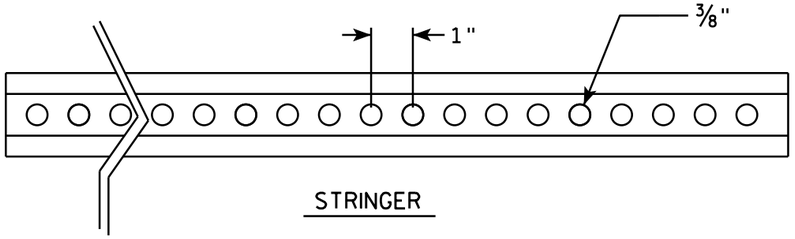
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 179	E



GENERAL NOTES

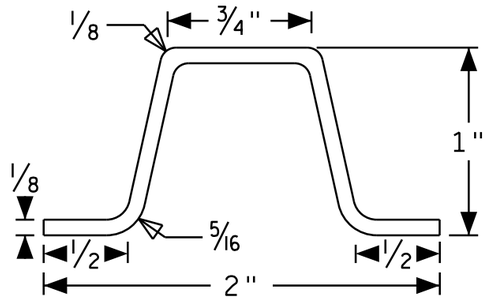
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

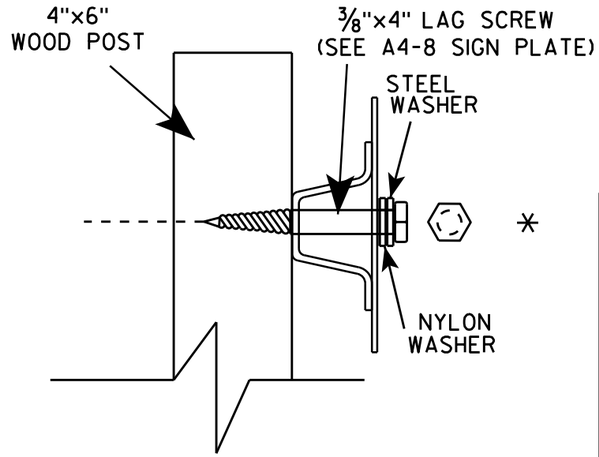


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

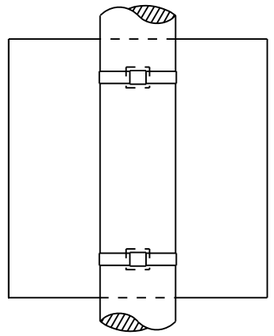
DATE 4/26/16 PLATE NO A4-18.1

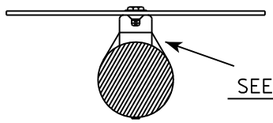
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000

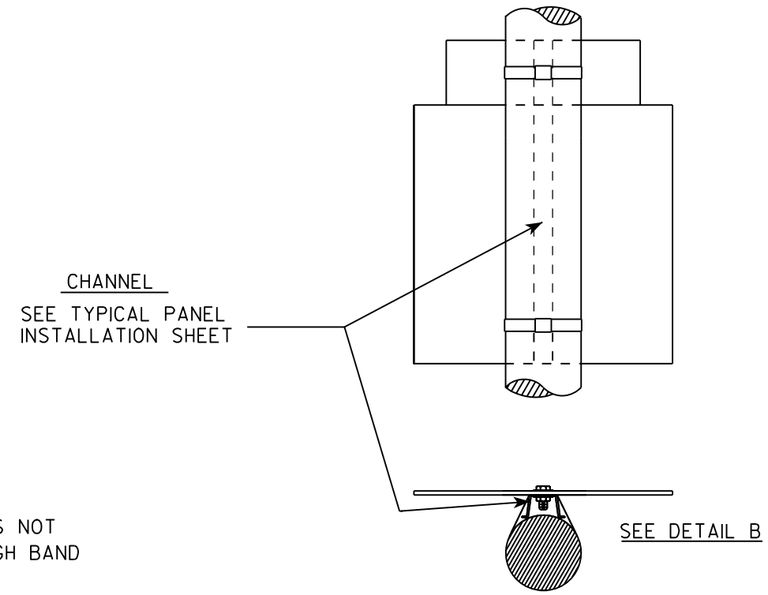
BANDING

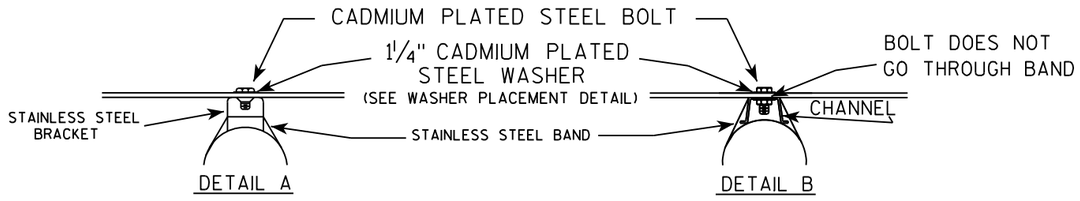
SINGLE SIGN



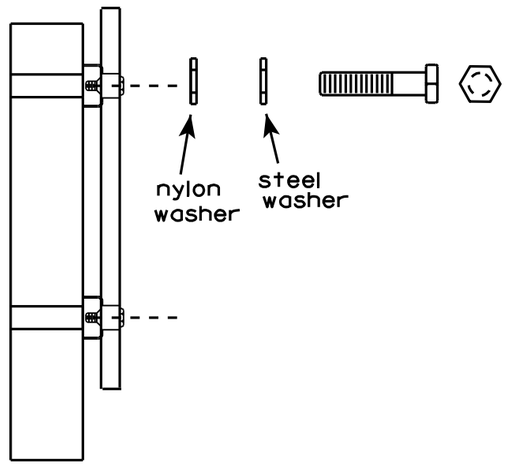


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be ¾" in width and 0.025" thickness.

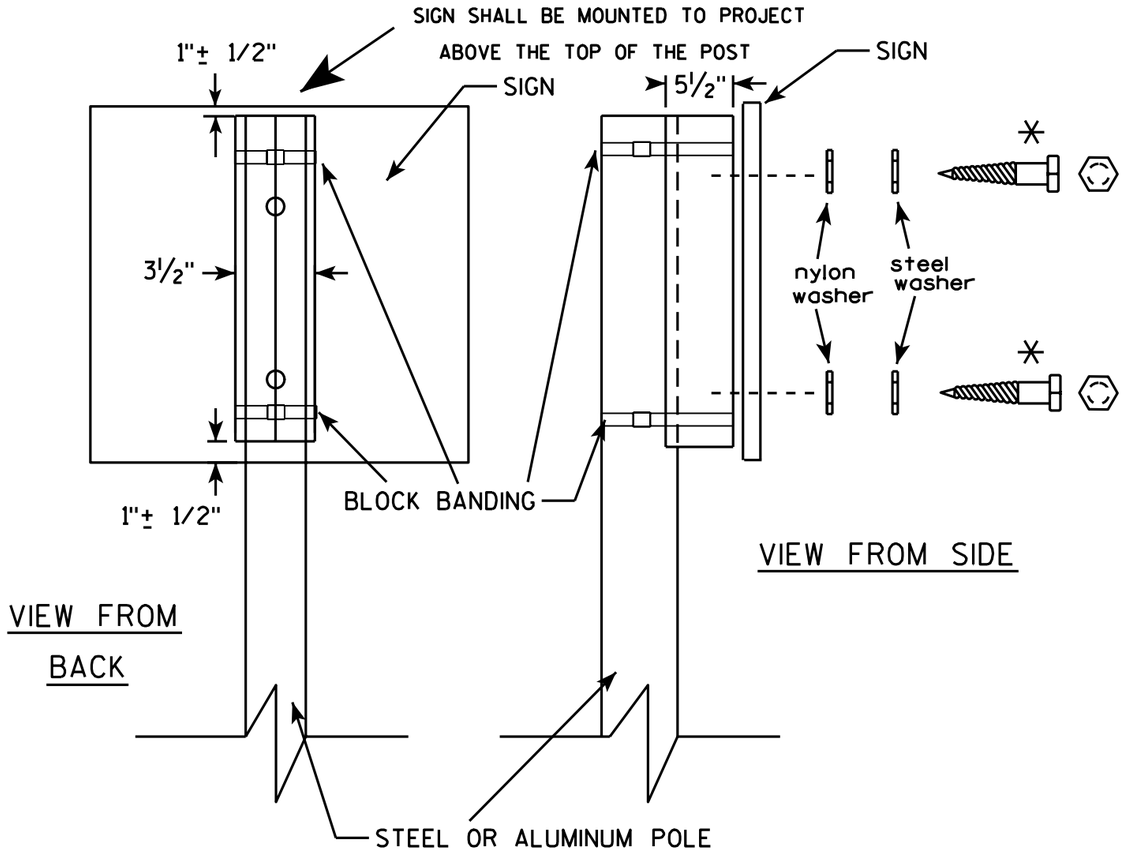
STANDARD SIGN
SIGN BANDING DETAILS

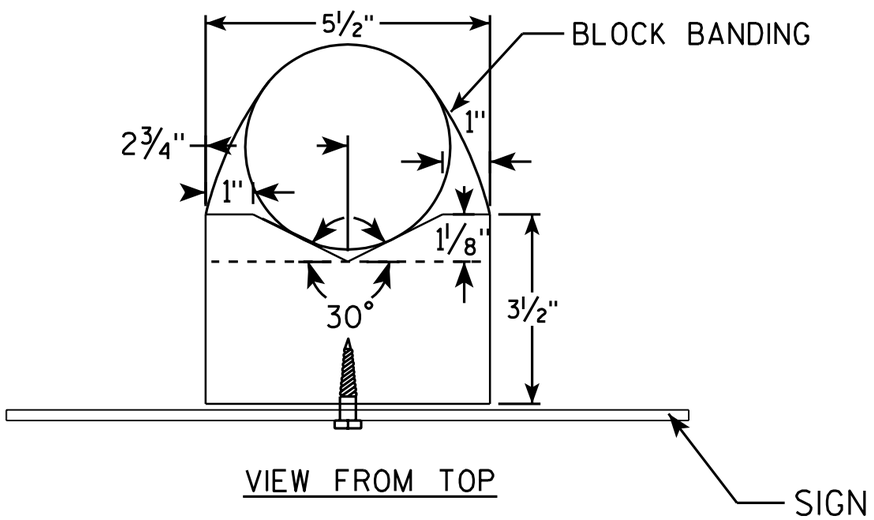
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 181	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

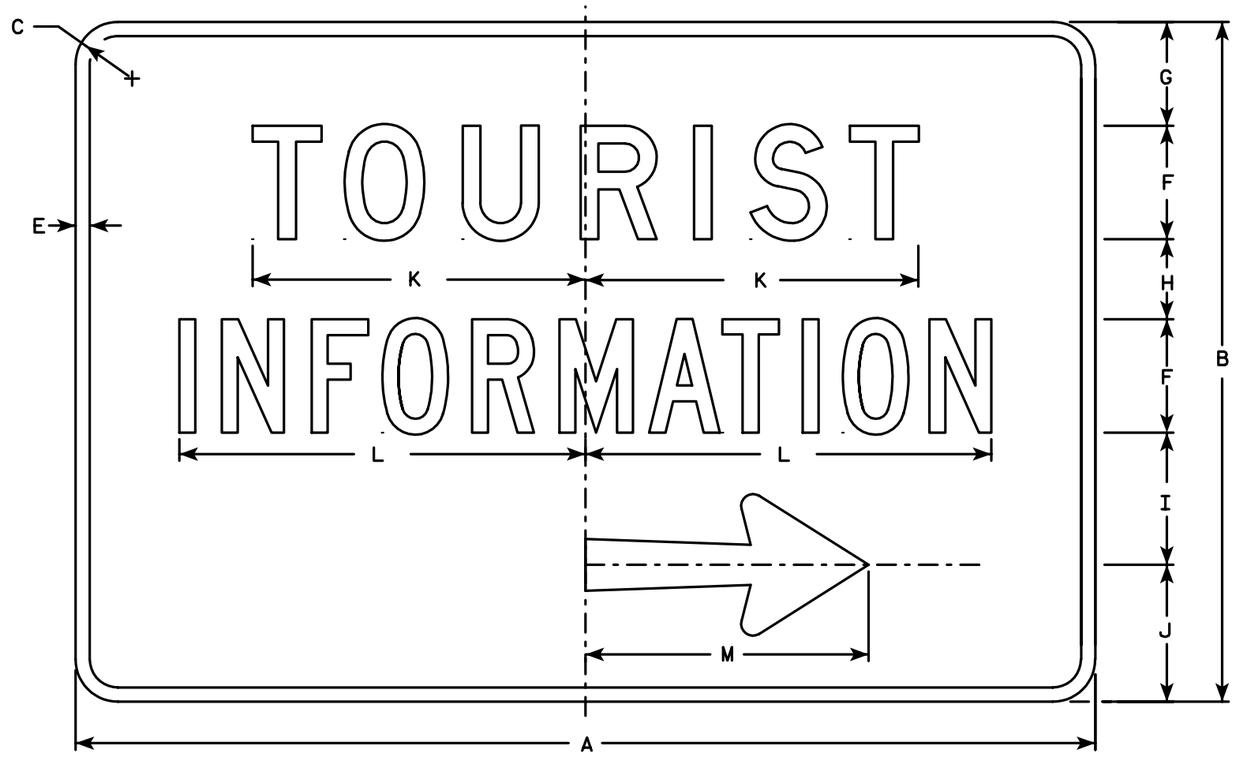
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO: 182 E

FILE NAME : C:\Users\Projects\tr_stdplate\A510.dgn PLOT DATE : 06-AUG-2007 13:37 PLOT BY : ditjph

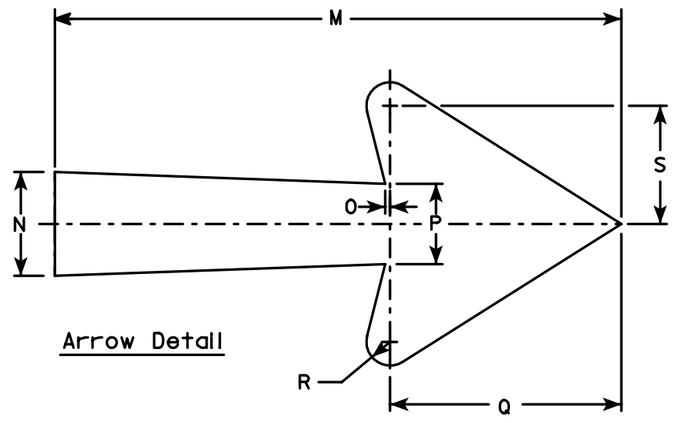
WISDOT/CADDS SHEET 42



D7-59R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White - Type H Reflective
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 are series D
   Line 2 is series C
6. D7-59L is same as D7-59R except the arrow is reversed.



Arrow Detail

Metric equivalent for this sign is:

SIZE	
1	
2	1350 mm X 900 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	54	36	2 1/4		3/4	6	5 1/2	4 1/4	7	7 1/4	17 5/8	21 1/2	15	2 3/4	1/8	2 1/8	6 1/8	5/8	3 1/8								13.5	1.22
3																												
4																												
5																												

STANDARD SIGN
D7-59

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spear for State Traffic Engineer

DATE 1/11/02 PLATE NO. D7-59.6

STATE PROJECT NUMBER:

SHEET NO: 183 E

58,59,60,61,62,63

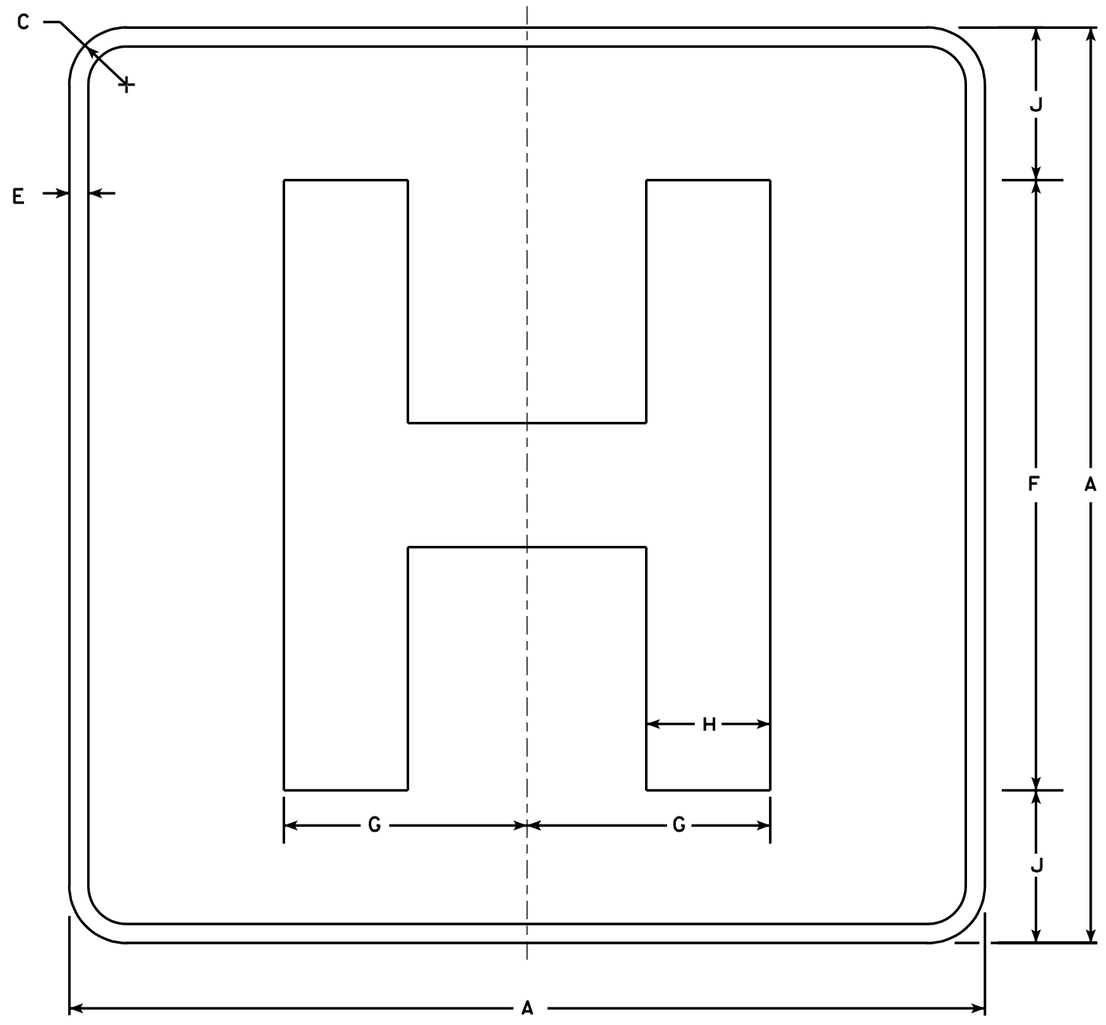
LEVELS ON • 2.3. 5.6. 10.

FILE NAME : C:\Users\Projects\tr_stdplate\D759.DGN PLOT DATE : 22-JAN-2002 08:12 ORG DATE : 5/21/97 Originator : Don Kluever

WISDOT/CADDS SHEET 42

7

7



D9-2

NOTES

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

Metric equivalent for this sign is:

SIZE	
1	450 mmX 450 mm
2	600 mmX 600 mm
3	900 mmX 900 mm
4	X
5	X

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18		1 1/8		1/2	12	4 3/4	2 3/8		3																	4.0
2	24		1 1/2		1/2	16	6 3/8	3 1/4		4																	4.0
3	36		2 1/4		3/4	24	9 1/2	4 7/8		6																	9.0
4																											
5																											

STANDARD SIGN
D9-2

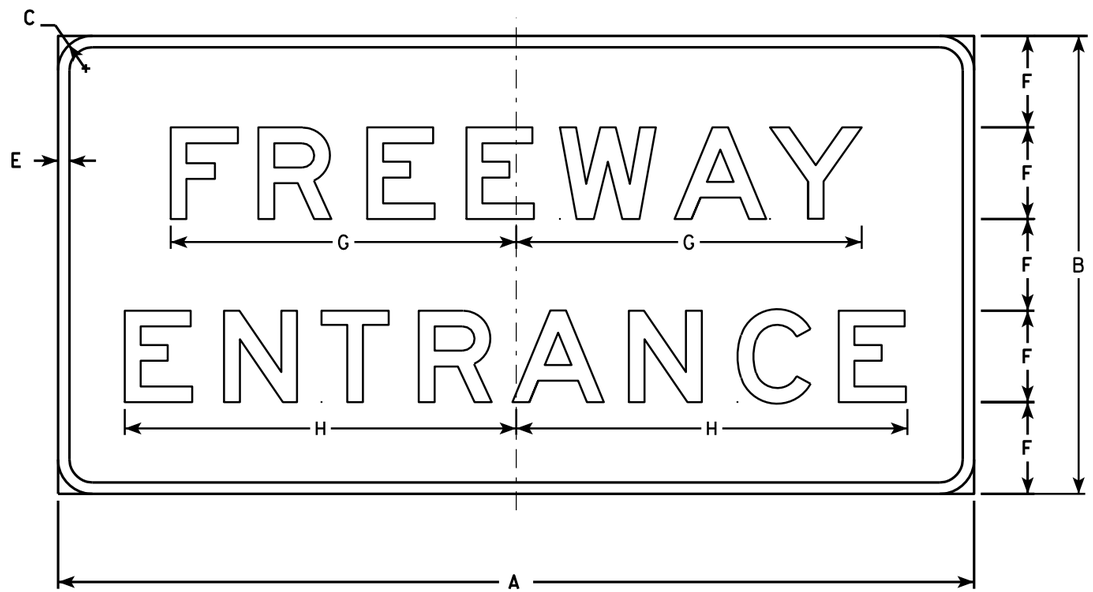
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spong
for State Traffic Engineer

DATE 1/15/02 PLATE NO. D9-2.4

PROJECT NO:

SHEET NO: 184 E



D13-3

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	60	30	2 1/4		3/4	6	22 5/8	25 5/8																			12.5
3																											
4																											
5																											

STANDARD SIGN
D13-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

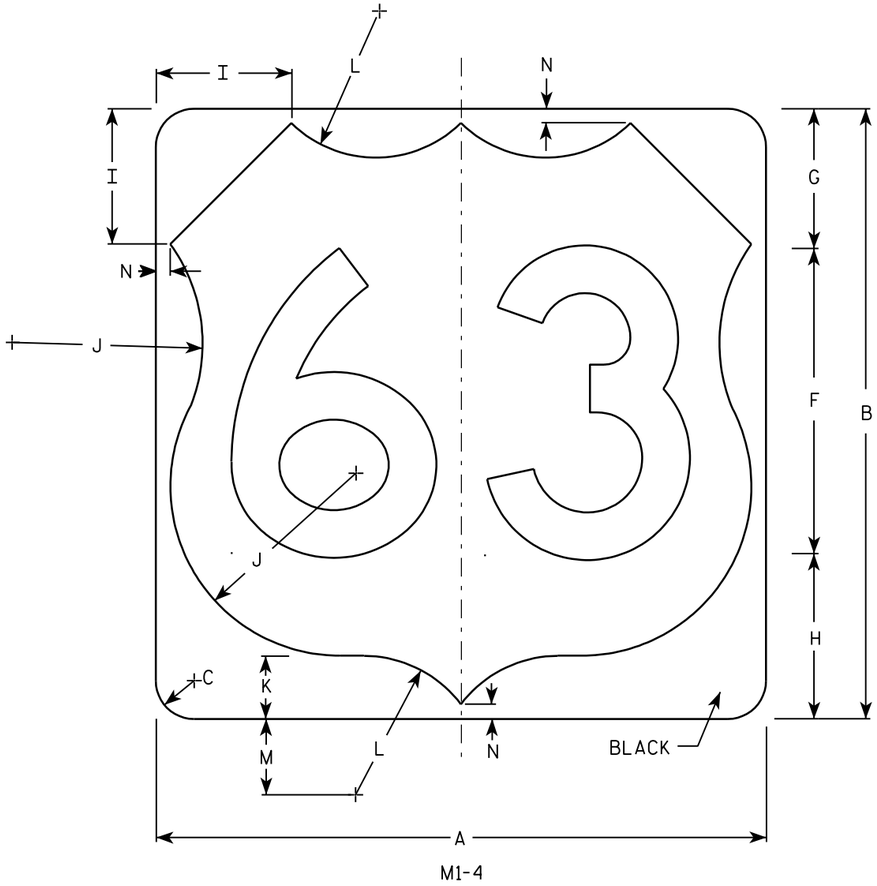
DATE 3/12/13 PLATE NO. D13-3.1

PROJECT NO:

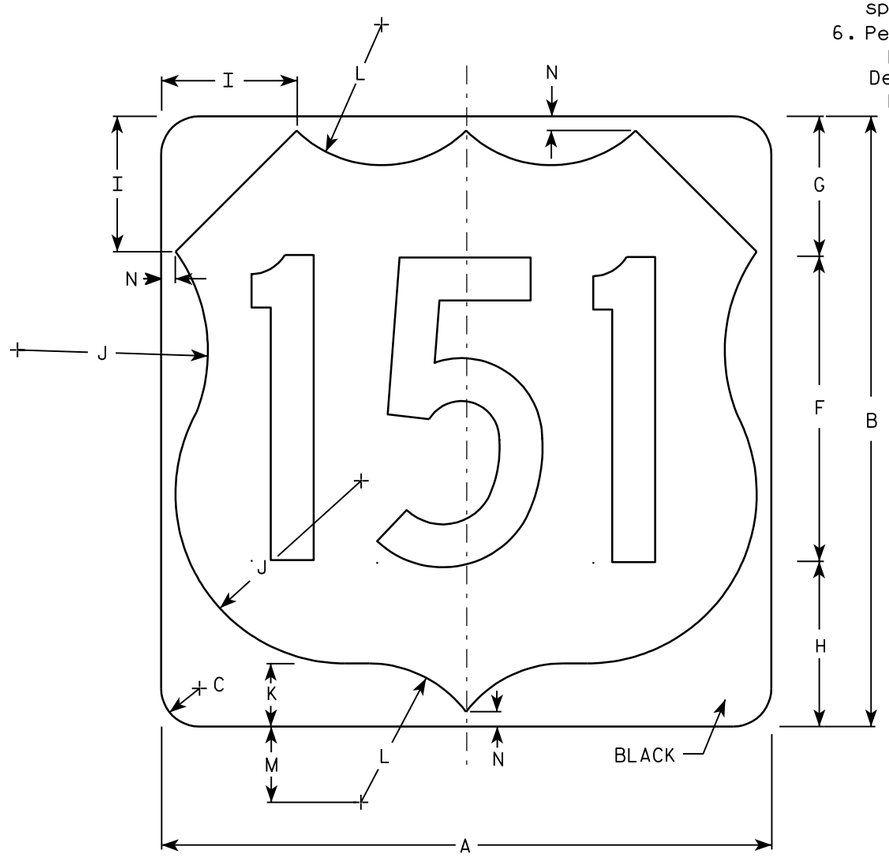
SHEET NO: 185 E

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and adjust spacing as per Plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary signs
   Background - Reflective



M1-4



M1-4

Metric equivalent for this sign is:

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m2
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

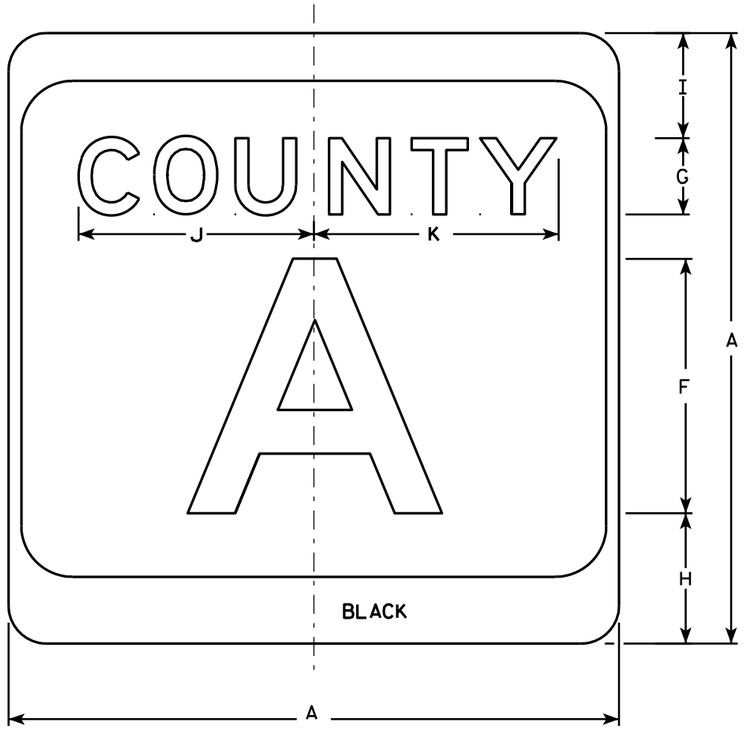
USH MARKER
M1-4 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

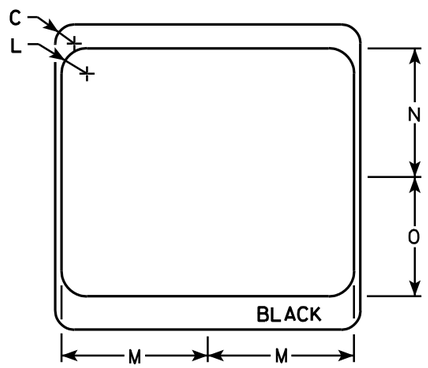
APPROVED Matthew R Rauch
for State Traffic Engineer

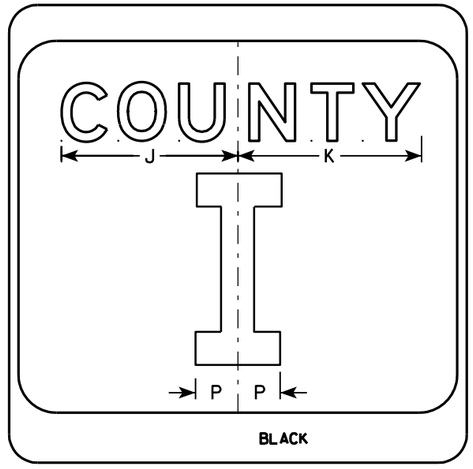
DATE 08/25/05 PLATE NO. M1-4.9

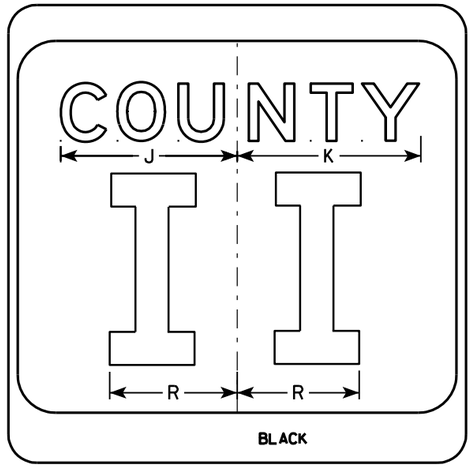
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 186 | E



M1-5A







NOTES

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

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

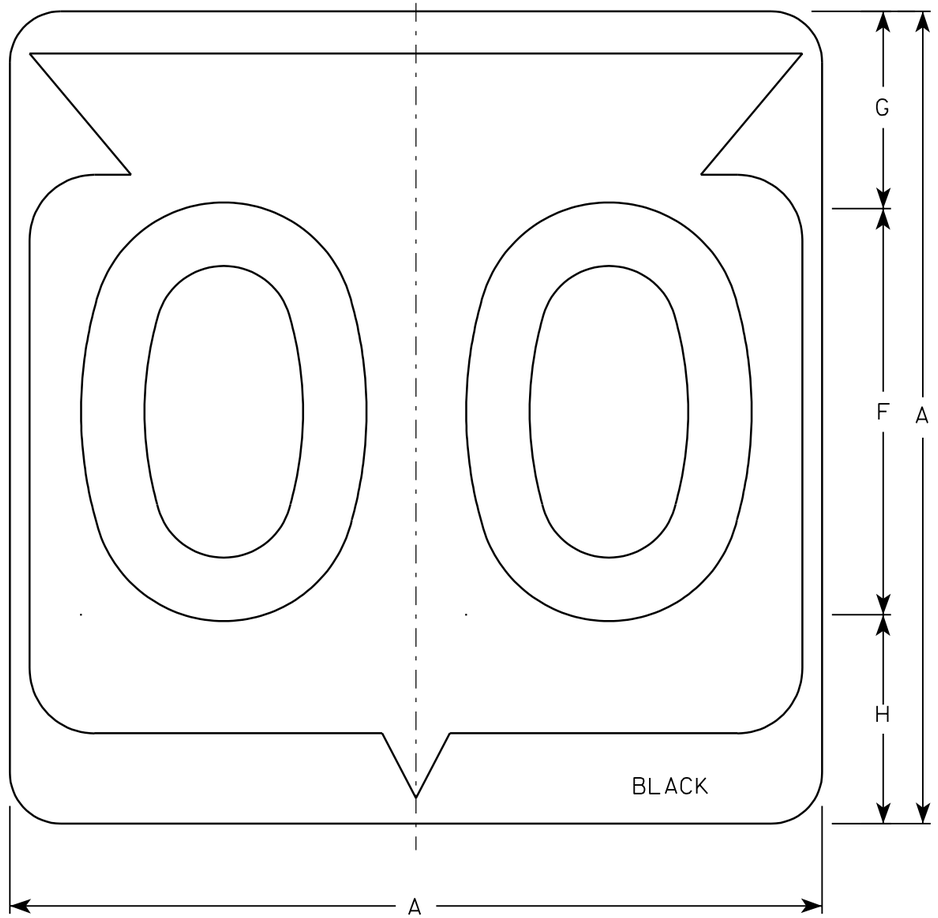
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

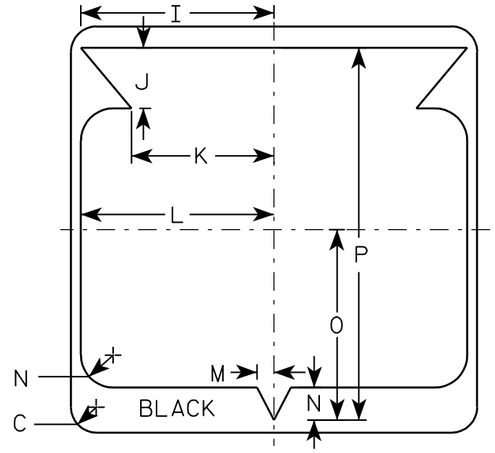
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 187 | E



M1-6

NOTES

1. Sign is Type II - See Note 6 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White & Black - See Note 6
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate Series numerals and adjust spacing as per plate A10-1.
6. Permanent Signs
   Background - Type H Reflective
   Detour or temporary Signs
   Background - Reflective



Metric equivalent for this sign is:

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

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

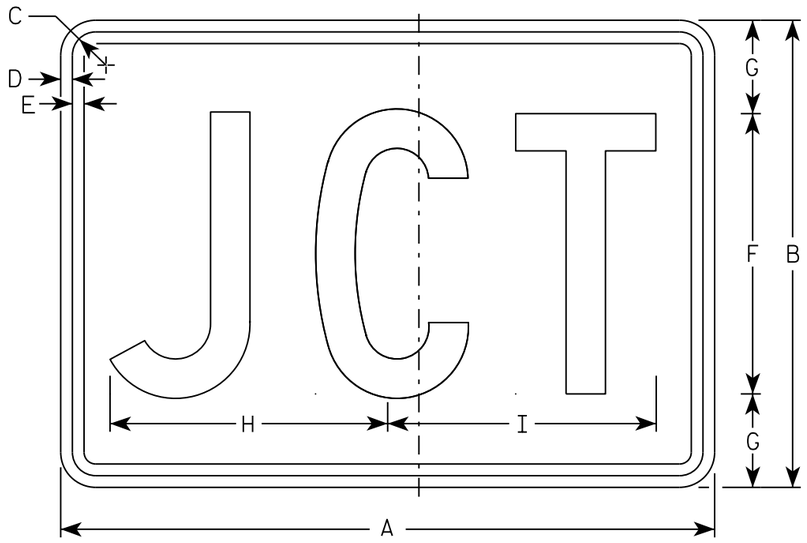
STATE ROUTE MARKER M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

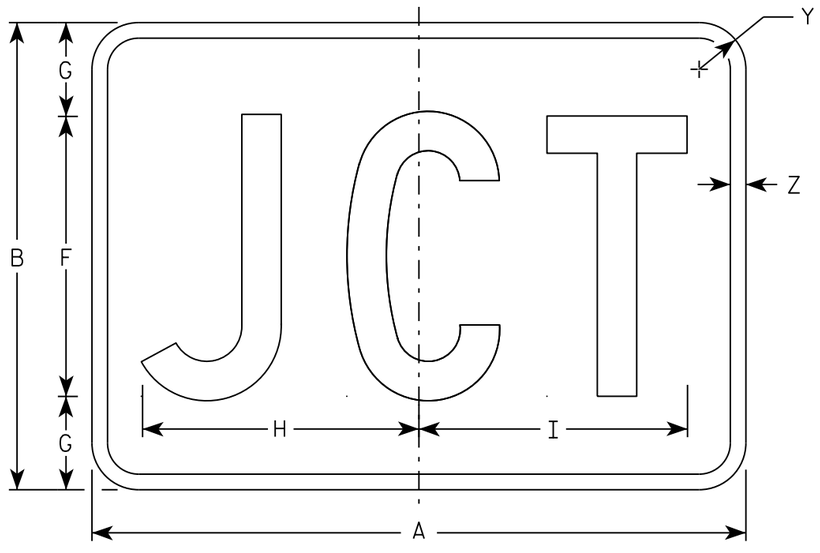
APPROVED Chester J Spang for State Traffic Engineer

DATE 3/20/02 PLATE NO. M1-6.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 188	E



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
2. Color:
   Background - See note 5
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M2-1 Background - White
   Message - Black
   MB2-1 Background - Blue
   Message - White
   MK2-1 Background - Green
   Message - White
   MM2-1 Background - White
   Message - Green
   MN2-1 Background - Brown
   Message - White
   MP2-1 Background - White
   Message - Blue
   MR2-1 Background - Brown
   Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

STANDARD SIGN
M2-1

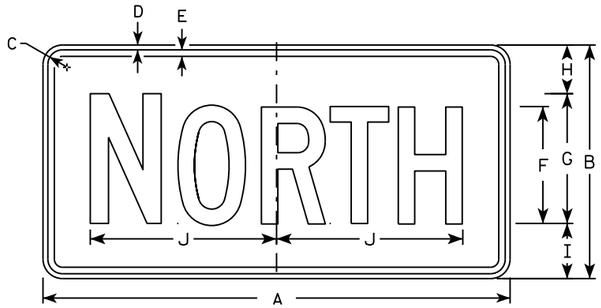
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

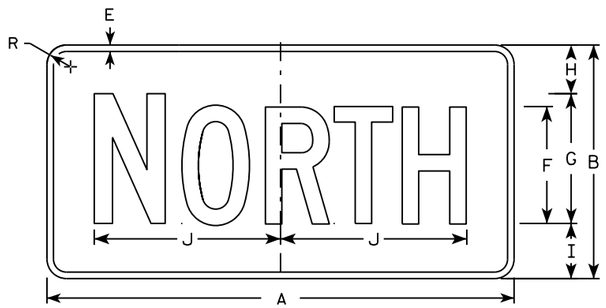
DATE 10/15/15 PLATE 189 12-1.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M21.DGN PLOT DATE : 01-DEC-2015 17:54 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 4.864603:1.000000



M3-1
MM3-1
MP3-1



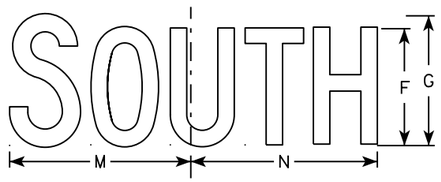
MB3-1
MK3-1
MN3-1



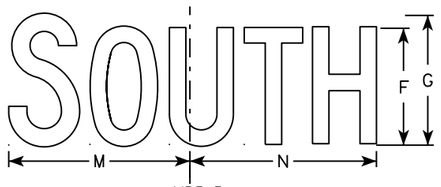
M3-2
MM3-2
MP3-2



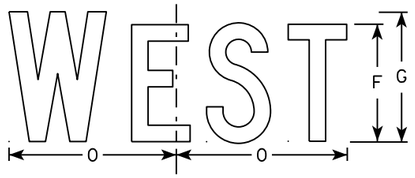
MB3-2
MK3-2
MN3-2



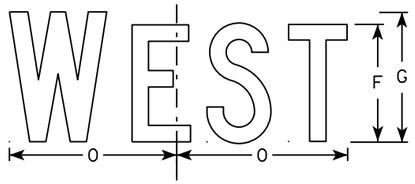
M3-3
MM3-3
MP3-3



MB3-3
MK3-3
MN3-3



M3-4
MM3-4
MP3-4



MB3-4
MK3-4
MN3-4

NOTES

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

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

STANDARD SIGNS
M3-1 thur M3-4
SERIES

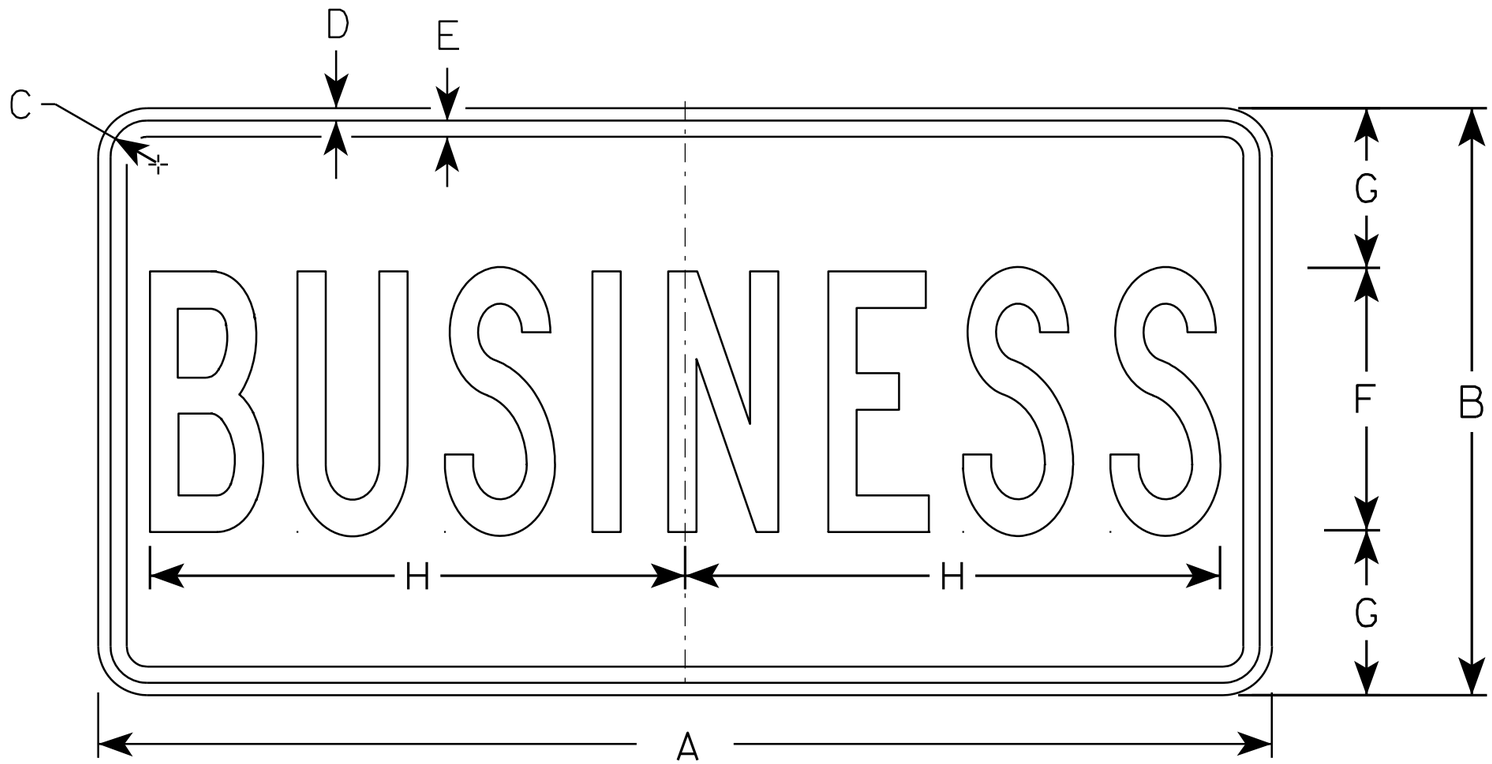
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew P Rauch for State Traffic Engineer

DATE 10/15/15 PLATE NO M3-1.14

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

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



M4-3

NOTES

1. Sign is Type II - See Note 5 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White - See Note 5
   Message - Black
3. Message Series - B
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Permanent Signs
   Background - Type H Reflective
   Detour or other temporary Signs
   Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	5	3 1/2	9 5/8																			2.0
3	36	18	1 1/8	3/8	1/2	8	5	16 3/8																			4.5
4																											
5																											

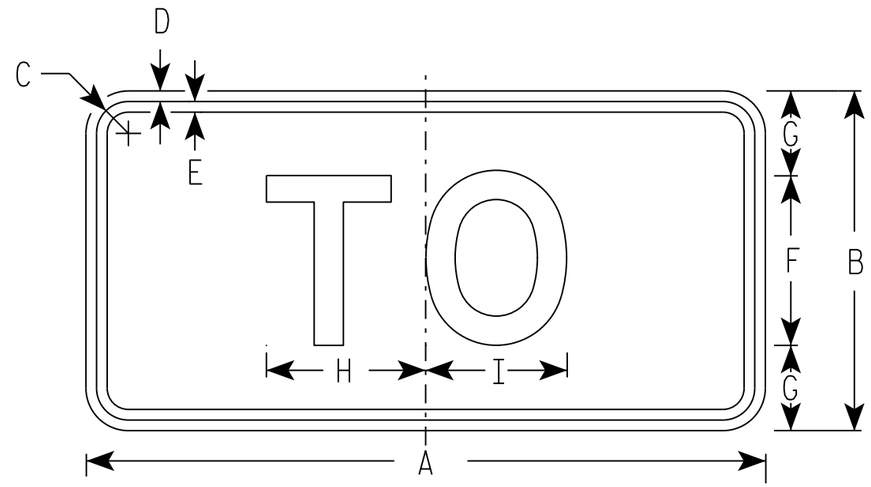
STANDARD SIGN
M4-3

WISCONSIN DEPT OF TRANSPORTATION

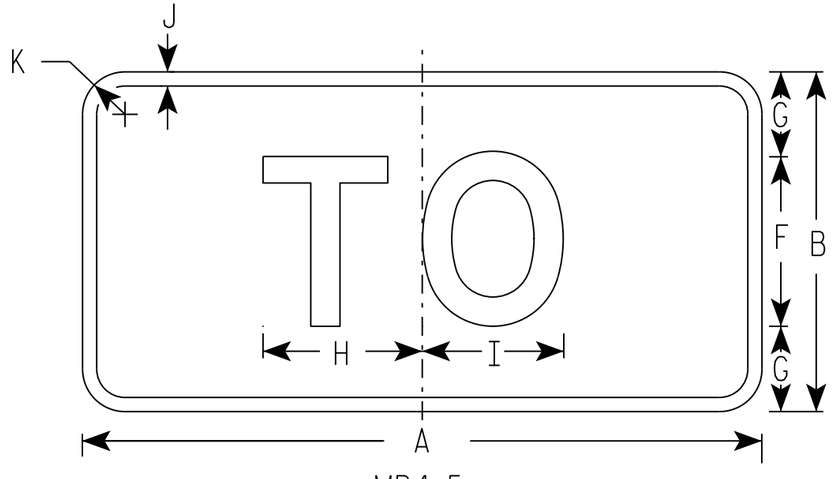
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-3.5

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 191 | E



M4-5
MM4-5
MP4-5



MB4-5
MK4-5
MN4-5

NOTES

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

   MB4-5 Background - Blue
   Message - White

   MK4-5 Background - Green
   Message - White

   MM4-5 Background - White
   Message - Green

   MN4-5 Background - Brown
   Message - White

   MP4-5 Background - White
   Message - Blue

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

STANDARD SIGN
M4-5

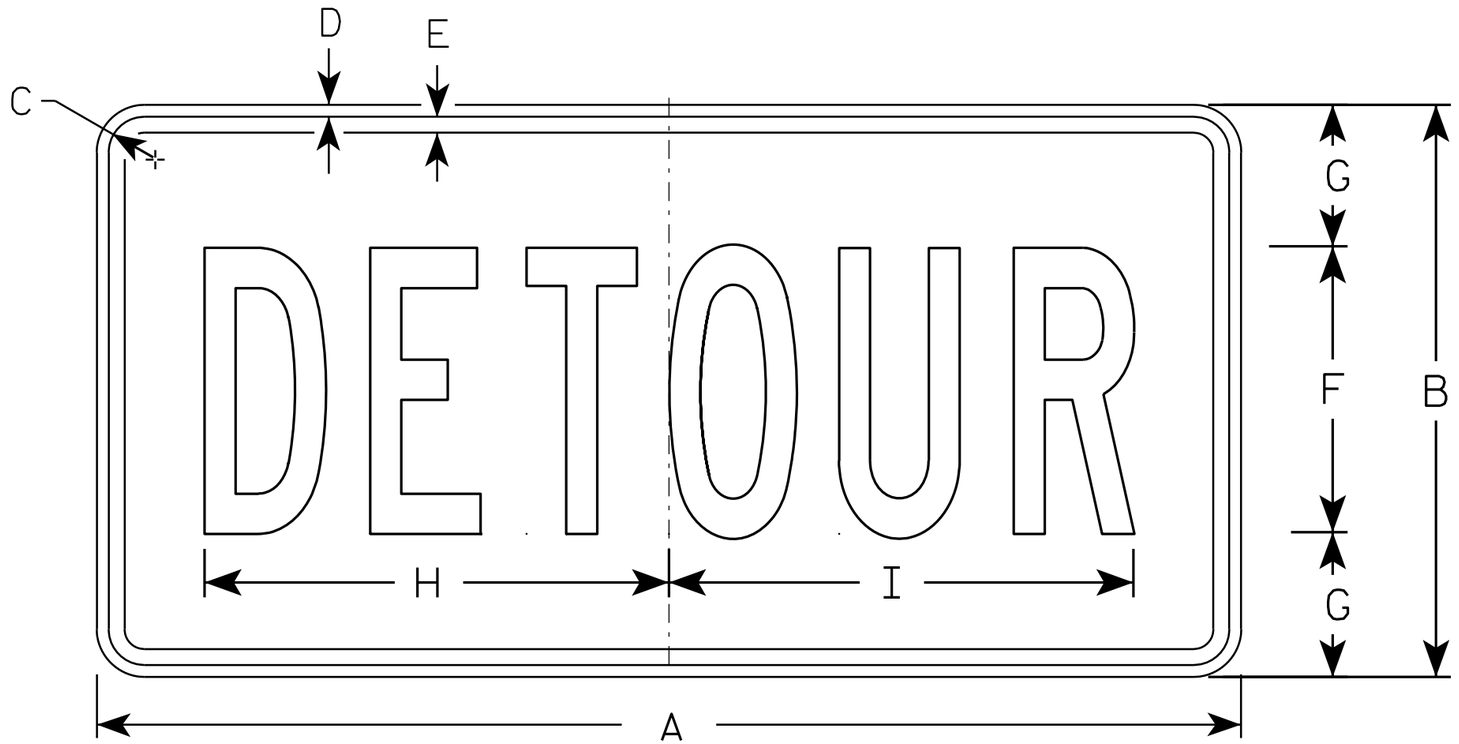
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 192 M4-5.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M45.DGN PLOT DATE : 01-DEC-2015 17:55 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000



M4-8

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

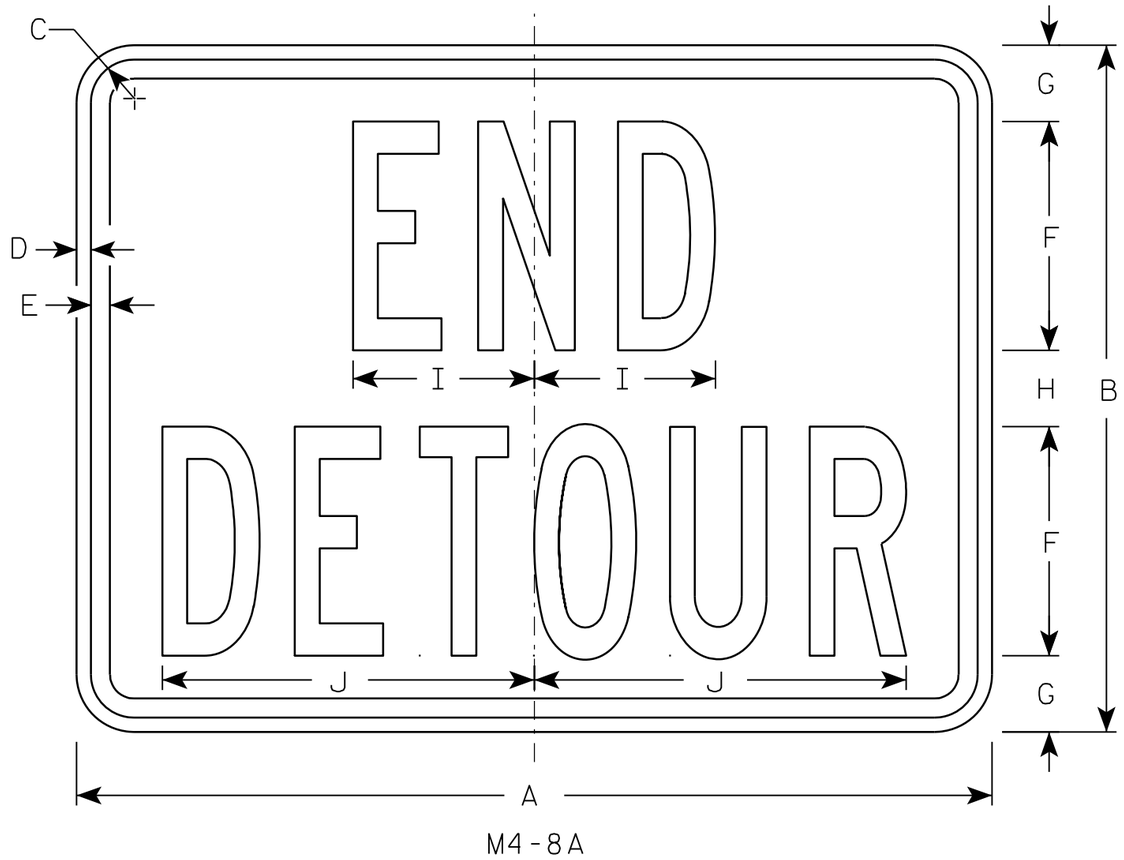
STANDARD SIGN
M4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 193	E



M4-8A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

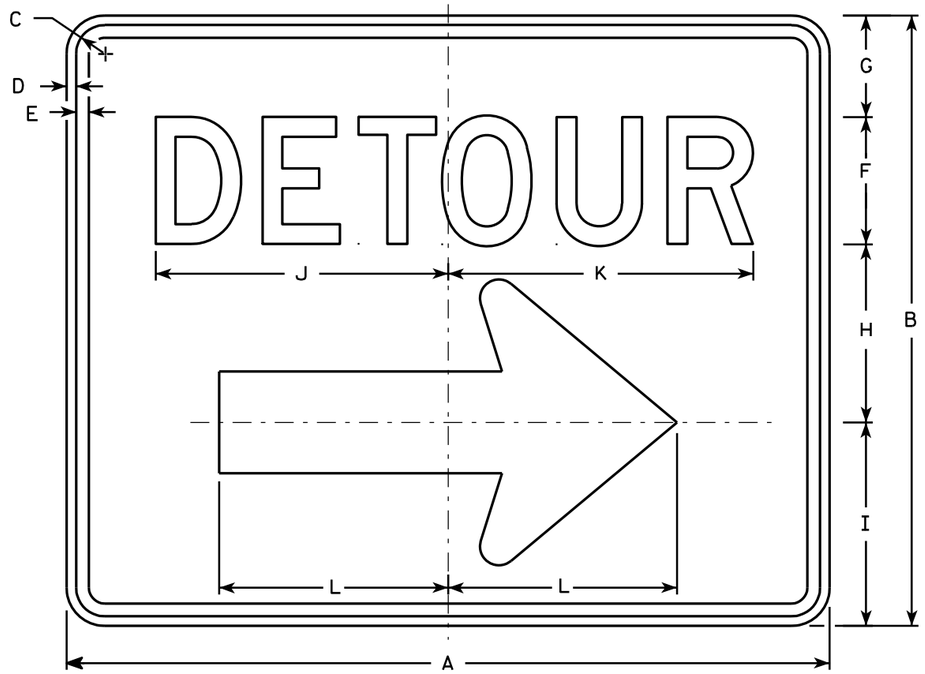
STANDARD SIGN
M4-8A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2

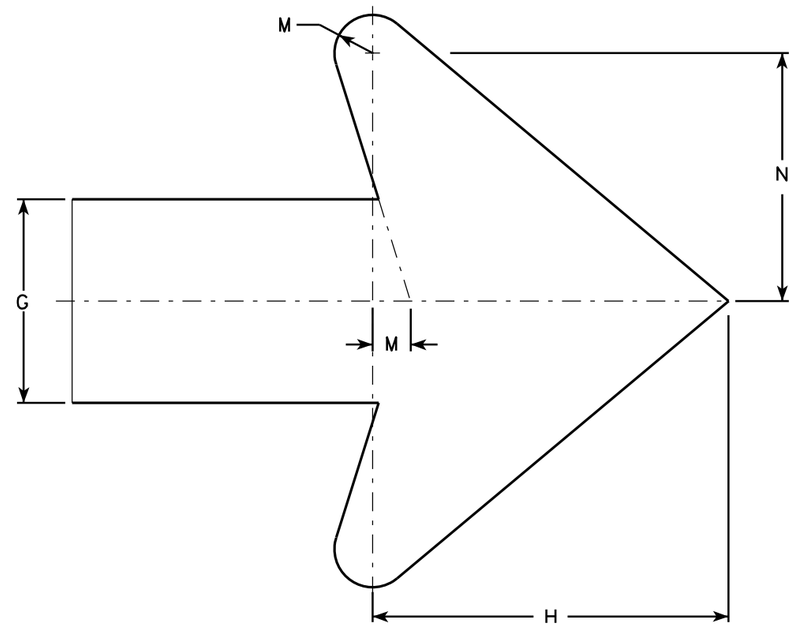
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 194	E



M4-9R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M4-9L is the same as M4-9R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

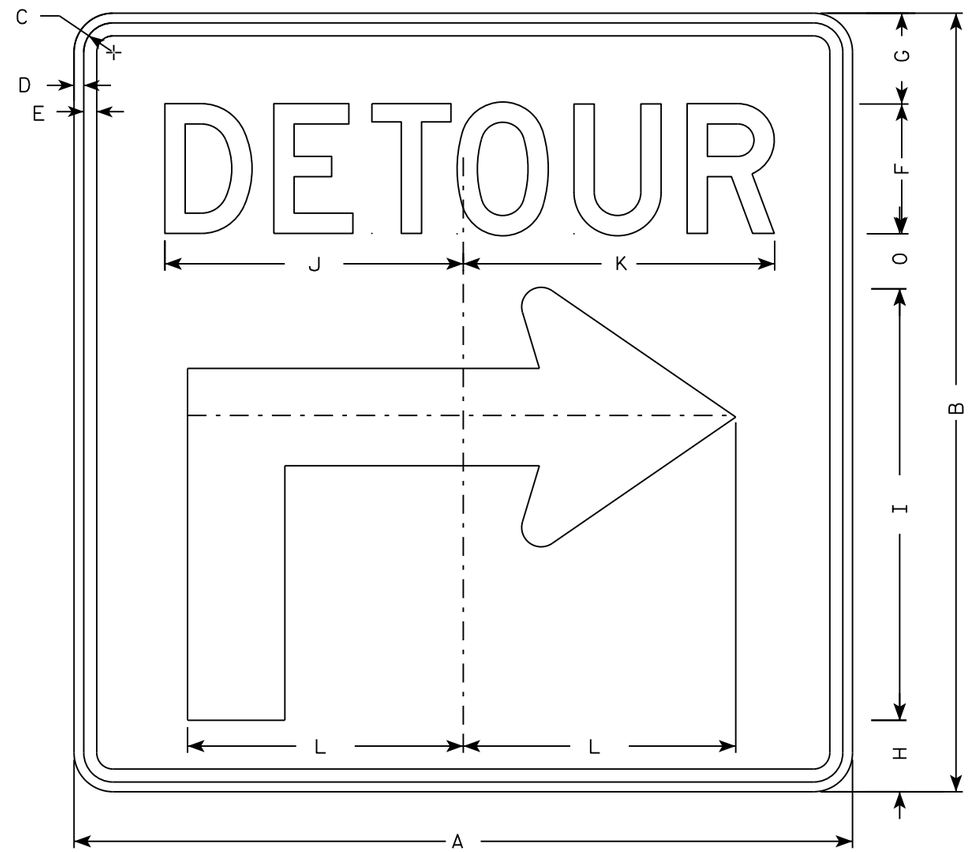
STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

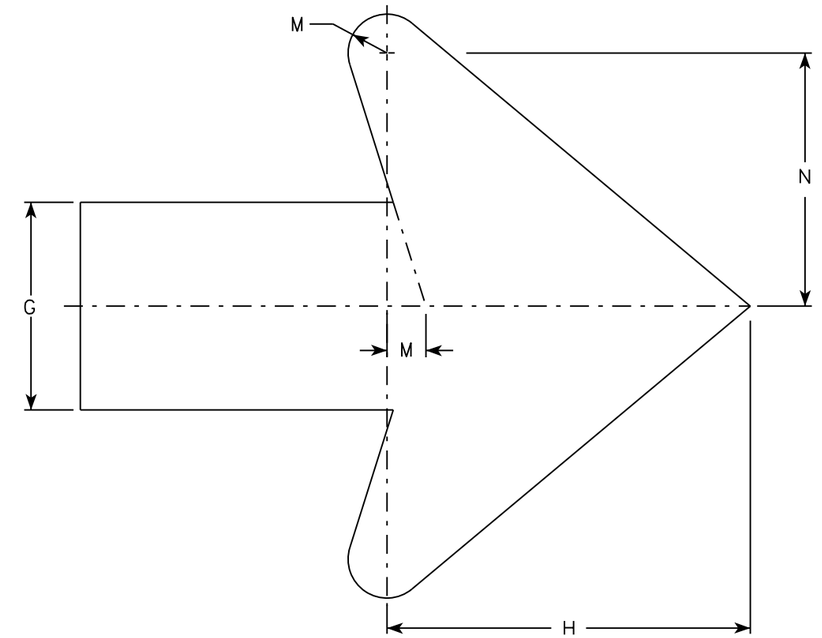
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 195	E



M4-59R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   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.
5. M4-59L is the same as M4-59R except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	30	1 1/8	3/8	1/2	5	3 1/2	2 3/4	16 5/8	11 1/2	12	10 1/2	3/4	4 7/8	2 1/8												6.25
3	30	30	1 1/8	3/8	1/2	5	3 1/2	2 3/4	16 5/8	11 1/2	12	10 1/2	3/4	4 7/8	2 1/8												6.25
4	48	48	1 3/8	1/2	5/8	8	5 5/8	4 3/8	26 5/8	20 5/8	20 1/2	17	1 1/8	6 7/8	3 3/8												16.0
5	48	48	1 3/8	1/2	5/8	8	5 5/8	4 3/8	26 5/8	20 5/8	20 1/2	17	1 1/8	6 7/8	3 3/8												16.0

STANDARD SIGN
M4-59 L&R

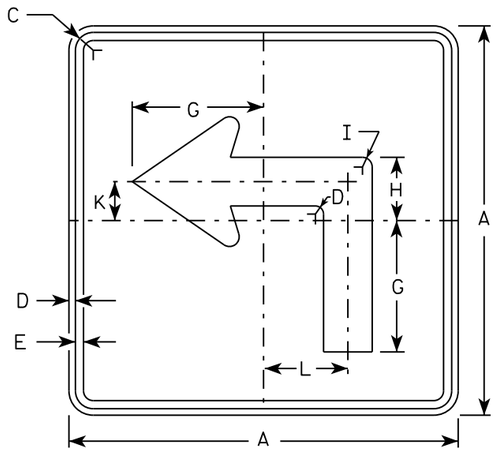
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

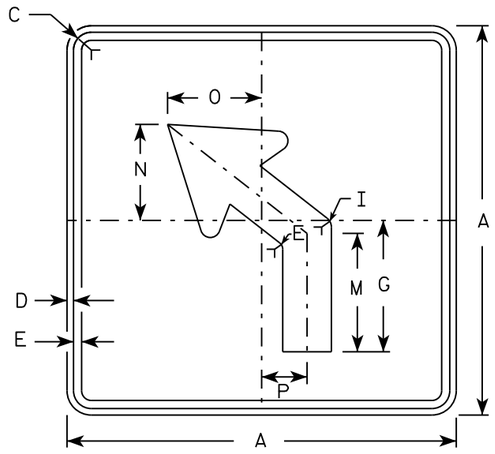
DATE 11/10/15 PLATE M4-59.1

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

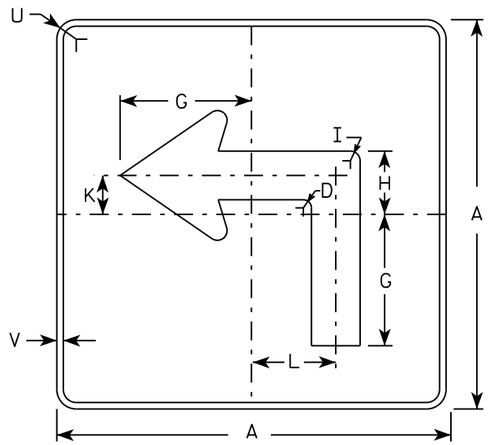
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M459.DGN PLOT DATE : 01-DEC-2015 18:05 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 5.837526:1.000000



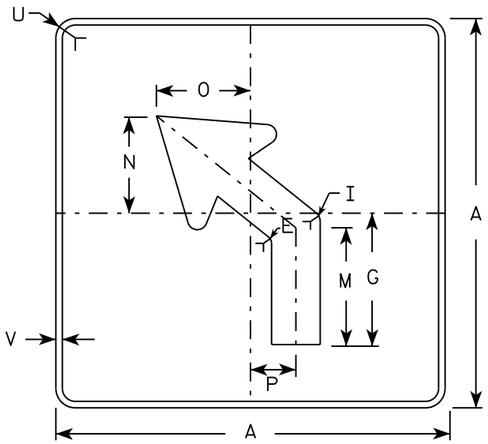
M5-1L
MM5-1L
MO5-1L
MP5-1L



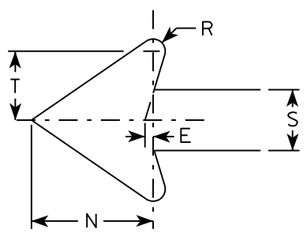
M5-2L
MM5-2L
MO5-2L
MP5-2L



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



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



NOTES

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

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

STANDARD SIGN
M5-1 & M5-2

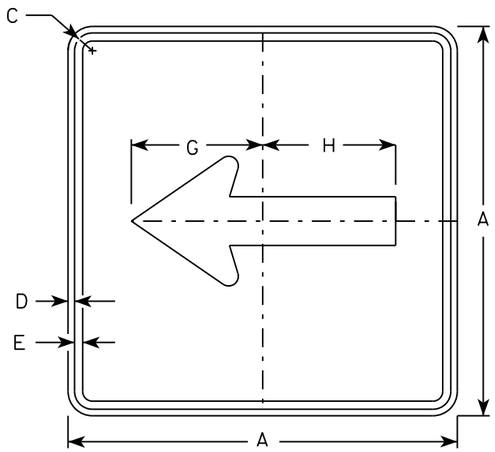
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

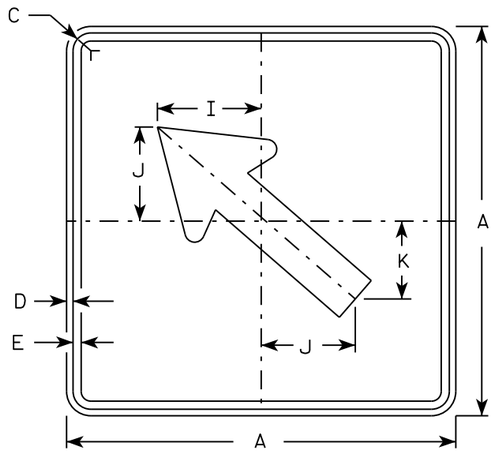
DATE 10/15/15 PLATE NO. M5-1.13

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

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



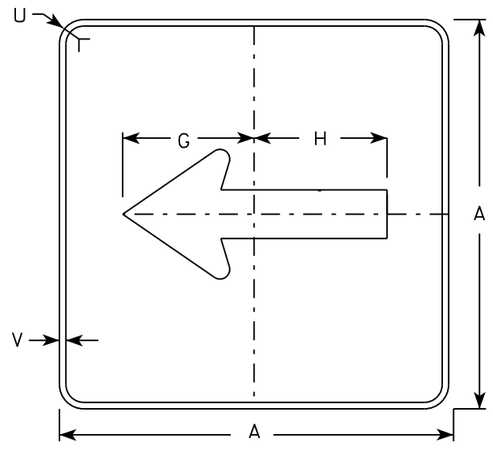
M6-1
MM6-1
MO6-1
MP6-1



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

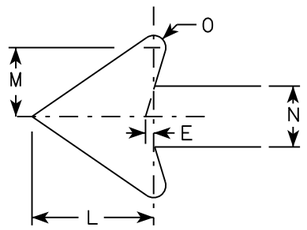
NOTES

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



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

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



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

STANDARD SIGN M6-1 & M6-2 SERIES

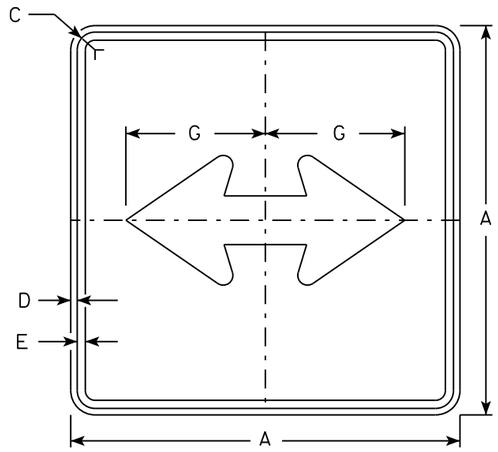
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

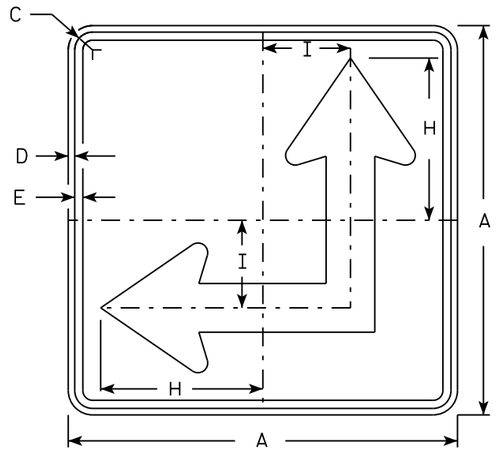
DATE 10/15/15 PLATE 198 M6-1.15

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

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



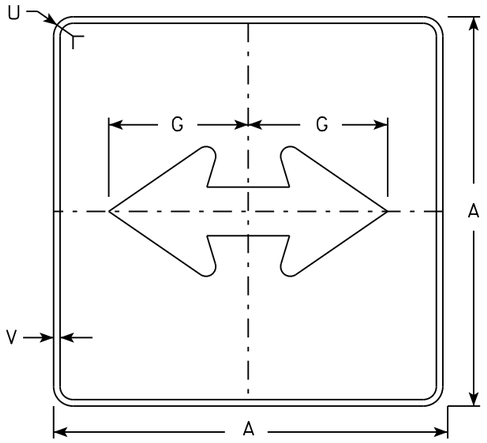
M6-4
MM6-4
MO6-4
MP6-4



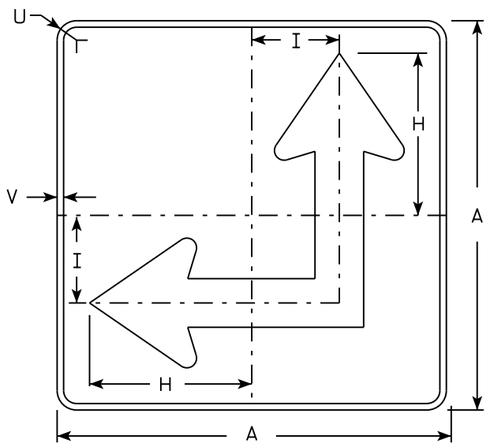
M6-6
MM6-6
MO6-6
MP6-6

NOTES

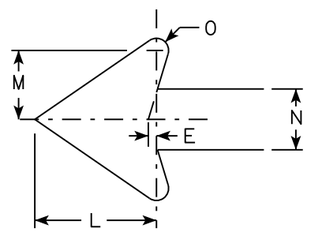
1. Signs are Type II - Type H except as Shown
2. Color:
   Background - See Note 4
   Message - See Note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. M6-4 and M6-6 Background - White
   Message - Black
   MB6-4 and MB6-6 Background - Blue
   Message - White
   MK6-4 and MK6-6 Background - Green
   Message - White
   MM6-4 and MM6-6 Background - White
   Message - Green
   MN6-4 and MN6-6 Background - Brown
   Message - White
   MO6-4 and MO6-6 Background - Orange - Type F Reflective
   Message - Black
   MP6-4 and MP6-6 Background - White
   Message - Blue
   MR6-4 and MR6-6 Background - Brown
   Message - Yellow
5. M6-6R same as M6-6L except arrow points ahead and right.



MB6-4
MK6-4
MN6-4
MR6-4



MB6-6
MK6-6
MN6-6
MR6-6



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN
M6-4 & M6-6
SERIES

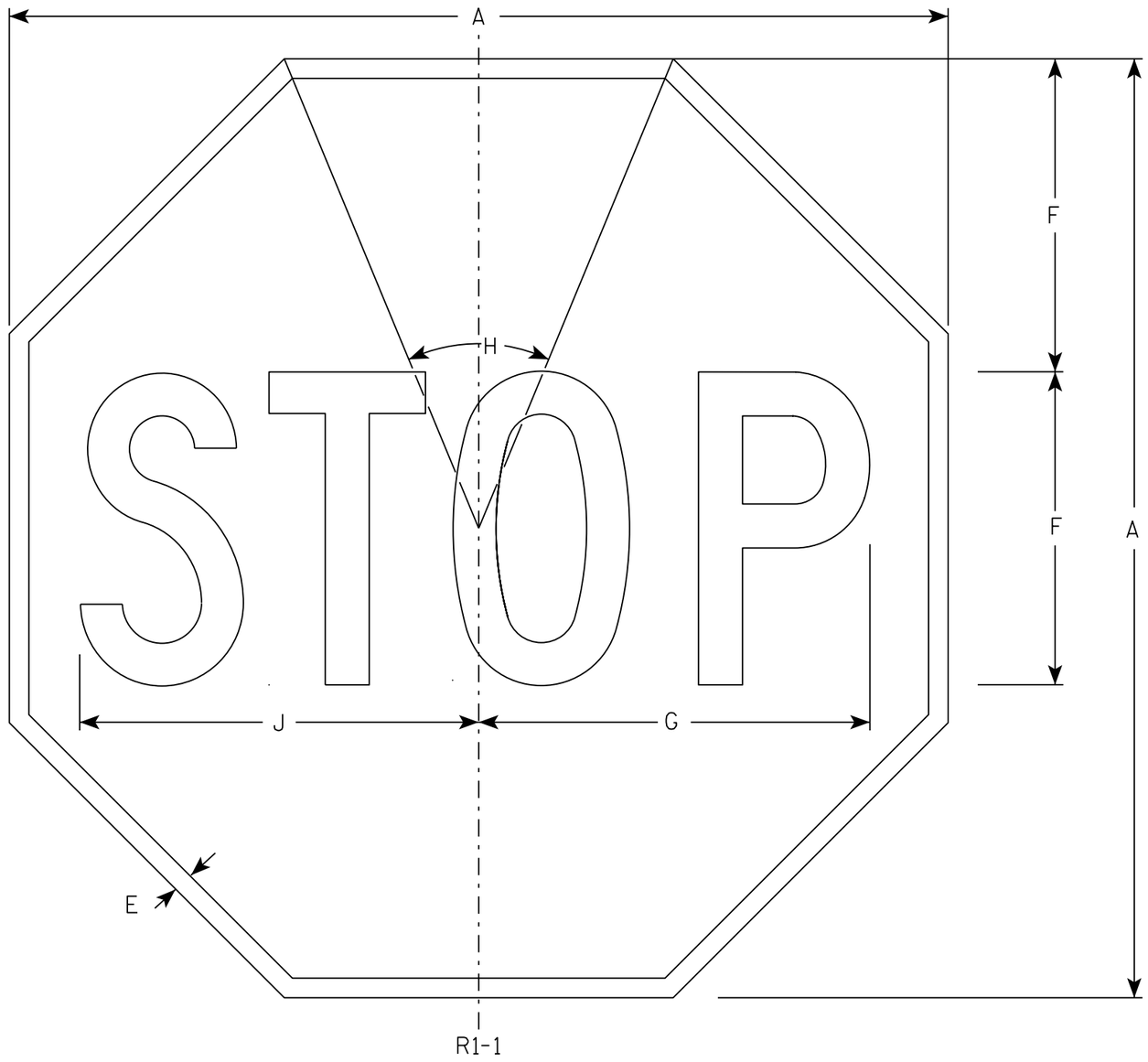
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE 199 M6-4.10

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M64.DGN PLOT DATE : 01-DEC-2015 17:58 PLOT BY : $$ platuser $$ PLOT NAME : PLOT SCALE : 11.675051:1.000000



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

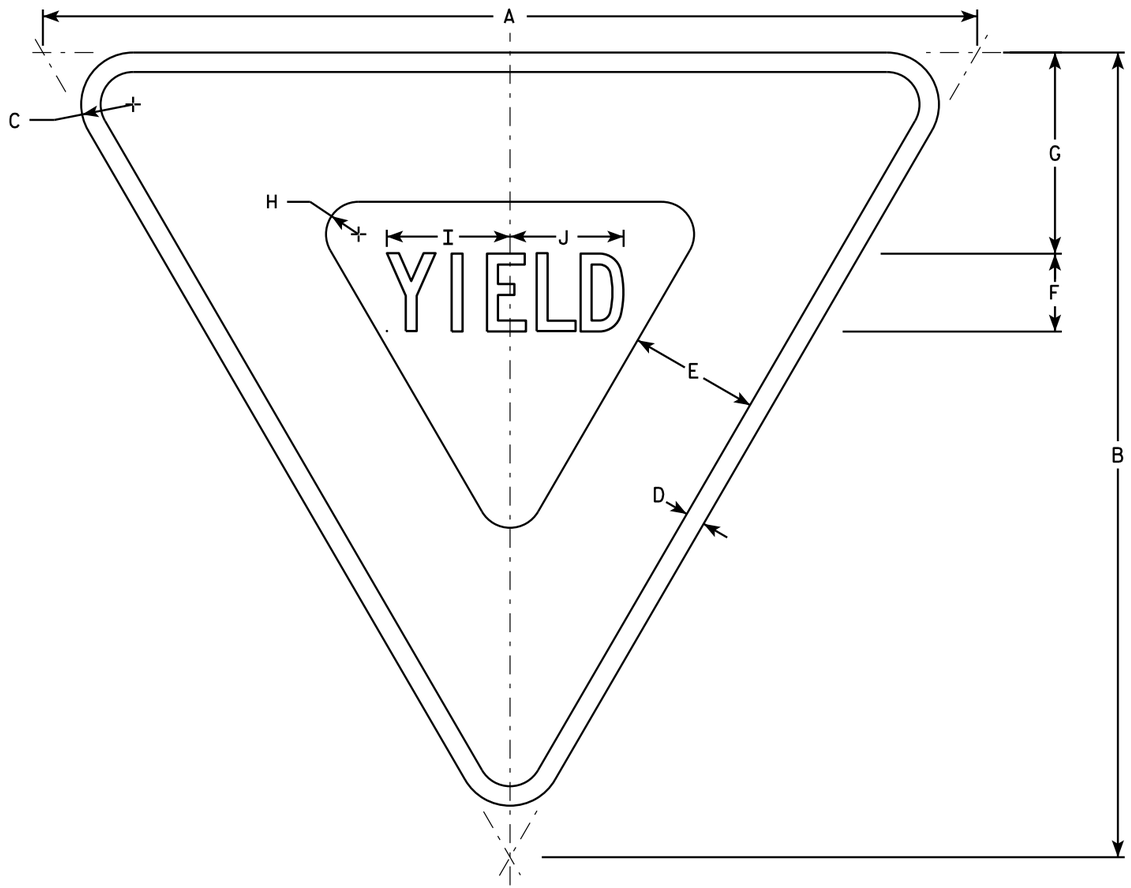
STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 200	E



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

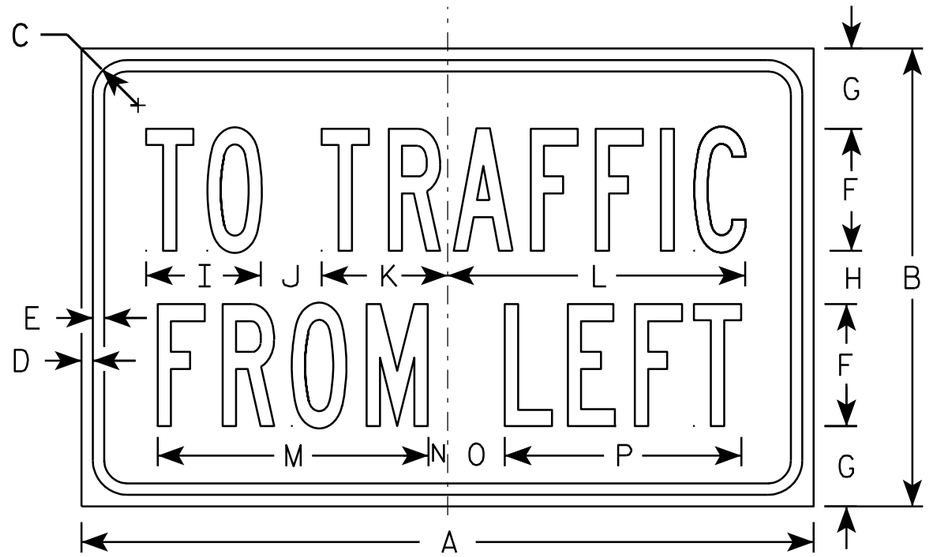
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE R1-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R1-54

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 - B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
2M	24	15	1 1/8	3/8	3/8	4	2 5/8	1 3/4	3 3/4	2	4 1/8	9 3/4	8 7/8	5/8	1 7/8	7 3/4											2.5
3																											
4																											
5																											

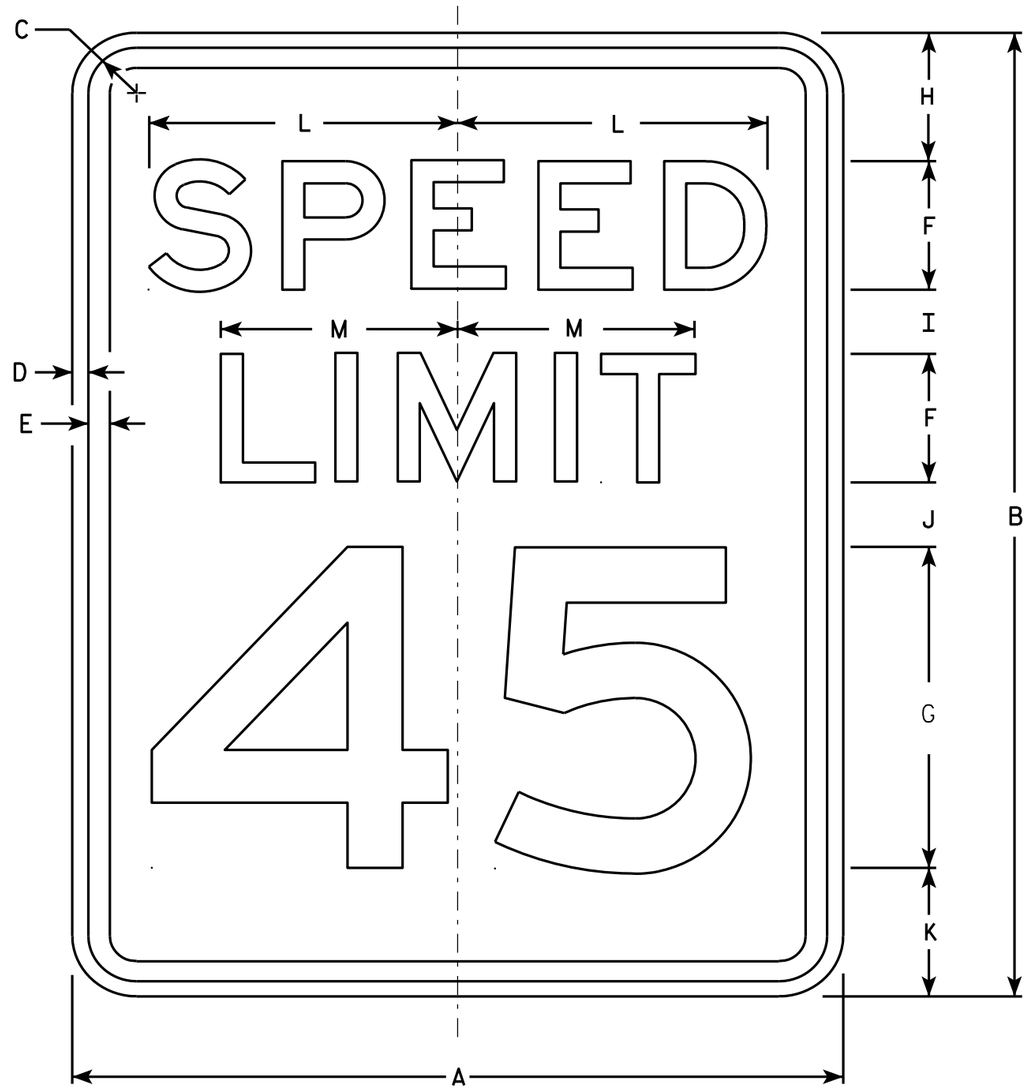
STANDARD SIGN
R1-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-54.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 202	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

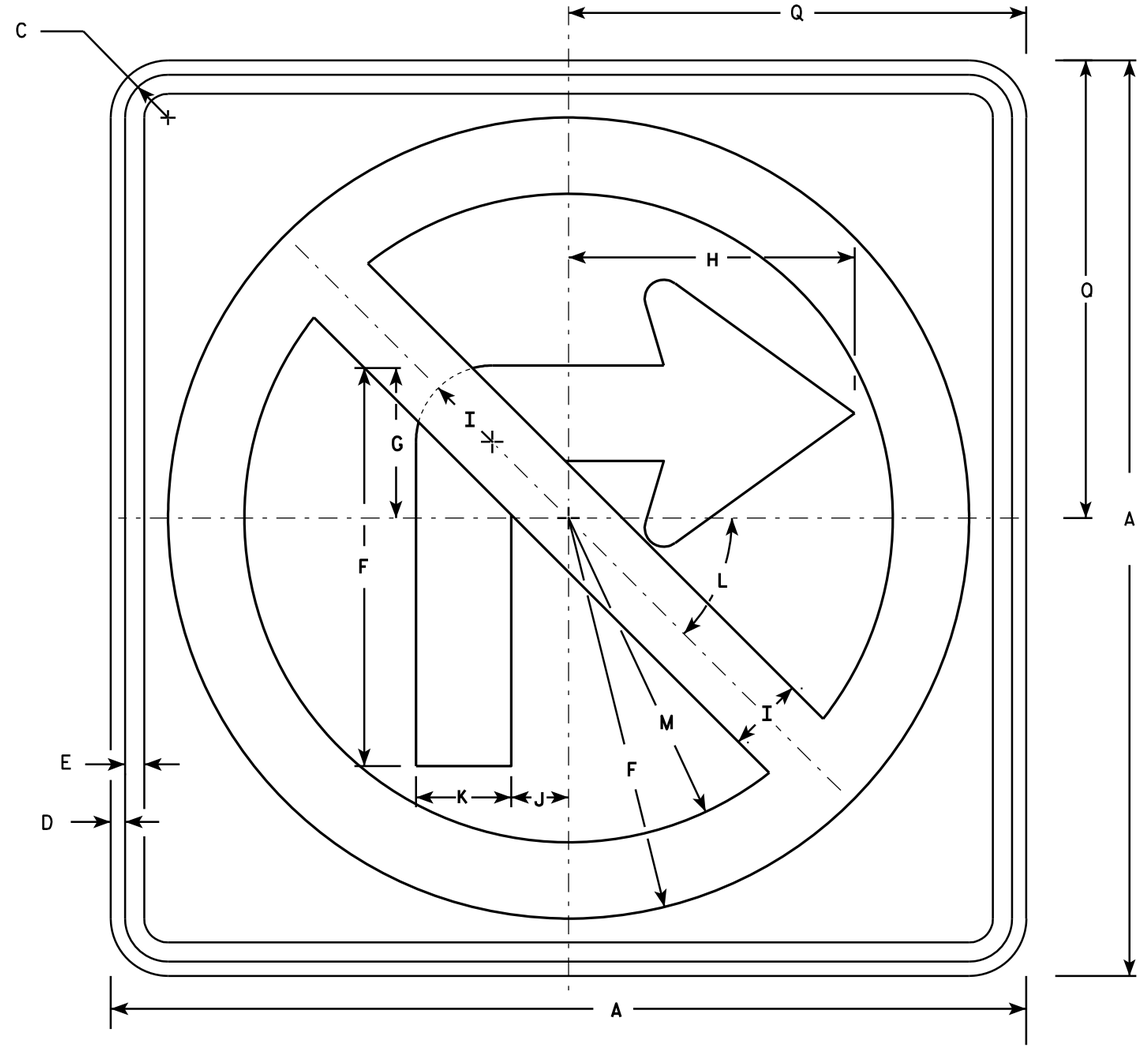
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

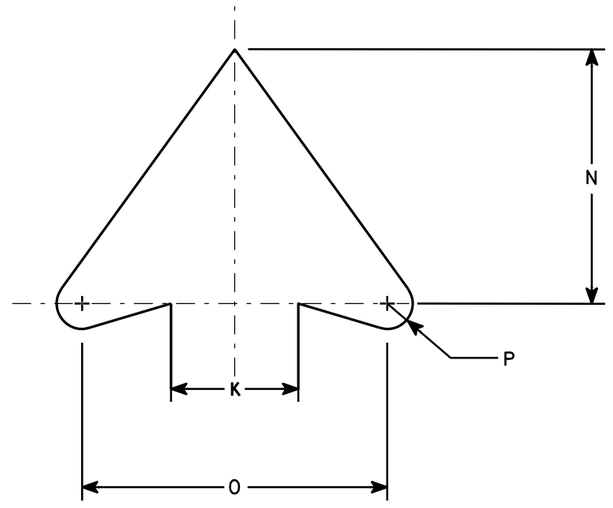
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 203	E



R3-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

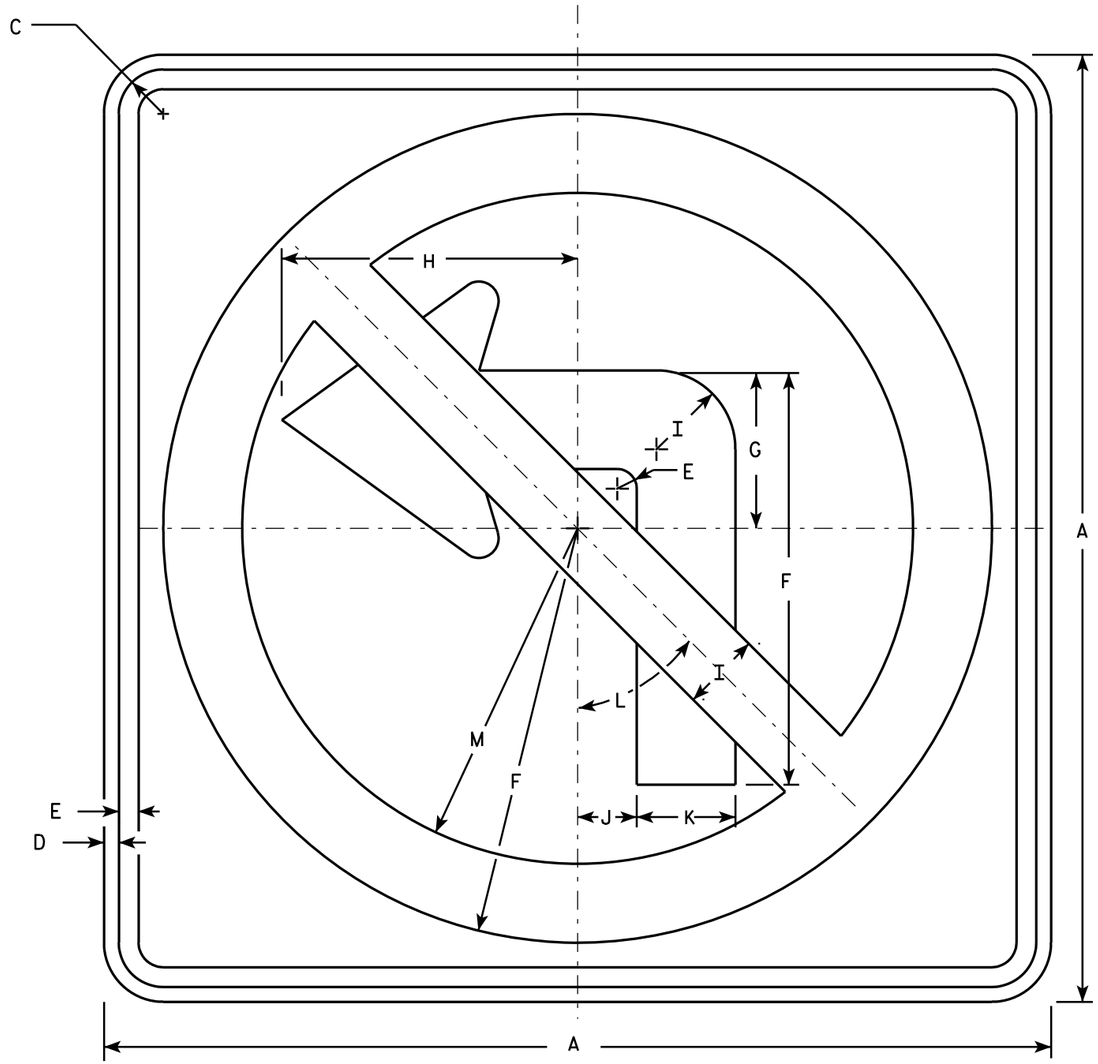
STANDARD SIGN
R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

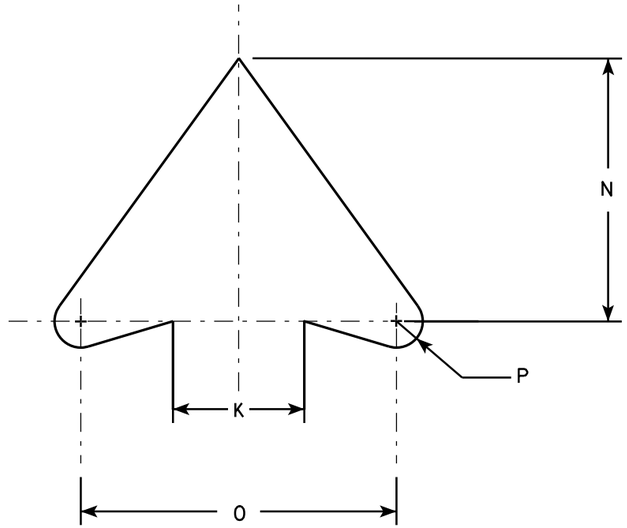
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 204	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

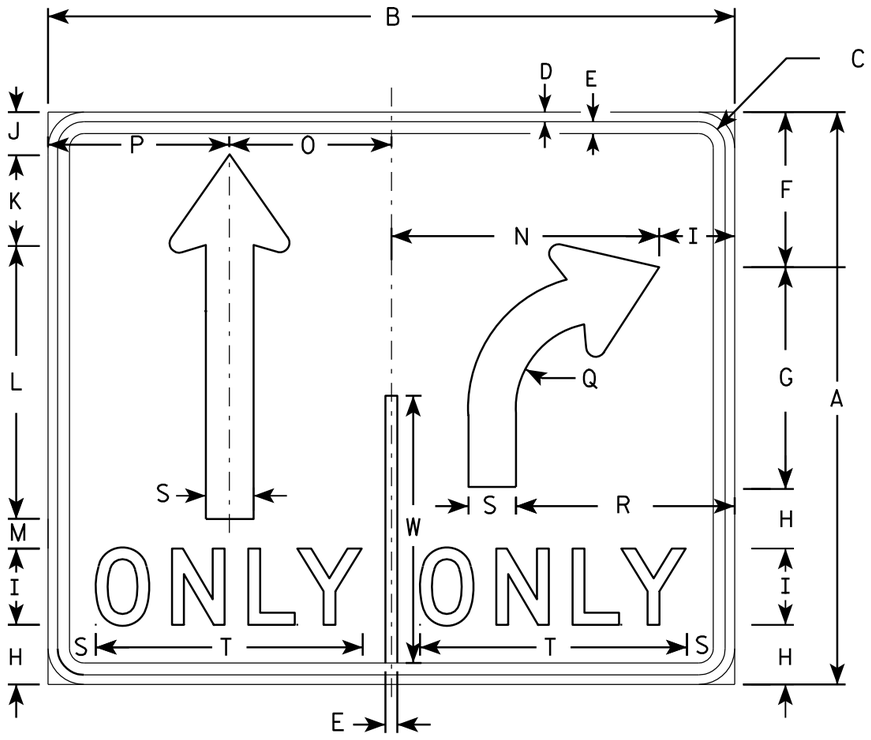
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

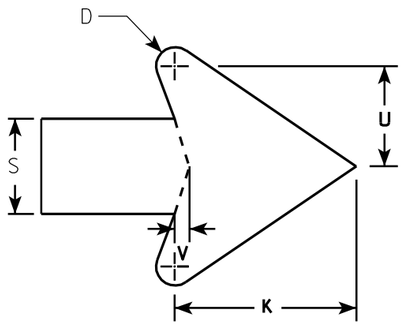
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 205	E



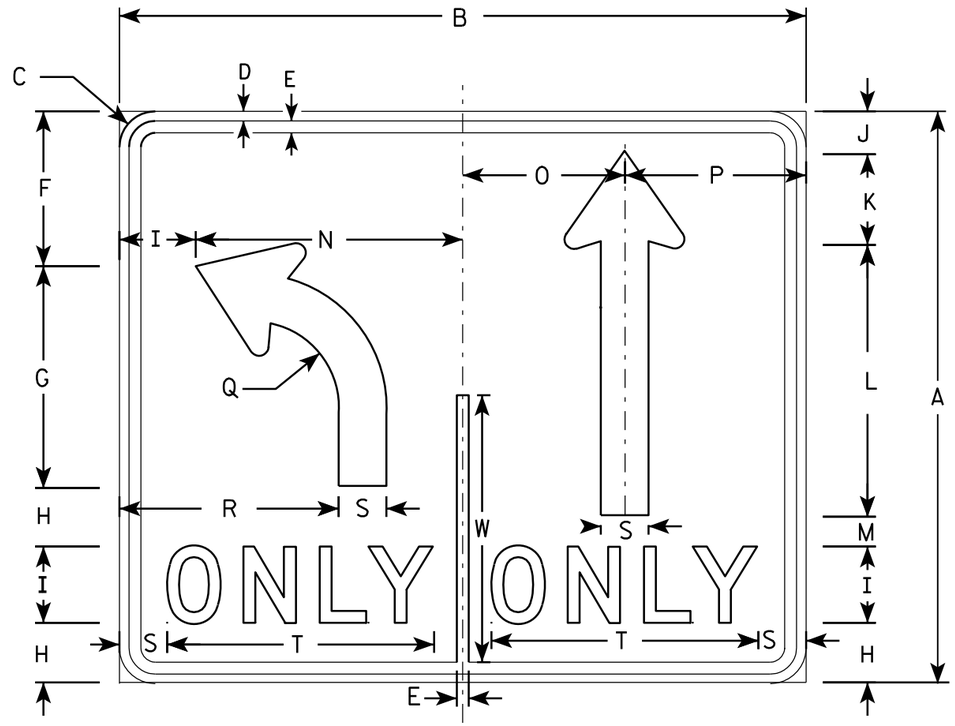
R3-8D



ARROW DETAIL

NOTES

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



R3-8E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	14	8 1/2	9 1/2	4 1/2	11 1/2	2 1/2	14	2 5/8	3/8	14				7.5
2M	30	36	1 3/8	1/2	5/8	8 1/8	11 5/8	3 1/8	4	2 1/4	4 3/4	14 1/4	1 5/8	14	8 1/2	9 1/2	4 1/2	11 1/2	2 1/2	14	2 5/8	3/8	14				7.5
3																											
4	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7 1/8	21 1/2	4 3/4	21	12 3/4	14 1/4	7 1/4	17 1/8	3 3/4	20 5/8	4	5/8	22 3/8				18.0
5	48	54	2 1/4	3/4	1	13 1/4	18 1/2	5 1/8	6	3 1/2	7 1/8	21 1/2	4 3/4	21	12 3/4	14 1/4	7 1/4	17 1/8	3 3/4	20 5/8	4	5/8	22 3/8				18.0

STANDARD SIGN
R3-8D & R3-8E

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/2011 PLATE NO. R3-8D.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 206	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R38D.DGN PLOT DATE : 18-MAR-2011 12:47 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 7.945391:1.000000

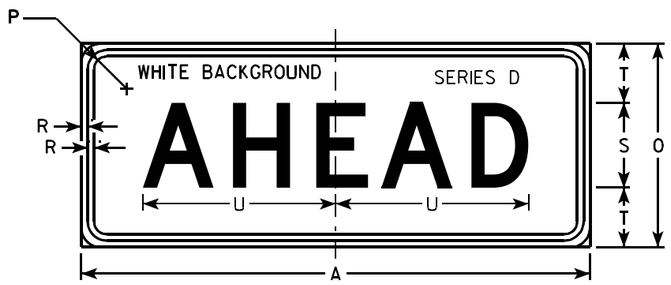
WISDOT/CADDS SHEET 42



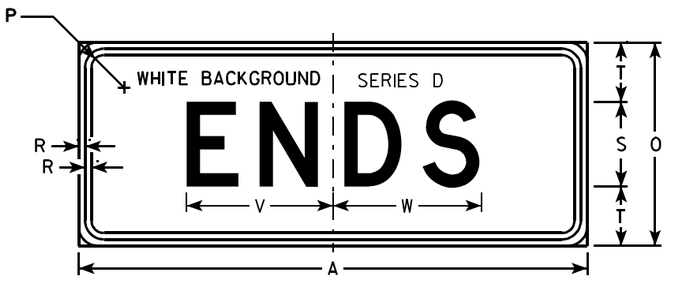
R3-17

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - AS SHOWN
   Message - BLACK
3. Message Series - C or as noted on the Signs.
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.



R3-17ap



R3-17bp

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	R3-17 Area sq. ft.	R3-17ap Area sq. ft.	R3-17bp Area sq. ft.
1																													
2S	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
2M	30	24	1 1/8	3/8	1/2	2	4	4 1/8	7 7/8	6 3/8	9 1/2	2 5/8	7/8	13	12	1 1/8	3 3/8	3/8	5	3 1/2	11 3/8	8 5/8	8 3/4	2 3/8	15 5/8	8	5.0	2.5	2.5
3																													
4																													
5																													

STANDARD SIGN
R3-17 & R3-17a&bp

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

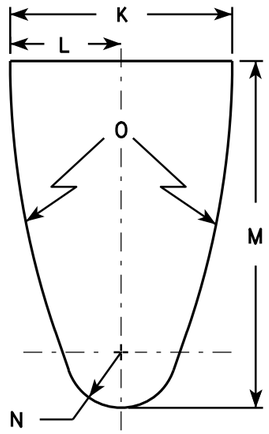
DATE 4/12/2011 PLATE NO. R3-17.2

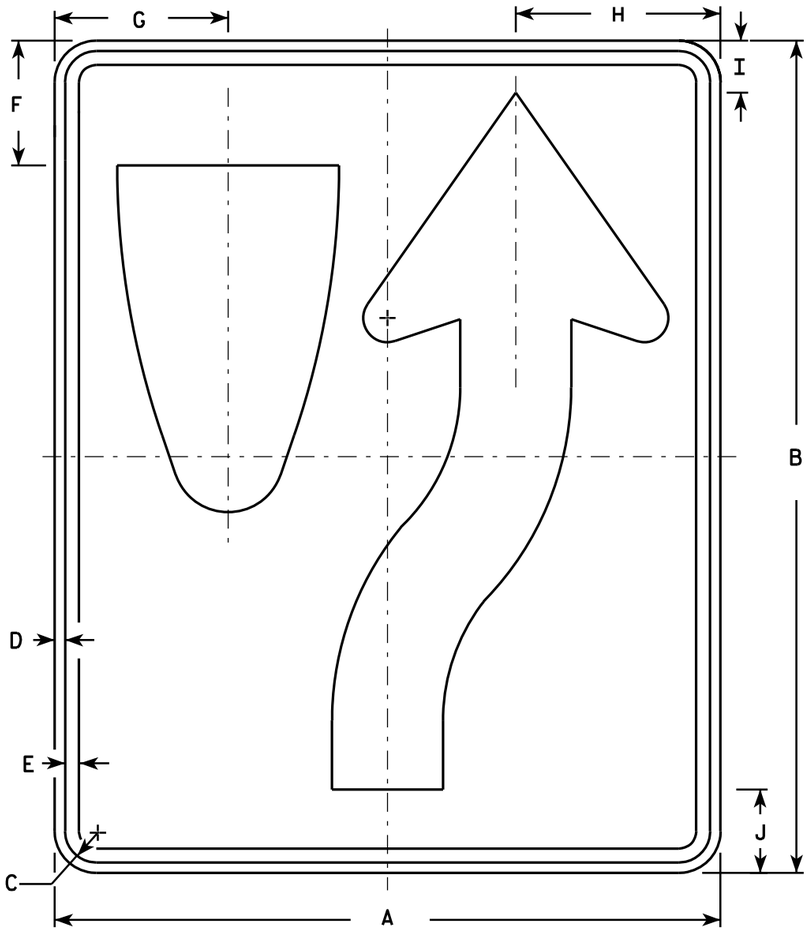
PROJECT NO:

SHEET NO: 207 E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R317.DGN PLOT DATE : 02-APR-2013 14:09 PLOT BY : mscj9h

WISDOT/CADDS SHEET 42

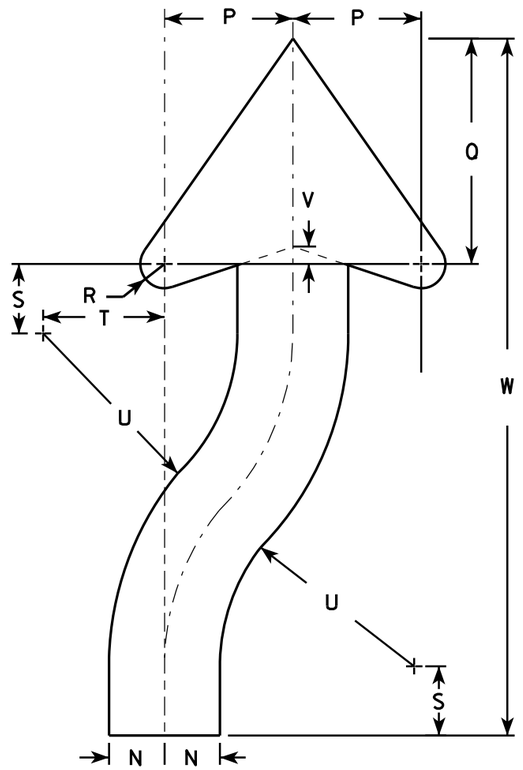




R4-7

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
2. Color:
   Background - White
   Message - Black
3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

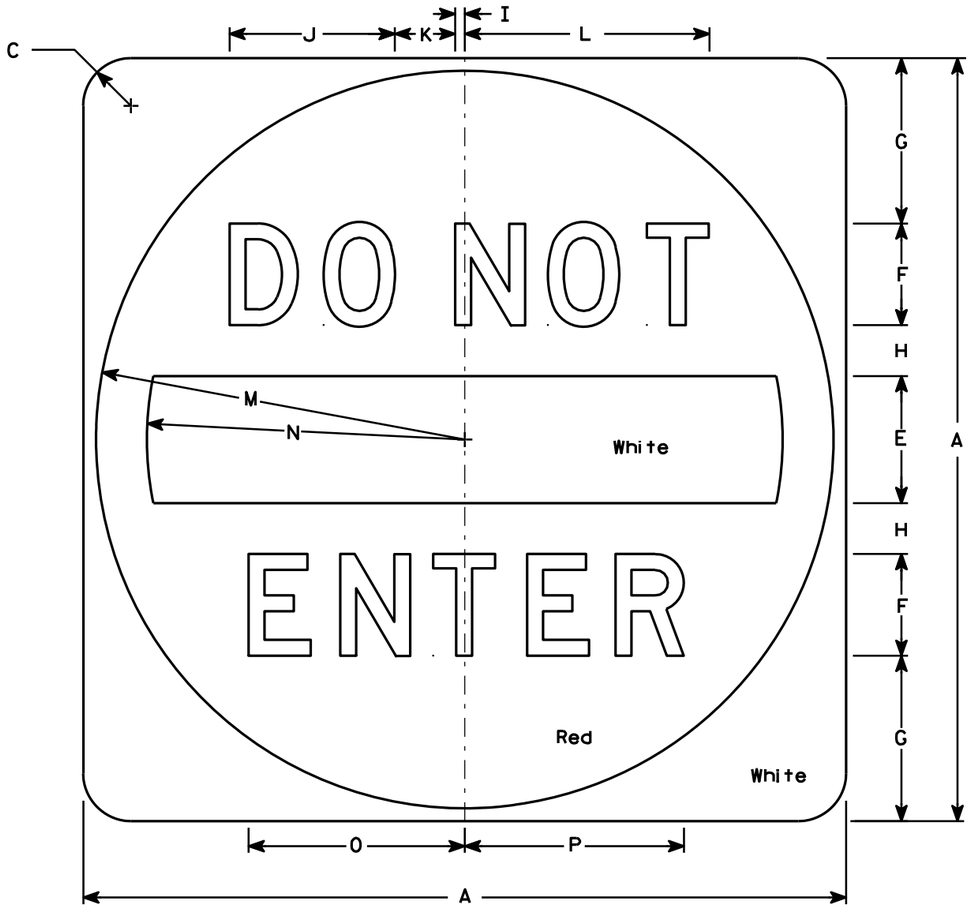
STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 208	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

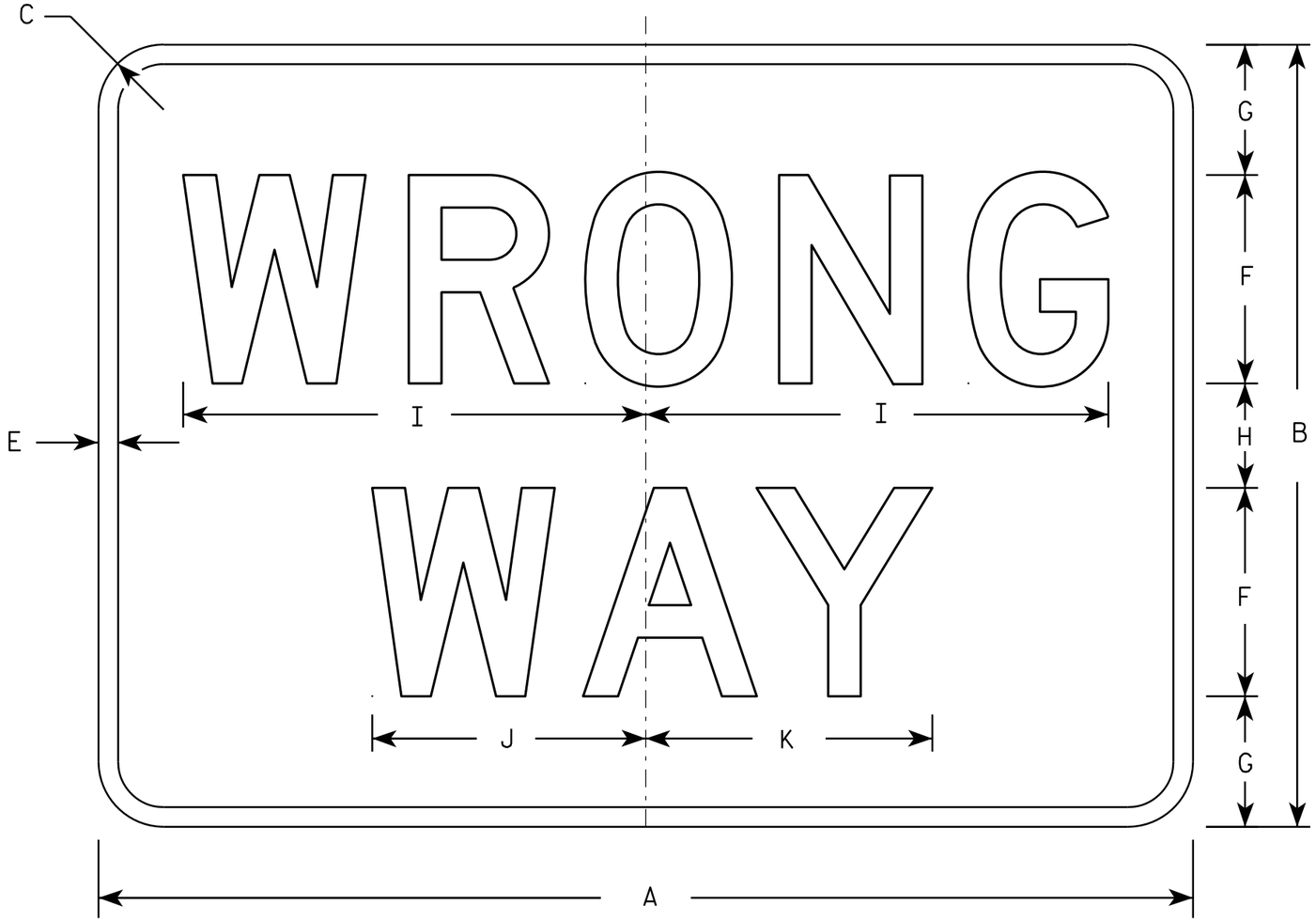
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 209 | E



R5-1A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

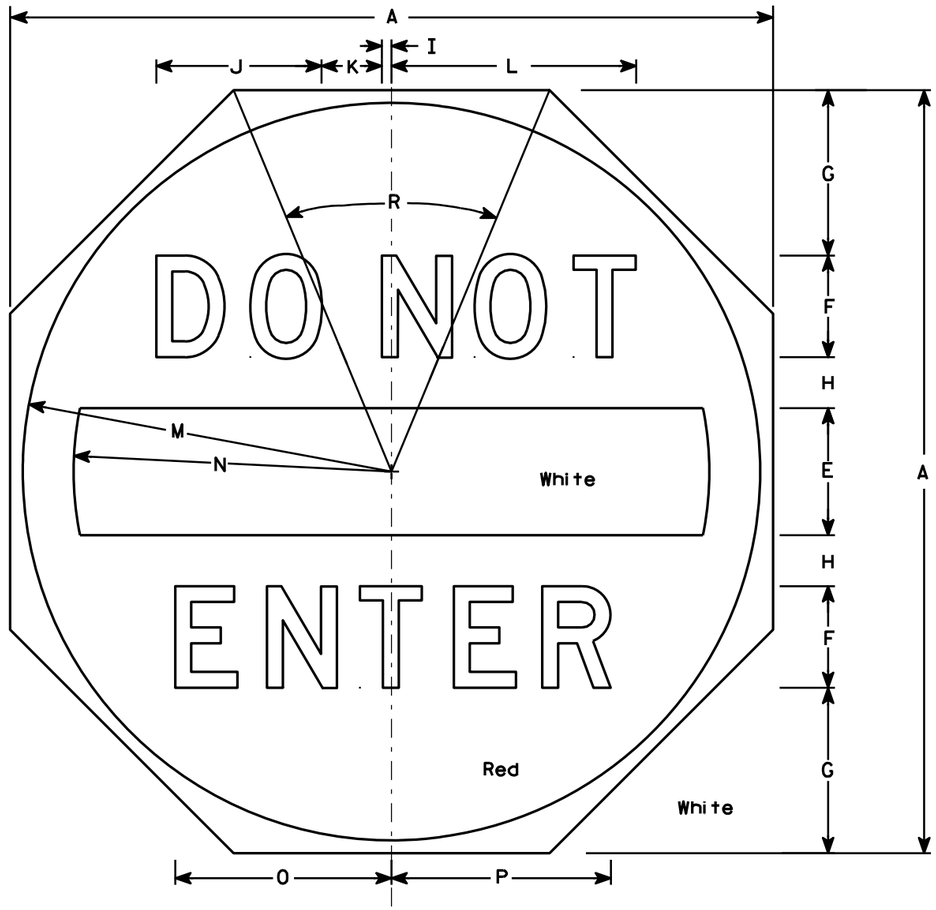
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 210 | E



R5-1C

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8		45°									5.18
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4		45°									7.46
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4		45°									7.46
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4		45°									13.25
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8		45°									13.25

STANDARD SIGN
R5-1C

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

State Traffic Engineer

DATE 3/23/11 PLATE NO. R5-1C.1

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 211 | E



R5-57

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 - Lines 1, 2, and 5 are Series C.
   Lines 3 and 4 are Series B.
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0
5	36		1 5/8	5/8	3/4	4	3	2	3 1/2	14 1/4	14 7/8	11	11 1/2	4 3/4	1 3/4	9		1 3/8	10	11	2 1/2	1 3/4	15 1/2	13	13 5/8		9.0

STANDARD SIGN
R5-57

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/29/2011 PLATE NO. R5-57.10

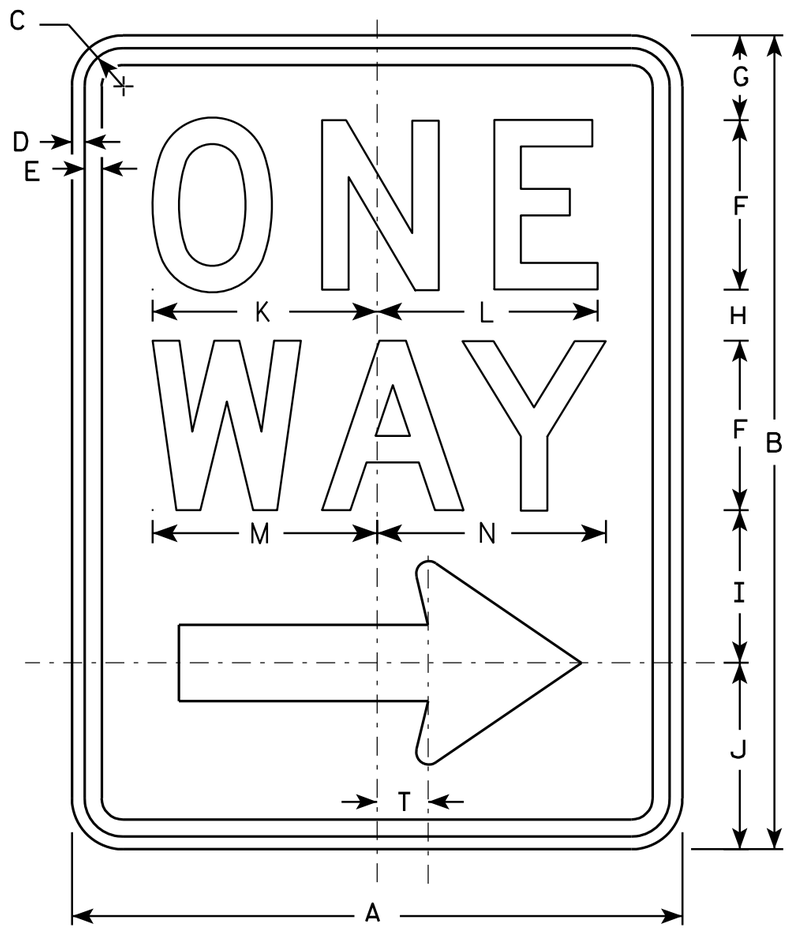
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 212 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R557.DGN PLOT DATE : 29-MAR-2011 14:38 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.959043:1.000000

WISDOT/CADDS SHEET 42

7

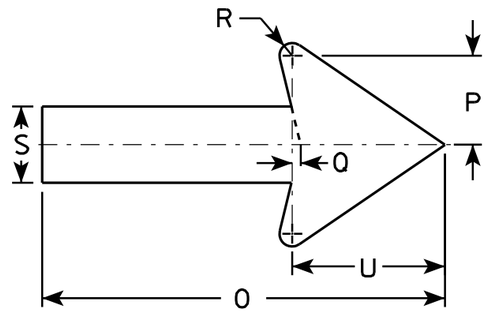
7



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

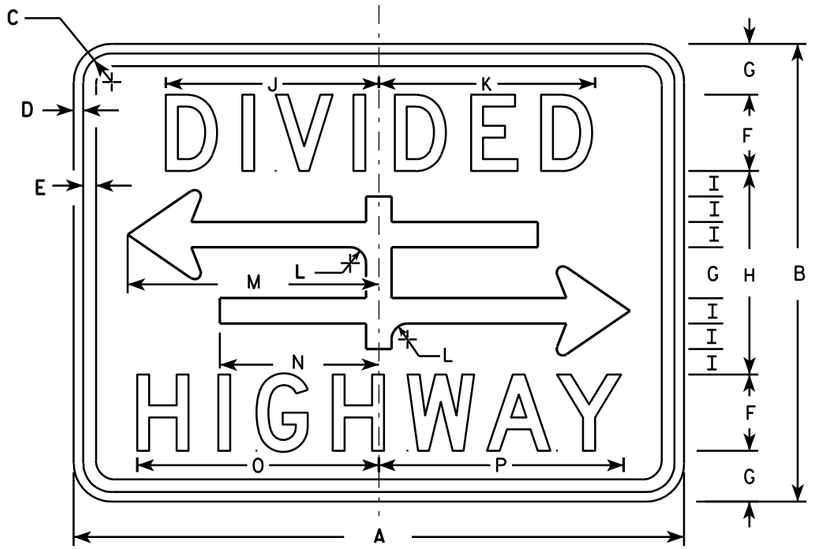
STANDARD SIGN
R6-2 R&L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8

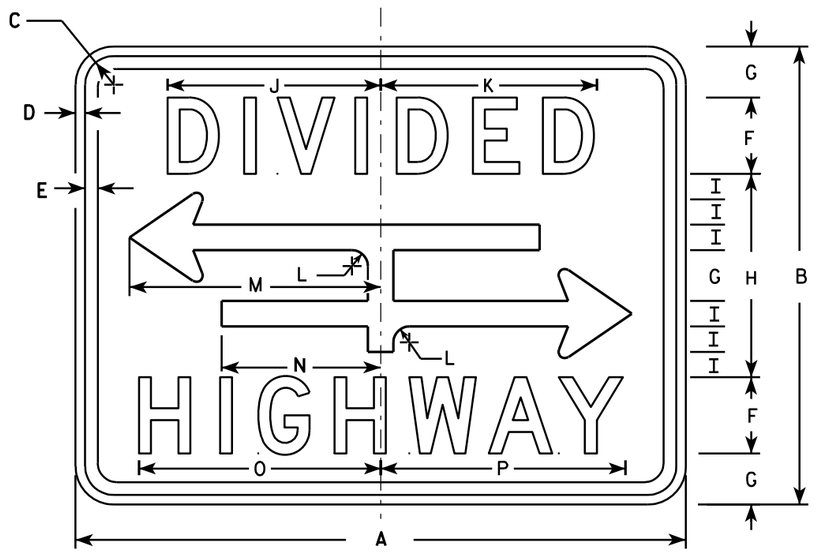
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 213	E



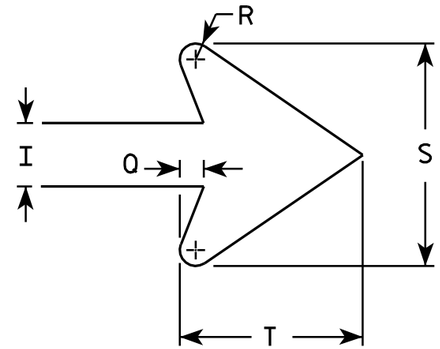
R6-3

NOTES

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



R6-3A



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24	18	1 1/8	3/8	3/8	3	2	8	1	8 3/8	8 1/2	5/8	9 7/8	6 1/4	9 1/2	9 5/8	3/8	1/4	3 1/2	2 3/4							3.0
2S	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
2M	30	24	1 1/8	3/8	1/2	4	2 5/8	10 3/4	1 3/8	10 1/2	10 5/8	7/8	12 1/2	7 7/8	12 1/4	12 3/8	1/2	3/8	4 5/8	3 5/8							5.0
3																											
4																											
5																											

STANDARD SIGN
R6-3 & R6-3A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

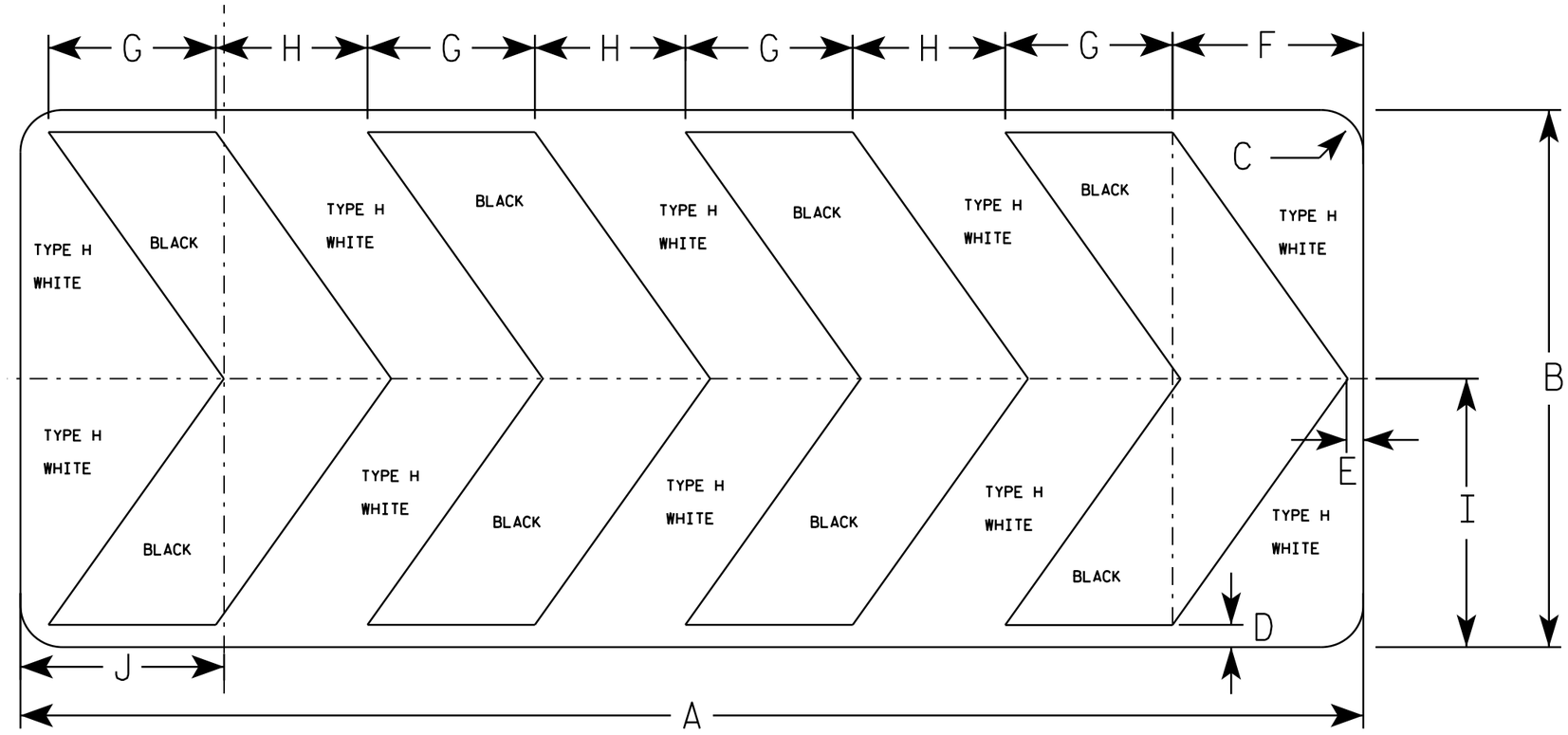
DATE 3/31/2011 PLATE NO. R6-3.5

PROJECT NO:

SHEET NO: 214 E

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   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.



R6-4B

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	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
2M	60	24	1 7/8	1	3/4	8 1/2	7 1/2	6 3/4	12	9 1/8																	10.0
3																											
4																											
5																											

STANDARD SIGN
R6-4B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/21/14 PLATE NO. R6-4.3

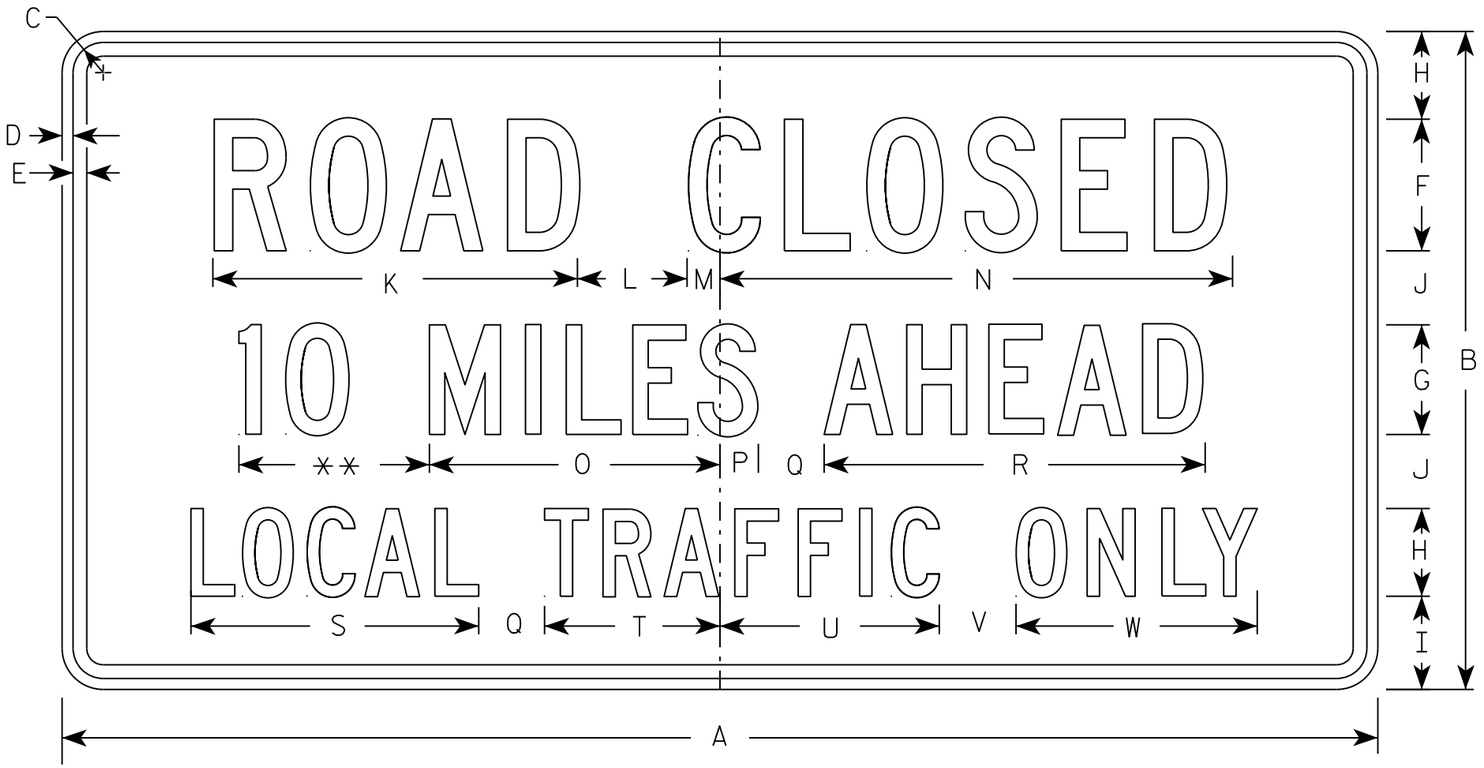
PROJECT NO: SHEET NO: E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R64B.DGN PLOT DATE : 21-AUG-2014 15:01 PLOT BY : mscsja

WISDOT/CADDS SHEET 42

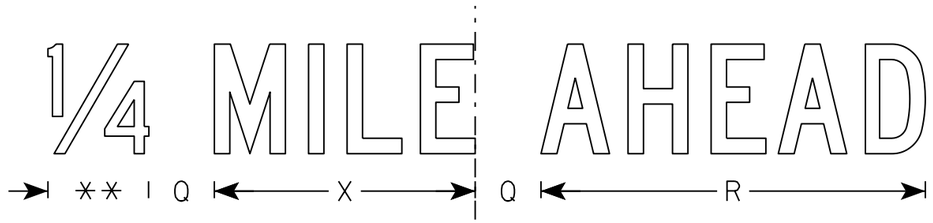
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

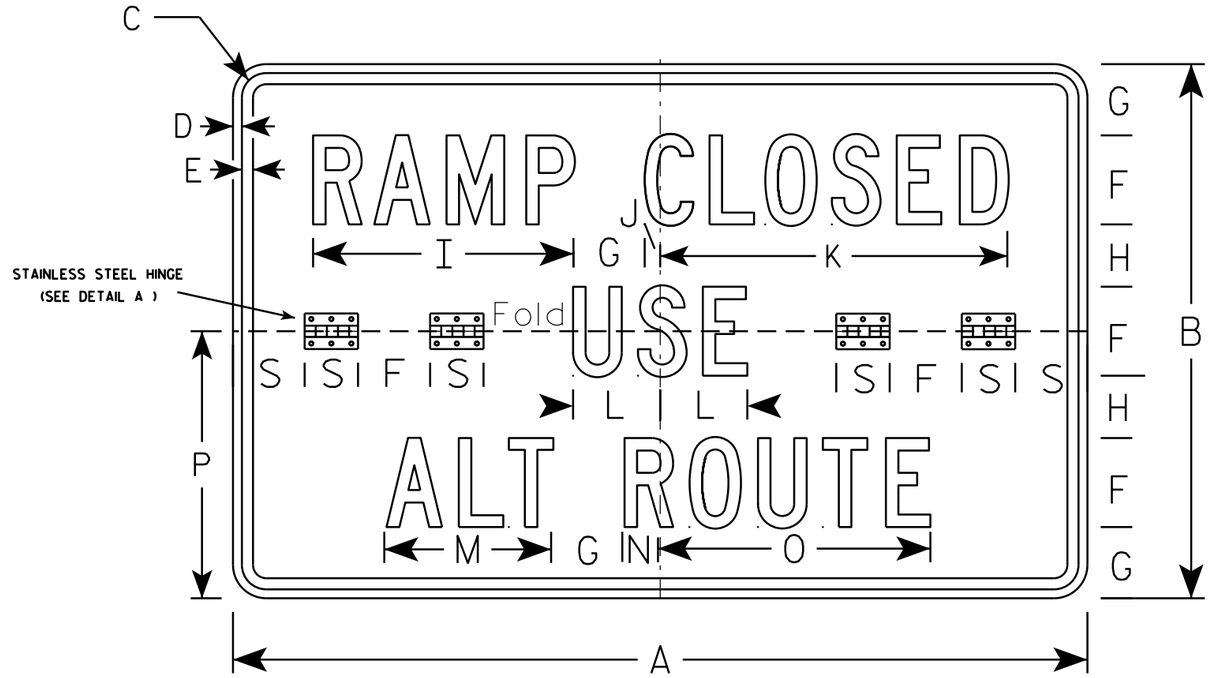
STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

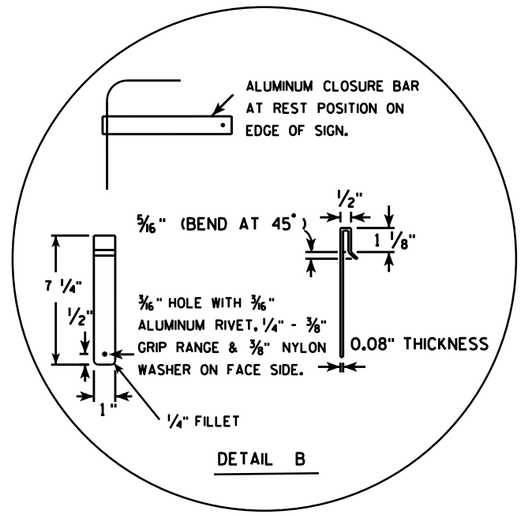
DATE 3/15/17 PLATE NO. R11-3.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 216	E



R11-54F

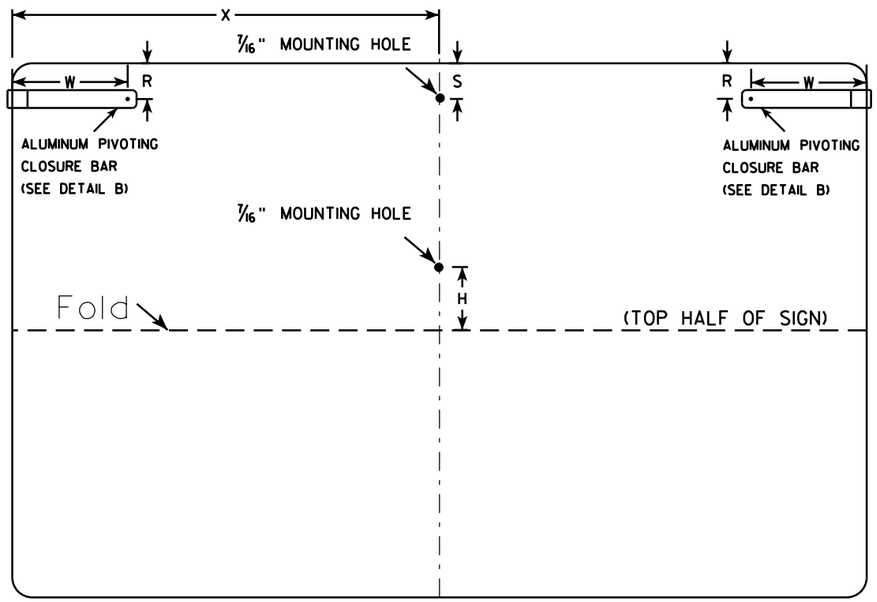
DETAIL A



DETAIL B

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - WHITE
   Message - BLACK
3. Message Series - C
4. Sign Base Material shall be aluminum, corners and borders shall be rounded.
5. All hardware used on the folding sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.
6. Refer to plate A5-3A for sign blank layout.



(BACK VIEW)

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
2M	48	30	1 3/8	1/2	5/8	5	4	3 1/2	14 5/8	7/8	19 1/2	4 7/8	9 3/8	2	15 1/4	15		2	3	2 5/8	1 1/4	11/16	6 1/2	24			10.0
3																											
4																											
5																											

STANDARD SIGN
R11-54F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

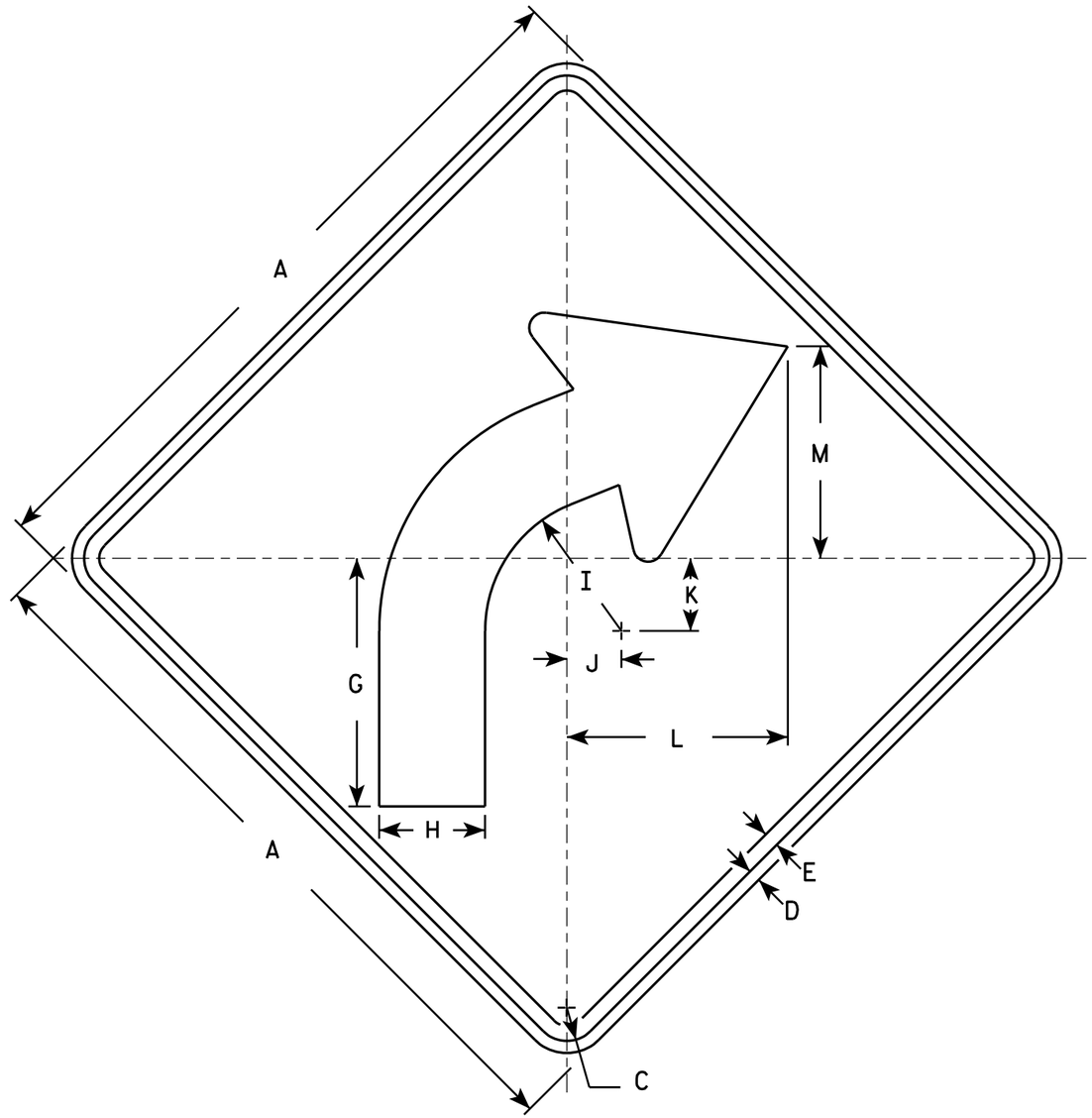
DATE 5/28/14 PLATE NO. R11-54F.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

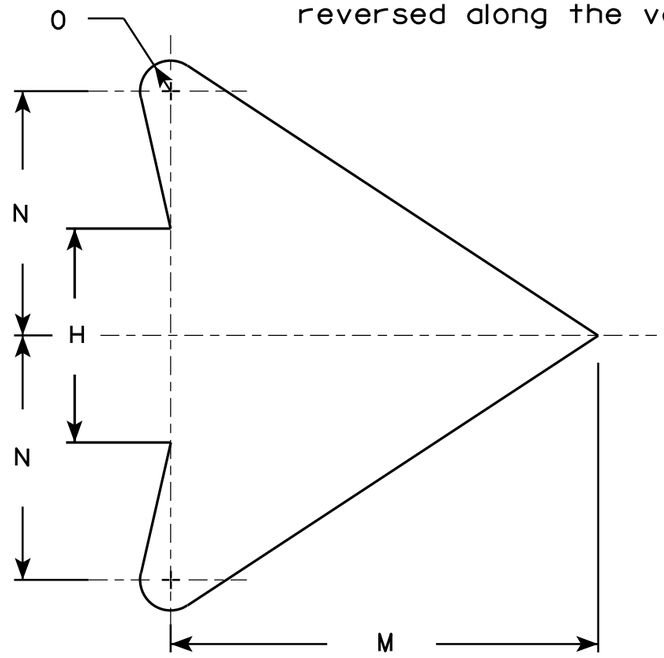
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R1154F.DGN PLOT DATE : 28-MAY-2014 14:15 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 8.511110:1.000000
WISDOT/CADDS SHEET 42

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

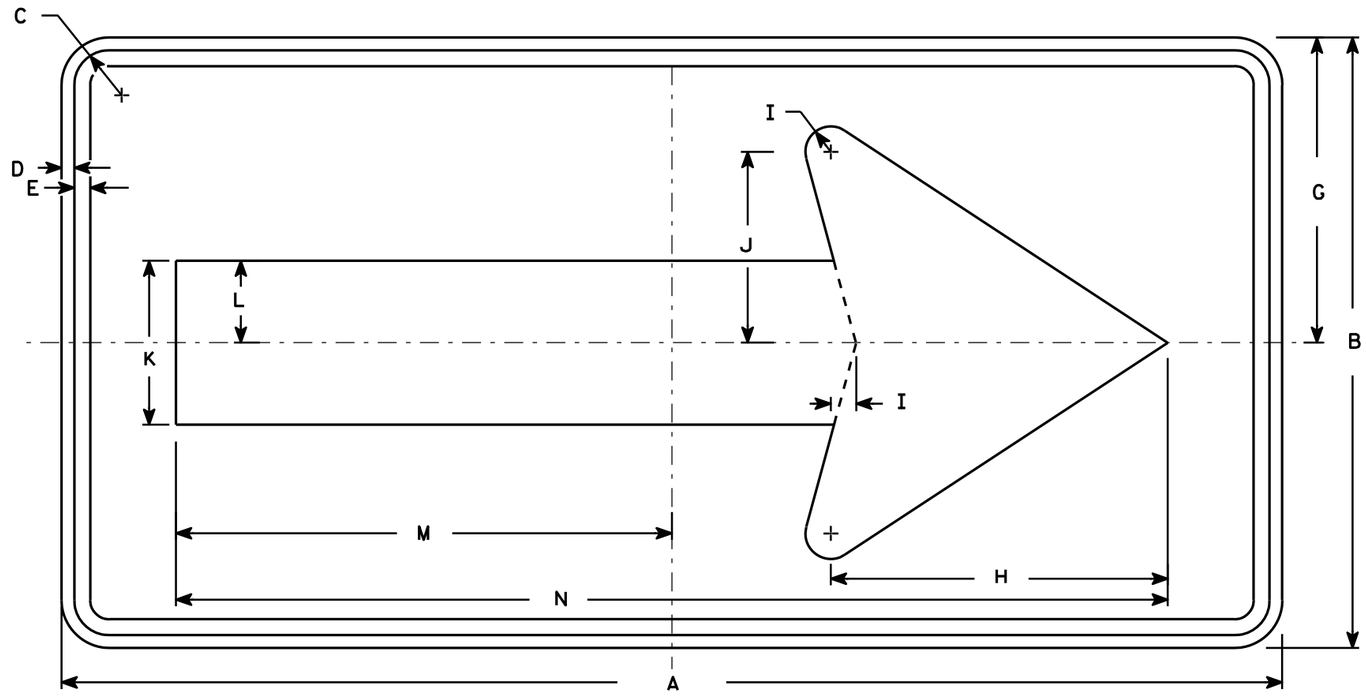
STANDARD SIGN
W1-2

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: 218	E



W1-6

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	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

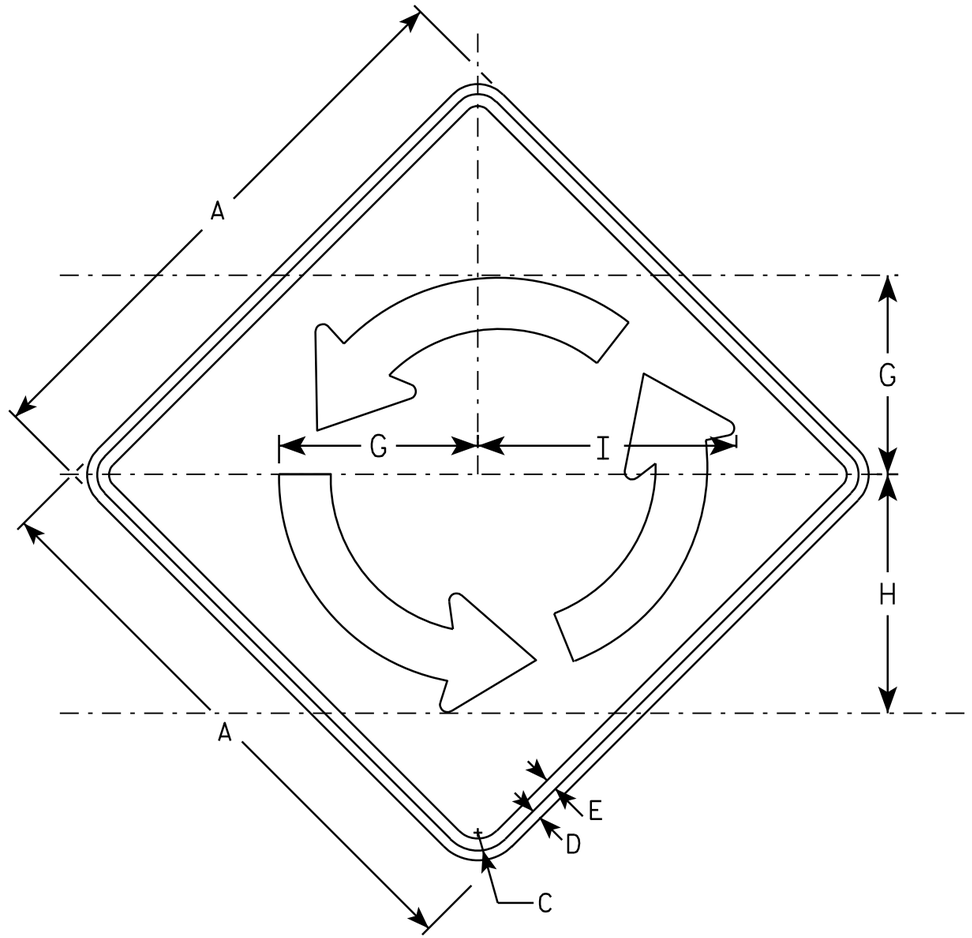
STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W1-6.8

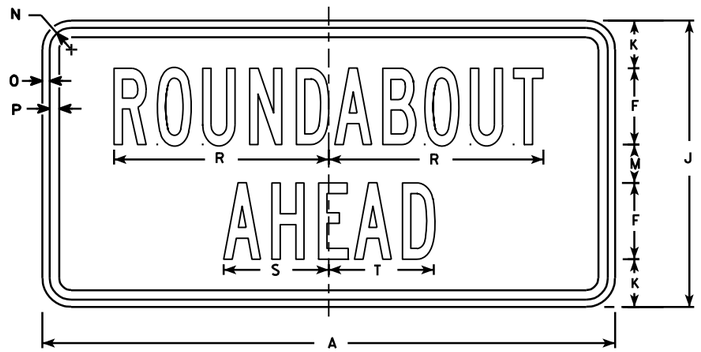
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 219



W2-6

NOTES

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



W2-6P

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	W2-6 Area sq. ft.	W2-6P Area sq. ft.
1																										
2S	30		1 3/8	1/2	5/8	4	10 3/8	12 1/2	13 1/2	15	2 1/2		2	1 1/8	3/8	1/2		11 1/4	5 1/2	5 1/2					6.25	3.12
2M	30		1 3/8	1/2	5/8	4	10 3/8	12 1/2	13 1/2	15	2 1/2		2	1 1/8	3/8	1/2		11 1/4	5 1/2	5 1/2					6.25	3.12
3	36		1 5/8	5/8	3/4	5	12 1/2	15	16 1/4	18	2 5/8		2 3/4	1 1/8	3/8	1/2		14	7	6 3/4					9.00	4.50
4	48		2 1/4	3/4	1	6	16 5/8	20	16 1/4	24	4 3/8		3 5/8	1 3/8	1/2	5/8		17	8 1/4	8 1/4					16.0	8.0
5																										

STANDARD SIGN
W2-6

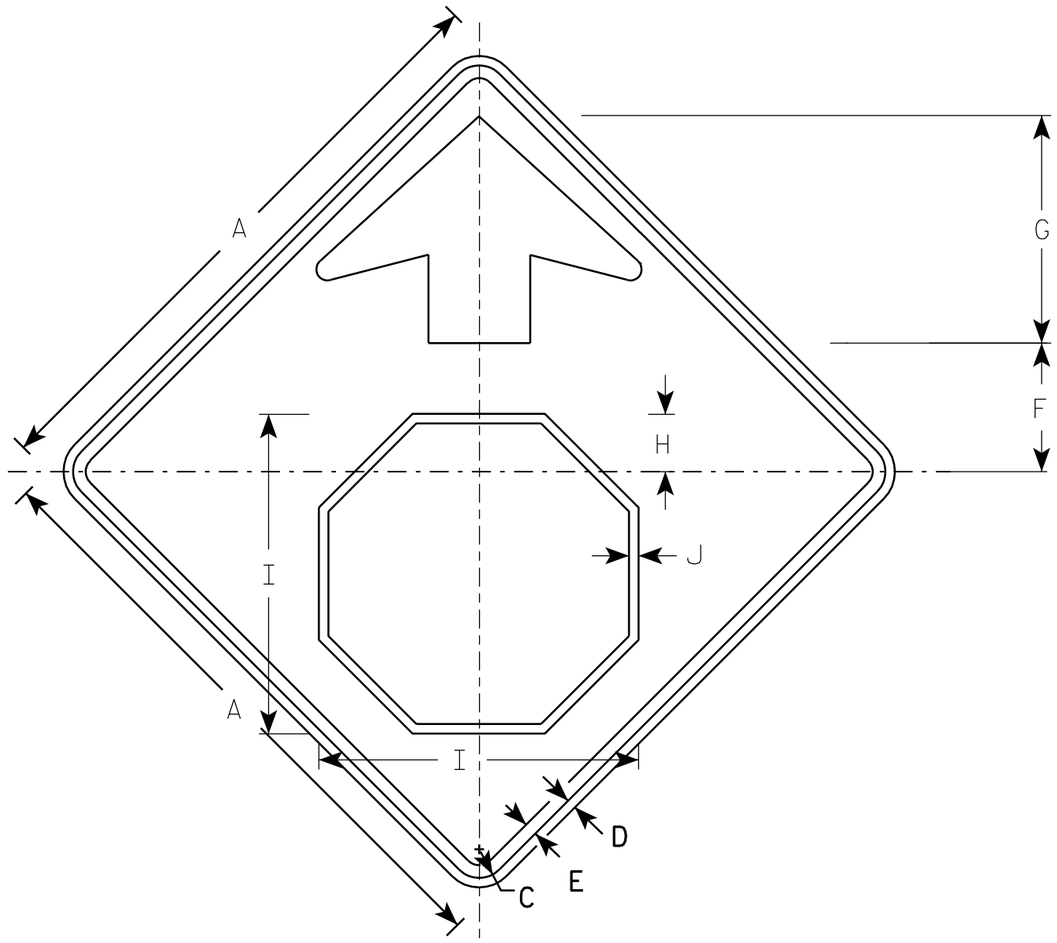
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/29/12 PLATE NO. W2-6.5

PROJECT NO:

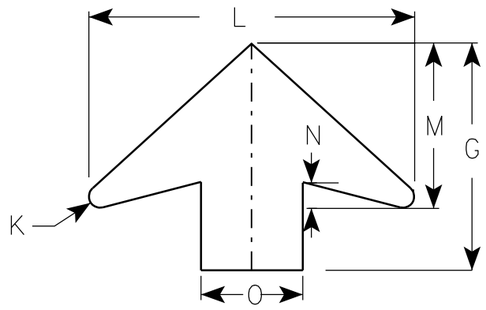
SHEET NO: 220 E



W3-1

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

STANDARD SIGN
W3-1

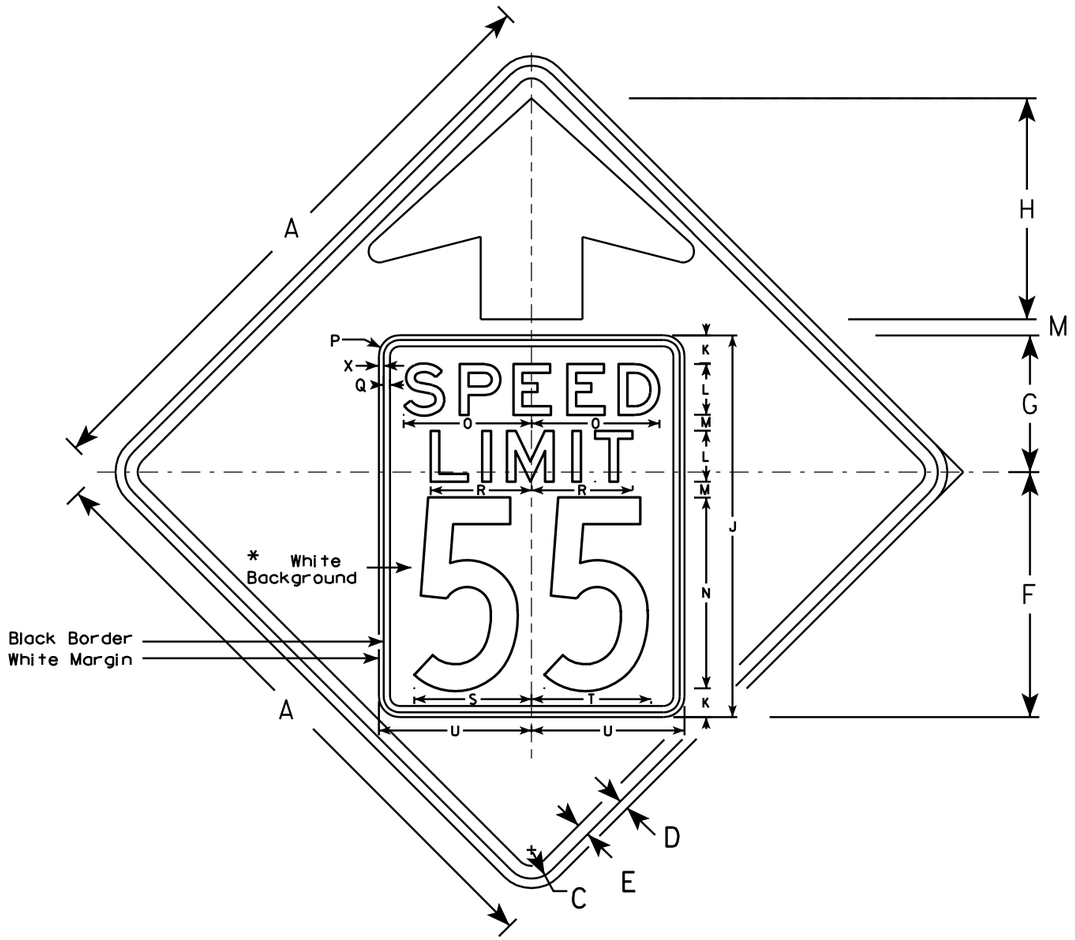
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

PROJECT NO:

SHEET NO: 221 E

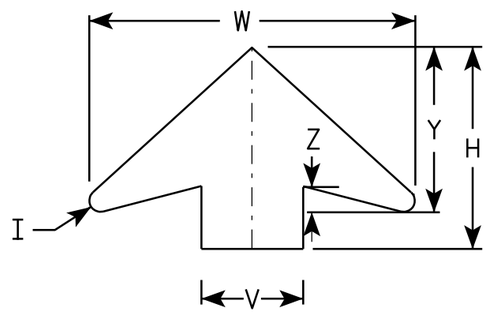


W3-5

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 - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White 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																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN
W3-5

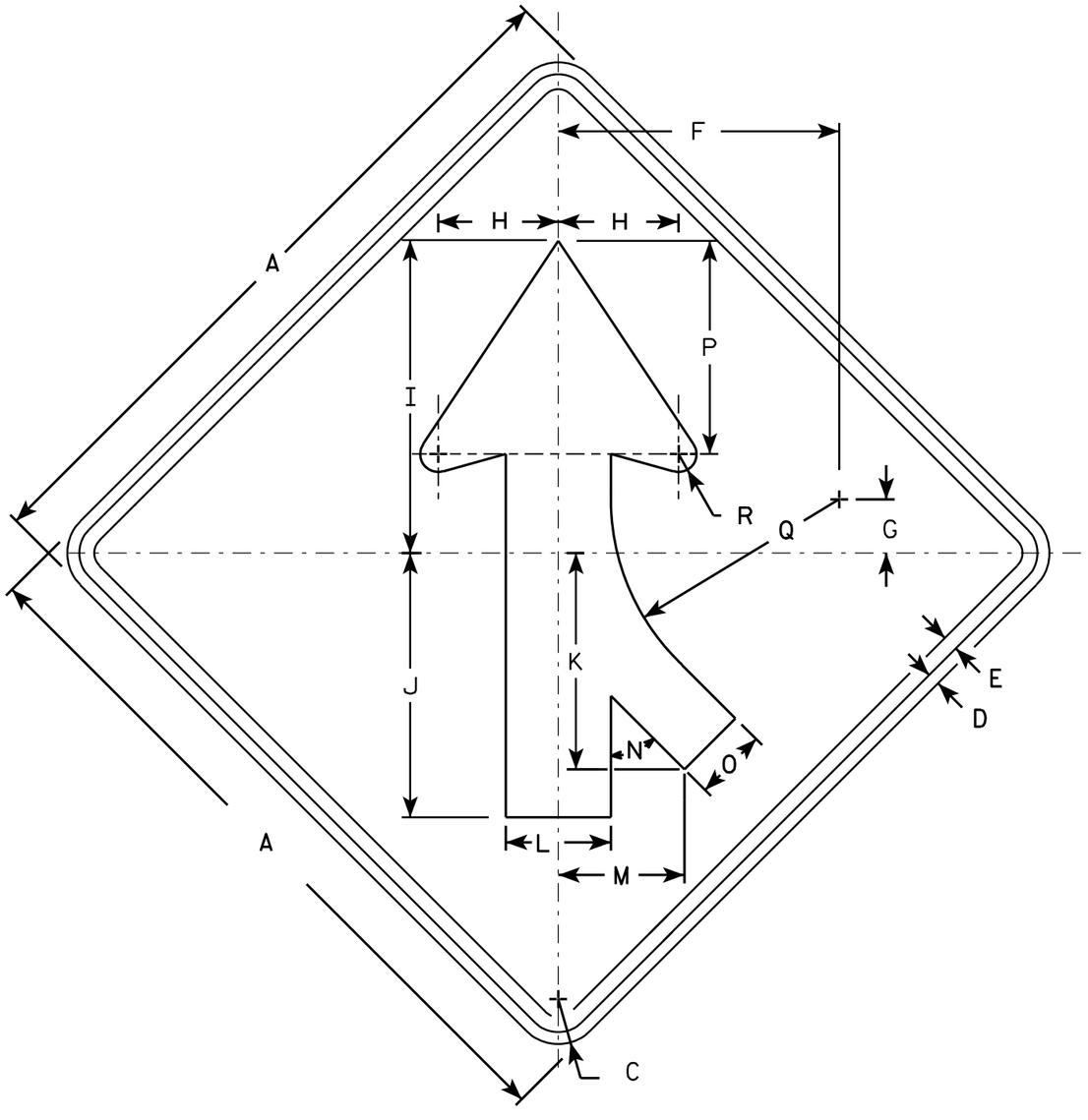
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO: 222 E



W4-1 R

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. W4-1L is the same as W4-1R 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	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

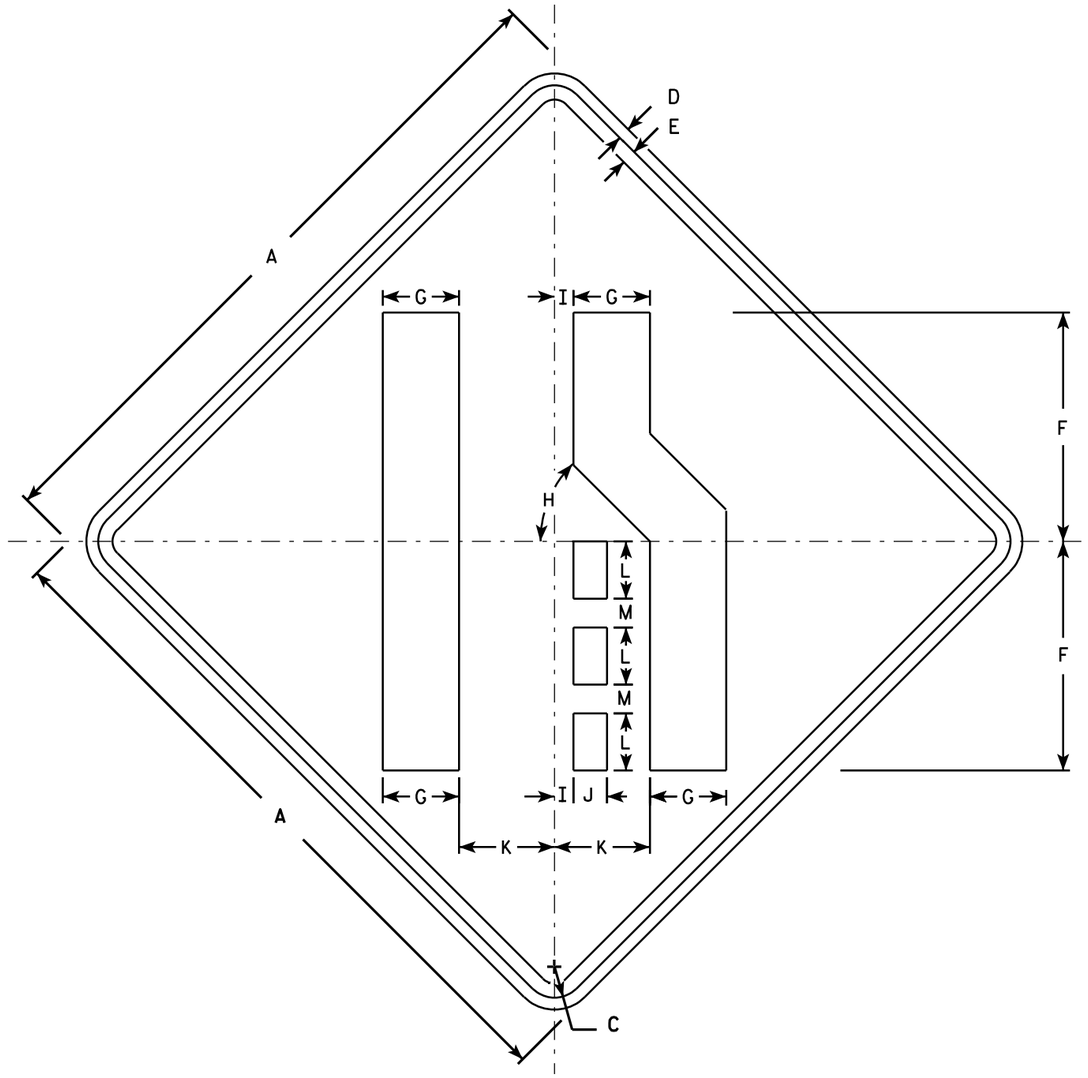
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rausch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 223 | E



W4-2R

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. W4-2L is the same as W4-2R except the symbol 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	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

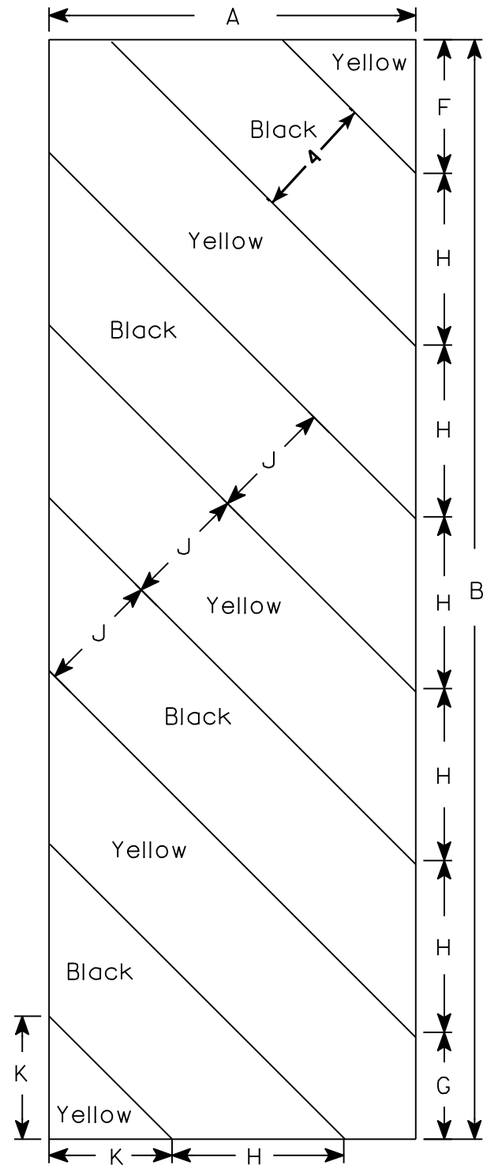
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

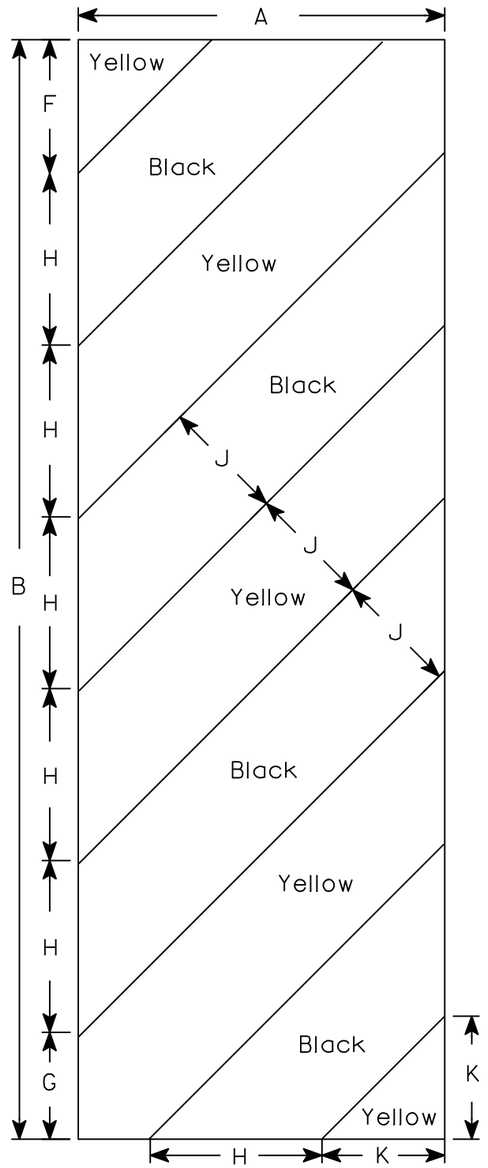
DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

SHEET NO: 224 E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Alternate colors of stripes as shown.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

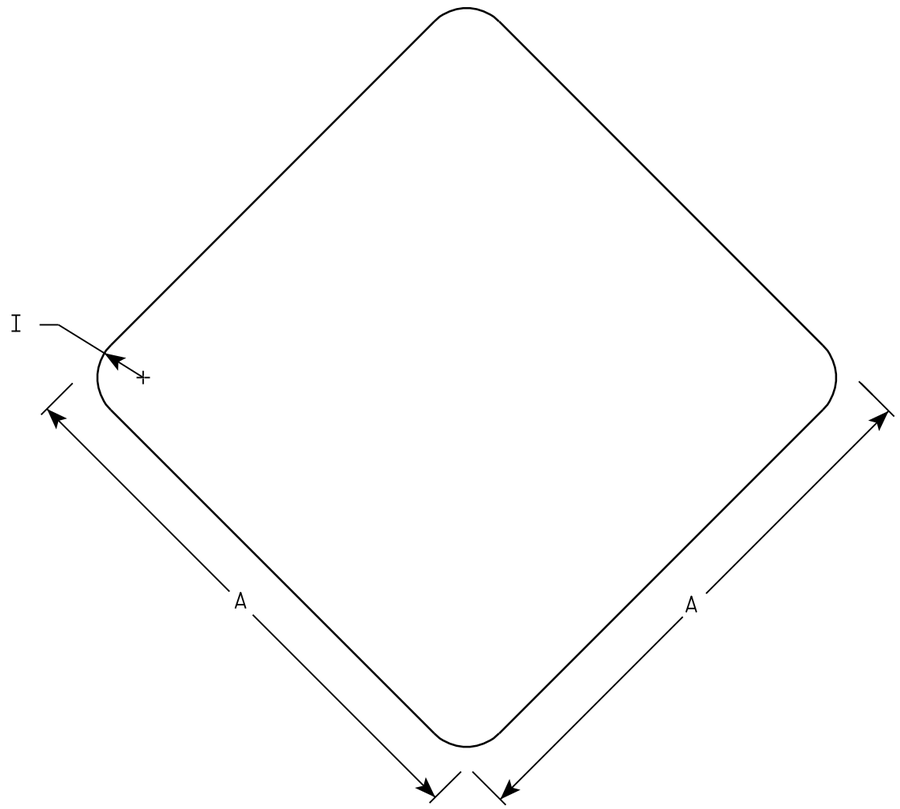
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 225	E



W5-54

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
3. Corners may be square or rounded when base material is plywood. When base material is metal the corners 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	12								1																		1.0
2S	18								1 ½																		2.25
2M	18								1 ½																		2.25
3																											
4																											
5																											

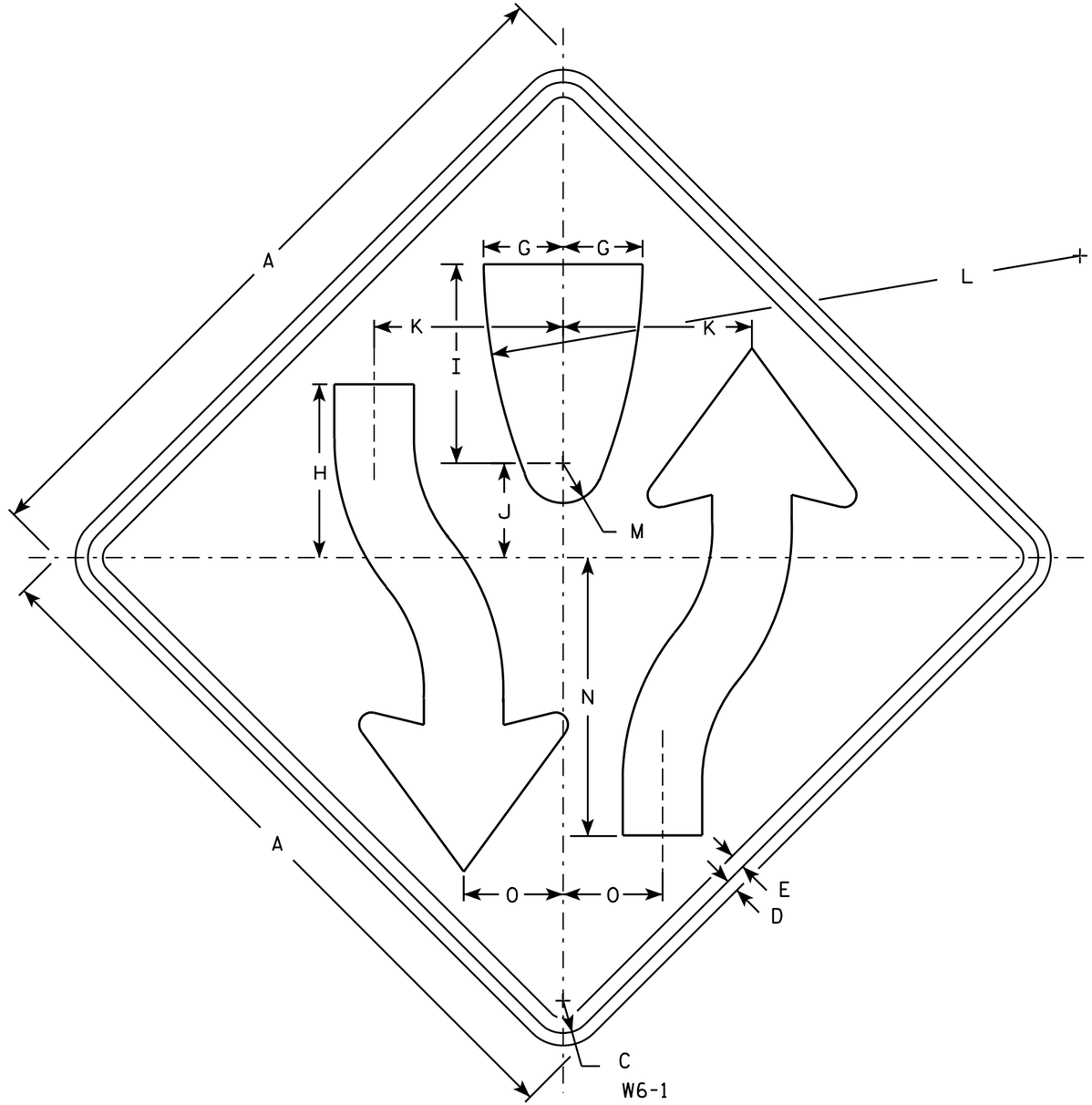
STANDARD SIGN
W5-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

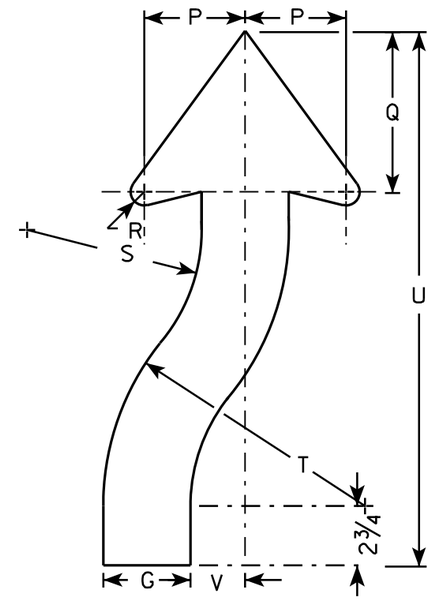
DATE 11/3/10 PLATE NO. W5-54.8

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 226 | 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. W6-2 same as W6-1 but is rotated 180° when mounted.



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		3 1/4	8	8 1/4	4 1/8	7 7/8	25	1 3/4	11 5/8	4 1/8	3 7/8	6 3/4	5/8	6 5/8	9 7/8	21 5/8	2					6.25
2S	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
2M	36		1 5/8	5/8	3/4		4	8 3/4	10	4 3/4	9 1/2	30	2	14	5	4 5/8	7 3/8	7/8	8	12	24 1/2	2 1/2					9.0
3																											
4	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0
5	48		2 1/4	3/4	1		5 3/8	11 5/8	13 3/8	6 3/8	12 5/8	40	2 5/8	18 5/8	6 5/8	6 1/4	9 7/8	1 1/4	10 5/8	16	32 5/8	3 3/8					16.0

STANDARD SIGN
W6-1 & W6-2

WISCONSIN DEPT OF TRANSPORTATION

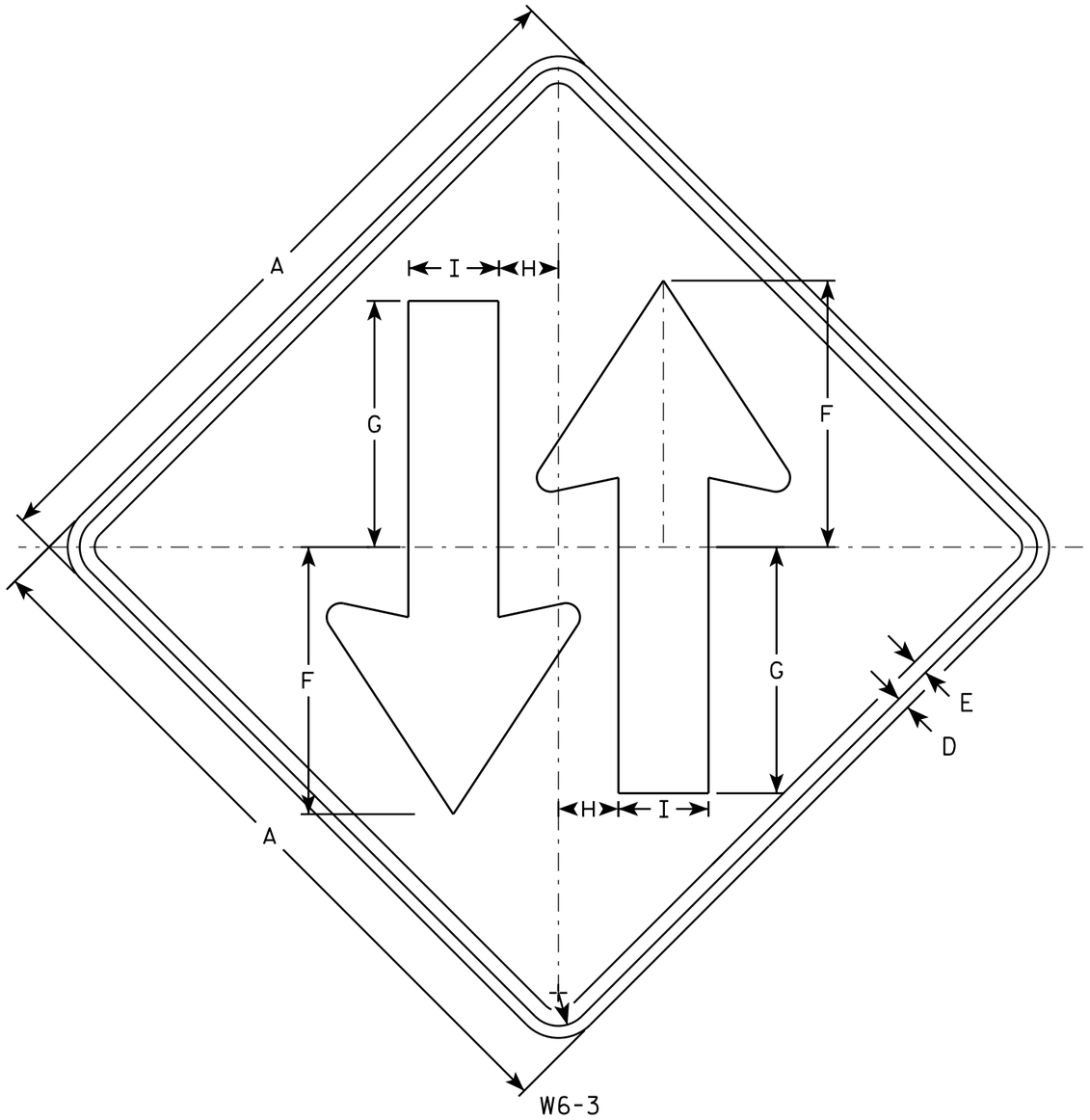
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 227	E

7

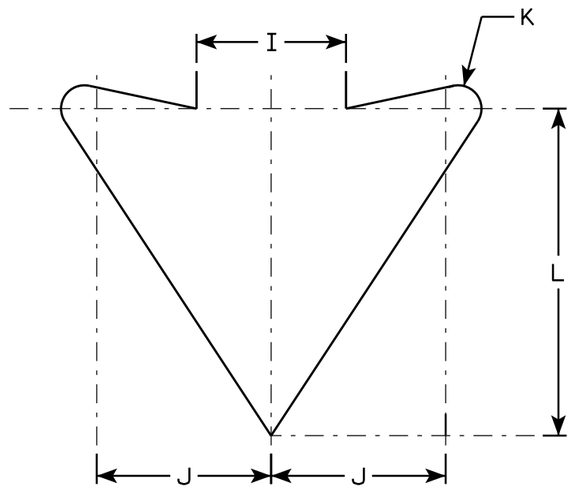
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W61.DGN PLOT DATE : 12-MAR-2013 14:02 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.946657:1.000000
WISDOT/CADDS SHEET 42



W6-3

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.



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	11 1/8	10 1/4	2 1/2	3 3/4	4 3/8	5/8	8 1/4															6.25
2S	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
2M	36		1 5/8	5/8	3/4	13 3/8	12 1/4	3	4 1/2	5 1/4	3/4	9 7/8															9.0
3																											
4	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0
5	48		2 1/4	3/4	1	17 3/4	16 3/8	4	6	7	1	13 1/8															16.0

STANDARD SIGN
W6-3

WISCONSIN DEPT OF TRANSPORTATION

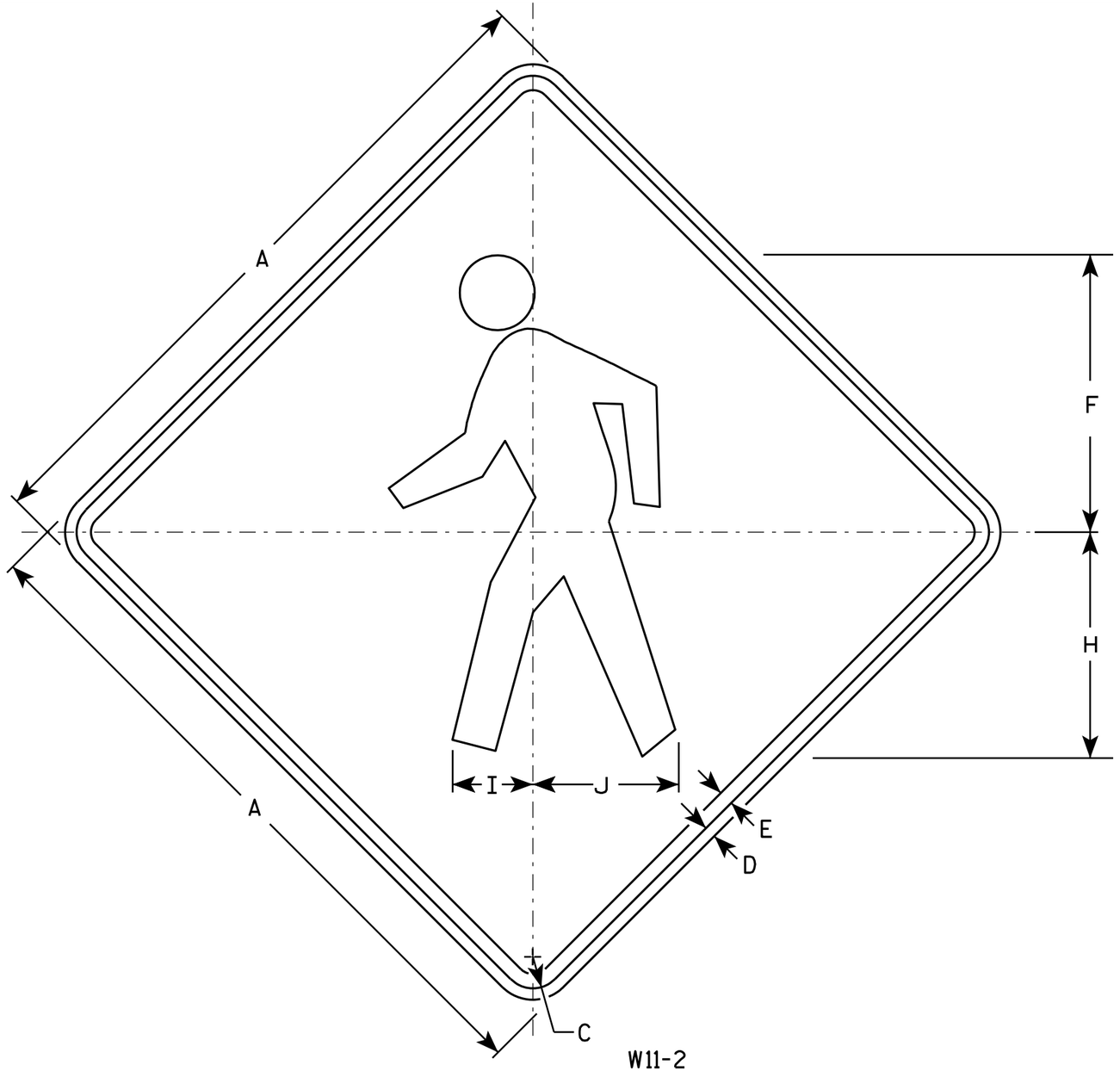
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/10/16 PLATE W6-3.11

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

7

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\W63.DGN PLOT DATE : 10-MAR-2016 14:01 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 6.080757:1.000000 WISDOT/CADDS SHEET 42



W11-2

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

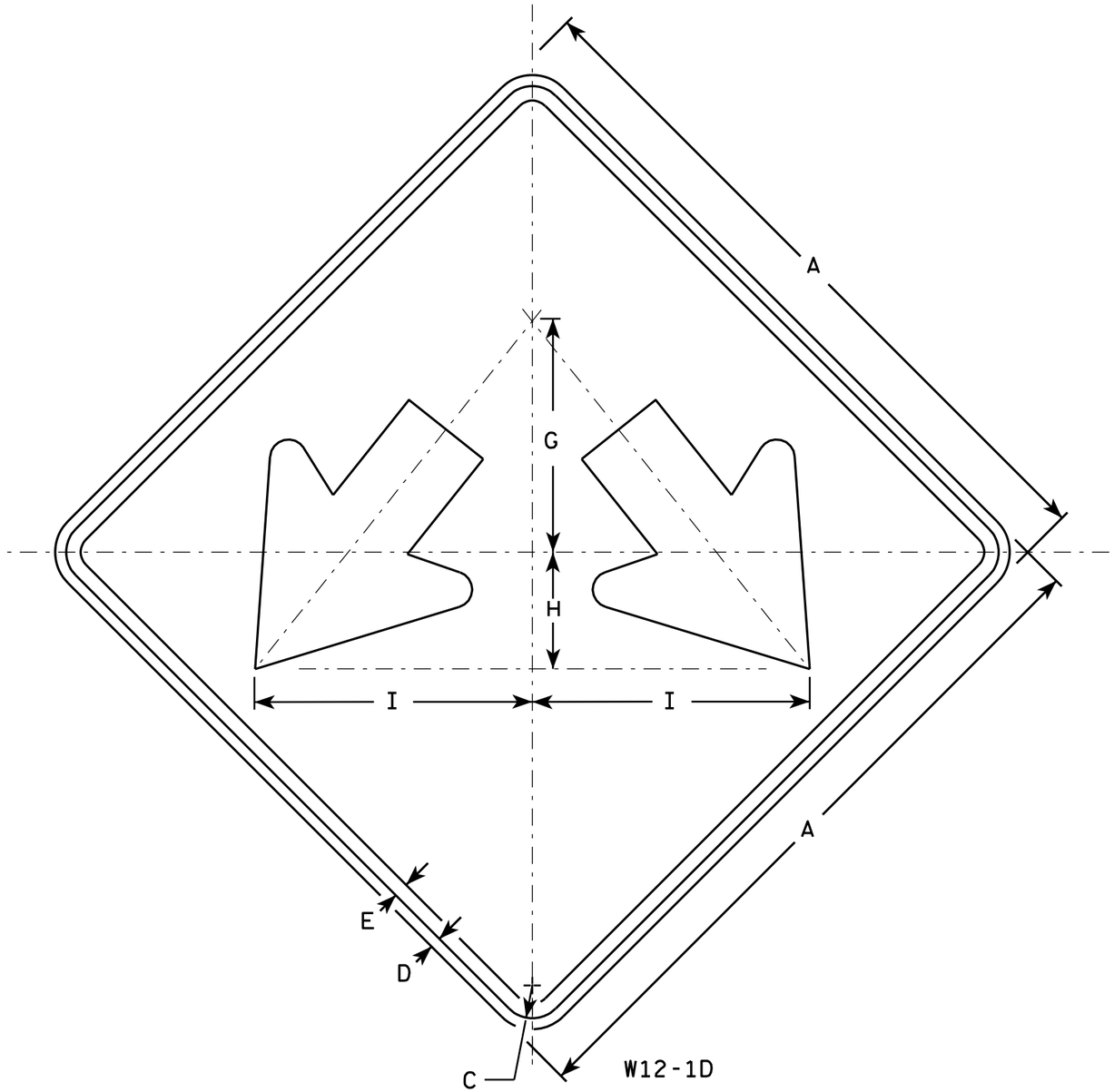
STANDARD SIGN
W11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

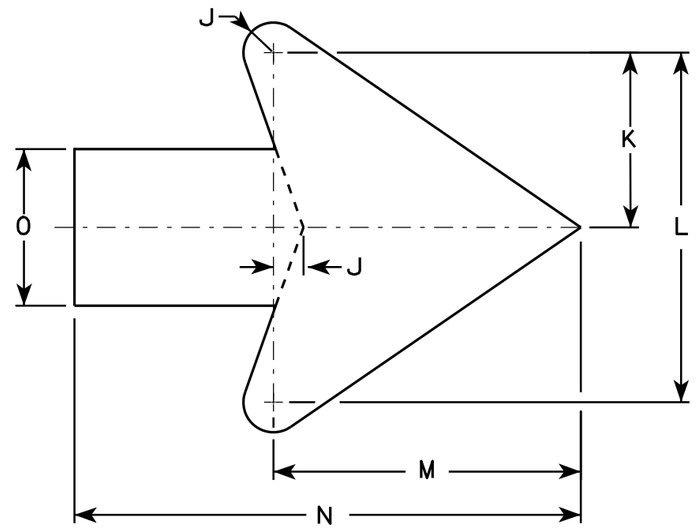
DATE 6/7/10 PLATE NO. W11-2.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 229	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.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
2M	24		1 1/8	1/2	3/8		8	4	9 1/2	3/8	3 3/8	7 1/4	6 3/8	10 3/8	3 1/4												4.0
3	30		1 3/8	1/2	5/8		10	5	11 7/8	3/4	4 1/2	9	7 7/8	13	4												6.25
4	36		1 3/8	1/2	5/8		12	6	14 1/4	1	5 1/2	10 7/8	9 5/8	15 3/4	4 3/4												9.0
5	48		2 1/4	3/4	1		16	8	19	1 1/4	7 1/4	14 1/2	12 3/4	21	6 1/4												16.0

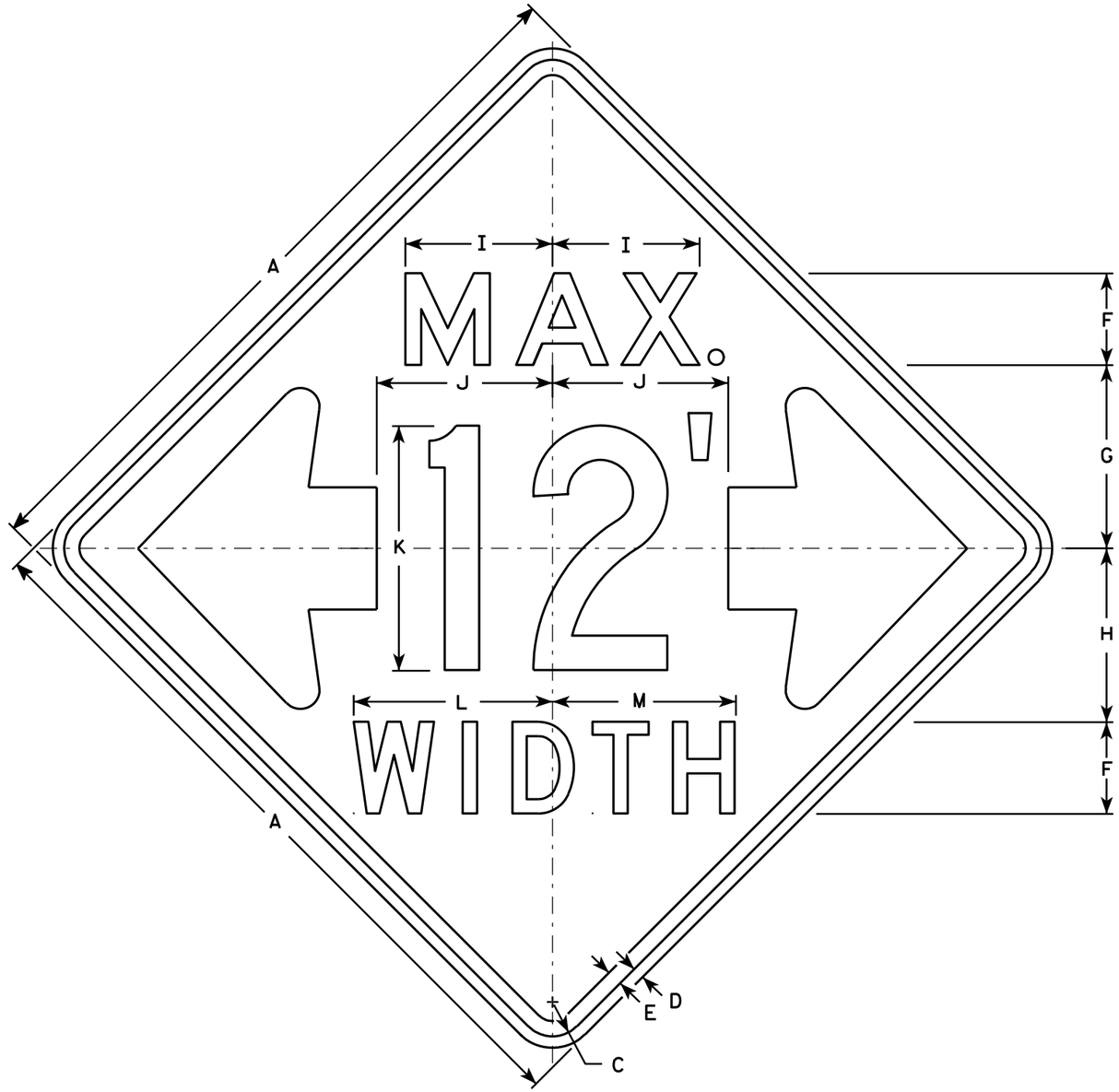
STANDARD SIGN
W12-1D

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/13 PLATE NO. W12-1D.15

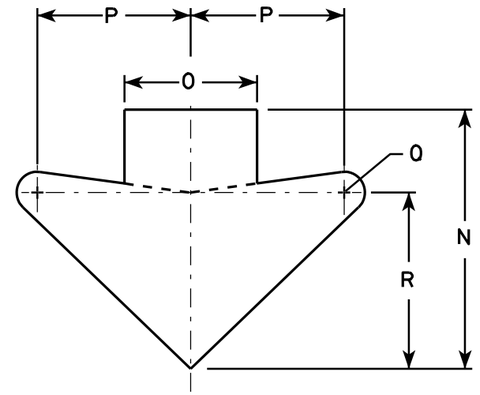
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 230	E



W12-52

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The top line is series E, the numerals are series C, and the bottom line is series D.
6. Substitute appropriate numerals and adjust spacing as required.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
2M	48		2 1/4	3/4	1	6	12	11 3/8	9 5/8	11 1/2	16	13	12	15 5/8	8	9 1/4	1 1/4	10 5/8									16.0
3																											
4																											
5																											

STANDARD SIGN
W12-52

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/16/11 PLATE NO. W12-52.7

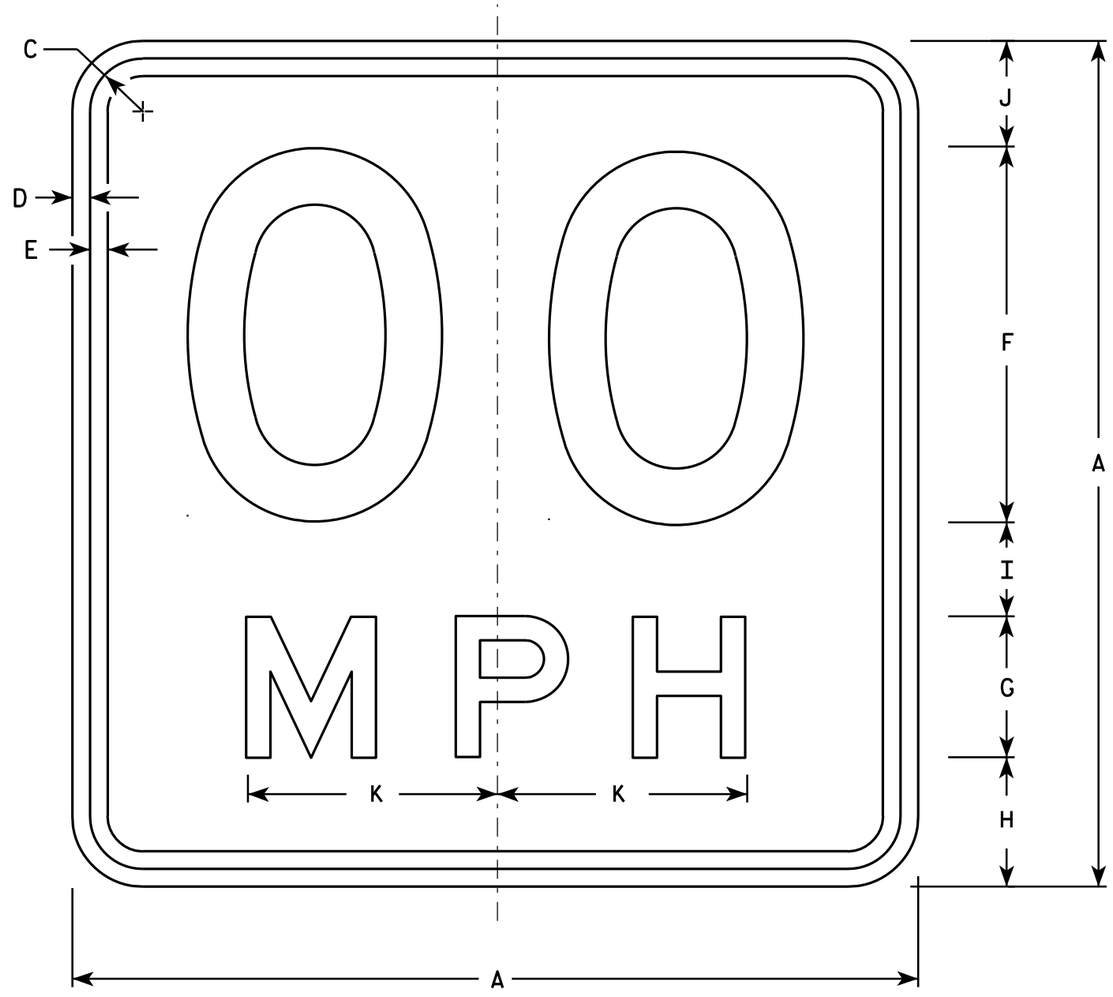
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 231 | E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W1252.DGN PLOT DATE : 16-MAR-2011 14:45 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 9.137199:1.000000

WISDOT/CADDS SHEET 42

7

7



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.

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

	SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
	1	18		1 1/8	3/8	3/8	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

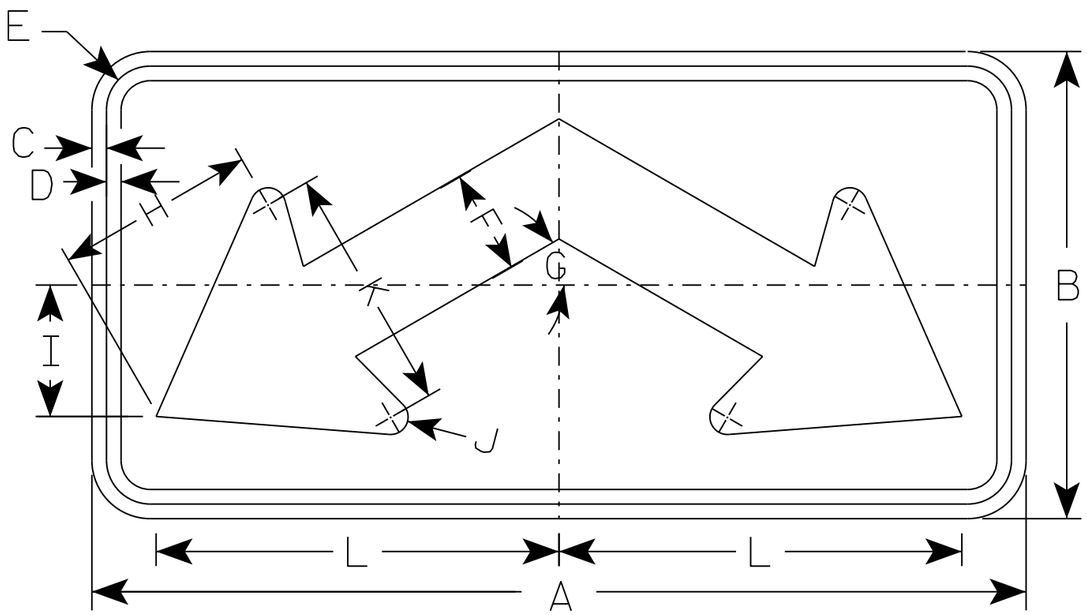
APPROVED Matthew R Rauch
For State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 232 | E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black



W16-7D

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	3/8	3/8	1 1/8	2 5/8	30°	5 1/8	3 3/8	1/2	6 1/4	10 3/8															2.0
2S	24	12	3/8	3/8	1 1/8	2 5/8	30°	5 1/8	3 3/8	1/2	6 1/4	10 3/8															2.0
2M	30	18	3/8	1/2	1 1/8	4	30°	7 5/8	5 3/8	5/8	9 1/4	13															3.75
3	30	18	3/8	1/2	1 1/8	4	30°	7 5/8	5 3/8	5/8	9 1/4	13															3.75
4	48	24	1/2	5/8	1 3/8	5 3/8	30°	10 3/8	7 1/4	1	12 5/8	20 3/4															8.0
5																											

STANDARD SIGN
W16-7D

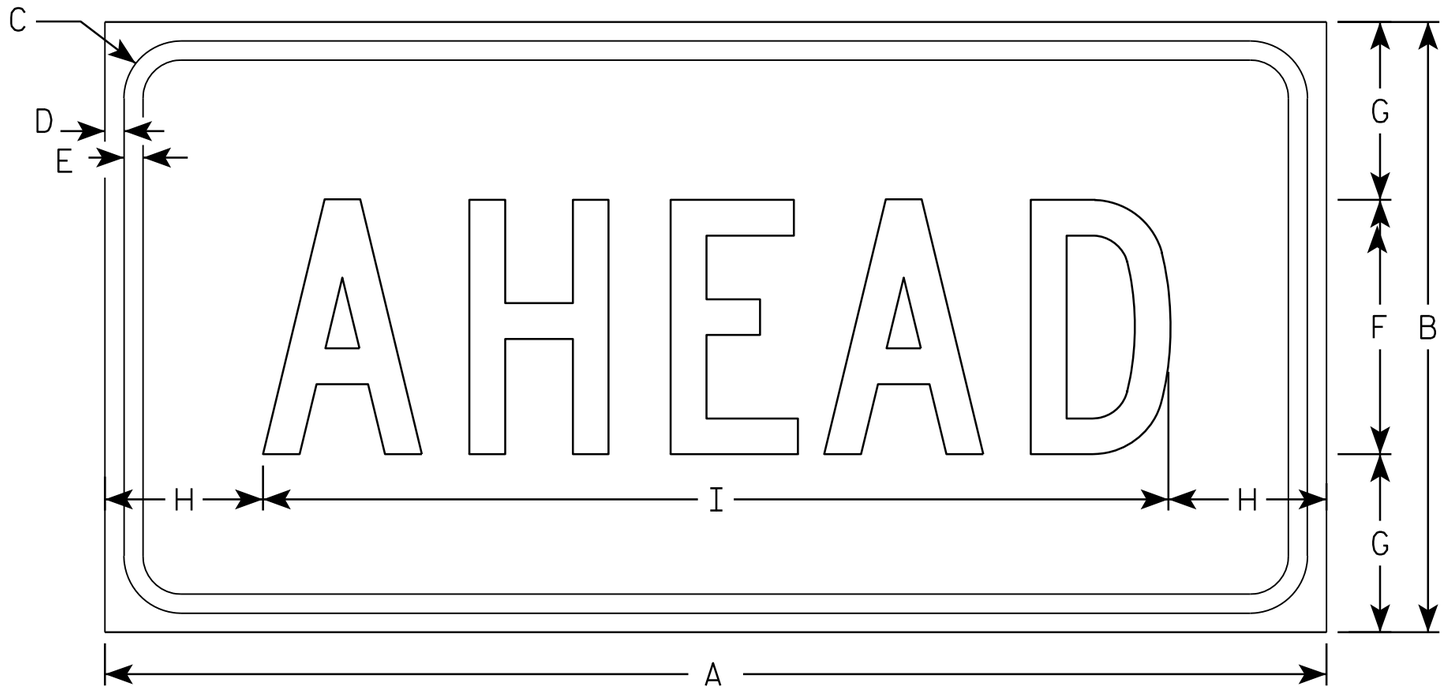
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/1/16 PLA 233 116-7D.1

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W16?D.DGN PLOT DATE : 11-AUG-2016 11:30 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 3.891684:1 000000



W16-9P

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 - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
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
W16-9P

WISCONSIN DEPT OF TRANSPORTATION

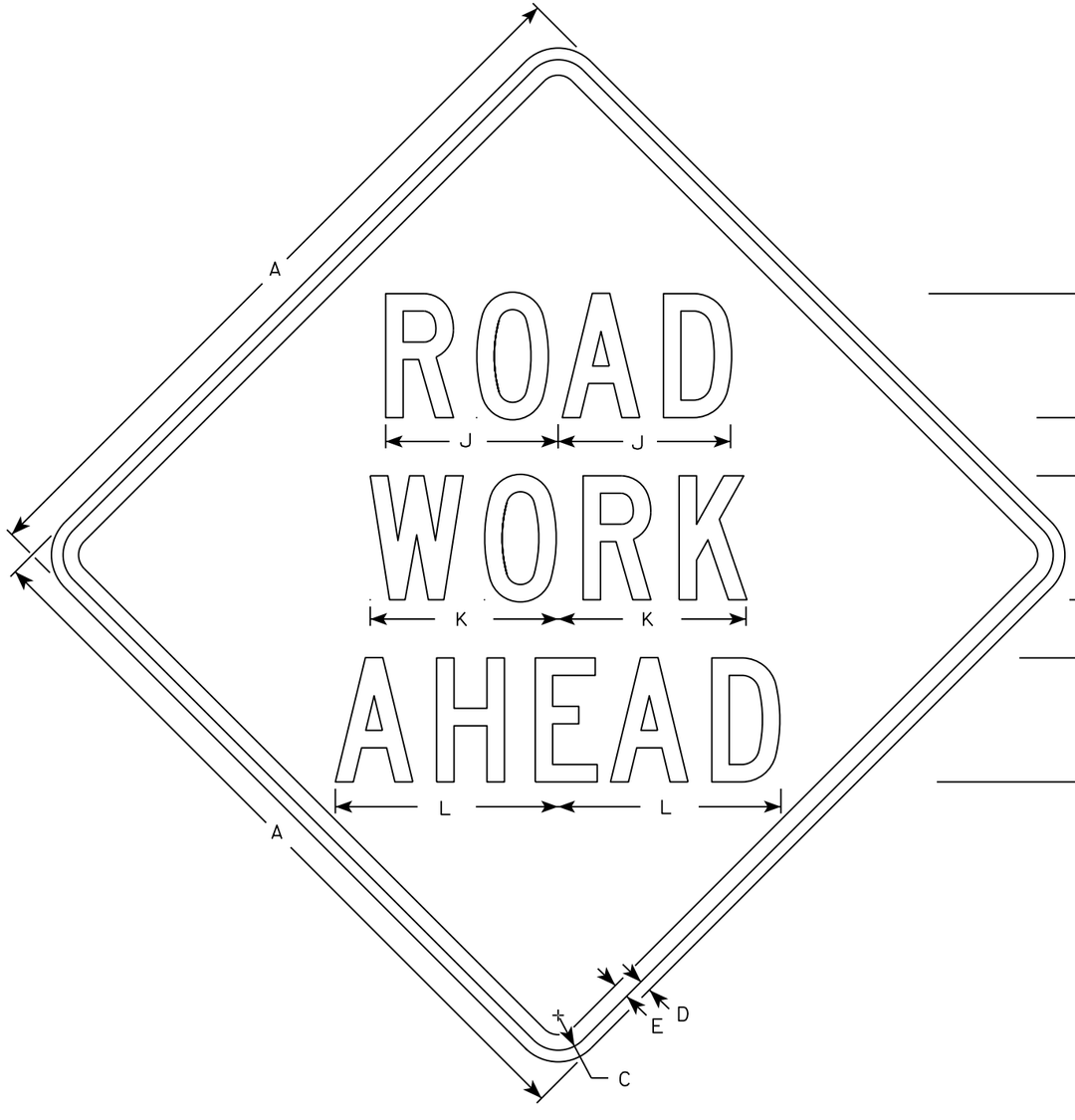
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/28/10 PLATE NO. W16-9P.6

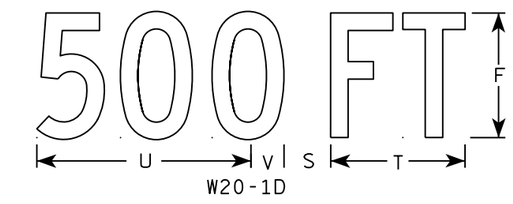
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 234 | E

7

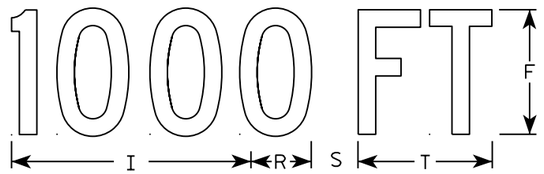
FILE NAME : C:\Users\PROJECTS\tr_stdplate\W169P.DGN PLOT DATE : 28-DEC-2010 13:39 PLOT BY : dotsja PLOT NAME : PLOT SCALE : 2.979524:1.000000
WISDOT/CADDS SHEET 42



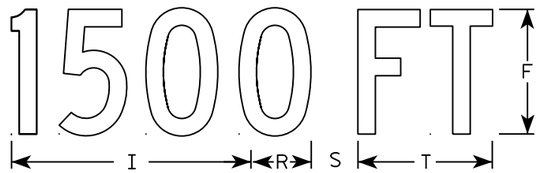
W20-1A



W20-1D



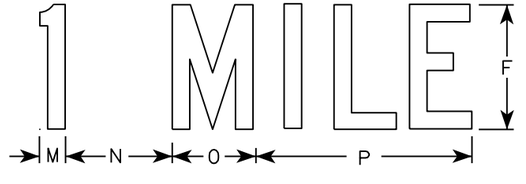
W20-1C



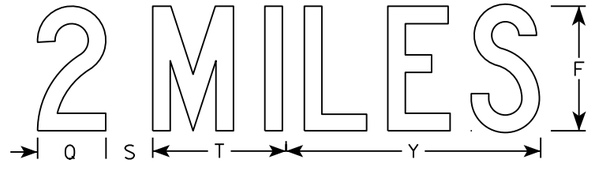
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

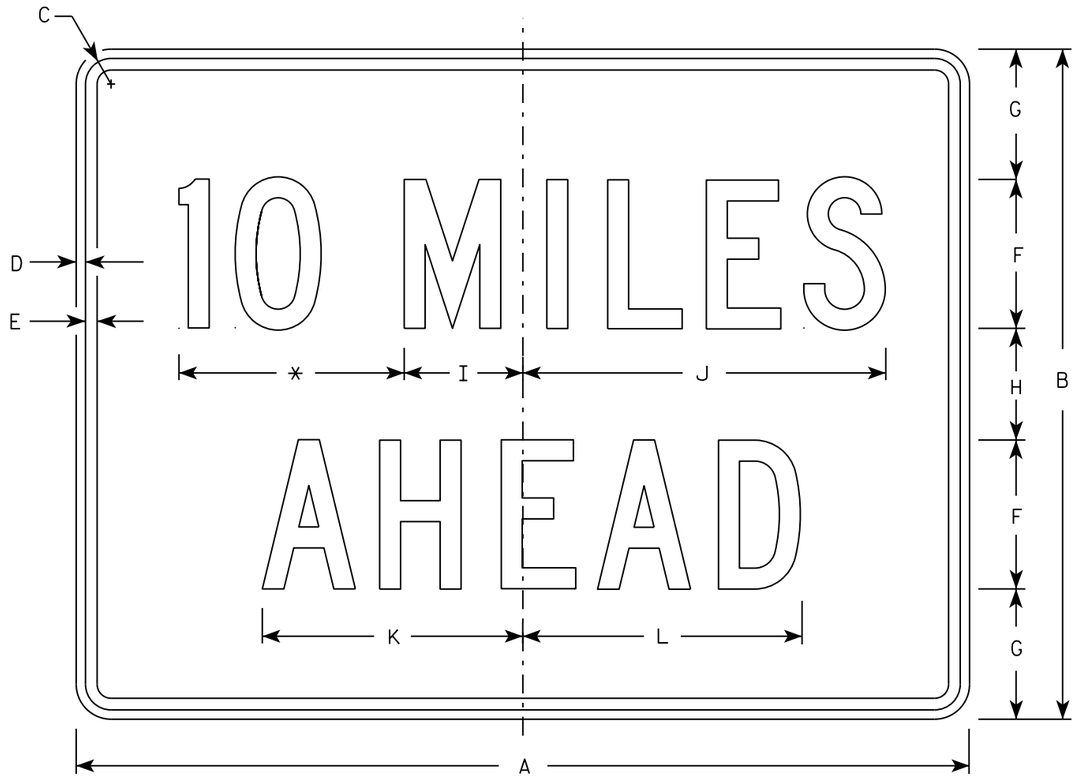
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10

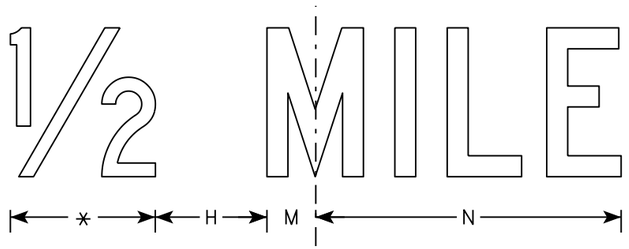
PROJECT NO:

SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$



W057-52



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals to the nearest quarter mile and optically adjust spacing to achieve proper balance.

* See note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	24	1 1/8	3/8	1/2	6	4 1/2	3	4 3/4	14 5/8	10 5/8	11 3/8	2	12													6.0
2S	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
2M	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
3	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
4	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0
5	48	36	1 3/8	1/2	5/8	8	7	6	6 3/8	19 1/2	14	15	2 3/4	16 3/8													12.0

STANDARD SIGN
W057-52

WISCONSIN DEPT OF TRANSPORTATION

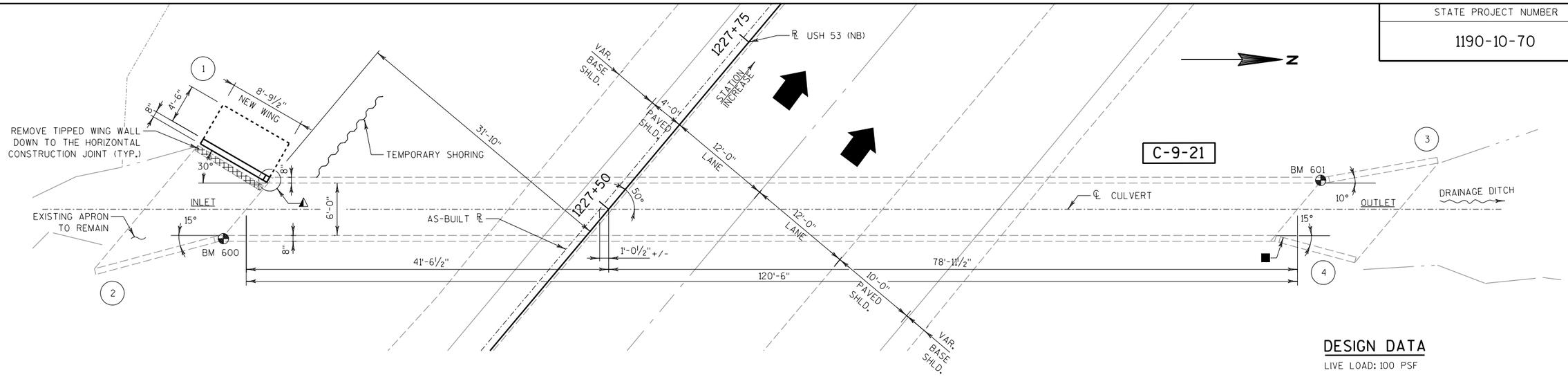
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W057-52.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 236	E

STATE PROJECT NUMBER

1190-10-70



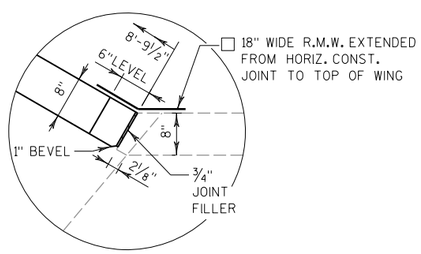
PLAN

BENCHMARKS

NO.	STATION	DESCRIPTION	EL.
600	1227+29, LT	CHISELED SQUARE SE CORNER	1074.26
601	1228+05, RT	CHISELED SQUARE NW CORNER	1073.93

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	TOTAL
203.0200	REMOVING OLD STRUCTURE STATION 1227+50.00	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS C-9-21	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	20
502.4205	ADHESIVE ANCHORS NO. 5 BAR	EACH	9
504.0100	CONCRETE MASONRY CULVERTS	CY	3
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	293
511.1200	TEMPORARY SHORING C-9-21	SF	80
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	3
	NON-BID ITEMS		
	FILLER	SIZE	3/4"



⚠ CORNER DETAIL AT WING 1

LEGEND

(X) INDICATES WING NUMBER

⚠ SEE CORNER DETAIL

■ NAME PLATE LOCATION (TO REMAIN)

☐ RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.)

DESIGN DATA

LIVE LOAD: 100 PSF

MATERIAL PROPERTIES:

CONCRETE MASONRY _____ f'c = 3.5 K.S.I.
BAR STEEL REINFORCEMENT _____ fy = 60 K.S.I.

FOUNDATION DATA

THE RETAINING WALL IS TO BE SUPPORTED ON A SPREAD FOOTING. THE MINIMUM FACTORED BEARING RESISTANCE OF THE SOIL BELOW THE SPREAD FOOTING SHALL BE 4000 PSF.

TRAFFIC DATA

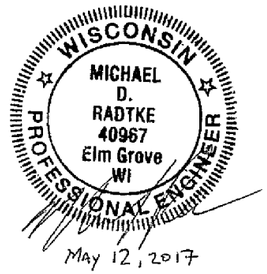
USH 53
ADT (2018) = 13,900
ADT (2038) = 16,800
RDS = 70 M.P.H.

LIST OF DRAWINGS

1. GENERAL PLAN WING REPLACEMENT
2. WINGWALL DETAILS

STRUCTURE DESIGN CONTACTS

BRIDGE OFFICE: WILLIAM DREHER (608) 266-8489
CONSULTANT: MICHAEL D. RADTKE (414) 347-1607



GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

DIMENSIONS SHOWN ARE BAED ON THE ORIGINAL STRUCTURE PLANS.

ALL CONCRETE REMOVAL SHALL BE DEFINED BY A 1 INCH DEEP SAW CUT.

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

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

SEE ROADWAY PLANS FOR EROSION CONTROL MEASURES.

THE EXISTING STRUCTURE IS A 5'-0" HIGH X 6'-0" WIDE X 120'-6" SINGLE CELL CONCRETE BOX CULVERT. THERE IS EXISTING HEAVY RIPRAP AT THE OUTLET APRON (NOT SHOWN).

THE ℄ SHOWN IS BASED ON FIELD SURVEY OF USH 53 (NB). THE ORIGINAL AS-BUILT ℄ IS SHOWN FOR INFORMATIONAL PURPOSES ONLY.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES CULVERTS C-9-21" SHALL BE THE EXISTING GROUNDLINE.

AT THE B.F. OF WALL ALL VOLUME WHICH CANNOT BE PLACED BEFORE WALL CONSTRUCTION AND NOT OCCUPIED THE THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

NO.	DATE	REVISION	BY

emcs inc
1300 W. Canal Street, Suite 200
Milwaukee, WI 53233
414.347.1607 Fax 414.347.1347

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR 08/28/17
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE C-9-21

USH 53 (NB) OVER DRAINAGE DITCH

COUNTY	TOWN
CHIPPEWA	AUBURN

DESIGN SPEC.
REHABILITATION N/A

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
MDR	AJC	MDR	AJC

GENERAL PLAN
WING REPLACEMENT

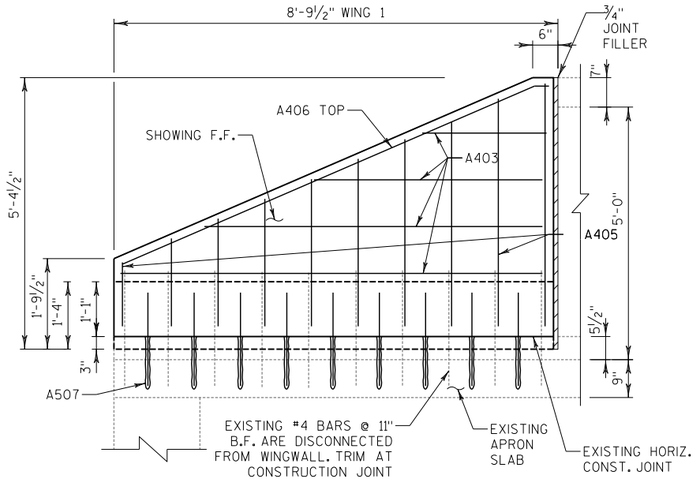
SHEET 1 OF 2
237

8

8

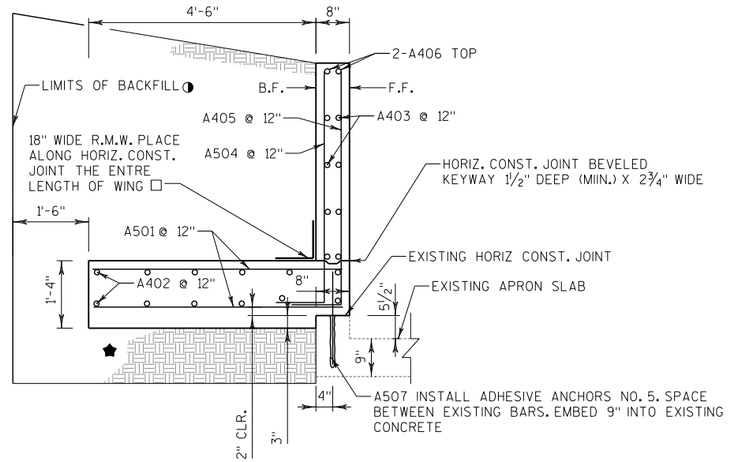
STATE PROJECT NUMBER

1190-10-70



NEW WING 1 ELEVATION

NOTE:
WING ELEVATION VIEW SHOWS FRONT FACE REINFORCING ONLY. BACK FACE REINFORCING NOT SHOWN FOR CLAIRTY.



SECTION THRU WING 1

BILL OF BARS

BAR MARK	COAT	NO.	LENGTH	BENT	BAR SERIES	LOCATION
A501	X	20	4'-10"			FOOTING TRANSVERSE TOP AND BOT.
A402	X	12	8'-4"			FOOTING LONGITUDINAL TOP AND BOT.
A403	X	8	5'-4"		X	WINGWALL HORIZONTAL
A504	X	10	4'-5"	X	X	VERTICAL B.F.
A405	X	10	3'-7"	X	X	VERTICAL F.F.
A406	X	2	9'-1"	X		TOP OF WINGWALL
A507	X	9	1'-6"			DOWELS

BAR SERIES TABLE

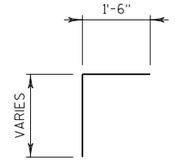
BAR MARK	NO. REQ'D	LENGTHS FOR EACH SERIES
A403	2 SERIES OF 4	2'-4" TO 8'-4"
A504	1 SERIES OF 10	2'-8" TO 6'-2"
A405	1 SERIES OF 10	1'-10" TO 5'-4"

LEGEND

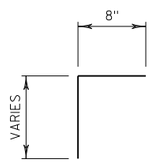
◑ "BACKFILL STRUCTURE TYPE B" PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

□ RUBBERIZED MEMBRANE WATERPROOFING (R.M.W.)

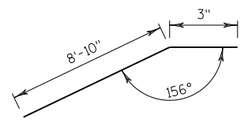
⬟ UNDER CUT 1'-0" AT WINGWALL FOOTING. EXCAVATION FOR UNDER CUT TO BE INCLUDED IN EXCAVATION FOR STRUCTURES. BACKFILL WITH "BACKFILL STRUCTURE TYPE B." EXTEND 1'-6" BEYOND THE WINGWALL FOOTING.



A504



A405



A406

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE C-9-21

DRAWN BY MDR | PLANS CK'D. AJC

WINGWALL DETAILS

SHEET 2 OF 2
238

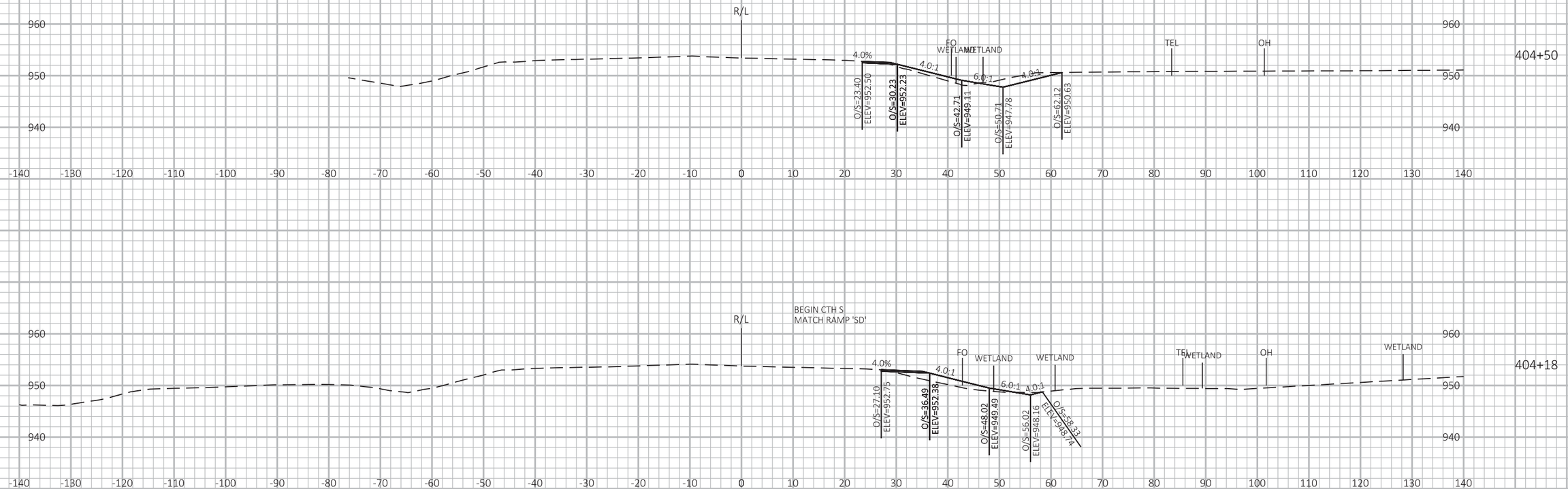
8

8

FILE NAME : P:\49xx\4979.DP.16.USH53-STH29.BAR-CHI\09 STRUCTURES\Plan\080102_a1.dgn

PLOT DATE : 3/7/2017

PLOT BY : mdr



10 FT
10 FT

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 239	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090201-XS

PLOT DATE : 4/20/2017 12:07 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

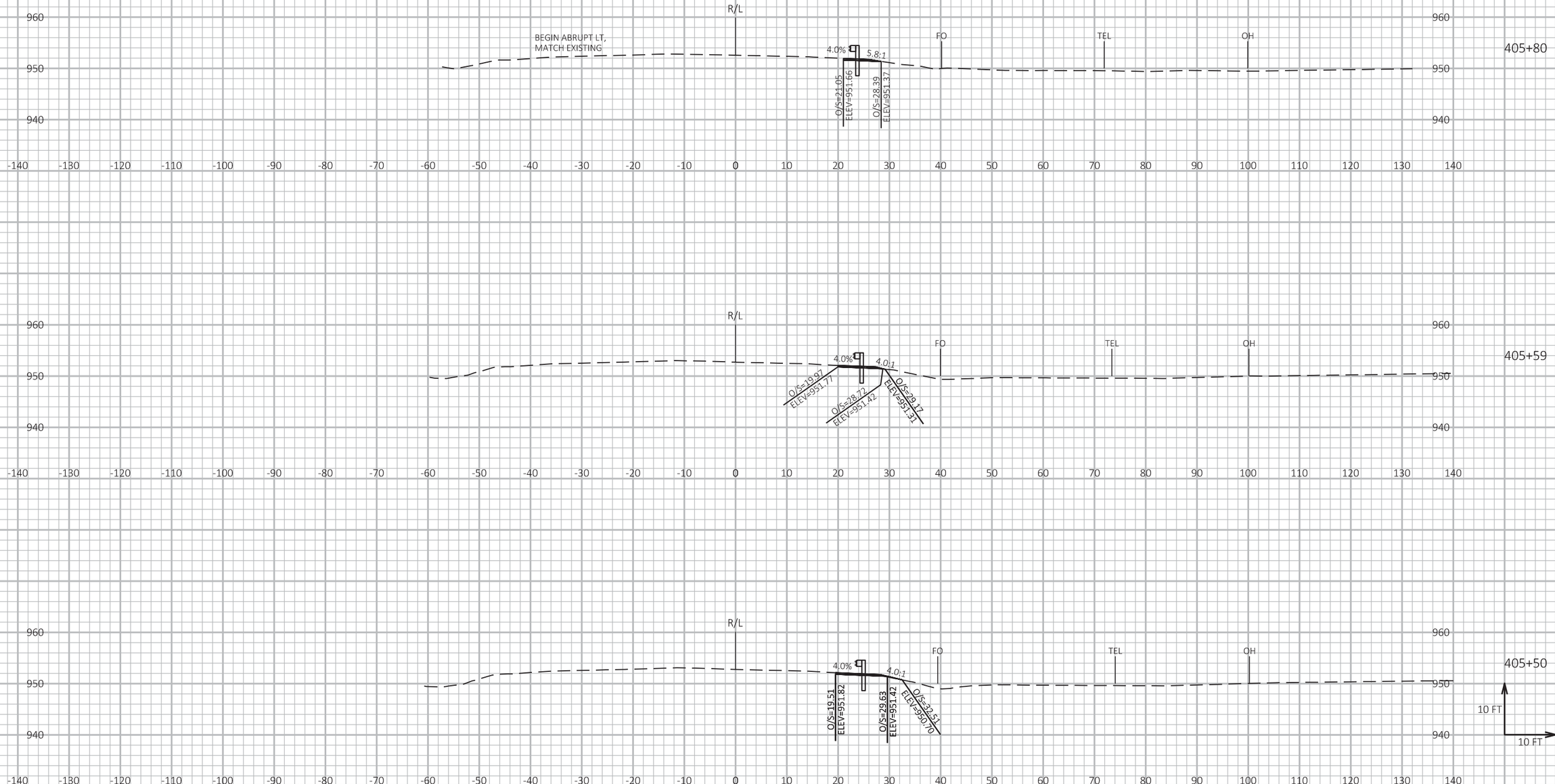
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 240	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090202-XS

PLOT DATE : 7/20/2017 12:20 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

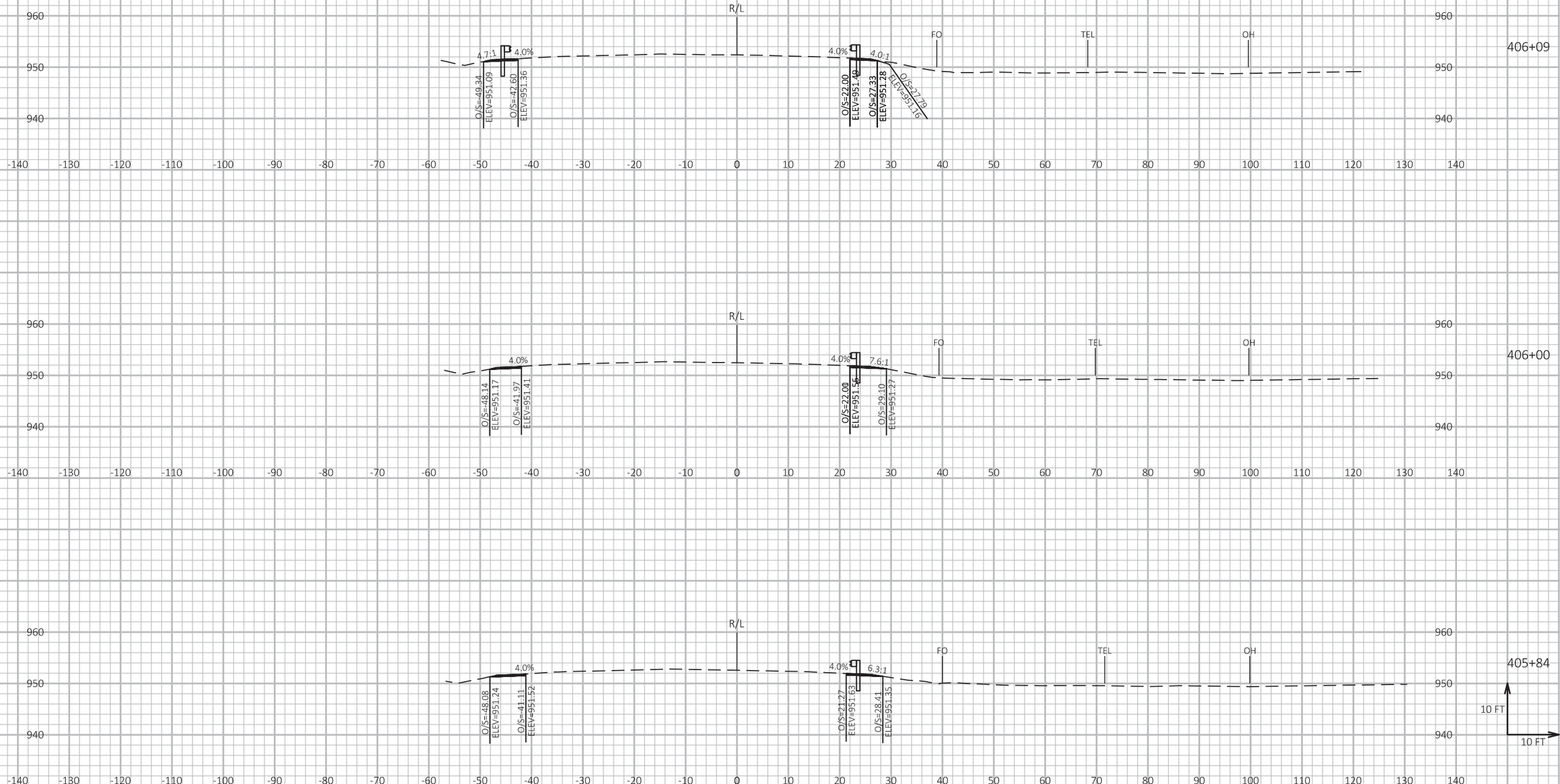
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 241	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090203-XS

PLOT DATE : 4/20/2017 12:08 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

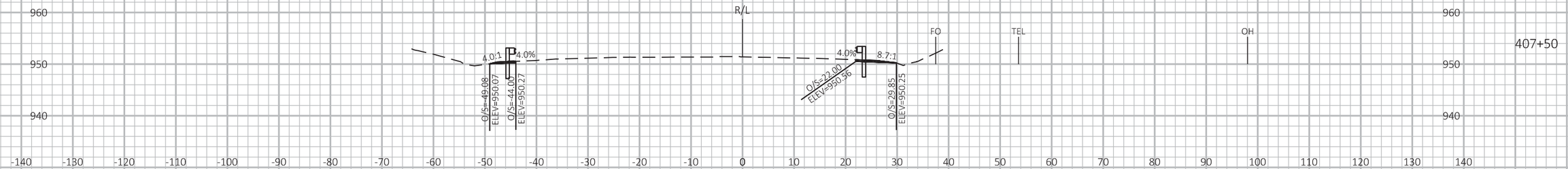
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 242	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090204-XS

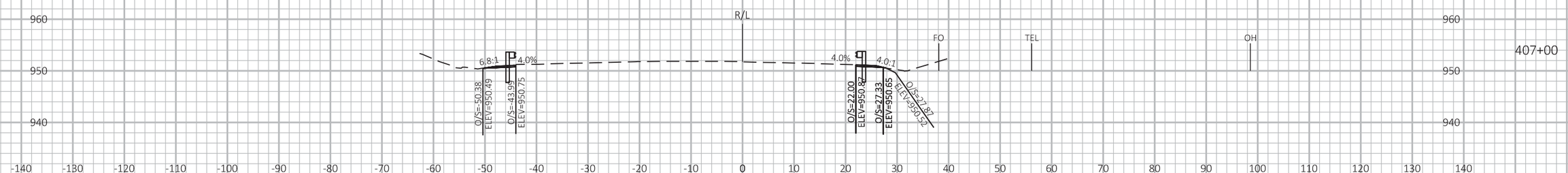
PLOT DATE : 4/20/2017 12:08 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49

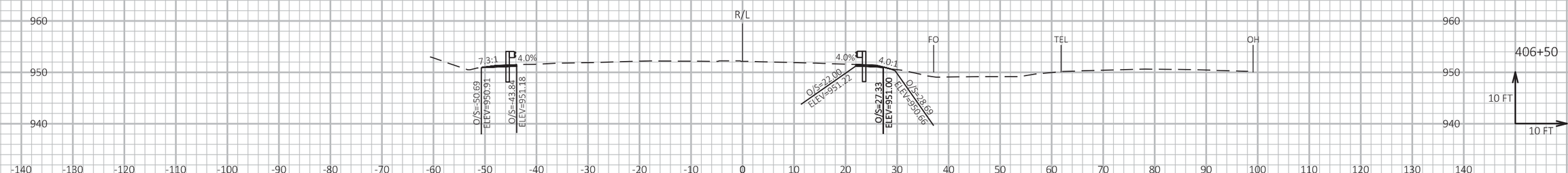
9



407+50



407+00



406+50

10 FT

10 FT

9

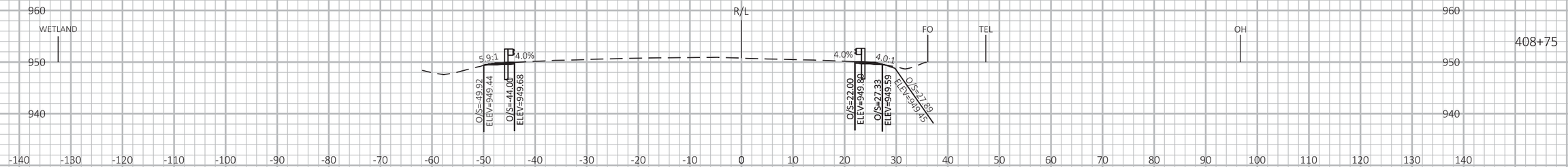
9

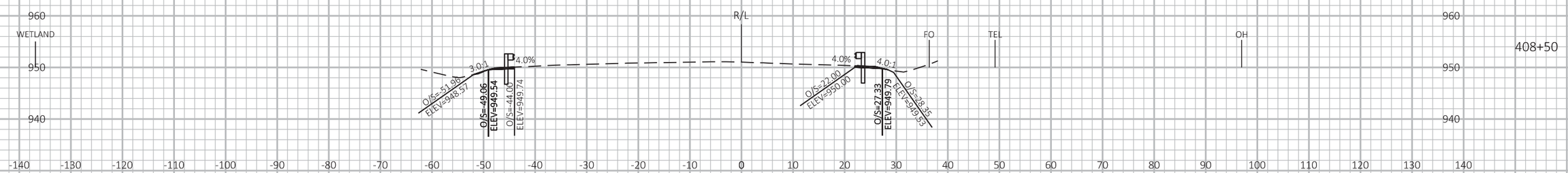
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 243	E

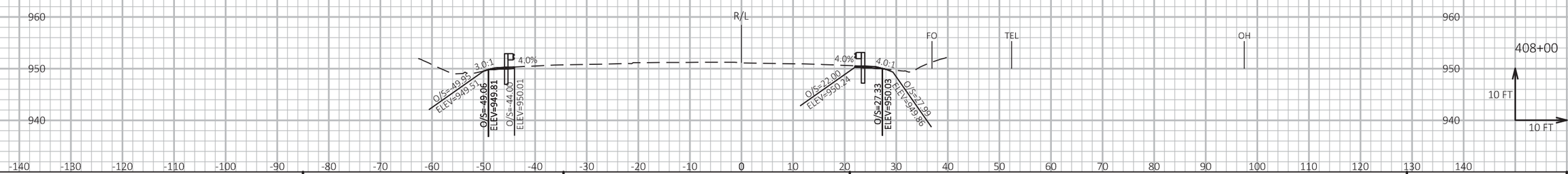
FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090205-XS

PLOT DATE : 4/20/2017 12:08 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49







9

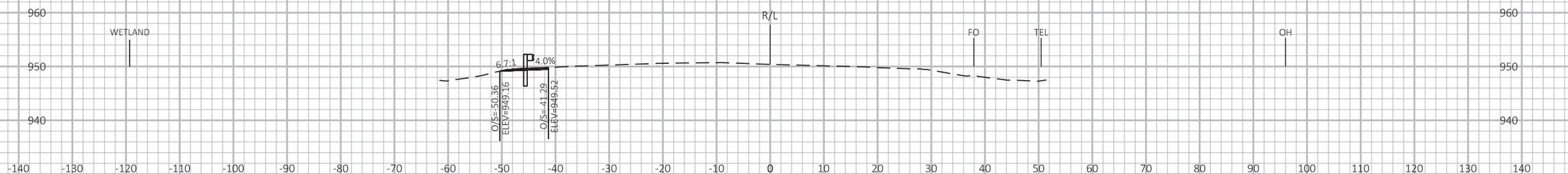
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 244	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090206-XS
PLOT DATE : 4/20/2017 12:08 PM
PLOT BY : MICHAEL HIGGINS
PLOT NAME :
PLOT SCALE : 1 IN:20 FT_1
WISDOT/CADDS SHEET 49



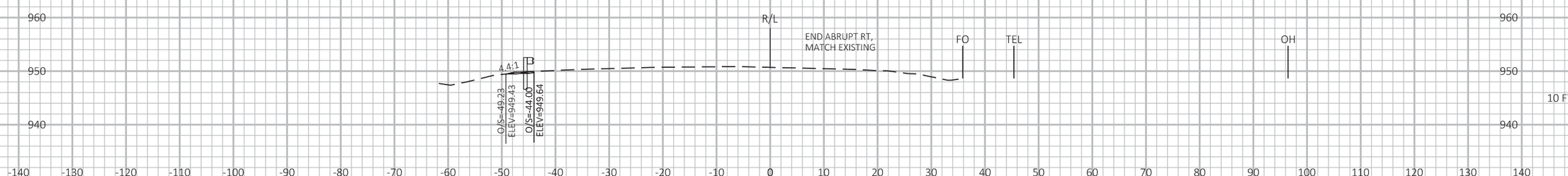
410+00



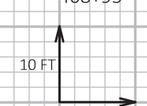
409+50



409+00



408+95



9

9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 245	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090207-XS

PLOT DATE : 4/20/2017 12:08 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49







9

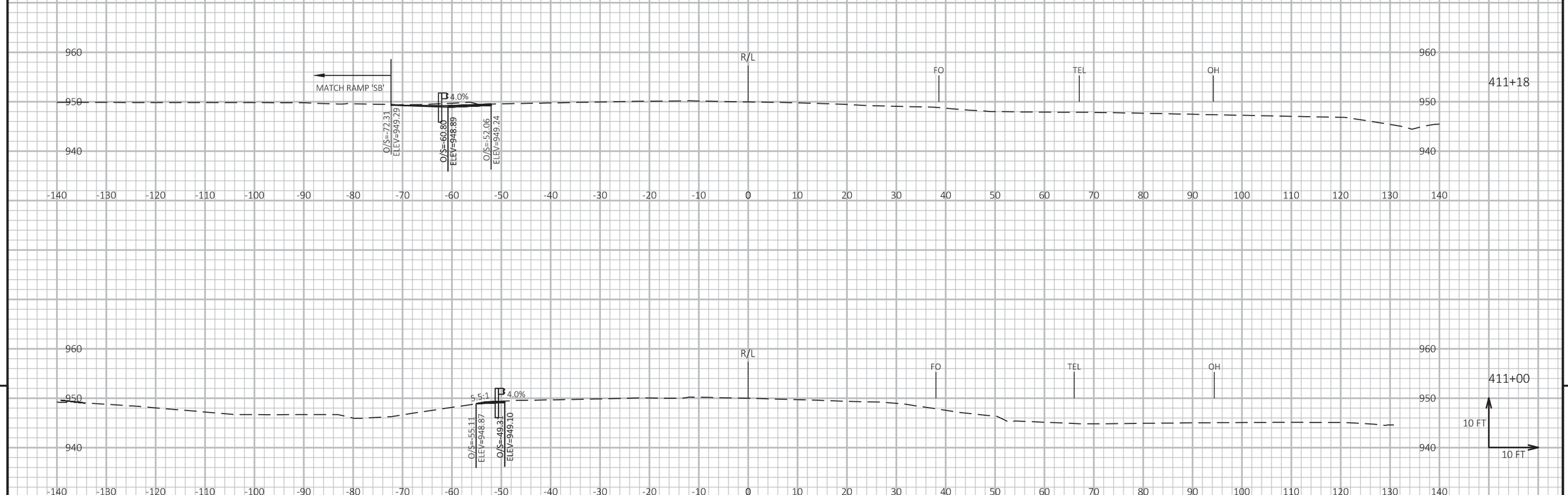
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 246	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090208-XS

PLOT DATE : 4/20/2017 12:08 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

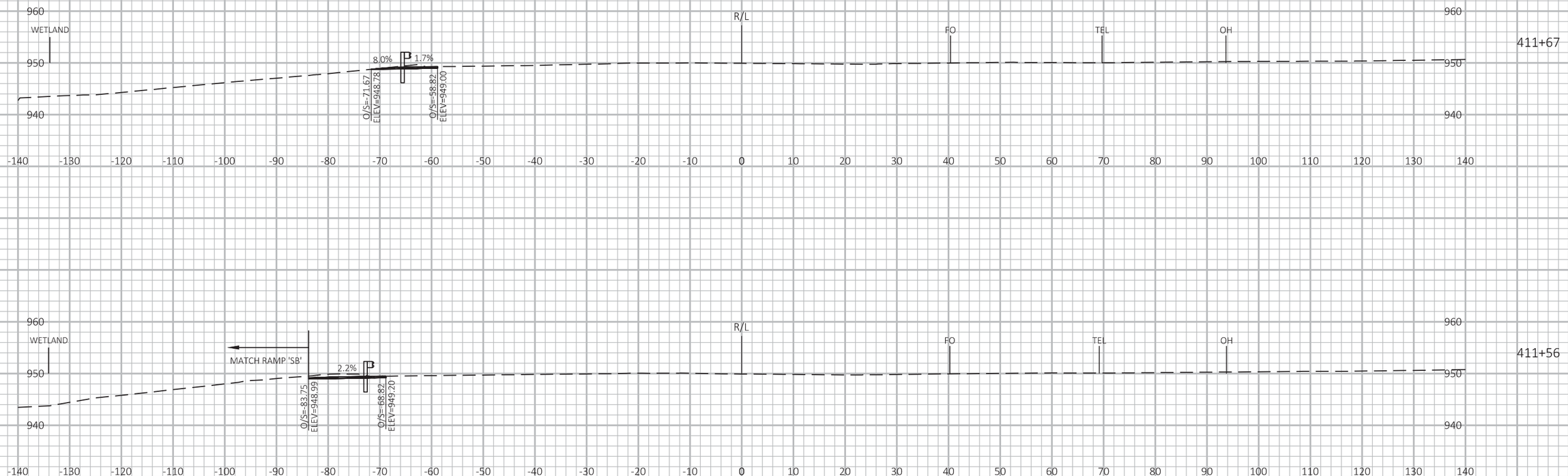
9

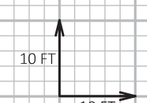
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 247	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090209-XS

PLOT DATE : 4/20/2017 12:09 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49





9

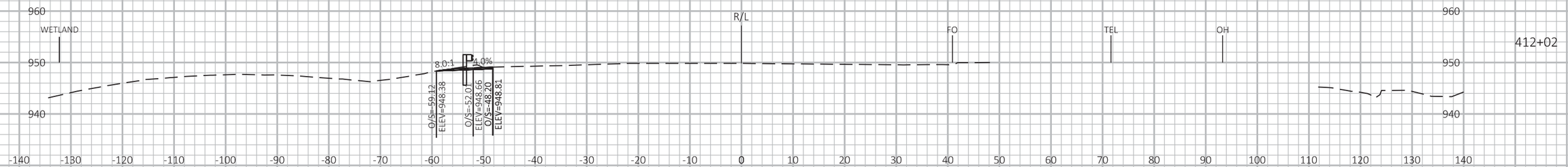
9

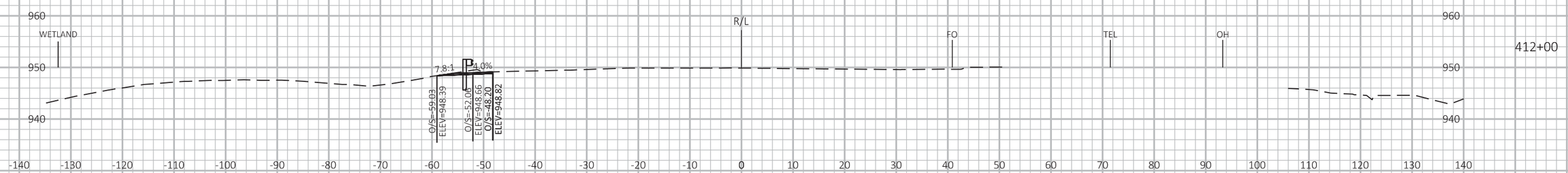
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 248	E

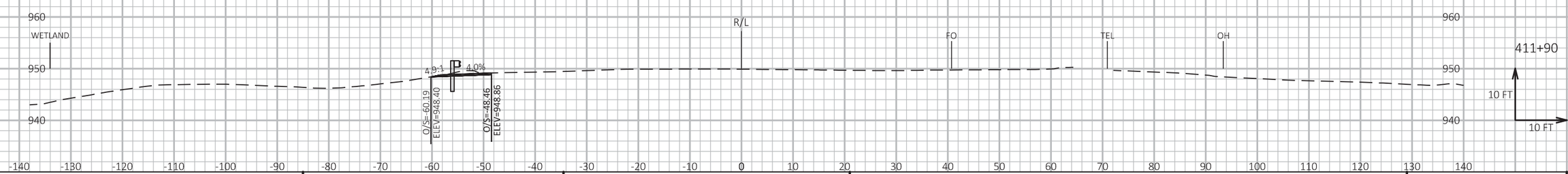
FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090210-XS

PLOT DATE : 4/20/2017 12:09 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49







9

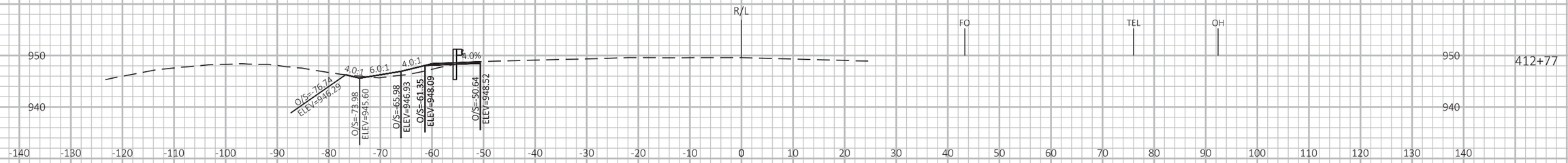
9

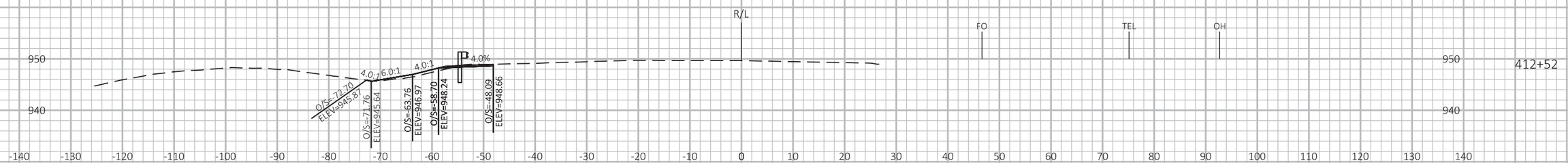
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 249	E

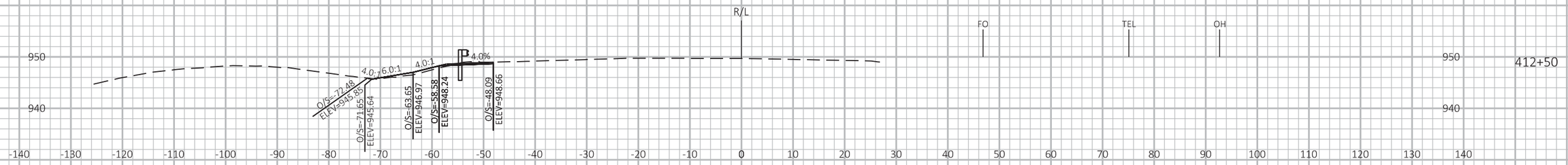
FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090211-XS

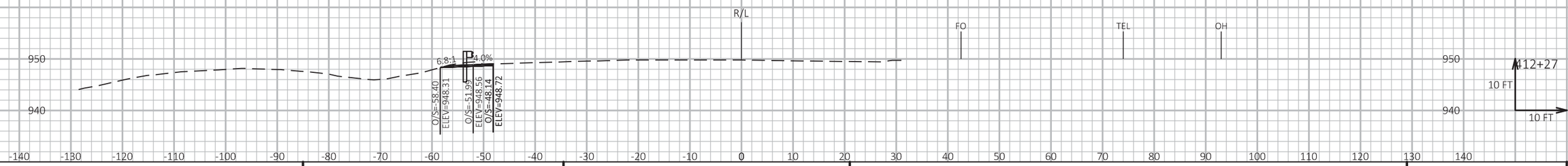
PLOT DATE : 4/20/2017 12:09 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49









9

9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 250	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090212-XS

PLOT DATE : 4/20/2017 12:09 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

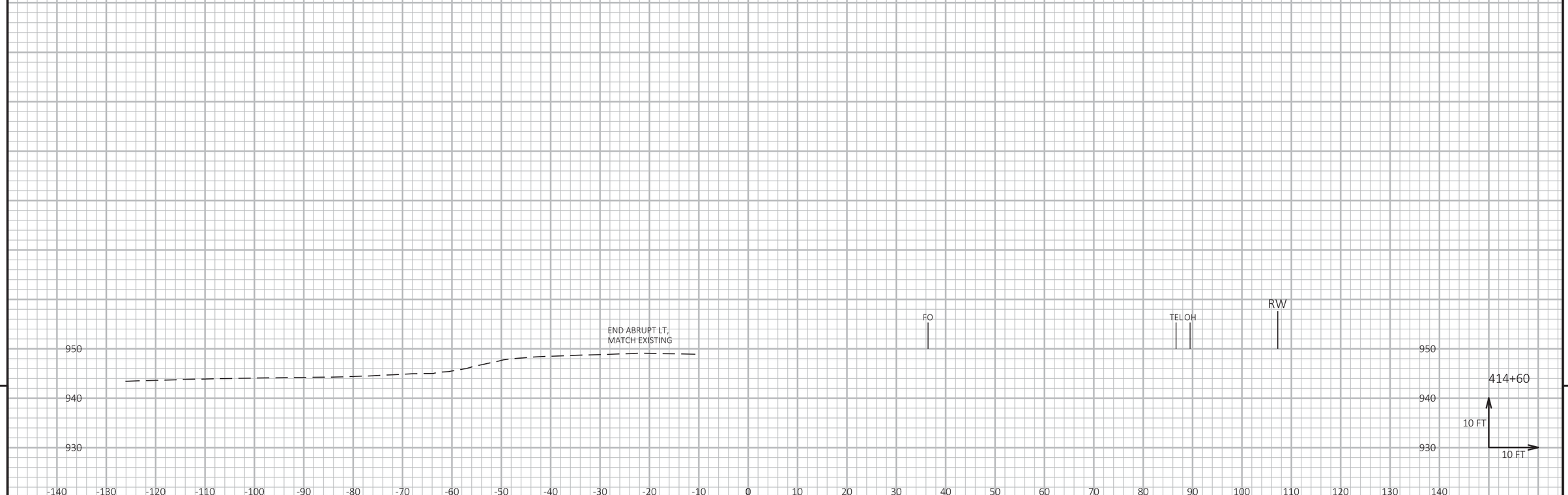
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 251	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090213-XS

PLOT DATE : 4/20/2017 12:09 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



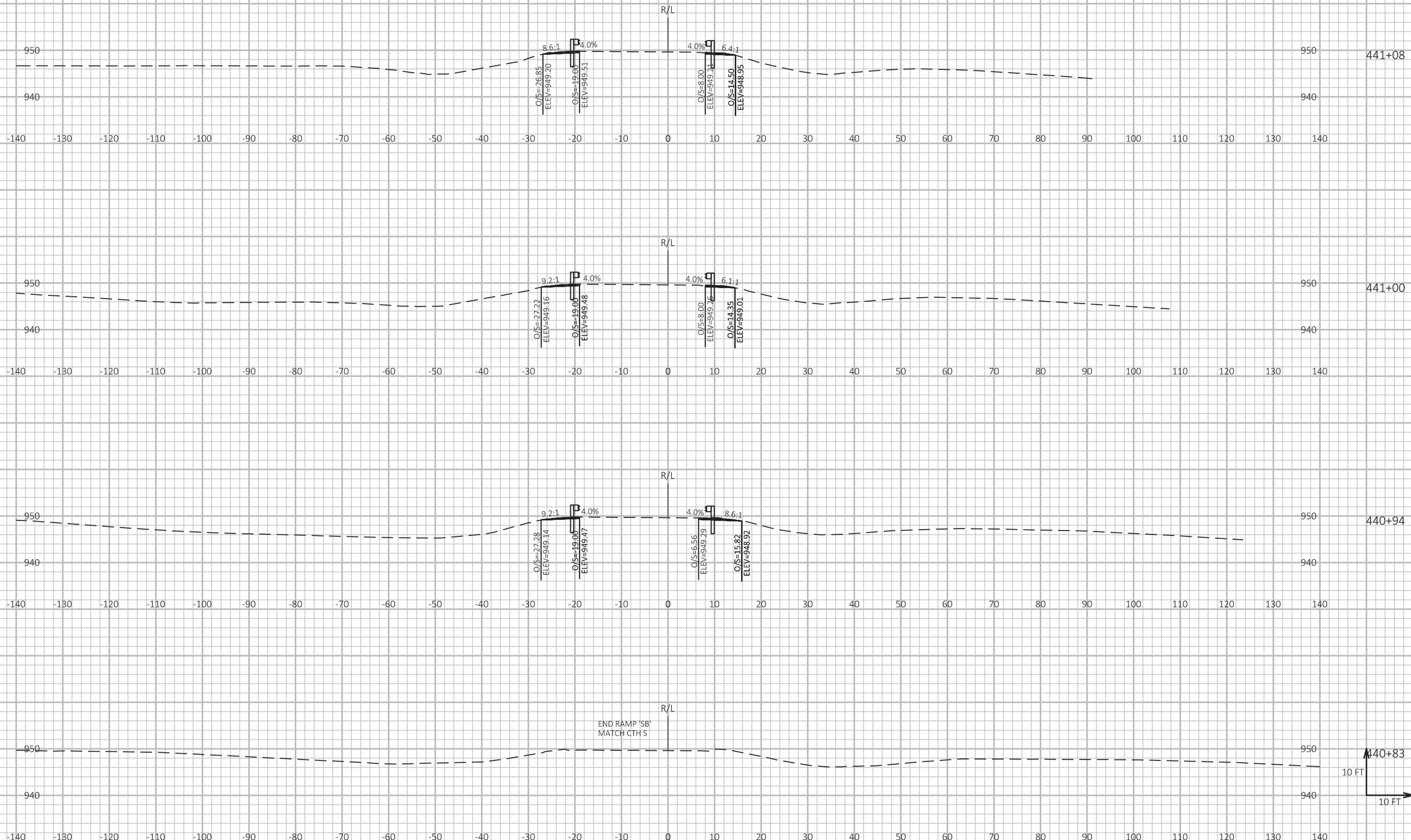
9 9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S	SHEET 252	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090214-XS

PLOT DATE : 4/20/2017 12:09 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

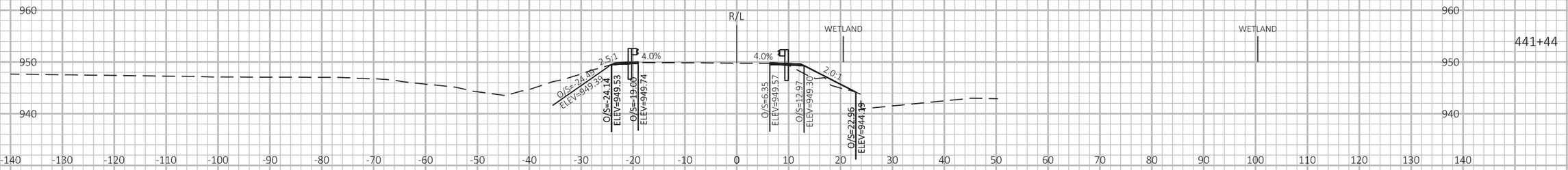
9

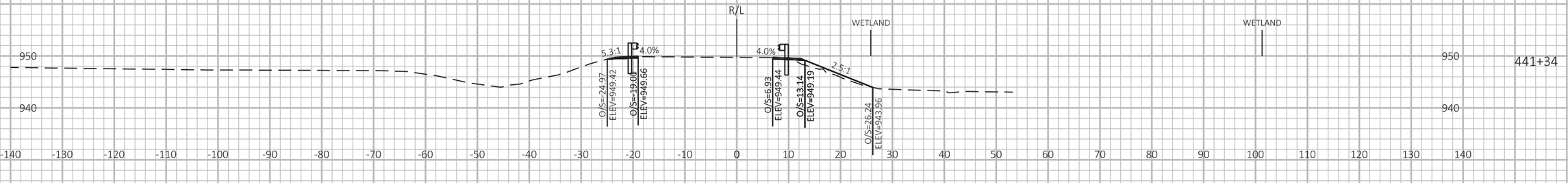
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SB'	SHEET 253	E

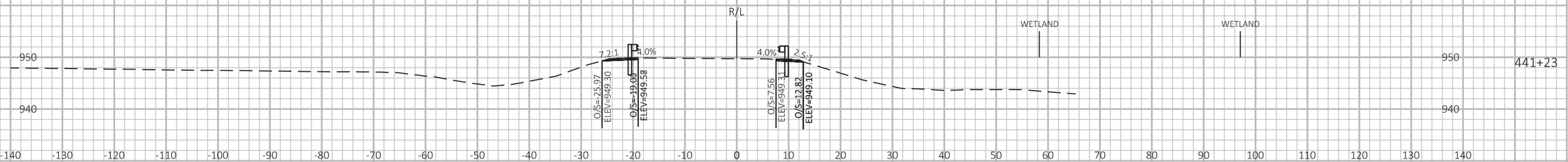
FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090215-XS

PLOT DATE : 4/20/2017 12:09 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49







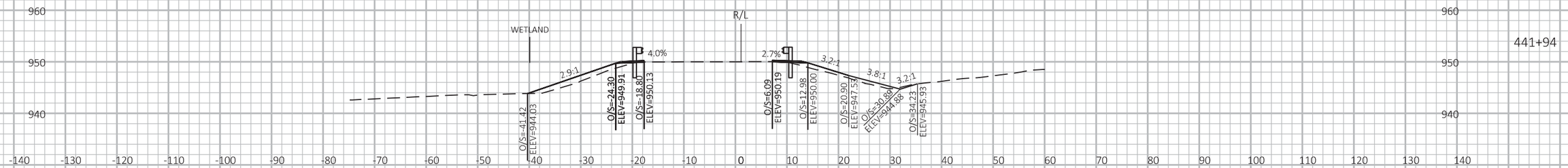


9

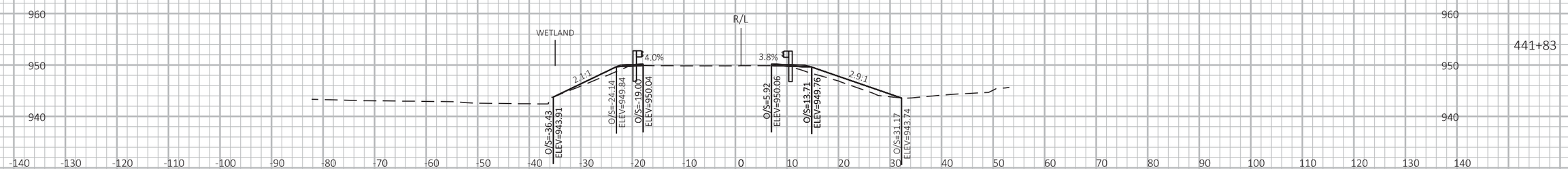
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SB'	SHEET 254	E

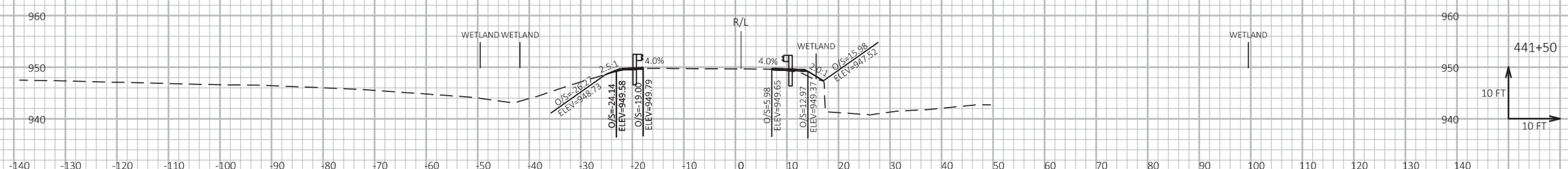
FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090216-XS
PLOT DATE : 4/20/2017 12:09 PM
PLOT BY : MICHAEL HIGGINS
PLOT NAME :
PLOT SCALE : 1 IN:20 FT_1
WISDOT/CADDS SHEET 49



441+94



441+83



441+50

10 FT
10 FT

9

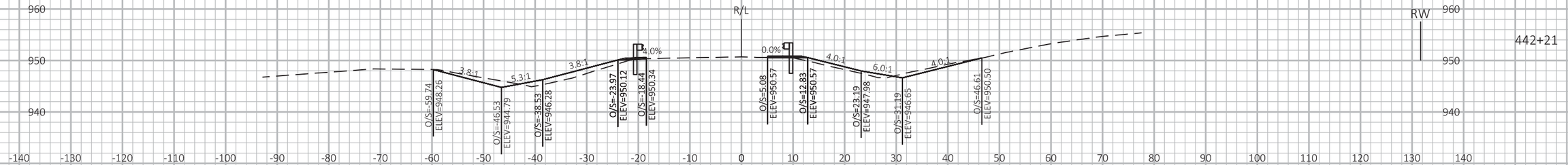
9

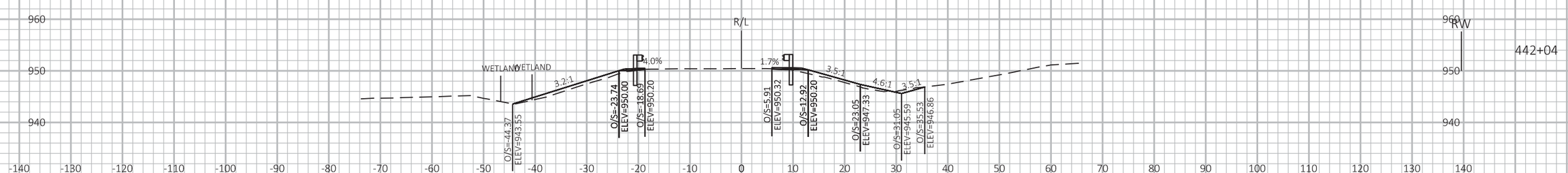
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SB'	SHEET 255	E

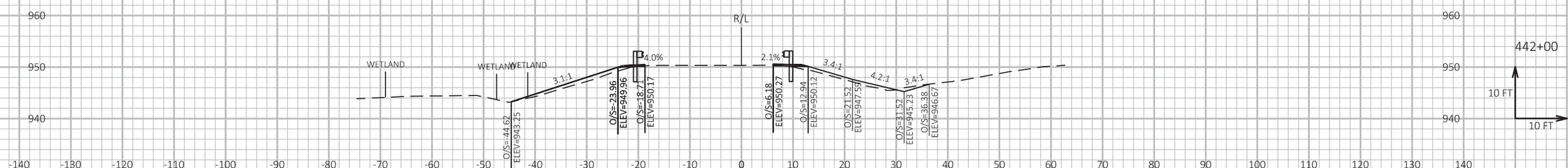
FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090217-XS

PLOT DATE : 4/20/2017 12:10 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49







9

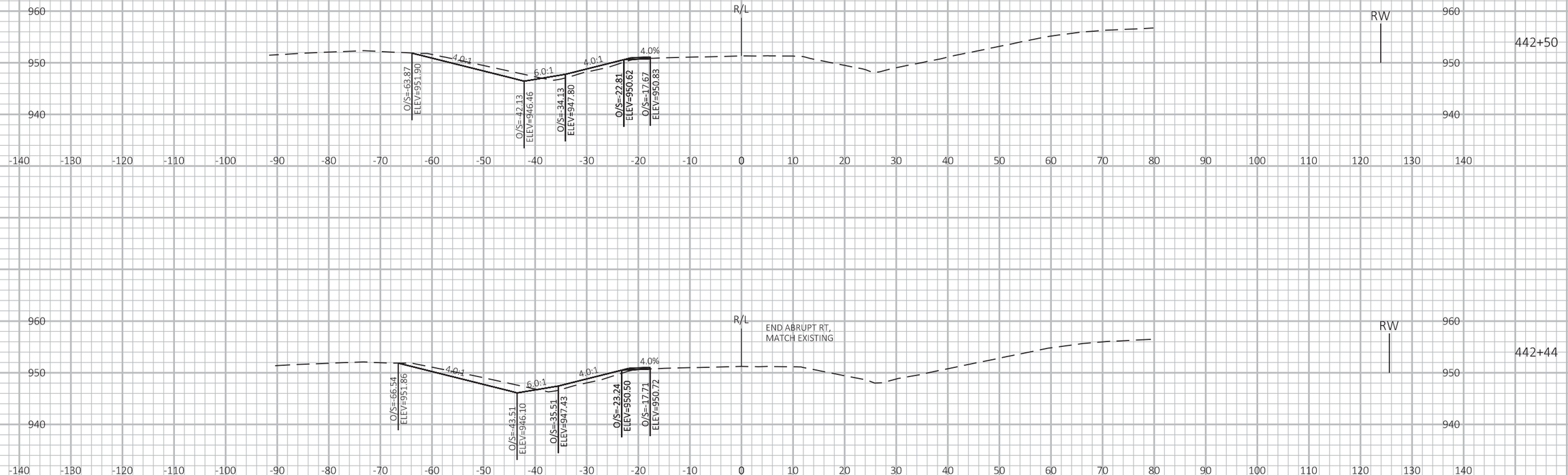
9

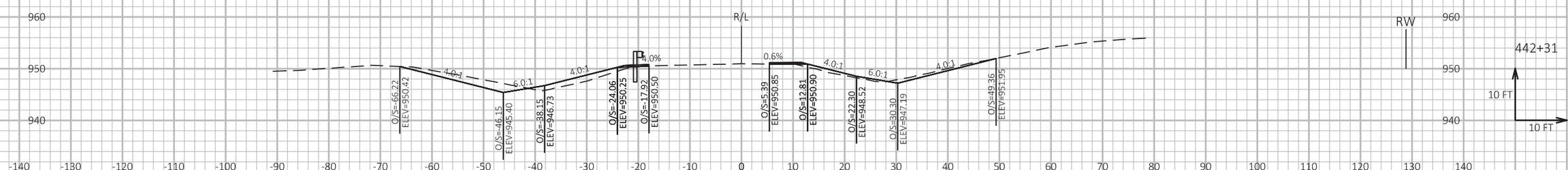
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SB'	SHEET 256 E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090218-XS

PLOT DATE : 4/20/2017 12:10 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49





9

9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SB'	SHEET 257	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090219-XS

PLOT DATE : 4/20/2017 12:10 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

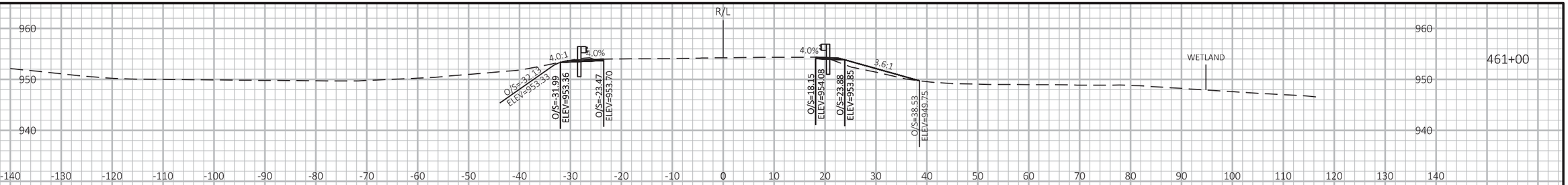
9

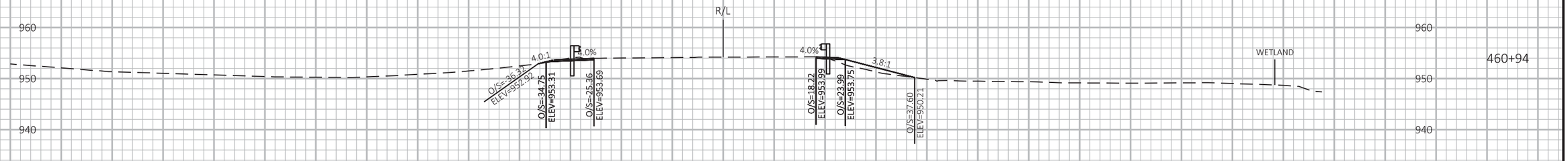
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SB'	SHEET 258	E

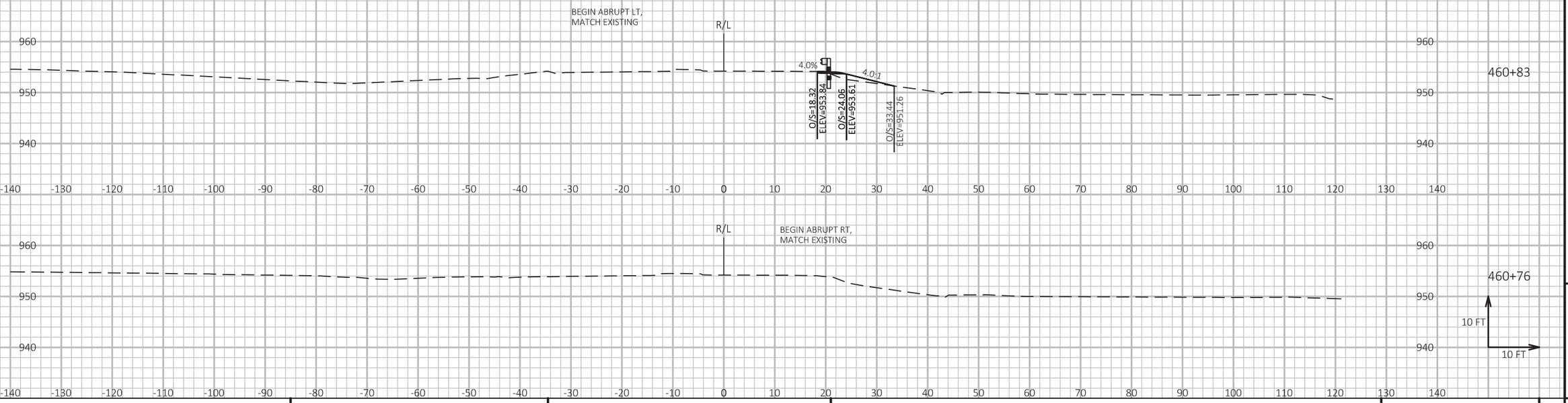
FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090220-XS

PLOT DATE : 4/20/2017 12:10 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49







9

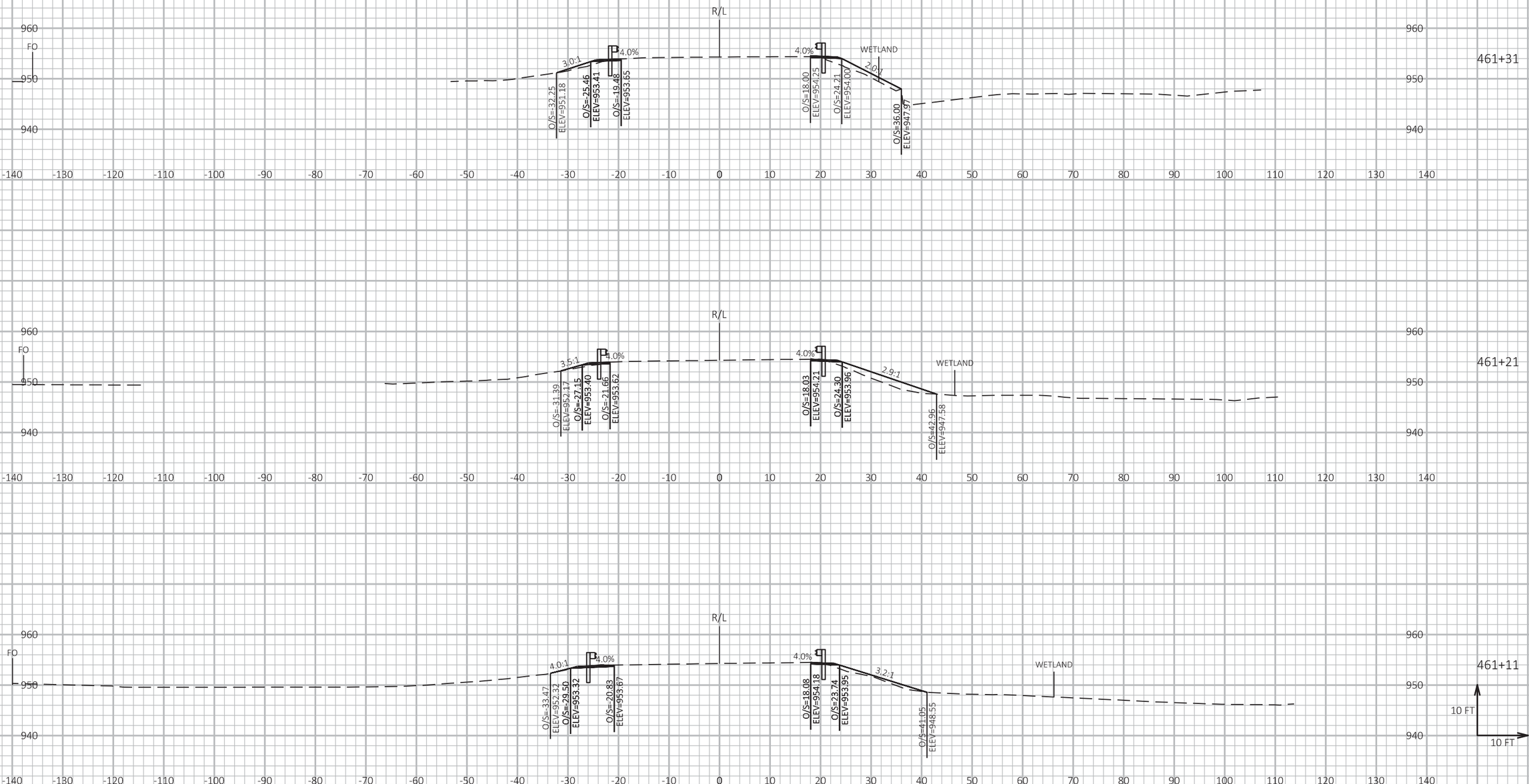
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SC'	SHEET 259	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090223-XS

PLOT DATE : 4/20/2017 12:10 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

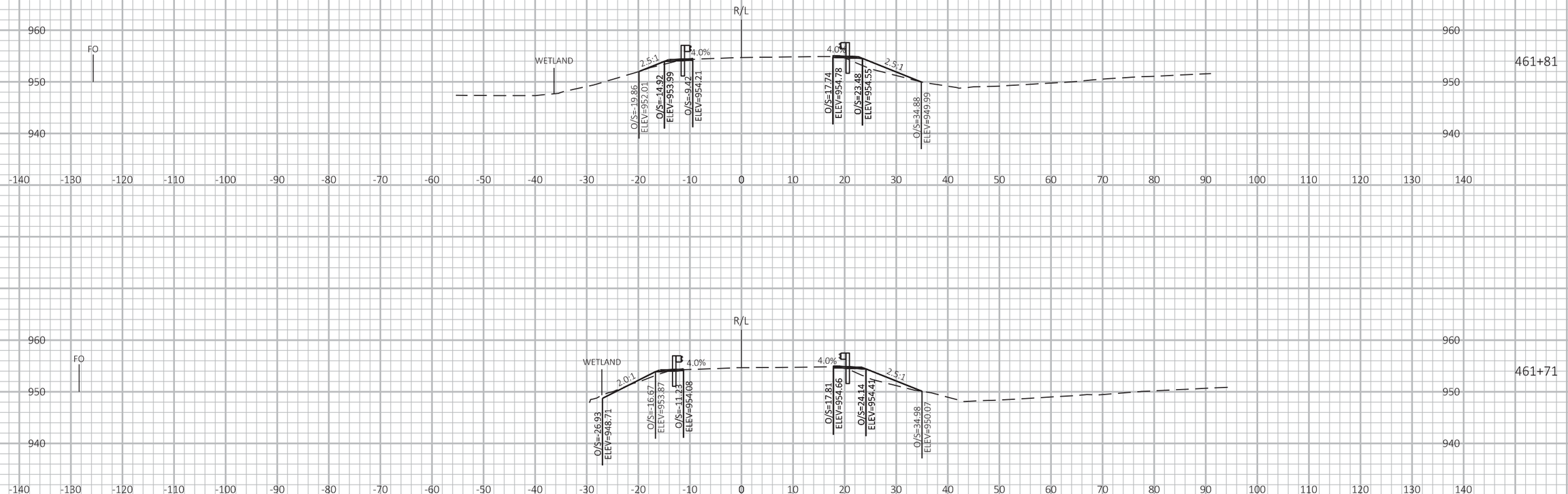
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SC'	SHEET 260	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090224-XS

PLOT DATE : 4/20/2017 12:10 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

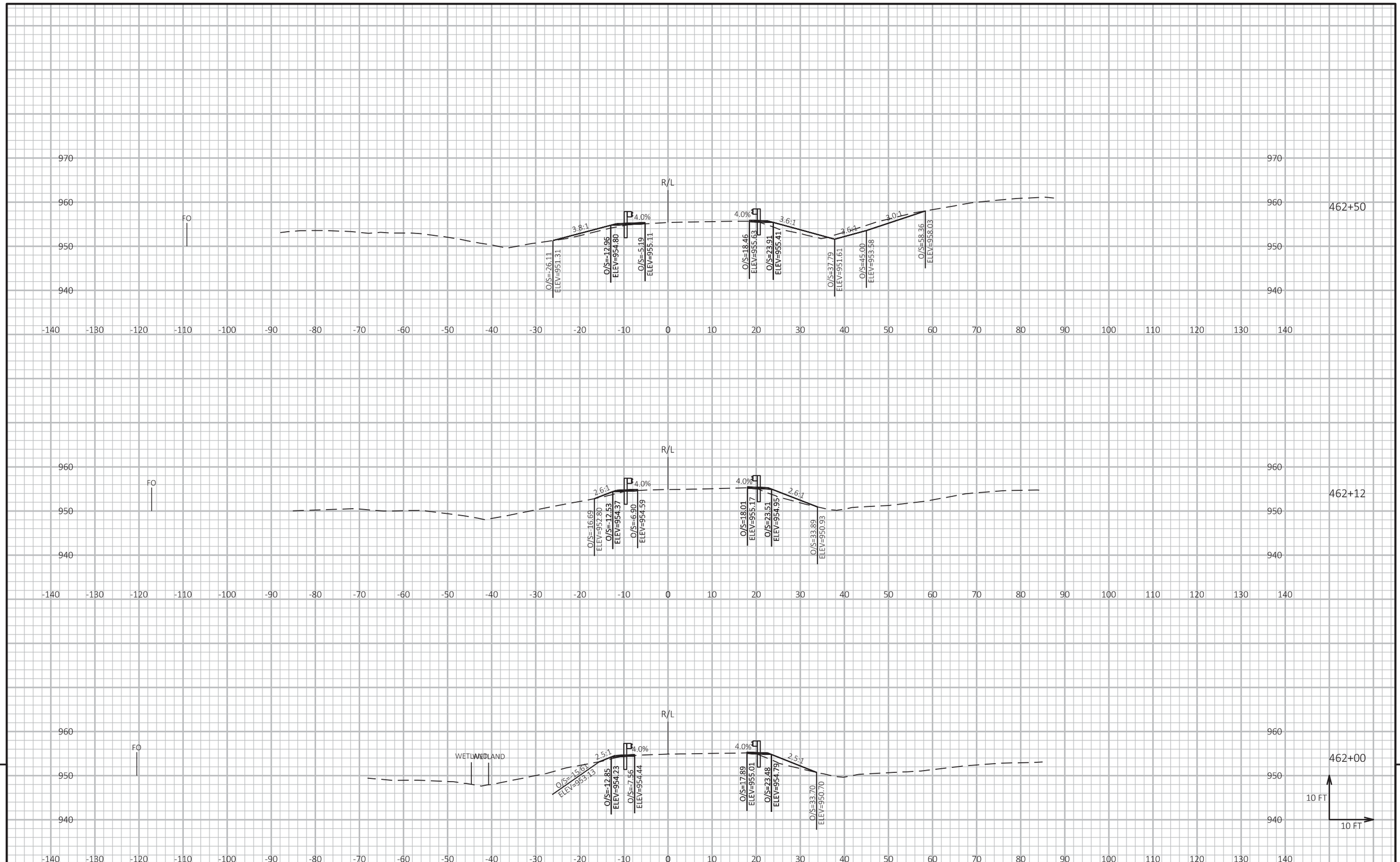
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SC'	SHEET 261	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090225-XS

PLOT DATE : 4/20/2017 12:10 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

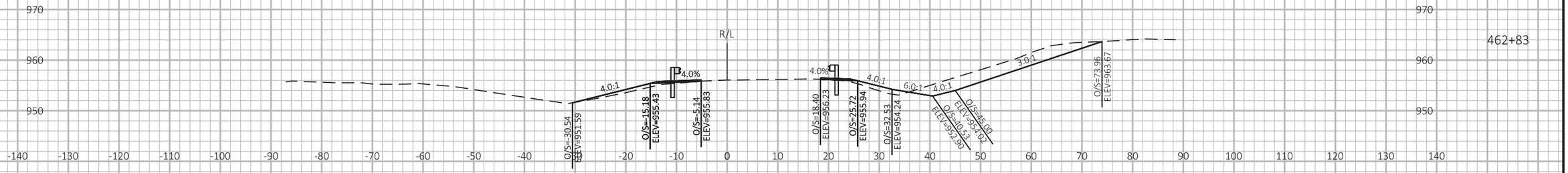
9

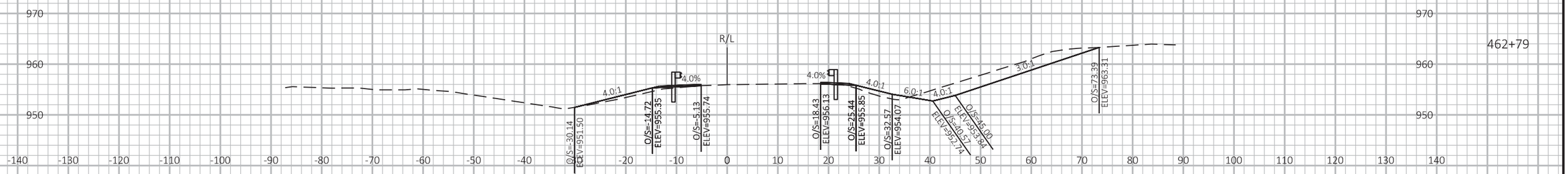
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SC'	SHEET 262	E

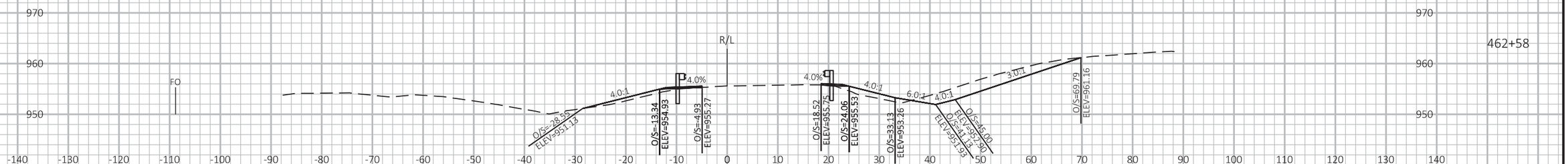
FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090226-XS

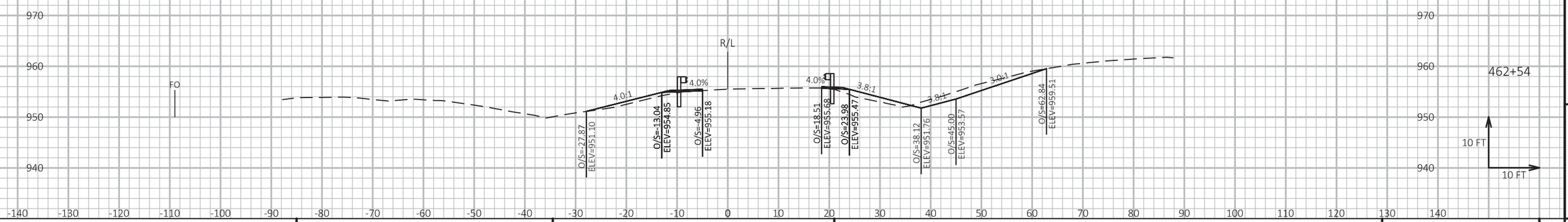
PLOT DATE : 4/20/2017 12:10 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49









9

9

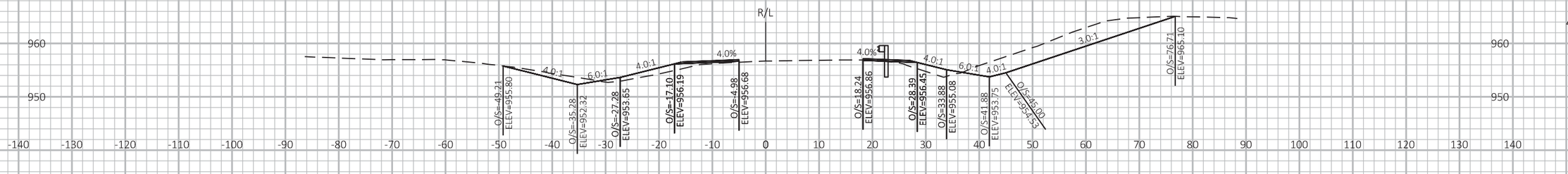
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SC'	SHEET 263 E

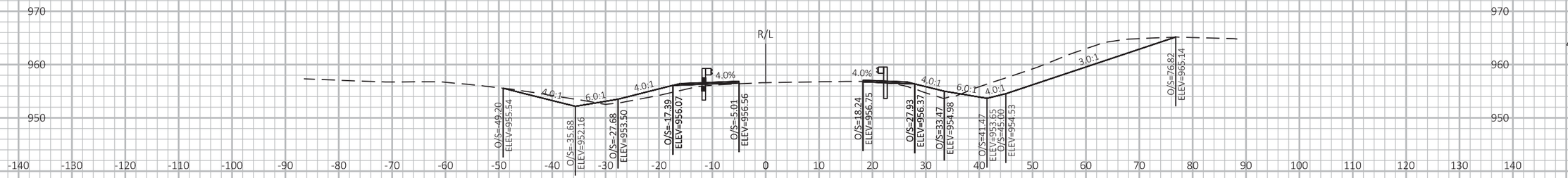
FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090227-XS

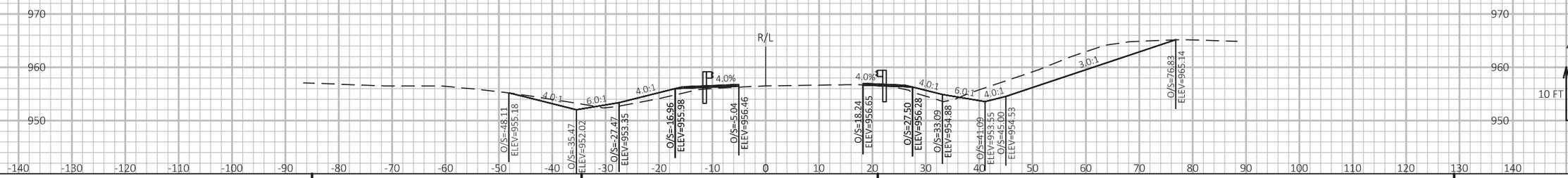
PLOT DATE : 4/20/2017 12:11 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49









9

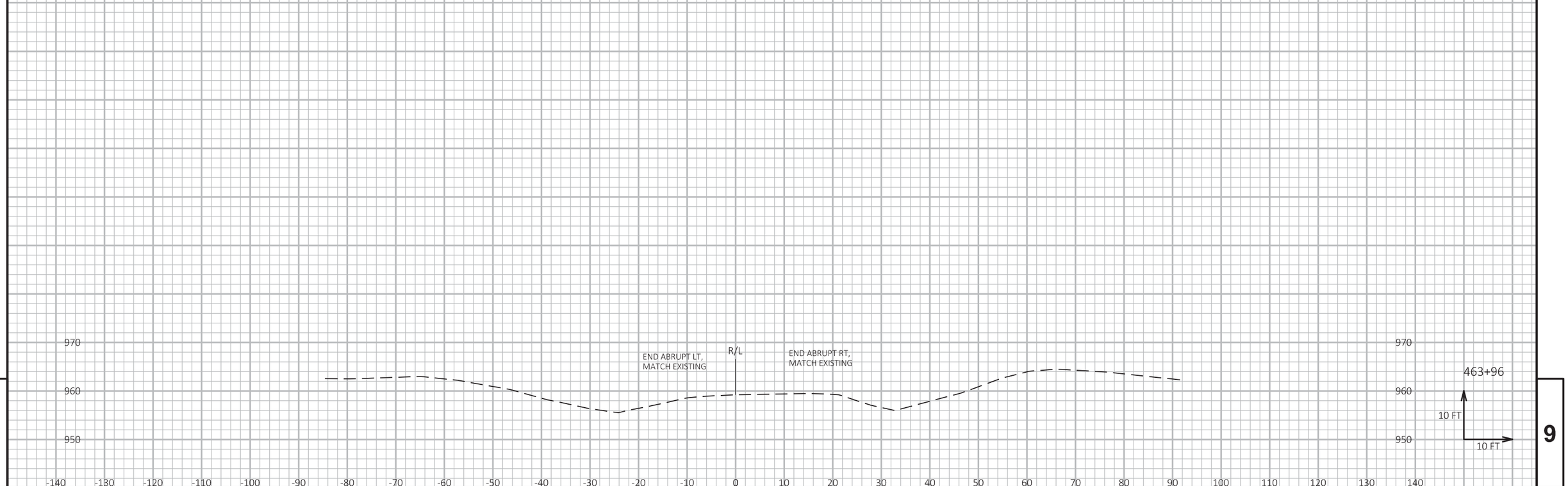
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SC'	SHEET 264	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090228-XS

PLOT DATE : 4/20/2017 12:11 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

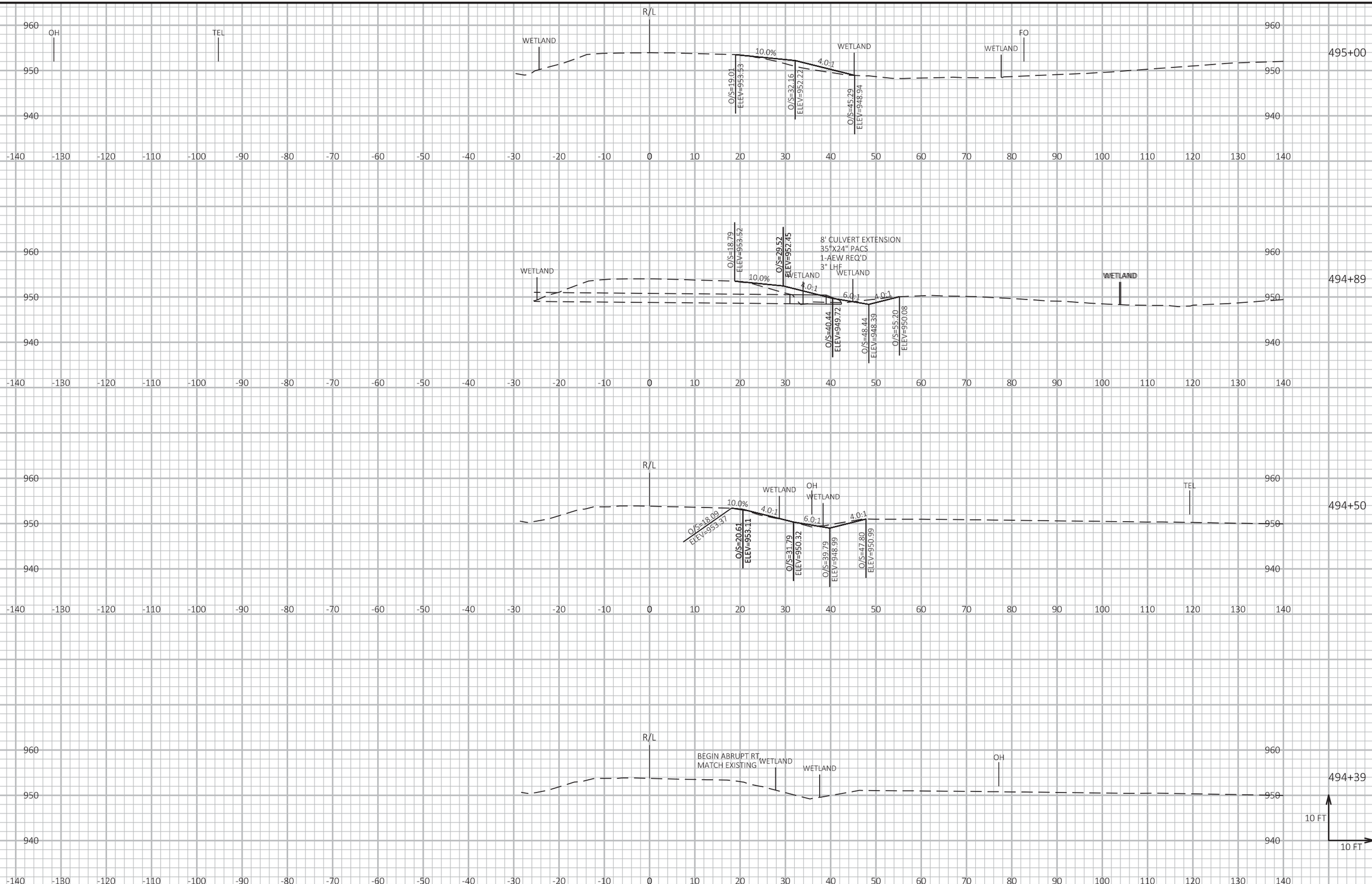
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SC'	SHEET 265	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090229-XS

PLOT DATE : 4/20/2017 12:11 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49



9

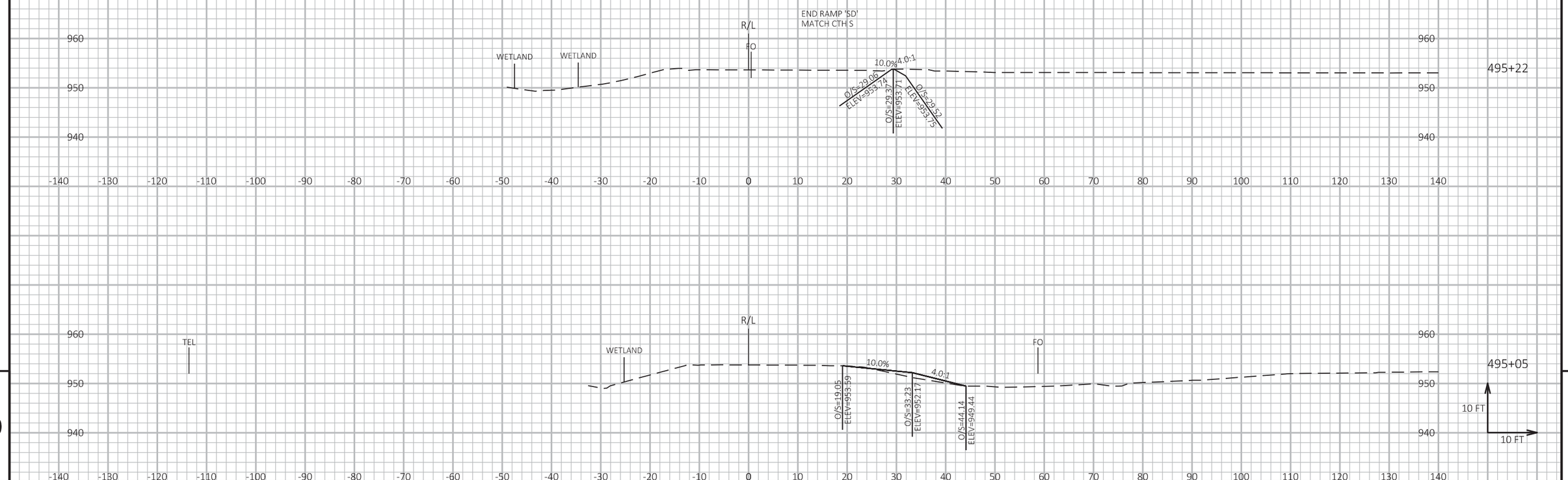
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SD'	SHEET 266	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090230-XS

PLOT DATE : 4/20/2017 12:11 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

WISDOT/CADDS SHEET 49

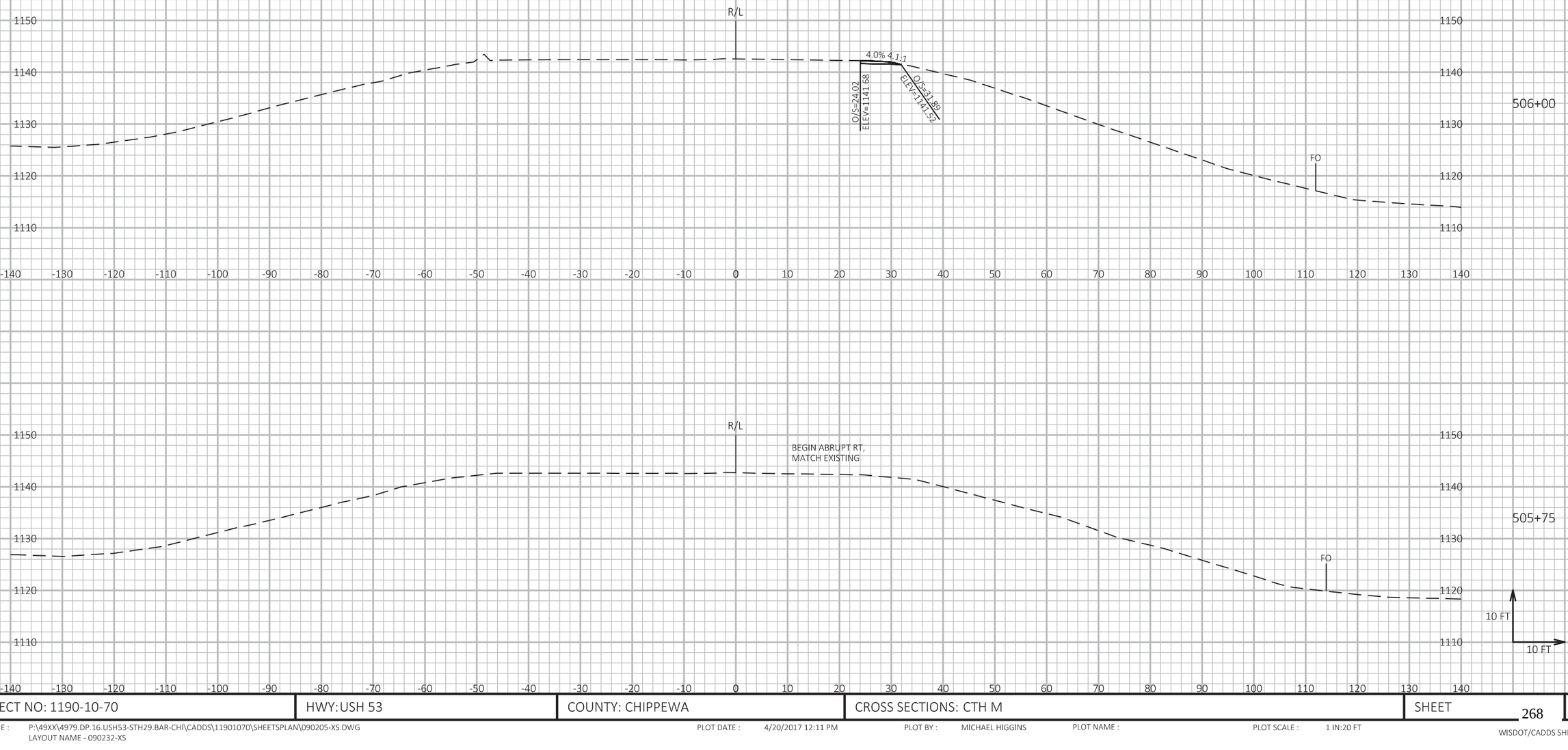


PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH S - RAMP 'SD'	SHEET 267	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090204-XS.DWG
LAYOUT NAME - 090231-XS

PLOT DATE : 4/20/2017 12:11 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT_1

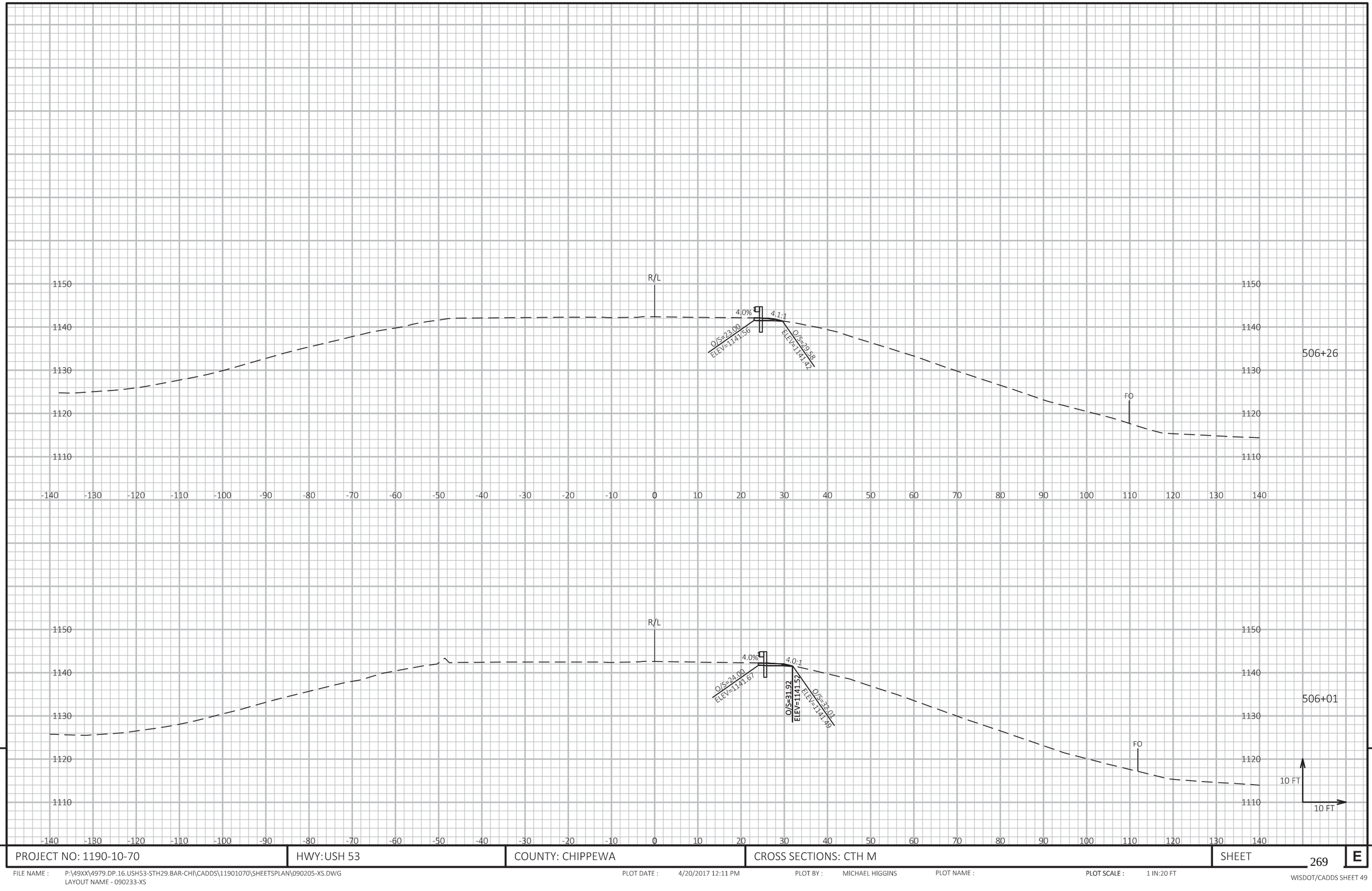
WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH M	SHEET 268	E



9

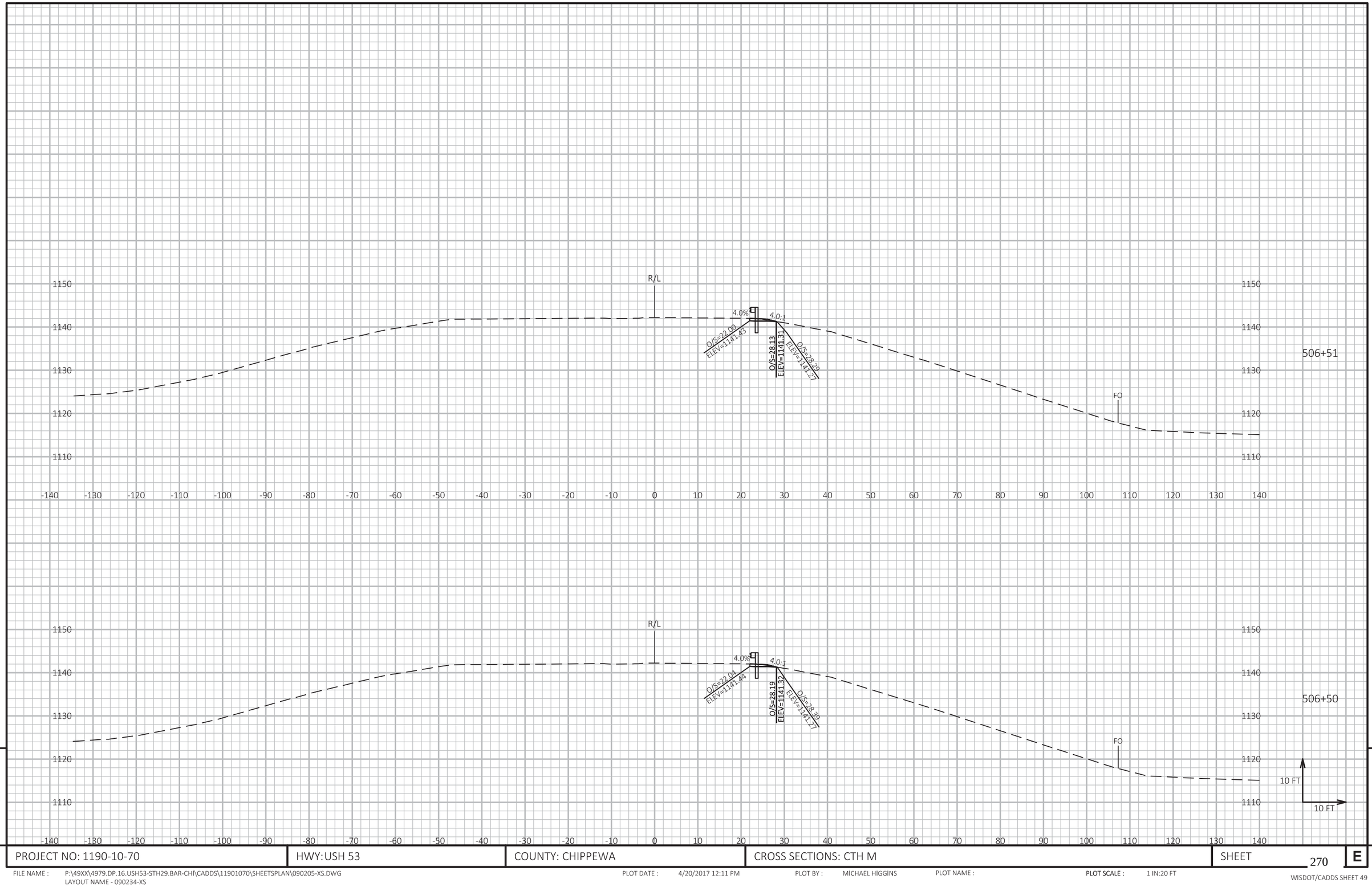
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH M	SHEET 269	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090233-XS

PLOT DATE : 4/20/2017 12:11 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

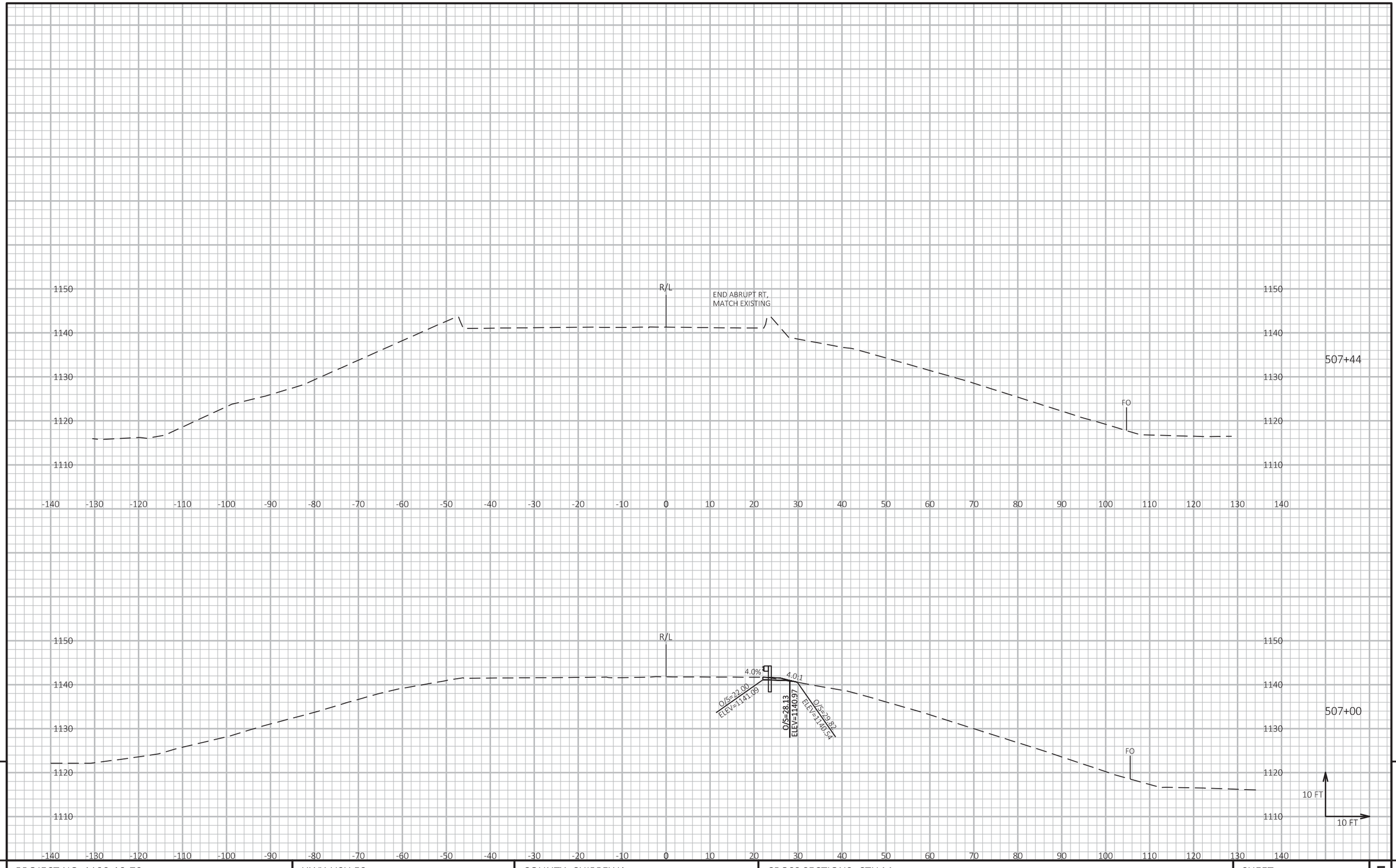
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH M	SHEET 270	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090234-XS

PLOT DATE : 4/20/2017 12:11 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

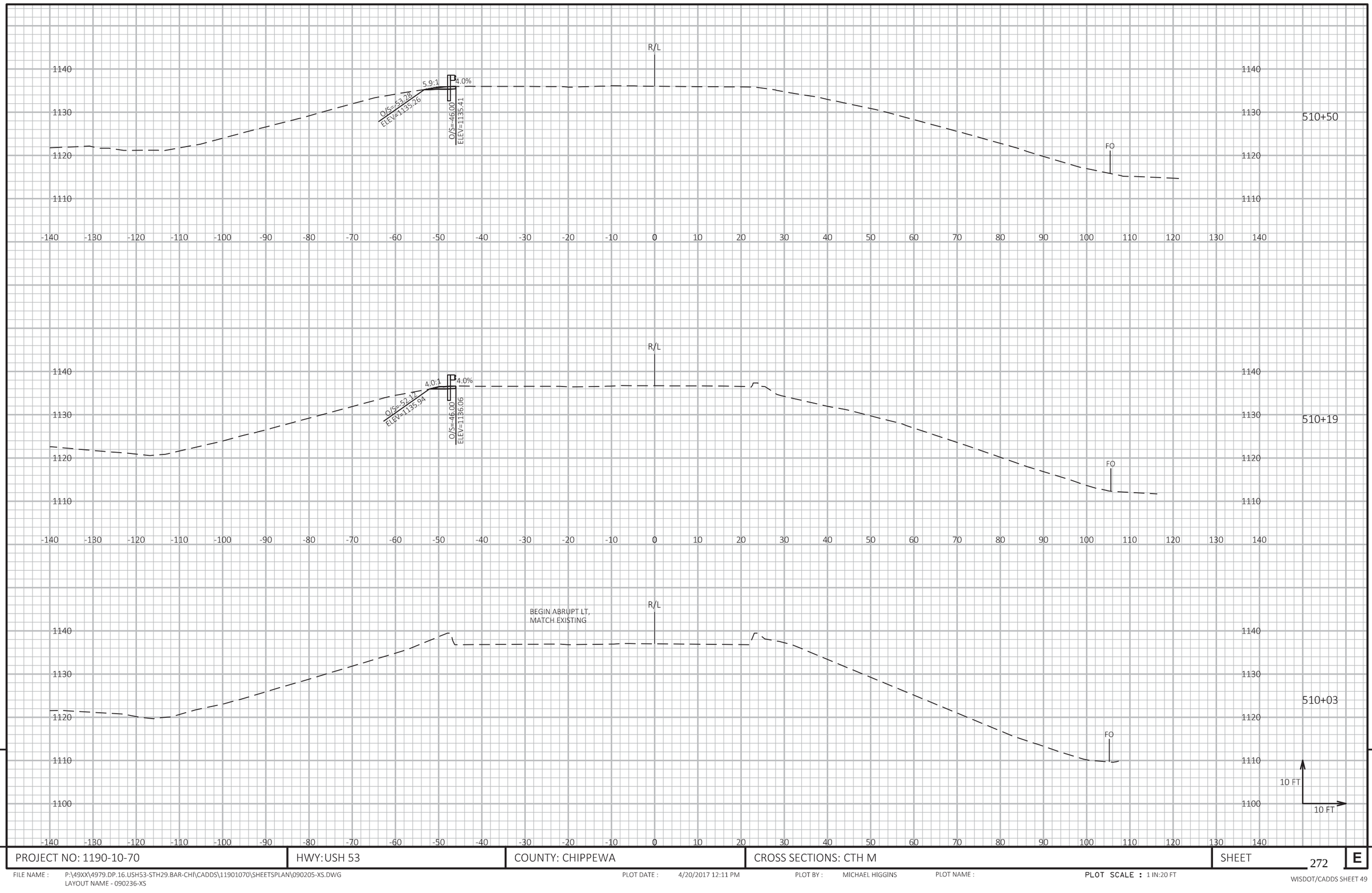
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH M	SHEET 271	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090235-XS

PLOT DATE : 4/20/2017 12:11 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

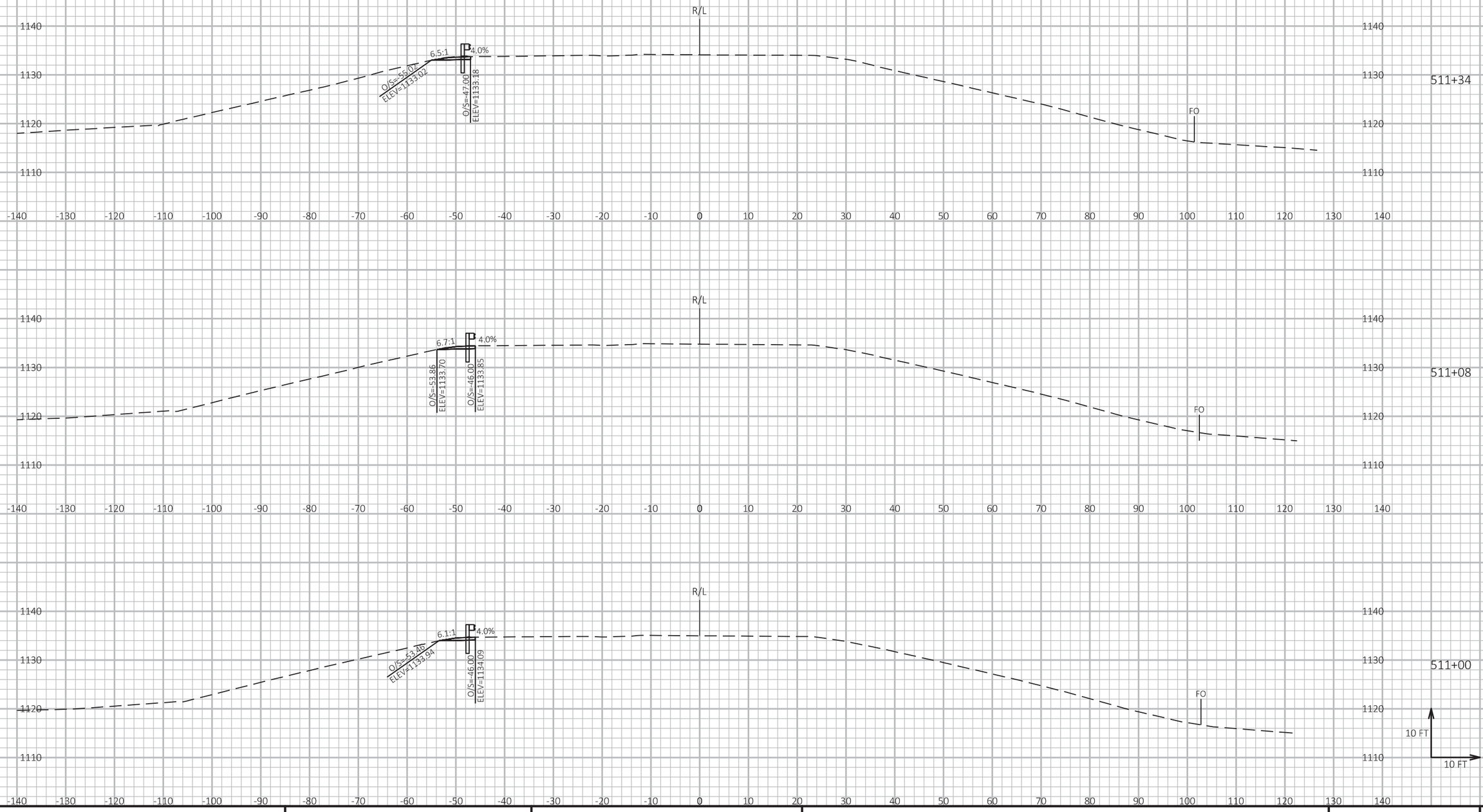
9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH M	SHEET 272	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090236-XS

PLOT DATE : 4/20/2017 12:11 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49



9

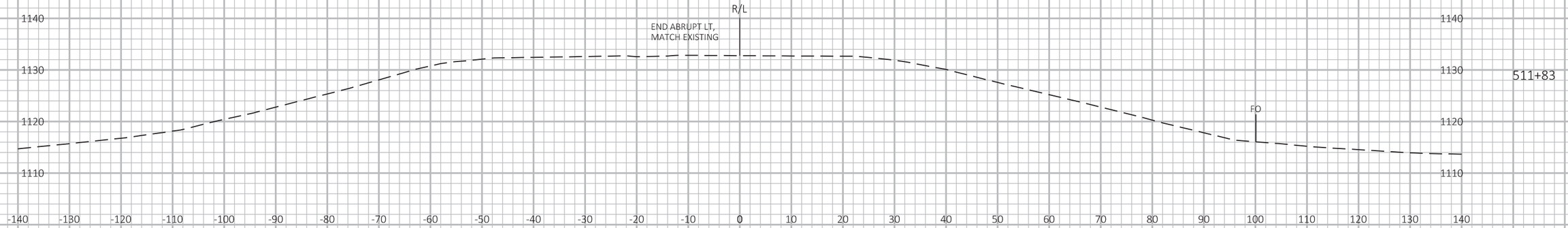
9

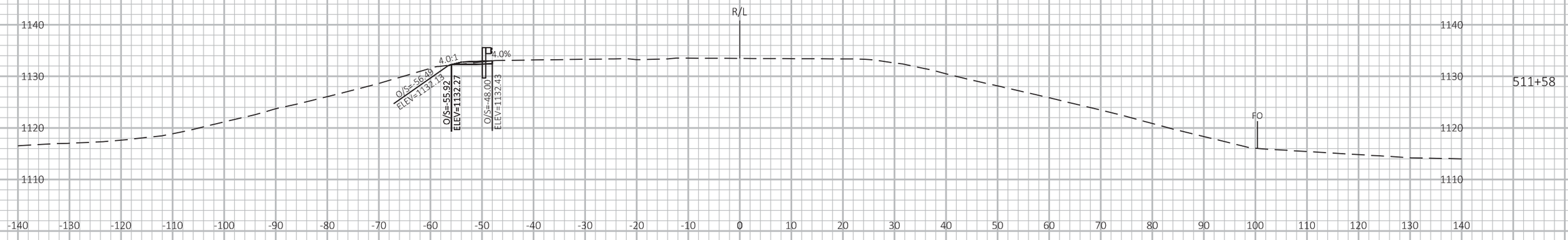
PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH M	SHEET 273	E

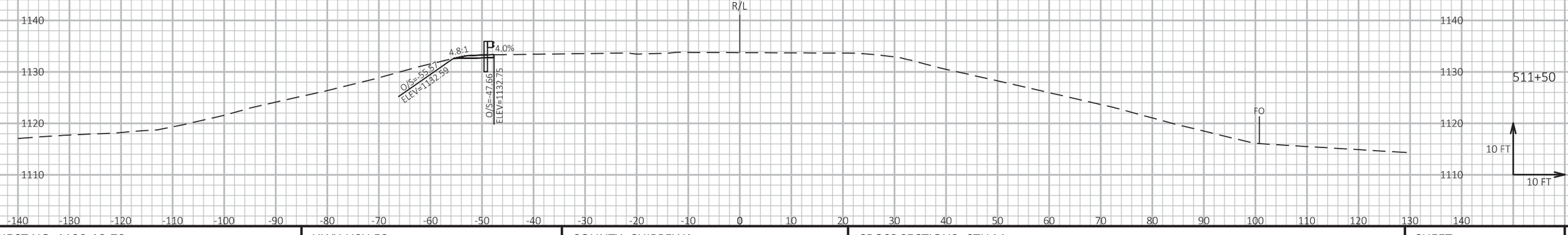
FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090237-XS

PLOT DATE : 4/20/2017 12:12 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49





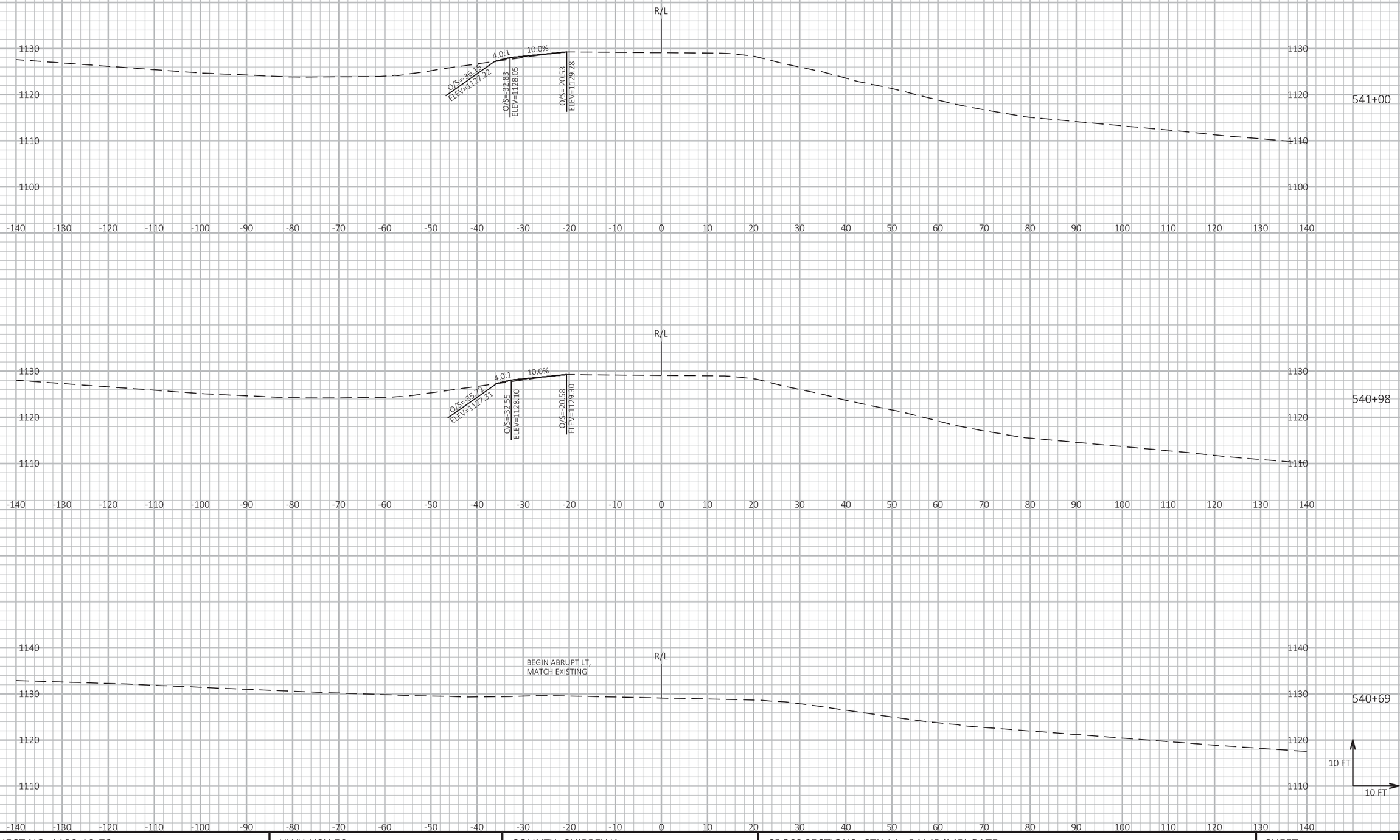


9

9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH M	SHEET 274	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090238-XS
PLOT DATE : 4/20/2017 12:12 PM
PLOT BY : MICHAEL HIGGINS
PLOT NAME :
PLOT SCALE : 1 IN:20 FT
WISDOT/CADDS SHEET 49



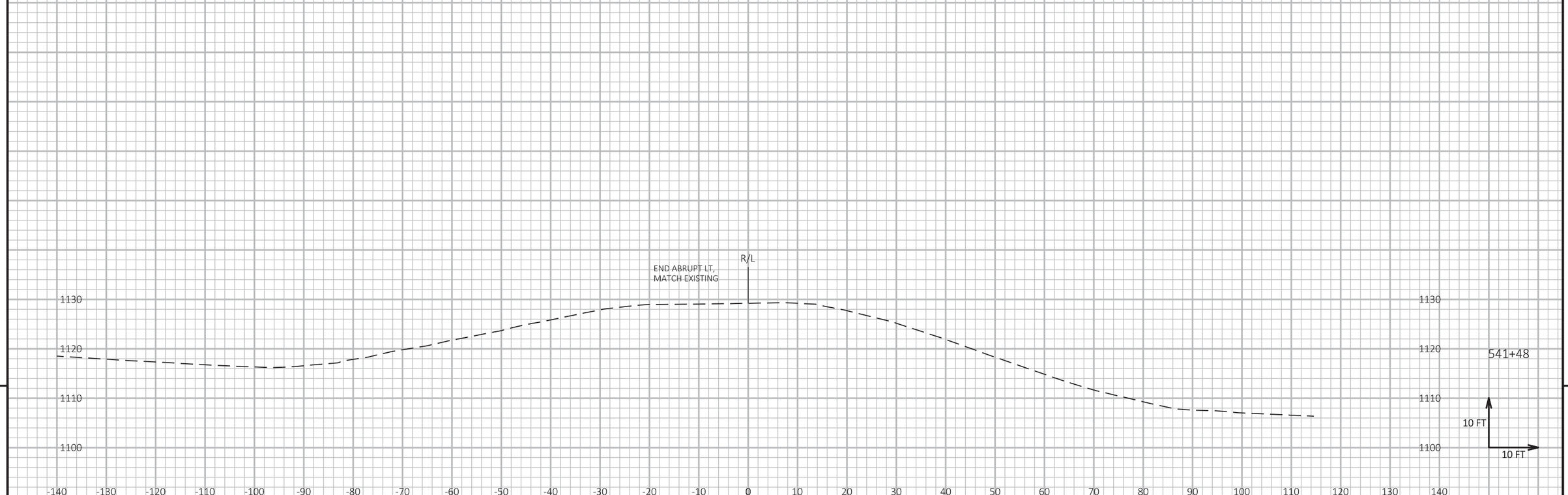
9

9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH M - RAMP 'MB' GATE	SHEET 275	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090239-XS

PLOT DATE : 4/20/2017 12:12 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT



9

9

PROJECT NO: 1190-10-70	HWY: USH 53	COUNTY: CHIPPEWA	CROSS SECTIONS: CTH M - RAMP 'MB' GATE	SHEET 276	E

FILE NAME : P:\49XX\4979.DP.16.USH53-STH29.BAR-CHI\CADDS\11901070\SHEETSPLAN\090205-XS.DWG
LAYOUT NAME - 090240-XS

PLOT DATE : 4/20/2017 12:12 PM PLOT BY : MICHAEL HIGGINS PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov