

SUP

JUNE 2016

ORDER OF SHEETS

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

TOTAL SHEETS = 120



DESIGN DESIGNATION

A.A.D.T.	2014	=	1500
A.A.D.T.	2034	=	1900
D.H.V.		=	340
D.D.		=	50%
T.		=	15%
DESIGN SPEED		=	60 MPH
ESALS		=	562,100

CONVENTIONAL SYMBOLS

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

PROFILE	
GRADE LINE	----
ORIGINAL GROUND	----
MARSH OR ROCK PROFILE (To be noted as such)	----
SPECIAL DITCH	----
GRADE ELEVATION	95.36
CULVERT (Profile View)	----
UTILITIES	
ELECTRIC	----
FIBER OPTIC	----
GAS	----
SANITARY SEWER	----
STORM SEWER	----
TELEPHONE	----
WATER	----
UTILITY PEDESTAL	----
POWER POLE	----
TELEPHONE POLE	----

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

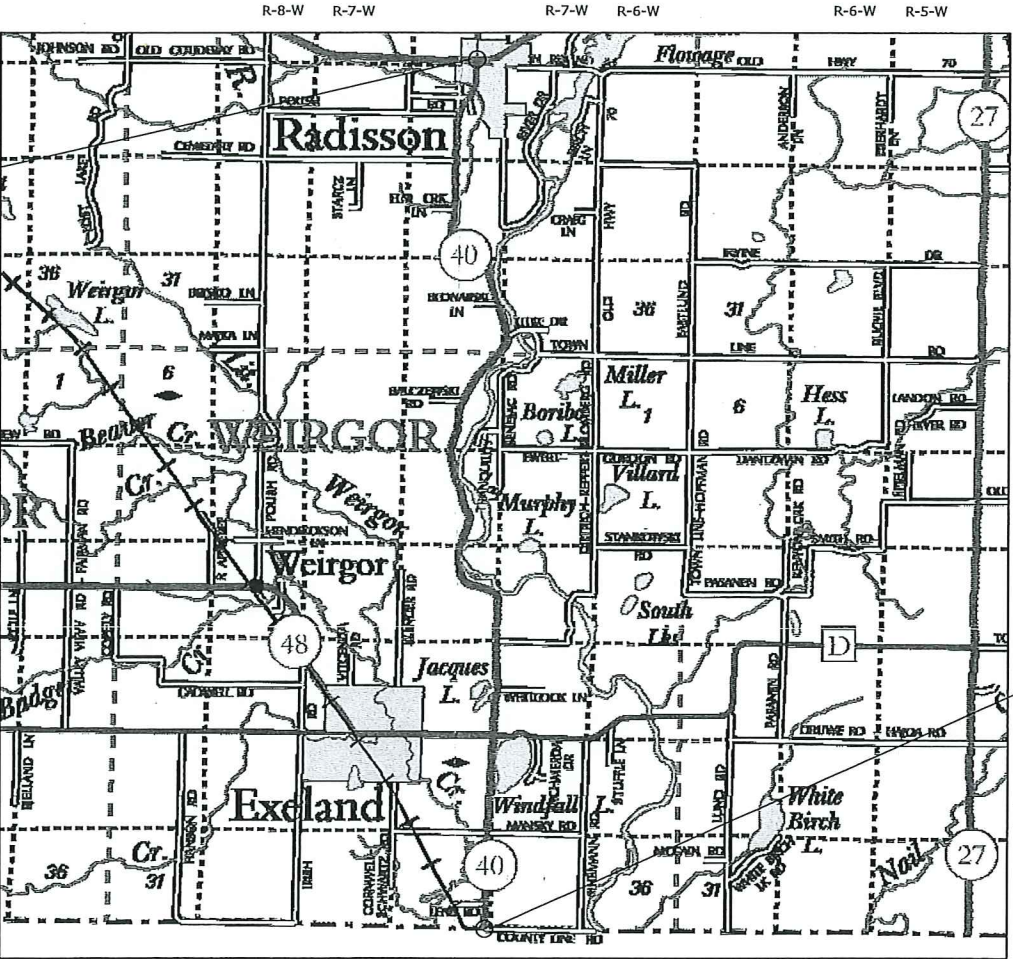
BRUCE - RADISSON

SOUTH COUNTY LINE TO STH 27

STH 40

SAWYER COUNTY

STATE PROJECT NUMBER
8590-22-60



END PROJECT
STA 620+65
Y = 348708.44
X = 684320.71

BEGIN PROJECT
STA. 100+00.00
Y = 300821.25
X = 685569.52

LAYOUT
SCALE 0 1

TOTAL NET LENGTH OF CENTERLINE = 9.861

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, SAWYER COUNTY, NAD83 (2014), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE PROJECT

8590-22-60

FEDERAL PROJECT

PROJECT

CONTRACT

ACCEPTED FOR

VILLAGE of RADISSON

11/20/15
(Date)
(Signature)
VILLAGE PRES
(Title)

PREPARED BY



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Prepared By	COOPER ENGINEERING
Surveyor	COOPER ENGINEERING
Designer	PHILIP KEPPERS
Project Manager	DANIEL OJIBWAY
Regional Examiner	DAVID OSTROWSKI
Regional Supervisor	

APPROVED FOR THE DEPARTMENT
DATE: 11-25-2015
(Signature)

E

LIST OF STANDARD ABBREVIATIONS

	ABUTMENT	LT.	LEFT
	ACRES	LS	LUMP SUM
	AGGREGATE	MH	MANHOLE
	AHEAD	N	NORTH
	AVERAGE DAILY TRAFFIC	NC	NORMAL CROWN
ABUT		PAVT	PAVEMENT
AC	AVERAGE	PC	POINT OF CURVATURE
AGG	ASPHALTIC	PE	PRIVATE ENTRANCE
AH	BACK	PI	POINT OF INTERSECTION
ADT	BENCHMARK	PL	PROPERTY LINE
	CENTRAL ANGLE OR DELTA	PP	POWER POLE
AVG.	CENTERLINE	PT	POINT OF TANGENCY
ASPH	CURB AND GUTTER	R	RANGE , RADIUS
BK.	CRUSHED AGGREGATE	RCCP	REINFORCED CONCRETE
BM	BASE COURSE		CULVERT PIPE
Δ	CONCRETE	RD	ROAD
℄ , C/L		REBAR	REINFORCEMENT BAR
C & G	CORNER	REQD	REQUIRED
CABC	CORRUGATED	RDWY	ROADWAY
	CORRUGATED STEEL	RHF	RIGHT HAND FORWARD
CONC.	CULVERT PIPE	RL, R/L	REFERENCE LINE
	CORRUGATED STEEL	RR	RAILROAD
COR	PIPE ARCH	RT.	RIGHT
CORR	COUNTY TRUNK HIGHWAY	R/W	RIGHT-OF-WAY
CSCP	CULVERT PIPE	S	SOUTH
	CUBIC YARD	SAN S	SANITARY SEWER
CSPA	HUNDREDWEIGHT	SDD	STANDARD DETAIL DRAWING
	DIAMETER	SE	SUPER ELEVATION
CTH	DEGREE OF CURVE	SF.	SQUARE FEET
CP.	DESIGN HOURLY VOLUME	SHLDR	SHOULDER
CY	DRIVEWAY	SPECS	SPECIFICATIONS
CWT.	EXC. BELOW SUB GRADE	SQ.	SQUARE
BLV., EL	ELEVATION	SS.	STORM SEWER
D	ELECTRIC	SY.	SQUARE YARD
DHV	EXCAVATION	STH	STATE TRUNK HIGHWAY
DWY	EXISTING	ST.	STREET
EBS	EAST	STA.	STATION
	FIELD ENTRANCE	SW	SIDEWALK
ELEC.	FACE TO FACE	T	TANGENT
EXC	FLOW LINE	TC	TOP OF CURB
EXIST	FULL SUPERELEVATION	℄ , T/L	TRANSIT LINE
E	GARAGE	TEL	TELEPHONE
FE	GRID NORTH	TEMP	TEMPORARY
FF.	HOUSE	TLE	TEMPORARY LIMITED EASEMENT
FL, F/L		TYP	TYPICAL
FS		USH	UNITED STATES HIGHWAY
G	HYDRANT	UG	UNDERGROUND
GN	INTERSECTION ANGLE	V	DESIGN SPEED
INTERS	INTERSECTION	VAR.	VARIABLE
	INVERT	VERT	VERTICAL
	IRON PIN OR PIPE	YD	YARD
HYD	LONG CHORD OF CURVE		
I			
	LINEAR FOOT		
INV.	LEFT HAND FORWARD		
IP	LENGTH OF CURVE		
LC			
LF			
LHF			
L			

UTILITY CONTACTS

ELECTRIC

NORTH CENTRAL POWER COMPANY
ATTN.: MIKE HEATH
3661 NORTH CLARK STREET
RADISSON, WI 54867
TEL.: (715) 945-2630

TELEPHONE

CENTURYLINK
ATTN.: BRIAN HUHN
400 W 9TH STREET N., SUITE #5
LADYSMITH, WI 54848
TEL.: (715) 532-0023
EMAIL: BRIAN.HUHN@CENTURYLINK.COM

TELEPHONE

INDIANHEAD TELEPHONE COMPANY
ATTN.: STEPHEN ROBERTSON
N3767 4TH STREET
WEYERHAEUSER, WI
TEL.: (715) 353-2434
EMAIL: itc@indianheadtel.net

SEWER & WATER

VILLAGE OF RADISSON PUBLIC WORKS
10598 W. RAILROAD STREET
P.O. BOX 127
RADISSON, WI 54867
TEL.: (715) 945-2020

TELEVISION

S & K TV SYSTEMS, INC.
ATTN.: DAVID SCOTT
508 MINER AVENUE WEST
LADYSMITH, WI 54848
TEL.: (715) 532-7321
EMAIL: dave@skcable.com

ALL UTILITIES LISTED ARE MEMBERS OF DIGGERS HOTLINE



Dial 811 or (800)242-8511

www.DiggersHotline.com

OTHER CONTACTS

DESIGN CONSULTANT

COOPER ENGINEERING CO. INC.
2600 COLLEGE DRIVE
RICE LAKE, WI. 54868
PHONE (715) 234-7008

DNR NORTHERN REGIONAL HQ

DNR/DOT LIAISON
ATTN.: BILL CLARK
810 W. MAPLE ST.
SPOONER, WI 54801
TEL.: (715) 635-4226
EMAIL: WILLIAMH.CLARK@WISCONSIN.GOV

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (%)			SLOPE RANGE (%)			SLOPE RANGE (%)			SLOPE RANGE (%)		
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 = 24 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 24 ACRES

GENERAL NOTES:

SUPER ELEVATIONS SHALL MATCH EXISTING ROADWAY.

NO TREES OR SHRUBS SHALL BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE BEEN DESIGNATED FOR REMOVAL BY THE ENGINEER.

ACCESS TO ALL RESIDENCES SHALL BE MAINTAINED DURING CONSTRUCTION.

THE LOCATION OF EXISTING UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOW SHOWN.

WHEN THE QUANTITY OF HMA PAVEMENT OR BASE AGGREGATE DENSE IS MEASURED BY THE TON, THE DEPTH OR THICKNESS SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

AREAS THAT FAIL DURING OR AFTER THE SURFACE MILL SHALL BE REPAIRED BY MEANS OF LEVELLING/WEDGING AND SPOT LANE REPAIR USING THE APPROPRIATE ASPHALTIC SURFACE BID ITEM.

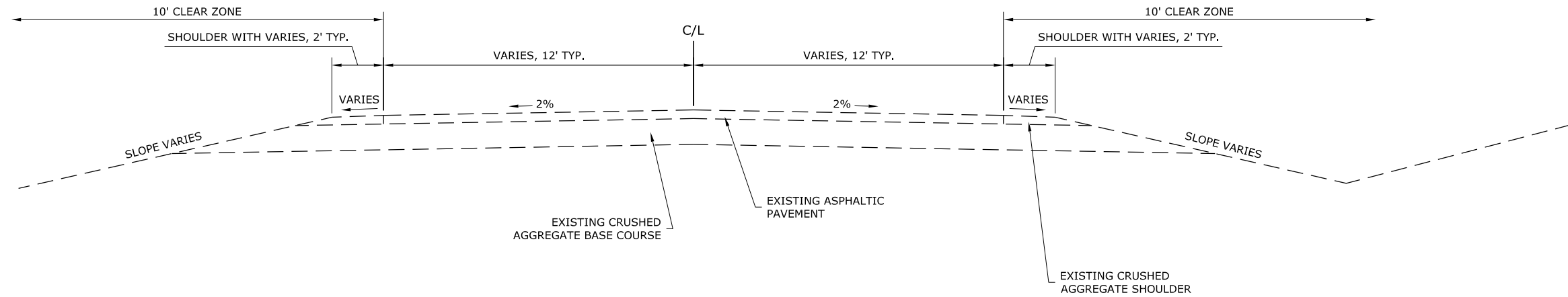
RESTORE SIDEROAD INTERSECTIONS AND PRIVATE ENTRANCES TO EXISTING CONDITIONS UNLESS OTHERWISE SHOWN.

THE EXACT CONSTRUCTION LIMITS OF PRIVATE ENTRANCES SHALL BE COORDINATED WITH THE ENGINEER IN THE FIELD.

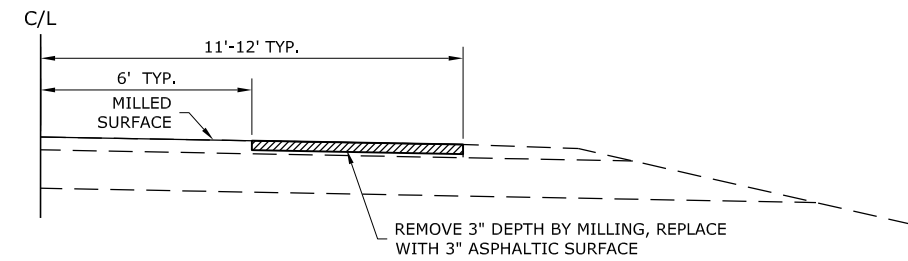
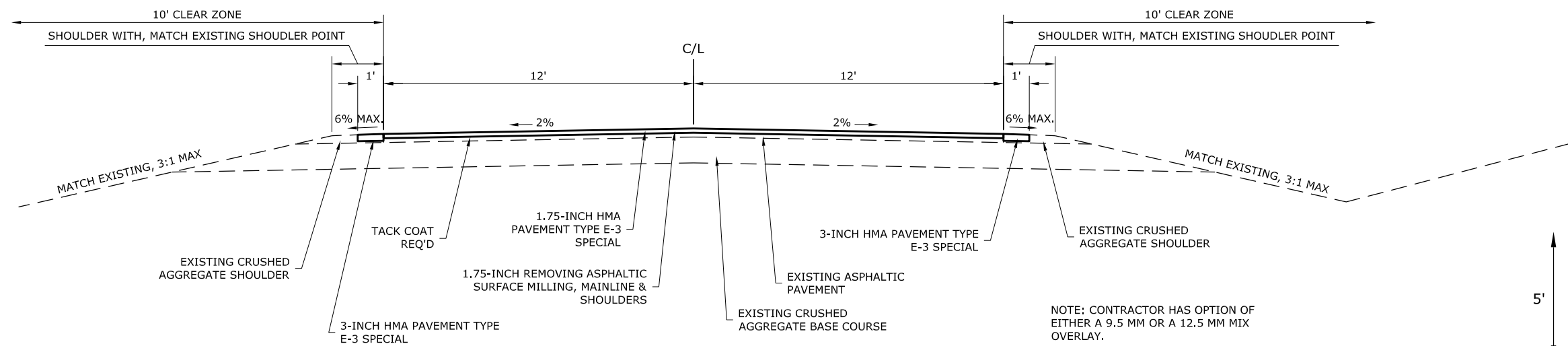
PAVEMENT MARKING SHALL MEET MUTCD STANDARDS.

PAVEMENT CORE LOG										
PROJECT: 8590-20-60					ROAD: STH 40					
COUNTY: SAWYER					DI STRI CT: BRUCE-RADI SSON					
CORE NO.	STATION	OFFSET (FT)	SIDE	CORE DIAMETER (IN)	CORE UNDERLYING PAVEMENT		MATERIAL	TYPE	COMMENTS	
1	105+00	5	LT	5.75	4		BASE	ASPHALT	1" BRM	
2	120+00	5	RT	9.00	4		SAND/GRAVEL	ASPHALT	2" BRM	
3	135+00	10	LT	4.75	4		BASE	ASPHALT		
4	150+00	4	RT	8.75	4		BASE	ASPHALT		
5	165+00	7	LT	8.75	4		BASE	ASPHALT	1.5" BRM	
6	180+00	10	RT	7.75	4		BASE	ASPHALT	2.5" BRM	
7	195+00	7	LT	7.00	4		BASE	ASPHALT		
8	210+00	7	RT	8.75	4		BASE	ASPHALT		
9	225+00	10	LT	7.00	4		BASE	ASPHALT	WAS BRM ?"	
10	240+00	6	RT	8.25	4		BASE	ASPHALT	2" BRM	
11	255+00	7	LT	6.75	4		BASE	ASPHALT		
12	270+00	9	RT	8.50	4		BASE	ASPHALT	1" BRM	
13	285+00	4	LT	4.00	4		BASE	ASPHALT	2" BRM	
14	300+00	8	RT	6.00	4		BASE	ASPHALT	1.75" BRM	
15	315+00	9	LT	2.50	4		BASE	ASPHALT	1.5" BRM	
16	330+00	4	RT	5.25	4		BASE	ASPHALT	1.75" BRM	
17	345+00	7	LT	5.25	4		BASE	ASPHALT	1.25" BRM	
18	360+00	9	RT	6.00	4		BASE	ASPHALT	5" BRM	
19	375+00	6	LT	5.75	4		BASE	ASPHALT	4" BRM	
20	390+00	5	RT	7.00	4		BASE	ASPHALT	2" BRM	
21	405+00	9	LT	5.75	4		BASE	ASPHALT		
22	420+00	5	RT	3.00	4		BASE	ASPHALT	1" BRM	
23	435+00	6	LT	3.75	4		BASE	ASPHALT	3.25" BRM	
24	450+00	9	RT	5.00	4		BASE	ASPHALT	6" BRM	
25	465+00	5	LT	6.00	4		BASE	ASPHALT	0.25" BRM	
26	480+00	5	RT	9.25	4		BASE	ASPHALT	1.5" BRM	
27	495+00	10	LT	2.50	4		BASE	ASPHALT	2" BRM	
28	510+00	4	RT	4.75	4		BASE	ASPHALT	4.5" BRM	
29	525+00	5	LT	4.00	4		BASE	ASPHALT	4.75" BRM	
30	540+00	7	RT	6.00	4		BASE	ASPHALT	2.5" BRM	
31	555+00	6	LT	4.50	4		BASE	ASPHALT	4.5" BRM	
32	570+00	4	RT	3.75	4		BASE	ASPHALT	1.5" BRM	
33	585+00	10	LT	7.50	4		BASE	ASPHALT		
34	600+00	6	RT	5.50	4		BASE	ASPHALT		
35	615+00	6	LT	5.00	4		BASE	ASPHALT		

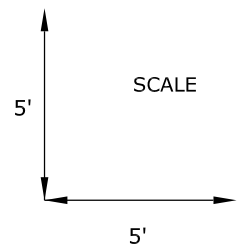
* BRM = BI TUMI NOUS ROAD MI X - ORGI NAL ROAD

**TYPICAL EXISTING SECTION**

STA. 100+00.00 TO 271+60

**ASPHALTIC SURFACE LANE REPAIR****TYPICAL FINISHED SECTION**

STA. 100+00.00 TO 271+60



PROJECT NUMBER: 8590-22-60

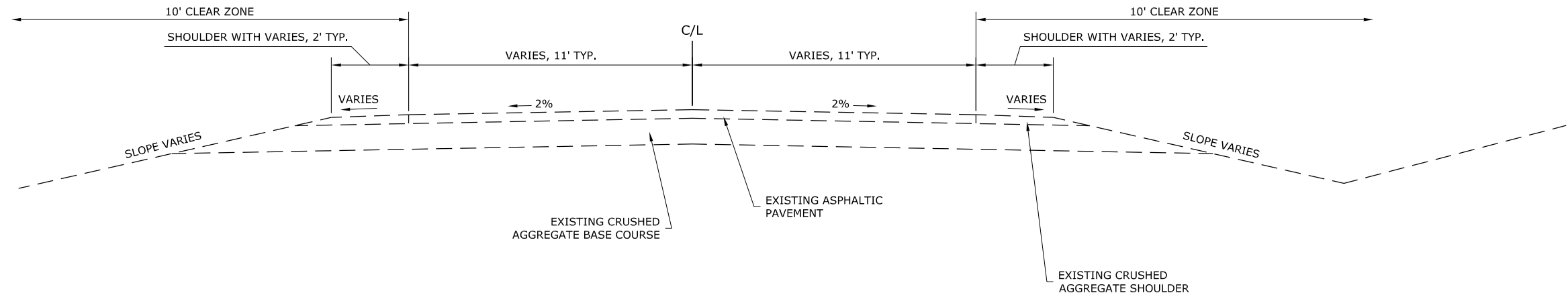
HWY: STH 40

COUNTY: SAWYER

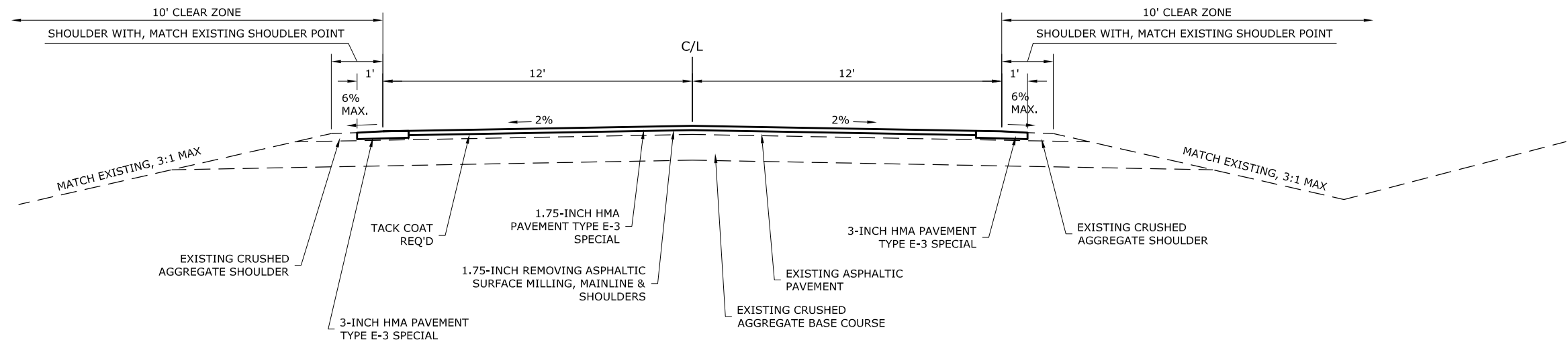
TYPICAL SECTION SHEET

SHEET NO:

E

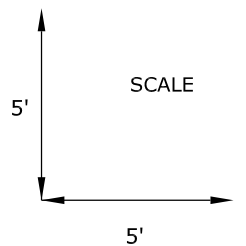


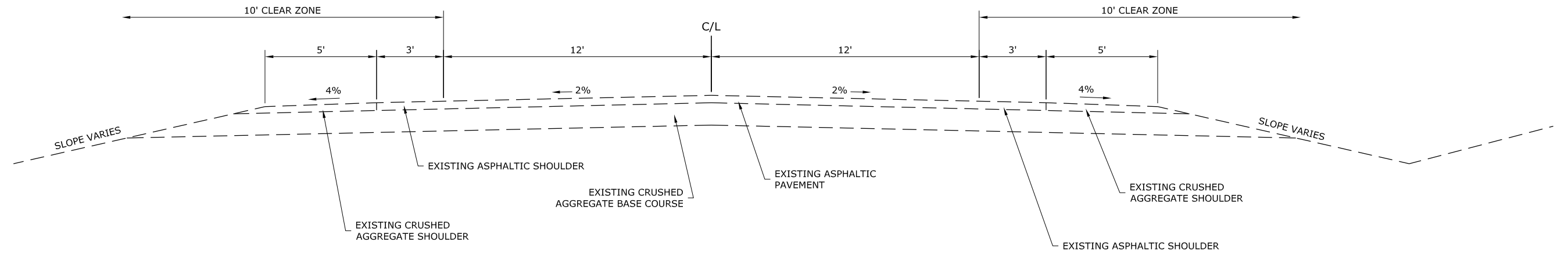
TYPICAL EXISTING SECTION
STA. 271+60 TO 568+00



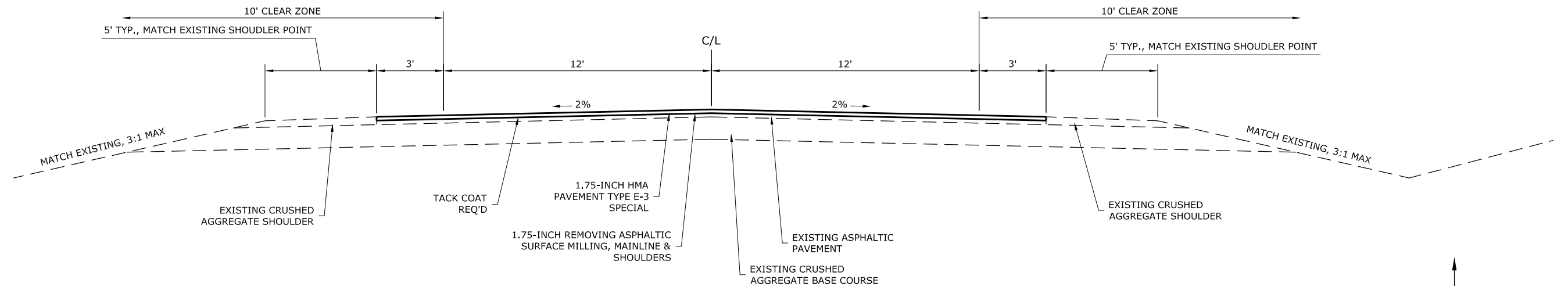
TYPICAL FINISHED SECTION
STA. 271+60 TO 568+00

NOTE: CONTRACTOR HAS OPTION OF
EITHER A 9.5 MM OR A 12.5 MM MIX
OVERLAY.



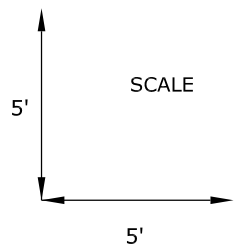


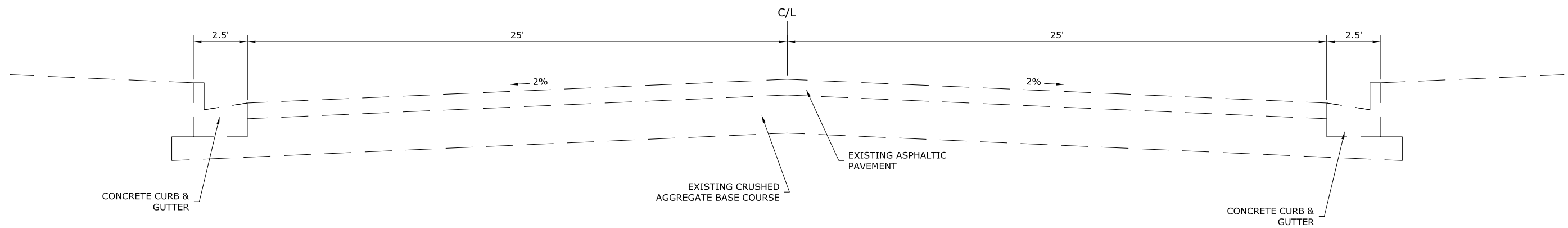
TYPICAL EXISTING SECTION
STA. 568+00 TO 608+00



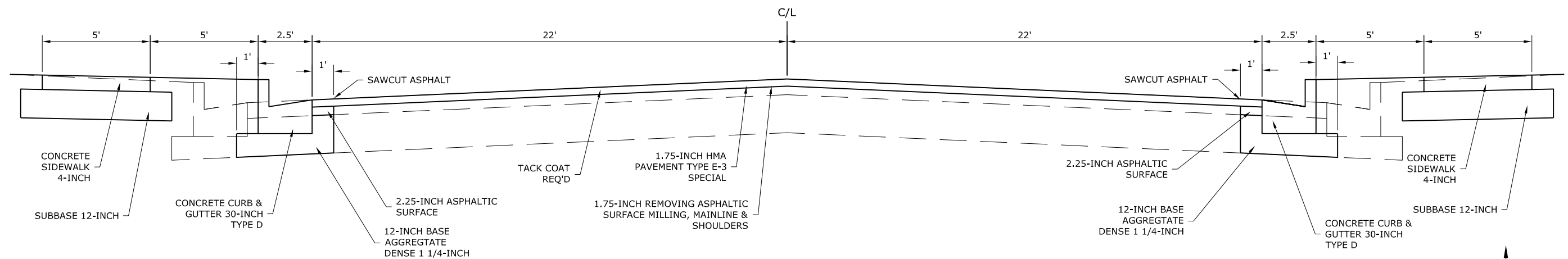
TYPICAL FINISHED SECTION
STA. 568+00 TO 608+00

NOTE: CONTRACTOR HAS OPTION OF
EITHER A 9.5 MM OR A 12.5 MM MIX
OVERLAY.



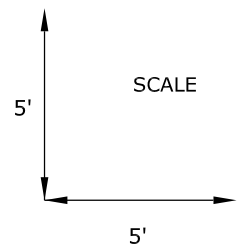


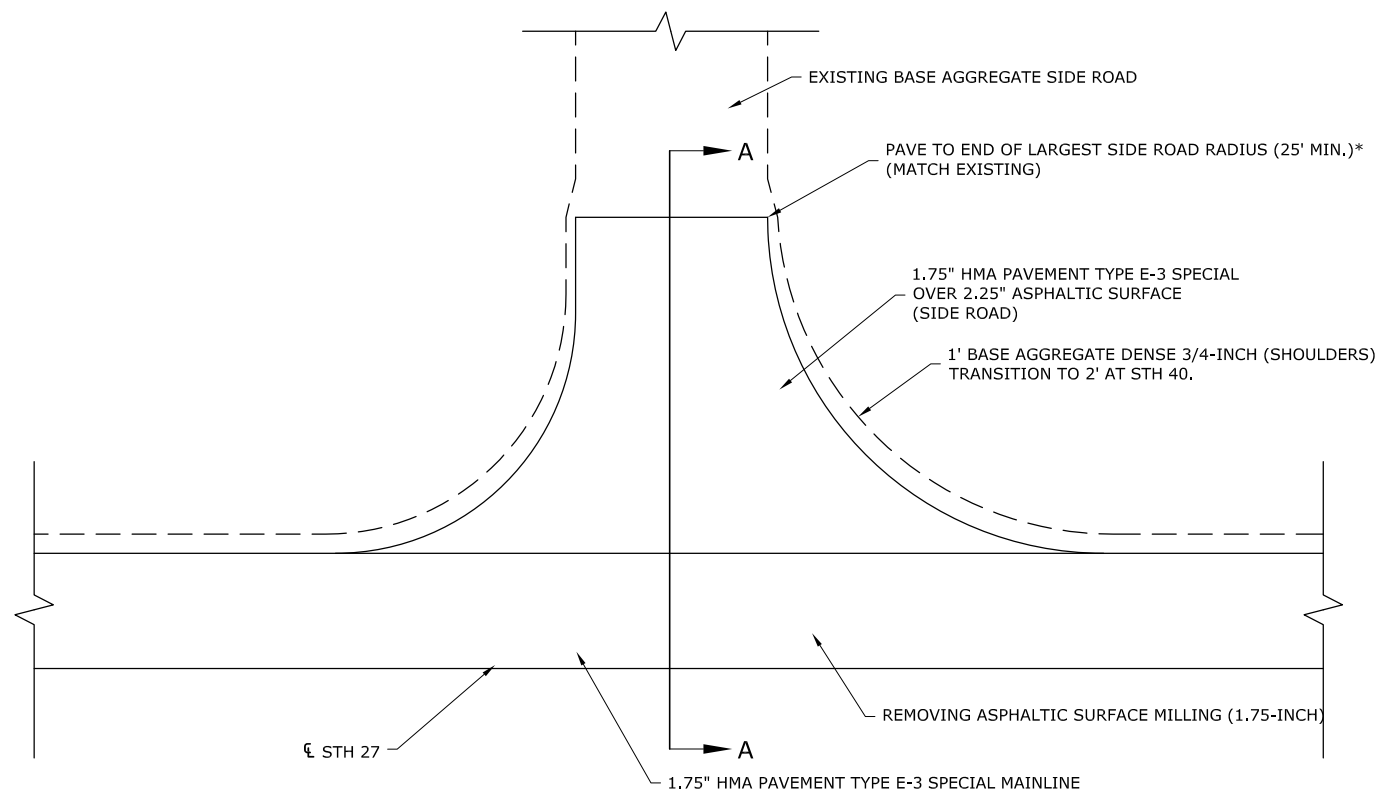
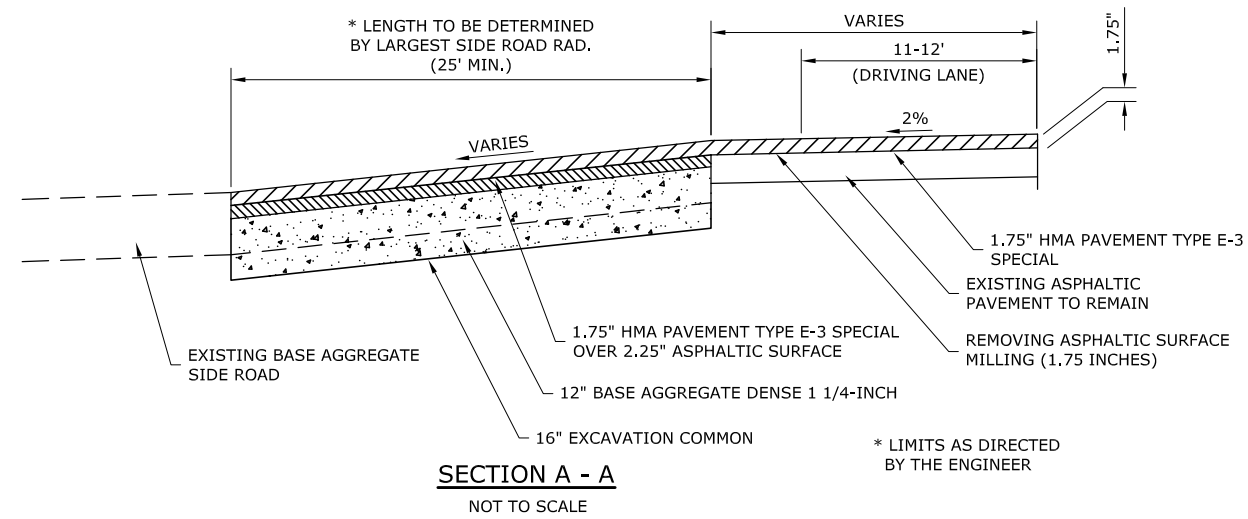
TYPICAL EXISTING SECTION
STA. 608+00 TO 620+71



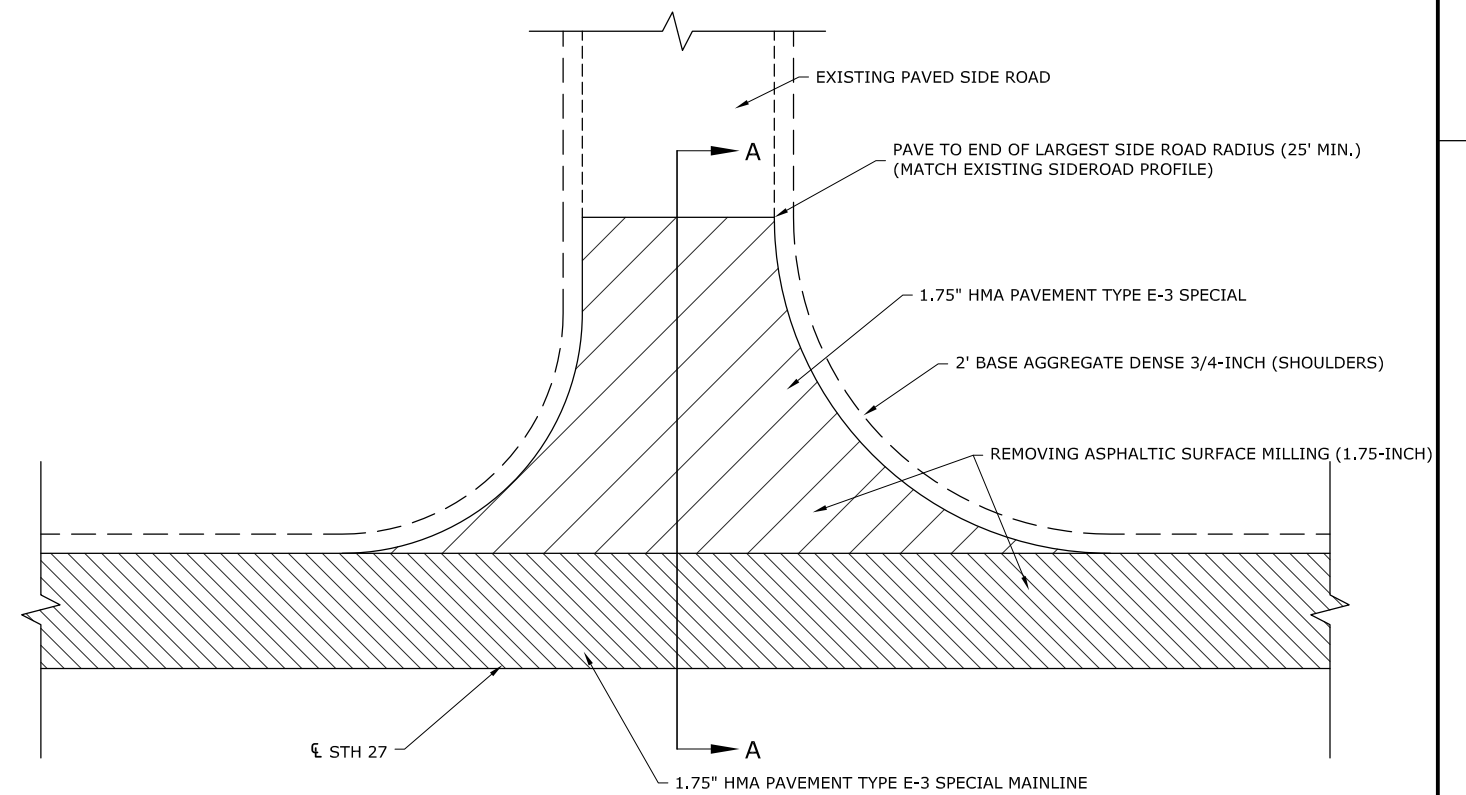
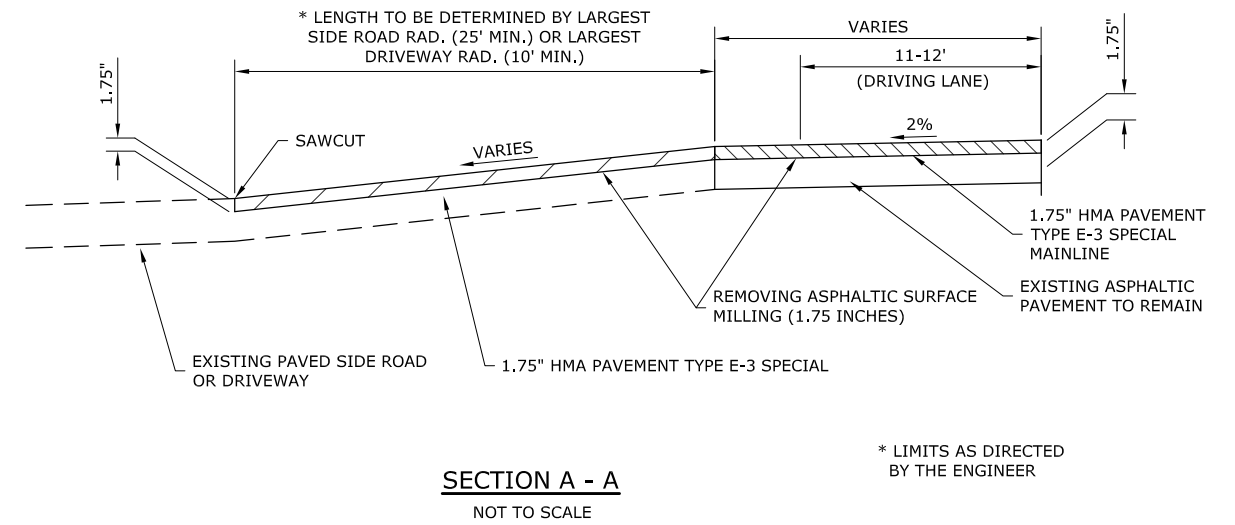
TYPICAL FINISHED SECTION
STA. 608+00 TO 620+71

NOTE: CONTRACTOR HAS OPTION OF
EITHER A 9.5 MM OR A 12.5 MM MIX
OVERLAY.

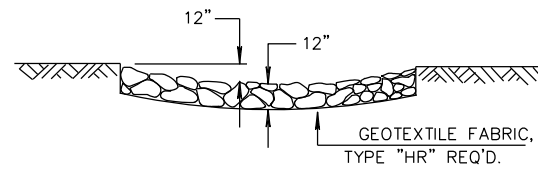




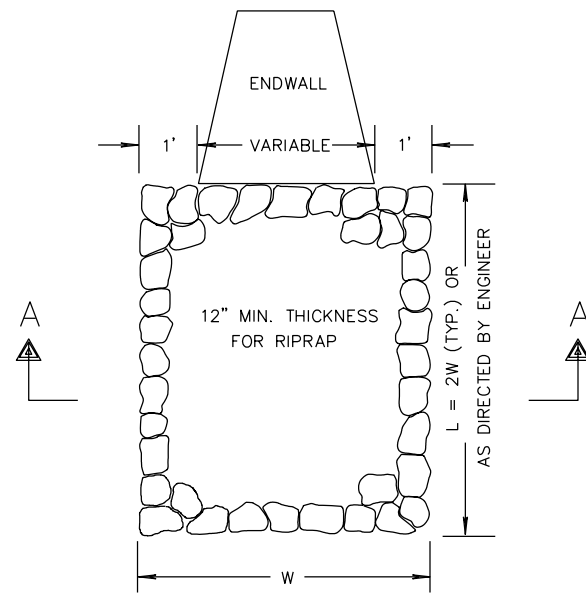
NOTE: TRANSITION SHOULDER SLOPE TO MATCH SIDE ROAD PROFILE PRIOR TO INTERSECTION



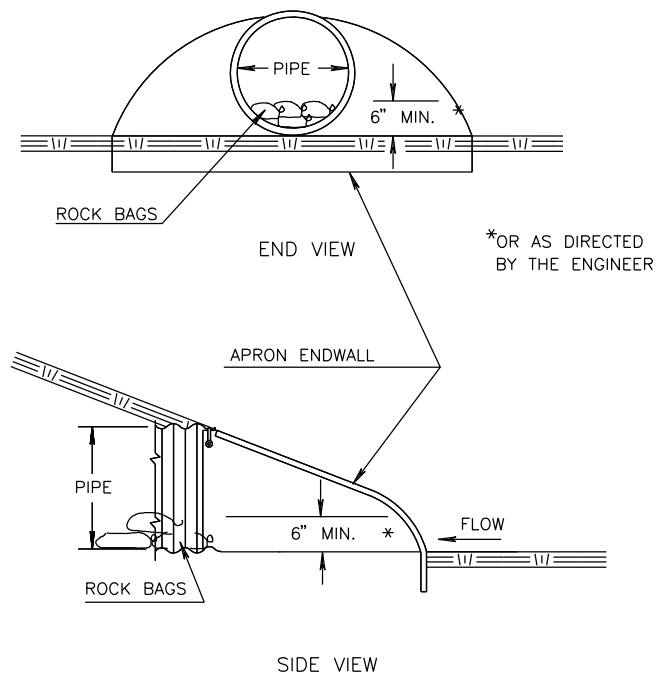
NOTE: TRANSITION SHOULDER SLOPE TO MATCH SIDE ROAD PROFILE PRIOR TO INTERSECTION



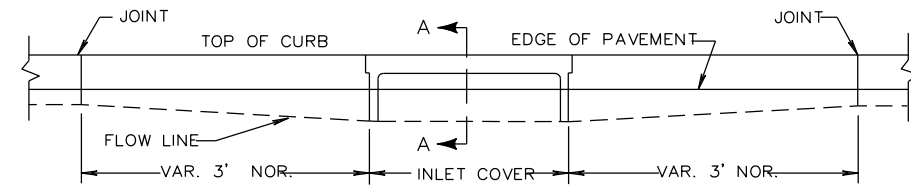
SECTION A-A



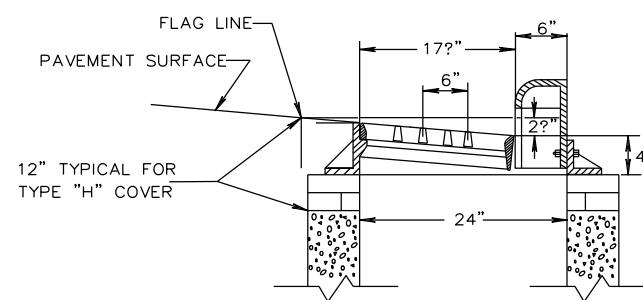
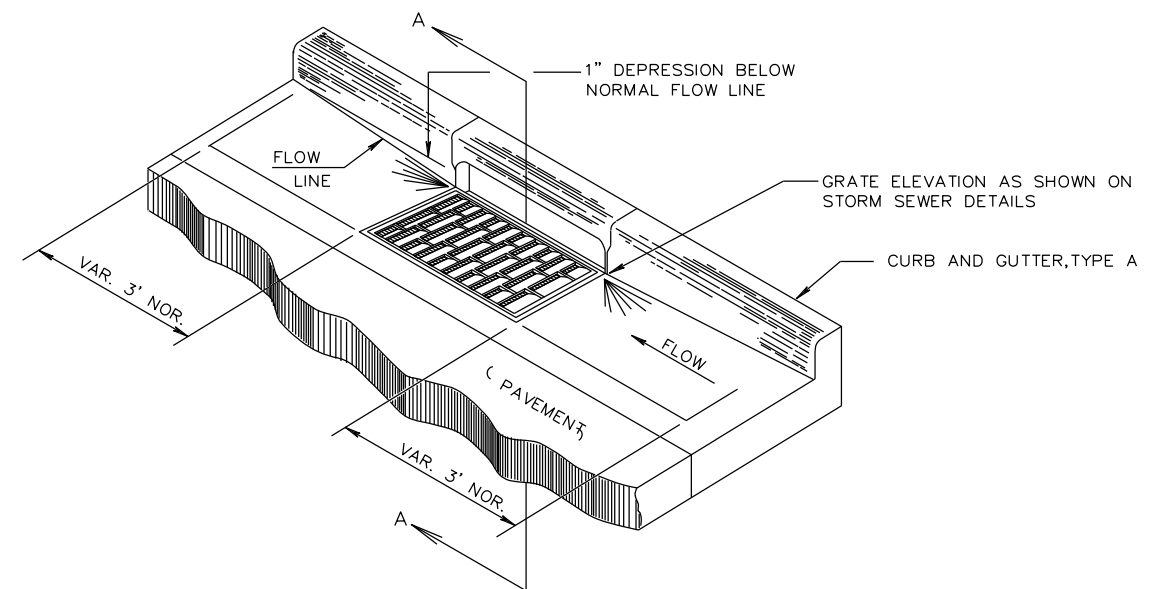
RIPRAP TREATMENT AT CULVERTS



CULVERT PIPE CHECK

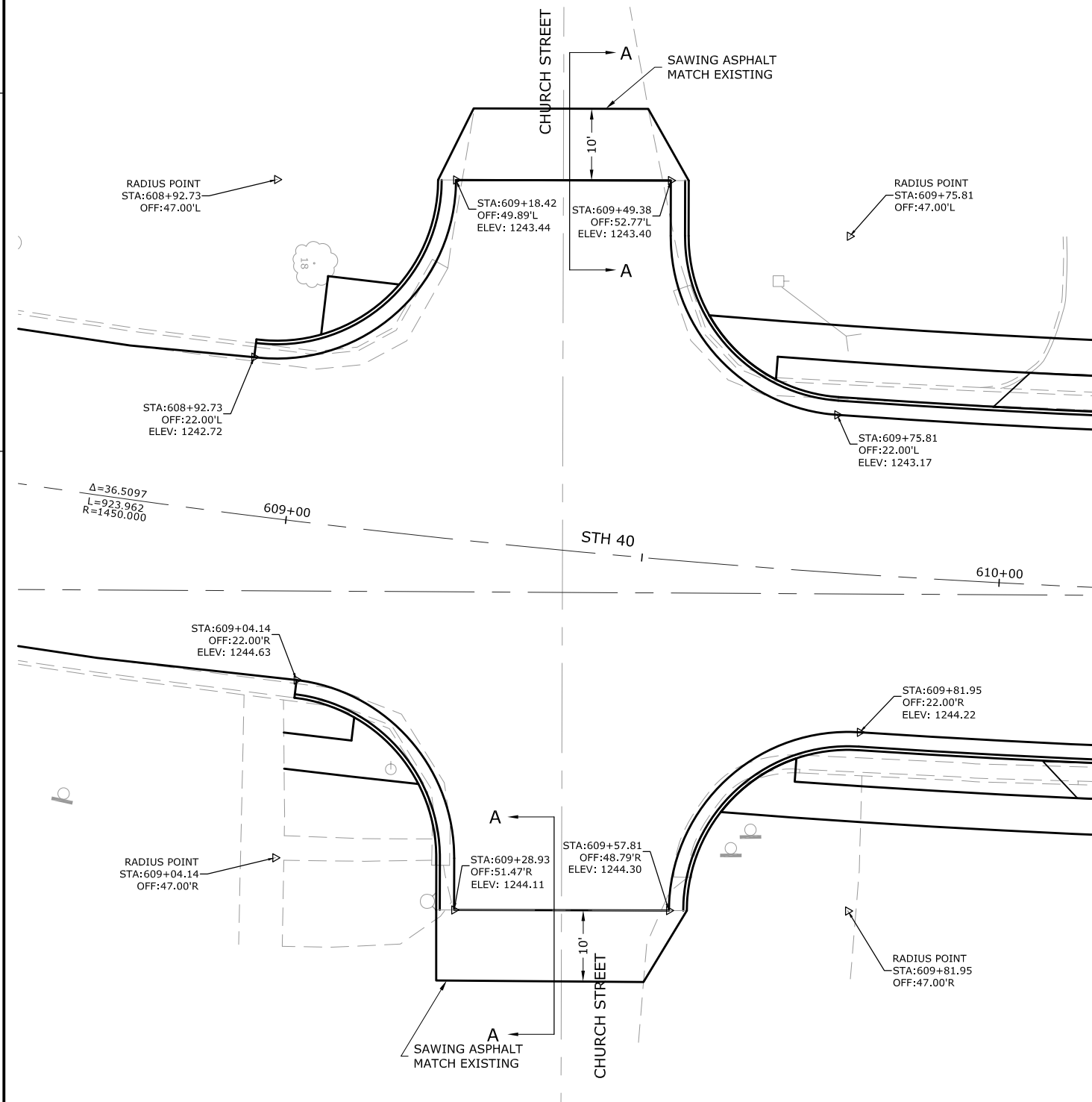


ELEVATION



SECTION A-A

DETAIL OF CURB AND GUTTER AT INLETS
(2 X 3 FT-H INLET SHOWN)



PROJECT NUMBER:

8590-22-60

HWY:

STH 40

COUNTY:

SAWYER

RADISSON INTERSECTION DETAILS

SHEET NO:

E

FILE NAME: C:\WisDOT\Stdnt\Temp\AcPublish_9840\050201_pn_radisson-intersections.dwg PLOT DATE: Jan 07, 2015 - 08:36am

PLOT BY:Owner

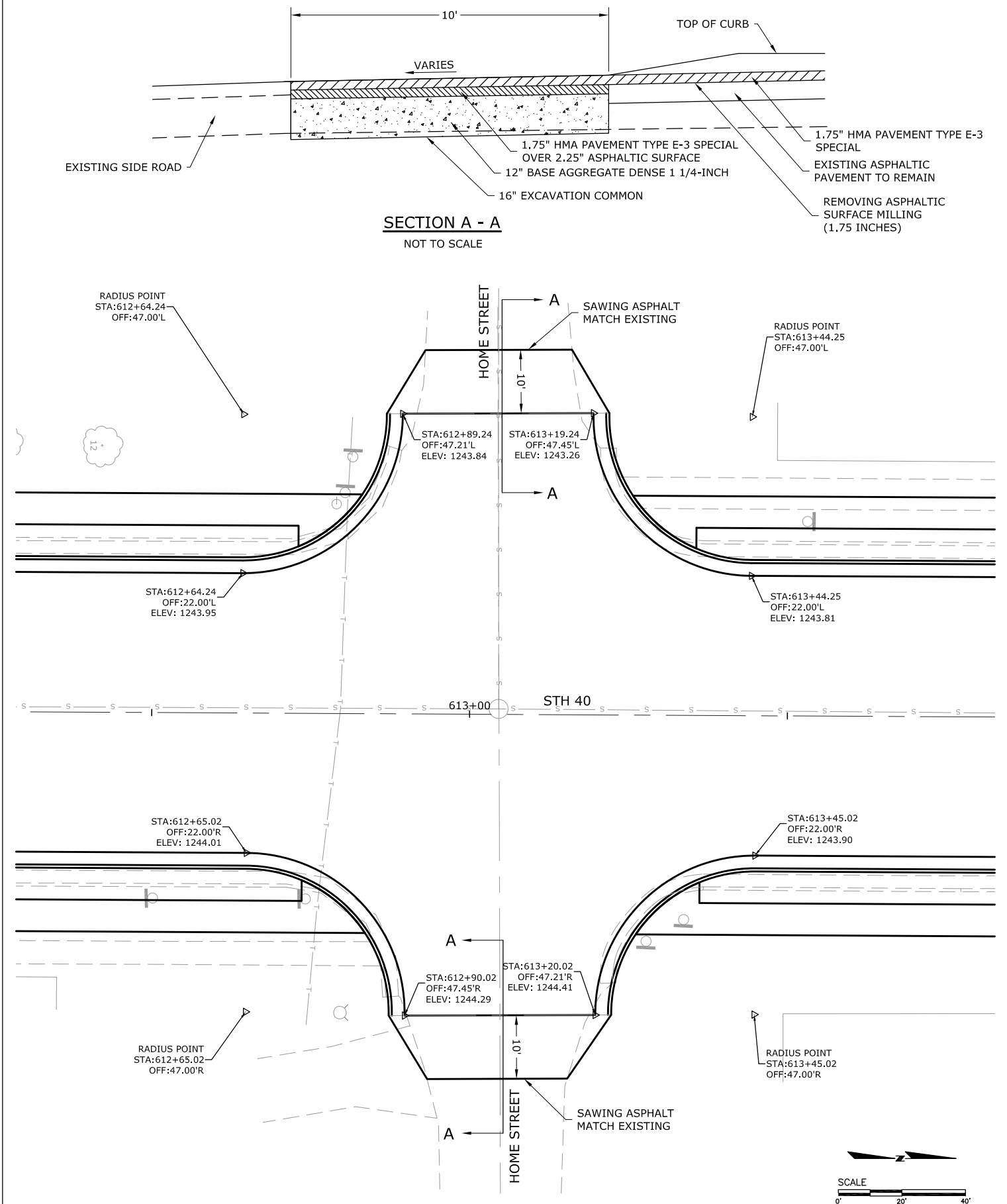
PLOT NAME: PL-PL (10)

ORG. DATE: Feb 13, 2009

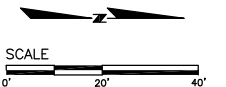
Originator :

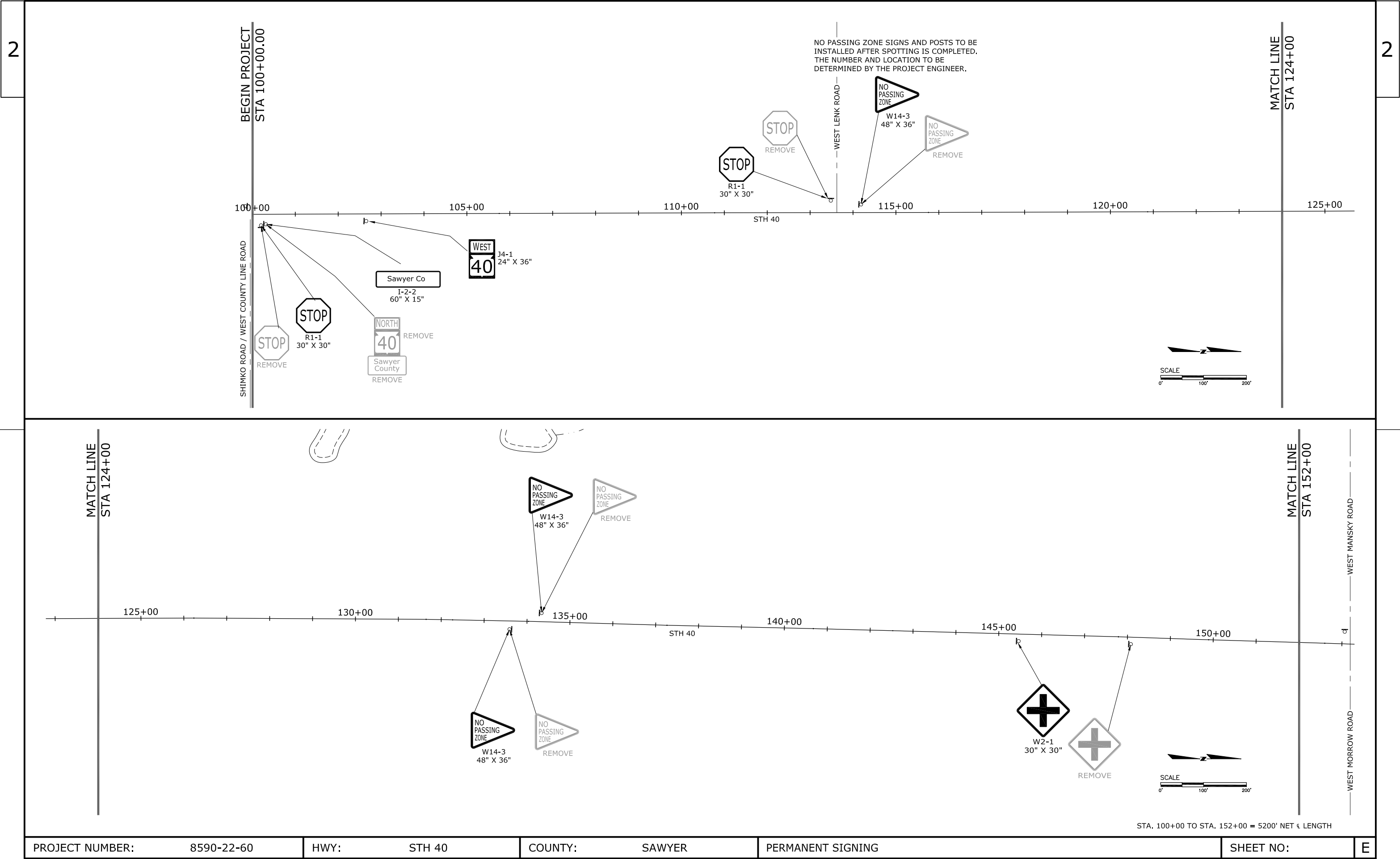
PLOT SCALE :

WISDOT/CADDs SHEET 42

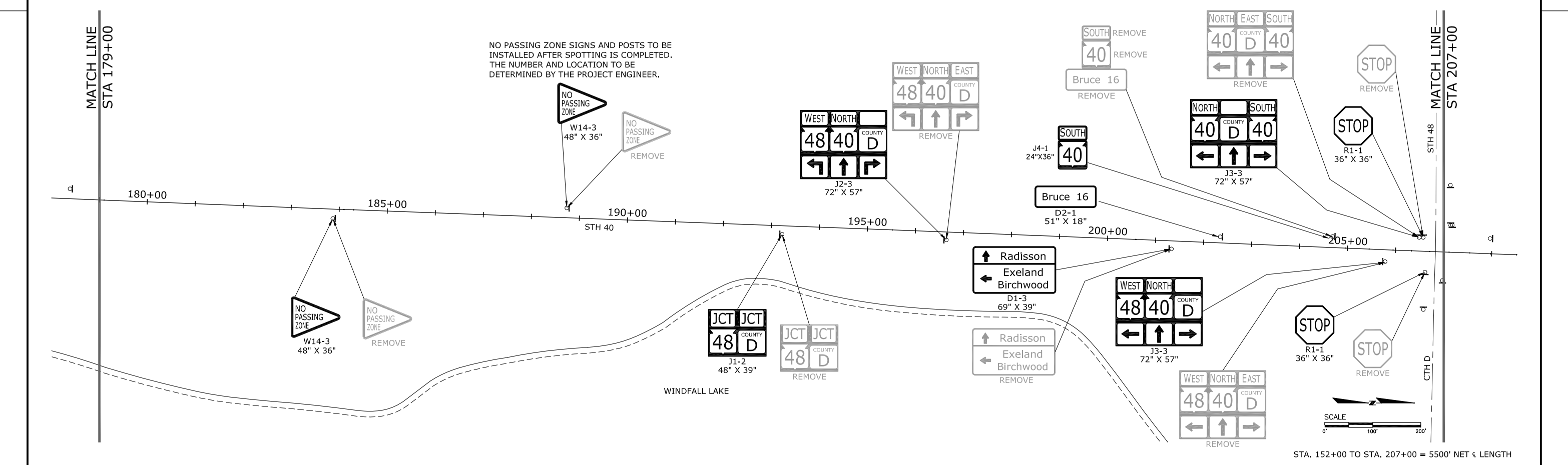
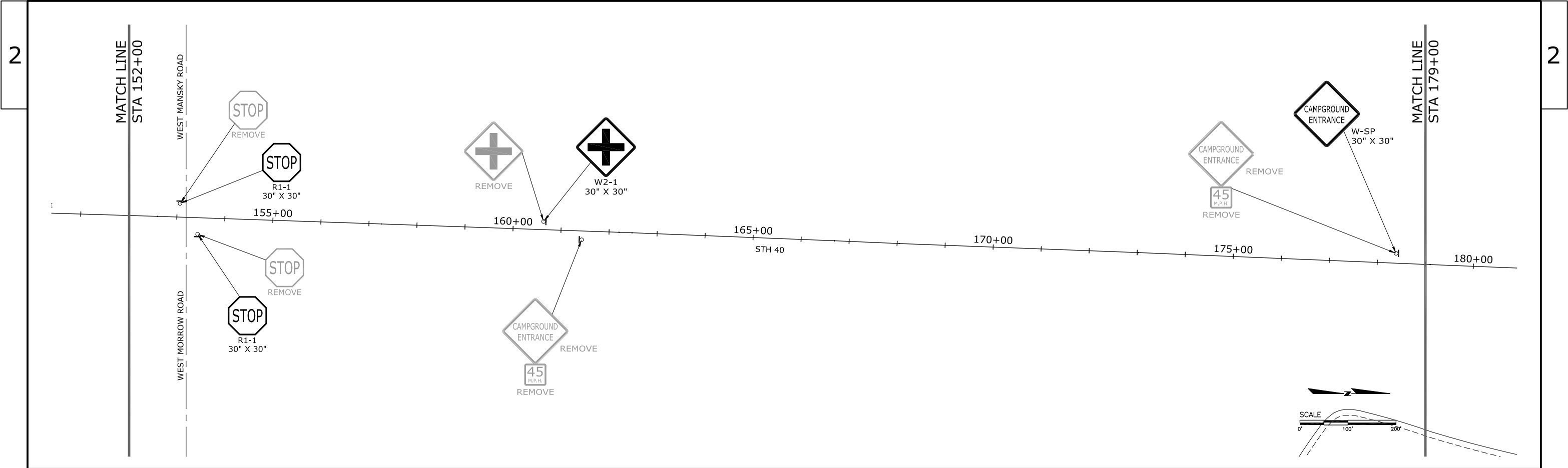


DETAIL FOR STORM SEWER/CULVERT REPLACEMENT AND ASPHALT BASE PATCHING
NOT TO SCALE

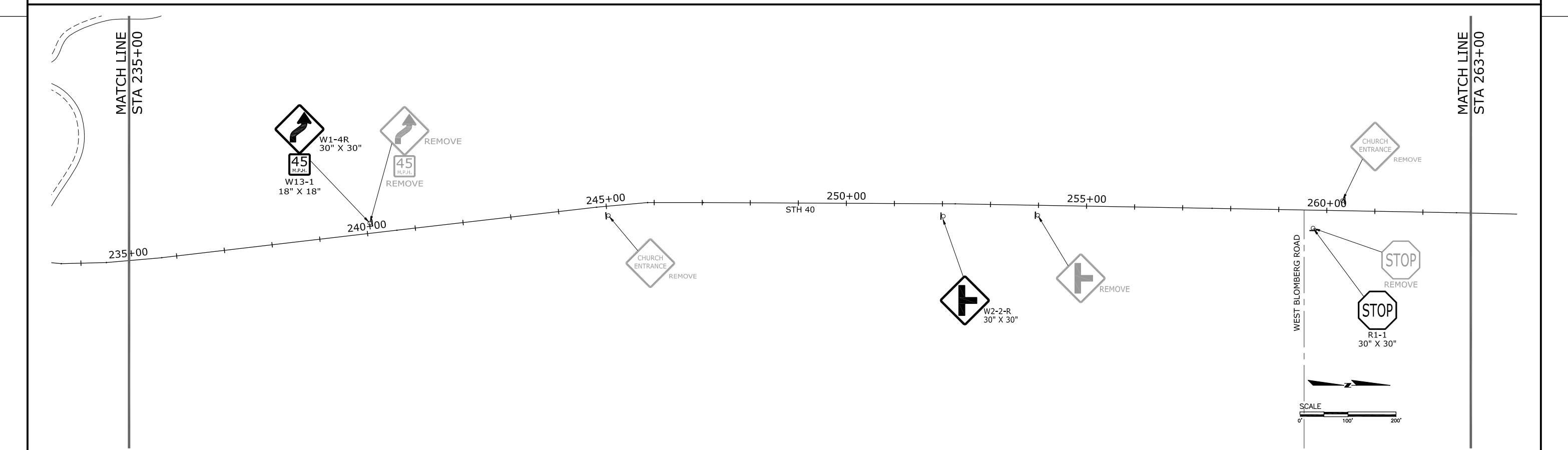
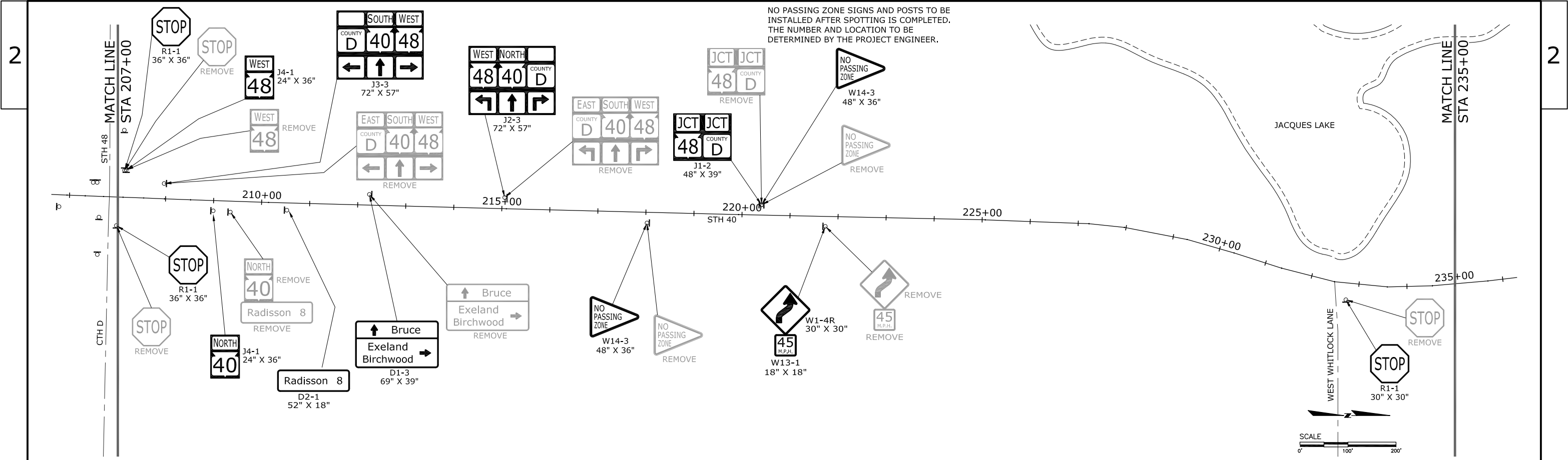




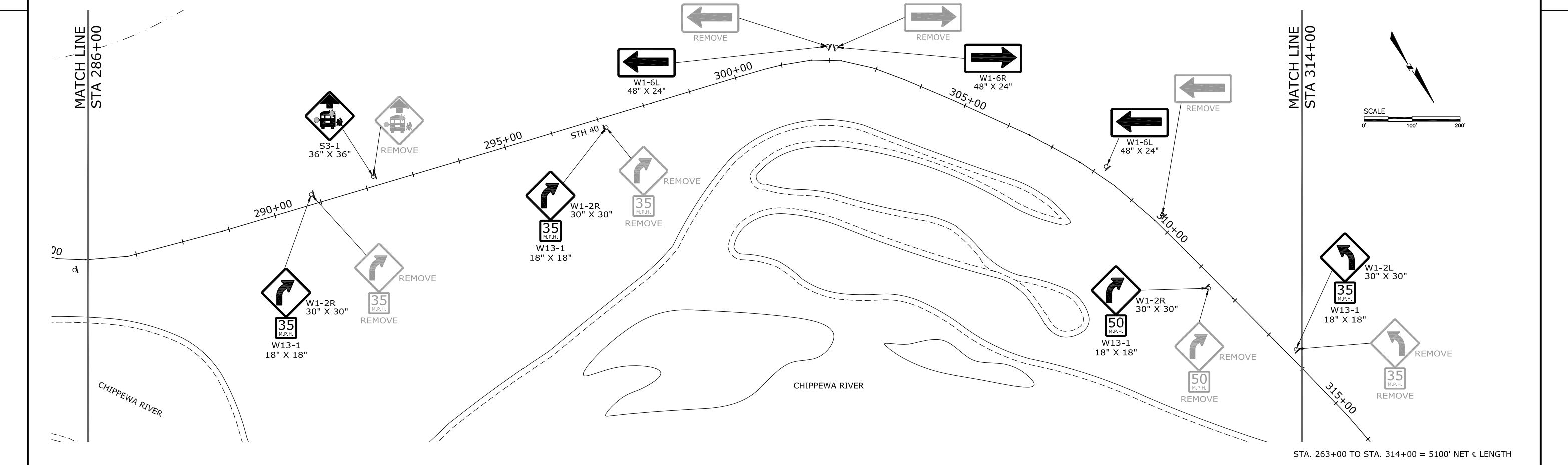
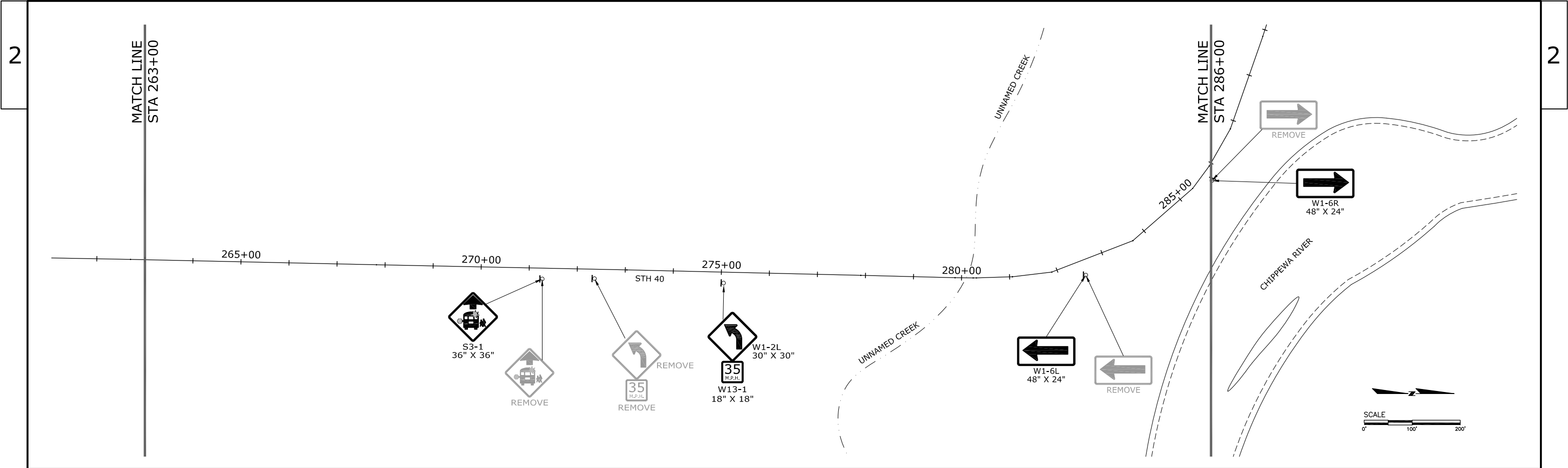
PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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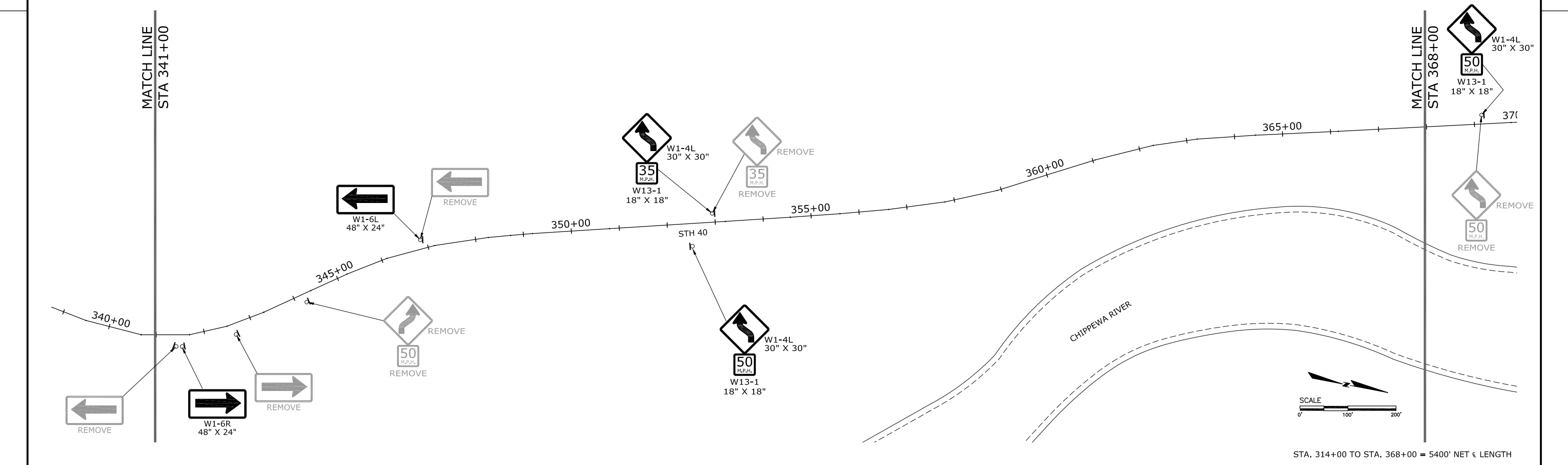
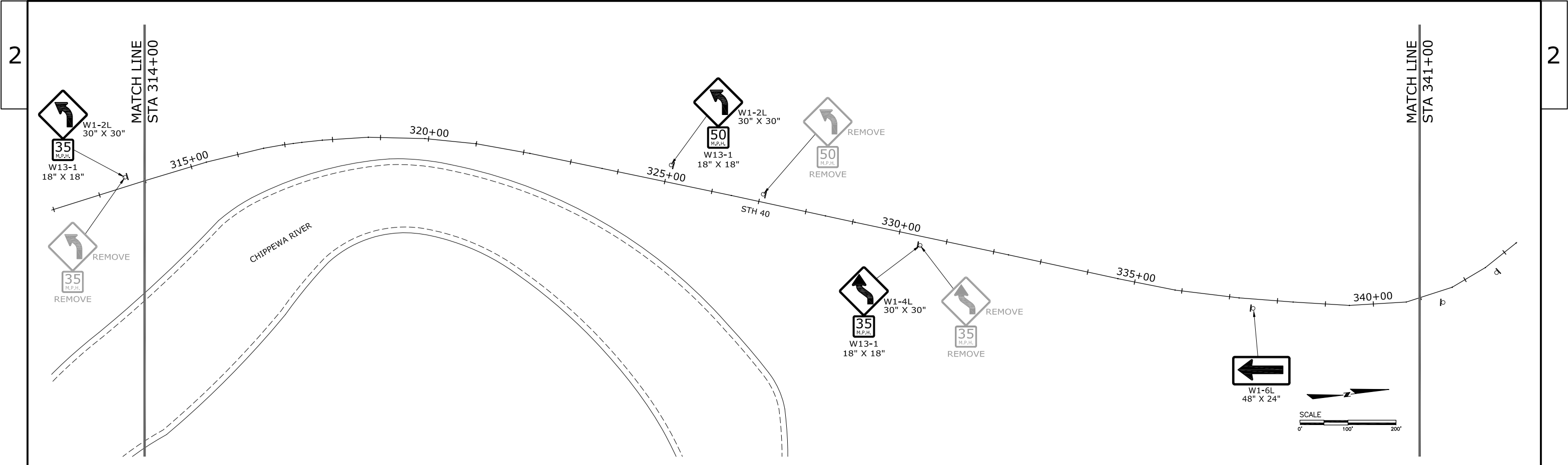
PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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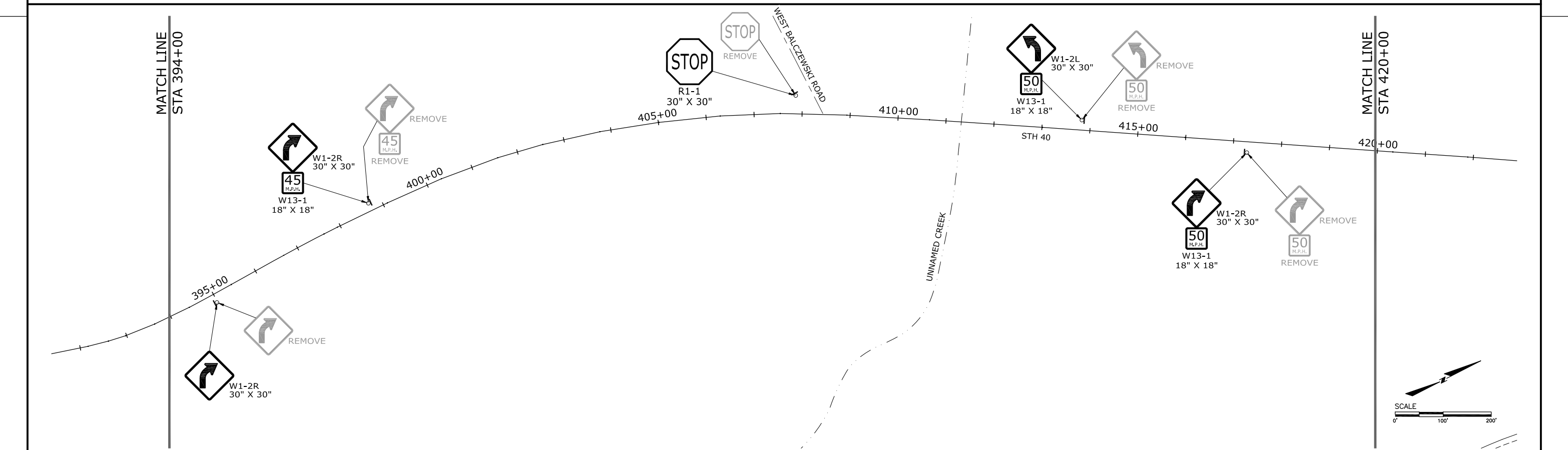
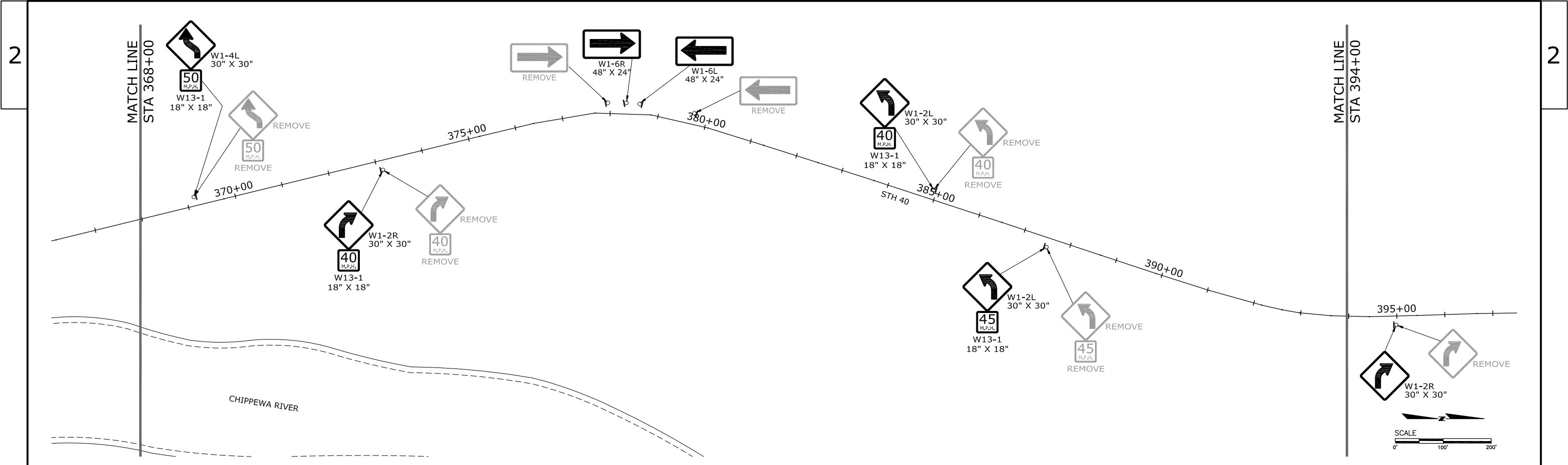


PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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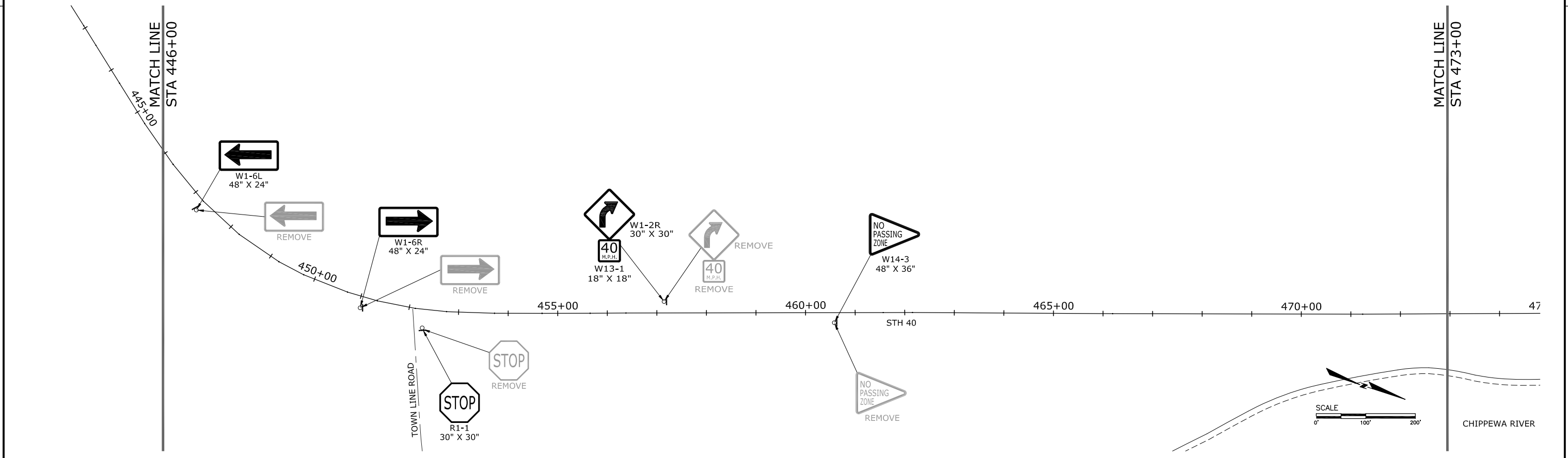
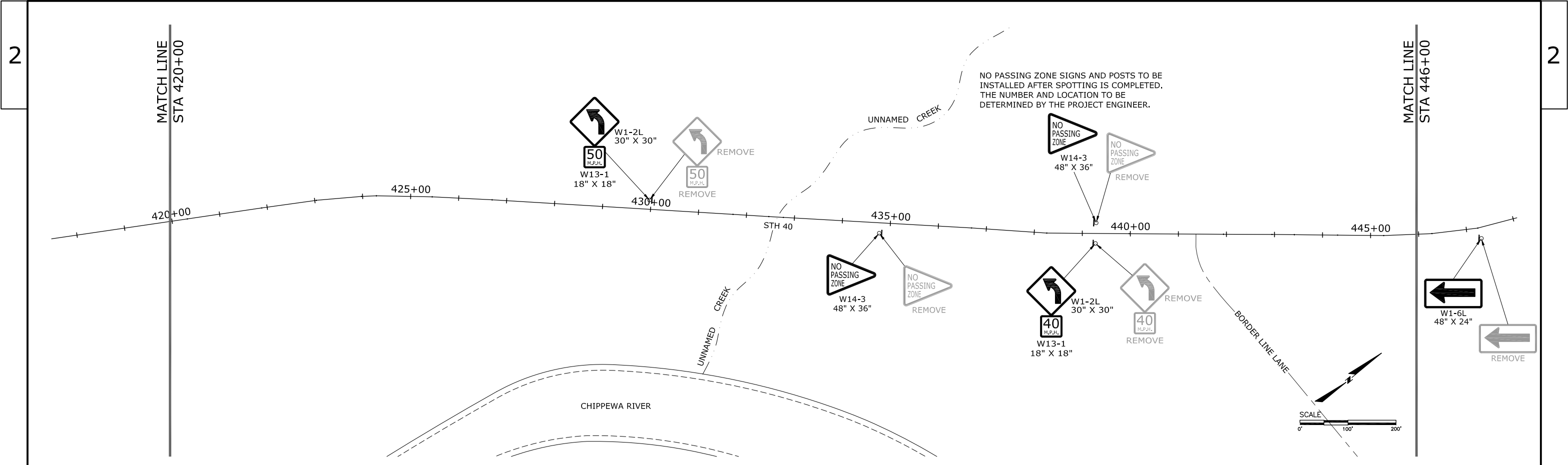
STA. 314+00 TO STA. 368+00 = 5400' NET & LENGTH

PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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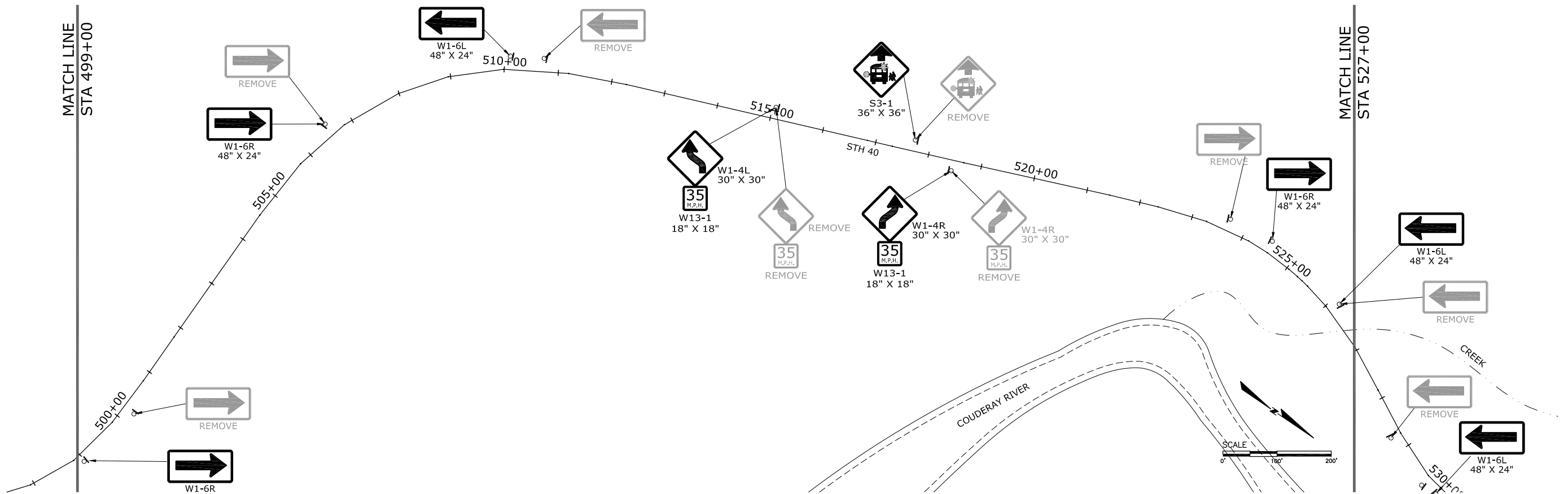


STA. 368+00 TO STA. 420+00 = 5200' NET & LENGTH

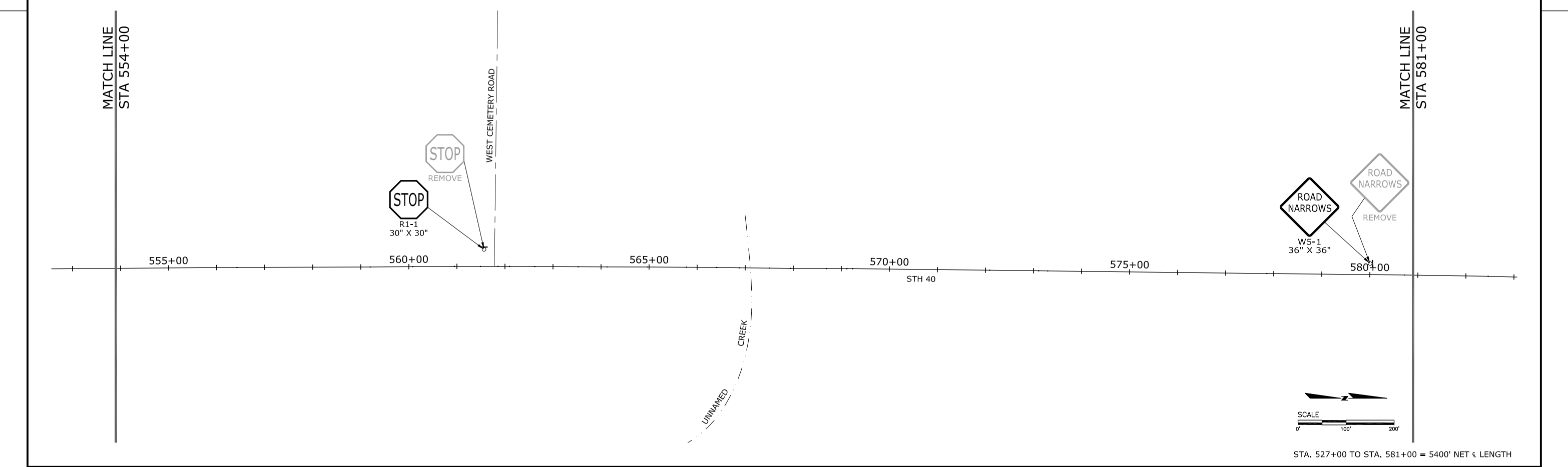
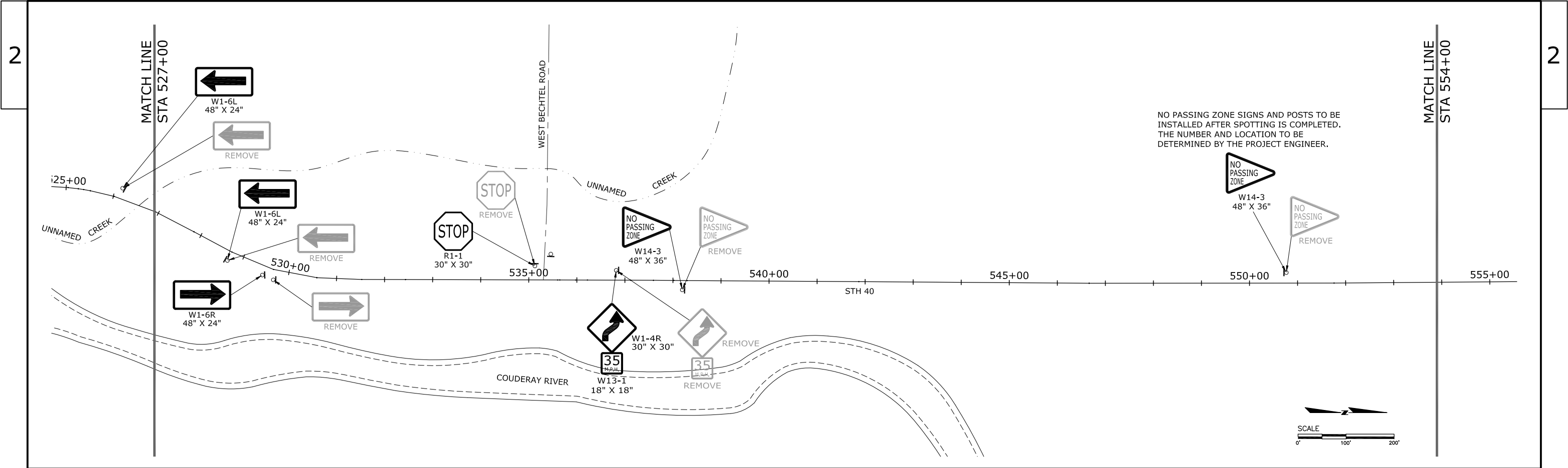
PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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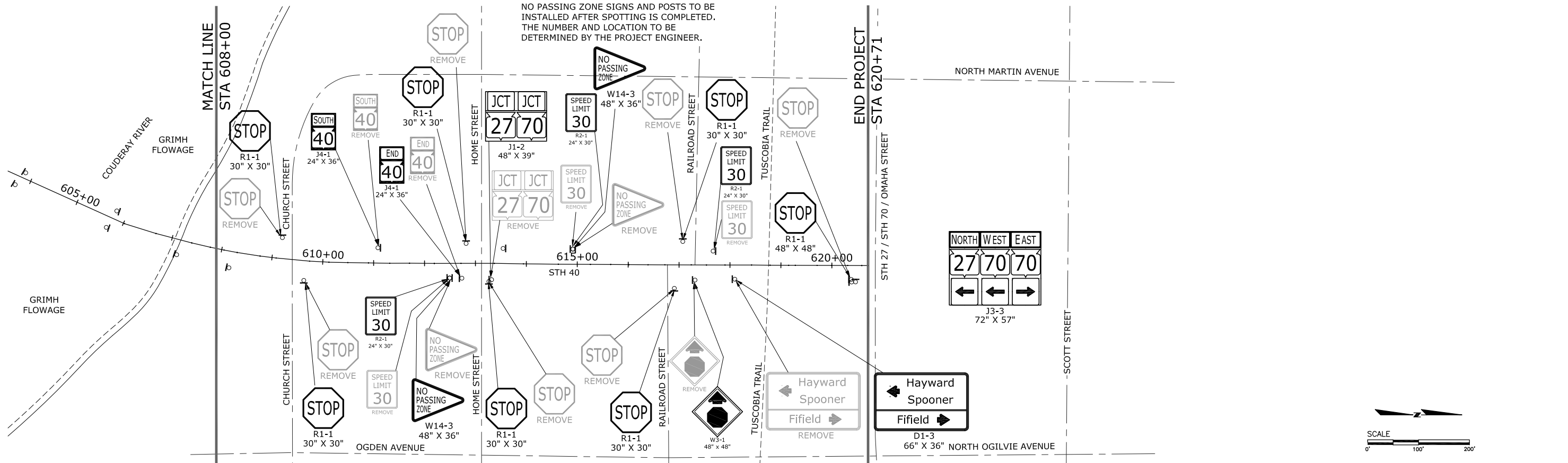
PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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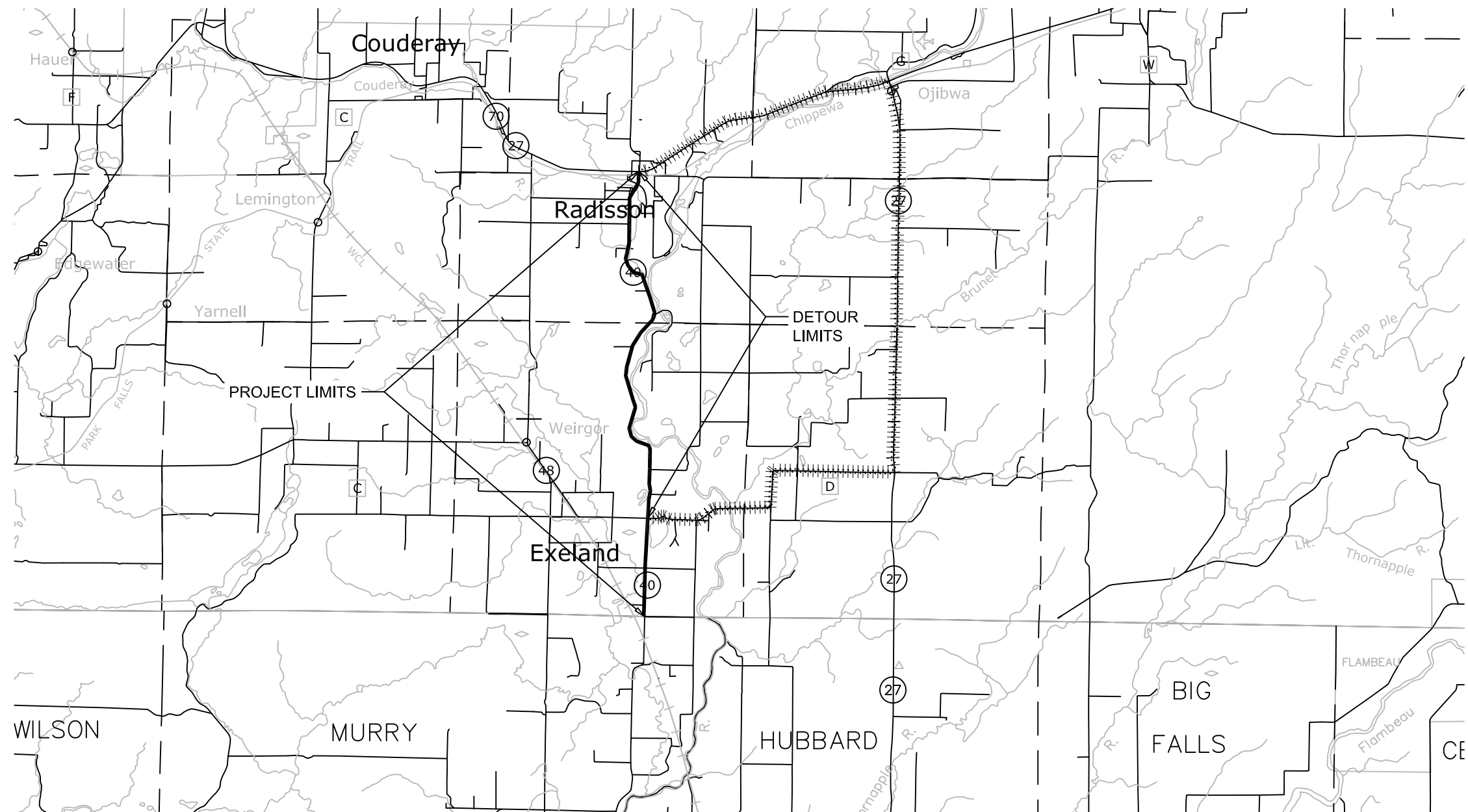
PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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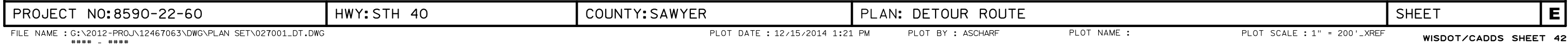
PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PERMANENT SIGNING	SHEET NO:	E
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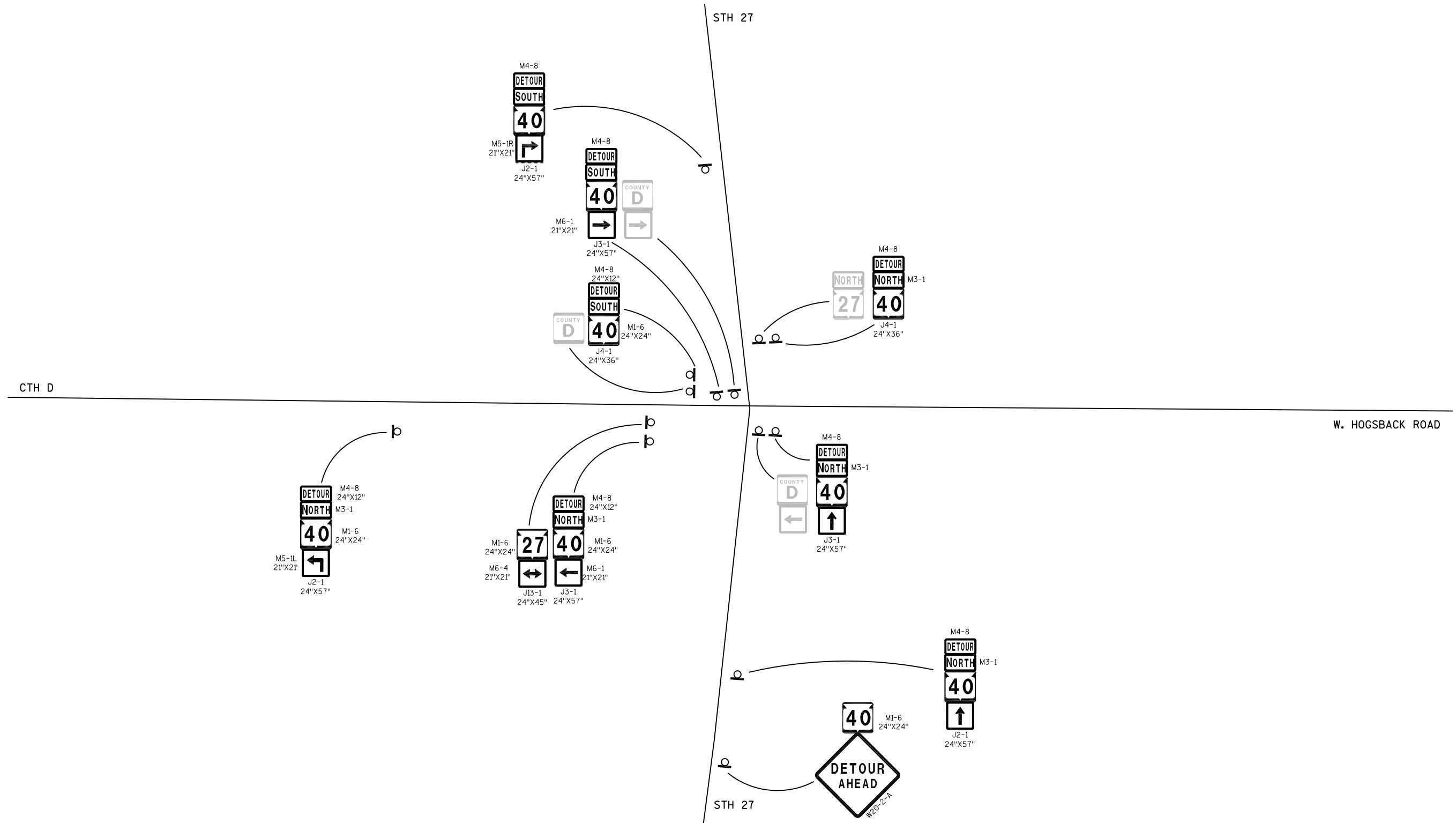


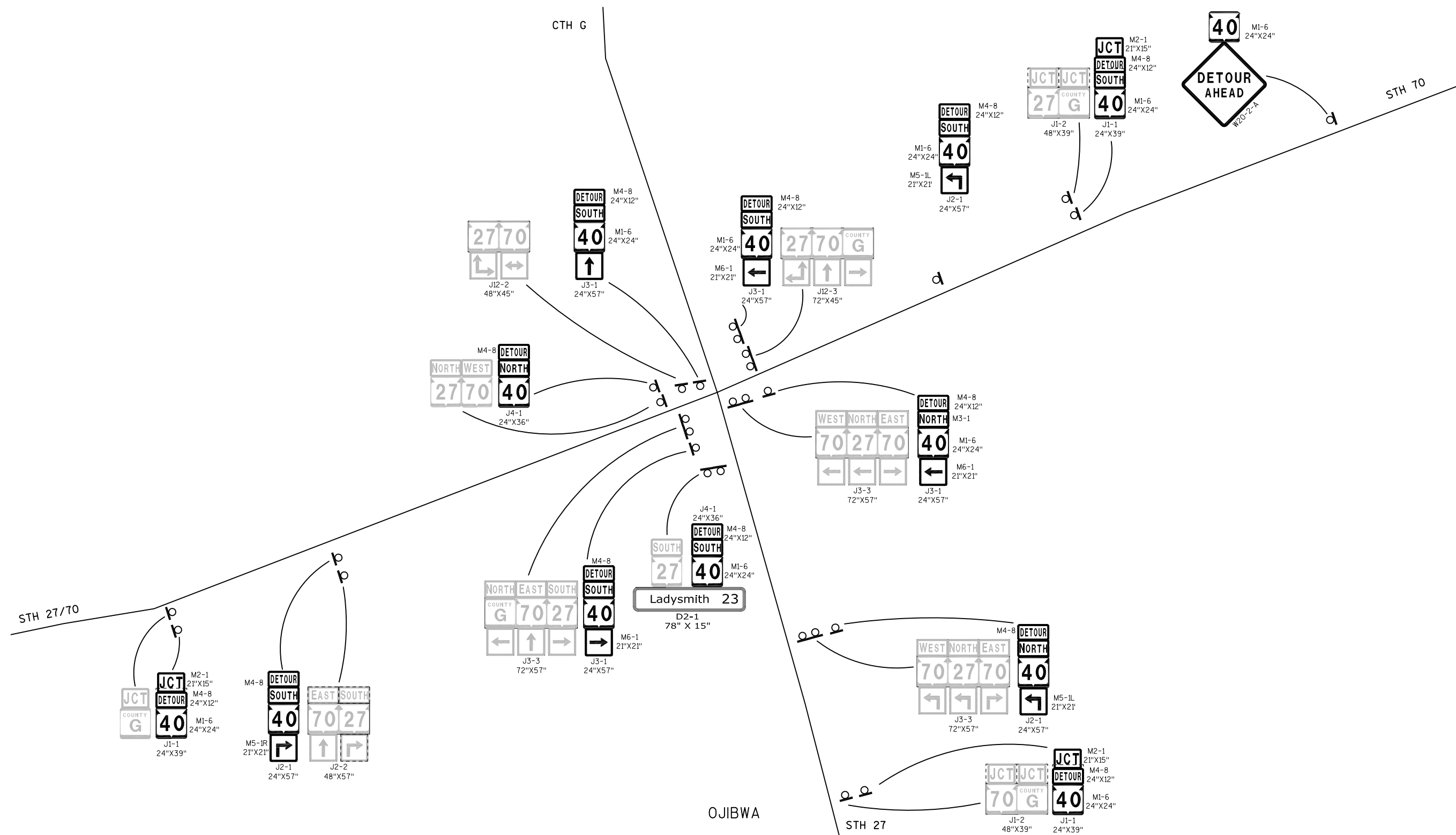
----- - DETOUR ROUTE - CTH D, STH 27/77

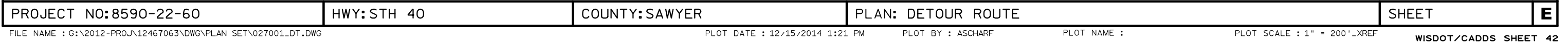
DETOUR ROUTE

1. ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF TRAFFIC CONTROL DEVICES (WMUTCD)
2. THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS SHALL BE ADJUSTED TO FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
3. DURING HOURS OF DARKNESS, ALL BARRICADES USED TO SHIELD A HAZARD SHALL BE EQUIPPED WITH TYPE "A" (LOW-INTENSITY FLASHING) LIGHTS AND DEVICES USED TO DELINEATE A TRAVEL PATH SHALL BE EQUIPPED WITH TYPE "C" (STEADY BURN) LIGHTS.
4. "W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACK-GROUND SHALL BE ORANGE
5. ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED
6. ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE INCLUDING PRE-EXISTING SIGNING IN THE VICINITY, SHALL BE COVERED OR REMOVED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.









DATE 03MAY16		E S T I M A T E O F Q U A N T I T I E S			
LINE					8590-22-60
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	202.0105	Roadside Clearing	STA	25.000	25.000
0020	203.0100	Removing Small Pipe Culverts	EACH	5.000	5.000
0030	204.0120	Removing Asphaltic Surface Milling	SY	150,240.000	150,240.000
0040	204.0150	Removing Curb & Gutter	LF	1,917.000	1,917.000
0050	204.0155	Removing Concrete Sidewalk	SY	220.000	220.000
0060	204.0220	Removing Inlets	EACH	4.000	4.000
0070	204.0245	Removing Storm Sewer (size) 01. 12-INCH	LF	123.000	123.000
0080	205.0100	Excavation Common	CY	6,700.000	6,700.000
0090	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	472.000	472.000
0100	213.0100	Finishing Roadway (project) 01. 8590-22-60	EACH	1.000	1.000
0110	305.0110	Base Aggregate Dense 3/4-Inch	TON	4,780.000	4,780.000
0120	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,975.000	1,975.000
0130	305.0500	Shaping Shoulders	STA	1,006.000	1,006.000
0140	350.0145	Subbase 12-Inch	SY	1,870.000	1,870.000
0150	416.0160	Concrete Driveway 6-Inch	SY	273.000	273.000
0160	440.4410	Incentive IRI Ride	DOL	39,290.000	39,290.000
0170	455.0605	Tack Coat	GAL	9,529.000	9,529.000
0180	460.2000	Incentive Density HMA Pavement	DOL	10,530.000	10,530.000
0190	460.4000	HMA Cold Weather Paving	TON	8,220.000	8,220.000
0200	465.0105	Asphaltic Surface	TON	1,581.000	1,581.000
0210	465.0110	Asphaltic Surface Patching	TON	50.000	50.000
0220	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	80.000	80.000
0230	465.0475	Asphalt Center Line Rumble Strips 2-Lane Rural	LF	50,590.000	50,590.000
0240	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	4.000	4.000
0250	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	7.000	7.000
0260	520.1036	Apron Endwalls for Culvert Pipe 36-Inch	EACH	3.000	3.000
0270	520.1048	Apron Endwalls for Culvert Pipe 48-Inch	EACH	4.000	4.000
0280	520.3148	Culvert Pipe Class III 48-Inch	LF	60.000	60.000
0290	520.3324	Culvert Pipe Class III-A 24-Inch	LF	60.000	60.000
0300	520.3330	Culvert Pipe Class III-A 30-Inch	LF	118.000	118.000
0310	520.3336	Culvert Pipe Class III-A 36-Inch	LF	50.000	50.000
0320	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	2,326.000	2,326.000
0330	602.0405	Concrete Sidewalk 4-Inch	SF	8,280.000	8,280.000
0340	602.0415	Concrete Sidewalk 6-Inch	SF	1,980.000	1,980.000
0350	602.0515	Curb Ramp Detectable Warning Field Natural Patina	SF	128.000	128.000
0360	606.0200	Riprap Medium	CY	25.000	25.000
0370	608.0412	Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	LF	168.000	168.000
0380	611.0600	Inlet Covers Type A	EACH	1.000	1.000
0390	611.0624	Inlet Covers Type H	EACH	2.000	2.000
0400	611.3003	Inlets 3-FT Diameter	EACH	1.000	1.000
0410	611.3230	Inlets 2x3-FT	EACH	2.000	2.000
0420	611.8110	Adjusting Manhole Covers	EACH	5.000	5.000
0430	611.8120.S	Cover Plates Temporary	EACH	3.000	3.000
0440	619.1000	Mobilization	EACH	1.000	1.000
0450	625.0100	Topsoil	SY	975.000	975.000
0460	625.0500	Salvaged Topsoil	SY	17,305.000	17,305.000
0470	627.0200	Mulching	SY	18,280.000	18,280.000
0480	628.1504	Silt Fence	LF	2,000.000	2,000.000
0490	628.1520	Silt Fence Maintenance	LF	2,000.000	2,000.000

DATE 03MAY16		E S T I M A T E O F Q U A N T I T I E S			
LINE					8590-22-60
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0500	628. 1905	Mobilizations Erosion Control	EACH	5. 000	5. 000
0510	628. 1910	Mobilizations Emergency Erosion Control	EACH	5. 000	5. 000
0520	628. 7015	Inlet Protection Type C	EACH	6. 000	6. 000
0530	628. 7504	Temporary Ditch Checks	LF	740. 000	740. 000
0540	628. 7555	Culvert Pipe Checks	EACH	8. 000	8. 000
0550	629. 0205	Fertilizer Type A	CWT	11. 500	11. 500
0560	630. 0130	Seeding Mixture No. 30	LB	294. 000	294. 000
0570	630. 0140	Seeding Mixture No. 40	LB	42. 000	42. 000
0580	633. 5200	Markers Culvert End	EACH	16. 000	16. 000
0590	634. 0614	Posts Wood 4x6-Inch X 14-FT	EACH	23. 000	23. 000
0600	634. 0616	Posts Wood 4x6-Inch X 16-FT	EACH	53. 000	53. 000
0610	634. 0618	Posts Wood 4x6-Inch X 18-FT	EACH	52. 000	52. 000
0620	634. 0620	Posts Wood 4x6-Inch X 20-FT	EACH	11. 000	11. 000
0630	637. 2210	Signs Type II Reflective H	SF	531. 440	531. 440
0640	637. 2230	Signs Type II Reflective F	SF	535. 250	535. 250
0650	638. 2602	Removing Signs Type II	EACH	168. 000	168. 000
0660	638. 3000	Removing Small Sign Supports	EACH	140. 000	140. 000
0670	642. 5001	Field Office Type B	EACH	1. 000	1. 000
0680	643. 0100	Traffic Control (project) 01. 8590-22-60	EACH	1. 000	1. 000
0690	643. 0300	Traffic Control Drums	DAY	18, 000. 000	18, 000. 000
0700	643. 0420	Traffic Control Barricades Type III	DAY	400. 000	400. 000
0710	643. 0705	Traffic Control Warning Lights Type A	DAY	480. 000	480. 000
0720	643. 0715	Traffic Control Warning Lights Type C	DAY	18, 000. 000	18, 000. 000
0730	643. 0900	Traffic Control Signs	DAY	1, 500. 000	1, 500. 000
0740	643. 2000	Traffic Control Detour (project) 01. 8590-22-60	EACH	1. 000	1. 000
0750	643. 3000	Traffic Control Detour Signs	DAY	500. 000	500. 000
0760	645. 0120	Geotextile Type HR	SY	75. 000	75. 000
0770	646. 0106	Pavement Marking Epoxy 4-Inch	LF	185, 025. 000	185, 025. 000
0780	646. 0406	Pavement Marking Same Day Epoxy 4-Inch	LF	83, 325. 000	83, 325. 000
0790	647. 0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	24. 000	24. 000
0800	647. 0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	1, 102. 000	1, 102. 000
0810	648. 0100	Locating No-Passing Zones	MI	10. 000	10. 000
0820	649. 0402	Temporary Pavement Marking Paint 4-Inch	LF	104, 130. 000	104, 130. 000
0830	650. 4000	Construction Staking Storm Sewer	EACH	4. 000	4. 000
0840	650. 5500	Construction Staking Curb Gutter and Curb & Gutter	LF	2, 326. 000	2, 326. 000
0850	650. 6000	Construction Staking Pipe Culverts	EACH	5. 000	5. 000
0860	650. 8000	Construction Staking Resurfacing Reference	LF	52, 065. 000	52, 065. 000
0870	650. 9910	Construction Staking Supplemental Control (project) 01. 8590-22-60	LS	1. 000	1. 000
0880	690. 0150	Sawing Asphalt	LF	2, 790. 000	2, 790. 000
0890	SPV. 0090	Special 01. CONCRETE CURB & GUTTER CURE AND SEAL TREATMENT	LF	2, 326. 000	2, 326. 000
0900	SPV. 0105	Special 01. PREPARE FOUNDATION FOR ASPHALTIC PAVING SPECIAL	LS	1. 000	1. 000
0910	SPV. 0105	Special 02. MATERIAL TRANSFER VEHICLE	LS	1. 000	1. 000
0920	SPV. 0165	Special 01. CONCRETE SIDEWALK CURE AND SEAL TREATMENT	SF	10, 260. 000	10, 260. 000
0930	SPV. 0180	Special 01. CONCRETE DRIVEWAY CURE AND SEAL TREATMENT	SY	273. 000	273. 000
0940	SPV. 0195	Special 01. ASPHALTIC SURFACE SPECIAL	TON	1, 600. 000	1, 600. 000
0950	SPV. 0195	Special 02. HMA PAVEMENT TYPE E-3 SPECIAL	TON	16, 440. 000	16, 440. 000

3

ROADSIDE CLEARING		202.0105	
CATEGORY	LOCATION	SIDE	STA
0010	UNDISTRIBUTED	LT/RT	25
0010 TOTAL			25

BASE AGGREGATE DENSE 3/4-INCH		BASE AGGREGATE DENSE 1 1/4-INCH		SHAPING SHOULDERS
CATEGORY	STATION TO STATION	TON	TON	STA
0010	100+00 - 603+00	4,780	-	1,006
0010	100+00 - 620+65	-	430	-
0010	100+00 - 620+65	-	845	-
0010	100+00 - 620+65	-	700	-
0010 TOTAL		4,780	1,975	1,006

Division	Station	To	Station	Side	Common Excavation (1) (item # 205.0100)		Unexpanded Fill	Expanded Fill	Mass Ordinate +/- (3)	Waste	Comment:
					Cut (2)	EBS Excavation		Factor 1.25			
10	205+00		209+00	LT	300	0	0	0	300	300	
	205+00		209+00	RT	300	0	0	0	300	300	
	442+00		455+00	LT	960	0	0	0	960	960	
	442+00		455+00	RT	960	0	0	0	960	960	
	491+00		501+00	LT	740	0	0	0	740	740	
	521+00		525+50	RT	330	0	0	0	330	330	
	535+50		538+50	RT	220	0	0	0	220	220	
	559+00		570+00	LT	810	0	0	0	810	810	
	559+00		570+00	RT	810	0	0	0	810	810	
	BASE PATCHING				520	0	0	0	520	520	
Division 10 Subtotal					5950	0	0	0	5950	5950	
20	608+00		620+65		750	0	0	0	750	750	
Division 20 Subtotal					750	0	0	0	750	750	
Grand Total					6700	0	0	0	6700	6700	
Total Common Exc					6700						

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
2) Salvaged/Unsuable Pavement Material is included in Cut.
3) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Divisi

																			PREPARE FOUNDATION FOR		ASPHALTIC SURFACE DRIVEWAYS AND ENTRANCES		ASPHALT CENTER LINE RUMBLE STRIP 2-LANE RURAL		SAWING ASPHALT		ASPHALTIC PAVING SPECIAL		MATERIAL TRANSFER VEHICLE		ASPHALTIC SURFACE SPECIAL		HMA PAVEMENT TYPE E-3 SPECIAL	
																			REMOVING ASPHALTIC SURFACE MILLING	PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	INCENTIVE IRI RIDE	TACK COAT	INCENTIVE DENSITY HMA PAVEMENT	ASPHALTIC SURFACE PATCHING	ASPHALTIC SURFACE	DRIVEWAYS AND ENTRANCES	ASPHALT CENTER LINE RUMBLE STRIP 2-LANE RURAL	SAWING ASPHALT	ASPHALTIC PAVING SPECIAL	MATERIAL TRANSFER VEHICLE	ASPHALTIC SURFACE SPECIAL	HMA PAVEMENT TYPE E-3 SPECIAL		
																			204.0120	211.0400	440.4410	455.0605	460.2000	465.0105	465.0110	465.0120	465.0475	690.0150	SPV.0105.01	SPV.0105.02	SPV.0195.01	SPV.0195.02		
CATEGORY	STATION TO STATION	SIDE	WIDTH (FT)	THICKNESS (IN)	LAYERS	SY	STA	DOL	GAL	DOL	TON	TON	TON	LF	LF	LS	LS	TON	TON	REMARKS														
0010	100+00 - 572+00	LT/RT	24	1.75	1	125,900	472	35,760	-	-	-	-	-	-	-	1	1	-	-	MAINLINE														
0010	572+00 - 598+00	LT/RT	30	1.75	1	8,700	-	1,970	-	-	-	-	-	-	-	-	-	-	-	MAINLINE														
0010	598+00 - 603+00	LT/RT	36	1.75	1	2,000	-	380	-	-	-	-	-	-	-	-	-	-	-	MAINLINE														
0010	605+10 - 608+00	LT/RT	40	1.75	1	1,300	-	220	-	-	-	-	-	-	-	-	-	-	-	MAINLINE														
0010	608+00 - 620+65	LT/RT	44	1.75	1	5,330	-	960	-	-	-	-	-	-	-	-	-	-	-	RADISSON														
0010	100+00 - 572+00	LT/RT	27	1.75	1	-	-	-	7,080	8,890	-	-	-	-	47,200	-	-	-	13,880	MAINLINE & 1' PAVED SHOULDERS @ 3"														
0010	572+00 - 598+00	LT/RT	30	1.75	1	-	-	-	433	544	-	-	-	-	2,600	-	-	-	850	MAINLINE & PAVED SHOULDERS														
0010	598+00 - 603+00	LT/RT	36	1.75	1	-	-	-	100	128	-	-	-	-	500	-	-	-	200	MAINLINE & PAVED SHOULDERS														
0010	605+10 - 608+00	LT/RT	40	1.75	1	-	-	-	64	83	-	-	-	-	290	-	-	-	130	MAINLINE & PAVED SHOULDERS														
0010	608+00 - 620+65	LT/RT	44	1.75	1	-	-	-	280	352	64	-	-	-	2,590	-	-	-	550	MAINLINE AND PARKING LANE														
0010	INSIDE CURVES		3	3.00	1	-	-	-	171	365	-	-	-	-	-	-	-	-	570	INSIDE CURVE PAVED SHOULDERS														
0010	UNDISTRIBUTED			4.00		-	-	-	-	-	447	-	-	-	-	-	-	-	-	BASE PATCHING AND CULVERTS/STORM SEWER														
0010	UNDISTRIBUTED		6	3.00		5,670	-	-	142	-	960	-	-	-	-	-	-	-	-	OUTSIDE LANE REPAIR														
0010	UNDISTRIBUTED			1.75		-	-	-	55	70	110	-	-	-	100	-	-	-	110	SIDE ROADS														
0010	UNDISTRIBUTED			3.00		-	-	-	-	-	-	-	80	-	100	-	-	-	-	DRIVEWAYS AND TAPERS														
0010	UNDISTRIBUTED					-	-	-	1,170	-	-	-	-	-	-	-	-	1,600	-	LEVELLING & WEDGING														
0010	UNDISTRIBUTED					-	-	-	-	-	-	50	-	-	-	-	-	-	-	MINOR REPAIRS, RAMPING AT BUTT JOINTS														
0010 TOTAL						148,900	472	39,290	9,495	10,434	1,581	50	80	50,590	2,790	1	1	1,600	16,290															
0030	608+00 - 620+65	LT/RT	40	1.75	1	1,340	-	-	34	96	-	-	-	-	-	-	-	-	150	RADISSON														
0030 TOTAL						1,340	0	0	34	96	0	0	0	0	0	0	0	0	150															
TOTAL						150,240	472	39,290	9,529	10,530	1,581	50	80	50,590	2,790	1	1	1,600	16,440															

PROJECT NO:8590-22-60

HWY:STH 40

COUNTY:SAWYER

MISCELLANEOUS QUANTITIES

SHEET

E

3

3

CATEGO	STATION	SIDE	REMOVING	CULVERT	CULVERT	CULVERT	CULVERT	CULVERT	CULVERT	CULVERT	CULVERT	CULVERT	CULVERT	CULVERT	APRON	APRON	APRON	APRON	RIPRAP	CULVERT	MARKERS	GEOTEXTILE		CONSTRUCTION	
			SMALL PIPE	PIPE CLASS	CLASS III	CLASS III	PIPE CLASS	CLASS III	CLASS III	PIPE CLASS	CLASS III	CLASS III	PIPE CLASS	CLASS III	CLASS III	ENDWALLS	ENDWALLS	ENDWALLS				ENDWALLS	FABRIC TYPE		STAKING PIPE
			CULVERTS	48-INCH	STEEL	ALUMINUM	24-INCH	STEEL	ALUMINUM	30-INCH	STEEL	ALUMINUM	36-INCH	STEEL	ALUMINUM	FOR CULVERT	FOR CULVERT	FOR CULVERT		FOR CULVERT	"HR"	CULVERTS			
			203.0100	520.3148	THICKNESS	THICKNESS	520.3324	THICKNESS	THICKNESS	520.3330	THICKNESS	THICKNESS	520.3336	THICKNESS	THICKNESS	521.1024	521.1030	521.1036	521.1048	606.0200	628.7555	633.5200	645.0120		650.6000
			EA	LF			LF			LF			LF		EA	EA	EA	EA	CY	EA	EA	SY	EA		
0010	317+20	LT/RT	1	60	0.064	0.075	-	-	-	-	-	-	-	-	-	-	-	2	-	1	2	-	1		
0010	329+07	LT/RT	1	-	-	-	-	-	-	40	0.064	0.075	-	-	-	2	-	-	-	1	2	-	1		
0010	348+76	LT/RT	1	-	-	-	-	-	-	35	0.064	0.075	-	-	-	2	-	-	-	1	2	-	1		
0010	411+34	LT/RT	-	-	-	-	-	-	-	-	-	-	50	0.064	0.075	-	-	2	-	1	2	-	-		
0010	424+34	RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	15	-		
0010	432+50	RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	5	-	-	15	-		
0010	483+06	RT	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	10	-	-	30	-	-		
0010	496+89	LT/RT	1	-	-	-	-	-	-	43	0.064	0.075	-	-	-	2	-	-	-	1	2	-	1		
0010	525+40	RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	-		
0010	535+73	RT	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	2	2	-	-		
0010	569+33	LT/RT	1	-	-	-	60	0.064	0.075	-	-	-	-	-	2	-	-	-	-	1	2	-	1		
0010	573+414	RT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	15	-		
0010 TOTAL			5	60	0	0	60	0	0	118	0	0	50	0	0	4	7	3	4	25	8	16	75	5	

CATEGORY	STATION TO	STATION	SIDE	CONCRETE		
				REMOVING	CURB & GUTTER	GUTTER CURE
				CURB &	30-INCH	AND SEAL
				GUTTER	TYPE D	TREATMENT
				204. 0150	601. 0411	SPV. 0090. 01
				LF	LF	LF
0010	608+92 -	609+19	LT	32	39	39
0010	609+04 -	609+28	RT	35	41	41
0010	609+49 -	612+89	LT	347	366	366
0010	609+58 -	612+90	RT	350	359	359
0010	613+20 -	617+15	LT	400	419	419
0010	613+20 -	616+57	RT	348	360	360
0010	616+88 -	620+64	RT	-	400	400
0010	616+97 -	618+50	RT	153	-	-
0010	617+45 -	620+64	LT	-	342	342
0010	617+48 -	618+53	LT	105	-	-
0010	619+20 -	619+53	LT	33	-	-
0010	619+28 -	619+53	RT	25	-	-
0010	620+30 -	620+64	LT	49	-	-
0010	620+38 -	620+64	RT	40	-	-
0010 TOTAL				1917	2326	2326

CATEGORY	STATION to	STATION	OFFSET	SIDE	STORM SEWER PIPE									
					REMOVING INLETS	REMOVING STORM SEWER (12-INCH)	REINFORCED CONCRETE CLASS IV 12-INCH	INLET COVERS TYPE A	INLET COVERS TYPE H	INLETS 3-FT DIAMETER	INLETS 2X3-FT	ADJUSTING MANHOLE COVERS	COVER PLATES TEMPORARY	INLET PROTECTION TYPE C
204.0220 EACH	204.0245 LF	608.0412 LF	611.0600 EACH	611.0624 EACH	611.3003 EACH	611.3230 EACH	611.8120.S EACH	611.8120.S EACH	628.7015 EACH					
0010	610+49		0'	LT	-	-	-	-	-	-	-	1	-	-
0010	613+05		0'	LT	-	-	-	-	-	-	-	1	-	-
0010	616+44		25.5'	RT	-	-	-	-	1	-	1	-	1	1
0010	616+44	- 617+48		RT	-	-	105	-	-	-	-	-	-	-
0010	616+94		28'	RT	1	-	-	-	-	-	-	-	-	-
0010	616+94	- 617+48		RT	-	54	-	-	-	-	-	-	-	-
0010	617+19		0'	LT	-	-	-	-	-	-	-	1	-	-
0010	617+47		29'	RT	1	-	-	-	-	-	-	-	-	-
0010	617+47	- 617+49		RT	-	6	-	-	-	-	-	-	-	-
0010	617+49			LT/RT	-	63	63	-	-	-	-	-	-	-
0010	617+49		23'	RT	1	-	-	-	1	-	1	-	1	1
0010	617+49		31'	LT	1	-	-	-	-	-	-	-	-	-
0010	617+49		40'	LT	-	-	-	1	-	1	-	-	1	1
0010	617+58		31'	LT	-	-	-	-	-	-	-	1	-	-
0010	619+87		29'	LT	-	-	-	-	-	-	-	1	-	-
0010		UNDISTRICTED			-	-	-	-	-	-	-	-	-	3
0010 TOTAL					4	123	168	1	2	1	2	5	3	6

				REMOVING CONCRETE SIDEWALK	SUBBASE 12-INCH	CONCRETE DRIVEWAY 6-INCH	CONCRETE SIDEWALK 4-INCH	CONCRETE SIDEWALK 6-INCH	CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	CONCRETE SIDEWALK CURE AND SEAL TREATMENT	CONCRETE DRIVEWAY CURE AND SEAL TREATMENT
CATEGORY	STATION TO	STATION	SIDE	204. 0155 SY	350. 0145 SY	416. 0160 SY	602. 0405 SF	602. 0415 SF	602. 0515 SF	SPV. 0165. 01 SF	SPV. 0180. 01 SY
0020	610+89 -	610+90	LT	4	-	-	-	-	-	-	-
0020	613+25 -	617+08	RT	213	-	-	-	-	-	-	-
0020	616+30 -	616+34	LT	3	-	-	-	-	-	-	-
0020	609+02 -	609+12	LT	-	7	-	48	-	8	48	-
0020	609+03 -	609+22	RT	-	33	17	95	-	8	95	17
0020	609+56 -	612+83	LT	-	302	51	1238	380	16	1618	51
0020	609+65 -	612+84	RT	-	295	44	1261	350	16	1611	44
0020	613+26 -	617+09	LT	-	320	22	1732	175	16	1907	22
0020	613+26 -	616+51	RT	-	297	44	1265	350	16	1615	44
0020	616+94 -	620+57	RT	-	320	36	1552	275	16	1827	36
0020	617+51 -	620+57	LT	-	298	58	1088	450	16	1538	58
0020	617+70 -	617+75	LT	-	-	-	-	-	8	-	-
0020	617+70 -	617+75	RT	-	-	-	-	-	8	-	-
0020 TOTAL				220	1870	273	8280	1980	128	10260	273

				SALVAGED			SILT	SILT FENCE	MOBILIZATIONS	MOBILIZATIONS	TEMPORARY	FERTILIZER	SEEDING	SEEDING
				TOPSOIL	TOPSOIL	MULCHING	FENCE	MAINTENANCE	EROSION CONTROL	EROSION CONTROL	DITCH CHECKS	TYPE A	MIXTURE	MIXTURE NO.
				625. 0500 SY	625. 0500 SY	627. 0200 SY	628. 1504 LF	628. 1520 LF	628. 1905 EA	628. 1910 EA	628. 7504 LF	629. 0205 CWT	630. 0130 LB	630. 0140 LB
0010	205+00 -	209+00	LT	-	890	890	-	-	-	-	40	0. 6	16	-
0010	205+00 -	209+00	RT	-	890	890	-	-	-	-	40	0. 6	16	-
0010	442+00 -	455+00	LT	-	2890	2890	-	-	-	-	130	1. 8	52	-
0010	442+00 -	455+00	RT	-	2890	2890	-	-	-	-	130	1. 8	52	-
0010	491+00 -	501+00	LT	-	2220	2220	-	-	-	-	100	1. 4	40	-
0010	521+00 -	525+50	RT	-	1000	1000	-	-	-	-	50	0. 6	18	-
0010	535+50 -	538+50	RT	-	670	670	-	-	-	-	30	0. 4	12	-
0010	559+00 -	570+00	LT	-	2440	2440	-	-	-	-	110	1. 5	44	-
0010	559+00 -	570+00	RT	-	2440	2440	-	-	-	-	110	1. 5	44	-
0010	UNDISTRICTED			-	-	-	2000	2000	5	5	-	-	-	-
0010 TOTAL				0	16330	16330	2000	2000	5	5	740	10	294	0
0020	608+00 -	620+65	RT	975	975	1950	-	-	-	-	-	1. 5	-	42
0020 TOTAL				975	975	1950	0	0	0	0	0	1. 5	0	42
TOTAL				975	17305	18280	2000	2000	5	5	740	12	294	42

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Category	Station	Side	Sign Code	Description	Width	Height	SIGNS	SIGNS	Sign Message	POSTS	POSTS	POSTS	POSTS	REMOVING	REMOVING		
							REFLECTIVE	REFLECTIVE		WOOD	WOOD	WOOD	WOOD	SIGNS	SMALL SIGN		
							TYPE II H	TYPE II F		4X6-INCH	4X6-INCH	4X6-INCH	4X6-INCH	TYPE II	SUPPORTS		
							637.2210	637.2230				634.0614	634.0616	634.0618	634.0620	638.2602	638.3000
Northbound							SF	SF	Line Order 1	Line Order 2	Line Order 3	EA	EA	EA	EA	EA	EA
0010	100+20	Right	R1-1	Stop	36	36	7.46						1		1	1	
0010	100+31	Right	I-2-2	County Line Name	60	15	6.25		Sawyer	County		2		1	1		
0010	100+31	Right	J4-1	Reassurance Assembly (1 Headed Route Panel)	24	36	6.00		NORTH	40				1			
0010	114+18	Left	W14-3	No Passing Zone	48	36		6.00					1	1	1		
0010	134+33	Left	W14-3	No Passing Zone	48	36		6.00					1	1	1		
0010	148+08	Right	W2-1	Cross Road	30	30		6.25				1		1	1		
0010	153+44	Right	R1-1	Stop	30	30	5.18					1		1	1		
0010	161+43	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18			45	M.P.H.				1			
0010	161+43	Right	SP	Any Special Sign	30	30			CAMPGROUND	ENTRANCE				1	1		
0010	188+73	Left	W14-3	No Passing Zone	48	36		6.00					1	1	1		
0010	193+22	Right	J1-2	Junction or End Assembly (2 Headed Panel)	48	39	13.00		JCT JCT	48 D			1	1	1		
0010	196+65	Right	J2-3	Route Turn Assembly (3 Headed Route Panel)	72	57	28.50		WEST NORTH EAST	48 40 D	(LT) (UA) (RT)			2	1	2	
0010	201+33	Right	D1-3	Triple Destination/Arrow	72	36	18.00		(UA) Radisson	(LA) Exeland	(LA) Birchwood		2	1	2		
0010	205+79	Right	J3-3	Directional Assembly (3 Headed Panel)	72	57	28.50		WEST NORTH EAST	48 40 D	(LA) (UA) (RA)			2	1	2	
0010	206+63	Right	R1-1	Stop	36	36	7.46						1	1	1		
0010	206+99	Right	R1-1	Stop	36	36	7.46						1	1	1		
0010	208+60	Right	J4-1	Reassurance Assembly (1 Headed Route Panel)	24	36	6.00		NORTH	40				1			
0010	210+60	Right	D2-1	Destination/Distance (One) with Die Cut Letters	66	15	6.88		Radisson 8			2		1	2		
0010	220+40	Left	W14-3	No Passing Zone	48	36		6.00					1	1	1		
0010	221+74	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	45	M.P.H.				1			
0010	221+74	Right	W1-4-R	Right Reverse Curve	30	30		6.25					1	1	1		
0010	232+77	Right	R1-1	Stop	30	30	5.18						1	1	1		
0010	245+03	Right	W54-58	Church Entrance	30	30		6.25	CHURCH	ENTRANCE			1	1	1		
0010	253+99	Right	W2-2	Side Road (90 Degrees)	30	30		6.25					1	1	1		
0010	259+72	Right	R1-1	Stop	30	30	5.18						1	1	1		
0010	271+28	Right	S3-1	School Bus Stop Ahead	30	30	6.25						1	1	1		
0010	275+00	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	35	M.P.H.				1			
0010	275+00	Right	W1-2-L	Left Curve	30	30		6.25					1	1	1		
0010	282+54	Right	W1-6-L	Night Arrow (Single)	48	24		8.00					1	1	1		
0010	297+14	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	35	M.P.H.				1			
0010	297+14	Right	W1-2-R	Right Curve	30	30		6.25					1	1	1		
0010	302+15	Left	W1-6-R	Night Arrow (Single)	48	24		8.00					1	1	1		
0010	311+45	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18			50	M.P.H.				1			
0010	311+45	Right	W1-2-R	Right Curve	30	30		6.25					1	1	1		
0010	330+49	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	35	M.P.H.				1			
0010	330+49	Right	W1-4-L	Left Reverse Curve	30	30		6.25					1	1	1		
0010	337+40	Right	W1-6-L	Night Arrow (Single)	48	24		8.00					1	1	1		
0010	352+50	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18			50	M.P.H.				1			
0010	352+50	Right	W1-4-L	Left Reverse Curve	30	30		6.25					1	1	1		
0010	373+15	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	40	M.P.H.				1			
0010	373+15	Right	W1-2-R	Right Curve	30	30		6.25					1	1	1		
0010	378+50	Left	W1-6-R	Night Arrow (Single)	48	24		8.00					1	1	1		
0010	387+57	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	45	M.P.H.				1			
0010	387+57	Right	W1-2-L	Left Curve	30	30		6.25					1	1	1		
0010	395+02	Right	W1-2-R	Right Curve	30	30		6.25					1	1	1		
0010	417+33	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18			50	M.P.H.				1			
0010	417+33	Right	W1-2-R	Right Curve	30	30		6.25					1	1	1		
0010	439+33	Left	W14-3	No Passing Zone	48	36		6.00					1	1	1		
0010	439+33	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	40	M.P.H.				1			
0010	439+33	Right	W1-2-L	Left Curve	30	30		6.25					1	1	1		
0010	447+31	Right	W1-6-L	Night Arrow (Single)	48	24		8.00					1	1	1		
0010	452+36	Right	R1-1	Stop	30	30	5.18						1	1	1		
0010	484+65	Left	W14-3	No Passing Zone	48	36		6.00					1	1	1		
0010	486+59	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	35	M.P.H.				1			
0010	486+59	Right	W1-4-L	Left Reverse Curve	30	30		6.25					1	1	1		
0010	493+85	Right	W1-6-L	Night Arrow (Single)	48	24		8.00					1	1	1		
0010	497+44	Right	S3-1	School Bus Stop Ahead	36	36	9.00						1	1	1		
SUBTOTAL							162.48	195.75				0	19	24	4	57	47

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PROJECT NO:8590-22-60

HWY:STH 40

COUNTY:SAWYER

MISCELLANEOUS QUANTITIES

SHEET

E

3

PROJECT NO: 8590-22-60	HWY: STH 40	COUNTY: SAWYER	MISCELLANEOUS QUANTITIES	SHEET	E
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Category	Station	Side	Sign Code	Description	Width	Height	SIGNS	SIGNS	Sign Message	Line Order 1	Line Order 2	Line Order 3	POSTS	POSTS	POSTS	POSTS	REMOVING	REMOVING			
							REFLECTIVE	REFLECTIVE					WOOD	WOOD	WOOD	WOOD	SIGNS	SMALL SIGN			
							TYPE II H	TYPE II F					4X6-INCH	4X6-INCH	4X6-INCH	4X6-INCH	TYPE II	SUPPORTS			
							637.2210	638.2213								634.0614	634.0616	634.0618	634.0620	638.2602	638.3000
Southbound							SF	SF				EA	EA	EA	EA	EA	EA				
0010	325+00	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18			M.P.H.	50							1				
0010	325+00	Right	W1-2-L	Left Curve	30	30		6.25							1		1				
0010	342+65	Left	W1-6-R	Night Arrow (Single)	48	24		8.00						1			1				
0010	346+91	Right	W1-6-L	Night Arrow (Single)	48	24		8.00						1			1				
0010	352+98	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	M.P.H.	35							1				
0010	352+98	Right	W1-4-L	Left Reverse Curve	30	30		6.25							1		1				
0010	369+19	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18			M.P.H.	50							1				
0010	369+19	Right	W1-4-L	Left Reverse Curve	30	30		6.25							1		1				
0010	379+00	Right	W1-6-L	Night Arrow (Single)	48	24		8.00						1			1				
0010	384+97	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	M.P.H.	40							1				
0010	384+97	Right	W1-2-L	Left Curve	30	30		6.25							1		1				
0010	398+77	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	M.P.H.	45							1				
0010	398+77	Right	W1-2-R	Right Curve	30	30		6.25							1		1				
0010	407+91	Right	R1-1	Stop	30	30	5.18							1			1				
0010	413+86	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18			M.P.H.	50							1				
0010	413+86	Right	W1-2-L	Left Curve	30	30		6.25							1		1				
0010	430+01	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18			M.P.H.	50							1				
0010	430+01	Right	W1-2-L	Left Curve	30	30		6.25							1		1				
0010	434+82	Left	W14-3	No Passing Zone	48	36		6.00							1		1				
0010	451+09	Left	W1-6-R	Night Arrow (Single)	48	24		8.00						1			1				
0010	457+20	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	M.P.H.	40							1				
0010	457+20	Right	W1-2-R	Right Curve	30	30		6.25							1		1				
0010	460+63	Left	W14-3	No Passing Zone	48	36		6.00							1		1				
0010	499+00	Left	W1-6-R	Night Arrow (Single)	48	24		8.00						1			1				
0010	510+00	Right	W1-6-L	Night Arrow (Single)	48	24		8.00						1			1				
0010	515+15	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	M.P.H.	35							1				
0010	515+15	Right	W1-4-L	Left Reverse Curve	30	30		6.25							1		1				
0010	517+79	Right	S3-1	School Bus Stop Ahead	36	36	9.00								1		1				
0010	526+23	Right	W1-6-L	Night Arrow (Single)	48	24		8.00							1		1				
0010	529+20	Left	W1-6-R	Night Arrow (Single)	48	24		8.00							1		1				
0010	535+22	Right	R1-1	Stop	30	30	5.18							1			1				
0010	536+92	Right	W13-1	Advisory Speed Plate (Yellow Back)	18	18		2.25	M.P.H.	35							1				
0010	536+92	Right	W1-4-R	Right Reverse Curve	30	30		6.25							1		1				
0010	538+29	Left	W14-3	No Passing Zone	48	36		6.00							1		1				
0010	561+66	Right	R1-1	Stop	30	30	5.18							1			1				
0010	580+10	Right	W5-1	Road Narrows	36	36		9.00						1			1				
0010	587+66	Right	R1-1	Stop	30	30	5.18							1			1				
0010	592+24	Right	M3-3	SOUTH Cardinal Route Marker	24	12	2.00										1				
0010	592+24	Right	M1-6	State Route Marker	24	24	4.00			40							1				
0010	592+24	Right	D2-1	Destination/Distance (One) with Die Cut Letters	60	15	6.25		Bruce 23				1				1				
0010	593+90	Right	R2-1	Speed Limit _ MPH	24	30	5.00			55				1			1				
0010	596+88	Left	W14-3	No Passing Zone	48	36		6.00						1			1				
0010	597+88	Right	R1-1	Stop	30	30	5.18							1			1				
0010	605+82	Left	W5-52-L	Clearance Striper Down Left	12	36		3.00									1				
0010	605+91	Right	W5-52-R	Clearance Striper Down Right	12	36		3.00									1				
0010	609+27	Right	R1-1	Stop	30	30	5.18						1				1				
0010	611+19	Right	J4-1	Reassurance Assembly (1 Headed Route Panel)	24	36	6.00		SOUTH	40			1				1				
0010	612+60	Left	W14-3	No Passing Zone	48	36		6.00					1				1				
0010	612+92	Right	R1-1	Stop	30	30	5.18						1				1				
0010	613+65	Right	W11-15	Recreational Trail Crossing (Word Message)	30	30			RECREATIONAL	TRAIL	XING						1				
0010	615+02	Right	R2-1	Speed Limit _ MPH	24	30	5.00			30							1				
0010	617+18	Right	R1-1	Stop	30	30	5.18						1				1				
0010	617+78	Right	R2-1	Speed Limit _ MPH	24	30	5.00			30			1				1				
SUBTOTAL							83.69	185.00					7.00	16.00	14.00	0.00	53.00	37.00			
TOTAL							531.44	535.25					23.00	53.00	52.00	11.00	168.00	140.00			

PROJECT NO:8590-22-60

HWY:STH 40

COUNTY:SAWYER

MISCELLANEOUS QUANTITIES

SHEET

E

CATEGORY	TRAFFI C CONTROL DRUMS		TRAFFI C BARRI CADES TYPE I I I		TRAFFI C WARNI NG LIGHTS TYPE A		TRAFFI C WARNI NG LIGHTS TYPE C		TRAFFI C CONTROL SIGN S		TRAFFI C DETOUR SIGN S	
	643. 0300		643. 0420		643. 0705		643. 0715		643. 0900		643. 3000	
	#DRUMS		#BARR. DAYS		# LIGHTS DAYS		# LIGHTS DAYS		# SIGN S DAYS		# DETOUR SIGN S DAYS	
0010	600	18,000	40	400	48	480	600	18,000	50	1,500	50	500
0010 TOTAL	18,000		400		480		18,000		1,500		500	

CATEGORY	STATION TO	STATION	SIDE	PAVEMENT	PAVEMENT	PAVEMENT	PAVEMENT	LOCATI NG	TEMPORARY	REMARKS
				MARKI NG	MARKI NG SAME	MARKI NG STOP	CROSSWALK	NO-PASSI NG	PAVEMENT	
				EPOXY	DAY EPOXY	LINE EPOXY	EPOXY	ZONES	PAI NT	
				4-I NCH	4-I NCH	18-I NCH	6-I NCH		4-I NCH	
				646. 0106	646. 0406	647. 0566	647. 0766	648. 0100	649. 0402	
				LF	LF	LF	LF	MI	LF	
0010	100+00	- 608+50	LT	50850	-	-	-	-	-	WHI TE, EDGELI NE
0010	100+00	- 608+50	RT	50850	-	-	-	-	-	WHI TE, EDGELI NE
0010	100+00	- 114+10	LT/RT	353	353	-	-	0. 27	2820	YELLOW, CL, DASHED
0010	114+10	- 123+60	LT/RT	1188	1188	-	-	0. 18	1900	YELLOW, CL, DASHED LT, SOLI D RT
0010	123+60	- 134+00	LT/RT	1300	1300	-	-	0. 20	2080	YELLOW, CL, SOLI D LT, DASHED RT
0010	134+00	- 144+10	LT/RT	1263	1263	-	-	0. 19	2020	YELLOW, CL, DASHED LT, SOLI D RT
0010	144+10	- 175+30	LT/RT	6240	6240	-	-	0. 59	6240	YELLOW, CL, DOUBLE YELLOW
0010	175+30	- 184+00	LT/RT	1088	1088	-	-	0. 16	1740	YELLOW, CL, SOLI D LT, DASHED RT
0010	184+00	- 188+60	LT/RT	115	115	-	-	0. 09	920	YELLOW, CL, DASHED
0010	188+60	- 198+60	LT/RT	1250	1250	-	-	0. 19	2000	YELLOW, CL, DASHED LT, SOLI D RT
0010	198+60	- 209+10	LT/RT	2100	2100	-	-	0. 20	2100	YELLOW, CL, DOUBLE YELLOW
0010	209+10	- 218+10	LT/RT	1125	1125	-	-	0. 17	1800	YELLOW, CL, SOLI D LT, DASHED RT
0010	218+10	- 220+50	LT/RT	60	60	-	-	0. 05	480	YELLOW, CL, DASHED
0010	220+50	- 230+00	LT/RT	1188	1188	-	-	0. 18	1900	YELLOW, CL, DASHED LT, SOLI D RT
0010	230+00	- 426+50	LT/RT	39300	39300	-	-	3. 72	39300	YELLOW, CL, DOUBLE YELLOW
0010	426+50	- 434+80	LT/RT	1038	1038	-	-	0. 16	1660	YELLOW, CL, SOLI D LT, DASHED RT
0010	434+80	- 439+50	LT/RT	118	118	-	-	0. 09	940	YELLOW, CL, DASHED
0010	439+50	- 447+40	LT/RT	988	988	-	-	0. 15	1580	YELLOW, CL, DASHED LT, SOLI D RT
0010	447+40	- 451+70	LT/RT	860	860	-	-	0. 08	860	YELLOW, CL, DOUBLE YELLOW
0010	451+70	- 460+60	LT/RT	1113	1113	-	-	0. 17	1780	YELLOW, CL, SOLI D LT, DASHED RT
0010	460+60	- 484+70	LT/RT	603	603	-	-	0. 46	4820	YELLOW, CL, DASHED
0010	484+70	- 494+00	LT/RT	1163	1163	-	-	0. 18	1860	YELLOW, CL, DASHED LT, SOLI D RT
0010	494+00	- 530+20	LT/RT	7240	7240	-	-	0. 69	7240	YELLOW, CL, DOUBLE YELLOW
0010	530+20	- 538+30	LT/RT	1013	1013	-	-	0. 15	1620	YELLOW, CL, SOLI D LT, DASHED RT
0010	538+30	- 550+80	LT/RT	313	313	-	-	0. 24	2500	YELLOW, CL, DASHED
0010	550+80	- 559+80	LT/RT	1125	1125	-	-	0. 17	1800	YELLOW, CL, DASHED LT, SOLI D RT
0010	559+80	- 590+40	LT/RT	6120	6120	-	-	0. 58	6120	YELLOW, CL, DOUBLE YELLOW
0010	590+40	- 597+00	LT/RT	825	825	-	-	0. 13	1320	YELLOW, CL, SOLI D LT, DASHED RT
0010	597+00	- 603+50	LT/RT	813	813	-	-	0. 12	1300	YELLOW, CL, DASHED LT, SOLI D RT
0010	603+50	- 620+65	LT/RT	3430	3430	-	-	0. 32	3430	YELLOW, CL, DOUBLE YELLOW
0010	603+50	- 620+65	LT/RT	-	-	24	1102	-	-	WHI TE, SEE PLAN SHEETS
0010 TOTAL				185025	83325	24	1102	10	104130	

CATEGORY	STATION TO	STATION	CONSTRUCTION STAKI NG CURB CONSTRUCTION CONSTRUCTION			
			CONSTRUCTI ON STAKI NG STORM SEWER		GUTTER AND CURB & GUTTER	
			650. 4000		650. 5500	
			EA		LF	
0010	100+00	- 620+65	-		52065	1
0010	608+00	- 620+65	-	2326	-	-
0010	616+50	- 617+50	4	-	-	-
0010 TOTAL			4		2326	
					52065	
					1	



STA. 100+00 TO STA. 152+00 = 5200' NET & LENGTH

PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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STA. 152+00 TO STA. 207+00 = 5500' NET & LENGTH

PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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STA. 207+00 TO STA. 263+00 = 5600' NET ϵ LENGTH

PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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STA. 263+00 TO STA. 314+00 = 5100' NET & LENGTH

PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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STA. 314+00 TO STA. 368+00 = 5400' NET & LENGTH

PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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STA. 368+00 TO STA. 420+00 = 5200' NET & LENGTH

PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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5



5



STA. 420+00 TO STA. 473+00 = 5300' NET ϵ LENGTH

PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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5



5



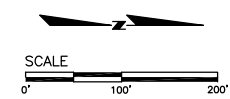
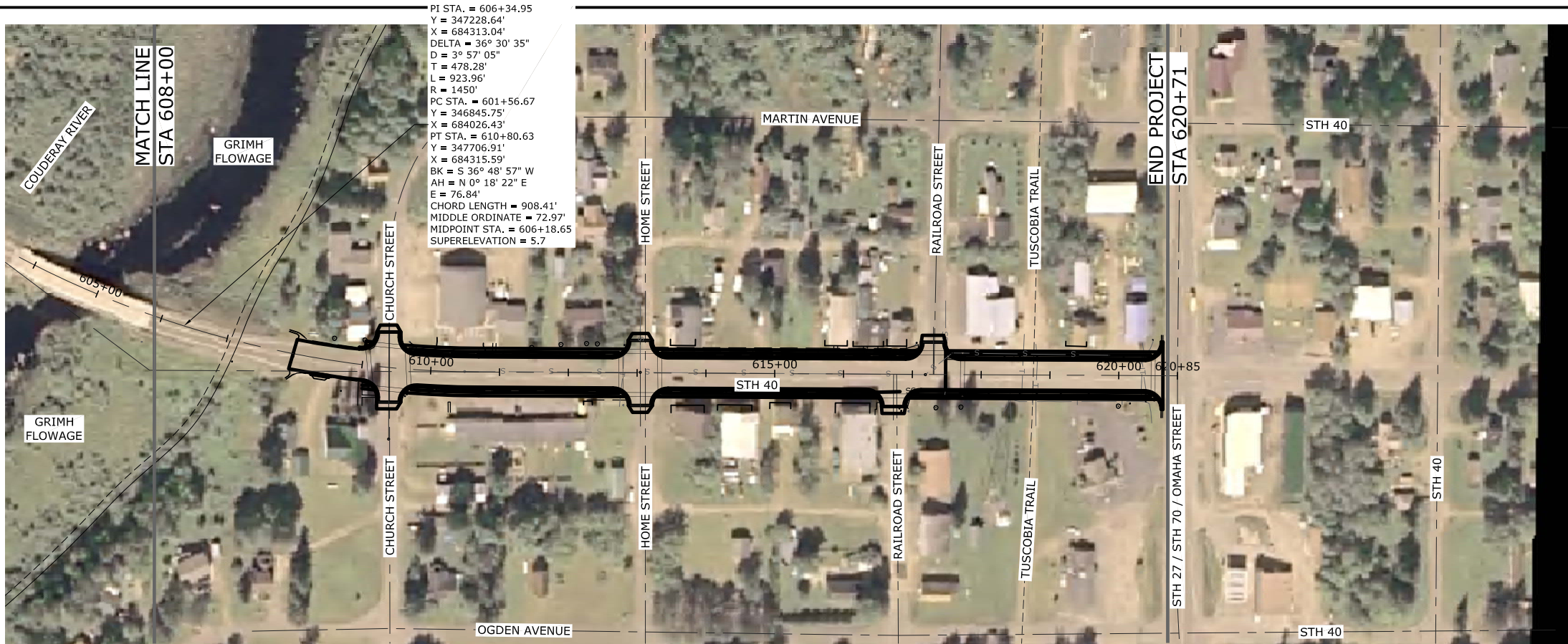
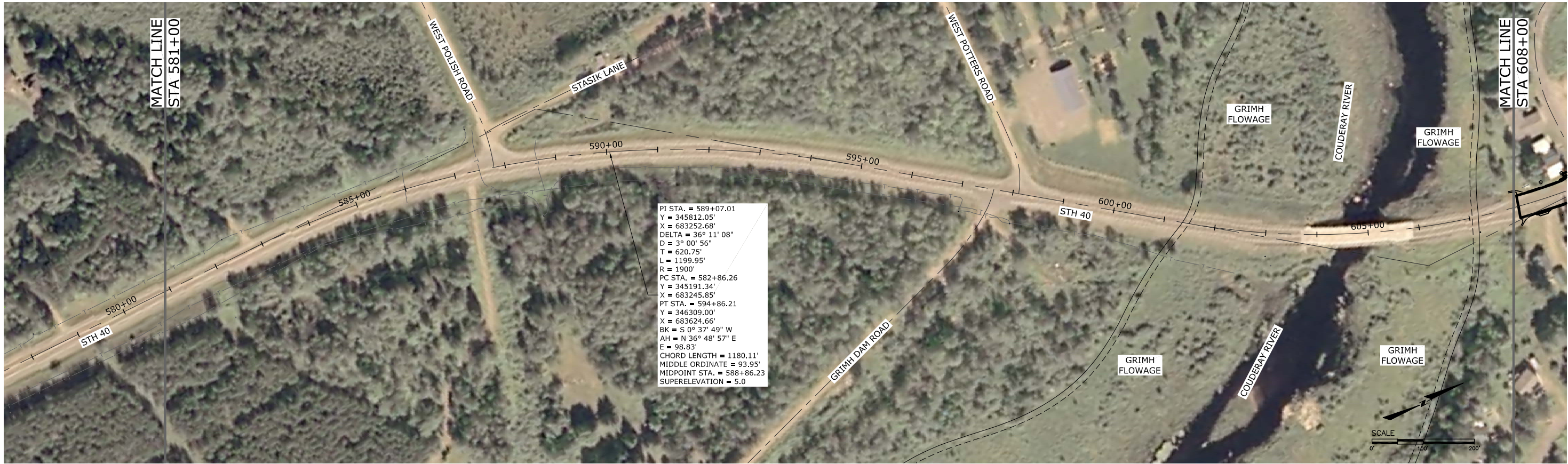
STA. 473+00 TO STA. 527+00 = 5400' NET & LENGTH

PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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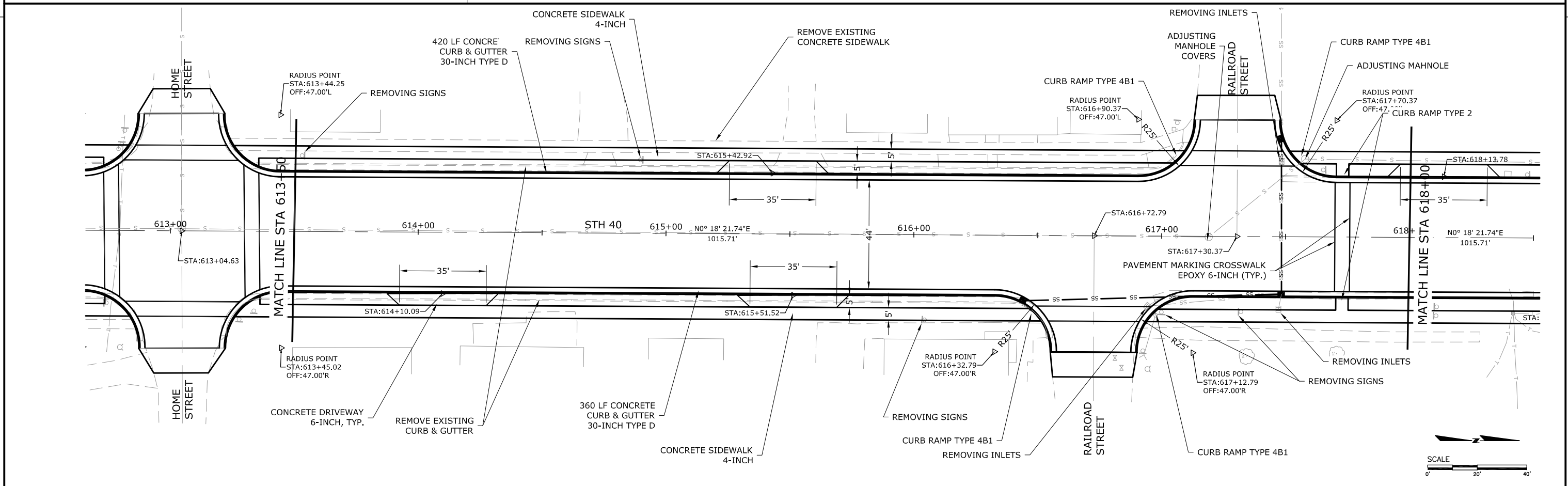
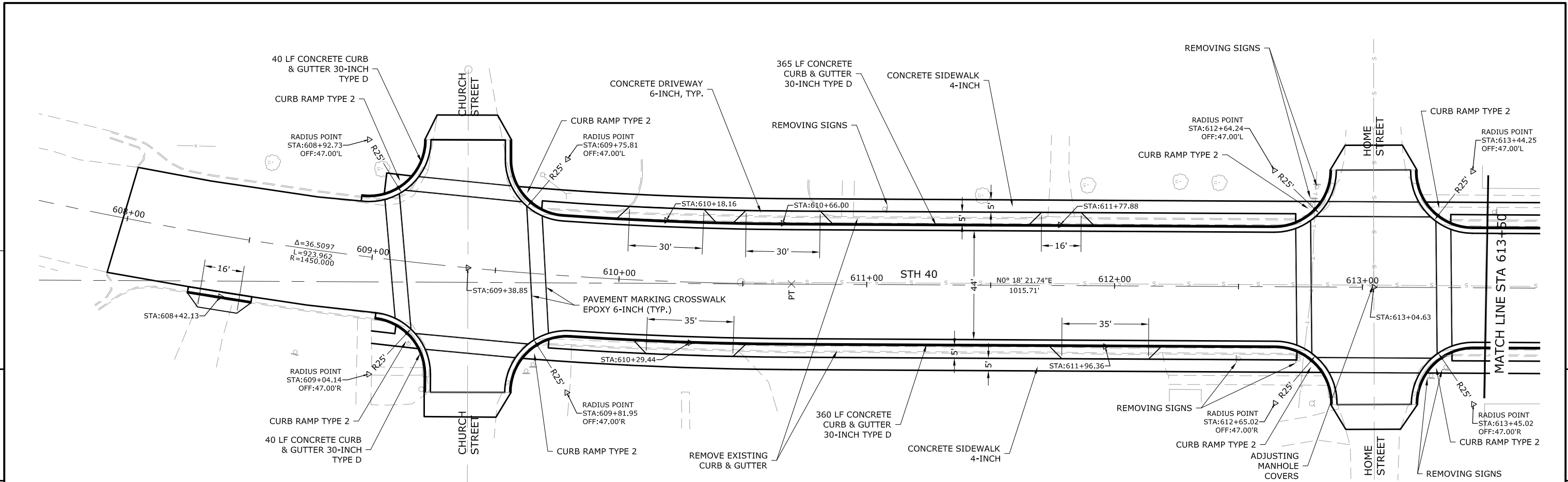
STA. 527+00 TO STA. 581+00 = 5400' NET & LENGTH

PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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STA. 581+00 TO STA. 620+96.34 = 3996.34' NET ϵ LENGTH

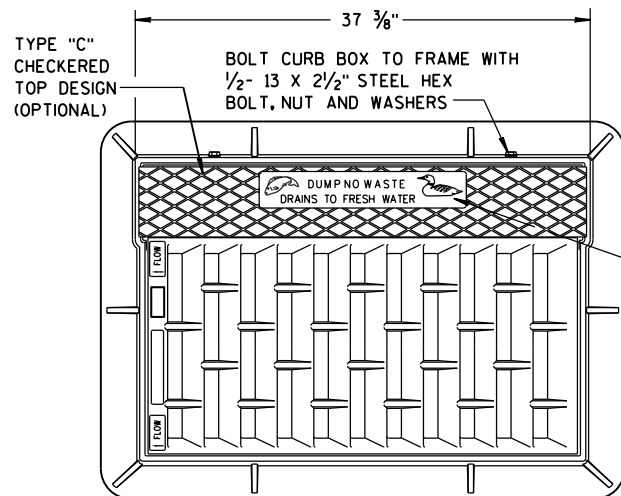
PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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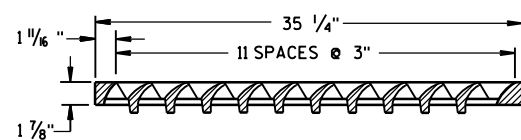
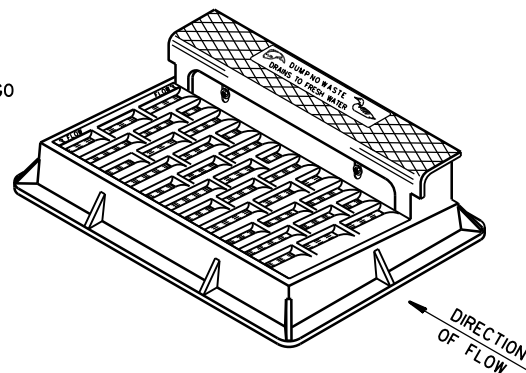
PROJECT NUMBER:	8590-22-60	HWY:	STH 40	COUNTY:	SAWYER	PLAN SHEET	SHEET NO:	E
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Standard Detail Drawing List

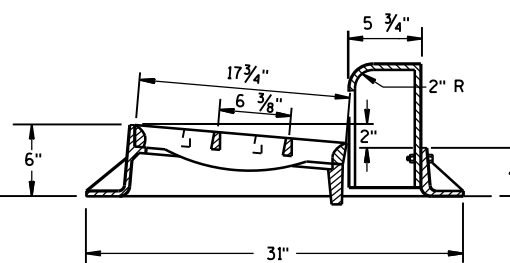
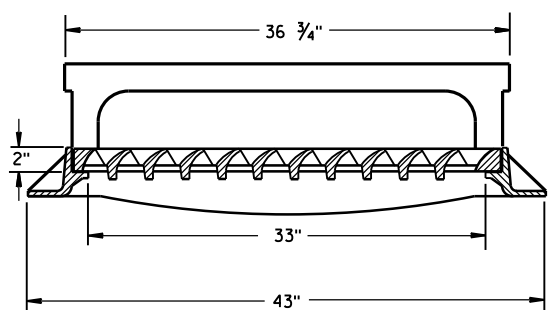
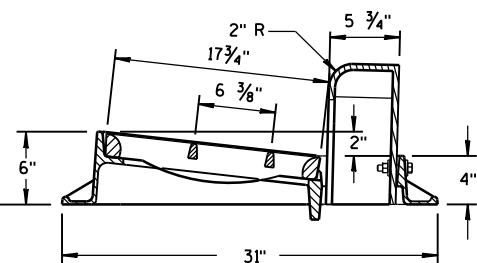
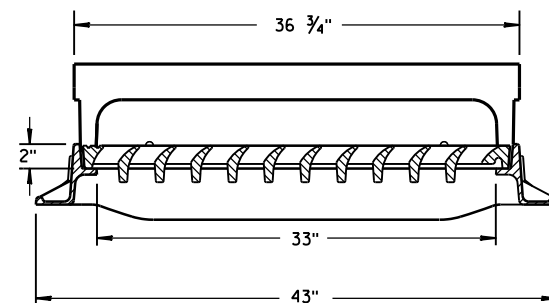
08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C06-01	INLETS 3-FT AND 4-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08D01-18	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-16A	CURB RAMPS TYPES 1 AND 1-A
08D05-16B	CURB RAMPS TYPES 2 AND 3
08D05-16C	CURB RAMPS TYPES 4A AND 4A1
08D05-16D	CURB RAMPS TYPE 4B AND 4B1
08D05-16E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-03A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING



**NOTE:
GRATE IS REVERSIBLE.**

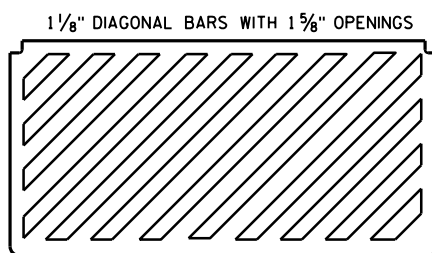


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"



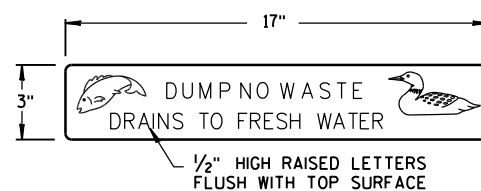
TYPE "H"

NOTE: EITHER CASTING IS ACCEPTABLE

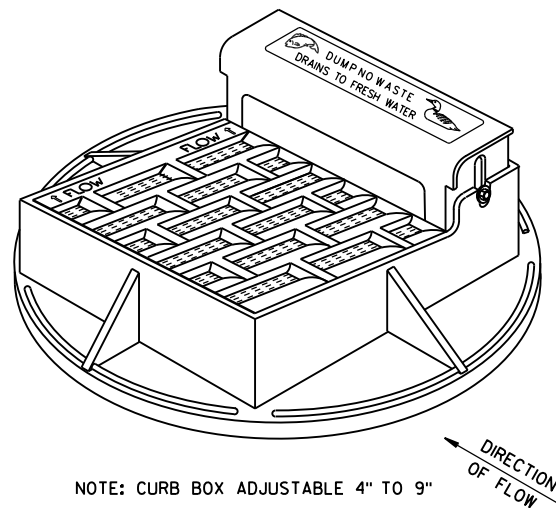


**SPECIAL GRATE FOR
TYPE "H" COVER**

(MEASURES 35 1/4" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)

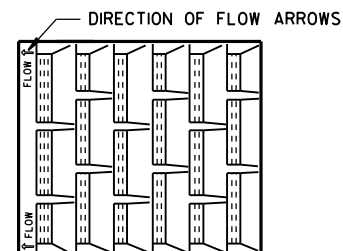


LOGO DETAIL

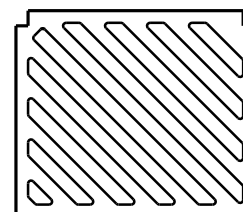


NOTE: CURB BOX ADJUSTABLE 4" TO 9"

**NOTE:
GRATE IS REVERSIBLE.**

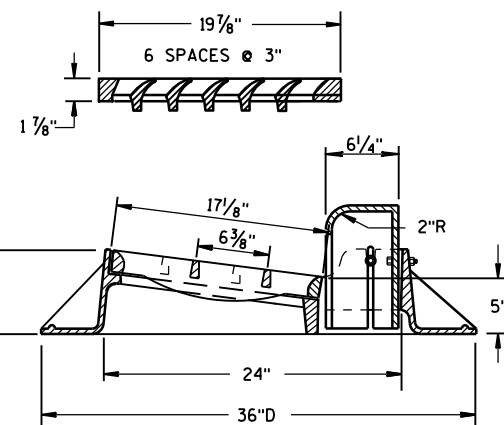
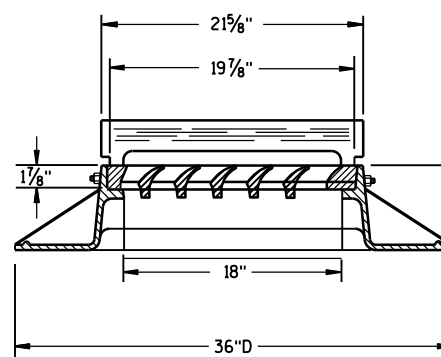


1" DIAGONAL BARS
WITH 1 1/2" OPENINGS

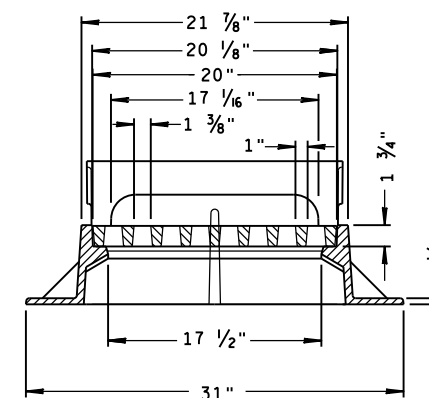
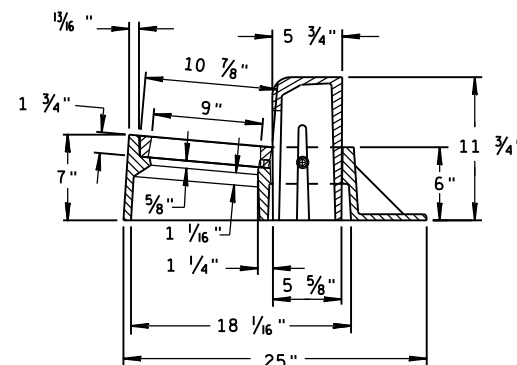


**SPECIAL GRATE FOR
TYPE "A" COVER**

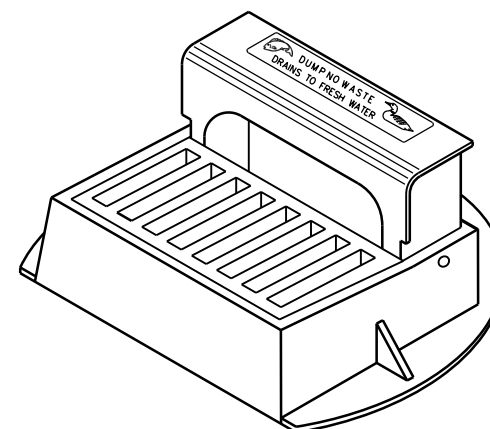
(MEASURES 19 3/4" X 17" X 1 1/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



TYPE "Z"

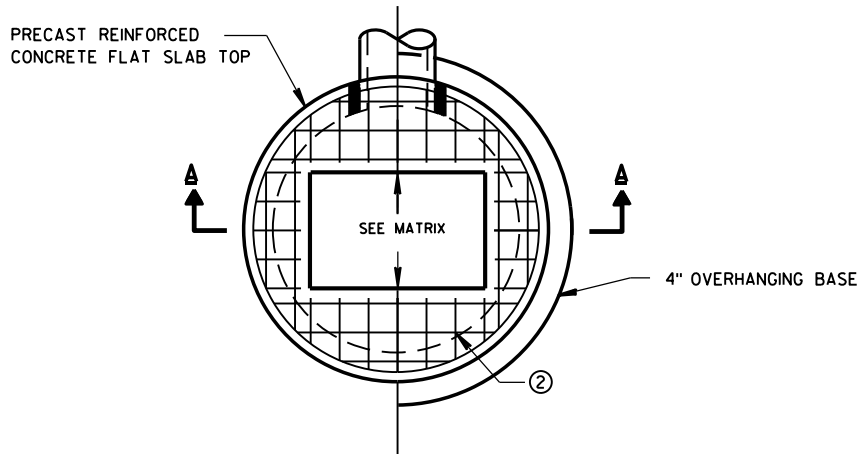


**INLET COVERS
TYPE A, H, A-S, H-S & Z**

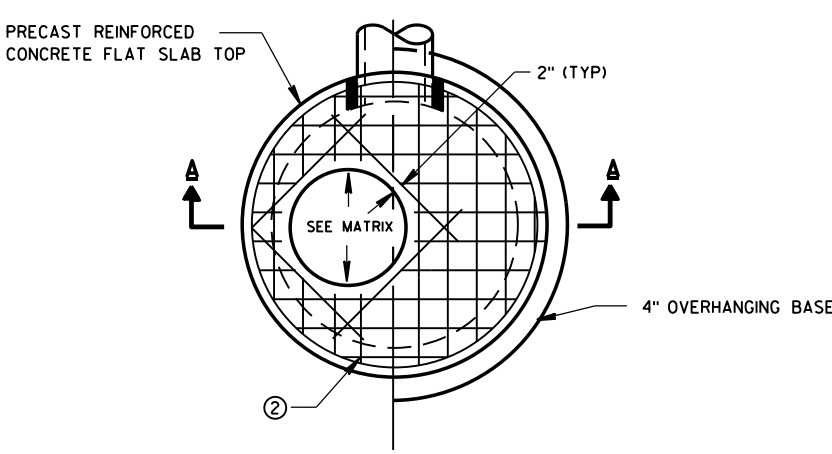
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

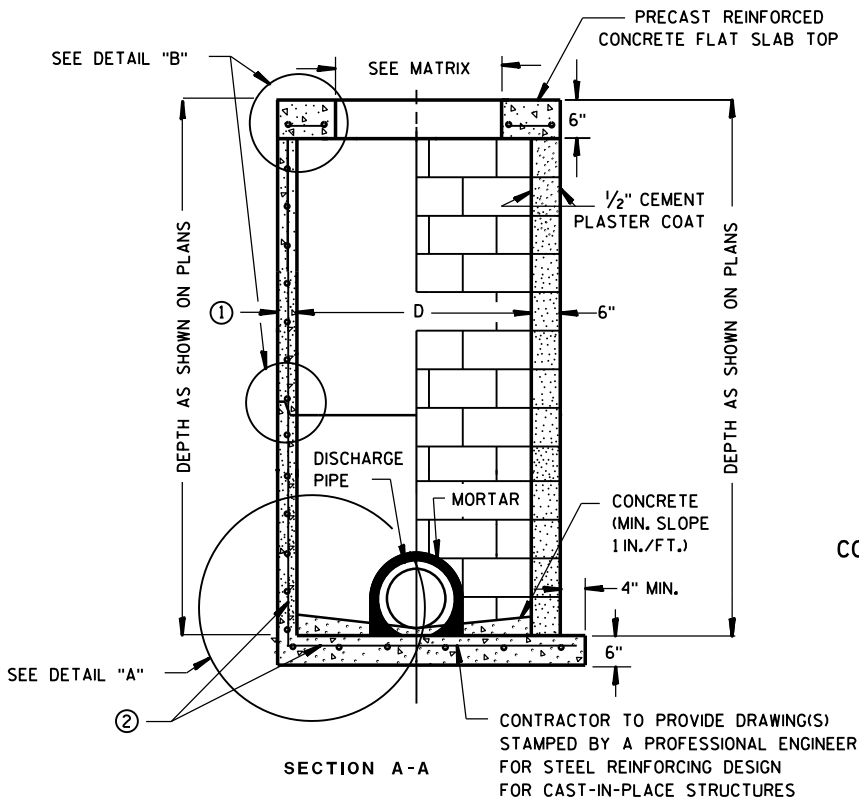


PLAN VIEW RECTANGULAR OPENING



PLAN VIEW CIRCULAR OPENING

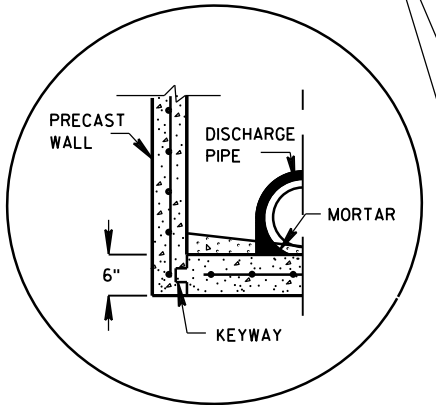
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)



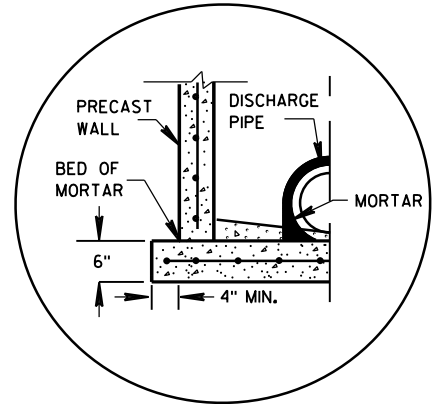
PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

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

CIRCULAR INLETS W/ FLAT TOP

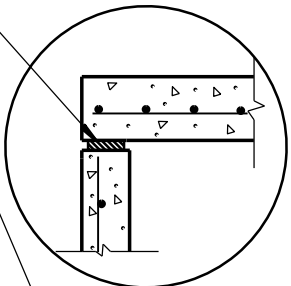


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION

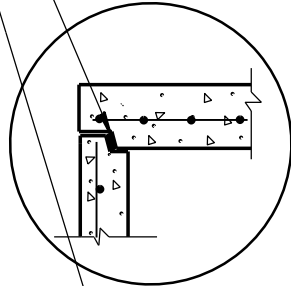


SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

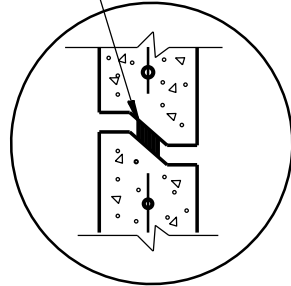
DETAIL "A"



TOP WITH PLAIN END JOINT



TOP WITH TONGUE AND GROOVE JOINT



RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

INLETS 3-FT AND 4-FT DIAMETER

GENERAL NOTES

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

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

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

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

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

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

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

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

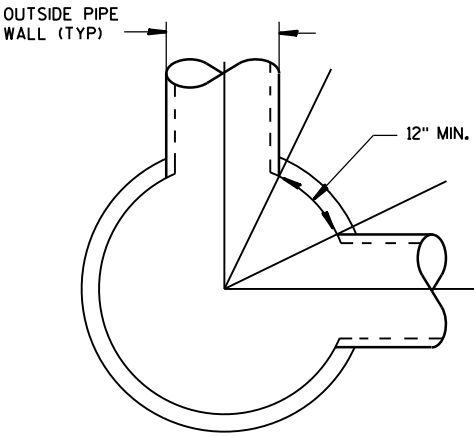
4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

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

- ① MINIMUM WALL THICKNESS SHALL BE 4-IN FOR 3-FT DIAMETER AND 5-IN FOR 4-FT DIAMETER PRECAST INLETS.
- ② FOR PRECAST CATCH BASINS PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

INLET COVER OPENING MATRIX

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



DETAIL "C"

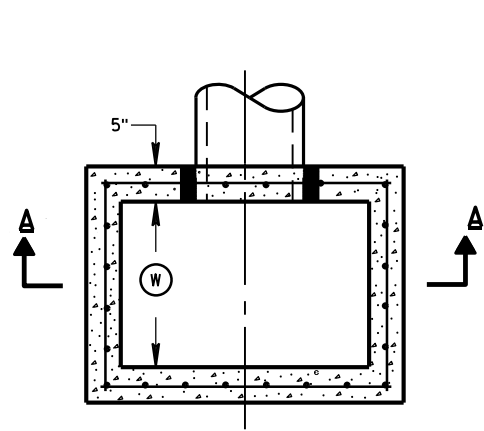
PIPE MATRIX

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

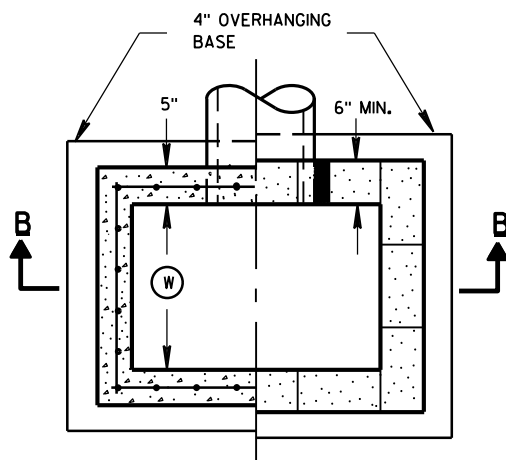
INLETS 3-FT AND 4-FT DIAMETER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

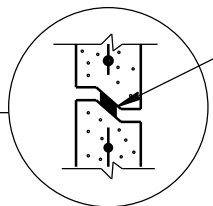
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER



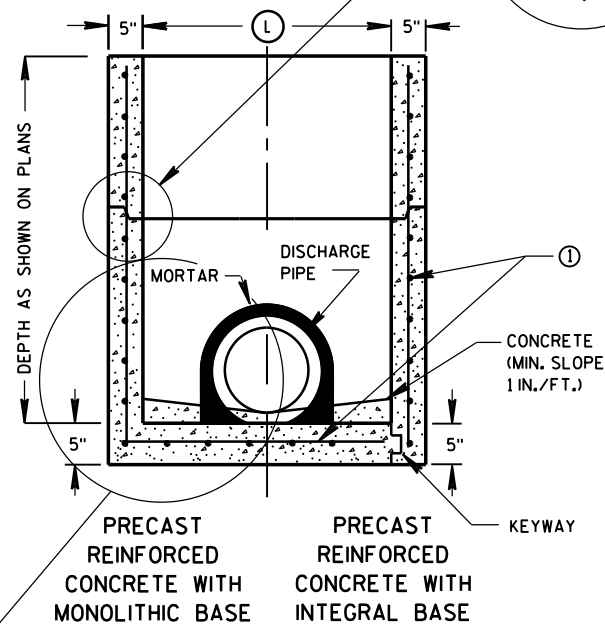
PLAN VIEW



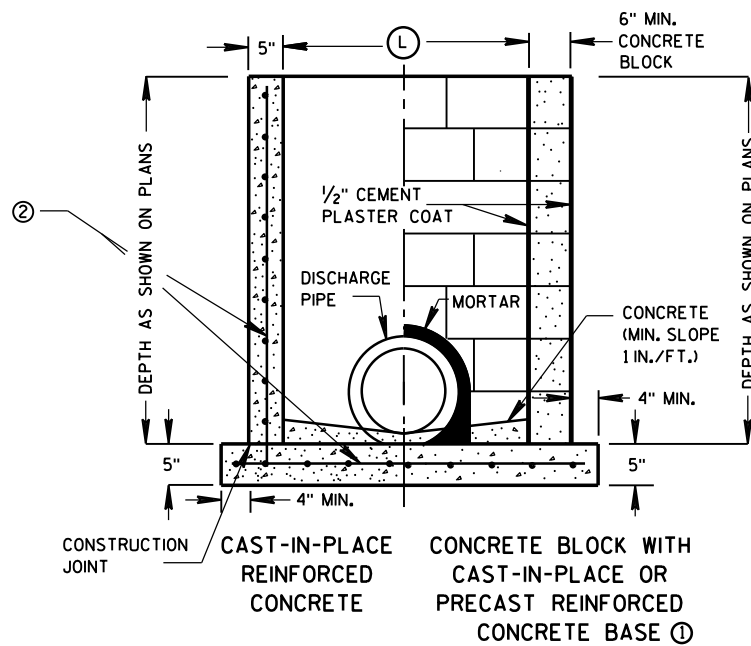
PLAN VIEW



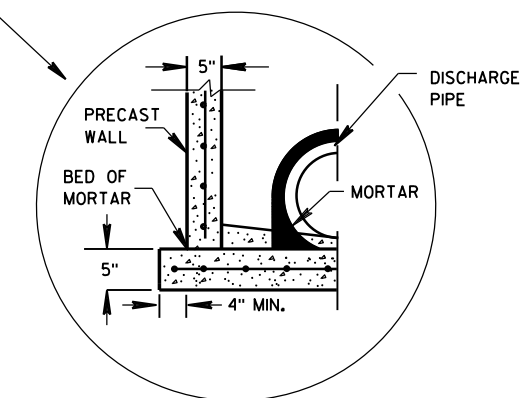
RISER JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

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

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

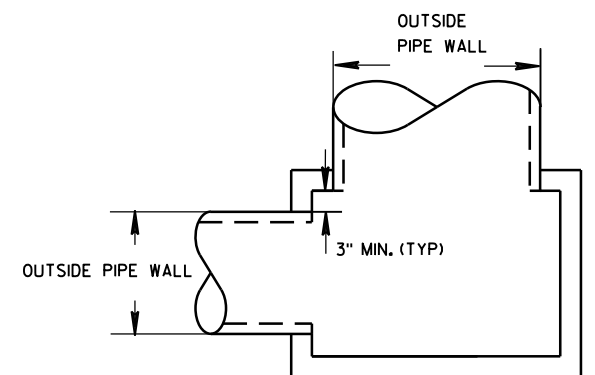
- ① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH ① (FT)	LENGTH ② (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

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

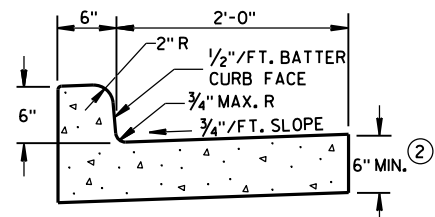


DETAIL "A"

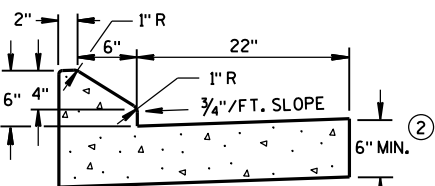
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

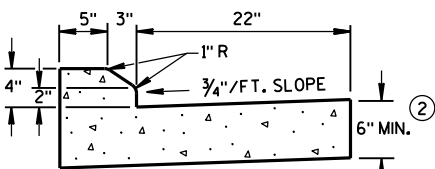
APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA ENGINEER



TYPES A & D ①

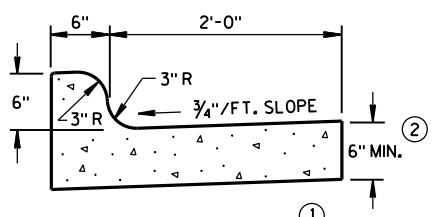


6" SLOPED CURB TYPES G & J ①



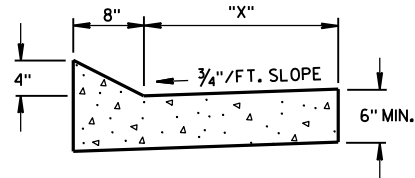
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



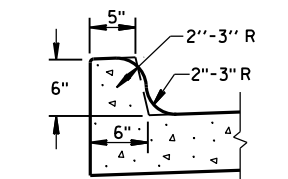
TYPES K & L ①

CONCRETE CURB & GUTTER 30"

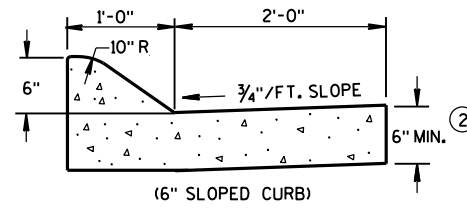


TYPES TBT & TBT ①
CONCRETE CURB & GUTTER

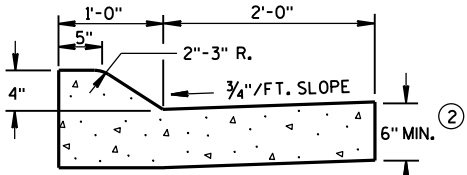
TBT & TBT	"X"
30"	22"
36"	28"



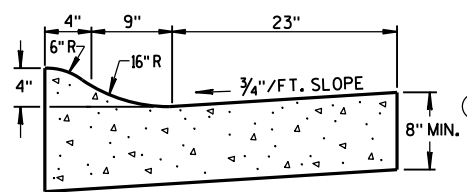
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



(6" SLOPED CURB)

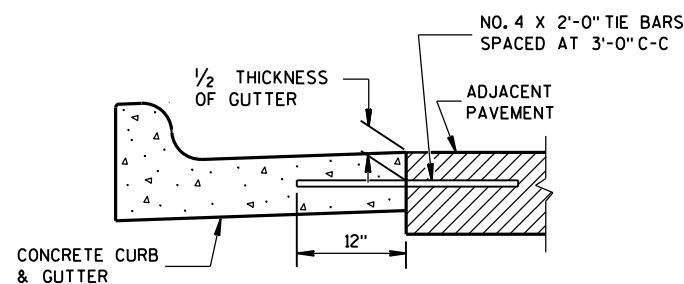


TYPES A & D ①

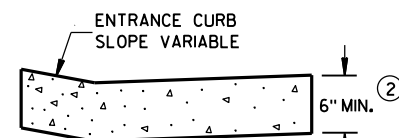


4" SLOPED CURB TYPES R & T ① ④

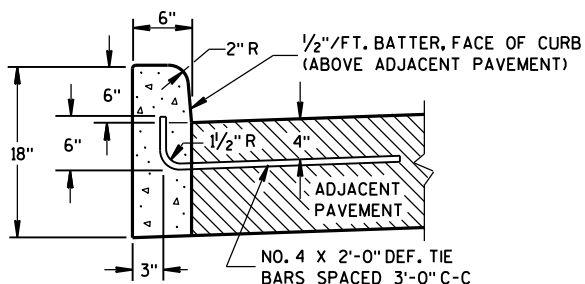
CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION ①

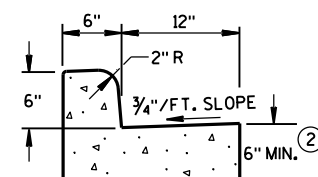


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

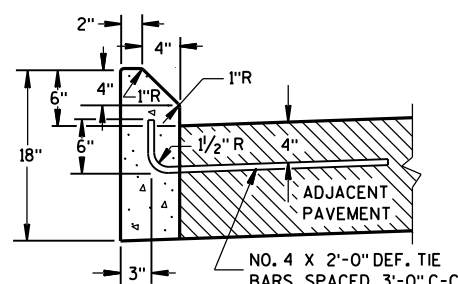


TYPES A & D ①

CONCRETE CURB



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

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

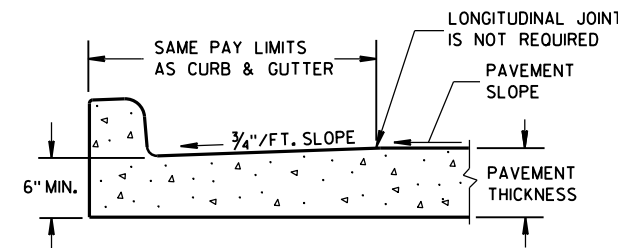
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

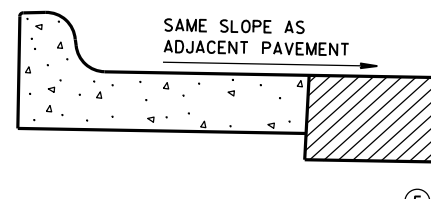
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

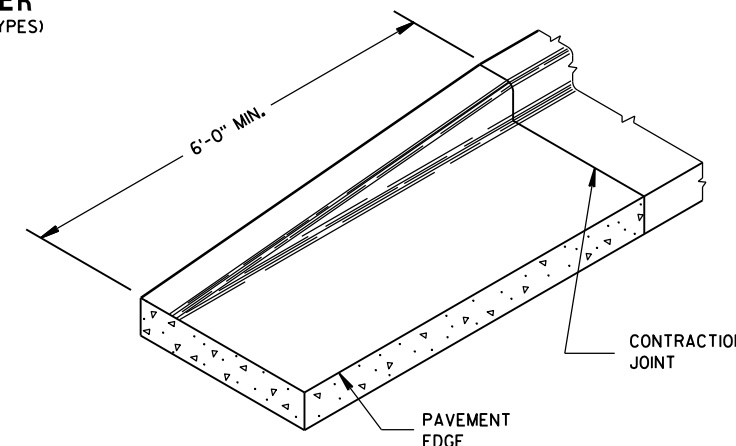
- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



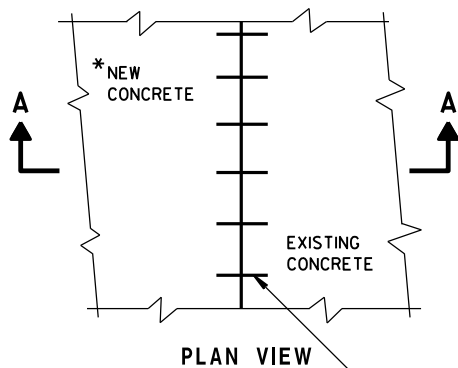
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



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



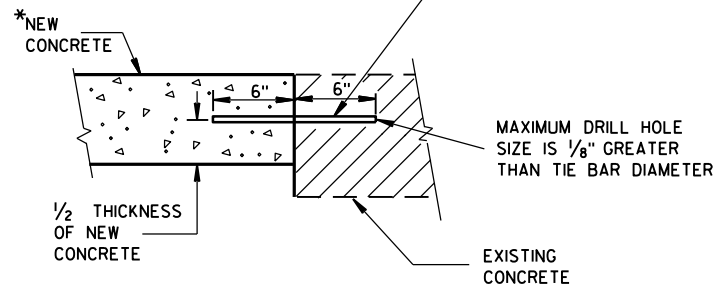
END SECTION CURB & GUTTER



PLAN VIEW

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

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

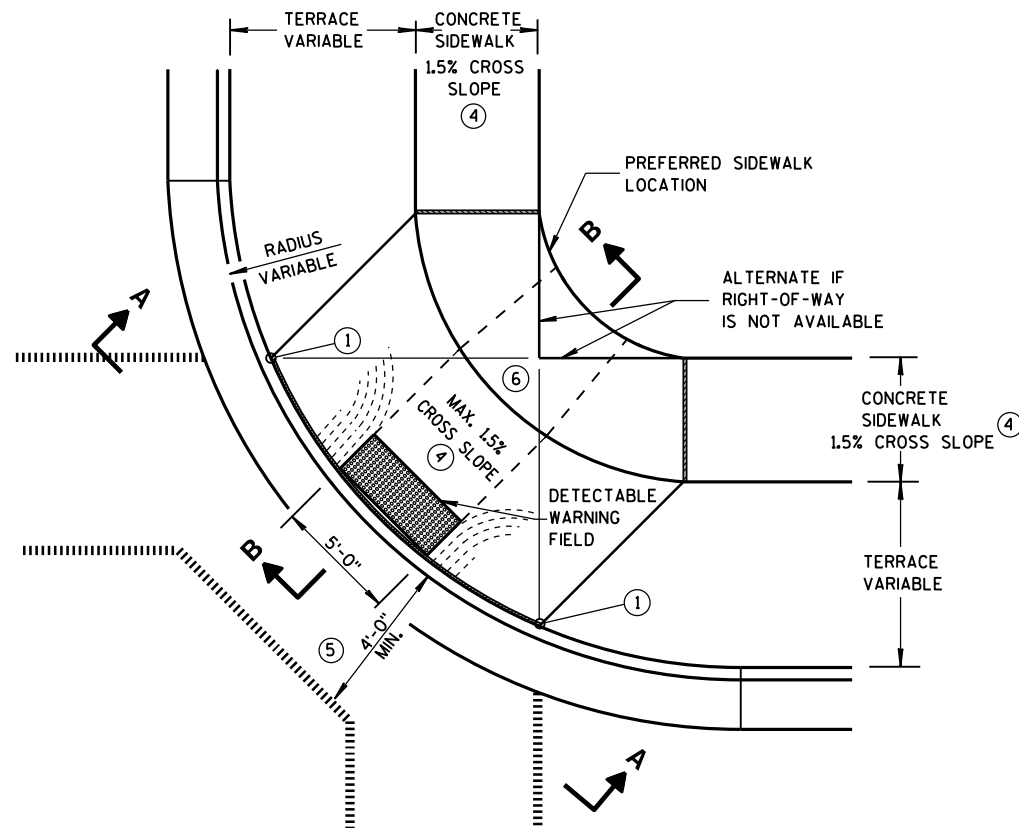


SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

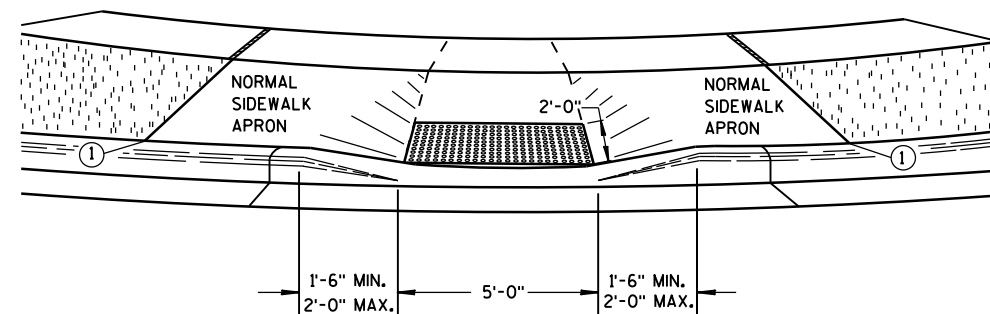
CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

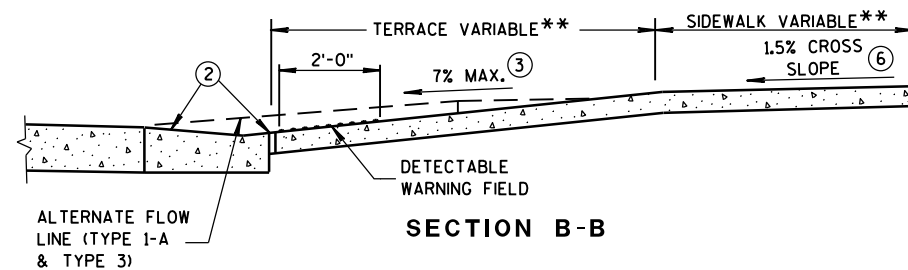


**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)

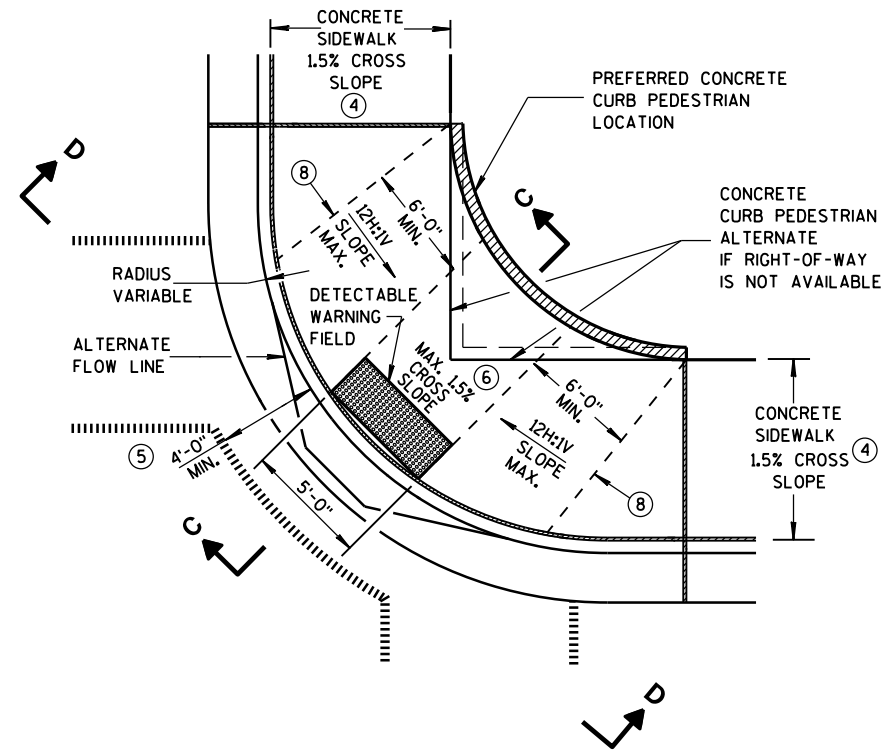


VIEW A-A

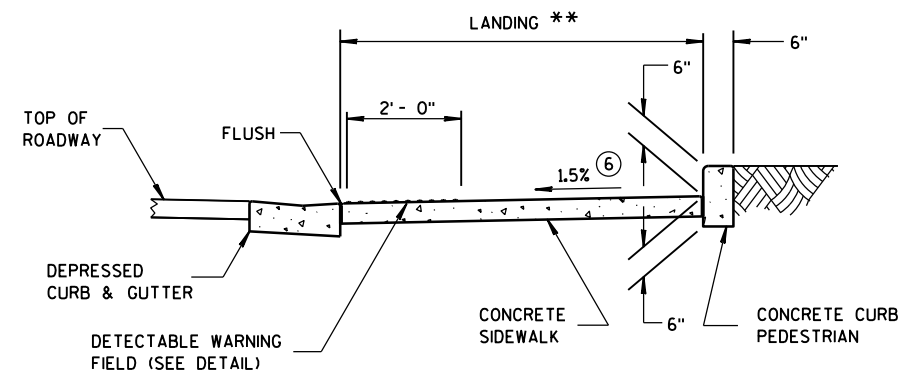
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



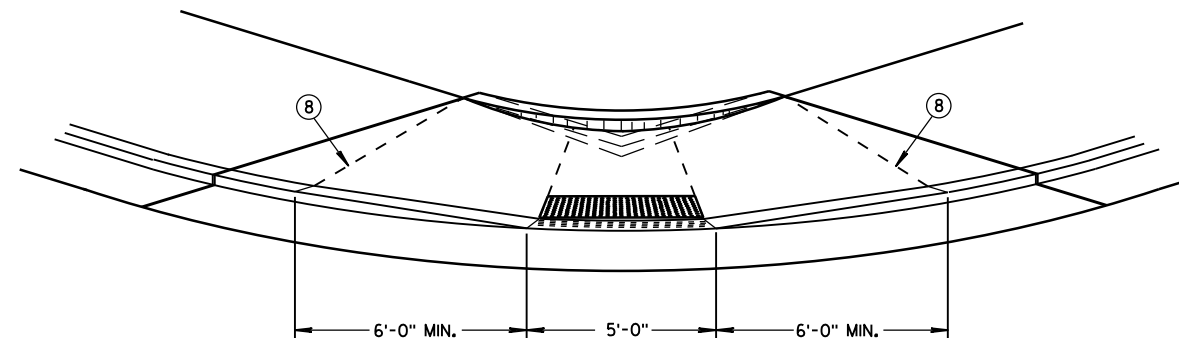
SECTION B-B



**PLAN VIEW
TYPE 1-A RAMP**
(NO TERRACE)



SECTION C-C



VIEW D-D

GENERAL NOTES

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

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

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

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

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

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

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

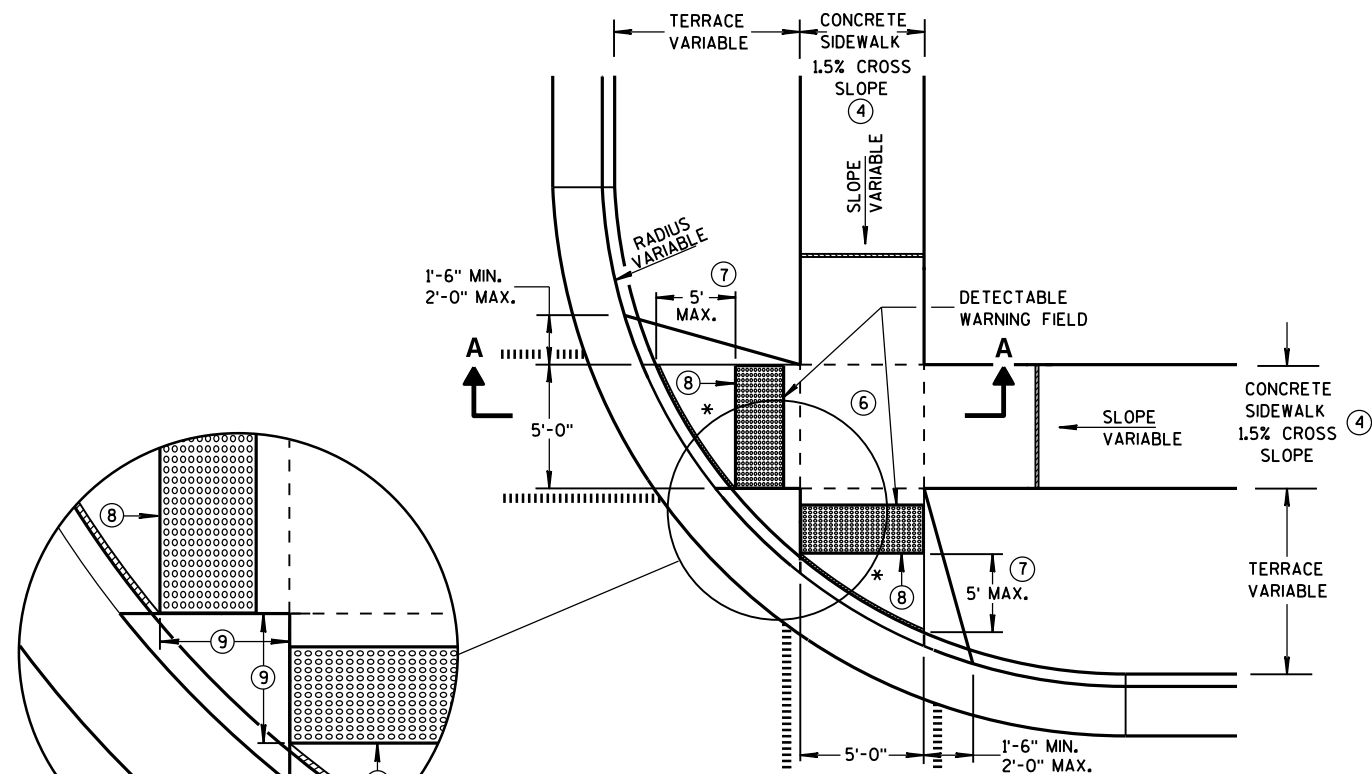
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

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

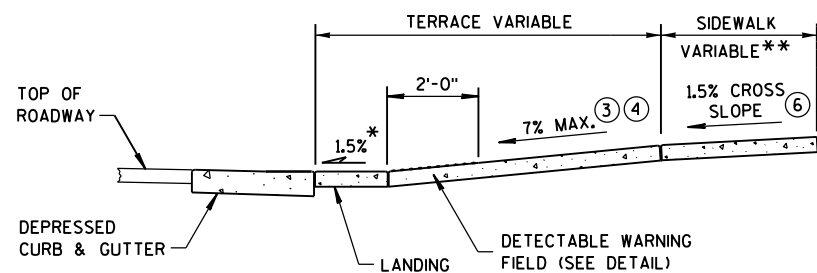
**CURB RAMPS
TYPES 1 AND 1-A**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



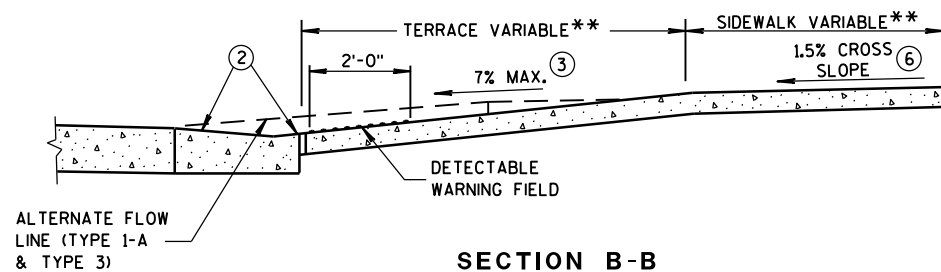
**PLAN VIEW
TYPE 2 RAMP**
(ON LINE WITH SIDEWALK)

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



SECTION A-A

** WIDTH SHOWN ELSEWHERE
IN THE PLANS



SECTION B-B

GENERAL NOTES

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

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

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

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

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

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

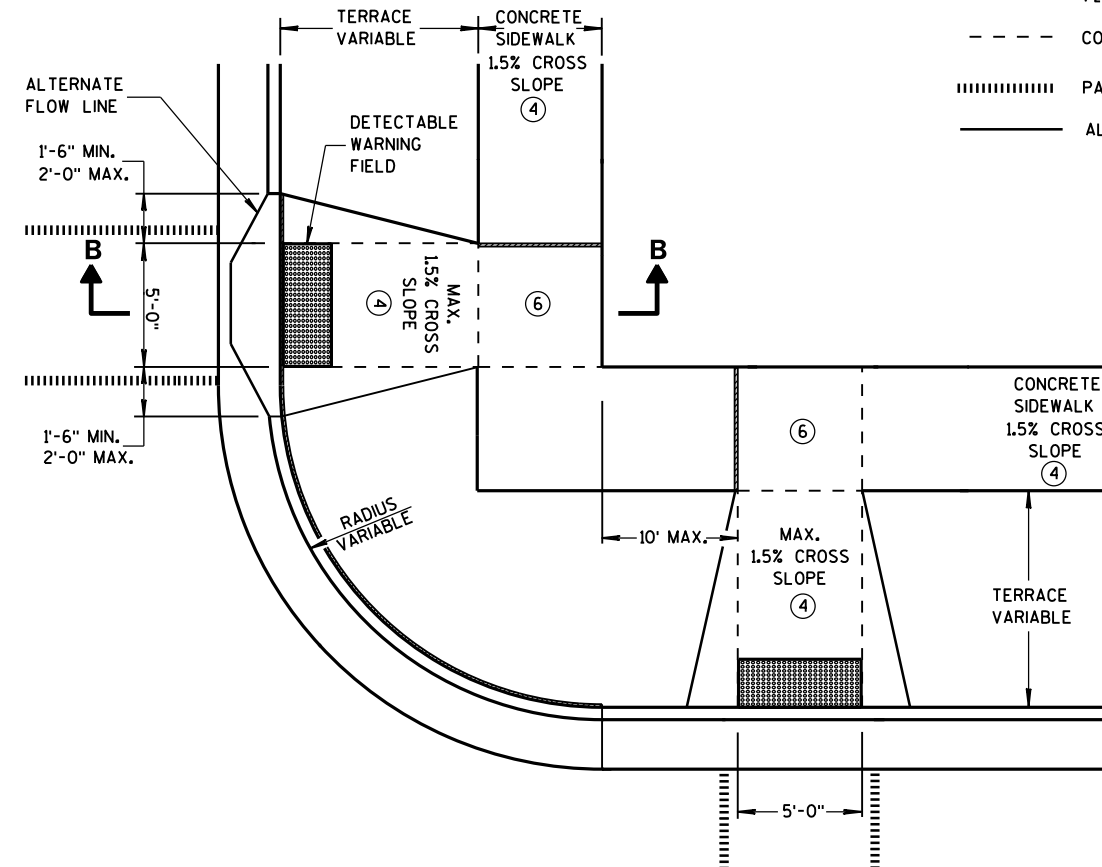
⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

⑨ WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. 2" MINIMUM CURB HEIGHT.

LEGEND

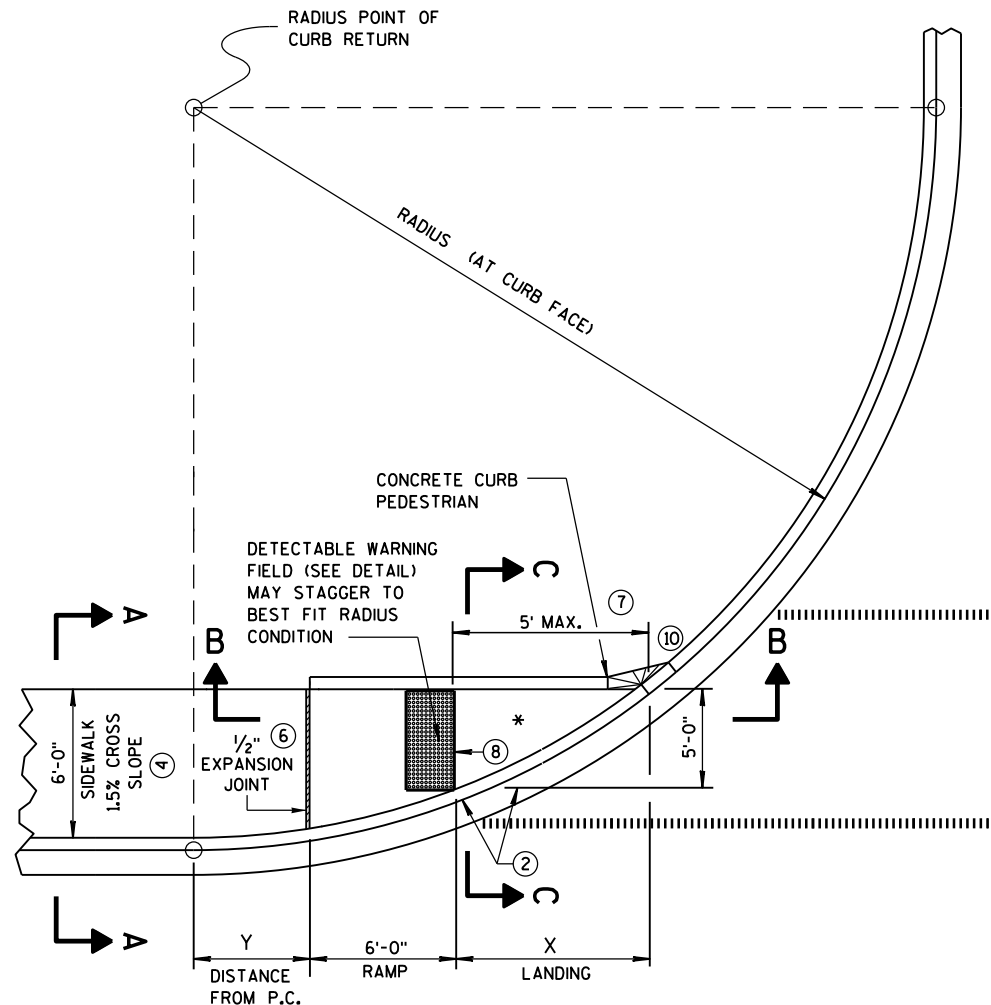
- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



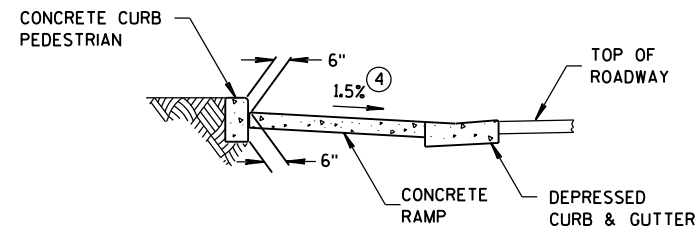
**PLAN VIEW
TYPE 3 RAMP**
(OUTSIDE OF CROSSWALK AREA)

**CURB RAMPS
TYPES 2 AND 3**

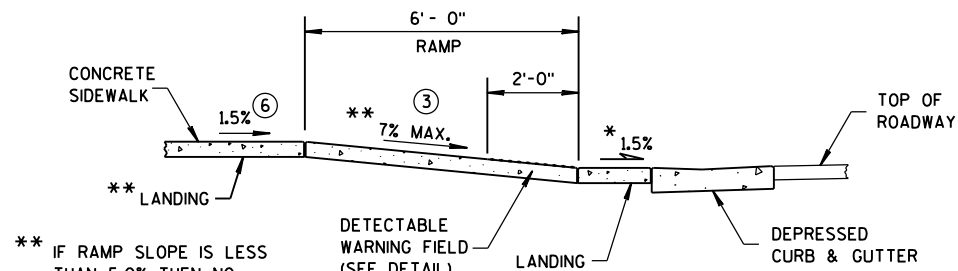
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A



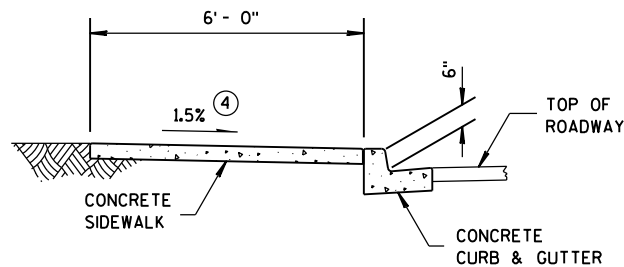
SECTION B-B FOR TYPE 4A

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

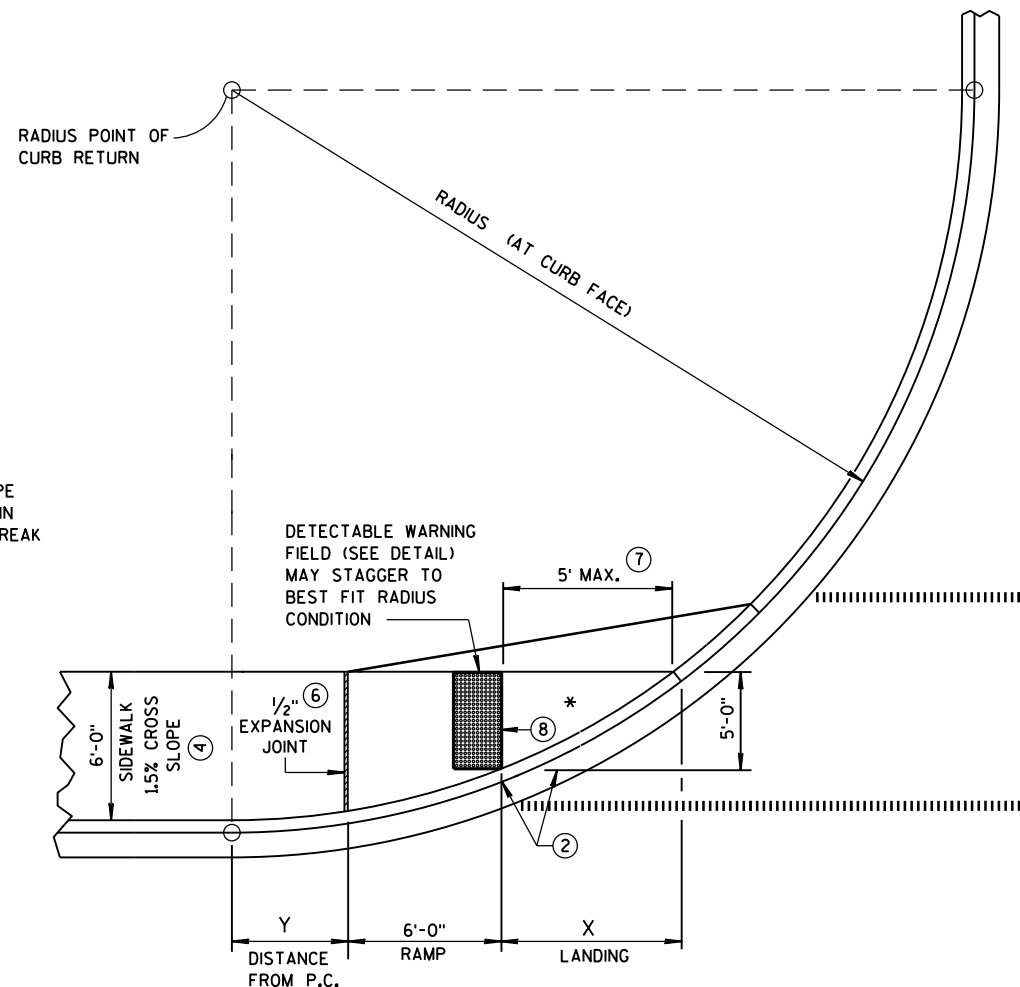
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1 3/4"	2'-7 1/4"
30 FEET	7'-11 3/4"	4'-8 1/4"
40 FEET	9'-5 1/4"	6'-5"
50 FEET	10'-8 3/4"	7'-11 1/4"
60 FEET	11'-10 1/4"	9'-3 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



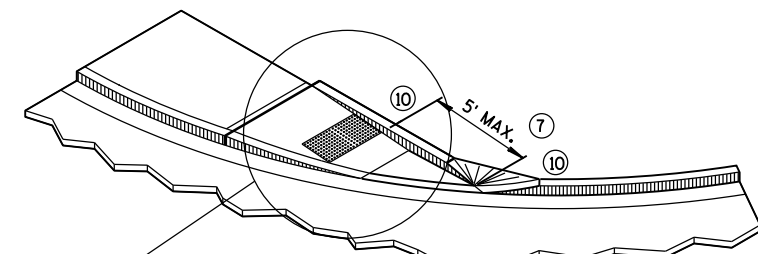
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

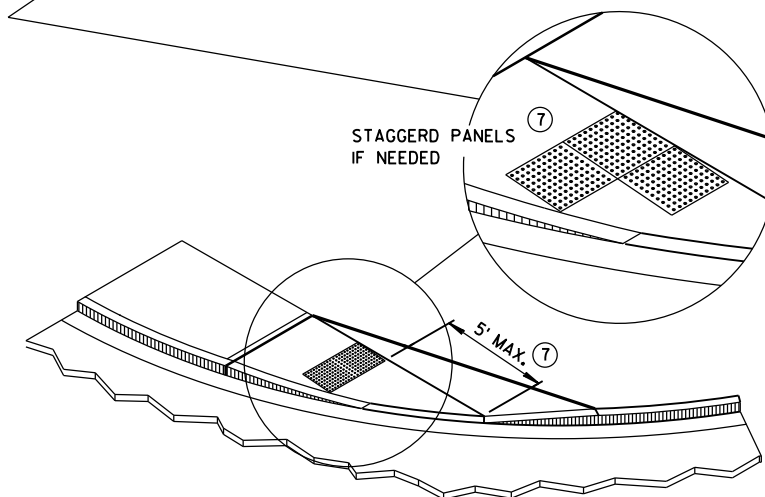
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
- ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



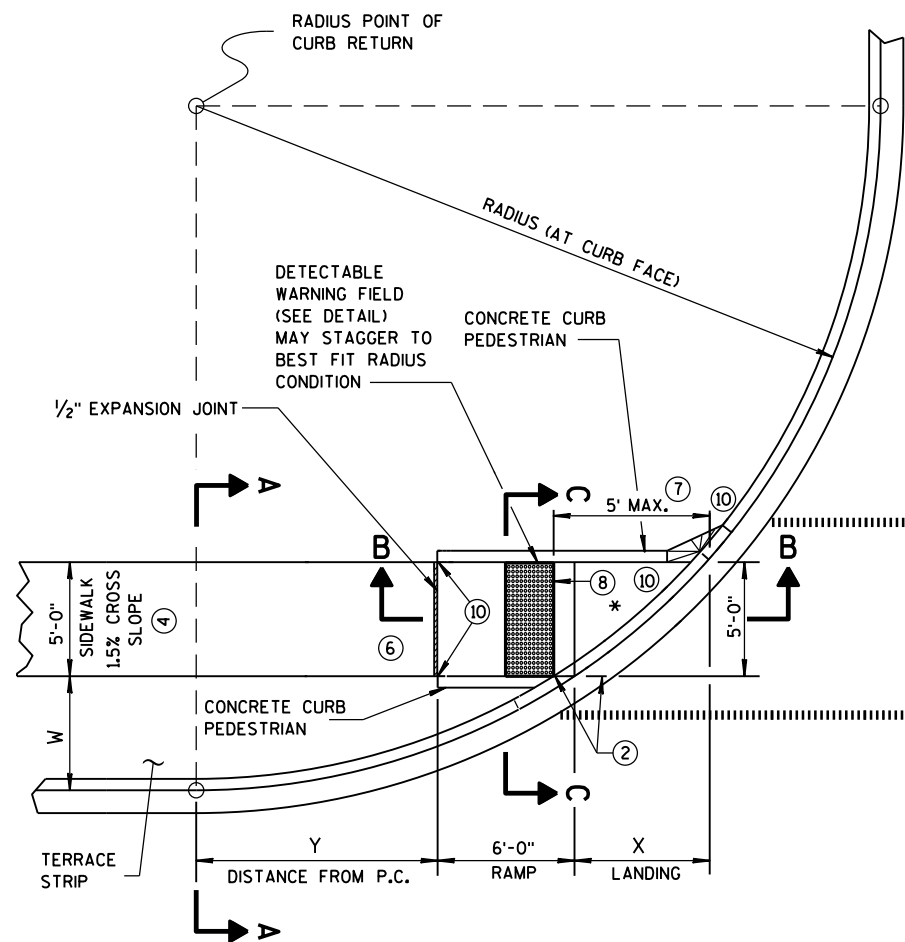
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

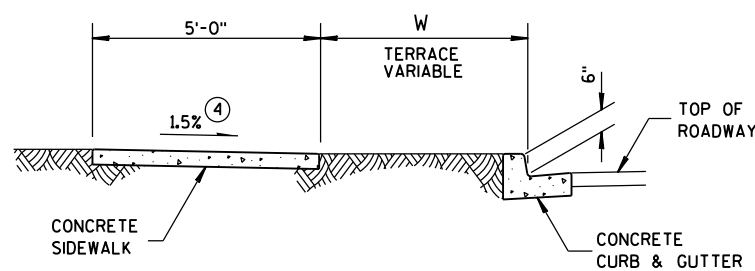
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

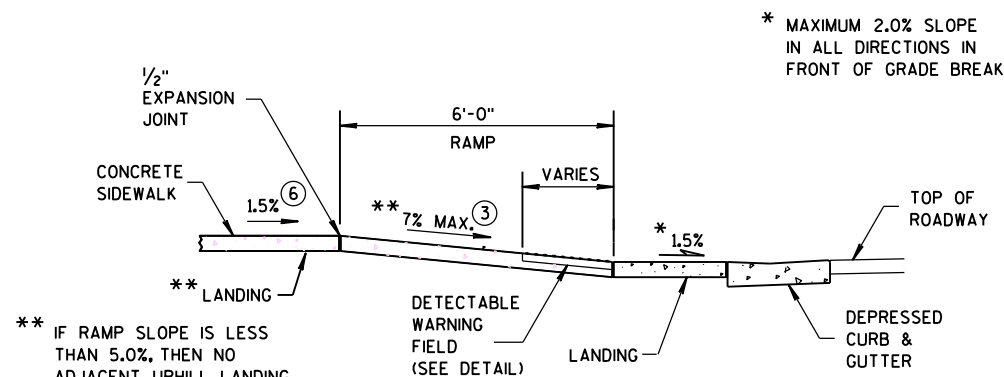
STATE OF WISCONSIN
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**CURB RAMP TYPE 4B
PLAN VIEW**

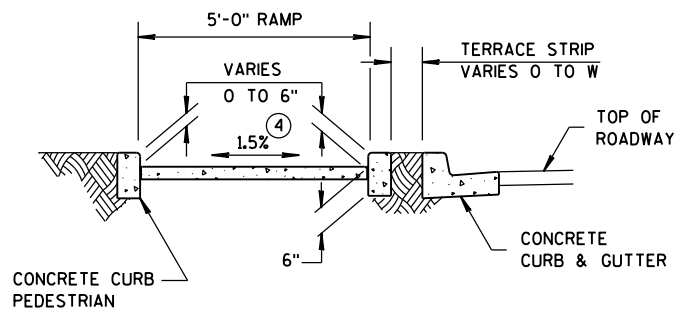


SECTION A-A FOR TYPE 4B

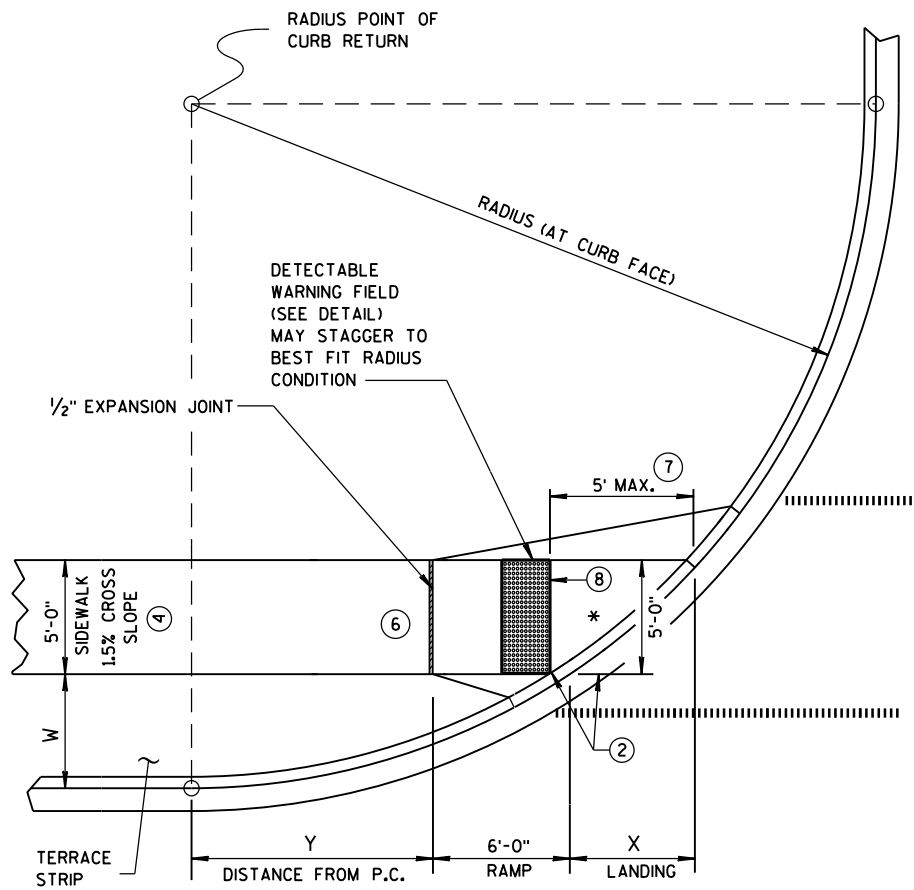


SECTION B-B FOR TYPE 4B

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



SECTION C-C FOR TYPE 4B

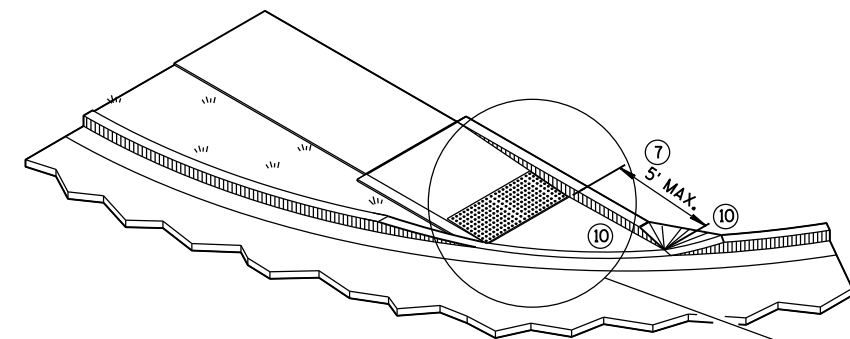


**CURB RAMP TYPE 4B1
PLAN VIEW**

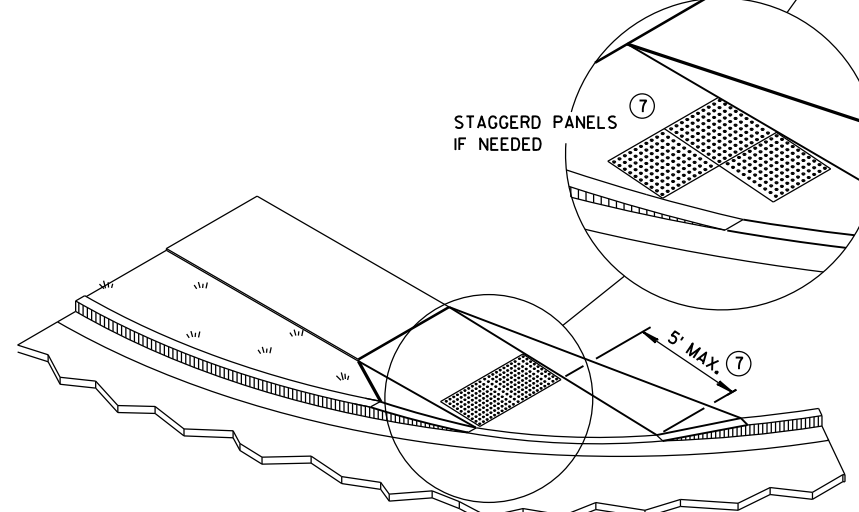
RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5 1/2"	4'-6 1/2"	4'-8 1/2"	6'-0"	4'-1"	7'-2 3/4"	3'-7"	8'-3 1/2"	3'-1 1/2"	9'-2 1/2"
30 FEET	7'-3 3/4"	7'-1"	6'-5 1/2"	8'-11 1/2"	5'-9 1/4"	10'-7"	5'-2 1/2"	12'-0"	4'-8 3/4"	13'-3 1/4"
40 FEET	8'-9 1/2"	9'-2 1/2"	7'-10"	11'-5 1/4"	7'-1"	13'-4 1/2"	6'-5 3/4"	15'-3/4"	5'-11 1/2"	16'-7 1/4"
50 FEET	10'-3/4"	11'-3/4"	9'-1/4"	13'-7 1/4"	8'-2 1/2"	15'-9 1/2"	7'-6 1/2"	17'-9"	6'-11 3/4"	19'-6 1/4"
60 FEET	11'-2 1/2"	12'-8 3/4"	10'-3/4"	15'-6 1/2"	9'-2 1/4"	17'-11 3/4"	8'-5 3/4"	20'-1 3/4"	7'-10 1/2"	22'-1 1/2"

GENERAL NOTES

- INTERMEDIATE RADII CAN BE INTERPOLATED
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS. DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
 - ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
 - ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
 - ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.
 - ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

**CURB RAMPS
TYPE 4B AND 4B1**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



*** DETAILS TO BE DETERMINED
BY DESIGNER



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

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



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

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



TRUNCATED DOMES DETECTABLE WARNING PATTERN DETAIL



DETECTABLE WARNING FIELD (TYPICAL)

CURB RAMPS

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

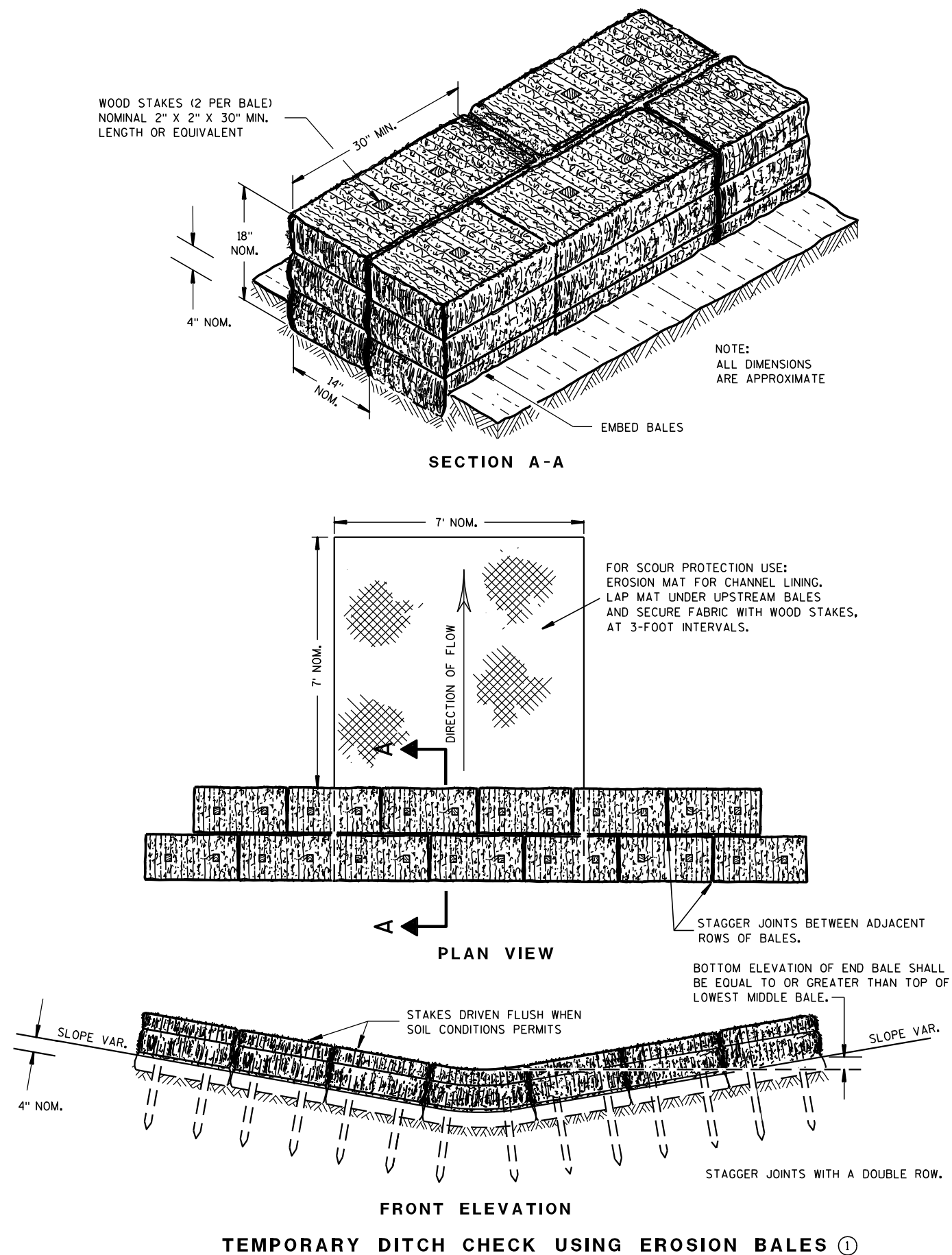
APPROVED June, 2015 <u>DATE</u> FHWA		/S/ Jerry H. Zogg <u>ROADWAY STANDARDS DEVELOPMENT</u> ENGINEER
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6

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

6

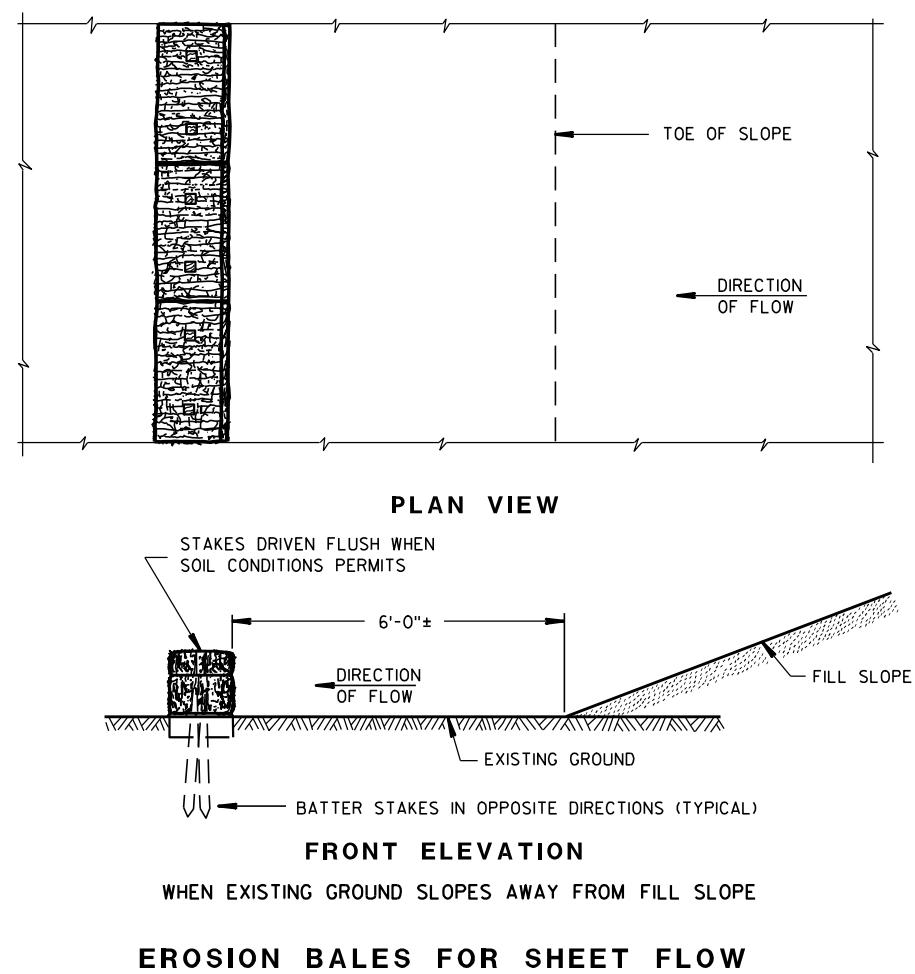
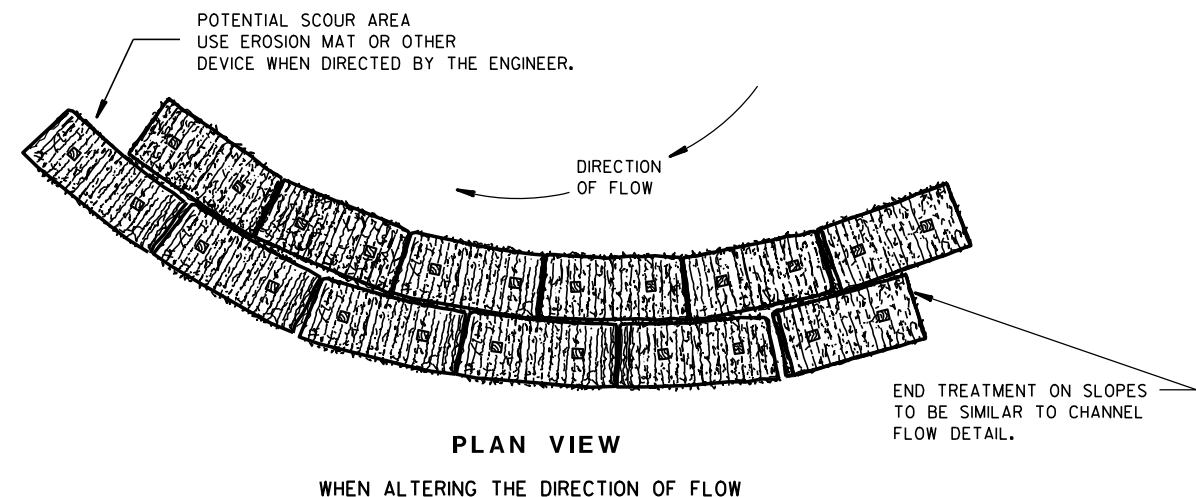
S D D 8 D 5-16e



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.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

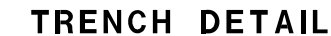
APPROVED

6/04/02
DATE/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

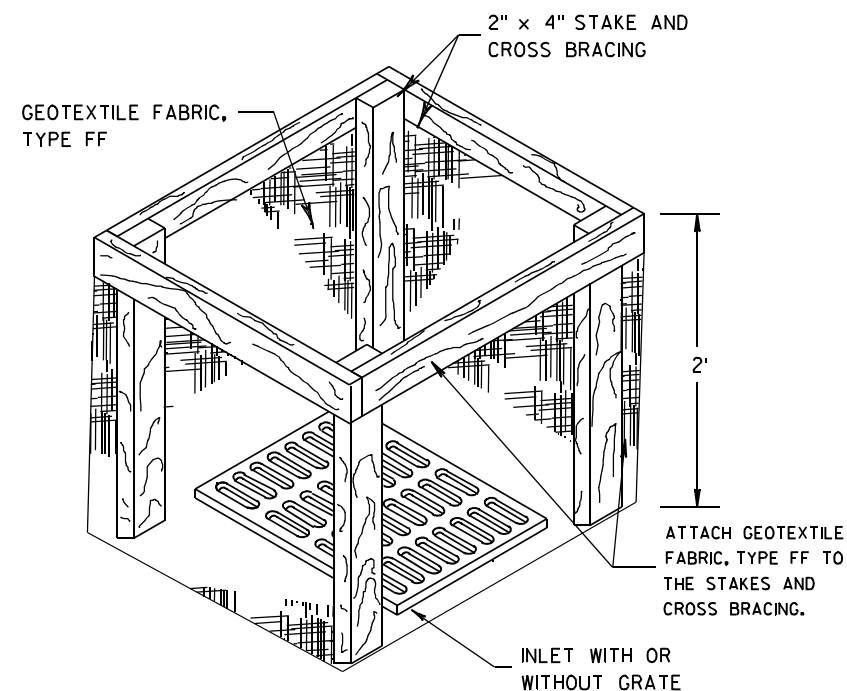
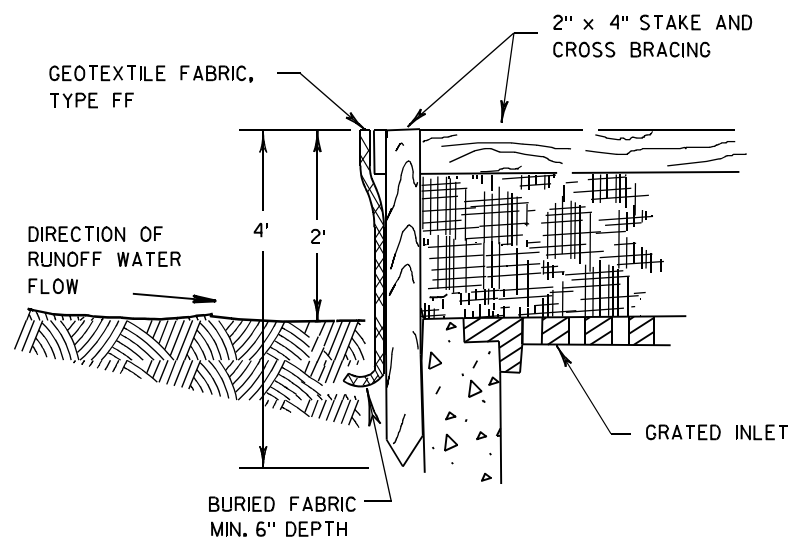
FHWA



- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



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



INLET PROTECTION, TYPE A

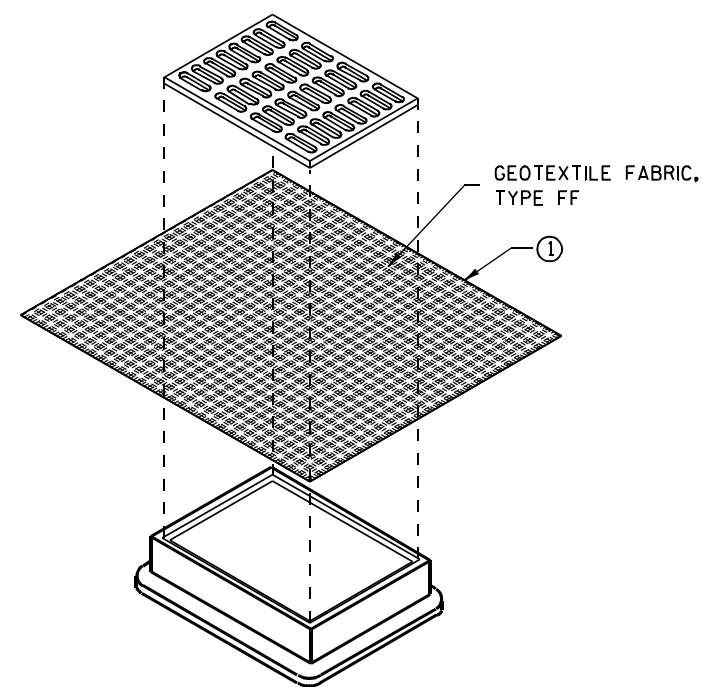
GENERAL NOTES

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

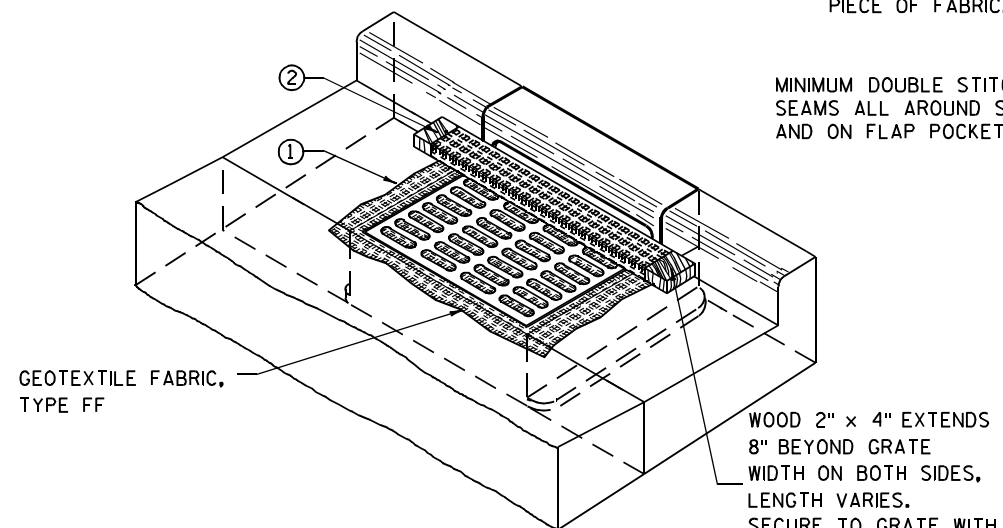
MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

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.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**
(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

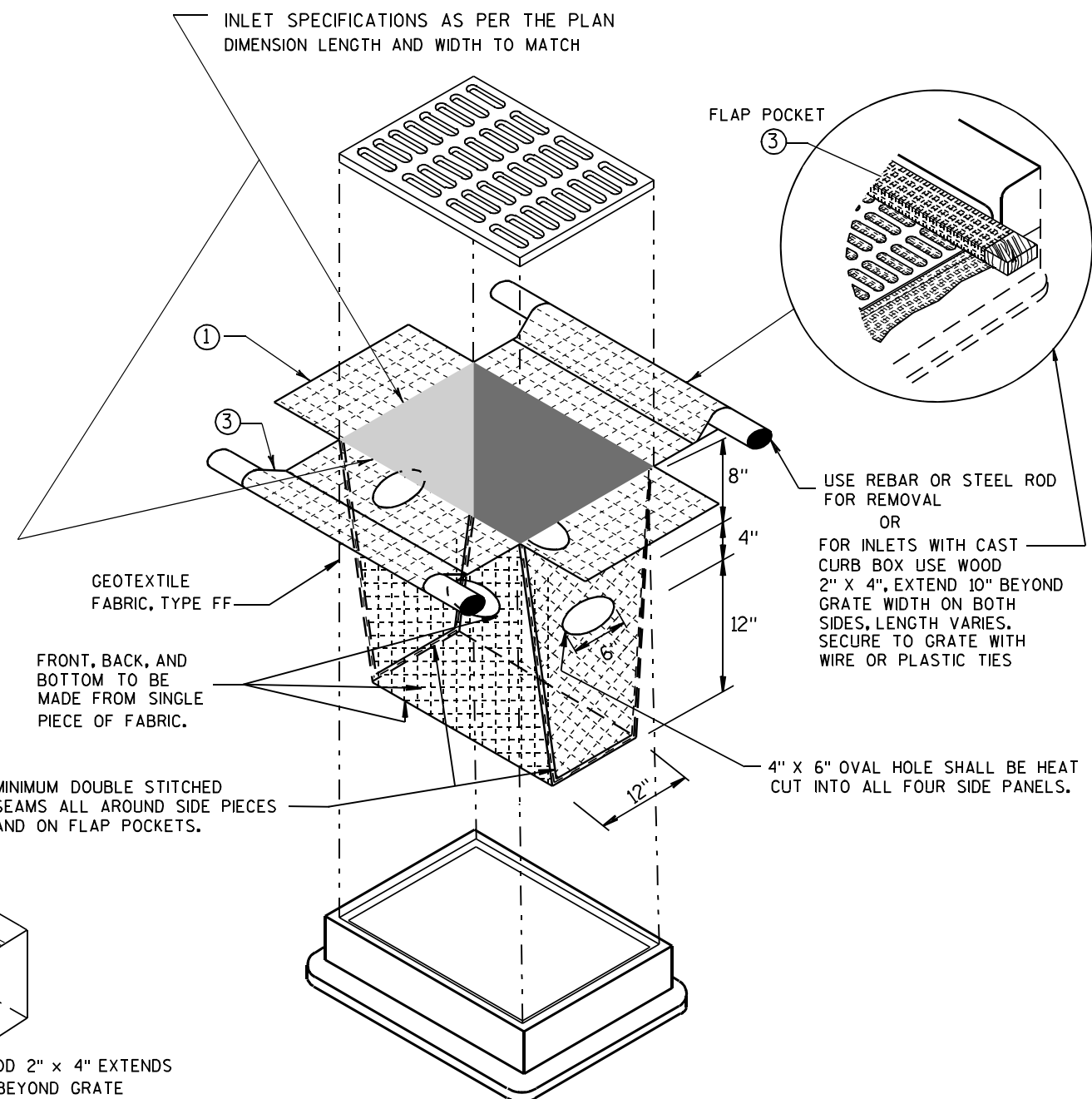
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

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 D

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

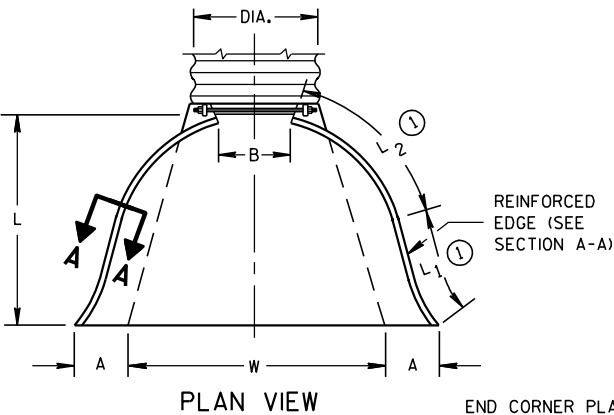
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER

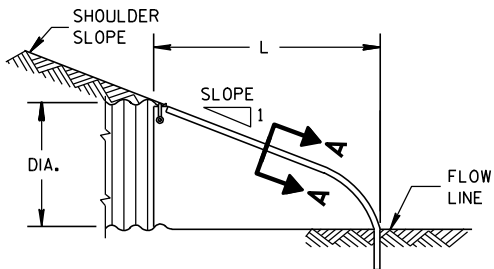
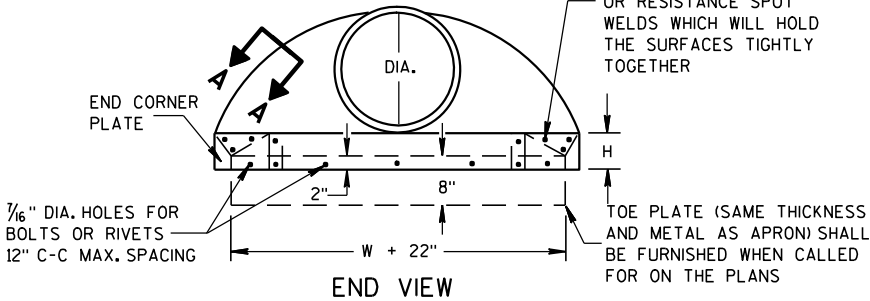
METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1	1 Pc.
18	.064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

* EXCEPT CENTER PANEL
SEE GENERAL NOTES



END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

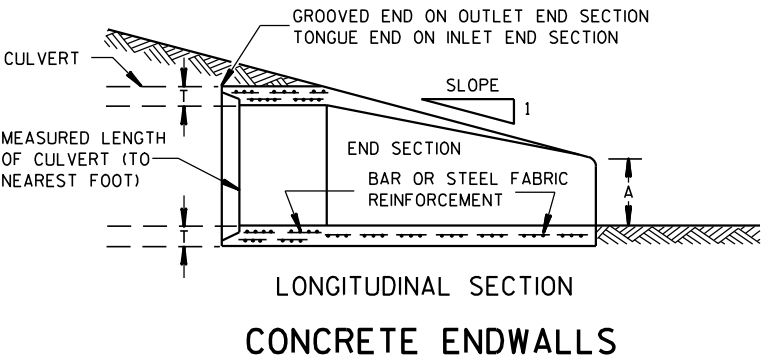
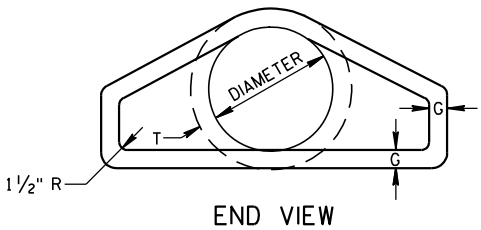
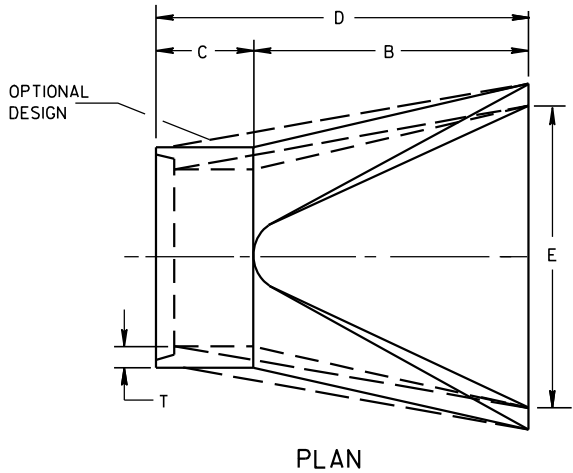
TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS



SIDE ELEVATION
METAL ENDWALLS

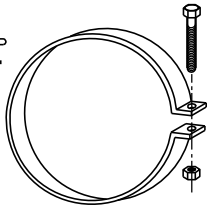
REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9 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

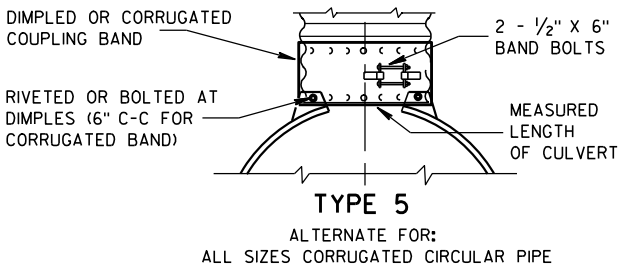
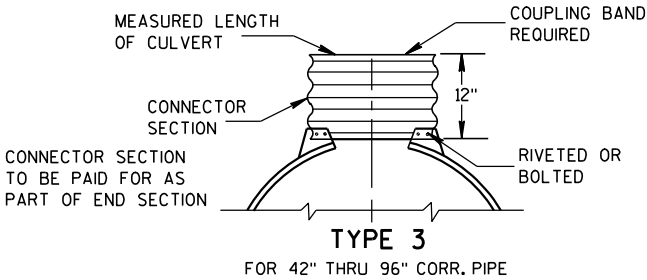
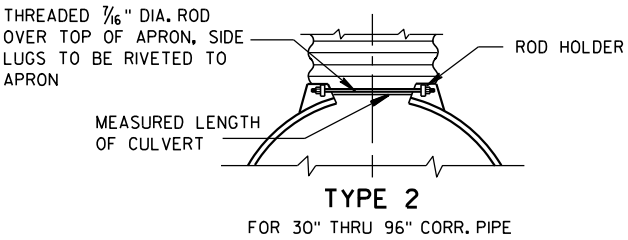
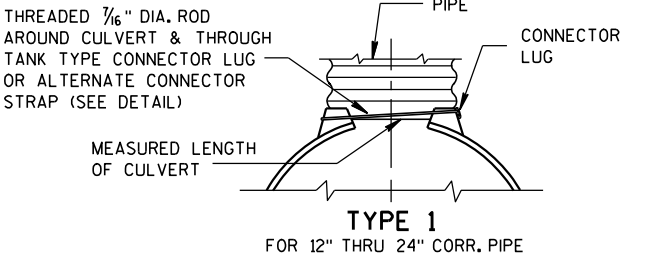


LONGITUDINAL SECTION
CONCRETE ENDWALLS

1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



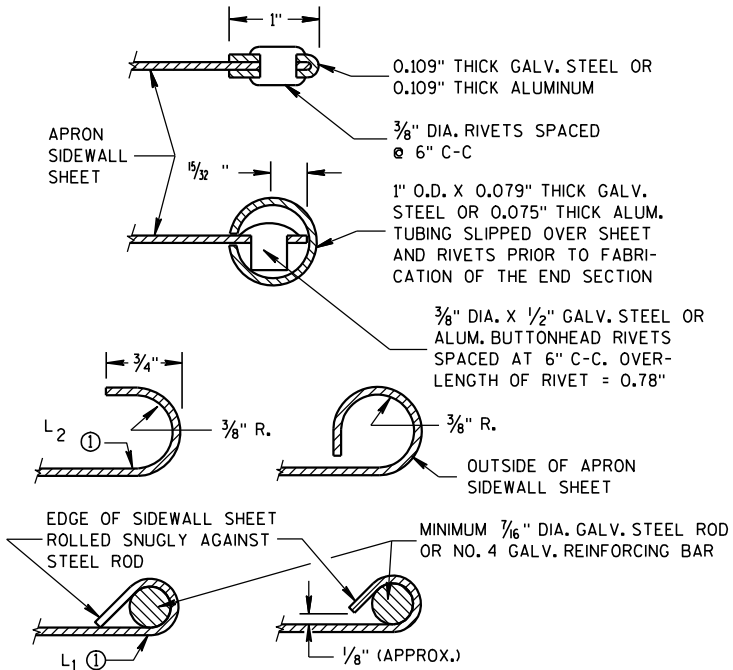
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

GENERAL NOTES

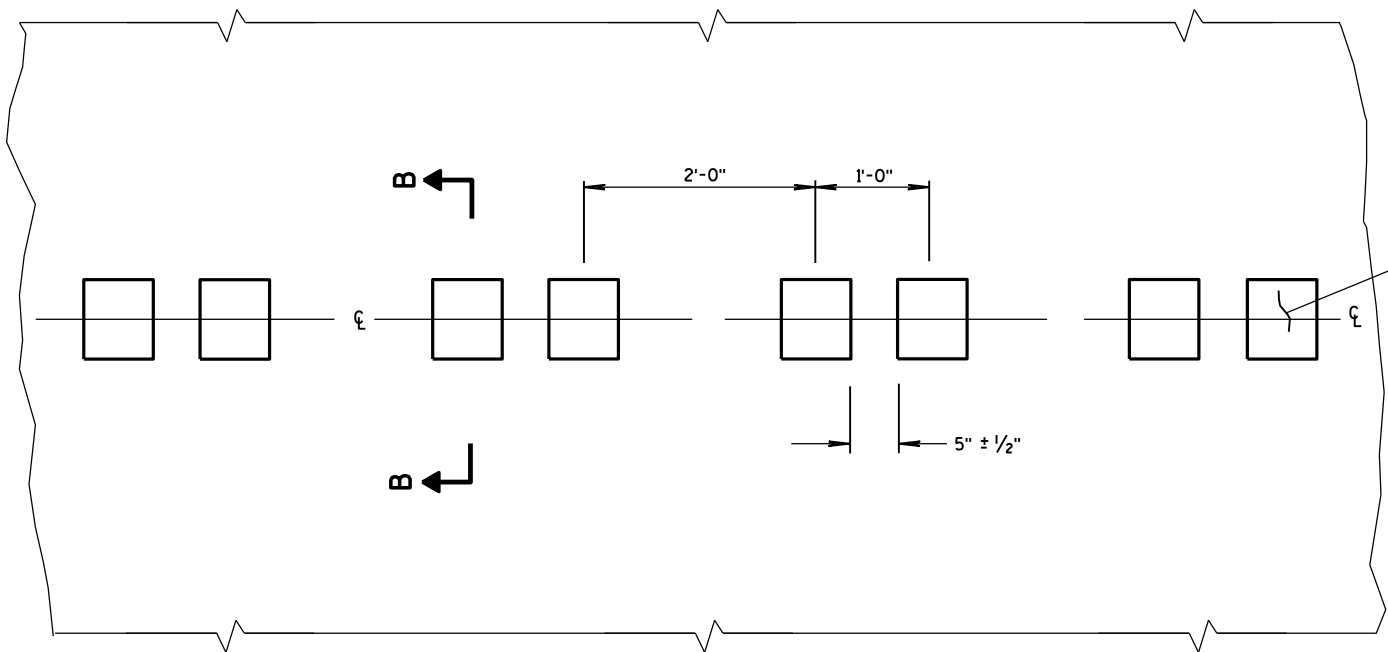
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

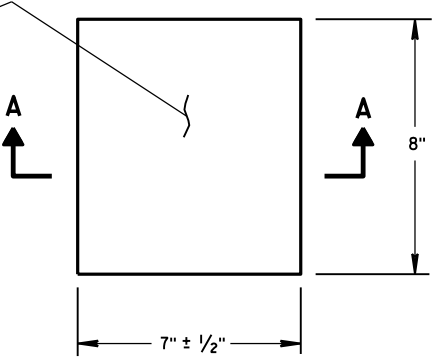
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

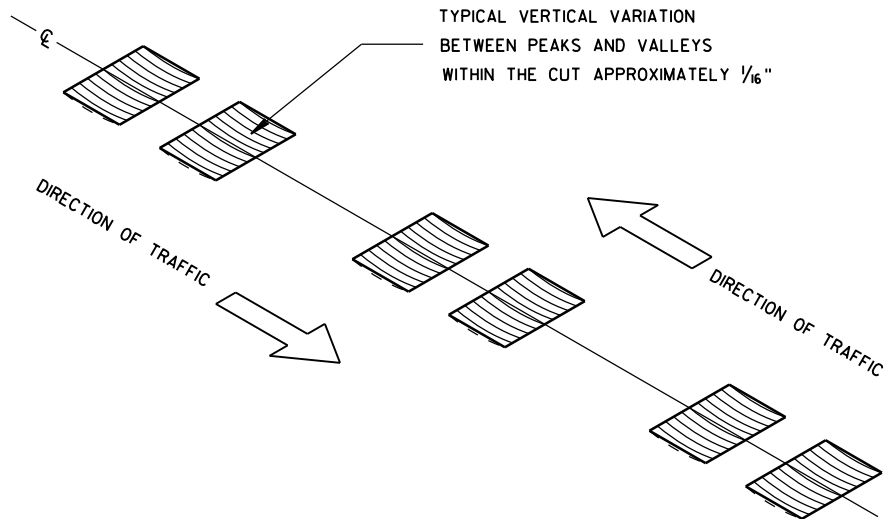
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



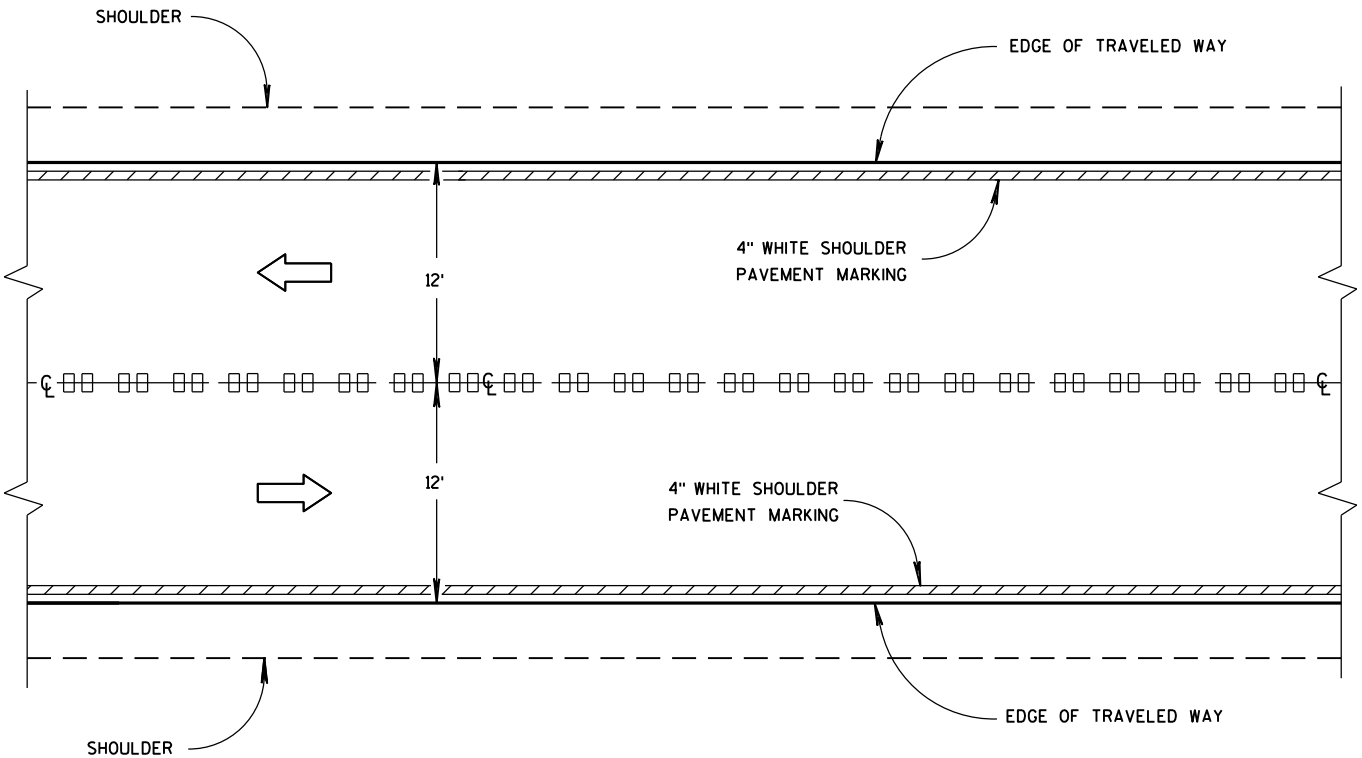
PLAN VIEW
CENTER LINE WITH GROOVES



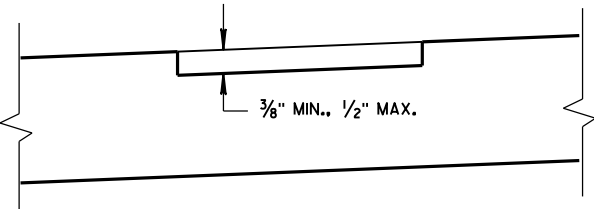
PLAN VIEW
(SINGLE GROOVE)



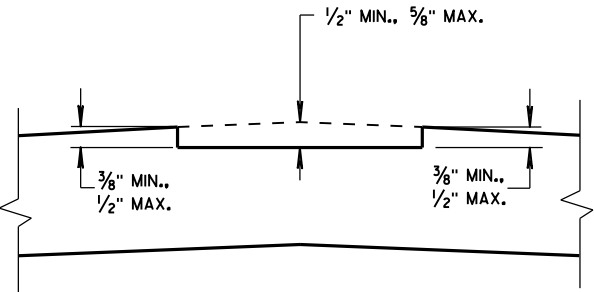
ISOMETRIC



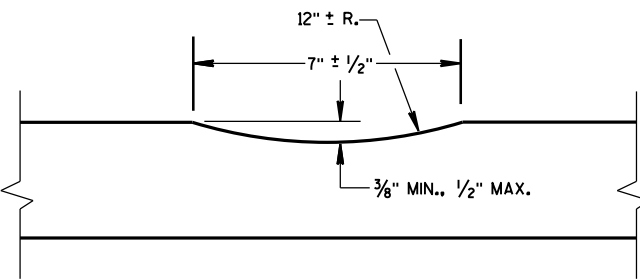
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



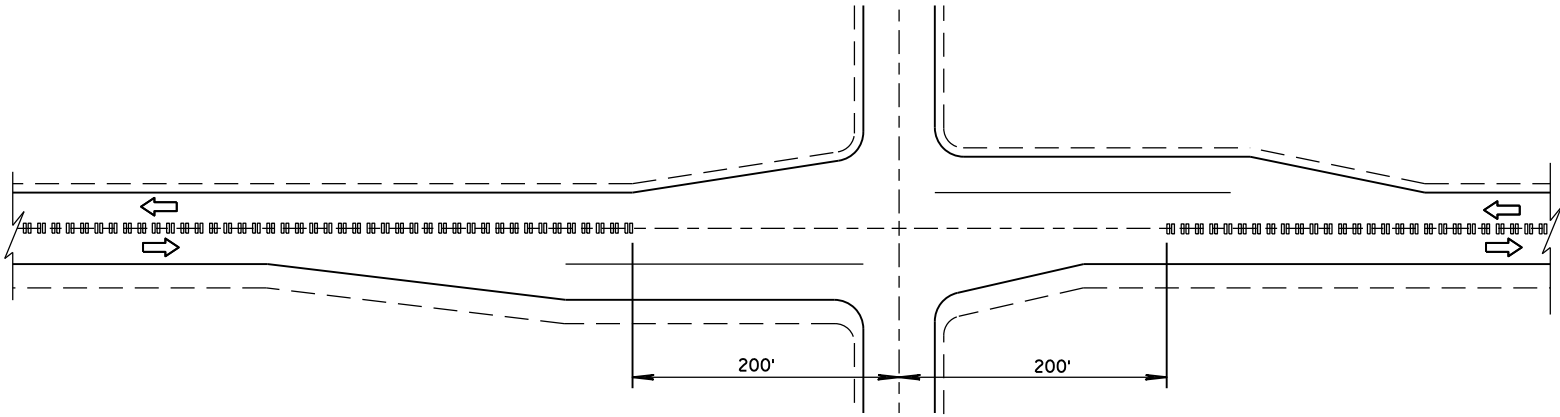
SECTION B-B
CROWNED ROADWAY



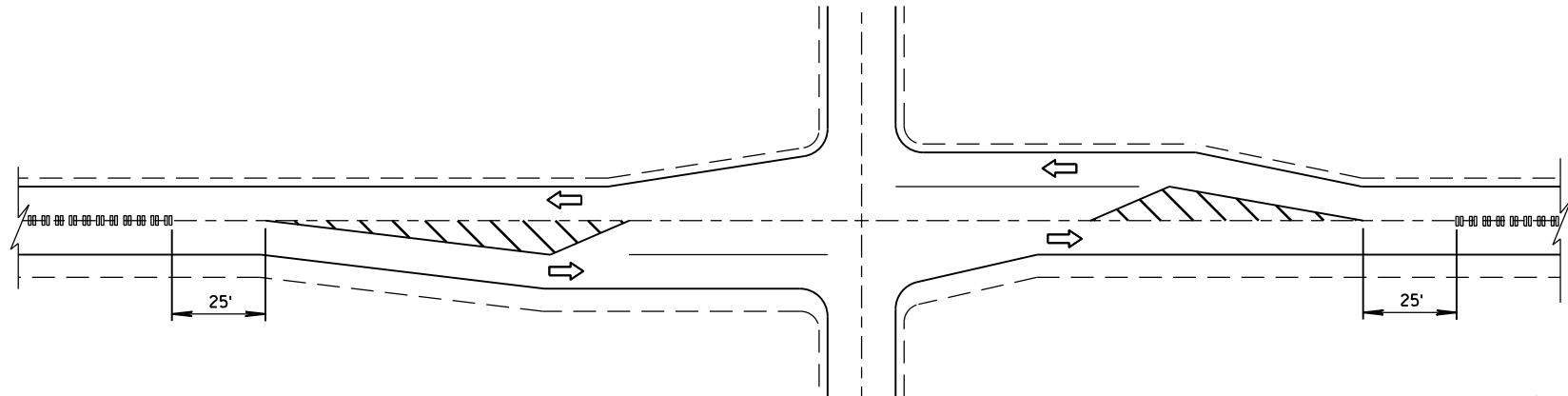
SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

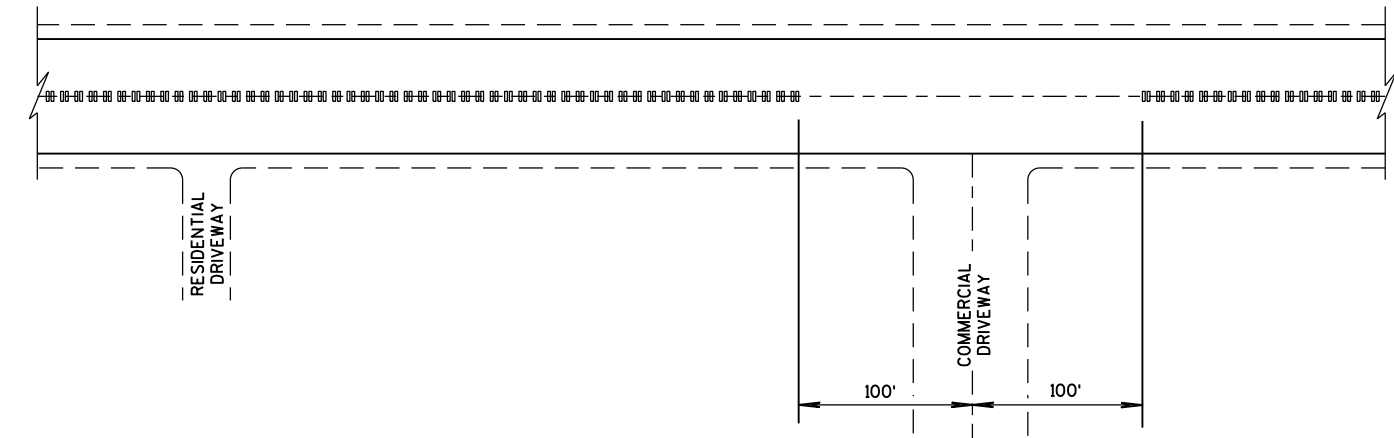
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTER LINE GROOVES AT INTERSECTIONS

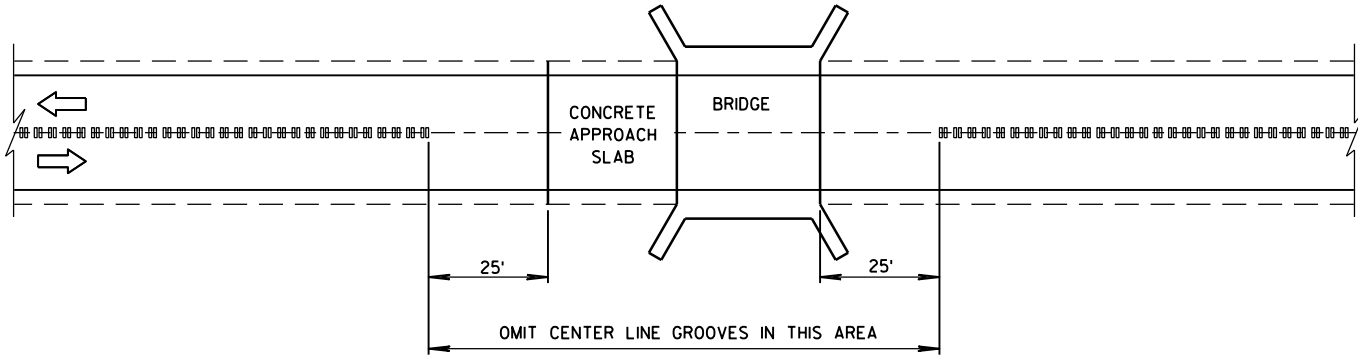


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

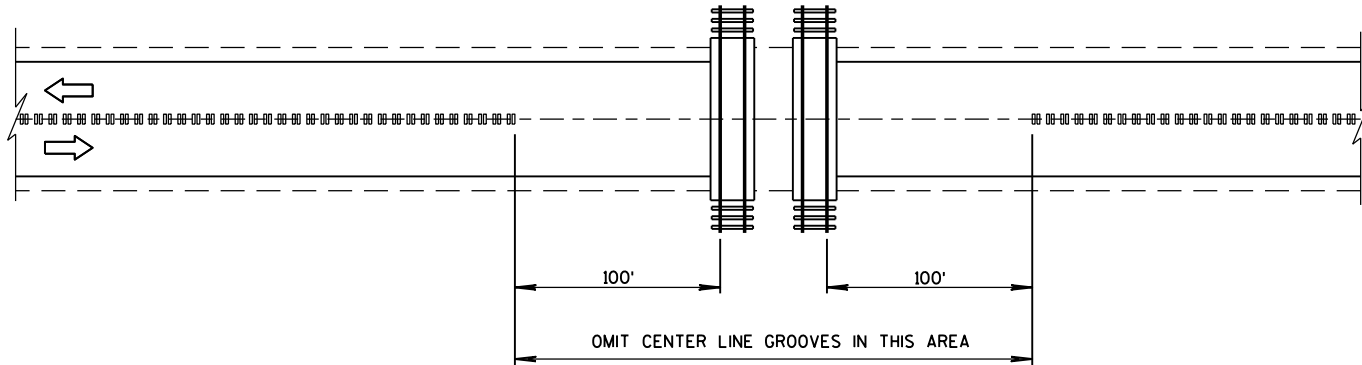


CENTER LINE GROOVES AT DRIVEWAYS¹

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

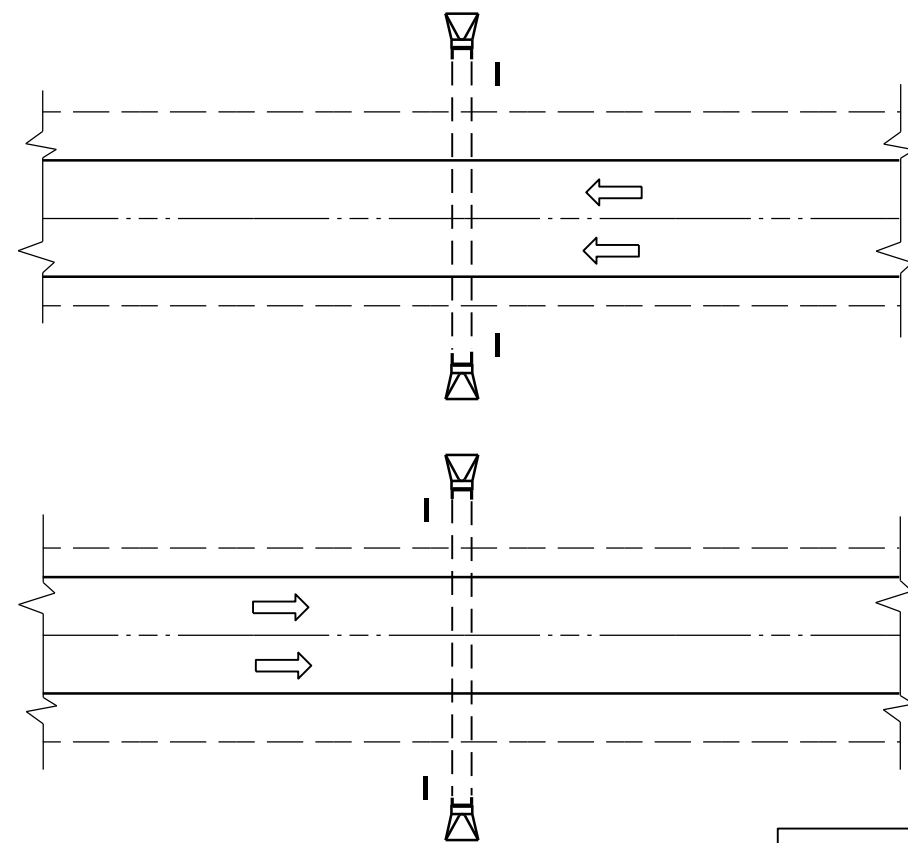


CENTER LINE GROOVES AT BRIDGES

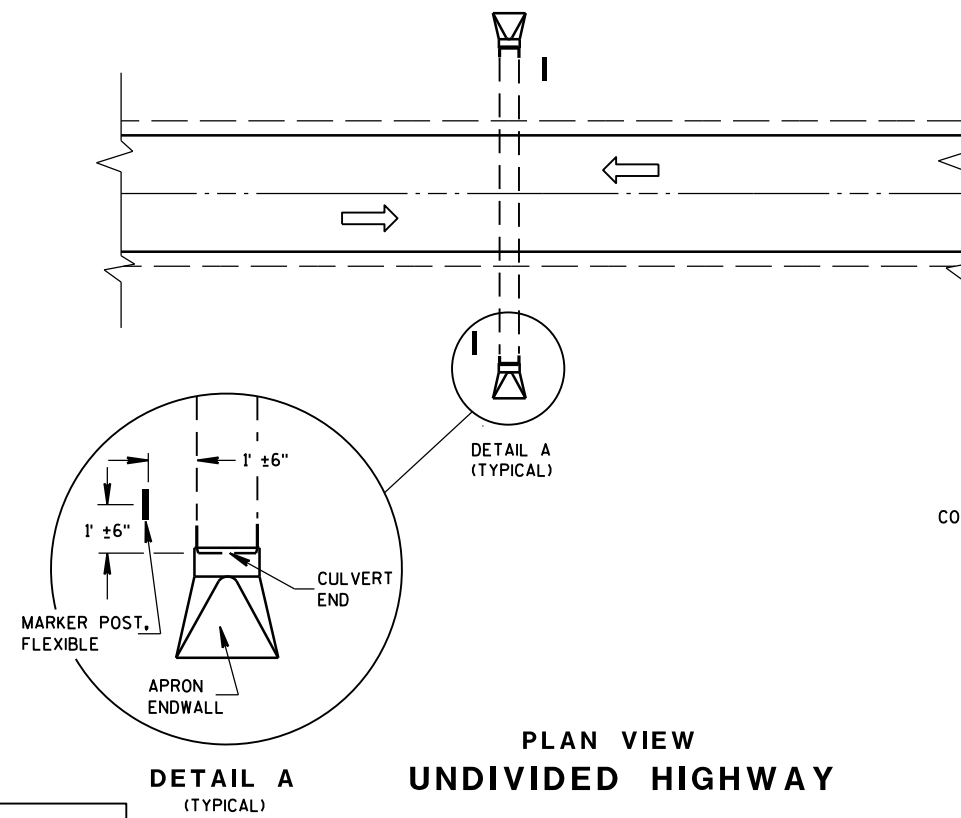
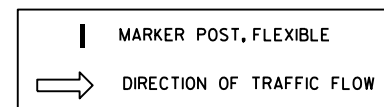


CENTER LINE GROOVES AT RAILROADS

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



PLAN VIEW
DIVIDED HIGHWAY

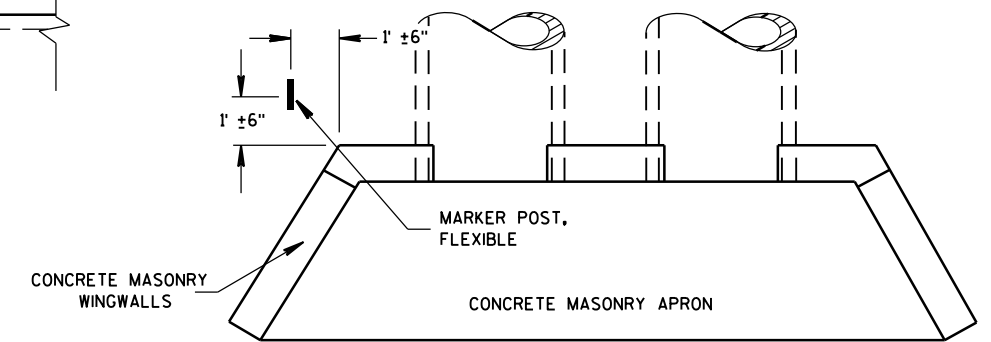


PLAN VIEW
UNDIVIDED HIGHWAY

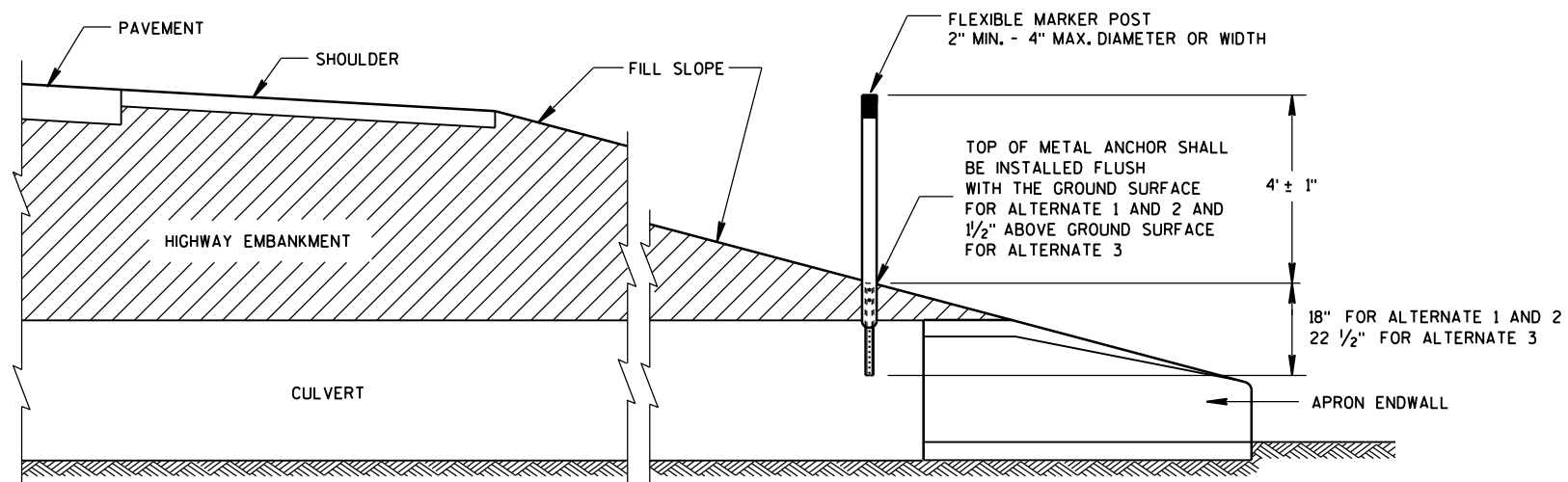
FLEXIBLE MARKER POST LOCATION

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.



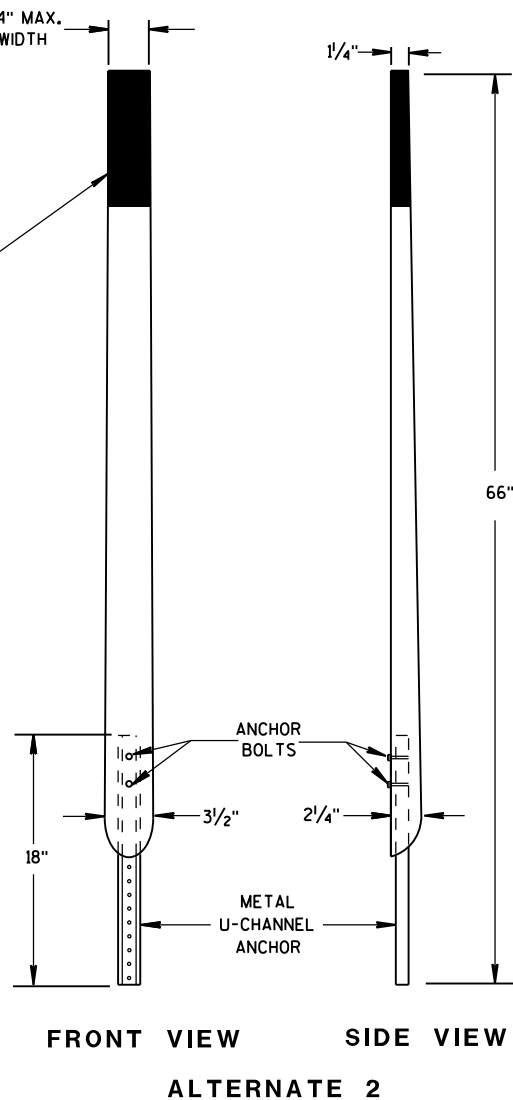
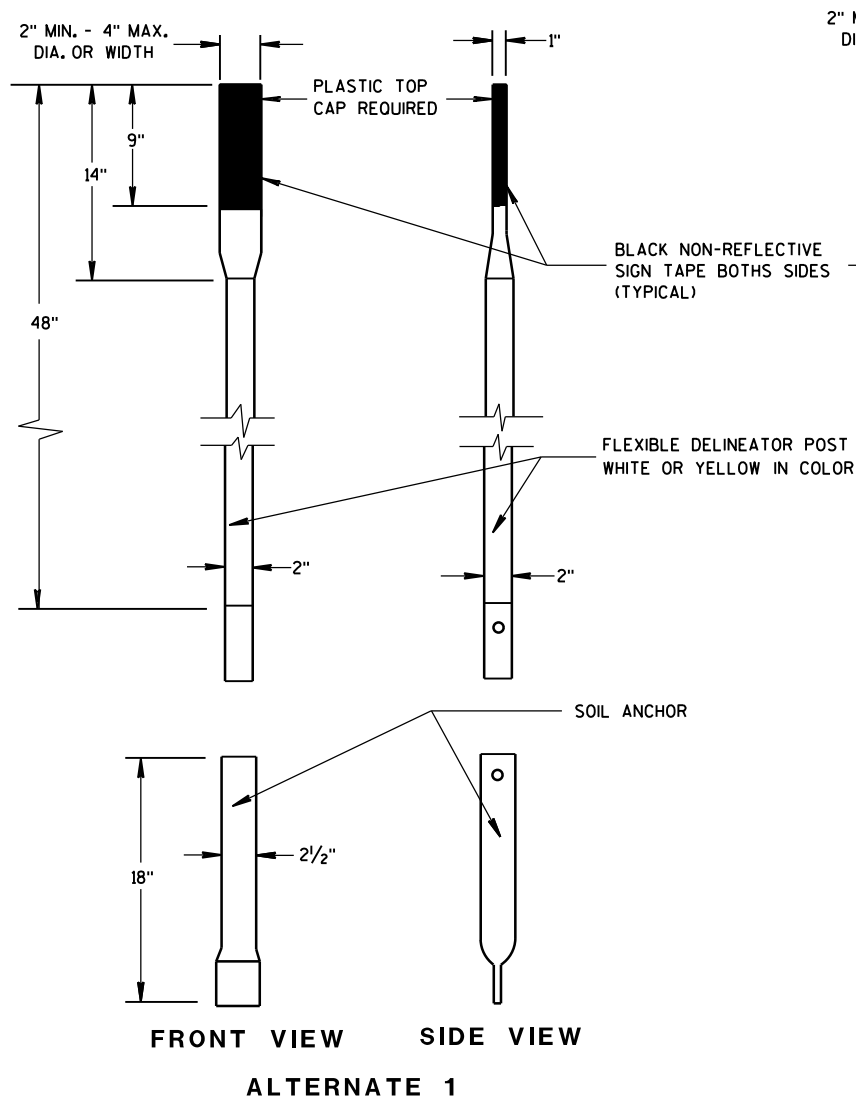
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



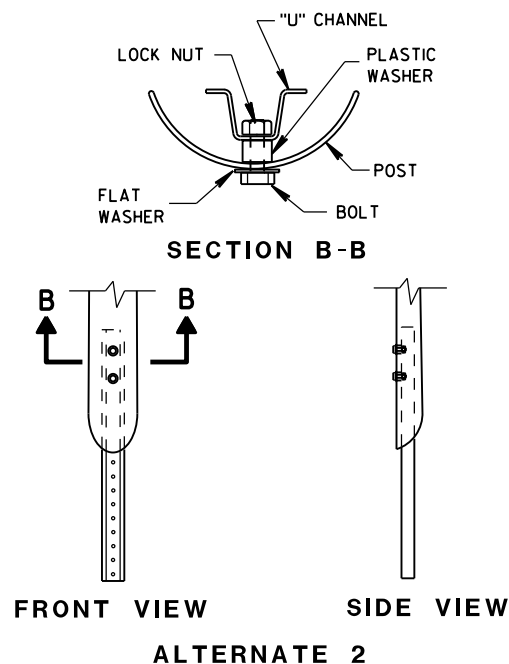
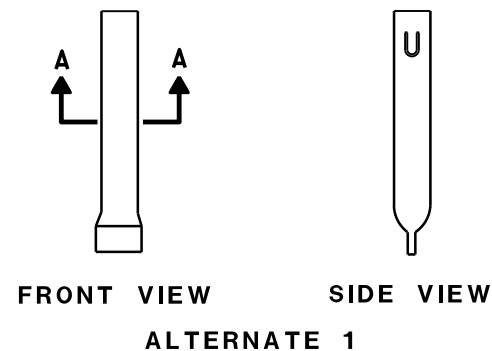
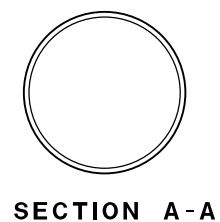
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

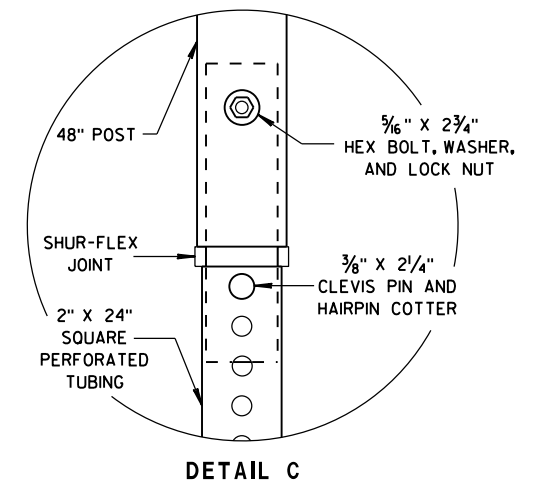
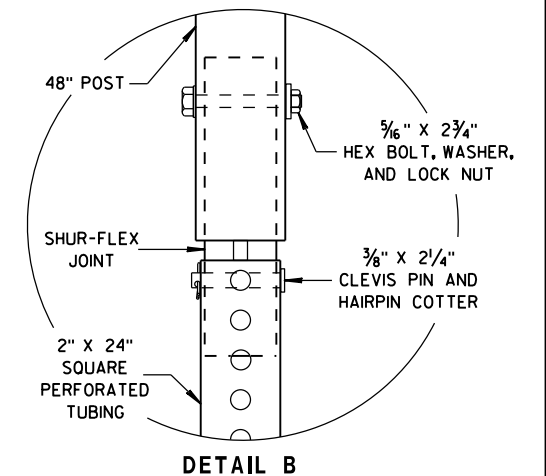
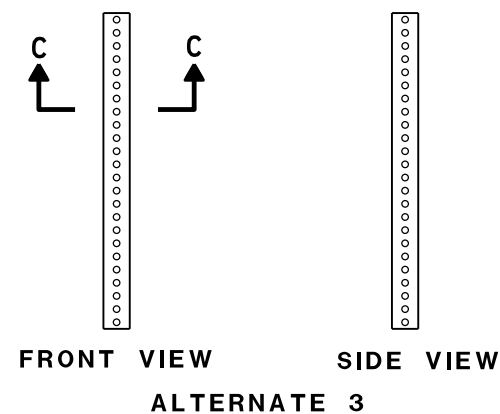
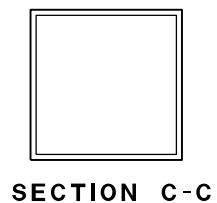
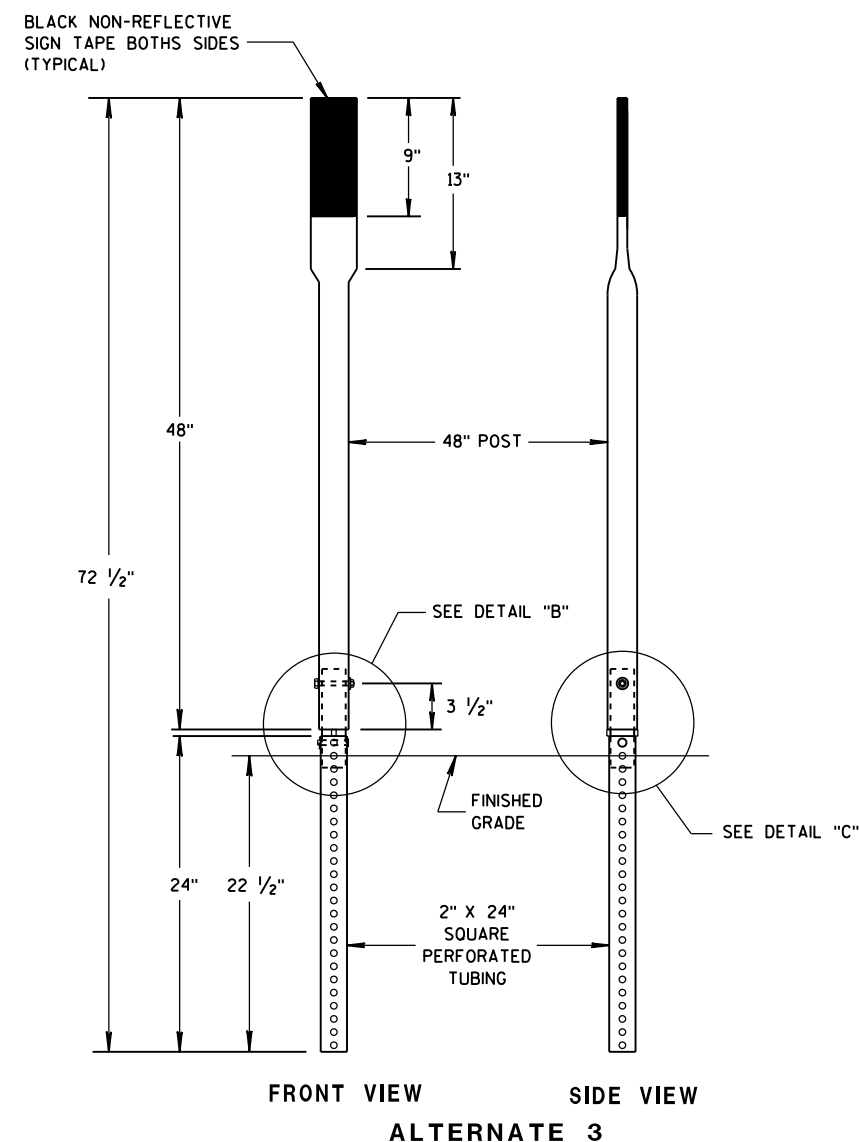
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE MARKER POSTS



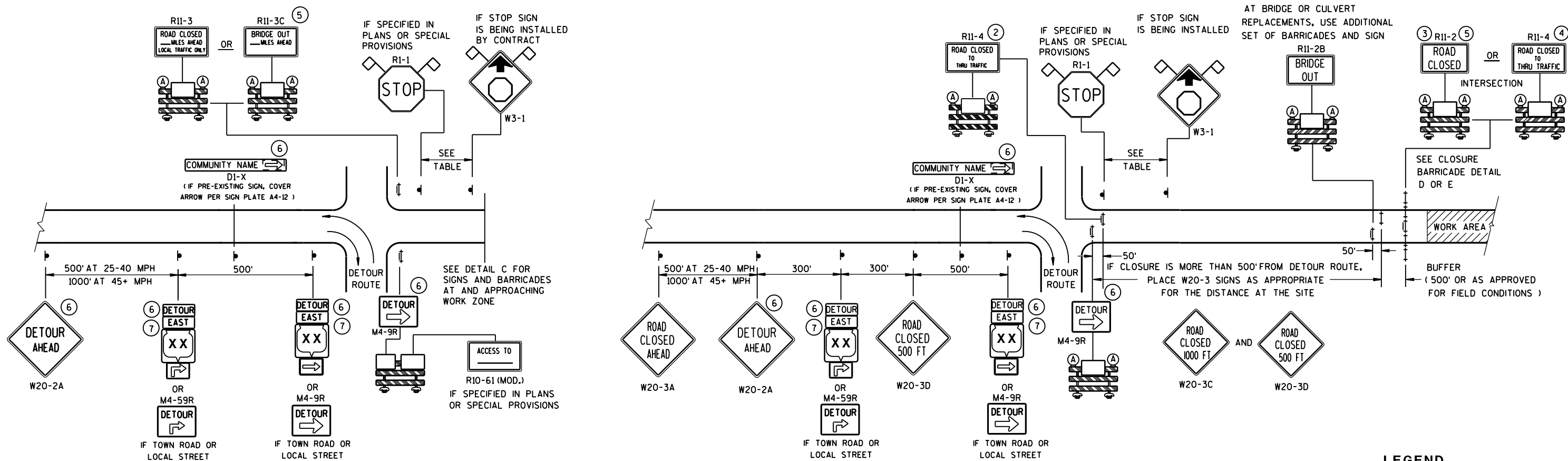
FLEXIBLE MARKER POST ANCHORS



FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

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

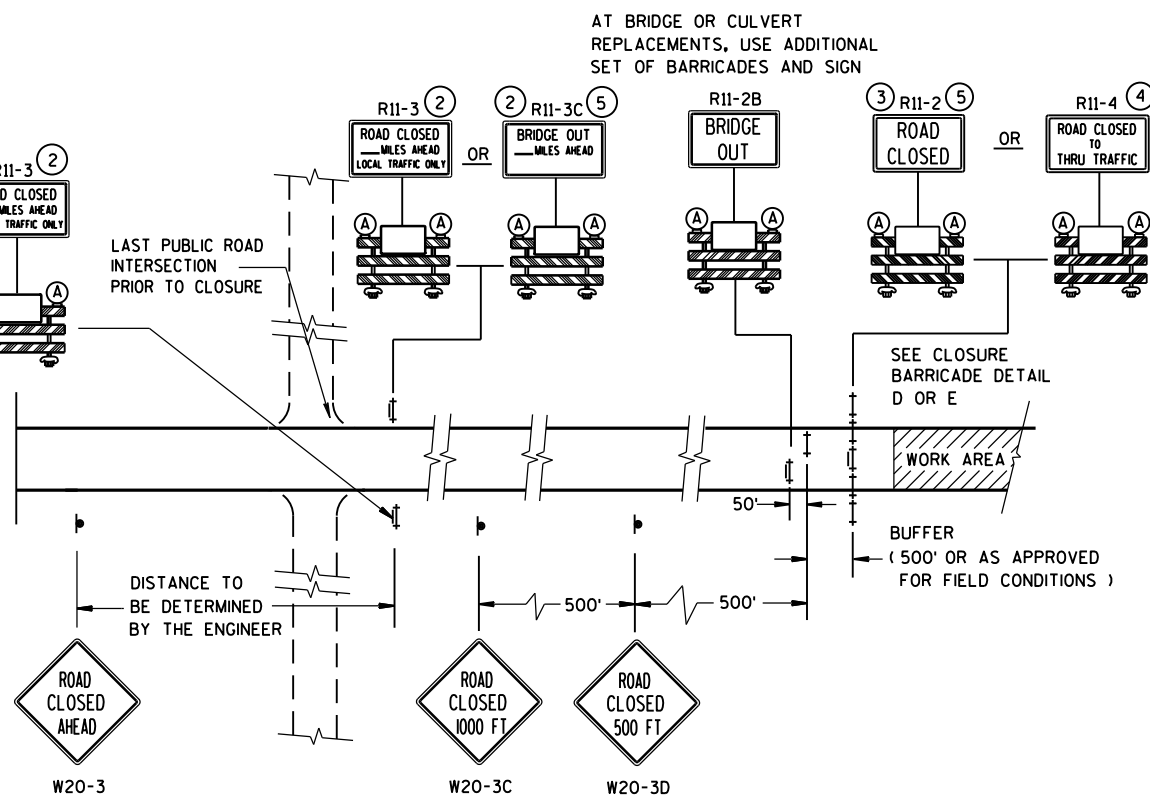
WORK AREA

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

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

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



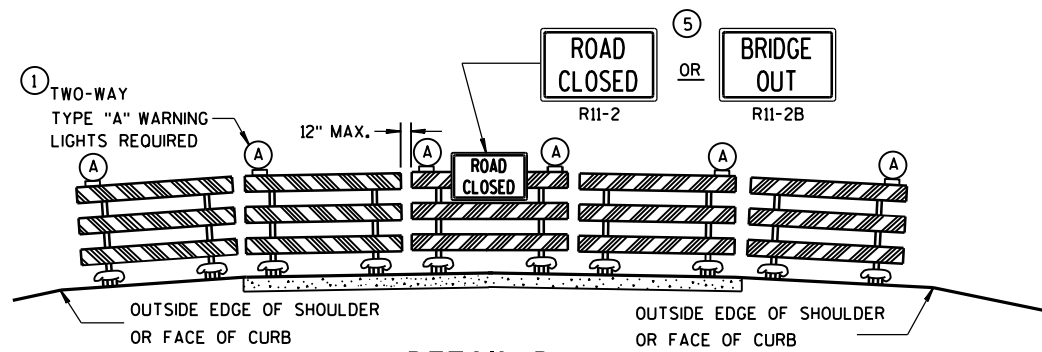
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

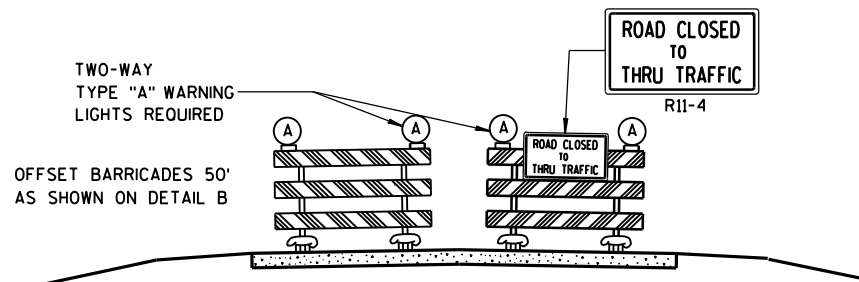
**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER



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.

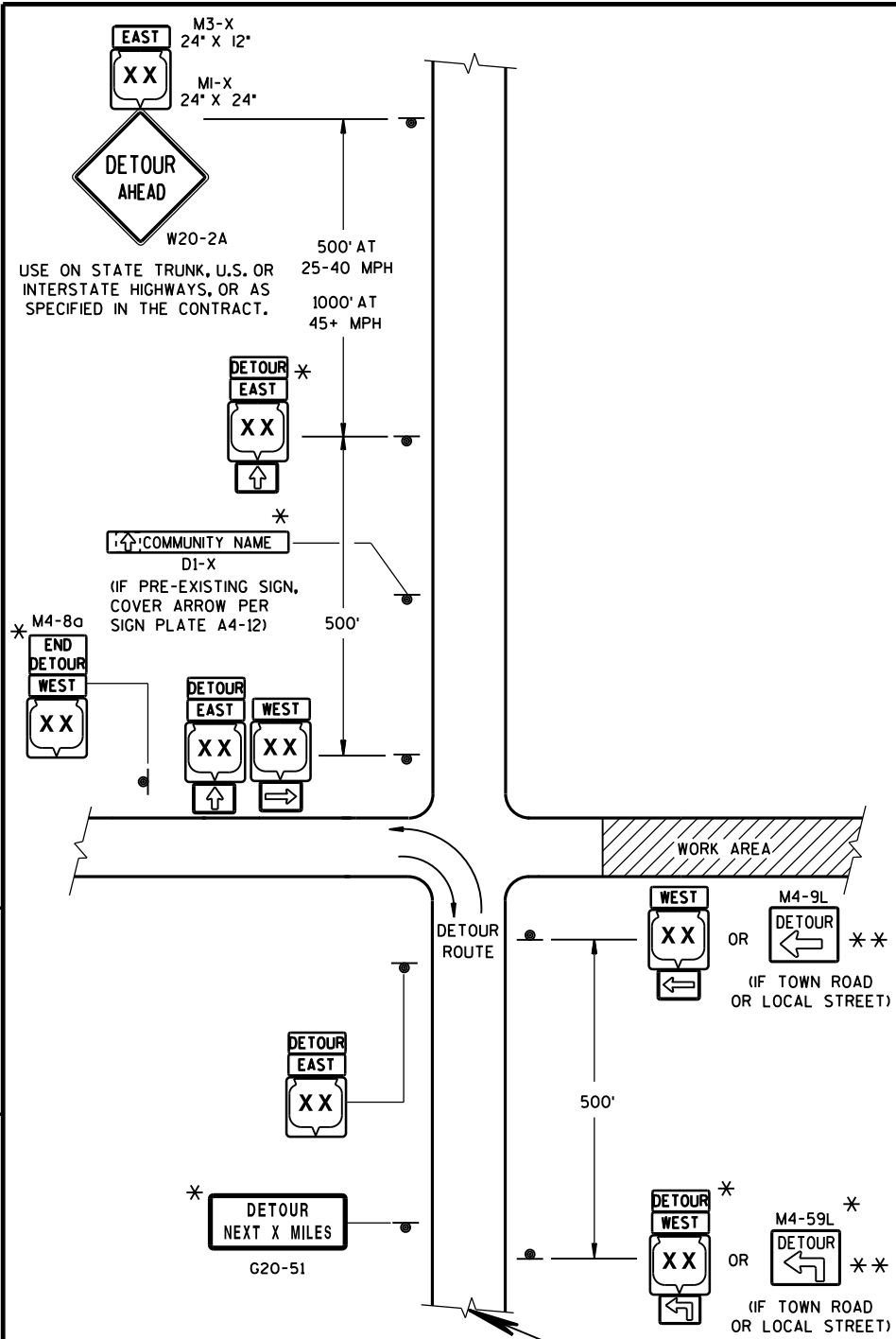
"WO" AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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 Amokobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT

DETAIL F
DETOUR SIGNING

GENERAL NOTES

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

IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS, MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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

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

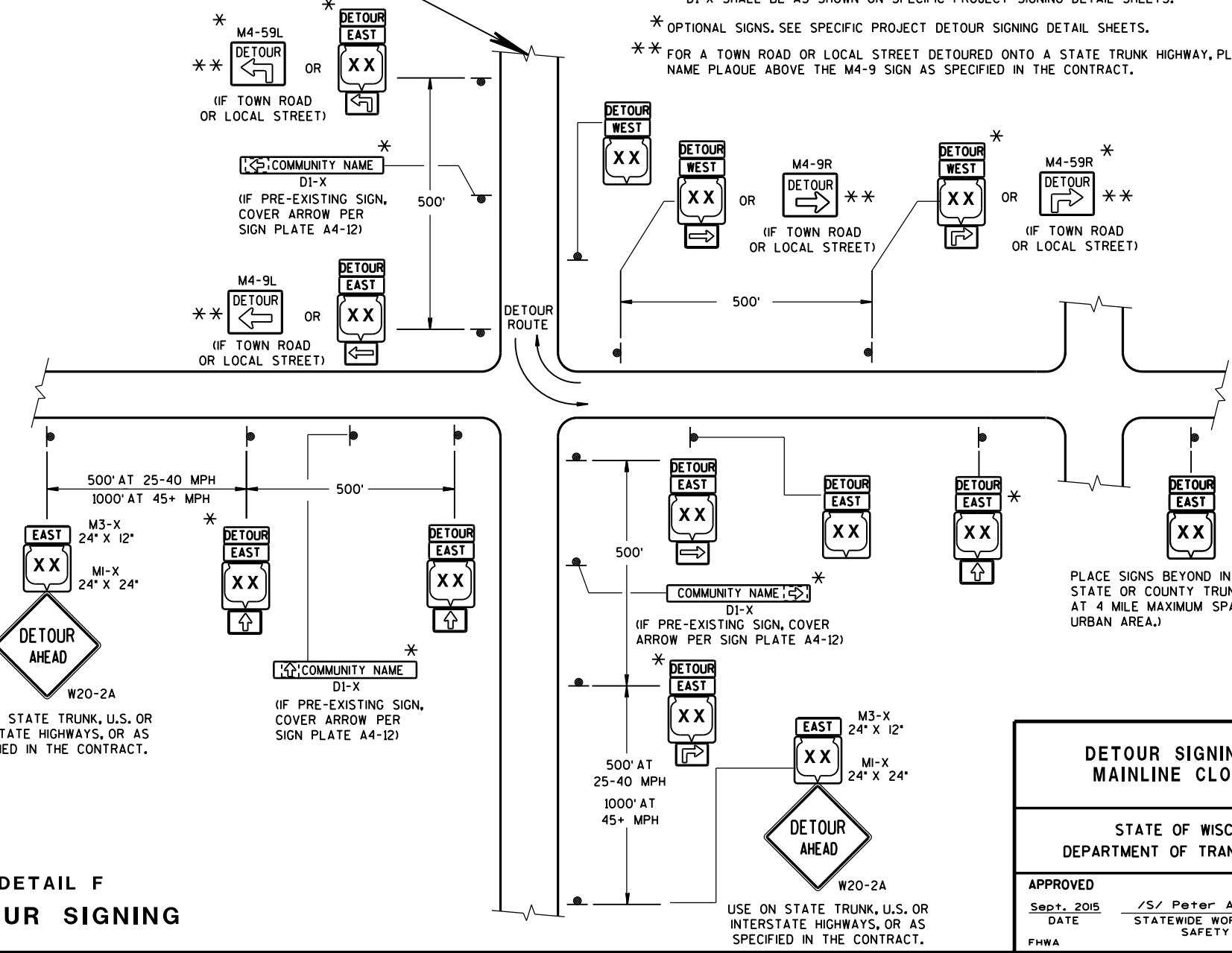
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 SHALL BE 48" X 48".
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

* OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.

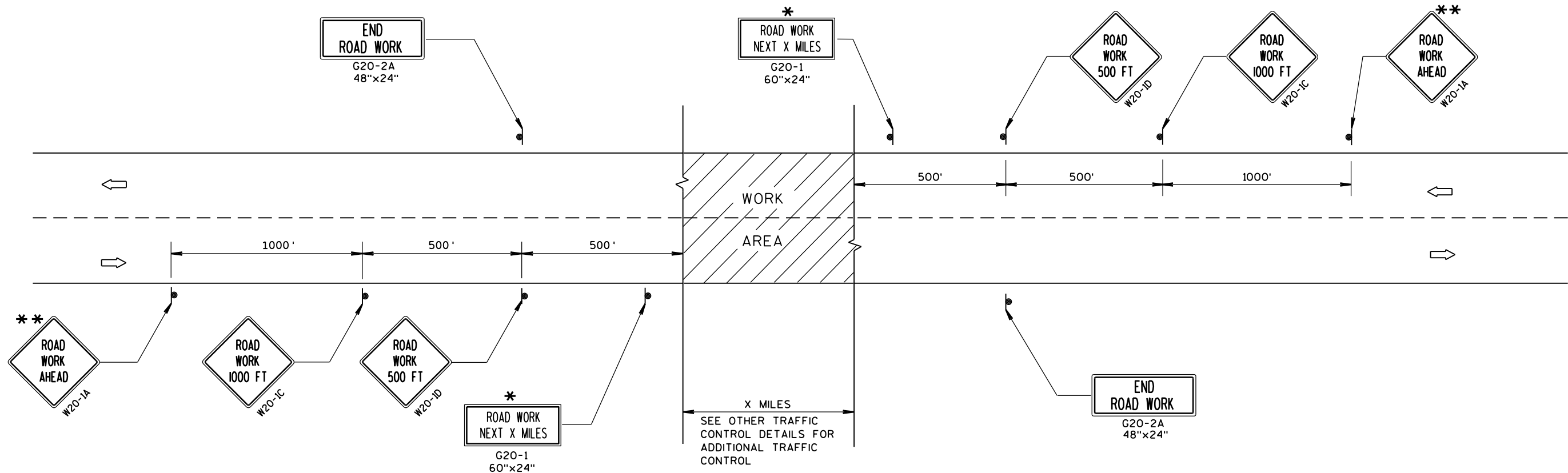
** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.



DETOUR SIGNING FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: Sept. 2015 /S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA



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.

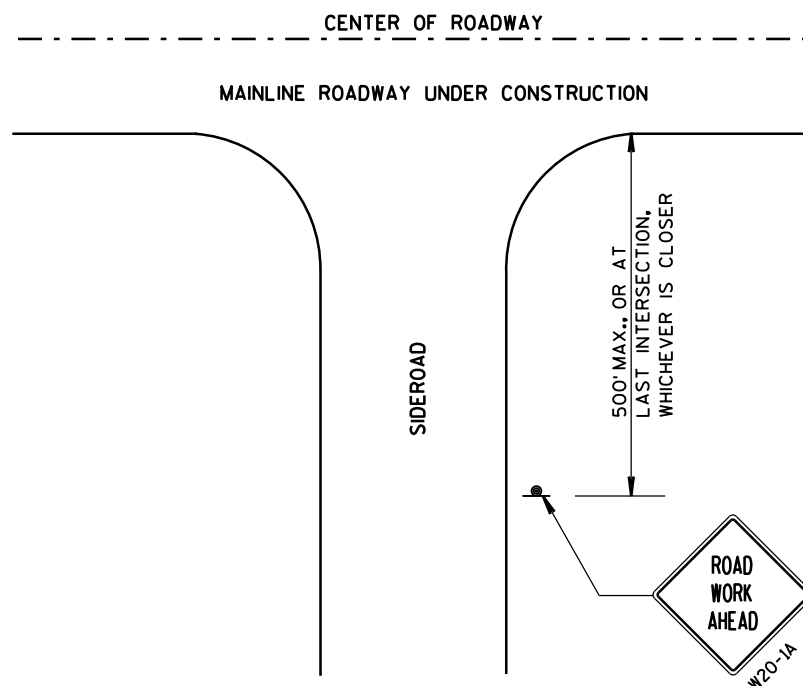
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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.



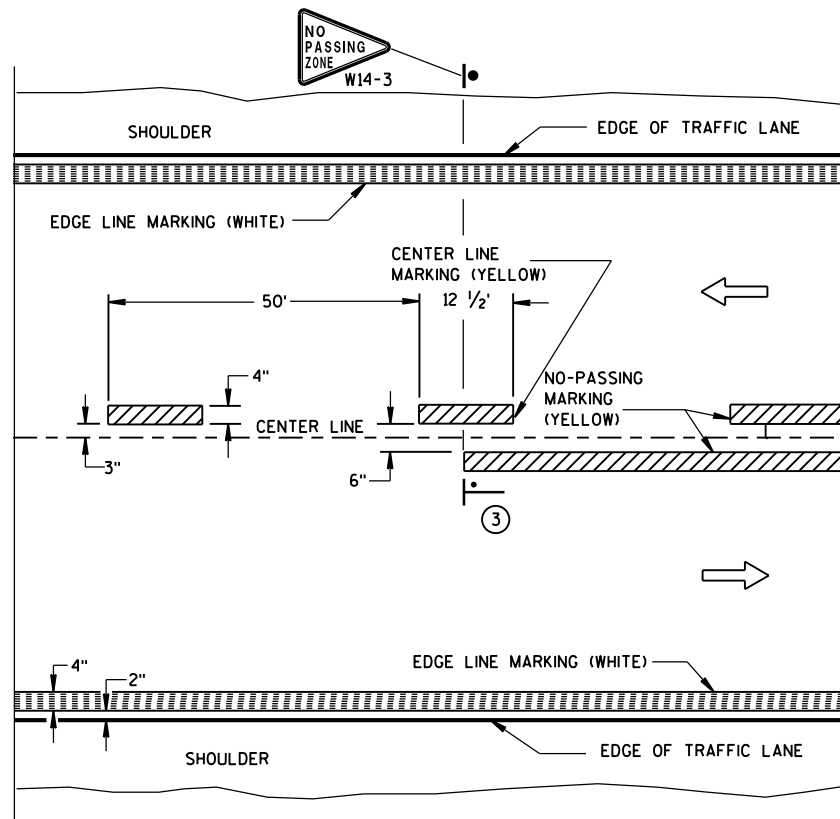
LEGEND

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

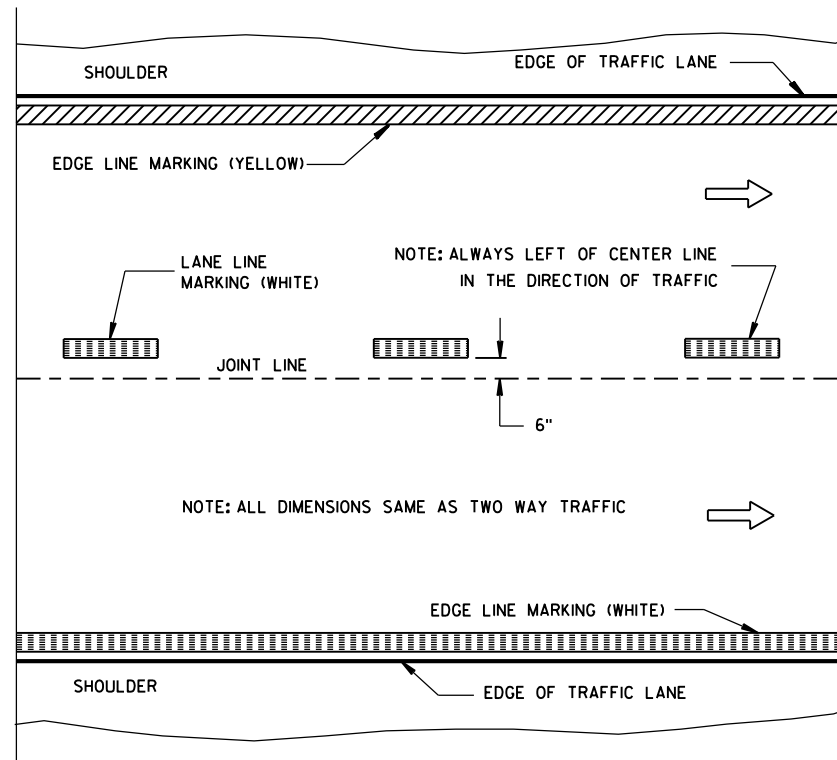
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 45 M.P.H.
OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

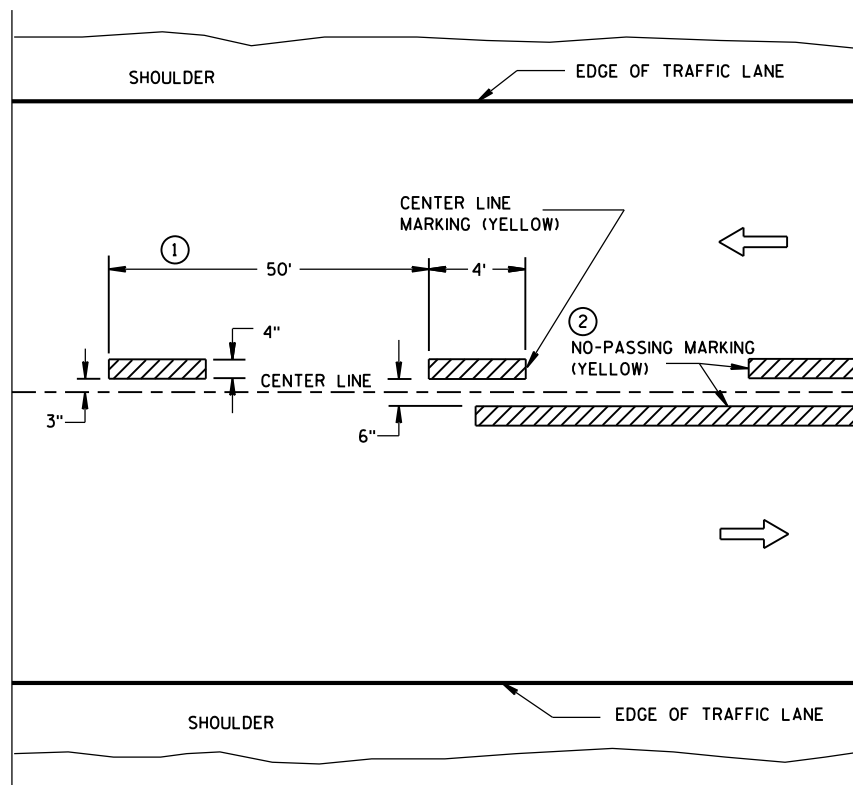


TWO WAY TRAFFIC

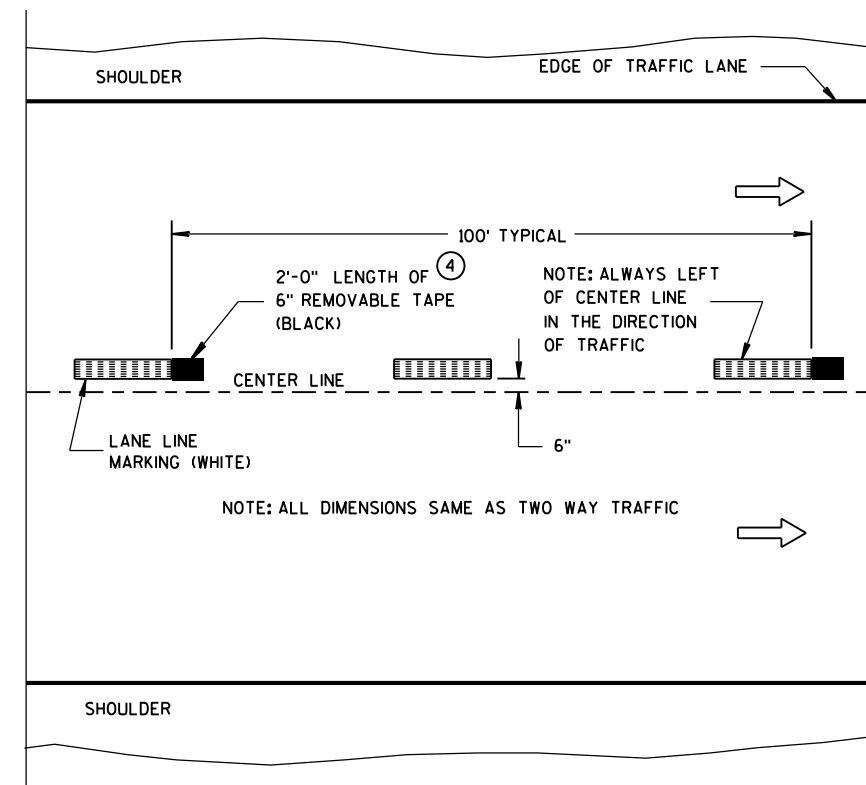


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

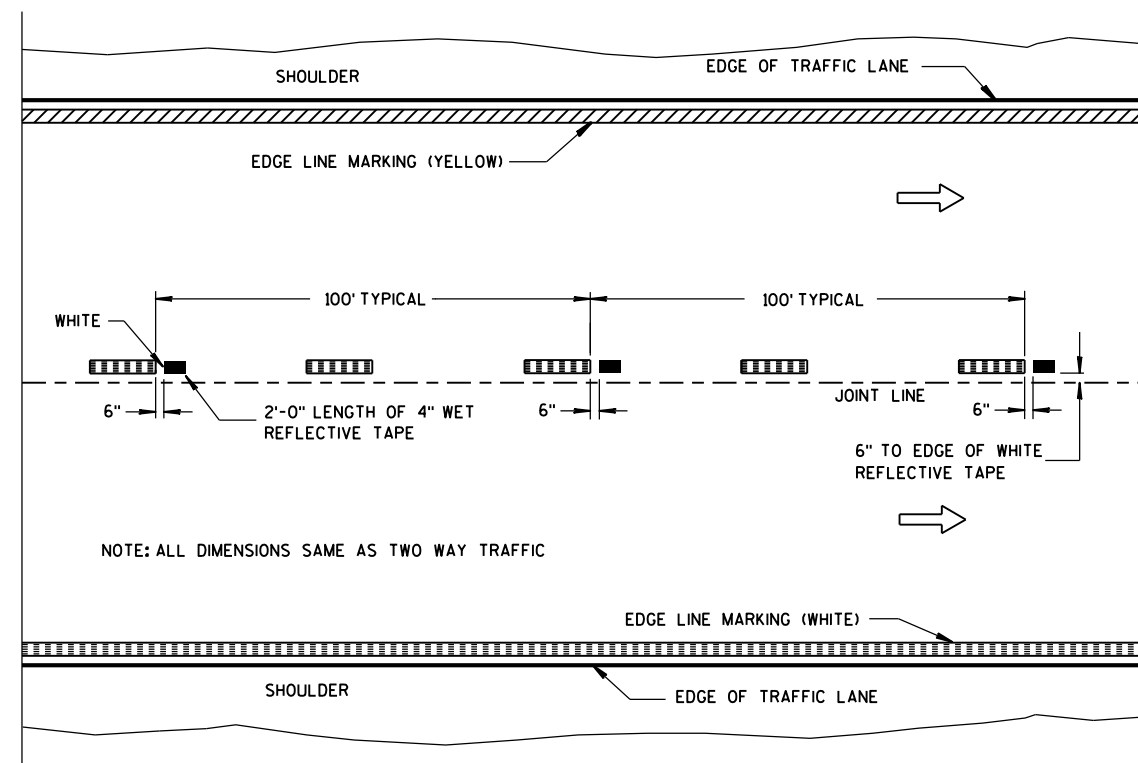
GENERAL NOTES

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

- ① HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- ② NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- ③ NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- ④ CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

- "T" MARKING
- POST MOUNTED SIGN





PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5-13-2013
DATE
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

LEGEND

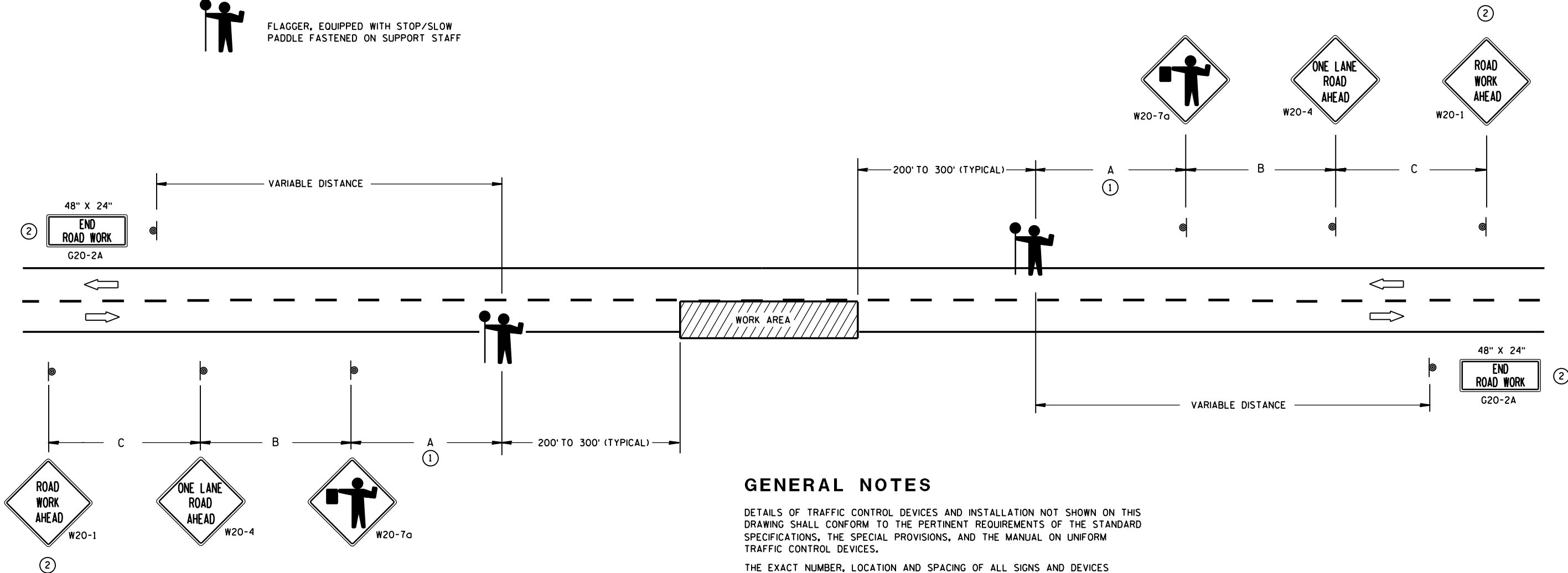
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

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



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



GENERAL NOTES

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

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

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

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

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

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

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

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

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

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

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

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

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

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

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

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

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

 **WET PAINT**

OR

WET PAINT 

W21-64 W21-64

③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

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

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

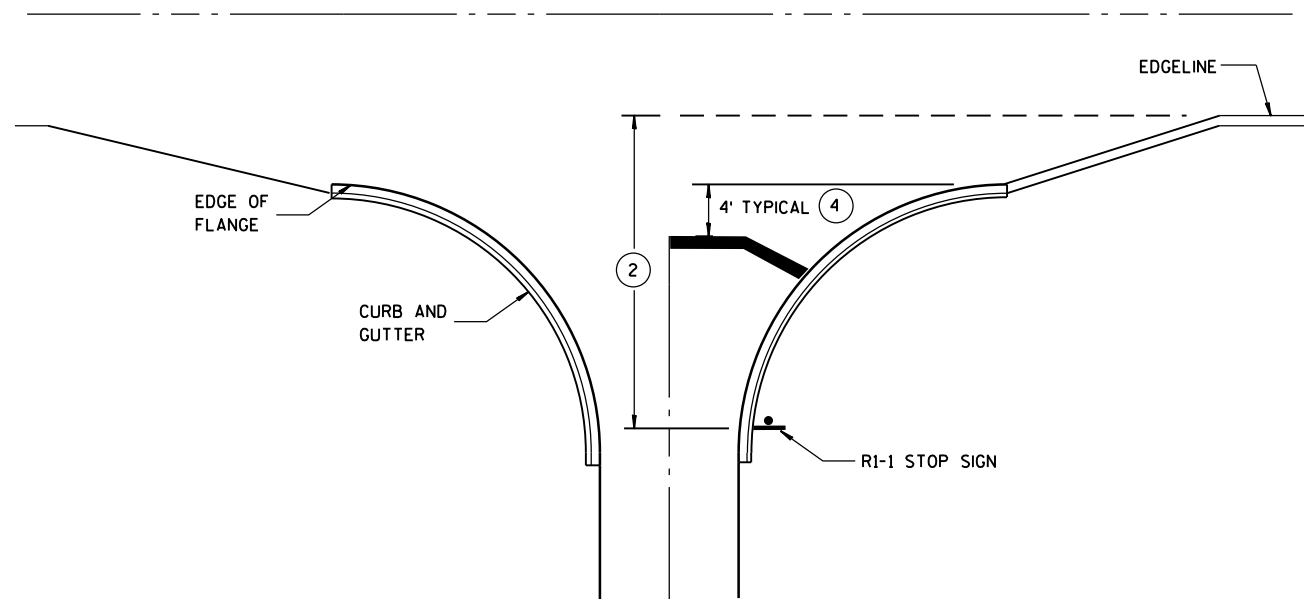
MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

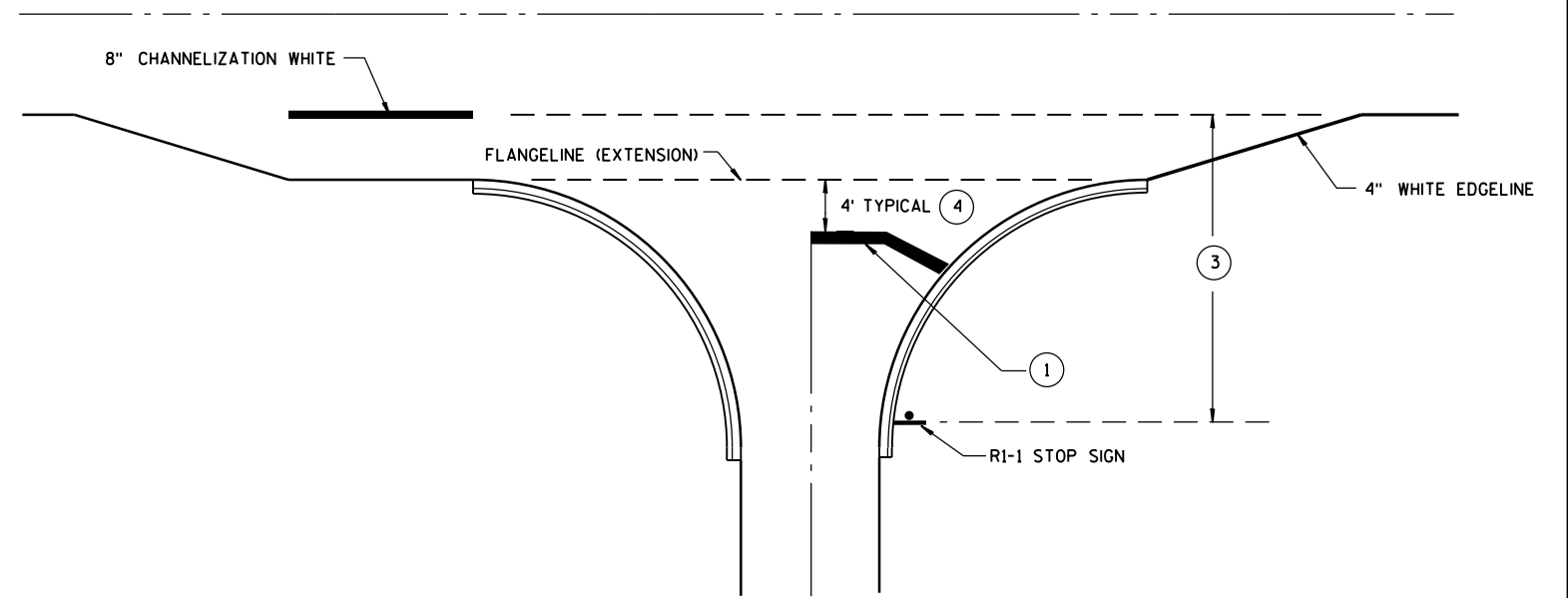
APPROVED

DATE /S/ Peter Amakobe Atepe

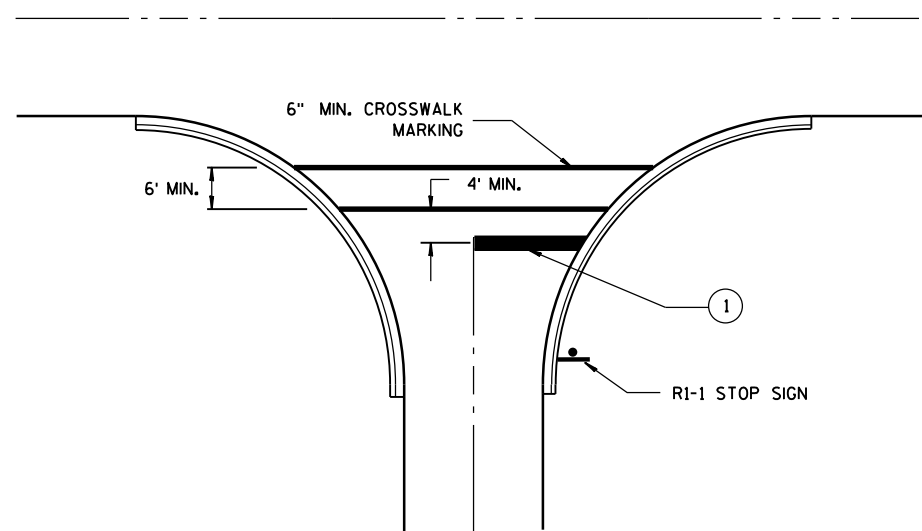
FHWA STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER



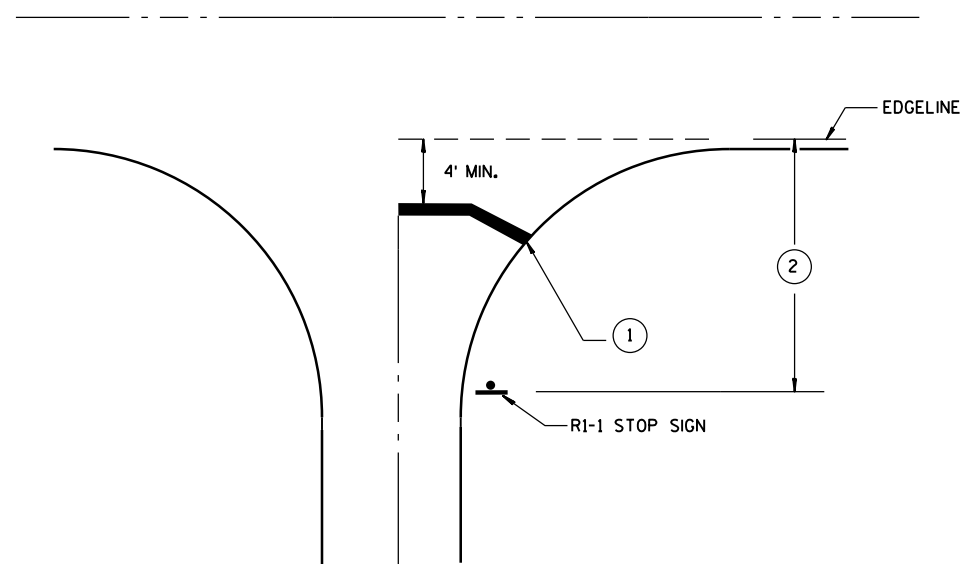
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING**



**TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER**

GENERAL NOTES

- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- ③ IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- ④ MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

**STOP LINE AND CROSSWALK
PAVEMENT MARKING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

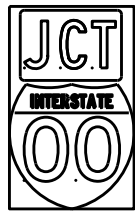
APPROVED

4/30/2013
DATE

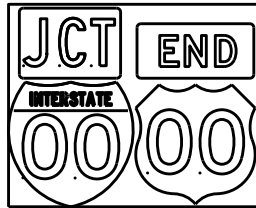
FHWA

/S/ Travis Fettes
STATE TRAFFIC ENGINEER

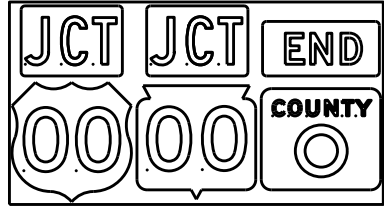
TYPICAL ASSEMBLIES



J1-1



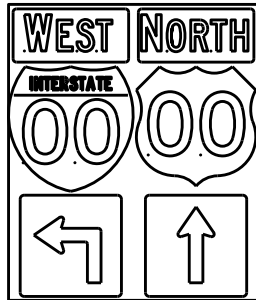
J1-2



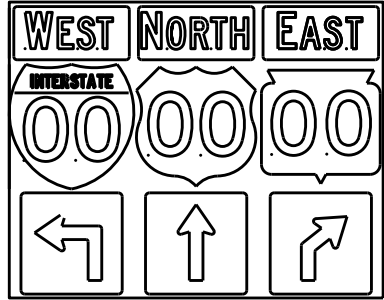
J1-3



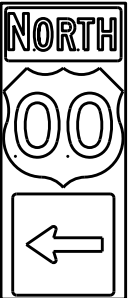
J2-1



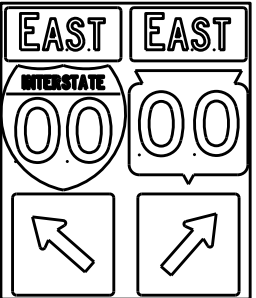
J2-2



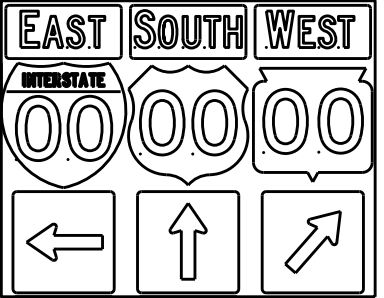
J2-3



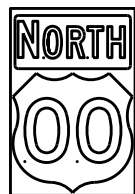
J3-1



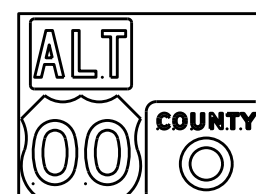
J3-2



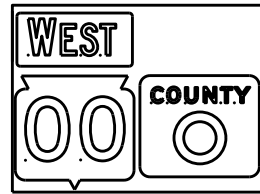
J3-3



J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

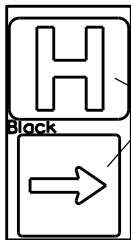


J22-1



JV

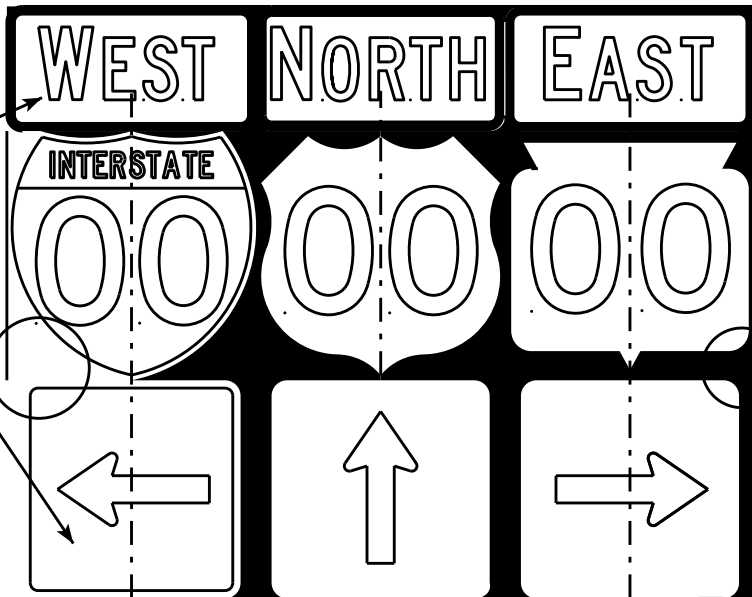
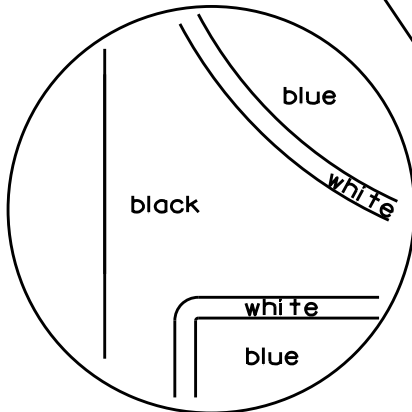
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

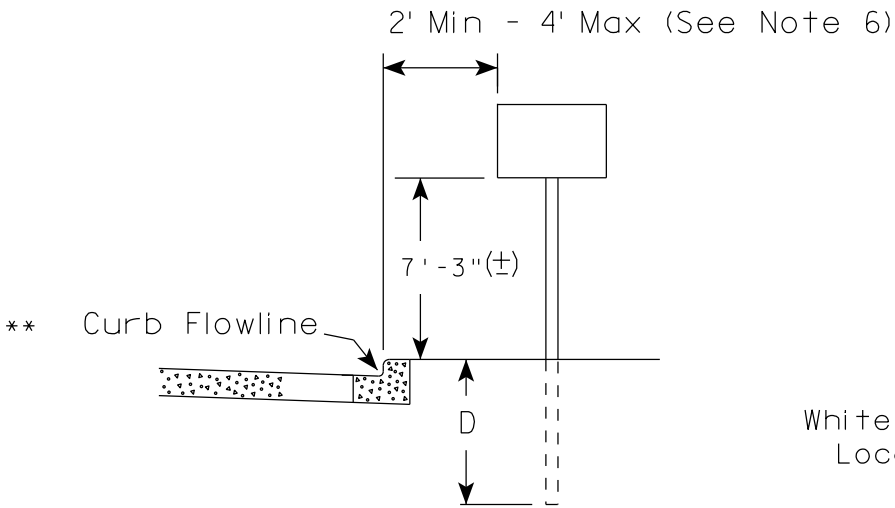
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/06/14 PLATE NO. A2-1S.8

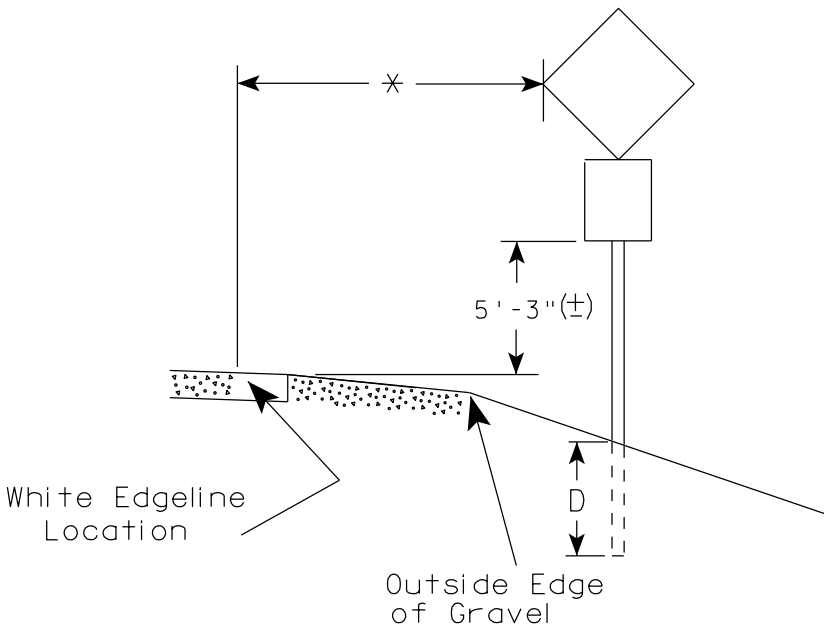
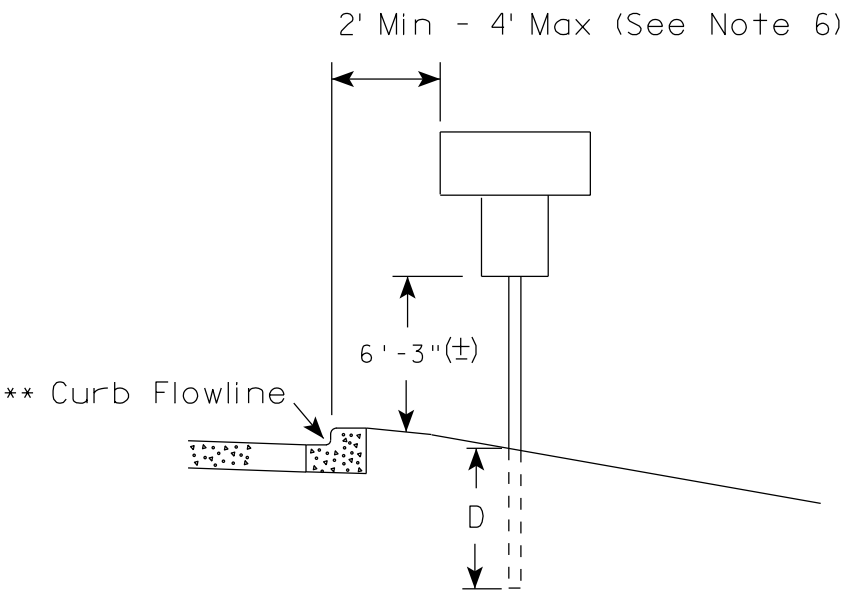
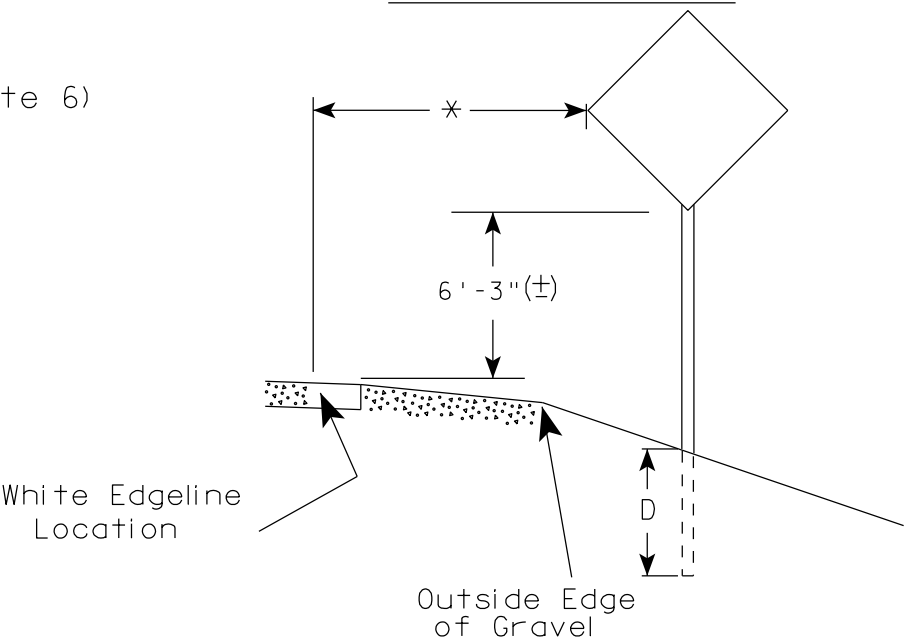
NOTES

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 inches (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.

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'-3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

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

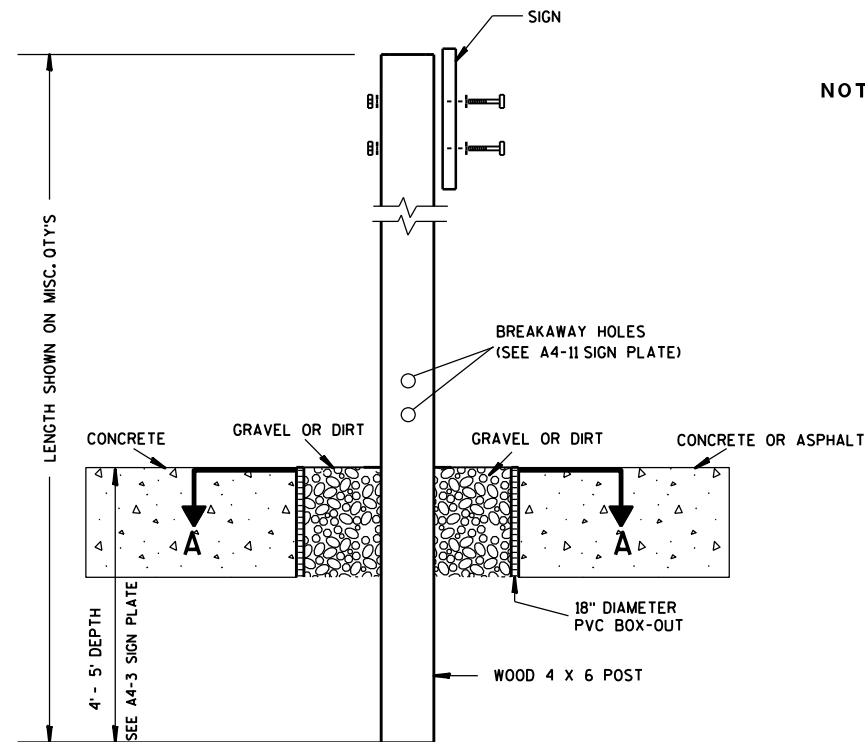
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

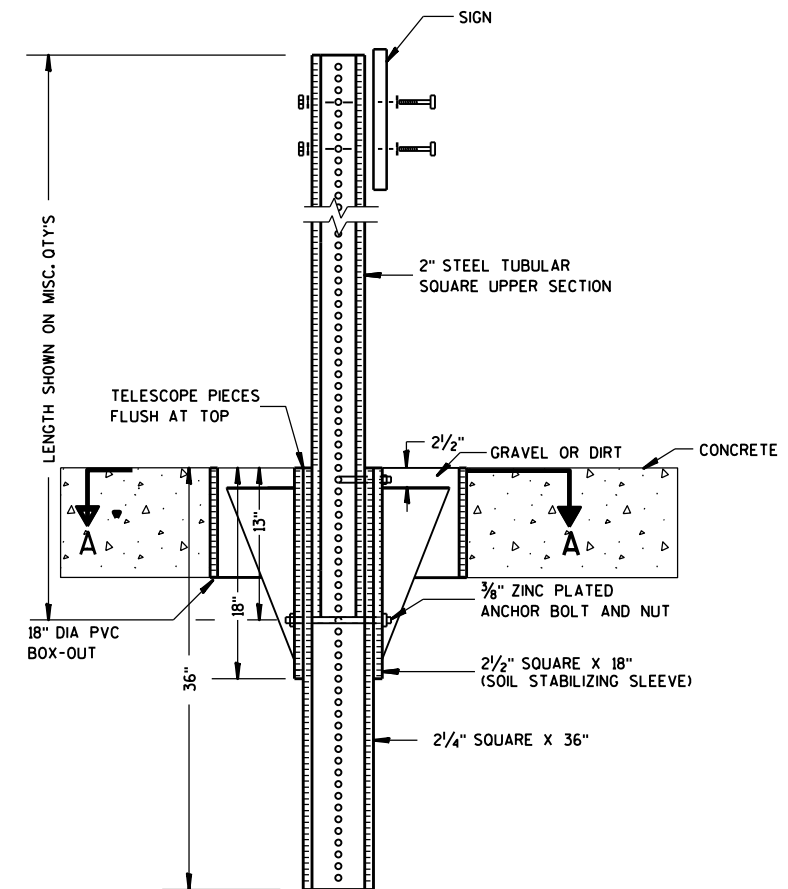
DATE 7/23/15 PLATE NO. A4-3.20



ELEVATION VIEW

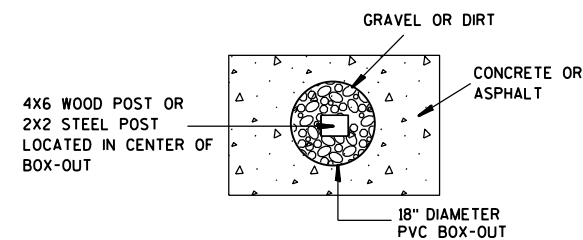
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- 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

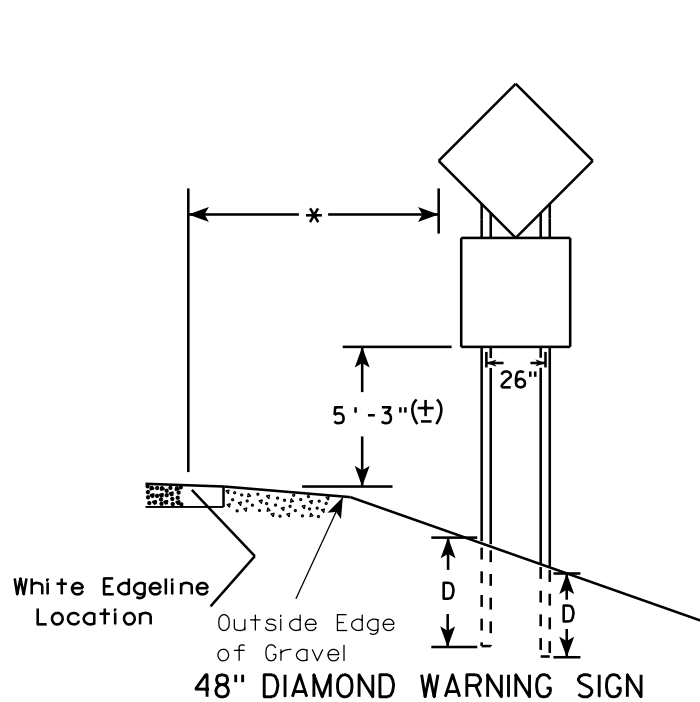
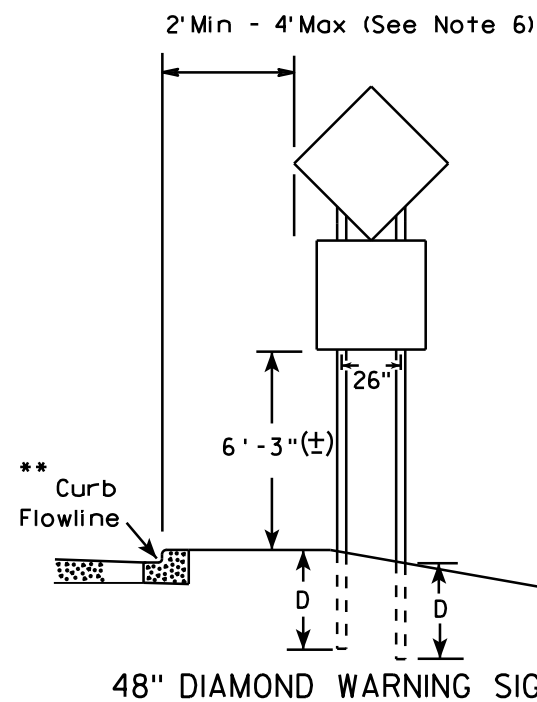
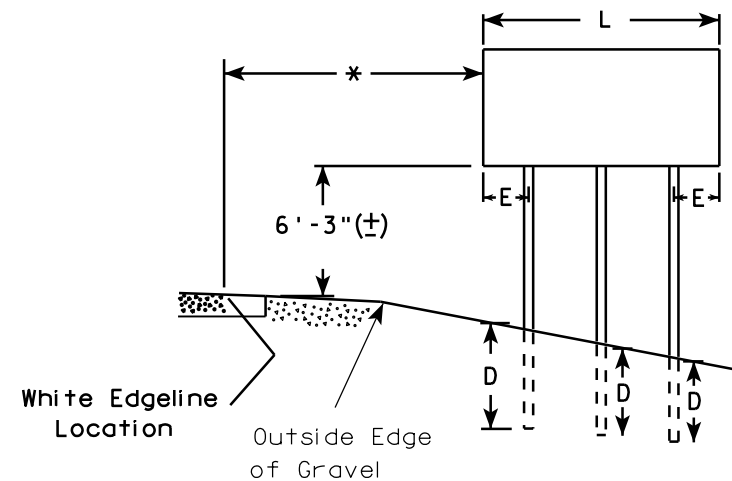
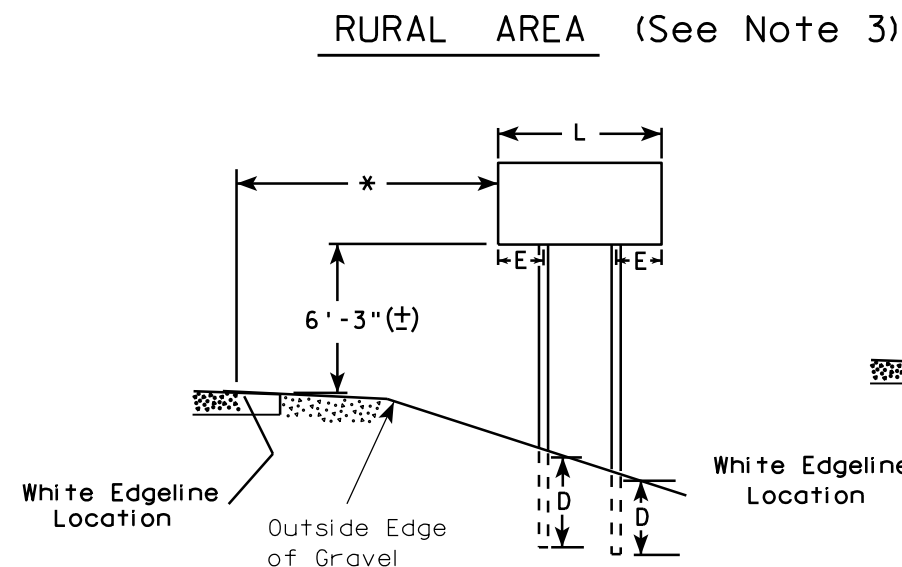
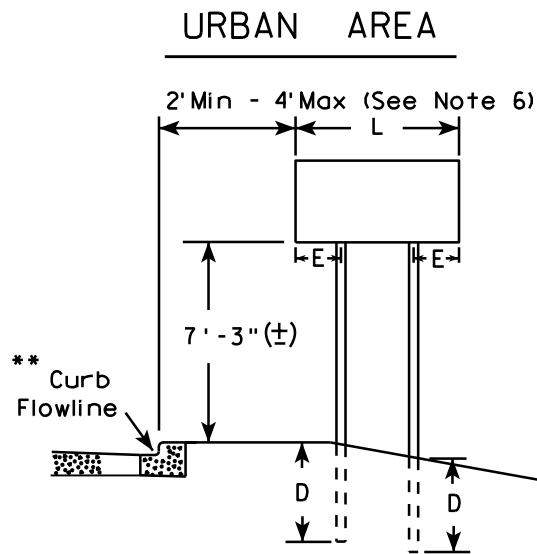
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



- GENERAL NOTES**
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 2. See tables below for required number of posts.
 3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

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

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

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

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

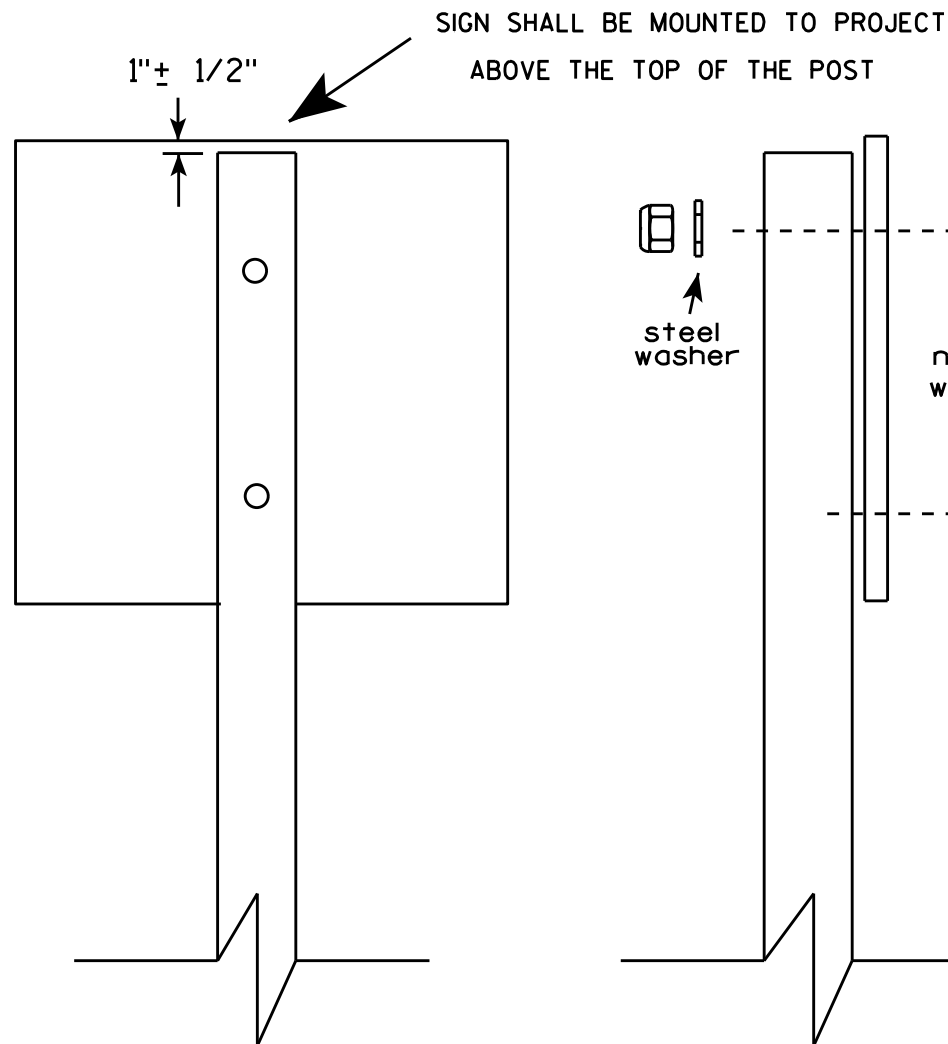
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4.14



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

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

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

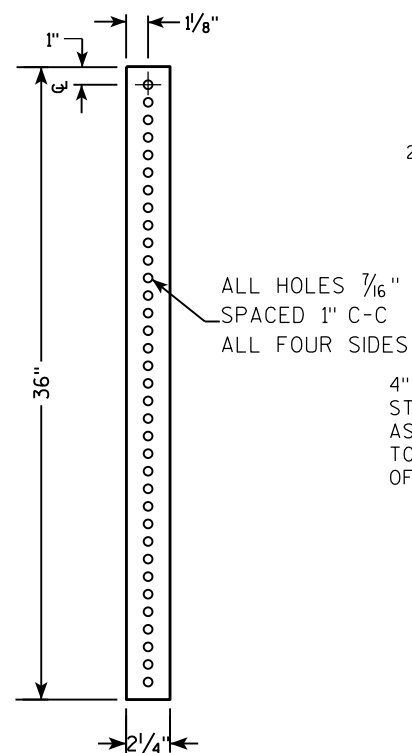
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - 5/8" X 1-3/4" Length w/ 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 for all Type H signs.

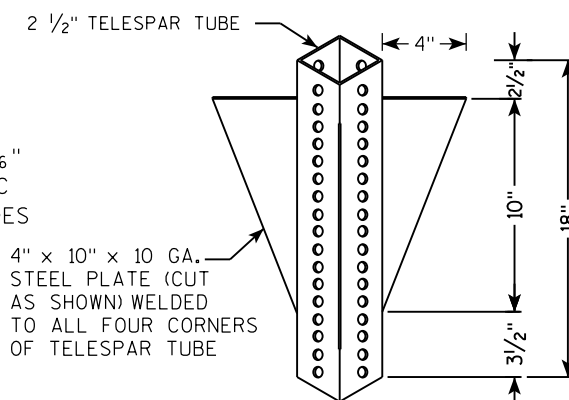
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/5/16	PLATE NO. A4-8.8

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



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



TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- Sign:** 13" wide, 13" high, 1/4" thick. Material: 1/4" PLATE.
- Sign Plate:** SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL.
- Post:** 2" STEEL TUBULAR SQUARE UPPER SECTION. ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES.
- Anchor Bolt and Nut:** 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT.
- Gravel or Dirt:** 2 1/2" GRAVEL OR DIRT.
- Soil Stabilizing Sleeve:** 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE).
- Post Section:** 2 1/4" SQUARE X 36".
- Box-Out:** 18" DIA SCHEDULE 40 PVC BOX-OUT.
- Telescope Pieces:** TELESCOPE PIECES FLUSH AT TOP.
- Dimensions:** 13", 13", 13", 18", 36".

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY.

Side View Dimensions:

- Overall height: 36"
- Section A-A: 18" (top section), 12" (bottom section)
- Section B-B: 18" (top section), 12" (bottom section)

End View Dimensions:

- Overall width: 2 1/4" SQUARE X 36"
- Section A-A: 18" (top section), 12" (bottom section)
- Section B-B: 18" (top section), 12" (bottom section)

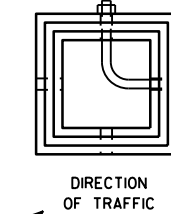
Labels and Specifications:

- SIGN
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
- 2" STEEL TUBULAR SQUARE UPPER SECTION
- ALL HOLES 7/16" SPACED 1" C-C
- ALL FOUR SIDES
- 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
- 1"
- 3/8" ZINC PLATED ANCHOR BOLT AND NUT
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- TELESCOPE PIECES FLUSH AT TOP
- 2 1/4" SQUARE X 36"

Notes:

- LENGTH SHOWN ON MISC. QTY'S

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



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 NO. A4-9.9

PROJECT NO:

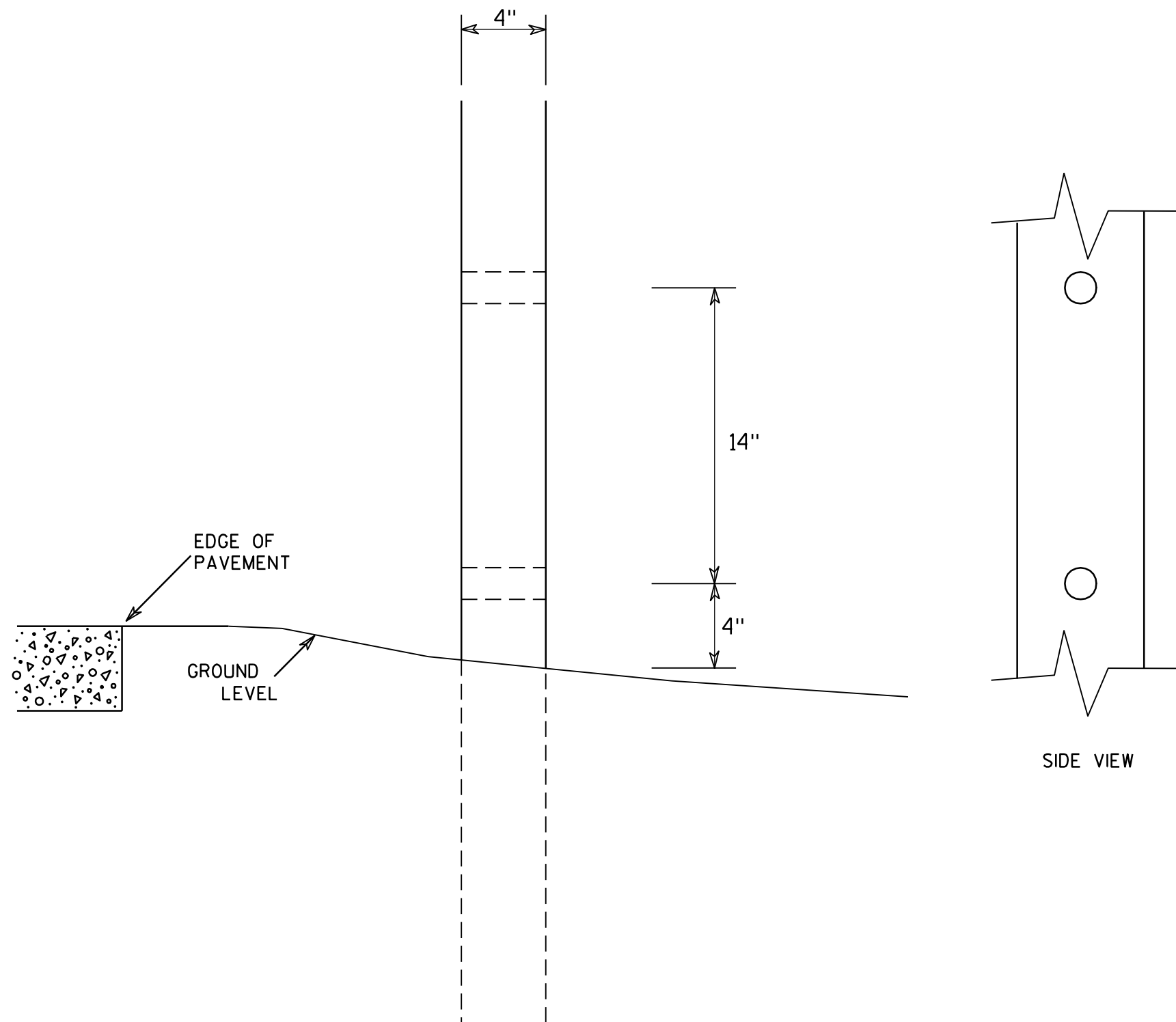
HWY:

COUNTY:

SHEET NO:

1

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

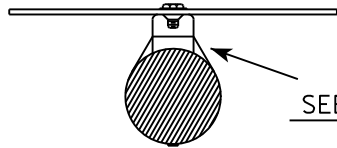
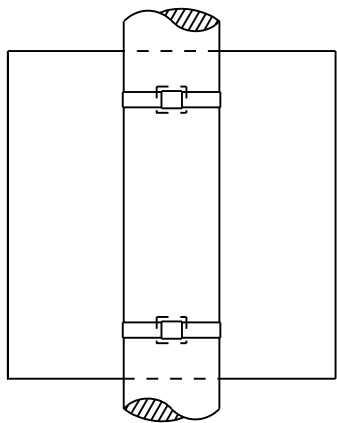
COUNTY:

SHEET NO:

E

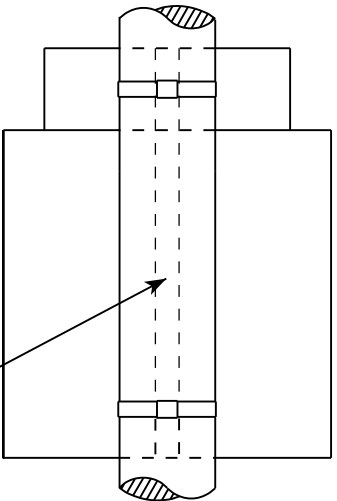
BANDING

SINGLE SIGN

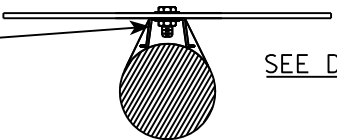


SEE DETAIL A

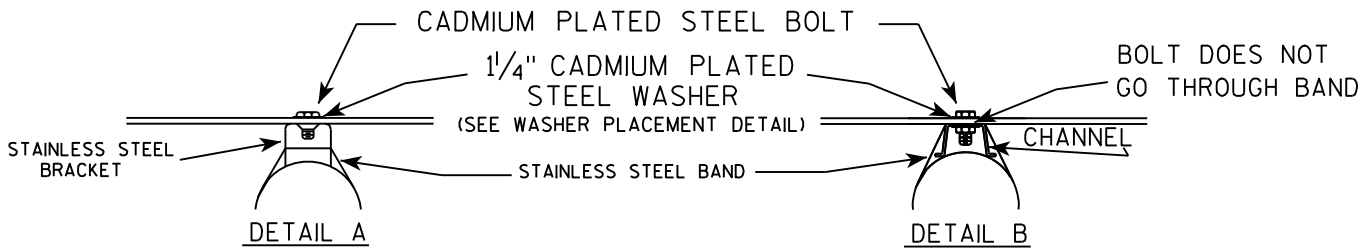
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



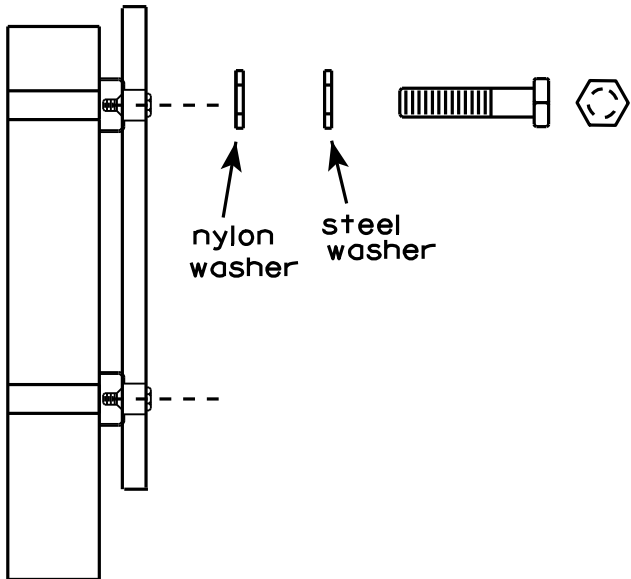
SEE DETAIL B



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 $\frac{3}{4}$ " in width and 0.025" thickness.

WASHER PLACEMENT



nylon washer

steel washer

WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 8/16/13

PLATE NO. A5-9.3

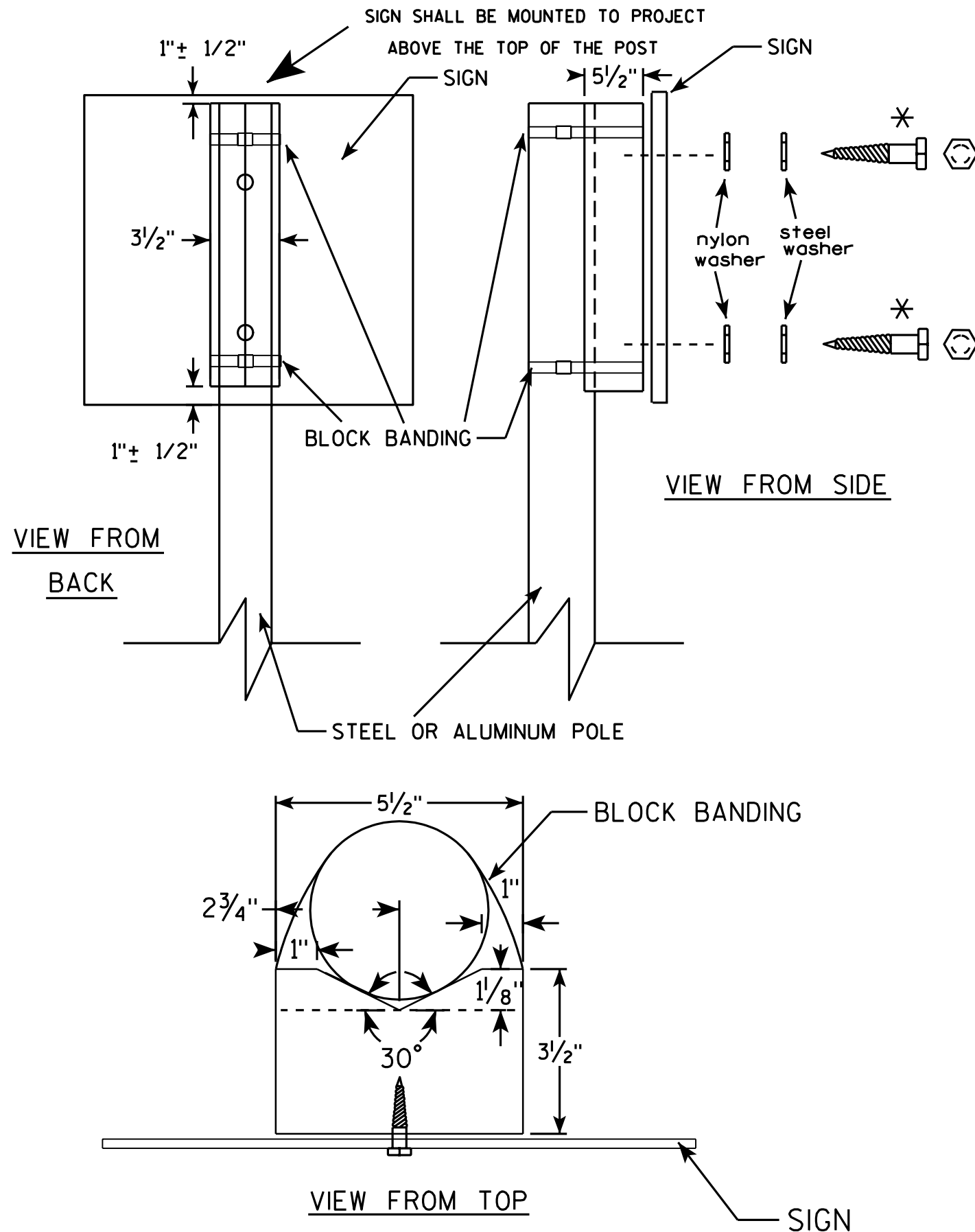
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

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, 3/4" 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 NORMALLY 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 1 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

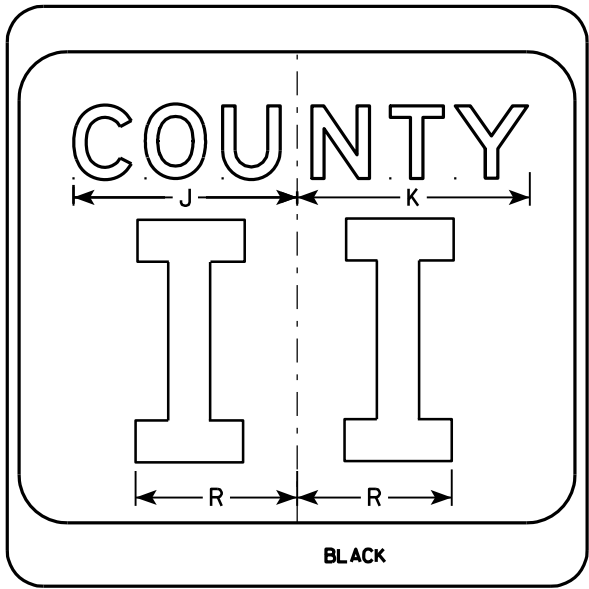
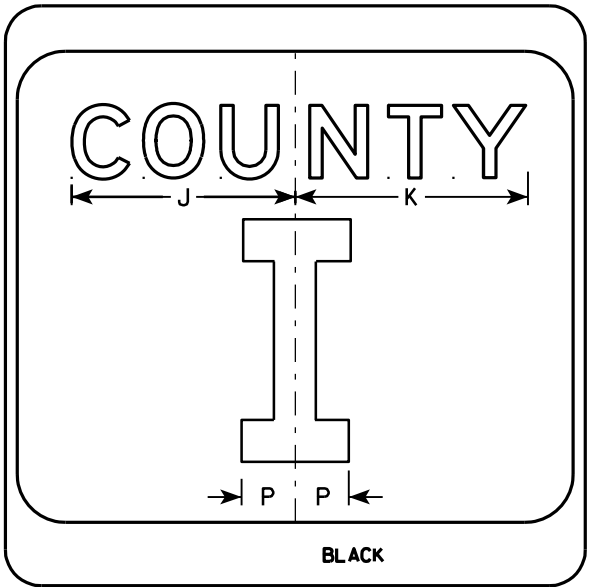
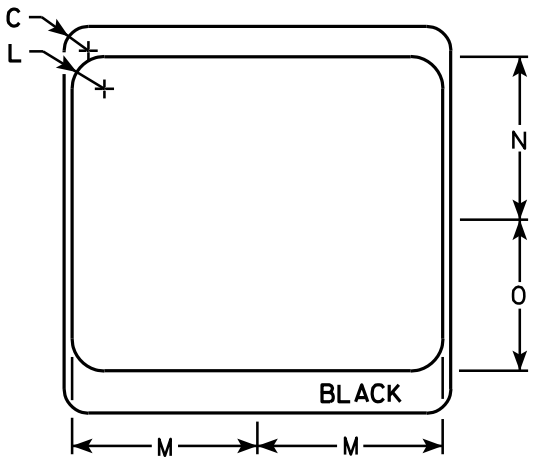
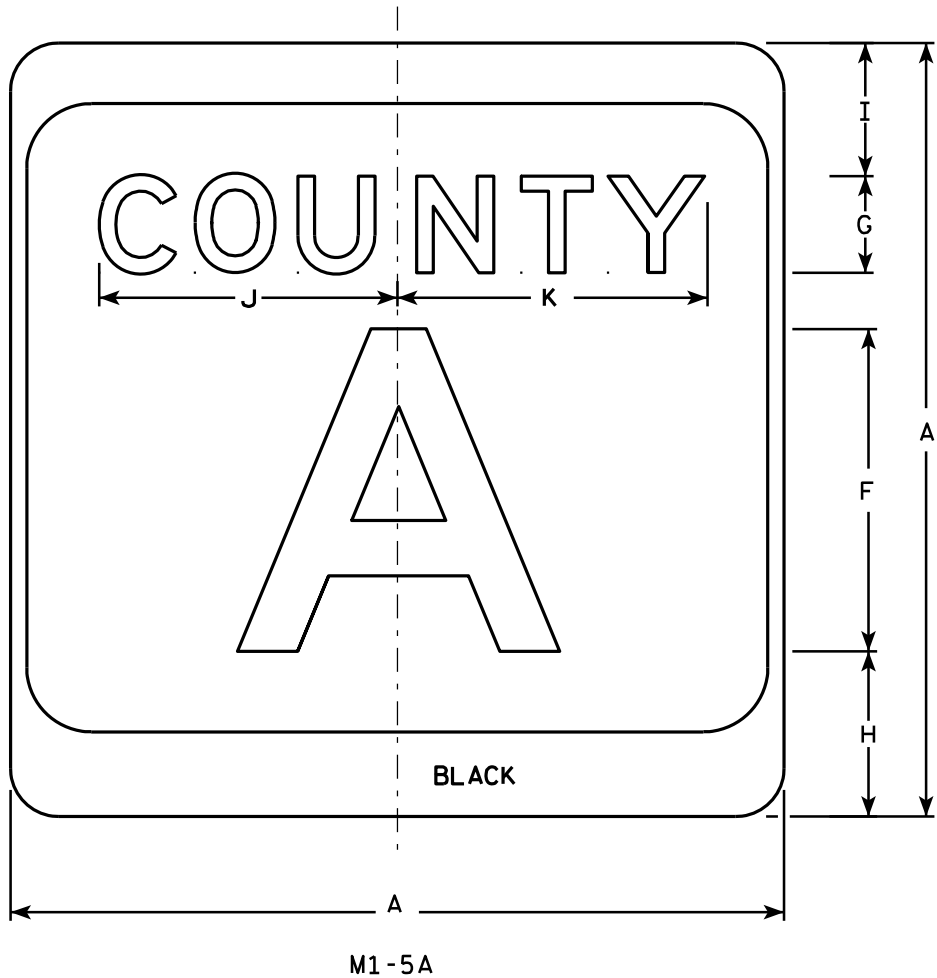
DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO:

E

7



NOTES

- Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - White & Black - See Note 7
Message - Black
- Message Series - see Note 5
- 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.
- 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.
- Substitute appropriate letters & optically center to achieve proper balance.
- 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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

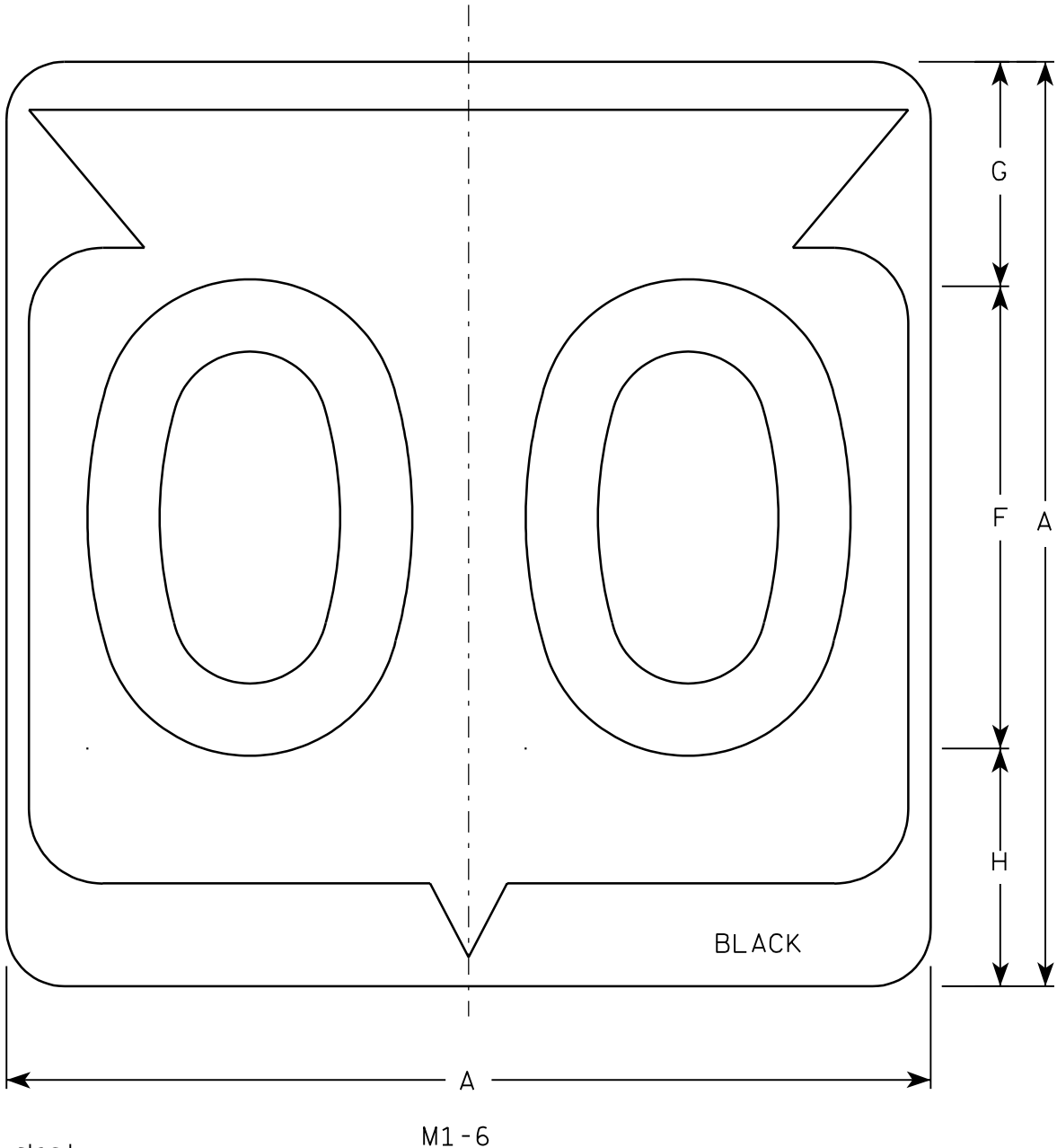
CTH MARKER
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
For State Traffic Engineer

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

7



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 m ²
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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

FILE NAME : C:\Users\Projects\tr_stdp\late\M16.DGN

PLOT DATE : 13-OCT-2005 14:55

PLOT BY : DITJPH

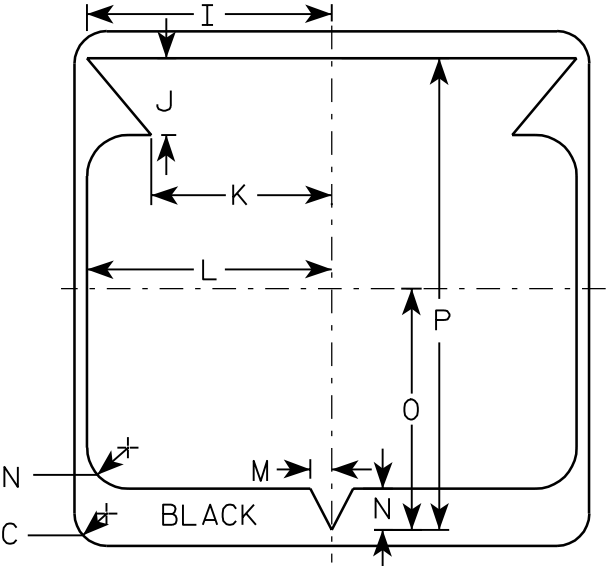
PLOT NAME :

PLOT SCALE : 6.715871:1.000000

WISDOT/CADDs SHEET 42

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



STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

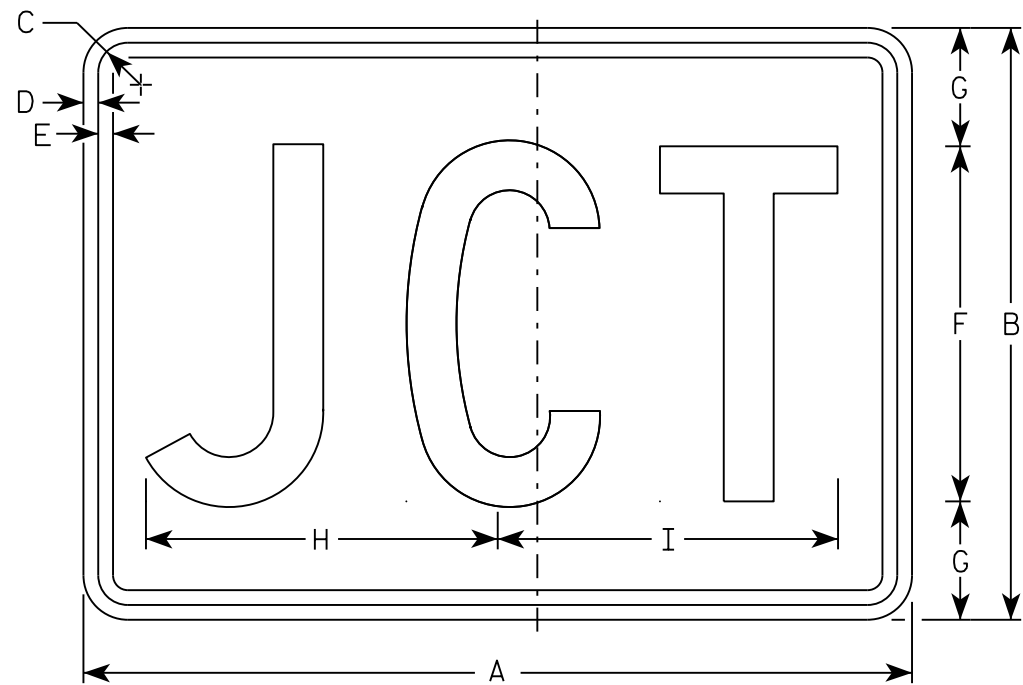
WISCONSIN DEPT OF TRANSPORTATION

APPROVED

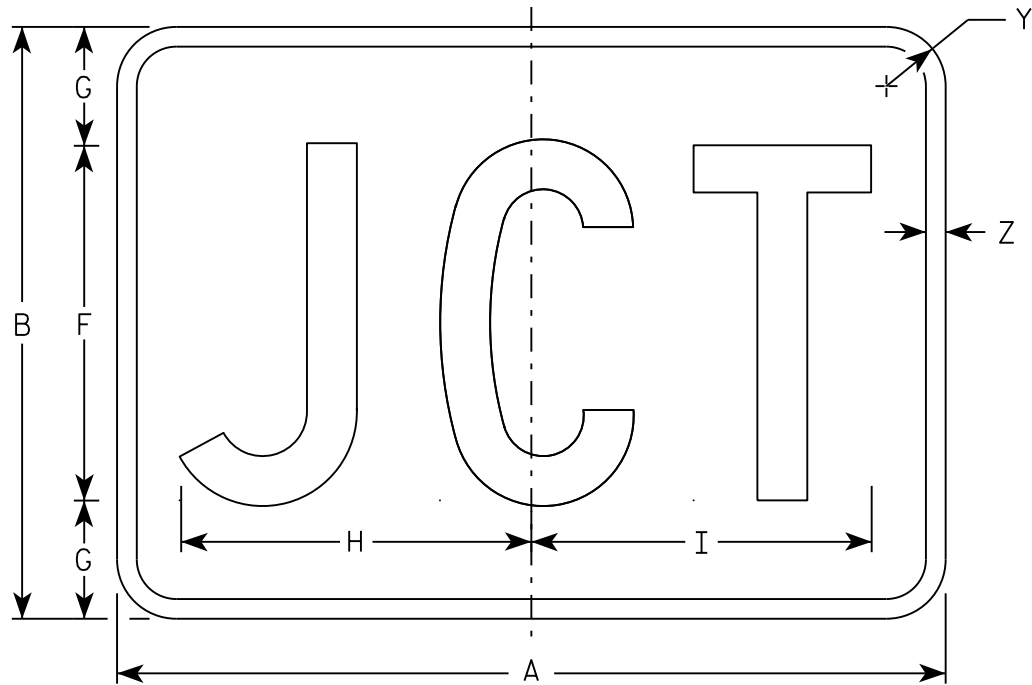
Chester J. Spang
for State Traffic Engineer

DATE 3/20/02

PLATE NO. M1-6.9



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

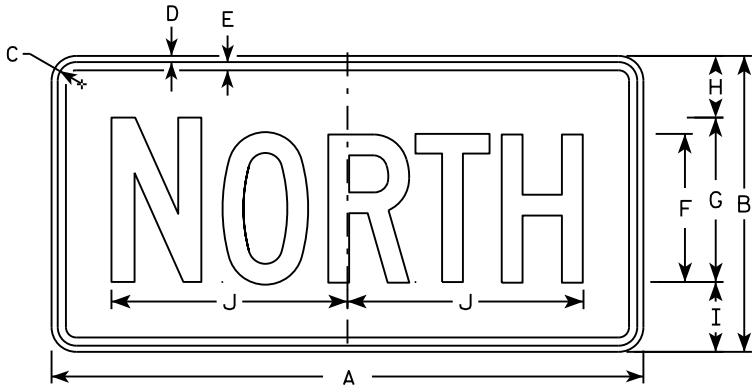
APPROVED

Matthew R. Rauch

For State Traffic Engineer

DATE 10/15/15

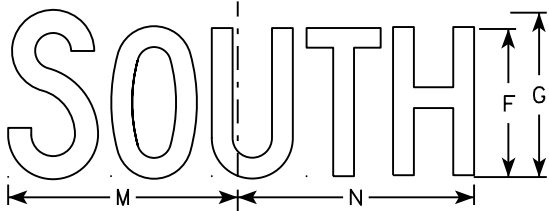
PLATE NO. M2-1.12



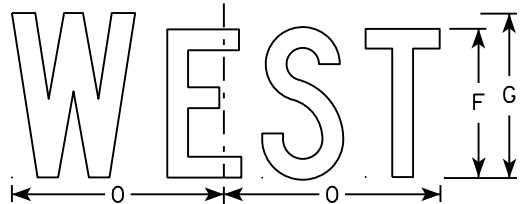
M3-1
MM3-1
MP3-1



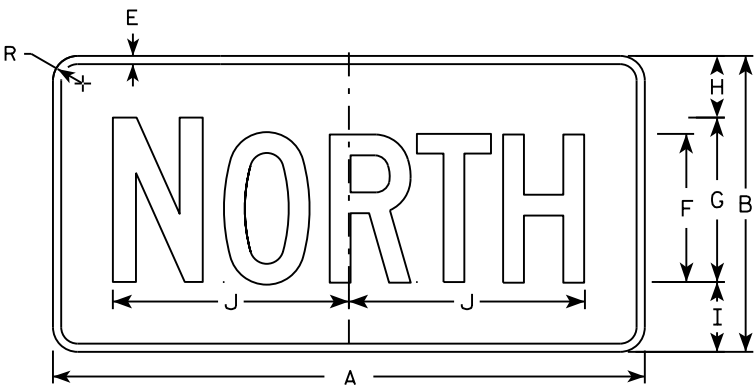
M3-2
MM3-2
MP3-2



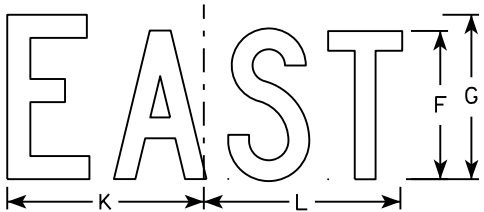
M3-3
MM3-3
MP3-3



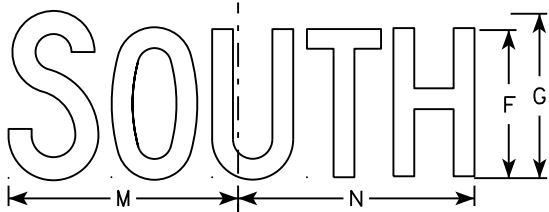
M3-4
MM3-4
MP3-4



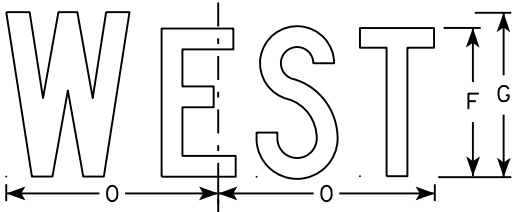
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



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.

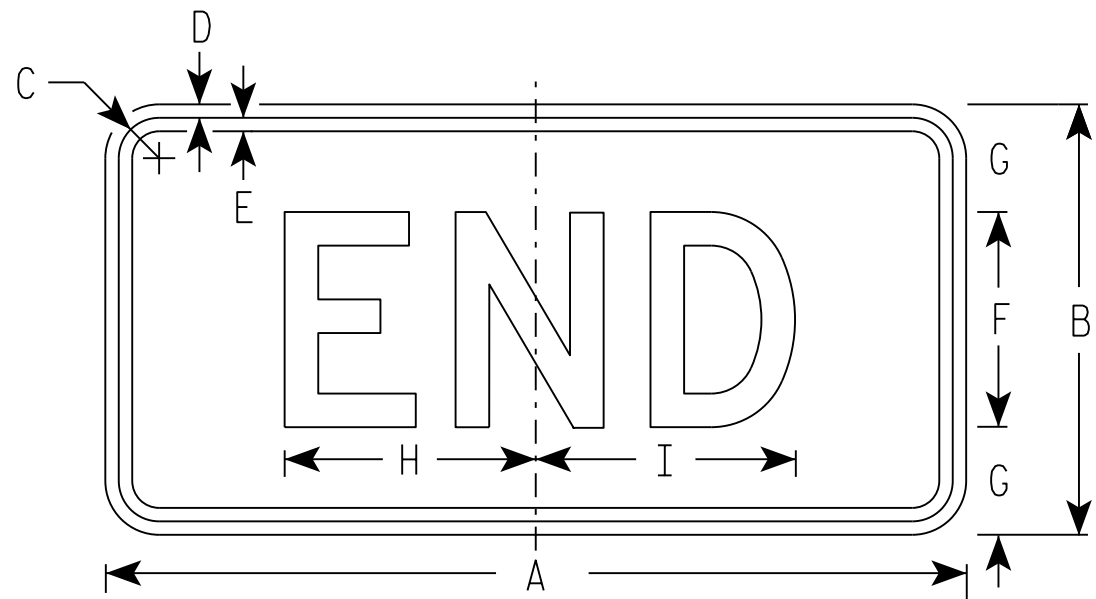
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	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 thru M3-4
SERIES

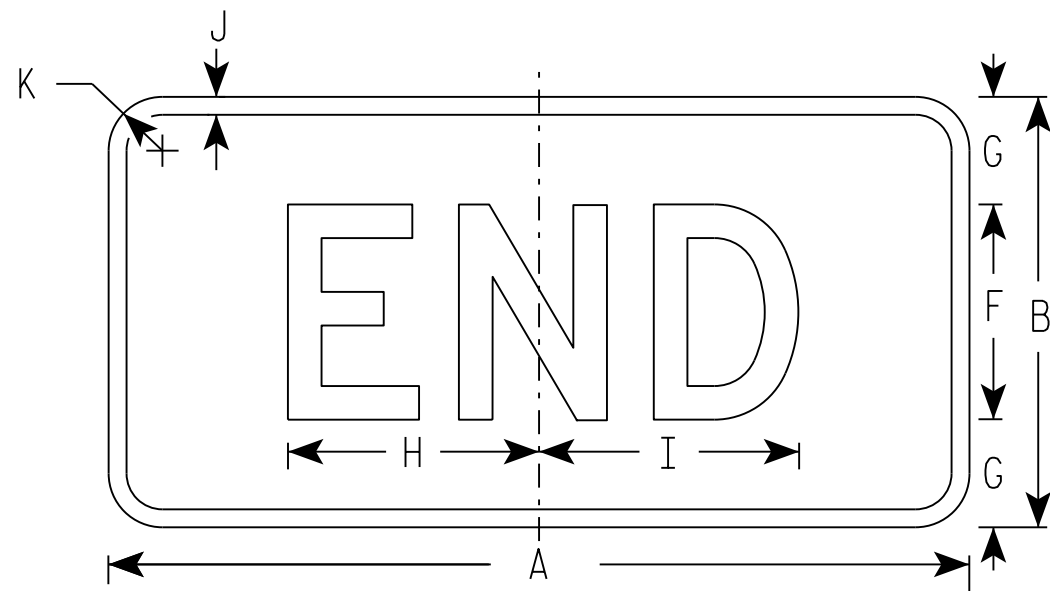
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

- Sign is Type II - Type H
- Color:
Background - See note 5
Message - See note 5
- Message Series - D
- 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.
- M4-6 Background - White
Message - Black
MB4-6 Background - Blue
Message - White
MK4-6 Background - Green
Message - White
MM4-6 Background - White
Message - Green
MN4-6 Background - Brown
Message - White
MP4-6 Background - White
Message - Blue
MR4-6 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	24	12	1 1/8	3/8	3/8	6	3	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

STANDARD SIGN
M4-6

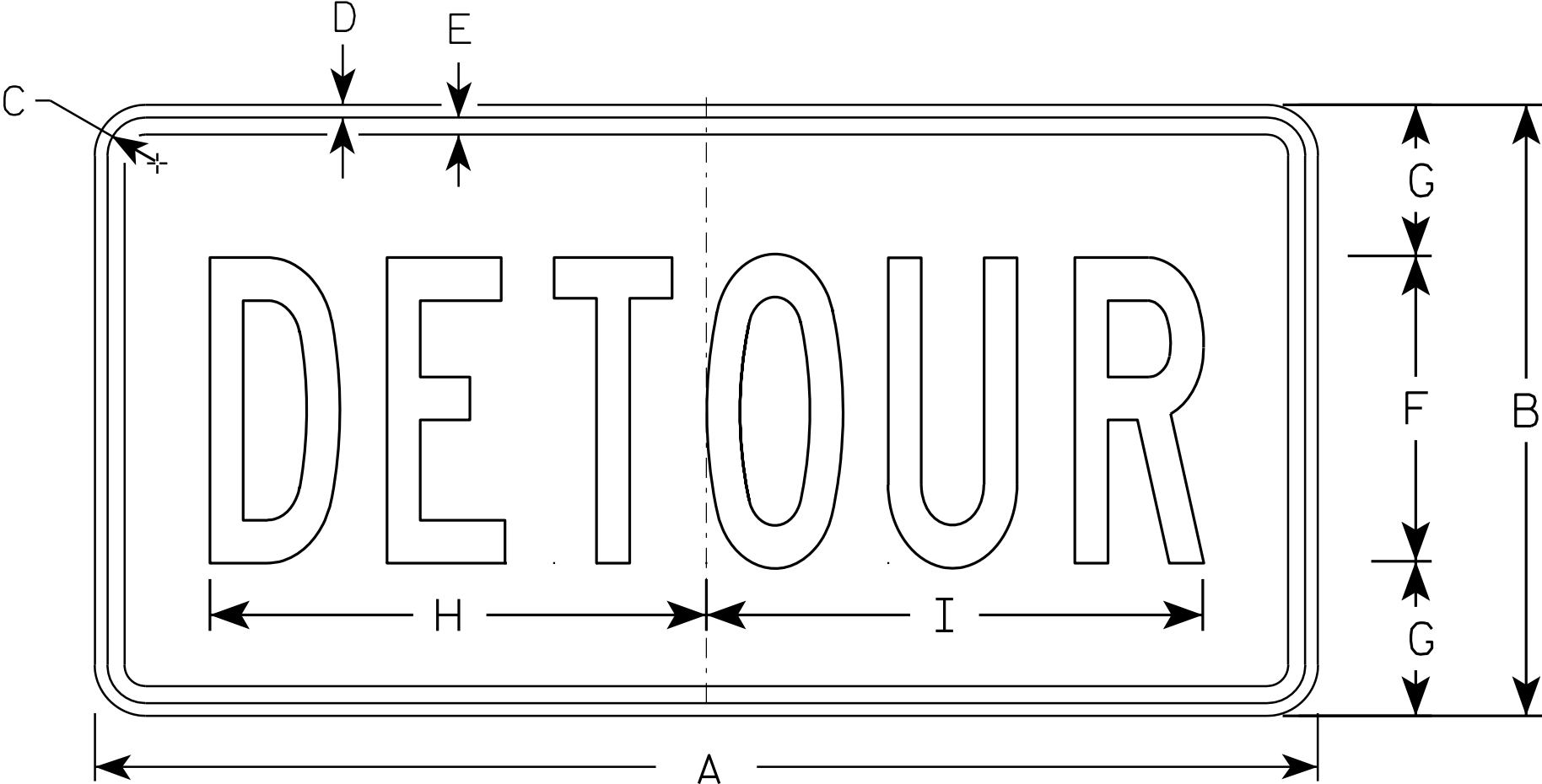
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M4-7.9

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - 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.



M4 - 8

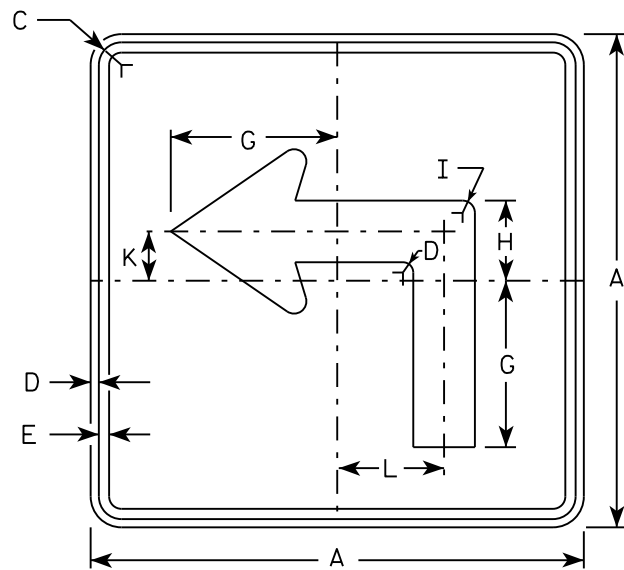
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Areg. sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4 - 8

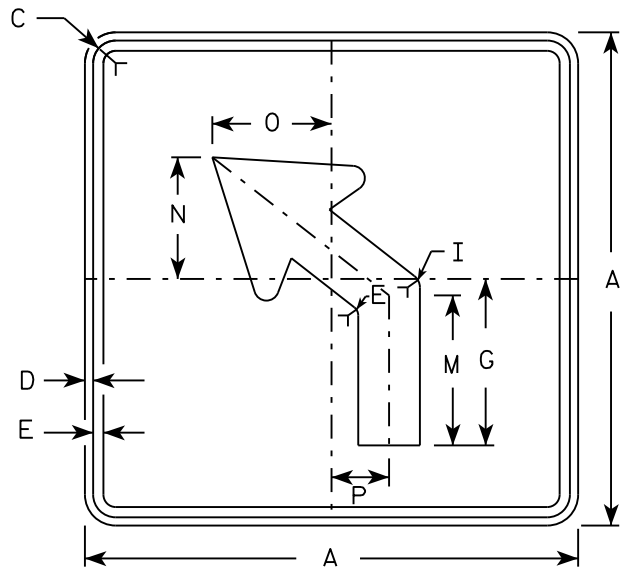
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

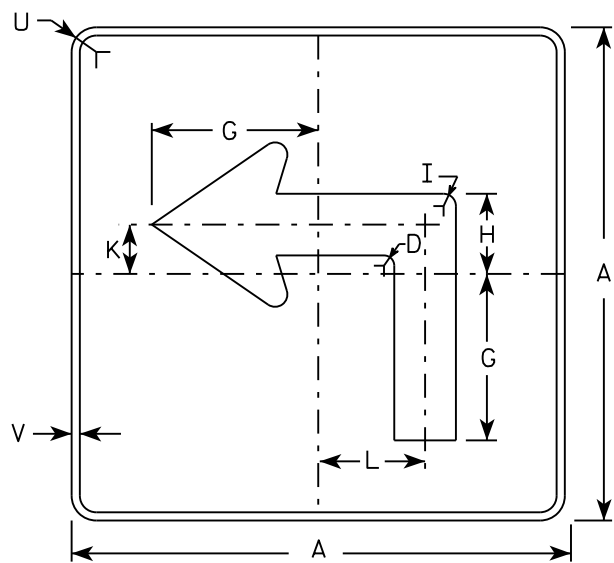
DATE 11/10/10 PLATE NO. M4-8.2



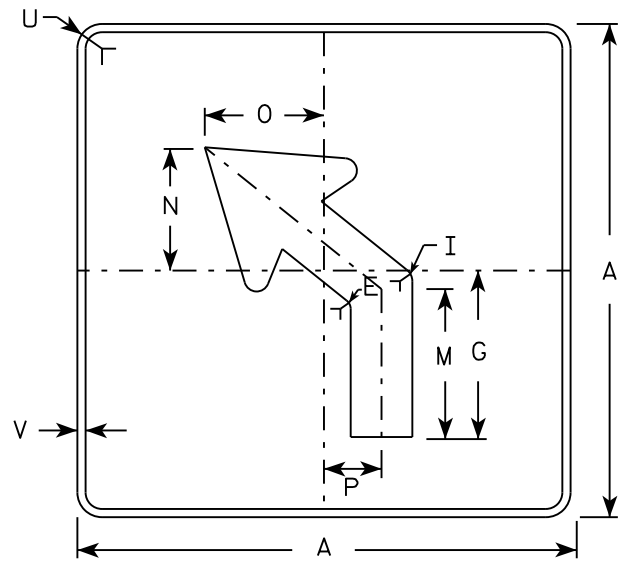
M5-1L
MM5-1L
M05-1L
MP5-1L



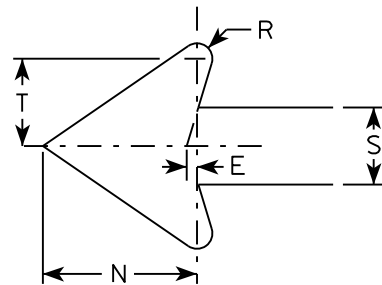
M5-2L
MM5-2L
M05-2L
MP5-2L



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



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



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 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.
- | | |
|-----------------|---|
| 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 |
| M05-1 and M05-2 | 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 |
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

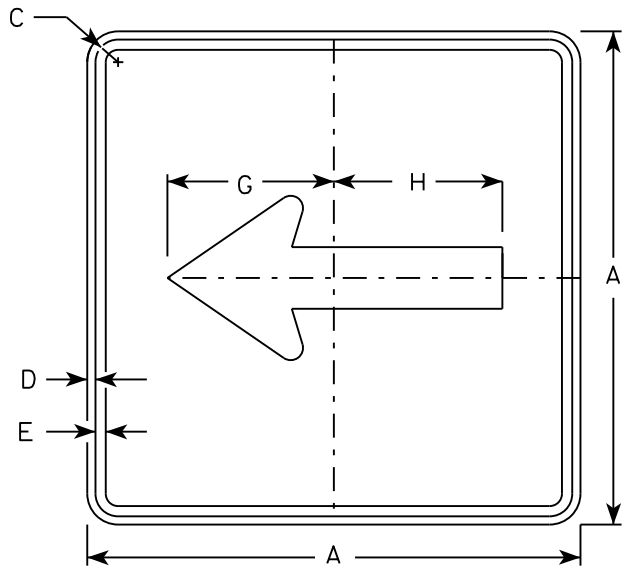
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25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

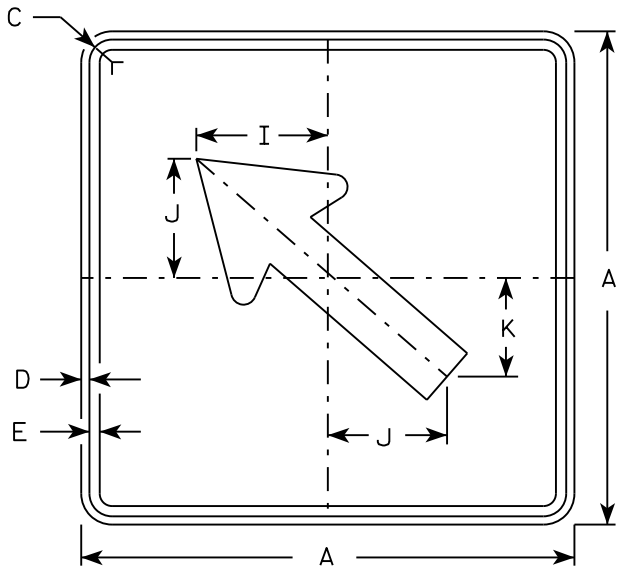
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

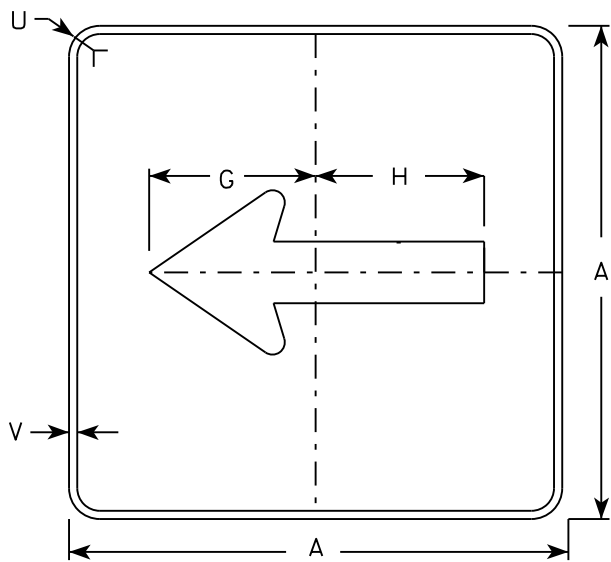
DATE 10/15/15 PLATE NO. M5-1.13



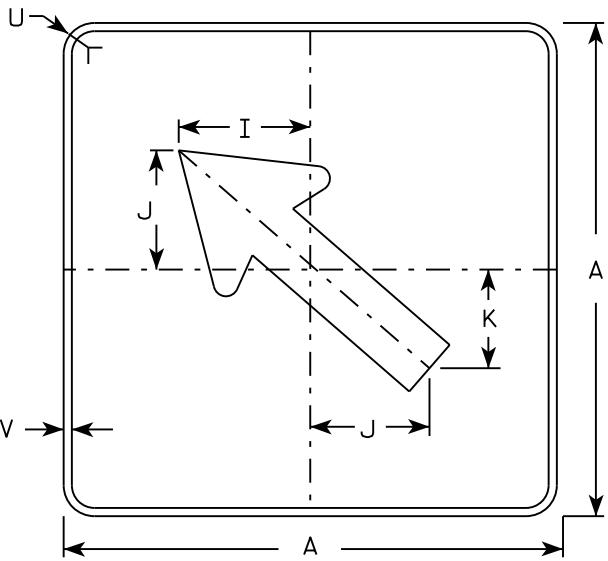
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



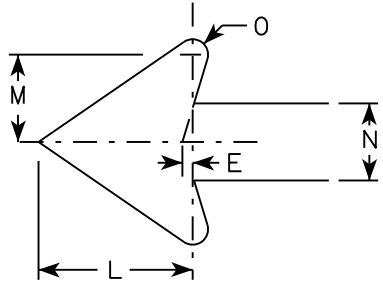
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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



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



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 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.
- 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
M06-1 and M06-2 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

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

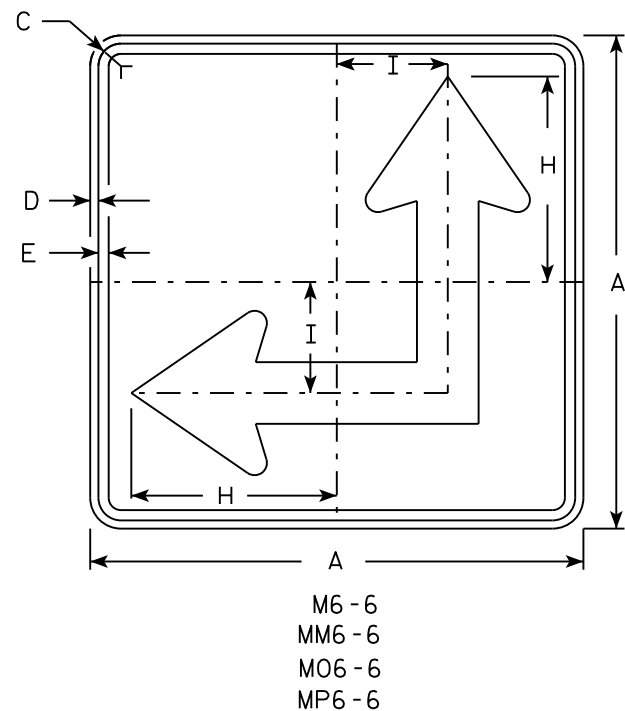
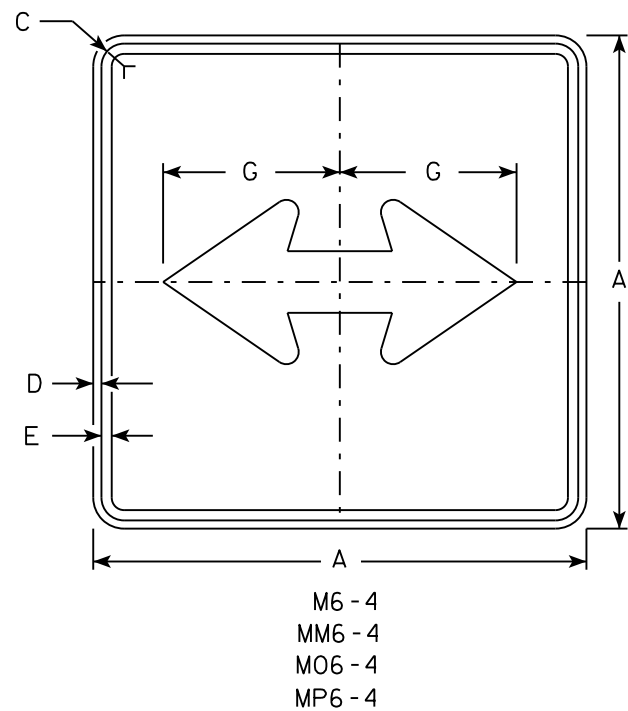
E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

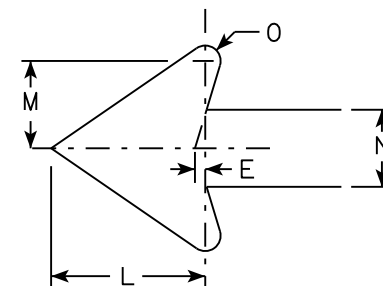
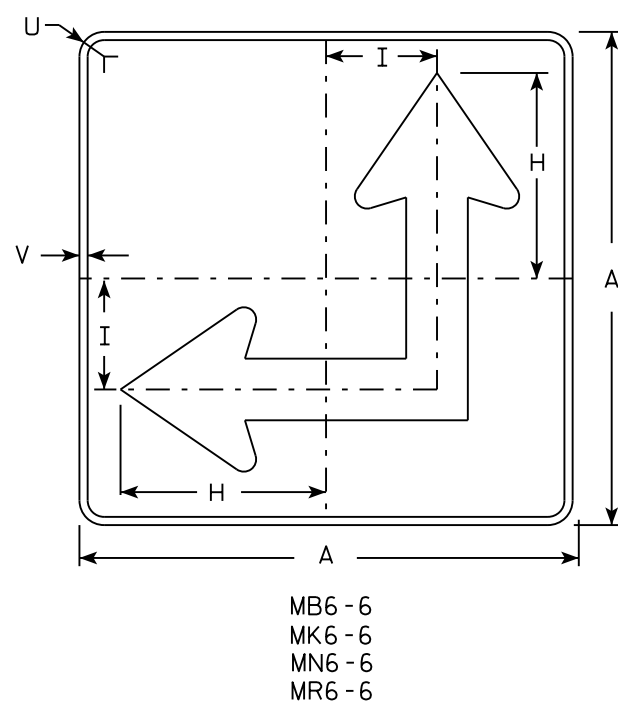
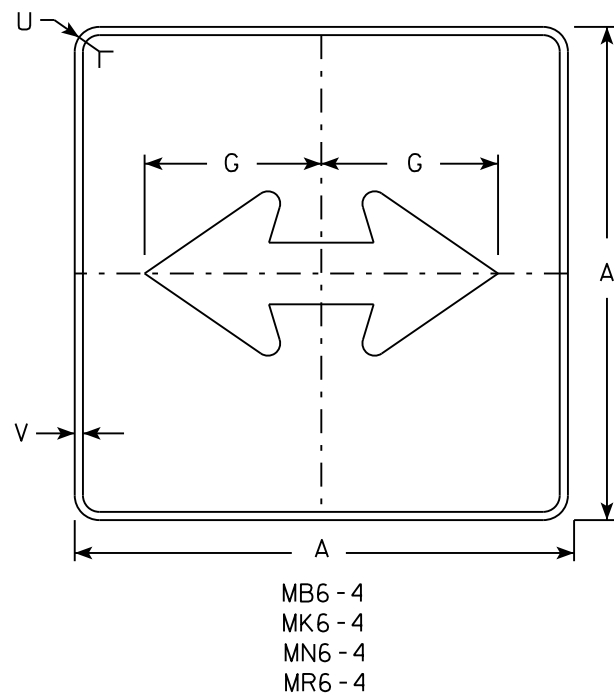
APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15



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
M06-4 and M06-6 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.



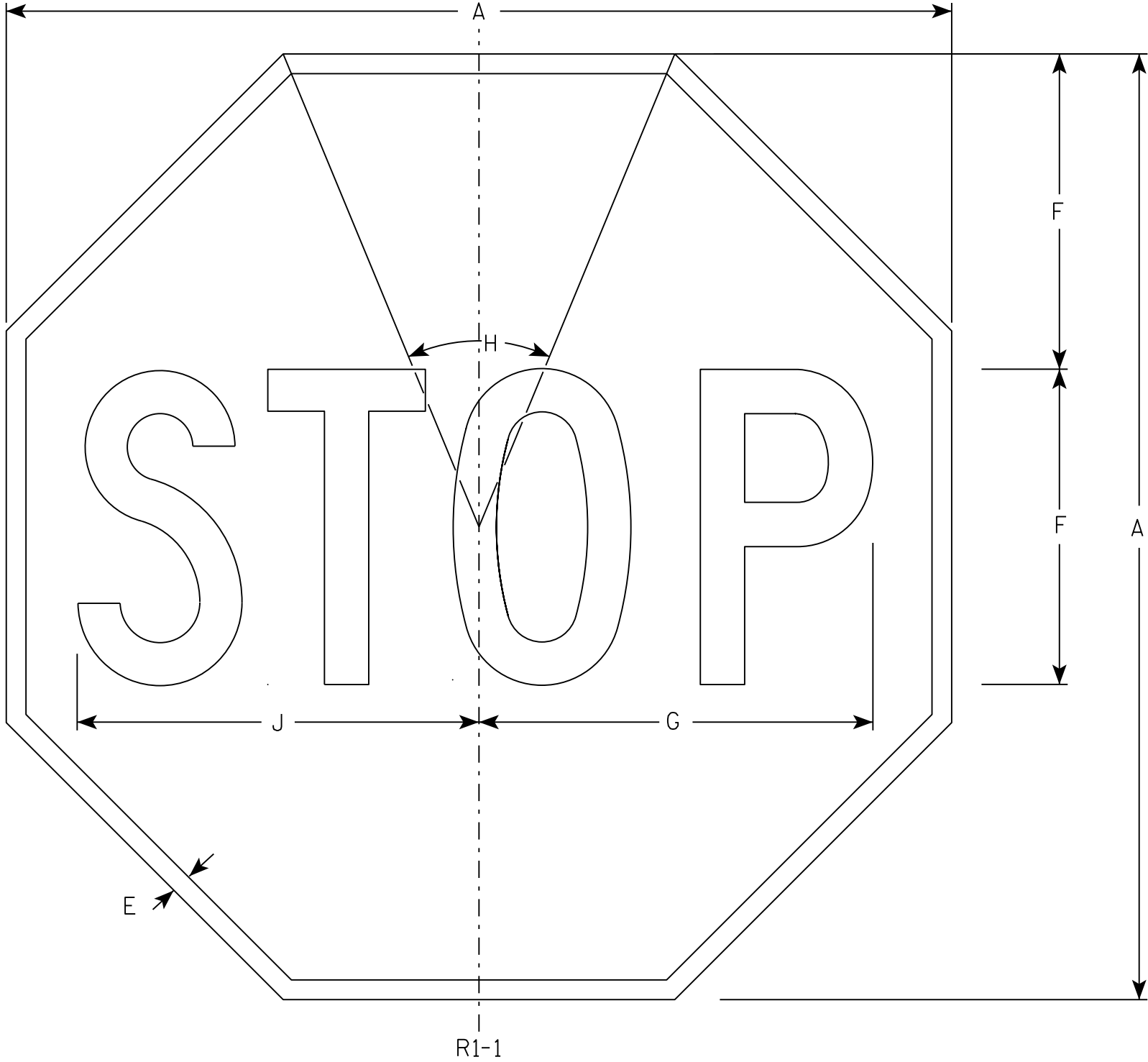
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 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 NO. M6-4.10



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

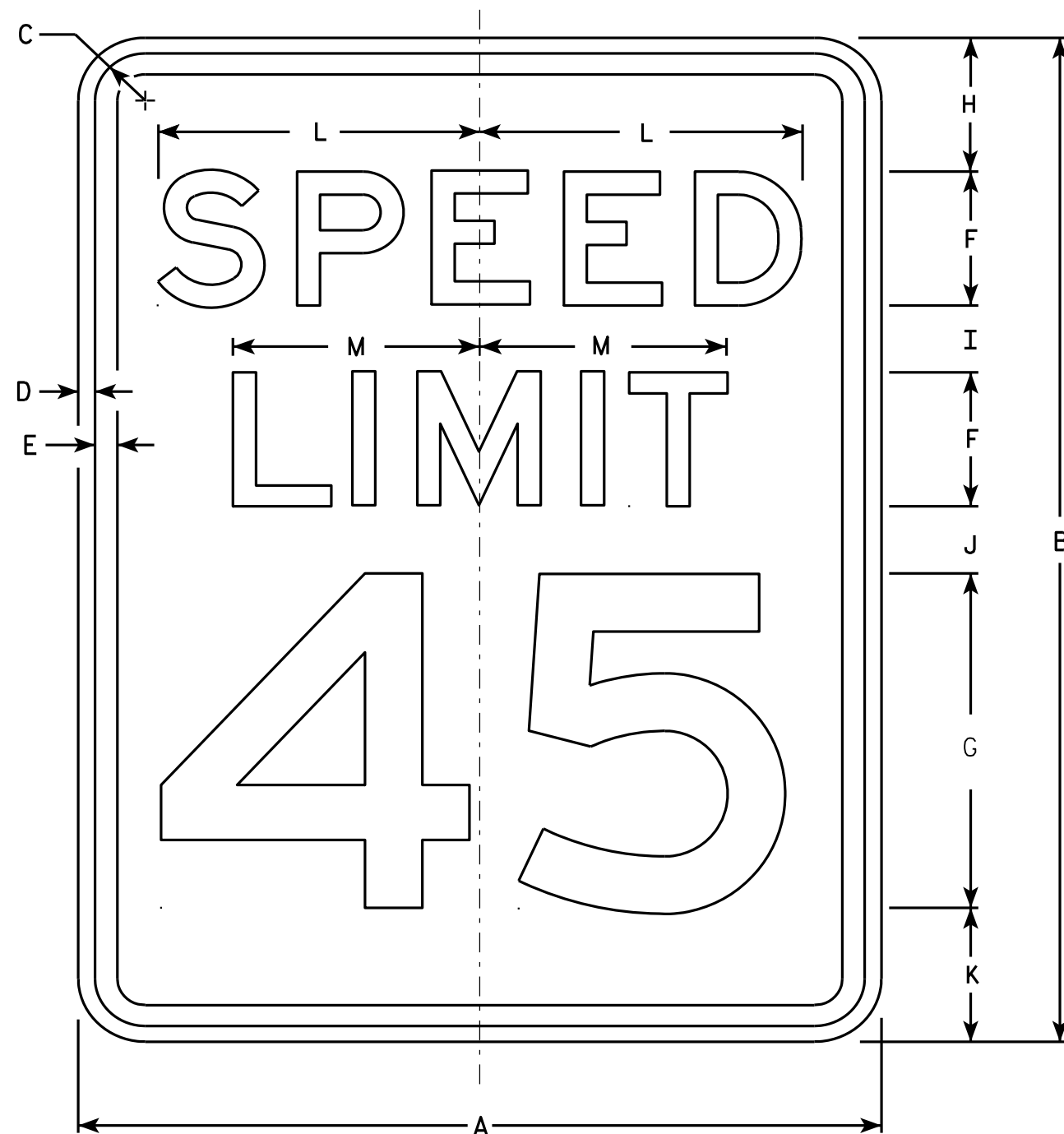
STANDARD SIGN

R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

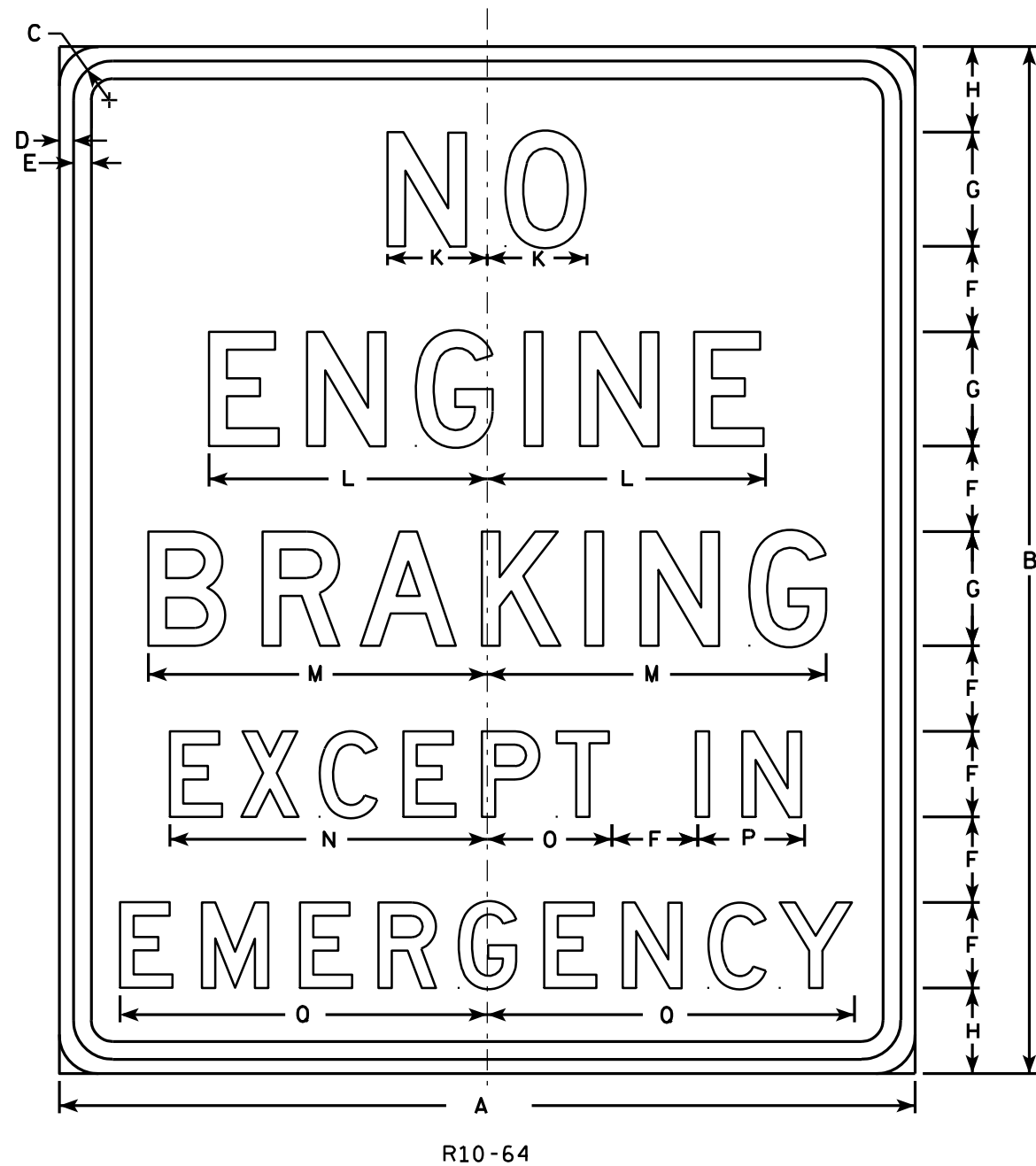
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



- NOTES
- 1. Signs are 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 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 2 of R10-64F is Series C for "TOWNSHIP" Only



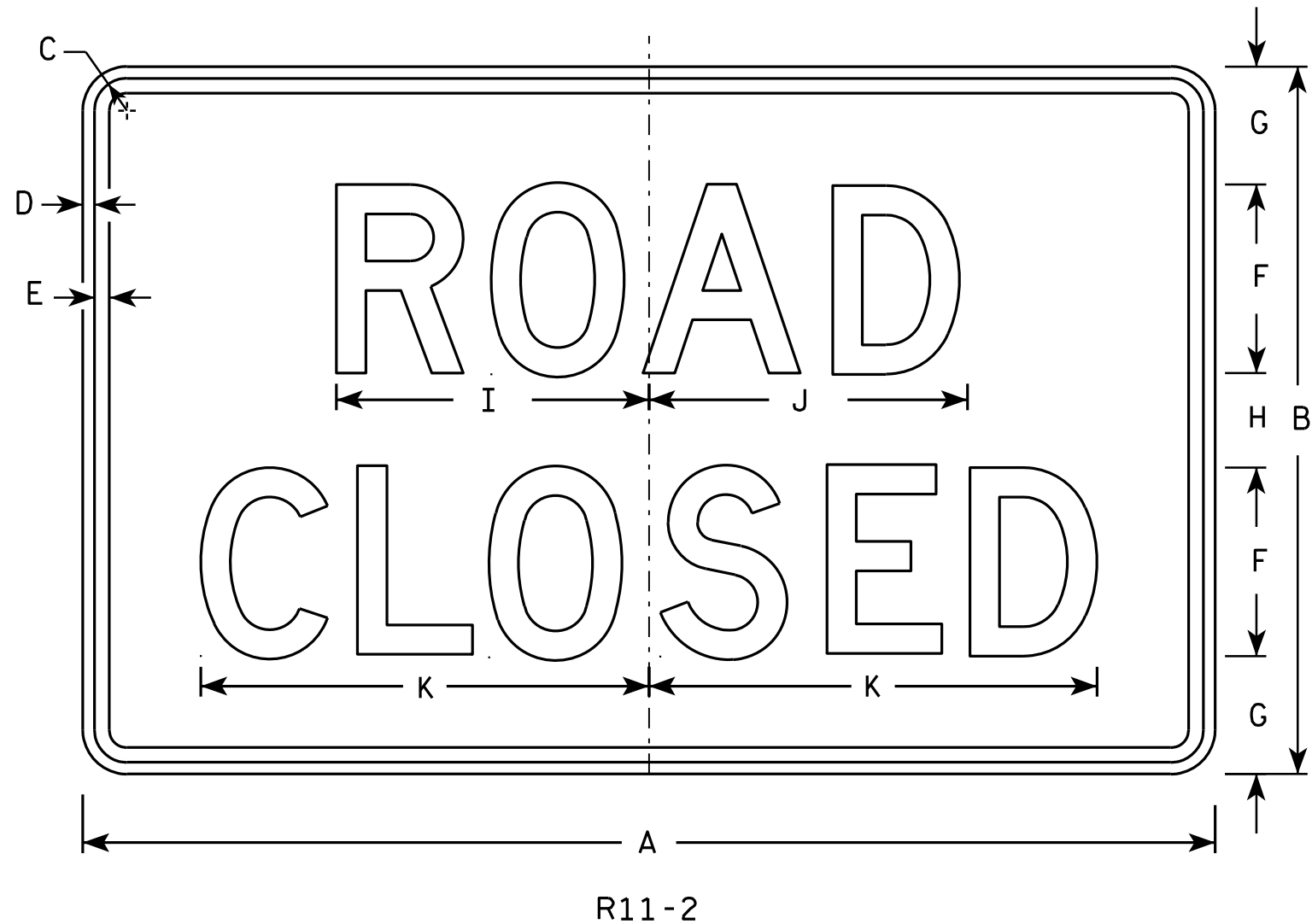
VILLAGE

Area sq. ft.
3.75
7.0

TOWNSHIP

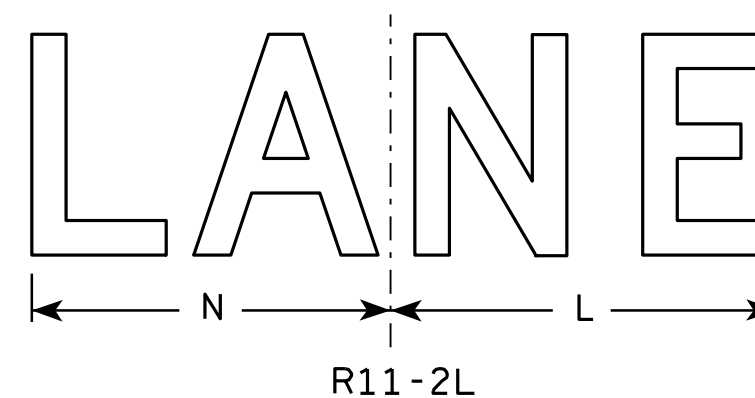
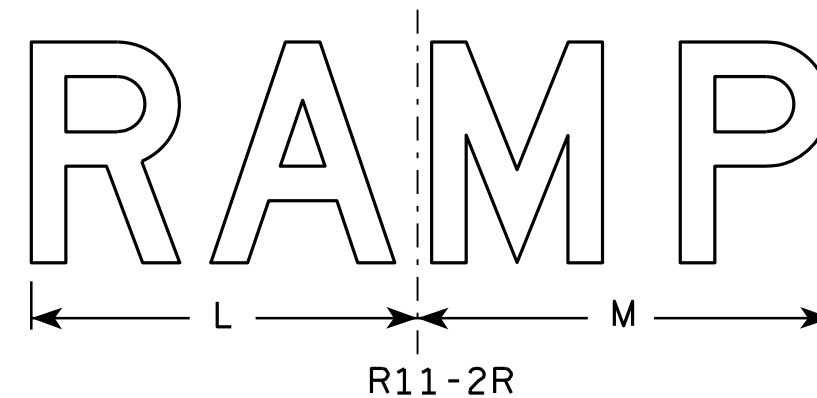
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	30	36	1 3⁄8	1⁄2	5⁄8	3	4	3	2		3 1⁄2	9 3⁄4	11 7⁄8	11 1⁄8	4 3⁄8	3 3⁄4	12 7⁄8	7 1⁄4	4 3⁄4		8 1⁄4	8 3⁄4	5⁄8	6 3⁄4	18	1 1⁄2	7.5
2S	30	36	1 3⁄8	1⁄2	5⁄8	3	4	3	2		3 1⁄2	9 3⁄4	11 7⁄8	11 1⁄8	4 3⁄8	3 3⁄4	12 7⁄8	7 1⁄4	4 3⁄4		8 1⁄4	8 3⁄4	5⁄8	6 3⁄4	18	1 1⁄2	7.5
2M	30	36	1 3⁄8	1⁄2	5⁄8	3	4	3	2		3 1⁄2	9 3⁄4	11 7⁄8	11 1⁄8	4 3⁄8	3 3⁄4	12 7⁄8	7 1⁄4	4 3⁄4		8 1⁄4	8 3⁄4	5⁄8	6 3⁄4	18	1 1⁄2	7.5
3	42	48	1 3⁄8	1⁄2	5⁄8	4	5	4 1⁄2	3		4	12 1⁄4	14 7⁄8	14 1⁄8	5 1⁄4	4 3⁄4	16 1⁄4	9	6		11	11 1⁄4	1 1⁄2	8 1⁄2	24	2	14.0
4																											
5																											

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E
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NOTES

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

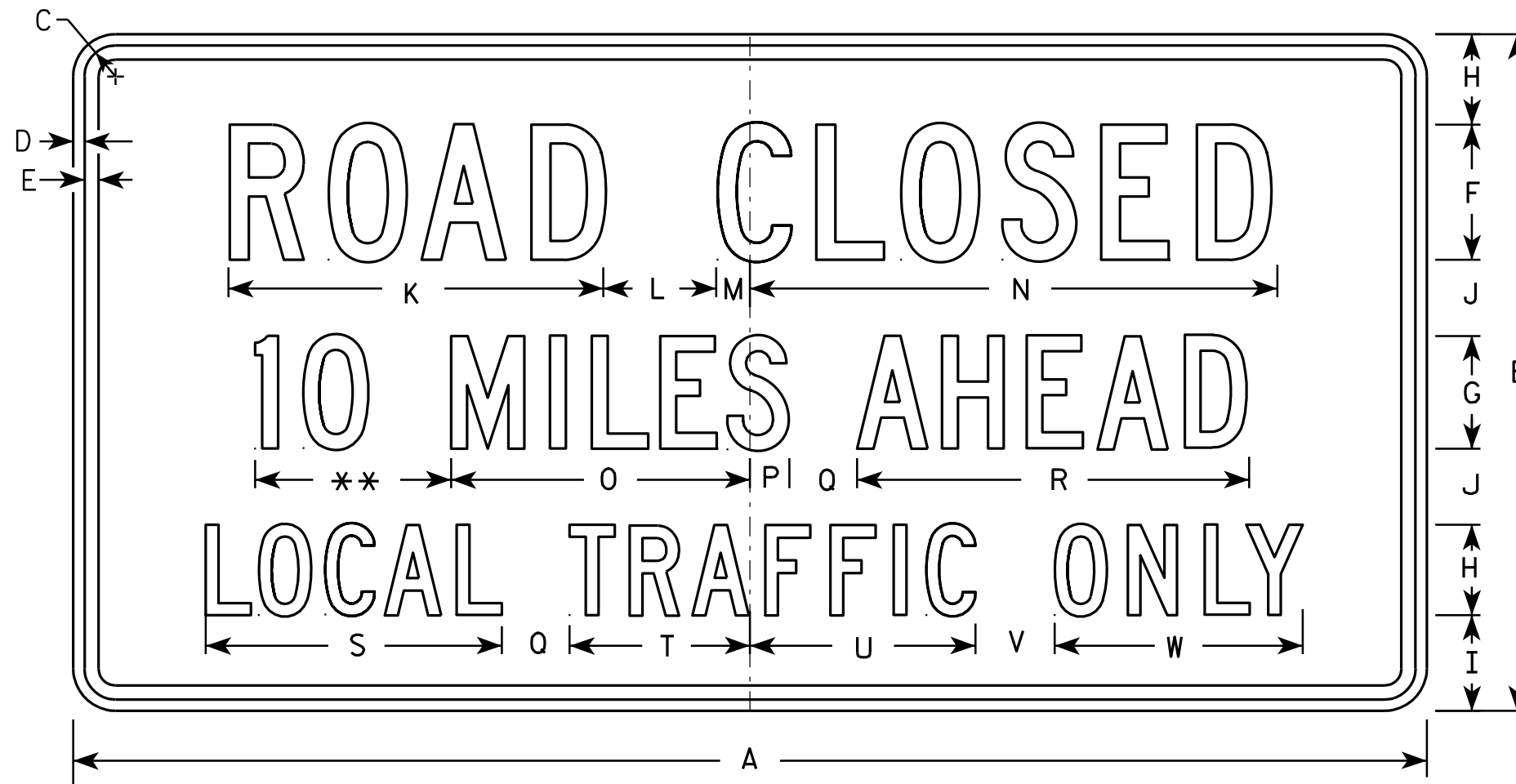


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

STANDARD SIGN R11-2

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: HWY: COUNTY: SHEET NO: E



R11-3

NOTES

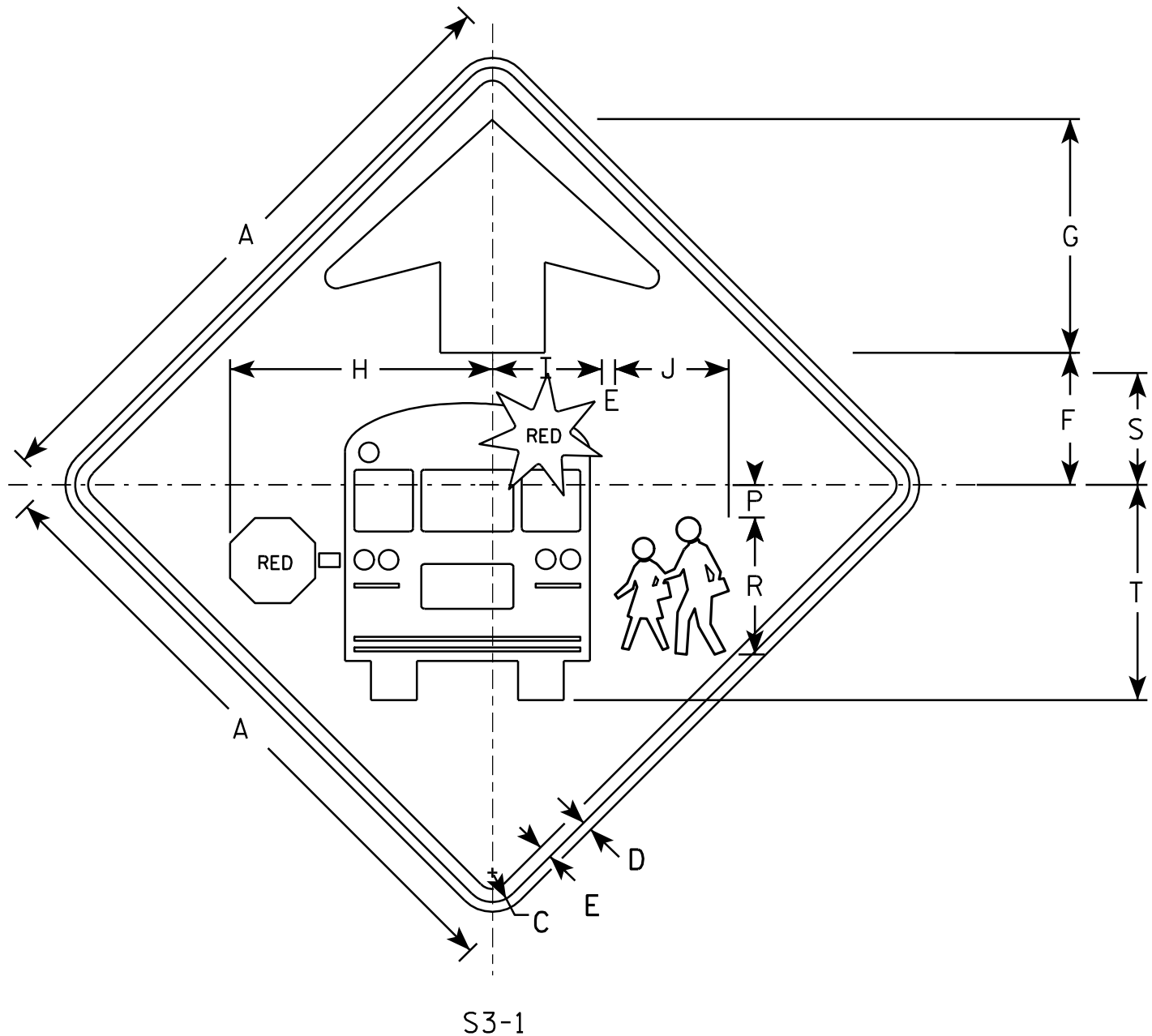
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

** See Note 5

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4				4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11				12.5
3																											
4																											
5																											

STANDARD SIGN R11-3	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/11	PLATE NO. R11-3.6

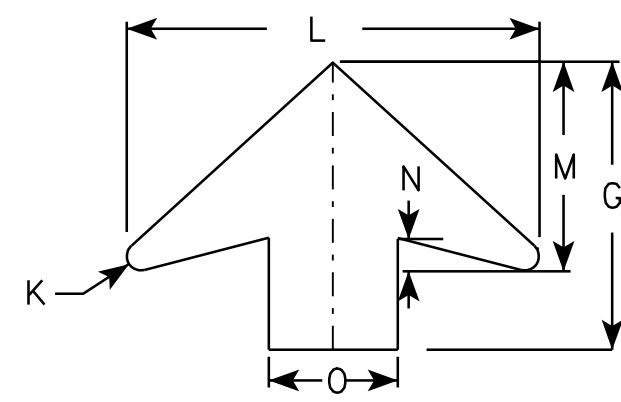
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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S3-1

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-GREEN
Message - BLACK except as noted
Circles except PEDS- RED BACKGROUND
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	6 1/4	11 1/4	12 1/2	5 1/4	5 1/2	1/2	16	8	1 1/4	5	1 1/2		6 5/8	5 3/8	10 3/8							6.25
2	36		1 5/8	5/8	3/4	7 1/2	13 1/2	15 1/8	6 1/4	6 1/2	5/8	19 1/4	9 3/4	1 5/8	6	1 7/8		7 7/8	6 3/8	12 3/8							9.0
3	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
4	48		2 1/4	3/4	1	10	17 7/8	20 1/8	8 3/8	8 3/4	7/8	25 5/8	13	2	8	2 1/2		10 1/2	8 1/2	16 1/2							16.0
5																											

PROJECT NO:					SHEET NO:	E
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STANDARD SIGN

S3-1

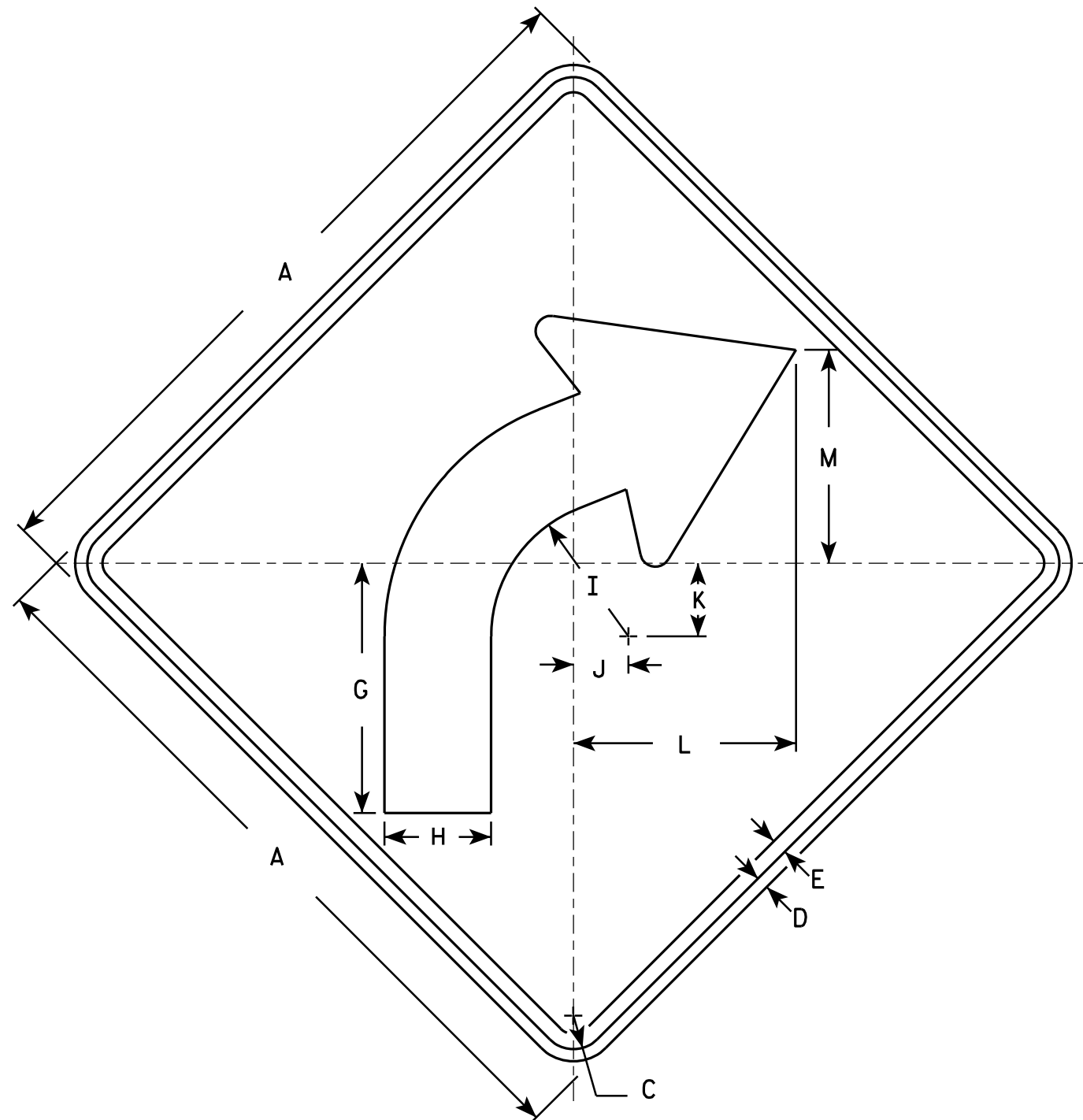
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

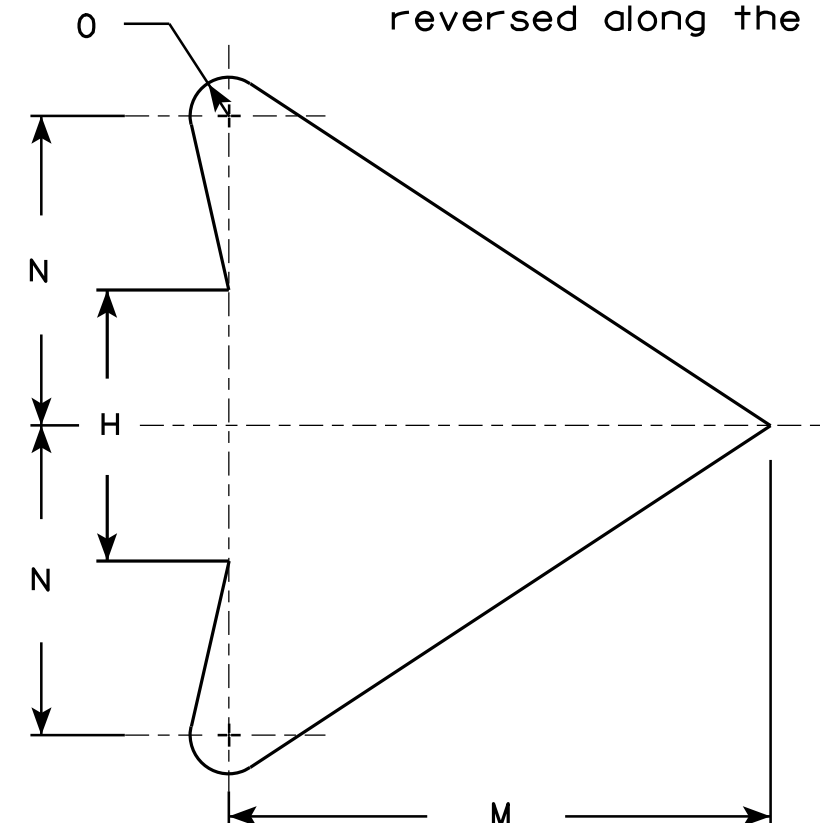
DATE 6/8/10 PLATE NO. S3-1.6

NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - Black
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

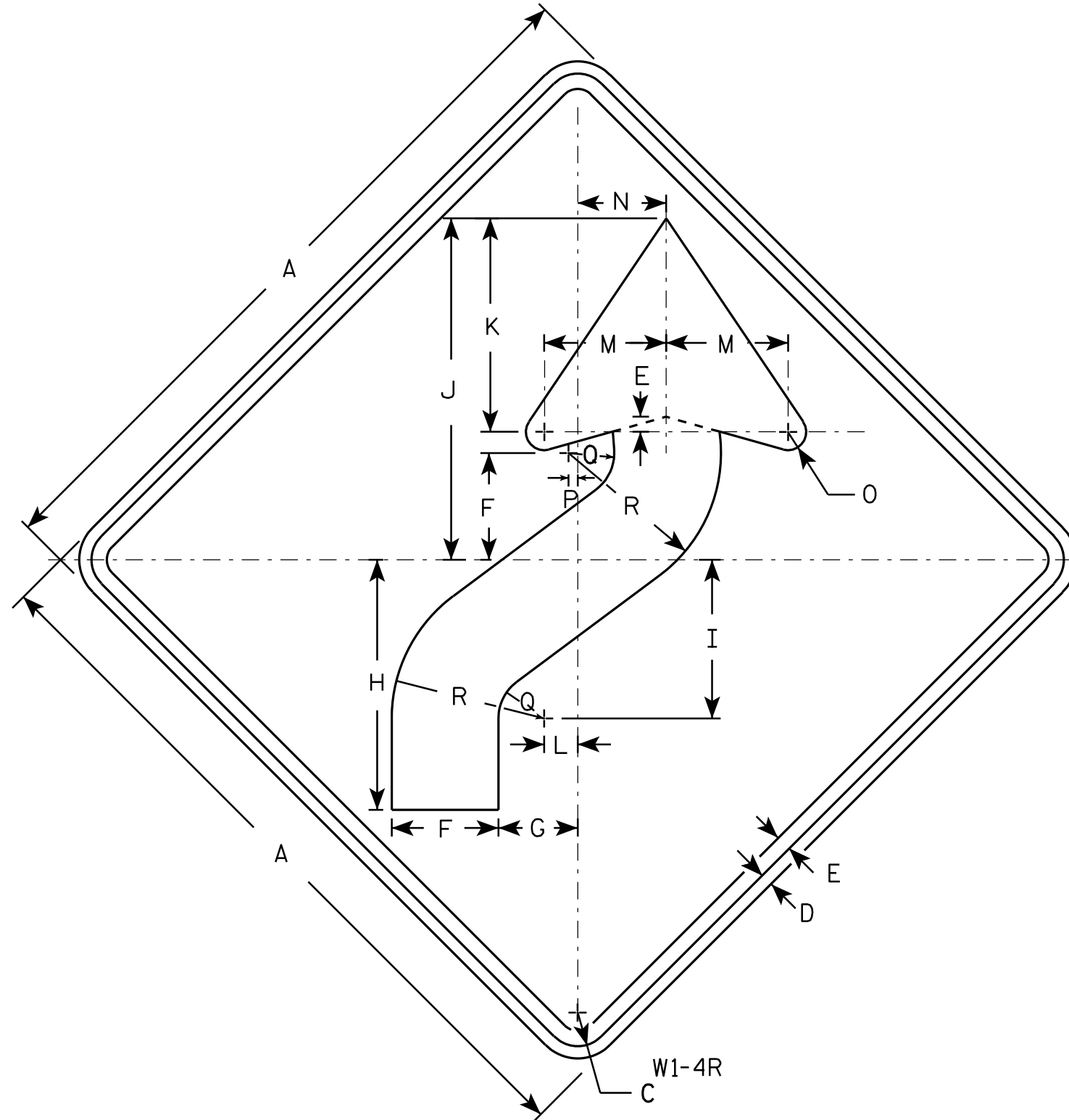
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Yellow
Message - Black
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- W1-4L is the same as W1-4R except the arrow is reversed along the vertical centerline.

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

STANDARD SIGN

W1 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

HWY:

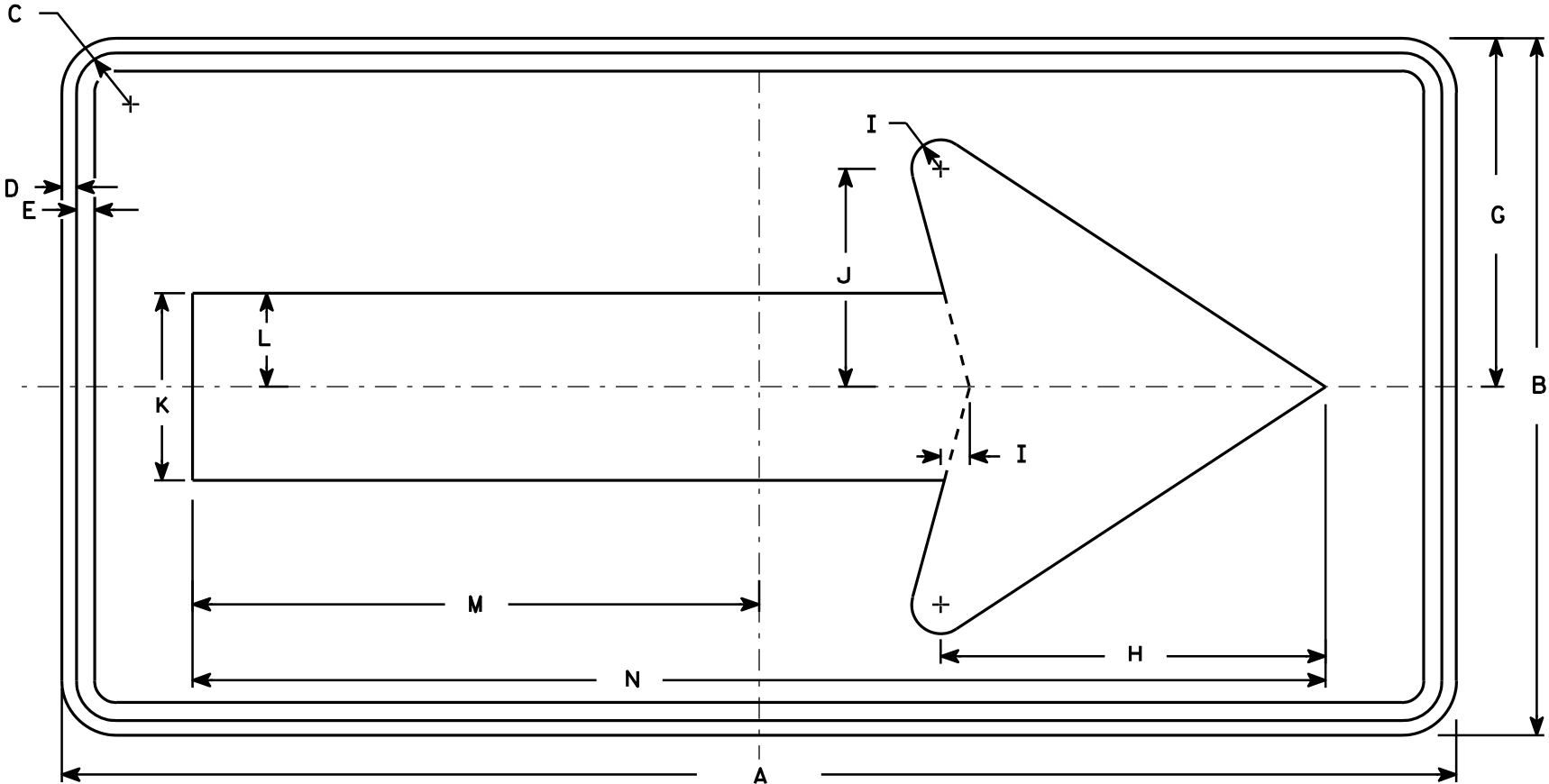
COUNTY:

SHEET NO:

E

NOTES

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



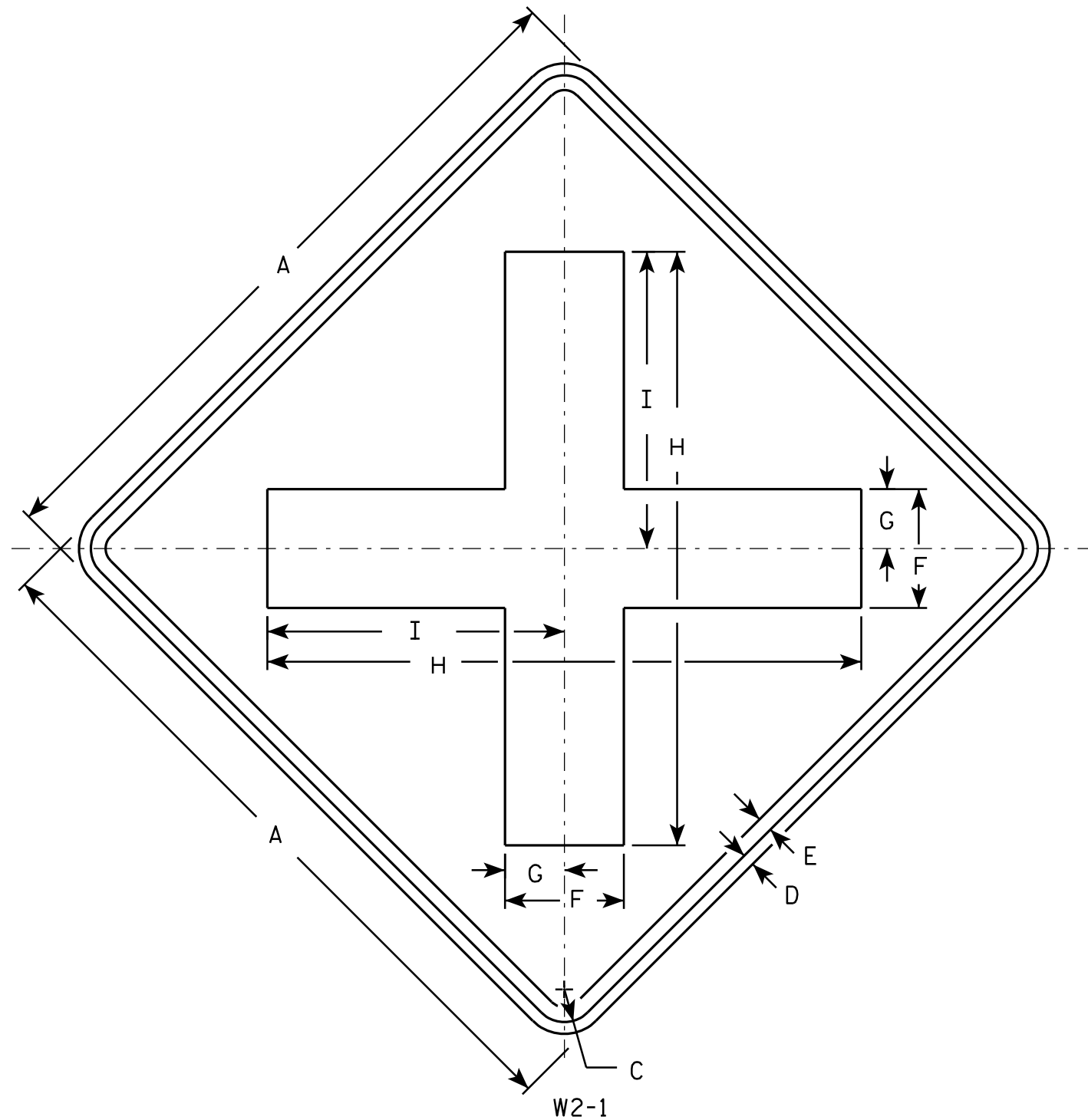
W1-6

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	3/8		9	10	3/4	5 5/8	4 3/4	2 3/8	14 5/8	29 1/4													4.5
2S	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
2M	48	24	1 3/8	1/2	5/8		12	13 1/4	1	7 1/2	6 1/2	3 1/4	19 1/2	39													8.0
3	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
4	60	30	1 3/8	1/2	5/8		15	16 1/4	1 1/4	9 1/4	8	4	24 3/8	48 3/4													12.5
5	96	48	2 1/4	3/4	1		24	26 1/2	2	15	13	6 1/2	39	78													32.0

STANDARD SIGN
W1-6

WISCONSIN DEPT OF TRANSPORTATION

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



NOTES

1. 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	4	2	20	10																		4.0
2S	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
2M	30		1 3/8	1/2	5/8	5	2 1/2	25	12 1/2																		6.25
3	36		1 5/8	5/8	3/4	6	3	30	15																		9.0
4	48		2 1/4	3/4	1	8	4	40	20																		16.0
5																											

STANDARD SIGN

W2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W2-1.9

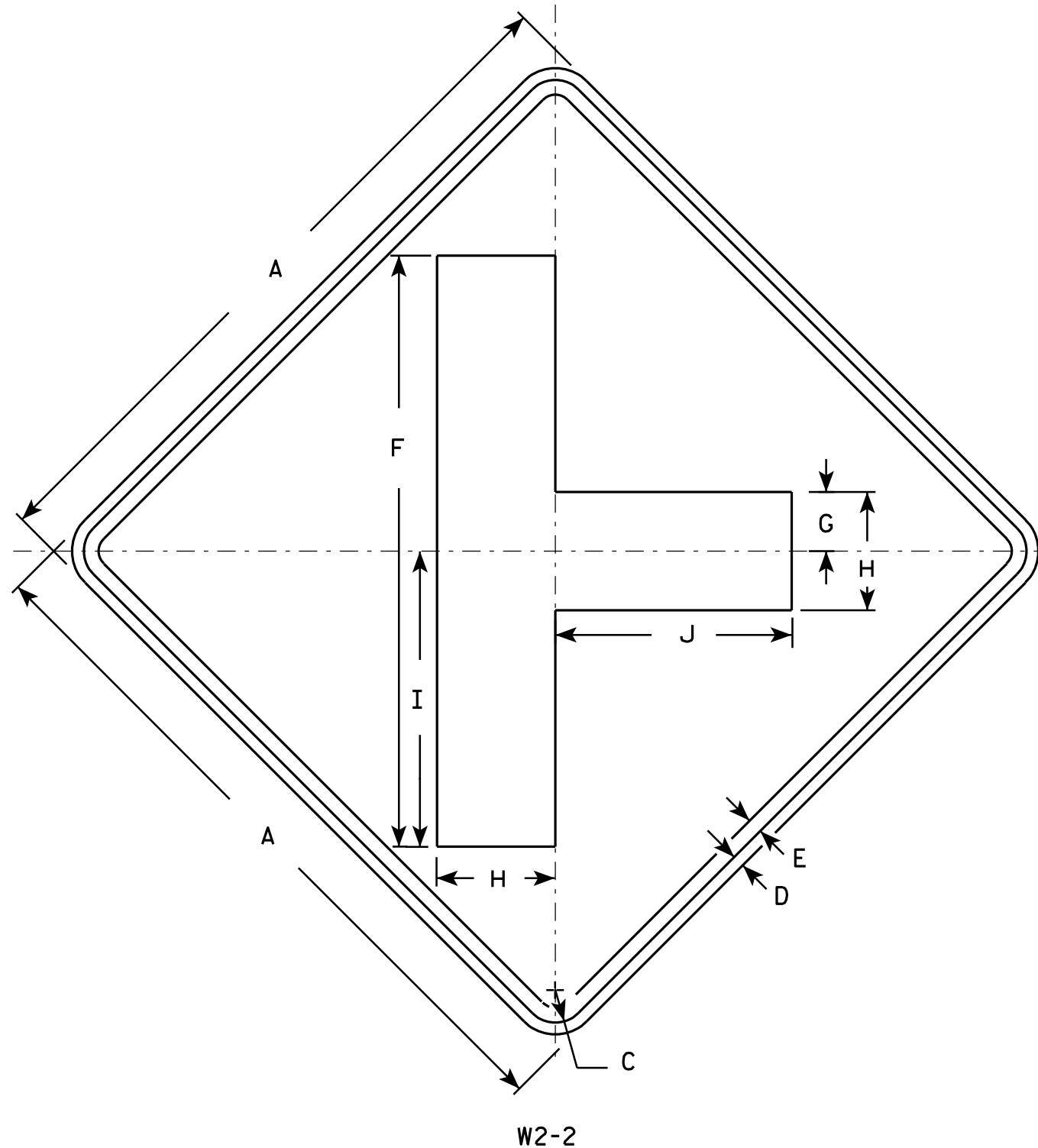
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



NOTES

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

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	20	2	4	10	8																	4.0
2S	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
2M	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
3	36		1 5/8	5/8	3/4	30	3	6	15	12																	9.0
4	48		2 1/4	3/4	1	40	4	8	20	16																	16.0
5																											

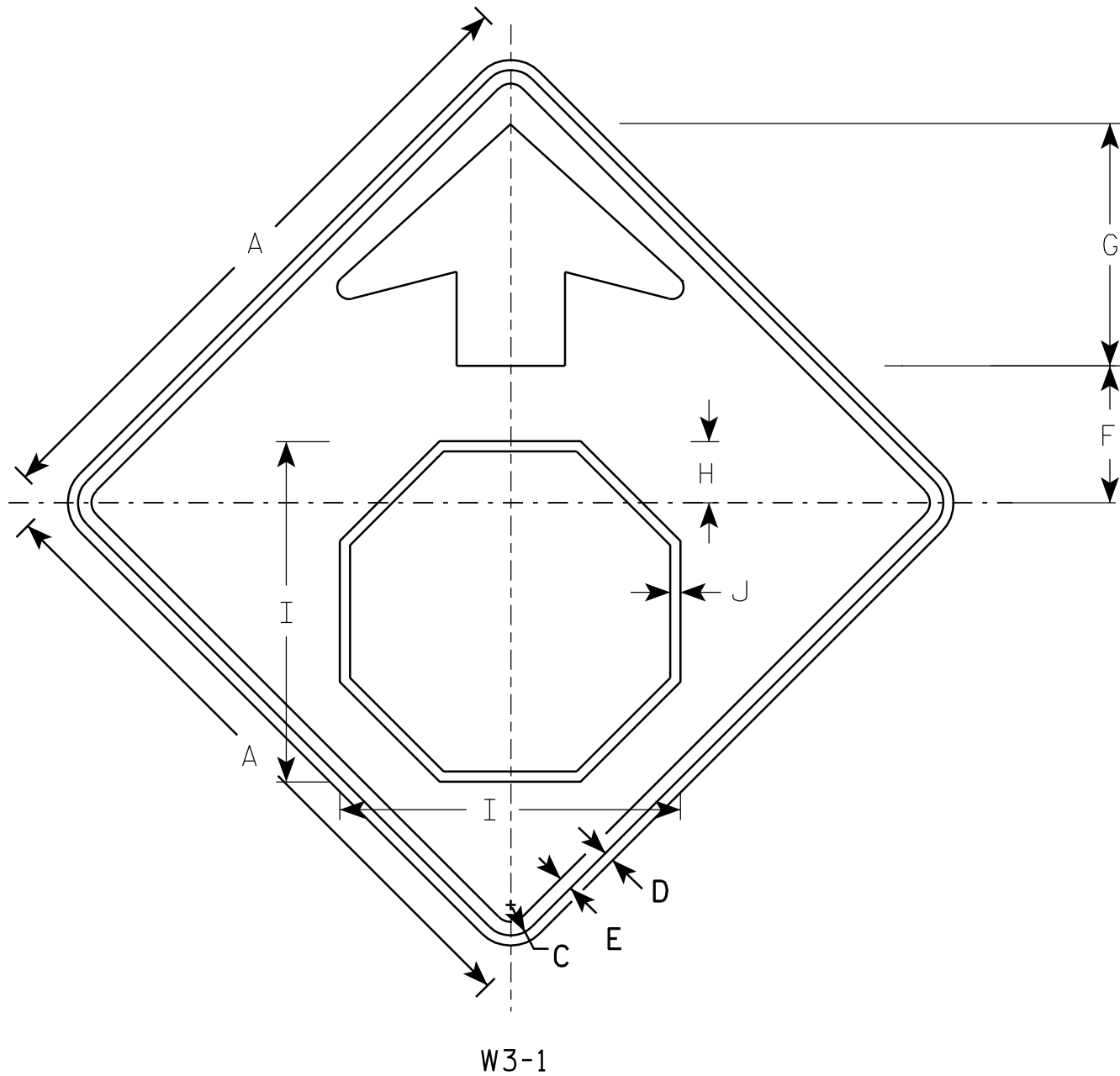
STANDARD SIGN W2-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

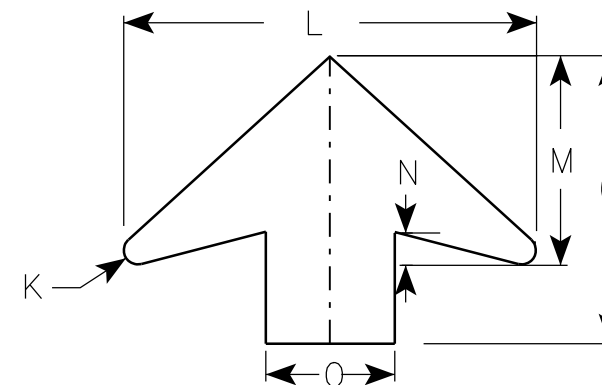
DATE 5/29/12 PLATE NO. W2-2.6

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

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



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 ³ / ₈	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

PROJECT NO:				SHEET NO:	E
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STANDARD SIGN

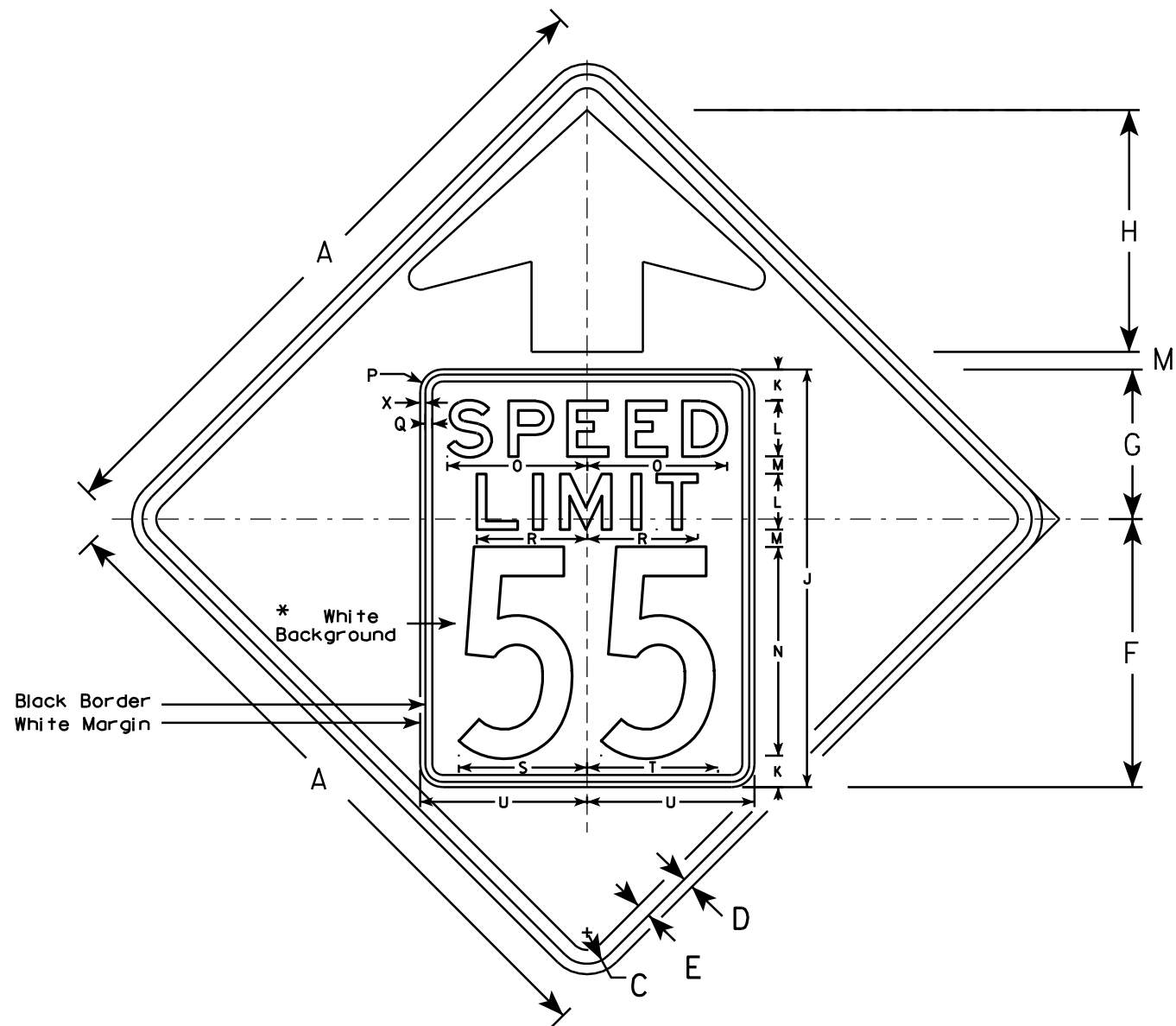
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*

for State Traffic Engineer

DATE 6/7/10 PLATE NO. W3-1.12

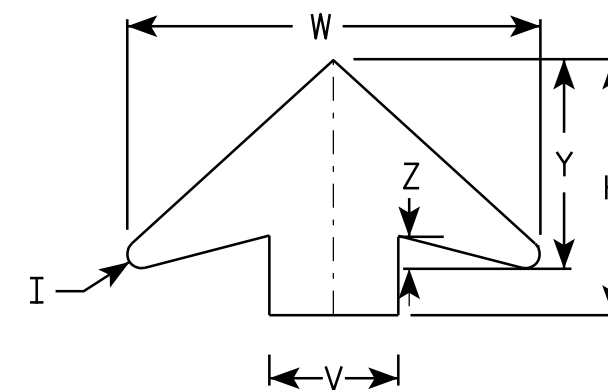


W3-5

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

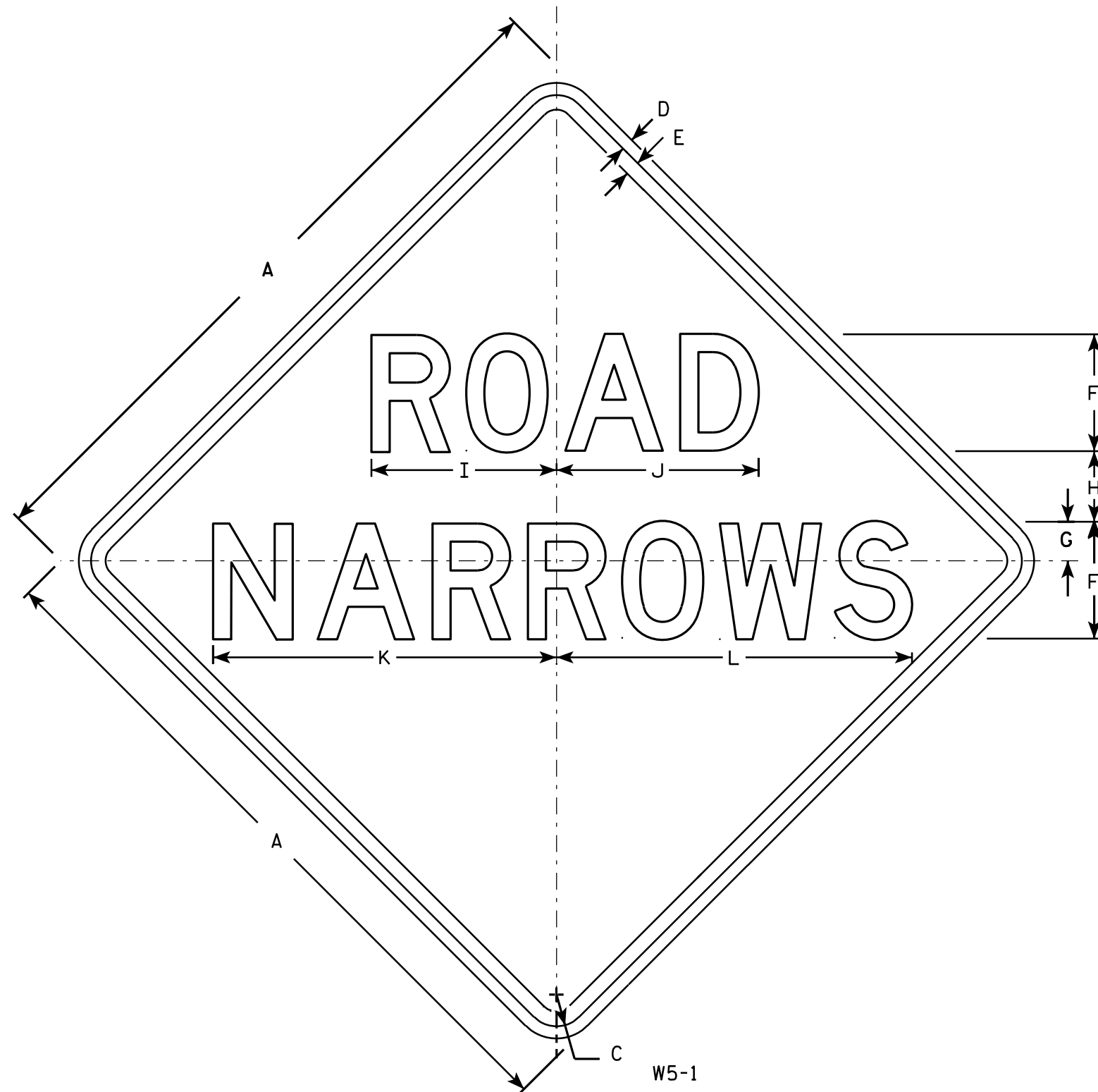
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO:

E



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3⁄8	1⁄2	5⁄8	5	1 3⁄4	3	7 7⁄8	8 5⁄8	14 3⁄4	15 1⁄8															6.25
2S	36		1 5⁄8	5⁄8	3⁄4	6	2	3 1⁄2	9 1⁄2	10 3⁄8	17 5⁄8	18 1⁄4															9.0
2M	36		1 5⁄8	5⁄8	3⁄4	6	2	3 1⁄2	9 1⁄2	10 3⁄8	17 5⁄8	18 1⁄4															9.0
3																											
4	48		2 1⁄4	3⁄4	1	8	3	4	12 3⁄4	13 3⁄4	23 1⁄2	24 3⁄8															16.0
5																											

STANDARD SIGN

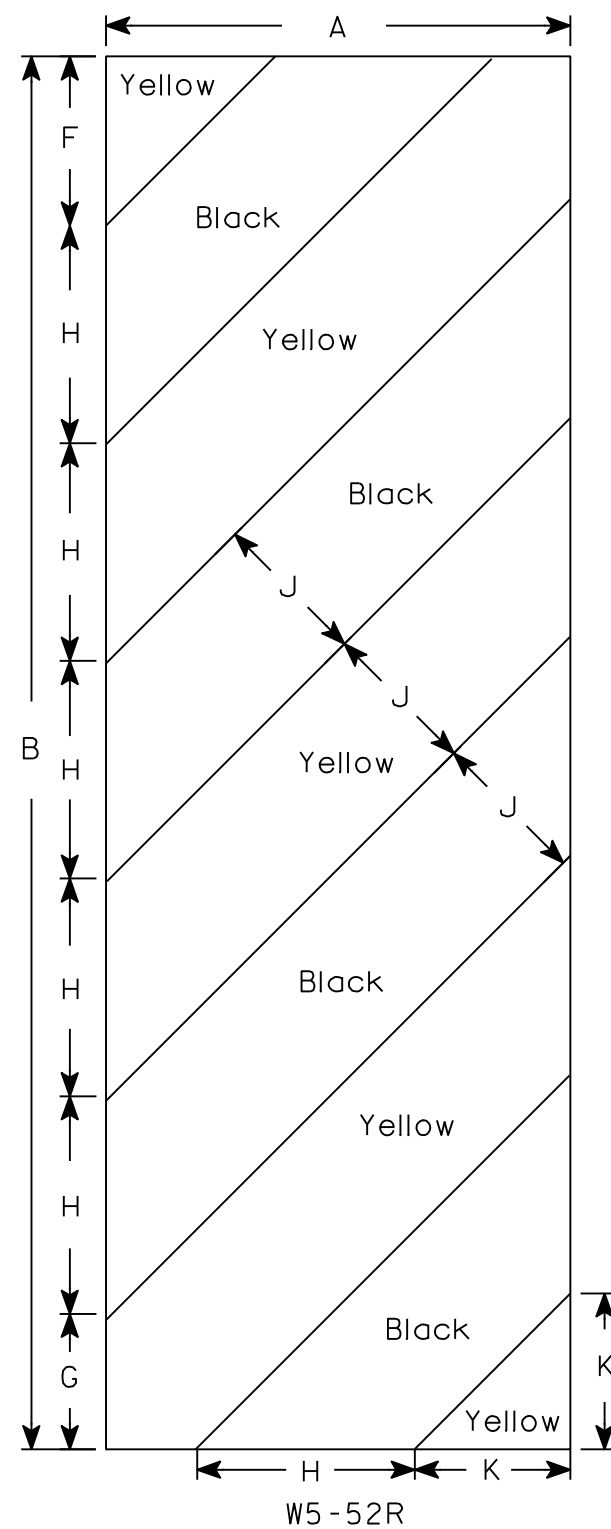
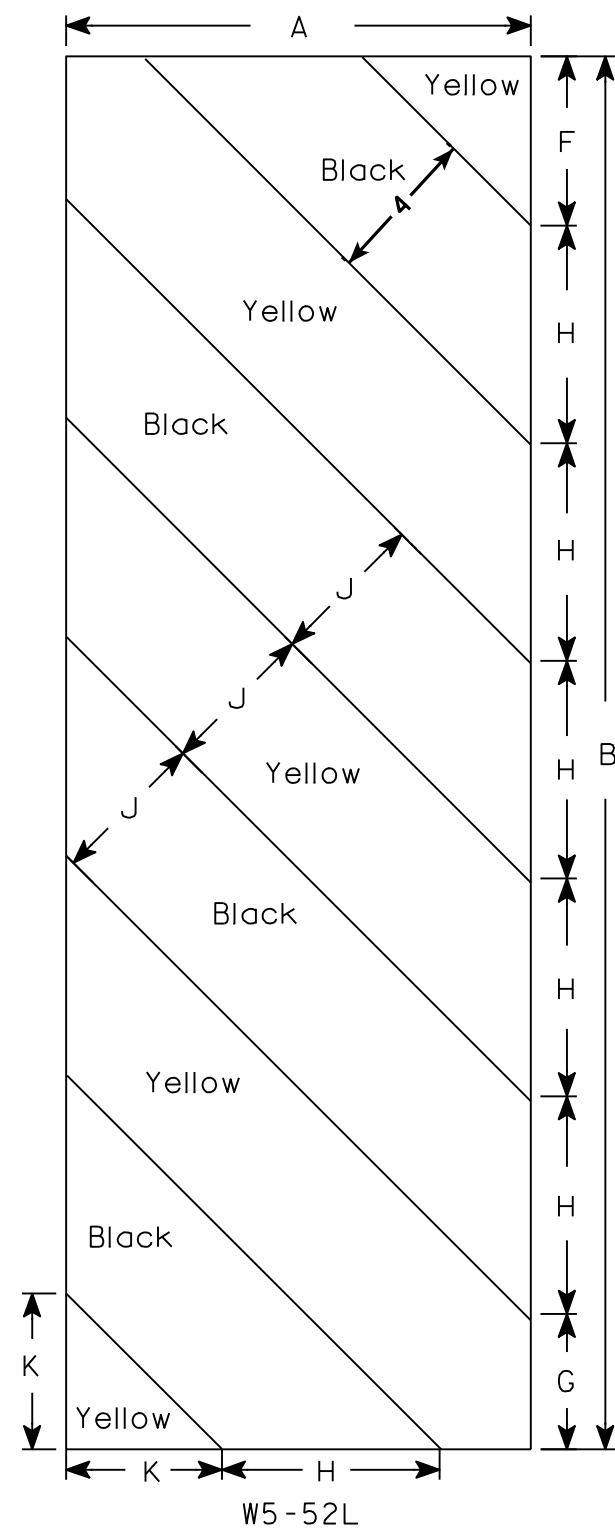
W5 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W5-1.8

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
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.

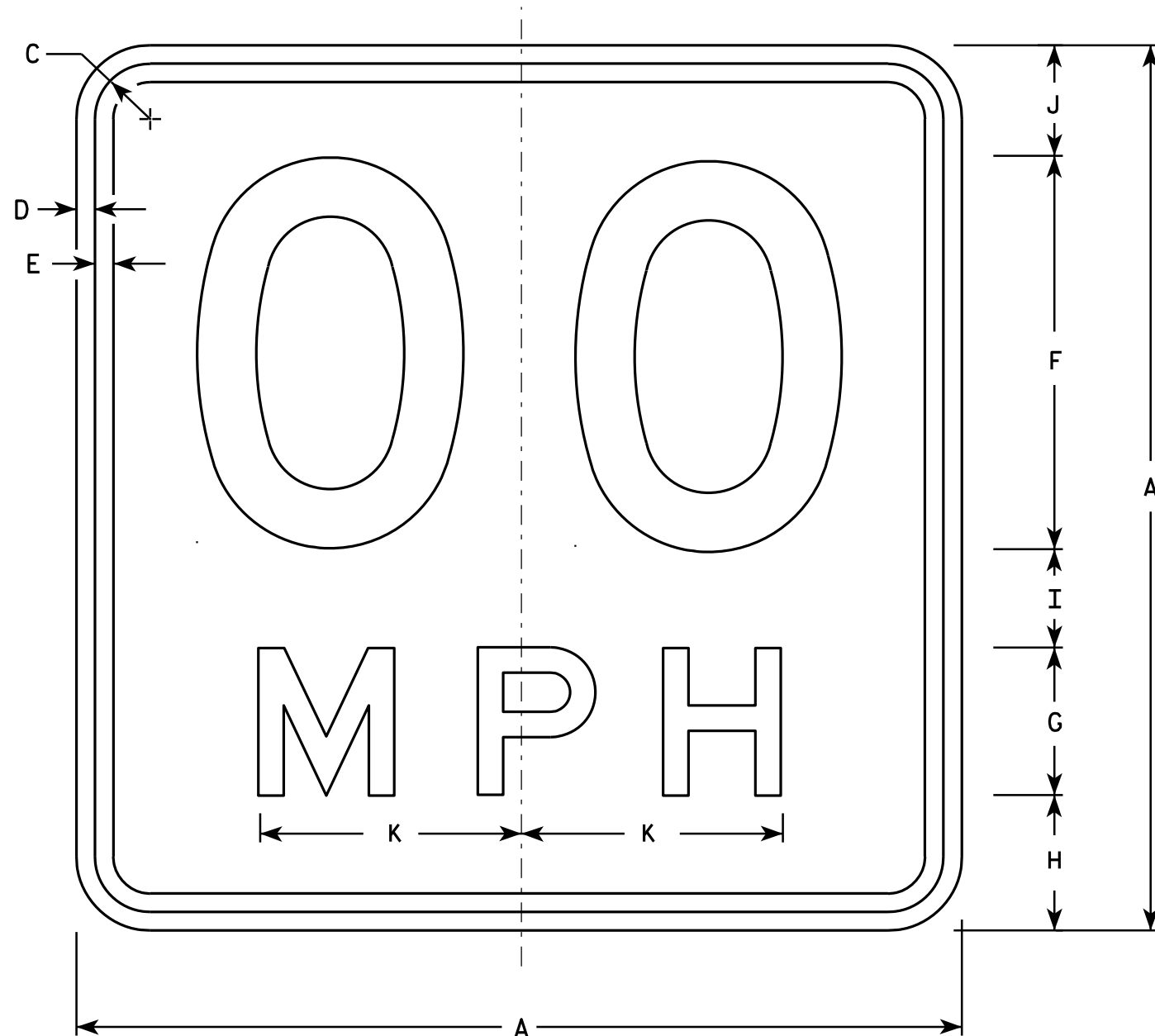
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36				4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54				6	5 1/2	8 1/2	45°	6	6 5/6																6.75
4																											
5																											

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



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Message Series - See Note 6
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically space about centerline to achieve proper balance.
6. Line 1 is Series D
Line 2 is Series E

W13-1

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	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:

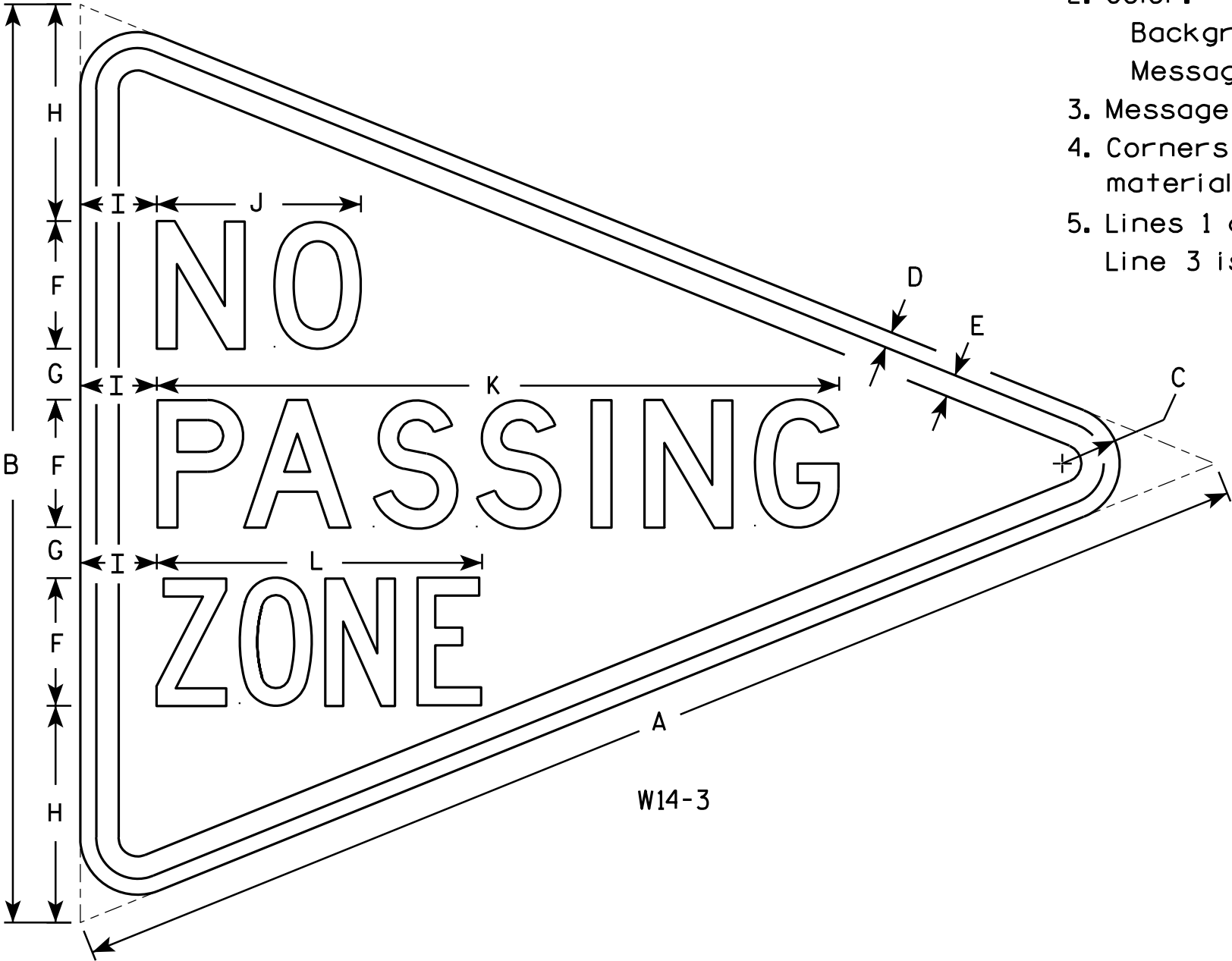
COUNTY:

SHEET NO:

E

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - See note 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.
Line 3 is series C.



W14-3

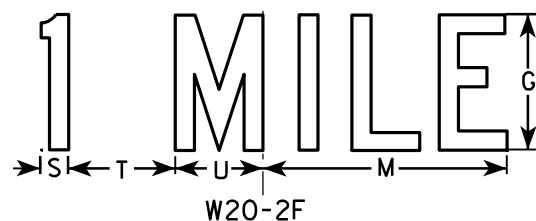
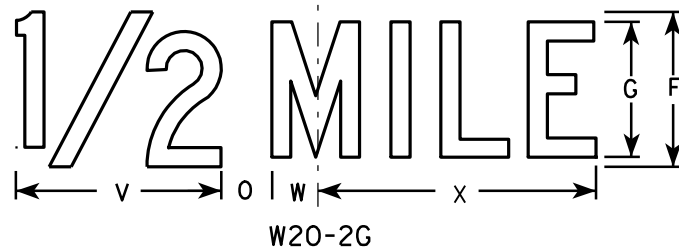
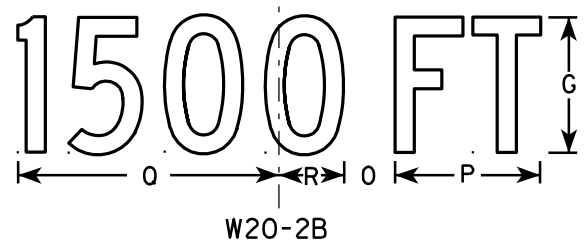
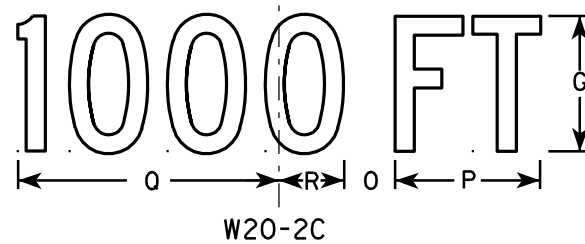
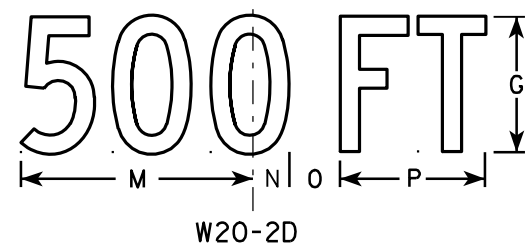
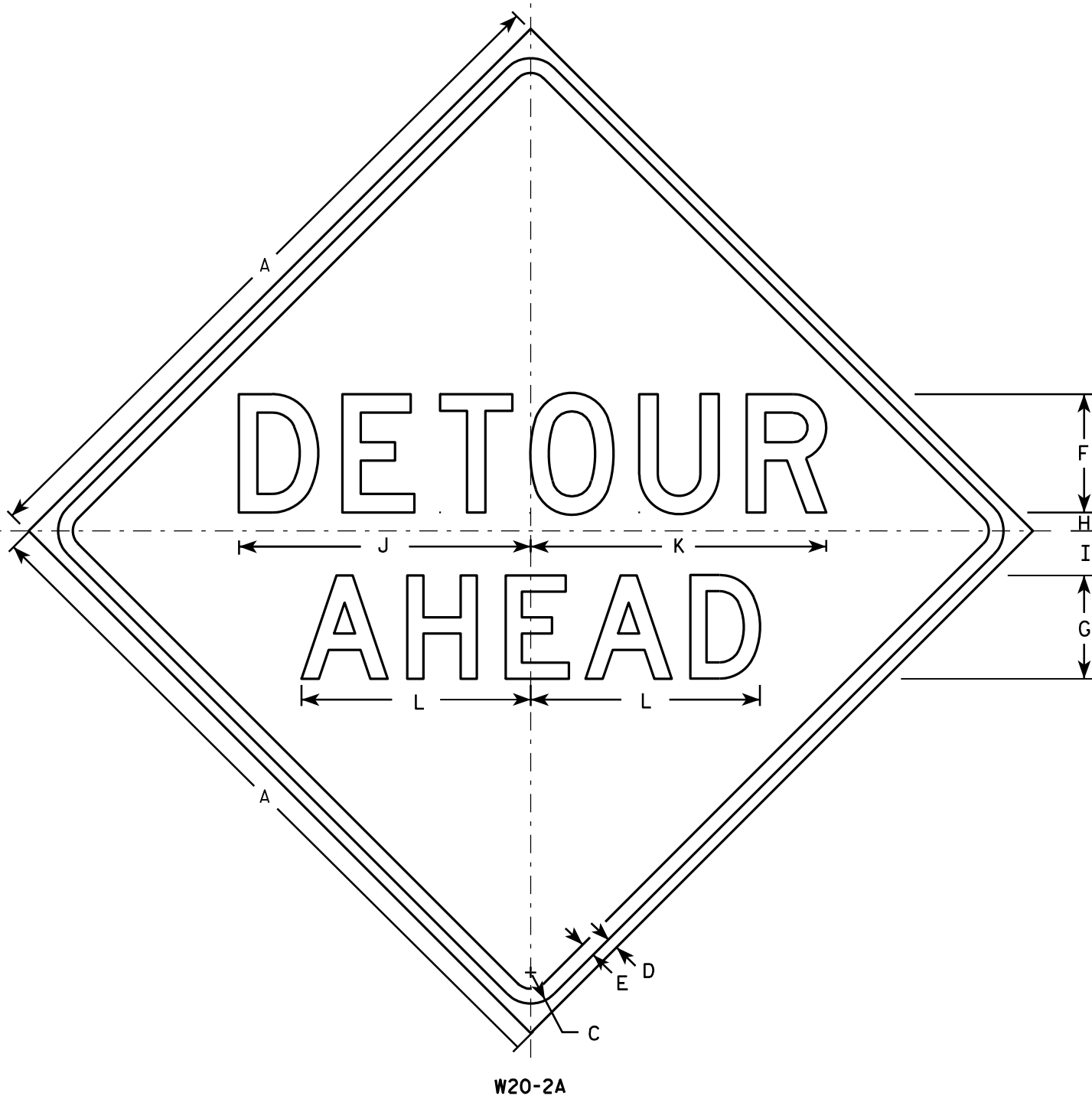
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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



NOTES

- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - Orange
Message - Black
- Message Series - See note 5
- 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.
- Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/18/11 PLATE NO. W20-2.6

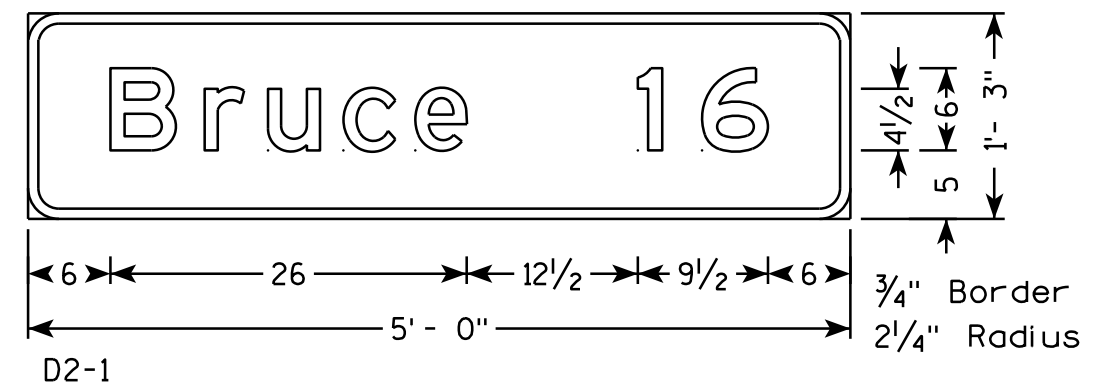
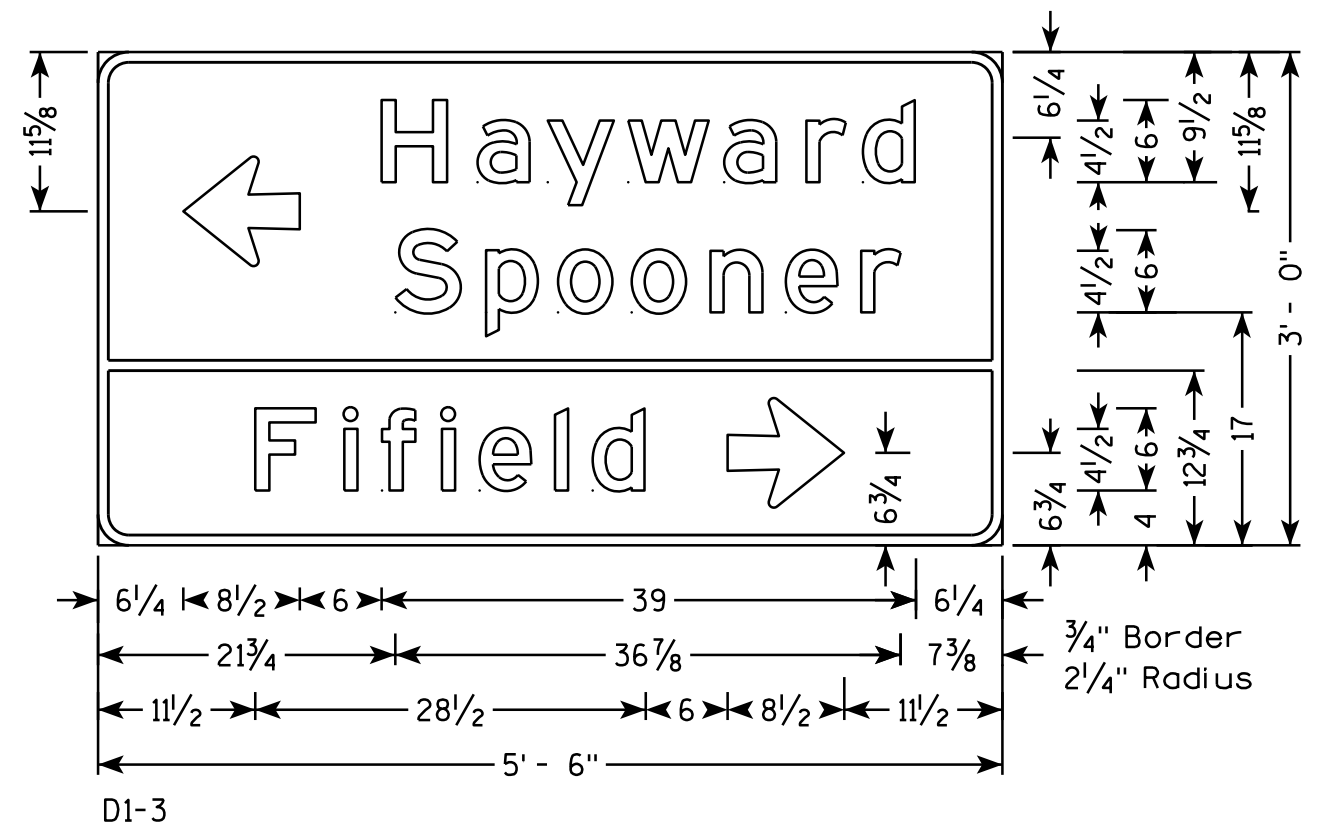
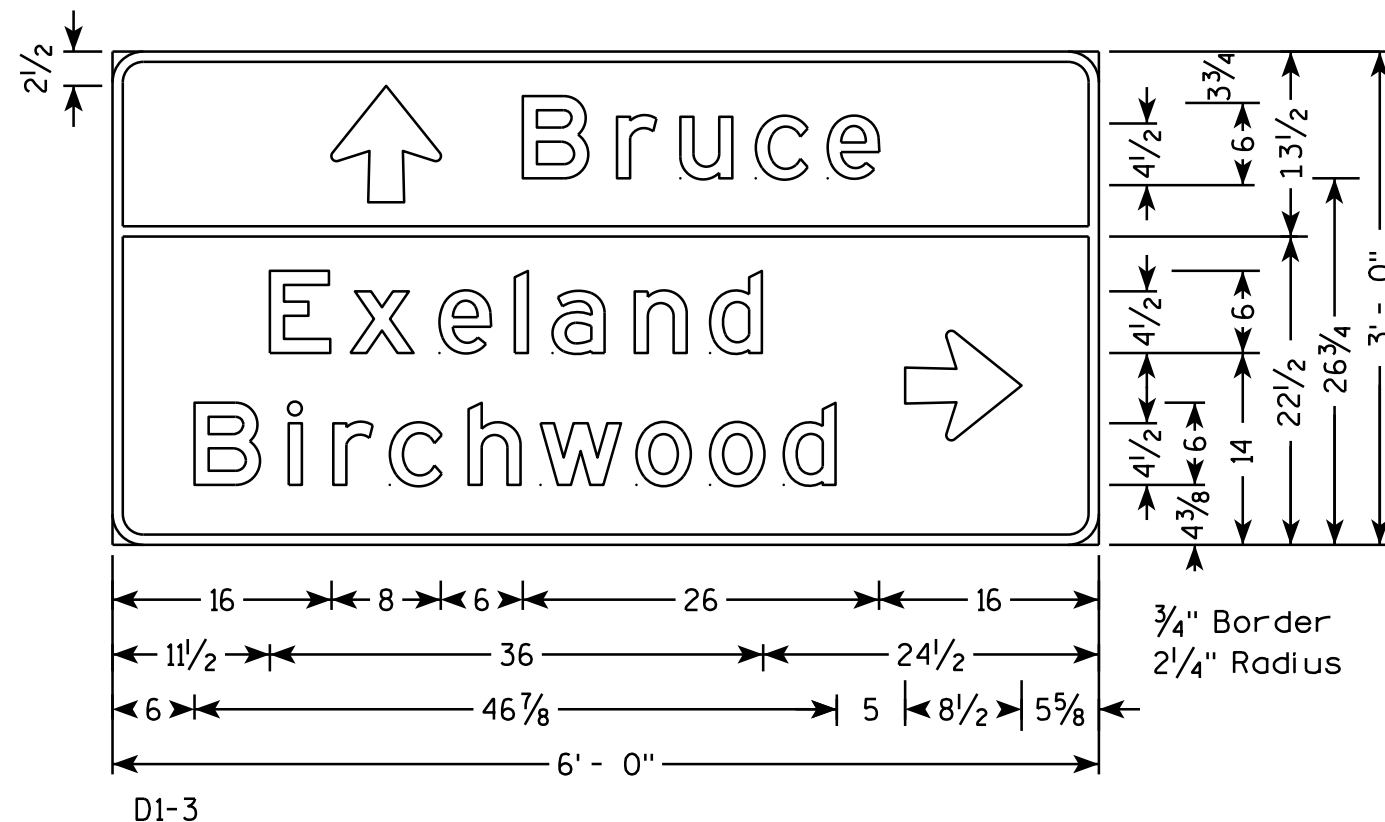
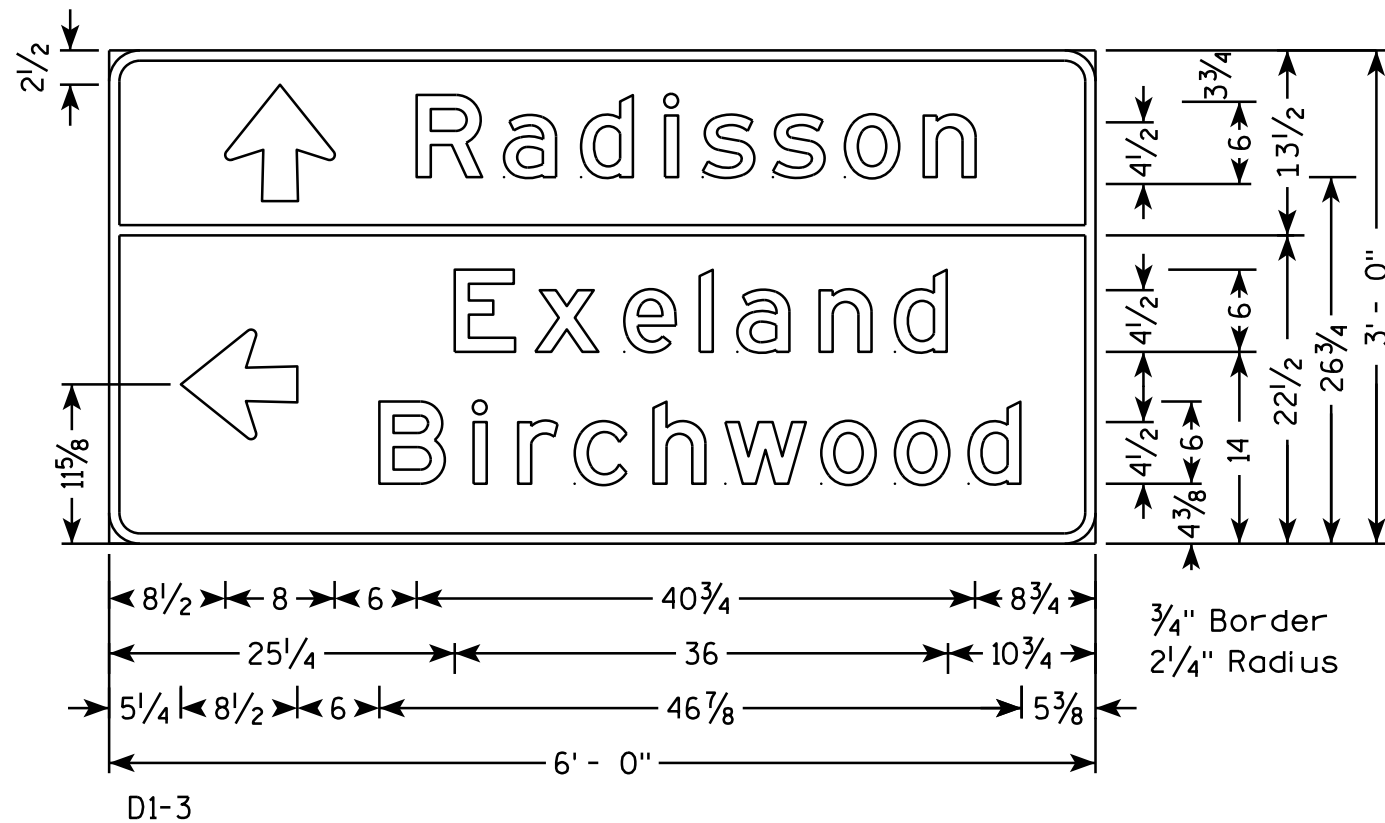
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

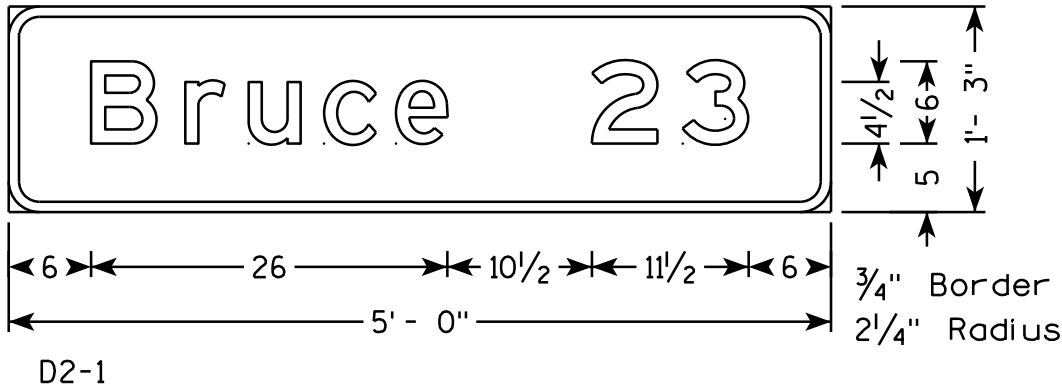
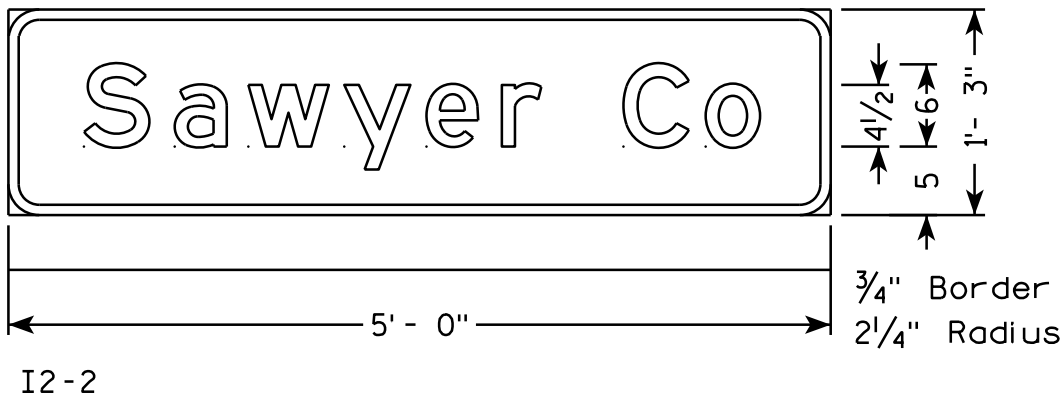
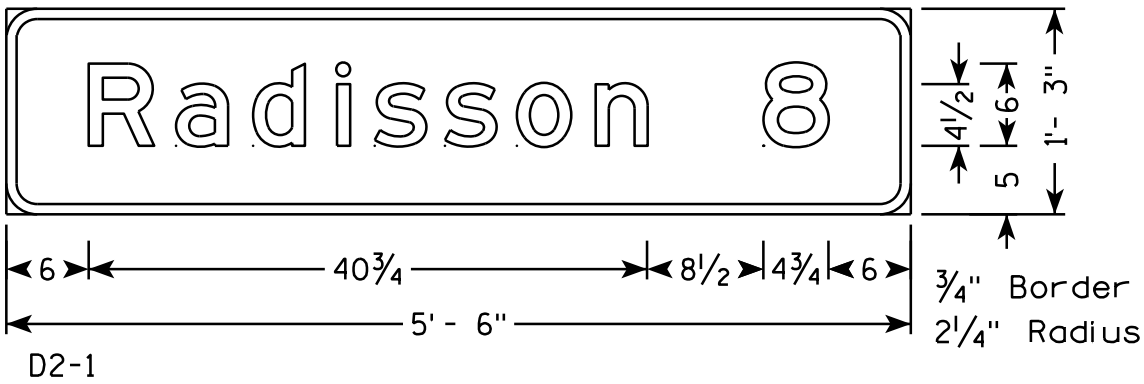
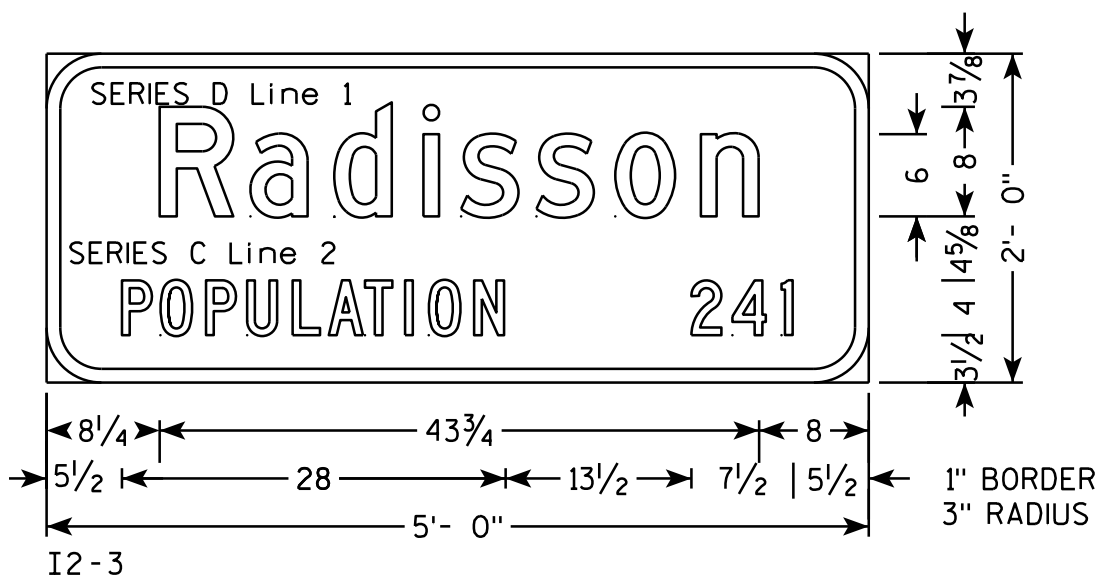


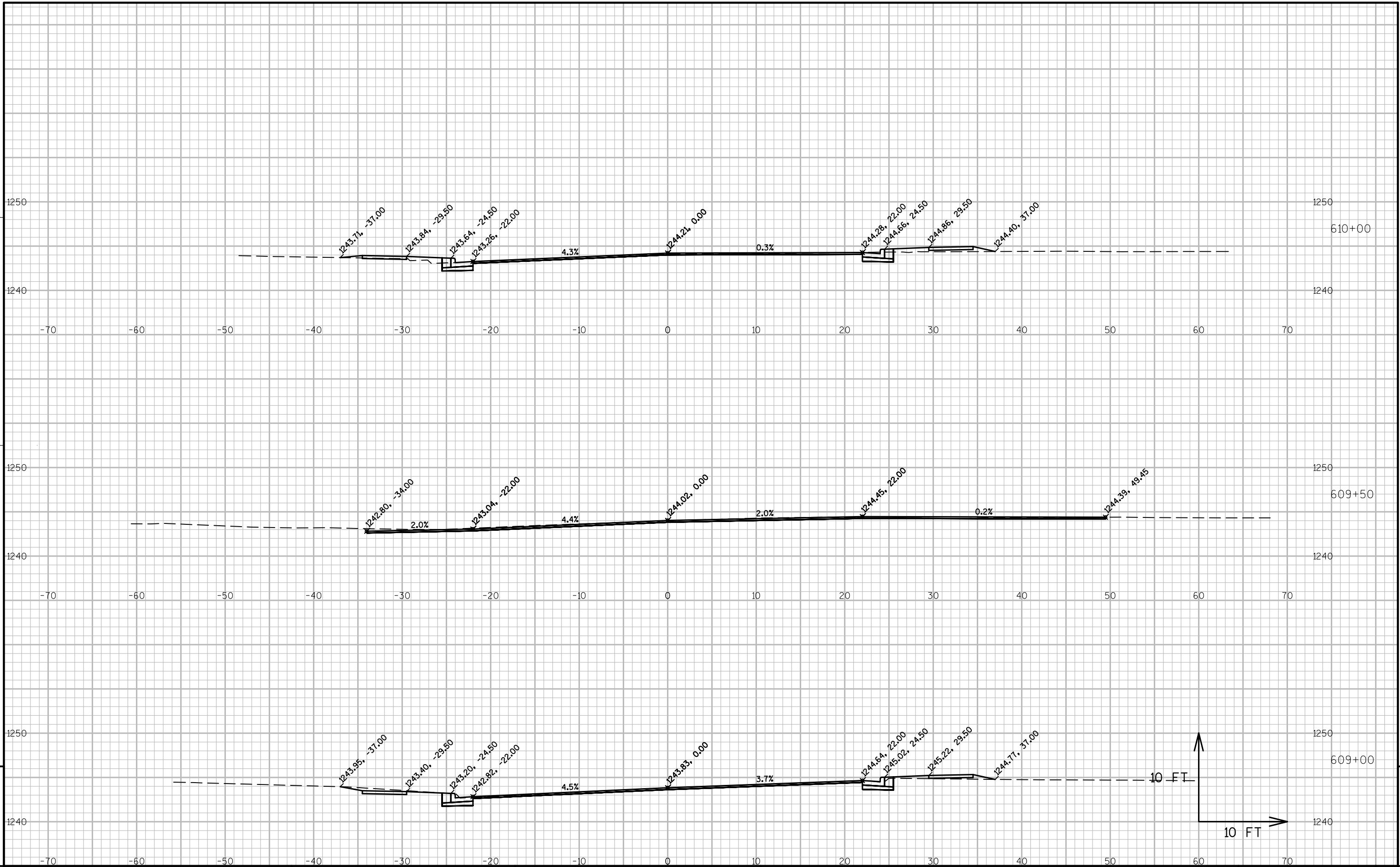
NOTES

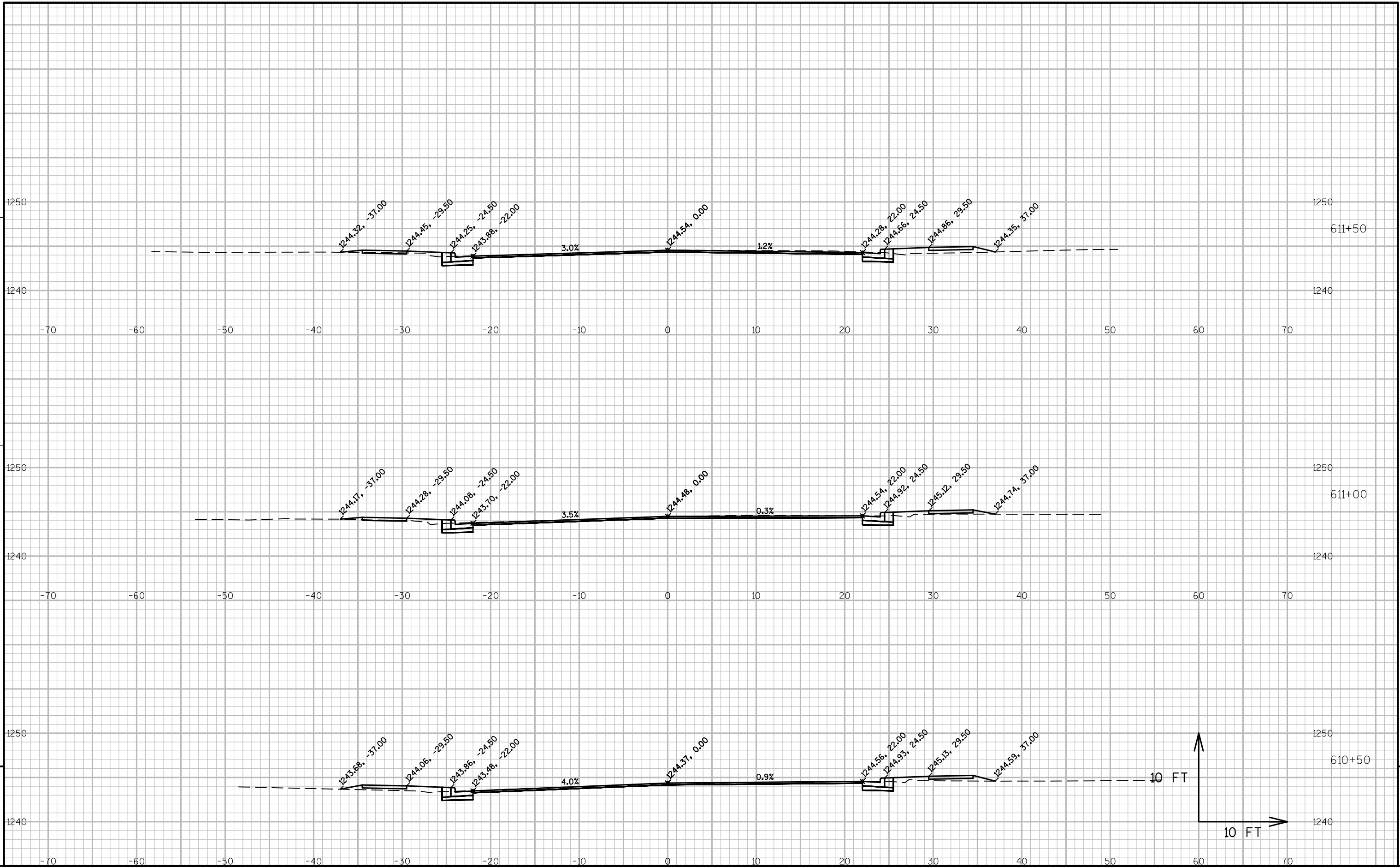
1. All Signs Type II - Type H Reflective
2. Color:
Background - GREEN
Message - WHITE
3. Message Series - E

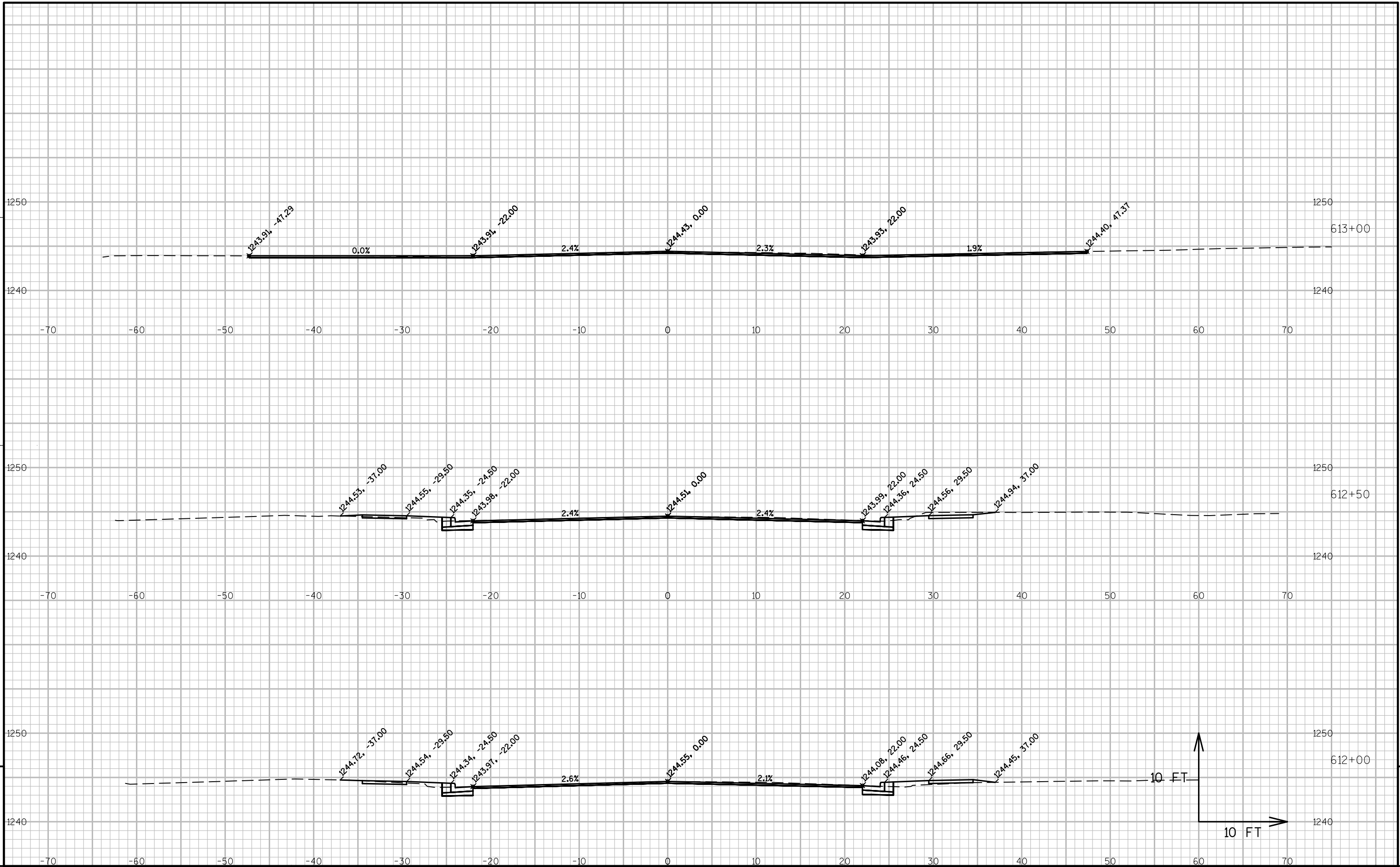
NOTES

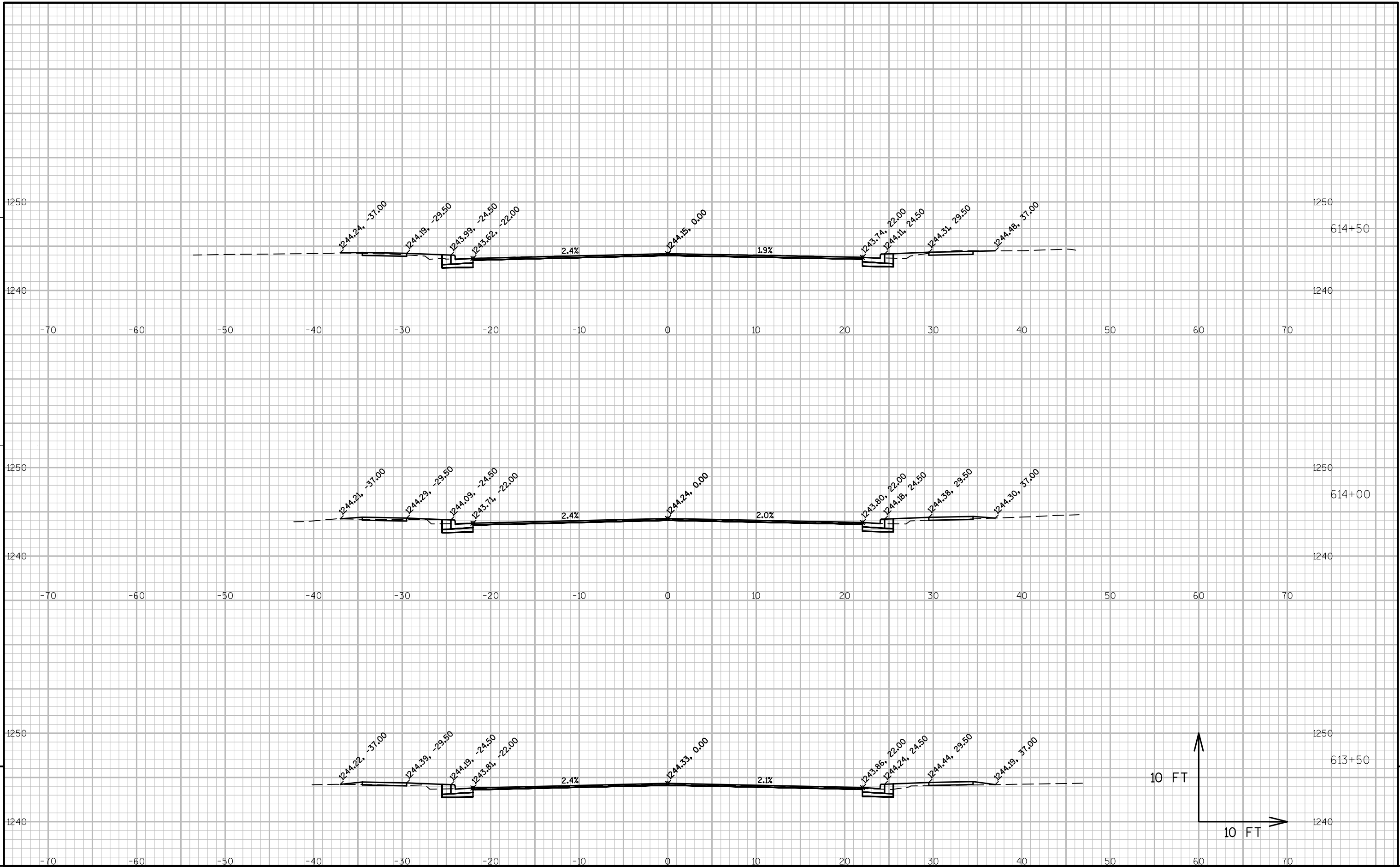
- 1. All Signs Type II - Type H Reflective
- 2. Color:
Background - GREEN
Message - WHITE
- 3. Message Series - E except as Shown

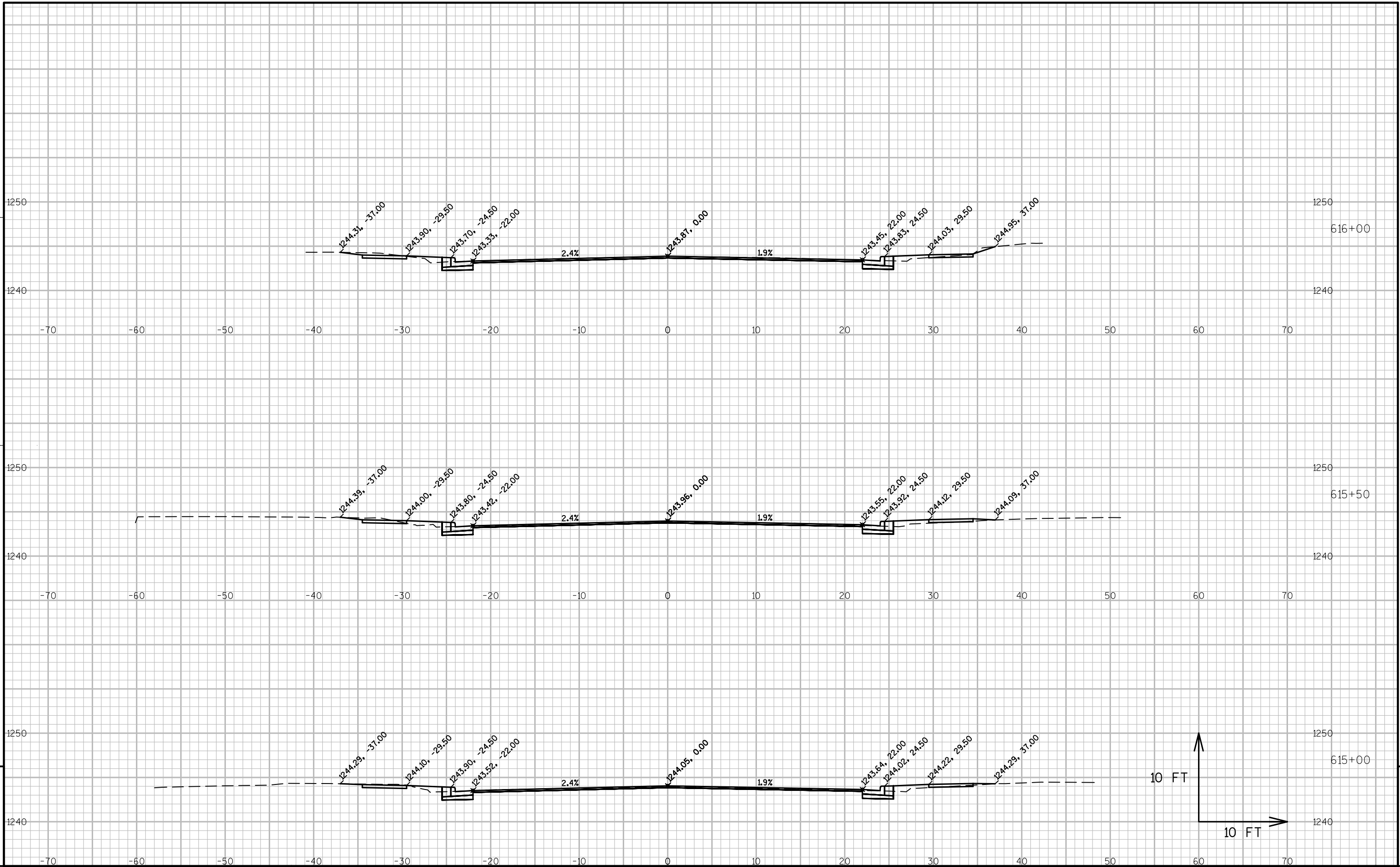


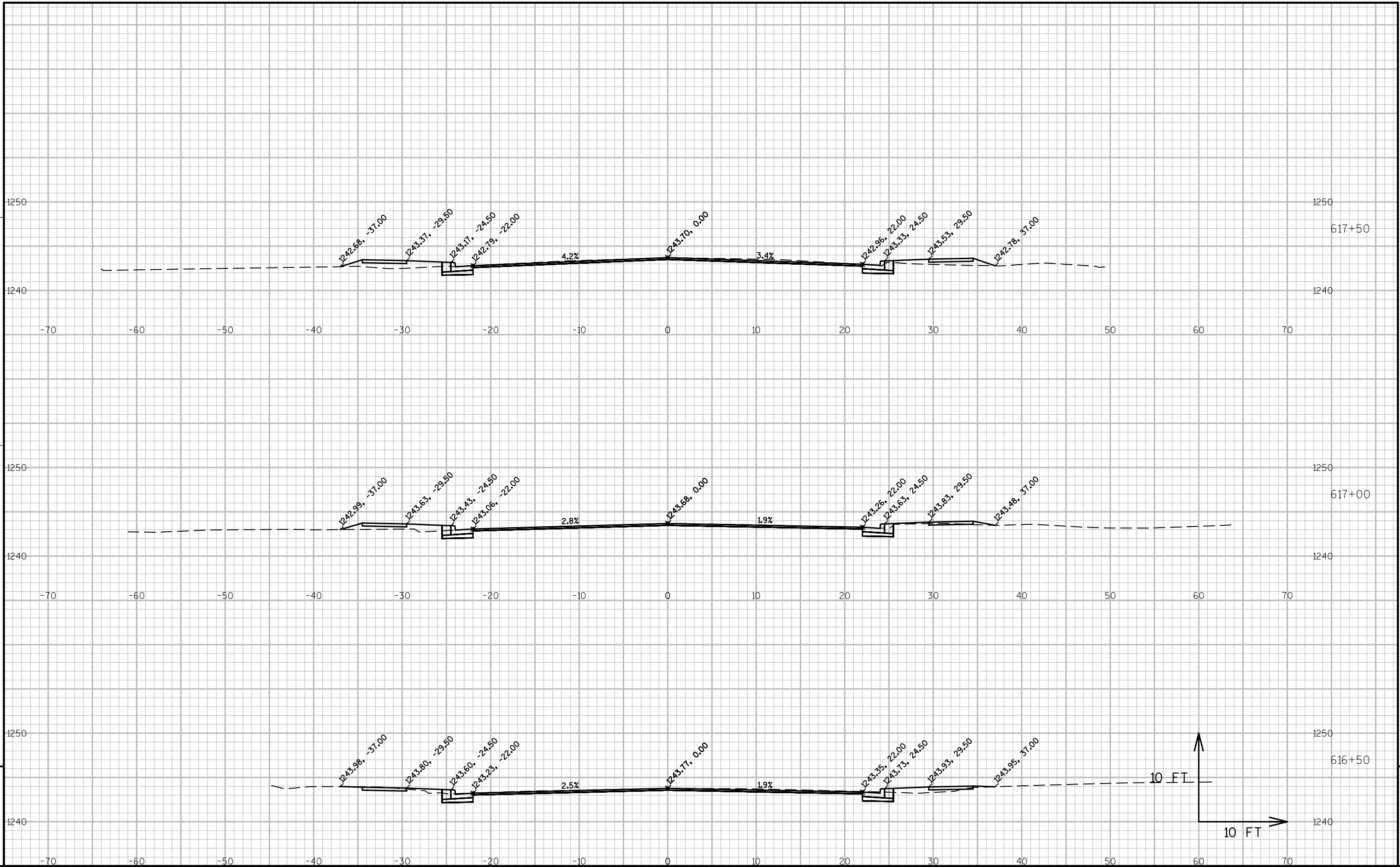


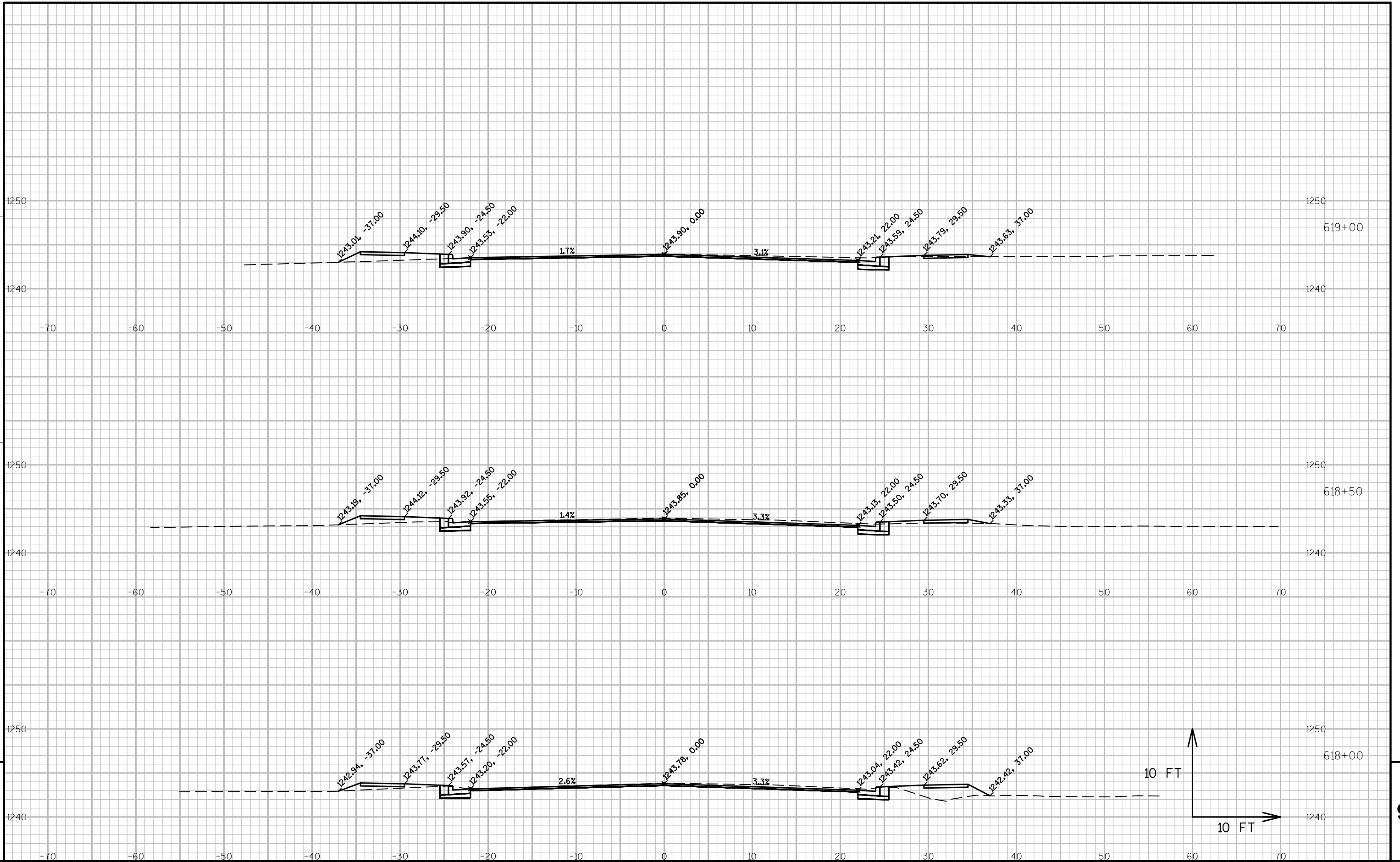


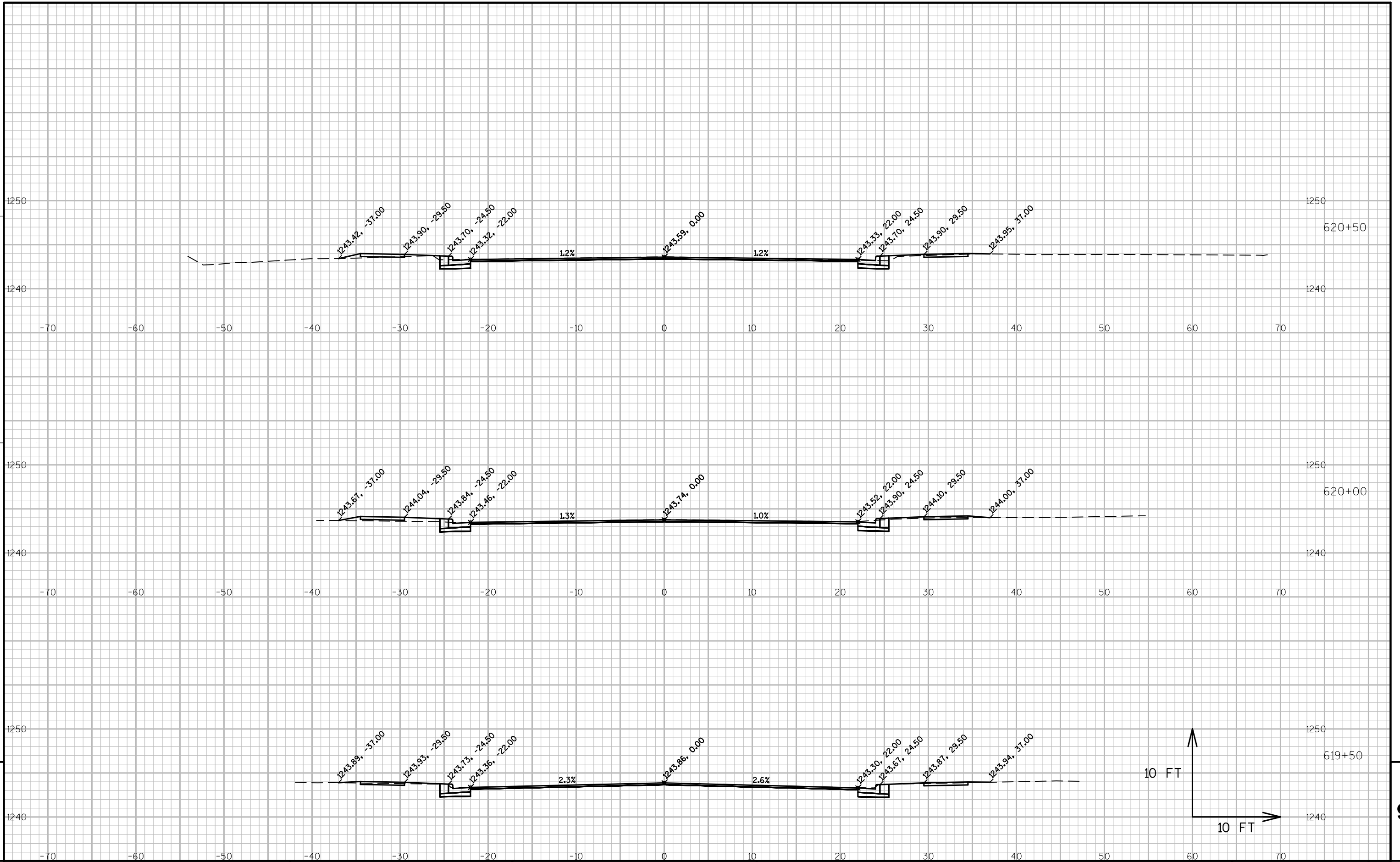




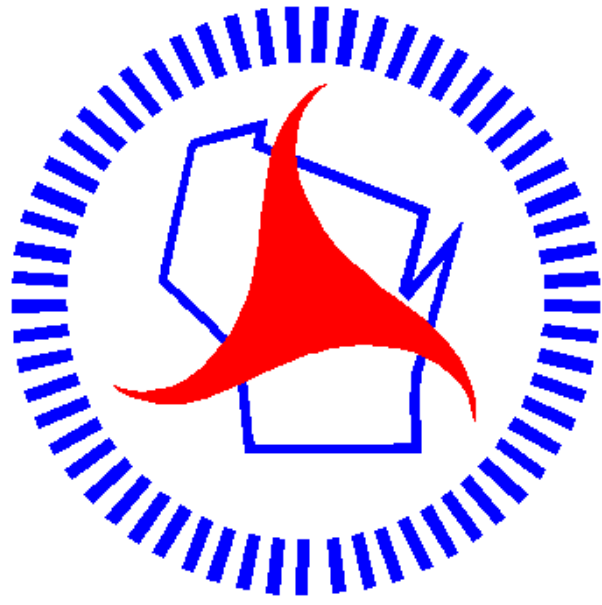








Notes



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