

WKE
WITH:

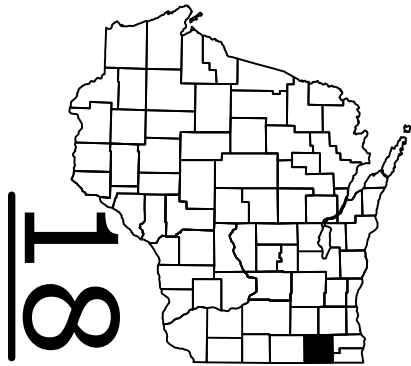
PROJECT ID:
3697-05-70

COUNTY:
WALWORTH

MARCH 2025
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 = 78



DESIGN DESIGNATION

A.A.D.T.	2025	=	2355
A.A.D.T.	2045	=	2355
D.H.V.		=	
D.D.		=	50/50
T.		=	19.3%
DESIGN SPEED		=	55 MPH
ESALS		=	570,000

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
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

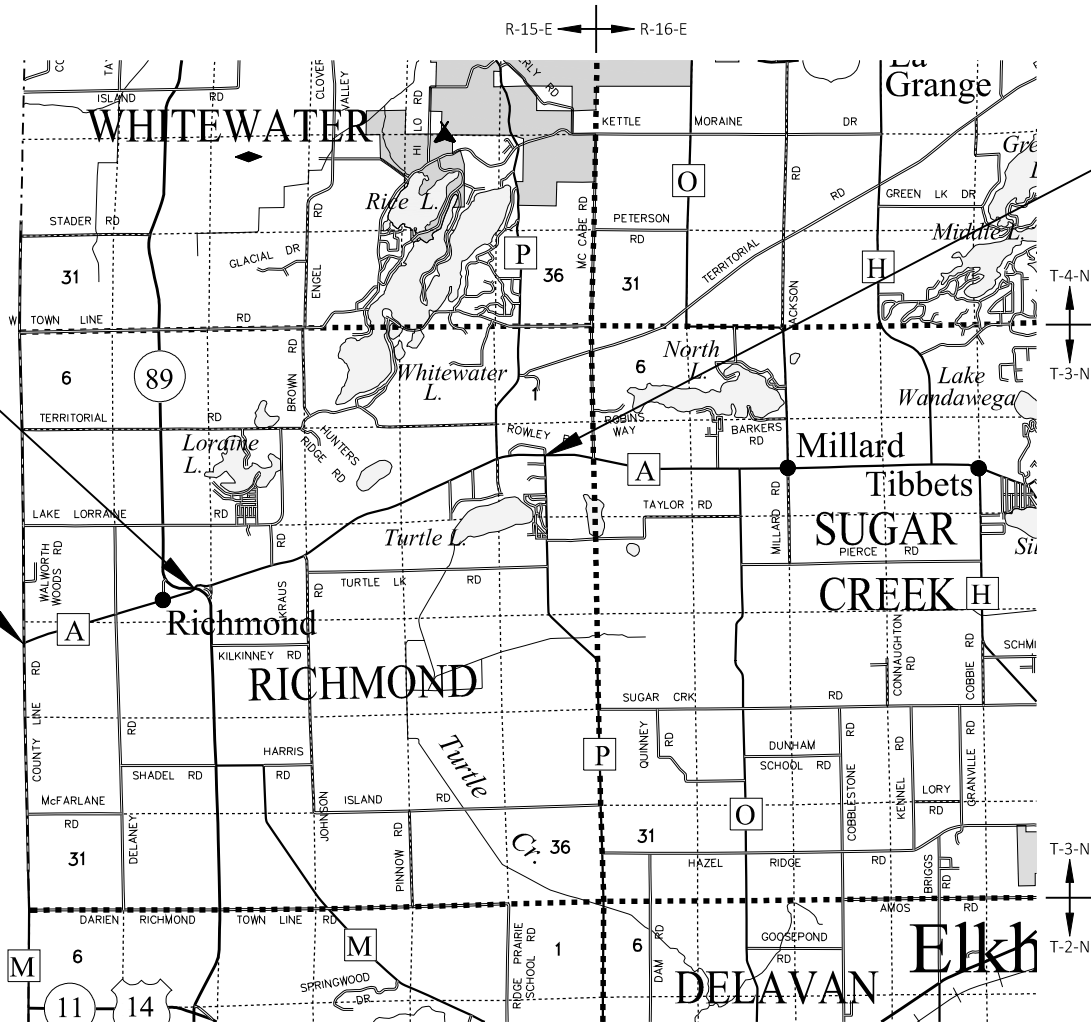
T RICHMOND, CTH A

W COUNTY LINE TO CTH P

CTH A

WALWORTH COUNTY

STATE PROJECT NUMBER
3697-05-70



END PROJECT
STA 410+81.00

NET EXCEPTION TO CL LENGTH
STA 199+12 - 201+29

BEGIN PROJECT
STA 100+51.70
Y = 378,487.167
X = 699,454.404

LAYOUT
SCALE 0 2 MI
TOTAL NET LENGTH OF CENTERLINE = 5.836 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), WALWORTH COUNTY NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES.

ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 18.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
3697-05-70	WISC 2025374	1

ACCEPTED FOR
WALWORTH COUNTY

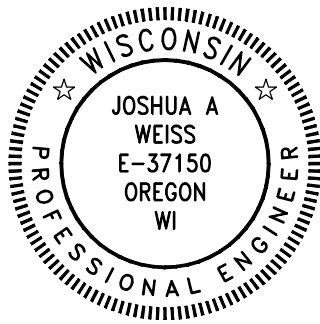
DATE: 10-28-2024

(Signature of Official)

ORIGINAL PLANS PREPARED BY

CORRE
ENGINEERING

MADISON | EAU CLAIRE | WAUKESHA | APPLETON | TOMAH | WAUSAU



Digitally signed by Josh Weiss
DN: C=US,
E=jweiss@correinc.com,
O=CORRE Inc., CN=Josh Weiss
Date: 2024.10.30
07:03:57-05'00'

Josh Weiss

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CORRE INC
Designer	CORRE INC
Project Manager	JOSEPH JELACIC
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	AMY TAETSCH

APPROVED FOR THE DEPARTMENT

DATE: 10/29/2024

Joseph Jelacio
(Signature)

E

UTILITIES CONTACTS

AT&T WISCONSIN COMMUNICATIONS KIM CLOWES 435 S. 95TH STREET MILWAUKEE, WI 53214 PHONE: (608) 322-4452 EMAIL:	EDGE BROADBAND COMMUNICATIONS TARAN BLANCHARD 10 W. EVERGREEN PKWY, SUITE 6 ELKHORN, WI 53121 PHONE: (262) 458-4220 EMAIL: TARAN@EDGEBROADBAND.COM	SPECTRUM COMMUNICATIONS COMMUNICATIONS CODY THOMPSON 1348 PLAINFIELD AVE JANESVILLE, WI 53545 PHONE: (608) 921-8282 EMAIL: CODY.THOMPSON@CHARTER.COM
EVERSTREAM COMMUNICATIONS SHAD GARCIA 324 E. WISCONSIN AVE, SUITE 730 MILWAUKEE, WI 53202 PHONE: (414) 522-6685 EMAIL: SGARCIA@EVERSTREAM.NET	WE ENERGIES - ELECTRIC ELECTRICITY STEVE KING S13 W33800 HWY 18 DELAFIELD, WI 53018 PHONE: (262) 968-5768 EMAIL: STEVE.KING@WE-ENERGIES.COM	WE ENERGIES - GAS GAS / PETROLEUM SCOTT HOLSTEIN 700 S. KANE STREET BURLINGTON, WI 53105 PHONE: (262) 763-1084 EMAIL: SCOTT.HOLSTEIN@WE-ENERGIES.COM
ENBRIDGE ENERGY OIL CRAIG GUTTENBERG 803 HIGHLAND AVE FORT ATKINSON, WI 53538 PHONE: (920) 691-6827 EMAIL: CRAIG.GUTTENBERG@ENBRIDGE.COM		WIN TECHNOLOGY COMMUNICATIONS TODD ELICKSON 5499 BULLIS FARM RD EAU CLAIRE, WI 54701 PHONE: (608) 852-4072 EMAIL: TODD.ELICKSON@WINECHNOLOGY.COM

ORDER OF SECTION 2 DETAIL SHEETS

- GENERAL NOTES
- TYPICAL SECTIONS
- PLAN DETAILS

WISDOT PROJECT MANAGER

JOSEPH JELACIC
WISDOT SOUTHEAST REGION
141 NW BARSTOW STREET
WAUKESHA, WI 53188
PHONE: (262) 548-6762
EMAIL: JOSEPH.JELACIC@DOT.WI.GOV

DESIGN CONSULTANT PROJECT MANAGER

JOSH WEISS
CORRE INC.
6510 GRAND TETON PLAZA, SUITE 314
MADISON, WI 53719
PHONE: 608-826-6140
EMAIL: JWEISS@CORREINC.COM

COUNTY HIGHWAY COMMISSIONER

JOSEPH KROLL
WALWORTH COUNTY
W4097 COUNTY ROAD NN
ELKHORN, WI 53121
PHONE: 262-741-3441
EMAIL: JKROLL@WALWORTH.WI.US

WISCONSIN DNR LIAISON

CRAIG WEBSTER
WISCONSIN DEPARTMENT OF NATURAL RESOURCES
141 NW BARSTOW ST, RM 180
WAUKESHA, WI 53188
PHONE: 262-574-2141
EMAIL: CRAIG.WEBSTER@WISCONSIN.GOV

TOWN OF RICHMOND

CINDY HAFFERKAMP
TOWN CLERK
W9046 COUNTY ROAD A
DELAVAN, WI 53115
PHONE: 608-883-2269
EMAIL: CLERK@TOWNOFRICHMOND-WALWORTHWI.GOV

GENERAL NOTES

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

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE.

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

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

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

THE CONTRACTOR IS TO WORK WITH UTMOST CARE AND PROTECT ALL SURVEY MARKERS. REMOVAL OF ANY SURVEY MARKER IS TO BE WITH THE APPROVAL OF THE ENGINEER.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE, SUBBASE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYERS SHOWN ON THE PLAN IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT APPROXIMATE LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE CONTRACTOR'S EROSION CONTROL IMPLEMENTATION PLAN (ECIP) AND APPROVED BY THE ENGINEER. MAINTAIN EROSION CONTROL MEASURES UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

PAVEMENT BUTT JOINTS WILL BE TO THE NEAREST JOINT OR AS DIRECTED BY THE ENGINEER.

THE EXACT LOCATION AND WIDTH OF DRIVEWAYS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. DRIVEWAYS SHALL BE REPLACED IN KIND.

PIPE ELEVATIONS, LENGTHS AND LOCATIONS AS SHOWN ON THE PLANS, MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

THE PROPOSED SHOULDER WIDTH SHOWN IN THE TYPICAL SECTIONS ARE MINIMUM WIDTH. PERPETUATE EXISTING SHOULDERS THAT ARE WIDER THAN WHAT IS SHOWN IN THE TYPICAL SECTIONS.

THE CONTRACTOR'S PAVING OPERATION SHALL BE CONSISTENT WITH THE TYPICAL SECTIONS AND CONSTRUCTED TO PREVENT LONGITUDINAL JOINTS FROM BEING LOCATED WITHIN A DRIVING, TURNING, PASSING, OR PARKING LANE.

FIELD VERIFY GUARDRAIL HEIGHTS AFTER PAVING AND SHOULDERING AND ADJUST GUARDRAIL HEIGHTS AS NECESSARY. ADJUST SLOPE OF GRAVEL SHOULDER AT EAT'S TO MAINTAIN PROPER HEIGHT.

CONTRACTOR SHALL MAINTAIN ACCESS TO ALL DRIVEWAYS AT ALL TIMES EXCEPT WHEN PAVING OR PIPE LAYING OPERATIONS REQUIRE THE DRIVEWAY TO BE CLOSED. ACCESS TO DRIVEWAYS SHALL BE RE-ESTABLISHED IMMEDIATELY AFTER OPERATIONS ARE COMPLETED. ACCESS SHALL BE PROVIDED DURING ALL NON-WORKING HOURS.

TRAFFIC CONTROL DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

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

DO NOT DRIVE OR STORE EQUIPMENT, OR STORE CONSTRUCTION MATERIALS IN ENVIRONMENTALLY SENSITIVE AREAS, WETLANDS OR WATERWAYS.

RE-TOPSOIL GRADED AREAS, AS DIRECTED BY THE ENGINEER, IMMEDIATELY AFTER GRADING IS COMPLETED IN THOSE AREAS. SEED, FERTILIZE, AND EROSION MAT TOPSOILED AREAS WITHIN 7 CALENDAR DAYS AFTER DISTURBANCE. IF GRADED AREAS WILL BE LEFT EXPOSED FOR MORE THAN 7 CALENDAR DAYS, SEED THOSE AREAS WITH TEMPORARY SEED AND MULCH/EROSION MAT WITHIN 3 DAYS OF INITIAL AND/OR REPEATED DISTURBANCE.

RUNOFF COEFFICIENT TABLE

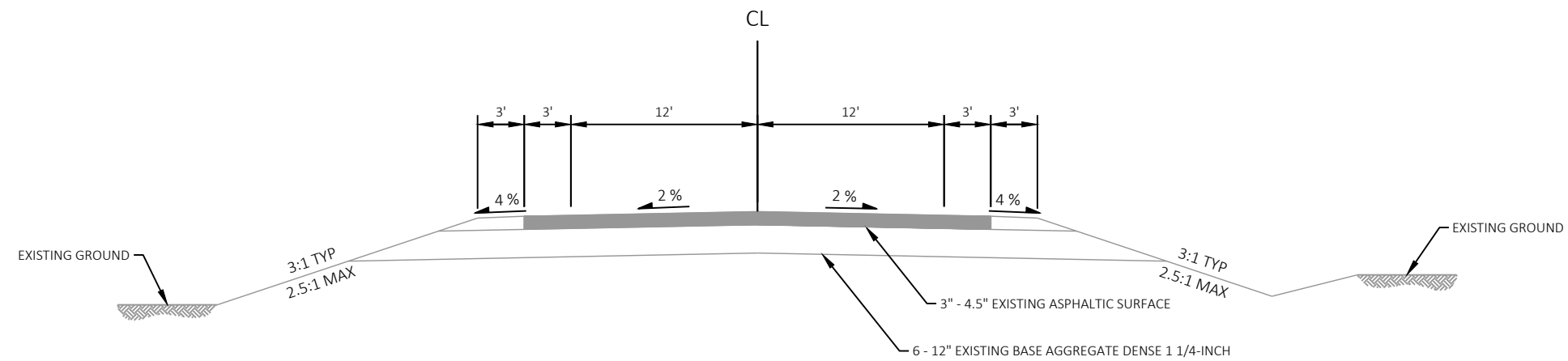
LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS:	.08	.16	.22	.12	.20	.27	.15	.24	.33	.19	.28	.38
	.22	.30	.38	.26	.34	.44	.30	.37	.50	.34	.41	.56
MEDIAN STRIPTURF:	.19	.20	.24	.19	.22	.26	.20	.23	.30	.20	.25	.30
	.24	.26	.30	.25	.28	.33	.26	.30	.37	.27	.32	.40
SIDE SLOPETURF:			.25			.27			.28			.30
			.32			.34			.36			.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 = 0.45 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.11 ACRES

DIGGERSHOTLINE

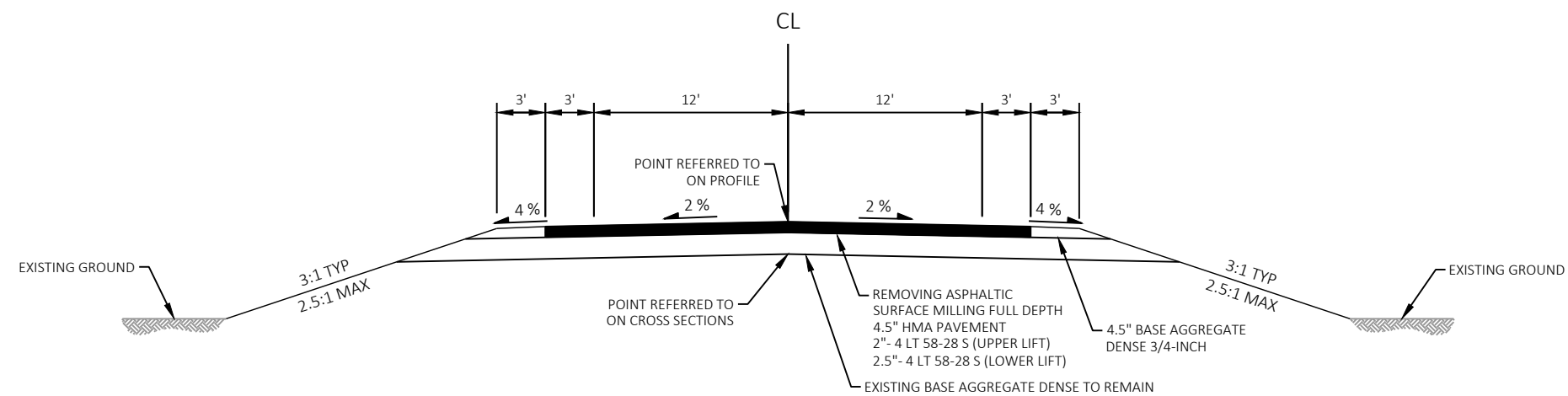
Dial 811 or (800)242-8511

www.DiggersHotline.com



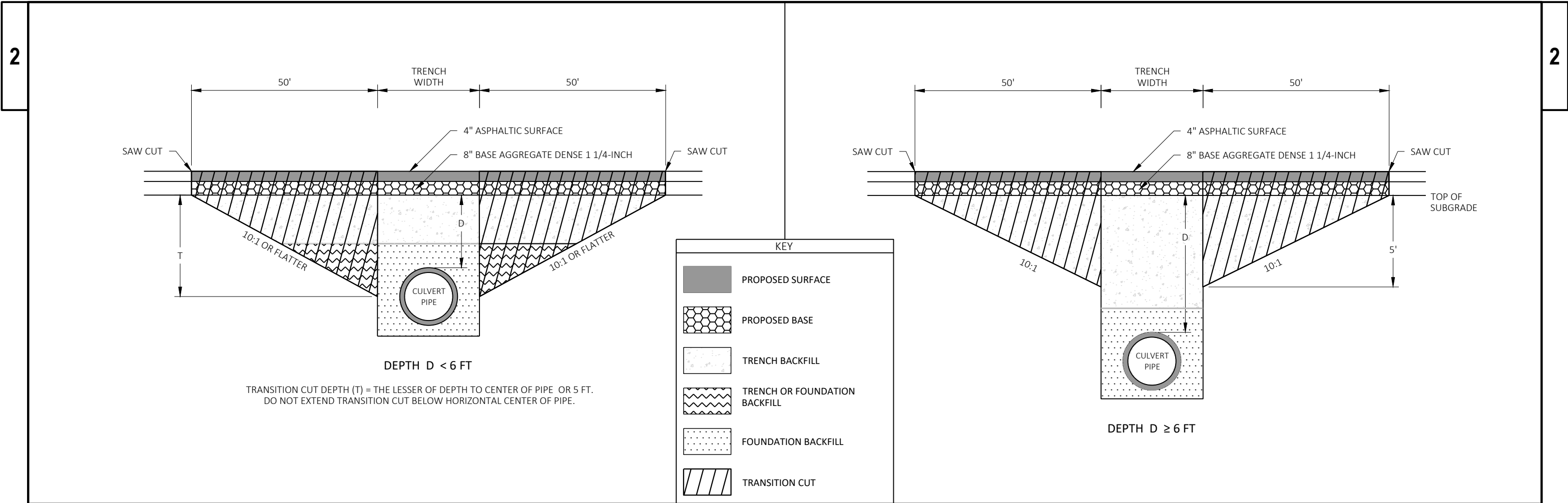
EXISTING TYPICAL SECTION - CTH A

STA 100+51.7 - 199+12.0
STA 201+29.0 - 410+81.0



FINISHED TYPICAL SECTION - CTH A

STA 100+51.7 - 199+12.0
STA 201+29.0 - 410+81.0



NOTES

TRANSITION CUT IS PAID AS EXCAVATION COMMON.

TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.

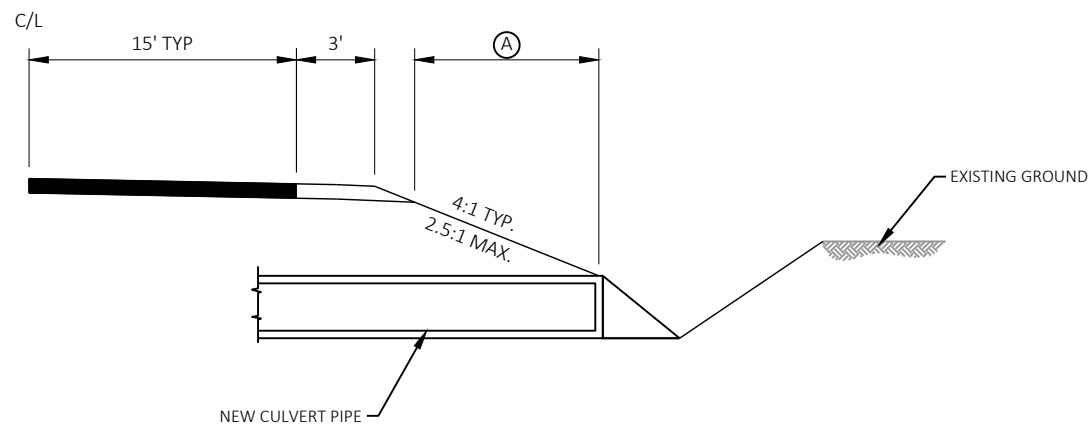
BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.

FOUNDATION BACKFILL IS PAID AS BACKFILL GRANULAR GRADE 2.

PERFORM CULVERT PIPE INSTALLATION BEFORE MILLING OPERATIONS.

CROSS DRAIN INSTALLATION DETAIL

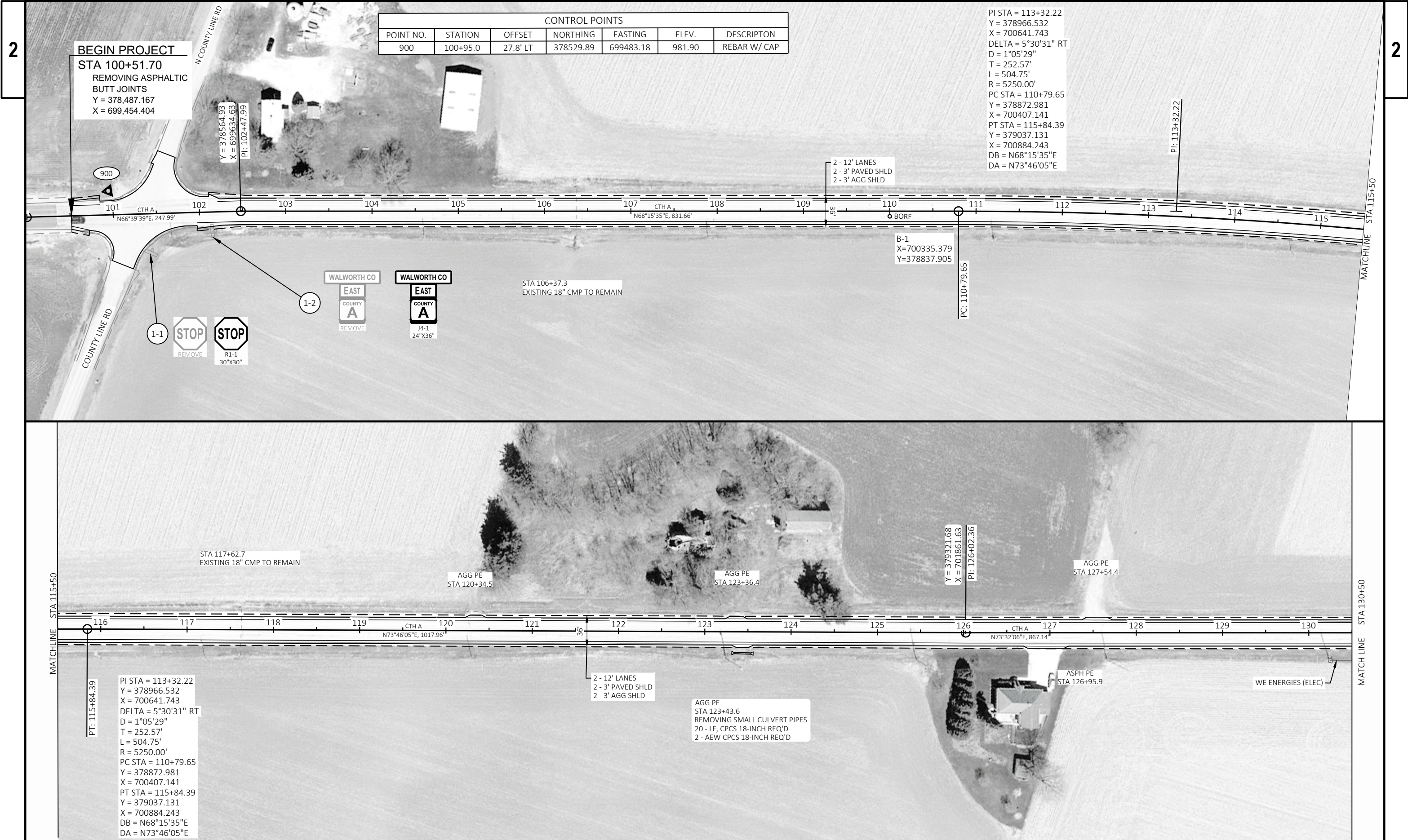
ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)
CTH A	131+98	2.2'	24"
CTH A	204+61	8.3'	30"
CTH A	224+14	1.7'	24"
CTH A	259+83	10.2'	24"
CTH A	273+03	3.9'	24"
CTH A	281+29	11.3'	36"
CTH A	300+56	3.8'	24"
CTH A	306+08	11.9'	24"
CTH A	328+27	3.0'	30"
CTH A	353+50	0.7'	30"
CTH A	367+81	5.2'	24"



(A) EROSION MAT URBAN CLASS I TYPE B, SEEDING TEMPORARY, SEEDING MIXTURE NO. 20, FERTILIZER TYPE B

NOTE: FINAL LOCATIONS TO BE FIELD VERIFIED WITH THE ENGINEER.

EROSION CONTROL AT CULVERT REPLACEMENTS



CONTROL POINTS						
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTON
900	100+95.0	27.8' LT	378529.89	699483.18	981.90	REBAR W/ CAP

PI STA = 113+32.22
Y = 378966.532
X = 700641.743
DELTA = 5°30'31" RT
D = 1°05'29"
T = 252.57'
L = 504.75'
R = 5250.00'
PC STA = 110+79.65
Y = 378872.981
X = 700407.141
PT STA = 115+84.39
Y = 379037.131
X = 700884.243
DB = N68°15'35"E
DA = N73°46'05"E

PI STA = 113+32.22
Y = 378966.532
X = 700641.743
DELTA = 5°30'31" RT
D = 1°05'29"
T = 252.57'
L = 504.75'
R = 5250.00'
PC STA = 110+79.65
Y = 378872.981
X = 700407.141
PT STA = 115+84.39
Y = 379037.131
X = 700884.243
DB = N68°15'35"E
DA = N73°46'05"E

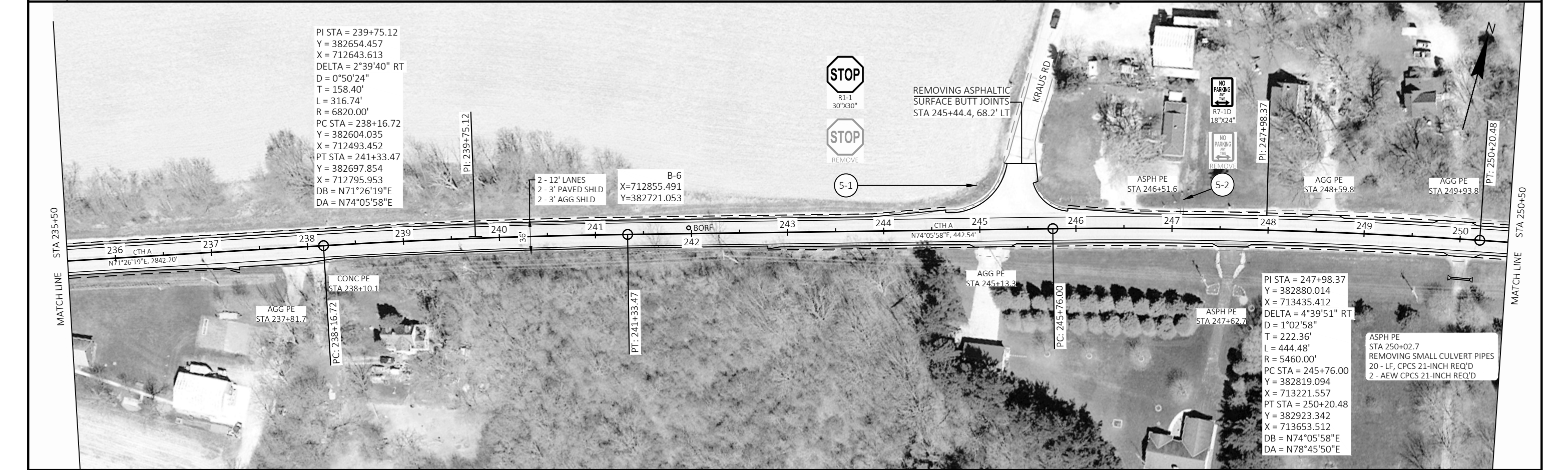
AGG PE
STA 123+43.6
REMOVING SMALL CULVERT PIPES
20 - LF, CPCS 18-INCH REQ'D
2 - AEW CPCS 18-INCH REQ'D





CONTROL POINTS						
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
906	166+73.1	20.8' LT	380493.90	705759.95	970.71	REBAR W/ CAP

CONTROL POINTS						
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
907	179+05.5	42.7' LT	380864.46	76935.60	999.04	REBAR W/ CAP
908	186+66.3	24.2' RT	381019.57	707683.24	967.76	REBAR W/ CAP





CONTROL POINTS						
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTON
902	263+67.6	32.2' RT	383297.95	714946.82	960.21	REBAR W/ CAP

PI STA = 260+67.38
Y = 383127.333
X = 714680.339
DELTA = 24°28'28" LT
D = 2°02'20"
T = 609.45'
L = 1200.32'
R = 2810.00'
PC STA = 254+57.92
Y = 383008.579
X = 714082.567
PT STA = 266+58.24
Y = 383483.066
X = 715175.200
DB = N78°45'50"E
DA = N54°17'22"E

PI STA = 260+67.38
Y = 383127.333
X = 714680.339
DELTA = 24°28'28" LT
D = 2°02'20"
T = 609.45'
L = 1200.32'
R = 2810.00'
PC STA = 254+57.92
Y = 383008.579
X = 714082.567
PT STA = 266+58.24
Y = 383483.066
X = 715175.200
DB = N78°45'50"E
DA = N54°17'22"E

B-7
X=715291.441
Y=383559.236

STA 273+03
REMOVING SMALL CULVERT PIPES
88 - LF, CPCS 24-INCH REQ'D
2 - AEW CPCS 24-INCH REQ'D
INV. 951.97, 40.1' LT
INV. 951.08, 48.0' RT
SKEW 0°

AGG CE
STA 265+74.7
REMOVING SMALL CULVERT PIPES
40 - LF, CPCS 18-INCH REQ'D
2 - AEW CPCS 18-INCH REQ'D

STA 267+08.6
EXISTING 24" CMP TO REMAIN

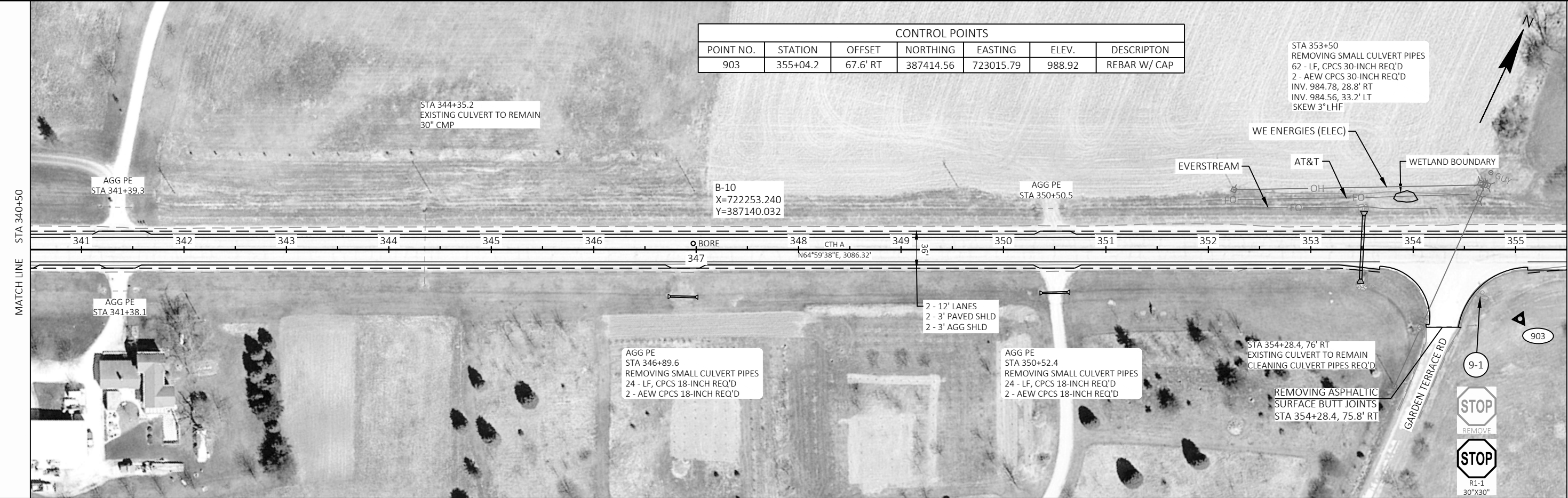




PI STA = 319+47.01
Y = 385970.572
X = 719760.213
DELTA = 11°22'08" LT
D = 1°02'17"
T = 549.46'
L = 1095.31'
R = 5520.00'
PC STA = 313+97.54
Y = 385841.024
X = 719226.241
PT STA = 324+92.86
Y = 386202.837
X = 720258.169
DB = N76°21'47"E
DA = N64°59'38"E

CONTROL POINTS						
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
905	312+28.1	43.8' LT	385843.65	719051.29	983.78	REBAR W/ CAP

2



2



PROJECT NO:	3697-05-70
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HWY: CTH A

COUNTY: WALWORTH

PLAN DETAILS

SHEET

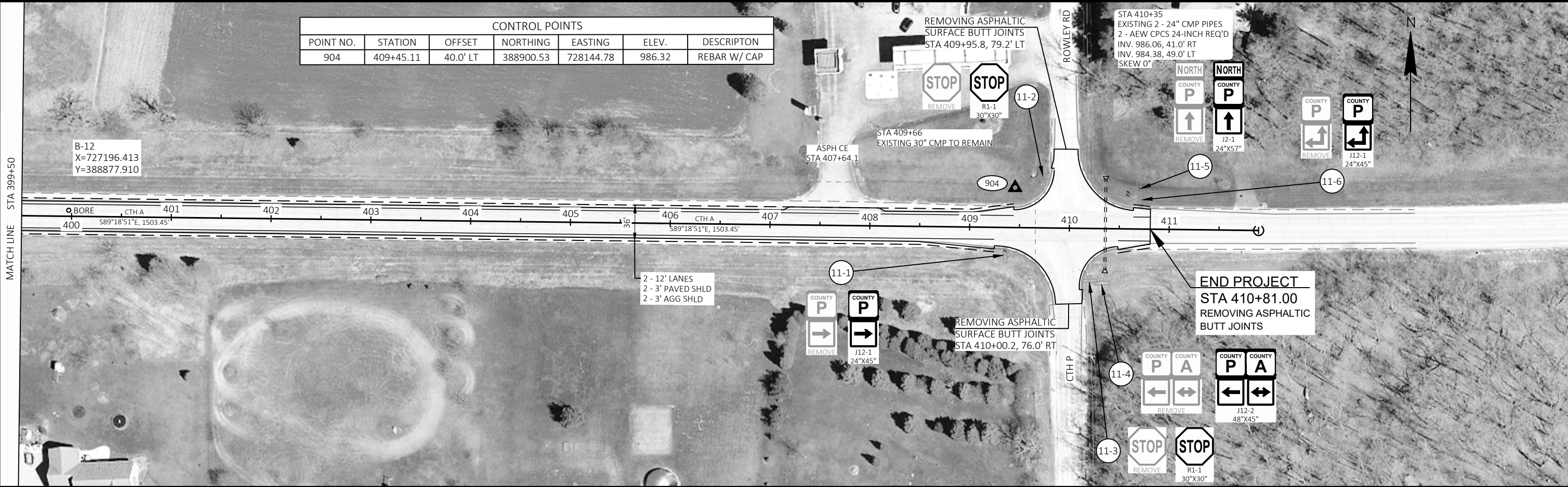
E



2

2

CONTROL POINTS						
POINT NO.	STATION	OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTON
904	409+45.11	40.0' LT	388900.53	728144.78	986.32	REBAR W/ CAP



Estimate Of Quantities

3697-05-70

Line	Item	Item Description	Unit	Total	Qty
0002	203.0100	Removing Small Pipe Culverts	EACH	27.000	27.000
0004	204.0115	Removing Asphaltic Surface Butt Joints	SY	893.000	893.000
0006	204.0120	Removing Asphaltic Surface Milling	SY	104,834.000	104,834.000
0008	205.0100	Excavation Common	CY	13,055.000	13,055.000
0010	208.0100	Borrow	CY	5,175.000	5,175.000
0012	208.1500.S	Temporary Lane Shift During Culvert Work	EACH	10.000	10.000
0014	209.2100	Backfill Granular Grade 2	CY	375.000	375.000
0016	211.0101	Prepare Foundation for Asphaltic Paving (project) 01. 3697-05-70	EACH	1.000	1.000
0018	213.0100	Finishing Roadway (project) 01. 3697-05-70	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,210.000	1,210.000
0022	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	6,560.000	6,560.000
0024	305.0500	Shaping Shoulders	STA	311.000	311.000
0026	455.0605	Tack Coat	GAL	6,560.000	6,560.000
0028	460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH	1.000	1.000
0030	460.0110.S	HMA Percent Within Limits (PWL) Test Strip Density	EACH	1.000	1.000
0032	460.2005	Incentive Density PWL HMA Pavement	DOL	21,160.000	21,160.000
0034	460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL	6,210.000	6,210.000
0036	460.2010	Incentive Air Voids HMA Pavement	DOL	27,530.000	27,530.000
0038	460.5224	HMA Pavement 4 LT 58-28 S	TON	27,530.000	27,530.000
0040	465.0105	Asphaltic Surface	TON	880.000	880.000
0042	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	465.000	465.000
0044	520.8700	Cleaning Culvert Pipes	EACH	5.000	5.000
0046	521.1018	Apron Endwalls for Culvert Pipe Steel 18-Inch	EACH	30.000	30.000
0048	521.1021	Apron Endwalls for Culvert Pipe Steel 21-Inch	EACH	4.000	4.000
0050	521.1024	Apron Endwalls for Culvert Pipe Steel 24-Inch	EACH	16.000	16.000
0052	521.1030	Apron Endwalls for Culvert Pipe Steel 30-Inch	EACH	6.000	6.000
0054	521.1036	Apron Endwalls for Culvert Pipe Steel 36-Inch	EACH	2.000	2.000
0056	521.3118	Culvert Pipe Corrugated Steel 18-Inch	LF	403.000	403.000
0058	521.3121	Culvert Pipe Corrugated Steel 21-Inch	LF	40.000	40.000
0060	521.3124	Culvert Pipe Corrugated Steel 24-Inch	LF	637.000	637.000
0062	521.3130	Culvert Pipe Corrugated Steel 30-Inch	LF	268.000	268.000
0064	521.3136	Culvert Pipe Corrugated Steel 36-Inch	LF	138.000	138.000
0066	614.0400	Adjusting Steel Plate Beam Guard	LF	725.000	725.000
0068	614.0950	Replacing Guardrail Posts and Blocks	EACH	10.000	10.000
0070	614.0951	Replacing Guardrail Rail and Hardware	LF	50.000	50.000
0072	614.0952	Replacing Guardrail Reflectors	EACH	10.000	10.000
0074	619.1000	Mobilization	EACH	1.000	1.000
0076	625.0100	Topsoil	SY	480.000	480.000
0078	628.1504	Silt Fence	LF	2,750.000	2,750.000
0080	628.1520	Silt Fence Maintenance	LF	2,750.000	2,750.000
0082	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0084	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0086	628.2008	Erosion Mat Urban Class I Type B	SY	480.000	480.000
0088	628.7555	Culvert Pipe Checks	EACH	39.000	39.000
0090	629.0205	Fertilizer Type A	CWT	2.000	2.000
0092	630.0120	Seeding Mixture No. 20	LB	35.000	35.000
0094	630.0200	Seeding Temporary	LB	35.000	35.000
0096	633.5200	Markers Culvert End	EACH	26.000	26.000
0098	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	46.000	46.000

Estimate Of Quantities

3697-05-70

Line	Item	Item Description	Unit	Total	Qty
0100	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	11.000	11.000
0102	637.2210	Signs Type II Reflective H	SF	219.770	219.770
0104	637.2230	Signs Type II Reflective F	SF	159.500	159.500
0106	638.2602	Removing Signs Type II	EACH	63.000	63.000
0108	638.3000	Removing Small Sign Supports	EACH	55.000	55.000
0110	643.0900	Traffic Control Signs	DAY	1,700.000	1,700.000
0112	643.5000	Traffic Control	EACH	1.000	1.000
0114	646.1020	Marking Line Epoxy 4-Inch	LF	124,200.000	124,200.000
0116	646.6120	Marking Stop Line Epoxy 18-Inch	LF	40.000	40.000
0118	648.0100	Locating No-Passing Zones	MI	5.880	5.880
0120	650.6000	Construction Staking Pipe Culverts	EACH	11.000	11.000
0122	650.8000	Construction Staking Resurfacing Reference	LF	31,030.000	31,030.000
0124	650.9911	Construction Staking Supplemental Control (project) 01. 3697-05-70	EACH	1.000	1.000
0126	740.0440	Incentive IRI Ride	DOL	23,510.000	23,510.000
0128	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	600.000	600.000
0130	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,320.000	1,320.000
0132	SPV.0170	Special 01. Proof Rolling	STA	311.000	311.000

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						204.0115		204.0120				205.0100		208.0100		209.2100		SPV.0170.01	
						REMOVING		REMOVING				EXCAVATION		BORROW		BACKFILL		SPECIAL (01.	
						ASPHALTIC		ASPHALTIC				COMMON		CY		GRADE 2		PROOF ROLLING)	
						SURFACE BUTT		SURFACE				CY		CY		CY		STA	
STATION	TO	STATION	LOCATION	SY	SY	CATEGORY		STATION	TO	STATION	LOCATION	CY		CY		CY		REMARKS	
100+51	-	410+81	CTH A	-	104,834	0010	100+51	-	410+81	CTH A	6,210	5,175		-		311		UNDISTRIBUTED AMOUNT OF EBS	
			CTH A BOP, STA. 100+51	47	-	0010			131+98	CULVERT REPLACEMENT	490	-		30		-			
			COUNTY LINE RD	47	-	0010			204+61	CULVERT REPLACEMENT	705	-		40		-			
			N. COUNTY LINE RD	47	-	0010			224+14	CULVERT REPLACEMENT	445	-		30		-			
			DELANEY RD (SOUTH)	47	-	0010			259+83	CULVERT REPLACEMENT	705	-		30		-			
			DELANEY RD (NORTH)	47	-	0010			273+03	CULVERT REPLACEMENT	650	-		30		-			
			CHURCH RD	47	-	0010			281+29	CULVERT REPLACEMENT	745	-		45		-			
			CTH A, STA. 199+12	47	-	0010			300+56	CULVERT REPLACEMENT	640	-		30		-			
			CTH A, STA. 201+29	47	-	0010			306+08	CULVERT REPLACEMENT	715	-		30		-			
			E. BRADFORD TOWN HALL RD	47	-	0010			328+27	CULVERT REPLACEMENT	595	-		40		-			
			KRAUS RD	47	-	0010			353+50	CULVERT REPLACEMENT	380	-		40		-			
			JOHNSON RD	47	-	0010			367+81	CULVERT REPLACEMENT	775	-		30		-			
			GARDEN TERRACE RD	47	-														
			HOLIDAY DR	47	-					TOTAL 0010	13,055	5,175		375		311			
			WISCONSIN PKWY	47	-														
			CTH P (NORTH)	47	-														
			ROWLEY RD (WEST)	47	-														
			ROWLEY RD (EAST)	47	-														
			CTH P (SOUTH)	47	-														
			CTH A EOP, STA. 410+81	47	-														
			TOTAL 0010		893														

														305.0110	305.0120	305.0500		
																BASE		
														BASE	AGGREGATE			
														AGGREGATE	DENSE 1 1/4-	SHAPING		
														DENSE 3/4-INCH	INCH	SHOULDERS		
CATEGORY	STATION	TO	STATION	LOCATION	TACK COAT	4 LT 58-28 S	ASPHALTIC	ASPHALTIC SURFACE	CATEGORY	STATION	TO	STATION	LOCATION	TON	TON	STA	REMARKS	
					GAL	TON	TON	TON										
									0010	100+51	-	410+81	CTH A	1210	-	311	ROADWAY SHOULDERS	
0010	100+51	-	410+81	CTH A	6,560	27,530	-	465	0010	100+51	-	410+81	CTH A	-	4,140	-	UNDISTRIBUTED EBS BACKFILL	
0010			131+98	CULVERT REPLACEMENT	-	-	80	-	0010			131+98	CULVERT REPLACEMENT	-	220	-		
0010			204+61	CULVERT REPLACEMENT	-	-	80	-	0010			204+61	CULVERT REPLACEMENT	-	220	-		
0010			224+14	CULVERT REPLACEMENT	-	-	80	-	0010			224+14	CULVERT REPLACEMENT	-	220	-		
0010			259+83	CULVERT REPLACEMENT	-	-	80	-	0010			259+83	CULVERT REPLACEMENT	-	220	-		
0010			273+03	CULVERT REPLACEMENT	-	-	80	-	0010			273+03	CULVERT REPLACEMENT	-	220	-		
0010			281+29	CULVERT REPLACEMENT	-	-	80	-	0010			281+29	CULVERT REPLACEMENT	-	220	-		
0010			300+56	CULVERT REPLACEMENT	-	-	80	-	0010			300+56	CULVERT REPLACEMENT	-	220	-		
0010			306+08	CULVERT REPLACEMENT	-	-	80	-	0010			306+08	CULVERT REPLACEMENT	-	220	-		
0010			328+27	CULVERT REPLACEMENT	-	-	80	-	0010			328+27	CULVERT REPLACEMENT	-	220	-		
0010			353+50	CULVERT REPLACEMENT	-	-	80	-	0010			353+50	CULVERT REPLACEMENT	-	220	-		
0010			367+81	CULVERT REPLACEMENT	-	-	80	-	0010			367+81	CULVERT REPLACEMENT	-	220	-		
TOTAL 0010					6,560	27,530	880	465	TOTAL 0010					1,210	6,560	311		

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FOR INFORMATIONAL PURPOSES ONLY								
LOCATION	STATION	MIXTURE USE:	UNDERLYING SURFACE	BID ITEM	TONS	THICKNESS	QUALITY MANAGEMENT PROGRAM TO BE USED FOR:	
							MIXTURE ACCEPTANCE	DENSITY ACCEPTANCE
12 FT DRIVING LANES	100+51 TO 410+81	UPPER LAYER	LOWER LAYER	4 LT 58-28 S	9,268	2"	INCENTIVE AIR VOIDS HMA PAVEMENT 460.2010	INCENTIVE DENSITY PWL HMA PAVEMENT 460.2005
12 FT DRIVING LANES	100+51 TO 410+81	LOWER LAYER	MILLED SURFACE	4 LT 58-28 S	11,585	2.5"		
3-FT SHOULDERS	100+51 TO 410+81	UPPER LAYER	LOWER LAYER	4 LT 58-28 S	2,317	2"		ACCEPTANCE TESTING BY THE DEPARTMENT; NOT ELIGIBLE FOR INCENTIVE OR DISINCENTIVE
3-FT SHOULDERS	100+51 TO 410+81	LOWER LAYER	MILLED SURFACE	4 LT 58-28 S	2,896	2.5"		
SIDE ROAD INTERSECTIONS	100+51 TO 410+81	UPPER LAYER	MILLED SURFACE	4 LT 58-28 S	1,465	4.5"		

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CATEGORY	STATION	LOCATION	203.0100 REMOVING SMALL PIPE CULVERTS EACH	208.1500.S TEMPORARY LANE SHIFT DURING CULVERT WORK EACH	520.8700 CLEANING CULVERT PIPES EACH	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH EACH	521.1021 APRON ENDWALLS FOR CULVERT PIPE STEEL 21-INCH EACH	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH EACH	521.1030 APRON ENDWALLS FOR CULVERT PIPE STEEL 30-INCH EACH	521.1036 APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH EACH	521.3118 CULVERT PIPE CORRUGATED STEEL 18-INCH LF	521.3121 CULVERT PIPE CORRUGATED STEEL 21-INCH LF	521.3124 CULVERT PIPE CORRUGATED STEEL 24-INCH LF	521.3130 CULVERT PIPE CORRUGATED STEEL 30-INCH LF	521.3136 CULVERT PIPE CORRUGATED STEEL 36-INCH LF	628.7555 CULVERT PIPE CHECKS EACH	633.5200 MARKERS CULVERT END EACH	PIPE THICKNESS INCH
0010	123+47	P.E. RT	1	-	-	2	-	-	-	-	20	-	-	-	-	-	-	0.064
0010	131+98	CTH A, CL	1	1	-	-	-	2	-	-	-	-	48	-	-	3	2	0.064
0010	146+95	P.E. LT	1	-	-	2	-	-	-	-	40	-	-	-	-	-	-	0.064
0010	155+45	P.E. RT	1	-	-	2	-	-	-	-	20	-	-	-	-	-	-	0.064
0010	155+81	P.E. LT	1	-	-	2	-	-	-	-	20	-	-	-	-	-	-	0.064
0010	156+30	P.E. LT	1	-	-	2	-	-	-	-	29	-	-	-	-	-	-	0.064
0010	183+33	CTH A, CL	-	-	1	2	-	-	-	-	-	-	-	-	-	3	2	-
0010	190+51	P.E. LT	1	-	-	2	-	-	-	-	45	-	-	-	-	-	-	0.064
0010	204+61	CTH A, CL	1	1	-	-	-	-	2	-	-	-	-	128	-	3	2	0.079
0010	221+49	CTH A, CL	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	224+14	CTH A, CL	1	1	-	-	-	2	-	-	-	-	46	-	-	3	2	0.064
0010	250+03	P.E. RT	1	-	-	-	2	-	-	-	-	20	-	-	-	-	-	0.064
0010	252+18	P.E. RT	1	-	-	-	2	-	-	-	-	20	-	-	-	-	-	0.064
0010	259+83	CTH A, CL	1	1	-	-	-	2	-	-	-	-	124	-	-	3	2	0.064
0010	265+75	P.E. RT	1	-	-	2	-	-	-	-	40	-	-	-	-	-	-	0.064
0010	273+03	CTH A, CL	1	1	-	-	-	2	-	-	-	-	88	-	-	3	2	0.064
0010	281+29	CTH A, CL	1	1	-	-	-	-	-	2	-	-	-	-	138	3	2	0.079
0010	288+17	P.E. RT	1	-	-	2	-	-	-	-	29	-	-	-	-	-	-	0.064
0010	300+56	CTH A, CL	1	-	-	-	-	2	-	-	-	-	90	-	-	3	2	0.064
0010	306+08	CTH A, CL	1	1	-	-	-	2	-	-	-	-	140	-	-	3	2	0.064
0010	307+46	P.E. RT	1	-	-	2	-	-	-	-	28	-	-	-	-	-	-	0.064
0010	324+06	P.E. RT	1	-	-	2	-	-	-	-	29	-	-	-	-	-	-	0.064
0010	328+27	CTH A, CL	1	1	-	-	-	-	2	-	-	-	-	78	-	3	2	0.079
0010	334+56	P.E. RT	1	-	-	2	-	-	-	-	27	-	-	-	-	-	-	0.064
0010	346+90	P.E. RT	1	-	-	2	-	-	-	-	24	-	-	-	-	-	-	0.064
0010	350+52	P.E. RT	1	-	-	2	-	-	-	-	24	-	-	-	-	-	-	0.064
0010	353+50	CTH A, CL	1	1	-	-	-	-	2	-	-	-	-	62	-	3	2	0.079
0010	354+28	GARDEN TERRACE RD	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	367+81	CTH A, CL	1	1	-	-	-	2	-	-	-	-	101	-	-	3	2	0.064
0010	374+47	P.E. RT	1	-	-	2	-	-	-	-	28	-	-	-	-	-	-	0.064
0010	383+24	WISCONSIN PKWY	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
0010	410+35	CTH A, CL	-	-	-	-	-	2	-	-	-	-	-	-	-	3	2	-
TOTAL 0010			27	10	5	30	4	16	6	2	403	40	637	268	138	39	26	

				614.0400	614.0950	614.0951	614.0952		
				ADJUSTING	REPLACING	REPLACING	REPLACING		
				STEEL PLATE	GUARDRAIL	GUARDRAIL RAIL	GUARDRAIL		
				BEAM GUARD	POSTS AND	AND HARDWARE	REFLECTORS		
				LF	EACH	LF	EACH		
STATION	TO	STATION	LOCATION						
268+70	-	272+15	CTH A, RT	345	-	-	-		
391+55	-	395+35	CTH A, LT	380	-	-	-		
			UNDISTRIBUTED	-	10	50	10		
TOTAL 0010				725	10	50	10		

		625.0100	628.1504	628.1520	628.1905	628.1910	628.2008	629.0205	630.0120	630.0200
					MOBILIZATIONS	MOBILIZATIONS	EROSION MAT			
					EROSION	EROSION	URBAN CLASS I	FERTILIZER TYPE	SEEDING	SEEDING
		TOPSOIL	SILT FENCE	SILT FENCE	CONTROL	CONTROL	TYPE B	A	MIXTURE NO. 20	TEMPORARY
		SY	LF	LF	EACH	EACH	SY	CWT	LB	LB
LOCATION										
CULVERT RESTORATION		380	2,200	2,200	2	2	380	1	25	25
UNDISTRIBUTED		100	550	550	-	-	100	1	10	10
TOTAL 0010		480	2,750	2,750	2	2	480	2	35	35

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SIGN ID	STATION	LT/RT	SIGN CODE	SIGN MESSAGE	SIGN SIZE	634.0616	634.0618	637.2210	637.2230
						POSTS WOOD 4X6- INCH X 16-FT	POSTS WOOD 4X6- INCH X 18-FT	SIGNS TYPE II REFLECTIVE H	SIGNS TYPE II REFLECTIVE F
						EACH	EACH	SF	SF
1-1	101+44	RT	R1-1	STOP	30"X30"	1	--	5.18	--
1-2	102+18	RT	J4-1	CTH A EAST/WALWORTH CO	23"X36"	1	--	5.75	--
2-1	154+46	LT	R1-1	STOP	30"X30"	1	--	5.18	--
2-2	154+63	RT	R1-1	STOP	30"X30"	1	--	5.18	--
3-1	170+03	RT	W3-5	SPEED LIMIT 40 AHEAD	36"X36"	1	--	--	9.00
3-2	176+72	LT	R2-1	SPEED LIMIT 55	24"X30"	1	--	5.00	--
3-3	176+16	RT	R2-1	SPEED LIMIT 40/RICHMOND	24"X30"	1	--	5.00	--
3-4	177+76	RT	W2-2L	SIDE ROAD AHEAD	30"X30"	1	--	--	6.25
3-5	181+59	LT	R1-1	STOP	30"X30"	1	--	5.18	--
3-6	181+65	RT	W1-7	TWO DIRECTION LARGE ARROW	48"X24"	1	--	--	8.00
3-7	182+93	LT	R2-1	SPEED LIMIT 40	24"X30"	1	--	5.00	--
3-8	187+77	RT	R2-1	SPEED LIMIT 40	24"X30"	1	--	5.00	--
3-9	189+26	LT	R2-1	SPEED LIMIT 40	24"X30"	1	--	5.00	--
4-1	191+82	LT	W2-2R	SIDE ROAD AHEAD	30"X30"	1	--	--	6.25
4-2	193+15	RT	W3-1	STOP AHEAD	36"X36"	1	--	--	9.00
4-3	193+76	LY	W3-1	STOP AHEAD	36"X36"	1	--	--	9.00
4-4	195+32	RT	J1-1	JCT STH 89	24"X39"	1	--	6.50	--
4-5	197+17	RT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
	197+97	RT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
4-6	198+77	RT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
4-7	201+83	LT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
	202+63	LT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
	203+43	LT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
	204+23	LT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
4-8	206+88	RT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
	207+28	RT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
	207+68	RT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
4-9	208+08	RT	W1-6	ONE DIRECTION LARGE ARROW	48"X24"	1	--	--	8.00
4-10	208+09	RT	W1-6	ONE DIRECTION LARGE ARROW	48"X24"	1	--	--	8.00
4-11	208+48	RT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
	208+88	RT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
	209+28	RT	W1-8	CHEVRONS	18"X24"	1	--	--	6.00
4-12	208+83	LT	W3-1	STOP AHEAD	36"X36"	1	--	--	9.00
4-13	210+22	RT	R1-1	STOP	30"X30"	1	--	5.18	--
4-14	212+53	LT	J1-1	JCT STH 89	24"X39"	1	--	6.50	--
4-15	214+05	LT	W3-1	STOP AHEAD	36"x36"	1	--	--	9.00
5-1	245+03	LT	R1-1	STOP	30"X30"	1	--	5.18	--
5-2	247+06	LT	R7-1D	NO PARKING	18"X24"	1	--	3.00	--
6-1	264+50	RT	R1-1	STOP	30"X30"	1	--	5.18	--
9-1	354+67	RT	R1-1	STOP	30"X30"	1	--	5.18	--
9-2	368+73	RT	R1-1	STOP	30"X30"	1	--	5.18	--
10-1	371+66	RT	J1-1	JCT CTH P	24"X39"	--	1	6.50	--
10-2	382+76	RT	J12-1	CTH P STRAIGHT/LEFT ARROW	24"X45"	--	1	7.50	--
10-3	382+80	RT	J2-1	CTH P SOUTH/ARROW	24"X57"	--	1	9.50	--
10-4	382+88	LT	J12-2	CTH P/CTH A/ARROWS	48"X45"	--	1	15.00	--
10-5	383+04	LT	R1-1	STOP	30"X30"	1	--	5.18	--
10-6	383+52	RT	R1-1	STOP	30"X30"	1	--	5.18	--
10-7	384+05	LT	J12-1	CTH P/RIGHT ARROW	24"X45"	--	1	7.50	--
10-8	388+47	LT	J12-1	CTH P/RIGHT AHEAD	24"X45"	--	1	7.50	--
10-9	390+58	LT	R1-1	STOP	30"X30"	1	--	5.18	--
10-10	399+30	RT	J12-1	CTH P/RIGHT AHEAD	24"X45"	--	1	7.50	--
11-1	409+39	RT	J12-1	CTH P/ARROW RIGHT	24"X45"	--	1	7.50	--
11-2	409+73	LT	R1-1	STOP	30"X30"	1	--	5.18	--
11-3	410+20	RT	R1-1	STOP	30"X30"	1	--	5.18	--
11-4	410+33	RT	J12-2	CTH P/CTH A/ARROWS	48"X45"	--	1	15.00	--
11-5	410+66	LT	J2-1	CTH P NORTH/ARROW	24"X57"	--	1	9.50	--
11-6	410+66	LT	J12-1	CTH P/ARROWS	24"X45"	--	1	7.50	--
TOTAL 0010						46	11	219.77	159.50

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				638.2602	638.3000
				REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS
SIGN ID	STATION	LT/RT	SIGN MESSAGE	EACH	EACH
1-1	101+44	RT	STOP	1	1
1-2	102+18	RT	CTH A EAST/WALWORTH CO	2	1
2-1	154+46	LT	STOP	1	1
2-2	154+63	RT	STOP	1	1
3-1	170+03	RT	SPEED LIMIT 40 AHEAD	1	1
3-2	176+72	LT	SPEED LIMIT 55	1	1
3-3	176+16	RT	SPEED LIMIT 40/RICHMOND	2	1
3-4	177+76	RT	SIDE ROAD AHEAD	1	1
3-5	181+59	LT	STOP	1	1
3-6	181+65	RT	TWO DIRECTION LARGE ARROW	1	1
3-7	182+93	LT	SPEED LIMIT 40	1	1
3-8	187+77	RT	SPEED LIMIT 40	1	1
3-9	189+26	LT	SPEED LIMIT 40	1	1
4-1	191+82	LT	SIDE ROAD AHEAD	1	1
4-2	193+15	RT	STOP AHEAD	1	1
4-3	193+76	LY	STOP AHEAD	1	1
4-4	195+32	RT	JCT STH 89	1	1
4-5R	197+59	RT	CHEVRONS	2	1
	197+86	RT	CHEVRONS	2	1
	198+11	RT	CHEVRONS	2	1
4-7R	202+40	LT	CHEVRONS	2	1
	202+85	LT	CHEVRONS	2	1
	203+35	LT	CHEVRONS	2	1
4-8R	207+46	RT	CHEVRONS	1	1
	207+63	RT	NIGHT ARROW	1	1
	207+84	RT	CHEVRONS	1	1
	208+23	RT	CHEVRONS	1	1
	208+47	RT	NIGHT ARROW	1	1
	208+74	RT	CHEVRONS	1	1
	208+82	RT	STOP AHEAD	1	1
4-12	208+83	LT	STOP AHEAD	1	1
4-13	210+22	RT	STOP	1	1
4-14	212+53	LT	JCT STH 89	1	1
4-15	214+05	LT	STOP AHEAD	1	1

				638.2602	638.3000
				REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS
SIGN ID	STATION	LT/RT	SIGN MESSAGE	EACH	EACH
5-1	245+03	LT	STOP	1	1
5-2	247+06	LT	NO PARKING	1	1
6-1	264+50	RT	STOP	1	1
9-1	354+67	RT	STOP	1	1
9-2	368+73	RT	STOP	1	1
10-1	371+66	RT	JCT CTH P	1	1
10-2	382+76	RT	CTH P STRAIGHT/LEFT ARROW	1	1
10-3	382+80	RT	CTH P SOUTH/ARROW	1	1
10-4	382+88	LT	CTH P/CTH A/ARROWS	1	1
10-5	383+04	LT	STOP	1	1
10-6	383+52	RT	STOP	1	1
10-7	384+05	LT	CTH P/RIGHT ARROW	1	1
10-8	388+47	LT	CTH P/RIGHT AHEAD	1	1
10-9	390+58	LT	STOP	1	1
10-10	399+30	RT	CTH P/RIGHT AHEAD	1	1
11-1	409+39	RT	CTH P/ARROW RIGHT	1	1
11-2	409+73	LT	STOP	1	1
11-3	410+20	RT	STOP	1	1
11-4	410+33	RT	CTH P/CTH A/ARROWS	1	1
11-5	410+66	LT	CTH P NORTH/ARROW	1	1
11-6	410+66	LT	CTH P/ARROWS	1	1
TOTAL 0010				63	55

3

STATION	TO	STATION	LOCATION	643.0900	643.5000
				TRAFFIC CONTROL SIGNS DAY	TRAFFIC CONTROL EACH
100+51	-	410+81	CTH A	1,700	1
TOTAL 0010				1,700	1

STATION	TO	STATION	LOCATION	650.6000	650.8000	650.9911.01
				CONSTRUCTION STAKING PIPE CULVERTS EACH	CONSTRUCTION STAKING RESURFACING REFERENCE LF	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. TBD) EACH
100+51	-	410+81	CTH A	11	31,030	1
TOTAL 0010				11	31,030	1

STATION	TO	STATION	LOCATION	460.0105.S	460.0110.S	460.2005	460.2007	460.2010	740.0440
				HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP VOLUMETRICS EACH	HMA PERCENT WITHIN LIMITS (PWL) TEST STRIP DENSITY EACH	INCENTIVE DENSITY PWL HMA PAVEMENT DOL	INCENTIVE DENSITY HMA PAVEMENT LONGITUDINAL JOINTS DOL	INCENTIVE AIR VOIDS HMA PAVEMENT DOL	INCENTIVE IRI RIDE DOL
100+51	-	410+81	PROJECT	1	1	21,160	6,210	27,530	23,510
TOTAL 0010				1	1	21,160	6,210	27,530	23,510

STATION	TO	STATION	LOCATION	646.1020	646.6120	648.0100	REMARKS
				MARKING LINE EPOXY 4-INCH LF	MARKING STOP LINE EPOXY 18- INCH LF	LOCATING NO- PASSING ZONES MI	
100+51	-	410+81	CTH A	62,100	-	5.88	WHITE EDGE LINES
100+51	-	410+81	CTH A	62,100	-	-	YELLOW CENTERLINES
199+12			CTH A	-	20	-	
201+29			CTH A	-	20	-	
TOTAL 0010				124,200	40	5.88	

3

Standard Detail Drawing List

08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-14A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13C19-03	HMA LONGITUDINAL JOINTS
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-23A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C11-10A	CHANNELIZING DEVICES FLEXIBLE TUBULAR MARKER POST
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-09A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-05	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-06A	PAVEMENT MARKING (INTERSECTIONS)
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D44-02	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH MILLED SURFACES
15D48-01	TRAFFIC CONTROL, LANE SHIFT IN FLAGGING OPERATION
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY



- 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.

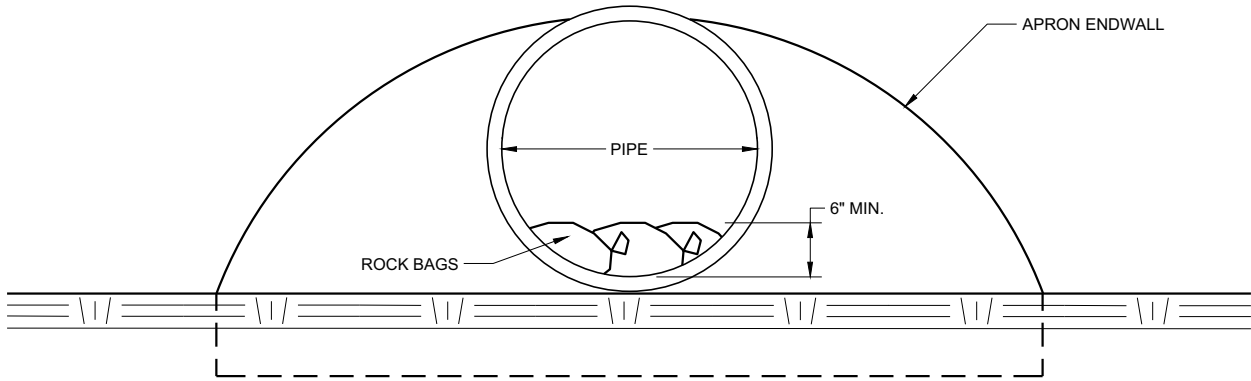


SILT FENCE

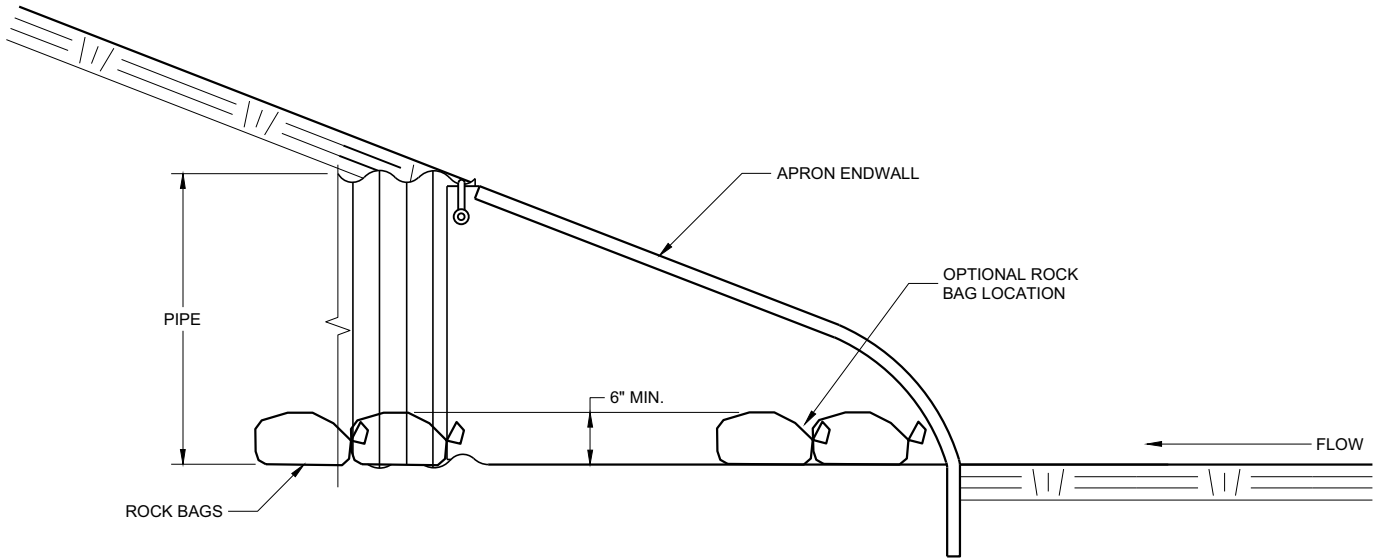
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



END VIEW



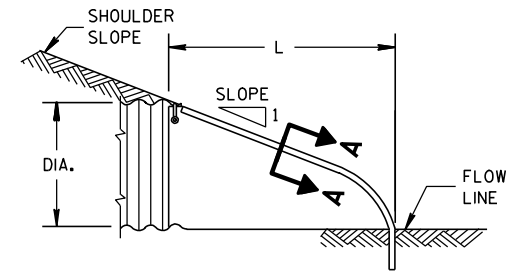
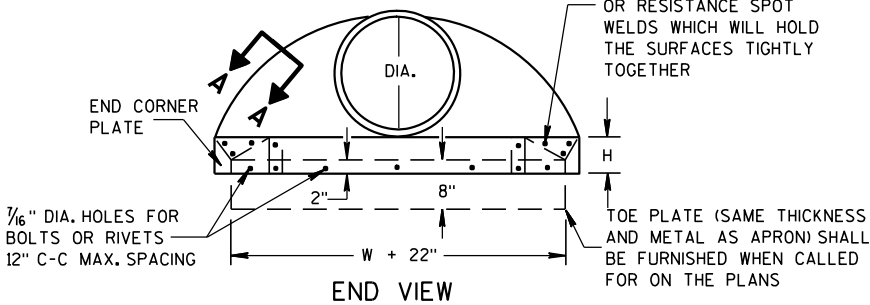
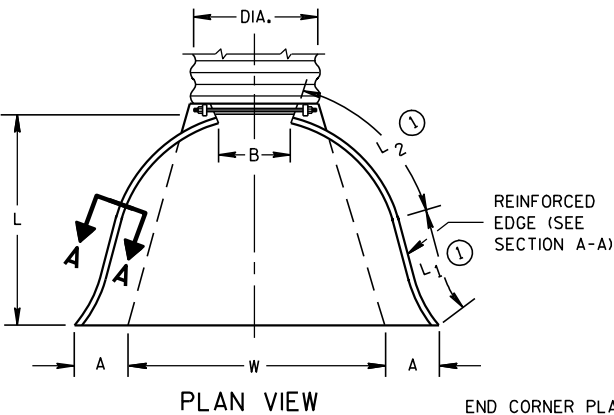
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI	27
FHWA		

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")	L ₁ ①	L ₂ ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.	
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.	
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.	
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.	
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.	
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.	
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.	
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.	
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.	
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.	
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.	
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.	
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.	
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.	
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.	
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.	
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.	

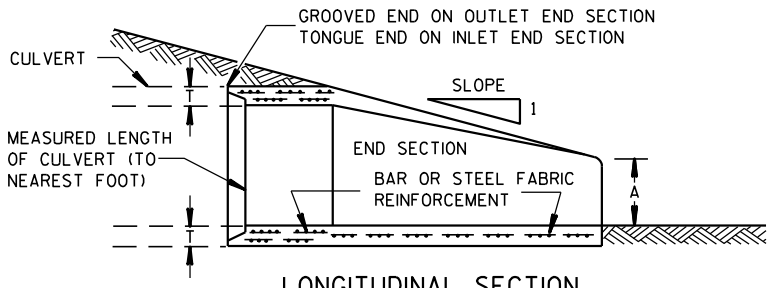
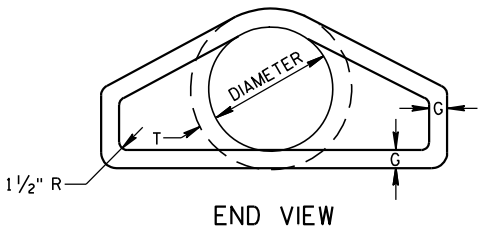
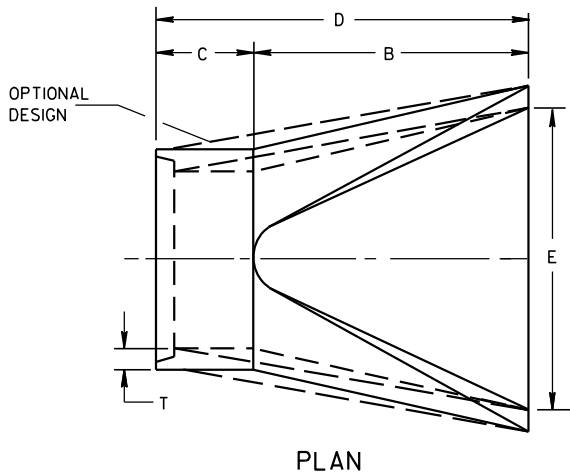
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



METAL ENDWALLS

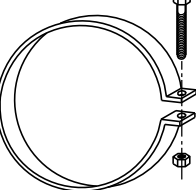
REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ⁷ / ₈	72 ⁷ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43 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 ¹ / ₂ 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

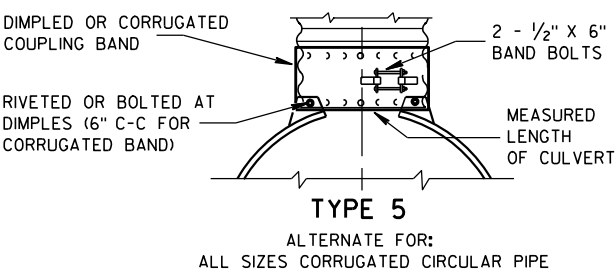
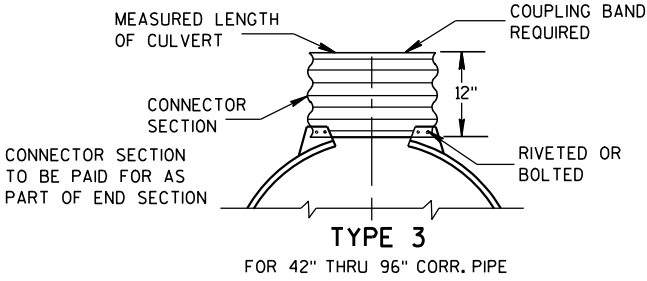
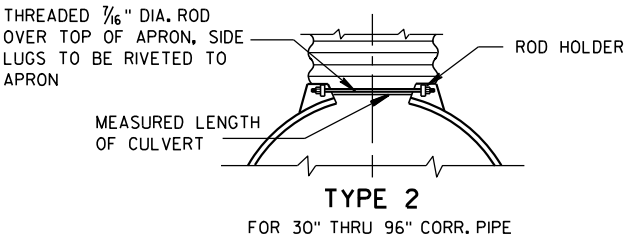
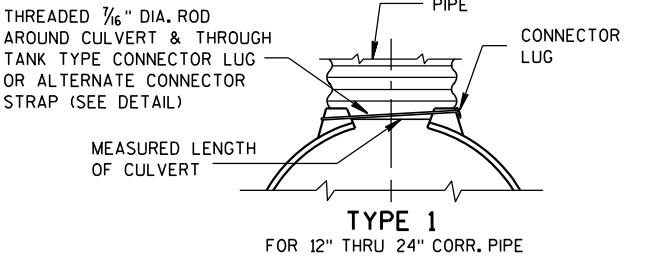


CONCRETE ENDWALLS

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



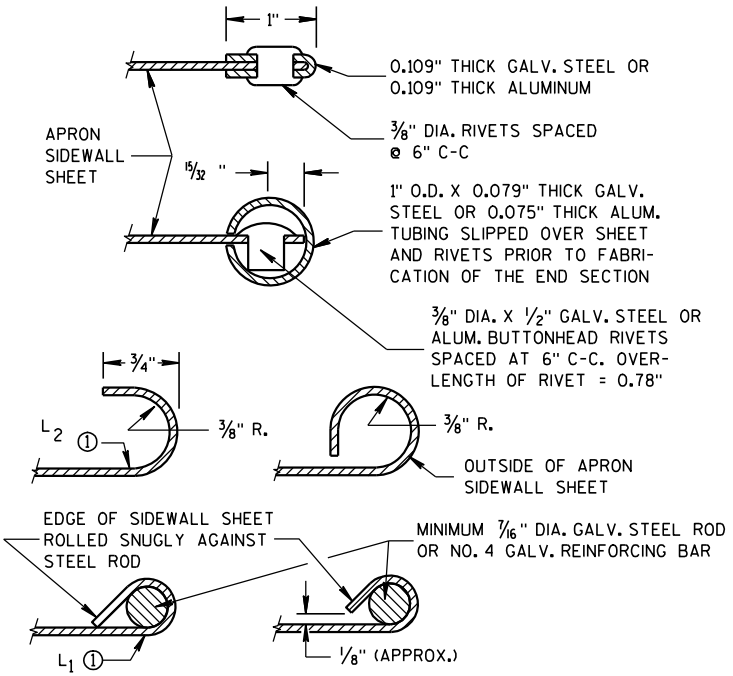
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VICE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

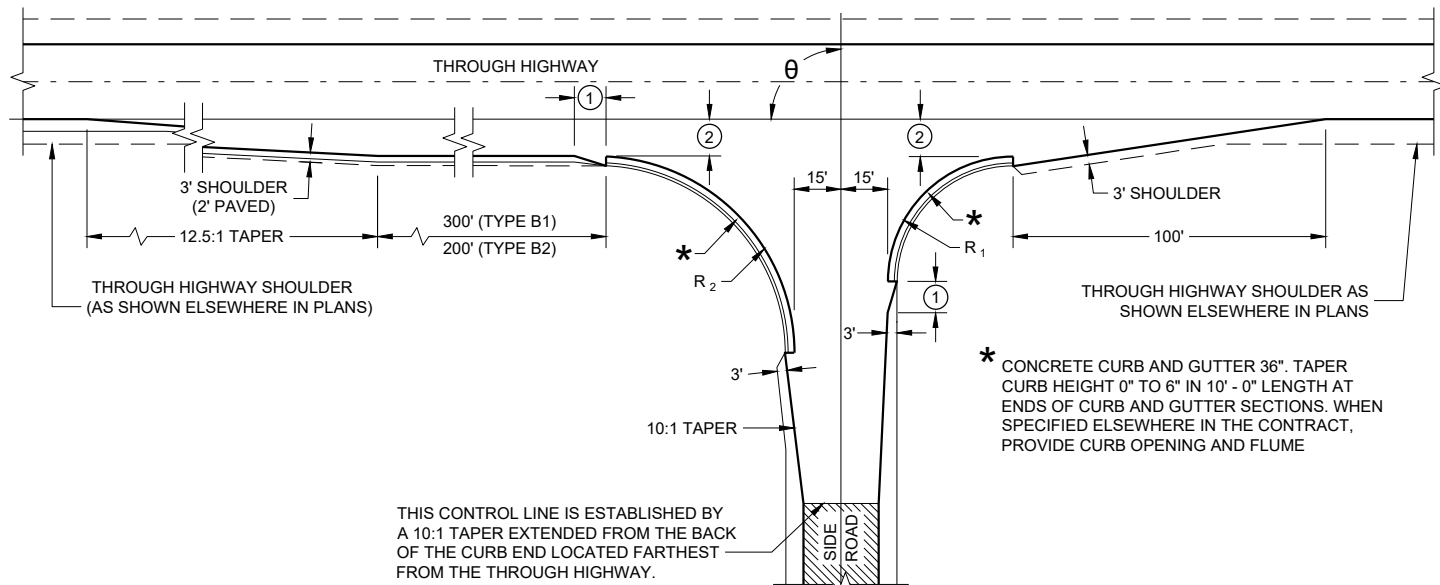
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

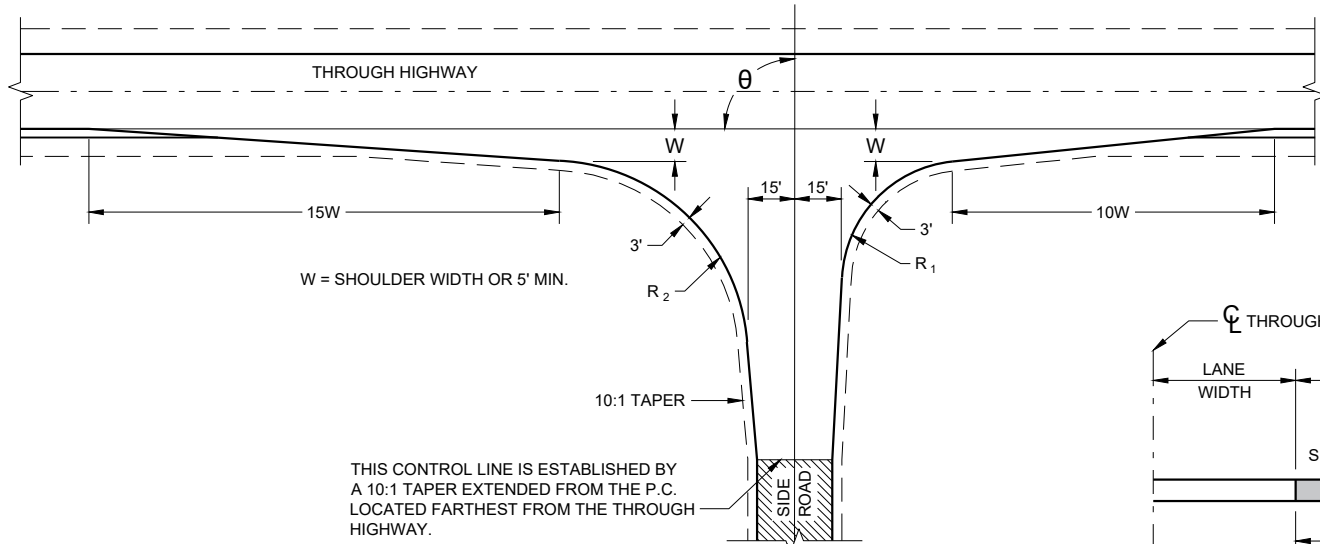
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

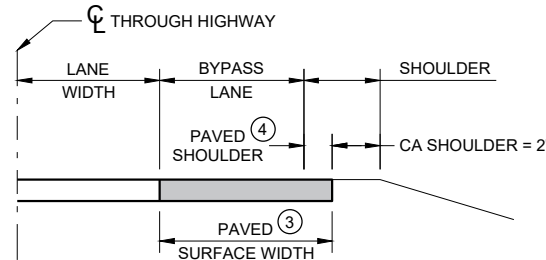
APRON ENDWALLS FOR CULVERT PIPE			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinehart CHIEF ROADWAY DEVELOP	28	NEER
FHWA			



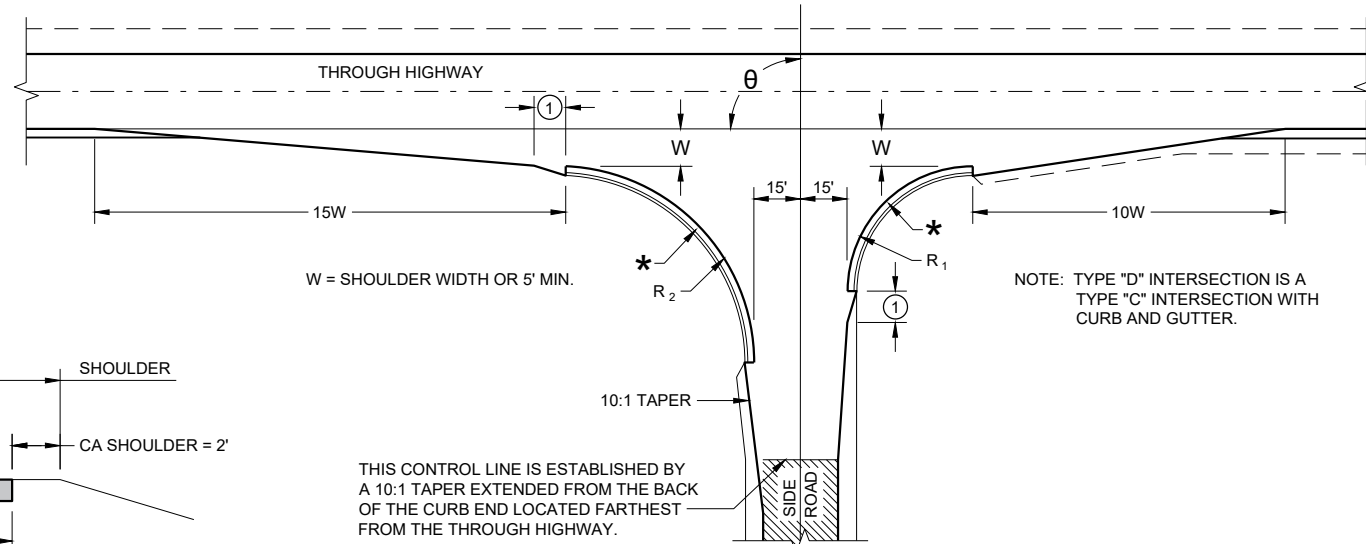
TYPE "B1" AND "B2"



TYPE "C"



SECTION A - A
(SHOWING BYPASS LANE AND SHOULDER)



TYPE "D"

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

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

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

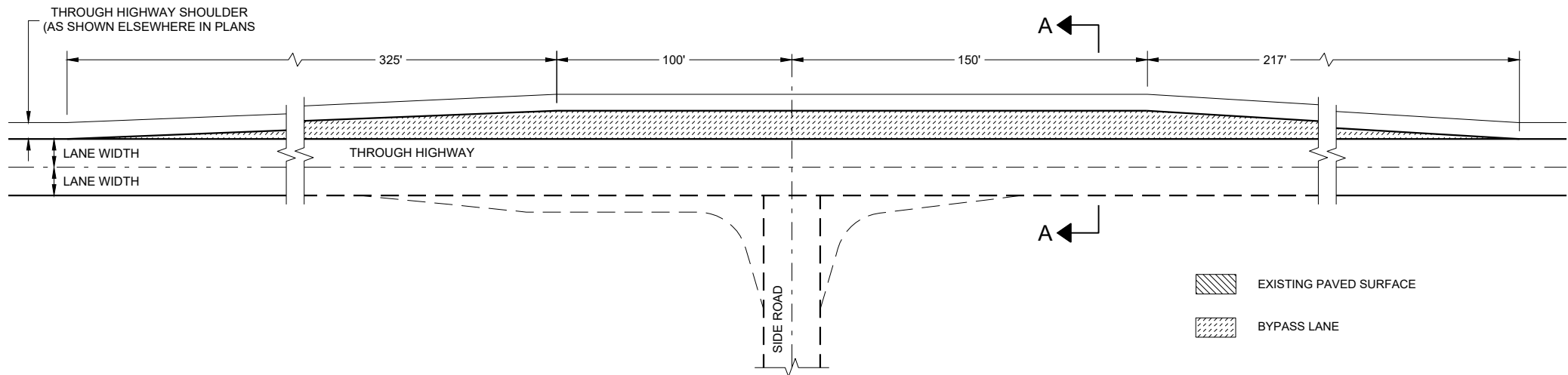
WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

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

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

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

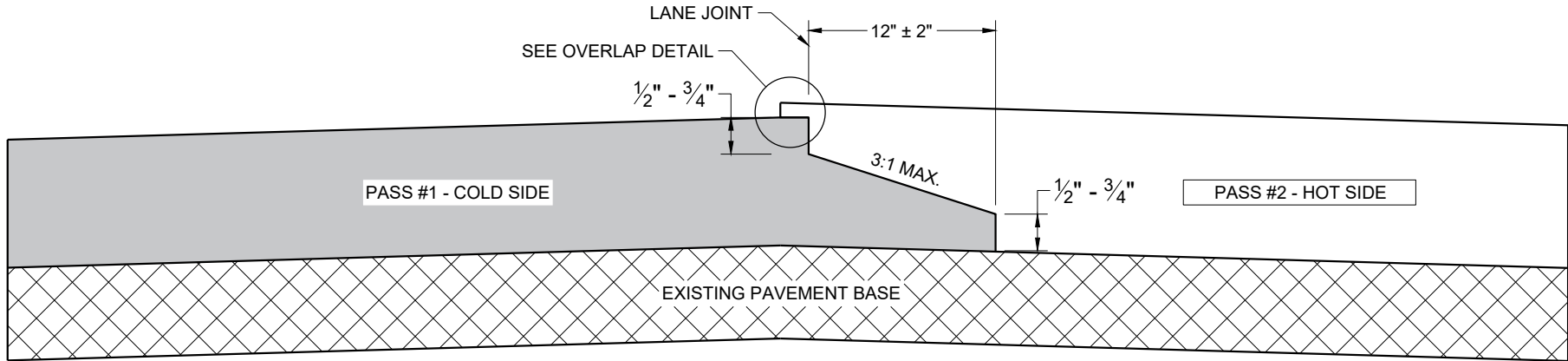
NOTE: TYPE "D" INTERSECTION IS A
TYPE "C" INTERSECTION WITH
CURB AND GUTTER.



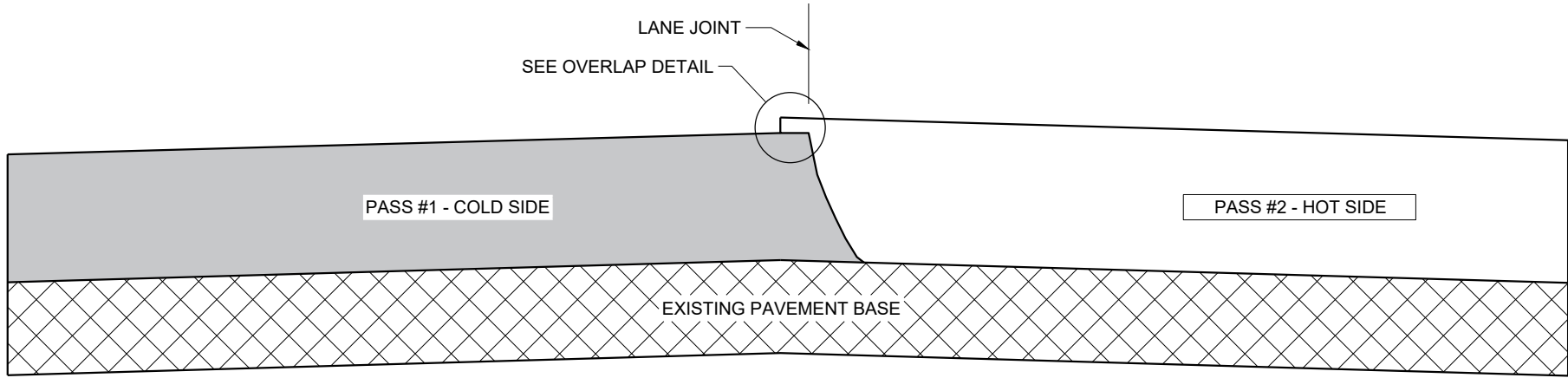
TEE INTERSECTION BYPASS LANE DETAIL

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

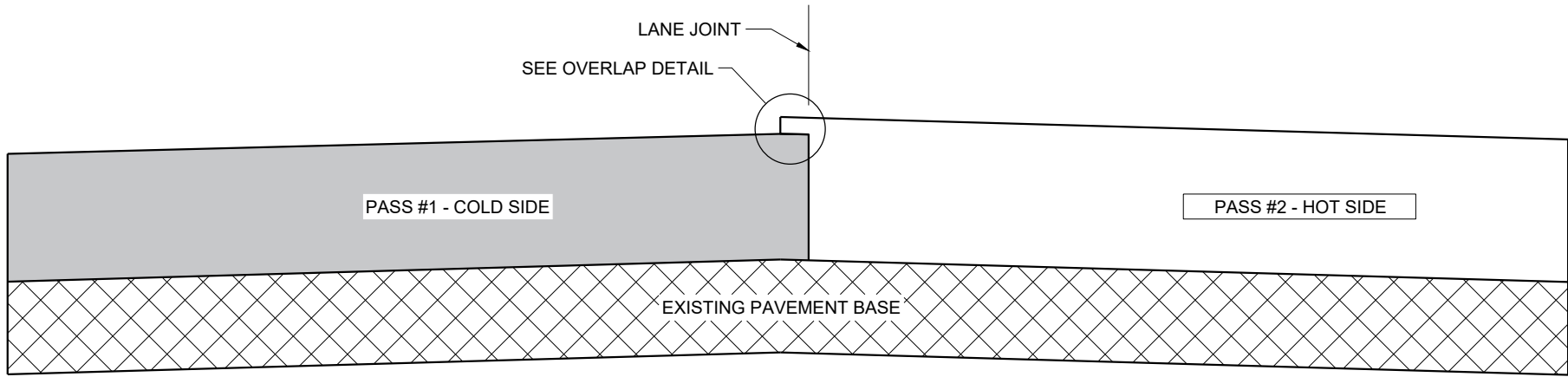
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

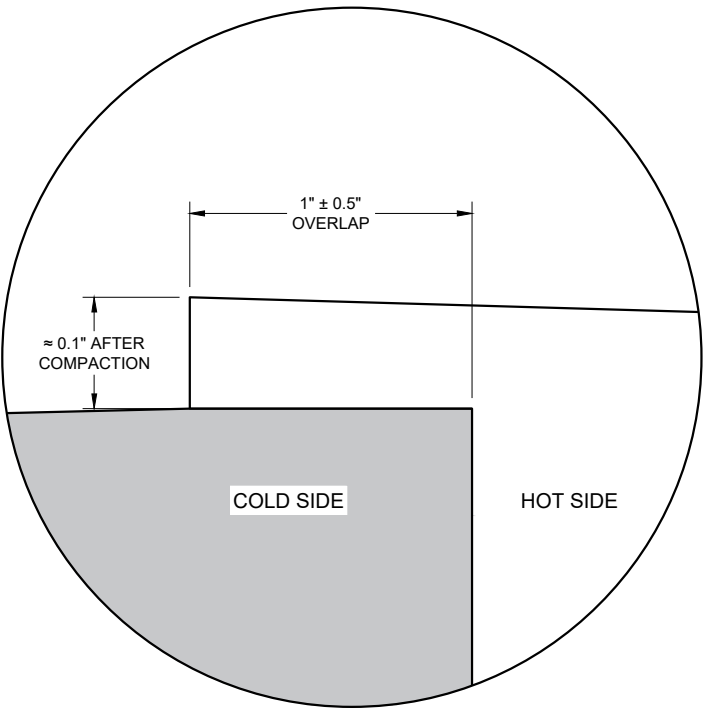
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY $0.1"$ AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

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

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

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



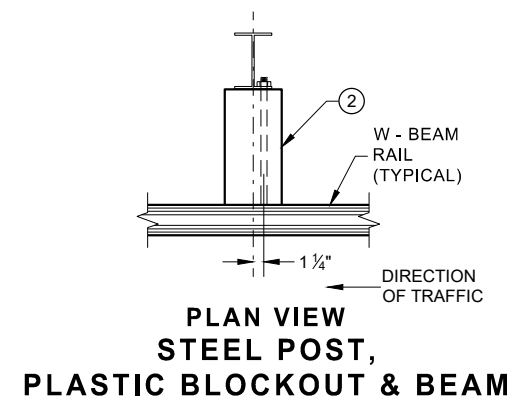
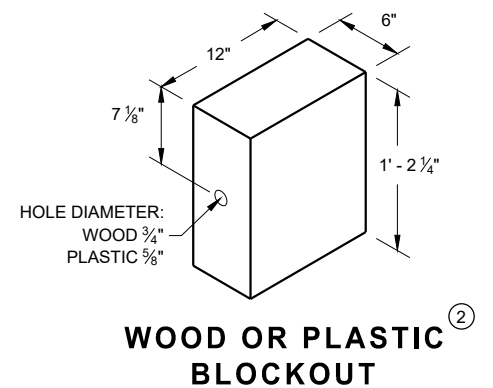
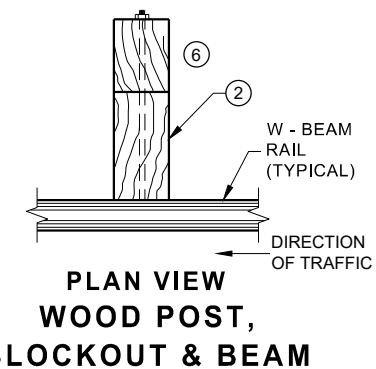
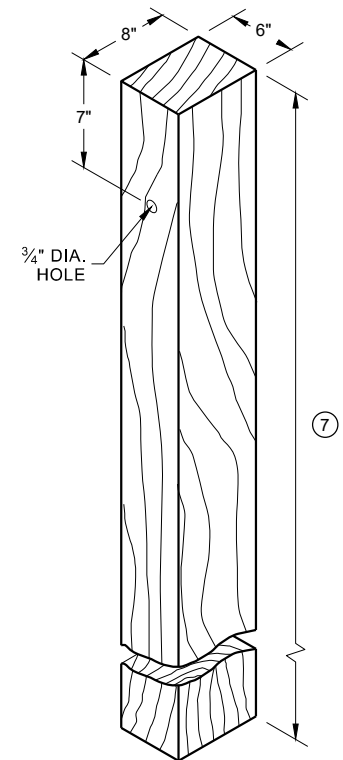
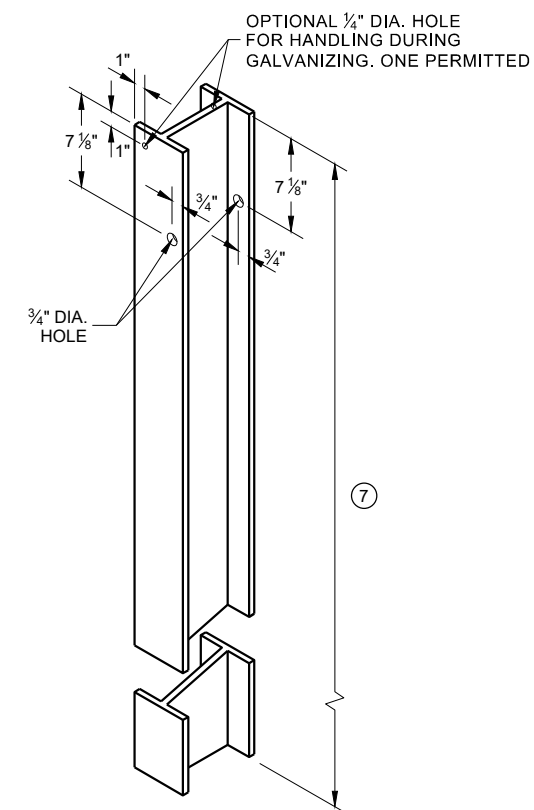
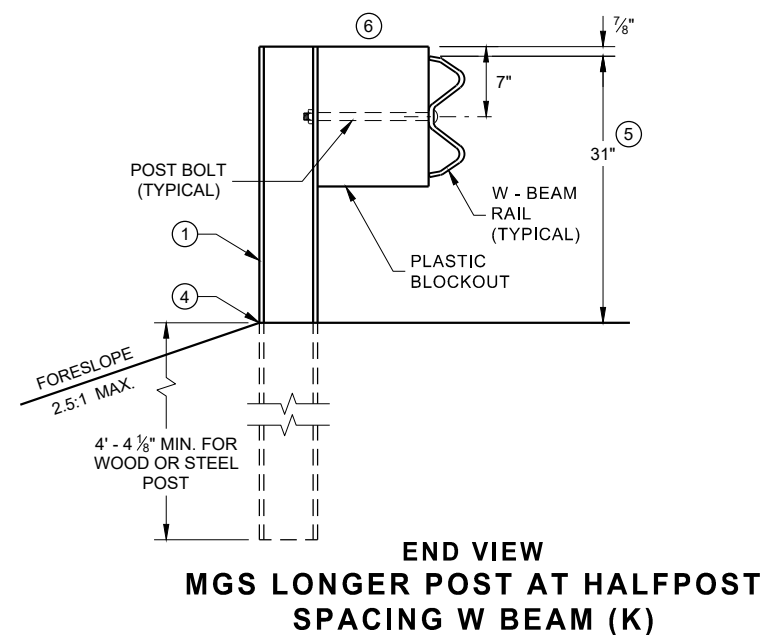
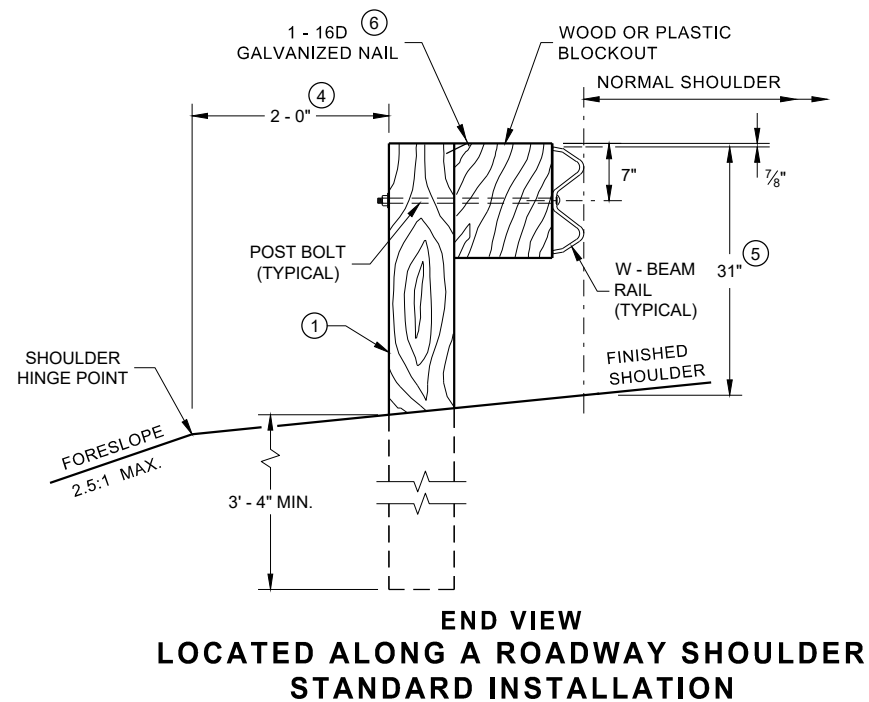
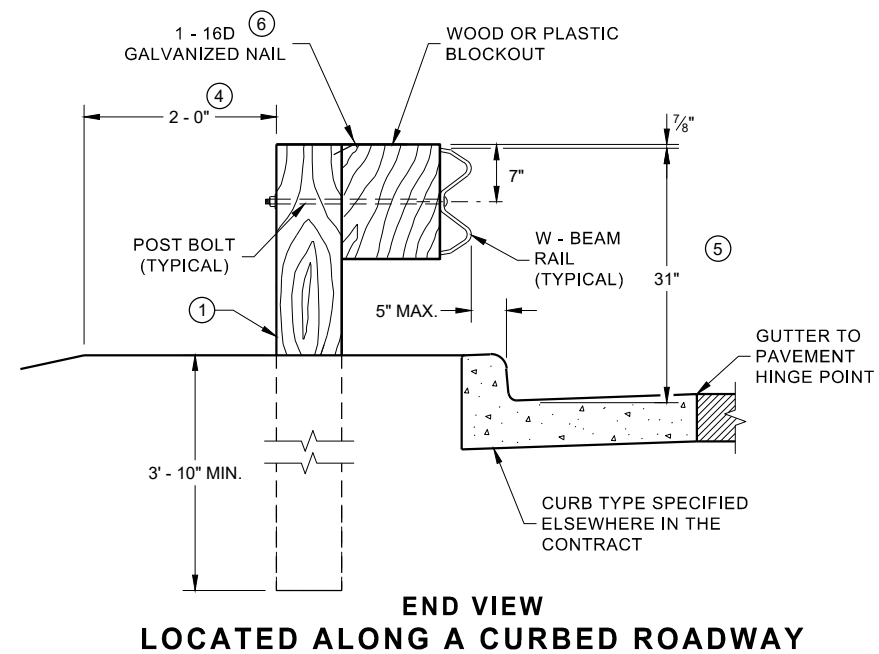
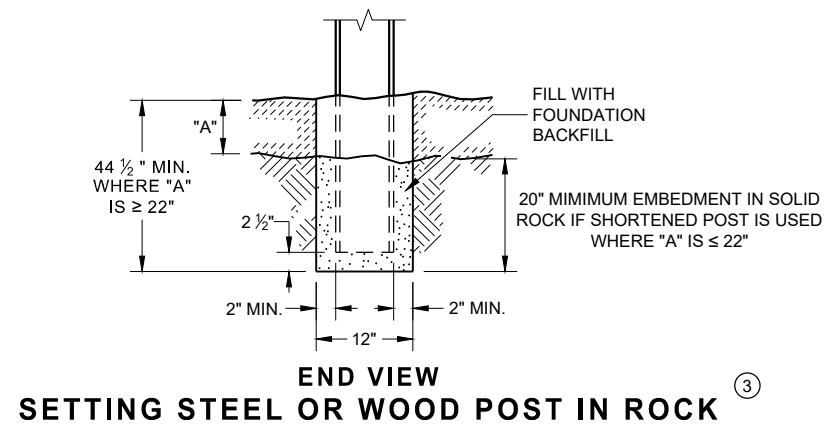
OVERLAP DETAIL (TYPICAL)

HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

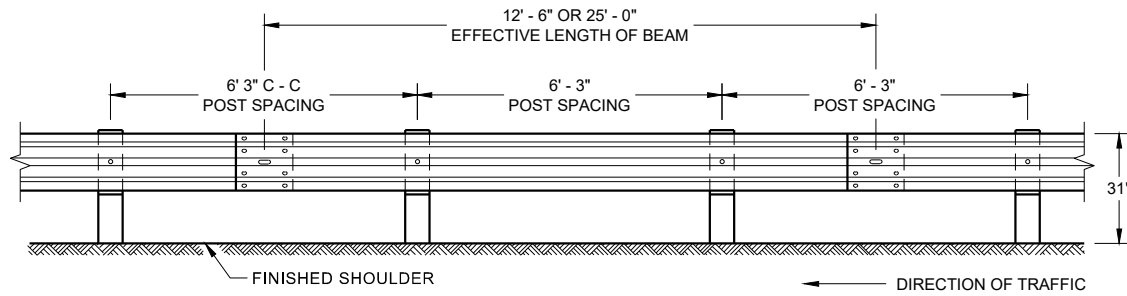
APPROVED
November 2020 /S/ Steven Hefel
DATE HMA PAVEMENT ENGIN 30
FHWA

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0".
TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".

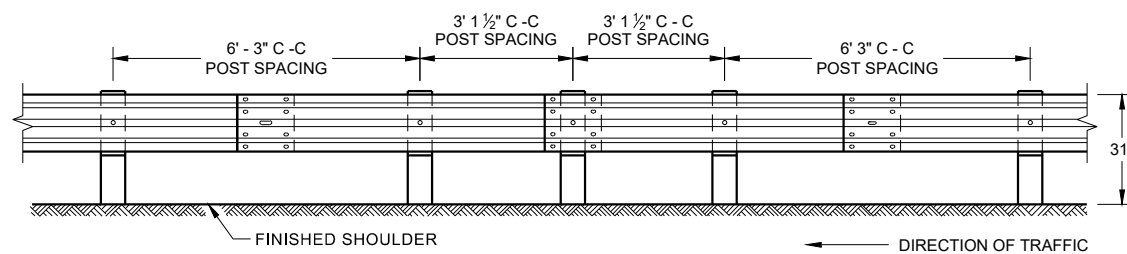


MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

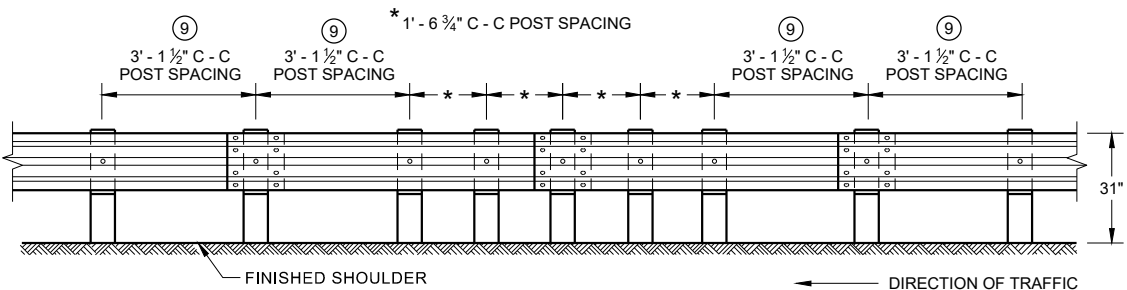
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 31



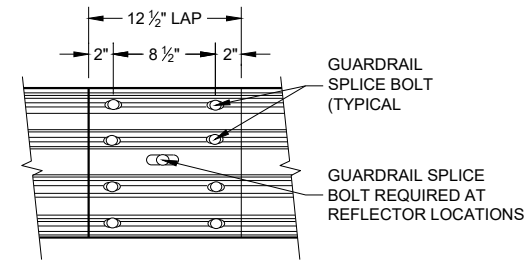
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



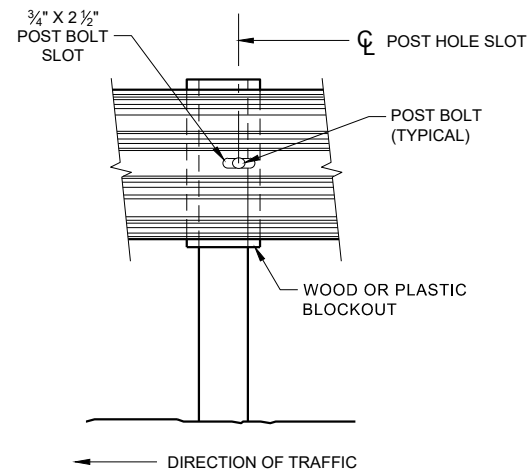
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



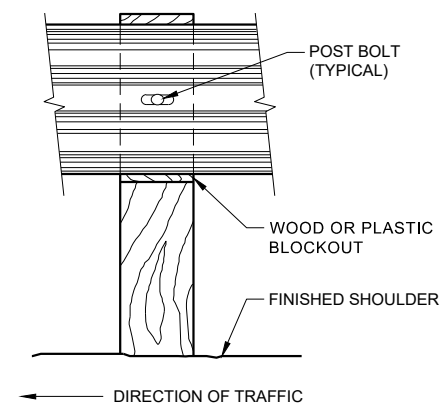
**FRONT VIEW
QUARTER POST SPACING (QS)**



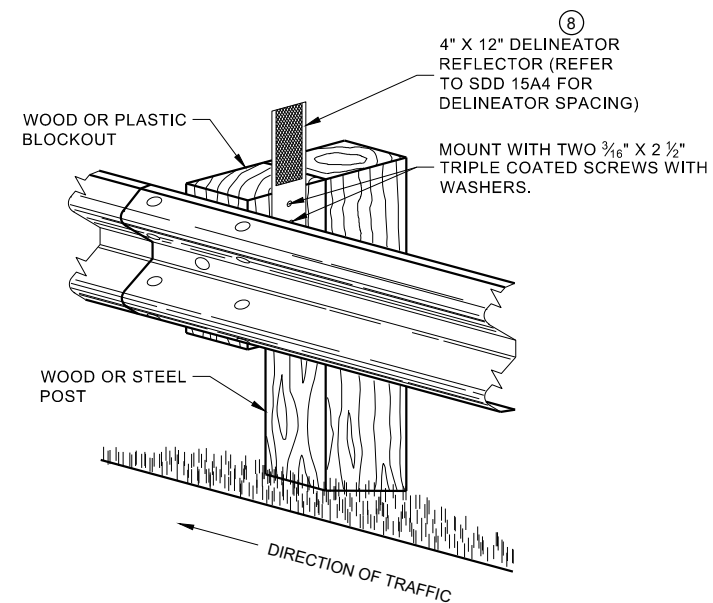
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



FRONT VIEW AT WOOD POST



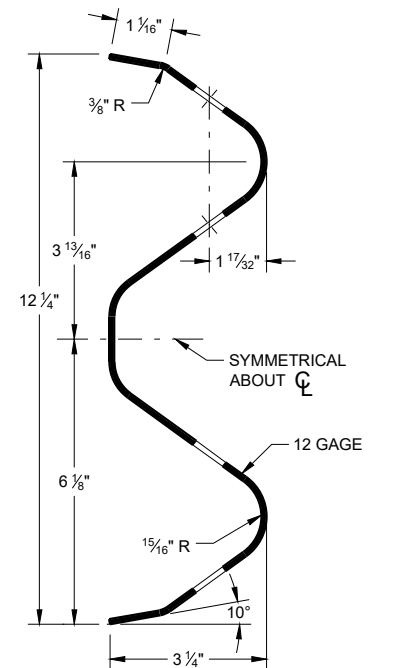
**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- 8 DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
- 9 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

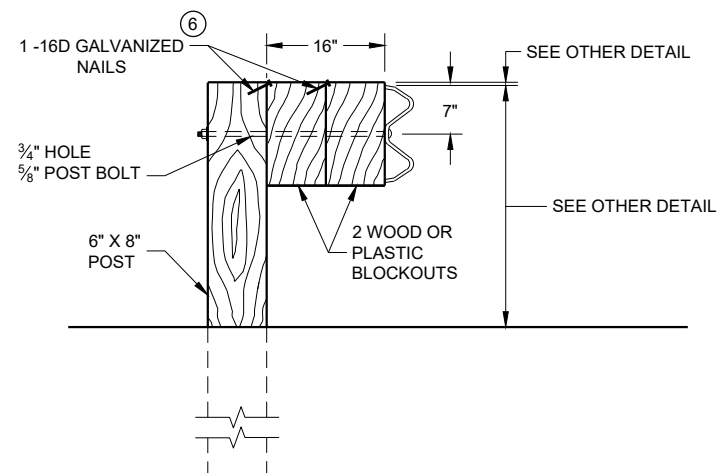
GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

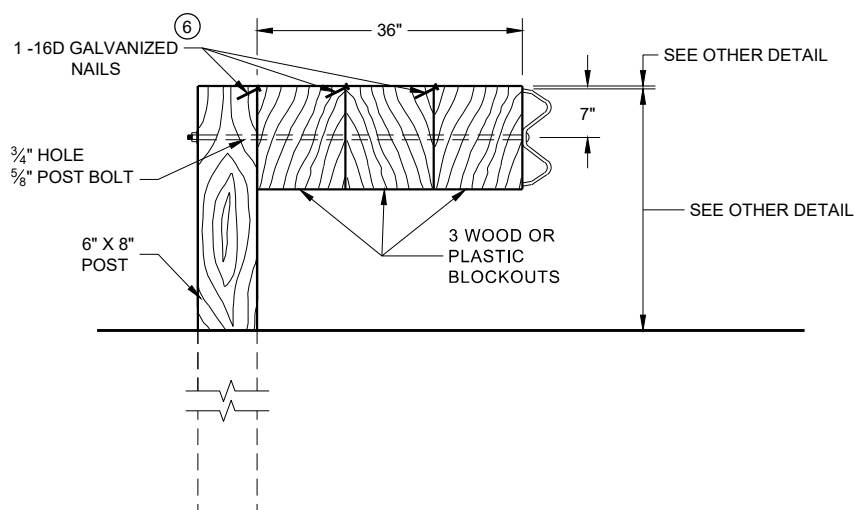
**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR 16" BLOCKOUT DEPTH

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



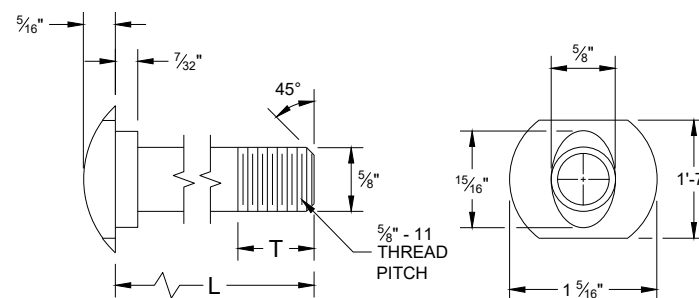
DETAIL FOR 36" BLOCKOUT DEPTH

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

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

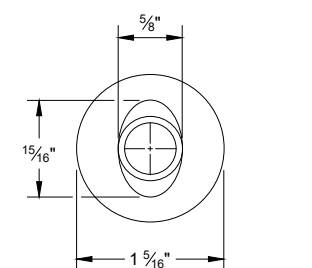
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF $\frac{3}{16}$ ".
2. IF THE BOLT EXTENDS MORE THAN $\frac{1}{4}$ " FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

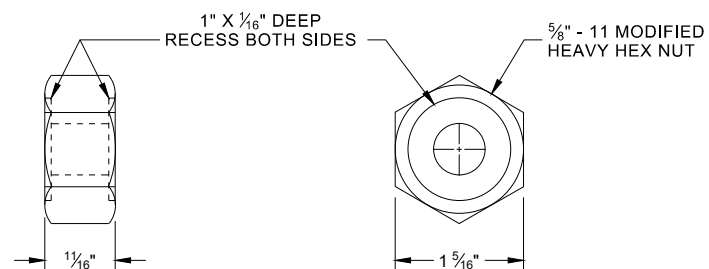


POST BOLT TABLE

L	T (MIN.)
1 ¼"	1 ⅝"
2"	1 ¾"
10"	4"
14"	4 ⅙"
18"	4"
21"	4 ⅙"
25"	4"

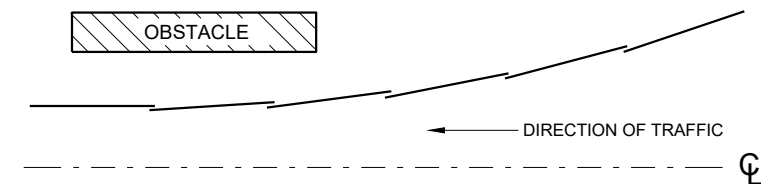


ALTERNATE BOLT HEAD

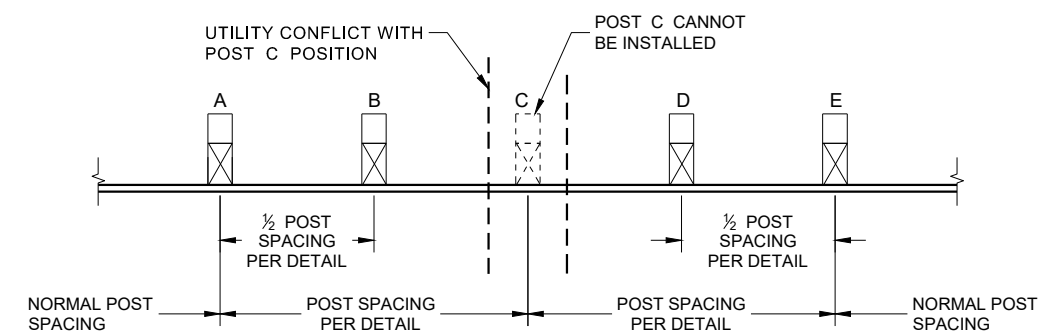


POST BOLT, SPLICE BOLT AND RECESS NUT

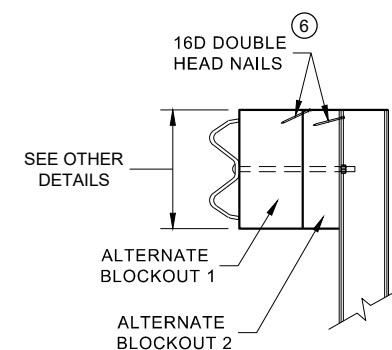
⑥ WHEN USING STEEL POST AD WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



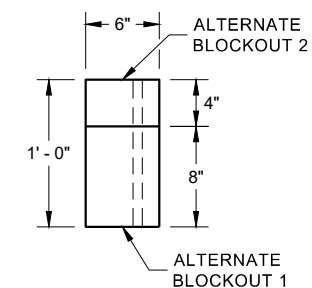
**PLAN VIEW
BEAM LAPPING DETAIL**



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

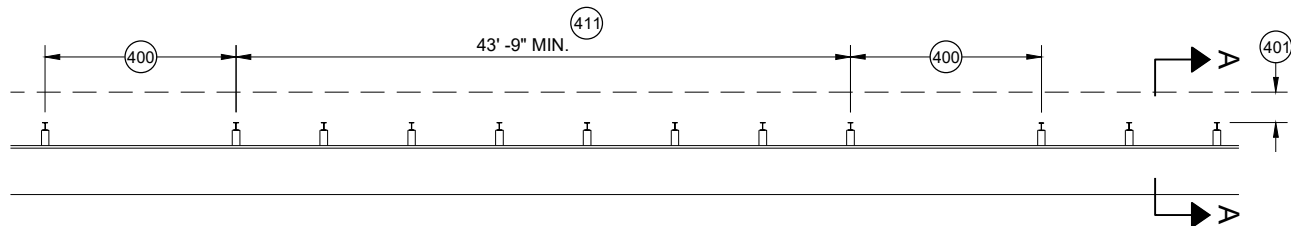


PLAN VIEW

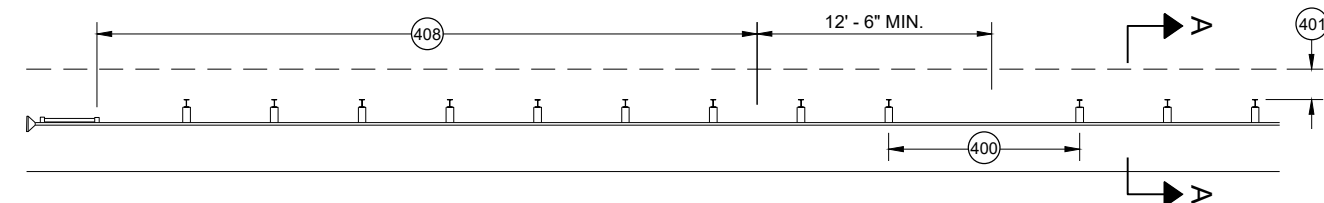
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

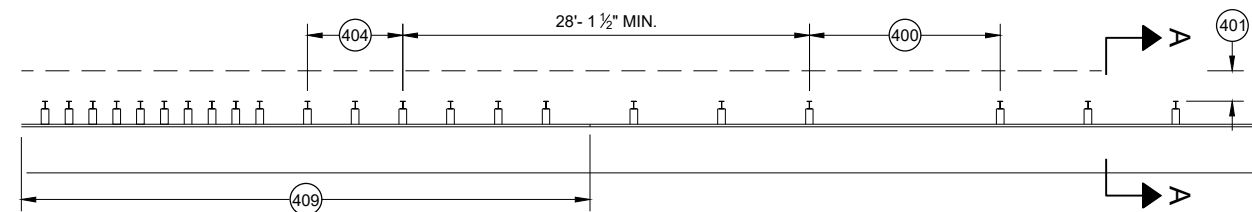
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION 33



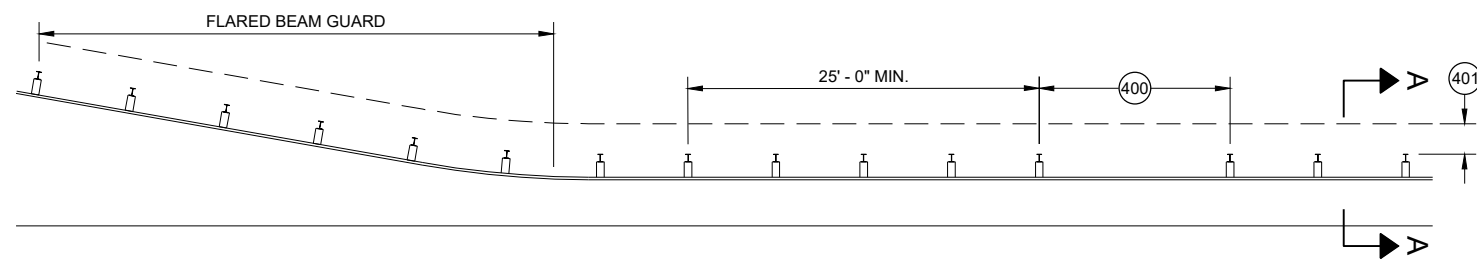
MISSING POST IN MGS GUARDRAIL



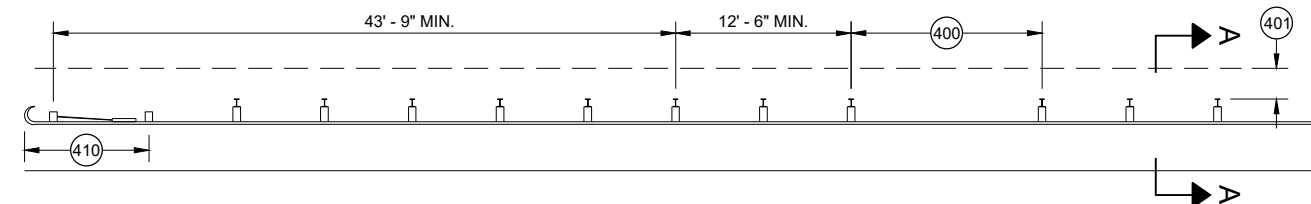
MISSING POST IN MGS GUARDRAIL NEAR EAT



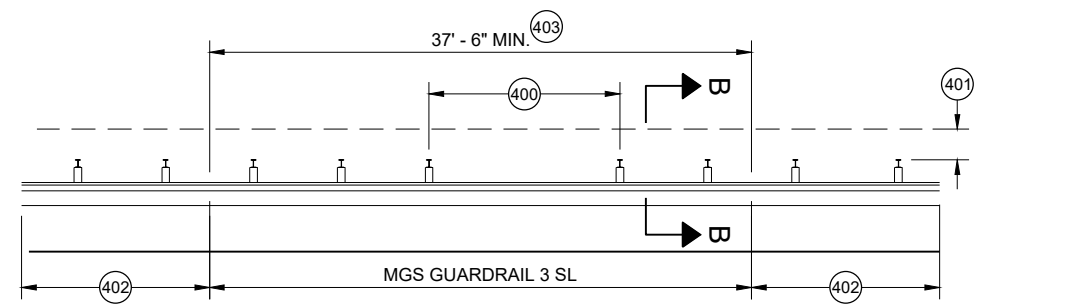
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

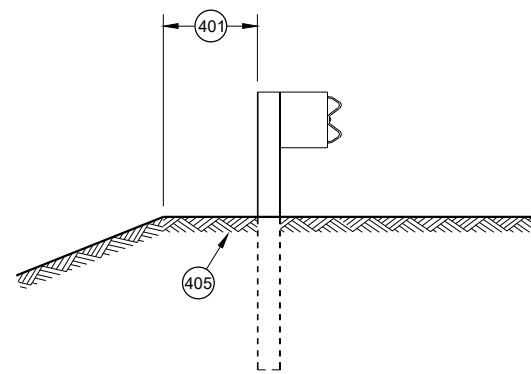


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

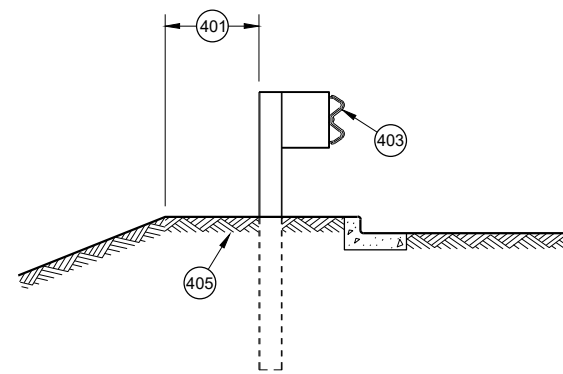


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- (400) MAX SPAN 12' - 6"
- (401) 2' MIN.
- (402) MGS GUARDRAIL 3
- (403) NESTING BEAM GUARD
- (404) ASYMMETRIC TRANSITION
- (405) SOIL WELL DRAINED AND COMPACTED
- (406) SEE OTHER DRAWINGS IN THIS SDD
- (407) SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- (408) SEE SDD 14B44
- (409) SEE SDD 14B45
- (410) SEE SDD 14B47
- (411) MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



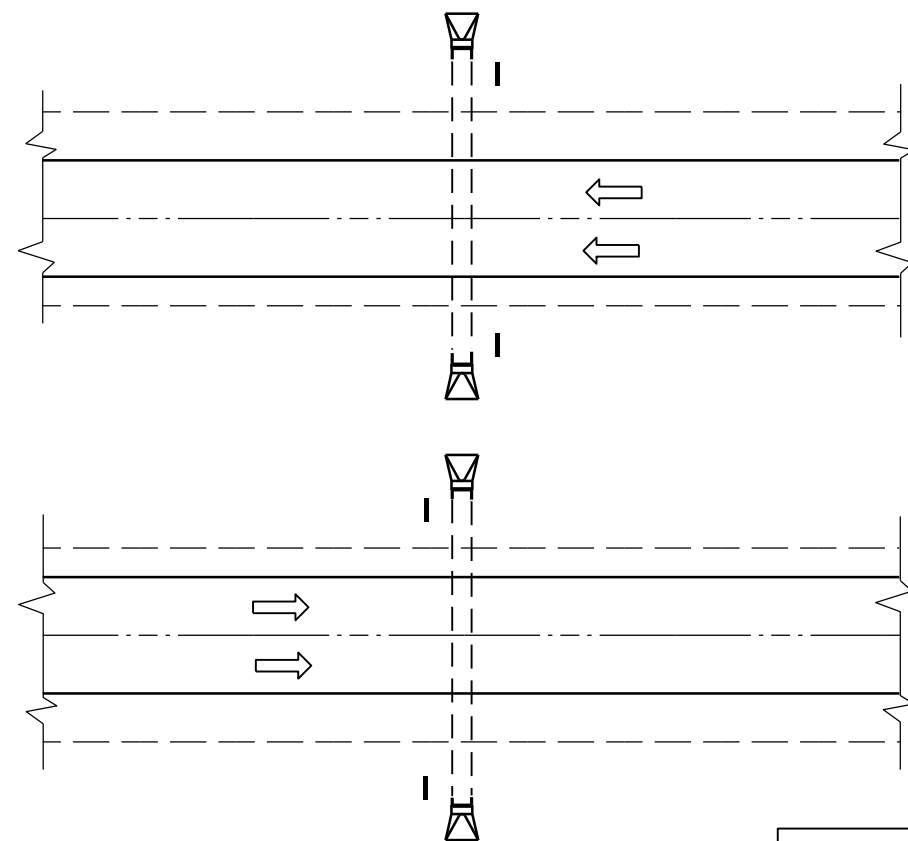
SECTION B - B

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

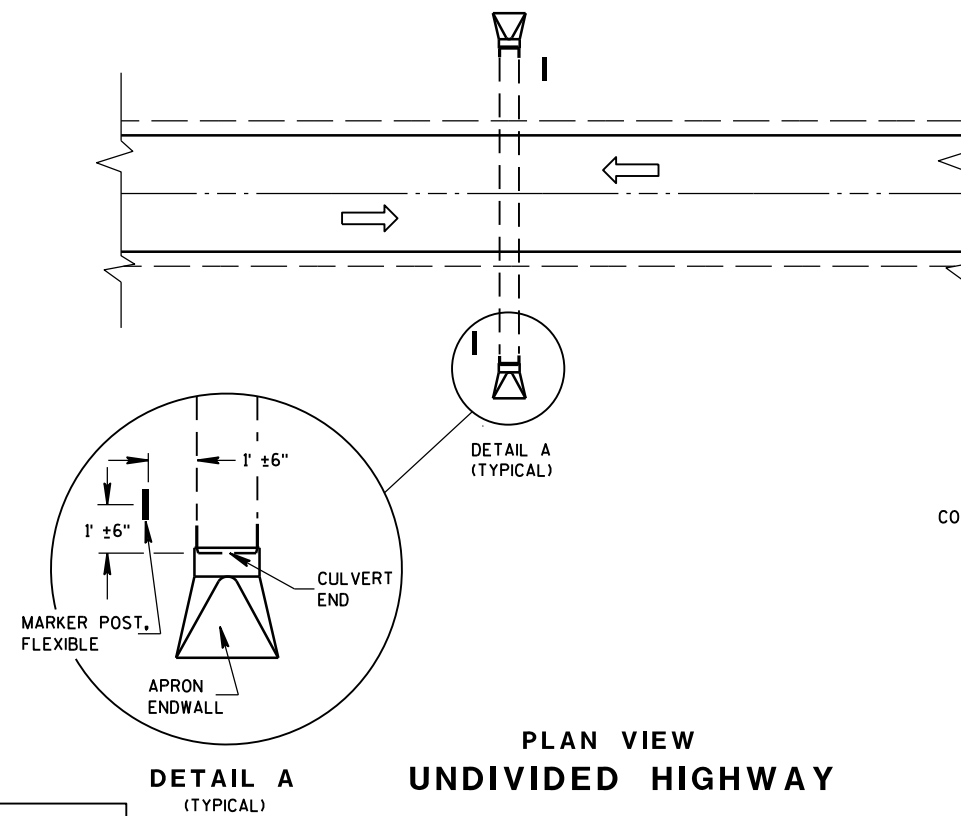
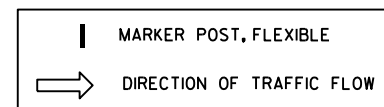
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA



PLAN VIEW
DIVIDED HIGHWAY

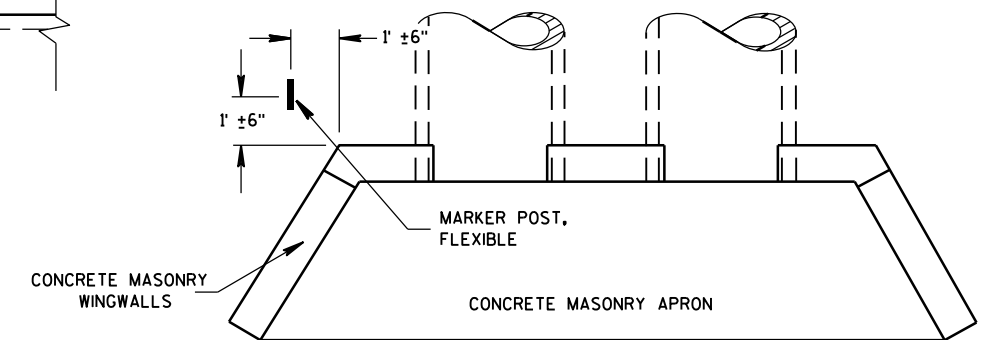


PLAN VIEW
UNDIVIDED HIGHWAY

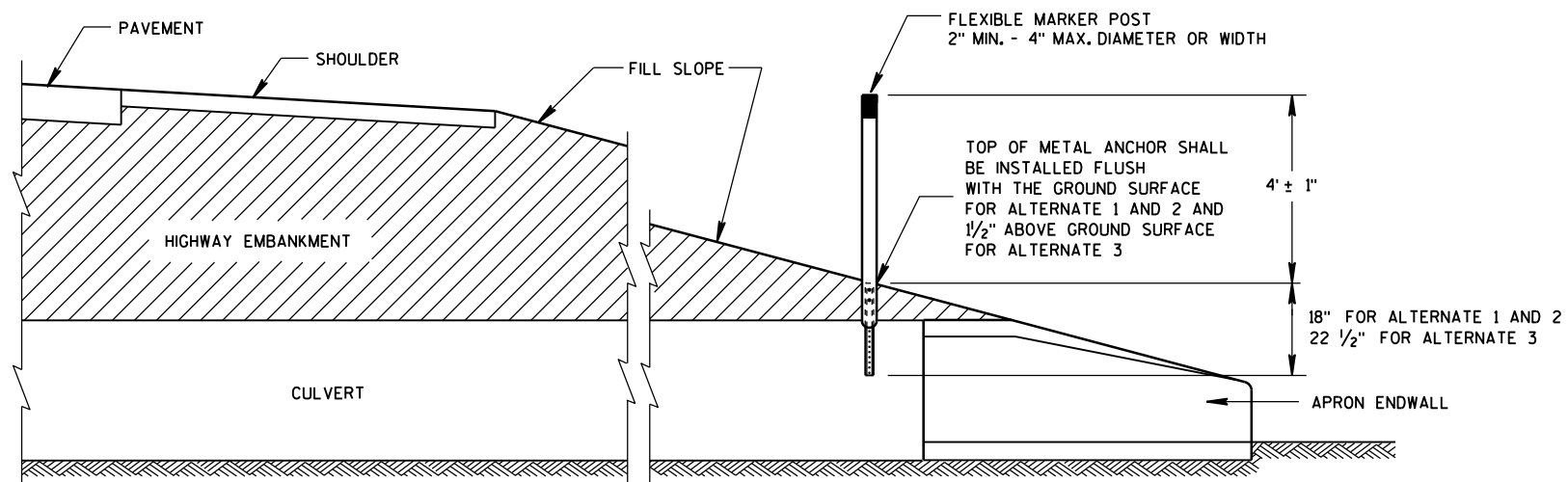
FLEXIBLE MARKER POST LOCATION

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.



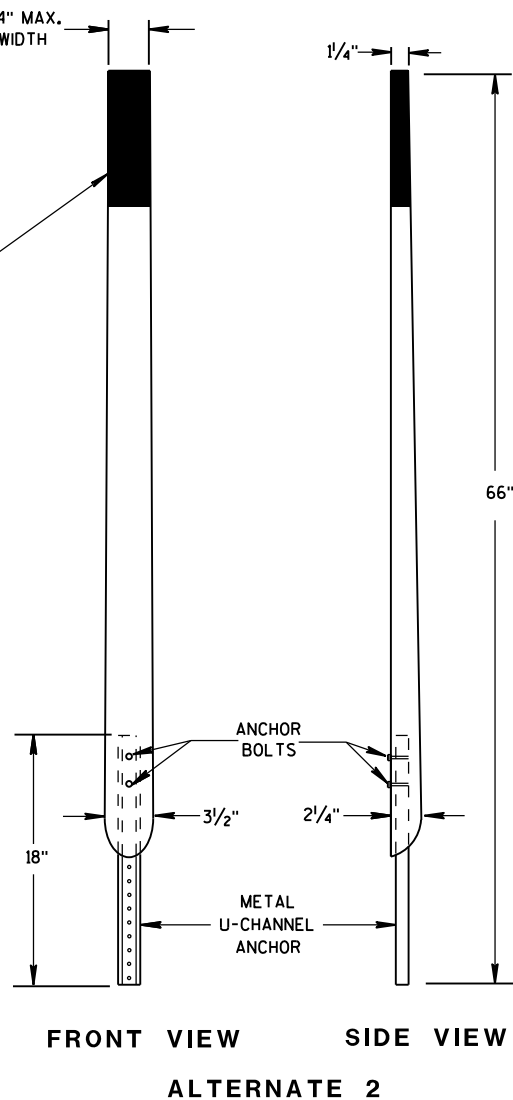
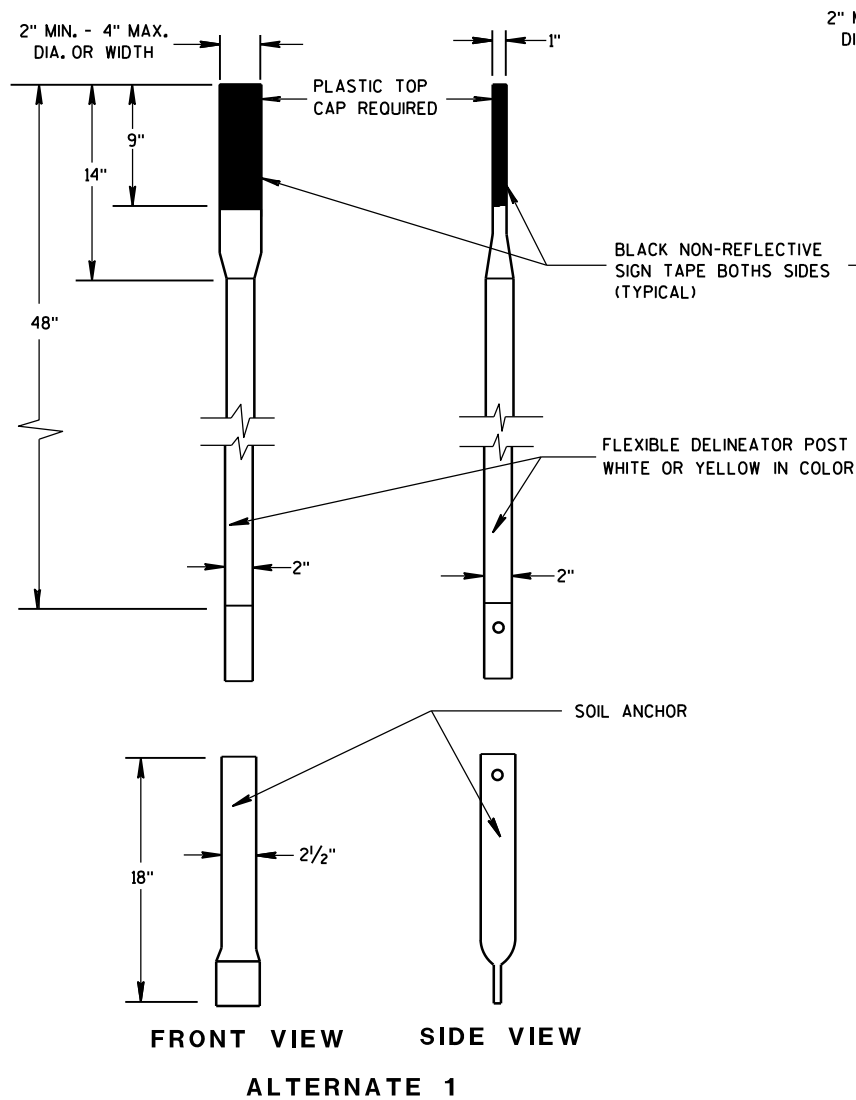
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



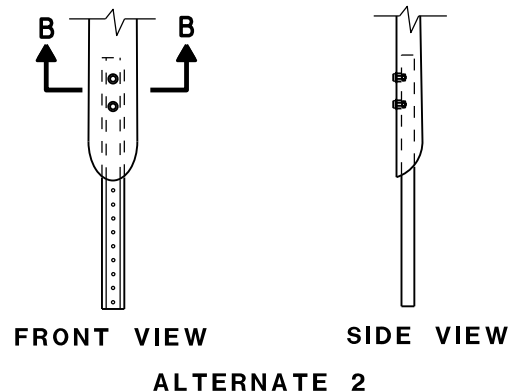
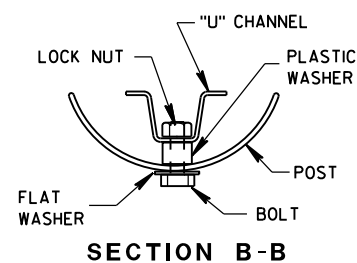
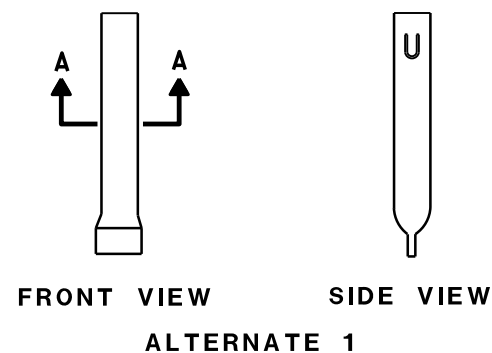
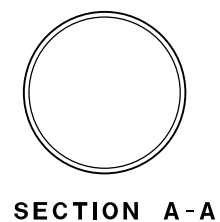
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

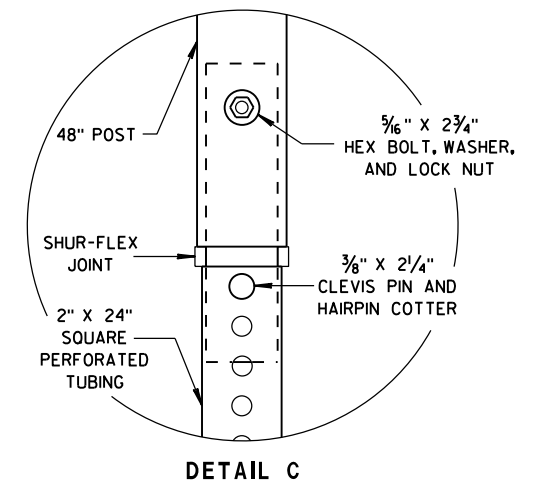
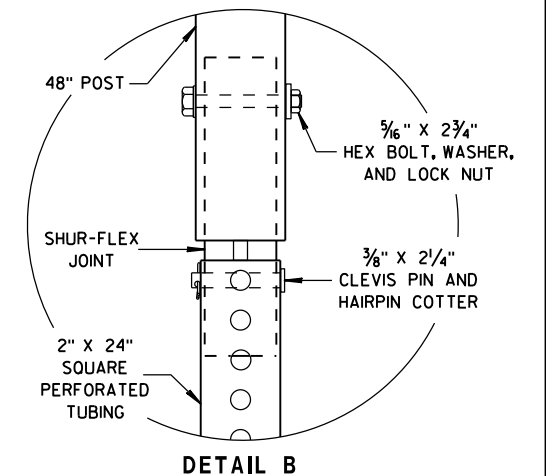
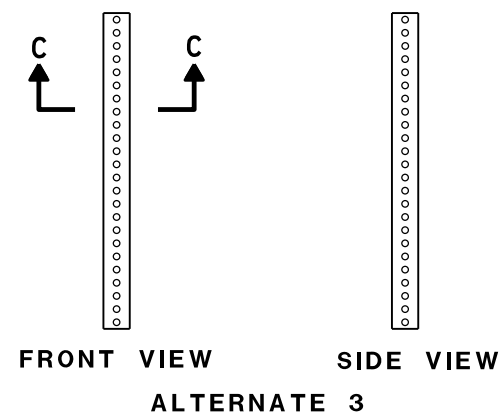
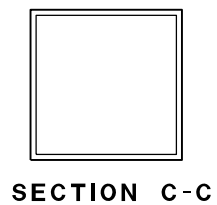
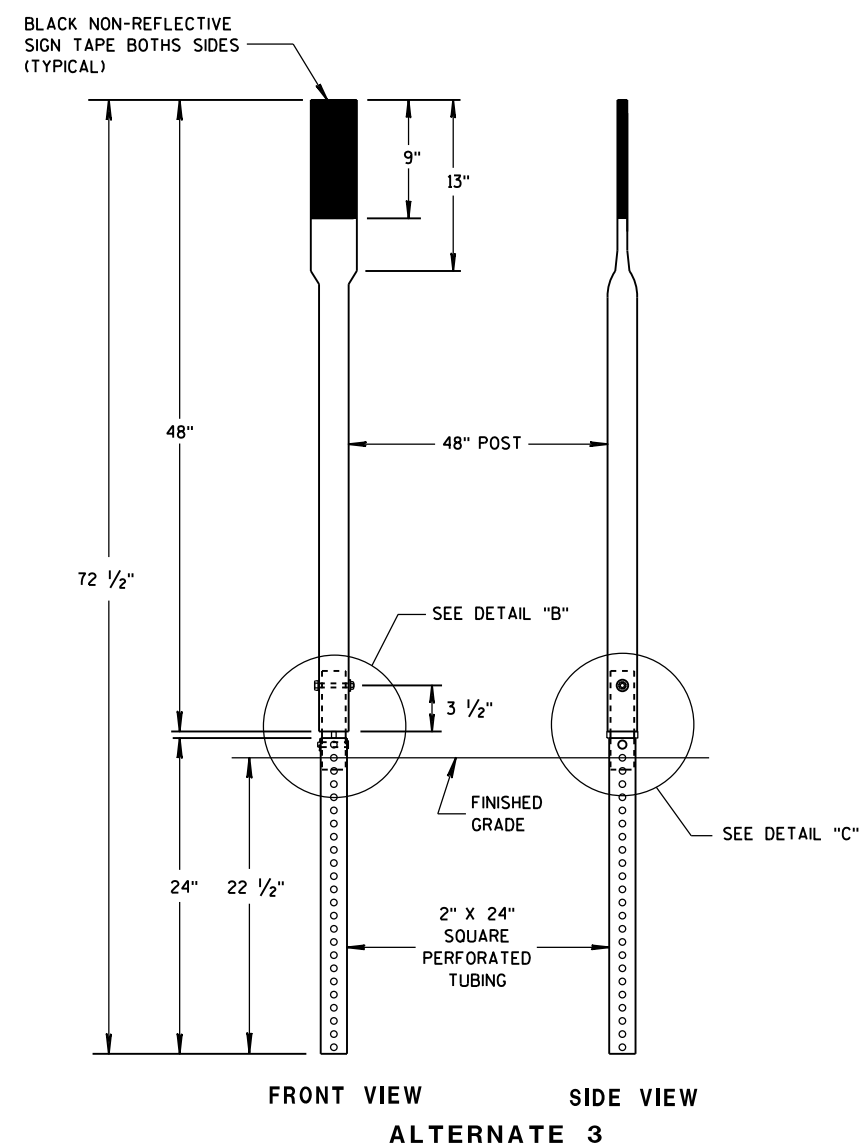
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE MARKER POSTS



FLEXIBLE MARKER POST ANCHORS



FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER 36 IGN
FHWA

GENERAL NOTES

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

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

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

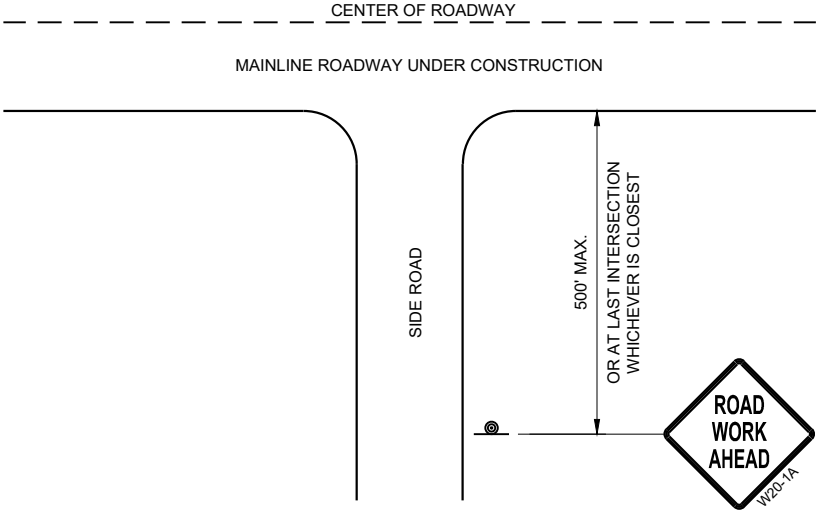
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

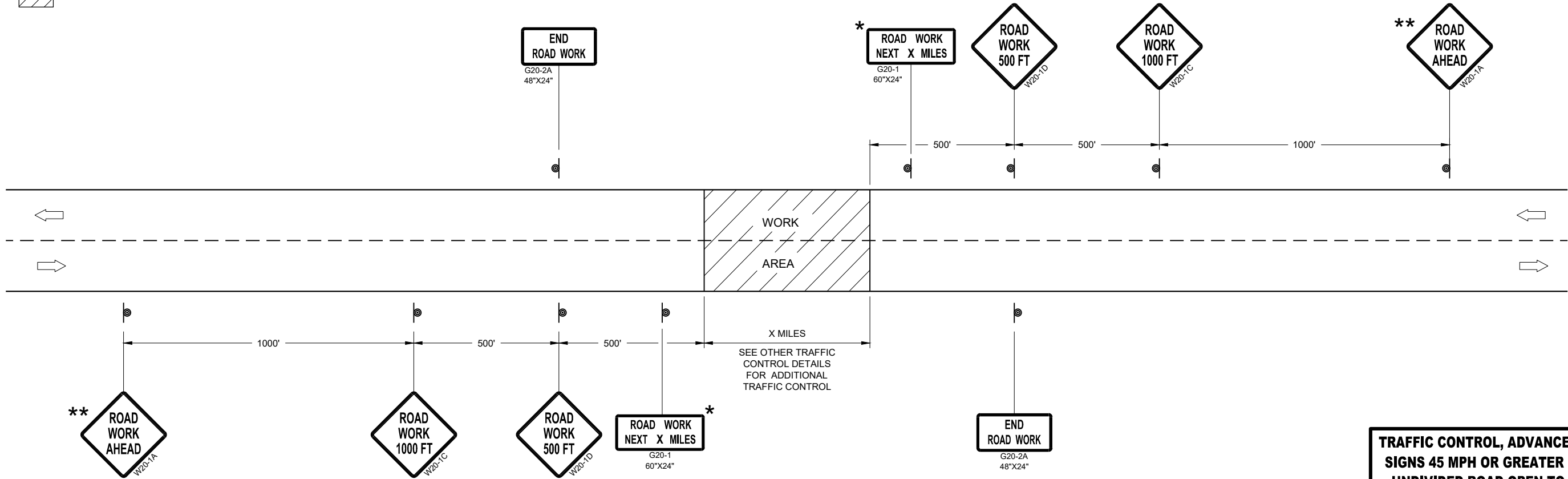
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

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



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL

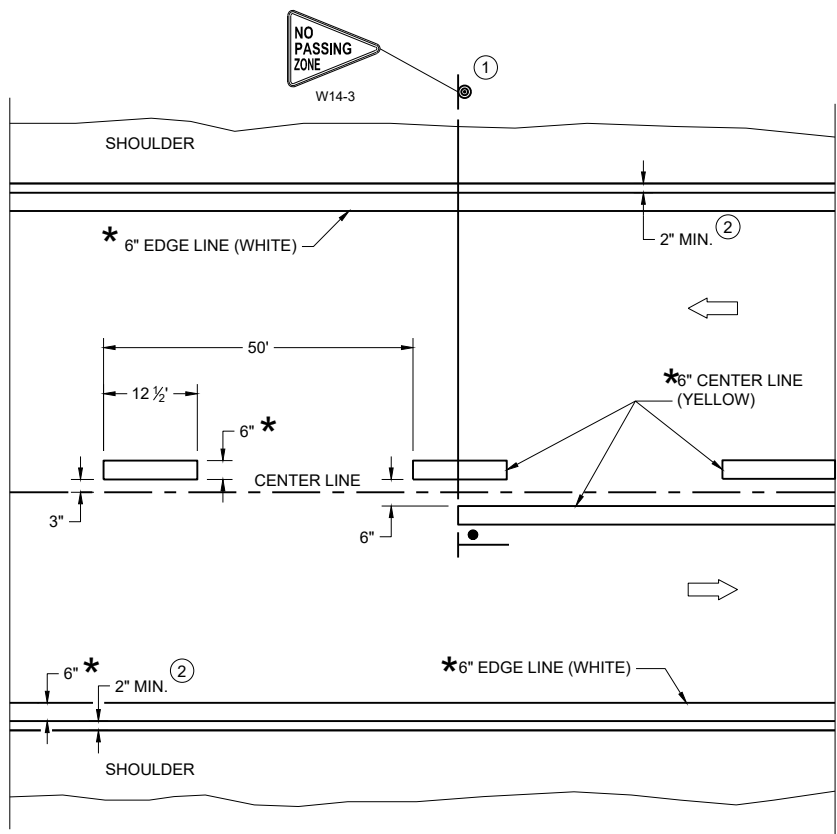


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

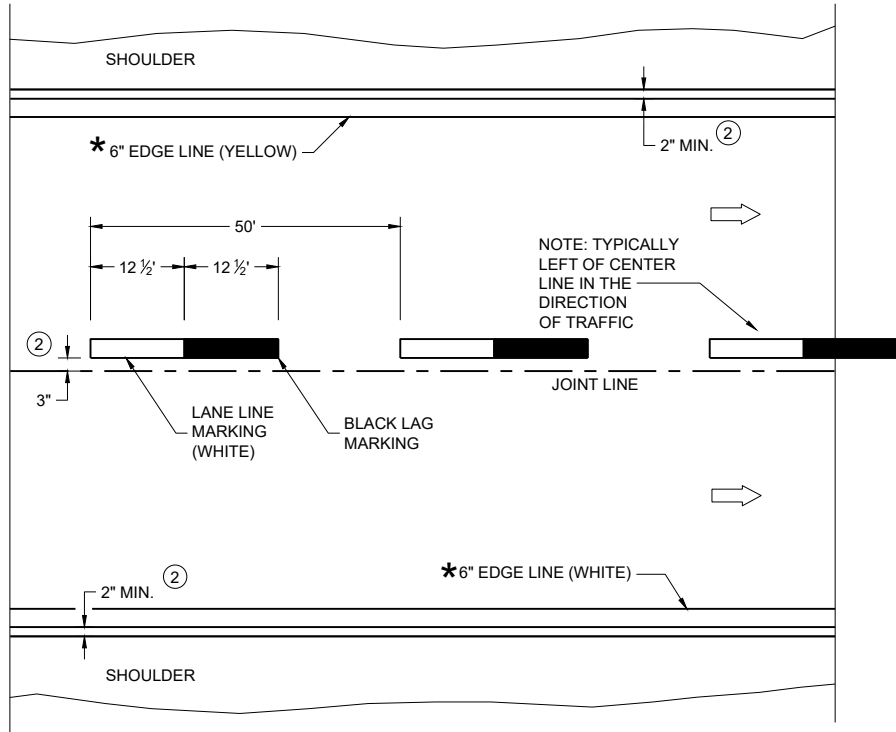
TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 37
FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

GENERAL NOTES

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

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

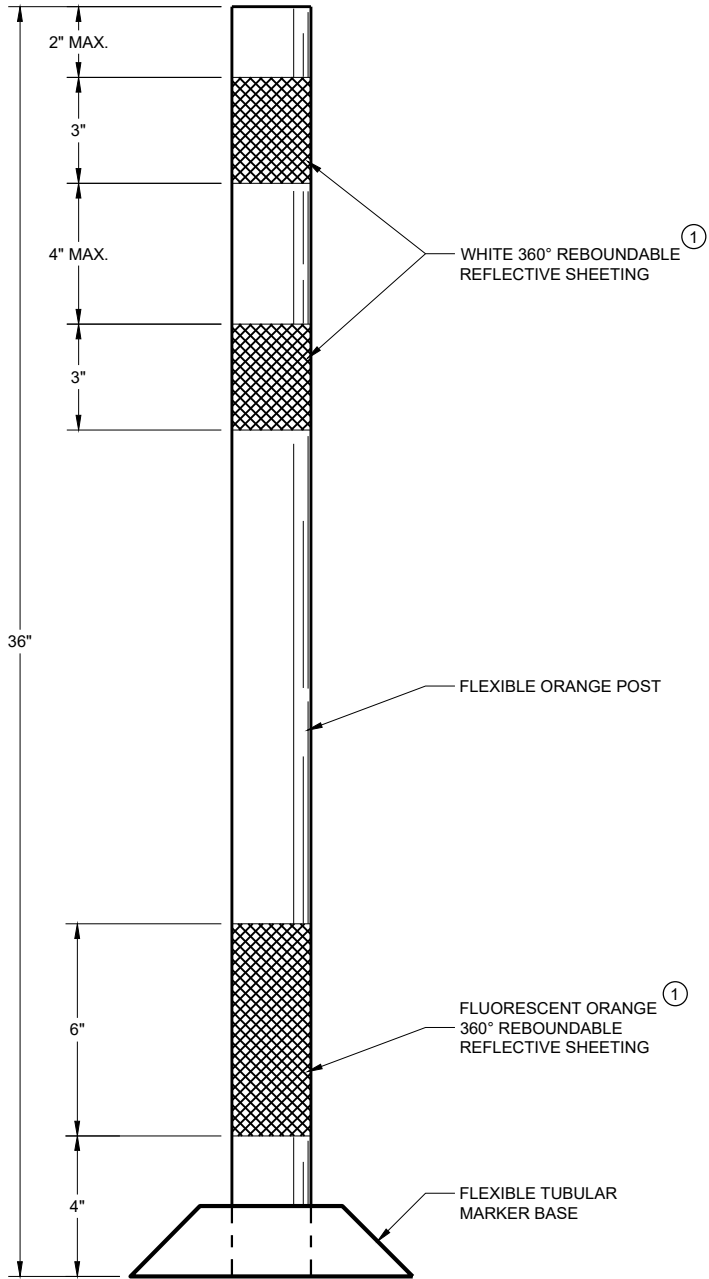
LEGEND

- "T" MARKING
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Jeannie Silver
DATE Statewide Pavement Marking Engineer



FLEXIBLE TUBULAR
MARKER POST
WORK ZONE

GENERAL NOTES

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

SURFACE MOUNTED BASES SHALL BE FURNISHED IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS TO BE COMPATIBLE WITH FLEXIBLE TUBULAR MARKER POSTS TO A SIZE AND SHAPE THAT WILL PROVIDE A STABLE POST FOUNDATION WHEN SECURED TO THE PAVEMENT.

THE ASPHALTIC ADHESIVE OR BUTYL PAD FURNISHED SHALL BE IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS, UNLESS DIRECTED BY THE ENGINEER TO USE BOLTS.

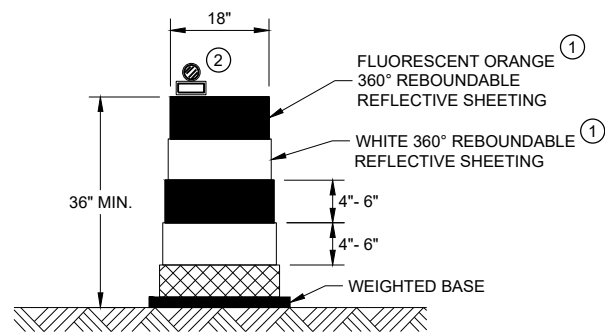
① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.

CHANNELIZING DEVICES
FLEXIBLE TUBULAR
MARKER POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

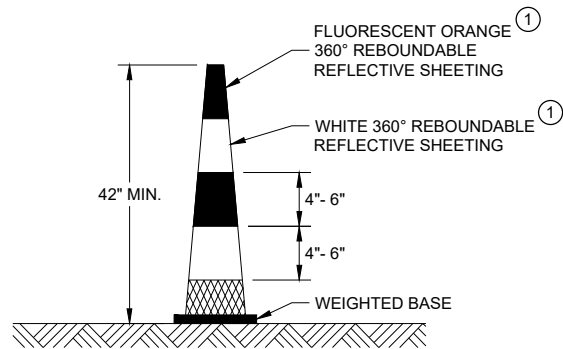
APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 39

FHWA



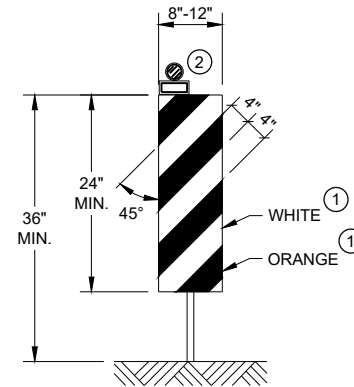
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



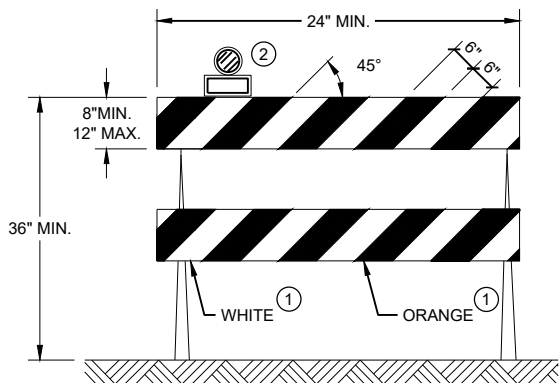
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



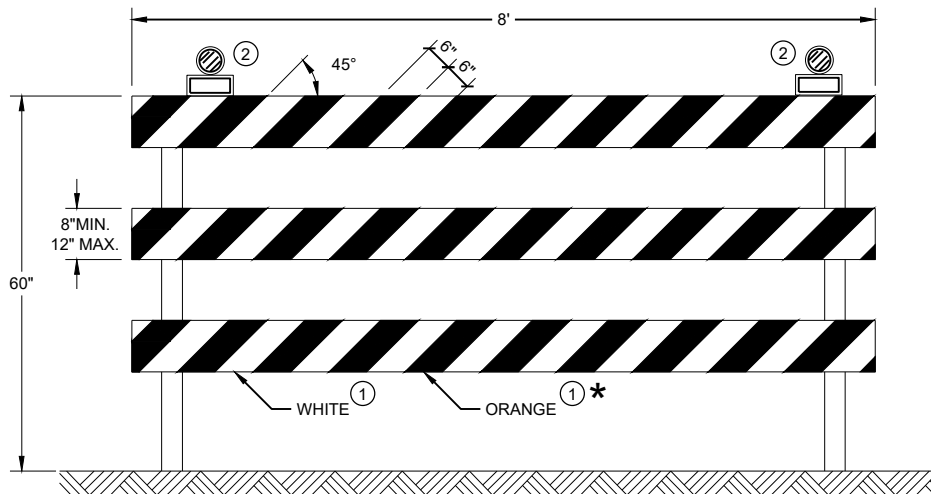
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER 40
FHWA	

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

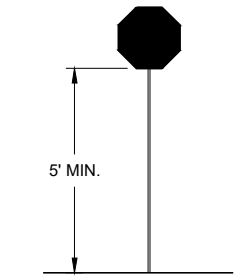
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



STOP/SLOW PADDLE ON SUPPORT STAFF

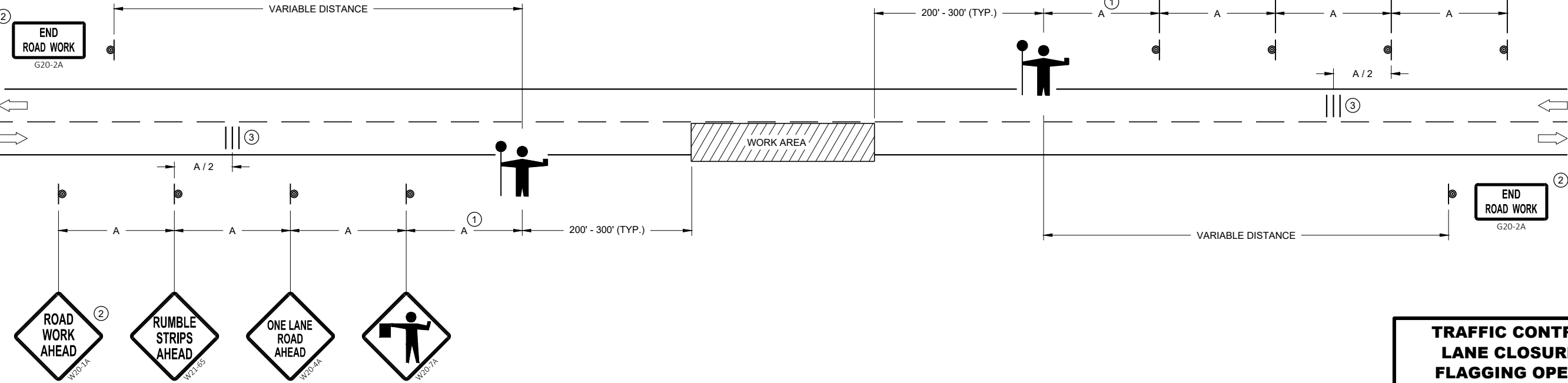
SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



W03-4

USE OF W03-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 41

FHWA

LEGEND

- V1

LEAD VEHICLE
- V2

MARKING VEHICLE
- V3

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

SIGN ON TEMPORARY SUPPORT
- 

DIRECTION OF TRAFFIC

GENERAL NOTES

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

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

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

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

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

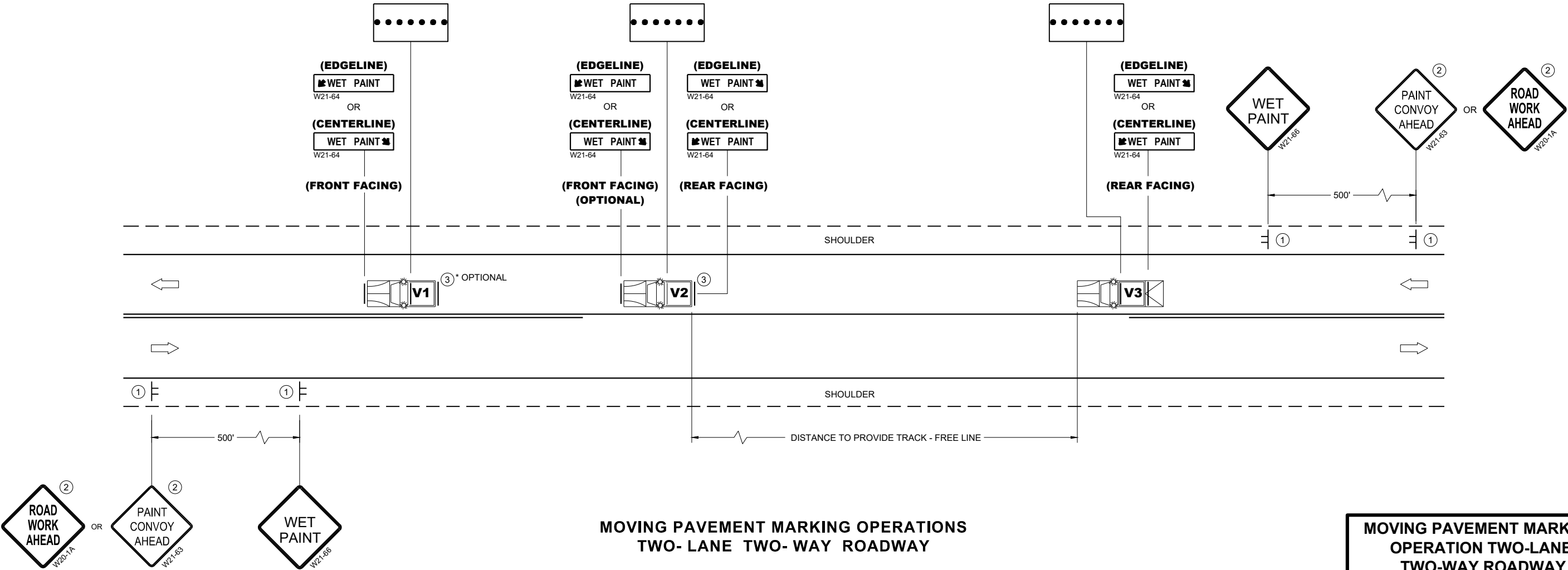
WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH

UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

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

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES AND AFTER EVERY MAJOR INTERSECTION.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

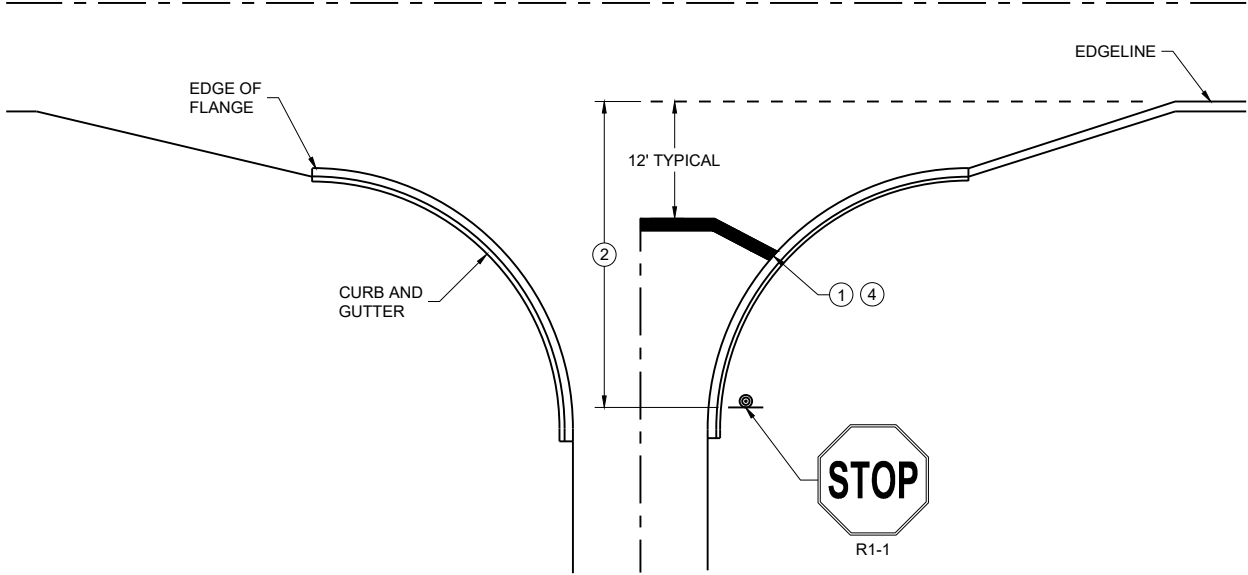


MOVING PAVEMENT MARKING
OPERATION TWO-LANE
TWO-WAY ROADWAY

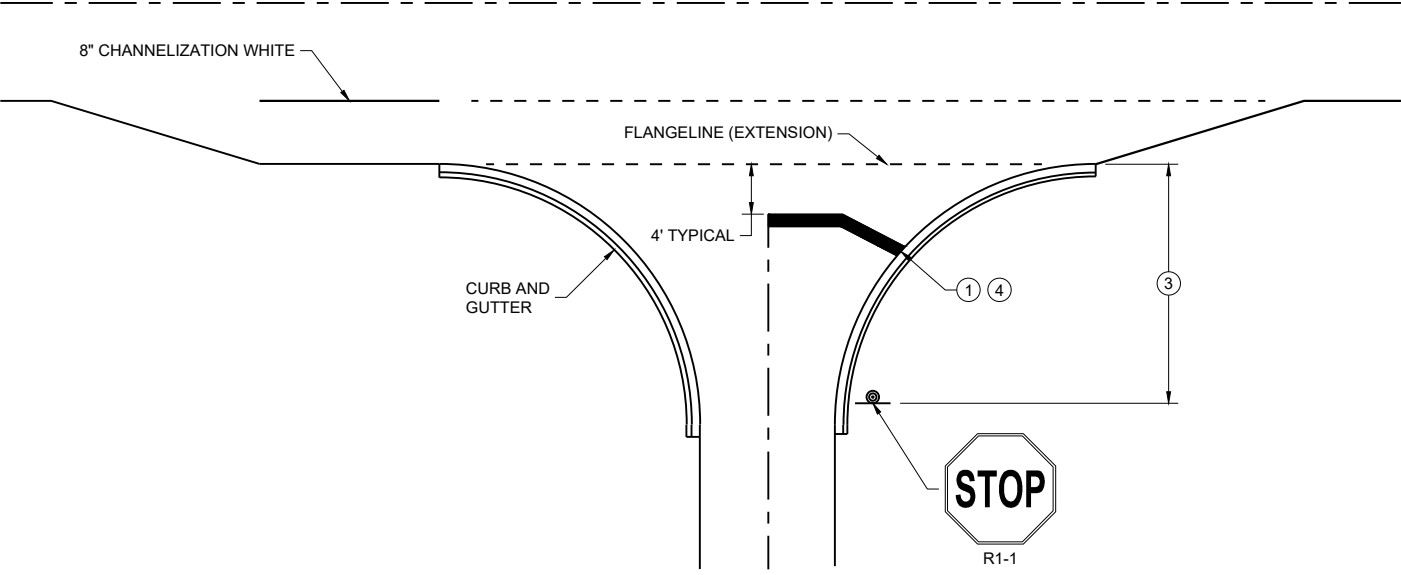
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2024 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

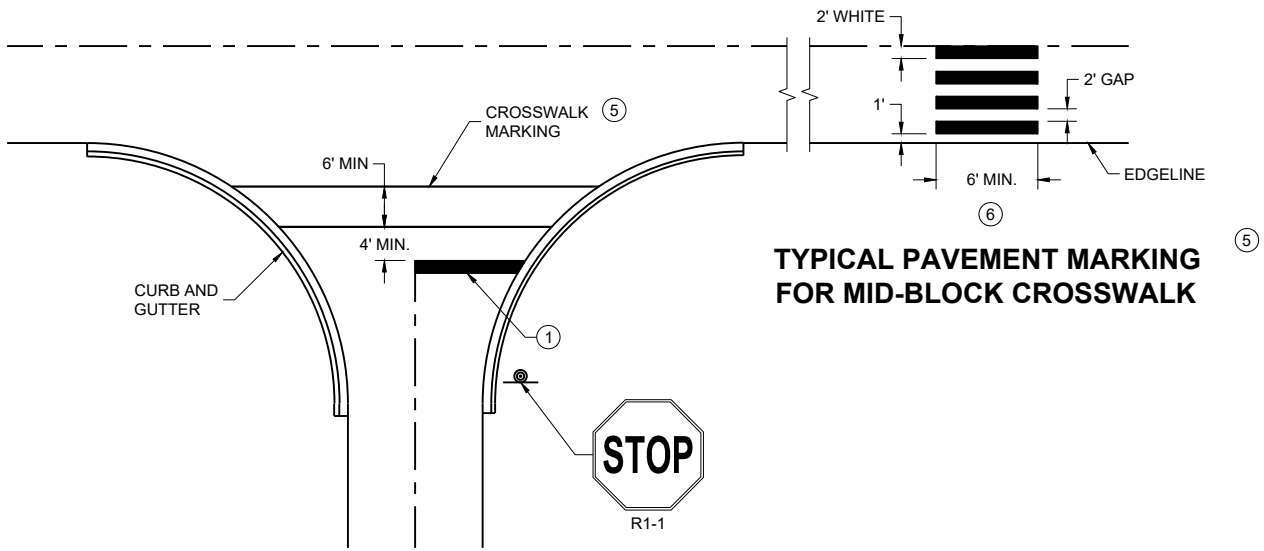
FHWA



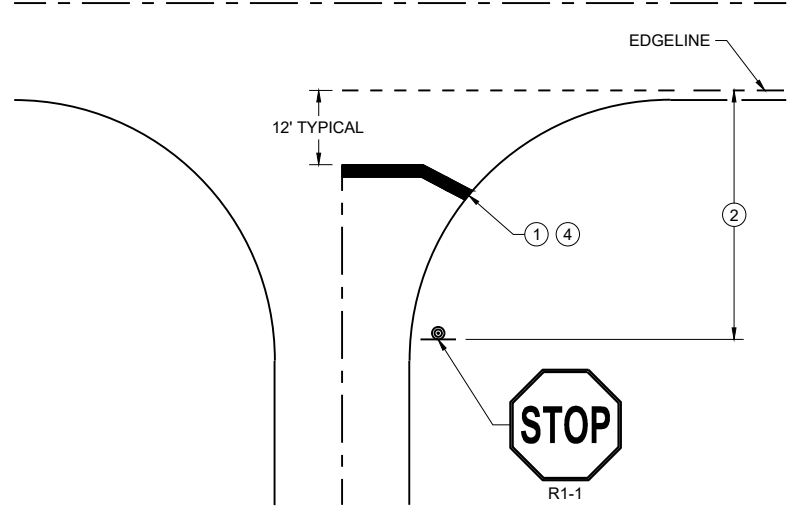
TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDE ROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDE ROADS WITH CROSSWALK MARKING



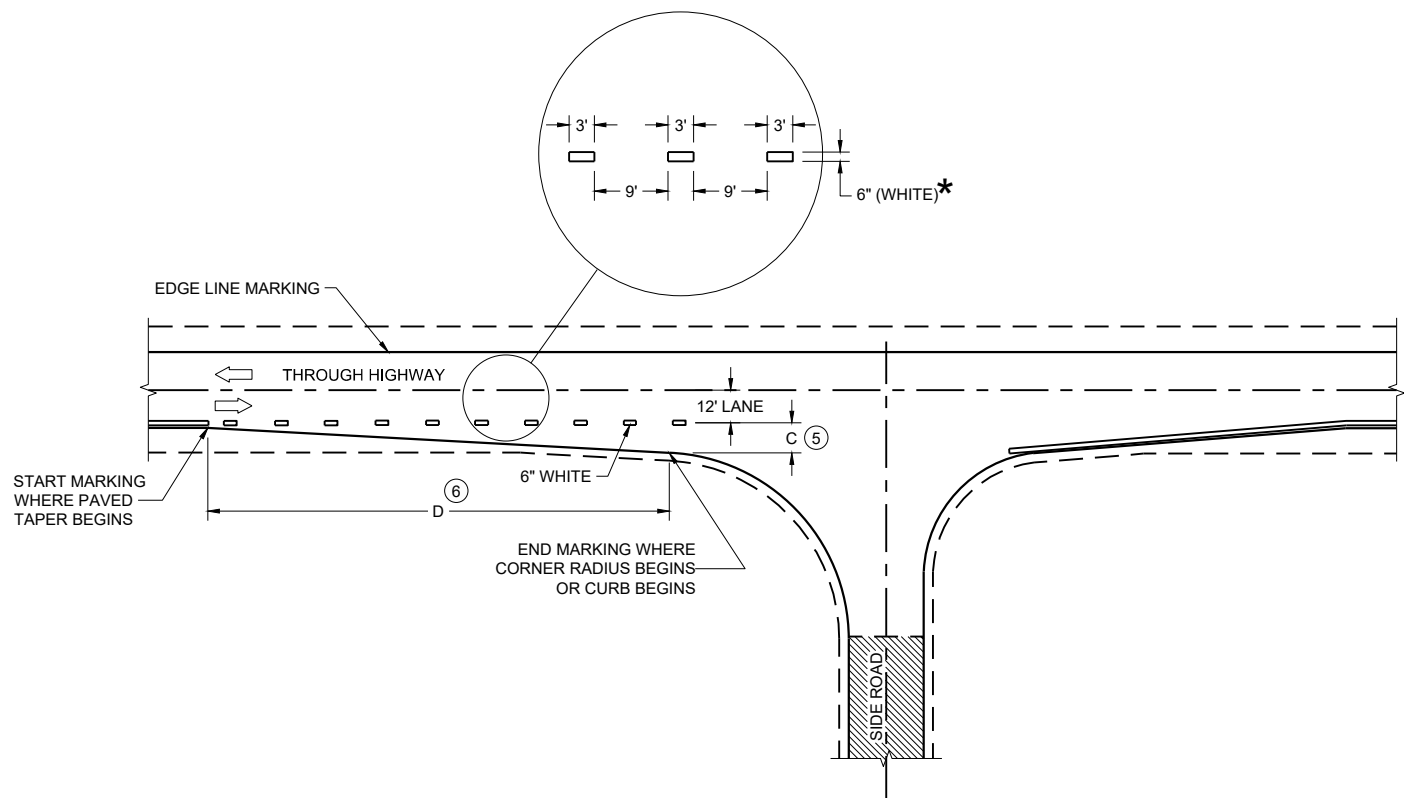
TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

GENERAL NOTES

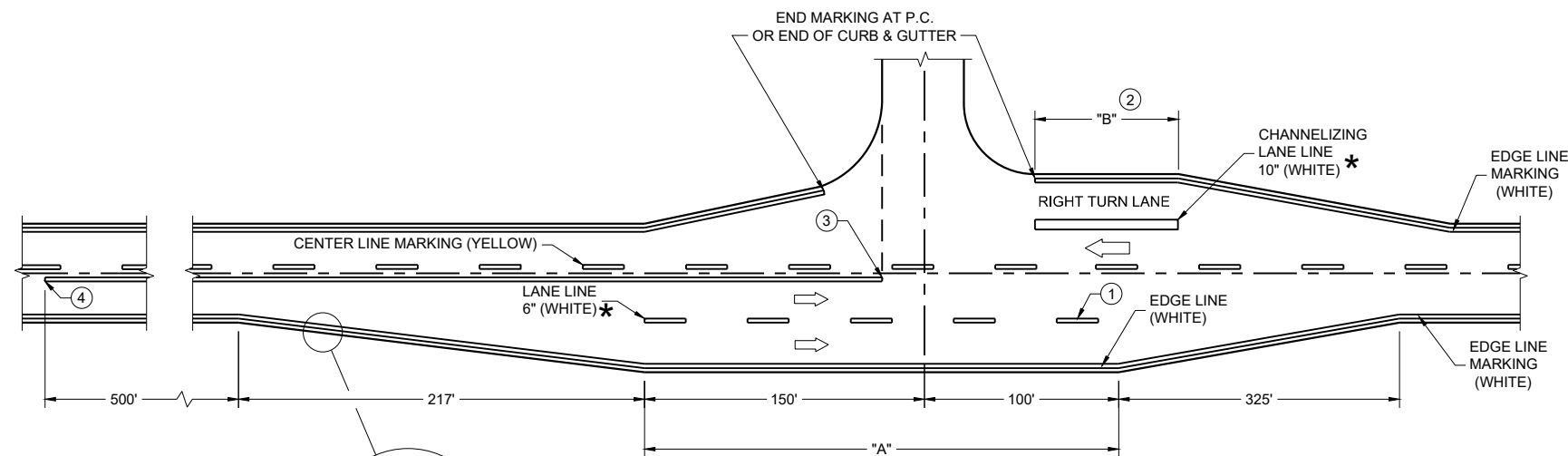
STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE LOCATION.

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE.
- 3 NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGE LINE EXTENSION.
- 4 MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- 5 LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES.
- 6 POSTED SPEED LIMITS OF 40 MPH OR GREATER USE A MINIMUM WIDTH OF 8' FOR MIDBLOCK CROSSWALKS

STOP LINE AND CROSSWALK PAVEMENT MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED March 2024 DATE	/S/ Matthew Rauch STATE SIGNING AND MARKING ENGINEER



MINOR INTERSECTION



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

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES

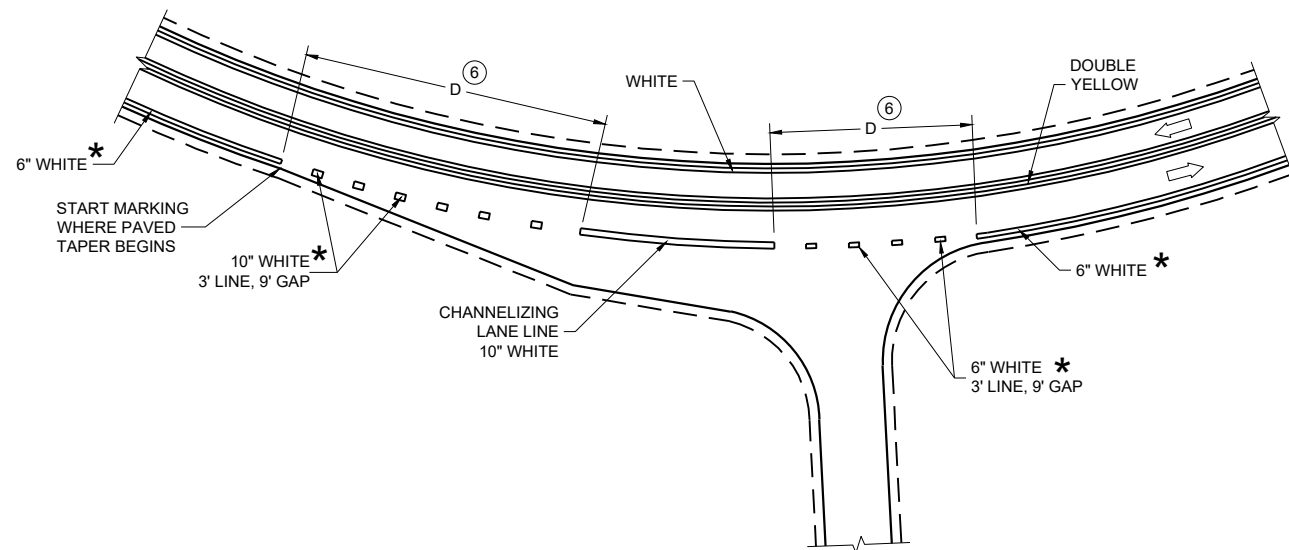
GENERAL NOTES

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

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

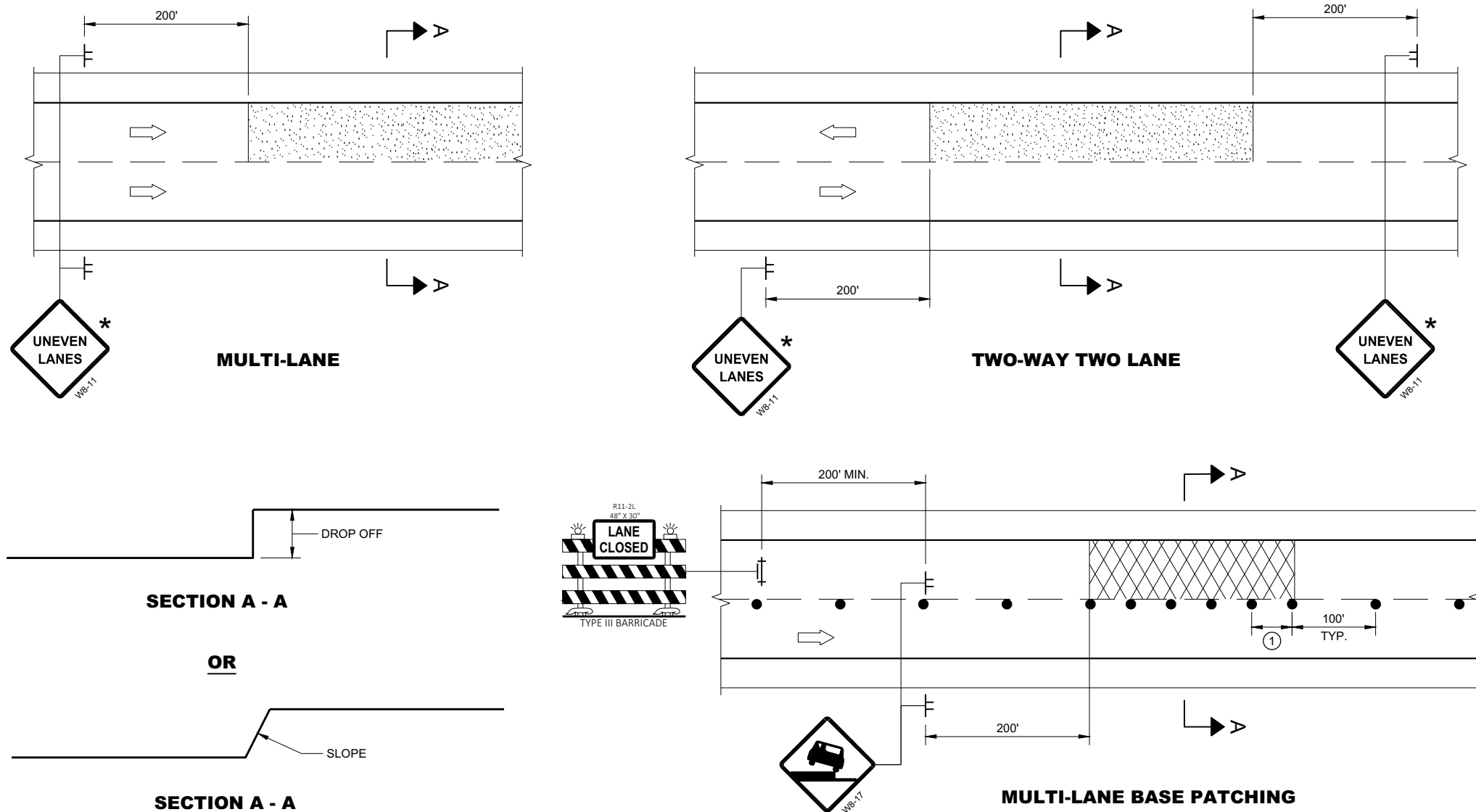
➡ DIRECTION OF TRAVEL



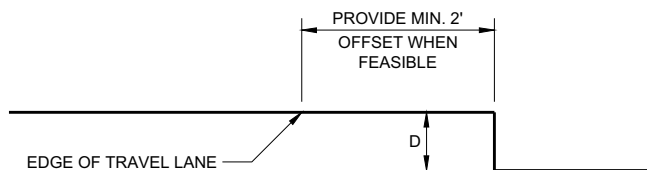
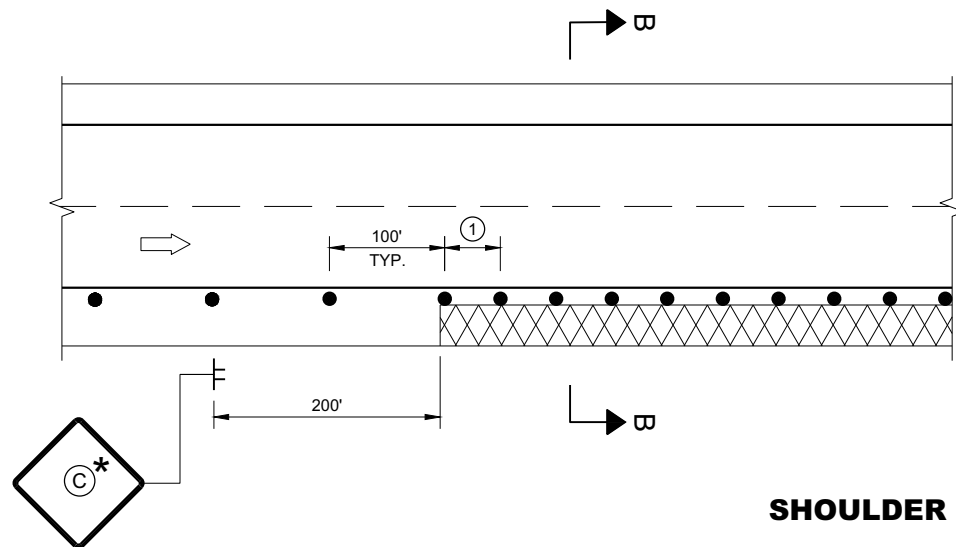
INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



ADJACENT LANE DROP-OFFS



D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	 WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	 W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

GENERAL NOTES

- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

TRAFFIC CONTROL, DROP-OFF SIGNING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 45
FHWA

GENERAL NOTES

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

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

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

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

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

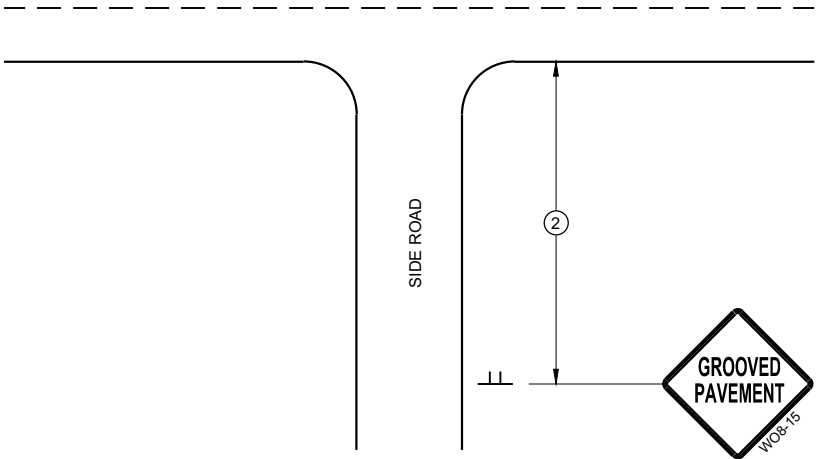
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

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

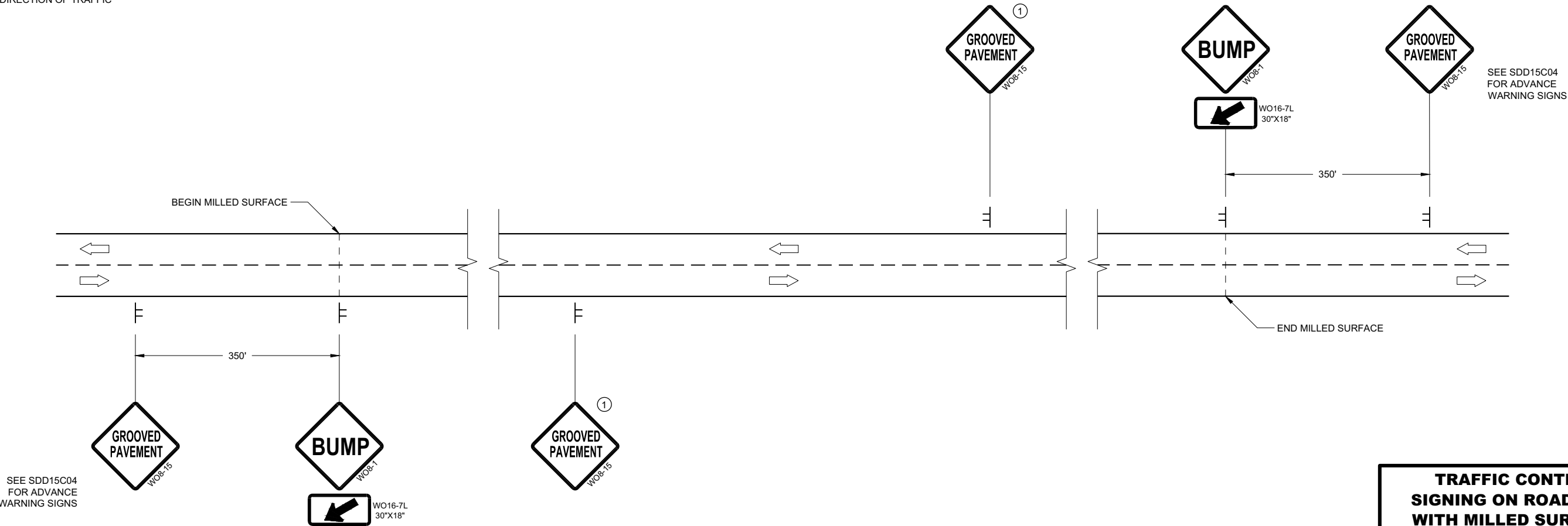
- ① PLACE SIGNS 350' IN ADVANCE OF MILLED SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

LEGEND

-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH
SIGN DETAIL

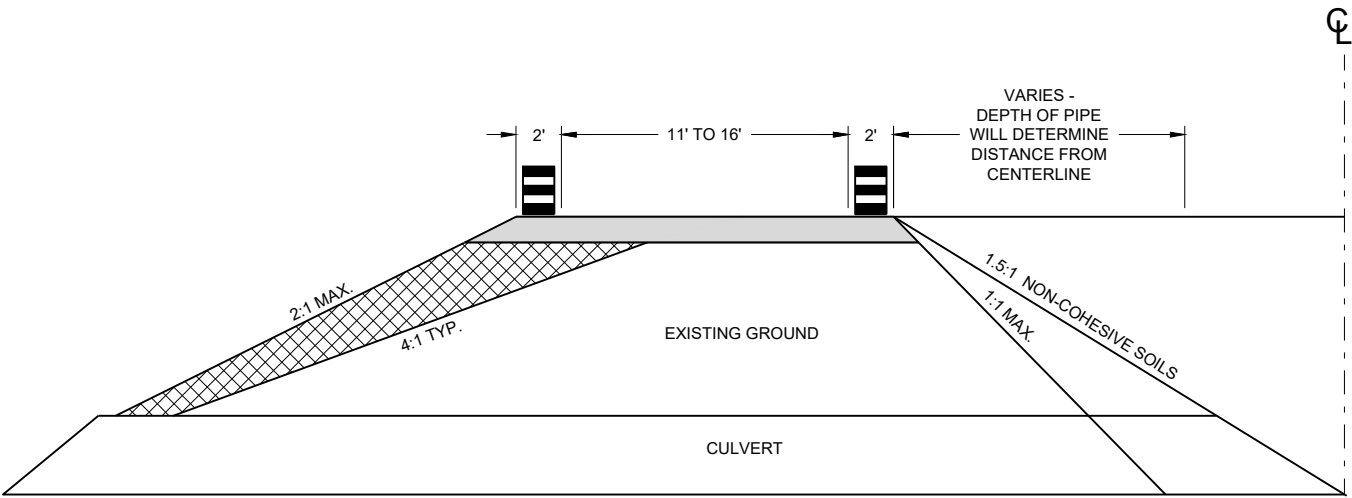


DETAIL FOR SIGNING ON MILLED SURFACES

TRAFFIC CONTROL,
SIGNING ON ROADWAYS
WITH MILLED SURFACES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 46
FHWA



CROSS SECTION

GENERAL NOTES

USE 1:1 FOR COHESIVE CLAYS AND SILTS, LOAMS, SANDY CLAYS AND ANGULAR GRAVEL SOILS.
USE 1.5:1 FOR NON-COHESIVE SOILS.

THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT WITH THE WORK OPERATION.

ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION.

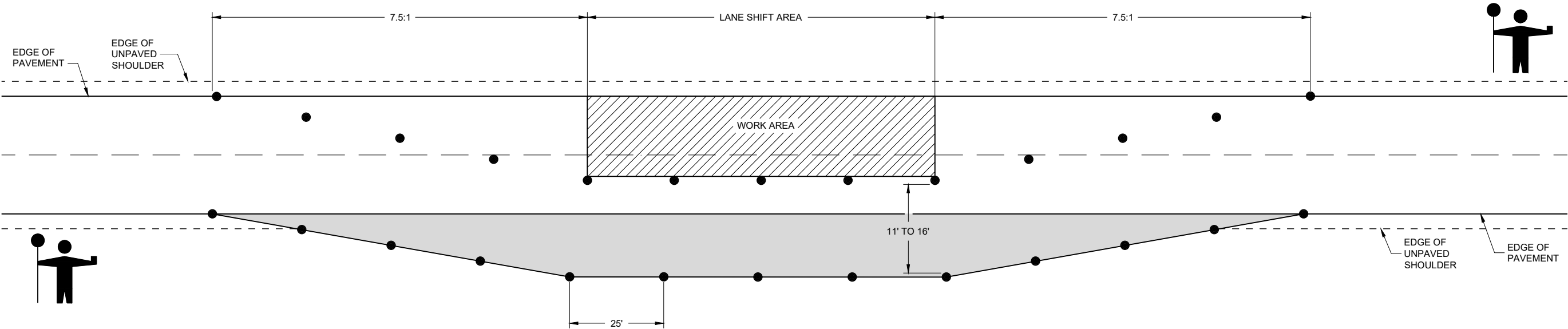
CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

USE WITH SDD 15C12 "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS"

USE WITH SDD 15D45 "SIGNING ON ROADWAYS WITH LOOSE GRAVEL"

LEGEND

- DRUM WITHOUT WARNING LIGHT
- 6" BASE AGGREGATE DENSE 1 1/4" - INCIDENTAL TO LANE SHIFT ITEM
- FILL - INCIDENTAL TO LANE SHIFT ITEM
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF



LANE SHIFT IN FLAGGING OPERATION

**TRAFFIC CONTROL,
TEMPORARY LANE SHIFT
DURING CULVERT WORK**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 47

FHWA

LEGEND

- V1

WORK VEHICLE
- V2

SHADOW VEHICLE
- 

TRUCK MOUNTED ATTENUATOR (TMA)
- 

FLASHING ARROW PANEL (CAUTION)
- 

WORK AREA
- 

DIRECTION OF TRAFFIC

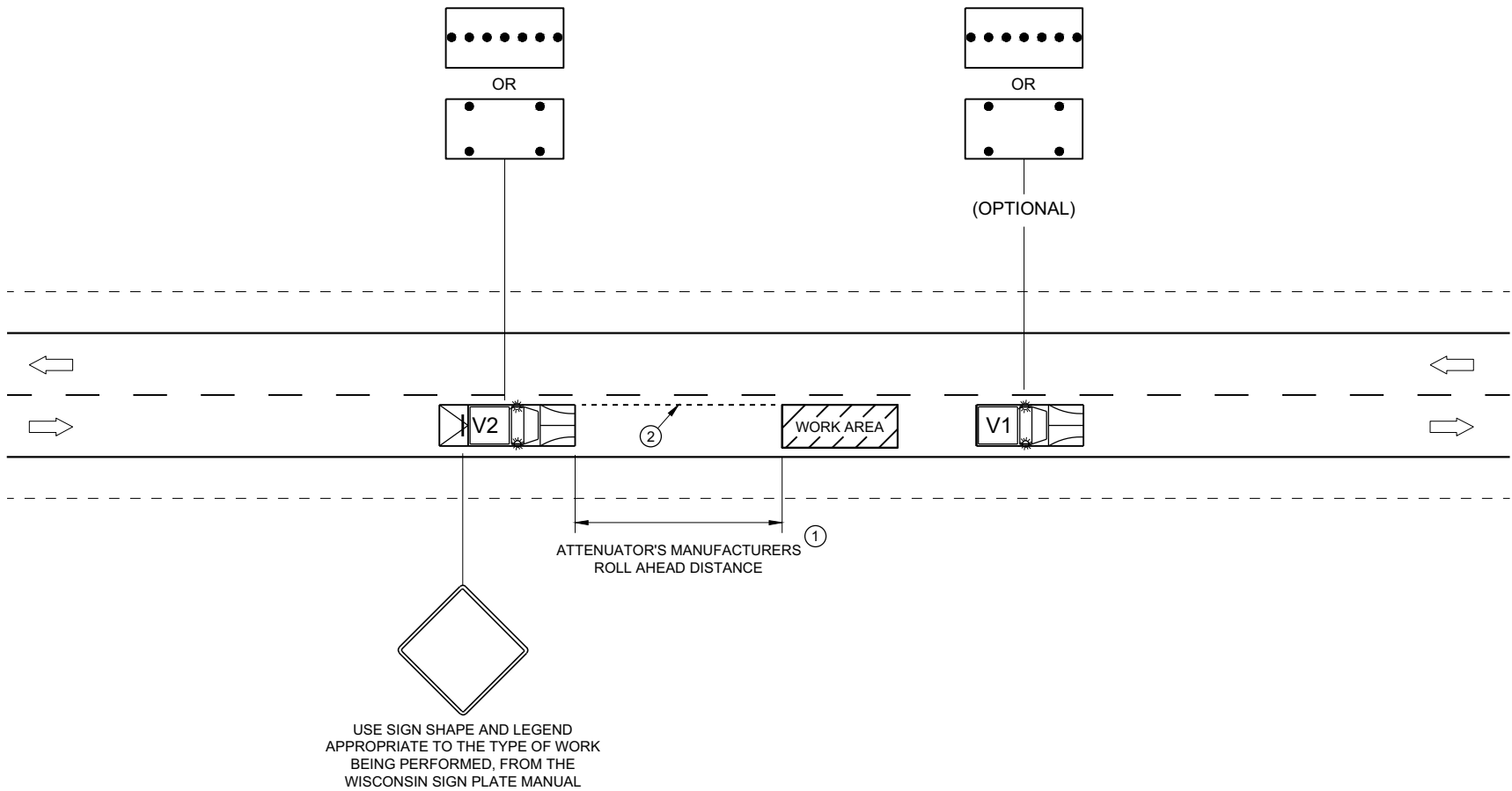
POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

- ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.
- MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.
- ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.
- ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.
- USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.
- ①

DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, 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.
- ②

ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



TRAFFIC CONTROL,
MOBILE OPERATIONS ON
AN UNDIVIDED ROADWAY

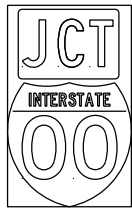
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE

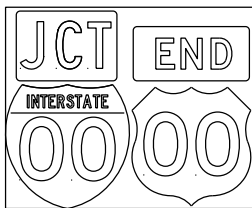
/S/ Andrew Heidtke
STATEWIDE WORK ZONE T
SAFETY ENGINEER

FHWA 48

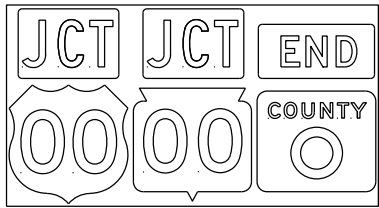
TYPICAL ASSEMBLIES



J1-1



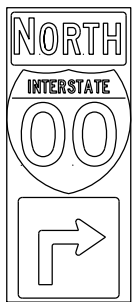
J1-2



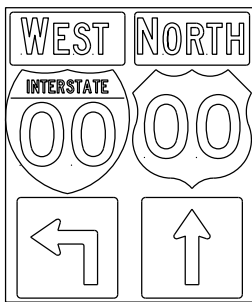
J1-3



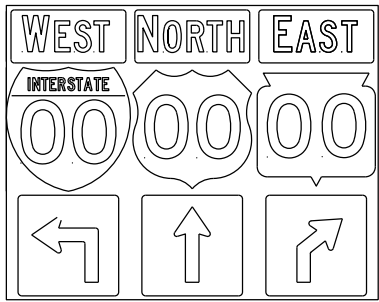
JR1-1



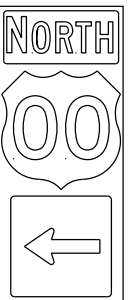
J2-1



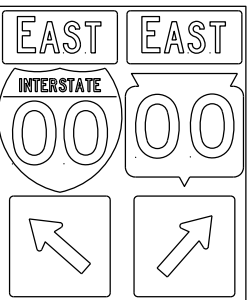
J2-2



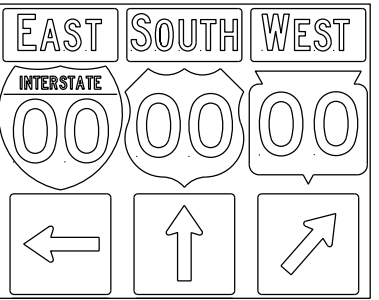
J2-3



J3-1



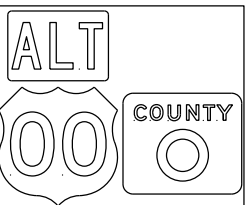
J3-2



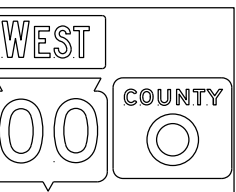
J3-3



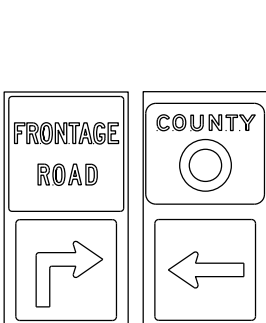
J4-1



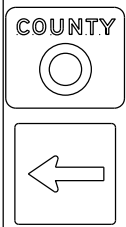
J4-2



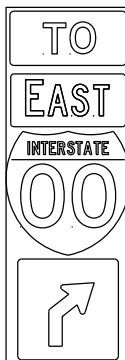
J4-2



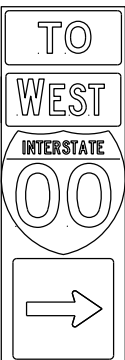
J12-1



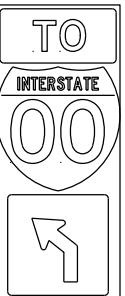
J13-1



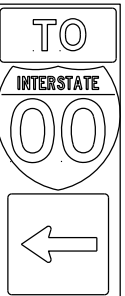
J32-1



J33-1



J22-1



J23-1



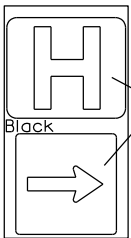
JR13-1



JR23-1



JR99-1

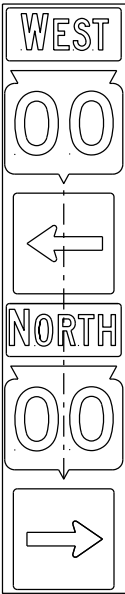
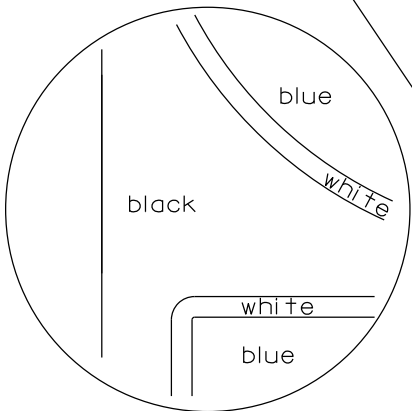


JH-1

Blue Background

Black

blue background with interstate

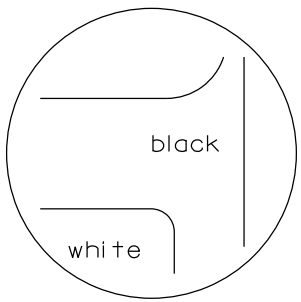
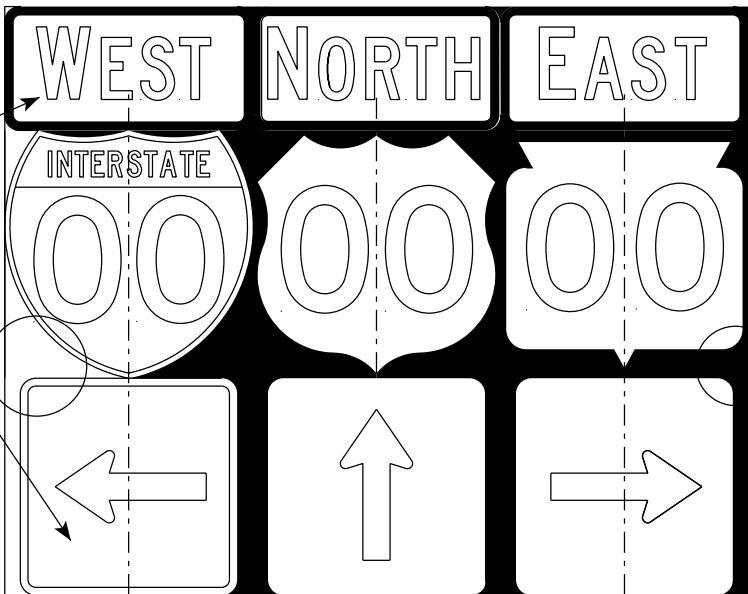


JV

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

NOTES

1. Signs are Type II - Type H Reflective
2. Color:
Background - Black Non-reflective
Message - see Note 4
3. Message Series - See Note 4
4. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
5. 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.
6. 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.
7. 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.
8. 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.
9. All Vertical J Assemblies are given a Sign Code of JV
10. For JV Assemblies that have a mixture of Interstate and Non-Interstate shields, arrows and cardinals shall be white on blue.
11. For JV Assemblies that have a mixture of Non-Interstate and Auto-Tour shields, arrows and cardinals shall be black on white.



black background

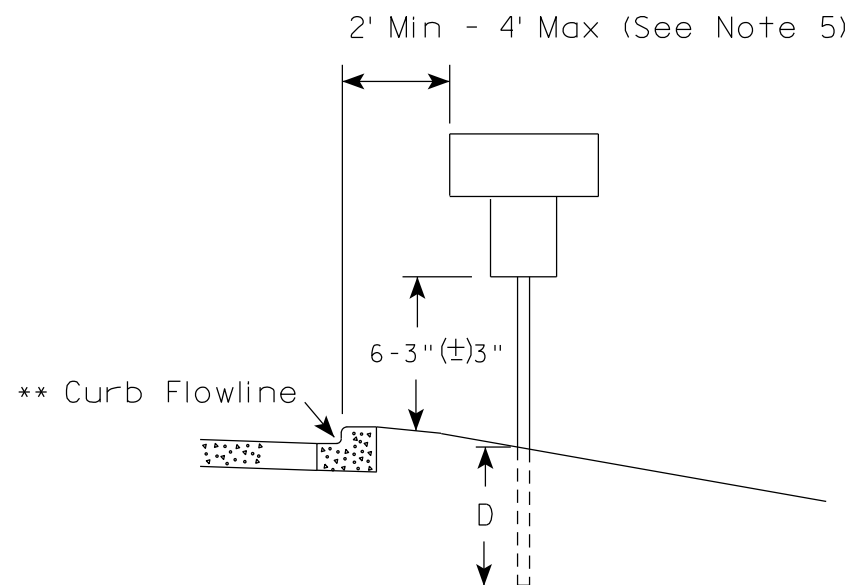
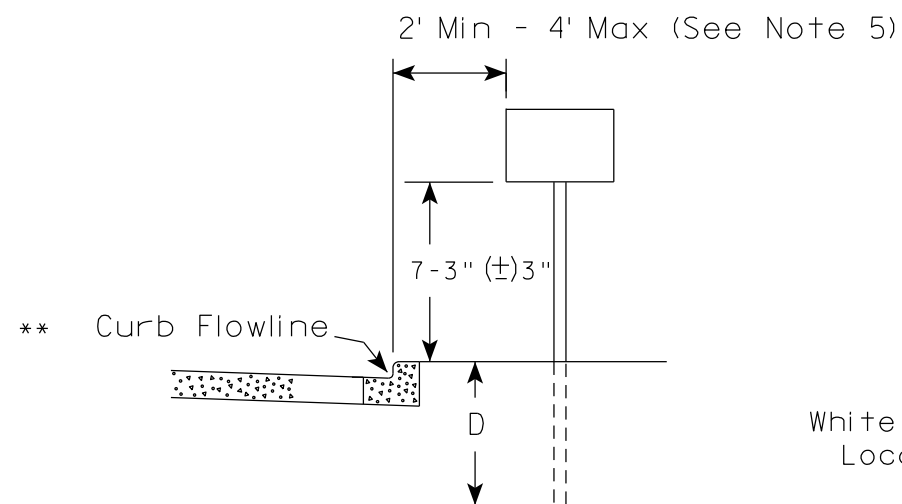
ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

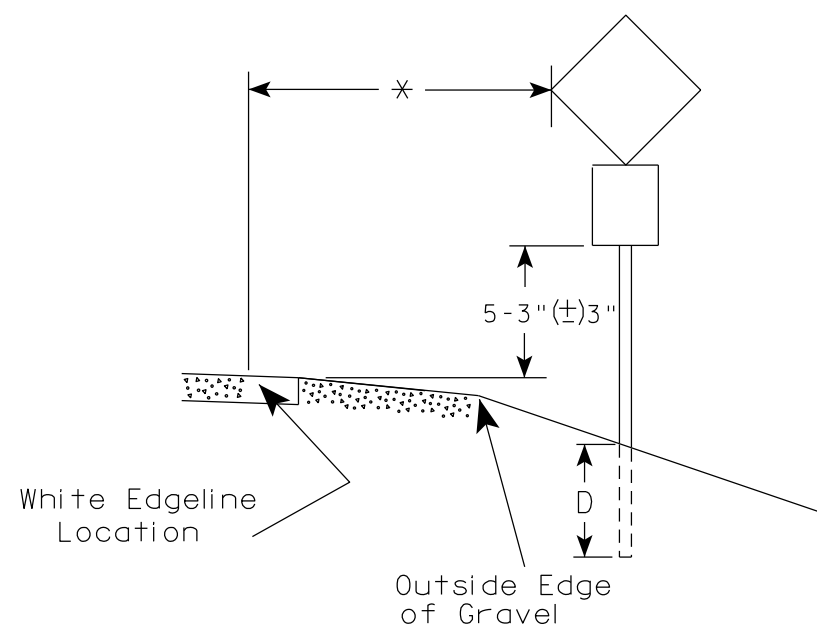
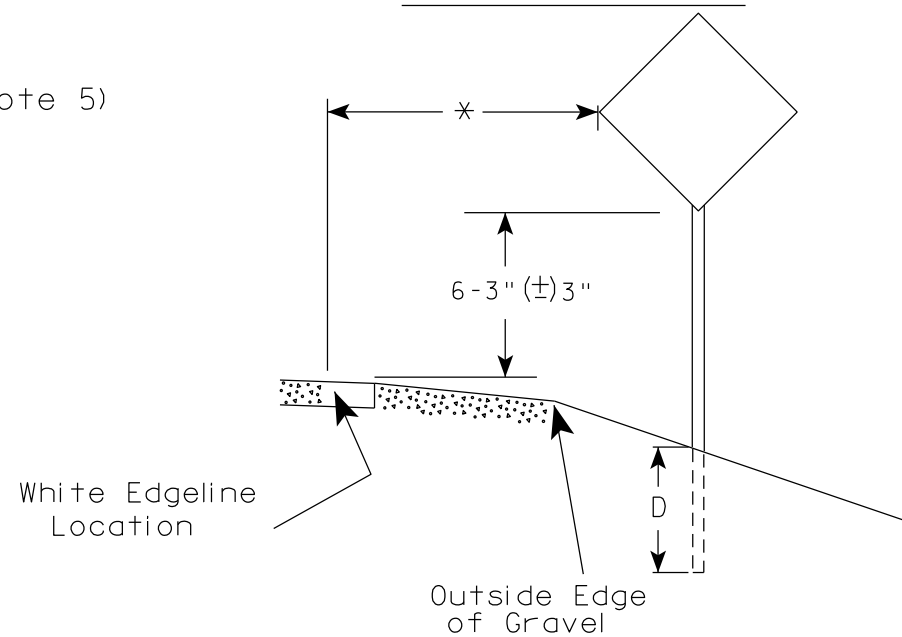
DATE 6/7/23 PLATE NO. A2-1S.10

URBAN AREA



* * 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.

RURAL AREA (See Note 2)



* 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.

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-3.23

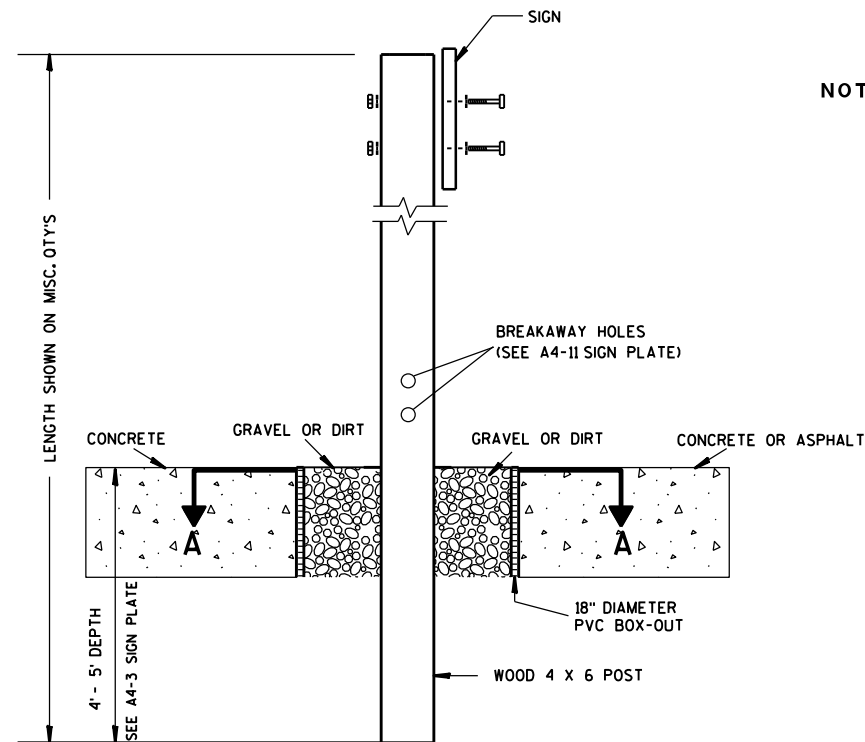
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 50

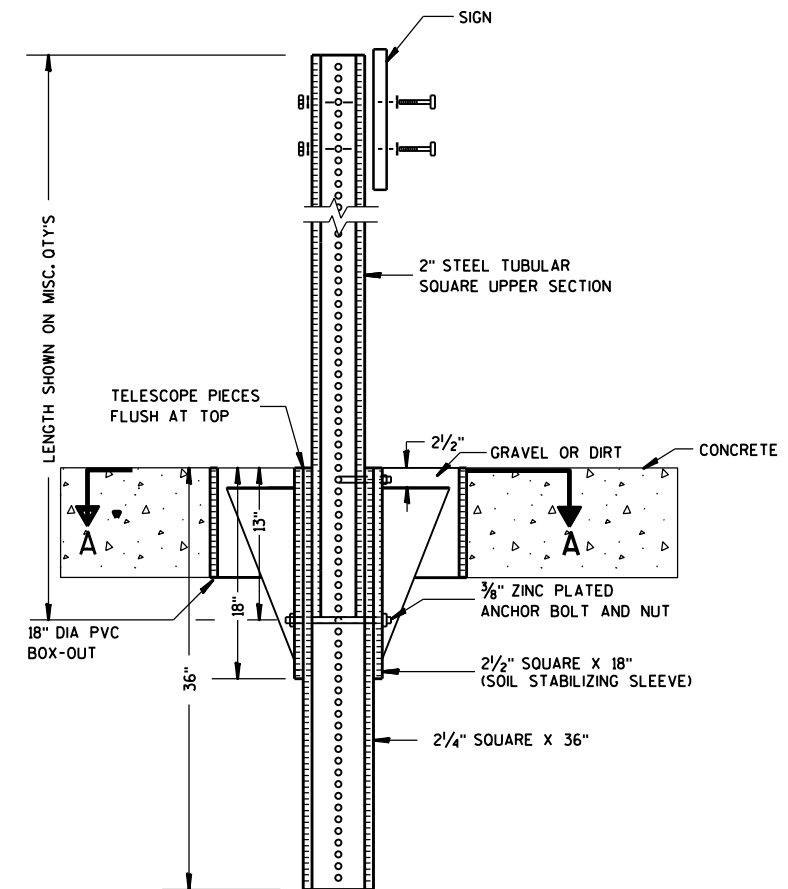
E



ELEVATION VIEW

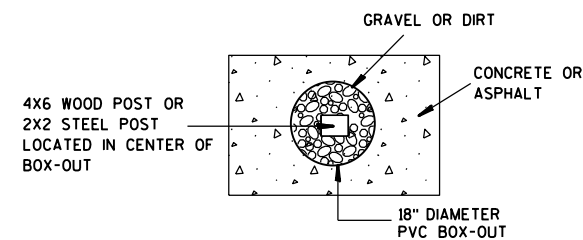
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 51 A4-3B.1

PROJECT NO:

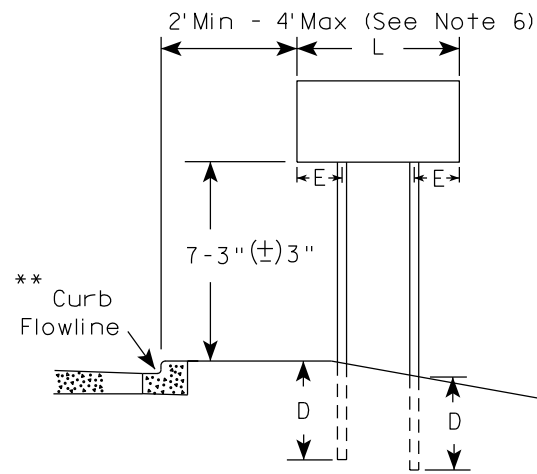
HWY:

COUNTY:

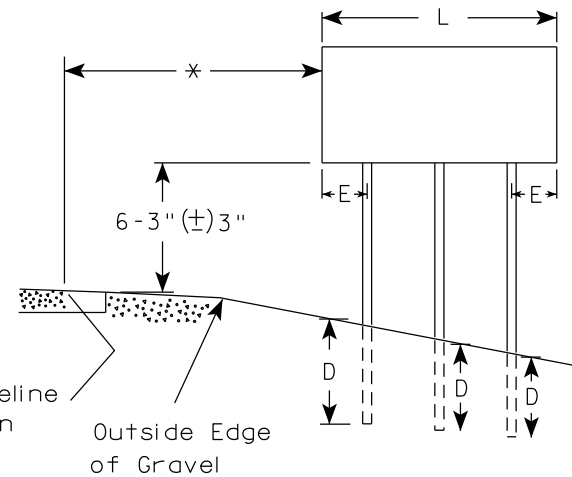
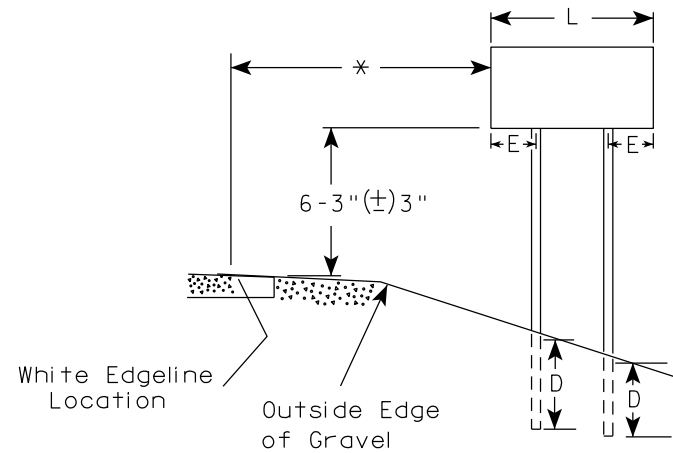
SHEET NO:

E

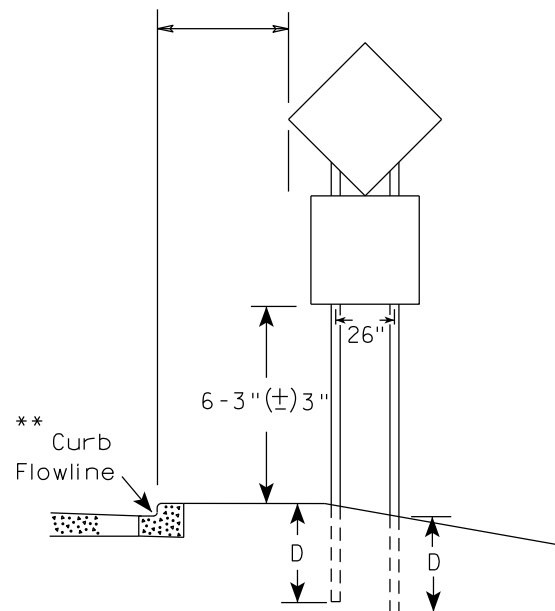
URBAN AREA



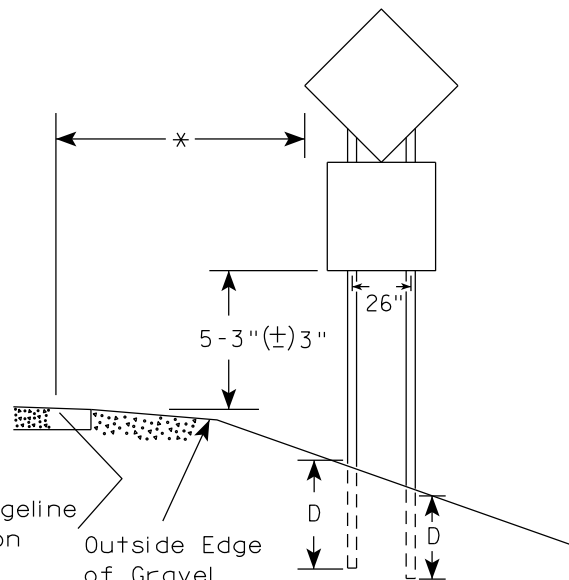
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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 12/6/23 PLATE NO. A4-4.16

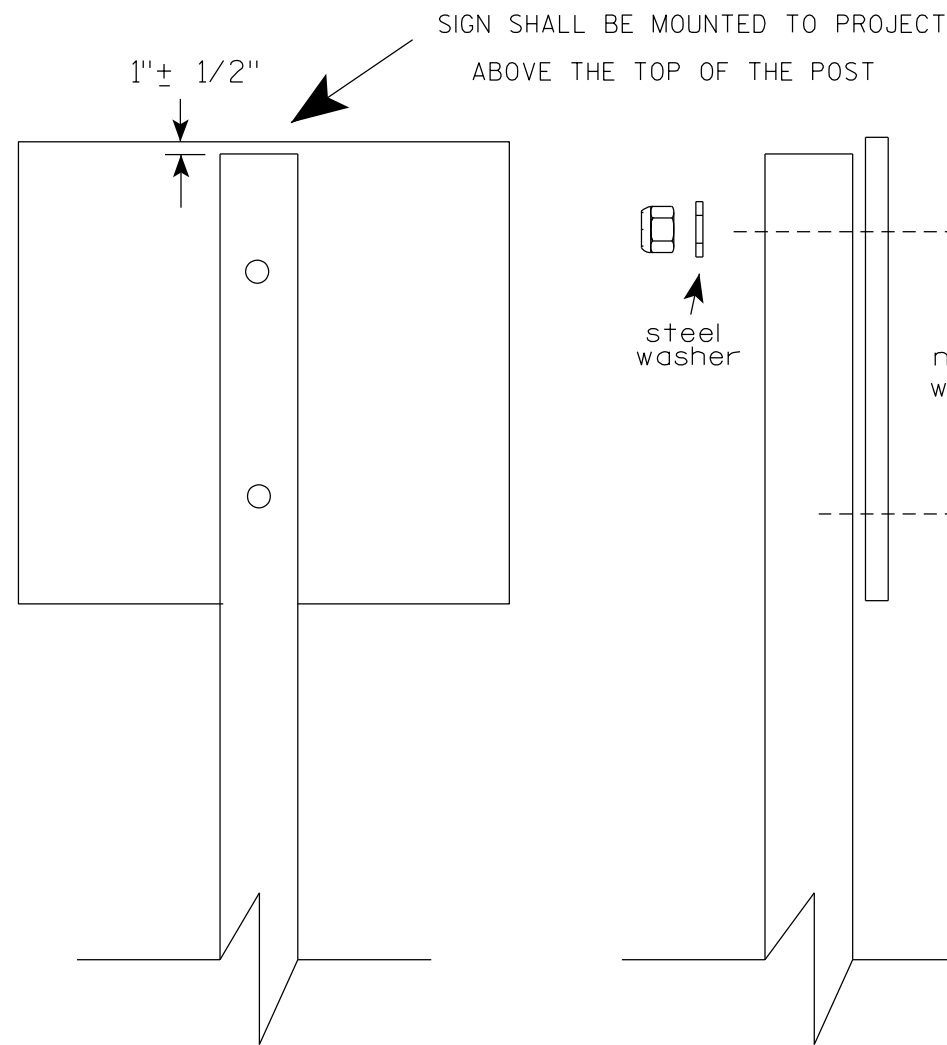
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 52

E



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

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

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

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (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 $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
 - 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 4/1/2020	PLATE NO. A4-8.9

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

1"

$\frac{1}{8}"$

ALL HOLES $\frac{7}{16}"$
SPACED 1" C-C
ALL FOUR SIDES

4" x 10" x 10 GA. — 
STEEL PLATE (CUT
AS SHOWN) WELDED
TO ALL FOUR CORNERS
OF TELESPAR TUBE

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

2 1/2" TELESAR TUBE

4" x 10" x 10 GA. STEEL PLATE (CUT AS SHOWN) WELDED TO ALL FOUR CORNERS OF TELESAR TUBE

4"

2 1/2"

10"

3 1/2"

19"

LENGTH SHOWN ON MISC. QTY'S
 18" DIA SCHEDULE 40 PVC BOX-OUT
 TELESCOPE PIECES FLUSH AT TOP
 36"
 18"
 13"
 2 1/2"
 2 1/4" SQUARE X 36"
 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 3/8" ZINC PLATED ANCHOR BOLT AND NUT
 2 1/2" GRAVEL OR DIRT
 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
 ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES
 2" STEEL TUBULAR SQUARE UPPER SECTION
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 SIGN

LENGTH SHOWN ON MISC. QTY'S

SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

TELESCOPE PIECES FLUSH AT TOP

18"

12"

36"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

A

B

C

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

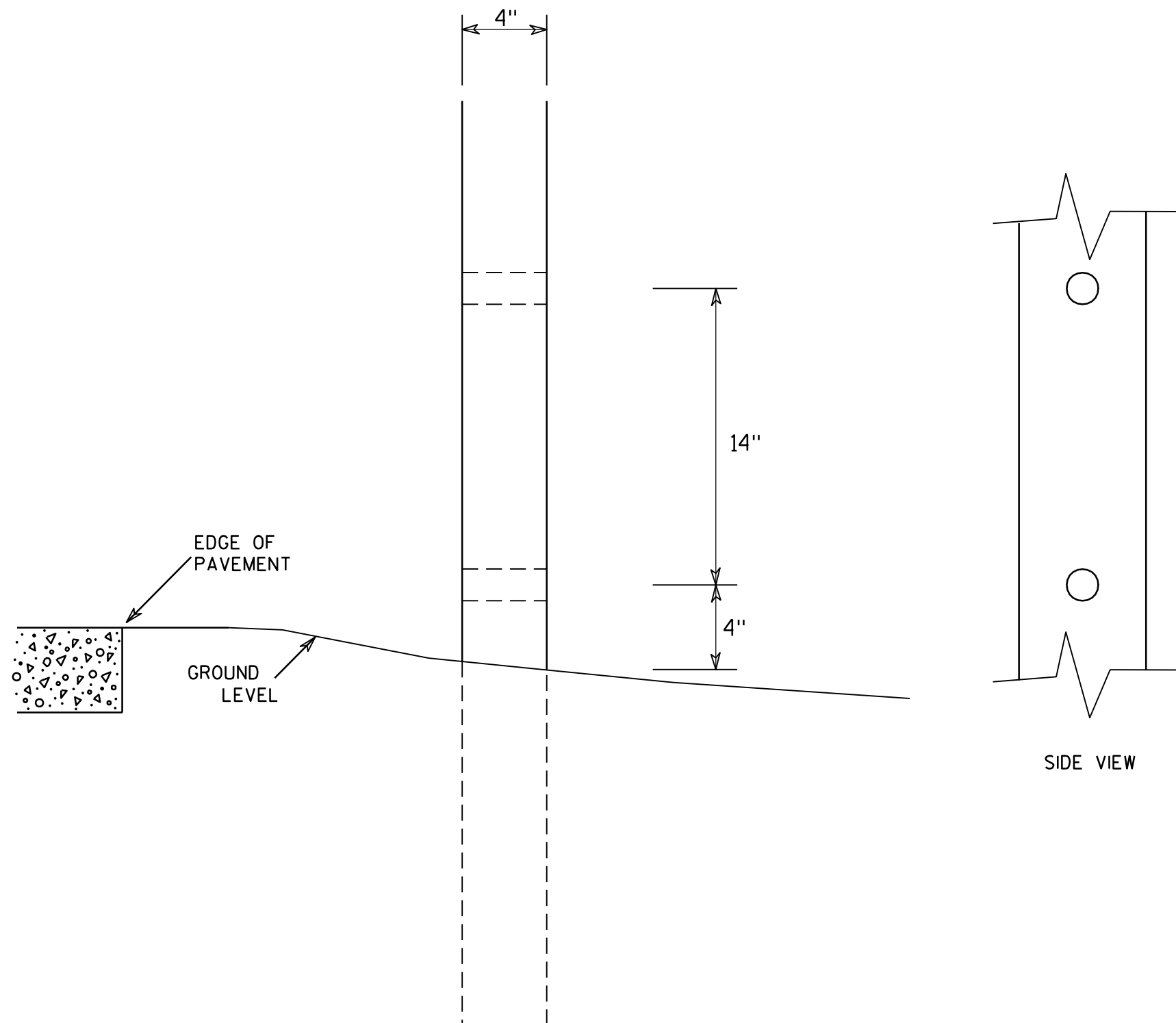
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R. Rauch
For State Traffic Engineer

DATE 2/05/15 PLAT 54 14-9.9

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:

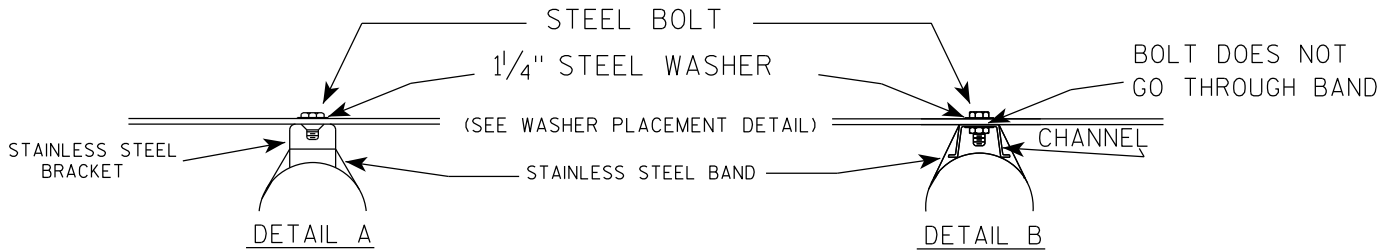
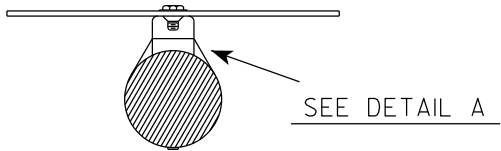
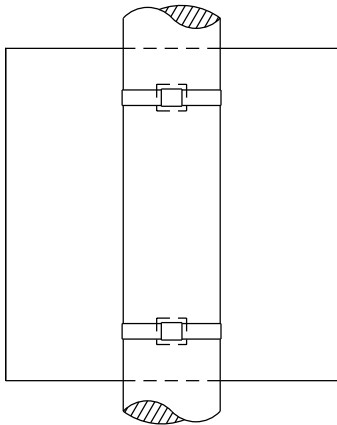
COUNTY:

SHEET NO: 55

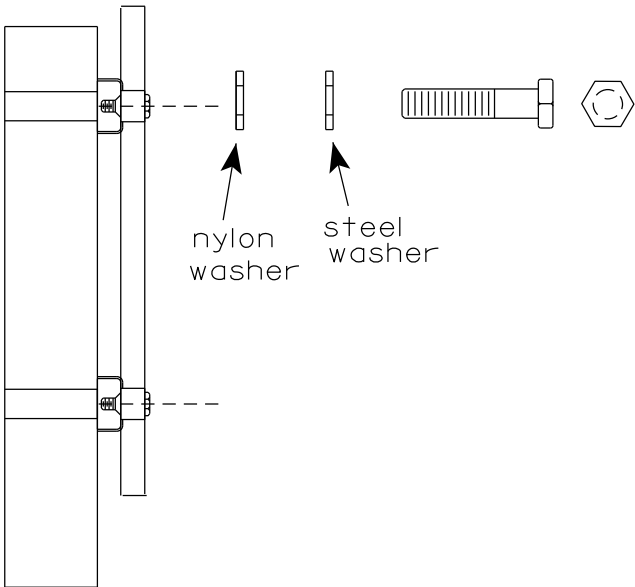
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

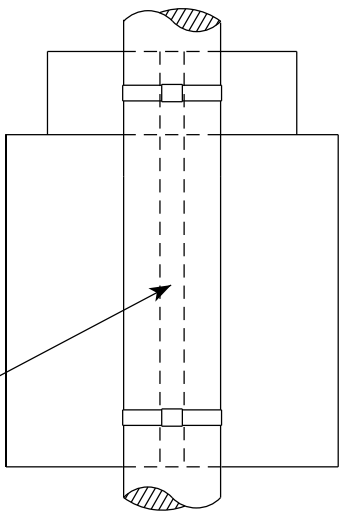


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



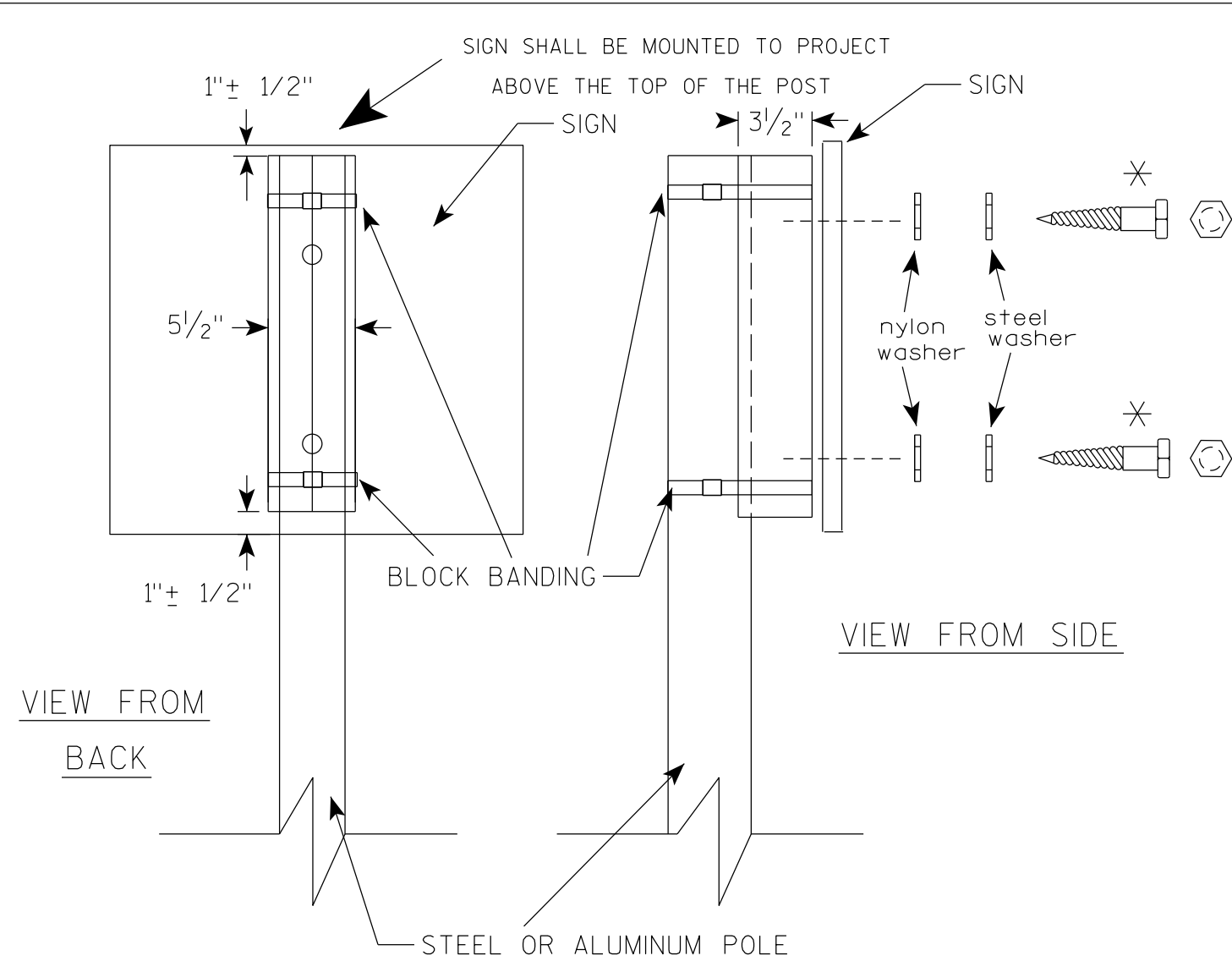
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

STANDARD SIGN
SIGN BANDING DETAILS

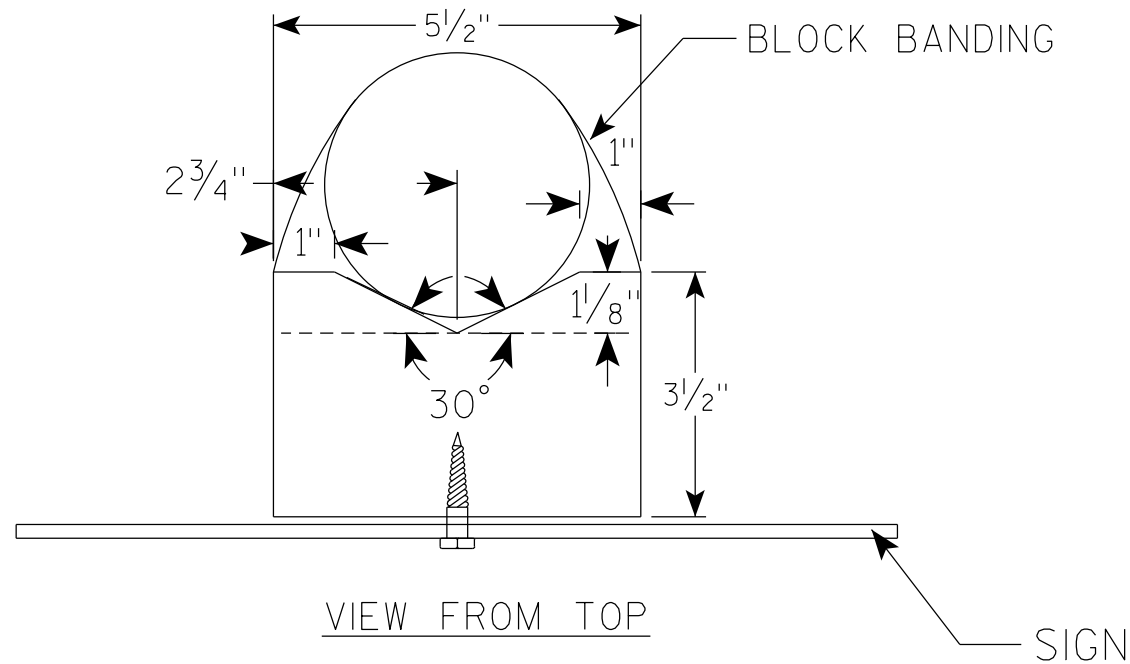
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

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, $\frac{3}{4}$ " 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
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

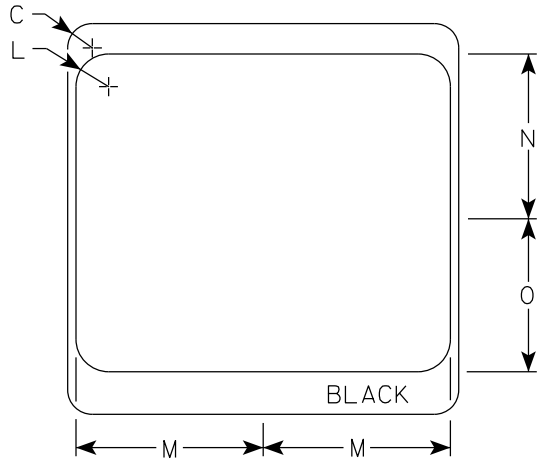
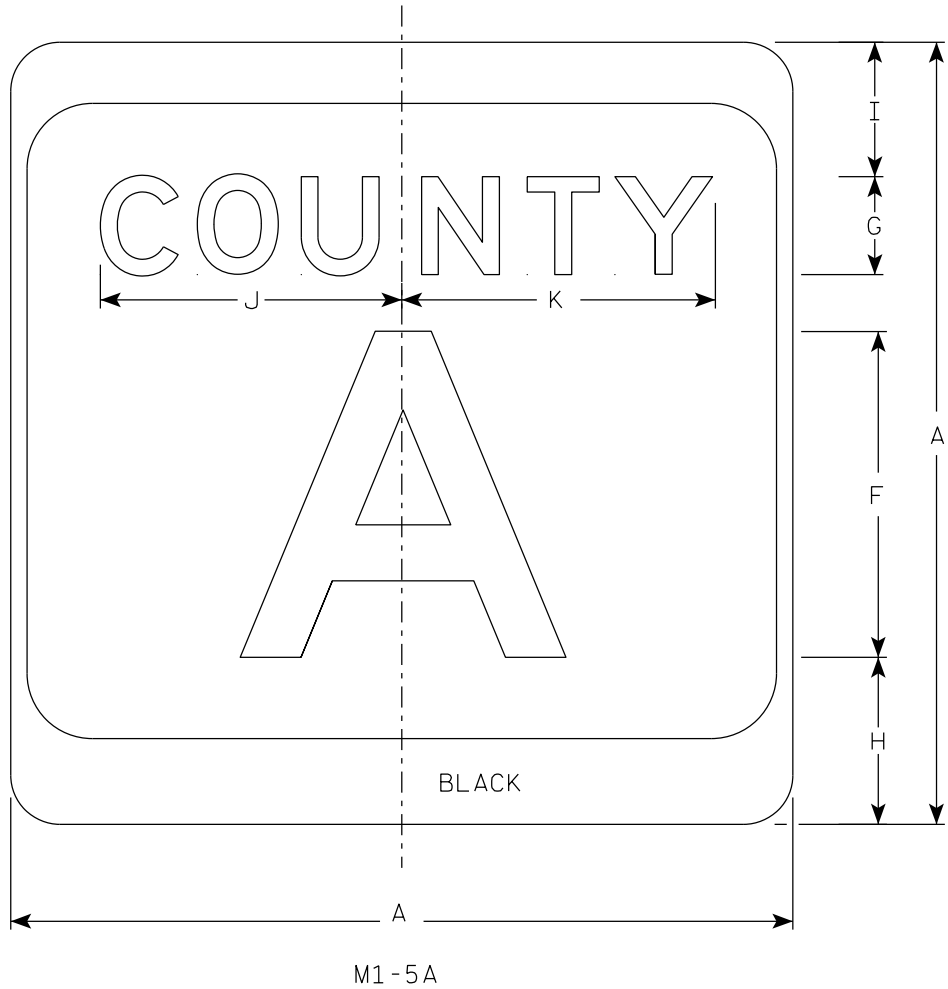
DATE 4/19/2022 PLATE NO. A5-10.3

PROJECT NO:

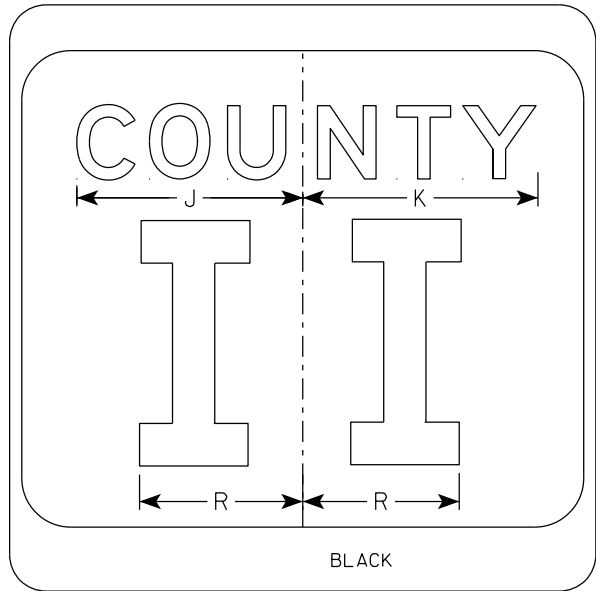
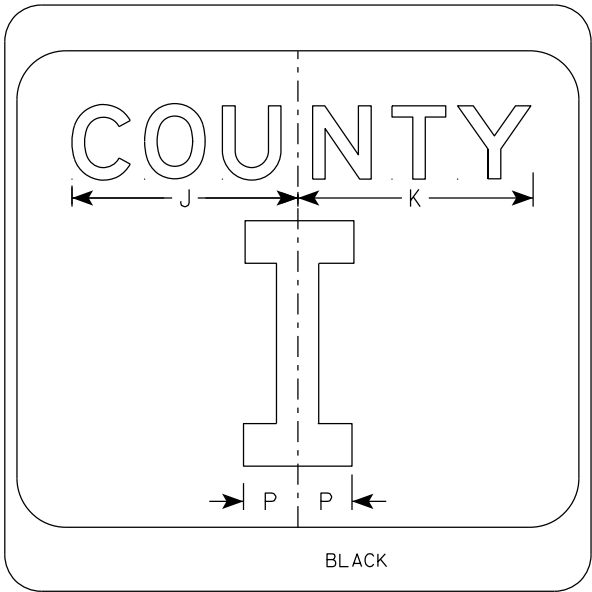
SHEET NO: 57

E

7



- NOTES
1. Sign is Type II - Type H Reflective
 2. Color:
Background - White & Black
Message - Black
 3. Message Series - see Note 4
 4. 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.
 5. Substitute appropriate letters & optically center to achieve proper balance.



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

CTH MARKER

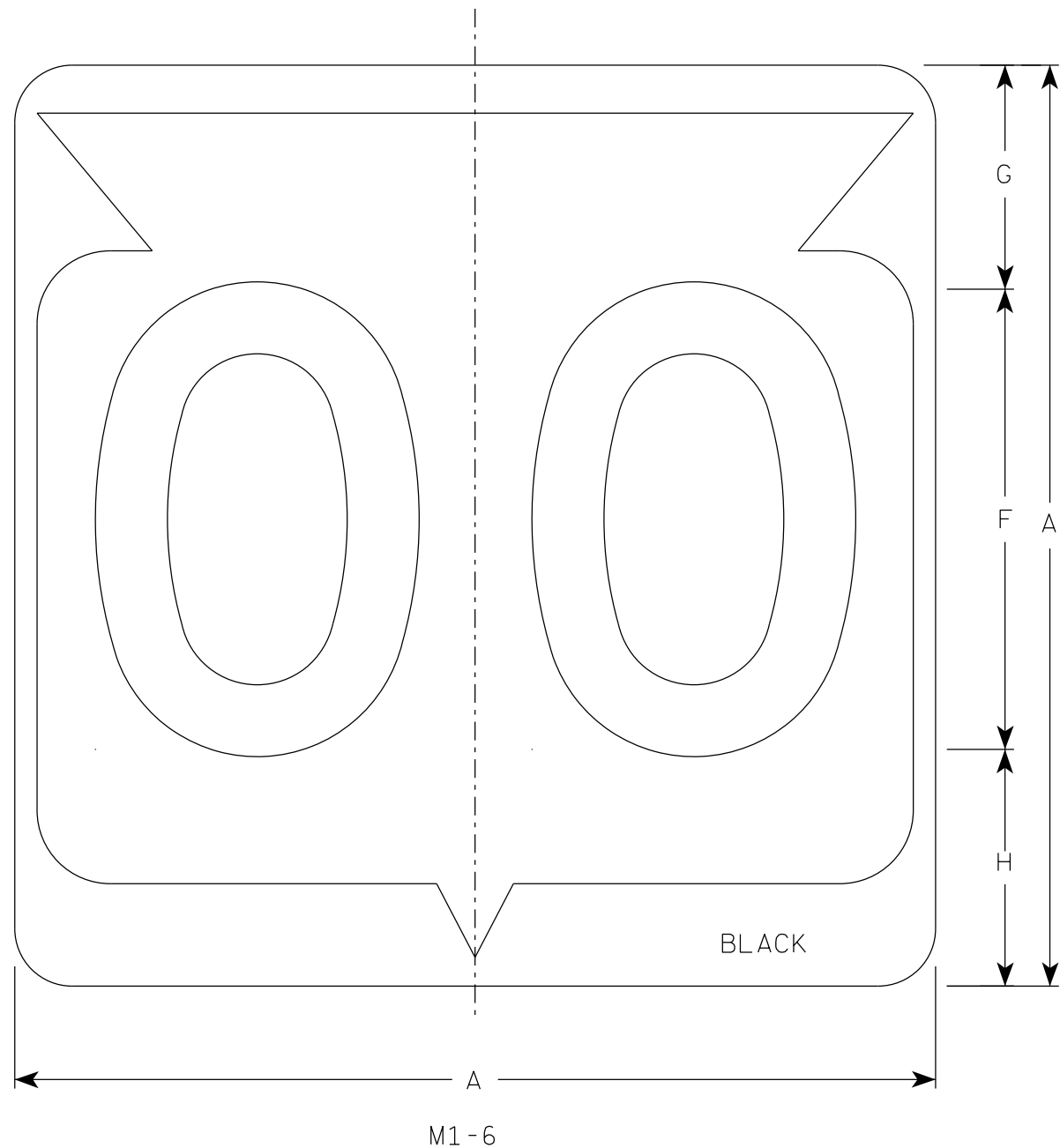
M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

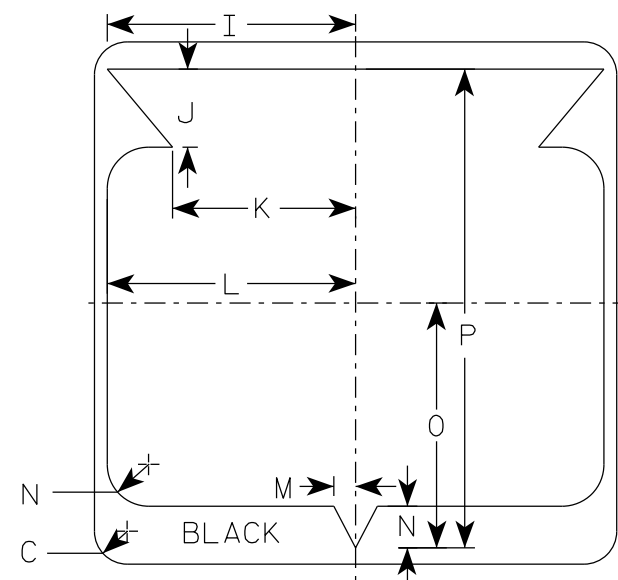
DATE 11/8/2022 PLATE NO. M1-5A.9

7



NOTES

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



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

STATE ROUTE MARKER
M1-6 FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

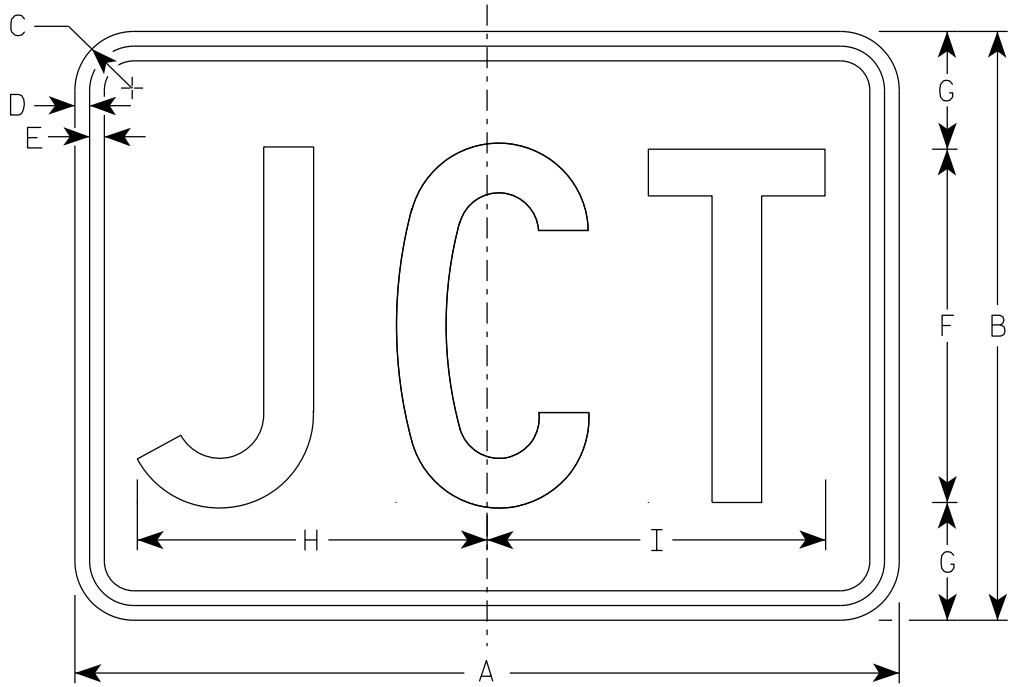
DATE 11/8/2022 PLATE NO. M1-6.11

PROJECT NO: HWY: COUNTY: SHEET NO: 59

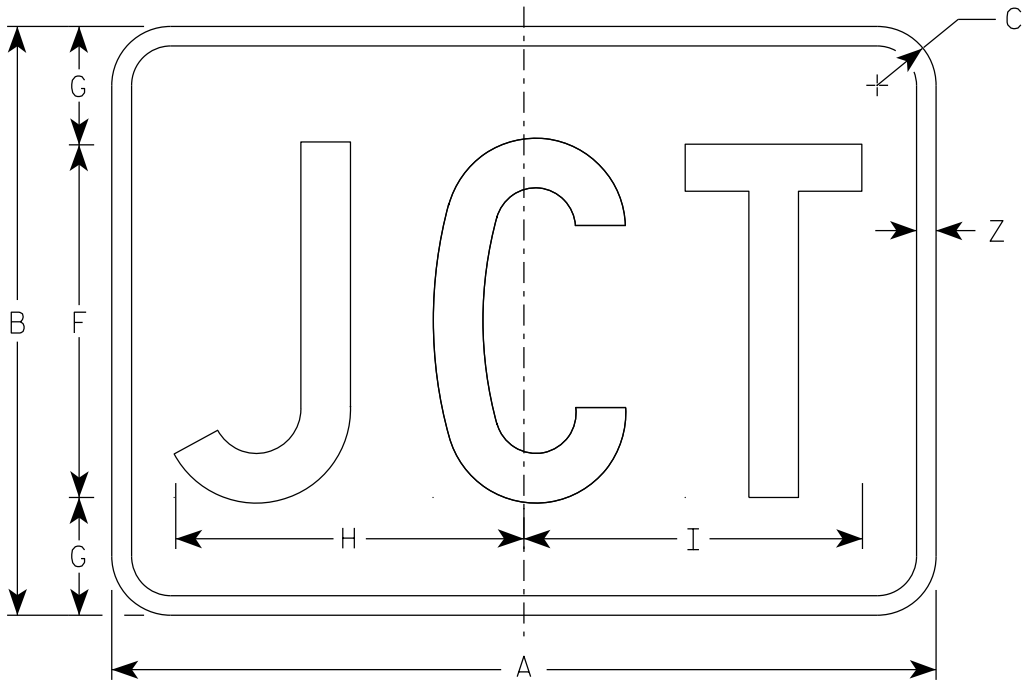
E

7

7



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. 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

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
2M	21	15	1 1/2	3/8	3/8	9	3	8 7/8	8 5/8																	1/2	2.20
3	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
4	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40
5	30	21	1 1/2	3/8	3/8	13	4	12 7/8	12 3/8																	1/2	4.40

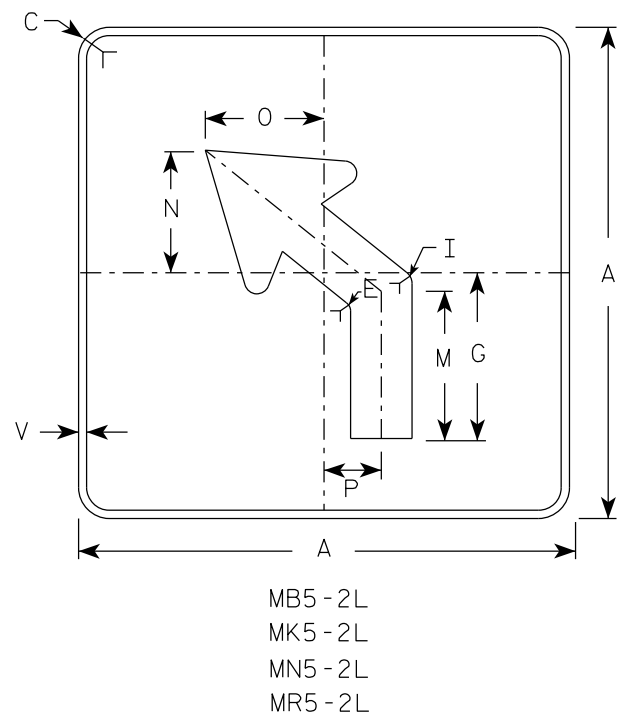
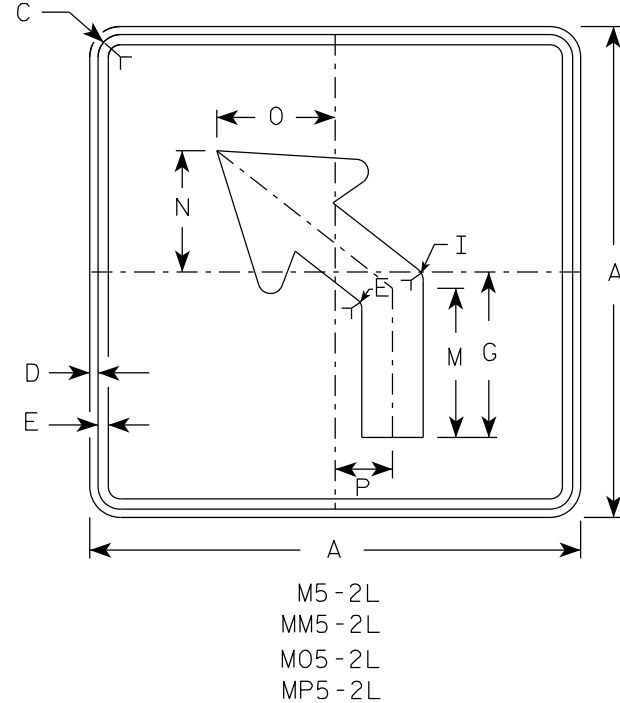
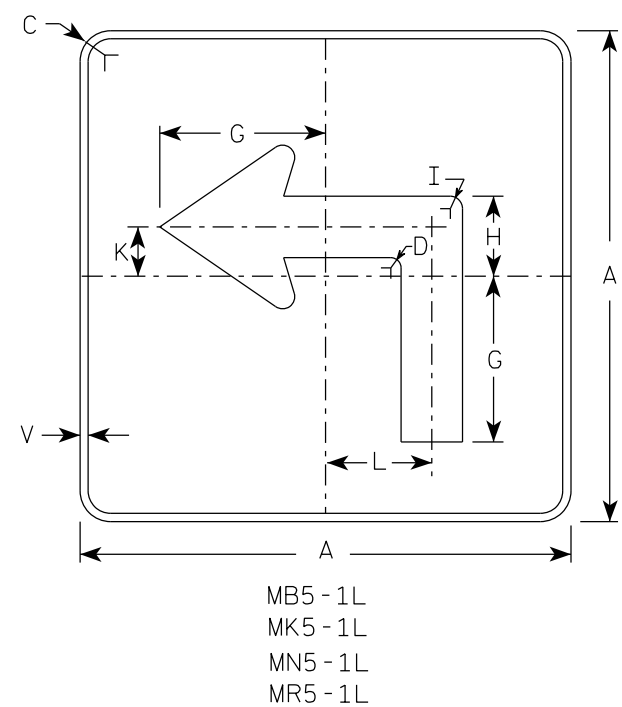
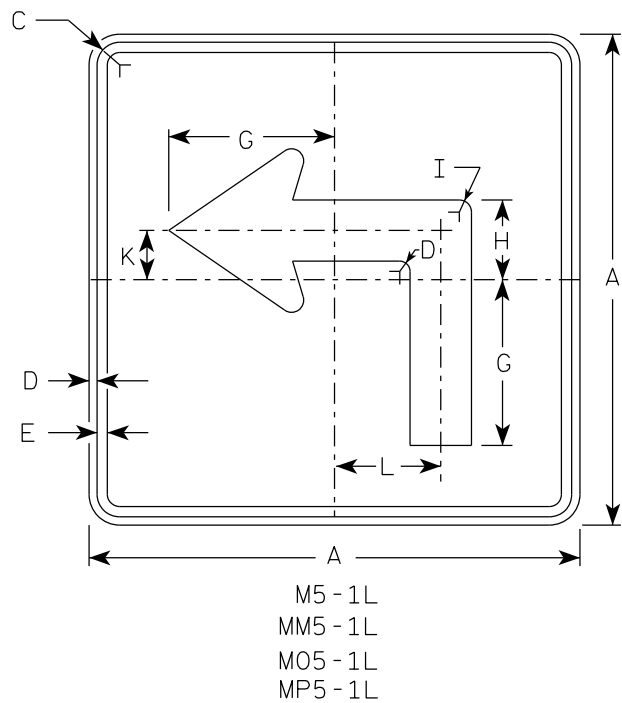
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 60

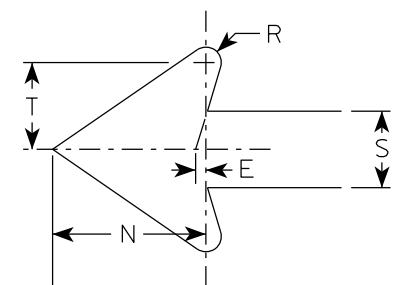
E



NOTES

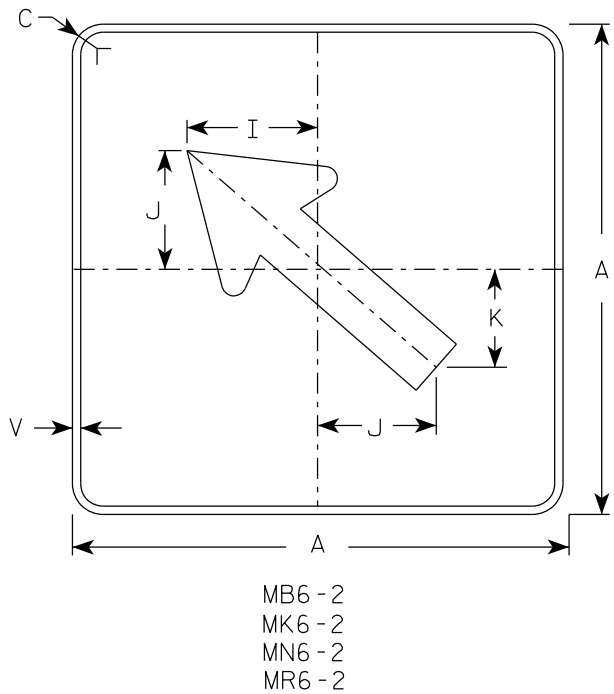
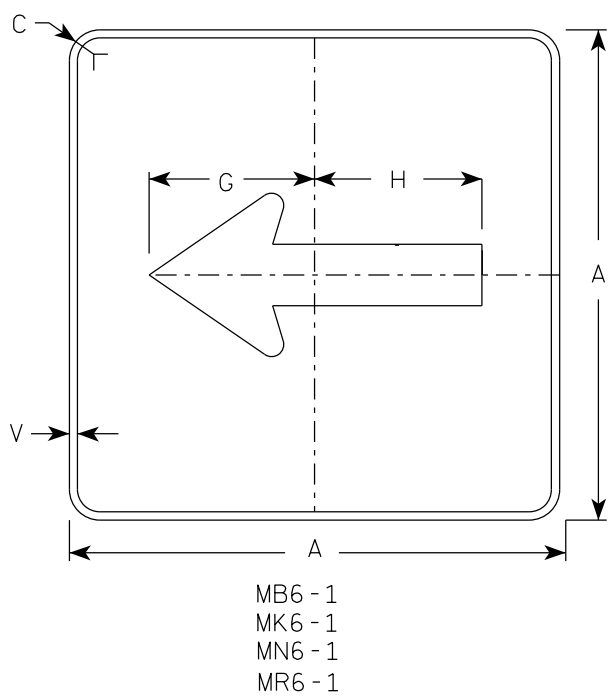
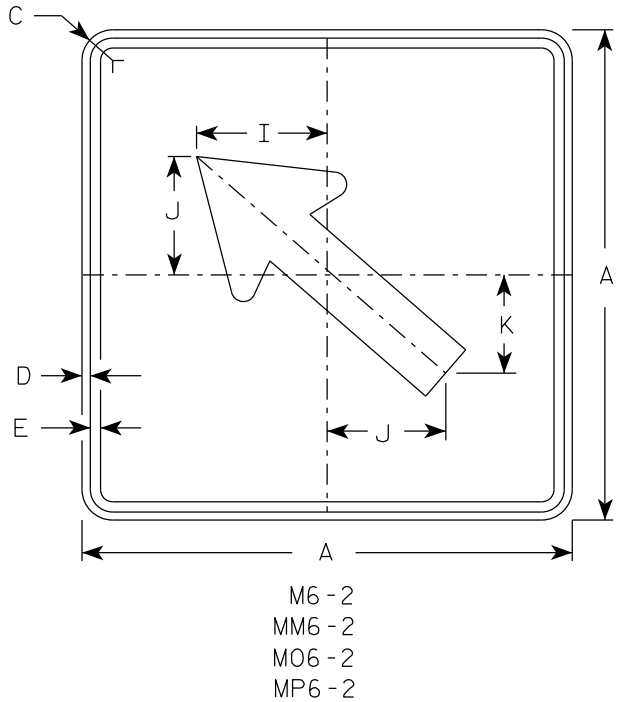
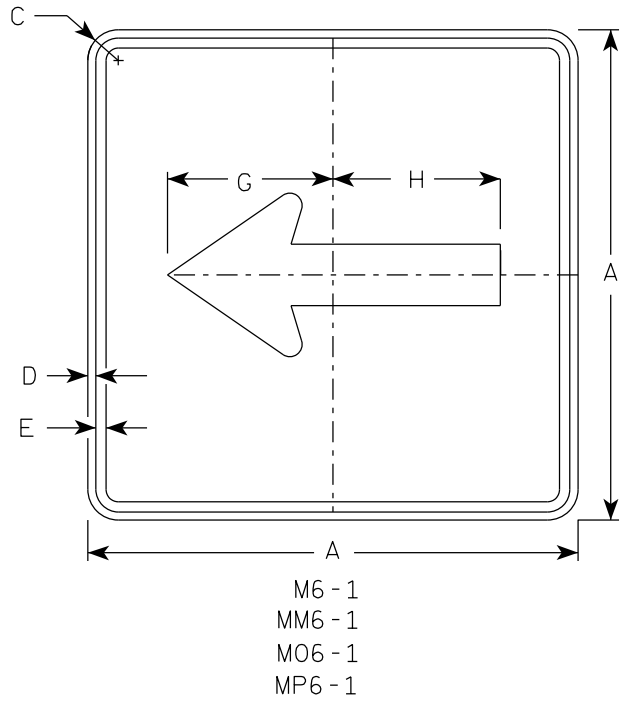
- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- | | | |
|-----------|-------|---|
| 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 |
| | | 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.

ARROW DETAIL

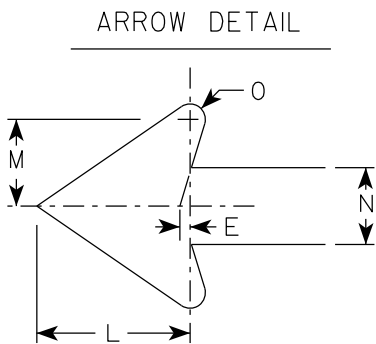


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
2M	21		1 1/2	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3		1/2					3.06
3	30		1 7/8	1/2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

PROJECT NO:		HWY:		COUNTY:		SHEET NO: 61		E
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- 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.
 - 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



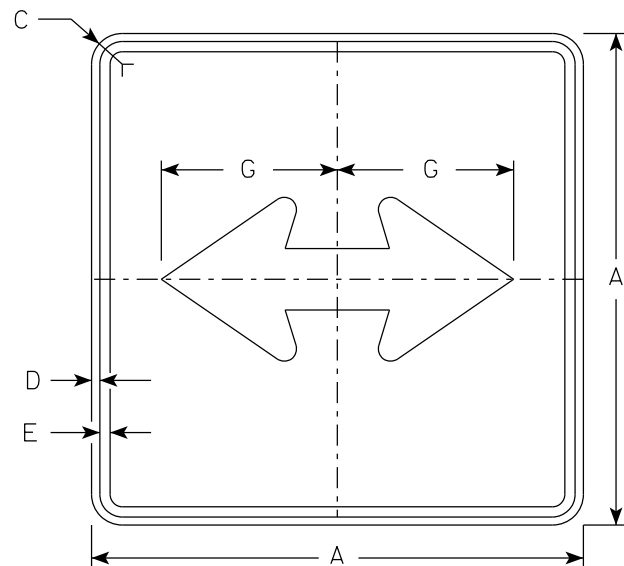
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	10 1/4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

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

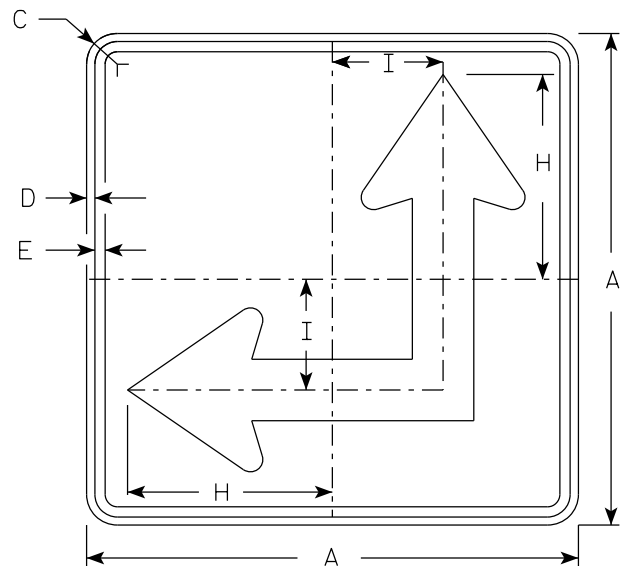
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

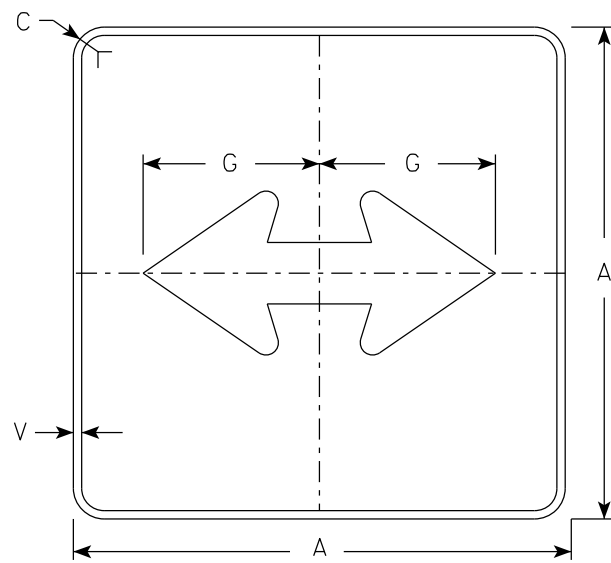
DATE 2/13/2023 PLATE NO. M6-1.16



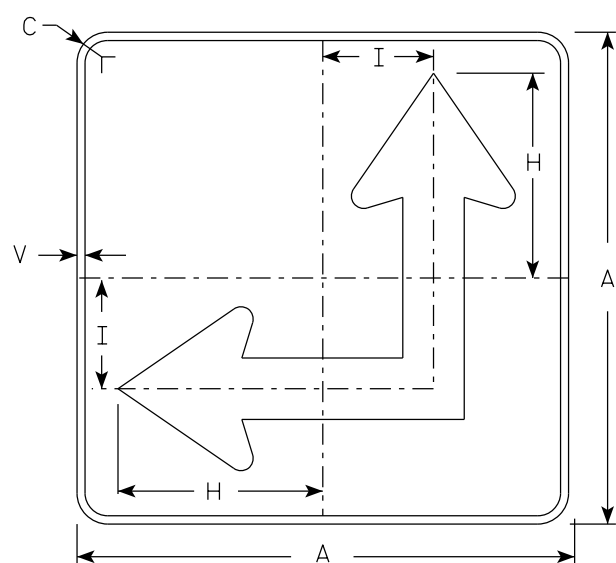
M6 - 4
MM6 - 4
M06 - 4
MP6 - 4



M6 - 6
MM6 - 6
M06 - 6
MP6 - 6



MB6 - 4
MK6 - 4
MN6 - 4
MR6 - 4

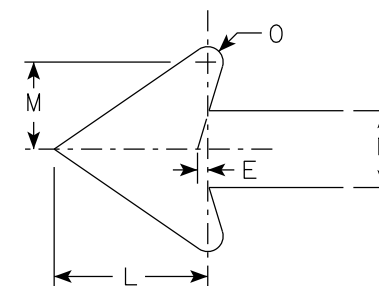


MB6 - 6
MK6 - 6
MN6 - 6
MR6 - 6

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.
- 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
- M6-6R same as M6-6L except arrow points ahead and right.

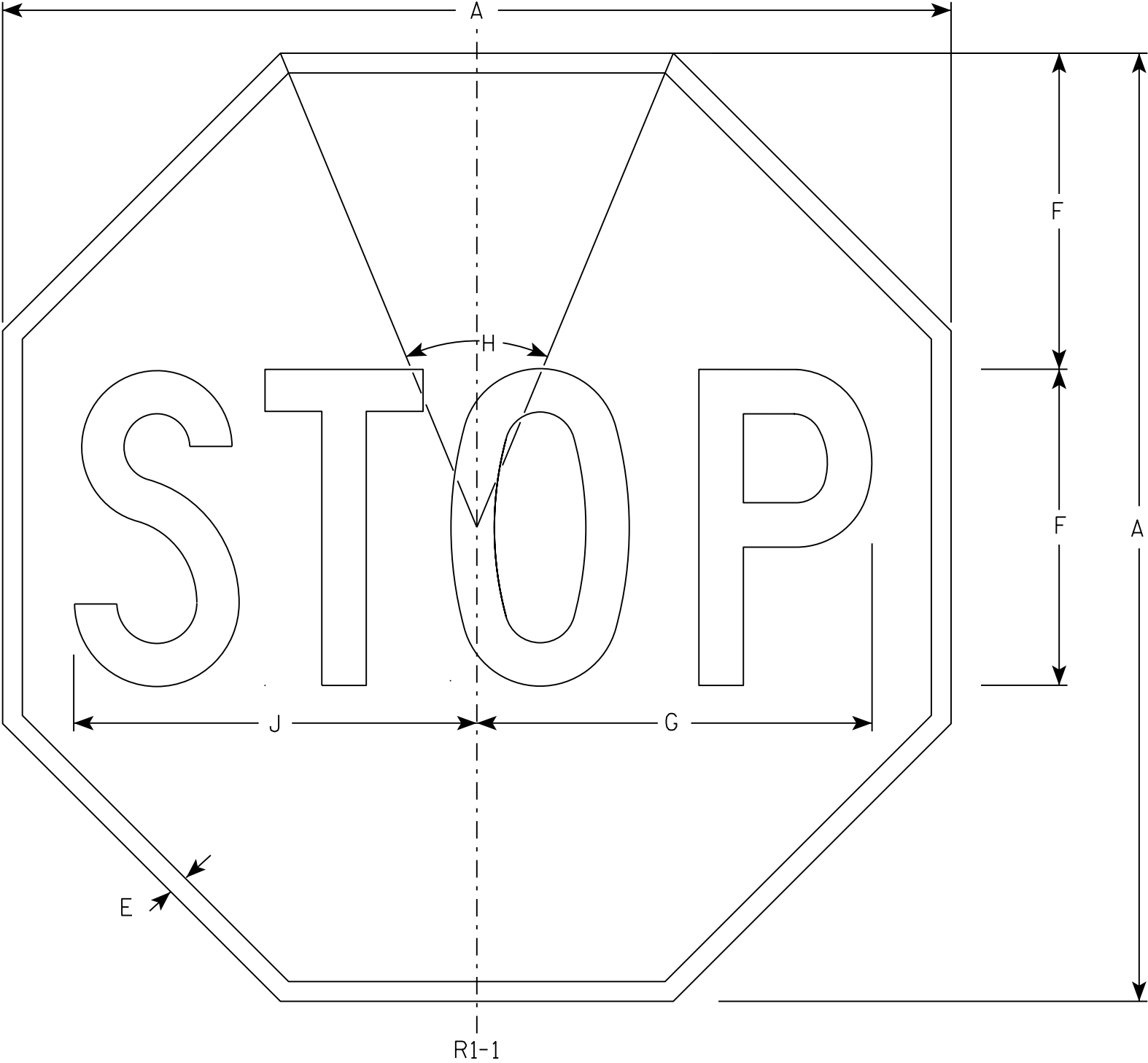
ARROW DETAIL



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	21		1 1/2	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2							1/2					3.06
2M	21		1 1/2	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2							1/2					3.06
3	30		1 7/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
4	30		1 7/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4							1/2					6.25
5	30		1 7/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4							1/2					6.25

PROJECT NO:	HWY:	COUNTY:	SHEET NO: 63	E
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7



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Red
Message - White
- 3. Message Series - C

7

R1-1

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	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

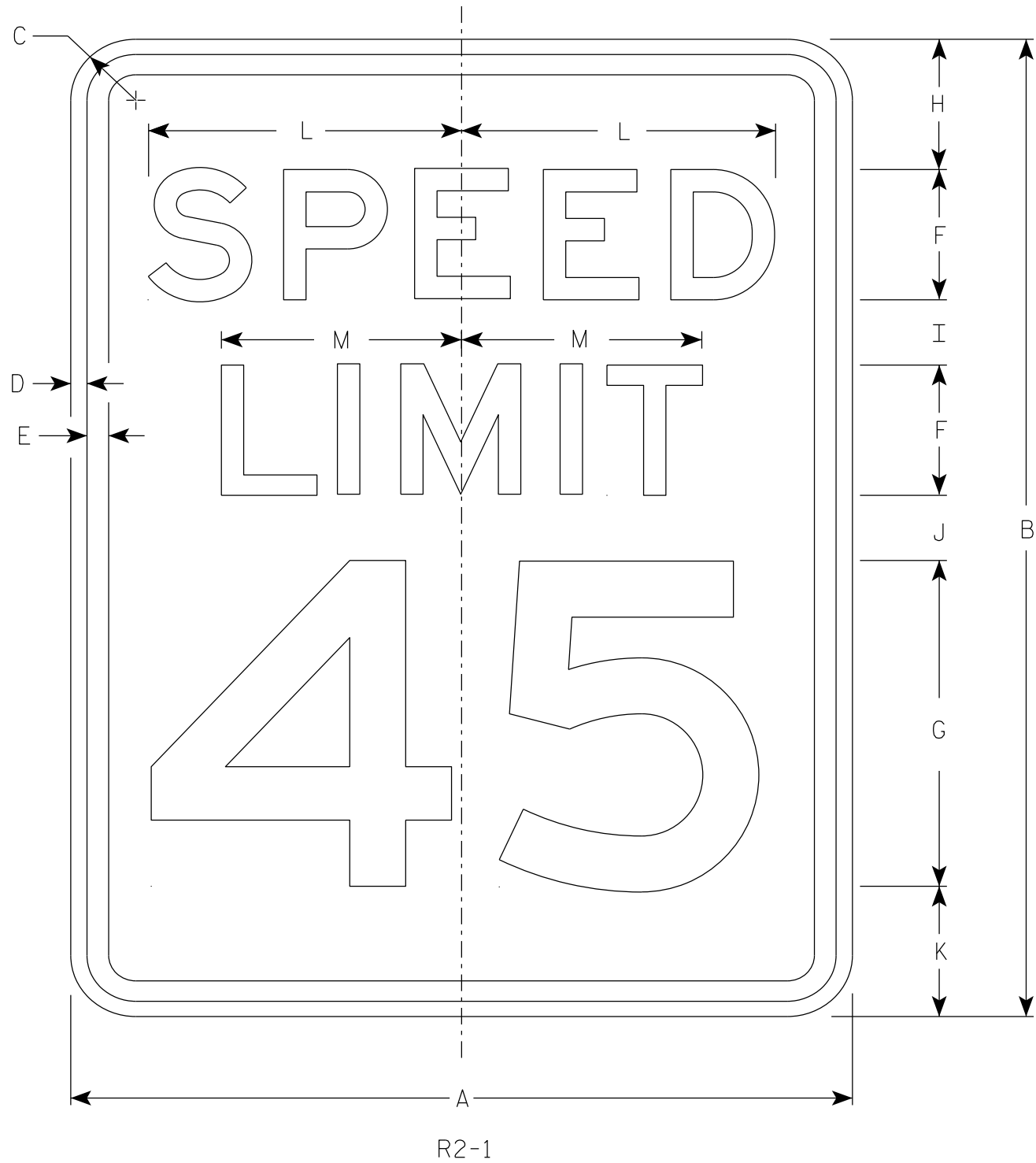
STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

7



NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
Background - White
Message - Black
- 3. Message Series - E
- 4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

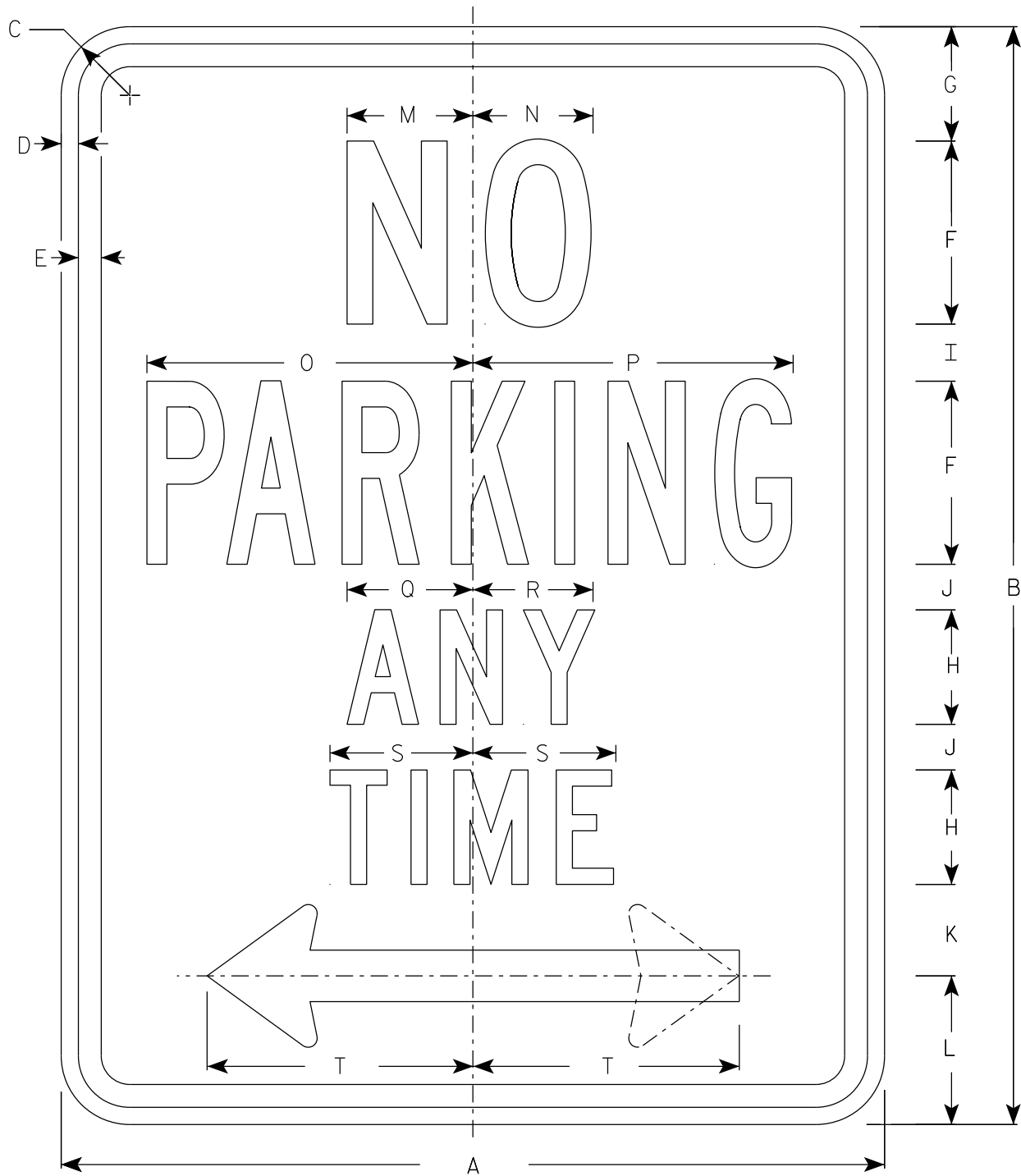
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/2	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/2	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 7/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 7/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	3	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 2/1/23 PLATE NO. R2-1.14

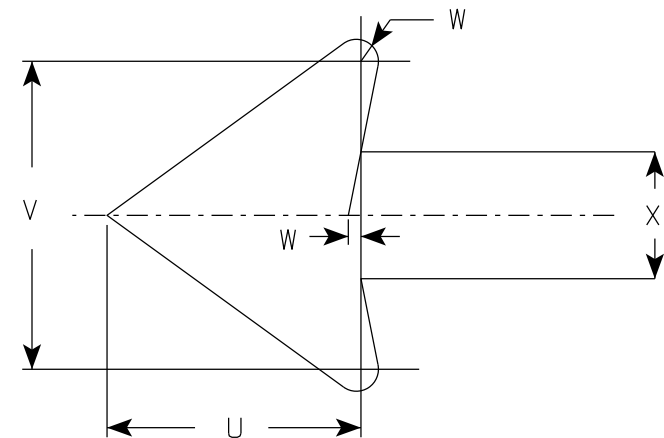


R7-1

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Red
3. Message Series - See Note 4
4. Lines 1, 3 and 4 are series C, line 2 is series B.
5. R7-1D (double arrow)
R7-1L (left arrow)
R7-1R (right arrow)

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	12	18	1 1/2	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/2	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/2	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/2	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

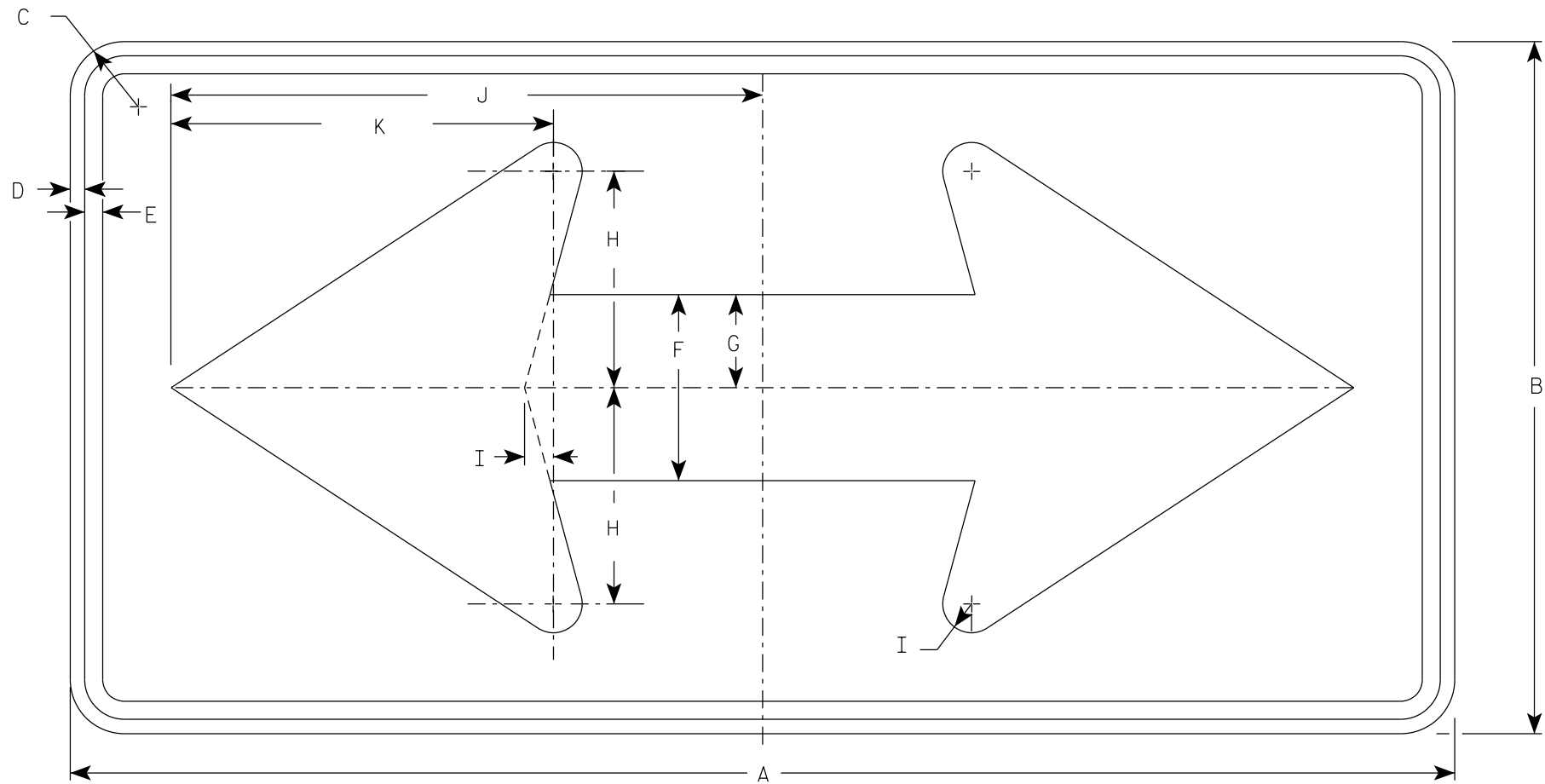
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 10/26/23 PLATE NO. R7-1.11

PROJECT NO: HWY: COUNTY: SHEET NO: 66 E

7



W1-7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 7/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 7/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 7/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 7/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	3	3/4	1	13	6 1/2	15	2	41	26 1/2																32.0

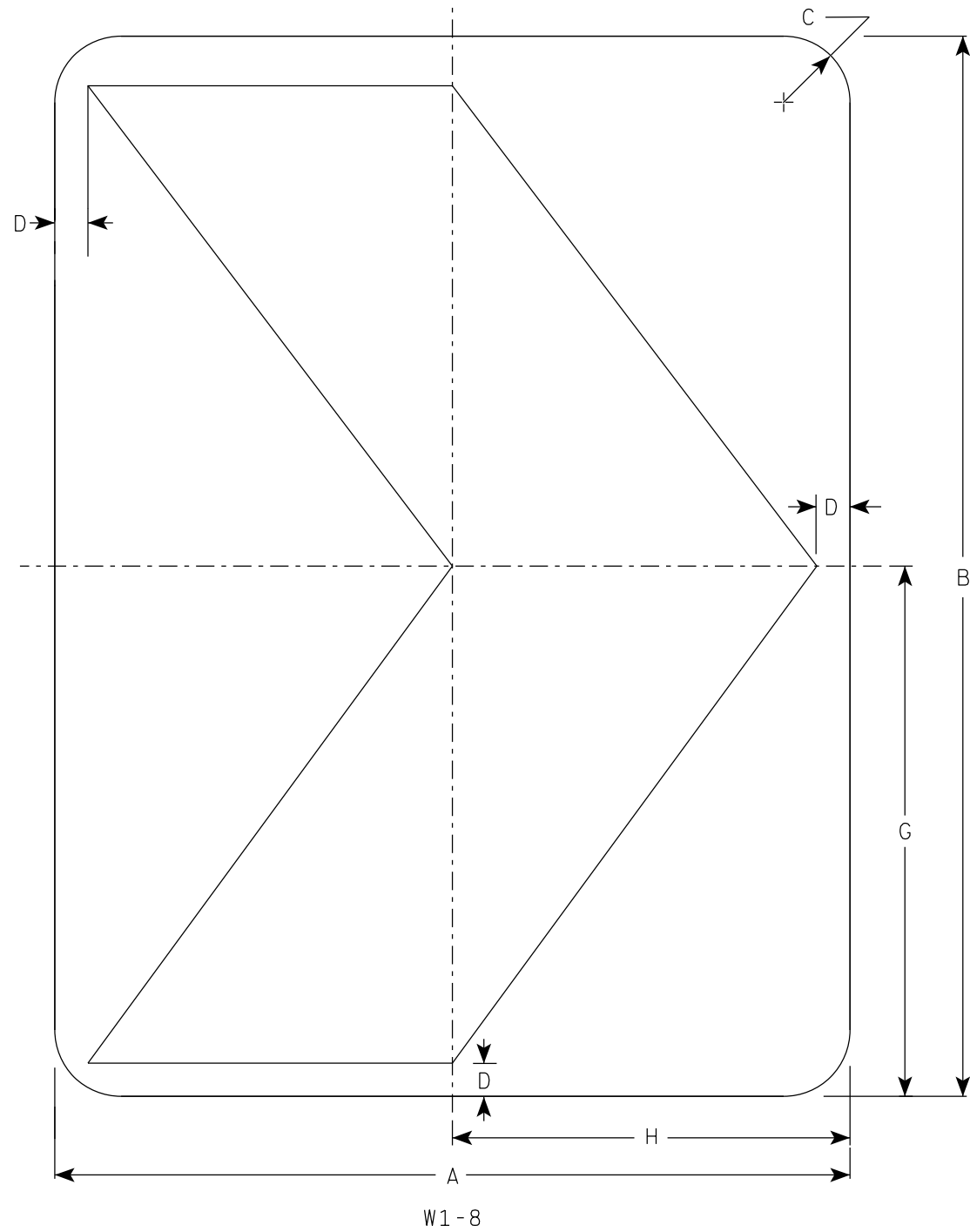
STANDARD SIGN
W1-7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/10/2023 PLATE NO. W1-7.8

7



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
- Background - Yellow
- Message - Black

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/2	1/2			9	6																			1.5
2S	18	24	1 1/2	3/4			12	9																			3.0
2M	18	24	1 1/2	3/4			12	9																			3.0
3	24	30	1 1/2	1			15	12																			5.0
4	30	36	1 7/8	1 1/4			18	15																			7.5
5	36	48	1 7/8	1 1/2			24	18																			12.0

STANDARD SIGN

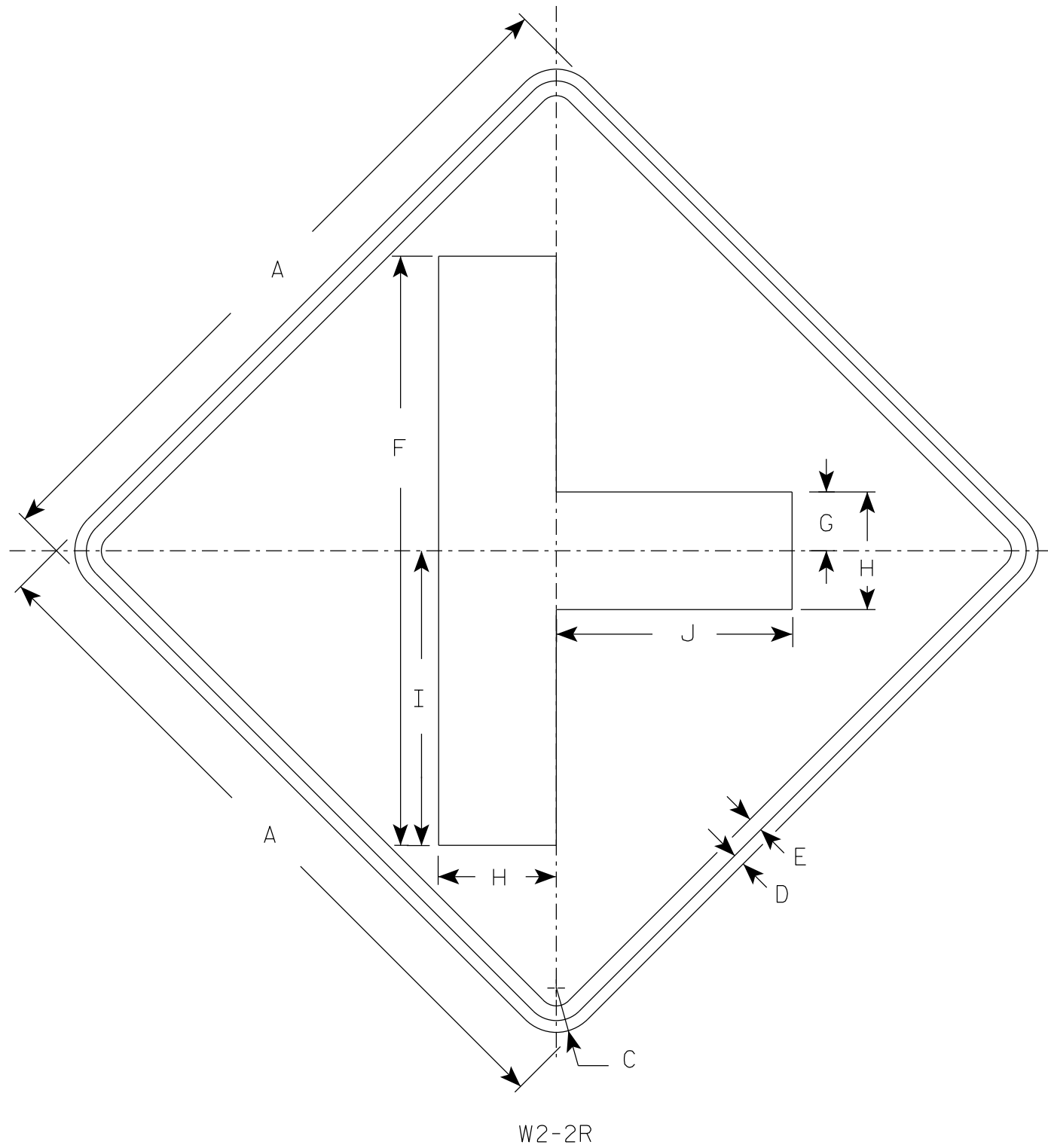
W1-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/11/2023 PLATE NO. W1-8.7

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. W2-2L same as W2-2R but is rotated 180° when mounted.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/2	3/8	1/2	20	2	4	10	8																	4.0
2S	30		1 7/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
2M	30		1 7/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
3	36		2 1/4	5/8	3/4	30	3	6	15	12																	9.0
4	48		3	3/4	1	40	4	8	20	16																	16.0
5																											

PROJECT NO:

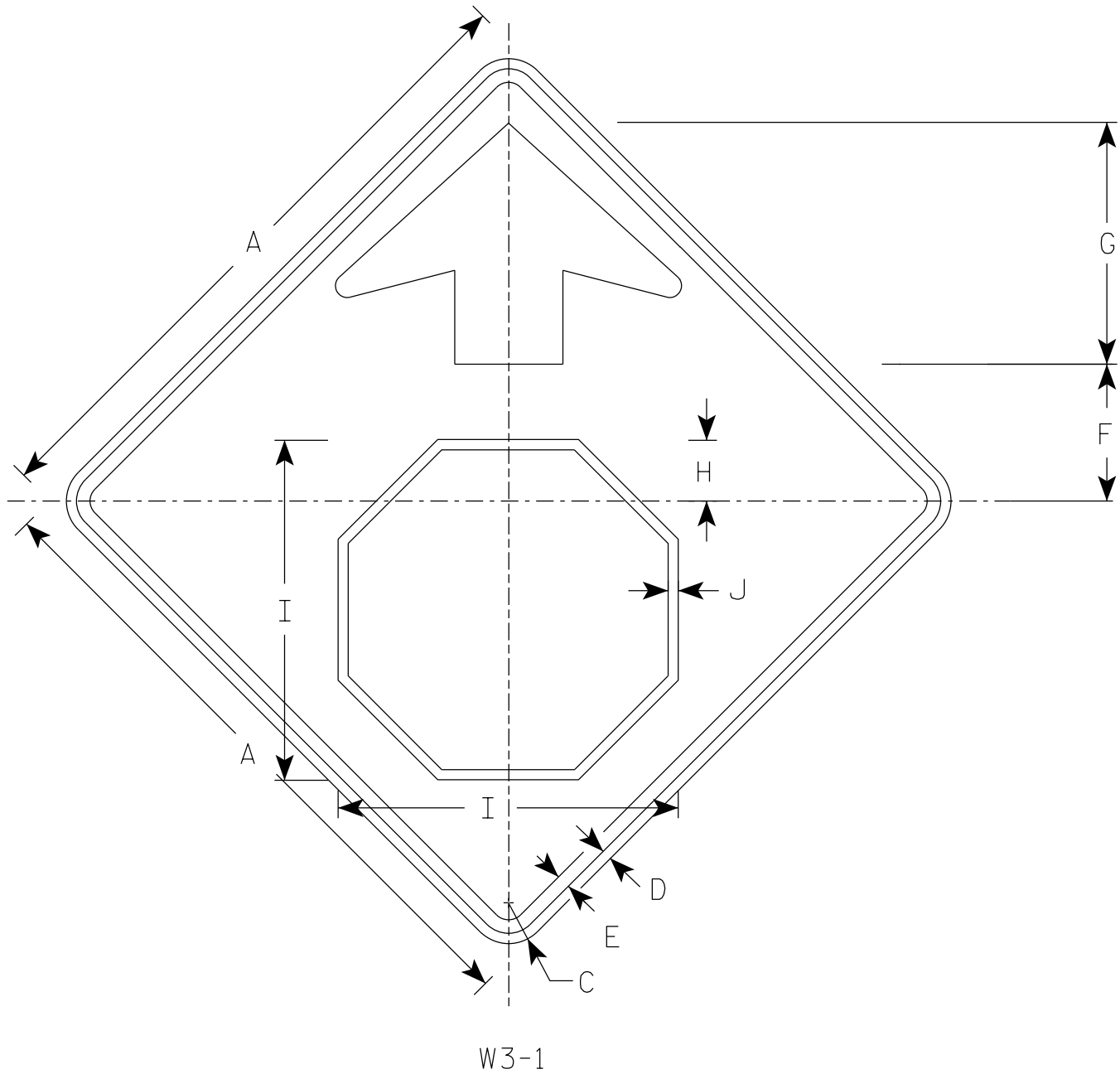
HWY:

COUNTY:

SHEET NO: 69

E

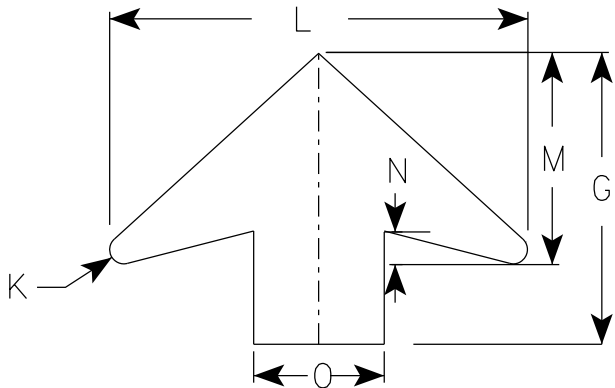
7



W3-1

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Yellow
 - Arrow & Border - Black
 - Stop Symbol - White Border on Red Background



ARROW DETAIL

7

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

STANDARD SIGN

W3-1

WISCONSIN DEPT OF TRANSPORTATION

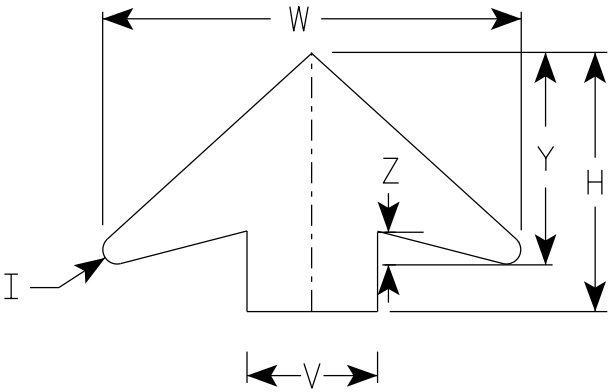
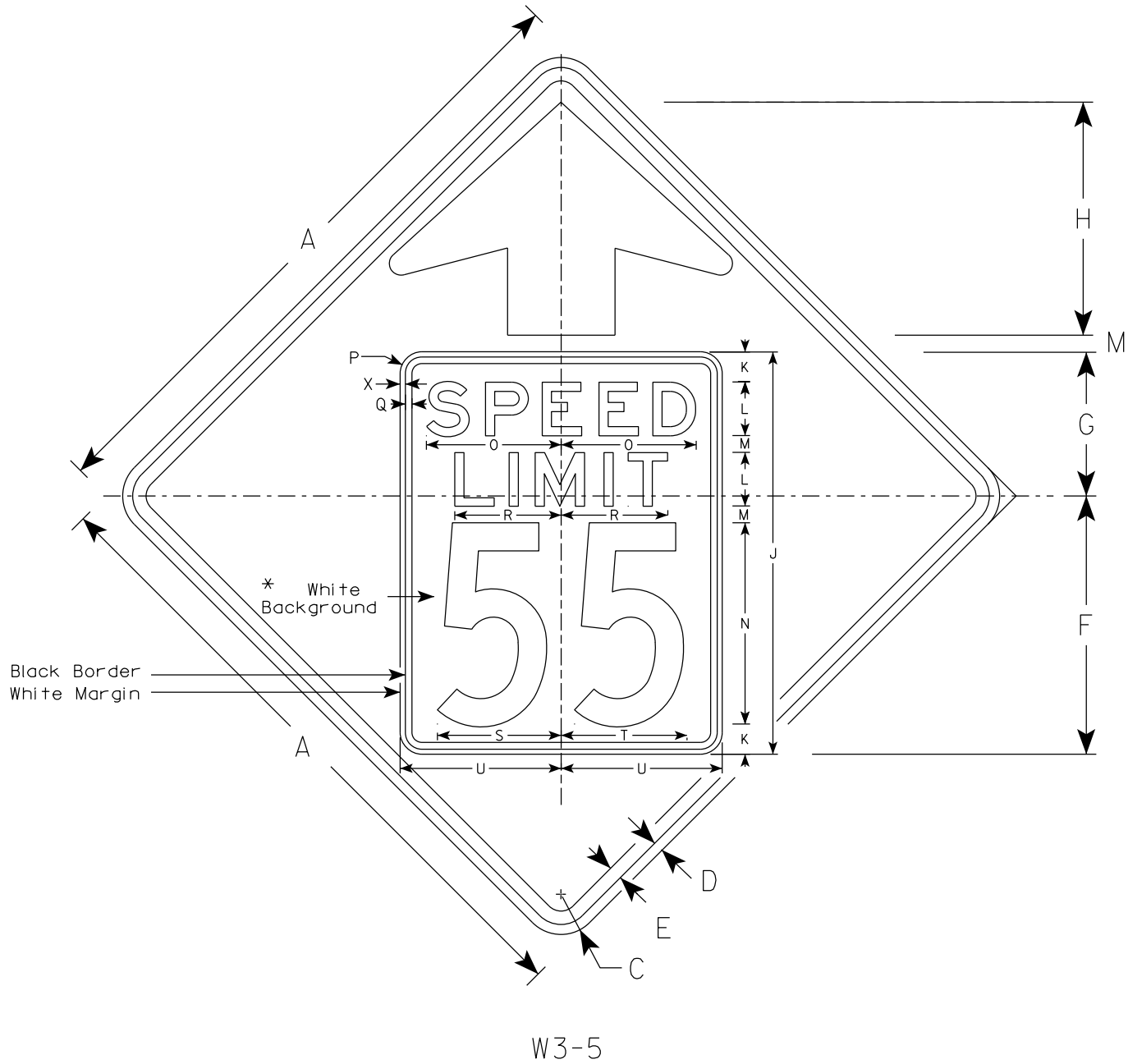
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 8/17/2023 PLATE NO. W3-1.13

NOTES

- 1. Sign is Type II - See Note 2 for Sheeting Type
- 2. Color: *
Background - Yellow* (Type F Reflective)
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 with black message (Type SH Reflective)



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		2 1/4	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		2 1/4	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		2 1/4	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		3	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		3	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

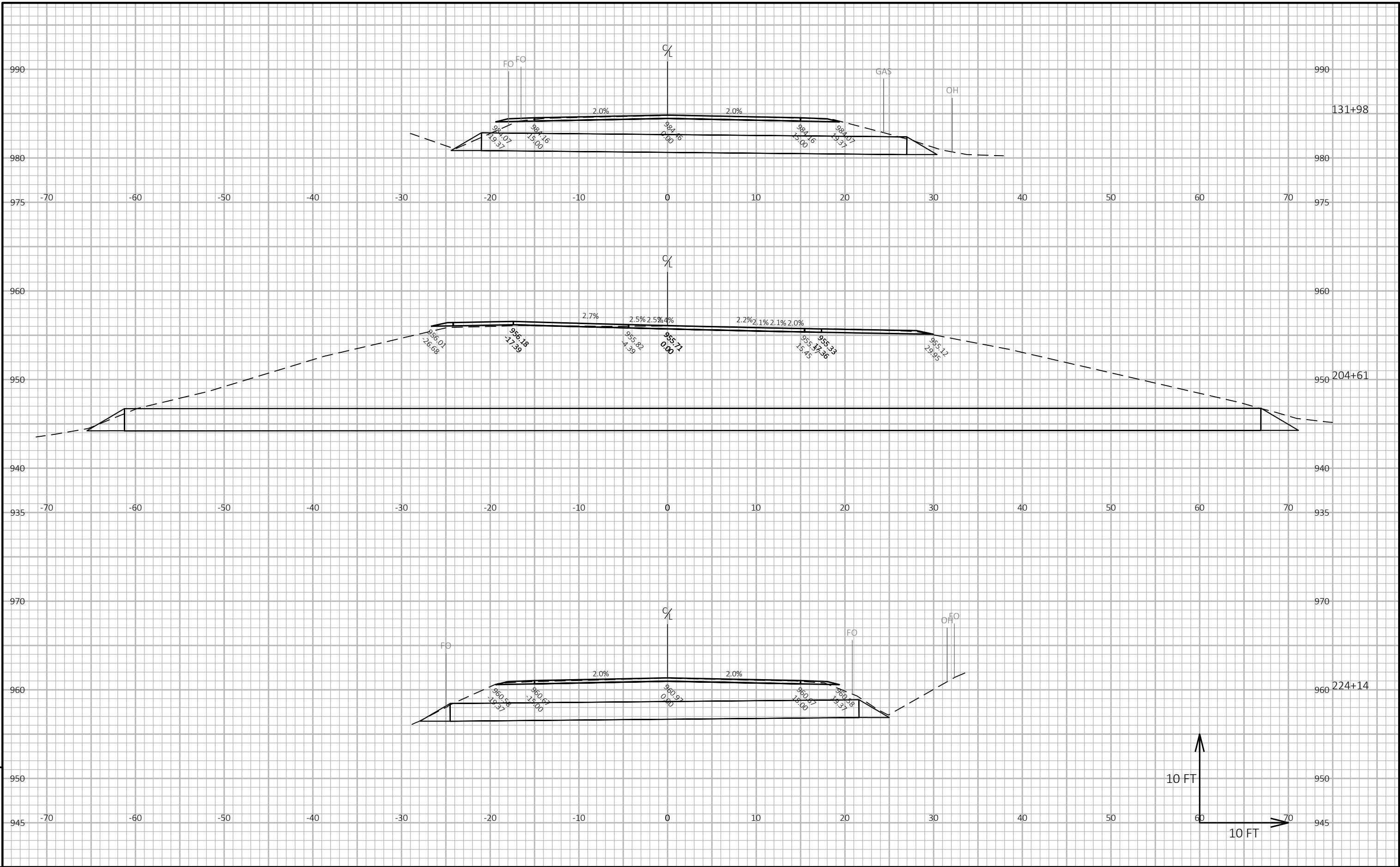
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

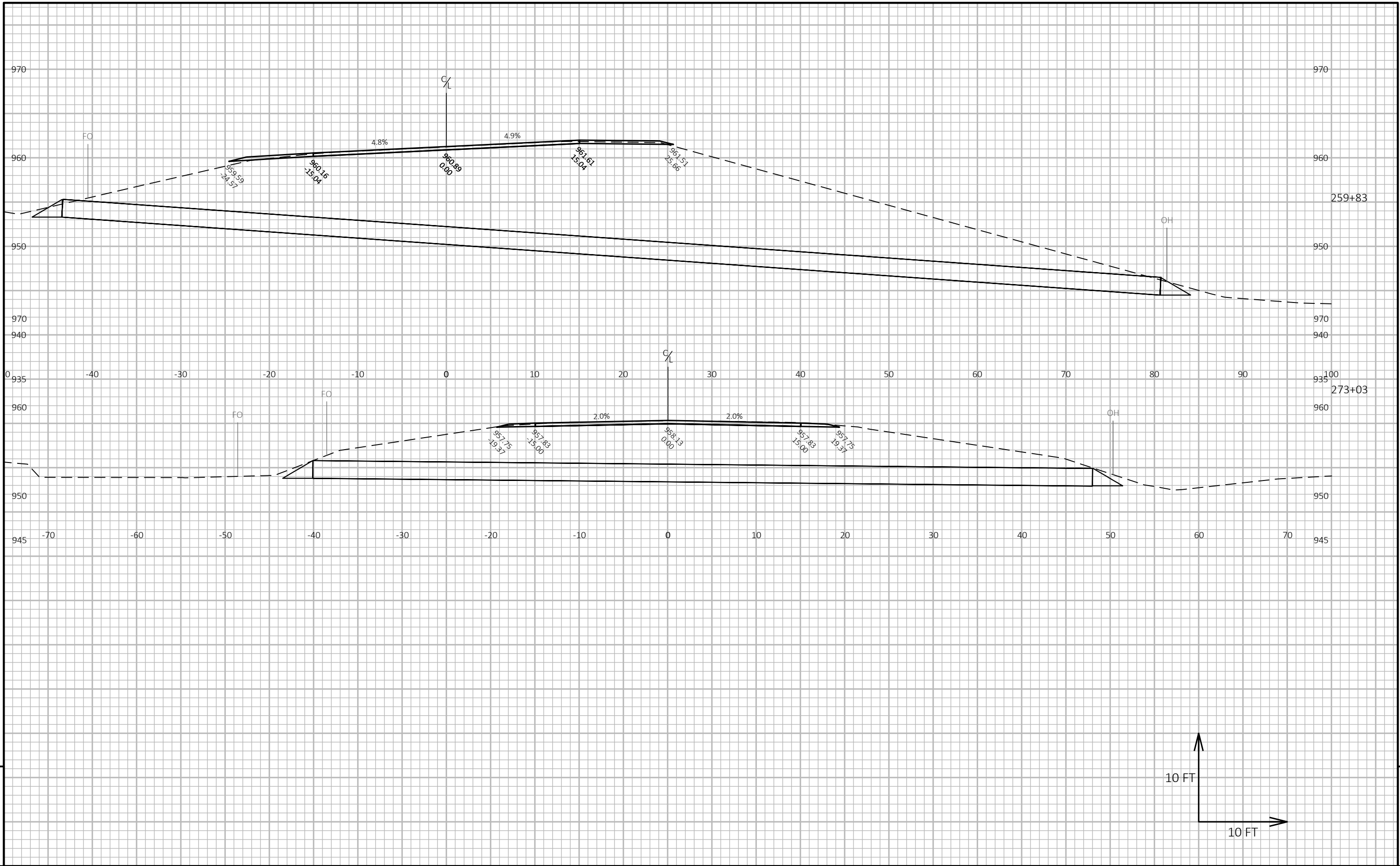
DATE 8/30/2023 PLATE NO. W3-5.7

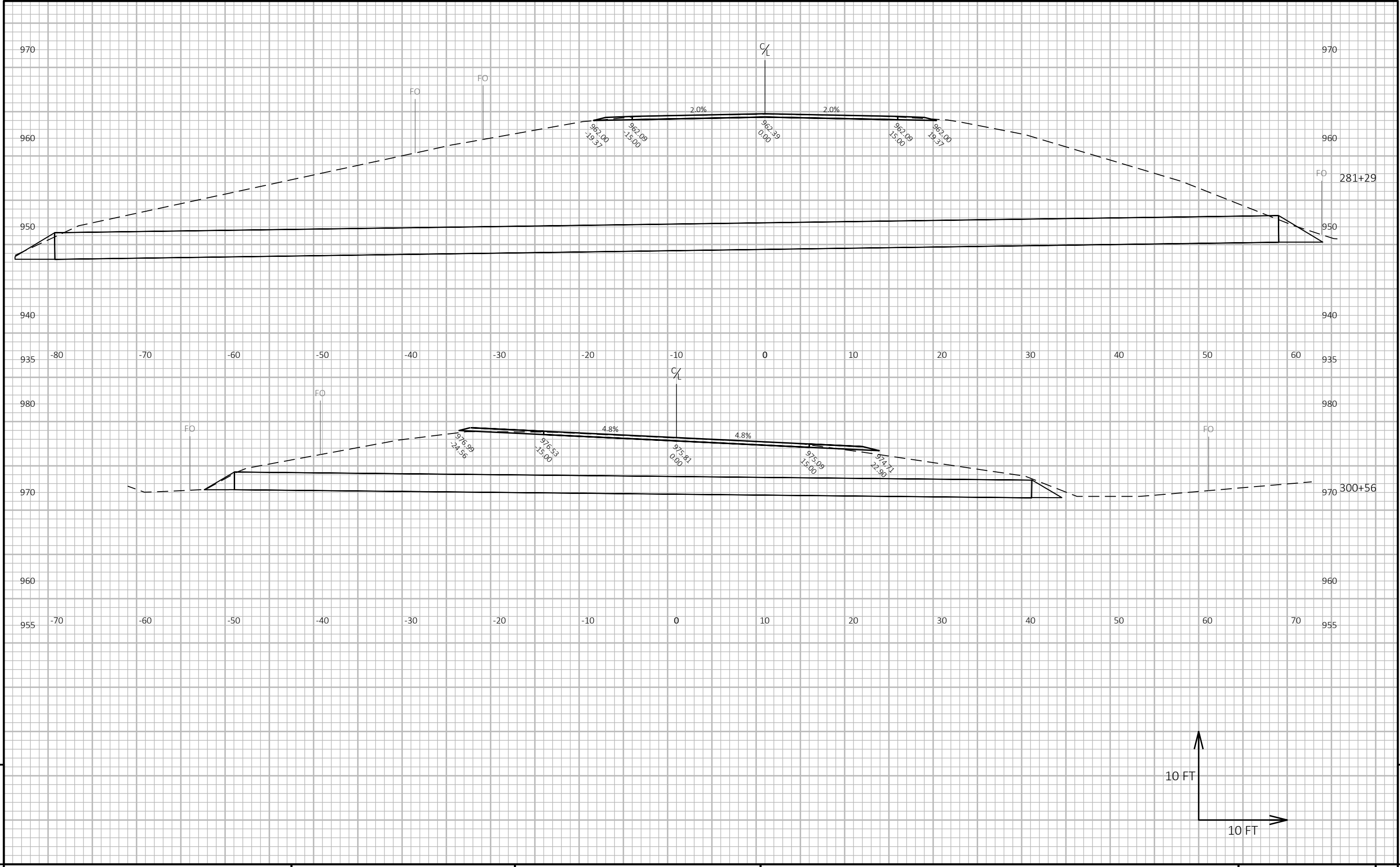
PROJECT NO:

SHEET NO: 71

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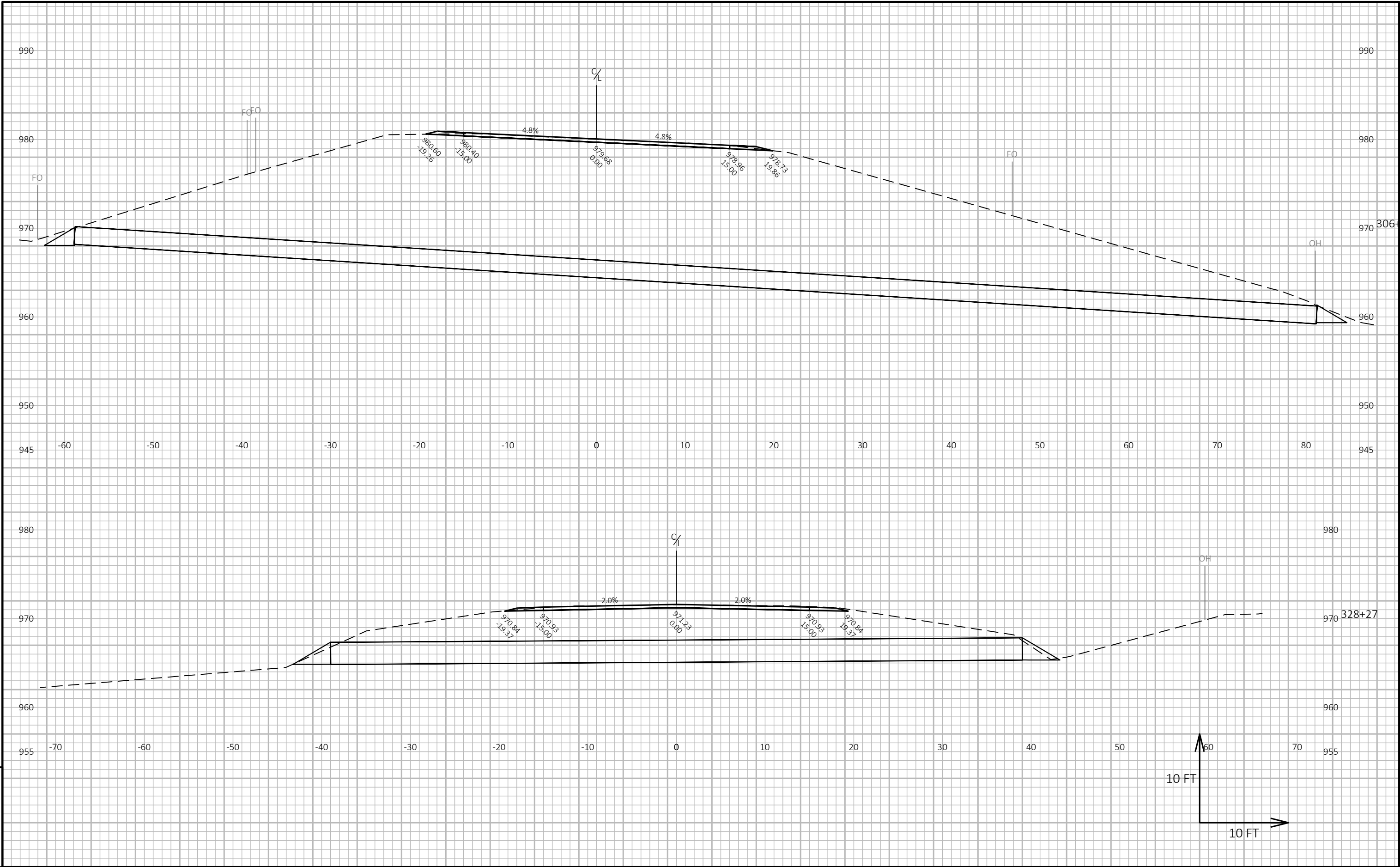


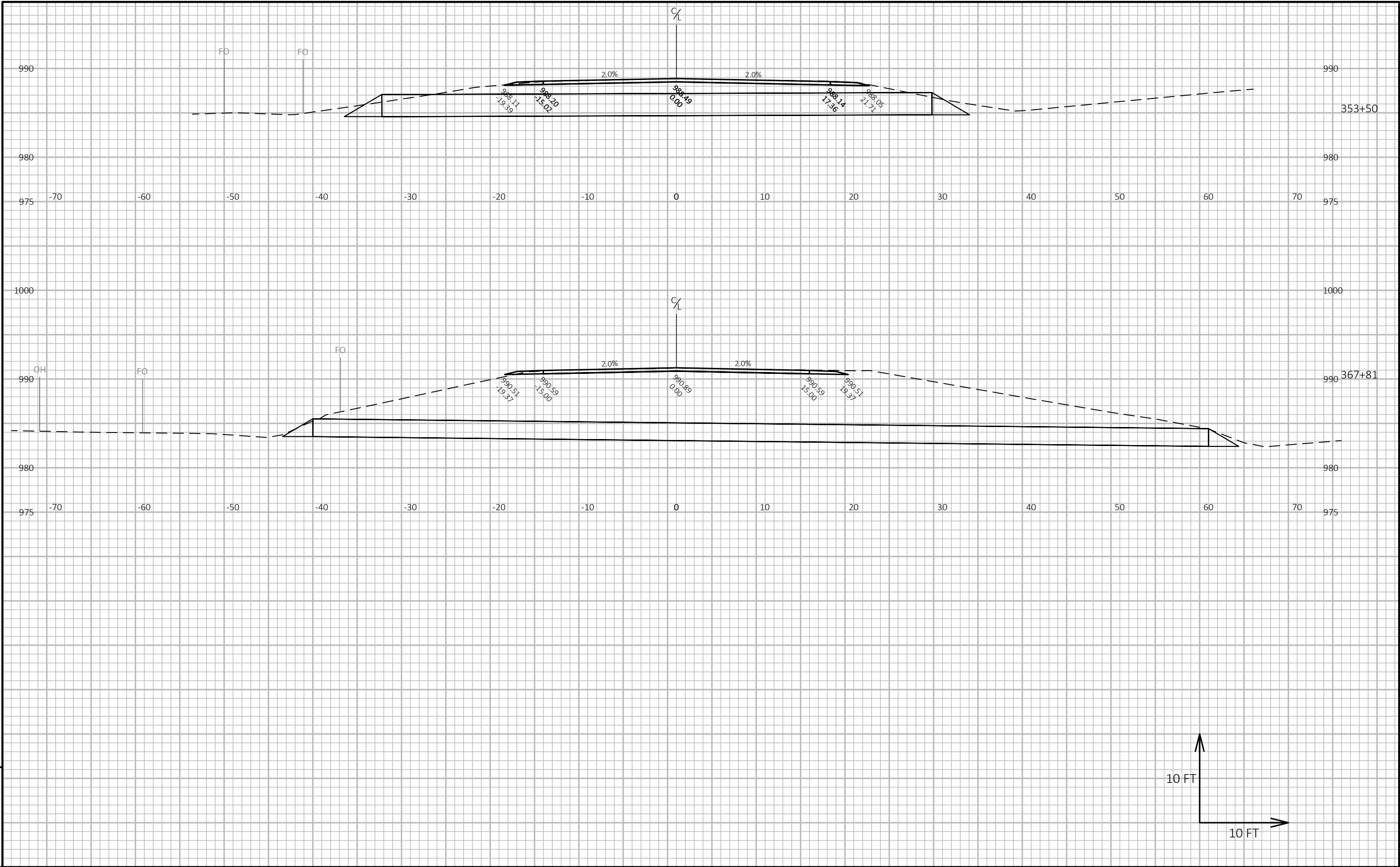




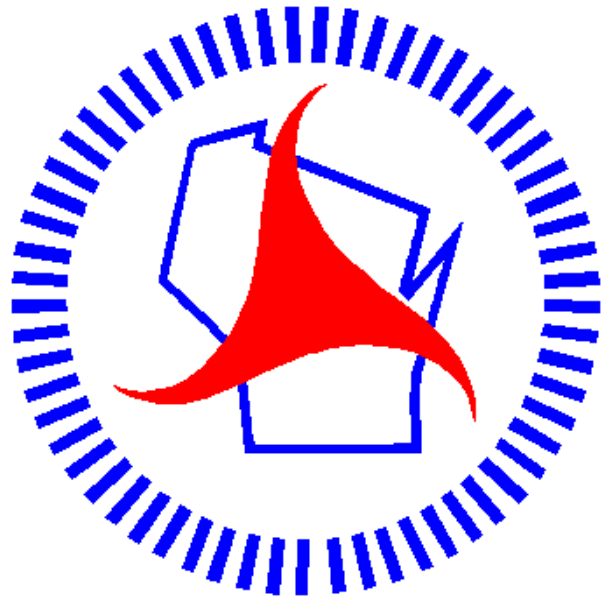
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Notes



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