

LAX

PROJECT ID: 5040-04-60

WITH: N/A

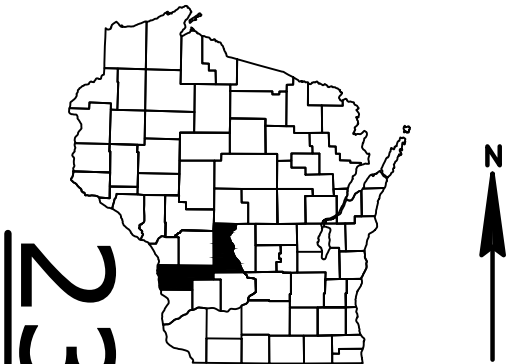
COUNTY: JUNEAU & VERNON

JUNE 2017

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 = 74



DESIGN DESIGNATION

A.A.D.T.	2017	=	3800
A.A.D.T.	2037	=	4400
D.H.V.	2037	=	449
D.D.		=	60/40
T.		=	6.5%
DESIGN SPEED		=	60 MPH
ESALS		=	1,600,000

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

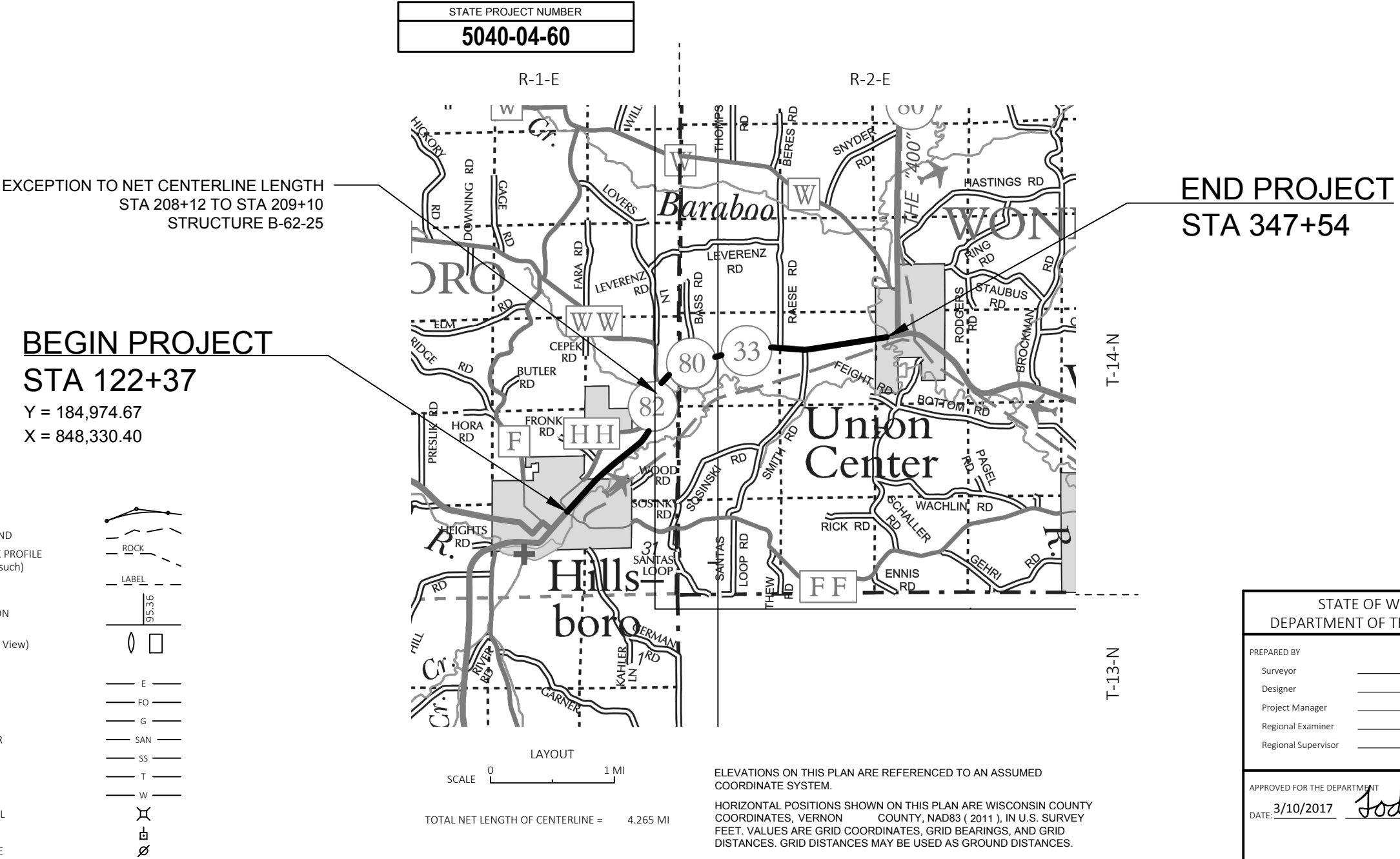
HILLSBORO - UNION CENTER

.02MI E CTH FF TO B-29-59

STH 33

JUNEAU & VERNON COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5040-04-60		



GENERAL NOTES

THERE ARE UTILITY FACILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE

PRIOR TO THE PLACEMENT OF STEEL PLATE BEAM GUARD, THE SHOULDERS SHALL BE IN PLACE, SHAPED AND COMPACTED UNLESS SHOWN OTHERWISE

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

2 INCH HMA PAVEMENT SHALL BE CONSTRUCTED IN A SINGLE LAYER. 3.5 INCH HMA PAVEMENT SHALL BE CONSTRUCTED WITH 2 INCH UPPER LAYER AND 1.5 INCH LOWER LAYER

APPLY TACK COAT TO MILLED SURFACE AND BETWEEN HMA PAVEMENT LAYERS AT A RATE OF 0.07 GAL/SY

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN

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

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST

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

STANDARD ABBREVIATIONS

A.A.D.T.	ANNUAL AVERAGE DAILY TRAFFIC	PC	POINT OF CURVATURE
Δ	CENTRAL ANGLE OR DELTA	PI	POINT OF INTERSECTION
D	DEGREE OF CURVE	PT	POINT OF TANGENCY
D.H.V.	DESIGN HOURLY VOLUME	R	RADIUS OR RANGE
D.D.	DIRECTIONAL DISTRIBUTION	REQ'D	REQUIRED
ESALS	EQUIVALENT SINGLE AXLE LOADS	S.D.D.	STANDARD DETAIL DRAWING(S)
CWT	HUNDRED WEIGHT	T	TANGENT
L	LENGTH OF CURVE	T.	PERCENT TRUCKS
LT	LEFT	TYP	TYPICAL
MGAL	1000 GALLONS	VAR	VARIABLE

UTILITY CONTACTS

ATC MANAGEMENT INC., ELECTRICITY-TRANSMISSION  
ANTHONY MARCINIAK  
W 234 N 200 RIDGEVIEW PARKWAY CT P.O. BOX 47  
WAUKESHA, WI 53187  
PHONE: 262-506-6700  
MOBILE: N/A

ALLIANT ENERGY, GAS/PETROLEUM  
MARK SCHOEN  
338 E STATE STREET  
MAUSTON, WI 53948  
PHONE: 608-847-1315  
MOBILE: 608-206-4819

CITY OF HILLSBORO, WATER/SEWER  
MIKE LANGE  
P.O. BOX 447  
HILLSBORO, WI 54634  
PHONE: 608-489-3388  
MOBILE: 608-558-5701

PACKERLAND BROADBAND, COMMUNICATION LINE  
RANDY SIMMS  
105 KENT STREET P.O. BOX 190  
IRON MOUNTAIN, MI 49801  
PHONE: N/A  
MOBILE: 906-282-3802

ALLIANT ENERGY, ELECTRICITY  
MARK SCHOEN  
338 E STATE STREET  
MAUSTON, WI 53948  
PHONE: 608-847-1315  
MOBILE: 608-206-4819

COMMUNITY ANTENNA SYSTEMS  
INC., COMMUNICATION LINE  
RANDALL KUBARSKI  
1010 LAKE STREET  
HILLSBORO, WI 54634  
PHONE: 608-489-2321  
MOBILE: 608-604-3695

CITY OF HILLSBORO, HILLSBORO  
TELEPHONE COMPANY INC.,  
CHAD SCHMIDT  
121 MILL STREET  
HILLSBORO, WI 54634  
PHONE: 608-489-4415  
MOBILE: N/A

UNITED COOPERATIVE, GAS  
KARL BETH  
N7160 RACEWAY ROAD  
BEAVER DAM, WI 53916  
PHONE: 920-887-1756  
MOBILE: 608-576-5275

ENVIRONMENTAL CONTACT


KAREN KALVELAGE  
ENVIRONMENTAL ANALYSIS & REVIEW SPECIALIST  
WISCONSIN DEPT. OF NATURAL RESOURCES  
SOUTH CENTRAL REGION  
3550 MORMON COULEE RD  
LA CROSSE, WI 54601  
PHONE: 608-785-9115  
Email: karen.Kalvelage@wisconsin.gov

DESIGN CONTACTS

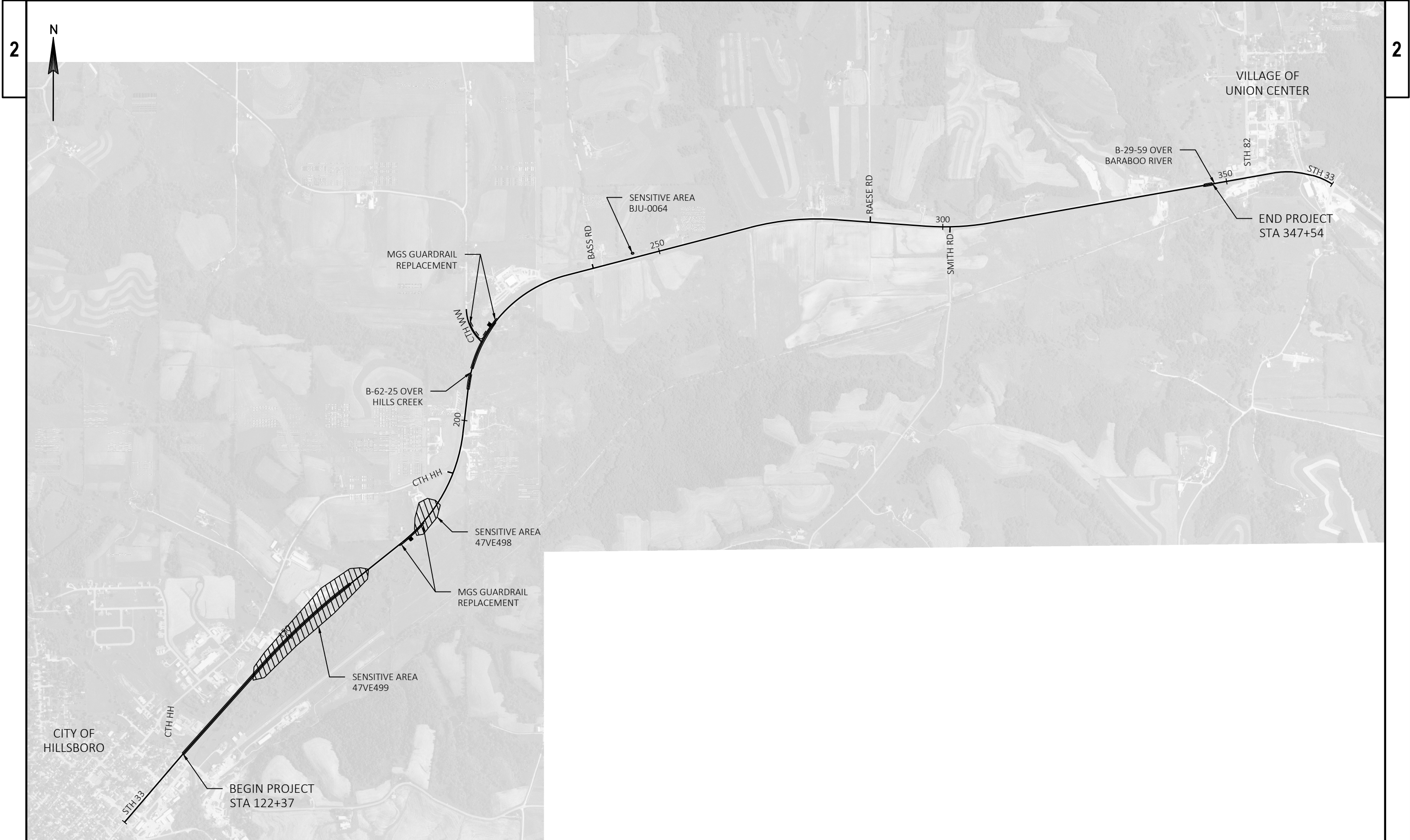
TODD WALDO  
PROJECT MANAGER  
WISDOT SW REGION  
3550 MORMON COULEE ROAD  
LA CROSSE, WI 54601  
PHONE: 608-785-9462  
EMAIL: Todd.Waldo@dot.wi.gov

ALEIGHA BURG  
PROJECT DESIGNER  
WISDOT SW REGION  
3550 MORMON COULEE ROAD  
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PHONE:608-317-9083  
EMAIL: Aleigha.Burg@dot.wigov

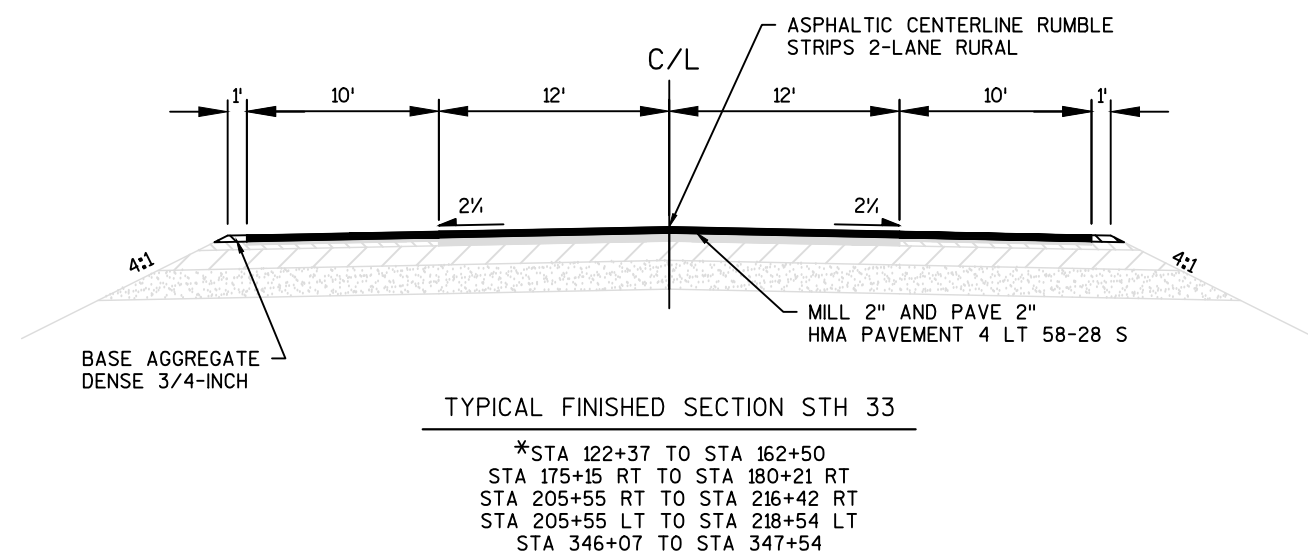
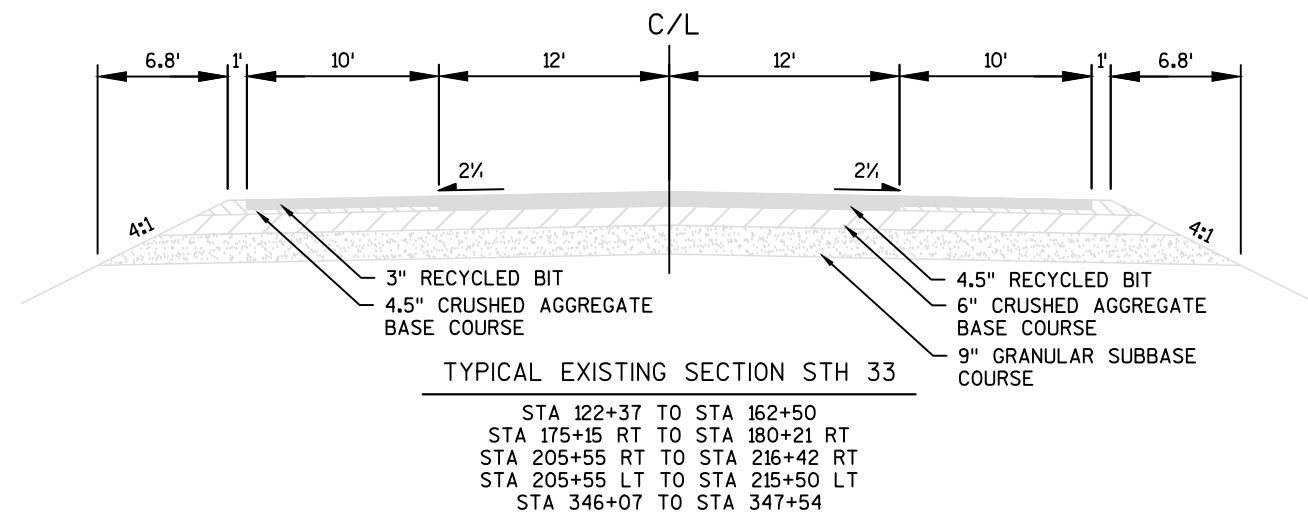


Dial  or (800)242-8511  
www.DiggersHotline.com

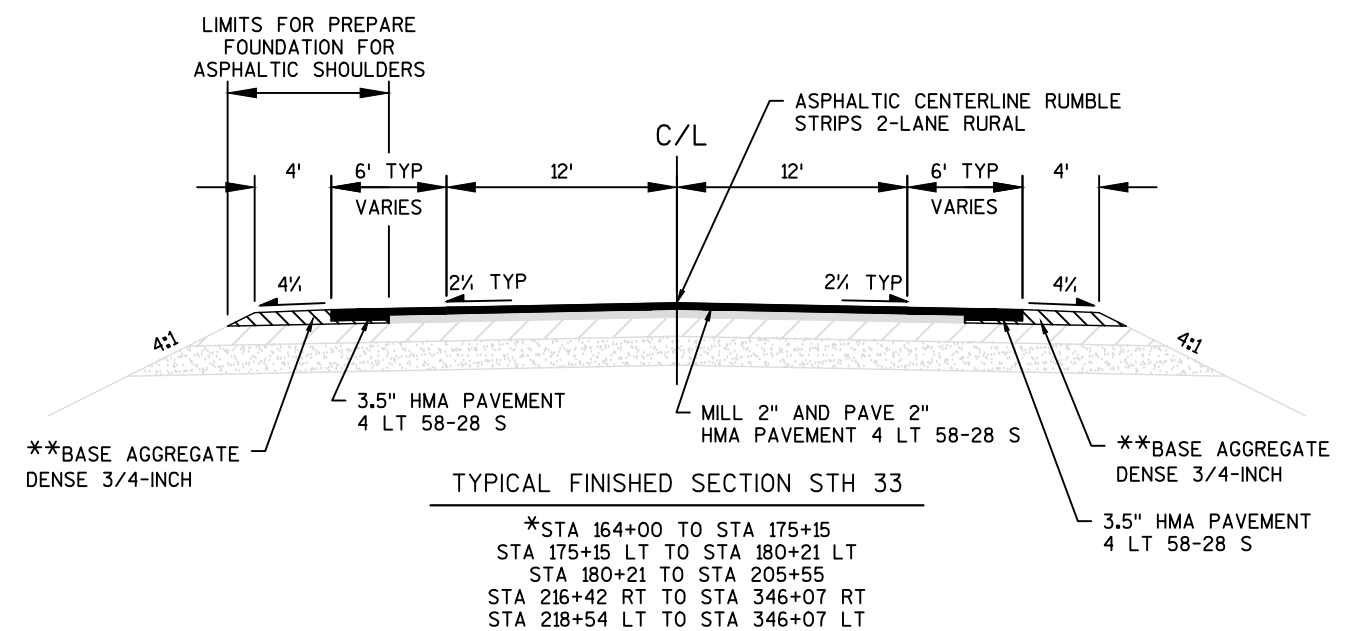
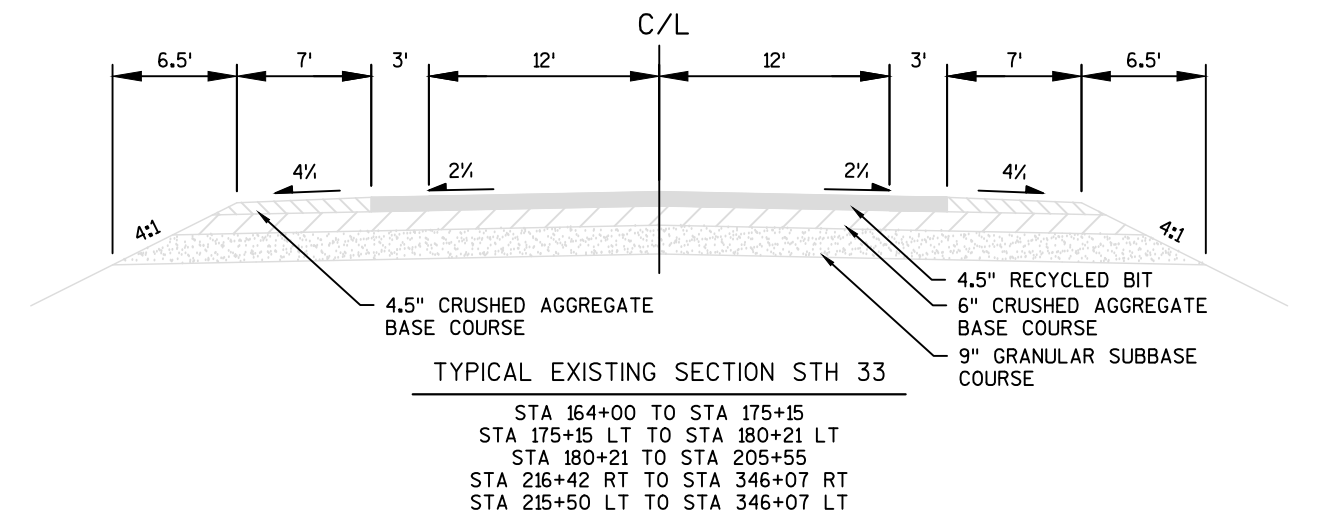




PROJECT NO: 5040-04-60	HWY: STH 33	COUNTY: JUNEAU	PROJECT OVERVIEW	SHEET	E
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\* STA 162+50.00 TO STA 164+00.00, TAPER HMA PAVEMENT SHOULDER WIDTH  
 \*\* EXISTING CRUSHED AGGREGATE BASE COURSE TO BE USED FOR BASE LEVELING BENEATH EXTENDED PAVED SHOULDER. EXCESS MATERIAL TO BE SALVAGED AND PLACED ON SHOULDERS. PAID FOR UNDER ITEM PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS



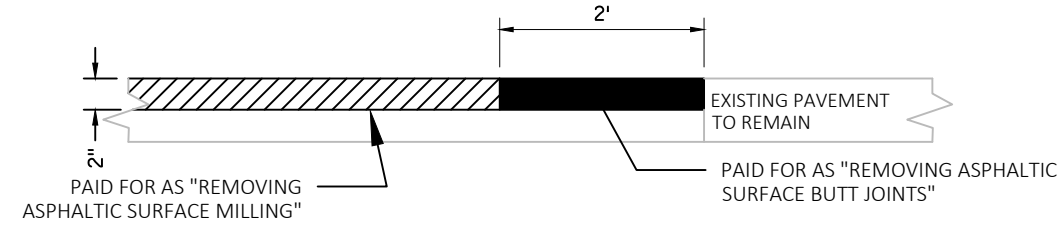
NOTE:  
 IN AREAS WITH 6' SHOULDERS, CONTRACTOR SHALL PAVE ONE PASS 18' WIDE FROM CENTERLINE. IN AREAS OF GUARD RAIL, TURN LANES, AND WIDER SHOULDERS, CONTRACTOR TO MATCH EXISTING PAVING WIDTHS

GUARDRAIL THAT IS REMAINING IN PLACE, MILL/PAVE TO WITHIN 6" OF GUARDRAIL FACE

MILL ADDITIONAL 3' THRU SIDEROADS AND DRIVEWAYS FOR A TOTAL MILLING WIDTH OF 18'

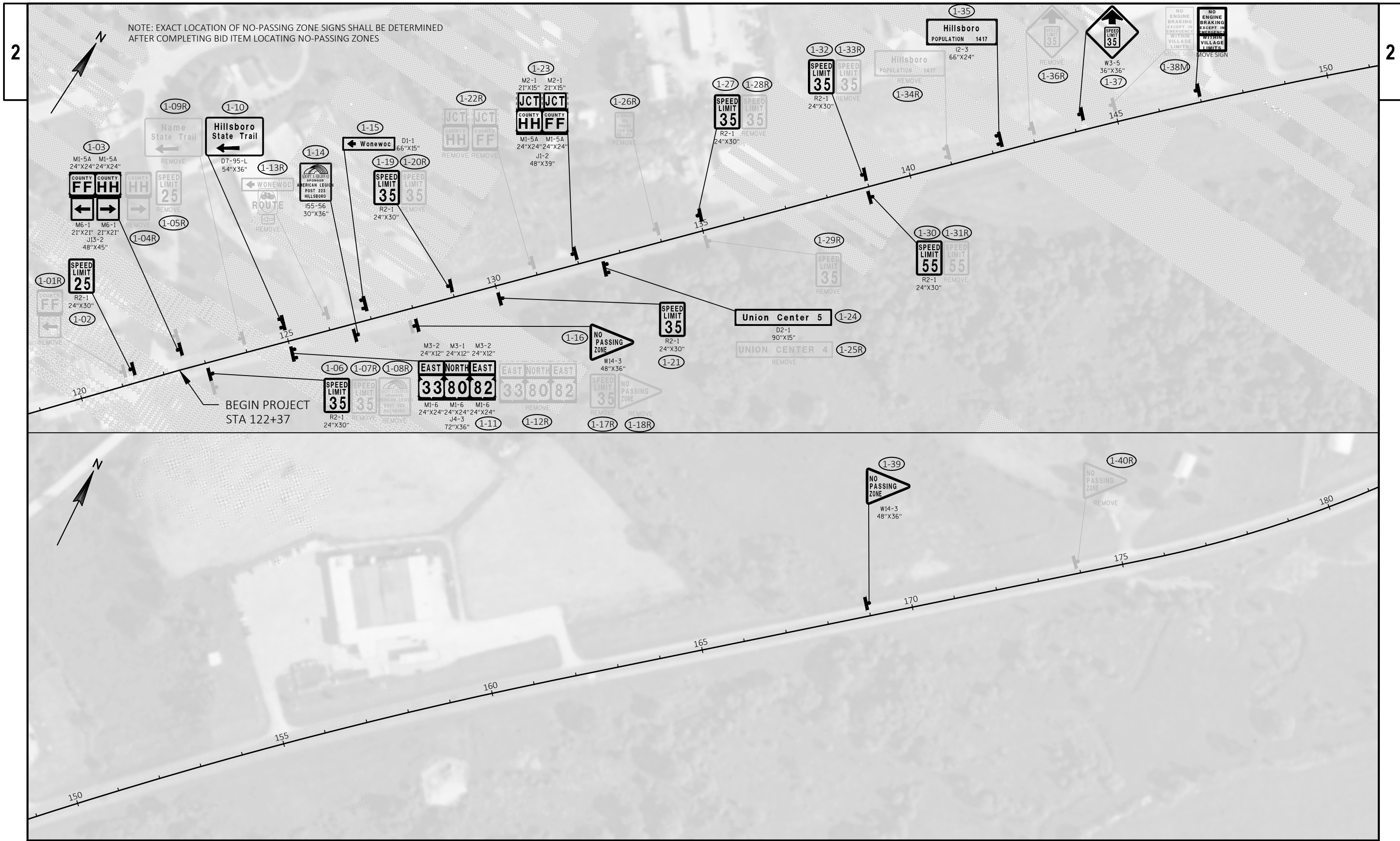
USE A 10:1 TAPER WHEN CHANGING SHOULDER WIDTH, UNLESS NOTED ELSEWHERE

SUPERELEVATION RANGES FROM 2% TO 7%



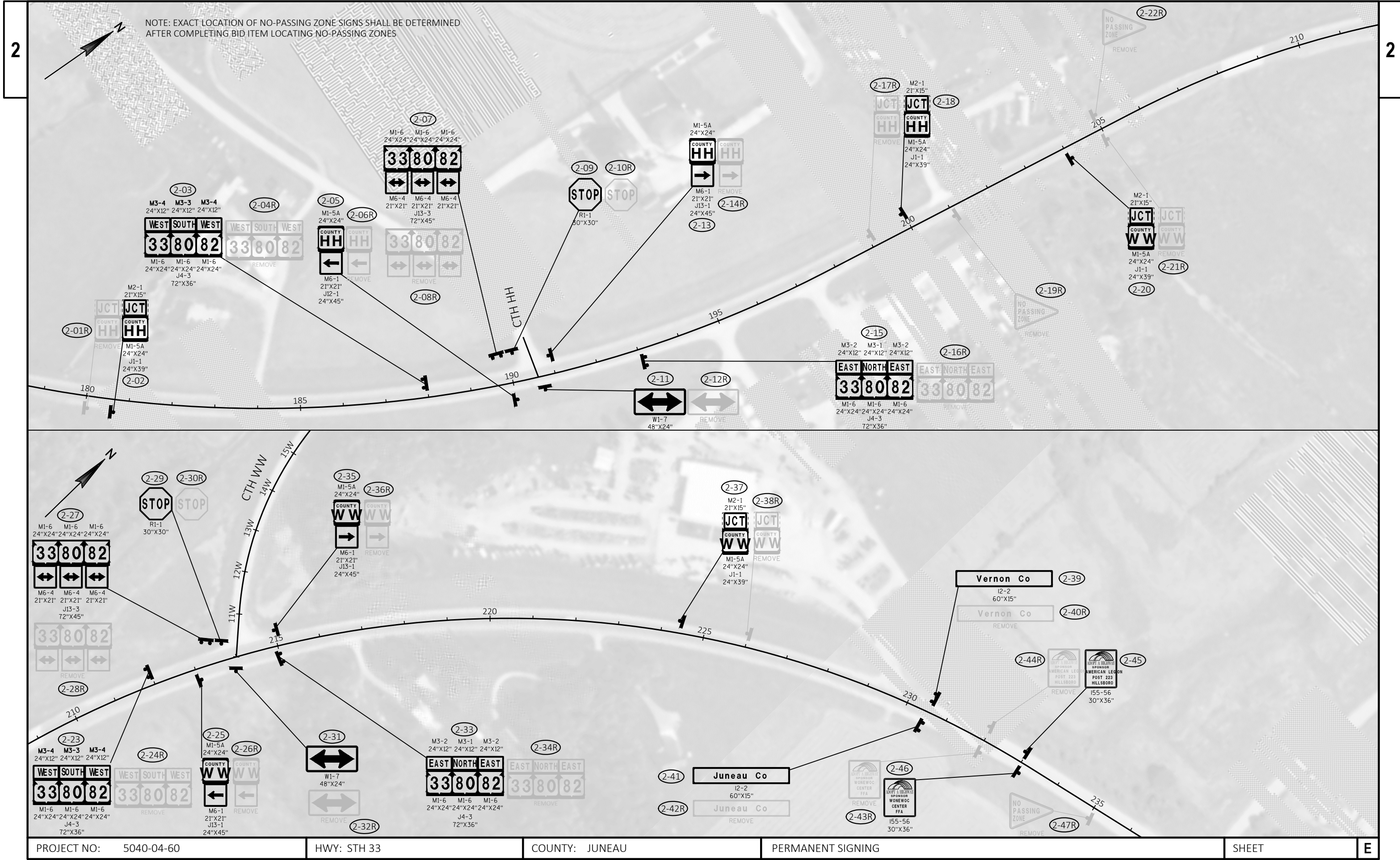
REMOVING ASPHALTIC SURFACE BUTT JOINTS DETAIL





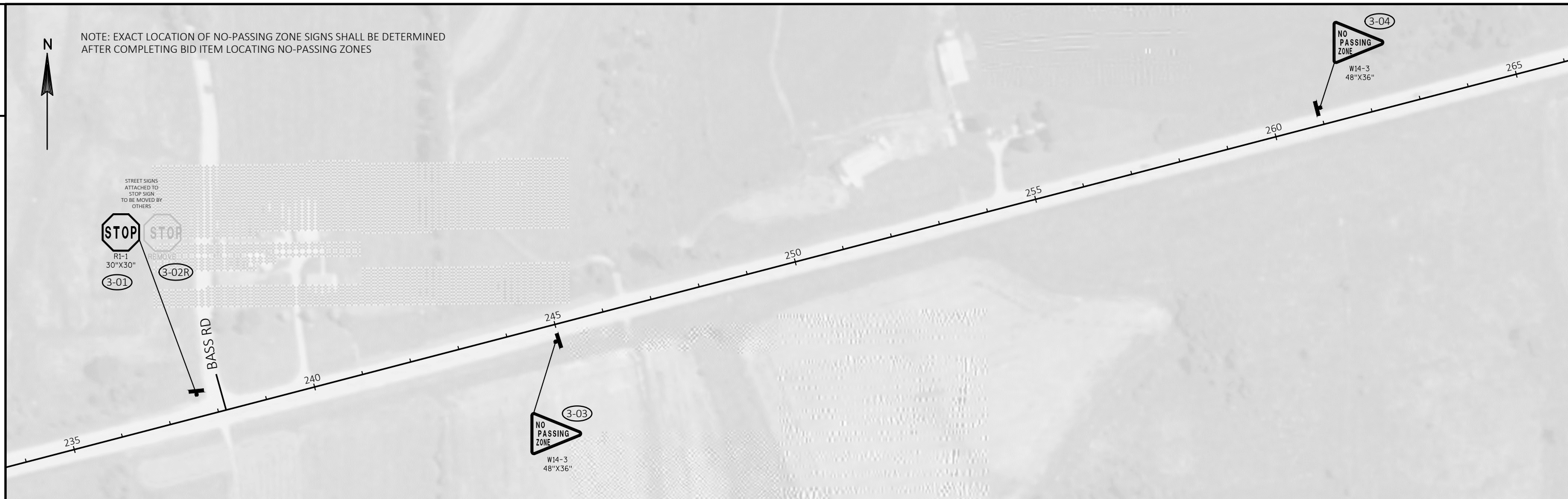
PROJECT NO: 5040-04-60	HWY: STH 33	COUNTY: JUNEAU	PERMANENT SIGNING	SHEET	E
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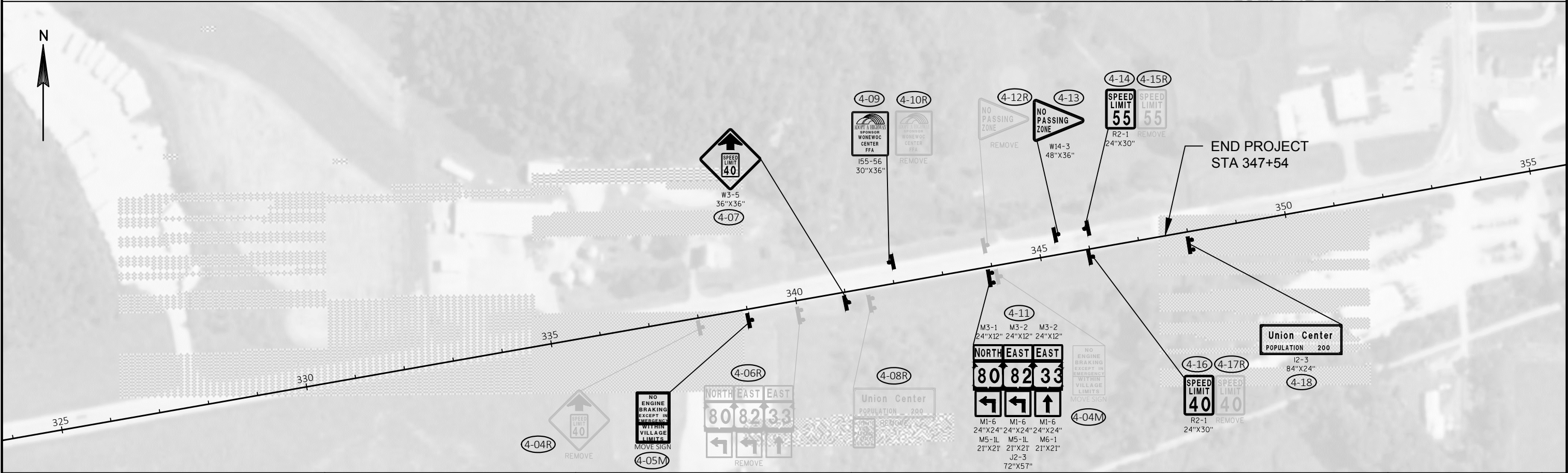
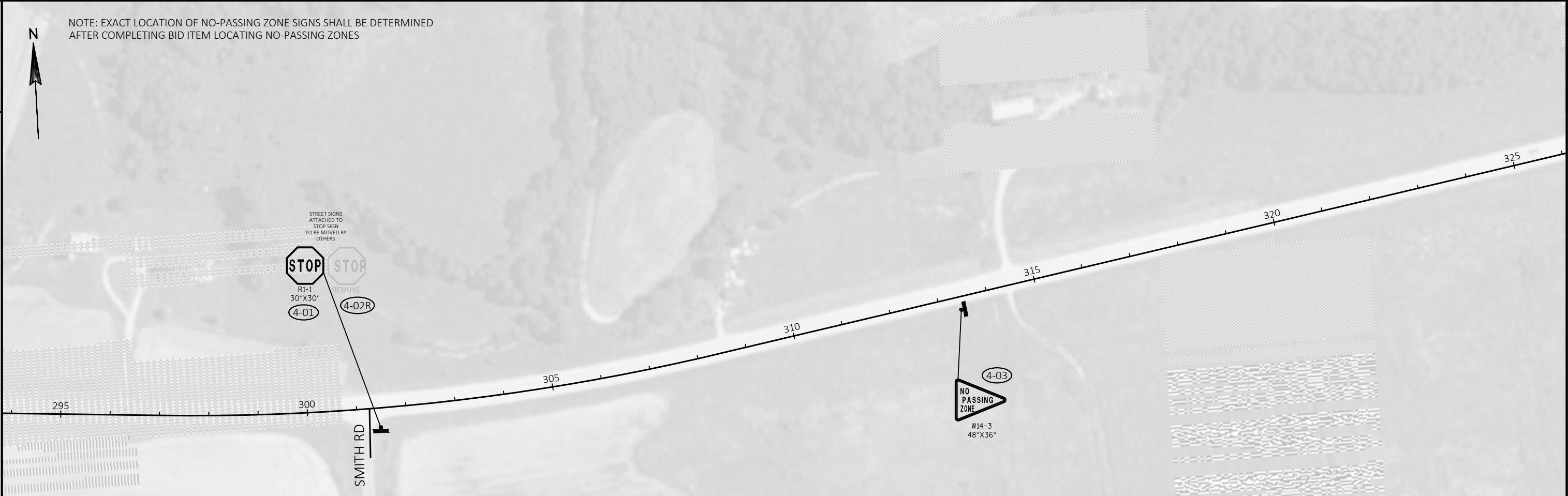


NOTE: EXACT LOCATION OF NO-PASSING ZONE SIGNS SHALL BE DETERMINED AFTER COMPLETING BID ITEM LOCATING NO-PASSING ZONES

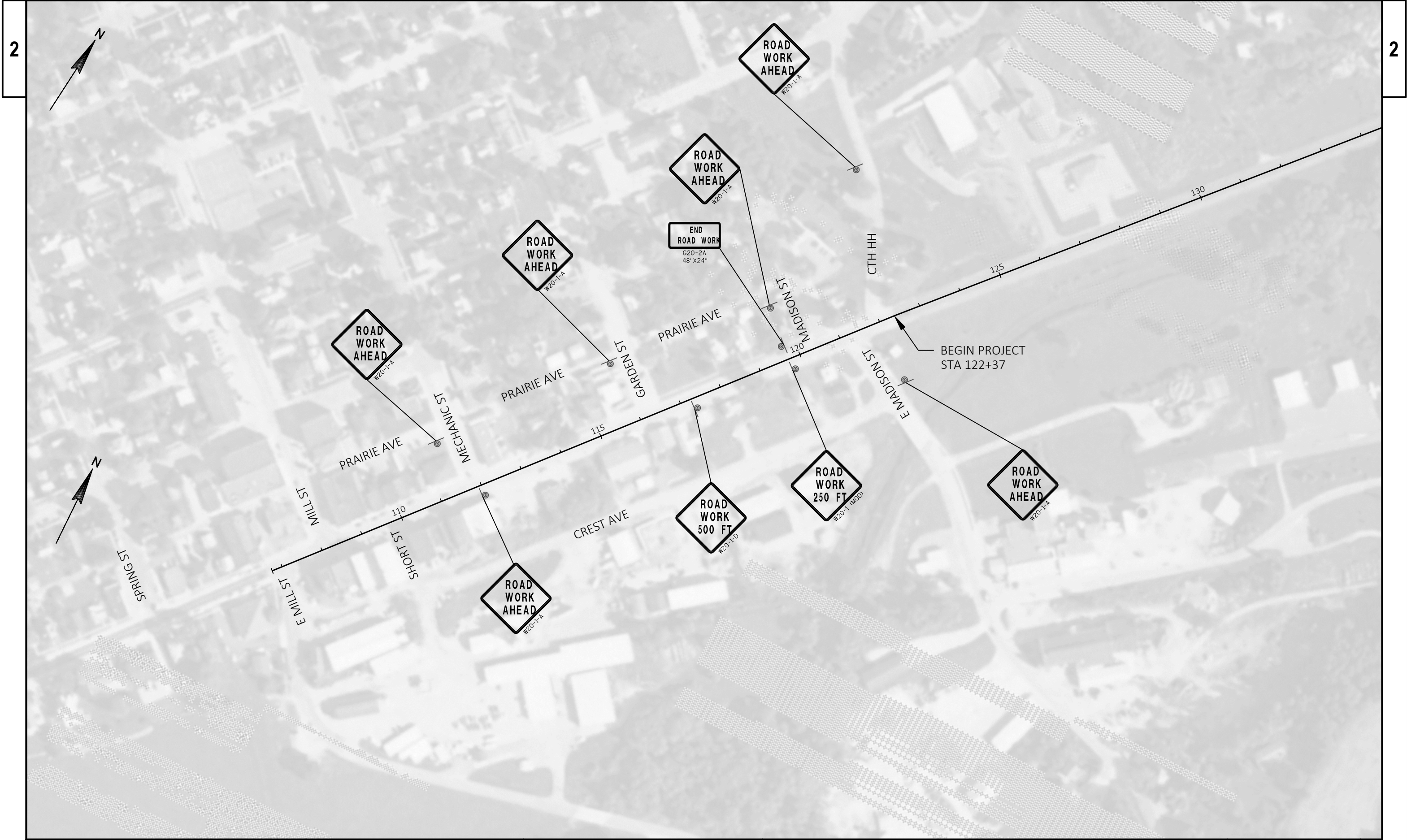


PROJECT NO: 5040-04-60	HWY: STH 33	COUNTY: JUNEAU	PERMANENT SIGNING	SHEET	E
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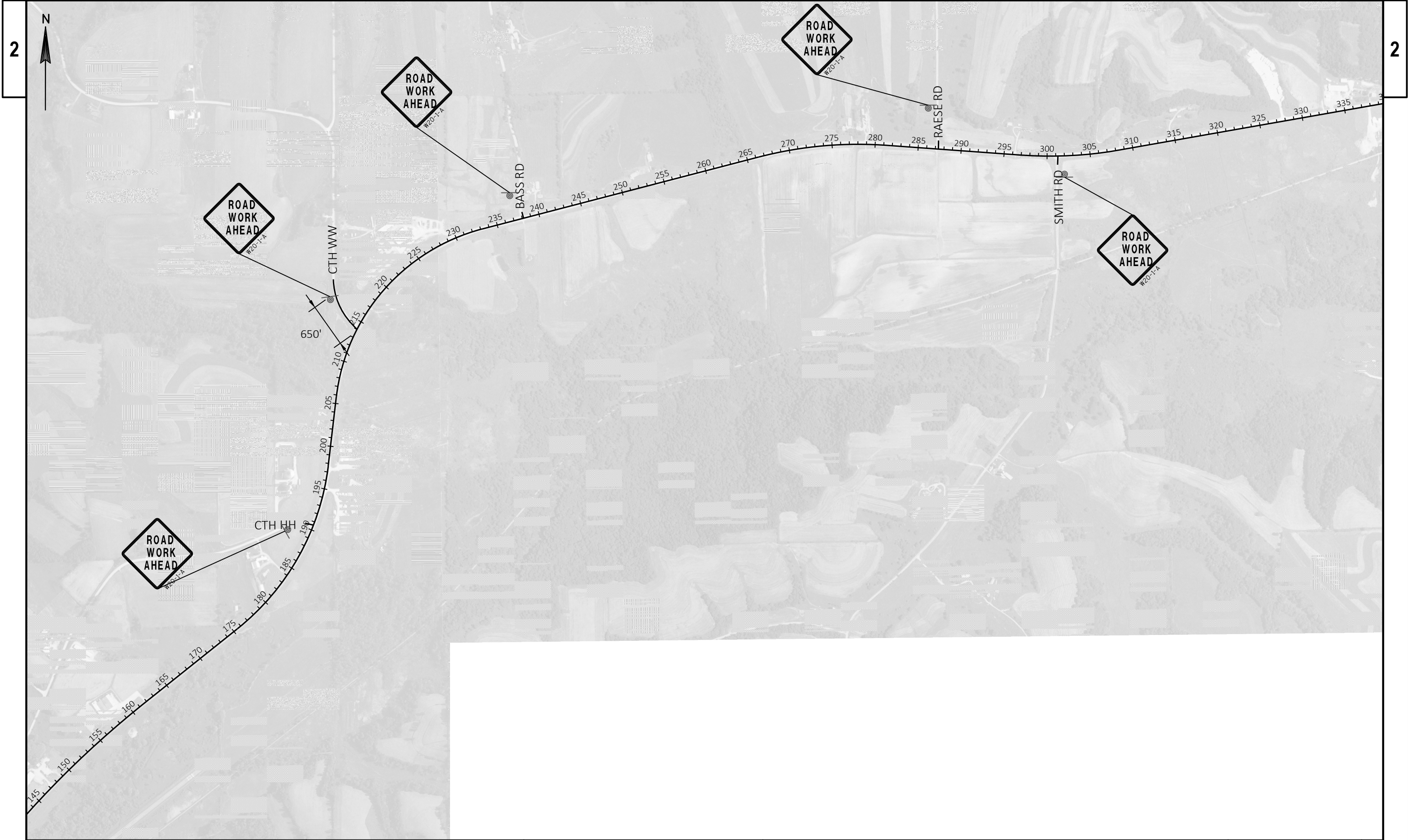






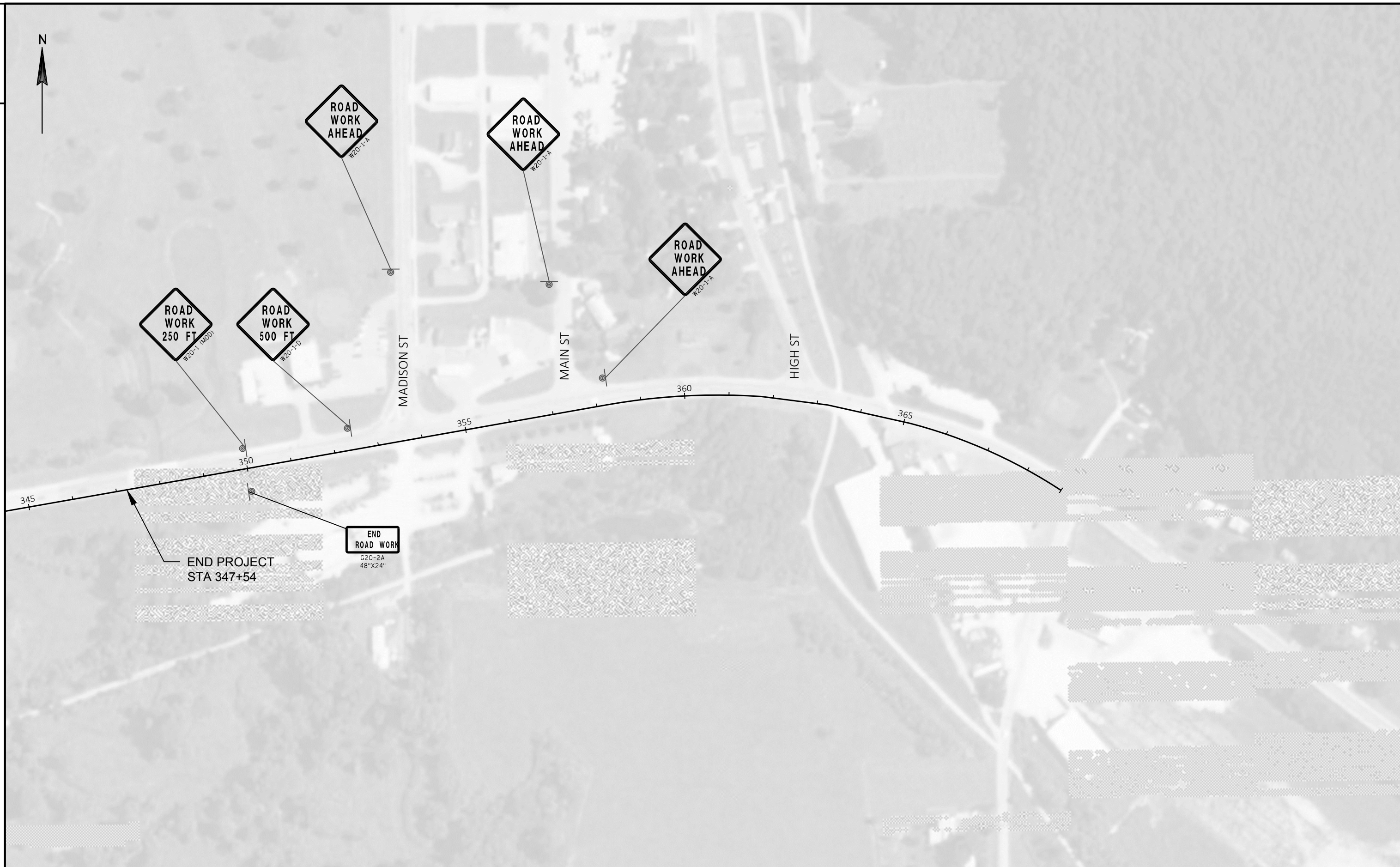
PROJECT NO: 5040-04-60	HWY: STH 33	COUNTY: JUNEAU	ADVANCED WARNING SIGNING	SHEET	E
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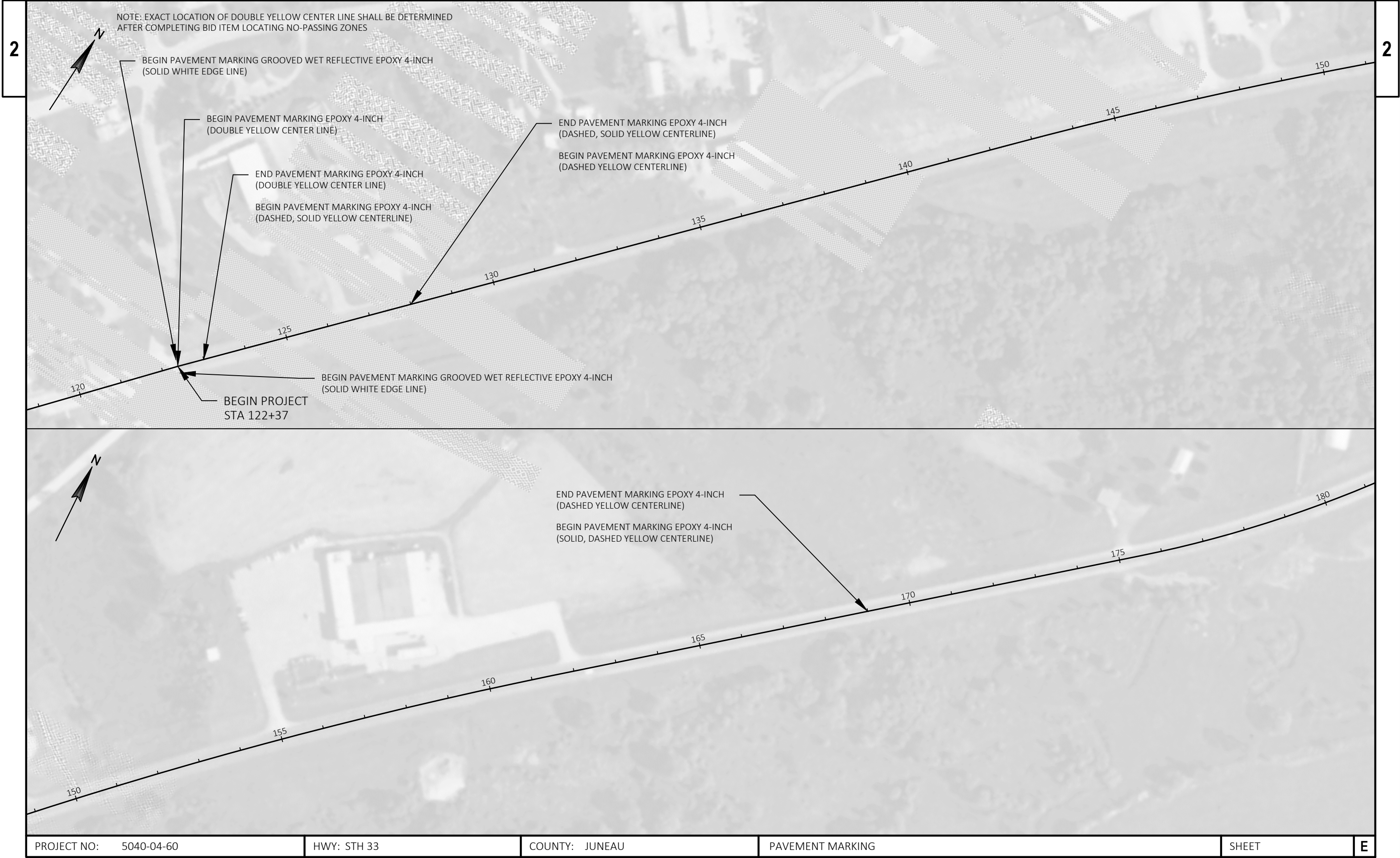
PROJECT NO: 5040-04-60	HWY: STH 33	COUNTY: JUNEAU	ADVANCED WARNING SIGNING	SHEET	E
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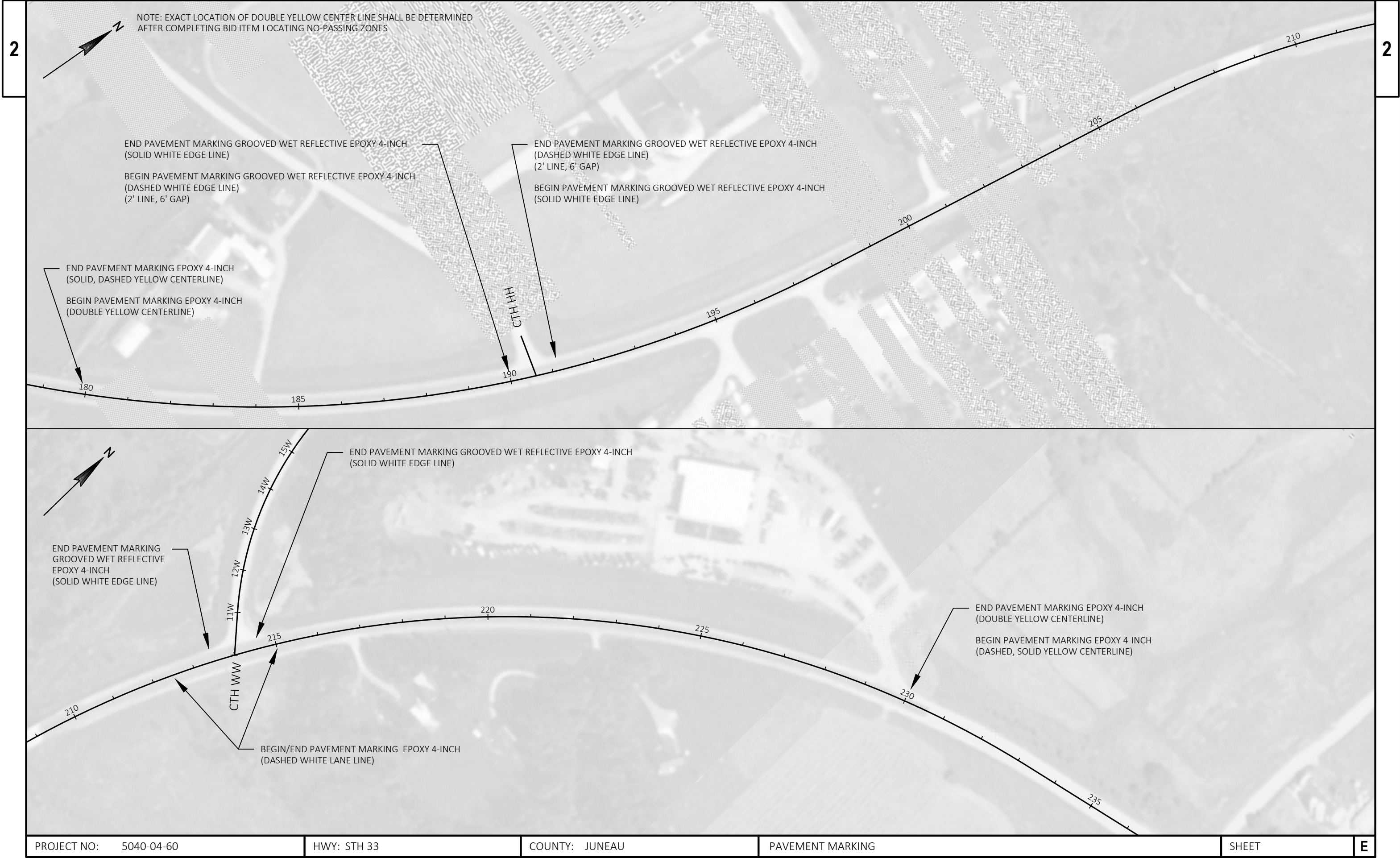


PROJECT NO: 5040-04-60	HWY: STH 33	COUNTY: JUNEAU	ADVANCED WARNING SIGNING	SHEET	E
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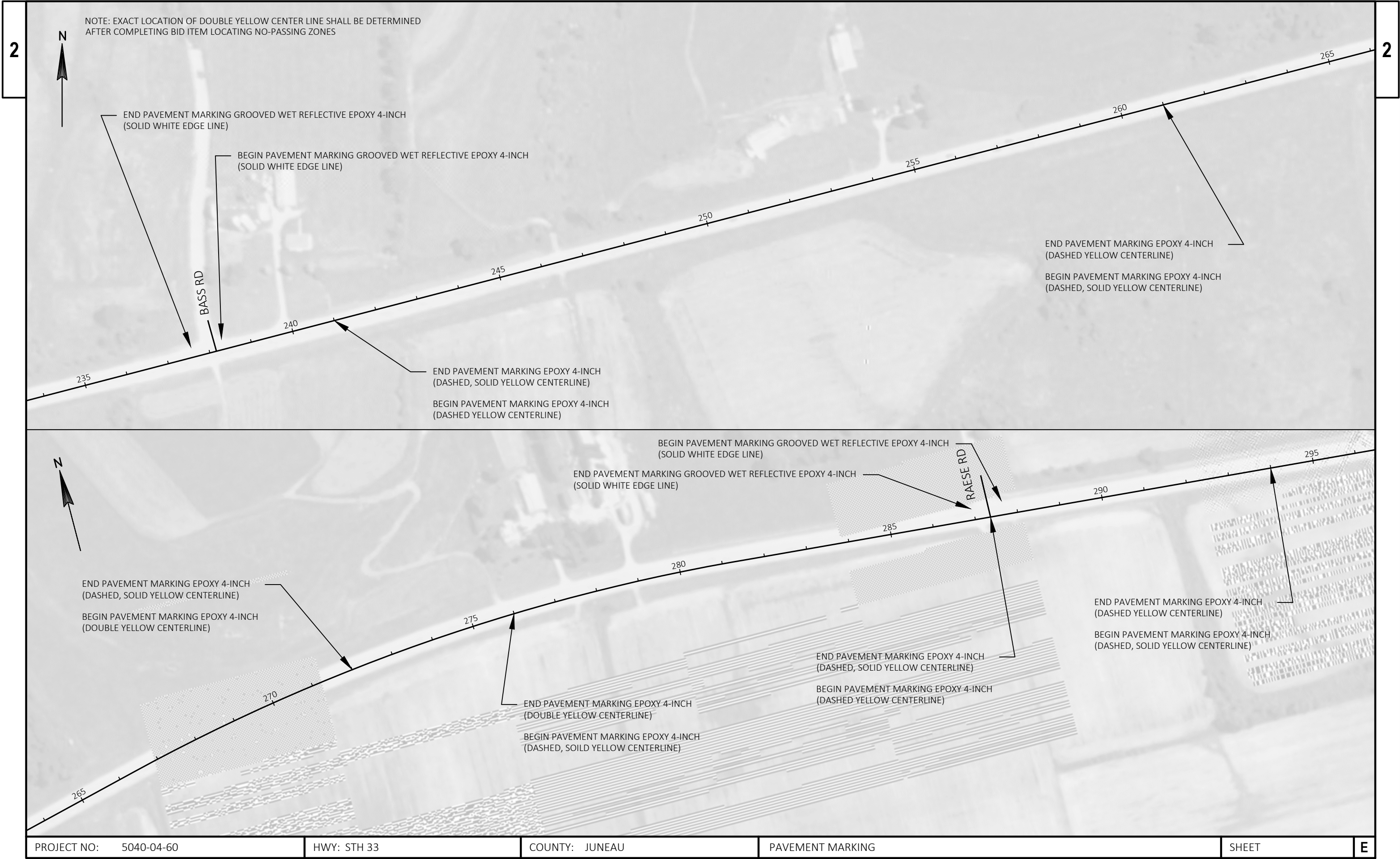










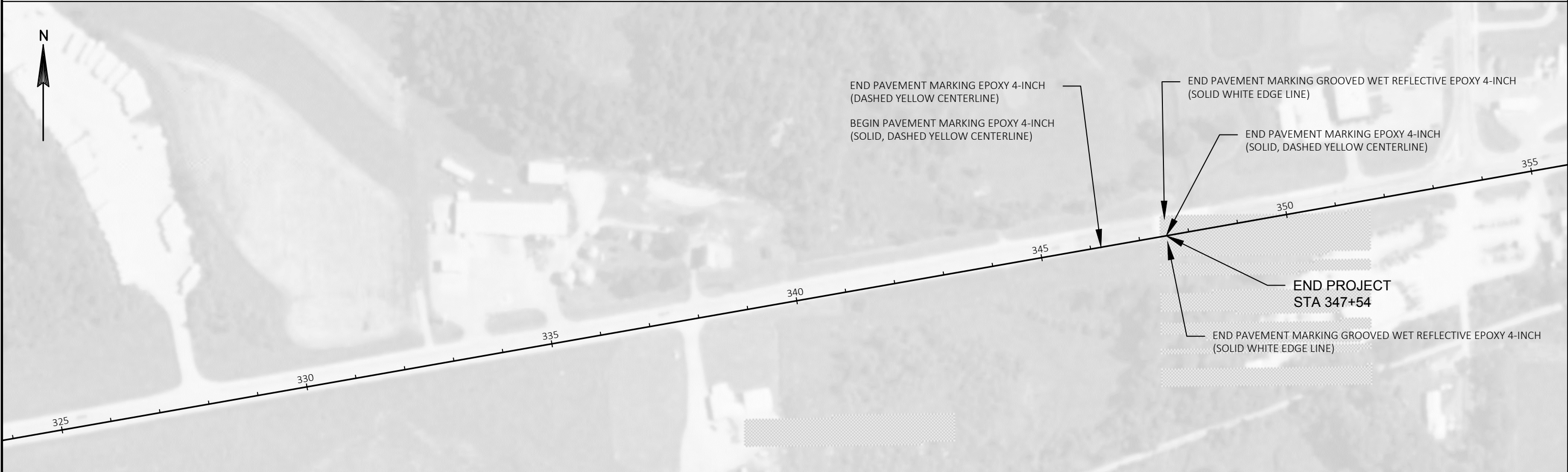
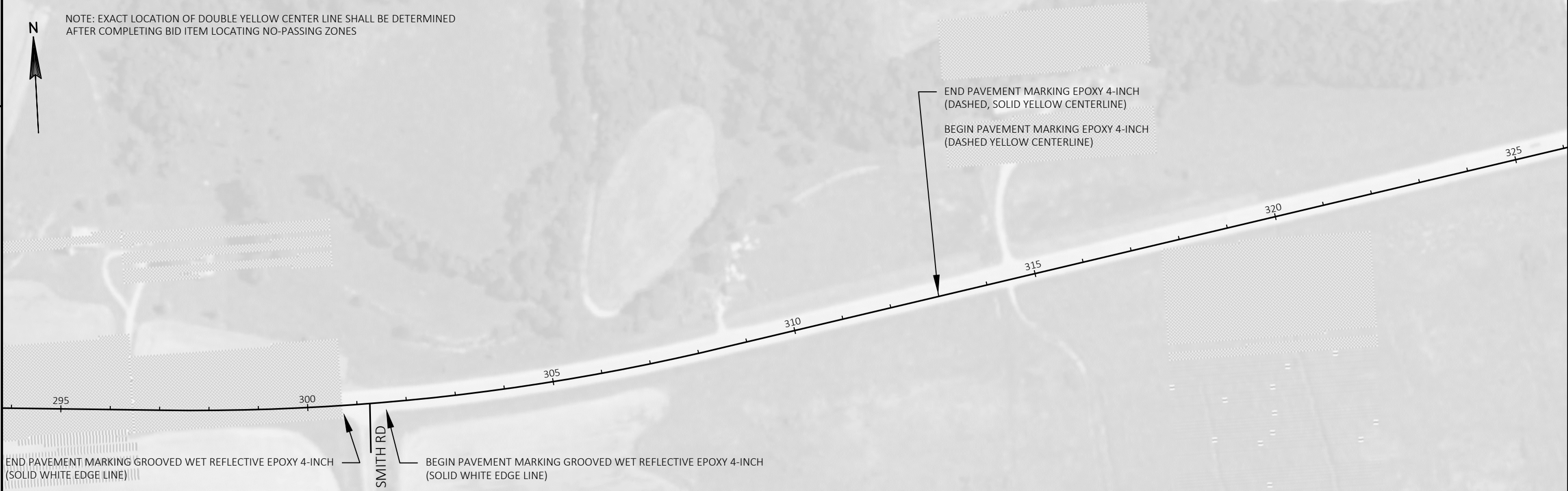


PROJECT NO: 5040-04-60	HWY: STH 33	COUNTY: JUNEAU	PAVEMENT MARKING	SHEET	E
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NOTE: EXACT LOCATION OF DOUBLE YELLOW CENTER LINE SHALL BE DETERMINED AFTER COMPLETING BID ITEM LOCATING NO-PASSING ZONES



PROJECT NO: 5040-04-60	HWY: STH 33	COUNTY: JUNEAU	PAVEMENT MARKING	SHEET	E
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Estimate Of Quantities

5040-04-60

Line	Item	Item Description	Unit	Total	Qty
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	40.000	40.000
0020	204.0120	Removing Asphaltic Surface Milling	SY	83,643.000	83,643.000
0030	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	336.000	336.000
0040	213.0100	Finishing Roadway (project) 01. 5040-04-60	EACH	1.000	1.000
0050	305.0110	Base Aggregate Dense 3/4-Inch	TON	3,890.000	3,890.000
0060	440.4410	Incentive IRI Ride	DOL	16,982.000	16,982.000
0070	455.0605	Tack Coat	GAL	6,484.400	6,484.400
0080	460.2000	Incentive Density HMA Pavement	DOL	7,490.000	7,490.000
0090	460.5224	HMA Pavement 4 LT 58-28 S	TON	11,662.000	11,662.000
0100	465.0475	Asphalt Center Line Rumble Strips 2-Lane Rural	LF	17,452.000	17,452.000
0110	614.0920	Salvaged Rail	LF	845.000	845.000
0120	614.2300	MGS Guardrail 3	LF	1,050.000	1,050.000
0130	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0140	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5040-04-60	EACH	1.000	1.000
0150	619.1000	Mobilization	EACH	1.000	1.000
0160	624.0100	Water	MGAL	1.000	1.000
0170	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0180	628.1910	Mobilizations Emergency Erosion Control	EACH	1.000	1.000
0190	628.2004	Erosion Mat Class I Type B	SY	25.000	25.000
0200	629.0210	Fertilizer Type B	CWT	0.020	0.020
0210	630.0120	Seeding Mixture No. 20	LB	0.700	0.700
0220	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	43.000	43.000
0230	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	26.000	26.000
0240	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	1.000	1.000
0250	637.2210	Signs Type II Reflective H	SF	415.650	415.650
0260	637.2230	Signs Type II Reflective F	SF	82.000	82.000
0270	638.2102	Moving Signs Type II	EACH	2.000	2.000
0280	638.2602	Removing Signs Type II	EACH	56.000	56.000
0290	638.3000	Removing Small Sign Supports	EACH	68.000	68.000
0300	642.5001	Field Office Type B	EACH	1.000	1.000
0310	643.0100	Traffic Control (project) 01. 5040-04-60	EACH	1.000	1.000
0320	643.0300	Traffic Control Drums	DAY	108.000	108.000
0330	643.0900	Traffic Control Signs	DAY	700.000	700.000
0340	646.0106	Pavement Marking Epoxy 4-Inch	LF	22,216.000	22,216.000
0350	646.0600	Removing Pavement Markings	LF	11,077.000	11,077.000
0360	646.2304.S	Pavement Marking Grooved Wet Reflective Epoxy 4-Inch	LF	44,637.000	44,637.000
0370	648.0100	Locating No-Passing Zones	MI	4.260	4.260
0380	649.0402	Temporary Pavement Marking Paint 4-Inch	LF	11,077.000	11,077.000

Estimate Of Quantities

5040-04-60

Line	Item	Item Description	Unit	Total	Qty
0390	650.8000	Construction Staking Resurfacing Reference	LF	22,517.000	22,517.000
0400	650.9910	Construction Staking Supplemental Control (project) 01. 5040-04-60	LS	1.000	1.000
0410	SPV.0180	Special 01. REMOVING DISTRESSED PAVEMENT MILLING	SY	1,784.000	1,784.000



REMOVING ASPHALTIC SURFACE BUTT JOINTS

204. 0115						
CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	122+37	-	122+39	MAINLINE	10	BEGIN PROJEECT
0010	208+10	-	208+12	MAINLINE	10	WEST END OF B-62-25
0010	209+10	-	209+12	MAINLINE	10	EAST END OF B-62-25
0010	347+52	-	347+54	MAINLINE	10	END PROJECT
TOTAL 0010					40	

REMOVING ASPHALTIC SURFACE MILLING

204. 0120						
CATEGORY	STATION	TO	STATION	LOCATION	SY	REMARKS
0010	122+37	-	162+50	RT/LT	19619	HMA Shoul der Wi dth Taper
0010	162+50	-	164+00	RT/LT	617	
0010	164+00	-	175+15	RT/LT	3717	
0010	175+15	-	180+21	RT/LT	2080	
0010	180+21	-	205+55	RT/LT	8447	
0010	205+55	-	208+12	RT/LT	1256	
0010	209+10	-	215+50	LT	1564	
0010	209+10	-	216+42	RT	1789	
0010	216+42	-	346+07	RT	21608	
0010	215+50	-	346+07	LT	21762	
0010	346+07	-	347+54	RT/LT	721	DRI VEWAYS AND SI DE ROADS
0010	122+37	-	347+54	RT/LT	463	
TOTAL 0010					83643	

PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS

211. 0400						
CATEGORY	STATION	TO	STATION	LOCATION	STA	REMARKS
0010	164+00	-	175+15	RT/LT	22	
0010	175+15	-	180+21	LT	5	
0010	180+21	-	205+55	RT/LT	51	
0010	216+42	-	346+07	RT	130	
0010	218+54	-	346+07	LT	128	
TOTAL 0010					336	

BASE AGGREGATE DENSE 3/4-INCH

305. 0110						
CATEGORY	STATION	TO	STATION	LOCATION	TON	REMARKS
0010	122+37	-	347+54	RT/LT	3890	SHOULDER
TOTAL 0010					3890	

TACK COAT

455. 0605						
CATEGORY	STATION	TO	STATION	LOCATION	GAL	REMARKS
0010	122+37	-	162+50	RT/LT	1373	
0010	162+50	-	164+00	RT/LT	43	
0010	164+00	-	175+15	RT/LT	260	
0010	175+15	-	150+21	RT/LT	158	
0010	180+21	-	205+55	RT/LT	591	
0010	205+55	-	216+42	RT	186	
0010	205+55	-	218+54	LT	222	
0010	216+42	-	346+07	RT	1815	
0010	218+54	-	346+07	LT	1786	
0010	346+07	-	347+54	RT/LT	50	
TOTAL 0010					6484	

HMA PAVEMENT 4 LT 58-28 S

460. 5224						
CATEGORY	STATION	TO	STATION	LOCATION	TON	REMARKS
0010	122+37	-	162+50	RT/LT	2197	DRI VI NG LANES AND SHOULDERS
0010	162+50	-	164+00	RT/LT	69	DRI VI NG LANES
0010	162+50	-	164+00	RT/LT	10	SHOULDER WI DENI NG TAPERS
0010	164+00	-	175+15	RT/LT	416	DRI VI NG LANES
0010	164+00	-	175+15	RT/LT	146	SHOULDERS
0010	175+15	-	180+21	LT	94	DRI VI NG LANE AND SHOULDER
0010	175+15	-	180+21	LT	33	SHOULDER WI DENI NG
0010	175+15	-	180+21	RT	139	DRI VI NG LANE AND SHOULDER
0010	180+21	-	205+55	RT/LT	946	DRI VI NG LANES
0010	180+21	-	205+55	RT/LT	331	SHOULDERS
0010	205+55	-	208+12	RT/LT	141	DRI VI NG LANE AND SHOULDER
0010	209+10	-	215+50	LT	175	DRI VI NG LANE AND SHOULDER
0010	209+10	-	216+42	RT	200	DRI VI NG LANE AND SHOULDER
0010	215+50	-	218+54	LT	46	SHOULDER WI DENI NG AT GUARDRAI L
0010	215+50	-	218+54	LT	57	DRI VI NG LANE AND SHOULDER
0010	216+42	-	346+07	RT	2420	DRI VI NG LANE AND SHOULDER
0010	216+42	-	346+07	RT	847	SHOULDER WI DENI NG
0010	218+54	-	346+07	LT	2381	DRI VI NG LANE AND SHOULDER
0010	218+54	-	346+07	LT	833	SHOULDER WI DENI NG
0010	346+07	-	347+54	RT/LT	81	DRI VI NG LANES AND SHOULDERS
0010	122+37	-	162+50	RT/LT	100	DI STRESSED PAVEMENT REPAI R
TOTAL 0010					11662	

ASPHALT CENTER LINE RUMBLE STRIPS 2-LANE RURAL

465. 0475					
CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	122+37	-	125+50	CENTERLINE	313
0010	128+80	-	135+40	CENTERLINE	660
0010	137+40	-	146+30	CENTERLINE	890
0010	149+85	-	154+00	CENTERLINE	415
0010	156+00	-	161+00	CENTERLINE	500
0010	163+00	-	188+60	CENTERLINE	2560
0010	192+60	-	194+00	CENTERLINE	140
0010	198+35	-	200+00	CENTERLINE	165
0010	202+00	-	207+85	CENTERLINE	585
0010	209+35	-	212+00	CENTERLINE	265
0010	216+00	-	228+50	CENTERLINE	1250
0010	231+50	-	236+15	CENTERLINE	465
0010	240+15	-	285+30	CENTERLINE	4515
0010	289+30	-	299+20	CENTERLINE	990
0010	303+20	-	332+30	CENTERLINE	2910
0010	339+00	-	347+29	CENTERLINE	829
TOTAL 0010					17452

SALVAGED RAIL

614. 0920					
CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	175+50	-	179+30	RT	405
0010	214+00	-	217+98	LT	440
TOTAL 0010					845

MGS GUARDRAIL 3

614. 2300					
CATEGORY	STATION	TO	STATION	LOCATION	LF
0010	175+68	-	179+68	RT	400
0010	10+84W	-	13+47W	LT	262. 5
0010	214+43	-	214+76	LT	62. 5
0010	214+76	-	218+01	LT	325
TOTAL 0010					1050

MGS GUARDRAIL TERMINAL EAT

614. 2610					
CATEGORY	STATION	TO	STATION	LOCATION	EACH
0010	175+15	-	175+68	RT	1
0010	179+68	-	180+21	RT	1
0010	13+47W	-	14+00W	RT	1
0010	218+01	-	218+54	LT	1
TOTAL 0010					4

WATER

624. 0100					
CATEGORY	STATION	TO	STATION	LOCATION	MGAL
0010	122+37	-	347+54	RT/LT	1
TOTAL 0010					1

EROSION CONTROL

628. 2004 EROSION MAT CLASS I TYPE B SY							
629. 021 FERTILIZER TYPE B CWT							
630. 0120 SEEDING MIXTURE NO. 20 LB							
CATEGORY	STATION	TO	STATION	LOCATION	SY	CWT	LB
0010	14+15W	-	217+50	LT	25	0. 02	0. 7
TOTAL 0010					25	0. 02	0. 7

MOBILIZATIONS EROSION CONTROL

628. 1905					
CATEGORY	STATION	TO	STATION	LOCATION	EACH
0010	122+37	-	347+54	RT/LT	2
TOTAL 0010					2

MOBILIZATIONS EMERGENCY EROSION CONTROL

628. 1910					
CATEGORY	STATION	TO	STATION	LOCATION	EACH
0010	122+37	-	347+54	RT/LT	1
TOTAL 0010					1

PERMANENT SIGNING															
CATEGORY	SIGN NO	APPROX STATION	LOCATION	SIGN CODE	DESCRIPTION	MESSAGE	SIZE IN X IN	634.0614	634.0616	634.0618	637.2210	637.2230	638.2102	638.2602	638.3000
								POSTS WOOD 4X6-INCH 14-FT EACH	POSTS WOOD 4X6-INCH 16-FT EACH	POSTS WOOD 4X6-INCH 18-FT EACH	SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	MOVING SIGNS TYPE II EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
0010	1-01R	121+15	LT	R2-1	SPEED LIMIT (25)	25	24 X 30	---	---	---	---	---	---	1	---
0010	1-02	121+35	LT	R2-1	SPEED LIMIT (25)	25	24 X 30	1	---	---	5.00	---	---	---	---
0010	1-03	122+50	LT	J13-2	DIRECTIONAL ASSEMBLY	FF, HH LEFT ARROW, RIGHT ARROW	48 X 45	1	---	---	15.00	---	---	---	---
0010	1-04R	122+50	LT	J13-1	DIRECTIONAL ASSEMBLY	HH RIGHT ARROW	24 X 45	---	---	---	---	---	---	1	1
0010	1-05R	122-50	LT	R2-1	SPEED LIMIT (25)	25	24 X 30	---	---	---	---	---	---	1	1
0010	1-06	123+00	RT	R2-1	SPEED LIMIT (35)	35	24 X 30	1	---	---	5.00	---	---	---	---
0010	1-07R	123+00	RT	R2-1	SPEED LIMIT (35)	35	24 X 30	---	---	---	---	---	---	1	1
0010	1-08R	123+00	RT	I55-56	ADOPT A HIGHWAY	AMERICAN LEGION POST 223 HILLSBORO	30 X 36	---	---	---	---	---	---	1	1
0010	1-09R	125+00	LT	D7-95-L	STATE TRAIL (LEFT ARROW)	HILLSBORO STATE TRAIL	54 X 36	---	---	---	---	---	---	1	1
0010	1-10	125+00	LT	D7-95-L	STATE TRAIL (LEFT ARROW)	HILLSBORO STATE TRAIL	54 X 36	---	2	---	13.50	---	---	---	---
0010	1-11	125+00	RT	J4-3	REASSURANCE ASSEMBLY	EAST, NORTH, EAST 33, 80, 82	72 X 36	2	---	---	18.00	---	---	---	---
0010	1-12R	125+00	RT	J4-3	REASSURANCE ASSEMBLY	EAST, NORTH, EAST 33, 80, 82	72 X 36	---	---	---	---	---	---	1	2
0010	1-13R	126+00	LT	SP	WONEWOC	BIKE ROUTE, LEFT ARROW	66 X 15	---	---	---	---	---	---	1	1
0010	1-14	126+50	RT	I55-56	ADOPT A HIGHWAY	AMERICAN LEGION POST 223 HILLSBORO	30 X 36	1	---	---	7.50	---	---	---	---
0010	1-15	127+00	LT	D1-1	DESTINATION ARROW (LEFT ARROW)	WONEWOC	66 X 15	2	---	---	6.88	---	---	---	---
0010	1-16	128+00	RT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	1	---	---	6.00	---	---	---
0010	1-17R	128+00	RT	R2-1	SPEED LIMIT (35)	33	24 X 30	---	---	---	---	---	---	1	1
0010	1-18R	128+00	RT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	---	---	---	---	---	---	---
0010	1-19	129+00	LT	R2-1	SPEED LIMIT (35)	35	24 X 30	1	---	---	5.00	---	---	---	---
0010	1-20R	129+00	LT	R2-1	SPEED LIMIT (35)	35	24 X 30	---	---	---	---	---	---	1	1
0010	1-21	130+00	RT	R2-1	SPEED LIMIT (35)	35	24 X 30	1	---	---	5.00	---	---	---	---
0010	1-22R	131+00	LT	J1-2	JUNCTION ASSEMBLY	JCT, JCT HH, FF	48 X 39	---	---	---	---	---	---	2	2
0010	1-23	132+00	LT	J1-2	JUNCTION ASSEMBLY	JCT, JCT HH, FF	48 X 39	1	---	---	13.00	---	---	---	---
0010	1-24	132+50	RT	D2-1	DESTINATION DISTANCE	UNION CENTER 5	90 X 15	2	---	---	9.38	---	---	---	---
0010	1-25R	132+50	RT	D2-1	DESTINATION DISTANCE	UNION CENTER 5	90 X 15	---	---	---	---	---	---	1	2
0010	1-26R	134+00	LT	SP	ALTERNATE SIDE PARKING	---	---	---	---	---	---	---	---	1	1
0010	1-27	135+00	LT	R2-1	SPEED LIMIT (35)	35	24 X 30	1	---	---	5.00	---	---	---	---
0010	1-28R	135+00	LT	R2-1	SPEED LIMIT (35)	35	24 X 30	---	---	---	---	---	---	1	1
0010	1-29R	135+00	RT	R2-1	SPEED LIMIT (35)	35	24 X 30	---	---	---	---	---	---	1	1
0010	1-30	139+00	RT	R2-1	SPEED LIMIT (55)	55	24 X 30	1	---	---	5.00	---	---	---	---
0010	1-31R	139+00	RT	R2-1	SPEED LIMIT (55)	55	24 X 30	---	---	---	---	---	---	1	1
0010	1-32	139+00	LT	R2-1	SPEED LIMIT (35)	35	24 X 30	1	---	---	5.00	---	---	---	---
0010	1-33R	139+00	LT	R2-1	SPEED LIMIT (35)	35	24 X 30	---	---	---	---	---	---	1	1
0010	1-34R	141+00	LT	I2-3	POPULATION SIGN	HILLSBORO POPULATION 1417	66 X 24	---	---	---	---	---	---	1	2
0010	1-35	142+25	LT	I2-3	POPULATION SIGN	HILLSBORO POPULATION 1417	66 X 24	2	---	---	11.00	---	---	---	---

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PERMANENT SIGNING

CATEGORY	SIGN NO	APPROX STATION	LOCATION	SIGN CODE	DESCRIPTION	MESSAGE	SIZE IN X IN	634. 0614	634. 0616	634. 0618	637. 2210	637. 2230	638. 2102	638. 2602	638. 3000	REMARKS
								POSTS WOOD	POSTS WOOD	POSTS WOOD	SIGNS TYPE II	SIGNS TYPE II	MOVING SIGNS TYPE II	REMOVING SIGNS TYPE II	REMOVING SMALL SIGN SUPPORTS	
								4X6-INCH 14-FT EACH	4X6-INCH 16-FT EACH	4X6-INCH 18-FT EACH	REFLECTIVE H SF	REFLECTIVE F SF	EACH	EACH	EACH	
0010	1-36R	143+00	LT	W3-5	SPEED LIMIT (35) AHEAD	35	36 X 36	---	---	---	---	---	---	1	1	
0010	1-37	144+25	LT	W3-5	SPEED LIMIT (35) AHEAD	35	36 X 36	1	---	---	---	9. 00	---	---	---	
0010	1-38M	147+00	LT	SP	NO ENGINE BRAKING EXCEPT IN EMERGENCY	WITHIN VILLAGE LIMITS	---	---	---	---	---	---	1	---	---	MOVE FROM 145+00 TO 147+00
0010	1-39	170+00	LT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	1	---	---	6. 00	---	---	---	
0010	1-40R	174+00	LT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	---	---	---	---	---	1	1	
0010	2-01R	180+00	RT	J1-1	JUNCTION ASSEMBLY	JCT	24 X 39	---	---	---	---	---	---	1	1	
						HH	---	---	---	---	---	---	---	---	---	
0010	2-02	180+60	RT	J1-1	JUNCTION ASSEMBLY	JCT	24 X 39	1	---	---	6. 50	---	---	---	---	
						HH	---	---	---	---	---	---	---	---	---	
0010	2-03	188+00	LT	J4-3	REASSUREANCE ASSEMBLY	WEST, SOUTH, WEST	72 X 36	---	2	---	18. 00	---	---	---	---	
						33, 80, 82	---	---	---	---	---	---	---	---	---	
0010	2-04R	188+00	LT	J4-3	REASSUREANCE ASSEMBLY	WEST, SOUTH, WEST	72 X 36	---	---	---	---	---	---	1	2	
						33, 80, 82	---	---	---	---	---	---	---	---	---	
0010	2-05	190+00	RT	J13-1	DIRECTIONAL ASSEMBLY	HH	24 X 45	1	---	---	7. 50	---	---	---	---	
						LEFT ARROW	---	---	---	---	---	---	---	---	---	
0010	2-06R	190+00	RT	J13-1	DIRECTIONAL ASSEMBLY	HH	24 X 45	---	---	---	---	---	---	1	1	
						LEFT ARROW	---	---	---	---	---	---	---	---	---	
0010	2-07	189+75	LT	J13-3	DIRECTIONAL ASSEMBLY	33, 80, 82	72 X 45	---	2	---	22. 50	---	---	---	---	CTH HH
						DBL ARROW, DBL ARROW, DBL ARROW	---	---	---	---	---	---	---	---	---	
0010	2-08R	189+75	LT	J13-3	DIRECTIONAL ASSEMBLY	33, 80, 82	72 X 45	---	---	---	---	---	---	1	2	CTH HH
						DBL ARROW, DBL ARROW, DBL ARROW	---	---	---	---	---	---	---	---	---	
0010	2-09	190+00	LT	R1-1	STOP	---	30 X 30	1	---	---	5. 18	---	---	---	---	CTH HH
0010	2-10R	190+00	LT	R1-1	STOP	---	30 X 30	---	---	---	---	---	---	1	1	CTH HH
0010	2-11	190+50	RT	W1-7	TWO DIRECTION LARGE ARROW	---	48 X 24	1	---	---	---	8. 00	---	---	---	
0010	2-12R	190+50	RT	W1-7	TWO DIRECTION LARGE ARROW	---	48 X 24	---	---	---	---	---	---	1	1	
0010	2-13	191+00	LT	J13-1	DIRECTIONAL ASSEMBLY	HH	24 X 45	1	---	---	7. 50	---	---	---	---	
						RIGHT ARROW	---	---	---	---	---	---	---	---	---	
0010	2-14R	191+00	LT	J13-1	DIRECTIONAL ASSEMBLY	HH	24 X 45	---	---	---	---	---	---	1	1	
						RIGHT ARROW	---	---	---	---	---	---	---	---	---	
0010	2-15	193+00	RT	J4-3	REASSUREANCE ASSEMBLY	EAST, NORTH, EAST	72 X 36	---	2	---	18. 00	---	---	---	---	
						33, 80, 82	---	---	---	---	---	---	---	---	---	
0010	2-16R	193+00	RT	J4-3	REASSUREANCE ASSEMBLY	EAST, NORTH, EAST	72 X 36	---	---	---	---	---	---	1	2	
						33, 80, 82	---	---	---	---	---	---	---	---	---	
0010	2-17R	199+00	LT	J1-1	JUNCTION ASSEMBLY	JCT	24 X 39	---	---	---	---	---	---	1	1	
						HH	---	---	---	---	---	---	---	---	---	
0010	2-18	200+00	LT	J1-1	JUNCTION ASSEMBLY	JCT	24 X 39	1	---	---	6. 50	---	---	---	---	
						HH	---	---	---	---	---	---	---	---	---	
0010	2-19R	201+00	RT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	---	---	---	---	---	1	1	
0010	2-20	204+00	RT	J1-1	JUNCTION ASSEMBLY	JCT	24 X 39	1	---	---	6. 50	---	---	---	---	
						WW	---	---	---	---	---	---	---	---	---	
0010	2-21R	205+00	RT	J1-1	JUNCTION ASSEMBLY	JCT	24 X 39	---	---	---	---	---	---	1	1	
						WW	---	---	---	---	---	---	---	---	---	
0010	2-22R	205+00	LT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	---	---	---	---	---	1	1	
0010	2-23	212+00	LT	J4-3	REASSUREANCE ASSEMBLY	WEST, SOUTH, WEST	72 X 36	---	2	---	18. 00	---	---	---	---	
						33, 80, 82	---	---	---	---	---	---	---	---	---	
0010	2-24R	212+00	LT	J4-3	REASSUREANCE ASSEMBLY	WEST, SOUTH, WEST	72 X 36	---	---	---	---	---	---	1	2	
						33, 80, 82	---	---	---	---	---	---	---	---	---	

PERMANENT SIGNING															
CATEGORY	SIGN NO	APPROX STATION	LOCATION	SIGN CODE	DESCRIPTION	MESSAGE	SIZE IN X IN	634.0614	634.0616	634.0618	637.2210	637.2230	638.2102	638.2602	638.3000
								POSTS WOOD 4X6-INCH 14-FT EACH	POSTS WOOD 4X6-INCH 16-FT EACH	POSTS WOOD 4X6-INCH 18-FT EACH	SIGNS TYPE II REFLECTIVE H SF	SIGNS TYPE II REFLECTIVE F SF	MOVING SIGNS TYPE II EACH	REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH
0010	2-25	213+00	RT	J13-1	DIRECTI ONAL ASSEMBLY	WW	24 X 45	1	---	---	7.50	---	---	---	---
						LEFT ARROW	---	---	---	---	---	---	---	---	---
0010	2-26R	213+00	RT	J13-1	DIRECTI ONAL ASSEMBLY	WW	24 X 45	---	---	---	---	---	---	1	1
						LEFT ARROW	---	---	---	---	---	---	---	---	---
0010	2-27	10+30W	LT	J13-3	DIRECTI ONAL ASSEMBLY	33, 30, 82	72 X 45	---	2	---	22.50	---	---	---	CTH WW
						DBL ARROW, DBL ARROW, DBL ARROW	---	---	---	---	---	---	---	---	---
0010	2-28R	10+30W	LT	J13-3	DIRECTI ONAL ASSEMBLY	33, 30, 82	72 X 45	---	---	---	---	---	---	1	2
						DBL ARROW, DBL ARROW, DBL ARROW	---	---	---	---	---	---	---	---	---
0010	2-29	10+30W	LT	R1-1	STOP	---	30 X 30	1	---	---	5.18	---	---	---	CTH WW
0010	2-30R	10+30W	LT	R1-1	STOP	---	30 X 30	---	---	---	---	---	---	1	1
0010	2-31	214+00	RT	W1-7	TWO DI RECTI ON LARGE ARROW	---	48 X 24	1	---	---	---	8.00	---	---	CTH WW
0010	2-32R	214+00	RT	W1-7	TWO DI RECTI ON LARGE ARROW	---	48 X 24	---	---	---	---	---	---	1	1
0010	2-33	215+00	RT	J4-3	REASSUREANCE ASSEMBLY	EAST, NORTH, EAST	72 X 36	---	2	---	18.00	---	---	---	---
						33, 80, 82	---	---	---	---	---	---	---	---	---
0010	2-34R	215+00	RT	J4-3	REASSUREANCE ASSEMBLY	EAST, NORTH, EAST	72 X 36	---	---	---	---	---	---	1	2
						33, 80, 82	---	---	---	---	---	---	---	---	---
0010	2-35	215+00	LT	J13-1	DIRECTI ONAL ASSEMBLY	---	24 X 45	1	---	---	7.50	---	---	---	---
						RI GHT ARROW	---	---	---	---	---	---	---	---	---
0010	2-36R	215+00	LT	J13-1	DIRECTI ONAL ASSEMBLY	---	24 X 45	---	---	---	---	---	---	1	1
						RI GHT ARROW	---	---	---	---	---	---	---	---	---
0010	2-37	224+40	LT	J1-1	JUNCTI ON ASSEMBLY	JCT	24 X 39	1	---	---	6.50	---	---	---	---
						WW	---	---	---	---	---	---	---	---	---
0010	2-38R	226+00	LT	J1-1	JUNCTI ON ASSEMBLY	JCT	24 X 39	---	---	---	---	---	---	1	1
						WW	---	---	---	---	---	---	---	---	---
0010	2-39	230+50	LT	I2-2	VERNON CO	---	60 X 15	2	---	---	6.25	---	---	---	---
0010	2-40R	230+50	LT	I2-2	VERNON CO	---	60 X 15	---	---	---	---	---	---	1	2
0010	2-41	230+50	RT	I2-2	JUNEAU CO	---	60 X 15	2	---	---	6.25	---	---	---	---
0010	2-42R	230+50	RT	I2-2	JUNEAU CO	---	60 X 15	---	---	---	---	---	---	1	2
0010	2-43R	232+00	RT	I55-56	ADOPT A HIGHWAY	WONEWOC	30 X 36	---	---	---	---	---	---	1	1
						CENTER FFA	---	---	---	---	---	---	---	---	---
0010	2-44R	232+00	LT	I55-56	ADOPT A HIGHWAY	AMERI CAN LEGI ON	30 X 36	---	---	---	---	---	---	1	1
						POST 223	---	---	---	---	---	---	---	---	---
						HILLSBORO	---	---	---	---	---	---	---	---	---
0010	2-45	233+00	LT	I55-56	ADOPT A HIGHWAY	AMERI CAN LEGI ON	30 X 36	---	1	---	7.50	---	---	---	---
						POST 223	---	---	---	---	---	---	---	---	---
						HILLSBORO	---	---	---	---	---	---	---	---	---
0010	2-46	233+00	RT	I55-56	ADOPT A HIGHWAY	WONEWOC	30 X 36	---	1	---	7.50	---	---	---	---
						CENTER FFA	---	---	---	---	---	---	---	---	---
0010	2-47R	235+00	RT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	---	---	---	---	---	1	1
0010	3-01	237+75	LT	R1-1	STOP	---	30 X 30	1	---	---	5.18	---	---	---	BASS RD
0010	3-02R	237+75	LT	R1-1	STOP	---	30 X 30	---	---	---	---	---	---	1	1
															BASS RD

PERMANENT SIGNING

CATEGORY	SIGN NO	APPROX STATION	LOCATION	SIGN CODE	DESCRIPTION	MESSAGE	SIZE IN X IN	634.0614	634.0616	634.0618	637.2210	637.2230	638.2102	638.2602	638.3000	REMARKS
								POSTS WOOD	POSTS WOOD	POSTS WOOD	637.2210	637.2230	638.2102	638.2602	REMOVING	
								4X6-INCH	4X6-INCH	4X6-INCH	SIGNS TYPE II	SIGNS TYPE II	Moving SIGNS	REMOVING SIGNS	SMALL SIGN	
REFLECTIVE H SF	REFLECTIVE F SF	SIGNS TYPE II	SIGNS TYPE II	SUPPORTS												
0010	3-03	245+00	RT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	1	---	---	6.00	---	---	---	
0010	3-04	261+00	LT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	1	---	---	6.00	---	---	---	
0010	3-05	287+00	LT	R1-1	STOP	---	30 X 30	1	---	---	5.18	---	---	---	---	RAESE RD
0010	3-06R	287+00	LT	R1-1	STOP	---	30 X 30	---	---	---	---	---	---	1	1	RAESE RD
0010	3-07	286+50	RT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	1	---	---	6.00	---	---	---	
0010	3-08	293+75	RT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	1	---	---	6.00	---	---	---	
0010	4-01	301+50	RT	R1-1	STOP	---	30 X 30	1	---	---	5.18	---	---	---	---	SMITH RD
0010	4-02R	301+50	RT	R1-1	STOP	---	30 X 30	---	---	---	---	---	---	1	1	SMITH RD
0010	4-03	313+50	RT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	1	---	---	6.00	---	---	---	
0010	4-04R	338+00	RT	W3-5	SPEED LIMIT (40) AHEAD	40	36 X 36	---	---	---	---	---	---	1	1	
0010	4-05M	339+00	RT	SP	NO ENGINE BREAKING EXCEPT IN EMERGENCY	WITHIN VILLAGE LIMITS	---	---	---	---	---	---	1	---	---	MOVE FROM 344+00 TO 339+00
0010	4-06R	340+00	RT	J2-3	DIRECTIONAL ASSEMBLY	NORTH, EAST, EAST 80, 82, 33 LEFT, LEFT, AHEAD	72 X 57	---	---	---	---	---	---	1	2	
0010	4-07	341+00	RT	W3-5	SPEED LIMIT (40) AHEAD	40	36 X 36	---	1	---	---	9.00	---	---	---	
0010	4-08R	341+50	RT	I2-3	POPULATION SIGN	UNION CENTER POPULATION 200	84 X 24	---	---	---	---	---	---	1	2	
0010	4-09	342+00	LT	I55-56	ADOPT A HIGHWAY	WONEWOC CENTER FFA	30 X 36	1	---	---	7.50	---	---	---	---	
0010	4-10R	342+00	LT	I55-57	ADOPT A HIGHWAY	WONEWOC CENTER FFA	30 X 36	---	---	---	---	---	---	1	1	
0010	4-11	344+00	RT	J2-3	DIRECTIONAL ASSEMBLY	NORTH, EAST, EAST 80, 82, 33 LEFT, LEFT, AHEAD	72 X 57	---	1	1	28.50	---	---	---	---	
0010	4-12R	334+00	LT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	---	---	---	---	---	1	1	
0010	4-13	334+00	LT	W14-3	NO PASSING ZONE PENNANT	---	48 X 36	---	1	---	---	6.00	---	---	---	
0010	4-14	346+00	LT	R2-1	SPEED LIMIT (55)	55	24 X 30	1	---	---	5.00	---	---	---	---	
0010	4-15R	346+00	LT	R2-1	SPEED LIMIT (55)	55	24 X 30	---	---	---	---	---	---	1	1	
0010	4-16	346+00	RT	R2-1	SPEED LIMIT (40)	40	24 X 30	1	---	---	5.00	---	---	---	---	
0010	4-17R	346+00	RT	R2-1	SPEED LIMIT (40)	40	24 X 30	---	---	---	---	---	---	1	1	
0010	4-18	348+00	RT	I2-3	POPULATION SIGN	UNION CENTER POPULATION 200	84 X 24	2	---	---	14.00	---	---	---	---	
TOTAL 0010								43	26	1	415.65	82.00	2	56	68	

PAVEMENT MARKING										
					646. 0106		646. 2304. S	649. 0402		
					PAVEMENT	PAVEMENT	PAVEMENT	TEMPORARY		
					MARKI NG	MARKI NG	MARKI NG	PAVEMENT		
					EPOXY	EPOXY	GROOVED WET	PAI NT		
					4-I NCH	4-I NCH	REFLECTI VE	4-I NCH		
					YELLOW	WHI TE	EPOXY	YELLOW		
					LF	LF	WHI TE	WHI TE		
					LF	LF	MARKI NGS	LF	LF	REMARKS
0010	122+37	-	190+00	LT	---	---	---	6763	---	EDGE LI NE
0010	122+37	-	300+75	RT	---	---	---	17838	---	EDGE LI NE
0010	122+37	-	123+00	CL	126	---	---	---	---	DOUBLE SOLI D CENTERLINE
0010	123+00	-	128+00	CL	625	---	---	---	---	DASHED, SOLI D CENTERLINE
0010	128+00	-	169+00	CL	1025	---	---	---	---	DASHED CENTER LI NE
0010	169+00	-	180+00	CL	1375	---	---	---	---	SOLID, DASHED CENTERLINE
0010	180+00	-	230+00	CL	10000	---	---	---	---	DOUBLE SOLID CENTERLINE
0010	190+00	-	191+10	LT	---	---	---	28	---	DASHED EDGE LI NE (2' LI NE, 6' GAP) CTH HH
0010	191+10	-	213+50	LT	---	---	---	2240	---	EDGE LI NE
0010	212+50	-	215+00	RT	---	63	---	---	---	DASHED LANE LI NE CTH WW
0010	214+50	-	237+60	LT	---	---	---	2310	---	EDGE LI NE
0010	230+00	-	241+00	CL	1375	---	---	---	---	DASHED, SOLI D CENTERLINE
0010	238+30	-	287+00	LT	---	---	---	4870	---	EDGE LI NE
0010	287+70	-	347+54	LT	---	---	---	5984	---	EDGE LI NE
0010	241+00	-	261+00	CL	500	---	---	---	---	DASHED CENTERLINE
0010	261+00	-	272+00	CL	1375	---	---	---	---	DASHED, SOLI D CENTERLINE
0010	272+00	-	276+00	CL	800	---	---	---	---	DOUBLE SOLID CENTERLINE
0010	276+00	-	287+35	CL	1419	---	---	---	---	DASHED, SOLI D CENTERLINE
0010	287+35	-	294+00	CL	166	---	---	---	---	DASHED CENTERLINE
0010	294+00	-	313+00	CL	2375	---	---	---	---	DASHED, SOLI D CENTERLINE
0010	301+50	-	347+54	RT	---	---	---	4604	---	EDGE LI NE
0010	313+00	-	346+25	CL	831	---	---	---	---	DASHED CENTERLINE
0010	346+25	-	347+54	CL	161	---	---	---	---	DASHED, SOLI D CENTERLINE
0010	122+37	-	347+54	CL	---	---	11077	---	11077	REMOVING TEMP. CENTERLINE
SUB TOTAL 0010					22153	63	11077	44637	11077	
TOTAL 0010					22216					

TRAFFIC CONTROL

CATEGORY	LOCATION	SIGN CODE	MESSAGE	SERVICE PERIOD DAYS	643.0300 TRAFFIC CONTROL DRUMS		643.0900 TRAFFIC CONTROL SIGNS		REMARKS
					NO	DAY	NO	DAY	
0010	STH 33	W20-1-A	ROAD WORK AHEAD	35	---	---	14	490	
0010	STH 33	W20-1 (MOD)	ROAD WORK 250 FT	35	---	---	2	70	
0010	STH 33	W20-1-D	ROAD WORK 500 FT	35	---	---	2	70	
0010	STH 33	G20-2A	END ROAD WORK	35	---	---	2	70	
0010	177+68	---	---	3	17	51	---	---	GUARDRAIL
0010	CTH WW	---	---	3	19	57	---	---	GUARDRAIL
TOTAL 0010					108		700		

LOCATING NO-PASSING ZONES

CATEGORY	STATION	TO	STATION	LOCATION	648.0100	REMARKS
					MI	
0010	122+37	-	347+54	RT/LT	4.26	PROJECT LIMITS
TOTAL 0010					4.26	

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT)

CATEGORY	STATION	TO	STATION	LOCATION	650.9910	REMARKS
					LS	
0010	122+37	-	347+54		1	PROJECT LIMITS
TOTAL 0010					1	

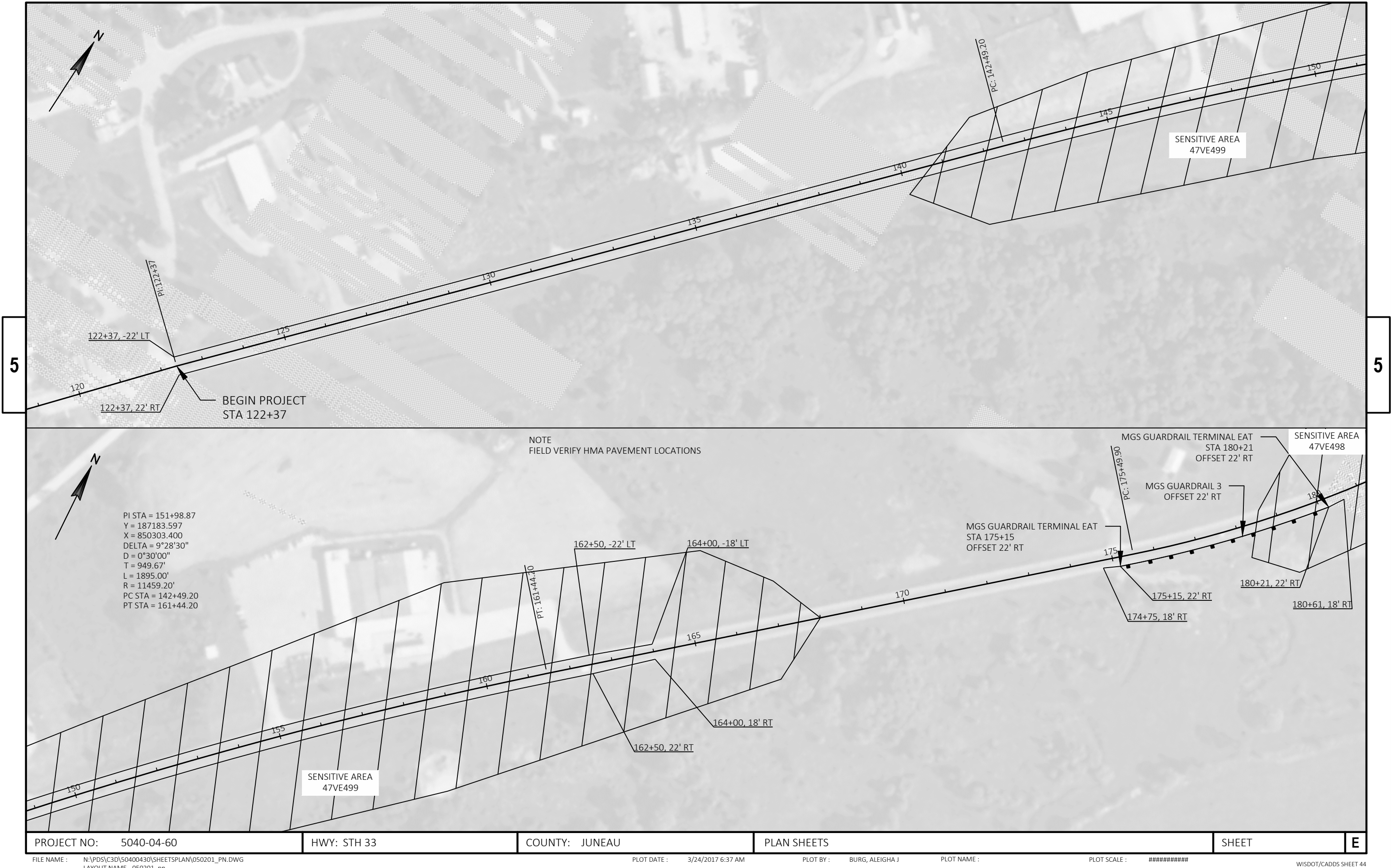
CONSTRUCTION STAKING RESURFACING REFERENCE

CATEGORY	STATION	TO	STATION	LOCATION	650.8000	REMARKS
					LF	
0010	122+37	-	347+54	MAINLINE	22517	PROJECT LIMITS
TOTAL 0010					22517	

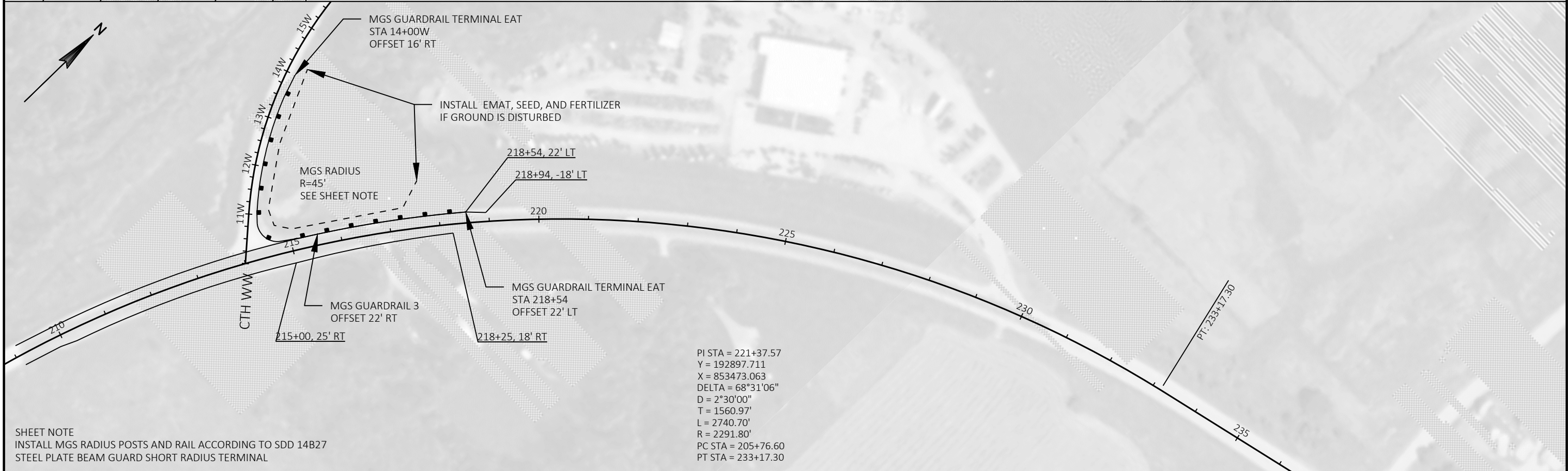
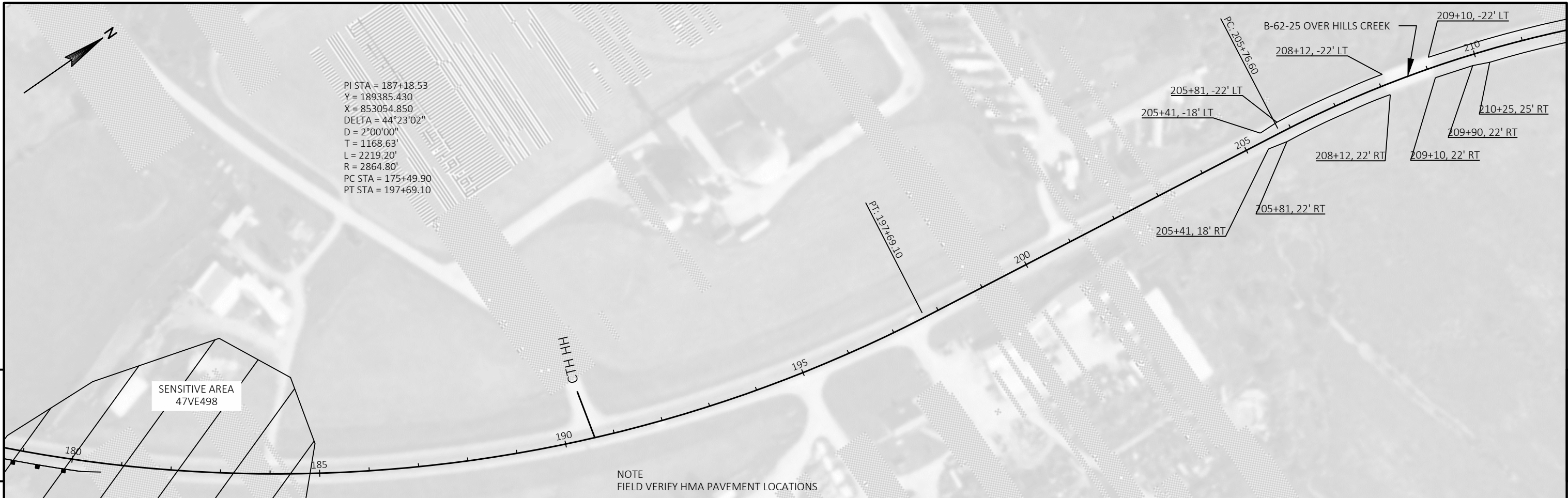
SPECIAL 01. REMOVING DISTRESSED PAVEMENT MILLING

CATEGORY	STATION	TO	STATION	LOCATION	SPV.0180	REMARKS
					SY	
0010	122+37	-	162+50	RT/LT	1784	SHOULDERS
TOTAL 0010					1784	









SHEET NOTE  
INSTALL MGS RADIUS POSTS AND RAIL ACCORDING TO SDD 14B27  
STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

PROJECT NO: 5040-04-60	HWY: STH 33	COUNTY: JUNEAU	PLAN SHEETS	SHEET	E
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PROJECT NO: 5040-04-60

HWY: STH 33

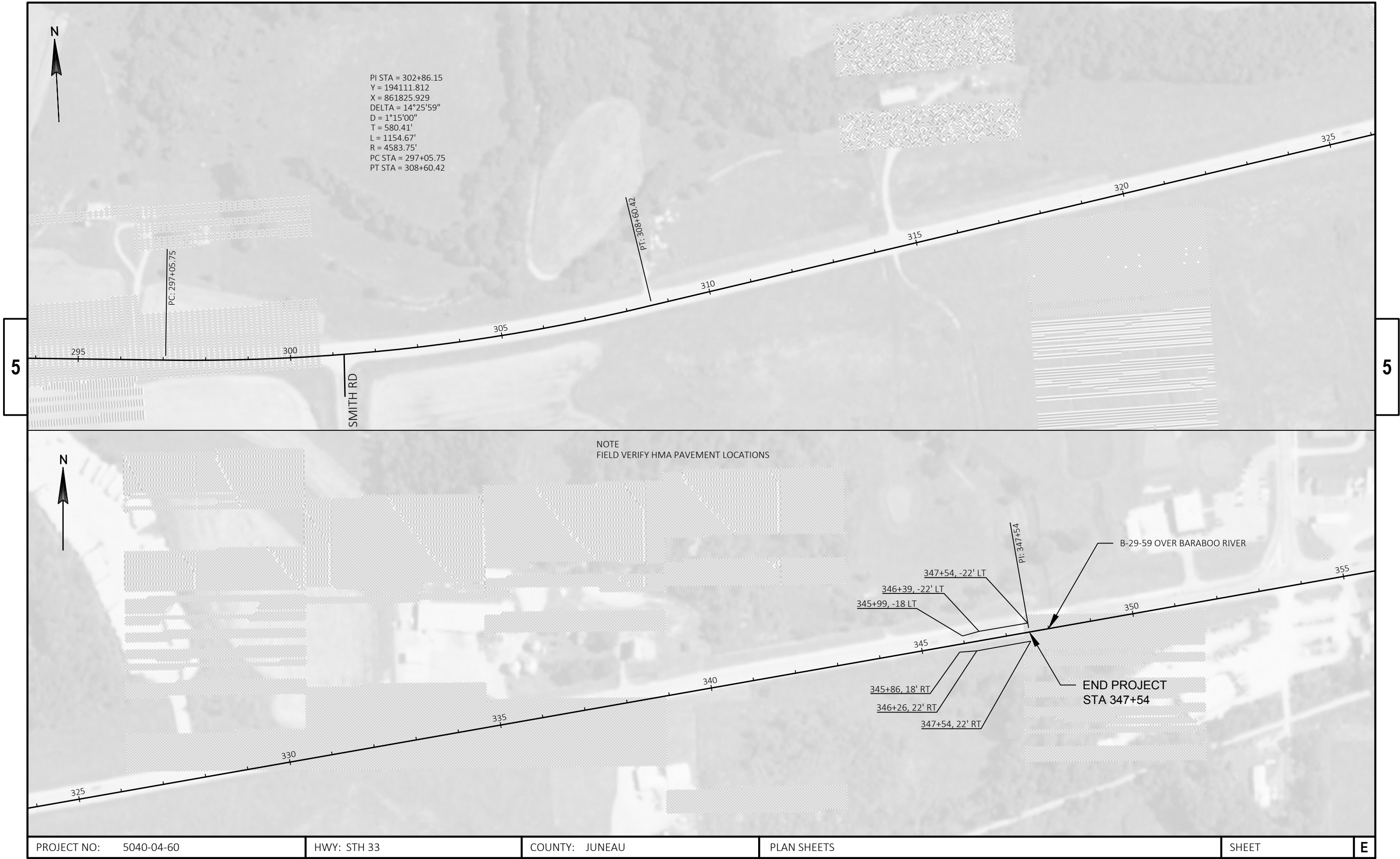
COUNTY: JUNEAU

PLAN SHEETS

SHEET

E





PROJECT NO: 5040-04-60	HWY: STH 33	COUNTY: JUNEAU	PLAN SHEETS	SHEET	E
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Standard Detail Drawing List

13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B27-01A	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01B	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B27-01C	STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M. P. H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

GENERAL NOTES

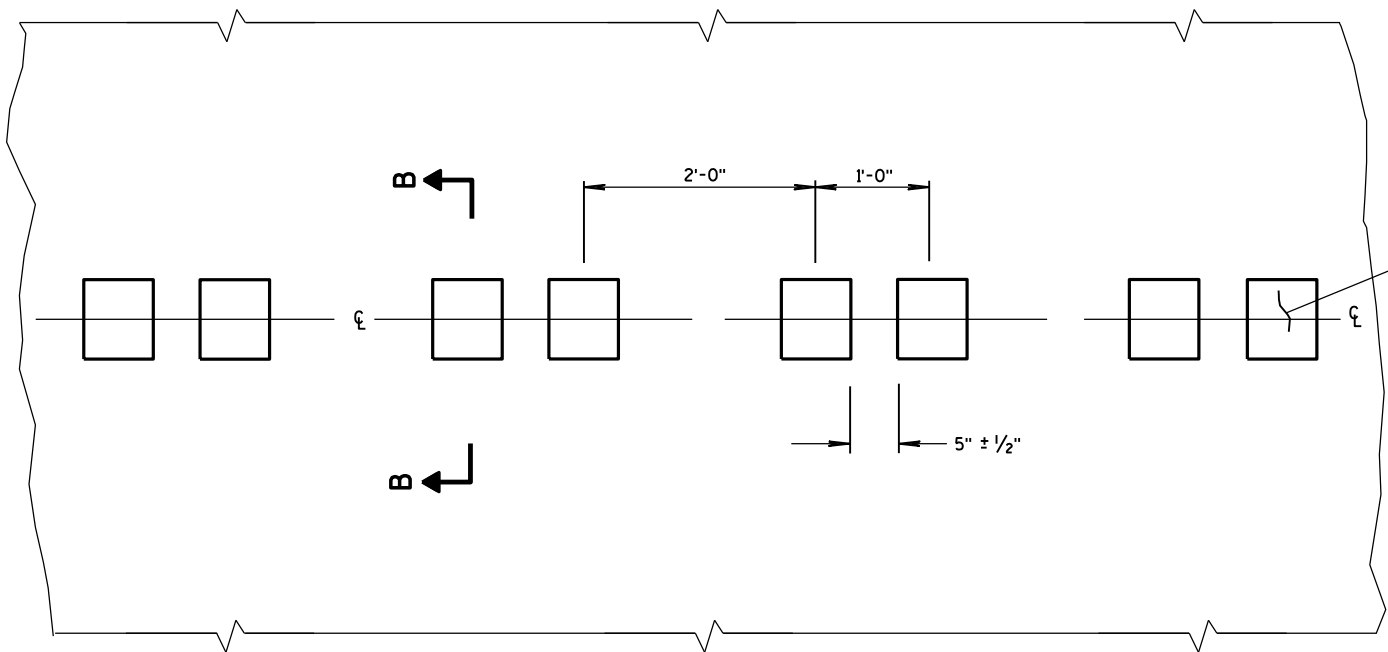
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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

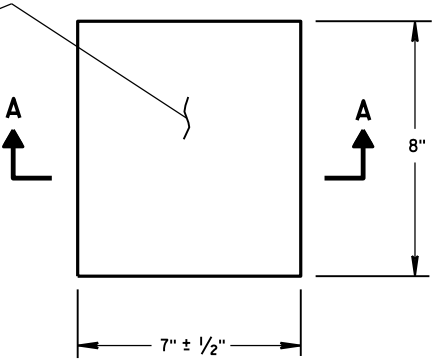
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

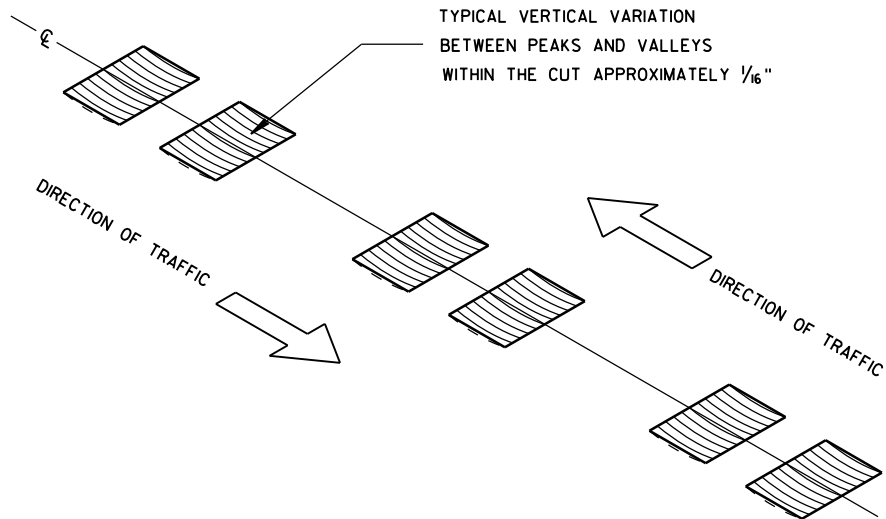
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



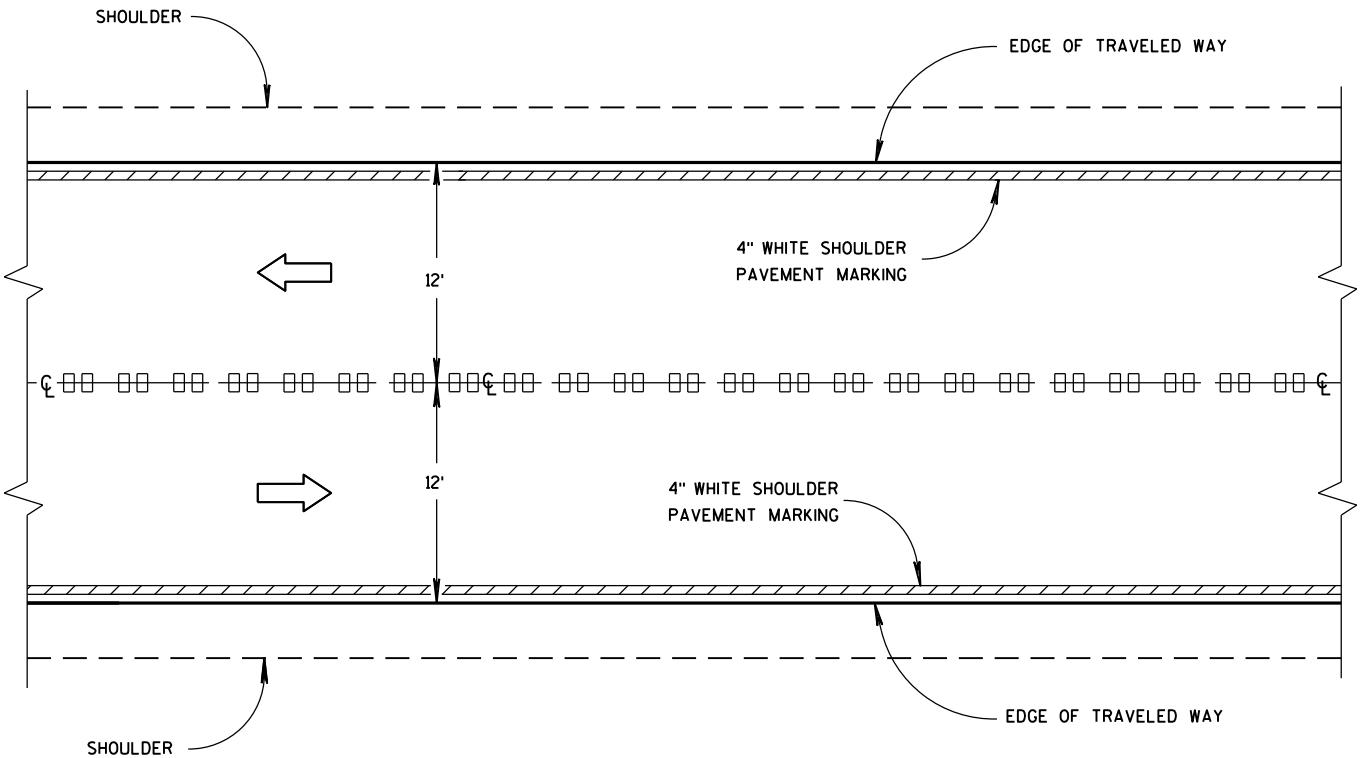
PLAN VIEW  
CENTER LINE WITH GROOVES



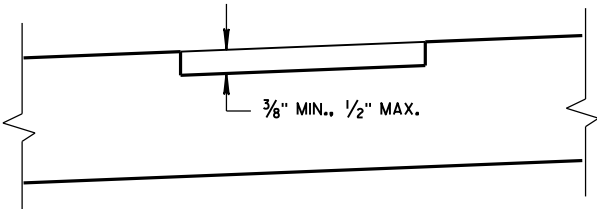
PLAN VIEW  
(SINGLE GROOVE)



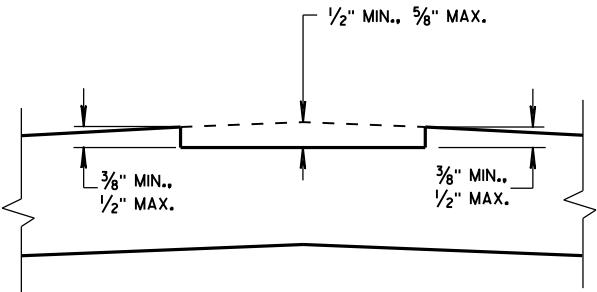
ISOMETRIC



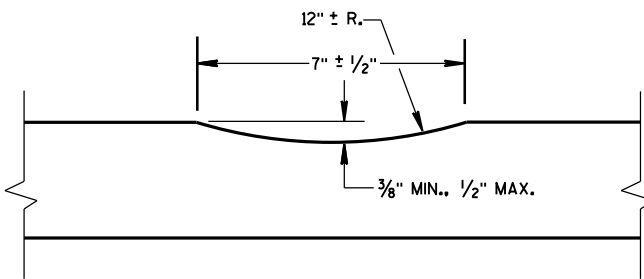
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B  
SUPERELEVATED ROADWAY



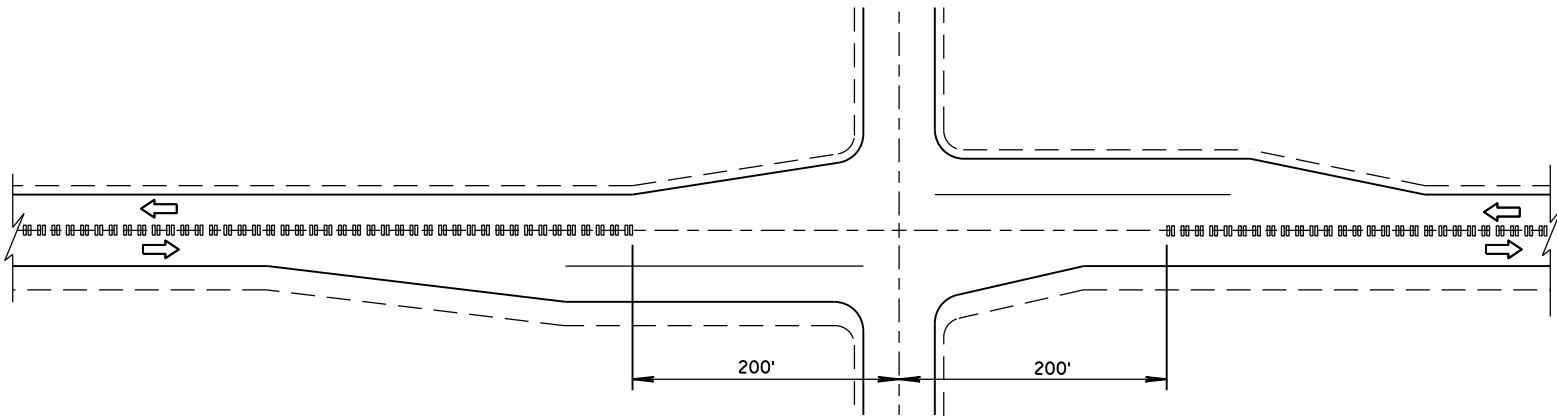
SECTION B-B  
CROWNED ROADWAY



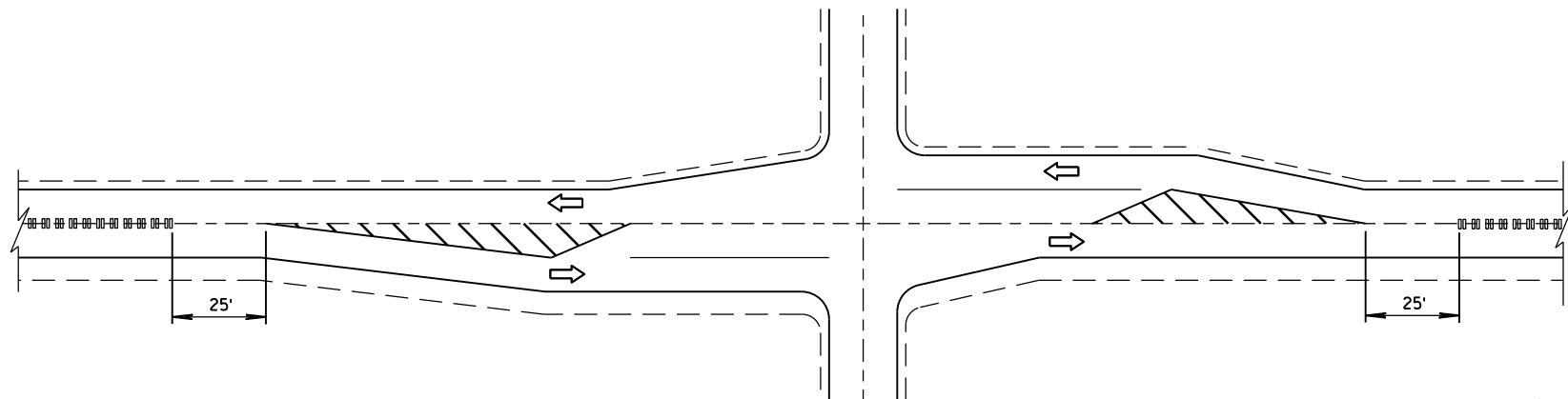
SECTION A-A

2-LANE RURAL  
CENTER LINE RUMBLE STRIP,  
MILLING

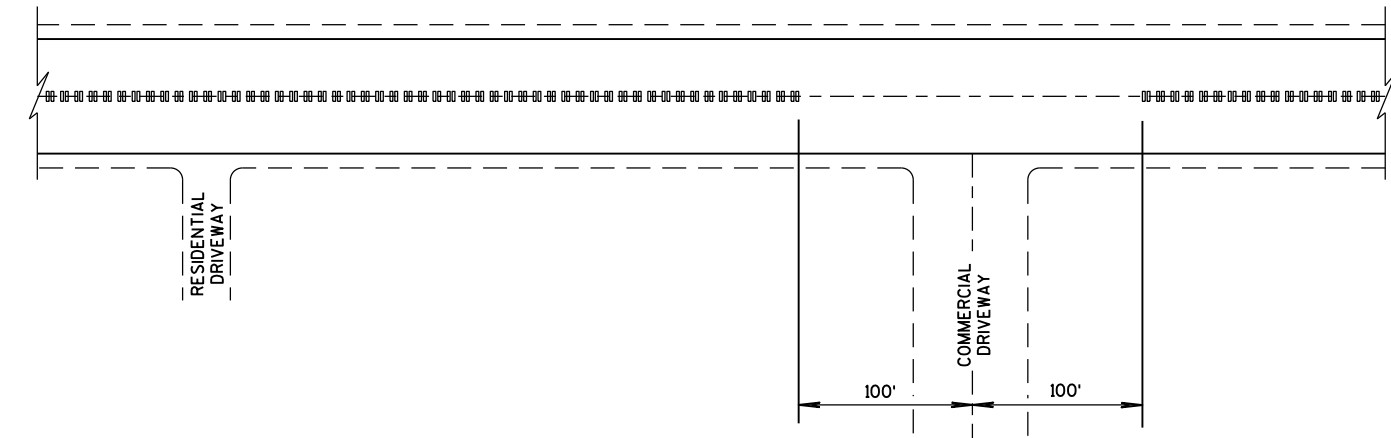
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



CENTER LINE GROOVES AT INTERSECTIONS

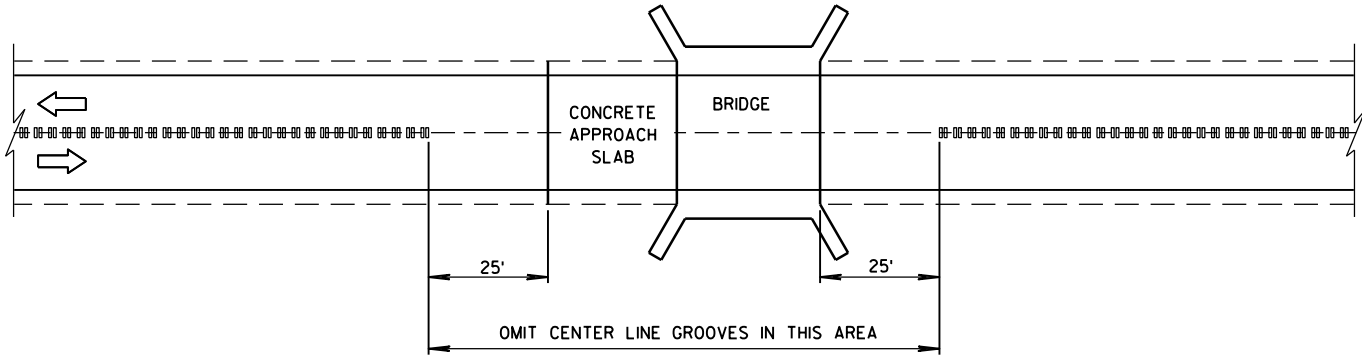


CENTER LINE GROOVES AT INTERSECTIONS  
(WITH LEFT TURN LANES)

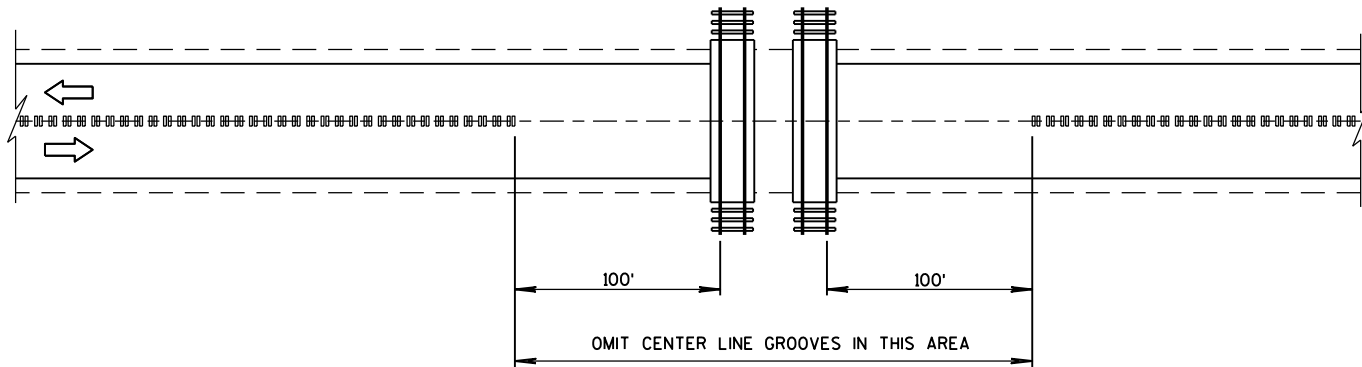


CENTER LINE GROOVES AT DRIVEWAYS<sup>①</sup>

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

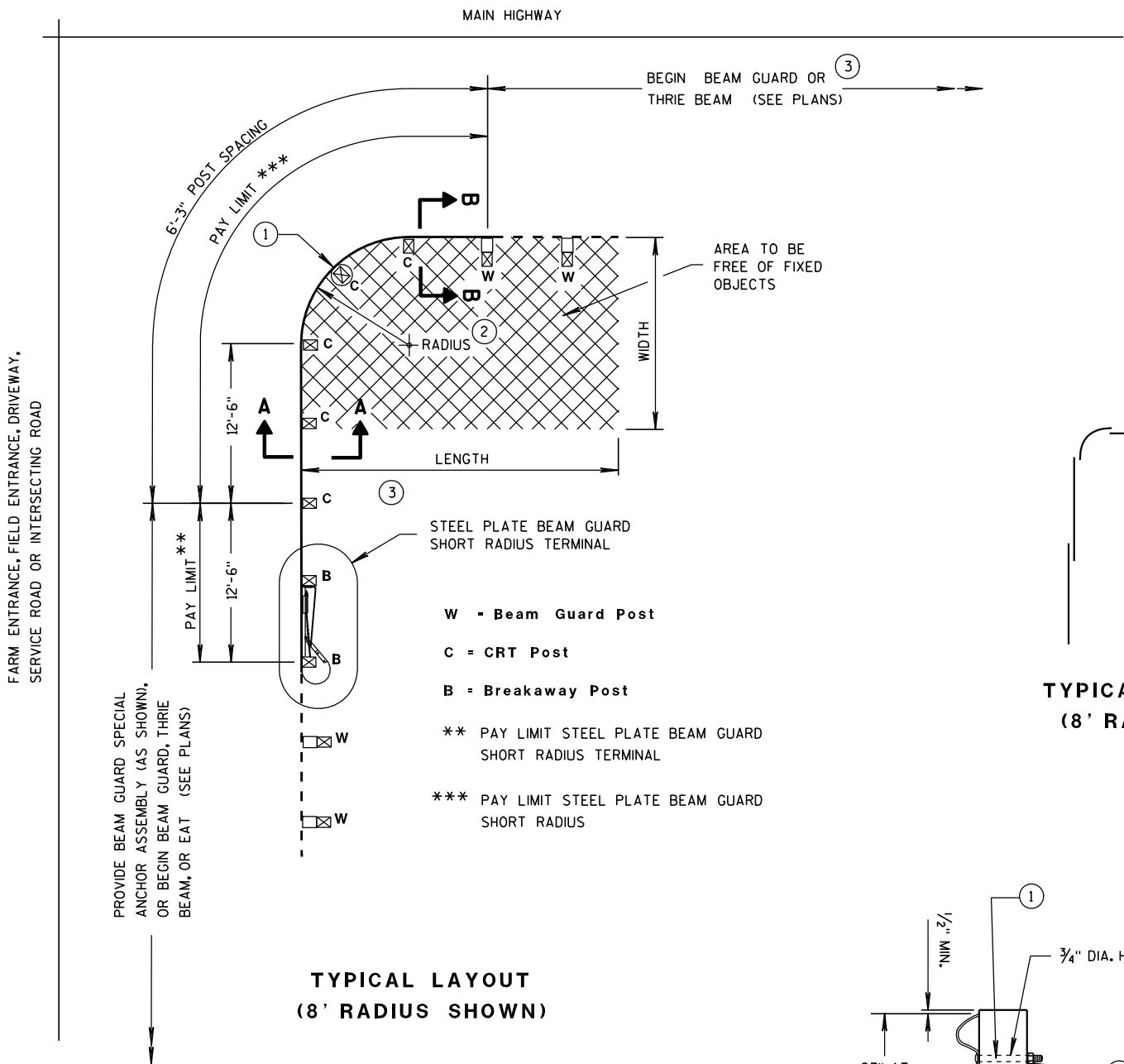


CENTER LINE GROOVES AT BRIDGES

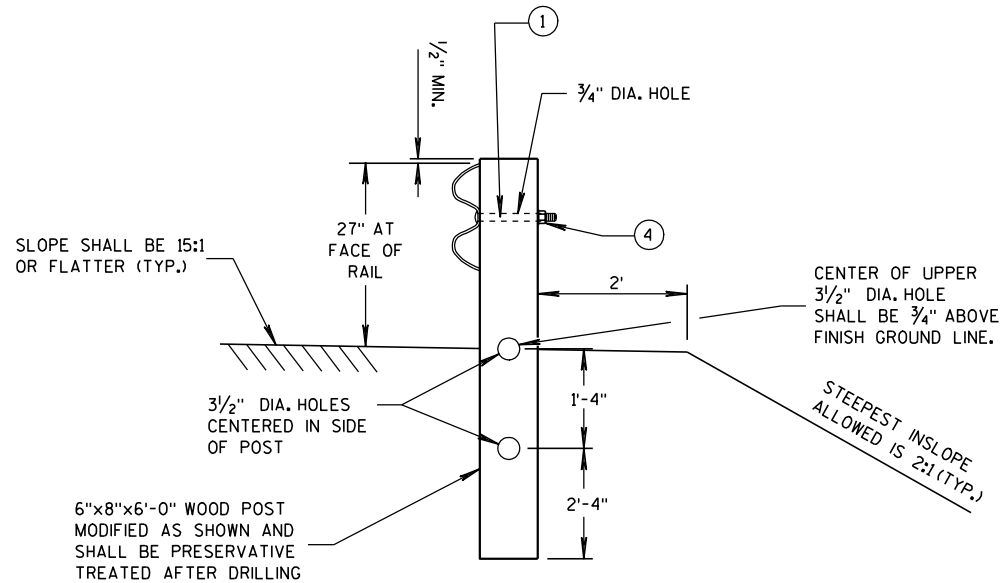


CENTER LINE GROOVES AT RAILROADS

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



TYPICAL LAYOUT  
(8' RADIUS SHOWN)



SECTION A-A  
(CRT POST)

TYPICAL LAP SPLICES  
(8' RADIUS SHOWN)

GENERAL NOTES

ALL ANGLES, CHANNELS, AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A36 AND THE STRUCTURAL TUBING SHALL CONFORM TO ASTM A 500. WELDING SHALL MEET THE CURRENT REQUIREMENTS OF THE AMERICAN WELDING SOCIETY STRUCTURAL WELDING CODE ANSI/AWS D1.1. ALL STRUCTURAL STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A 123. PUNCHING, DRILLING, CUTTING, OR WELDING WILL NOT BE PERMITTED AFTER GALVANIZING. FURNISH AND INSTALL HARDWARE PER STANDARD SPECIFICATION 614.2, UNLESS NOTED OTHERWISE.

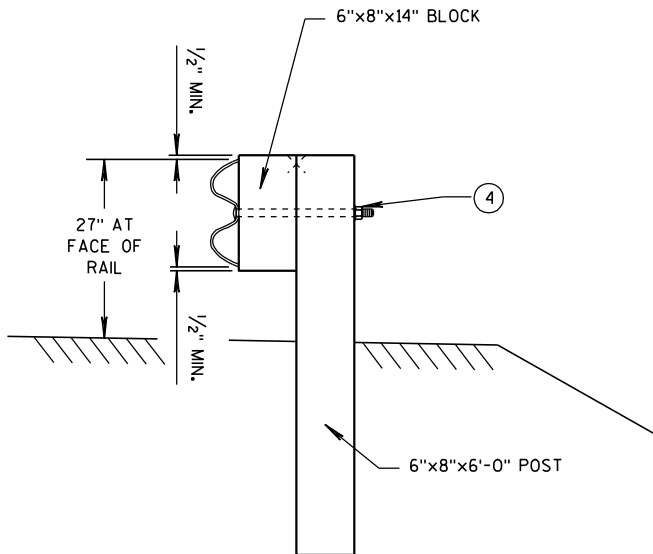
SHOP BEND CURVED RAIL SECTIONS.

SEE STANDARD DETAIL DRAWING 14 B 15 FOR OTHER DETAIL.

- ① ON THE 8 FOOT RADIUS INSTALLATION, DO NOT INSTALL BUTTON HEAD BOLT AT CENTER CRT POST.
- ② RADIUS FROM 8' - 36'. SEE PLAN.
- ③ HEIGHT TRANSITION MAY BE REQUIRED. SEE PLAN OR PROJECT ENGINEER.
- ④ 5/8" Ø X 1'-6" BUTTON HEAD BOLT AND RECESS NUT WITH ROUND WASHER UNDER NUT.

RADIUS	NUMBER OF CRT POSTS	*NUMBER AND LENGTH OF CURVED RAILS	REQUIRED AREA FREE OF FIXED OBJECTS (LENGTH x WIDTH)
8'	5	1 at 12.5'	25' x 15'
16'	7	1 at 25'	30' x 15'
24'	9	1 at 25' and 1 at 12.5'	40' x 20'
32'	11	2 at 25'	50' x 20'

\* THE NUMBER OF RAILS IS BASED ON A 90° INTERSECTION. SEE PLAN FOR NON 90° INSTALLATIONS.

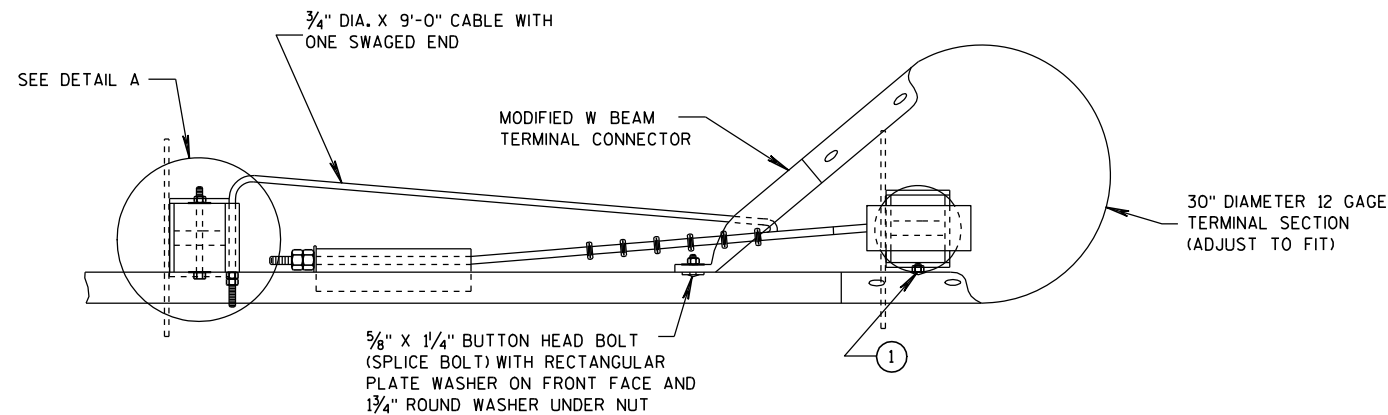


SECTION B-B  
(BEAM GUARD POST)

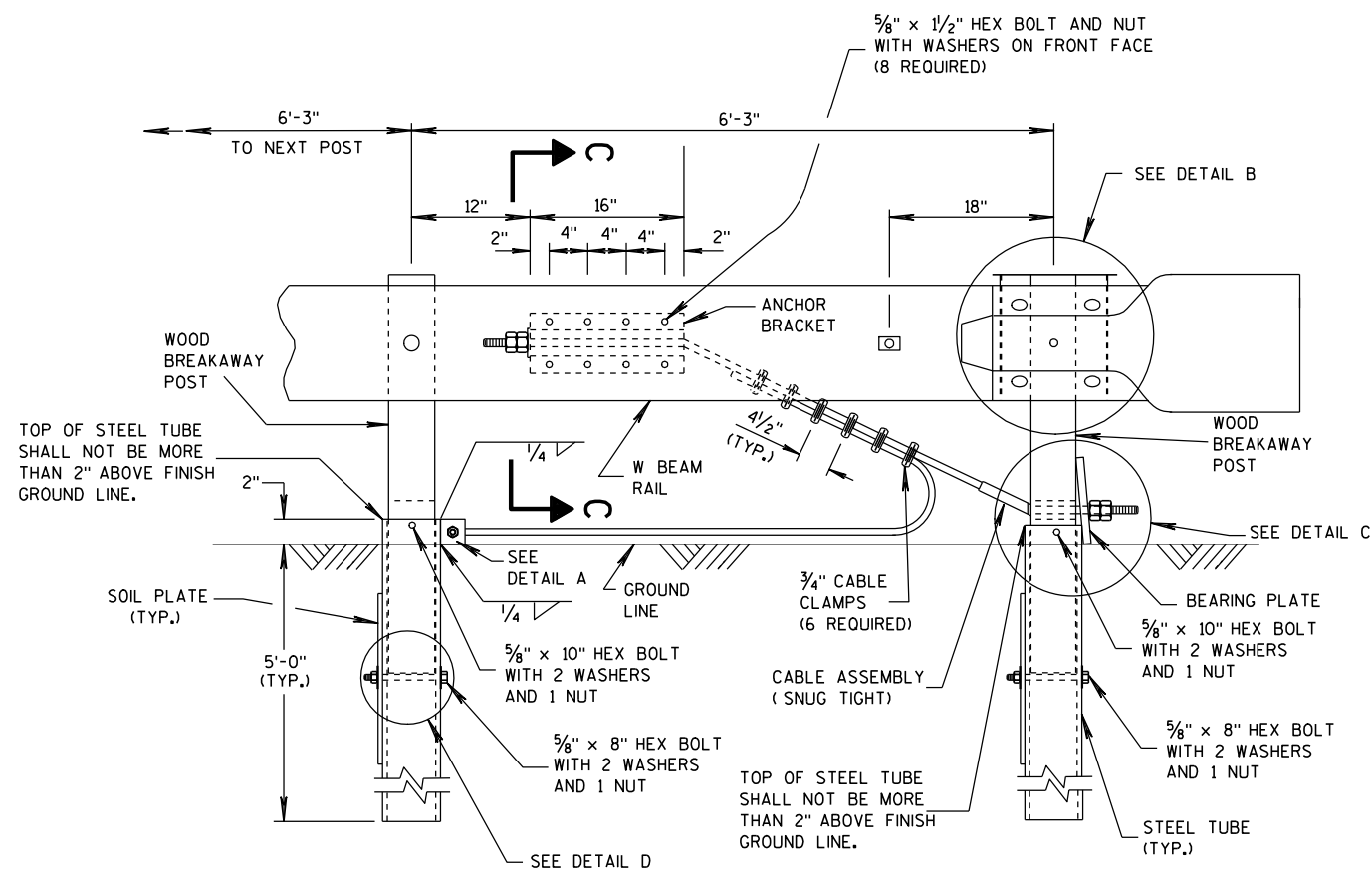
STEEL PLATE BEAM GUARD  
SHORT RADIUS TERMINAL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION





PLAN VIEW

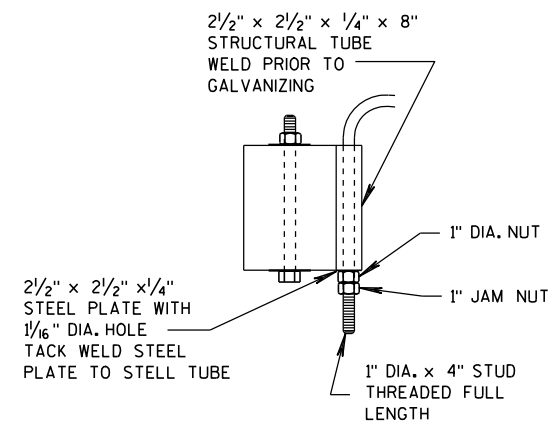


ELEVATION VIEW

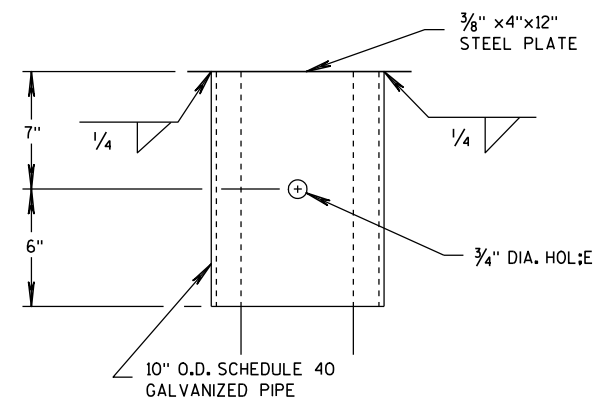
# STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL

## GENERAL NOTES

- ATTACH W BEAM RAIL TO THE STEEL PIPE WITH A 5/8" X 2" BUTTON HEAD BOLT WITH NO WASHER. CONNECTION TO THE POST IS NOT REQUIRED.
- INSTALL GALVANIZED 3/4" (6X19) PREFORMED WIRE OR INDEPENDENT WIRE ROPE CORE CONFORMING TO AASHTO M 30. MANUFACTURE WIRE ROPE OUT OF IMPROVED PLOW STEEL WITH A MINIMUM BREAKING STRENGTH OF 42,800 PSI.



DETAIL A

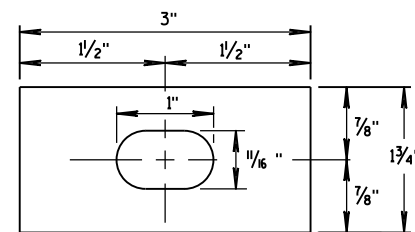


DETAIL B

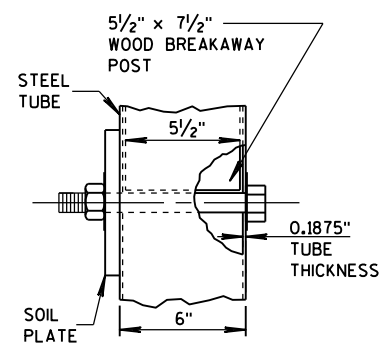
(BEAM GUARD AND TERMINAL SECTION NOT SHOWN)

STEEL PLATE BEAM GUARD  
SHORT RADIUS TERMINAL

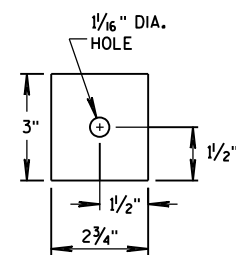
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



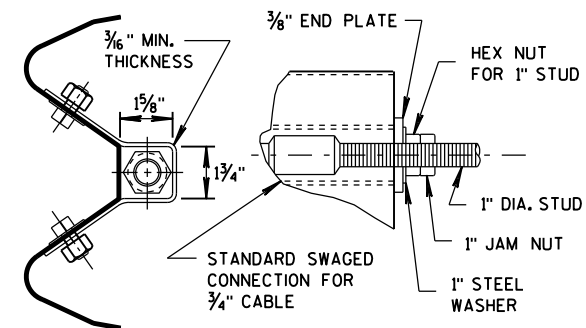
# RECTANGULAR PLATE WASHER



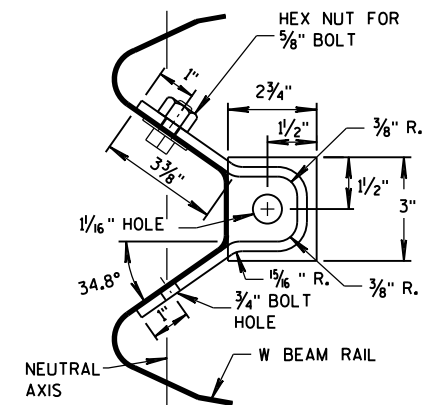
### DETAIL D



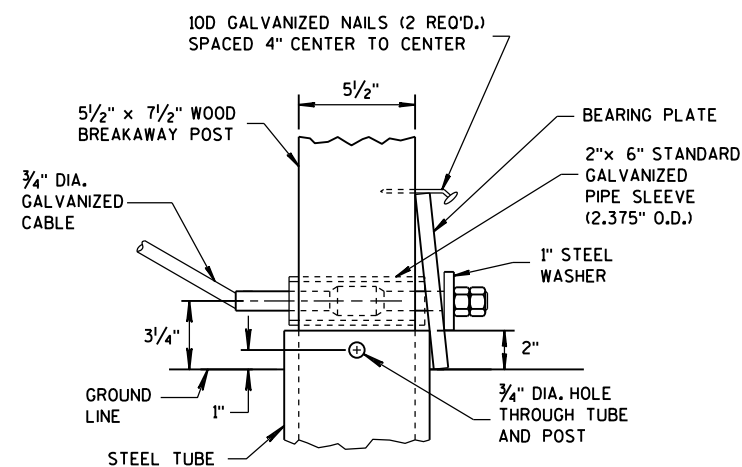
## END PLATE



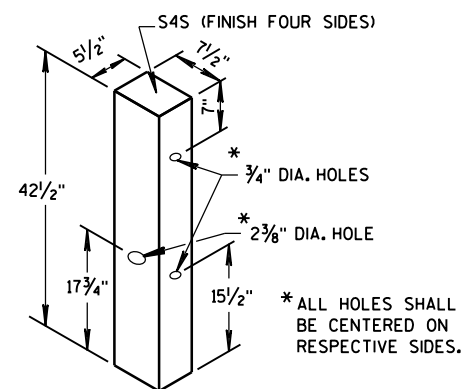
**SECTION C-C**  
**(END PLATE REMOVED)**



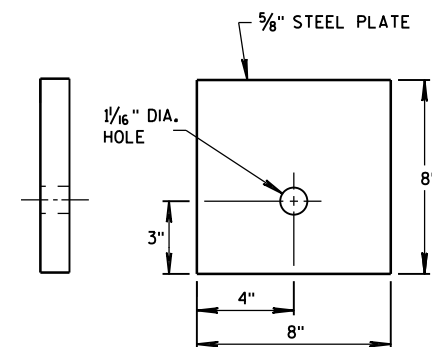
## ANCHOR BRACKET



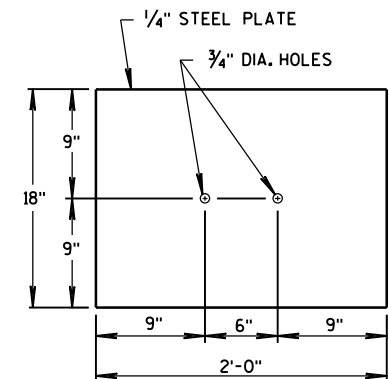
### DETAIL C



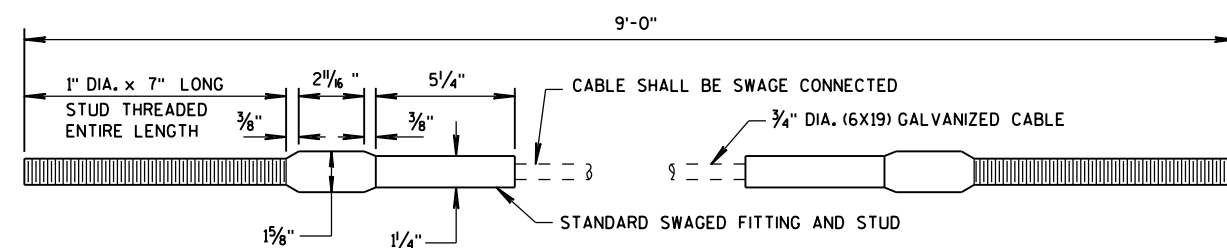
## WOOD BREAKAWAY POST



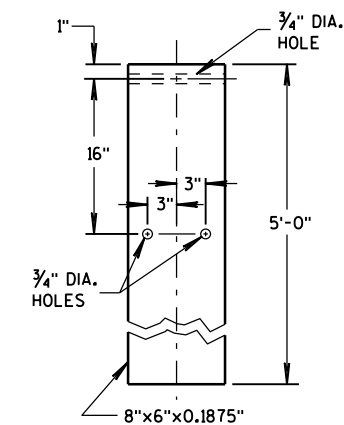
## BEARING PLATE



## SOIL PLATE



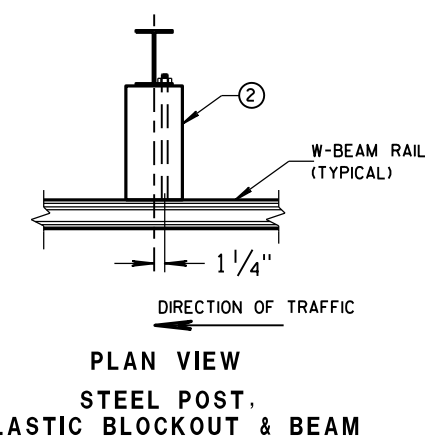
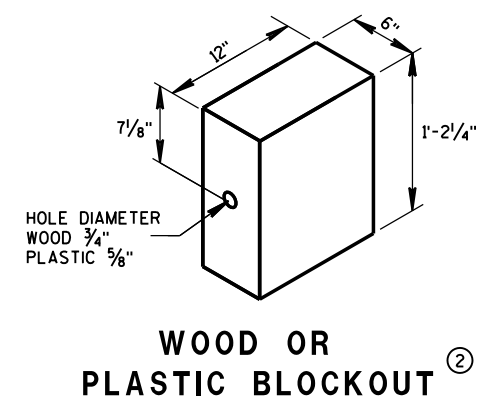
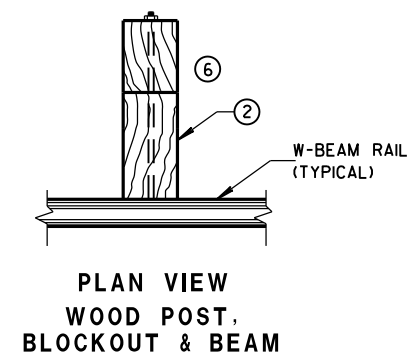
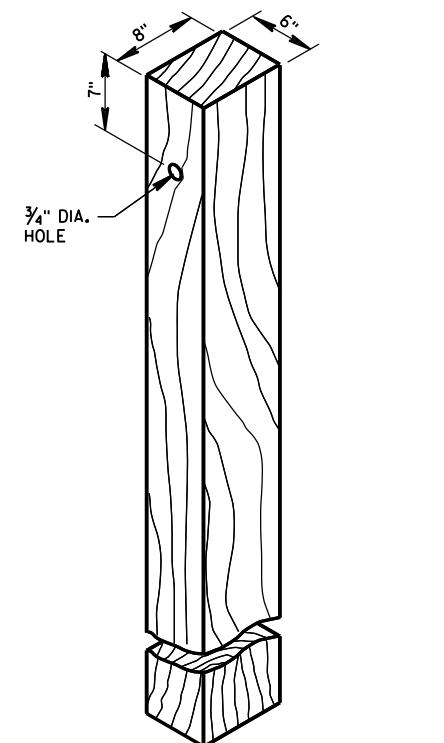
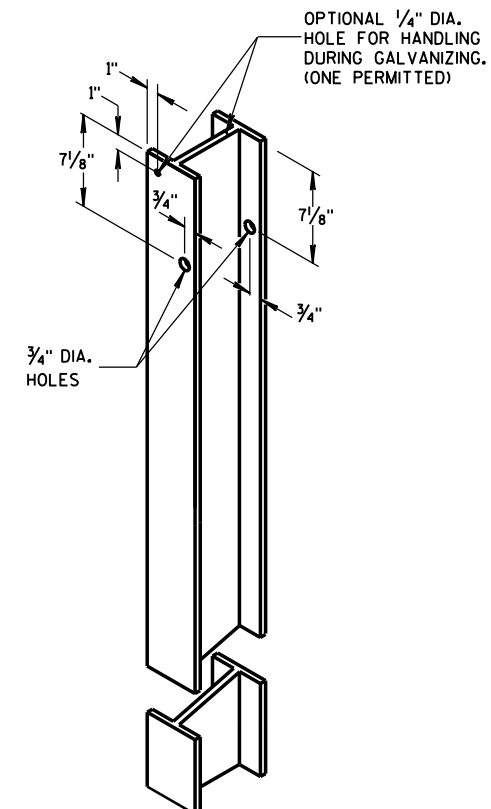
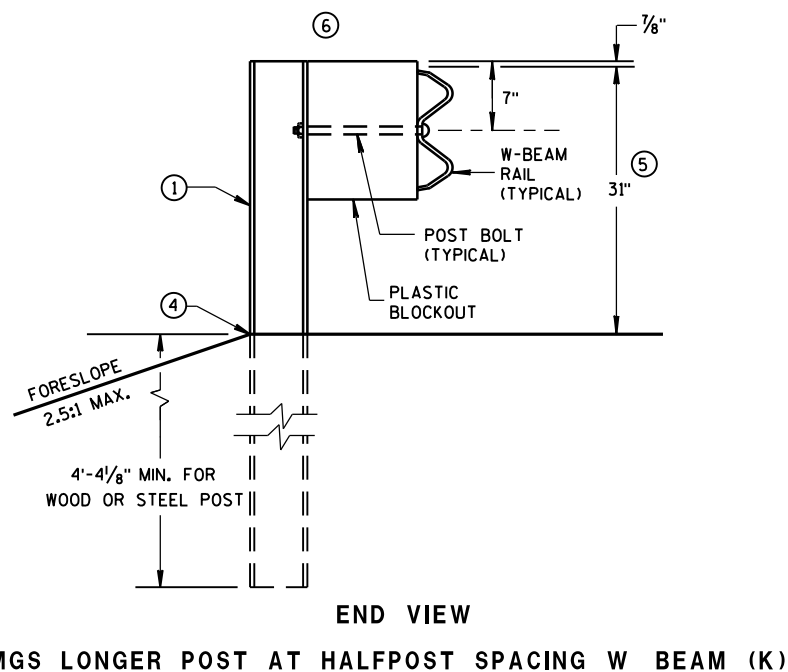
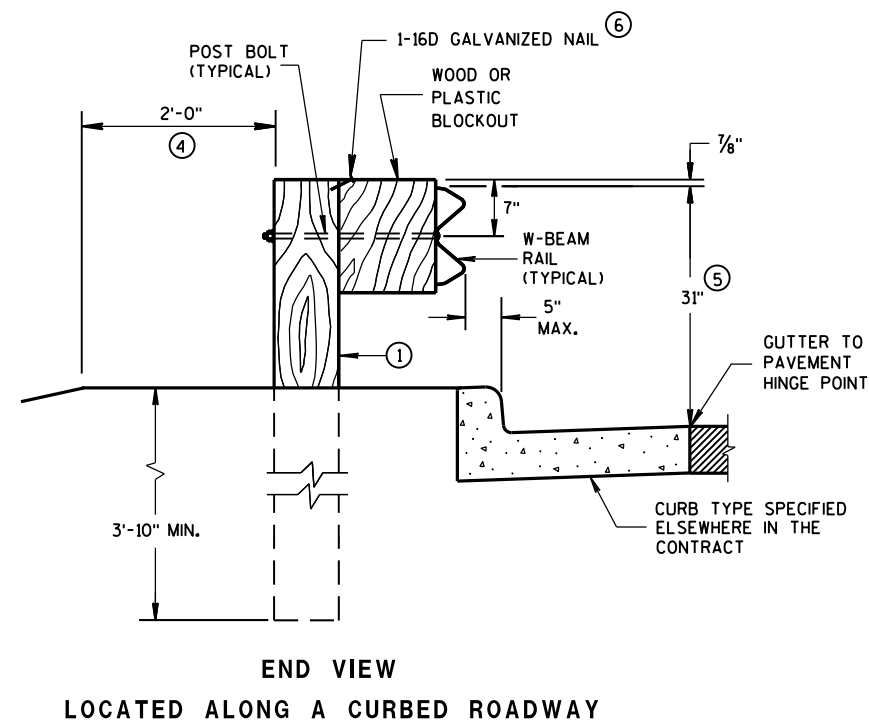
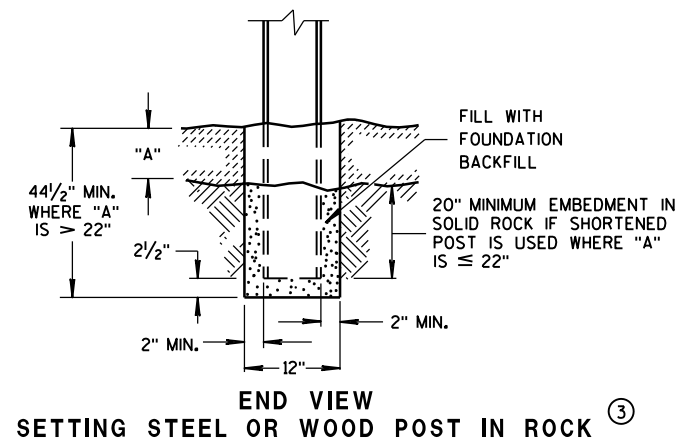
## CABLE ASSEMBLY



## STEEL TUBE

<p>STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL</p>	
<p>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>	
<p>APPROVED 12/18/08 DATE</p>	<p>/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER</p>
<p>FHWA</p>	

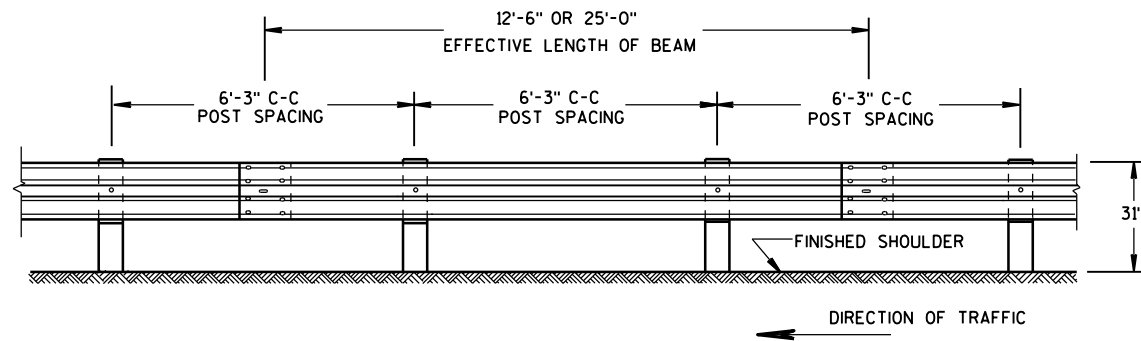
- ① WOOD OR STEEL POSTS (w6x9 OR w6x8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS TO THE 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 ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



**MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL**

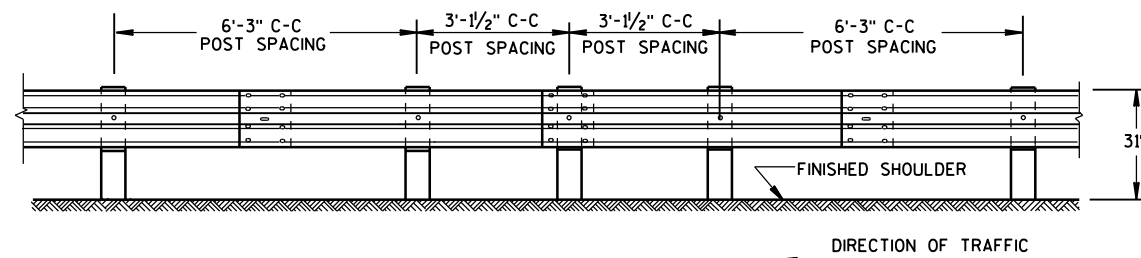
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION





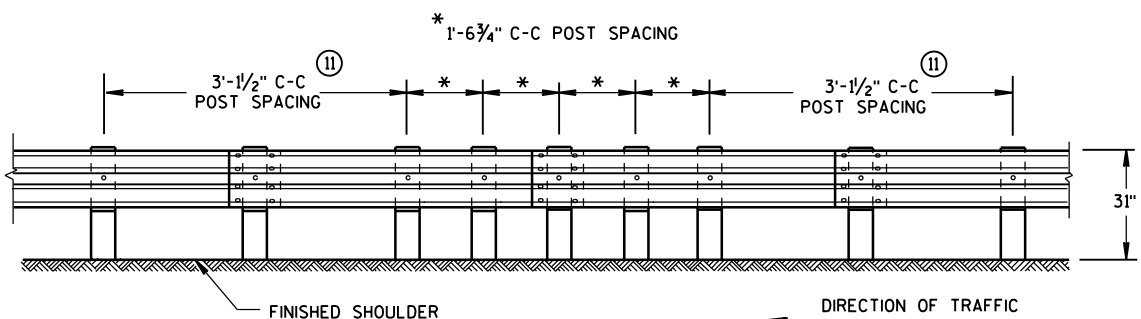
FRONT VIEW

## POST SPACING STANDARD INSTALLATION



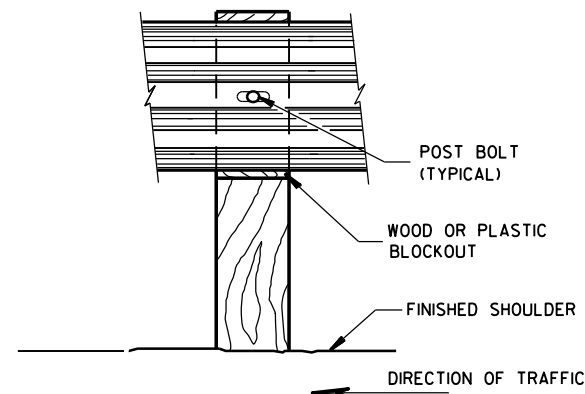
FRONT VIEW

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

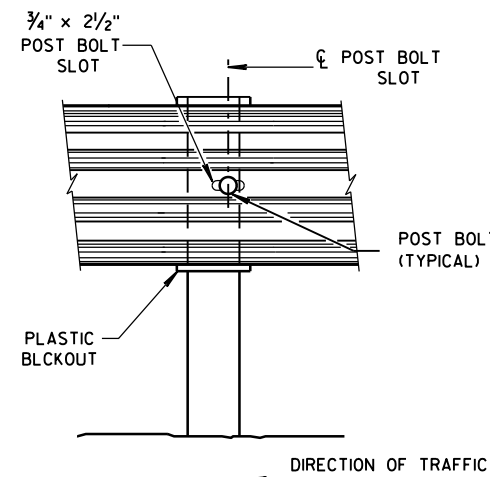


FRONT VIEW

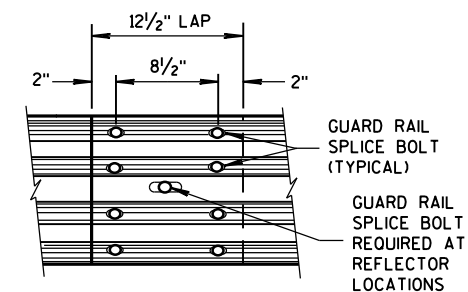
## QUARTER POST SPACING (QS)



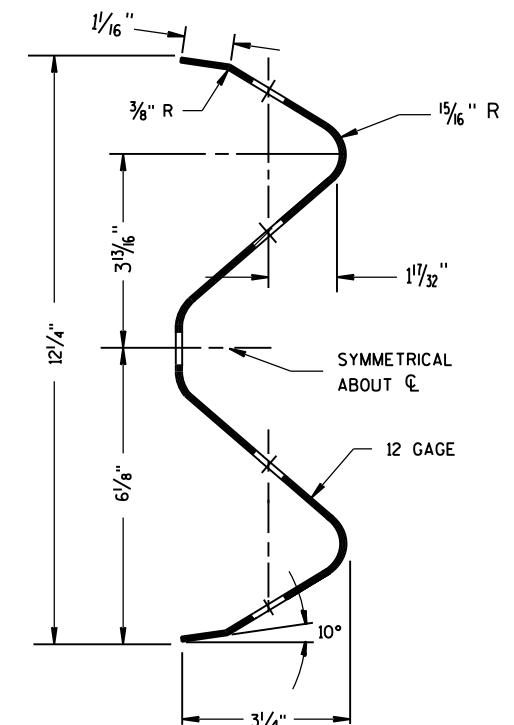
FRONT VIEW AT WOOD POST



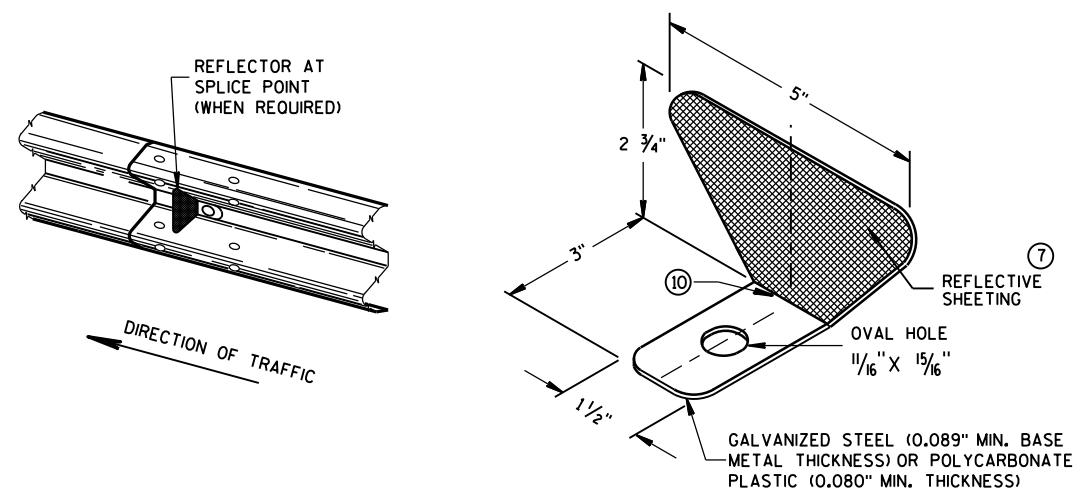
FRONT VIEW AT STEEL POST



FRONT VIEW  
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



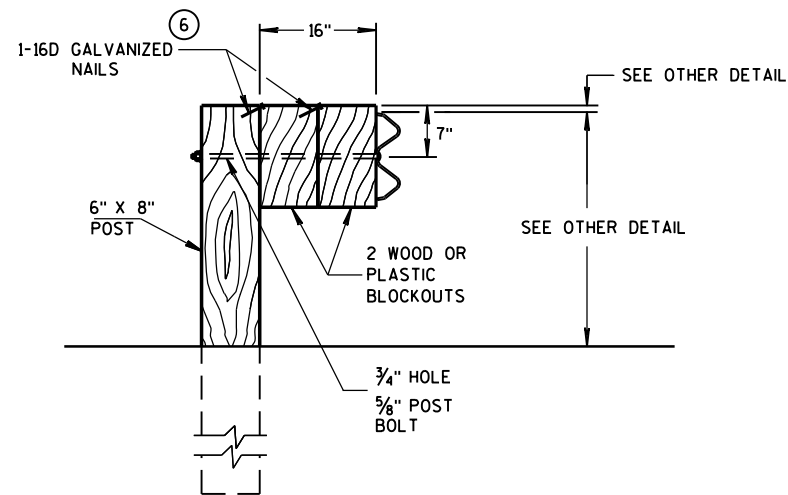
ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

- ⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.
  - ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
  - ⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.
  - ⑩ PROVIDE AN ANGLE OF BEND OF  $90^\circ \pm 1^\circ$  FOR TWO-SIDED REFLECTORS.
  - ⑪ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A  $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES  $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND  $\frac{5}{8}$ " DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A  $\frac{5}{8}$ " DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES  $\frac{5}{8}$ " DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

REFLECTOR SPACING <sup>⑧</sup>				
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 <sup>⑨</sup>	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2 <sup>⑩</sup>	3
	> 200'	100' C-C	2	

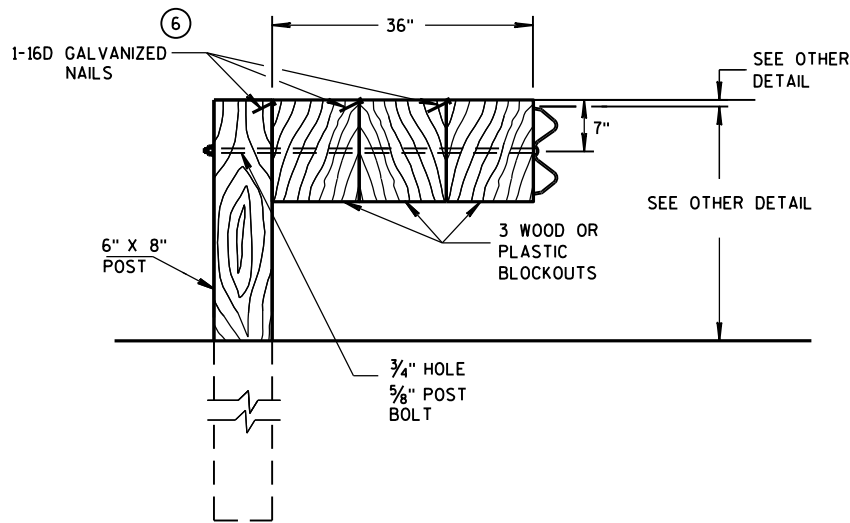
## MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION



### DETAIL FOR 16" BLOCKOUT DEPTH

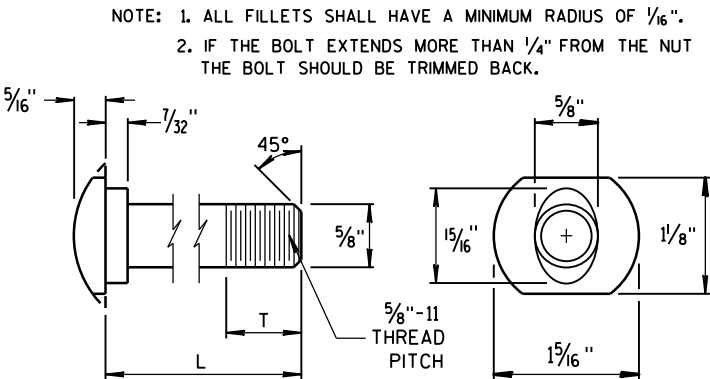
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



### DETAIL FOR 36" BLOCKOUT DEPTH

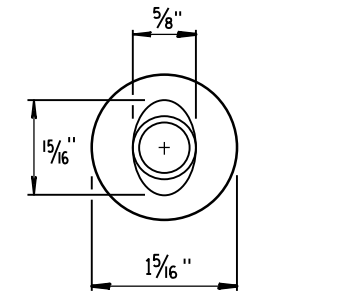
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

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

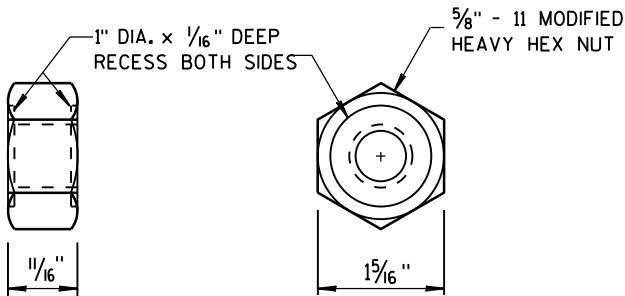


POST BOLT TABLE

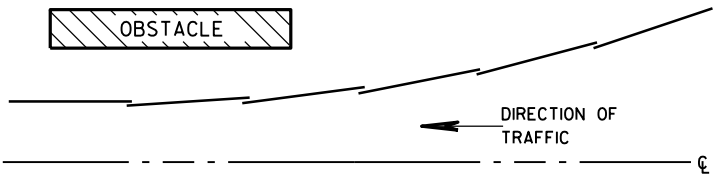
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



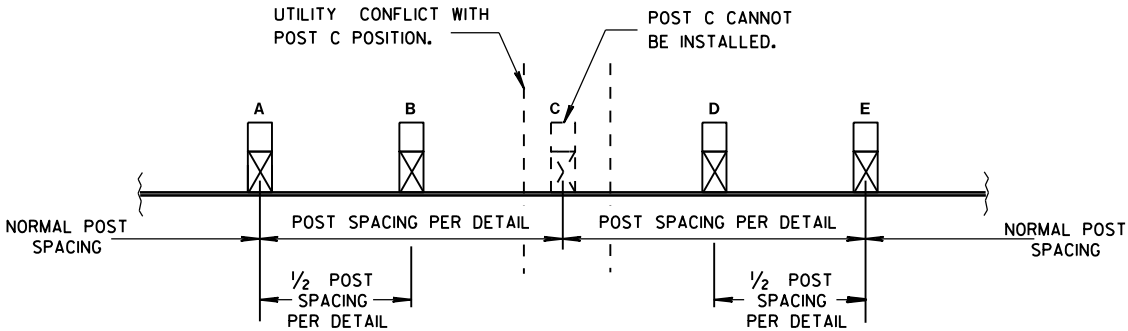
ALTERNATE BOLT HEAD



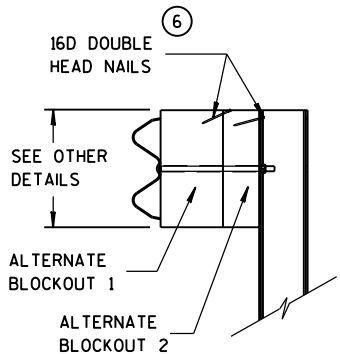
### POST BOLT, SPLICE BOLT AND RECESS NUT



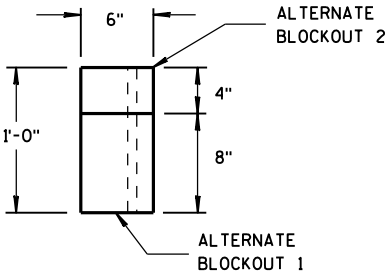
PLAN VIEW  
BEAM LAPPING DETAIL



### POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

### ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM  
(MGS) GUARDRAIL

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

## GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.
- (C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.
- (D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.
- (E) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS, ONE SCREW PER CORNER.
- (G) 1/2" DIAMETER X 3" LONG LAG BOLT AND WASHER.
- (H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.
- (I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

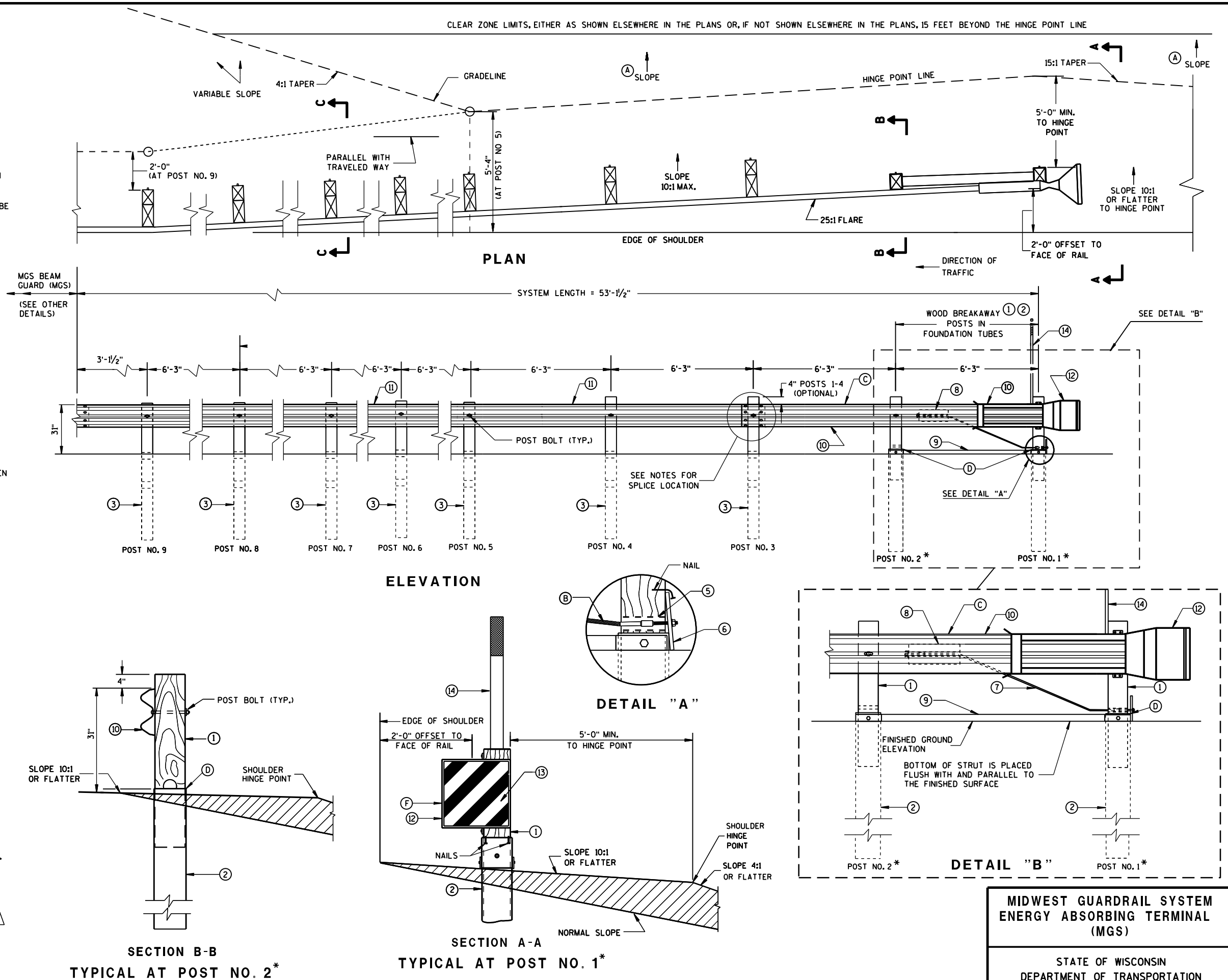
SEE SDD 14B42 FOR MORE INFORMATION.

\* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

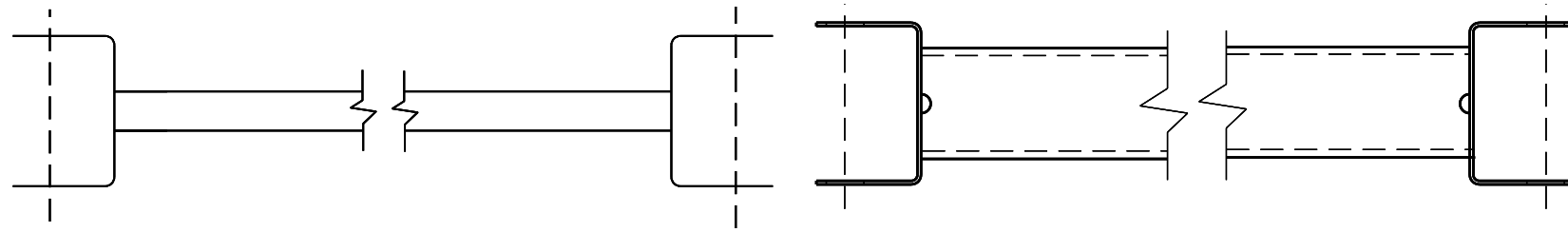
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

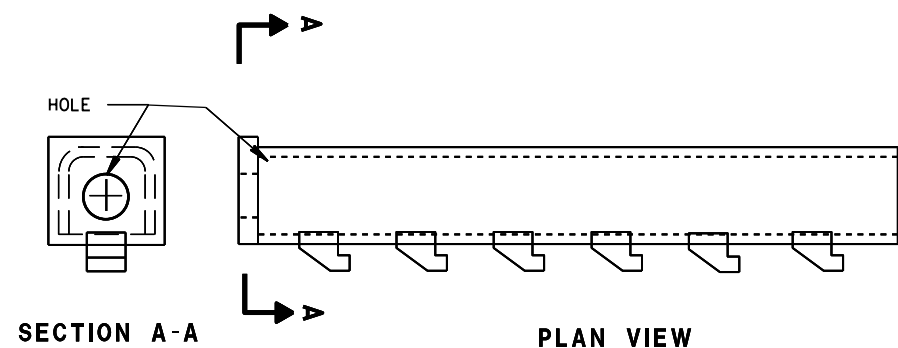
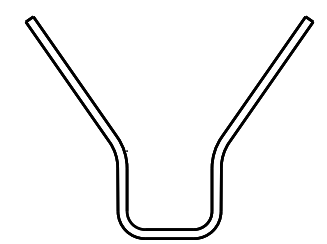
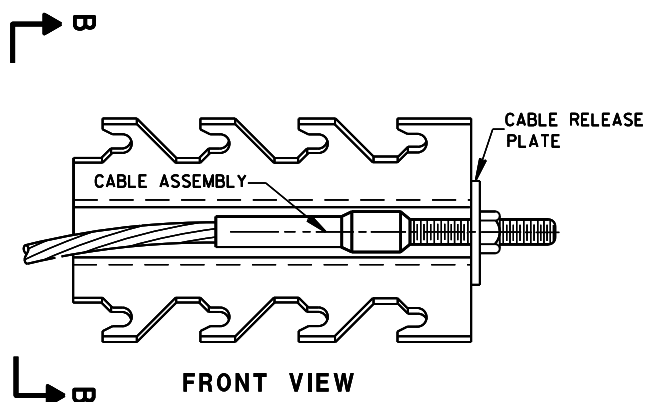
THE CENTER OF THE UPPER 3/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.







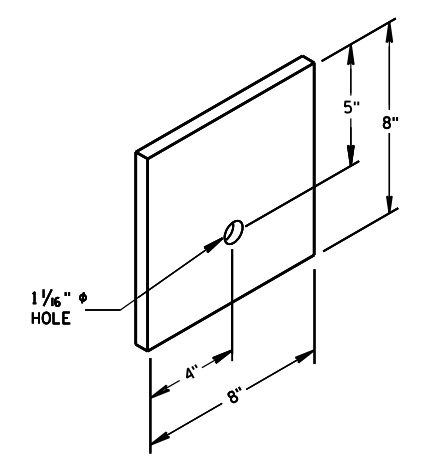
9 H  
**GENERIC GROUND STRUT**



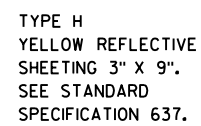
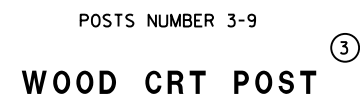
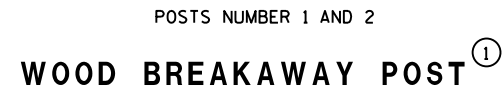
8 H  
**GENERIC ANCHOR CABLE BOX**

**BILL OF MATERIALS**

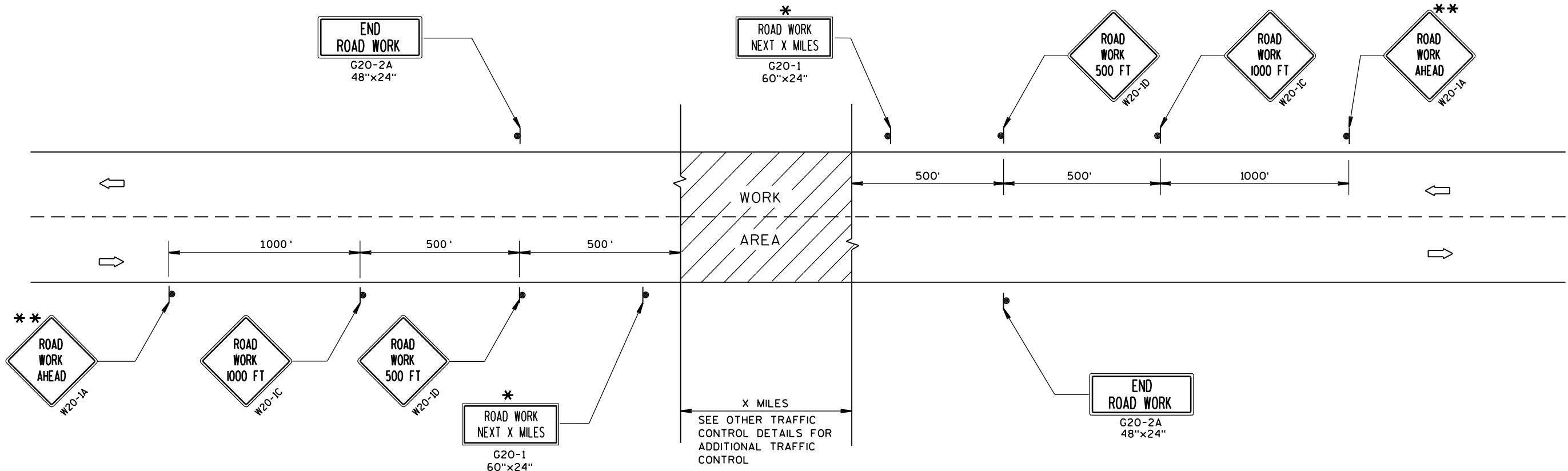
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	END SECTION EAT
⑬	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
⑭	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



6  
**BEARING PLATE**



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



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

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

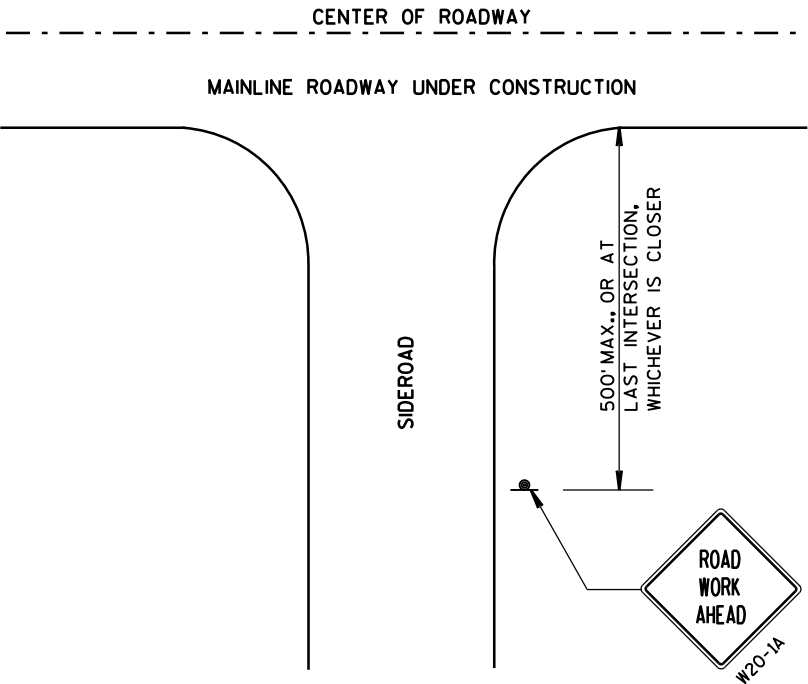
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

\* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

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



LEGEND

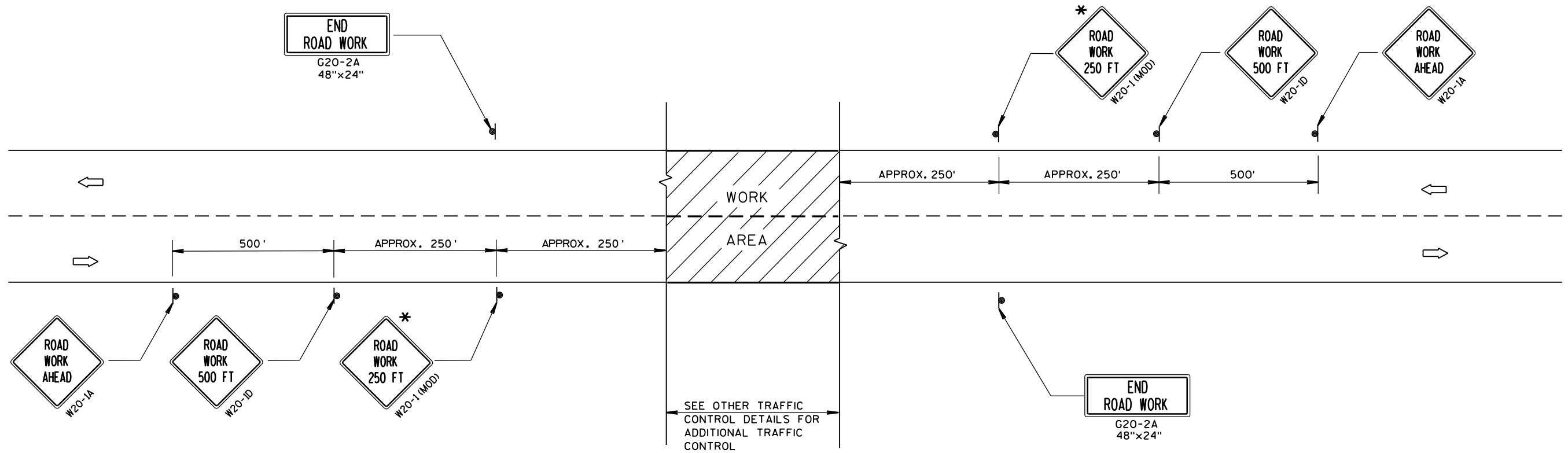
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

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

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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





TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

## GENERAL NOTES

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

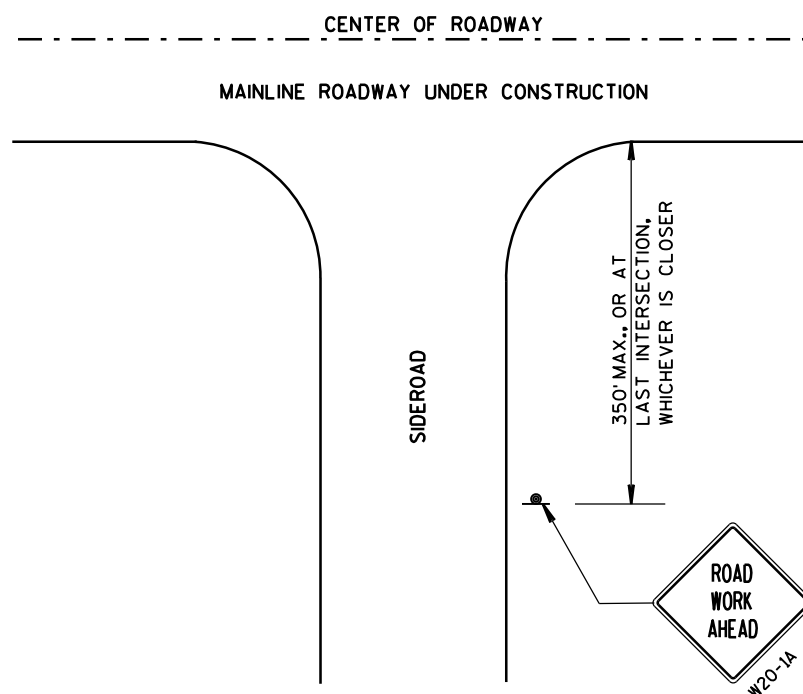
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

\* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FT" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.



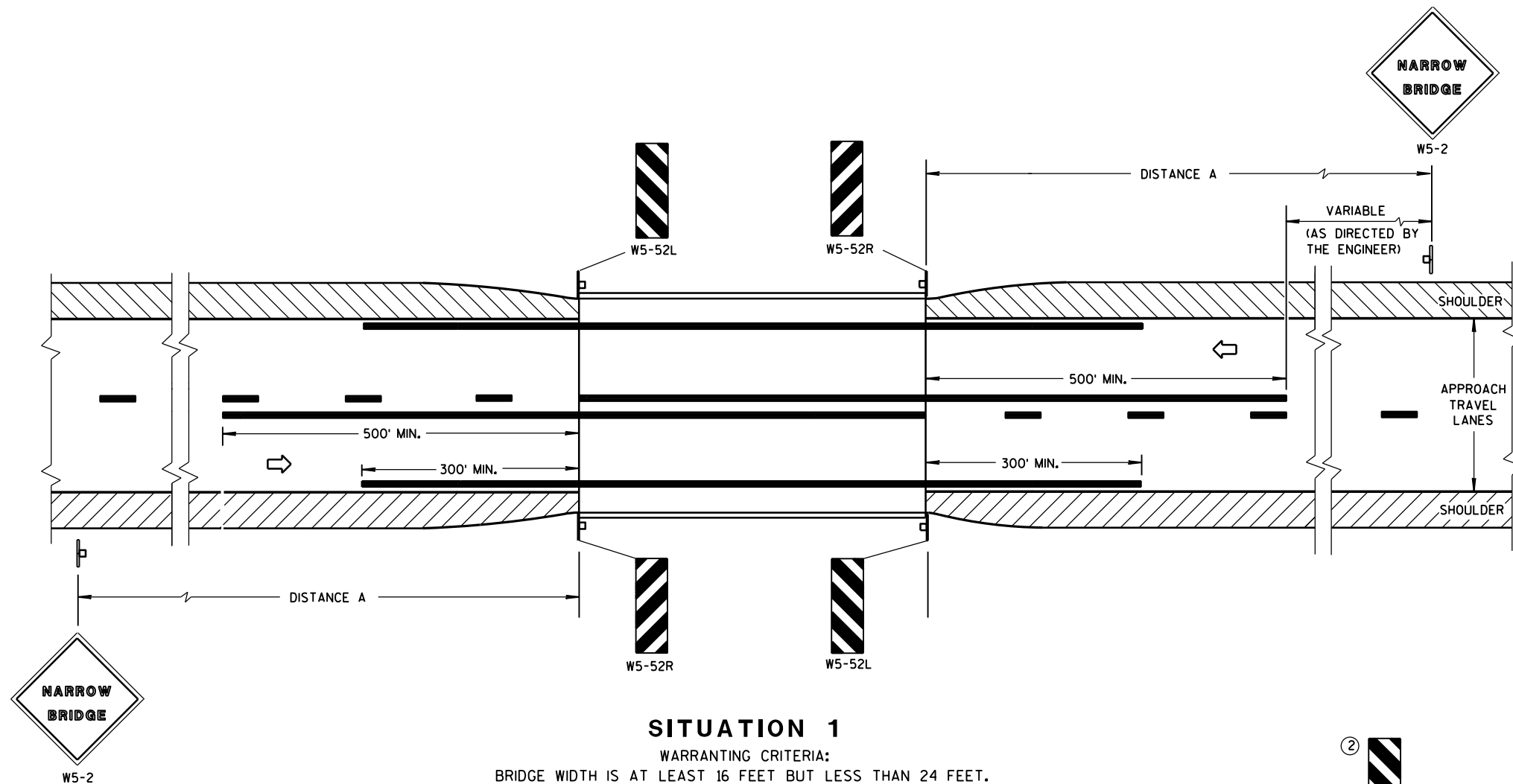
## LEGEND

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

TRAFFIC CONTROL, ADVANCE  
WARNING SIGNS 40 M.P.H.  
OR LESS TWO-WAY UNDIVIDED  
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



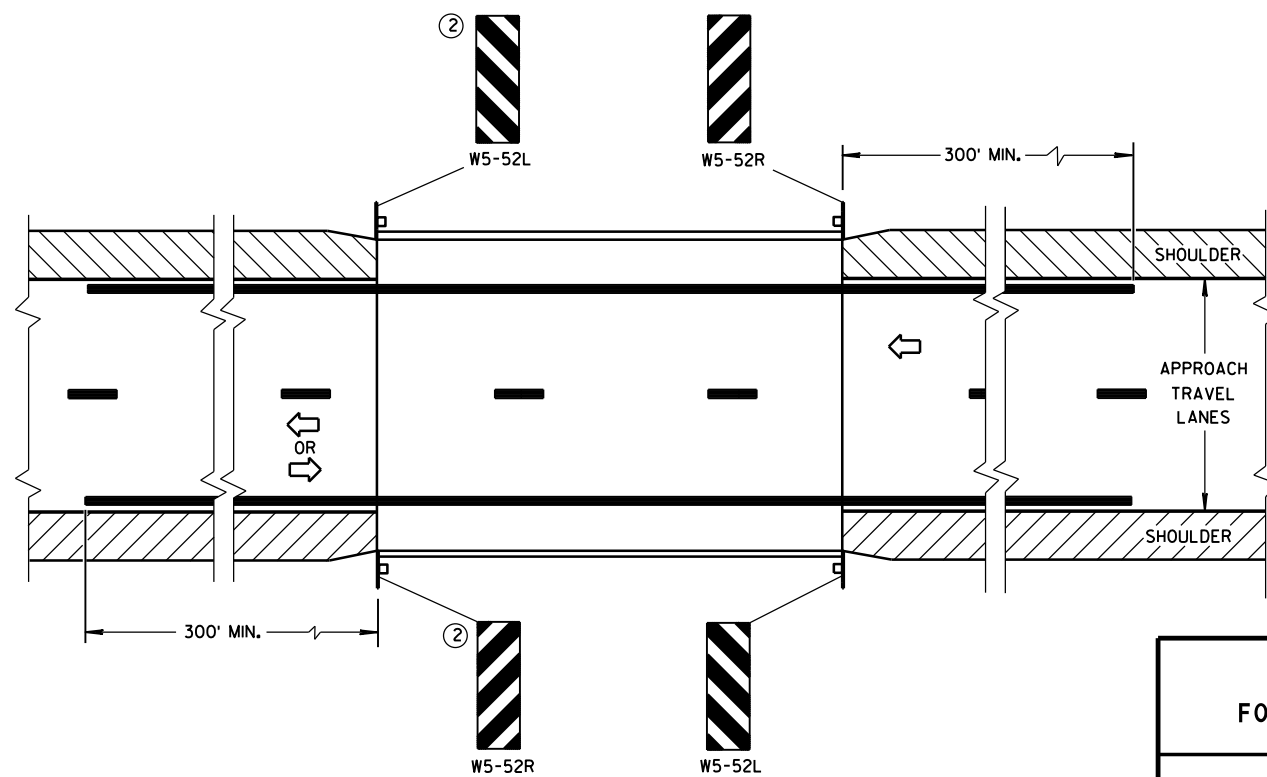
DISTANCE TABLE

POSTED OR 85th PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	750'

## 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.

- ① LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.
- ② OMIT ON ONE-WAY TRAVELLED WAYS.
- ③ EDGE OF W5-52 SIGN SHALL BE PLACED IN LINE WITH FACE OF CURB OR PARAPET.

SIGNING & MARKING  
FOR TWO LANE BRIDGES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

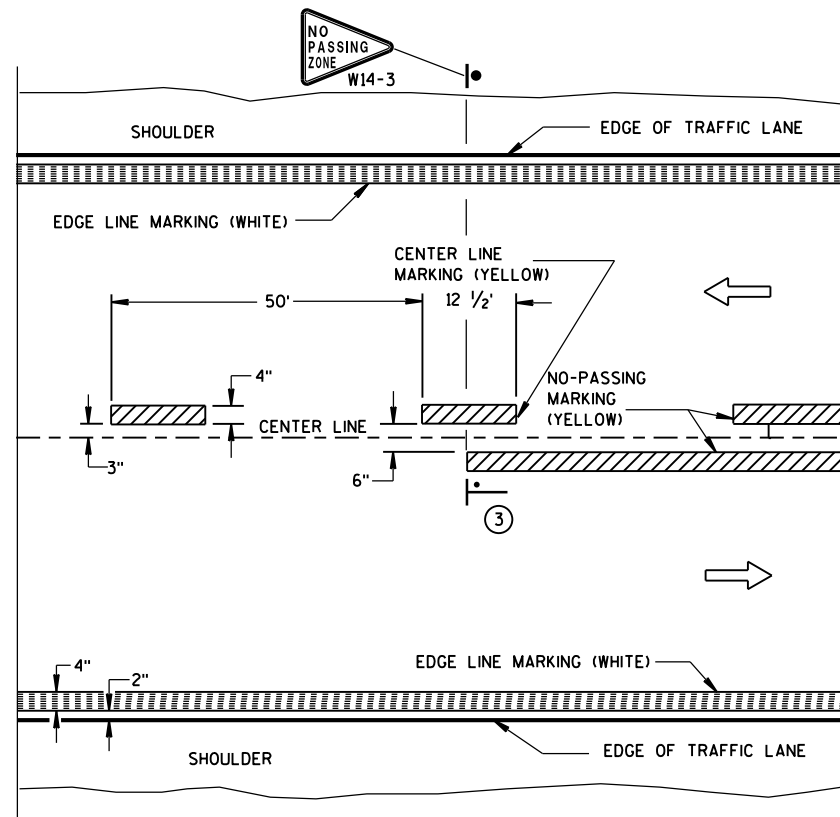
APPROVED

4-18-16

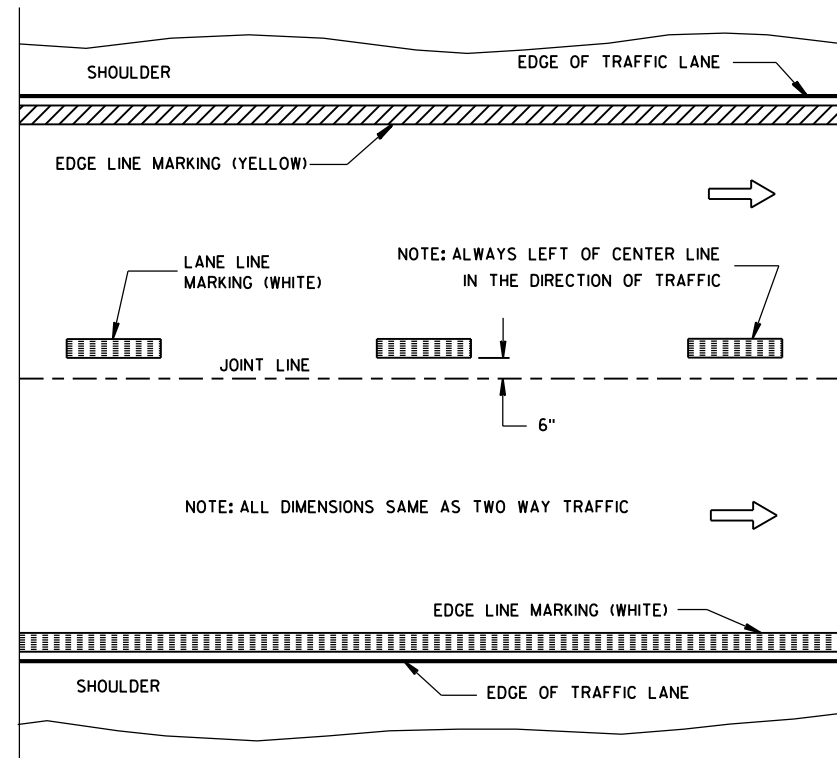
DATE

FHWA

/S/ Matthew R. Rauch  
STATE SIGNING AND MARKING ENGINEER

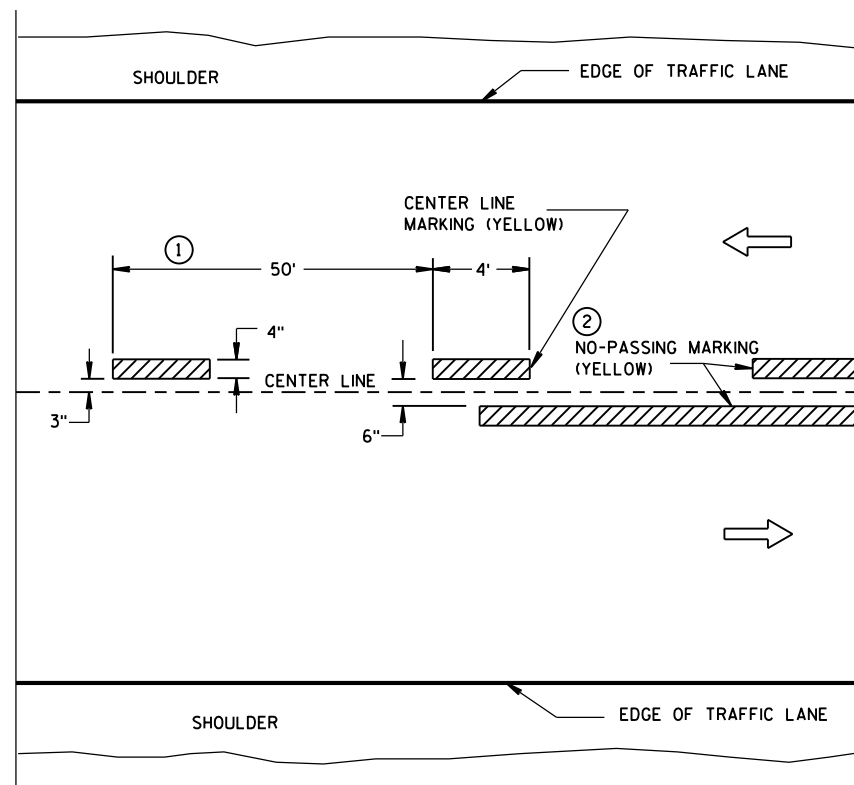


TWO WAY TRAFFIC

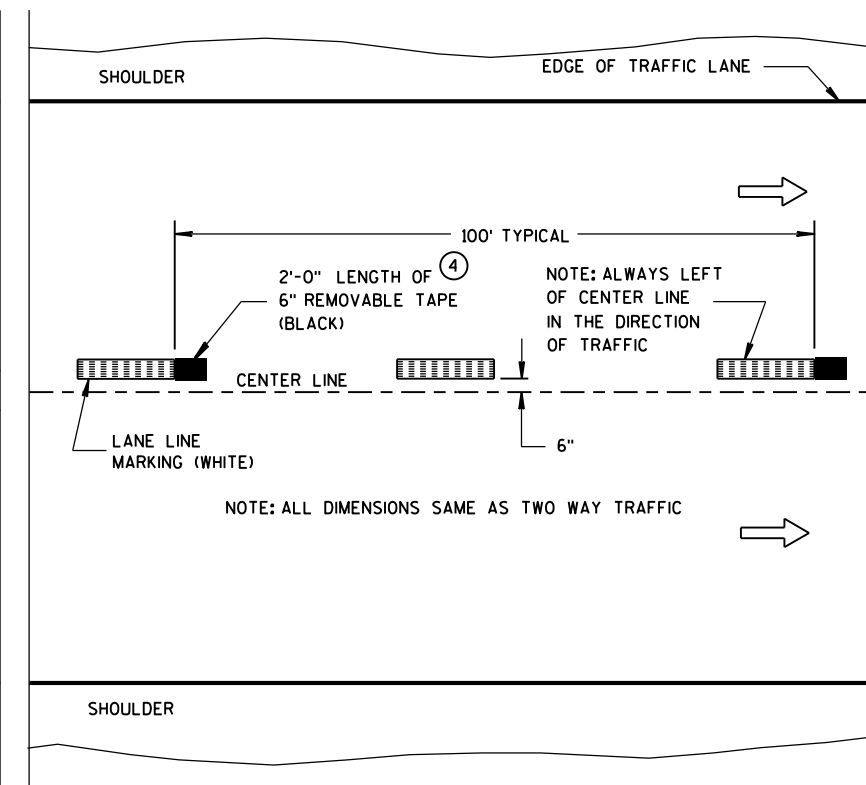


ONE WAY TRAFFIC

## PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

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

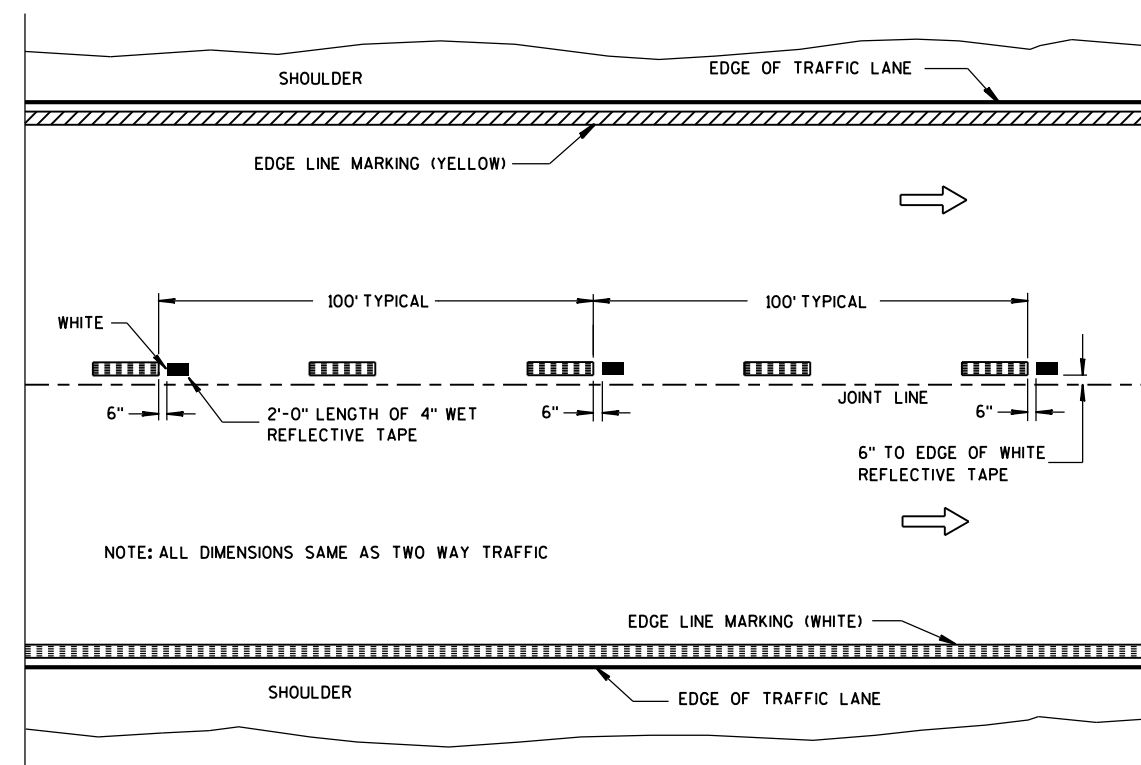
## GENERAL NOTES

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

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

## NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

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

## LEGEND

- "T" MARKING
- POST MOUNTED SIGN

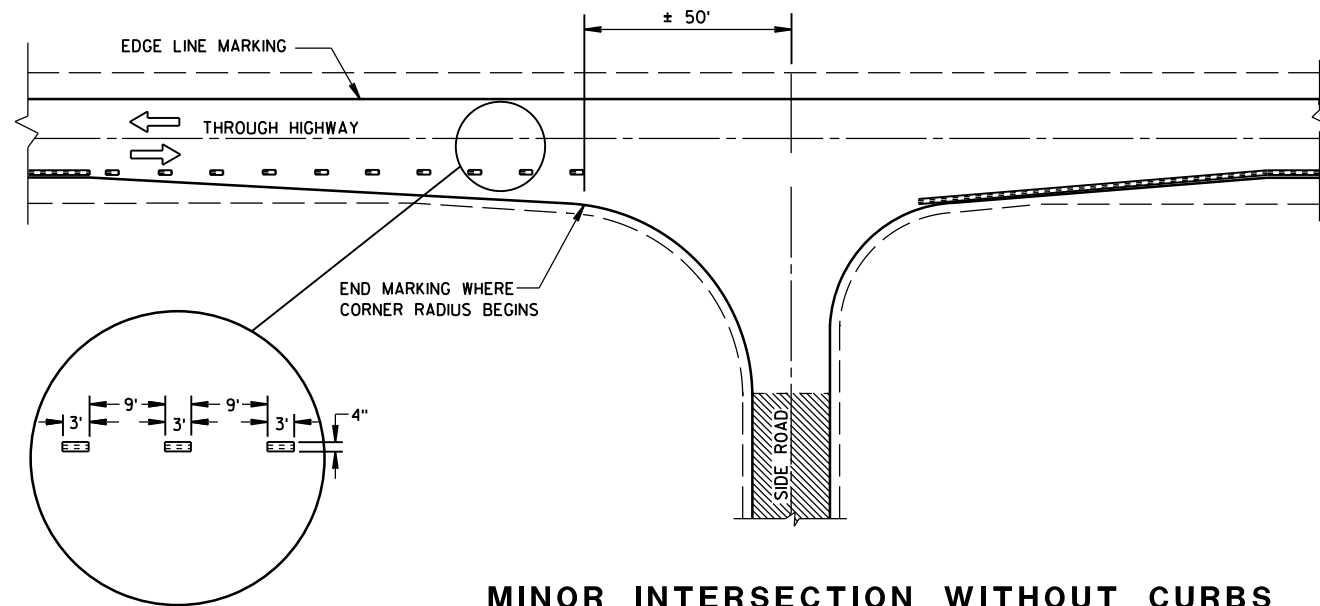
PAVEMENT MARKING  
(MAINLINE)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
5-13-2013  
DATE  
FHWA

/S/ Travis Feltes  
STATE TRAFFIC ENGINEER

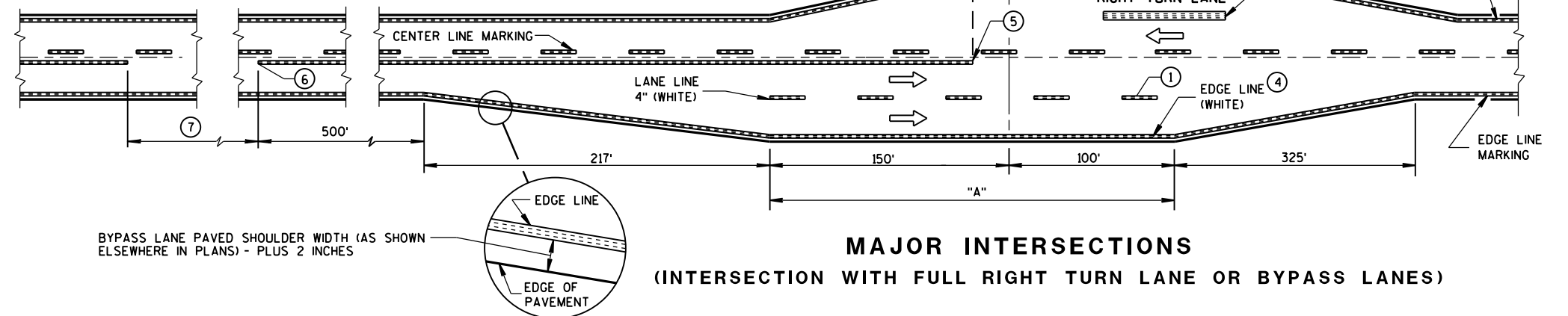




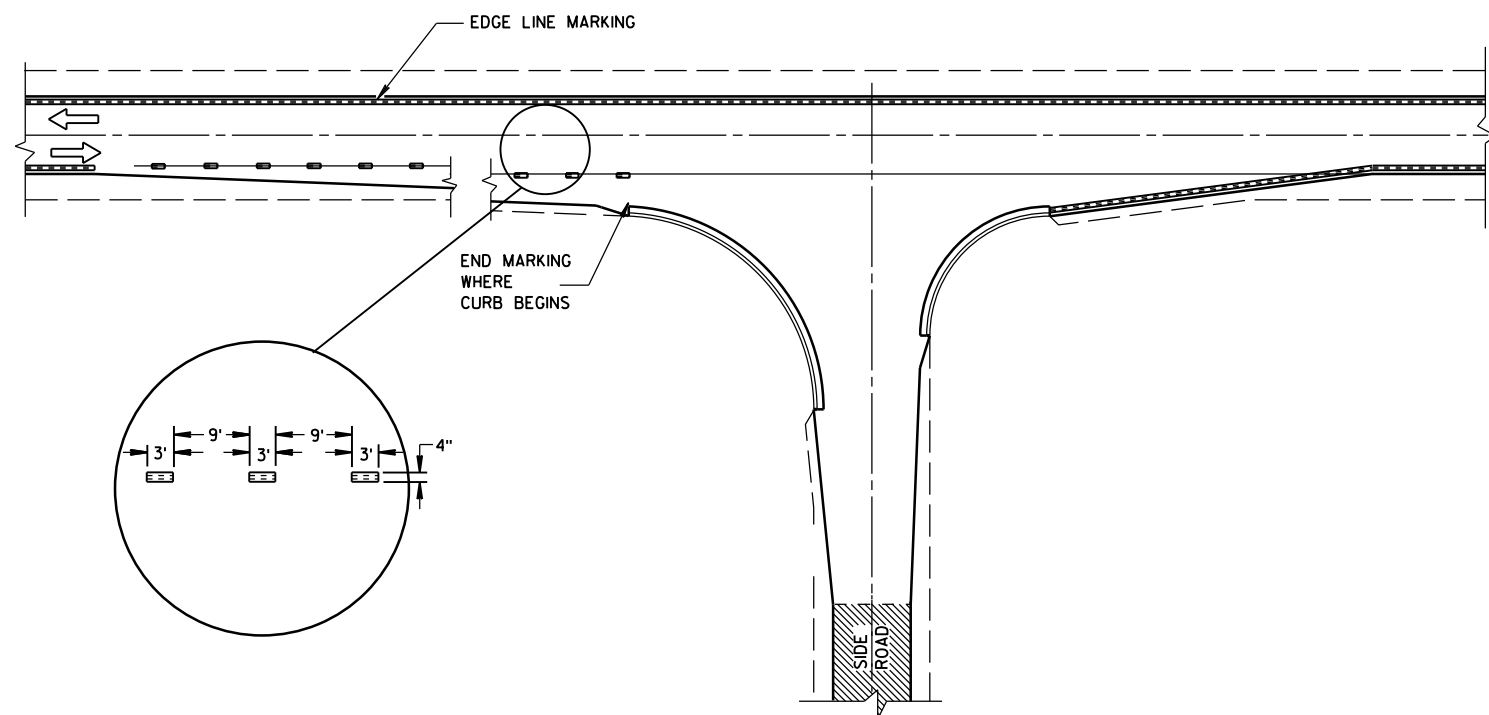
**MINOR INTERSECTION WITHOUT CURBS**

⑦

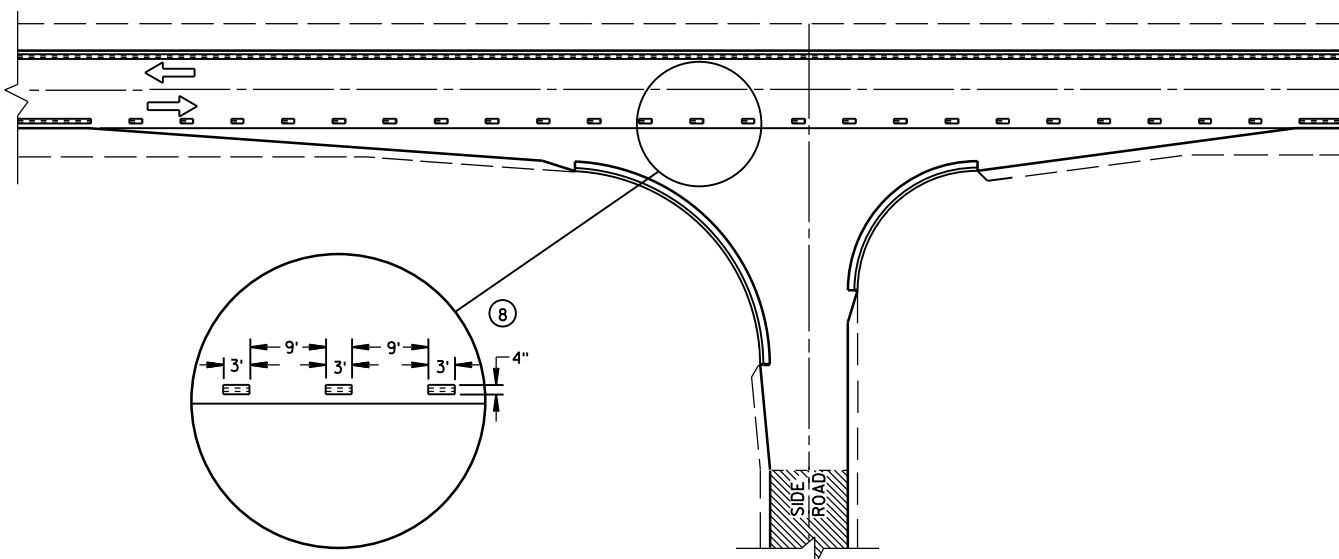
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



**MINOR INTERSECTION WITH CURBS**  
(TYPICAL MARKING)



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





## GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
  - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
  - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
  - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
  - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
  - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
  - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
  - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL ( → ) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING  
(INTERSECTIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

LEGEND

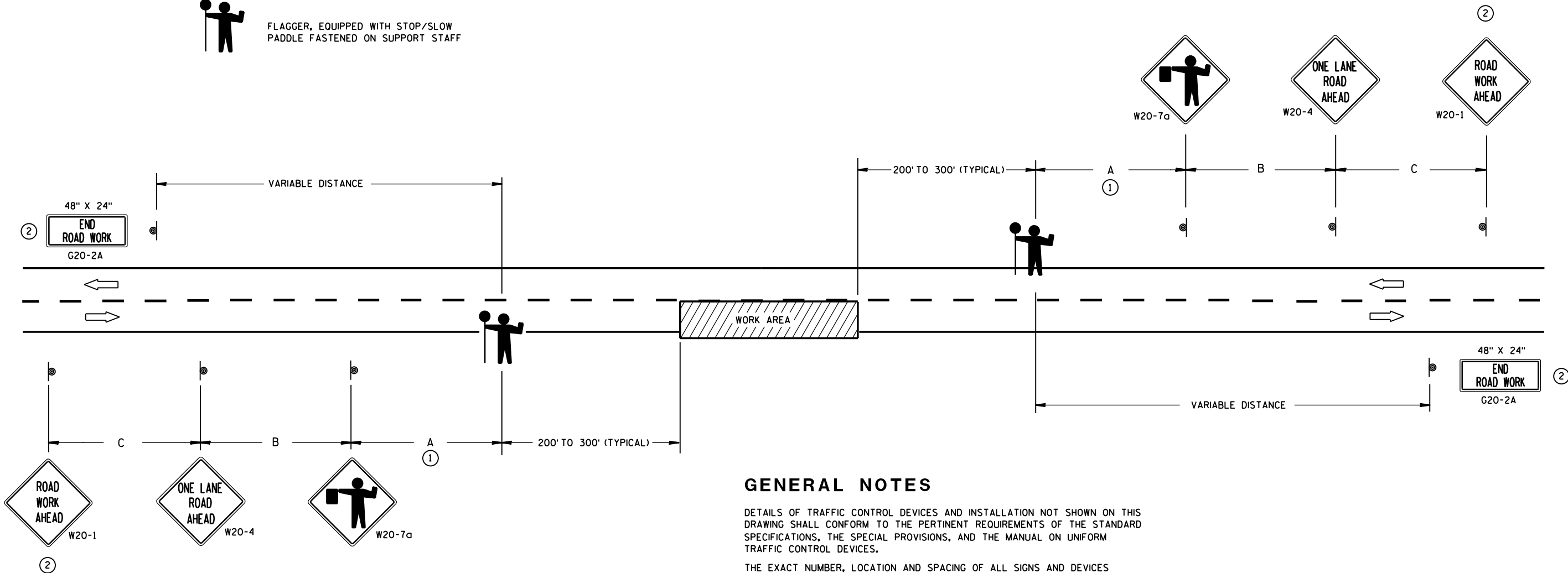
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

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



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



GENERAL NOTES

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

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

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

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

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

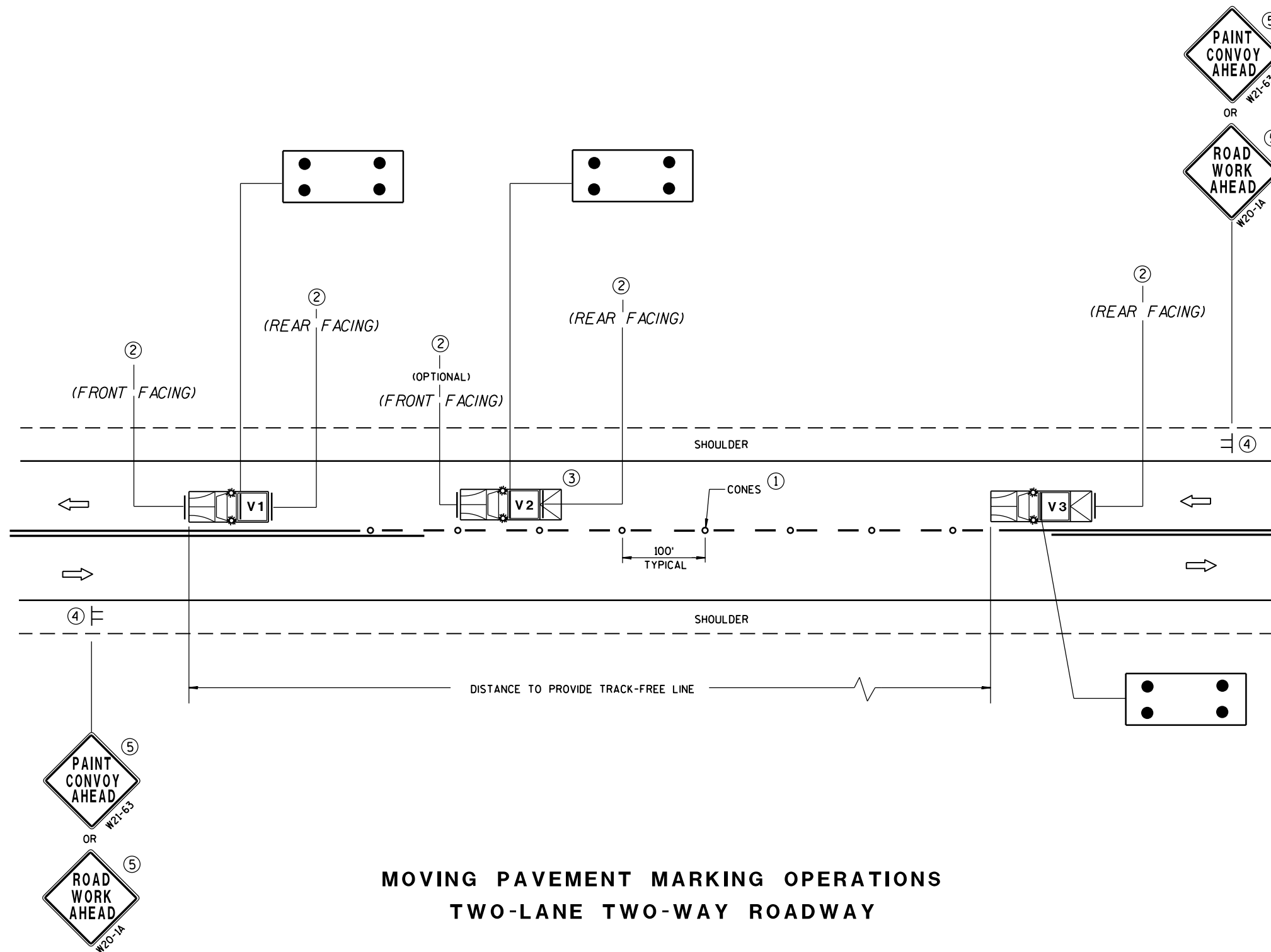
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



## MOVING PAVEMENT MARKING OPERATIONS TWO-LANE TWO-WAY ROADWAY

### GENERAL NOTES

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

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

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

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

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

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

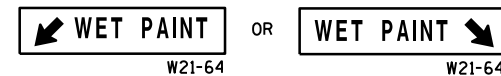
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

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

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

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

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

### LEGEND

**V1** LEAD VEHICLE

**V2** SHADOW VEHICLE

**V3** TRAIL VEHICLE WITH TMA

**TMA** TRUCK-MOUNTED ATTENUATOR

 SIGN ON TEMPORARY SUPPORT

 DIRECTION OF TRAFFIC

 CONES

 FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING  
OPERATION  
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
June 2016  
DATE  
FHWA

/S/ Peter Amakobe Atepe  
STATEWIDE WORK ZONE TRAFFIC  
SAFETY ENGINEER



GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

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

TABLE A

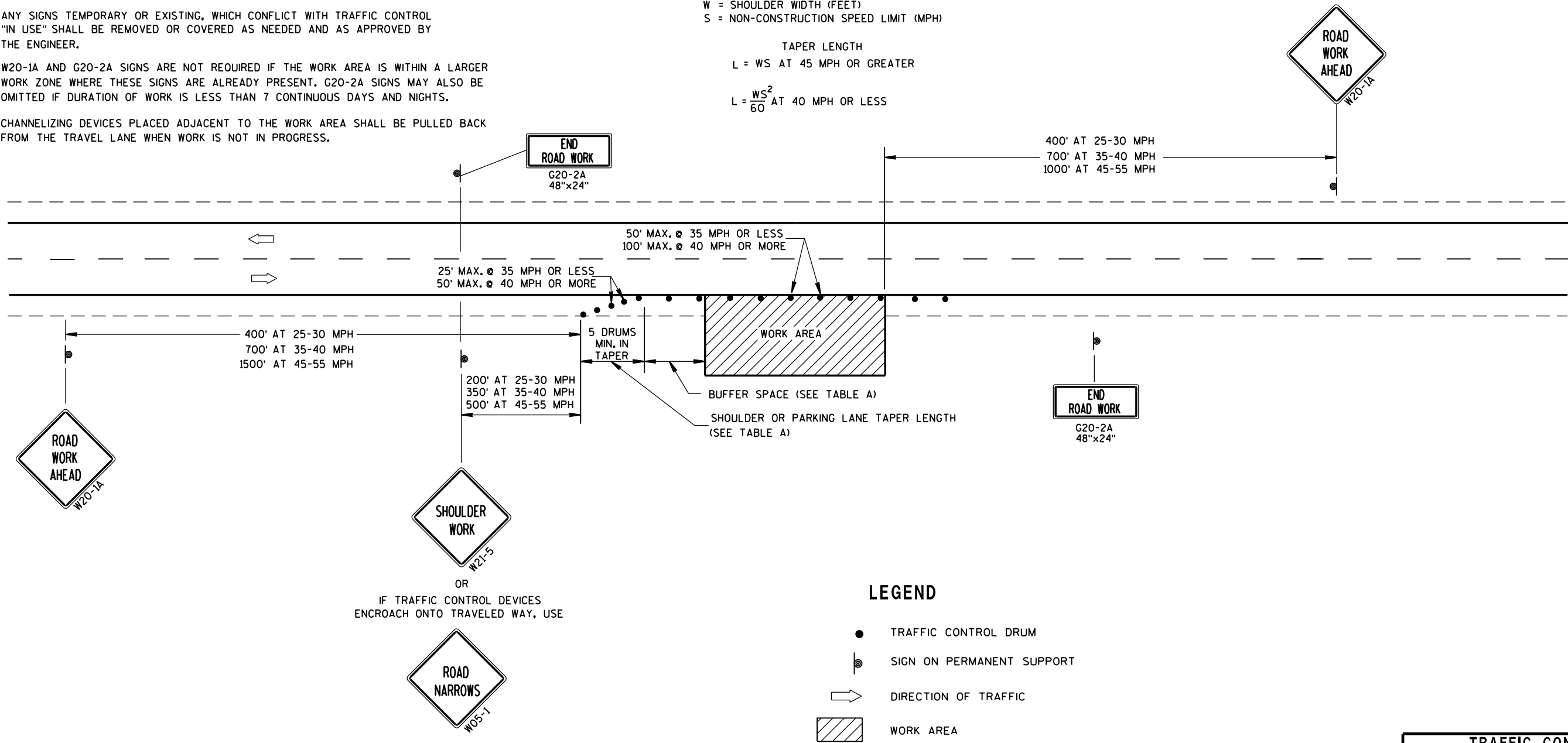
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

W = SHOULDER WIDTH (FEET)  
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH  
L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$  AT 40 MPH OR LESS

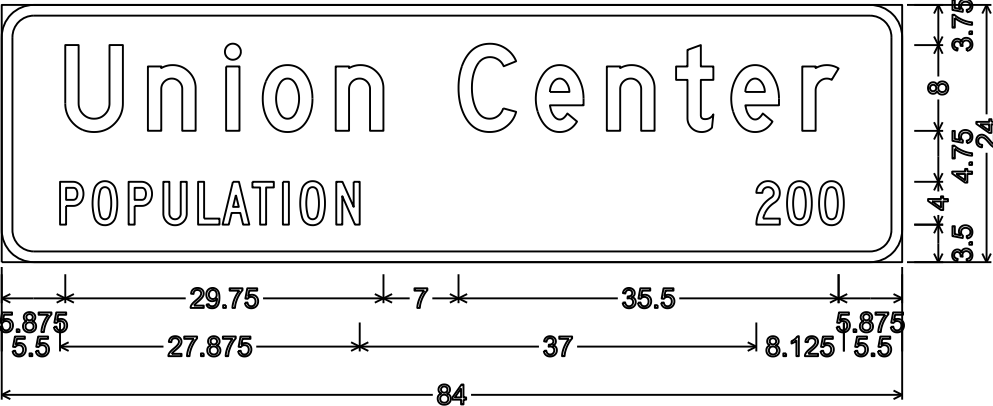
SHOULDER TAPER LENGTH =  $\frac{1}{3}L$



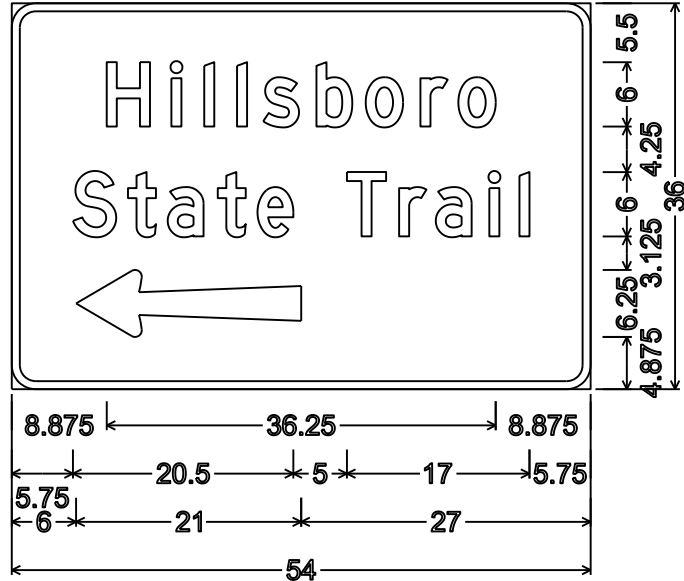
LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

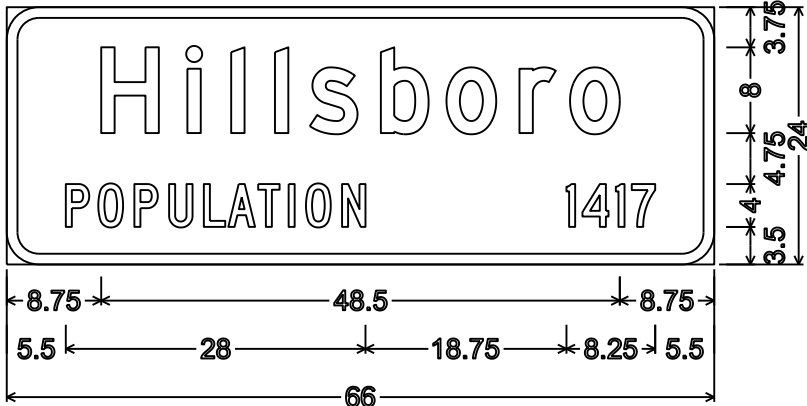
TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 14, 2015 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



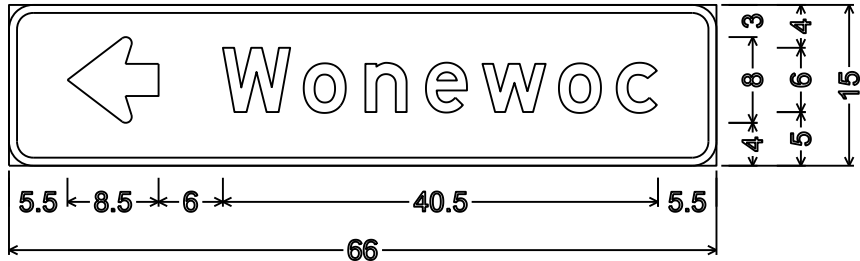
I2-3; 3.000" Radius, 1.000" Border,  
"Union" D; "Center" D; "POPULATION" C; "200" C



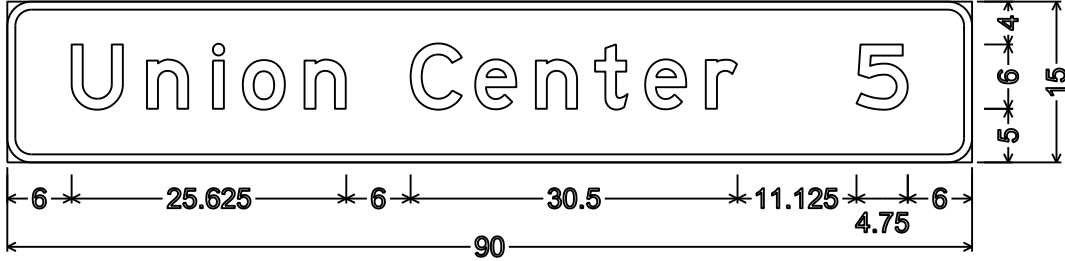
D7-95L;  
2.250" Radius, 0.750" Border, White on Brown;  
"Hillsboro" D; "State" D; "Trail" D



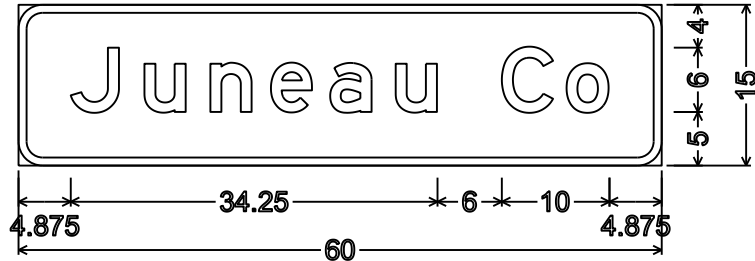
I2-3; 3.000" Radius, 1.000" Border,  
"Hillsboro" D; "POPULATION" C; "1417" C



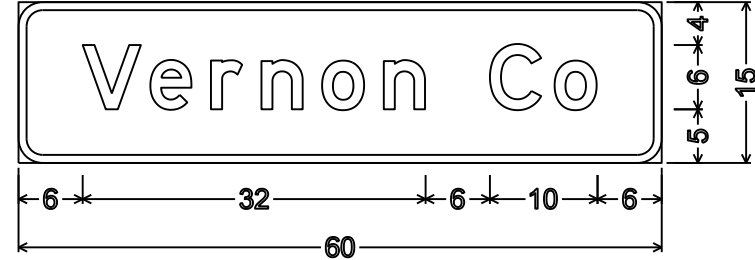
D1-1; 2.250" Radius, 0.750" Border



D2-1; 2.250" Radius, 0.750" Border



I2-2;  
2.250" Radius, 0.750" Border

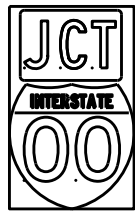


I2-2;  
2.250" Radius, 0.750" Border

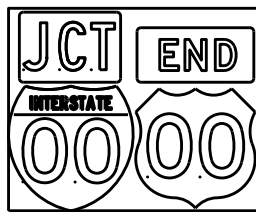
NOTES

1. All Signs Type II - Type H Reflective
2. Color:  
Background - Green except as noted  
Message - White
3. Message Series - E except as noted

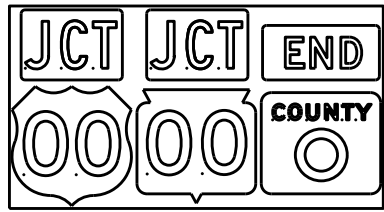
TYPICAL ASSEMBLIES



J1-1



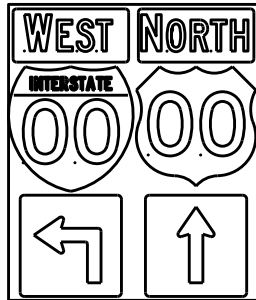
J1-2



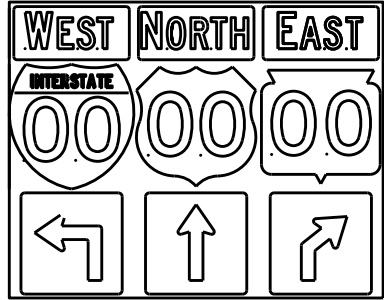
J1-3



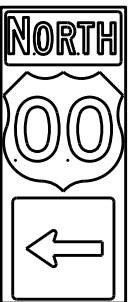
J2-1



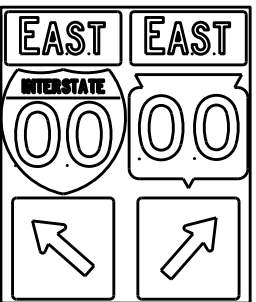
J2-2



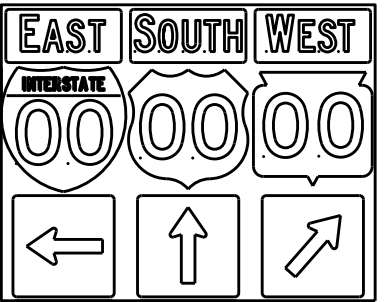
J2-3



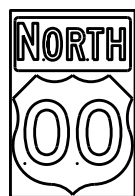
J3-1



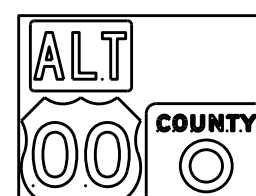
J3-2



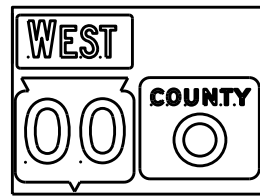
J3-3



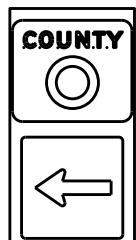
J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

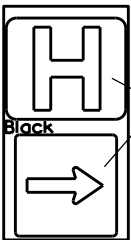


J22-1



JV

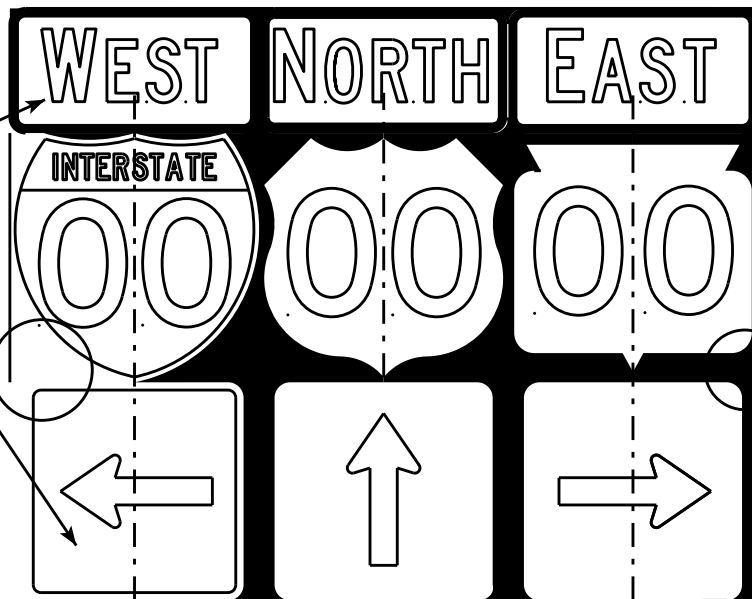
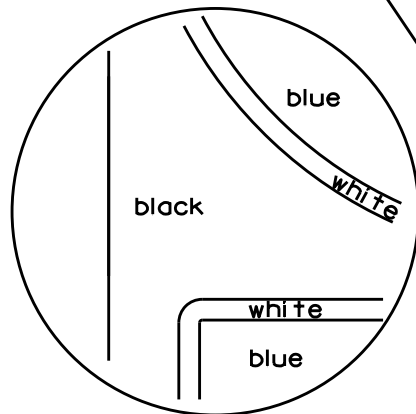
( Typical Vertical J-Assembly  
See Note 10 and 11)



JH-1

Blue Background

[blue background  
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS  
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

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

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - Black Non-reflective  
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

PROJECT NO:

FILE NAME : C:\CAEFiles\Projects\tr\_stdplate\A21S.DGN

PLOT DATE : 06-FEB-2014 14:10

PLOT BY : mscs.ja

PLOT NAME :

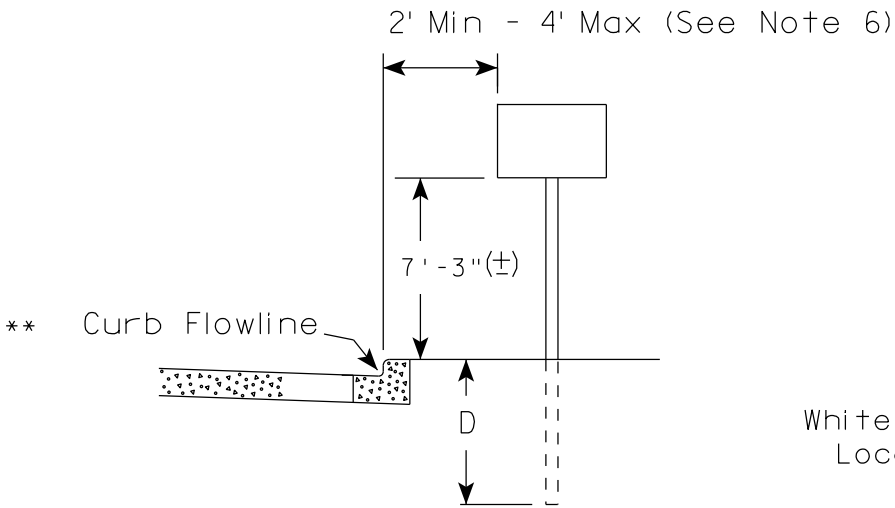
SHEET NO:

E

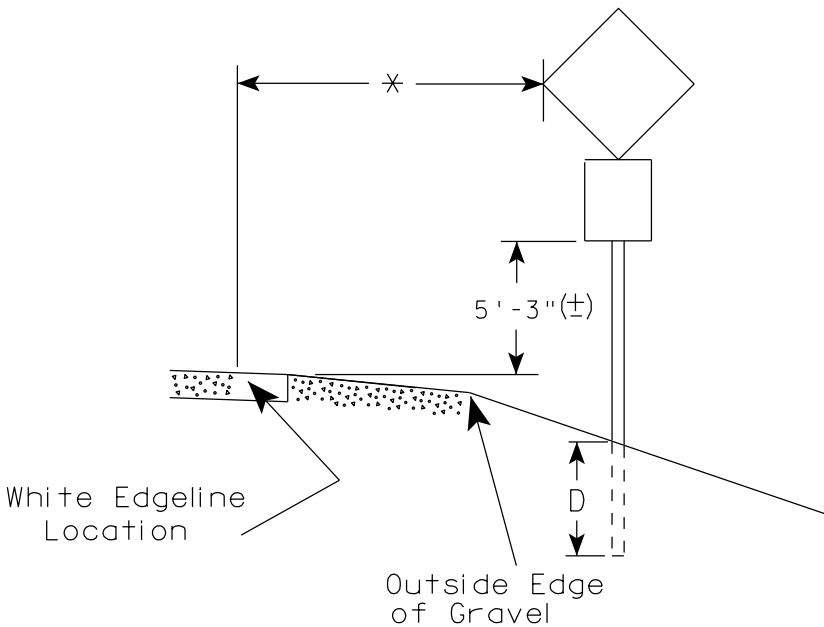
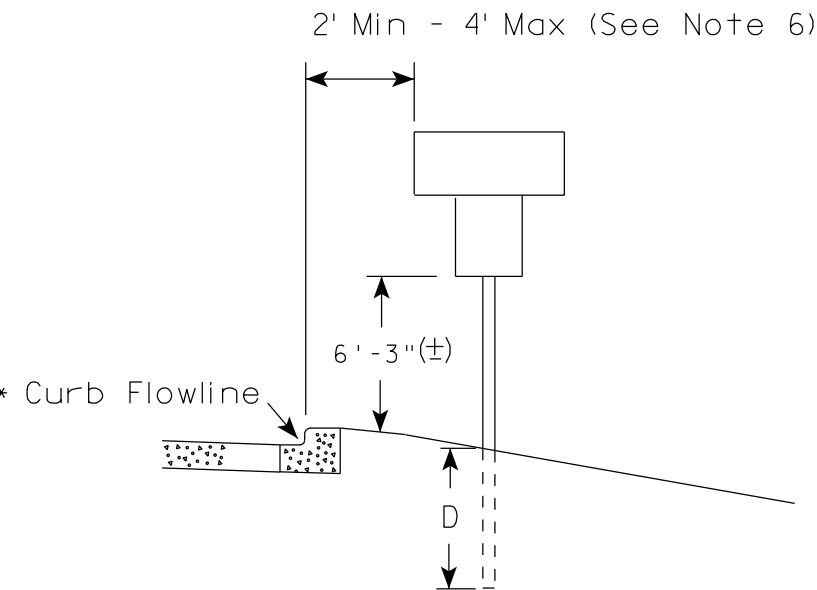
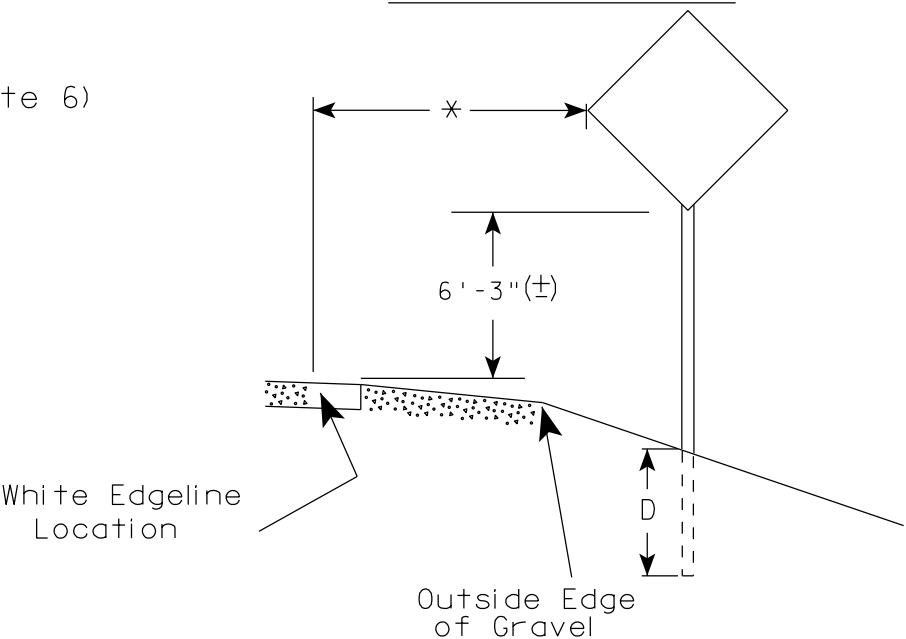
WISDOT/CADDs SHEET 42



URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

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

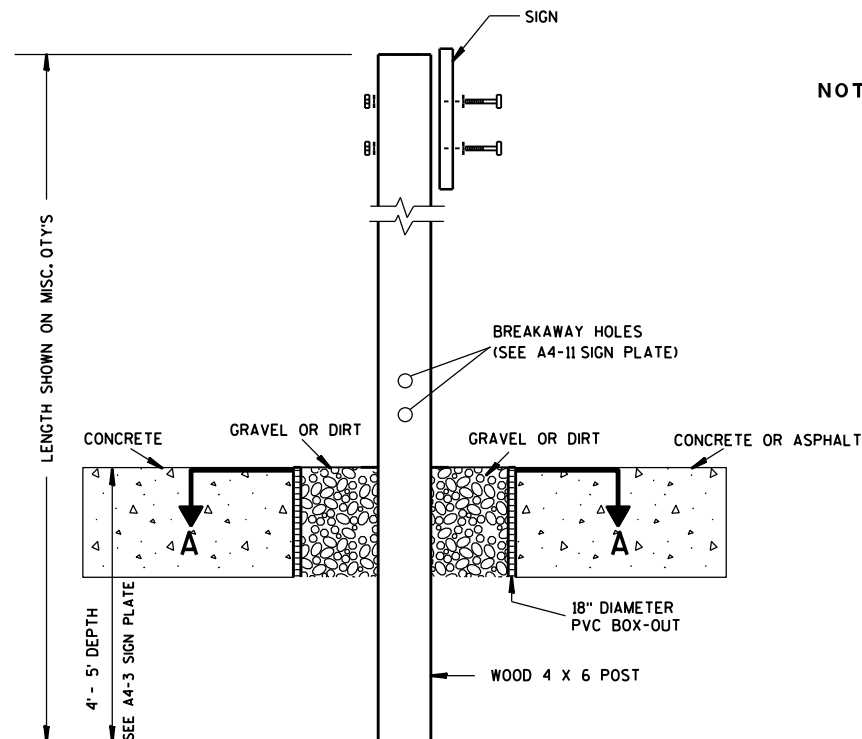
\* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION  
OF PERMANENT TYPE II  
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

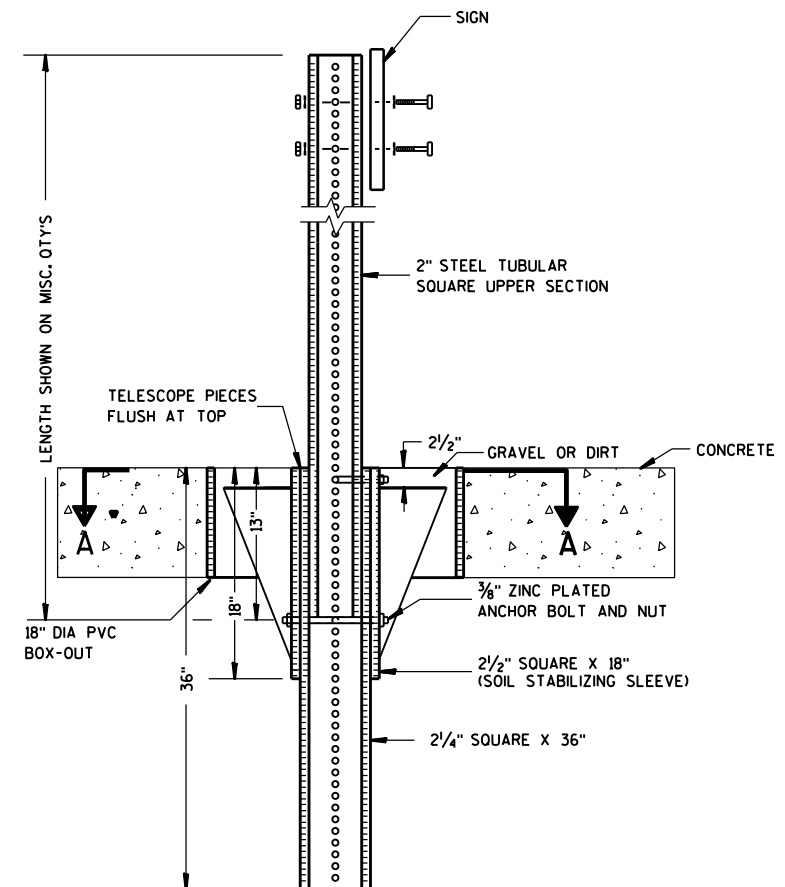
DATE 7/23/15 PLATE NO. A4-3.20



### ELEVATION VIEW

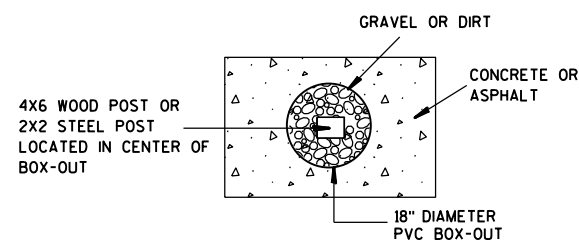
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



### ELEVATION VIEW

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



### PLAN VIEW

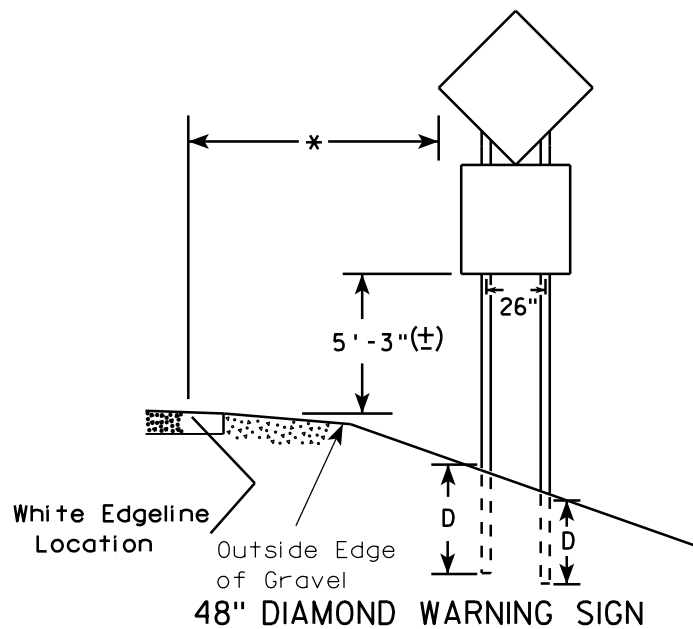
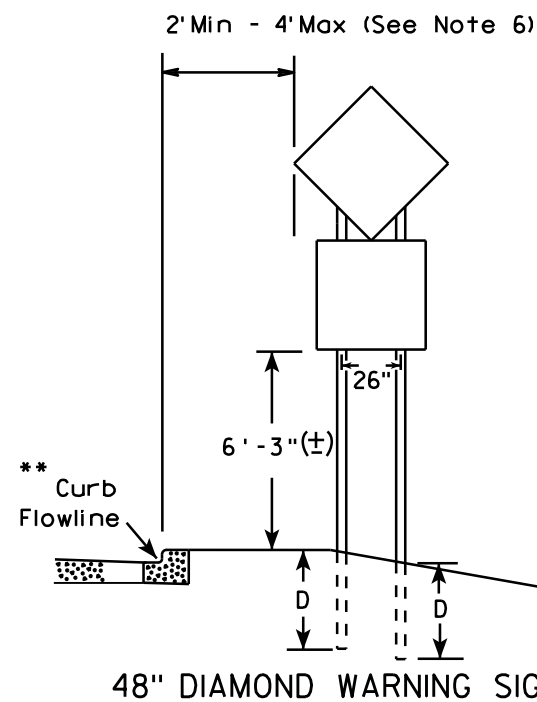
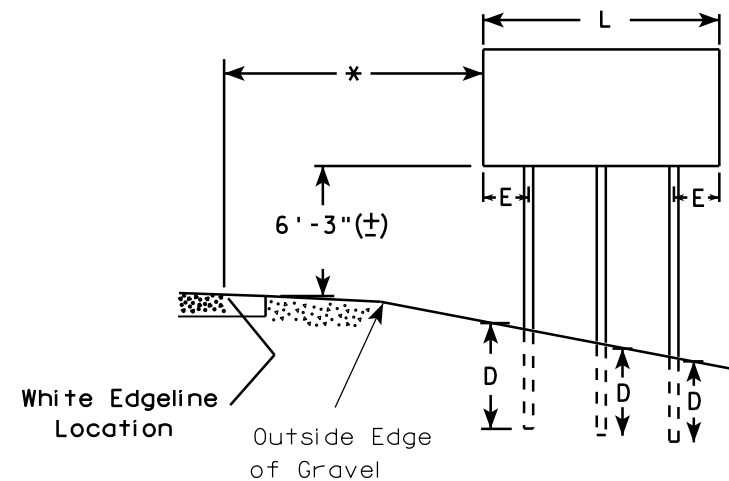
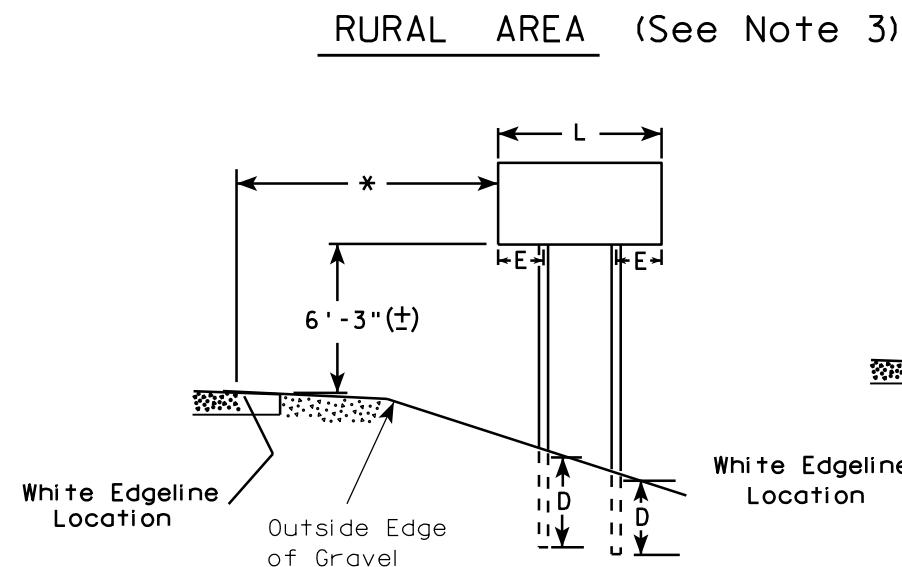
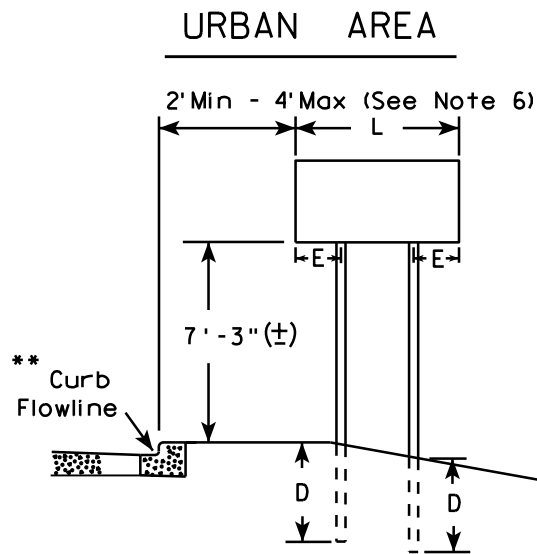
FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST  
BOX-OUTS  
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1



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

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

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

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

\*\*\*

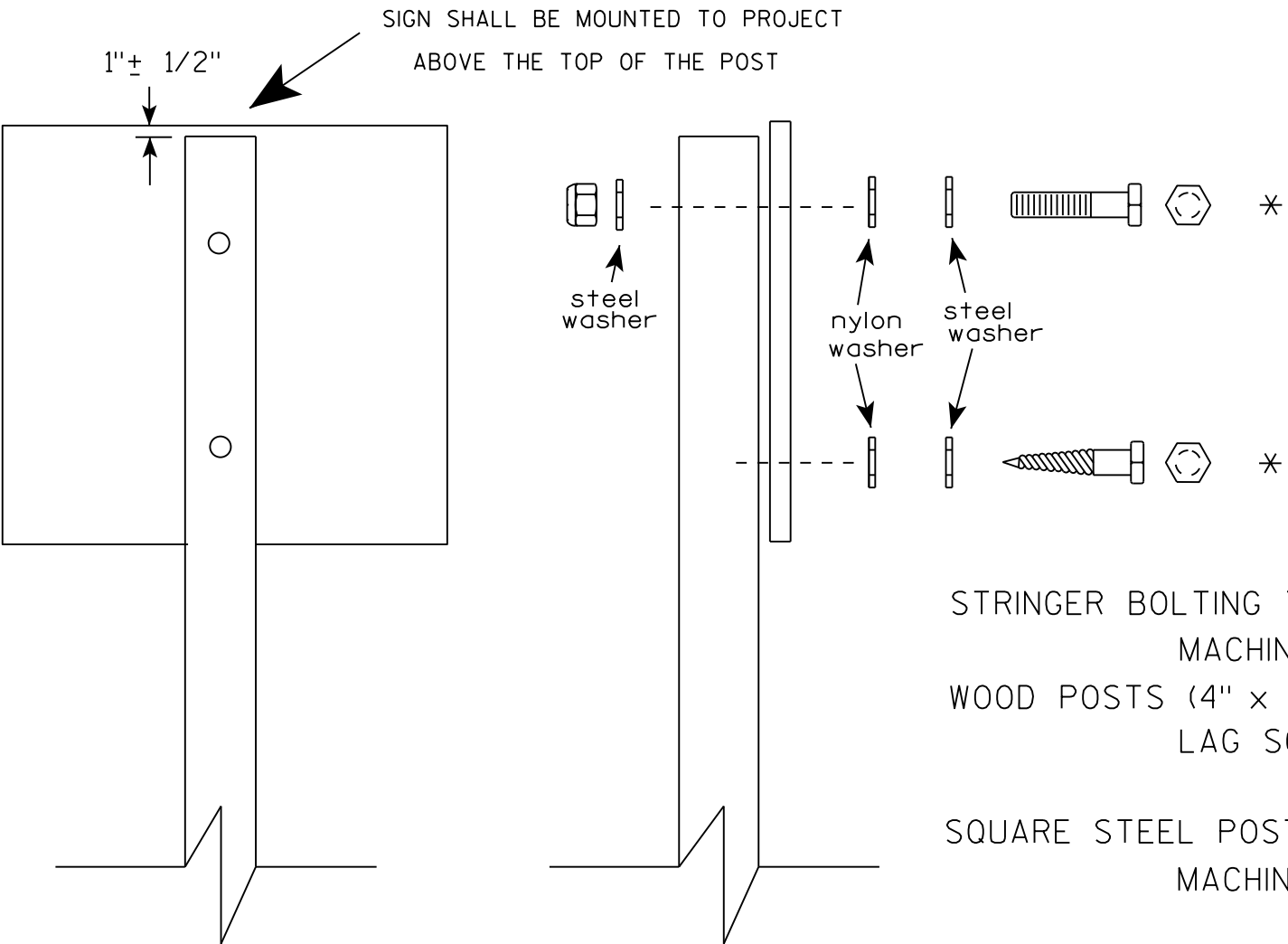
SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

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

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

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 7/23/15	PLATE NO. A4-4.14



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

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

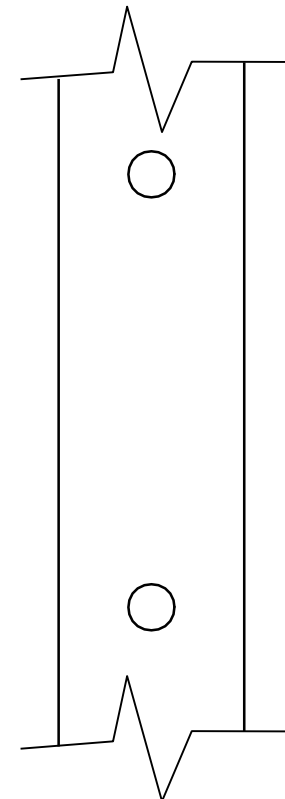
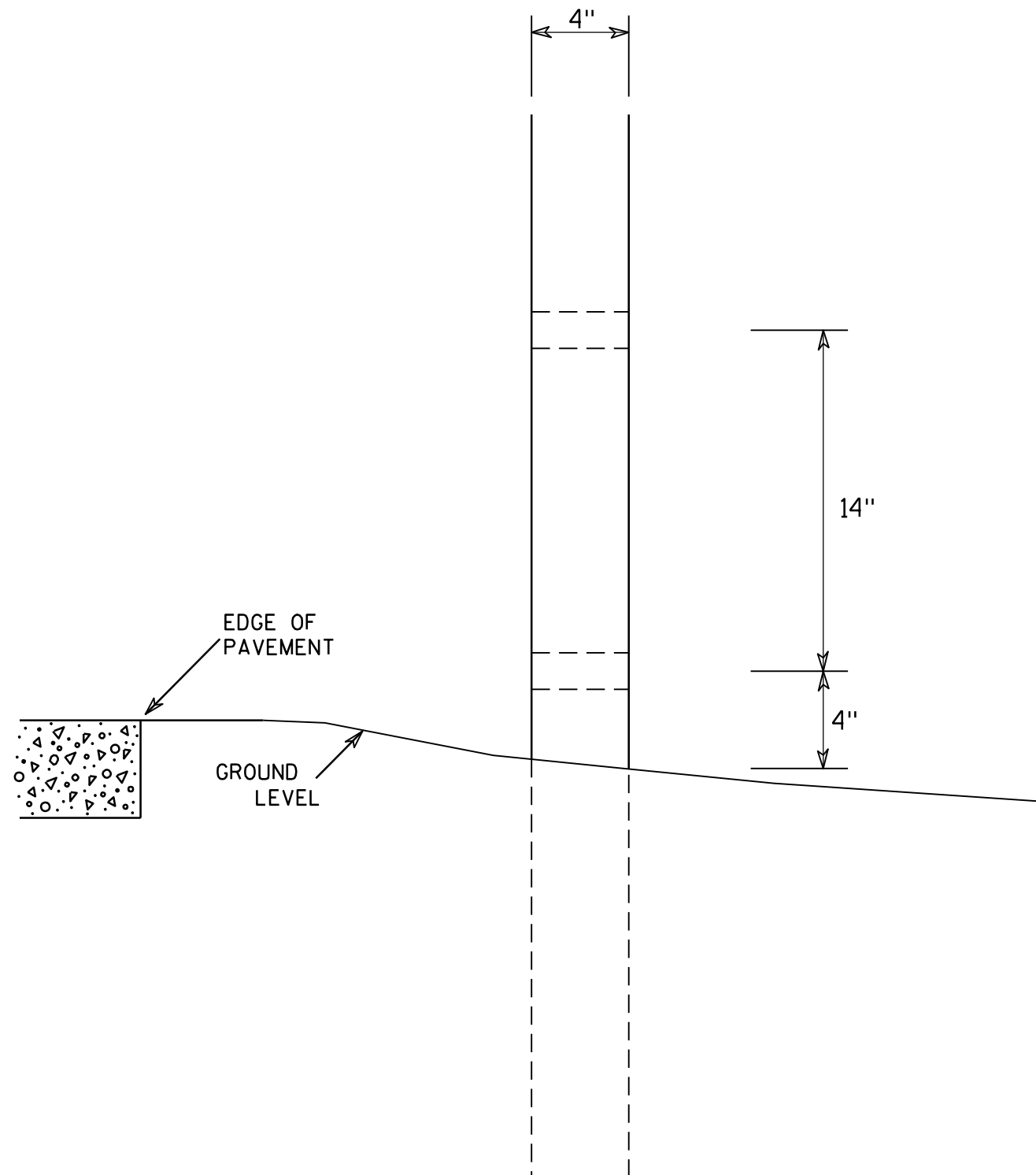
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
  - 3/8" X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
  - 3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
- O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
  - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 8/11/16	PLATE NO. A4-8.8





SIDE VIEW

# GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

## 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Chester J. Spang*  
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

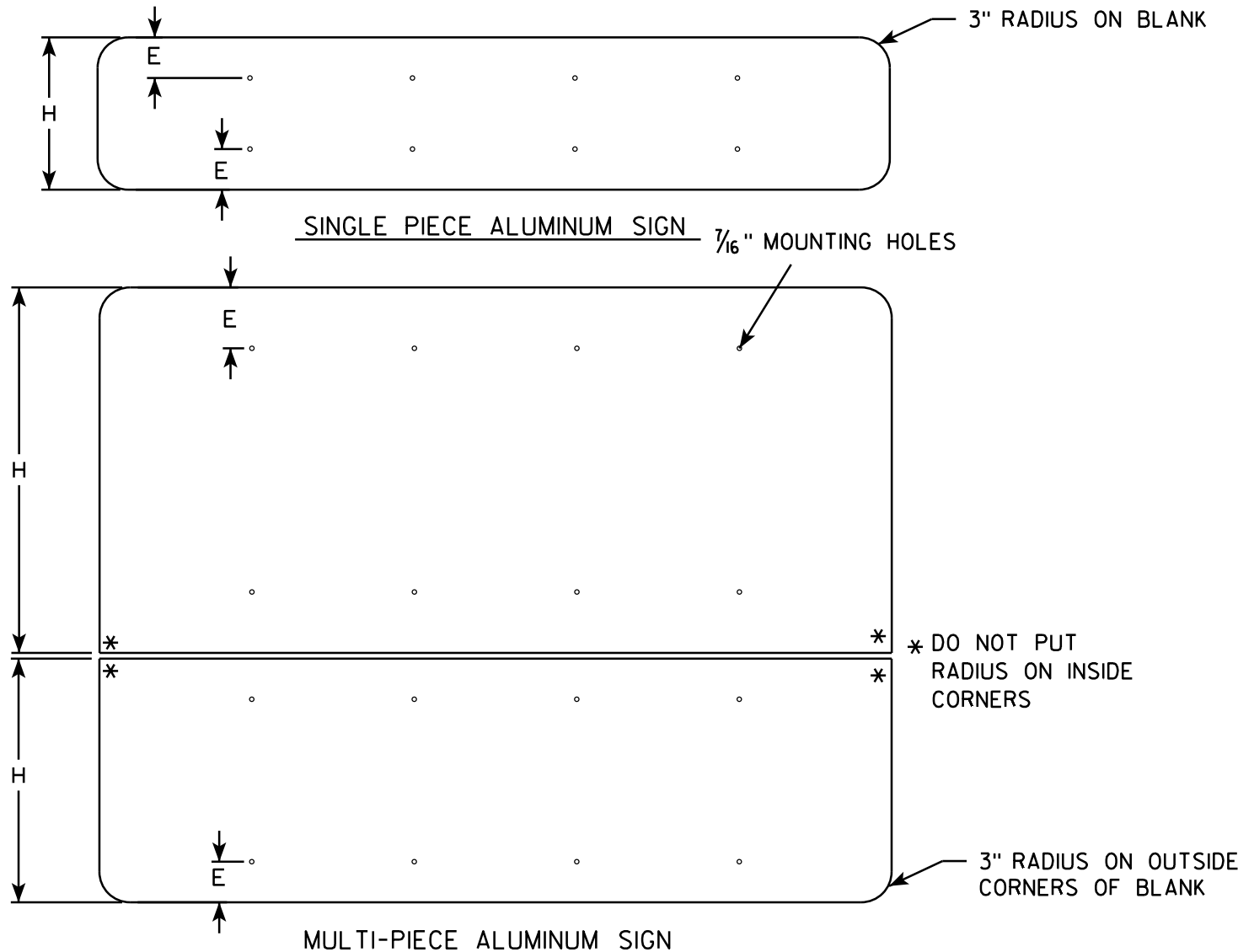
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

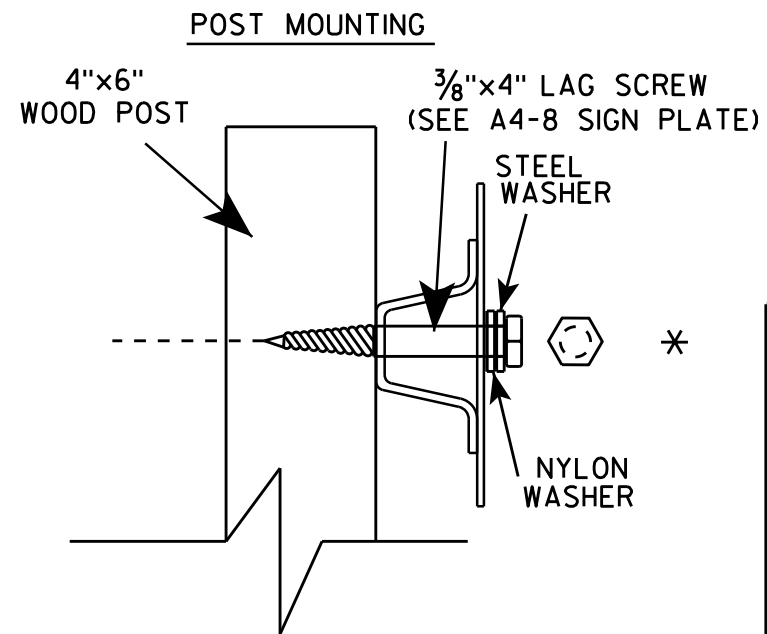
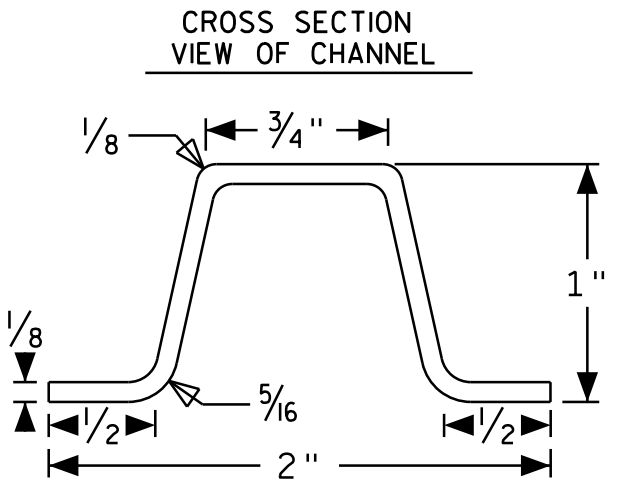
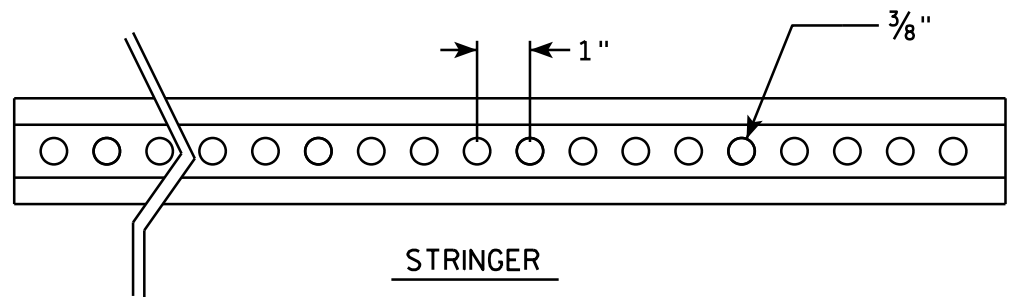
E



### GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES			
78"	72"	2	16"	15"	31"	47"	63"
84"	72"	2	17"	16 1/2"	33 1/2"	50 1/2"	67 1/2"
90"	72"	2	18"	18"	36"	54"	72"
96"	90"	2	19"	19 1/2"	38 1/2"	57 1/2"	76 1/2"
102"	90"	2	20"	21"	41"	61"	81"
108"	90"	2	21"	22 1/2"	43 1/2"	64 1/2"	85 1/2"
114"	108"	3	15"	12"	27"	42"	57" 72" 87" 102"
120"	108"	3	16"	12"	28"	44"	60" 76" 92" 108"
126"	108"	3	17"	12"	29"	46"	63" 80" 97" 114"
132"	126"	3	18"	12"	30"	48"	66" 84" 102" 120"
138"	126"	3	19"	12"	31"	50"	69" 88" 107" 126"
144"	126"	3	20"	12"	32"	52"	72" 92" 112" 132"



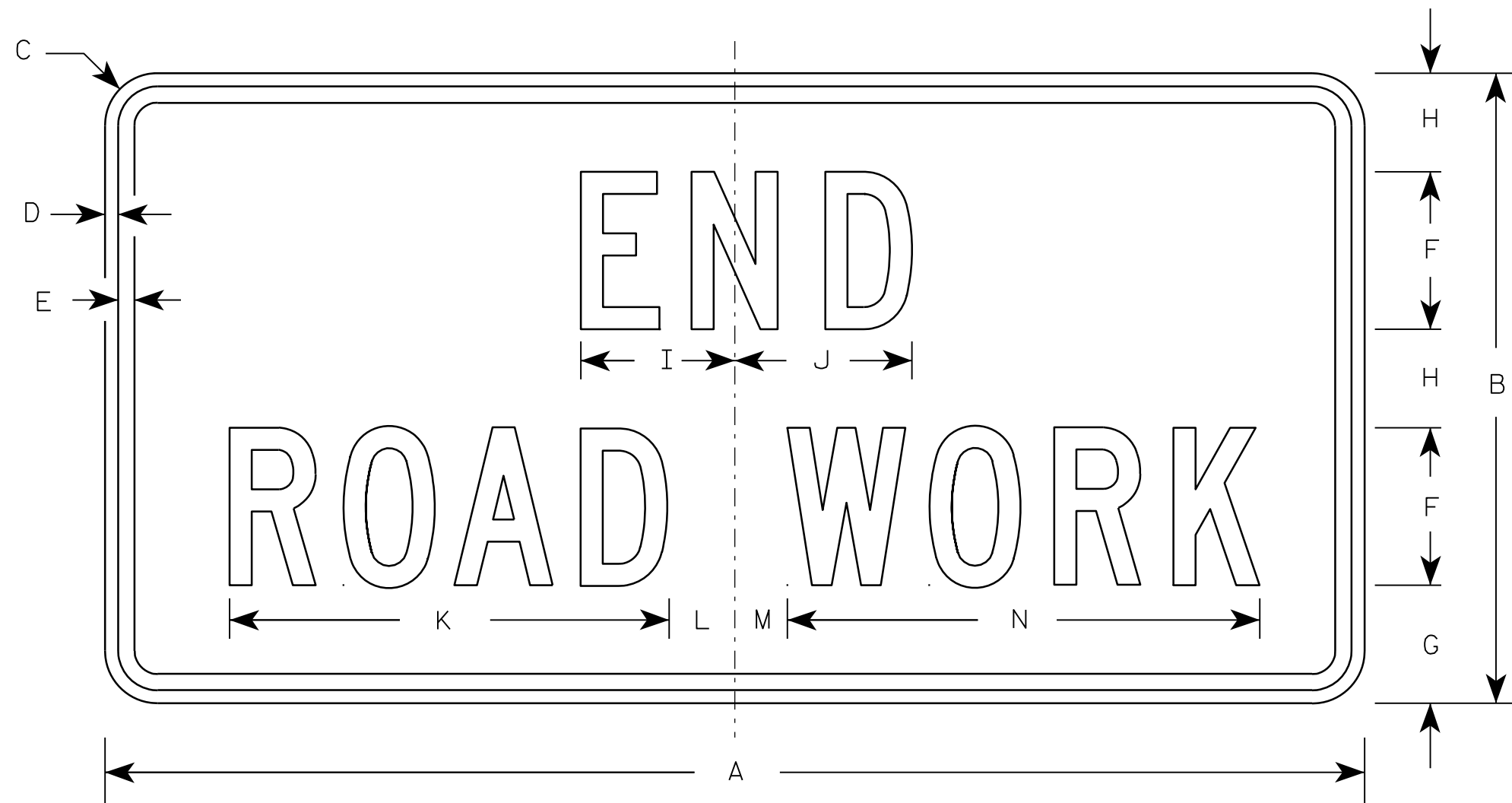
### SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 4/26/16 PLATE NO. A4-18.1

7



G20-2A

Metric equivalent  
for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. m.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
4	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
5	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72

NOTES

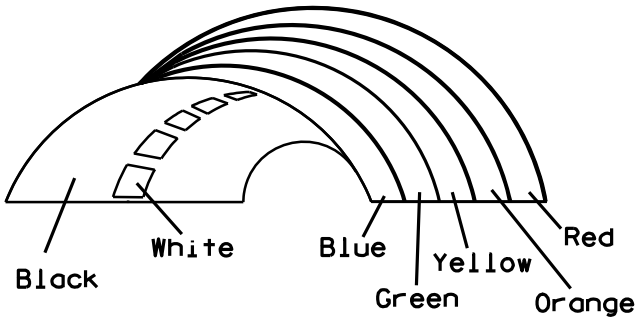
- Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:  
Background - Orange  
Message - Black
- Message Series - C
- Corners may be square or rounded when base material is plywood but borders shall be rounded as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

7



\* VARIES

Background Colors of Symbol\*



\*1/4" Black Border between each color of rainbow and border of rainbow

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White  
Message - (See Note 5)
3. Message Series - (See Note 6)
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Border - Blue  
Line 1 - Red  
Line 2 - Black  
Line 3-5 - Blue
6. Line 1 - Dutch 8011L  
Line 2 - Series E  
Line 3-5 - Series C
7. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	36	1 1/2	1/2	5/8	3	2	3 1/2	2 7/8	1	8	2 1/8	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2							7.5
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

STANDARD SIGN  
I55-56

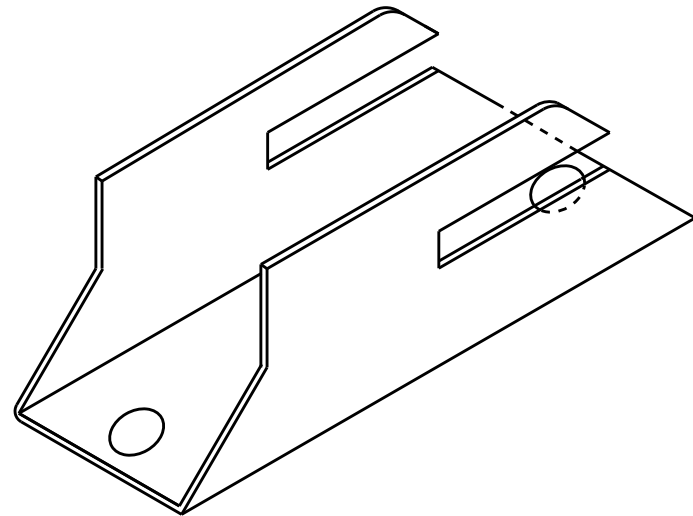
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
For State Traffic Engineer

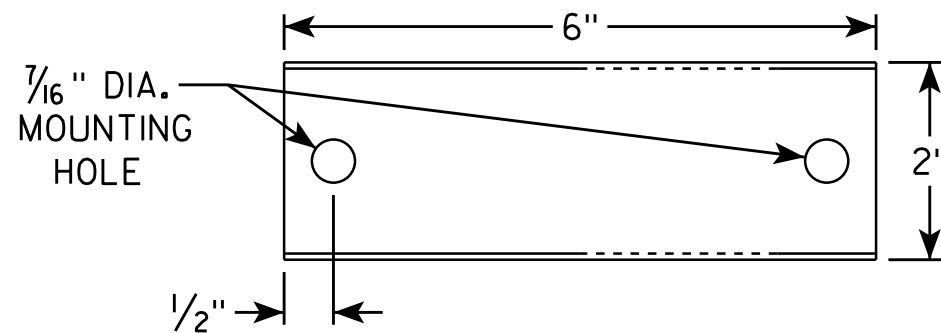
DATE 4/27/11 PLATE NO. I55-56.3



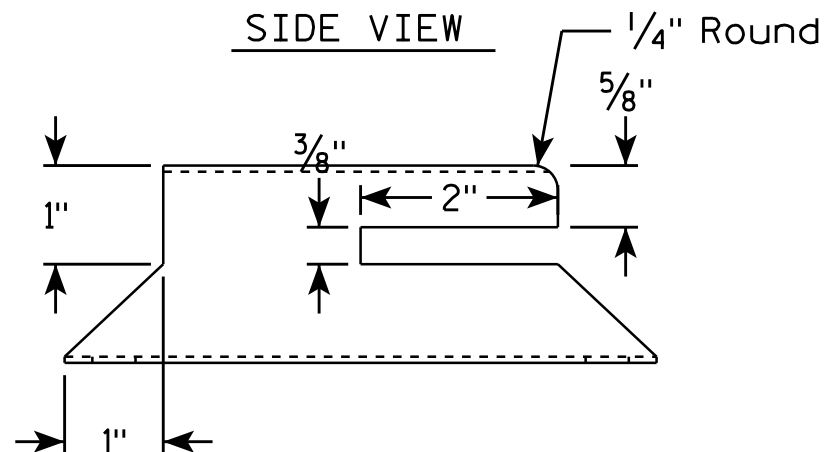
# ISOMETRIC VIEW



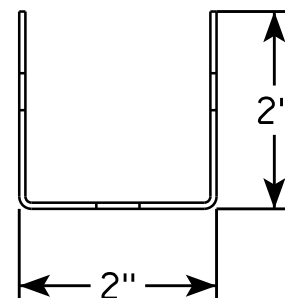
# TOP VIEW



# SIDE VIEW



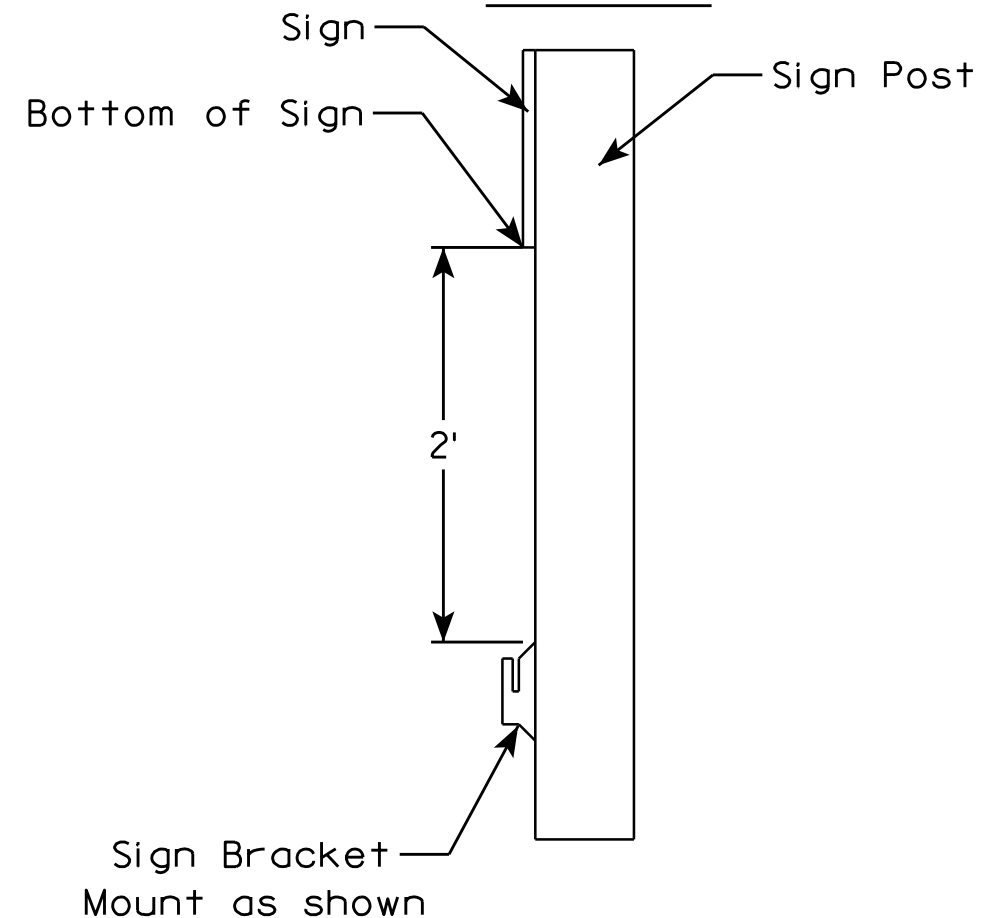
# END VIEW



# NOTES

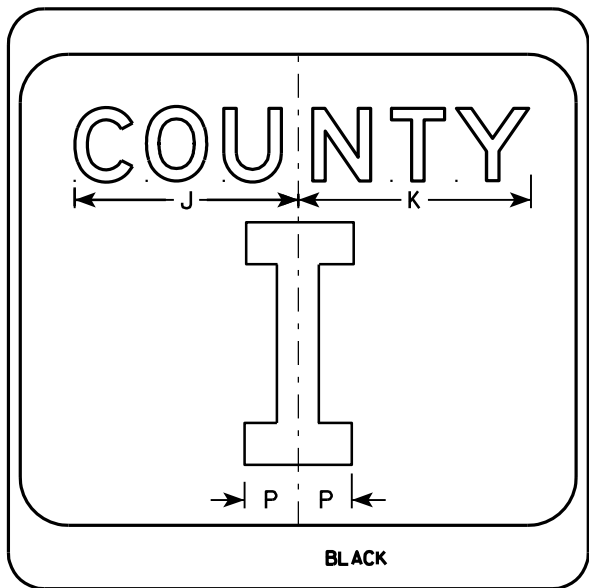
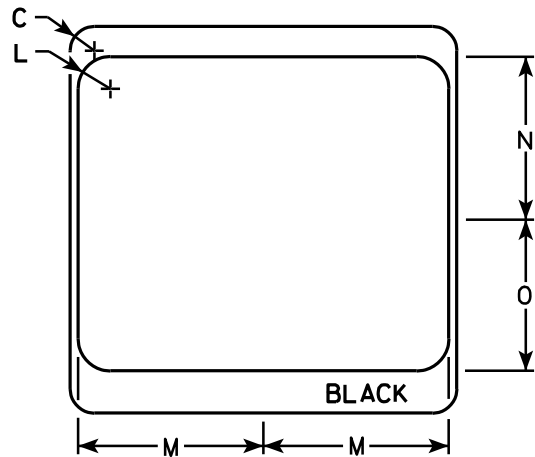
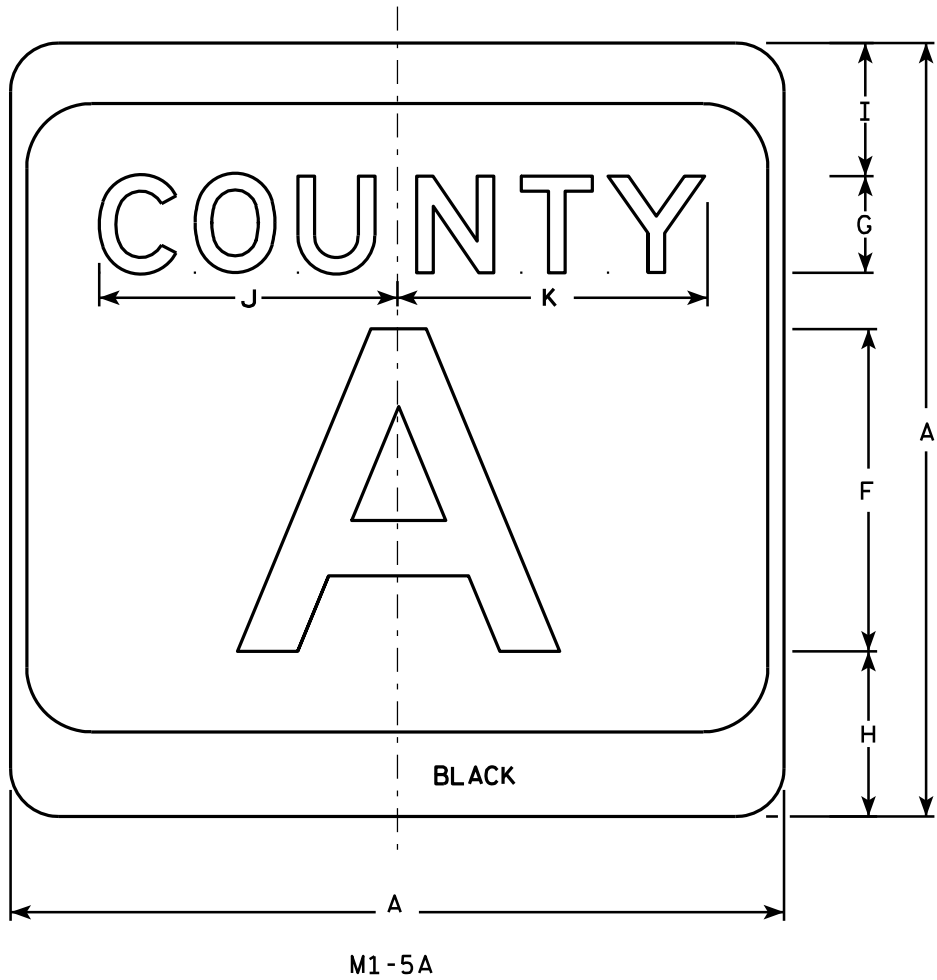
1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

# SIDE VIEW



ROLLUP SIGN BRACKET I55-56B	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/26/16	PLATE NO. I55-56B.2

7



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White & Black - See Note 7  
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.  
Message Series D for 2 letters unless message is too big then Series C.  
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs  
Background - Type H Reflective  
Detour or temporary Signs  
Background - Reflective

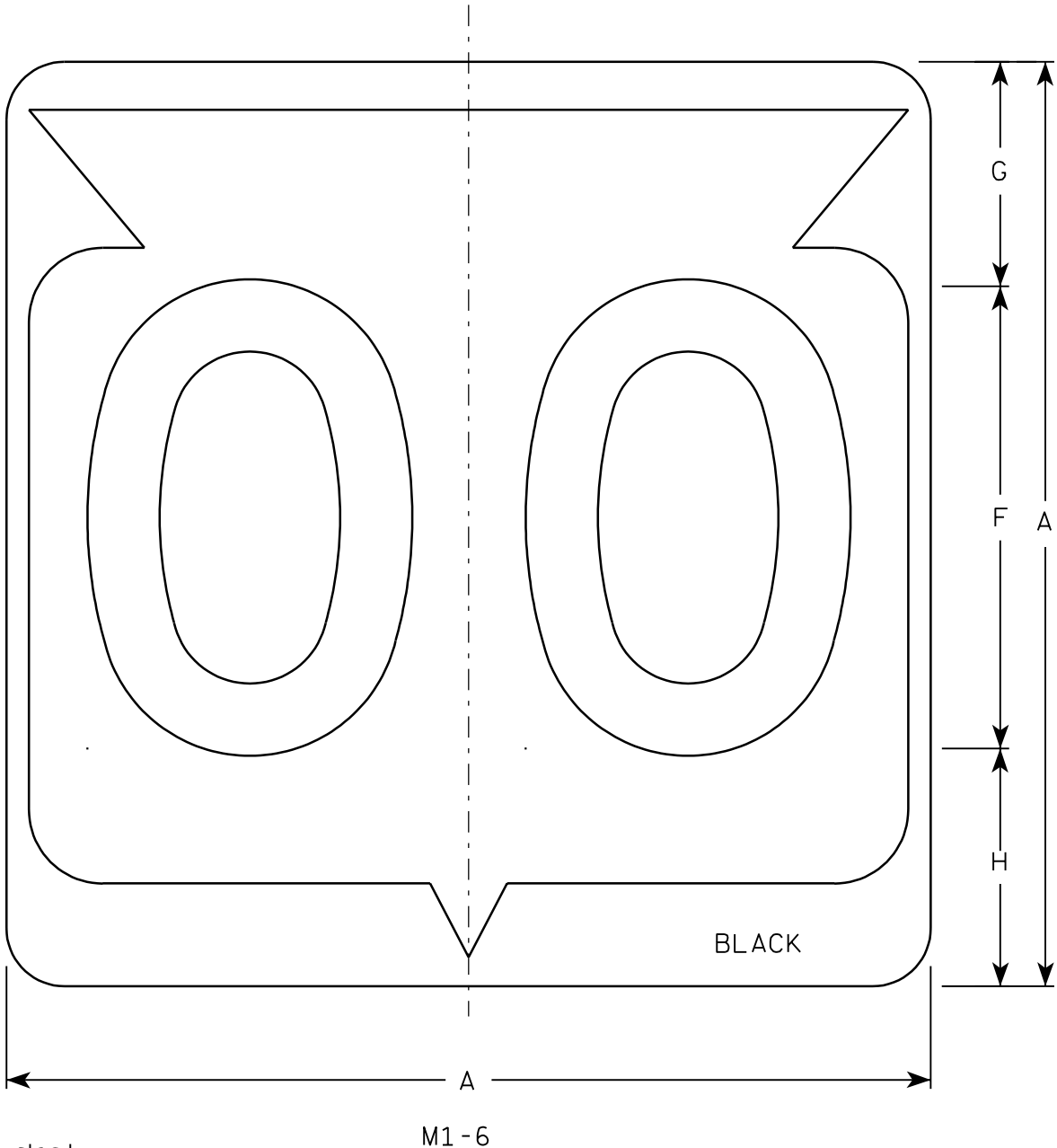
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5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

CTH MARKER	
M1-5A FOR ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/27/11	PLATE NO. M1-5A.8

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

7

7



Metric equivalent  
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m <sup>2</sup>
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8											4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33											9.0	.81

PROJECT NO:

HWY:

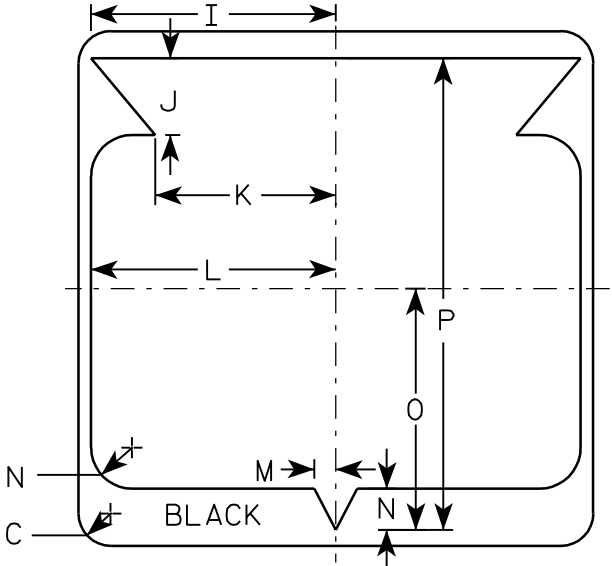
COUNTY:

SHEET NO:

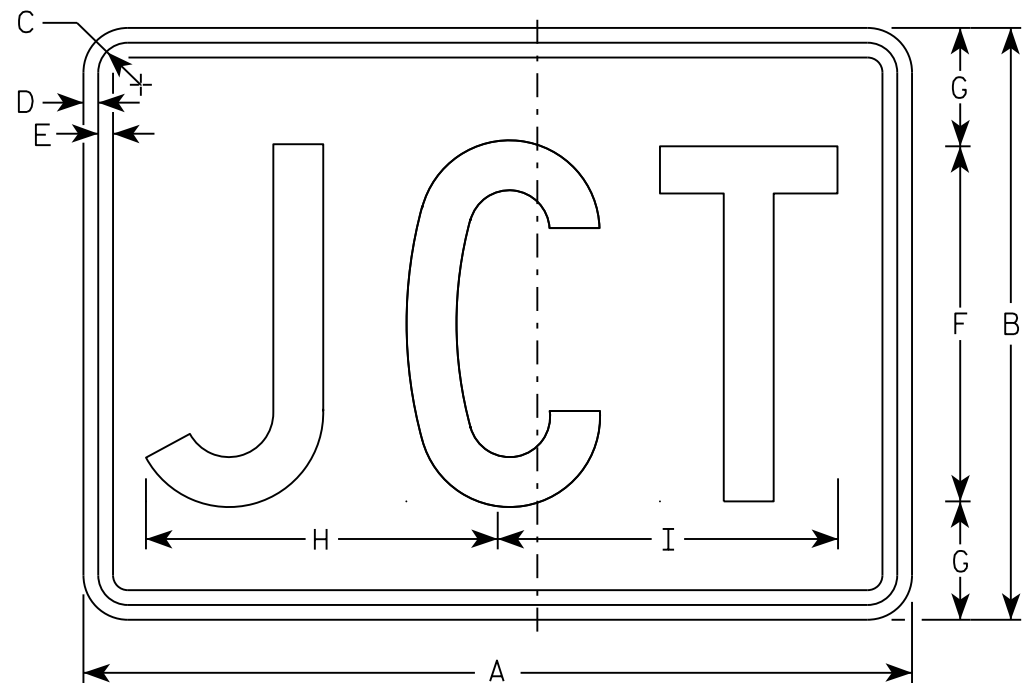
E

NOTES

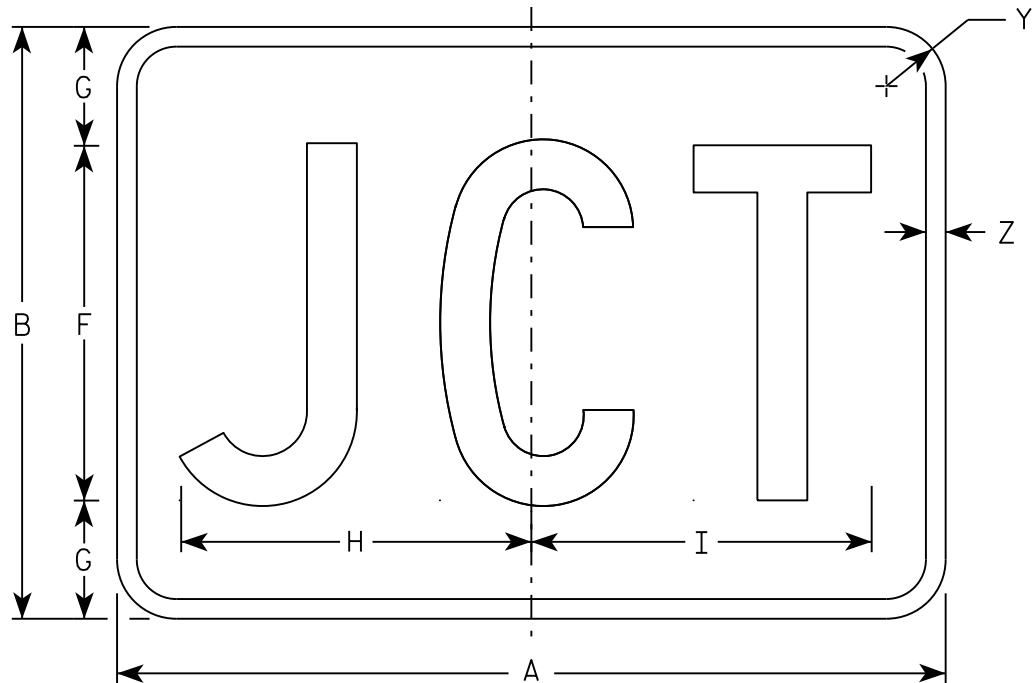
1. Sign is Type II - See Note 6 - reference  
WIS DOT Standard Specification for HIGHWAY  
and STRUCTURE CONSTRUCTION latest edition.
2. Color:  
Background - White & Black - See Note 6  
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base  
material is plywood but borders shall be rounded  
as shown. When base material is metal, the  
corners and borders shall be rounded.
5. Substitute appropriate Series numerals and  
adjust spacing as per plate A10-1.
6. Permanent Signs  
Background - Type H Reflective  
Detour or temporary Signs  
Background - Reflective



7



M2-1  
MM2-1  
MP2-1



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

NOTES

- 1. Sign is Type II - Type H
- 2. Color:
  - Background - See note 5
  - Message - See note 5
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. M2-1 Background - White  
    Message - Black  
    MB2-1 Background - Blue  
    Message - White  
    MK2-1 Background - Green  
    Message - White  
    MM2-1 Background - White  
    Message - Green  
    MN2-1 Background - Brown  
    Message - White  
    MP2-1 Background - White  
    Message - Blue  
    MR2-1 Background - Brown  
    Message - Yellow

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

STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

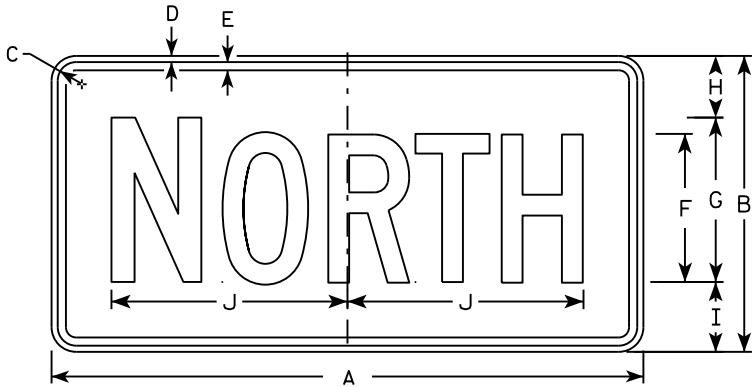
Matthew R. Rauch

For State Traffic Engineer

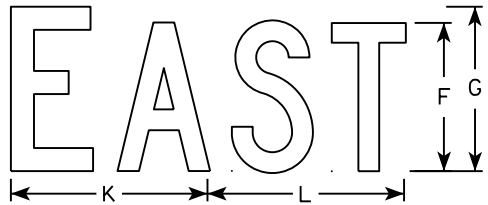
DATE 10/15/15

PLATE NO. M2-1.12

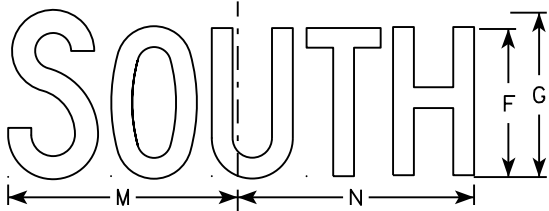




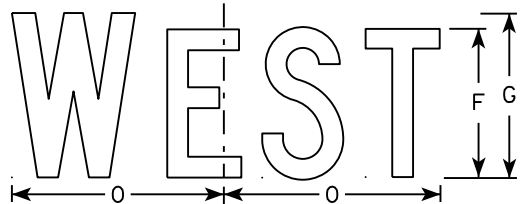
M3-1  
MM3-1  
MP3-1



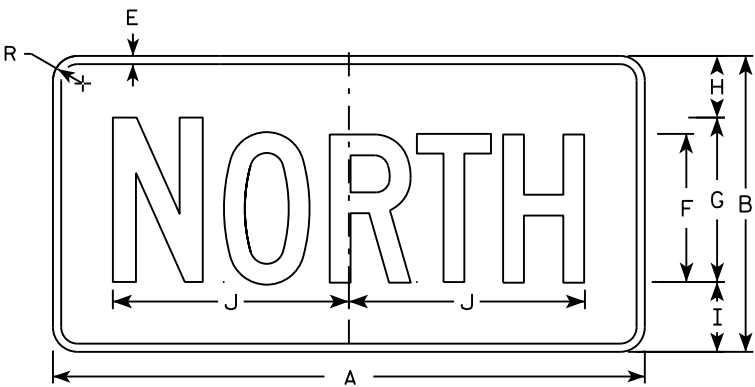
M3-2  
MM3-2  
MP3-2



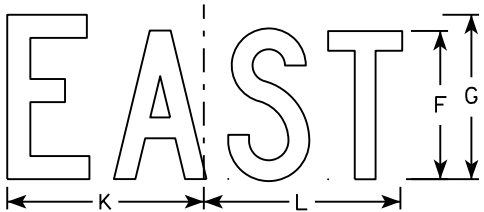
M3-3  
MM3-3  
MP3-3



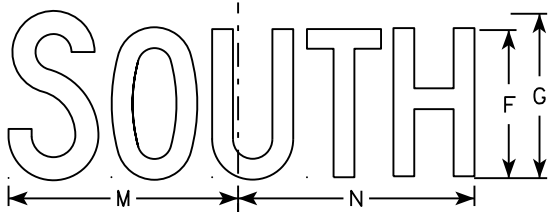
M3-4  
MM3-4  
MP3-4



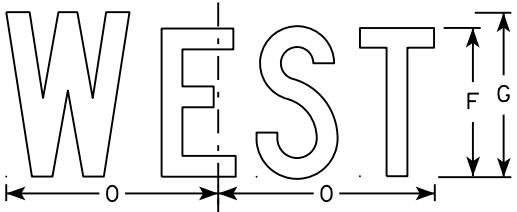
MB3-1  
MK3-1  
MN3-1



MB3-2  
MK3-2  
MN3-2



MB3-3  
MK3-3  
MN3-3



MB3-4  
MK3-4  
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:  
Background - See note 5  
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White  
Message - Black  
MB3-1 thru MB3-4 Background - Blue  
Message - White  
MK3-1 thru MK3-4 Background - Green  
Message - White  
MM3-1 thru MM3-4 Background - White  
Message - Green  
MN3-1 thru MN3-4 Background - Brown  
Message - White  
MP3-1 thru MP3-4 Background - White  
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

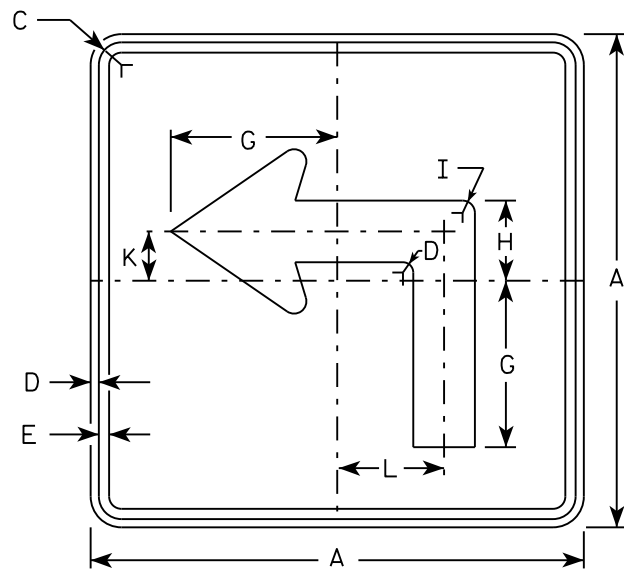
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS  
M3-1 thru M3-4  
SERIES

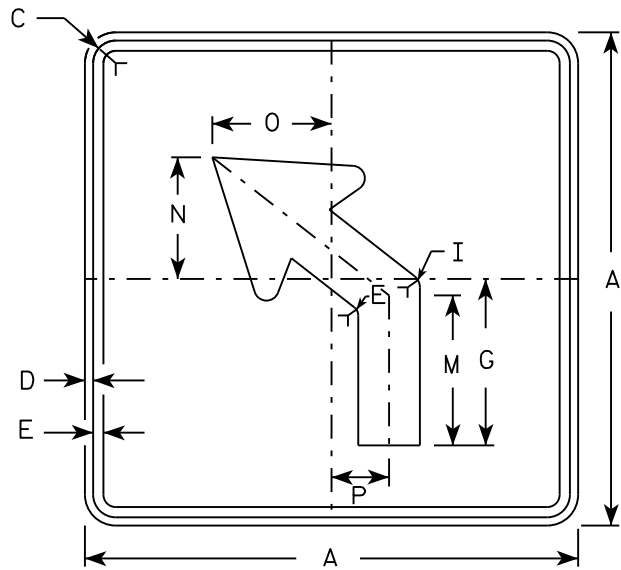
WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

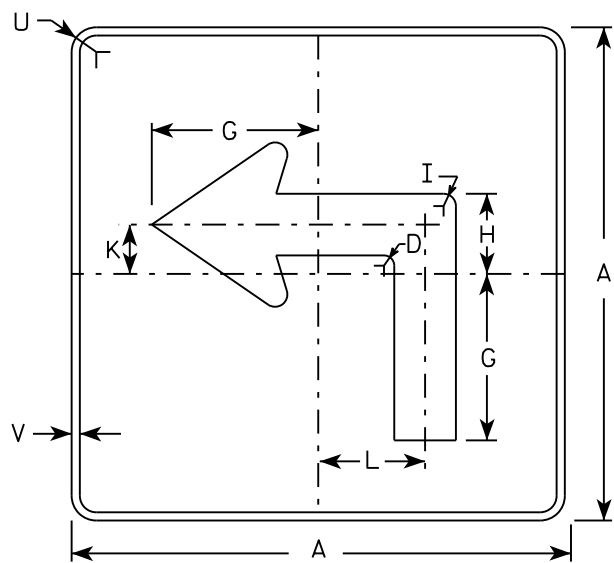
DATE 10/15/15 PLATE NO. M3-1.14



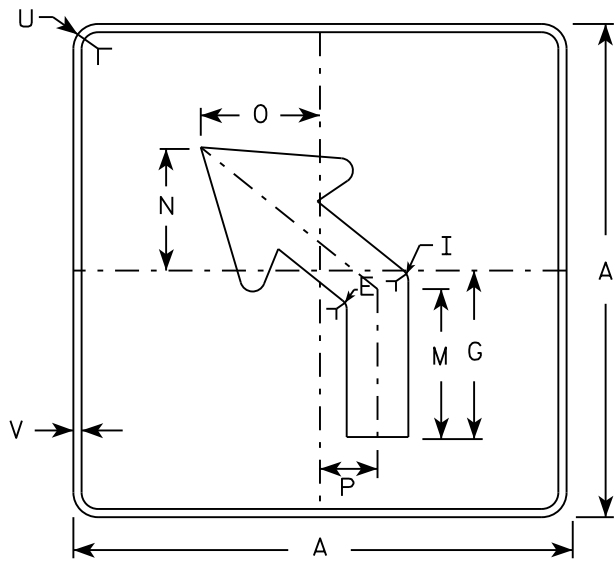
M5-1L  
MM5-1L  
M05-1L  
MP5-1L



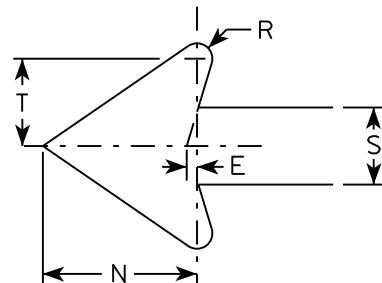
M5-2L  
MM5-2L  
M05-2L  
MP5-2L



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



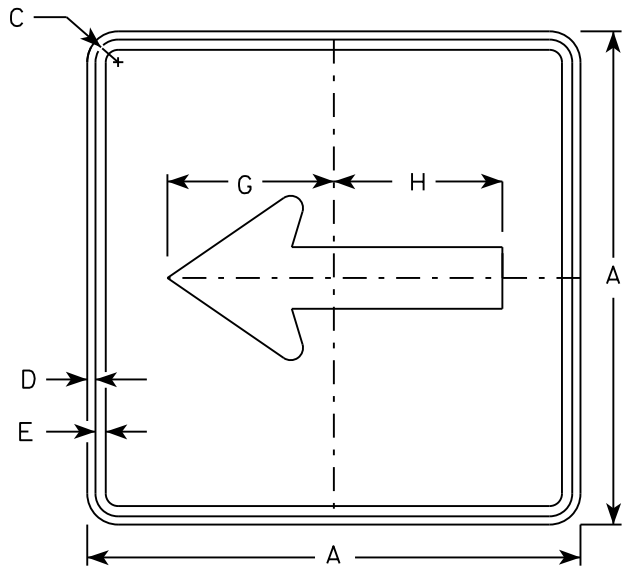
MB5-2L  
MK5-2L  
MN5-2L  
MR5-2L



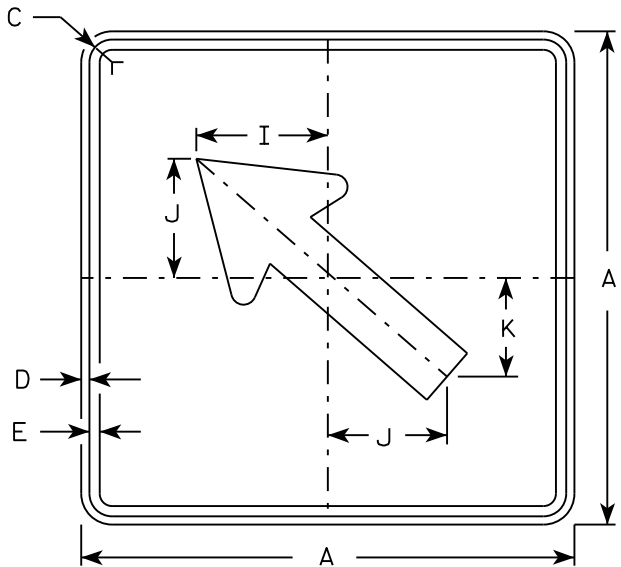
NOTES

- Signs are Type II - Type H reflective except as shown
- Color:  
Background - See note 4  
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White  
Message - Black  
MB5-1 and MB5-2 Background - Blue  
Message - White  
MK5-1 and MK5-2 Background - Green  
Message - White  
MM5-1 and MM5-2 Background - White  
Message - Green  
MN5-1 and MN5-2 Background - Brown  
Message - White  
M05-1 and M05-2 Background - Orange - Type F Reflective  
Message - Black  
MP5-1 and MP5-2 Background - White - Type H Reflective  
Message - Blue  
MR5-1 and MR5-2 Background - Brown  
Message - Yellow
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

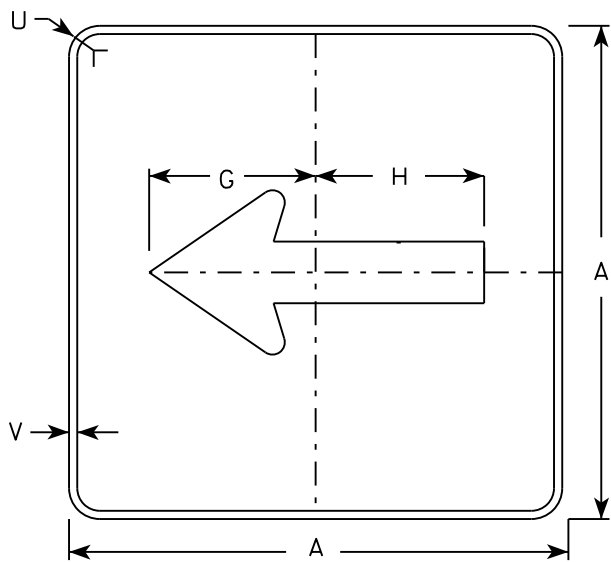
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25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



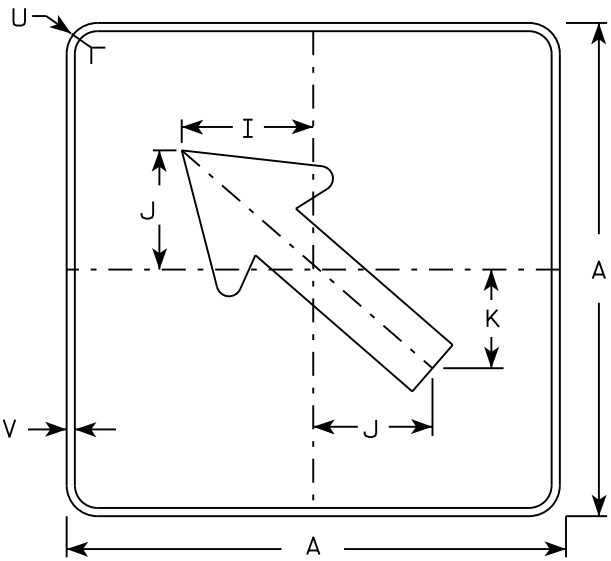
M6 - 1  
MM6 - 1  
M06 - 1  
MP6 - 1



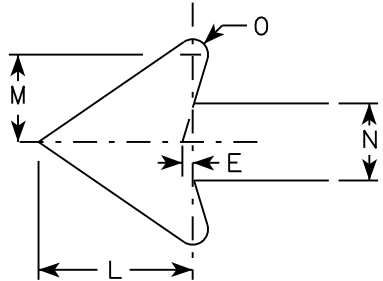
M6 - 2  
MM6 - 2  
M06 - 2  
MP6 - 2



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



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



NOTES

- 1. Signs are Type II - Type H except as Shown
- 2. Color:  
Background - See note 4  
Message - See note 4
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. M6-1 and M6-2 Background - White  
Message - Black  
MB6-1 and MB6-2 Background - Blue  
Message - White  
MK6-1 and MK6-2 Background - Green  
Message - White  
MM6-1 and MM6-2 Background - White  
Message - Green  
MN6-1 and MN6-2 Background - Brown  
Message - White  
M06-1 and M06-2 Background - Orange - Type F Reflective  
Message - Black  
MP6-1 and MP6-2 Background - White  
Message - Blue  
MR6-1 and MR6-2 Background - Brown  
Message - Yellow

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

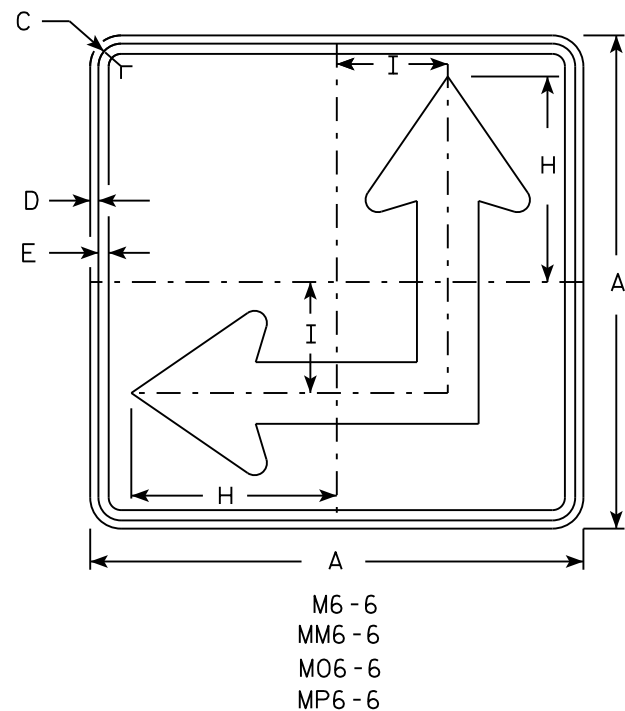
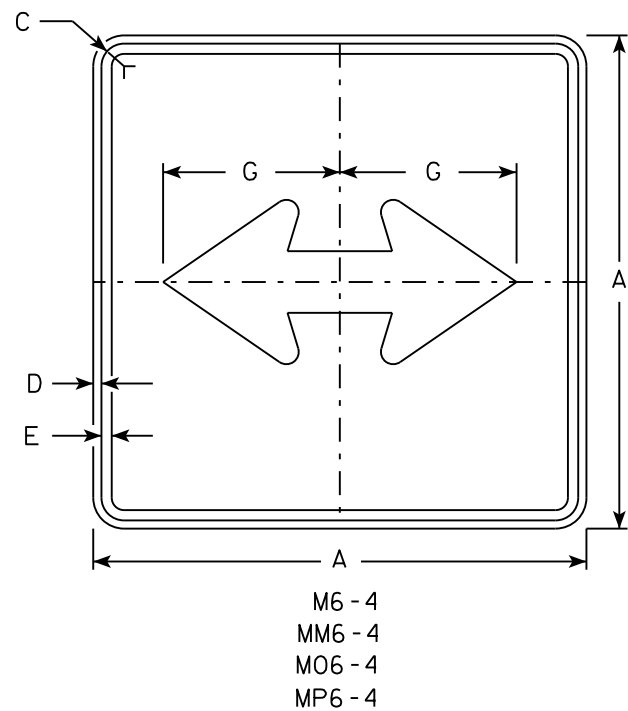
E

STANDARD SIGN  
M6 - 1 & M6 - 2  
SERIES

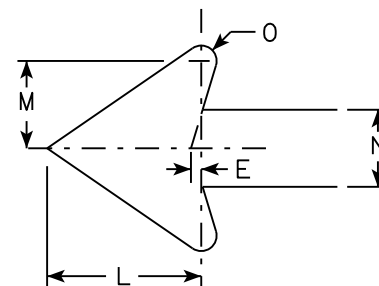
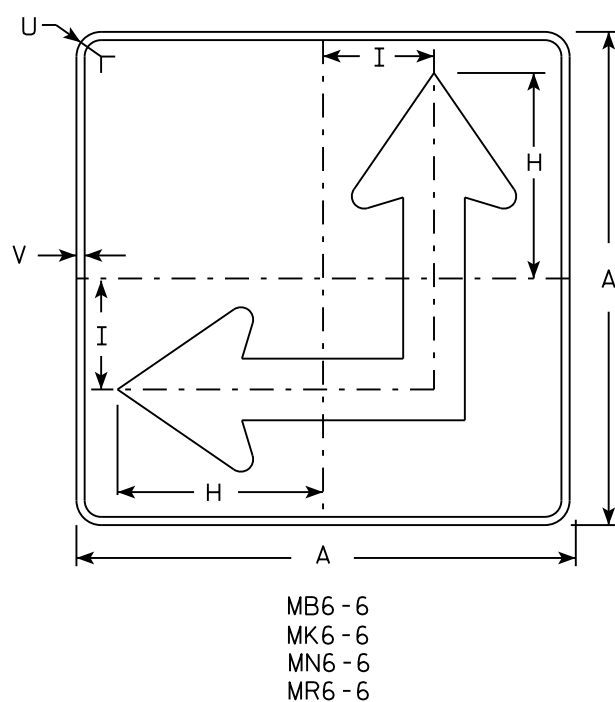
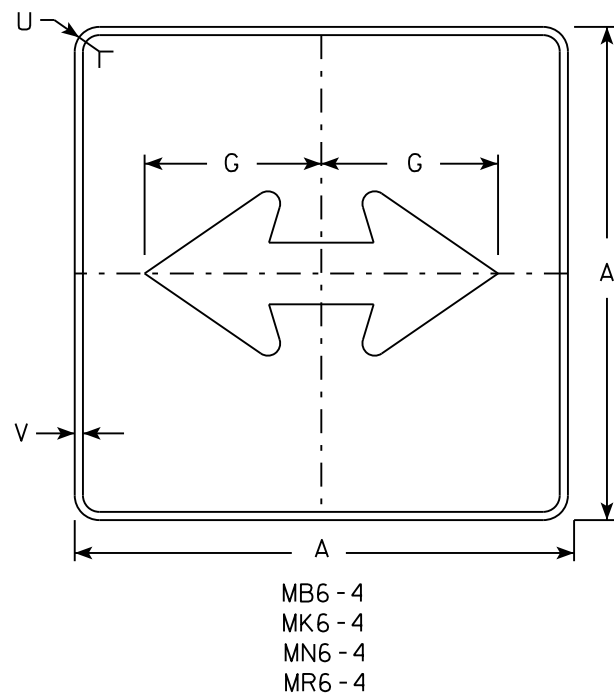
WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

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



- NOTES
- Signs are Type II - Type H except as Shown
  - Color:  
Background - See Note 4  
Message - See Note 4
  - Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
  - M6-4 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.



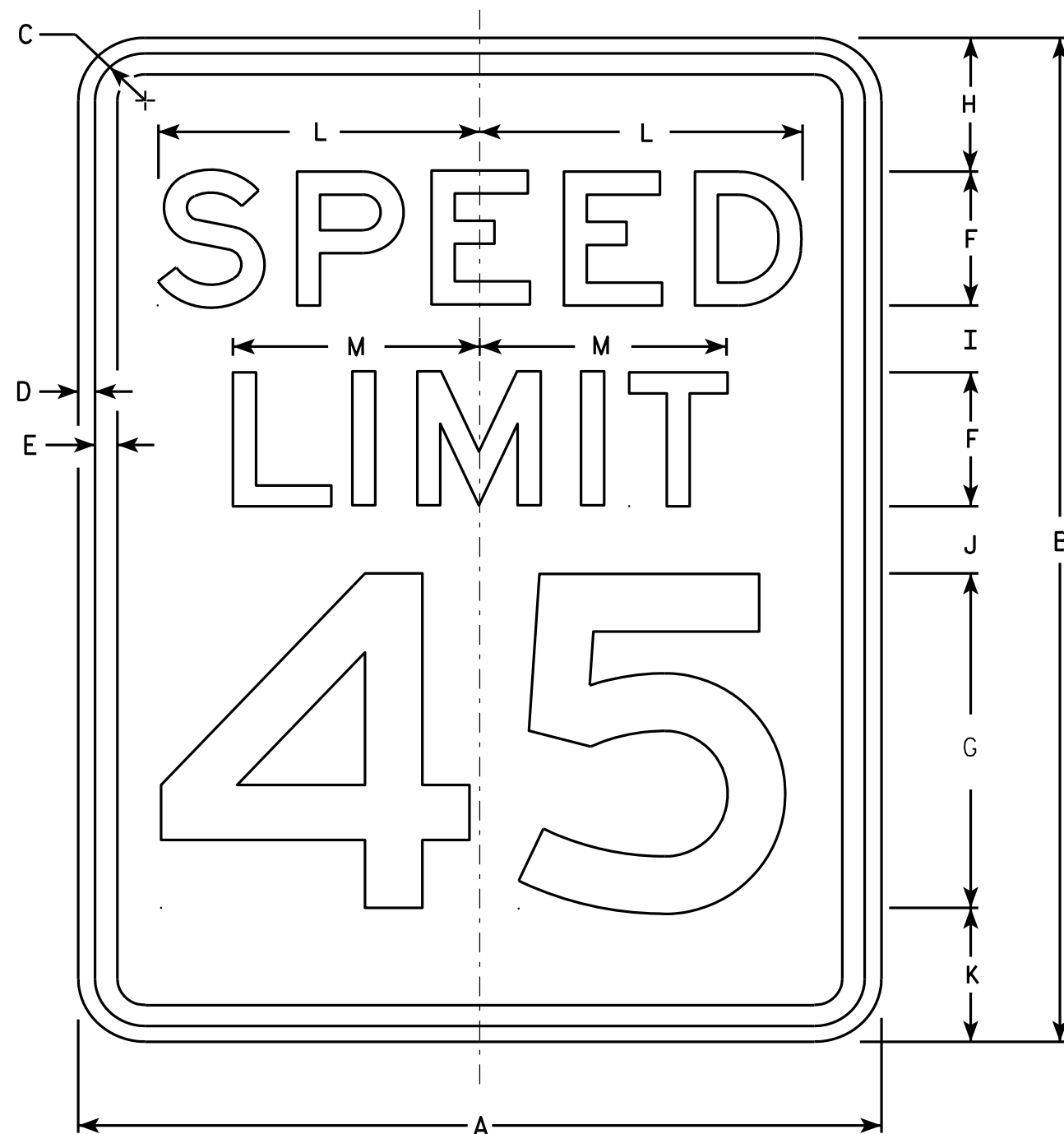
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

STANDARD SIGN  
M6 - 4 & M6 - 6  
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED  
*Matthew R. Rauch*  
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10



R2-1

### NOTES

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

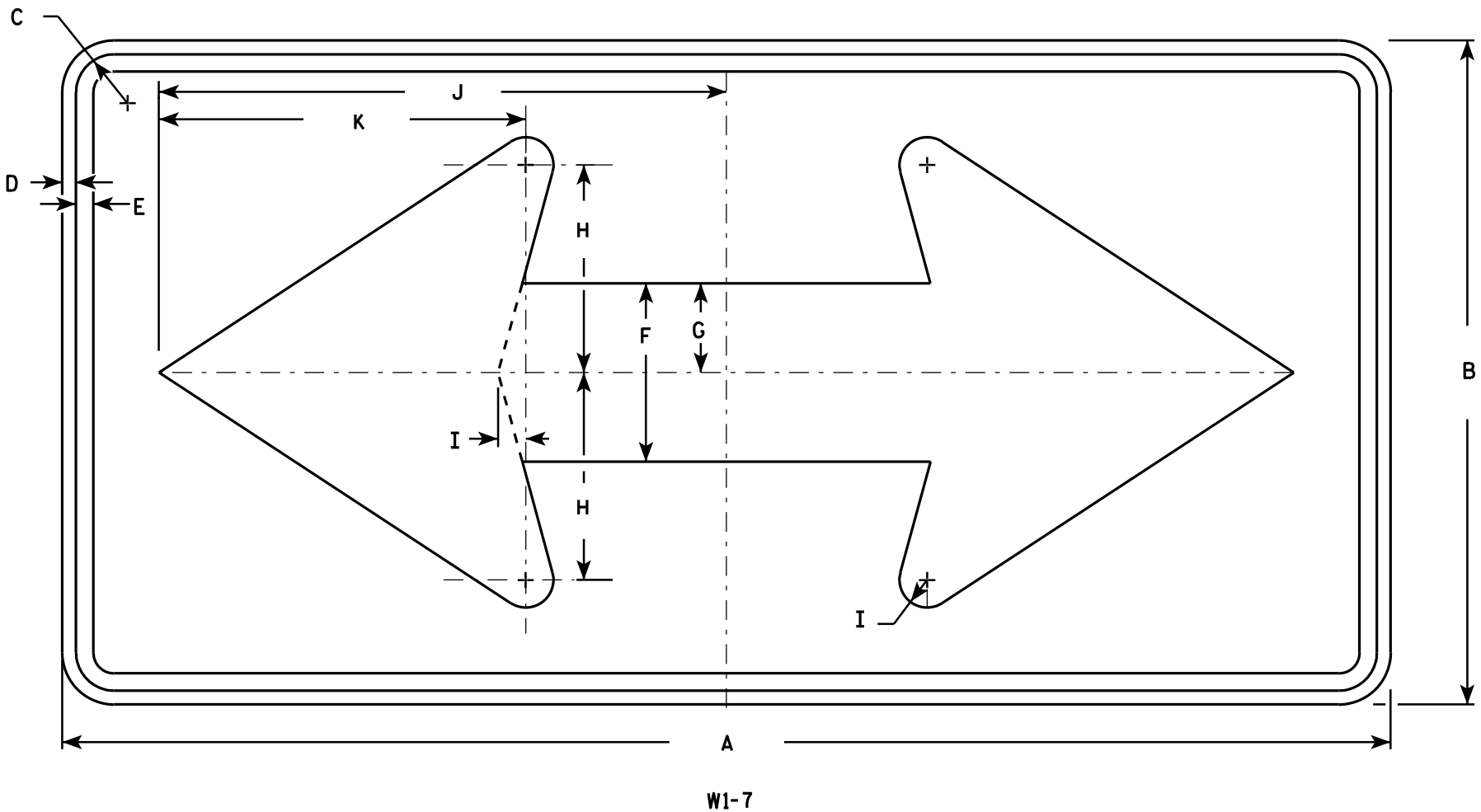
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8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

### STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION  
APPROVED *Matthew R. Rauch*  
For State Traffic Engineer  
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E





NOTES

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

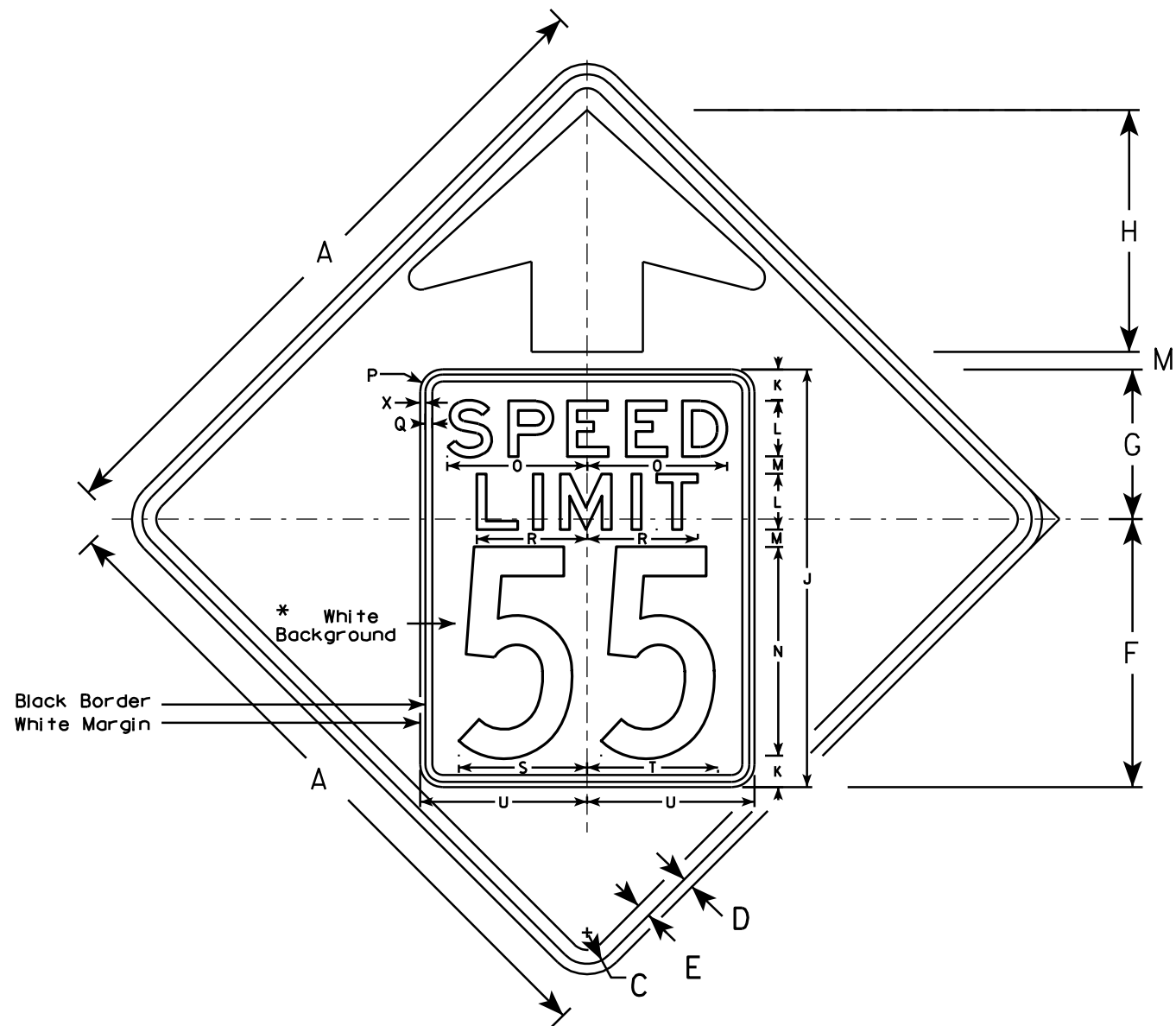
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/8	3/8	1/2	5	2 1/2	5 3/4	3/4	15 5/8	10 1/8																4.5
2S	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
2M	48	24	1 3/8	1/2	5/8	6 1/2	3 1/4	7 1/2	1	20 1/2	13 1/4																8.0
3	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
4	60	30	1 3/8	1/2	5/8	8	4	9 1/4	1 1/4	25 3/8	16 1/4																12.5
5	96	48	2 1/4	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 6/7/10 PLATE NO. W1-7.7

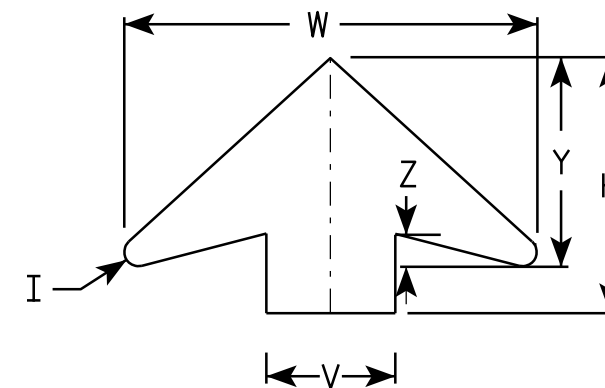


W3-5

### NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: \*  
Background - YELLOW\*  
Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

\*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
2M	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
3	36		1 5⁄8	5⁄8	3⁄4	14 1⁄2	9 1⁄2	11 1⁄2	5⁄8	24	2	3	1	12	7 1⁄8	1 1⁄2	3⁄8	5 3⁄4	7 1⁄4	7 1⁄8	9	6	19 1⁄4	3⁄8	9 3⁄4	1 5⁄8	9.0
4	48		2 1⁄4	3⁄4	1	19 1⁄4	10 3⁄4	17 3⁄8	7⁄8	30	2 1⁄4	4	1 1⁄4	15	10	1 5⁄8	1⁄2	8	9 1⁄4	9 3⁄8	12	8	25 5⁄8	3⁄8	13	2	16.0
5	48		2 1⁄4	3⁄4	1	19 1⁄4	10 3⁄4	17 3⁄8	7⁄8	30	2 1⁄4	4	1 1⁄4	15	10	1 5⁄8	1⁄2	8	9 1⁄4	9 3⁄8	12	8	25 5⁄8	3⁄8	13	2	16.0

### STANDARD SIGN

W3-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

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

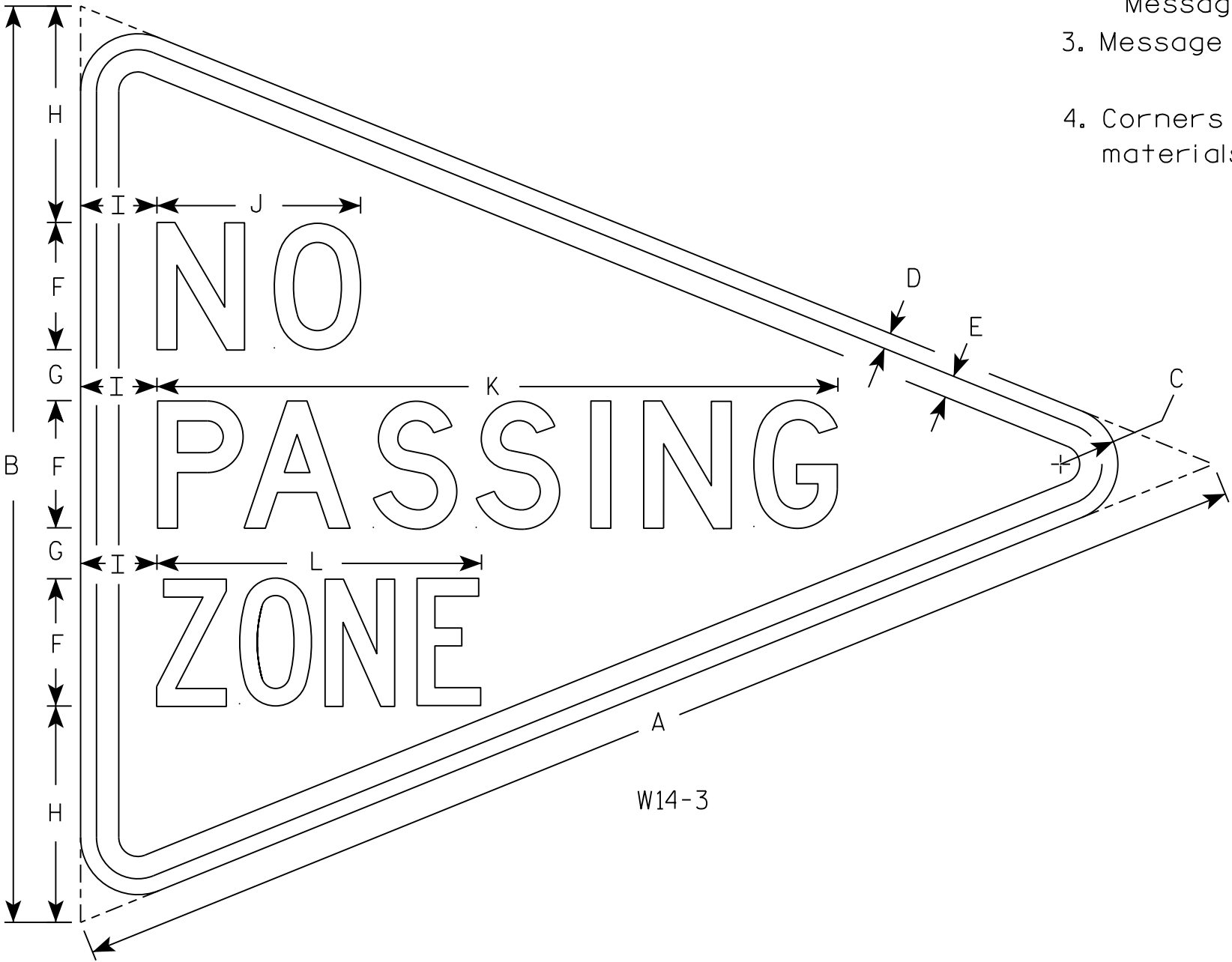
PROJECT NO:

SHEET NO:

E

NOTES

- 1. Sign is Type II- Type F Reflective
- 2. Color:  
Background - Yellow  
Message - Black
- 3. Message Series - Lines 1 and 2 are Series D.  
Line 3 is series C.
- 4. Corners and borders shall be rounded on all base materials for this sign.



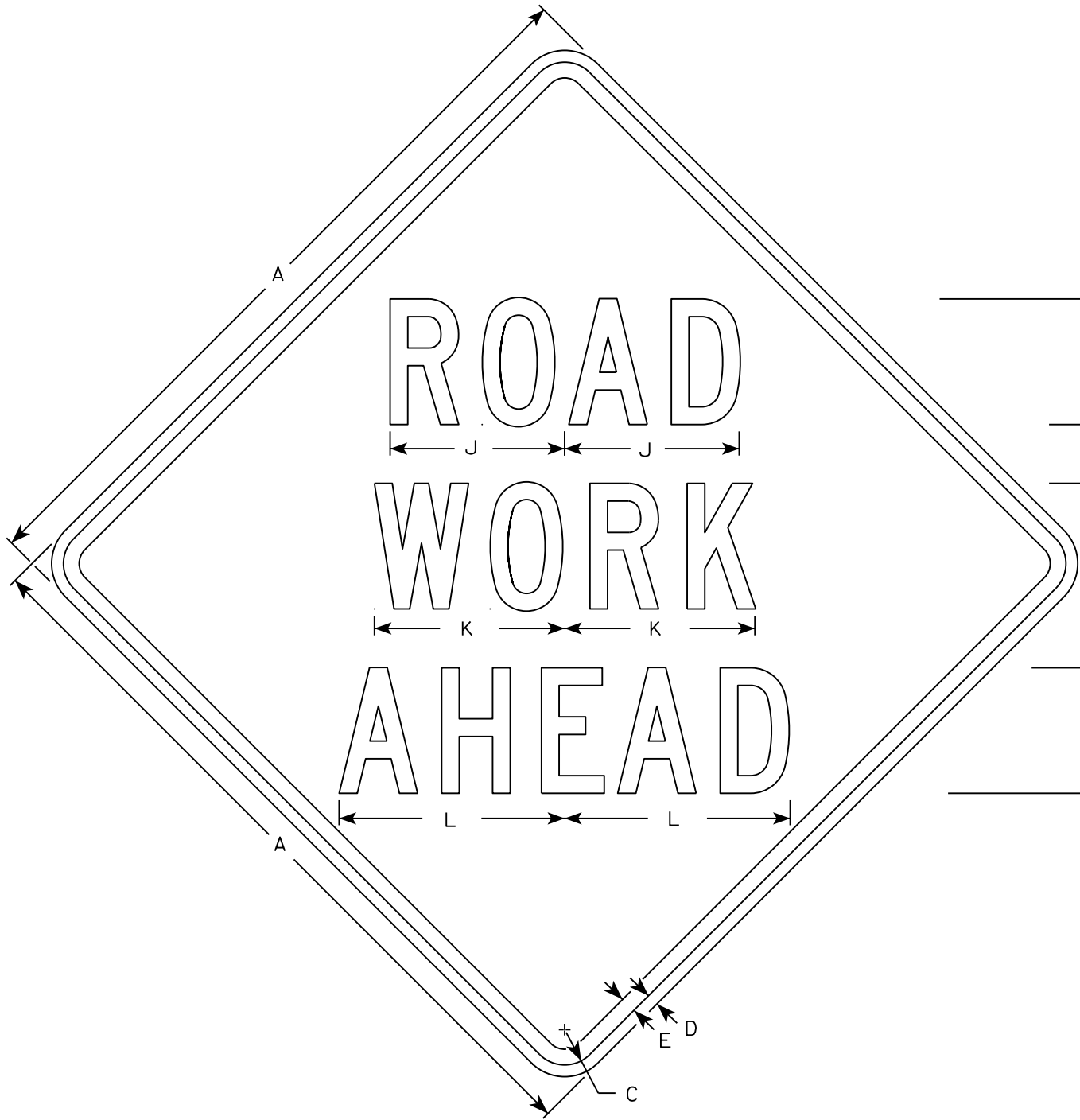
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN  
W14-3

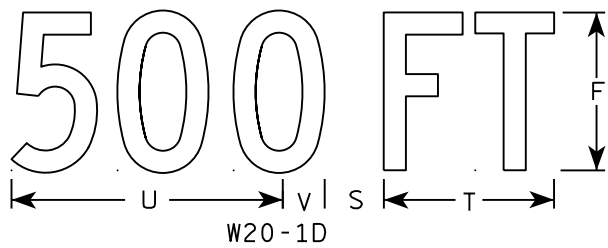
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

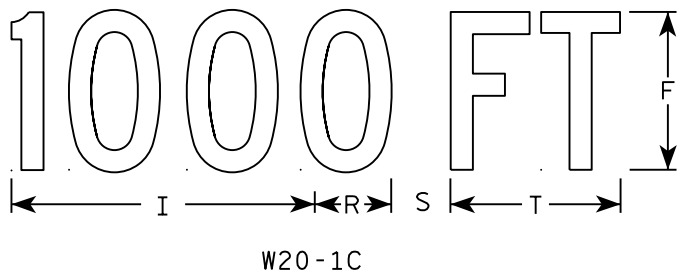
DATE 3/21/17 PLATE NO. W14-3.10



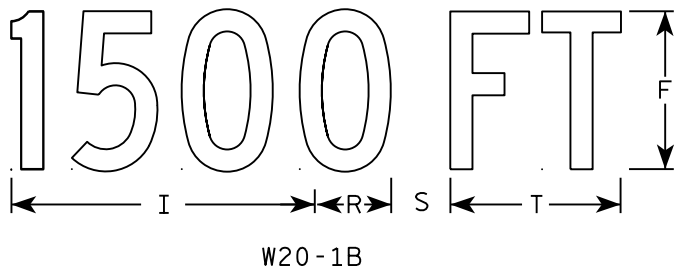
W20-1A



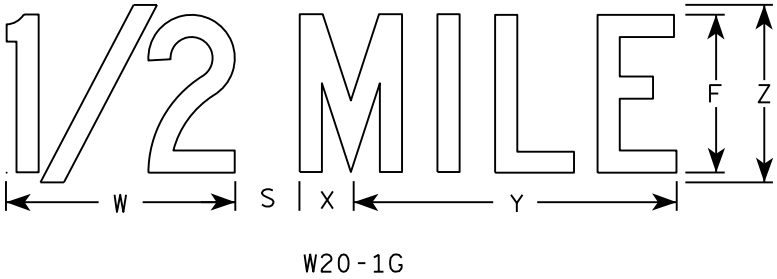
W20-1D



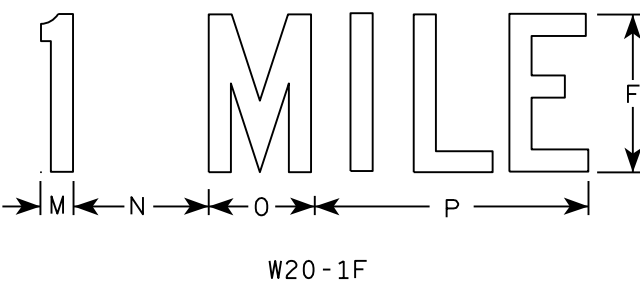
W20-1C



W20-1B

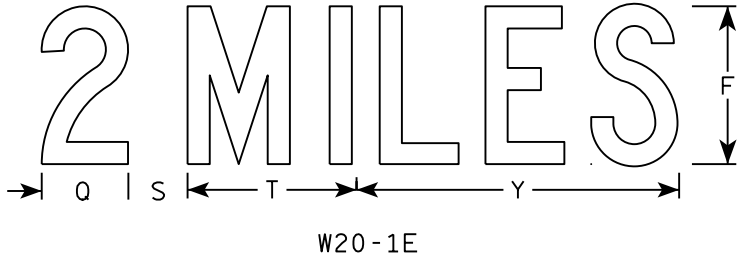


W20-1G



W20-1F

- NOTES
1. Sign is Type II - Type F Reflective
  2. Color:  
Background - Orange  
Message - Black
  3. Message Series - C
  4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN  
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*  
for State Traffic Engineer

DATE 5/07/15 PLATE NO. W20-1.10



## ***Wisconsin Department of Transportation***

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