

GRE
WITH:
PROJECT ID:
N/A

1150-60-71

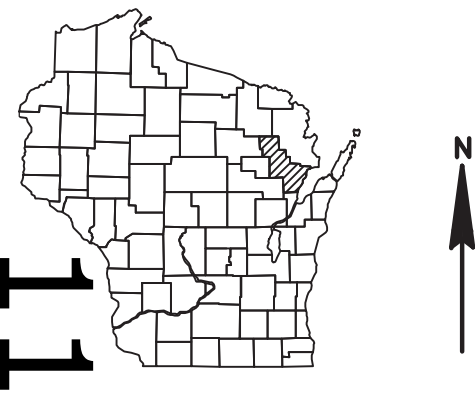
COUNTY:
OCONTO

JUN 2016

ORDER OF SHEETS

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

TOTAL SHEETS = 160



DESIGN DESIGNATION

A.A.D.T.	2016	=	12,050
A.A.D.T.	2036	=	14,600
D.H.V.		=	1,490
D.D.		=	60/40
T.		=	11.4%
DESIGN SPEED		=	65 MPH
ESALS		=	3,701,100

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

GREEN BAY - OCONTO

USH 141 - KRUEGERS QUARRY ROAD

USH 41

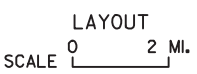
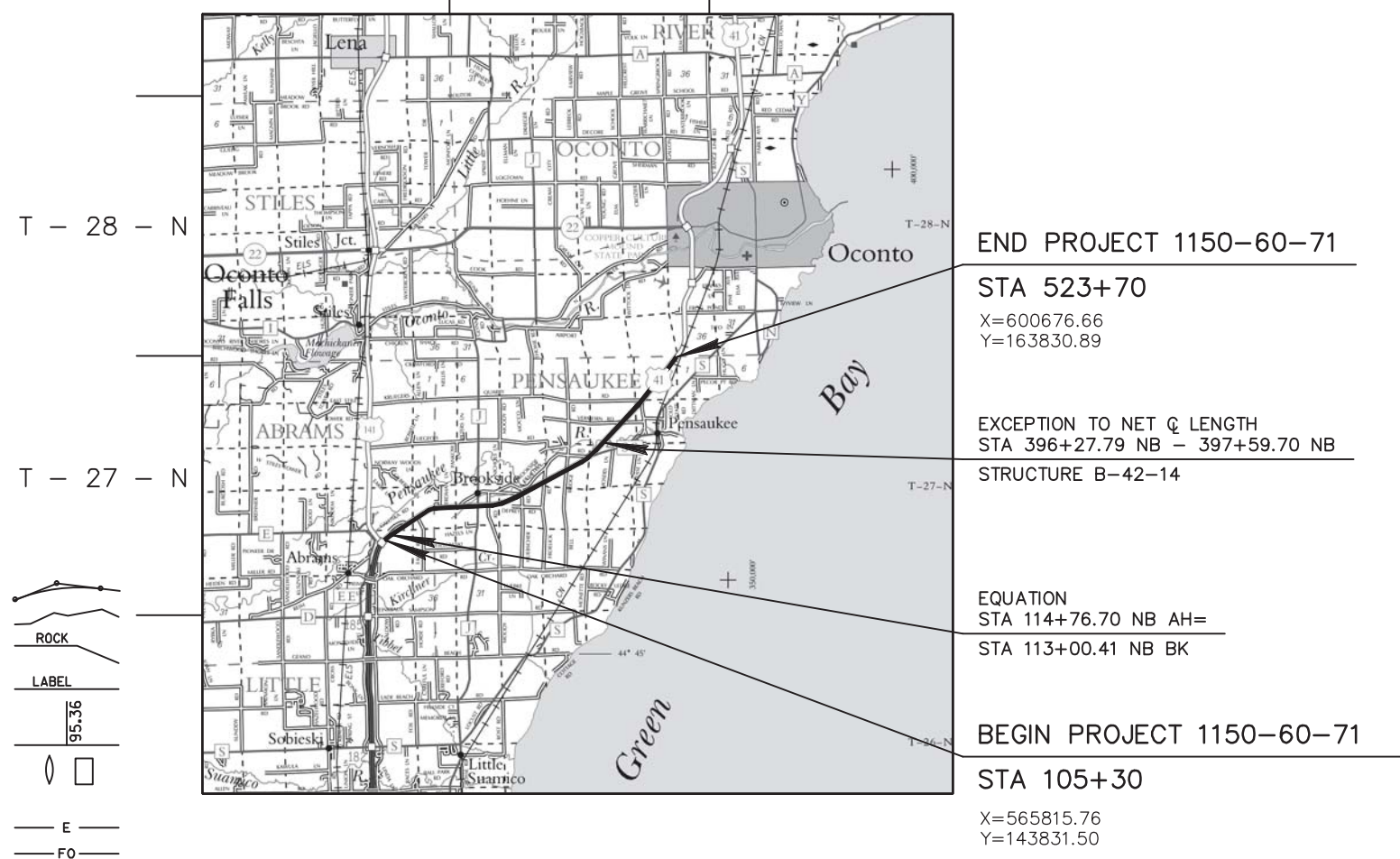
OCONTO COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1150-60-71	WISC 2016225	1

STATE PROJECT NUMBER

1150-60-71

R - 20 - E | R - 21 - E | R - 22 - E



TOTAL NET LENGTH OF CENTERLINE = 7.898 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, OCONTO COUNTY, NAD83 (2007), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor: WISDOT NE REGION

Designer: D. KIRST & K. FOUST

Project Manager: M. TERNES

Regional Examiner: D. SEGERSTROM

Regional Supervisor: D. SEGERSTROM

APPROVED FOR THE DEPARTMENT

DATE: 1/28/2016

Signature

E

GENERAL NOTES

ALL COORDINATES SHOWN ON THIS PLAN ARE GRID COORDINATES REFERENCED TO THE WISCONSIN COORDINATE SYSTEM, CENTRAL ZONE.

ALL ELEVATIONS ON THIS PROJECT ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88

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

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

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN ARE APPROXIMATE AND SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

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

EXISTING DRAINAGE DITCHES ANDS CULVERT PIPES WILL REMAIN FUNCTIONAL DURING EXCAVATION.

DNR AREA LIAISON

Jim Doperalski Jr.
Department of Natural Resources
DNR Northeast Regional Headquarters
2984 Shawano Ave
Green Bay, WI 54313
(920) 662-5119
James.Doperalski@wisconsin.gov

UTILITIES

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5303 Fen Oak Dr
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(734) 476-3873
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P.O. Box 260
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Jack Pardy
Oconto Electric Cooperative - Electricity
7479 Rea Rd
Oconto Falls, WI 54154
(920) 373-8524
jpardy@ocontoelectric.com

COUNTY SURVEYOR OR SURVEYS CONTACT PERSON

CONTACT: CORMAC MCINNIS
NORTHEAST REGIONAL SURVEY COORDINATOR
944 VANDERPERREN WAY
GREEN BAY, WI 54304
920-492-5638
Cormac.Mcinnis@dot.wi.gov



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

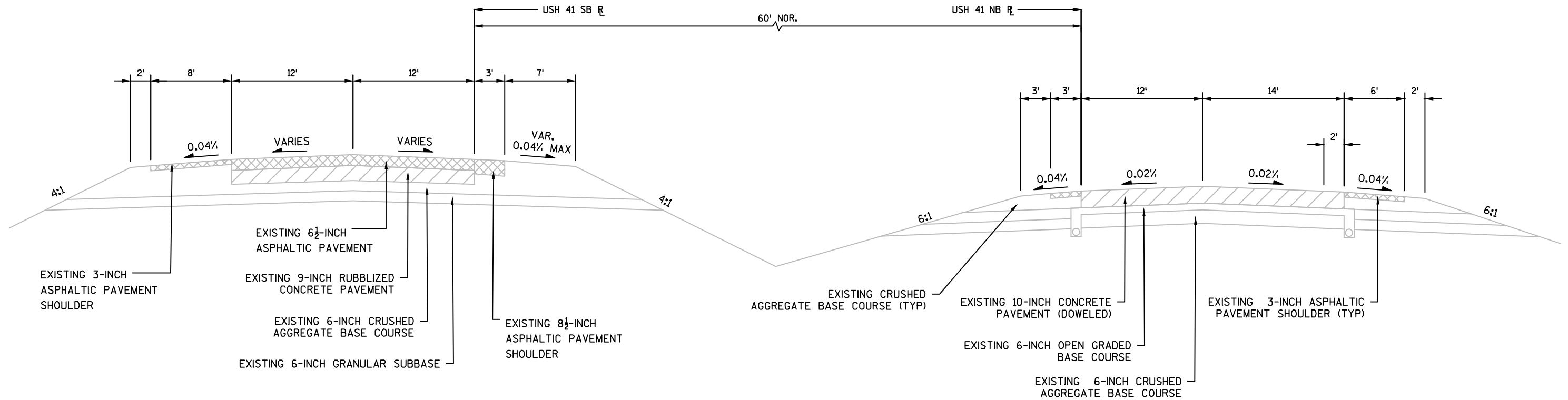
EMERGENCY CONTACT NUMBERS FOR WISCONSIN POWER AND LIGHT COMPANY

ELECTRIC 24 HOUR EMERGENCY SERVICE: 1-800-862-6261
GAS 24 HOUR EMERGENCY SERVICE: 1-800-862-6263

EMERGENCY CONTACT NUMBERS FOR WISCONSIN PUBLIC SERVICE

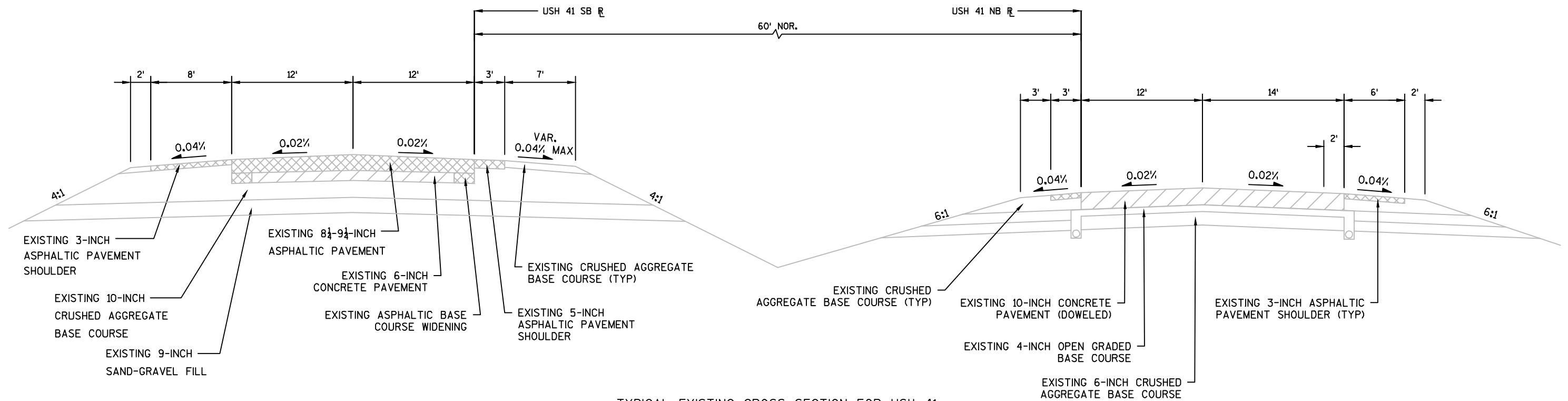
ELECTRIC 24 HOUR EMERGENCY SERVICE: 1-800-450-7240
GAS 24 HOUR EMERGENCY SERVICE: 1-800-450-7280





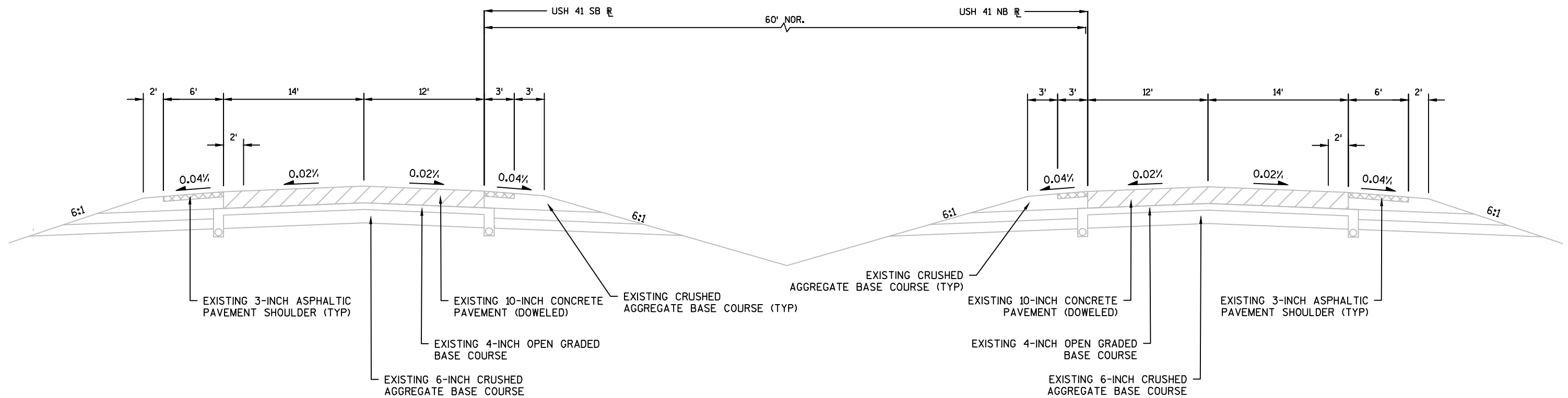
TYPICAL EXISTING CROSS SECTION FOR USH 41

STA. 105'SB'+30 TO STA. 297'SB'+00
STA. 128'NB'+00 TO STA. 297'NB'+00



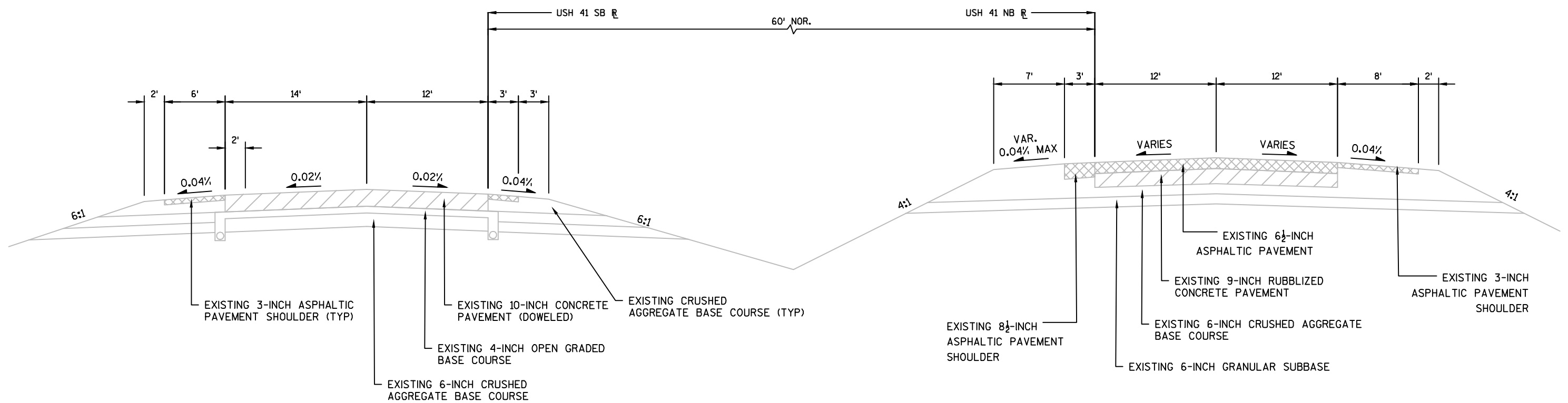
TYPICAL EXISTING CROSS SECTION FOR USH 41

STA. 297+00 TO STA. 359+24



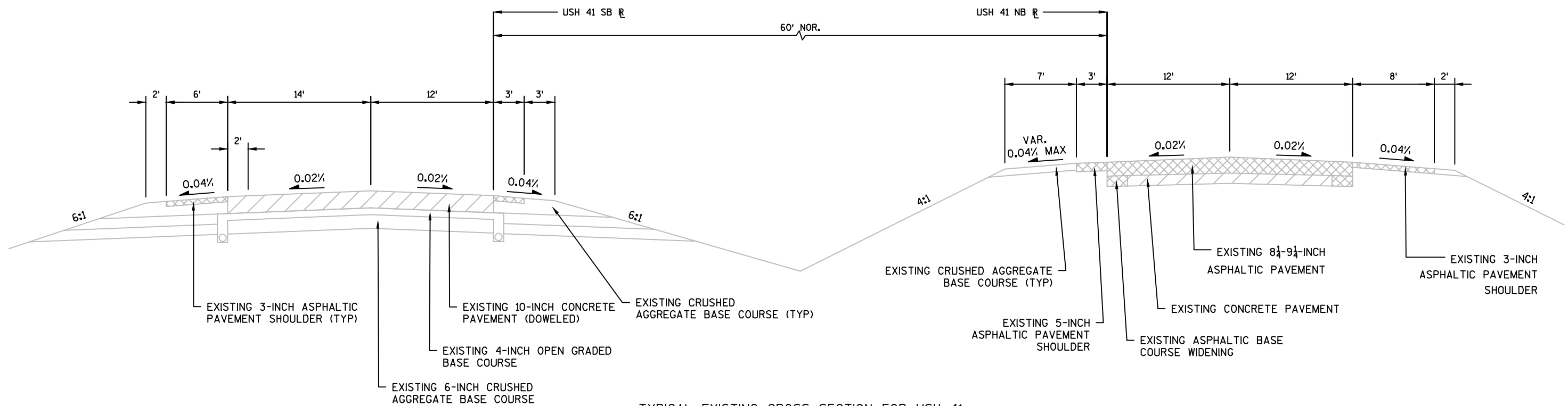
TYPICAL EXISTING CROSS SECTION FOR USH 41

STA. 359+24 TO STA. 379+47



TYPICAL EXISTING CROSS SECTION FOR USH 41

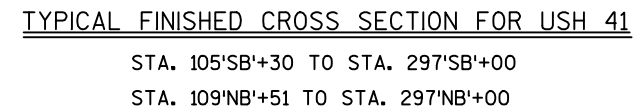
STA. 379+47 TO STA. 490+00

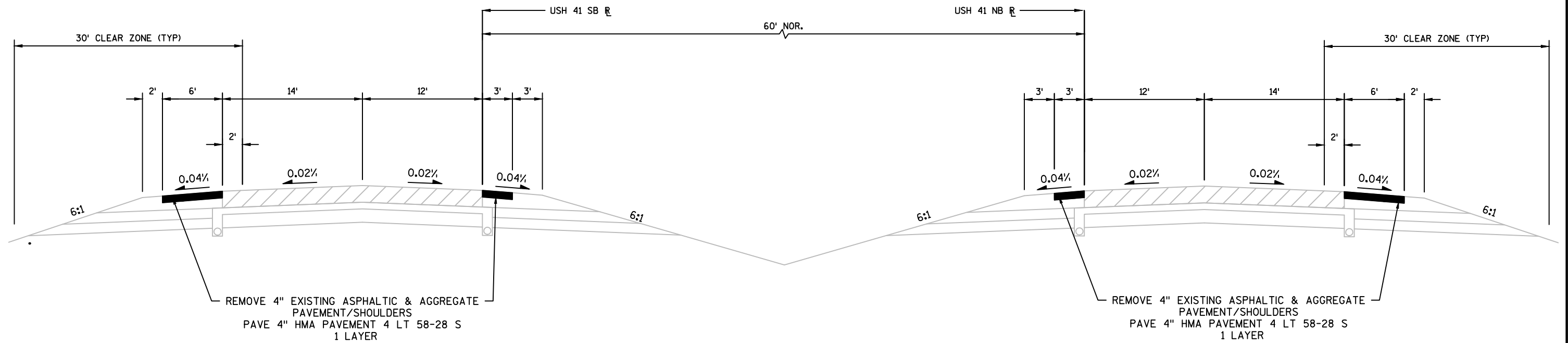


TYPICAL EXISTING CROSS SECTION FOR USH 41

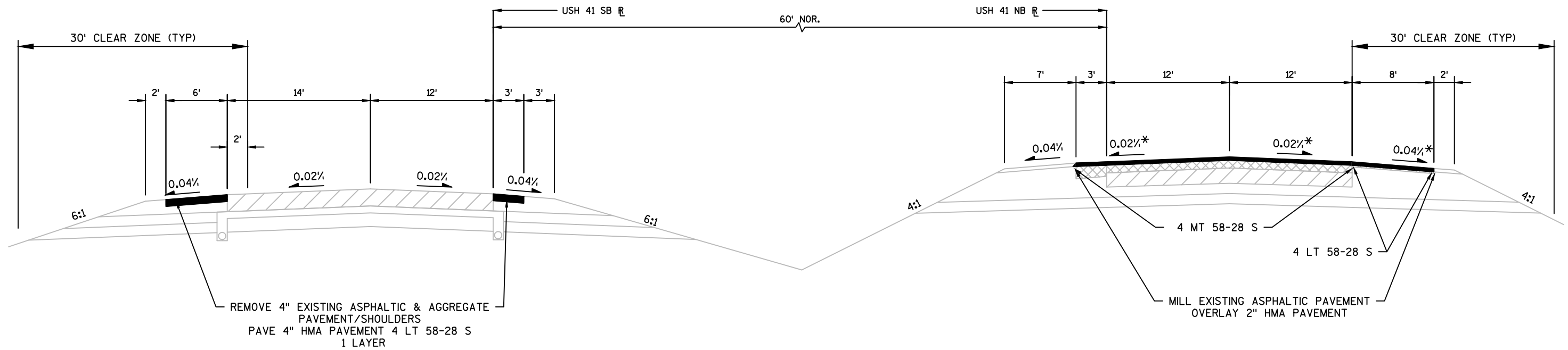
STA. 490+00 TO STA. 523+70

2





TYPICAL FINISHED CROSS SECTION FOR USH 41
STA. 359+24 TO STA. 379+47

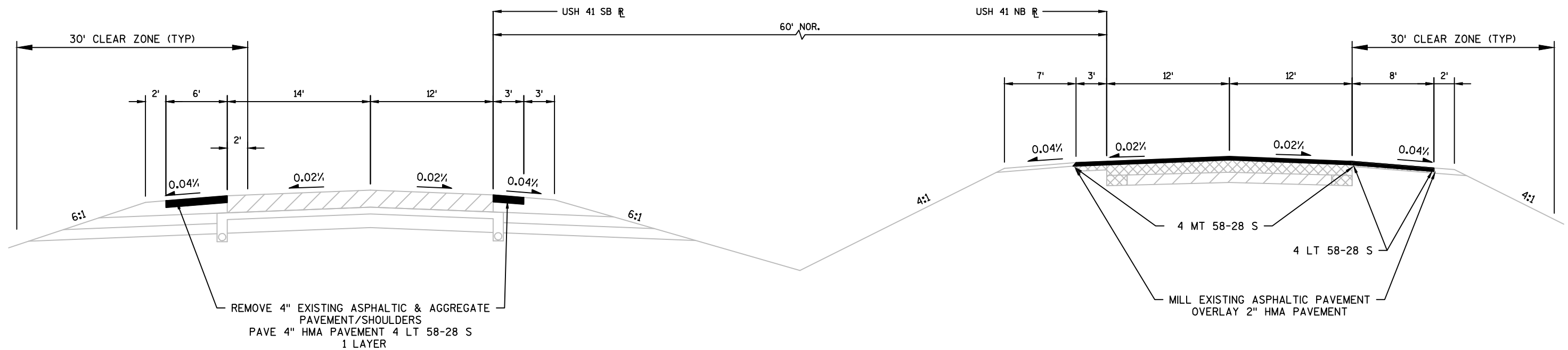


TYPICAL FINISHED CROSS SECTION FOR USH 41

STA. 379+47 TO STA. 490+00

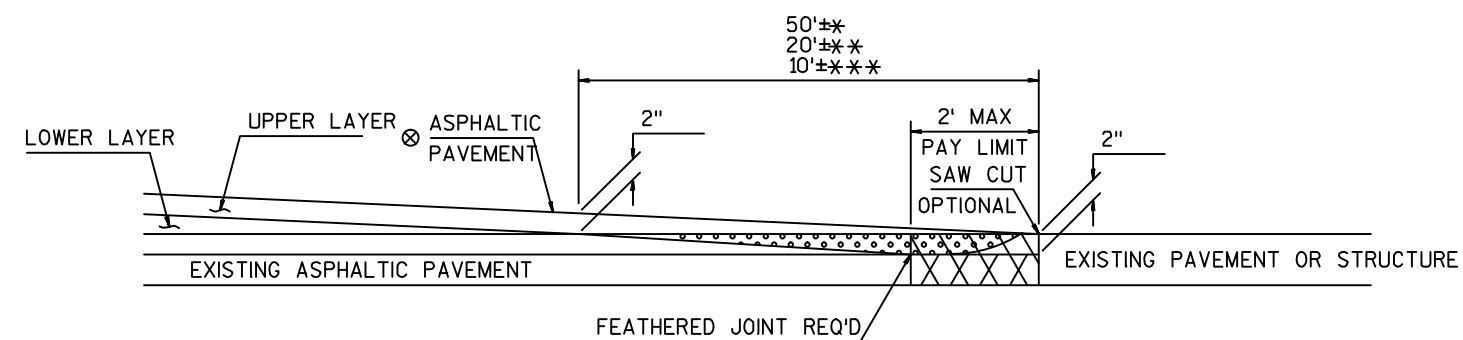
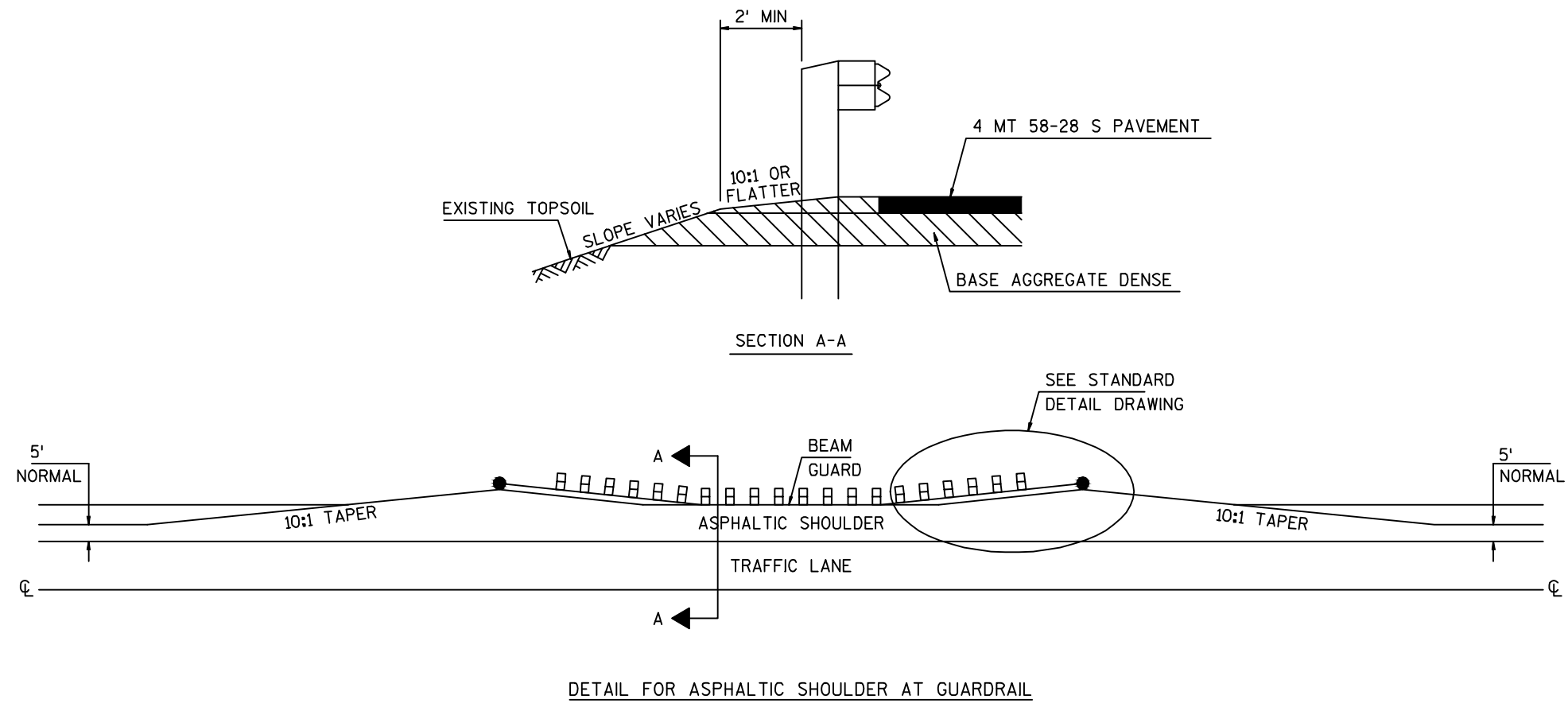
*ACHIEVE PROPOSED CROSS SLOPES THROUGH MILLING OPERATIONS.

MILL DEPTH AT: ϵ = VARIES
12' OFFSET ϵ LT/RT = 2"
LT/RT SHOULDERS = 2"



TYPICAL FINISHED CROSS SECTION FOR USH 41

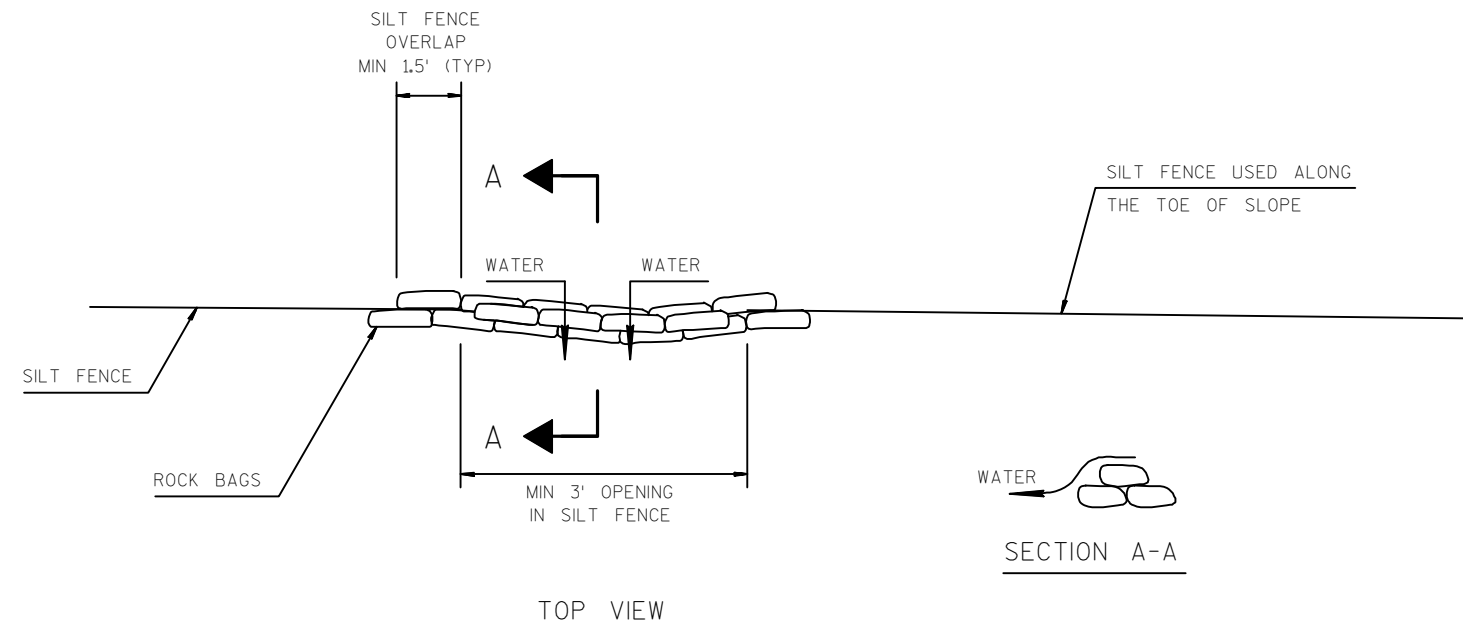
STA. 490+00 TO STA. 523+70



- ⊗ SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS
- REMOVING ASPHALTIC SURFACE, MILLING
- REMOVING ASPHALTIC SURFACE, BUTT JOINTS (FULL DEPTH REMOVAL OPTIONAL)
- ASPHALTIC WEDGING (FULL DEPTH REMOVAL OPTION)

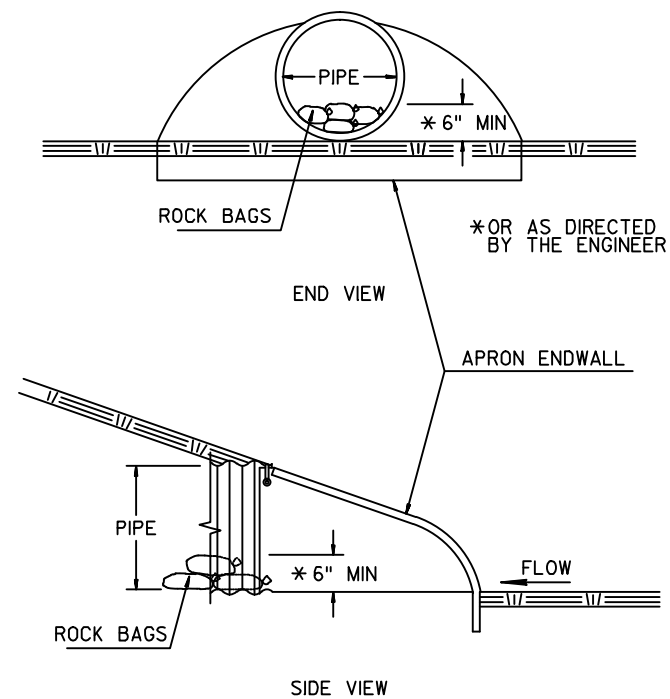
BUTT JOINT DETAIL FOR MILLED ASPHALTIC PAVEMENTS

* MAINLINE
** SIDEROADS
*** PRIVATE ENTRANCES

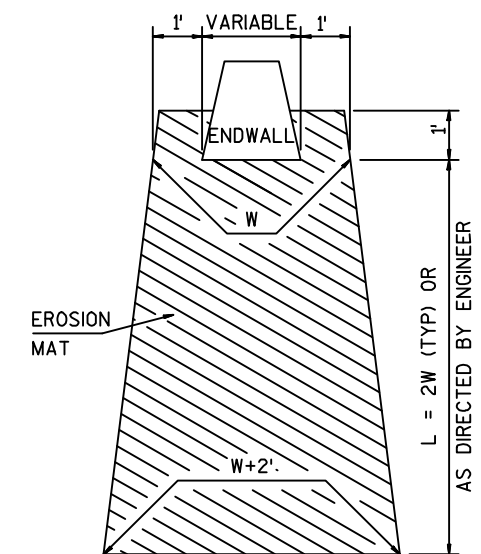


ROCK BAGS USED FOR SILT FENCE RELIEF DETAIL

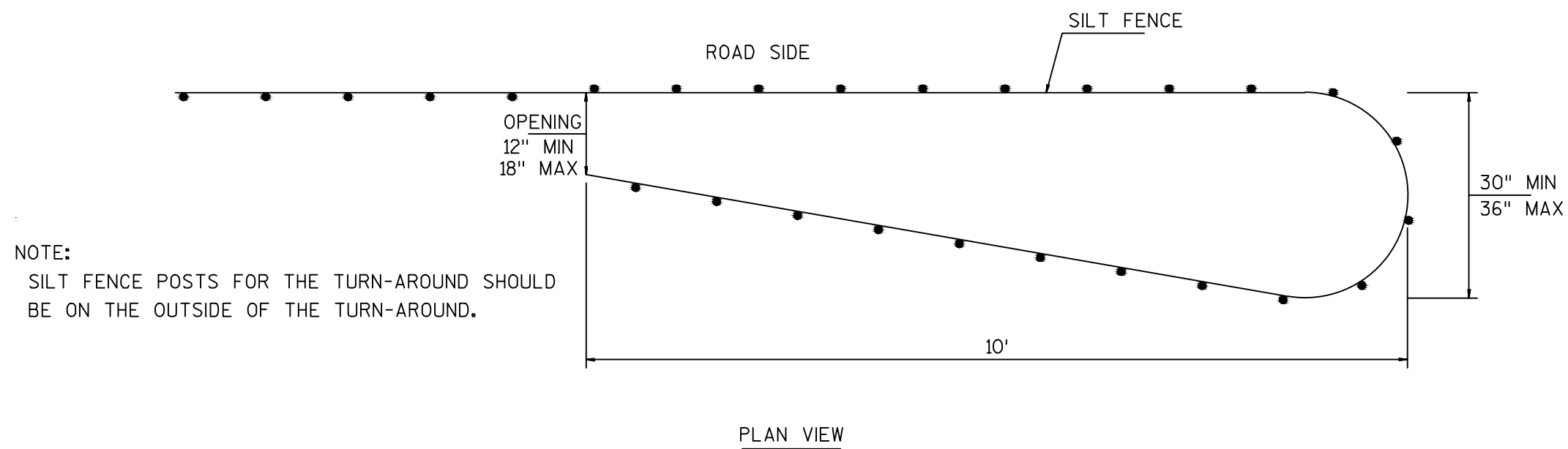
PAID AS ROCK BAGS



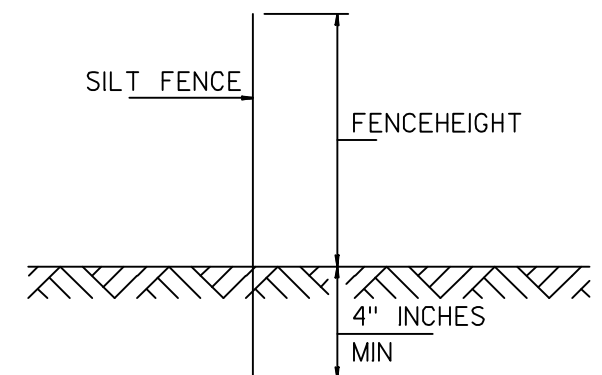
CULVERT PIPE CHECKS

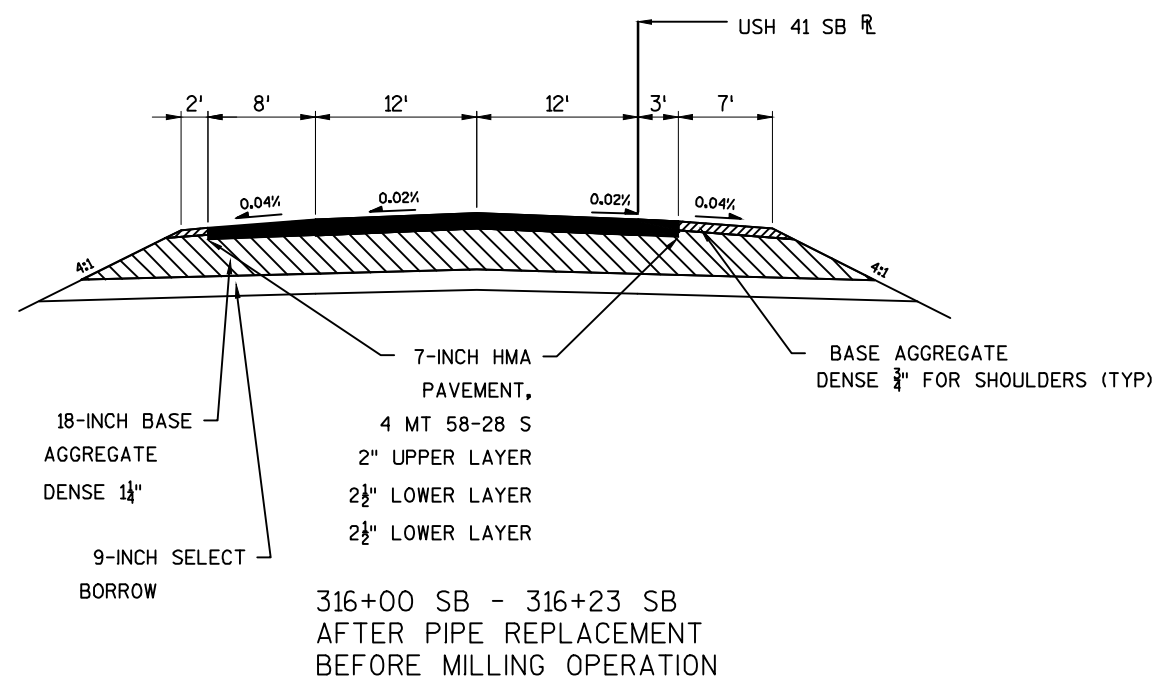


EROSION MAT TREATMENT AT CULVERTS



SILT FENCE TURN-AROUND DETAIL





STA 316+13.63 O/S 54.0' LT
CULVERT PIPE REINFORCED
CONCRETE CLASS III 24-INCH

STA 316+08.63 O/S 54.0' LT
CULVERT PIPE REINFORCED
CONCRETE CLASS III 24-INCH

SEE CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPES AND PIPE ARCH SDD

REPLACE PIPES UNDER SB LANES AND
EXTEND PIPES TO CLEARZONE

REMOVE EXISTING ENDWALL

30' CLEARZONE

30' CLEARZONE

317+00

2'

8'

24'

3'

7'

EXCAVATION
LIMITS

8'

8'

30' CLEARZONE

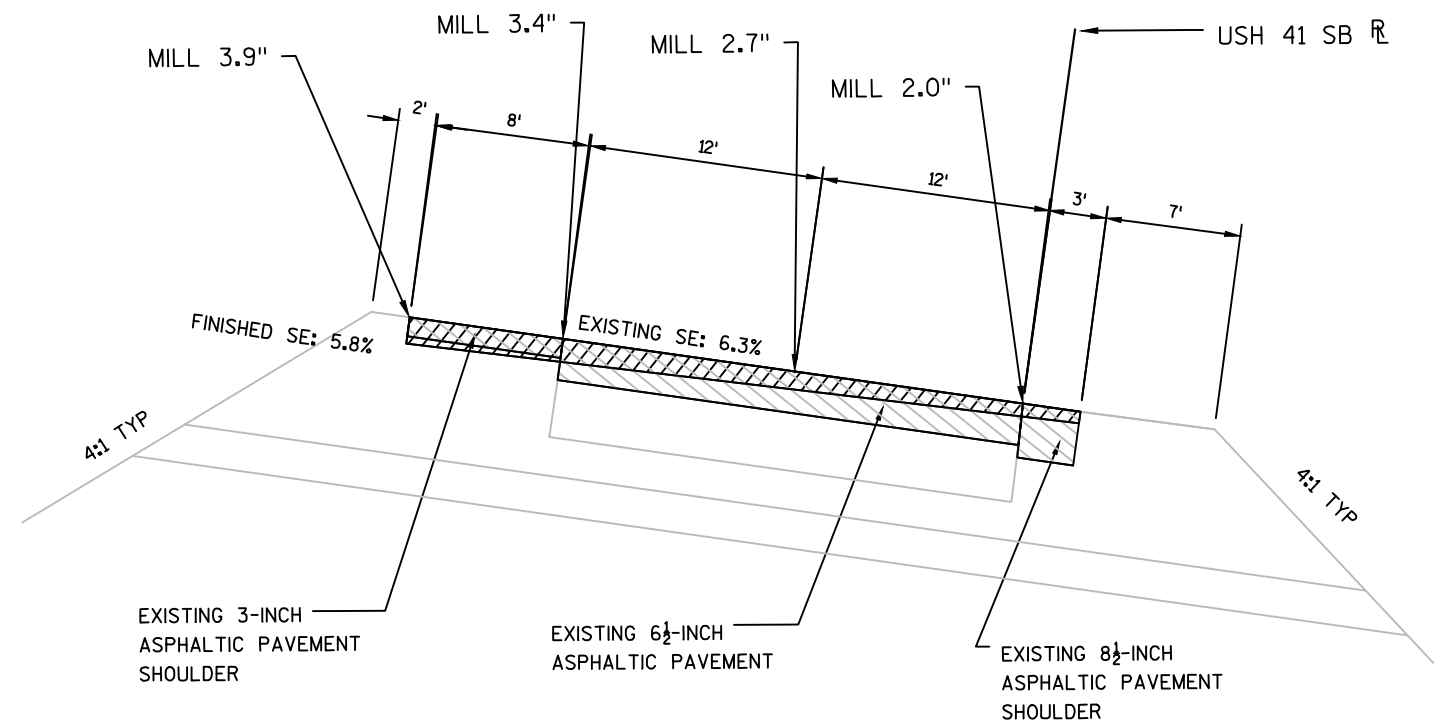
USH 41 SB

315+00

316+00

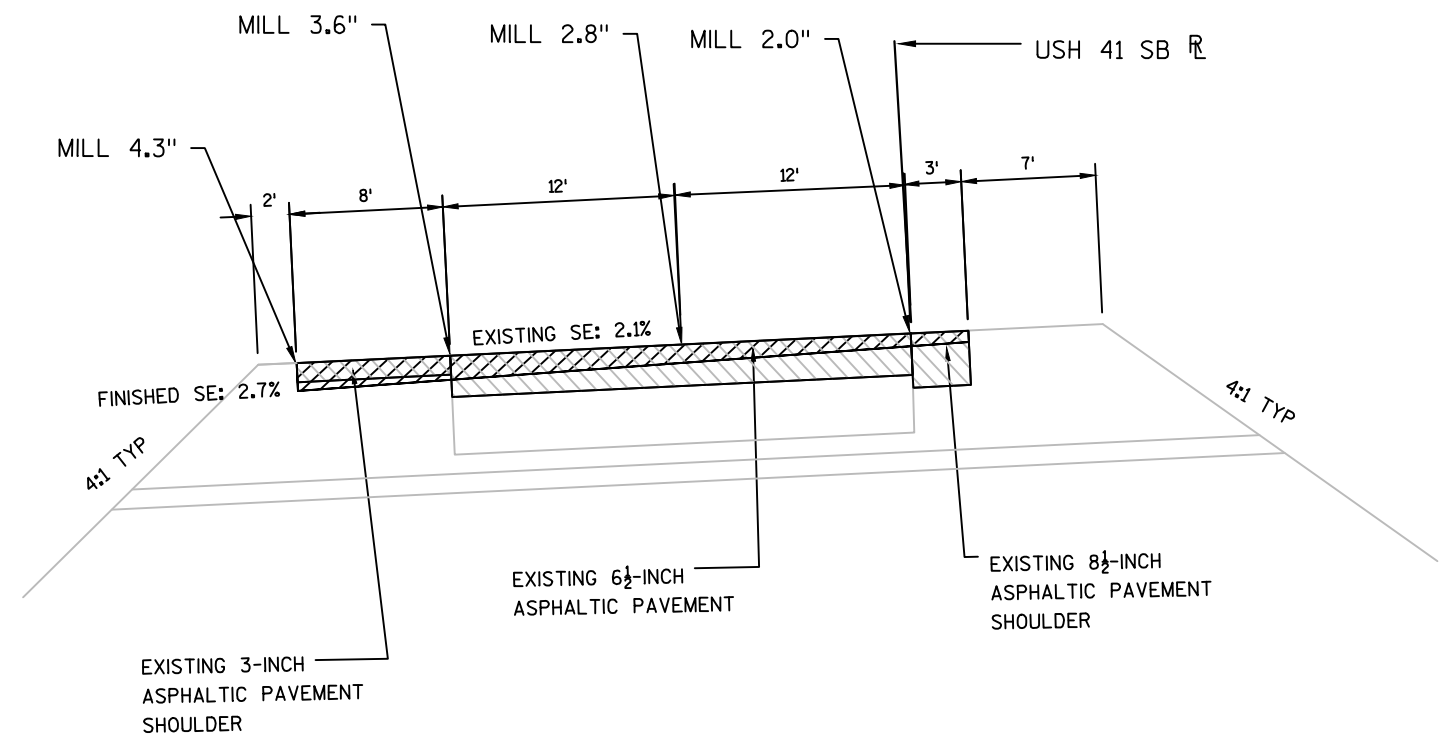
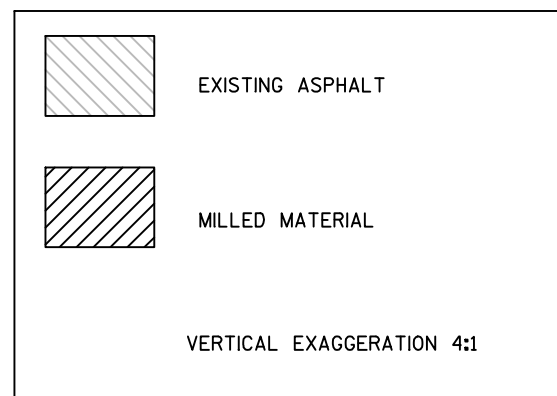
316+00

USH 41 NB



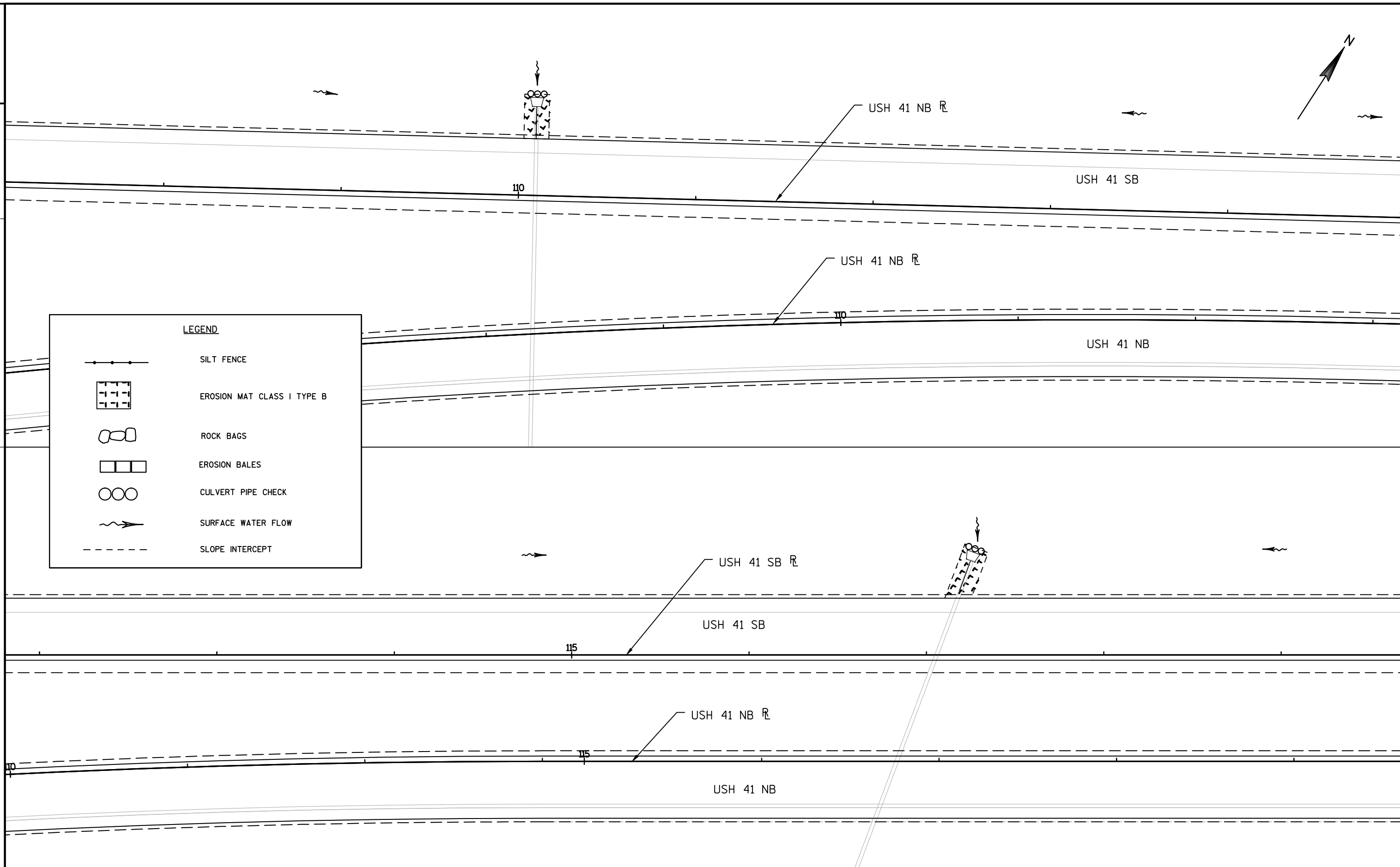
SUPERELEVATION CORRECTION: MILLING OPERATION

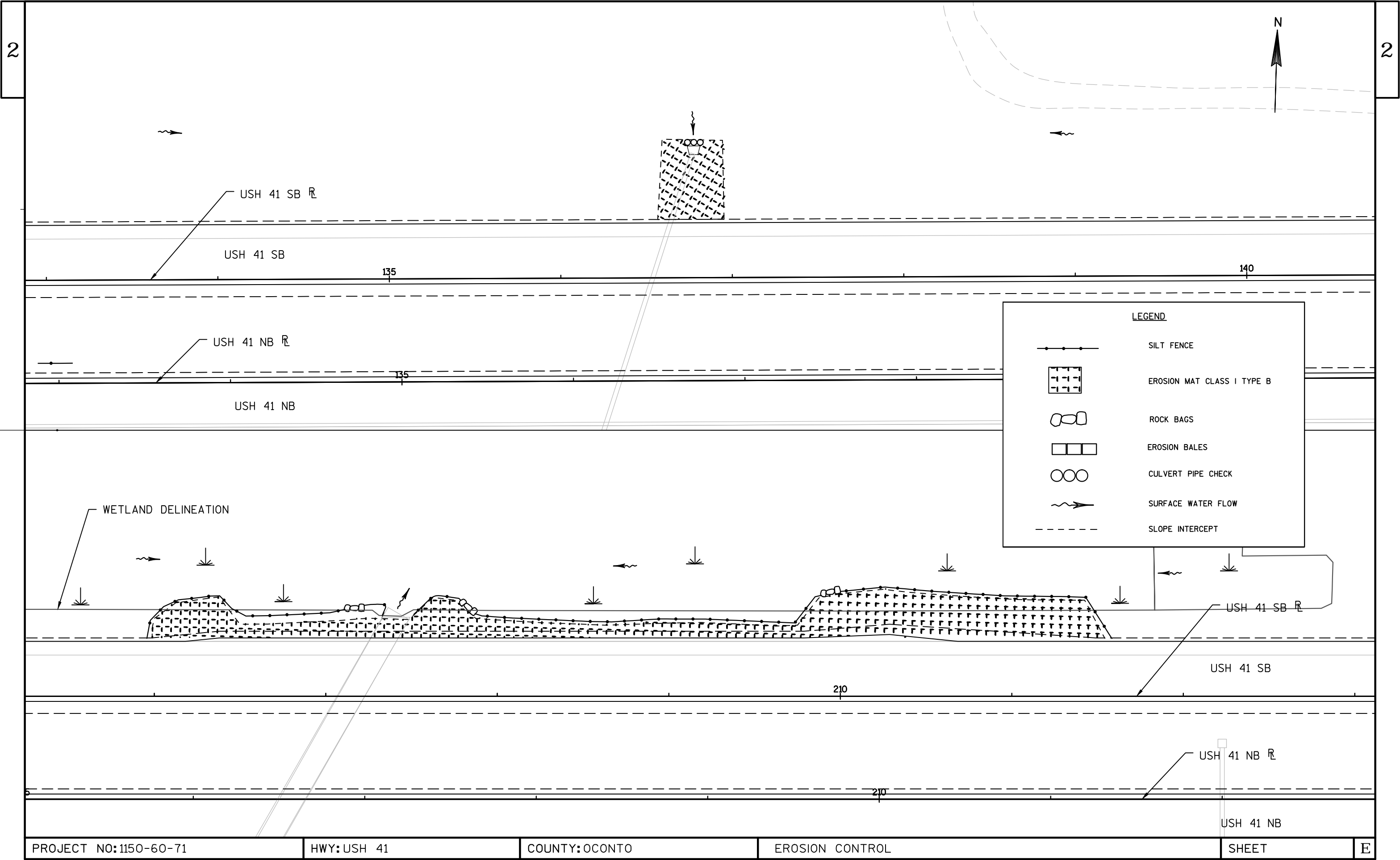
STA. 159'SB'+46 TO STA. 171'SB'+09

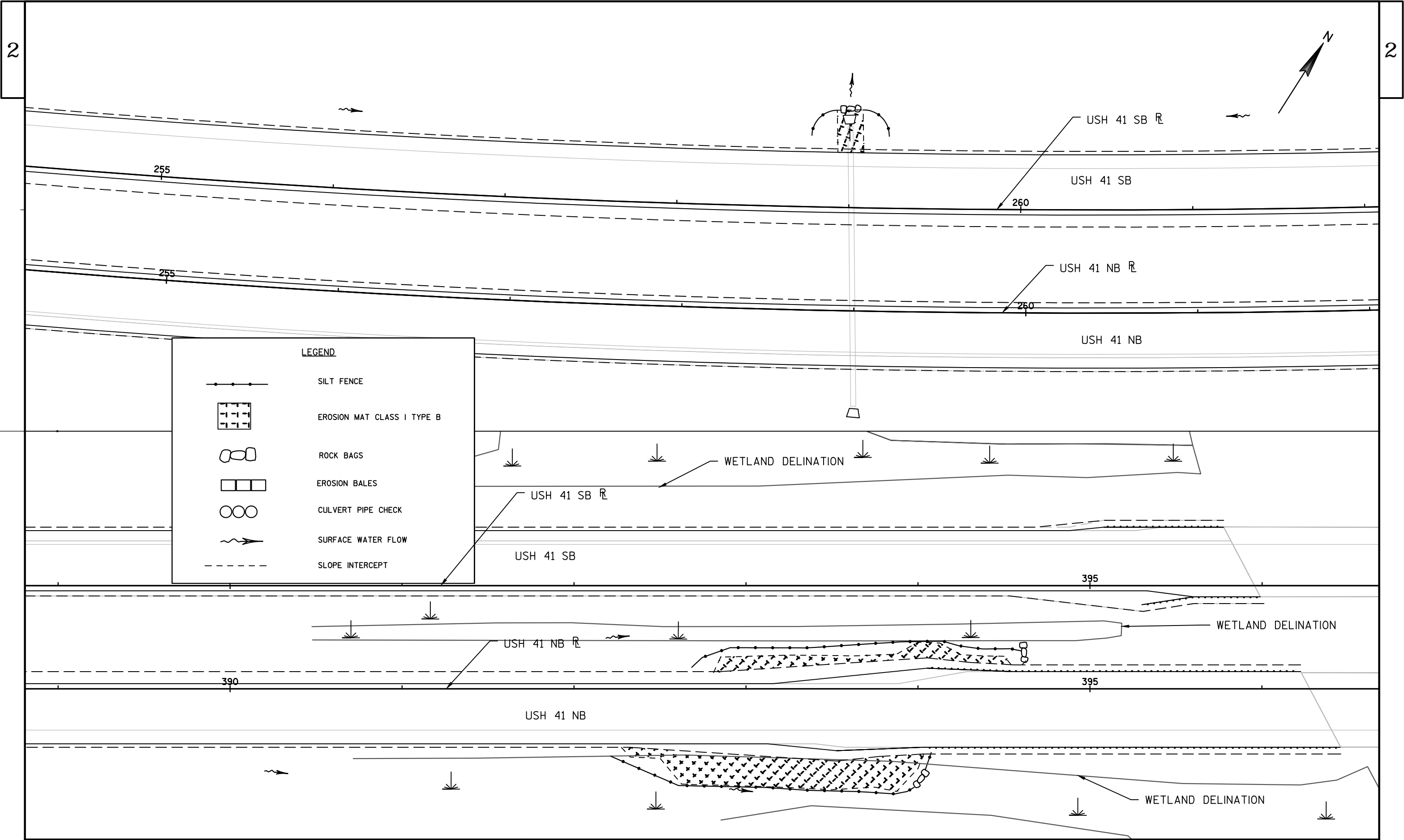


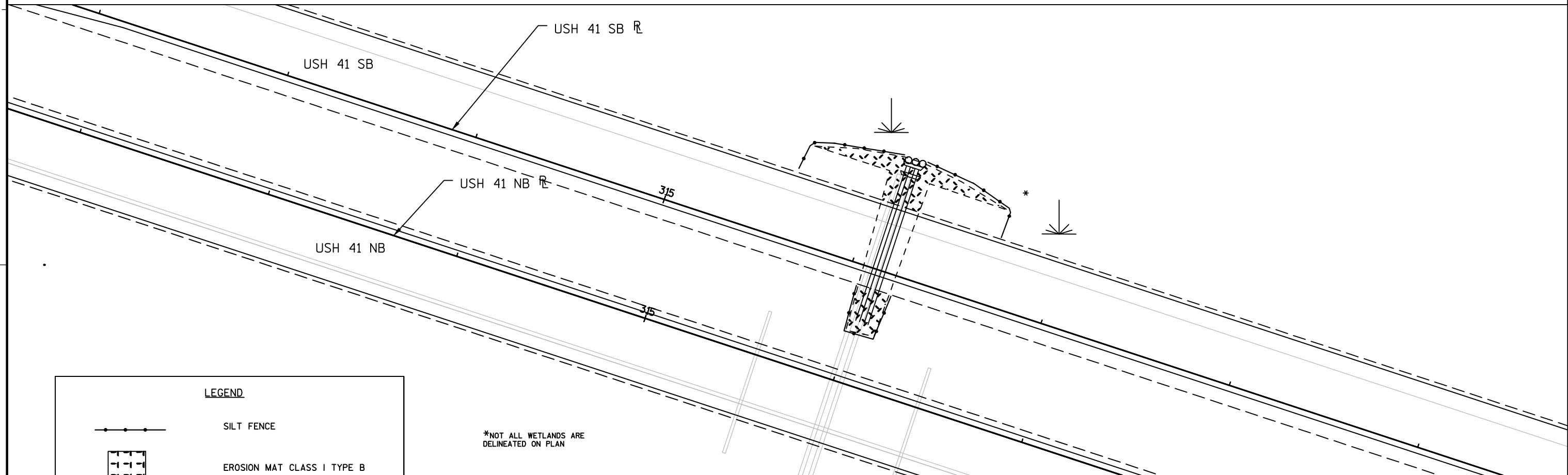
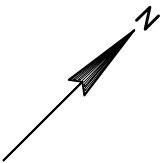
SUPERELEVATION CORRECTION: MILLING OPERATION

STA. 235'SB'+77 TO STA. 268'SB'+34



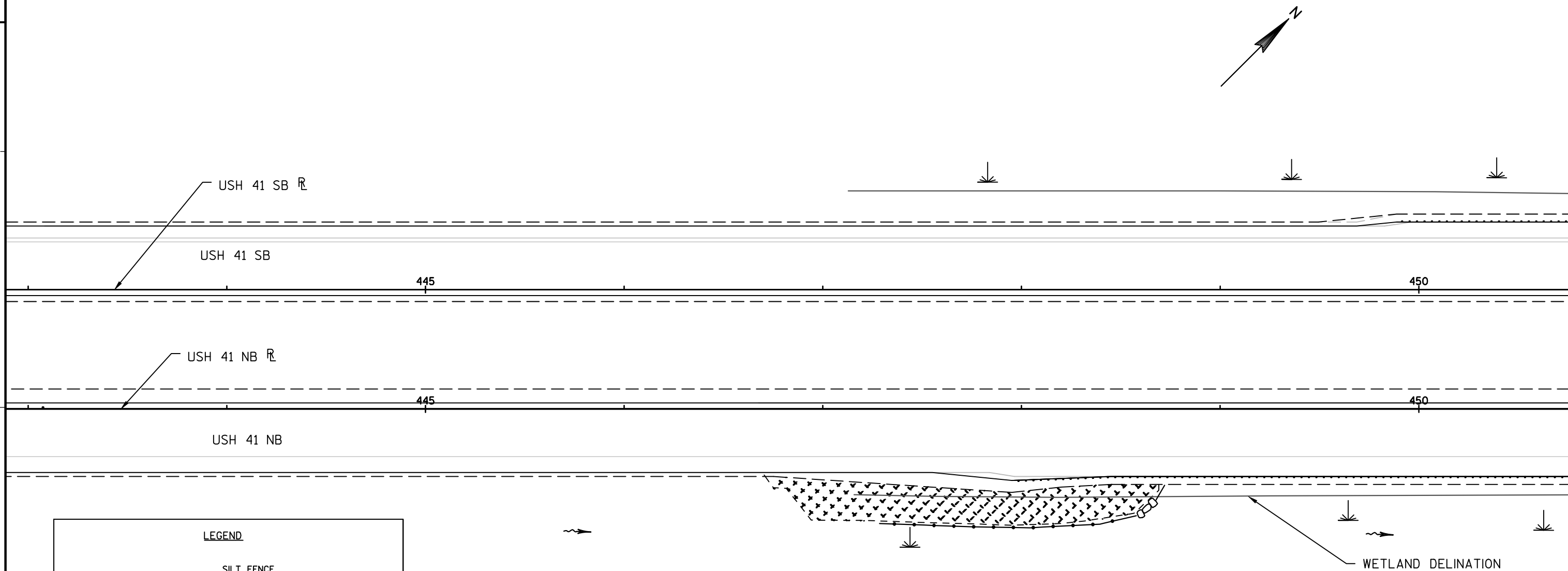







LEGEND


	SILT FENCE
	EROSION MAT CLASS I TYPE B
	ROCK BAGS
	EROSION BALES
	CULVERT PIPE CHECK
	SURFACE WATER FLOW
	SLOPE INTERCEPT




LEGEND




SILT FENCE




EROSION MAT CLASS I TYPE B




ROCK BAGS




EROSION BALES



CULVERT PIPE CHECK



SURFACE WATER FLOW



SLOPE INTERCEPT

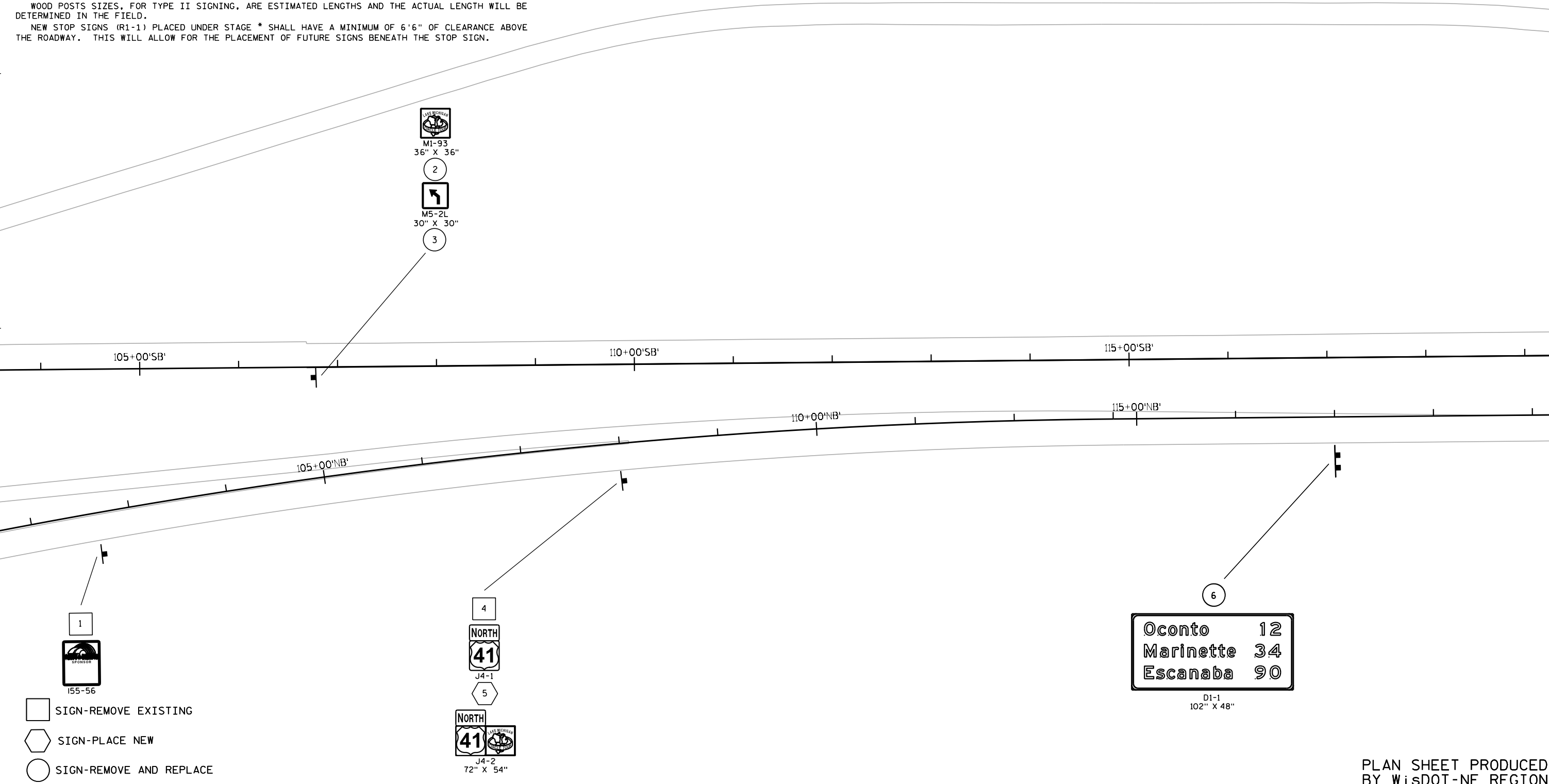
SIGNING NOTES

TYPE II SIGNS AND SUPPORTS REMOVED UNDER THE CONTRACT SHALL BE DELIVERED TO THE REGIONAL TRAFFIC UNIT. SIGNS SHALL BE CAREFULLY REMOVED FROM THE SUPPORTS, SORTED BY BASE MATERIAL AND PALLETIZED BY MATERIAL TYPE. SUPPORTS SHALL BE SORTED BY LENGTH AND TYPE. THE REGIONAL TRAFFIC UNIT 920-492-5653, SHALL BE NOTIFIED THREE WORKING DAYS PRIOR TO DELIVERY OF SIGNS AND SUPPORTS.

WHEN AN EXISTING STOP SIGN AND SUPPORT IS TO BE REMOVED AND A NEW STOP SIGN AND SUPPORT ERECTED THE WORK SHALL BE DONE CONCURRENTLY. FOR OTHER SIGNS AND SUPPORTS THAT ARE TO BE REMOVED AND NEW SIGNS AND SUPPORTS ERECTED, THE REMOVAL OF THE EXISTING SIGN/SUPPORT AND ERECTION OF THE NEW SIGN/SUPPORT SHOULD BE DONE AS CONCURRENTLY AS POSSIBLE. IN NO CASE SHALL A NEW SIGN/SUPPORT BE DOWN FOR MORE THAN 24 HOURS AND THERE SHALL NOT BE MORE THAN ONE SIGN OF THE SAME LEGEND MISSING IN A ROW.

WOOD POSTS SIZES, FOR TYPE II SIGNING, ARE ESTIMATED LENGTHS AND THE ACTUAL LENGTH WILL BE DETERMINED IN THE FIELD.

NEW STOP SIGNS (R1-1) PLACED UNDER STAGE * SHALL HAVE A MINIMUM OF 6'6" OF CLEARANCE ABOVE THE ROADWAY. THIS WILL ALLOW FOR THE PLACEMENT OF FUTURE SIGNS BENEATH THE STOP SIGN.



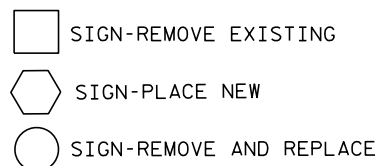
PLAN SHEET PRODUCED
BY WisDOT-NE REGION

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PLAN SHEET PRODUCED
BY WISDOT-NE REGION

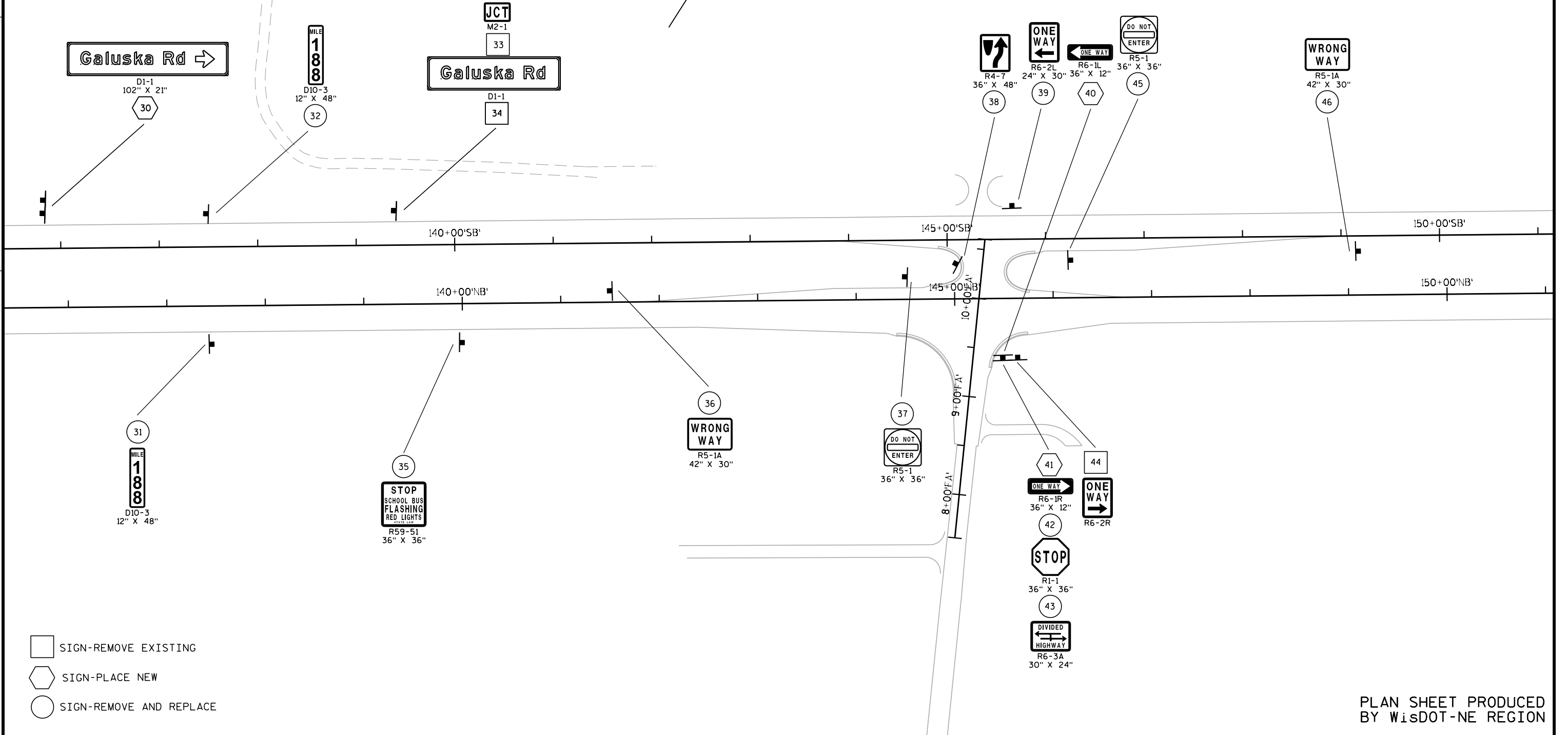
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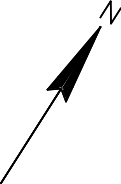
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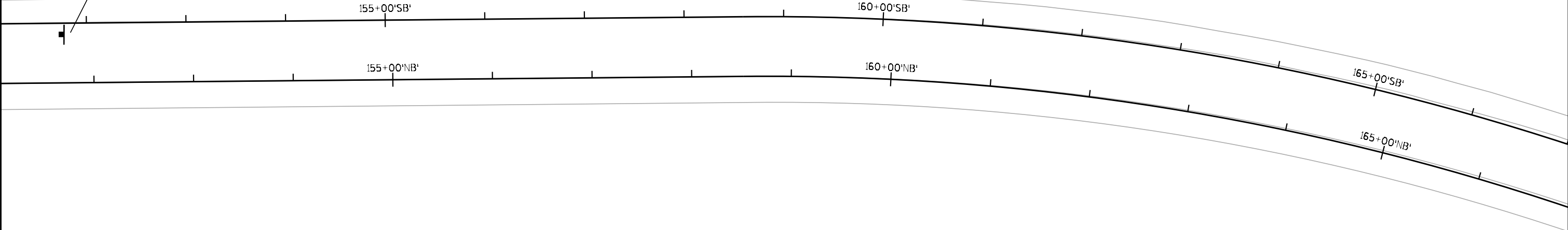
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




← Falk Rd

D1-1
78" X 21"

47



-  SIGN-REMOVE EXISTING
-  SIGN-PLACE NEW
-  SIGN-REMOVE AND REPLACE

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

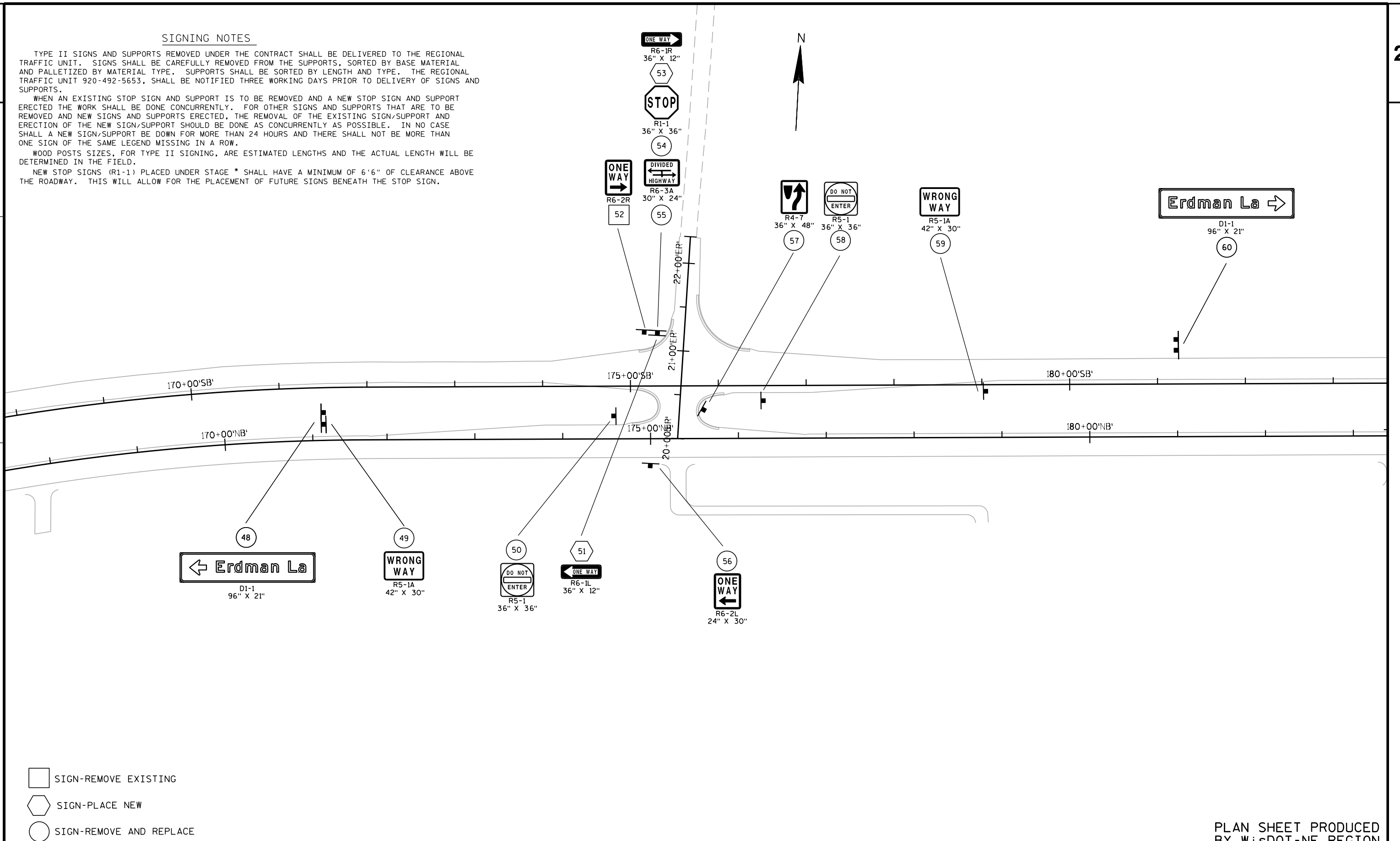
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SIGNING NOTES

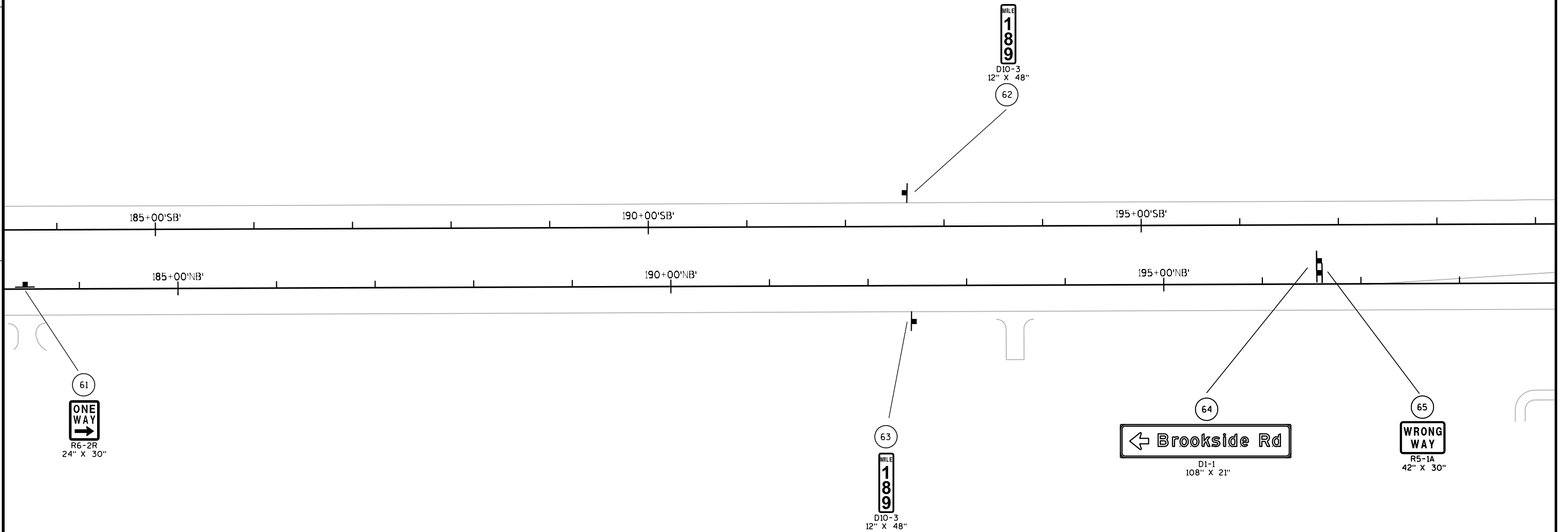
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□ SIGN-REMOVE EXISTING

⬡ SIGN-PLACE NEW

○ SIGN-REMOVE AND REPLACE

PLAN SHEET PRODUCED
BY WISDOT-NE REGION

PROJECT NO: 1150-60-71

HWY: USH 41

COUNTY: OCONTO

PERMANENT SIGNING PLAN

SHEET

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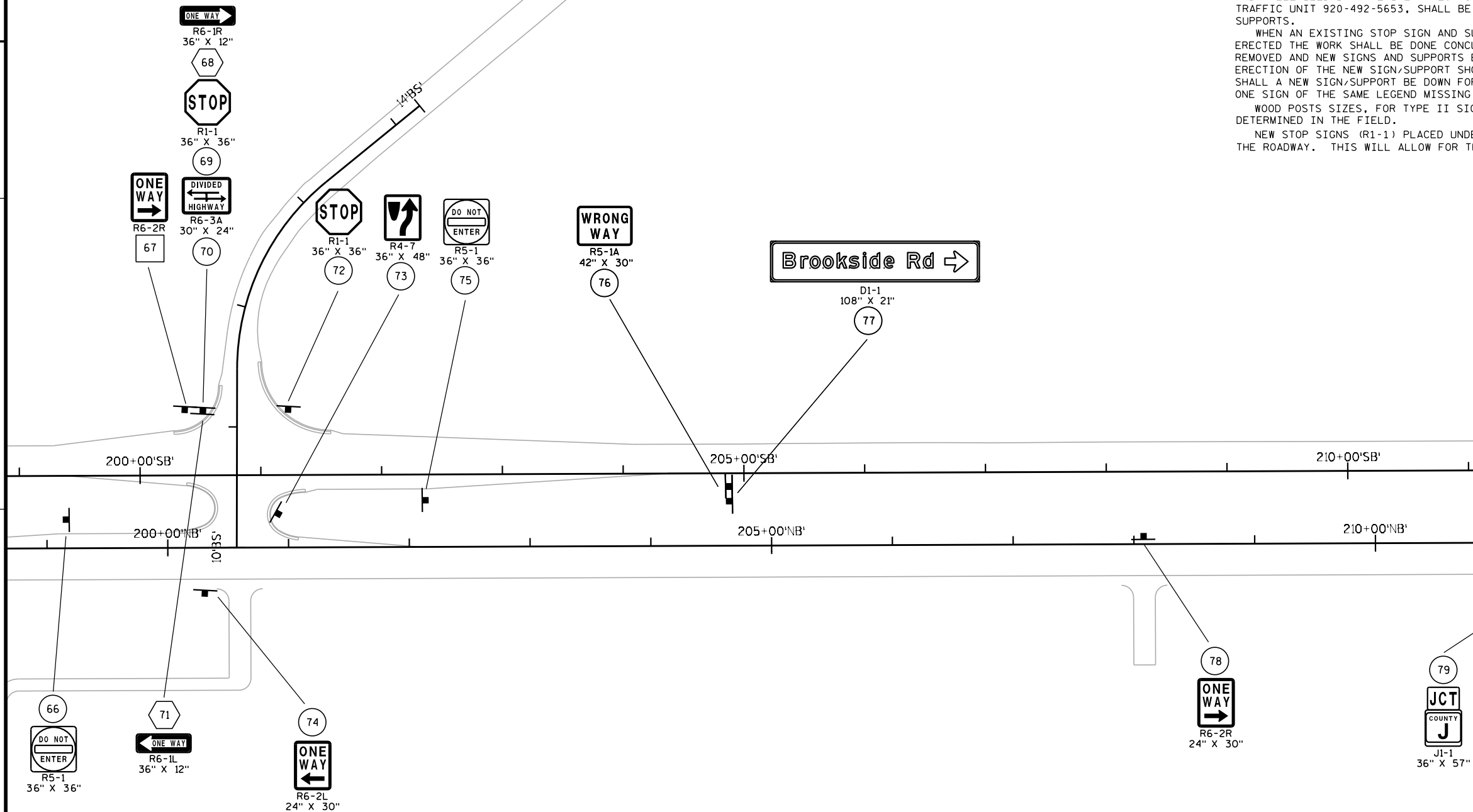
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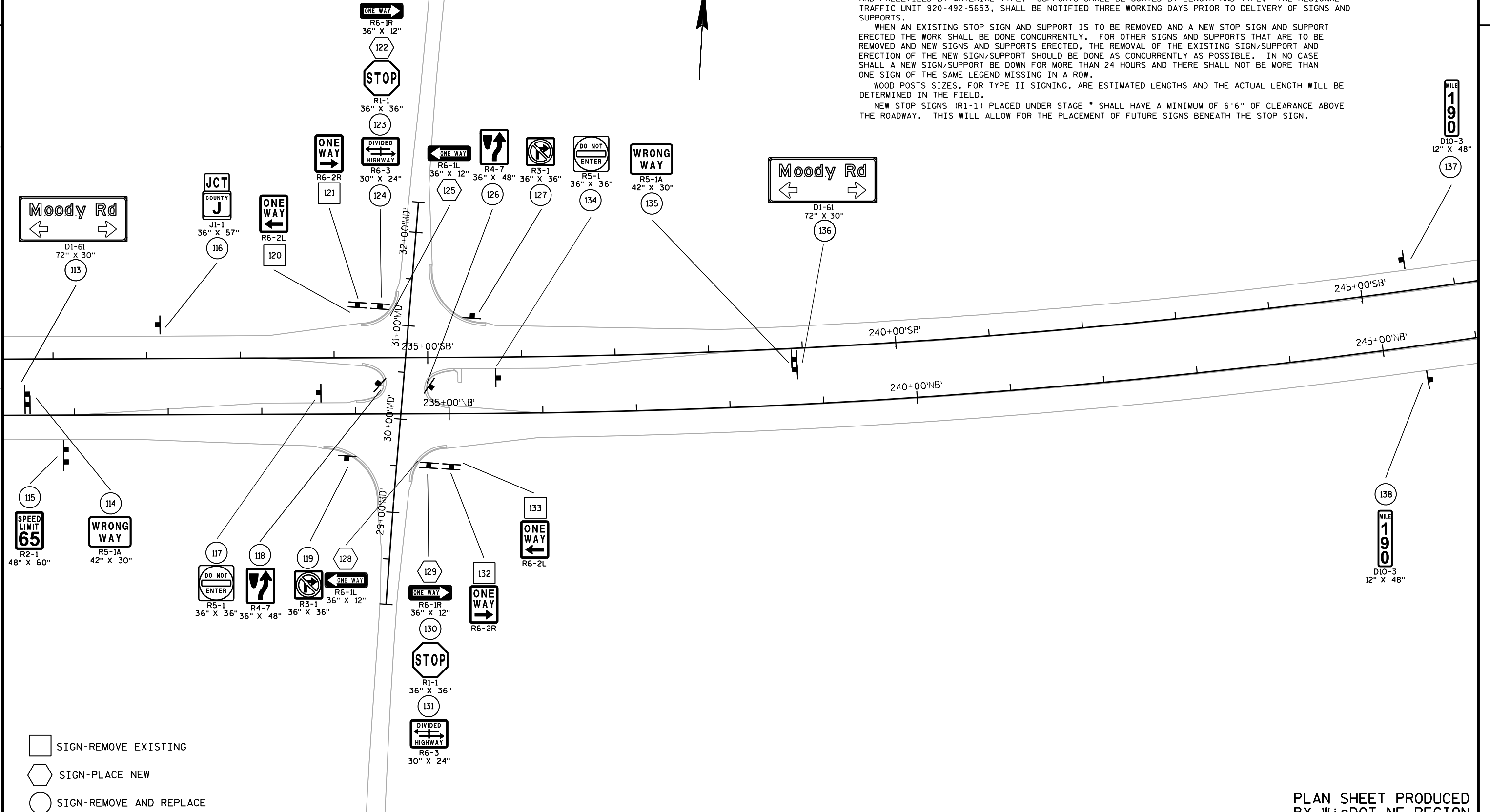
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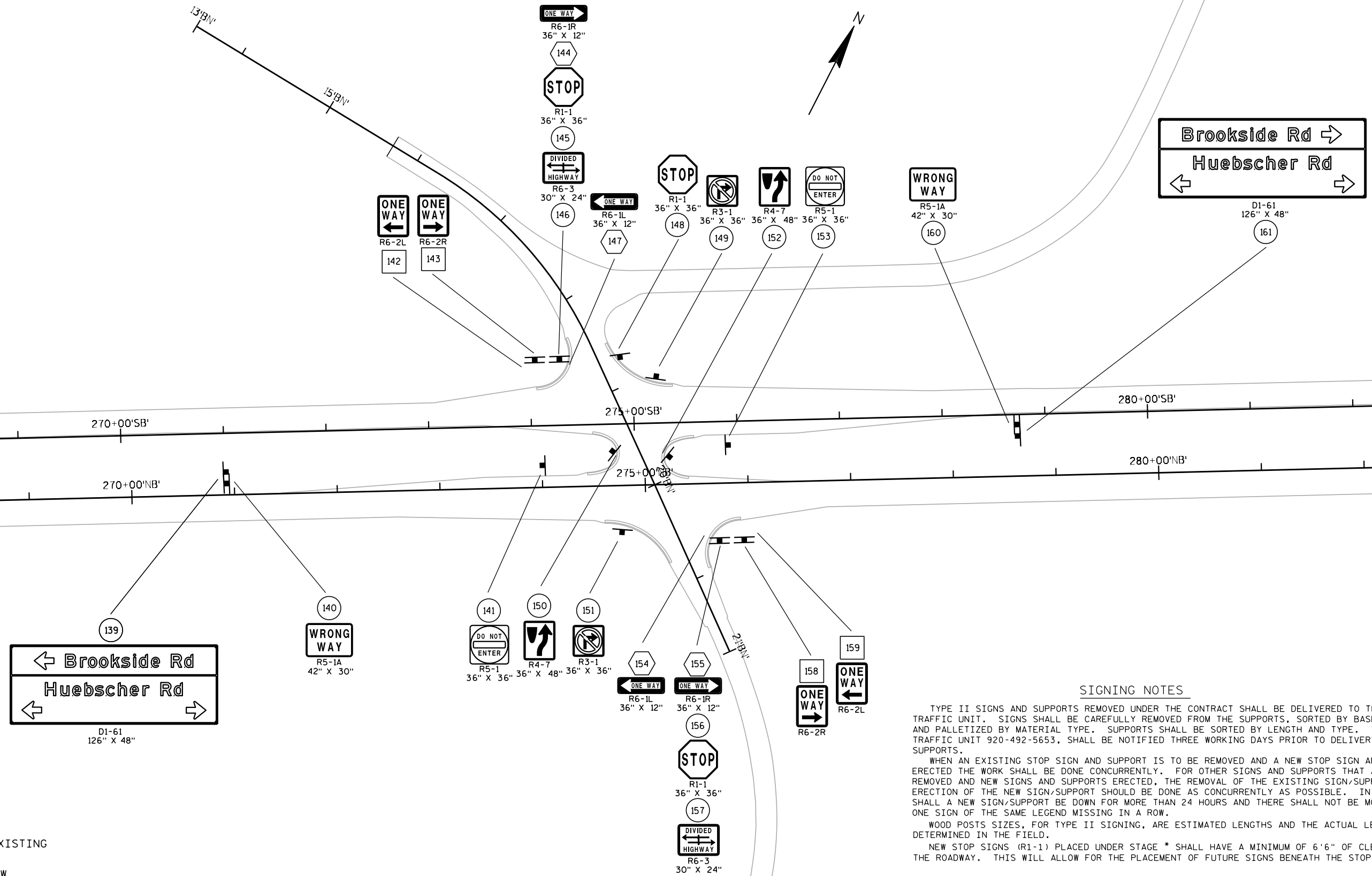
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

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PLAN SHEET PRODUCED
BY WISDOT-NE REGION

PROJECT NO: 1150-60-71

HWY: USH 41

COUNTY: OCONTO

PERMANENT SIGNING PLAN

SHEET

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FILE NAME : N:\spo\traffic\SIGNING\Projects\1150-60-71 USH 41 Oconto Co\023210.ps.DGN

PLOT DATE : 24-SEP-2014 13:28

PLOT BY : dotj1f

PLOT NAME :

PLOT SCALE : 100:1

WISDOT/CADDs SHEET 42

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SIS

MILE
191
D10-3
12" X 48"
162

163
MILE
191
D10-3
12" X 48"

164
Froelick Rd
D1-61
84" X 30"

165
WRONG WAY
R5-1A
42" X 30"

166
DO NOT ENTER
R5-1
36" X 36"

167
ONE WAY
R6-1L
36" X 12"

169
ONE WAY
R6-1R
36" X 12"

170
STOP
R1-1
36" X 36"

171
DIVIDED HIGHWAY
R6-3
30" X 24"

172
ONE WAY
R6-2R
36" X 12"

173
ONE WAY
R6-2L
36" X 12"

ONE WAY
R6-2L
176

ONE WAY
R6-2R
177

ONE WAY
R6-1R
36" X 12"

178
STOP
R1-1
36" X 36"

DIVIDED HIGHWAY
R6-3
30" X 24"

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PLAN SHEET PRODUCED
BY WISDOT-NE REGION

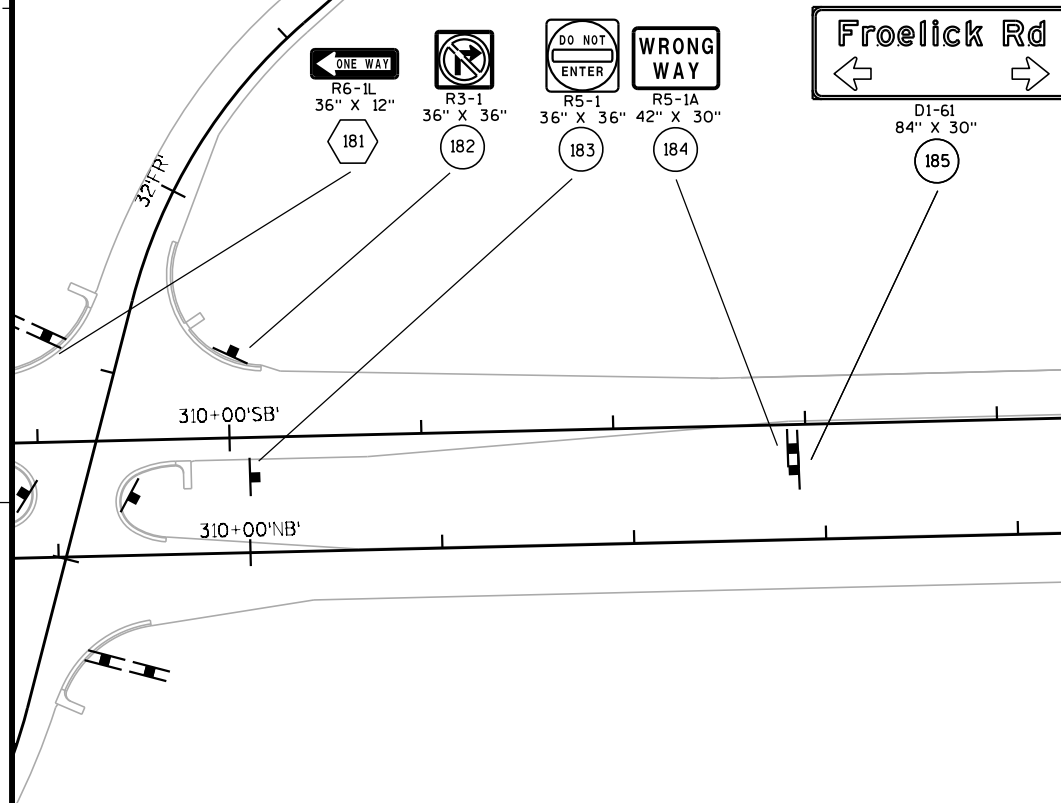
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BY WisDOT-NE REGION

PROJECT NO: 1150-60-71

HWY: USH 41

COUNTY: OCONTO

PERMANENT SIGNING PLAN

SHEET

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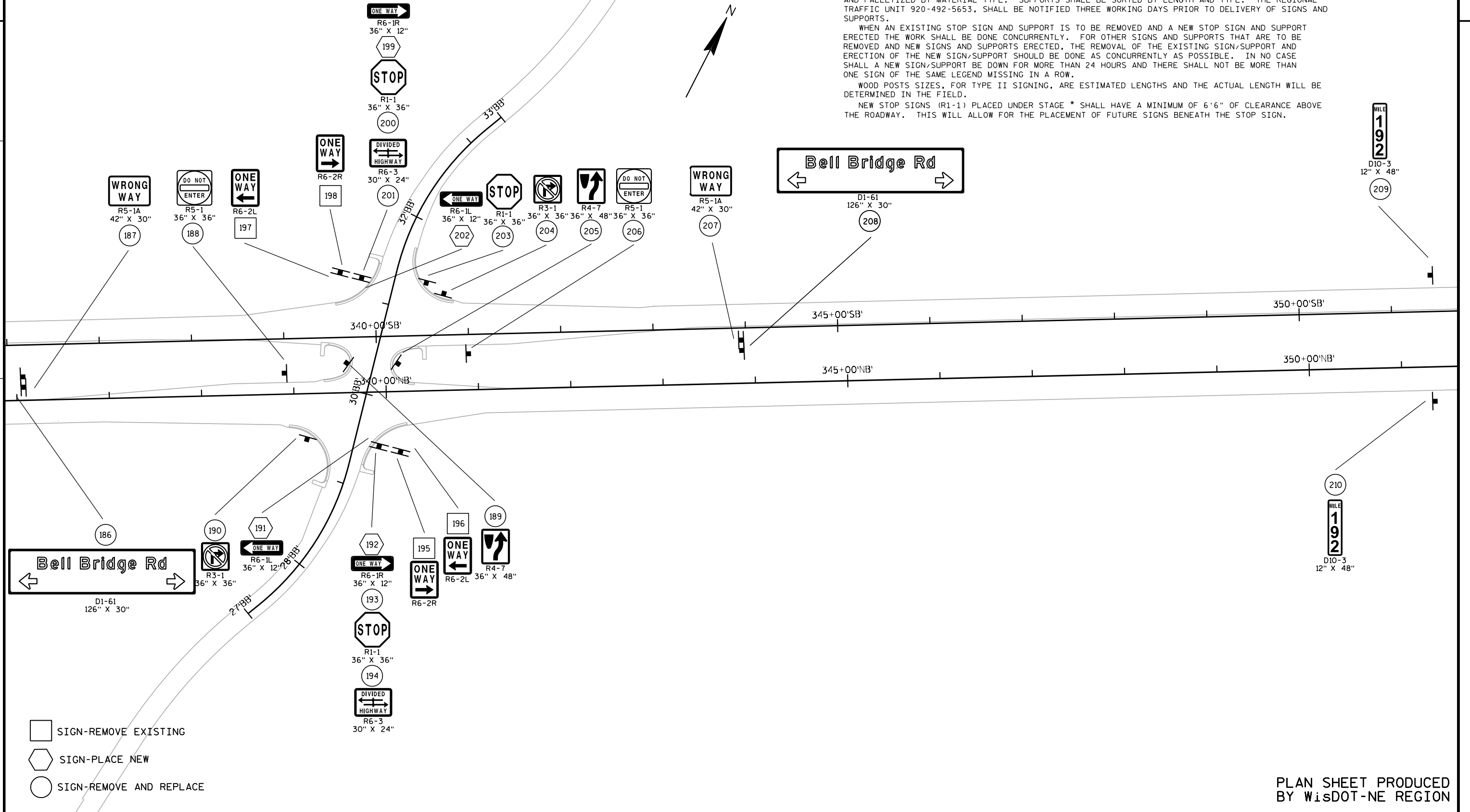
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PROJECT NO: 1150-60-71

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PERMANENT SIGNING PLAN

SHEET

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FILE NAME : N:\spo\traffic\SIGNING\Projects\1150-60-71 USH 41 Oconto Co\023213.ps.DGN

PLOT DATE : 24-SEP-2014 10:18

PLOT BY : dotj1f

PLOT NAME :

PLOT SCALE : 100:1

WISDOT/CADDs SHEET 42

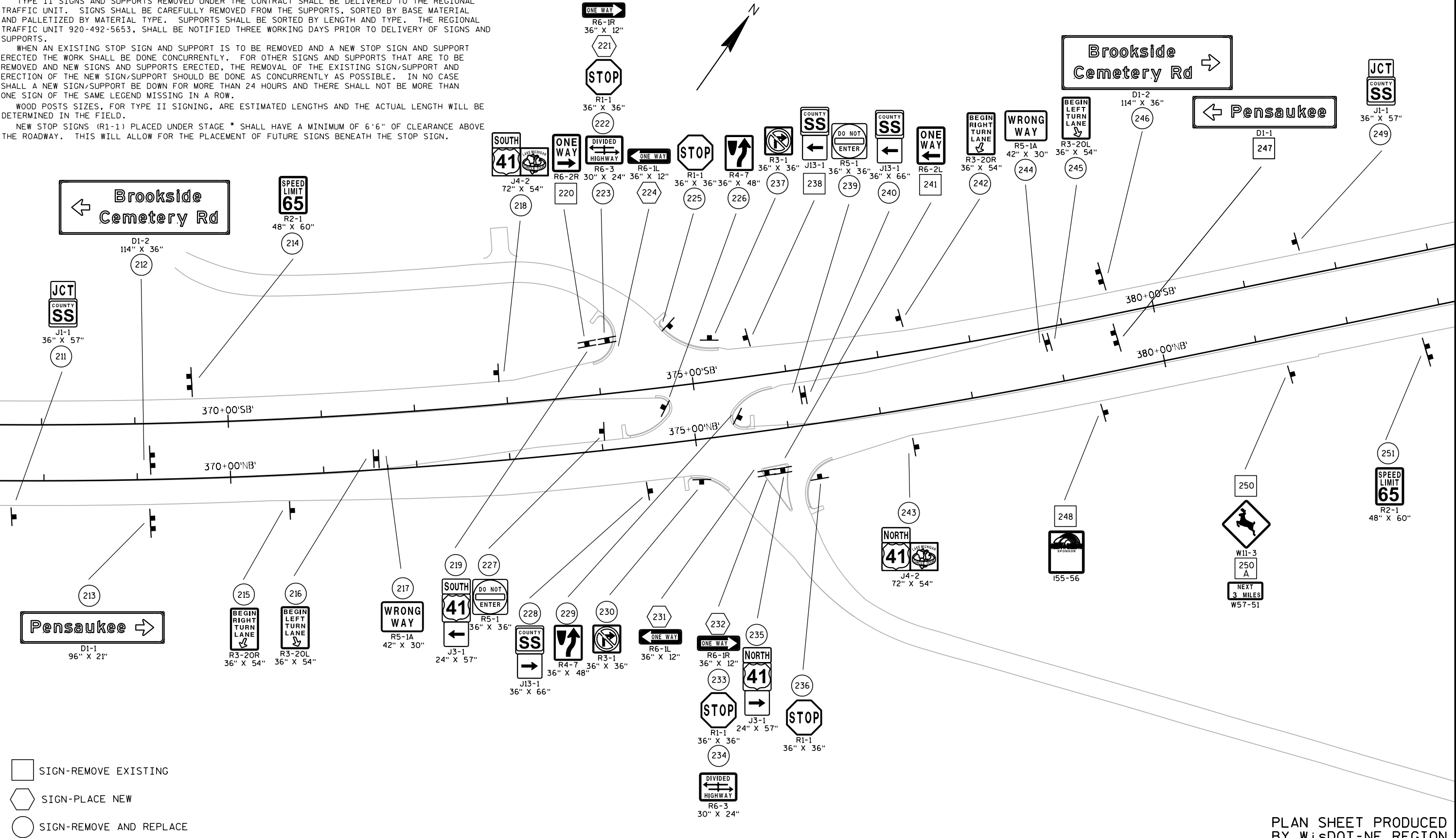
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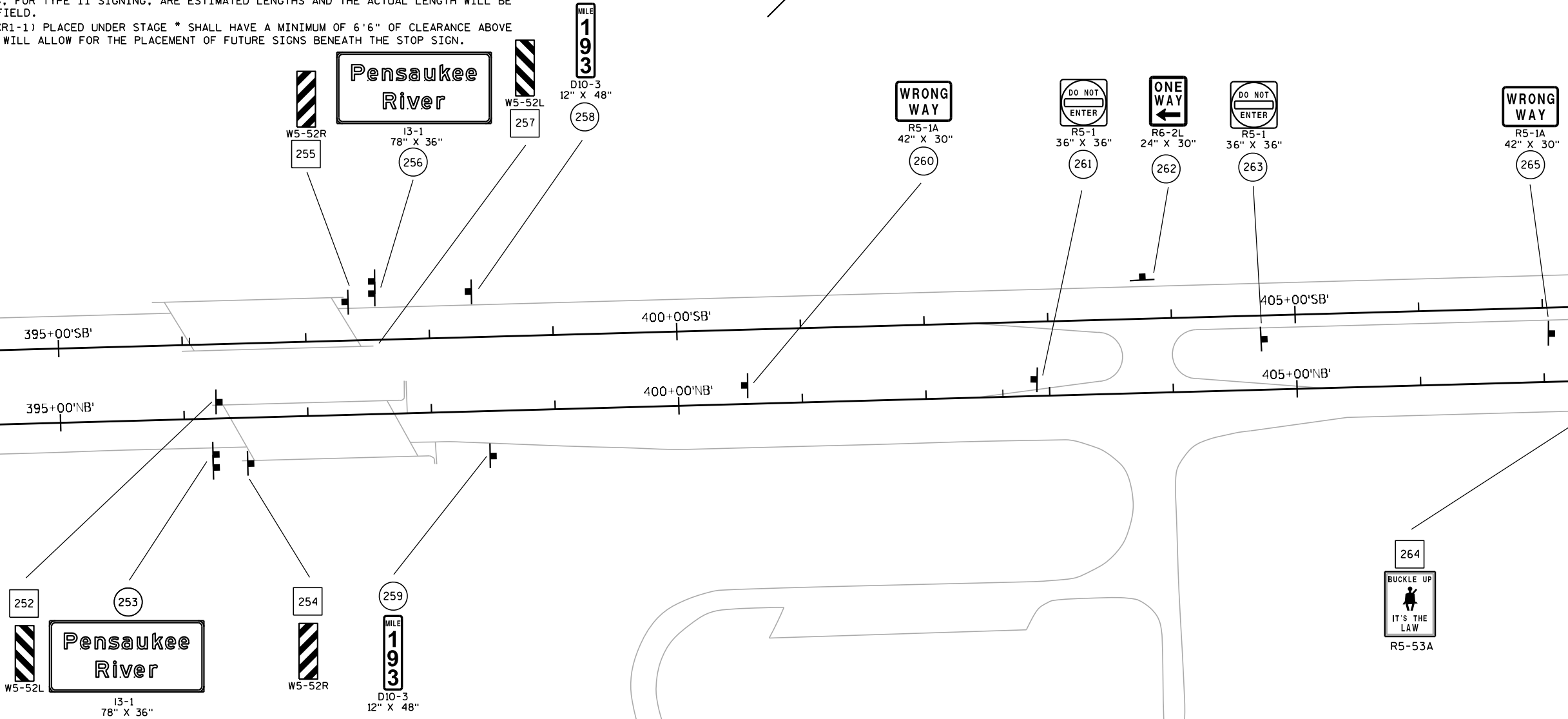
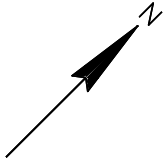
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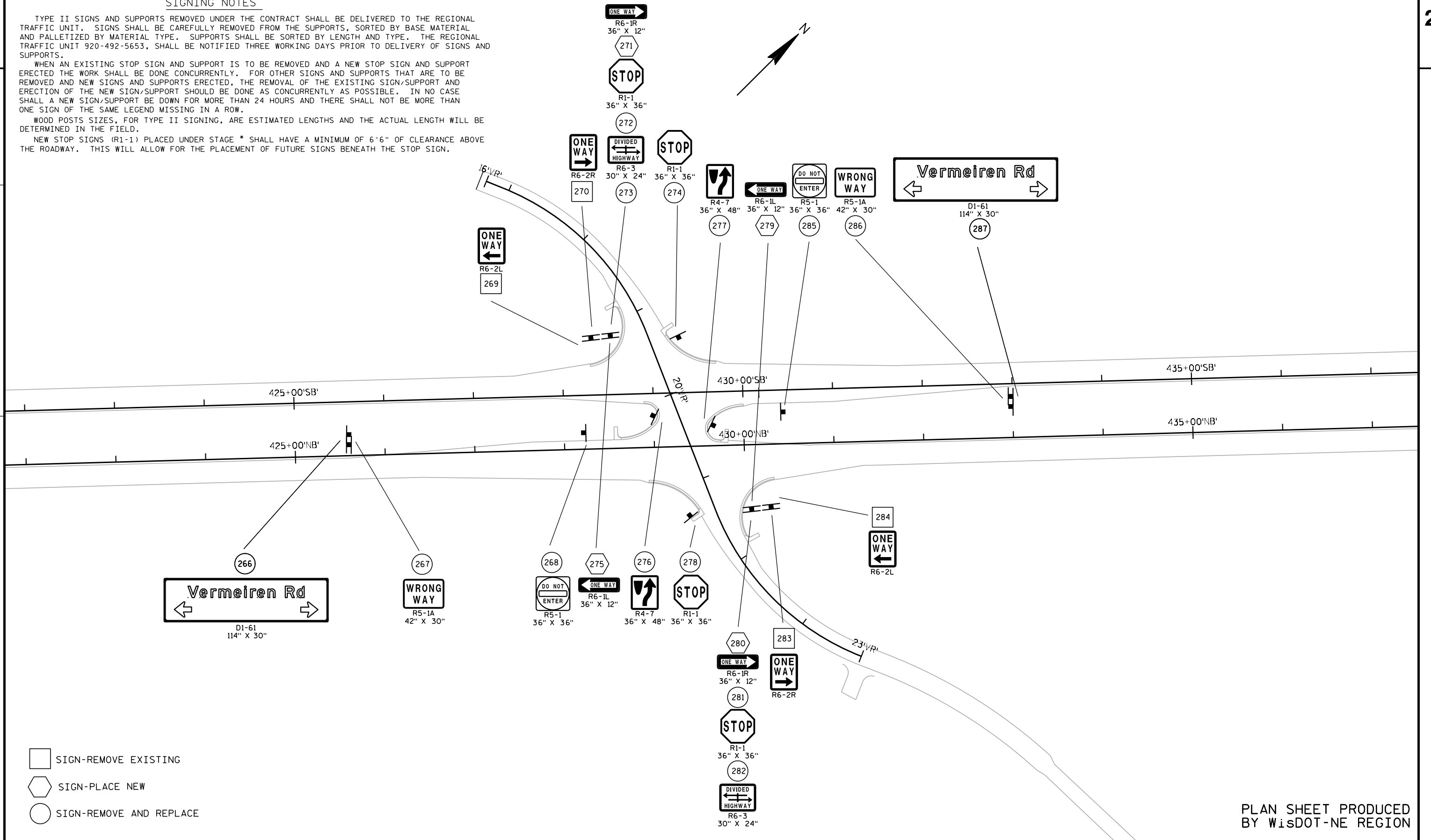
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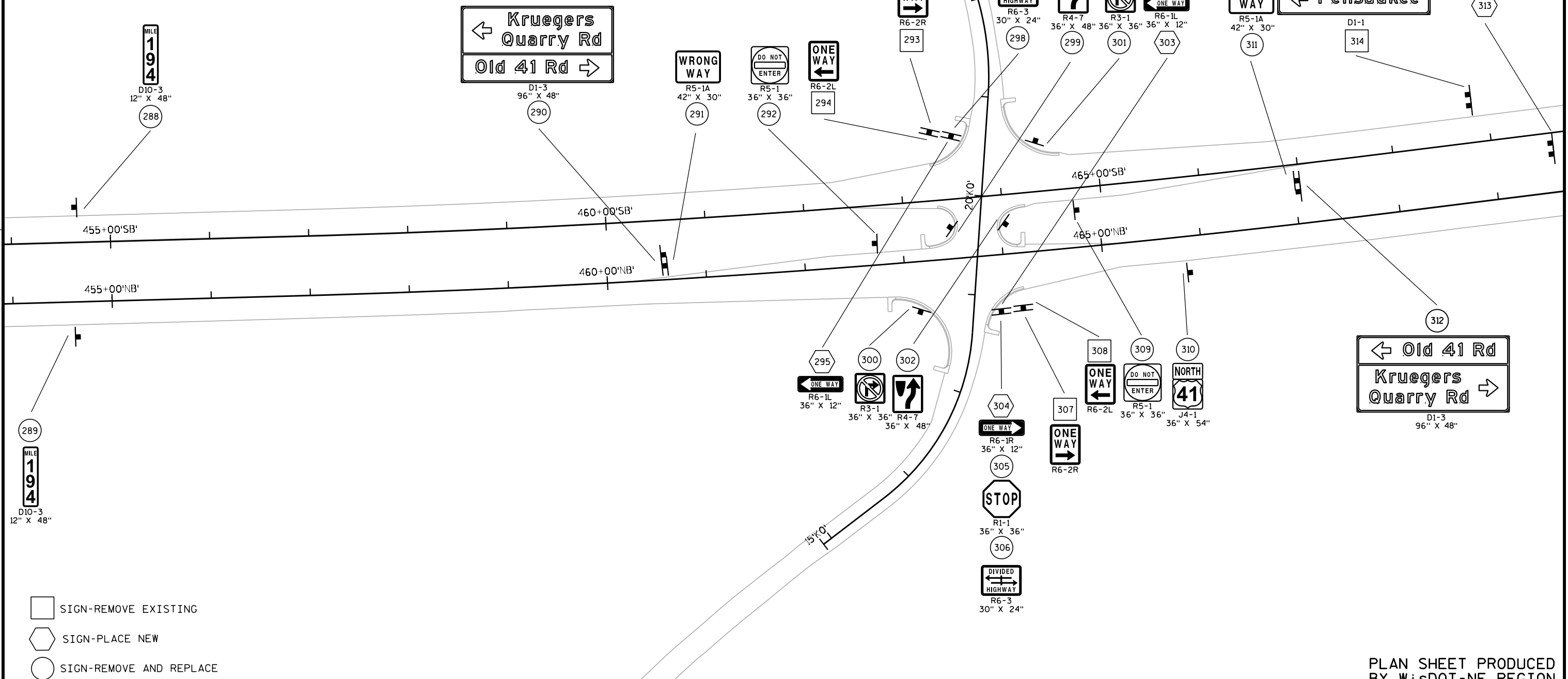
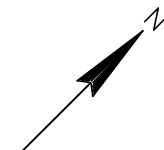
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PROJECT NO: 1150-60-71

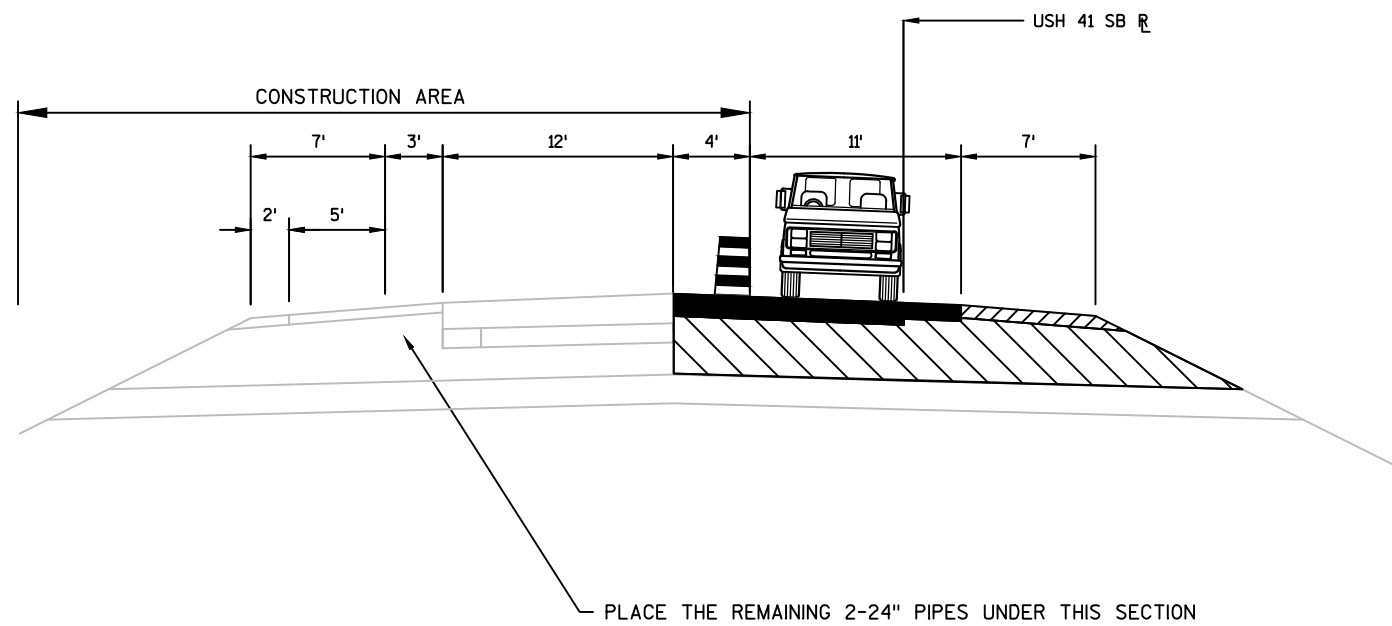
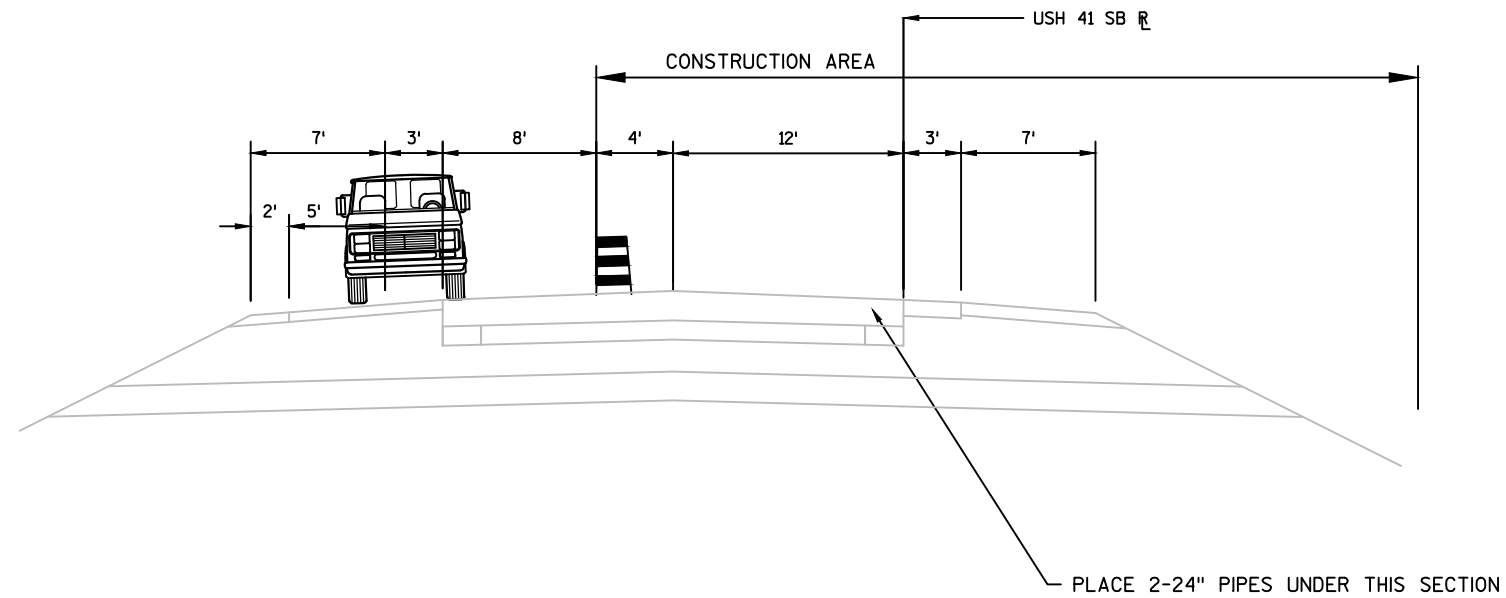
HWY: USH 41

COUNTY: OCONTO

PERMANENT SIGNING PLAN

SHEET

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STAGE 1A CROSS SECTION FOR USH 41
PIPE REPLACEMENT AT STA 316+11 SB

Diagram illustrating the construction area layout and dimensions:

- Dimensions from left to right: 7', 3', 8', 4', 12', 3', 7'.
- Vertical dimension: 2'.
- Labels: STRADDLE EXISTING RUMBLE STRIPS, MILL/OVERLAY ASPHALT PVMNT MARKING, DO NOT INSTALL RUMBLE STRIP, SHAPE SHOULDER.
- Area labeled: CONSTRUCTION AREA.

STA. 105'SB'+30 TO STA. 359'SB'+24
STA. 128'NB'+00 TO STA. 359'NB'+24

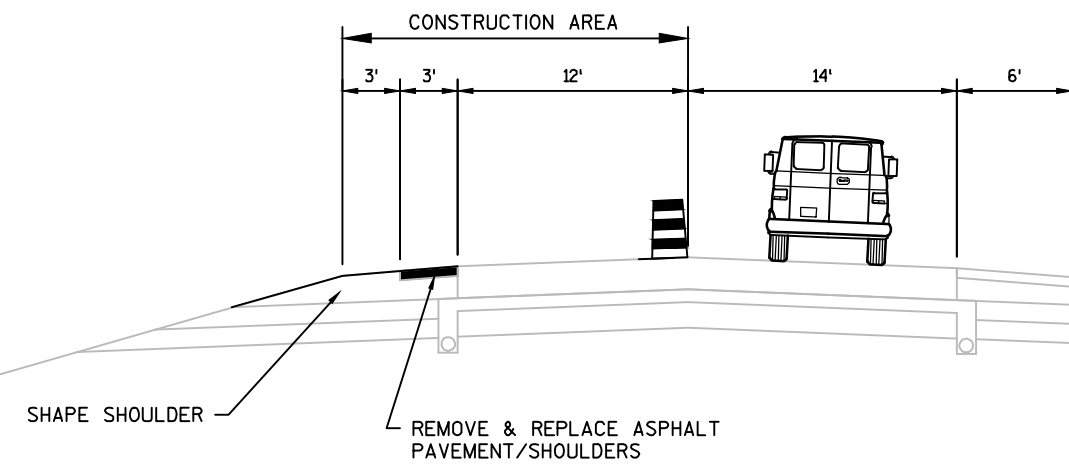
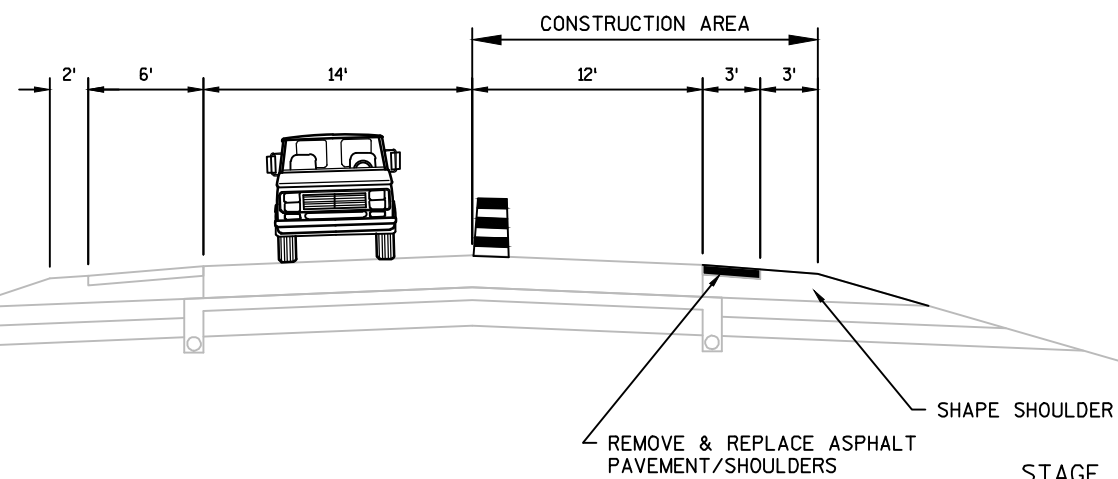
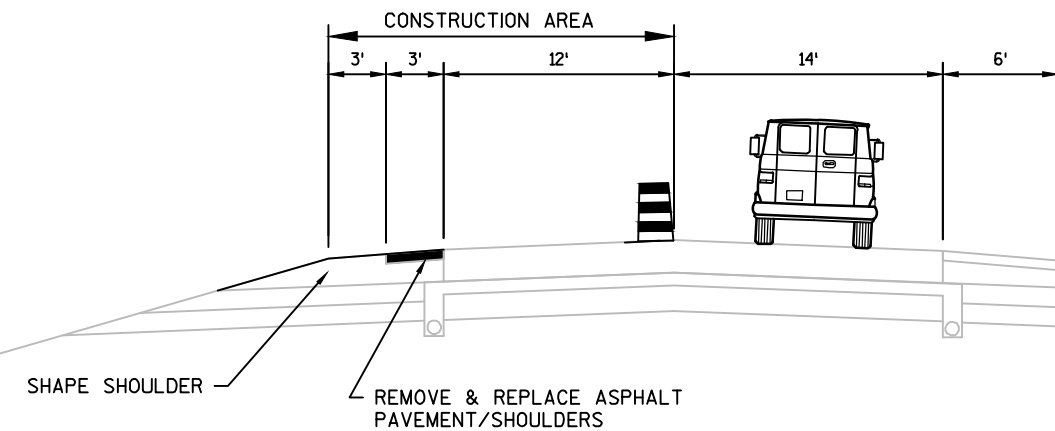


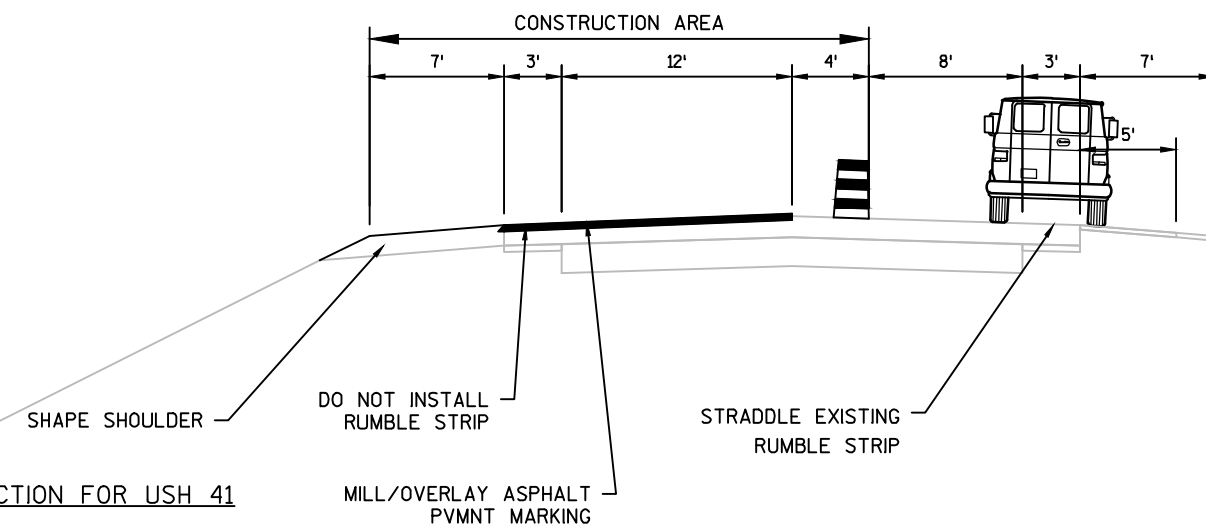
Diagram illustrating a road construction scenario with dimensions and labels:

- Dimensions: 2', 6', 14', 12', 3', 3'
- Labels: CONSTRUCTION AREA, SHAPE SHOULDER, REMOVE & REPLACE ASPHALT PAVEMENT / SHOULDERS

STA. 359+24 TO STA. 379+47

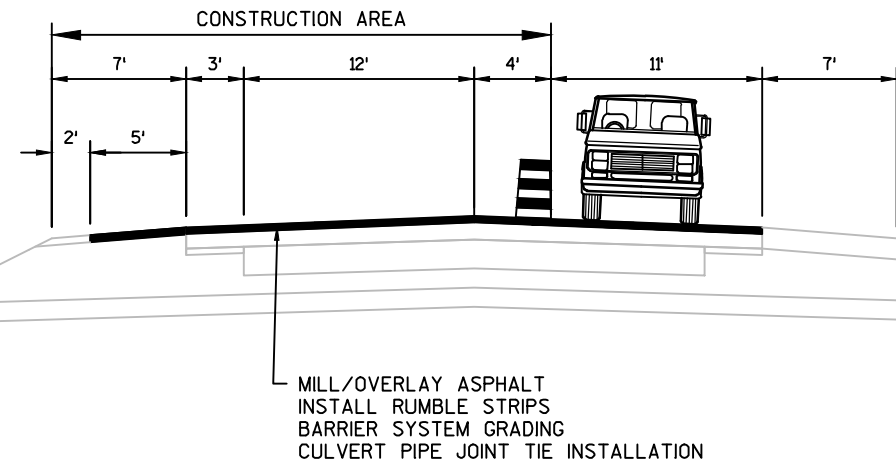


STA. 379+47 TO STA. 523+70



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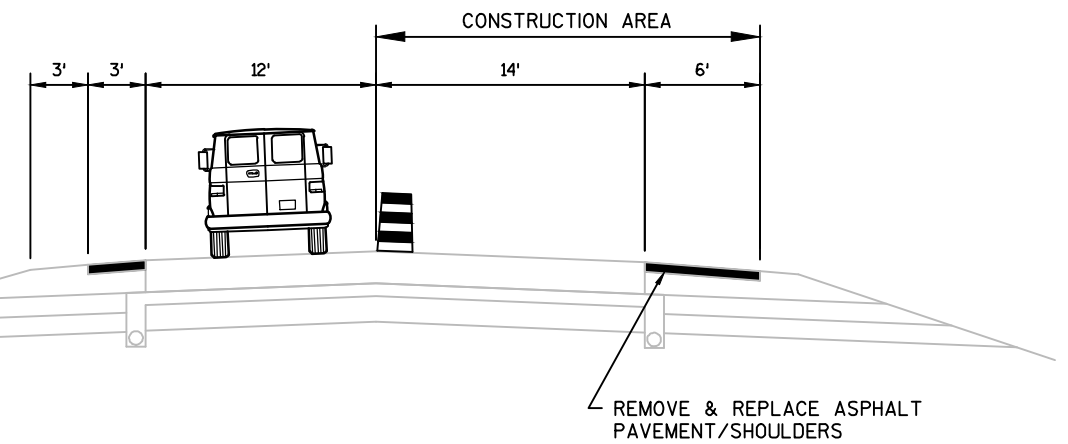


STAGE 2 CROSS SECTION FOR USH 41

STA. 105'SB'+30 TO STA. 359'SB'+24

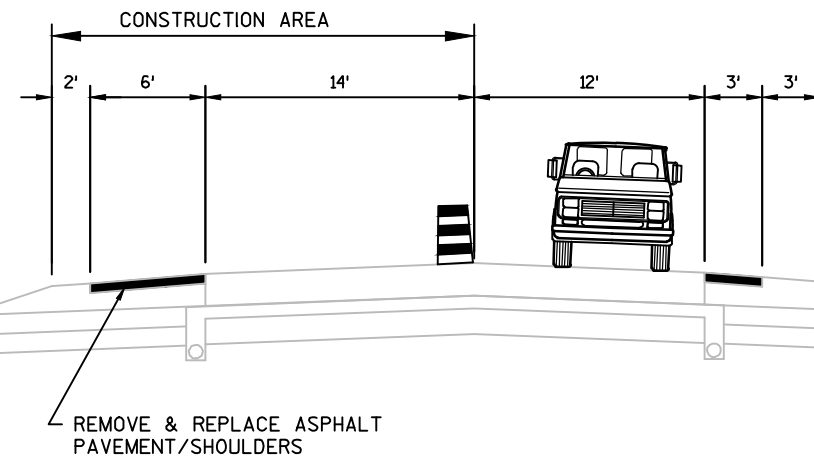
STA. 128'NB'+00 TO STA. 359'NB'+24

2



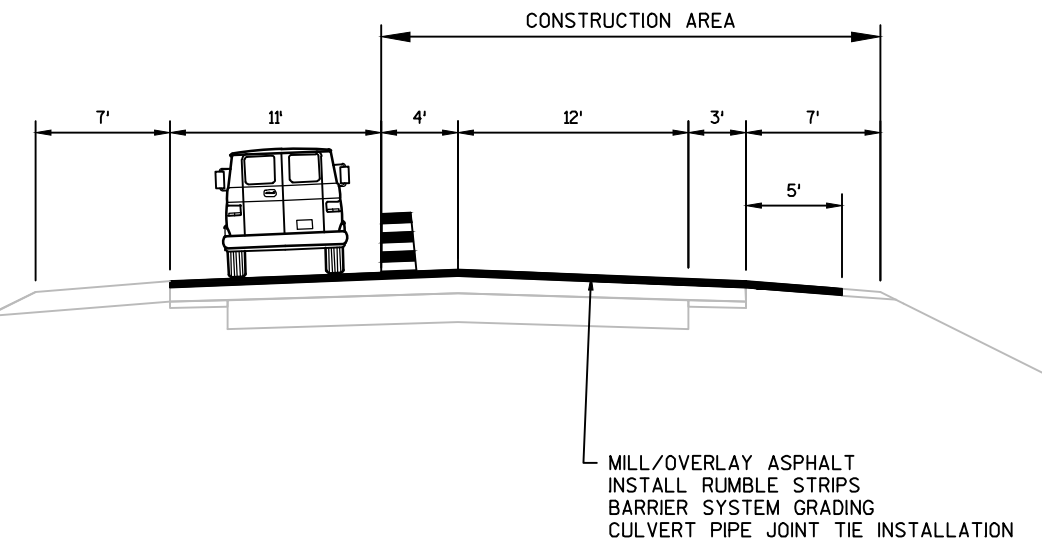
STAGE 2 CROSS SECTION FOR USH 41

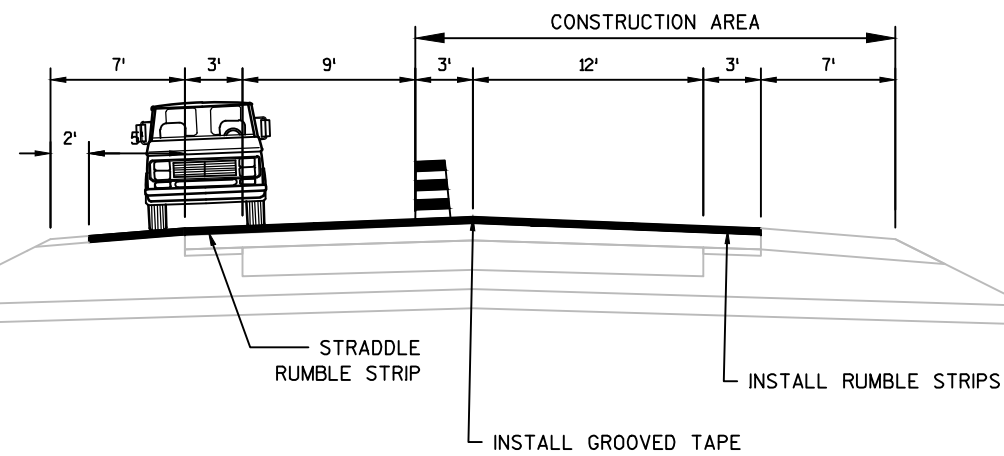
STA. 359+24 TO STA. 379+47



STAGE 2 CROSS SECTION FOR USH 41

STA. 379+47 TO STA. 523+70

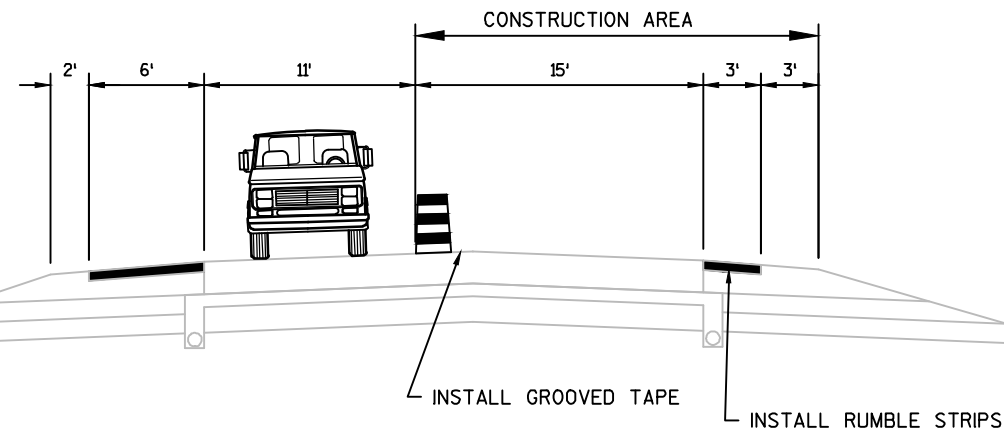




STAGE 3 CROSS SECTION FOR USH 41

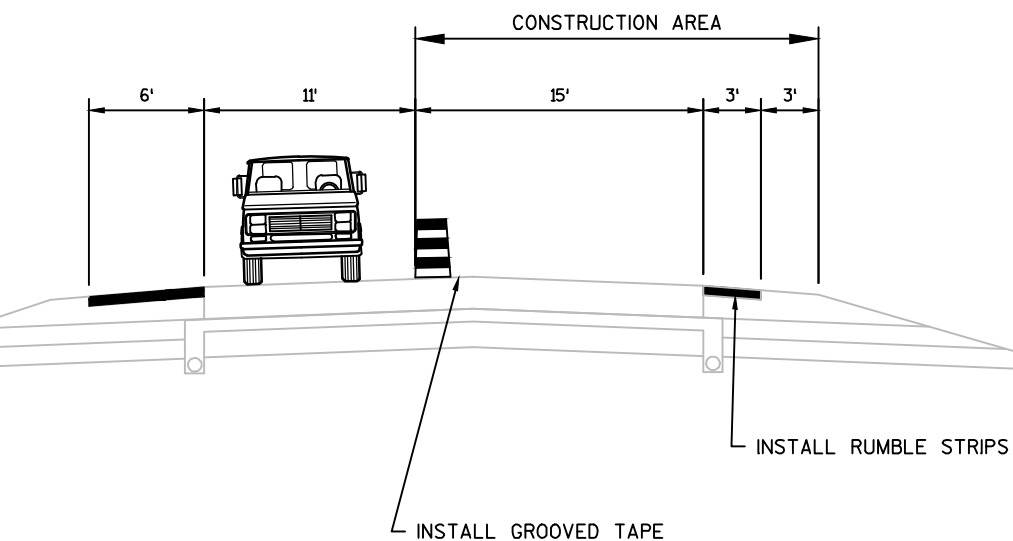
STA. 105'SB'+30 TO STA. 359'SB'+24

STA. 128'NB'+00 TO STA. 359'NB'+24



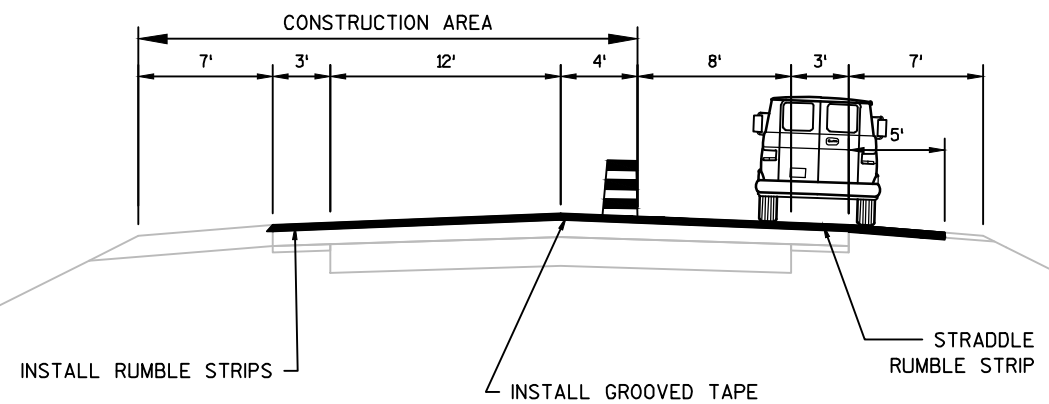
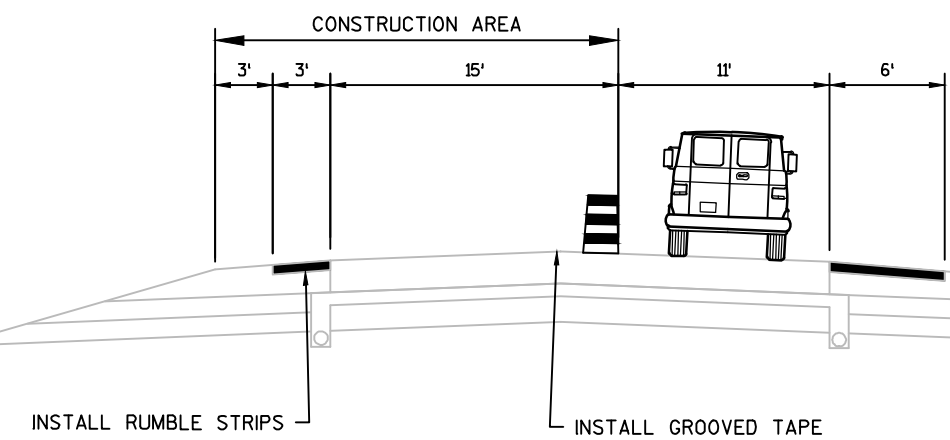
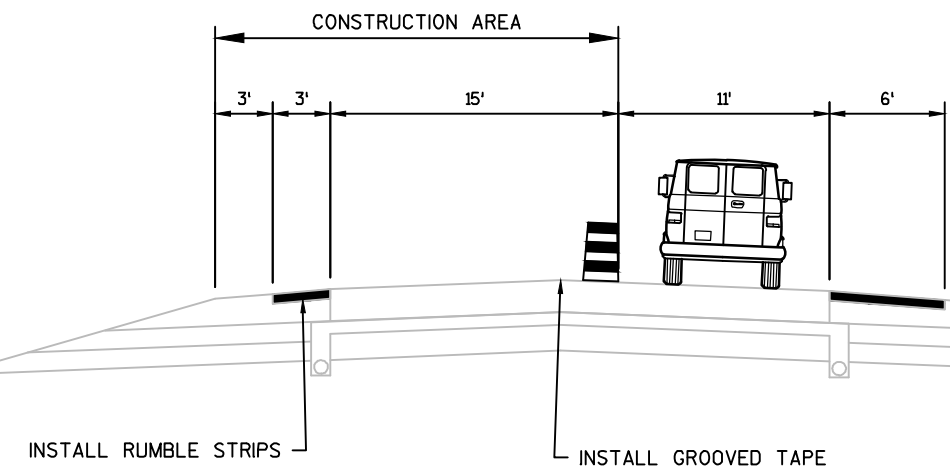
STAGE 3 CROSS SECTION FOR USH 41

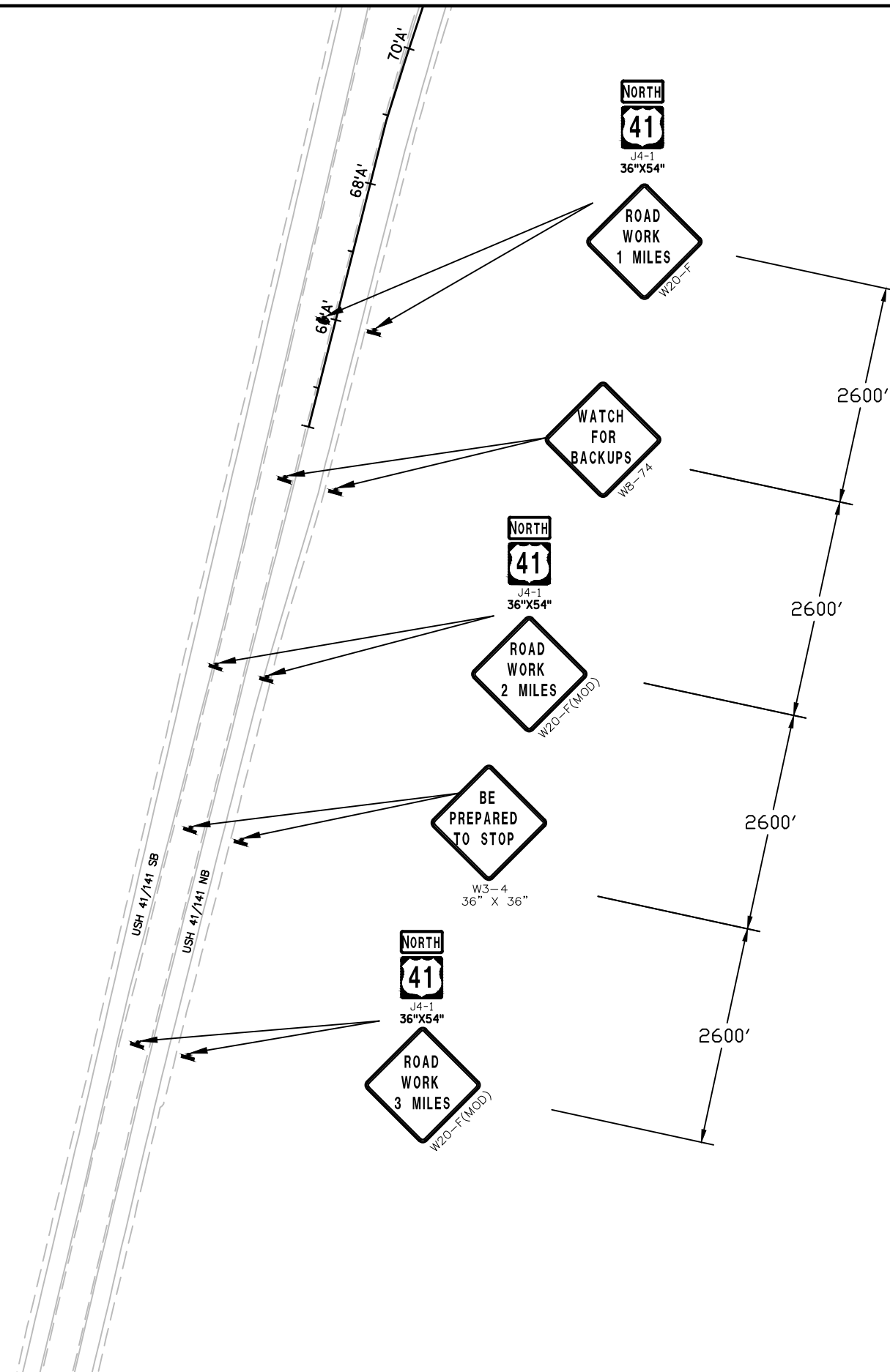
STA. 359+24 TO STA. 379+47

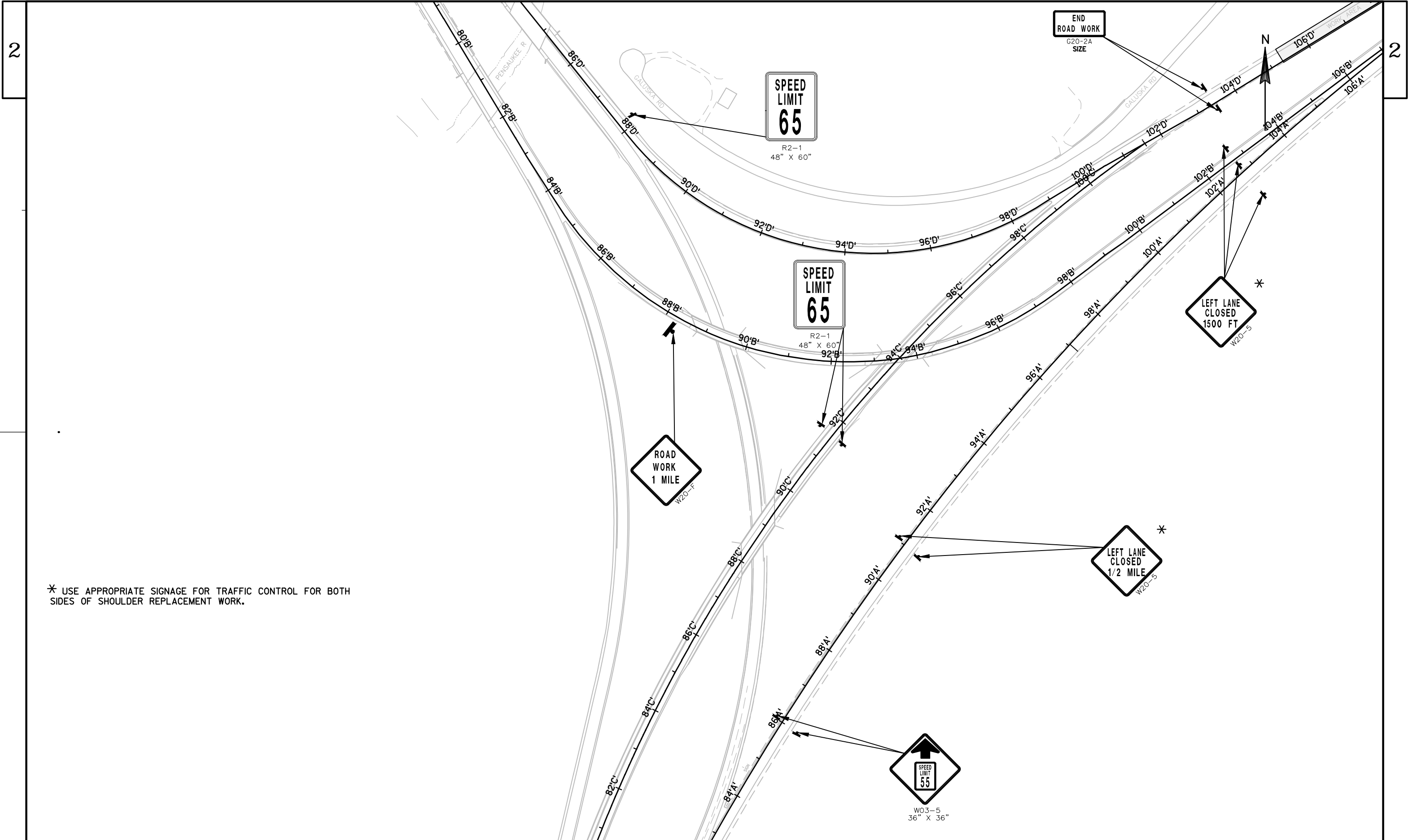


STAGE 3 CROSS SECTION FOR USH 41

STA. 379+47 TO STA. 523+70

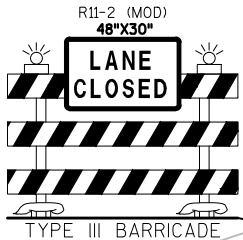




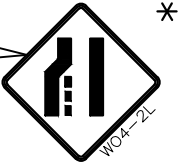


* USE APPROPRIATE SIGNAGE FOR TRAFFIC CONTROL FOR BOTH SIDES OF SHOULDER REPLACEMENT WORK.

*USE APPROPRIATE SIGNAGE FOR TRAFFIC CONTROL FOR BOTH SIDES OF SHOULDER REPLACEMENT WORK.

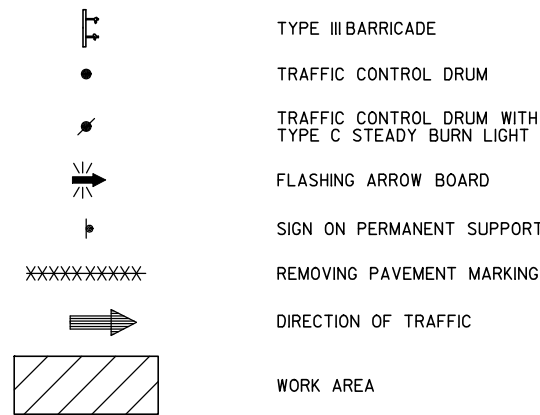


FINES
DOUBLE
N WORK
ZONES
W21-61
SIZE



END ROAD WORK
G20-2A
SIZE

LEGEND



TRAFFIC CONTROL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, 500 FEET DESIRABLE, DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

"W0" IS THE SAME AS "W" EXCEPT THE BACKGROUND IS ORANGE.

ANY SIGNS, TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

REDUCED SPEED AHEAD AND SPEED LIMIT 55 SIGNS MUST BE POST MOUNTED.

SPEED LIMIT SIGNS SHALL ALSO BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP AND AT 0.5 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

THE LOCATION OF THE FIRST SIGN INDICATING THE 55 MPH REGULATORY SPEED LIMIT IS REFERENCED FROM BEGINNING OF LANE CLOSURE TAPER. THE 55 MPH REGULATORY SPEED LIMIT SIGN LOCATION MUST BE ADJUSTED WHEN CONSTRUCTION ACTIVITIES REQUIRE THE LANE CLOSURE START LOCATION TO CHANGE.

TRAFFIC CONTROL DEVICES NOT IN USE SHALL BE LAYED DOWN OR REMOVED, TURNING OF DEVICES TO OBSCURE THE MESSAGE WILL NOT BE ALLOWED.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

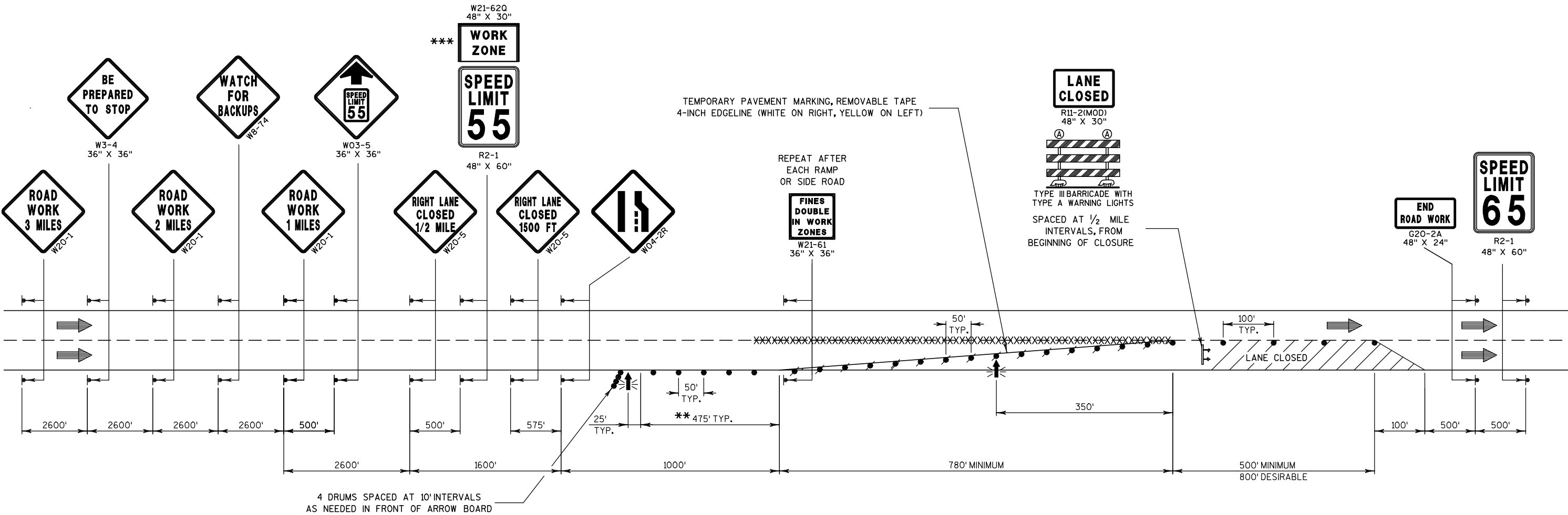
IF LANE CLOSURE IS MORE THAN 1 MILE, PLACE A TYPE III BARRICADE APPROXIMATELY EVERY 1/2 MILE ACROSS THE CLOSED LANE TO HELP ENFORCE THE DRUM LINE.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

***CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARDS SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM OF 1500 FEET IN FRONT OF THE DRUMS.

***SEE REQUIREMENT FOR TEMPORARY REGULATORY SPEED REDUCTION IN THE SPECIAL PROVISIONS.

COVERING AND REMOVAL OF MATERIAL COVERING TEMPORARY REGULATORY SPEED LIMIT SIGNS AND EXISTING SPEED LIMIT SIGNS RELATED TO TEMPORARY AND/OR PERIODIC LANE CLOSURES SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.



LANE CLOSURE - REGULATORY SPEED REDUCTION WITHOUT BARRIER



DATE 14APR16		E S T I M A T E O F Q U A N T I T I E S			
LINE				1150-60-71	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0020	204.0100	Removing Pavement	SY	61.000	61.000
0030	204.0110	Removing Asphaltic Surface	SY	41,475.000	41,475.000
0040	204.0115	Removing Asphaltic Surface Butt Joints	SY	50.000	50.000
0050	204.0120	Removing Asphaltic Surface Milling	SY	179,470.000	179,470.000
0060	204.0185	Removing Masonry	CY	2.000	2.000
0070	204.9060.S	Removing (item description) 01. Apron Endwall 24-Inch	EACH	1.000	1.000
0080	205.0100	Excavation Common	CY	126.000	126.000
0090	208.1100	Select Borrow	CY	41.000	41.000
0100	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 1150-60-71	LS	1.000	1.000
0110	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	885.000	885.000
0120	213.0100	Finishing Roadway (project) 01. 1150-60-71	EACH	1.000	1.000
0130	305.0110	Base Aggregate Dense 3/4-Inch	TON	13,123.000	13,123.000
0140	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	638.000	638.000
0150	305.0500	Shaping Shoulders	STA	753.000	753.000
0160	416.1110	Concrete Shoulder Rumble Strips	LF	39,550.000	39,550.000
0170	440.4410	Incentive IRI Ride	DOL	30,160.000	30,160.000
0180	455.0605	Tack Coat	GAL	13,596.000	13,596.000
0190	460.2000	Incentive Density HMA Pavement	DOL	19,980.000	19,980.000
0200	460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF	39,691.000	39,691.000
0210	460.5224	HMA Pavement 4 LT 58-28 S	TON	13,858.000	13,858.000
0220	460.6224	HMA Pavement 4 MT 58-28 S	TON	17,357.000	17,357.000
0230	465.0105	Asphaltic Surface	TON	188.000	188.000
0240	465.0110	Asphaltic Surface Patching	TON	40.000	40.000
0250	465.0315	Asphaltic Flumes	SY	194.000	194.000
0260	465.0400	Asphaltic Shoulder Rumble Strips	LF	106,373.000	106,373.000
0270	504.0900	Concrete Masonry Endwalls	CY	2.000	2.000
0280	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	1.000	1.000
0290	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	160.000	160.000
0300	524.0124	Culvert Pipe Salvaged 24-Inch	LF	20.000	20.000
0310	524.0130	Culvert Pipe Salvaged 30-Inch	LF	18.000	18.000
0320	524.0136	Culvert Pipe Salvaged 36-Inch	LF	2.000	2.000
0330	524.0624	Apron Endwalls for Culvert Pipe Salvaged 24-Inch	EACH	1.000	1.000
0340	524.0630	Apron Endwalls for Culvert Pipe Salvaged 30-Inch	EACH	1.000	1.000
0350	524.0636	Apron Endwalls for Culvert Pipe Salvaged 36-Inch	EACH	1.000	1.000
0360	614.0010	Barrier System Grading Shaping Finishing	EACH	4.000	4.000
0370	614.2300	MGS Guardrail 3	LF	225.000	225.000
0380	614.2340	MGS Guardrail 3 L	LF	112.500	112.500
0390	614.2610	MGS Guardrail Terminal EAT	EACH	1.000	1.000
0400	614.2620	MGS Guardrail Terminal Type 2	EACH	1.000	1.000
0410	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1150-60-71	EACH	1.000	1.000
0420	619.1000	Mobilization	EACH	1.000	1.000
0430	624.0100	Water	MGAL	137.600	137.600
0440	625.0500	Salvaged Topsoil	SY	573.000	573.000
0450	628.1504	Silt Fence	LF	1,463.000	1,463.000

DATE 14APR16		E S T I M A T E O F Q U A N T I T I E S			
LINE					1150-60-71
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0460	628.1520	Silt Fence Maintenance	LF	1,463.000	1,463.000
0470	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0480	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0490	628.2004	Erosion Mat Class I Type B	SY	2,698.000	2,698.000
0500	628.7555	Culvert Pipe Checks	EACH	22.000	22.000
0510	628.7570	Rock Bags	EACH	180.000	180.000
0520	629.0210	Fertilizer Type B	CWT	0.370	0.370
0530	630.0130	Seeding Mixture No. 30	LB	11.000	11.000
0540	630.0200	Seeding Temporary	LB	6.000	6.000
0550	633.5200	Markers Culvert End	EACH	6.000	6.000
0560	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	120.000	120.000
0570	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	56.000	56.000
0580	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	39.000	39.000
0590	637.2210	Signs Type II Reflective H	SF	2,628.630	2,628.630
0600	637.2230	Signs Type II Reflective F	SF	176.000	176.000
0610	638.2602	Removing Signs Type II	EACH	209.000	209.000
0620	638.3000	Removing Small Sign Supports	EACH	232.000	232.000
0630	642.5201	Field Office Type C	EACH	1.000	1.000
0640	643.0100	Traffic Control (project) 01. 1150-60-71	EACH	1.000	1.000
0650	643.0300	Traffic Control Drums	DAY	55,968.000	55,968.000
0660	643.0420	Traffic Control Barricades Type III	DAY	1,664.000	1,664.000
0670	643.0705	Traffic Control Warning Lights Type A	DAY	3,328.000	3,328.000
0680	643.0715	Traffic Control Warning Lights Type C	DAY	1,560.000	1,560.000
0690	643.0800	Traffic Control Arrow Boards	DAY	104.000	104.000
0700	643.0900	Traffic Control Signs	DAY	8,476.000	8,476.000
0710	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0720	646.0106	Pavement Marking Epoxy 4-Inch	LF	159,615.000	159,615.000
0730	646.0805.S	Pavement Marking Outfall	EACH	166.000	166.000
0740	646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF	20,789.000	20,789.000
0750	646.0883.S	Pavement Marking Grooved Wet Reflective Tape 8-Inch	LF	2,925.000	2,925.000
0760	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
0770	650.8000	Construction Staking Resurfacing Reference	LF	81,413.000	81,413.000
0780	650.9910	Construction Staking Supplemental Control (project) 01. 1150-60-71	LS	1.000	1.000
0790	654.0102	Concrete Bases Type 2	EACH	1.000	1.000
0800	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	1.000	1.000
0810	657.0310	Poles Type 3	EACH	1.000	1.000
0820	690.0150	Sawing Asphalt	LF	673.000	673.000
0830	690.0250	Sawing Concrete	LF	71.000	71.000
0840	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000	2,000.000
0850	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,320.000	1,320.000
0860	SPV.0060	Special 01. Installing Pole Mounted Cabinet	EACH	1.000	1.000
0870	SPV.0060	Special 02. Installing 2 Solar Panels on One Bracket	EACH	1.000	1.000
0880	SPV.0060	Special 03. Installing Wavetronix Click 200 Module	EACH	1.000	1.000
0890	SPV.0060	Special 04. Installing Wavetronix Detector Module	EACH	1.000	1.000
0900	SPV.0060	Special 05. Installing Concrete Maintenance Platform	EACH	1.000	1.000

DATE 14APR16		E S T I M A T E O F Q U A N T I T I E S			
LINE		1150-60-71			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0910	SPV. 0060	Speci al 06. Gradi ng, Shapi ng, & Fini shi ng For ATR Si te	EACH	1. 000	1. 000

REMOVING ASPHALTIC SURFACE BUTT JOINTS

		204. 0115		
STATION	TO	LOCATION	SY	REMARKS
STAGE 1B				
105+30	SB	USH 41 LT	3	BEGINNING OF SB LANES
128+00	NB	USH 41 LT	1	NB SHOULDER
359+24	SB	USH 41	3	END OF SB LANES
379+47	NB	USH 41	3	BEGINNING OF NB LANES
396+47	NB	USH 41	5	STRUCTURE
397+80	NB	USH 41	5	STRUCTURE
523+70	SB	USH 41 RT	1	SB SHOULDER
523+70	NB	USH 41	3	END OF NB LANES
STAGE 1B TOTAL			24	
STAGE 2				
105+30	SB	USH 41	4	BEGINNING OF SB LANES
128+00	NB	USH 41 RT	1	NB SHOULDER
359+24	SB	USH 41	3	END OF SB LANES
379+47	NB	USH 41	3	BEGINNING OF NB LANES
396+47	NB	USH 41	5	STRUCTURE
397+80	NB	USH 41	5	STRUCTURE
523+70	SB	USH 41 LT	1	SB SHOULDER
523+70	NB	USH 41	4	END OF NB LANES
STAGE 2 TOTAL			26	
TOTAL			50	

ALL ITEMS ARE CATEGORY 0010
UNLESS OTHERWISE NOTED

REMOVING ASPHALTIC SURFACE MILLING

					204. 0120	
STATION	TO	STATION	LOCATION	SY	REMARKS	
STAGE 1B						
105+30	SB	- 359+24	SB USH 41	42325	MAINLINE	
126+16	SB	- 130+87	SB USH 41 RT	791	GALUSKA CROSSOVER	
142+28	SB	- 148+31	SB USH 41 RT	914	FALK CROSSOVER	
172+54	SB	- 178+58	SB USH 41 RT	910	ERDMAN CROSSOVER	
197+53	SB	- 203+76	SB USH 41 RT	932	BROOKSIDE SOUTH CROSSOVER	
218+89	SB	- 224	SB+93 USH 41 RT	916	COUNTY J CROSSOVER	
231+63	SB	- 237+63	SB USH 41 RT	914	MOODY CROSSOVER	
272+03	SB	- 277+95	SB USH 41 RT	900	BROOKSIDE NORTH CROSSOVER	
306+10	SB	- 312+14	SB USH 41 RT	914	FROELICK CROSSOVER	
336+81	SB	- 342+69	SB USH 41 RT	904	BELL BRIDGE CROSSOVER	
371+46	NB	- 378+61	NB USH 41 LT	1563	BROOKSIDE CEMETERY CROSSOVER	
379+47	NB	- 396+47	NB USH 41	2883	MAINLINE	
397+80	NB	- 523+70	NB USH 41	21139	MAINLINE	
402+71	NB	- 404+91	NB USH 41 LT	523	MEDIAN CROSSOVER	
426+00	NB	- 432+37	NB USH 41 LT	1012	VERMEIREN CROSSOVER	
460+83	NB	- 466+66	NB USH 41 LT	867	KRUEGERS QUARRY CROSSOVER	
474+91	NB	- 477+11	NB USH 41 LT	523	MEDIAN CROSSOVER	
501+71	NB	- 503+91	NB USH 41 LT	523	MEDIAN CROSSOVER	
STAGE 1B TOTAL				79453		
STAGE 2						
105+30	SB	- 359+24	SB USH 41	56434	MAINLINE	
143+82	SB	- 146+12	SB USH 41 RT	574	FALK RD	
128+65	SB	- 130+92	SB USH 41 LT	590	GALUSKA RD	
174+63	SB	- 176+73	SB USH 41 LT	357	ERDMAN RD	
199+81	SB	- 201+99	SB USH 41 LT	372	BROOKSIDE RD SOUTH	
220+52	SB	- 222+80	SB USH 41 RT	553	COUNTY J	
220+61	SB	- 225+03	SB USH 41 LT	596	COUNTY J	
233+22	SB	- 235+55	SB USH 41 RT	551	MOODY RD	
233+82	SB	- 236+30	SB USH 41 LT	411	MOODY RD	
274+03	SB	- 276+32	SB USH 41 RT	524	BROOKSIDE RD NORTH	
273+56	SB	- 275+93	SB USH 41 LT	382	BROOKSIDE RD NORTH	
307+64	SB	- 309+89	SB USH 41 RT	642	FROELICK RD	
308+34	SB	- 310+60	SB USH 41 LT	472	FROELICK RD	
338+41	SB	- 340+60	SB USH 41 RT	595	BELL BRIDGE RD	
338+98	SB	- 341+22	SB USH 41 LT	441	BELL BRIDGE RD	
371+68	NB	- 376+33	NB USH 41 RT	1312	BROOKSIDE CEMETERY RD	
372+97	NB	- 376+50	NB USH 41 LT	1033	BROOKSIDE CEMETERY RD	
379+47	NB	- 396+47	NB USH 41	3832	MAINLINE	
397+80	NB	- 523+70	NB USH 41	28099	MAINLINE	
427+78	NB	- 430+09	NB USH 41 LT	677	VERMEIREN RD	
428+29	NB	- 430+60	NB USH 41 RT	521	VERMEIREN RD	
462+42	NB	- 464+51	NB USH 41 RT	468	KRUEGERS QUARRY RD	
462+79	NB	- 465+23	NB USH 41 LT	581	KRUEGERS QUARRY RD	
STAGE 2 TOTAL				100017		
TOTAL				179470		

REMOVING ASPHALTIC SURFACE*

STATION	TO	STATION	LOCATION	204. 0110* SY	REMARKS
STAGE 1B					
128+00	NB -	379+47	NB USH 41 LT	8, 325	SHOULDERS
359+24	SB -	523+70	SB USH 41 RT	5, 436	SHOULDERS
STAGE 1B TOTAL				13, 761	
STAGE 2					
128+00	NB -	379+47	NB USH 41 RT	16, 648	SHOULDERS
359+24	SB -	523+70	SB USH 41 LT	10, 872	SHOULDERS
STAGE 2 TOTAL				27, 520	
TOTAL				41, 281	
* ADDITIONAL QUANTITIES LISTED ELSEWHERE IN PLAN					

REMOVING CULVERT PIPE ITEMS

STATION	LOCATION	REMOVING SMALL PIPE CULVERTS 203. 0100 EACH	REMOVING MASONRY 204. 0185 CY	REMOVING APRON ENDWALLS 204. 9060. S EACH
110+08	SB USH 41 LT	---	---	1
316+11	SB USH 41	2	---	---
316+11	SB USH 41 LT	---	2	---
TOTAL		2	2	1

BASE AGGREGATE DENSE 3/4-INCH

STATION	TO	STATION	LOCATION	305. 0110 TON	624. 0100 *WATER MGAL	REMARKS
Stage 1B						
105+30	SB -	359+24	SB USH 41 RT	5481	54. 8	SHOULDERS
359+24	SB -	523+70	SB USH 41 RT	763	7. 6	SHOULDERS
128+00	NB -	379+47	NB USH 41 LT	1167	11. 7	SHOULDERS
379+47	NB -	523+70	NB USH 41 LT	3113	31. 1	SHOULDERS
392+85	NB -	394+55	NB USH 41 LT	10	0. 1	BEAM GUARD SHOULDER
Stage 2						
105+30	SB -	359+24	SB USH 41 LT	785	7. 9	SHOULDERS
359+24	SB -	523+70	SB USH 41 LT	509	5. 1	SHOULDERS
128+00	NB -	379+47	NB USH 41 RT	778	7. 8	SHOULDERS
379+47	NB -	523+70	NB USH 41 RT	446	4. 5	SHOULDERS
205+99	SB -	211+49	SB USH 41 LT	45	0. 5	BEAM GUARD SHOULDER
392+33	NB -	394+03	NB USH 41 RT	9	0. 1	BEAM GUARD SHOULDER
446+775	NB -	448+45	NB USH 41 RT	19	0. 2	BEAM GUARD SHOULDER
TOTAL				13123	131. 2	

*WATER LISTED ELSEWHERE IN PLAN

REMOVING PAVEMENT

STATION	TO	STATION	LOCATION	204. 0100 SY
STAGE 1A				
316+00	SB -	316+23	SB USH 41	61
TOTAL				61

BARRIER SYSTEM GRADING SHAPING FINISHING

				614. 0010	* SALVAGED TOPSOIL	* FERTILIZER TYPE B	* SEEDING MIXTURE NO. 30	* SEEDING TEMPORARY	* EXCAVATION COMMON	* BORROW
STATION	TO	STATION	LOCATION	EACH	SY	CWT	LB	LB	CY	CY
205+99	SB	211+49	SB USH 41 LT	1	939	0. 6	17	13	105	54
392+33	NB	394+03	NB USH 41 RT	1	291	0. 2	5	4	-	33
392+85	NB	394+55	NB USH 41 LT	1	112	0. 1	2	2	-	2
446+75	NB	448+45	NB USH 41 RT	1	358	0. 2	6	5	41	68
TOTAL				4	1700	1. 1	30	24	146	157
* ITEMS AND QUANTITIES FOR BID INFORMATION ONLY										

SELECT BORROW

STATION	TO	STATION	LOCATION	208. 1100 CY	REMARKS
STAGE 1A					
316+00	SB -	316+23	SB USH 41	41	PIPE REPLACEMENTS
TOTAL				41	

BASE AGGREGATE DENSE 1 1/4-INCH

STATION	TO	STATION	LOCATION	305. 0120 TON	624. 0100 *WATER MGAL
STAGE 1A					
316+00	SB -	316+23	SB USH 41	153	1. 5
STAGE 1B					
392+85	NB -	394+55	NB USH 41 LT	48	0. 5
STAGE 2					
205+99	SB -	211+49	SB USH 41 LT	315	3. 2
392+33	NB -	394+03	NB USH 41 RT	23	0. 2
446+75	NB -	448+45	NB USH 41 RT	99	1. 0
TOTAL				638	6. 4

*WATER LISTED ELSEWHERE IN PLAN

PREPARE FOUNDATION FOR ASPHALTIC PAVING AND SHOULDERS

STATION	TO	STATION	LOCATION	PAVING 211. 0100 LS	SHOULDERS 211. 0400 STA	REMARKS
STAGE 1B						
PROJECT STAGE 1			USH 41	0. 5	---	
359+24	SB -	523+70	SB USH 41 RT	---	165	SHOULDER
128+00	NB -	379+47	NB USH 41 LT	---	251	SHOULDER
STAGE 1B TOTALS				0. 5	416	
STAGE 2						
PROJECT STAGE 2			USH 41	0. 5	---	
158+59	SB -	171+97	SB USH 41 LT	---	14	REPLACE SHOULDER
206+18	SB -	210+62	SB USH 41 LT	---	5	WIDENING ADJACENT TO BG
235+36	SB -	268+75	SB USH 41 LT	---	34	REPLACE SHOULDER
359+24	SB -	523+70	SB USH 41 LT	---	165	SHOULDER
128+00	NB -	379+47	NB USH 41 RT	---	251	SHOULDER
STAGE 2 TOTALS				0. 5	469	
TOTAL				1	885	

SHAPING SHOULDERS

STATION	TO	STATION	LOCATION	305. 0500 STA
STAGE 1B				
105+30	SB -	359+24	SB USH 41 RT	255
379+47	NB -	523+70	NB USH 41 LT	145
STAGE 2				
105+30	SB -	158+59	SB USH 41 LT	54
171+97	SB	206+18	SB USH 41 LT	36
210+62	SB	235+36	SB USH 41 LT	26
268+75	SB	359+24	SB USH 41 LT	92
379+47	NB -	523+70	NB USH 41 RT	145
TOTAL				753

ASPHALTIC FLUMES AND REMOVING ASPHALTIC SURFACE*

		ASPHALTIC FLUMES		REMOVING ASPHALTIC SURFACE	
		465. 0315		204. 0110*	
STATION	LOCATION	SY		SY	
STAGE 1B					
129+00	NB 18' LT	4. 4		4. 4	
130+20	NB 13' LT	4. 4		4. 4	
176+00	SB 20' RT	4. 4		4. 4	
201+30	SB 20' RT	4. 4		4. 4	
235+20	SB 20' RT	4. 4		4. 4	
340+40	SB 18' RT	4. 4		4. 4	
373+50	NB 20' LT	4. 4		4. 4	
STAGE 1B TOTAL		31		31	
STAGE 2					
129+20	SB 98' LT	4. 4		4. 4	
130+00	SB 40' LT	4. 4		4. 4	
144+90	SB 105' RT	4. 4		4. 4	
145+30	SB 70' RT	4. 4		4. 4	
175+40	SB 73' LT	4. 4		4. 4	
175+70	SB 99' LT	4. 4		4. 4	
200+60	SB 76' LT	4. 4		4. 4	
220+90	NB 38' RT	4. 4		4. 4	
222+20	NB 38' RT	4. 4		4. 4	
234+60	SB 70' LT	4. 4		4. 4	
234+90	SB 100' LT	4. 4		4. 4	
234+20	NB 97' RT	4. 4		4. 4	
234+50	NB 72' RT	4. 4		4. 4	
275+10	NB 78' RT	4. 4		4. 4	
275+50	NB 83' RT	4. 4		4. 4	
274+30	SB 85' LT	4. 4		4. 4	
274+70	SB 79' LT	4. 4		4. 4	
308+40	NB 106' RT	4. 4		4. 4	
309+40	NB 40' RT	4. 4		4. 4	
308+60	SB 38' LT	4. 4		4. 4	
309+60	SB 103' LT	4. 4		4. 4	
339+40	SB 40' LT	4. 4		4. 4	
340+80	SB 40' LT	4. 4		4. 4	
339+20	NB 100' RT	4. 4		4. 4	
340+10	NB 40' RT	4. 4		4. 4	
374+10	NB 42' RT	4. 4		4. 4	
375+90	NB 41' RT	4. 4		4. 4	
373+60	SB 102' LT	4. 4		4. 4	
375+00	SB 42' LT	4. 4		4. 4	
429+40	NB 76' RT	4. 4		4. 4	
429+90	NB 105' RT	4. 4		4. 4	
428+50	SB 103' LT	4. 4		4. 4	
429+10	SB 75' LT	4. 4		4. 4	
463+20	NB 98' RT	4. 4		4. 4	
463+70	NB 92' RT	4. 4		4. 4	
463+60	SB 80' LT	4. 4		4. 4	
464+50	SB 36' LT	4. 4		4. 4	
STAGE 2 TOTAL		163		163	
TOTAL		194		194	

*ADDITIONAL QUANTITIES LISTED ELSEWHERE IN PLAN

RESTORATION ITEMS

		SALVAGED TOPSOIL		FERTILIZER		SEEDING MIXTURE		SEEDING TEMPORARY	
		625. 0500		629. 0210		630. 0130		630. 0200	
STATION	TO	STATION	LOCATION	SY	CWT	LB		LB	
110+02	SB -	110+16	SB USH 41 LT	36	0. 02	1		1	
117+10	SB -	117+35	SB USH 41 LT	44	0. 03	1		1	
136+57	SB -	136+95	SB USH 41 LT	189	0. 12	3		2	
258+93	SB -	259+08	SB USH 41 LT	41	0. 03	1		1	
315+64	SB -	316+67	SB USH 41 LT	90	0. 06	2		1	
316+00	SB -	316+23	SB USH 41 RT	58	0. 04	1		1	
UNDI STRIBUTED				115	0. 07	2		1	
TOTAL				573	0. 37	11		6	

SILT FENCE

		SILT FENCE		SILT FENCE MAINTENANCE	
		628. 1504		628. 1520	
STATION	TO	STATION	LOCATION	LF	LF
205+75	SB -	212+00	SB USH 41 LT	630	630
258+75	SB -	259+25	SB USH 41 LT	59	59
315+60	SB -	316+70	SB USH 41 LT	110	110
316+00	SB -	316+25	SB USH 41 RT	73	73
392+00	NB -	394+25	NB USH 41 RT	251	251
392+50	NB -	394+75	NB USH 41 LT	249	249
448+00	NB -	449+00	NB USH 41 RT	91	91
TOTAL				1463	1463

3

3

ASPHALT ITEMS									
STATION TO STATION		LOCATION	TACK COAT 455. 0605 GAL	HMA PAVEMENT 4 MT 58-28 S 460. 6224 TON	HMA PAVEMENT 4 LT 58-28 S 460. 5224 TON	REHEATING HMA LONGITUDINAL JOINTS 460. 4110. S LF	ASPHALTIC SURFACE 465. 0105 TON	ASPHALTIC SURFACE PATCHING 465. 0110 TON	REMARKS
STAGE 1A									
316+00 SB - 316+23 SB		SOUTHBOUND LANES/SHOULDERS	5	36	---	---	---	---	FOR PIPE REPLACEMENT
STAGE 1B									
105+30 SB - 359+24 SB		SOUTHBOUND LANES	2539	5150	---	---	---	---	
126+16 SB - 342+69 SB		SOUTHBOUND INTERSECTION CROSSOVERS	438	876	---	---	---	---	
359+24 SB - 523+70 SB		SHOULDERS	329	---	1196	---	---	---	
128+00 NB - 379+47 NB		SHOULDERS	503	---	1777	---	---	---	
379+47 NB - 396+47 NB		NORTHBOUND LANES	175	353					
397+80 NB - 523+70 NB		NORTHBOUND LANES	1270	2566	---	---	---	---	
402+71 NB - 503+91 NB		NORTHBOUND MEDIAN CROSSOVERS	207	---	---	---	188	---	
371+46 NB - 466+66 NB		NORTHBOUND INTERSECTION CROSSOVERS	207	413	---	---	---	---	
PROJECT		USH 41	---	---	---	---	---	20	UNDISTRIBUTED
STAGE 1B TOTALS			5668	9358	2973	0	188	20	
STAGE 2									
128+00 NB - 379+47 NB		SHOULDERS	1006	---	3831	---	---	---	
105+30 SB - 359+24 SB		SOUTHBOUND LANES & SHOULDER	3392	4075	2709	25395	---	---	
359+24 SB - 523+70 SB		SHOULDERS	658	---	2500	---	---	---	
128+65 NB - 341+22 NB		SOUTHBOUND SIDE ROADS	424	847	---	---	---	---	
379+47 NB - 396+47 NB		NORTHBOUND LANES & SHOULDER	232	301	163				
397+80 NB - 523+70 NB		NORTHBOUND LANES & SHOULDER	1686	2189	1183	14296	---	---	
428+29 NB - 464+51 NB		NORTHBOUND SIDE ROADS	276	551	---	---	---	---	
158+59 SB - 171+97 SB		SOUTHBOUND, OUTSIDE SHOULDER	71	---	143	---	---	---	TO FIX SUPERELEVATION
235+36 SB - 268+75 SB		SOUTHBOUND, OUTSIDE SHOULDER	178	---	356	---	---	---	TO FIX SUPERELEVATION
PROJECT		USH 41	---	---	---	---	---	20	UNDISTRIBUTED
STAGE 2 TOTALS			7923	7963	10885	39691	0	20	
TOTAL			13, 596	17357	13858	39691	188	40	

CULVERT PIPE ITEMS													
STATION	LOCATION	CONCRETE REINFORCED		CONCRETE		APRON ENDWALLS		CULVERT PIPE		CULVERT PIPE		CULVERT PIPE	
		CONCRETE MASONRY ENDWALL 504. 0900 CY	CLASS III 24-INCH 522. 0124 LF	FOR CULVERT PIPE 24-INCH 520. 1024 EACH	CULVERT PIPE SALVAGED 24-INCH 524. 0124 LF	CULVERT PIPE SALVAGED 30-INCH 524. 0130 LF	CULVERT PIPE SALVAGED 36-INCH 524. 0136 LF	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 24-INCH 524. 0624 EACH	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 30-INCH 524. 0630 EACH	APRON ENDWALLS FOR CULVERT PIPE SALVAGED 36-INCH 524. 0636 EACH	MARKERS CULVERT END 633. 5200 EACH	* JOINT TIES	REMARKS
110+08 SB	USH 41 LT	---	---	1	10	---	---	---	---	---	1	4	TIE AEW & FIRST PIPE SECTION
117+17 SB	USH 41 LT	---	---	---	10	---	---	1	---	---	1	4	TIE AEW & FIRST PIPE SECTION
136+63 SB	USH 41 LT	---	---	---	---	18	---	---	1	---	1	6	TIE AEW & FIRST TWO PIPE SECTIONS
258+99 SB	USH 41 LT	---	---	---	---	---	2	---	---	1	1	2	TIE AEW
316+11 SB	USH 41	---	160	---	---	---	---	---	---	---	---	---	SEE CONSTRUCTION DETAIL
316+11 SB	USH 41 LT	2	---	---	---	---	---	---	---	---	2	---	
TOTAL		2	160	1	20	18	2	1	1	1	6	16	
* NON-BID ITEM (FOR INFORMATION ONLY)													

ASPHALTIC SHOULDER RUMBLE STRIP

					465. 0400	
STATION TO		STATION		LOCATION		LF
<u>STAGE 2</u>						
105+30	SB	-	128+15	SB	USH 41 LT	2285
130+92	SB	-	174+13	SB	USH 41 LT	4334
176+78	SB	-	199+31	SB	USH 41 LT	2252
201+99	SB	-	220+11	SB	USH 41 LT	1812
225+03	SB	-	233+32	SB	USH 41 LT	830
236+30	SB	-	273+06	SB	USH 41 LT	3666
275+93	SB	-	307+84	SB	USH 41 LT	3191
310+60	SB	-	338+48	SB	USH 41 LT	2789
341+22	SB	-	359+24	SB	USH 41 LT	1802
379+47	NB	-	395+20	NB	USH 41 RT	1573
398+75	NB	-	428+29	NB	USH 41 RT	2954
431+10	NB	-	462+42	NB	USH 41 RT	3134
465+01	NB	-	523+70	NB	USH 41 RT	5873
STAGE 2 TOTAL						36, 495

CONCRETE SHOULDER RUMBLE STRIP

					416. 1110
STATION	TO	STATION	LOCATION		LF
<u>STAGE 2</u>					
359+24	SB	-	372+45	SB USH 41 LT	1321
376+45	SB	-	394+82	SB USH 41 LT	1837
398+16	SB	-	427+30	SB USH 41 LT	2914
430+20	SB	-	462+25	SB USH 41 LT	3205
465+15	SB	-	523+70	SB USH 41 LT	5855
109+51	NB	-	113+00	NB USH 41 RT	349
114+77	NB	-	129+54	NB USH 41 RT	1477
129+98	NB	-	143+75	NB USH 41 RT	1377
146+55	NB	-	167+20	NB USH 41 RT	2065
167+89	NB	-	171+58	NB USH 41 RT	369
171+74	NB	-	174+94	NB USH 41 RT	320
175+52	NB	-	184+43	NB USH 41 RT	891
184+99	NB	-	200+22	NB USH 41 RT	1523
200+80	NB	-	207+52	NB USH 41 RT	672
208+07	NB	-	220+29	NB USH 41 RT	1222
223+07	NB	-	232+99	NB USH 41 RT	992
235+82	NB	-	262+79	NB USH 41 RT	2697
263+49	NB	-	268+78	NB USH 41 RT	529
268+65	NB	-	273+94	NB USH 41 RT	529
276+72	NB	-	307+54	NB USH 41 RT	3082
310+30	NB	-	338+32	NB USH 41 RT	2802
341+01	NB	-	373+58	NB USH 41 RT	3257
376+82	NB	-	379+47	NB USH 41 RT	265
TOTAL					39550

ASPHALTIC SHOULDER RUMBLE STRIP CONT.

STATION TO		STATION	LOCATION		465. 0400 LF
<u>STAGE 3</u>					
105+30	SB	-	128+65	SB USH 41 RT	2335
130+75	SB	-	143+68	SB USH 41 RT	1293
148+31	SB	-	173+77	SB USH 41 RT	2545
178+58	SB	-	199+16	SB USH 41 RT	2058
203+76	SB	-	220+34	SB USH 41 RT	1658
224+93	SB	-	233+07	SB USH 41 RT	814
237+63	SB	-	273+34	SB USH 41 RT	3572
277+95	SB	-	307+50	SB USH 41 RT	2955
312+14	SB	-	338+21	SB USH 41 RT	2608
342+69	SB	-	359+24	SB USH 41 RT	1655
359+24	SB	-	372+66	SB USH 41 RT	1342
376+05	SB	-	394+96	SB USH 41 RT	1891
398+29	SB	-	402+22	SB USH 41 RT	393
405+41	SB	-	427+61	SB USH 41 RT	2220
432+38	SB	-	462+18	SB USH 41 RT	2980
466+87	SB	-	474+41	SB USH 41 RT	754
477+61	SB	-	501+21	SB USH 41 RT	2360
504+41	SB	-	523+70	SB USH 41 RT	1929
109+51	NB	-	113+00	NB USH 41 LT	349
114+77	NB	-	126+11	NB USH 41 LT	1134
130+81	NB	-	142+20	NB USH 41 LT	1139
146+84	NB	-	172+31	NB USH 41 LT	2547
176+77	NB	-	197+30	NB USH 41 LT	2053
202+16	NB	-	218+76	NB USH 41 LT	1660
223+34	NB	-	231+40	NB USH 41 LT	806
236+06	NB	-	268+78	NB USH 41 LT	3272
268+65	NB	-	271+94	NB USH 41 LT	329
276+37	NB	-	306+01	NB USH 41 LT	2964
310+64	NB	-	336+71	NB USH 41 LT	2607
341+34	NB	-	371+46	NB USH 41 LT	3012
376+46	NB	-	379+47	NB USH 41 LT	301
379+47	NB	-	395+20	NB USH 41 LT	1573
398+75	NB	-	402+71	NB USH 41 LT	396
405+41	NB	-	426+00	NB USH 41 LT	2059
430+77	NB	-	460+84	NB USH 41 LT	3007
465+25	NB	-	474+91	NB USH 41 LT	969
477+61	NB	-	501+71	NB USH 41 LT	2410
504+41	NB	-	523+70	NB USH 41 LT	1929
STAGE 3 TOTAL					69, 878
TOTAL					106, 373

MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT)

LOCATION	618. 0100 EACH
PROJECT	1
TOTAL	1

MOBILIZATIONS EROSION CONTROL

LOCATION	MOBILIZATION EROSION CONTROL 628. 1905 EACH	MOBILIZATION EMERGENCY EROSION 628. 1910 EACH
PROJECT	2	2
TOTAL	2	2

EROSION MAT CLASS I TYPE B

STATION	TO	STATION	LOCATION	628. 2004 SY
110+02 SB	-	110+16 SB	USH 41 LT	36
117+10 SB	-	117+35 SB	USH 41 LT	44
136+57 SB	-	136+95 SB	USH 41 LT	189
205+99 SB	-	211+49 SB	USH 41 LT	939
258+93 SB	-	259+08 SB	USH 41 LT	41
315+64 SB	-	316+67 SB	USH 41 LT	90
316+03 SB	-	316+25 SB	USH 41 RT	58
392+33 NB	-	394+03 NB	USH 41 RT	291
392+85 NB	-	394+55 NB	USH 41 LT	112
446+75 NB	-	448+45 NB	USH 41 RT	358
UNDI STRI BUTED				540
TOTAL				2698

CULVERT PIPE CHECKS AND ROCK BAGS

STATION	TO	STATION	LOCATION	CULVERT PIPE CHECKS 628. 7555 EACH	ROCK BAGS 628. 7570 EACH	REMARKS
110+09 SB			USH 41 LT	4	---	
117+18 SB			USH 41 LT	4	---	
136+78 SB			USH 41 LT	5	---	
206+00 SB	-	212+00 SB	USH 41 LT	---	60	SILT FENCE RELIEF
259+00 SB			USH 41 LT	---	20	SILT FENCE RELIEF
316+11 SB			USH 41 LT	9	40	SILT FENCE RELIEF
393+75 NB	-	394+75 NB	USH 41 RT<	---	40	SILT FENCE RELIEF
448+00 NB	-	449+00 NB	USH 41 RT<	---	20	SILT FENCE RELIEF
TOTAL				22	180	

GUARDRAIL ITEMS

STATION	TO	STATION	LOCATION	MGS GUARDRAIL 3 614. 2300 LF	MGS GUARDRAIL 3 L 614. 2340 LF	MGS GUARDRAIL TERMINAL EAT 614. 2610 EACH	MGS GUARDRAIL TERMINAL TYPE 2 614. 2620 EACH
206+38 SB	-	206+76 SB	USH 41 LT	37. 5	---	---	1
206+76 SB	-	207+89 SB	USH 41 LT	---	112. 5	---	---
207+89 SB	-	209+76 SB	USH 41 LT	187. 5	---	---	---
209+76 SB	-	210+29 SB	USH 41 LT	---	---	1	---
TOTAL				225. 0	112. 5	1	1

REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVING SIGNS TYPE II EACH	638. 3000 REMOVING SMALL SIGN SUPPORTS EACH
1	USH 41, N. OF USH 141/41 SPLIT	I55-56	---	---	---	---	---	---	1	1
2	"	M1-93	36" X 36"	9.00	---	---	1	---	1	1
3	"	M5-2L	30" X 30"	6.25	---	---		---	---	---
4	"	J4-1	36" X 54"	13.50	---	---	1	---	1	1
5	"	M1-93	36" X 36"	9.00	---	1	---	---	---	---
6	"	D3-2	102" X 48"	34.00	---	2	---	---	1	2
7	"	R2-1	48" X 60"	20.00	---	---	2	---	1	1
8	"	W6-53	144" X 48"	---	48.00	---	3	---	1	3
9	"	W6-53	144" X 48"	---	48.00	---	3	---	1	3
10	"	D1-1	102" X 21"	14.88	---	2	---	---	1	1
11	"	R5-1A	42" X 30"	8.75	---	---	---	---	---	---
12	"	R5-1A	36" X 36"	9.00	---	1	---	---	---	---
13	"	M1-93	---	---	---	---	---	---	1	1
14	GALUSKA RD	R6-2R	---	---	---	---	---	---	1	1
15	"	R6-1R	54" X 18"	6.75	---	---	---	---	---	---
16	"	R1-1	36" X 36"	7.46	---	---	---	---	1	1
17	"	R6-3	30" X 24"	5.00	---	---	---	---	---	---
18	"	R1-1	36" X 36"	7.46	---	1	---	---	1	1
19	USH 41, AT GALUSKA RD	R4-7	36" X 48"	12.00	---	---	1	---	1	1
20	GALUSKA RD	R6-1L	54" X 18"	6.75	---	---	---	---	---	---
21	USH 41, AT GALUSKA RD	R6-2L	---	---	---	---	---	---	1	1
22	"	R5-1	36" X 36"	9.00	---	1	---	---	1	1
23	"	R6-2L	24" X 30"	5.00	---	1	---	---	1	1
24	USH 41, N. OF GALUSKA RD	S3-51	96" X 48"	---	32.00	---	---	2	1	2
25	"	S57-51	48" X 24"	---	8.00	---	---	---	---	---
26	"	S3-51	96" X 48"	---	32.00	---	---	2	1	2
27	"	S57-51	48" X 24"	---	8.00	---	---	---	---	---
28	"	R5-1A	42" X 30"	8.75	---	1	---	---	1	1
29	"	D1-1	78" X 21"	11.38	---	2	---	---	1	1
30	"	D1-1	102" X 21"	14.88	---	2	---	---		
31	"	D10-3	12" X 48"	4.00	---	---	1	---	1	1
32	"	D10-3	12" X 48"	4.00	---	---	1	---	1	1
33	VACANT	---	---	---	---	---	---	---	---	---
34	USH 41, N. OF GALUSKA RD	D1-1	---	---	---	---	---	---	1	---
35	USH 41, S. OF FALK RD	R59-51	36" X 36"	9.00	---	1	---	---	1	1
36	"	R5-1A	42" X 30"	8.75	---	1	---	---	1	1
37	"	R5-1	36" X 36"	9.00	---	1	---	---	1	1
38	"	R4-7	36" X 48"	12.00	---	---	1	---	1	1
PAGE SUBTOTALS				265.55	176.00	17	14	4	27	33

PLAN SHEET PRODUCED
BY WisDOT - NE REGION

REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVING SIGNS TYPE II EACH	638. 3000 REMOVING SMALL SIGN SUPPORTS EACH
39	USH 41, AT FALK RD	R6- 2L	24" X 30"	5. 00	---	1	---	---	1	1
40	FALK RD	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
41	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
42	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
43	"	R6- 3A	30" X 24"	5. 00	---	---	---	---	---	---
44	"	R6- 2R	---	---	---	---	---	---	1	1
45	USH 41, N. OF FALK RD	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
46	"	R5- 1A	42" X 30"	8. 75	---	1	---	---	1	1
47	"	D1- 1	78" X 21"	11. 38	---	2	---	---	1	1
48	USH 41, S. OF ERDMAN LA	D1- 1	96" X 21"	14. 00	---	2	---	---	1	1
49	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
50	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
51	ERDMAN LANE	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
52	"	R6- 2R	---	---	---	---	---	---	1	1
53	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
54	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
55	"	R6- 3A	30" X 24"	5. 00	---	---	---	---	---	---
56	USH 41, AT ERDMAN LA	R6- 2L	24" X 30"	5. 00	---	1	---	---	1	1
57	"	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
58	USH 41, N. OF ERDMAN LA	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
59	"	R5- 1A	42" X 30"	8. 75	---	1	---	---	1	1
60	"	D1- 1	96" X 21"	14. 00	---	2	---	---	1	2
61	"	R6- 2R	24" X 30"	5. 00	---	1	---	---	1	1
62	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	1
63	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	1
64	USH 41, S. OF BROOKSIDE RD	D1- 1	108" X 21"	15. 75	---	2	---	---	1	2
65	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
66	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
67	BROOKSIDE RD	R6- 2R	---	---	---	---	---	---	1	1
68	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
69	"	R1- 1	36" X 36"	7. 46	---	---	---	---	1	1
70	"	R6- 3A	30" X 24"	5. 00	---	---	---	---	---	---
71	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
72	"	R1- 1	36" X 36"	7. 46	---	---	---	---	1	1
73	USH 41, AT BROOKSIDE RD	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
74	"	R6- 2L	24" X 30"	5. 00	---	1	---	---	1	1
75	USH 41, N. OF BROOKSIDE RD	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
76	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---

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281. 22

0. 00

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REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVING SIGNS TYPE II EACH	638. 3000 REMOVING SMALL SIGN SUPPORTS EACH
77	USH 41, N. OF BROOKSIDE RD	D1- 1	108" X 21"	15. 75	---	2	---	---	1	2
78	"	R6- 2R	24" X 30"	5. 00	---	1	---	---	1	1
79	"	J1- 1	36" X 57"	14. 25	---	---	1	---	1	1
80	USH 41, S. OF CTH J	R2- 1	48" X 60"	20. 00	---	---	2	---	1	1
81	"	D1- 2	120" X 36"	30. 00	---	2	---	---	1	2
82	"	R5- 1A	42" X 30"	8. 75	---	1	---	---	1	1
83	"	J4- 1	36" X 54"	13. 50	---	---	1	---	1	1
84	"	J13- 1	36" X 66"	16. 50	---	---	---	1	1	1
85	"	R5- 1	36" X 36"	9. 00	---	---	---	---	---	---
86	"	J13- 1	36" X 66"	16. 50	---	---	---	1	1	1
87	"	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
88	CTH J	R1- 1	36" X 36"	7. 46	---	1	---	---	1	1
89	USH 41, AT CTH J	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
90	CTH J	R6- 2L	---	---	---	---	---	---	1	1
91	"	R1- 1	36" X 36"	7. 46	---	1	---	---	1	1
92	"	R6- 2R	---	---	---	---	---	---	---	---
93	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
94	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
95	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
96	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
97	"	R6- 2R	---	---	---	---	---	---	1	1
98	"	R6- 2L	---	---	---	---	---	---	---	---
99	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
100	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
101	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
102	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
103	USH 41, N. OF CTH J	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
104	"	J13- 1	36" X 66"	16. 50	---	---	---	1	1	1
105	"	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
106	"	R5- 1	36" X 36"	9. 00	---	---	---	---	---	---
107	"	J13- 1	36" X 66"	16. 50	---	---	---	1	1	1
108	"	J4- 1	36" X 54"	13. 50	---	---	1	---	1	1
109	"	R5- 1A	42" X 30"	8. 75	---	1	---	---	1	1
110	VACANT	---	---	---	---	---	---	---	---	---
111	VACANT	---	---	---	---	---	---	---	---	---
112	"	D1- 2	120" X 36"	30. 00	---	2	---	---	1	2
113	USH 41, S. OF MOODY RD	D1- 61	72" X 30"	15. 00	---	2	---	---	1	2
114	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	1	---

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REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVING SIGNS TYPE II EACH	638. 3000 REMOVING SMALL SIGN SUPPORTS EACH
115	USH 41, S. OF MOODY RD	R2- 1	48" X 60"	20. 00	---	---	2	---	1	1
116	"	J1- 1	36" X 57"	14. 25	---	---	---	1	1	1
117	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
118	"	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
119	"	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
120	MOODY RD	R6- 2L	---	---	---	---	---	---	1	1
121	"	R6- 2R	---	---	---	---	---	---	---	---
122	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
123	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
124	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
125	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
126	USH 41, N. OF MOODY RD	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
127	"	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
128	MOODY RD	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
129	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
130	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
131	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
132	"	R6- 2R	---	---	---	---	---	---	1	1
133	"	R6- 2L	---	---	---	---	---	---	---	---
134	USH 41, N. OF MOODY RD	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
135	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
136	"	D1- 61	72" X 30"	15. 00	---	2	---	---	1	2
137	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	1
138	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	1
139	USH 41, S. OF BROOKSIDE / HUEBSCHER RD	D1- 61	126" X 48"	42. 00	---	2	---	---	1	2
140	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
141	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
142	BROOKSIDE RD / HUEBSCHER RD	R6- 2L	---	---	---	---	---	---	1	1
143	"	R6- 2R	---	---	---	---	---	---	---	---
144	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
145	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
146	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
147	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
148	"	R1- 1	36" X 36"	7. 46	---	1	---	---	1	1
149	USH 41, AT BROOKSIDE / HUEBSCHER RD	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
150	"	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
151	"	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
152	"	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
PAGE SUBTOTALS				313. 09	0. 00	14	6	4	24	26

PLAN SHEET PRODUCED
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REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVING SIGNS TYPE II EACH	638. 3000 REMOVING SMALL SIGN SUPPORTS EACH
153	USH 41, N. OF BROOKSIDE / HUEBSCHER RD	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
154	HUEBSCHER RD	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
155	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
156	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
157	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
158	"	R6- 2R	---	---	---	---	---	---	1	1
159	"	R6- 2L	---	---	---	---	---	---	---	---
160	USH 41, N. OF BROOKSIDE / HUEBSCHER RD	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
161	"	D1- 61	126" X 48"	42. 00	---	2	---	---	2	1
162	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	1
163	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	1
164	USH 41, S. OF FROELICK RD	D1- 61	84" X 30"	17. 50	---	2	---	---	1	2
165	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
166	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
167	"	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
168	FROELICK RD	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
169	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
170	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
171	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
172	"	R6- 2R	---	---	---	---	---	---	1	1
173	"	R6- 2L	---	---	---	---	---	---		
174	USH 41, AT FROELICK RD	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
175	"	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
176	FROELICK RD	R6- 2L	---	---	---	---	---	---	1	1
177	"	R6- 2R	---	---	---	---	---	---	---	---
178	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
179	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
180	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
181	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
182	USH 41, N. OF FROELICK RD	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
183	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
184	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
185	"	D1- 61	84" X 30"	17. 50	---	2	---	---	1	2
186	USH 41, S. OF BELL BRIDGE RD	D1- 61	126" X 30"	26. 25	---	2	---	---	1	2
187	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
188	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
189	USH 41, AT BELL BRIDGE RD	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
PAGE SUBTOTALS				314. 13	0. 00	16	3	3	22	24

PLAN SHEET PRODUCED
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REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVING SIGNS TYPE II EACH	638. 3000 REMOVING SMALL SIGN SUPPORTS EACH
190	USH 41, AT BELL BRIDGE RD	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
191	BELL BRIDGE RD	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
192	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
193	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
194	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
195	"	R6- 2R	---	---	---	---	---	---	1	1
196	"	R6- 2L	---	---	---	---	---	---	---	---
197	"	R6- 2L	---	---	---	---	---	---	1	1
198	"	R6- 2R	---	---	---	---	---	---	---	---
199	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
200	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
201	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
202	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
203	"	R1- 1	36" X 36"	7. 46	---	1	---	---	1	1
204	USH 41, AT BELL BRIDGE RD	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
205	"	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
206	USH 41, N. OF BELL BRIDGE RD	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
207	"	R5- 1A	42" X 30"	8. 75	---	---	---	---		
208	"	D1- 61	126" X 30"	26. 25	---	2	---	---	1	2
209	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	
210	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	
211	USH 41, S. OF BROOKSIDE CEMETARY RD	J1- 1	36" X 57"	14. 25	---	---	---	1	1	1
212	"	D1- 2	114" X 36"	28. 50	---	2	---	---	1	2
213	"	D1- 1	96" X 21"	14. 00	---	2	---	---	1	2
214	"	R2- 1	48" X 60"	20. 00	---	---	2	---	1	1
215	"	R3- 20R	36" X 54"	13. 50	---	---	---	1	1	1
216	"	R3- 20L	36" X 54"	13. 50	---	---	---	1	1	1
217	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
218	"	J4- 2	72" X 54"	27. 00	---	---	---	1	1	1
219	BROOKSIDE CEMETARY RD	J3- 1	24" X 57"	9. 50	---	---	---	1	1	1
220	"	R6- 2R	---	---	---	---	---	---	---	---
221	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
222	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
223	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
224	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
225	"	R1- 1	36" X 36"	7. 46	---	1	---	---	1	1
226	USH 41, AT BROOKSIDE CEMETARY RD	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
227	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
PAGE SUBTOTALS				344. 80	0. 00	14	4	8	24	25

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REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVING SIGNS TYPE II EACH	638. 3000 REMOVING SMALL SIGN SUPPORTS EACH
228	USH 41, AT BROOKSIDE CEMETARY RD	J13- 1	36" X 66"	16. 50	---	---	---	1	1	1
229	"	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
230	"	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
231	BROOKSIDE CEMETARY RD	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
232	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
233	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
234	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
235	"	J3- 1	24" X 57"	9. 50	---	---	---	1	1	1
236	"	R1- 1	36" X 36"	7. 46	---	1	---	---	1	1
237	USH 41, AT BROOKSIDE CEMETARY RD	R3- 1	36" X 36"	9. 00	---	1	---	---	1	1
238	"	J13- 1	---	---	---	---	---	---	1	1
239	USH 41, N. OF BROOKSIDE CEMETARY RD	R5- 1	36" X 36"	9. 00	---	---	---	---	---	---
240	"	J13- 1	36" X 66"	16. 50	---	---	1	---	1	1
241	"	R6- 2L	---	---	---	---	---	---	---	---
242	"	R3- 20R	36" X 54"	13. 50	---	---	---	1	1	1
243	"	J4- 2	72" X 54"	27. 00	---	---	---	1	1	1
244	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
245	"	R3- 20L	36" X 54"	13. 50	---	---	---	1	1	1
246	"	D1- 2	114" X 36"	28. 50	---	1	---	---	1	2
247	"	D1- 1	---	---	---	---	---	---	1	2
248	"	I55- 56	---	---	---	---	---	---	1	1
249	"	J1- 1	36" X 57"	14. 25	---	---	---	1	1	1
250	"	W11- 3	---	---	---	---	---	---	1	1
250A	"	W57- 51	---	---	---	---	---	---	---	---
251	"	R2- 1	48" X 60"	20. 00	---	---	2	---	1	1
252	USH 41, S. OF VERMEIREN RD	W5- 52L	---	---	---	---	---	---	1	1
253	"	I3- 1	78" X 36"	19. 50	---	---	2	---	1	1
254	"	W5- 52R	---	---	---	---	---	---	1	1
255	"	W5- 52R	---	---	---	---	---	---	1	1
256	"	I3- 1	78" X 36"	19. 50	---	---	2	---	1	1
257	"	W5- 52L	---	---	---	---	---	---	1	1
258	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	1
259	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	1
260	"	R5- 1A	42" X 30"	8. 75	---	1	---	---	1	1
261	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
262	"	R6- 2L	24" X 30"	5. 00	---	1	---	---	1	1
263	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
264	"	R5- 53A	---	---	---	---	---	---	1	1
265	"	R5- 1A	42" X 30"	8. 75	---	1	---	---	1	1
266	"	D1- 61	114" X 30"	23. 75	---	2	---	---	1	2
267	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
268	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
269	VERMEIREN RD	R6- 2L	---	---	---	---	---	---	1	1
270	"	R6- 2R	---	---	---	---	---	---	---	---
PAGE SUBTOTALS				369. 42	0. 00	14	8	7	35	38

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REMOVE AND REPLACE OF TYPE II SIGNS AND SUPPORTS

SIGN NO.	LOCATION	SIGN CODE	W X H	637. 2210 SIGNS TYPE II REFLECTIVE H S. F.	637. 2230 SIGNS TYPE II REFLECTIVE F S. F.	634. 0614 POSTS WOOD 4x6x14 EACH	634. 0616 POSTS WOOD 4x6x16 EACH	634. 0618 POSTS WOOD 4x6x18 EACH	638. 2602 REMOVING SIGNS TYPE II EACH	638. 3000 REMOVING SMALL SIGN SUPPORTS EACH
271	VERMEIREN RD	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
272	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
273	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
274	"	R1- 1	36" X 36"	7. 46	---	1	---	---	1	1
275	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
276	USH 41, AT VERMEIREN RD	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
277	"	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
278	VERMEIREN RD	R1- 1	36" X 36"	7. 46	---	1	---	---	1	1
279	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
280	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
281	"	R1- 1	36" X 36"	7. 46	---	---	---	1	1	1
282	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
283	"	R6- 2R	---	---	---	---	---	---	1	1
284	"	R6- 2L	---	---	---	---	---	---	---	---
285	USH 41, N. OF VERMEIREN RD	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
286	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
287	"	D1- 60	114" X 30"	23. 75	---	---	2	---	1	2
288	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	1
289	"	D10- 3	12" X 48"	4. 00	---	1	---	---	1	1
290	USH 41, S. OF KRUEGERS QUARRY RD	D1- 3	96" X 48"	32. 00	---	---	2	---	1	2
291	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
292	"	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
293	KRUEGERS QUARRY RD	R6- 2R	---	---	---	---	---	---	1	1
294	"	R6- 2L	---	---	---	---	---	---	---	---
295	"	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
296	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
297	"	R1- 1	36" X 36"	9. 00	---	---	---	1	1	1
298	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
299	USH 41, AT KRUEGERS QUARRY RD	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
300	"	R3- 1	36" X 36"	9. 00	---	---	1	---	1	1
301	"	R3- 1	36" X 36"	9. 00	---	---	1	---	1	1
302	"	R4- 7	36" X 48"	12. 00	---	---	1	---	1	1
303	OLD HWY 41 RD	R6- 1L	54" X 18"	6. 75	---	---	---	---	---	---
304	"	R6- 1R	54" X 18"	6. 75	---	---	---	---	---	---
305	"	R1- 1	36" X 36"	9. 00	---	---	---	1	1	1
306	"	R6- 3	30" X 24"	5. 00	---	---	---	---	---	---
307	"	R6- 2R	---	---	---	---	---	---	1	1
308	"	R6- 2L	---	---	---	---	---	---	---	---
309	USH 41, N. OF KRUEGERS QUARRY RD	R5- 1	36" X 36"	9. 00	---	1	---	---	1	1
310	"	J4- 1	36" X 54"	13. 50	---	---	---	1	1	1
311	"	R5- 1A	42" X 30"	8. 75	---	---	---	---	---	---
312	"	D1- 3	96" X 48"	32. 00	---	---	2	---	1	2
313	"	D1- 1	96" X 21"	14. 00	---	2	---	---	---	---
314	"	D1- 1	---	---	---	---	---	---	1	2
PAGE SUBTOTALS				364. 34	0. 00	9	12	5	25	29
PROJECT TOTALS				2628. 63	176. 00	120	56	39	209	232

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3

643- TRAFFIC CONTROL ITEMS											
STATION TO	STATION	LOCATION	TRAFFIC CONTROL DRUMS 643. 0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643. 0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643. 0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643. 0715 DAY	TRAFFIC CONTROL ARROW BOARDS 643. 0800 DAY	TRAFFIC CONTROL SIGNS 643. 0900 DAY	TRAFFIC CONTROL SIGNS PCMS 643. 1050 DAY	REMARKS	
STAGE 1A&B											
105+30 SB	-	523+70 SB	USH 41	9324	336	672	315	21	1386	7	PLACE PCMS ~STA 534+50
109+51 NB	-	523+70 NB	USH 41	9240	336	672	315	21	1617	7	PLACE PCMS ~STA 117+25
PROJECT LENGTH		MEDIANS	4800	---	---	---	---	---	---	---	
PROJECT LENGTH		SIDE ROADS	---	---	---	---	---	420	---	---	
STAGE 1(A&B) TOTAL			23364	672	1344	630	42	3423	14		
STAGE 2											
105+30 SB	-	523+70 SB	USH 41	11544	416	832	390	26	1716	---	
116+00 NB	-	523+70 NB	USH 41	11440	416	832	390	26	2002	---	
PROJECT LENGTH		SIDE ROADS	5200	---	---	---	---	520	---	---	
STAGE 2 TOTAL			28184	832	1664	780	52	3718	0		
STAGE 3											
105+30 SB	-	523+70 SB	USH 41	2220	80	160	75	5	330	---	
116+00 NB	-	523+70 NB	USH 41	2200	80	160	75	5	385	---	
PROJECT LENGTH		SIDE ROADS	---	---	---	---	---	100			
STAGE 3 TOTAL			4420	160	320	150	10	815	0		
TOTAL			55968	1664	3328	1560	104	8476	14		

3

PAVEMENT MARKING EPOXY 4-INCH

						646. 0106		
						LF		
STATION TO		STATION	LOCATION		YELLOW	WHITE		
<hr/>								
<u>STAGE 2</u>								
105+30	SB	-	359+24	SB	USH 41 LT	---	24322	
359+24	SB	-	523+70	SB	USH 41 LT	---	16013	
128+00	NB	-	379+47	NB	USH 41 RT	---	24021	
379+47	NB	-	523+70	NB	USH 41 RT	---	14149	
9+00	J	-	9+46	J	CTH J	59	28	
11+00	J	-	11+59	J	CTH J	68	12	
30+26	BC		31+27	BC	CTH SS	202	88	
						STAGE 2 TOTALS	329	78633
<hr/>								
<u>STAGE 3</u>								
105+30	SB	-	359+24	SB	USH 41 RT	24548	---	
359+24	SB	-	523+70	SB	USH 41 RT	16098	---	
109+51	NB	-	379+47	NB	USH 41 LT	25780	---	
379+47	NB	-	523+70	NB	USH 41 LT	14227	---	
						STAGE 3 TOTALS	80653	0
<hr/>								
						TOTAL	80982	78633
<hr/>								

PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE

CONTRAST TAPE 4- INCH 646. 0841. S					
STATION	TO	STATION	LOCATION	LF	REMARKS
105+30 SB	-	359+24 SB	USH 41 LT	6350. 00	GROOVE OVER EXIST PVMT MARKS
128+00 NB	-	379+47 NB	USH 41 RT	6713	GROOVE OVER EXIST PVMT MARKS
359+24 SB	-	523+70 SB	USH 41 LT	4113	GROOVE OVER EXIST PVMT MARKS
379+47 NB	-	523+70 NB	USH 41 RT	3613. 00	GROOVE OVER EXIST PVMT MARKS
TOTAL				20789	

TRAFFIC CONTROL (PROJECT)

643. 0100		
LOCATION	EACH	REMARKS
PROJECT	1	
TOTAL	1	

PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH

646. 0883. S				
STATION	TO	STATION	LOCATION	LF
STAGE 2				
374+93 SB	-	375+94 SB	USH 41 LT	100
222+69 SB	-	224+44 SB	USH 41 LT	175
372+17 NB	-	374+17 NB	USH 41 RT	200
11+04 J	-	11+14 J	CTH J	20
30+58 BC	-	30+73 BC	CTH SS	30
STAGE 2 TOTAL				525
STAGE 3				
128+09 NB	-	129+09 NB	USH 41	100
143+70 NB	-	144+70 NB	USH 41	100
173+71 NB	-	174+71 NB	USH 41	100
199+01 NB	-	200+01 NB	USH 41	100
220+19 NB	-	221+19 NB	USH 41	100
232+93 NB	-	233+93 NB	USH 41	100
273+36 NB	-	274+36 NB	USH 41	100
307+50 NB	-	308+50 NB	USH 41	100
338+21 NB	-	339+21 NB	USH 41	100
372+60 NB	-	373+60 NB	USH 41	100
427+50 NB	-	428+50 NB	USH 41	100
462+35 NB	-	463+35 NB	USH 41	100
145+82 SB	-	146+82 SB	USH 41	100
175+98 SB	-	176+98 SB	USH 41	100
201+28 SB	-	202+28 SB	USH 41	100
222+46 SB	-	223+46 SB	USH 41	100
235+19 SB	-	236+19 SB	USH 41	100
275+50 SB	-	276+50 SB	USH 41	100
309+64 SB	-	310+64 SB	USH 41	100
340+34 SB	-	341+34 SB	USH 41	100
375+45 SB	-	377+45 SB	USH 41	200
429+87 SB	-	430+87 SB	USH 41	100
464+29 SB	-	465+29 SB	USH 41	100
STAGE 3 TOTAL				2400
TOTAL				2925

PAVEMENT MARKING OUTFALL

		646. 0805. S		
STATION	LOCATION	EACH	REMARKS	
109+51 NB - 124+00 NB	USH 41 LT & RT	8	LOCATE IN FIELD	
124+00 NB	USH 41 LT & RT	2		
129+00 NB	USH 41 LT & RT	2		
133+50 NB	USH 41 LT & RT	2		
138+00 NB	USH 41 LT & RT	2		
142+00 NB	USH 41 LT & RT	2		
146+50 NB	USH 41 LT & RT	2		
154+00 NB	USH 41 LT	1		
157+50 NB	USH 41 LT	1		
156+00 NB	USH 41 RT	1		
160+00 NB	USH 41 RT	1		
163+50 NB	USH 41 RT	1		
167+00 NB	USH 41 RT	1		
170+50 NB	USH 41 RT	1		
174+50 NB	USH 41 RT	1		
176+00 NB	USH 41 LT	1		
180+00 NB	USH 41 LT & RT	2		
190+00 NB	USH 41 LT & RT	2		
195+00 NB	USH 41 LT & RT	2		
199+50 NB	USH 41 LT & RT	2		
204+00 NB	USH 41 LT & RT	2		
208+50 NB	USH 41 LT & RT	2		
212+50 NB	USH 41 LT & RT	2		
217+00 NB	USH 41 LT & RT	2		
221+00 NB	USH 41 LT & RT	2		
230+00 NB	USH 41 LT & RT	2		
233+80 NB	USH 41 RT	1		
235+00 NB	USH 41 LT	1		
238+50 NB	USH 41 LT	1		
242+00 NB	USH 41 LT	1		
245+50 NB	USH 41 LT	1		
249+00 NB	USH 41 LT	1		
252+50 NB	USH 41 LT	1		
256+00 NB	USH 41 LT	1		
259+50 NB	USH 41 LT	1		
263+00 NB	USH 41 LT	1		
266+50 NB	USH 41 LT	1		
270+00 NB	USH 41 LT	1		
270+00 NB	USH 41 RT	1		
274+00 NB	USH 41 LT & RT	2		
278+50 NB	USH 41 LT & RT	2		
287+00 NB	USH 41 LT & RT	2		
292+00 NB	USH 41 LT & RT	2		
297+00 NB	USH 41 LT & RT	2		
302+00 NB	USH 41 LT & RT	2		
307+00 NB	USH 41 LT & RT	2		
311+00 NB	USH 41 LT & RT	2		
315+00 NB	USH 41 LT & RT	2		
320+00 NB	USH 41 LT & RT	2		
329+00 NB	USH 41 LT & RT	2		
334+00 NB	USH 41 LT & RT	2		
338+50 NB	USH 41 LT & RT	2		
344+00 NB	USH 41 LT & RT	2		
349+00 NB	USH 41 LT & RT	2		
354+00 NB	USH 41 LT	1		

PAVEMENT MARKING OUTFALL, CONT.

		646. 0805. S		
STATION	LOCATION	EACH	REMARKS	
354+50 NB	USH 41 RT	1		
359+00 NB	USH 41 LT	1		
360+10 NB	USH 41 RT	1		
362+50 NB	USH 41 LT	1		
366+00 NB	USH 41 LT	1		
369+50 NB	USH 41 LT	1		
372+50 NB	USH 41 LT	1		
376+00 NB	USH 41 LT	1		
379+00 NB	USH 41 LT	1		
381+60 NB	USH 41 LT & RT	2		
362+50 SB	USH 41 LT	1		
365+00 SB	USH 41 LT	1		
369+50 SB	USH 41 LT	1		
373+00 SB	USH 41 LT	1		
376+50 SB	USH 41 LT	1		
380+00 SB	USH 41 LT	1		
384+00 SB	USH 41 LT	1		
388+00 SB	USH 41 LT & RT	2		
392+00 SB	USH 41 LT & RT	2		
395+90 SB	USH 41 LT & RT	2		
402+00 SB	USH 41 LT & RT	2		
407+00 SB	USH 41 LT & RT	2		
412+00 SB	USH 41 LT & RT	2		
417+00 SB	USH 41 LT & RT	2		
422+00 SB	USH 41 LT & RT	2		
427+00 SB	USH 41 LT & RT	2		
432+00 SB	USH 41 LT & RT	2		
437+00 SB	USH 41 LT & RT	2		
442+00 SB	USH 41 LT & RT	2		
447+00 SB	USH 41 LT & RT	2		
450+80 SB	USH 41 LT & RT	2		
456+00 SB	USH 41 LT & RT	2		
459+50 SB	USH 41 LT	1		
463+00 SB	USH 41 LT	1		
466+50 SB	USH 41 LT	1		
471+00 SB	USH 41 LT & RT	2		
476+00 SB	USH 41 LT & RT	2		
481+00 SB	USH 41 LT & RT	2		
486+00 SB	USH 41 LT & RT	2		
491+00 SB	USH 41 LT & RT	2		
496+00 SB	USH 41 LT & RT	2		
501+00 SB	USH 41 LT & RT	2		
511+00 SB	USH 41 LT & RT	2		
516+00 SB	USH 41 LT & RT	2		
521+00 SB	USH 41 LT & RT	2		
TOTAL		166		

CONSTRUCTION STAKING RESURFACING REFERENCE

STATION		TO	STATION		LOCATION	650. 8000 LF
105+30	SB	-	359+24	SB	USH 41	25394
128+00	NB	-	379+47	NB	USH 41	25147
359+24	SB	-	523+70	SB	USH 41	16446
379+47	NB	-	523+70	NB	USH 41	14426
TOTAL						81413

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (1150-60-71)

LOCATION	650. 9910 LS	REMARKS
PROJECT	1	
TOTAL	1	

CONSTRUCTION STAKING SLOPE STAKES FOR BARRIER SYSTEM GRADING SHAPING FINISHING*

STATION	TO	STATION	LOCATION	* LF
205+99	SB	-	211+49 SB	USH 41 LT 550
392+33	NB	-	394+55 NB	USH 41 RT 222
392+81	NB	-	394+55 NB	USH 41 LT 174
446+75	NB	-	448+45 NB	USH 41 RT 170
TOTAL				1116

* NON- BID ITEM FOR INFORMATION ONLY

CONSTRUCTION STAKING PIPE CULVERTS

STATION	LOCATION	650. 6000 EACH	REMARKS
316+08. 63	SB	USH 41 LT	1
316+13. 63	SB	USH 41 LT	1
TOTAL		2	

ATR WAVETRONIX DETECTOR

STATION	LOCATION	CONCRETE BASES TYPE 2	TRANSFORMER BASES BREAKAWAY 11 1/2- INCH BOLT CIRCLE	POLES TYPE 3	INSTALLING POLE MOUNTED CABINET	INSTALLING 2 SOLAR PANELS ON ONE BRACKET	INSTALLING WAVETRONIX CLICK 200 MODULE	INSTALLING WAVETRONIX DETECTOR MODULE	INSTALLING CONCRETE MAINTENANCE PLATFORM	GRADING, SHAPING, & FINISHING FOR ATR SITE
		654. 0102 EACH	657. 0255 EACH	657. 0310 EACH	SPV. 0060. 01 EACH	SPV. 0060. 02 EACH	SPV. 0060. 03 EACH	SPV. 0060. 04 EACH	SPV. 0060. 05 EACH	SPV. 0060. 06 EACH
125+00	NB	USH 41 LT	1	1	1	1	1	1	1	1
TOTAL		1	1	1	1	1	1	1	1	1

STATE WILL PROVIDE THE FOLLOWING ITEMS:

2 SOLAR PANELS AND ONE BRACKET
CCTV MOUNTED CABINET
WAVETRONIX HD- 125 UNIT & 40' CABLE
WAVETRONIX CLICK 200 SURGE ARRESTOR MODULE
WIRE AND HARDWARE NEEDED FOR INSTALLATION

SPV. 0060. 06 GRADING, SHAPING, & FINISHING FOR ATR SITE

STATION	CY	SY	CWT	LB	EACH
125+00	NB	3	15	0. 01	0. 25

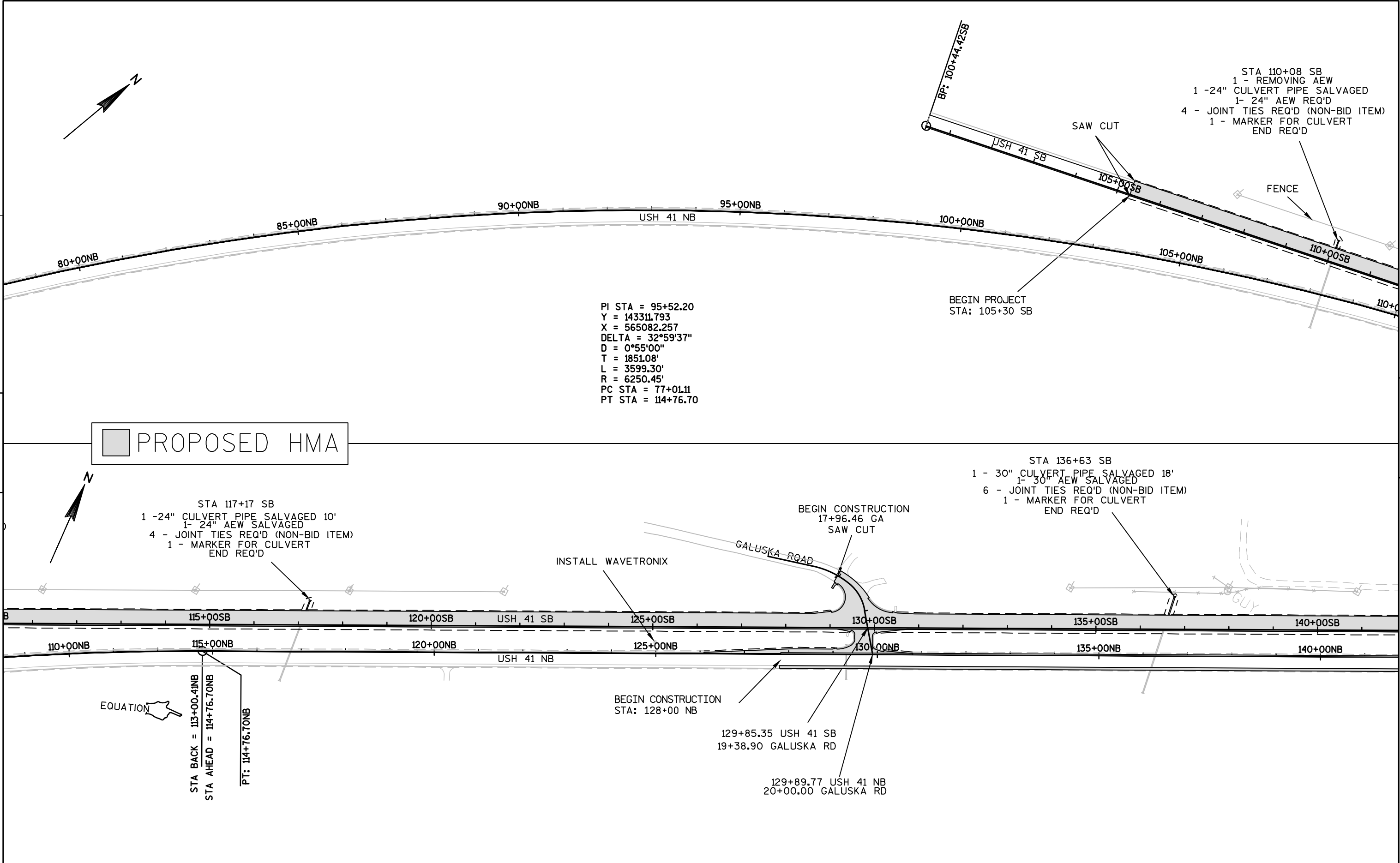
* ITEMS AND QUANTITIES FOR BID INFORMATION ONLY

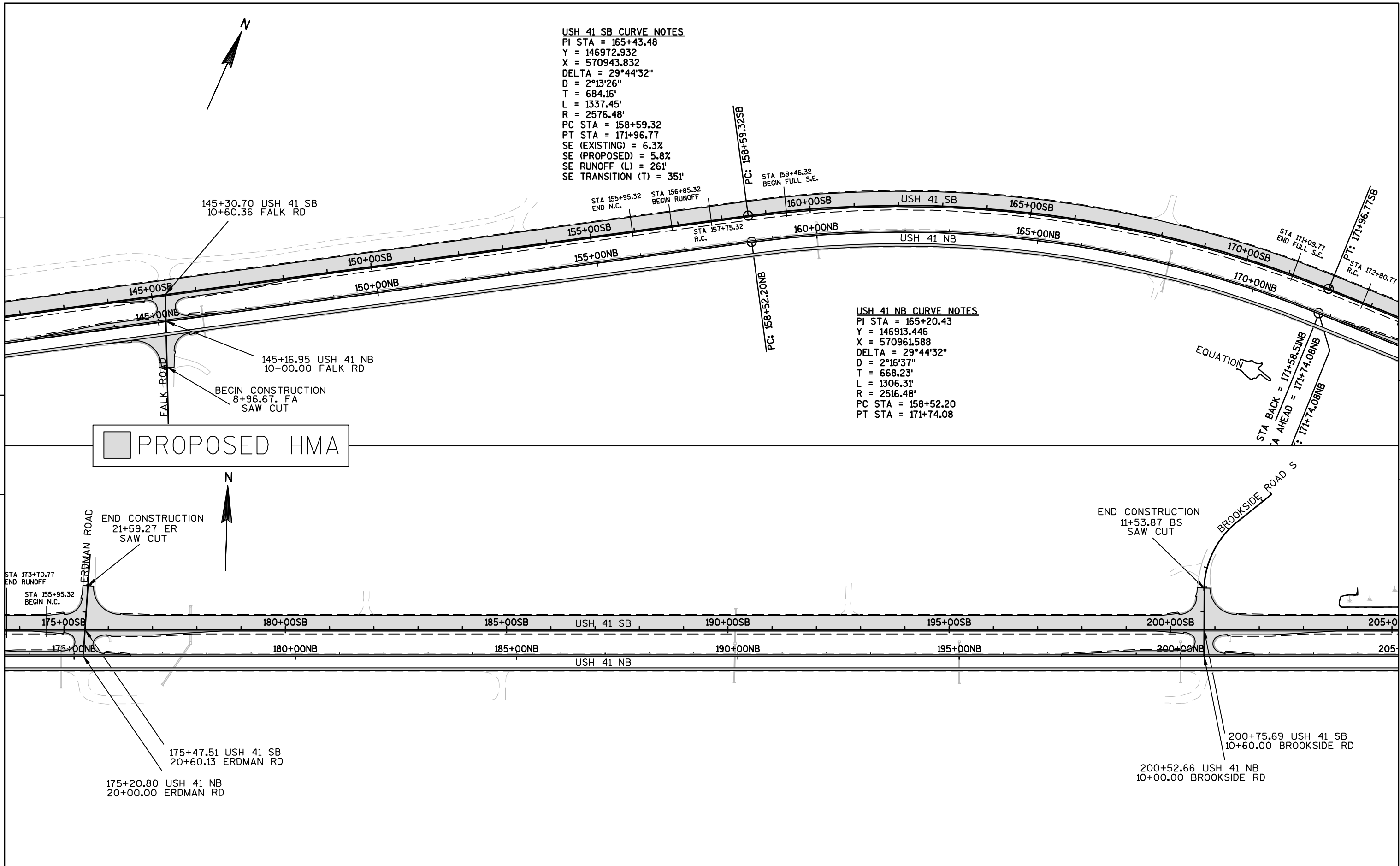
SAWING ASPHALT

		690. 0150	
STATION	LOCATION	LF	REMARKS
<u>STAGE 1A</u>			
316+00 SB	USH 41	11	PIPE REPLACEMENT
316+23 SB	USH 41	11	PIPE REPLACEMENT
<u>STAGE 1B</u>			
105+30 SB	USH 41	3	INSIDE SHOULDER USH 41 SB
109+51 NB	USH 41	3	INSIDE SHOULDER USH 41 NB
359+24 SB	USH 41 RT	3	INSIDE SHOULDER
379+47 NB	USH 41 LT	3	INSIDE SHOULDER
395+96 SB	USH 41 RT	3	INSIDE SHOULDER AT BRIDGE
397+29 SB	USH 41 RT	3	INSIDE SHOULDER AT BRIDGE
523+70 SB	USH 41 RT	3	INSIDE SHOULDER
STAGE 1(A&B) TOTAL		43	
<u>STAGE 2</u>			
105+30 SB	USH 41 LT	6	OUTSIDE SHOULDER USH 41 SB
128+00 NB	USH 41 RT	6	OUTSIDE SHOULDER USH 41 NB
359+24 SB	USH 41 LT	6	OUTSIDE SHOULDER USH 41 SB
379+47 NB	USH 41 RT	6	OUTSIDE SHOULDER USH 41 NB
395+96 SB	USH 41 LT	6	OUTSIDE SHOULDER AT BRIDGE
397+29 SB	USH 41 LT	6	OUTSIDE SHOULDER AT BRIDGE
523+70 NB	USH 41 RT	6	OUTSIDE SHOULDER
523+70 SB	USH 41 LT	6	OUTSIDE SHOULDER
17+96 GA	GALUSKA RD	28	
8+97 FA	FALK RD	29	
21+59 ER	ERDMAN RD	24	
11+54 BS	BROOKSIDE RD SOUTH	29	
9+00 J	COUNTY J	29	
11+59 J	COUNTY J	38	
29+01 MD	MOODY RD	29	
31+61 MD	MOODY RD	30	
18+38 BN	BROOKSIDE RD NORTH	38	
20+99 BN	BROOKSIDE RD NORTH	31	
28+79 FR	FROELICK RD	30	
31+76 FR	FROELICK RD	27	
28+85 BB	BELL BRIDGE RD	32	
31+66 BB	BELL BRIDGE RD	33	
27+67 BC	BROOKSIDE CEMETERY RD	27	
31+32 BC	BROOKSIDE CEMETERY RD	46	
18+71 VR	VERMEIREN RD	27	
21+87 VR	VERMEIREN RD	28	
18+30 KQ	KRUEGERS QUARRY RD	27	
STAGE 2 TOTAL		630	
TOTAL		673	

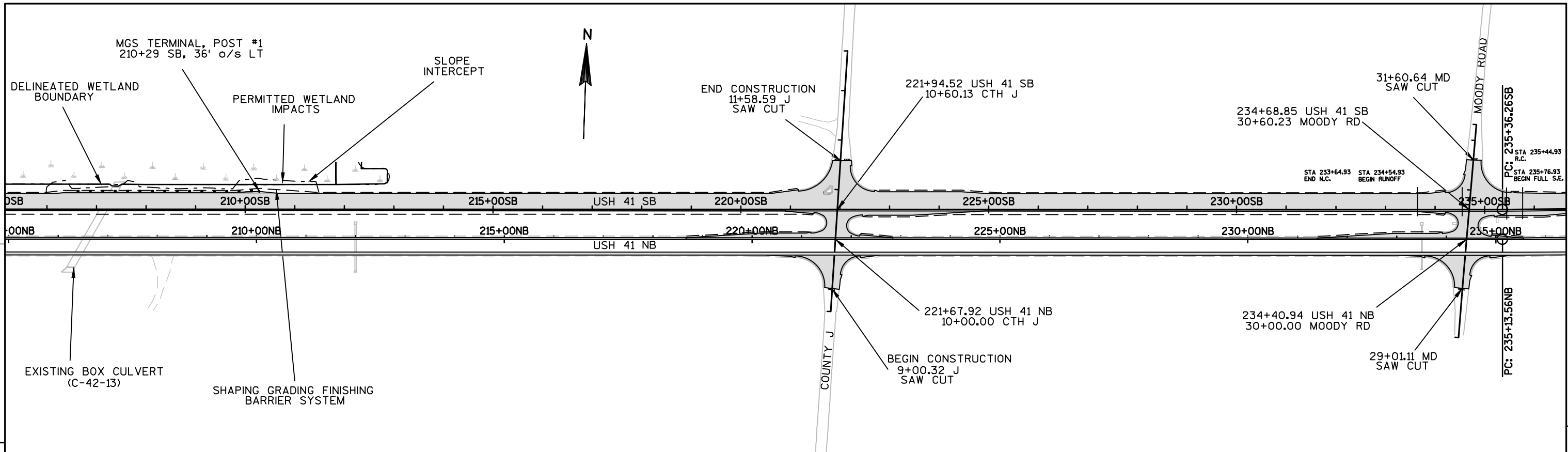
SAWING CONCRETE

		690. 0250	
STATION	LOCATION	LF	REMARKS
<u>STAGE 1A</u>			
316+00 - 316+23 SB	USH 41	23	PIPE REPLACEMENT
316+00 SB	USH 41	24	PIPE REPLACEMENT
316+23 SB	USH 41	24	PIPE REPLACEMENT
STAGE 1A TOTAL		71	





PROJECT NO:1150-60-71	HWY:USH 41	COUNTY:OCONTO	PLAN: USH 41	SHEET	E
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PROPOSED HMA

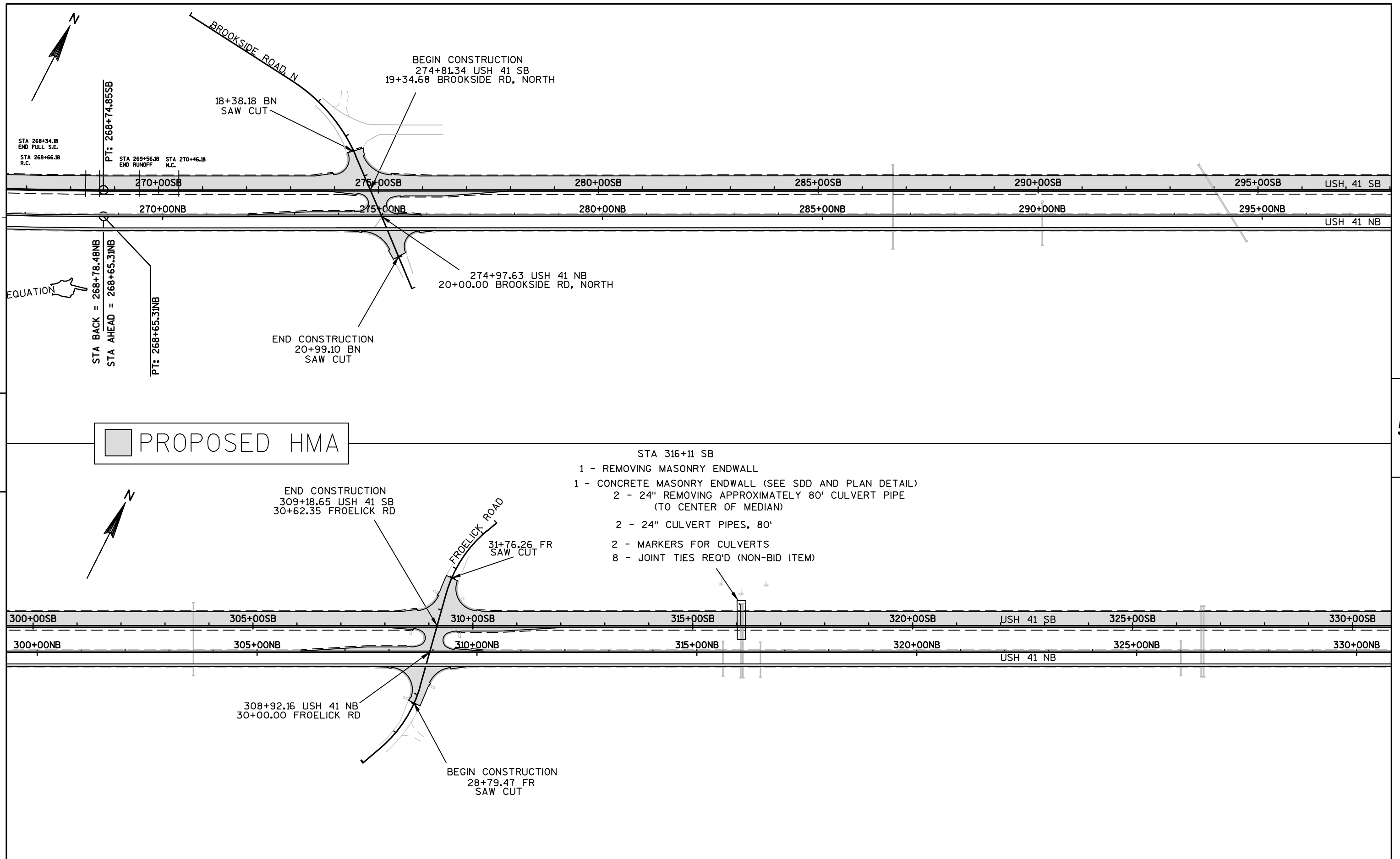
USH 41 SB CURVE NOTES

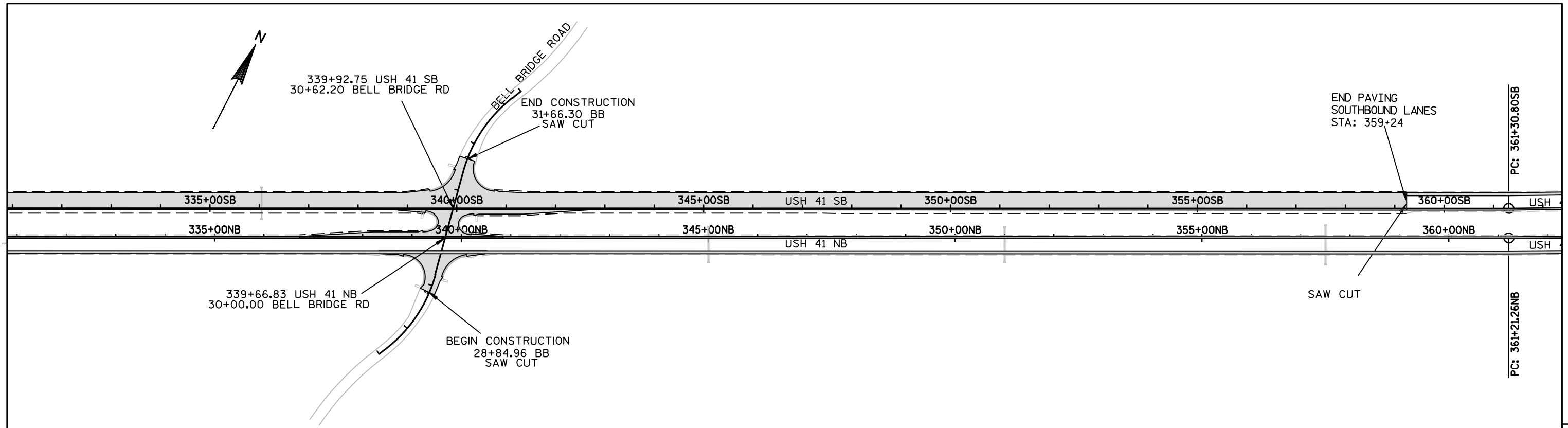
PI STA = 252+32.86
Y = 147239.105
X = 579660.009
DELTA = 25°08'17"
D = 0°45'11"
T = 1696.60'
L = 3338.59'
R = 7609.44'
PC STA = 235+36.26
PT STA = 268+74.85
SE (EXISTING) = 2.1%
SE (PROPOSED) = 2.7%
SE RUNOFF (L) = 122'
SE TRANSITION (T) = 212'

STA 258+99 SB
1 - 36" CULVERT PIPE SALVAGED
1 - 36" AEW SALVAGED
2 - JOINT TIES REQ'D (NON-BID ITEM)
1 - MARKER FOR CULVERT
END REQ'D

USH 41 NB CURVE NOTES

PI STA = 252+23.54
Y = 147179.541
X = 579675.212
DELTA = 25°08'17"
D = 0°44'49"
T = 1709.98'
L = 3364.92'
R = 7669.44'
PC STA = 235+13.56
PT STA = 268+65.31



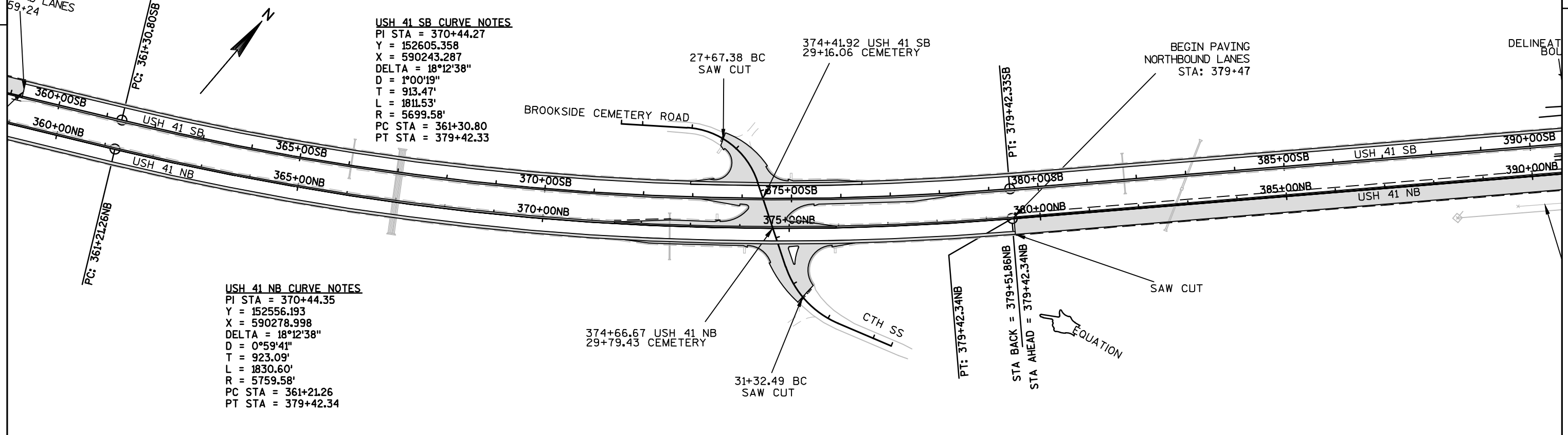


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5

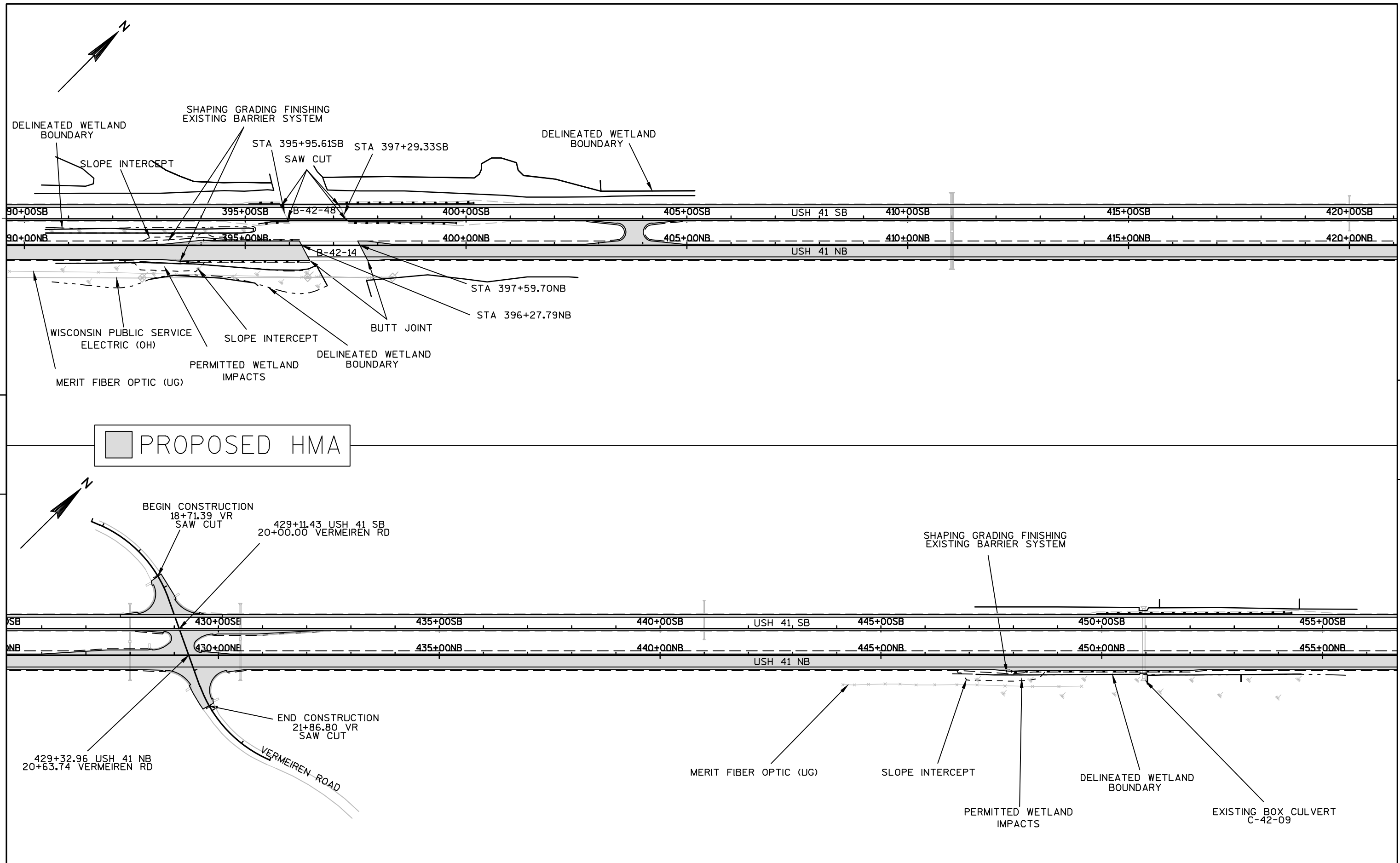
PROPOSED HMA

AVING
BOUND LANES
59+24



USH 41 SB CURVE NOTES
PI STA = 370+44.27
Y = 152605.358
X = 590243.287
DELTA = 18°12'38"
D = 1°00'19"
T = 913.47'
L = 1811.53'
R = 5699.58'
PC STA = 361+30.80
PT STA = 379+42.33

USH 41 NB CURVE NOTES
PI STA = 370+44.35
Y = 152556.193
X = 590278.998
DELTA = 18°12'38"
D = 0°59'41"
T = 923.09'
L = 1830.60'
R = 5759.58'
PC STA = 361+21.26
PT STA = 379+42.34



PROJECT NO: 1150-60-71	HWY: USH 41	COUNTY: OCONTO	PLAN: USH 41	SHEET	E
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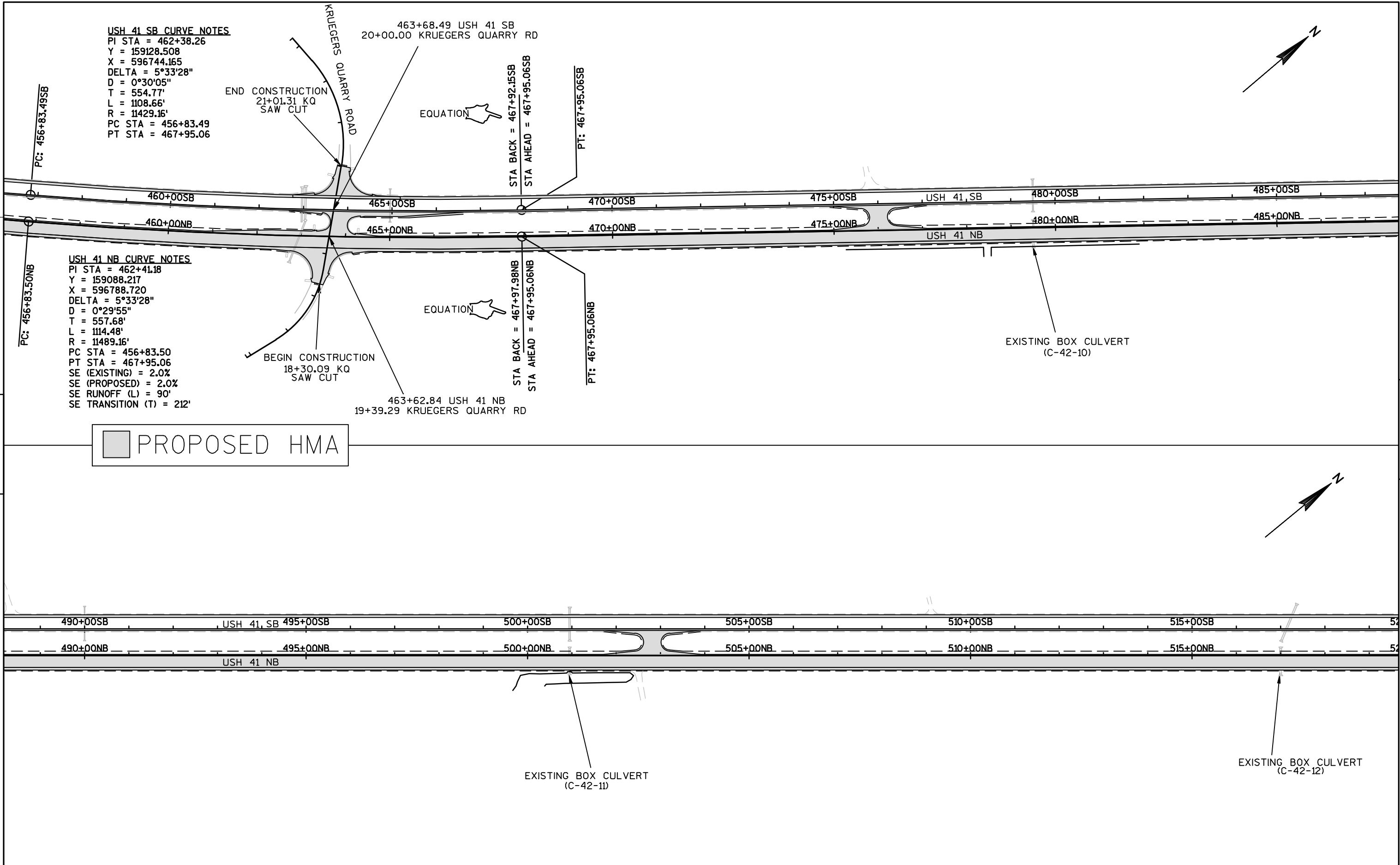
USH 41 SB CURVE NOTES
PI STA = 462+38.26
Y = 159128.508
X = 596744.165
DELTA = 5°33'28"
D = 0°30'05"
T = 554.77'
L = 1108.66'
R = 11429.16'
PC STA = 456+83.49
PT STA = 467+95.06

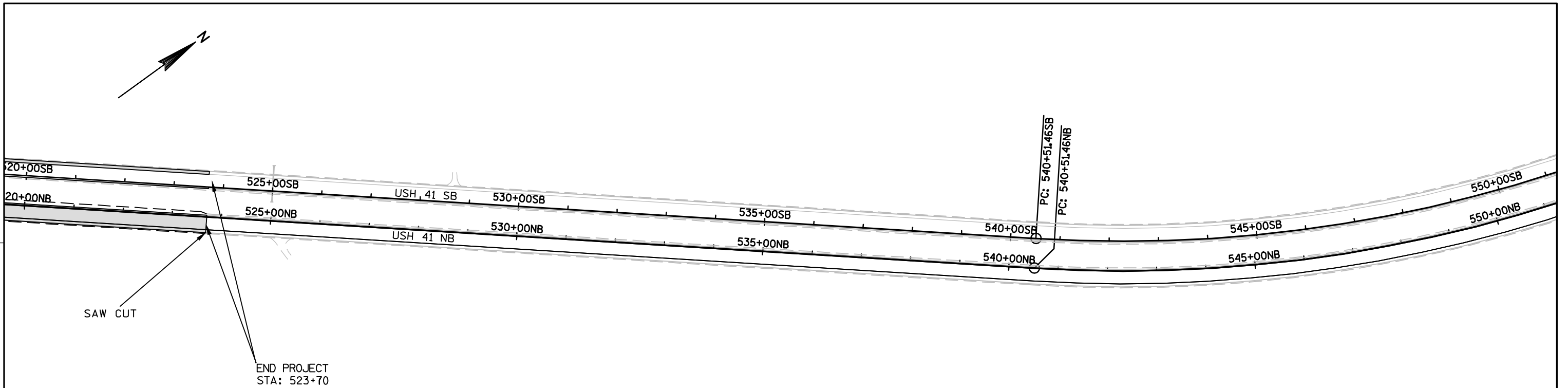
USH 41 NB CURVE NOTES
PI STA = 462+41.18
Y = 159088.217
X = 596788.720
DELTA = 5°33'28"
D = 0°29'55"
T = 557.68'
L = 1114.48'
R = 11489.16'
PC STA = 456+83.50
PT STA = 467+95.06
SE (EXISTING) = 2.0%
SE (PROPOSED) = 2.0%
SE RUNOFF (L) = 90'
SE TRANSITION (T) = 212'

PROPOSED HMA

5

5





5

PROPOSED HMA

5

Standard Detail Drawing List

08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D15-04A	EDGEDRAIN OUTLET AND OUTFALL MARKERS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
08F10-01	CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09E01-14B	POLE MOUNTINGS FOR TRAFFIC SIGNALS AND LIGHTING UNITS, TYPE 3 (HEAVY DUTY)
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
14B29-01	SAFETY EDGE
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B43-03A	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03B	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
14B43-03C	MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L)
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)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C08-16F	PAVEMENT MARKING (ISLANDS)

6



PLAN VIEW
FLUME AT CURB END



6

S.D.D. 8 D 4-5

- ① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

EXPANSION JOINT

CONCRETE CURB AND GUTTER

8'-0"

4'-0"

EDGE OF PAVEMENT

2" MIN. CURB HEIGHT

4" R

3'-0" MIN.

SURFACE DRAIN IS SYMETRICAL WHEN CURB AND GUTTER IS CONTINUED

TAPER CURB TO FLOW LINE

JOINTS

SHOULDER OR BERM HINGE POINT

W3 WIRE MESH (SEE SECTION D-D)

RIPRAP

6'-0"

OR AS REQUIRED

1'-0" ON CUT SLOPE

DITCH

PLAN VIEW

PLAN VIEW



APPROVED
9-4-08 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

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

① UNPERFORATED PIPE UNDERDRAIN AND FITTINGS FURNISHED FOR OUTFALL PIPE SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING SPECIFICATIONS:

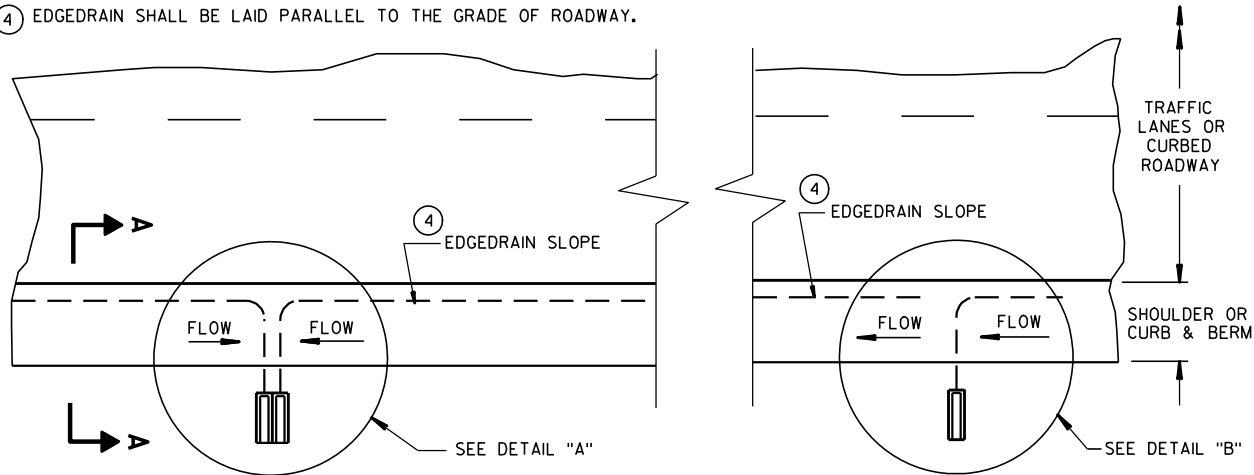
POLYVINYL CHLORIDE (PVC) PLASTIC DRAIN, WASTE, AND VENT PIPE AND FITTINGS, ASTM D 2665, SCHEDULE 40 PVC.

TYPE PSM POLYVINYL CHLORIDE (PVC) SEWER PIPE AND FITTINGS, ASTM D 3034, SDR 23.5 PVC SEWER PIPE.

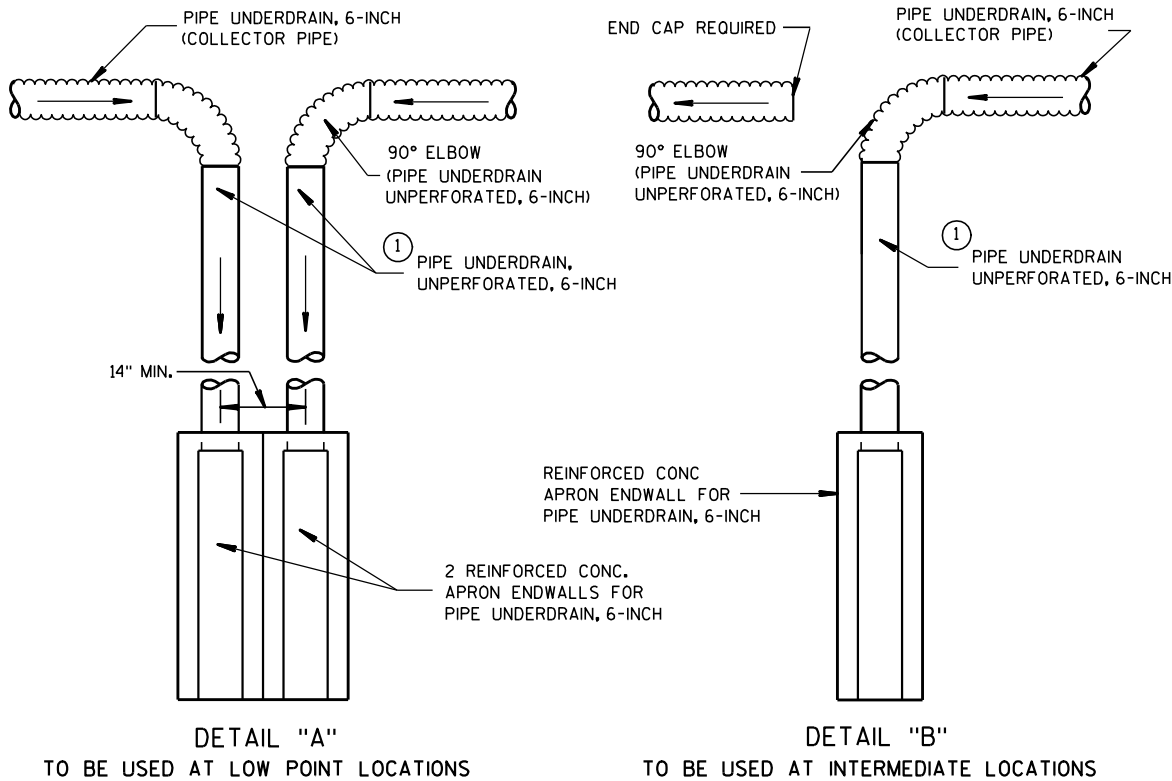
② MAXIMUM SPACING OF EDGEDRAIN OUTLETS SHALL BE 250 FEET UNLESS OTHERWISE SPECIFIED IN THE CONTRACT OR DIRECTED BY THE ENGINEER.

③ EDGEDRAIN SHALL BE CONNECTED TO INLETS REGARDLESS OF FLOW DIRECTION FOR DRAINAGE AND MAINTENANCE ACCESS.

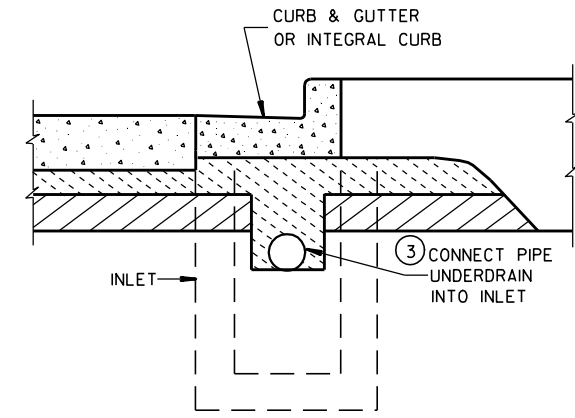
④ EDGEDRAIN SHALL BE LAID PARALLEL TO THE GRADE OF ROADWAY.



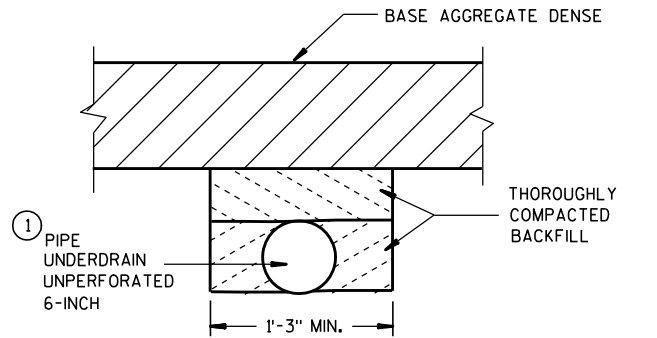
**PLAN VIEW
ROADWAY WITH SHOULDERS OR CURBS
(EDGEDRAIN OUTLETS TO ROADSIDE) ②**



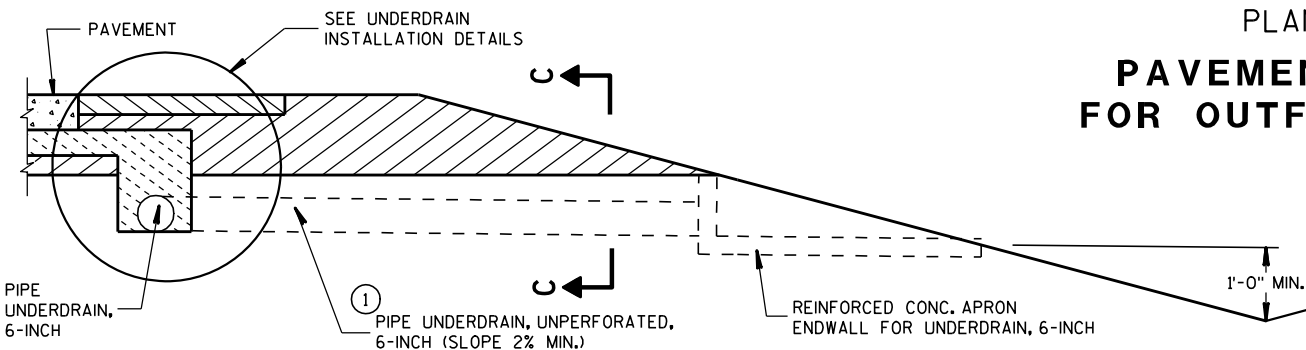
TYPICAL DRAIN OUT DETAILS



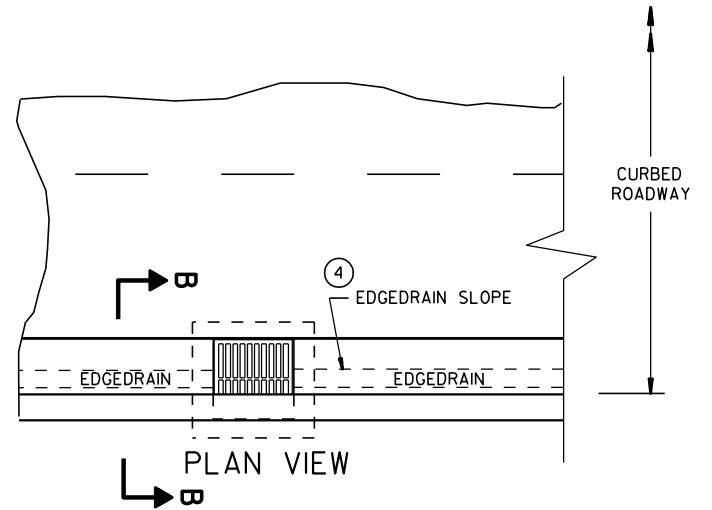
**SECTION B-B
URBAN CROSS SECTION**



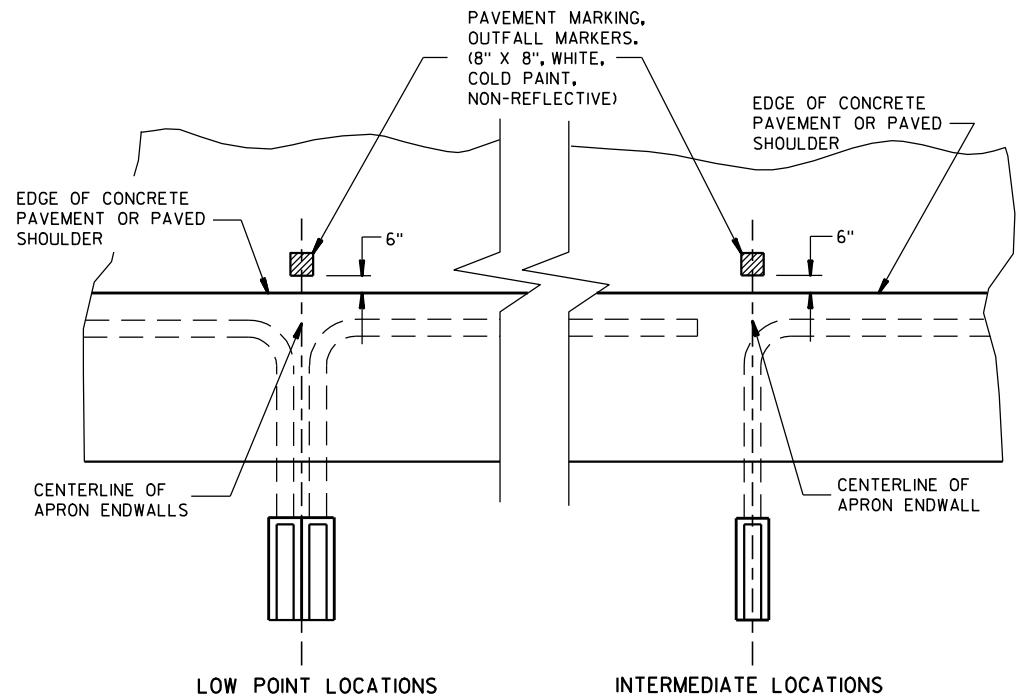
**SECTION C-C
(TRENCH FOR OUTFALL PIPE)**



**SECTION A-A
RURAL CROSS SECTION**



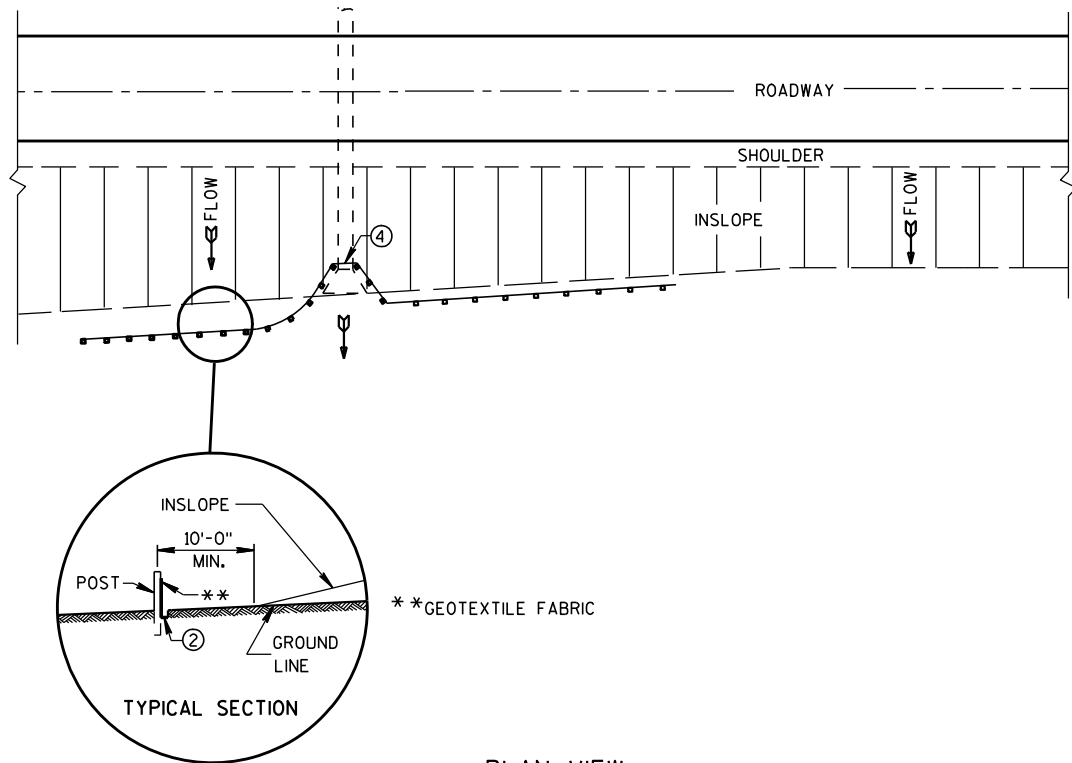
**ROADWAY WITH CURBS
(EDGEDRAIN CONNECTS INTO INLET STRUCTURE)**



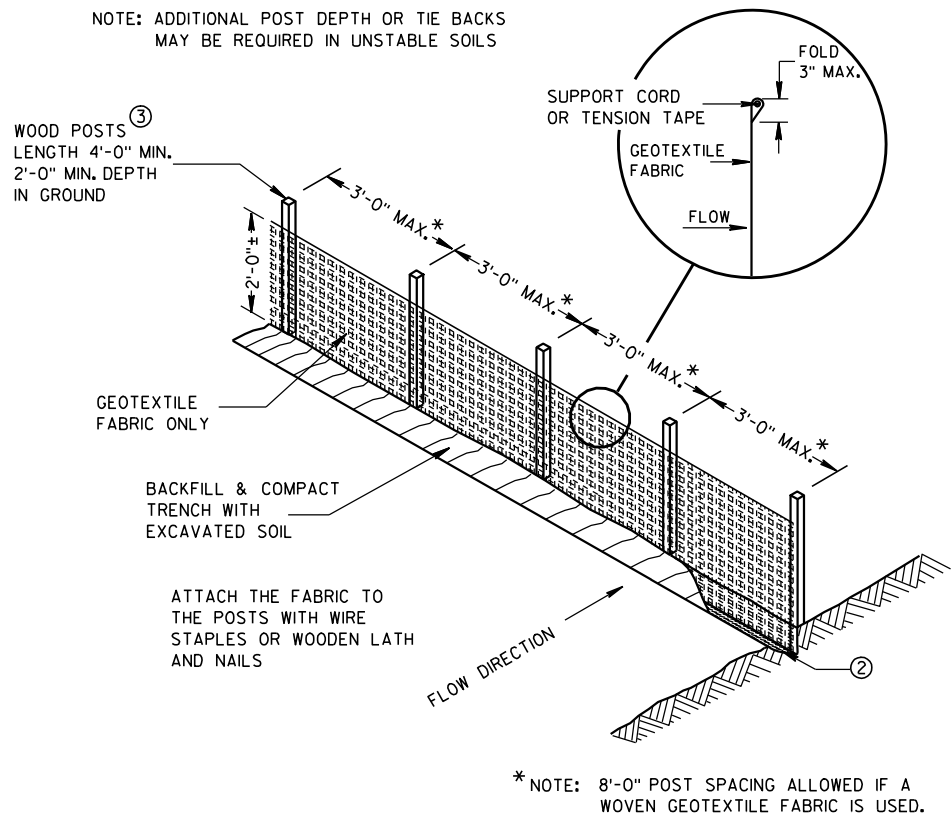
**PLAN VIEW
PAVEMENT MARKING
FOR OUTFALL MARKERS**

**EDGEDRAIN OUTLET
AND OUTFALL MARKERS**

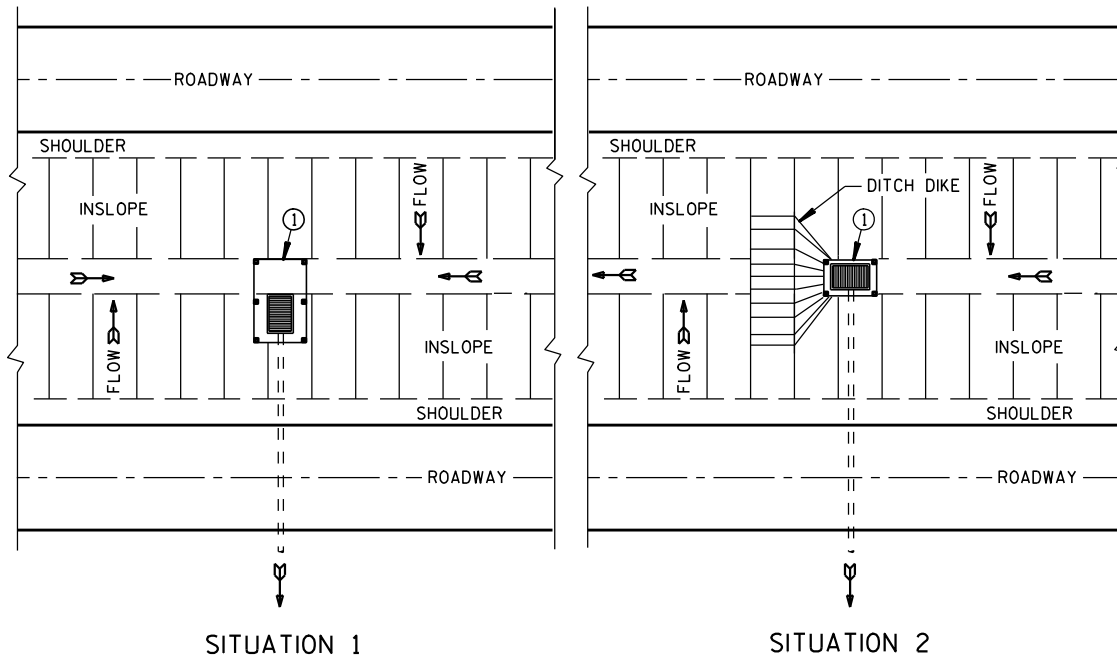
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



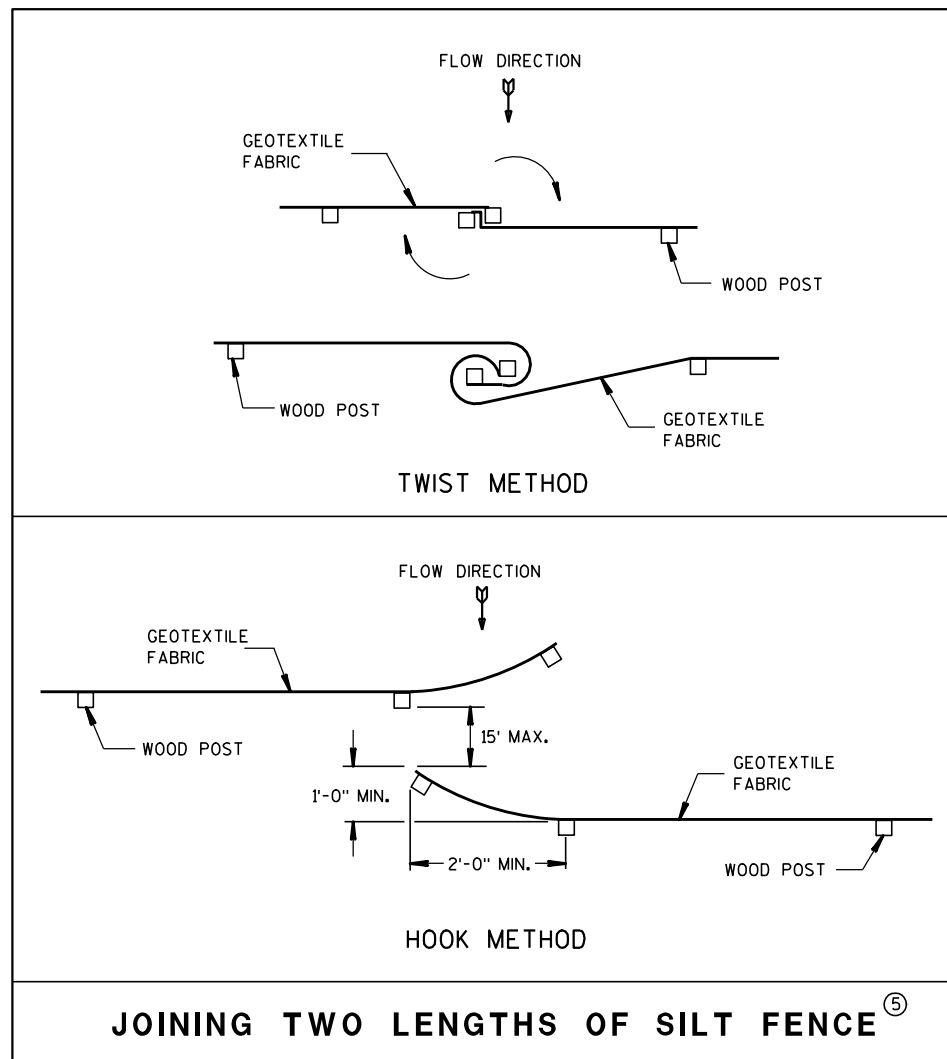
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

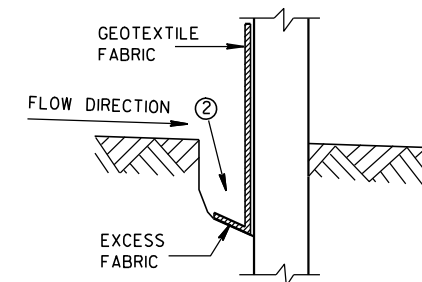


JOINING TWO LENGTHS OF SILT FENCE (5)

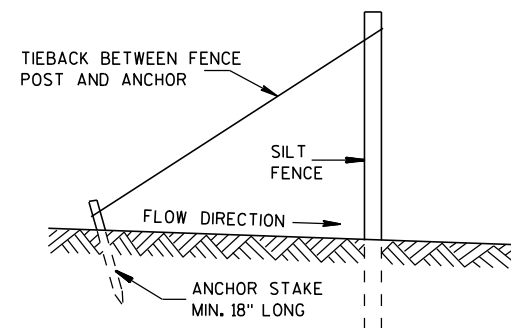
GENERAL NOTES

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

- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



TRENCH DETAIL

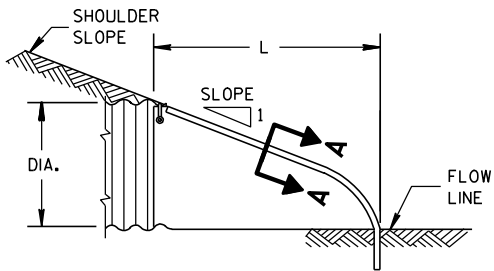
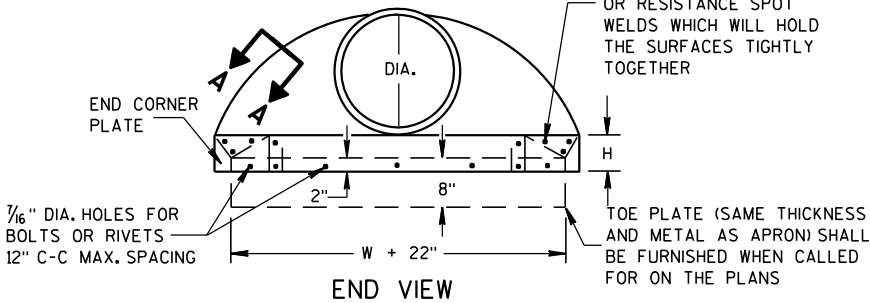
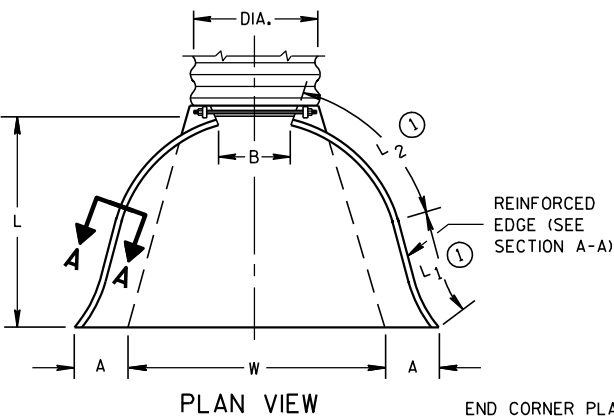


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

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

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

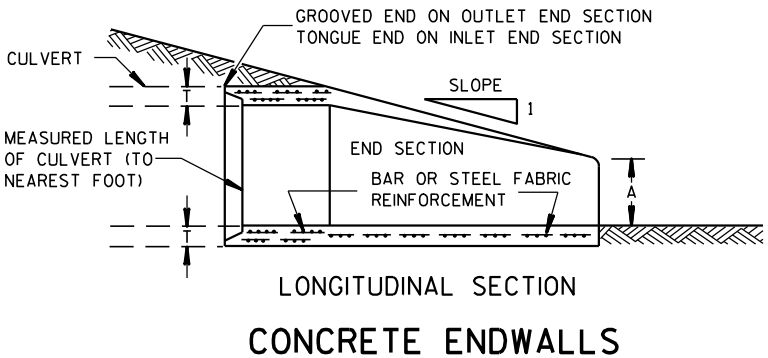
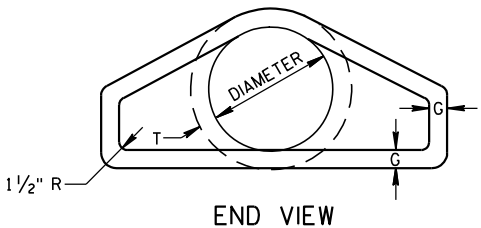
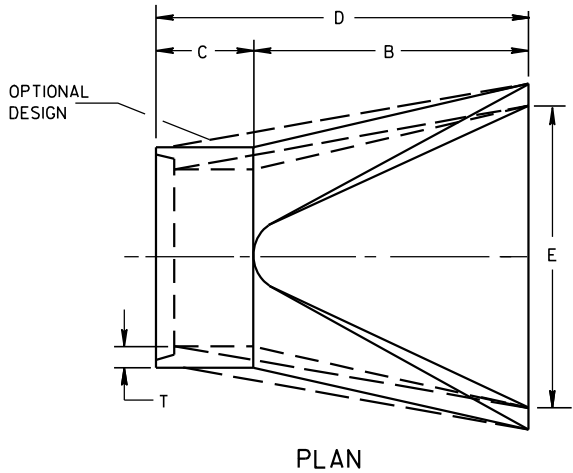
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



METAL ENDWALLS

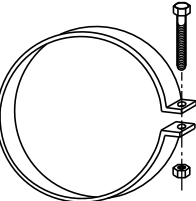
REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ⁷ / ₈	72 ⁷ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43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

* MINIMUM
** MAXIMUM

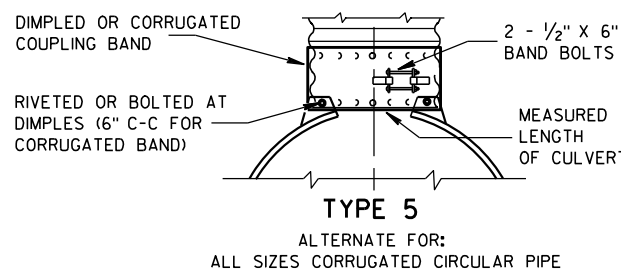
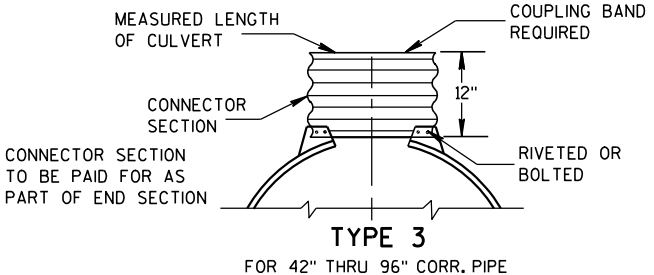
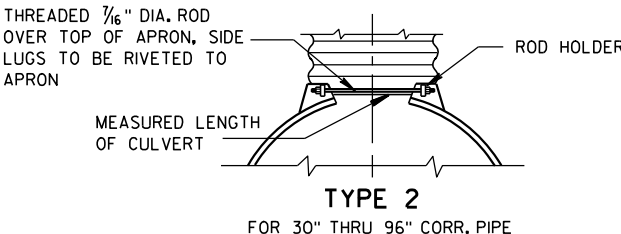
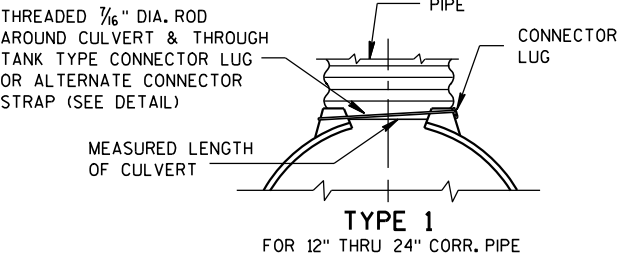


CONCRETE ENDWALLS

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



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



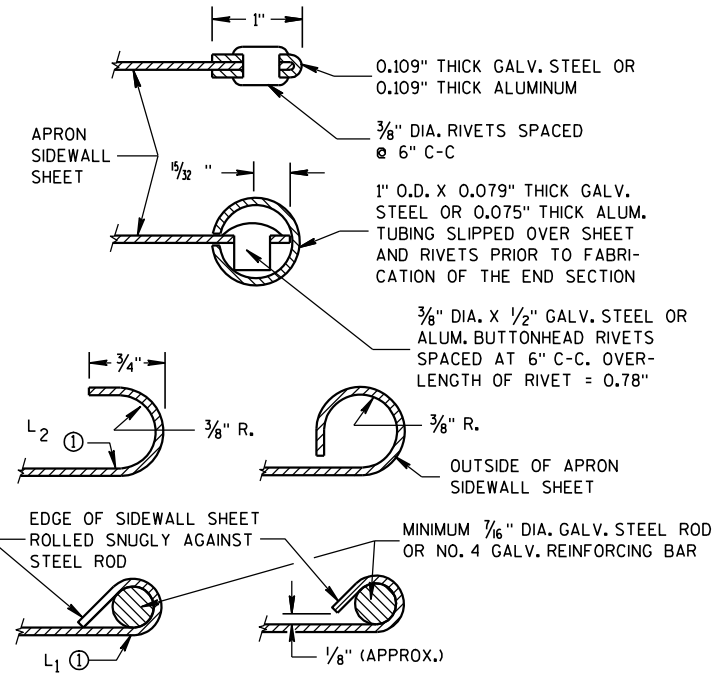
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

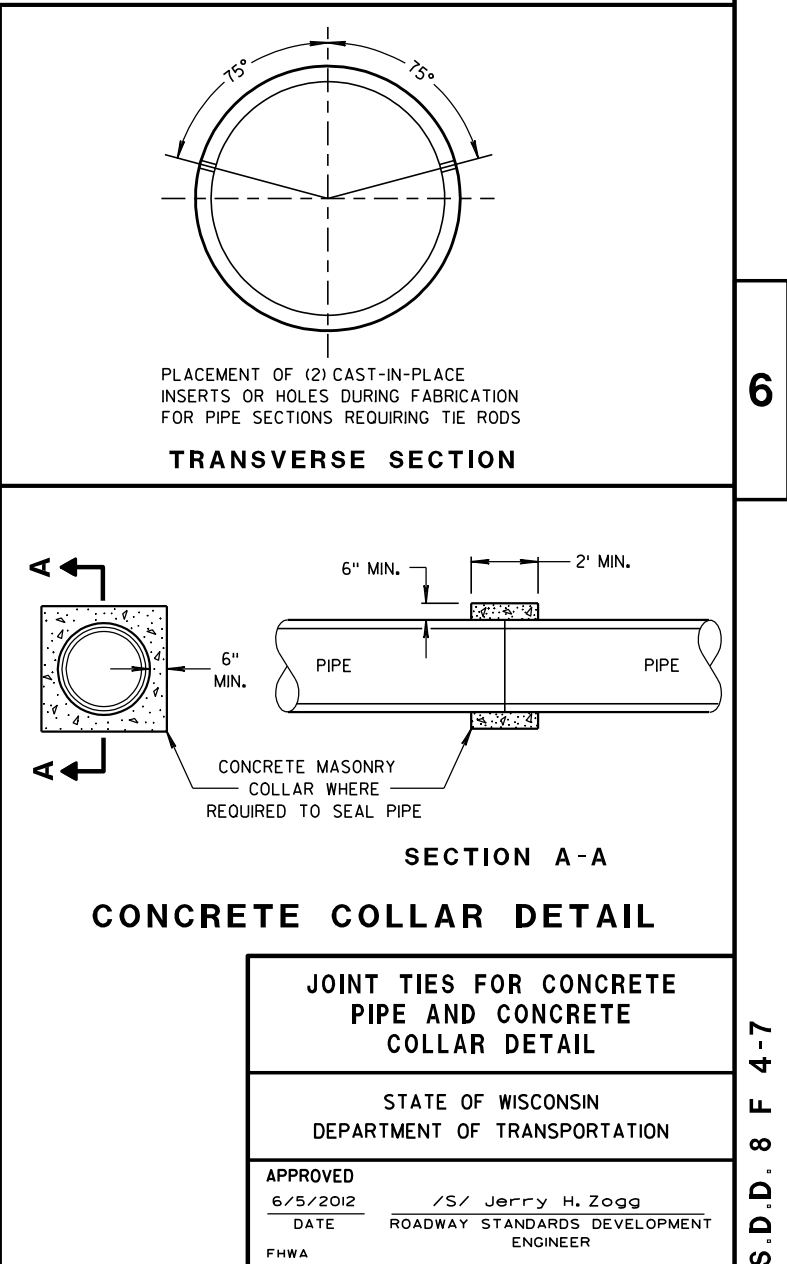
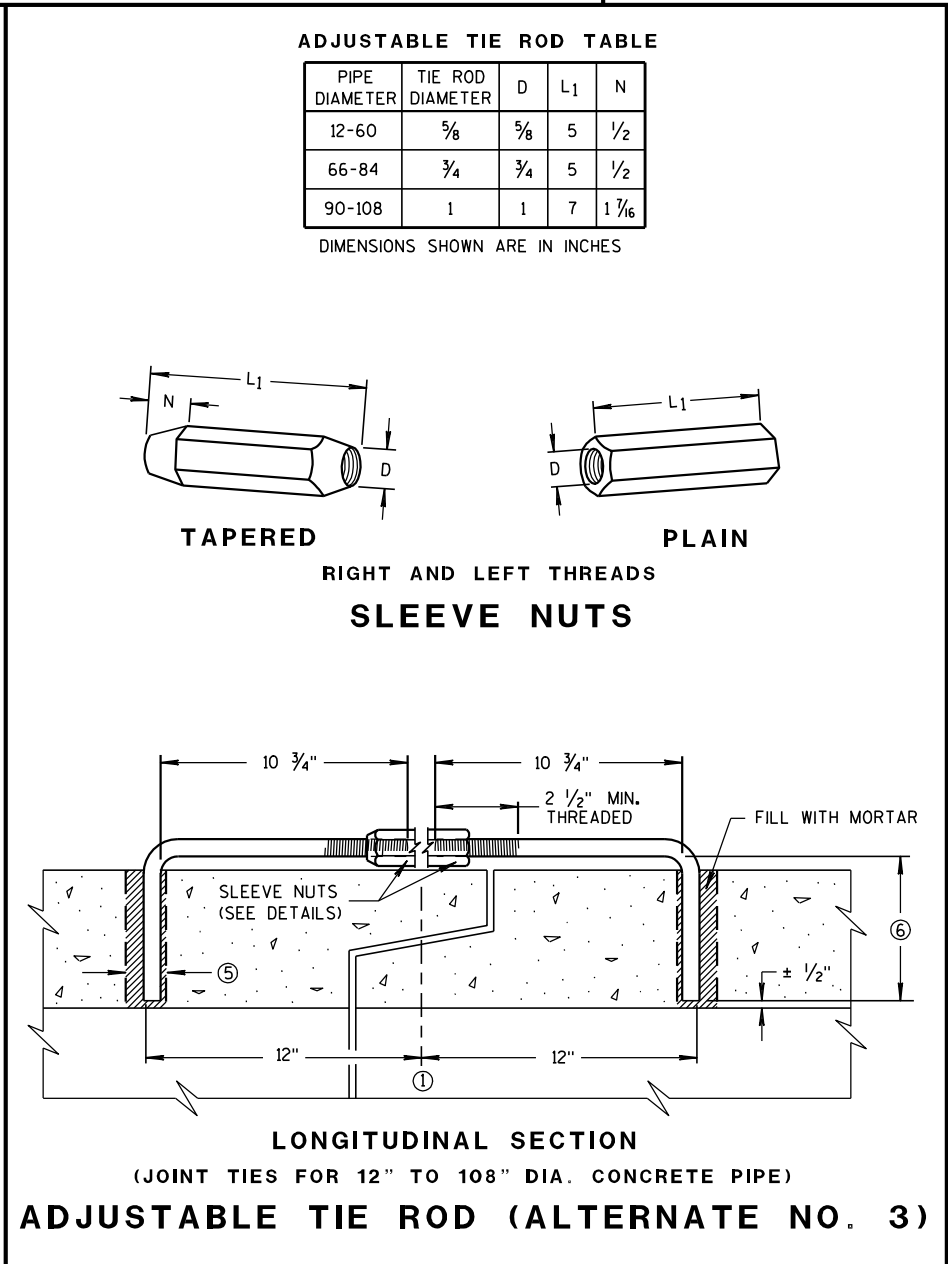
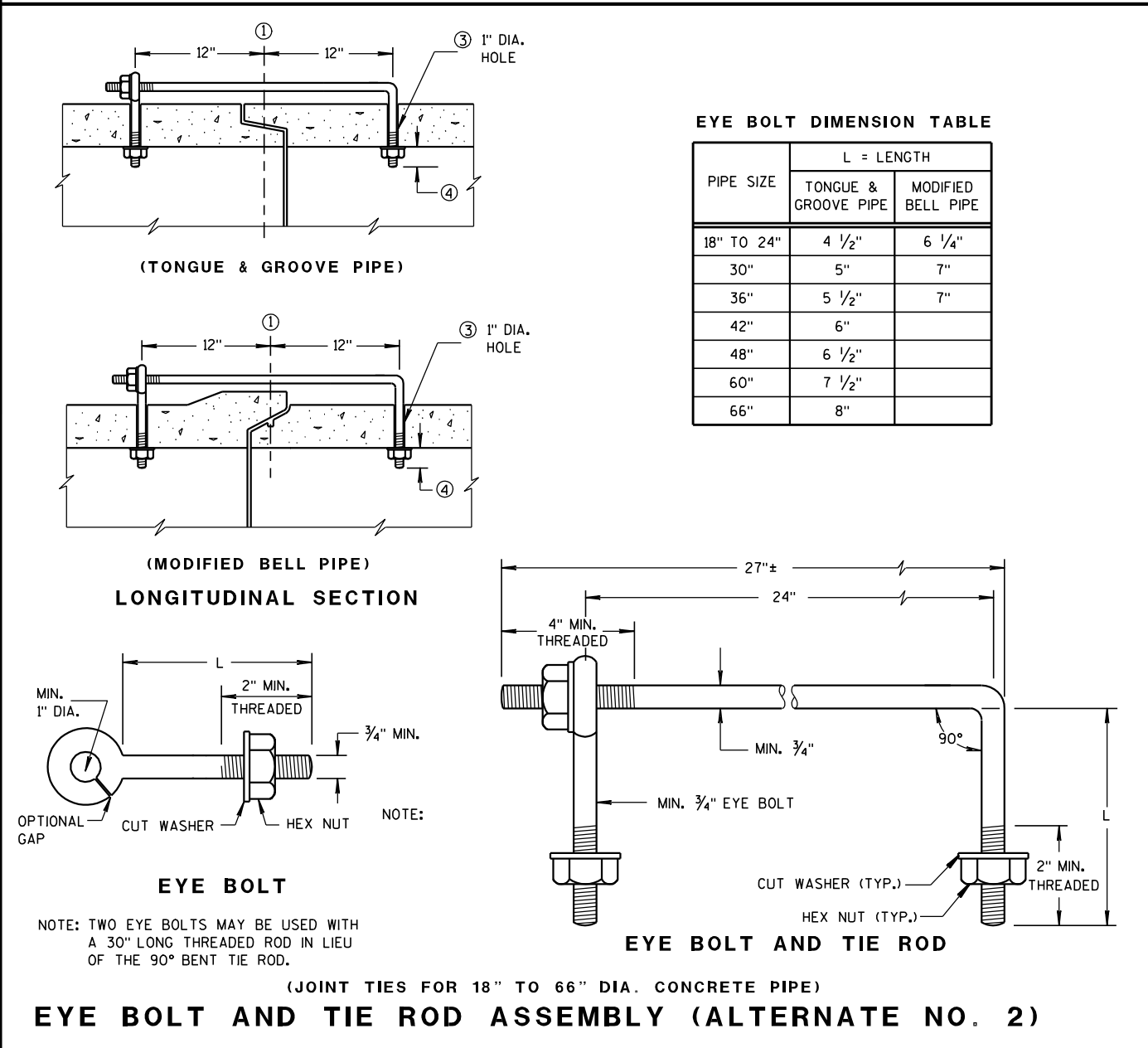
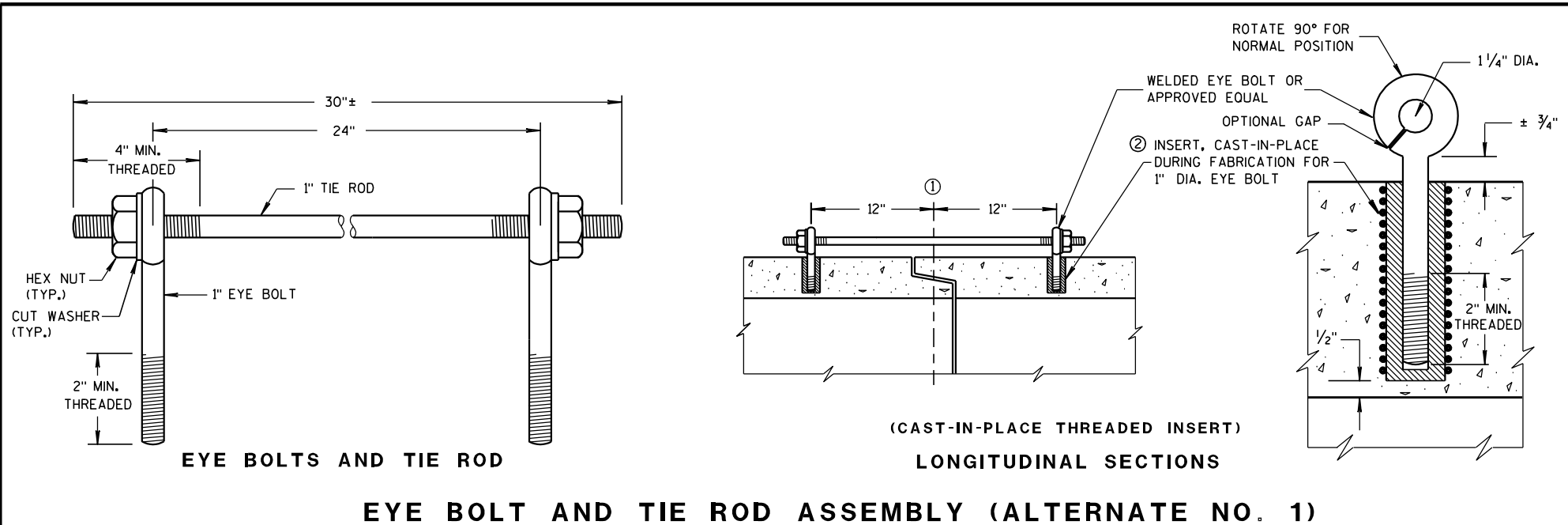
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

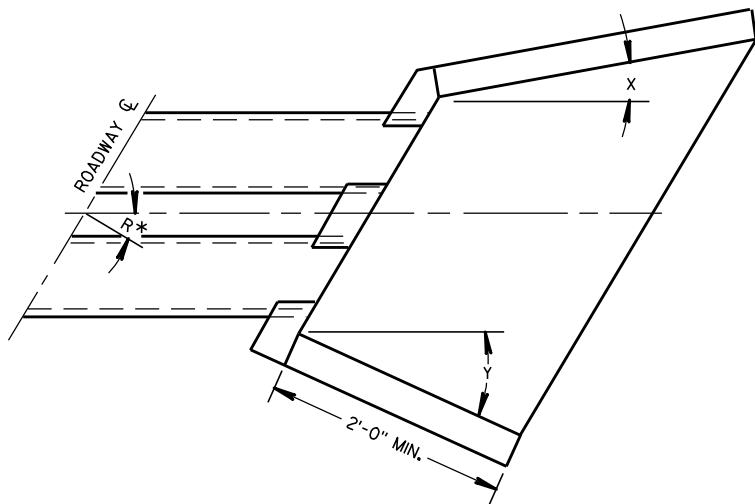
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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





WINGWALL ANGLE DETAILS

INLET			OUTLET		
R*	X	Y	R*	X	Y
0 - 7°	30°	30°	0 - 15°	15°	15°
8 - 22°	25°	"	16 - 45°	10°	"
23 - 37°	20°	"	46 - 75°	5°	"
38 - 52°	15°	"	OVER 75°	0°	"
53 - 67°	10°	"			
68 - 82°	5°	"			
OVER 82°	0°	"			

*R = NUMBER OF DEGREES RIGHT OR LEFT HAND FORWARD

GENERAL NOTES

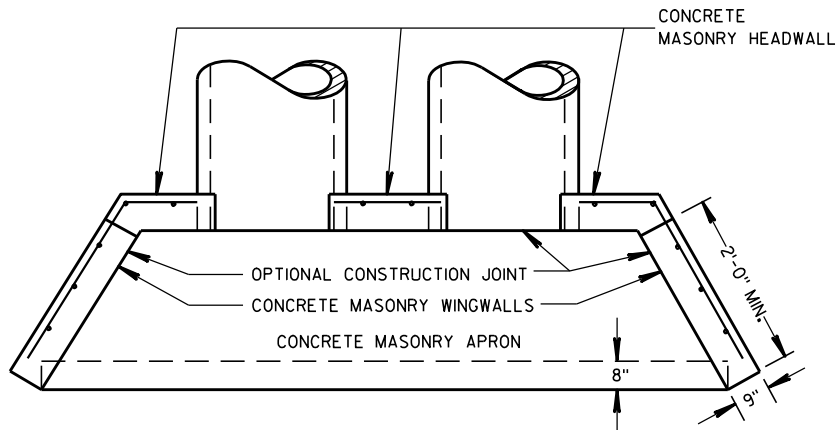
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

FILL SLOPES FLATTER THAN 2 1/2:1 SHALL BE WARPED TO MEET THE TOP OF THE WINGWALLS.

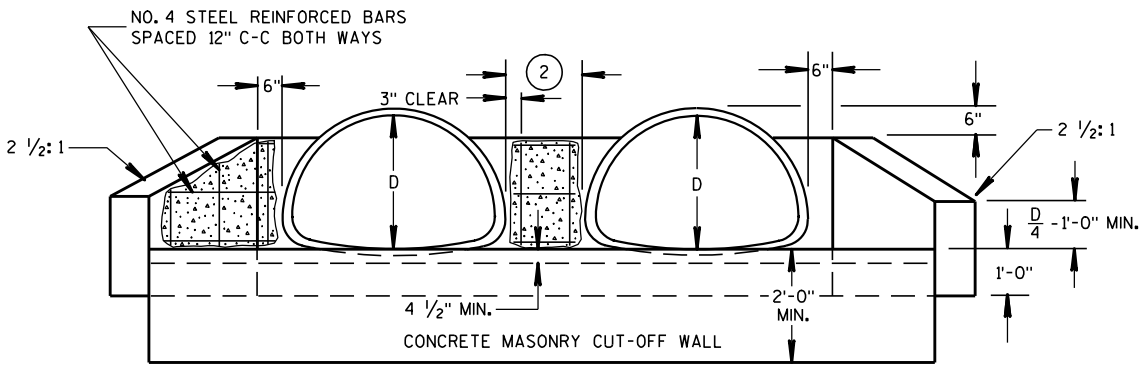
ALL STEEL REINFORCEMENT AND WELDED STEEL WIRE FABRIC SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE NOTED.

- 1 MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS SPACED 12" C-C IN BOTH DIRECTIONS.
- 2 THE SPACE BETWEEN PIPES SHALL BE AS FOLLOWS:

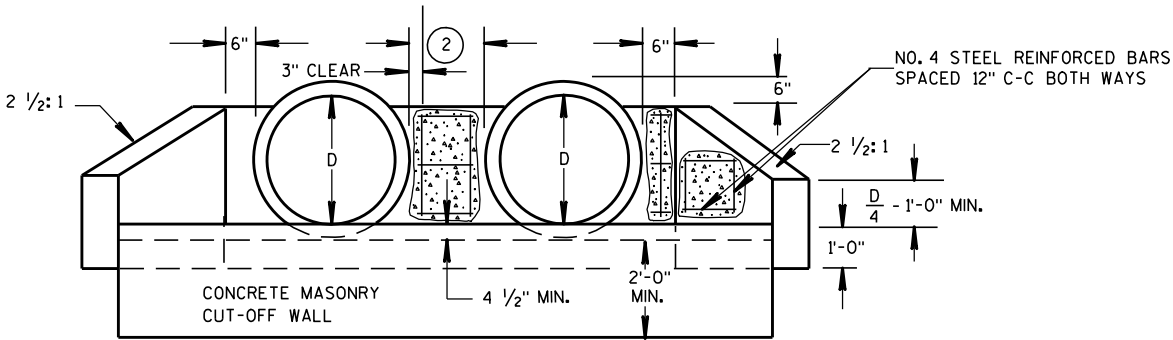
DIAMETER OR SPAN	SPACE
UP TO AND INCLUDING 48"	2'-0"
OVER 48" TO 72"	1/2 DIA. OR SPAN
OVER 72"	3'-0"



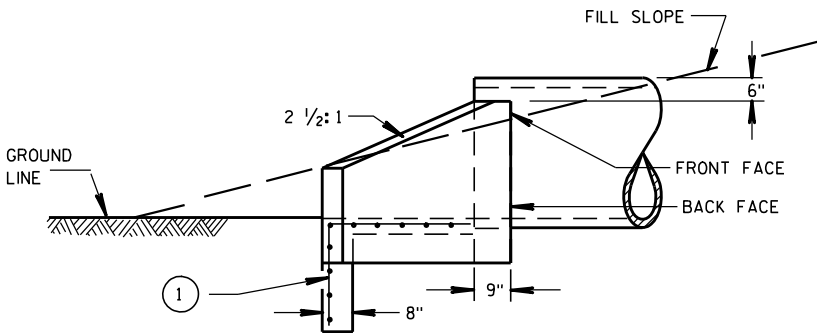
PLAN VIEW
CULVERT PIPE AND PIPE ARCH



END ELEVATION
PIPE ARCH



END ELEVATION
CULVERT PIPE



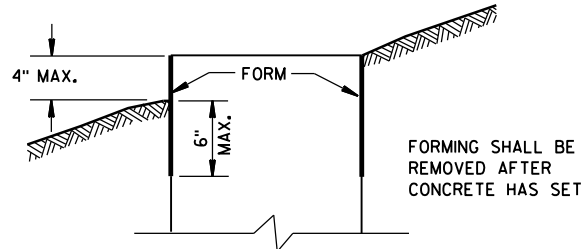
SIDE ELEVATION
CULVERT PIPE AND PIPE ARCH

CONCRETE MASONRY ENDWALLS
FOR CULVERT PIPE AND
PIPE ARCH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/14/98 /S/ Rory L. Rhinesmith
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

FORM DEPTH SHALL BE NO MORE THAN 6" BELOW GRADE ON THE LOWER SIDE OF BASE



FORMING DETAIL

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

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

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

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

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

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

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

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

GENERAL NOTES (CONTINUED)

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

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

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

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

1 THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

2 (4) 1" DIA. X 3'-6" ANCHOR RODS.

3 (4) 1" DIA. X 5'-0" ANCHOR RODS.

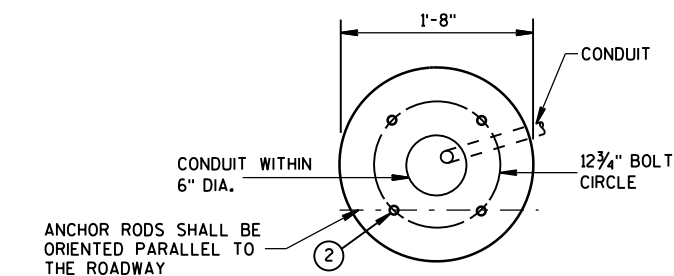
4 (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

5 (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

6 (4) 1" DIA. X 3'-6" ANCHOR RODS.

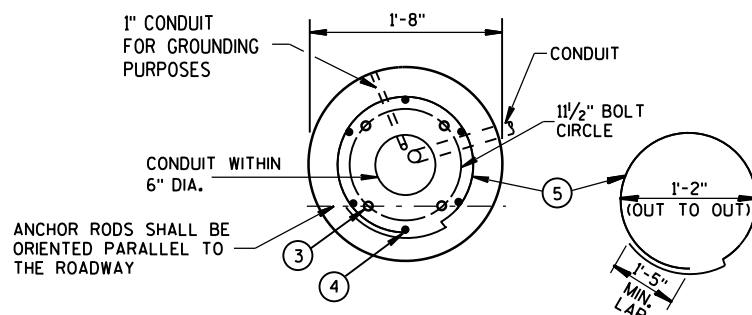
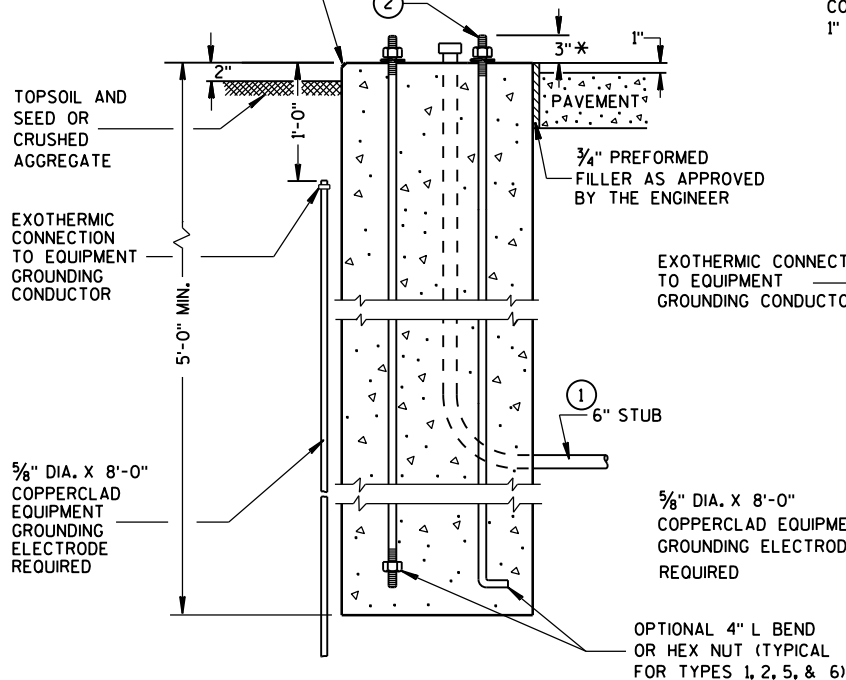
7 (6) NO. 4 X 4'-8" BAR STEEL REINFORCEMENT.

8 (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

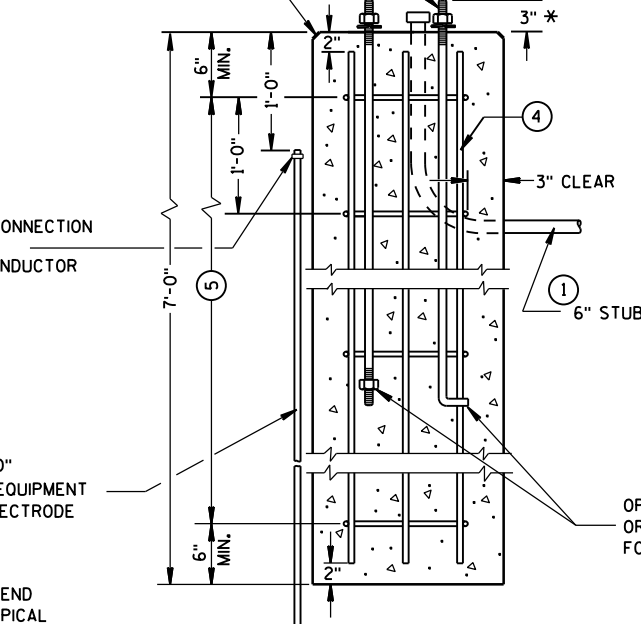


FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

HALF SECTION IN UNPAVED AREA (TYPICAL FOR TYPES 1, 2, 5, & 6)

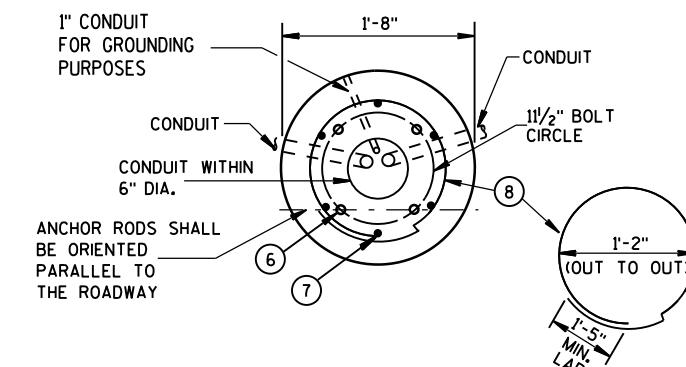


FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND

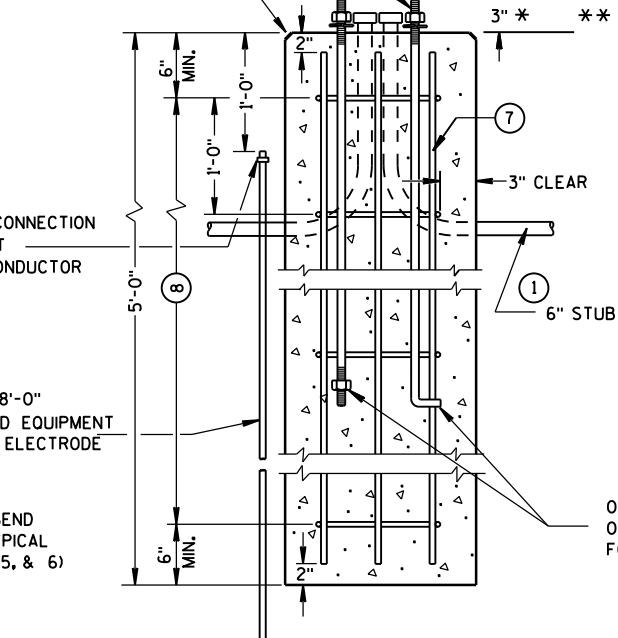


TYPE 2

CONCRETE BASES



FORM ALL EXPOSED CONCRETE. PROVIDE 1" CHAMFER ALL AROUND



TYPE 5 & 6

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2 3/4" OR LONGER THAN 3 3/4" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4 1/2" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL ENGINEER

FHWA

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

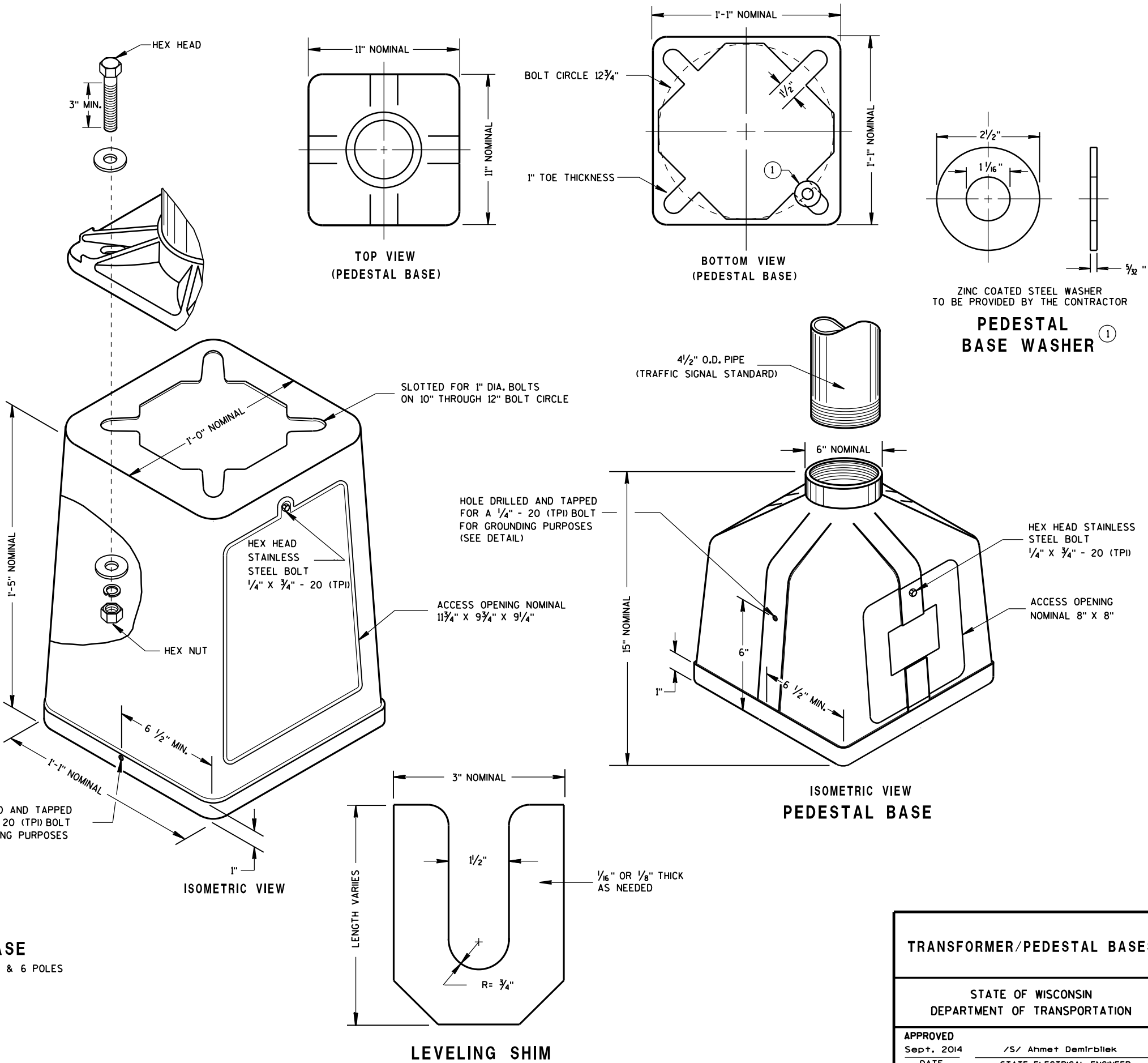
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.



TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

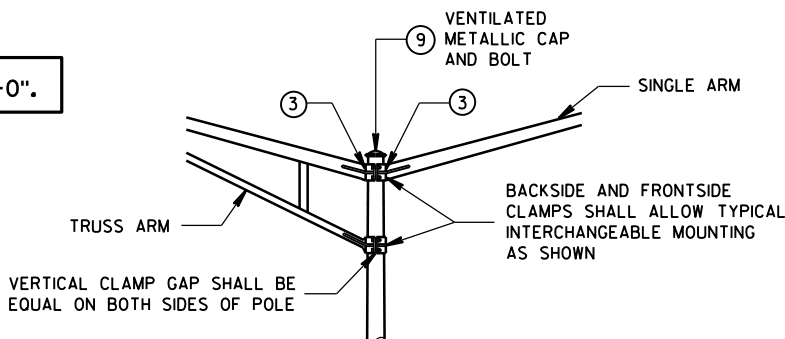
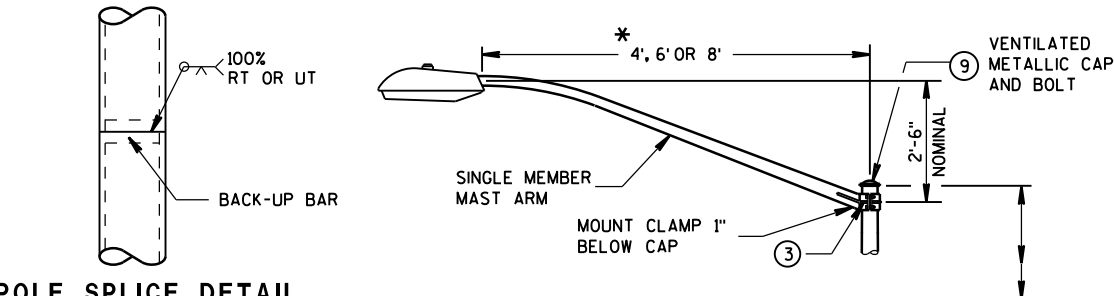
APPROVED
Sept. 2014 /S/ Ahmet Demirbilek
DATE STATE ELECTRICAL ENGINEER
FHWA

FOR MANUFACTURERS USE ONLY

WELD TO BE 100% R.T. OR U.T. TESTED AS PER THE REQUIREMENTS OF AWS D 1.5-88. RECORDS OF COMPLIANCE OF SUCH TESTING SHALL BE FURNISHED TO THE OFFICE OF DESIGN/BRIDGE FOR VERIFICATION AND APPROVAL.

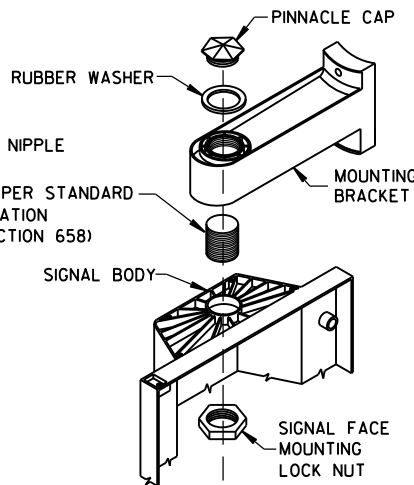
* RISE FOR 4' ARM SHALL BE 2'-0".

POLE SPLICE DETAIL

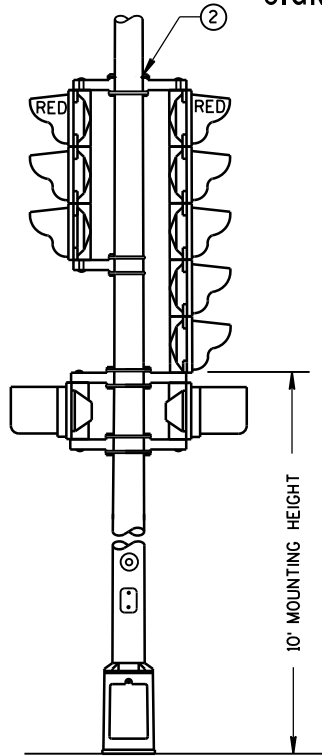


INTERCHANGEABLE MOUNTING DETAIL

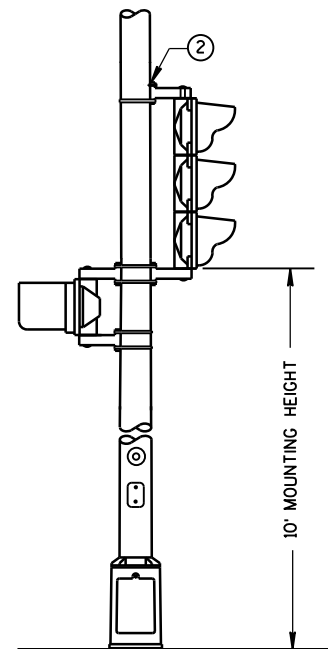
LUMINAIRE
WT. - 50 LBS.
EFFECTIVE PROJECTED
AREA FOR WIND
LOADING = 1.5 SQ. FT.



SIGNAL FACE MOUNTING DETAIL (BANDED)



TYPICAL MOUNTING OF BACK TO BACK
3 AND 5 SECTION SIGNAL FACES



TYPICAL MOUNTING OF 3 SECTION
SIGNAL FACE

TYPE 3 POLE MOUNTING CONFIGURATION

GENERAL NOTES

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

ALL TYPE 3 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE GALVANIZED STEEL.

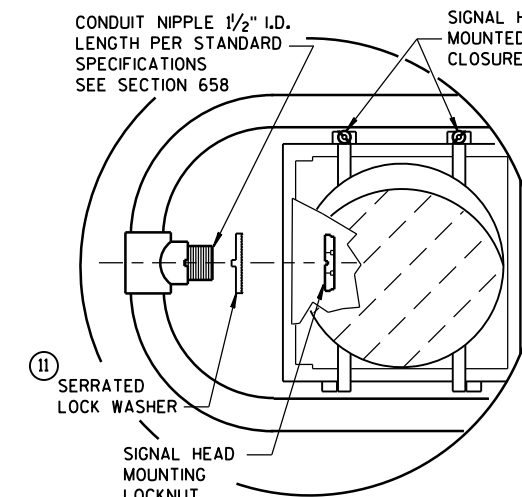
SECTION 657, POLES, OF THE STANDARD SPECIFICATIONS SHALL APPLY TO THIS DRAWING.

A PULL WIRE/ROPE IN ACCORDANCE WITH STANDARD SPECIFICATION 652, SHALL BE INSTALLED IN EACH TROMBONE ARM RACEWAY DURING THE MANUFACTURING PROCESS.

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2 3/8 INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

- 4" X 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) 1/4" X 3/4" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.
- SIGNAL FACE MOUNTING BRACKETS, MOUNT WITH CAP SCREWS AND BANDING. (SEE STANDARD SPECIFICATIONS - SEC. 658)
- GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1 3/8" HOLE IN POLE SHAFT FOR WIRING.
- SECURELY MOUNT DULL BLACK POLYCARBONATE BACKPLATES, PROJECTING 5" BEYOND ALL SIDES OF THE SIGNAL FACE HOUSING, PER MANUFACTURER'S RECOMMENDATIONS.
- POLE MOUNTED SIGNAL FACES SHALL REQUIRE 1 OR MORE MOUNTING SPACERS UNDER THE TOP MOUNTING BRACKET(S) AS REQUIRED, TO PLUMB THE SIGNAL FACE.
- TYPE 3 POLE CONFIGURATIONS SHALL BE MOUNTED DIRECTLY TO THEIR CONCRETE BASES.
- MOUNTING BRACKET NIPPLES FOR THE SIGNAL FACE(S) SHALL BE 2 INCHES IN LENGTH AND 1/2 INCHES IN DIAMETER. (SEE STANDARD SPECIFICATION - SECTION 658)
- VERTICAL STRUT (ADJUSTABLE). ONE (1) SET SCREW (1/4" X 3/4" - 20 TPI, STAINLESS STEEL, HEX HEAD) INTO EACH ARM MEMBER IF STRUT IS THE SLIDING TYPE.
- FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) 1/4" X 3/4" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.
- SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND POLE.
- USE SERRATED LOCK WASHERS WITH NOTCHES BETWEEN END TEE AND SIGNAL HEAD.

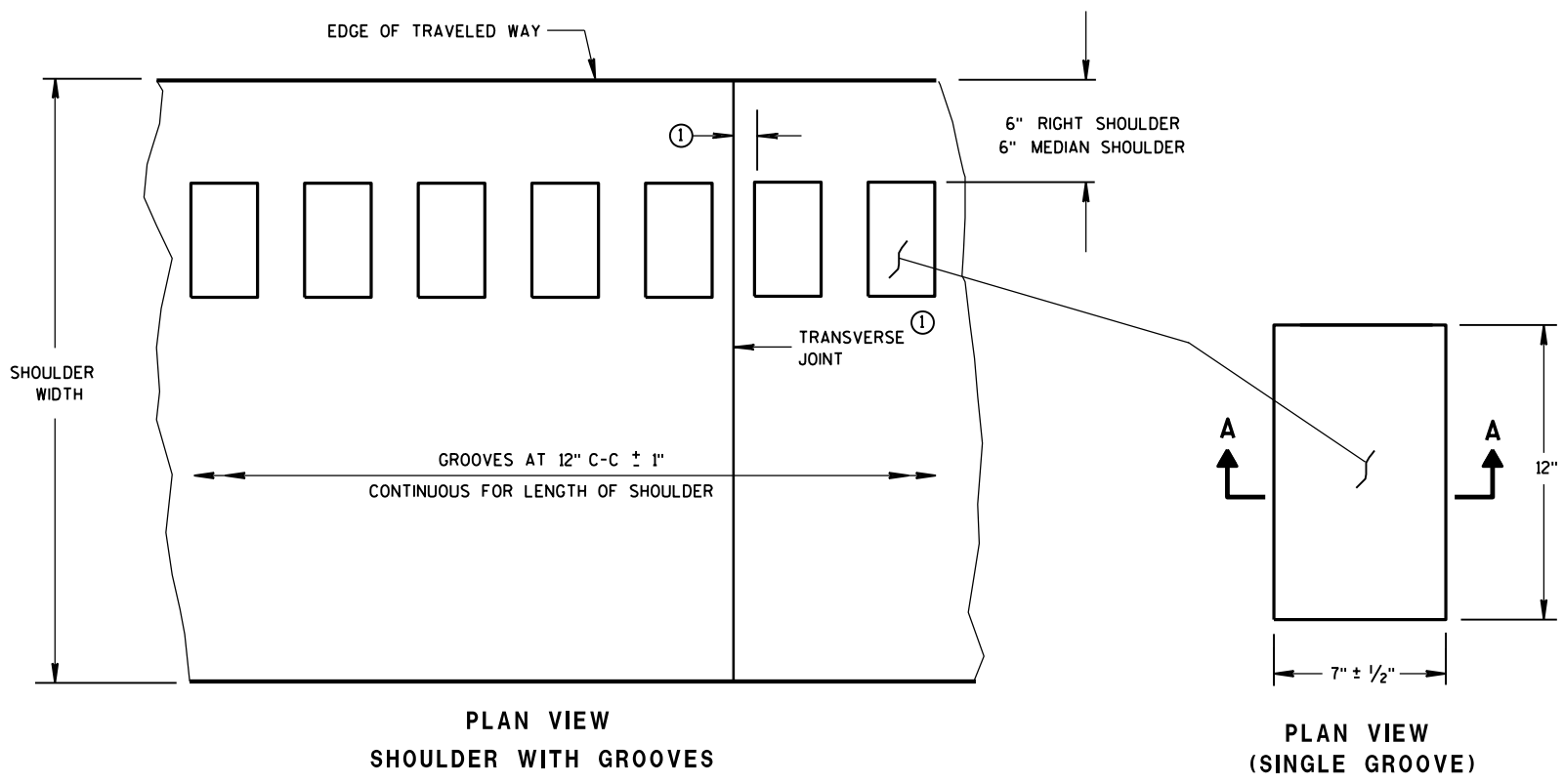


HORIZONTAL SIGNAL HEAD MOUNTING DETAIL **

** SIGNAL HEAD ATTACHMENT ALSO APPLYS TO MOUNTING AT CROSS BAR

POLE MOUNTINGS FOR
TRAFFIC SIGNALS AND
LIGHTING UNITS, TYPE 3
(HEAVY DUTY)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



6

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

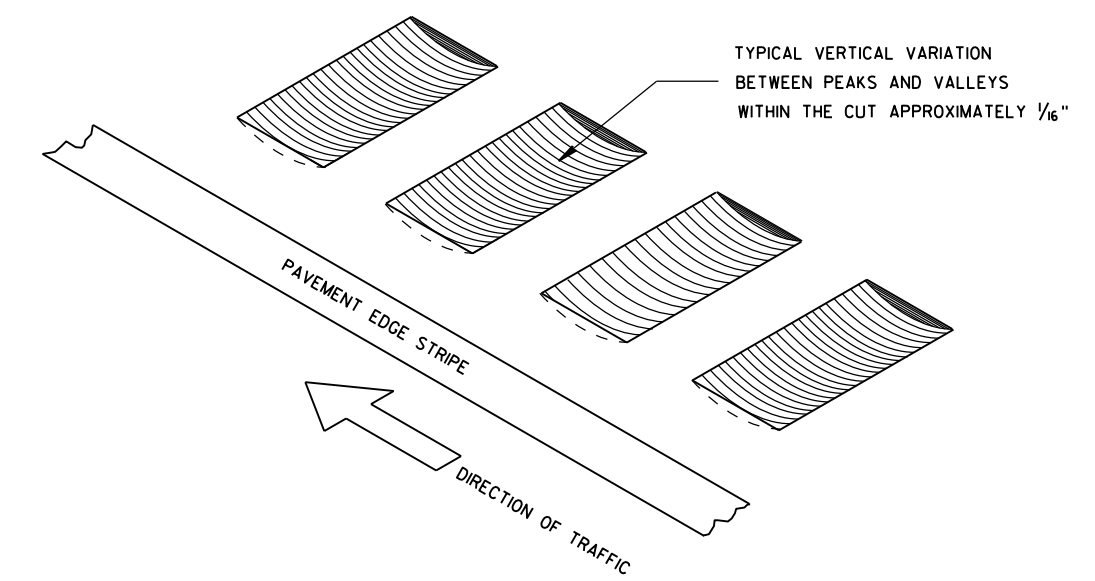
GENERAL NOTES

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

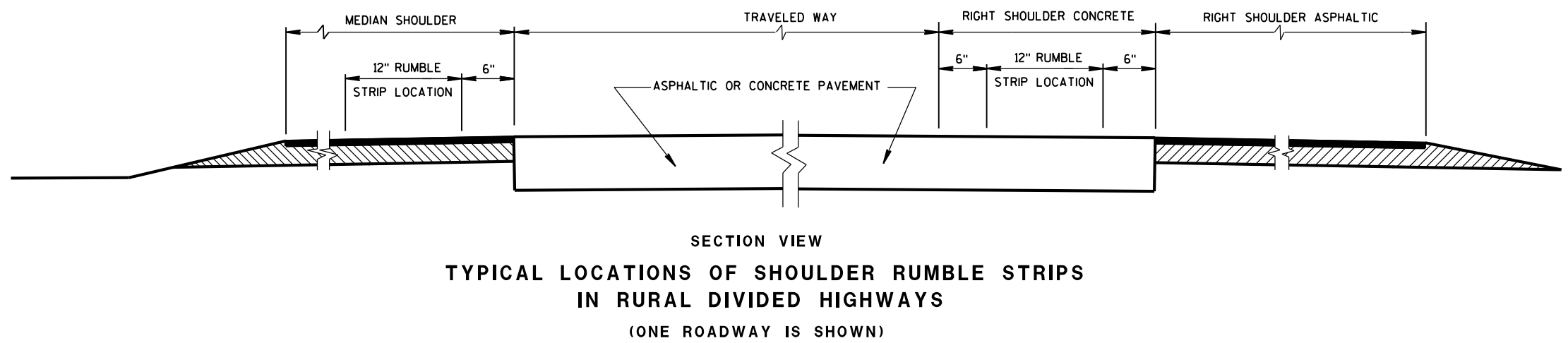
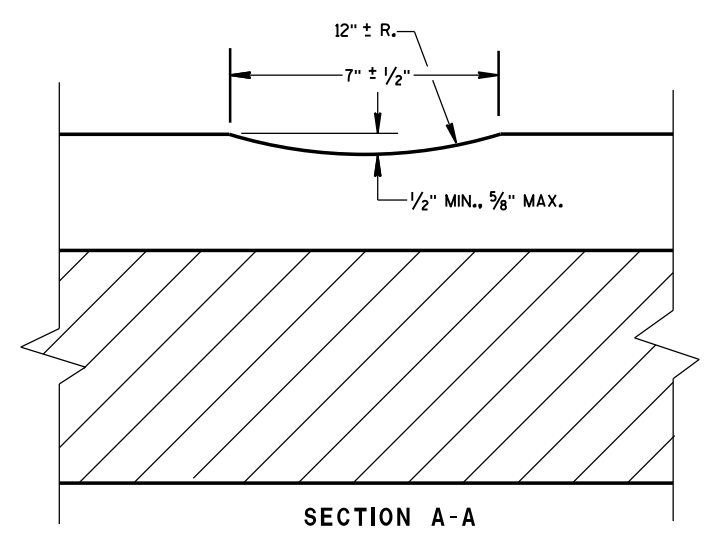
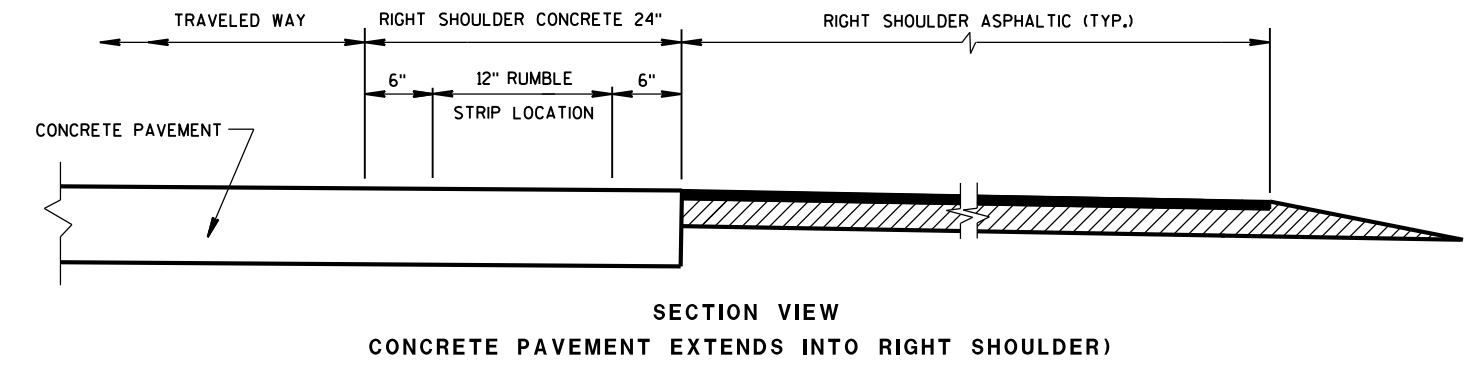
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.

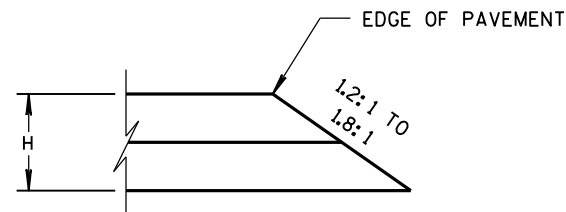


ISOMETRIC

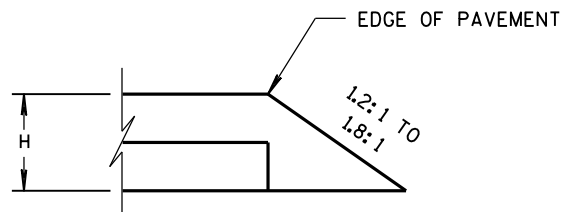


SHOULDER RUMBLE STRIP, MILLING

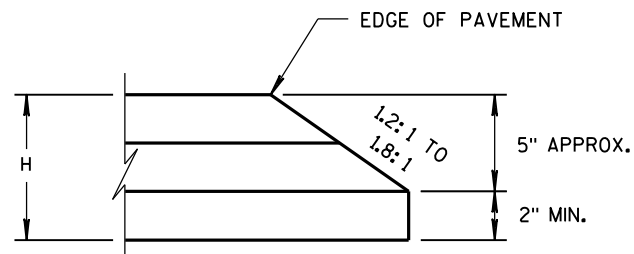
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



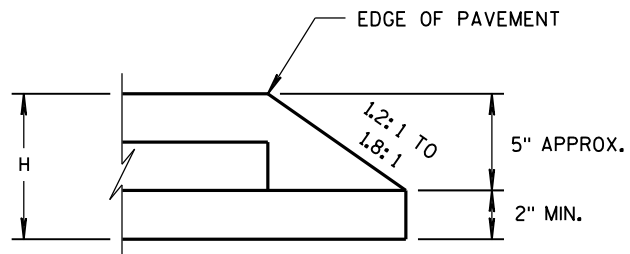
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

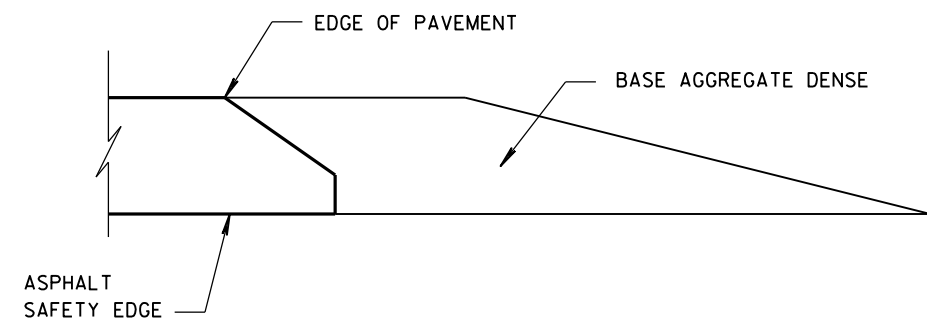


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

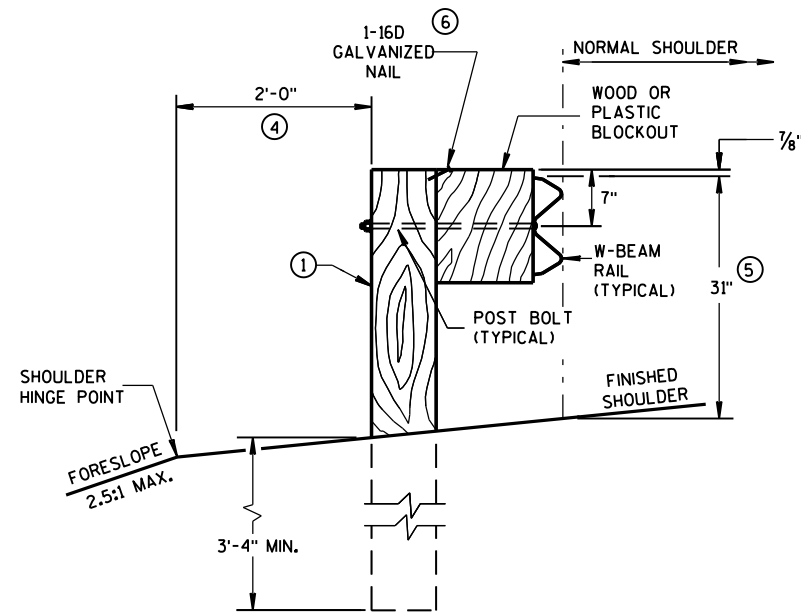
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/2012
DATE
FHWA

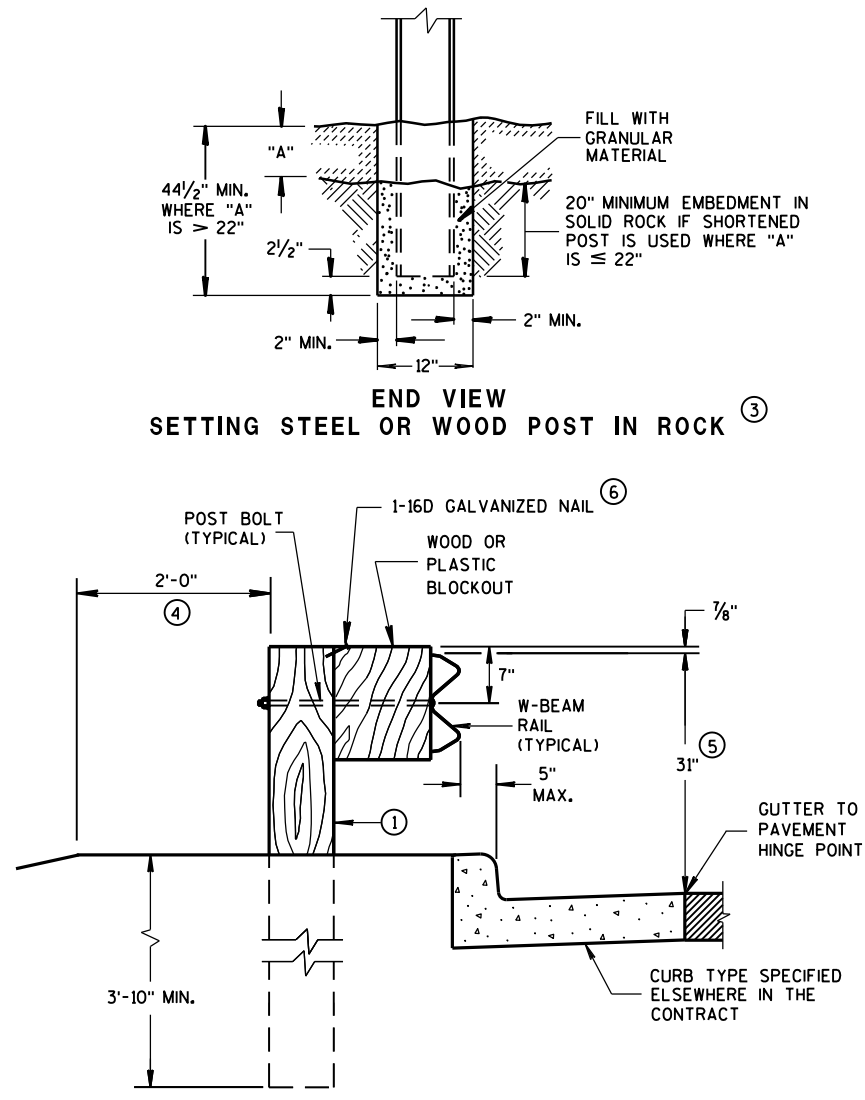
/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

GENERAL NOTES

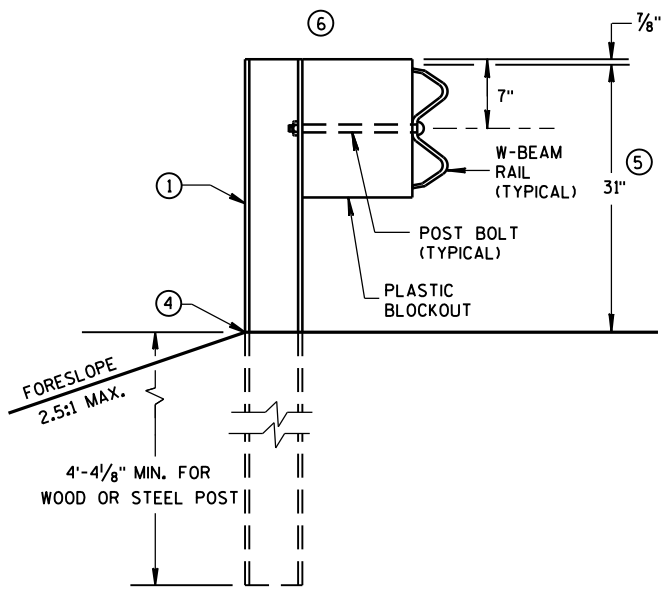
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL.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



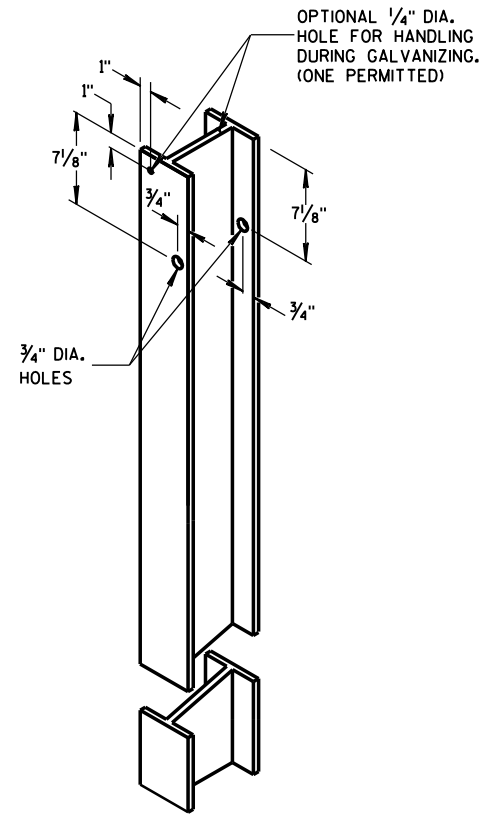
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



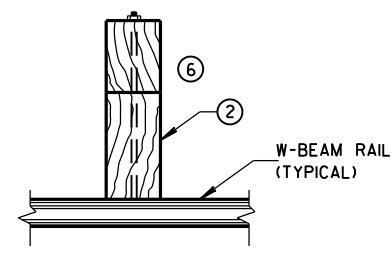
END VIEW
LOCATED ALONG A CURBED ROADWAY



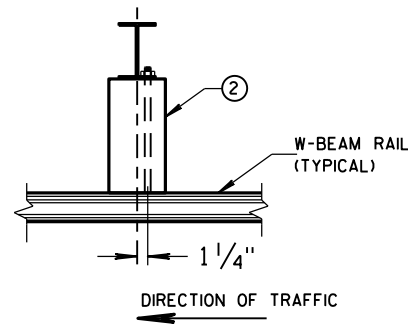
END VIEW
MGS LONGER POST AT HALFPST SPACING W BEAM (K)



STEEL POST &
HOLE PUNCHING DETAIL
(w6X9)



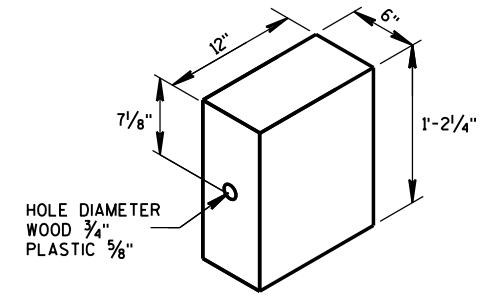
PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



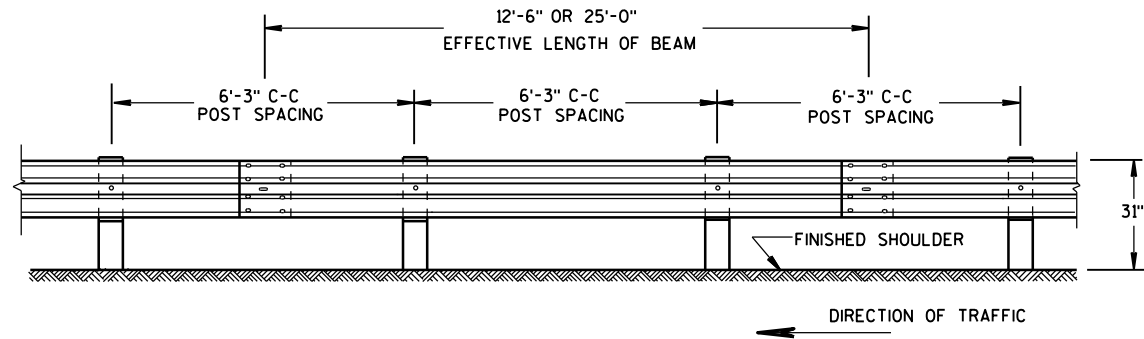
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM



WOOD POST
(6" X 8") NOMINAL

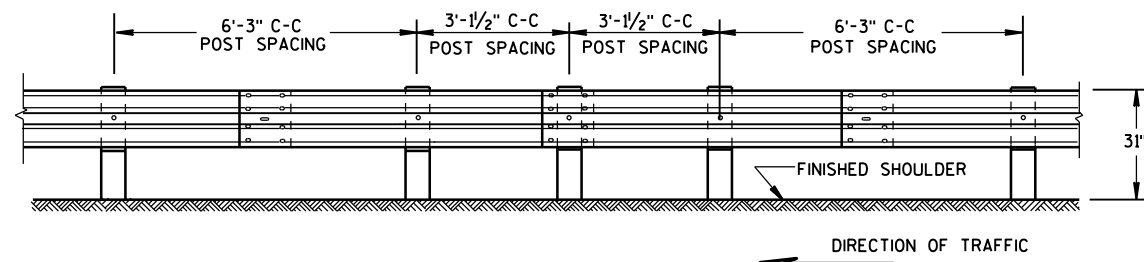


WOOD OR
PLASTIC BLOCKOUT



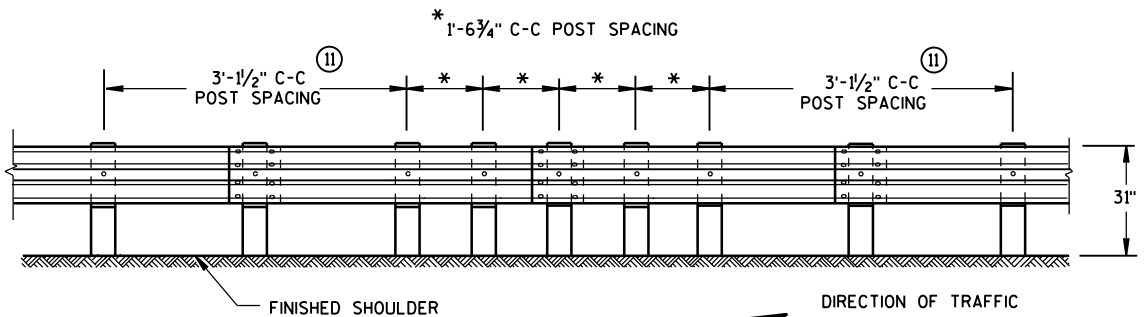
FRONT VIEW

POST SPACING STANDARD INSTALLATION



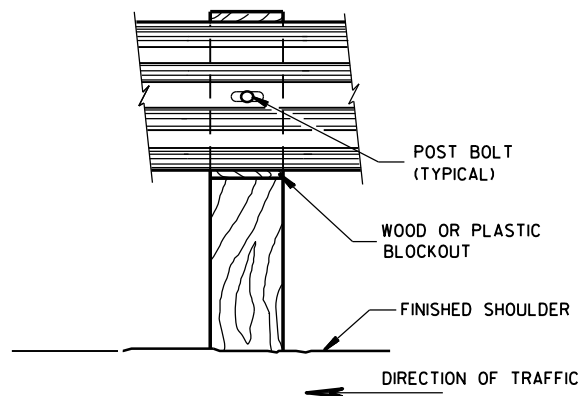
FRONT VIEW

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

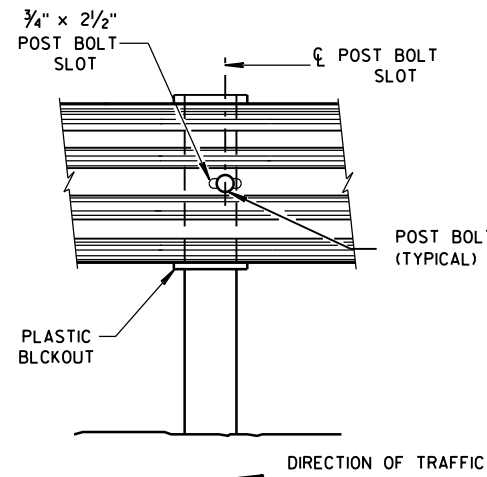


FRONT VIEW

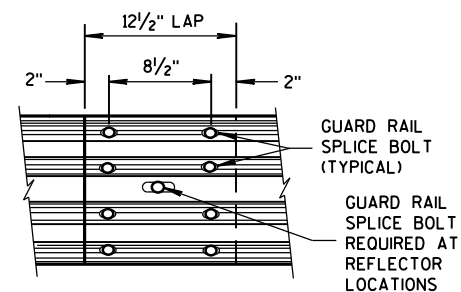
QUARTER POST SPACING (QS)



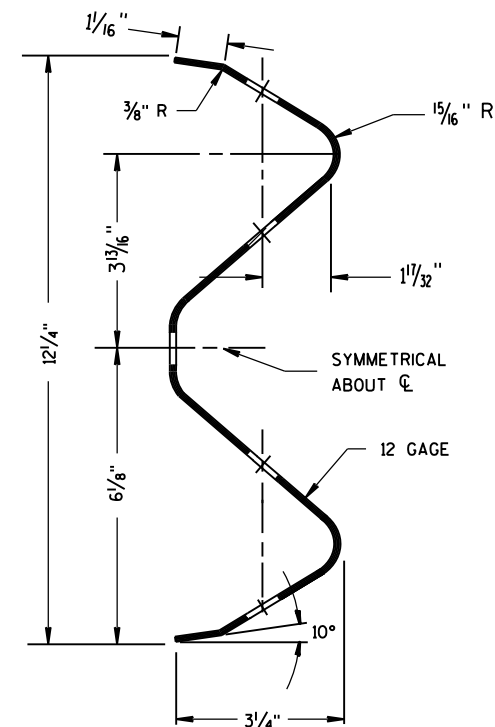
FRONT VIEW AT WOOD POST



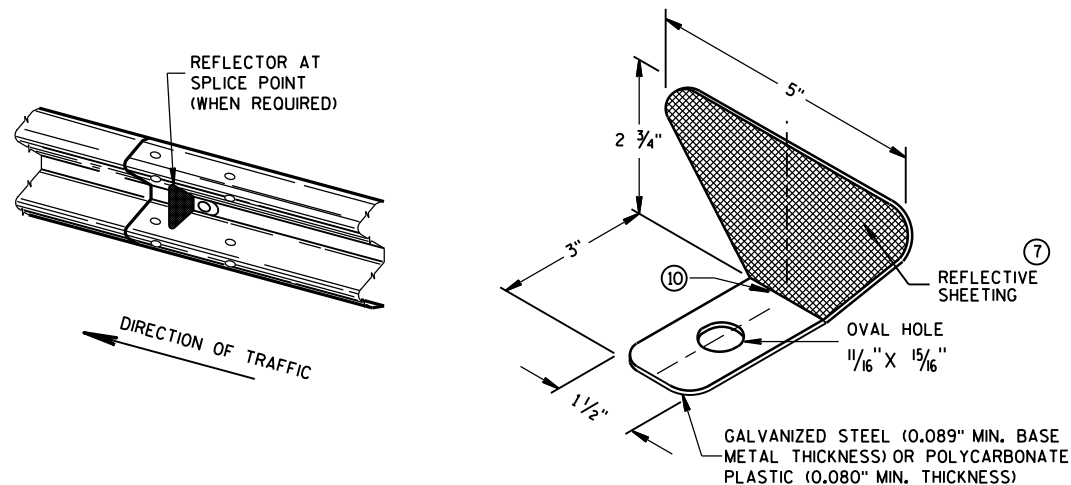
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

GENERAL NOTES

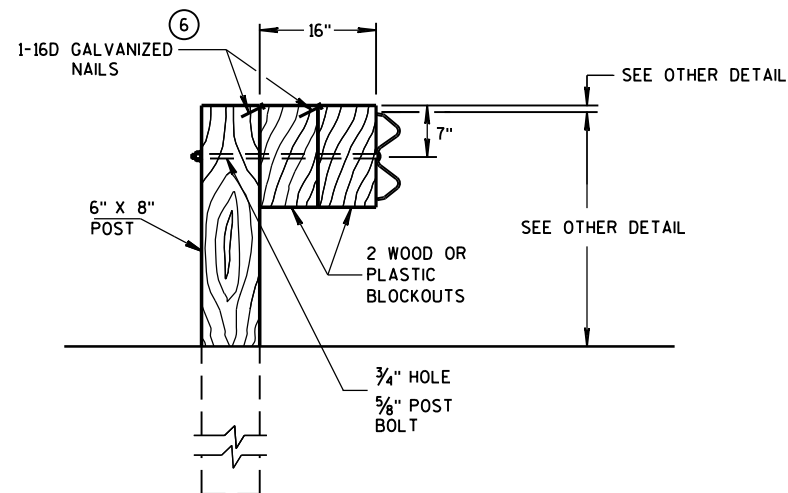
- ⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.
 - ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF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

REFLECTOR SPACING

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

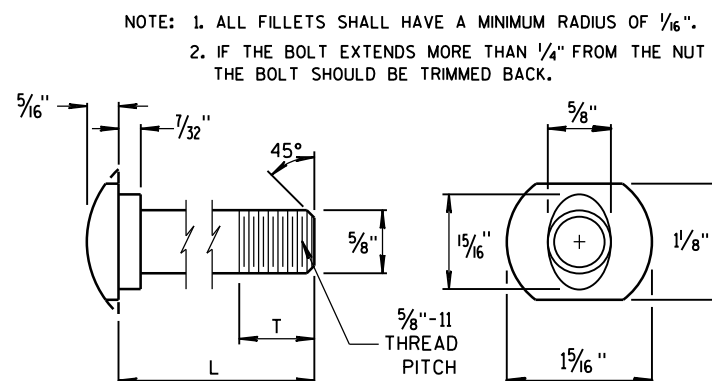
MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

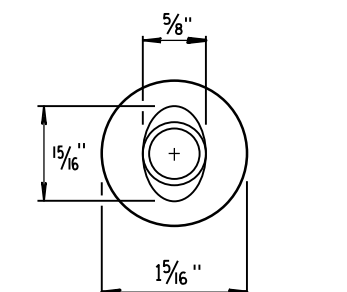


DETAIL FOR 16" BLOCKOUT DEPTH

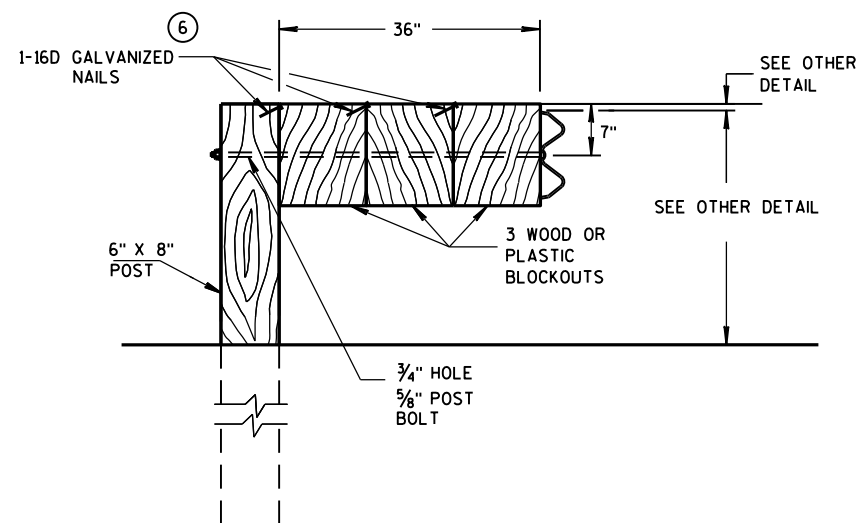
IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.



POST BOLT TABLE



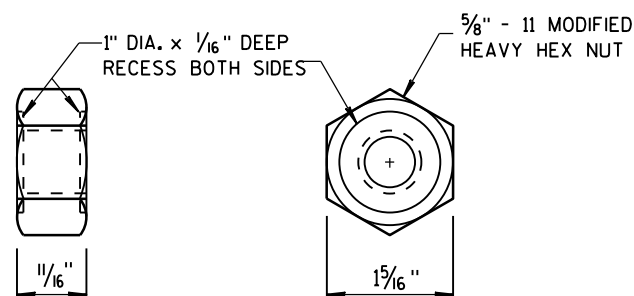
ALTERNATE BOLT HEAD



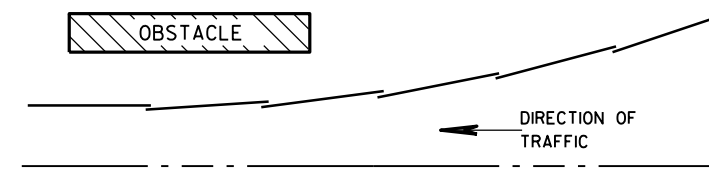
DETAIL FOR 36" BLOCKOUT DEPTH

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.

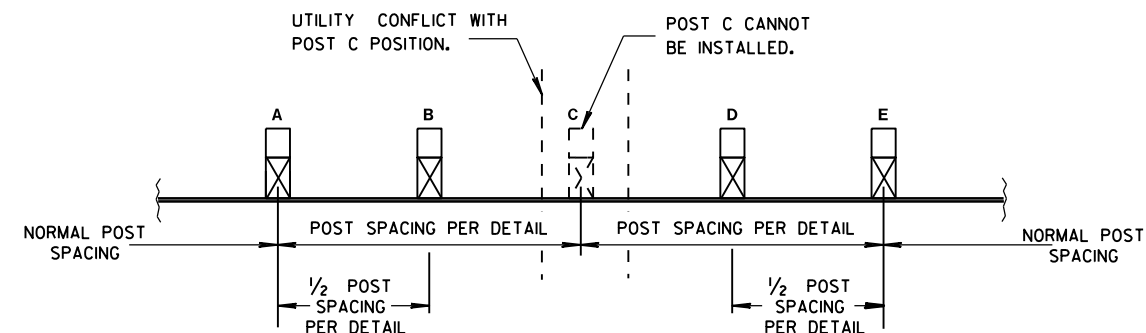
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



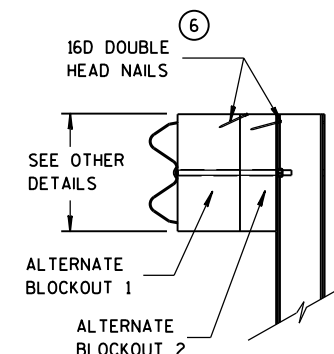
POST BOLT AND RECESS NUT



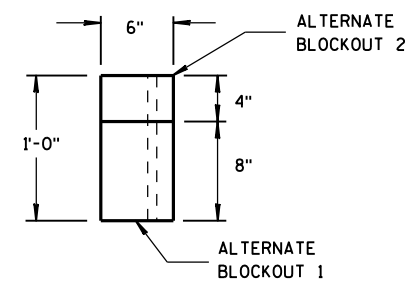
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

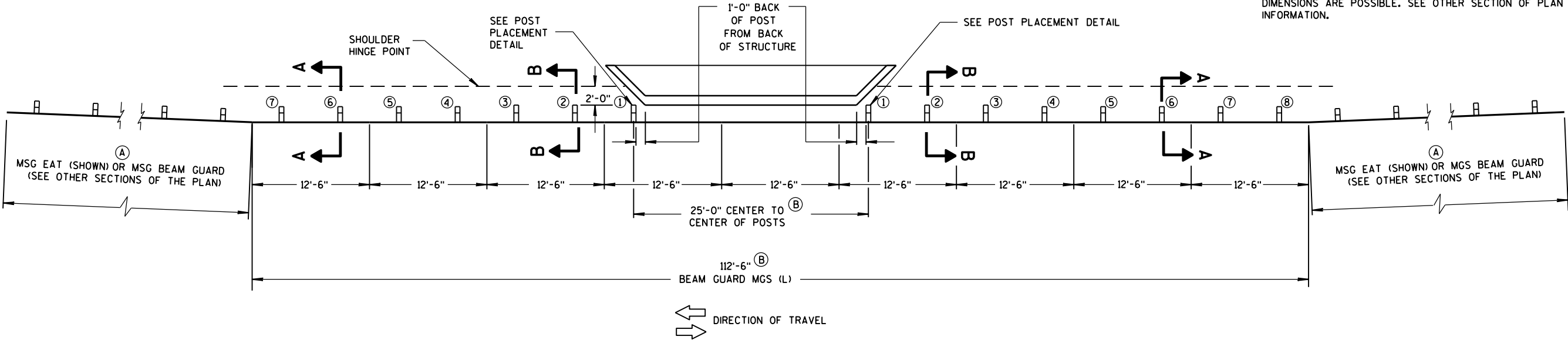
GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

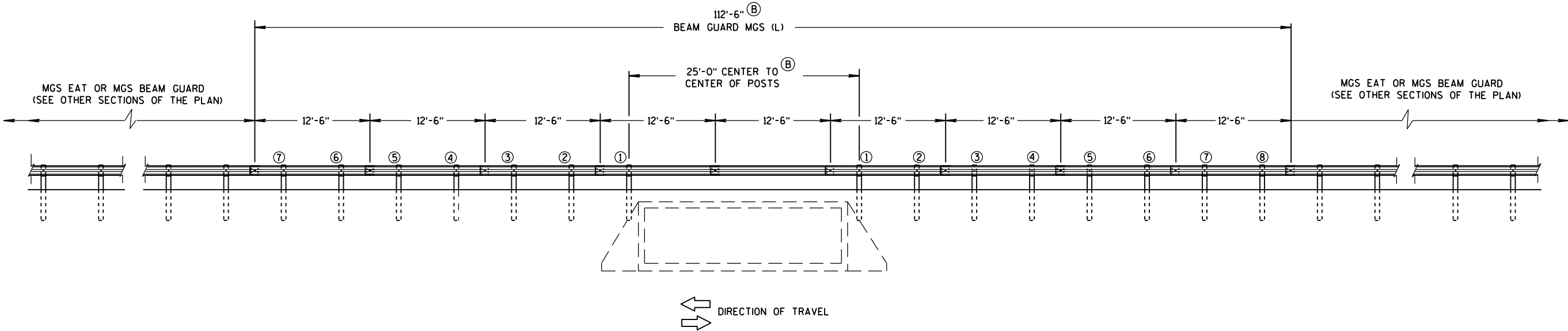
SEE SDD 14 B 42 FOR MORE DETAILS.

(A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.

(B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) TWO-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

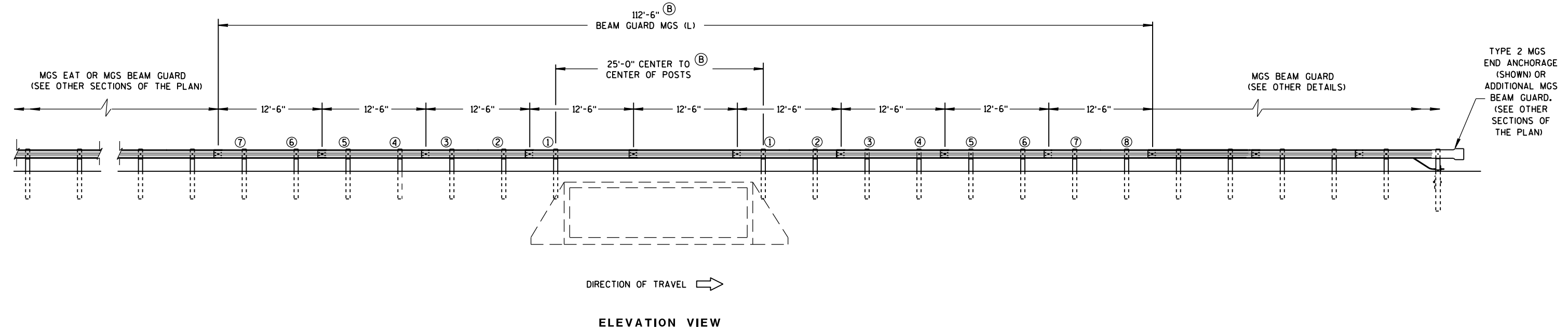
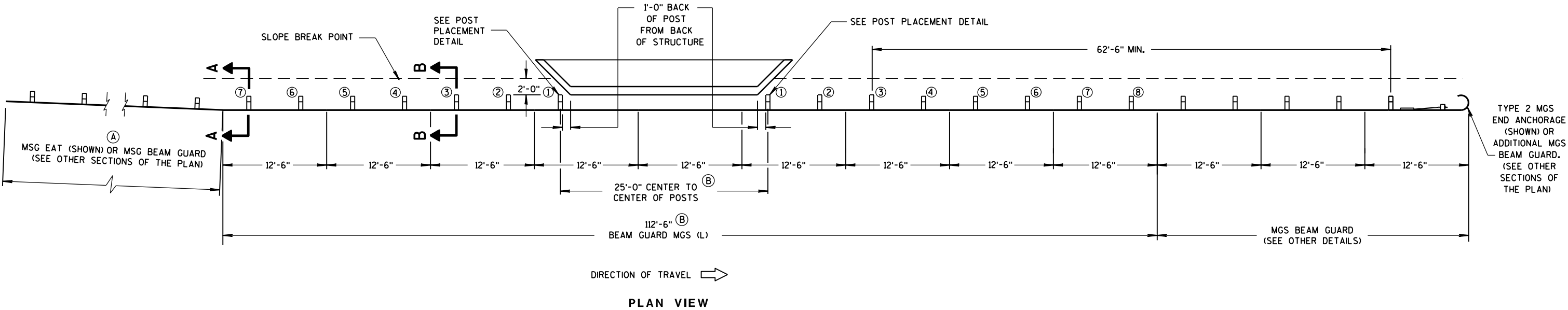
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

POSTS 1 THROUGH 3 ARE CRT POSTS.
ALL OTHER POSTS SHALL BE WOOD OR STEEL.

SEE SDD 14 B 42 FOR MORE DETAILS.

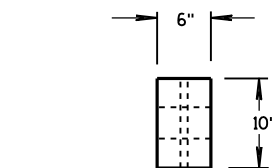
- (A) FLARE FOR MGS EAT SHOWN. IF INSTALLING MGS NO FLARE NEEDED.
- (B) VALUES SHOWN ON DRAWING REPRESENT THE MAXIMUM LENGTH. SHORTER DIMENSIONS ARE POSSIBLE. SEE OTHER SECTION OF PLAN FOR MORE INFORMATION.



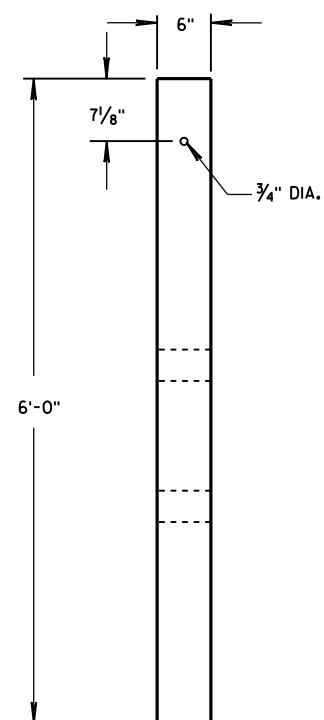
MIDWEST GUARDRAIL SYSTEM LONG SPAN MGS (L) ONE-WAY TRAFFIC

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

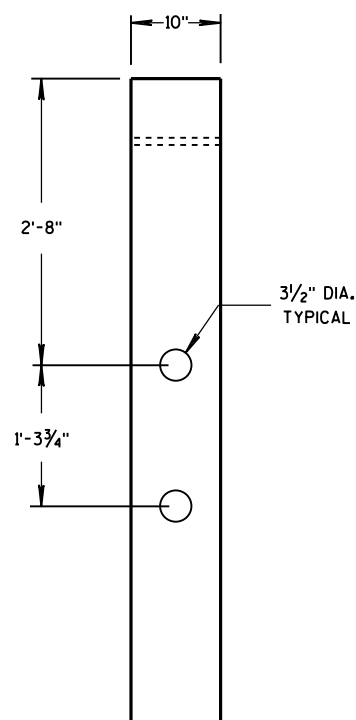


PLAN VIEW

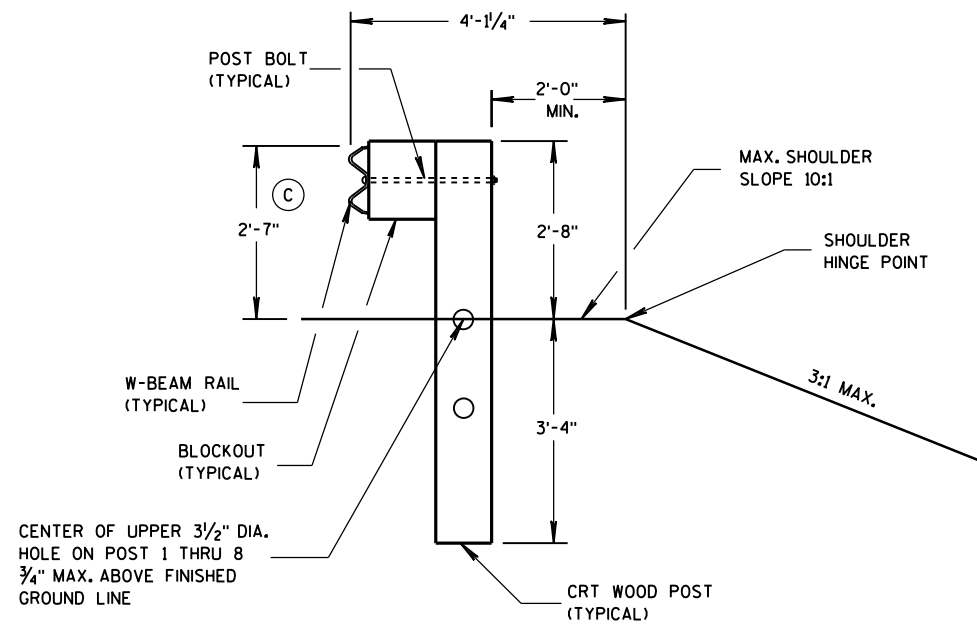


FRONT VIEW

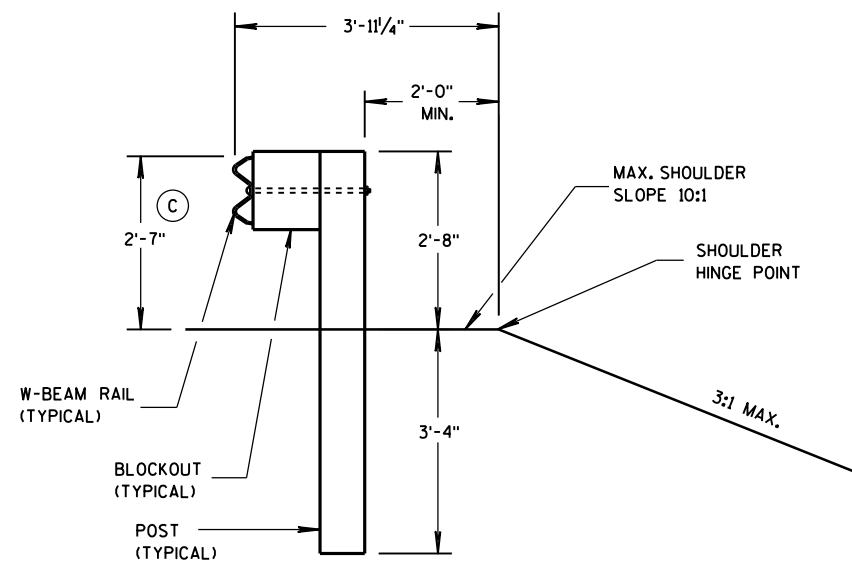
CRT WOOD POST



SIDE VIEW

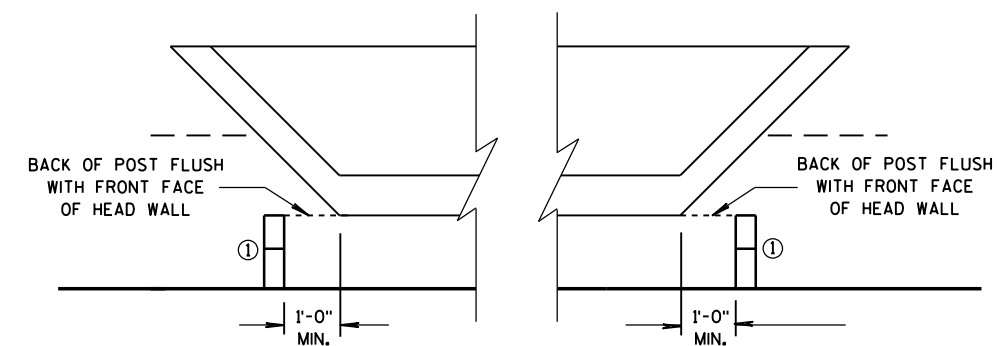
SECTION B-B
POSTS NO. 1-3

SEE OTHER DETAILS

SECTION A-A
POSTS NO. 4-8

SEE OTHER DETAILS

GENERAL NOTES

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

POST PLACEMENT DETAIL

MIDWEST GUARDRAIL SYSTEM
LONG SPAN MGS (L)STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
5/10/2013
DATE
FHWA/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.

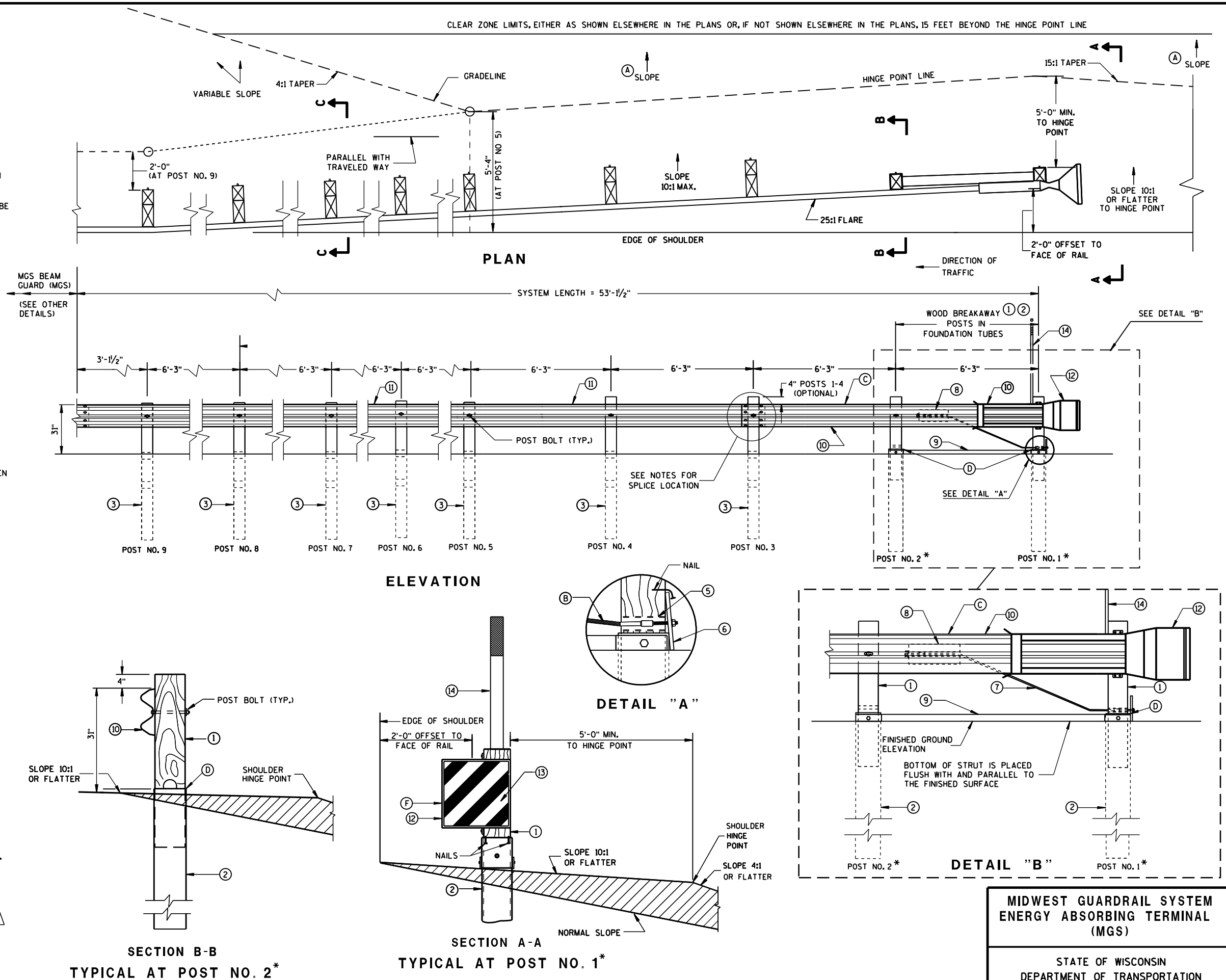
SEE SDD 14B42 FOR MORE INFORMATION.

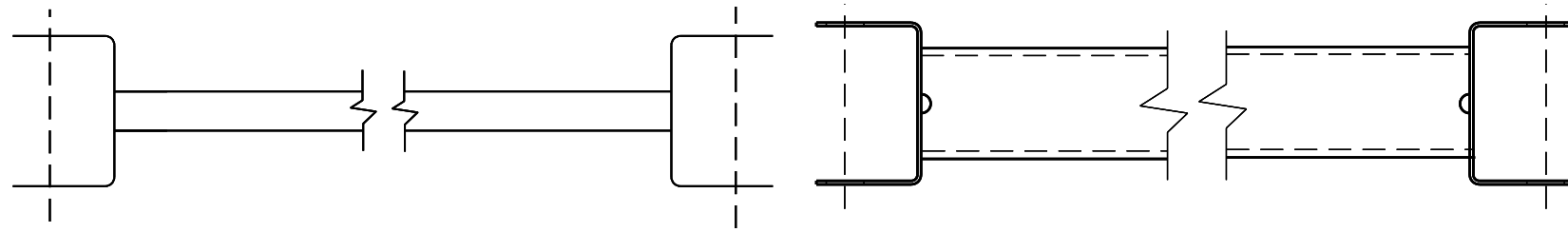
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

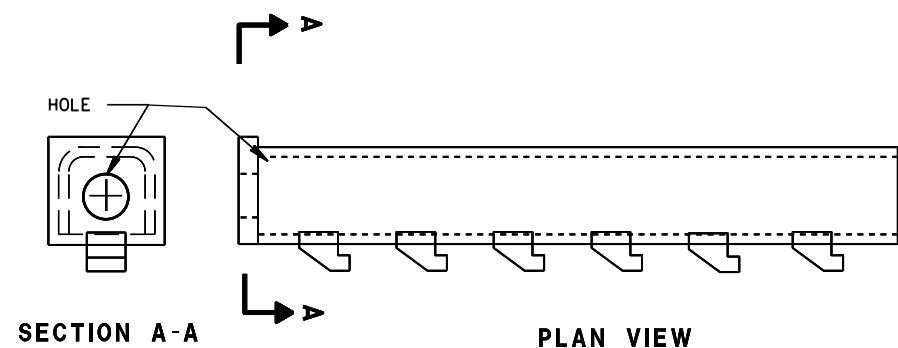
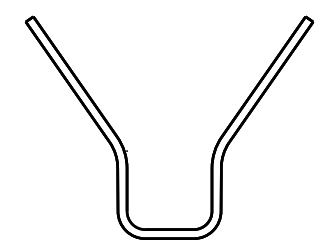
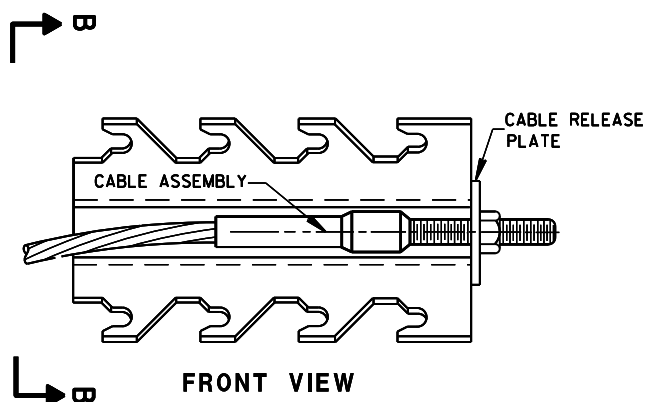
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

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.





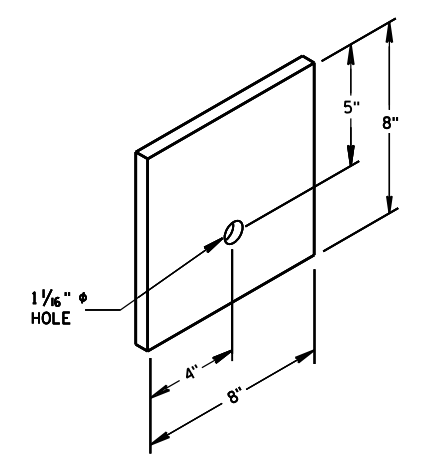
9 H
GENERIC GROUND STRUT



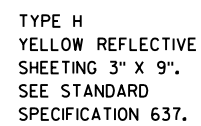
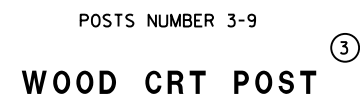
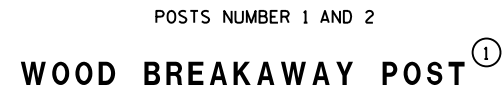
8 H
GENERIC ANCHOR CABLE BOX

BILL OF MATERIALS

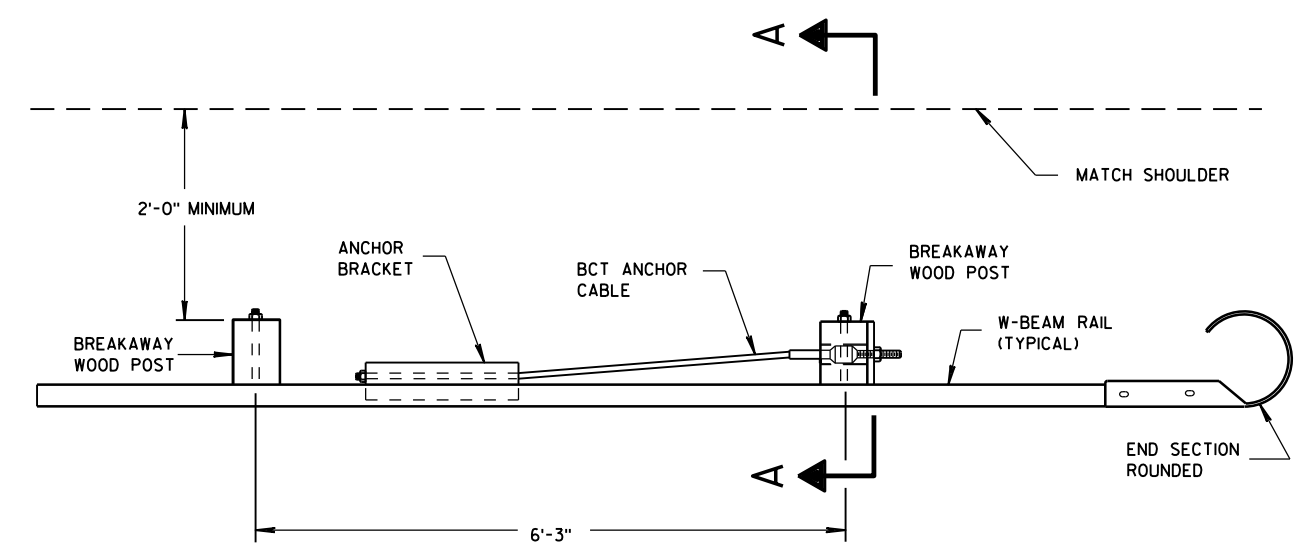
PART NO.	DESCRIPTION
MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.	
①	WOOD BREAKAWAY POST
②	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND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



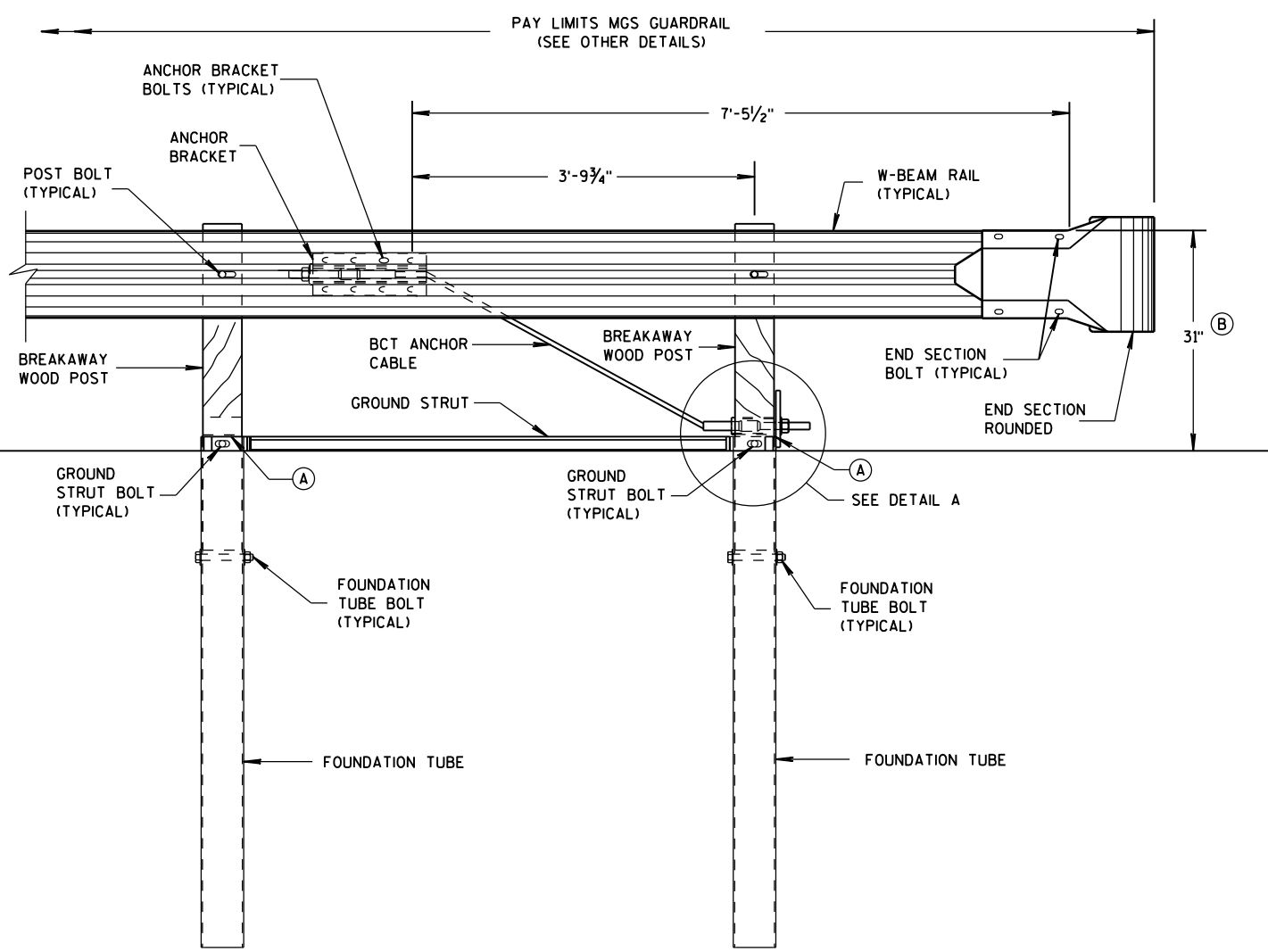
6
BEARING PLATE



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	

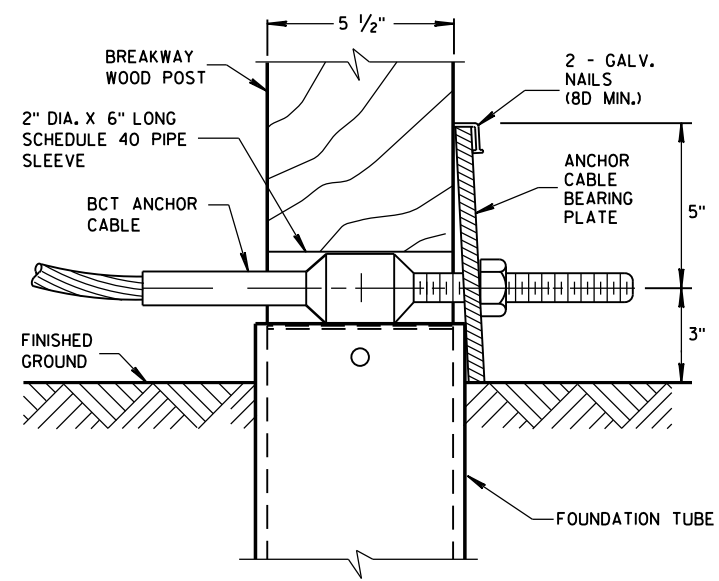


PLAN VIEW



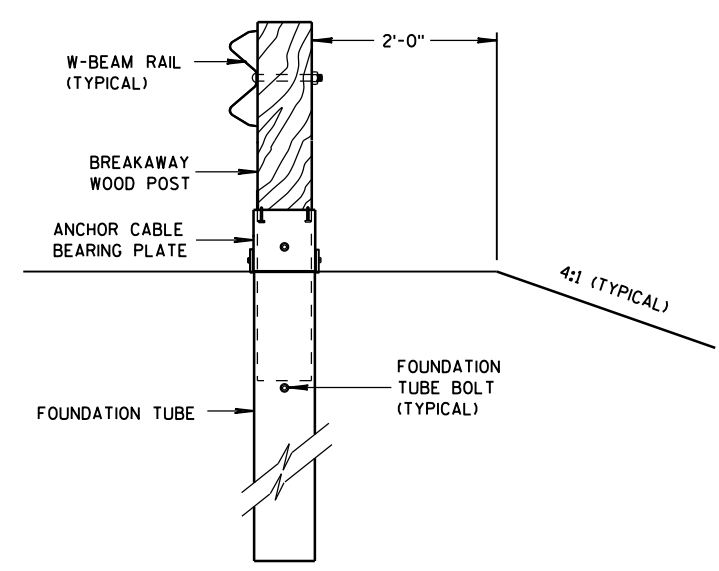
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUND STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

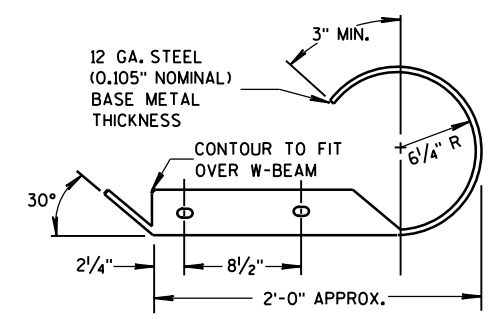
END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

FOUNDATION TUBE BOLTS ARE 7/8" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 7/8" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

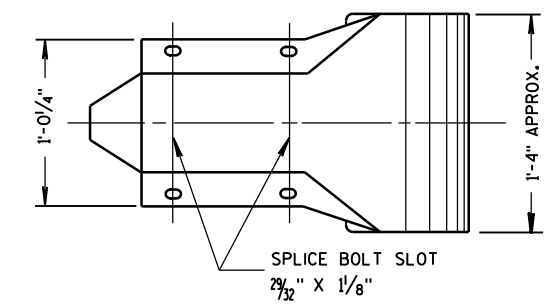
ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A 5/8" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 5/8" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

- (A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.
- (B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27 3/4" TO 32" ± 1".



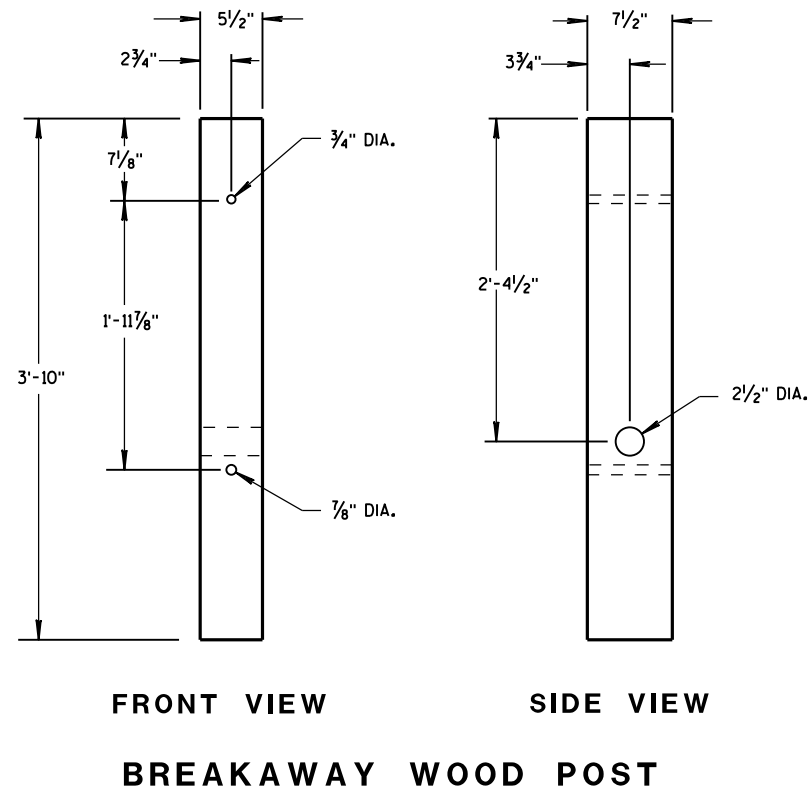
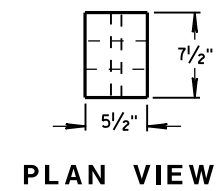
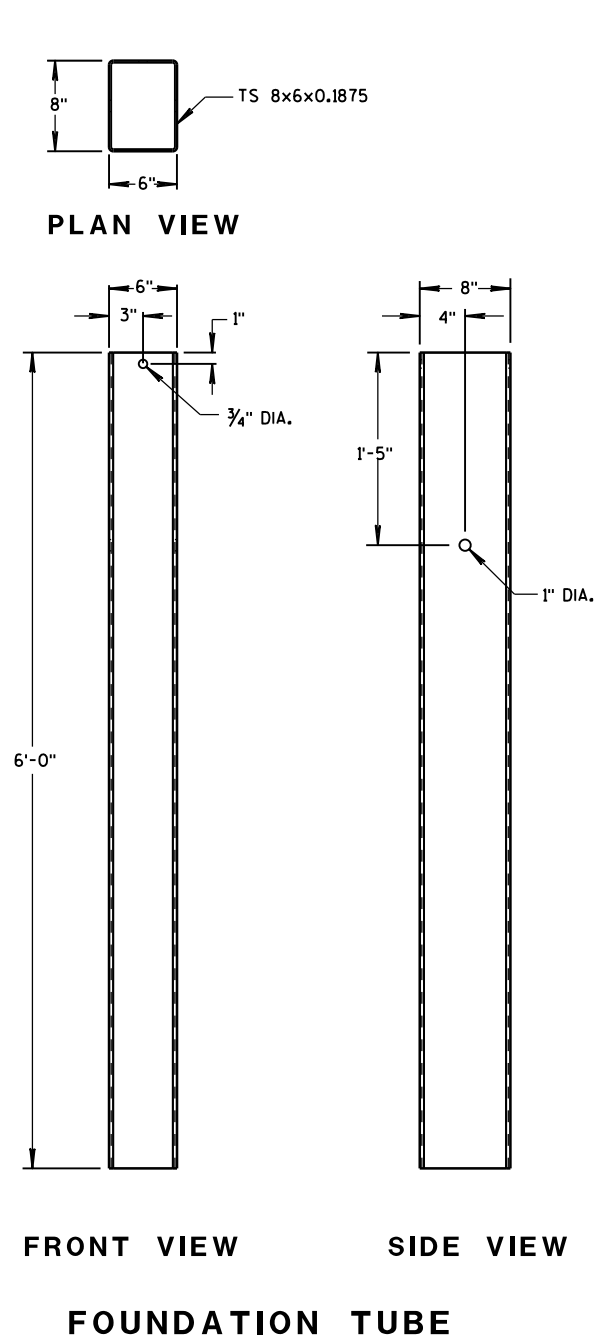
PLAN VIEW



FRONT VIEW

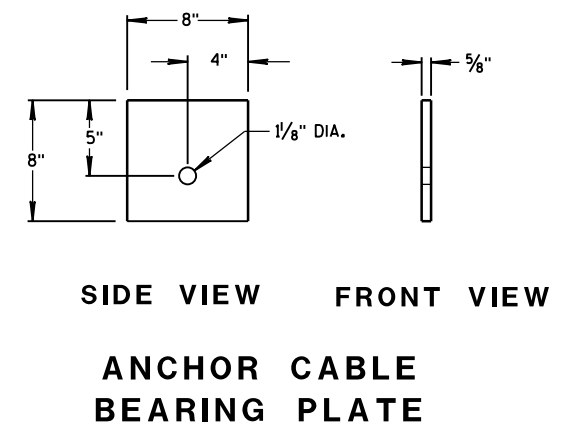
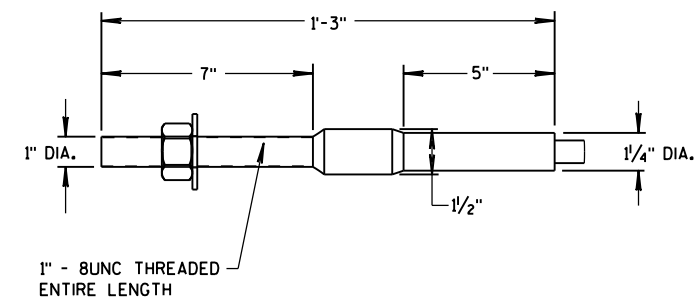
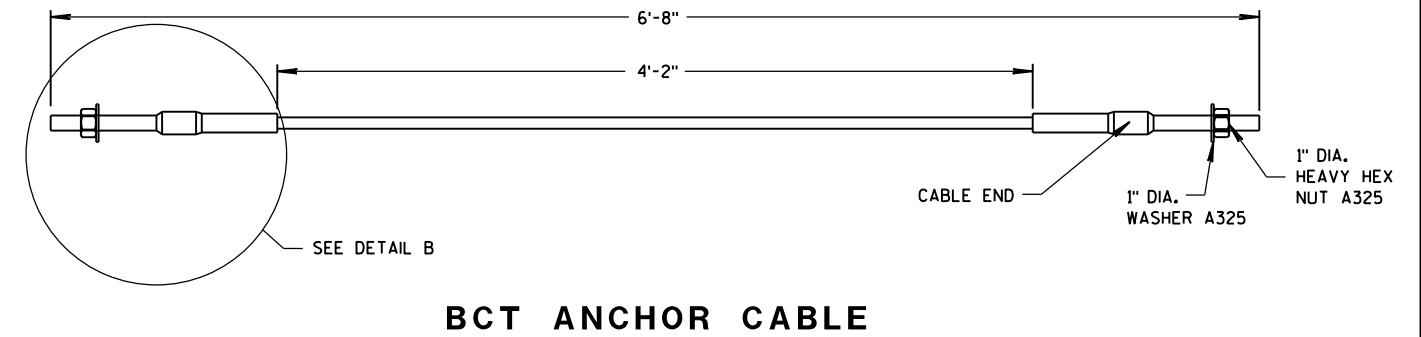
W BEAM END
SECTION ROUNDED

MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



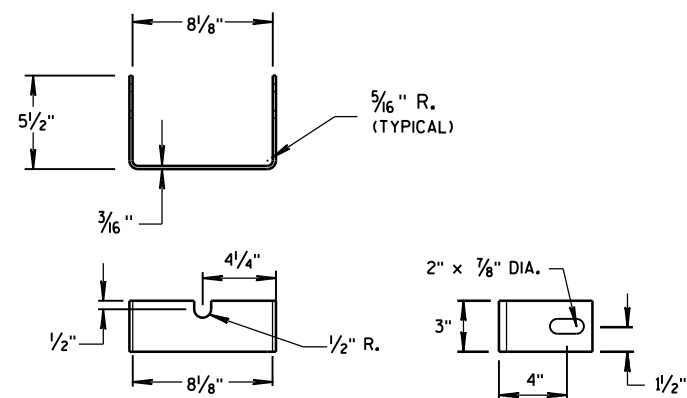
GENERAL NOTES

BCT ANCHOR CABLE IS A 3/4" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

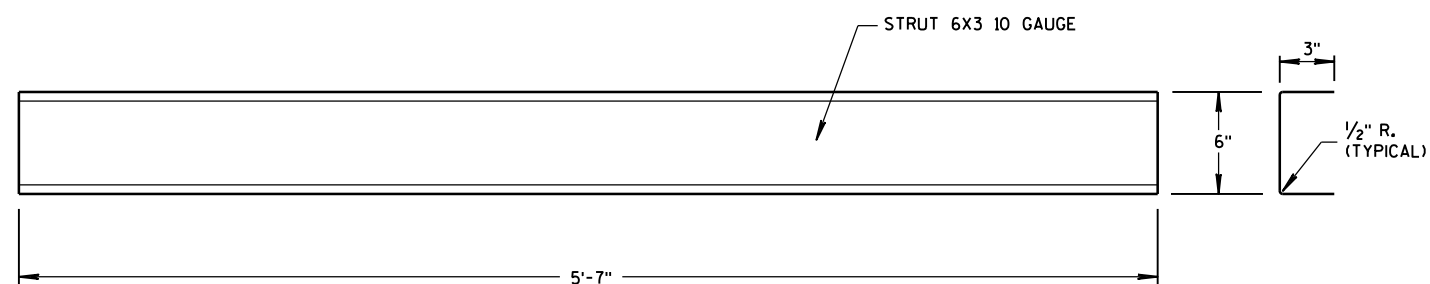


MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

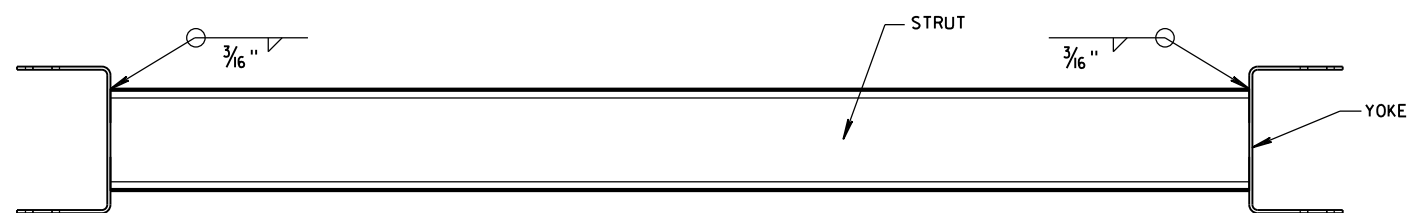
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



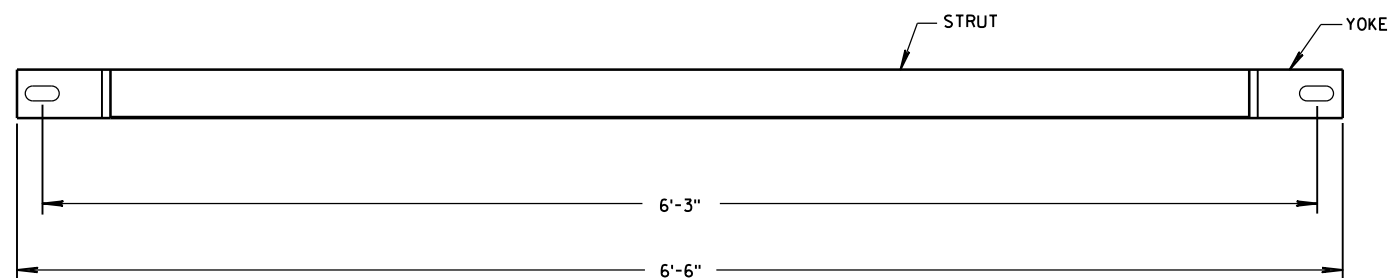
YOKE DETAIL



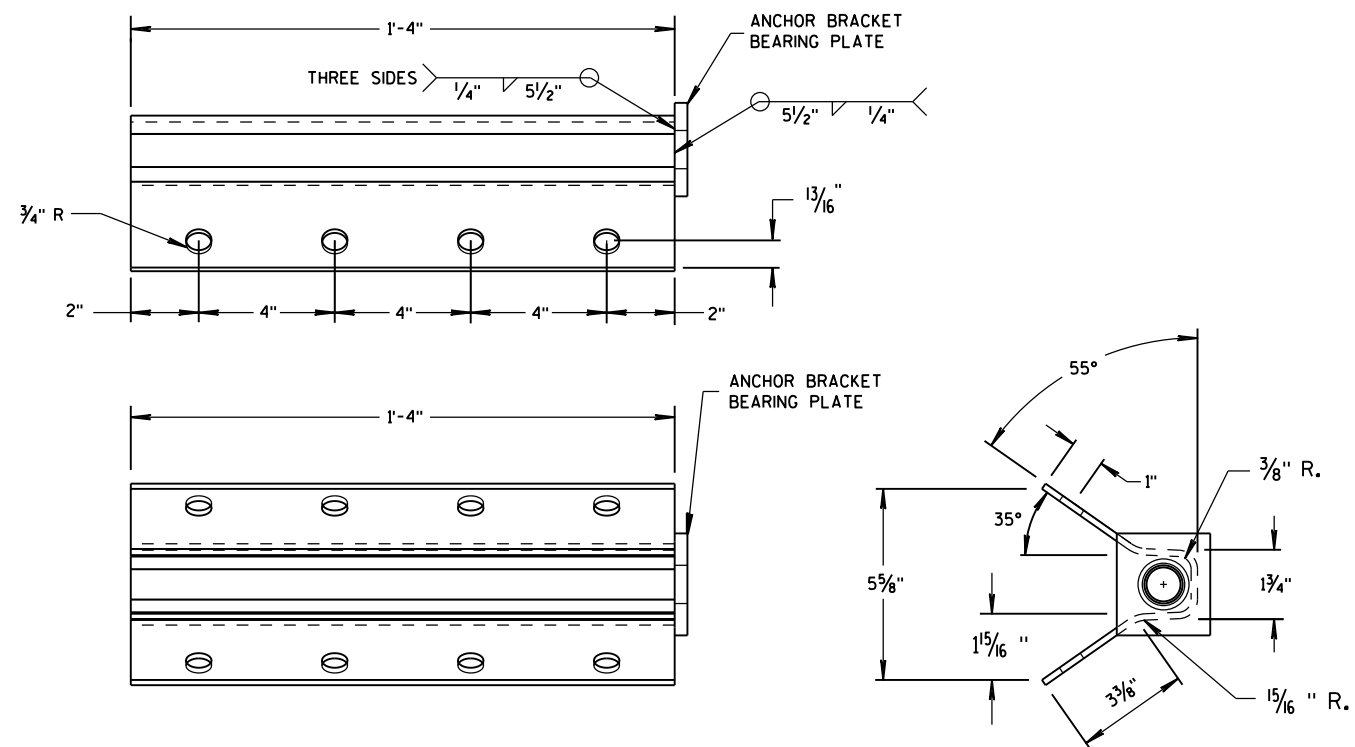
STRUT DETAIL



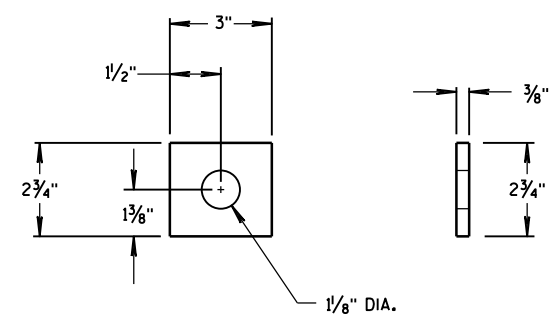
PLAN VIEW



FRONT VIEW
GROUND STRUT DETAIL



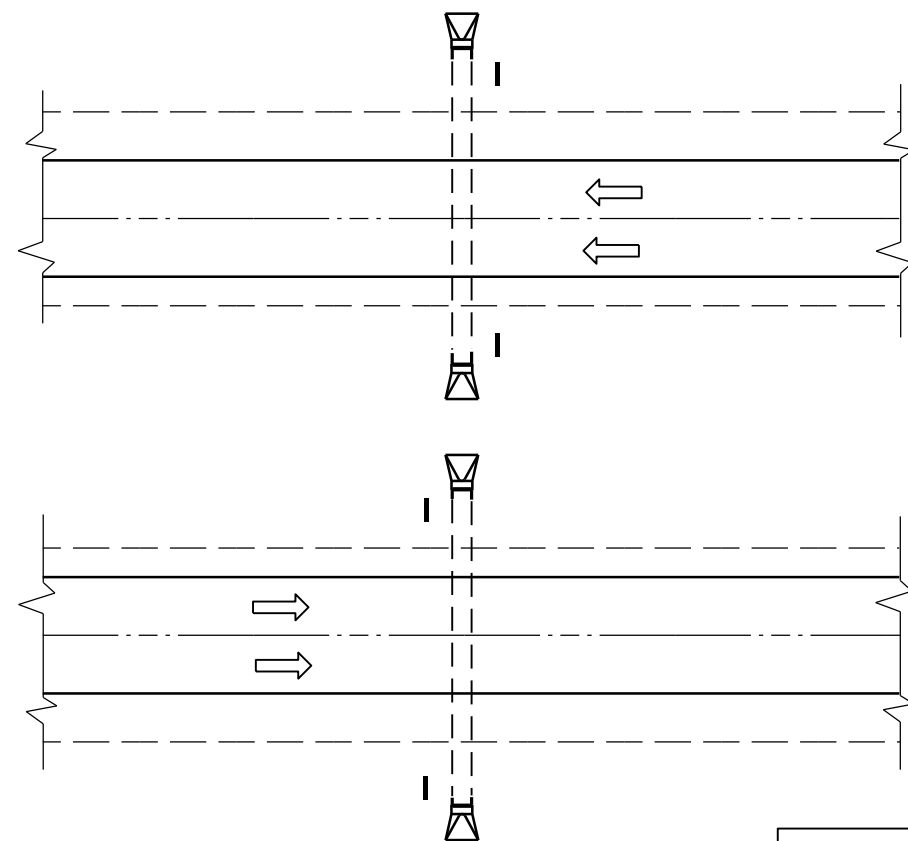
ANCHOR BRACKET

ANCHOR BRACKET
BEARING PLATE

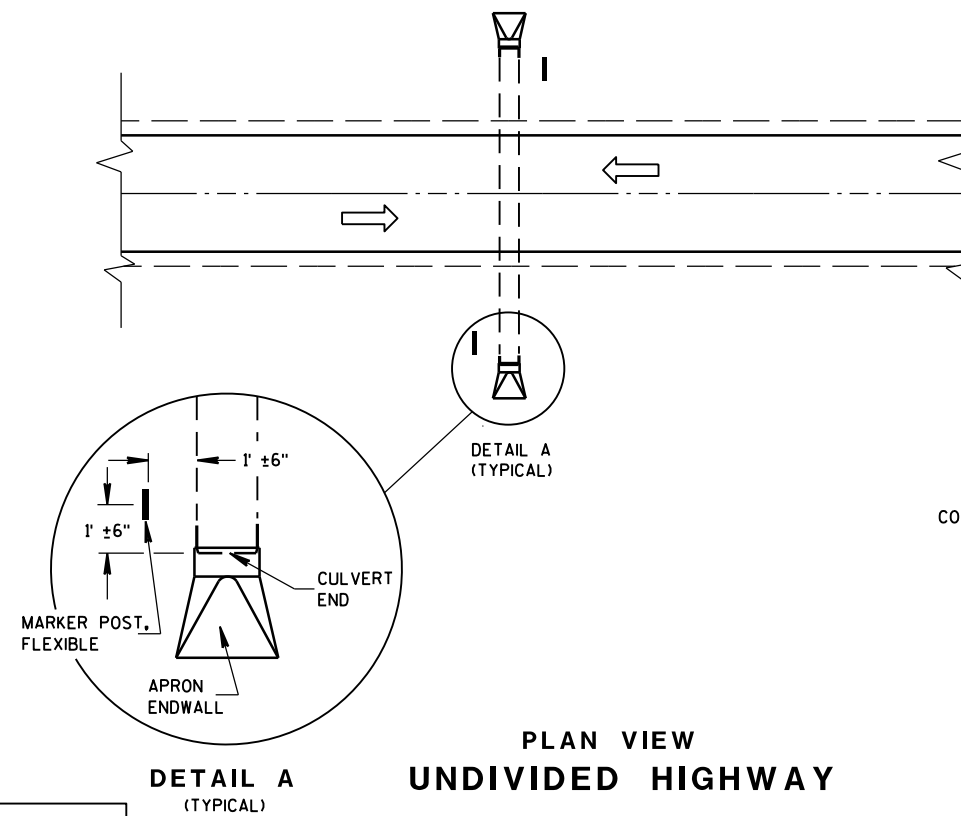
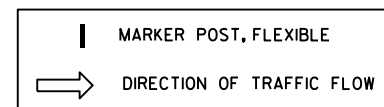
MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



PLAN VIEW
DIVIDED HIGHWAY

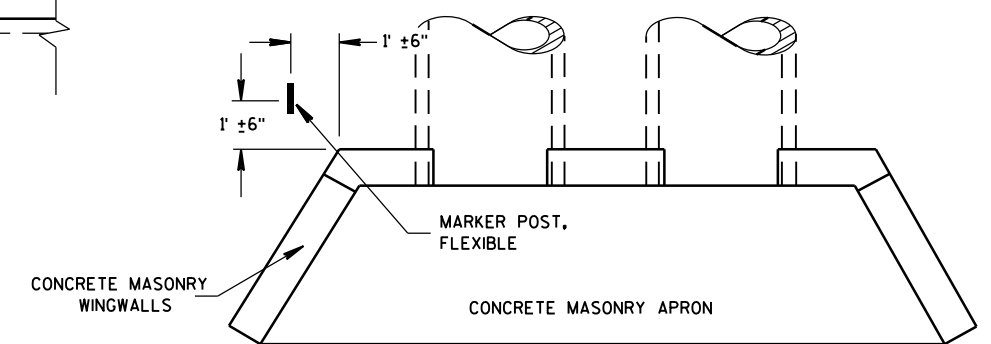


PLAN VIEW
UNDIVIDED HIGHWAY

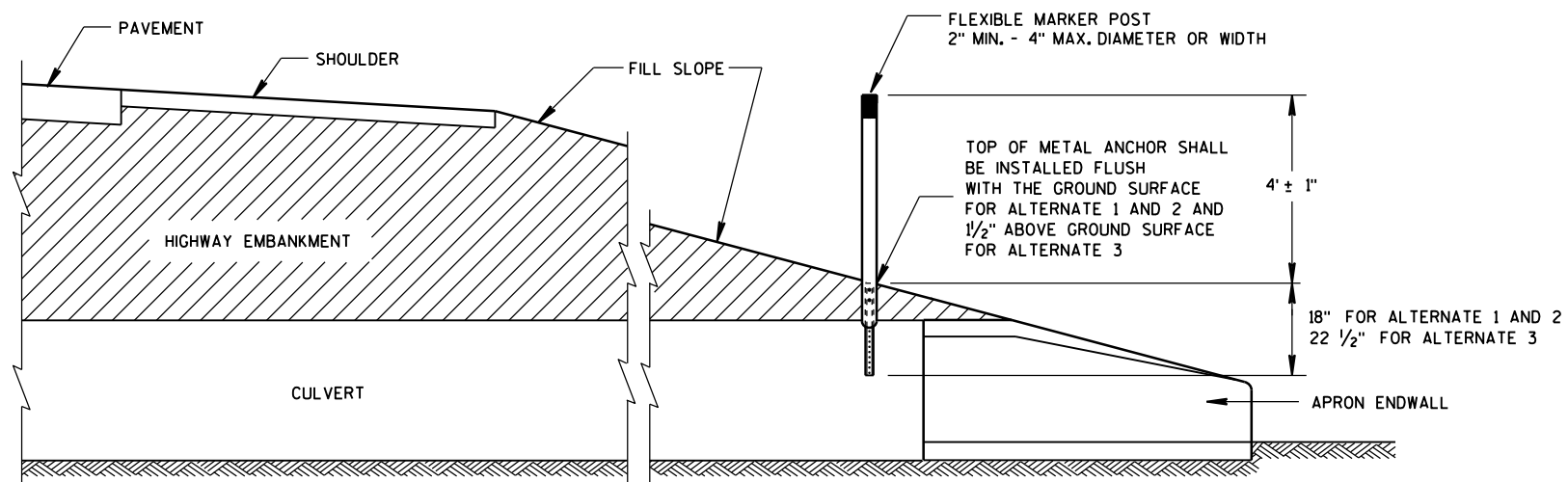
FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

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



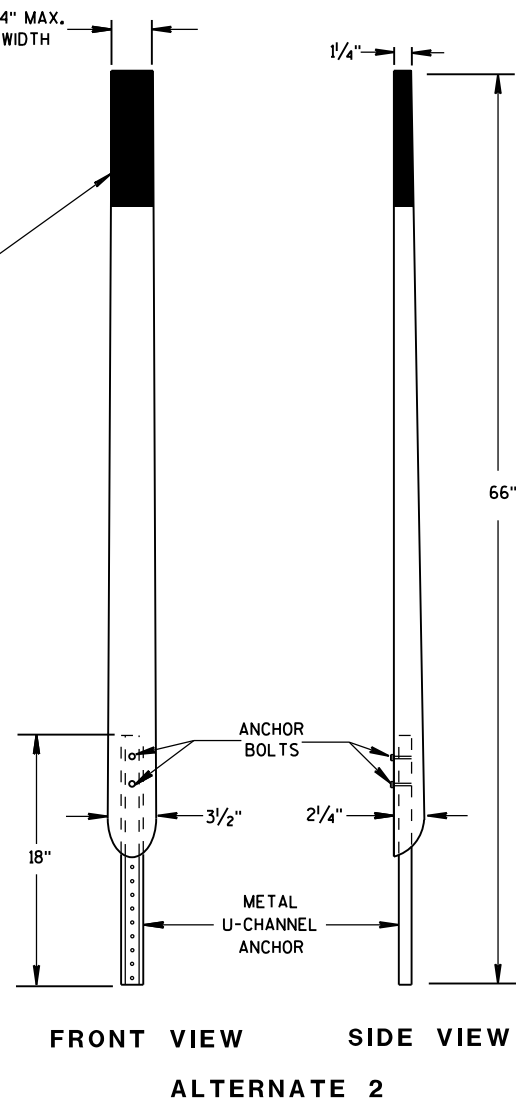
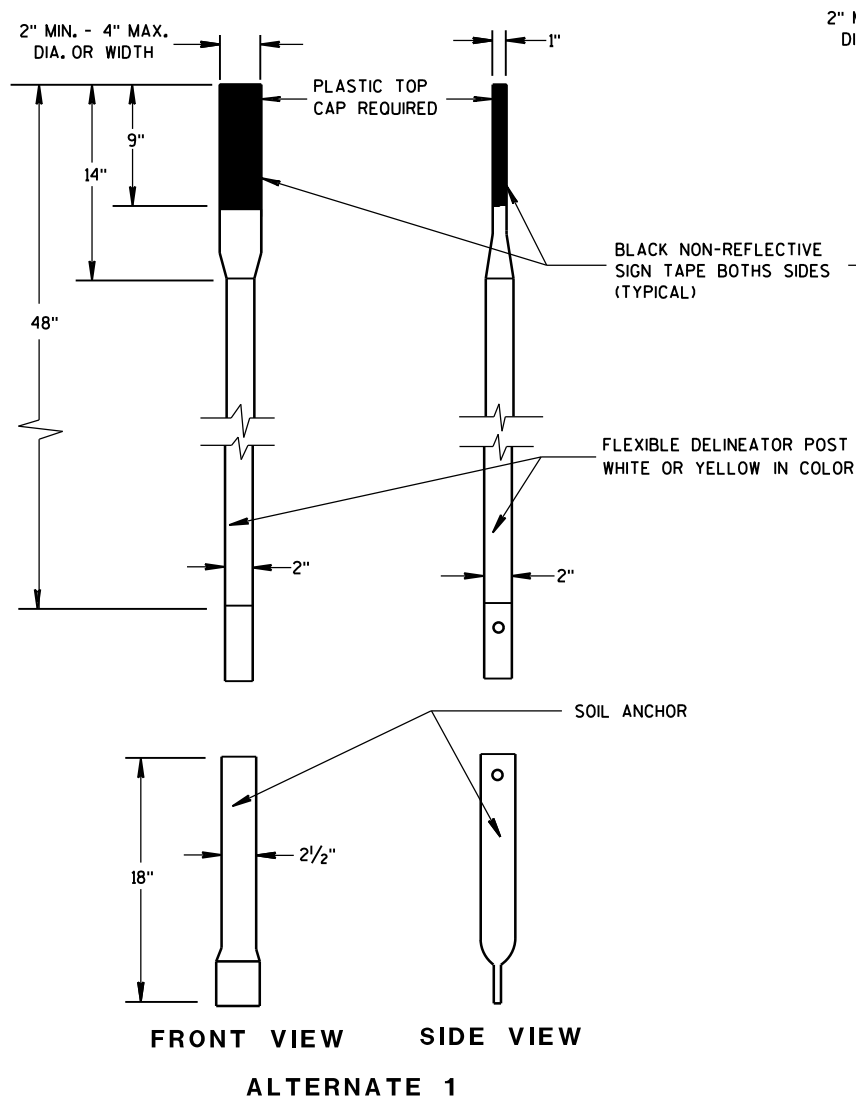
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



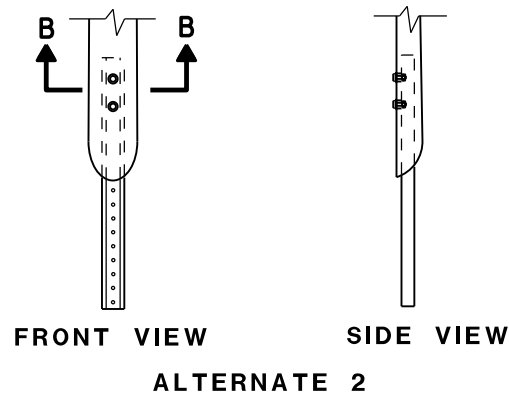
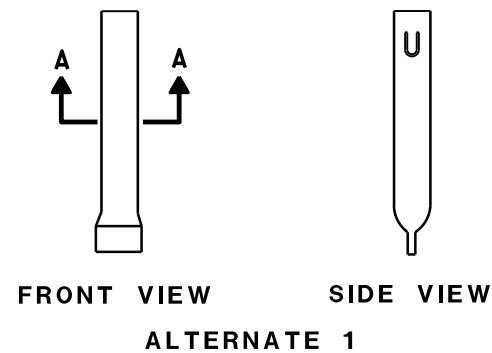
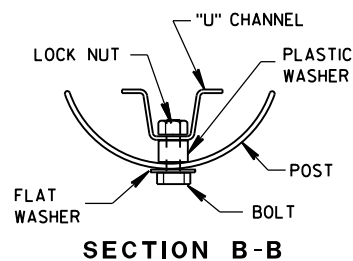
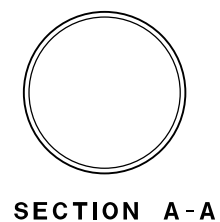
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

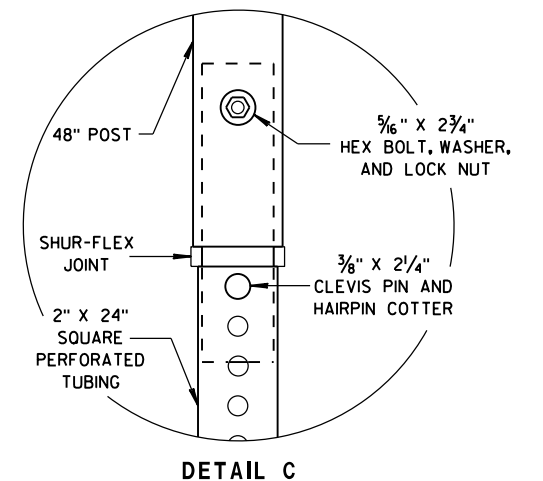
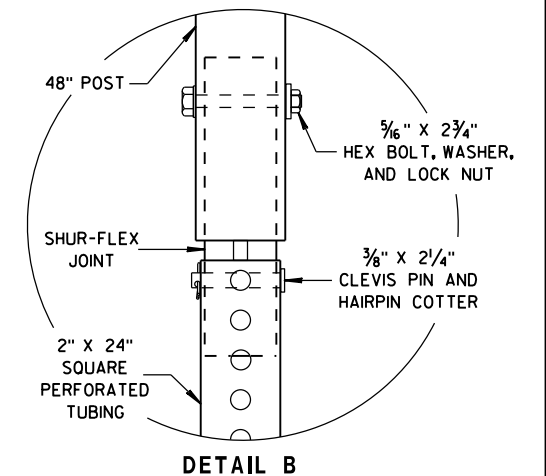
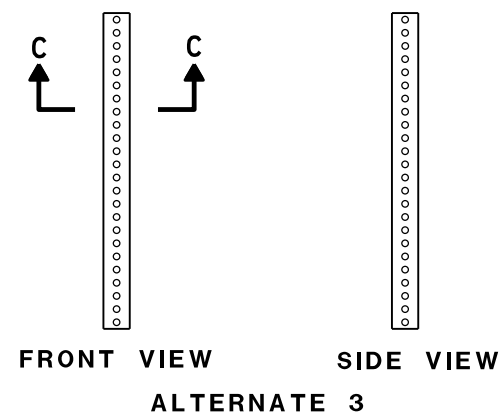
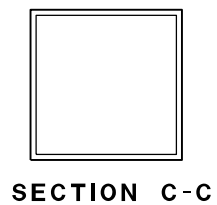
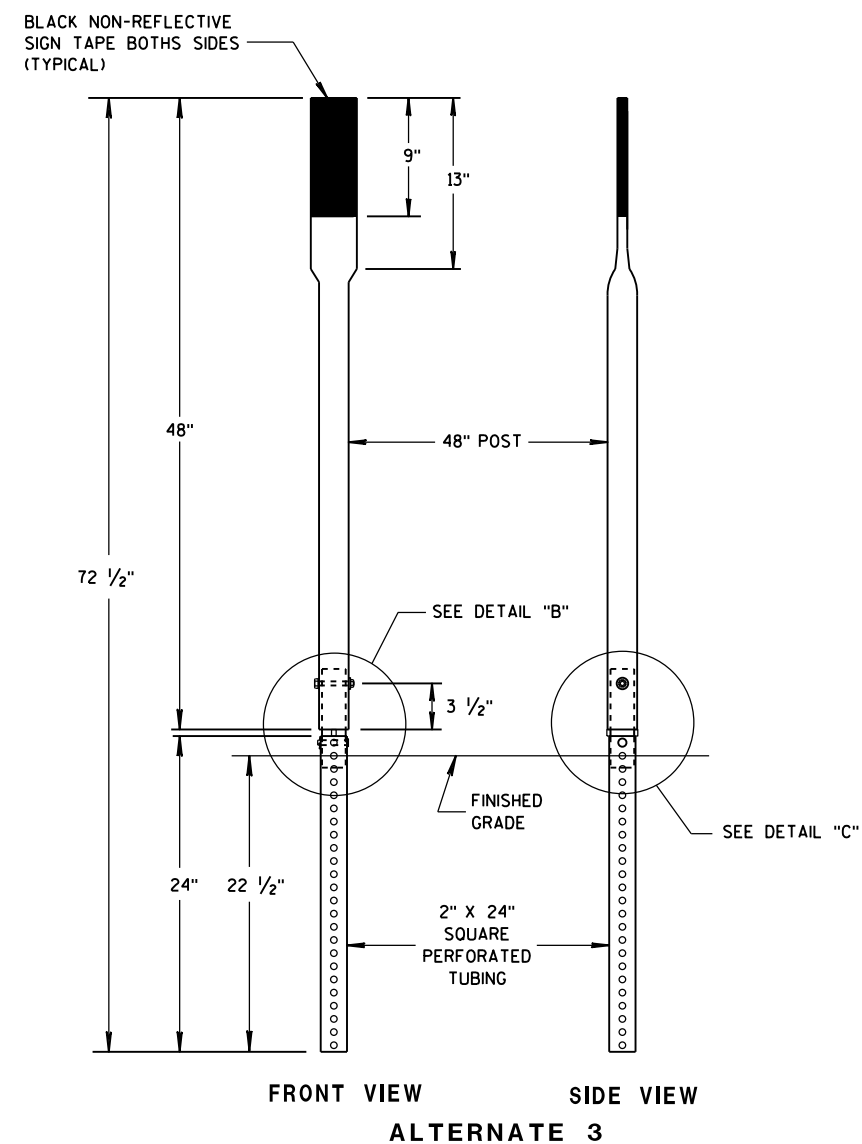
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE MARKER POSTS



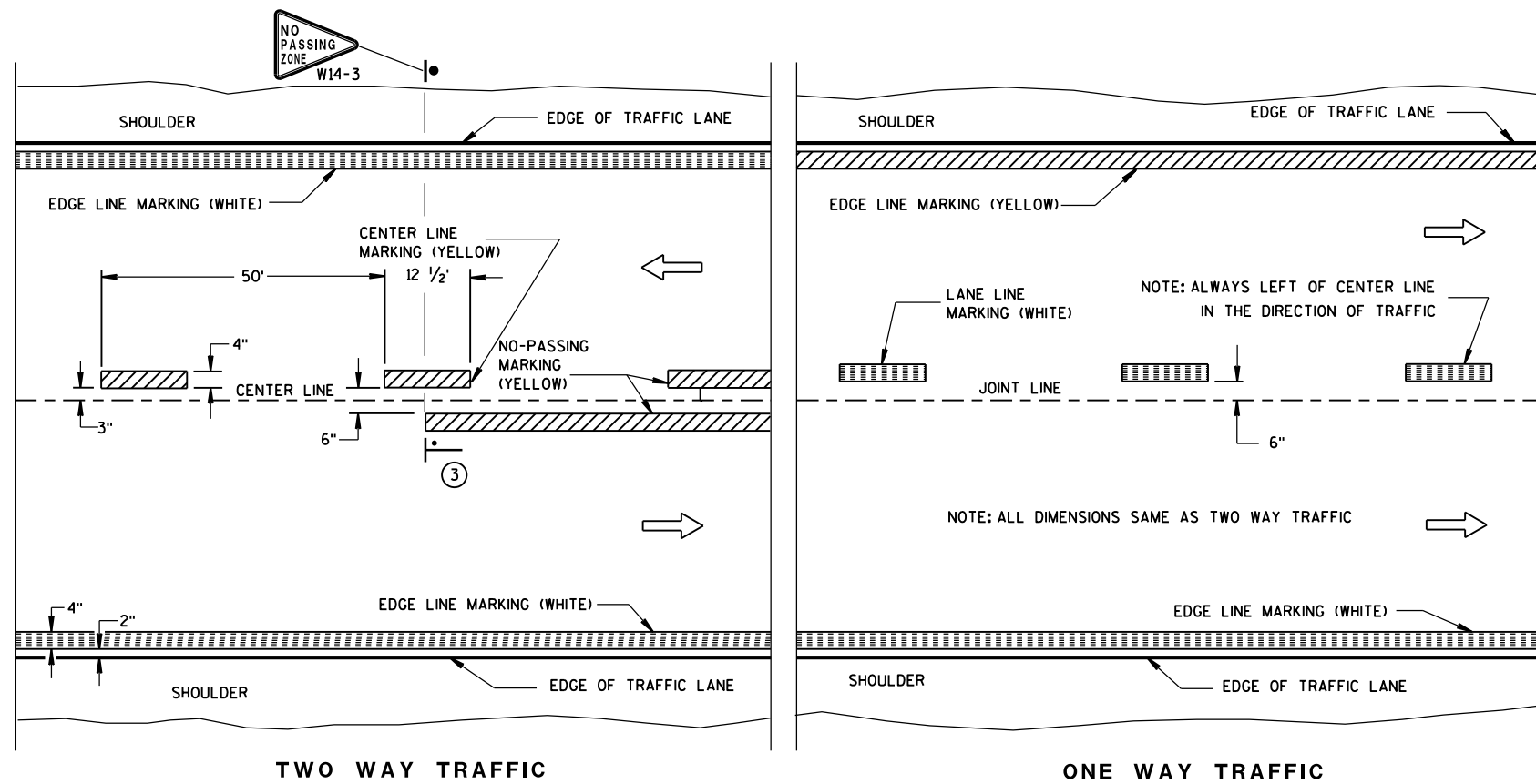
FLEXIBLE MARKER POST ANCHORS



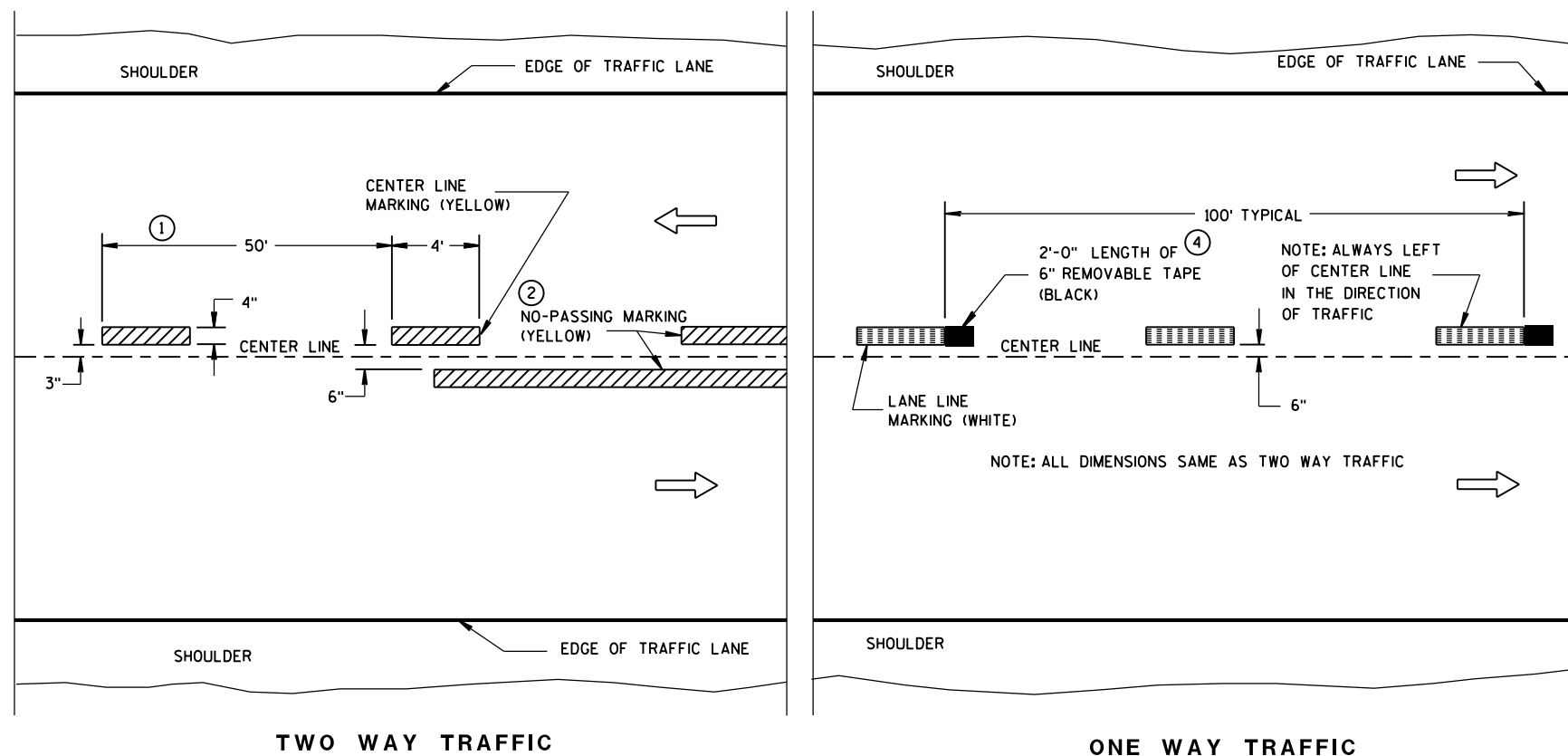
FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PERMANENT PAVEMENT MARKING




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

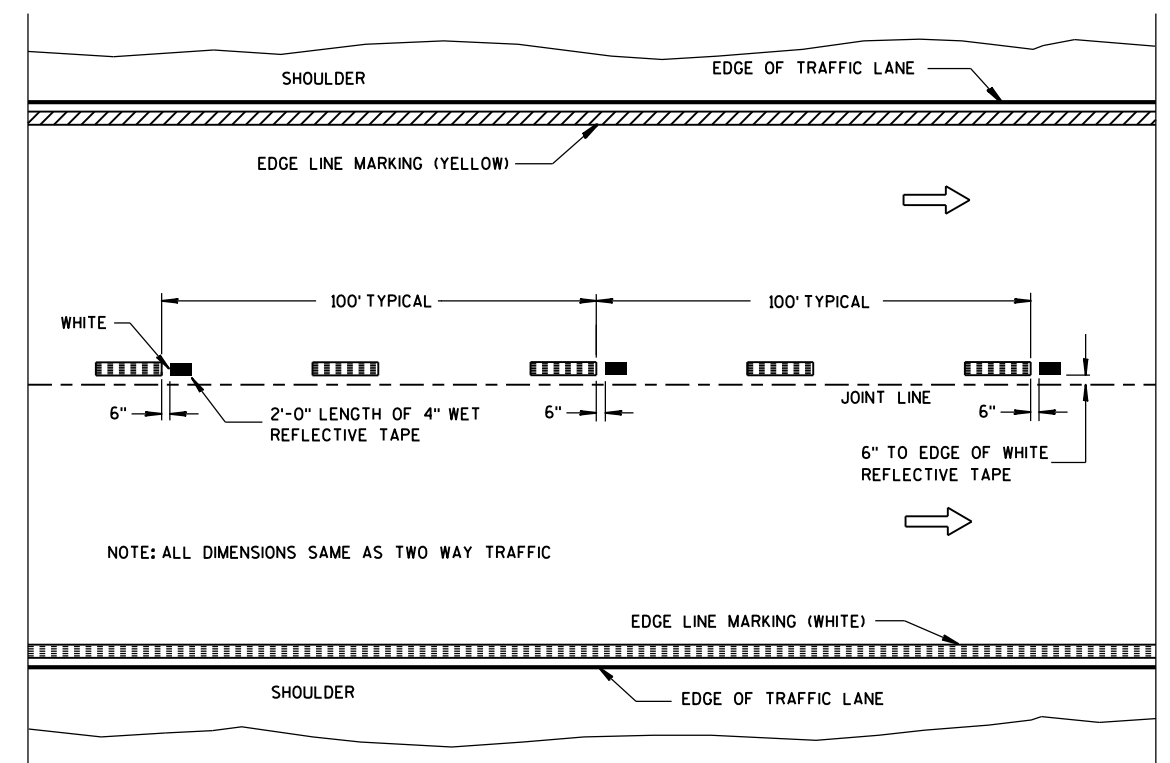
GENERAL NOTES

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

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



NOTE

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL



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

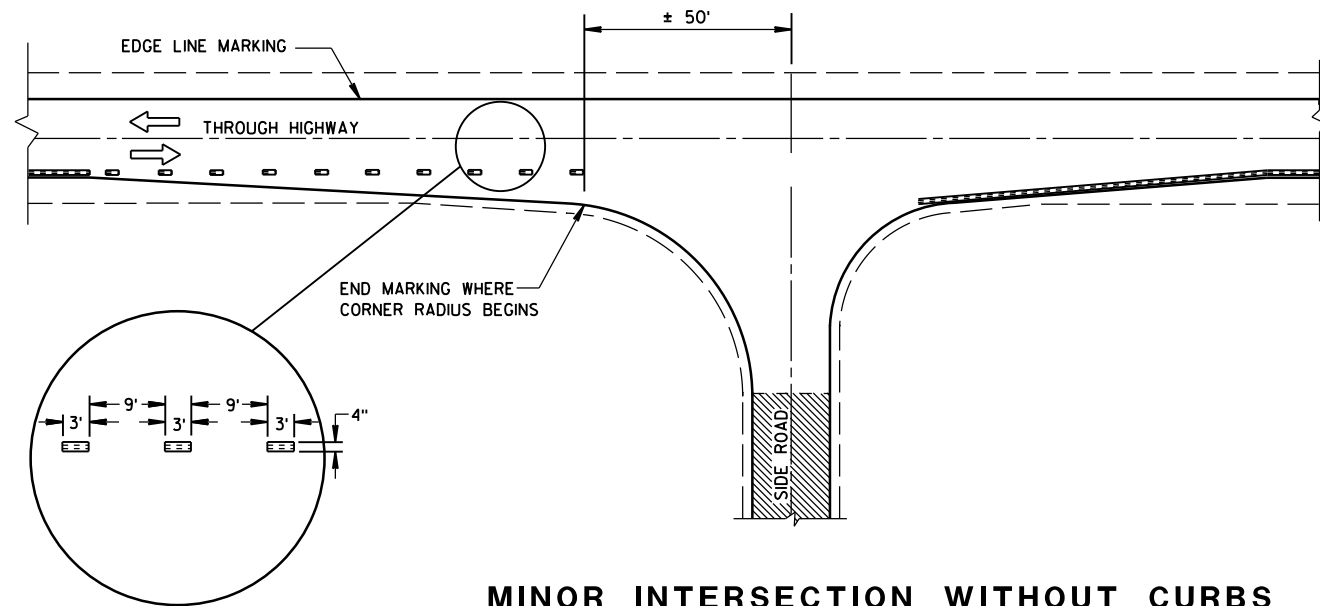
LEGEND

-  "T" MARKING
-  POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

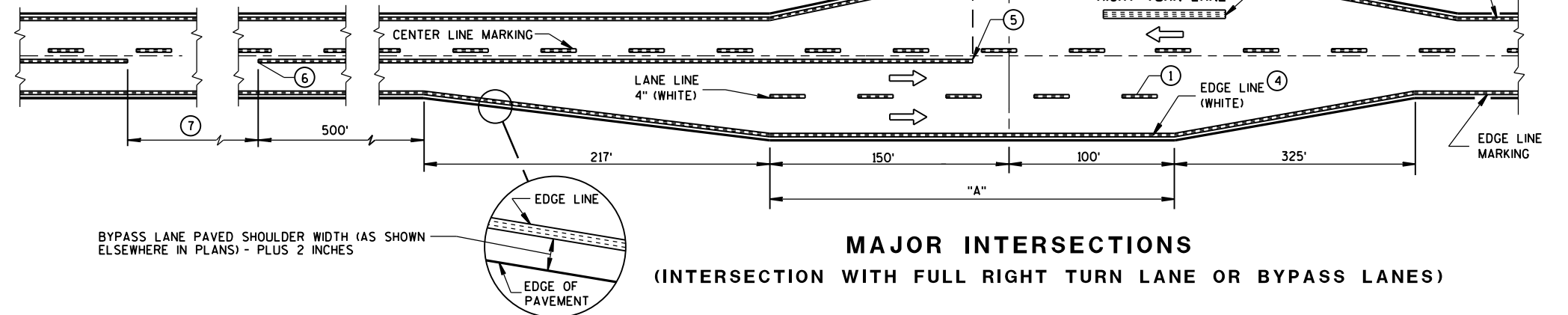
APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER
FHWA



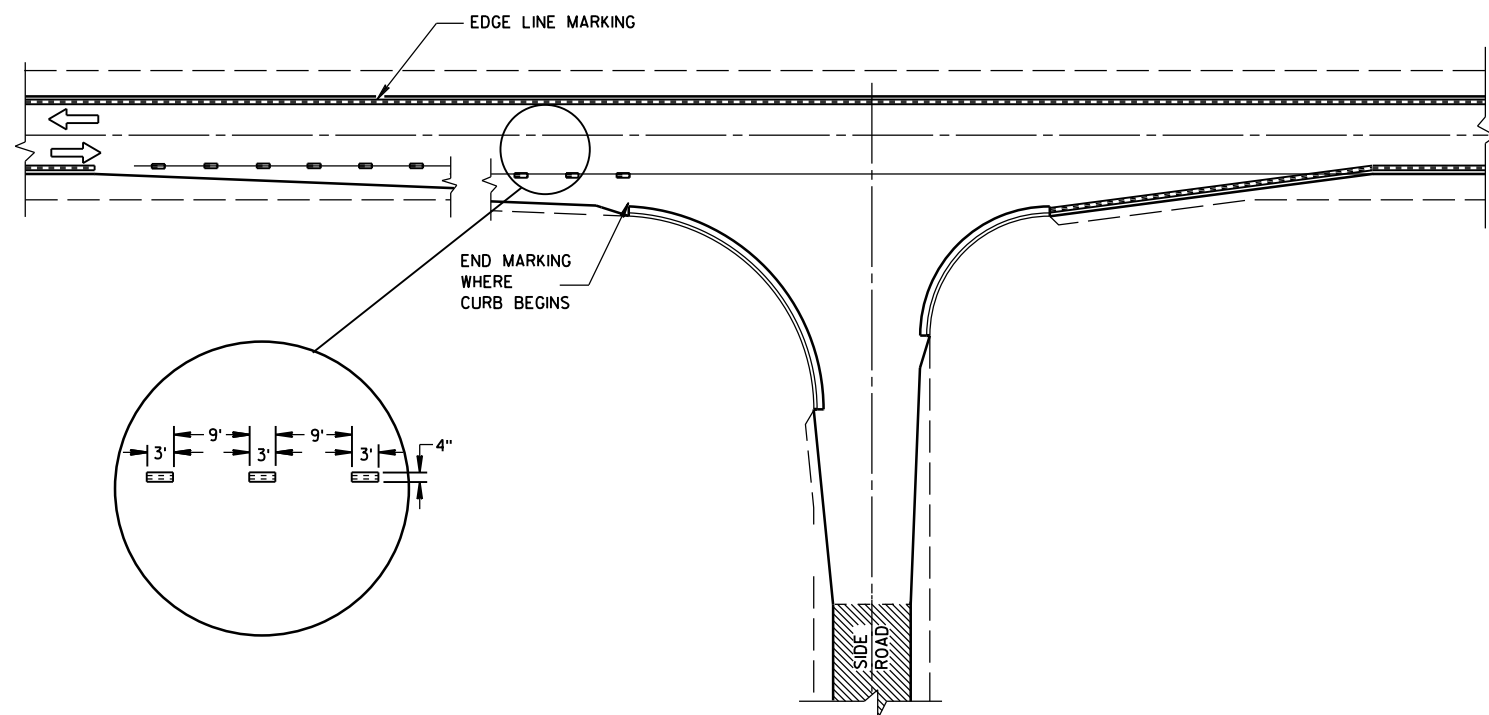
MINOR INTERSECTION WITHOUT CURBS

⑦

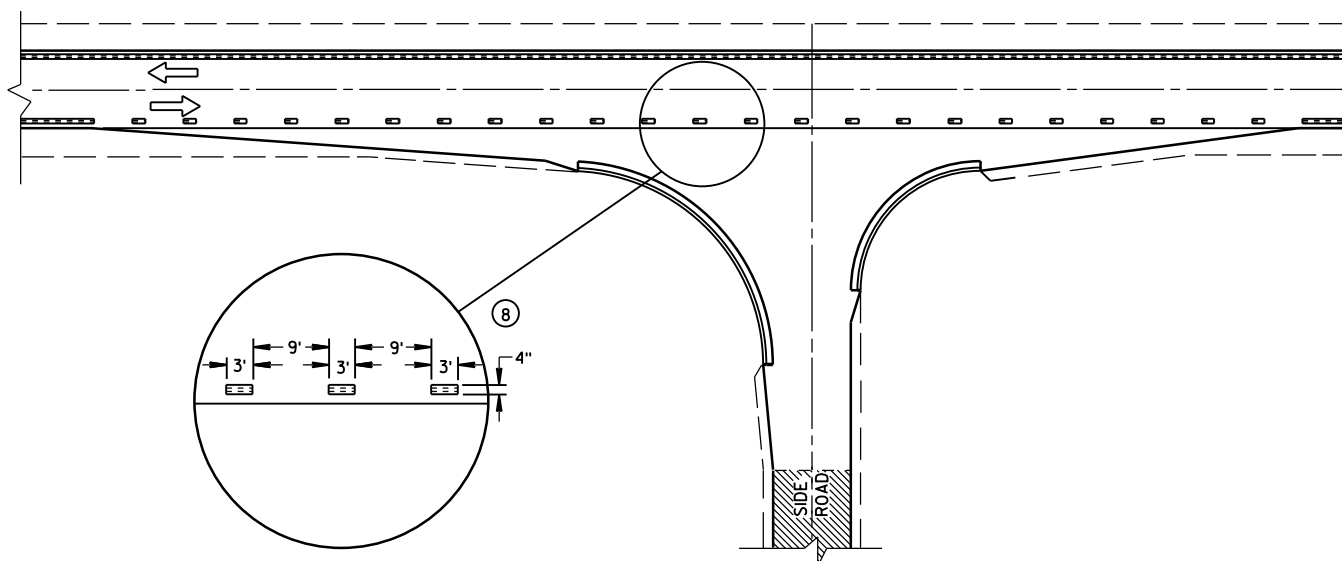
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



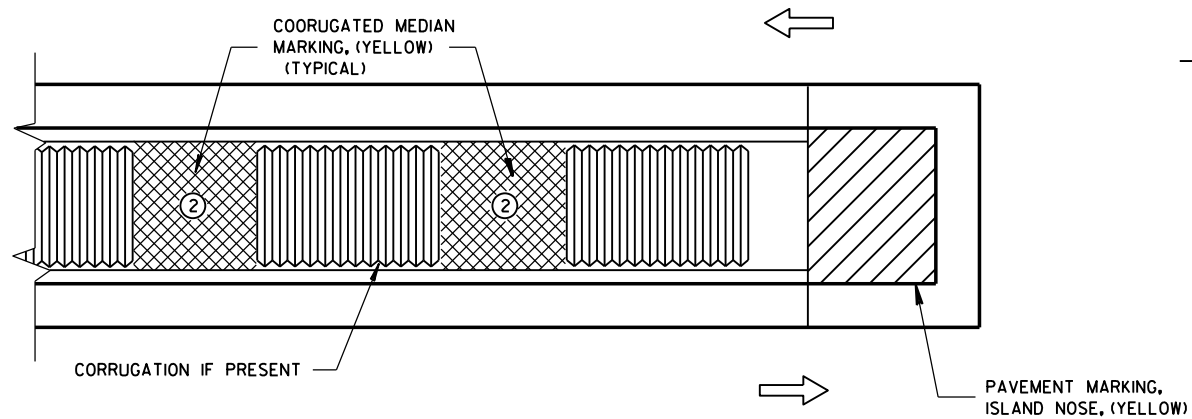
MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)

GENERAL NOTES

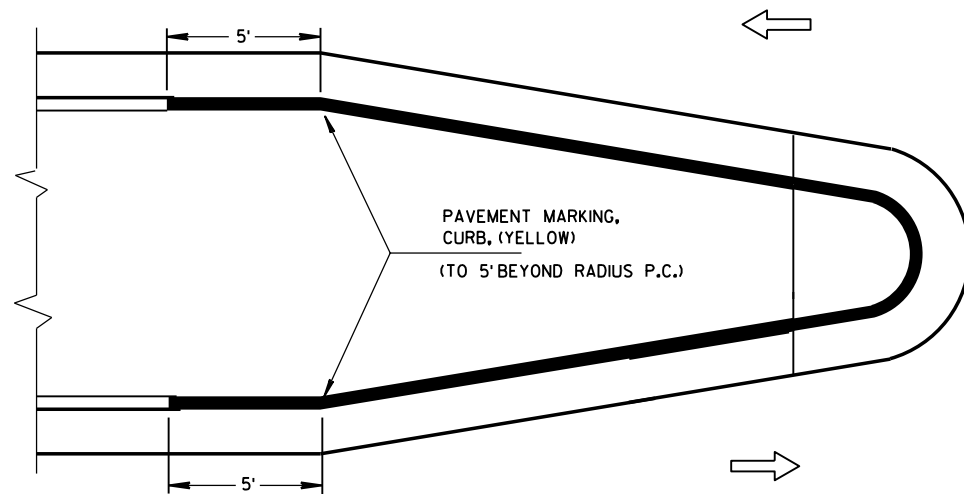
- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
 - ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
 - ③ ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE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

PAVEMENT MARKING
(INTERSECTIONS)

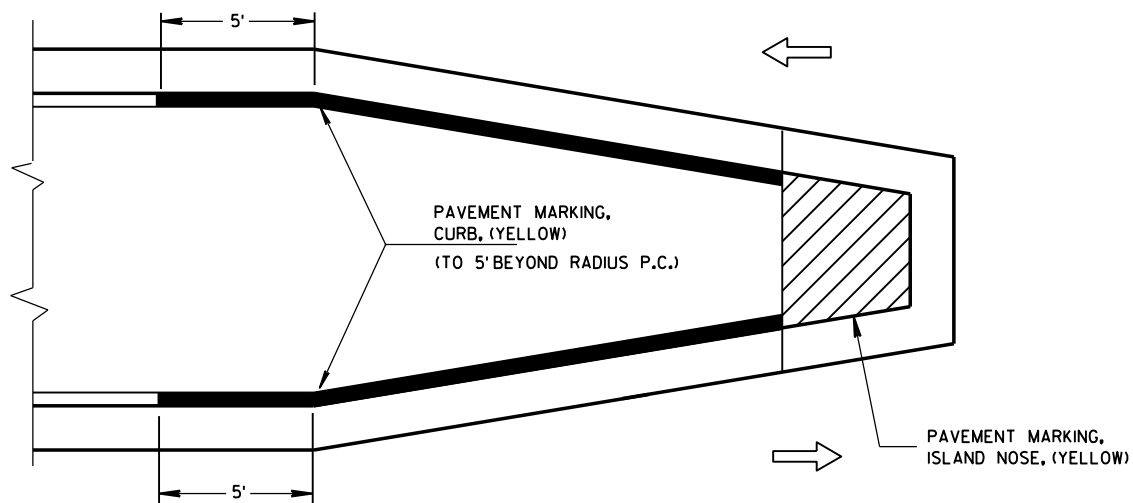
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MEDIAN ISLAND WITH SQUARE BLUNT NOSE

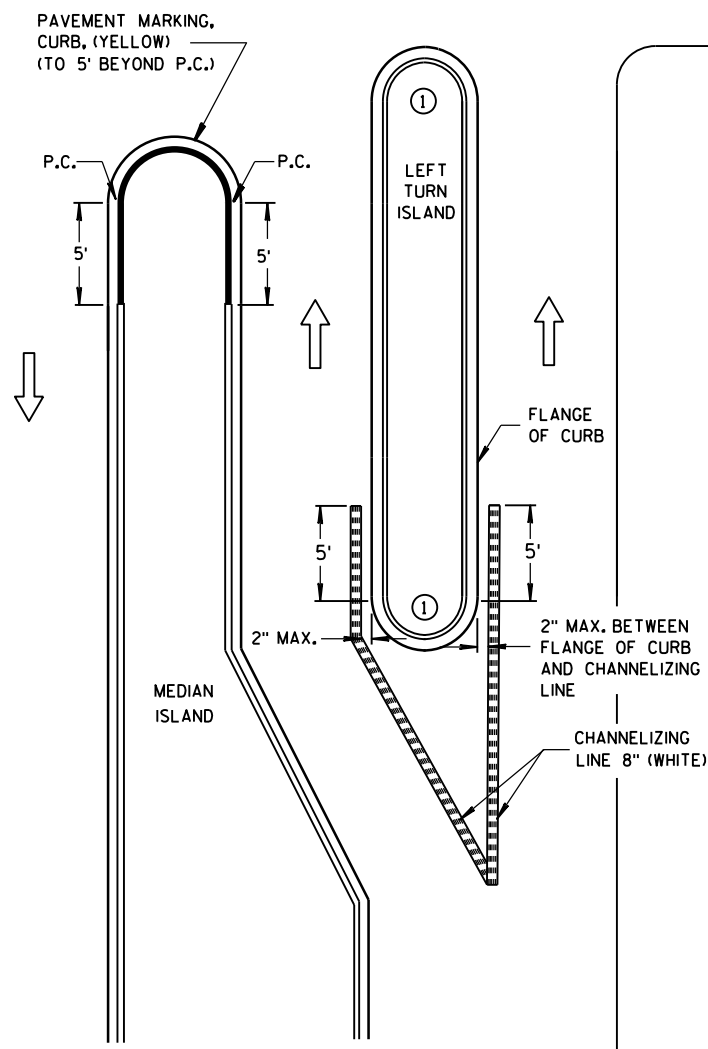


MEDIAN ISLAND WITH ROUND BLUNT NOSE



MEDIAN ISLAND WITH SLOPED NOSE

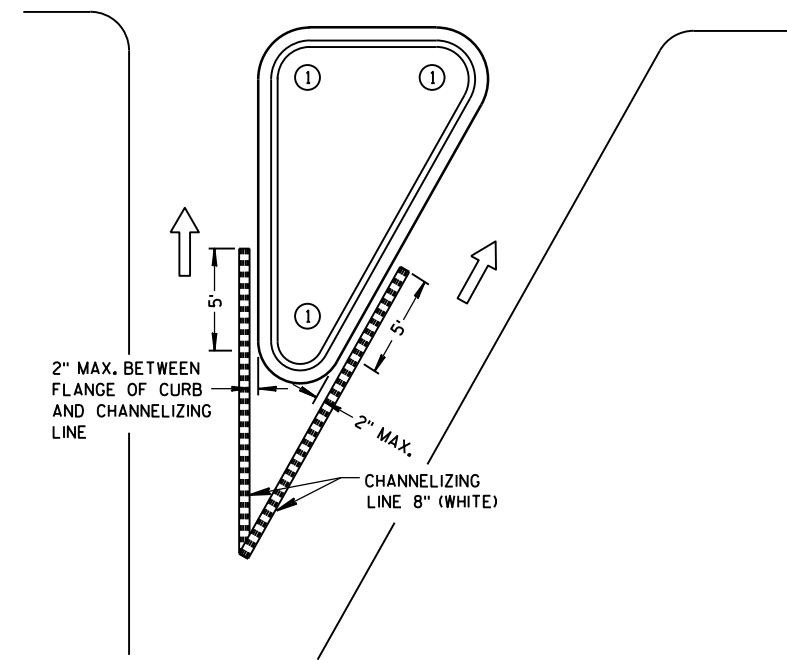
TYPICAL PLACEMENT OF PAVEMENT MARKING ON MEDIAN ISLANDS



LEFT TURN & MEDIAN ISLAND

GENERAL NOTES

- 1 DO NOT MARK CURB NOSES THAT SEPARATE LANES OF TRAFFIC TRAVELING IN THE SAME DIRECTION.
- 2 WHEN CONCRETE CORRUGATED MEDIAN IS CONSTRUCTED TO SEPARATE TRAFFIC OPERATING IN THE OPPOSING DIRECTION YELLOW PAVEMENT MARKING SHALL BE APPLIED TO THE FLAT PORTION OF THE CONCRETE CORRUGATED MEDIAN. THE ITEM OF PAVEMENT MARKING, CONCRETE CORRUGATED MEDIAN, WILL BE MEASURED IN PLACE AND ACCEPTED IN ACCORDANCE WITH THE CONTRACT AND PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT.



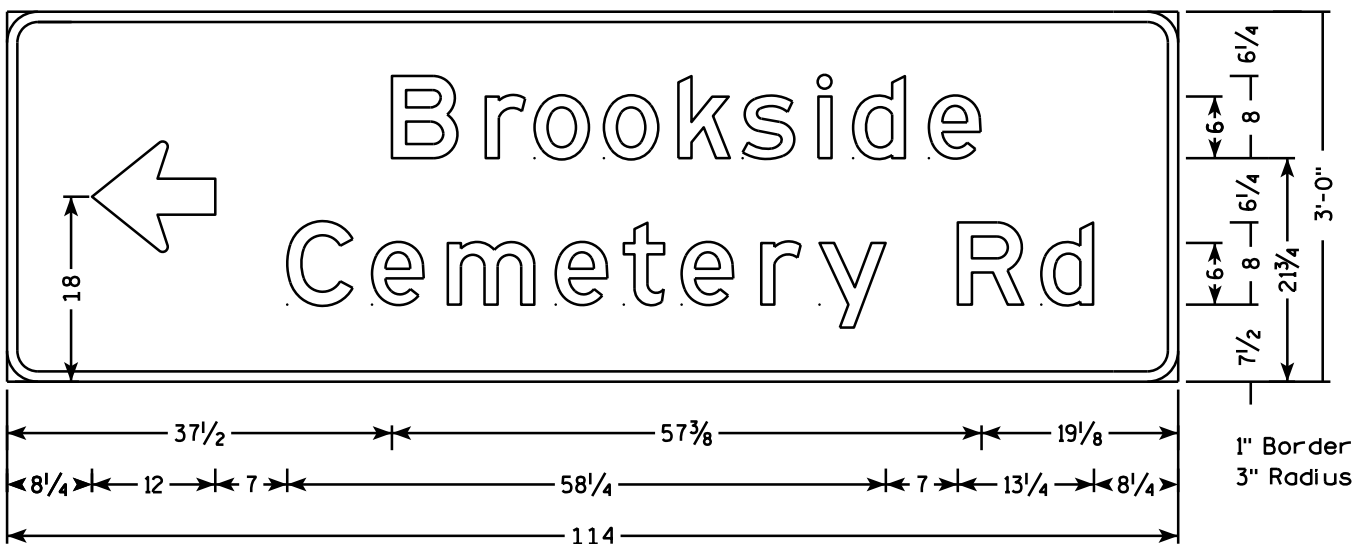
RIGHT TURN ISLAND

LEGEND

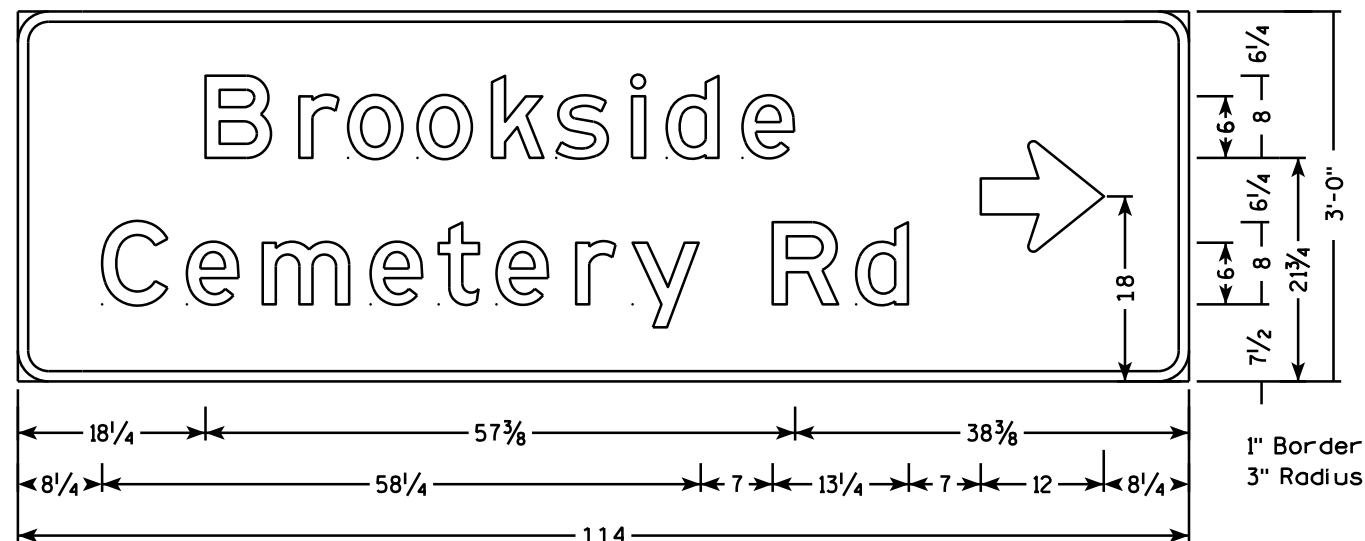
- ISLAND NOSE MARKING
- CURB MARKING
- CORRUGATED MEDIAN MARKING
- DIRECTION OF TRAVEL

PAVEMENT MARKING (ISLANDS)

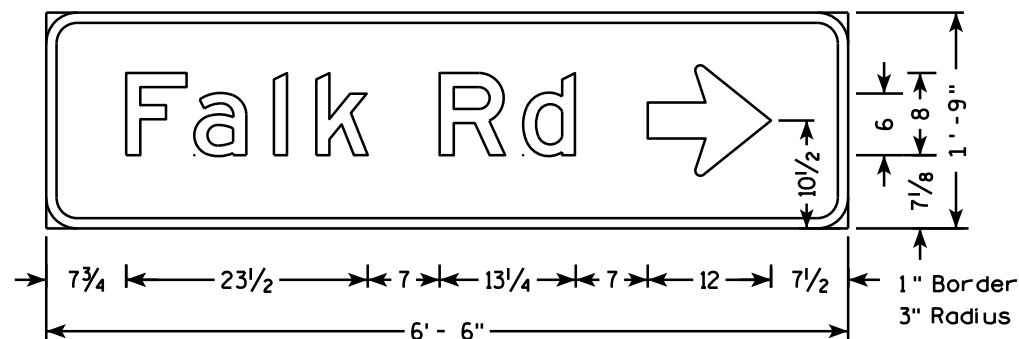
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DI-2

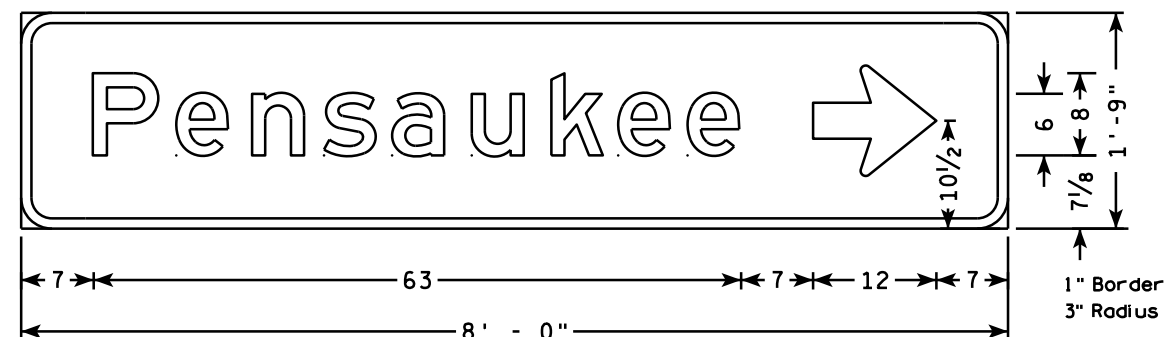


DI-2

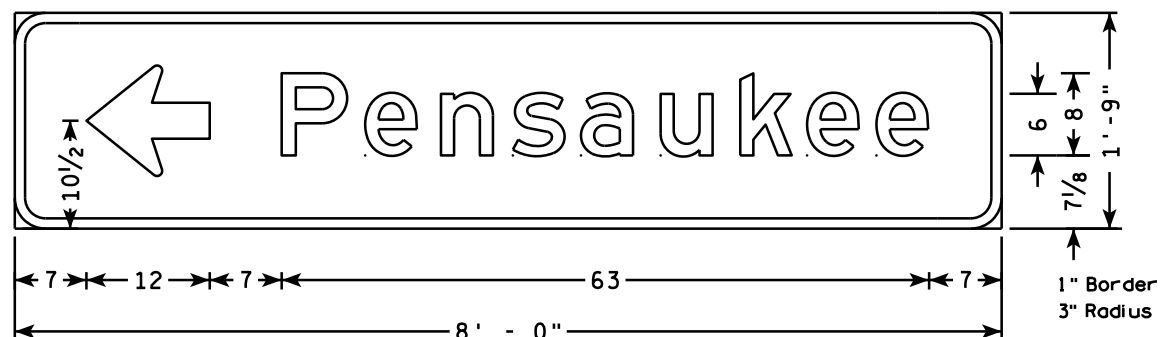


DI-1

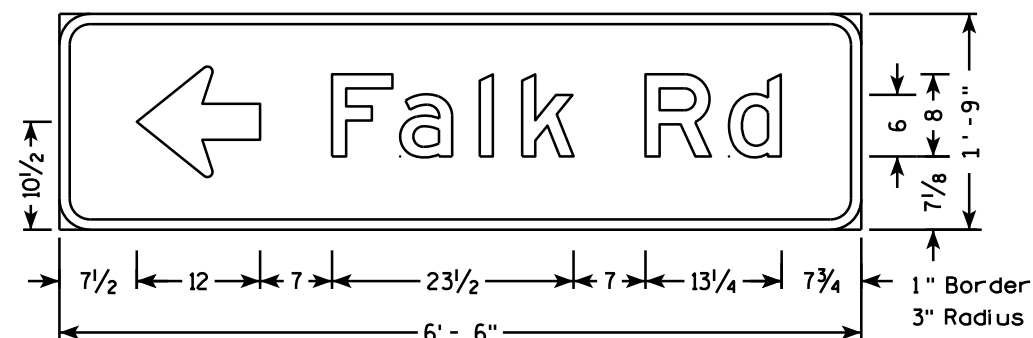
- NOTES**
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - Green
Message - White
 3. Message Series - E



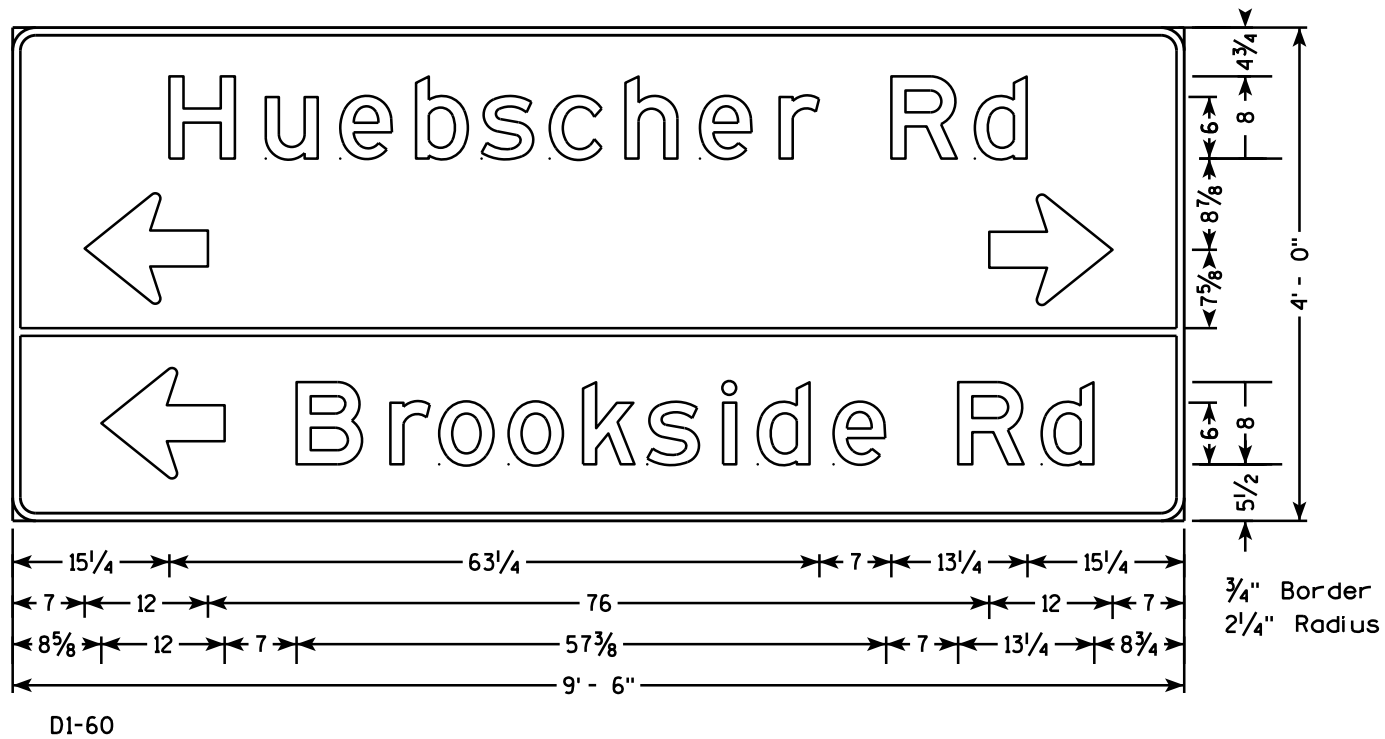
DI-1



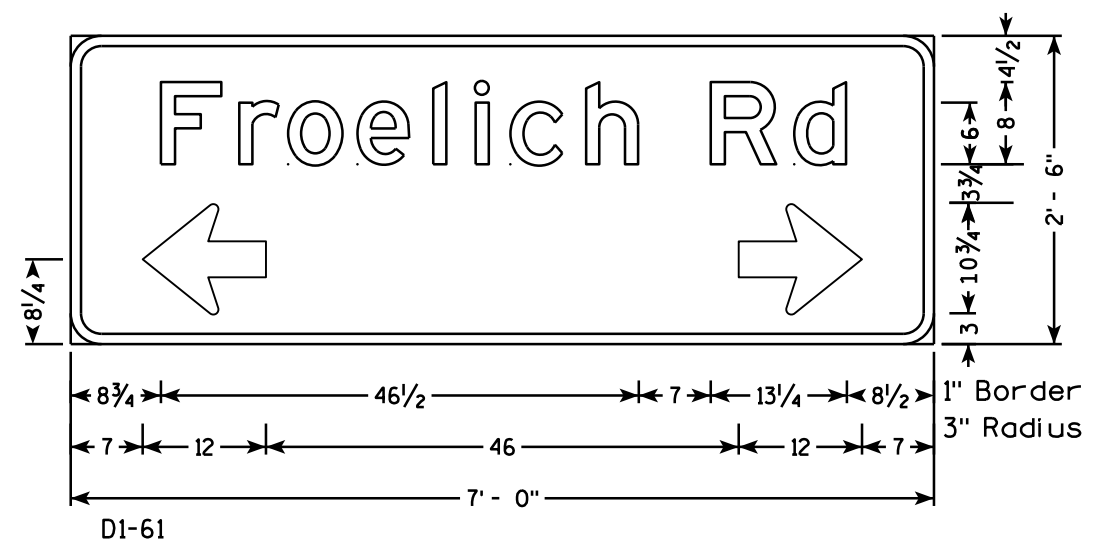
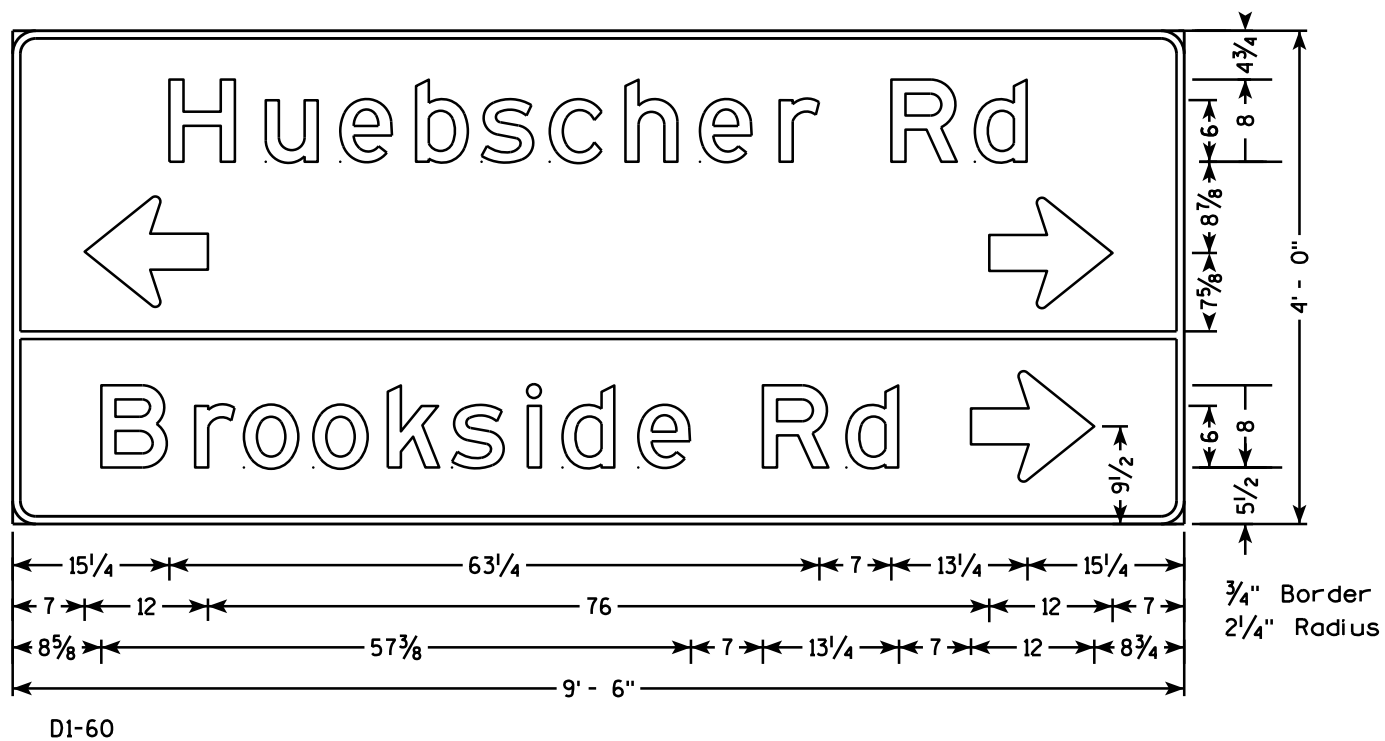
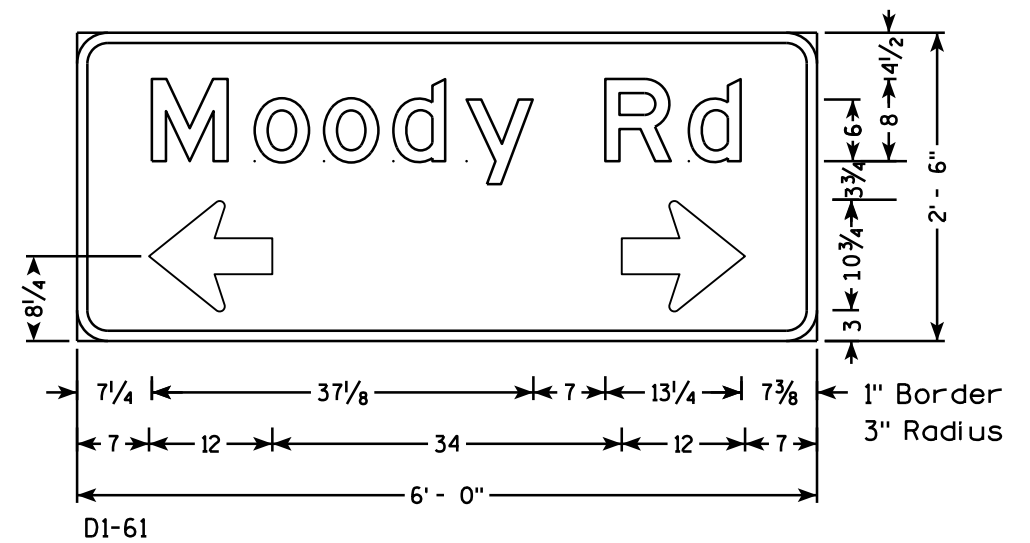
DI-1

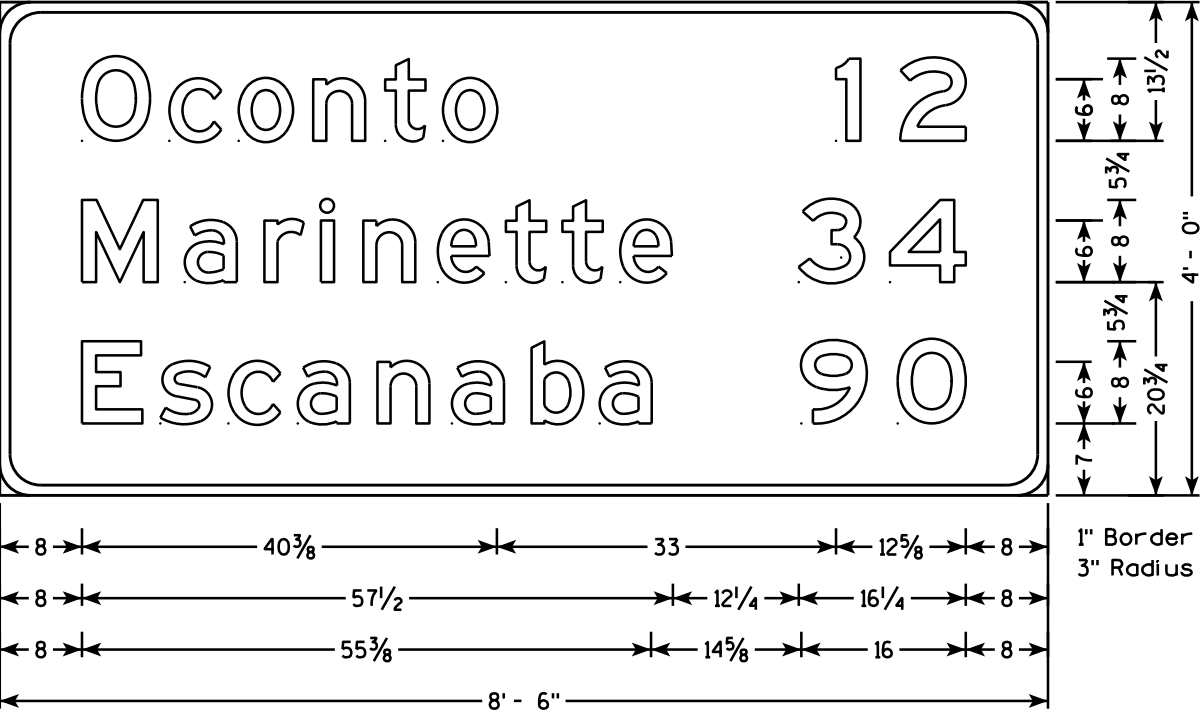


DI-1



- NOTES**
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - Green
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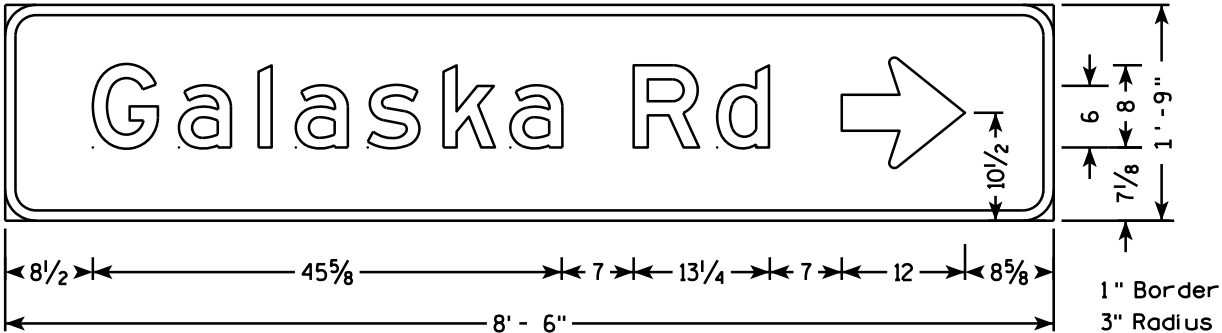




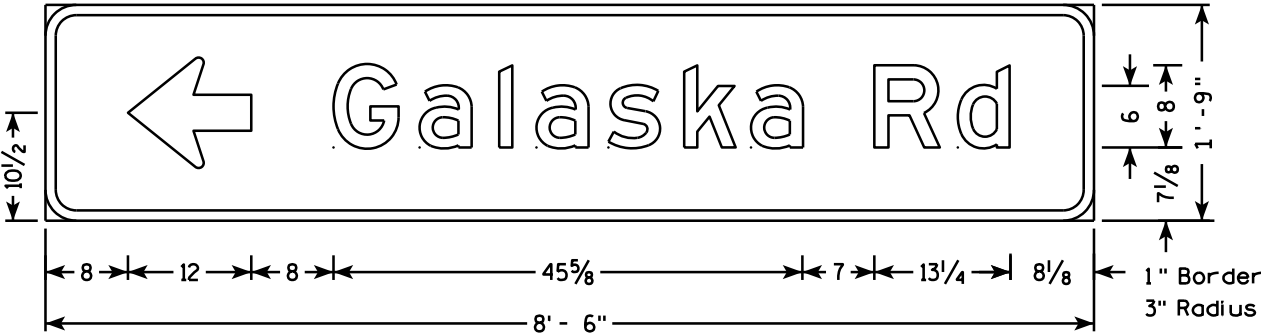
D3-2

NOTES

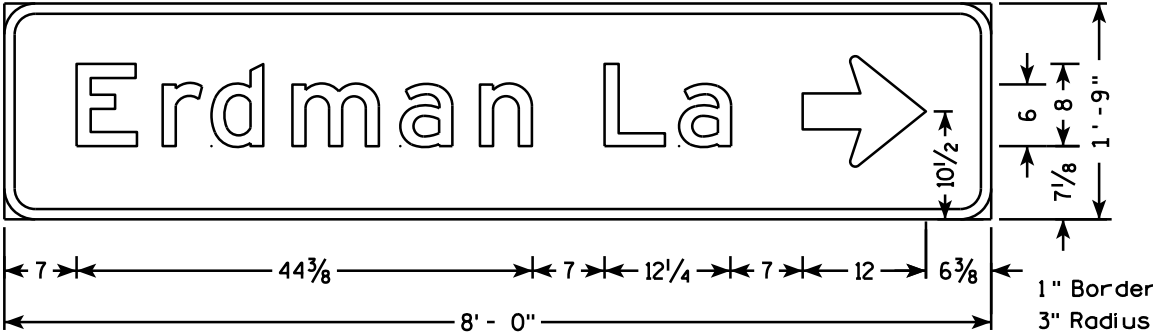
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Green
Message - White
3. Message Series - E



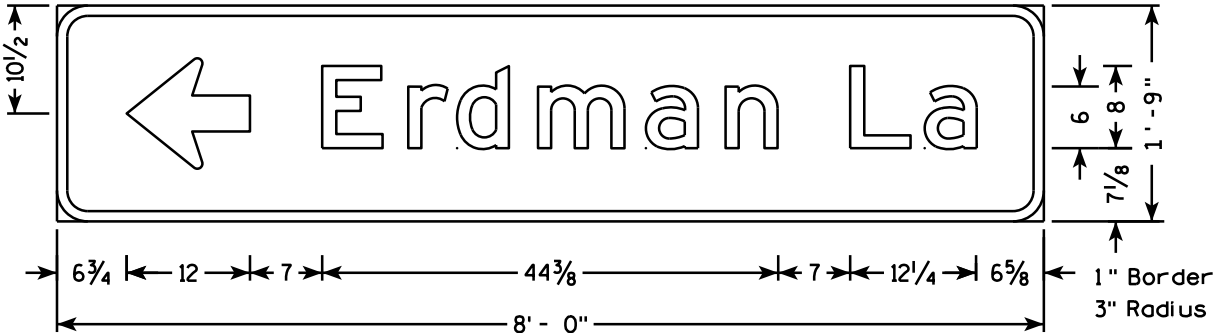
D1-1



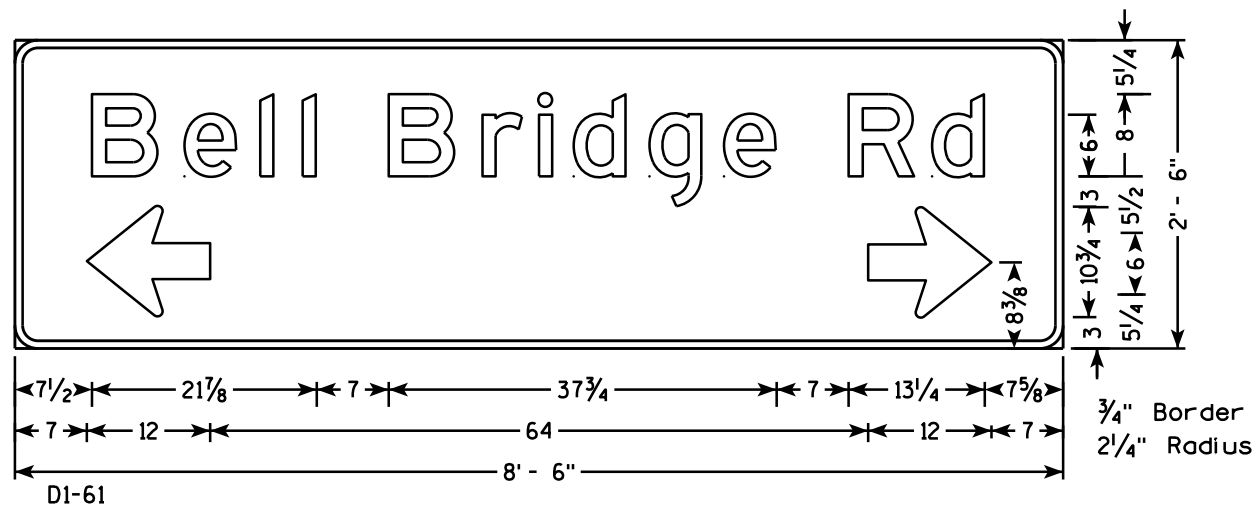
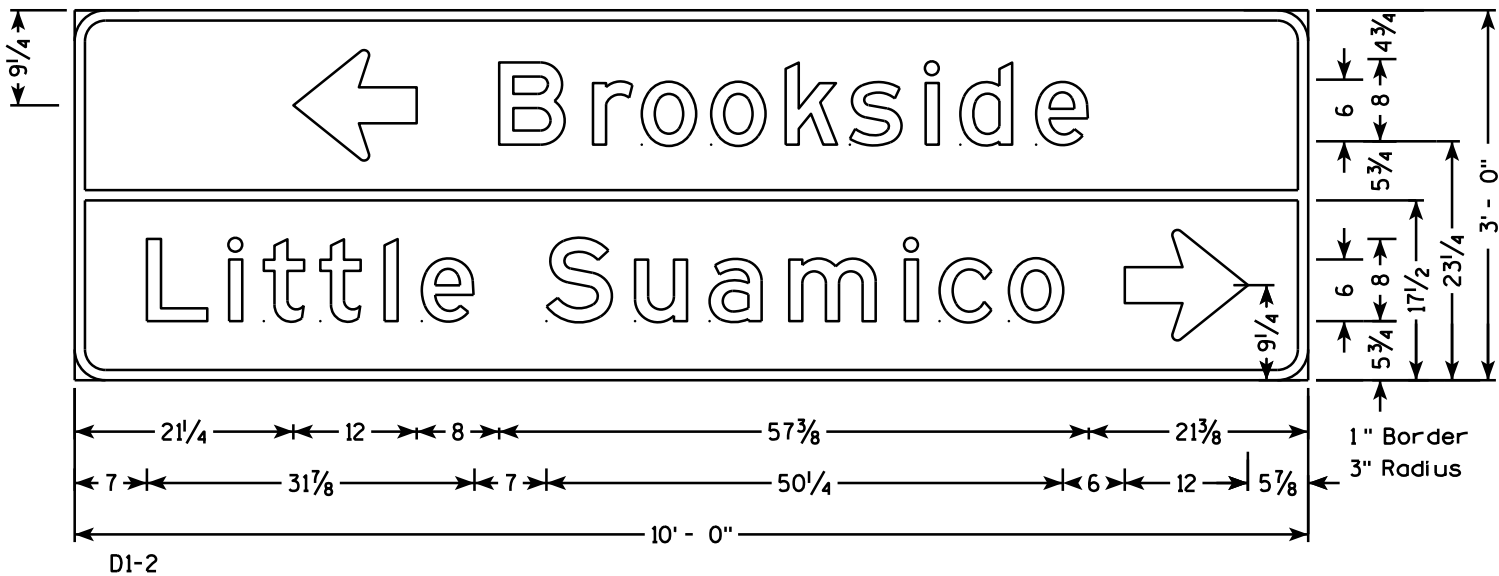
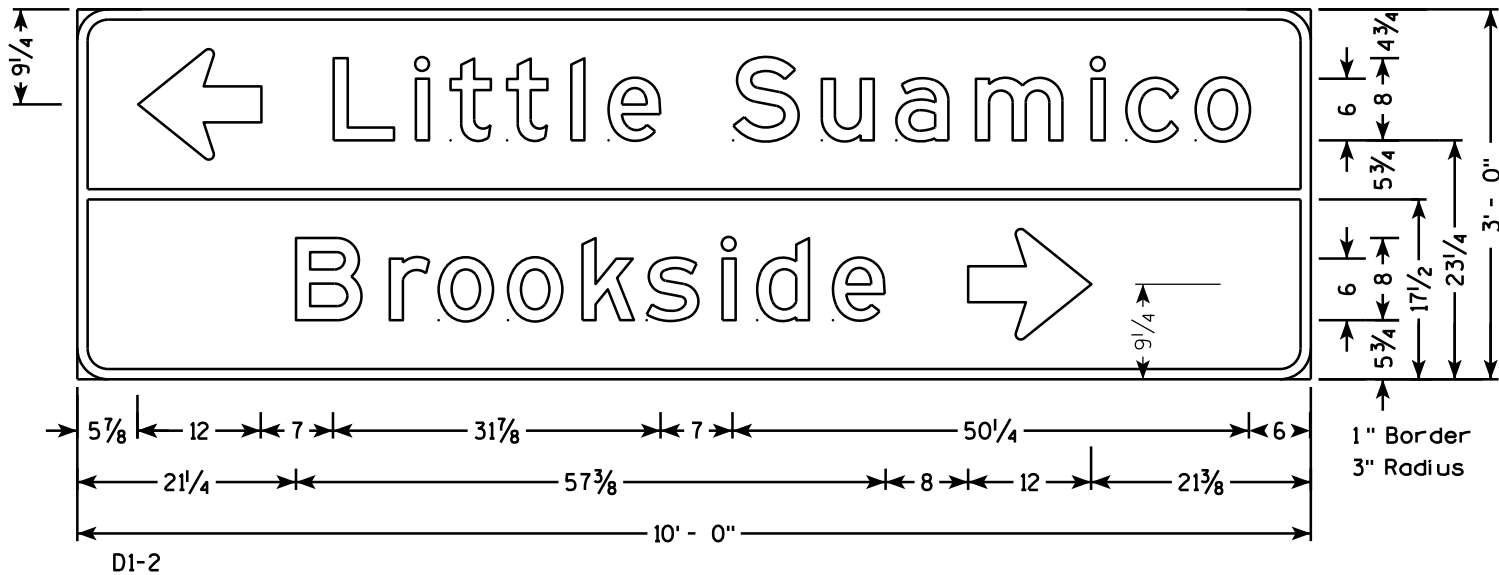
D1-1



D1-1

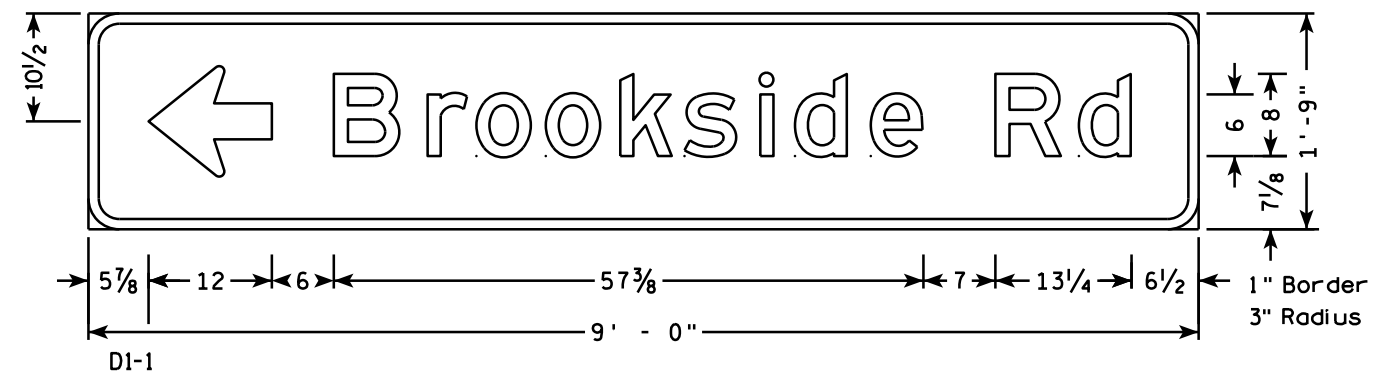
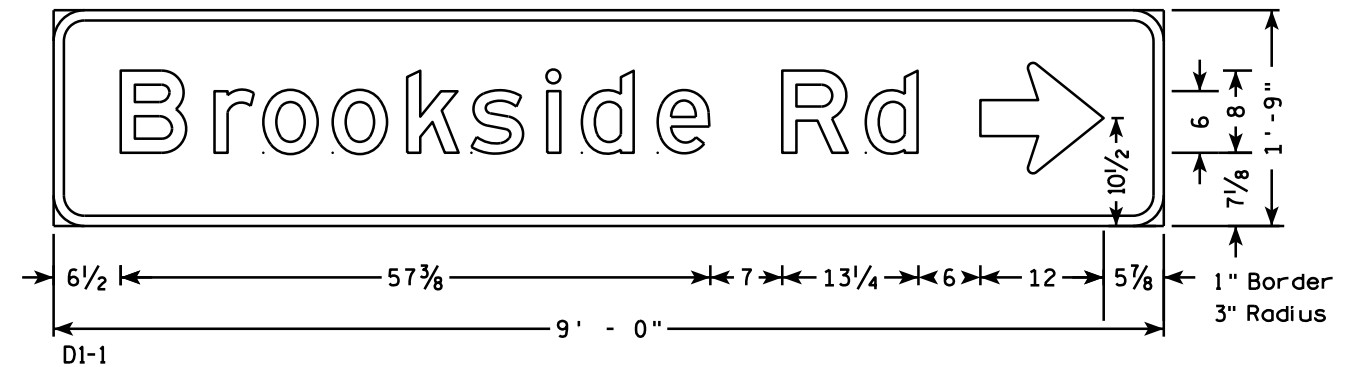


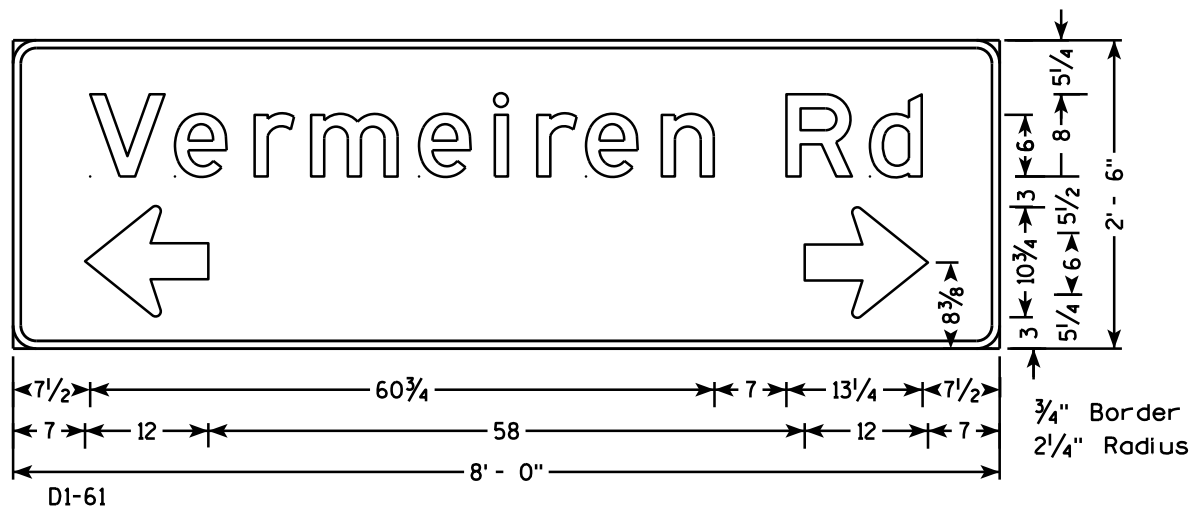
D1-1



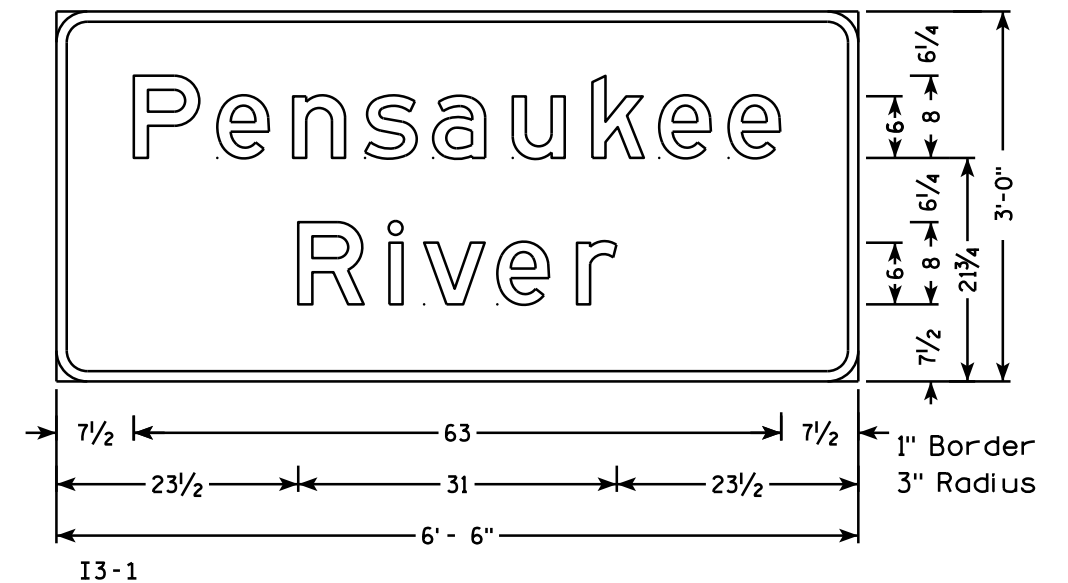
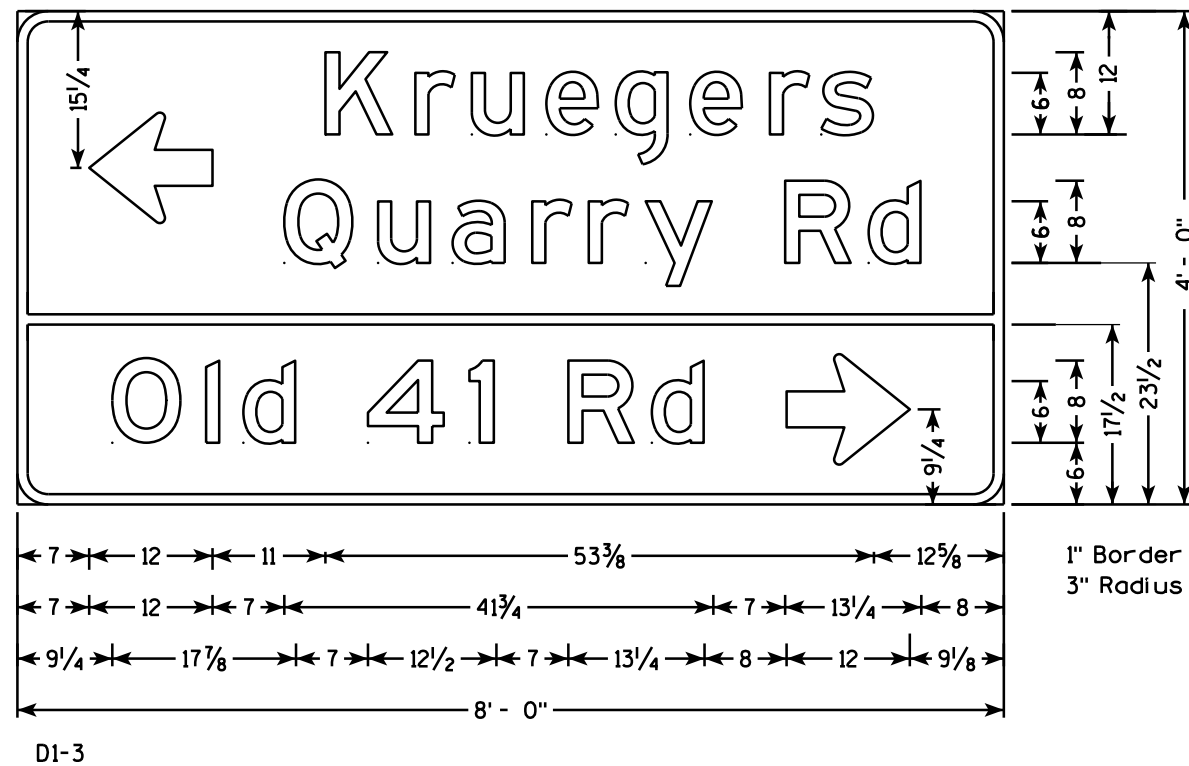
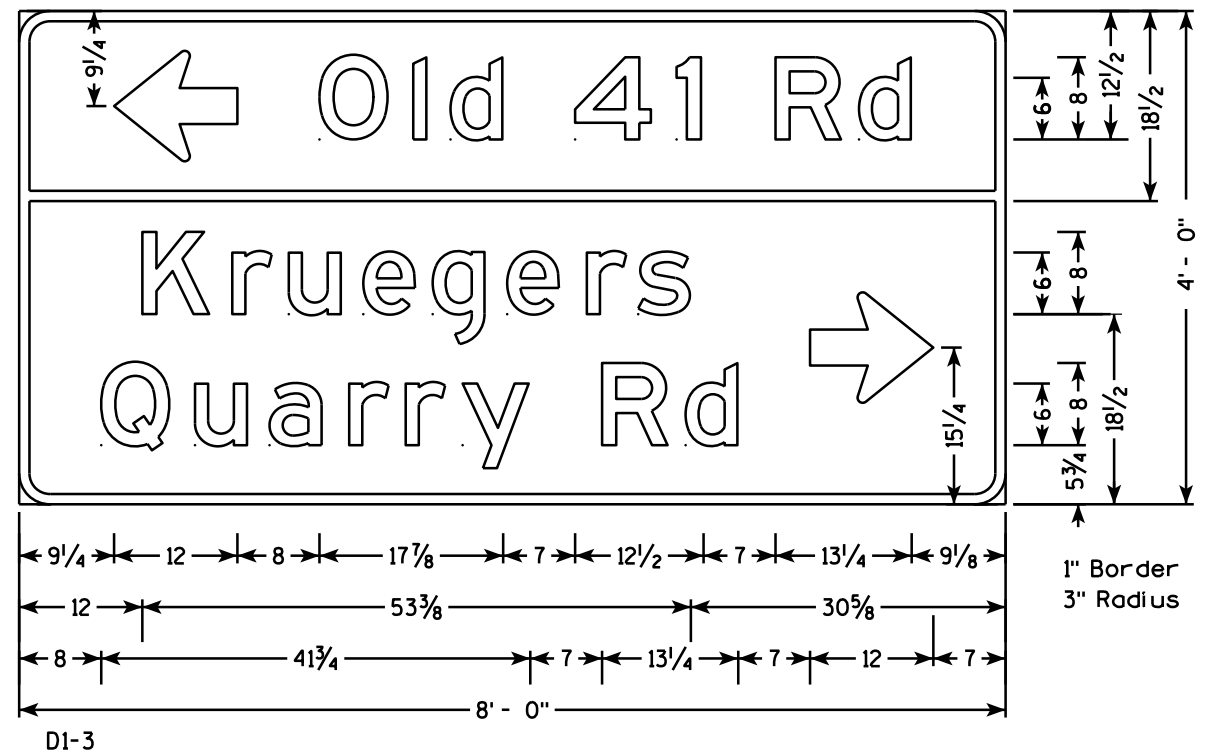
NOTES

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

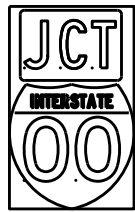




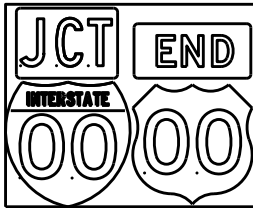
- NOTES**
1. All Signs Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - Green
Message - White
 3. Message Series - E



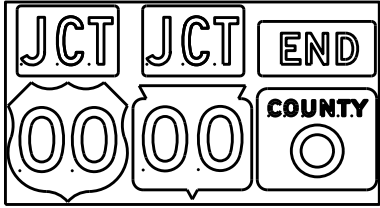
TYPICAL ASSEMBLIES



J1-1



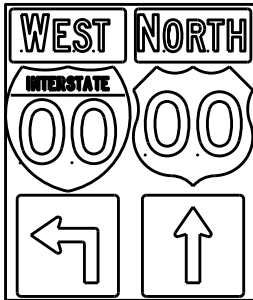
J1-2



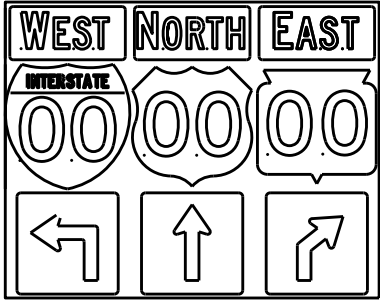
J1-3



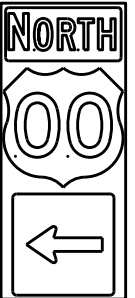
J2-1



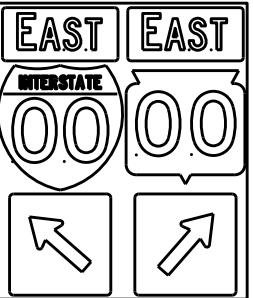
J2-2



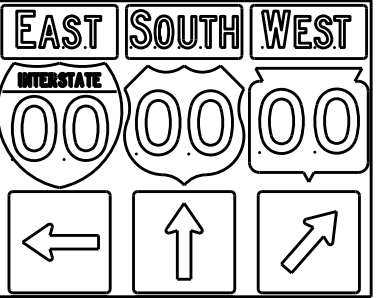
J2-3



J3-1



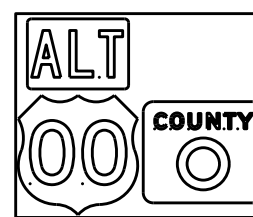
J3-2



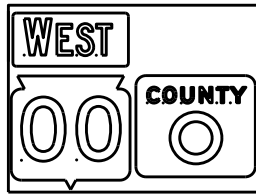
J3-3



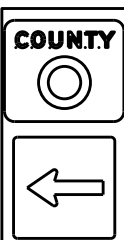
J4-1



J4-2



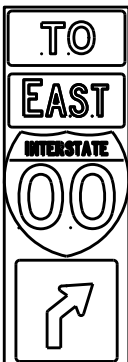
J4-2



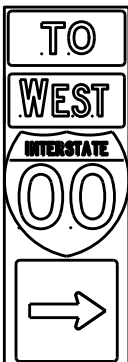
J13-1



J12-1



J32-1



J33-1



J23-1

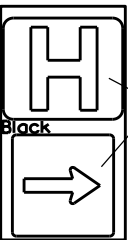


J22-1



JV

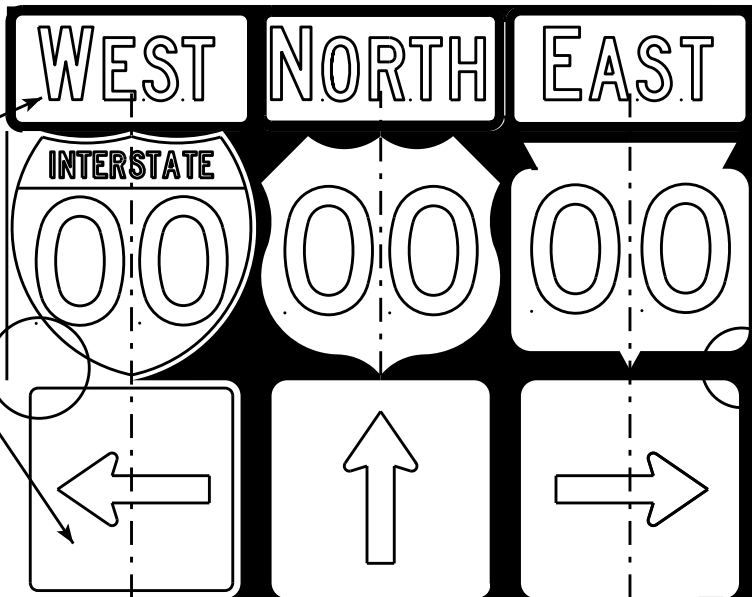
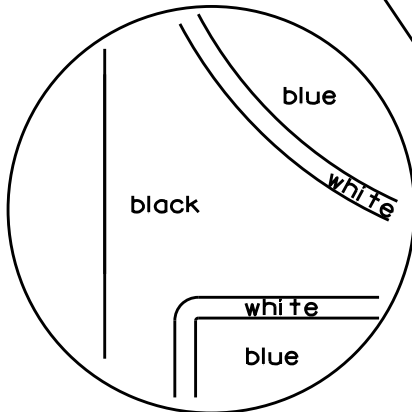
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

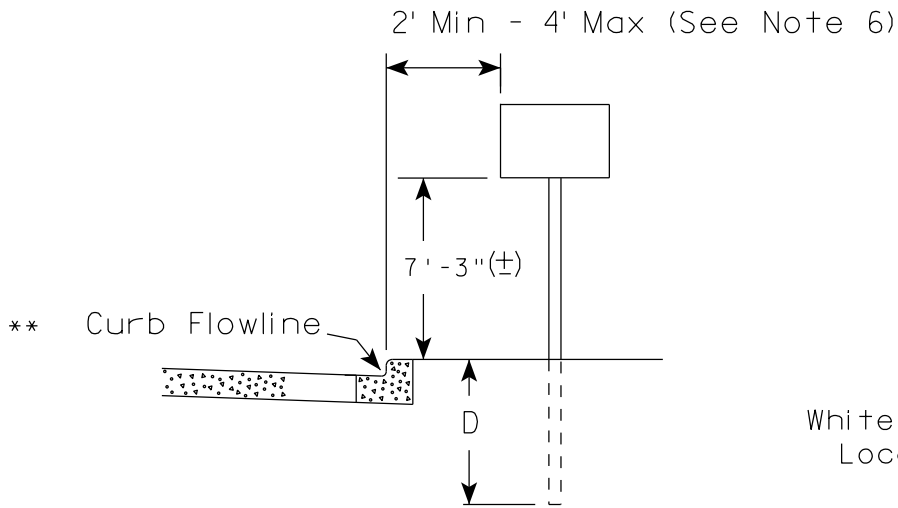
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

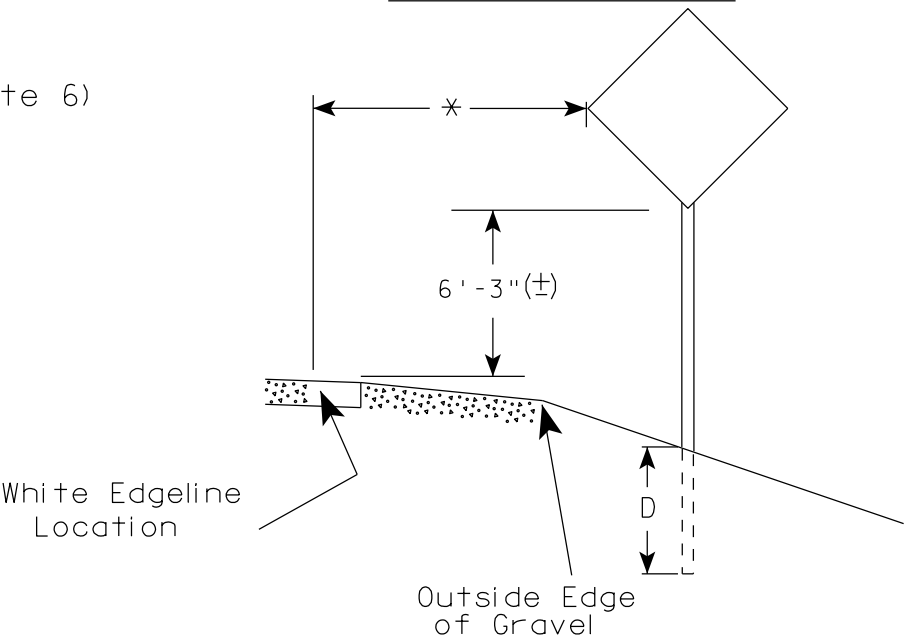
NOTES

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

URBAN AREA



RURAL AREA (See Note 2)



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

POST EMBEDMENT DEPTH

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

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

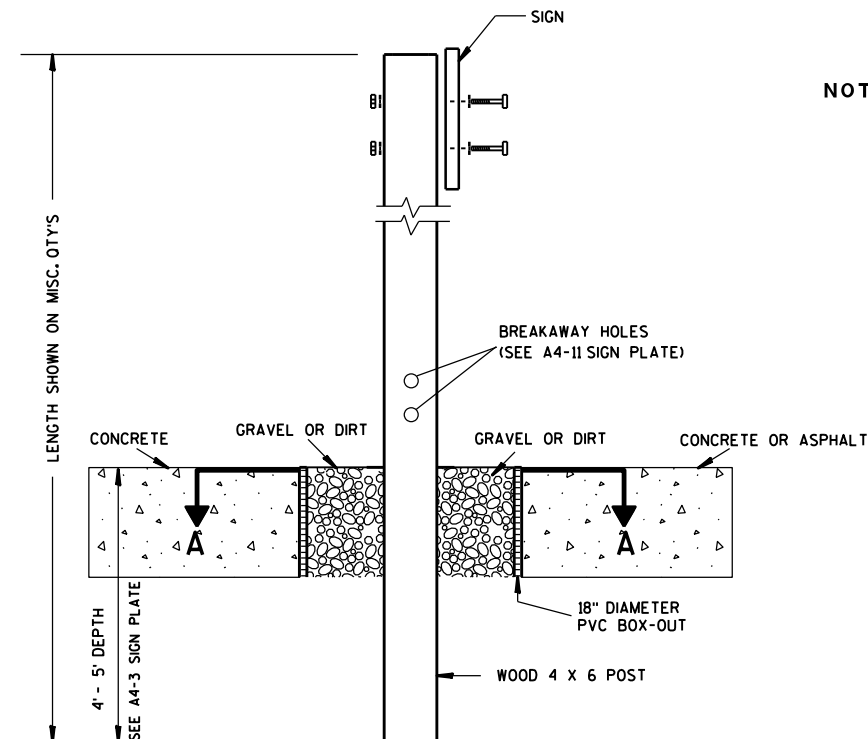
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

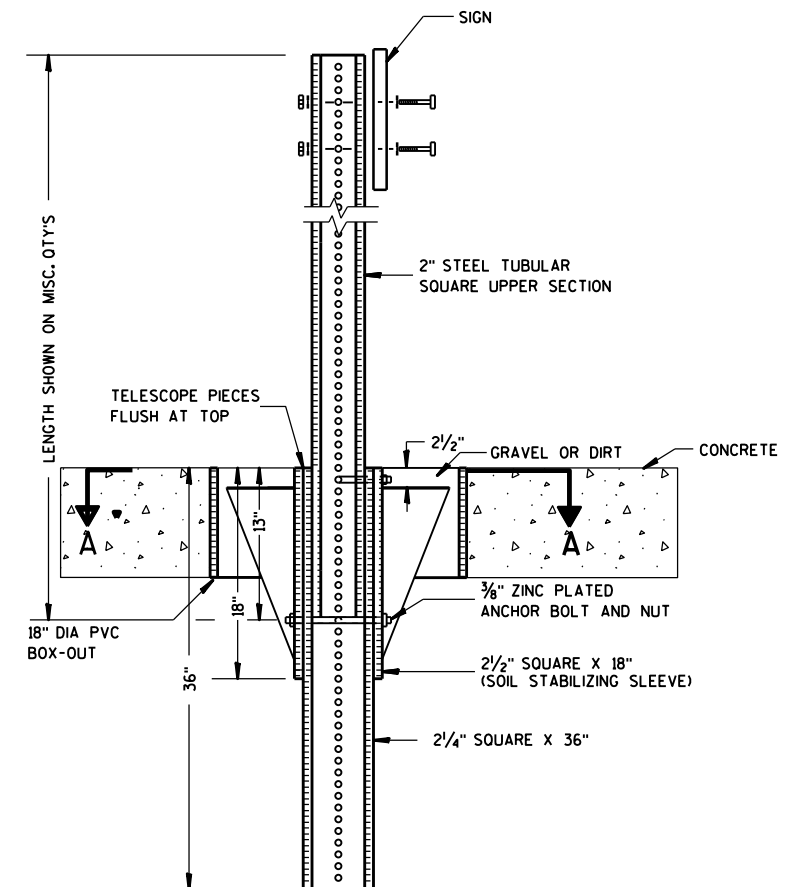
DATE 7/23/15 PLATE NO. A4-3.20



ELEVATION VIEW

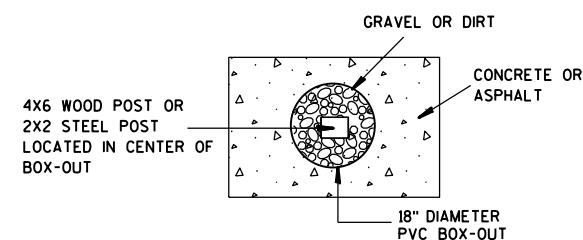
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

**SIGN POST
BOX-OUTS
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

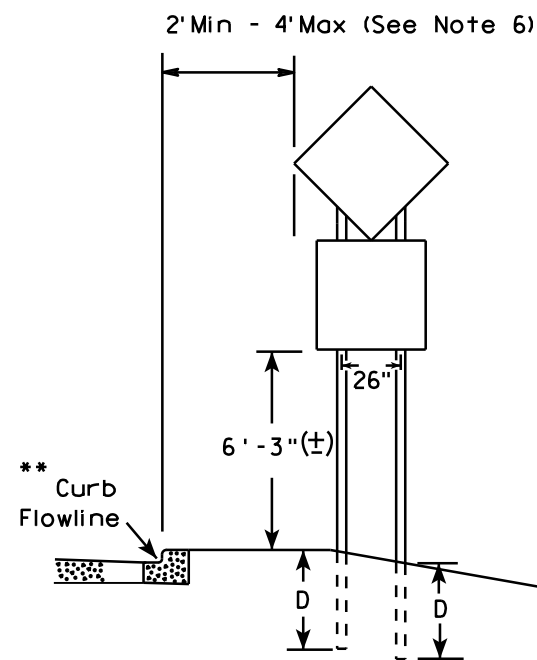
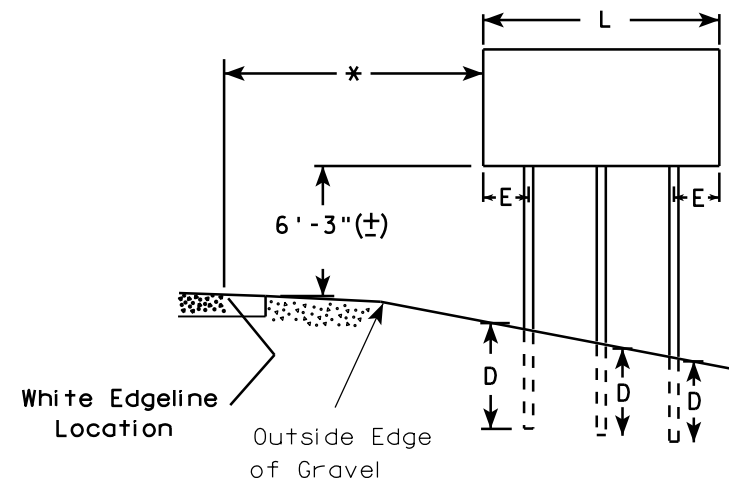
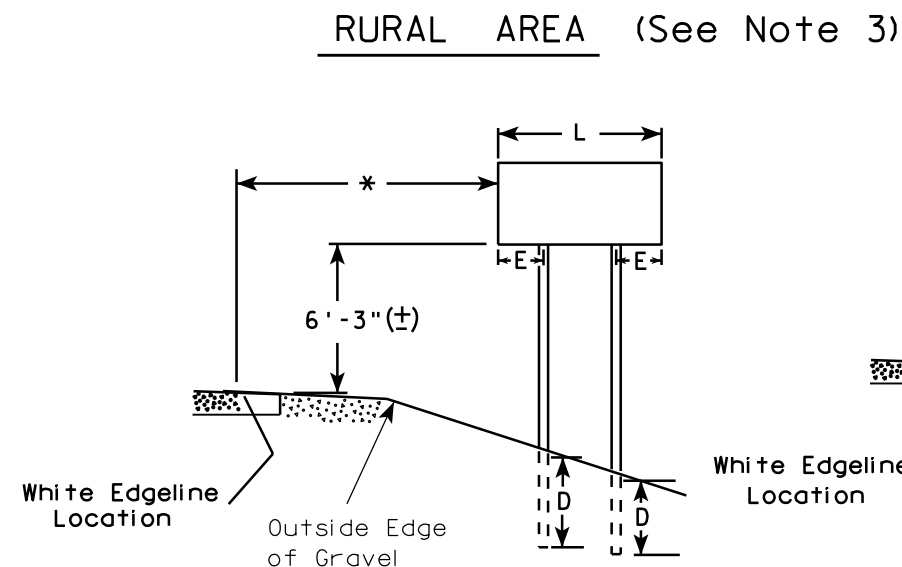
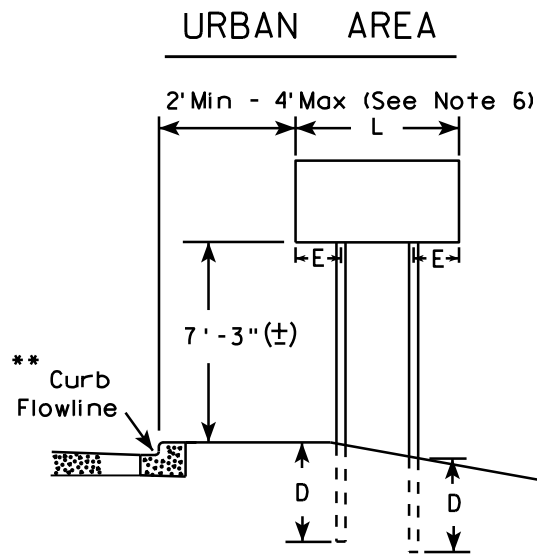
PROJECT NO:

HWY:

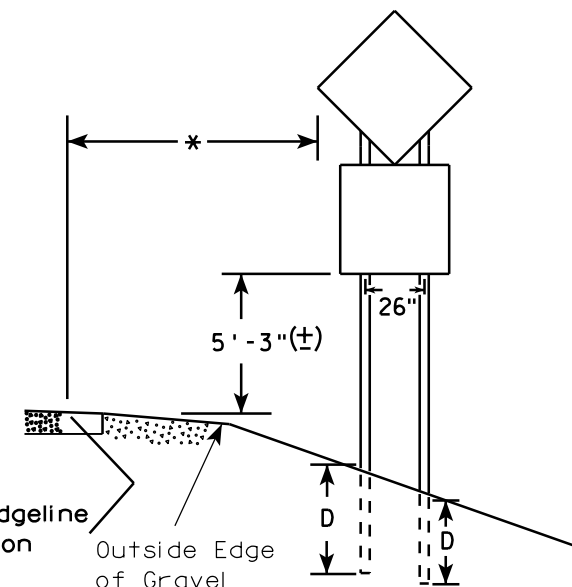
COUNTY:

SHEET NO:

E



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

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

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

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

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

POST EMBEDMENT DEPTH

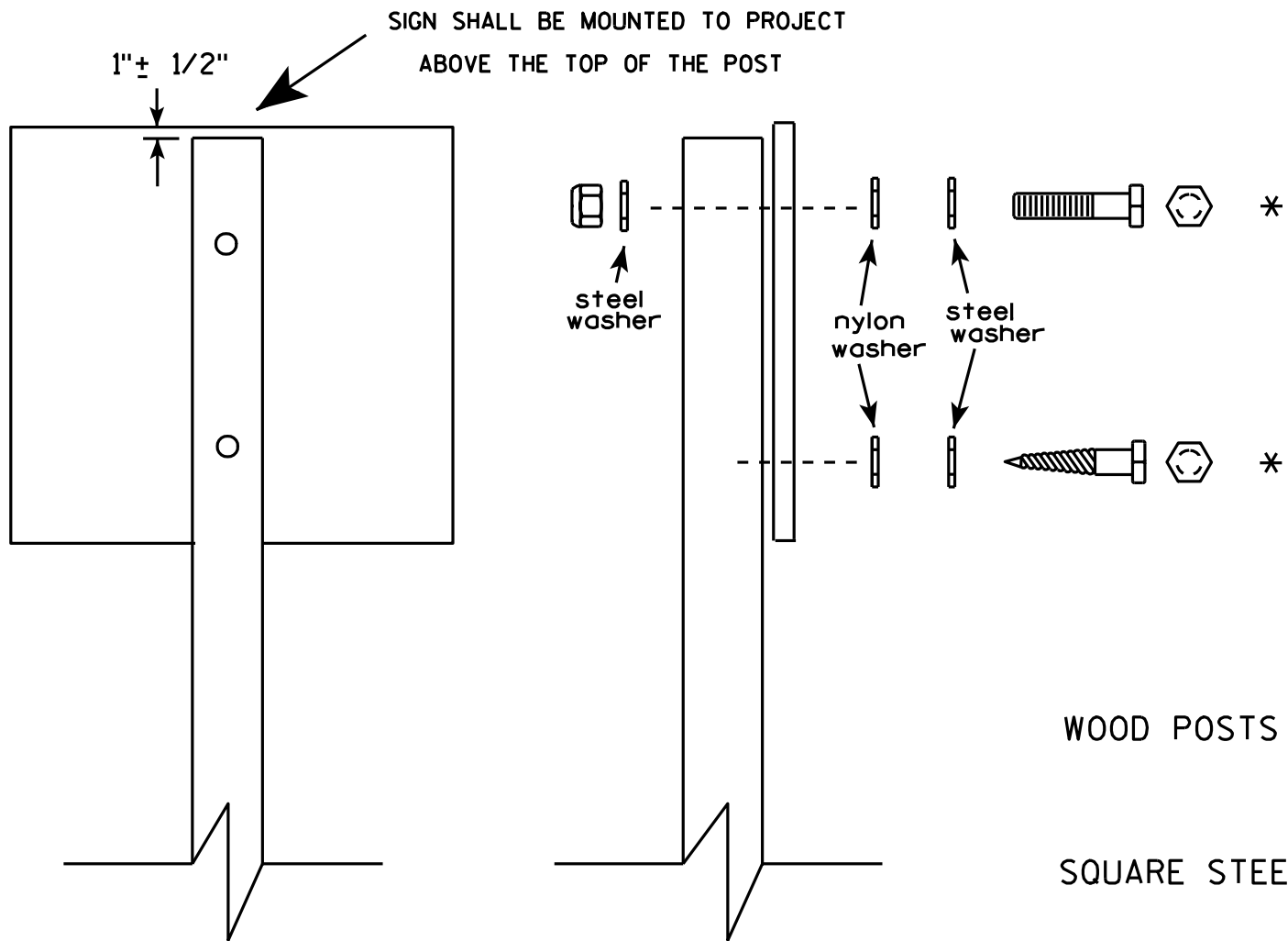
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

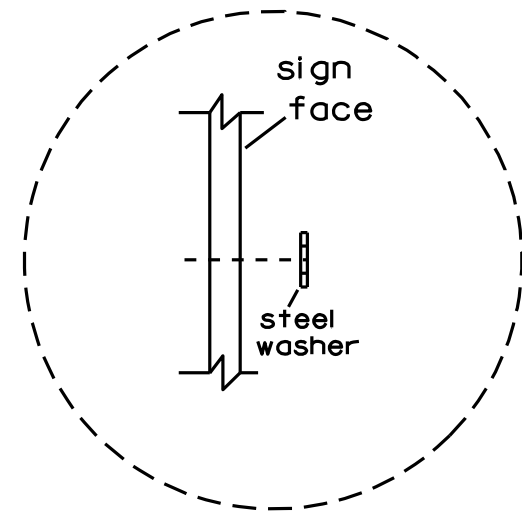


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

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

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

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



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

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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7

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

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

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

[illegible]

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- Dimensions:**
 - Overall height: LENGTH SHOWN ON MISC. QTY'S
 - Section 1 (top): 36"
 - Section 2 (middle): 18"
 - Section 3 (bottom): 12"
- Components and Labels:**
 - SIGN
 - SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 - 2" STEEL TUBULAR SQUARE UPPER SECTION
 - ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C
 - ALL FOUR SIDES
 - $\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT
 - TELESCOPE PIECES FLUSH AT TOP
 - $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
 - 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 - 2 1/4" SQUARE X 36"

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT

DIRECTION
OF TRAFFIC

SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthaeus R. Rauch

for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

PROJECT NO:

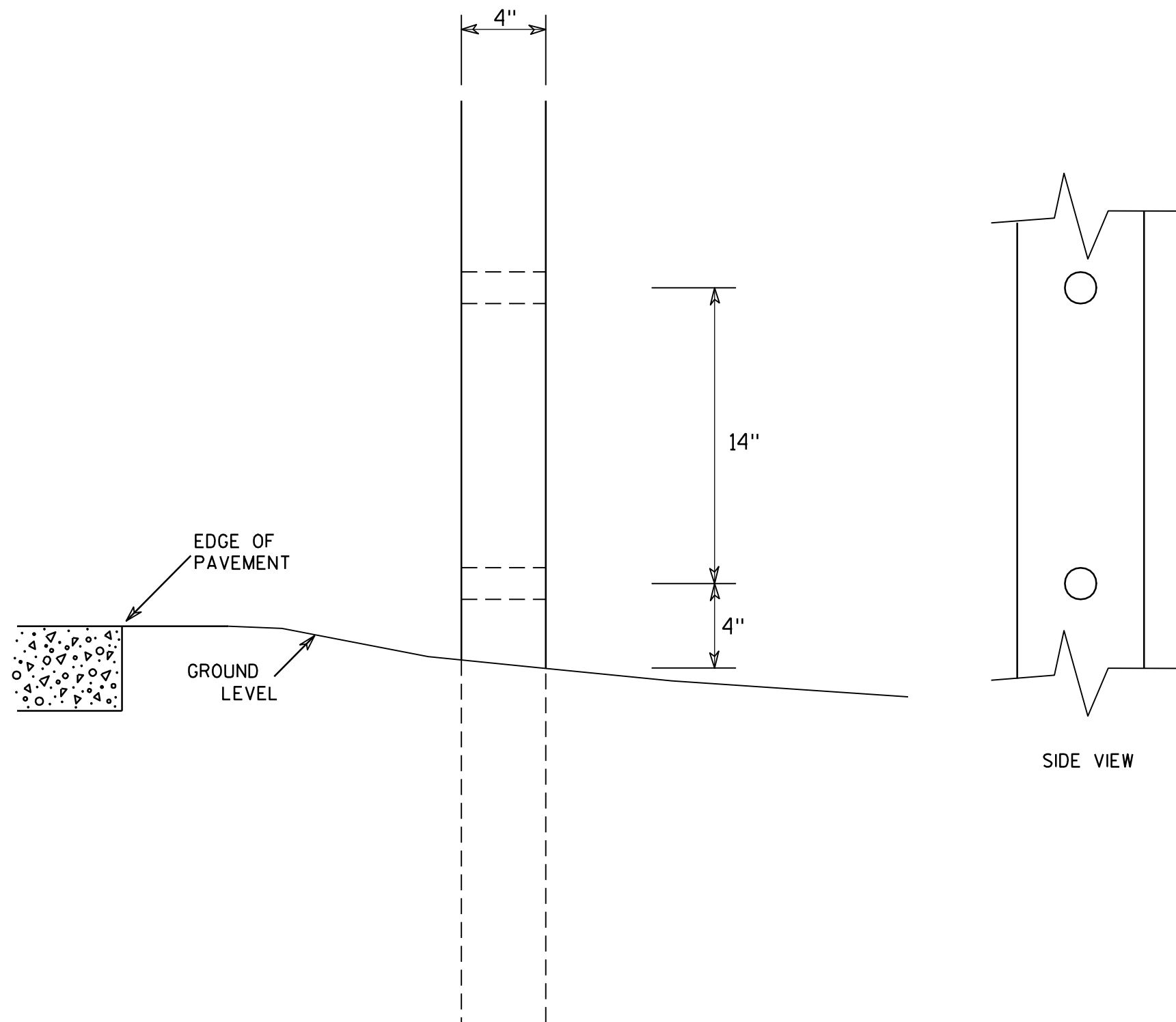
HWY:

COUNTY:

SHEET NO:

E

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

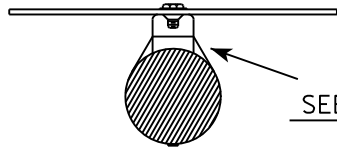
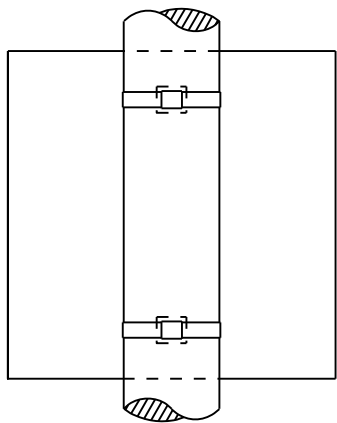
COUNTY:

SHEET NO:

E

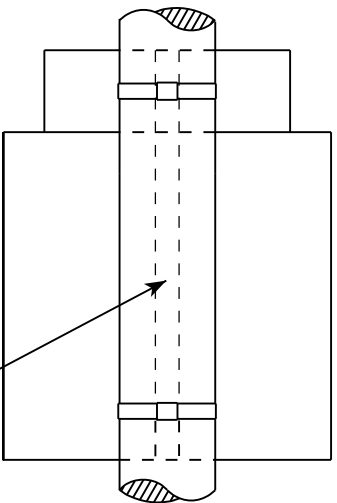
BANDING

SINGLE SIGN

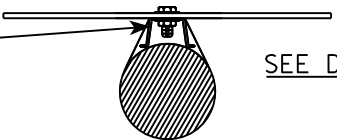


SEE DETAIL A

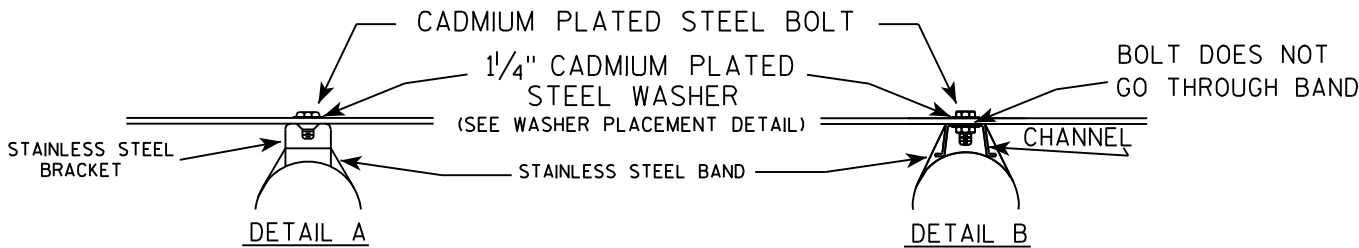
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



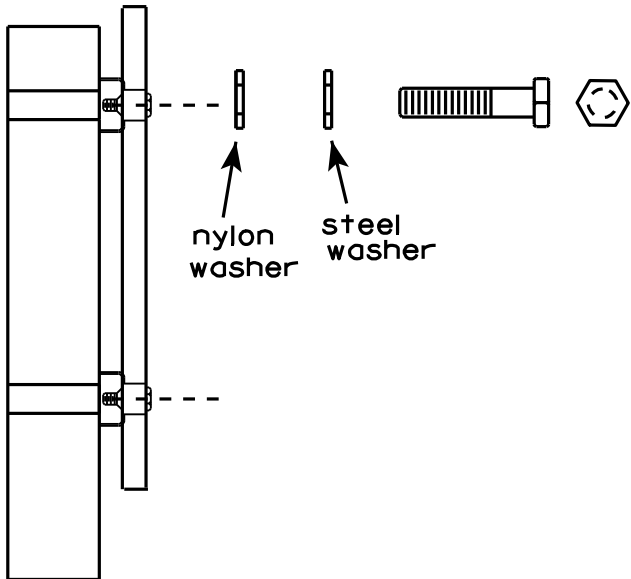
SEE DETAIL B



GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be $\frac{3}{4}$ " in width and 0.025" thickness.

WASHER PLACEMENT



nylon washer

steel washer

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

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 8/16/13

PLATE NO. A5-9.3

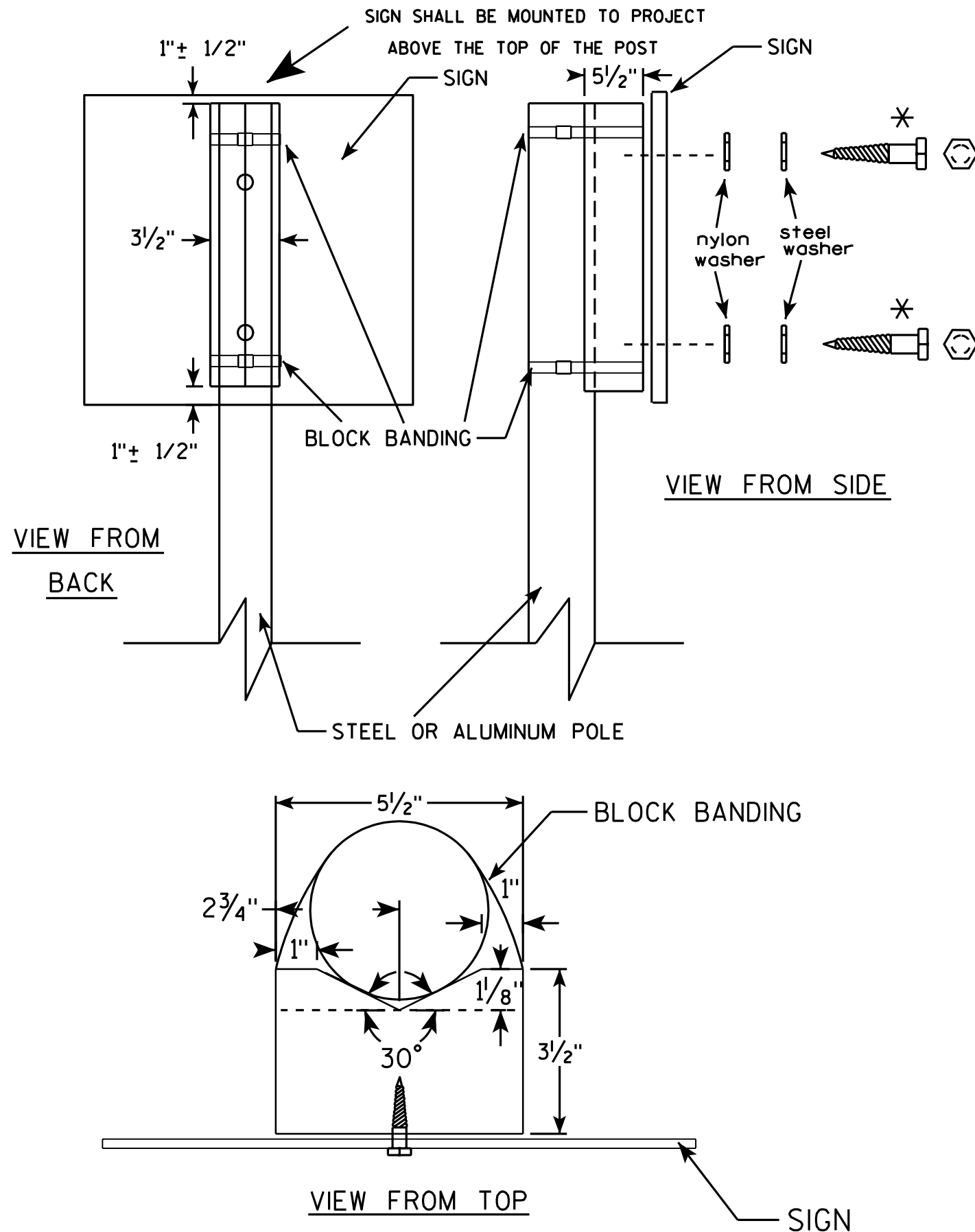
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WISDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
 - b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
 - c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

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

BLOCK BANDING DETAIL (V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

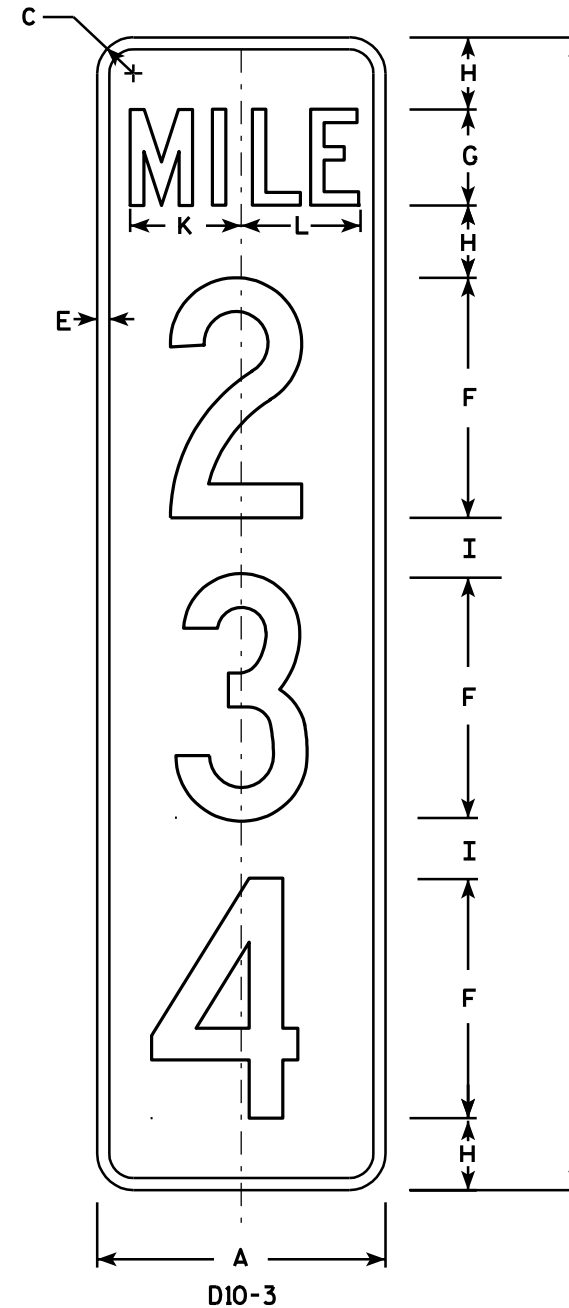
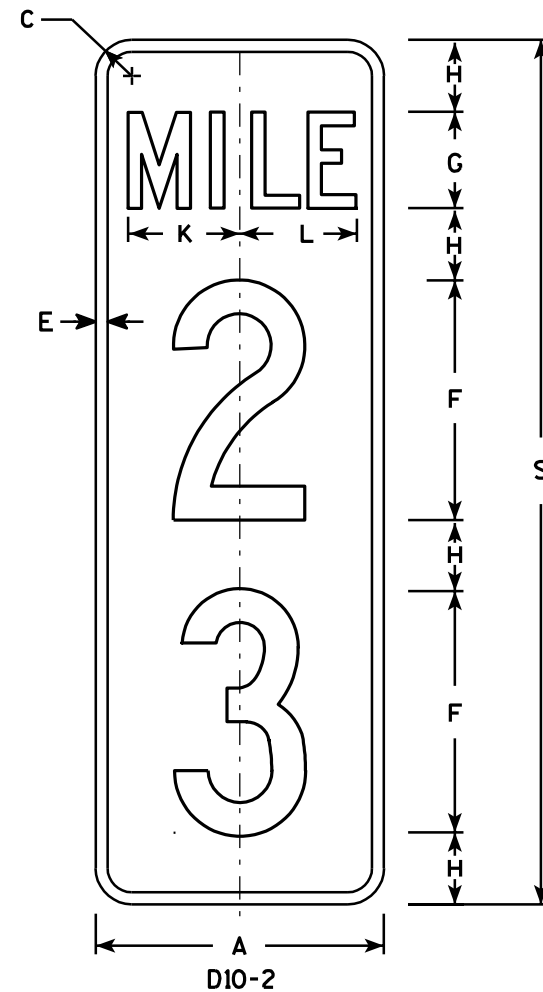
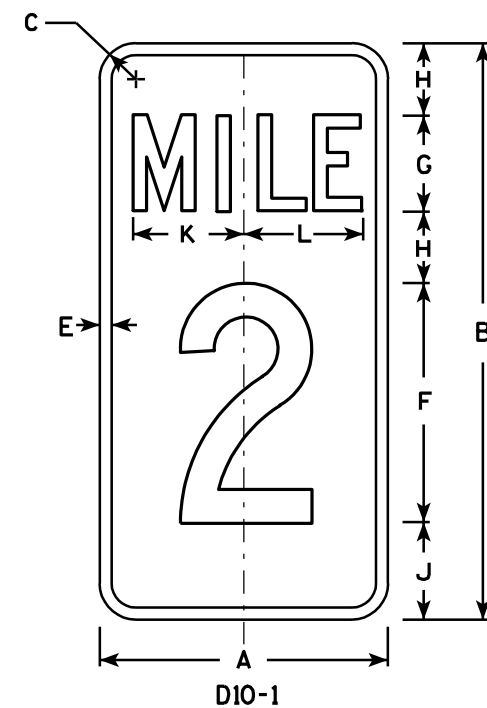
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

PROJECT NO:

SHEET NO:

E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 - Background - Green
 - Message - White - Type H Reflective
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. Optically adjust numerals about the centerline of the sign to achieve proper balance.

7

Metric equivalent
for this sign is:

PHY. SIZE	
12 X 24	300 mm X 600 mm
12 X 36	300 mm X 900 mm
12 X 48	300 mm X 1200 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
1																										
2																										
3																										
4	12	24	1 1/2		1/2	10	4	3	2 1/2	4	4 5/8	4 7/8							36	48						
5	12	24	1 1/2		1/2	10	4	3	2 1/2	4	4 5/8	4 7/8							36	48						

D10-1	D10-2	D10-3
Area sq. ft.	Area sq. ft.	Area sq. ft.
2.0	3.0	4.0
Area m ²	Area m ²	Area m ²
.19	.28	.38

STANDARD SIGN
D10-1 , D10-2 & D10-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Charles J. Spang*
for Director, Office of Traffic

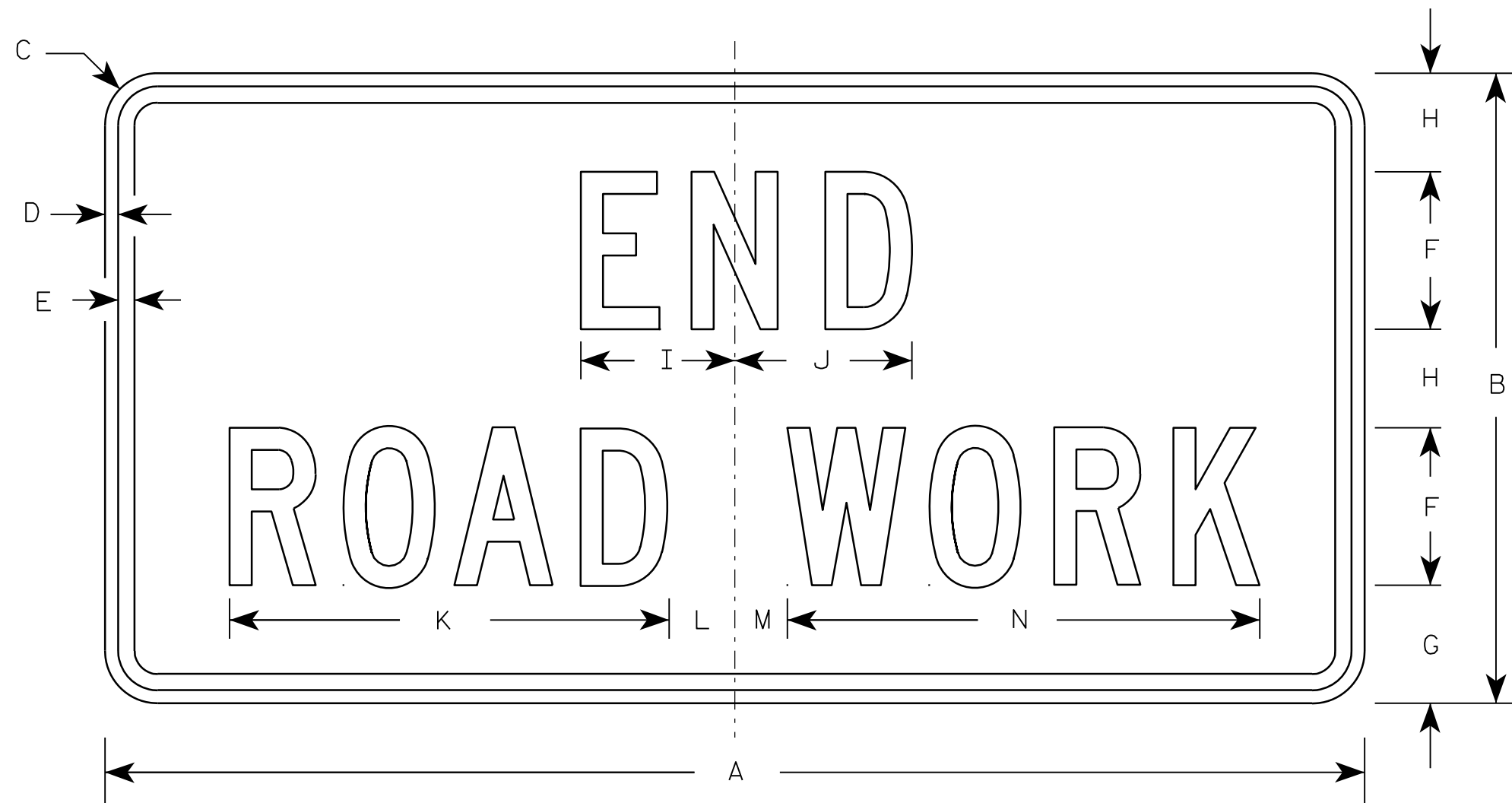
DATE **1/16/02** PLATE NO. **D10-3.2**

PROJECT NO:

SHEET NO:

E

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

PROJECT NO:

HWY:

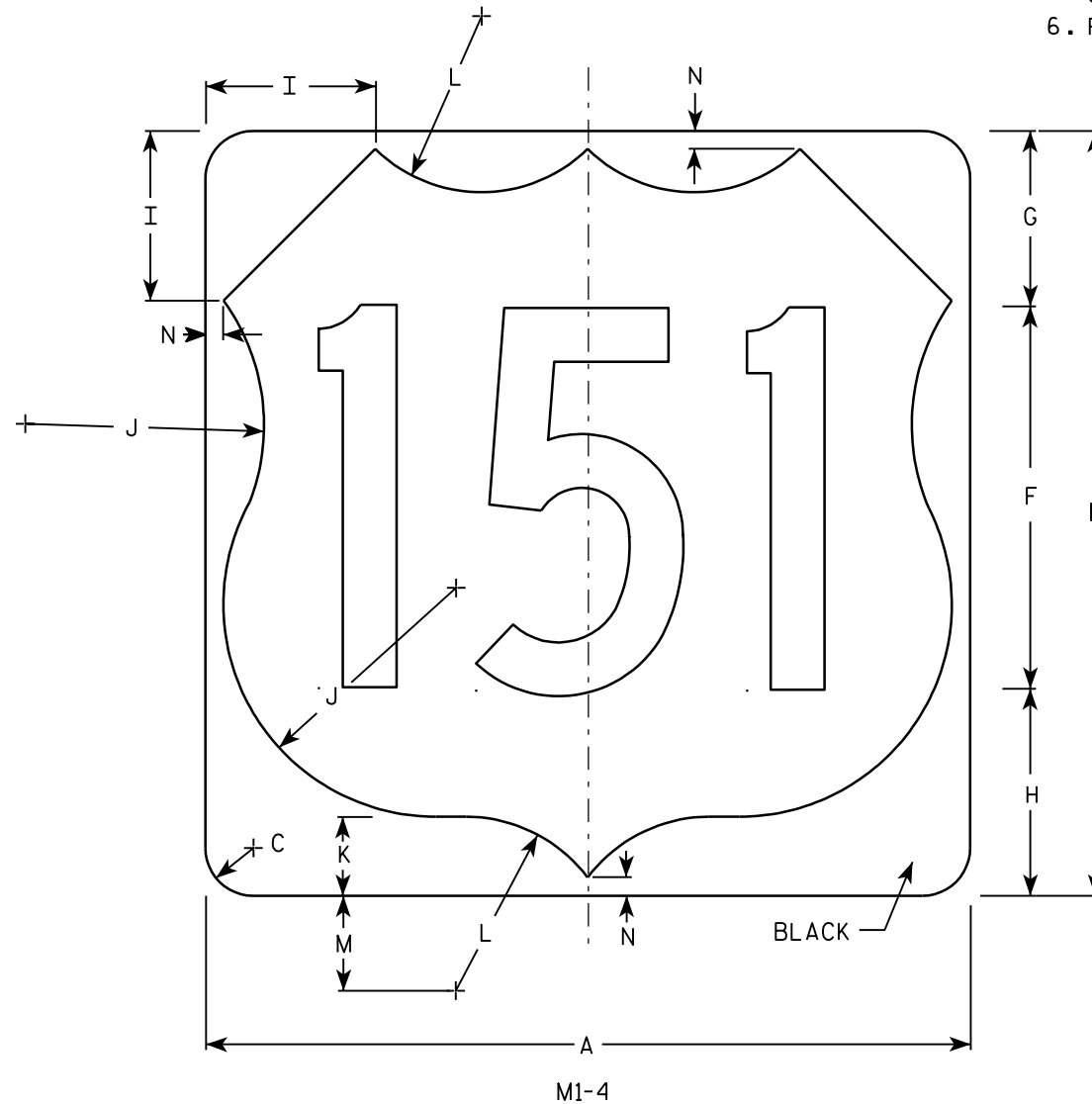
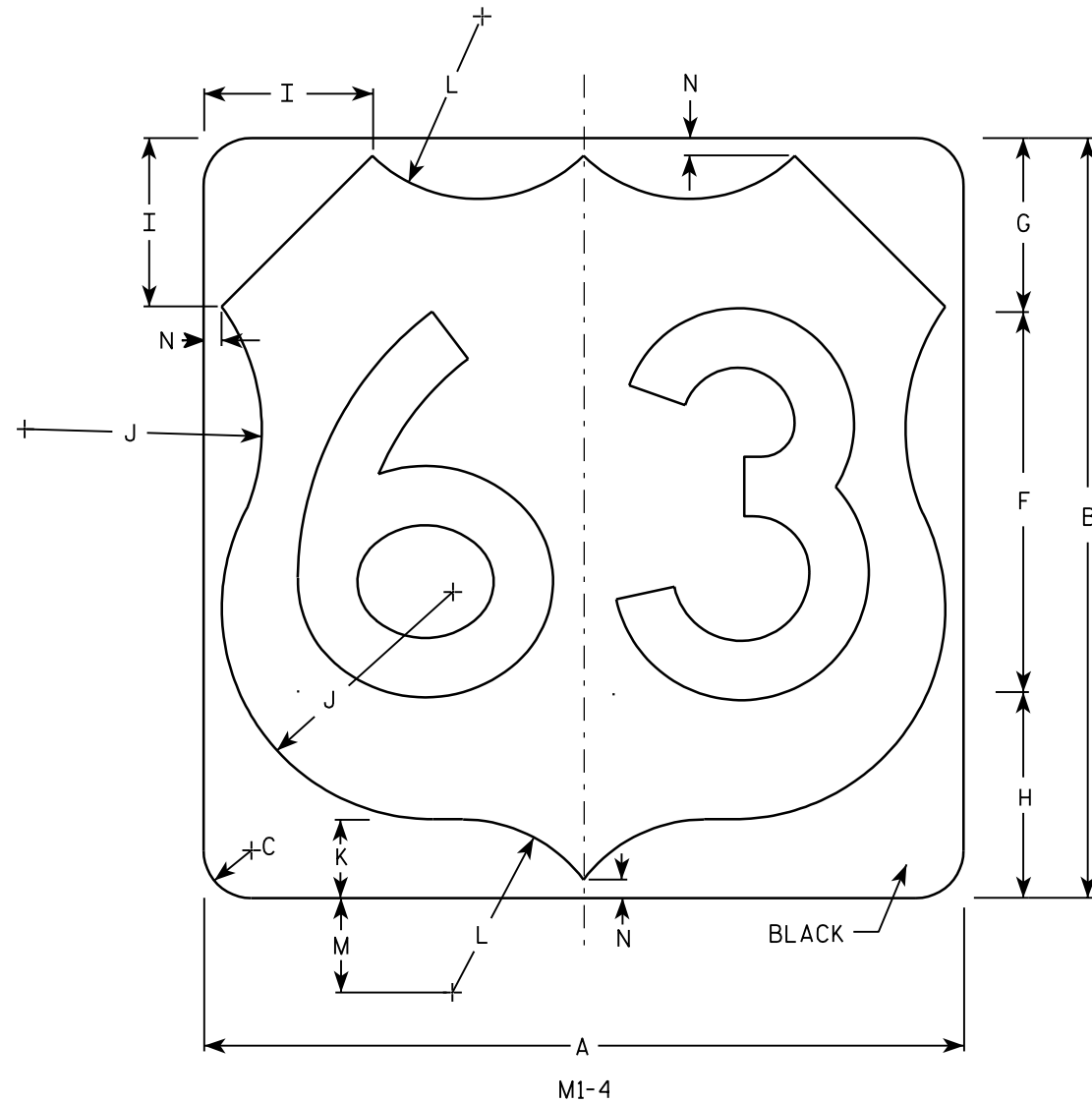
COUNTY:

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 numerals and adjust
spacing as per Plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or other temporary signs
Background - Reflective



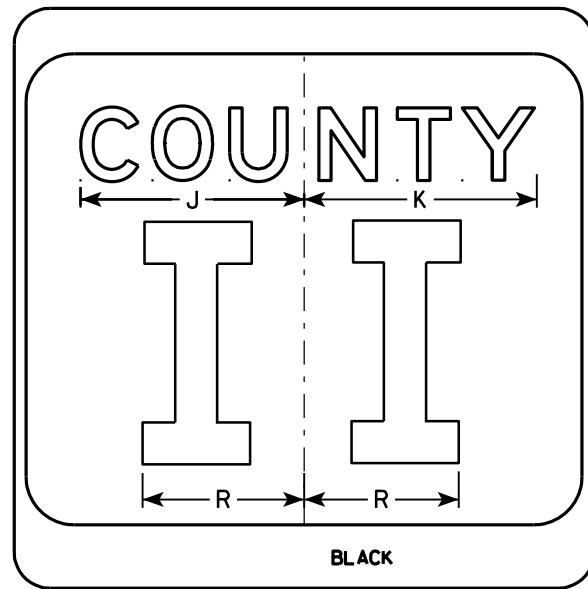
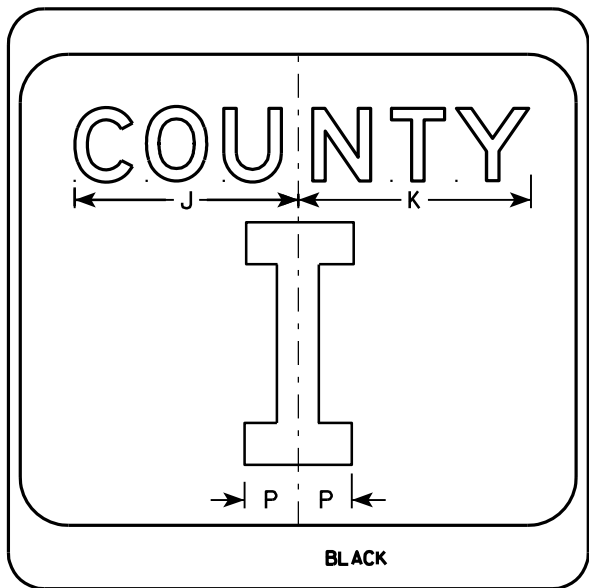
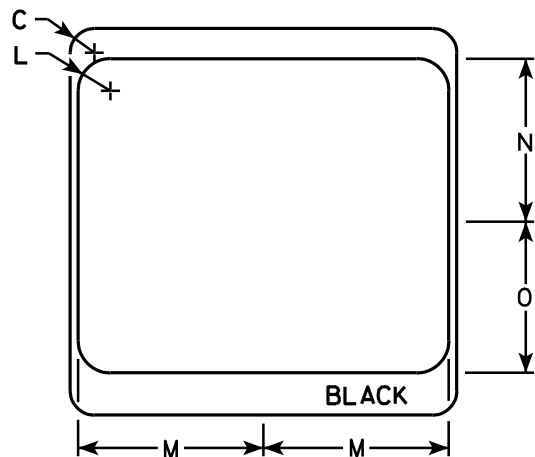
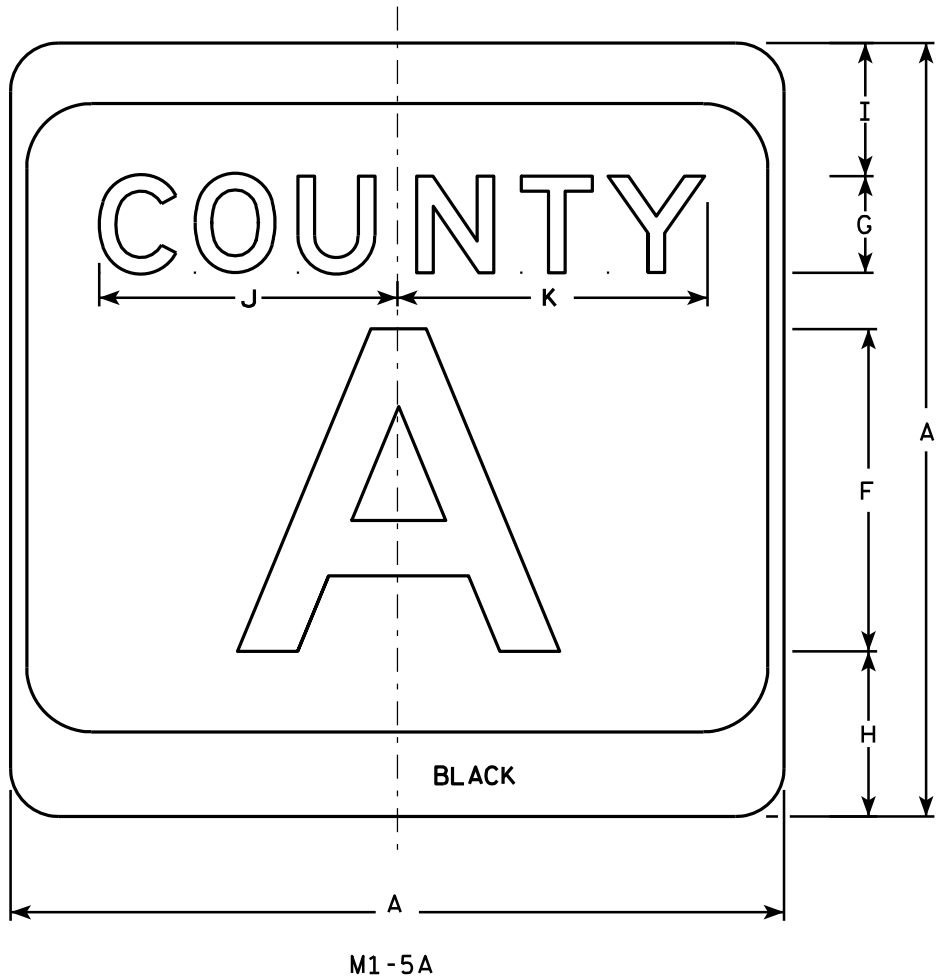
Metric equivalent
for this sign is:

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

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

PROJECT NO: HWY: COUNTY: SHEET NO: E

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

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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CTH MARKER

M1-5A FOR ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24			1 1/8	1/2																						4.0	.36
3																												
4	36			1 5/8	3/4																						9.0	.81
5																												

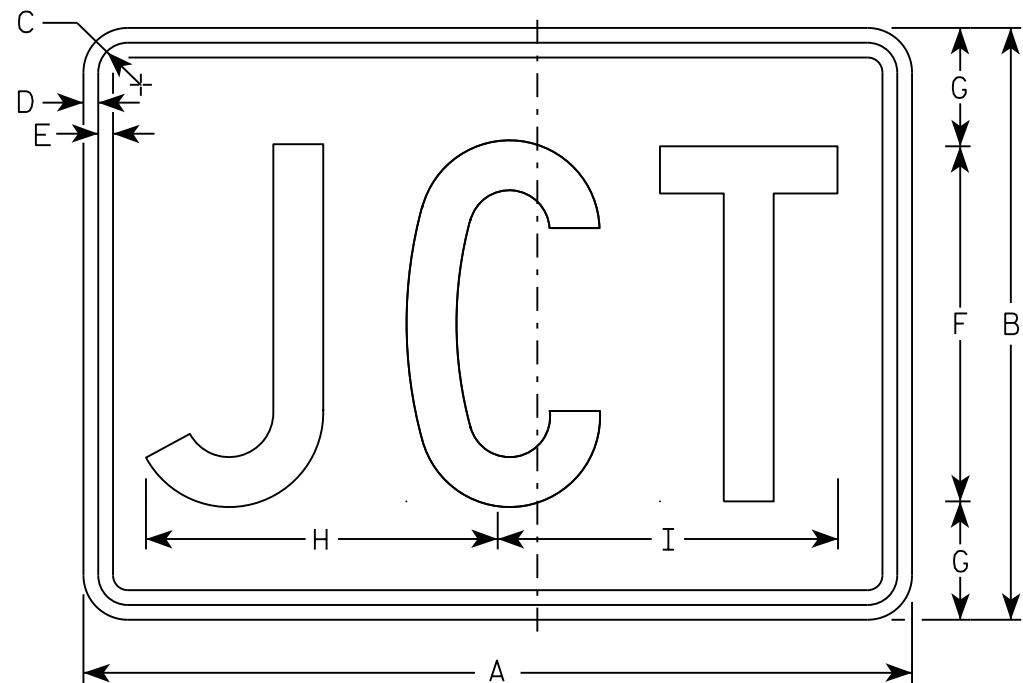
STANDARD SIGN

M1-93

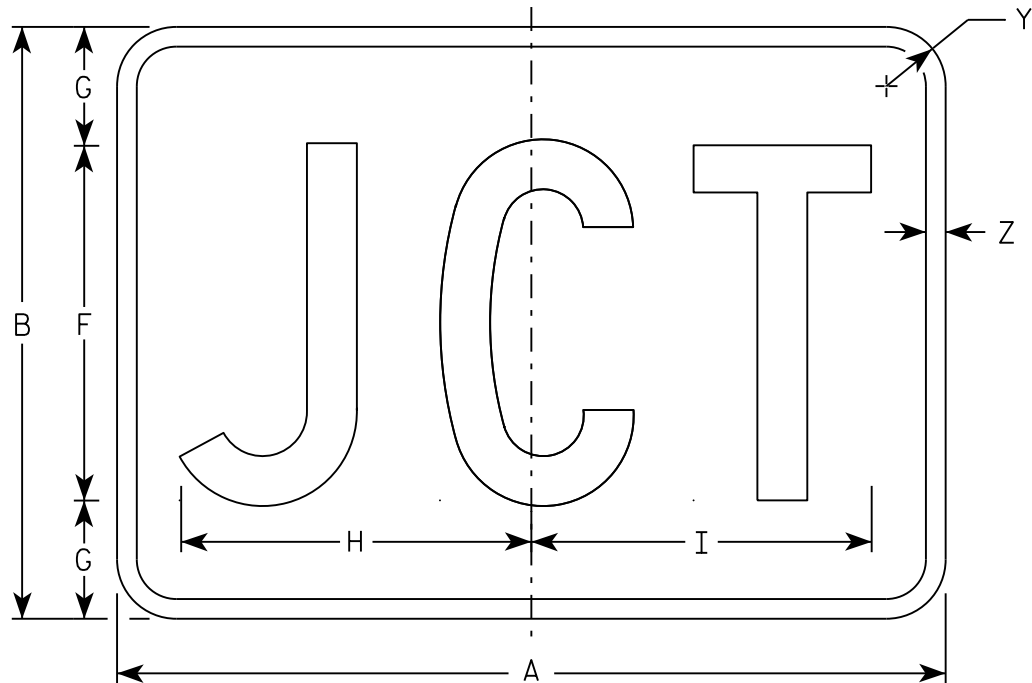
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
State Traffic Engineer

DATE 11/5/15 for PLATE NO. M1-93.2



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

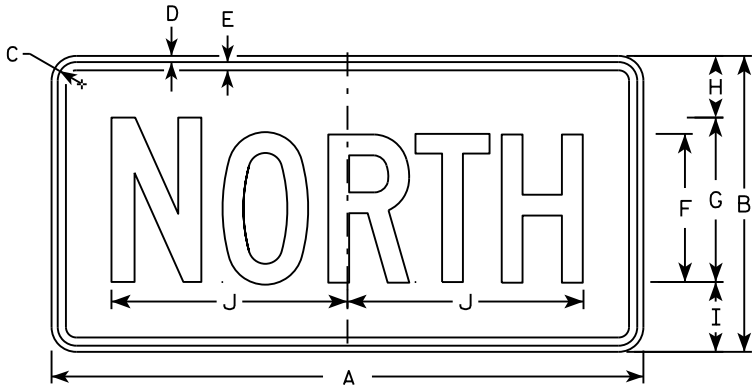
APPROVED

Matthew R. Rauch

For State Traffic Engineer

DATE 10/15/15

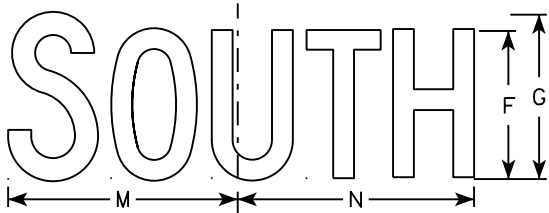
PLATE NO. M2-1.12



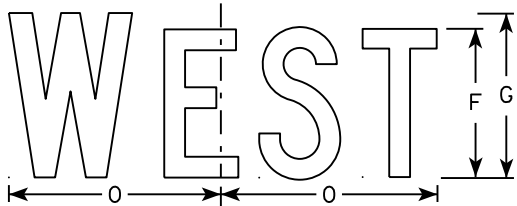
M3-1
MM3-1
MP3-1



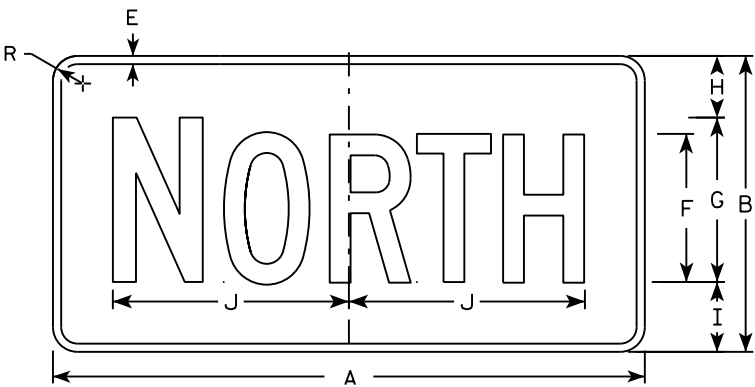
M3-2
MM3-2
MP3-2



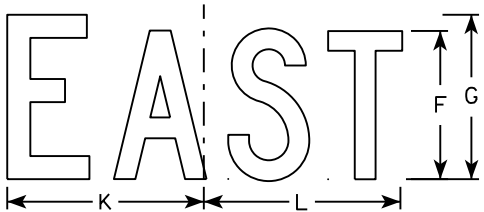
M3-3
MM3-3
MP3-3



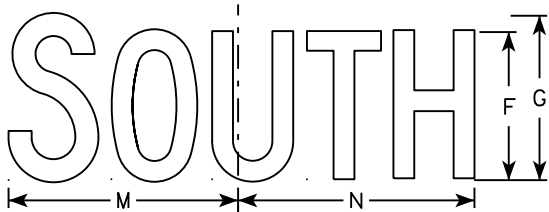
M3-4
MM3-4
MP3-4



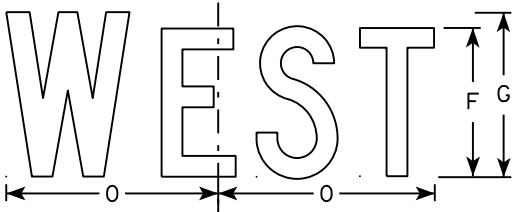
MB3-1
MK3-1
MN3-1



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.

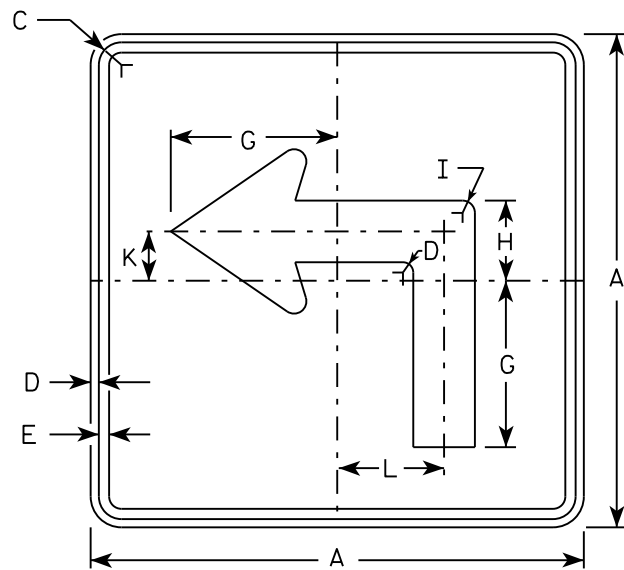
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8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

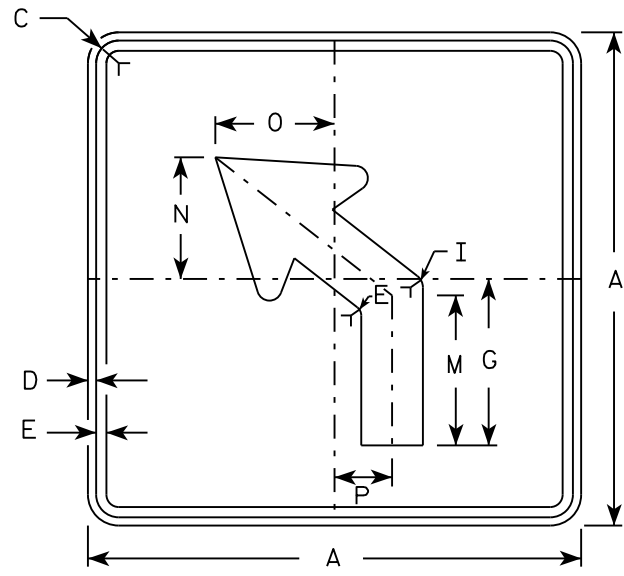
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

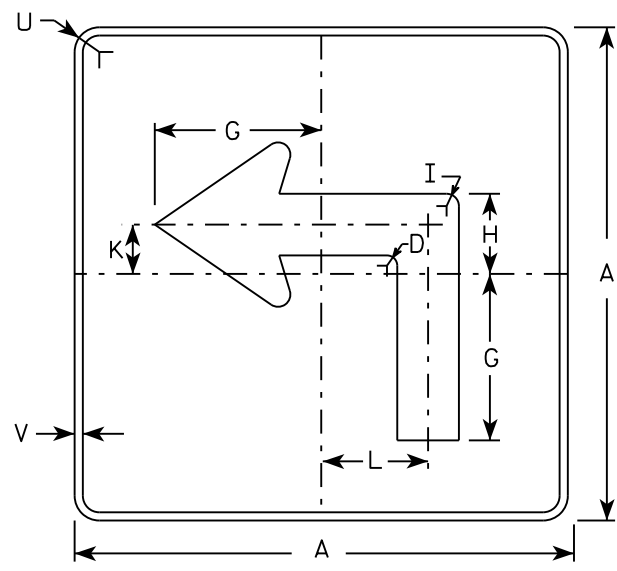
DATE 10/15/15 PLATE NO. M3-1.14



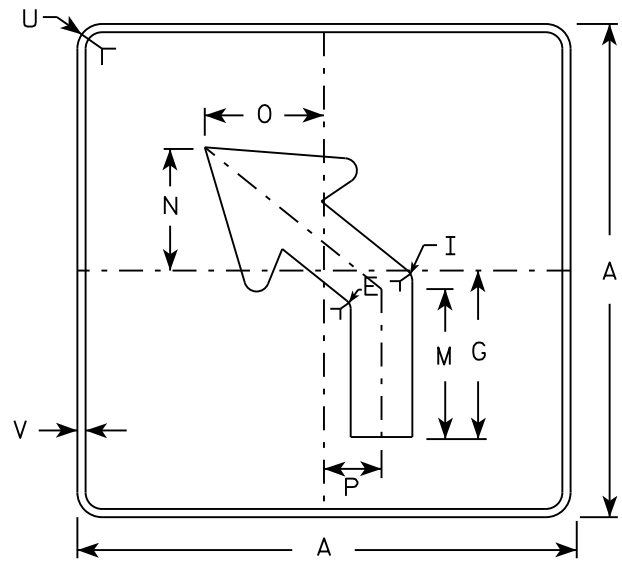
M5-1L
MM5-1L
M05-1L
MP5-1L



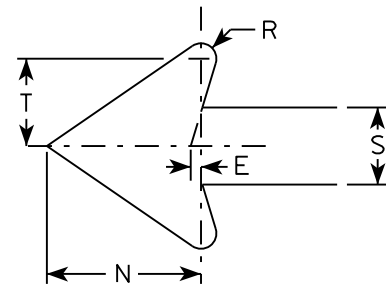
M5-2L
MM5-2L
M05-2L
MP5-2L



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

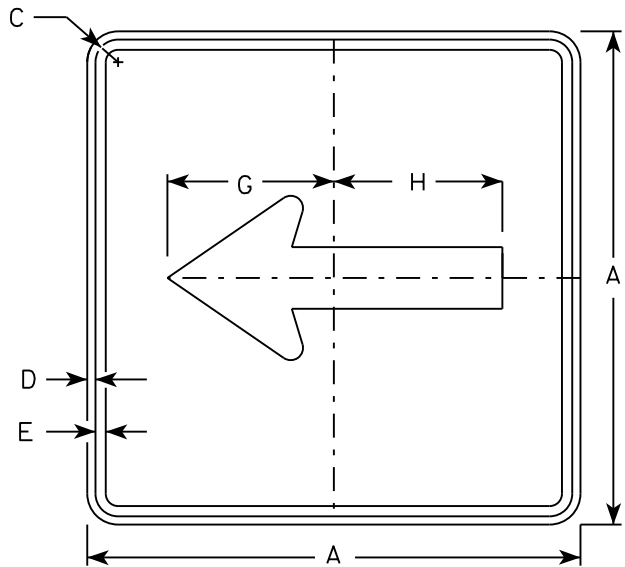
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M5-1 & M5-2

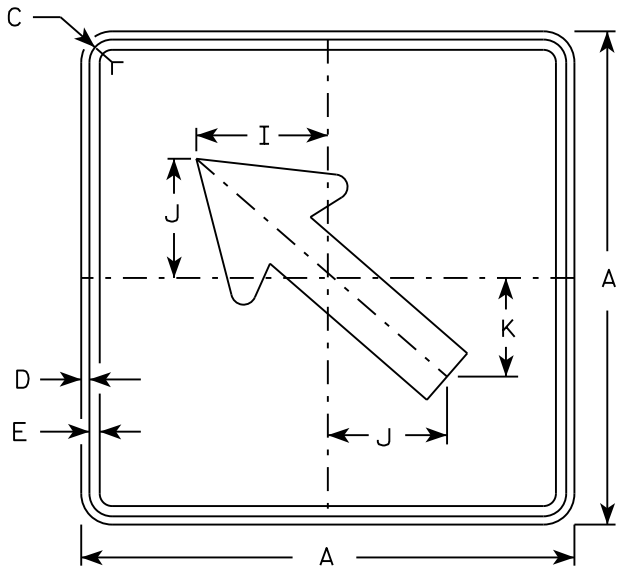
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

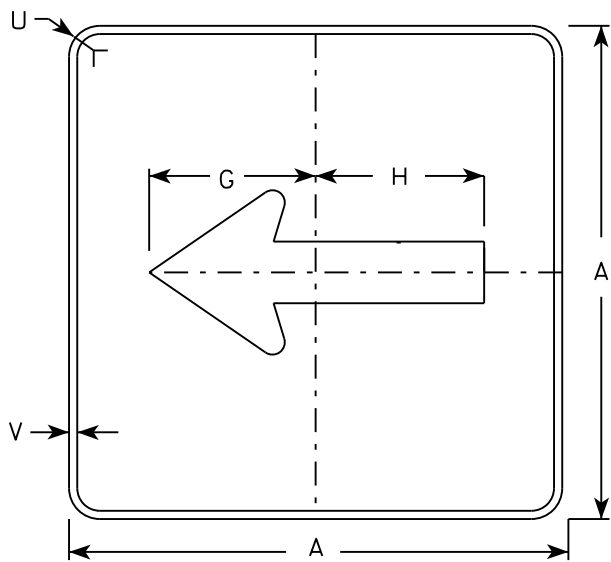
DATE 10/15/15 PLATE NO. M5-1.13



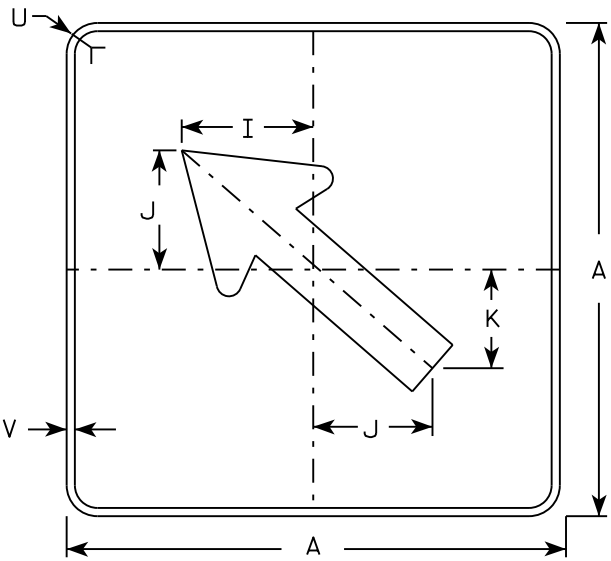
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



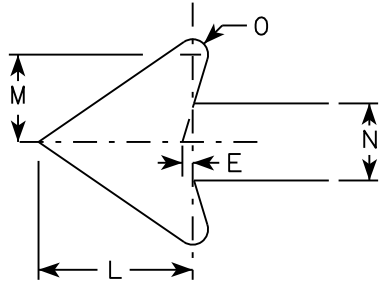
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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



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



NOTES

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

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

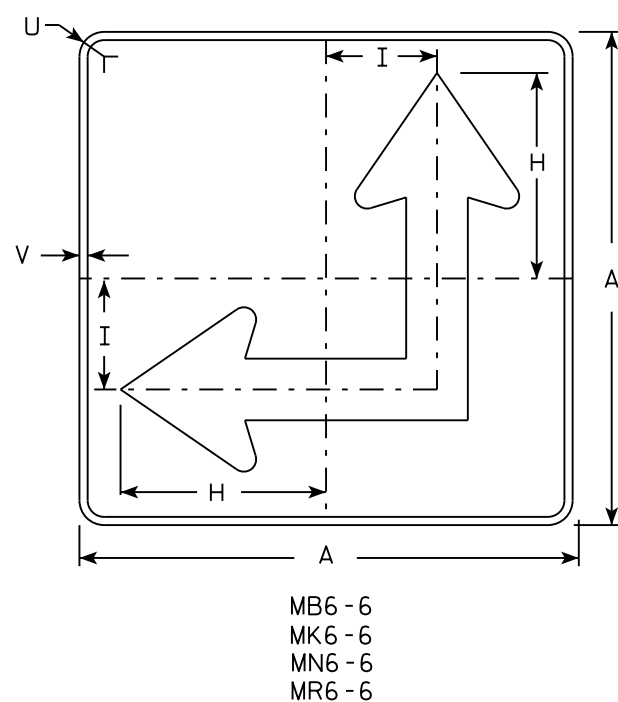
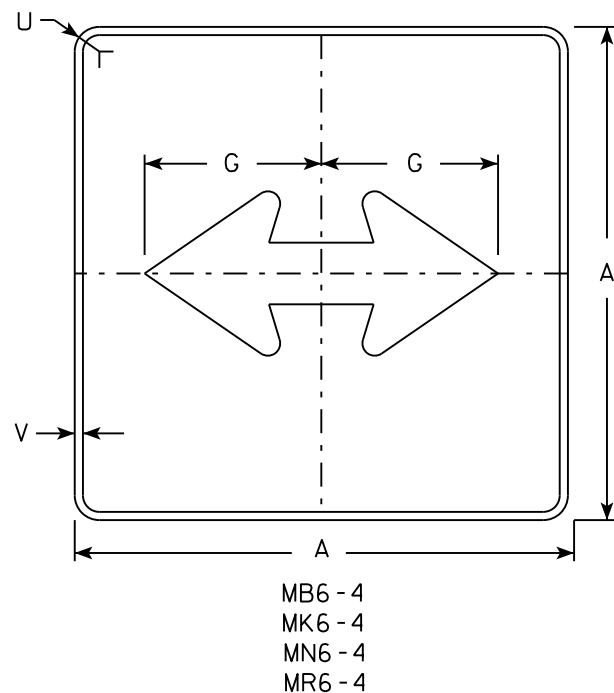
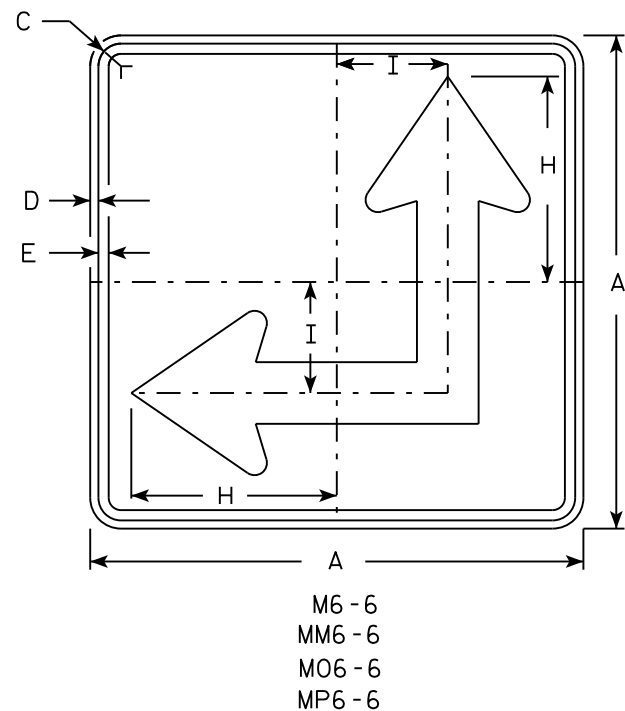
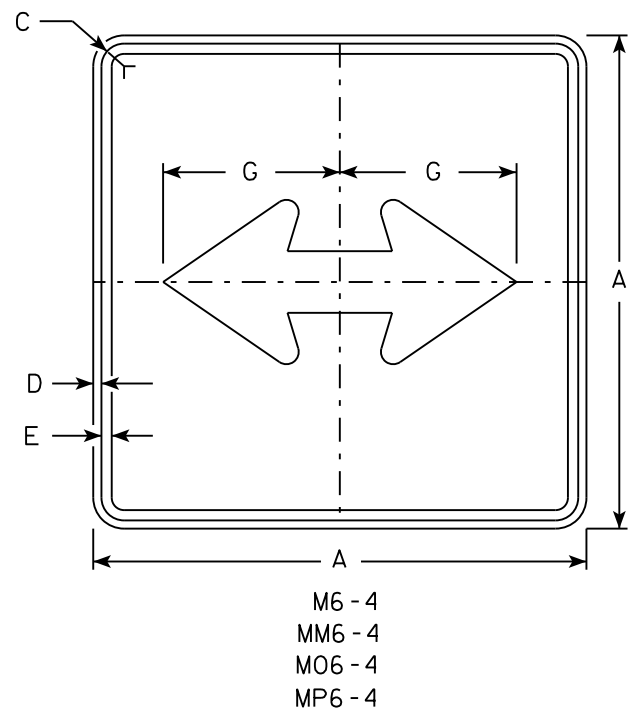
E

STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

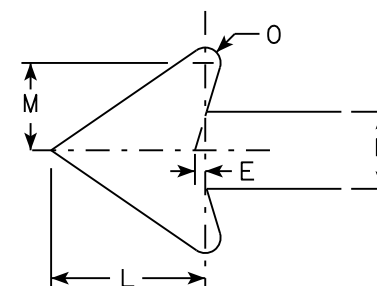
APPROVED
Matthew R. Rauch
for State Traffic Engineer

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



NOTES

- 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.



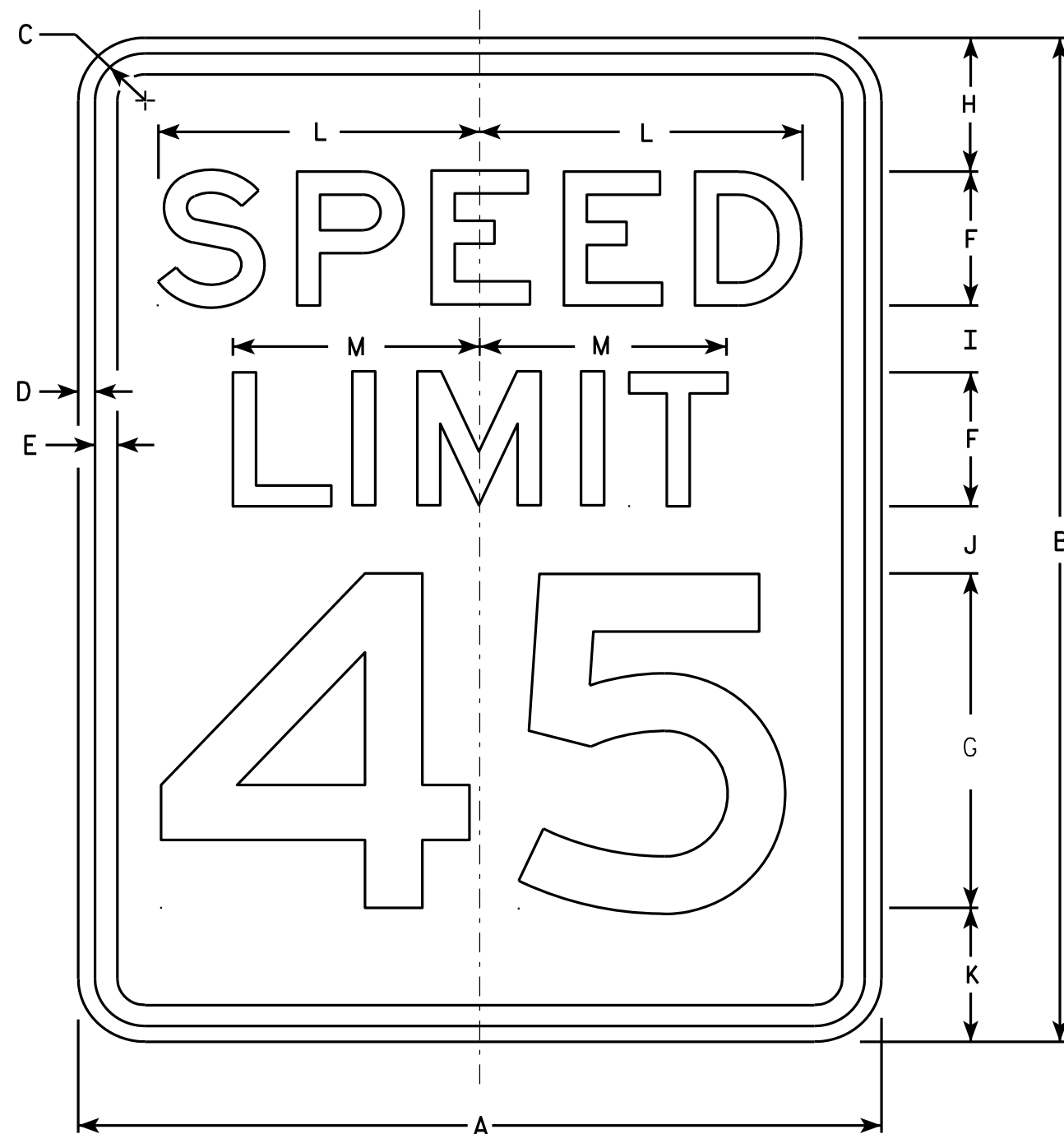
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12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

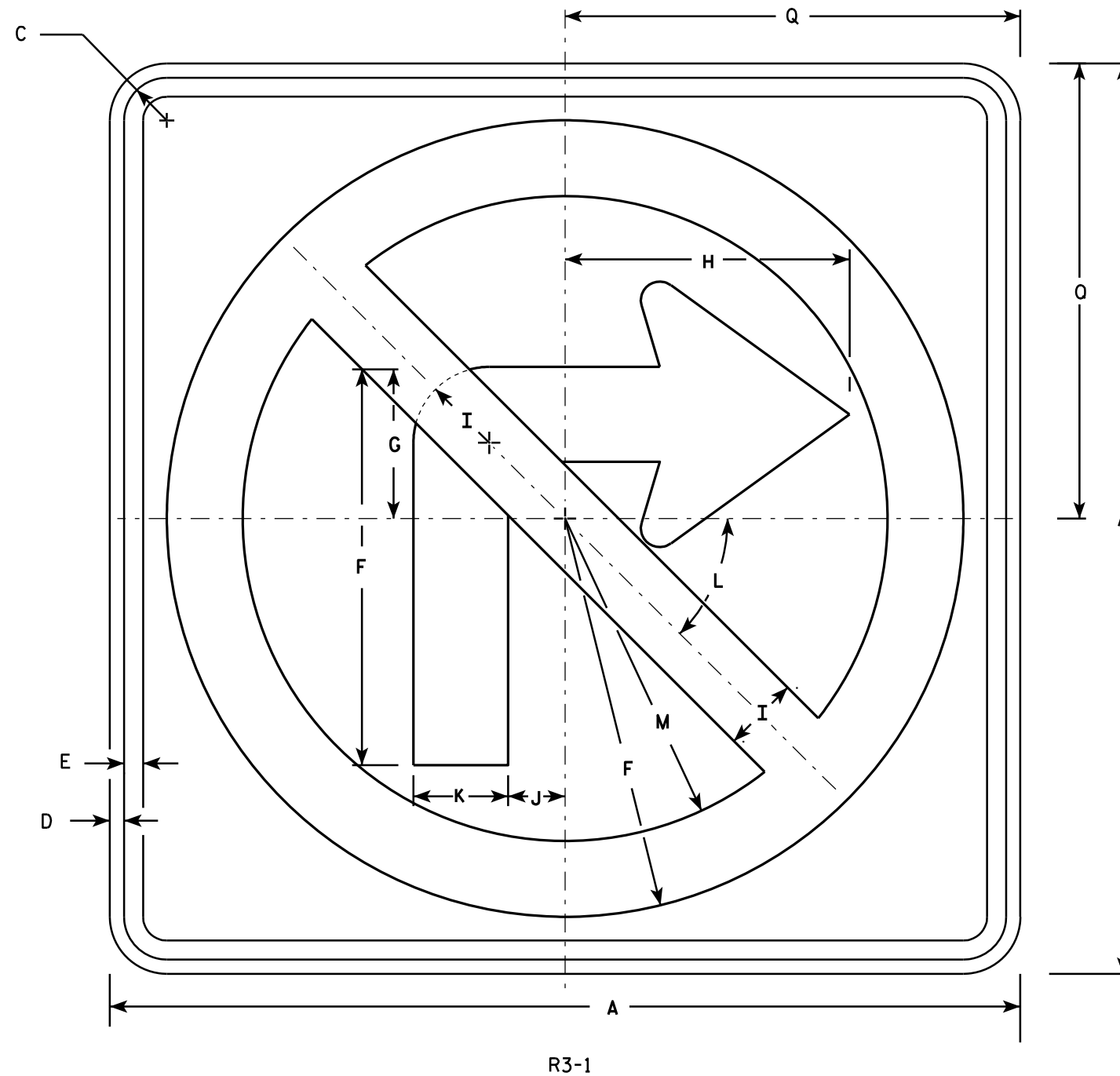
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as 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

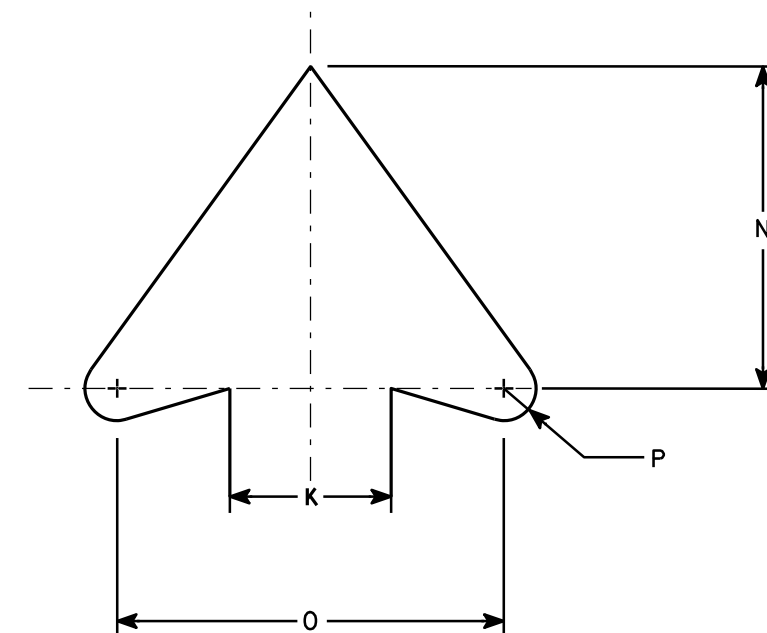
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45	8 1/2	5	6	1/2	12										4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2	12										4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45	12 3/4	7 1/2	9	3/4	18										9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4	18										9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1	24										16.0

STANDARD SIGN

R3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-1.5

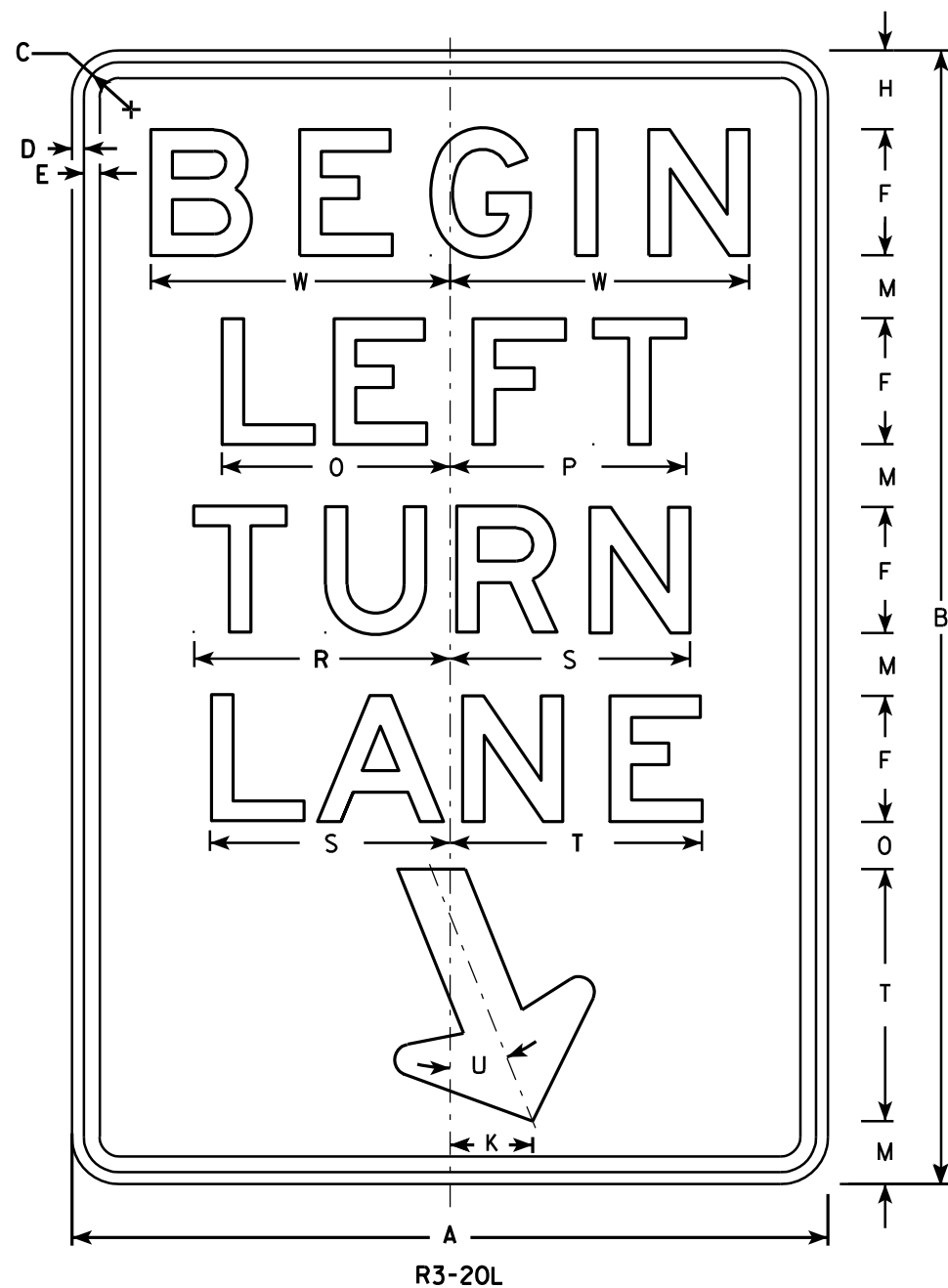
PROJECT NO:

HWY:

COUNTY:

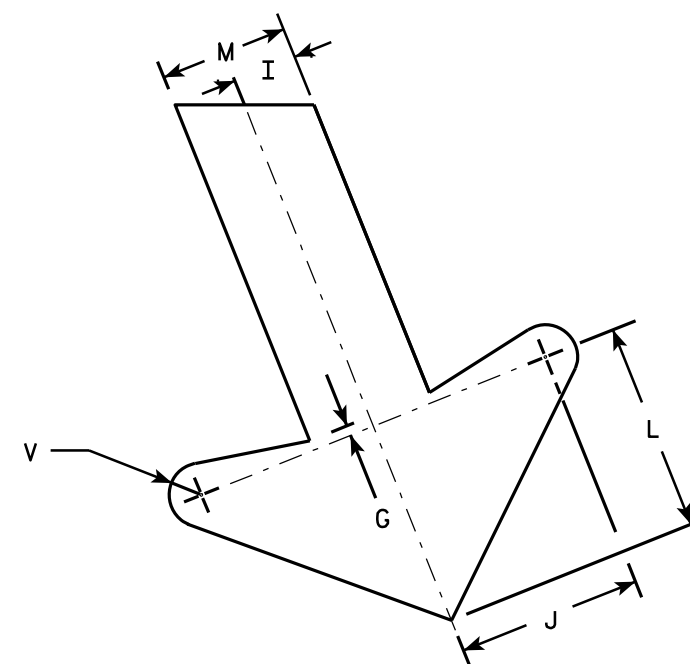
SHEET NO:

E



NOTES

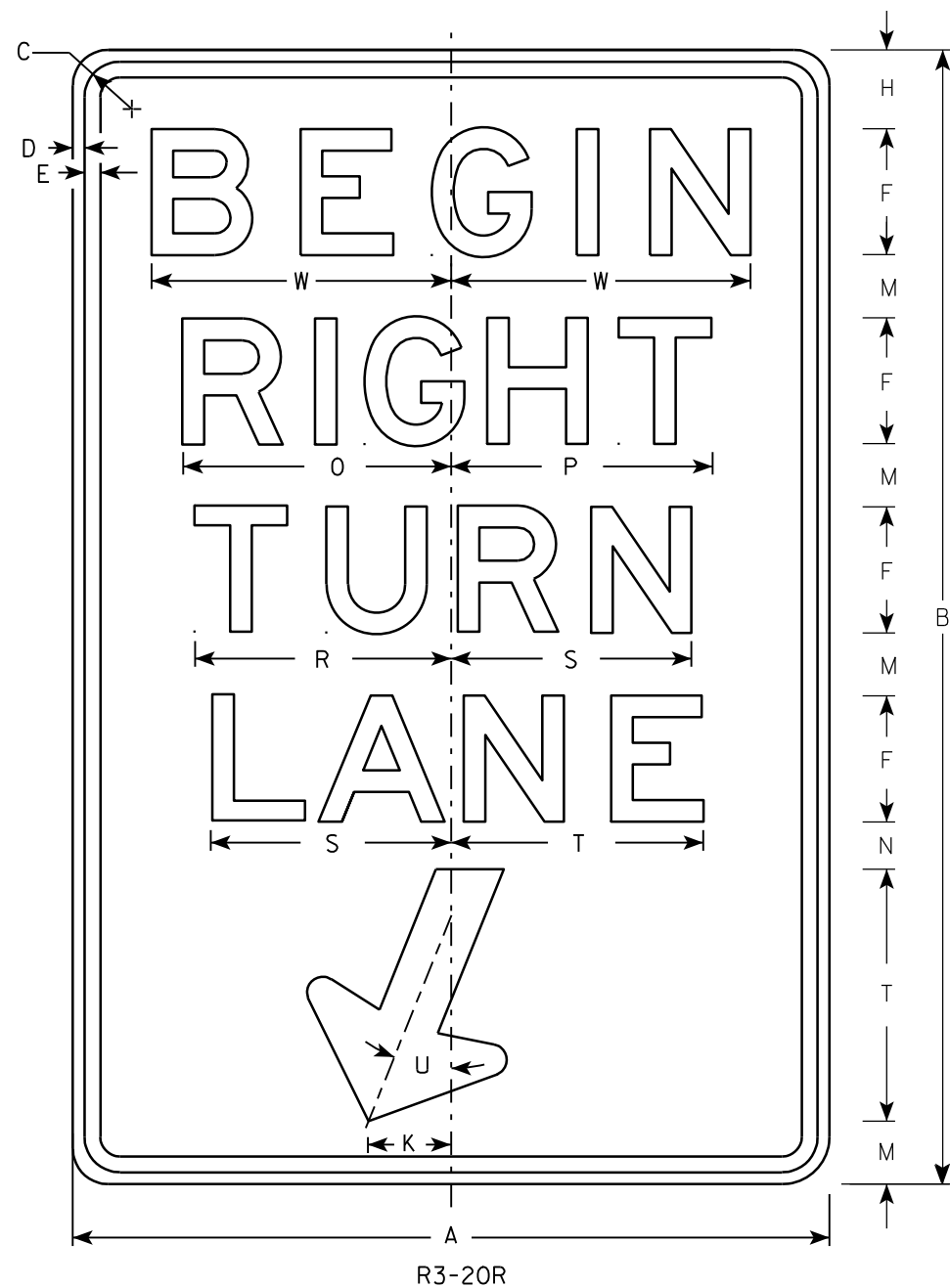
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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



ARROW DETAIL

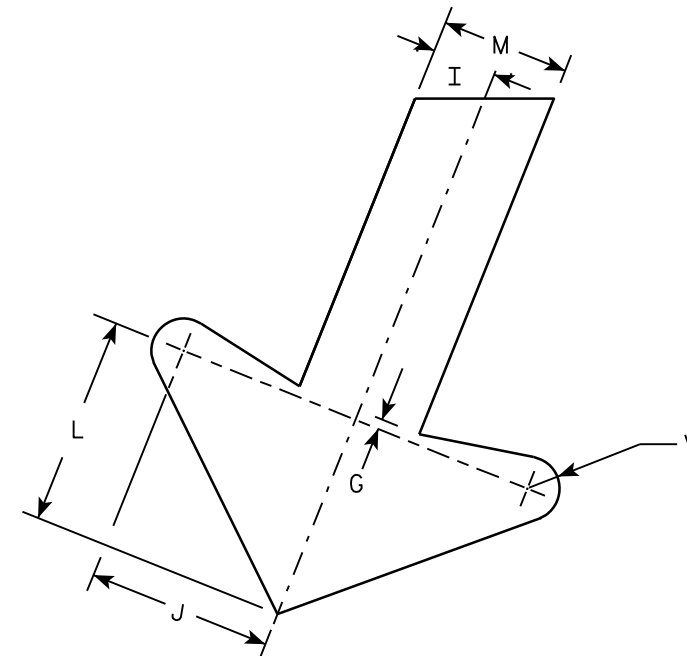
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	7 1/4	7 1/2		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	10 7/8	11 1/4		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

STANDARD SIGN R3-20L	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 10/18/10	PLATE NO. R3-20L.7



NOTES

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



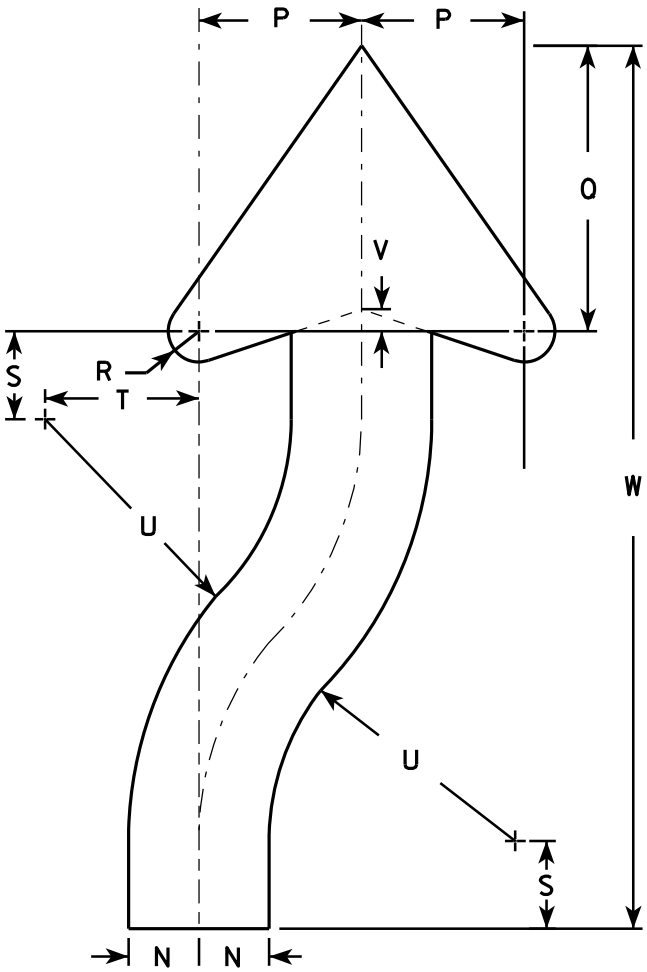
ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
2M	24	36	1 1/8	3/8	1/2	4	1/4	2 1/2	1	2 7/8	2 5/8	3 1/4	2	1 1/2	8 1/2	8 1/4		8 1/8	7 5/8	8	22°	1/2	9 1/2				6.0
3	36	54	1 3/4	1/2	5/8	6	3/8	3 3/4	1 1/2	4 1/4	4	4 7/8	3	2 1/4	12 3/4	12 1/2		12 1/4	11 1/2	12	22°	3/4	13 1/4				13.5
4																											
5																											

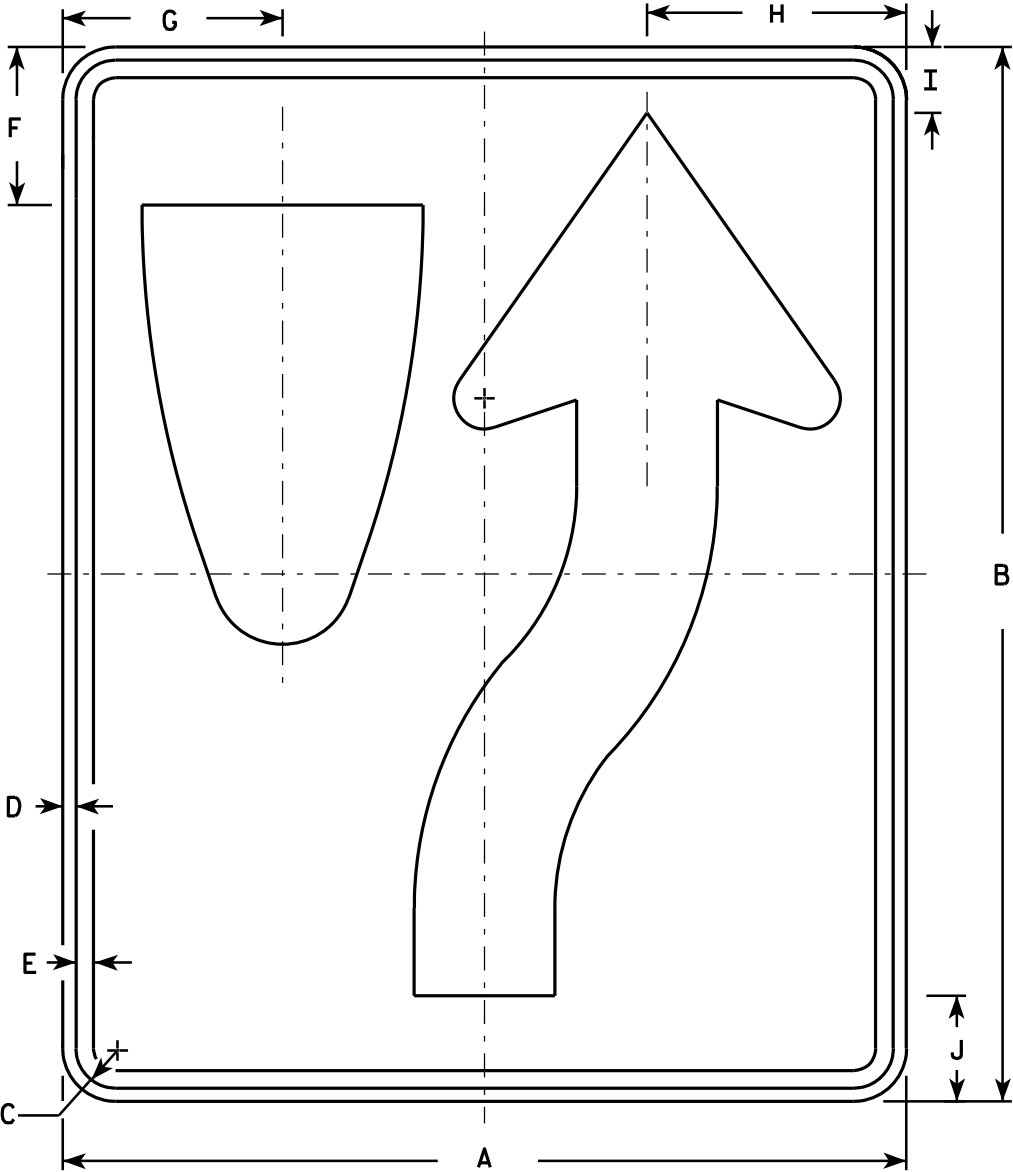
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition. material is plywood but borders shall be rounded
- 2. Color:
Background - White
Message - Black
- 3. Corners may be square or rounded when base as shown. When base material is metal, the corners and borders shall be rounded.
- 4. R4-8 is the same as R4-7 except Legend is reversed.



ARROW DETAIL



R4-7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3 3/8	4 3/4	5 1/2	1 3/8	2 1/4	6	3	9 3/8	1 1/2	22 1/2	3 1/2	6 1/8	5/8	1 7/8	3 1/4	6 3/4	1/2	20 3/8				3.0
2S	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
2M	24	30	1 1/8	3/8	1/2	4 1/2	6 1/4	7 3/8	1 7/8	3	8	4	12 1/2	2	30	4 5/8	8 1/8	7/8	2 1/2	4 3/8	9	5/8	25 1/8				5.0
3	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
4	36	48	1 3/4	1/2	5/8	6 3/4	9 3/8	11 1/8	2 7/8	4 1/2	12	6	18 3/4	3	45	6 7/8	12 1/4	1 1/4	3 3/4	6 5/8	13 1/2	1	40 3/4				12.0
5	48	60	2 1/4	3/4	1	9	12 1/2	14 3/4	3 3/4	6	16	8	25	4	60	9 1/4	16 1/4	1 5/8	5	8 3/4	18	1 1/4	50 1/4				20.0

STANDARD SIGN
R4-7 & R4-8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-7.8

PROJECT NO:

HWY:

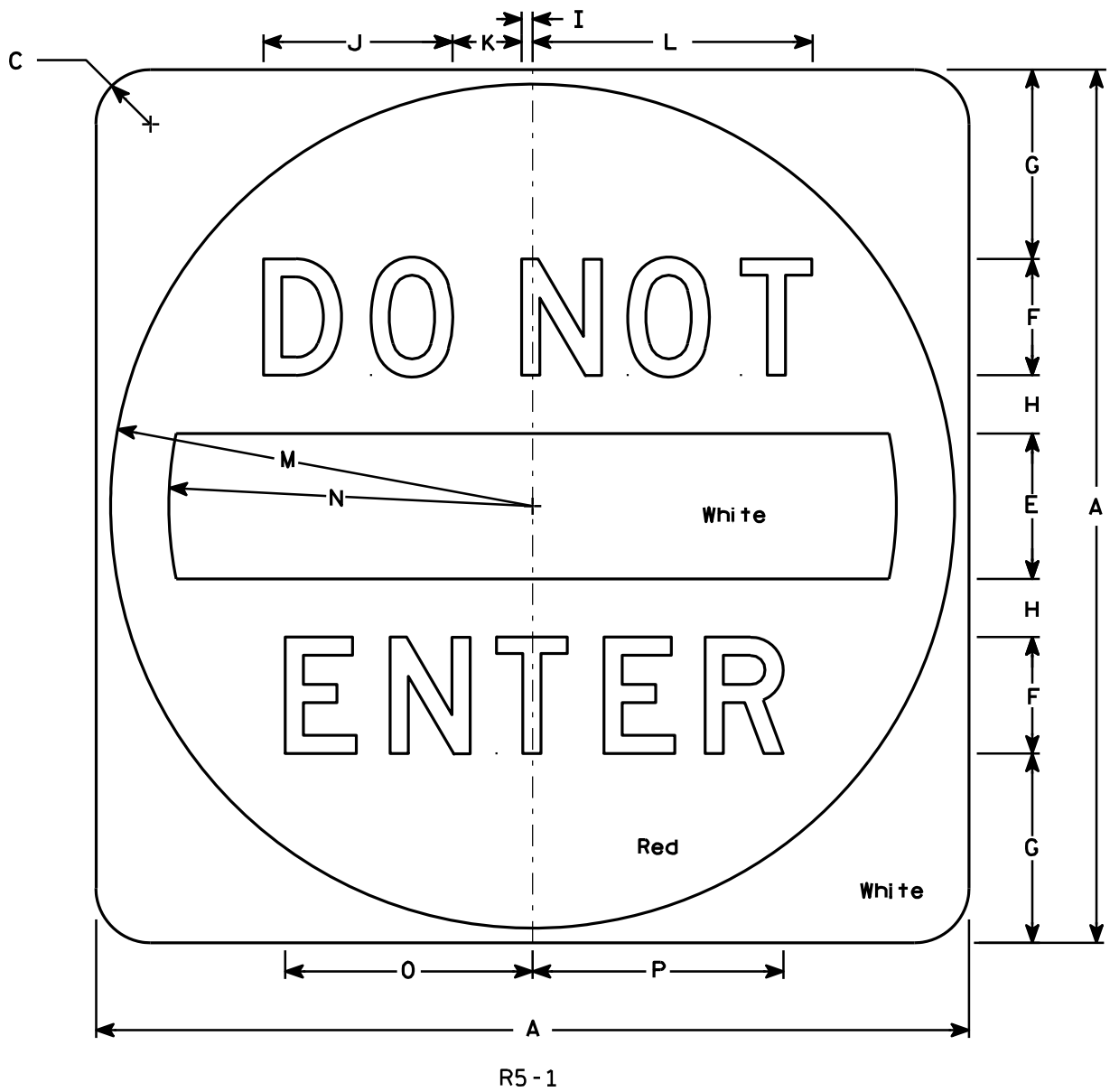
COUNTY:

SHEET NO:

E

NOTES

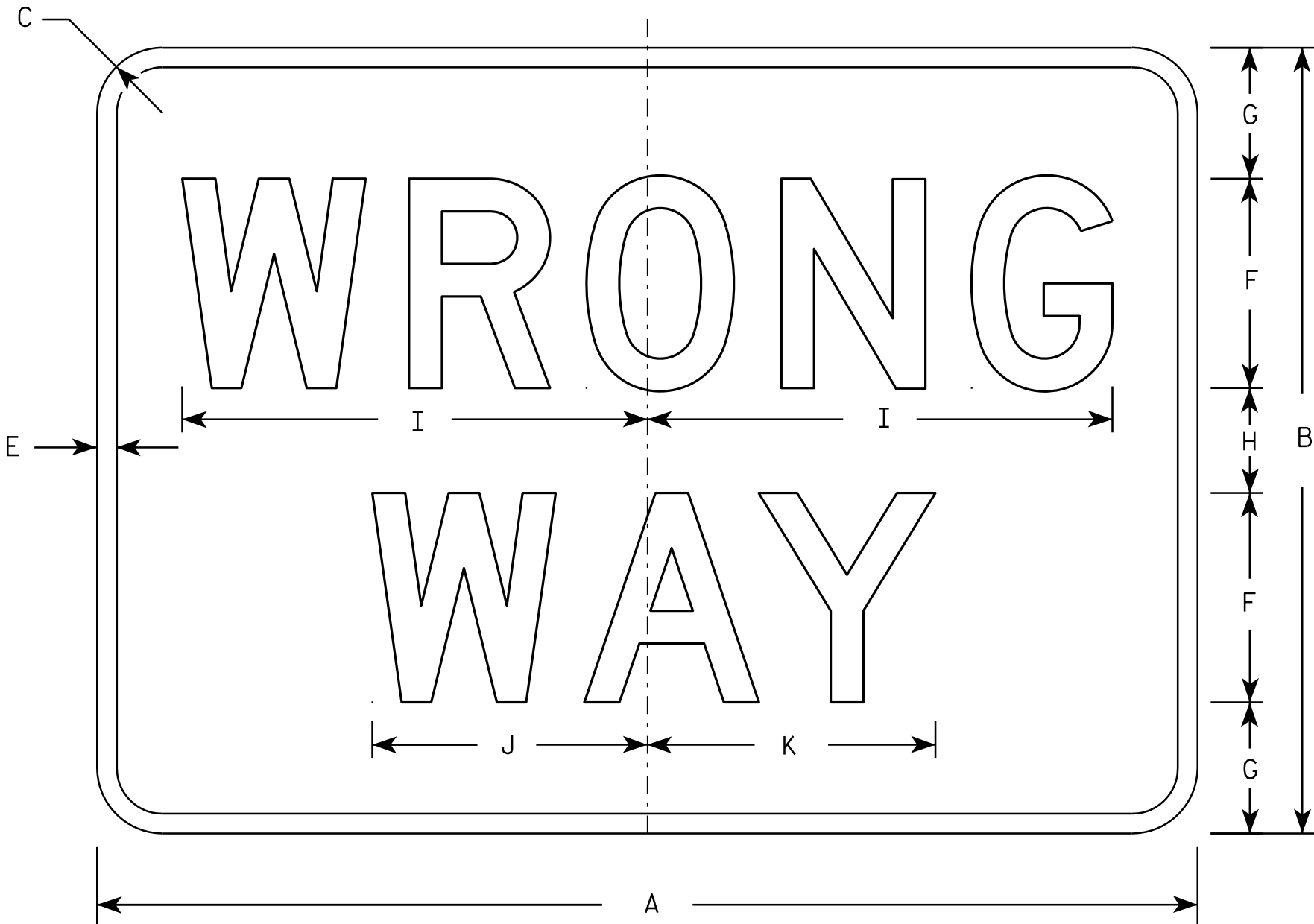
- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - See detail
 - Message - White - Type H Reflective
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7⁄8		5	4	6 1⁄2	2	3⁄8	6 1⁄2	2 3⁄8	9 5⁄8	14 1⁄2	12 1⁄2	8 1⁄2	8 5⁄8											6.26
2M	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
3	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
4	36		2 1⁄4		6	5	7 1⁄2	2 1⁄2	1⁄2	8 1⁄8	3	12 1⁄8	17 1⁄2	15	10 5⁄8	10 3⁄4											9.0
5	48		3		8	6	11	3	5⁄8	9 3⁄4	3 5⁄8	14 1⁄2	23 1⁄2	20	12 3⁄4	12 7⁄8											16.0

STANDARD SIGN	
R5 - 1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 12/17/10	PLATE NO. R5-1.15

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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R5-1A

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

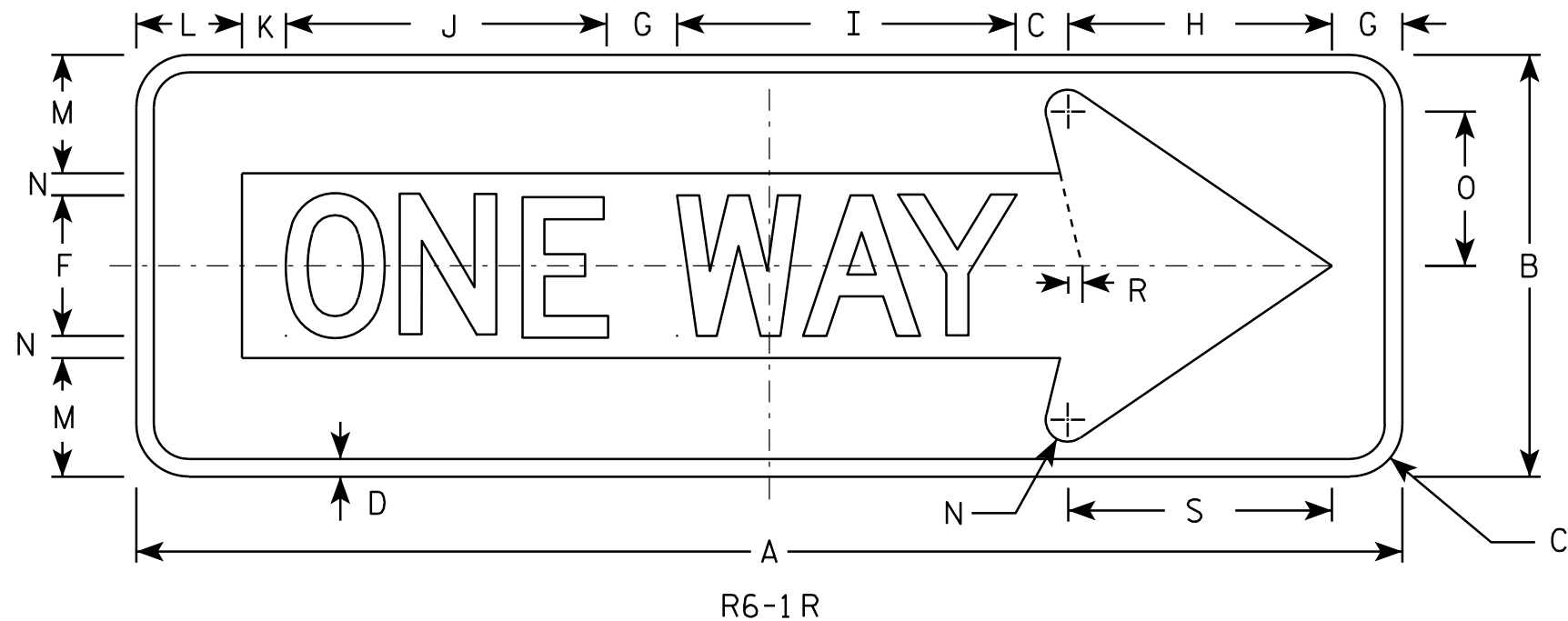
PROJECT NO:

HWY:

COUNTY:

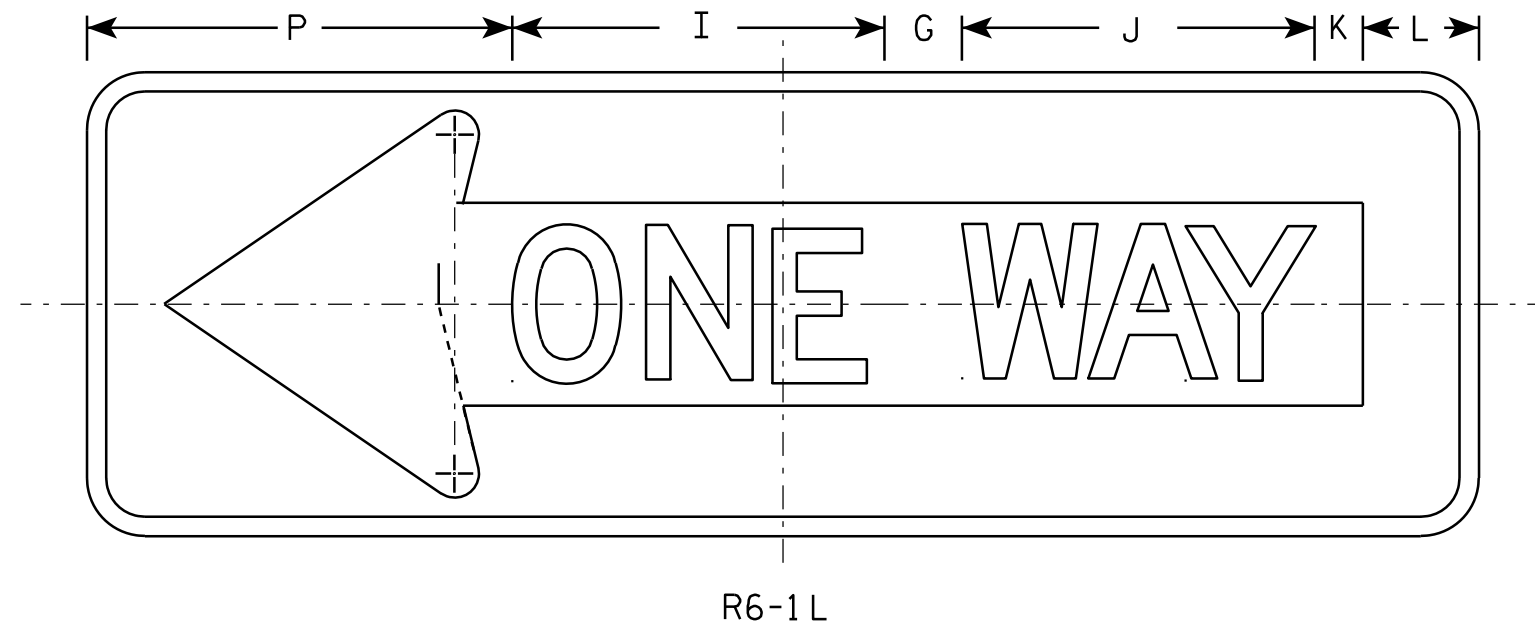
SHEET NO:

E



NOTES

- Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- Color:
Background - BLACK
Message - BLACK LEGEND & WHITE ARROW & BORDER
- Message Series - D
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



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	12	1 1/2	1/2		4	2	7 1/2	9 5/8	9 1/8	1 1/4	3	3 3/8	5/8	4 3/8	11		3/8	7 1/2							3.0	
2M	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4							6.75	
3	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4							6.75	
4	54	18	2 1/4	3/4		6	3	11 1/4	14 1/2	13 5/8	1 7/8	4 1/2	5	1	6 1/2	16 1/2		5/8	11 1/4							6.75	
5																											

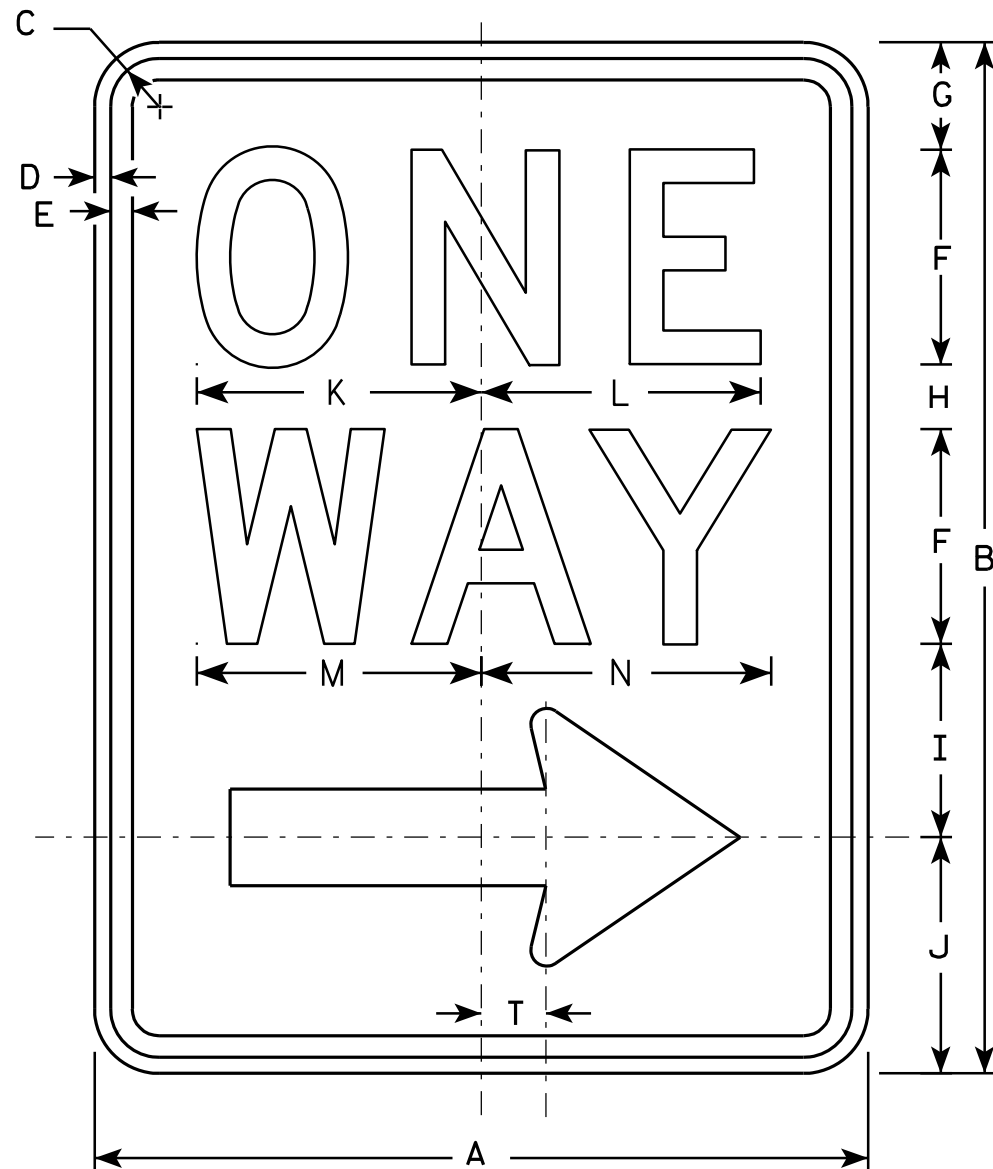
STANDARD SIGN R6-1 L & R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 12/17/10 PLATE NO. R6-1.2

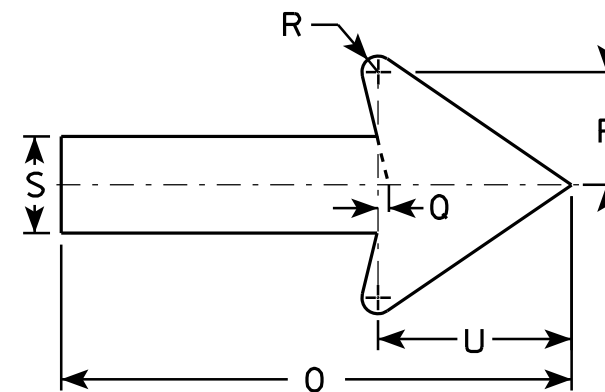
PROJECT NO: SHEET NO: E



R6-2R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R6-2L same as R6-2R except arrow points to the left.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z
1	18	24	1 1/8	3/8	1/2	5	2 1/2	1 1/2	4 1/2	5 1/2	6 5/8	6 1/2	6 5/8	6 3/4	11 7/8	2 5/8	1/4	3/8	2 1/4	1 1/2	4 1/2					
2S	24	30	1 1/8	3/8	1/2	6	3	2 1/2	5 1/2	7	8 1/8	8 1/8	8 1/2	8 5/8	16	3 1/2	3/8	1/2	3	2	6					
2M	30	36	1 3/8	1/2	5/8	8	2 1/2	2 5/8	6 7/8	8	10 1/2	10 1/2	11 1/4	11 1/4	20	4 3/8	1/2	5/8	3 3/4	2 1/2	7 1/2					
3	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
4	36	48	1 7/8	1/2	5/8	10	5 1/4	3 1/4	9	10 1/2	12 3/4	12 3/4	13 1/4	13 1/2	24	5 5/8	1/2	3/4	4 3/4	3	9					
5																										

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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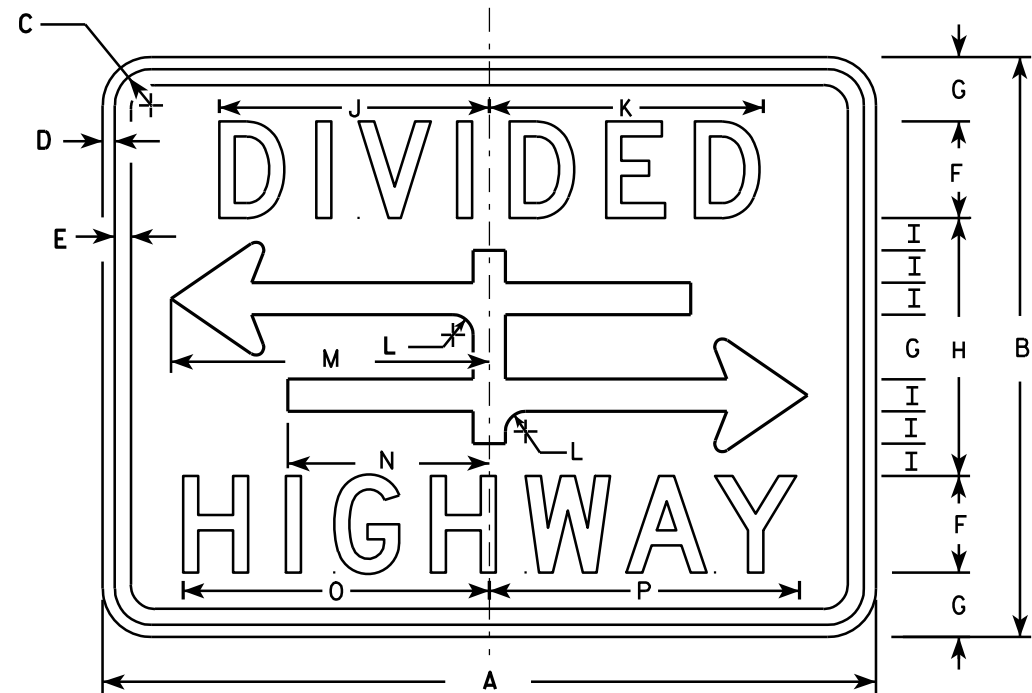
STANDARD SIGN

R6-2 R&L

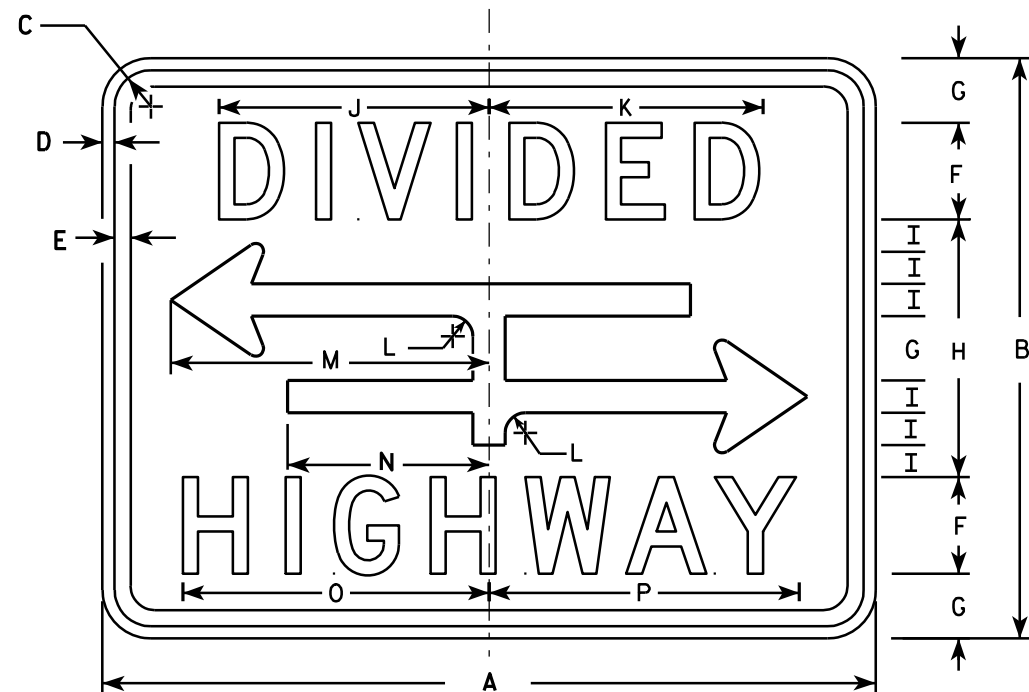
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/2/10 PLATE NO. R6-2.8



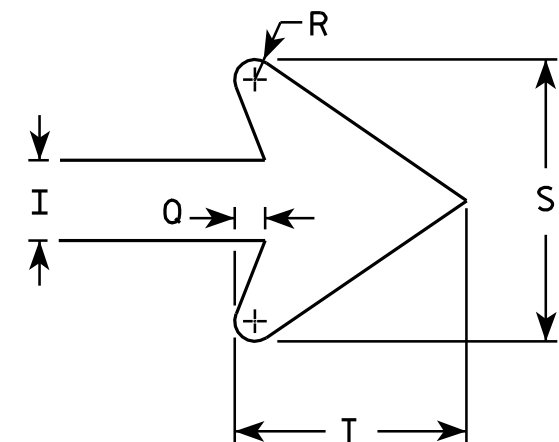
R6-3



R6-3A

NOTES

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



ARROW DETAIL

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

STANDARD SIGN R6-3 & R6-3A

WISCONSIN DEPT OF TRANSPORTATION

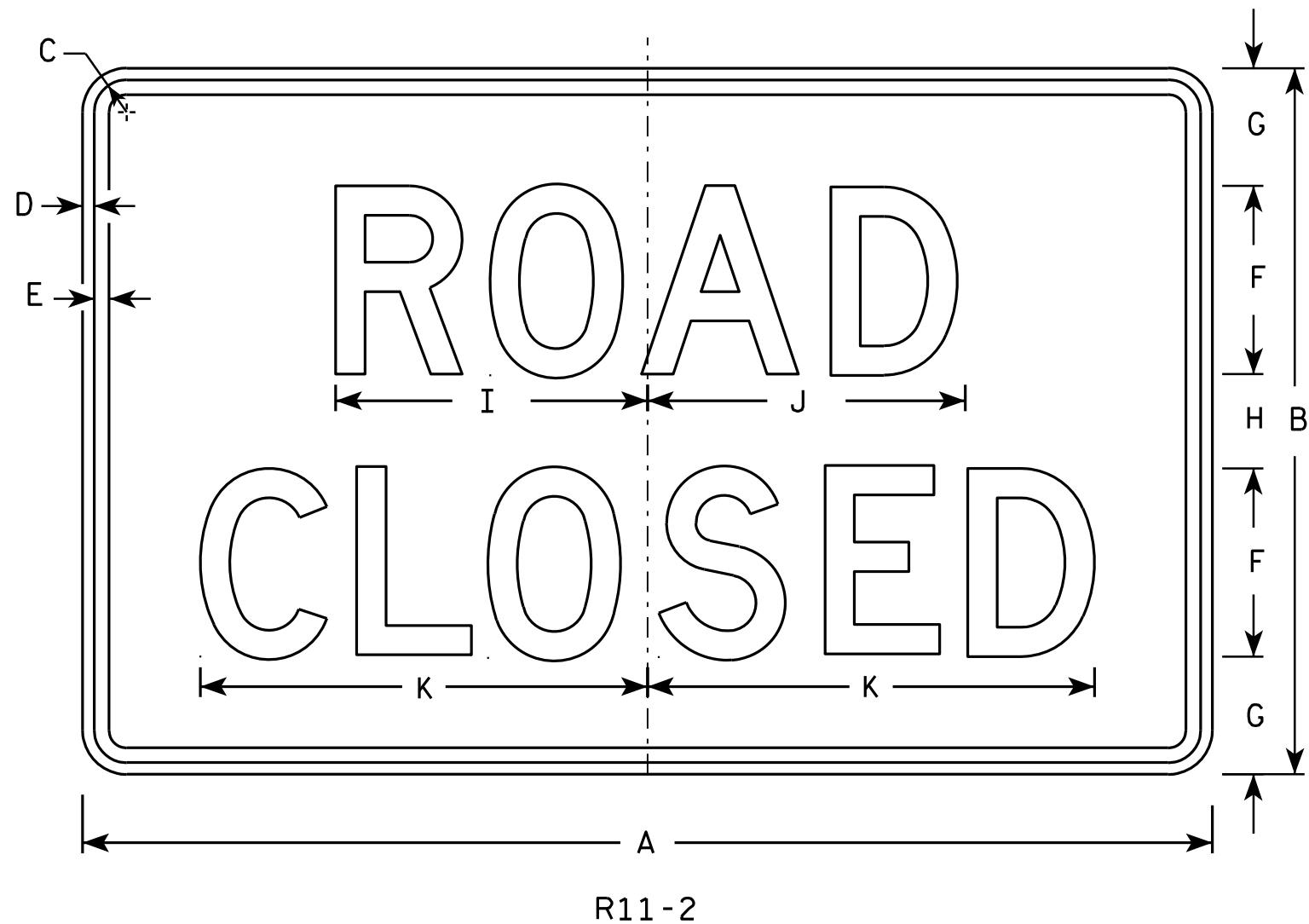
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R6-3.5

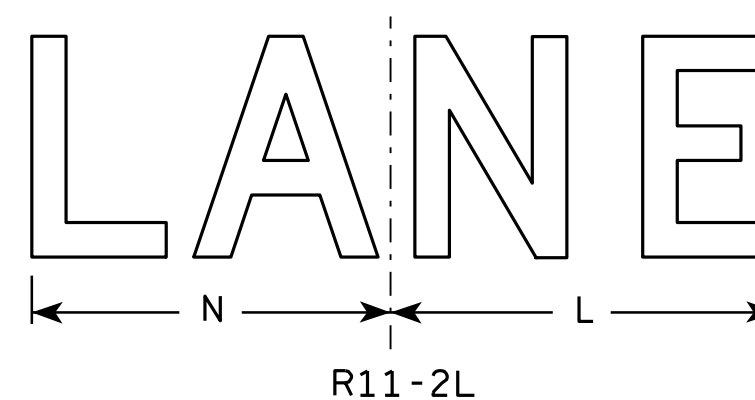
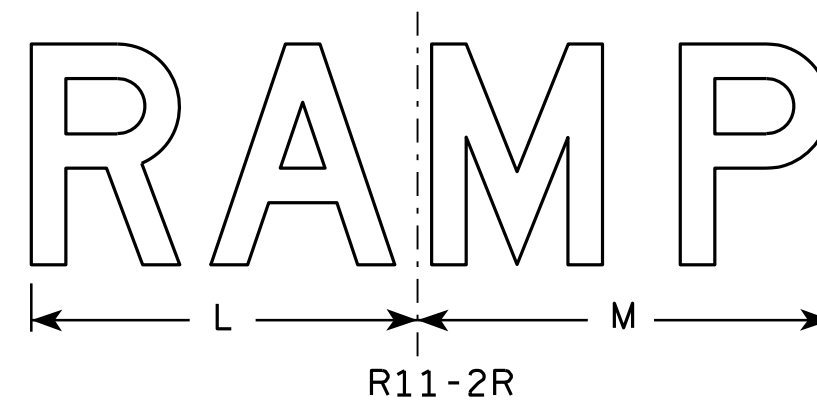
PROJECT NO:

SHEET NO:

E

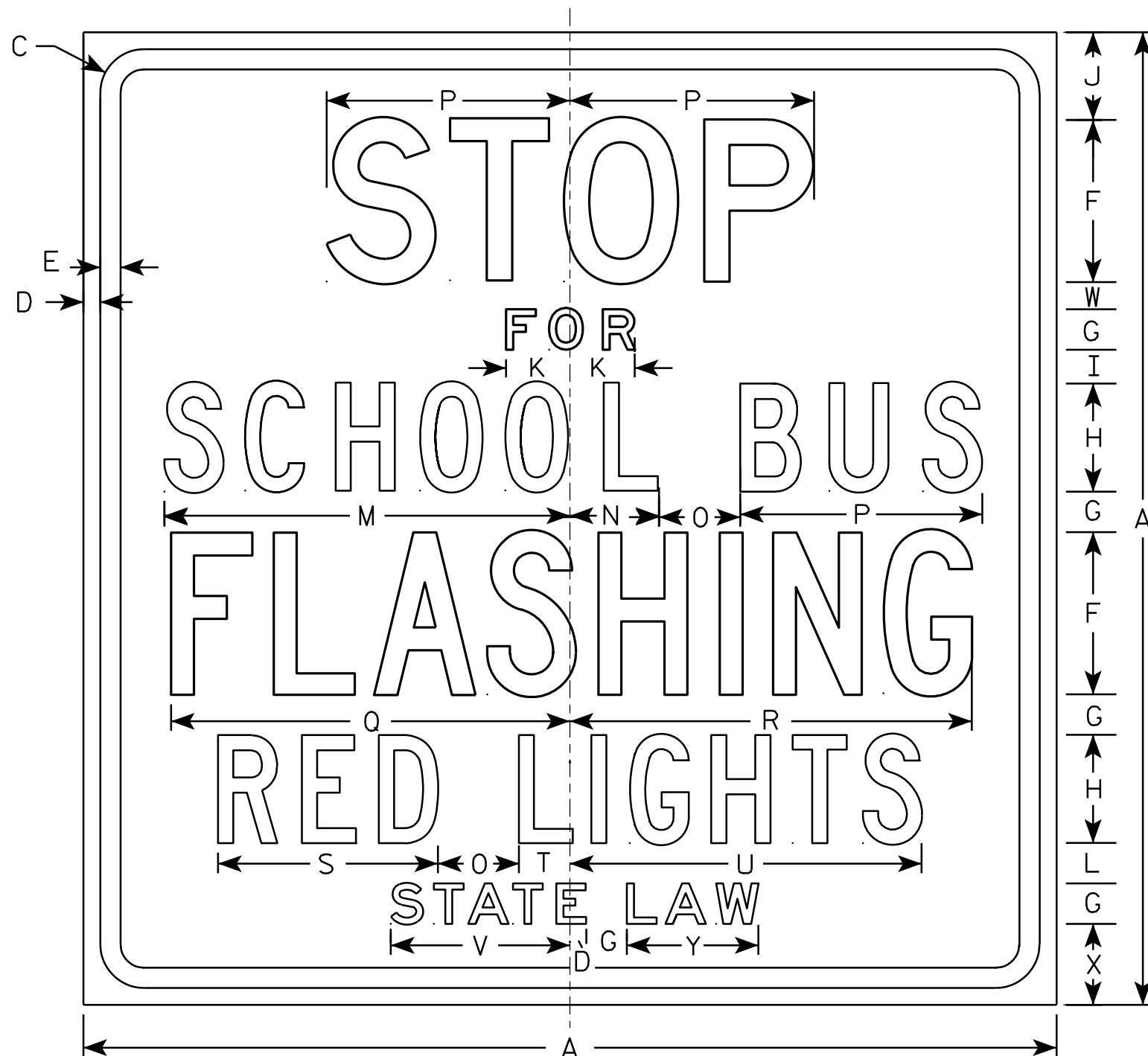


- NOTES**
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - White
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall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



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

STANDARD SIGN	
R11-2	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED	<i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>
DATE <u>4/1/11</u>	PLATE NO. <u>R11-2.10</u>



R59-51

NOTES

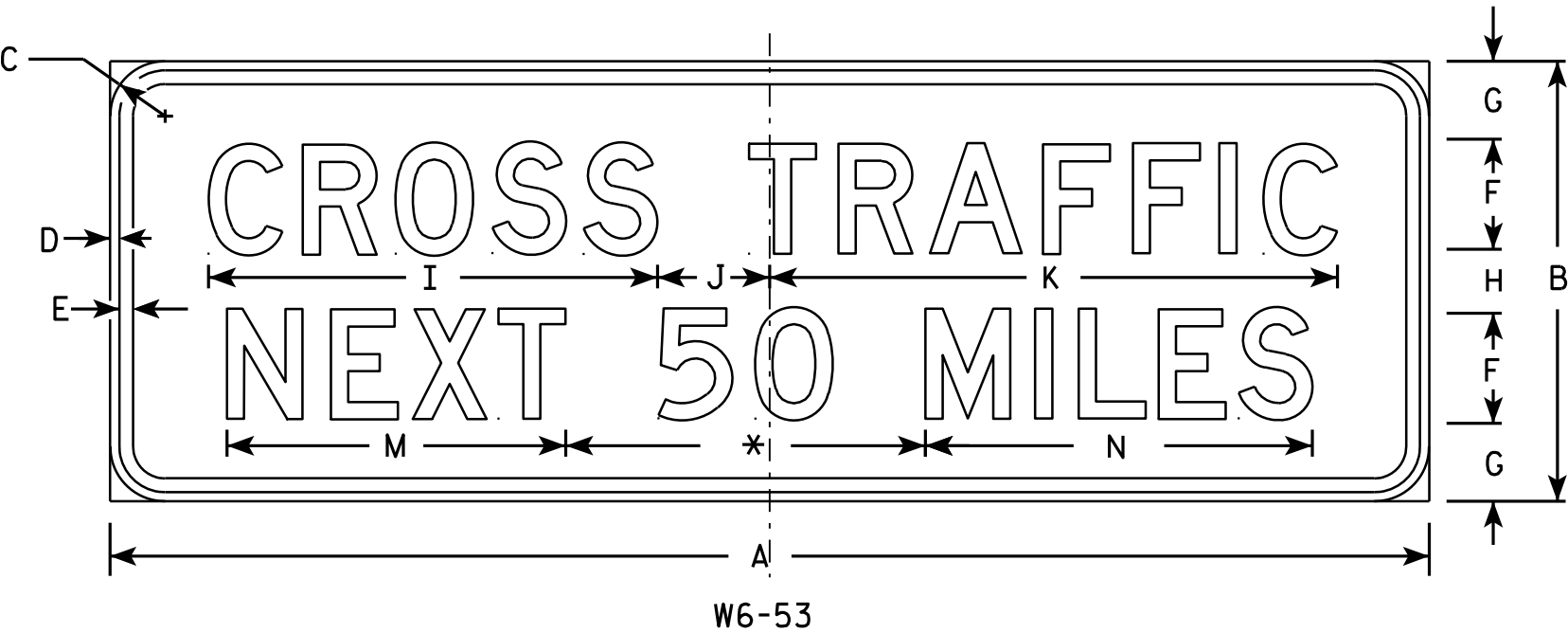
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - See note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Line 1 is Series D
Lines 2 & 6 are Series E
Line 3, 4 & 5 are Series C

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

STANDARD SIGN R59-51	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/30/11	PLATE NO. R59-51.10

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 Non - reflective
- 3. Message Series - D
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.



* Varies (See Note 5)

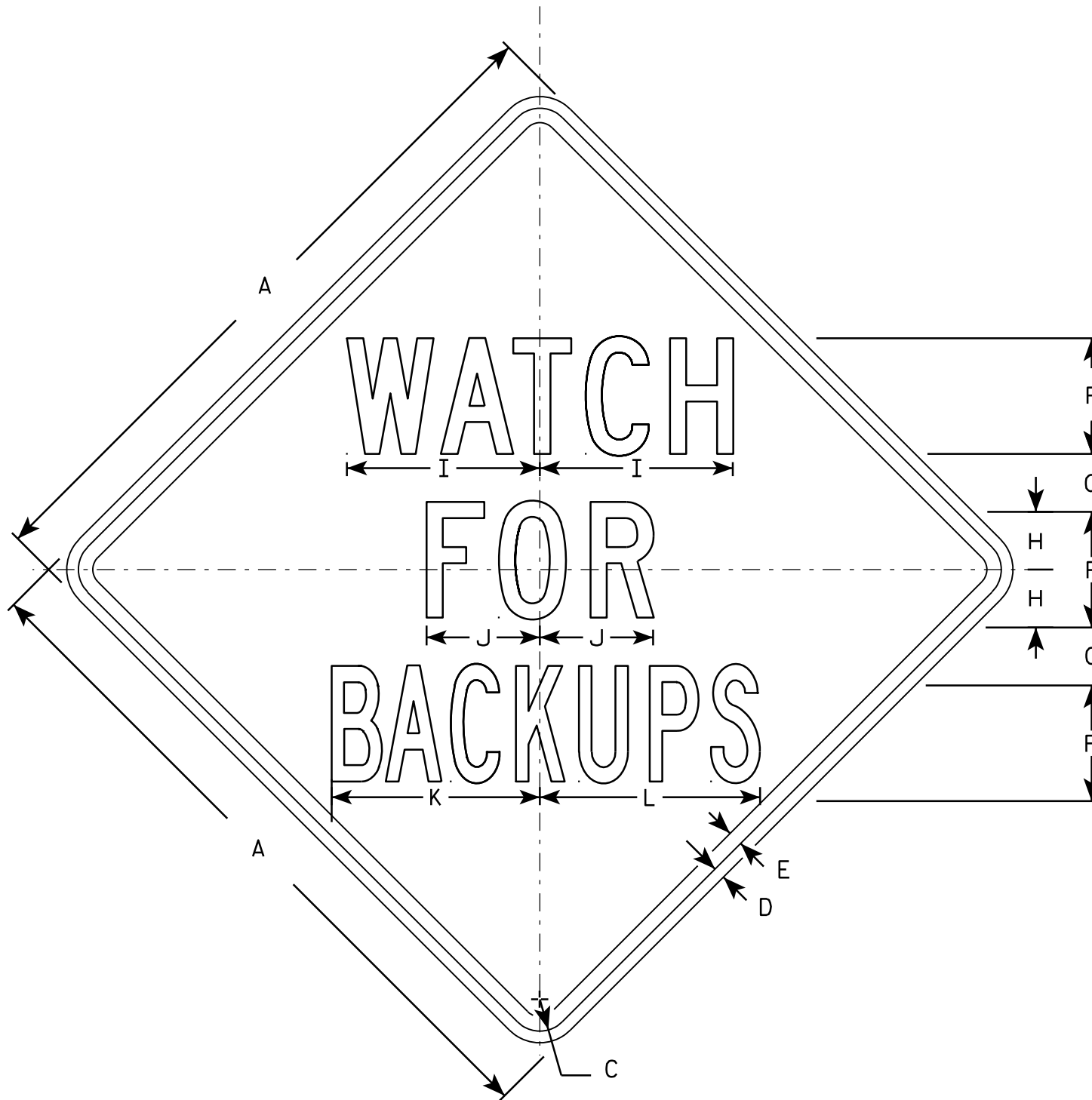
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	144	48	6	1	1½	12	9	6	49	12 ¼	62		37	42 ¼													48.0
5																											

STANDARD SIGN
W6 - 53

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 03/12/13 PLATE NO. W6-53.6



W8-74

NOTES

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

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

STANDARD SIGN

W8-74

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/23/11 PLATE NO. W8-74.2

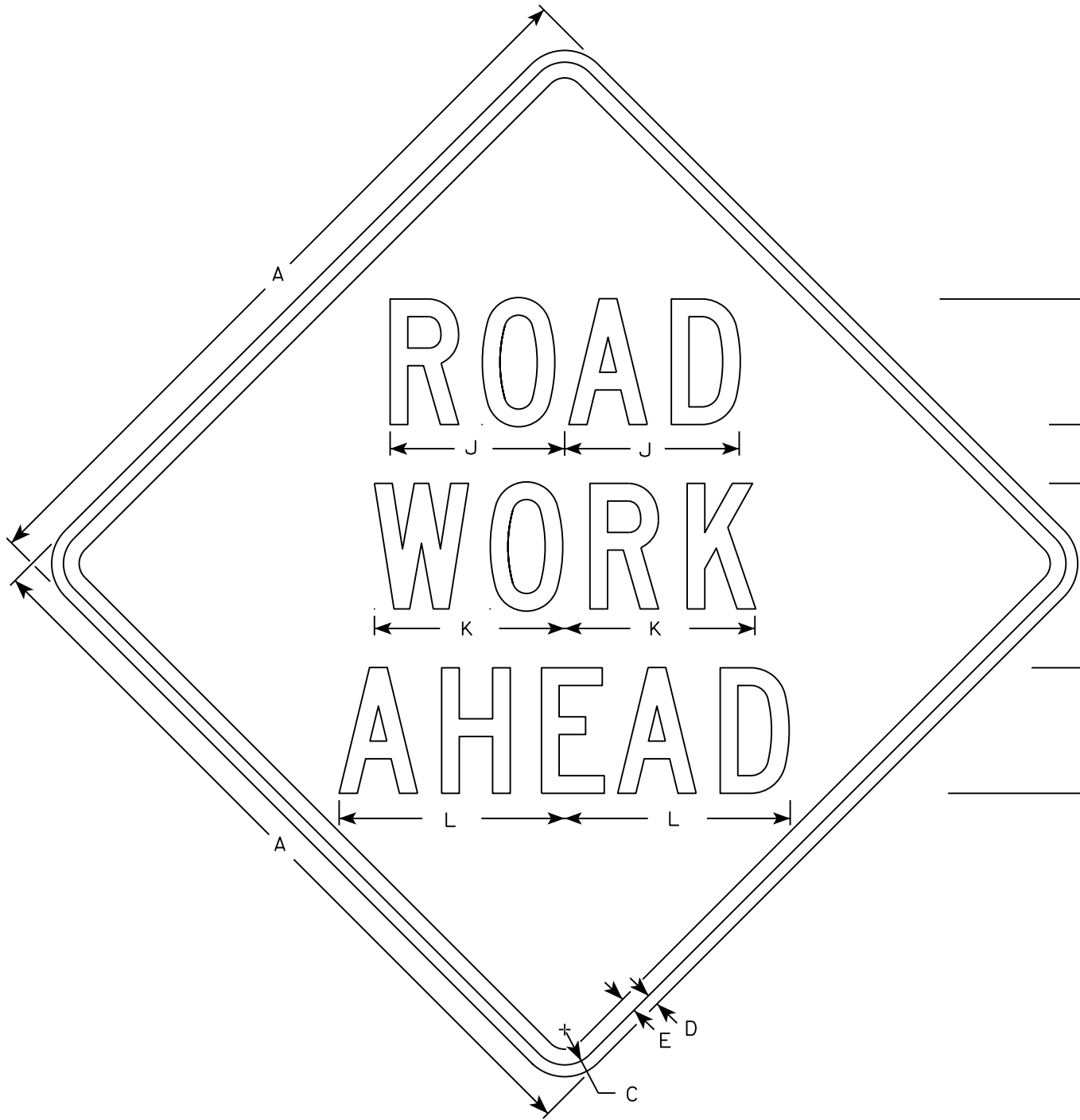
PROJECT NO:

HWY:

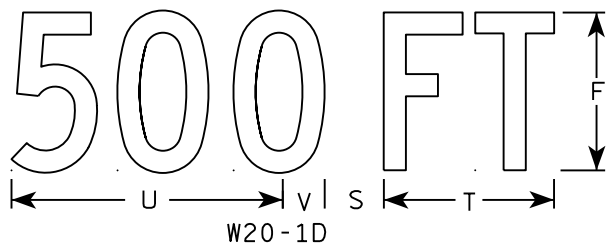
COUNTY:

SHEET NO:

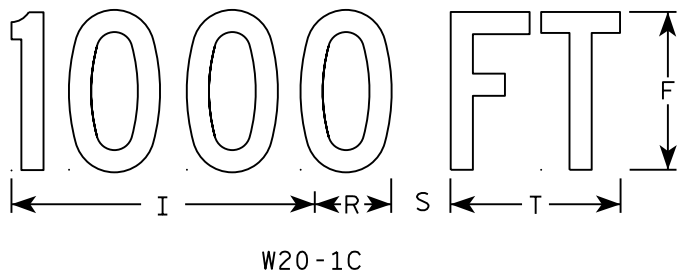
E



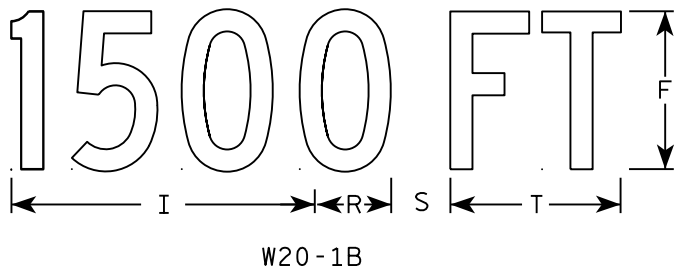
W20-1A



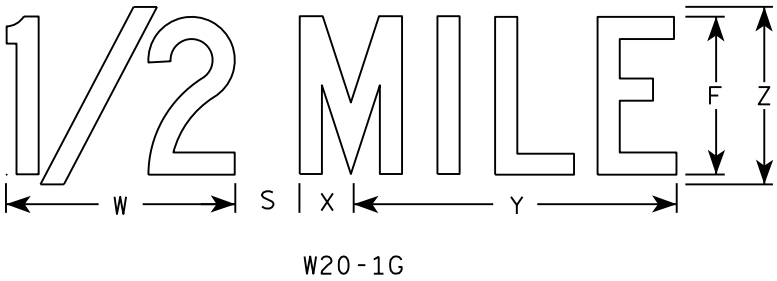
W20-1D



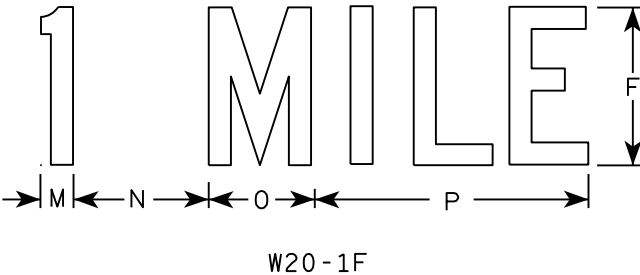
W20-1C



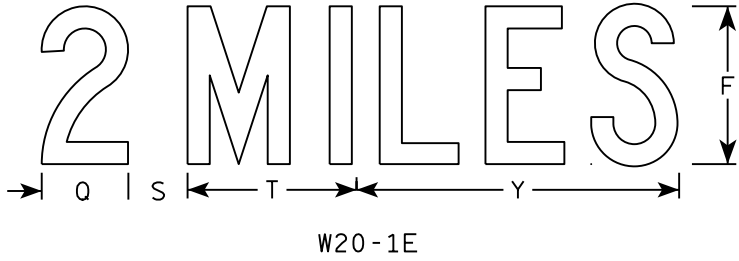
W20-1B



W20-1G



W20-1F



W20-1E

NOTES

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

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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

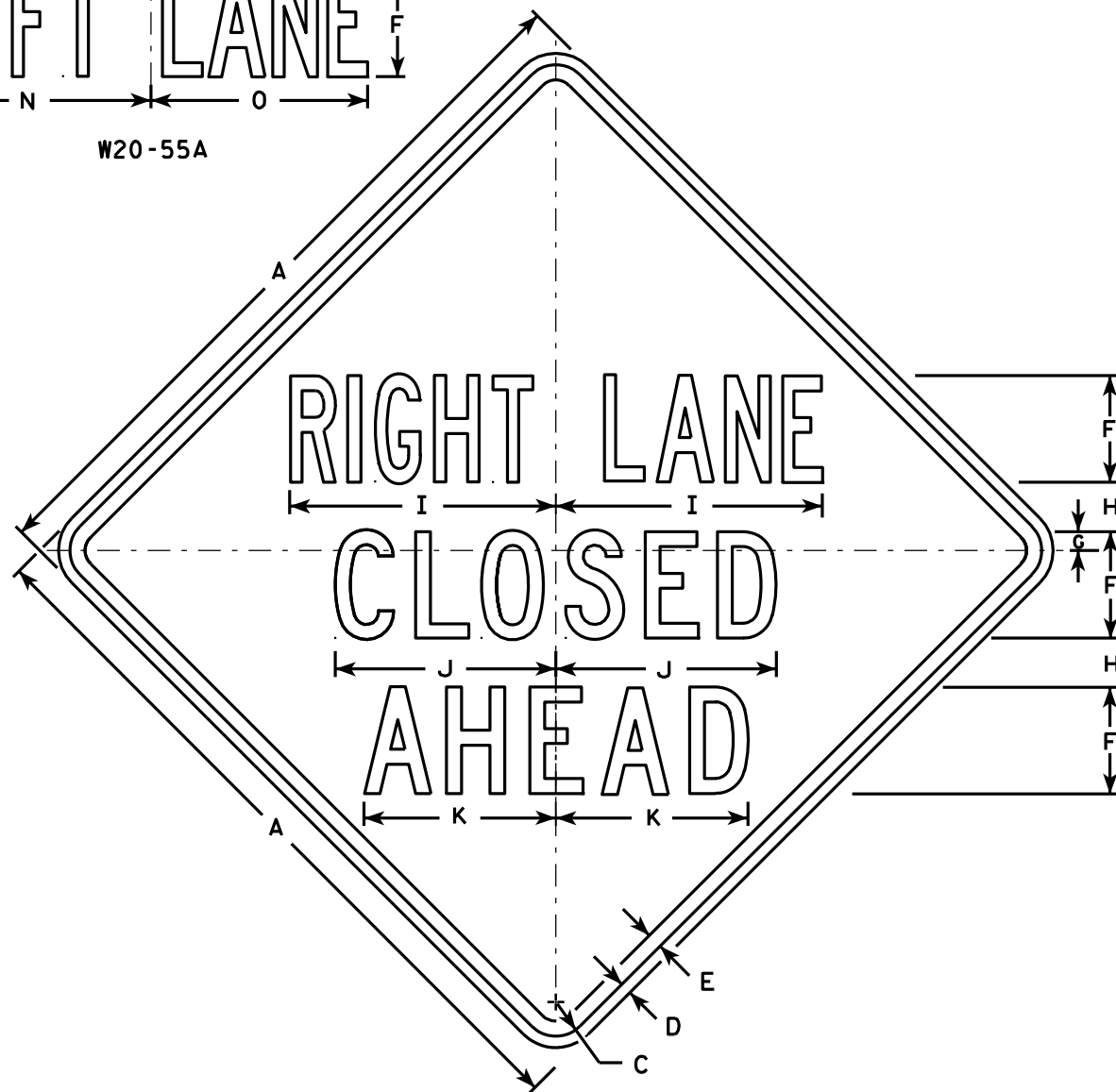
DATE 5/07/15 PLATE NO. W20-1.10

CENTER LANE

W20-56A

LEFT LANE

W20-55A



W20-5A

500 FT

W20-5D

1000 FT

W20-5C

1500 FT

W20-5B

1/2 MILE

W20-5G

1 MILE

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. "----- LANE" is Series B.
All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

PROJECT NO:

HWY:

COUNTY:

STANDARD SIGN
W20-5A, B, C, D, F & G

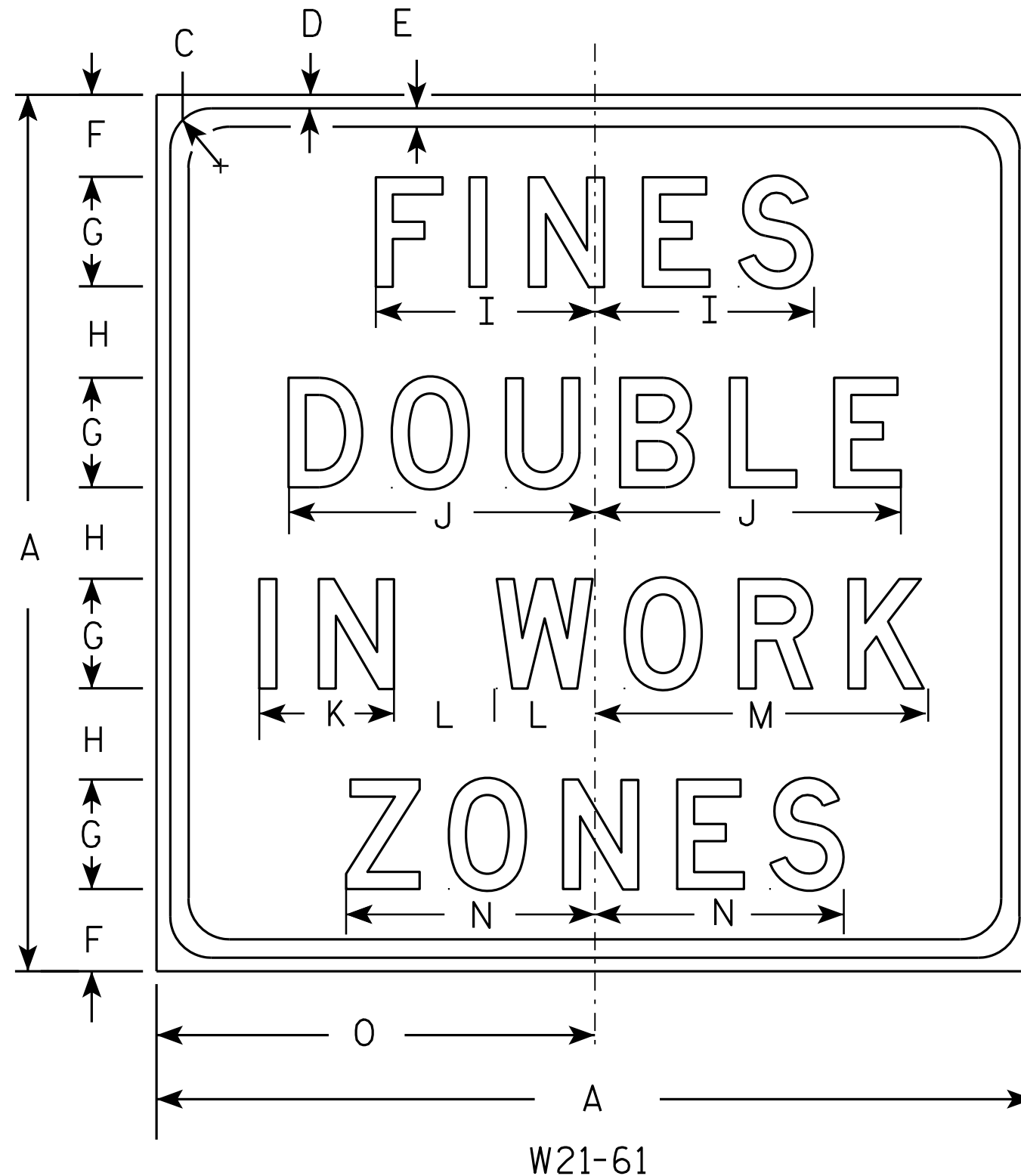
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

SHEET NO:

E



W21-61

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	2 1/4	3	2 1/2	6	8 3/8	3 3/4	2 3/4	9 1/8	6 7/8	12												4.0
2S	36		1 5/8	5/8	3/4	3 3/8	4 1/2	3 3/4	9	12 5/8	5 1/2	4 1/8	13 3/4	10 1/4	18												9.0
2M	36		1 5/8	5/8	3/4	3 3/8	4 1/2	3 3/4	9	12 5/8	5 1/2	4 1/8	13 3/4	10 1/4	18												9.0
3	48		2 1/4	3/4	1	4 1/2	6	5	12	16 3/4	7 3/8	5 1/2	18 1/4	13 5/8	24												16.0
4																											
5																											

STANDARD SIGN
W21-61

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 3/21/11 PLATE NO. W21-61.4

PROJECT NO:

HWY:

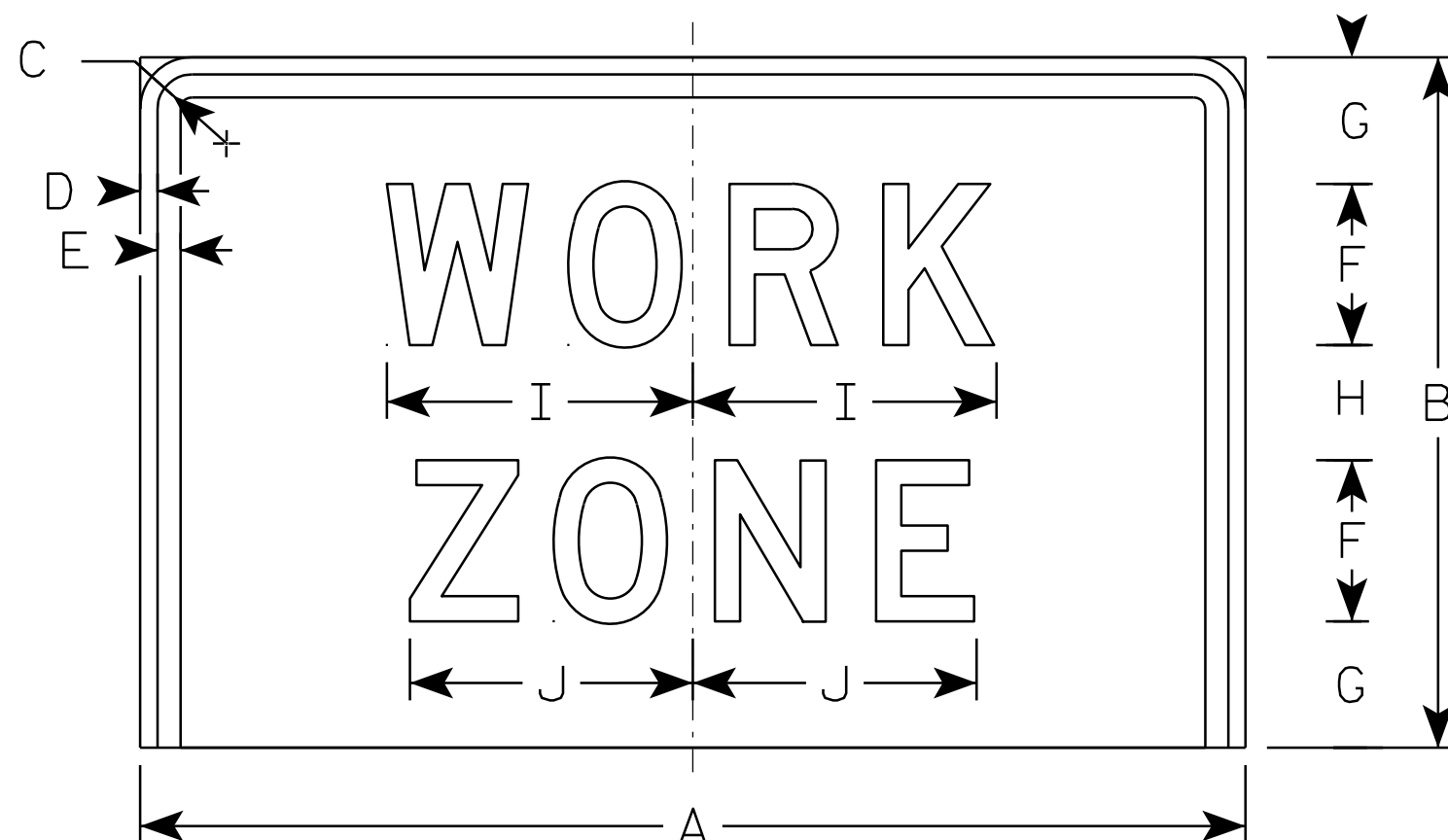
COUNTY:

SHEET NO:

E

NOTES

1. Sign is Type II - Type F - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - D



W21-620

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	12 1/4																	10.0
2M	48	30	2 1/4	3/4	1	7	5 1/2	5	13 1/4	12 1/4																	10.0
3																											
4																											
5																											

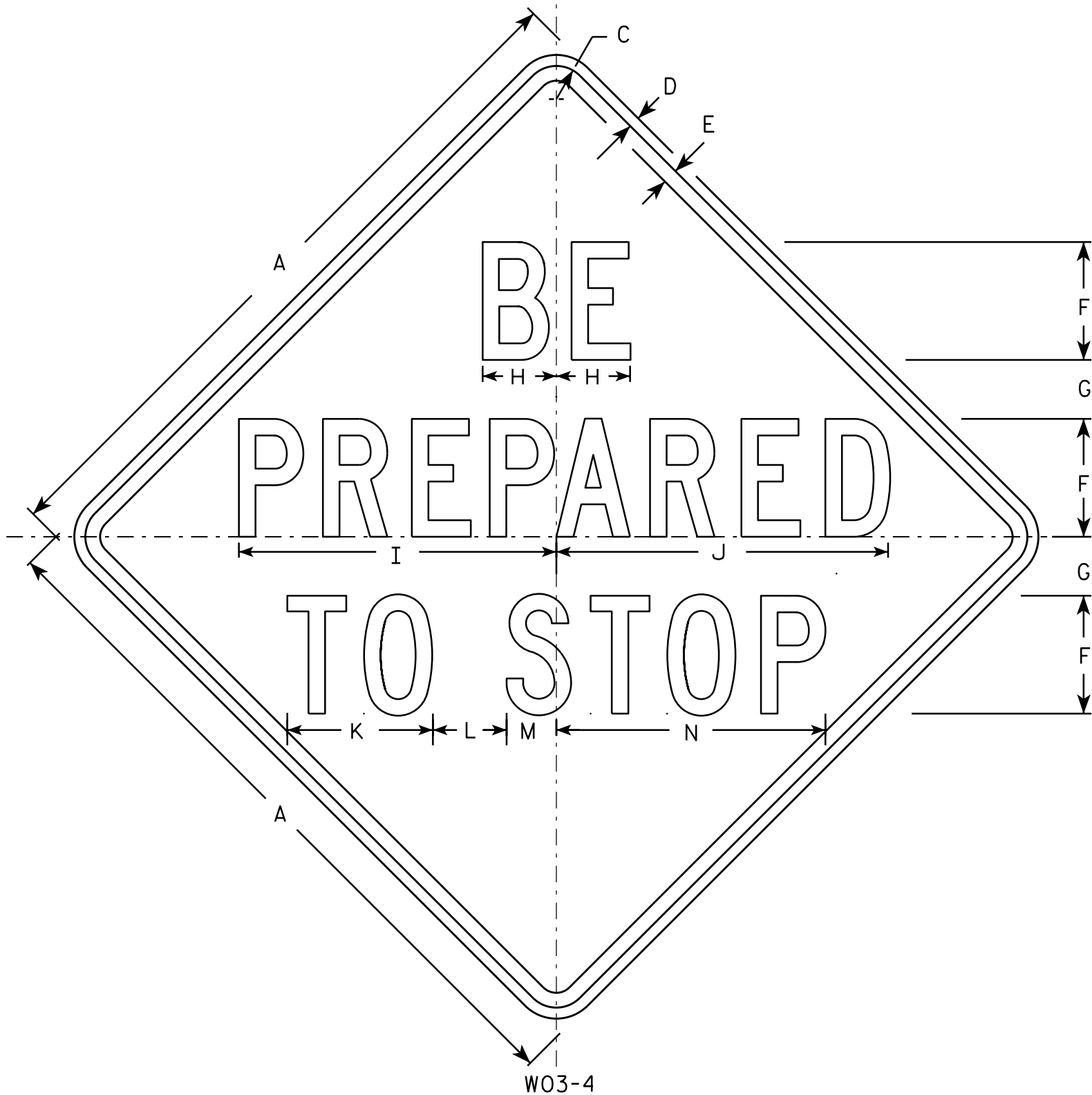
STANDARD SIGN
W21-620

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/21/11 PLATE NO. W21-620.2

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 - Orange
Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3⁄8	1⁄2	5⁄8	6	2 1⁄2	3 3⁄4	15 7⁄8	16 7⁄8	7 3⁄8	4	2 3⁄8	13 3⁄4													9.0
2S	48		2 1⁄4	3⁄4	1	8	4	5	21 1⁄2	22 1⁄2	9 7⁄8	5	3 3⁄8	18 1⁄4													16.0
2M	48		2 1⁄4	3⁄4	1	8	4	5	21 1⁄2	22 1⁄2	9 7⁄8	5	3 3⁄8	18 1⁄4													16.0
3	48		2 1⁄4	3⁄4	1	8	4	5	21 1⁄2	22 1⁄2	9 7⁄8	5	3 3⁄8	18 1⁄4													16.0
4	48		2 1⁄4	3⁄4	1	8	4	5	21 1⁄2	22 1⁄2	9 7⁄8	5	3 3⁄8	18 1⁄4													16.0
5	48		2 1⁄4	3⁄4	1	8	4	5	21 1⁄2	22 1⁄2	9 7⁄8	5	3 3⁄8	18 1⁄4													16.0

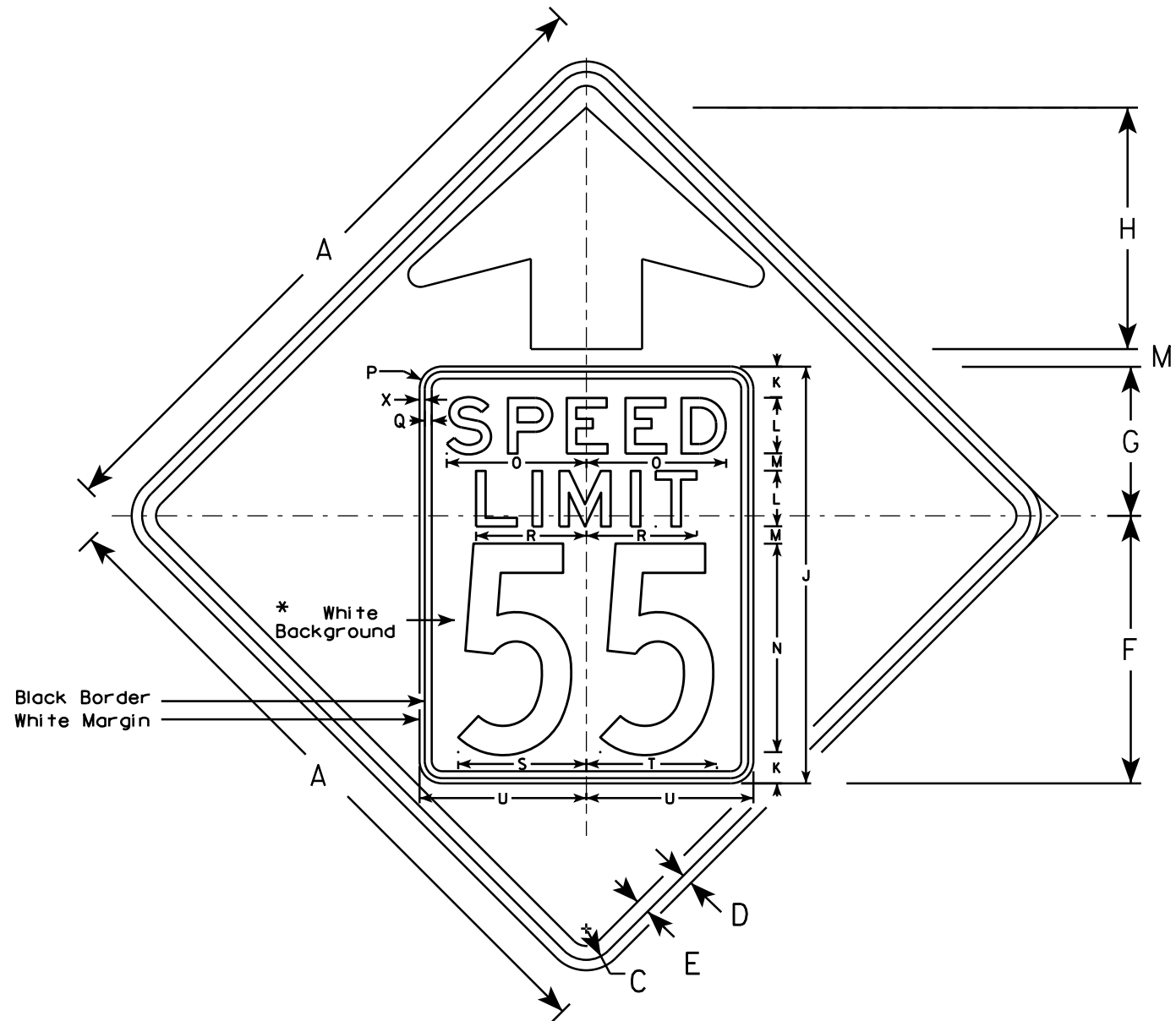
STANDARD SIGN W03-4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/02/13 PLATE NO. W03-4.1

PROJECT NO: HWY: COUNTY: SHEET NO: E

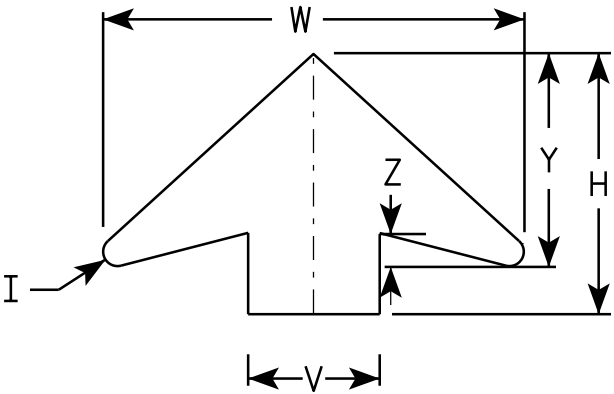


W03-5

NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color: *
Background - ORANGE*
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	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
2S	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
2M	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
3	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
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

PROJECT NO:

STANDARD SIGN
W03-5

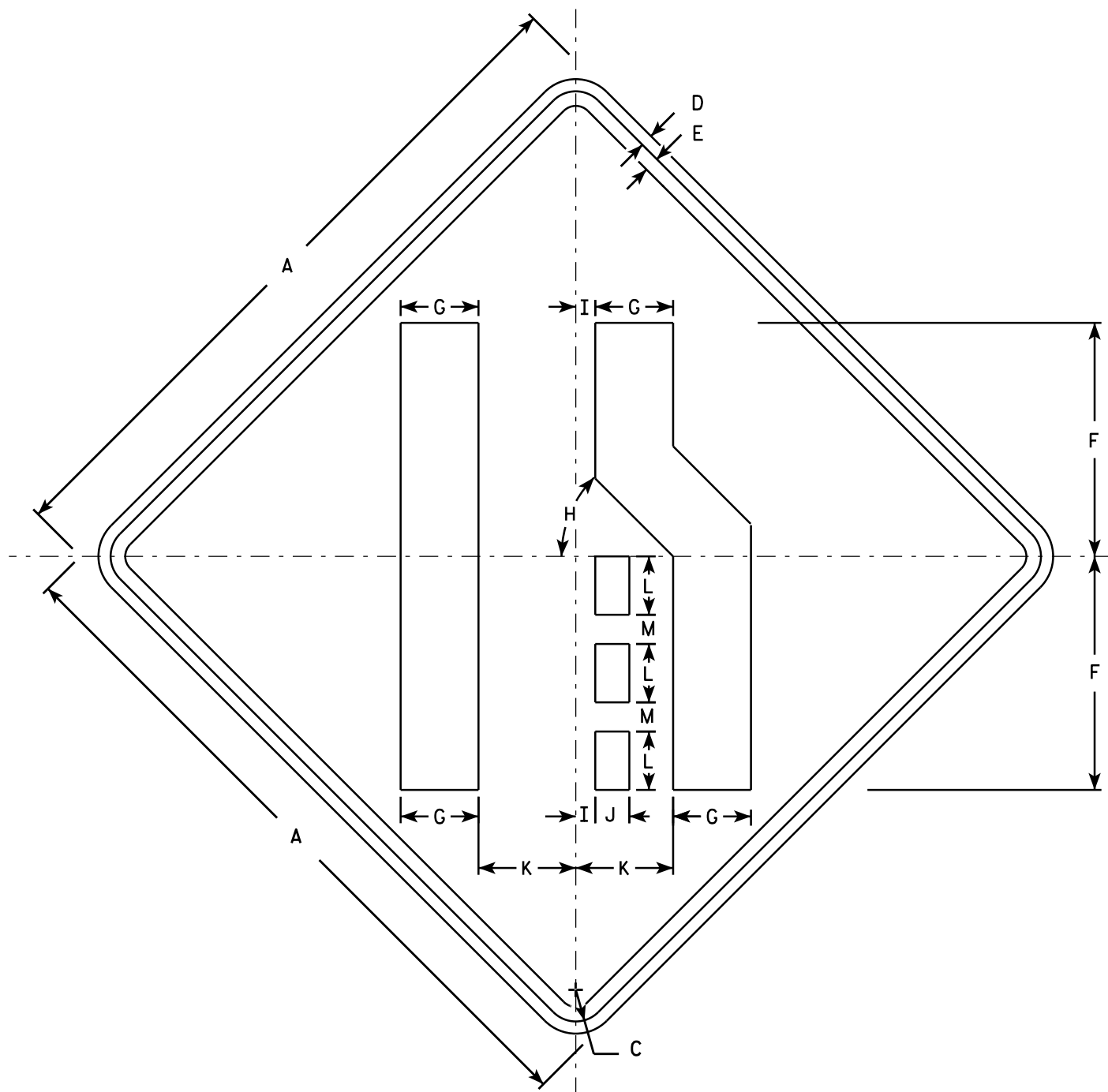
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W03-5.1

SHEET NO:

E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

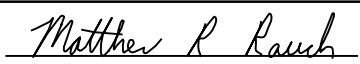
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN

W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

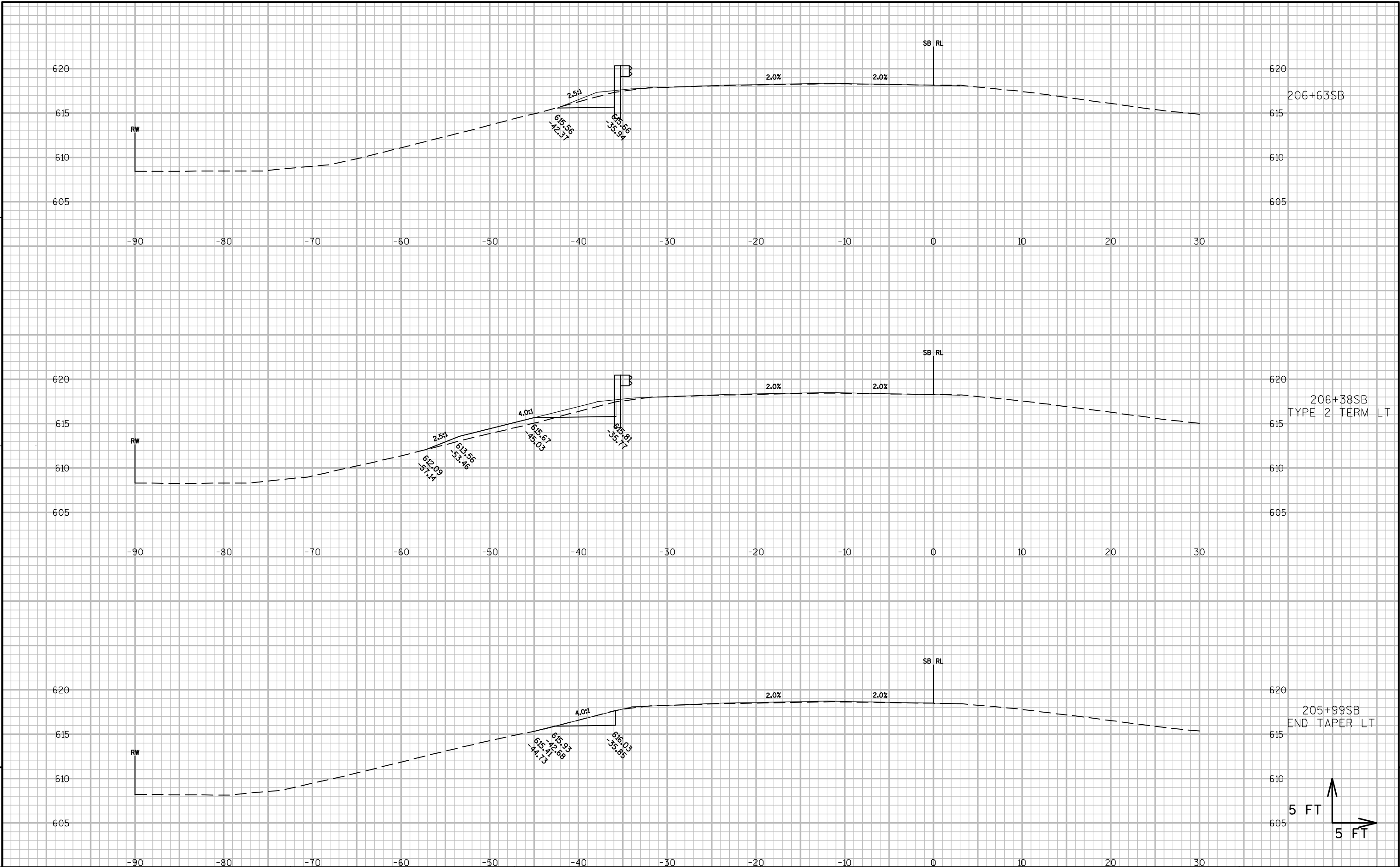


For State Traffic Engineer

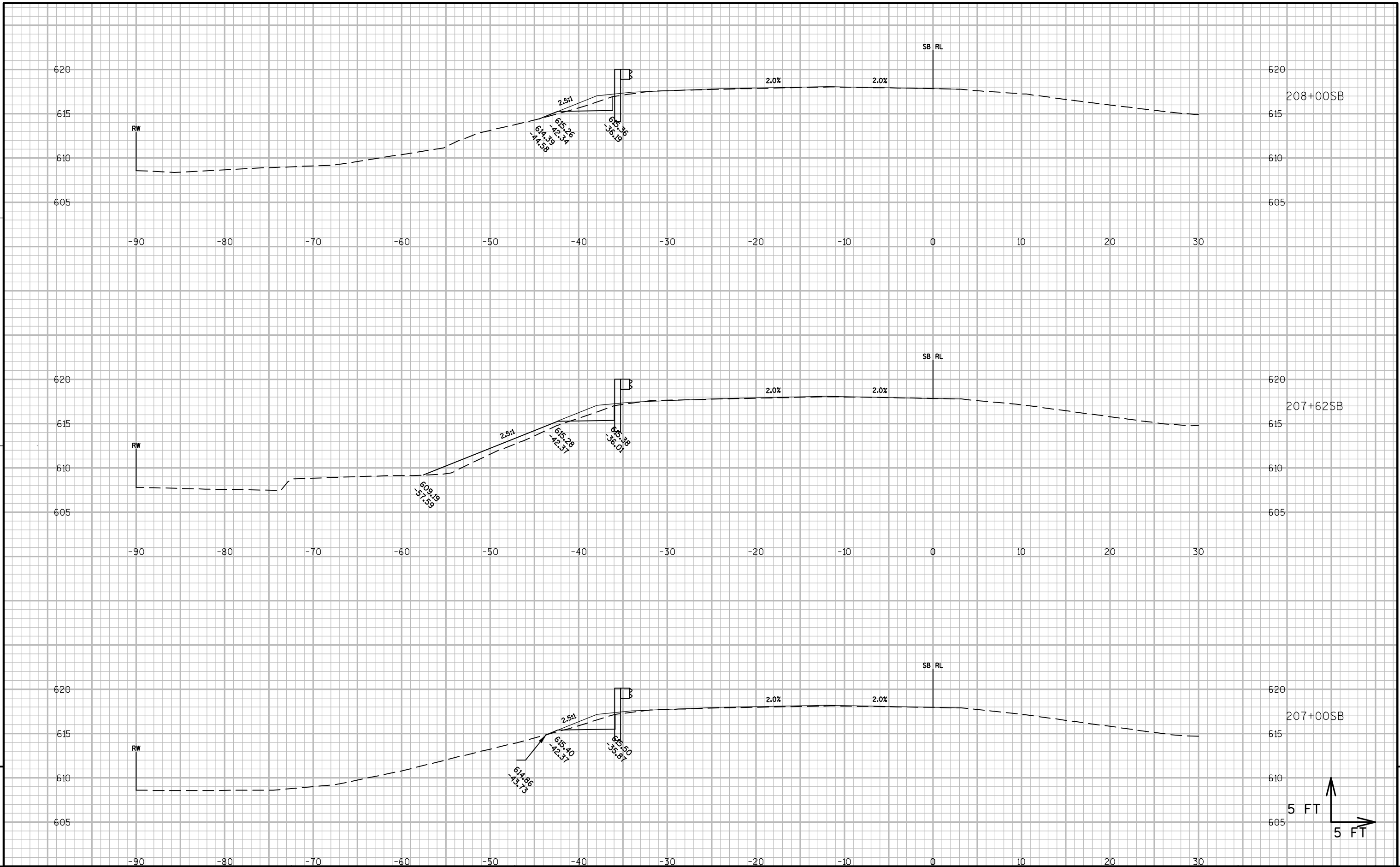
DATE 11/20/13

PLATE NO. W04-2.1

9

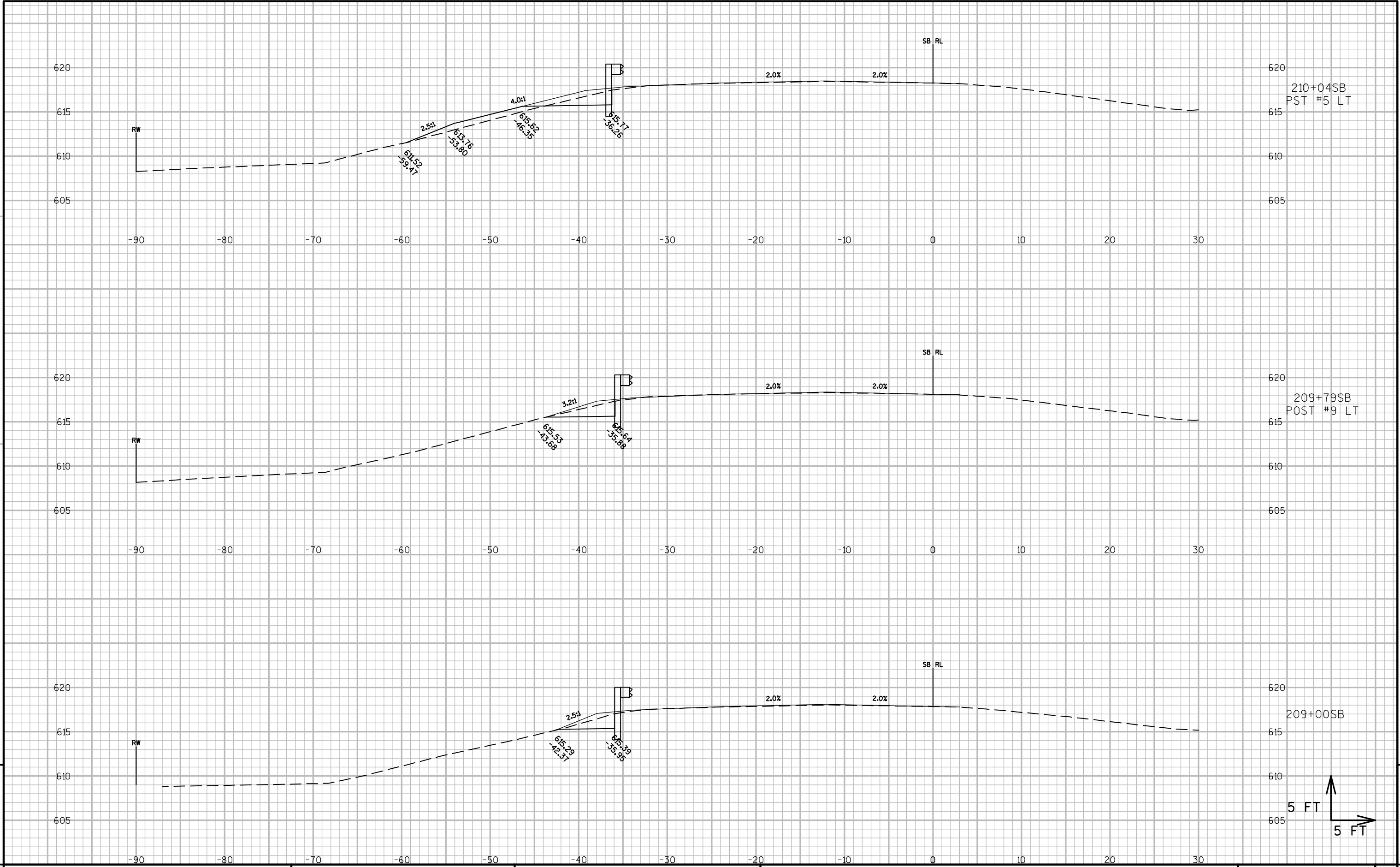


9



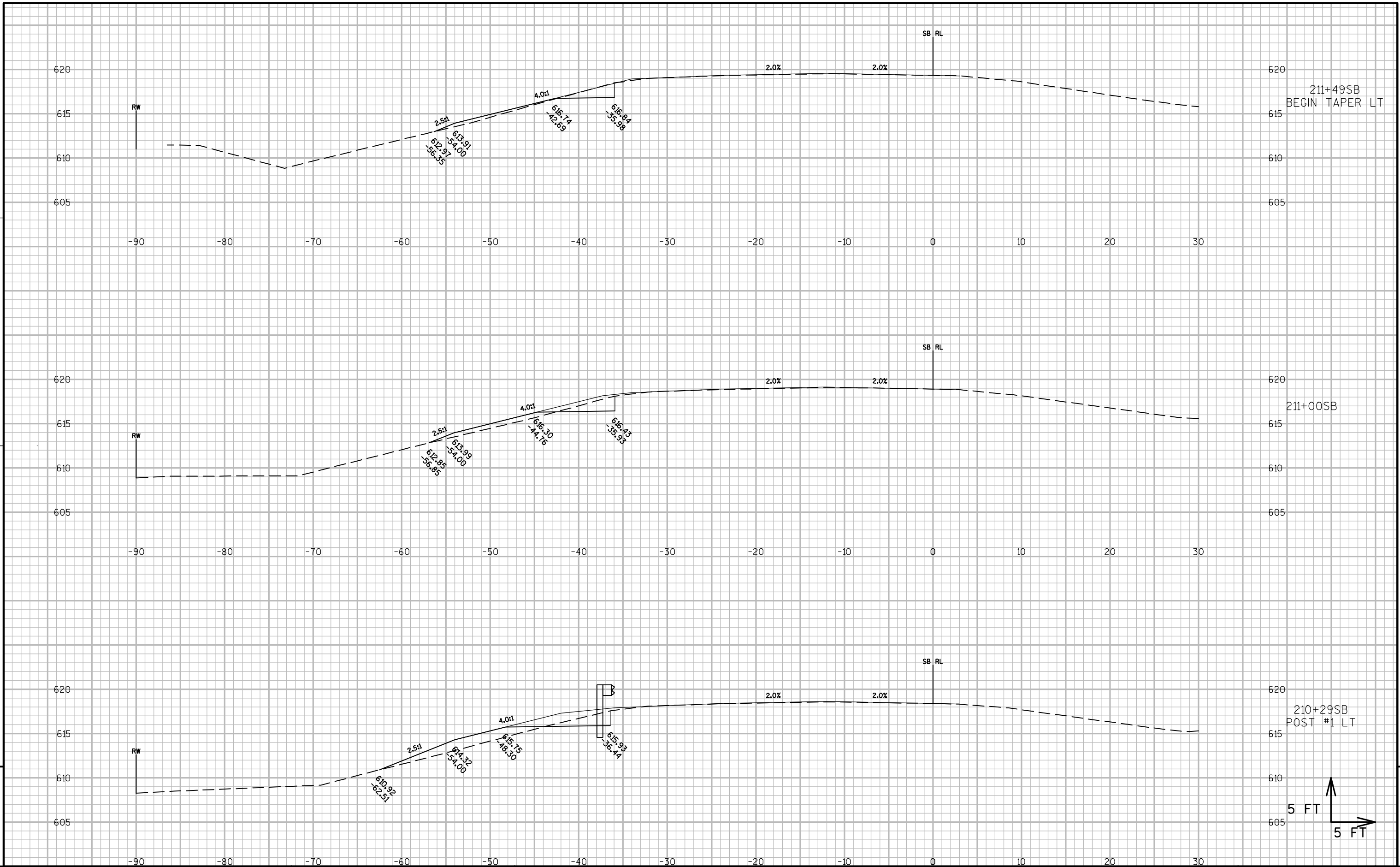
9

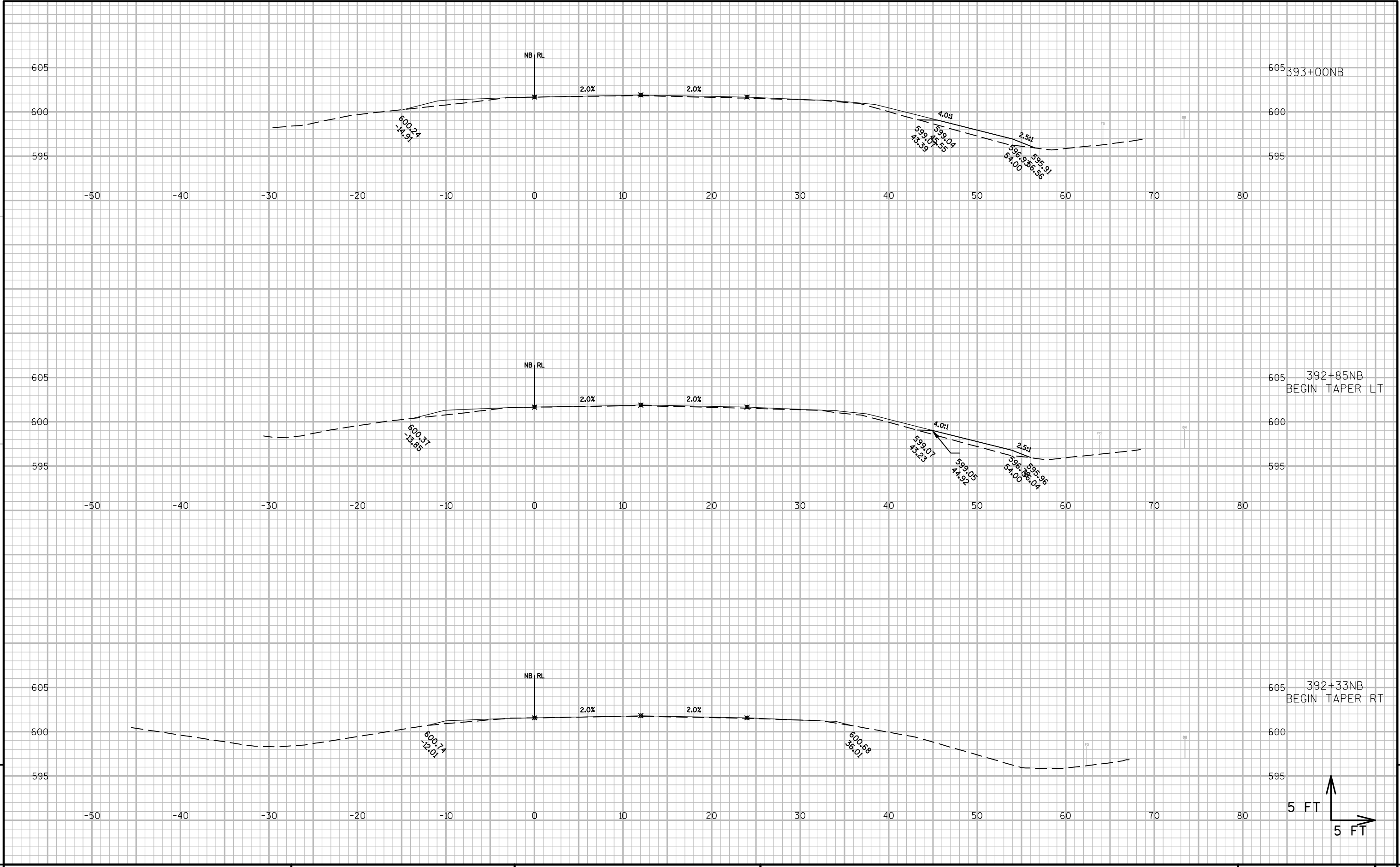
9

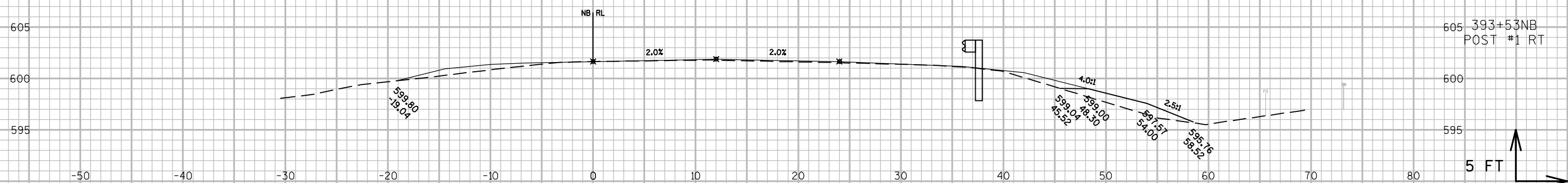
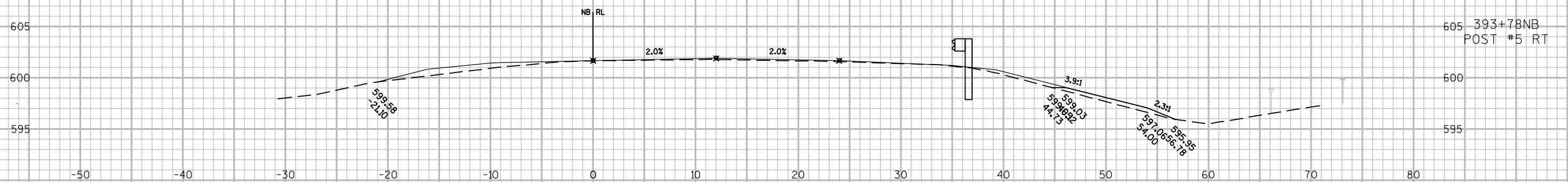
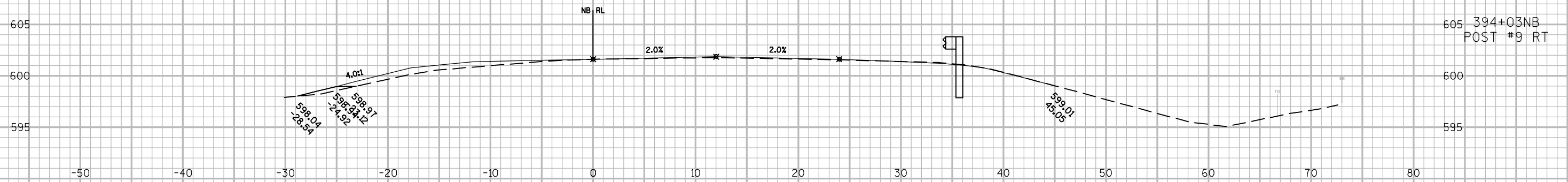


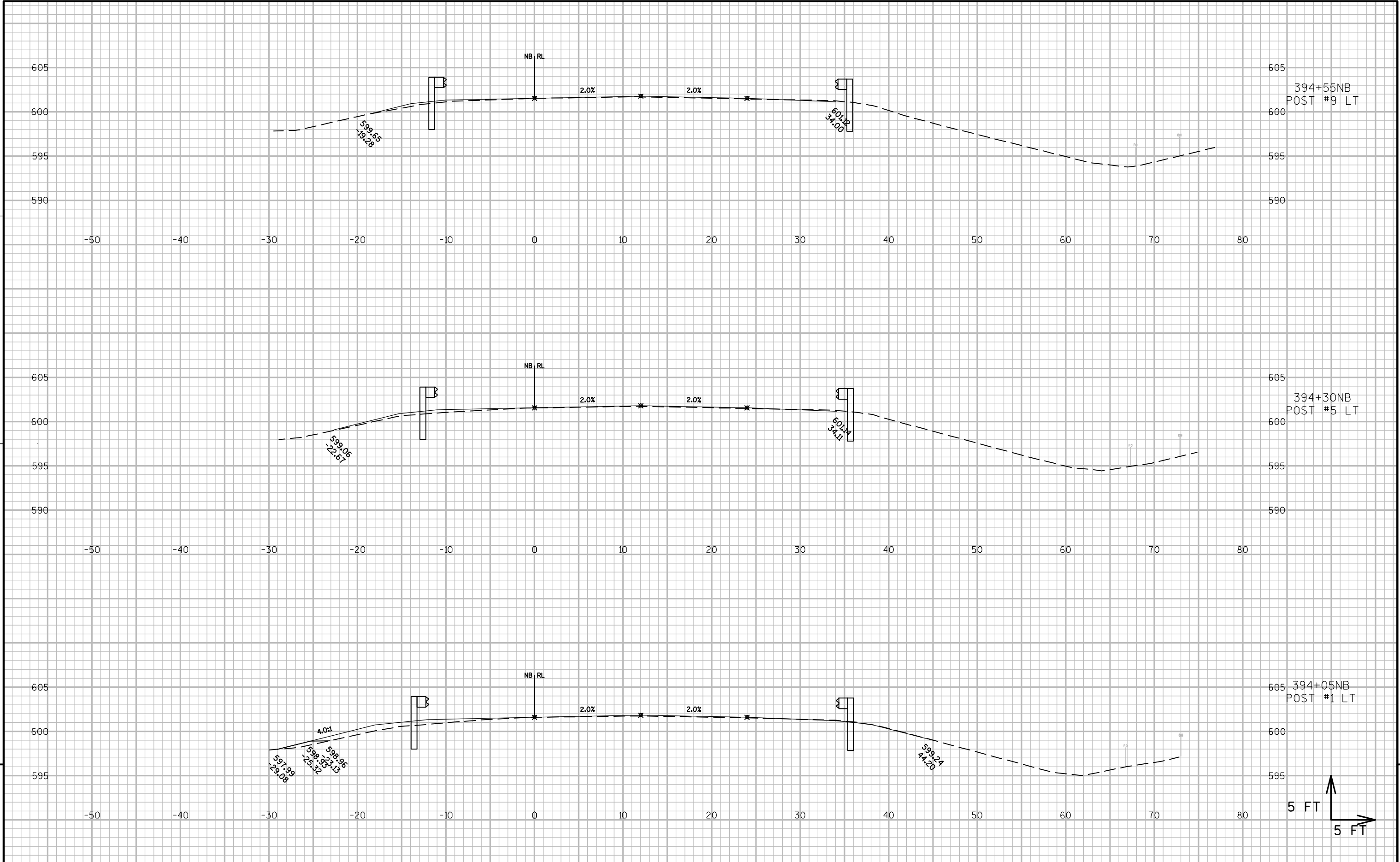
9

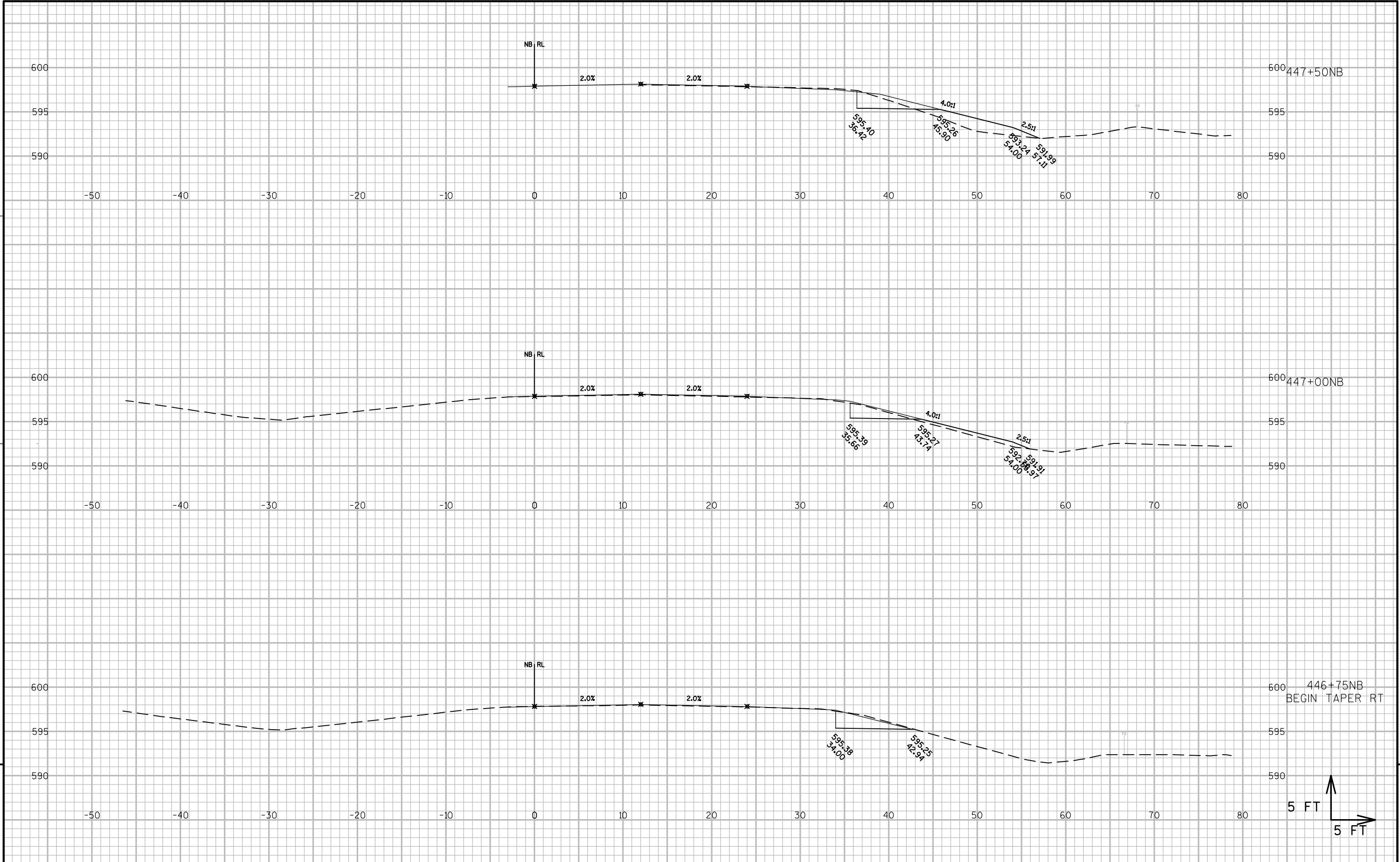
9





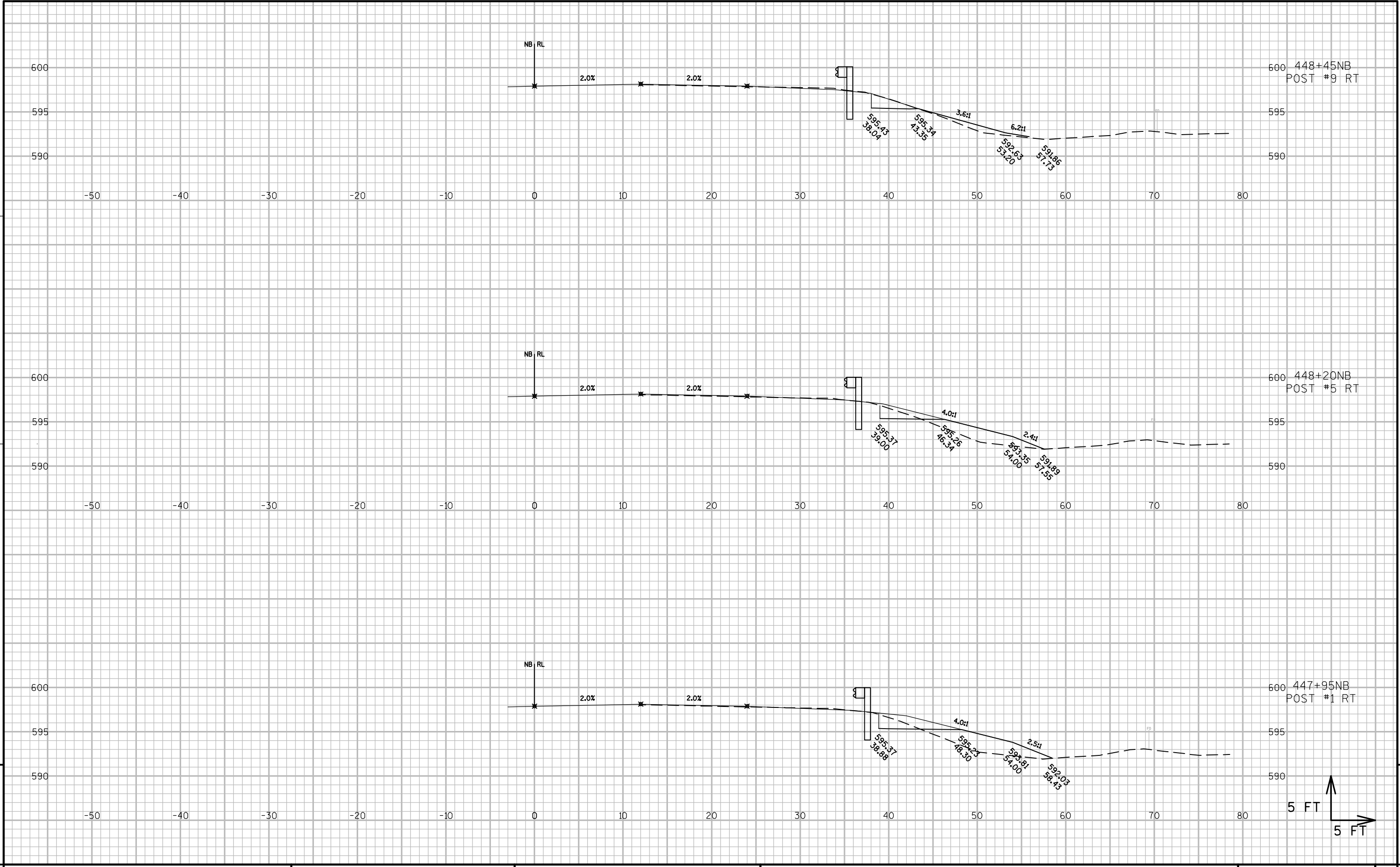






9

9





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