

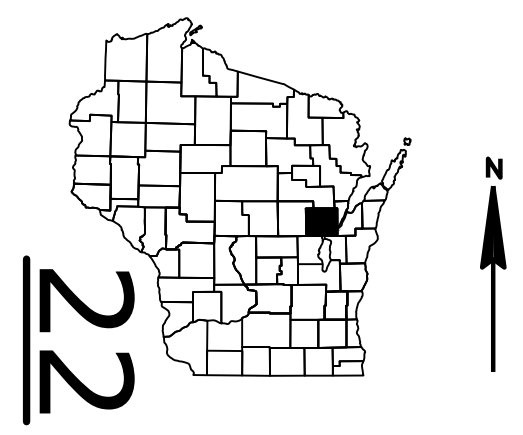
GRE PROJECT ID: 1130-59-71 WITH: COUNTY: OUTAGAMIE

FEBRUARY 2020

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 = 122



DESIGN DESIGNATION

A.A.D.T.	2016	=	62,950
A.A.D.T.	2036	=	70,250
D.H.V.		=	5,770
D.D.		=	53/47
T.		=	11.8%
DESIGN SPEED		=	70 M.P.H.
ESALS		=	N/A

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

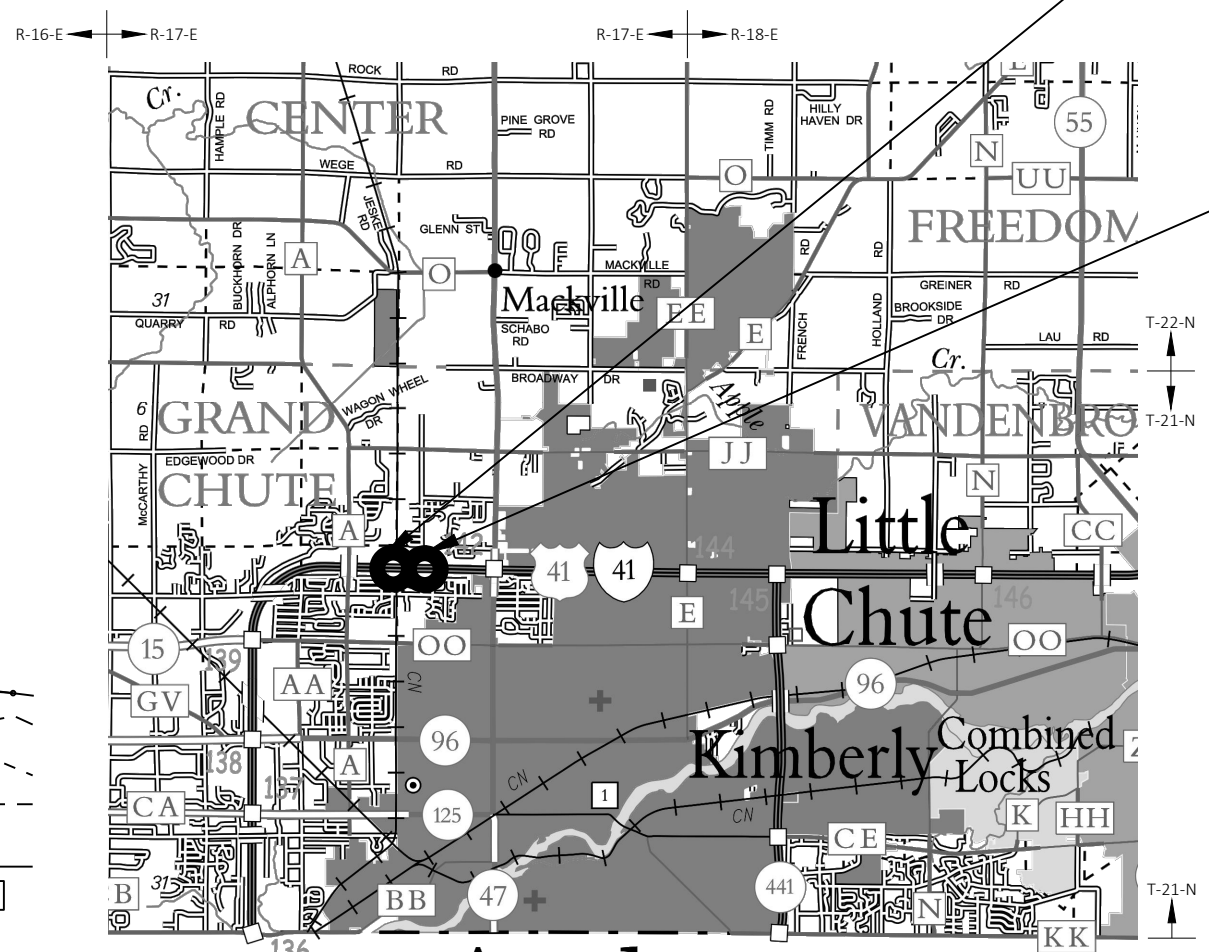
STH 15 - STH 47

GILLETT ST & RxR BRIDGES

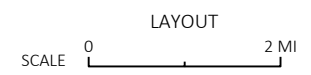
IH 41

OUTAGAMIE

STATE PROJECT NUMBER
1130-59-71



Appleton



TOTAL NET LENGTH OF CENTERLINE = 0 MI

STRUCTURE B-44-20
IH 41 SB STA 23+68 - 25+02
STRUCTURE B-44-21
IH 41 NB STA 23+69 - 25+03

STRUCTURE B-44-28
IH 41 SB STA 37+57 - 38+63
STRUCTURE B-44-29
IH 41 NB STA 37+57 - 38+64

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	
Designer	KRIS DENEYS AND JILL HILBERT, PE
Project Manager	TIM RANK, PE
Regional Examiner	
Regional Supervisor	CHARLES KAROW, PE
APPROVED FOR THE DEPARTMENT	
DATE: 8-22-2019	
	(Signature)

GENERAL NOTES

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

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

INSTALL EROSION CONTROL ITEMS AS DIRECTED BY THE ENGINEER. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH A TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

A VERTICAL FACE IS REQUIRED WHERE NEW HMA PAVEMENT MEETS EXISTING HMA PAVEMENT.

ALL ELEVATIONS NOTED IN THE PLAN SET SHALL BE FIELD VERIFIED.

OTHER CONTACTS

DNR LIASON
MATT SCHAEVE
2984 SHAWANO AVE
GREEN BAY, WI 54307-0048
(920) 366-1544
MATTHEW.SCHAEVE@WISCONSIN.GOV

TOWN OF GRAND CHUTE
KATIE SCHWARTZ
DIRECTOR OF PUBLIC WORKS
1900 W. GRAND CHUTE BOULEVARD
GRAND CHUTE, WI 54913
(920) 832-1581

OUTAGAMIE COUNTY
HIGHWAY DEPARTMENT
DEAN STEINGRABER
HIGHWAY COMMISSIONER
1313 HOLLAND ROAD
APPLETON, WI 54911
PHONE: (920) 832-5673
DEAN.STEINGRABER@OUTAGAMIE.ORG

OUTAGAMIE COUNTY
SURVEYOR
DAVE YURK
320 S. WALNUT STREET
APPLETON, WI 54911
(920) 830-6185
DAVID.YURK@OUTAGAMIE.ORG

UTILITY CONTACTS

ANR Pipeline Co - Gas/Petroleum
Todd Brister
W3925 Pipeline Lane
Eden, WI 53019
O (920) 477-2235, M (920) 979-0060
todd.brister@transcanada.com

AT&T Wisconsin - Communication Line
Joseph Kassab
First Floor Engineering
205 S Jefferson St
Green Bay, WI 54302
O (920) 433-4200, M (920) 202-4002
jk572k@att.com

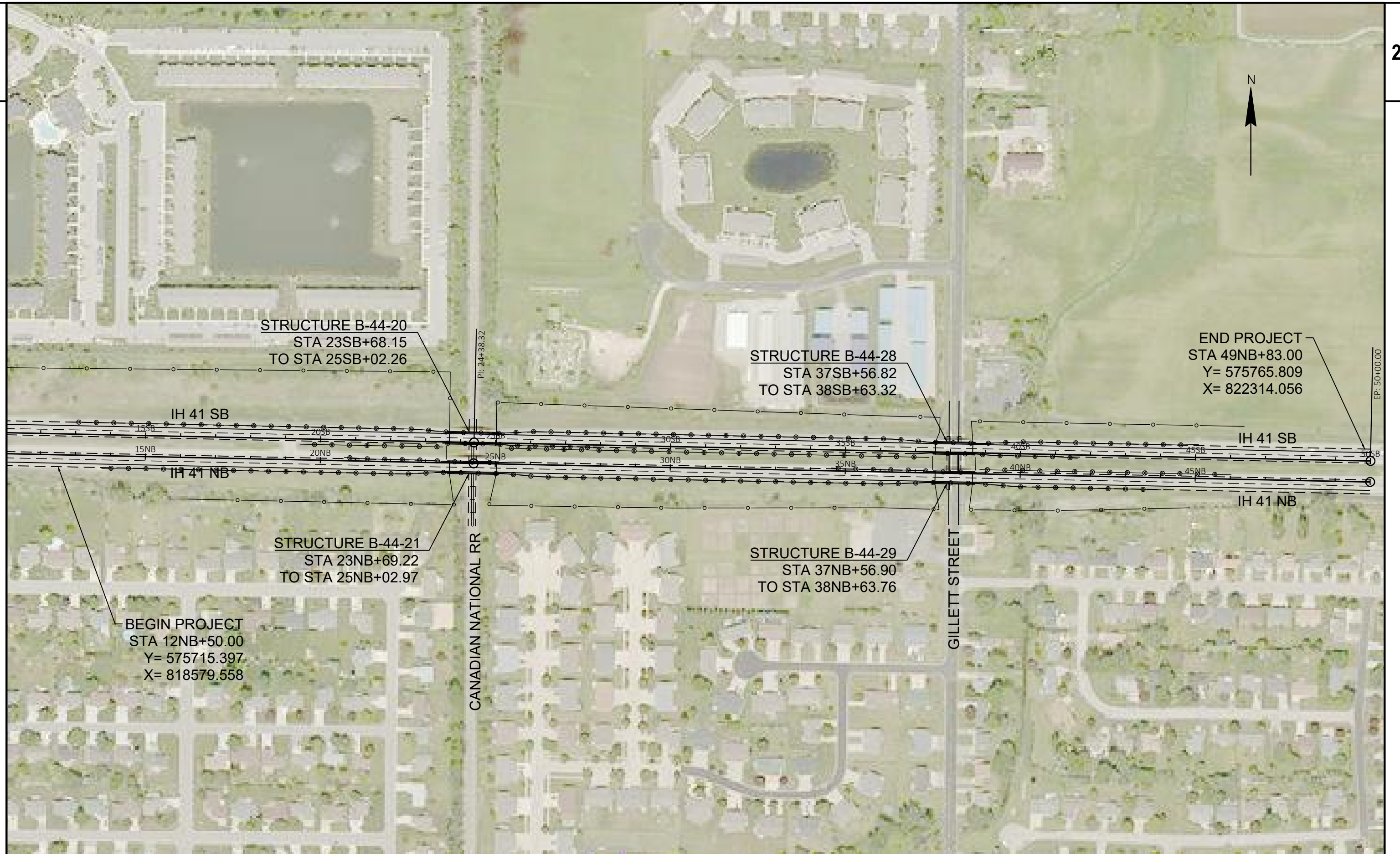
Charter Communications - Communication Line
Vincent Albin
3520 E Destination Dr
Appleton, WI 54915
O (920) 831-9249, M (920) 378-0444
Vince.Albin@charter.com

We Energies - Electricity
Shane Bruhnke
800 S Lynndale Dr
Appleton, WI 54914
380-3450
Shane.bruhnke@we-energies.com

We Energies - Gas/Petroleum
Cody Beckman
800 S Lynndale Dr
Appleton, WI 54914
O (920) 380-3422, M (920) 428-1038
Cody.beckman@we-energies.com



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



PROJECT NO: 1130-59-71

HWY: IH 41

COUNTY: OUTAGAMIE

PROJECT OVERVIEW

SHEET

E

FILE NAME : N:\PDS\C3D\11305900\020201_PO.DWG
LAYOUT NAME - 020201_po

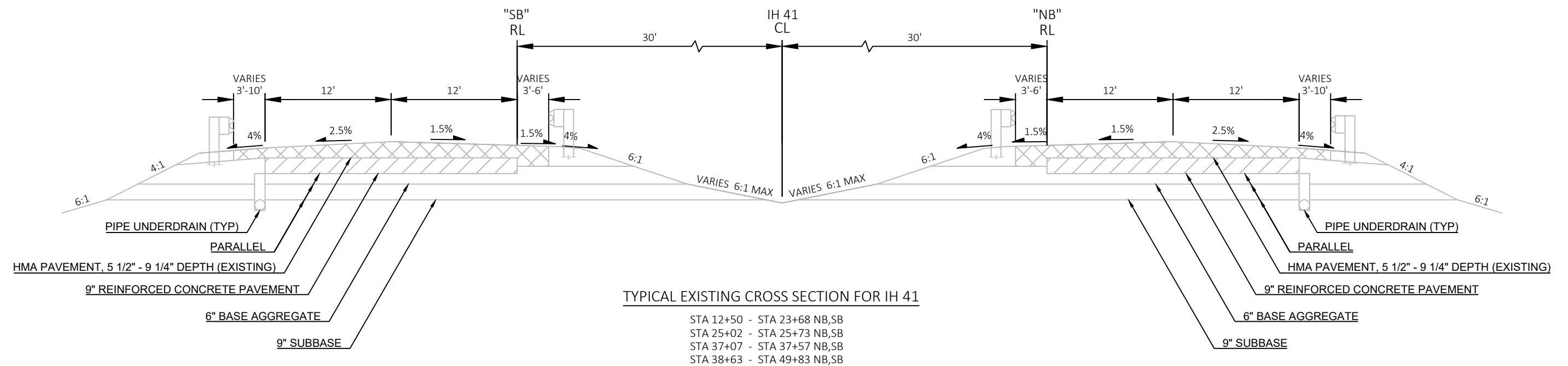
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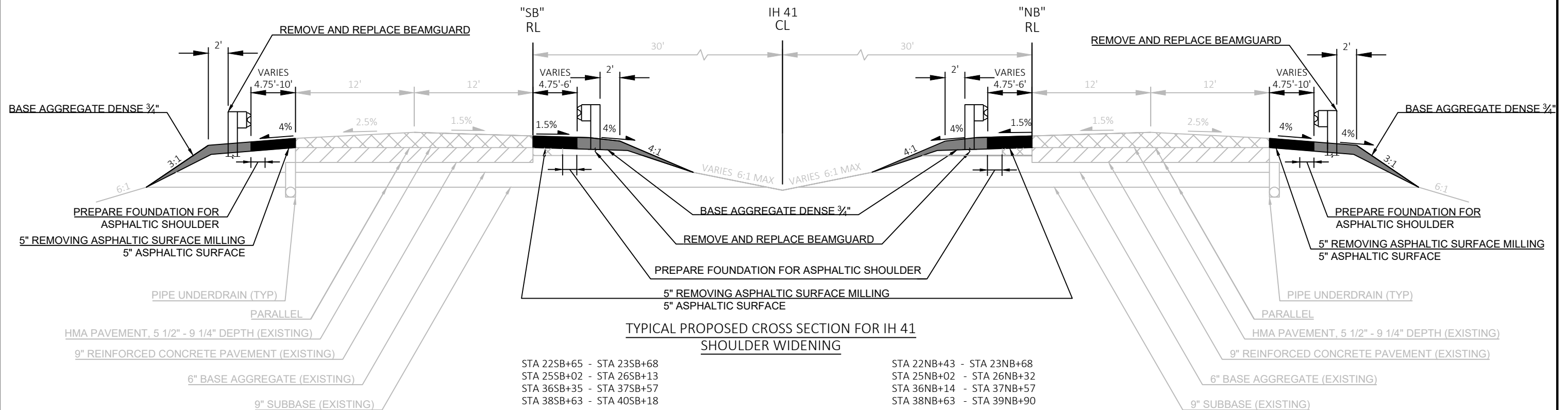
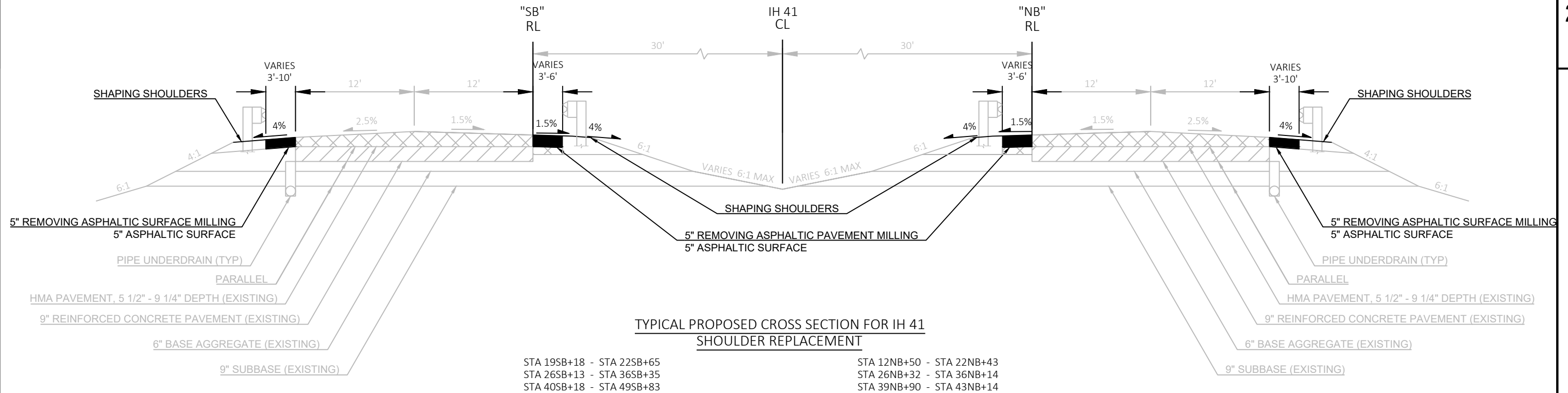
PLOT BY : DENEYS, KRISTOPHER M

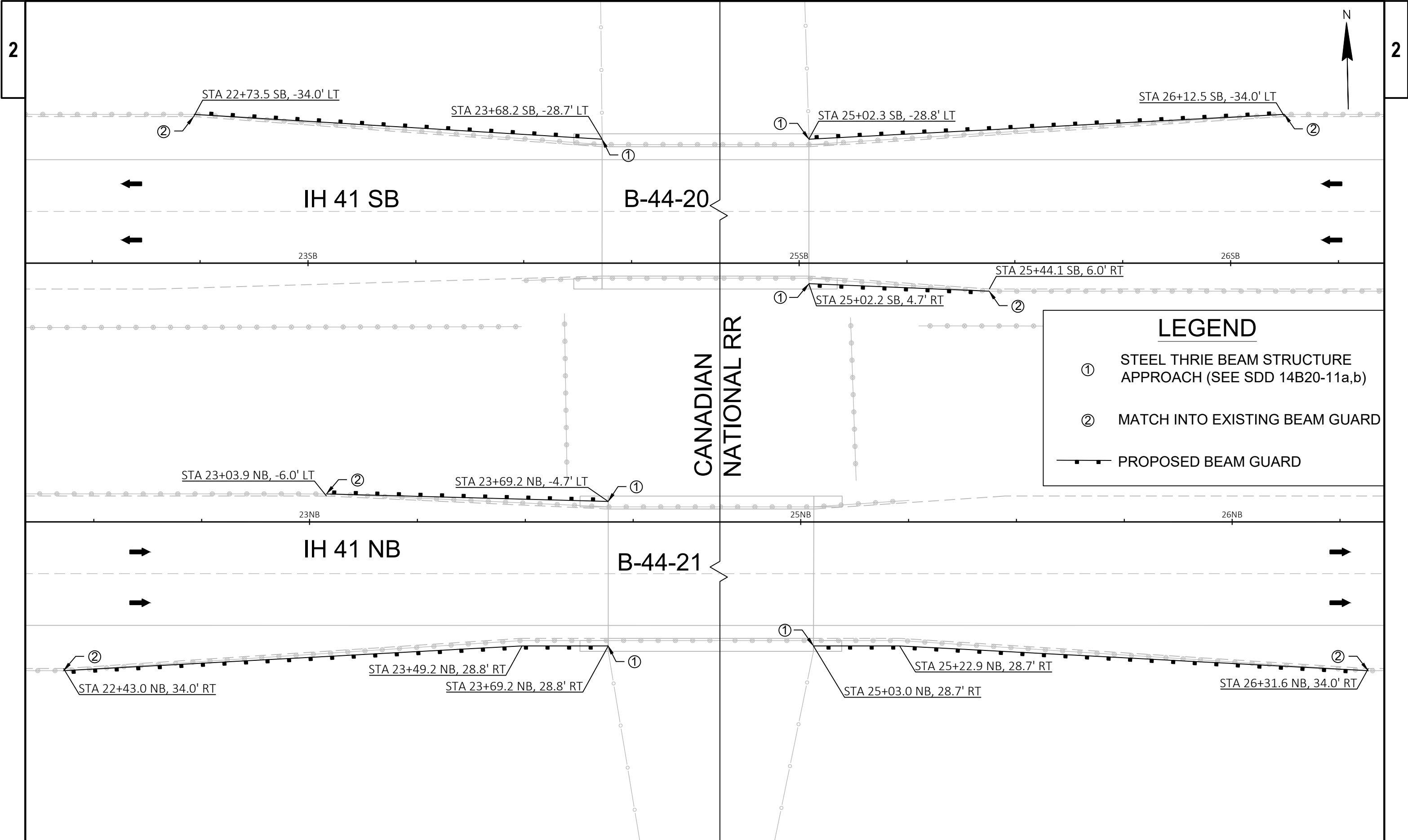
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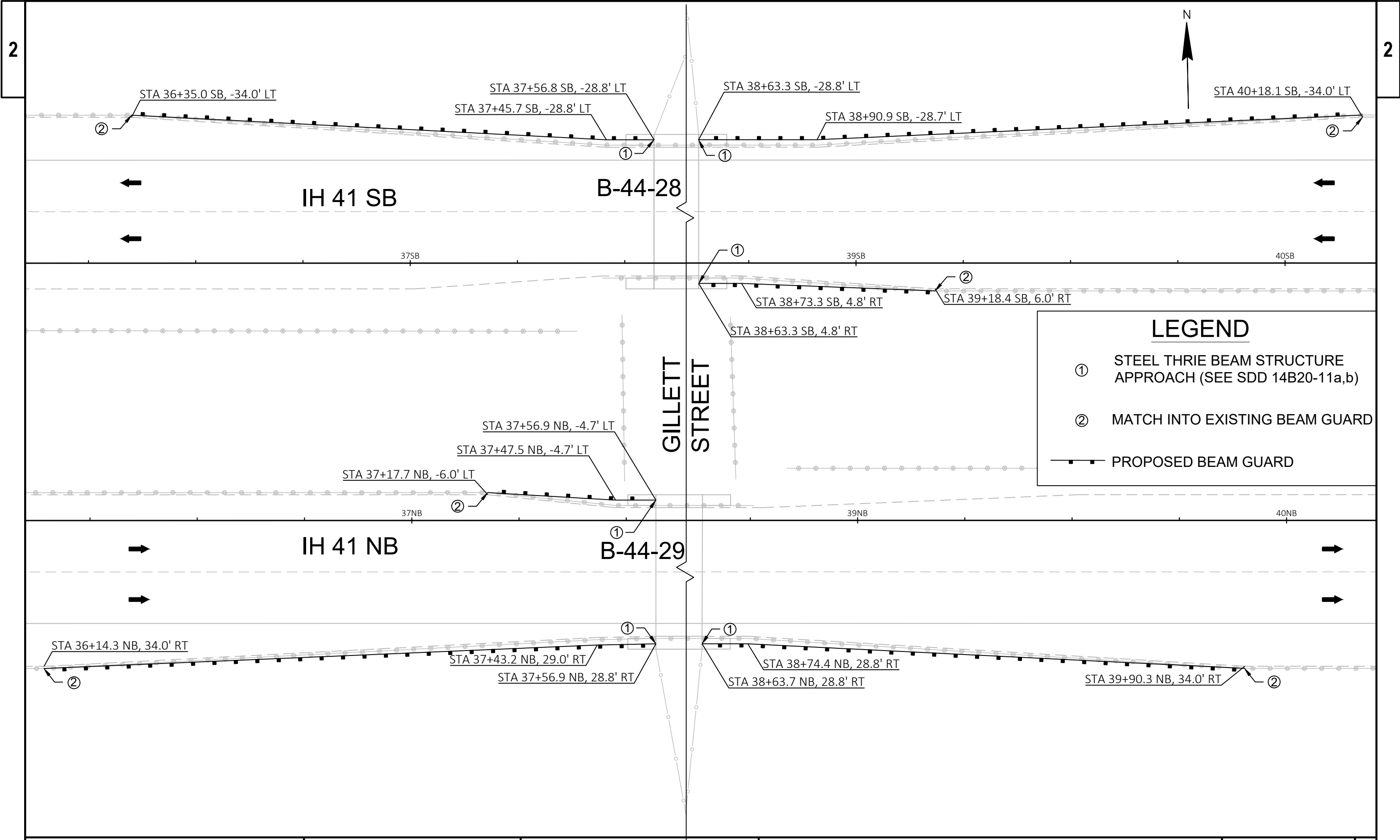
PLOT SCALE : 1 IN:250 FT

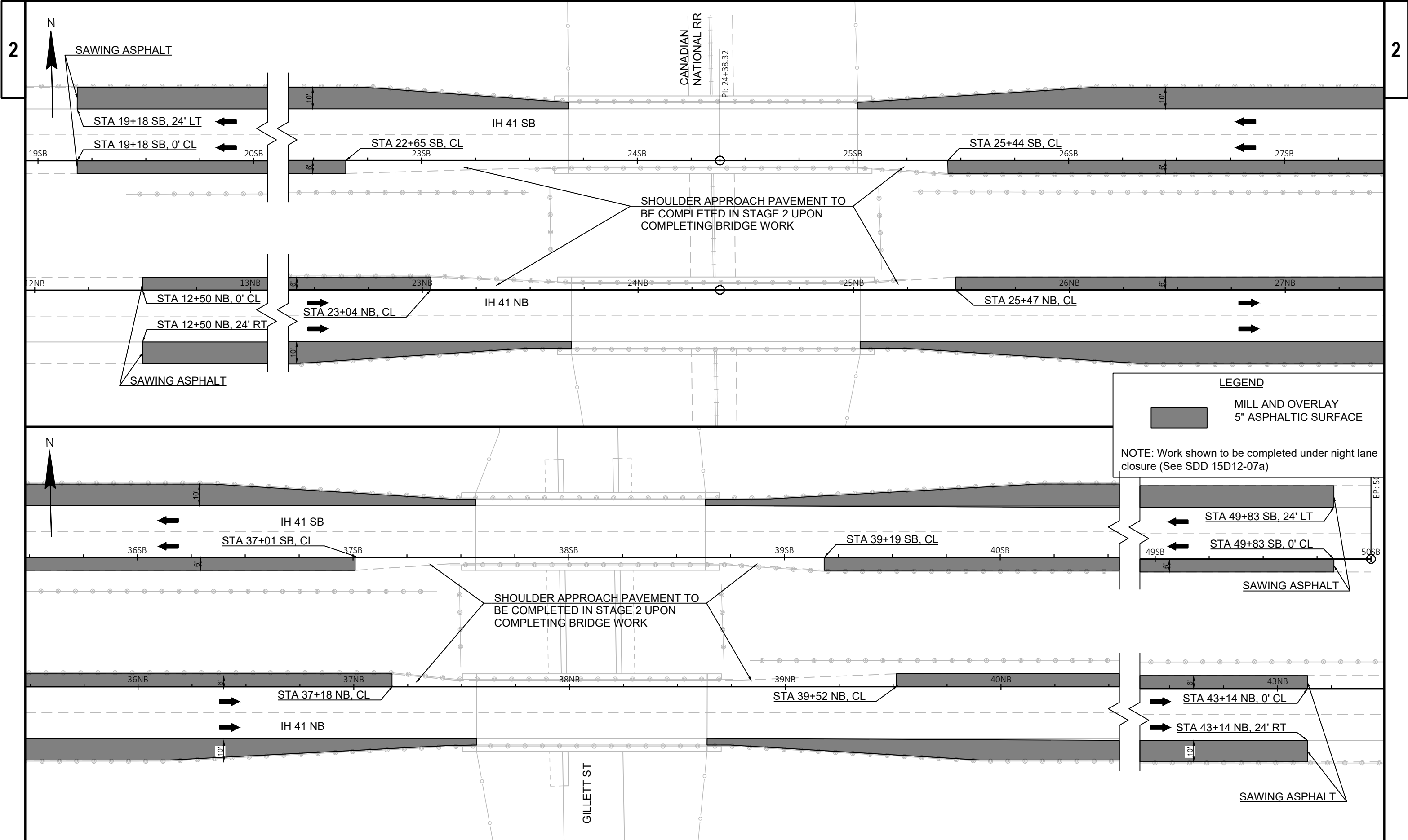
WISDOT/CADDs SHEET 42

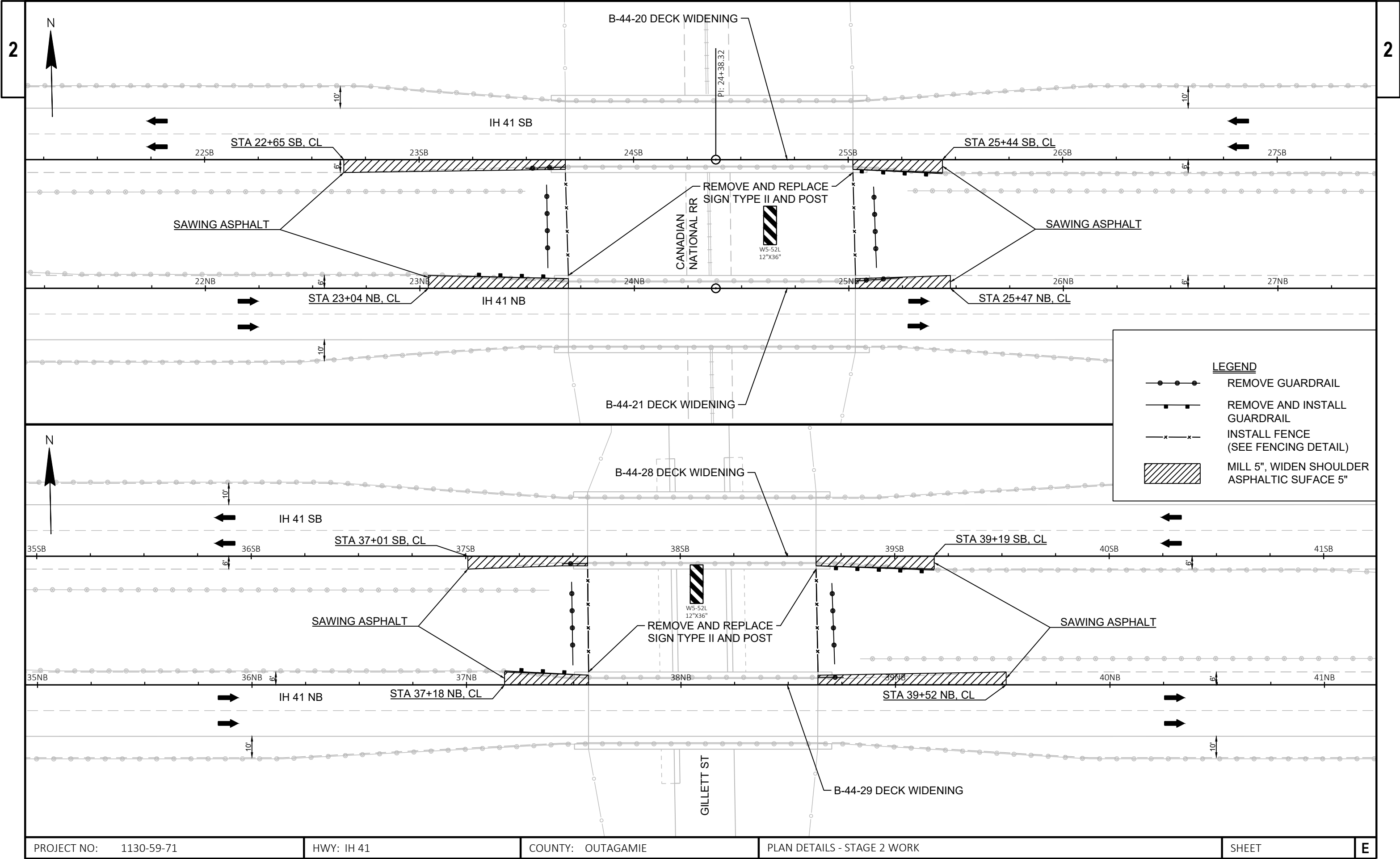




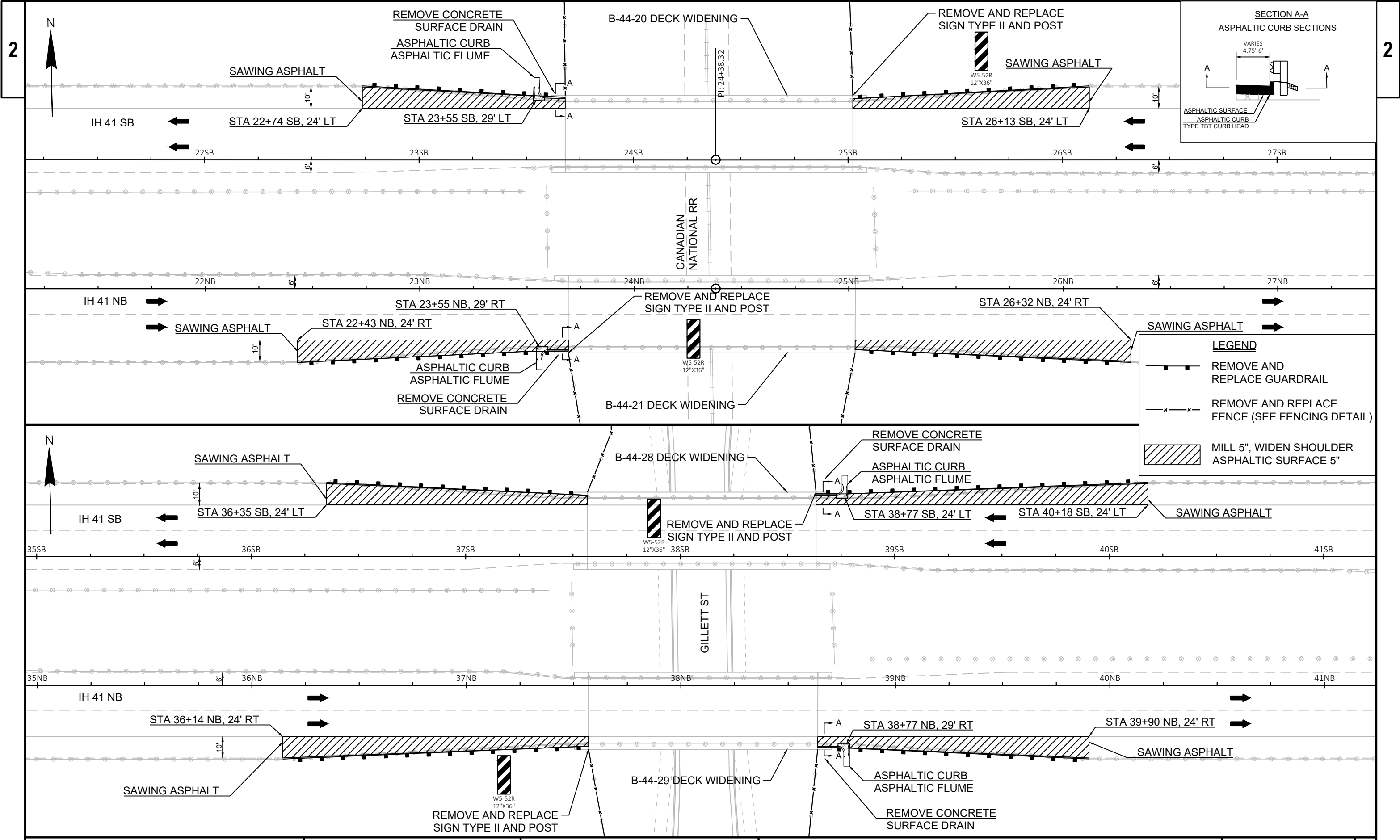


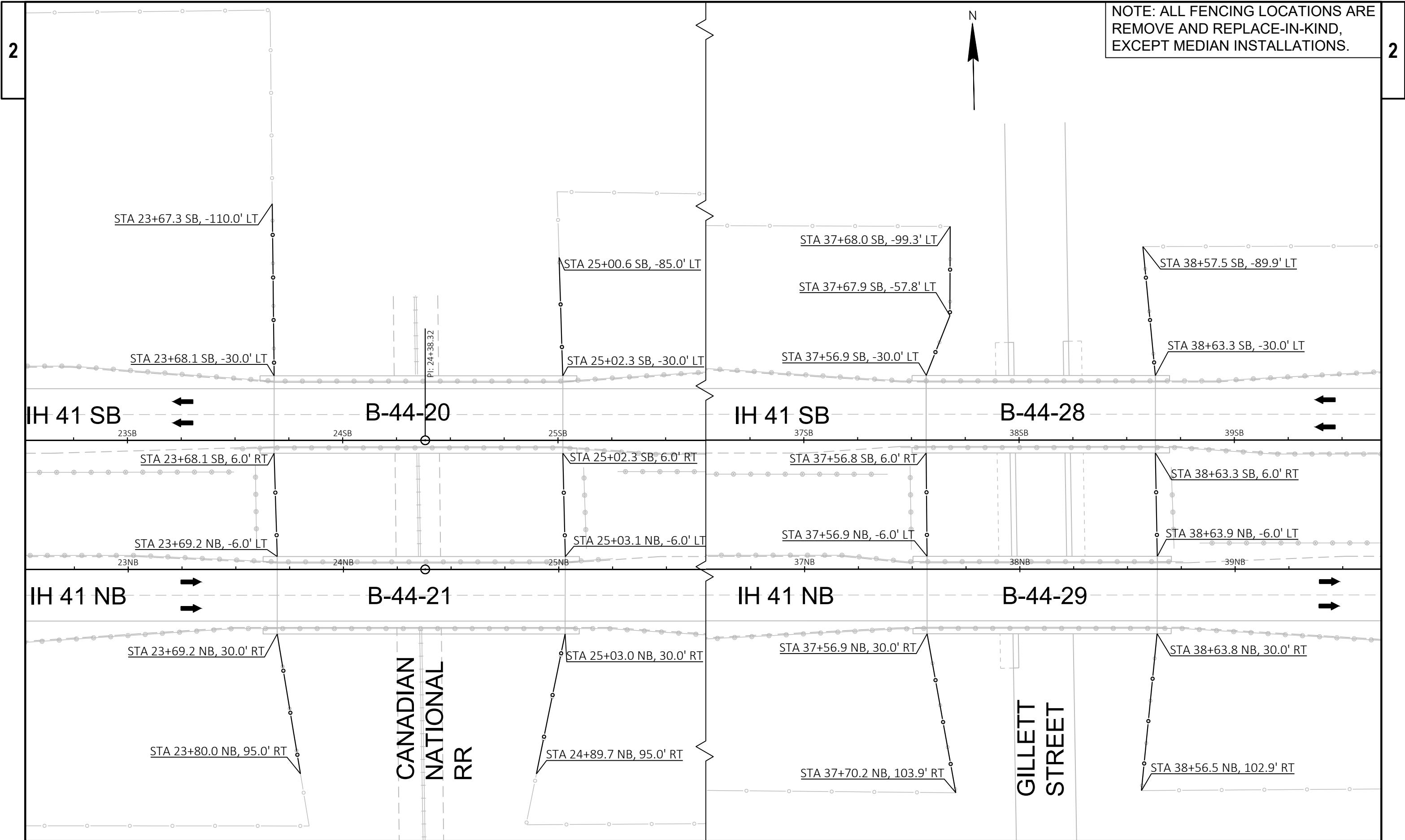




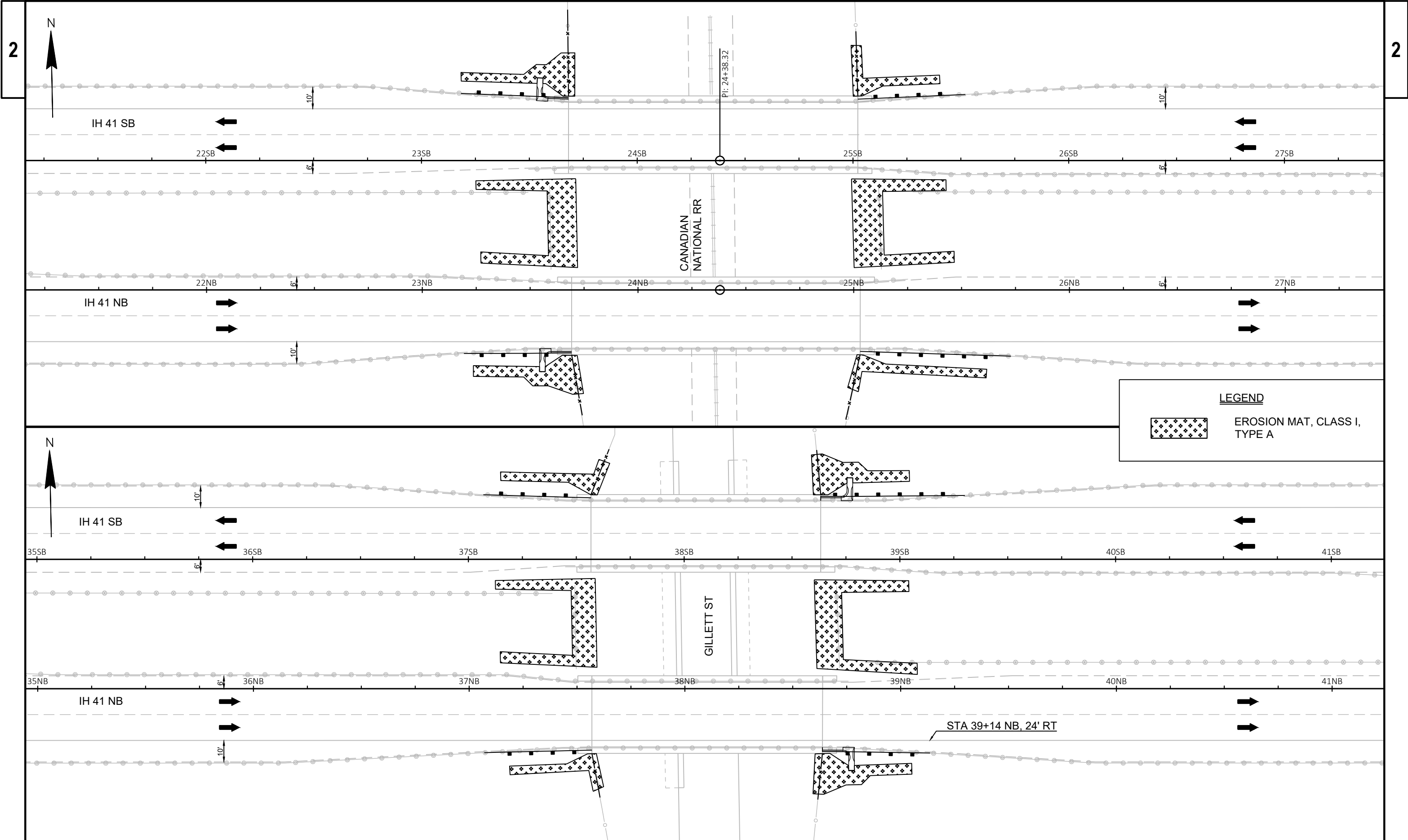


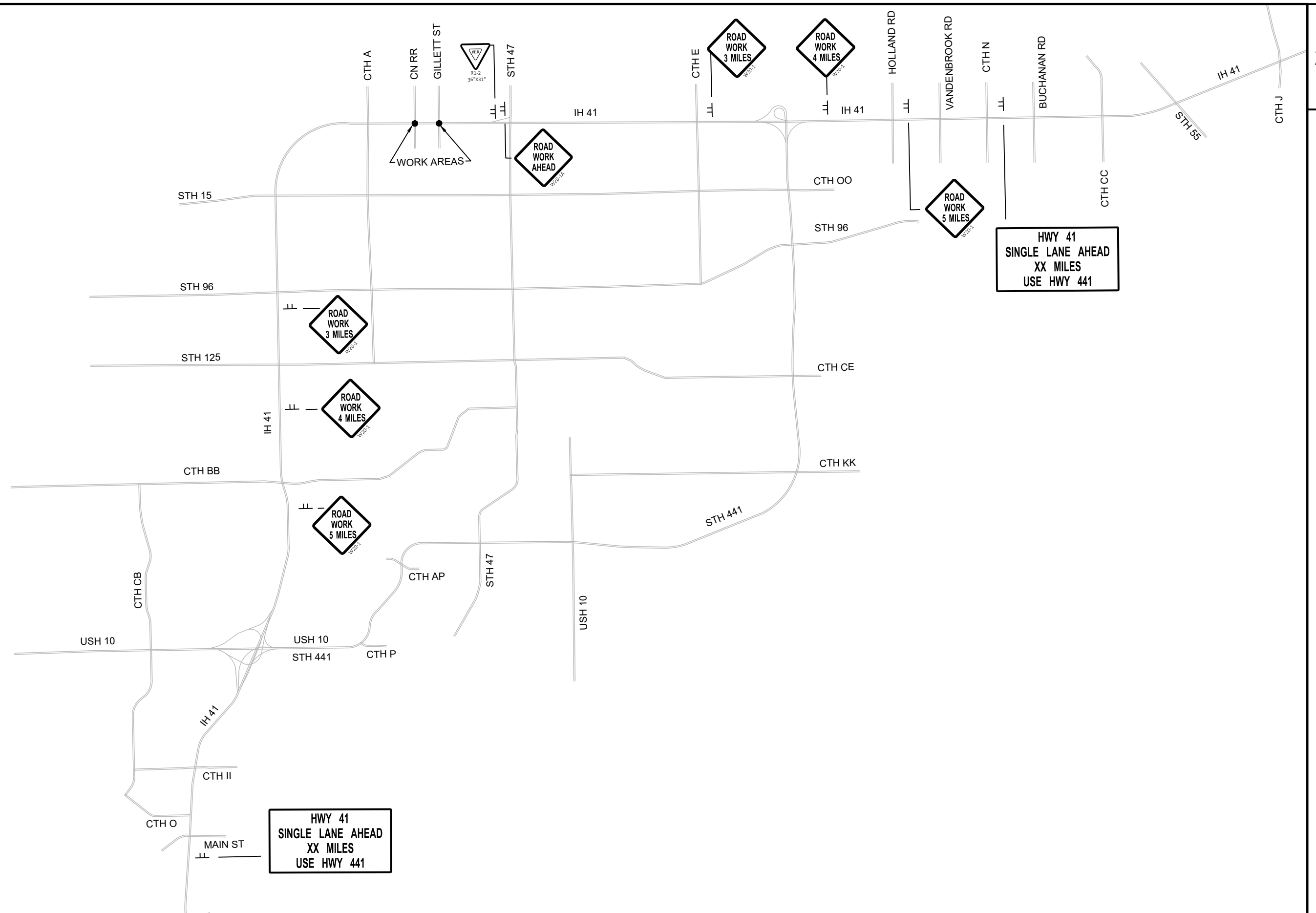
PROJECT NO: 1130-59-71	HWY: IH 41	COUNTY: OUTAGAMIE	PLAN DETAILS - STAGE 2 WORK	SHEET	E
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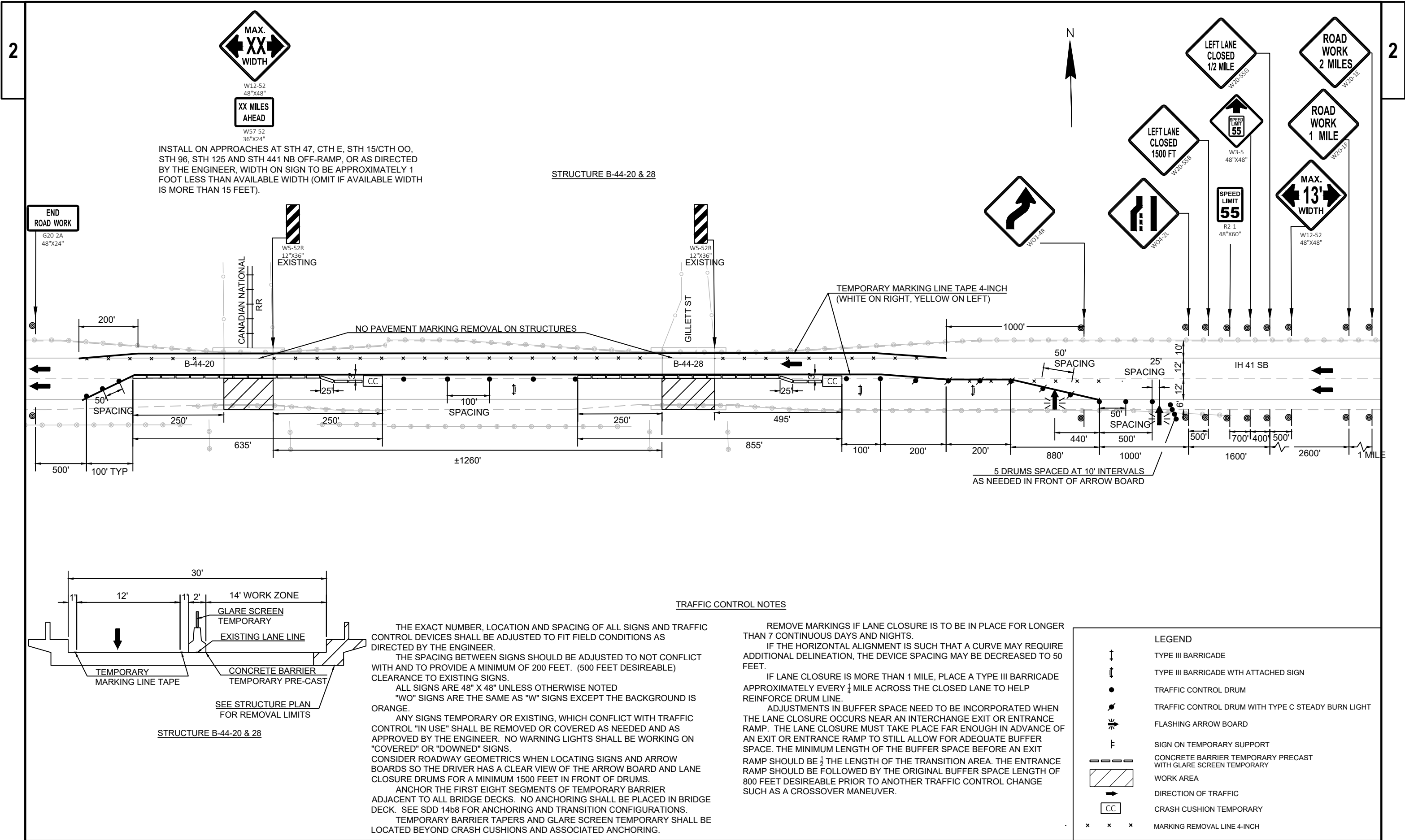


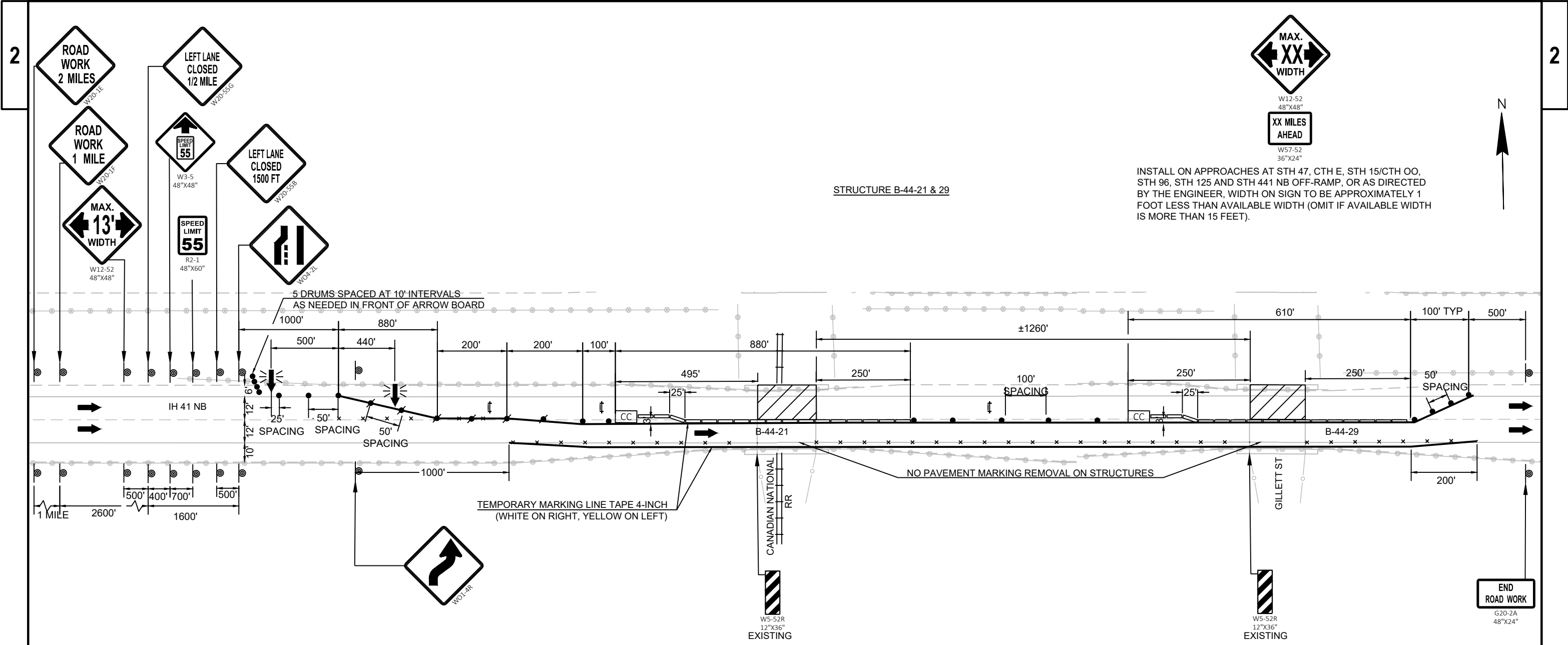


PROJECT NO: 1130-59-71	HWY: IH 41	COUNTY: OUTAGAMIE	FENCING DETAIL	SHEET	E
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TRAFFIC CONTROL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET. (500 FEET DESIREABLE) CLEARANCE TO EXISTING SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED

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

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

CONSIDER ROADWAY 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 1500 FEET IN FRONT OF DRUMS.

ANCHOR THE FIRST EIGHT SEGMENTS OF TEMPORARY BARRIER ADJACENT TO ALL BRIDGE DECKS. NO ANCHORING SHALL BE PLACED IN BRIDGE DECK. SEE SDD 14b8 FOR ANCHORING AND TRANSITION CONFIGURATIONS.

TEMPORARY BARRIER TAPERS AND GLARE SCREEN TEMPORARY SHALL BE LOCATED BEYOND CRASH CUSHIONS AND ASSOCIATED ANCHORING.

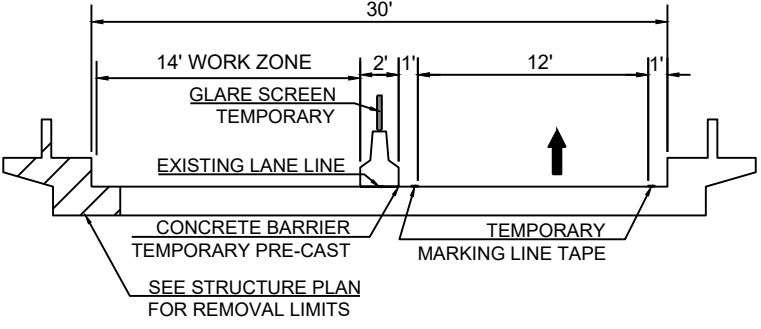
REMOVE MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 7 CONTINUOUS DAYS AND NIGHTS.

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 1/4 MILE ACROSS THE CLOSED LANE TO HELP REINFORCE 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 DESIREABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

LEGEND	
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TRAFFIC CONTROL DRUM
	TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
	FLASHING ARROW BOARD
	SIGN ON TEMPORARY SUPPORT
	CONCRETE BARRIER TEMPORARY PRECAST WITH GLARE SCREEN TEMPORARY
	WORK AREA
	DIRECTION OF TRAFFIC
	CRASH CUSHION TEMPORARY
	MARKING REMOVAL LINE 4-INCH

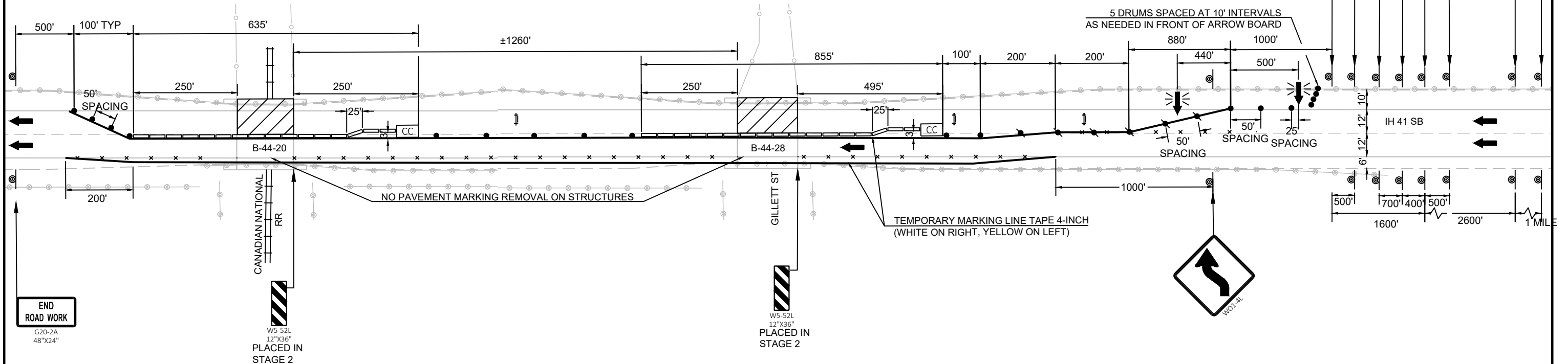


STRUCTURE B-44-21 & 29

XX MILES

W57-52
36"X24"

STRUCTURE B-44-20 & 28



31.75'

14' WORK ZONE

2'

1'

12'

2.75'

GLARE SCREEN
TEMPORARY

EXISTING LANE LINE

CONCRETE BARRIER
TEMPORARY PRE-CAST

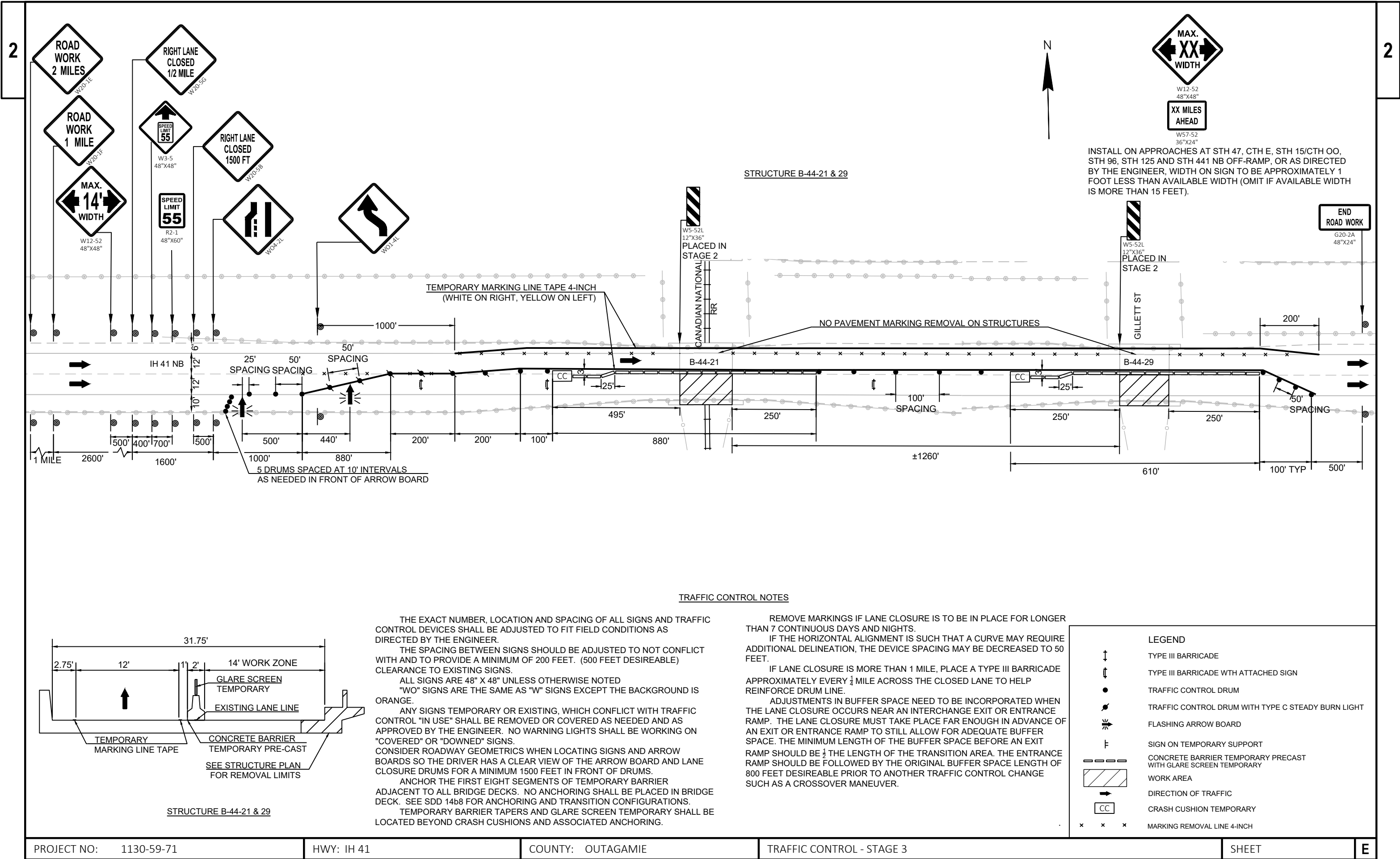
TEMPORARY
MARKING LINE TAPE

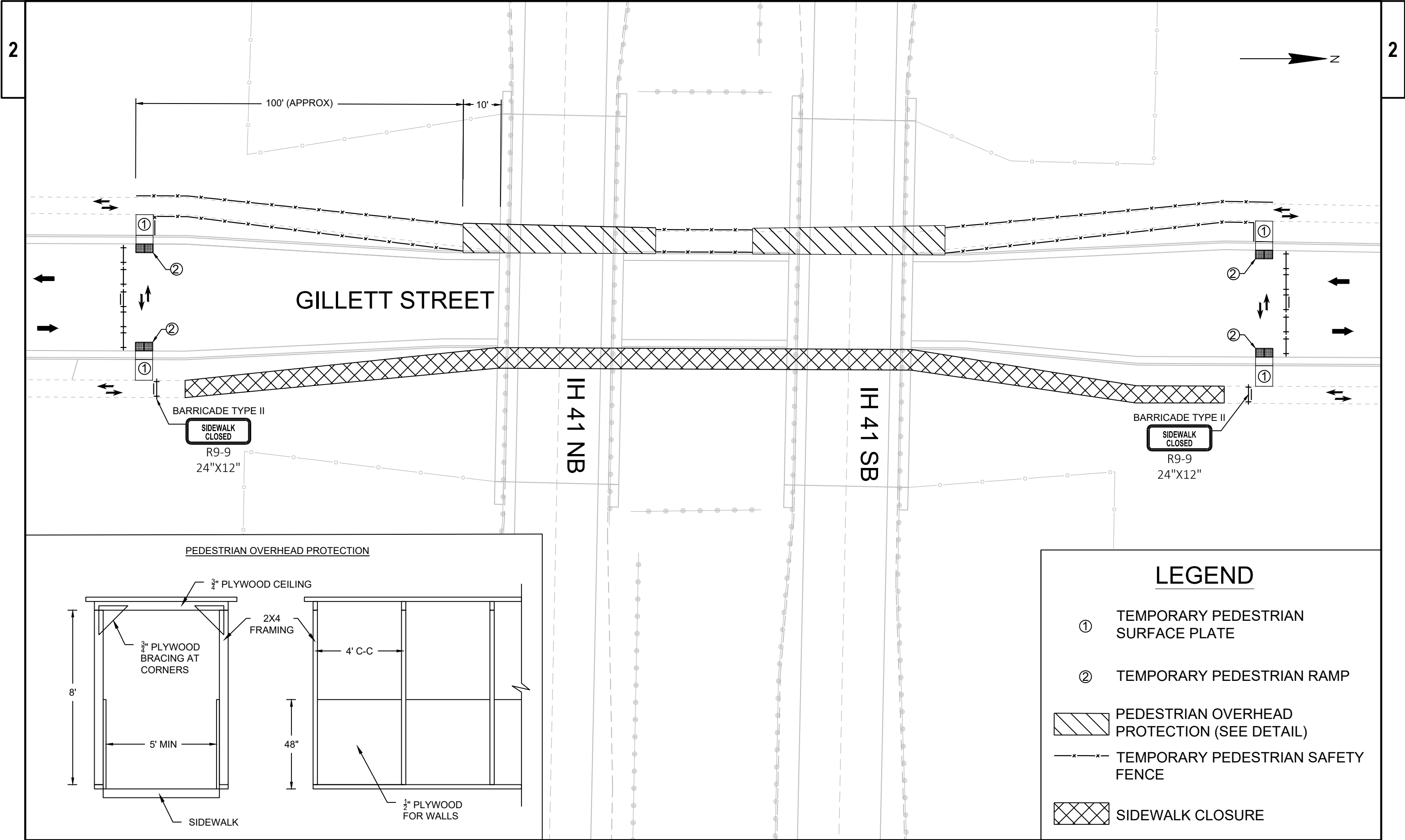
SEE STRUCTURE PLAN
FOR REMOVAL LIMITS

- | | |
|---|---|
|  | TYPE III BARRICADE |
|  | TYPE III BARRICADE WTH ATTACHED SIGN |
|  | TRAFFIC CONTROL DRUM |
|  | TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT |
|  | FLASHING ARROW BOARD |
|  | SIGN ON TEMPORARY SUPPORT |
|  | CONCRETE BARRIER TEMPORARY PRECAST
WITH GLARE SCREEN TEMPORARY |
|  | WORK AREA |
|  | DIRECTION OF TRAFFIC |
|  | CRASH CUSHION TEMPORARY |
|  | MARKING REMOVAL LINE 4-INCH |

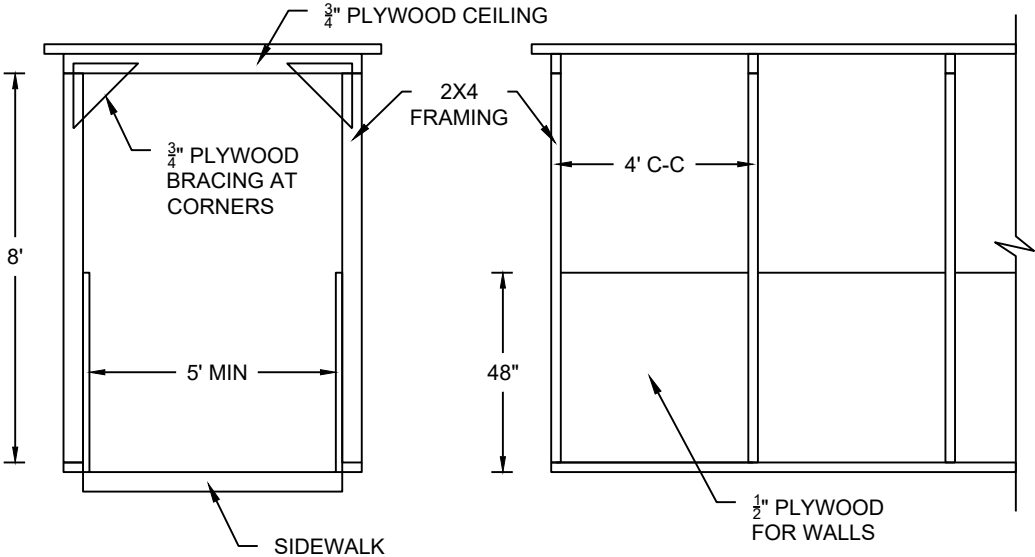
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WISDOT/CADDS SHEET 42



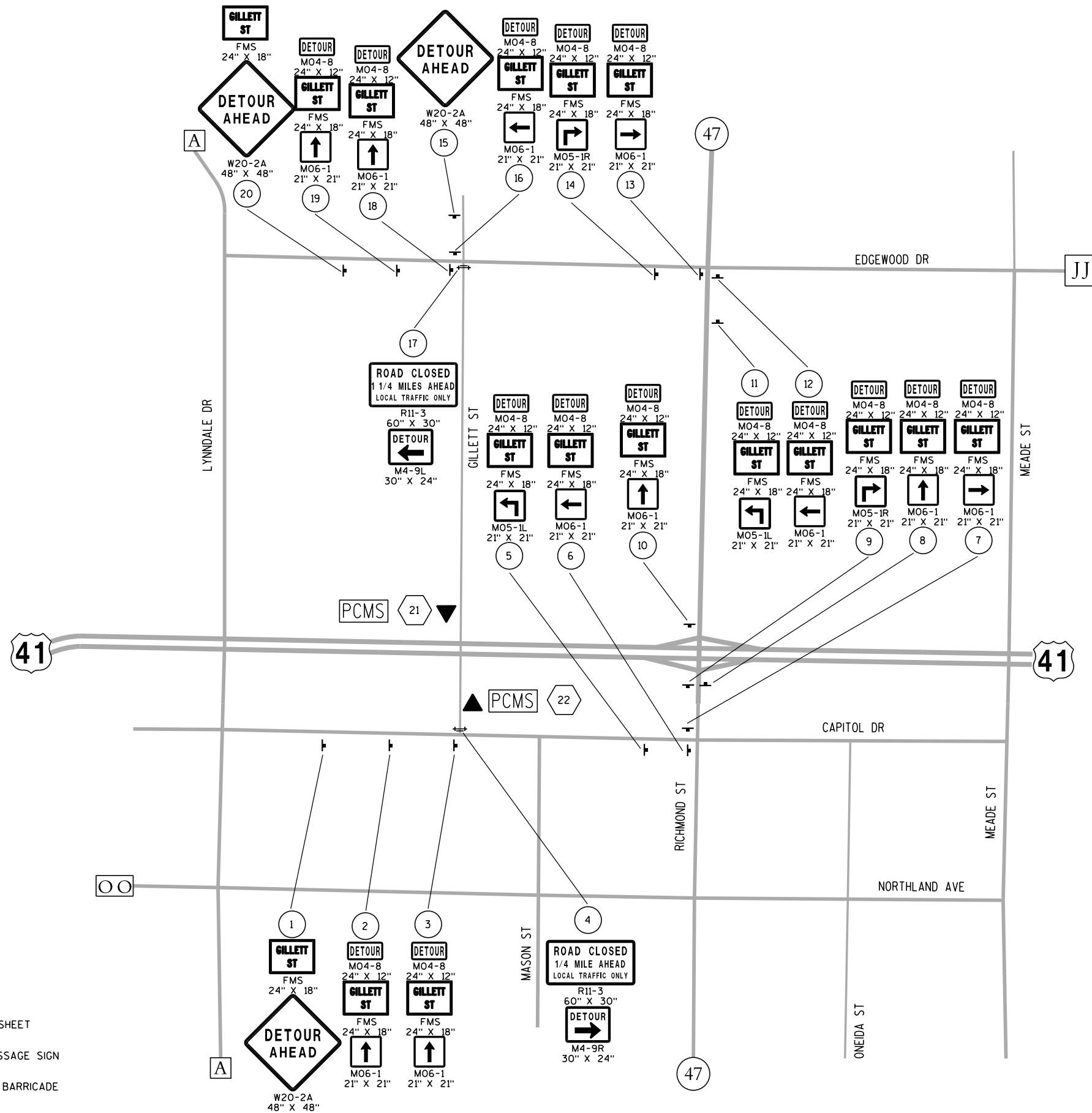


PEDESTRIAN OVERHEAD PROTECTION



LEGEND

- ① TEMPORARY PEDESTRIAN SURFACE PLATE
- ② TEMPORARY PEDESTRIAN RAMP
- [Hatched Box] PEDESTRIAN OVERHEAD PROTECTION (SEE DETAIL)
- x-x- TEMPORARY PEDESTRIAN SAFETY FENCE
- [Cross-hatched Box] SIDEWALK CLOSURE



LEGEND

- (X) SIGN NUMBER. REFER TO MISCELLANEOUS QUANTITY SHEET
- ▲ PCMS (X) PORTABLE CHANGEABLE MESSAGE SIGN
- SIGN MOUNTED ON TYPE III BARRICADE
- POST MOUNTED SIGN

PLAN SHEET PRODUCED
BY WisDOT-NE REGION

Estimate Of Quantities

1130-59-71

Line	Item	Item Description	Unit	Total	Qty
0002	203.0200	Removing Old Structure (station) 01. Sta. 24+35SB	LS	1.000	1.000
0004	203.0200	Removing Old Structure (station) 02. Sta. 24+35NB	LS	1.000	1.000
0006	203.0200	Removing Old Structure (station) 03. Sta. 38+10SB	LS	1.000	1.000
0008	203.0200	Removing Old Structure (station) 04. Sta. 38+10NB	LS	1.000	1.000
0010	203.0225.S	Debris Containment (structure) 01. B-44-0020	LS	1.000	1.000
0012	203.0225.S	Debris Containment (structure) 02. B-44-0021	LS	1.000	1.000
0014	204.0120	Removing Asphaltic Surface Milling	SY	10,209.000	10,209.000
0016	204.0165	Removing Guardrail	LF	1,426.000	1,426.000
0018	204.0170	Removing Fence	LF	560.000	560.000
0020	204.0190	Removing Surface Drains	EACH	4.000	4.000
0022	206.1000	Excavation for Structures Bridges (structure) 01. B-44-0020	LS	1.000	1.000
0024	206.1000	Excavation for Structures Bridges (structure) 02. B-44-0021	LS	1.000	1.000
0026	206.1000	Excavation for Structures Bridges (structure) 03. B-44-0028	LS	1.000	1.000
0028	206.1000	Excavation for Structures Bridges (structure) 04. B-44-0029	LS	1.000	1.000
0030	210.1100	Backfill Structure Type A	CY	44.000	44.000
0032	211.0400	Prepare Foundation for Asphaltic Shoulders	STA	16.000	16.000
0034	213.0100	Finishing Roadway (project) 01. 1130-59-71	EACH	1.000	1.000
0036	305.0110	Base Aggregate Dense 3/4-Inch	TON	471.000	471.000
0038	305.0500	Shaping Shoulders	STA	110.000	110.000
0040	450.4000	HMA Cold Weather Paving	TON	2,552.000	2,552.000
0042	455.0605	Tack Coat	GAL	725.000	725.000
0044	465.0105	Asphaltic Surface	TON	2,852.000	2,852.000
0046	465.0310	Asphaltic Curb	LF	40.000	40.000
0048	465.0315	Asphaltic Flumes	SY	16.000	16.000
0050	465.0400	Asphaltic Shoulder Rumble Strips	LF	11,296.000	11,296.000
0052	502.0100	Concrete Masonry Bridges	CY	392.000	392.000
0054	502.2000	Compression Joint Sealer Preformed Elastomeric (width) 01. 3-Inch	LF	144.000	144.000
0056	502.2000	Compression Joint Sealer Preformed Elastomeric (width) 02. 3-Inch	LF	144.000	144.000
0058	502.3200	Protective Surface Treatment	SY	370.000	370.000
0060	502.3210	Pigmented Surface Sealer	SY	538.000	538.000
0062	502.4206	Adhesive Anchors No. 6 Bar	EACH	480.000	480.000
0064	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	78,790.000	78,790.000
0066	516.0500	Rubberized Membrane Waterproofing	SY	24.000	24.000
0068	603.8000	Concrete Barrier Temporary Precast Delivered	LF	5,960.000	5,960.000
0070	603.8125	Concrete Barrier Temporary Precast Installed	LF	5,960.000	5,960.000

Estimate Of Quantities

1130-59-71

Line	Item	Item Description	Unit	Total	Qty
0072	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	16.000	16.000
0074	614.0200	Steel Thrie Beam Structure Approach	LF	168.000	168.000
0076	614.0305	Steel Plate Beam Guard Class A	LF	1,025.000	1,025.000
0078	614.0905	Crash Cushions Temporary	EACH	8.000	8.000
0080	616.0206	Fence Chain Link 6-FT	LF	752.000	752.000
0082	618.0100	Maintenance And Repair of Haul Roads (project) 01. 1130-59-71	EACH	1.000	1.000
0084	619.1000	Mobilization	EACH	1.000	1.000
0086	624.0100	Water	MGAL	6.600	6.600
0088	625.0500	Salvaged Topsoil	SY	864.000	864.000
0090	628.1905	Mobilizations Erosion Control	EACH	6.000	6.000
0092	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0094	628.2002	Erosion Mat Class I Type A	SY	864.000	864.000
0096	629.0210	Fertilizer Type B	CWT	0.550	0.550
0098	630.0130	Seeding Mixture No. 30	LB	15.500	15.500
0100	630.0500	Seed Water	MGAL	20.000	20.000
0102	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	8.000	8.000
0104	638.2102	Moving Signs Type II	EACH	8.000	8.000
0106	638.3000	Removing Small Sign Supports	EACH	8.000	8.000
0108	642.5001	Field Office Type B	EACH	1.000	1.000
0110	643.0300	Traffic Control Drums	DAY	8,450.000	8,450.000
0112	643.0410	Traffic Control Barricades Type II	DAY	140.000	140.000
0114	643.0420	Traffic Control Barricades Type III	DAY	1,314.000	1,314.000
0116	643.0705	Traffic Control Warning Lights Type A	DAY	2,068.000	2,068.000
0118	643.0715	Traffic Control Warning Lights Type C	DAY	3,462.000	3,462.000
0120	643.0800	Traffic Control Arrow Boards	DAY	280.000	280.000
0122	643.0900	Traffic Control Signs	DAY	5,786.000	5,786.000
0124	643.0920	Traffic Control Covering Signs Type II	EACH	21.000	21.000
0126	643.1000	Traffic Control Signs Fixed Message	SF	121.000	121.000
0128	643.1050	Traffic Control Signs PCMS	DAY	70.000	70.000
0130	643.1200.S	Portable Automated Real-Time Traffic Queue Warning System	DAY	120.000	120.000
0132	643.5000	Traffic Control	EACH	1.000	1.000
0134	644.1430	Temporary Pedestrian Surface Plate	SF	120.000	120.000
0136	644.1601	Temporary Pedestrian Curb Ramp	DAY	280.000	280.000
0138	644.1810	Temporary Pedestrian Barricade	LF	440.000	440.000
0140	646.1020	Marking Line Epoxy 4-Inch	LF	11,980.000	11,980.000
0142	646.1050	Marking Line Grooved Permanent Tape 4-Inch	LF	440.000	440.000
0144	646.9000	Marking Removal Line 4-Inch	LF	11,460.000	11,460.000
0146	649.0150	Temporary Marking Line Removable Tape 4-Inch	LF	28,320.000	28,320.000

Estimate Of Quantities

1130-59-71					
Line	Item	Item Description	Unit	Total	Qty
0148	650.8000	Construction Staking Resurfacing Reference	LF	12,303.000	12,303.000
0150	650.9910	Construction Staking Supplemental Control (project) 01. 1130-59-71	LS	1.000	1.000
0152	690.0150	Sawing Asphalt	LF	240.000	240.000
0154	715.0502	Incentive Strength Concrete Structures	DOL	2,352.000	2,352.000
0156	801.0117	Railroad Flagging Reimbursement	DOL	30,000.000	30,000.000
0158	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	600.000	600.000
0160	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,200.000	1,200.000
0162	SPV.0075	Special 01. Street Sweeping	HRS	20.000	20.000
0164	SPV.0090	Special 01. Concrete Barrier Temporary Precast Anchoring	LF	300.000	300.000
0166	SPV.0090	Special 02. Glare Screens Temporary	LF	5,440.000	5,440.000
0168	SPV.0090	Special 03. Temporary Rumble Strips (Orange) in Advance of Lane Closure	LF	648.000	648.000
0170	SPV.0090	Special 04. Pedestrian Overhead Protection	LF	110.000	110.000
0172	SPV.0105	Special 01. Temporary Superstructure Support B-44-0028	LS	1.000	1.000
0174	SPV.0105	Special 02. Temporary Superstructure Support B-44-0029	LS	1.000	1.000

REMOVING ASPHALTIC SURFACE MILLING

204.0120					
STATION	TO	STATION	LOCATION	SY	REMARKS
12+50NB, 24'RT	-	23+69NB, 24'RT	NB	1187	STAGE 1
25+03NB, 24'RT	-	37+57NB, 24'RT	NB	1277	STAGE 1
38+64NB, 24'RT	-	43+14NB, 24'RT	NB	447	STAGE 1
19+18SB, 24'LT	-	23+68SB, 24'LT	SB	463	STAGE 1
25+02SB, 24'LT	-	37+57SB, 24'LT	SB	1299	STAGE 1
38+63SB, 24'LT	-	49+83SB, 24'LT	SB	1173	STAGE 1
12+50NB, CL	-	23+04NB, CL	NB	702	STAGE 1
25+47NB, CL	-	37+18NB, CL	NB	780	STAGE 1
39+52NB, CL	-	43+14NB, CL	NB	241	STAGE 1
19+18SB, CL	-	22+65SB, CL	SB	231	STAGE 1
25+44SB, CL	-	37+01SB, CL	SB	771	STAGE 1
39+18SB, CL	-	49+83SB, CL	SB	710	STAGE 1
23+04NB, CL	-	23+69NB, CL	NB	33	STAGE 2
25+03NB, CL	-	25+47NB, CL	NB	22	STAGE 2
37+18NB, CL	-	37+57NB, CL	NB	18	STAGE 2
38+64NB, CL	-	39+52NB, CL	NB	41	STAGE 2
22+65SB, CL	-	23+68SB, CL	SB	52	STAGE 2
25+02SB, CL	-	25+44SB, CL	SB	21	STAGE 2
37+00SB, CL	-	37+57SB, CL	SB	26	STAGE 2
38+63SB, CL	-	39+18SB, CL	SB	26	STAGE 2
22+43NB, 24'RT	-	23+69NB, 24'RT	NB	84	STAGE 3
25+03NB, 24'RT	-	26+32NB, 24'RT	NB	85	STAGE 3
36+14NB, 24'RT	-	37+57NB, 24'RT	NB	100	STAGE 3
38+64NB, 24'RT	-	39+90NB, 24'RT	NB	87	STAGE 3
22+74SB, 24'LT	-	23+68SB, 24'LT	SB	68	STAGE 3
25+02SB, 24'LT	-	26+13SB, 24'LT	SB	80	STAGE 3
36+35SB, 24'LT	-	37+57SB, 24'LT	SB	84	STAGE 3
38+63SB, 24'LT	-	40+18SB, 24'LT	SB	101	STAGE 3
TOTAL				10209	

REMOVING GUARDRAIL

204.0165					
STATION	TO	STATION	LOCATION	LF	REMARKS
23+03.9NB, 6.0'LT	-	23+69.0NB, 5.0'LT	NB	65	STAGE 2
23+49.5SB, 4.0'RT	-	23+68.2SB, 3.5'RT	SB	19	STAGE 2
23+59.4SB, 11.7'RT	-	23+60.1SB, 50.6'RT	SB	39	STAGE 2
25+02.3SB, 3.5'RT	-	25+44.0SB, 6.5'RT	SB	42	STAGE 2
25+03.1NB, 3.5'LT	-	25+25.2NB, 5.0' LT	NB	22	STAGE 2
25+11.9SB, 12.6'RT	-	25+13.2SB, 50.4'RT	SB	38	STAGE 2
37+17.8NB, 6.5'LT	-	37+56.9NB, 3.5'LT	NB	39	STAGE 2
37+44.8SB, 3.5'RT	-	37+56.8SB, 3.5'RT	SB	12	STAGE 2
37+50.4SB, 12'RT	-	37+50.0SB, 50.9'RT	SB	39	STAGE 2
38+63.3SB, 3.5'RT	-	39+18.4NB, 6.2'RT	SB	55	STAGE 2
38+63.8NB, 3.5'LT	-	38+75.8NB, 5.0'LT	NB	12	STAGE 2
38+70.7SB, 12.6' RT	-	38+72.0SB, 50.4'RT	SB	38	STAGE 2
22+73.5SB, 34.0'LT	-	23+68.2SB, 29.2'LT	SB	95	STAGE 3
22+43.0NB, 34.0'RT	-	23+69.2NB, 29.4'RT	NB	126	STAGE 3
25+02.9NB, 28.5'RT	-	26+31.5NB, 34.0'RT	NB	129	STAGE 3
25+02.3SB, 29.4'LT	-	26+12.5SB, 34.0'RT	SB	110	STAGE 3
36+14.3NB, 34.0'RT	-	37+56.9NB, 29.0'RT	NB	143	STAGE 3
36+35.0SB, 34.0'LT	-	37+56.8SB, 27.5'LT	SB	122	STAGE 3
38+63.3SB, 29.2'LT	-	40+18.1SB, 34.0'LT	SB	155	STAGE 3
38+63.8NB, 29.2'RT	-	39+90.2NB, 34.0'RT	NB	126	STAGE 3
TOTAL				1426	

REMOVING FENCE

204.0170				
STATION	TO	STATION	LOCATION	LF
23+68SB, 30'LT	-	23+68SB, 110'LT	IH 41 SB	80
25+02SB, 30'LT	-	25+00SB, 85'LT	IH 41 SB	55
37+57SB, 30'LT	-	37+68SB, 100'LT	IH 41 SB	72
38+63SB, 30'LT	-	38+57SB, 90'LT	IH 41 SB	60
23+69NB, 30'RT	-	23+79NB, 95'RT	IH 41 NB	65
25+03NB, 30'RT	-	24+88NB, 105'RT	IH 41 NB	78
37+57NB, 30'RT	-	37+70NB, 105'RT	IH 41 NB	75
38+64NB, 30'RT	-	38+57NB, 105'RT	IH 41 NB	75
TOTAL				560

REMOVING SURFACE DRAINS

204.0190		
STATION	LOCATION	EACH
23+53SB, 30'LT	IH 41 SB	1
23+53NB, 30'RT	IH 41 NB	1
38+78SB, 30'LT	IH 41 SB	1
38+78NB, 30'RT	IH 41 NB	1
TOTAL		4

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SHOULDER GRADING									
				211.0400	305.0500	305.0110	624.0100		
				PREPARE		BASE			
				FOUNDATION FOR	SHAPING	AGGREGATE			
				ASPHALTIC	SHOULDERS	DENSE			
				SHOULDERS		3/4-INCH	WATER		
STATION	TO	STATION	LOCATION	STA	STA	TON	MGAL	REMARKS	
12+50NB, 24'RT	-	23+69NB, 24'RT	IH 41 NB	--	11	--	--	STAGE 1	
25+03NB, 24'RT	-	37+57NB, 24'RT	IH 41 NB	--	13	--	--	STAGE 1	
38+64NB, 24'RT	-	43+14NB, 24'RT	IH 41 NB	--	4	--	--	STAGE 1	
19+18SB, 24'LT	-	23+68SB, 24'LT	IH 41 SB	--	4	--	--	STAGE 1	
25+02SB, 24'LT	-	37+57SB, 24'LT	IH 41 SB	--	11	--	--	STAGE 1	
38+63SB, 24'LT	-	49+83SB, 24'LT	IH 41 SB	--	11	--	--	STAGE 1	
12+50NB, CL	-	23+04NB, CL	IH 41 NB	--	11	--	--	STAGE 1	
25+47NB, CL	-	37+18NB, CL	IH 41 NB	--	13	--	--	STAGE 1	
39+52NB, CL	-	43+14NB, CL	IH 41 NB	--	4	--	--	STAGE 1	
19+18SB, CL	-	22+65SB, CL	IH 41 SB	--	4	--	--	STAGE 1	
25+44SB, CL	-	37+01SB, CL	IH 41 SB	--	13	--	--	STAGE 1	
39+18SB, CL	-	49+83SB, CL	IH 41 SB	--	11	--	--	STAGE 1	
23+04NB, CL	-	23+69NB, CL	IH 41 NB	1	--	19	0.3	STAGE 2	
25+03NB, CL	-	25+47NB, CL	IH 41 NB	1	--	13	0.2	STAGE 2	
37+18NB, CL	-	37+57NB, CL	IH 41 NB	1	--	14	0.2	STAGE 2	
38+64NB, CL	-	39+52NB, CL	IH 41 NB	1	--	29	0.4	STAGE 2	
22+65SB, CL	-	23+68SB, CL	IH 41 SB	1	--	29	0.4	STAGE 2	
25+02SB, CL	-	25+44SB, CL	IH 41 SB	1	--	12	0.2	STAGE 2	
37+00SB, CL	-	37+57SB, CL	IH 41 SB	1	--	20	0.3	STAGE 2	
38+63SB, CL	-	39+18SB, CL	IH 41 SB	1	--	19	0.3	STAGE 2	
22+43NB, 24'RT	-	23+69NB, 24'RT	IH 41 NB	1	--	40	0.6	STAGE 3	
25+03NB, 24'RT	-	26+32NB, 24'RT	IH 41 NB	1	--	43	0.6	STAGE 3	
36+14NB, 24'RT	-	37+57NB, 24'RT	IH 41 NB	1	--	45	0.6	STAGE 3	
38+64NB, 24'RT	-	39+90NB, 24'RT	IH 41 NB	1	--	39	0.5	STAGE 3	
22+74SB, 24'LT	-	23+68SB, 24'LT	IH 41 SB	1	--	27	0.4	STAGE 3	
25+02SB, 24'LT	-	26+13SB, 24'LT	IH 41 SB	1	--	32	0.4	STAGE 3	
36+35SB, 24'LT	-	37+57SB, 24'LT	IH 41 SB	1	--	38	0.5	STAGE 3	
38+63SB, 24'LT	-	40+18SB, 24'LT	IH 41 SB	1	--	52	0.7	STAGE 3	
TOTAL				16	110	471	6.6		

ASPHALT ITEMS									
				450.4000	465.0105	455.0605	650.8000		
				HMA COLD			CONSTRUCTION		
				WEATHER	ASPHALTIC		STAKING		
				PAVING	SURFACE	TACK COAT	RESURFACING		
STATION	TO	STATION	LOCATION	TON	TON	GAL	REFERENCE	LF	
12+50NB, 24'RT	-	23+69NB, 24'RT	IH 41 NB	326	326	83		1119	
25+03NB, 24'RT	-	37+57NB, 24'RT	IH 41 NB	351	351	89		1254	
38+64NB, 24'RT	-	43+14NB, 24'RT	IH 41 NB	123	123	31		450	
19+18SB, 24'LT	-	23+68SB, 24'LT	IH 41 SB	127	127	32		450	
25+02SB, 24'LT	-	37+57SB, 24'LT	IH 41 SB	357	357	91		1255	
38+63SB, 24'LT	-	49+83SB, 24'LT	IH 41 SB	323	323	82		1120	
12+50NB, CL	-	23+04NB, CL	IH 41 NB	193	193	49		1054	
25+47NB, CL	-	37+18NB, CL	IH 41 NB	215	215	55		1171	
39+52NB, CL	-	43+14NB, CL	IH 41 NB	66	66	17		362	
19+18SB, CL	-	22+65SB, CL	IH 41 SB	64	64	16		347	
25+44SB, CL	-	37+01SB, CL	IH 41 SB	212	212	54		1157	
39+18SB, CL	-	49+83SB, CL	IH 41 SB	195	195	50		1065	
23+04NB, CL	-	23+69NB, CL	IH 41 NB	--	11	3		65	
25+03NB, CL	-	25+47NB, CL	IH 41 NB	--	7	2		44	
37+18NB, CL	-	37+57NB, CL	IH 41 NB	--	6	2		39	
38+64NB, CL	-	39+52NB, CL	IH 41 NB	--	14	4		88	
22+65SB, CL	-	23+68SB, CL	IH 41 SB	--	17	4		103	
25+02SB, CL	-	25+44SB, CL	IH 41 SB	--	7	2		42	
37+00SB, CL	-	37+57SB, CL	IH 41 SB	--	9	2		57	
38+63SB, CL	-	39+18SB, CL	IH 41 SB	--	9	2		55	
22+43NB, 24'RT	-	23+69NB, 24'RT	IH 41 NB	--	27	7		126	
25+03NB, 24'RT	-	26+32NB, 24'RT	IH 41 NB	--	27	7		129	
36+14NB, 24'RT	-	37+57NB, 24'RT	IH 41 NB	--	32	8		143	
38+64NB, 24'RT	-	39+90NB, 24'RT	IH 41 NB	--	28	7		126	
22+74SB, 24'LT	-	23+68SB, 24'LT	IH 41 SB	--	21	5		94	
25+02SB, 24'LT	-	26+13SB, 24'LT	IH 41 SB	--	25	6		111	
36+35SB, 24'LT	-	37+57SB, 24'LT	IH 41 SB	--	27	7		122	
38+63SB, 24'LT	-	40+18SB, 24'LT	IH 41 SB	--	33	8		155	
TOTAL				2552	2852	725		12303	

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ASPHALT ITEMS (CONTINUED)

STATION	TO	STATION	LOCATION	465.0310	465.0315
				ASPHALTIC	ASPHALTIC
				CURB	FLUMES
				LF	SY
23+69.2NB, 29.2'RT	-	23+54.4NB, 29.3'RT	NB	10	4
23+68.2SB, 29.2'LT	-	23+53.3SB, 29.8'LT	SB	10	4
38+78.2SB, 29.2'LT	-	38+78.2SB, 29.2'LT	SB	10	4
38+78.6NB, 29.2'RT	-	38+78.6NB, 29.3'RT	NB	10	4
TOTAL				40	16

STEEL THRIE BEAM STRUCTURE APPROACH

614.0200					
STATION	TO	STATION	LOCATION	LF	REMARKS
23+48.6NB, 5.0'LT	-	23+69.2NB, 4.5'LT	IH 41 NB	21	STAGE 2
25+02.3SB, 4.5'RT	-	25+23.0SB, 5.5'RT	IH 41 SB	21	STAGE 2
37+36.2NB, 5.3'LT	-	37+56.9NB, 4.5'LT	IH 41 NB	21	STAGE 2
38+63.3SB, 4.5'RT	-	38+84.0SB, 5.2'RT	IH 41 SB	21	STAGE 2
23+48.6NB, 29.4'RT	-	23+69.2NB, 29.2'RT	IH 41 NB	21	STAGE 3
25+02.3SB, 28.5'LT	-	25+22.9SB, 29.4'LT	IH 41 SB	21	STAGE 3
37+36.2NB, 29.0'RT	-	37+56.9NB, 28.5'RT	IH 41 NB	21	STAGE 3
38+63.3SB, 29.2'LT	-	38+84.0SB, 29.2'LT	IH 41 SB	21	STAGE 3
TOTAL				168	

CONCRETE BARRIER TEMPORARY PRECAST

STATION	TO	STATION	LOCATION	603.8000	603.8125	SPV.0090.01	SPV.0090.02
				CONCRETE	CONCRETE	CONCRETE	
				BARRIER	BARRIER	BARRIER	
				TEMPORARY	TEMPORARY	TEMPORARY	GLARE
				PRECAST	PRECAST	PRECAST	SCREENS
				DELIVERED	INSTALLED	ANCHORING	TEMPORARY
				LF	LF	LF	LF
18+74NB, RT	-	27+54NB, RT	STAGE 2	880	880	38	815
21+19SB, LT	-	27+54SB, LT	STAGE 2	635	635	37	570
35+07NB, RT	-	41+17NB, RT	STAGE 2	610	610	38	545
35+07SB, LT	-	43+62SB, LT	STAGE 2	855	855	37	790
18+74NB, RT	-	27+54NB, RT	STAGE 3	880	880	38	815
21+19SB, LT	-	27+54SB, LT	STAGE 3	635	635	37	570
35+07NB, RT	-	41+17NB, RT	STAGE 3	610	610	38	545
35+07SB, LT	-	43+62SB, LT	STAGE 3	855	855	37	790
TOTAL				5960	5960	300	5440

CRASH CUSHION TEMPORARY

LOCATION	STAGE	614.0905		OBJECT MARKING PATTERN	TRAFFIC DIRECTION	TRAFFIC LOCATION
		CRASH CUSHION TEMPORARY EACH	BACK WIDTH FT			
18+74NB, 9' RT	STAGE 2	1	2	OM-3R (WO5-58R)	Unidirectional	R
27+54SB, 9' LT	STAGE 2	1	2	OM-3R (WO5-58R)	Unidirectional	R
35+07NB, 9' RT	STAGE 2	1	2	OM-3R (WO5-58R)	Unidirectional	R
43+62SB, 9' LT	STAGE 2	1	2	OM-3R (WO5-58R)	Unidirectional	R
18+74NB, 15' RT	STAGE 3	1	2	OM-3L (WO5-58L)	Unidirectional	L
27+54SB, 15' LT	STAGE 3	1	2	OM-3L (WO5-58L)	Unidirectional	L
35+07NB, 15' RT	STAGE 3	1	2	OM-3L (WO5-58L)	Unidirectional	L
43+62SB, 15' LT	STAGE 3	1	2	OM-3L (WO5-58L)	Unidirectional	L
		8				

STEEL PLATE BEAM GUARD CLASS A

614.2300					
STATION	TO	STATION	LOCATION	LF	REMARKS
23+03.9NB, 6.0'LT	-	23+48.5NB, 5.0'LT	IH 41 NB	45	STAGE 2
25+23.0SB, 5.5'RT	-	25+47.3SB, 6.0'RT	IH 41 SB	24	STAGE 2
37+17.8NB, 6.0'LT	-	37+36.2NB, 5.3'LT	IH 41 NB	19	STAGE 2
38+84.0SB, 5.2'RT	-	39+18.4NB, 6.0'RT	IH 41 SB	34	STAGE 2
22+73.5SB, 34.0'LT	-	23+68.2SB, 29.2'LT	IH 41 SB	95	STAGE 3
22+43.0NB, 34.0'RT	-	23+48.5NB, 29.4'RT	IH 41 NB	106	STAGE 3
25+02.9NB, 28.5'RT	-	26+31.5NB, 34.0'RT	IH 41 NB	129	STAGE 3
25+23.0SB, 29.4'LT	-	26+12.6SB, 34.0'RT	IH 41 SB	90	STAGE 3
36+14.3NB, 34.0'RT	-	37+36.2NB, 29.0'RT	IH 41 NB	122	STAGE 3
36+35.0SB, 34.0'LT	-	37+36.1SB, 29.1'LT	IH 41 SB	101	STAGE 3
38+84.0SB, 29.2'LT	-	40+18.1SB, 34.0'LT	IH 41 SB	134	STAGE 3
38+63.8NB, 29.2'RT	-	39+90.2NB, 34.0'RT	IH 41 NB	126	STAGE 3
TOTAL				1025	

FENCE CHAIN LINK 6-FT

616.0206					
STATION	TO	STATION	LOCATION	LF	REMARKS
23+68SB, 6'RT	-	23+70NB, 6'LT	IH 41 NB	48	STAGE 2
25+02SB, 6'RT	-	25+13NB, 6'LT	IH 41 NB	48	STAGE 2
37+57SB, 6'RT	-	37+57NB, 6'LT	IH 41 NB	48	STAGE 2
38+63SB, 6'RT	-	38+64NB, 6'LT	IH 41 NB	48	STAGE 2
23+68SB, 30'LT	-	23+68SB, 110'LT	IH 41 SB	80	STAGE 3
25+02SB, 30'LT	-	25+00SB, 85'LT	IH 41 SB	55	STAGE 3
37+57SB, 30'LT	-	37+68SB, 100'LT	IH 41 SB	72	STAGE 3
38+63SB, 30'LT	-	38+57SB, 90'LT	IH 41 SB	60	STAGE 3
23+69NB, 30'RT	-	23+79NB, 95'RT	IH 41 NB	65	STAGE 3
25+03NB, 30'RT	-	24+89NB, 95'RT	IH 41 NB	78	STAGE 3
37+57NB, 30'RT	-	37+70NB, 104'RT	IH 41 NB	75	STAGE 3
38+64NB, 30'RT	-	38+57NB, 103'RT	IH 41 NB	75	STAGE 3
TOTAL				752	

FINISHING MATERIALS

625.0500 628.2002 629.0210 630.0130 SPV.0120.001									
				EROSION CONTROL MAT CLASS I		FERTILIZER	SEEDING MIXTURE NO.	WATER FOR SEEDED AREAS	REMARKS
STATION	TO	STATION	LOCATION	SALVAGED TOPSOIL SY	TYPE A SY	TYPE B CWT	30 LB	MGAL	
23+25SB, 9'RT	-	23+72NB, 10'LT	IH 41 MEDIAN	95	95	0.06	1.7	2	STAGE 2
25+00SB, 9'RT	-	25+47NB, 13'LT	IH 41 MEDIAN	100	100	0.06	1.8	2	STAGE 2
37+12SB, 10'RT	-	37+59NB, 10'LT	IH 41 MEDIAN	88	88	0.06	1.6	2	STAGE 2
38+60SB, 10'RT	-	39+08NB, 7'LT	IH 41 MEDIAN	95	95	0.06	1.7	2	STAGE 2
23+24NB, 35'RT	-	23+75NB, 48'RT	IH 41 NB	48	48	0.03	0.9	1	STAGE 3
24+97NB, 45'RT	-	25+62NB, 37'RT	IH 41 NB	36	36	0.02	0.6	1	STAGE 3
37+19NB, 36'RT	-	37+62NB, 45'RT	IH 41 NB	27	27	0.02	0.5	1	STAGE 3
38+62NB, 49'RT	-	39+05NB, 35'RT	IH 41 NB	47	47	0.03	0.8	1	STAGE 3
23+18SB, 37'LT	-	27+71SB, 50'LT	IH 41 SB	46	46	0.03	0.8	1	STAGE 3
25+00SB, 53'LT	-	25+40SB, 36'LT	IH 41 SB	30	30	0.02	0.5	1	STAGE 3
37+15SB, 36'LT	-	37+65SB, 45'LT	IH 41 SB	31	31	0.02	0.6	1	STAGE 3
38+59SB, 48'LT	-	39+04SB, 36'LT	IH 41 SB	48	48	0.03	0.9	1	STAGE 3
UNDISTRIBUTED				173	173	0.11	3.1	4	
TOTAL				864	864	0.55	15.5	20	

MOBILIZATION EROSION CONTROL

		628.1905	628.1910
		MOBILIZATION EROSION CONTROL	MOBILIZATION EMERGENCY EROSION CONTROL
PROJECT	LOCATION	EACH	EACH
1130-59-71	PROJECT	6	2
TOTAL		6	2

ERECTION & REMOVAL OF PERMANENT SIGNING, TYPE II

634.0612 638.3000 638.2102					
POSTS			REMOVING SMALL SIGN SUPPORTS		MOVING SIGNS TYPE II
STATION	LOCATION	4X6-INCH X 12-FT EACH	EACH	EACH	
23+69NB	IH 41 NB	2	2	2	W5-52R 12"X36"
37+57NB	IH 41 NB	2	2	2	"
25+02SB	IH 41 SB	2	2	2	"
38+63SB	IH 41 SB	2	2	2	"
TOTAL		8	8	8	

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 70 DAYS	643.0900 SIGNS** DAYS	643.1000 FIXED MESSAGE SIGN** SF	643.1050 PORTABLE CHANGEABLE MESSAGE SIGN** DAYS	643.0420 BARRICADE TYPE III** DAYS	643.0705 WARNING LIGHTS TYPE A** DAYS	REMARKS
1	CAPITOL DR, W. OF GILLETT ST, PLACE 1500' W. OF GILLETT ST INTERSECTION	FMS	24"x18"	1			3				GILLETT ST
	"	W 20-2A	48"x48"	1	70	70					
2	CAPITOL DR, W. OF GILLETT ST, PLACE 750' W. OF GILLETT ST INTERSECTION	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 6-1	21"x21"	1	70	70					AHEAD
3	CAPITOL DR, W. OF GILLETT ST, PLACE 150' W. OF GILLETT ST INTERSECTION	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 6-1	21"x21"	1	70	70					AHEAD
4	GILLETT ST, AT CAPITOL DR, PLACE ON RIGHT SHOULDER AT CAPITOL DR INTERSECTION	R 11-3	60"x30"	1	70	70			70	140	1/4 MILE AHEAD
	"	M 4-9R	30"x24"	1	70	70					
5	CAPITOL DR, W. OF STH 47, PLACE 750' W. OF STH 47 INTERSECTION	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 5-1L	21"x21"	1	70	70					
6	CAPITOL DR, W. OF STH 47, PLACE 150' W. OF STH 47 INTERSECTION	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 6-1	21"x21"	1	70	70					LEFT
7	STH 47, N. OF CAPITOL DR, PLACE 150' N. OF CAPITOL DR INTERSECTION	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 6-1	21"x21"	1	70	70					RIGHT
8	STH 47, S. OF I-41 NB RAMPS, PLACE 150' S. OF I-41 NB RAMP INTERSECTION	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 6-1	21"x21"	1	70	70					AHEAD
9	STH 47, S. OF I-41 NB RAMPS, PLACE 750' N. OF CAPITOL DR INTERSECTION	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 5-1R	21"x21"	1	70	70					
10	STH 47, N. OF I-41 SB RAMPS, PLACE 150' N. OF I-41 SB RAMP INTERSECTION	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 6-1	21"x21"	1	70	70					AHEAD
11	STH 47, S. OF CTH JJ, PLACE 750' S. OF CTH JJ INTERSECTION	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 5-1L	21"x21"	1	70	70					
12	STH 47, S. OF CTH JJ, PLACE RIGHT OF EXISTING J13-1 SIGN	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 6-1	21"x21"	1	70	70					LEFT
13	CTH JJ, W. OF STH 47, PLACE RIGHT OF EXISTING J13-1 SIGN	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 6-1	21"x21"	1	70	70					RIGHT
14	CTH JJ, W. OF STH 47, PLACE 750' W. OF STH 47 INTERSECTION	MO 4-8	24"x12"	1	70	70					
	"	FMS	24"x18"	1			3				GILLETT ST
	"	MO 5-1R	21"x21"	1	70	70					

PAGE SUBTOTALS 40 1,890 39 0 70 140 **ADDITIONAL QUANTITIES FOUND ELSEWHERE

TRAFFIC CONTROL DETOUR SIGN SUMMARY

SIGN NO.	LOCATION	SIGN CODE	SIZE W X H	NUMBER IN SERVICE	APPROX. SERVICE PERIOD 70 DAYS	643.0900 DETOUR SIGNS** DAYS	643.1000 FIXED MESSAGE SIGN** SF	643.1050 PORTABLE CHANGEABLE MESSAGE SIGN** DAYS	643.0420 BARRICADE TYPE III** DAYS	643.0705 WARNING LIGHTS TYPE A** DAYS	REMARKS
15	GILLETT ST, N. OF CTH JJ, PLACE 1000' N. OF CTH JJ INTERSECTION	W 20-2A	48"X48"	1	70	70					
16	GILLETT ST, N. OF CTH JJ, PLACE 150' N. OF CTH JJ INTERSECTION	MO 4-8	24"X12"	1	70	70					
	"	FMS	24"X18"	1			3				GILLETT ST
	"	MO 6-1	21"X21"	1	70	70					LEFT
17	GILLETT ST, AT CTH JJ, PLACE IN ROADWAY AT CTH JJ INTERSECTION	R 11-3	60"X30"	1	70	70			70	140	1 1/4 MILES AHEAD
	"	M 4-9L	30"X24"	1	70	70					
18	CTH JJ, W. OF GILLETT ST, PLACE 150' W. OF GILLETT ST INTERSECTION	MO 4-8	24"X12"	1	70	70					
	"	FMS	24"X18"	1			3				GILLETT ST
	"	MO 6-1	21"X21"	1	70	70					AHEAD
19	CTH JJ, W. OF GILLETT ST, PLACE 750' W. OF GILLETT ST INTERSECTION	MO 4-8	24"X12"	1	70	70					
	"	FMS	24"X18"	1			3				GILLETT ST
	"	MO 6-1	21"X21"	1	70	70					AHEAD
20	CTH JJ, W. OF GILLETT ST, PLACE 1500' W. OF GILLETT ST INTERSECTION	FMS	24"X18"	1			3				GILLETT ST
	"	W 20-2A	48"X48"	1	70	70					
21	GILLETT ST, N. OF I-41, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1				7			PLACE PRIOR TO FULL CLOSURE
22	GILLETT ST, S. OF I-41, PLACE ON RIGHT SHOULDER, FIELD DETERMINE LOCATION	PCMS		1				7			PLACE PRIOR TO FULL CLOSURE
PAGE SUBTOTALS				16		700	12	14	70	140	**ADDITIONAL QUANTITIES FOUND ELSEWHERE
DETOUR TOTALS				56		2,590	51	14	140	280	

GILLETT STREET PEDESTRIAN TRAFFIC CONTROL SUMMARY

	643.0410	643.0900	644.1430	644.1601	644.1810	SPV.0090.04
	TRAFFIC CONTROL BARRICADES TYPE II	TRAFFIC CONTROL SIGNS**	TEMPORARY PEDESTRIAN SURFACE PLATE	TEMPORARY CURB RAMP	TEMPORARY PEDESTRIAN BARRICADE	PEDESTRIAN OVERHEAD PROTECTION
STATION	EACH* DAYS	EACH* DAYS	SF	EACH* DAYS	LF	LF
STAGE 2&3	2 70	4 70	120	4 70	440	110
TOTAL	140	280	120	280	440	110

*FOR INFORMATION ONLY

**ADDITIONAL QUANTITIES FOUND ELSEWHERE

TRAFFIC CONTROL SUMMARY

	643.0300	643.0420	643.0715	643.0715	643.0800	643.0900	643.0920	643.1050	643.1000	SPV.0090.03
			TRAFFIC							STRIPS
	TRAFFIC	TRAFFIC	CONTROL	TRAFFIC	TRAFFIC	TRAFFIC		TRAFFIC	TRAFFIC	(ORANGE) IN
	CONTROL	CONTROL	WARNING	CONTROL	CONTROL	CONTROL	TRAFFIC CONTROL COVERING	CONTROL	CONTROL	ADVANCE OF
	DRUMS	BARRICADES	LIGHTS	WARNING	ARROW	SIGNS**	SIGNS TYPE II	SIGNS	SIGNS FIXED	LANE
		TYPE III**	TYPE A**	LIGHTS TYPE C	BOARDS			PCMS**	MESSAGE**	CLOSURE
STATION	EACH* DAYS	EACH* DAYS	EACH* DAYS	EACH* DAYS	EACH* DAYS	EACH* DAYS	EACH # of Signs # of Cycles	EACH* DAYS	SF	LF
STAGE 1	90 19	6 19	12 19	18 19	2 19	20 19	19 1 19	2 7	--	--
STAGE 2	108 30	6 30	12 30	52 30	4 30	42 30	1 1 1	2 7	--	648
STAGE 3	108 30	6 30	12 30	52 30	4 30	42 30	1 1 1	2 7	--	--
STAGE 2&3	-- --	10 70	12 70	-- --	-- --	2 70	-- -- --	2 7	70	--
SHOULDER CLOSURE	80 2	-- --	-- --	-- --	1 2	8 2	-- -- --	-- --	--	--
UNDISTRIBUTED	-- 100	-- --	-- --	-- --	-- --	-- --	-- -- --	-- --	--	--
TOTAL	8450	1174	1788	3462	280	2916	21	56	70	648

NOTE: REMOVAL/COVERING OF FIXED MESSAGE SIGNS IS REQUIRED BETWEEN STAGE 2 AND 3, AND IS INCIDENTAL TO BID ITEM
*FOR INFORMATION ONLY
**ADDITIONAL QUANTITIES FOUND ELSEWHERE

PORTABLE AUTOMATED REAL-TIME TRAFFIC QUEUE WARNING
SYSTEM (QWS)

QUEUE WARNING SYSTEM			
LOCATION	STAGE	DISTANCE (MILES)	(DAY)
IH 41 NB	2,3	9	60
IH 41 SB	2,3	10	60
TOTAL			120

MARKING REMOVAL LINE 4-INCH

646.9000					
STATION	TO	STATION	LOCATION	LF	REMARKS
19+18SB, 24'LT	-	23+68SB, 24'LT	IH 41 SB	450	STAGE 2
25+02SB, 24'LT	-	37+57SB, 24'LT	IH 41 SB	1255	STAGE 2
38+63SB, 24'LT	-	49+13SB, 24'LT	IH 41 SB	1050	STAGE 2
13+19NB, 24'RT	-	23+69NB, 24'RT	IH 41 NB	1050	STAGE 2
25+03NB, 24'RT	-	37+57NB, 24'RT	IH 41 NB	1255	STAGE 2
38+64NB, 24'RT	-	43+14NB, 24'RT	IH 41 NB	450	STAGE 2
51+78SB, 12'LT	-	60+58SB, 12'LT	IH 41 SB	220	STAGE 2 - WHITE DASH
1+74NB, 12'RT	-	10+54NB, 12'RT	IH 41 NB	220	STAGE 2 - WHITE DASH
19+18SB, CL	-	23+68SB, CL	IH 41 SB	450	STAGE 3
25+02SB, CL	-	37+57SB, CL	IH 41 SB	1255	STAGE 3
38+63SB, CL	-	49+13SB, CL	IH 41 SB	1050	STAGE3
13+19NB, CL	-	23+69NB, CL	IH 41 NB	1050	STAGE 3
25+03NB, CL	-	37+57NB, CL	IH 41 NB	1255	STAGE 3
38+64NB, CL	-	43+14NB, CL	IH 41 NB	450	STAGE3
TOTAL				11460	

NOTE: NO MARKING REMOVAL ON STRUCTURES

TEMPORARY MARKING LINE REMOVABLE TAPE 4-INCH

649.0150					
STATION	TO	STATION	LOCATION	LF	REMARKS
19+18SB, 26'LT	-	49+13SB, 26'LT	IH 41 SB	2995	STAGE 2 - WHITE
13+19NB, 26'RT	-	43+14NB, 26'RT	IH 41 NB	2995	STAGE 2 - WHITE
20+18SB, 14'LT	-	59+93SB, 14'LT	IH 41 SB	3975	STAGE 2 - YELLOW
2+39NB, 14'RT	-	42+14NB, 14'RT	IH 41 NB	3975	STAGE 2 - YELLOW
51+78SB, 12'LT	-	60+58SB, 12'LT	IH 41 SB	220	STAGE 2/3- WHITE DASH
1+74NB, 12'RT	-	10+54NB, 12'RT	IH 41 NB	220	STAGE 2/3- WHITE DASH
19+18SB, 2'RT	-	49+13SB, 2'RT	IH 41 SB	2995	STAGE 3 - YELLOW
13+19NB, 2'LT	-	43+14NB, 2'LT	IH 41 NB	2995	STAGE 3 - YELLOW
20+18SB, 10'LT	-	59+93SB, 10'LT	IH 41 SB	3975	STAGE 3 - WHITE
2+39NB, 10'RT	-	42+14NB, 10'RT	IH 41 NB	3975	STAGE 3 - WHITE
TOTAL				28320	

MARKING LINE EPOXY 4-INCH

				EPOXY 4-INCH 646.1020	PERMANENT TAPE 4-INCH 646.1050	
STATION	TO	STATION	LOCATION	LF	LF	REMARKS
19+18SB, 26'LT	-	49+13SB, 26'LT	IH 41 SB	2995		STAGE 2 - WHITE
13+19NB, 26'RT	-	43+14NB, 26'RT	IH 41 NB	2995		STAGE 2 - WHITE
51+78SB, 12'LT		60+58SB, 12'LT	IH 41 SB	-	220	STAGE 3- WHITE DASH
1+74NB, 12'RT	-	10+54NB, 12'RT	IH 41 NB	-	220	STAGE 3- WHITE DASH
19+18SB, 2'RT	-	49+13SB, 2'RT	IH 41 SB	2995		STAGE 3 - YELLOW
13+19NB, 2'LT	-	43+14NB, 2'LT	IH 41 NB	2995		STAGE 3 - YELLOW
TOTAL				11980		

SAWING ASPHALT

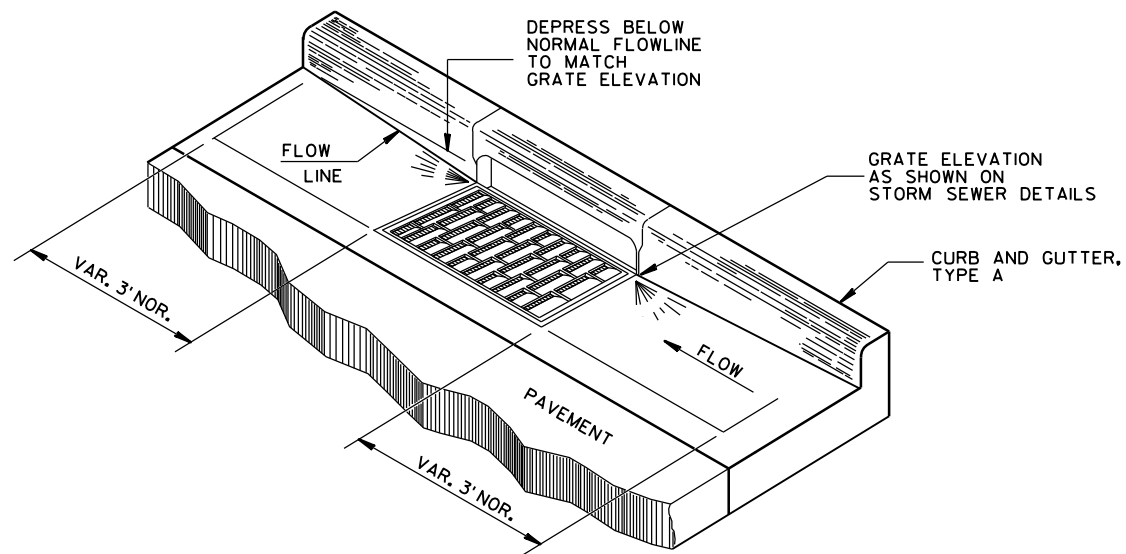
690.0150			
STATION	LOCATION	LF	REMARKS
12+50NB, 24'RT	IH 41 NB	10	STAGE 1
12+50NB, CL	IH 41 NB	6	STAGE 1
23+04NB, CL	IH 41 NB	6	STAGE 1
25+47NB, CL	IH 41 NB	6	STAGE 1
37+18NB, CL	IH 41 NB	6	STAGE 1
39+52NB, CL	IH 41 NB	6	STAGE 1
43+14NB, CL	IH 41 NB	6	STAGE 1
43+14NB, 24'RT	IH 41 NB	10	STAGE 1
19+18SB, 24'LT	IH 41 SB	10	STAGE 1
19+18SB, CL	IH 41 SB	6	STAGE 1
22+65SB, CL	IH 41 SB	6	STAGE 1
25+44 SB, CL	IH 41 SB	6	STAGE 1
37+01SB, CL	IH 41 SB	6	STAGE 1
39+19SB, CL	IH 41 SB	6	STAGE 1
49+83SB, CL	IH 41 SB	6	STAGE 1
49+83SB, 24'LT	IH 41 SB	10	STAGE 1
23+19NB, CL	IH 41 NB	6	STAGE 2
25+47NB, CL	IH 41 NB	6	STAGE 2
37+18NB, CL	IH 41 NB	6	STAGE 2
39+11NB, CL	IH 41 NB	6	STAGE 2
23+18SB, CL	IH 41 SB	6	STAGE 2
25+44SB, CL	IH 41 SB	6	STAGE 2
37+23SB, CL	IH 41 SB	6	STAGE 2
39+13SB, CL	IH 41 SB	6	STAGE 2
23+19NB, 24'RT	IH 41 NB	10	STAGE 3
25+73NB, 24'RT	IH 41 NB	10	STAGE 3
37+07NB, 24'RT	IH 41 NB	10	STAGE 3
39+14NB, 24'RT	IH 41 NB	10	STAGE 3
23+19SB, 24'LT	IH 41 SB	10	STAGE 3
25+52SB, 24'LT	IH 41 SB	10	STAGE 3
37+07SB, 24'LT	IH 41 SB	10	STAGE 3
39+30SB, 24'LT	IH 41 SB	10	STAGE 3
TOTAL		240	

STREET SWEEPING

SPV.0075.01		
LOCATION	LF	REMARKS
PROJECT LIMITS	10	STAGE 2
PROJECT LIMITS	10	STAGE 3
TOTAL	20	

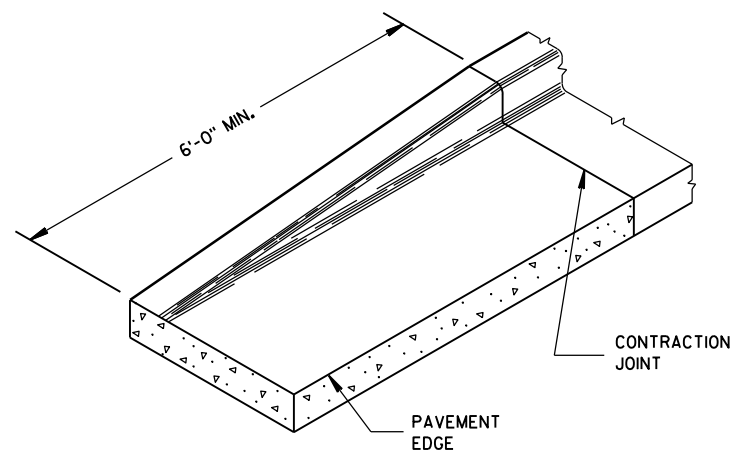
Standard Detail Drawing List

08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
12A03-10	NAME PLATE (STRUCTURES)
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
14B07-15A	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15B	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15C	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15D	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15E	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15F	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15G	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15H	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B07-15I	CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"
14B08-02A	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02B	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02C	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02D	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B08-02E	CRASH CUSHION/SAND BARREL ARRAY AND OTHER TEMPORARY BARRIER LAYOUT DETAILS
14B15-11A	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11B	STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS
14B15-11C	STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS
14B16-04A	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B16-04B	ANCHORAGE FOR STEEL PLATE BEAM GUARD TYPE 2
14B18-06A	STEEL PLATE BEAM GUARD, CLASS "A" (AT BRIDGES, OBSTACLES AND SIDEROADS/DRIVEWAYS)
14B18-06B	STEEL PLATE BEAM GUARD, CLASS "A" AT MEDIAN APPROACH TO BRIDGES
14B20-11A	STEEL THRIE BEAM STRUCTURE APPROACH
14B20-11B	STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS
14B20-11H	STEEL THRIE BEAM STRUCTURE APPROACH, SINGLE SLOPE ATTACHMENT
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D12-07A	TRAFFIC CONTROL, LANE CLOSURE
15D12-07B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D30-05A	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D30-05B	TRAFFIC CONTROL, TEMPORARY ADA COMPLIANT PEDESTRIAN ACCOMMODATION
15D30-05C	TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

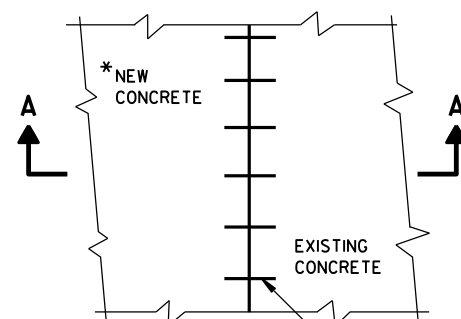


DETAIL OF CURB AND GUTTER AT INLETS

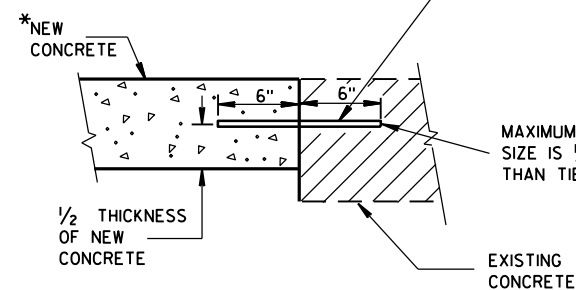
(TYPE H INLET COVER SHOWN)



END SECTION CURB & GUTTER



PLAN VIEW



**SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT**

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

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

MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

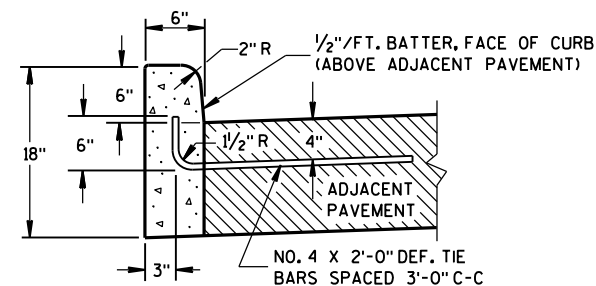
GENERAL NOTES

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

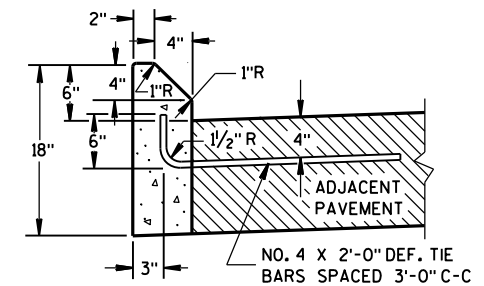
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

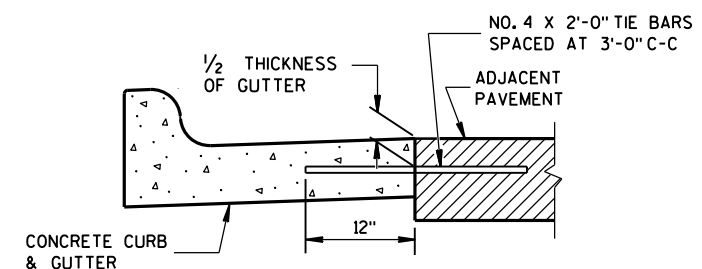


TYPES A^① & D

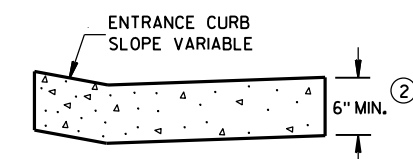


TYPES G^① & J

CONCRETE CURB



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2017

DATE

FHWA

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

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 $\frac{1}{2}$ 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 SYMMETRICAL 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"

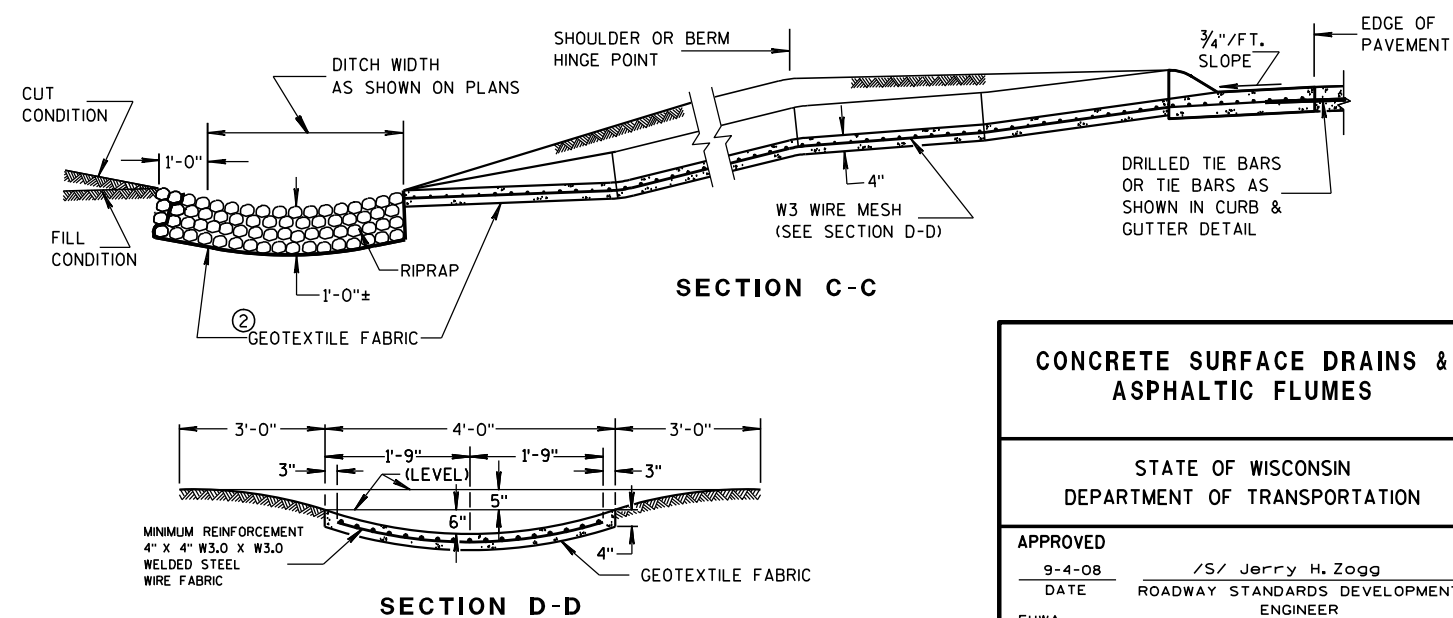
OR AS REQUIRED

1'-0" ON CUT SLOPE

DITCH

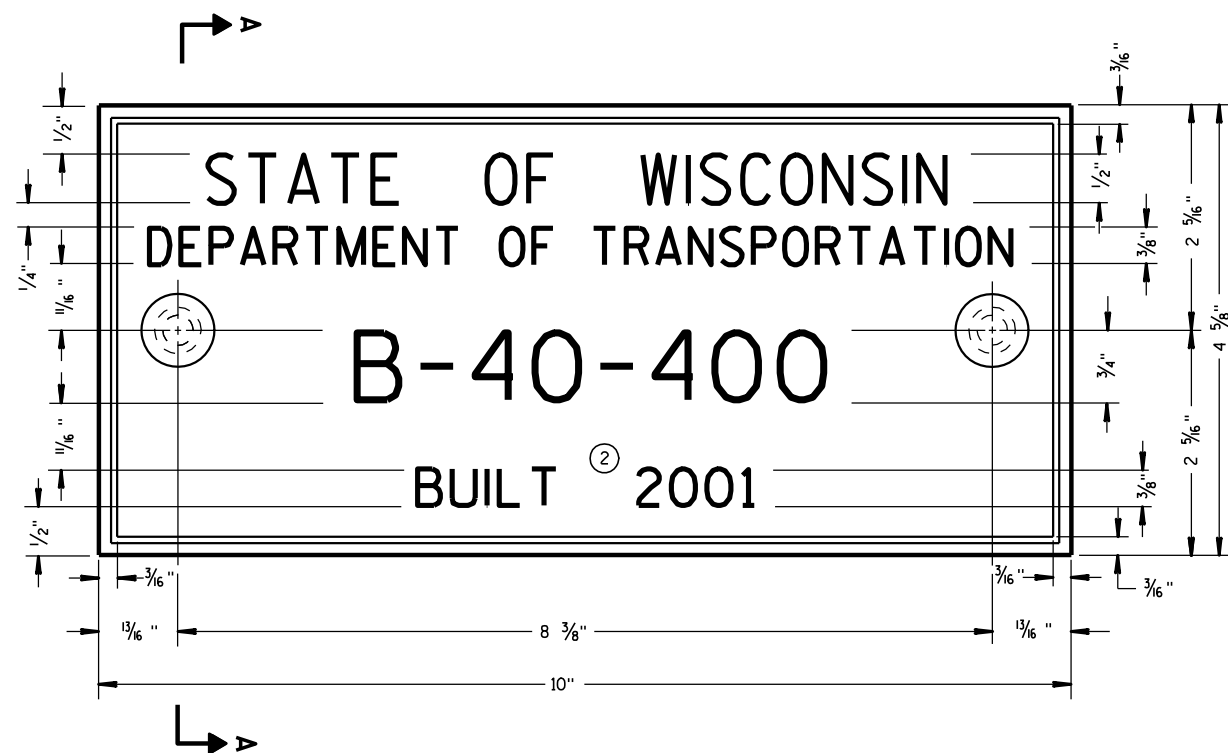
PLAN VIEW

PLAN VIEW

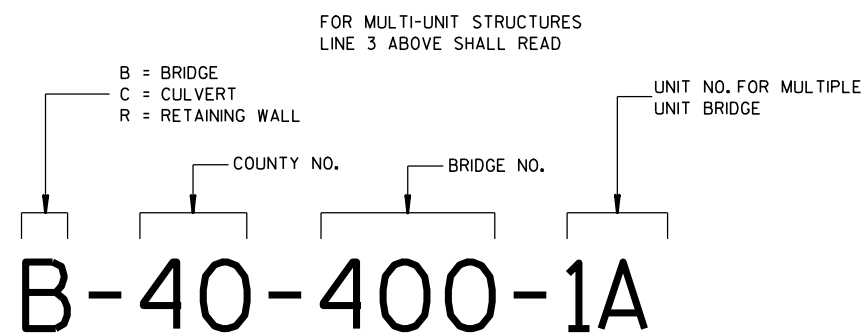


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)



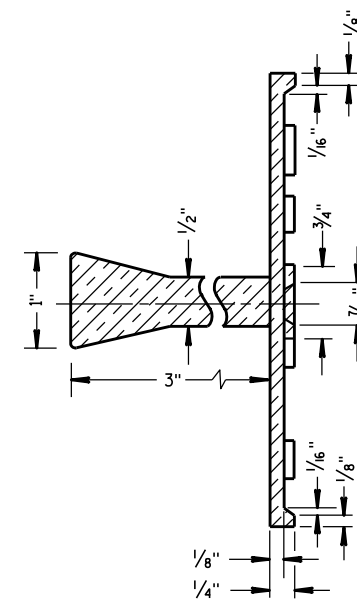
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

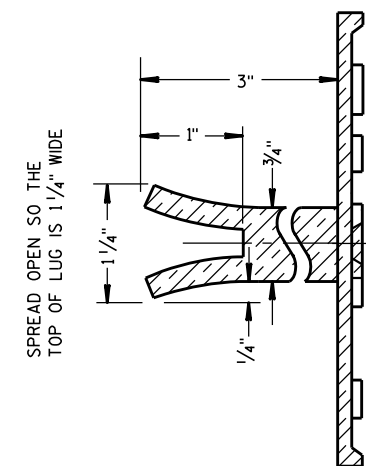
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.

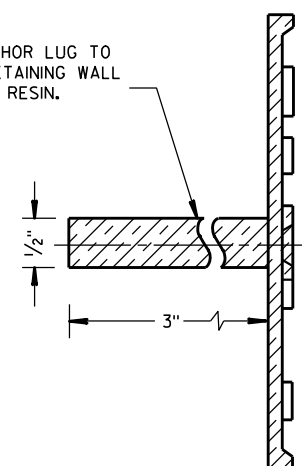


SECTION A-A



ALTERNATE LUG

- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

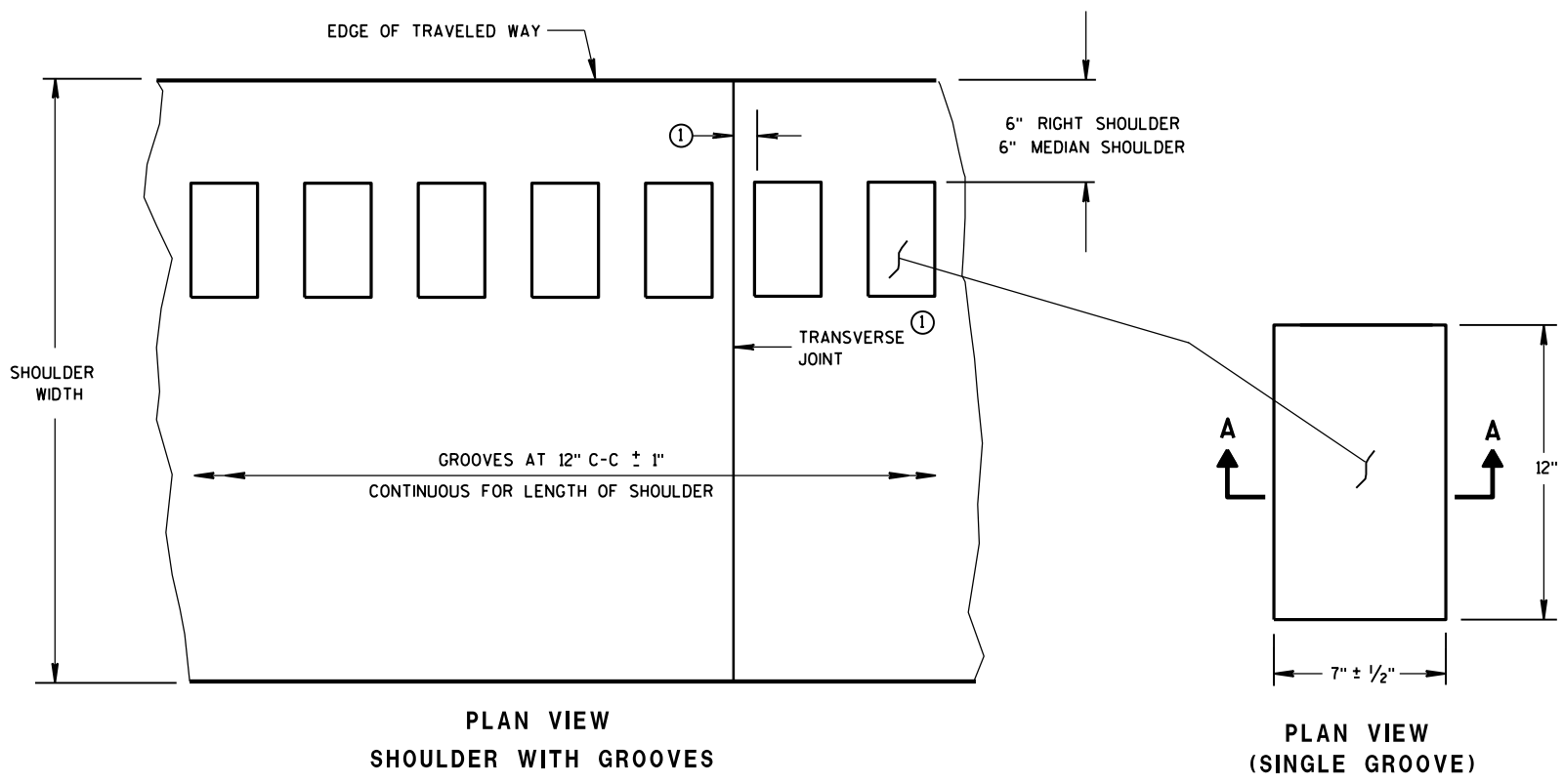
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10
DATE

FHWA

/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

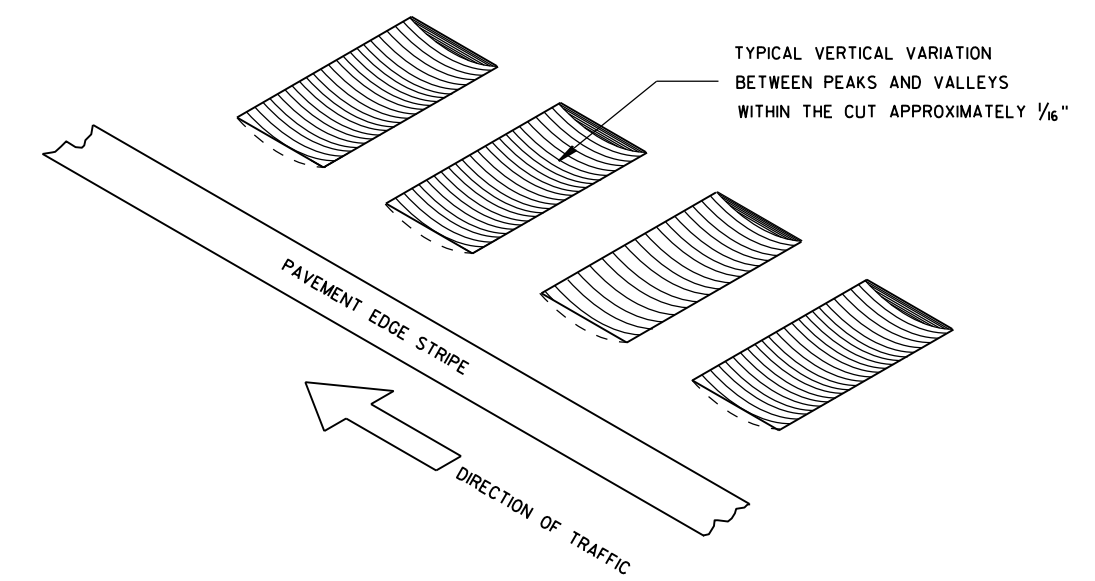
GENERAL NOTES

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

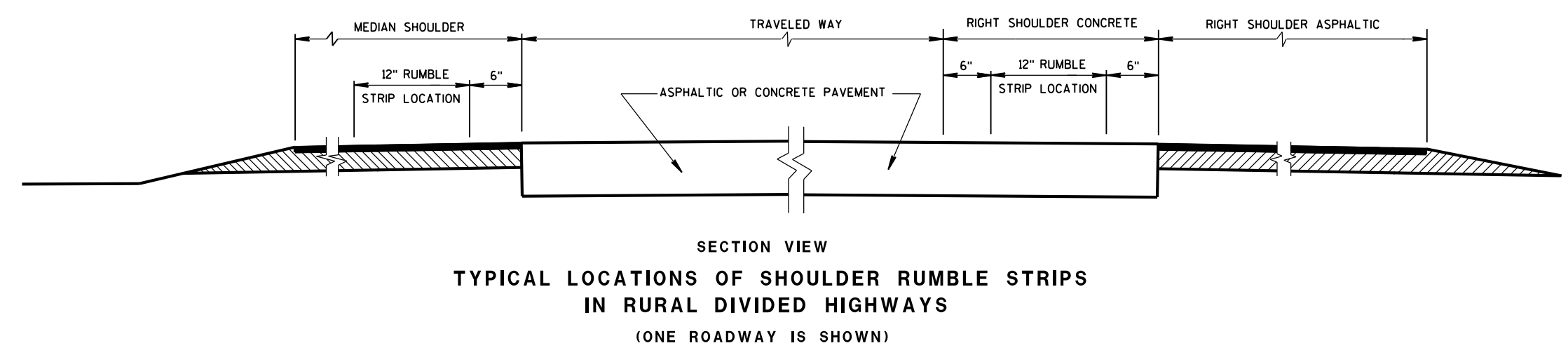
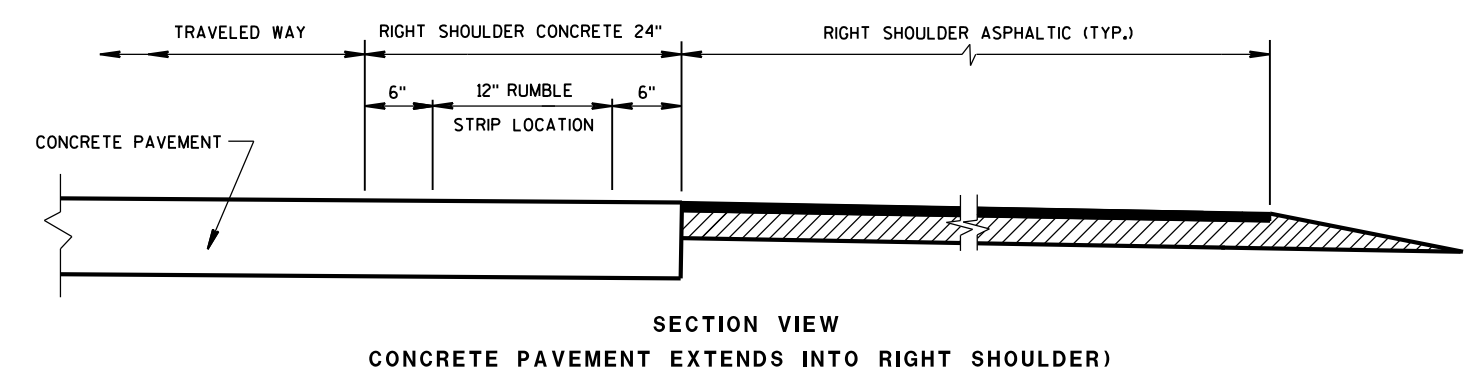
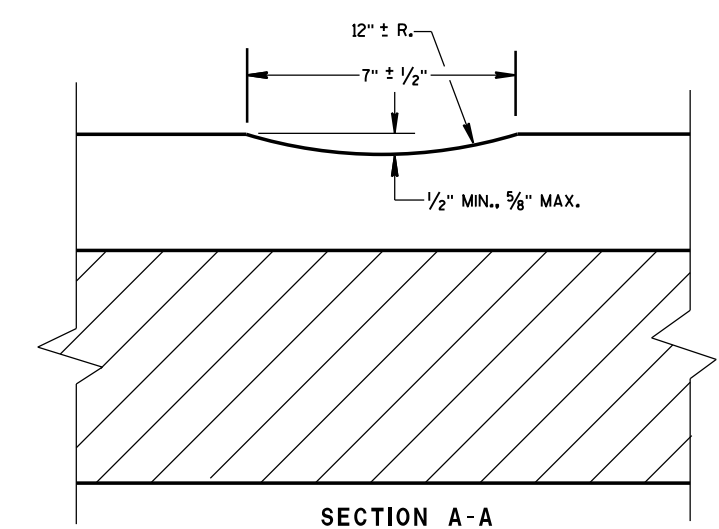
RUMBLE STRIPS ON EXPRESSWAYS

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.

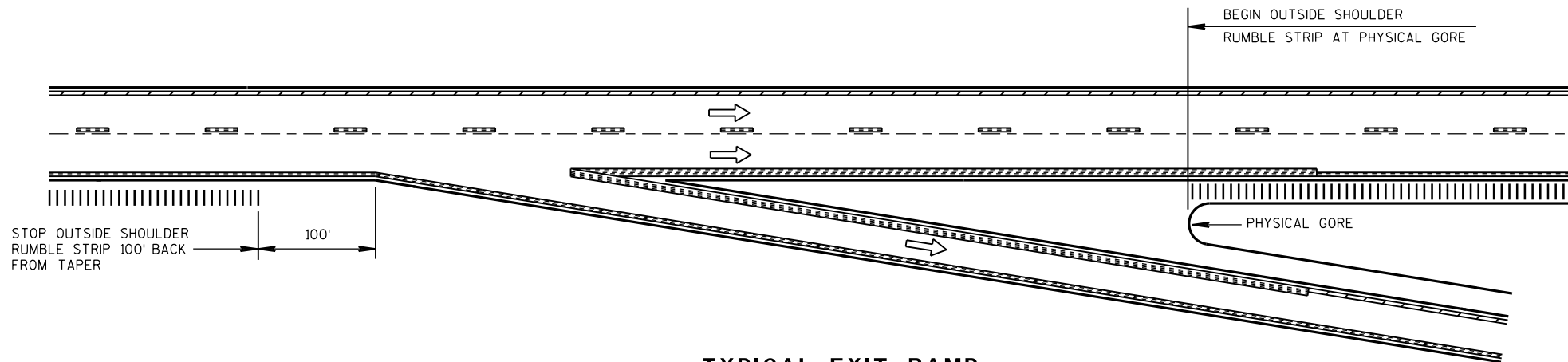
① CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



ISOMETRIC



SHOULDER RUMBLE STRIP, MILLING
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



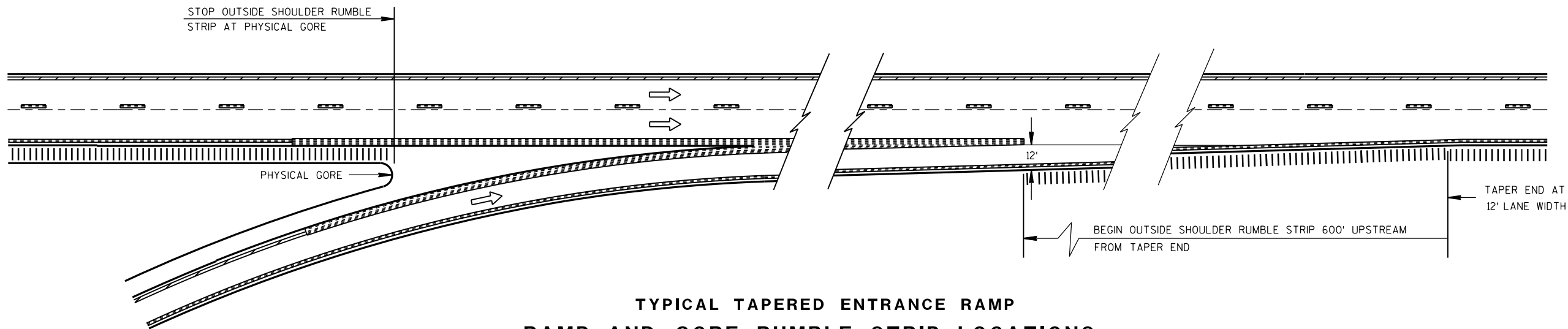
TYPICAL EXIT RAMP

NOTES:

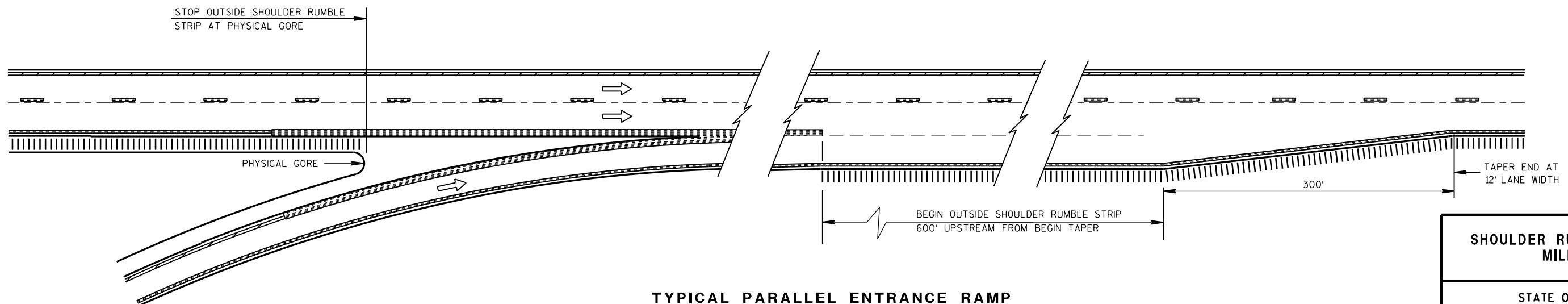
NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL



**TYPICAL TAPERED ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONS**



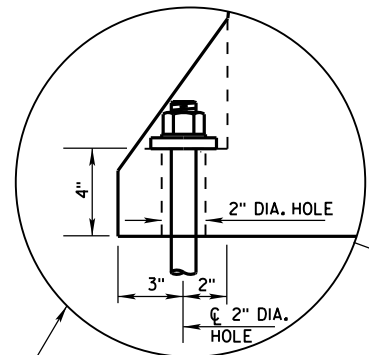
**TYPICAL PARALLEL ENTRANCE RAMP
RAMP AND GORE RUMBLE STRIP LOCATIONS**

**SHOULDER RUMBLE STRIP,
MILLING**

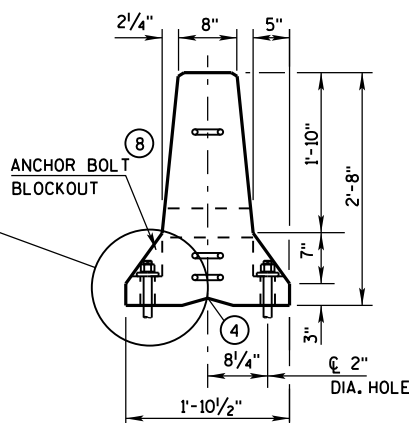
**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

APPROVED
12/17/2012
DATE
FHWA

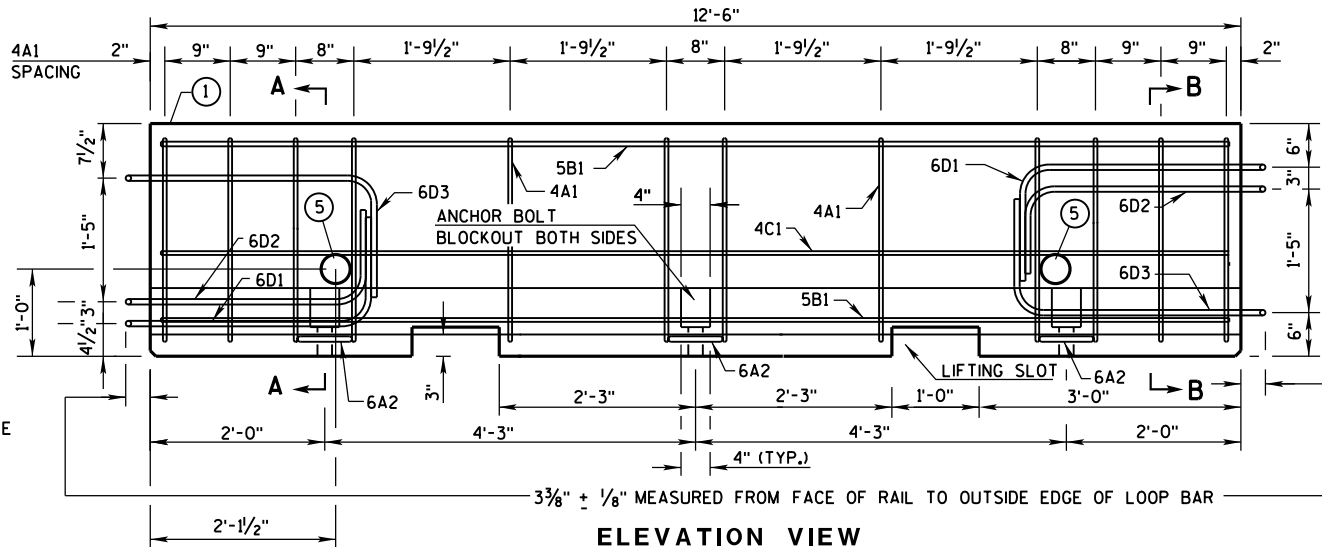
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



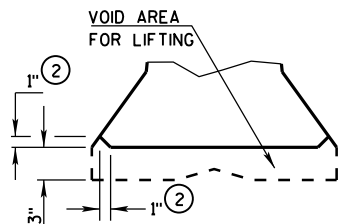
ANCHOR ON TRAFFIC SIDE
ONLY WHEN REQUIRED
(SEE SHEET D FOR ADDITIONAL
ANCHOR DETAIL)



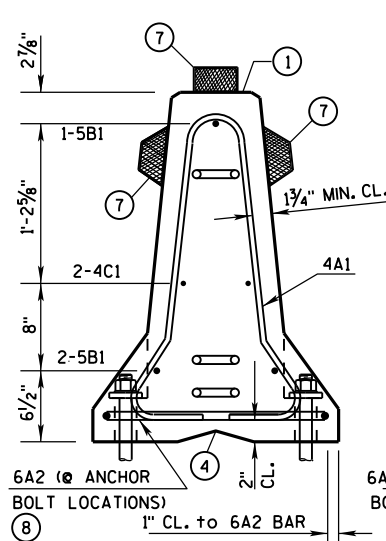
END VIEW



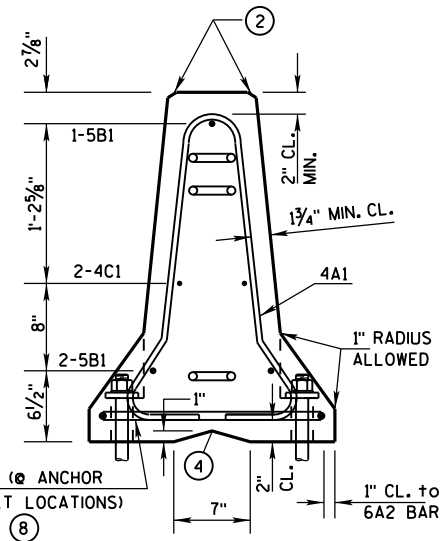
ELEVATION VIEW



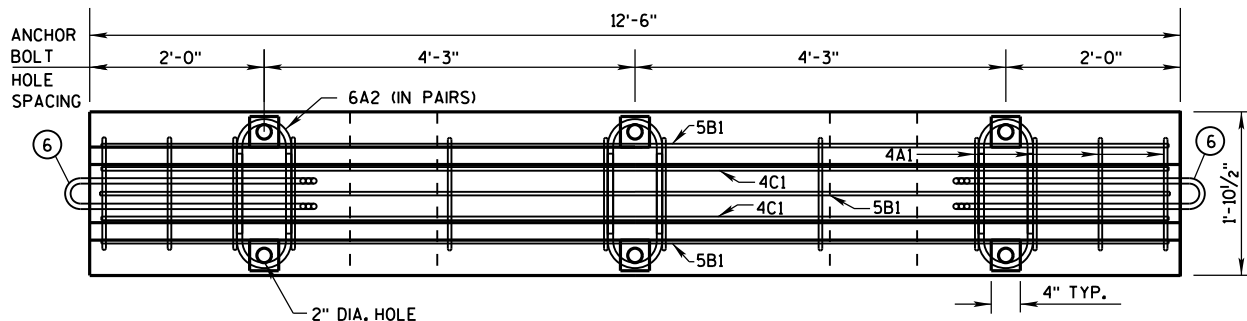
DETAIL "B"
LIFTING SLOT DETAIL



SECTION A-A
(STIRRUP PLACEMENT)

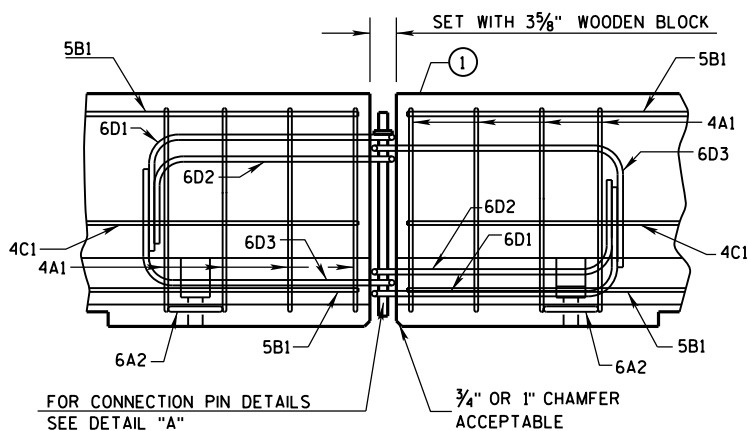


SECTION B-B
(STIRRUP PLACEMENT)

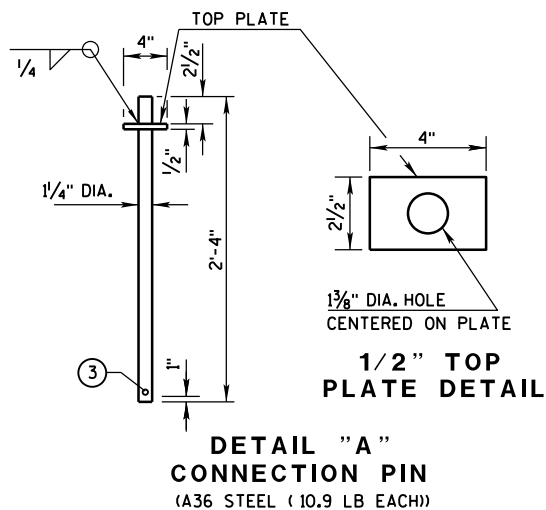


PLAN VIEW

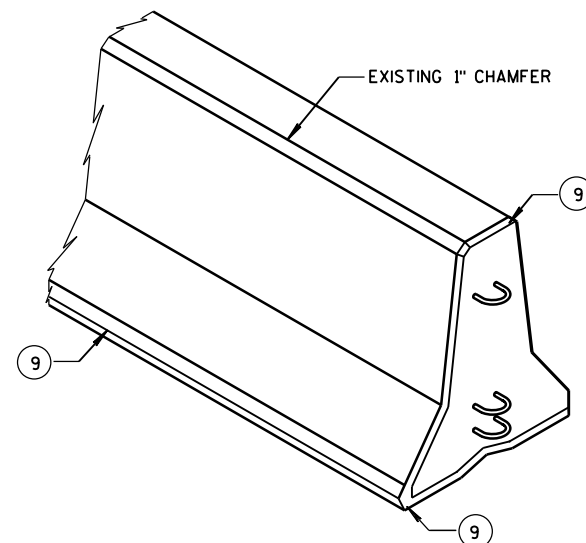
DETAILS OF BARRIER SECTION



DETAILS OF BARRIER CONNECTION



DETAIL "A"
CONNECTION PIN
(A36 STEEL (10.9 LB EACH))



GENERAL NOTES

THESE GENERAL NOTES APPLY TO SHEETS 14B7-15(a) THRU 14B7-15(i).

DO NOT INTERMIX CONCRETE BARRIER TEMPORARY PRECAST, 12'-6" (CBTP12.5) WITH OTHER TEMPORARY CONCRETE BARRIERS.

USE ASTM A-615, GRADE 60, DEFORMED STEEL BARS FOR BARS 4A1, 6A2, 5B1 AND 4C1 IN THE BARRIER SECTION AND FOR 4V1, 4V2, 4V3, 4V4, 4V5, 4V6, 4F1, 4F2 AND 5F3 IN THE BARRIER TAPER SECTION.

LOOP BARS 6D1, 6D2 AND 6D3 SHALL BE 3/4" SMOOTH STEEL BARS WITH A MINIMUM YIELD STRENGTH OF 60 KSI, A TENSILE STRENGTH OF NOT LESS THAN 1.25 TIMES THE YIELD STRENGTH BUT A MINIMUM OF 80 KSI, A MINIMUM 14% ELONGATION IN 8 INCHES AND PASSING A 180 DEGREE BEND TEST USING A 3-1/2" PIN BEND DIAMETER FOR BEND TESTS. THE LOOPS SHALL BE INSTALLED WITHIN 1/8" OF THE PLAN DIMENSION.

CONSTRUCT LIFTING SLOTS AS SPECIFIED ON THE PLANS TO FACILITATE THE DRAINAGE OF WATER AFTER INSTALLATION.

PLACE BARRIER ON A PAVED SURFACE. REMOVE ALL LOOSE DIRT AND SAND FROM THE ROADWAY SURFACE PRIOR TO PLACEMENT OF THE BARRIER.

INSTALL MECHANICAL OR ADHESIVE ANCHORS PER MANUFACTURER'S RECOMMENDATIONS. PROVIDE MANUFACTURER'S INFORMATION TO PROJECT ENGINEER.

- MARK ONE END OF EACH BARRIER PERMANENTLY BY FORMING INTO THE BARRIER THE FOLLOWING INFORMATION:
a. TYPE: WICBTP
b. MANUFACTURER
c. DATE MANUFACTURED (MONTH AND YEAR)
- 1" CHAMFER TO PREVENT SPALLING.
- A 3/8" HOLE IN THE CONNECTION PIN, AT THE LOCATION SHOWN, IS ACCEPTABLE, BUT NOT REQUIRED..
- "V" NOTCH IS OPTIONAL.
- THE 4" DIAMETER, 11 GAUGE STEEL, ROUND MECHANICAL TUBING SLEEVE FOR LIFTING (OPTIONAL).
- NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.
- USE DELINEATORS CONFORMING TO SECTION 633 OF THE STANDARD SPECIFICATIONS. CONTRACTOR MAY USE ALTERNATE SHAPES AND HOUSING. INSTALL DELINEATORS ACCORDING TO MANUFACTURES INSTRUCTION. INSTALL YELLOW REFLECTORS WHEN BARRIER IS LOCATED TO THE LEFT OF TRAFFIC AND WHITE REFLECTORS WHEN BARRIER IS LOCATED TO THE RIGHT OF TRAFFIC. SPACE DELINEATORS A MAXIMUM OF 25 FEET APART. PROVIDE TOP MOUNTED DELINEATORS IN ADDITION TO THE SIDE MOUNTED DELINEATORS ON ALL BARRIER INSTALLATIONS LOCATED ON A CURVED ALIGNMENT LONGER THAN 200 FEET AND ON BARRIERS USED TO SEPARATE OPPOSING TRAFFIC.
- SEE SHEET D FOR HOW TO ANCHOR BARRIER. SEE SHEET E FOR WHEN TO ANCHOR BARRIER.
- 1" CHAMFER OPTIONAL.

f'c = 4,000 psi

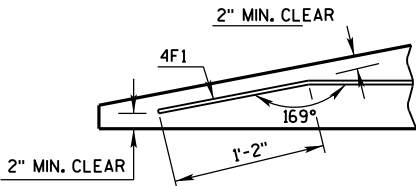
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

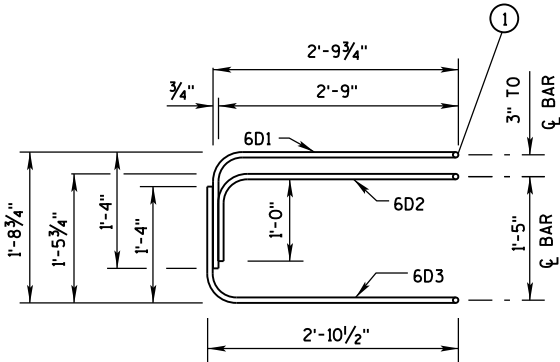
BARRIER TAPER SECTION
BILL OF MATERIALS

(PER 12'-6" BARRIER TAPER SECTION)

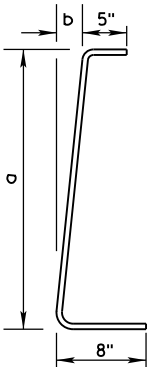
BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4V1	4	2	1'-11"
4V2	4	2	2'-2"
4V3	4	2	2'-6"
4V4	4	2	2'-9"
4V5	4	2	3'-2"
4V6	4	2	3'-4"
4F1	4	2	12'-0"
4F2	4	2	7'-6"
5F3	5	1	11'-9"
LOOP ASSEMBLY			
6D1	6	1	8'-5"
6D2	6	1	7'-7"
6D3	6	1	8'-6"



DETAIL "C"
BENT BAR DETAIL



ELEVATION
LOOP BAR ASSEMBLY



BAR	a	b
V1	10"	1"
V2	1'-1"	1 1/4"
V3	1'-5"	1 5/8"
V4	1'-8"	1 7/8"
V5	2'-0 1/2"	2 3/8"
V6	2'-3"	2 3/4"

4V BARS
2 AT EACH SIZE REQUIRED
FOR STIRRUP ASSEMBLY

TAPER BARRIER SECTION

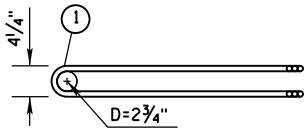
GENERAL NOTES

① NEVER USE LOOP BARS (6D1, 6D2 OR 6D3) TO LIFT, MOVE OR REPOSITION THE BARRIER.

BARRIER SECTION
BILL OF MATERIALS

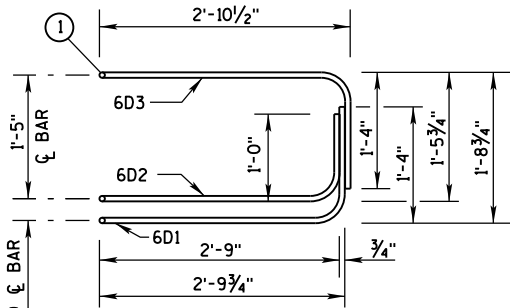
(PER 12'-6" BARRIER SECTION)

BAR	BAR SIZE	NO. OF BARS	LENGTH FT.
4A1	4	12	6'-0"
6A2	6	6	2'-11"
5B1	5	3	12'-2"
4C1	4	2	12'-2"
LOOP ASSEMBLY			
6D1	6	2	8'-5"
6D2	6	2	7'-7"
6D3	6	2	8'-6"

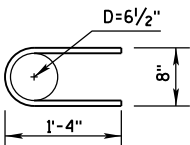


PLAN VIEW
LOOP BAR ASSEMBLY

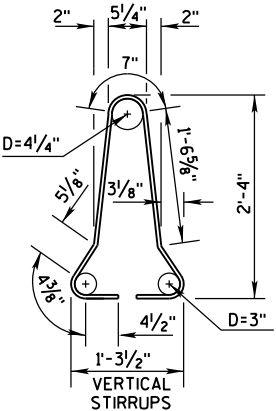
(MARKED END SHOWN, INVERT FOR OTHER END)



ELEVATION VIEW



6A2

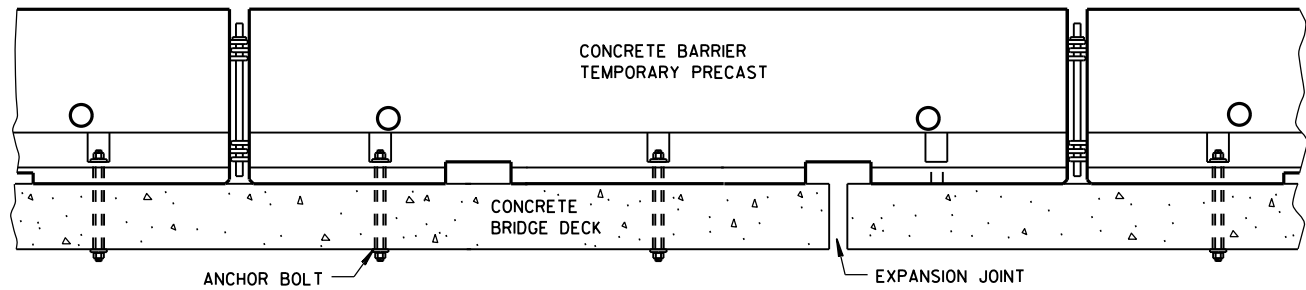
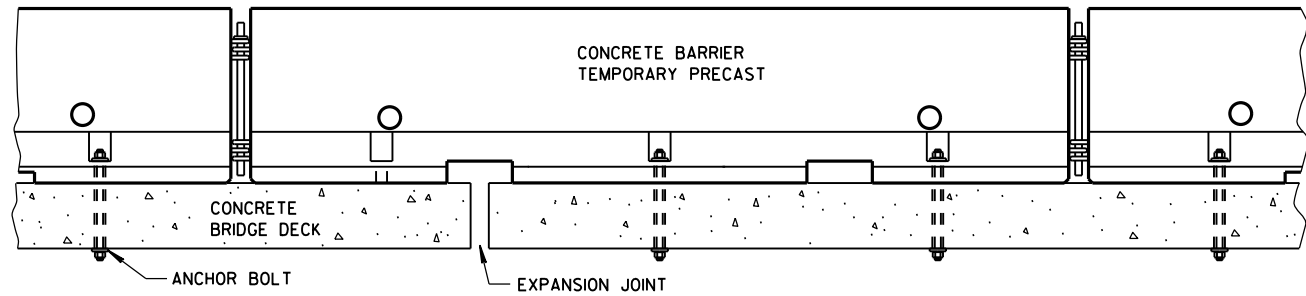


4A1

BARRIER SECTION

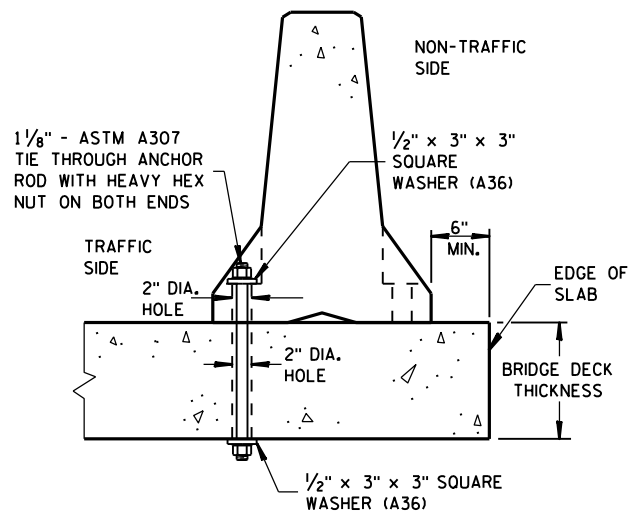
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



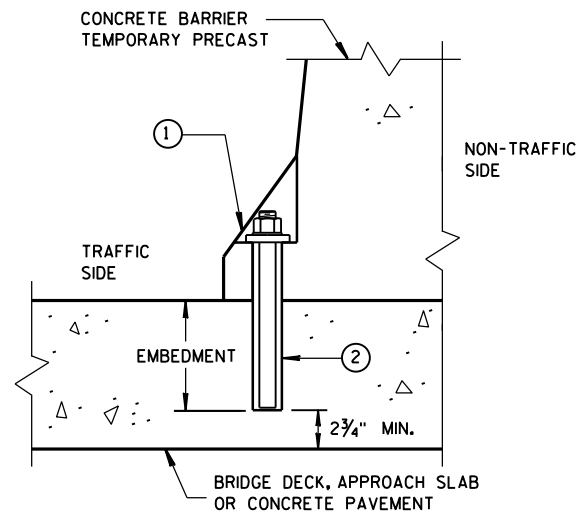
TREATMENT AT BRIDGE DECK EXPANSION JOINTS

(NO SINGLE CONCRETE BARRIER SECTION SHALL BE ANCHORED TO BOTH THE BRIDGE DECK AND THE APPROACH SLAB. ALL ANCHOR BOLT LOCATIONS SHALL BE ANCHORED TO THE DECK IN ACCORDANCE WITH THE DETAIL. NO MORE THAN ONE ANCHOR BOLT SHALL BE ELIMINATED FROM A BARRIER SECTION WHEN SPANNING AN EXPANSION JOINT.)



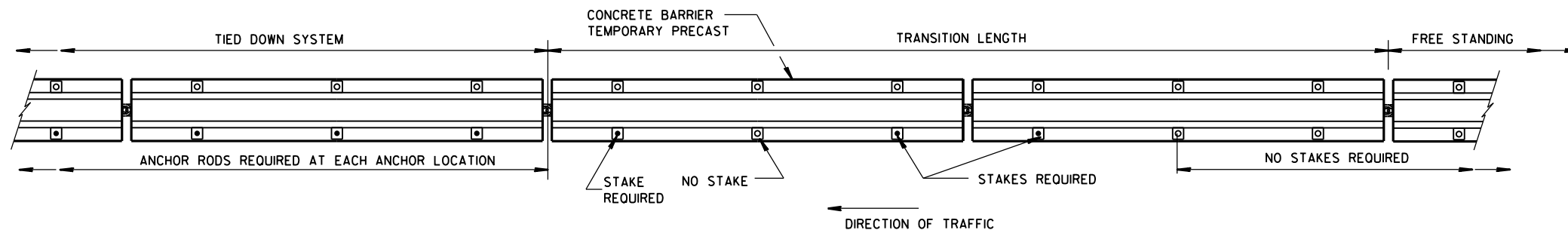
THROUGH BOLTED ANCHOR INSTALLATION ON BRIDGE DECK

(DO NOT USE ON CONCRETE BRIDGE DECK WITH ASPHALT OVERLAY)



REMOVABLE ADHESIVE ANCHOR INSTALLATION ON CONCRETE BRIDGE DECK, CONCRETE APPROACH SLAB, OR CONCRETE PAVEMENT

(DO NOT USE ON CONCRETE WITH AN ASPHALTIC OVERLAY)



PLAN VIEW

FREE STANDING TRANSITION TO TIED-DOWN SYSTEM

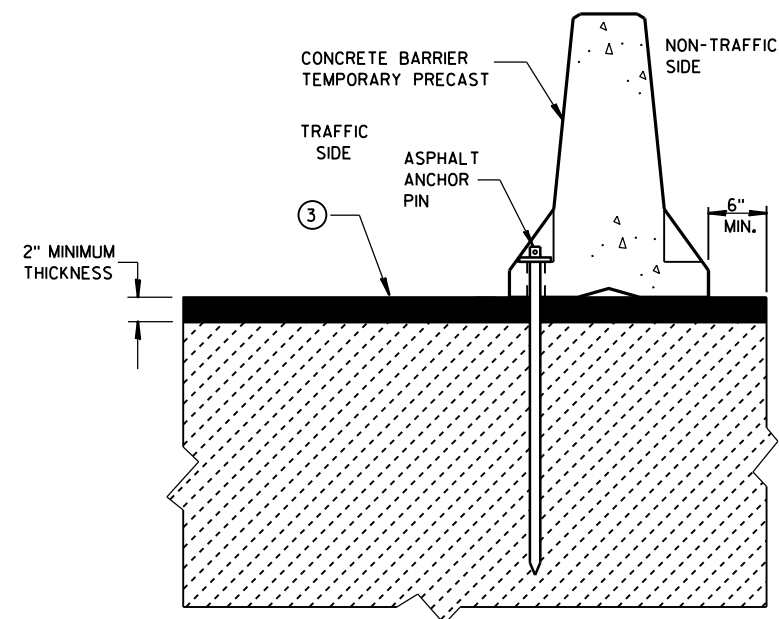
(PLACE TRANSITION IN A TANGENT SECTION OF BARRIER PARALLEL TO THE ROADWAY. IF TRANSITION OCCURS ON STRUCTURAL SLAB, ANCHOR AS SHOWN.)

GENERAL NOTES

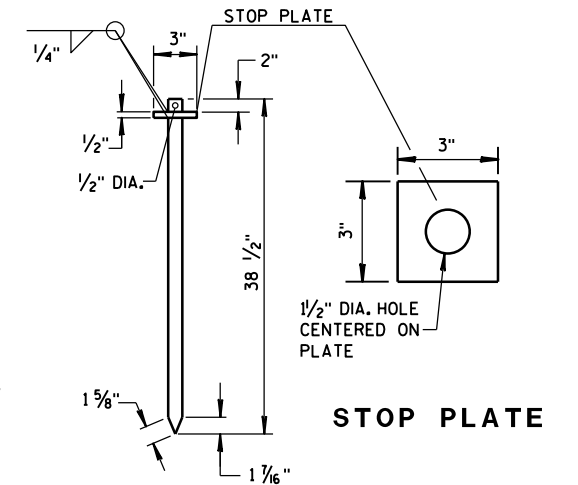
SEE SHEET E FOR WHEN TO ANCHOR. OTHER PARTS OF THE PLAN MAY SHOW ADDITIONAL LOCATIONS REQUIRING ANCHORING.

REMOVE ALL ANCHORS WHEN NO LONGER NEEDED. FILL CONCRETE PAVEMENTS, DECKS AND APPROACH SLABS WITH NON-SHRINK COMMERCIAL GROUT FROM THE APPROVED PRODUCT LIST. FILL ASPHALT PAVEMENTS WITH ASTM D6690 TYPE II RUBBERIZED CRACK FILLER.

- ① 1/8" DIAMETER A307 THREADED ROD, 1/2" X 3" X 3" SQUARE PLATE WASHER WITH ASTM A36 STEEL, ASTM A563A HEAVY HEX NUT.
- ② ADHESIVE ANCHORS WITH A MINIMUM BOND STRENGTH OF 1,800 PSI AND 5/4" EMBEDMENT. SEE 603.2 AND 603.3.12 OF THE WISCONSIN STANDARD SPECIFICATIONS FOR MORE INFORMATION ON ADHESIVE ANCHORS.
- ③ ASPHALT SURFACE SHOWN. CONTRACTOR MAY DRILL THROUGH CONCRETE PAVEMENT AND THEN DRIVE ASPHALT ANCHOR PIN.



STAKE DOWN INSTALLATION FOR ASPHALTIC SURFACE

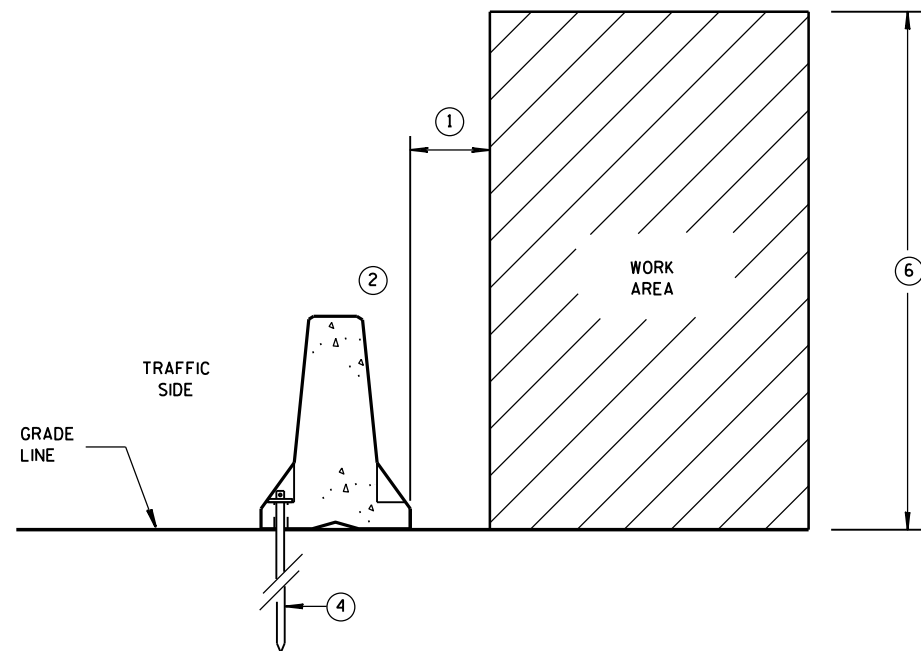


ASPHALT ANCHOR PIN

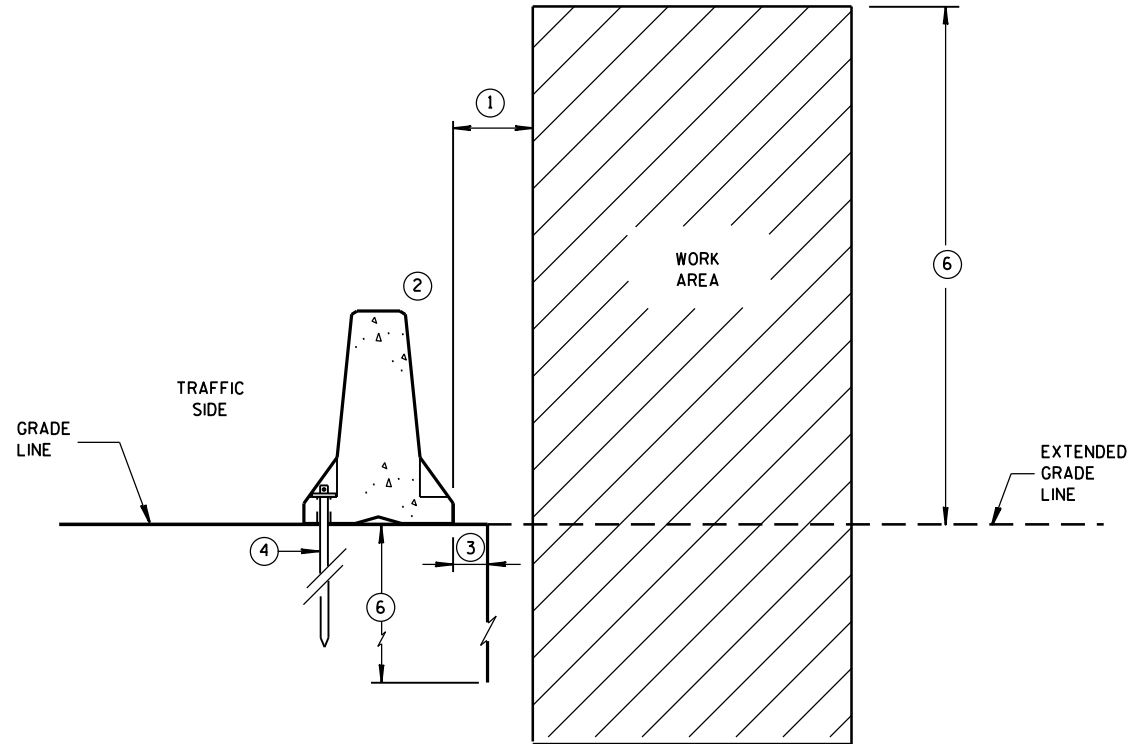
(ASTM A36 STEEL)

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**ANCHORED BARRIER SPACE REQUIREMENTS
FOR HAZARDS EXTENDED
ABOVE THE GRADE LINE**

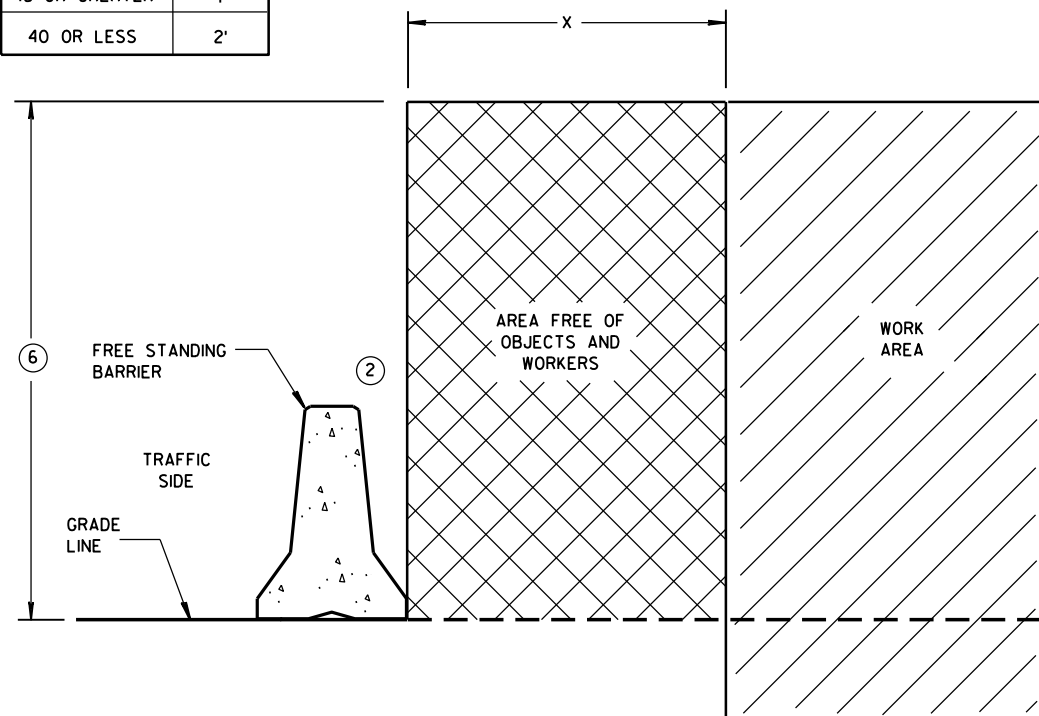


**ANCHORED BARRIER SPACE REQUIREMENTS
ON VERTICAL DROP OFFS**

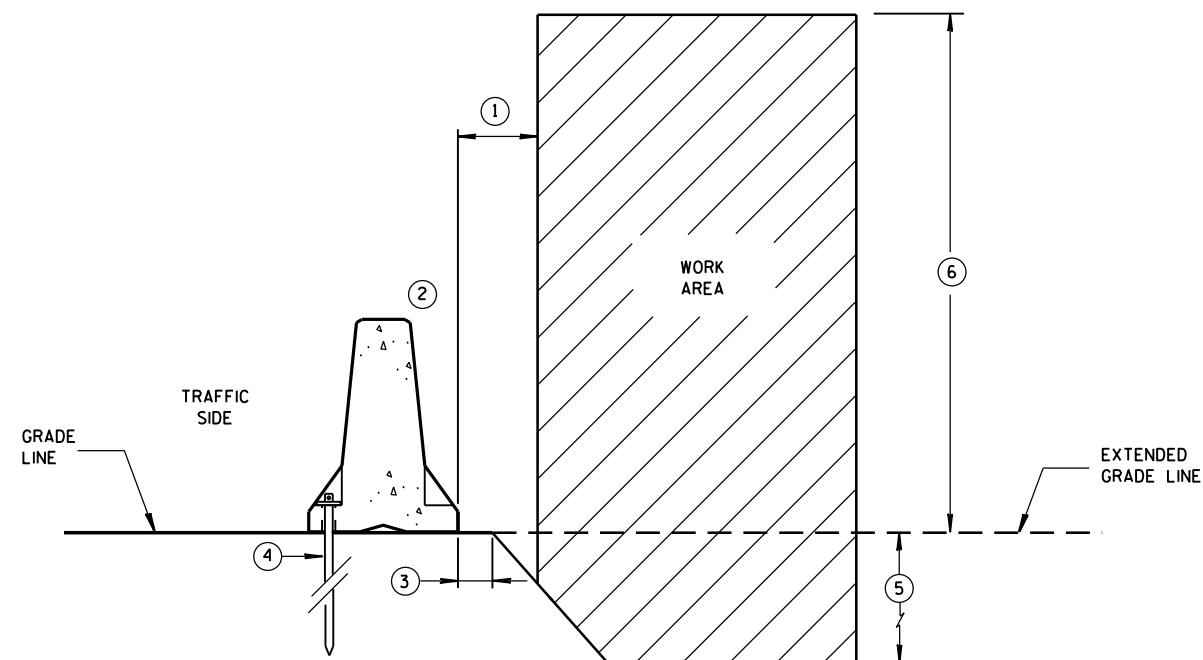
GENERAL NOTES

- ① WHEN OBJECTS EXTEND ABOVE THE GRADE, A MINIMUM OF 1 FOOT IS REQUIRED FROM BACK OF BARRIER TO OBJECT. SEE OTHER DETAILS FOR FOR THE MINIMUM OFFSET FROM BACK OF BARRIER TO SLOPES OR VERTICAL DROPS.
- ② OBJECTS ARE NOT TO BE PLACED ON, MOUNTED TO, OR LEANED AGAINST THE BARRIER WITHOUT PERMISSION OF THE PROJECT ENGINEER.
- ③ SEE OTHER DETAIL ON SHEET "D" FOR SPACE REQUIREMENTS.
- ④ SEE BOLT THROUGH DECK, REMOVABLE ADHESIVE ANCHOR, OR A STAKE DOWN FOR ASPHALTIC SURFACE TREATMENT DETAILS. ASPHALTIC ANCHOR SHOWN.
- ⑤ DEPTH OF 3 FEET OR MORE.
- ⑥ Y = 6'-6".

POSTED SPEED MPH	X
45 OR GREATER	4'
40 OR LESS	2'



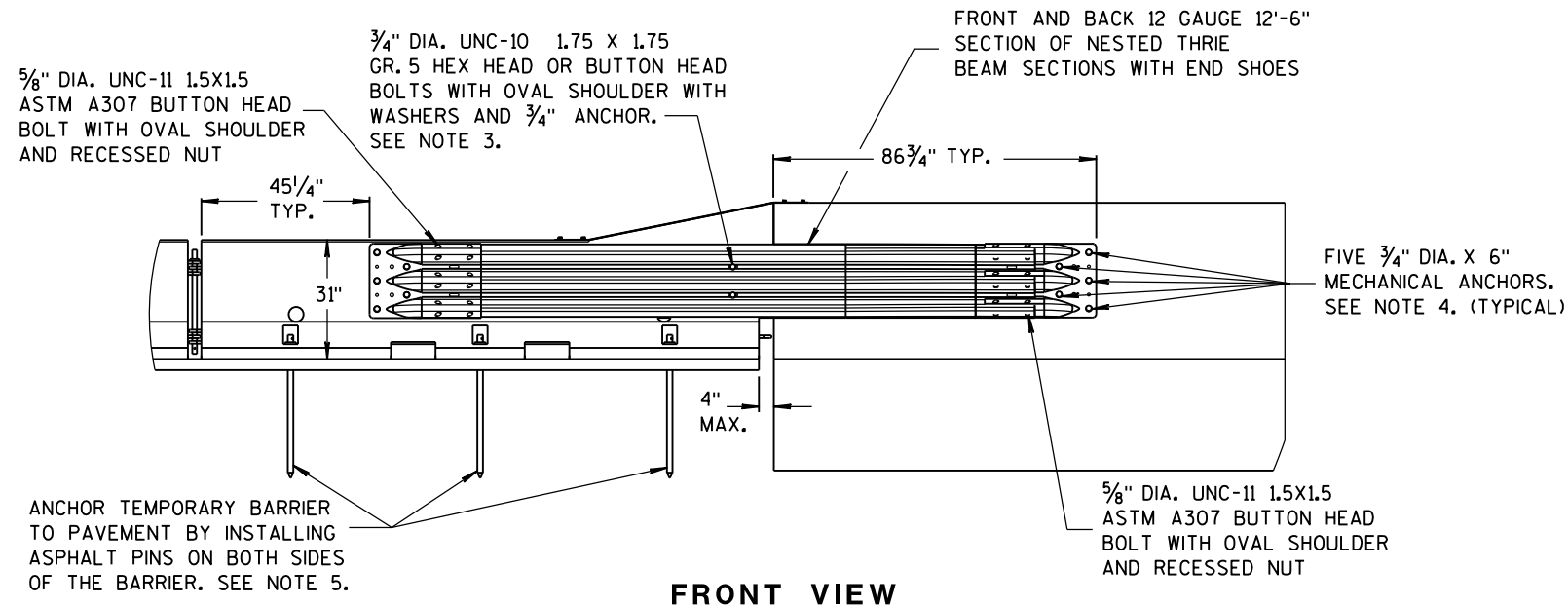
FREE STANDING BARRIER SPACE REQUIREMENTS



**ANCHORED BARRIER SPACE REQUIREMENTS
ON SLOPES**

**CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FRONT VIEW

NOTES

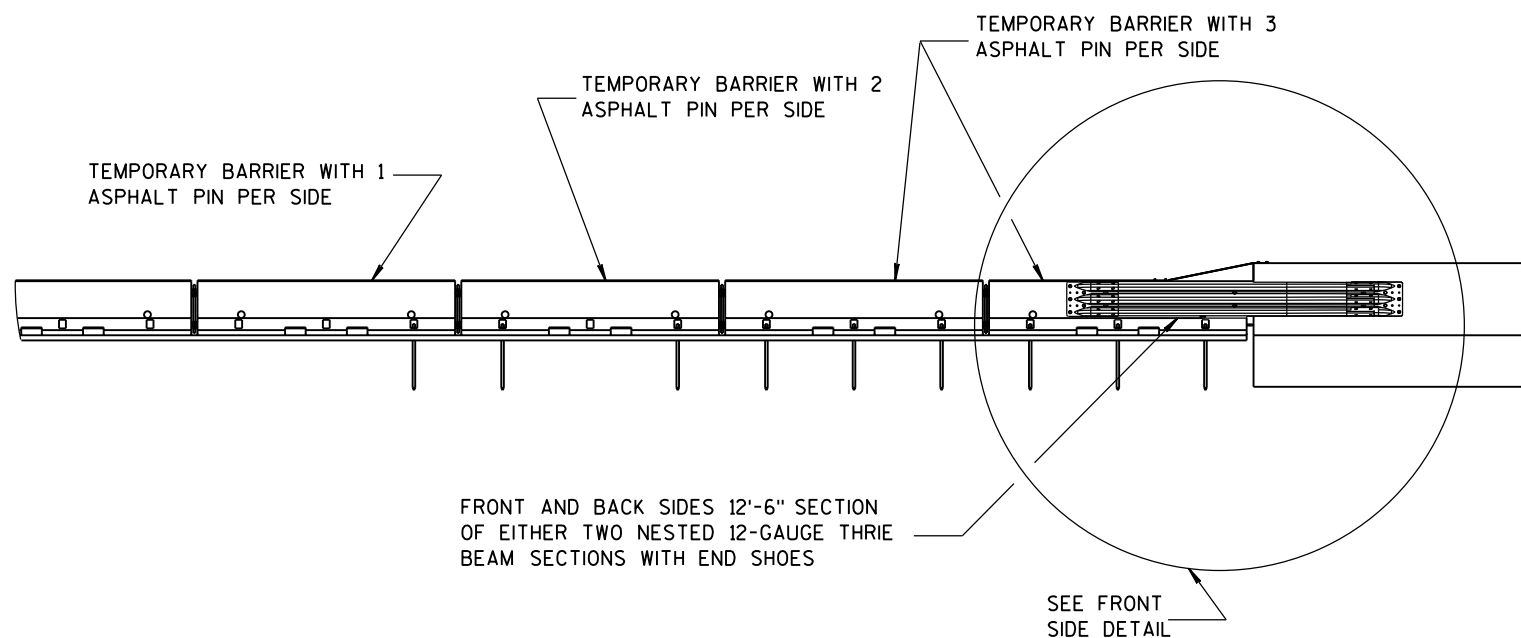
NESTED THRIE BEAM IS REQUIRED ON BOTH SIDES OF THE TEMPORARY BARRIER FOR ALL INSTALLATIONS REGARDLESS OF TRAFFIC.

1. CAP END PLATE PLACED FLUSH WITH UPSTREAM END OF PERMANENT BARRIER OR PARAPET.
2. THRIE BEAM PIECES ARE OFFSET 15 1/4" TO PREVENT INTERFERENCE FROM THE ANCHORS ON OPPOSING SIDES.
3. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 9.48 KIPS AND ULTIMATE SHEAR LOAD 10.48 KIPS.

4. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 17.9 KIPS AND ULTIMATE SHEAR LOAD 21.96 KIPS.

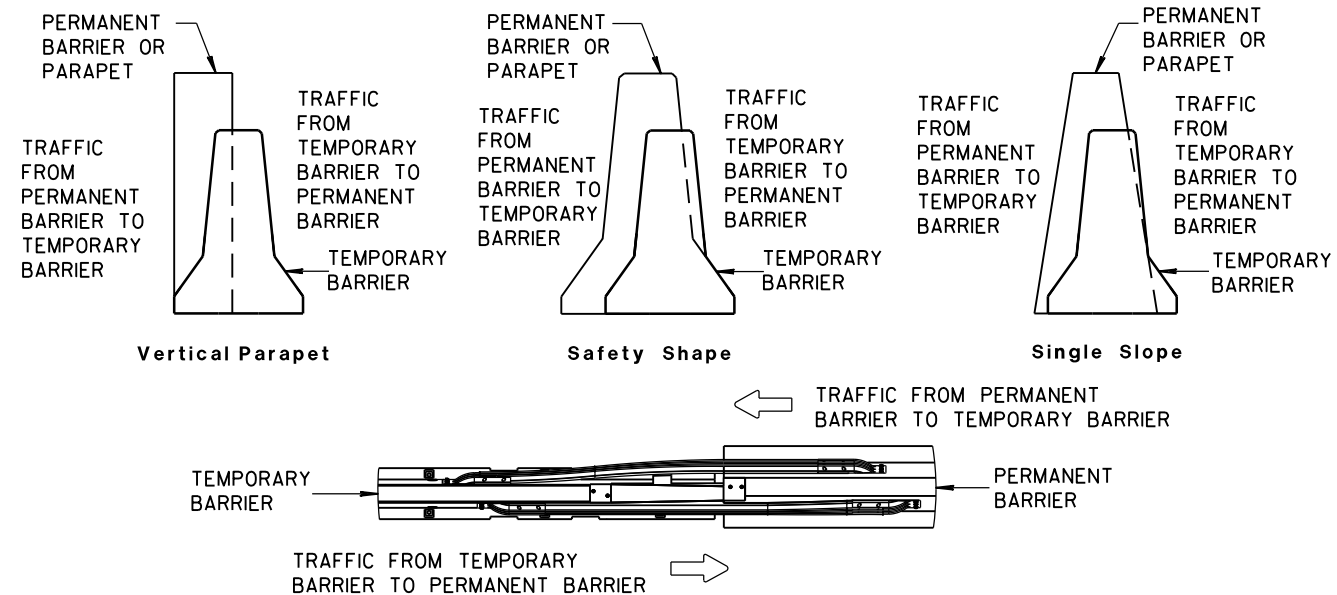
5. MAY BE USED ON CONCRETE OR ASPHALT PAVEMENTS. ASPHALT OPTION SHOWN. FOR CONCRETE OPTION SEE OTHER DETAILS.

6. MINIMUM MECHANICAL OR ADHESIVE ANCHOR STRENGTH REQUIREMENTS: ULTIMATE TENSILE LOAD 12.14 KIPS AND ULTIMATE SHEAR LOAD 17.5 KIPS.

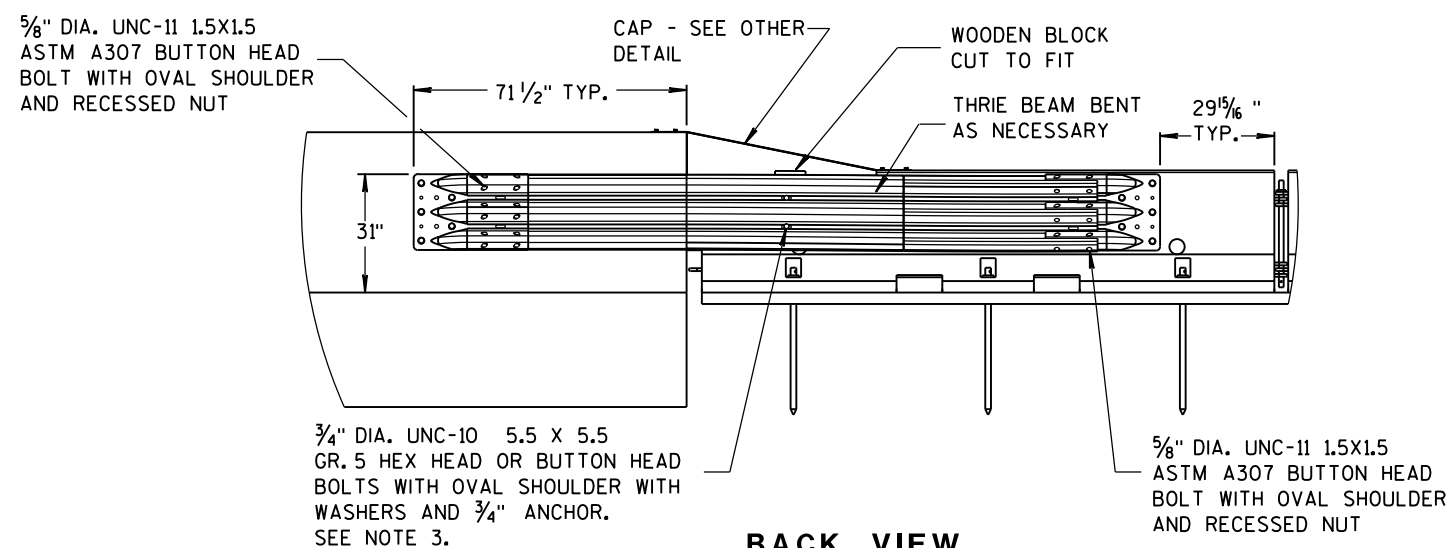


FRONT VIEW

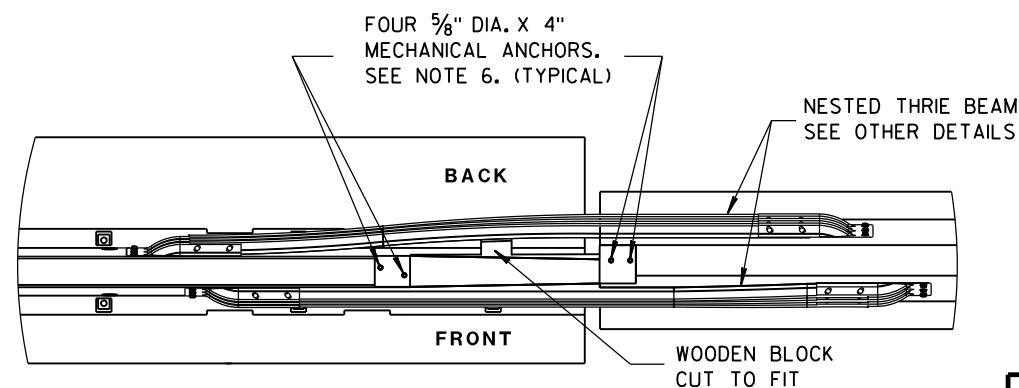
BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



TEMPORARY BARRIER PLACEMENT FOR BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM



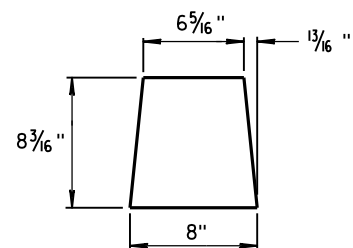
BACK VIEW



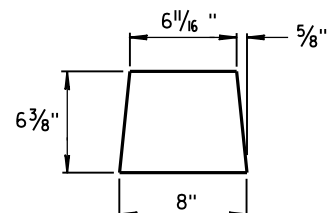
PLAN VIEW

CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

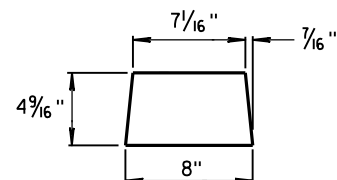
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



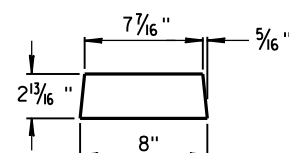
GUSSET 1



GUSSET 2

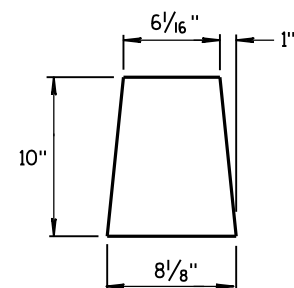


GUSSET 3

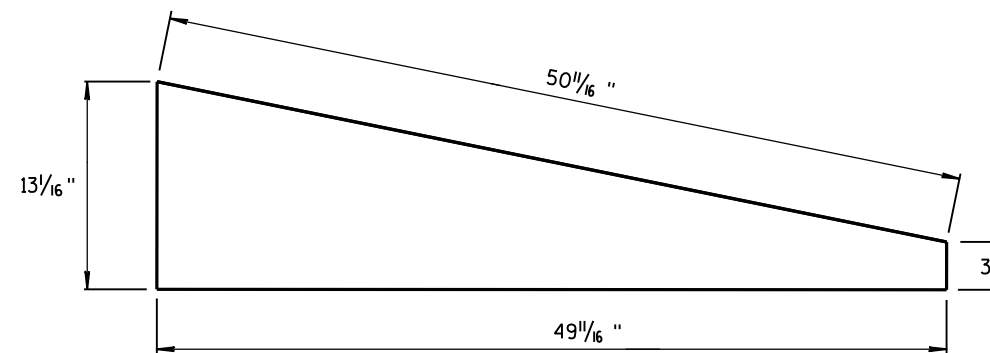


GUSSET 4

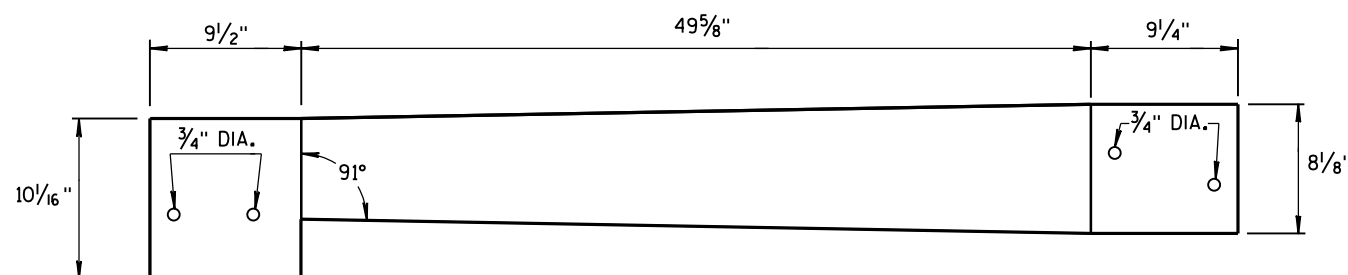
GUSSETS



END PLATE



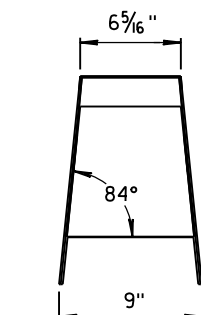
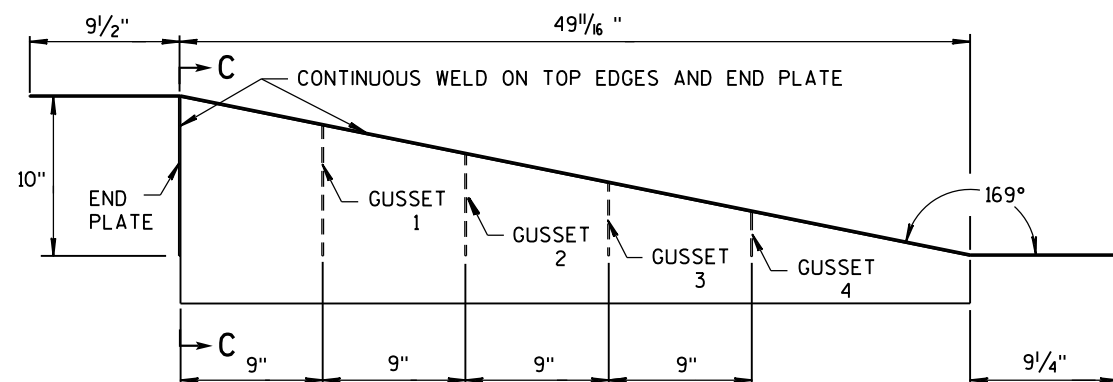
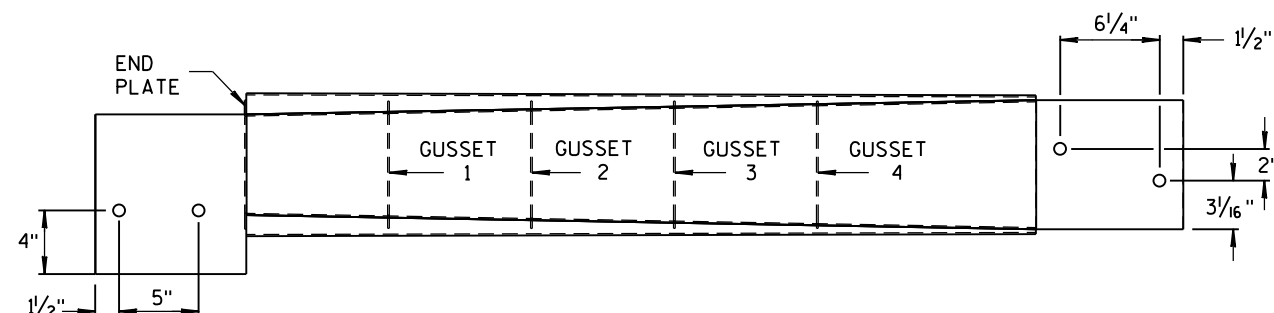
SIDE PLATE



TOP PLATE

**SIDE, TOP AND END PLATES FOR CAP
FROM TEMPORARY CONCRETE BARRIER
TO 42" PERMANENT CONCRETE BARRIER**

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 GALVANIZED STEEL.



SECTION C-C

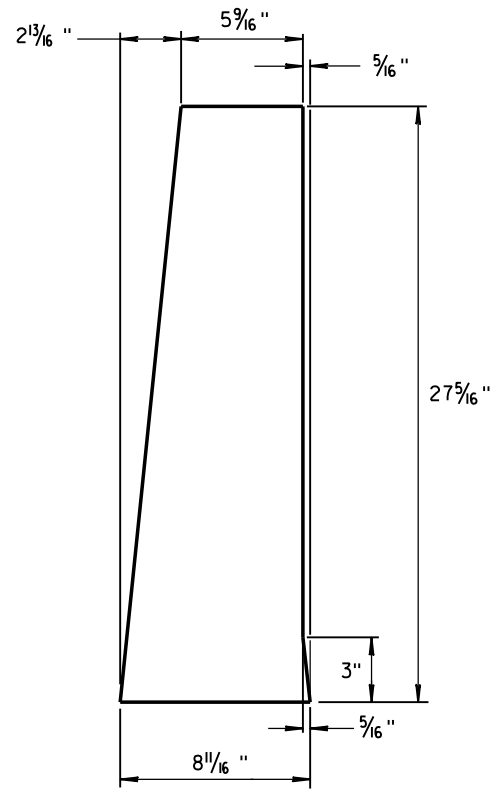
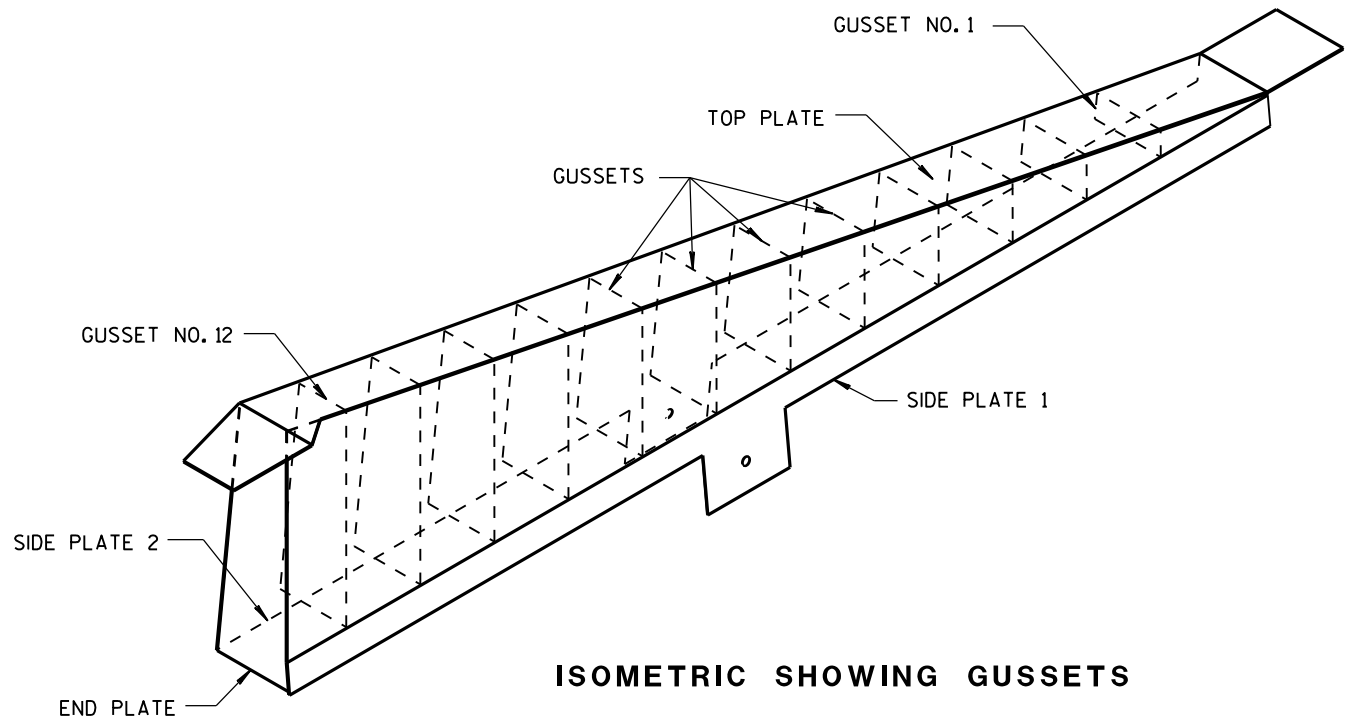
NOTES

1. FOUR GUSSETS AND END PLATE ARE STITCH WELDED ON THREE SIDES.
2. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE, AND GUSSETS.

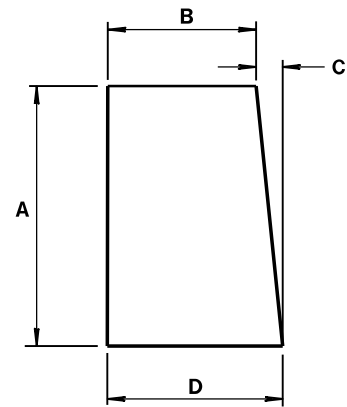
**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 42" PERMANENT CONCRETE BARRIER**

**CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



1/8" STEEL PLATE

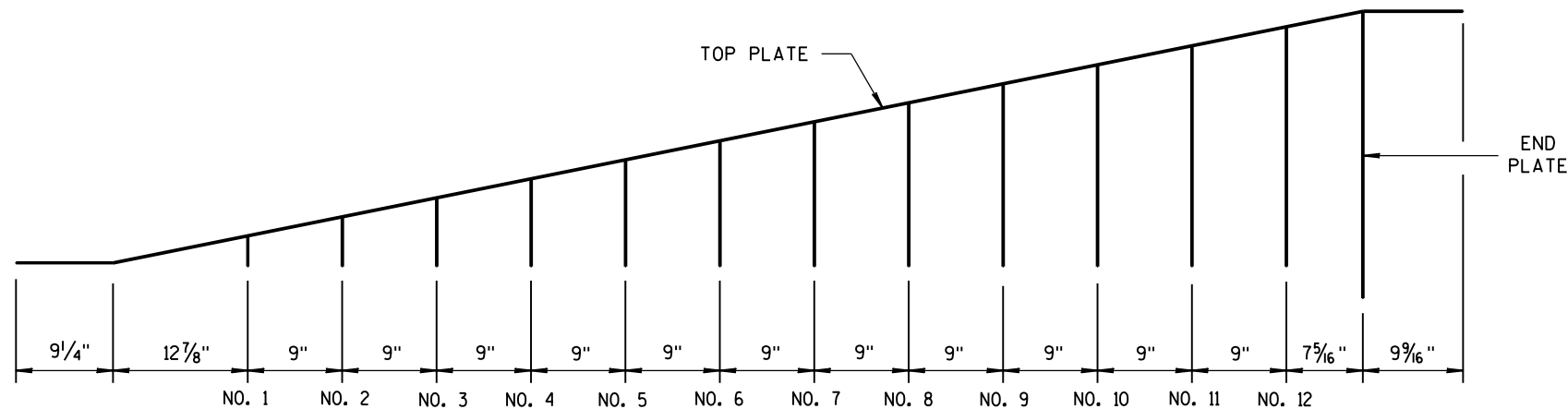


ALL GUSSETS 1/8" STEEL PLATE

GUSSET DIMENSIONS				
GUSSET NO.	A	B	C	D
1	2 7/8"	7 3/4"	1/4"	8
2	4 1/16 "	7 9/16 "	1/2"	8
3	6 1/2"	7 3/8"	1 1/16 "	8 1/16 "
4	8 5/16"	7 3/16"	7/8"	8 1/16"
5	10 1/8"	7"	1 1/16"	8 1/16"
6	11 5/16 "	6 13/16 "	1 1/4"	8 1/16"
7	13 3/4"	6 5/8"	1 7/16"	8 1/16"
8	15 9/16"	6 7/16"	1 9/16"	8 1/16"
9	17 3/8"	6 1/4"	1 13/16 "	8 1/16"
10	19 3/16"	6 1/16"	1 15/16 "	8 1/16"
11	21"	5 7/8"	2 3/16"	8 1/16"
12	22 13/16 "	5 11/16 "	2 5/16"	8 1/16"

SIDE PLATES, TOP PLATE, END PLATE AND GUSSETS ARE 12 GAUGE ASTM A36 STEEL AND GALVANIZED.

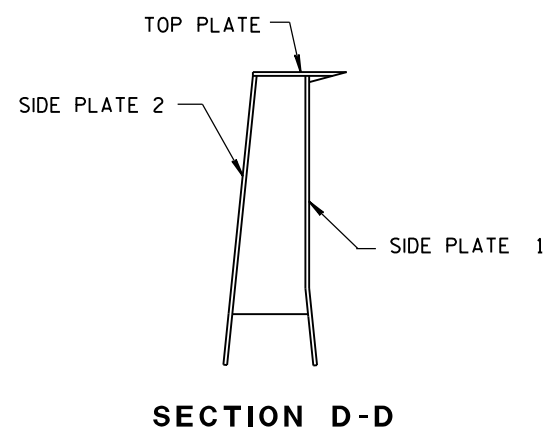
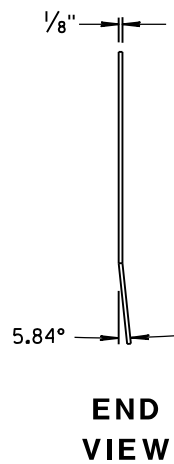
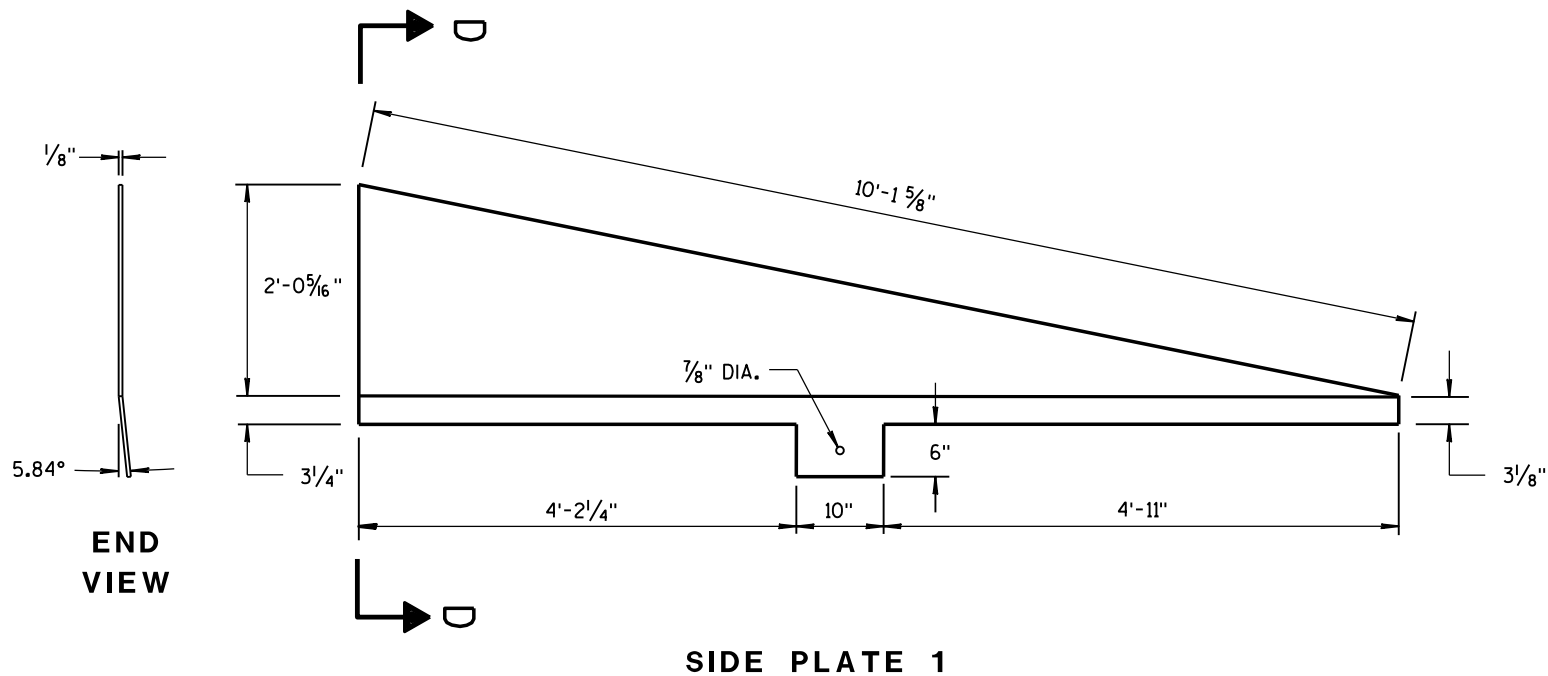
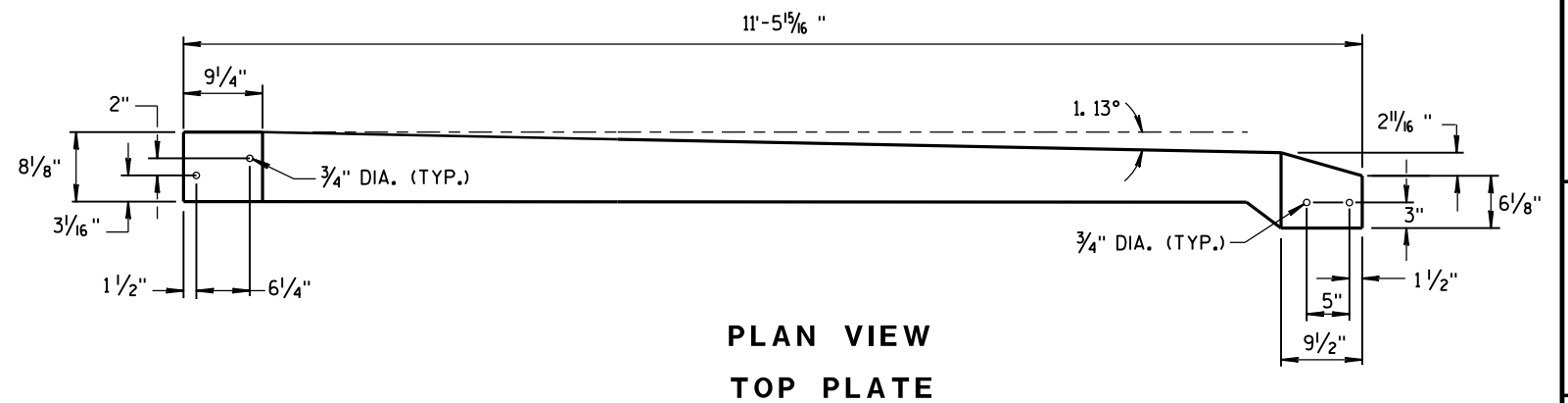
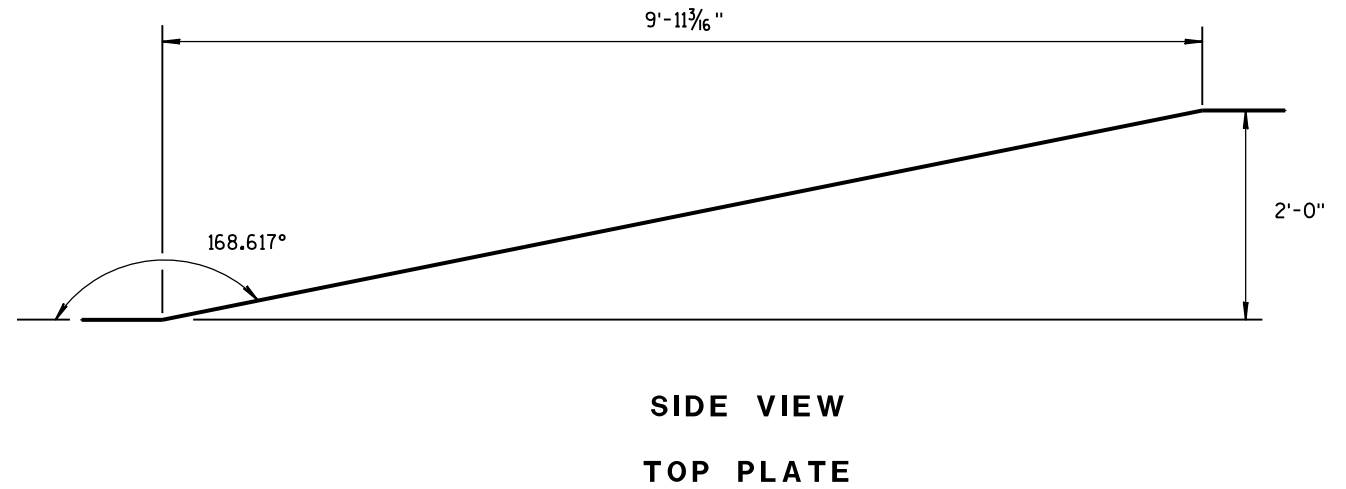
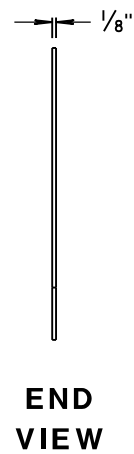
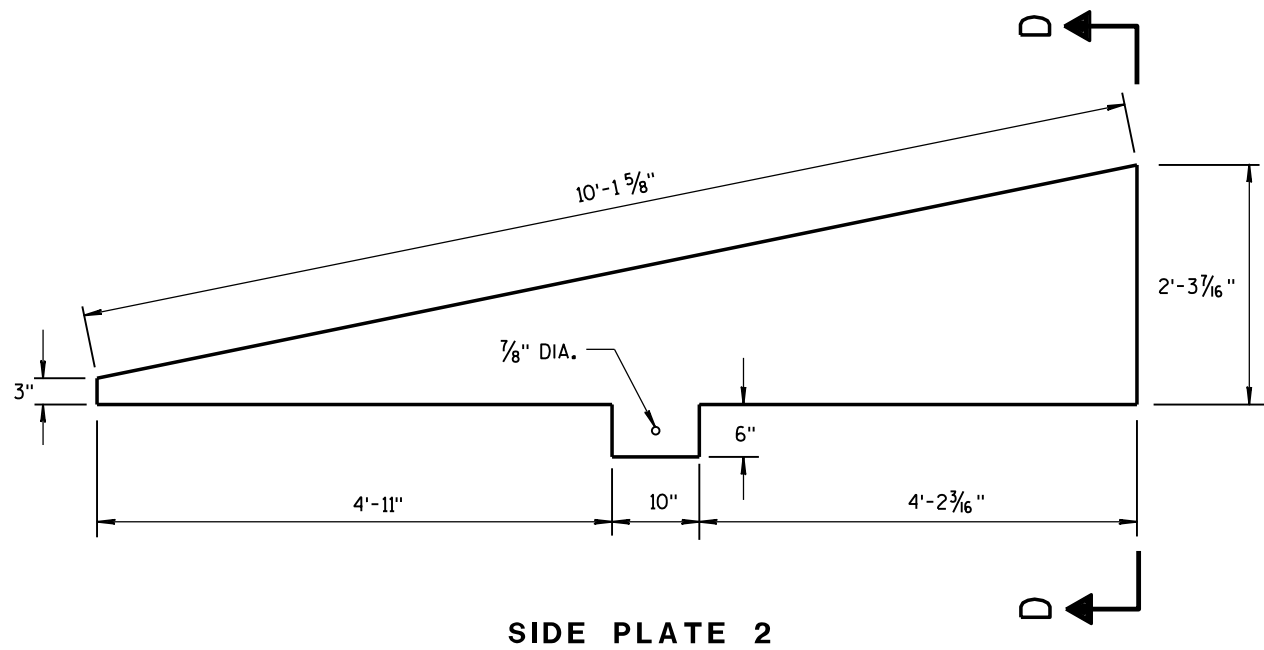
GUSSETS AND END PLATE ARE STITCH WELDED ON 3 SIDES. TWO TRIANGULAR SIDE PLATES ARE STITCH WELDED TO TOP PLATE, END PLATE AND GUSSETS.



CAP DETAILS FOR TEMPORARY CONCRETE BARRIER TO 56" PERMANENT CONCRETE BARRIER

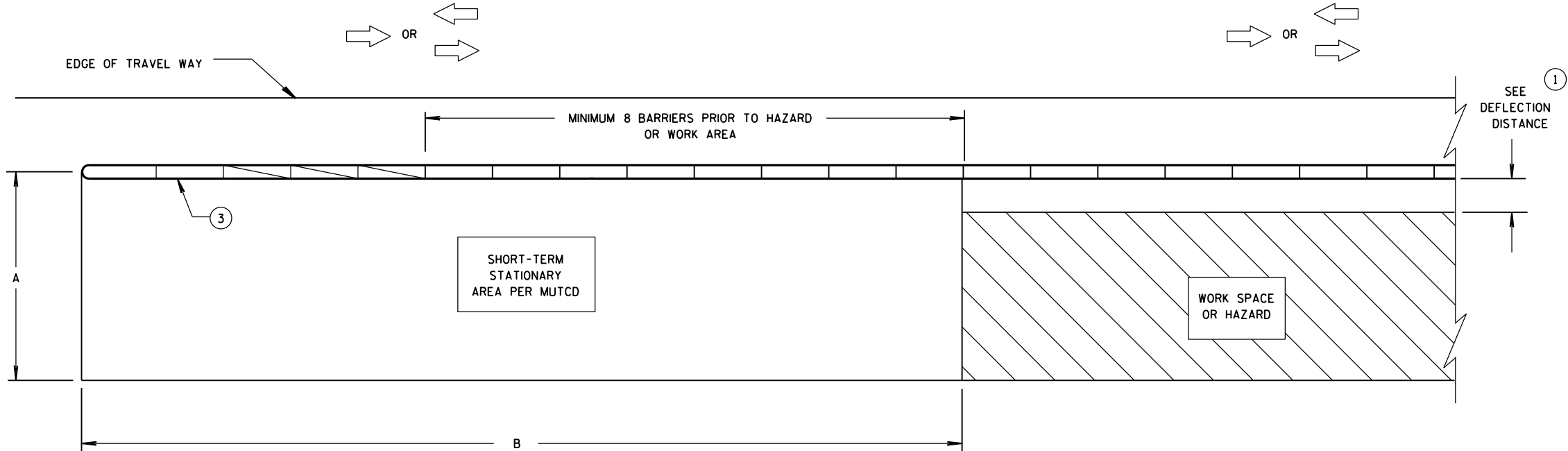
CONCRETE BARRIER
TEMPORARY PRECAST, 12'-6"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

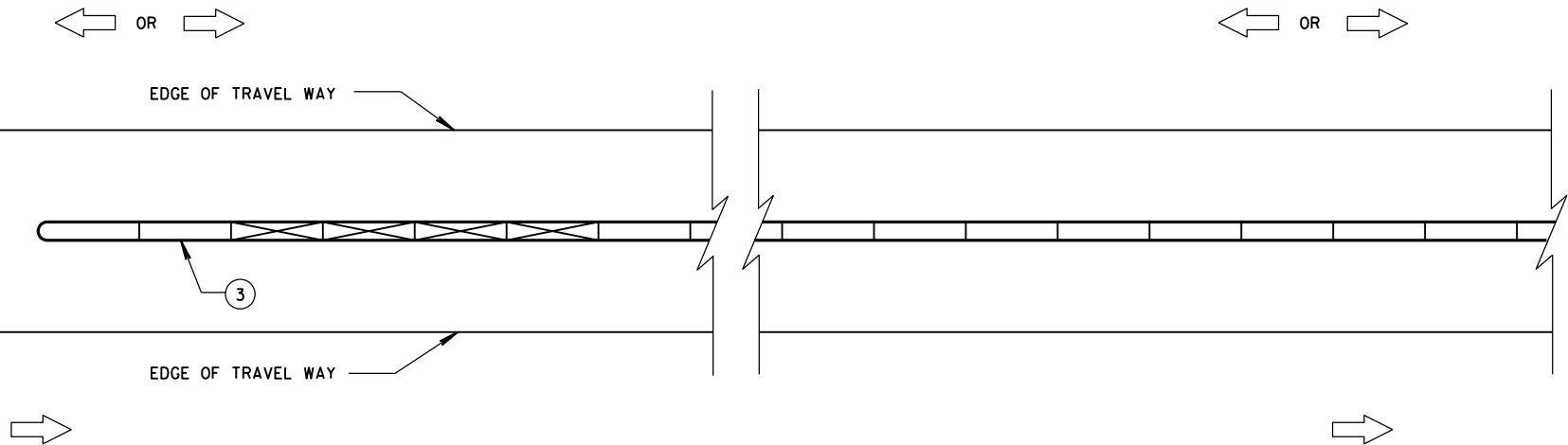


**CAP DETAILS FOR TEMPORARY CONCRETE
BARRIER TO 56" PERMANENT CONCRETE BARRIER**

CONCRETE BARRIER TEMPORARY PRECAST, 12'-6"	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Rodney Taylor ROADWAY STANDARD DEVELOPMENT UNIT SUPERVISOR
FHWA	



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON ONE SIDE OF BARRIER**



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON BOTH SIDES OF BARRIER**

GENERAL NOTES

SEE STANDARD DETAIL DRAWING 14B7 FOR MORE INFORMATION.

DETAILS PROVIDE A GENERAL LAYOUT OF TEMPORARY CONCRETE BARRIER, CRASH CUSHIONS, SAND BARREL ARRAYS AND TIE DOWN TRANSITIONS. DETAILS PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

ADDITIONAL TEMPORARY BARRIER MAY BE REQUIRED TO PROTECT TRAVELING PUBLIC FROM HAZARDS, CONTRACTOR'S OPERATIONS OR TO CONTROL TRAFFIC.

TEMPORARY BARRIER MAY BE REQUIRED TO BE ANCHORED TO PAVEMENT OR BRIDGE DECK.

FOR DETAILS ON CRASH CUSHION OR SAND BARREL ARRAYS SEE OTHER SECTIONS OF THE PLAN AND MANUFACTURE'S DETAILS.

SLOPES LEADING TO TEMPORARY BARRIER, CRASH CUSHION OR SAND BARREL ARRAY ARE 10:1 OR LESS.

- ① FOR DEFLECTION INFORMATION SEE STANDARD DETAIL DRAWING 14B7.
- ② VALUES PROVIDED MAY NOT FIT ALL POSSIBLE SITUATIONS OR SITE CONDITIONS. SEE OTHER SECTIONS OF THE CONTRACT OR PROJECT ENGINEER FOR MORE DETAILS.

- ③ ANCHOR TEMPORARY BARRIER ACCORDING TO CRASH CUSHION OR SAND BARREL MANUFACTURER'S RECOMMENDATIONS. IF MANUFACTURER'S RECOMMENDATIONS ARE NOT PROVIDED, ANCHOR 3 PINS ON TRAFFIC SIDE.

DIMENSION A TABLE ②

FACILITY	POSTED SPEED MPH	DIMENSION A	
		MIN. FT	MAX. FT
FREEWAY/EXPRESSWAY	ALL	15	20
NON-FREEWAY/EXPRESSWAY	GREATER THAN OR EQUAL TO 45	10	15
NON-FREEWAY/EXPRESSWAY	LESS THAN 45	8	10
AADT LESS THAN 1,500	ALL	8	10

DIMENSION B TABLE ②

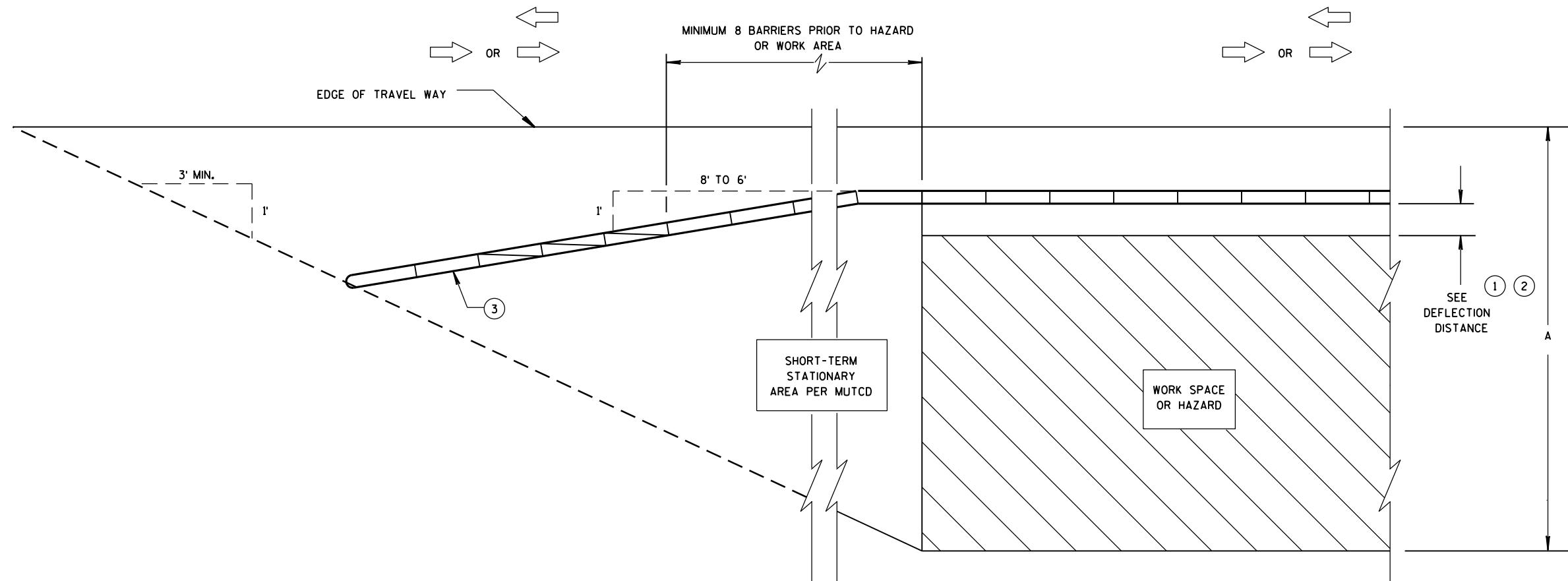
POSTED SPEEDS MPH	DIMENSION B FT
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645

LEGEND

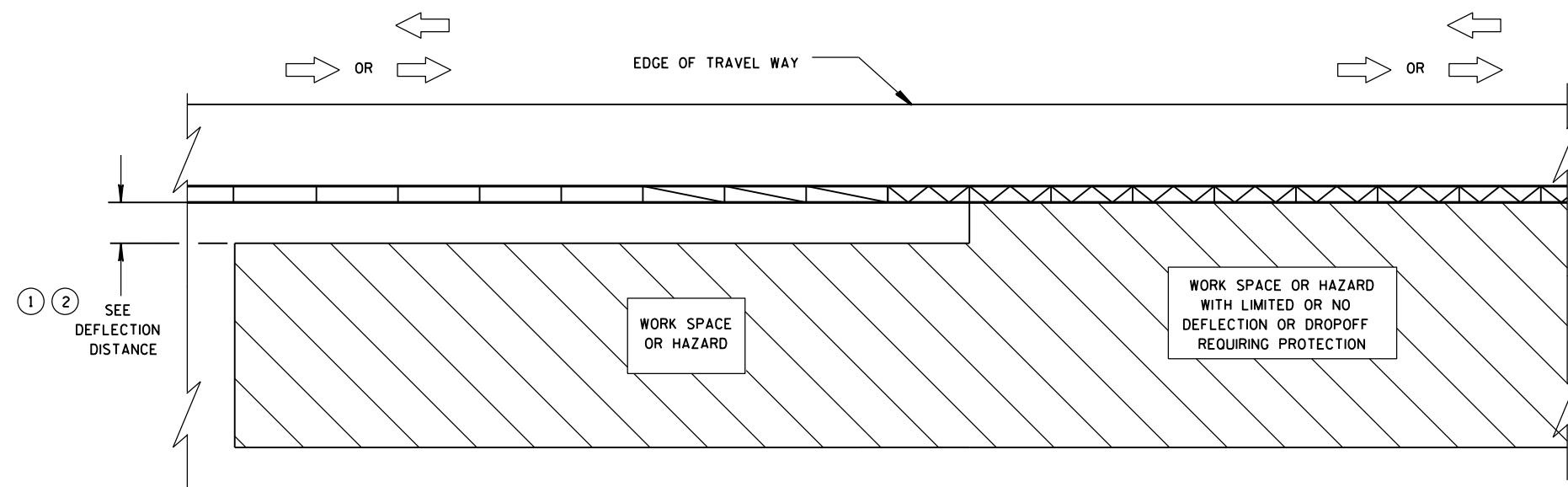
- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CRASH CUSHION/SAND BARREL ARRAY AND TEMPORARY BARRIER
INSTALLATION FOR TRAFFIC ON ONE SIDE - FLARED INSTALLATION**



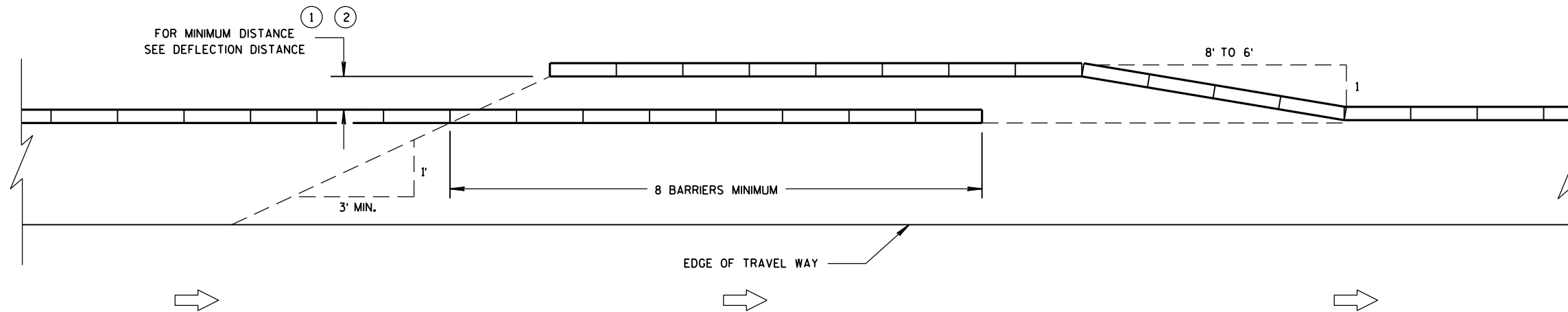
**TRANSITION FROM FREE STANDING TEMPORARY BARRIER
TO ANCHORED BARRIER**

LEGEND

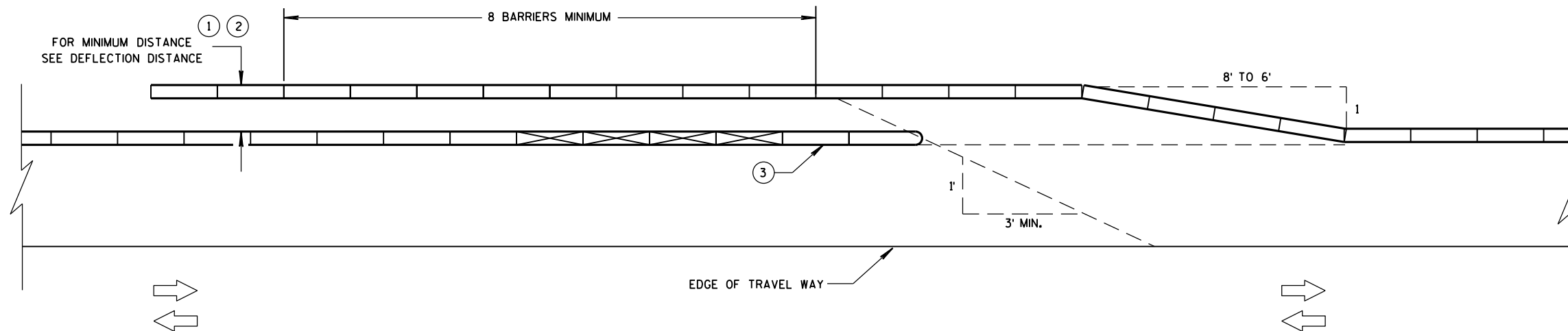
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

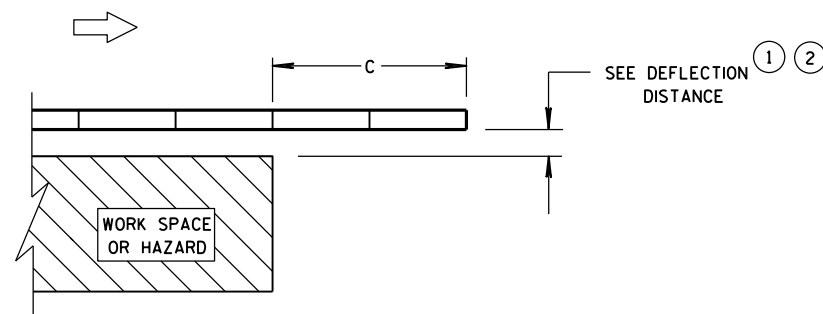
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



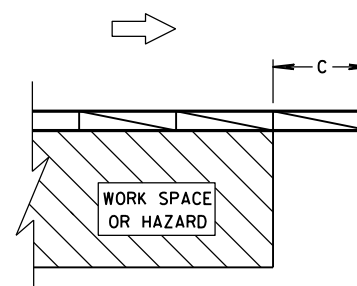
TEMPORARY BARRIER OVERLAP - ONE-WAY TRAFFIC



TEMPORARY BARRIER OVERLAP - TWO-WAY TRAFFIC



**ENDING TEMPORARY BARRIER
DOWNSTREAM - UNANCHORED**



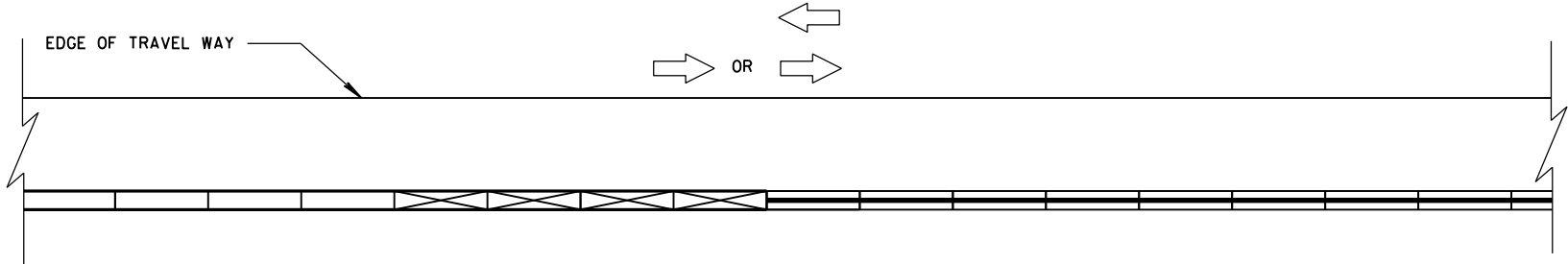
**ENDING TEMPORARY BARRIER
DOWNSTREAM - ANCHORED**

LEGEND

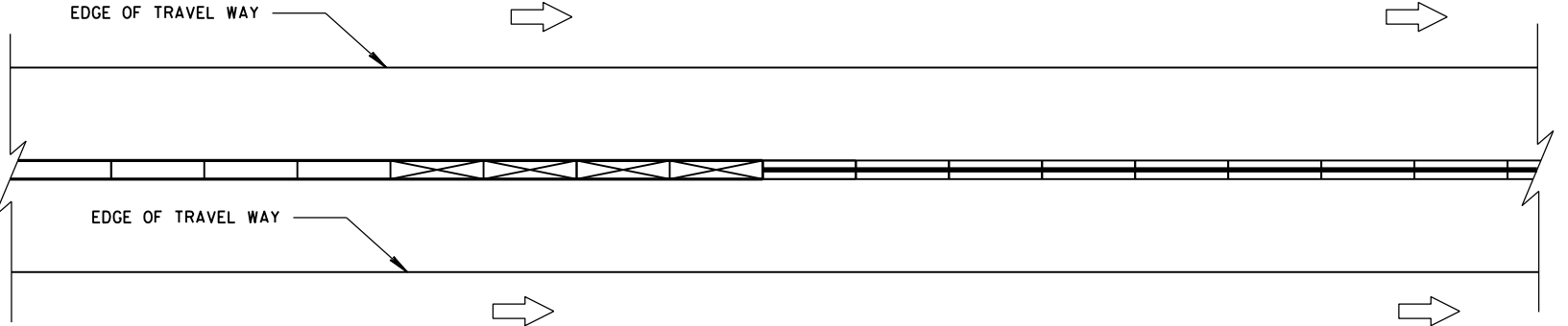
DIRECTION OF TRAVEL	
CRASH CUSHION OR SAND BARREL ARRAY	
SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS	
SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS	
3 PINS PLACED ON TRAFFIC SIDE OF BARRIER	
PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET	
FREE STANDING TEMPORARY BARRIER	

**CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



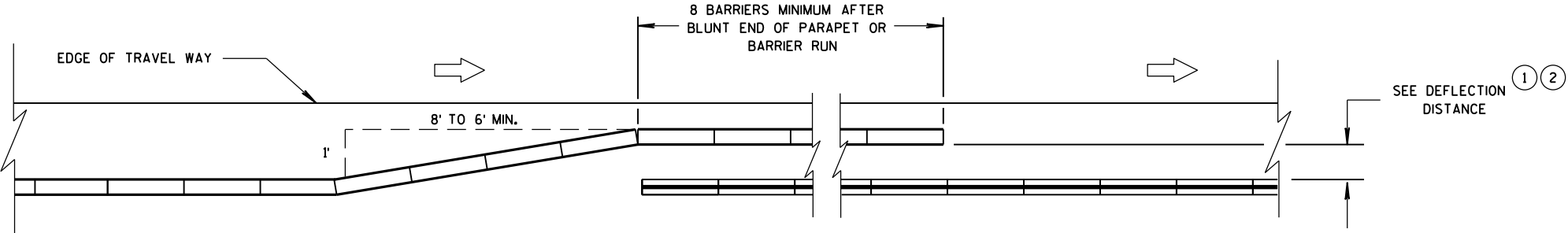
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON ONE SIDE



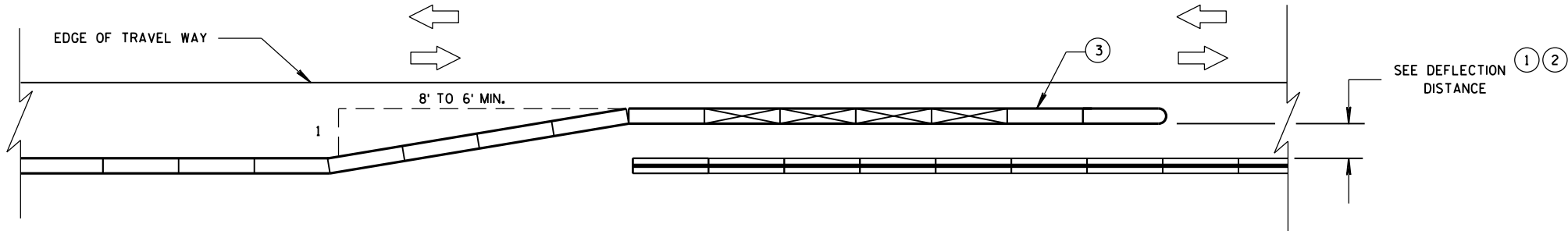
CONNECTING TEMPORARY BARRIER TO PERMANENT
CONCRETE BARRIER-TRAFFIC ON BOTH SIDES

LEGEND

- DIRECTION OF TRAVEL
- CRASH CUSHION OR SAND BARREL ARRAY
- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS
- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS
- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER
- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET
- FREE STANDING TEMPORARY BARRIER



OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
ONE WAY TRAFFIC

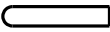


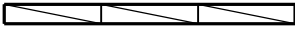
OVERLAPPING TEMPORARY BARRIER AND PERMANENT BARRIER -
TWO WAY TRAFFIC

LEGEND

- DIRECTION OF TRAVEL

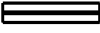

- CRASH CUSHION OR SAND BARREL ARRAY

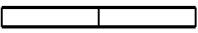

- SEE FREE STANDING TRANSITION TO TIED-DOWN SYSTEM DETAILS


- SEE BI-DIRECTIONAL TRANSITION TO TIED-DOWN SYSTEM DETAILS


- 3 PINS PLACED ON TRAFFIC SIDE OF BARRIER


- PERMANENT CONCRETE BARRIER OR CONCRETE PARAPET

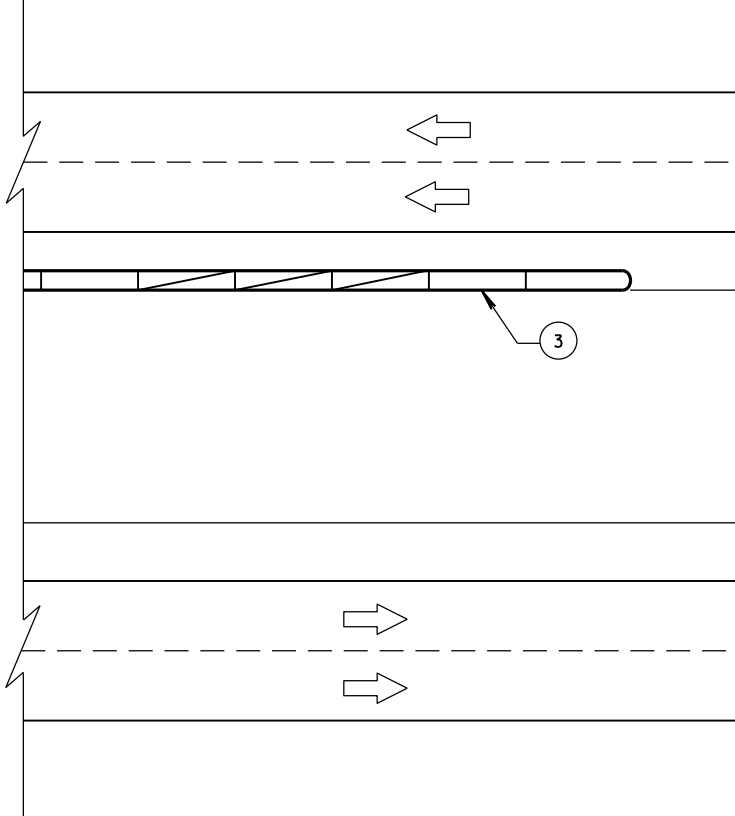
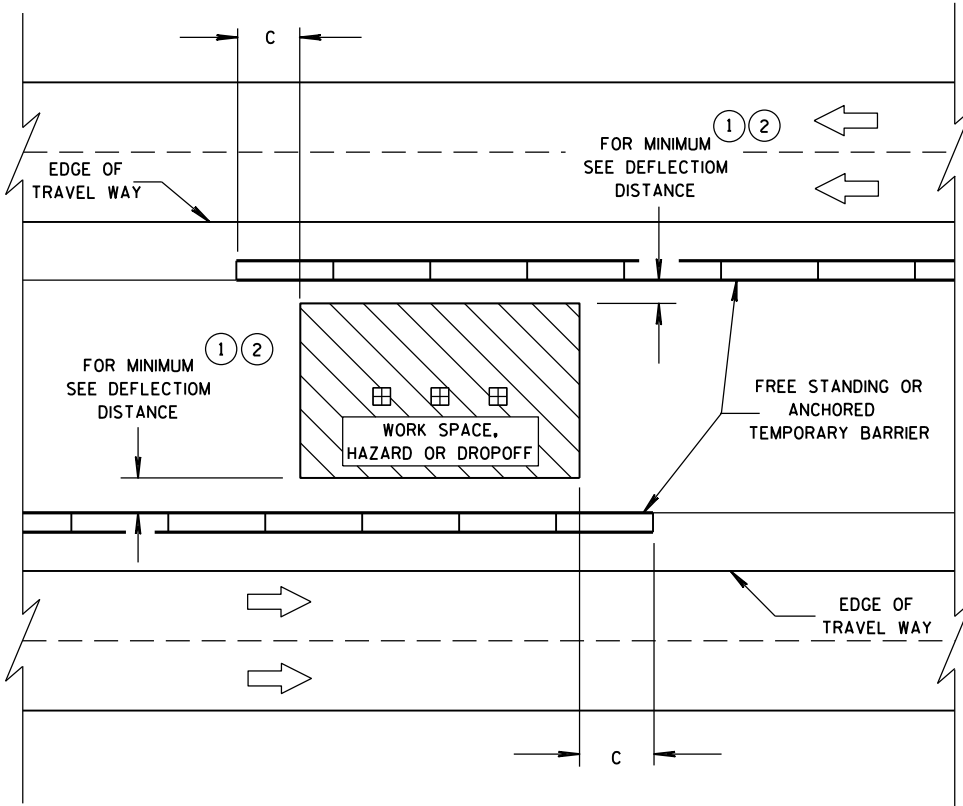
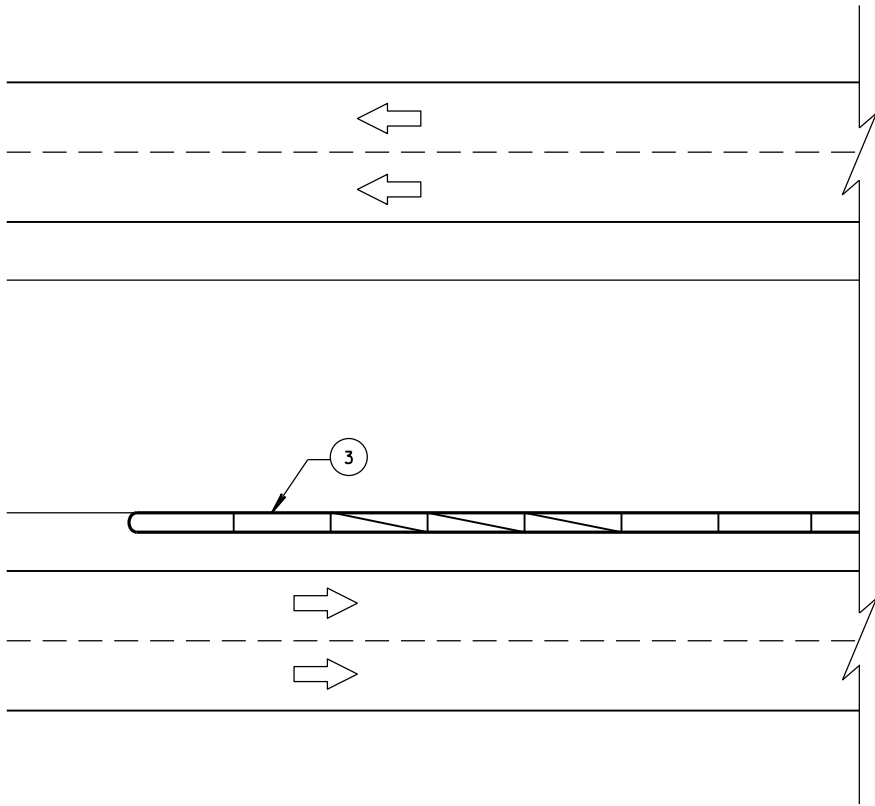

- FREE STANDING TEMPORARY BARRIER



DIMENSION C TABLE

2

AVAILABLE DEFLECTION DISTANCE	MINIMUM LENGTH OF BARRIER BEYOND HAZARD FT
GREATER THAN 8'	12.5
LESS THAN OR EQUAL TO 8' BUT GREATER THAN 4'	50
LESS THAN OR EQUAL TO 4'	100



CRASH CUSHION/SAND BARREL
ARRAY AND OTHER TEMPORARY
BARRIER LAYOUT DETAILS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2015

DATE

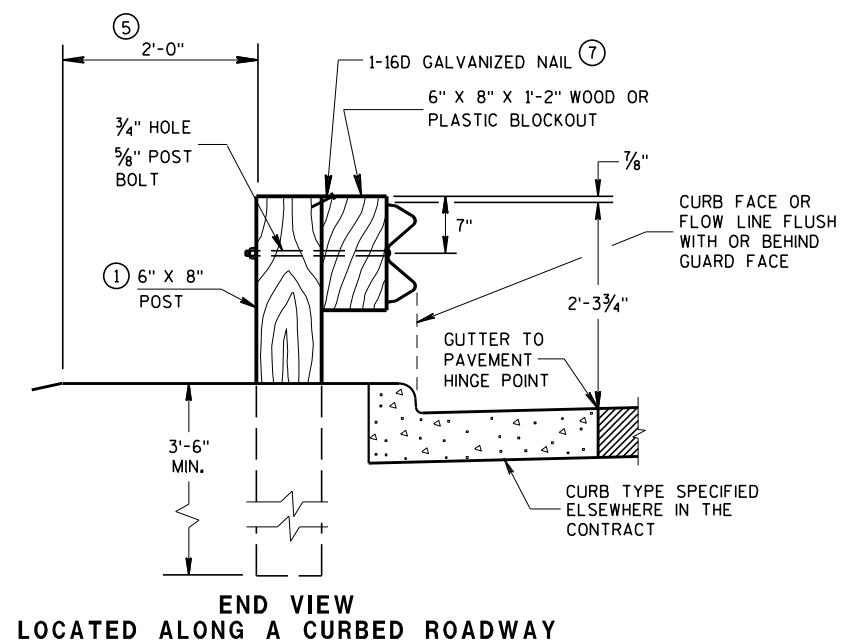
FHWA

/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT
ENGINEER

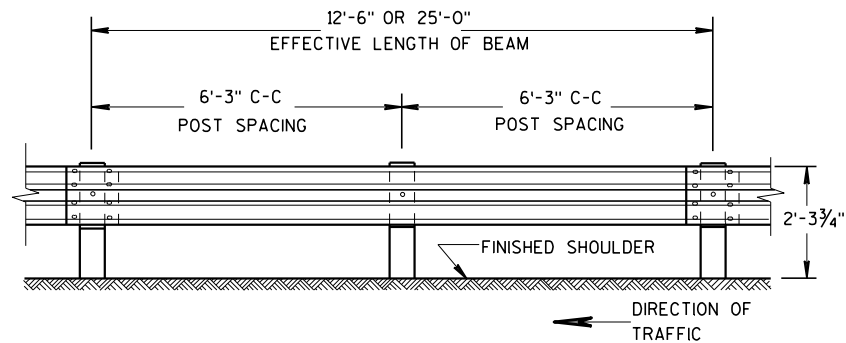
6

- S.D.D. 14 B 15-11a**



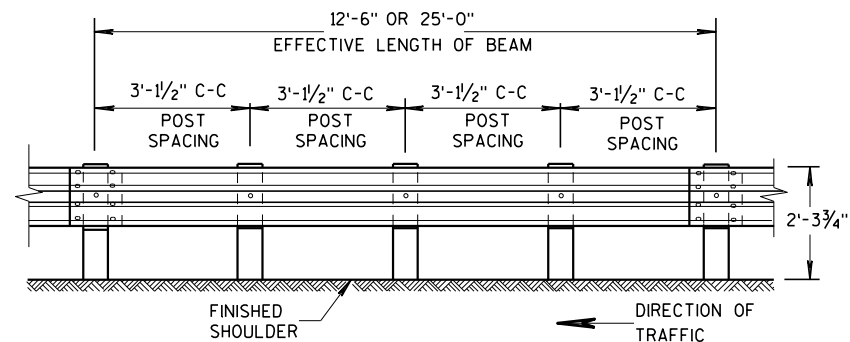
STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



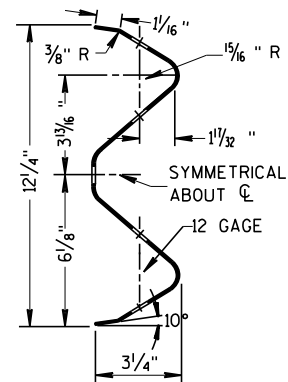
FRONT VIEW

POST SPACING STANDARD INSTALLATION

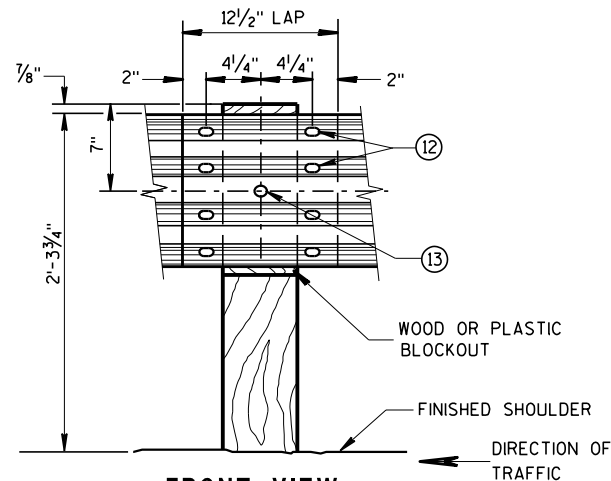


FRONT VIEW

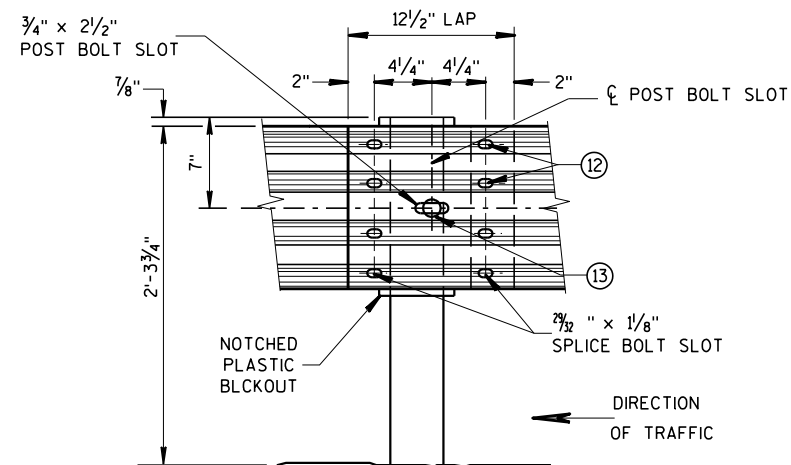
POST SPACING FOR LONGER POST
AT HALF POST SPACING W BEAM (LHW)



SECTION THRU W BEAM



FRONT VIEW
BEAM SPLICE AT WOOD POST
AND POST MOUNTING DETAIL

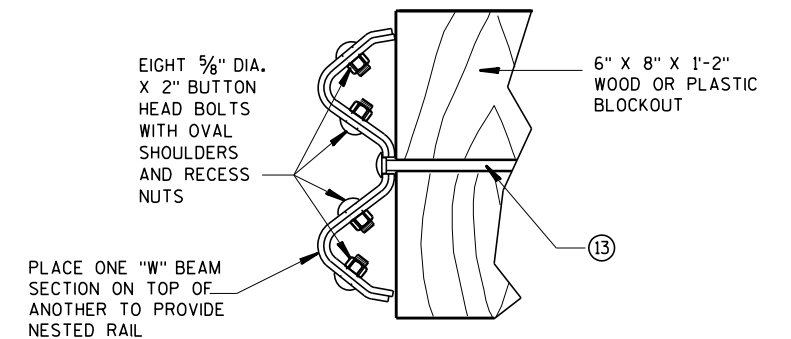


FRONT VIEW
BEAM SPLICE AT STEEL POST
TYPICAL SPlicing DETAILS
OF STEEL PLATE BEAM GUARD

GENERAL NOTES

FURNISH GUARDRAIL DEFLECTORS FROM APPROVED PRODUCTS LIST.

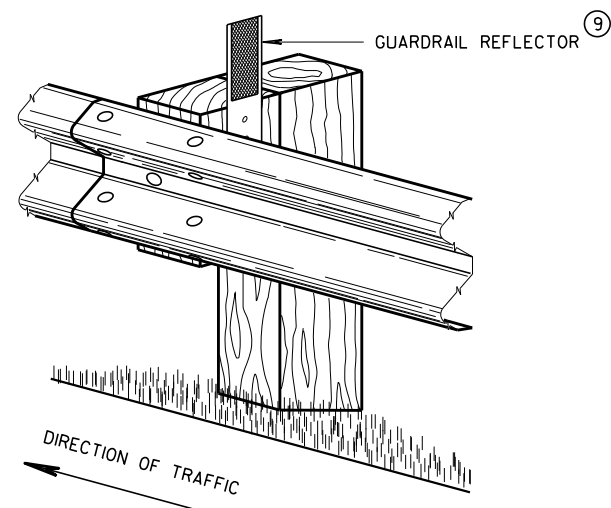
- ⑨ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINA. START REFLECTORS AT POST #9 AND SPACE EVENLY EVERY 100 FEET (MAX.) TO THE END OF GUARDRAIL RUN, USING A MINIMUM OF 3 REFLECTORS.
- ⑫ 8 - 5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.
- ⑬ 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



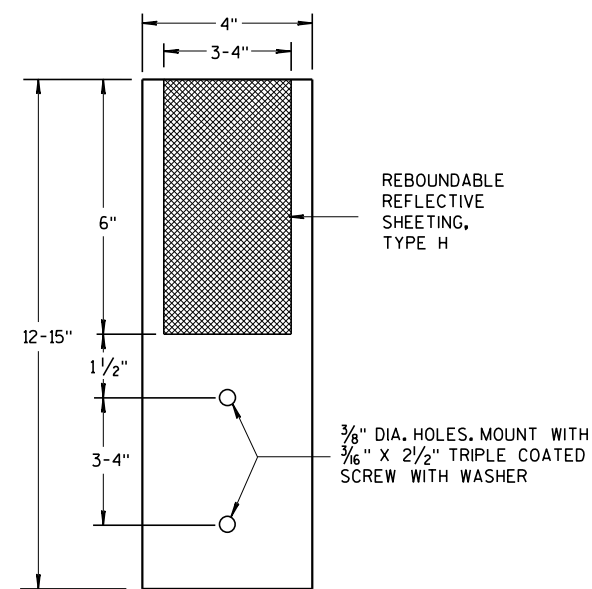
NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR
CONSTRUCTING NESTED W BEAM (NW)

* USE DOUBLE SIDED WHITE GUARDRAIL REFLECTORS ON ROADWAYS WITH BI-DIRECTIONAL TRAFFIC (NO MEDIAN). USE SINGLE SIDED WHITE (RIGHT SIDE) AND SINGLE SIDED YELLOW (LEFT SIDE) ON ROADWAYS WITH MEDIAN SEPARATION.



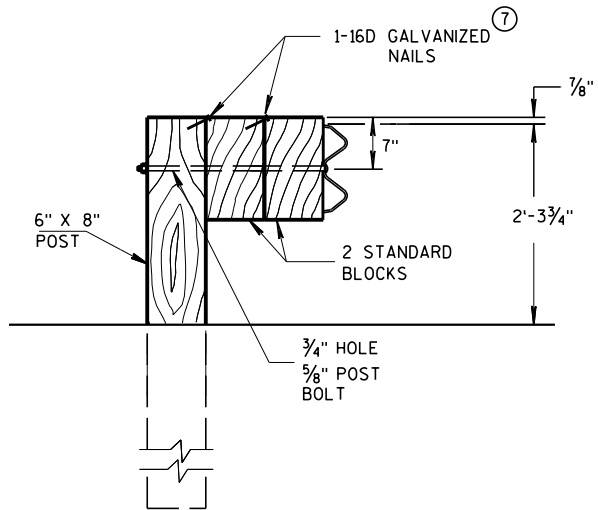
4" X 12" GUARDRAIL REFLECTOR DETAIL
AND TYPICAL INSTALLATION *



4"x 12" GUARDRAIL REFLECTOR

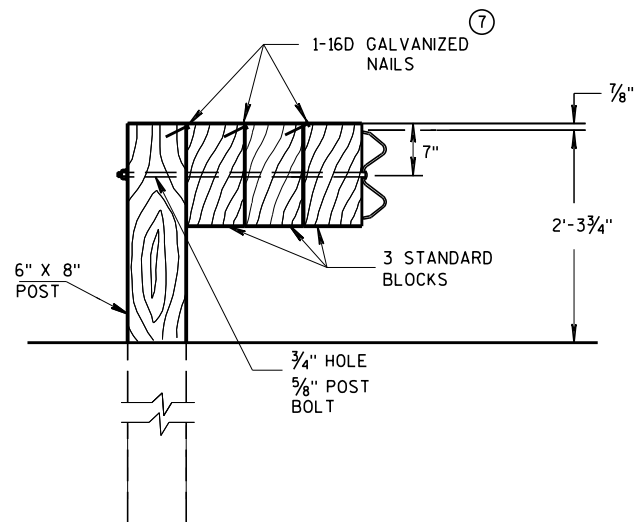
STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS
WITHIN A BARRIER RUN IS UNLIMITED

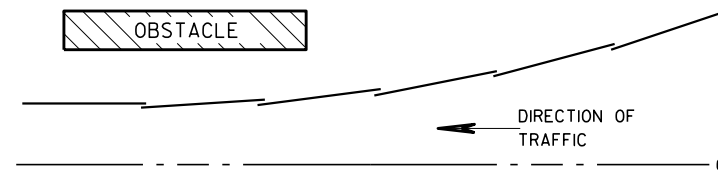


DETAIL FOR TRIPLE BLOCKS

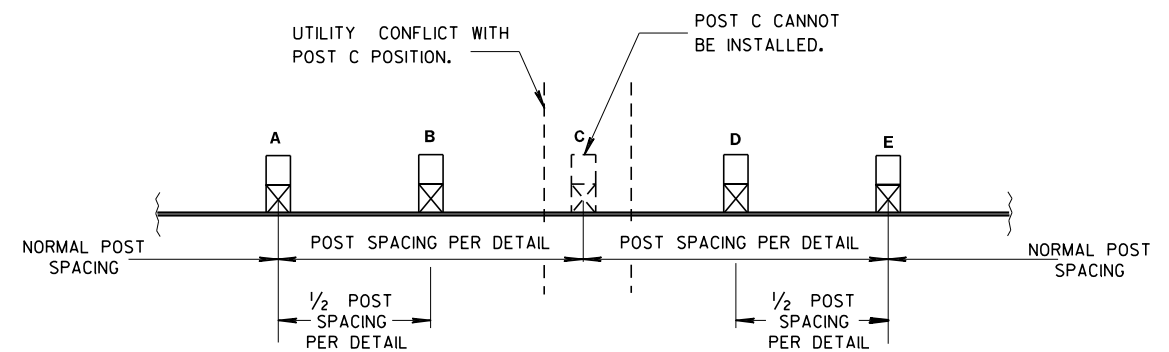
TRIPLE BLOCK DETAIL IS LIMITED TO ONE
LOCATION WITHIN A BEAM GUARD RUN.

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES
PREVENT THE POST FROM BEING INSTALLED.

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



PLAN VIEW BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

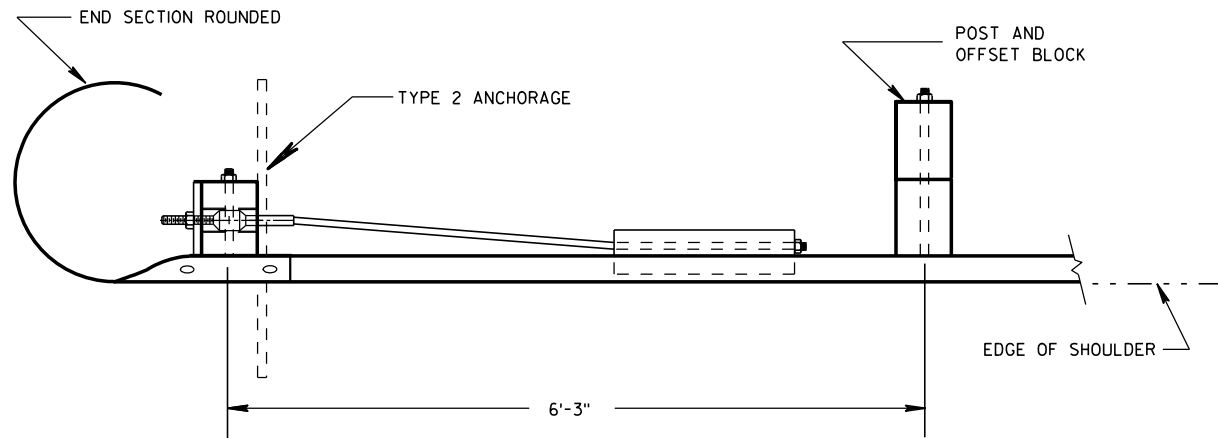
June 2017

DATE

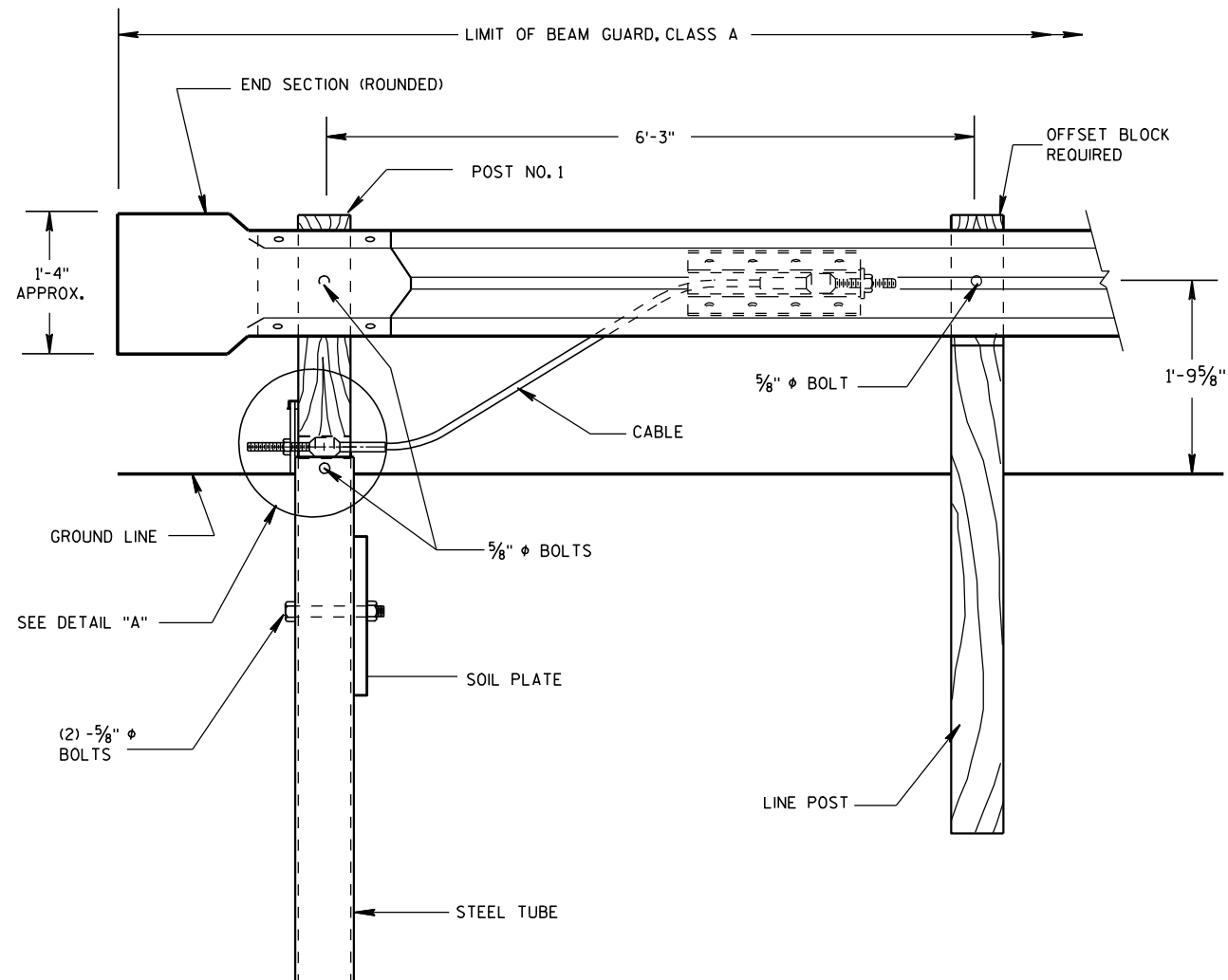
FHWA

/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR



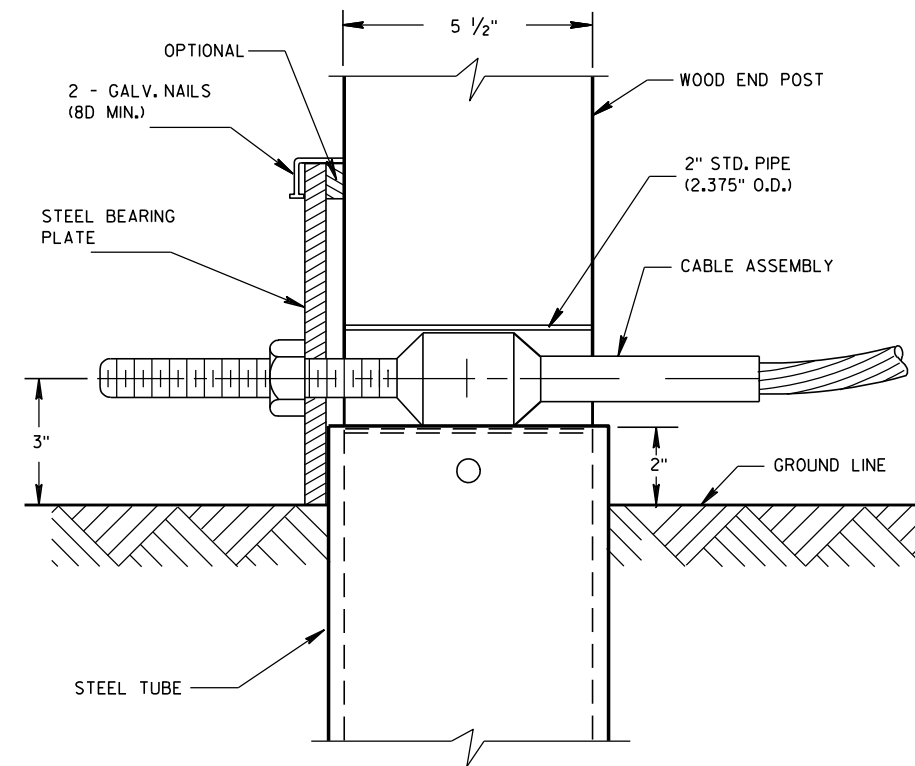
PLAN VIEW



FRONT VIEW

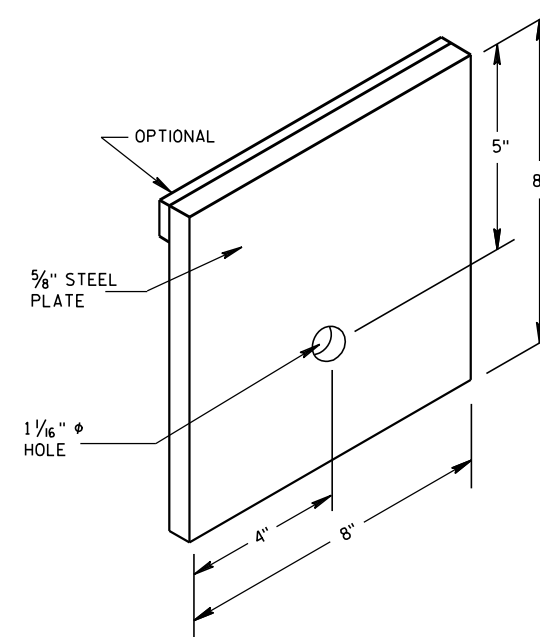
END TREATMENT WITH TYPE 2 ANCHORAGE

(USE ON ONE-WAY ROADWAYS ONLY - DEPARTING END)



DETAIL "A"

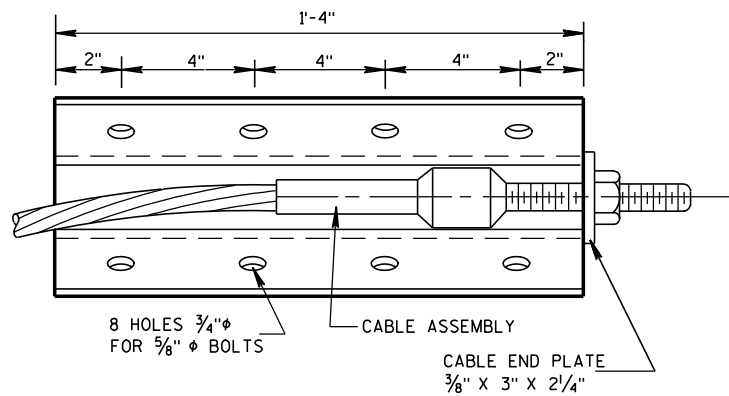
POST NO. 1



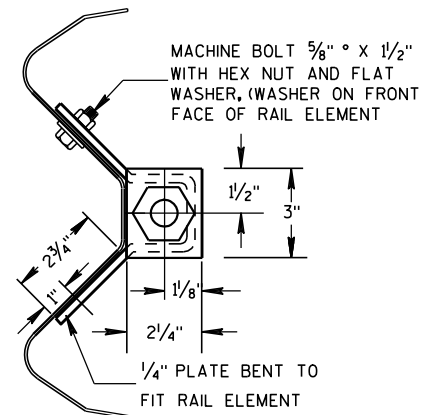
STEEL BEARING PLATE

**ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

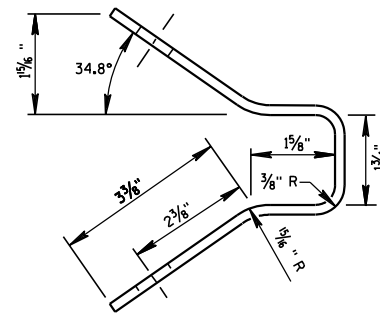


FRONT VIEW

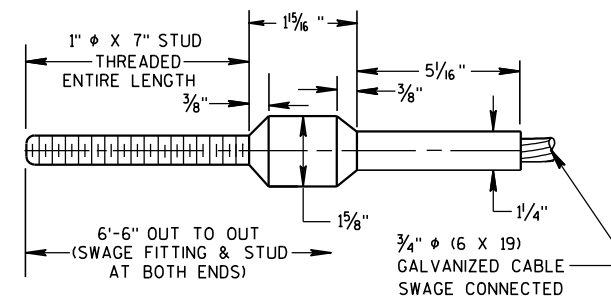


END VIEW

ANCHOR PLATE DETAIL



END VIEW OF BRACKET



CABLE ASSEMBLY

CABLE, SWAGE FITTING, STUD AND NUT SHALL DEVELOP A MINIMUM BREAKING STRENGTH OF 40,000 LB (TIGHTEN UNTIL TAUT)

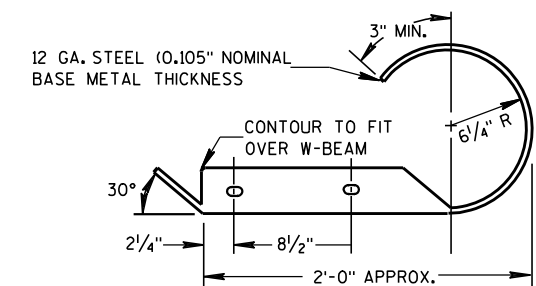
GENERAL NOTES

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

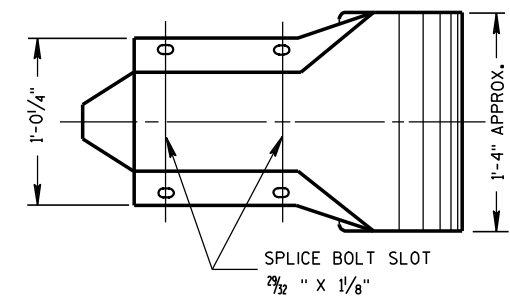
STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A-500 GRADE B OR ASTM A-501.

POST NO. 1 SHALL BE WOOD BREAKAWAY POST INSERTED AND BOLTED INTO STEEL TUBE.

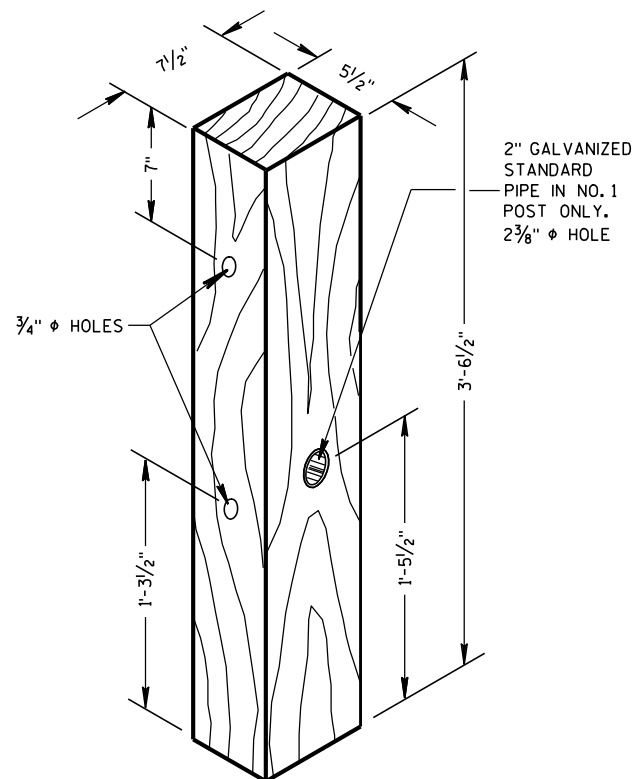
TYPE 2 ANCHORAGE SHALL CONSIST OF A STEEL TUBE, SOIL PLATE, WOOD BREAKAWAY POST, BEARING PLATE, ANCHOR PLATE, CABLE ASSEMBLY AND ALL ASSOCIATED HARDWARE, ALL STEEL PARTS SHALL BE GALVANIZED.



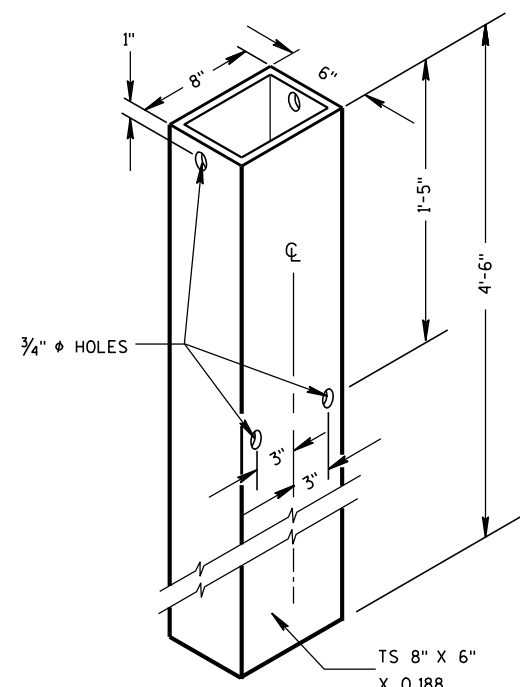
PLAN VIEW



FRONT VIEW
W BEAM END SECTION ROUNDED

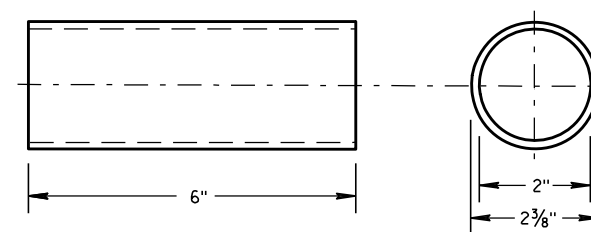


WOOD BREAKAWAY POST



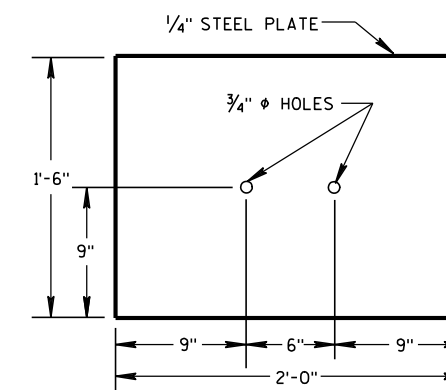
STEEL TUBE

STEEL TUBE SHALL CONFORM TO REQUIREMENTS OF ASTM A500



BREAKAWAY TERMINAL POST SLEEVE

GALVANIZED STANDARD STRENGTH STEEL PIPE, ASTM 53 GRADE "B"



SOIL PLATE

ANCHORAGE FOR STEEL
PLATE BEAM GUARD
TYPE 2

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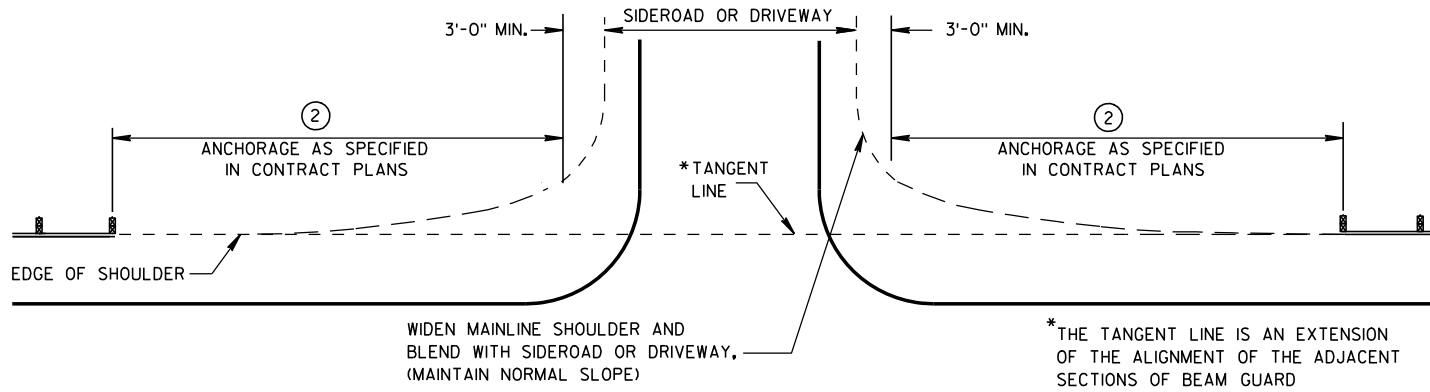
APPROVED

8/21/2007

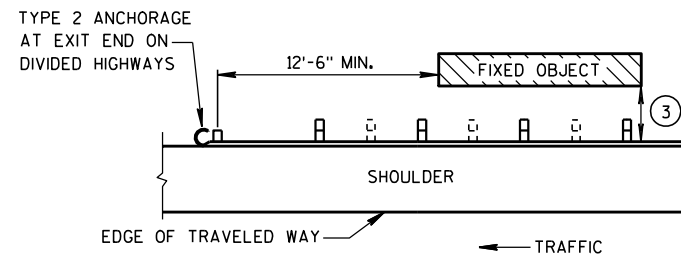
DATE

FHWA

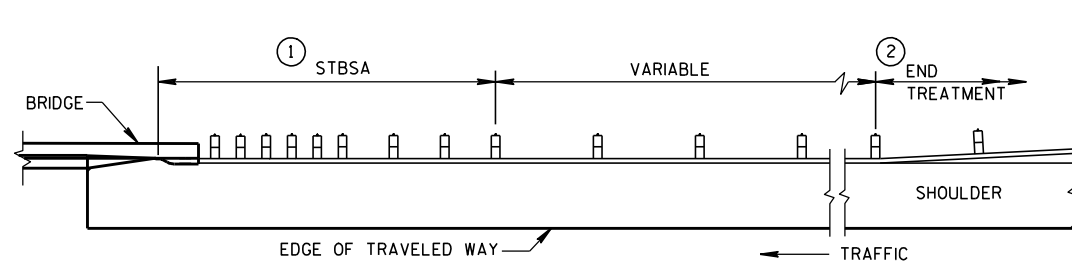
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



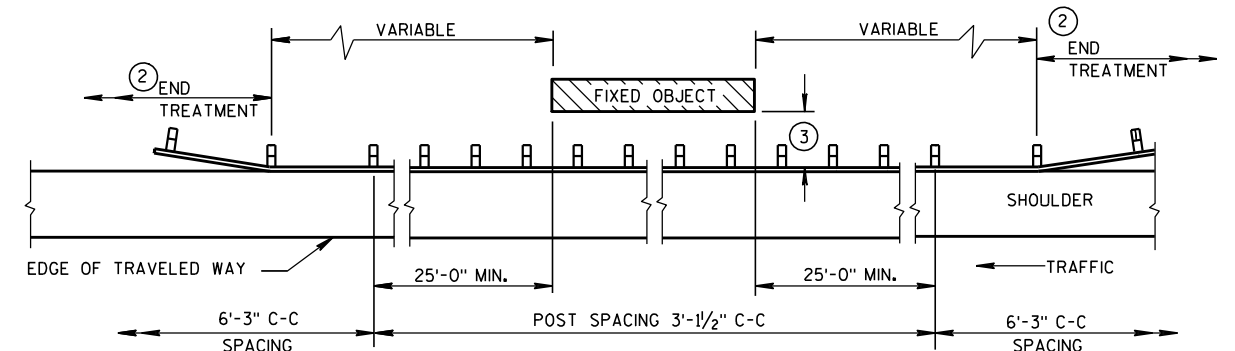
BEAM GUARD AT SIDEROADS OR DRIVEWAYS



BEAM GUARD AT OBSTACLES EXIT END - ONE WAY TRAFFIC



BEAM GUARD AT FULL WIDTH BRIDGES



BEAM GUARD AT OBSTACLES - TWO WAY TRAFFIC

(RAIL TO OBSTACLE CLEARANCE 3'-6" TO 4'-6")

TABLE 1
FLARE RATES FOR BEAM
GUARD AT NARROW BRIDGES

POSTED SPEED (MPH)	FLARE RATE
25	13:1
30	15:1
35	16:1
40	18:1
45	21:1
50	24:1
55	26:1
65	30:1

GENERAL NOTES

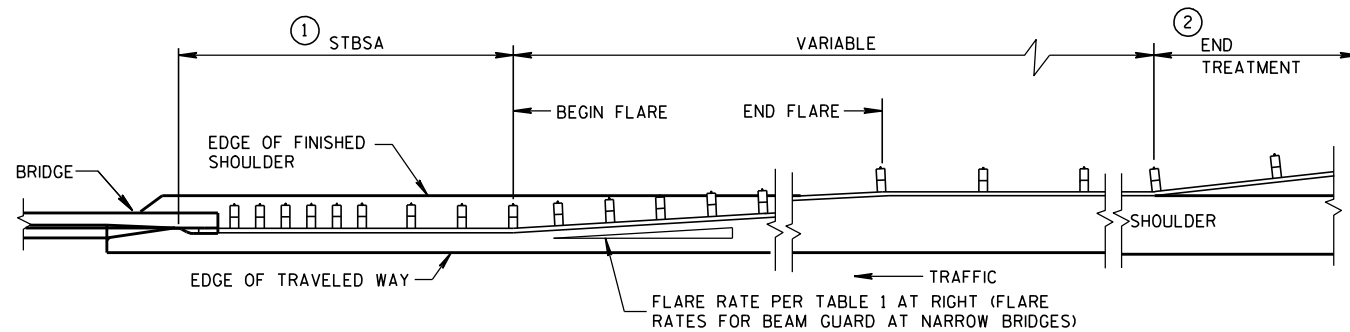
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE PERTINENT STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

W6 X 9 OR W6 X 8.5 STEEL POSTS WITH NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

THE LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

- STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
- USE AN APPROVED END TREATMENT FOR THE TRAFFIC APPROACH SIDE OF BRIDGE/OBSTACLES. USE TYPE 2 ANCHORAGE ONLY AT THE DOWNSTREAM ENDS OF BEAM GUARD LOCATED ALONG ROADWAYS WITH ONE WAY TRAFFIC.

MINIMUM LATERAL DISTANCE FROM FACE OF BEAM GUARD TO FIXED OBJECT	POST SPACING
3'-6"	3' - 1 1/2"
4'-6"	6' - 3"

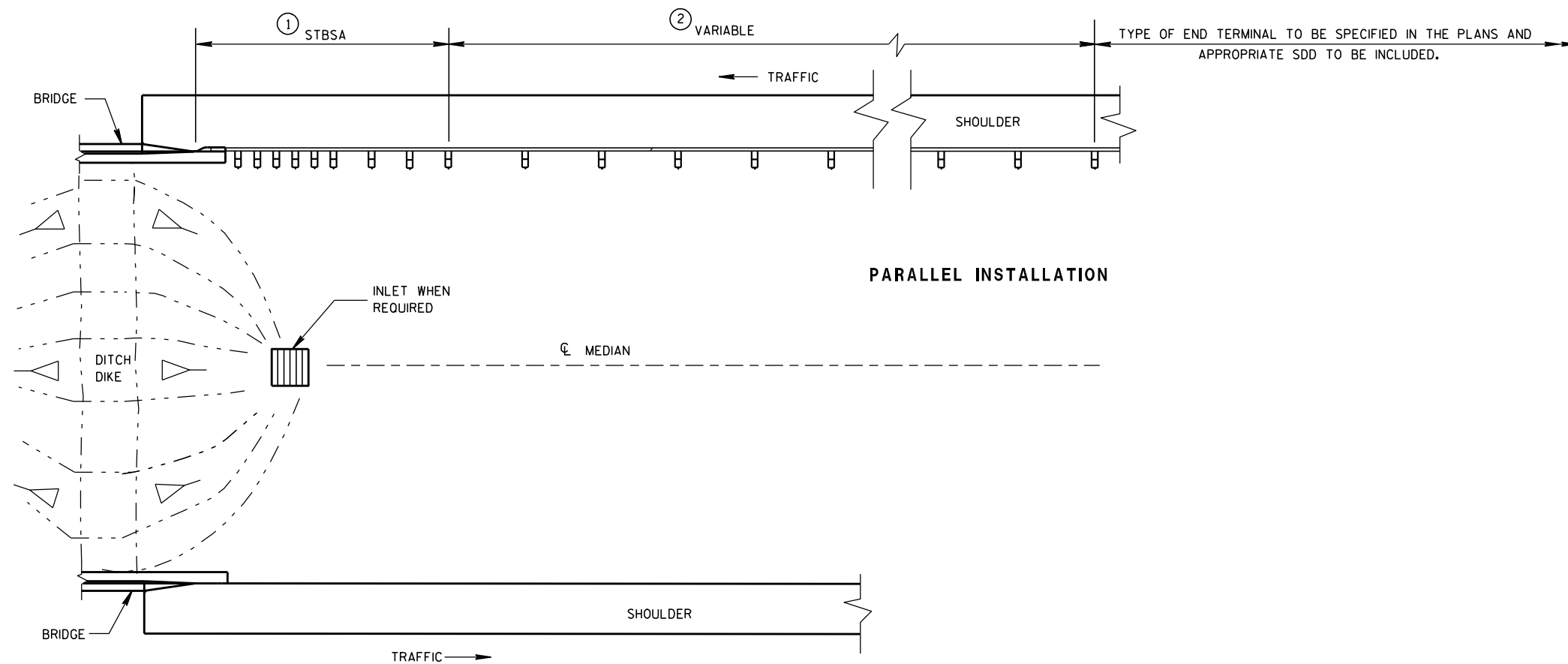


BEAM GUARD AT NARROW BRIDGES (FLARED TO SHOULDER EDGE, THEN PARALLEL TO ROADWAY)

STEEL PLATE BEAM GUARD
CLASS "A"
AT BRIDGES, OBSTACLES
AND SIDEROADS/DRIVEWAYS

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8-21-07
DATE
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ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



BEAM GUARD AT MEDIAN APPROACH TO BRIDGES

GENERAL NOTES

- ① STEEL THRIE BEAM STRUCTURAL APPROACH (STBSA) - SEE CURRENT SDD 14B20.
- ② LOCATIONS AND LENGTHS OF BEAM GUARD ARE SHOWN ELSEWHERE IN THE PLAN.

STEEL PLATE BEAM GUARD
CLASS "A" AT
MEDIAN APPROACH TO BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8-21-07
DATE

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ROADWAY STANDARDS DEVELOPMENT
ENGINEER

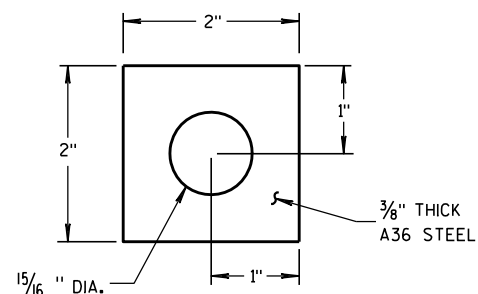
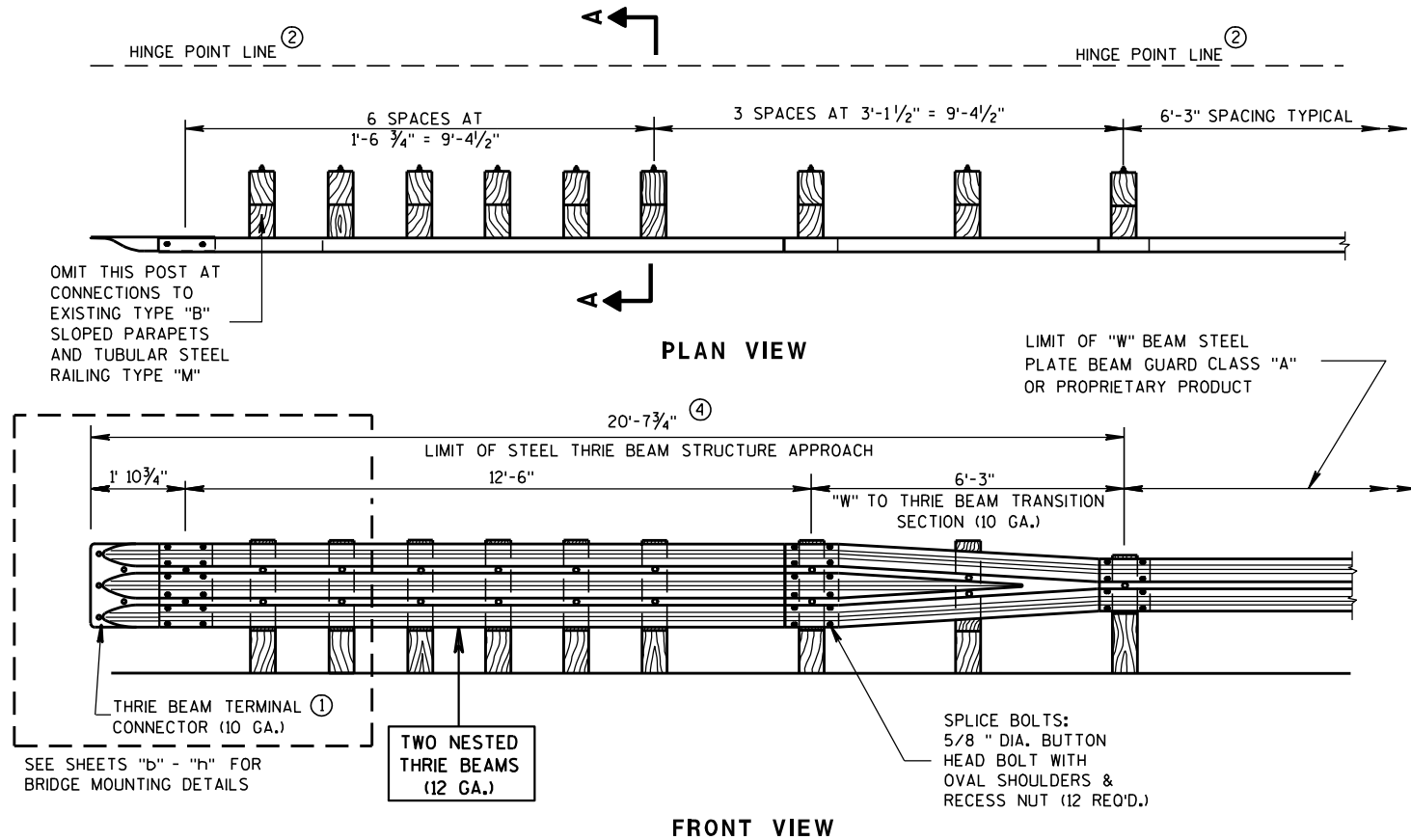


PLATE WASHER DETAIL

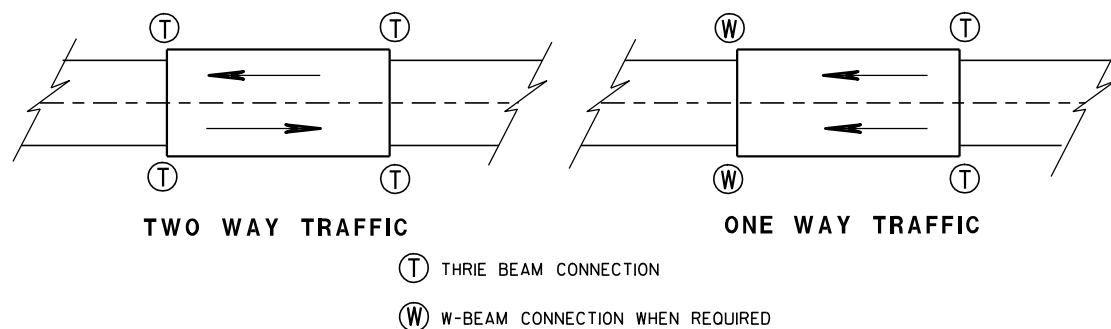
GENERAL NOTES

BOLT THE THRIE BEAM TO ALL POSTS AND BLOCKOUTS. DRILL OR PUNCH BOLT HOLES IN THE BEAM IF THE POST SPACING IS LESS THAN 6'-3".

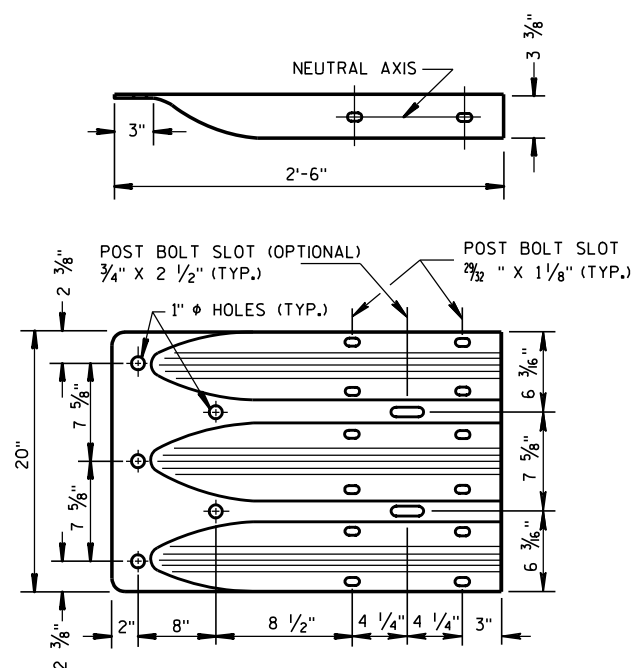
DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.

IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B15 FOR MORE DETAILS.

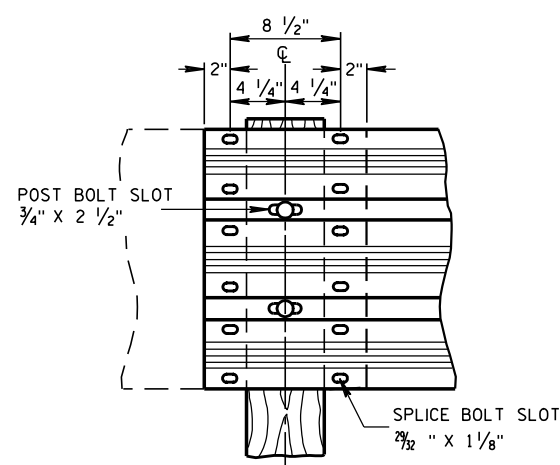
- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② MINIMUM EMBEDMENT SHALL BE 4'-0". WHERE EXISTING CONDITIONS DO NOT PERMIT THE APPROPRIATE EARTHWORK SHOWN ON THE PLAN TYPICAL SECTIONS OR DETAILS, THE ENGINEER MAY ALLOW THE REDUCTION OR ELIMINATION OF THE 2 FOOT DISTANCE TO THE HINGE POINT. OTHERWISE BUILD AS THE PLAN SHOWS OR AS THE ENGINEER DIRECTS. IF THE 2 FOOT DISTANCE TO THE HINGE POINT IS REDUCED OR ELIMINATED, INCREASE THE POST EMBEDMENT DEPTH TO 4'-6" OR MORE.
- ③ POST BOLTS ARE 5/8" DIAMETER ASTM A307 BUTTON HEAD BOLT. A POST BOLT REQUIRES A 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX AND A 5/8" DIAMETER F844 FLAT WASHER. LENGTH OF POST BOLT MAY VARY.
- ④ ALL WOOD POSTS MUST BE 6" X 8" AND AT LEAST 7'-0" LONG.



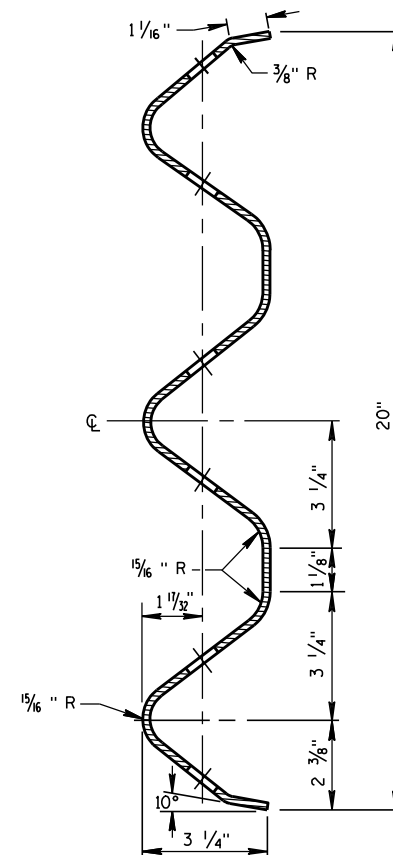
TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE



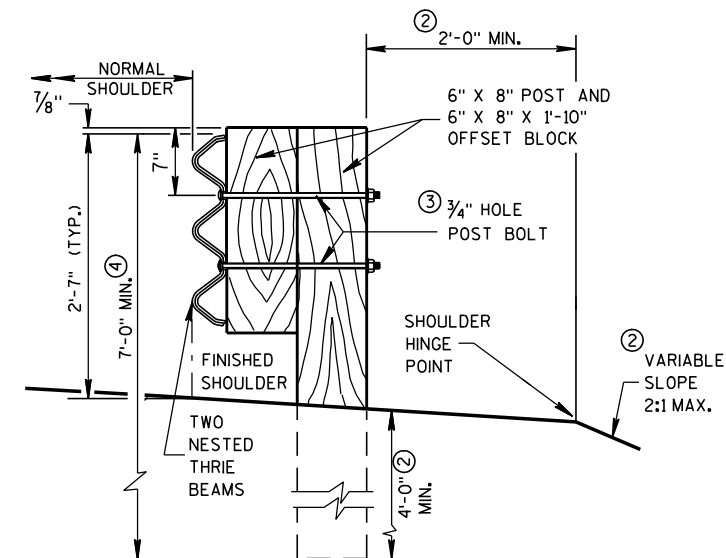
THRIE BEAM TERMINAL CONNECTOR



THRIE BEAM SPLICE



SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION A-A

STEEL THRIE BEAM STRUCTURE APPROACH

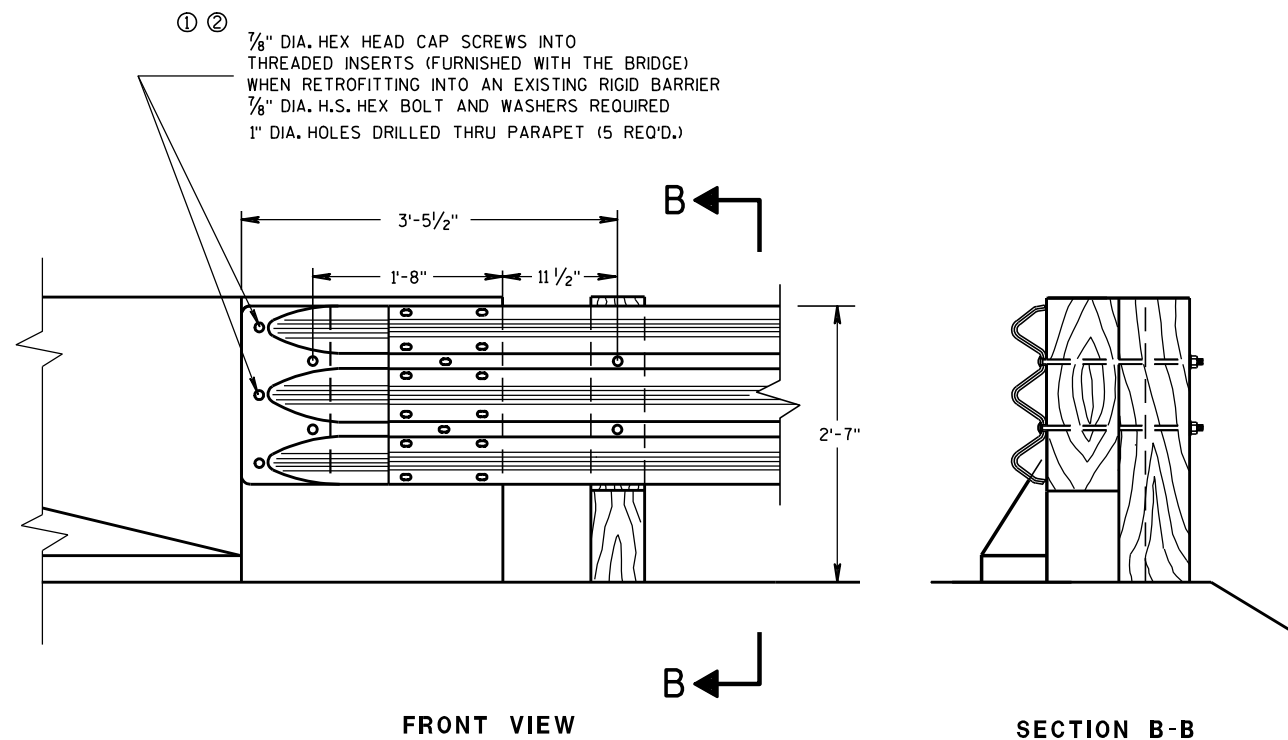
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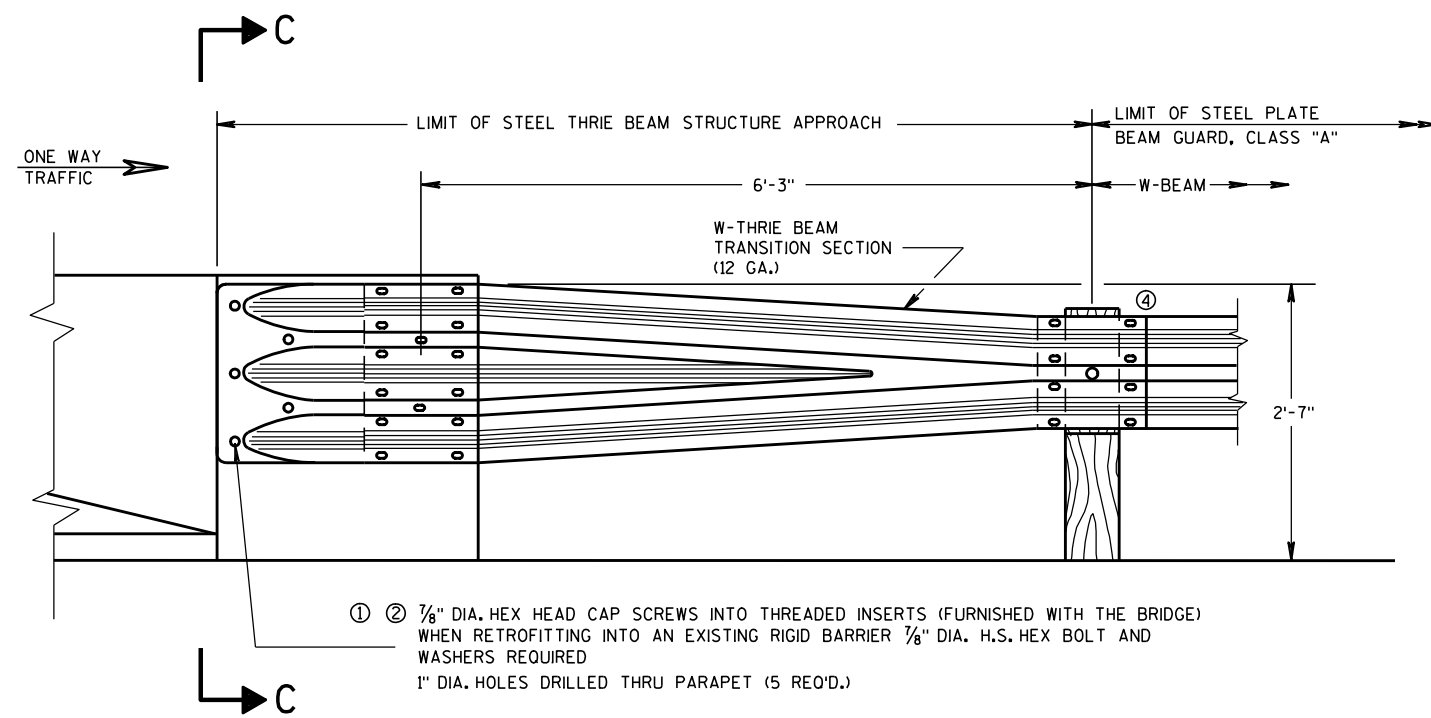
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/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



THRIE BEAM CONNECTION TO BRIDGE
PARAPET WITH SQUARE ENDS



W BEAM TRANSITION AND CONNECTION TO
BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

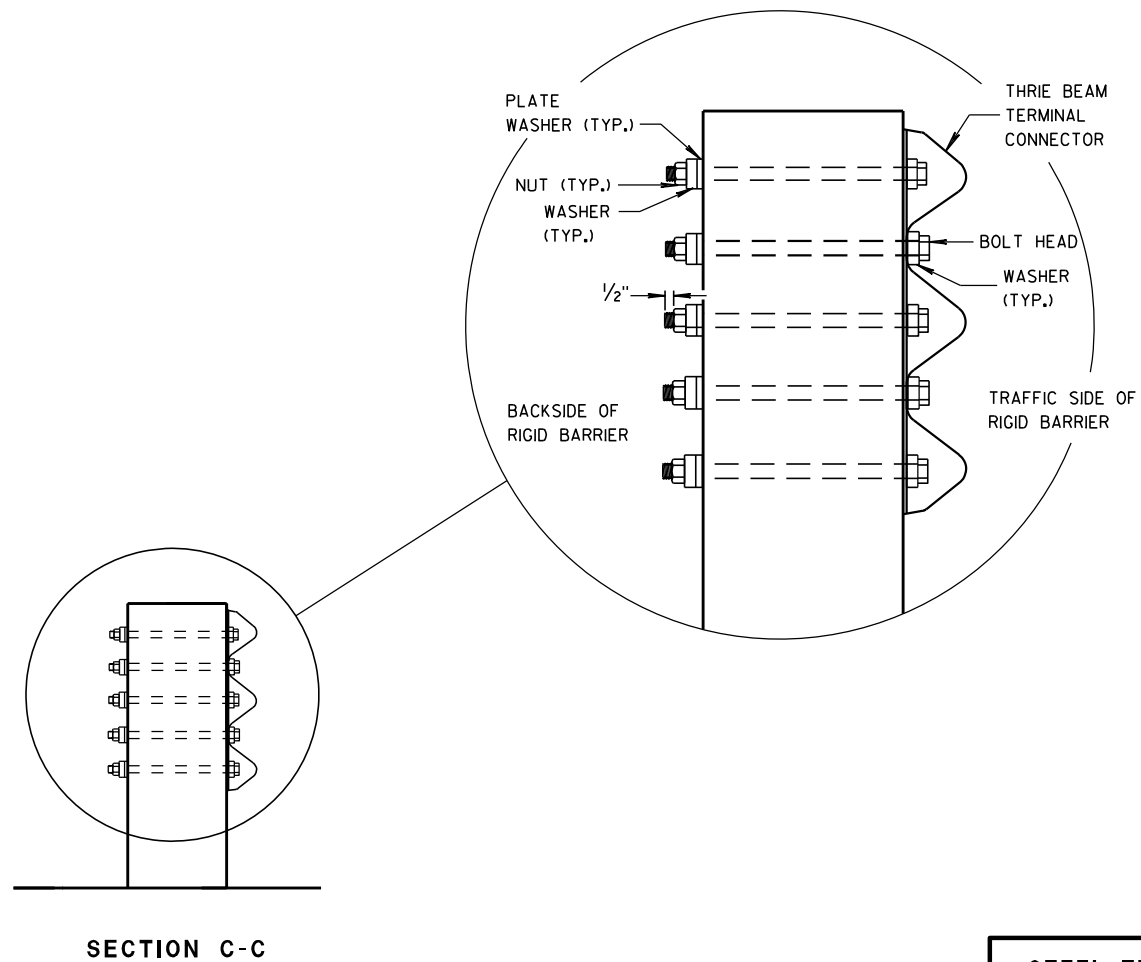
GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

BOLTS, NUTS AND WASHERS SHALL CONFORM TO ASTM A325, A449 AND GALVANIZED PER STANDARD SPECIFICATIONS 614.

- ① DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ② BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
- ③ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".
- ④ W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POST WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS.

DO NOT USE STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS IN THE STEEL THRIE BEAM STRUCTURAL APPROACH AND THE TRANSITION SECTION OF STEEL PLATE BEAM GUARD, CLASS "A" INSTALLATIONS.



STEEL THRIE BEAM STRUCTURE APPROACH, CONNECTION TO SQUARE END PARAPETS

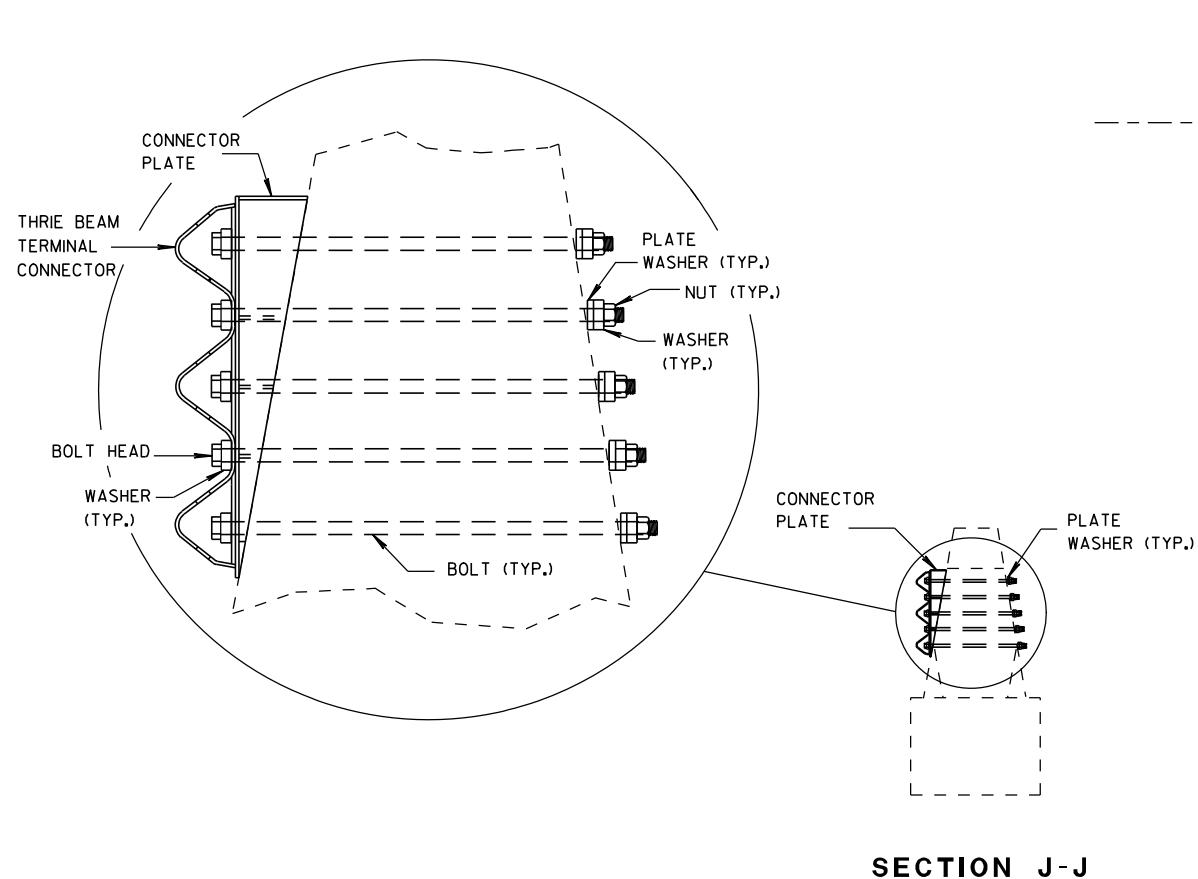
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ROADWAY STANDARDS DEVELOPMENT
ENGINEER



SECTION J-J

PLAN VIEW

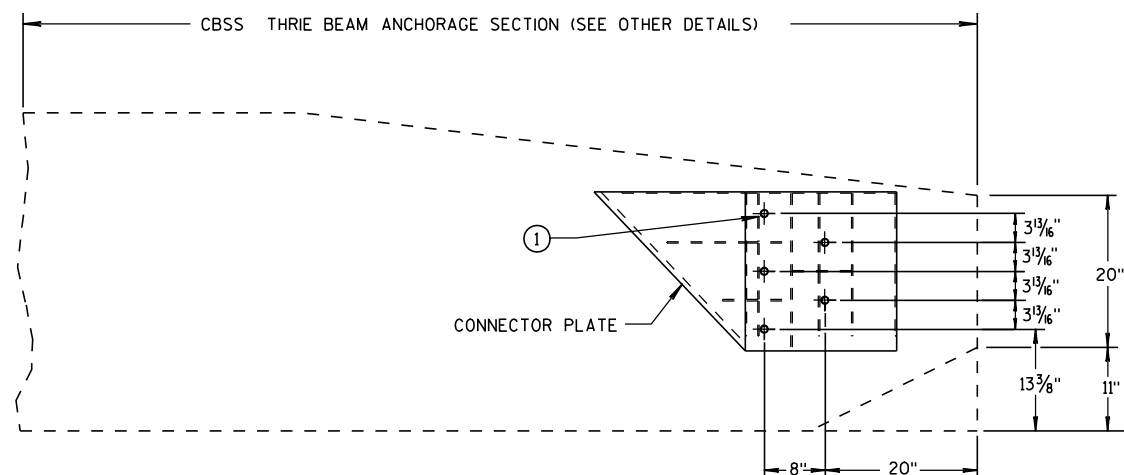
FRONT VIEW

GENERAL NOTES

CONSTRUCT PER STANDARD SPECIFICATION 614.

CONNECTOR PLATE, DRILLING HOLES THROUGH PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

- ① BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM TERMINAL CONNECTOR. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.



CONNECTOR PLATE LOCATION

STEEL THRIE BEAM STRUCTURE APPROACH

STEEL THRIE BEAM
STRUCTURE APPROACH,
SINGLE SLOPE ATTACHMENT

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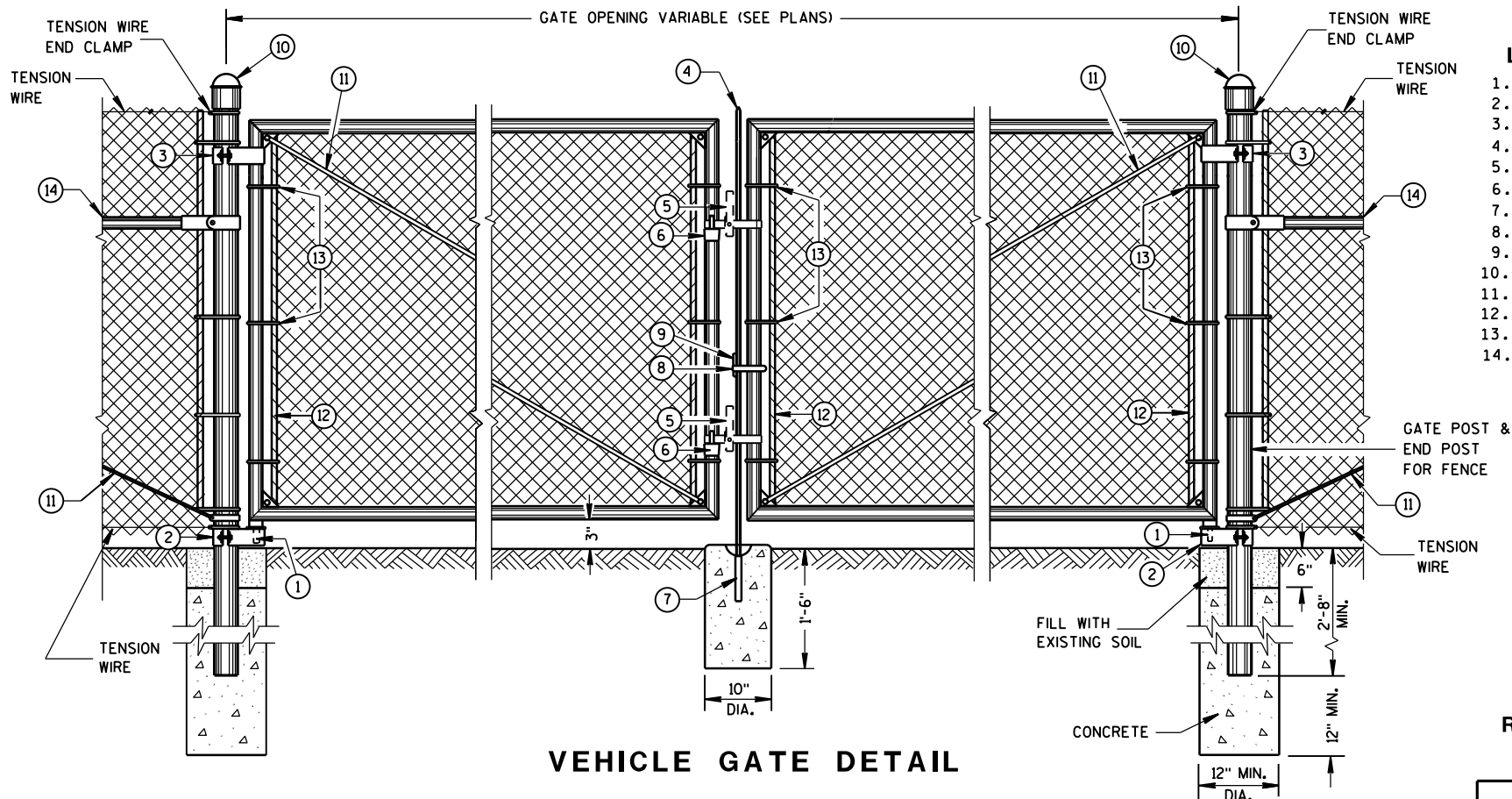
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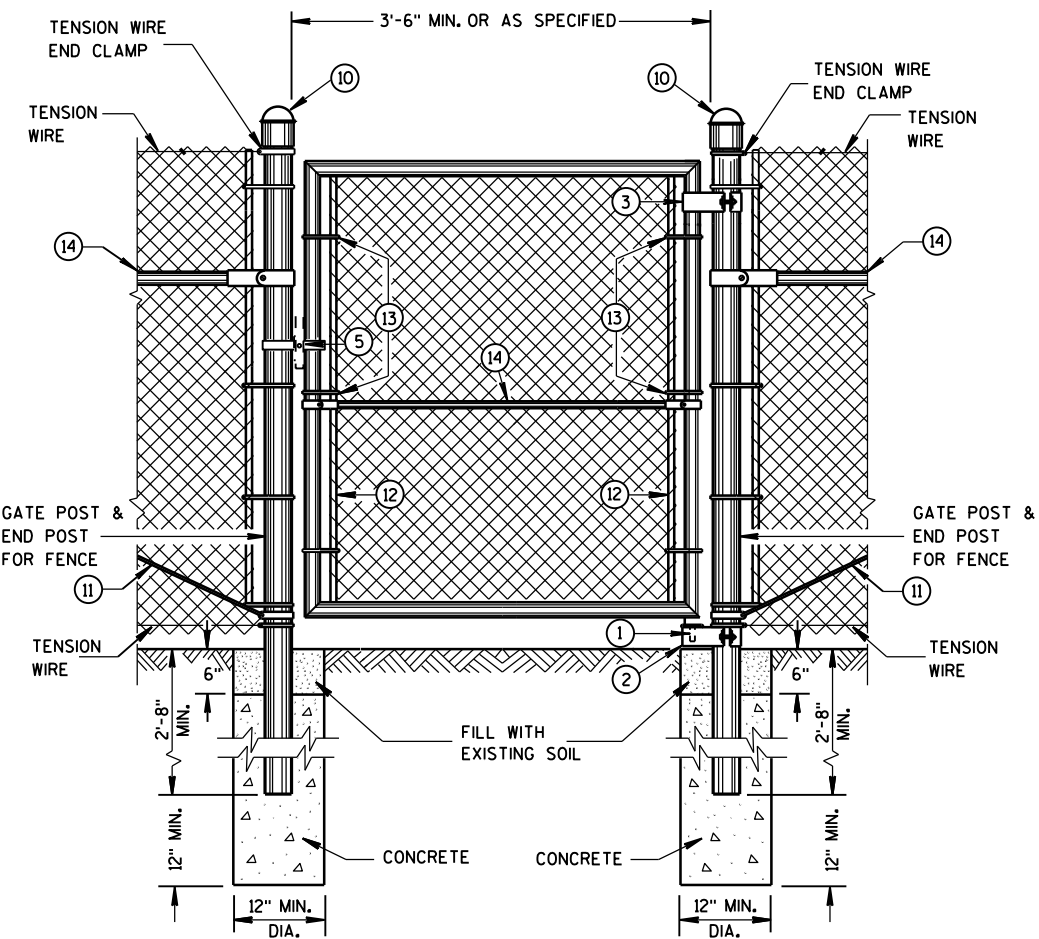
/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT

ENGINEER



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2+
	GREATER THAN OR EQUAL TO 8 FT.	FS3

BRACE RAIL TYPES

USE	TYPE
BRACE RAIL	SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

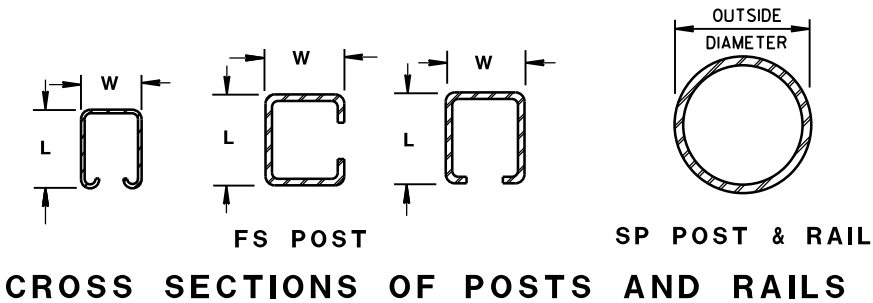
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



ROLLED-FORMED STEEL FENCE POST
(2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2+	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST
(1.8 OZ./SQ. FT. COATING)

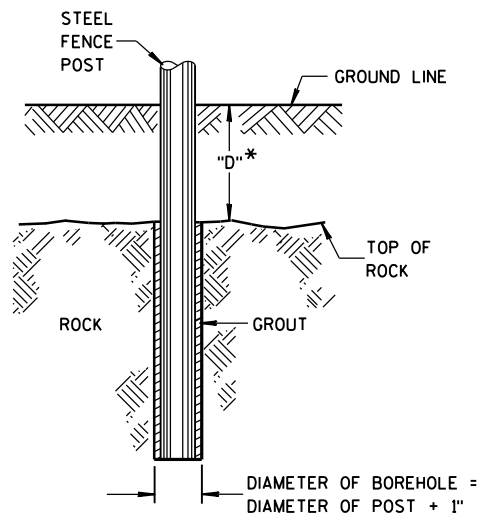
POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

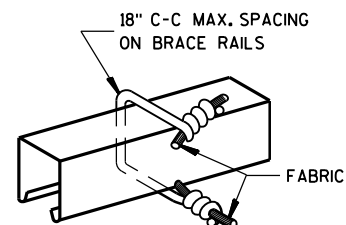
FENCE CHAIN LINK

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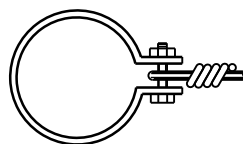
* IF "D" IS LESS THAN 2'-6",
DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST

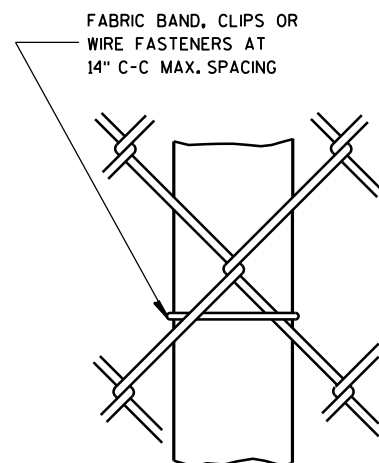


BRACE RAIL FABRIC FASTENER

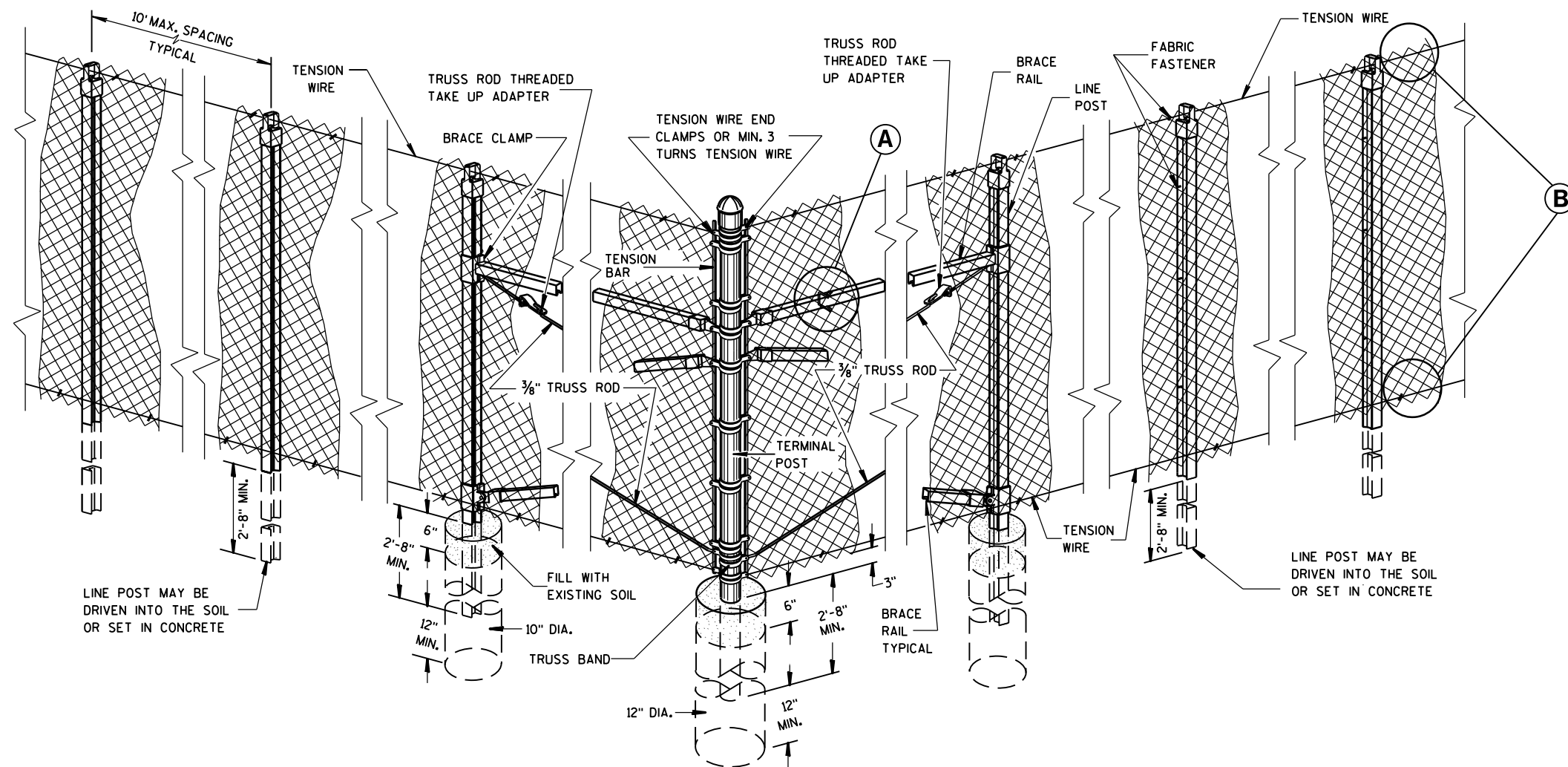
(A)



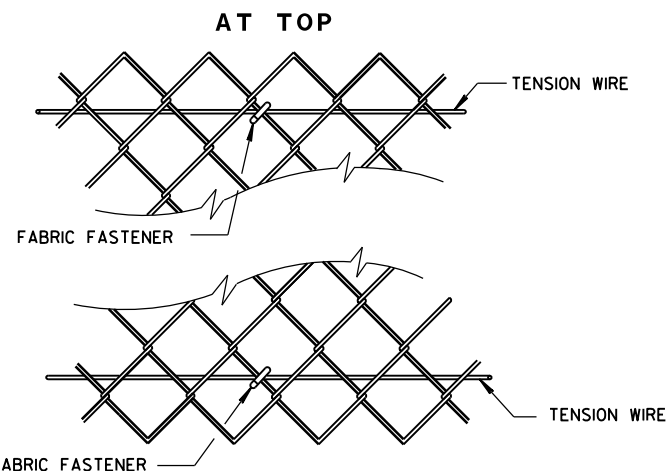
TENSION WIRE END CLAMP



LINE POST FABRIC FASTENER



END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS

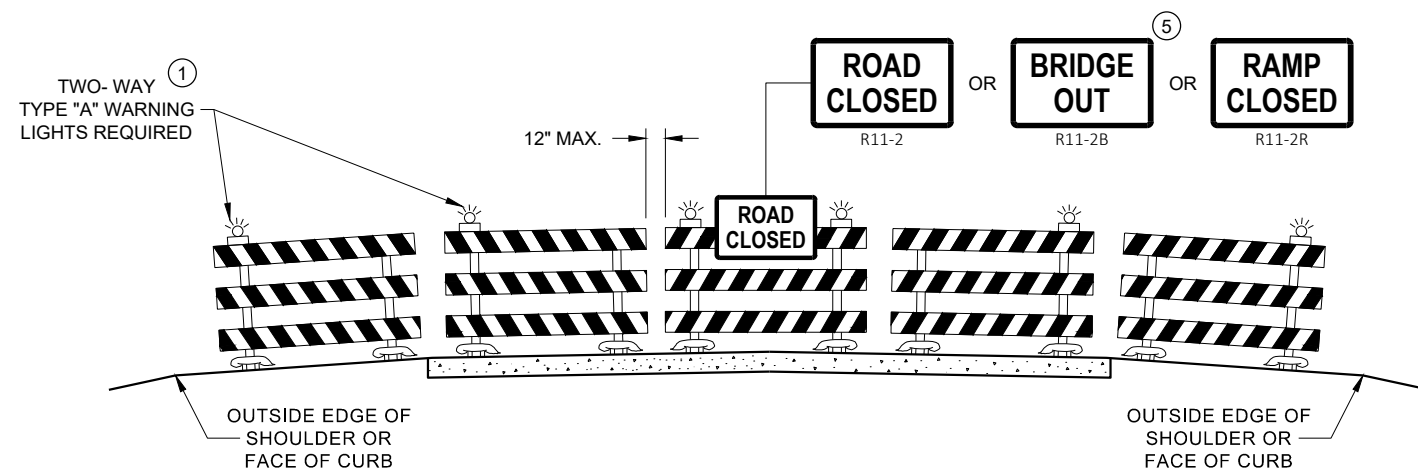


(B)

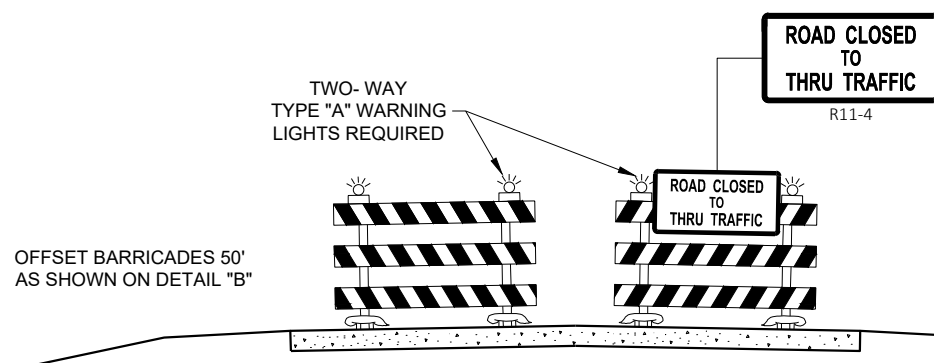
FENCE CHAIN LINK

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



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

BARRICADES THAT MUST BE MOVED FOR A WORK OPERATION SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OF THE OPERATION, OR FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.

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

ALL TYPE III BARRICADES SHALL HAVE RAILS REFLECTORIZED ON BOTH FACES. STRIPES SHALL BE PROPERLY SLOPED DOWN TOWARD THE TRAFFIC SIDE OR AS SHOWN IN THE ROAD CLOSURE BARRICADE DETAIL "D" FOR FULL ROAD CLOSURES.

TYPE "A" LOW - INTENSITY FLASHING WARNING LIGHTS SHALL BE VISIBLE ON BOTH SIDES OF THE BARRICADE.

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

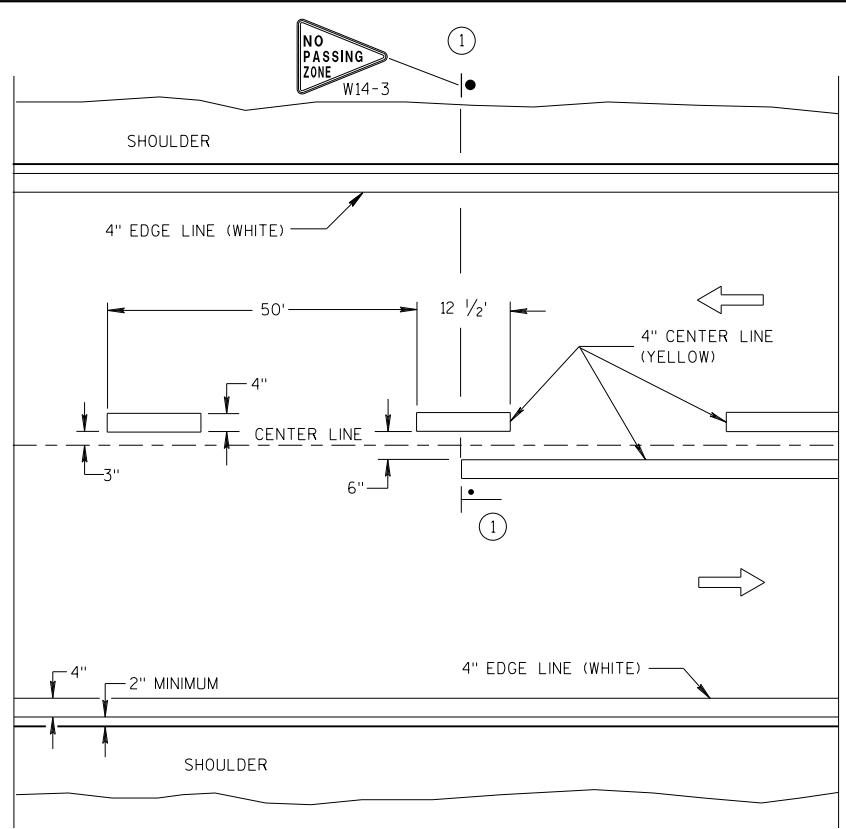
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT AN INTERSECTION.
- ③ FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "D".
- ④ FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL "E".
- ⑤ FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11 - 2 AND R11 - 3 SIGNS.
- ⑥ INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- ⑦ "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

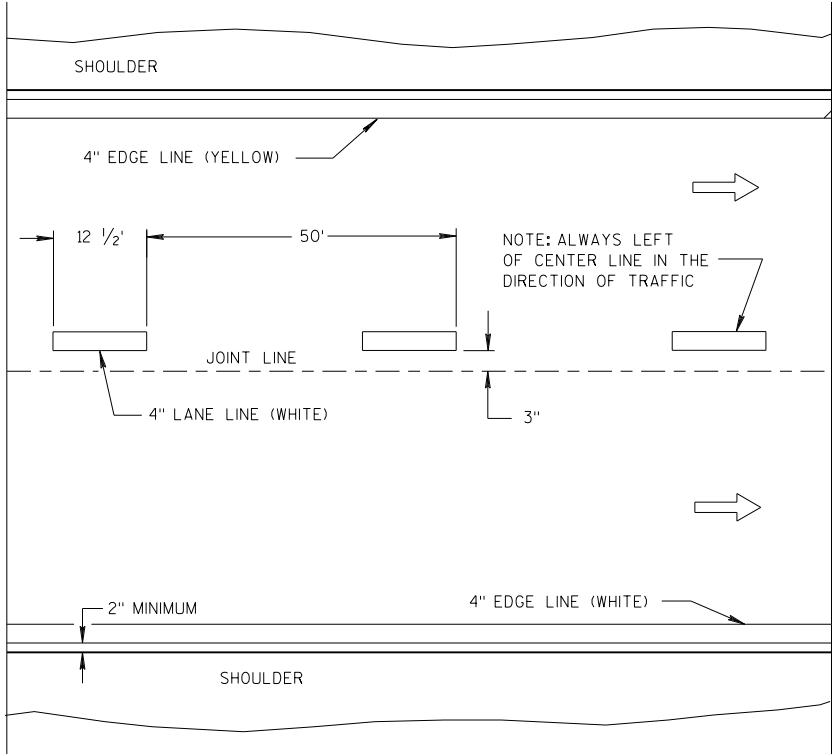
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

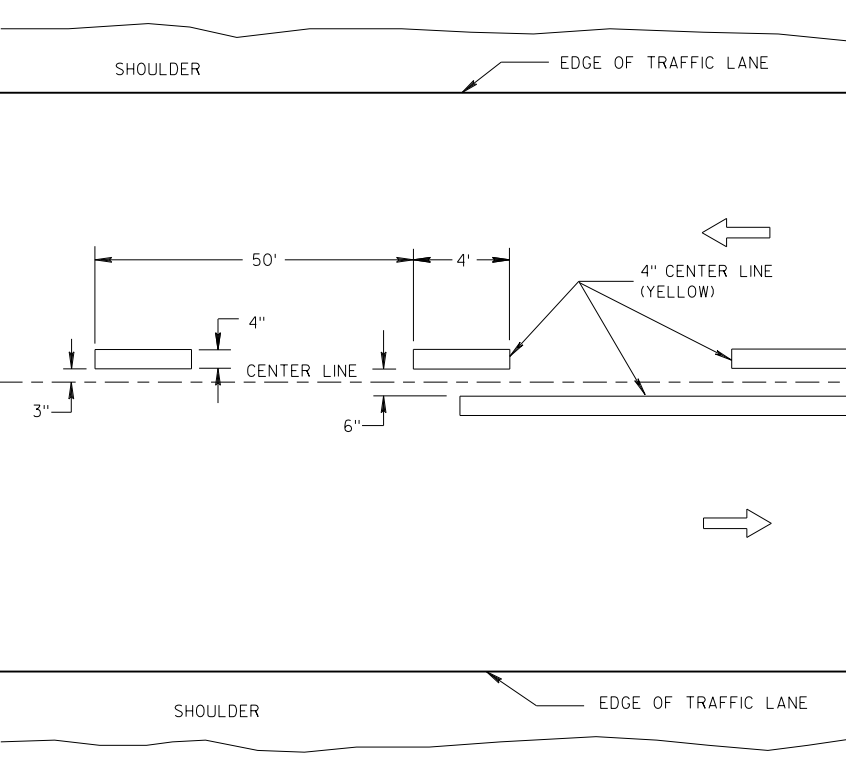


TWO WAY TRAFFIC

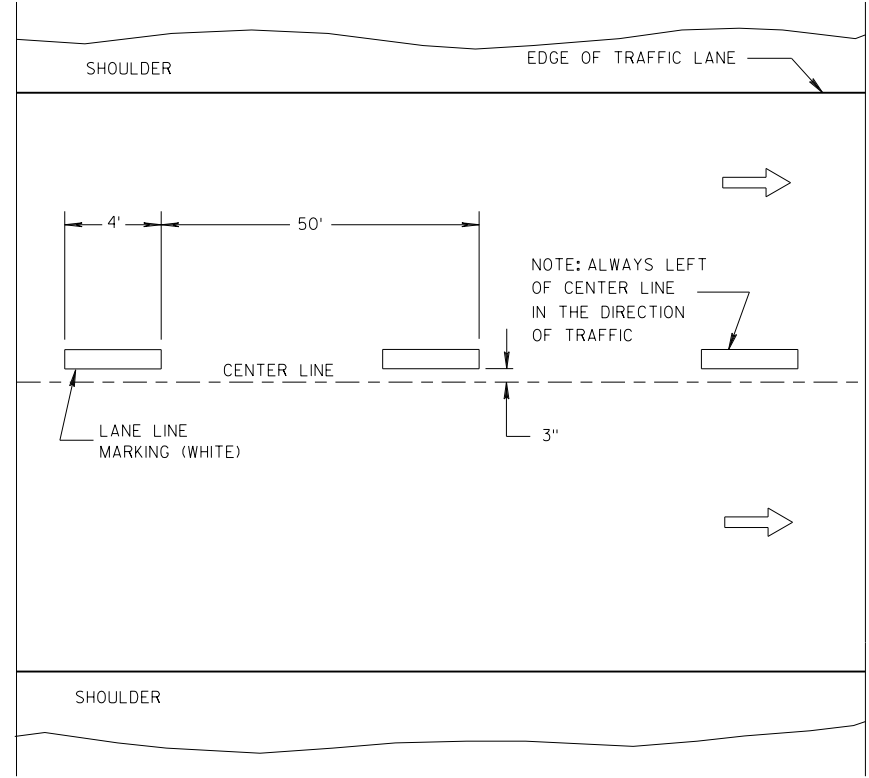


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

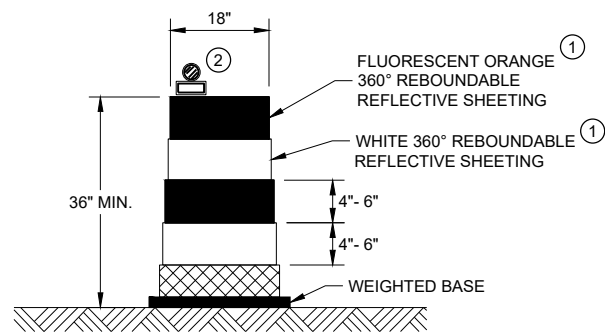
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

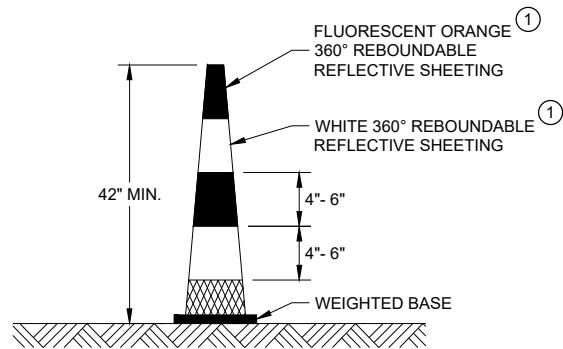
LONGITUDINAL MARKING (MAINLINE)

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7/2018 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

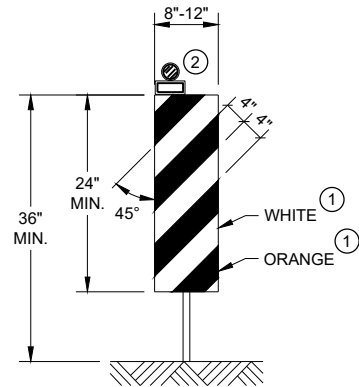


DRUM



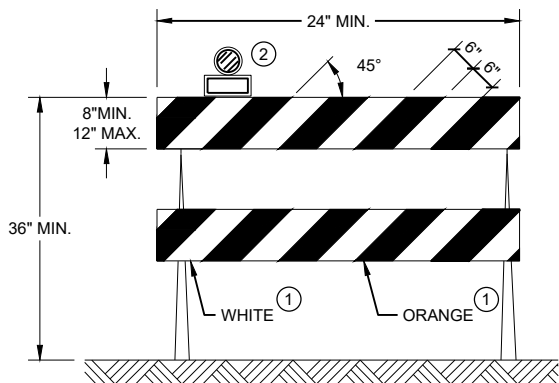
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



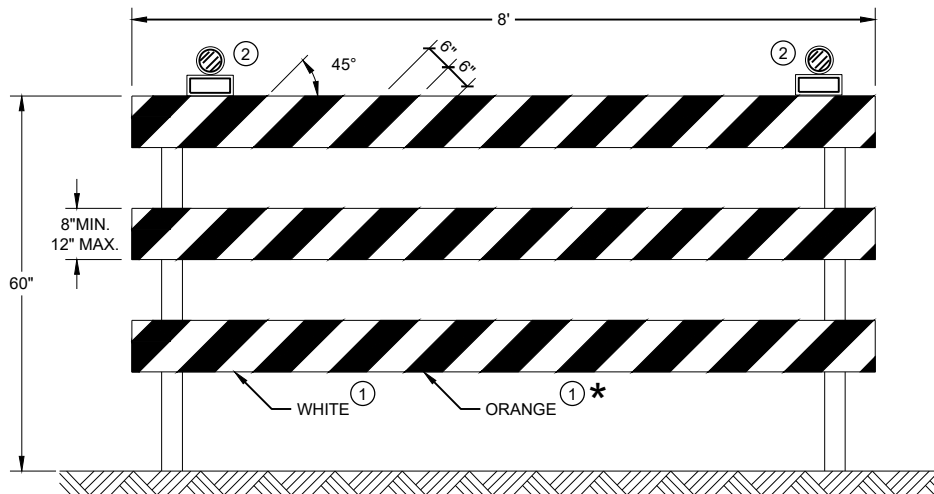
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE 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.

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

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

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

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

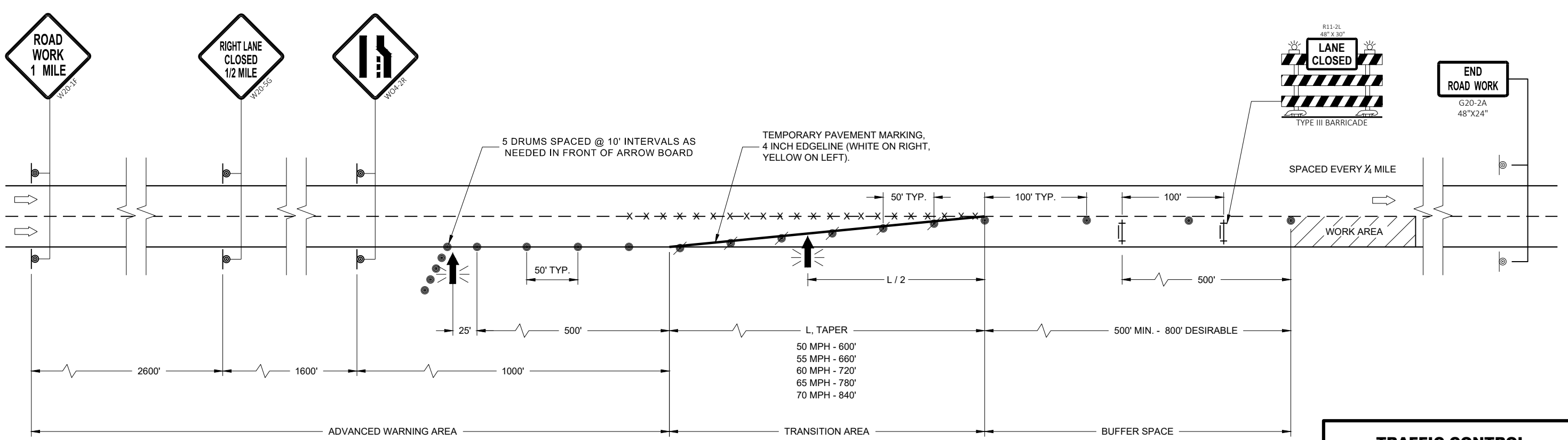
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS

NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. 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 ONE HALF 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 ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL LANE CLOSURE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2018 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE 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.

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

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

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

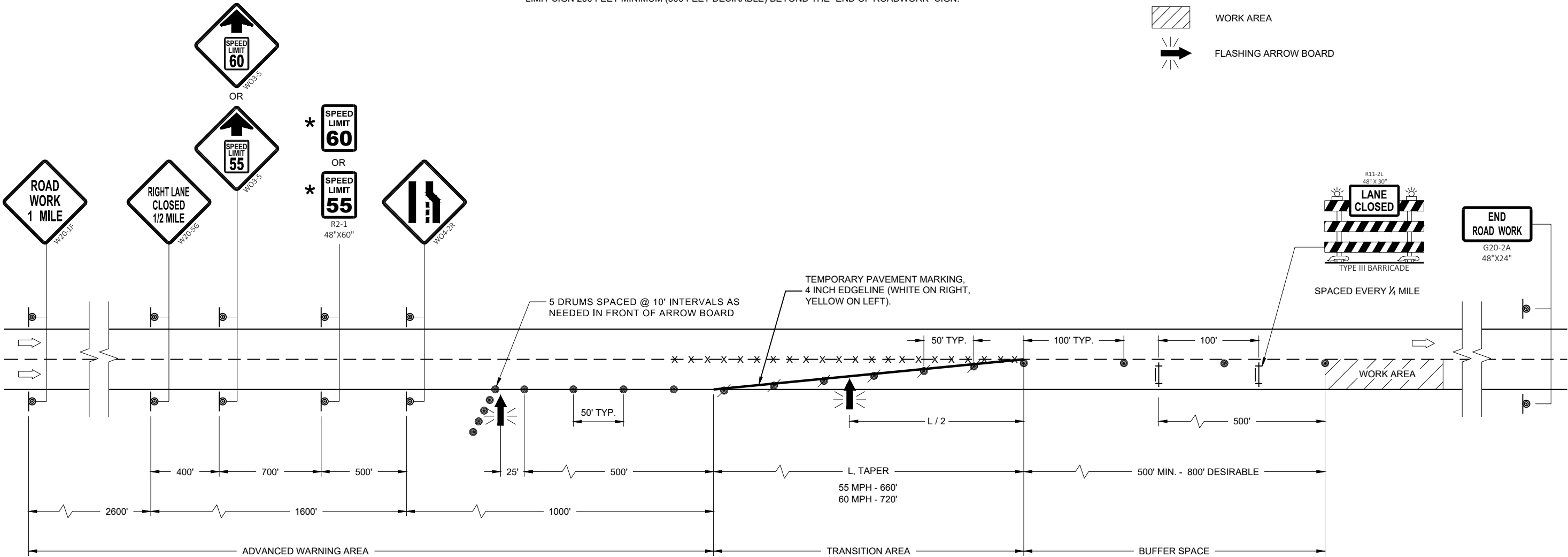
IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. 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 ONE HALF 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.

* A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. PLACE A SPEED LIMIT SIGN A MINIMUM OF EVERY 3 MILES. INCLUDE A RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END OF ROADWORK" SIGN.

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA
- FLASHING ARROW BOARD



TRAFFIC CONTROL,
LANE CLOSURE,
SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018
DATE /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

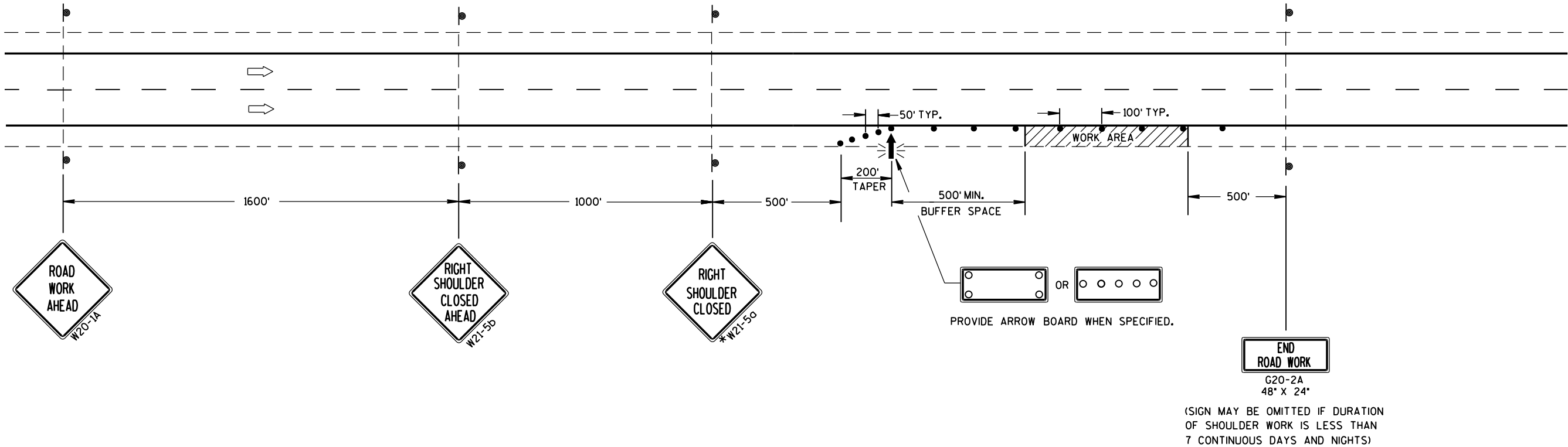
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

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

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.

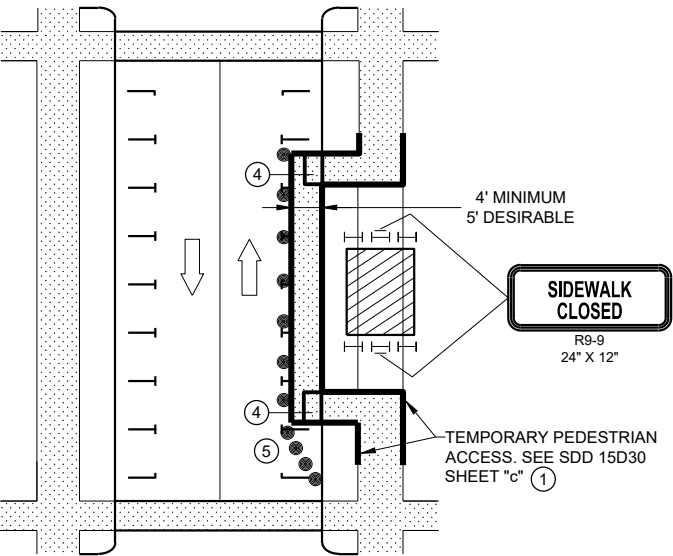


TRAFFIC CONTROL
SHOULDER CLOSURE ON DIVIDED
ROADWAY, SPEEDS GREATER
THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

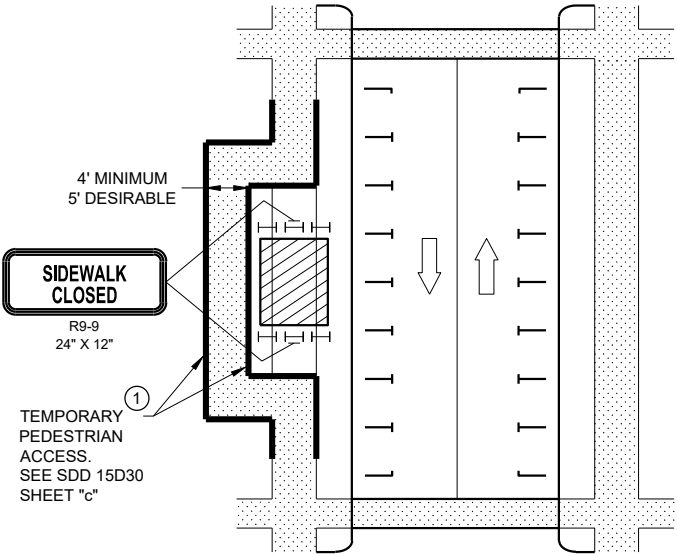
APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

NOTE: MAY BE USED ON ROADWAY WITH POSTED SPEED OF LESS THAN 40 MPH.

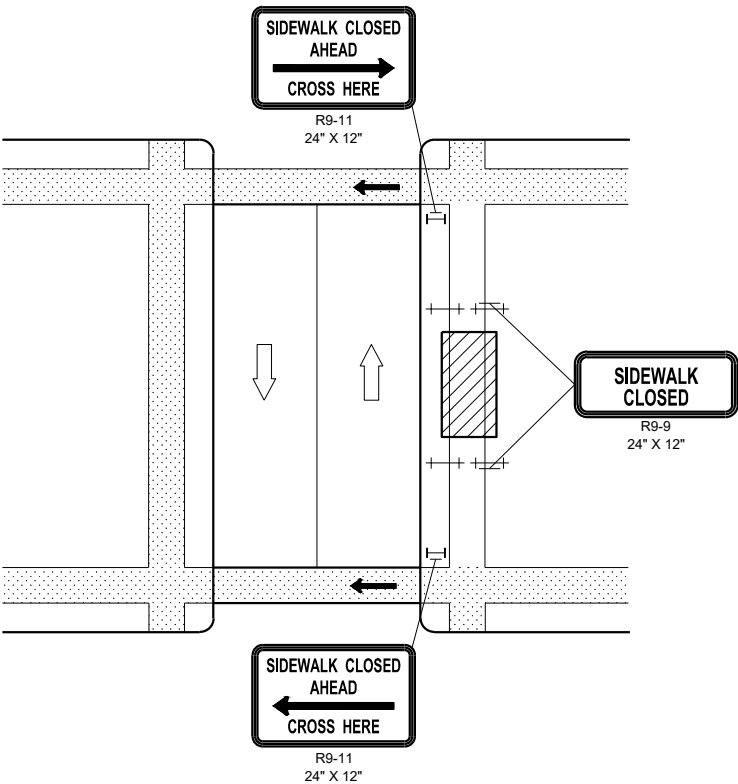


MID-BLOCK SIDEWALK CLOSURE
IN PARKING LANE

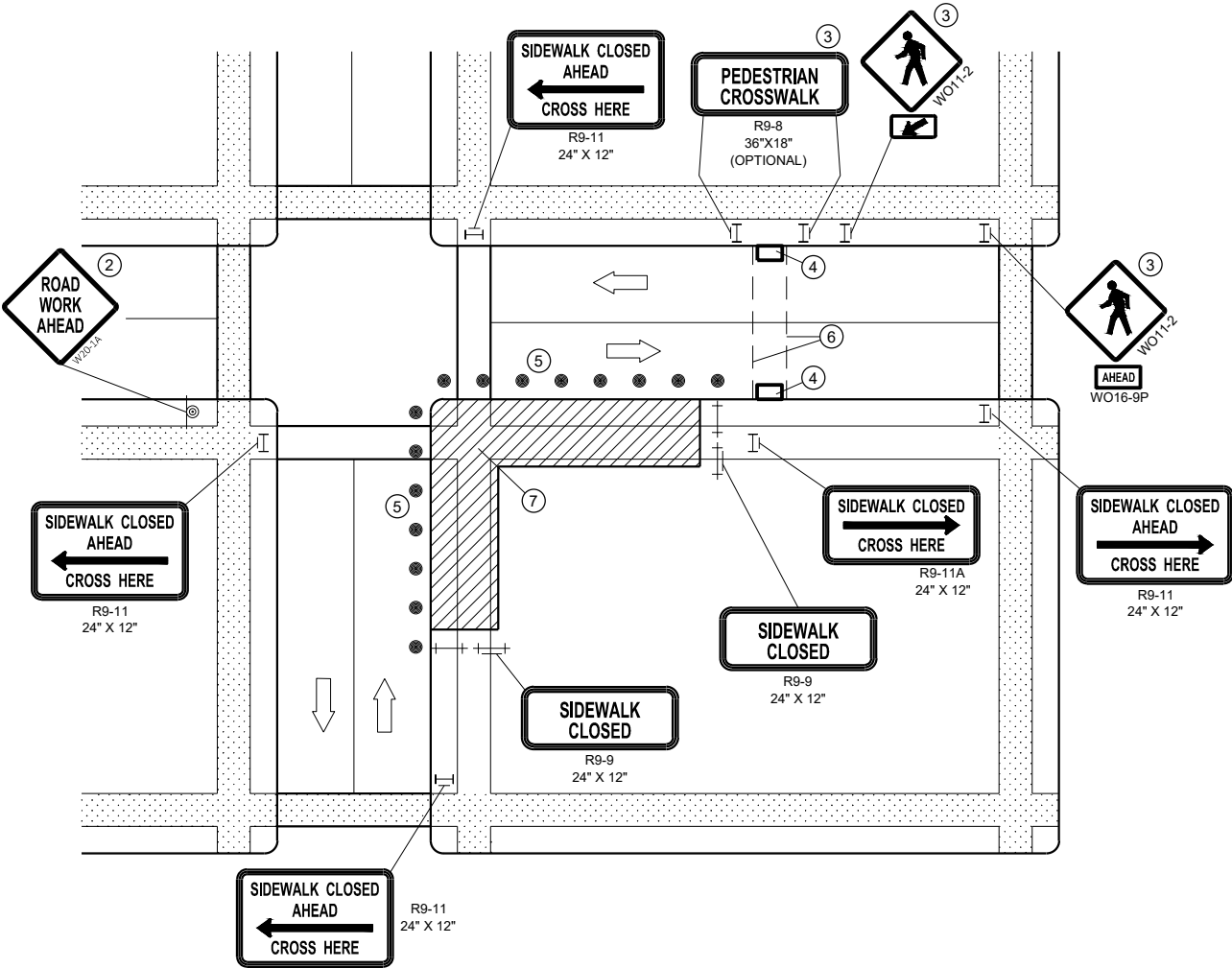
NOTE: LAYOUT SAME AS ABOVE.



SIDEWALK DIVERSION



MID-BLOCK SIDEWALK
CLOSURE



CORNER SIDEWALK CLOSURE WITH TEMPORARY CROSSWALK

GENERAL NOTES

WHEN CLOSING OR RELOCATING CROSSWALKS OR SIDEWALKS, PROVIDE DETECABLE TEMPORARY FACILITIES AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH EXISTING PEDESTRIAN FACILITIES.

TEMPORARY TRAFFIC CONTROL DEVICES FOR PEDESTRIANS ARE SHOWN. OTHER DEVICES MAY BE NECESSARY TO CONTROL VEHICULAR TRAFFIC. STAGE WORK AS NECESSARY, TO PROVIDE A TEMPORARY PEDESTRIAN ACCESS ROUTE AT ALL TIMES. FOR ROADWAYS WITH NO AVAILABLE DETOURS, MAINTAIN ONE OPEN SIDEWALK AT ALL TIMES.

"WO" SIGN IS THE SAME AS "W" SIGN, EXCEPT THE BACKGROUND IS ORANGE.

FOR NIGHTTIME CLOSURE, USE TYPE "A" FLASHING WARNING LIGHTS ON BARRICADES, SUPPORTING SIGNS AND CLOSING SIDEWALK. USE TYPE "C" STEADY BURN LIGHTS ON CHANNELIZING DEVICES SEPARATING THE WORK AREA FROM VEHICULAR TRAFFIC.

PEDESTRIAN TRAFFIC SIGNAL DISPLAY CONTROLLING CLOSED CROSSWALK SHALL BE COVERED OR DEACTIVATED.

POST MOUNTED SIGNS LOCATED ADJACENT TO A SIDEWALK SHALL HAVE A 7 FOOT MINIMUM CLEARANCE FROM THE BOTTOM OF THE SIGN TO THE SIDEWALK SURFACE.

ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.

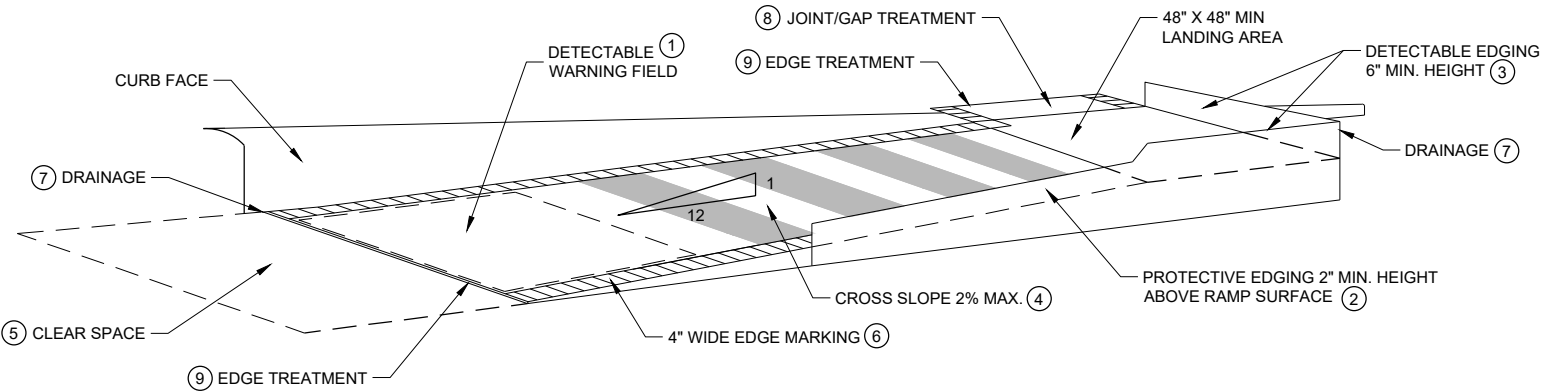
- ① IF SIDEWALK CLOSURE AFFECTS AN ACCESSIBLE AND DETECTABLE FACILITY, MAINTAIN ACCESSIBILITY AND DETECTABILITY ALONG THE ALTERNATE PEDESTRIAN ROUTE
- ② "ROAD WORK AHEAD" SIGNS ARE NOT REQUIRED IF THE SIDEWALK CLOSURE OCCURS WITHIN A LARGER WORK ZONE WHERE ADVANCE WARNING SIGNS ARE ALREADY PRESENT, OR IF THE WORK AREA AND EQUIPMENT ARE MORE THAN 2 FEET BEHIND THE CURB.
- ③ IF TEMPORARY PEDESTRIAN CROSSWALK IS NOT PROVIDED, OMIT R9-8 AND WO11-2 SIGN ASSEMBLIES. IF PROVIDED INCLUDE ON BOTH SIDES OF THE CROSSWALK.
- ④ TEMPORARY CURB RAMPS. SEE SDD 15D30 SHEET "b".
- ⑤ DRUMS OR BARRICADES AT 25 FOOT SPACING. STREET PARKING SHALL BE PROHIBITED FOR AT LEAST 50 FEET IN ADVANCE OF THE MID-BLOCK CROSSWALK.
- ⑥ TEMPORARY PAVEMENT MARKING FOR CROSSWALK LINES.
- ⑦ LIMIT WORK TO ONE QUADRANT AT A TIME TO MINIMIZE PEDESTRIAN DISRUPTION.

LEGEND

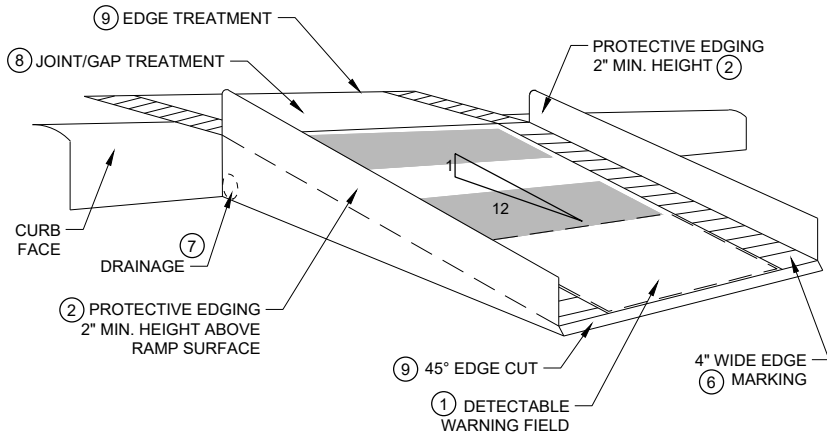
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE II BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- TYPE III BARRICADE WITH/WITHOUT SIGN (ALL WITH ONE WARNING LIGHT, TYPE A, LOW INTENSITY FLASHING)
- UNDER PEDESTRIAN TRAFFIC
- WORK AREA
- PEDESTRIAN CHANNELIZATION DEVICE
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

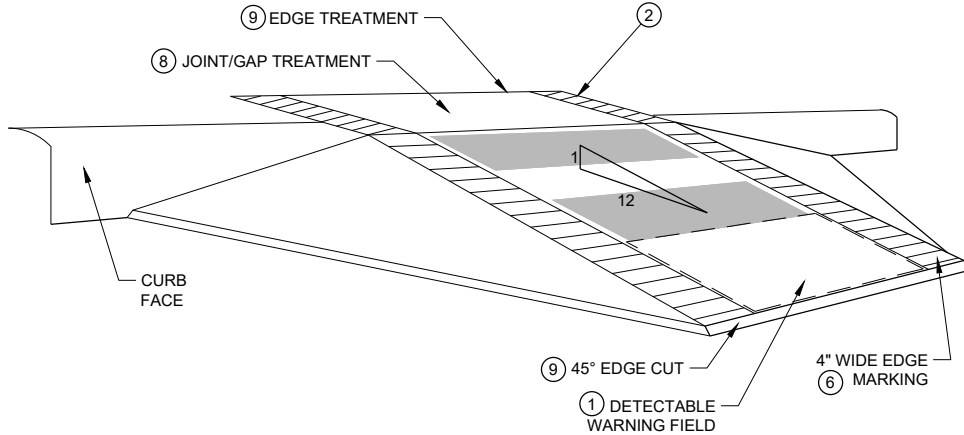
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TEMPORARY CURB RAMP PARALLEL TO CURB



WITH PROTECTIVE EDGE



WITH SIDE APRON

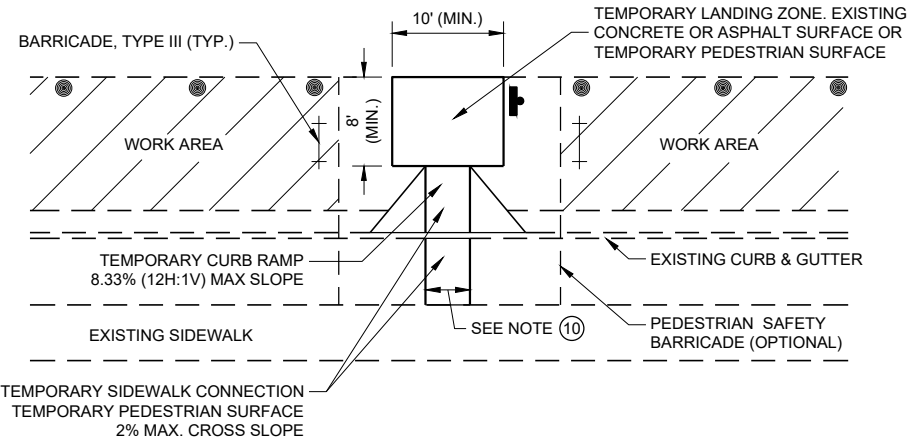
TEMPORARY CURB RAMP PERPENDICULAR TO CURB

LEGEND

- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE
- WORK AREA

GENERAL NOTES

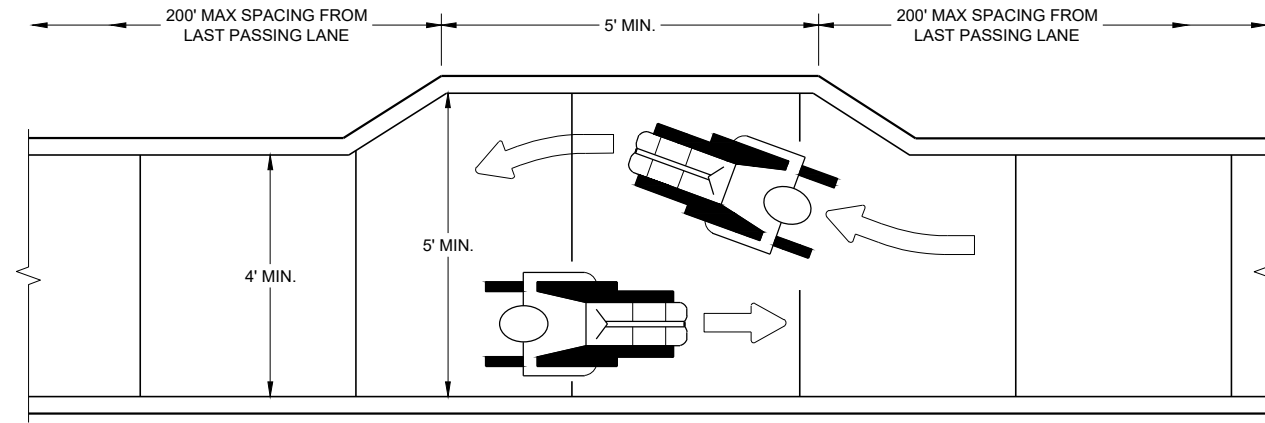
- NOTIFY THE BUS COMPANY 7 DAYS IN ADVANCE OF THE BUS STOP RELOCATION.
- ALTERNATE SIDEWALK WORK BETWEEN LEFT AND RIGHT SIDE OF ROADWAY TO MAINTAIN PEDESTRIAN ACCESS.
- CURB RAMPS SHALL BE 48" MIN. WIDTH WITH A FIRM, STABLE AND SLIP RESISTANT SURFACE. INSTALL CONTRASTING DETECTABLE WARNING FIELD AT PEDESTRIAN STREET CROSSINGS. REFER TO SDD 08D05, SHEET "e".
- PROTECTIVE EDGING WITH A 2" MIN. HEIGHT SHALL BE INSTALLED WHEN A CURB RAMP OR LANDING PLATFORM HAS A VERTICAL DROP OF 6" OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN CURB RAMPS OR LANDING PLATFORMS HAVE A VERTICAL DROP OF 3" OR MORE.
- DETECTABLE EDGING WITH 6" MIN. HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
- CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX. CROSS-SLOPE.
- CLEAR SPACE OF 48" X 48" SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
- THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A YELLOW COLOR, 4" WIDE MARKING, UNLESS A CONTRASTING DETECTABLE WARNING FIELD IS PROVIDED.
- DO NOT RESTRICT WATER FLOW IN THE GUTTER SYSTEM.
- LATERAL JOINTS OR GAPS BETWEEN SURFACES SHALL BE LESS THAN 1/2" WIDTH.
- CHANGES BETWEEN SURFACE HEIGHTS SHALL NOT EXCEED 1/2". LATERAL EDGES SHALL BE VERTICAL UP TO 1/4" HIGH AND BEVELED AT 1:2 BETWEEN 1/4" AND 1/2".
- 5' WIDE MIN. WITH PEDESTRIAN SAFETY BARRICADE, 10' WIDE MIN. WITHOUT PEDESTRIAN SAFETY BARRICADE.



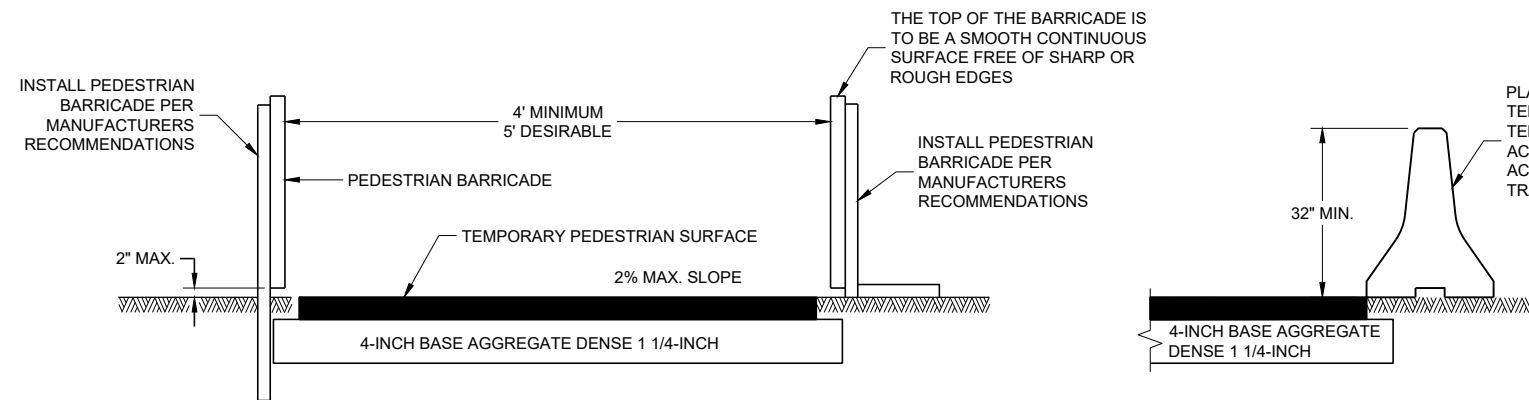
TEMPORARY BUS STOP PAD

TRAFFIC CONTROL,
PEDESTRIAN ACCOMMODATION

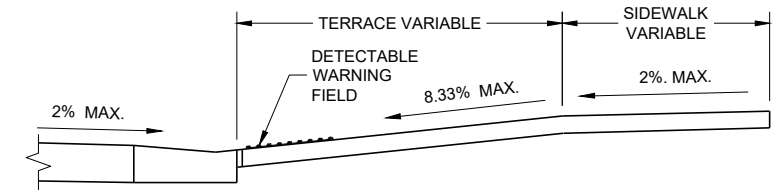
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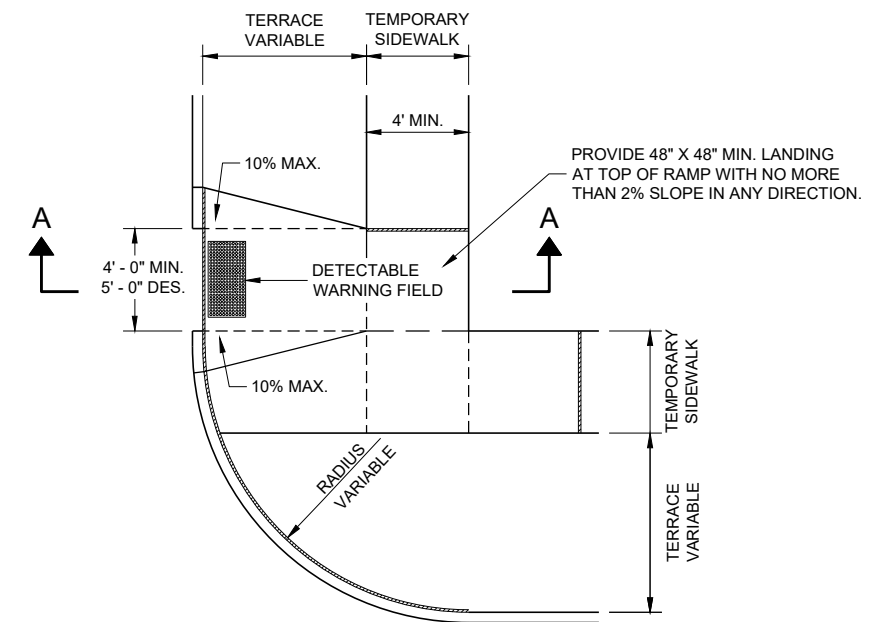
NARROW SIDEWALK PASSING DETAIL



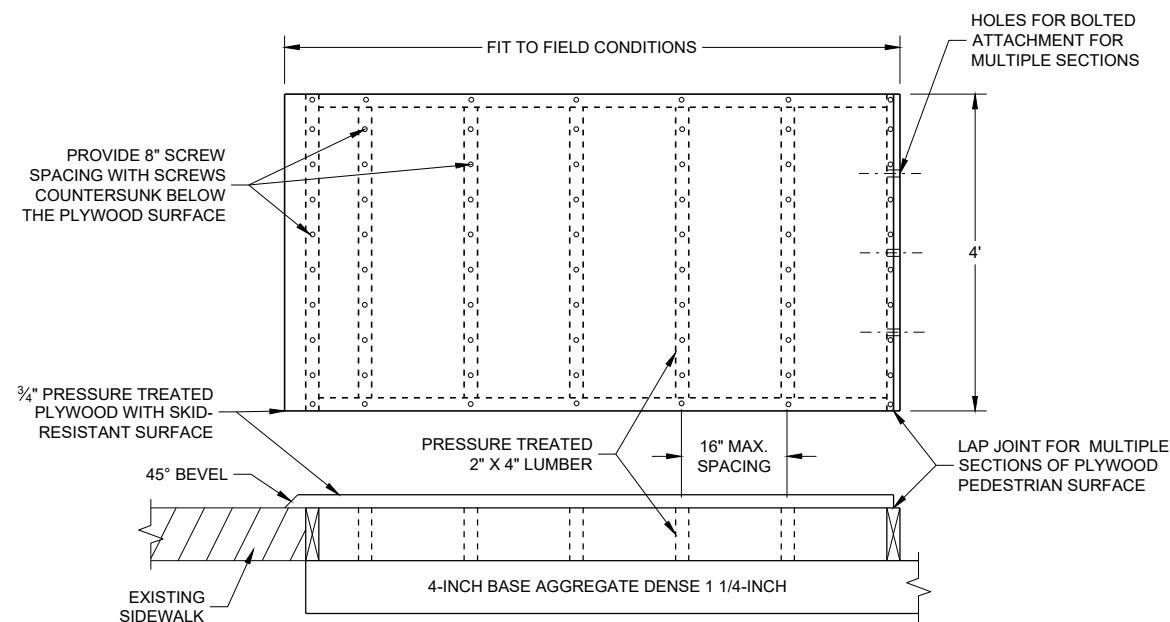
TEMPORARY PEDESTRIAN ACCESS



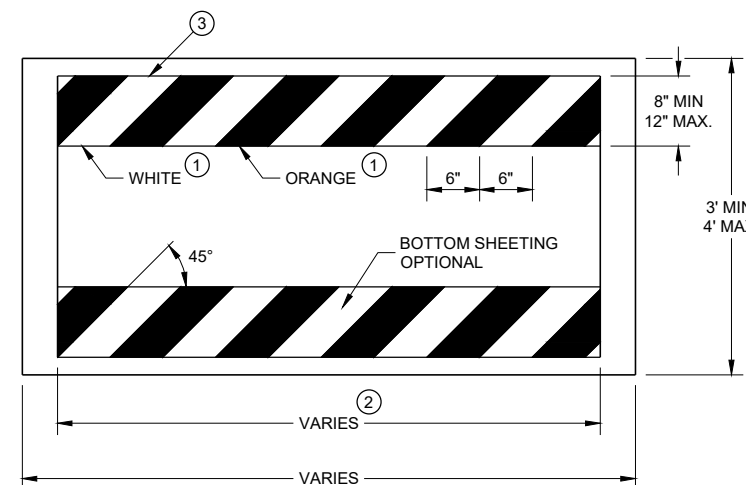
SECTION A - A



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



TEMPORARY PEDESTRIAN SURFACE PLYWOOD

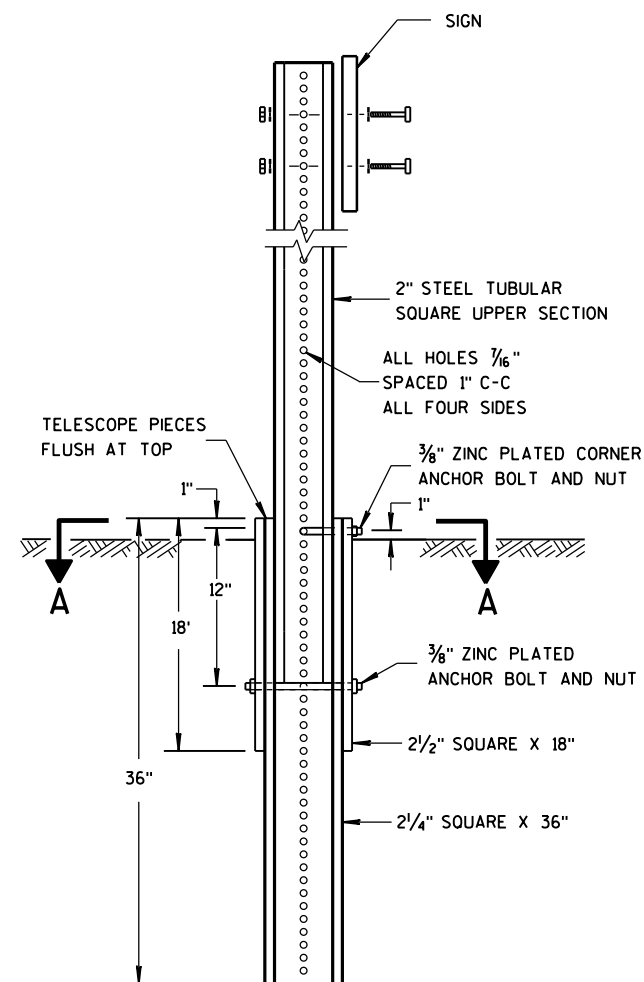


TEMPORARY PEDESTRIAN BARRICADE *

GENERAL NOTES

- BARRICADE DEVICE SELECTED FROM APPROVED PRODUCT LIST
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② SHEETING REQUIRED ON MORE THAN 50% OF BARRICADE WIDTH.
- ③ PLACE SHEETING ON BOTH SIDES OF THE BARRICADE.
- * USE THIS DETAIL FOR SHEETING PLACEMENT REFERENCE.

TRAFFIC CONTROL, PEDESTRIAN ACCOMMODATION	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

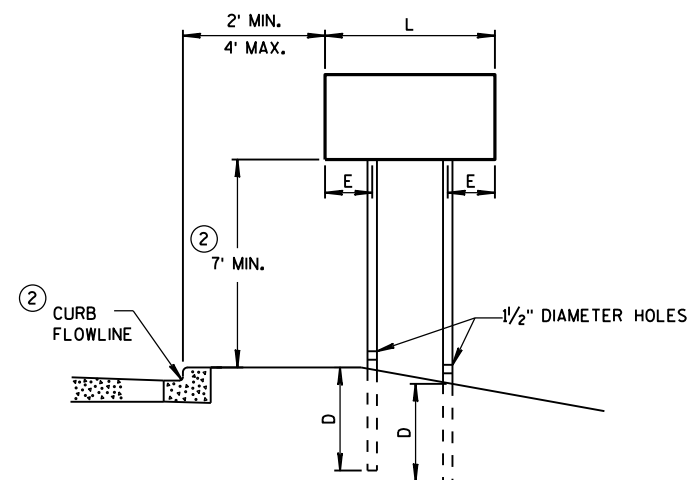
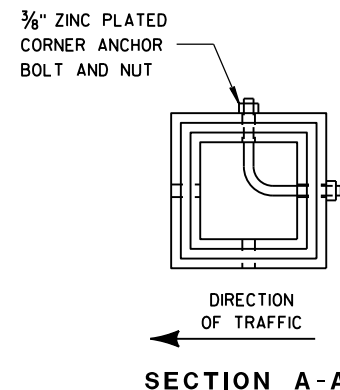


DETAIL OF TUBULAR
STEEL SIGN POST

TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL 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

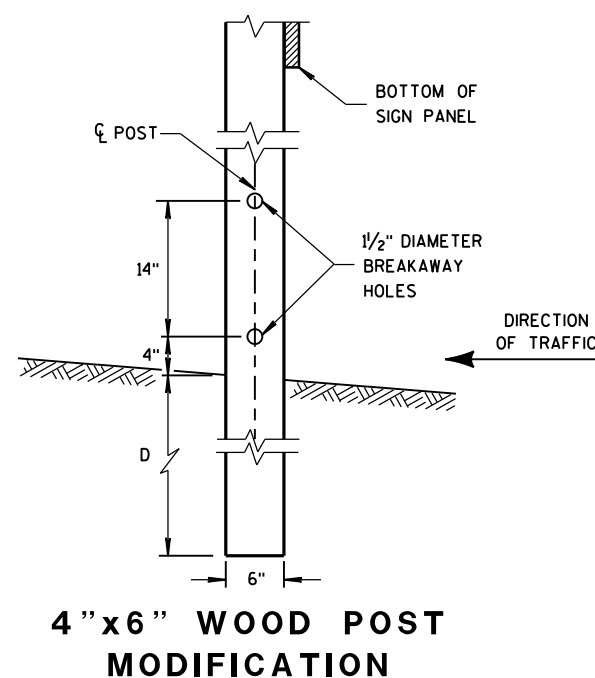
SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL
BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED
ON TUBULAR STEEL POSTS.



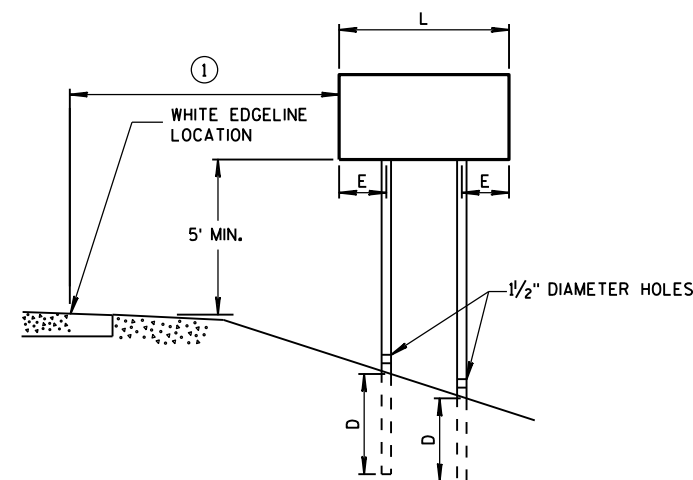
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH	
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

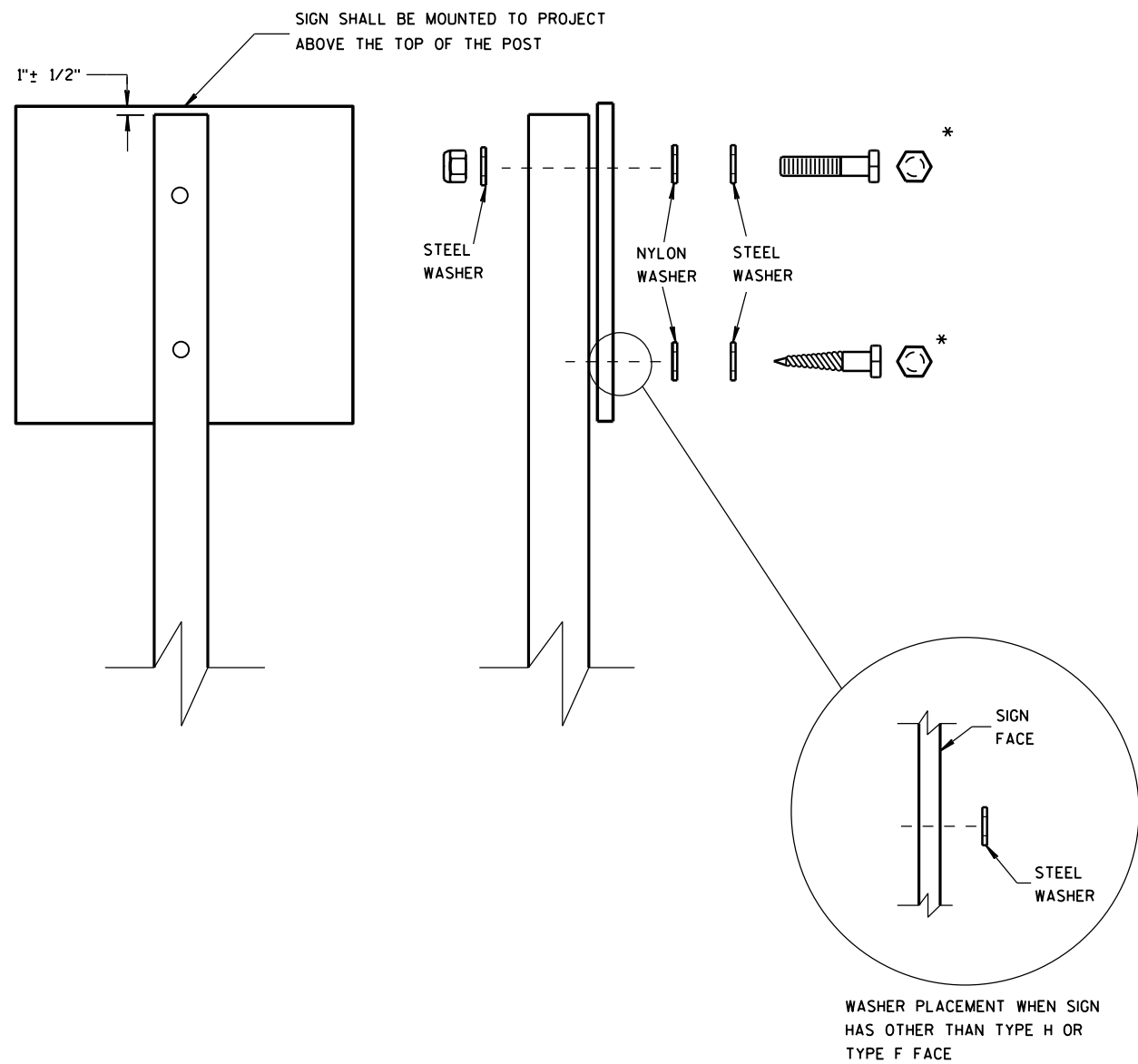
SEE NOTE ③

GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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.

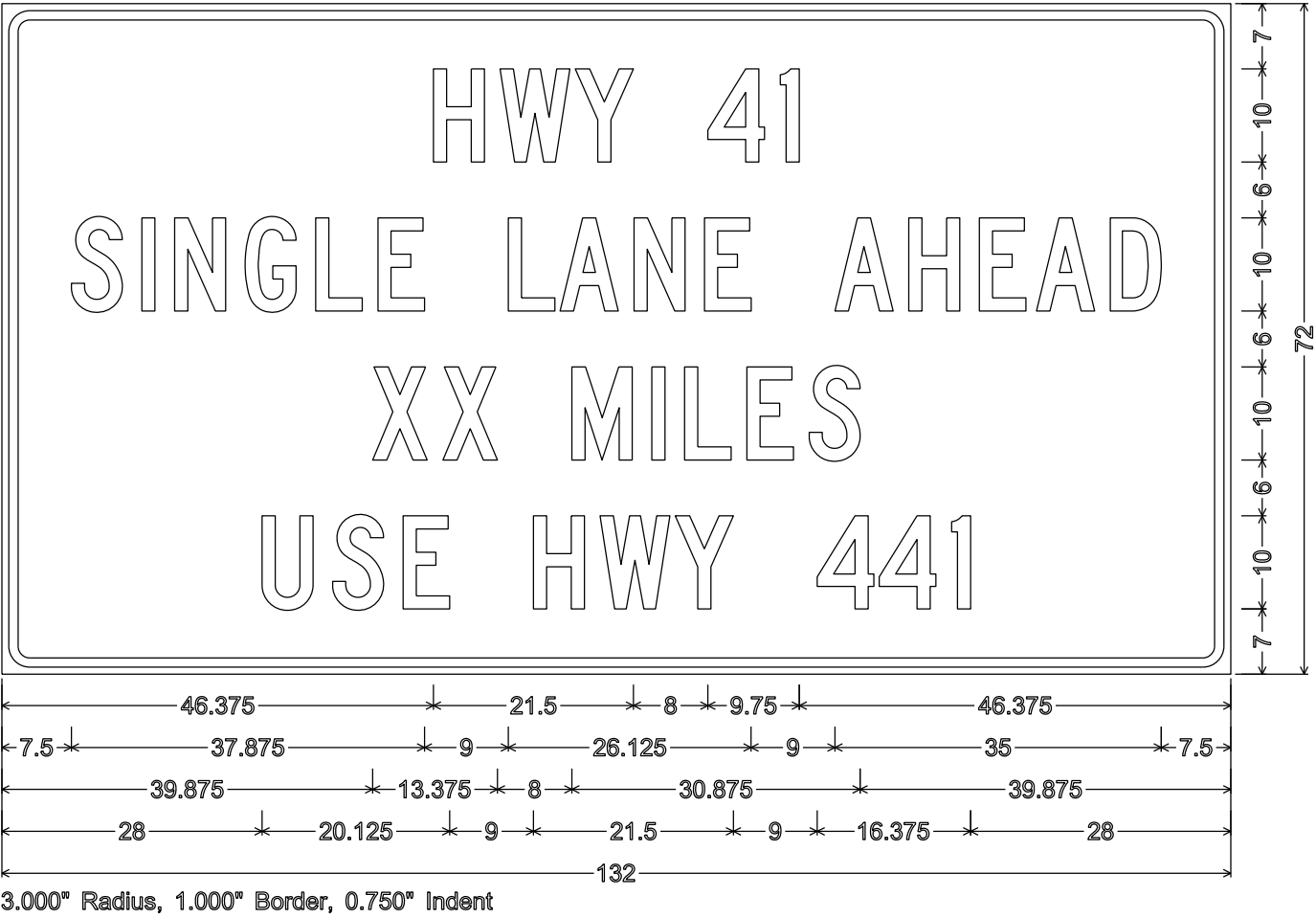
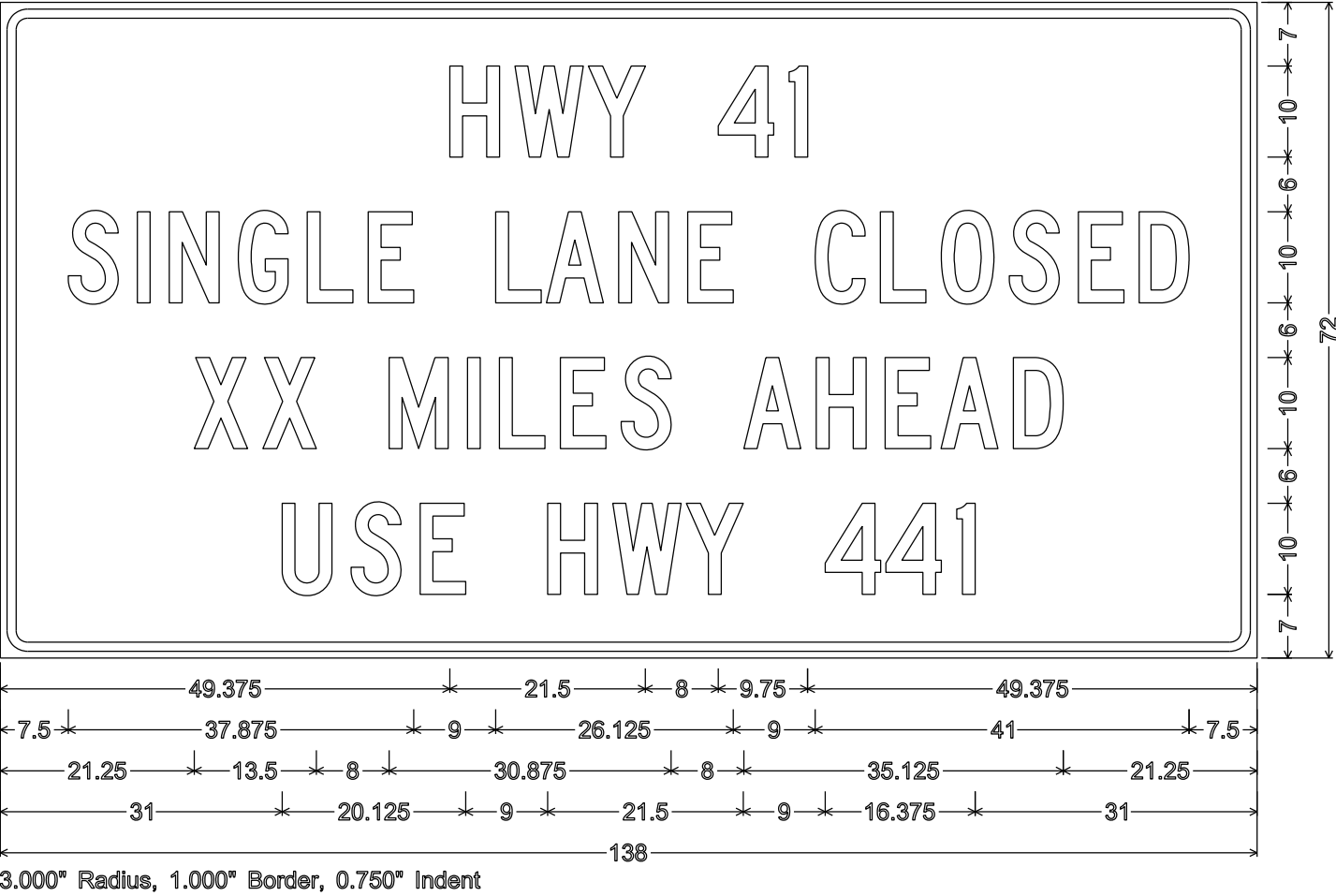
- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" x 3"
 - MACHINE BOLTS - 5/16" x 6-1/2" OR 7" LENGTH W/ NUTS

- 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

* 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. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heldtke WORK ZONE ENGINEER
FHWA	

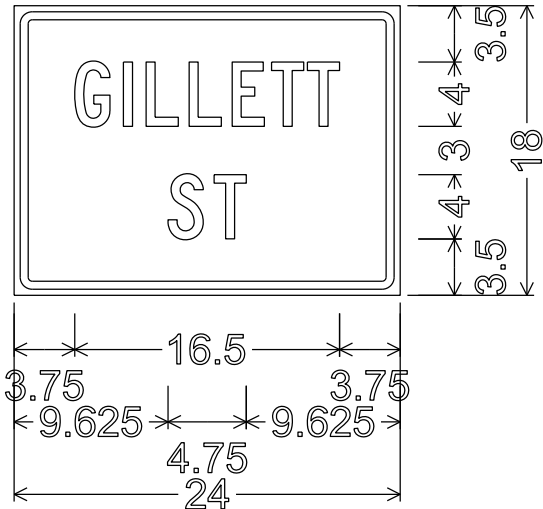


NOTES

- 1. Fixed Message Type II Signs - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - C

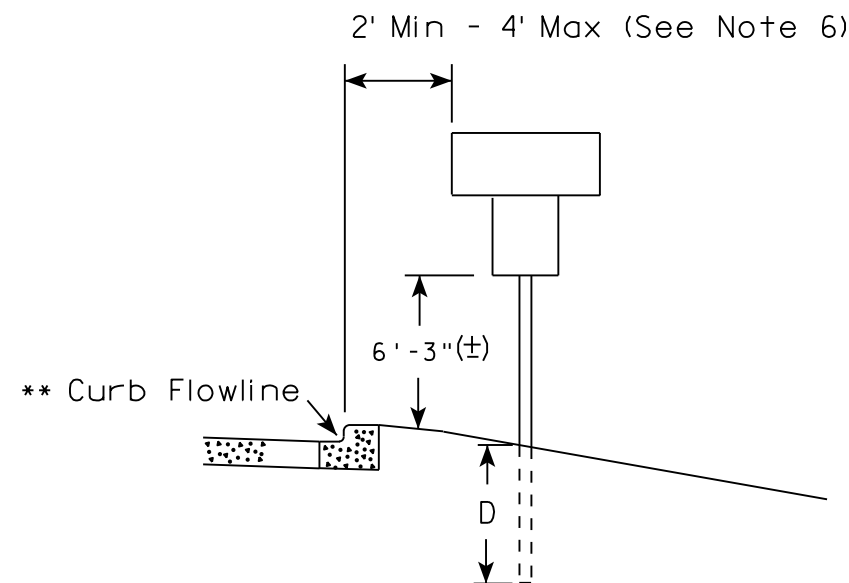
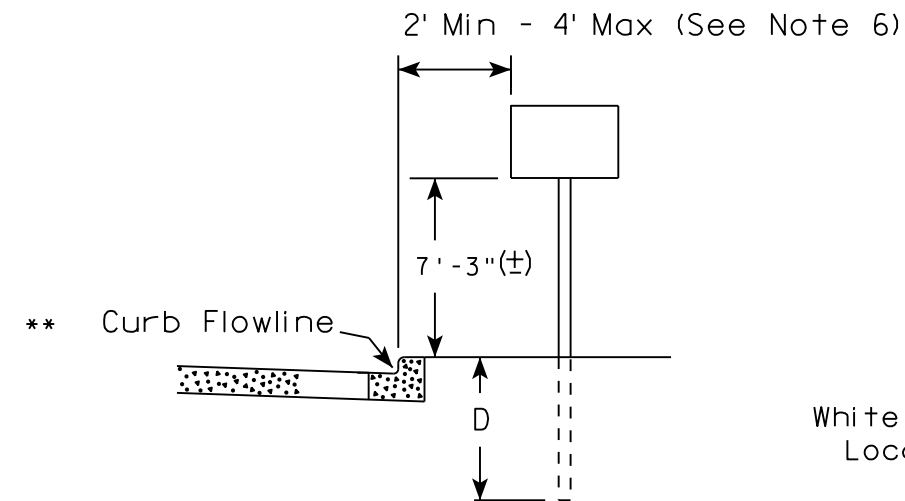
NOTES

- 1. Fixed Message Type II Signs - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - C



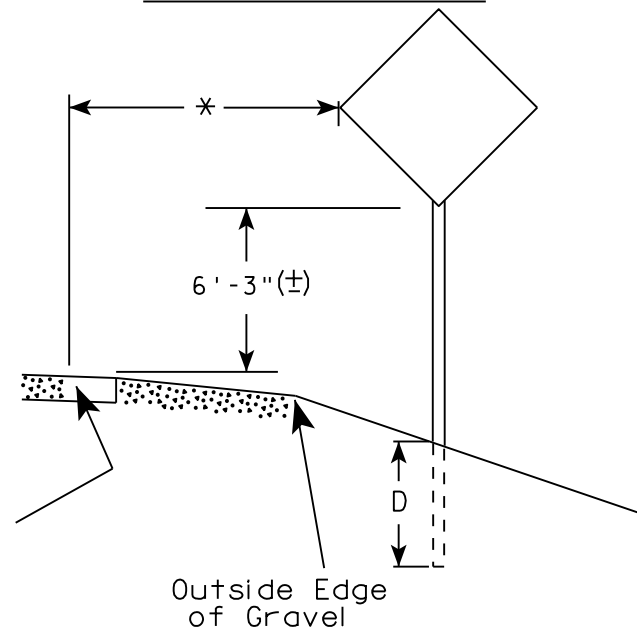
1.125" Radius, 0.500" Border, 0.375" Indent

URBAN AREA

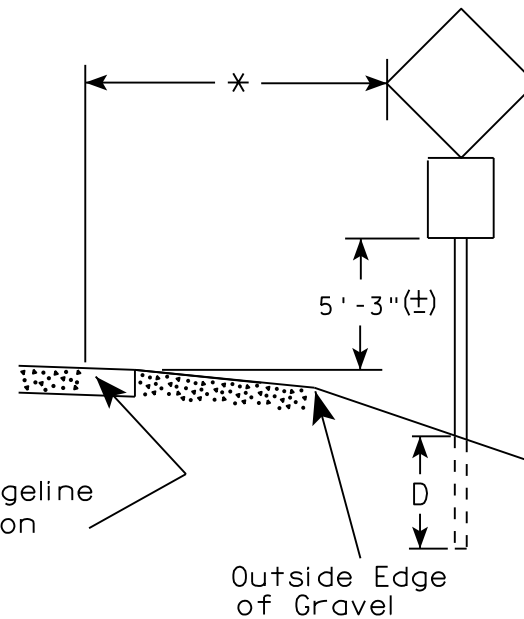


White Edgeline
Location

RURAL AREA (See Note 2)



White Edgeline
Location



Outside Edge
of Gravel

POST EMBEDMENT DEPTH

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

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. J-Assemblies are considered to be one sign for mounting height.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as 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" (±).

✱✱ 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 8/21/17

PLATE NO. A4-3.21

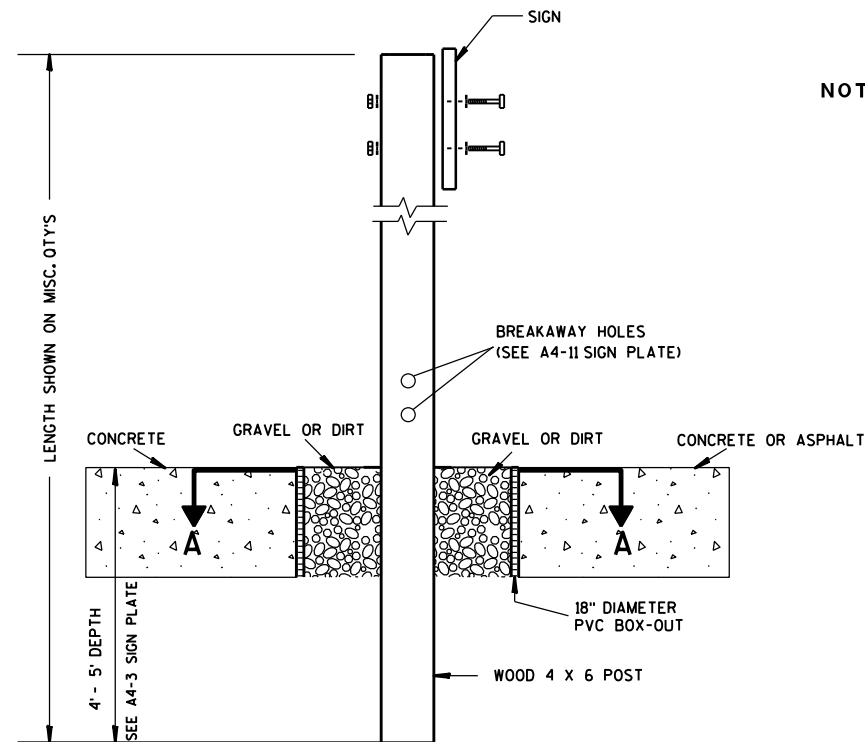
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

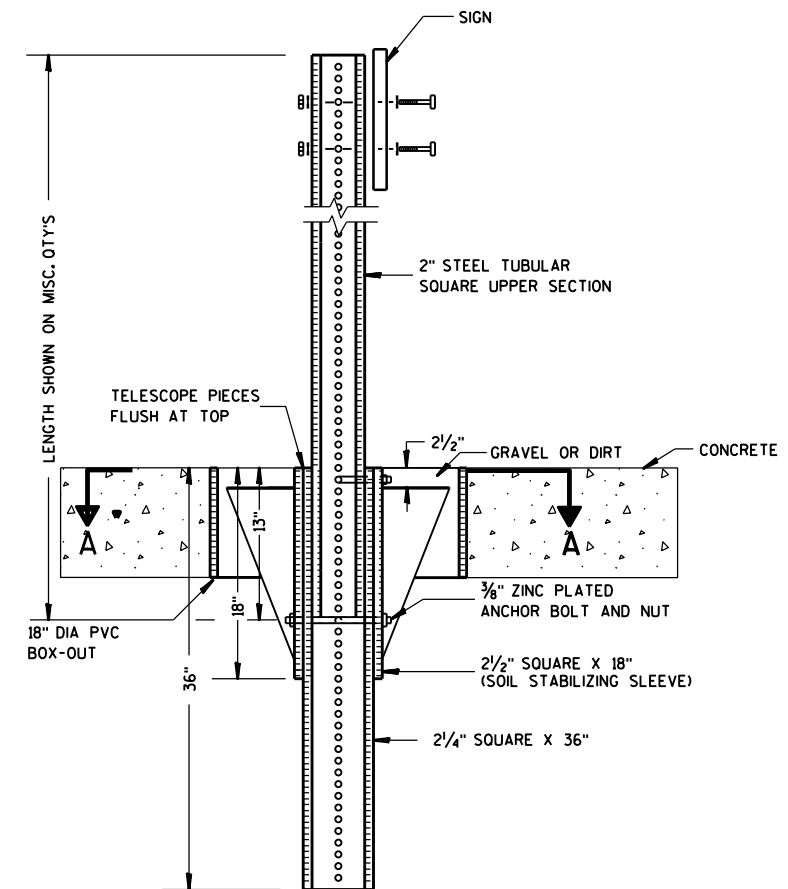
E



ELEVATION VIEW

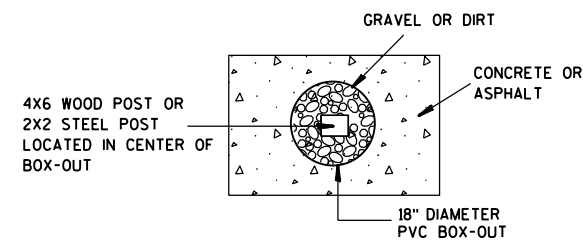
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

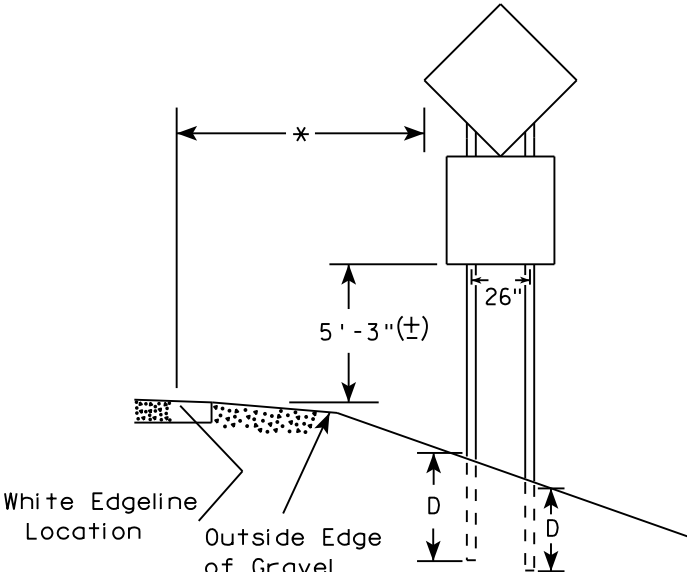
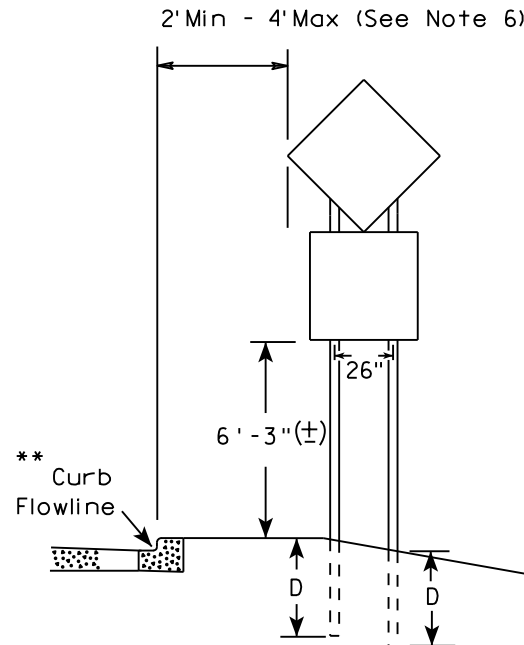
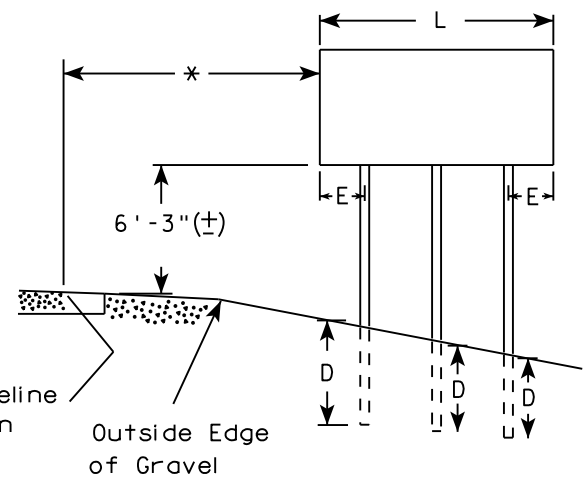
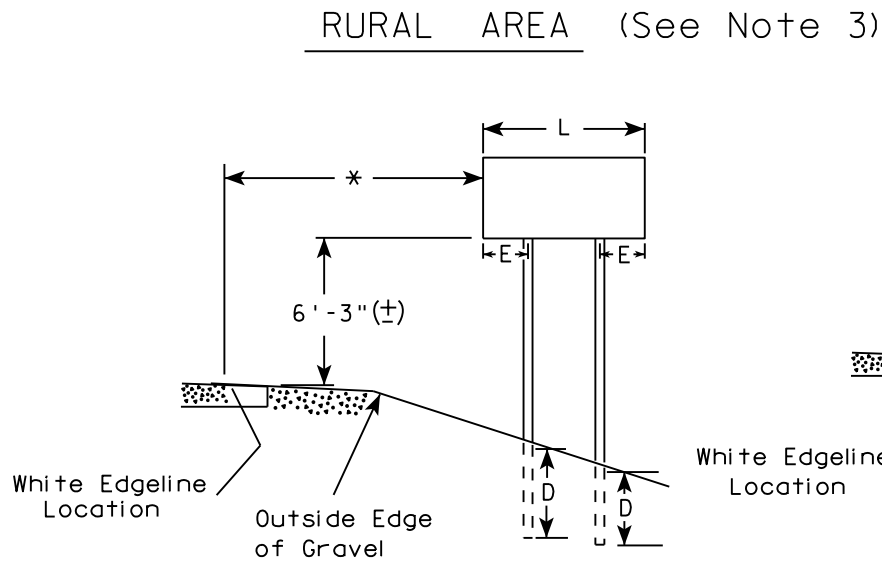
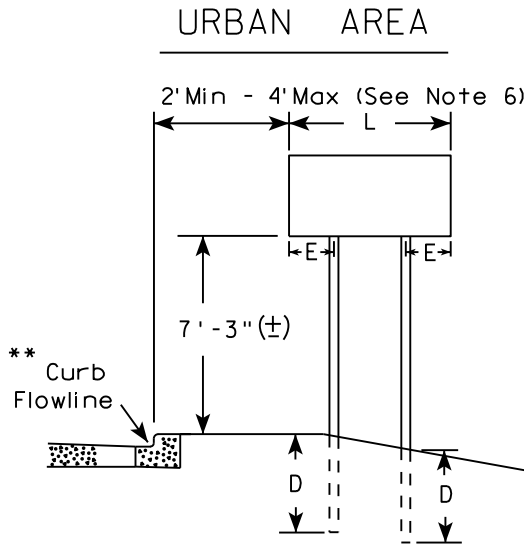
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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

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

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

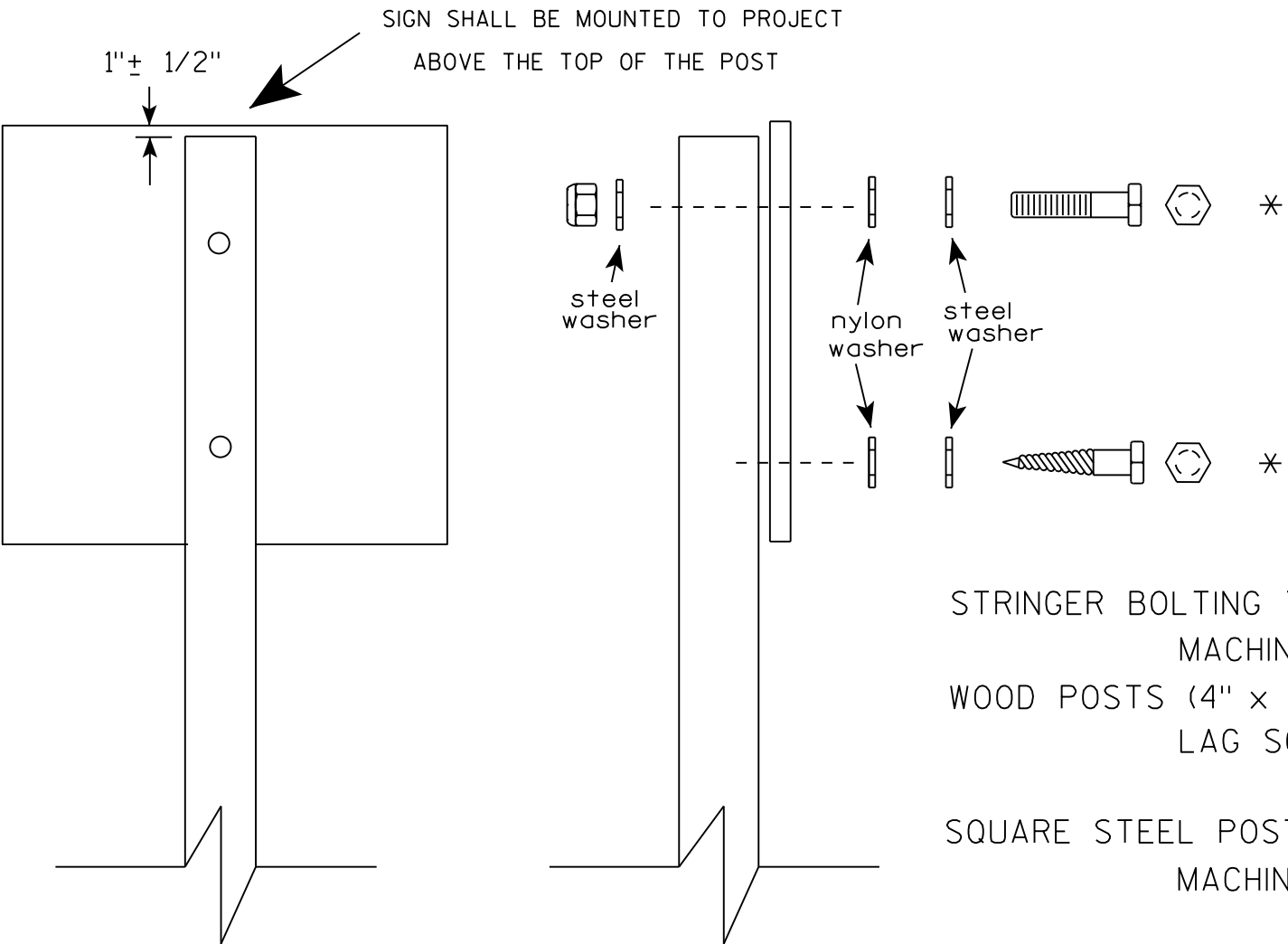
SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

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

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 8/21/17	PLATE NO. A4-4.15



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

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

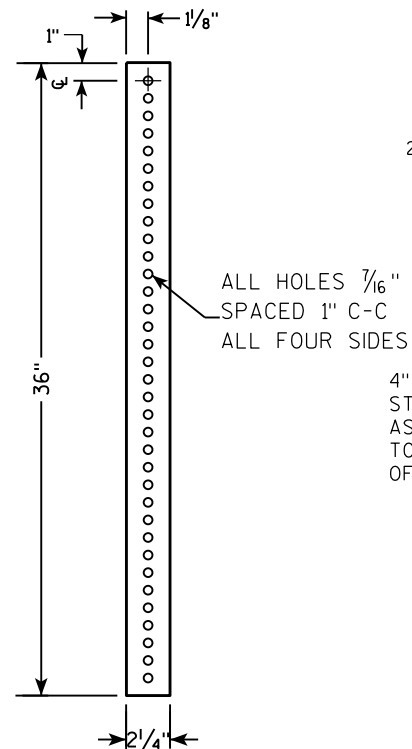
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

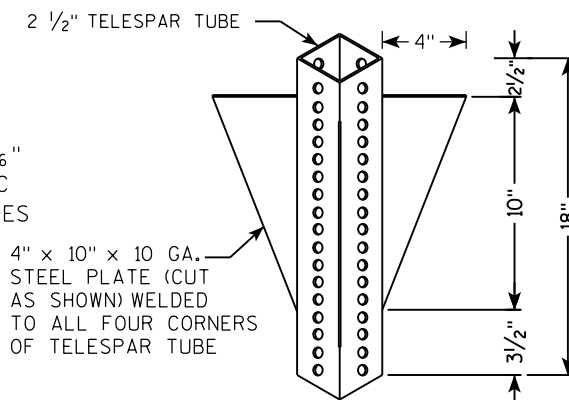
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

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

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



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



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

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

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

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

1"

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

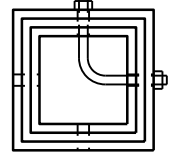
2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

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

SIGN

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

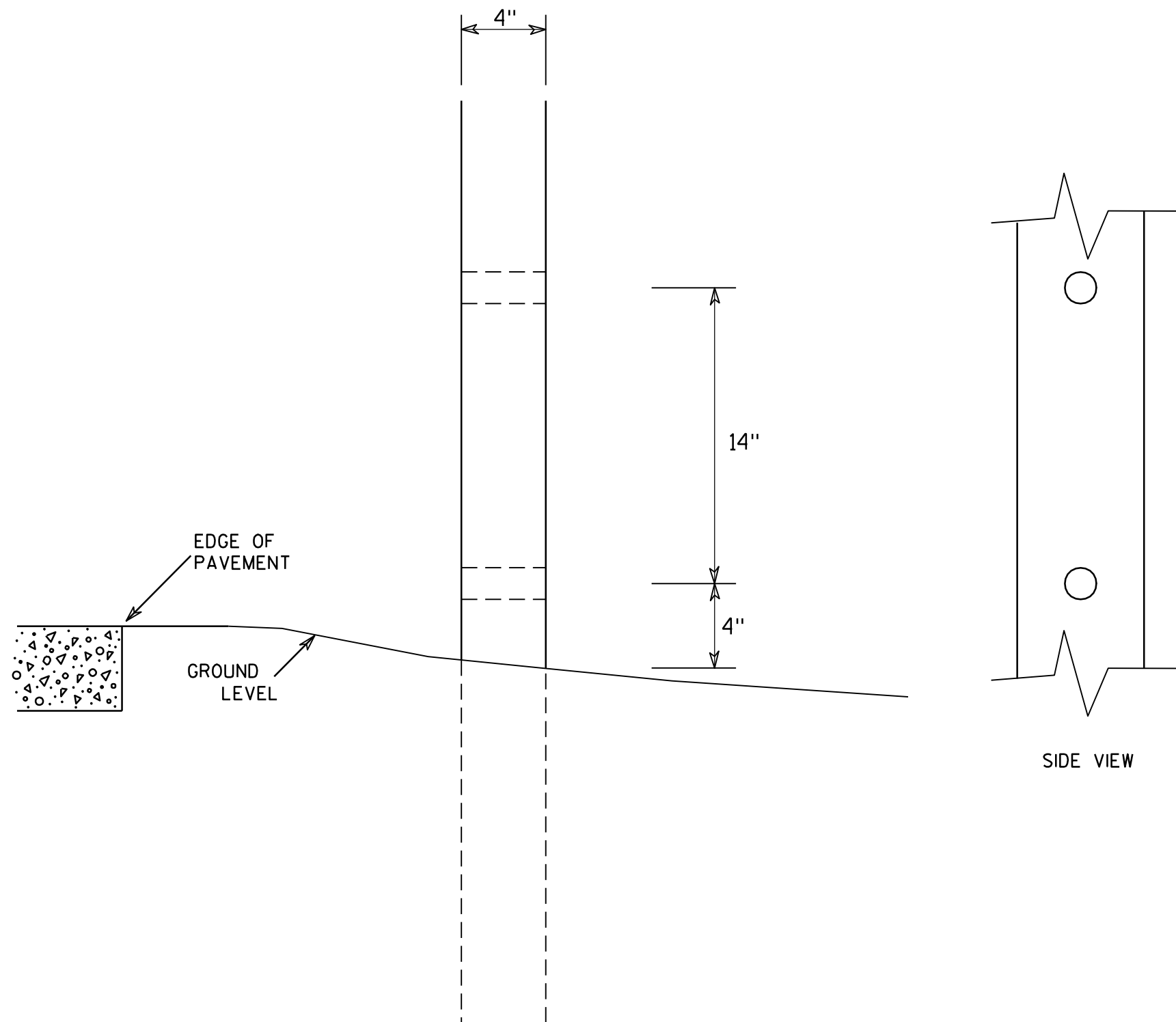
APPROVED Matthieu R. Rauch

for State Traffic Engineer

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

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

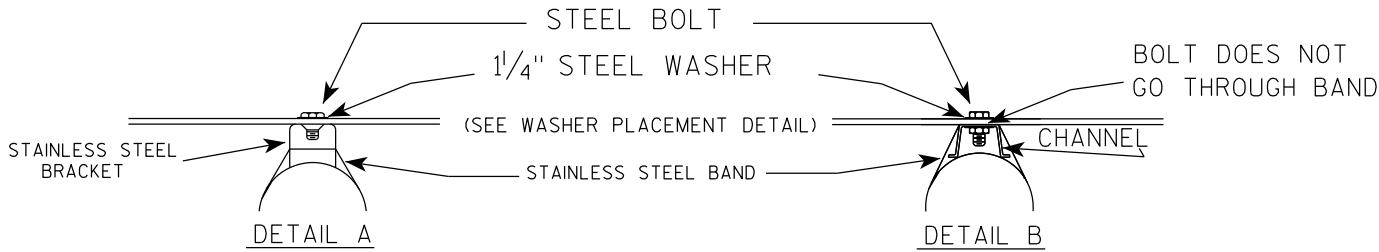
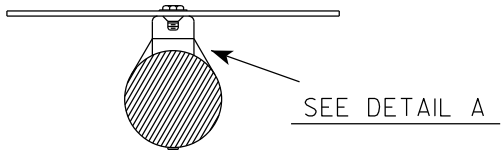
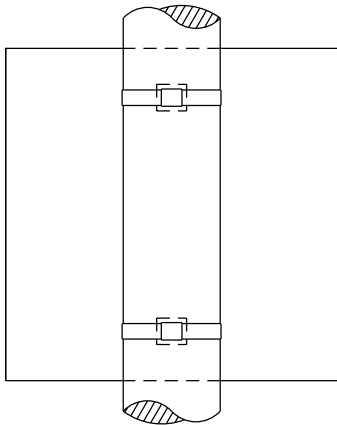
COUNTY:

SHEET NO:

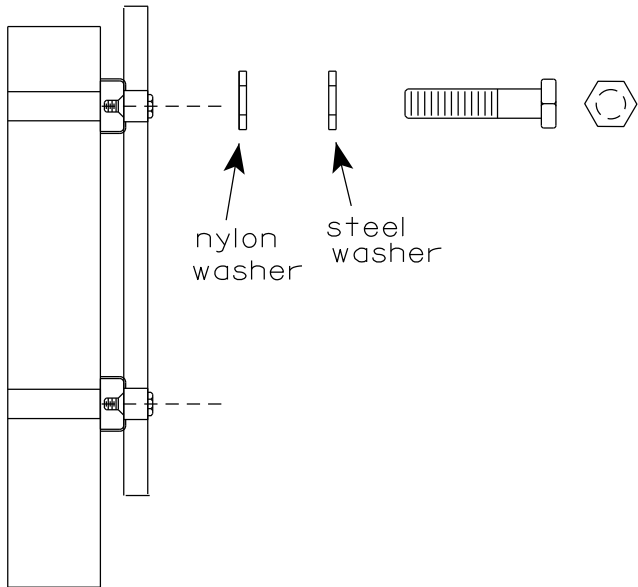
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

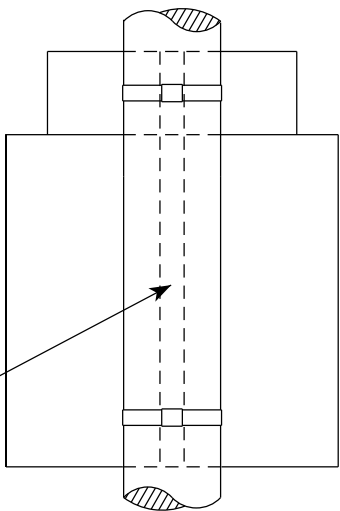


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

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

"J" ASSEMBLY



SEE DETAIL B

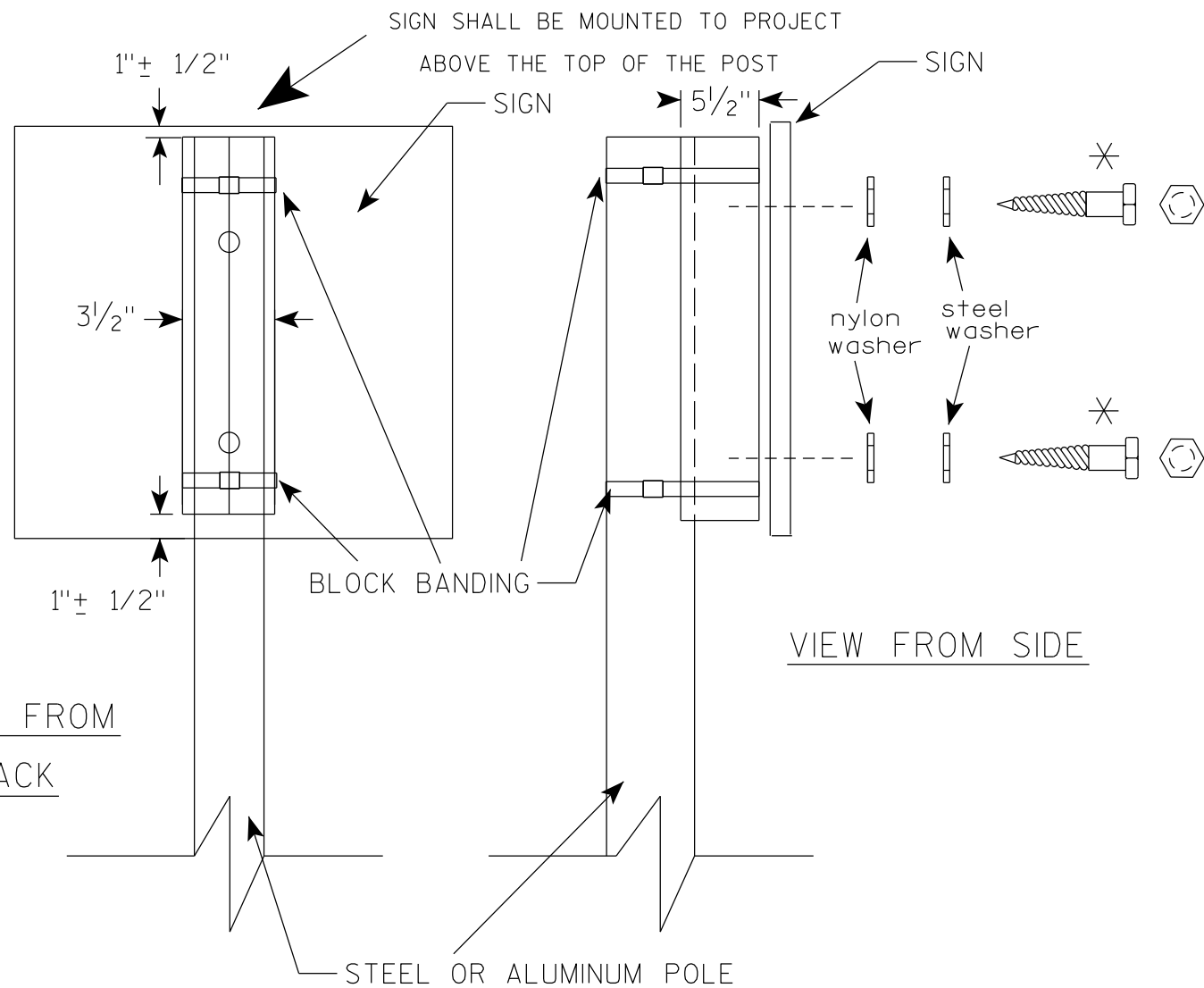
STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

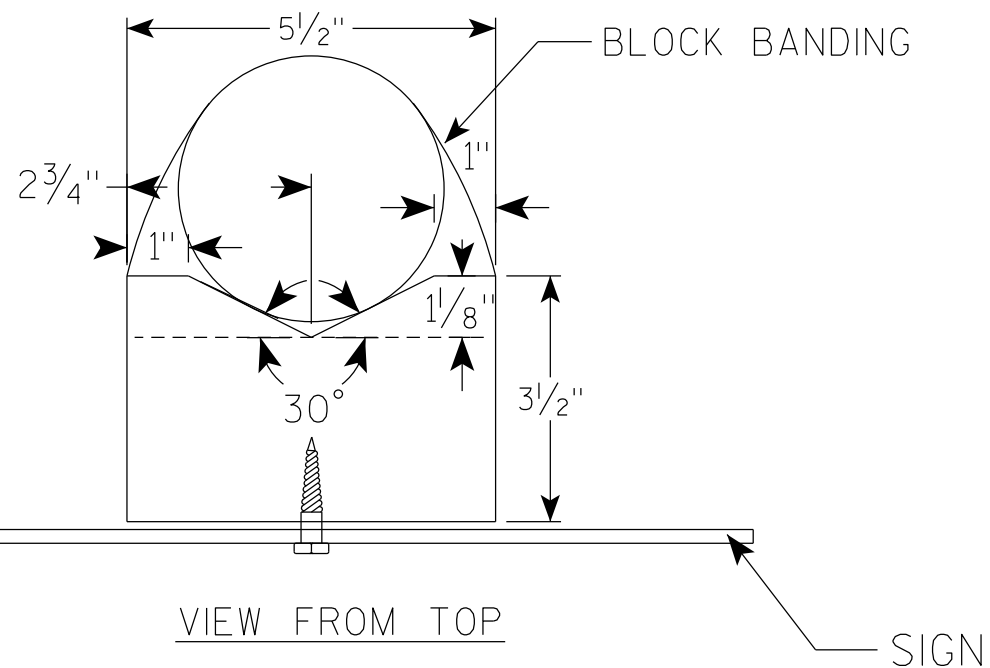
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-9.4

VIEW FROM
BACK



VIEW FROM SIDE



GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $1\frac{1}{4}$ " 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 6/10/19 PLATE NO. A5-10.2

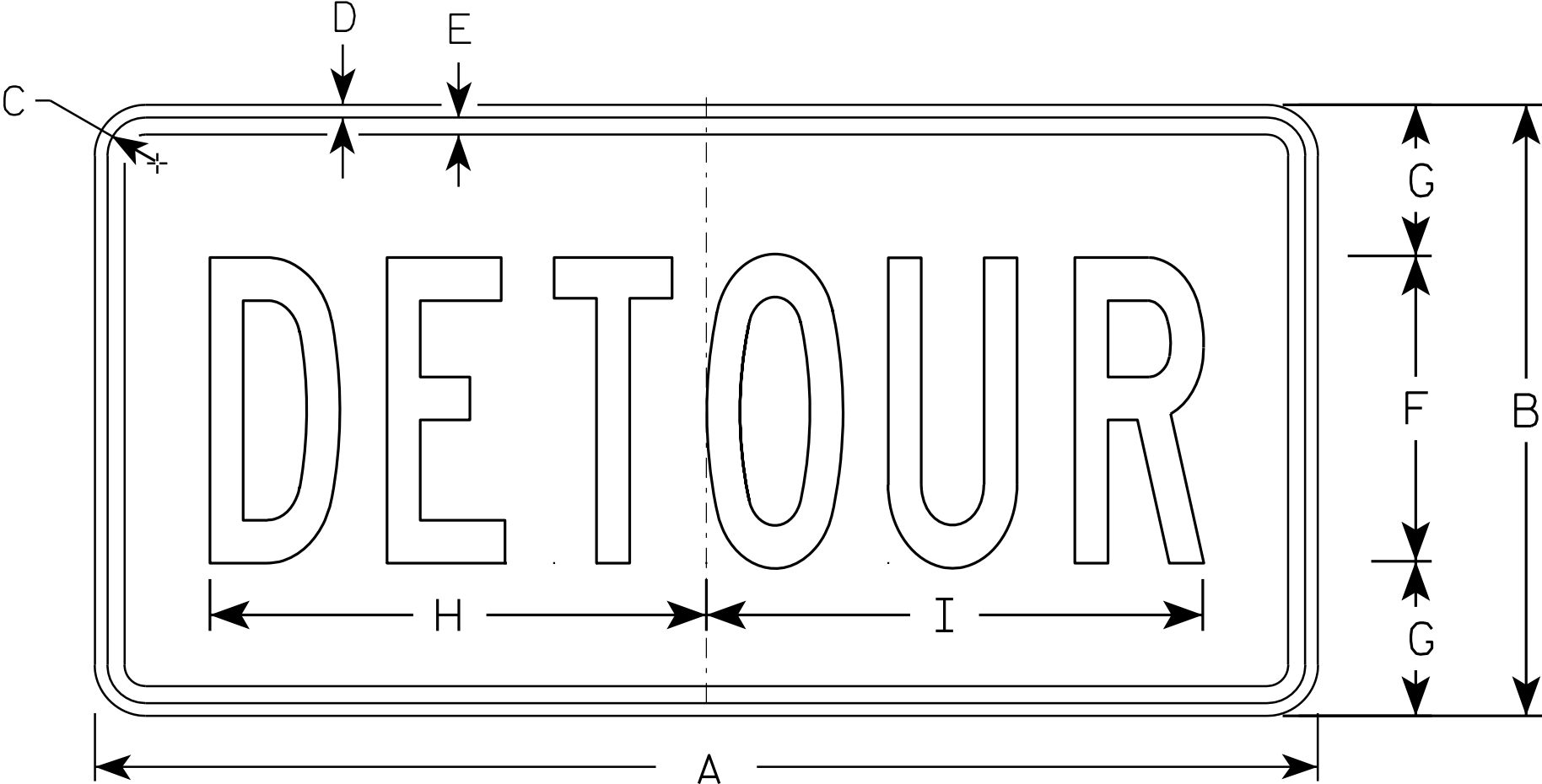
PROJECT NO:

SHEET NO:

E

NOTES

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



M4 - 8

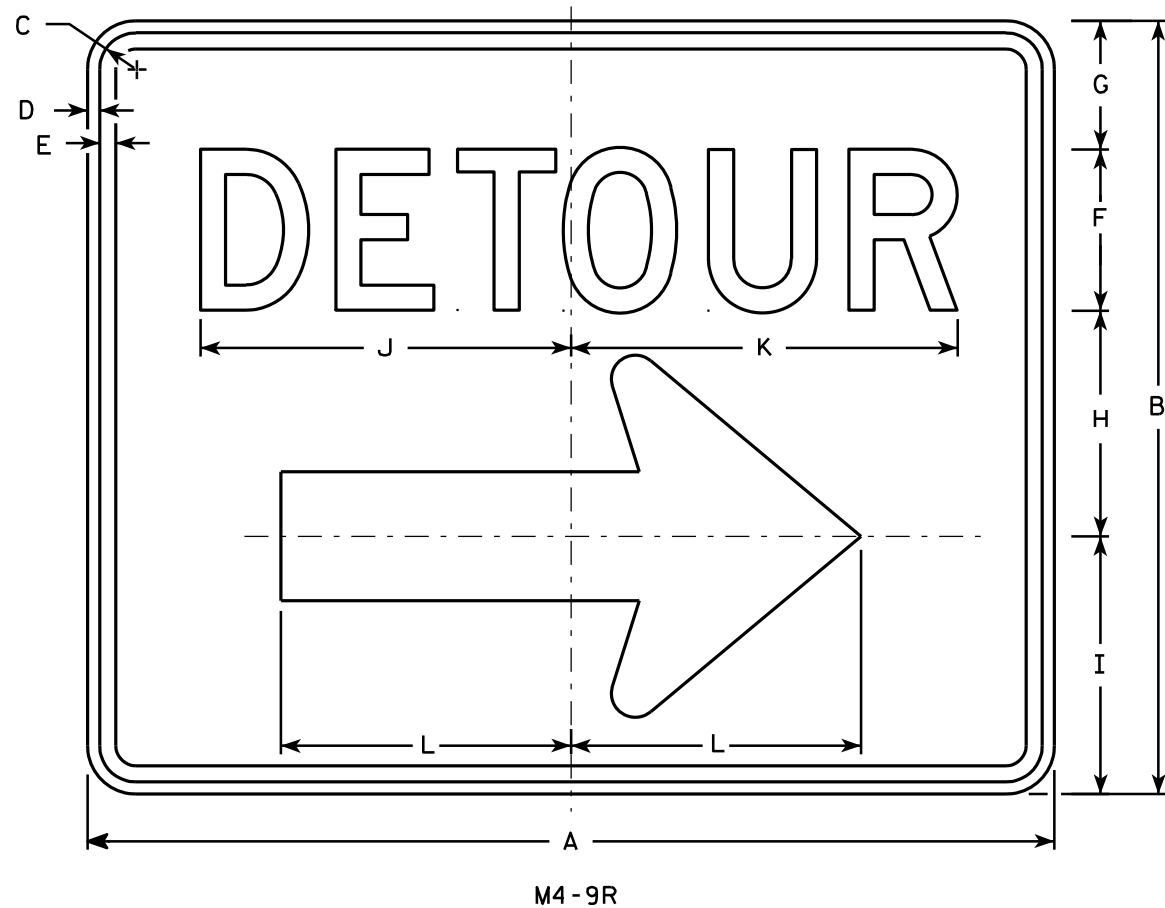
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

STANDARD SIGN
M4 - 8

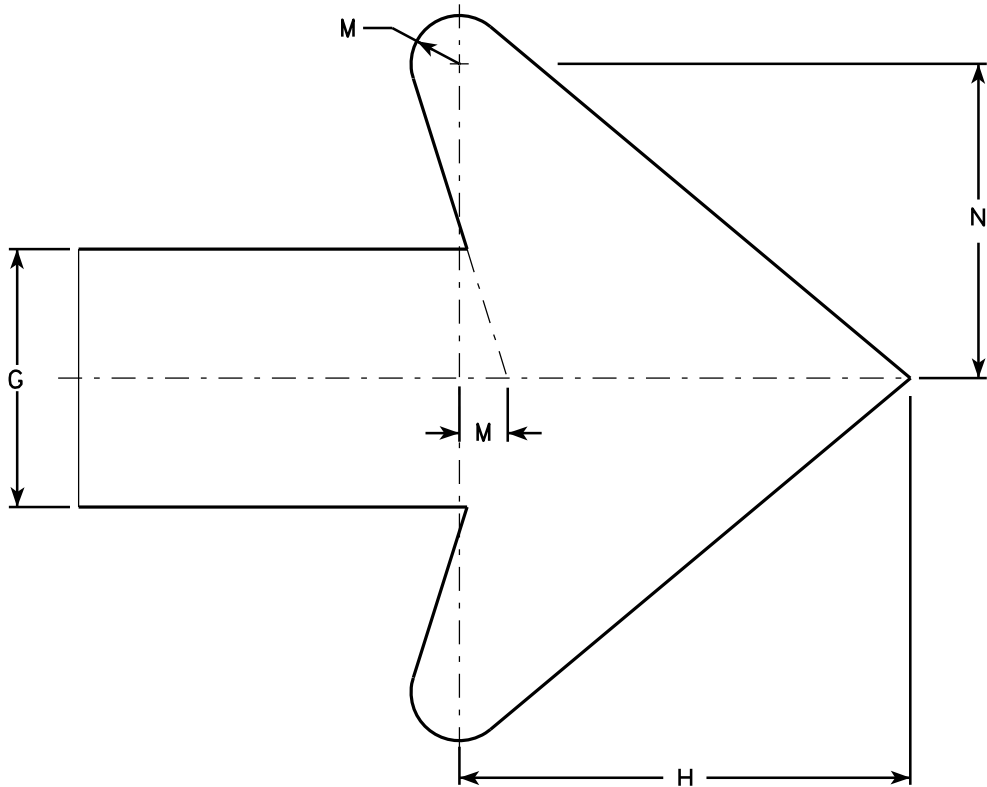
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

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



- NOTES**
1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - Orange
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. M4-9L is the same as M4-9R except the arrow is reversed.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

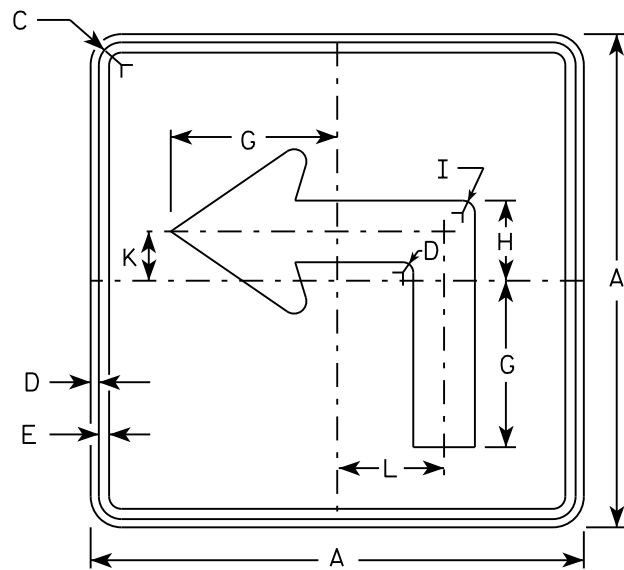
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M4-9 R & L

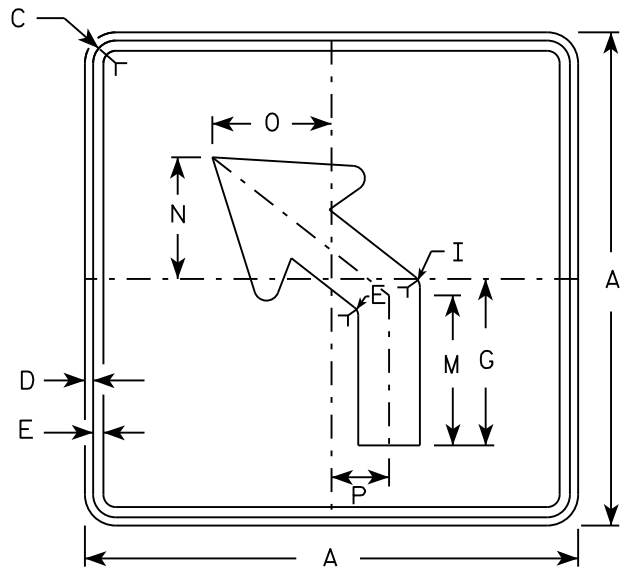
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

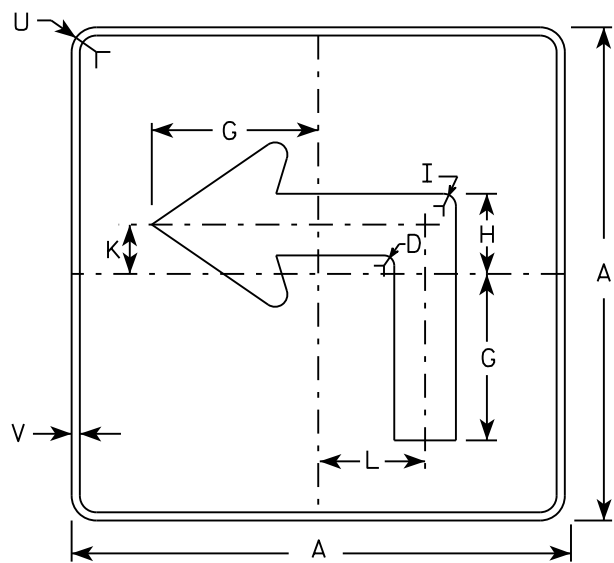
DATE 3/9/11 PLATE NO. M4-9R.4



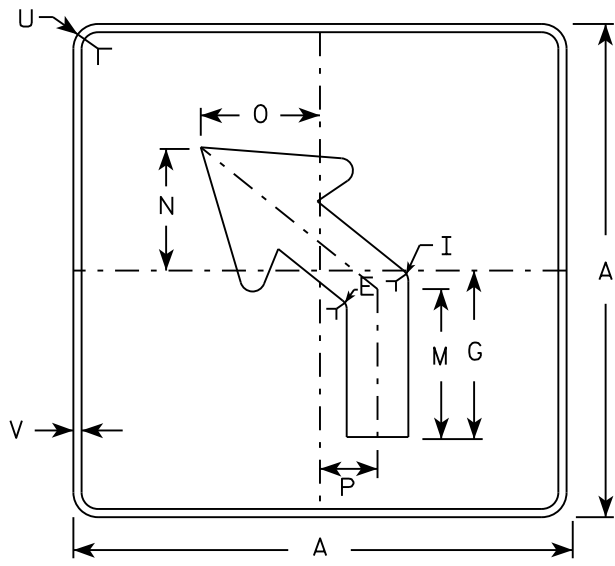
M5-1L
MM5-1L
M05-1L
MP5-1L



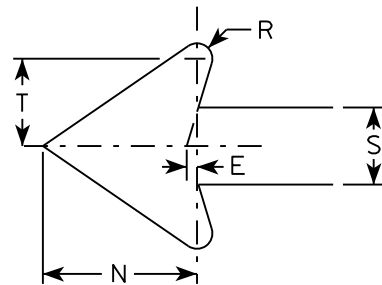
M5-2L
MM5-2L
M05-2L
MP5-2L



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

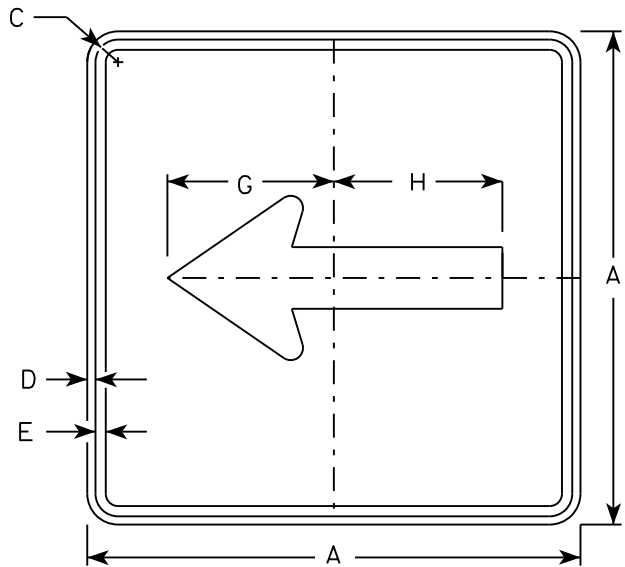
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M5-1 & M5-2

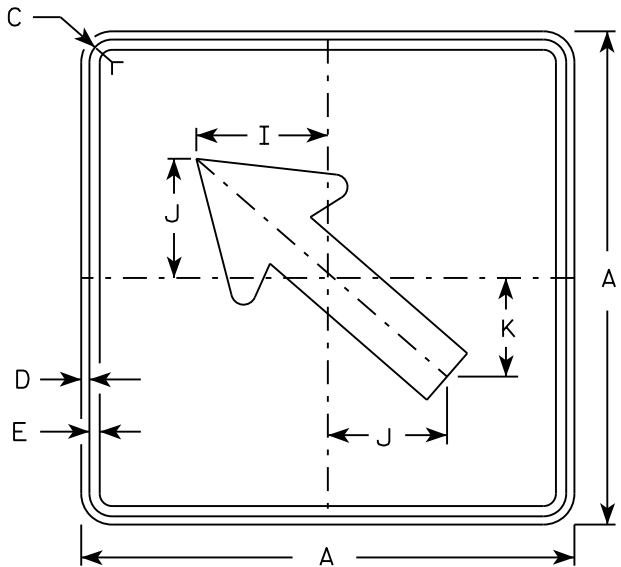
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

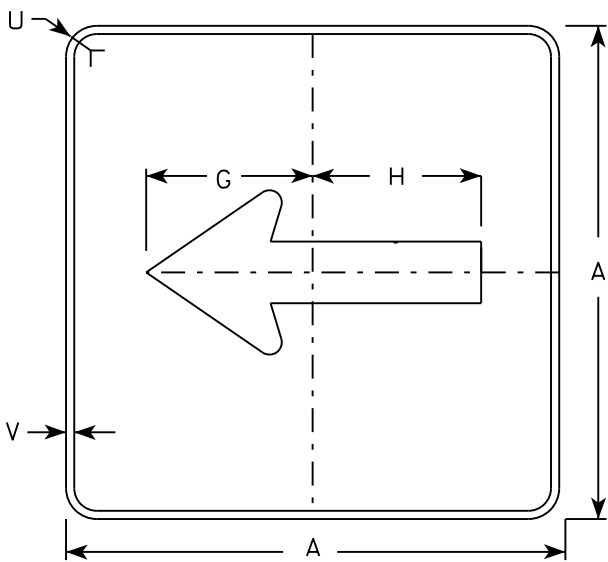
DATE 10/15/15 PLATE NO. M5-1.13



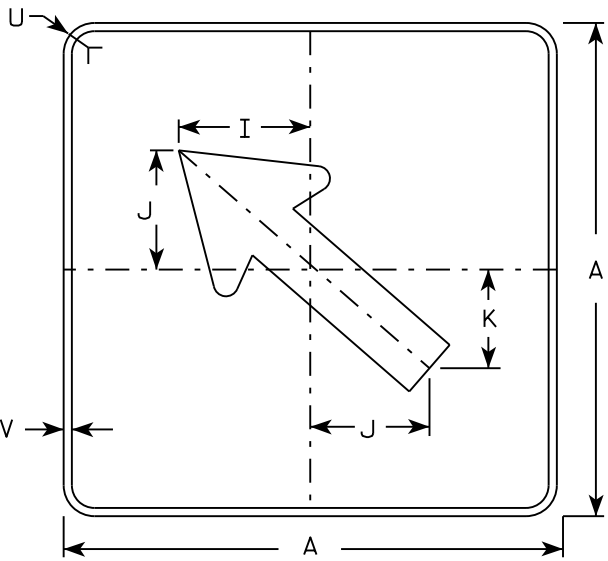
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



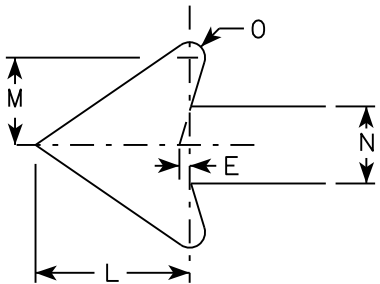
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



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

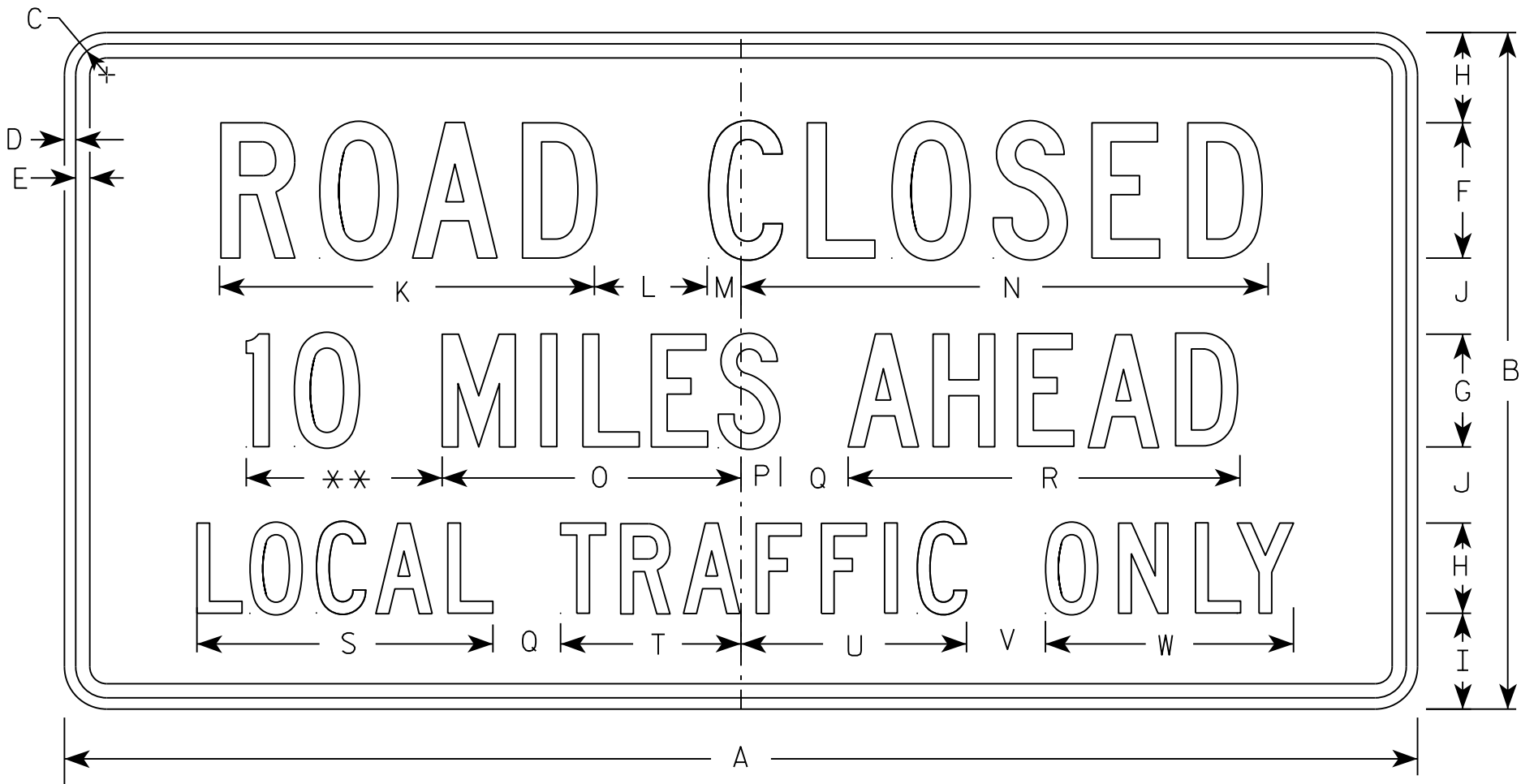
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

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

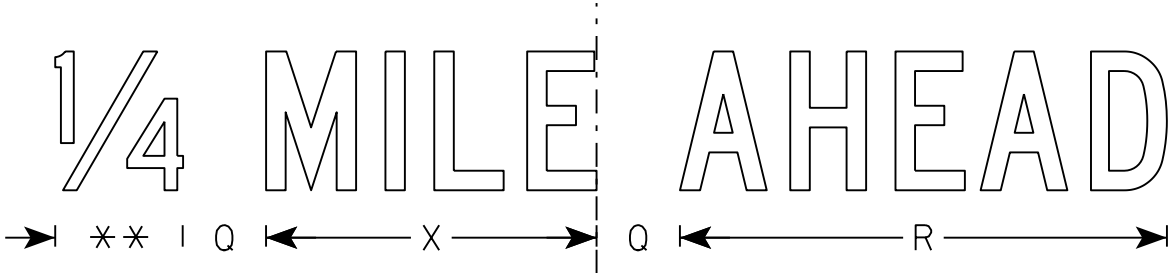
NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5

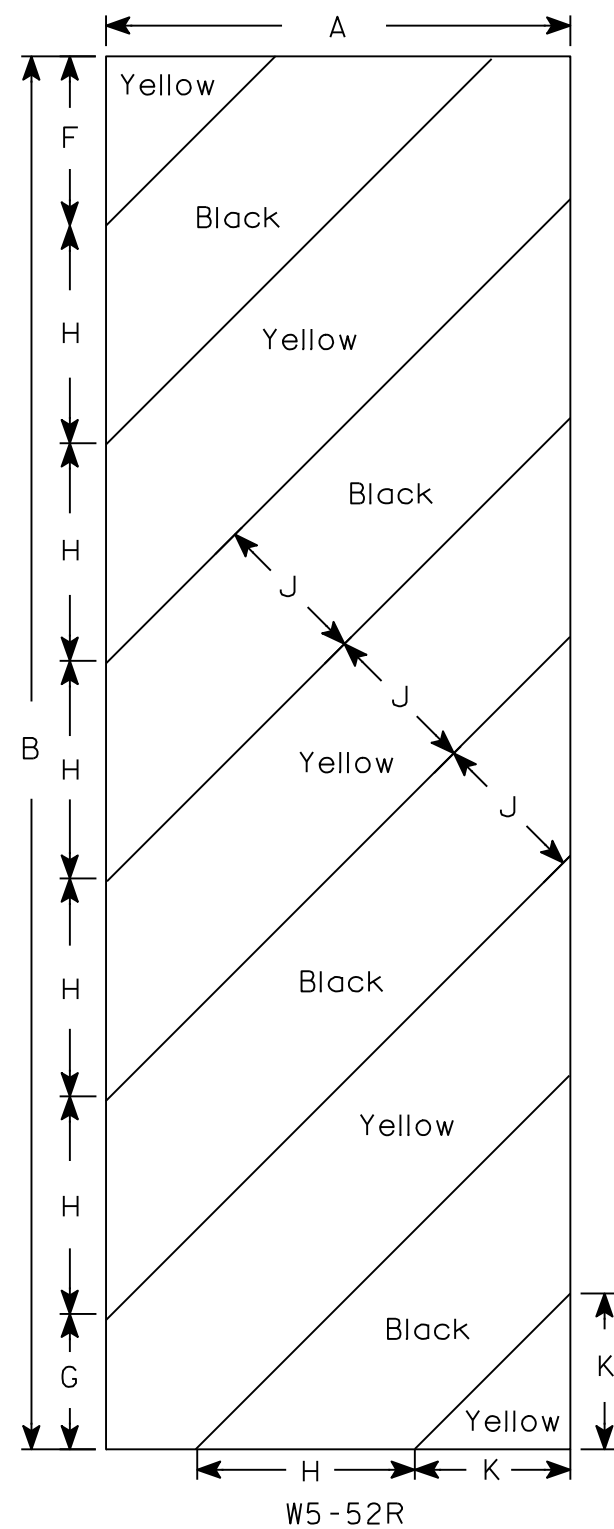
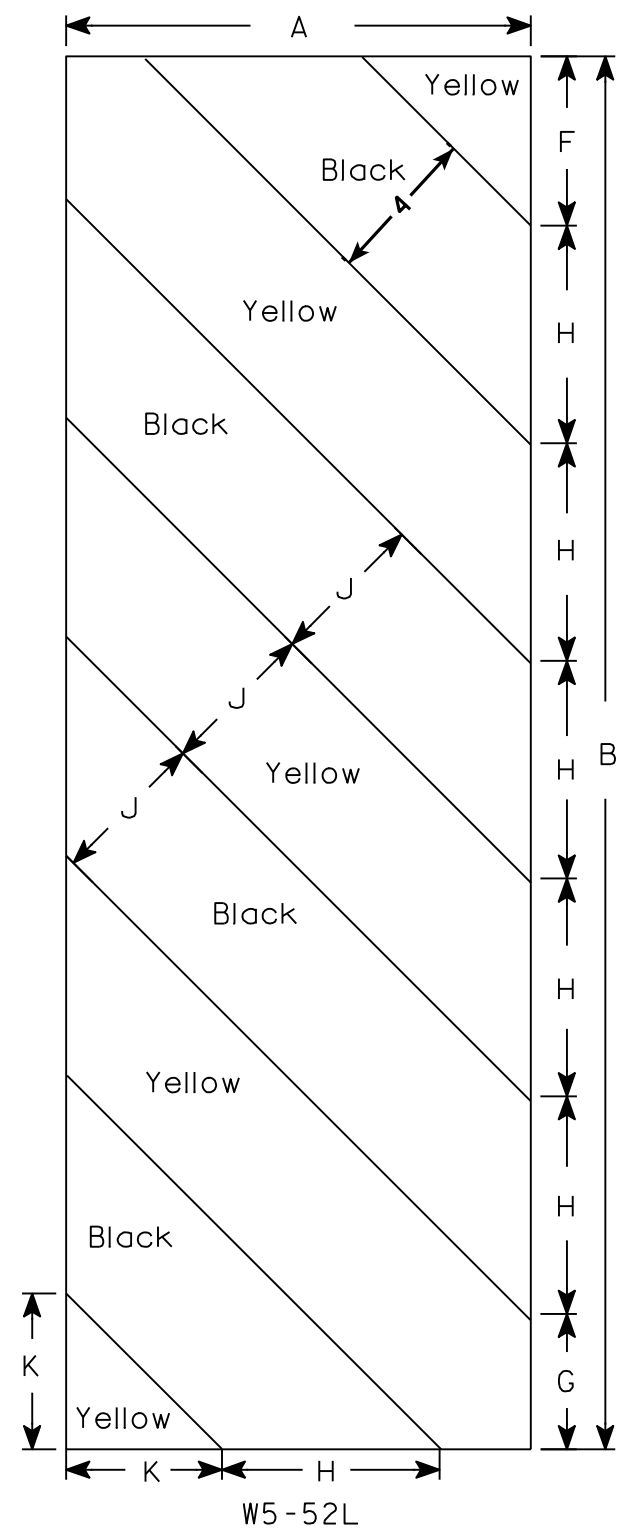


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/15/17 PLATE NO. R11-3.8



NOTES

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

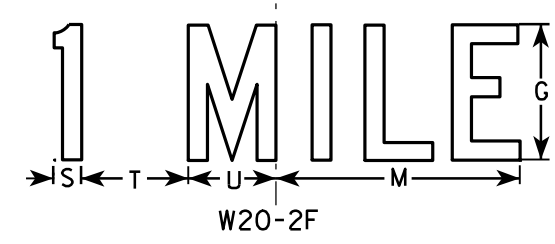
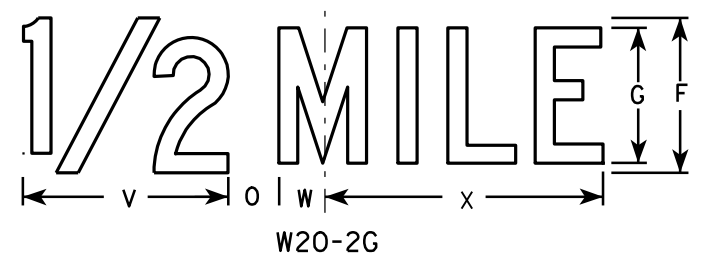
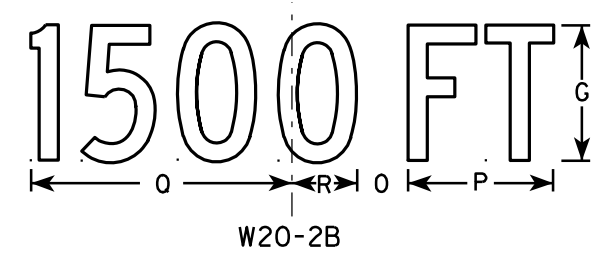
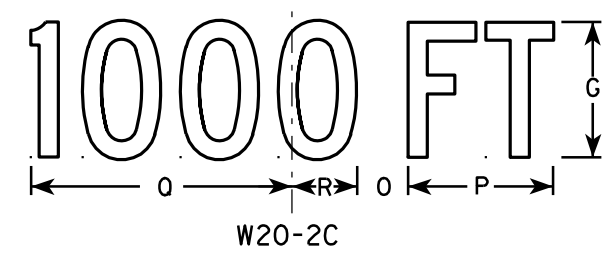
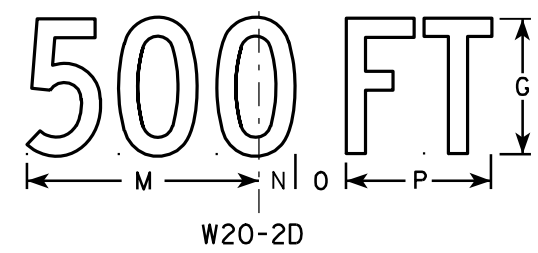
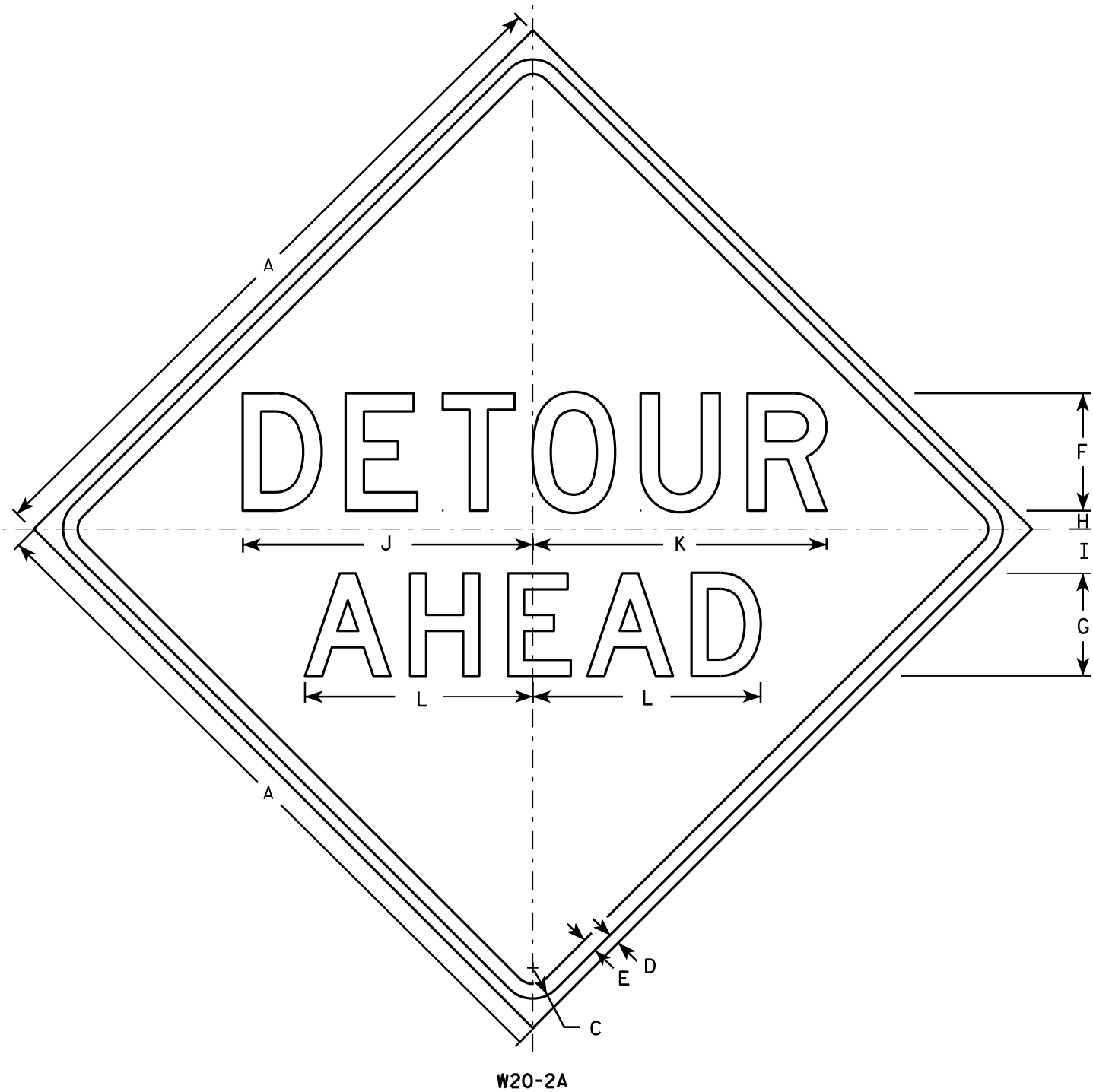
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
2M	12	36				4 3⁄8	3 1⁄2	5 5⁄8	45°	4	4																3.0
3	18	54				6	5 1⁄2	8 1⁄2	45°	6	6 9⁄16																6.75
4																											
5																											

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W5-52.9



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. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

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

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

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

DESIGN DATA

LIVE LOAD:

INVENTORY RATING: HS-17
OPERATING RATING: HS-28
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 250 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & PARAPET $f'_c = 4,000$ P.S.I.

BAR STEEL REINFORCEMENT:
GRADE 60 $f_y = 60,000$ P.S.I.
(ORIGINAL 1960 STRUCT.) GRADE 40 $f_y = 40,000$ P.S.I.

36" EXIST. PRESTRESSED GIRDERS:
CONCRETE MASONRY $f'_c = 5,000$ P.S.I.
STRANDS: 7/16" DIA. WITH ULTIMATE TENSILE STRENGTH OF 250,000 P.S.I.

LEGEND

- ⊙ REMOVE & REPLACE NEOPRENE COMPRESSION SEAL, EDGE TO EDGE OF DECK. NO SPlicing PERMITTED. SEAL ENDS, VERTICAL FACES OF EXISTING JOINT OPENING SHALL BE CLEANED PRIOR TO INSTALLATION OF NEW COMPRESSION SEAL. MANUFACTURER SHALL FURNISH SEAL WITH TOP SIDE LABELED. SEE JOINT OPENING FORMING DETAILS AT 42SS PPT. ON 'SUPERSTRUCTURE DETAILS' SHEET.
- * PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT, AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".
- ⊖ INDICATES WING NUMBER

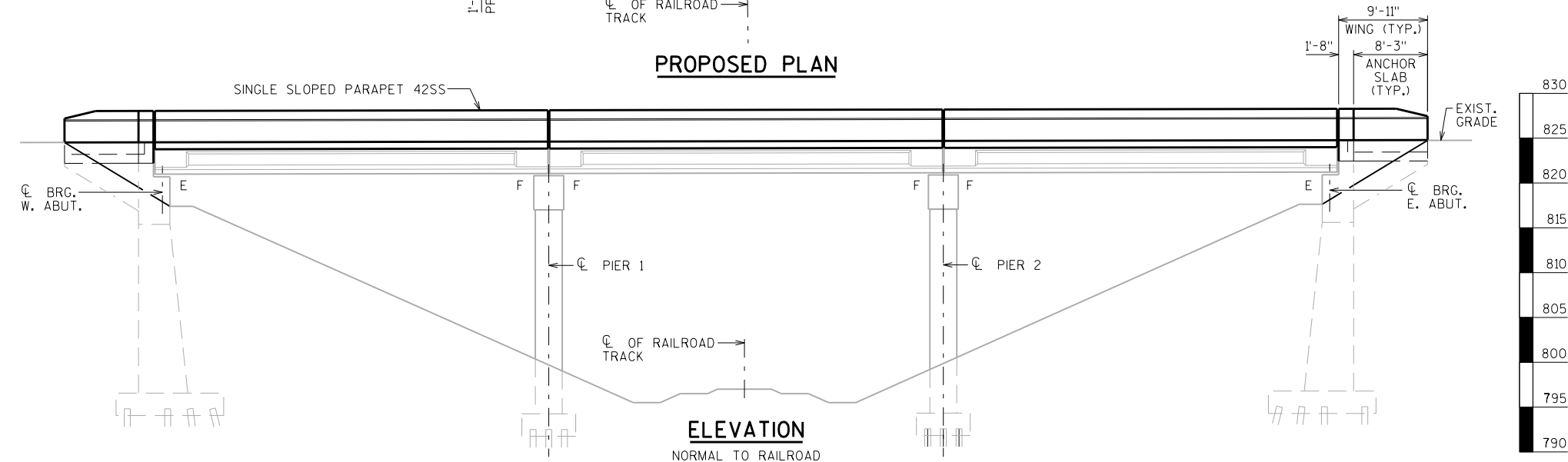
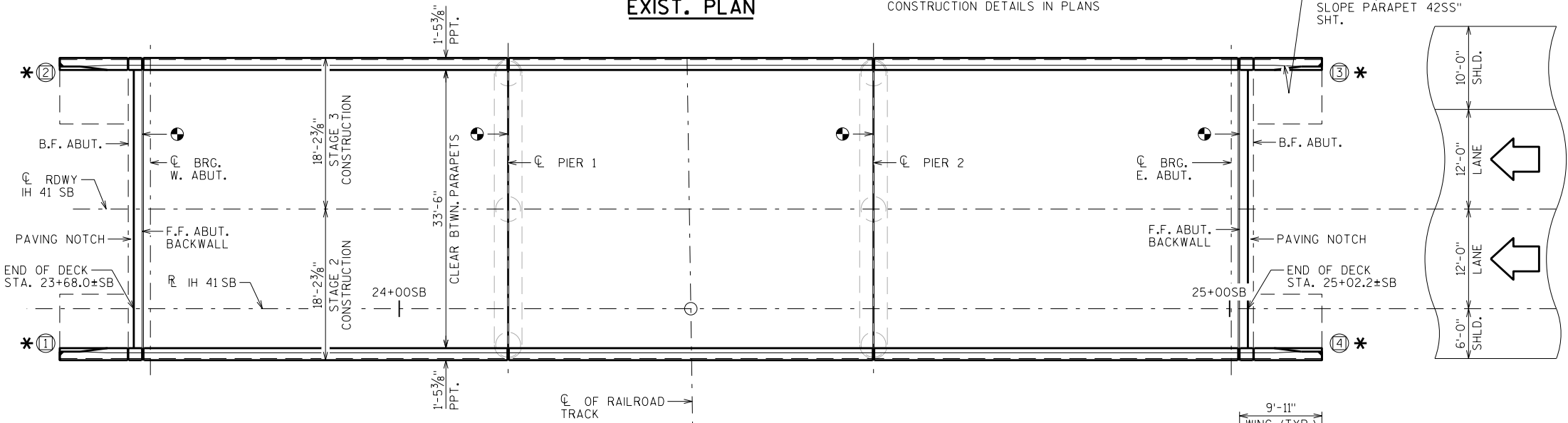
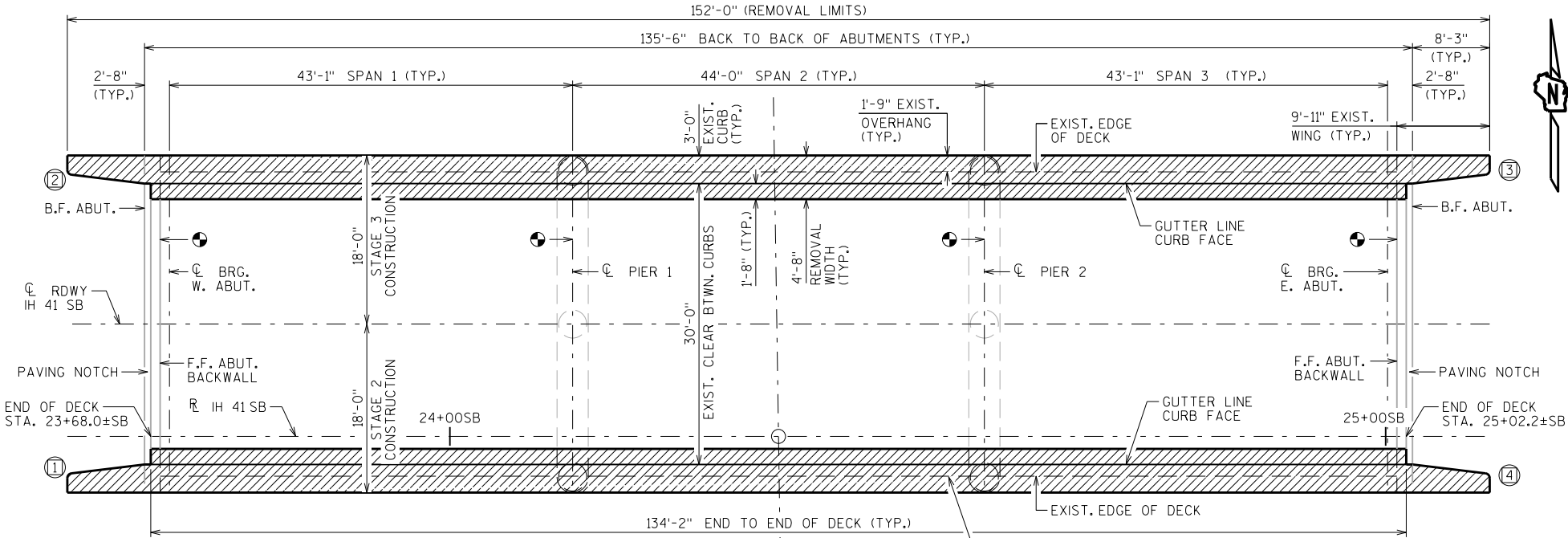
LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. STAGING DETAILS 1
4. STAGING DETAILS 2
5. ABUT. WING REMOVAL & REPLACEMENT 1
6. ABUT. WING REMOVAL & REPLACEMENT 2
7. SUPERSTRUCTURE DETAILS
8. SINGLE SLOPE PARAPET 42SS

STRUCTURE DESIGN CONTACTS:

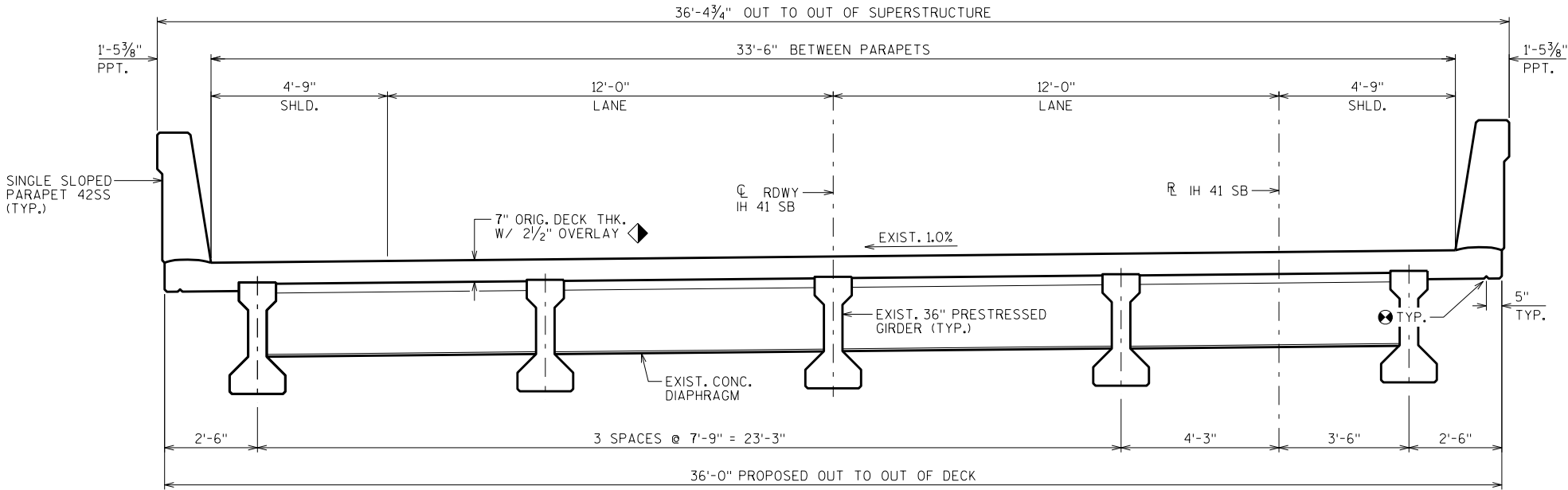
ALEXANDER CRABTREE (608) 266-3686
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY
 BUREAU OF STRUCTURES			
ACCEPTED <i>William C. Dechen</i> 12/18/19 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-44-20			
REHAB IH 41 SB OVER SOO LINE RAILROAD			
COUNTY	OUTAGAMIE	TOWN	GRAND CHUTE
DESIGN SPEC. AASHTO STD. SPEC. FOR HIGHWAY BRIDGES, 17TH EDITION			
DESIGNED BY	ARC	DESIGNED CK'D.	JDM
DRAWN BY	ARC	PLANS CK'D.	JDM
GENERAL PLAN			SHEET 1 OF 8



GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" OR MATCH EXISTING BEVELS, UNLESS OTHERWISE NOTED.
- ALL REMOVAL LINES SHALL BE DEFINED BY A 1/2-INCH SAWCUT.
- TRAFFIC MAINTAINED DURING CONSTRUCTION. SEE STAGING DETAILS SHOWN IN PLAN.
- PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF NEW DECK, AND TO THE NEW VERTICAL & HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT BACKWALL.
- PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE, TOP, AND ENDS OF PARAPETS, INCLUDING PARAPETS ON ABUTMENT WINGS.
- DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
- THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 1960.
- REHAB WORK ON STRUCTURE PERFORMED IN 2 STAGES. TRAFFIC MAINTAINED ON 1/2 OF THE STRUCTURE, DURING CONSTRUCTION. TEMPORARY SUPPORT OF EXIST. DECK AT EXTERIOR PANEL IS REQUIRED. COST OF TEMPORARY SUPPORT INCLUDED IN CONCRETE MASONRY BRIDGES BID ITEM. SEE STAGING SHEETS FOR DETAILS.



SECTION THRU ROADWAY LOOKING EAST

- 3/4" V-GROOVE. TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENT BACKWALL
- 1 1/2"± MIN. MILLED OFF OF ORIG. 7" THICK DECK, BEFORE ADDING 2 1/2"± AVG. OVERLAY (2006)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 24+35SB	LS	—	—	—	1
203.0225,S	DEBRIS CONTAINMENT B-44-20	LS	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-44-20	LS	—	—	—	1
210.1100	BACKFILL STRUCTURE TYPE A	CY	—	6	6	12
502.0100	CONCRETE MASONRY BRIDGES	CY	71	10	10	91
502.2000	COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC 3-INCH	LF	144	—	—	144
502.3200	PROTECTIVE SURFACE TREATMENT	SY	105	—	—	105
502.3210	PIGMENTED SURFACE SEALER	SY	130	10	10	150
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH	—	6	6	12
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	15,780	1,320	1,320	18,420
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	3	3	6
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	2	2	4
	NON-BID ITEMS					
	FILLER		—	—	—	1/2"

LS 203.0225,S DEBRIS CONTAINMENT B-

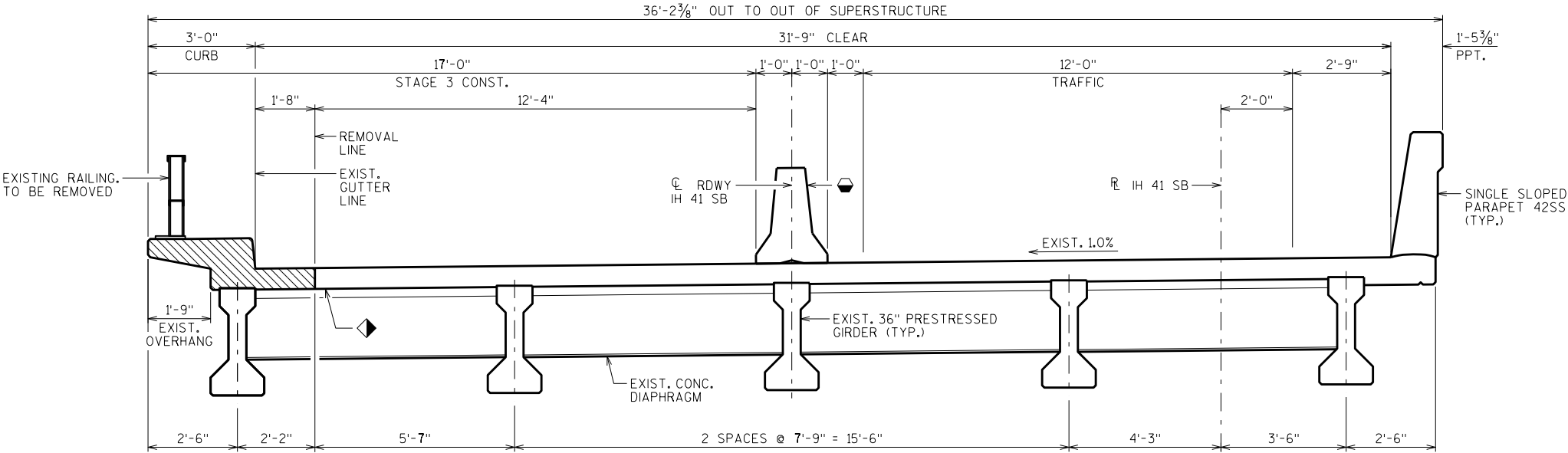
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-20			
	DRAWN BY	ARC	PLANS CK'D. JDM
CROSS SECTION & QUANTITIES		SHEET 2	

SCALE = 2.00

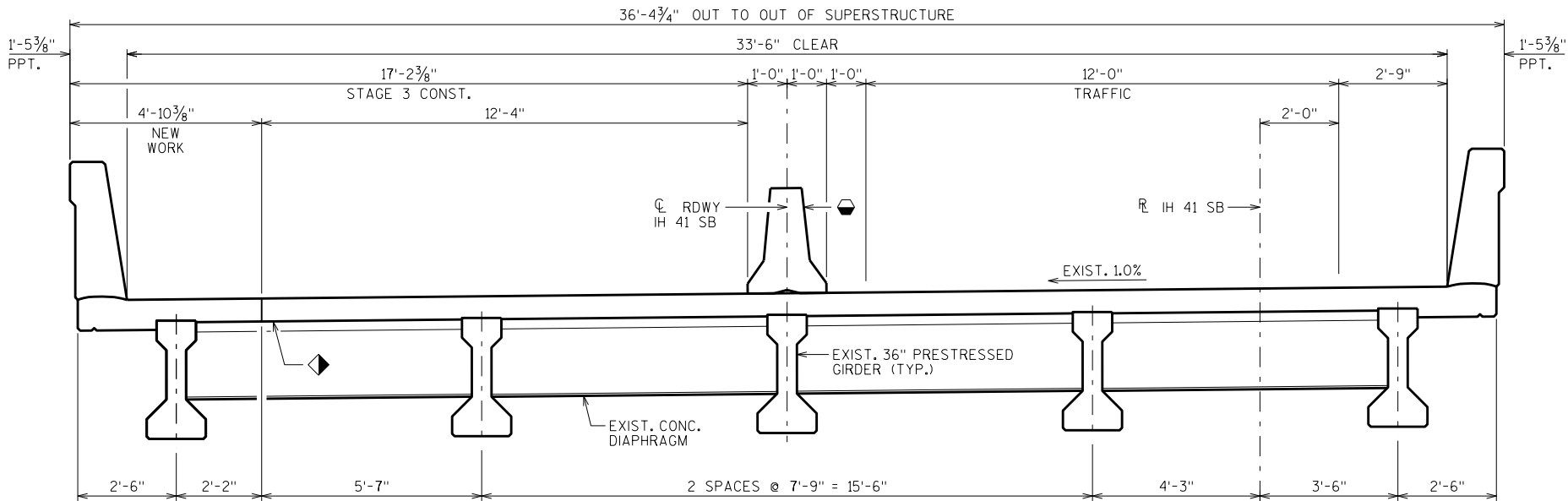


 CONCRETE BARRIER TEMPORARY PRECAST
 TEMPORARY SUPPORT OF EXIST. DECK AT EXTERIOR PANEL IS REQUIRED, AND PAID FOR IN BID ITEM "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-20			
DRAWN BY		ARC	PLANS CK'D. JDM
STAGING DETAILS 1		SHEET 3	



STAGE 3 REMOVAL & TRAFFIC
(LOOKING EAST)



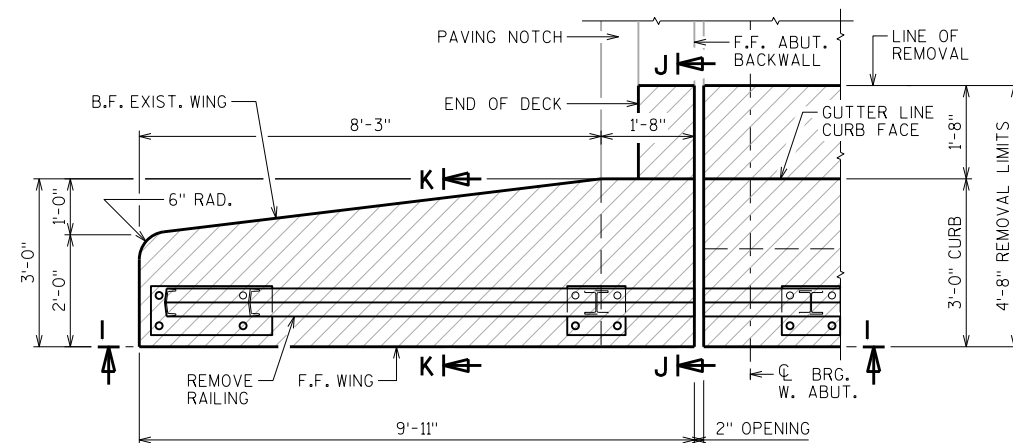
STAGE 3 CONSTRUCTION & TRAFFIC
(LOOKING EAST)

NOTE: ALL EXISTING TRANSVERSE DECK REINF. AND EXIST. HOOP REINF. IN ALL CONCRETE DIAPHRAGMS IS TO BE SALVAGED & REINCORPORATED INTO NEW WORK. FOR DETAILS, SEE SUPERSTRUCTURE DETAILS SHEET.

LEGEND

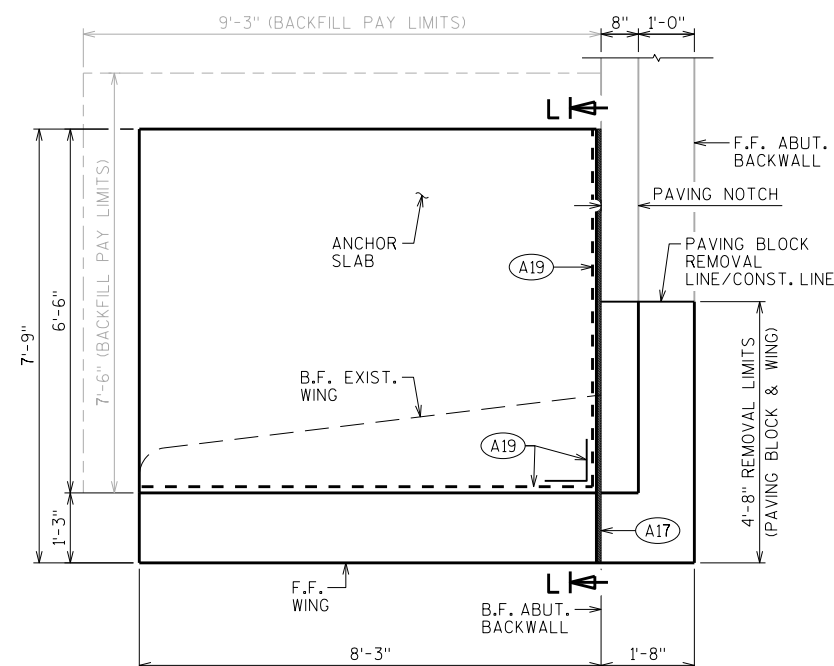
- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SUPPORT OF EXIST. DECK AT EXTERIOR PANEL IS REQUIRED, AND PAID FOR IN BID ITEM "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION		BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION				
STRUCTURE B-44-20				
DRAWN BY		ARC	PLANS CK'D.	JDM
STAGING DETAILS 2			SHEET 4	



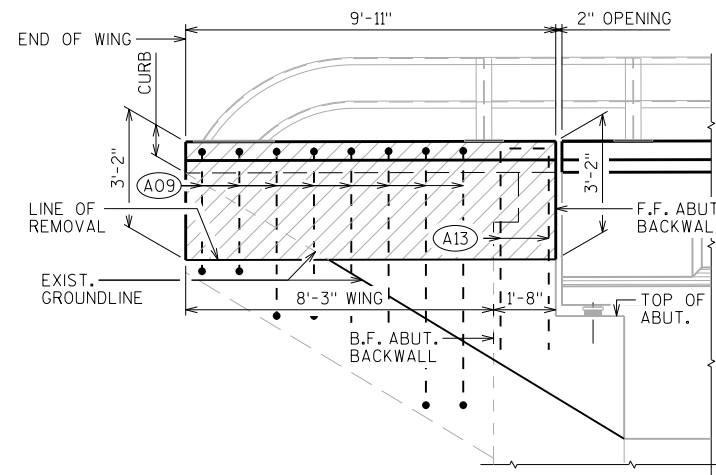
PLAN OF WING - SHOWING REMOVAL DIMS.

(SHOWING WING 1 - ALL OTHER WINGS SIMILIAR)



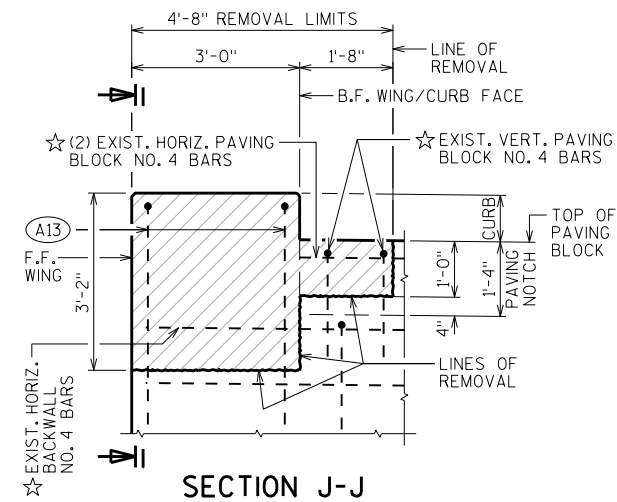
PLAN OF PROPOSED ANCHOR SLAB WING

(SHOWING WING 1 - ALL OTHER WINGS SIMILIAR)

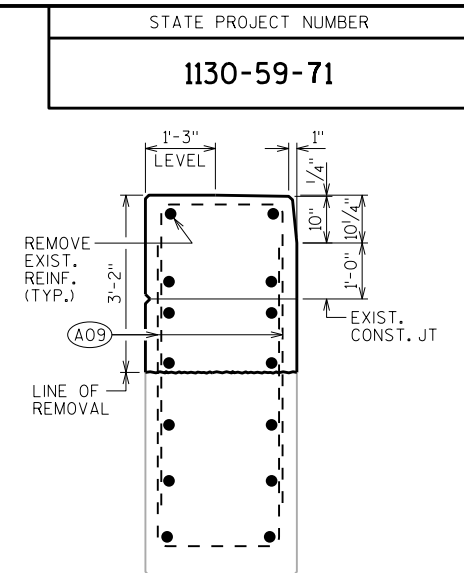


VIEW 1-1

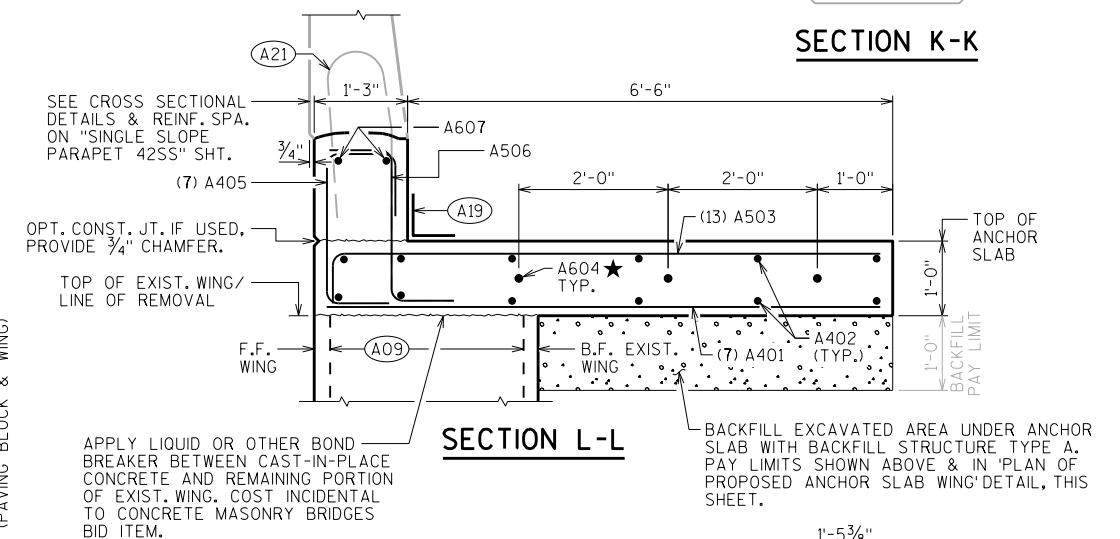
(PARTIAL ELEVATION VIEW SHOWING REMOVAL)



SECTION J-J

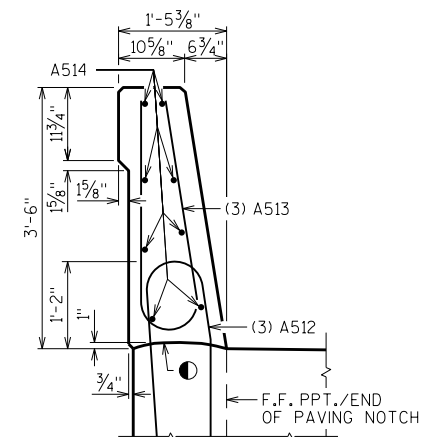


SECTION K-K



SECTION L-L

BACKFILL EXCAVATED AREA UNDER ANCHOR
SLAB WITH BACKFILL STRUCTURE TYPE A.
PAY LIMITS SHOWN ABOVE & IN 'PLAN OF
PROPOSED ANCHOR SLAB WING' DETAIL, THIS
SHEET.



SECTION THRU PARAPET

(@ SECTION M-M)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-20			
		DRAWN BY	PLANS CKD.
		ARC	JDM
ABUT. WING REMOVAL & REPLACEMENT 1		SHEET 5	

SCALE = 5.00

8

8

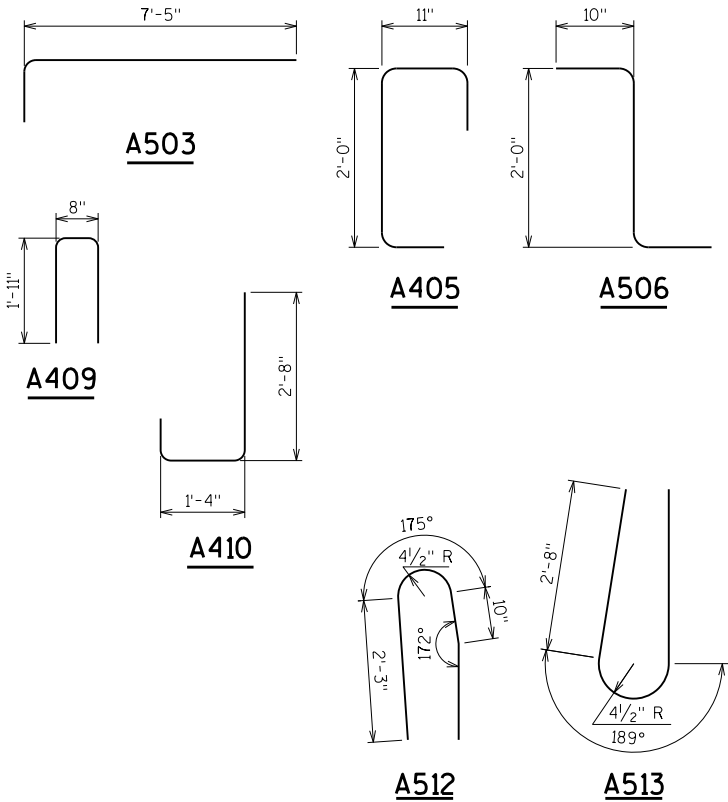
LEGEND

- (A09) EXIST. VERT. WING NO. 4 BARS, SPACED AT 1'-0". CUT BARS AT LINE OF REMOVAL.
- (A13) PRESERVE EXIST. VERT. CURB NO. 4 BARS. CUT BARS TO LENGTH FOR ADEQUATE CLEAR COVER AT BOT. OF PAVING NOTCH & TOP OF PAVING NOTCH.
- (A17) 1/2" FILLER (INCLUDED IN ANCHOR SLAB LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.) EXTEND SEALER 3" BELOW GUTTER LINE AT THE INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE OF ABUT. IF OPTIONAL CONST. JOINT USED IN ANCHOR SLAB, PLACE 18" MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGIT. JOINT. THE MEMBRANE WATERPROOFING SEALING THE OPTIONAL CONST. JOINT IS INCIDENTAL TO THE CONCRETE MASONRY BID ITEM, AND NOT INCLUDED IN PLAN QUANTITIES.
- (A21) FOR PPT BARS & DIMENSIONS, SEE "SINGLE SLOPE PARAPET 42SS" SHEET FOR DETAILS. ALL VERT. WING REINF. (R501, R503 & R504) TO BE INCLUDED INTO INITIAL POUR OF ANCHOR SLAB FOOTING.
- ★ ADHESIVE ANCHORS NO. 6 BAR, EMBED 9" INTO B.F. OF ABUTMENT. USE AN APPROVED DEBONDER ON 1/2 THE BAR LENGTH, EXTENDING INTO ANCHOR SLAB. COST OF DEBONDER INCIDENTAL TO CONCRETE MASONRY BRIDGES BID ITEM.
- ☆ PRESERVE FULL LENGTH OF EXIST. REINFORCEMENT, AND INCORPORATE INTO NEW WORK (TYP.)
- CONST. JOINT. STRIKE OFF AS SHOWN

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401	X	28	7'-5"			ANCHOR SLAB-BOT.-TRANS.
A402	X	48	7'-11"			ANCHOR SLAB-TOP&BOT.-LONGIT.
A503	X	52	8'-0"	X		ANCHOR SLAB-TOP-TRANS.
A604	X	12	1'-6"			ANCHORS-B.F. ABUT.
A405	X	28	4'-0"	X		WINGS-VERTICAL-F.F.
A506	X	56	3'-5"	X		WINGS-VERTICAL-B.F.
A607	X	8	7'-11"			WINGS-TOP-LONGIT.
A408	X	8	3'-3"			PAVING BLOCK-HORIZ.-TOP
A409	X	8	4'-4"	X		PAVING BLOCK-VERT.
A410	X	8	4'-6"	X		ABUT. BACKWALL-HORIZ.
A411	X	8	2'-0"			ABUT. BACKWALL-VERT.
A512	X	12	5'-10"	X		ABUT. BACKWALL/PPT.-VERT.
A513	X	12	6'-8"	X		PPT.-VERT.
A514	X	32	1'-4"			PPT.-HORIZ.



LEGEND

★ ADHESIVE ANCHORS NO. 6 BAR. EMBED 9" INTO B.F. OF ABUTMENT. USE AN APPROVED DEBONDER ON 1/2 THE BAR LENGTH, EXTENDING INTO ANCHOR SLAB. COST OF DEBONDER INCIDENTAL TO CONCRETE MASONRY BRIDGES BID ITEM.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-20			
DRAWN BY		ARC	PLANS CK'D. JDM
ABUT. WING REMOVAL & REPLACEMENT 2		SHEET 6	

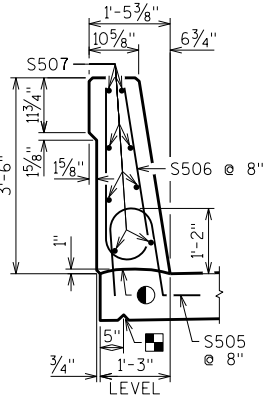
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

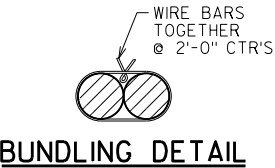
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	468	4'-5"			DECK-TRANSVERSE-BOTTOM
S502	X	936	5'-0"	X		DECK-TRANSVERSE-TOP
S503	X	72	23'-0"			DECK-LONGIT.-ALL SPANS
S504	X	36	4'-5"			DIAPHRAGMS-TRANSVERSE
S505	X	396	4'-5"	X		DECK/PARAPET-VERTICAL
S506	X	396	6'-8"	X		PARAPET-VERTICAL
S507	X	96	22'-8"			PARAPET-HORIZONTAL

LEGEND

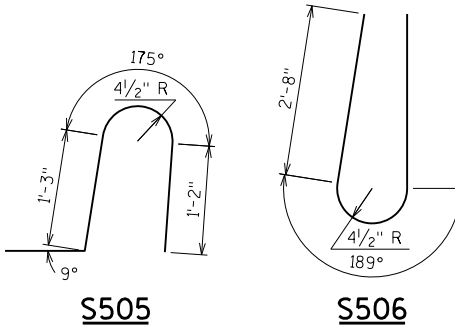
- ⊙ INDICATES WING NUMBER
- ☆ PRESERVE EXIST. REINF. AND INCORPORATE INTO NEW WORK (TYP.)
- ◆ AFTER MILLING OFF 1/2"± OF ORIG. 7" DECK THICK. & ADDING 2 1/2"± AVG. OVERLAY (2006)
- 3/4" CONTINUOUS V-GROOVE (TYP.). TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENT BACKWALL
- CONST. JOINT. STRIKE OFF AS SHOWN
- ⊙ REMOVE & REPLACE NEOPRENE COMPRESSION SEAL, EDGE TO EDGE OF SLAB. NO SPLICING PERMITTED. SEAL ENDS.



SECTION THRU PARAPET ON DECK



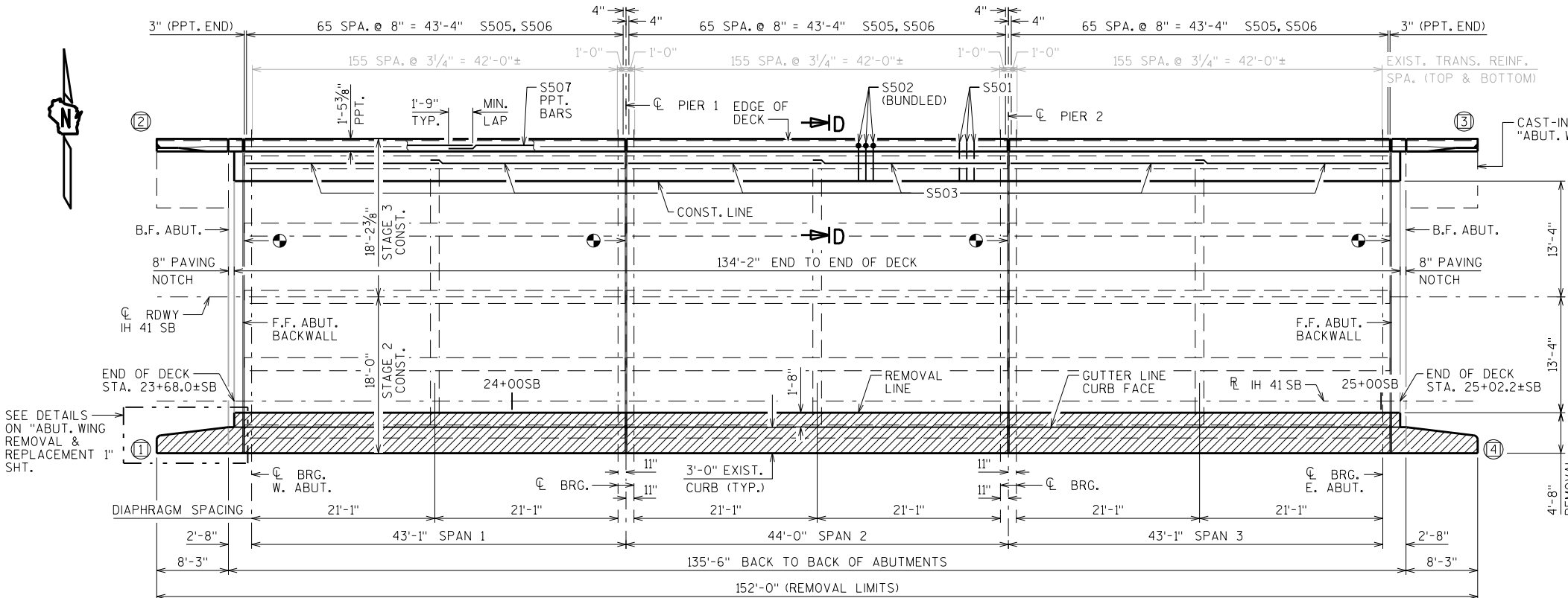
BUNDLING DETAIL



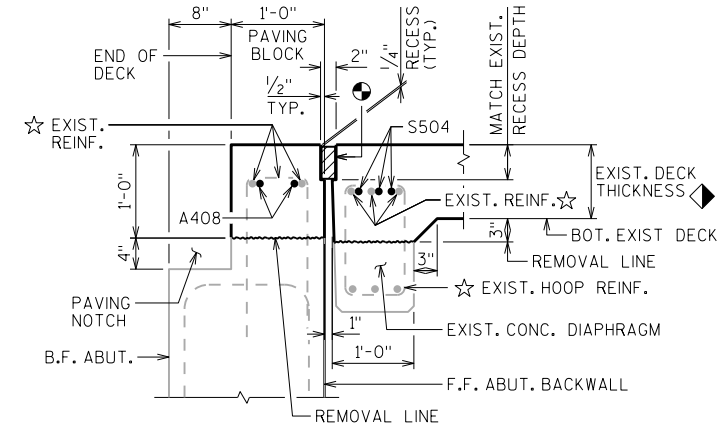
S505

S506

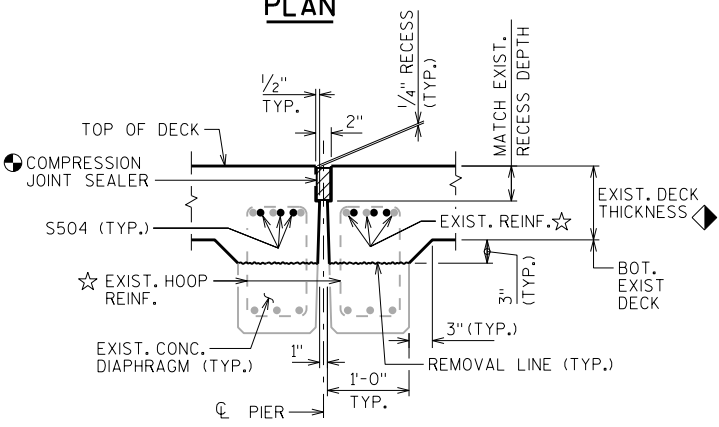
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-20			
DRAWN BY		ARC	PLANS CK'D. JDM
SUPERSTRUCTURE DETAILS		SHEET 7	



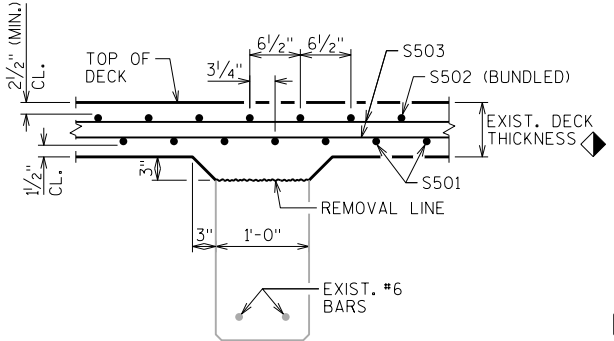
PLAN



SECTION THRU NEW JOINT AT ABUTS.

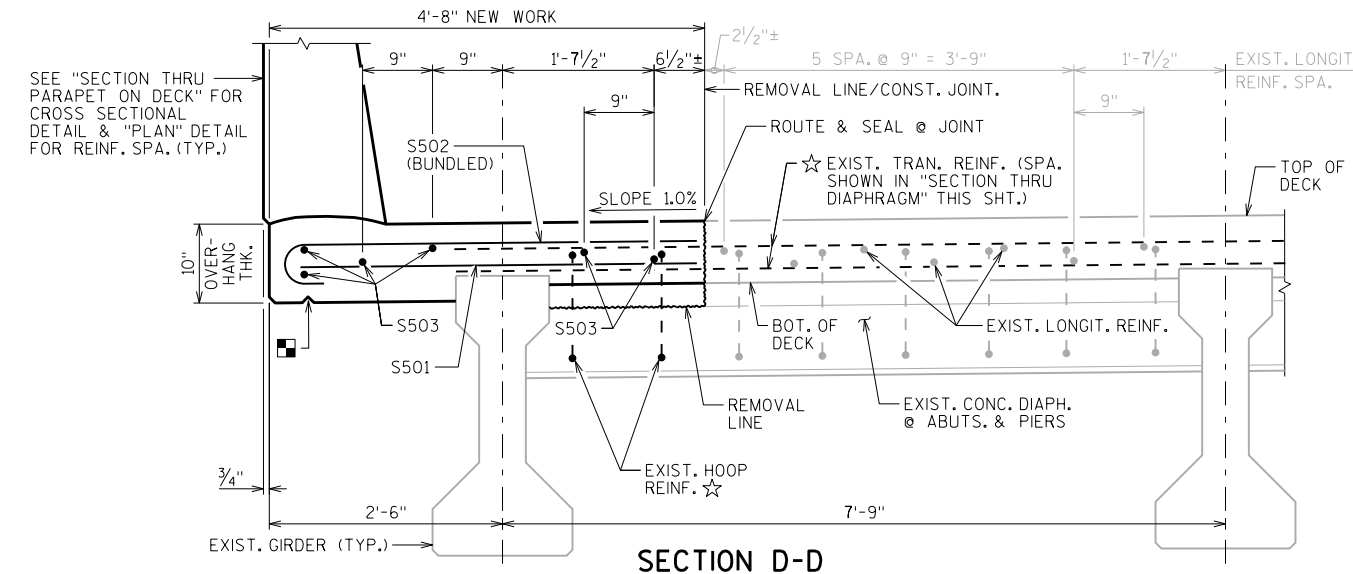


SECTION THRU NEW JOINT AT PIERS

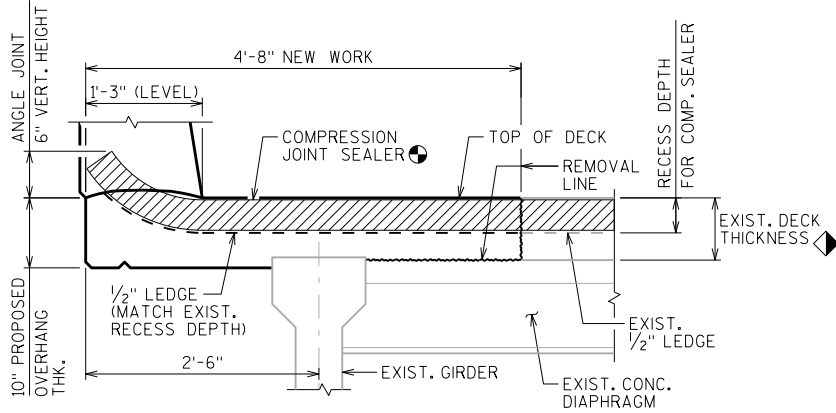


SECTION THRU DIAPHRAGM

(MID-SPAN DIAPHRAGM)



SECTION D-D



SECTION THRU DECK AT JOINT

(SHOWING PROPOSED COMPRESSION JOINT SEALER)



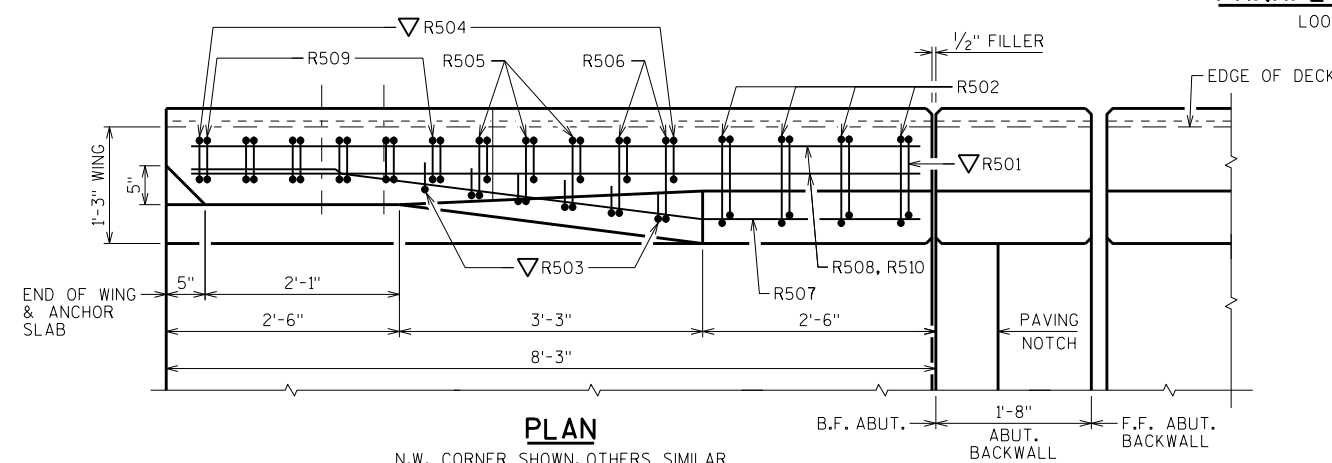
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD". EACH.



LOOKING AT INSIDE FACE OF PARAPET

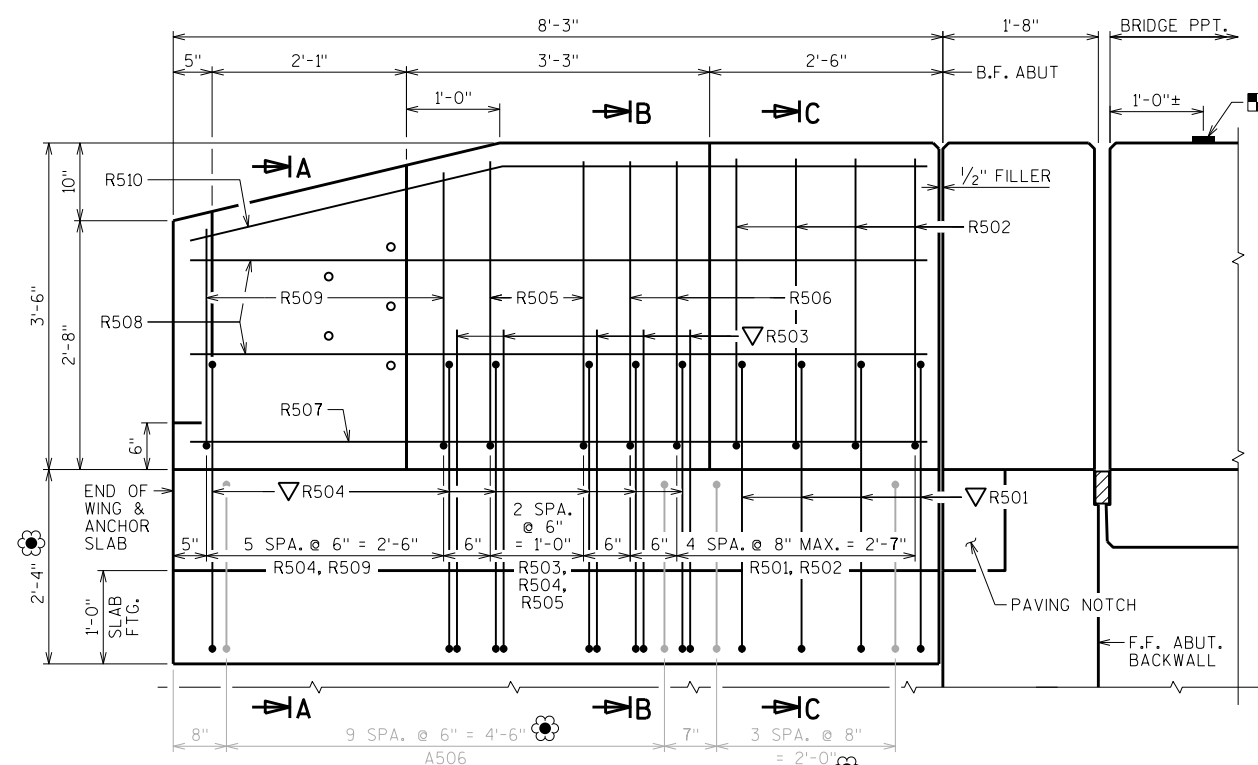


- CONST. JOINT - STRIKE OFF AS SHOWN
- ▽ BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.
- BENCH MARK CAP (WHEN SUPPLIED).
- ⊙ ABUT. WING ANCHOR SLAB REINFORCEMENT. DIMENSIONS & DETAILS SHOWN ON "ABUT. WING REMOVAL & REPLACEMENT" SHEETS.

SCALE = 1.00

PLAN

N.W. CORNER SHOWN. OTHERS SIMILAR



INSIDE ELEVATION

N.W. CORNER SHOWN, OTHERS SIMILAR



DESIGN DATA

LIVE LOAD:
INVENTORY RATING: HS-17
OPERATING RATING: HS-28
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 250 (KIPS)

MATERIAL PROPERTIES:
CONCRETE MASONRY:
SUPERSTRUCTURE & PARAPET $f'c = 4,000$ P.S.I.
BAR STEEL REINFORCEMENT:
GRADE 60 $f_y = 60,000$ P.S.I.
(ORIGINAL 1960 STRUCT.) GRADE 40 $f_y = 40,000$ P.S.I.
36" EXIST. PRESTRESSED GIRDERS:
CONCRETE MASONRY $f'c = 5,000$ P.S.I.
STRANDS: 7/16" DIA. WITH ULTIMATE TENSILE STRENGTH OF 250,000 P.S.I.

LEGEND

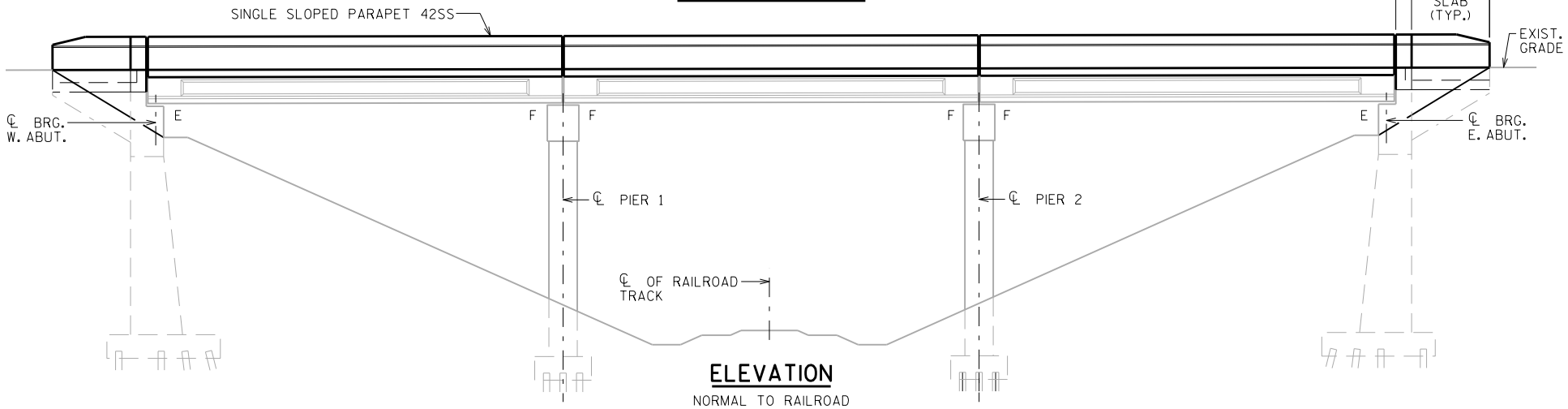
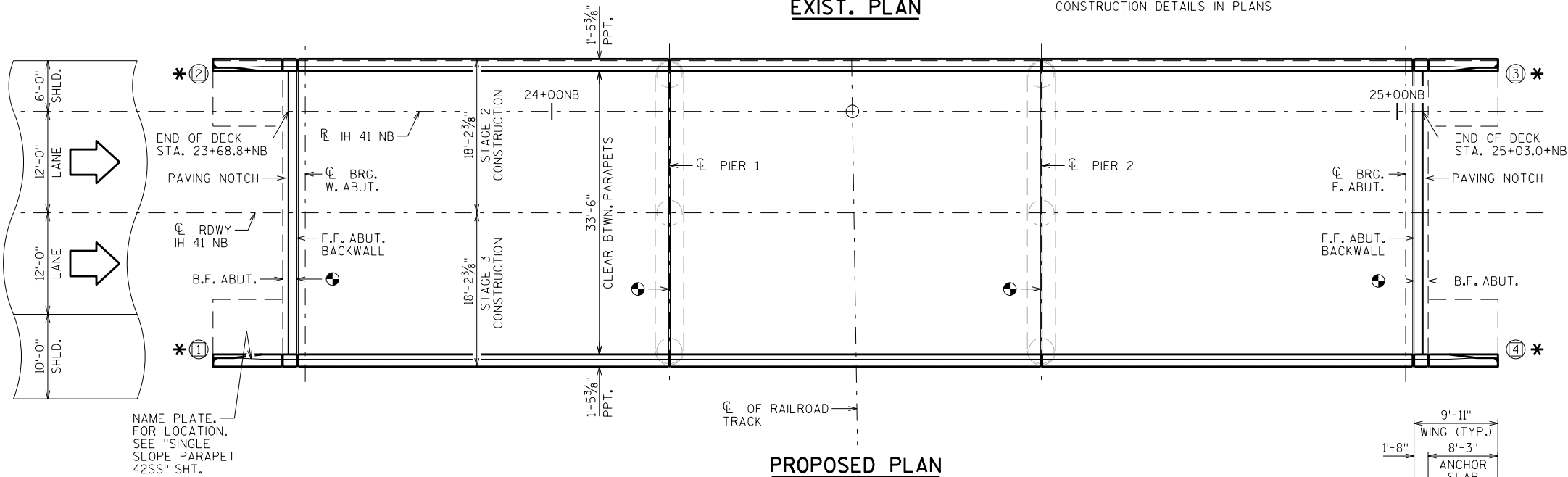
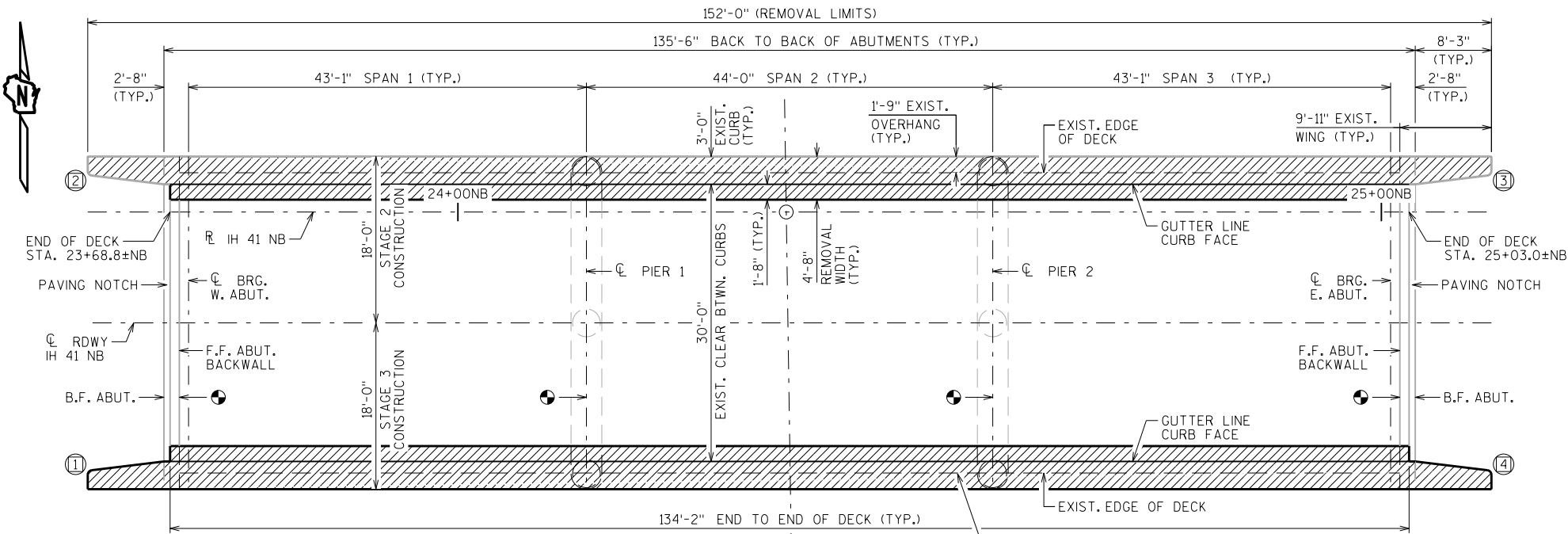
- REMOVE & REPLACE NEOPRENE COMPRESSION SEAL, EDGE TO EDGE OF DECK. NO SPlicing PERMITTED. SEAL ENDS, VERTICAL FACES OF EXISTING JOINT OPENING SHALL BE CLEANED PRIOR TO INSTALLATION OF NEW COMPRESSION SEAL. MANUFACTURER SHALL FURNISH SEAL WITH TOP SIDE LABELED. SEE JOINT OPENING FORMING DETAILS AT 42SS PPT. ON 'SUPERSTRUCTURE DETAILS' SHEET.
- * PROVIDE FOR THRIE BEAM GUARD RAIL ATTACHMENT, AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".
- INDICATES WING NUMBER

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. STAGING DETAILS 1
4. STAGING DETAILS 2
5. ABUT. WING REMOVAL & REPLACEMENT 1
6. ABUT. WING REMOVAL & REPLACEMENT 2
7. SUPERSTRUCTURE DETAILS 1
8. SINGLE SLOPE PARAPET 42SS

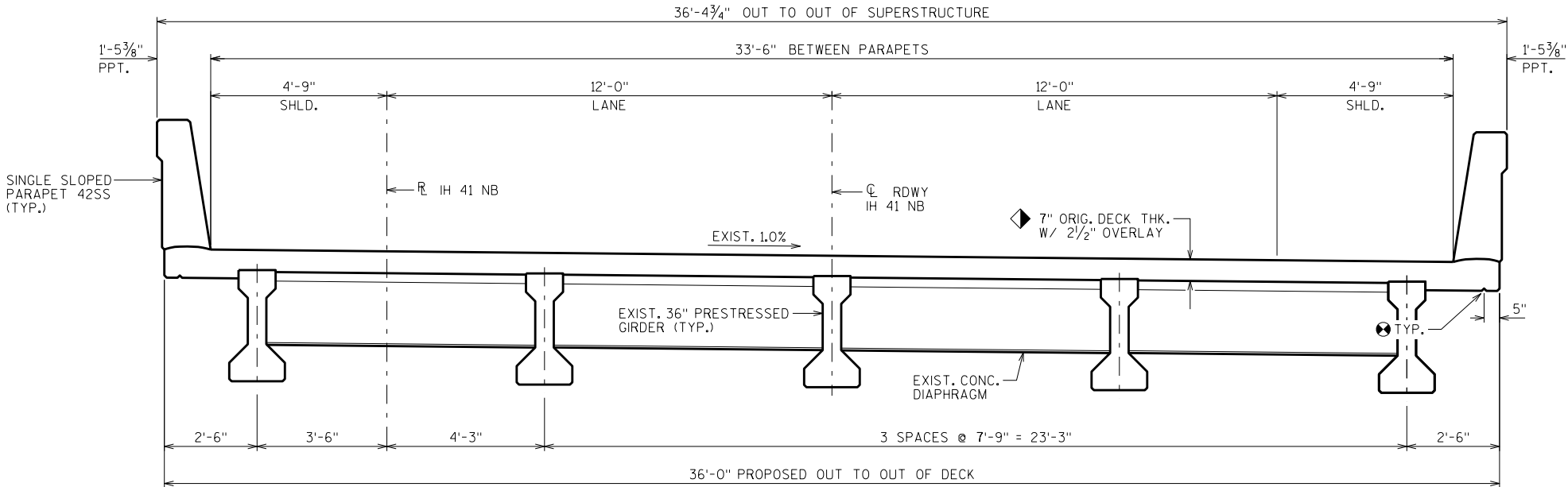
STRUCTURE DESIGN CONTACTS:
ALEXANDER CRABTREE (608) 266-3686
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY
 BUREAU OF STRUCTURES			
ACCEPTED <i>William C. Decker</i> 12/18/19 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-44-21			
REHAB IH 41NB OVER SOO LINE RAILROAD			
COUNTY	OUTAGAMIE	TOWN	GRAND CHUTE
DESIGN SPEC. AASHTO STD. SPEC. FOR HIGHWAY BRIDGES, 17TH EDITION			
DESIGNED BY	ARC	DESIGNED CK'D.	JDM
DRAWN BY	ARC	PLANS CK'D.	JDM
GENERAL PLAN			SHEET 1 OF 8



GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" OR MATCH EXISTING BEVELS, UNLESS OTHERWISE NOTED.
- ALL REMOVAL LINES SHALL BE DEFINED BY A 1/2-INCH SAWCUT.
- TRAFFIC MAINTAINED DURING CONSTRUCTION. SEE STAGING DETAILS SHOWN IN PLAN.
- PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF NEW DECK, AND TO THE NEW VERTICAL & HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT BACKWALL.
- PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE, TOP, AND ENDS OF PARAPETS, INCLUDING PARAPETS ON ABUTMENT WINGS.
- DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
- THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 1960.
- REHAB WORK ON STRUCTURE PERFORMED IN 2 STAGES. TRAFFIC MAINTAINED ON 1/2 OF THE STRUCTURE, DURING CONSTRUCTION. TEMPORARY SUPPORT OF EXIST. DECK AT EXTERIOR PANEL IS REQUIRED. COST OF TEMPORARY SUPPORT INCLUDED IN CONCRETE MASONRY BRIDGES BID ITEM. SEE STAGING SHEETS FOR DETAILS.



SECTION THRU ROADWAY LOOKING EAST

- 3/4" V-GROOVE, TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENT BACKWALL
- 1 1/2"± MIN. MILLED OFF OF ORIG. 7" THICK DECK, BEFORE ADDING 2 1/2"± AVG. OVERLAY (2006)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 24+35NB	LS	—	—	—	1
203.0225,S	DEBRIS CONTAINMENT B-44-21	LS	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-44-21	LS	—	—	—	1
210.1100	BACKFILL STRUCTURE TYPE A	CY	—	6	6	12
502.0100	CONCRETE MASONRY BRIDGES	CY	71	10	10	91
502.2000	COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC 3-INCH	LF	144	—	—	144
502.3200	PROTECTIVE SURFACE TREATMENT	SY	105	—	—	105
502.3210	PIGMENTED SURFACE SEALER	SY	130	10	10	150
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH	—	6	6	12
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	15,780	1,320	1,320	18,420
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	3	3	6
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	2	2	4
	NON-BID ITEMS		—	—	—	1/2"
	FILLER					

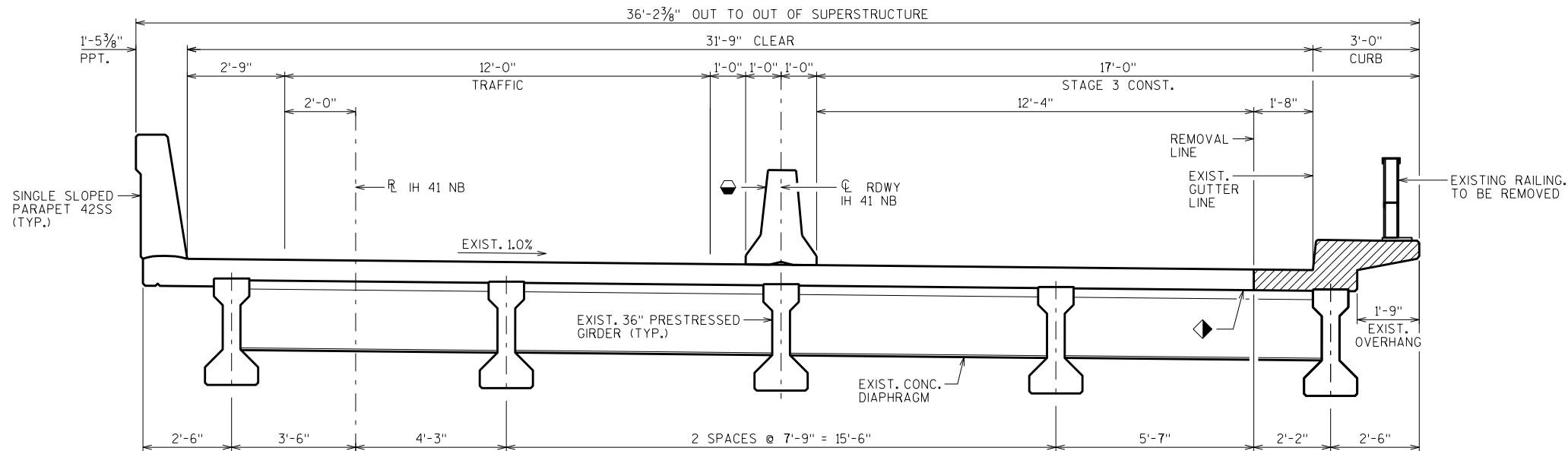
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-21			
	DRAWN BY	ARC	PLANS CK'D. JDM
CROSS SECTION & QUANTITIES		SHEET 2	



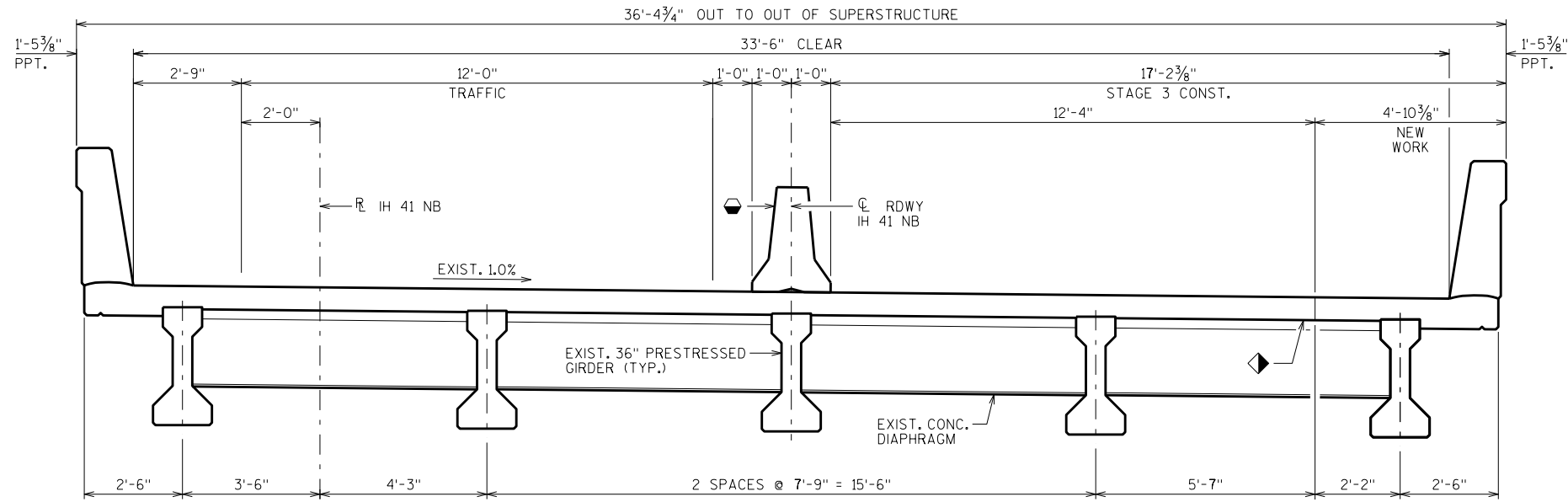
LEGEND

-  CONCRETE BARRIER TEMPORARY PRECAST
 TEMPORARY SUPPORT OF EXIST. DECK AT EXTERIOR PANEL IS REQUIRED, AND PAID FOR IN BID ITEM "CONCRETE MASONRY BRIDGES".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-21			
DRAWN BY		ARC	PLANS CK'D. JDM
STAGING DETAILS 1		SHEET 3	



STAGE 3 REMOVAL & TRAFFIC
(LOOKING EAST)



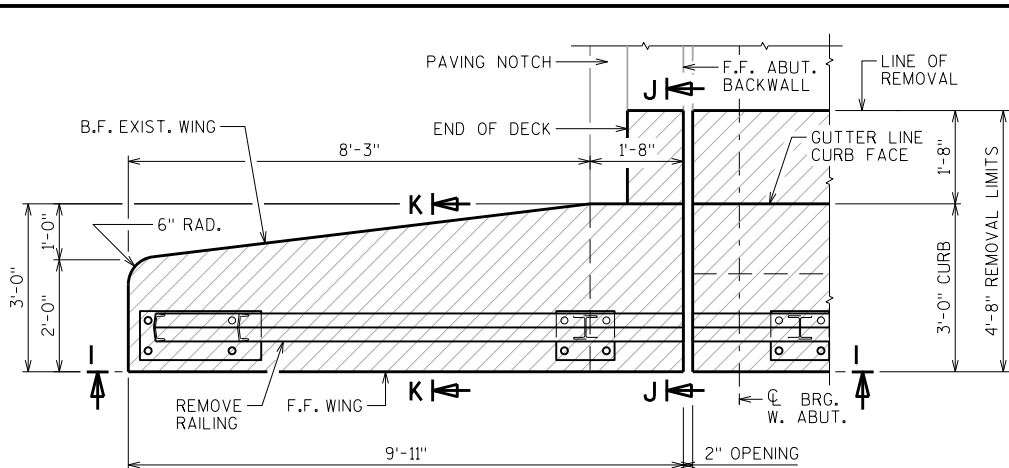
STAGE 3 CONSTRUCTION & TRAFFIC
(LOOKING EAST)

NOTE: ALL EXISTING TRANSVERSE DECK REINF. AND EXIST. HOOP REINF. IN ALL CONCRETE DIAPHRAGMS IS TO BE SALVAGED & REINCORPORATED INTO NEW WORK. FOR DETAILS, SEE SUPERSTRUCTURE DETAILS SHEET.

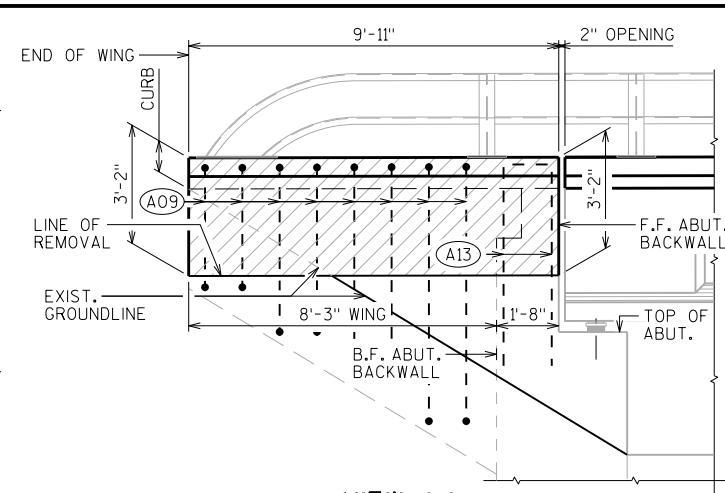
LEGEND

- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SUPPORT OF EXIST. DECK AT EXTERIOR PANEL IS REQUIRED, AND PAID FOR IN BID ITEM "CONCRETE MASONRY BRIDGES".

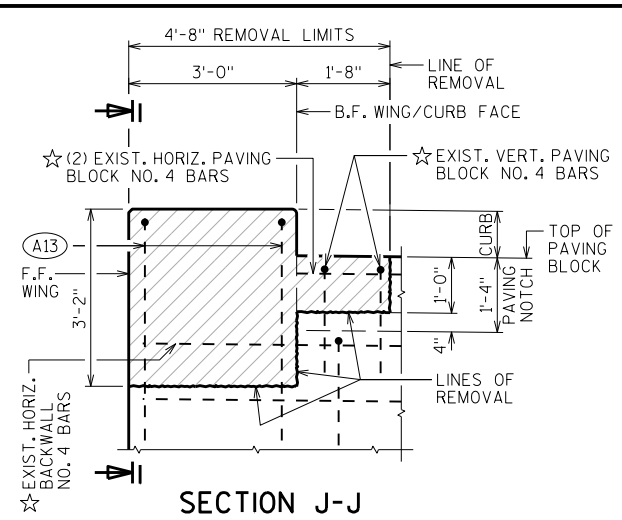
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-21			
		DRAWN BY	ARC
		PLANS CK'D.	JDM
STAGING DETAILS 2		SHEET 4	



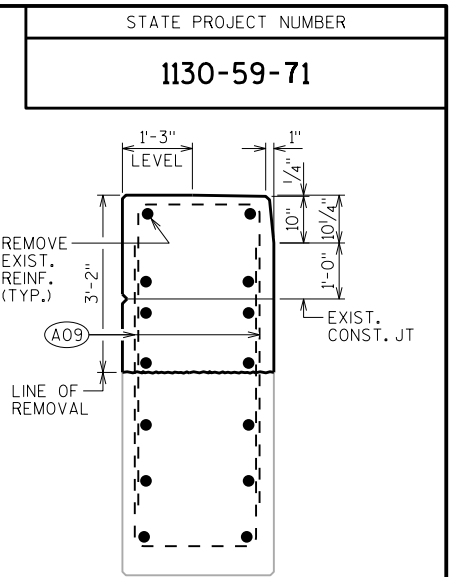
PLAN OF WING - SHOWING REMOVAL DIMS.
(SHOWING WING 1 - ALL OTHER WINGS SIMILIAR)



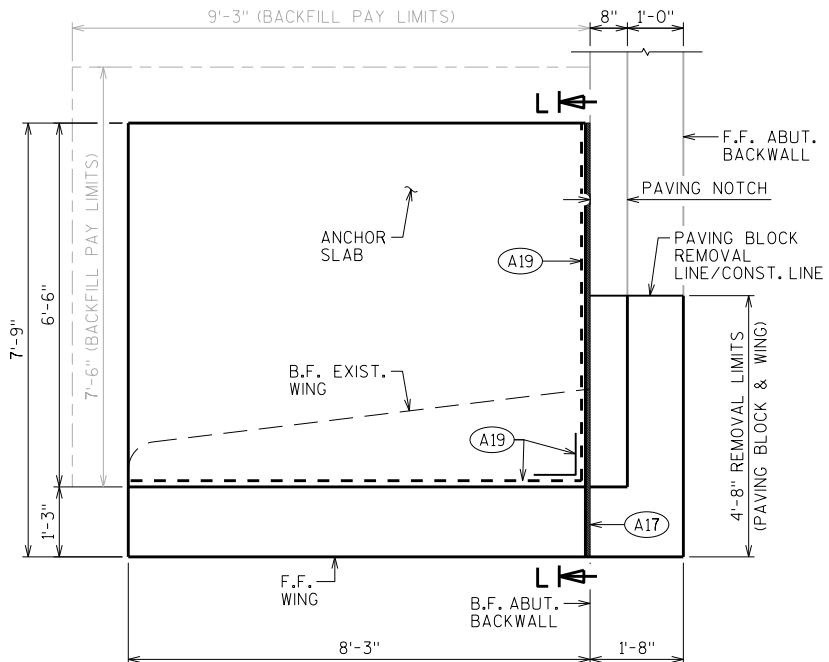
VIEW I-I
(PARTIAL ELEVATION VIEW SHOWING REMOVAL)



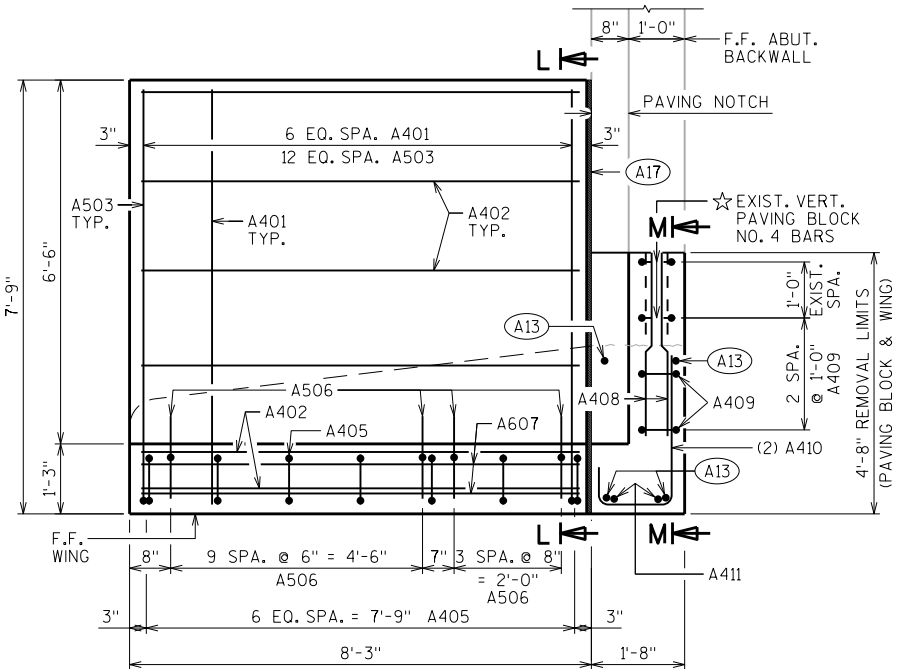
SECTION J-J



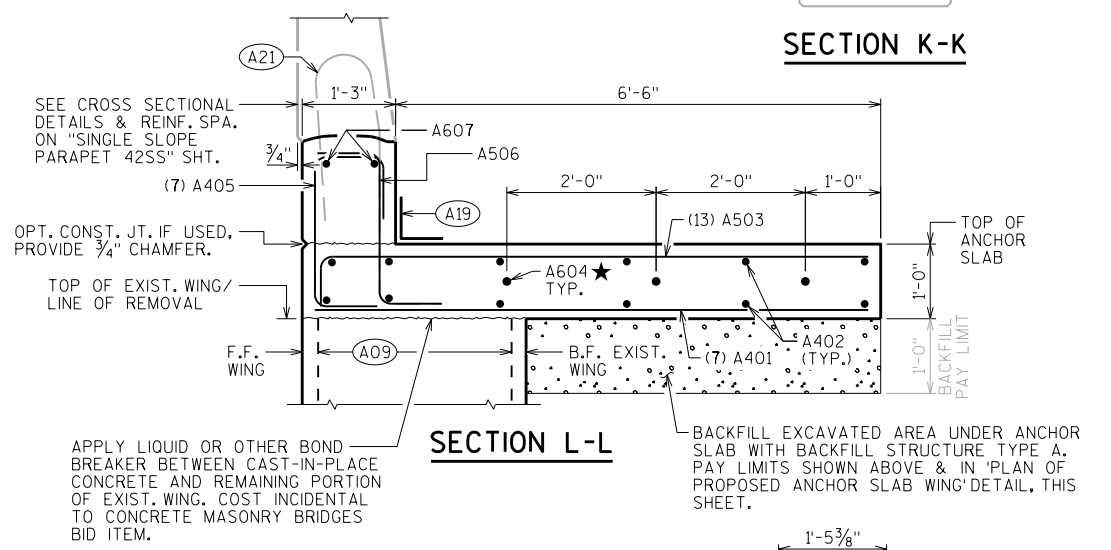
SECTION K-K



PLAN OF PROPOSED ANCHOR SLAB WING
(SHOWING WING 1 - ALL OTHER WINGS SIMILIAR)



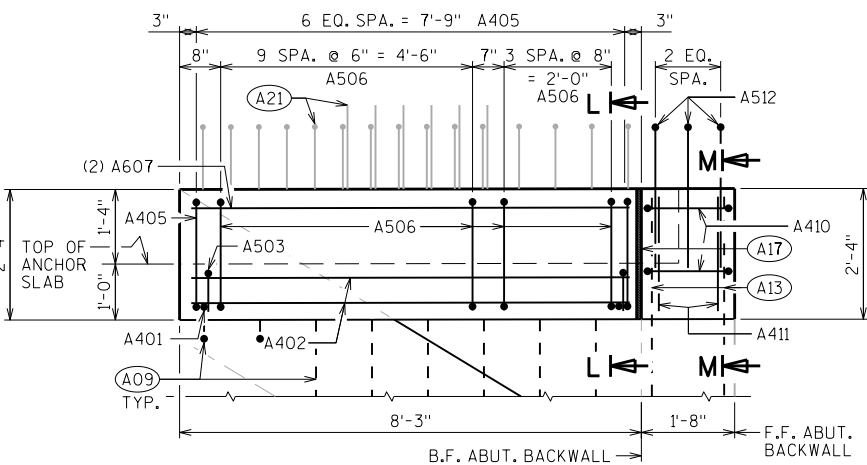
PLAN OF PROPOSED WING & BACKWALL REINF.
(SHOWING WING 1 - ALL OTHER WINGS SIMILIAR)



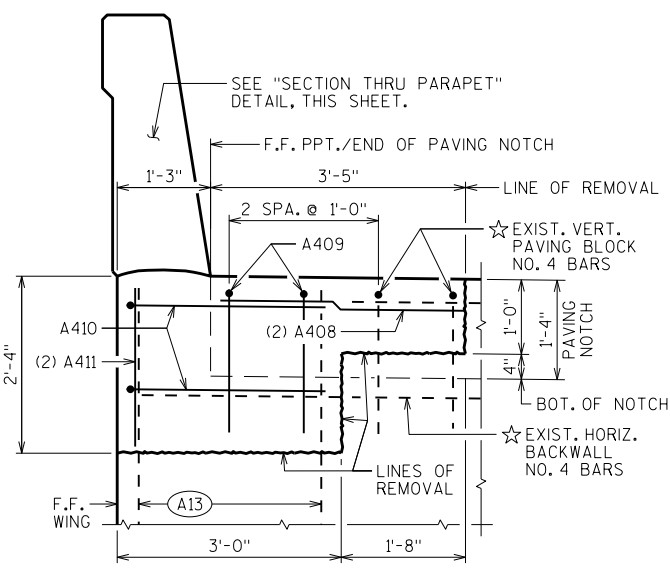
SECTION L-L

BACKFILL EXCAVATED AREA UNDER ANCHOR SLAB WITH BACKFILL STRUCTURE TYPE A. PAY LIMITS SHOWN ABOVE & IN 'PLAN OF PROPOSED ANCHOR SLAB WING' DETAIL, THIS SHEET.

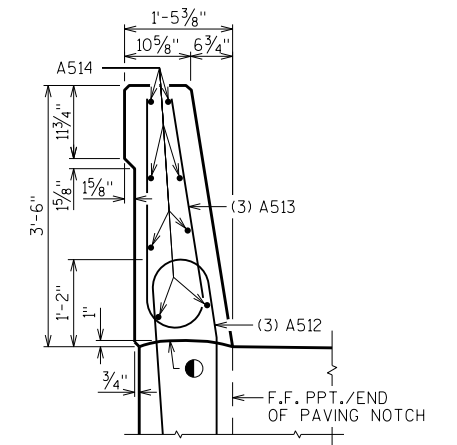
- LEGEND**
- (A09) EXIST. VERT. WING NO. 4 BARS, SPACED AT 1'-0". CUT BARS AT LINE OF REMOVAL.
 - (A13) PRESERVE EXIST. VERT. CURB NO. 4 BARS. CUT BARS TO LENGTH FOR ADEQUATE CLEAR COVER AT BOT. OF PAVING NOTCH & TOP OF PAVING NOTCH.
 - (A17) 1/2" FILLER (INCLUDED IN ANCHOR SLAB LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.) EXTEND SEALER 3" BELOW GUTTER LINE AT THE INSIDE FACE.
 - (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE OF ABUT. IF OPTIONAL CONST. JOINT USED IN ANCHOR SLAB, PLACE 18" MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGIT. JOINT. THE MEMBRANE WATERPROOFING SEALING THE OPTIONAL CONST. JOINT IS INCIDENTAL TO THE CONCRETE MASONRY BID ITEM, AND NOT INCLUDED IN PLAN QUANTITIES.
 - (A21) FOR PPT BARS & DIMENSIONS, SEE "SINGLE SLOPE PARAPET 42SS" SHEET FOR DETAILS. ALL VERT. WING REINF. (R501, R503 & R504) TO BE INCLUDED INTO INITIAL POUR OF ANCHOR SLAB FOOTING.
 - ★ ADHESIVE ANCHORS NO. 6 BAR. EMBED 9" INTO B.F. OF ABUTMENT. USE AN APPROVED DEBONDER ON 1/2 THE BAR LENGTH, EXTENDING INTO ANCHOR SLAB. COST OF DEBONDER INCIDENTAL TO CONCRETE MASONRY BRIDGES BID ITEM.
 - ☆ PRESERVE FULL LENGTH OF EXIST. REINFORCEMENT, AND INCORPORATE INTO NEW WORK (TYP.)
 - CONST. JOINT. STRIKE OFF AS SHOWN



PARTIAL ELEV. OF PROPOSED WING BACKWALL REINF.
(SHOWING WING 1 - ALL OTHER WINGS SIMILIAR)



SECTION M-M



SECTION THRU PARAPET
(@ SECTION M-M)

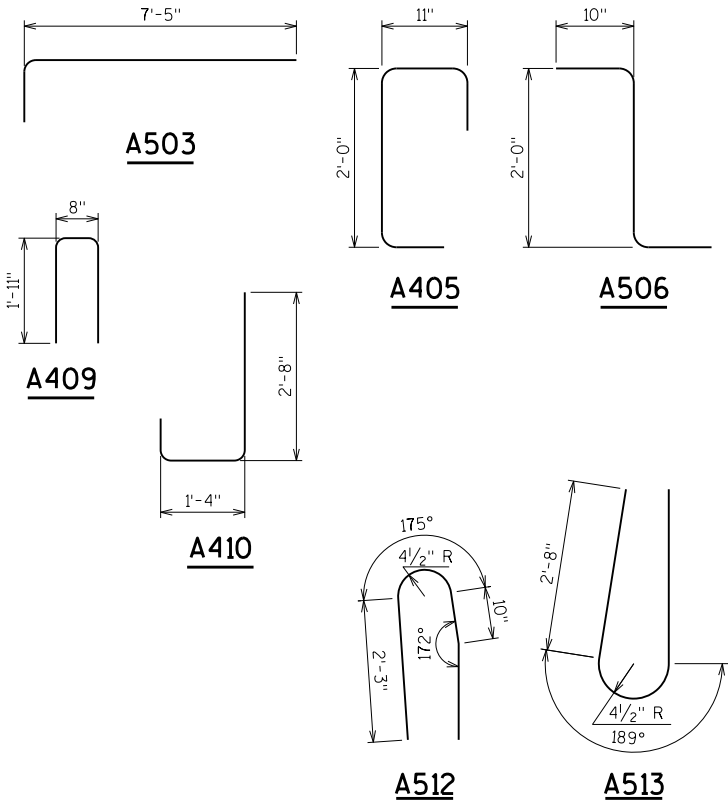
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-21			
DRAWN BY		ARC	PLANS CK'D. JDM
ABUT. WING REMOVAL & REPLACEMENT 1		SHEET 5	

SCALE = 5.00

BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401	X	28	7'-5"			ANCHOR SLAB-BOT.-TRANS.
A402	X	48	7'-11"			ANCHOR SLAB-TOP&BOT.-LONGIT.
A503	X	52	8'-0"	X		ANCHOR SLAB-TOP-TRANS.
A604	X	12	1'-6"			ANCHORS-B.F. ABUT.
A405	X	28	4'-0"	X		WINGS-VERTICAL-F.F.
A506	X	56	3'-5"	X		WINGS-VERTICAL-B.F.
A607	X	8	7'-11"			WINGS-TOP-LONGIT.
A408	X	8	3'-3"			PAVING BLOCK-HORIZ.-TOP
A409	X	8	4'-4"	X		PAVING BLOCK-VERT.
A410	X	8	4'-6"	X		ABUT. BACKWALL-HORIZ.
A411	X	8	2'-0"			ABUT. BACKWALL-VERT.
A512	X	12	5'-10"	X		ABUT. BACKWALL/PPT.-VERT.
A513	X	12	6'-8"	X		PPT.-VERT.
A514	X	32	1'-4"			PPT.-HORIZ.



LEGEND

★ ADHESIVE ANCHORS NO. 6 BAR. EMBED 9" INTO B.F. OF ABUTMENT. USE AN APPROVED DEBONDER ON 1/2 THE BAR LENGTH, EXTENDING INTO ANCHOR SLAB. COST OF DEBONDER INCIDENTAL TO CONCRETE MASONRY BRIDGES BID ITEM.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-21			
DRAWN BY		ARC	PLANS CK'D. JDM
ABUT. WING REMOVAL & REPLACEMENT 2		SHEET 6	

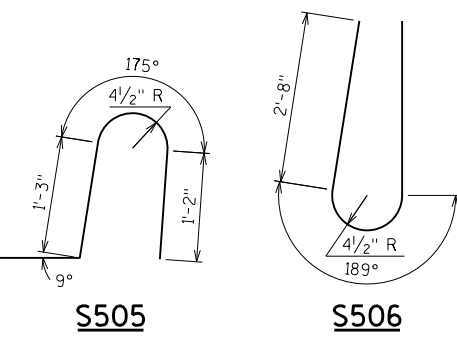
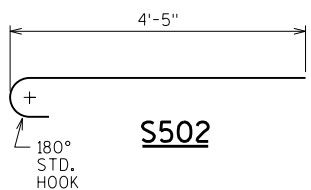
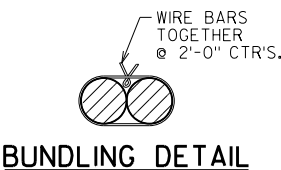
LEGEND

- ⊙ INDICATES WING NUMBER
- ☆ PRESERVE EXIST. REINF. AND INCORPORATE INTO NEW WORK (TYP.)
- ◆ AFTER MILLING OFF $1\frac{1}{2}" \pm$ OF ORIG. 7" DECK THICK. & ADDING $2\frac{1}{2}" \pm$ AVG. OVERLAY (2006)
- $\frac{3}{4}"$ CONTINUOUS V-GROOVE (TYP.). TERMINATE 2'-0" FROM FRONT FACE OF ABUTMENT BACKWALL
- CONST. JOINT. STRIKE OFF AS SHOWN
- ⊙ REMOVE & REPLACE NEOPRENE COMPRESSION SEAL, EDGE TO EDGE OF SLAB. NO SPLICING PERMITTED. SEAL ENDS.

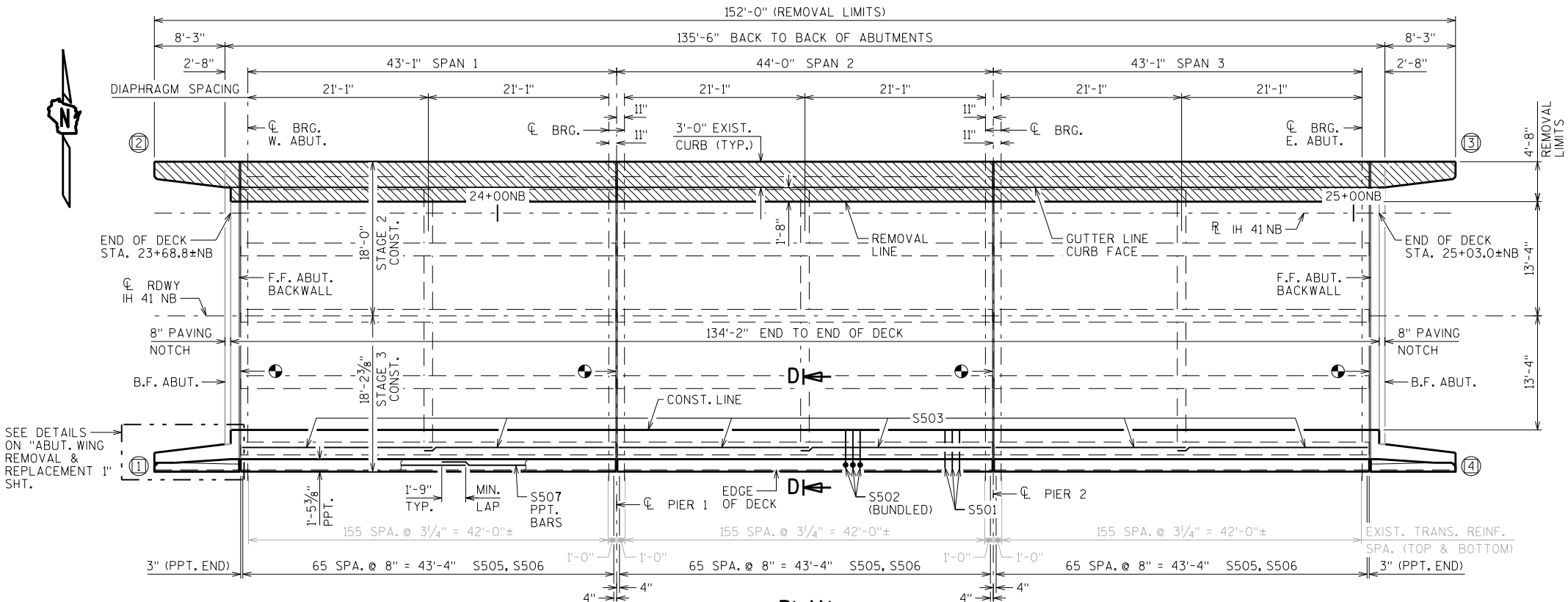
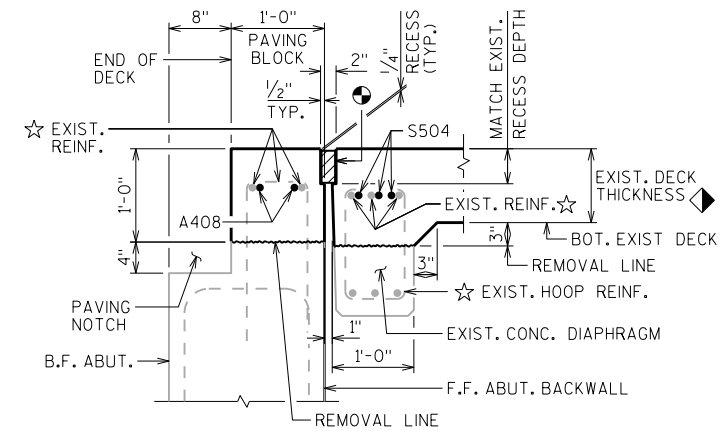
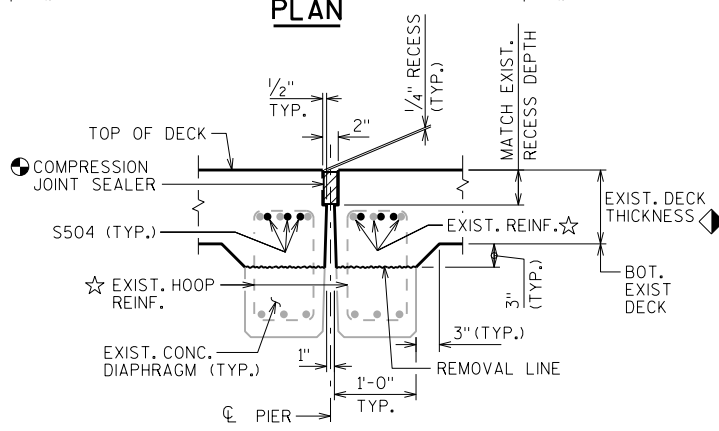
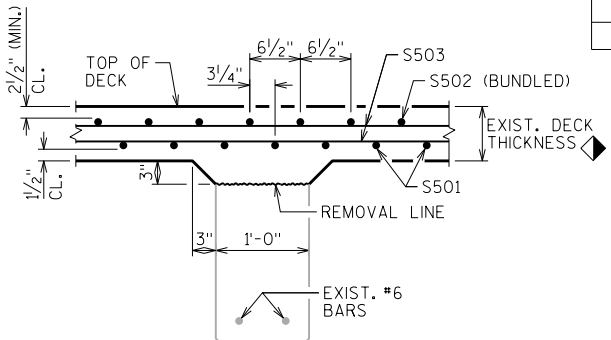
SECTION THRU PARAPET ON DECK**BILL OF BARS**

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

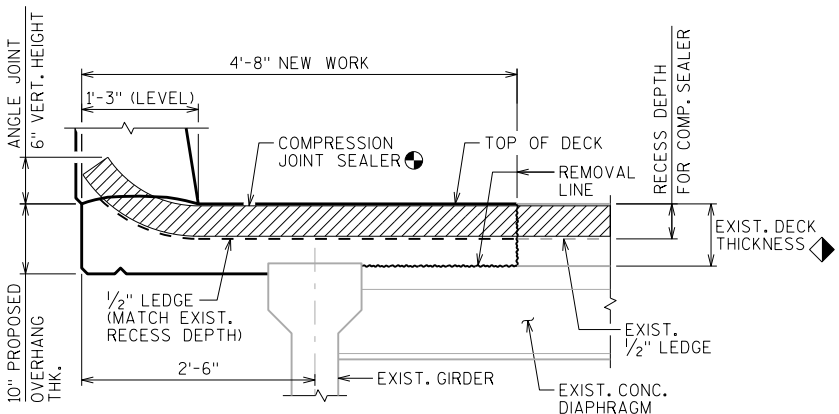
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	468	4'-5"			DECK-TRANSVERSE-BOTTOM
S502	X	936	5'-0"	X		DECK-TRANSVERSE-TOP
S503	X	72	23'-0"			DECK-LONGIT.-ALL SPANS
S504	X	36	4'-5"			DIAPHRAGMS-TRANSVERSE
S505	X	396	4'-5"	X		DECK/PARAPET-VERTICAL
S506	X	396	6'-8"	X		PARAPET-VERTICAL
S507	X	96	22'-8"			PARAPET-HORIZONTAL



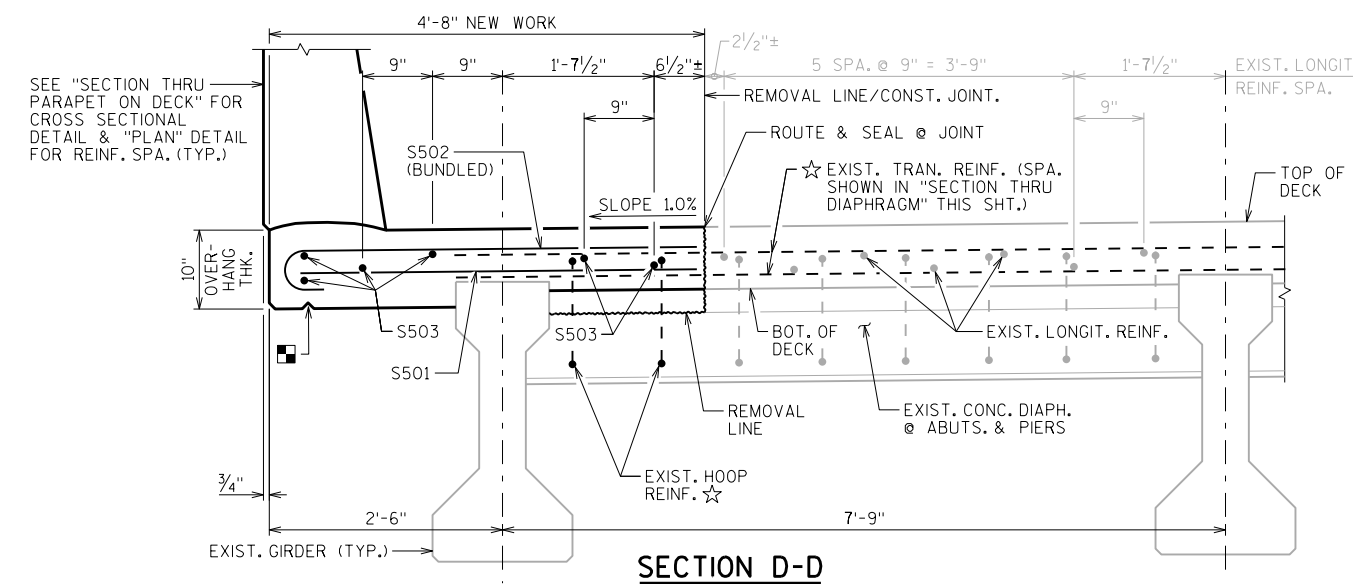
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-21			
DRAWN BY		ARC	PLANS CK'D. JDM
SUPERSTRUCTURE DETAILS		SHEET 7	

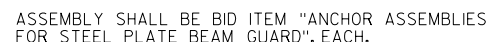
**PLAN****SECTION THRU NEW JOINT AT ABUTS.****SECTION THRU NEW JOINT AT PIERS****SECTION THRU DIAPHRAGM**

(MID-SPAN DIAPHRAGM)

**SECTION THRU DECK AT JOINT**

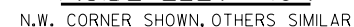
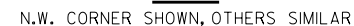
(SHOWING PROPOSED COMPRESSION JOINT SEALER)

**SECTION D-D**



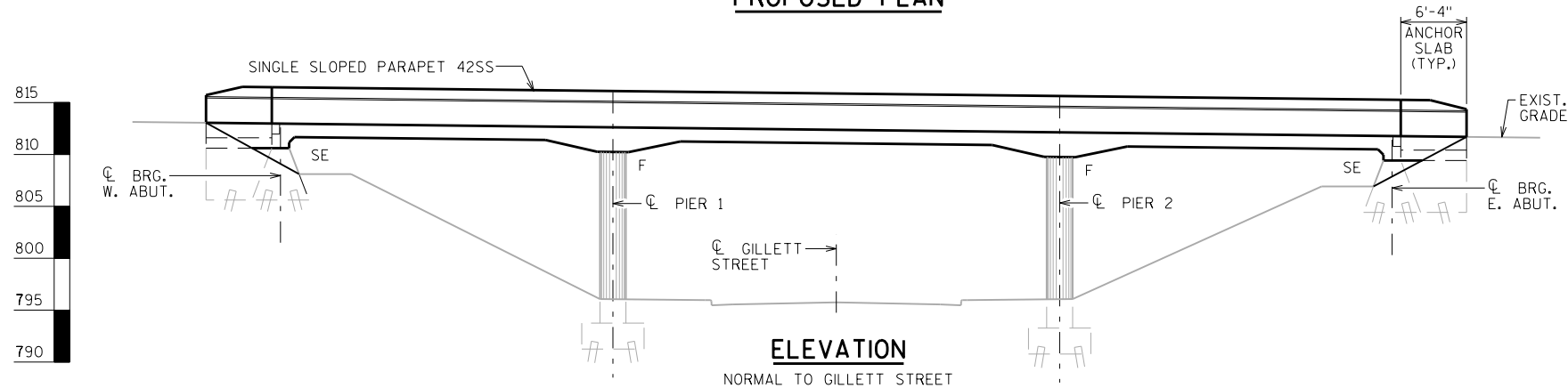
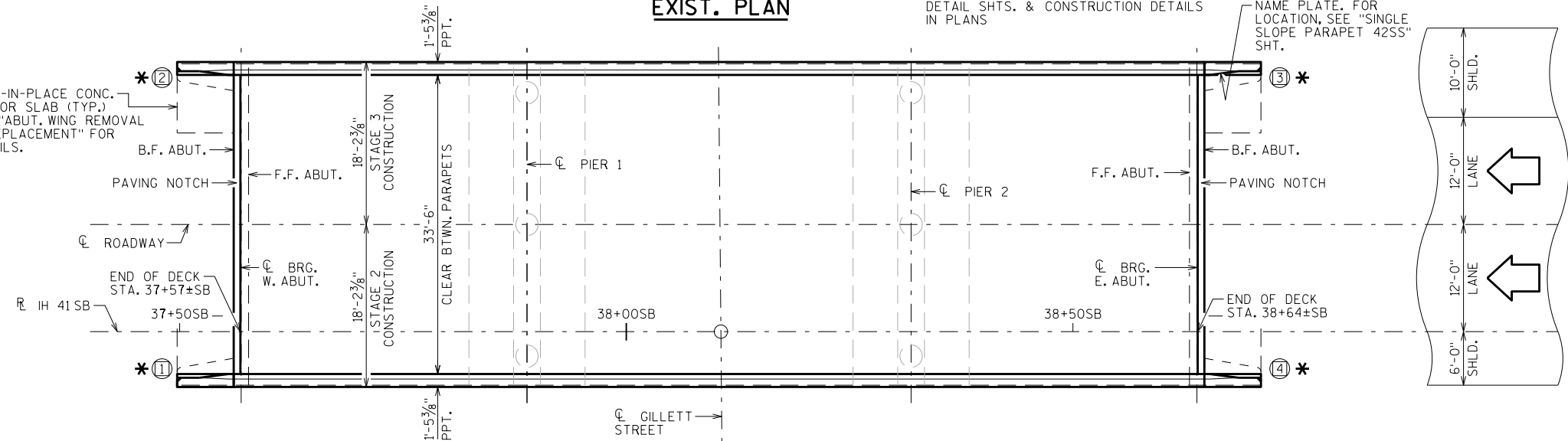
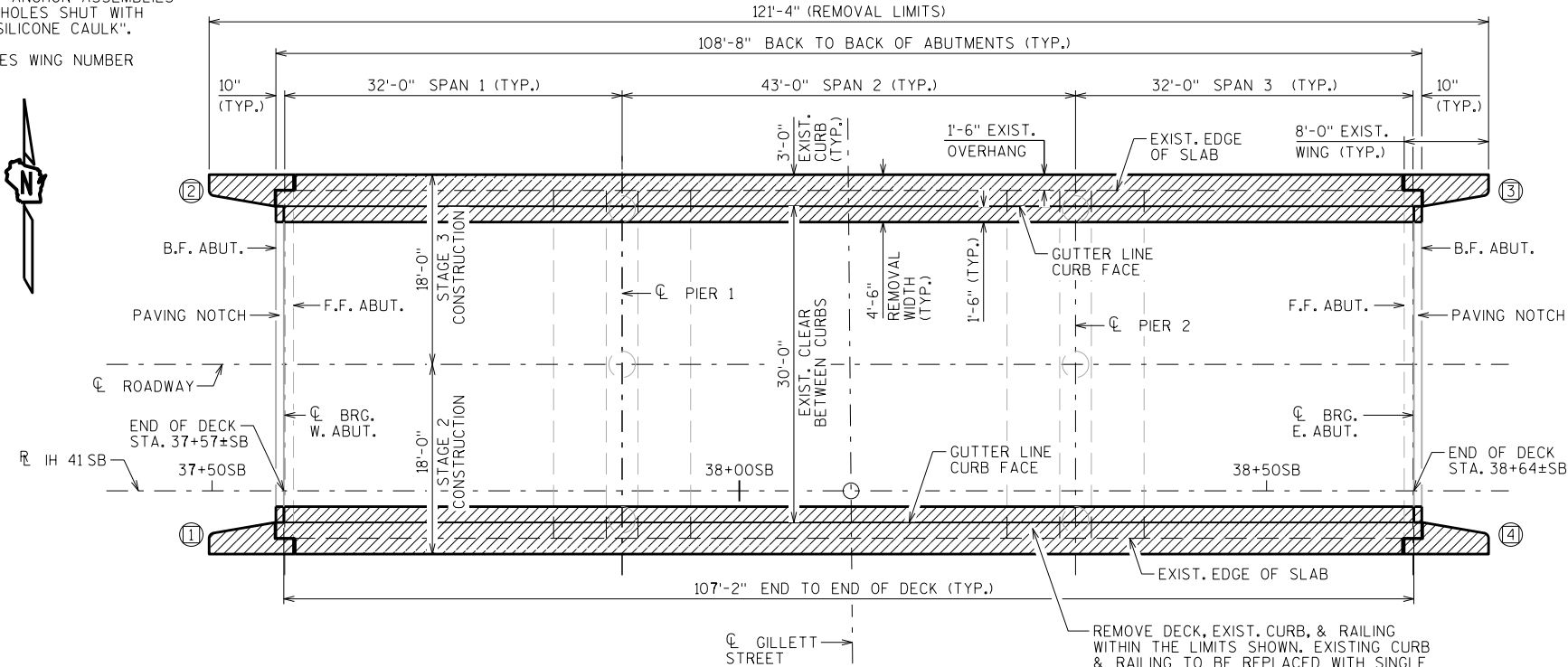
- CONST. JOINT - STRIKE OFF AS SHOWN
- ▽ BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.
- BENCH MARK CAP (WHEN SUPPLIED).
- ⊙ ABUT. WING ANCHOR SLAB REINFORCEMENT. DIMENSIONS & DETAILS SHOWN ON "ABUT. WING REMOVAL & REPLACEMENT" SHEETS.

SINGLE SLOPE SHEET 8



* PROVIDE FOR THREE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

INDICATES WING NUMBER



DESIGN DATA

LIVE LOAD:

INVENTORY RATING: HS-15
OPERATING RATING: HS-25
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 150 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & PARAPET $f'_c = 4,000$ P.S.I.
BAR STEEL REINFORCEMENT:
GRADE 60 $f_y = 60,000$ P.S.I.
(ORIGINAL 1960 STRUCT.) GRADE 40 $f_y = 40,000$ P.S.I.

LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. STAGING DETAILS 1
4. STAGING DETAILS 2
5. ABUT. WING REMOVAL & REPLACEMENT
6. SUPERSTRUCTURE DETAILS 1
7. SUPERSTRUCTURE DETAILS 2
8. SINGLE SLOPE PARAPET 42SS

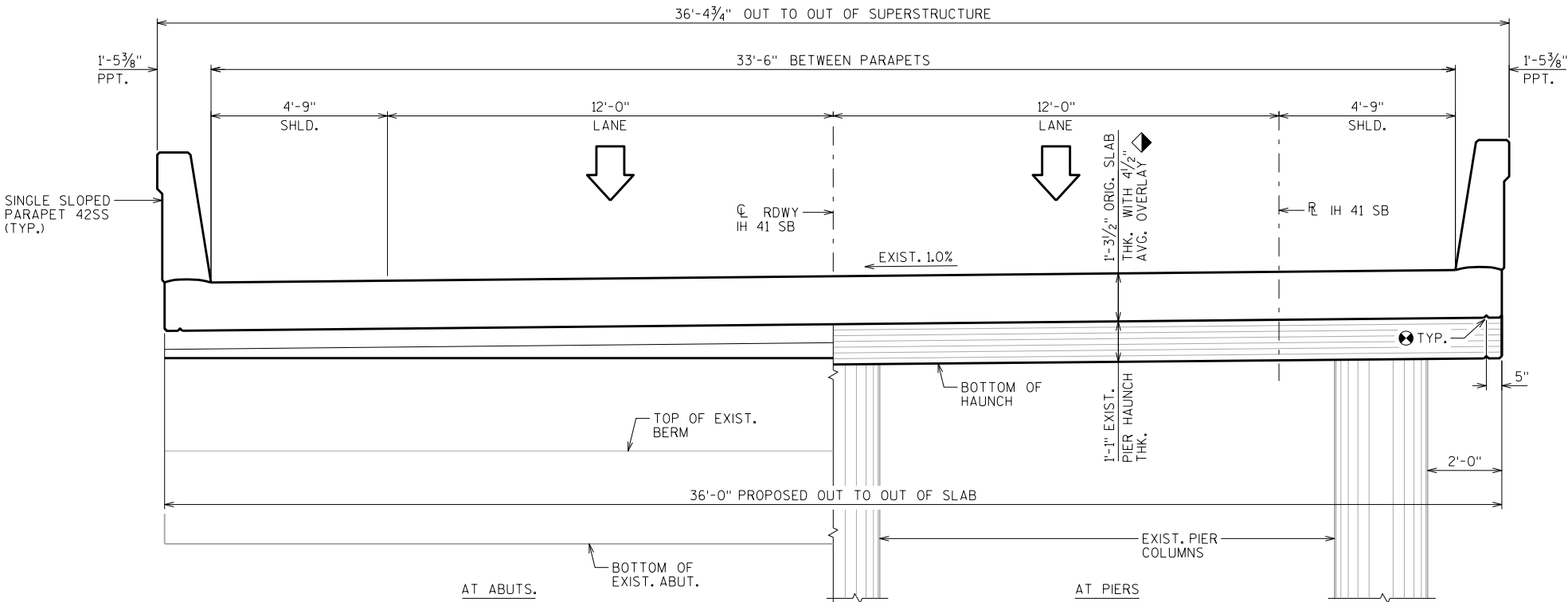
STRUCTURE DESIGN CONTACTS:

ALEXANDER CRABTREE (608) 266-3686
LAURA SHADEWALD (608) 267-9592

NO.	DATE	REVISION	BY
 BUREAU OF STRUCTURES			
ACCEPTED <i>William C. Dreher</i> 12/9/19		CHIEF STRUCTURES DESIGN ENGINEER DATE	
STRUCTURE B-44-28			
REHAB IH 41 SB OVER GILLETT STREET			
COUNTY	OUTAGAMIE	TOWN	GRAND CHUTE
DESIGN SPEC. AASHTO STD. SPEC. FOR HIGHWAY BRIDGES, 17TH EDITION			
DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
ARC	MWB	ARC	MWB
GENERAL PLAN			SHEET 1 OF 8

GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" OR MATCH EXISTING BEVELS, UNLESS OTHERWISE NOTED.
- ALL REMOVAL LINES SHALL BE DEFINED BY A 1/2-INCH SAWCUT.
- PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF NEW SLAB, AND TO THE NEW VERTICAL & HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.
- PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE, TOP, AND ENDS OF PARAPETS, INCLUDING PARAPETS ON ABUTMENT WINGS.
- DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
- THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 1961.
- REHAB WORK ON STRUCTURE PERFORMED IN 2 STAGES. TRAFFIC MAINTAINED ON 1/2 OF THE STRUCTURE, DURING CONSTRUCTION. WHILE THE OTHER 1/2 OF THE STRUCTURE, RECEIVING WORK, IS TO BE SUPPORTED DURING CONSTRUCTION.



SECTION THRU ROADWAY LOOKING EAST

- 3/4" CONTINUOUS "V" DRIP GROOVE (TYP.), EXTEND GROOVE 6" FROM THE FILLET ADJACENT TO ABUTMENTS.
- 1/2"± MIN. MILLED OFF OF ORIG. SLAB THICKNESS DECK, BEFORE ADDING 4 1/2"± AVG. OVERLAY (2006)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 38+10SB	LS	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-44-28	LS	—	—	—	1
210.1100	BACKFILL STRUCTURE TYPE A	CY	—	5	5	10
502.0100	CONCRETE MASONRY BRIDGES	CY	93	6	6	105
502.3200	PROTECTIVE SURFACE TREATMENT	SY	80	—	—	80
502.3210	PIGMENTED SURFACE SEALER	SY	107	6	6	119
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH	216	6	6	228
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	19,100	940	935	20,975
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	3	3	6
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	2	2	4
SPV.0105	TEMPORARY SUPERSTRUCTURE SUPPORT B-44-28	LS	—	—	—	1
	NON-BID ITEMS					
	FILLER		—	—	—	1/2"

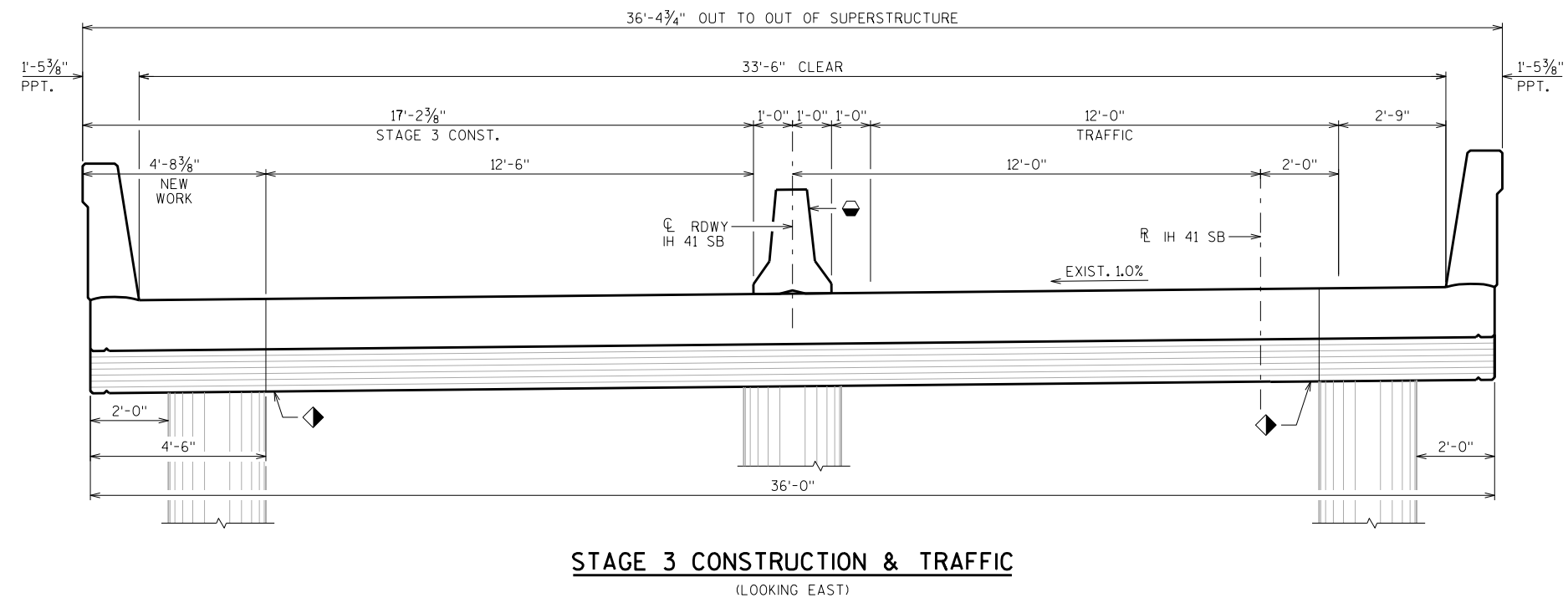
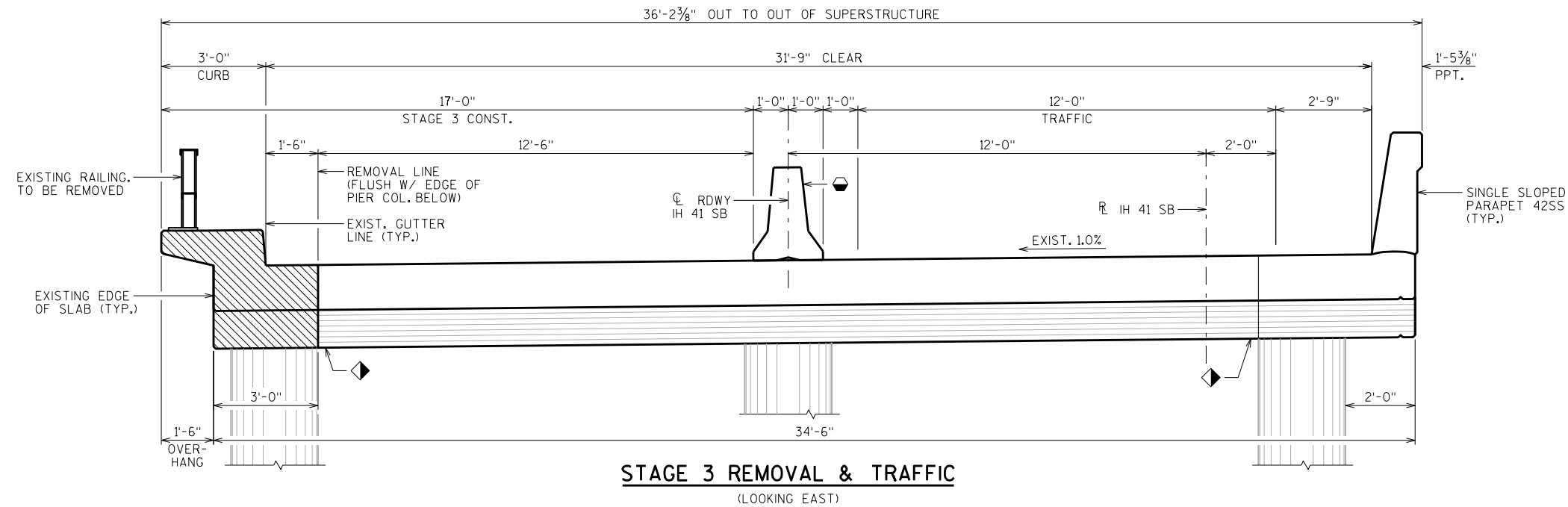
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-28			
	DRAWN BY	ARC	PLANS CK'D. MWB
CROSS SECTION & QUANTITIES		SHEET 2	



LEGEND

- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SUPPORT OF EXIST. SLAB & HAUNCH, AT PIERS, IS REQUIRED DURING CONSTRUCTION. THE COST OF TEMPORARY SUPPORT IS TO BE PAID FOR UNDER SPV BID ITEM "TEMPORARY SUPERSTRUCTURE SUPPORT B-44-28".

NO.	DATE	REVISION			BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION					
STRUCTURE B-44-28					
		DRAWN BY	ARC	PLANS C'K'D.	MWB
STAGING DETAILS 1			SHEET 3		

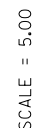


NOTE: ALL EXISTING TRANSVERSE REINF. IN THE SLAB AND HAUNCHES IS TO BE SALVAGED & REINCORPORATED INTO NEW WORK. FOR DETAILS, SEE SUPERSTRUCTURE DETAILS SHEETS.

LEGEND

- CONCRETE BARRIER TEMPORARY PRECAST
- TEMPORARY SUPPORT OF EXIST. SLAB & HAUNCH, AT PIERS, IS REQUIRED DURING CONSTRUCTION. THE COST OF TEMPORARY SUPPORT IS TO BE PAID FOR UNDER SPV BID ITEM "TEMPORARY SUPERSTRUCTURE SUPPORT B-44-28".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-28			
		DRAWN BY	PLANS CKD. MWB
STAGING DETAILS 2		ARC	SHEET 4



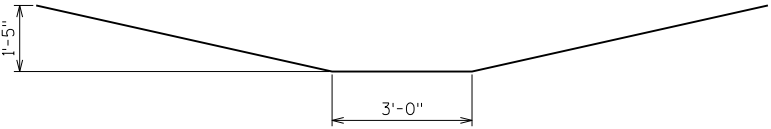


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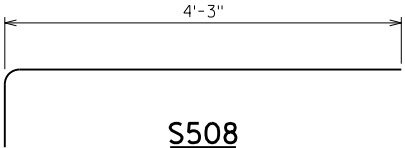
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

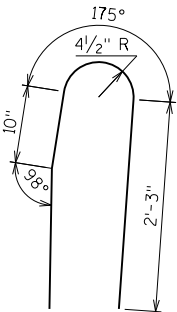
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	222	4'-3"			SLAB-TRAN.-BOT.
S502	X	20	16'-0"	X		HAUNCH-LONGIT.-BOT.
S903	X	16	26'-6"			SLAB-LONGIT.-BOT.-SPAN 1&3
S904	X	20	20'-6"			SLAB-LONGIT.-BOT.-SPAN 1&3
S905	X	10	35'-0"			SLAB-LONGIT.-BOT.-SPAN 2
S906	X	10	24'-0"			SLAB-LONGIT.-BOT.-SPAN 2
S607	X	216	3'-3"			SLAB-ADHESIVE ANCHORS
S508	X	430	5'-0"	X		SLAB-TRAN.-TOP
S409	X	16	13'-0"			SLAB-LONGIT.-TOP-SPAN 1&3
S910	X	20	37'-0"			SLAB-LONGIT.-TOP-PIERS
S911	X	16	23'-0"			SLAB-LONGIT.-TOP-PIERS
S412	X	8	11'-0"			SLAB-LONGIT.-TOP-SPAN 2
S513	X	8	5'-10"	X		SLAB/PPT.-END-VERT.-PAVING NOTCH
S514	X	320	4'-5"	X		SLAB/PPT.-VERT.
S515	X	328	6'-8"	X		PPT.-VERT.
S516	X	48	37'-5"			PPT.-HORIZ.



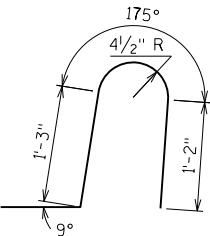
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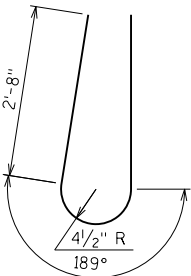
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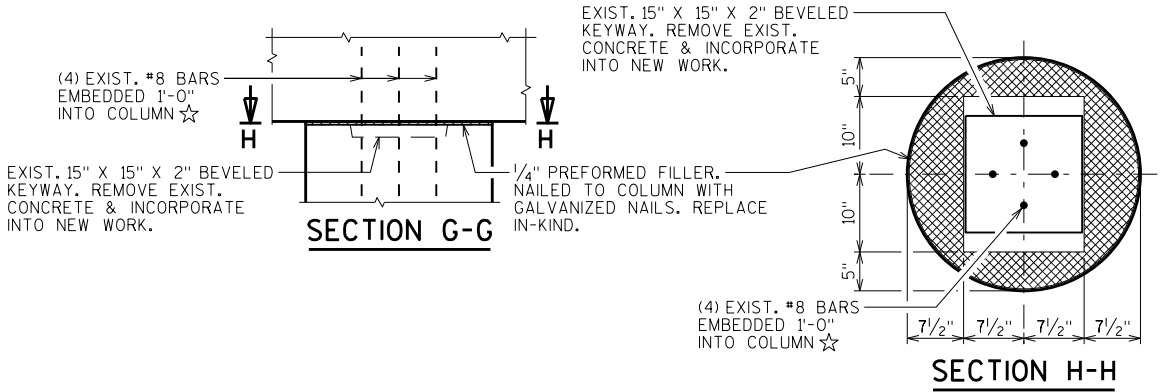
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S514



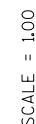
S515



LEGEND

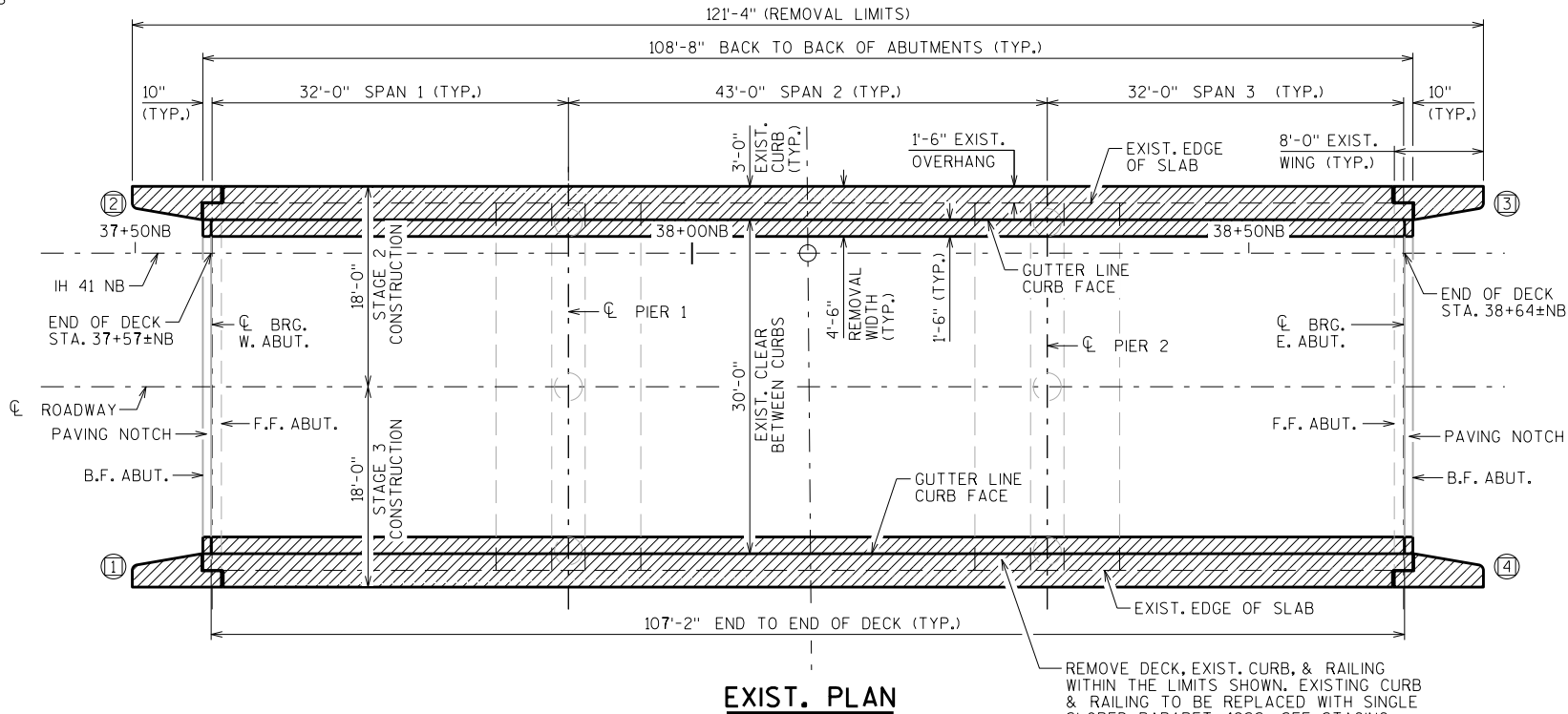
- S607 ADHESIVE ANCHORS. EMBED 1'-3" INTO EXIST. CONCRETE.
- PRESERVE FULL LENGTH OF EXIST. REINFORCEMENT, AND INCORPORATE INTO NEW WORK. (TYP.)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-28			
DRAWN BY		ARC	PLANS CK'D. MWB
SUPERSTRUCTURE DETAILS 2		SHEET 7	



* PROVIDE FOR THREE BEAM GUARD RAIL ATTACHMENT AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

INDICATES WING NUMBER



DESIGN DATA

LIVE LOAD:

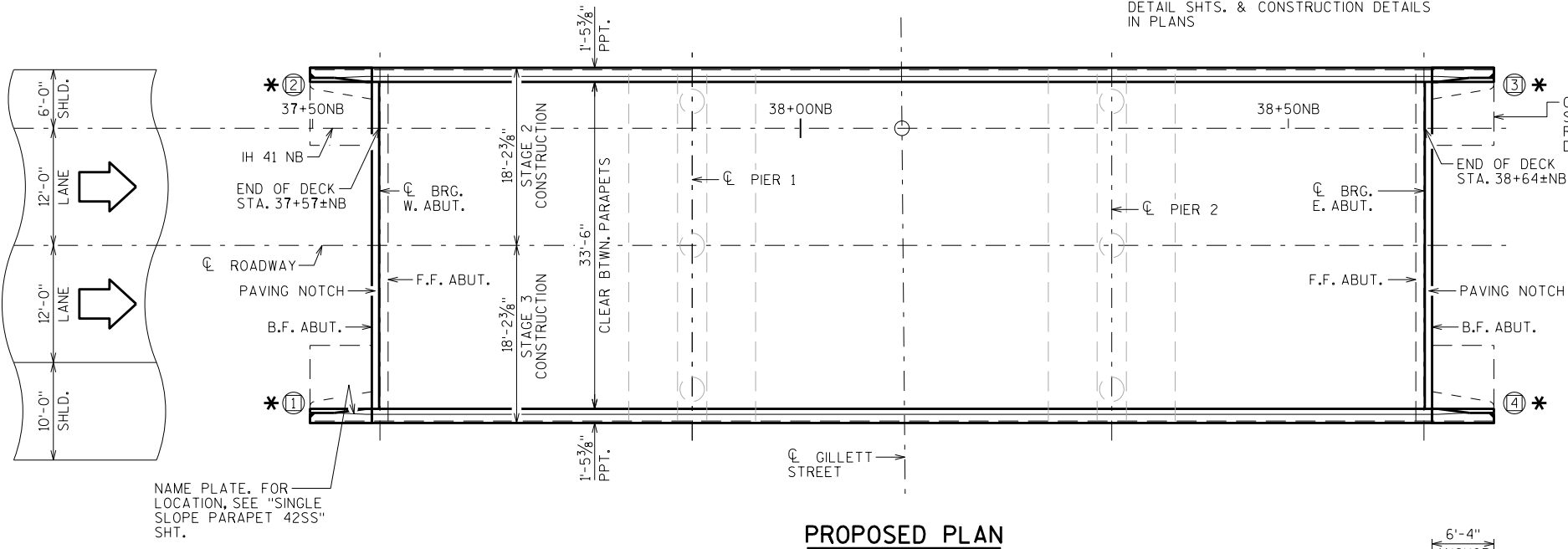
INVENTORY RATING: HS-15
OPERATING RATING: HS-25
MAXIMUM STANDARD PERMIT VEHICLE LOAD: 150 (KIPS)

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE & PARAPET $f'_c = 4,000$ P.S.I.
BAR STEEL REINFORCEMENT:
GRADE 60 $f_y = 60,000$ P.S.I.
(ORIGINAL 1960 STRUCT.) GRADE 40 $f_y = 40,000$ P.S.I.

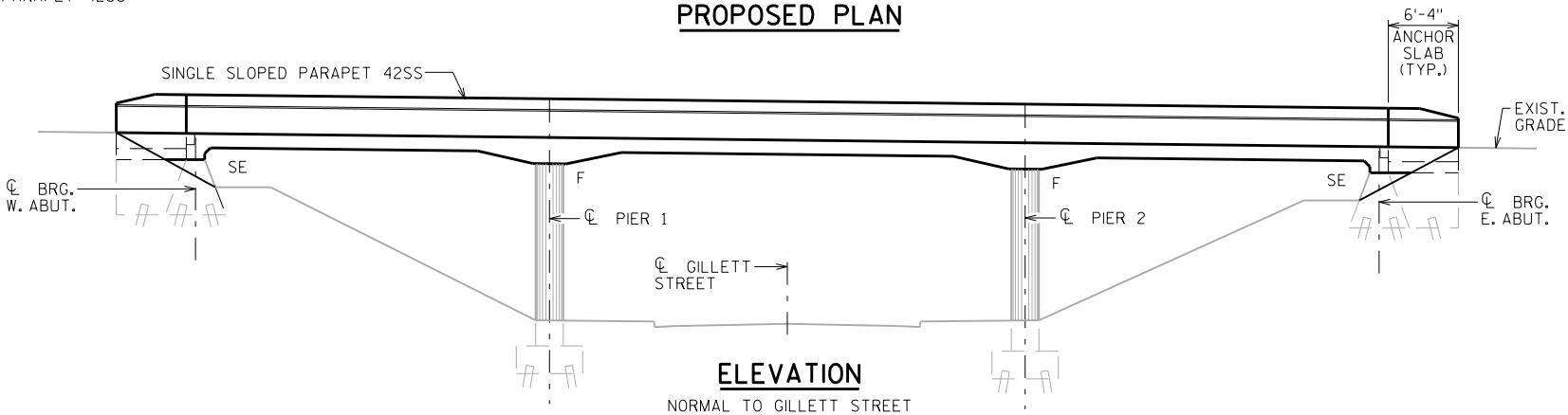
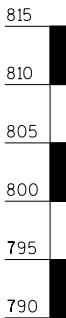
LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. STAGING DETAILS 1
4. STAGING DETAILS 2
5. ABUT. WING REMOVAL & REPLACEMENT
6. SUPERSTRUCTURE DETAILS 1
7. SUPERSTRUCTURE DETAILS 2
8. SINGLE SLOPE PARAPET 42SS



STRUCTURE DESIGN CONTACTS:

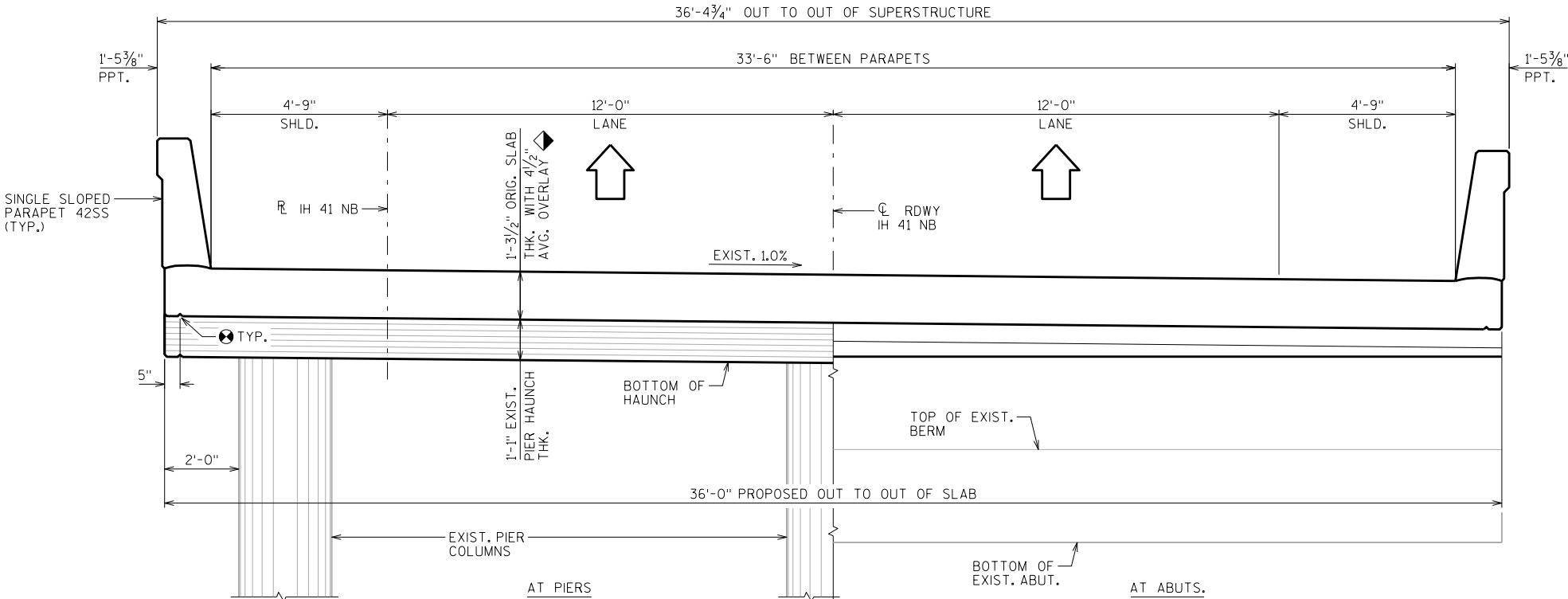
ALEXANDER CRABTREE (608) 266-3686
LAURA SHADEWALD (608) 267-9592



NO.	DATE	REVISION	BY
ACCEPTED <i>William C. Decker</i> 12/9/19 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-44-29			
REHAB IH 41 NB OVER GILLETT STREET			
COUNTY	OUTAGAMIE	TOWN	GRAND CHUTE
DESIGN SPEC. AASHTO STD. SPEC. FOR HIGHWAY BRIDGES, 17TH EDITION			
DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
ARC	MWB	ARC	MWB
GENERAL PLAN			SHEET 1 OF 8

GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" OR MATCH EXISTING BEVELS, UNLESS OTHERWISE NOTED.
- ALL REMOVAL LINES SHALL BE DEFINED BY A 1/2-INCH SAWCUT.
- PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF NEW SLAB, AND TO THE NEW VERTICAL & HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.
- PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE, TOP, AND ENDS OF PARAPETS, INCLUDING PARAPETS ON ABUTMENT WINGS.
- DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.
- THE CONTRACTOR SHALL SUPPLY A NEW NAME PLATE IN ACCORDANCE WITH SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAIL DRAWINGS. NAME PLATE TO SHOW ORIGINAL CONSTRUCTION YEAR 1961.
- REHAB WORK ON STRUCTURE PERFORMED IN 2 STAGES. TRAFFIC MAINTAINED ON 1/2 OF THE STRUCTURE, DURING CONSTRUCTION. WHILE THE OTHER 1/2 OF THE STRUCTURE, RECEIVING WORK, IS TO BE SUPPORTED DURING CONSTRUCTION.



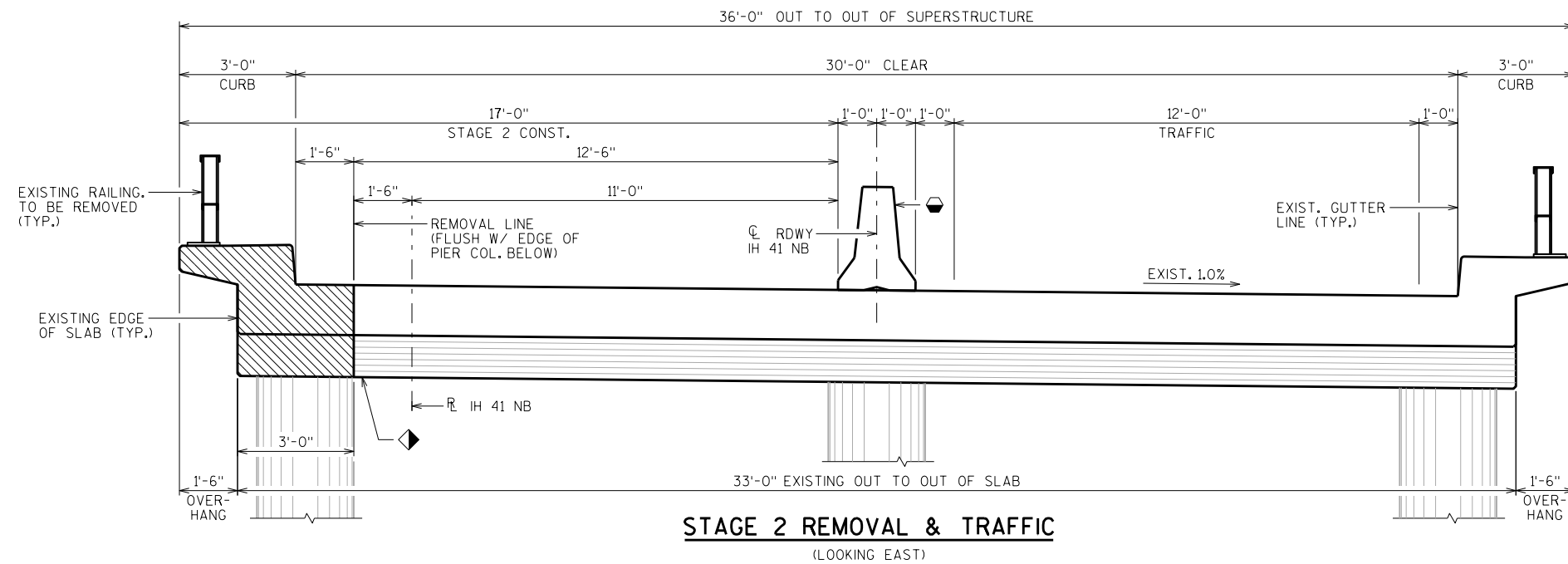
SECTION THRU ROADWAY LOOKING EAST

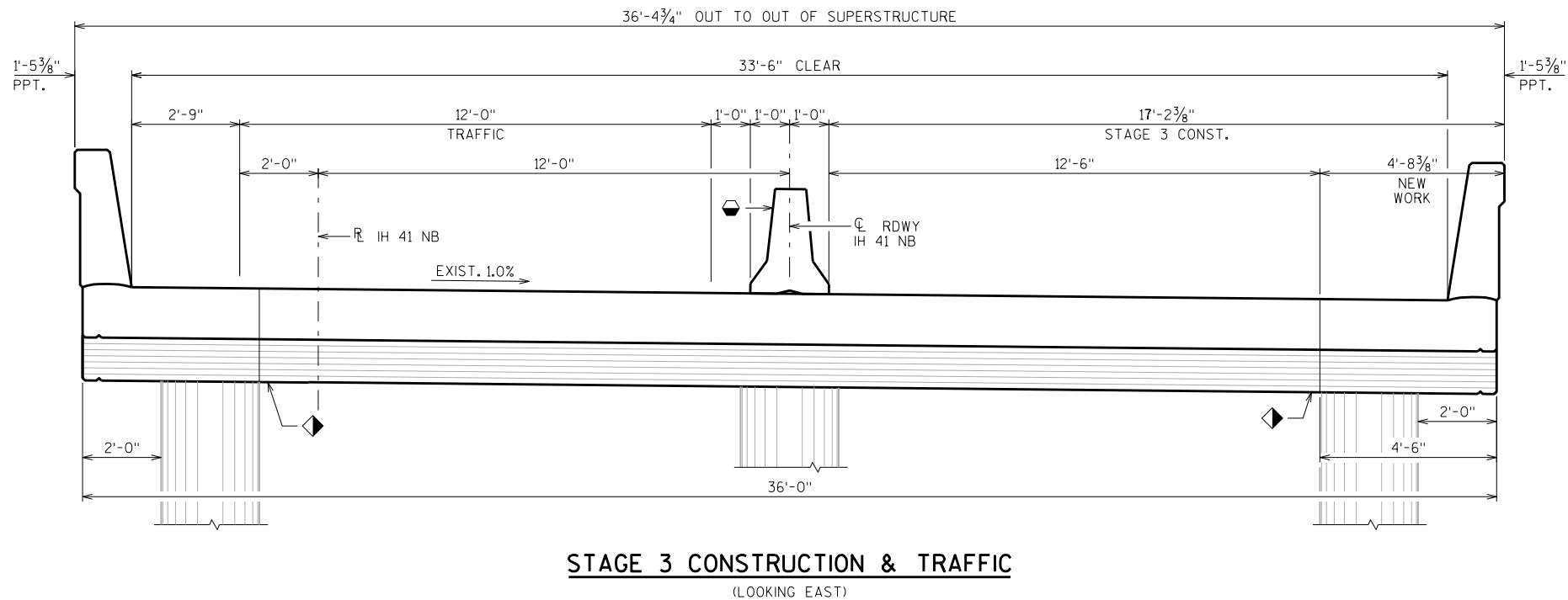
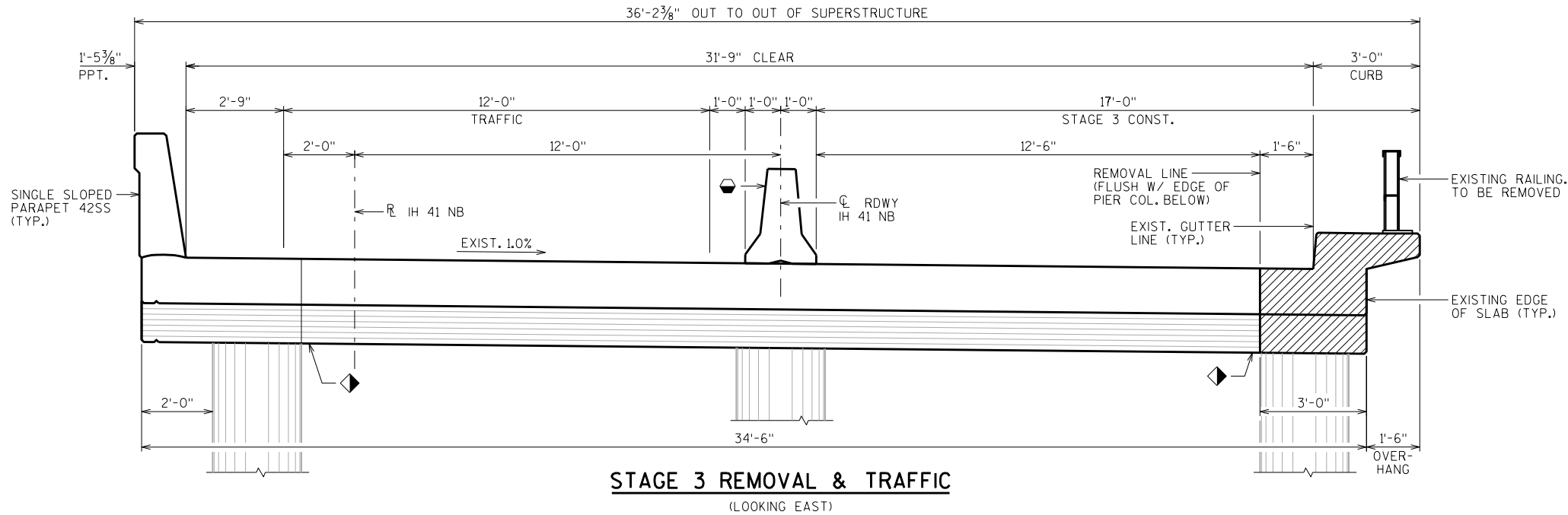
- 3/4" CONTINUOUS "V" DRIP GROOVE (TYP.). EXTEND GROOVE 6" FROM THE FILLET ADJACENT TO ABUTMENTS.
- 1/2"± MIN. MILLED OFF OF ORIG. SLAB THICKNESS DECK, BEFORE ADDING 4 1/2"± AVG. OVERLAY (2006)

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER.	WEST ABUT.	EAST ABUT.	TOTALS
203.0200	REMOVING OLD STRUCTURE STA. 38+10NB	LS	—	—	—	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-44-29	LS	—	—	—	1
210.1100	BACKFILL STRUCTURE TYPE A	CY	—	5	5	10
502.0100	CONCRETE MASONRY BRIDGES	CY	93	6	6	105
502.3200	PROTECTIVE SURFACE TREATMENT	SY	80	—	—	80
502.3210	PIGMENTED SURFACE SEALER	SY	107	6	6	119
502.4206	ADHESIVE ANCHORS NO. 6 BAR	EACH	216	6	6	228
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	19,100	940	935	20,975
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	—	3	3	6
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	—	2	2	4
SPV.0105	TEMPORARY SUPERSTRUCTURE SUPPORT B-44-29	LS	—	—	—	1
	NON-BID ITEMS					
	FILLER		—	—	—	1/2"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-29			
	DRAWN BY	ARC	PLANS CK'D. MWB
CROSS SECTION & QUANTITIES		SHEET 2	





NOTE: ALL EXISTING TRANSVERSE REINF. IN THE SLAB AND HAUNCHES IS TO BE SALVAGED & REINCORPORATED INTO NEW WORK. FOR DETAILS, SEE SUPERSTRUCTURE DETAILS SHEETS.

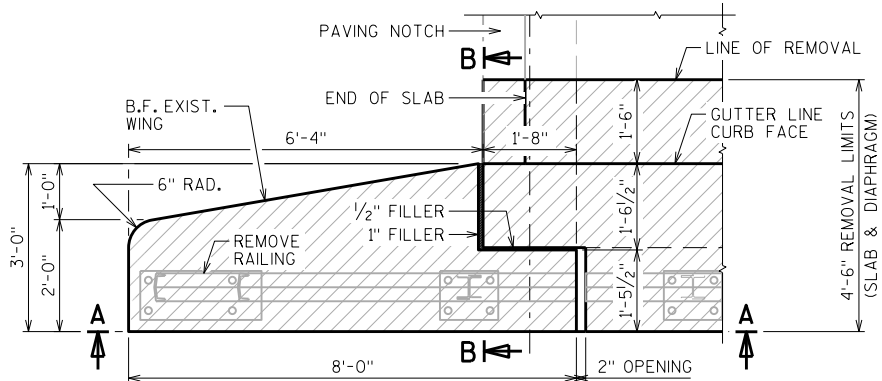
LEGEND

- CONCRETE BARRIER TEMPORARY PRECAST
- ◆ TEMPORARY SUPPORT OF EXIST. SLAB & HAUNCH, AT PIERS, IS REQUIRED DURING CONSTRUCTION. THE COST OF TEMPORARY SUPPORT IS TO BE PAID FOR UNDER SPV BID ITEM "TEMPORARY SUPERSTRUCTURE SUPPORT B-44-29".

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-29			
DRAWN BY		ARC	PLANS CK'D. MWB
STAGING DETAILS 2		SHEET 4	

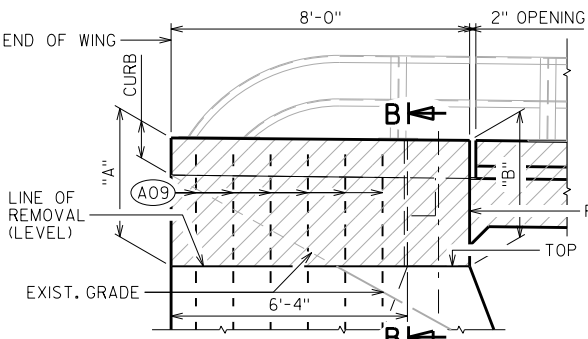
BILL OF BARS NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A401	X	24	7'-5"			ANCHOR SLAB-BOT.-TRANS.
A402	X	48	6'-0"			ANCHOR SLAB-TOP&BOT.-LONGIT.
A503	X	40	8'-0"	X		ANCHOR SLAB-TOP-TRANS.
A604	X	12	1'-6"			ANCHORS-B.F. ABUT.
A405	X	6	3'-8"	X		WING 1-VERTICAL-F.F.
A406	X	6	4'-0"	X		WING 2-VERTICAL-F.F.
A407	X	6	3'-11"	X		WING 3-VERTICAL-F.F.
A408	X	6	3'-7"	X		WING 4-VERTICAL-F.F.
A609	X	8	6'-0"			WINGS-TOP-LONGIT.
A510	X	11	3'-1"	X		WING 1-VERTICAL-B.F.
A511	X	11	3'-5"	X		WING 2-VERTICAL-B.F.
A512	X	11	3'-4"	X		WING 3-VERTICAL-B.F.
A513	X	11	3'-0"	X		WING 4-VERTICAL-B.F.



PLAN OF WING - SHOWING REMOVAL DIMS.

(SHOWING WING 1 - ALL OTHER WINGS SIMILIAR)

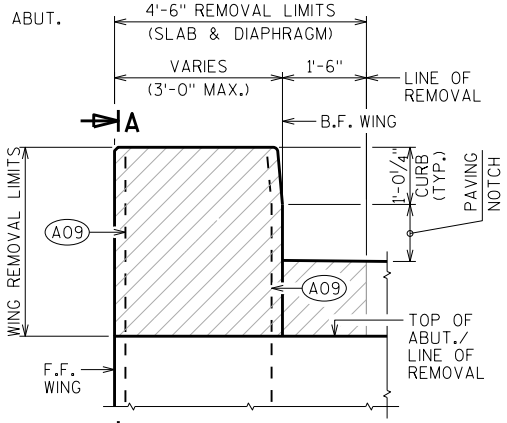


VIEW A-A

(PARTIAL ELEVATION VIEW SHOWING WING REMOVAL)

WING REMOVAL HEIGHTS

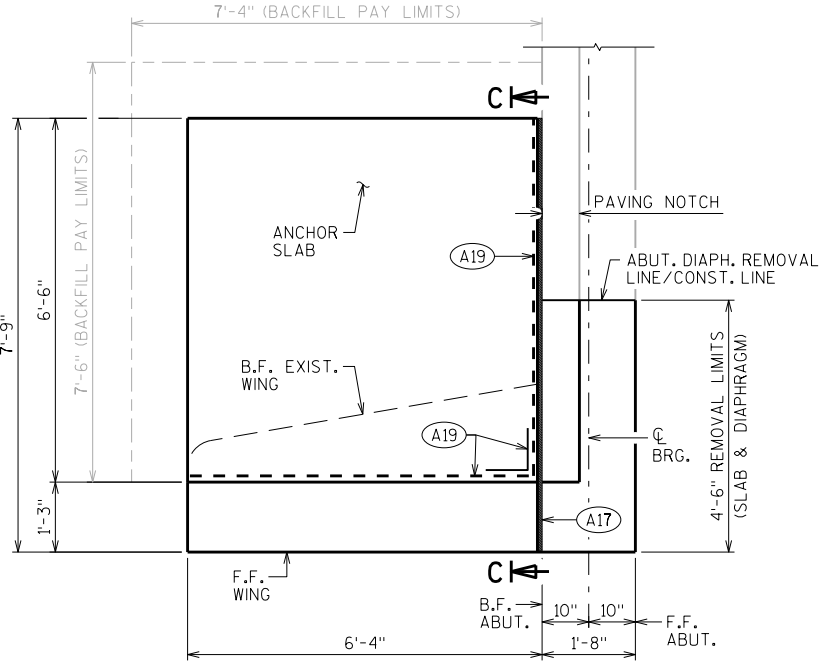
	"A"	"B"
WING 1	3'-1 5/8"	3'-0 5/8"
WING 2	3'-5 1/4"	3'-4 1/4"
WING 3	3'-3 3/8"	3'-4 1/2"
WING 4	2'-11 3/4"	3'-0 7/8"



SECTION B-B

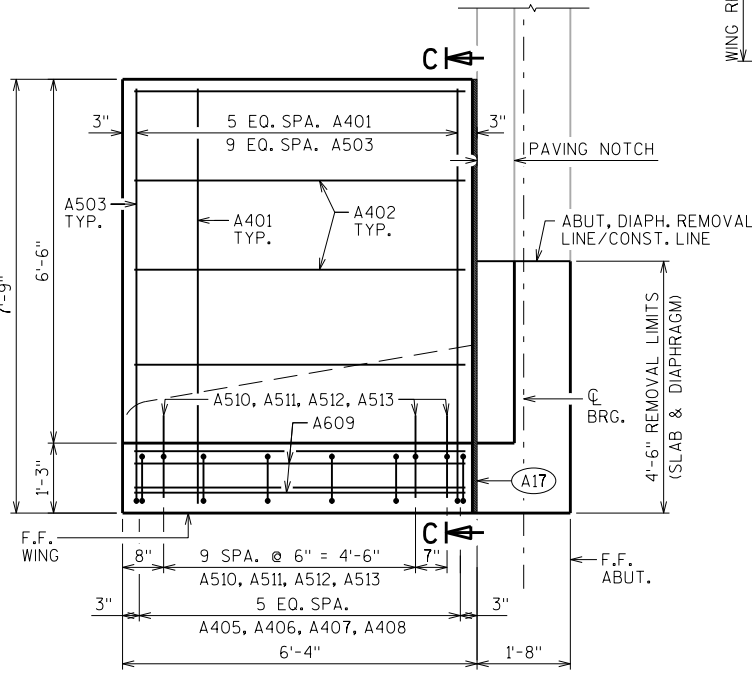
LEGEND

- A09 EXIST. (2) NO. 4 BARS @ F.F. OF WING, AND (6) NO. 5 BARS @ B.F. OF WING. CUT BARS AT LINE OF REMOVAL.
- A17 1/2" FILLER (INCLUDED IN ANCHOR SLAB LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.) EXTEND SEALER 3" BELOW GUTTER LINE AT THE INSIDE FACE.
- A19 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE OF ABUT. IF OPTIONAL CONST. JOINT USED IN ANCHOR SLAB, PLACE 18" MEMBRANE WATERPROOFING ALONG THE ENTIRE LONGIT. JOINT. THE MEMBRANE WATERPROOFING SEALING THE OPTIONAL CONST. JOINT IS INCIDENTAL TO THE CONCRETE MASONRY BID ITEM, AND NOT INCLUDED IN PLAN QUANTITIES.
- A21 FOR PPT BARS & DIMENSIONS, SEE "SINGLE SLOPE PARAPET 42SS" SHEET FOR DETAILS. ALL VERT. WING REINF. (R501, R502, & R504 THRU R511) TO BE INCLUDED INTO INITIAL POUR OF ANCHOR SLAB FOOTING.
- ★ ADHESIVE ANCHORS NO. 6 BAR. EMBED 9" INTO B.F. OF ABUTMENT. USE AN APPROVED DEBONDER ON 1/2 THE BAR LENGTH, EXTENDING INTO ANCHOR SLAB. COST OF DEBONDER INCIDENTAL TO CONCRETE MASONRY BRIDGES BID ITEM.



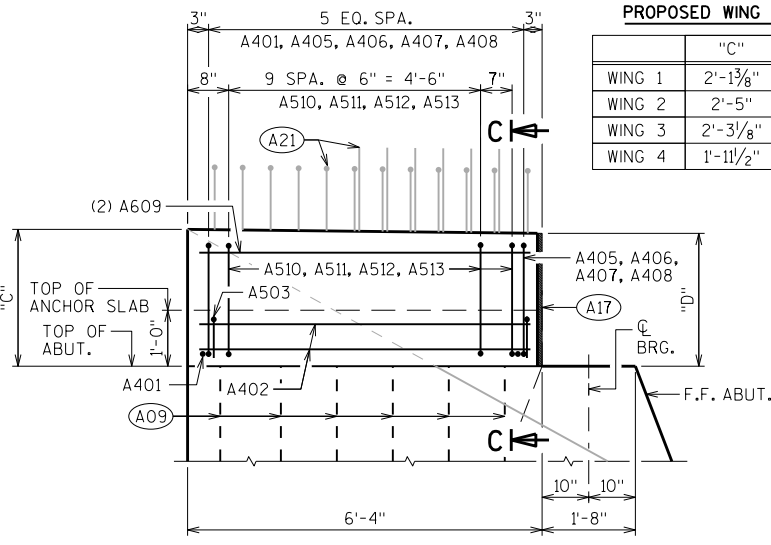
PLAN OF PROPOSED ANCHOR SLAB WING

(SHOWING WING 1 - ALL OTHER WINGS SIMILIAR)



PLAN OF PROPOSED WING REINF.

(SHOWING WING 1 - ALL OTHER WINGS SIMILIAR)

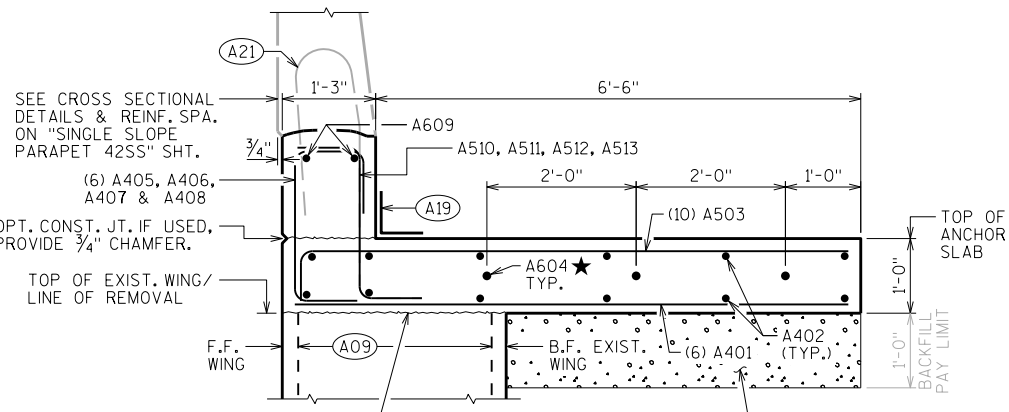


PARTIAL ELEV. OF PROPOSED WING REINF.

(SHOWING WING 1 - ALL OTHER WINGS SIMILIAR)

PROPOSED WING HEIGHTS

	"C"	"D"
WING 1	2'-1 3/8"	2'-0 5/8"
WING 2	2'-5"	2'-4 1/4"
WING 3	2'-3 3/8"	2'-4"
WING 4	1'-11 1/2"	2'-0 3/8"

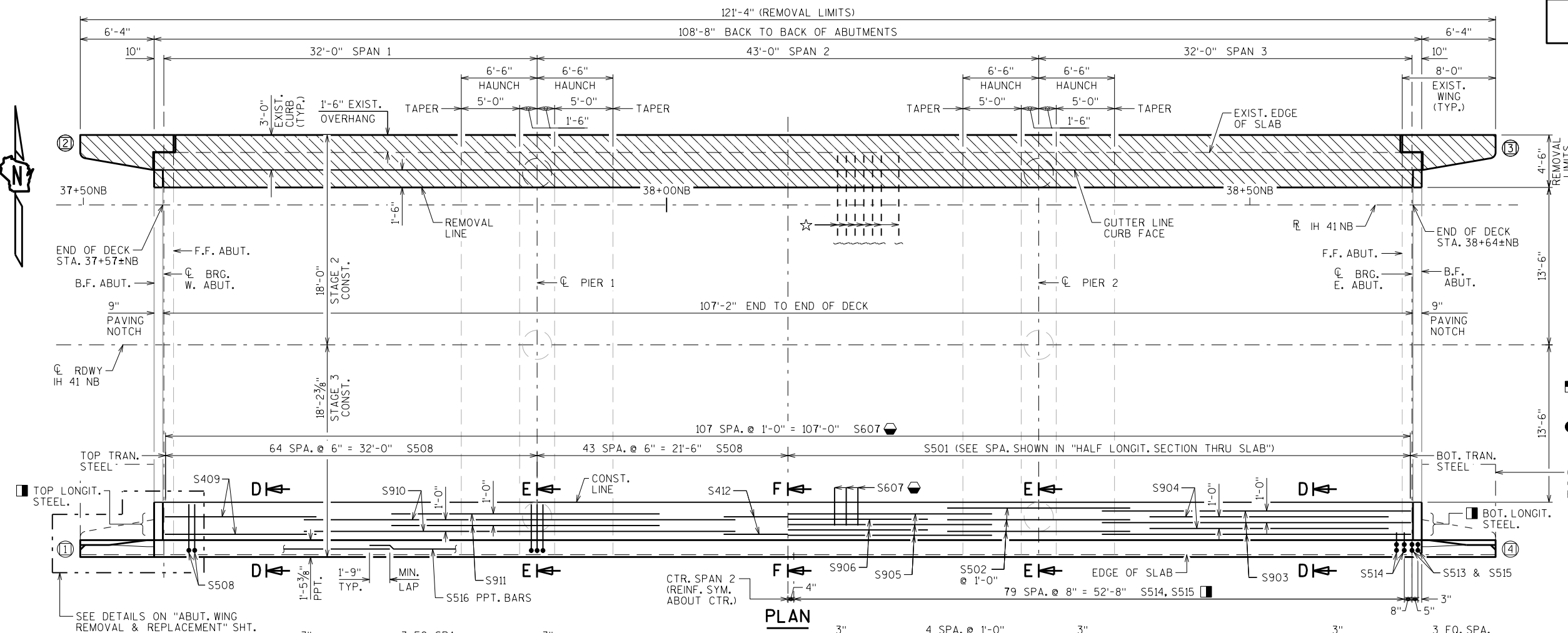


SECTION C-C

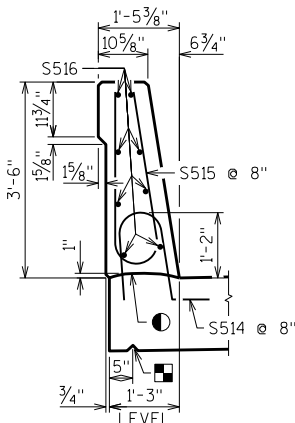
APPLY LIQUID OR OTHER BOND BREAKER BETWEEN CAST-IN-PLACE CONCRETE AND REMAINING PORTION OF EXIST. WING. COST INCIDENTAL TO CONCRETE MASONRY BRIDGES BID ITEM.

BACKFILL EXCAVATED AREA UNDER ANCHOR SLAB WITH BACKFILL STRUCTURE TYPE A. PAY LIMITS SHOWN ABOVE & IN 'PLAN OF PROPOSED ANCHOR SLAB WING' DETAIL, THIS SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-29			
DRAWN BY		ARC	PLANS CK'D. MWB
ABUT. WING REMOVAL & REPLACEMENT		SHEET 5	



PLAN



SECTION THRU PARAPET ON DECK

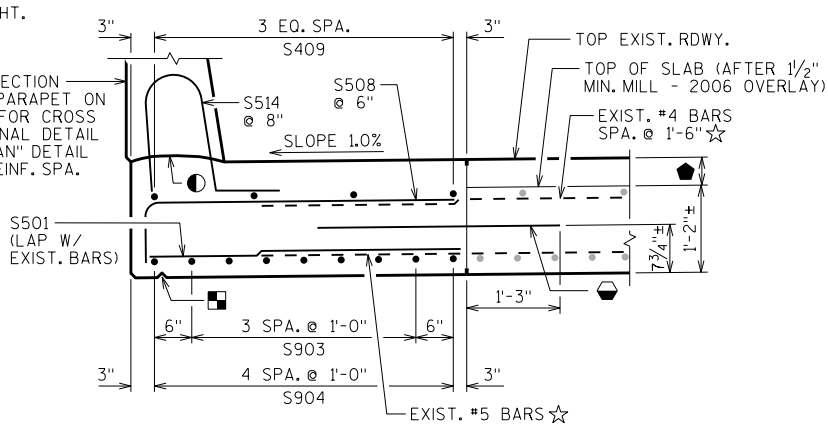
- 3/4" CONTINUOUS "V" DRIP GROOVE (TYP.). EXTEND GROOVE 6" FROM THE FILLET ADJACENT TO ABUTMENTS.
- CONST. JOINT. STRIKE OFF AS SHOWN

CAST-IN-PLACE CONC. ANCHOR SLAB (TYP.) SEE "ABUT. WING REMOVAL & REPLACEMENT" FOR DETAILS.

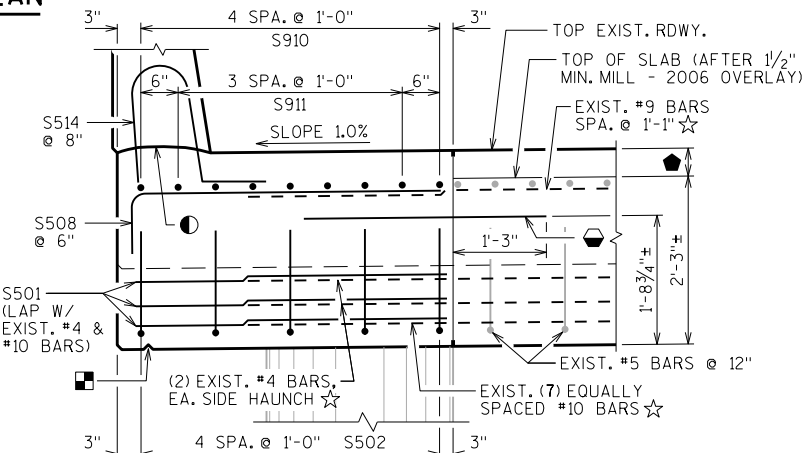
LEGEND

- INDICATES WING NUMBER
- TYP. BOTH SIDES OF SLAB & SYM. ABOUT CENTER SPAN 2
- S607 ADHESIVE ANCHORS. EMBED 1'-3" INTO EXIST. CONCRETE.
- ☆ PRESERVE FULL LENGTH OF EXIST. TRANSVERSE REINFORCEMENT, AND INCORPORATE INTO NEW WORK. (TYP.)
- ◆ 4 1/2" ± AVG. OVERLAY THICKNESS (2006 OVERLAY)
- ◇ SLAB THICKNESS (AFTER MILLING OFF 1 1/2" ± IN 2006 OVERLAY)

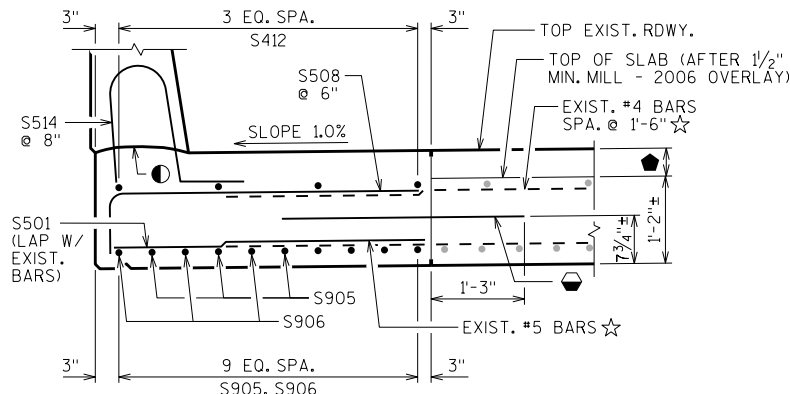
SEE "SECTION THRU PARAPET ON DECK" FOR CROSS SECTIONAL DETAIL & "PLAN" DETAIL FOR REINF. SPA. (TYP.)



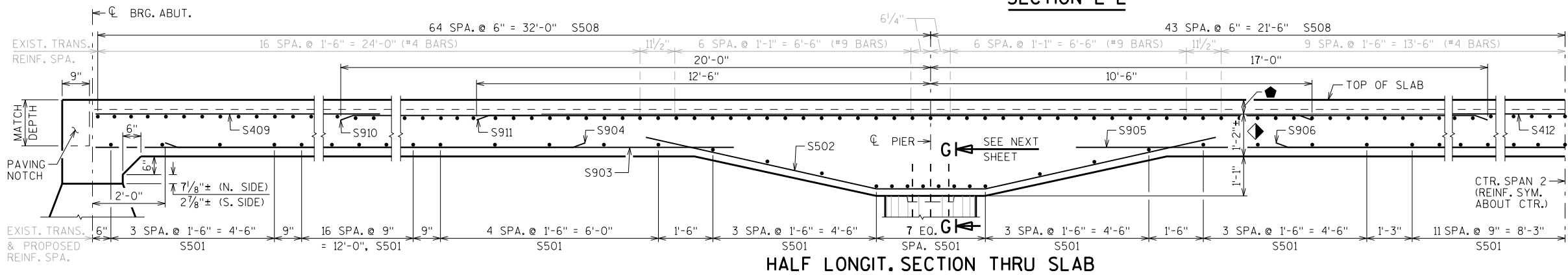
SECTION D-D



SECTION E-E



SECTION F-F



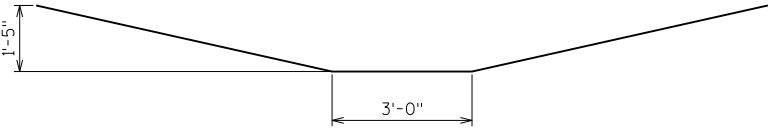
HALF LONGIT. SECTION THRU SLAB

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-29			
DRAWN BY		ARC	PLANS CK'D. MWB
SUPERSTRUCTURE DETAILS 1			SHEET 6

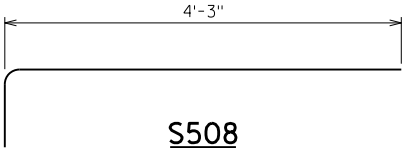
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

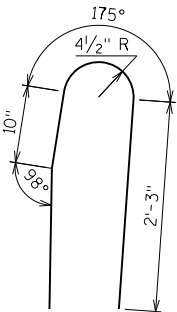
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	222	4'-3"			SLAB-TRAN.-BOT.
S502	X	20	16'-0"	X		HAUNCH-LONGIT.-BOT.
S903	X	16	26'-6"			SLAB-LONGIT.-BOT.-SPAN 1&3
S904	X	20	20'-6"			SLAB-LONGIT.-BOT.-SPAN 1&3
S905	X	10	35'-0"			SLAB-LONGIT.-BOT.-SPAN 2
S906	X	10	24'-0"			SLAB-LONGIT.-BOT.-SPAN 2
S607	X	216	3'-3"			SLAB-ADHESIVE ANCHORS
S508	X	430	5'-0"	X		SLAB-TRAN.-TOP-SPAN 1&3
S409	X	16	13'-0"			SLAB-LONGIT.-TOP-SPAN 1&3
S910	X	20	37'-0"			SLAB-LONGIT.-TOP-PIERS
S911	X	16	23'-0"			SLAB-LONGIT.-TOP-PIERS
S412	X	8	11'-0"			SLAB-LONGIT.-TOP-SPAN 2
S513	X	8	5'-10"	X		SLAB/PPT.-END-VERT.-PAVING NOTCH
S514	X	320	4'-5"	X		SLAB/PPT.-VERT.
S515	X	328	6'-8"	X		PPT.-VERT.
S516	X	48	37'-5"			PPT.-HORIZ.



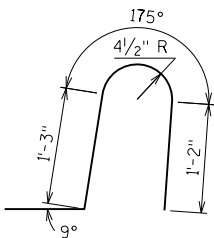
S502



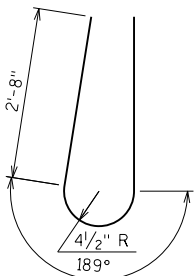
S508



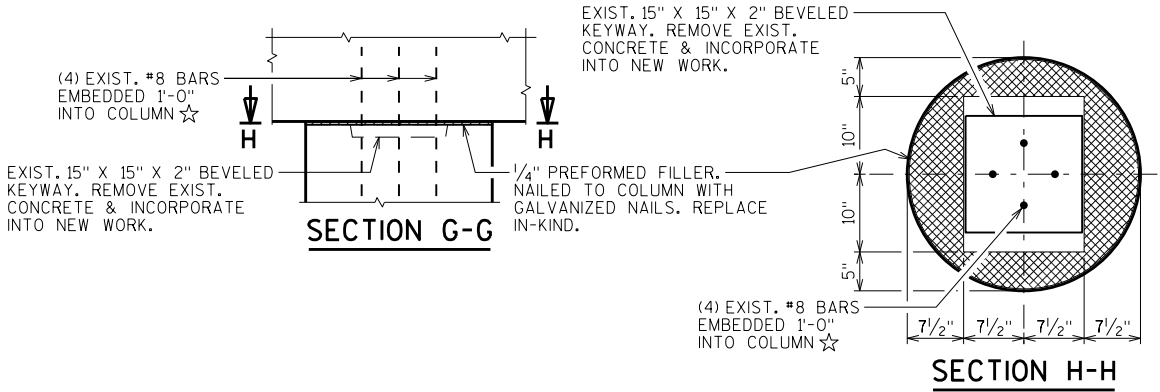
S513



S514



S515



LEGEND

- ⬮ S607 ADHESIVE ANCHORS. EMBED 1'-3" INTO EXIST. CONCRETE.
☆ PRESERVE FULL LENGTH OF EXIST. REINFORCEMENT, AND INCORPORATE INTO NEW WORK. (TYP.)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-29			
DRAWN BY		ARC	PLANS CK'D. MWB
SUPERSTRUCTURE DETAILS 2		SHEET 7	

BILL OF BARS (FOR ABUTMENT WING PARAPETS)

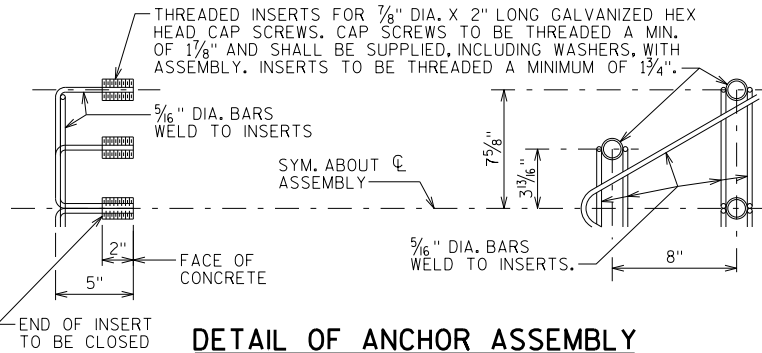
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	1	1	6'-9"	X		PARAPET VERT.-WINGS 1&4
R502	X	1	1	6'-5"	X		PARAPET VERT.-WINGS 2&3
R503	X	2	2	6'-8"	X		PARAPET VERT.
R504	X	6	—	4'-3"	X		PARAPET VERT.-WING 1
R505	X	6	—	4'-6"	X		PARAPET VERT.-WING 2
R506	X	—	6	4'-4"	X		PARAPET VERT.-WING 3
R507	X	—	6	4'-1"	X		PARAPET VERT.-WING 4
R508	X	11	—	6'-4"	X		PARAPET VERT.-WING 1
R509	X	11	—	6'-7"	X		PARAPET VERT.-WING 2
R510	X	—	11	6'-5"	X		PARAPET VERT.-WING 3
R511	X	—	11	6'-2"	X		PARAPET VERT.-WING 4
R512	X	6	6	6'-5"	X		PARAPET VERT.
R513	X	4	4	6'-6"	X		PARAPET VERT.
R514	X	2	2	5'-11"	X		PARAPET HORIZ.
R515	X	10	10	5'-10"			PARAPET HORIZ.
R516	X	12	12	5'-5"	X	▲	PARAPET VERT.
R517	X	4	4	5'-11"	X		PARAPET HORIZ.

▲ LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
R516	4 SERIES OF 6	4'-9" TO 6'-1"

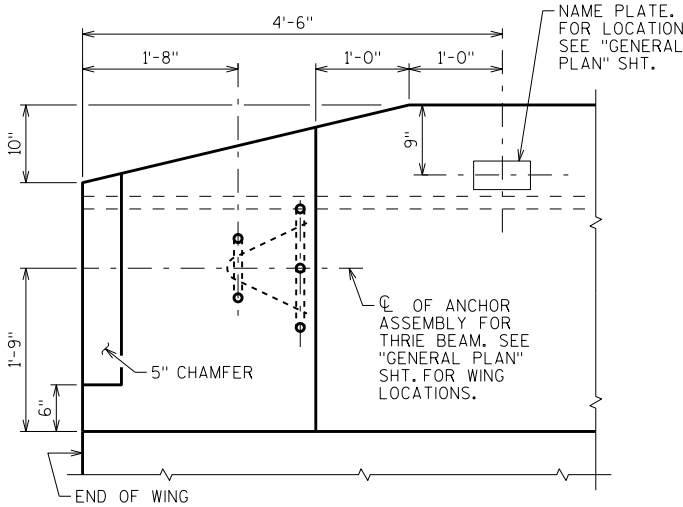
BUNDLE AND TAG EACH SERIES SEPARATELY.



DETAIL OF ANCHOR ASSEMBLY

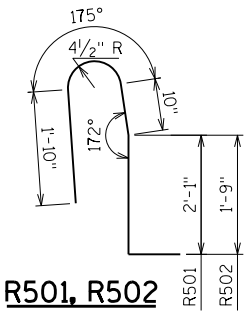
NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C OR MECHANICALLY COATED ACCORDING TO ASTM B695 CLASS 50.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

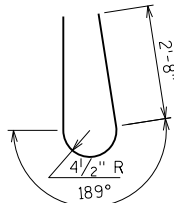


PARAPET END TREATMENT DETAIL

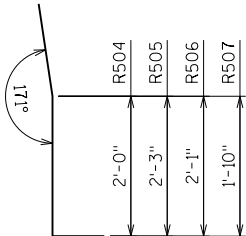
LOOKING AT INSIDE FACE OF PARAPET



R501, R502

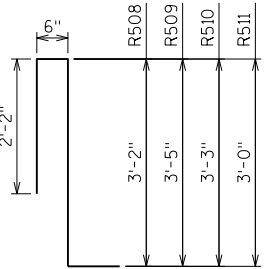


R503



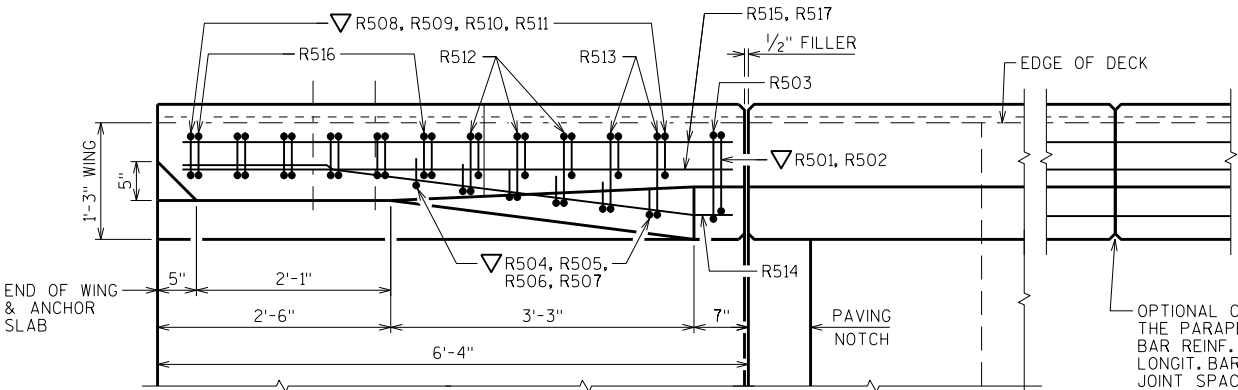
R504, R505

R506, R507



R508, R509

R510, R511



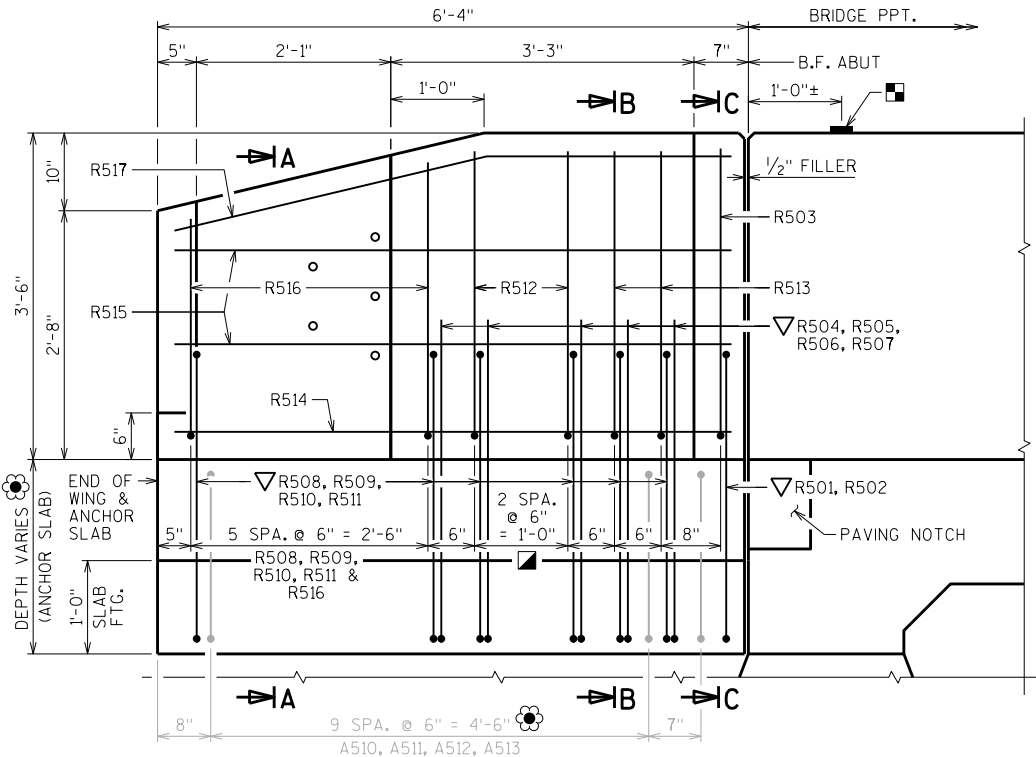
PLAN

B.F. ABUT

ABUTMENT

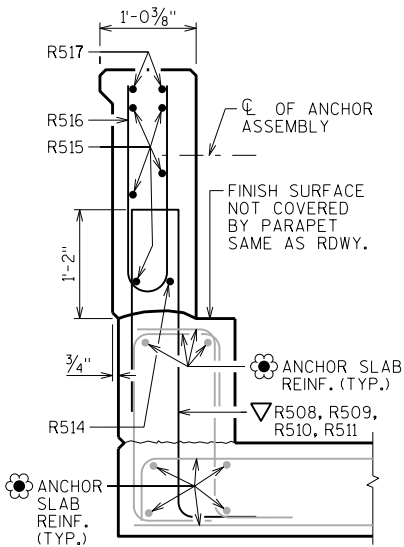
N.W. CORNER SHOWN, OTHERS SIMILAR

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" - 'V' GROOVE.

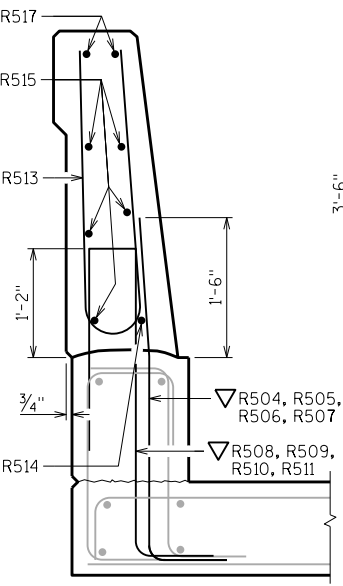


INSIDE ELEVATION

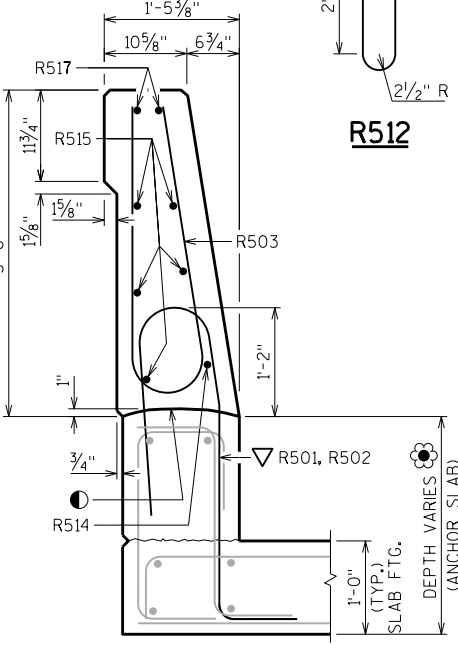
N.W. CORNER SHOWN, OTHERS SIMILAR



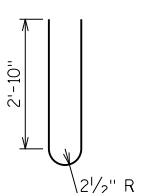
SECTION A-A



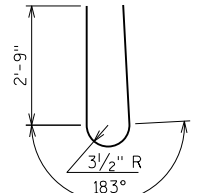
SECTION B-B



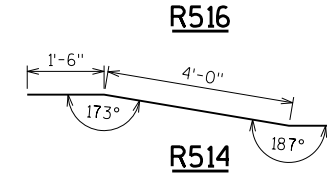
SECTION C-C



R512



R513



R516

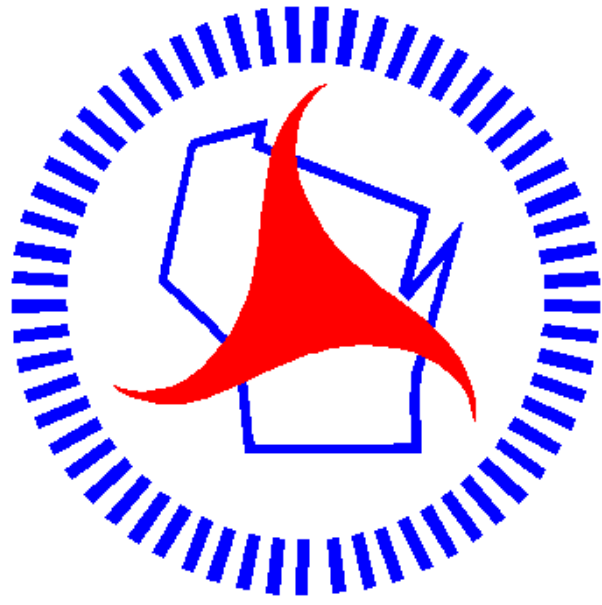
R514

R517

LEGEND

- CONST. JOINT - STRIKE OFF AS SHOWN
- ▽ BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.
- BENCH MARK CAP (WHEN SUPPLIED).
- ▣ SPACING INCLUDES: R504, R505, R506, R507, R508, R509, R510, R511 & R512 BARS
- ⊗ ABUT. WING ANCHOR SLAB REINFORCEMENT. DIMENSIONS & DETAILS SHOWN ON "ABUT. WING REMOVAL & REPLACEMENT" SHT.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-44-29			
DRAWN BY		ARC	PLANS CK'D. MWB
SINGLE SLOPE PARAPET 42SS		SHEET 8	



Wisconsin Department of Transportation

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