EAU | DECEMBER 2025

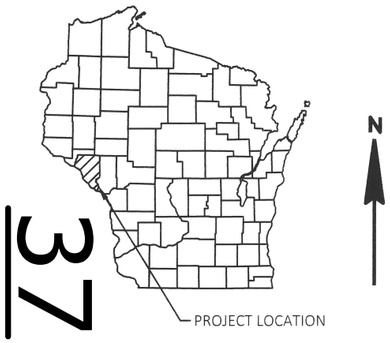
PROJECT ID: 7290-00-70

WITH: N/A

COUNTY: BUFFALO

ORDER OF SHEETS

TOTAL SHEETS = 80



DESIGN DESIGNATION

A.A.D.T.	(2026)	=	340
A.A.D.T.	(2046)	=	370
D.H.V.		=	93
D.D.		=	60/40
T.		=	20.0%
DESIGN SPEED		=	40 MPH
ESALS		=	150,000

CONVENTIONAL SYMBOLS

PLAN

- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES

- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STH 95 - MARSHLAND

TREMPEALEAU RIVER BRIDGE B-06-0238

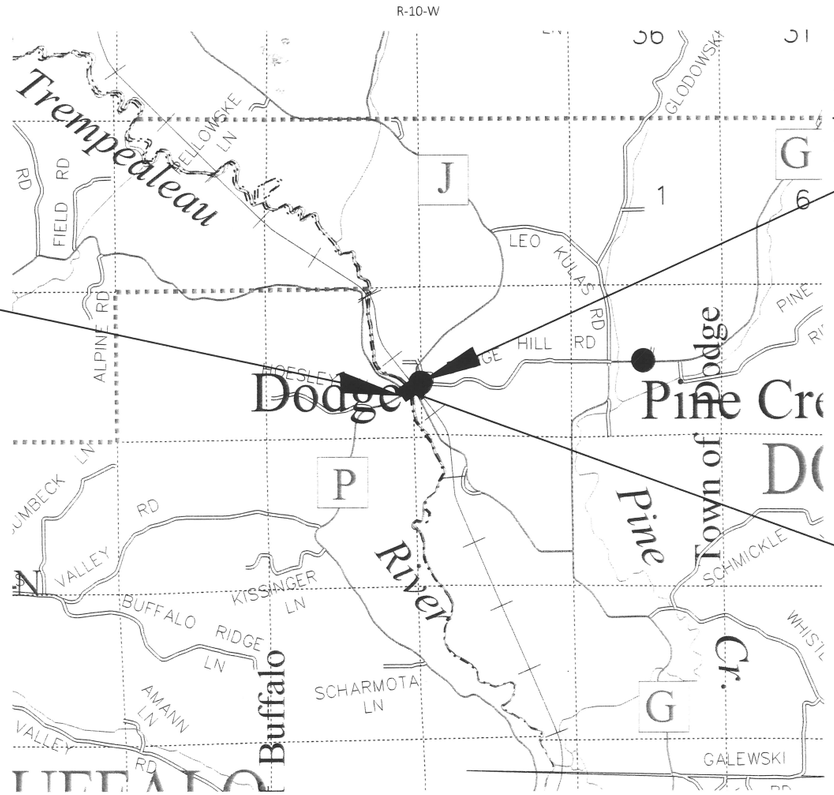
CTH P

BUFFALO COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7290-00-70	WISC 2026088	1

STATE PROJECT NUMBER

7290-00-70



LAYOUT

SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.046 MI

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

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

ACCEPTED FOR

BUFFALO COUNTY

Date 7/21/25 (HIGHWAY COMMISSIONER)

ORIGINAL PLANS PREPARED BY

MSA

1702 Pankratz Street, Madison WI 53704

(608)242-7779 www.msa-ps.com

WISCONSIN
JOSHUA R. SWENO
E-44384
WAUNAKEE
WI
PROFESSIONAL ENGINEER

DATE: 7/16/2025 (PROFESSIONAL ENGINEER)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	MSA PROFESSIONAL SERVICES, INC
Designer	MSA PROFESSIONAL SERVICES, INC
Project Manager	TOU YANG, P.E.
Regional Examiner	NORTHWEST REGION
Regional Supervisor	TOU YANG, P.E.

APPROVED FOR THE DEPARTMENT

DATE: 7/23/2025 (Signature)

E

FILE NAME : G:\05\05643\05643027\CADD\SHEETSPLAN\010101-TI.DWG PLOT DATE : ---- PLOT BY : CONNOR GIRTEN PLOT NAME :

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE AREA THAT ARE NOT SHOWN.

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

THE 4" ASPHALTIC SURFACE SHALL BE CONSTRUCTED USING A 2.25" LOWER LAYER OF 19 MM NOMINAL SIZE AGGREGATE AND A 1.75" UPPER LAYER WITH 12.5 MM NOMINAL SIZE AGGREGATE.

ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 112 LBS/SY/IN.

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

ORDER OF SECTION 2 DETAIL SHEETS

DNR LIASON

WISCONSIN DEPARTMENT OF NATURAL RESOURCES
ATTN: AMY LESIK
1300 W CLAIREMONT
EAU CLAIRE, WI 54701
PHONE: (715) 495-1903
EMAIL: AMYL.LESIK@WISCONSIN.GOV

MSA DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC
ATTN: JOSH SWENO, P.E.
1702 PANKRATZ STREET
MADISON, WI 53704
PHONE: (608) 355-8852
EMAIL: JSWENO@MSA-PS.COM

COUNTY CONTACT

BUFFALO COUNTY HIGHWAY DEPARTMENT
ATTN: KARL NOELDNER
S1672 STATE ROAD 37
ALMA, WI 54610
PHONE: (608) 685-6226
EMAIL: KARL.NOELDNER@BUFFALOCOUNTYWI.GOV

UTILITIES

BURIED COMMUNICATIONS:
BRIGHTSPEED
THOMAS MURRAY
333 N FRONT ST
LA CROSSE, WI 54601
PHONE: (608) 780-0895
EMAIL: TOM.L.MURRAY@BRIGHTSPEED.COM

OVERHEAD ELECTRIC:
XCEL ENERGY
JOHN KELSER
1400 WESTERN AVE
EAU CLAIRE, WI 54703
PHONE: (715) 737-6020
EMAIL: JOHN.KELSER@XCELENERGY.COM

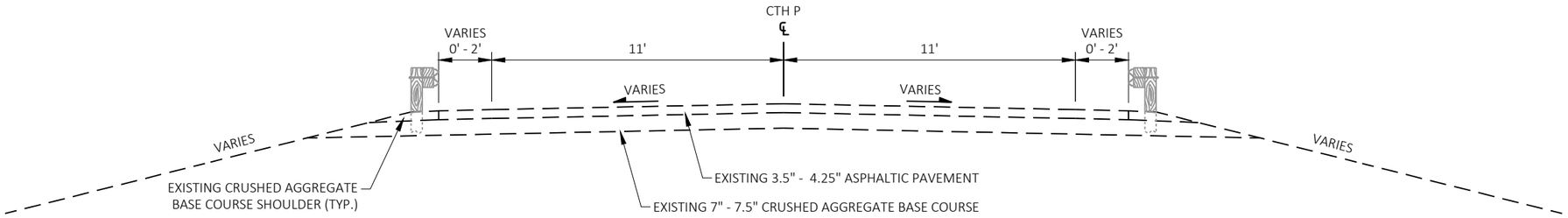
* NOT A DIGGERS HOTLINE MEMBER

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

RUNOFF COEFFICIENT TABLE

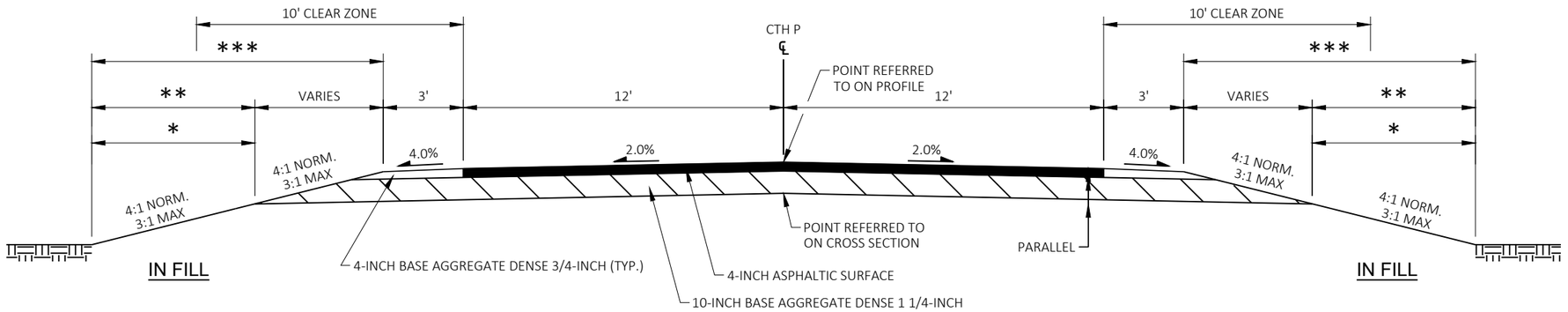
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP- TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE: TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 1.16 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.44 ACRES



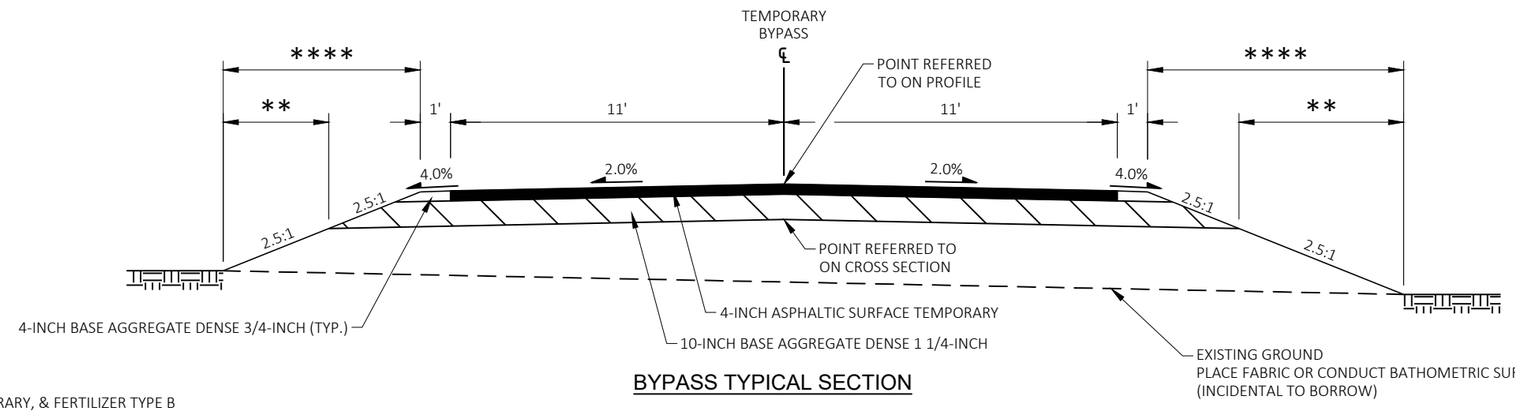
EXISTING TYPICAL SECTION

STA 8+68.32 - STA 9+40.10
STA 10+60.60 - STA 11+09.75



FINISHED TYPICAL SECTION

STA 8+68.32 - STA 9+30.75
STA 10+69.25 - STA 11+09.75



BYPASS TYPICAL SECTION

* LIMITS OF SALVAGED TOPSOIL

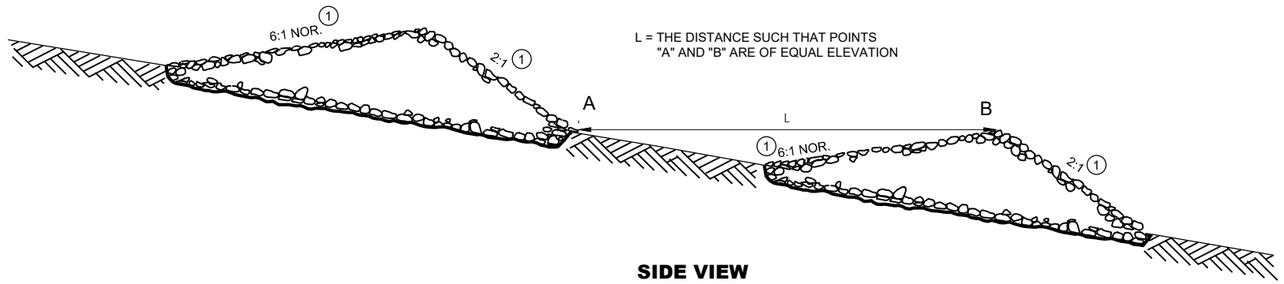
** LIMITS OF EROSION MAT URBAN CLASS I, TYPE B

*** LIMITS OF SEEDING MIXTURE #20, SEEDING TEMPORARY, & FERTILIZER TYPE B

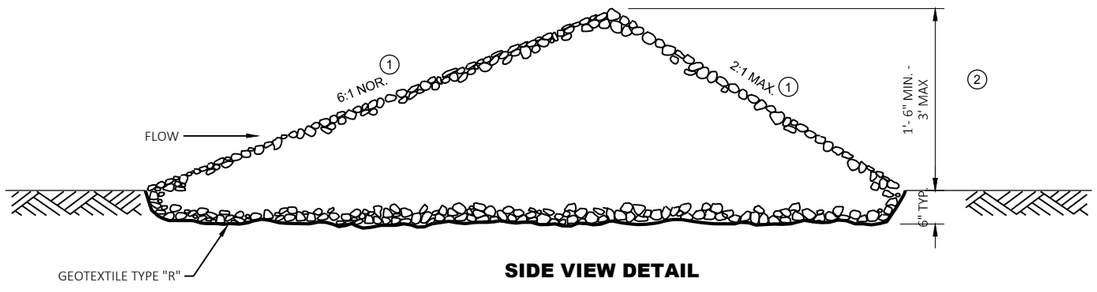
**** LIMITS OF SEEDING TEMPORARY & FERTILIZER TYPE B

PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	TYPICAL SECTIONS	SHEET 3	E

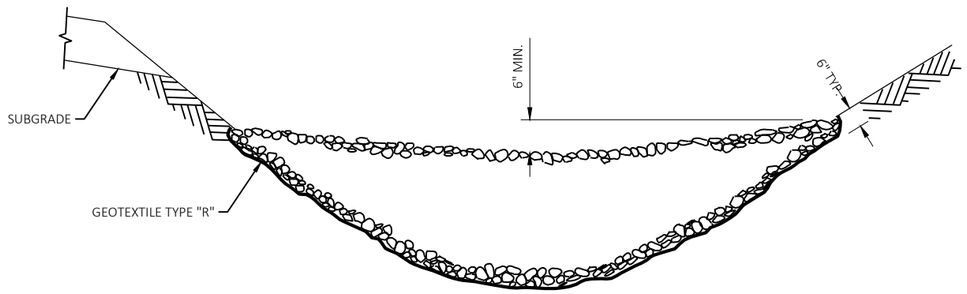
2



SIDE VIEW



SIDE VIEW DETAIL



SECTION VIEW

STONE DITCH CHECK

(1) WHEN PLACED WITHIN THE CLEAR ZONE, SLOPED AT 6:1 OR FLATTER.

(2) MEASURED AT THE CENTER OF THE DITCH CHECK.

2

N

EXISTING R/W

EXISTING R/W

CTH P

TREMPEALEAU RIVER

BURIED COMMUNICATIONS (BRIGHTSPEED)

OVERHEAD ELECTRIC (XCEL ENERGY)

EROSION CONTROL LIMITS SHOWN ARE BASED ON FINAL GRADING LIMITS. MAKE ADJUSTMENTS TO ACCOMMODATE THE TEMPORARY PEDESTRIAN PORTAGE.

STRUCTURE B-06-0238

CTH J

CTH P

7+00

8+00

9+00

10+00

11+00

17+00'TB'

18+00'TB'

19+00'TB'

20+00'TB'

21+00'TB'

FRONT ST

CANADIAN NATIONAL RAILROAD

TEMPORARY STONE DITCH CHECK REQ'D UNTIL RIPRAP IS INSTALLED

TEMPORARY BRIDGE

EXISTING R/W

BURIED COMMUNICATIONS (BRIGHTSPEED)

RESTORE FE WITH BASE AGGREGATE DENSE 3/4-INCH

EROSION CONTROL LIMITS SHOWN ARE BASED ON FINAL GRADING LIMITS. MAKE ADJUSTMENTS TO ACCOMMODATE THE TEMPORARY PEDESTRIAN PORTAGE.

BURIED COMMUNICATIONS (BRIGHTSPEED)

CTH J

EXISTING R/W

EXISTING R/W

LEGEND

- EROSION MAT URBAN CLASS I, TYPE B
- SILT FENCE
- RIPRAP HEAVY
- TEMPORARY STONE DITCH CHECK
- SLOPE INTERCEPT
- COFFERDAMS OR TEMPORARY SHORING
- TURBIDITY BARRIER
- SURFACE WATER FLOW

PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	EROSION CONTROL	SHEET 5	E

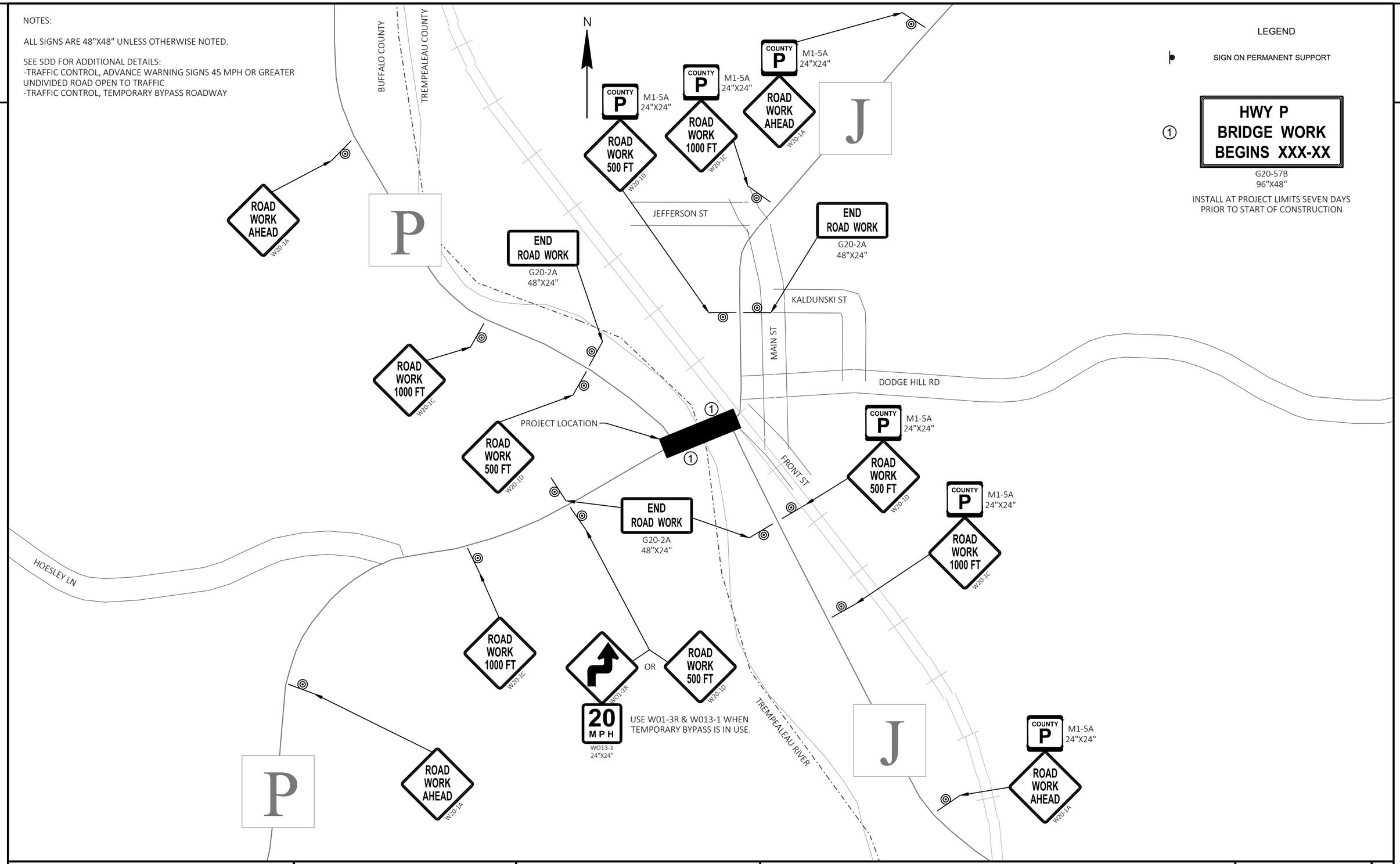
FILE NAME : G:\05\05643\05643027\CADD\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 022001-ec

PLOT DATE : 7/24/2025 12:06 PM PLOT BY : CONNOR GIRTEN PLOT NAME : PLOT SCALE : 1 IN:40 FT

NOTES:

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

SEE SDD FOR ADDITIONAL DETAILS:
-TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 MPH OR GREATER UNDIVIDED ROAD OPEN TO TRAFFIC
-TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY



LEGEND

SIGN ON PERMANENT SUPPORT

① HWY P BRIDGE WORK BEGINS XXX-XX
G20-57B
96"X48"

INSTALL AT PROJECT LIMITS SEVEN DAYS PRIOR TO START OF CONSTRUCTION

PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	TRAFFIC CONTROL - ADVANCED WARNING SIGNING	SHEET 6	E

FILE NAME : G:\05\05643\05643027\CADD\SHEETSPLAN\025000-AW.DWG
LAYOUT NAME - 025000-aw
PLOT DATE : 5/19/2025 9:49 AM
PLOT BY : CONNOR GIRTEN
PLOT NAME :
PLOT SCALE : 1 IN:400 FT

NOTES:

OBTAIN THE NECESSARY WATERWAY MARKER PERMIT PER STANDARD SPEC 107.19. COORDINATE THE BUOY PLACEMENT WITH THE DNR. ALL COSTS FOR COORDINATING, CONSTRUCTING, INSTALLING, AND MAINTAINING THE BUOYS ARE INCIDENTAL TO "TEMPORARY PEDESTRIAN PORTAGE".

INSTALL ALL SAFETY MEASURES PRIOR TO THE START OF BRIDGE REMOVAL.

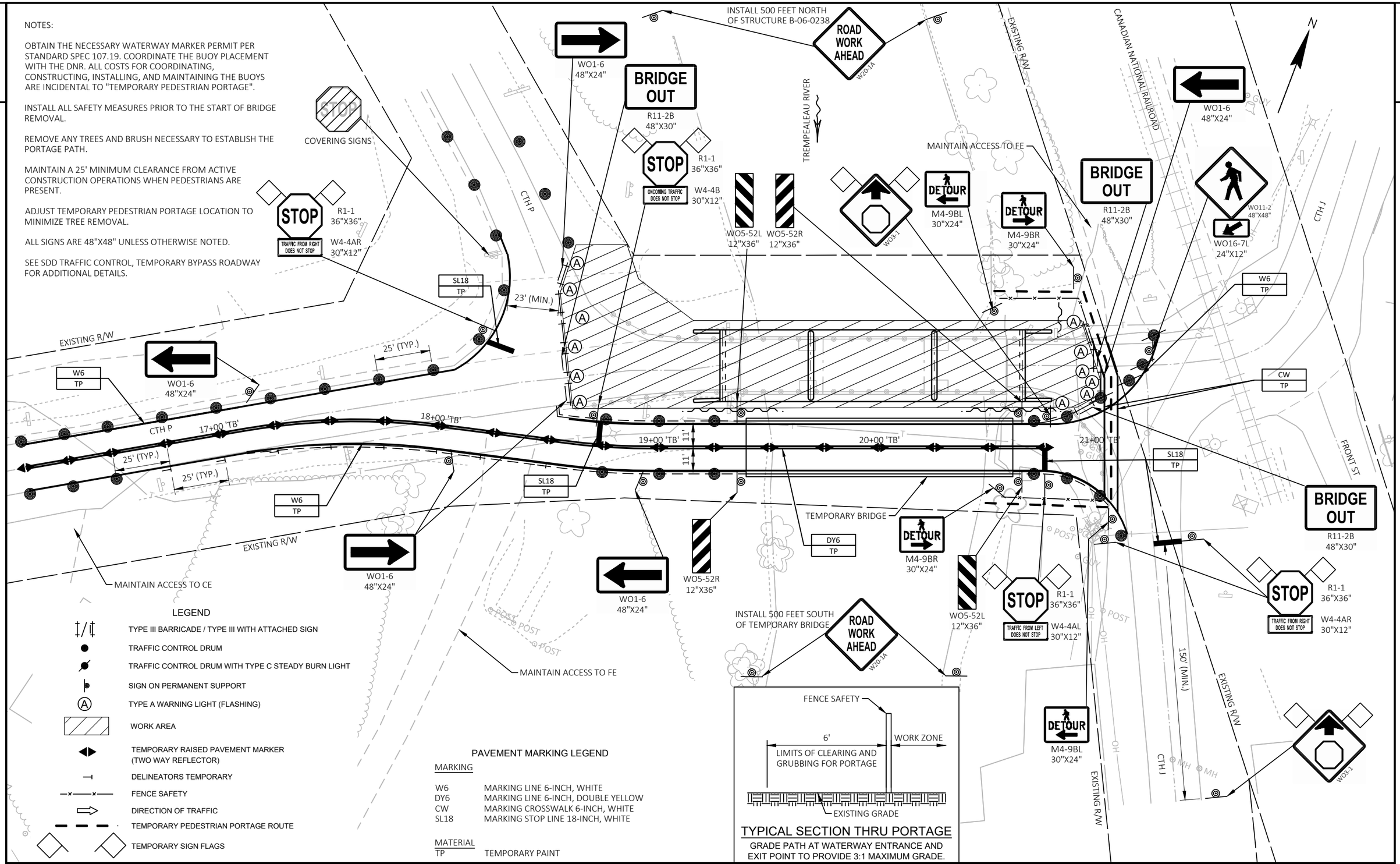
REMOVE ANY TREES AND BRUSH NECESSARY TO ESTABLISH THE PORTAGE PATH.

MAINTAIN A 25' MINIMUM CLEARANCE FROM ACTIVE CONSTRUCTION OPERATIONS WHEN PEDESTRIANS ARE PRESENT.

ADJUST TEMPORARY PEDESTRIAN PORTAGE LOCATION TO MINIMIZE TREE REMOVAL.

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

SEE SDD TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY FOR ADDITIONAL DETAILS.



LEGEND

- TYPE III BARRICADE / TYPE III WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- SIGN ON PERMANENT SUPPORT
- (A) TYPE A WARNING LIGHT (FLASHING)
- WORK AREA
- TEMPORARY RAISED PAVEMENT MARKER (TWO WAY REFLECTOR)
- DELINEATORS TEMPORARY
- FENCE SAFETY
- DIRECTION OF TRAFFIC
- TEMPORARY PEDESTRIAN PORTAGE ROUTE
- TEMPORARY SIGN FLAGS

PAVEMENT MARKING LEGEND

MARKING

W6	MARKING LINE 6-INCH, WHITE
DY6	MARKING LINE 6-INCH, DOUBLE YELLOW
CW	MARKING CROSSWALK 6-INCH, WHITE
SL18	MARKING STOP LINE 18-INCH, WHITE

MATERIAL

TP	TEMPORARY PAINT

TYPICAL SECTION THRU PORTAGE

GRADE PATH AT WATERWAY ENTRANCE AND EXIT POINT TO PROVIDE 3:1 MAXIMUM GRADE.

PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	TRAFFIC CONTROL	SHEET 7	E

Estimate Of Quantities

7290-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0110	Clearing	SY	28.000	28.000
0004	201.0210	Grubbing	SY	28.000	28.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-6-22	EACH	1.000	1.000
0008	204.9060.S	Removing (item description) 01. USGS Equipment Cabinet	EACH	1.000	1.000
0010	205.0100	Excavation Common	CY	586.000	586.000
0012	205.0508.S	Excavation, Hauling, and Disposal of Potential Creosote Contaminated Soil	TON	224.000	224.000
0014	206.1001	Excavation for Structures Bridges (structure) 01. B-6-238	EACH	1.000	1.000
0016	206.5001	Cofferdams (structure) 01. B-6-238	EACH	1.000	1.000
0018	208.0100	Borrow	CY	130.000	130.000
0020	210.1500	Backfill Structure Type A	TON	310.000	310.000
0022	213.0100	Finishing Roadway (project) 01. 7290-00-70	EACH	1.000	1.000
0024	305.0110	Base Aggregate Dense 3/4-Inch	TON	83.000	83.000
0026	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	713.000	713.000
0028	450.4000	HMA Cold Weather Paving	TON	26.000	26.000
0030	455.0605	Tack Coat	GAL	48.000	48.000
0032	465.0105	Asphaltic Surface	TON	101.000	101.000
0034	465.0125	Asphaltic Surface Temporary	TON	111.000	111.000
0036	502.0100	Concrete Masonry Bridges	CY	471.000	471.000
0038	502.3200	Protective Surface Treatment	SY	611.000	611.000
0040	502.9000.S	Underwater Substructure Inspection (structure) 01. B-6-238	EACH	2.000	2.000
0042	505.0400	Bar Steel Reinforcement HS Structures	LB	7,920.000	7,920.000
0044	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	64,020.000	64,020.000
0046	511.1200	Temporary Shoring (structure) 01. B-6-238	SF	1,030.000	1,030.000
0048	513.4061	Railing Tubular Type M	LF	330.000	330.000
0050	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000
0052	526.0101	Temporary Structure (station) 01. 20+00'TB'	EACH	1.000	1.000
0054	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	3,400.000	3,400.000
0056	606.0300	Riprap Heavy	CY	300.000	300.000
0058	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	212.000	212.000
0060	616.0700.S	Fence Safety	LF	104.000	104.000
0062	618.0100	Maintenance and Repair of Haul Roads (project) 01. 7290-00-70	EACH	1.000	1.000
0064	619.1000	Mobilization	EACH	1.000	1.000
0066	624.0100	Water	MGAL	12.200	12.200
0068	625.0500	Salvaged Topsoil	SY	1,157.000	1,157.000
0070	627.0200	Mulching	SY	300.000	300.000
0072	628.1504	Silt Fence	LF	555.000	555.000
0074	628.1520	Silt Fence Maintenance	LF	555.000	555.000
0076	628.1905	Mobilizations Erosion Control	EACH	8.000	8.000
0078	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0080	628.2008	Erosion Mat Urban Class I Type B	SY	1,157.000	1,157.000
0082	628.6005	Turbidity Barriers	SY	573.000	573.000
0084	628.7515.S	Stone Ditch Checks	CY	5.000	5.000
0086	629.0210	Fertilizer Type B	CWT	1.400	1.400
0088	630.0120	Seeding Mixture No. 20	LB	49.000	49.000
0090	630.0200	Seeding Temporary	LB	45.000	45.000
0092	630.0500	Seed Water	MGAL	39.000	39.000
0094	633.1100	Delineators Temporary	EACH	10.000	10.000
0096	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0098	637.2230	Signs Type II Reflective F	SF	12.000	12.000

Estimate Of Quantities

7290-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	638.2602	Removing Signs Type II	EACH	2.000	2.000
0102	638.3000	Removing Small Sign Supports	EACH	2.000	2.000
0104	642.5001	Field Office Type B	EACH	1.000	1.000
0106	643.0300	Traffic Control Drums	DAY	7,058.000	7,058.000
0108	643.0420	Traffic Control Barricades Type III	DAY	1,372.000	1,372.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	2,734.000	2,734.000
0112	643.0715	Traffic Control Warning Lights Type C	DAY	612.000	612.000
0114	643.0900	Traffic Control Signs	DAY	10,200.000	10,200.000
0116	643.0920	Traffic Control Covering Signs Type II	EACH	1.000	1.000
0118	643.1000	Traffic Control Signs Fixed Message	SF	64.000	64.000
0120	643.3165	Temporary Marking Line Paint 6-Inch	LF	2,005.000	2,005.000
0122	643.3305	Temporary Marking Crosswalk Paint 6-inch	LF	154.000	154.000
0124	643.3760	Temporary Marking Raised Pavement Marker Type I	EACH	24.000	24.000
0126	643.3805	Temporary Marking Stop Line Paint 18-Inch	LF	47.000	47.000
0128	643.5000	Traffic Control	EACH	1.000	1.000
0130	645.0111	Geotextile Type DF Schedule A	SY	64.000	64.000
0132	645.0120	Geotextile Type HR	SY	530.000	530.000
0134	645.0130	Geotextile Type R	SY	8.000	8.000
0136	646.2020	Marking Line Epoxy 6-Inch	LF	111.000	111.000
0138	650.4500	Construction Staking Subgrade	LF	380.000	380.000
0140	650.5000	Construction Staking Base	LF	380.000	380.000
0142	650.6501	Construction Staking Structure Layout (structure) 01. B-06-0238	EACH	1.000	1.000
0144	650.9911	Construction Staking Supplemental Control (project) 01. 7290-00-70	EACH	1.000	1.000
0146	650.9920	Construction Staking Slope Stakes	LF	380.000	380.000
0148	690.0150	Sawing Asphalt	LF	147.000	147.000
0150	715.0502	Incentive Strength Concrete Structures	DOL	2,826.000	2,826.000
0152	801.0117	Railroad Flagging Reimbursement	DOL	22,500.000	22,500.000
0154	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
0156	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	800.000	800.000
0158	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	600.000	600.000
0160	SPV.0060	Special 01. Temporary Pedestrian Portage	EACH	1.000	1.000
0162	SPV.0060	Special 02. Salvage and Reinstall Signs	EACH	12.000	12.000
0164	SPV.0090	Special 01. Flashing Stainless Steel	LF	277.000	277.000

3

CLEARING & GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0110 CLEARING SY	201.0210 GRUBBING SY
0010	18+91'TB'	-	19+10'TB'	RT	4	4
0010	20+55'TB'	-	20+61'TB'	RT	4	4
0010	10+53	-	10+63	LT	7	7
0010	10+73	-	10+92	LT	13	13
				TOTAL 0010	28	28

REMOVING USGS EQUIPMENT CABINET

CATEGORY	STATION	LOCATION	204.9060.S.01 REMOVING (ITEM DESCRIPTION) (01. USGS EQUIPMENT CABINET) EACH
0010	10+69	RT	1
		TOTAL 0010	1

CREOSOTE ITEMS

CATEGORY	LOCATION	205.0508.S EXCAVATION, HAULING, AND DISPOSAL OF POTENTIAL CREOSOTE CONTAMINATED SOIL TON
0010	WEST ABUTMENT	112
0010	EAST ABUTMENT	112
	TOTAL 0010	224

EARTHWORK SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	205.0100 EXCAVATION COMMON CY	FILL CY (1)	EXPANDED FILL CY (1) (2)	WASTE CY (1)	208.0100 BORROW CY
BYPASS CONSTRUCTION									
0010	17+10'TB'	-	19+40'TB'	BYPASS CONSTRUCTION	72	159	207	-135	135
0010	20+61'TB'	-	21+05'TB'	BYPASS CONSTRUCTION	12	6	7	5	-5
				SUBTOTAL	84	165	214	0	130
CTH P									
0010	8+68	-	9+19	CTH P	104	24	31	73	-73
0010	10+81	-	11+06	CTH P	62	0	0	62	-62
0010	8+68	-	11+06	UNUSABLE PAVEMENT (3)	---	---	---	---	48
				SUBTOTAL	166	24	31	135	0
BYPASS REMOVAL									
0010	17+10'TB'	-	19+40'TB'	BYPASS REMOVAL	298	15	19	279	-279
0010	20+61'TB'	-	21+05'TB'	BYPASS REMOVAL	38	0	0	38	-38
				SUBTOTAL	336	15	19	317	0
				TOTAL 0010	586	204	264	452	130

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - EXISTING PAVEMENT IS INCLUDED IN EXCAVATION COMMON TOTALS. SEE EARTHWORK TABLE.

BASE AGGREGATE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	624.0100 WATER MGAL
0010	17+10'TB'	-	19+40'TB'	TEMP BYPASS	25	301	4.9
0010	20+60'TB'	-	21+04'TB'	TEMP BYPASS	4	85	1.4
0010	8+68	-	9+31	CTH P	12	191	3.1
0010	10+69	-	11+12	CTH P	8	136	2.2
0010	8+14	-	8+50	DWY, RT	34	---	0.6
				TOTAL 0010	83	713	12.2

ASPHALT ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	THICKNESS INCHES	450.4000 HMA COLD WEATHER PAVING TON	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	465.0125 ASPHALTIC SURFACE TEMPORARY TON
0010	17+10'TB'	-	19+40'TB'	TEMP BYPASS	4.00	---	19	---	85
0010	20+60'TB'	-	21+04'TB'	TEMP BYPASS	4.00	---	6	---	26
0010	8+68	-	9+31	CTH P	4.00	15	13	59	---
0010	10+69	-	11+12	CTH P	4.00	11	10	42	---
				TOTAL 0010		26	48	101	111

3

RESTORATION ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
0010	16+89'TB'	-	18+22'TB'	TEMP BYPASS RT	52	---	52	0.1	---	3	3
0010	18+43'TB'	-	19+40'TB'	TEMP BYPASS RT	60	---	60	0.1	---	3	3
0010	18+53'TB'	-	19+40'TB'	TEMP BYPASS LT	52	---	52	0.1	---	3	2
0010	20+60'TB'	-	21+04'TB'	TEMP BYPASS RT	14	---	14	0.1	---	1	1
0010	20+60'TB'	-	20+87'TB'	TEMP BYPASS LT	4	---	4	0.1	---	1	1
0010	7+12	-	8+14	CTH P RT	88	---	88	0.1	5	3	3
0010	8+30	-	9+51	CTH P RT	350	---	350	0.2	17	11	9
0010	8+74	-	9+43	CTH P LT	103	---	103	0.1	6	4	3
0010	10+51	-	11+07	CTH P RT	164	---	164	0.1	8	5	4
0010	10+54	-	11+02	CTH P LT	38	---	38	0.1	3	2	2
0010	---	-	---	UNDISTRIBUTED	232	300	232	0.3	10	9	8
				TOTAL 0010	1,157	300	1,157	1.4	49	45	39

MOBILIZATIONS EROSION CONTROL

CATEGORY	LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0010	PROJECT 7290-00-70	8	3
	TOTAL 0010	8	3

EROSION CONTROL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIERS SY	628.7515.S STONE DITCH CHECKS CY	645.0130 GEOTEXTILE TYPE R SY	REMARKS
0010	6+84	-	8+13	CTH P RT	136	136	---	---	---	
0010	8+31	-	9+52	CTH P RT	115	115	---	---	---	
0010	8+64	-	9+36	CTH P LT	87	87	---	---	---	
0010	10+57	-	11+07	CTH P LT	59	59	---	---	---	
0010	10+61	-	11+06	CTH P RT	47	47	---	---	---	
0010	9+28	-	9+59	WEST	---	---	225	---	---	
0010	9+30	-	---	CTH P RT	---	---	---	4	6	TEMPORARY
0010	10+44	-	10+65	EAST	---	---	233	---	---	
				UNDISTRIBUTED	111	111	115	1	2	
				TOTAL 0010	555	555	573	5	8	

SIGNING ITEMS

CATEGORY	STATION	LOCATION	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	SPV.0060.02 SPECIAL (02. SALVAGE AND REINSTALL SIGNS) EACH	REMARKS
0010	7+57	CTH P RT	---	---	---	---	2	RR XING / BIKE ROUTES / CTH P LT, CTH J ST
0010	8+97	CTH P RT	---	---	---	---	1	DODGE SPORTSMEN
0010	9+31	CTH P LT	1	3	---	---	---	W5-52L
0010	9+31	CTH P RT	1	3	---	---	---	W5-52R
0010	9+35	CTH P RT	---	---	---	---	2	CTH J DBL ARROW
0010	9+35	CTH P RT	---	---	---	---	2	TREMPEALEAU CO / TOWN OF DODGE
0010	9+35	CTH P LT	---	---	---	---	1	CTH P ST/RT
0010	9+40	CTH P LT/RT	---	---	2	2	---	TIGER BOARDS
0010	10+69	CTH P LT	1	3	---	---	---	W5-52R
0010	10+69	CTH P RT	1	3	---	---	---	W5-52L
0010	10+71	CTH P LT	---	---	---	---	1	BUFFALO CO / ATV SIGN
0010	10+83	CTH P RT	---	---	---	---	1	STOP
0010	10+84	CTH P LT	---	---	---	---	1	STOP
0010	11+00	CTH P RT	---	---	---	---	1	CTH P / CTH J
		TOTAL 0010	4	12	2	2	12	

3

TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	DAYS	633.1100 DELINEATORS TEMPORARY EACH	616.0700.S FENCE SAFETY LF	TRAFFIC CONTROL DRUMS EACH	643.0300 TRAFFIC CONTROL DRUMS DAY	TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C EACH	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C DAY	TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II EACH	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE SF	643.3760 TEMPORARY MARKING RAISED PAVEMENT MARKER TYPE I EACH	SPV.0060.01 SPECIAL (01. TEMPORARY PEDESTRIAN PORTAGE) EACH	REMARKS
0010	PROJECT LIMITS	7	---	---	---	---	---	---	---	---	---	---	---	---	---	64	---	---	G20-57B
0010	BYPASS & TEMP STRUCTURE CONSTRUCTION	28	---	---	30	840	---	---	---	---	---	---	22	616	---	---	---	---	
0010	BYPASS ADVANCED WARNING SIGNING	138	---	---	---	---	---	---	---	---	---	---	23	3,174	---	---	---	---	
0010	TEMPORARY BYPASS	138	8	---	36	4,968	9	1,242	18	2,484	4	552	25	3,450	1	---	20	---	CTH P NORTH - STOP SIGN
0010	BYPASS & TEMP STRUCTURE REMOVAL	20	---	---	30	600	---	---	---	---	---	---	22	440	---	---	---	---	
0010	PEDESTRIAN PORTAGE / TREMPEALEAU RIVER	175	---	104	---	---	---	---	---	---	---	---	10	1,750	---	---	---	1	
0010	UNDISTRIBUTED	---	2	---	---	650	---	130	---	250	---	60	---	770	---	---	4	---	
		TOTAL 0010	10	104		7,058		1,372		2,734		612		10,200	1	64	24	1	

3

PAVEMENT MARKING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	643.3805 TEMPORARY MARKING STOP LINE PAINT 18-INCH LF	643.3165 TEMPORARY MARKING LINE PAINT 6-INCH LF	643.3305 TEMPORARY MARKING CROSSWALK PAINT 6-INCH LF	646.202 MARKING LINE EPOXY 6-INCH LF	REMARKS
0010	10+69	-	11+06	LT	---	---	---	37	EDGELINE, WHITE
0010	10+69	-	11+07	RT	---	---	---	74	EDGELINE, WHITE
0010	16+10'TB'	-	21+25'TB'	TEMP BYPASS	---	2,005	---	---	CENTERLINE (YELLOW) AND EDGELINES (WHITE)
0010	18+22'TB'	-	---	CTH P NORTH	13	---	---	---	WHITE
0010	18+72'TB'	-	---	TEMP BYPASS	10	---	---	---	WHITE
0010	20+75'TB'	-	---	TEMP BYPASS	11	---	---	---	WHITE
0010	---	-	---	CTH J SOUTH	13	---	---	---	WHITE
0010	20+96'TB'	-	21+08'TB'	TEMP PED PORTAGE	---	---	154	---	WHITE
				TOTAL 0010	47	2,005	154	111	

STAKING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6501.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-06-0238) EACH	650.9911.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 7290-00-70) EACH	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	17+10'TB'	-	19+40'TB'	TEMP BYPASS	230	230	---	---	230
0010	20+60'TB'	-	21+04'TB'	TEMP BYPASS	44	44	---	---	44
0010	8+68	-	9+31	CTH P	63	63	---	---	63
0010	10+69	-	11+12	CTH P	43	43	---	---	43
0010	---	-	---	PROJECT 7290-00-70	---	---	1	1	---
				TOTAL 0010	380	380	1	1	380

SAWING ASPHALT

CATEGORY	STATION	LOCATION	690.0150 SAWING ASPHALT LF
0010	8+68	CTH P	63
0010	11+12	CTH P	84
		TOTAL 0010	147

BIRD DETERRENT SYSTEM

CATEGORY	LOCATION	999.2000.S.01 INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM (STATION) (01. 10+00) EACH
0010	B-06-0022	1
	TOTAL 0010	1

CONTROL POINTS				
NO.	STATION, OFFSET	DESCRIPTION	Y	X
2	---	MAG	237,206.44	639,271.66
4	10+75.87, 23.36' RT	¾" X 24" IRON ROD	237,211.97	639,190.83
5	8+73.33, 56.21' LT	¾" X 24" IRON ROD	237,209.35	638,969.38

BENCH MARKS			
NO.	STATION, OFFSET	DESCRIPTION	ELEV.
200	7+71.52, 104.86' LT	SE CORNER CONCRETE PAD	675.57
201	10+60.69. 12.85' RT	CHISELED SQUARE BRIDGE CONC CURB	677.62
202	11+00.66, 68.68' RT	HYDRANT FLAG BOLT CC	676.37

PI STA = 5+50.10
Y = 236,996.060
X = 638,715.312

PI STA = 11+23.66
Y = 237,250.731
X = 639,227.247

PI STA = 8+82.67
Y = 237,165.299
X = 639,001.607
DELTA = 9°51'04" RT
D = 8°34'32"
T = 57.58'
L = 114.87'
R = 668.12'
PC STA = 8+25.09
Y = 237,135.999
X = 638,952.041
PT STA = 9+39.97
Y = 237,185.687
X = 639,055.454
DB = N59°24'40"E
DA = N69°15'44"E

LEGEND
CLEARING & GRUBBING
RIPRAP HEAVY
XXXXXXXXX SAWING ASHPALT

STA 10+00 STRUCTURE B-06-0238
THREE-SPAN HAUNCHED CONCRETE SLAB
30.0 FT CLEAR ROADWAY WIDTH
138.5 FT OVERALL LENGTH
NO SKEW

REMOVE EXISTING STRUCTURE B-06-0022
STA 10+00
THREE-SPAN STEEL DECK GIRDER
24.0 FT CLEAR ROADWAY WIDTH
120.5 FT OVERALL LENGTH
NO SKEW

EARTHWORK SUMMARY	
STA 8+68.32 - STA 11+09.75	
EXC. COMMON	166 CY
FILL	24 CY
FILL EXPANSION	30%
WASTE	135 CY

PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	PLAN AND PROFILE: CTH P	SHEET 13 E

PI STA = 17+55.59 TB
Y = 237,101.572
X = 638,893.802
DELTA = 17°12'54" RT
D = 19°05'55"
T = 45.41'
L = 90.14'
R = 300.00'
PC STA = 17+10.18 TB
Y = 237,078.463
X = 638,854.710
PT STA = 18+00.32 TB
Y = 237,112.075
X = 638,937.982
DB = N59°24'40"E
DA = N76°37'34"E

PI STA = 18+76.96 TB
Y = 237,129.803
X = 639,012.549
DELTA = 7°21'50" LT
D = 19°05'55"
T = 19.31'
L = 38.56'
R = 300.00'
PC STA = 18+57.66 TB
Y = 237,125.338
X = 638,993.767
PT STA = 18+96.21 TB
Y = 237,136.639
X = 639,030.603
DB = N76°37'34"E
DA = N69°15'44"E

PI STA = 21+22.17TB
Y = 237,216.647
X = 639,241.916

BM 200
PREMIER COOPERATIVE
TOP OF SLOPE
BOTTOM OF SLOPE
EXISTING R/W
EXISTING CPCM
GRAVEL CE
50'
ASPH & GRAVEL CE
CTH P
STA 6+50.00 R/L CTH P =
STA 16+48.15 R/L TEMP BYPASS
Y=237,046.899
X=638,801.314
BP: 16+48.15 'TB'
PC: 17+10.18 'TB'
BURIED COMMUNICATIONS (BRIGHTSPEED)
BOTTOM OF SLOPE
MICHAEL & LUANNE HOESLEY
DODGE FUEL COMPANY LLC
BEGIN CONSTRUCTION
STA 17+10.18'TB'
EXISTING LOADING RAMP
PT: 18+00.32 'TB'
GRAVEL FE
PC: 18+57.66 'TB'
PT: 18+96.21 'TB'
EXISTING DODGE SPORTSMEN SIGN
PERRY HOESLEY
BOTTOM OF SLOPE
EXISTING STRUCTURE B-06-0022
(TO BE REMOVED)
EXISTING CPCM TO REMAIN
CP 5
TREMPEALEAU RIVER
MICHAEL & LUANNE HOESLEY
RAILROAD R/W
BURIED COMMUNICATIONS (BRIGHTSPEED)
OVERHEAD ELECTRIC (XCEL ENERGY)
EXISTING R/W
STRUCTURE B-06-0238
50'
VARIES
BM 201
TEMPORARY SHORING (TYP.)
GRAVEL PE
CTH J
FRONT ST
SI (TYP)
TEMPORARY BRIDGE REQ'D
EXISTING USGS MONITORING STATION EQUIPMENT (TO BE RELOCATED BY OTHERS, SEE SPECIAL PROVISION)
EXISTING ABUTMENT STRUCTURE (ABANDONED)
EXISTING WOOD SHED TO REMAIN
EXISTING USGS MONITORING STATION EQUIPMENT BUILDING (TO BE REMOVED)
BURIED COMMUNICATIONS (BRIGHTSPEED)
BM 202
EP: 21+22.17 'TB'
CP 2
CANADIAN NATIONAL RAILROAD
6+00
7+00
8+00
9+00
10+00
11+00
17+00 'TB'
18+00 'TB'
19+00 'TB'
20+00 'TB'
21+00 'TB'

STA 20+00'TB' = 10+03.14, 37.07' RT
TEMPORARY BRIDGE REQ'D
HIGH WATER 5 = 673.80 FT
Q5 = 6,610 CFS
MINIMUM CLEAR OPENING OF
TEMP STRUCTURE = 908 SF
HL - 93 DESIGN LOAD
MINIMUM FOUR 30.25 FT SPANS
MINIMUM LOW CHORD ELEV. = 673.34
24' CLEAR WIDTH BETWEEN RAILS

END CONSTRUCTION
STA 21+05.54'TB'

STA 17+89.54
EL 674.12
VPC STA 19+33.50
VPC EL 676.43
VPI STA 19+98.50
VPI EL 677.47
VPT STA 20+63.50
VPT EL 676.03
STA 21+05.54
EL 675.11
HP STA 19+88.20
HP EL 676.86
FINISHED ℄ PROFILE
1.60%
-2.20%
EXISTING GROUND
VCL = 130.00
K = 34.19

680
675
670
665

	15+50	16+00	17+00	18+00	19+00	20+00	21+00	22+00	22+50
EXISTING		672.56	673.02	673.51	674.29	673.71	673.10	669.24	664.15	669.48	675.06		
FINISHED					674.29	675.09	675.89	676.65	676.84	676.30	675.23		

BYPASS EARTHWORK CONST.
STA 17+10.18'TB' - STA 21+05.54'TB'

EXC. COMMON	84 CY
FILL	165 CY
FILL EXPANSION	30%
BORROW	130 CY

BYPASS EARTHWORK REMOVAL
STA 17+10.18'TB' - STA 21+05.54'TB'

EXC. COMMON	336 CY
FILL	15 CY
FILL EXPANSION	30%
WASTE	317 CY

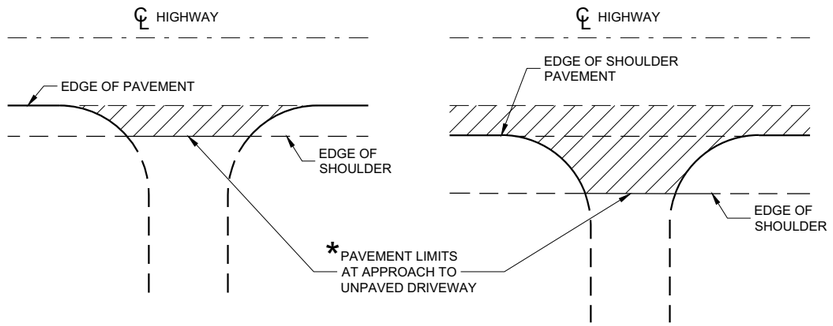
PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	PLAN AND PROFILE: TEMPORARY BYPASS 'TB'	SHEET 14	E

FILE NAME : G:\05\05643\05643027\CADD\SHEETSPLAN\050102-PP.DWG
LAYOUT NAME - 050102-pp
PLOT DATE : 7/24/2025 11:52 AM
PLOT BY : CONNOR GIRTEN
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

Standard Detail Drawing List

08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13C19-03	HMA LONGITUDINAL JOINTS
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-09B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-24A	PERMANENT LONGITUDINAL PAVEMENT MARKINGS
15C08-24B	TEMPORARY LONGITUDINAL PAVEMENT MARKING
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C12-09B	TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE
15D28-04	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D31-05	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

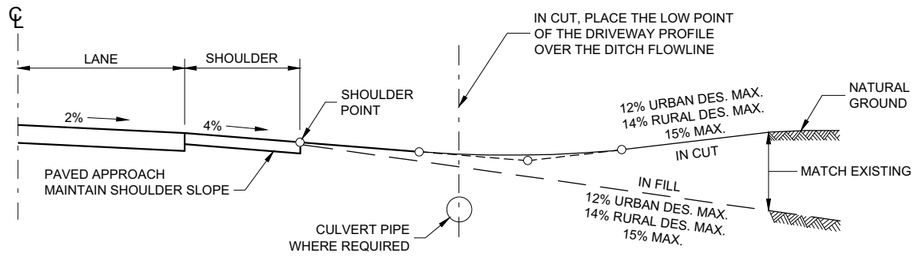
6



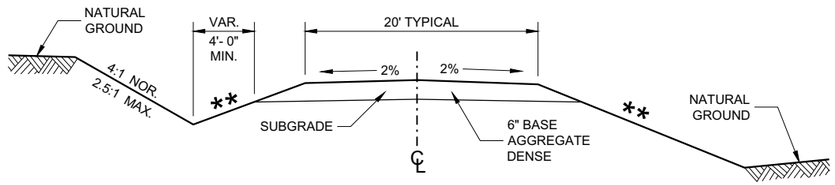
PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)



TYPICAL DRIVEWAY PROFILES

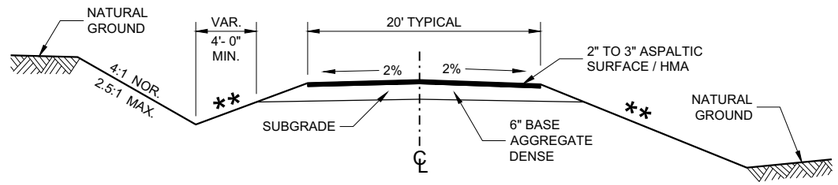


IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



IN CUT **IN FILL**

TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE

6

6

SDD 08D21 - 01

SDD 08D21 - 01

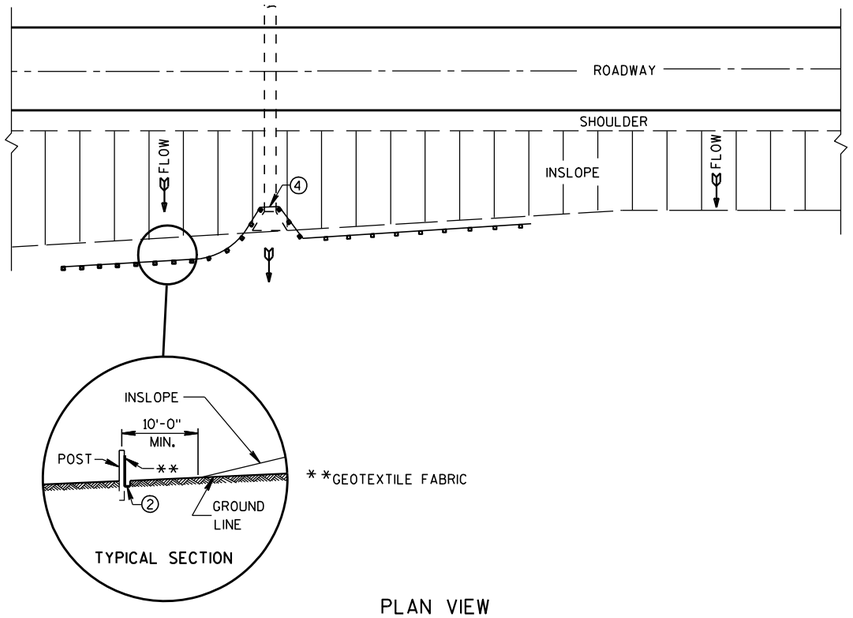
DRIVEWAYS WITHOUT CURB AND GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017
DATE

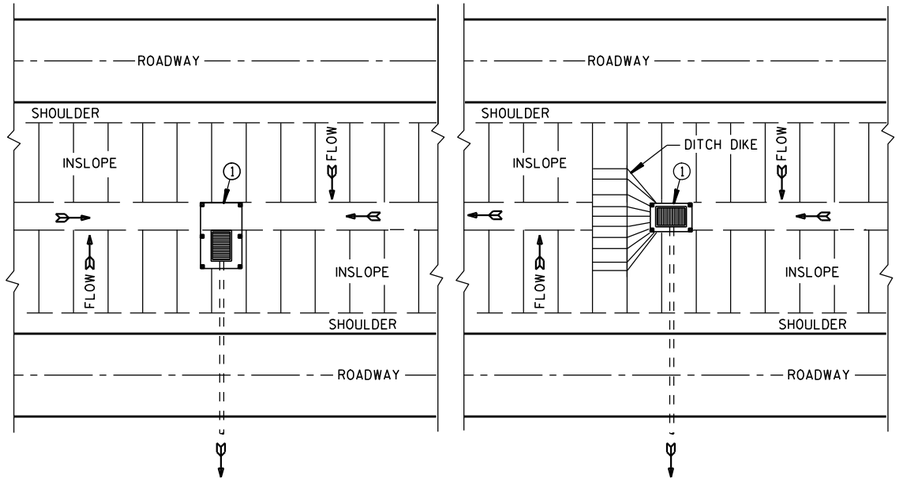
/S/ Rodney Taylor
ROADWAY STANDARDS DEVE
UNIT SUPERVISOR

FHWA



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

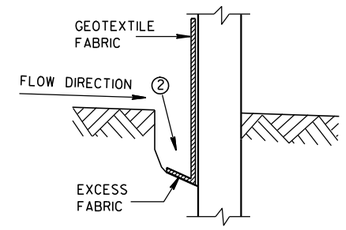
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.

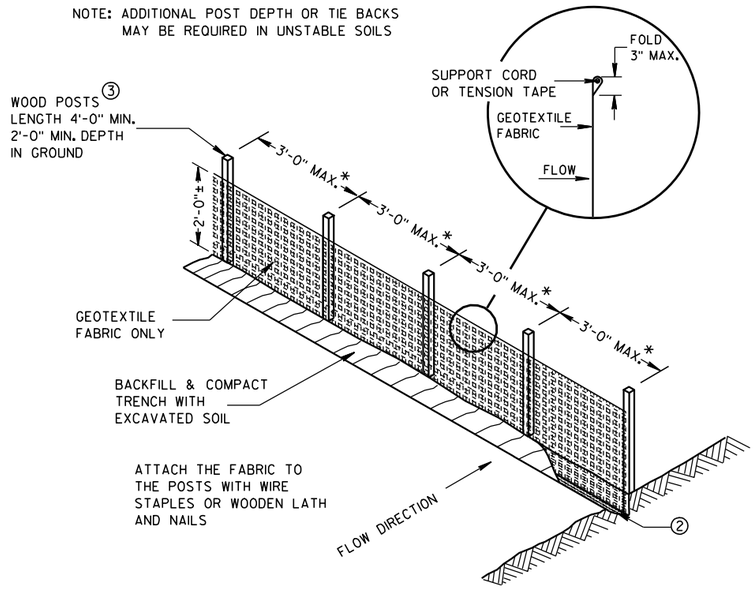
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.

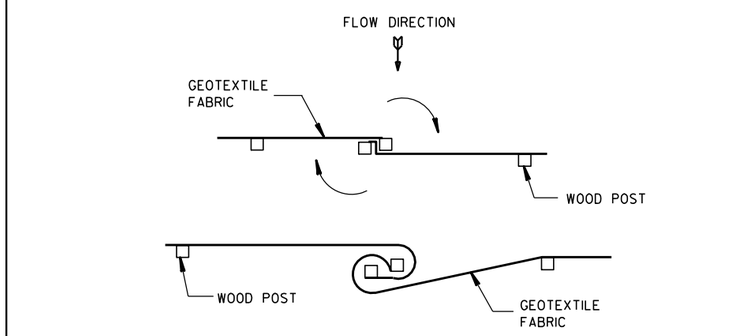
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



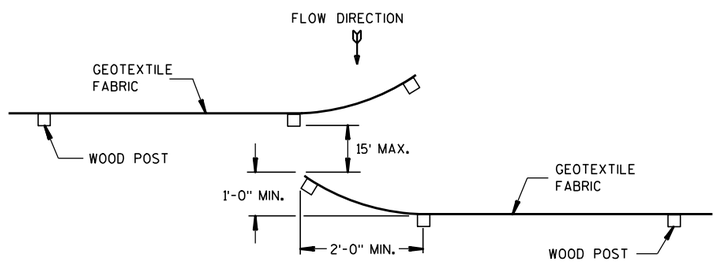
TRENCH DETAIL



SILT FENCE

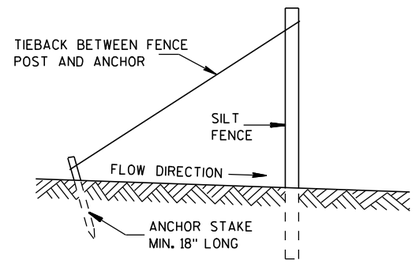


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 8 E 9-6

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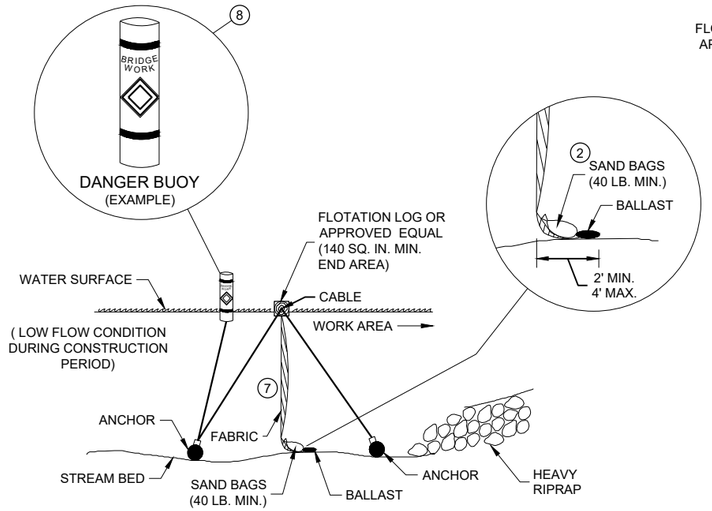
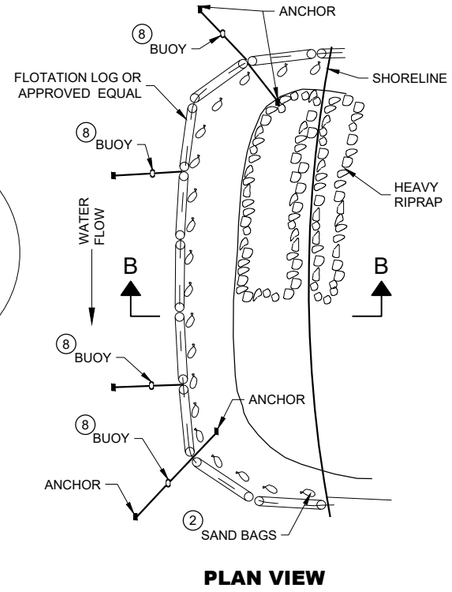
S.D.D. 8 E 9-6

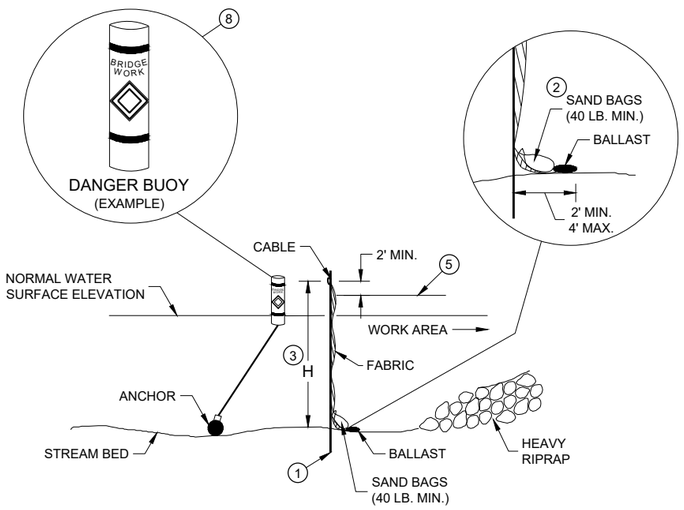


SECTION B - B

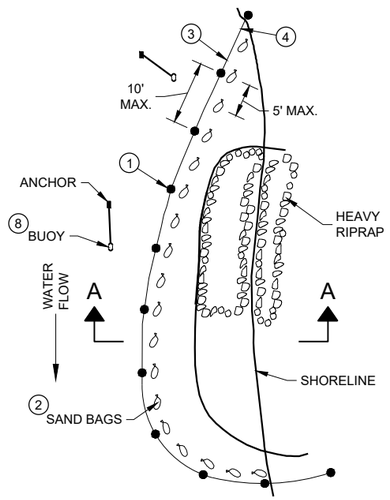


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

(1) DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

(2) SAND BAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

(3) WHEN BARRIER HEIGHT "H" EXCEEDS 8 FEET, POST SPACING MAY NEED TO BE DECREASED.

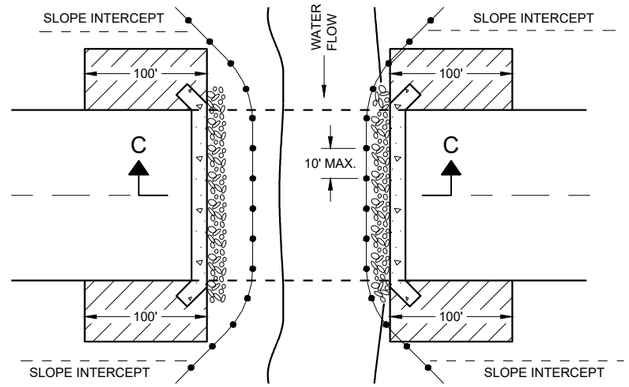
(4) IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

(5) ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.

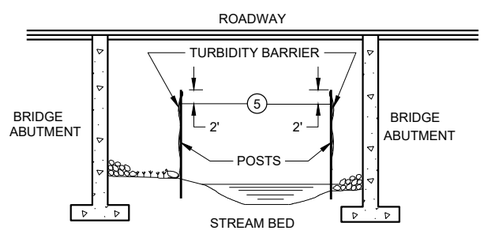
(6) FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK PREVENTS THE INSTALLATION OF POSTS.

(7) ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

(8) USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C - C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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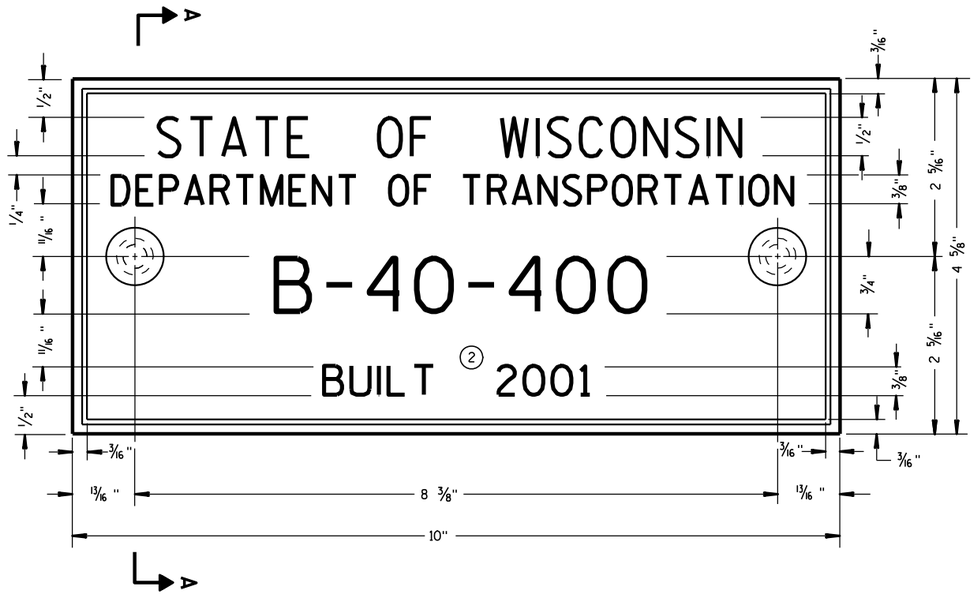
SDD 08E11 - 02



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

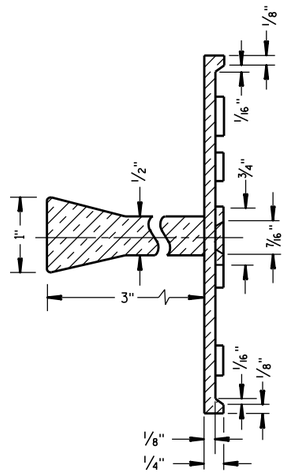
GENERAL NOTES

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.

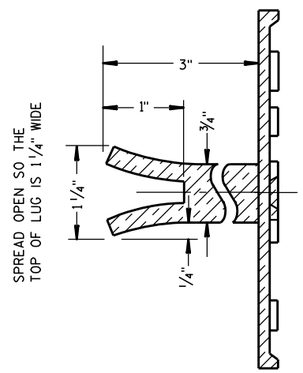
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

(1) EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

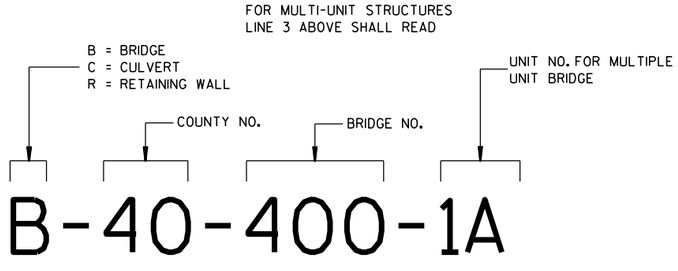
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



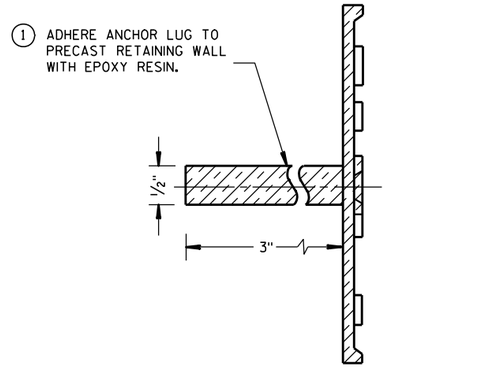
SECTION A-A



ALTERNATE LUG



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck-- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

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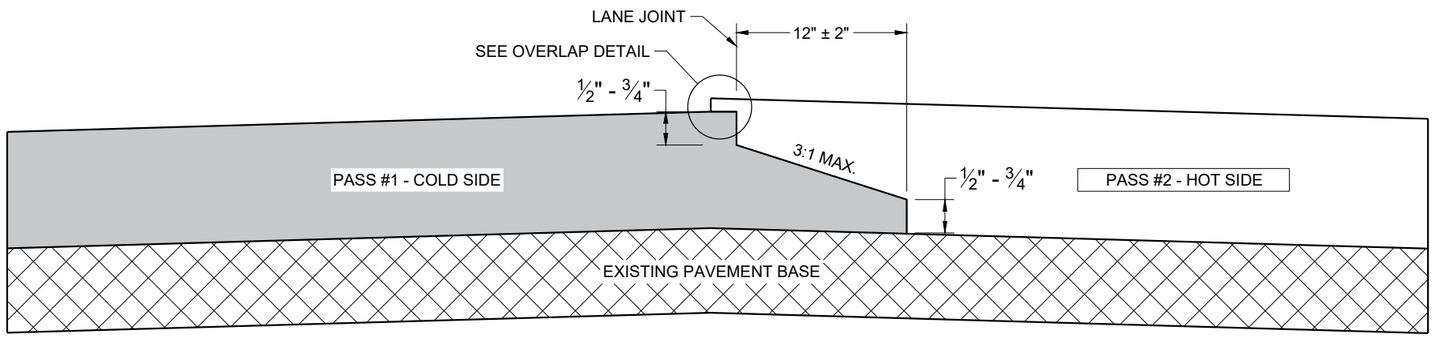
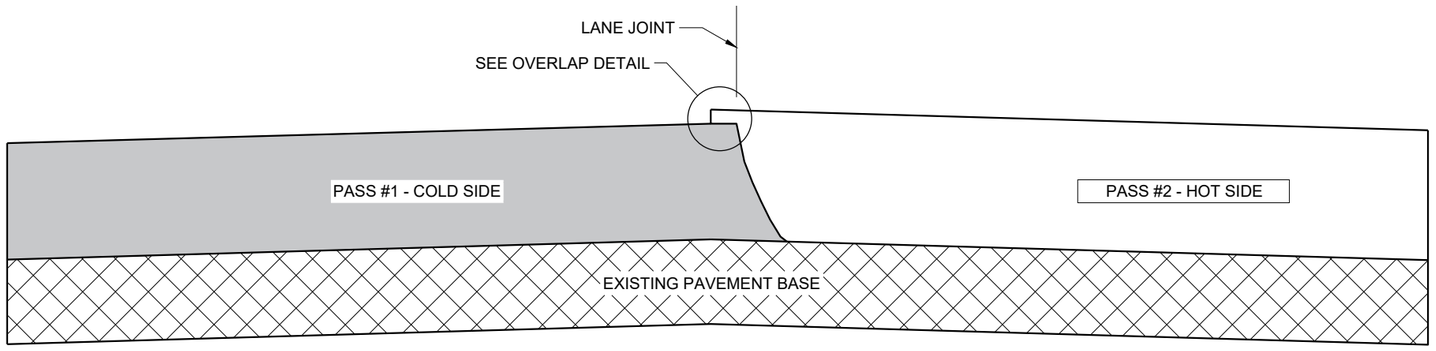
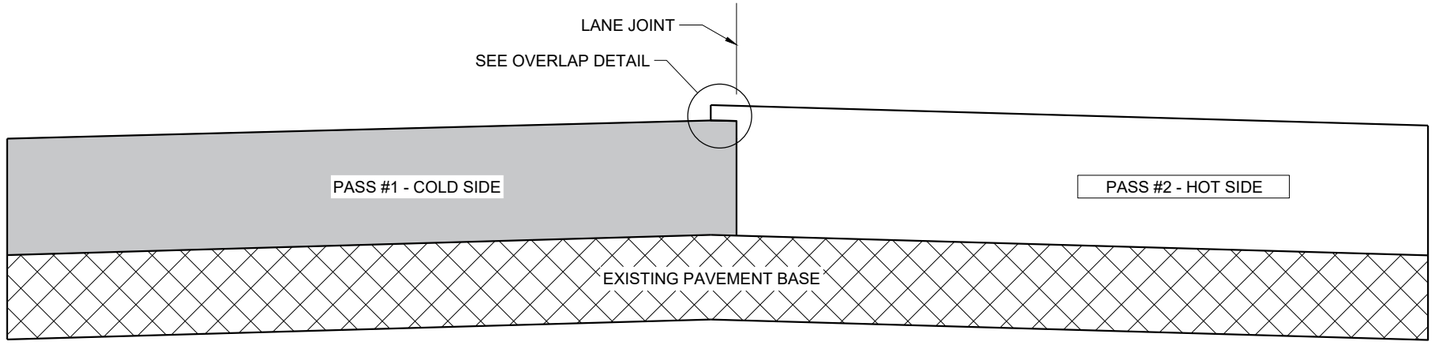
S.D.D. 12 A 3-10



TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT



TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)

GENERAL NOTES

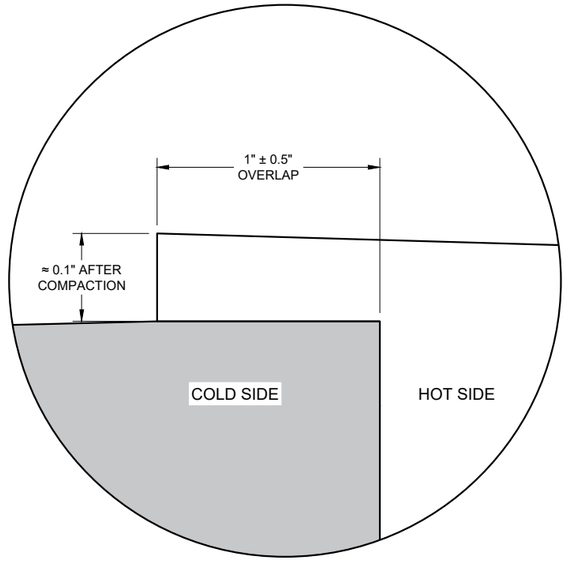
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

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SDD 13C19 - 03

SDD 13C19 - 03

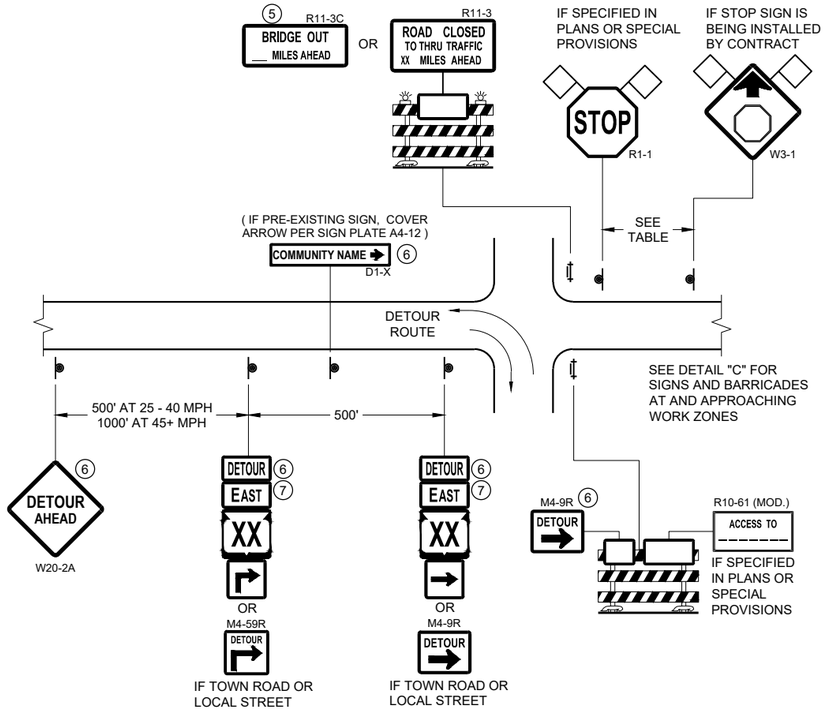
HMA LONGITUDINAL JOINTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020
DATE

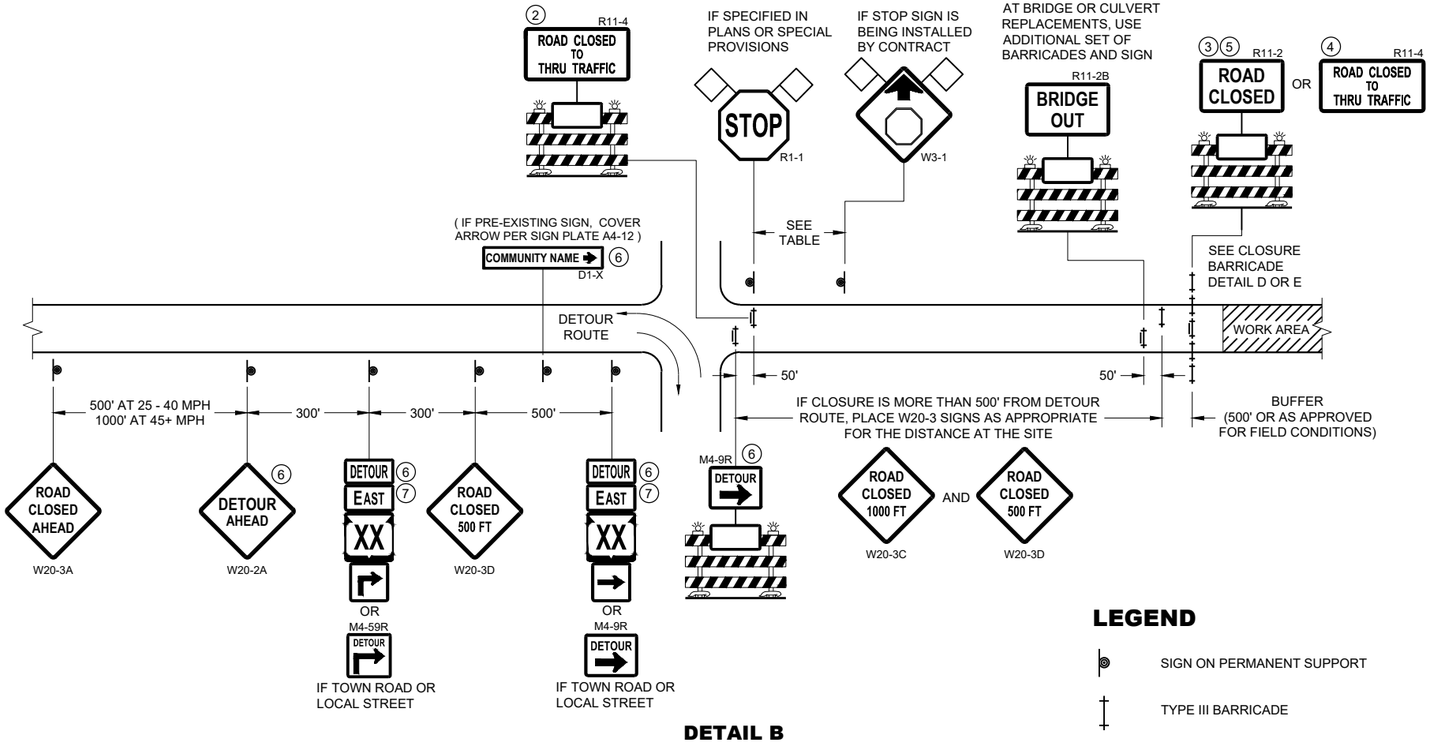
/S/ Steven Hefel
HMA PAVEMENT ENGIN

FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

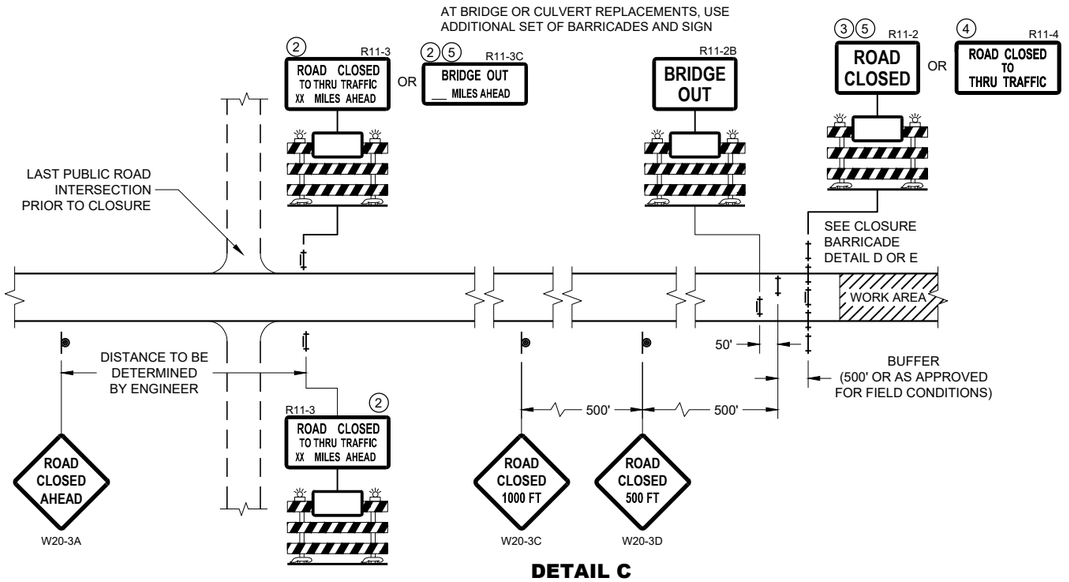


DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- DETOUR — M4 - 8
- EAST — M3 - X
- XX — M1 - 4 OR XX — M1 - 6 OR COUNTY X — M1 - 5A
- M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6

SDD 15C02 - 09a

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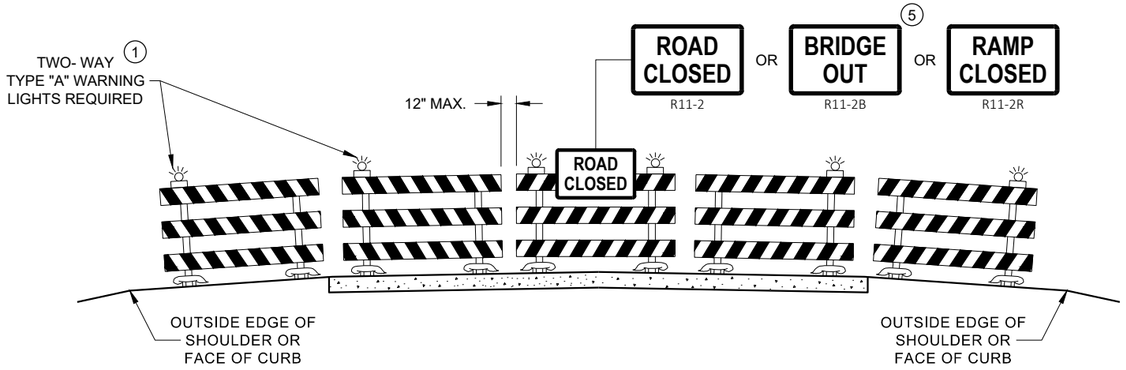
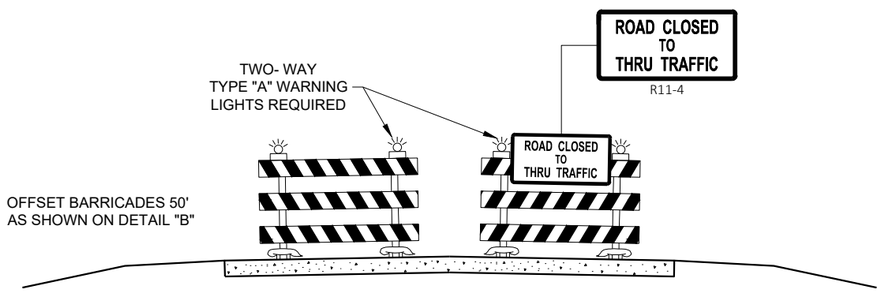
SDD 15C02 - 09a



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
May 2023
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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SDD 15C02 - 09b

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SDD 15C02 - 09b

GENERAL NOTES

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

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

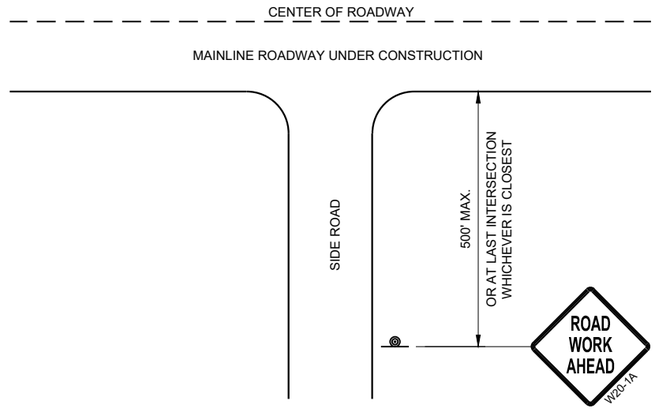
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

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

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

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

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



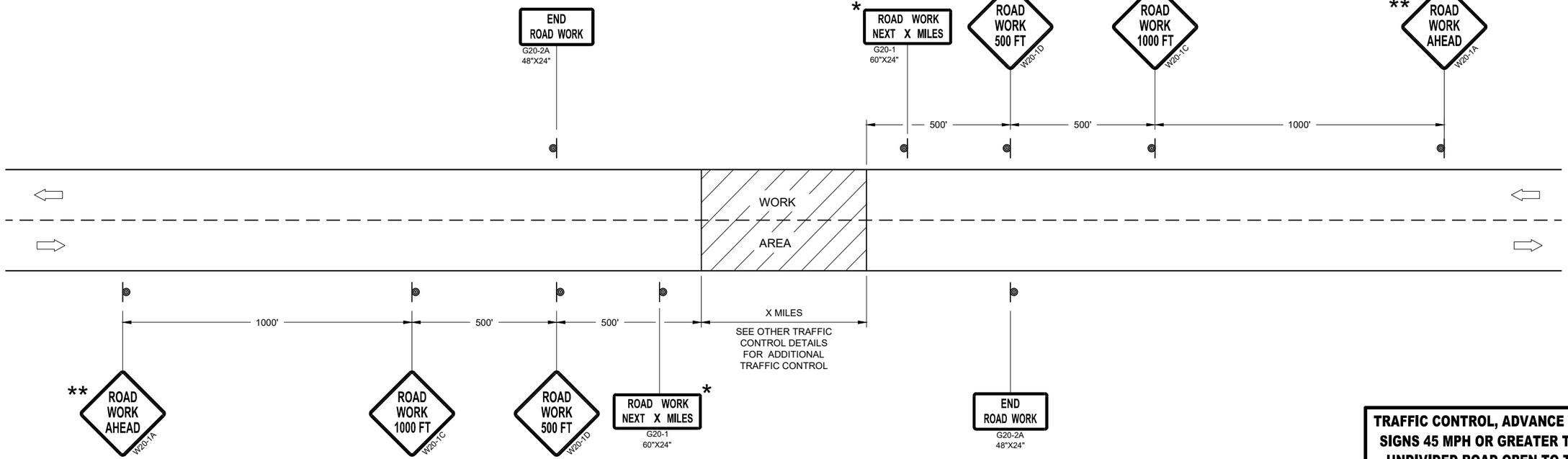
TYPICAL SIDE ROAD APPROACH WARNING SIGN DETAIL

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

WORK AREA



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

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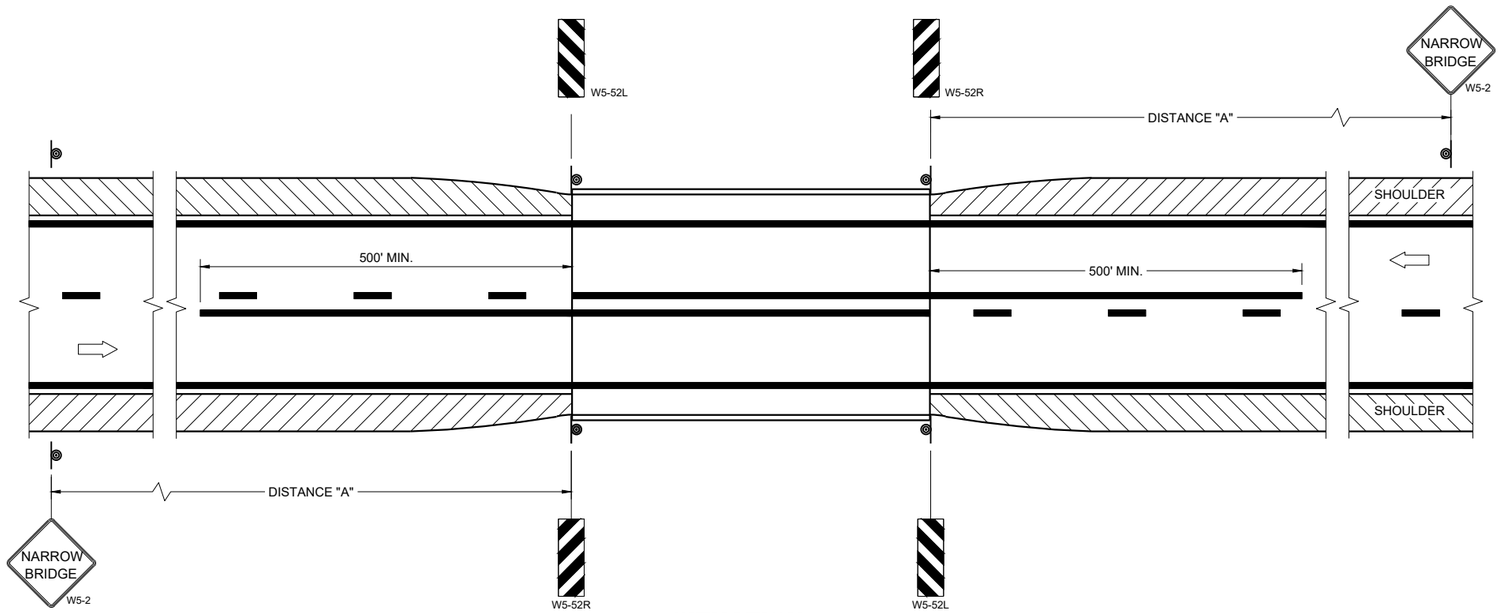
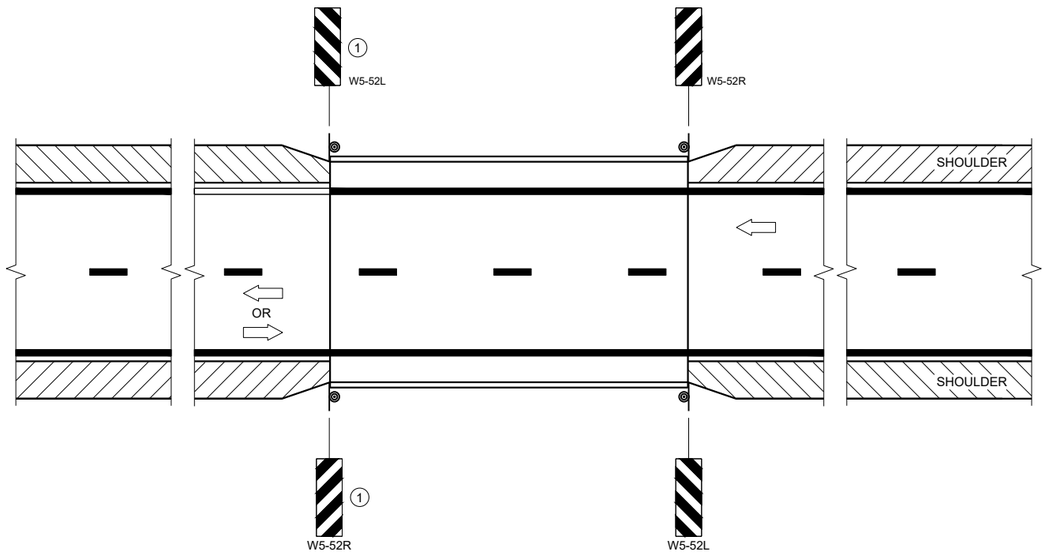
SDD 15C04 - 05



SITUATION 1

WARRANTING CRITERIA:
BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



SITUATION 2

WARRANTING CRITERIA:
1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET

GENERAL NOTES

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

LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

(1) OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6
SDD 15C06-12

GENERAL NOTES

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

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

(2) MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

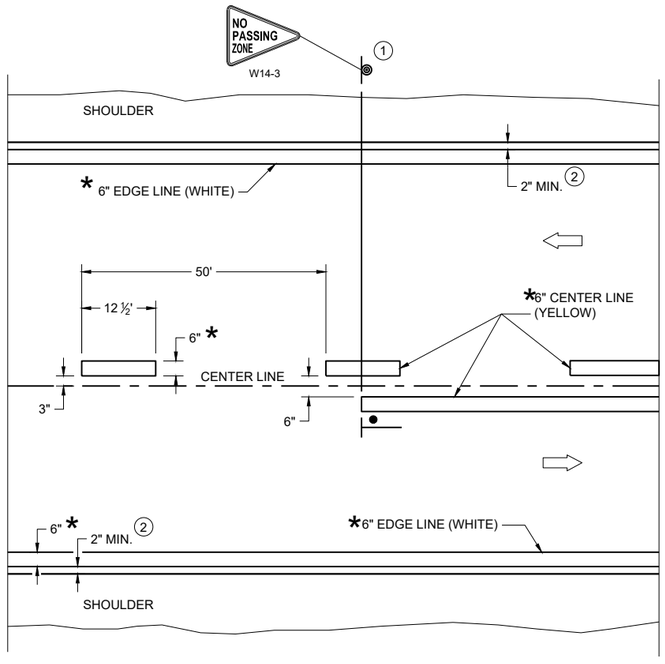
LEGEND

"T" MARKING

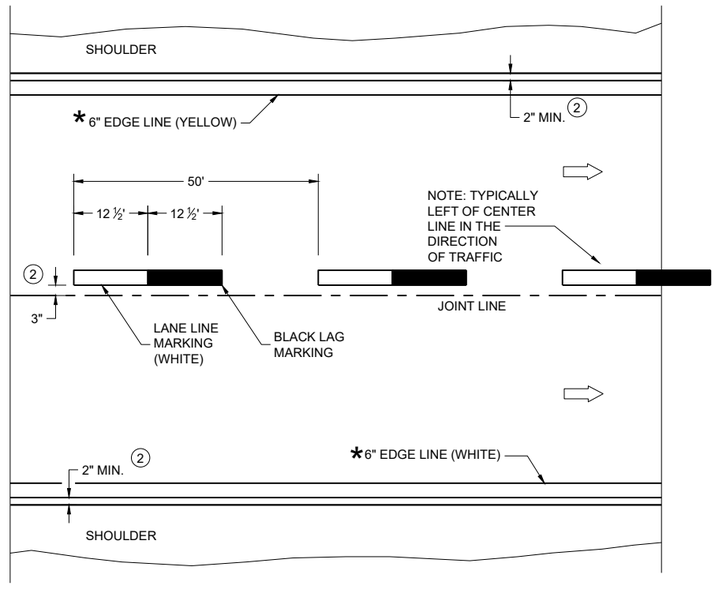
SIGN ON PERMANENT SUPPORT

DIRECTION OF TRAFFIC

*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE

/S/ Jeannie Silver
Statewide Pavement Marking Engineer

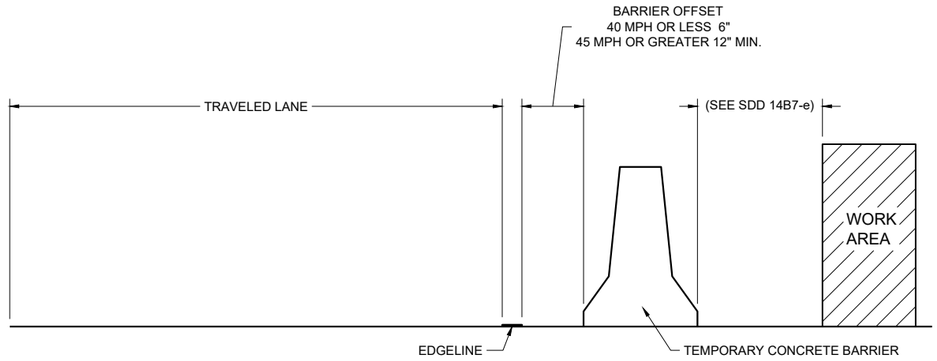
FHWA

6

SDD 15C08-24a

6

SDD 15C08-24a



TEMPORARY BARRIER OFFSET FROM EDGELINE

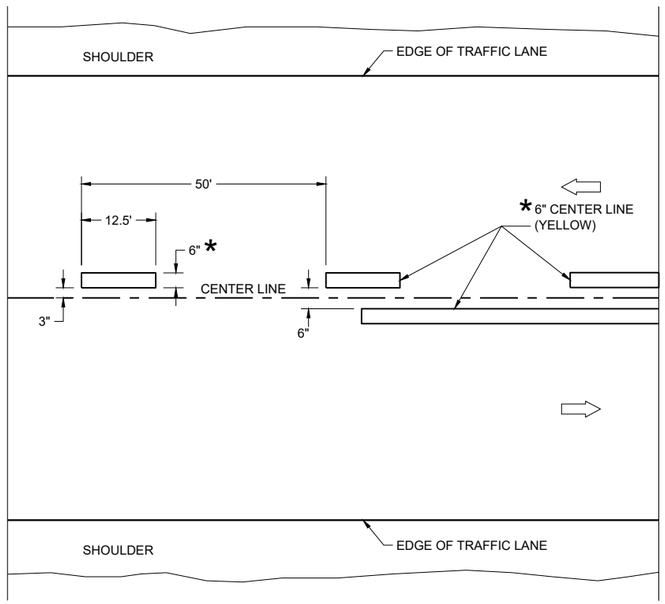
GENERAL NOTES

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

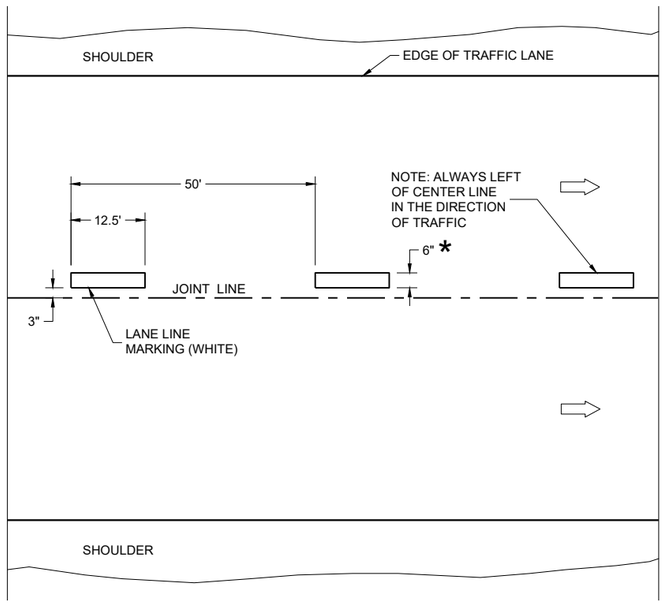
LEGEND

⇨ DIRECTION OF TRAFFIC

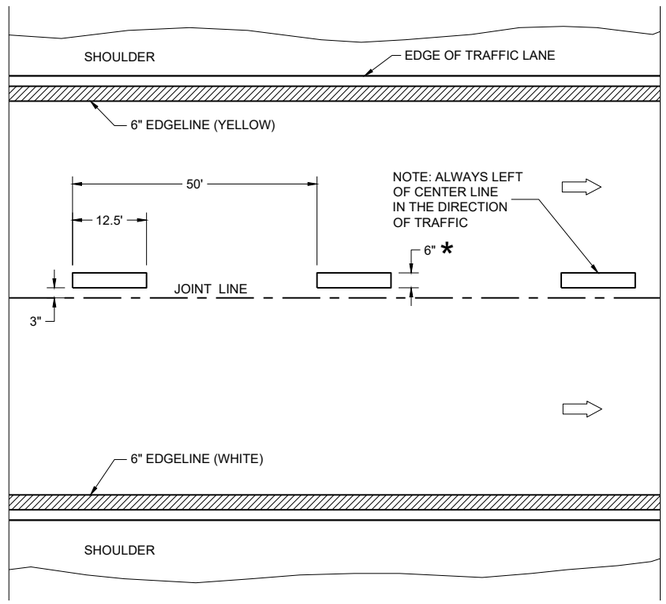
*CONFIRM MARKING LINE WIDTH WITH THE MISCELLANEOUS QUANTITIES



TWO WAY TRAFFIC



ONE WAY TRAFFIC



FREEWAYS AND EXPRESSWAYS

TEMPORARY PAVEMENT MARKING

TEMPORARY LONGITUDINAL PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2024
DATE
/S/ Jeannie Silver
Statewide Pavement Marking Engineer

FHWA

6

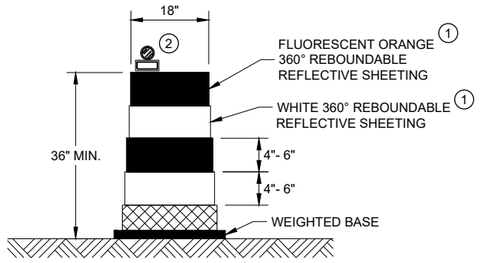
SDD 15C08-24b

6

SDD 15C08-24b

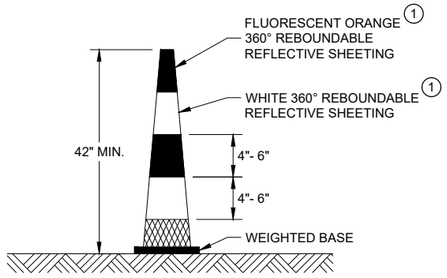
GENERAL NOTES

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.



DRUM

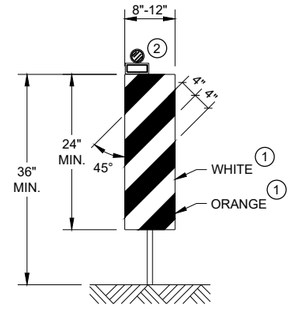
BALLAST WIDTHS
RANGE FROM 24"-36"



42" CONE

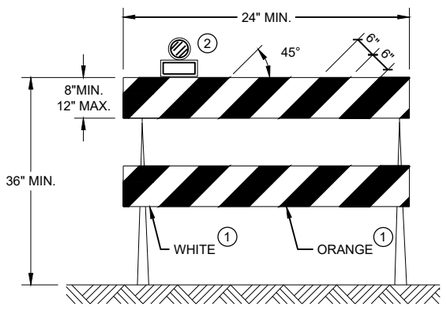
DO NOT USE IN TAPERS
½ SPACING OF DRUMS

BALLAST WIDTHS
RANGE FROM 14"-20"



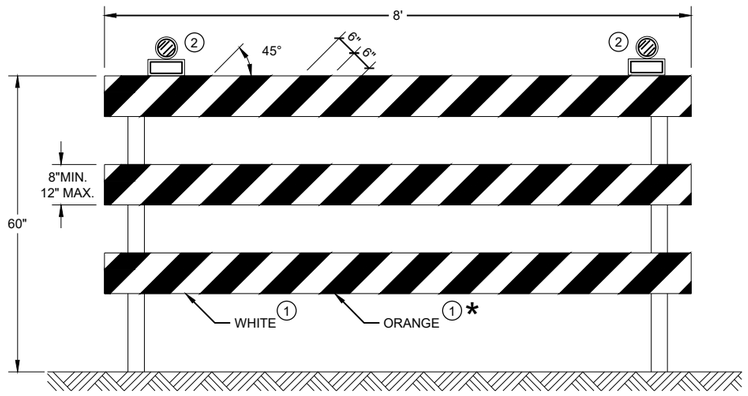
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15C11 - 10b
SDD 15C11 - 10b

LEGEND

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

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

(1) FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

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

TEMPORARY PORTABLE RUMBLE STRIPS

UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

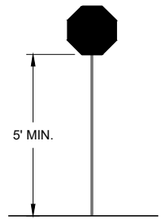
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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



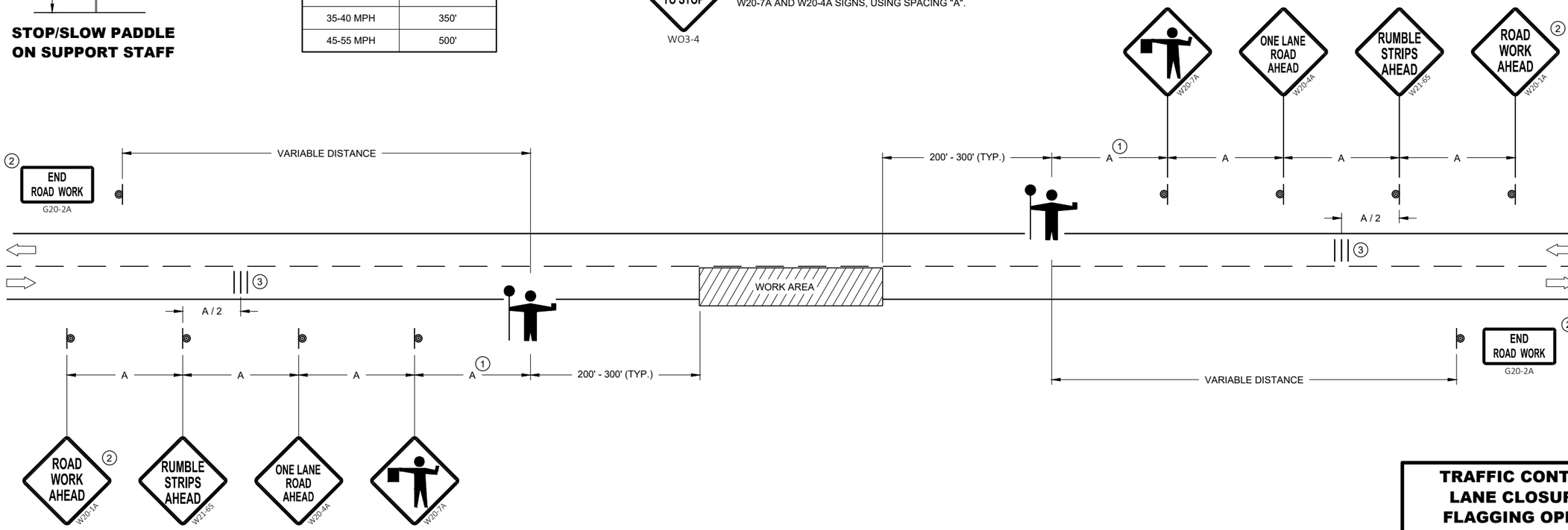
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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

WO3-4

USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6
SDD 15C12 - 09a

GENERAL NOTES

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL CONE 42-INCH

TRAFFIC CONTROL DRUM

TEMPORARY PORTABLE RUMBLE STRIP ARRAY

DIRECTION OF TRAFFIC

WORK AREA

AFAD — AUTOMATED FLAGGER ASSISTANCE DEVICE (AFAD)

GENERAL NOTES

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

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

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

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

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

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

FLAGGING

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

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

(1) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

(2) IF FLAGGERS ARE PHYSICALLY NEEDED TO FLAG, REPLACE WO3-4 SIGNS WITH W20-7A SIGNS.

TEMPORARY PORTABLE RUMBLE STRIPS

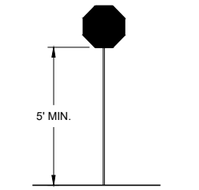
UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.

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

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

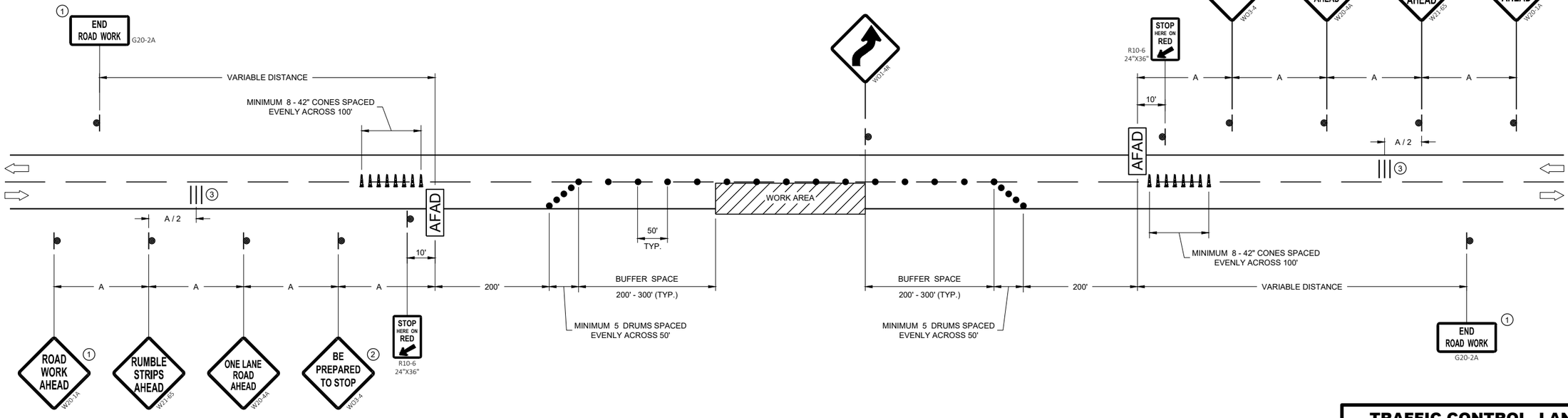
(3) EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSELY AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER.



STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



TRAFFIC CONTROL, LANE CLOSURE WITH AUTOMATED FLAGGER ASSISTANCE DEVICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

SDD 15C12 - 09b

SDD 15C12 - 09b

LEGEND

SIGN ON PERMANENT SUPPORT

TRAFFIC CONTROL DRUM

DIRECTION OF TRAFFIC

WORK ZONE

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY THE REGIONAL TRAFFIC UNIT.

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

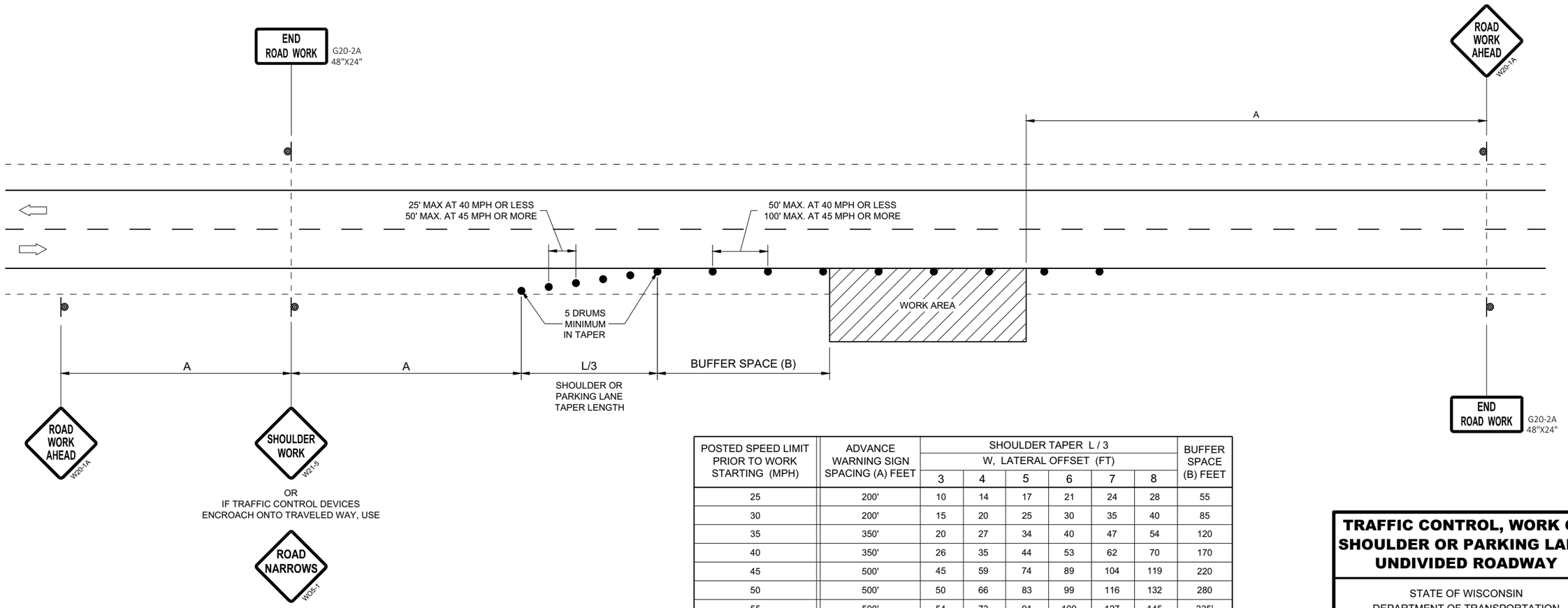
ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH THE TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

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

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

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

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



POSTED SPEED LIMIT PRIOR TO WORK STARTING (MPH)	ADVANCE WARNING SIGN SPACING (A) FEET	SHOULDER TAPER L / 3 W, LATERAL OFFSET (FT)						BUFFER SPACE (B) FEET
		3	4	5	6	7	8	
25	200'	10	14	17	21	24	28	55
30	200'	15	20	25	30	35	40	85
35	350'	20	27	34	40	47	54	120
40	350'	26	35	44	53	62	70	170
45	500'	45	59	74	89	104	119	220
50	500'	50	66	83	99	116	132	280
55	500'	54	73	91	109	127	145	335'

TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2020
DATE

/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

SDD 15D28 - 04

SDD 15D28 - 04

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TEMPORARY DELINEATOR (WHITE, SINGLE DELINEATOR)
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- TEMPORARY RAISED PAVEMENT MARKERS (TWO WAY YELLOW)
- TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT
- DIRECTION OF TRAFFIC
- REMOVE PAVEMENT MARKINGS
- WORK AREA

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

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

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

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' DESIRABLE) DISTANCE TO EXISTING SIGNS.

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

EQUIPMENT, VEHICLES, OR MATERIAL SHOULD NOT BE STORED IN BUFFER SPACE.

(1) IF ADVISORY SPEED IS GREATER THAN 30 MPH, USE THE WO1-4 SIGN. IF ADVISORY SPEED IS 30 MPH OR LESS, USE THE WO1-3 SIGN.

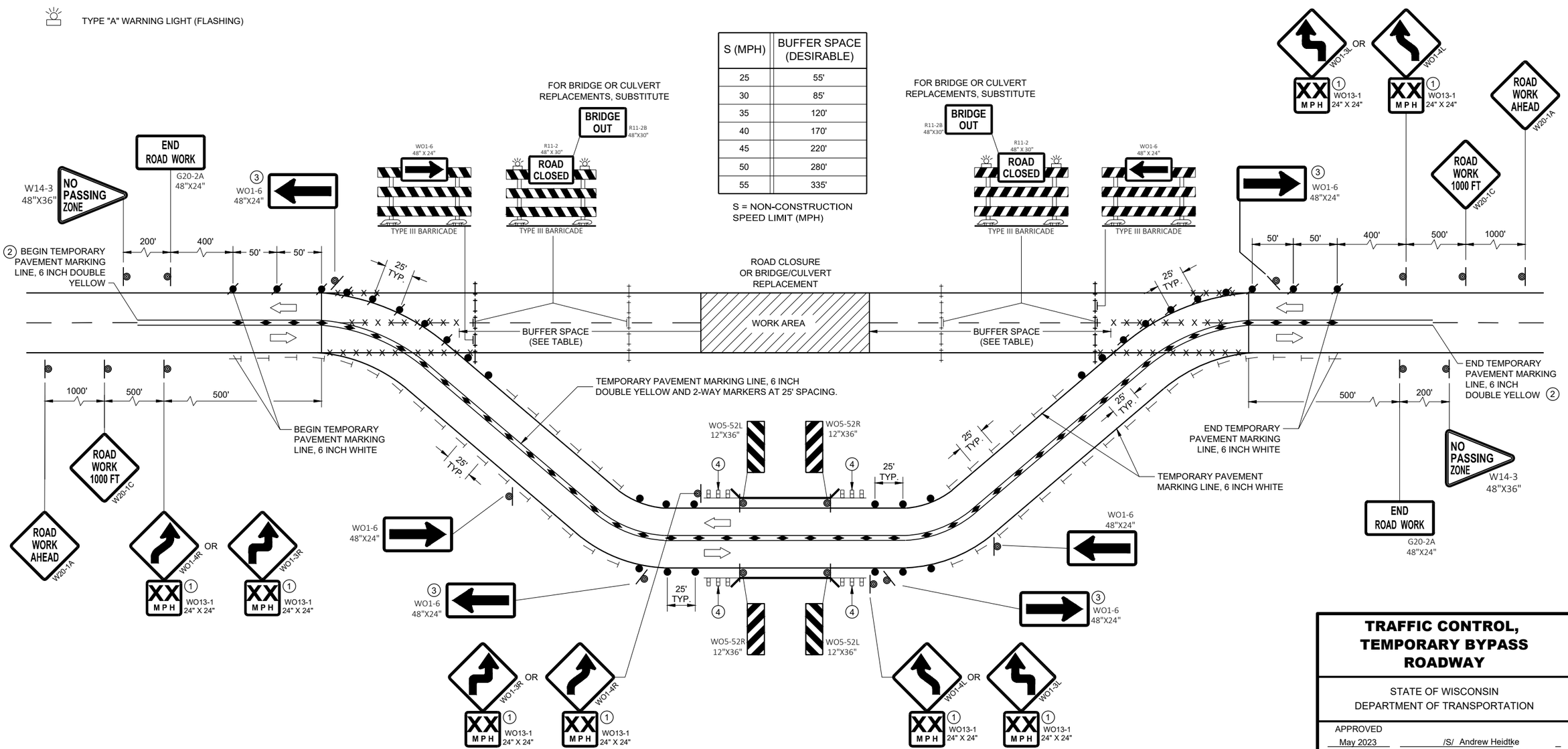
(2) WHEN THE DISTANCE TO / FROM THE NEXT CLOSEST NO-PASSING ZONE IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES AS INDICATED IN THE SPECIFICATIONS, THE TWO ZONES SHALL BE CONNECTED.

(3) OMIT THESE W01-6 SIGNS IF THE ADVISORY SPEED OF THE CURVE IS GREATER THAN 30 MPH.

(4) TEMPORARY STEEL PLATE BEAM GUARD AND END TREATMENT WHEN INCLUDED IN THE CONTRACT. FOR LAYOUT, SEE DETAILS ELSEWHERE IN THE PLAN.

S (MPH)	BUFFER SPACE (DESIRABLE)
25	55'
30	85'
35	120'
40	170'
45	220'
50	280'
55	335'

S = NON-CONSTRUCTION SPEED LIMIT (MPH)



TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023
DATE

/S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

6
SDD 15D31-05

GENERAL NOTES

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

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

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

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

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

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

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

(1) PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.

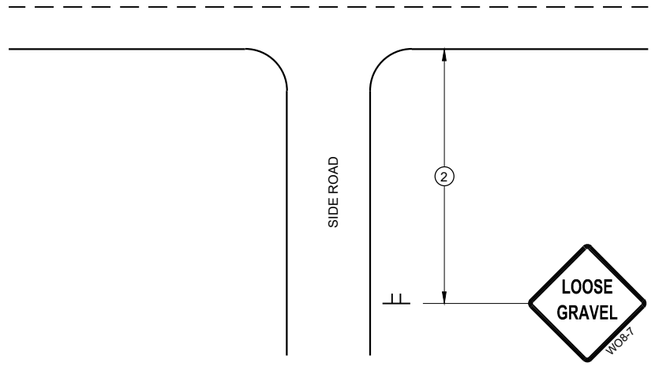
(2) PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.

(3) ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

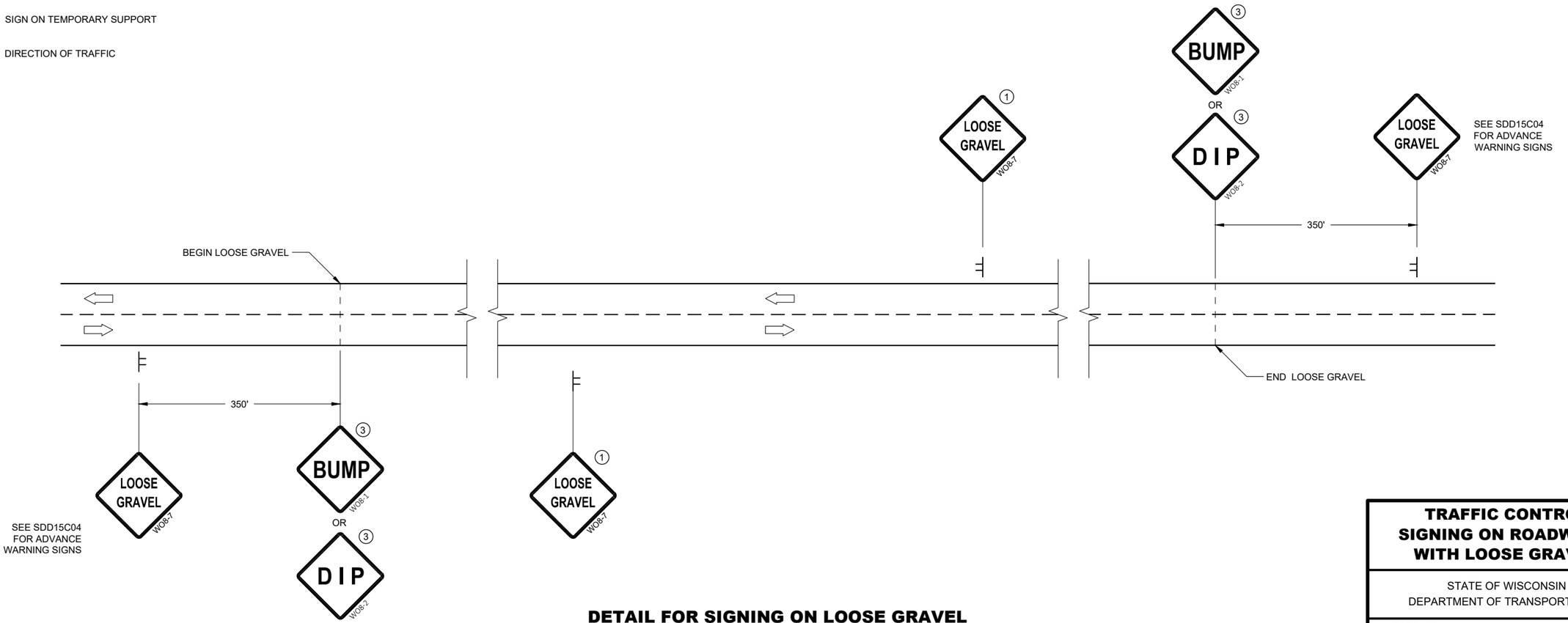
LEGEND

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC



TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2021
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE

FHWA

6

SDD 15D45 - 03

LEGEND

V1 WORK VEHICLE

V2 SHADOW VEHICLE

TRUCK MOUNTED ATTENUATOR (TMA)

FLASHING ARROW PANEL (CAUTION)

WORK AREA

DIRECTION OF TRAFFIC

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

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

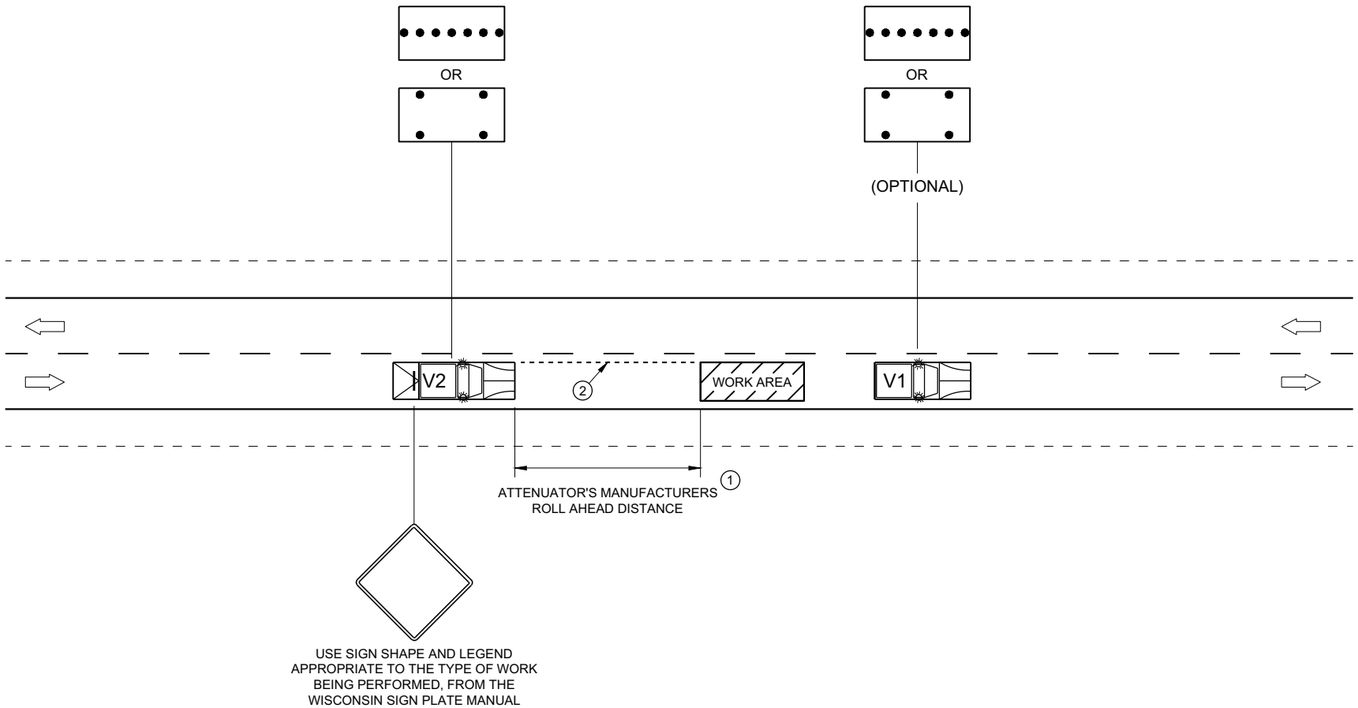
ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

(1) DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

(2) ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

February 2021
DATE

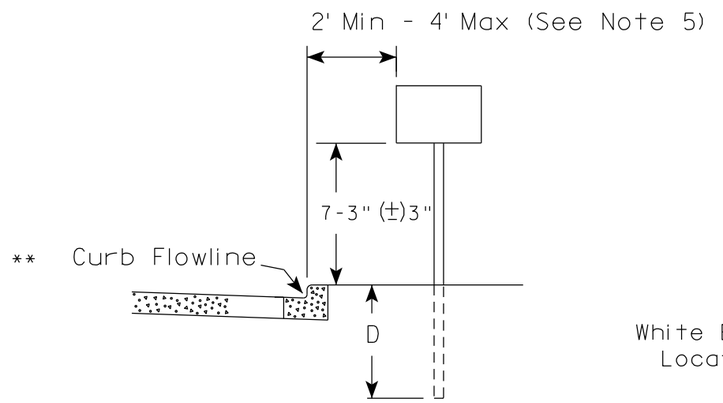
/S/ Andrew Heidtke
STATEWIDE WORK ZONE T SAFETY ENGINEER

FHWA

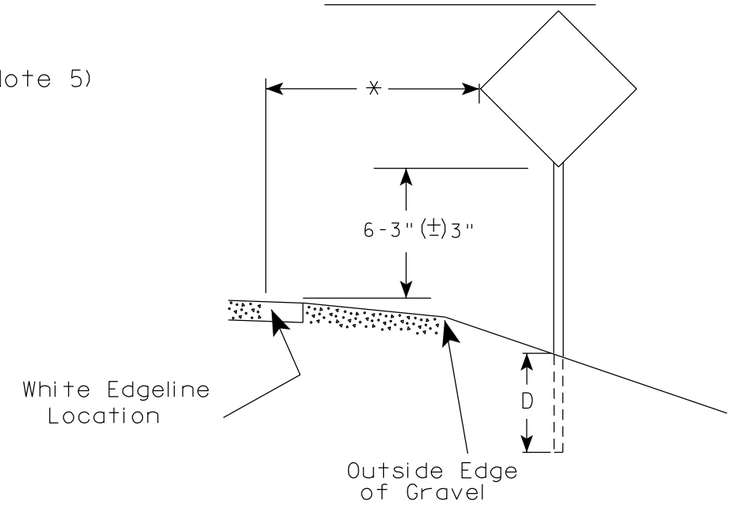
6

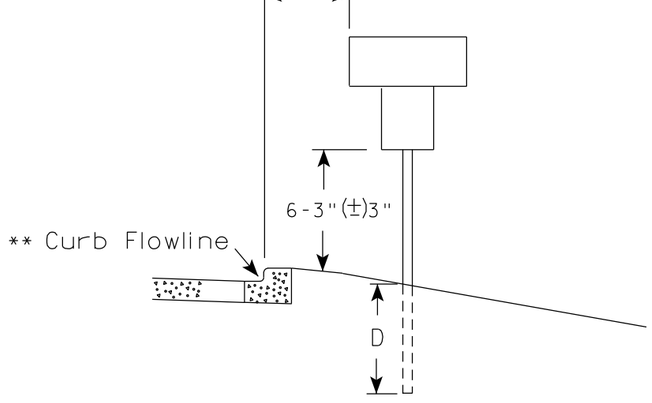
SDD 15D51 - 01

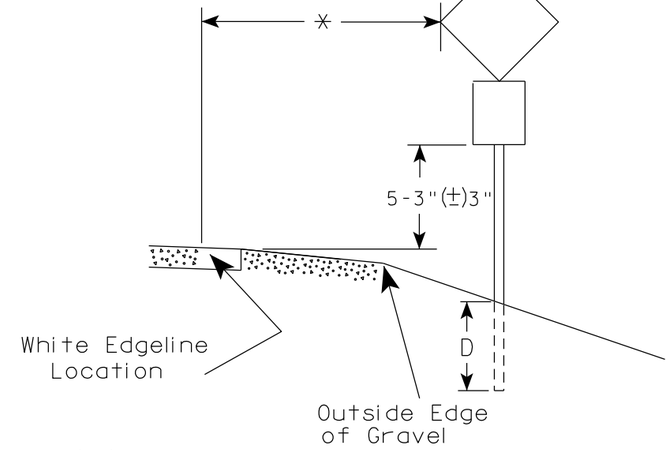
URBAN AREA



RURAL AREA (See Note 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. 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.

GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

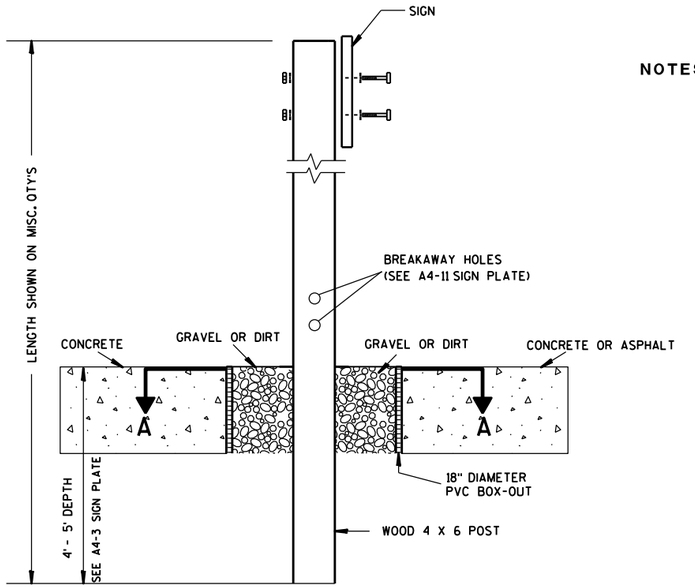
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-3.23

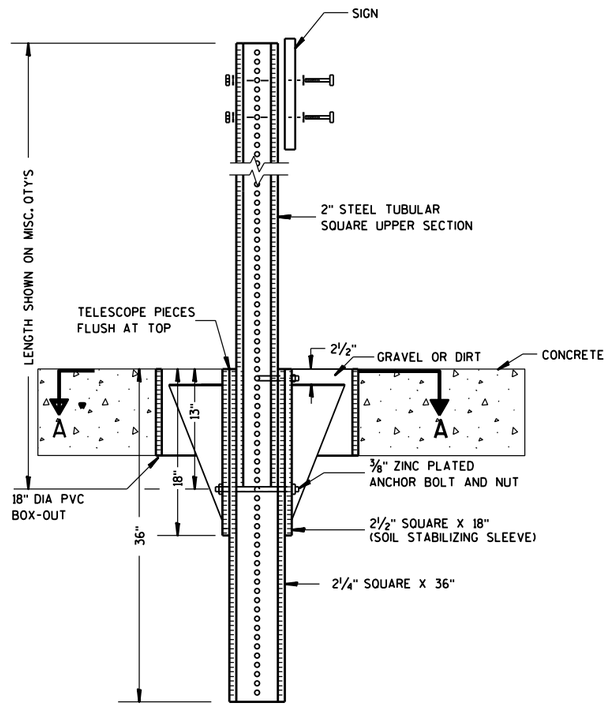
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 34	E



ELEVATION VIEW

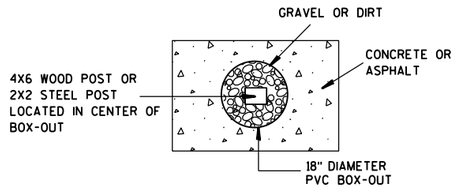
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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

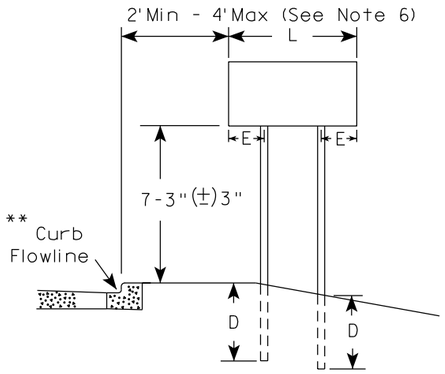
APPROVED Matthew R Rauch
for State Traffic Engineer

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

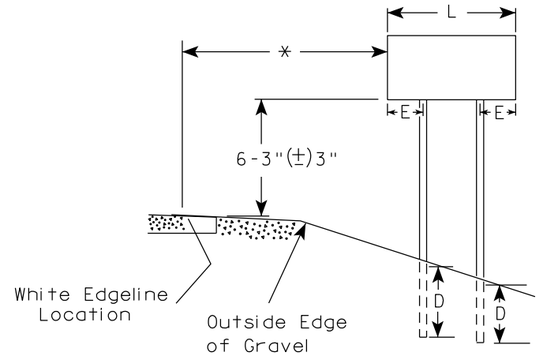
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

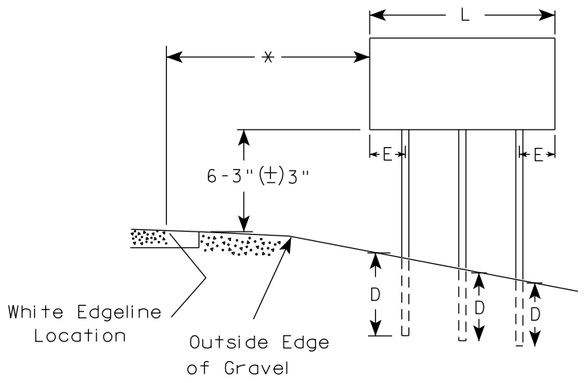
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

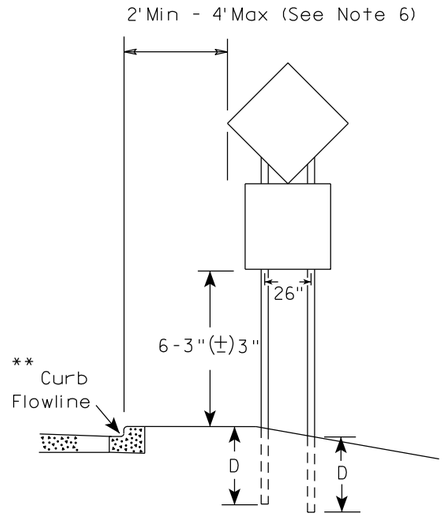
URBAN AREA



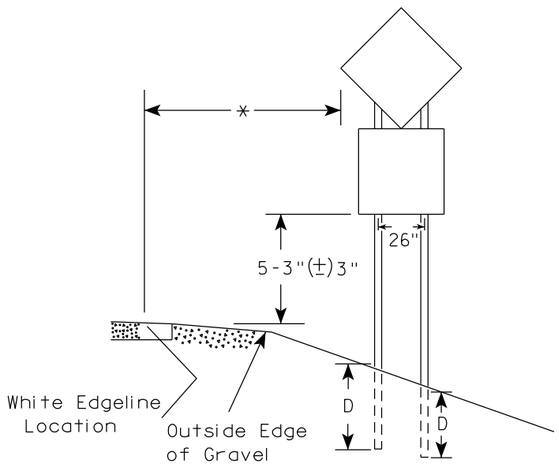
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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" (±) 3" or 6'-3" (±) 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" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 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.

POST EMBEDMENT DEPTH

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

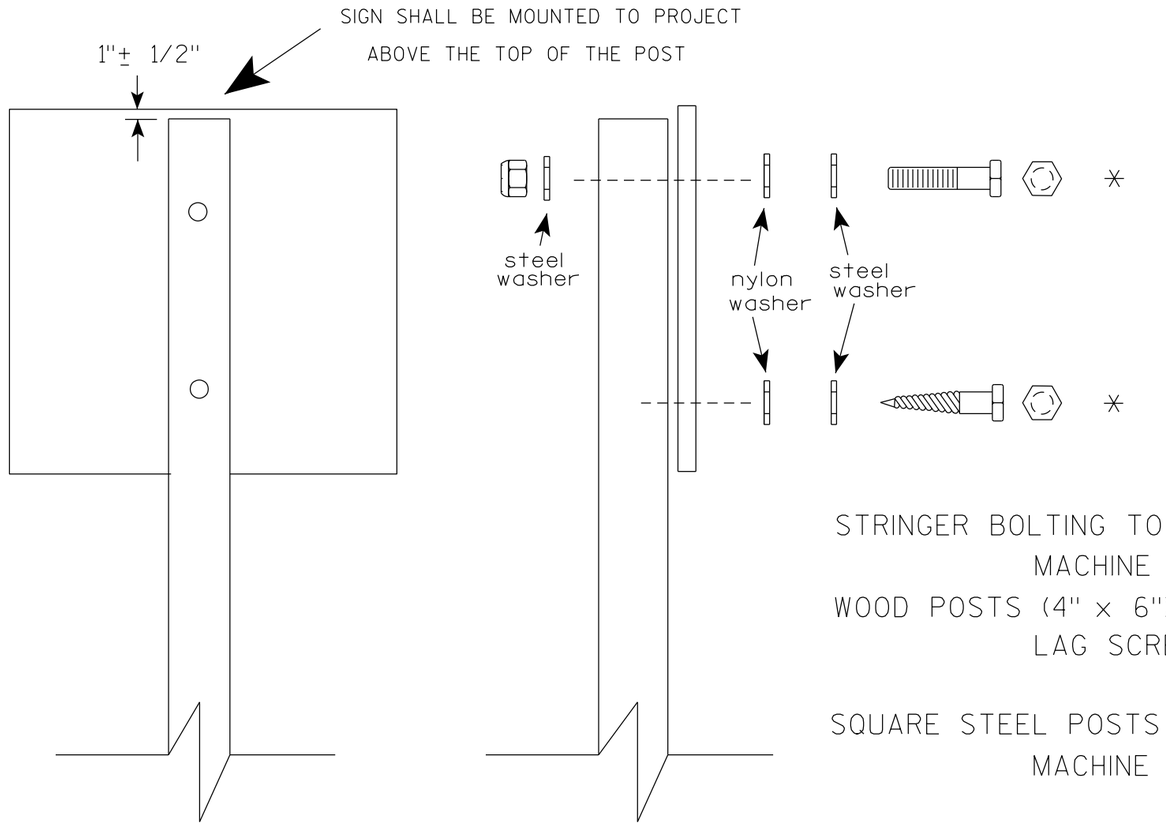
TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 36	E



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

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3

b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (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

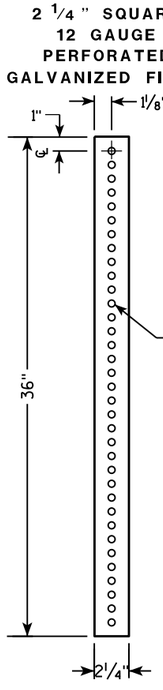
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

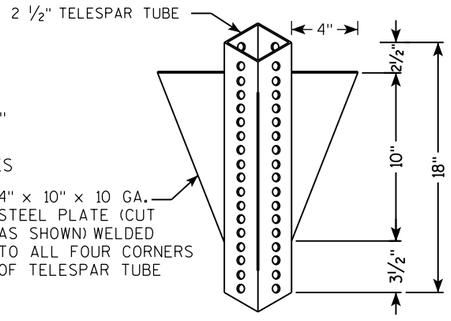
DATE 4/1/2020 PLATE NO. A4-8.9

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

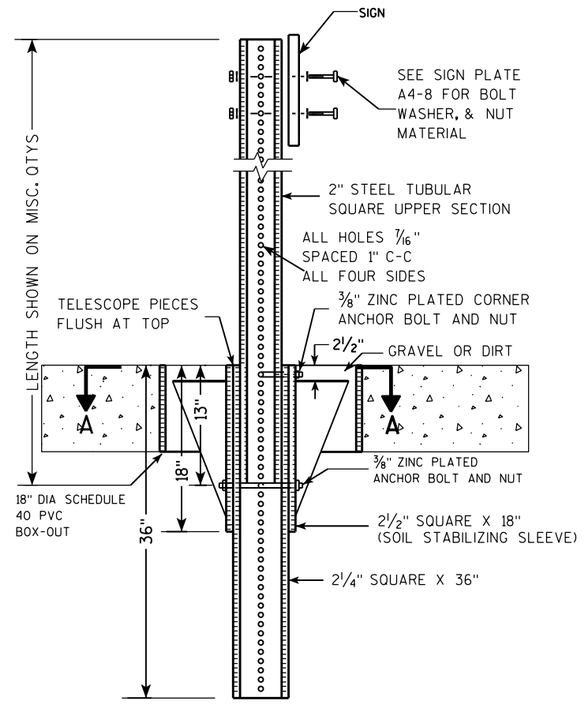
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



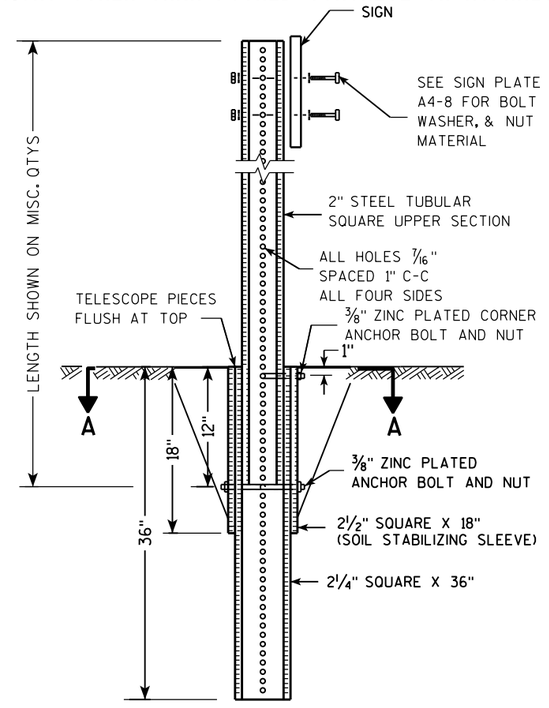
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

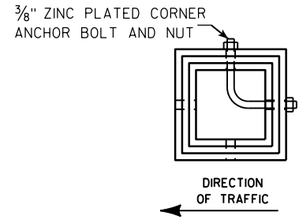


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

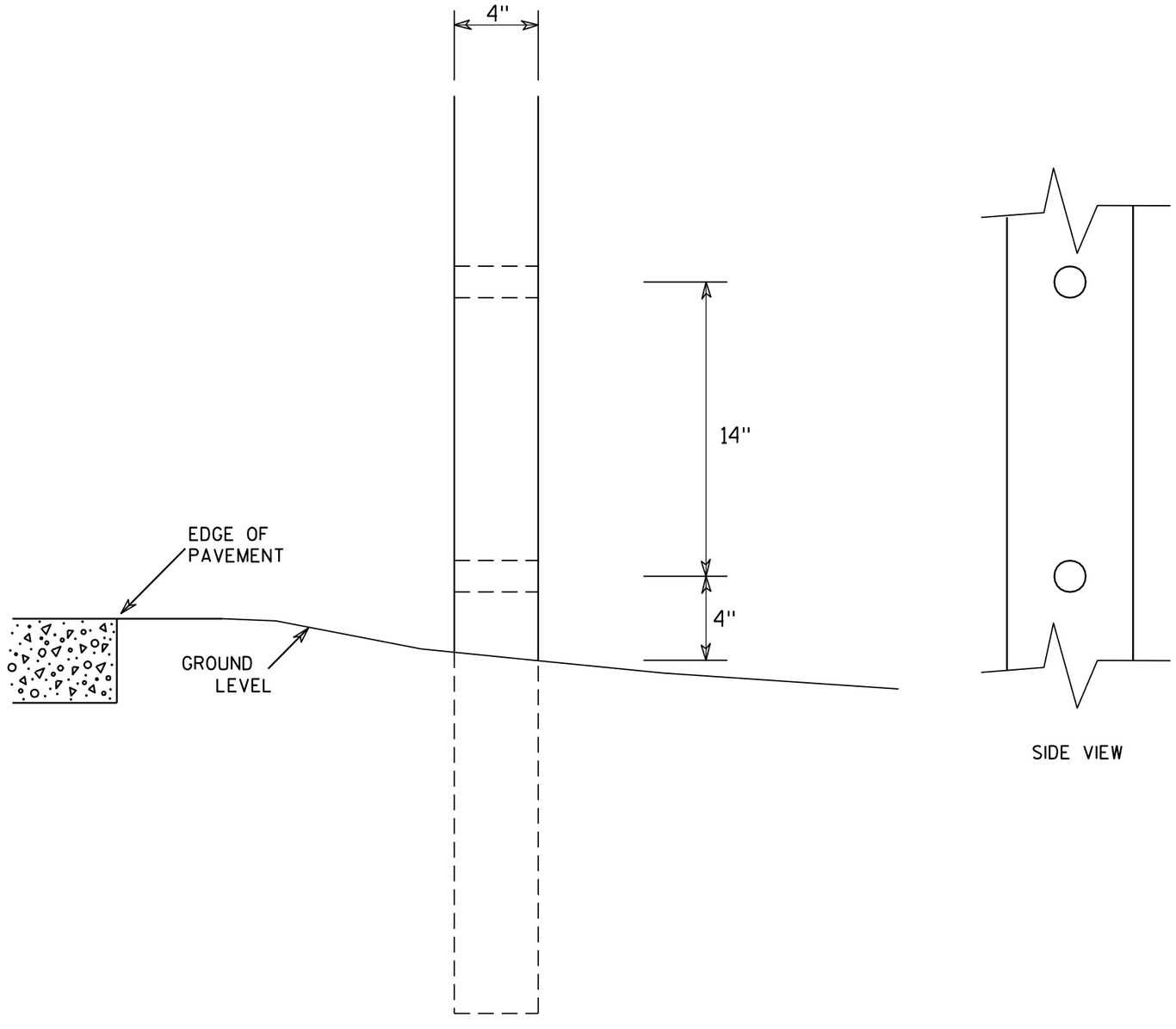
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A49.DGN PLOT DATE : 05-FEB-2015 17:09 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000
WISDOT/CADDS SHEET 42



SIDE VIEW

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

7

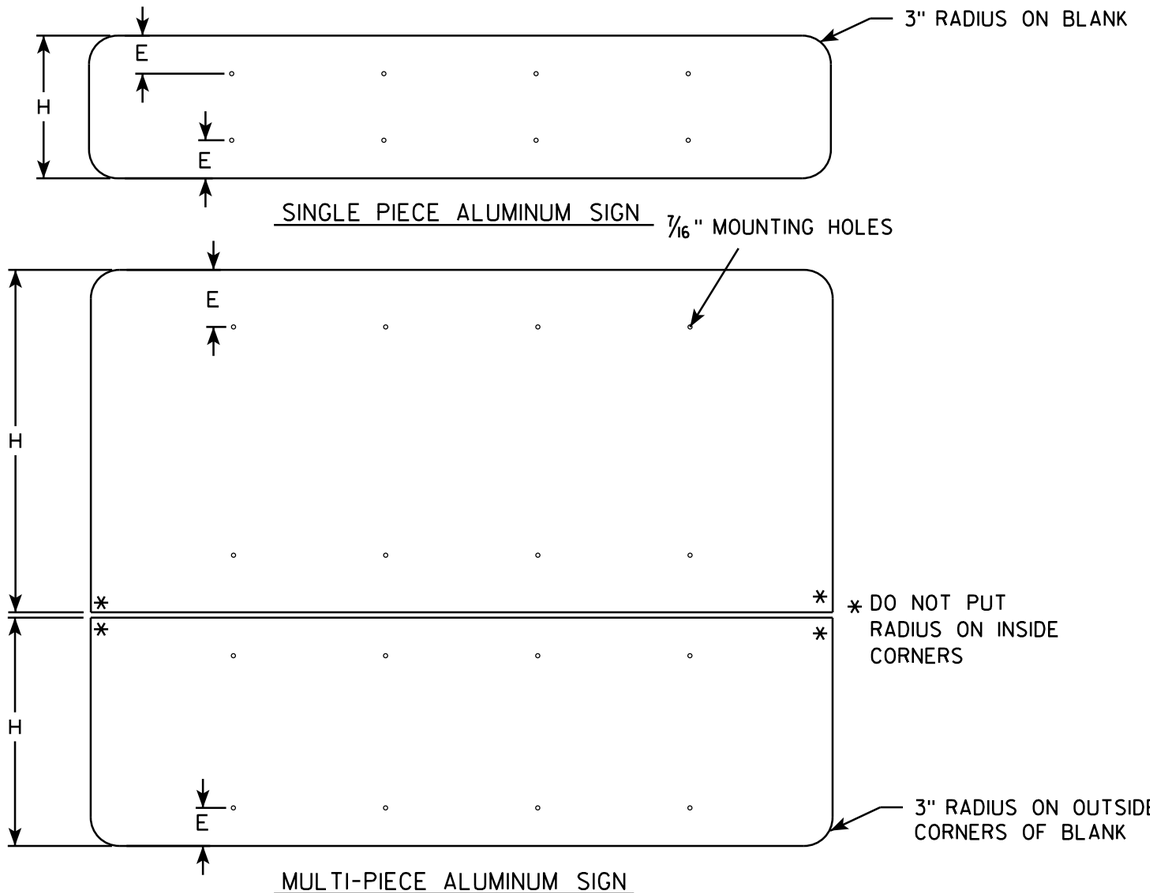
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

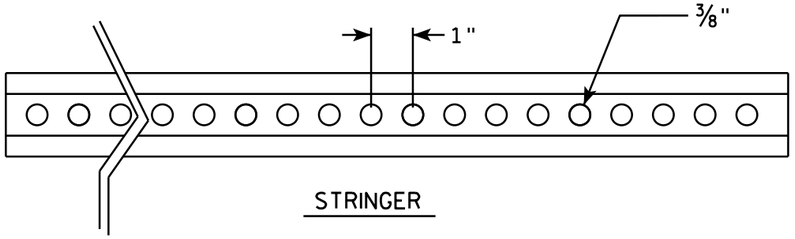
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 39	E



GENERAL NOTES

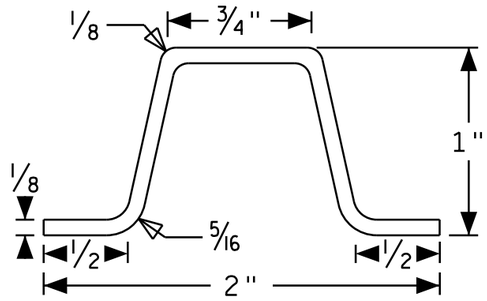
- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER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

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES
78"	72"	2	16"	15" 31" 47" 63"
84"	72"	2	17"	16½" 33½" 50½" 67½"
90"	72"	2	18"	18" 36" 54" 72"
96"	90"	2	19"	19½" 38½" 57½" 76½"
102"	90"	2	20"	21" 41" 61" 81"
108"	90"	2	21"	22½" 43½" 64½" 85½"
114"	108"	3	15"	12" 27" 42" 57" 72" 87" 102"
120"	108"	3	16"	12" 28" 44" 60" 76" 92" 108"
126"	108"	3	17"	12" 29" 46" 63" 80" 97" 114"
132"	126"	3	18"	12" 30" 48" 66" 84" 102" 120"
138"	126"	3	19"	12" 31" 50" 69" 88" 107" 126"
144"	126"	3	20"	12" 32" 52" 72" 92" 112" 132"

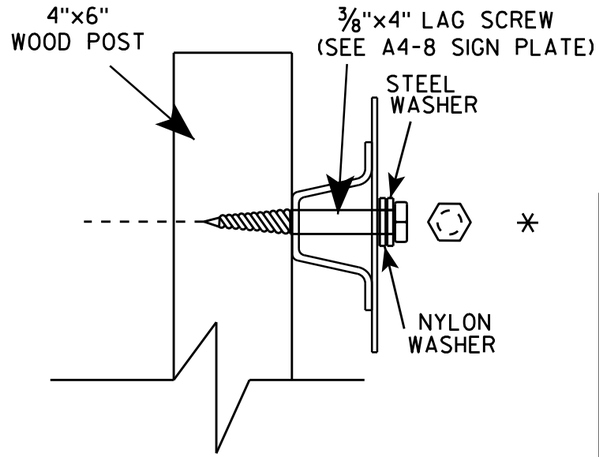


STRINGER

CROSS SECTION VIEW OF CHANNEL



POST MOUNTING



SIGN STRINGER MOUNTING REQUIREMENTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

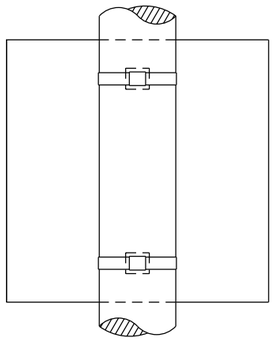
DATE 4/26/16 PLATE NO A4-18.1

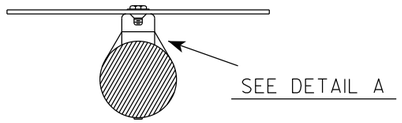
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

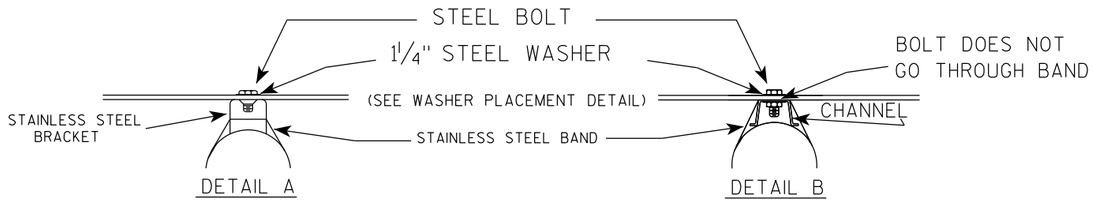
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A418.dgn PLOT DATE : 27-APR-2016 13:56 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 41.805205:1.000000

BANDING

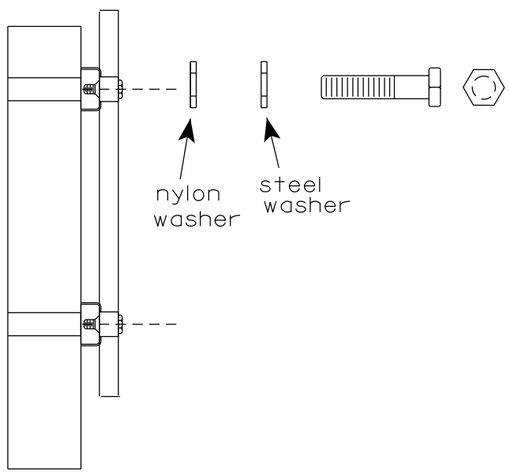
SINGLE SIGN







WASHER PLACEMENT

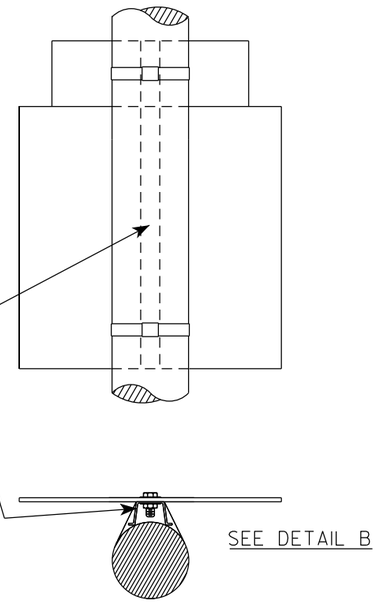


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

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 ¾" 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



STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

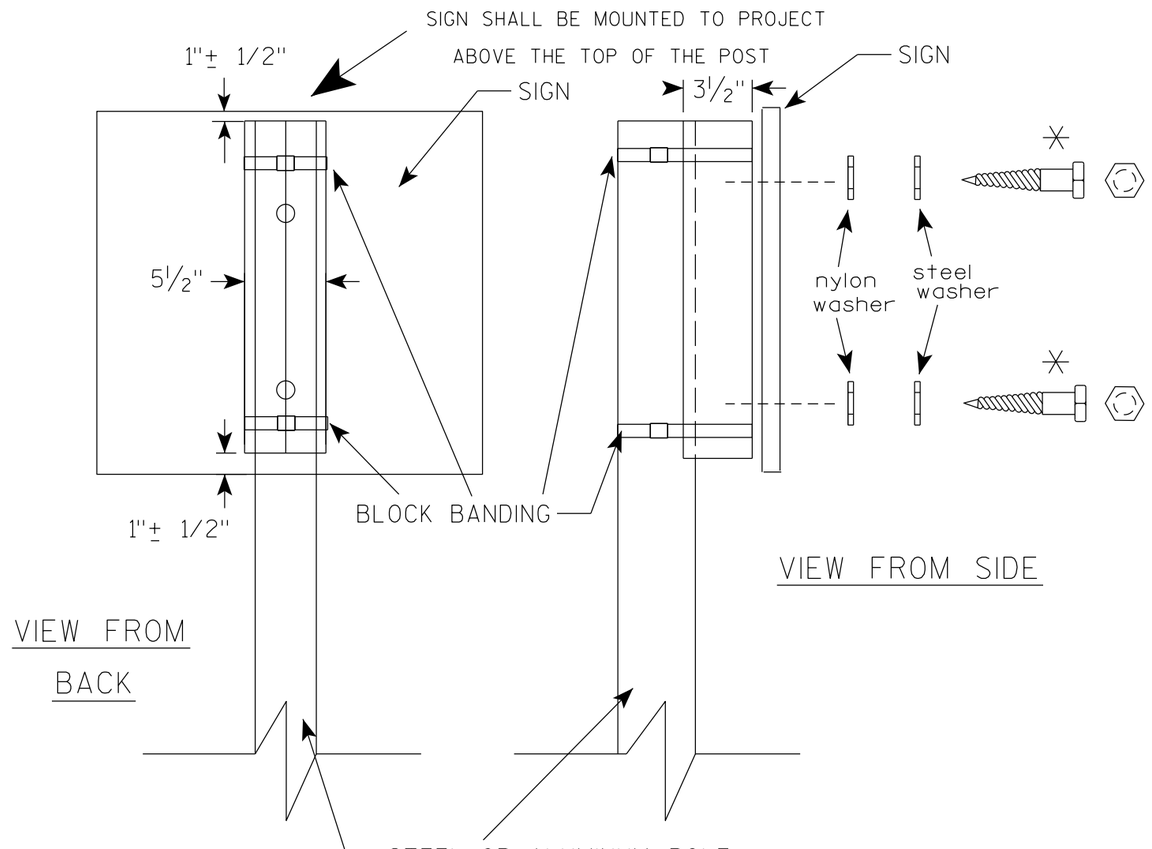
DATE 6/10/19 PLATE NO. A5-9.4

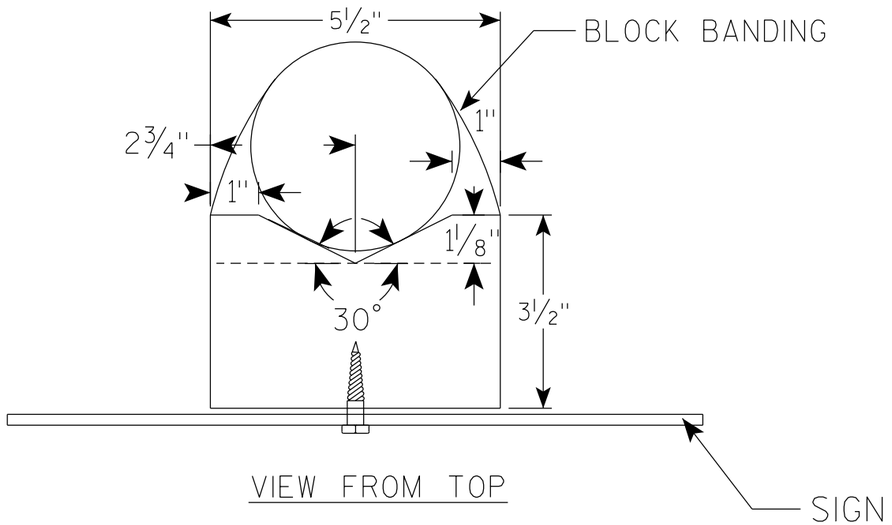
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 41	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A59.dgn PLOT DATE : 10-JUN 2019 4:10 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42

7

7





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, ¾" 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 NORNALLY 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 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

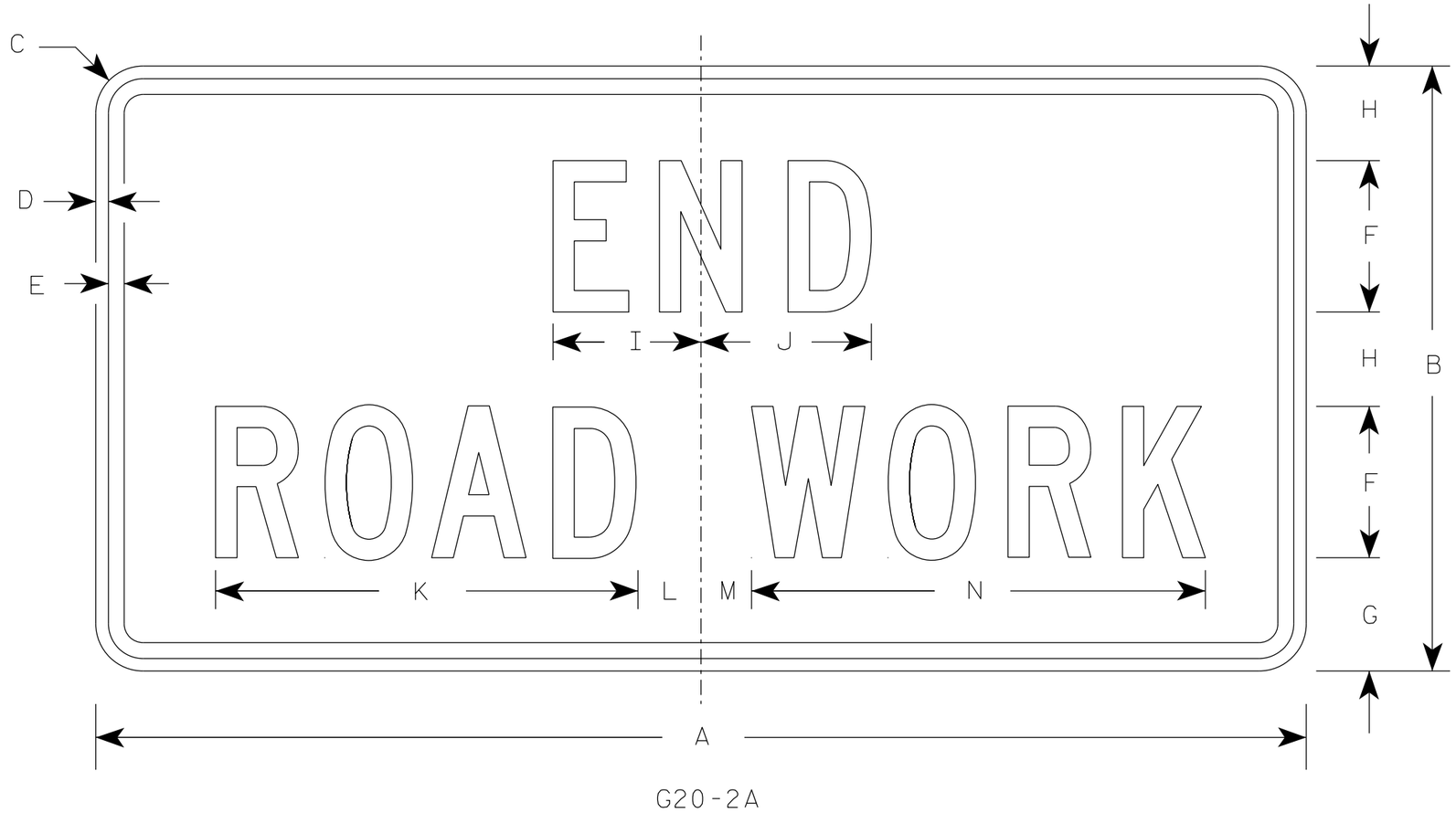
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:

SHEET NO: 42 E



G20-2A

NOTES

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

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

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

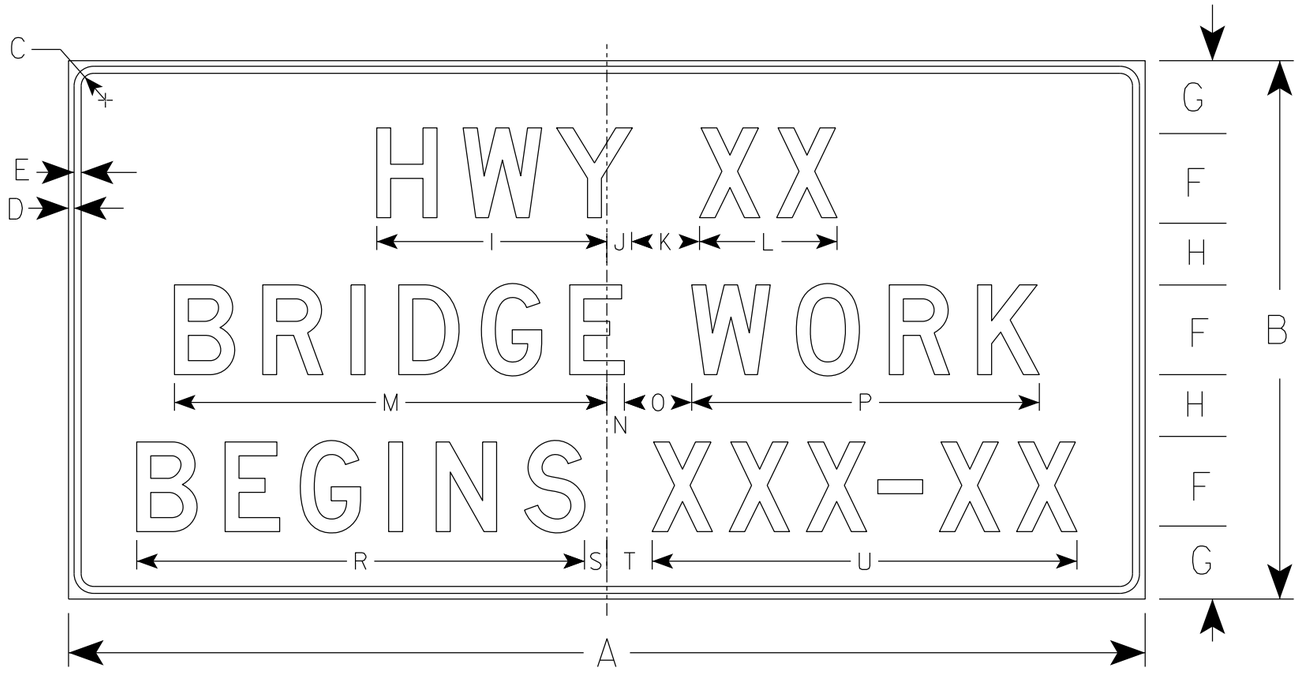
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 43 E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - D
4. Substitute appropriate numeral and adjust spacing to achieve proper balance.



G20-57B

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																											
3	72	36	1 1/8	1/2	5/8	6	5	4	15 5/8	1 5/8	5	9 1/4	29 1/8	7/8	5	23 1/4		29 7/8	1 3/4	3 1/4	28 1/2						18.0
4	96	48	2 1/4	3/4	1	8	6 1/2	5 1/2	20 5/8	2 1/4	6	12 1/4	38 1/2	1 1/2	6	31		39 1/4	2	4	37 7/8						32.0
5																											

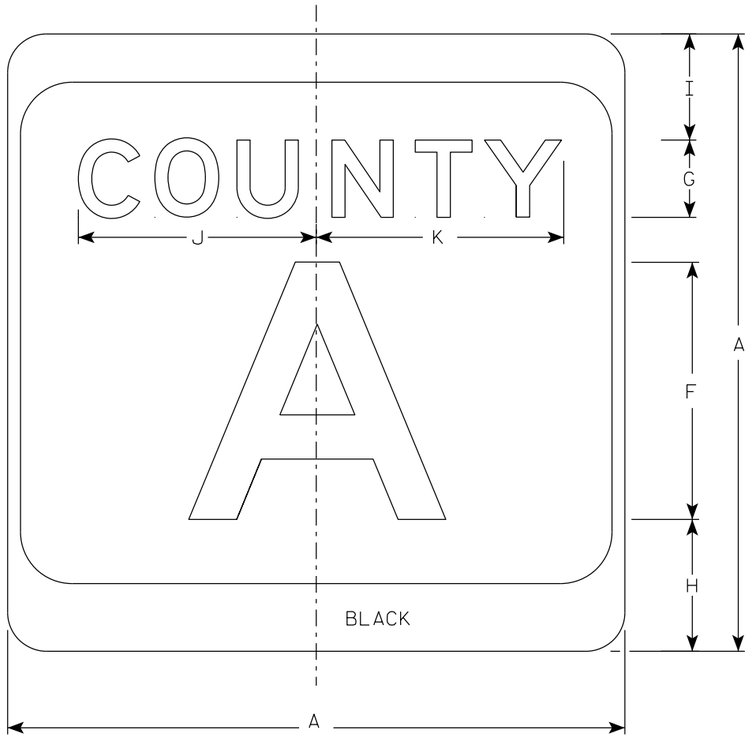
STANDARD SIGN
G20-57B

WISCONSIN DEPT OF TRANSPORTATION

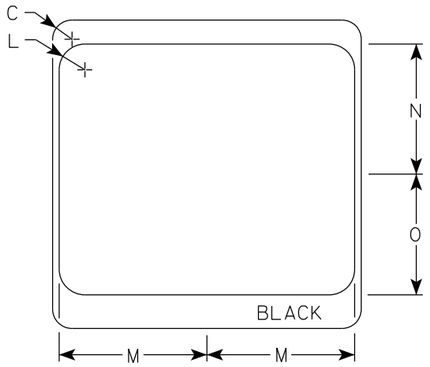
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/22/19 PLATE NO. G20-57B.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 44	E

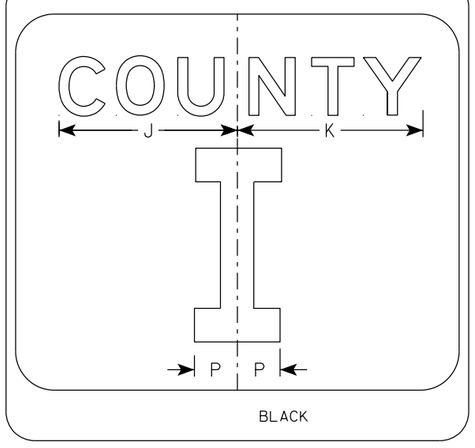


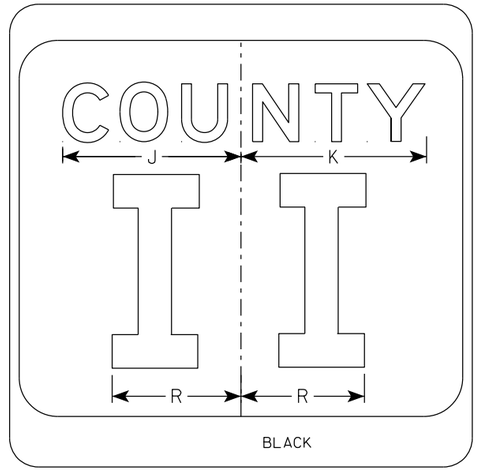
M1-5A



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
   Background - White & Black
   Message - Black
3. Message Series - see Note 4
4. Message Series E for 1 letter.
   Message Series D for 2 letters unless message is too big then Series C.
   Message Series C for 3 letters unless message is too big then Series B.
5. Substitute appropriate letters & optically center to achieve proper balance.





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

CTH MARKER
M1-5A FOR ASSEMBLIES

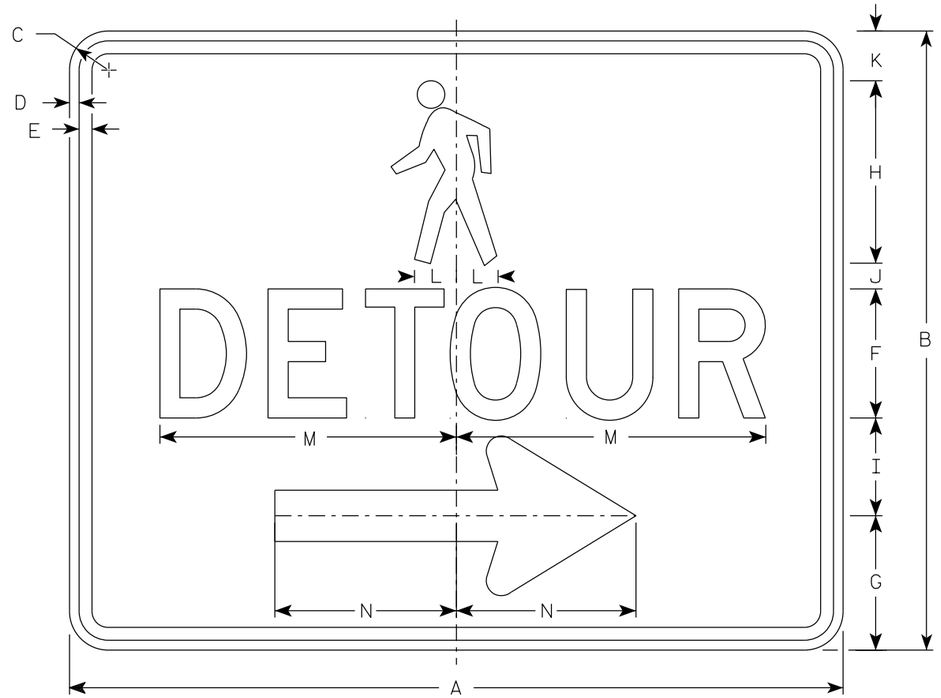
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

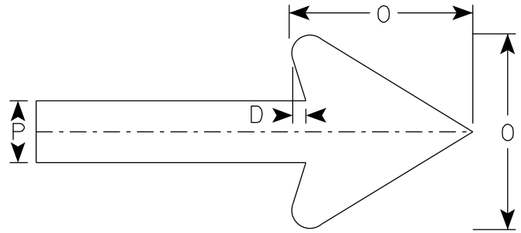
7



M4-9BR

NOTES

1. Sign is Type II-Type F Reflective
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. M4-9BL is the same as M4-9BR except the arrow is reversed.



Arrow Detail

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	24	1 1/2	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.0
2M	30	24	1 1/2	3/8	1/2	5	5 1/4	7 1/8	3 3/4	1	1 1/8	1 5/8	11 3/4	7	6	2											5.0
3																											
4																											
5																											

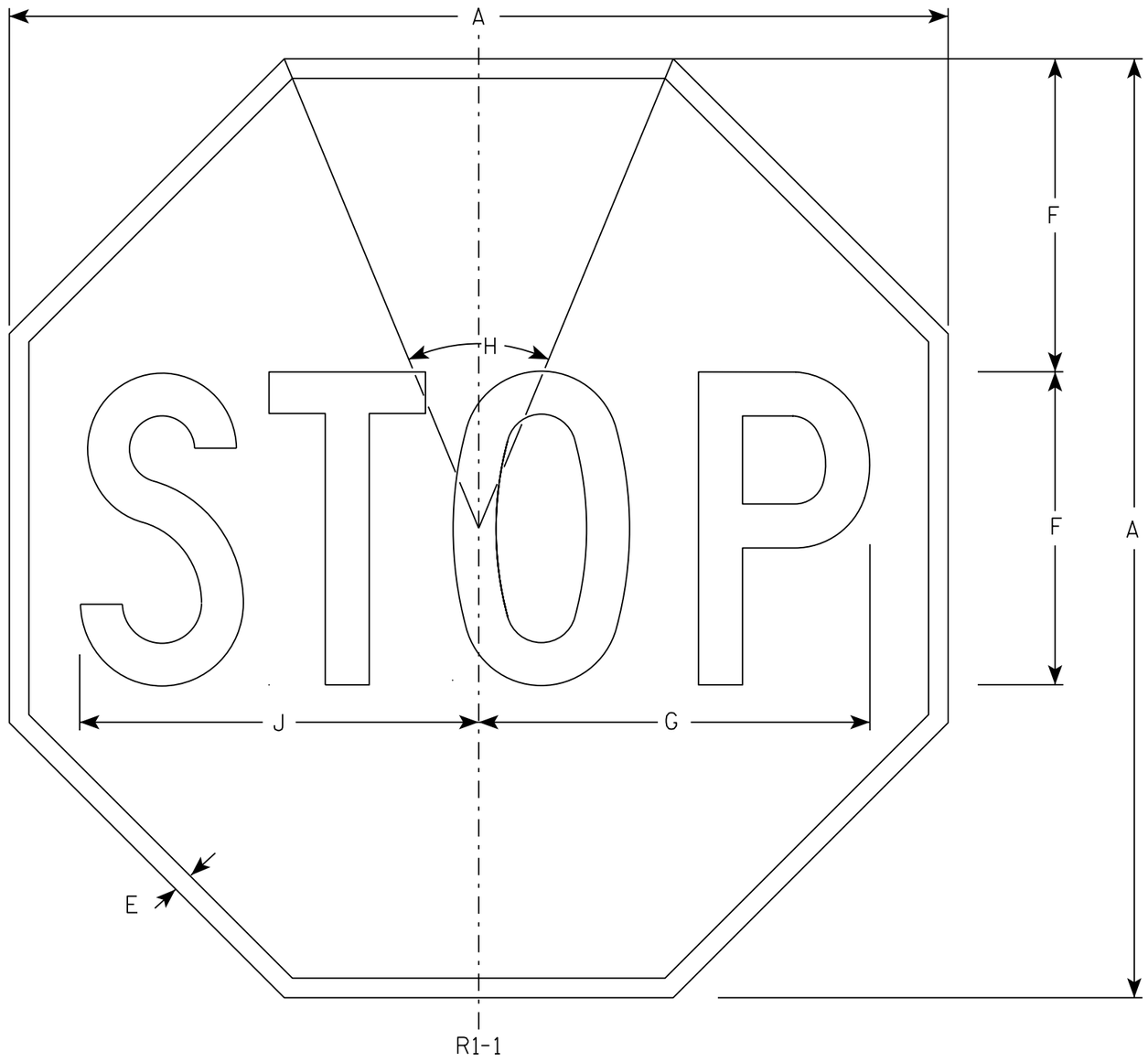
STANDARD SIGN
M4-9B L&R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

DATE 2/9/2023 PLATE NO. M4-9B.4

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 46 | E



NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN

R1-1

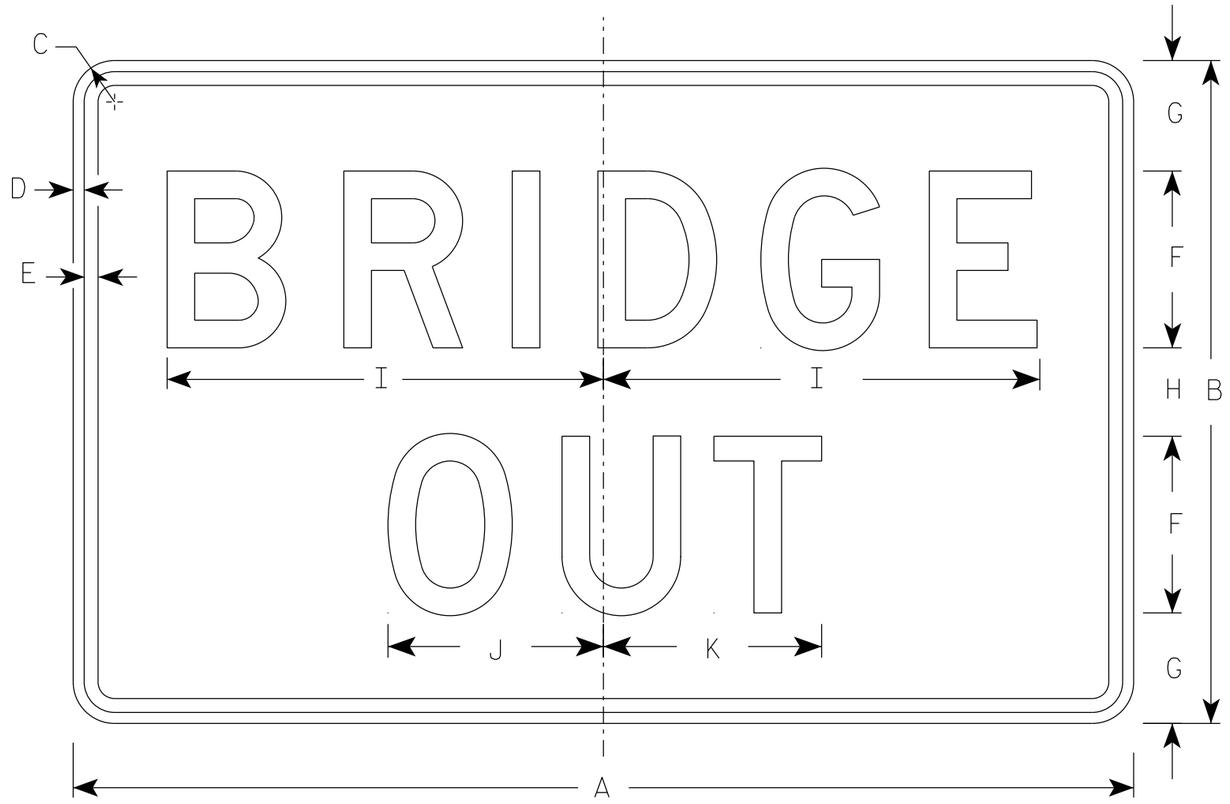
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 47	E



R11-2B

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
2M	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
3	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
4	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0
5	48	30	1 7/8	1/2	5/8	8	5	4	19 3/4	9 3/4	9 7/8																10.0

STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

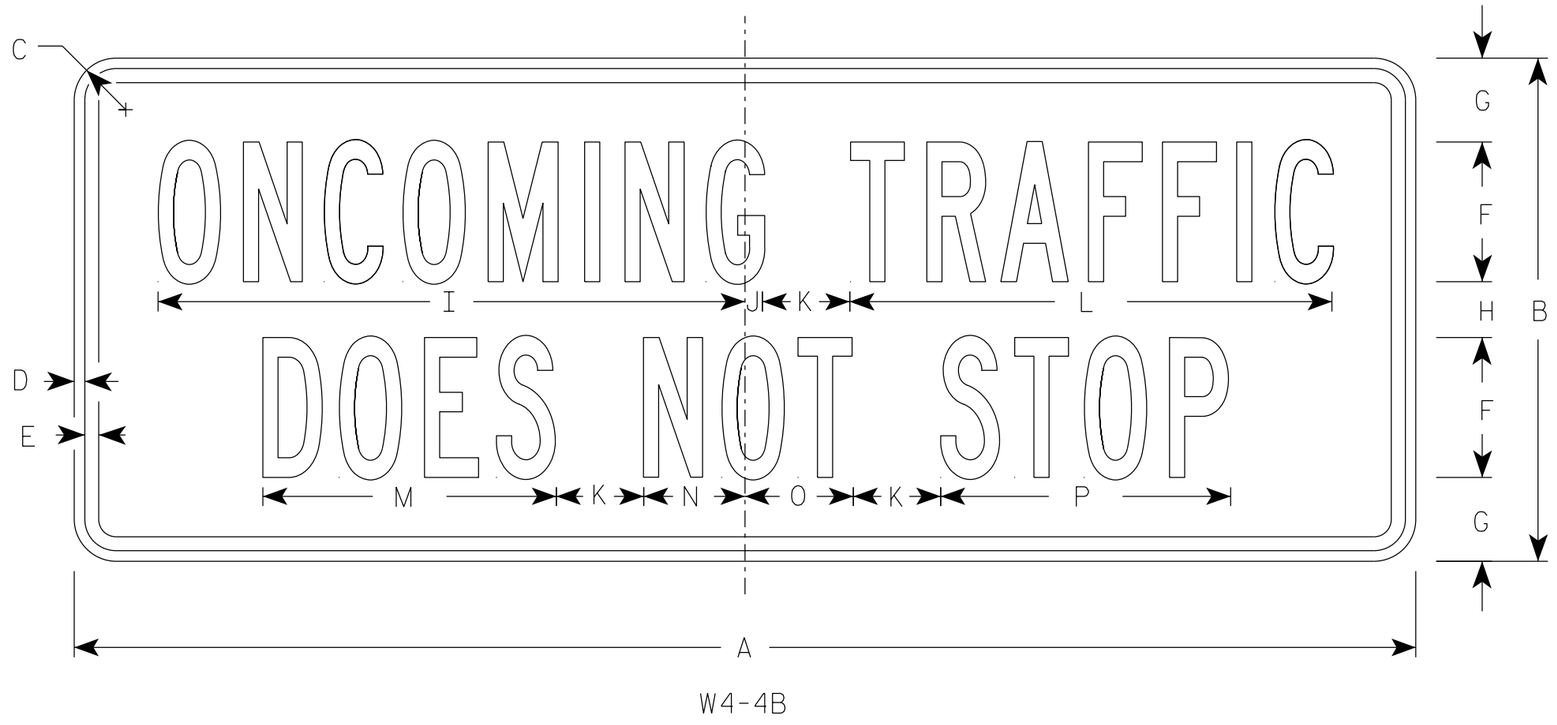
DATE 2/5/24 PLATE NO. R11-2B.3

PROJECT NO:

SHEET NO: 48 E

NOTES

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



W4-4B

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30	12	1 1/2	3/8	1/2	3	2 1/4	1 1/2	12 3/8	5/8	1 1/2	10 3/8	6 1/4	2 1/4	2 1/4	6 1/4											2.5
2M	30	12	1 1/2	3/8	1/2	3	2 1/4	1 1/2	12 3/8	5/8	1 1/2	10 3/8	6 1/4	2 1/4	2 1/4	6 1/4											2.5
3	42	15	1 1/2	3/8	1/2	4	2 5/8	1 3/4	16 7/8	5/8	2 3/8	13 7/8	8 3/8	3	3 1/8	8 3/8											4.38
4	48	18	1 1/2	3/8	1/2	5	3	2	21	5/8	3 1/8	17 1/4	10 1/2	3 5/8	3 7/8	10 3/8											6.0
5																											

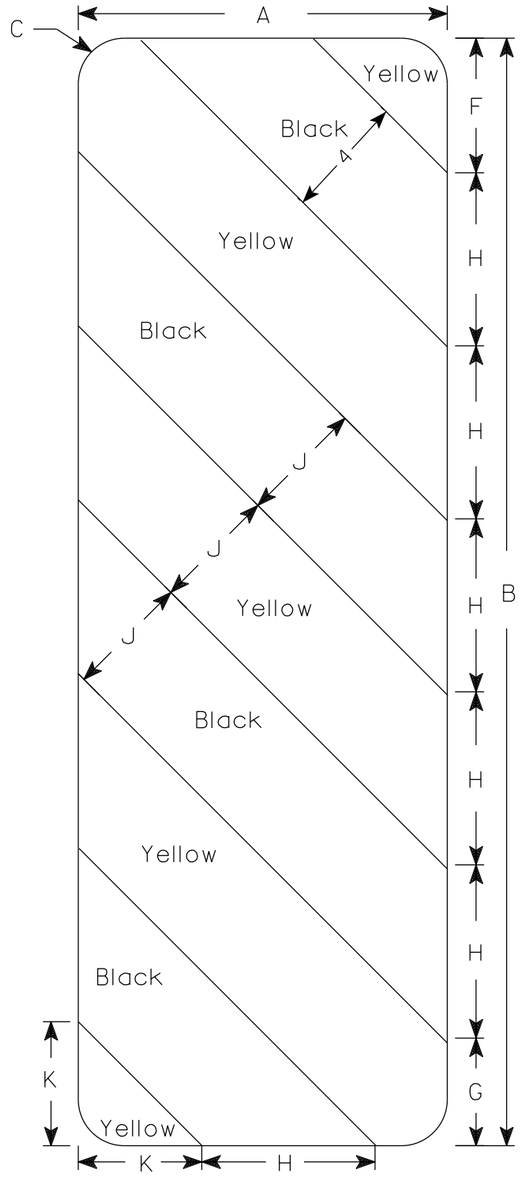
STANDARD SIGN
W4-4B

WISCONSIN DEPT OF TRANSPORTATION

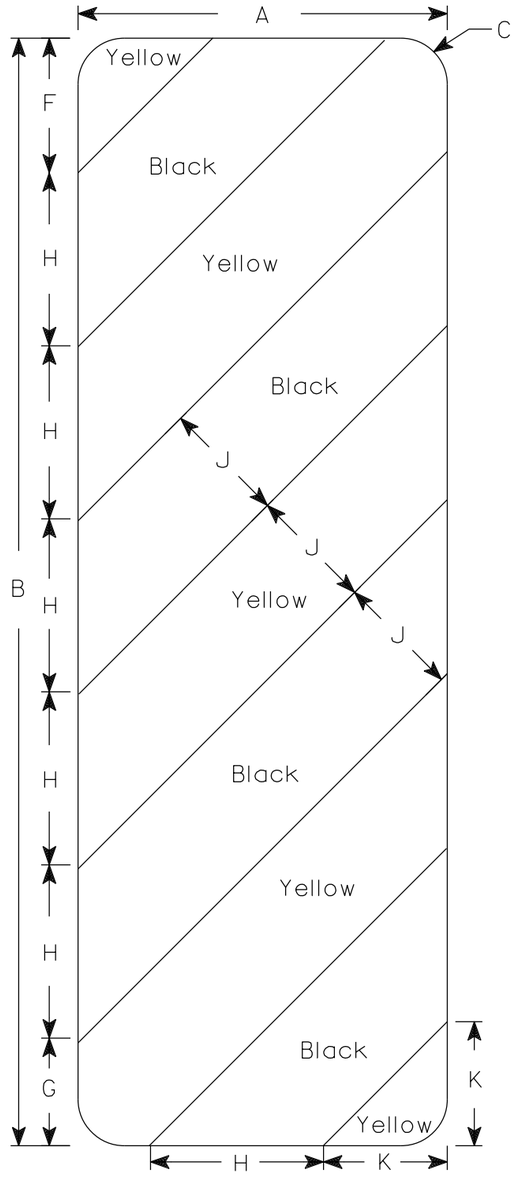
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/5/2023 PLATE NO. W4-4B.3

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



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. 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	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
2M	12	36	1 1/2			4 3/8	3 1/2	5 5/8	45°	4	4																3.0
3	18	54	1 1/2			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

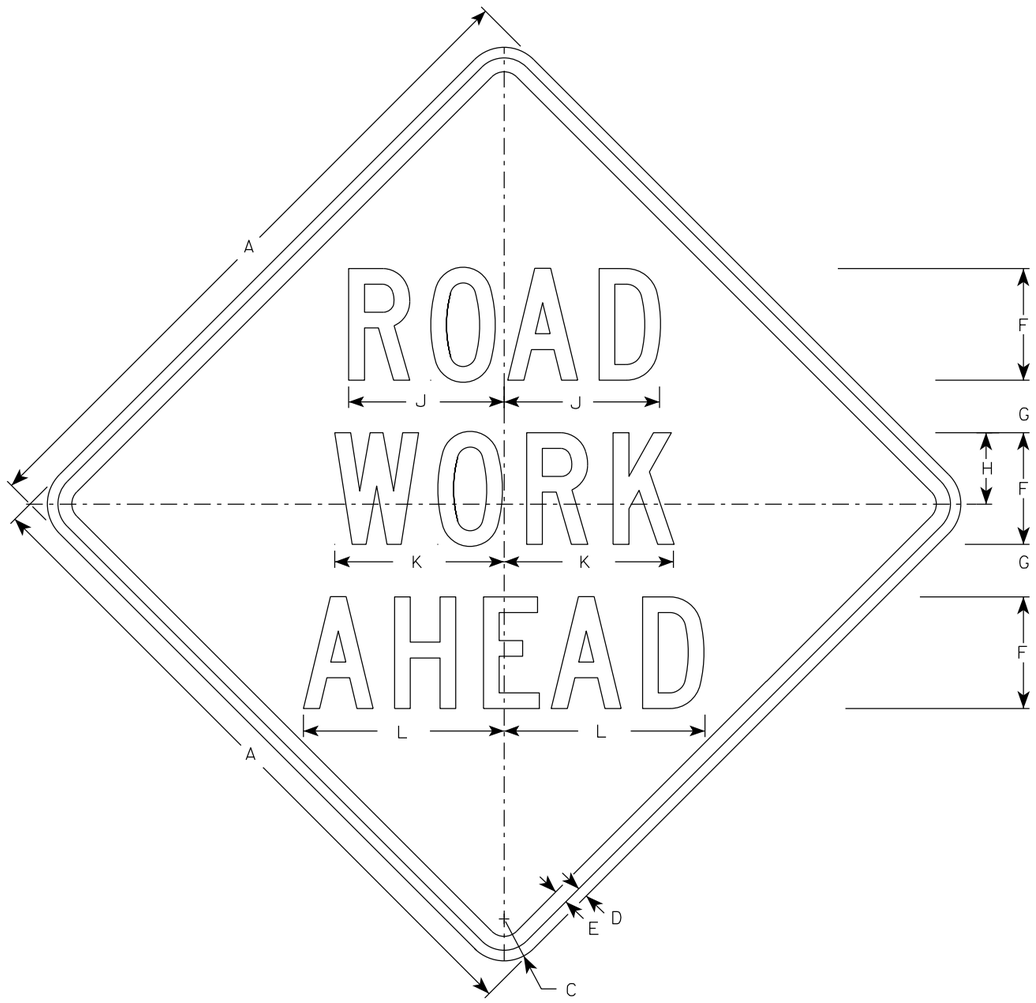
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/4/2024 PLATE NO. W5-52.10

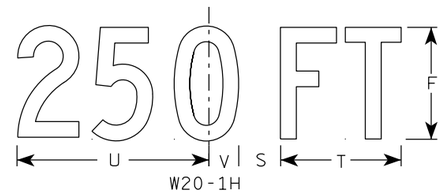
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 50 E

7

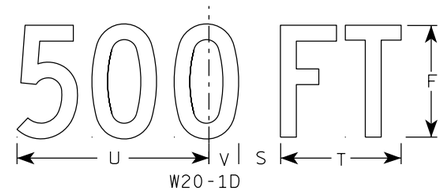
7



W20-1A



W20-1H



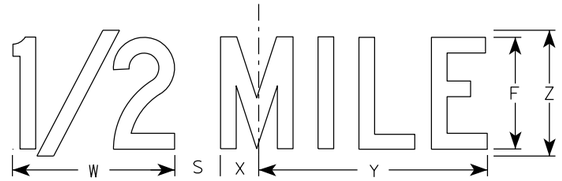
W20-1D

W20-1C

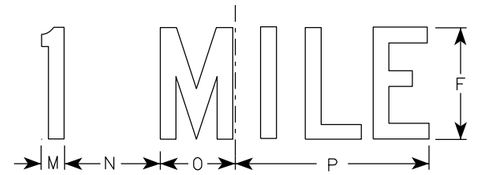
W20-1B

NOTES

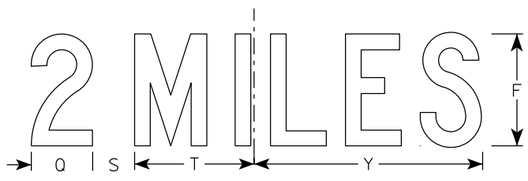
1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



W20-1F



W20-1E

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

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

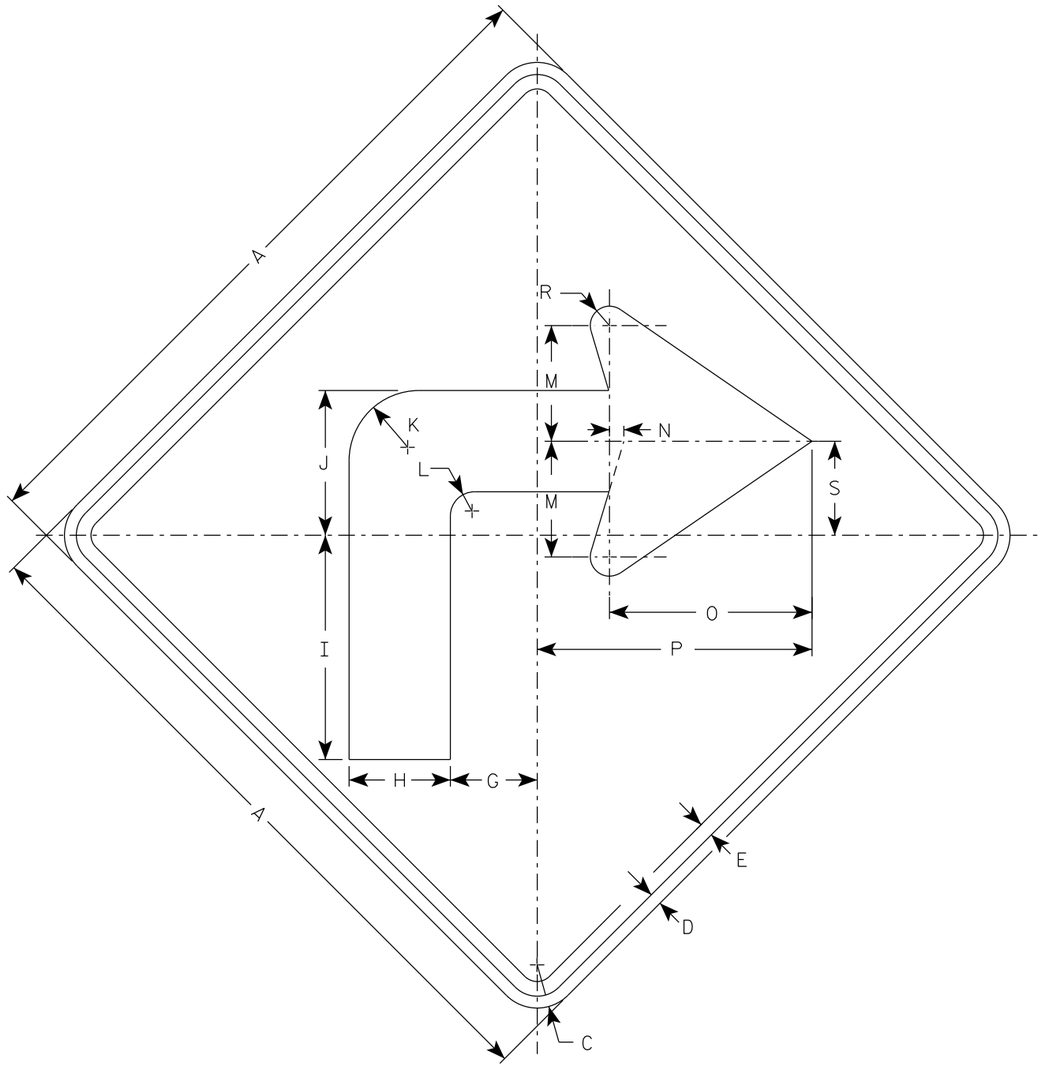
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/10/2024 PLATE NO. W20-1.12

PROJECT NO:

SHEET NO: 51 E



W01-1R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-1L is the same as W01-1R except the arrow is reversed along the vertical centerline.

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

STANDARD SIGN

W01-1

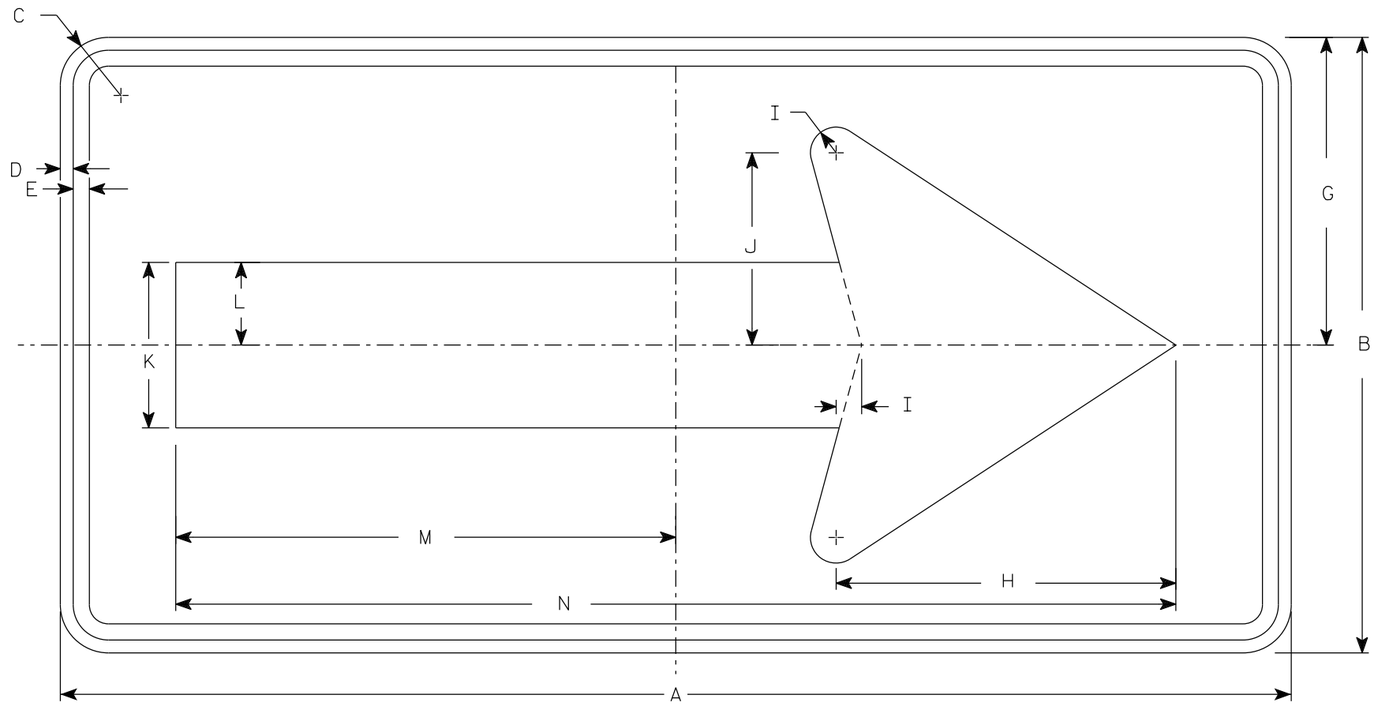
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. W01-1.2

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

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W011.dgn PLOT DATE : 24-JAN 2024 9:44 PLOT BY : dotc4c PLOT NAME : PLOT SCALE : $$.....plotscale.....$$ WISDOT/CADDS SHEET 42



WO1-6

NOTES

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

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

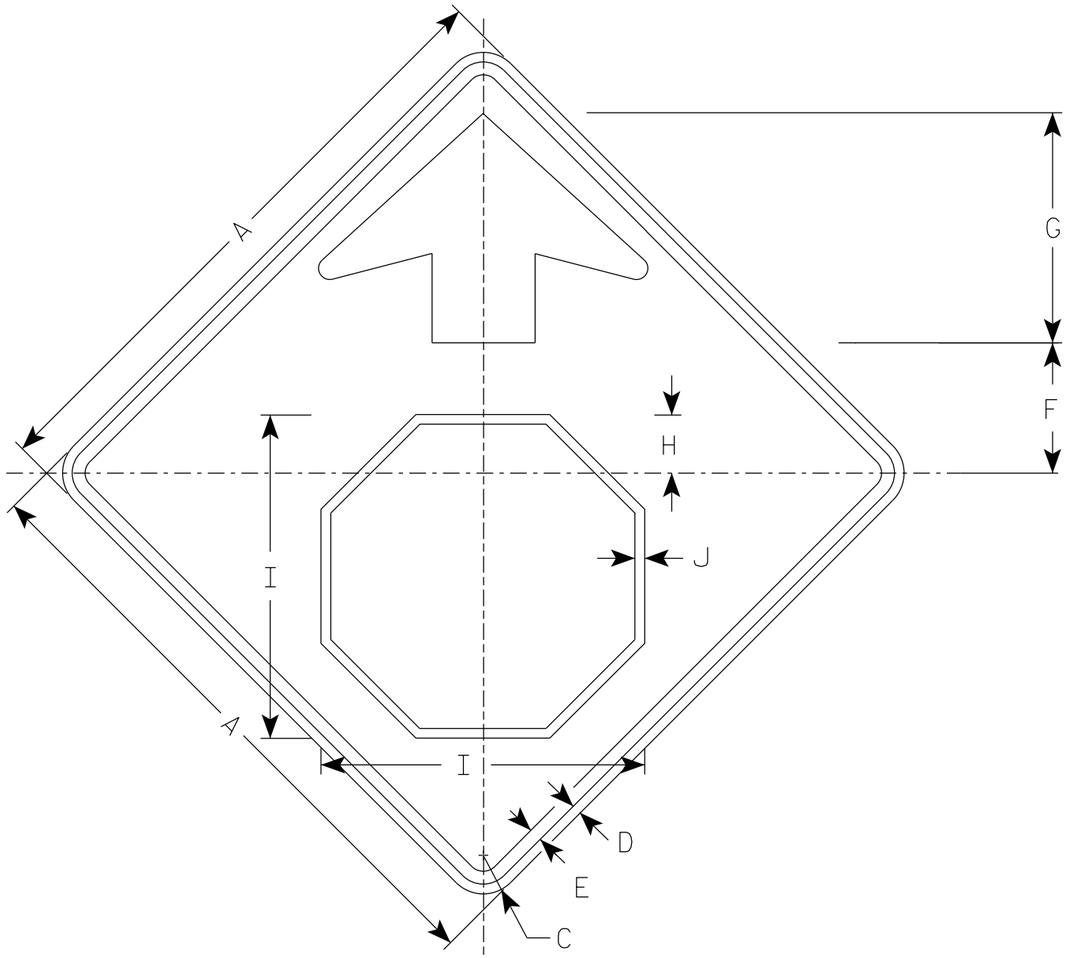
STANDARD SIGN
WO1-6

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/24/2024 PLATE NO. WO1-6.2

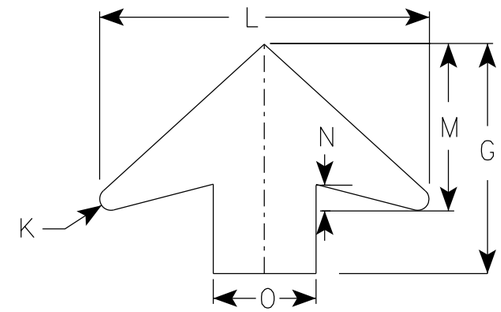
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E



W03-1

NOTES

1. All Signs Type II - Type F Reflective
2. Color:
   Background - ORANGE
   Arrow & Border - BLACK
   Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

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

STANDARD SIGN
W03-1

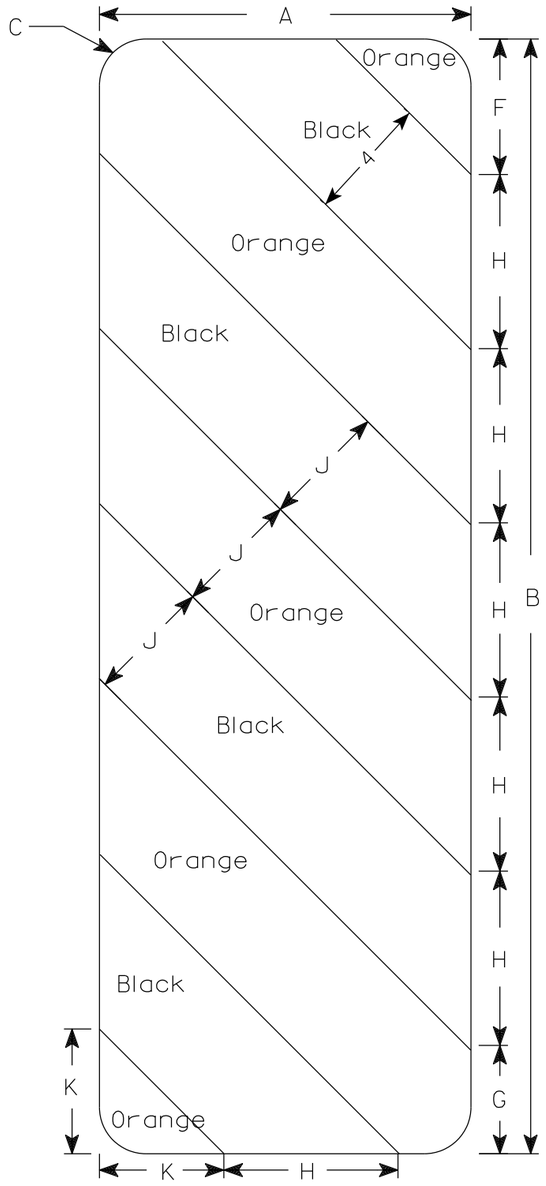
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
For State Traffic Engineer

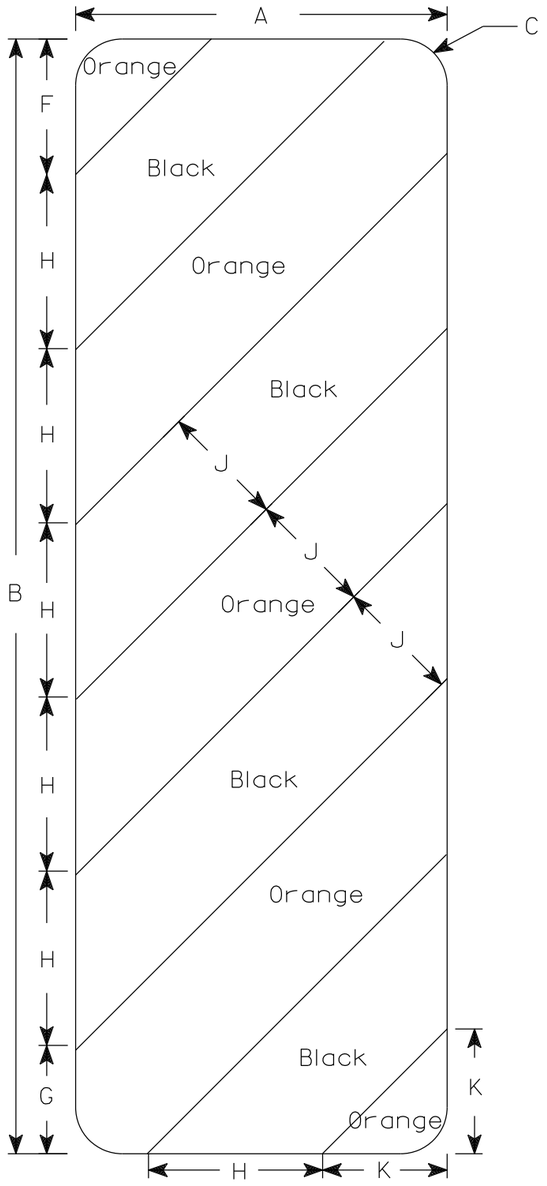
DATE 1/24/2024 PLATE NO. W03-1.2

PROJECT NO:

SHEET NO: 54 E



W05-52L



W05-52R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
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	1 ½			4 ⅜	3 ½	5 ⅝	45°	4	4																3.0
2M	12	36	1 ½			4 ⅜	3 ½	5 ⅝	45°	4	4																3.0
3	18	54	1 ½			6	5 ½	8 ½	45°	6	6 9/16																6.75
4																											
5																											

STANDARD SIGN

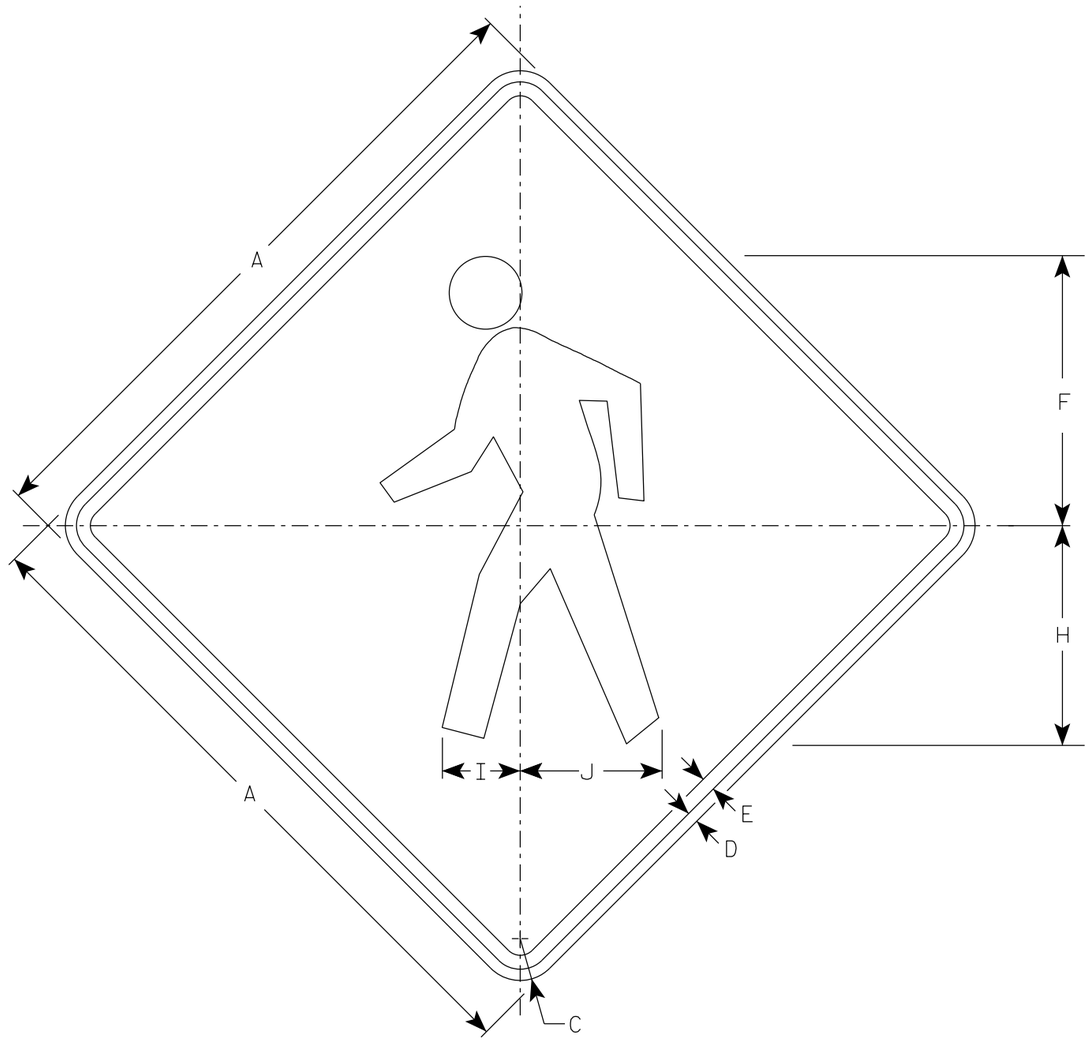
W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/13/2024 PLATE NO. W05-52.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 55 | E



WO11-2

NOTES

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

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		2 1/4	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
2S	48		3	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
2M	48		3	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
3	48		3	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
4	48		3	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN

WO11-2

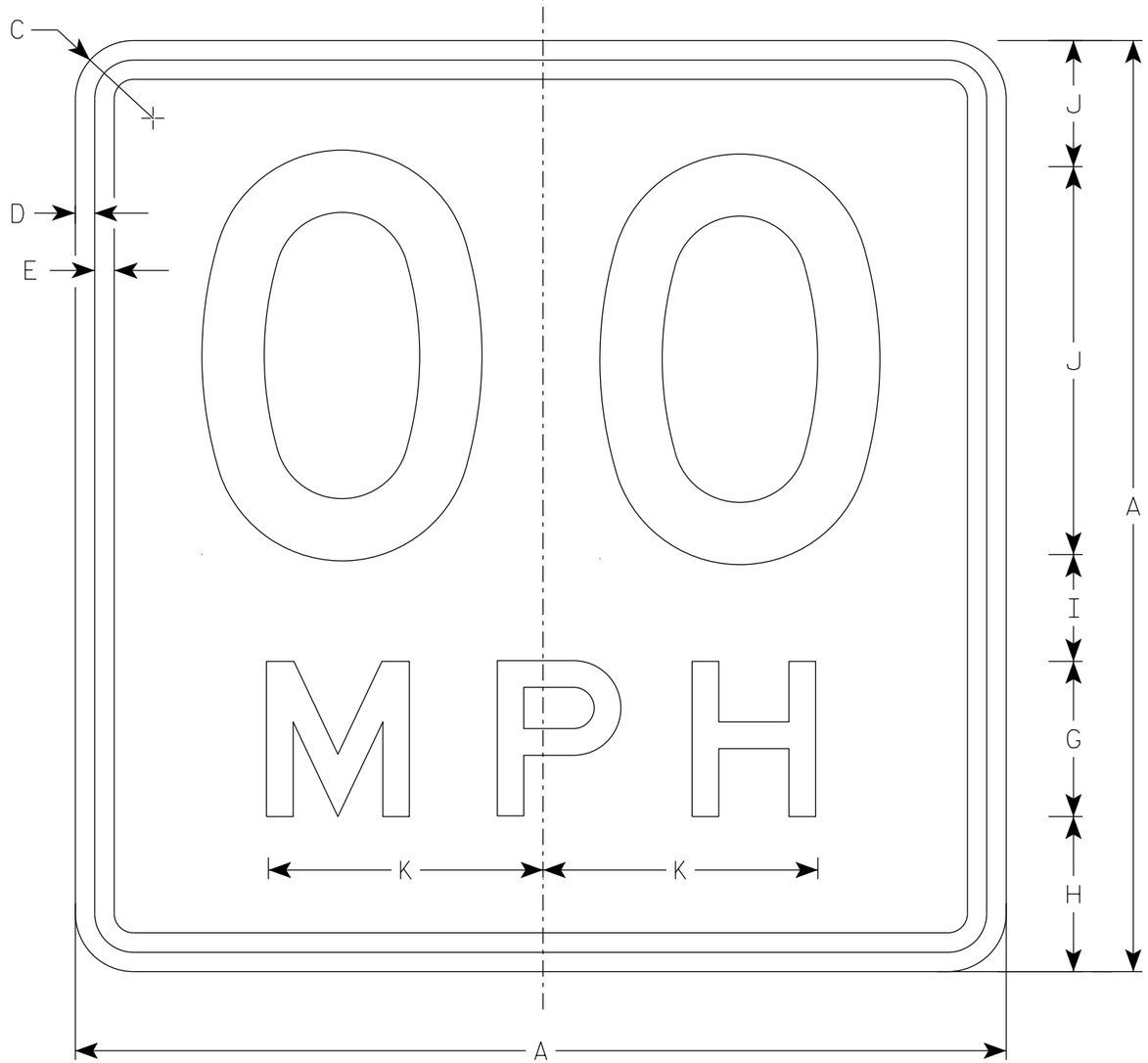
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

For State Traffic Engineer

DATE 2/1/2024 PLATE NO. WO11-2.2

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 56 E



W013-1

NOTES

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

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

STANDARD SIGN

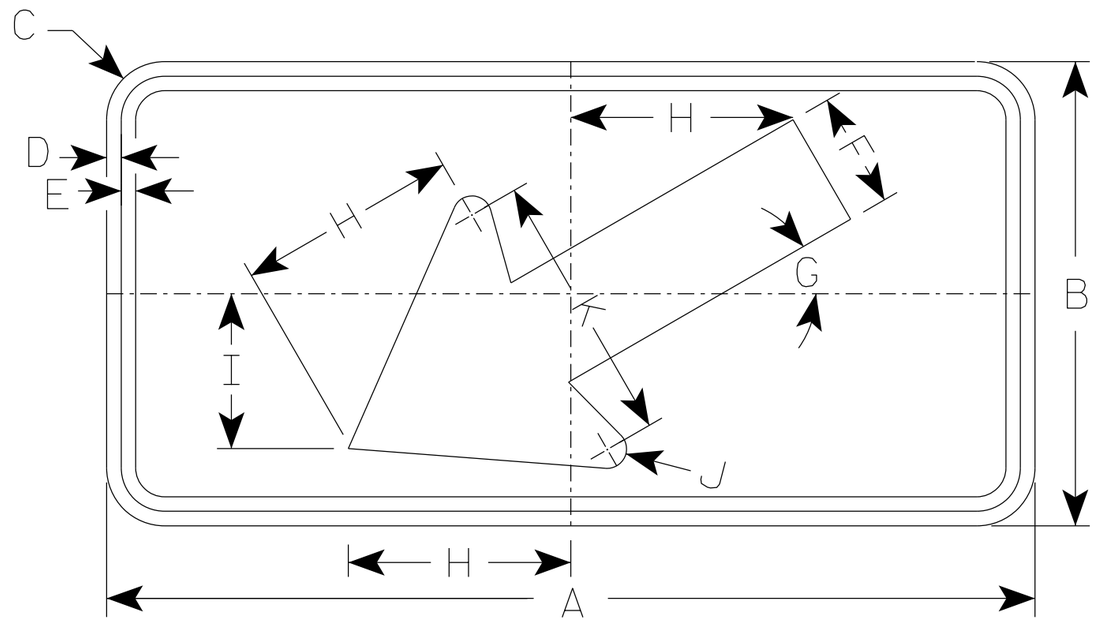
W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. W013-1.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 57	E



W016-7L

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded but corners shall be rounded when base material is metal.
4. W016-7R is the same as W016-L except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 ½	⅜	½	4 ½	30°	8 ½	6	⅝	10 ¼																3.75
2S	48	24	1 ⅞	½	⅝	6	30°	11 ½	8	1	14																8.0
2M	48	24	1 ⅞	½	⅝	6	30°	11 ½	8	1	14																8.0
3	48	24	1 ⅞	½	⅝	6	30°	11 ½	8	1	14																8.0
4	48	24	1 ⅞	½	⅝	6	30°	11 ½	8	1	14																8.0
5	48	24	1 ⅞	½	⅝	6	30°	11 ½	8	1	14																8.0

STANDARD SIGN
W016-7

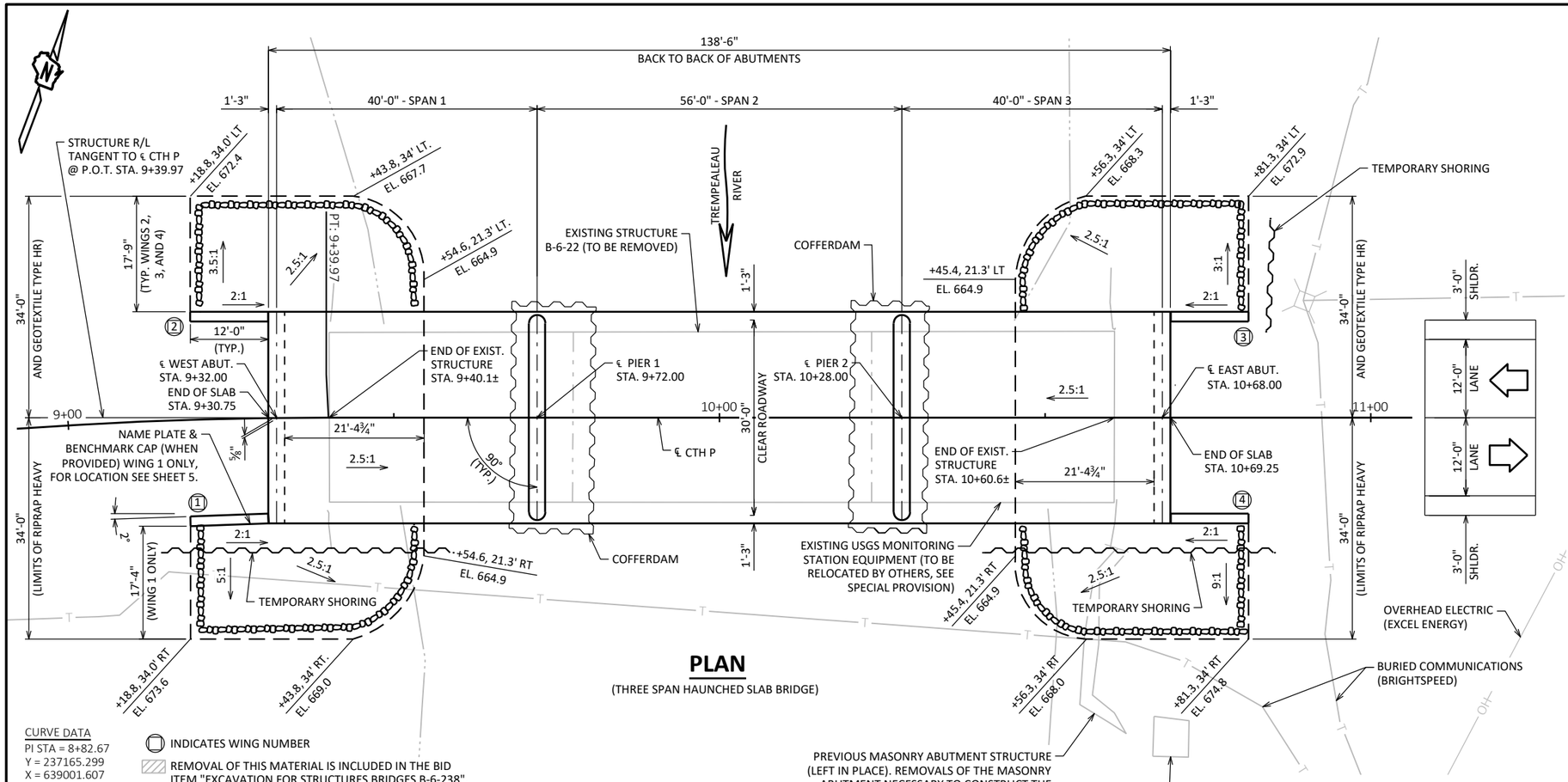
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/1/2024 PLATE NO. W016-7.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 58	E

7



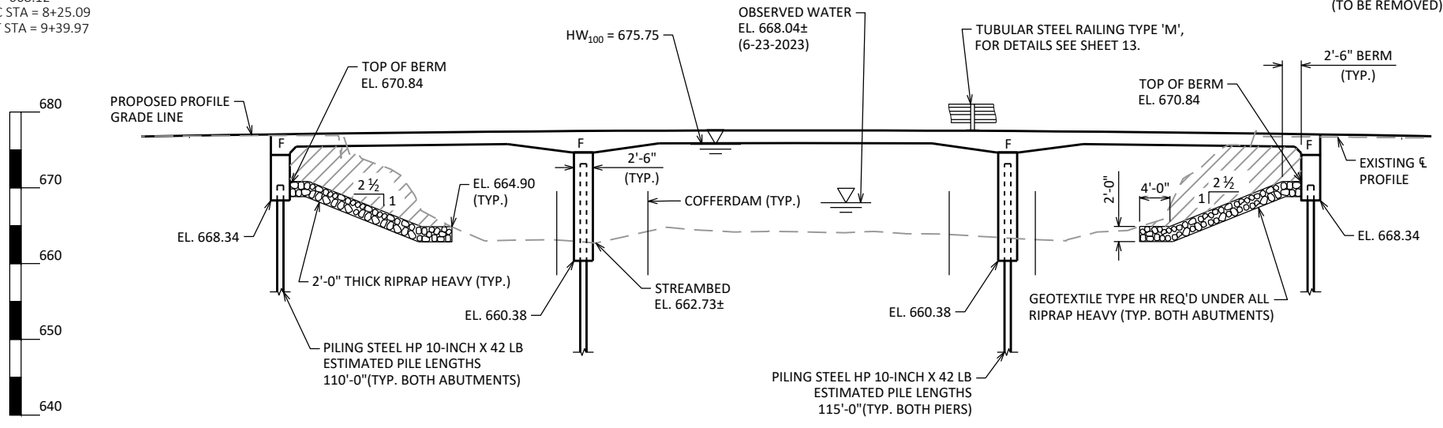
PLAN

(THREE SPAN HAUNCHED SLAB BRIDGE)

CURVE DATA
PI STA = 8+82.67
Y = 237165.299
X = 639001.607
DELTA = 9°51'04" RT
D = 8°34'32"
T = 57.58'
L = 114.87'
R = 668.12'
PC STA = 8+25.09
PT STA = 9+39.97

INDICATES WING NUMBER

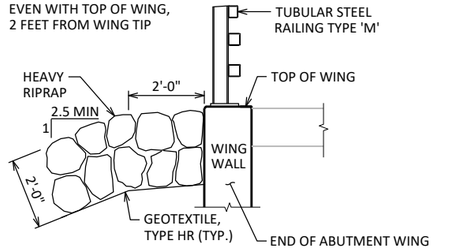
REMOVAL OF THIS MATERIAL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-6-238".



ELEVATION

(LOOKING NORTH)

NOTE: PLACE HEAVY RIPRAP EVEN WITH TOP OF WING, 2 FEET FROM WING TIP



TYPICAL FILL SECTION AT WING TIPS

LIST OF DRAWINGS:

STATE PROJECT NUMBER

7290-00-70

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING: RF = 1.19
OPERATING RATING: RF = 1.55
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE — f'_c = 4,000 PSI
ALL OTHER — f'_c = 3,500 PSI
BAR STEEL REINFORCEMENT:
GRADE 60 — f_y = 60,000 PSI
PILING STEEL:
HP 10-INCH X 42 LB — f_y = 50,000 PSI

FOUNDATION DATA

ABUTMENTS AND PIERS TO BE SUPPORTED ON HP 10-INCH X 42 LB PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA.
ESTIMATED 110'-0" LONG AT ABUTMENTS.
ESTIMATED 115'-0" LONG AT PIERS.

**THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE PILE CAPACITY.

HYDRAULIC DATA

100-YEAR FREQUENCY:

Q_{100} - TOTAL = 15,700 C.F.S.
- THRU BRIDGE = 8,794 C.F.S.
- OVERTOPPING ROADWAY = 6,906 C.F.S.
V_{100}= 11 F.P.S.
HW_{100}= EL. 675.75
WATERWAY AREA = 796 SQ. FT.
DRAINAGE AREA = 643 SQ. MI.
SCOUR CRITICAL CODE = 5

2-YEAR FREQUENCY:

Q_2= 3,920 C.F.S.
V_2= 6.23 F.P.S.
HW_2= EL. 672.67

ROADWAY OVERTOPPING

FREQUENCY = 5 YEARS
Q_5 = 6,610 C.F.S.
HW_5 = EL. 673.8

TRAFFIC DATA

CTH P:

A.A.D.T. (2026) = 340
A.A.D.T. (2046) = 370
R.D.S. = 40 MPH

JOSHUA R. SWENO E-44384 WAUNAKEE WI
WISCONSIN PROFESSIONAL ENGINEER
7/24/2025

CONSULTANT DESIGN CONTACT:
JOSH SWENO
(608) 355-8852

BRIDGE OFFICE CONTACT:
AARON BONK
(608) 261-0261

NO.	DATE	REVISION	BY

MSA
ENGINEERING | ARCHITECTURE | SURVEYING
FUNDING | PLANNING | ENVIRONMENTAL
1702 PANKRATZ STREET, MADISON WI 53704
(608) 242-7779 www.msa-ps.com

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORATION

ACCEPTED JJR 08/04/25
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-6-238

CTH P OVER TREMPEALEAU RIVER

COUNTY	TOWN/~~CITY/VILLAGE~~
BUFFALO	BUFFALO

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATION

DESIGNED BY	DESIGNED CK'D	DRAWN BY	PLANS CK'D
JDH	NRT	RLR	JDH

GENERAL PLAN

SHEET 1 OF 13
59

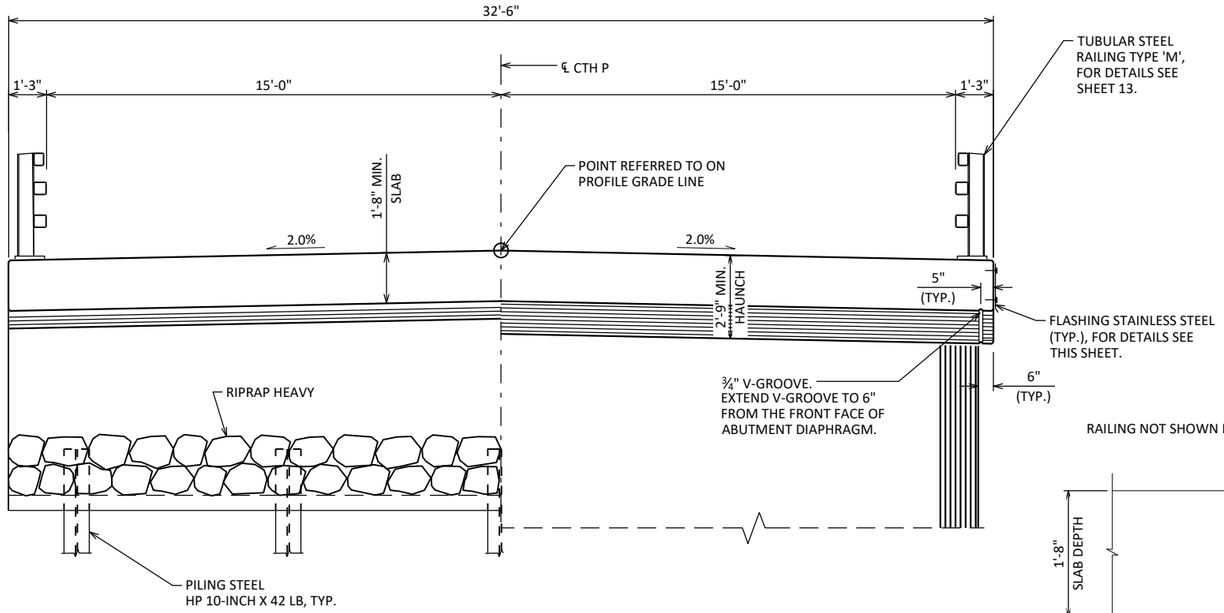
SCALE = 20

8

8

STATE PROJECT NUMBER

7290-00-70



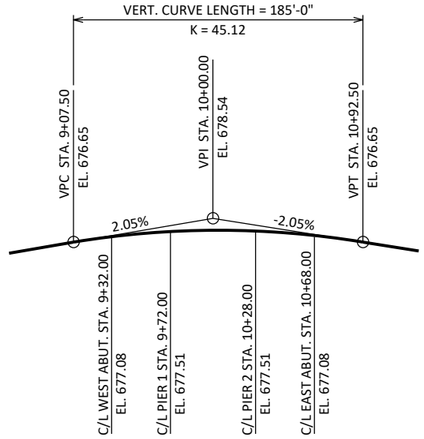
AT ABUTMENTS

AT PIERS

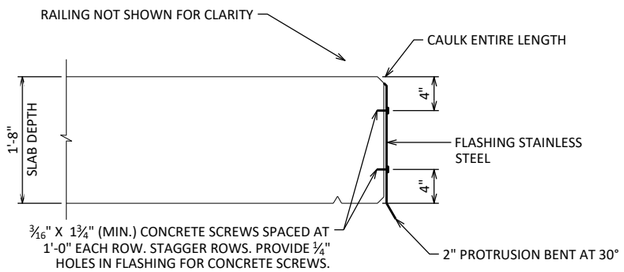
(PILING NOT SHOWN)

CROSS SECTION THRU BRIDGE

(LOOKING EAST)



PROFILE GRADE LINE



FLASHING DETAIL

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK AND 3/16" CONCRETE SCREWS.

FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

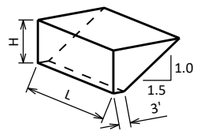
EXTEND FLASHING TO B.F. OF ABUTMENT DIAPHRAGM.

TOP OF FLASHING TO BEGIN APPROX. 1-INCH BELOW TOP OF SLAB SURFACE.

THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST SLAB DEPTH OVER THE BRIDGE LENGTH.

PROVIDE 2" MINIMUM FLASHING OVERLAP, FASTEN WITH 3/16" X 2" (MIN.) CONCRETE SCREWS.

CAULK SHALL BE NON-STAINING, GRAY NON-BITUMINOUS JOINT SEALER.



ABUTMENT BACKFILL DIAGRAM

L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)
V_{CY} = V_{CF}(EF)/27
V_{TON} = V_{CY}(2.0)

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY BAR SIZE.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE LIMITS SHOWN ON SHEET 1 AND THE ABUTMENT SHEETS.

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-6-238" SHALL BE THE EXISTING GROUNDLINE.

SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

THIS STRUCTURE WILL REPLACE EXISTING BRIDGE B-6-22, A 120.5 FT. LONG, 24.0 FT CLEAR WIDTH, THREE SPAN STEEL DECK GIRDER BRIDGE ON TIMBER ABUTMENTS SUPPORTED ON PILING AND CONCRETE PIERS SUPPORTED ON PILING.

AT BACK FACE OF ABUTMENT, ALL VOLUME WHICH CAN NOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURAL BACKFILL TYPE A.

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO USGS NAVD 88 (2012 ADJUSTED). BENCHMARK REFERENCES AT THE PROJECT SITE WERE SET BY THE CONSULTANT USING GPS TECHNOLOGY.

THE QUANTITY FOR BACKFILL STRUCTURES IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO "EXCAVATION FOR STRUCTURES BRIDGES B-6-238".

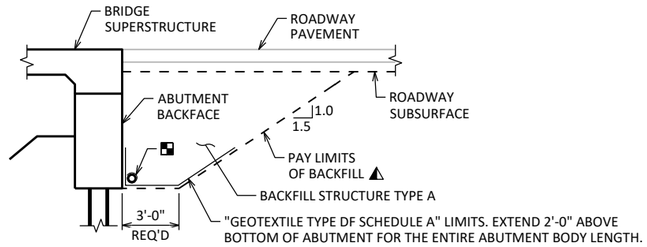
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND EDGES OF SLAB, TO THE OUTSIDE 1'-0" OF THE UNDERSIDE OF SLAB, TO THE TOPS OF WINGS, TO THE EXPOSED FRONT FACES OF WINGS, AND TO THE END 1'-0" OF THE ABUTMENT BODY FRONT FACES.

AT ABUTMENTS AND PIERS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	WEST ABUT.	PIER 1	PIER 2	EAST ABUT.	SUPER.	TOTAL
203.0260.01	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-6-22	EACH	-	-	-	-	-	1
206.1001.01	EXCAVATION FOR STRUCTURES BRIDGES B-6-238	EACH	-	-	-	-	-	1
206.5001.01	COFFERDAMS B-6-238	EACH	-	-	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	155	-	-	155	-	310
502.0100	CONCRETE MASONRY BRIDGES	CY	39.0	40.6	40.6	39.0	311.4	471
502.3200	PROTECTIVE SURFACE TREATMENT	SY	12	-	-	12	587	611
502.9000.S	UNDERWATER SUBSTRUCTURE INSPECTION B-6-238	EACH	-	1	1	-	-	2
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,970	1,990	1,990	1,970	-	7,920
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,670	60	60	1,670	60,560	64,020
511.1200.01	TEMPORARY SHORING B-6-238	SF	465	-	-	565	-	1,030
513.4061	RAILING TUBULAR TYPE M	LF	-	-	-	-	330	330
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	-	-	10	-	20
526.0101.01	TEMPORARY STRUCTURE STATION 20+00 'TB'	EACH	-	-	-	-	-	1
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	550	1,150	1,150	550	-	3,400
606.0300	RIPRAP HEAVY	CY	150	-	-	150	-	300
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	106	-	-	106	-	212
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	32	-	-	32	-	64
645.0120	GEOTEXTILE TYPE HR	SY	265	-	-	265	-	530
SPV.0090.01	FLASHING STAINLESS STEEL	LF	-	-	-	-	277	277
	NON-BID ITEMS							
	FILLER	SIZE						½", ¾"



TYPICAL SECTION THRU ABUTMENT

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

▪ PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

DRAWN BY RLR, EKK | PLANS CK'D JDH

CROSS SECTION, QUANTITIES & NOTES

SHEET 2
60

8

8

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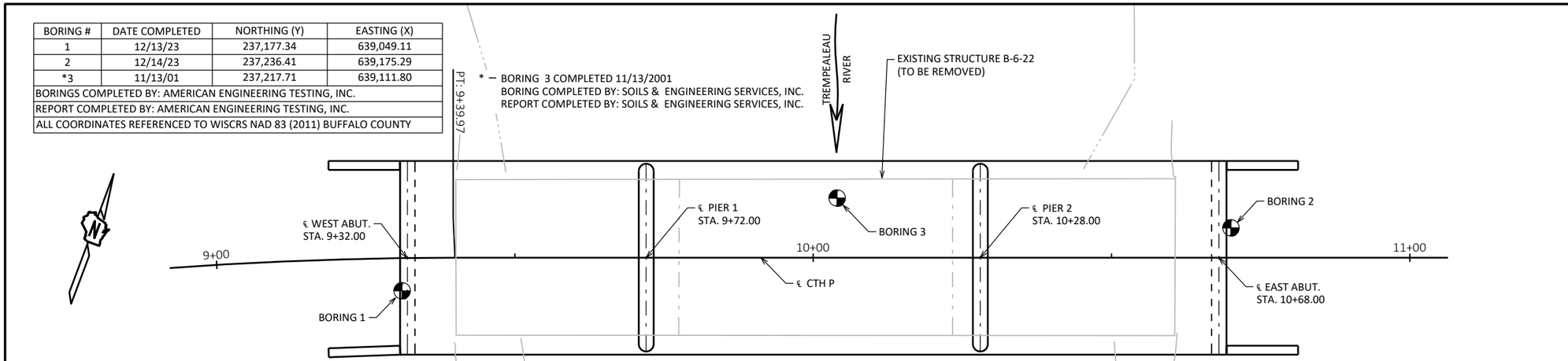
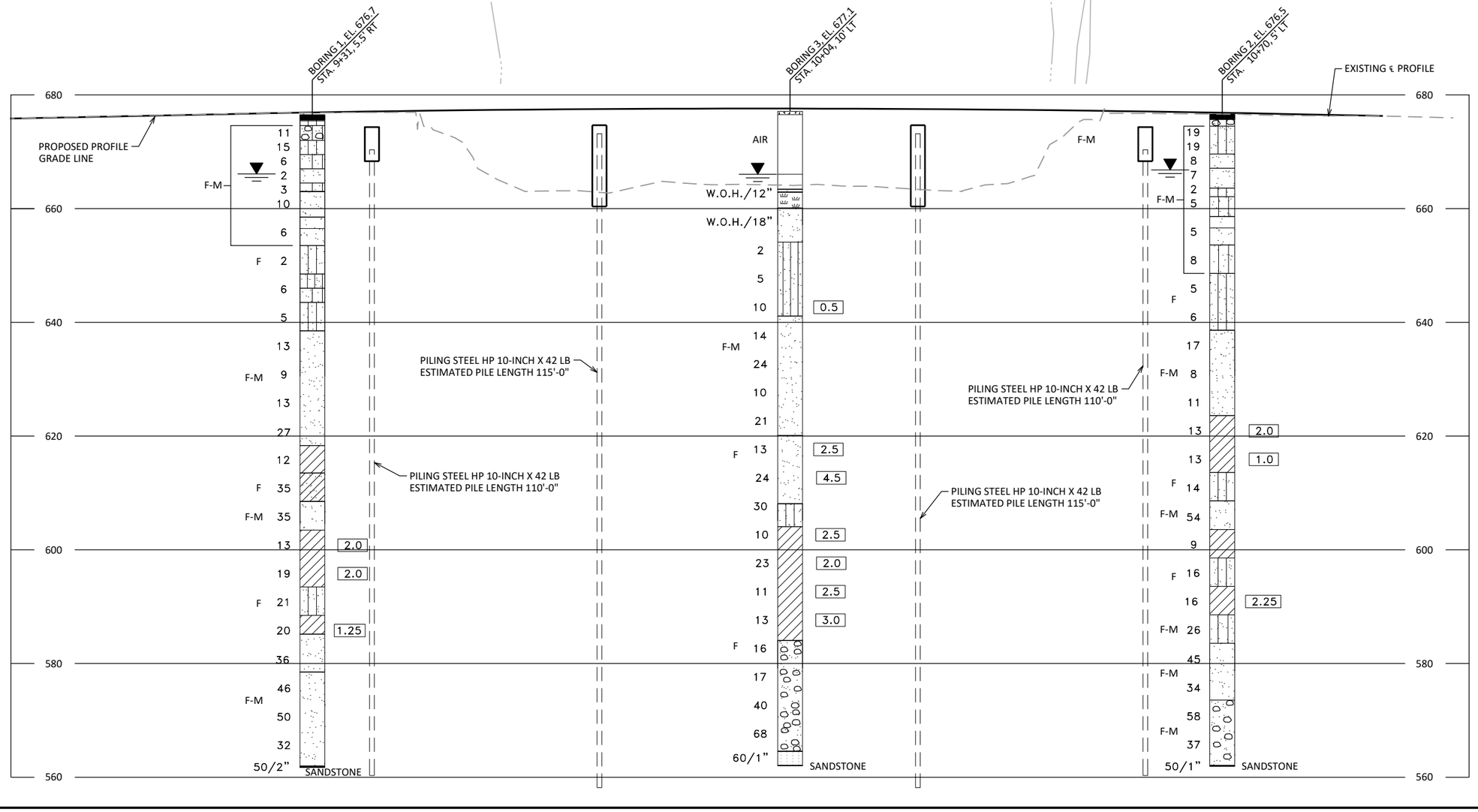
7/24/2025 9:01 AM

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	12/13/23	237,177.34	639,049.11
2	12/14/23	237,236.41	639,175.29
*3	11/13/01	237,217.71	639,111.80
BORINGS COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.			
REPORT COMPLETED BY: AMERICAN ENGINEERING TESTING, INC.			
ALL COORDINATES REFERENCED TO WISCRS NAD 83 (2011) BUFFALO COUNTY			

* – BORING 3 COMPLETED 11/13/2001
BORING COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.
REPORT COMPLETED BY: SOILS & ENGINEERING SERVICES, INC.





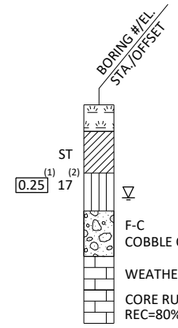
STATE PROJECT NUMBER

7290-00-70

MATERIAL SYMBOLS

ASPHALT, TOPSOIL, PEAT, CONCRETE, FILL, GRAVEL, SAND, CLAY, SILT, BOULDERS OR COBBLES, LIMESTONE, BEDROCK (UNKNOWN), SHALE, SANDSTONE, IGNEOUS/ META

LEGEND OF BORING



(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)

(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION

AT TIME OF DRILLING
END OF DRILLING
AFTER DRILLING

ABBREVIATIONS

F-FINE M-MEDIUM C-COARSE ST-SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT SIMILAR SUBSURFACE CONDITIONS BELOW, BETWEEN, OR BEYOND THESE BORINGS. VARIATIONS IN SOIL CONDITIONS SHOULD BE EXPECTED AND FLUCTUATIONS IN GROUNDWATER LEVELS MAY OCCUR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

DRAWN BY RLR | PLANS CK'D JDH

SUBSURFACE EXPLORATION

SHEET 3
61

SCALE =

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5/8/2025 8:49 AM

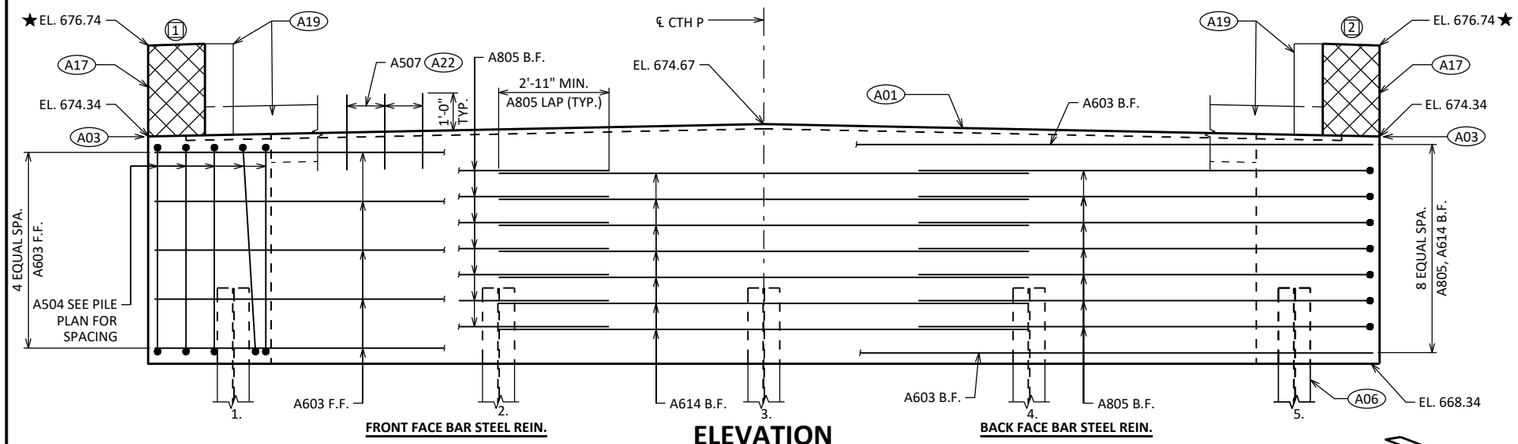
STATE PROJECT NUMBER

7290-00-70

NOTE:

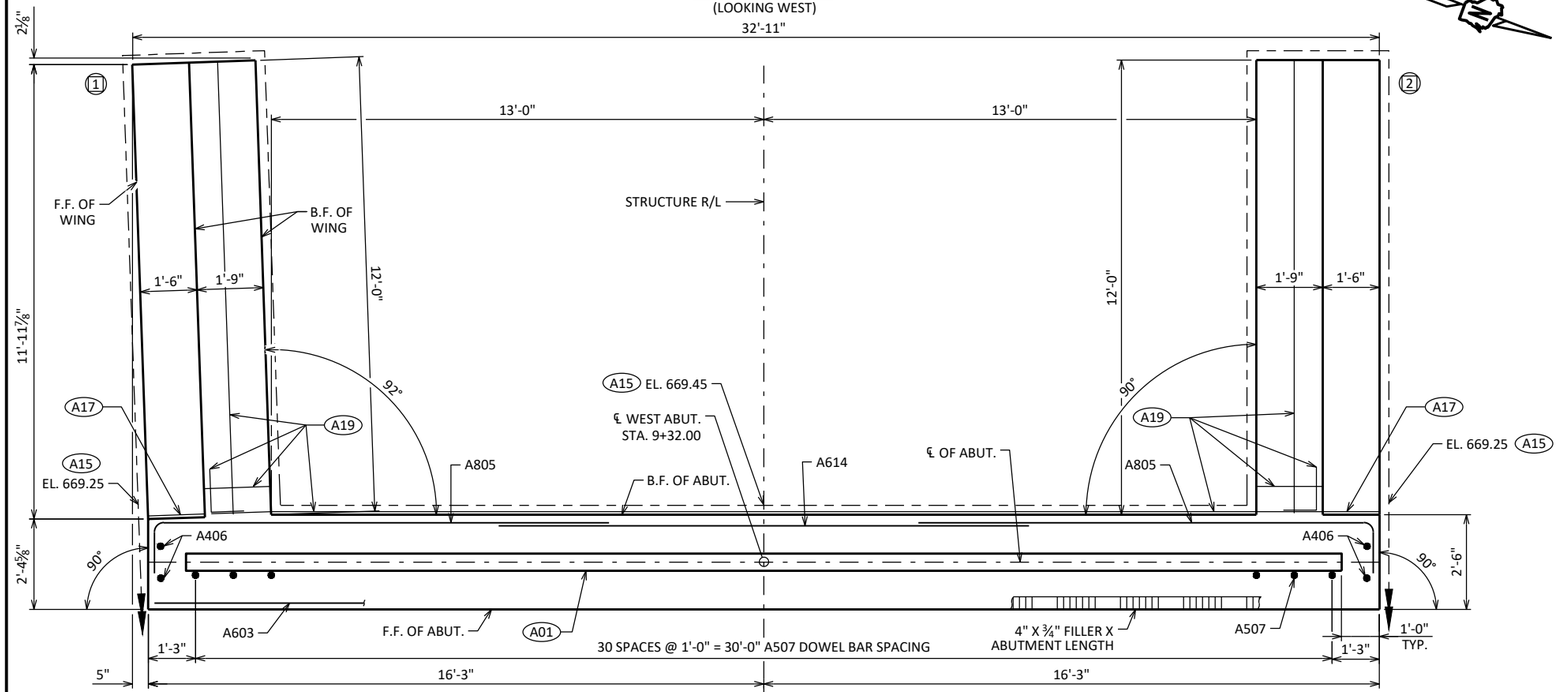
FOR WING DETAILS SEE SHEET 5.

★ ELEVATION GIVEN AT THE B.F. OF ABUTMENT.

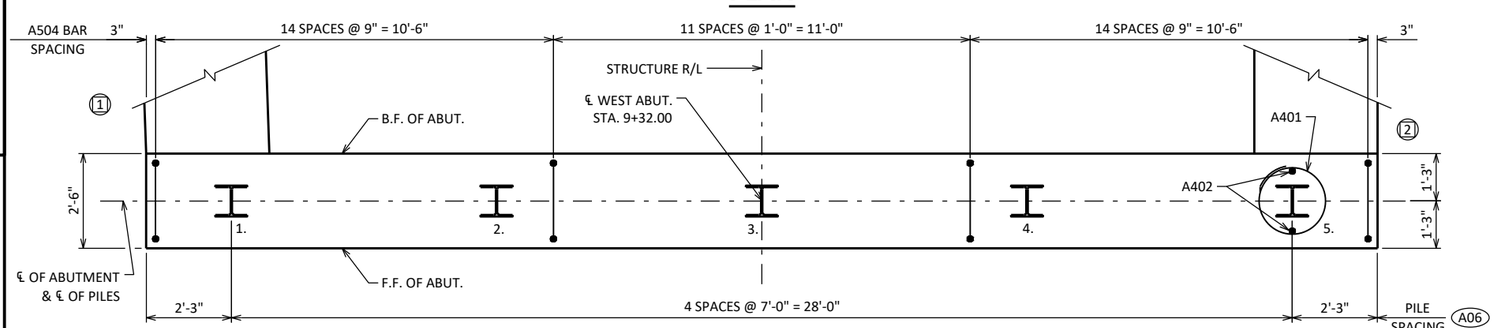


ELEVATION

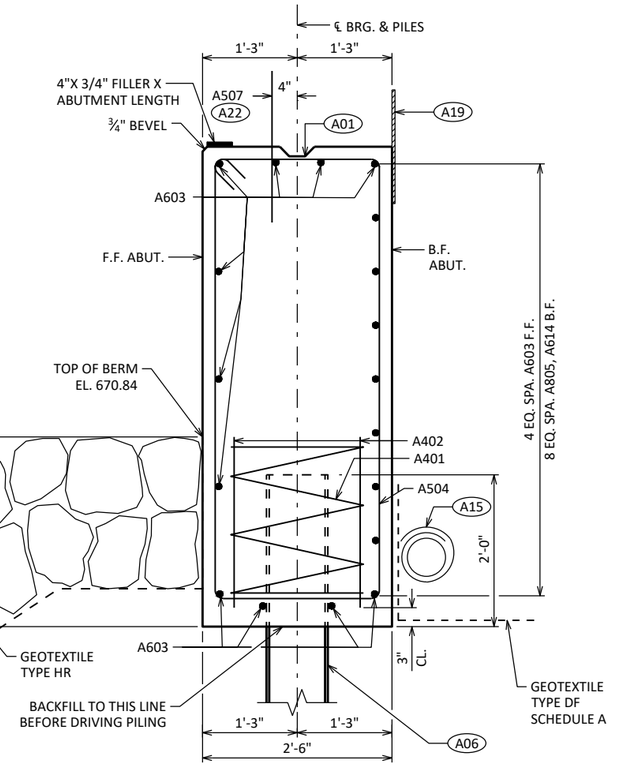
(LOOKING WEST)



PLAN



PILE PLAN



SECTION THRU BODY

LEGEND

- (A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 X 6.
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A06) SUPPORT ABUTMENT ON HP 10-INCH X 42 LB STEEL PILING, ESTIMATED 110'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHEET 7 FOR DETAILS.
- (A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- (A22) BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (1) (2) - INDICATES WING NUMBER

F.F. - FRONT FACE
B.F. - BACK FACE
CL. - CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

DRAWN BY EKK | PLANS CK'D JDH

WEST ABUTMENT

SHEET 4
62

8

8

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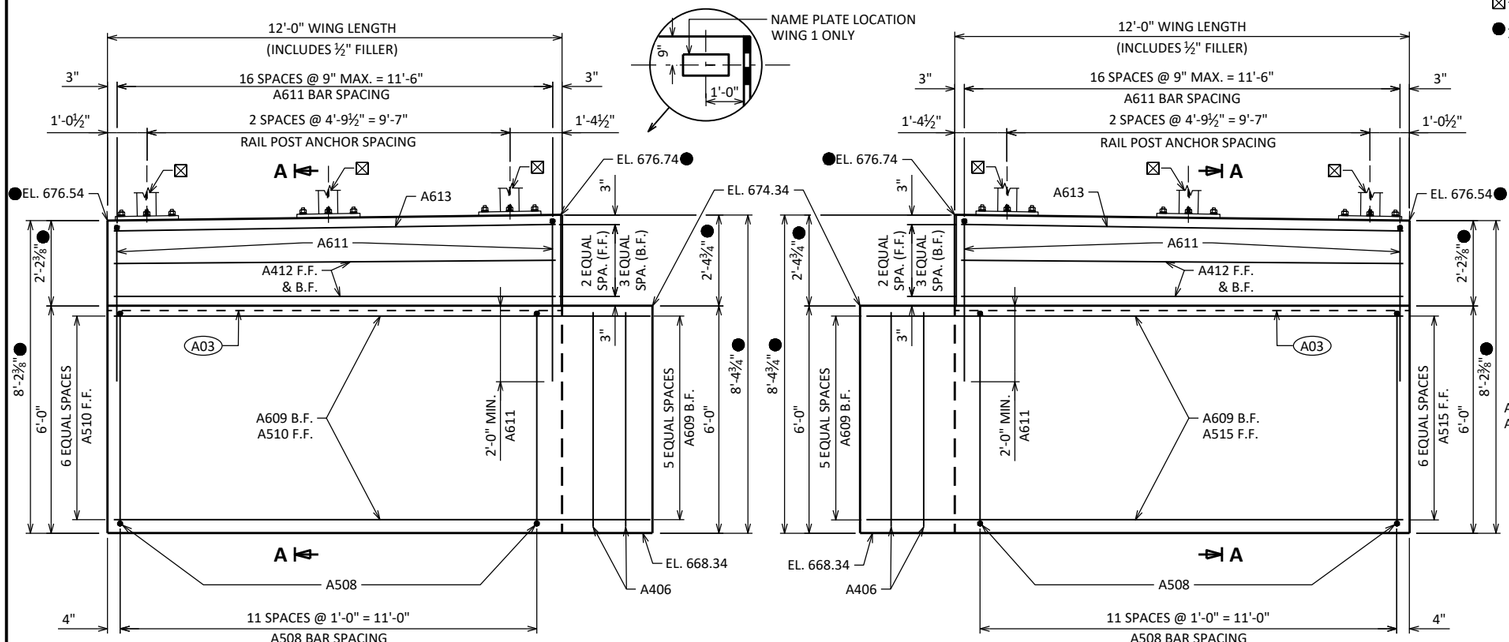
STATE PROJECT NUMBER

7290-00-70

NOTE:

- ⊠ - FOR RAIL POST ANCHOR DETAILS SEE SHEET 13.
- ● - ELEVATIONS AND DIMENSIONS ARE GIVEN AT THE F.F. OF WING.

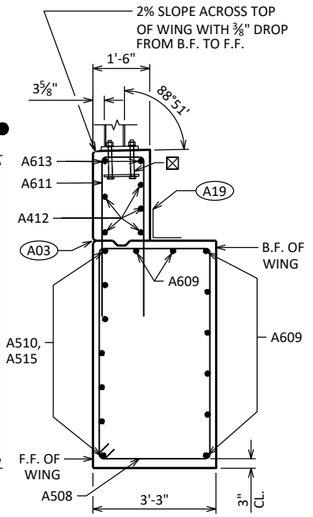


ELEVATION - WING 1

(LOOKING AT F.F. OF WING)

ELEVATION - WING 2

(LOOKING AT F.F. OF WING)



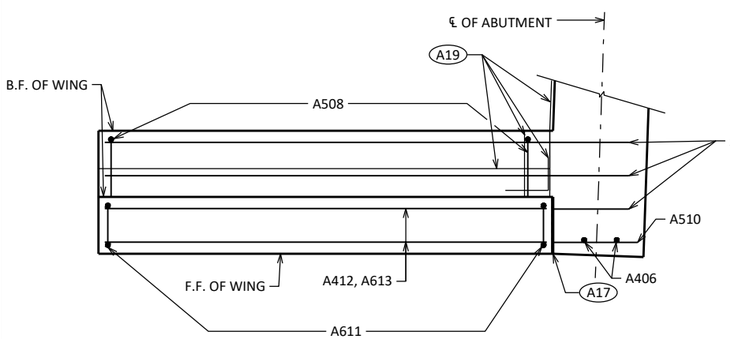
SECTION A-A THRU WING

BILL OF BARS - WEST ABUTMENT

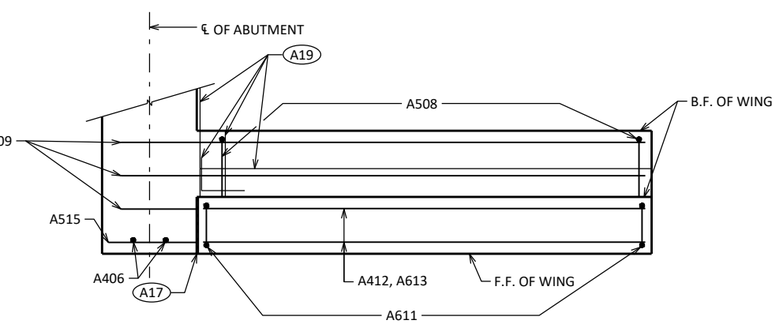
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
A401		5	28'-0"	X	ABUT. BODY - 1/PILE - SPIRAL WRAP
A402		10	2'-3"		ABUT. BODY - 2/PILE - VERT.
A603		11	32'-2"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
A504		40	16'-2"	X	ABUT. BODY - STIRRUP
A805		14	13'-2"	X	ABUT. BODY - B.F. - HORIZ.
A406		4	5'-7"		ABUT. BODY - END - VERT.
A507	X	31	2'-0"		ABUT. BODY - DOWEL - VERT.
A508	X	24	17'-8"	X	WINGS 1 & 2 - BASE - STIRRUP - VERT.
A609	X	16	13'-11"		WINGS 1 & 2 - BASE - B.F. & TOP - HORIZ.
A510	X	7	14'-0"		WING 1 - BASE - F.F. - HORIZ.
A611	X	34	9'-4"	X	WINGS 1 & 2 - TOP - STIRRUP - VERT.
A412	X	10	11'-7"		WINGS 1 & 2 - TOP - F.F. & B.F. - HORIZ.
A613	X	4	11'-7"		WINGS 1 & 2 - TOP - F.F. & B.F. - HORIZ.
A614		7	14'-0"		ABUT. BODY - B.F. - HORIZ.
A515	X	7	14'-2"		WING 2 - BASE - F.F. - HORIZ.

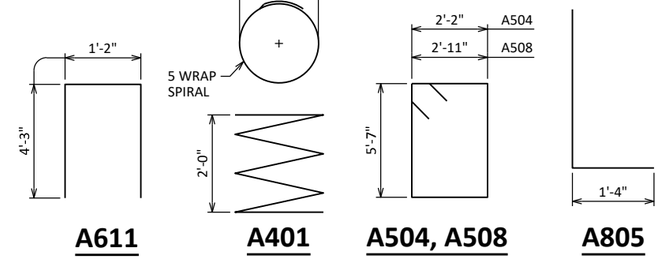
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



PLAN - WING 1



PLAN - WING 2



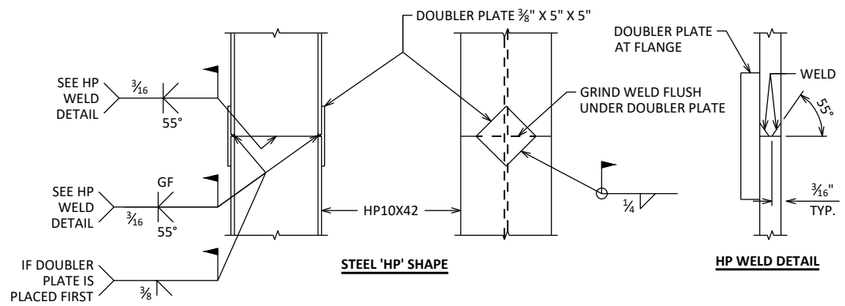
A611 **A401** **A504, A508** **A805**

LEGEND

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW TOP OF WING AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.



'HP' PILE DETAILS

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

DRAWN BY EKK | PLANS CK'D JDH

WEST ABUTMENT DETAILS

SHEET 5
63

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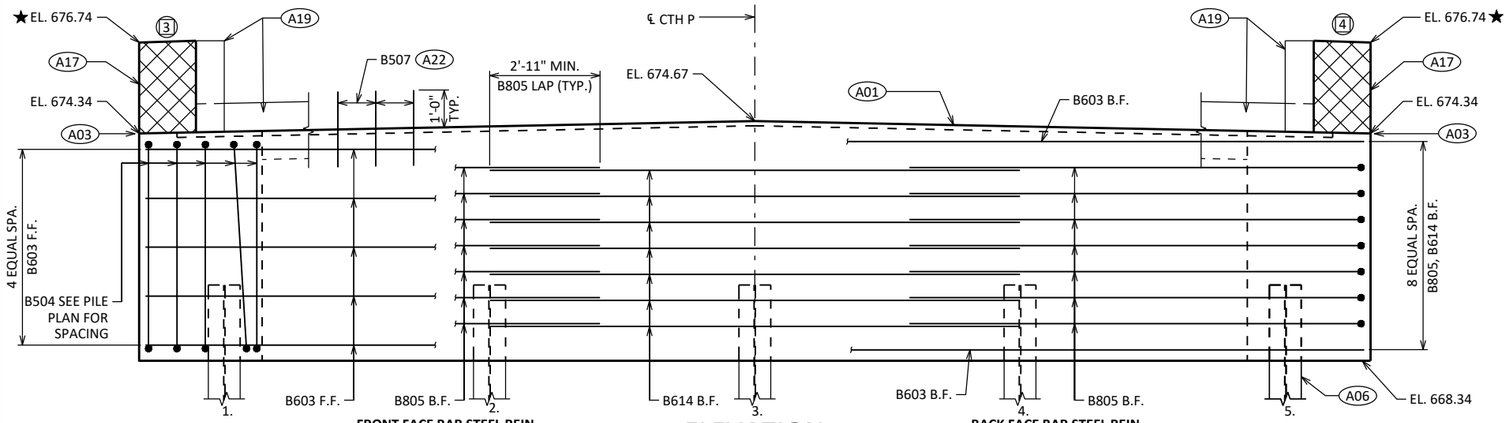
STATE PROJECT NUMBER
7290-00-70

NOTE:

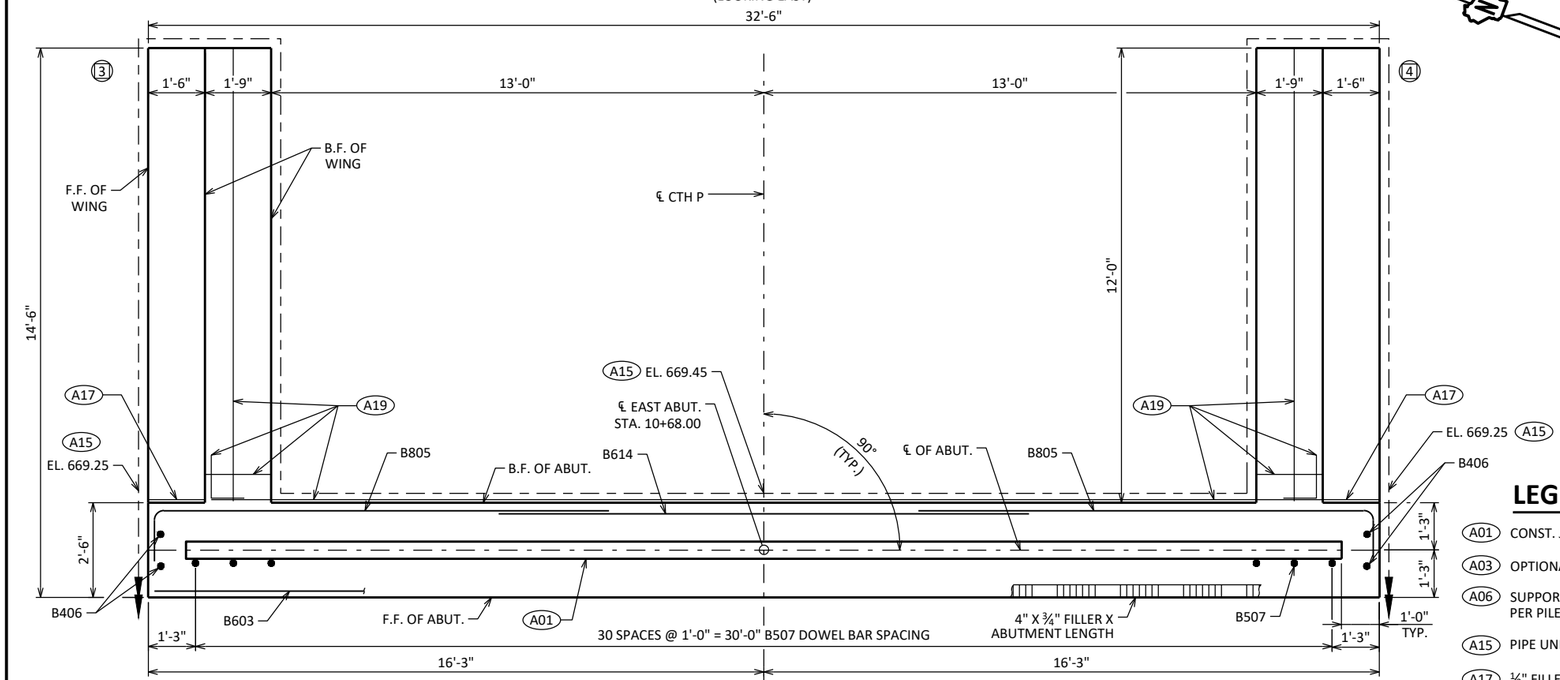
FOR WING DETAILS SEE SHEET 7.

★ ELEVATION GIVEN AT THE B.F. OF ABUTMENT.

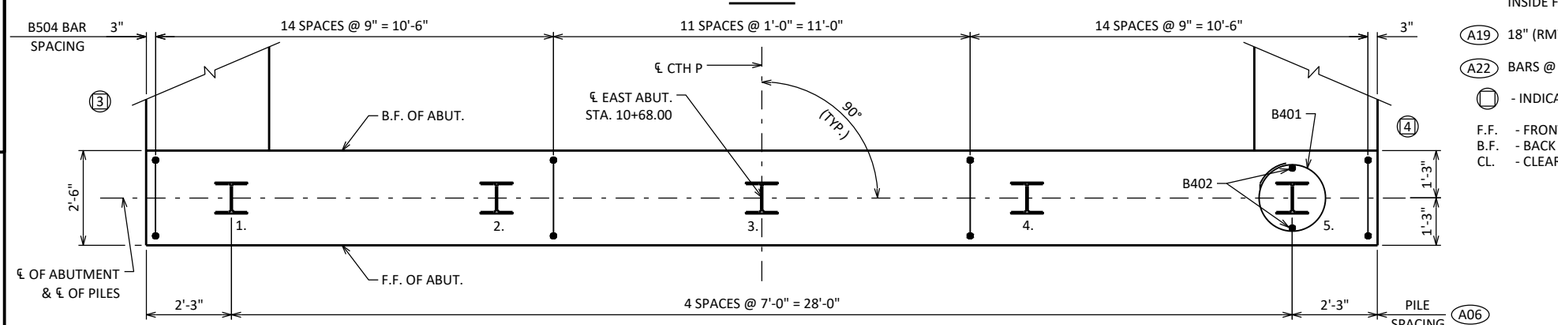


ELEVATION

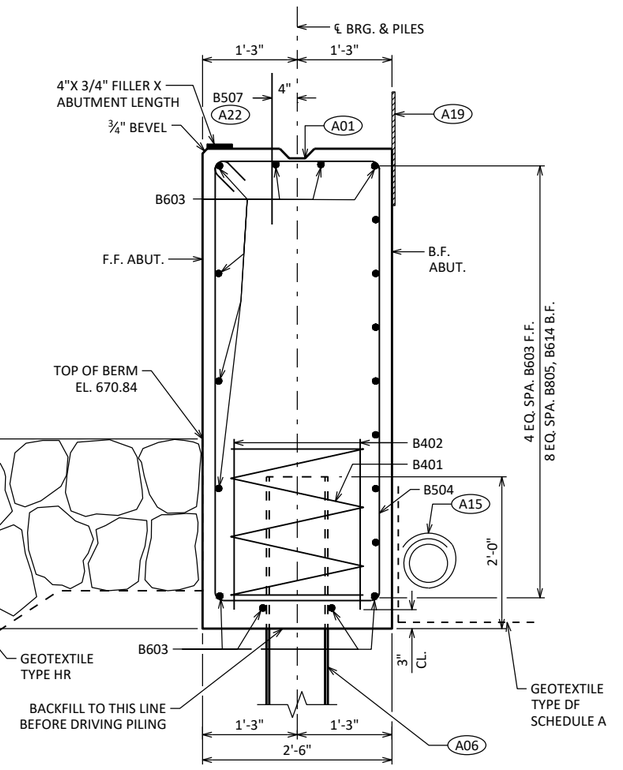
(LOOKING EAST)



PLAN



PILE PLAN



SECTION THRU BODY

LEGEND

- (A01) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 X 6.
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A06) SUPPORT ABUTMENT ON HP 10-INCH X 42 LB STEEL PILING, ESTIMATED 110'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE SHEET 7 FOR DETAILS.
- (A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.
- (A22) BARS @ 1'-0" CTRS. MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. (EMBED 1'-0" INTO CONC.)
- (3) (4) - INDICATES WING NUMBER

F.F. - FRONT FACE
B.F. - BACK FACE
CL. - CLEAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

DRAWN BY EKK | PLANS CK'D JDH

EAST ABUTMENT

SHEET 6
64

8

8

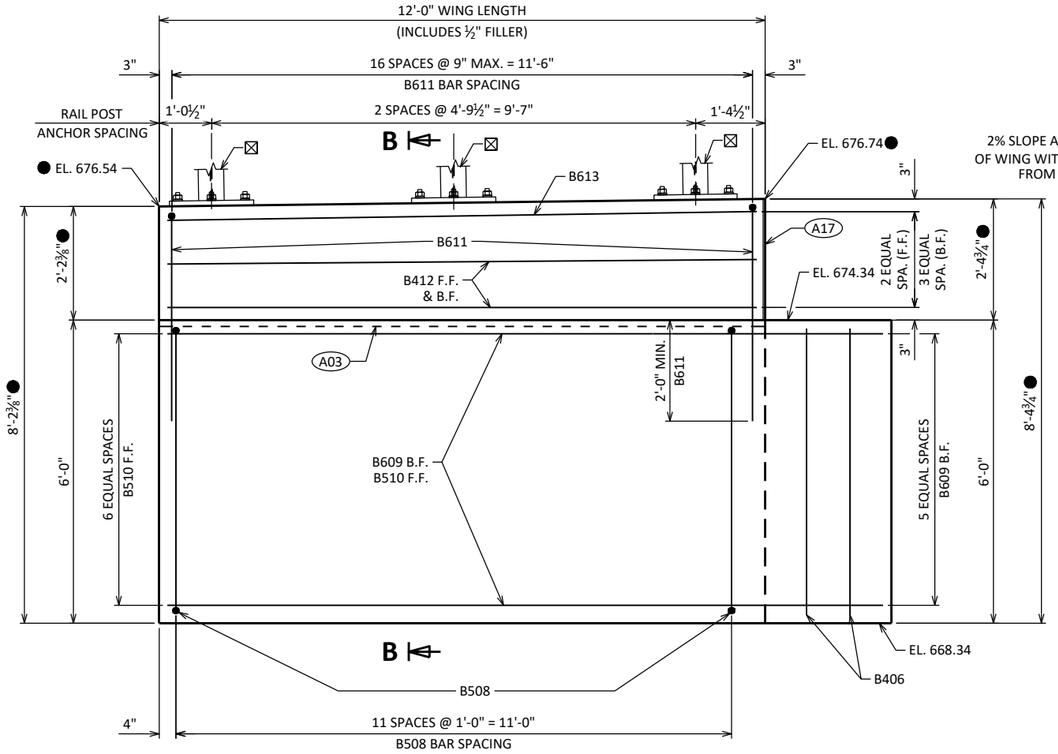
STATE PROJECT NUMBER

7290-00-70

NOTE:

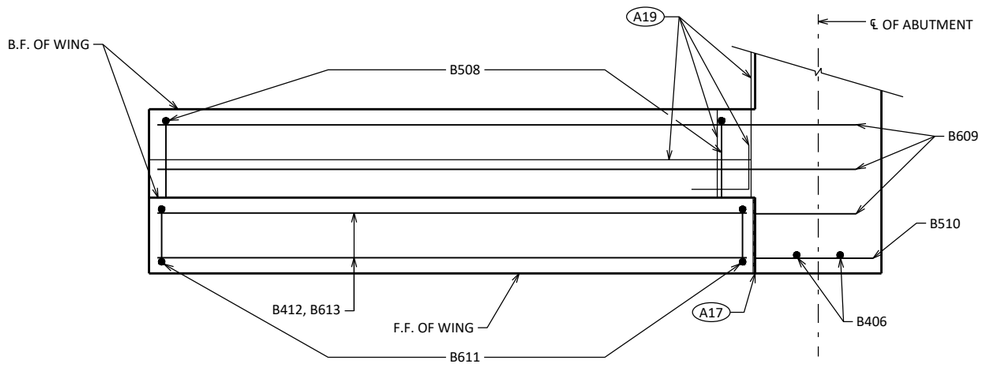
⊠- FOR RAIL POST ANCHOR DETAILS SEE SHEET 13.

●- ELEVATIONS AND DIMENSIONS ARE GIVEN AT THE F.F. OF WING.



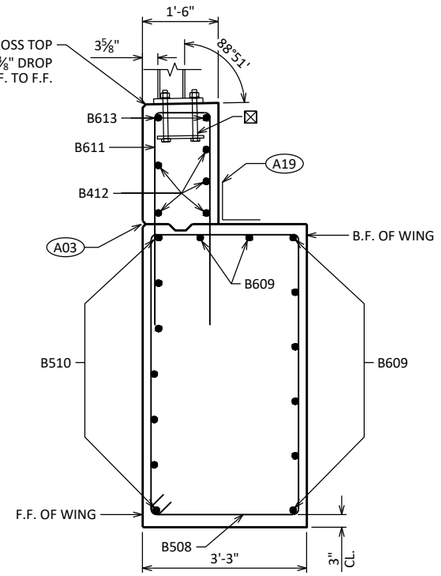
ELEVATION - WING

(LOOKING AT F.F. OF WING)
WING 3 SHOWN. WING 4 SIMILAR.

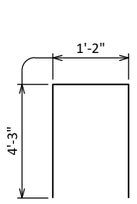


PLAN - WING

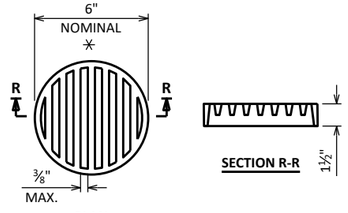
WING 3 SHOWN. WING 4 SIMILAR.



SECTION B-B THRU WING



B611



PLAN

RODENT SHIELD DETAIL

⚹ DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

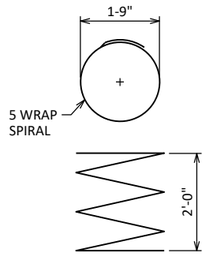
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALLY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH STAINLESS STEEL SHEET METAL SCREWS.

BILL OF BARS - EAST ABUTMENT

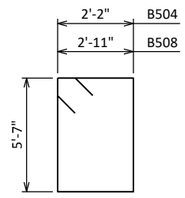
NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
B401		5	28'-0"	X	ABUT. BODY - 1/PILE - SPIRAL WRAP
B402		10	2'-3"		ABUT. BODY - 2/PILE - VERT.
B603		11	32'-2"		ABUT. BODY - F.F., TOP & BOTTOM - HORIZ.
B504		40	16'-2"	X	ABUT. BODY - STIRRUP
B805		14	13'-2"	X	ABUT. BODY - B.F. - HORIZ.
B406		4	5'-7"		ABUT. BODY - END - VERT.
B507	X	31	2'-0"		ABUT. BODY - DOWEL - VERT.
B508	X	24	17'-8"	X	WINGS 3 & 4 - BASE - STIRRUP - VERT.
B609	X	16	13'-11"		WINGS 3 & 4 - BASE - B.F. & TOP - HORIZ.
B510	X	14	14'-2"		WINGS 3 & 4 - BASE - F.F. - HORIZ.
B611	X	34	9'-4"	X	WINGS 3 & 4 - TOP - STIRRUP - VERT.
B412	X	10	11'-7"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.
B613	X	4	11'-7"		WINGS 3 & 4 - TOP - F.F. & B.F. - HORIZ.
B614		7	14'-0"		ABUT. BODY - B.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



B401



B504, B508

B805

LEGEND

(A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 X 6. (18" RMW @ B.F. & ¾" "V" GROOVE @ F.F. IF JOINT IS USED).

(A17) ½" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW TOP OF WING AT INSIDE FACE.

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACK FACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

DRAWN BY EKK | PLANS CK'D JDH

EAST ABUTMENT DETAILS

SHEET 7
65

8

8

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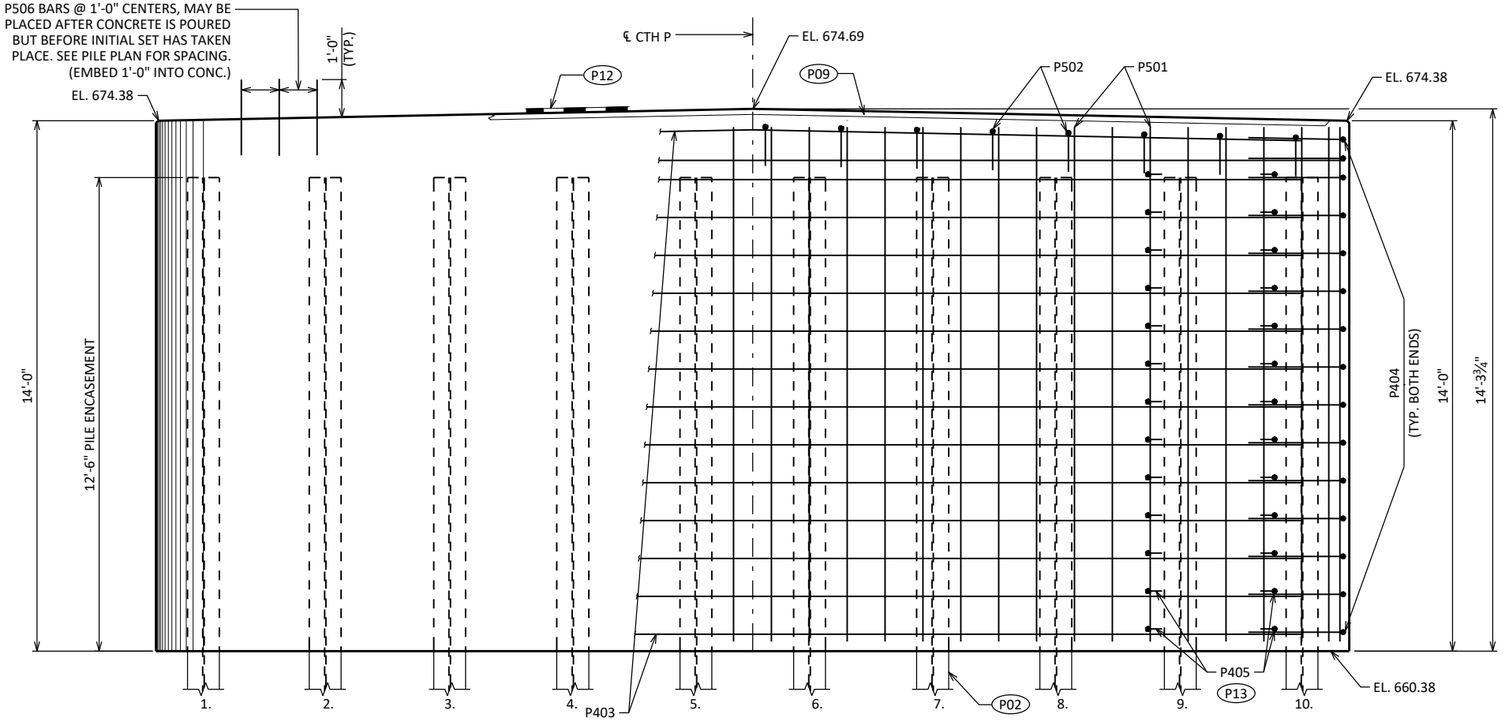
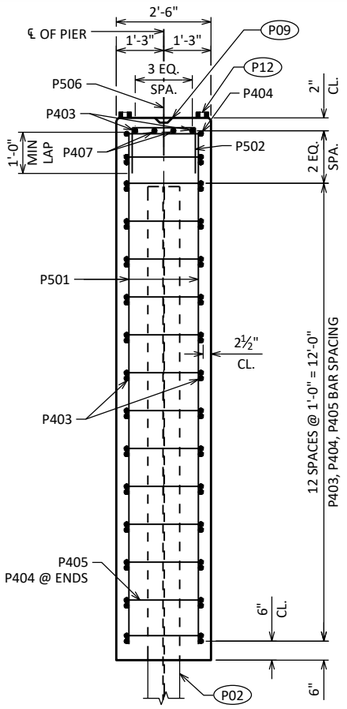
STATE PROJECT NUMBER

7290-00-70



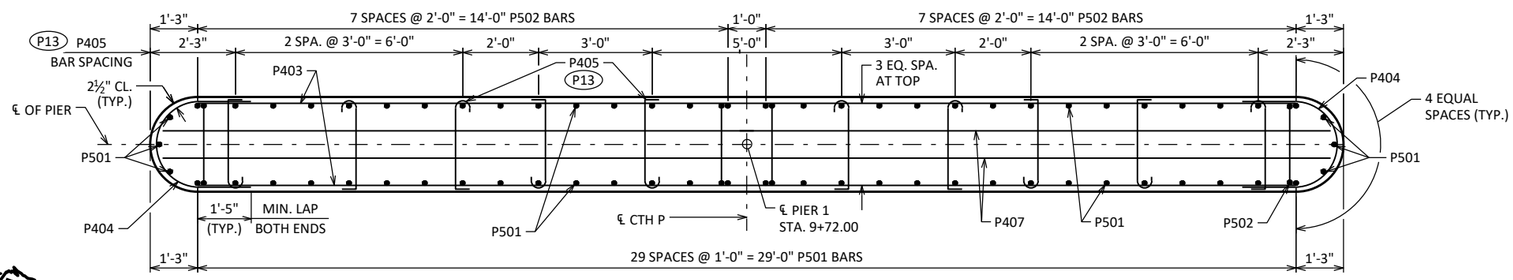
ELEVATION



TYPICAL SECTION THRU PIER

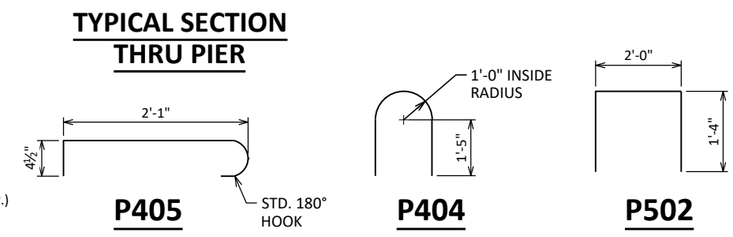
LEGEND

- (P02) SUPPORT PIER ON HP 10-INCH X 42 LB STEEL PILING, ESTIMATED 115'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (P09) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 X 6.
- (P12) 4" X ¾" FILLER, TYPICAL ALL AROUND TOP EDGES OF PIER.
- (P13) ADJACENT TO EACH PILE ONE SIDE ONLY. ALTERNATE THE POSITION OF 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
- CL. CLEAR



ELEVATION

(LOOKING EAST)

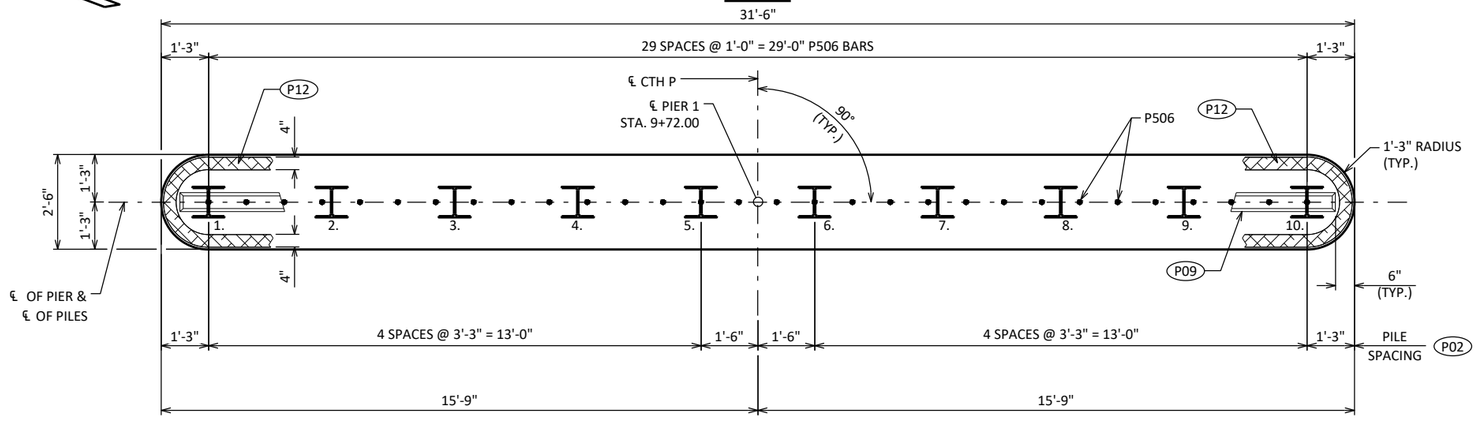


BILL OF BARS - PIER 1

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
P501		66	13'-4"		PIER - VERT.
P502		16	4'-5"	X	PIER - STIRRUPS - TOP - VERT.
P403		30	29'-0"		PIER - SIDES - HORIZ.
P404		30	6'-1"	X	PIER - AT ENDS - HORIZ.
P405		130	2'-11"	X	PIER - TIES - HORIZ.
P506	X	30	2'-0"		PIER - DOWELS @ TOP - VERT.
P407		2	30'-10"		PIER - TOP - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



PILE PLAN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

DRAWN BY EKK | PLANS CK'D JDH

PIER 1

SHEET 8
66

8

8

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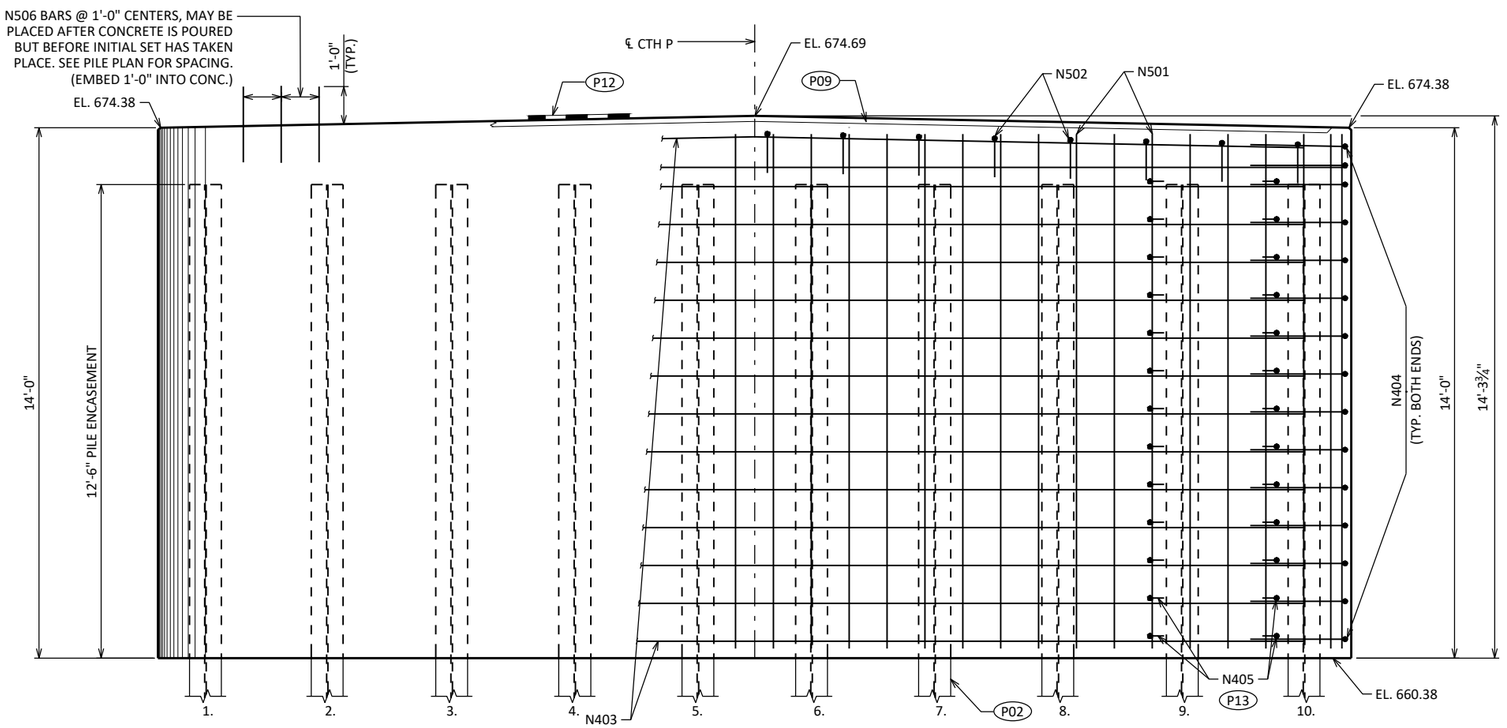
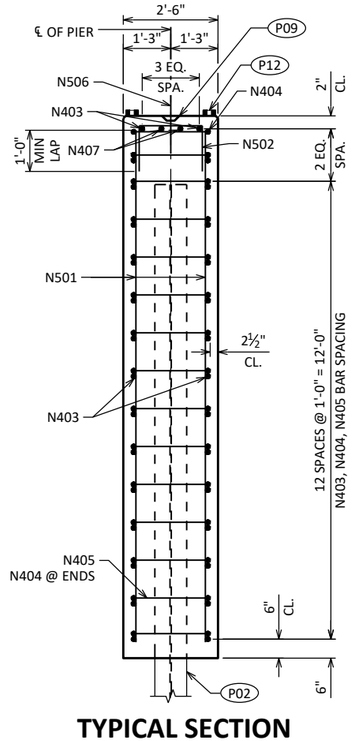


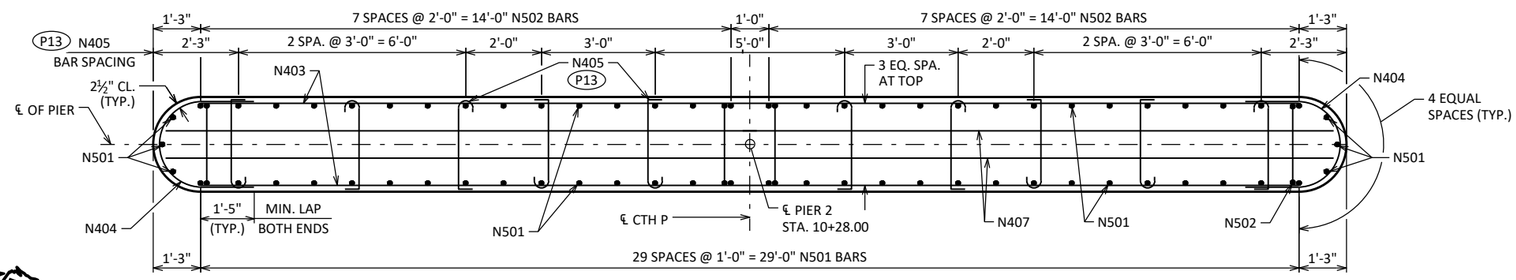
ELEVATION



TYPICAL SECTION THRU PIER

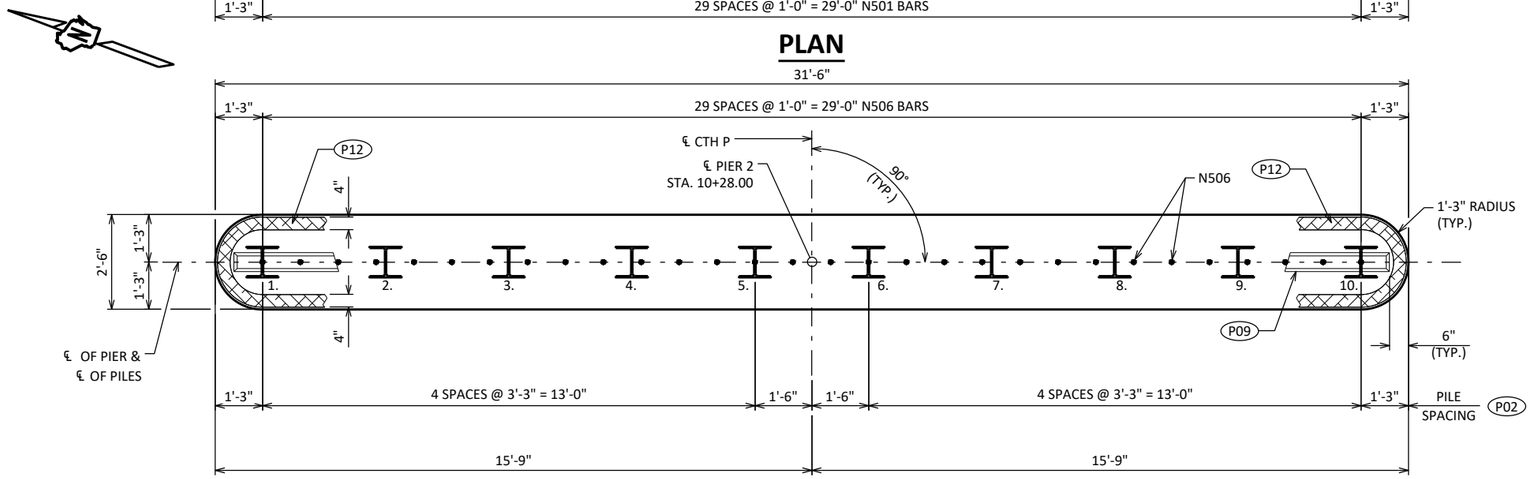
LEGEND

- (P02) SUPPORT PIER ON HP 10-INCH X 42 LB STEEL PILING, ESTIMATED 115'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS PER PILE.
- (P09) CONST. JOINT: KEYWAY FORMED BY A BEVELED 2 X 6.
- (P12) 4" X ¾" FILLER, TYPICAL ALL AROUND TOP EDGES OF PIER.
- (P13) ADJACENT TO EACH PILE ONE SIDE ONLY. ALTERNATE THE POSITION OF 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
- CL. CLEAR



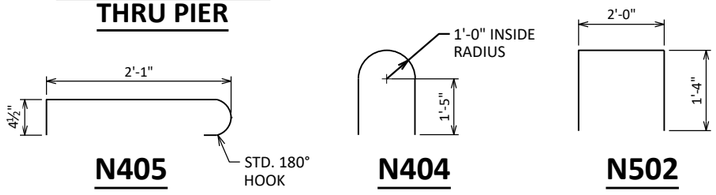
ELEVATION

(LOOKING EAST)



PLAN

PILE PLAN



N405 **N404** **N502**

BILL OF BARS - PIER 2

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
N501		66	13'-4"		PIER - VERT.
N502		16	4'-5"	X	PIER - STIRRUPS - TOP - VERT.
N403		30	29'-0"		PIER - SIDES - HORIZ.
N404		30	6'-1"	X	PIER - AT ENDS - HORIZ.
N405		130	2'-11"	X	PIER - TIES - HORIZ.
N506	X	30	2'-0"		PIER - DOWELS @ TOP - VERT.
N407		2	30'-10"		PIER - TOP - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

DRAWN BY EKK | PLANS CK'D JDH

PIER 2

SHEET 9
67

8

8

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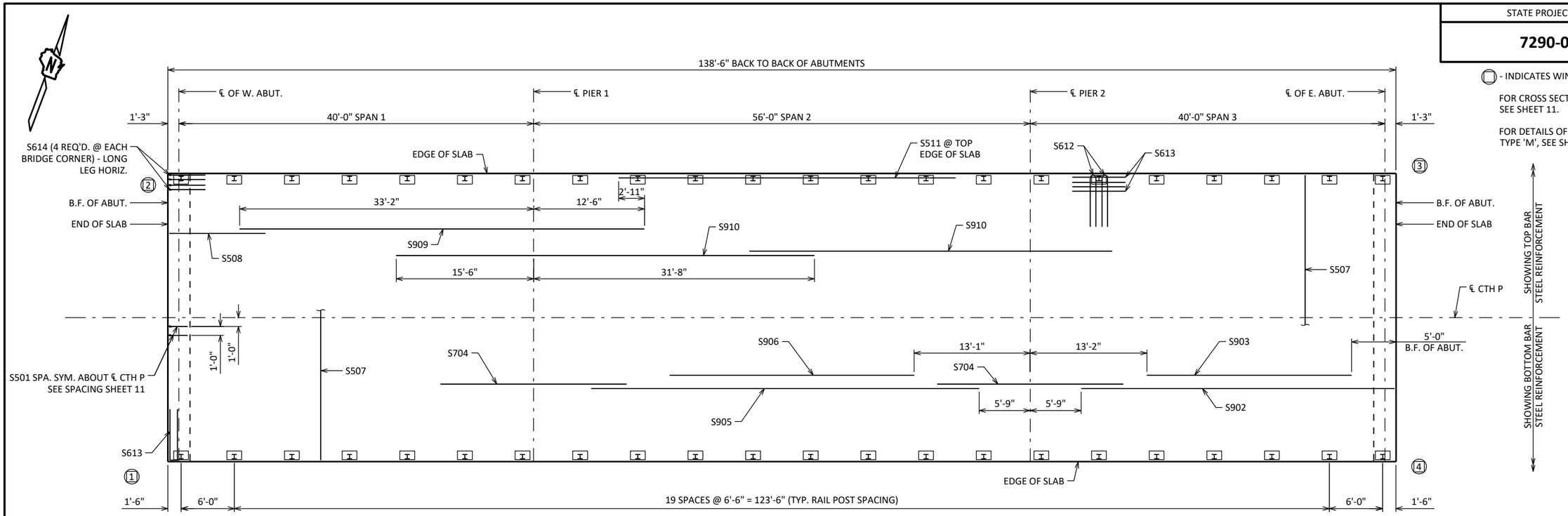
STATE PROJECT NUMBER

7290-00-70

(2) - INDICATES WING NUMBER

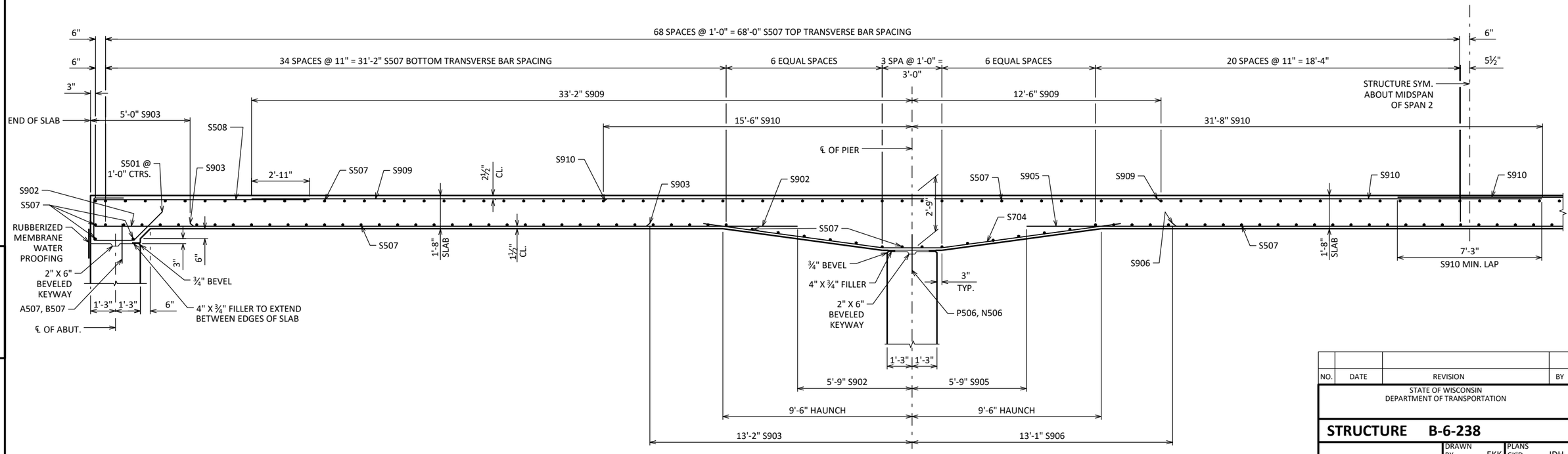
FOR CROSS SECTIONS THRU BRIDGE, SEE SHEET 11.

FOR DETAILS OF RAILING TUBULAR TYPE 'M', SEE SHEET 13.



PLAN

(THREE SPAN HAUNCHED CONCRETE SLAB)



PART LONGITUDINAL SECTION

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

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SUPERSTRUCTURE

SHEET 10
68

8

8

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STATE PROJECT NUMBER

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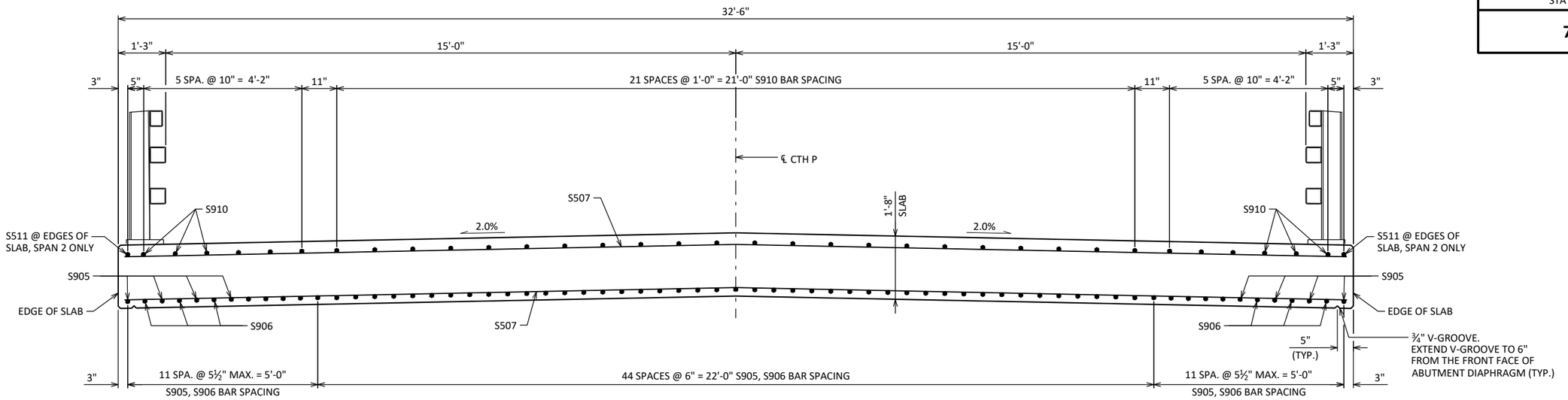
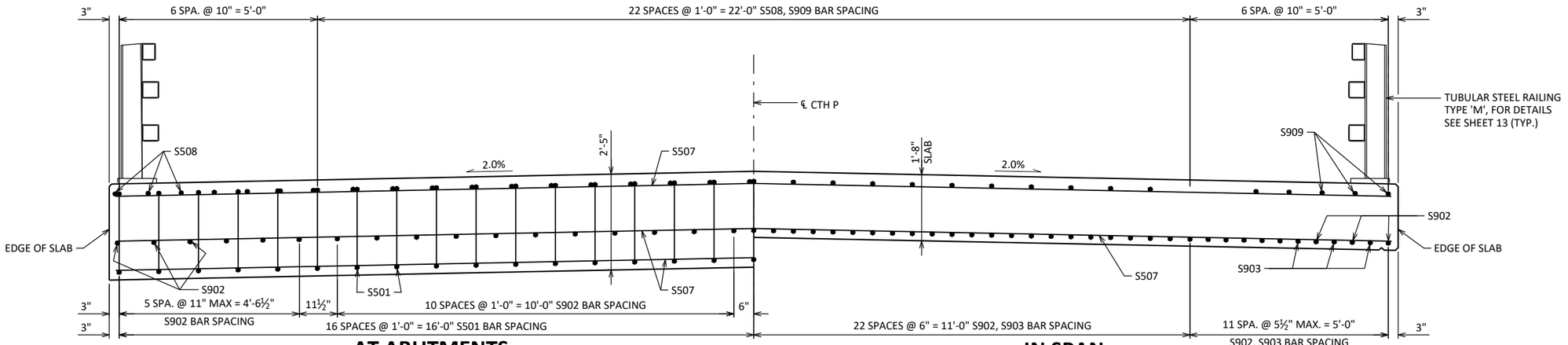


CROSS SECTION THRU BRIDGE - SPAN 2

(LOOKING EAST)

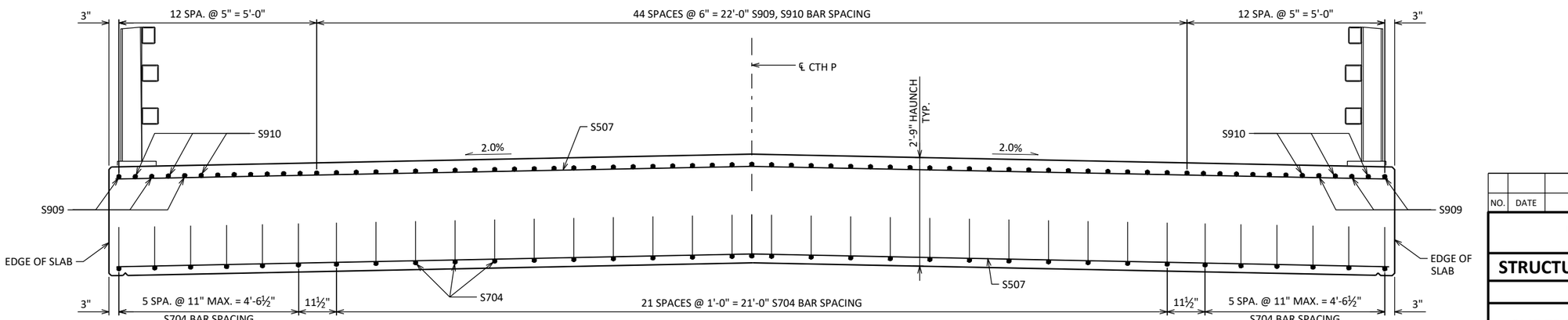


AT ABUTMENTS

IN SPAN

CROSS SECTION THRU BRIDGE SPANS 1 & 3

(LOOKING EAST)



SECTION THRU BRIDGE AT PIERS

(LOOKING EAST)

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

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SUPERSTRUCTURE SECTIONS

SHEET 11
69

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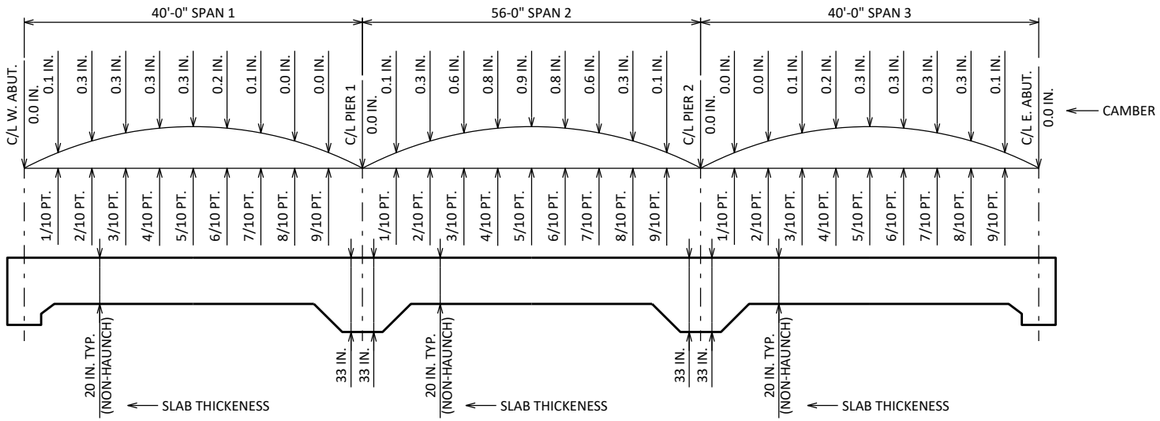


CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS. CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

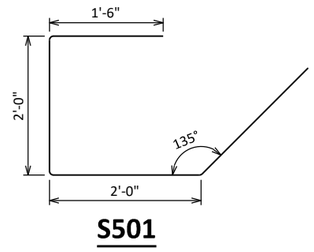
	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION

BILL OF BARS - SUPERSTRUCTURE

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

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	X	66	7'-2"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S902	X	68	35'-4"		SLAB BOTTOM - SPANS 1 & 3 - LONGIT.
S903	X	66	23'-1"		SLAB BOTTOM - SPANS 1 & 3 - LONGIT.
S704	X	68	21'-2"	X	HAUNCH OVER PIERS - LONGIT.
S905	X	34	44'-6"		SLAB BOTTOM - SPAN 2 - LONGIT.
S906	X	33	29'-10"		SLAB BOTTOM - SPAN 2 - LONGIT.
S507	X	286	32'-2"		SLAB TOP & BOTTOM - TRANS.
S508	X	70	10'-10"		SLAB TOP - @ ABUT. - LONGIT.
S909	X	70	45'-8"		SLAB TOP - SPANS 1 & 3 - LONGIT.
S910	X	68	47'-2"		SLAB TOP - SPAN 2 - LONGIT.
S511	X	2	36'-10"		SLAB TOP - SPAN 2 @ EDGE OF SLAB - LONGIT
S612	X	88	11'-4"	X	SLAB @ RAIL POST, TWO PER POST
S613	X	160	6'-0"		SLAB @ RAIL POST, FOUR PER POST
S614	X	16	4'-8"	X	SLAB @ RAIL CORNER POSTS AS NOTED

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



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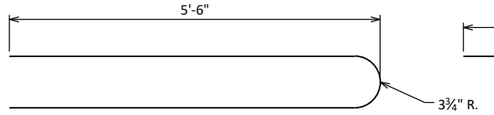

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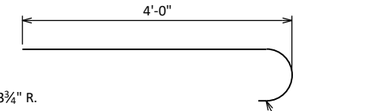

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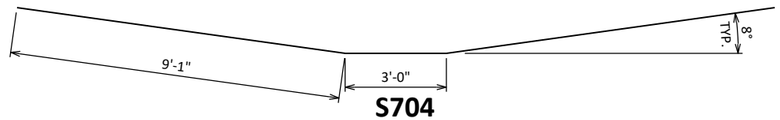

S704

TOP OF SLAB ELEVATIONS

SPAN	LOCATION	C/L BRG. W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L PIER 1
1	N. EDGE OF SLAB	676.76	676.82	676.87	676.92	676.97	677.01	677.05	677.09	677.13	677.16	677.18
	C/L	677.08	677.14	677.20	677.25	677.29	677.34	677.38	677.42	677.45	677.48	677.51
	S. EDGE OF SLAB	676.76	676.82	676.87	676.92	676.97	677.01	677.05	677.09	677.13	677.16	677.18

SPAN	LOCATION	C/L PIER 1	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L PIER 2
2	N. EDGE OF SLAB	677.18	677.21	677.24	677.26	677.27	677.27	677.27	677.26	677.24	677.21	677.18
	C/L	677.51	677.54	677.56	677.58	677.59	677.59	677.59	677.58	677.56	677.54	677.51
	S. EDGE OF SLAB	677.18	677.21	677.24	677.26	677.27	677.27	677.27	677.26	677.24	677.21	677.18

SPAN	LOCATION	C/L PIER 2	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	C/L BRG. E. ABUT.
3	N. EDGE OF SLAB	677.18	677.16	677.13	677.09	677.05	677.01	676.97	676.92	676.87	676.82	676.76
	C/L	677.51	677.48	677.45	677.42	677.38	677.34	677.29	677.25	677.20	677.14	677.08
	S. EDGE OF SLAB	677.18	677.16	677.13	677.09	677.05	677.01	676.97	676.92	676.87	676.82	676.76

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	ABUTMENT	5/10 PT.	PIER 1	5/10 PT.	PIER 2	5/10 PT.	ABUTMENT
N. EDGE OF SLAB							
C/L							
S. EDGE OF SLAB							

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE C/L OF ABUTMENTS, THE C/L OF PIERS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR C/L. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

NOTES

FILL IN THE TABLE OF "SURVEY TOP OF SLAB ELEVATIONS" FOR EACH SPAN ON AS BUILT PLANS.

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

DRAWN BY EKK | PLANS CK'D JDH

SUPERSTRUCTURE DETAILS

SHEET 12
70

SCALE = 2.25

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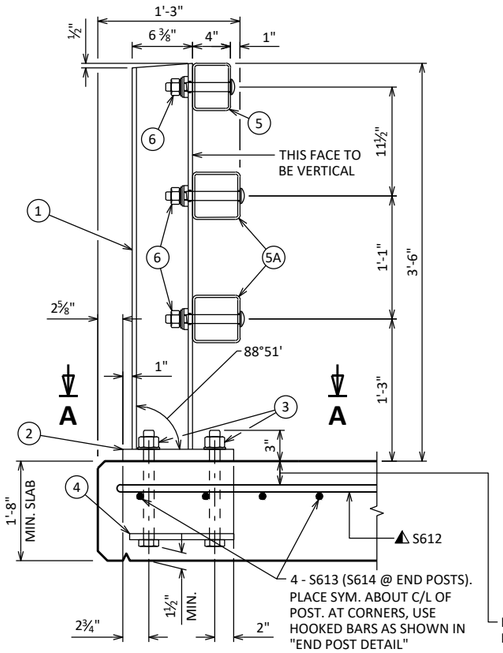
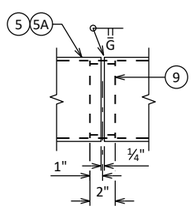
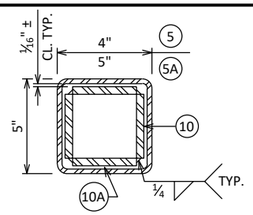


SECTION THRU RAILING ON DECK

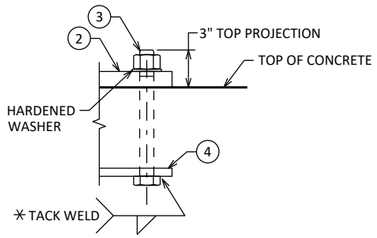


SHOP RAIL SPLICE DETAIL

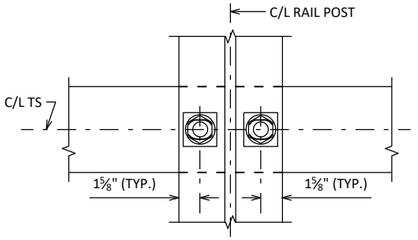
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



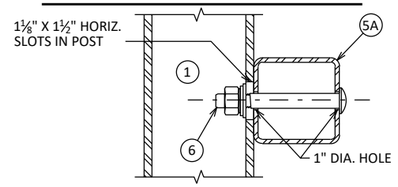
SECTION B-B



ANCHOR BOLTS



SECTION THRU POST WEB



SECTION THRU RAIL

NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

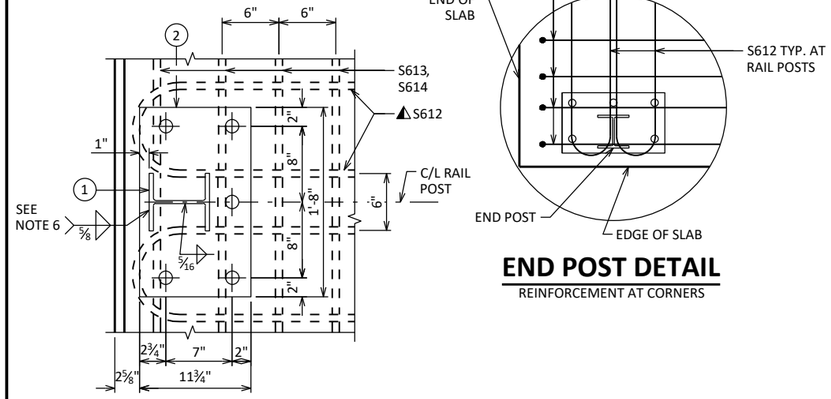
TYPICAL RAIL TO POST CONNECTIONS

LEGEND

1. W6 X 25 WITH 1½" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1¼" X 11¾" X 1'-8" WITH 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
4. ⅝" X 11" X 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 X 4 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 X 5 X 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1⅝" X 1⅝" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1¼" LONGIT. SLOTTED HOLES IN PLATE NO. 10A. AT FIELD JOINTS AND 15/16" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 15/16" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.

GENERAL NOTES

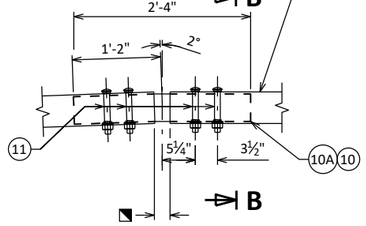
1. BID ITEM SHALL BE "RAILING TUBULAR TYPE M" WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL ⅛ TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.



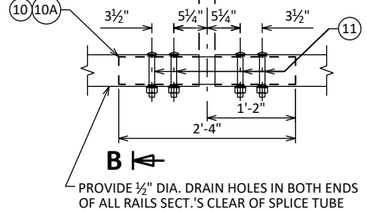
SECTION A-A

END POST DETAIL

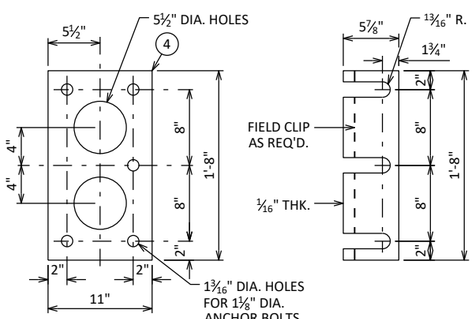
REINFORCEMENT AT CORNERS



WING 1 JOINT DETAIL



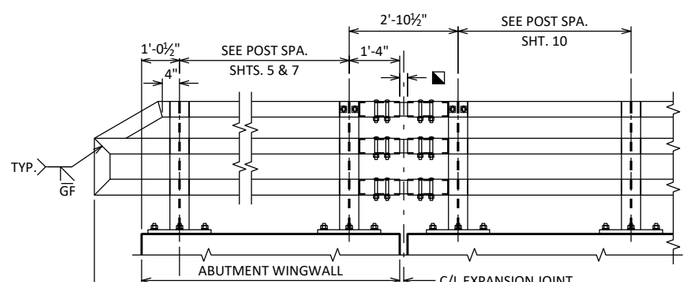
WING 2, EAST ABUTMENT, AND FIELD ERECTION JOINT DETAIL



ANCHOR PLATE

AT RAIL TO DECK CONNECTION

POST SHIM DETAIL



PART ELEVATION OF RAILING

- TIE TO TOP MAT OF STEEL.
- ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.
- ¼" TO ¾" OPENING FOR A1 ABUTMENT.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-6-238

DRAWN BY	PLANS CK'D
EKK	JDH

TUBULAR STEEL RAILING TYPE 'M'

SHEET 13
71

SCALE = 2.00

8

8

G:\05\05643\05643027\CADD\SheetsPlan\Structures\05643027_B-6-238_13 TUBULAR STEEL RAILING TYPE M.dwg

5/28/2025 10:37 AM

TEMPORARY BYPASS 'TB' CONSTRUCTION EARTHWORK SUMMARY

STA	EXCAVATION COMMON CY	FILL (1) CY	EXPANDED FILL (1) (2) CY	WASTE (1) CY	BORROW CY
17+10.18	-	-	-	-	-
	4.43	0.00	0.00	4.43	-4.43
17+25.00	-	-	-	-	-
	7.56	0.00	0.00	7.56	-7.56
17+50.00	-	-	-	-	-
	7.22	0.35	0.00	7.22	-7.22
17+75.00	-	-	-	-	-
	7.97	2.71	4.00	3.97	-3.97
18+00.00	-	-	-	-	-
	14.06	4.58	6.00	8.06	-8.06
18+30.00	-	-	-	-	-
	9.19	5.44	7.00	2.19	-2.19
18+50.00	-	-	-	-	-
	4.01	14.16	18.00	-13.99	13.99
18+70.00	-	-	-	-	-
	5.13	41.36	54.00	-48.87	48.87
19+00.00	-	-	-	-	-
	10.71	62.07	81.00	-70.29	70.29
19+30.00	-	-	-	-	-
	2.11	28.24	37.00	-34.89	34.89
19+39.50	-	-	-	-	-
TEMPORARY STRUCTURE STATION 20+00'TB'					
20+60.50	-	-	-	-	-
	0.04	3.64	5.00	-4.96	4.96
20+69.00	-	-	-	-	-
	3.77	1.85	2.00	1.77	-1.77
20+85.00	-	-	-	-	-
	8.64	0.31	0.00	8.64	-8.64
20+99.91	-	-	-	-	-
SUBTOTALS					
W. APPROACH	72.39	158.91	207.00	-134.61	134.61
E. APPROACH	12.45	5.80	7.00	5.45	-5.45
UNUSABLE PAVEMENT					0.00
TOTALS	84.84	164.71	214.00	0.00	129.00

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%

CTH P EARTHWORK SUMMARY

STA	EXCAVATION COMMON CY	FILL (1) CY	EXPANDED FILL (1) (2) CY	WASTE (1) CY	BORROW CY
8+68.32	-	-	-	-	-
	20.23	0.00	0.00	20.23	-20.23
8+75.00	-	-	-	-	-
	57.44	6.79	9.00	48.44	-48.44
9+00.00	-	-	-	-	-
	26.61	16.99	22.00	4.61	-4.61
9+19.22	-	-	-	-	-
STRUCTURE B-06-0238					
10+81.25	-	-	-	-	-
	13.65	0.34	0.00	13.65	-13.65
10+90.00	-	-	-	-	-
	32.96	0.03	0.00	32.96	-32.96
11+05.52	-	-	-	-	-
	14.89	0.00	0.00	14.89	-14.89
11+12.35	-	-	-	-	-
SUBTOTALS					
W. APPROACH	104.28	23.78	31.00	73.28	-73.28
E. APPROACH	61.50	0.37	0.00	61.50	-61.50
UNUSABLE PAVEMENT (3)					48.00
TOTALS	165.78	24.15	31.00	134.78	0.00

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(3) - EXISTING PAVEMENT BASED ON AVE THK OF 4.0"

TEMPORARY BYPASS 'TB' REMOVAL EARTHWORK SUMMARY

STA	EXCAVATION COMMON CY	FILL (1) CY	EXPANDED FILL (1) (2) CY	WASTE (1) CY	BORROW CY
17+10.18	-	-	-	-	-
	0.01	2.62	3.00	-2.99	2.99
17+25.00	-	-	-	-	-
	0.13	2.68	3.00	-2.87	2.87
17+50.00	-	-	-	-	-
	2.36	0.51	1.00	1.36	-1.36
17+75.00	-	-	-	-	-
	8.95	0.00	0.00	8.95	-8.95
18+00.00	-	-	-	-	-
	19.13	0.01	0.00	19.13	-19.13
18+30.00	-	-	-	-	-
	20.82	0.00	0.00	20.82	-20.82
18+50.00	-	-	-	-	-
	34.31	0.00	0.00	34.31	-34.31
18+70.00	-	-	-	-	-
	75.32	0.67	1.00	74.32	-74.32
19+00.00	-	-	-	-	-
	97.38	6.74	9.00	88.38	-88.38
19+30.00	-	-	-	-	-
	39.42	1.92	2.00	37.42	-37.42
19+39.50	-	-	-	-	-
TEMPORARY STRUCTURE STATION 20+00'TB'					
20+60.50	-	-	-	-	-
	13.23	0.00	0.00	13.23	-13.23
20+69.00	-	-	-	-	-
	16.84	0.00	0.00	16.84	-16.84
20+85.00	-	-	-	-	-
	8.04	0.00	0.00	8.04	-8.04
20+99.91	-	-	-	-	-
SUBTOTALS					
W. APPROACH	297.83	15.15	19.00	278.83	-278.83
E. APPROACH	38.11	0.00	0.00	38.11	-38.11
UNUSABLE PAVEMENT (4)					55.00
TOTALS	335.94	15.15	19.00	316.94	0.00

(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.
(2) - FILL EXPANSION 30%
(4) - ASPHALTIC SURFACE TEMPORARY

FINAL GRADE TO MATCH
EXISTING AFTER REMOVAL
OF TEMPORARY BYPASS.

STA 18+25.63'TB'
℄

GRAVEL FE
STA 8+25 RT
MAINTAIN 10:1 MIN. TEMPORARY SLOPES

EX
RW

8+25

STA 17+73.62'TB'
℄

EX
RW

7+75

STA 17+10.18'TB'
℄

EX
RW

7+12

10 FT

10 FT

BEGIN CONSTRUCTION OF BYPASS ROAD
MATCH EXISTING
STA 17+10.18'TB' = STA 7+12.03

690
680
670
665
-70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70

9

9

PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	CROSS SECTIONS: CTH P	SHEET 73	E

FILE NAME : G:\05\05643\05643027\CADD\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090201-xs

PLOT DATE : 5/29/2025 10:54 AM PLOT BY : CONNOR GIRTEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

STRUCTURE B-06-0238

TEMPORARY BRIDGE

FINAL GRADE TO MATCH EXISTING AFTER REMOVAL OF TEMPORARY BYPASS.

STA 19+17.22'TB'
R/L

EX RW

3.0:1 4.0:1 4.0% 2.0% 2.0% 4.0% 4.0:1 6.0:1

675.74 -23.14

675.40 -15.53

675.70 0.00

675.41 14.69

675.25 22.50

674.19 28.88

670.55 -37.23

9+19

STA 18+99.03'TB'
R/L

EX RW

4.2:1 4.1:1 4.1:1 9.2% 2.4% 2.4% 2.0% 4.0% 4.0:1 10.0:1

674.71 -25.47

674.89 -18.01

675.33 0.00

675.03 14.98

674.87 22.80

674.45 27.03

671.15 -40.27

9+00

STA 18+68.72'TB'
R/L

EX RW

1.1% 0.7% 2.0% 2.0% 8.0:1

674.34 -50.33

674.44 -42.75

674.52 -36.95

674.59 -29.62

674.67 -21.08

674.77 -12.27

674.71 -3.16

674.68 0.00

674.43 12.53

674.15 26.42

10 FT

10 FT

8+68

BEGIN PROJECT
MATCH EXISTING
STA 8+68.32

9

9

PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	CROSS SECTIONS: CTH P	SHEET 74	E

FILE NAME : G:\05\05643\05643027\CADD\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090202-xs

PLOT DATE : 5/29/2025 10:54 AM

PLOT BY : CONNOR GIRTEN

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

FINAL GRADE TO MATCH EXISTING AFTER REMOVAL OF TEMPORARY BYPASS.

END PROJECT
MATCH EXISTING
STA 11+09.75

11+06

EX RW

0.8% 3.4% 4.0% 4.1%

675.10 -13.10 | 675.21 0.00 | 673.97 33.87

10+90

EX RW

STA 20+86.86'TB'
R/L

3.0:1 4.0:1 4.0% 1.8% 3.0% 3.4% 9.4:1

674.36 -25.05 | 675.12 -22.74 | 675.26 -15.00 | 675.53 0.00 | 675.03 16.58 | 674.98 19.80 | 675.87 24.18

10+81

EX RW

STA 20+78.11'TB'
R/L

5.0:1 5.0:1 4.0% 2.0% 2.0% 4.0% 4.0:1 50.0:1

674.82 -26.09 | 675.21 -24.15 | 675.40 -15.00 | 675.70 0.00 | 675.40 15.00 | 675.24 22.81 | 675.20 24.65

STRUCTURE B-06-0238

TEMPORARY BRIDGE

10 FT

10 FT

9

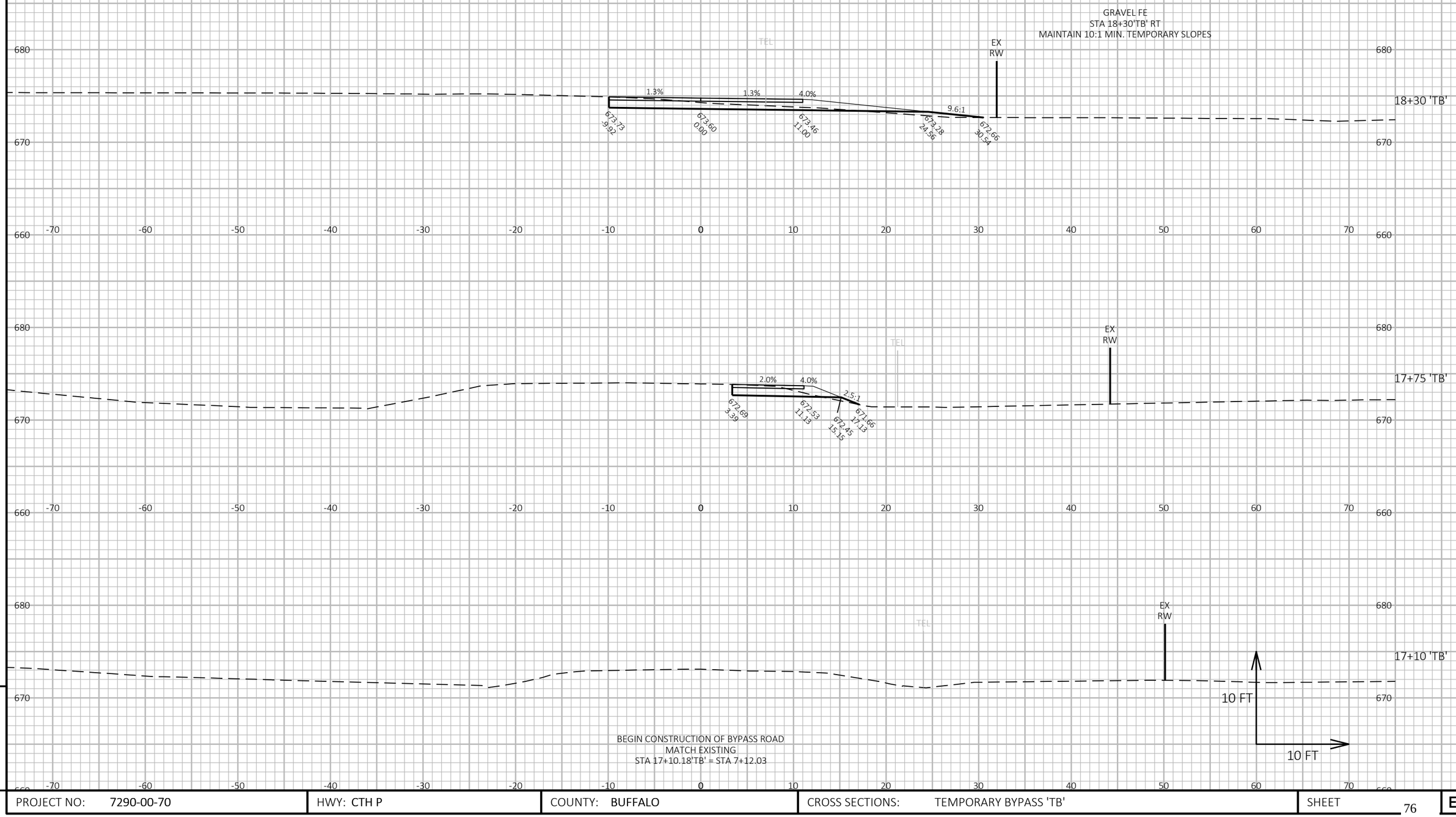
9

PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	CROSS SECTIONS: CTH P	SHEET 75	E

FILE NAME : G:\05\05643\05643027\CADD\SHEETSPLAN\090201-XS.DWG
LAYOUT NAME - 090203-xs

PLOT DATE : 5/29/2025 10:54 AM PLOT BY : CONNOR GIRTEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

GRAVEL FE
STA 18+30'TB' RT
MAINTAIN 10:1 MIN. TEMPORARY SLOPES

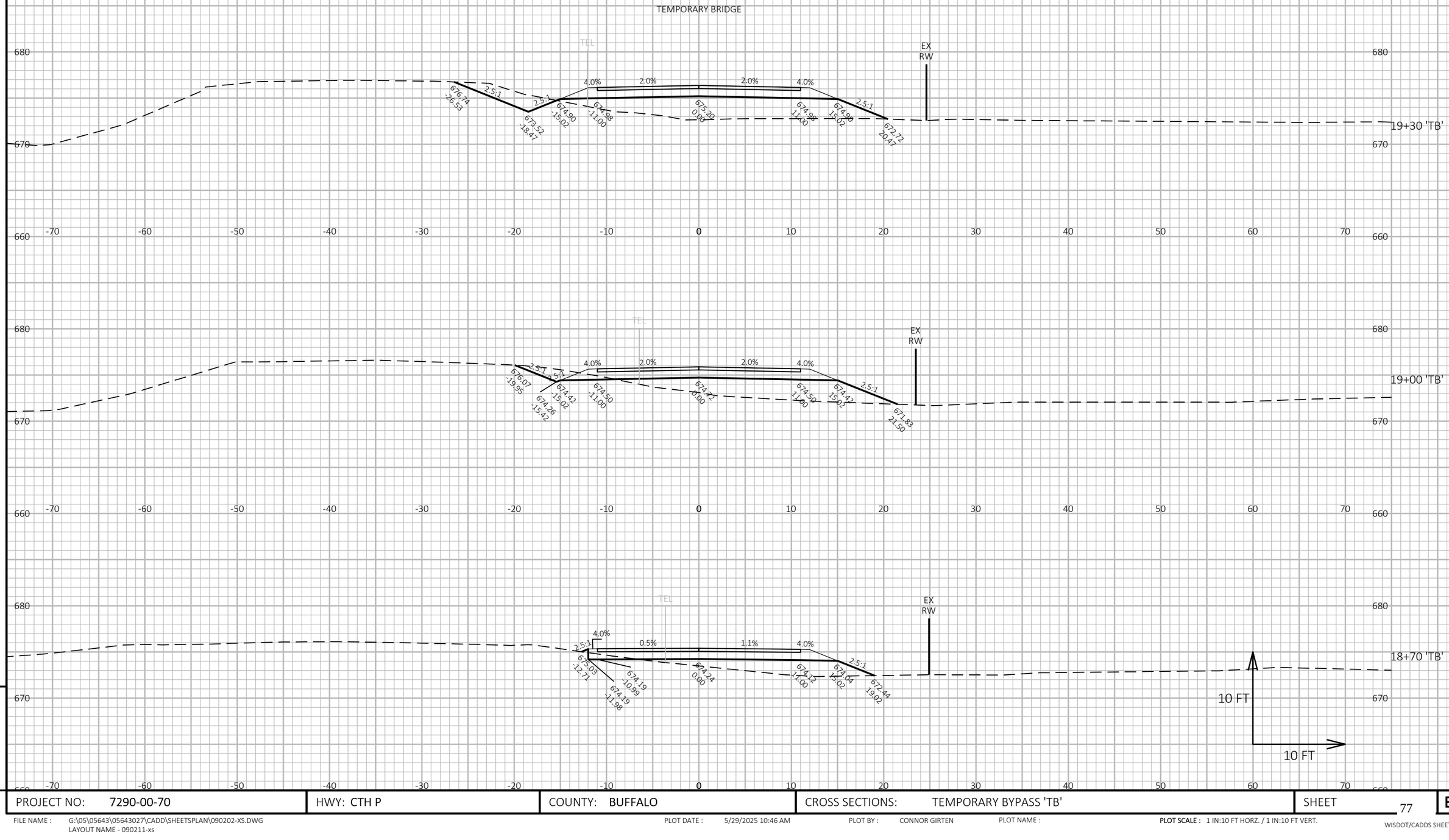


PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	CROSS SECTIONS: TEMPORARY BYPASS 'TB'	SHEET 76	E

FILE NAME : G:\05\05643\05643027\CADD\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090210-xs

PLOT DATE : 5/29/2025 10:46 AM PLOT BY : CONNOR GIRTEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

TEMPORARY BRIDGE

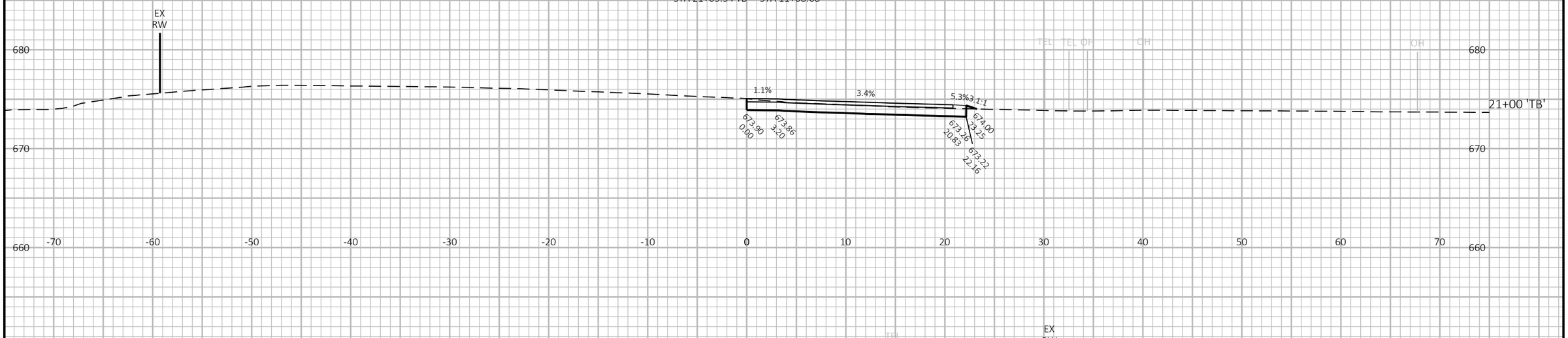


PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	CROSS SECTIONS: TEMPORARY BYPASS 'TB'	SHEET 77	E

FILE NAME : G:\05\05643\05643027\CADD\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090211-xs

PLOT DATE : 5/29/2025 10:46 AM PLOT BY : CONNOR GIRTEN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

END CONSTRUCTION OF BYPASS ROAD
MATCH EXISTING
STA 21+05.54'TB' = STA 11+08.68



PROJECT NO: 7290-00-70	HWY: CTH P	COUNTY: BUFFALO	CROSS SECTIONS: TEMPORARY BYPASS 'TB'	SHEET 78	E

FILE NAME : G:\05\05643\05643027\CADD\SHEETSPLAN\090202-XS.DWG
LAYOUT NAME - 090212-xs

PLOT DATE : 5/30/2025 9:24 AM PLOT BY : CONNOR GIRTEN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

Notes

Wisconsin Department of Transportation

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