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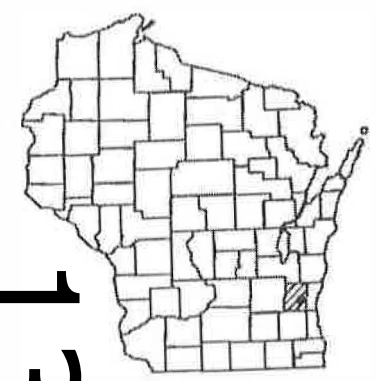
PROJECT ID: 2736-00-70

NOVEMBER 2021
ORDER OF SHEETS

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

TOTAL SHEETS = 60

13



DESIGN DESIGNATION 2736-00-70

AADT	2722	= 30
AADT	2042	= 40
G.M.V.		= 10.1
Q.D.		= 60/40
T		= 10%
DESIGN SPEED		= 20 MPH
ESALS		= 9.700

CONVENTIONAL SYMBOLS

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

PROFILE

GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

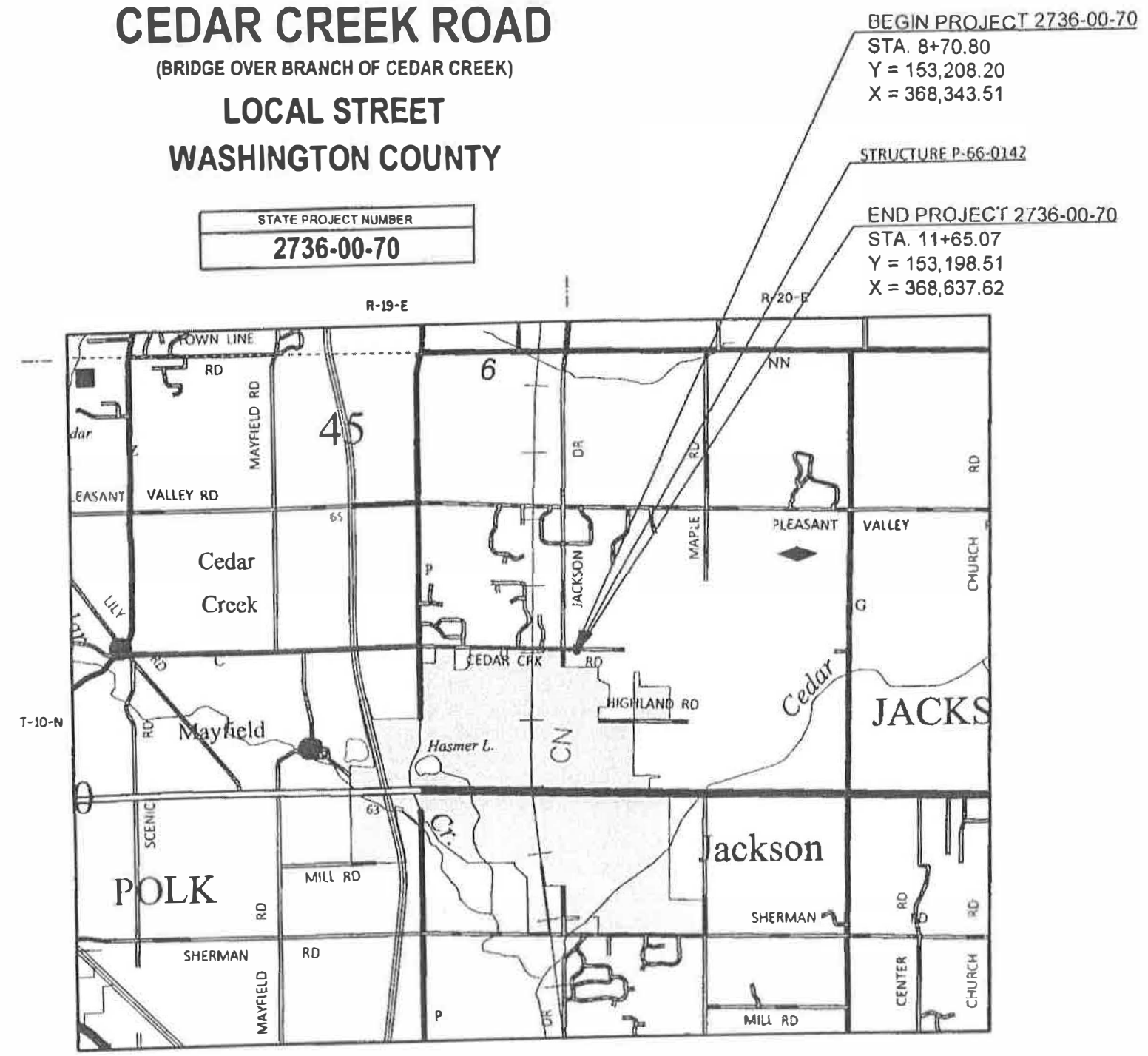
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CEDAR CREEK ROAD
(BRIDGE OVER BRANCH OF CEDAR CREEK)
LOCAL STREET
WASHINGTON COUNTY

STATE PROJECT NUMBER
2736-00-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2736-00-70	WISC 2022010	1



BEGIN PROJECT 2736-00-70
STA. 8+70.80
Y = 153,208.20
X = 368,343.51

STRUCTURE P-66-0142

END PROJECT 2736-00-70
STA. 11+65.07
Y = 153,198.51
X = 368,637.62

LAYOUT
SCALE 1" = 100'

TOTAL NET LENGTH OF CENTERLINE = 0.056 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES WASHINGTON COUNTY NAVD88 (2011 ADJUSTMENT), IN U.S. SURVEY FEET VALUES ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES. ELEVATIONS SHOWN ON THIS PLAN REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988, NAVD (2012)

ACCEPTED FOR
TOWN OF JACKSON
DATE 7-28-21 Robert H. Hartman

ORIGINAL PLANS PREPARED BY
MSA
1702 Pankratz St. Madison, WI 53704
608-242-7779 1-800-446-0679 Fax: 608-242-5664

WISCONSIN
CHAD D. WAGNER
E-45546
MADISON
WI
PROFESSIONAL ENGINEER
DATE 7/28/21

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: MSA PROFESSIONAL SERVICES, INC.
Designer: MSA PROFESSIONAL SERVICES, INC.
Project Manager: KATHLEEN KRAMER
Regional Examiner: SE REGION
Regional Supervisor: JEFF BOHLEN

APPROVED FOR THE DEPARTMENT
DATE 7-28-21 Kathleen Kramer
Digitally signed by Kathleen Kramer
Date: 2021.07.28
16:09:03 -0500

GENERAL NOTES

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS SHALL BE FERTILIZED, SEEDED AND EROSION CONTROL MAT AS DIRECTED BY THE ENGINEER.

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.

SILT FENCE AND TURBIDITY BARRIER TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER AND IN PLACE PRIOR TO BRIDGE REMOVAL.

TAPER THE ASPHALTIC SURFACE FROM 12.25 FEET MEASURED FROM C/L OF ROAD AT THE END OF THE BRIDGE TO 10.00 FEET AT +/- 25 FEET FROM THE BRIDGE ENDS.

WETLANDS ARE PRESENT OUTSIDE THE EXISTING TOE OF SLOPE. AREAS OUTSIDE THE SLOPE INTERCEPTS SHALL NOT BE DISTURBED.

DESIGN CONTACT

MSA PROFESSIONAL SERVICES, INC.
ATTN: CHAD WAGNER, P.E.
1702 PANKRATZ STREET
MADISON, WI 53704
PHONE: (608) 242-6651
EMAIL: CWAGNER@MSA-PS.COM

TOWN OF JACKSON
ATTN: BOB HARTWIG
3146 DIVISION ROAD
JACKSON, WI 53037
PHONE: (414) 313-7514
EMAIL: BOBHARTWIG777@GMAIL.COM

UTILITIES

AT&T TELEPHONE
ATTN: DEAN HERRO
435 S 95TH STREET
MILWAUKEE, WI 53214
PHONE: (262) 226-9636
EMAIL: dh2572@ATT.COM

DNR LIAISON

DEPARTMENT OF NATURAL RESOURCES
ATTN.: KRISTINA BETZOLD
2300 N MARTIN LUTHER KING JR DRIVE
MILWAUKEE, WI 53187
PHONE: (414) 343-9346
EMAIL: KRISTINA.BETZOLD@WISCONSIN.GOV

STANDARD ABBREVIATIONS

- AC ACRES
- AH AHEAD
- ALUM. ALUMINUM
- A.P. ACCESS POINT
- ASPH ASPHALT
- AVE AVENUE
- BK BACK
- BLK BLOCK
- BM BENCHMARK
- CABC CRUSHED AGGREGATE BASE COURSE
- CL or CENTERLINE
- Δ CENTRAL ANGLE or DELTA
- CONC CONCRETE
- CP CONTROL POINT
- CSM CERTIFIED SURVEY MAP
- D DEGREE OF CURVE
- DIA DIAMETER
- E EAST
- EB EASTBOUND
- ET AL AND OTHERS
- EW ENDWALL
- EXIST EXISTING
- FT FOOT
- FT2 SQUARE FEET
- GN GRID NORTH
- HYD HYDRANT
- IN INCH
- INL INLET
- IP IRON PIPE
- L LENGTH
- LF LENGTH OF CURVE
- LC LINEAL FEET
- LCB LONG CHORD
- LP LONG CHORD BEARING
- LT LOW POINT
- LT LEFT
- MH MANHOLE
- MI MILE
- MON MONUMENT
- N NORTH
- NB NORTHBOUND
- NO NUMBER
- PB PULLBOX
- PC POINT OF CURVATURE
- PI POINT OF INTERSECTION
- PT POINT
- PT POINT OF TANGENCY
- PL PROPERTY LINE
- PLE PERMANENT LIMITED EASEMENT
- POB POINT OF BEGINNING
- R RADIUS
- R RANGE
- RCP REINFORCED CONCRETE PIPE
- REQ'D REQUIRED
- RL or R/L REFERENCE LINE
- RP RADIUS POINT
- RT RIGHT
- R/W RIGHT-OF-WAY
- RD ROAD
- SAN SANITARY SEWER
- S SOUTH
- SB SOUTHBOUND
- SL SPECIAL LOGO
- SQ SQUARE
- STD STANDARD
- SEC SECTION
- SSPRC STORM SEWER PIPE REINFORCED CONCRETE
- ST STREET
- STA STATION
- STM STORM SEWER
- STR STRUCTURE
- T TANGENT
- TAN TANGENT
- TEMP TEMPORARY
- TLE TEMPORARY LIMITED EASEMENT
- T or TN TOWN
- TYP TYPICAL
- UD UNDERDRAIN
- WM WATERMAIN
- WV WATER VALVE
- W WEST
- WB WESTBOUND
- X EAST GRID COORDINATE
- Y NORTH GRID COORDINATE

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
MEDIAN STRIP TURF	0.19	0.20	0.24	0.19	0.22	0.26	0.20	0.23	0.30	0.20	0.25	0.30
SIDE SLOPE TURF			0.25			0.27			0.28			0.30
PAVEMENT:	0.40 - 0.60											
ASPHALT:	0.70 - 0.95											
CONCRETE:	0.80 - 0.95											
BRICK:	0.70 - 0.80											
DRIVES, WALKS:	0.75 - 0.85											
ROOFS:	0.75 - 0.95											
GRAVEL ROADS, SHOULDERS	0.40 - 0.60											

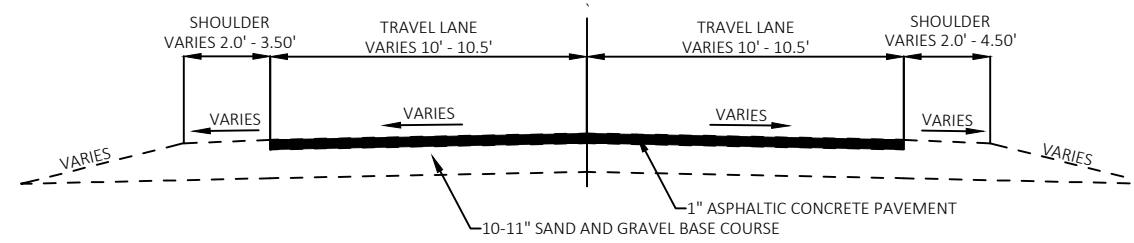
TOTAL PROJECT AREA = 0.579 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.487 ACRES

*DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

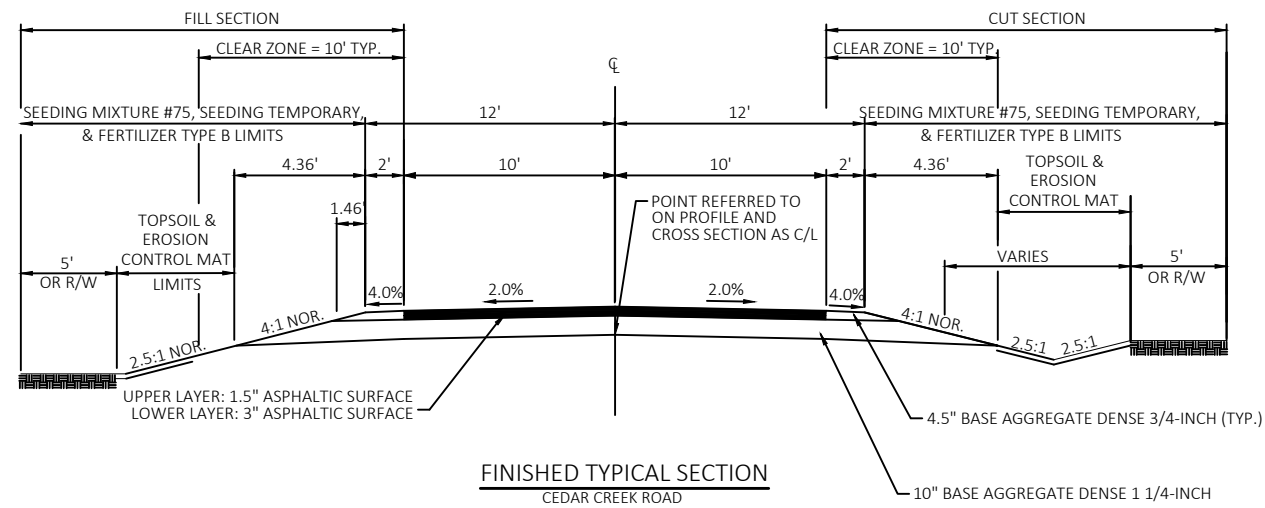


Dial **811** or (800) 242-8511

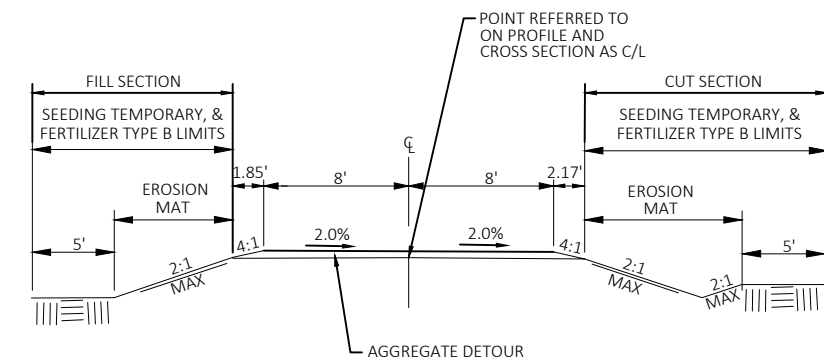
www.DiggersHotline.com



EXISTING TYPICAL SECTION
CEDAR CREEK ROAD




FINISHED TYPICAL SECTION
CEDAR CREEK ROAD




TYPICAL SECTION
TEMPORARY BYPASS

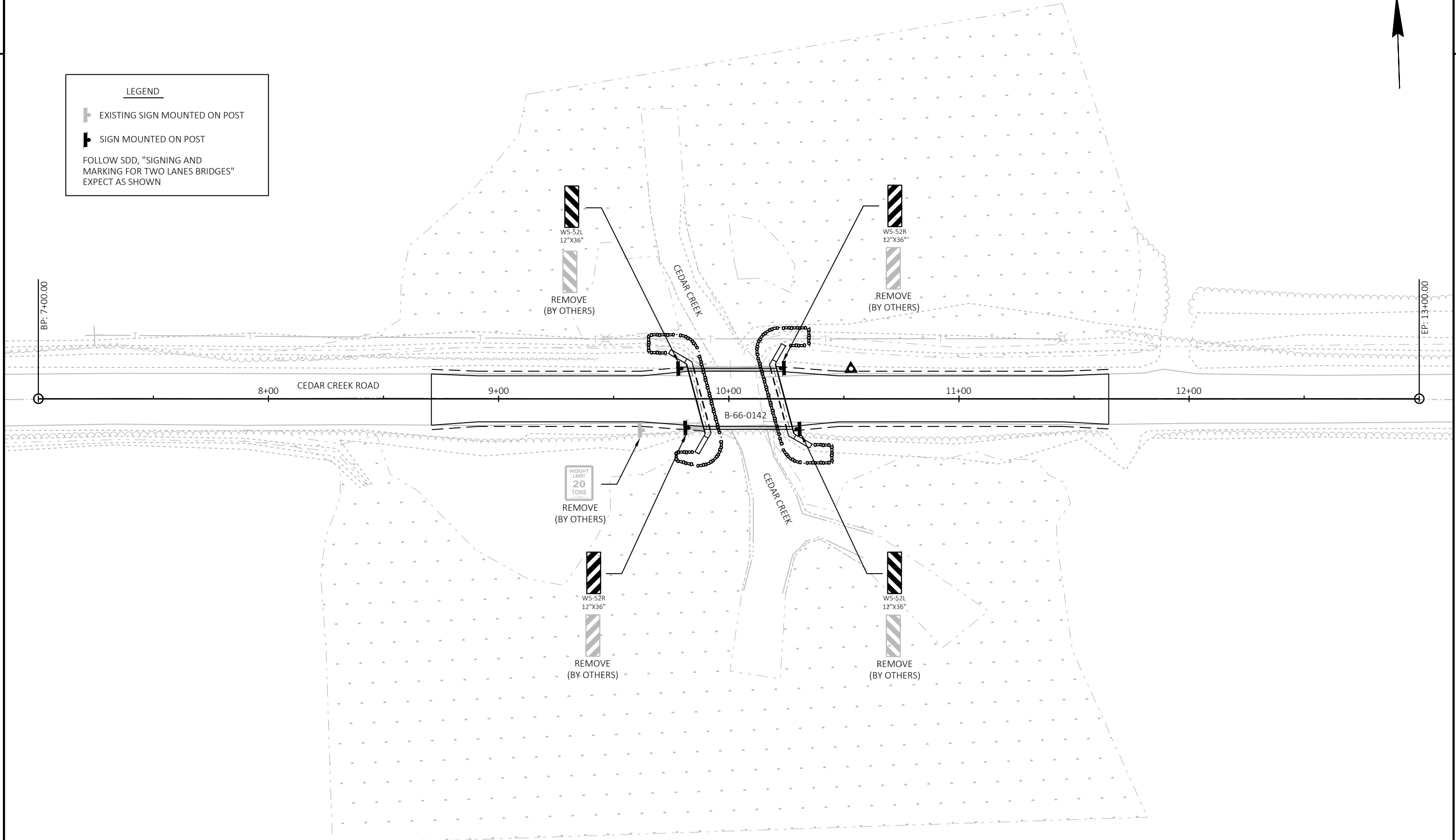


LEGEND

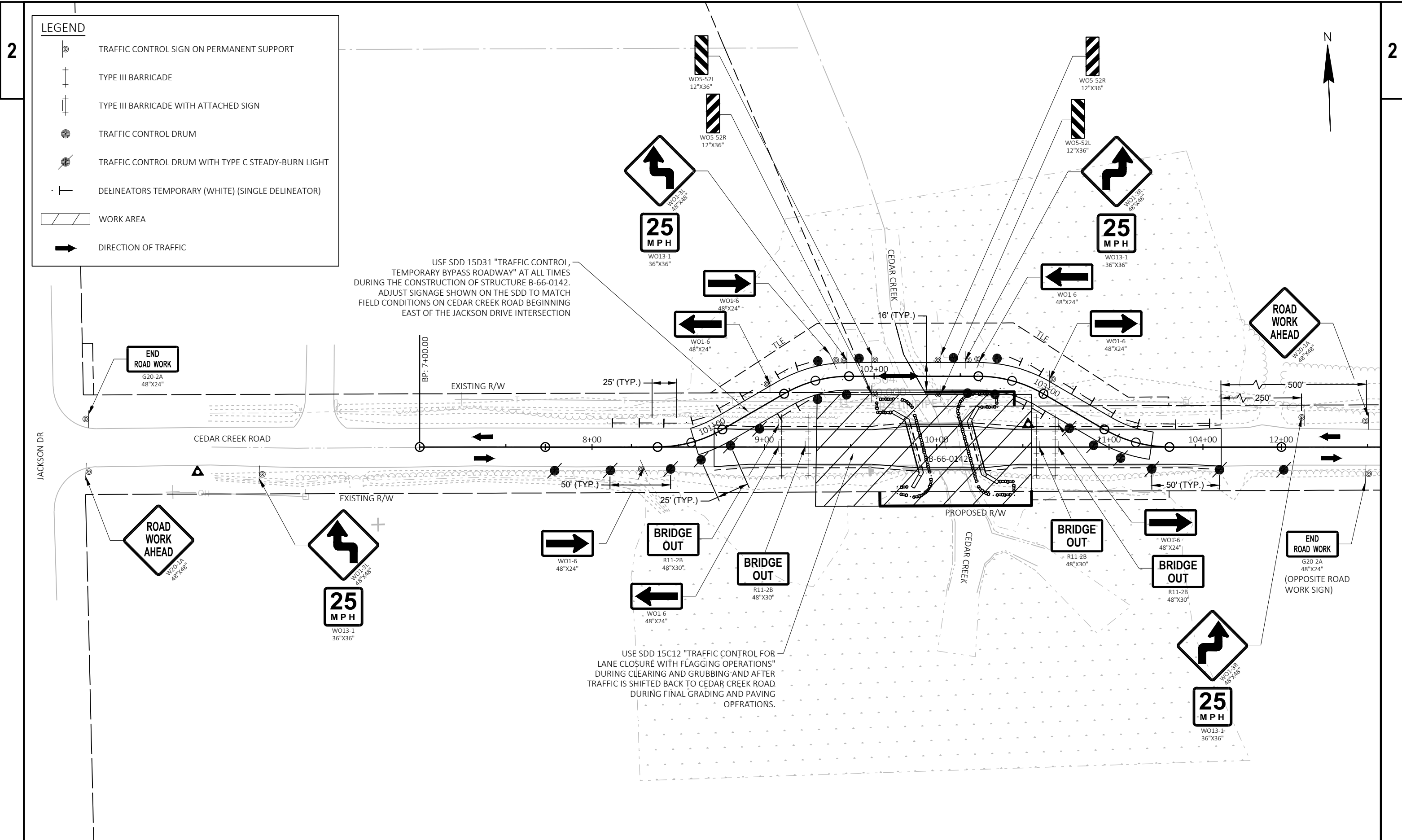
 EXISTING SIGN MOUNTED ON POST

 SIGN MOUNTED ON POST

FOLLOW SDD, "SIGNING AND MARKING FOR TWO LANES BRIDGES" EXPECT AS SHOWN



PROJECT NO: 2736-00-70	HWY: CEDAR CREEK ROAD	COUNTY: WASHINGTON	PERMANENT SIGNING PLAN	SHEET	E
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LEGEND

- TRAFFIC CONTROL SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE C STEADY-BURN LIGHT
- DELINEATORS TEMPORARY (WHITE) (SINGLE DELINEATOR)
- WORK AREA
- DIRECTION OF TRAFFIC

USE SDD 15D31 "TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY" AT ALL TIMES DURING THE CONSTRUCTION OF STRUCTURE B-66-0142. ADJUST SIGNAGE SHOWN ON THE SDD TO MATCH FIELD CONDITIONS ON CEDAR CREEK ROAD BEGINNING EAST OF THE JACKSON DRIVE INTERSECTION

USE SDD 15C12 "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATIONS" DURING CLEARING AND GRUBBING AND AFTER TRAFFIC IS SHIFTED BACK TO CEDAR CREEK ROAD DURING FINAL GRADING AND PAVING OPERATIONS.

Estimate Of Quantities

2736-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	3.000	3.000
0004	201.0205	Grubbing	STA	3.000	3.000
0006	203.0250	Removing Structure Over Waterway Remove Debris (structure) 01. P-66-904	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	789.000	789.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-66-142	LS	1.000	1.000
0012	208.0100	Borrow	CY	791.000	791.000
0014	210.1500	Backfill Structure Type A	TON	320.000	320.000
0016	213.0100	Finishing Roadway (project) 01. 2736-00-70	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	40.000	40.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	480.000	480.000
0022	305.0410	Aggregate Detours	TON	160.000	160.000
0024	455.0605	Tack Coat	GAL	70.000	70.000
0026	465.0105	Asphaltic Surface	TON	147.000	147.000
0028	502.0100	Concrete Masonry Bridges	CY	131.000	131.000
0030	502.3200	Protective Surface Treatment	SY	170.000	170.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	4,170.000	4,170.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	14,880.000	14,880.000
0036	513.4061	Railing Tubular Type M	LF	81.000	81.000
0038	516.0500	Rubberized Membrane Waterproofing	SY	14.000	14.000
0040	520.2018	Culvert Pipe Temporary 18-Inch	LF	212.000	212.000
0042	526.0100	Temporary Structure (station) 01. Station 9+86.57, 41' LT	LS	1.000	1.000
0044	550.0500	Pile Points	EACH	14.000	14.000
0046	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	1,260.000	1,260.000
0048	606.0300	Riprap Heavy	CY	80.000	80.000
0050	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	148.000	148.000
0052	618.0100	Maintenance And Repair of Haul Roads (project) 01. 2736-00-70	EACH	1.000	1.000
0054	619.1000	Mobilization	EACH	1.000	1.000
0056	624.0100	Water	MGAL	15.000	15.000
0058	625.0100	Topsoil	SY	700.000	700.000
0060	628.1504	Silt Fence	LF	780.000	780.000
0062	628.1520	Silt Fence Maintenance	LF	780.000	780.000
0064	628.1905	Mobilizations Erosion Control	EACH	7.000	7.000
0066	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0068	628.2008	Erosion Mat Urban Class I Type B	SY	355.000	355.000
0070	628.2027	Erosion Mat Class II Type C	SY	360.000	360.000
0072	628.6005	Turbidity Barriers	SY	240.000	240.000
0074	629.0210	Fertilizer Type B	CWT	1.200	1.200
0076	630.0175	Seeding Mixture No. 75	LB	10.000	10.000
0078	630.0200	Seeding Temporary	LB	20.000	20.000
0080	630.0500	Seed Water	MGAL	40.000	40.000
0082	633.1100	Delineators Temporary	EACH	40.000	40.000
0084	633.5100	Markers Row	EACH	9.000	9.000
0086	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0088	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0090	638.3000	Removing Small Sign Supports	EACH	5.000	5.000
0092	642.5001	Field Office Type B	EACH	1.000	1.000
0094	643.0300	Traffic Control Drums	DAY	1,856.000	1,856.000
0096	643.0420	Traffic Control Barricades Type III	DAY	896.000	896.000
0098	643.0705	Traffic Control Warning Lights Type A	DAY	640.000	640.000

Estimate Of Quantities

2736-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	643.0715	Traffic Control Warning Lights Type C	DAY	896.000	896.000
0102	643.0900	Traffic Control Signs	DAY	1,885.000	1,885.000
0104	643.5000	Traffic Control	EACH	1.000	1.000
0106	645.0111	Geotextile Type DF Schedule A	SY	74.000	74.000
0108	645.0120	Geotextile Type HR	SY	200.000	200.000
0110	650.4500	Construction Staking Subgrade	LF	256.000	256.000
0112	650.5000	Construction Staking Base	LF	256.000	256.000
0114	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
0116	650.6500	Construction Staking Structure Layout (structure) 01. B-66-142	LS	1.000	1.000
0118	650.9910	Construction Staking Supplemental Control (project) 01. 2736-00-70	LS	1.000	1.000
0120	650.9920	Construction Staking Slope Stakes	LF	256.000	256.000
0122	690.0150	Sawing Asphalt	LF	45.000	45.000
0124	715.0502	Incentive Strength Concrete Structures	DOL	786.000	786.000
0126	999.2000.S	Installing and Maintaining Bird Deterrent System (Station) 01. Station 10+05.00	EACH	1.000	1.000
0128	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	700.000	700.000
0130	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	900.000	900.000

CLEARING AND GRUBBING

CATEGORY	STATION	-	STATION	LOCATION	(201.0105)	(201.0205)
					CLEARING STA	GRUBBING STA
0010	8+50	-	11+50	RT & LT	3	3
PROJECT TOTALS					3	3

EARTHWORK SUMMARY - CEDAR CREEK ROAD

CATEGORY	STATION	TO	STATION	(205.0100)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	EXPANDED FILL	MASS ORDINATE +/-	(208.0100)
				EXC. COMMON CY (1)	CY (2)	CY (3)	CY (4)	BORROW CY
0010	8+71	-	9+81	92	7	104	-19	19
	10+24	-	11+65	85	8	98	-21	21
PROJECT TOTALS				177	15	202	-40	40

EARTHWORK SUMMARY - TEMPORARY BYPASS PLACEMENT

CATEGORY	STATION	TO	STATION	(205.0100)	EXPANDED FILL	MASS ORDINATE +/-	(208.0100)
				EXC. COMMON CY (1)	CY (3)	CY (4)	BORROW CY
0010	100+87.5	-	102+00.0	7	284	-277	277
	102+40.0	-	103+97.4	16	490	-474	474
PROJECT TOTALS				23	774	-751	751

EARTHWORK SUMMARY - TEMPORARY BYPASS REMOVAL

CATEGORY	STATION	TO	STATION	(205.0100)	EXPANDED FILL	MASS ORDINATE +/-	WASTE
				EXC. COMMON CY (1)	CY (3)	CY (4)	CY
0010	100+87.5	-	102+00.0	220	10	210	210
	102+40.0	-	103+97.4	369	36	333	333
PROJECT TOTALS				589	46	543	543

- (1) - IT IS ASSUMED CUT MATERIAL IS AVAILABLE FOR BACKFILL
- (2) - EXISTING ASPHALT IS ASSUMED TO BE UNUSABLE MATERIAL.
- (3) - FILL EXPANSION 25%
- (4) - THE MASS ORDINATE + OR - QUANTITY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THAT DIVISION. MINUS QUANTITY INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

BASE AGGREGATE

CATEGORY	STATION	-	STATION	(305.0110)	(305.0120)	(305.0410)	(624.0100)
				BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	AGGREGATE DETOURS TON	WATER MGAL
0010	8+71	-	9+86	17	215	-	5
	10+24	-	11+65	22	265	-	6
	101+06	-	102+04	-	-	81	2
	102+44	-	103+40	-	-	79	2
PROJECT TOTALS				40	480	160	15

TACK COAT & HMA PAVEMENT

CATEGORY	STATION	-	STATION	(455.0605)	(465.0105)
				TACK COAT GAL	ASPHALTIC SURFACE TON
0010	8+71	-	9+86	32	66
	10+24	-	11+65	38	81
PROJECT TOTALS				70	147

TEMPORARY CULVERTS

CATEGORY	STATION	LOCATION	(520.2018)	(650.6000)	INVERT
			CULVERT PIPE TEMPORARY 18-INCH LF	CONSTRUCTION STAKING PIPE CULVERTS EACH	
0010	8+68.5	23.0' LT	112	1	857.29
	9+80.1	27.6' LT	-	-	856.56
	10+04.9	28.7' LT	100	1	855.97
	11+04.7	22.0' LT	-	-	856.53
PROJECT TOTALS			212.0	2	

EROSION CONTROL

CATEGORY	STATION	-	STATION	LOCATION	(625.0100)	(628.2008)	(628.2027)	(629.0210)	(630.0175)	(630.0200)	(630.0500)
					TOPSOIL SY	EROSION MAT URBAN CLASS I TYPE B SY	EROSION MAT CLASS II TYPE C SY	FERTILIZER CWT	SEEDING MIXTURE NO. 75 LB	SEEDING TEMPORARY LB	SEED WATER MGAL
0010	8+71	-	9+86	LT	100	100	-	0.15	2	-	6
	9+14	-	9+86	RT	35	35	-	0.15	1	-	5
	10+24	-	11+65	RT	100	100	-	0.20	2	-	7
	10+24	-	11+65	LT	85	85	-	0.15	2	-	0
	100+80	-	106+06	LT	140	-	140	0.15	-	6	5
	102+39	-	103+89	LT	170	-	170	0.15	-	7	6
	UNDISTRIBUTED	-	-	-	70	36	50	0.25	2	4	8
PROJECT TOTALS					700	355	360	1.20	10	20	40

SILT FENCE						
CATEGORY	STATION	-	STATION	LOCATION	(628.1504)	(628.1520)
					SILT FENCE	SILT FENCE MAINTENANCE
					LF	LF
0010	8+67	-	9+16	LT	54	54
	8+62	-	9+77	RT	120	120
	10+72	-	11+73	LT	104	104
	10+45	-	11+70	RT	130	130
0010	100+71	-	102+06	LT	125	125
	102+28	-	103+98	LT	91	91
	UNDISTRIBUTED				156	156
PROJECT TOTALS					780	780

TURBIDITY BARRIERS			
CATEGORY	STATION	LOCATION	(628.6005)
			TURBIDITY BARRIERS
			SY
0010	9+86	LT & RT	99
	10+24	LT & RT	94
	UNDISTRIBUTED		47
PROJECT TOTAL			240

MOBILIZATIONS EROSION CONTROL			
CATEGORY	PROJECT	(628.1905)	(628.1910)
		MOBILIZATION EROSION CONTROL	MOBILIZATION EMERGENCY EROSION CONTROL
		EACH	EACH
0010	2736-00-70	7	3
PROJECT TOTALS		7	3

TRAFFIC CONTROL ITEMS													
CATEGORY	LOCATION	DAYS	EACH	(633.1100)	(643.0300)	(643.0420)	(643.0705)	(643.0715)	(643.0900)	EACH	DAYS	COMMENTS	
				DELINEATORS TEMPORARY	TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL WARNING LIGHTS TYPE C				TRAFFIC CONTROL WARNING LIGHTS TYPE C
0010	FLAGGING OPERATION	12	-	-	-	-	-	-	-	8	96	CLEARING AND GRUBBING	
	BEGINNING OF PROJECT	64	16	12	768	6	384	4	256	6	384	12	768
	END OF PROJECT	64	16	12	768	6	384	4	256	6	384	12	768
	FLAGGING OPERATION	12	-	-	-	-	-	-	-	-	4	48	FINAL GRADING AND PAVING
	UNDISTRUBUTED	64	8	5	320	2	128	2	128	2	128	3	205
PROJECT TOTALS			40		1856		896		640		896		1,885

FLAGGING OPERATION - SEE SDD "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"
 BEGINNING AND END OF PROJECT - SEE SDD "TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY"

SIGNING									
CATEGORY	STATION	LOCATION	SIGN CODE	SIZE	(637.2230)	(634.0612)	(638.3000)	COMMENTS	
					SIGNS REFLECTIVE F	POSTS 4X6-INCH	WOOD 12 FT SIGN SUPPORTS		
0010	9+62	RT	N/A	N/A	-	-	1	EXISTING WEIGHT LIMIT SIGN	
	9+64	LT	W5-52L	12"x36"	3	1	1	OBJECT MARKER	
	9+64	RT	W5-52R	12"x36"	3	1	1	OBJECT MARKER	
	10+36	LT	W5-52R	12"x36"	3	1	1	OBJECT MARKER	
	10+36	RT	W5-52L	12"x36"	3	1	1	OBJECT MARKER	
PROJECT TOTALS					12	4	5		

CONSTRUCTION STAKING							
CATEGORY	STATION	-	STATION	(650.4500)	(650.5000)	(650.9920)	(650.9910)
				CONSTRUCTION STAKING SUBGRADE	CONSTRUCTION STAKING BASE	CONSTRUCTION STAKING SLOPE STAKES	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL
				LF	LF	LF	LS
0010	8+71	-	9+86	115	115	115	-
	10+24	-	11+65	141	141	141	-
PROJECT TOTALS				256	256	256	1

MARKERS ROW				
CATEGORY	STATION	OFFSET FT	LOCATION	(633.5100)
				MARKERS ROW EACH
0010	8+68.00	31.41	LT	1
	9+67.03	34.26	RT	1
	9+67.09	25.80	RT	1
	10+44.97	32.00	LT	1
	10+45.00	23.75	LT	1
	10+55.00	25.71	RT	1
	10+55.03	33.96	RT	1
	11+34.92	24.05	LT	1
	11+35.08	25.45	RT	1
	PROJECT TOTAL			

SAWING ASPHALT		
CATEGORY	STATION	(690.0150)
		SAWING ASPHALT LF
0010	8+71	22
	11+65	23
PROJECT TOTAL		45

R/W PROJECT NUMBER 2736-00-00	SHEET NUMBER 1	TOTAL SHEETS 2
CONSTRUCTION PROJECT NUMBER 2736-00-70		

**PLAT OF RIGHT OF WAY REQUIRED FOR
TOWN OF JACKSON, CEDAR CREEK ROAD
BRIDGE OVER BRANCH OF CEDAR CREEK, P-66-0904**

TOWN ROAD WASHINGTON COUNTY

NOTES:
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WASHINGTON COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (TYPICALLY 3/4"x24" IRON REBARS) UNLESS OTHERWISE NOTED, AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS" OF PUBLIC RECORD.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE:
HIGHWAY ORDER AS SHOWN AS ENTRY #9 ON PAGE 26 OF THE TOWN OF JACKSON HIGHWAY REGISTRY BOOK ON FILE WITH THE WASHINGTON COUNTY HIGHWAY DEPARTMENT AND CSM #5496 RECORDED AS DOCUMENT #938711.

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON, THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE. ALL (TLEs) ON THIS PLAT EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

CAUTION:
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES.

ORIGINAL PLAT PREPARED BY



2901 International Lane, Suite 300 Madison, WI 53704-3133
608-242-7779 1-800-446-0679 Fax: 608-242-5664



11/29/2020 (DATE) *Bradley L. Tisdale* (BRADLEY L. TISDALE, PLS S-2824)

REVISION DATE	TOWN OF JACKSON
APPROVED FOR TOWN OF JACKSON	DATE: _____ (Signature)

CONVENTIONAL SYMBOLS

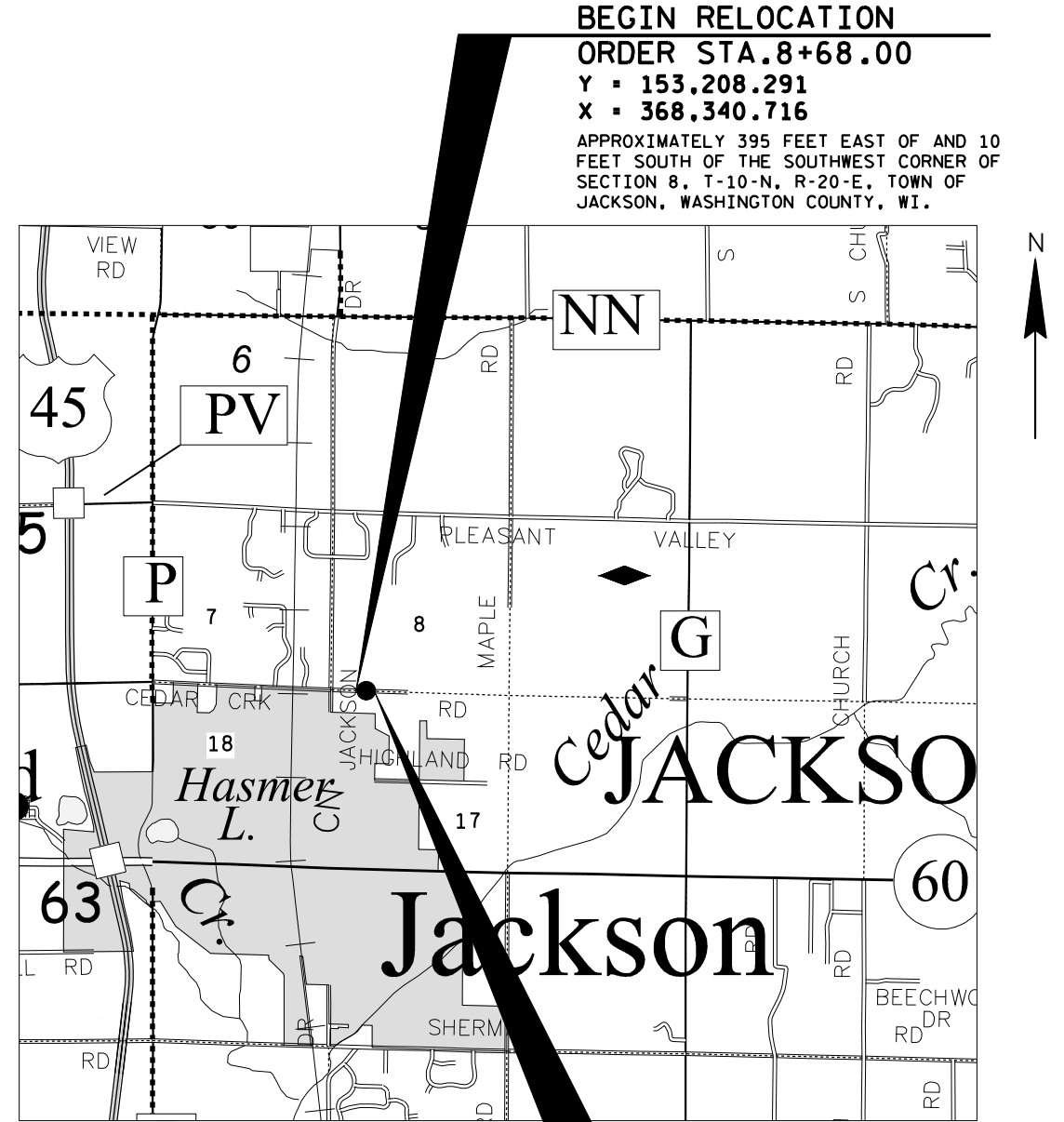
FOUND IRON PIPE/PIN	IP (1" UNLESS NOTED)	PROPOSED R/W LINE	—————
R/W MONUMENT	○ (SET)	EXISTING H.E. LINE	—————
R/W STANDARD	△ (SET)	PROPERTY LINE	—————
SIGN	ISIGN	LOT & TIE LINES	-----
SECTION CORNER MONUMENT	⊕	SLOPE INTERCEPTS	-----
SECTION CORNER SYMBOL	⊕	CORPORATE LIMITS	-----
FEE (HATCH VARIES)	⊕	NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	-----
TEMPORARY LIMITED EASEMENT	⊕	ACCESS RESTRICTED (BY ACQUISITION)	-----
PERMANENT LIMITED EASEMENT	⊕	NO ACCESS (BY STATUTORY AUTHORITY)	-----
R/W BOUNDARY POINT	⊕	SECTION LINE	-----
PARCEL NUMBER	⊕	QUARTER LINE	-----
UTILITY INTEREST	⊕	SIXTEENTH LINE	-----
SIGN NUMBER (OFF PREMISE)	⊕	EXISTING CENTERLINE	-----
BUILDING	⊕	PROPOSED REFERENCE LINE	-----
		PARALLEL OFFSET	-----

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—	LONG CHORD	LCH
GAS	—G—	LONG CHORD BEARING	LCB
TELEPHONE	—T—	RADIUS	R
OVERHEAD	—OH—	DEGREE OF CURVE	D
TRANSMISSION LINES	—E—	CENTRAL ANGLE	Δ/DELTA
ELECTRIC	—E—	LENGTH OF CURVE	L
CABLE TELEVISION	—TV—	TANGENT	T
FIBER OPTIC	—FO—	DIRECTION AHEAD	DA
SANITARY SEWER	—SAN—	DIRECTION BACK	DB
STORM SEWER	—SS—		
NON COMPENSABLE	⊕		
COMPENSABLE	⊕		
POWER POLE	⊕		
TELEPHONE POLE	⊕		
TELEPHONE PEDESTAL	⊕		
ELECTRIC TOWER	⊕		

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	OUTLOT	OL
ACRES	AC	PAGE	P
AHEAD	AH	POINT OF TANGENCY	PT
ALUMINUM	ALUM	PROPERTY LINE	PL
AND OTHERS	ET AL	RECORDED AS	(100')
BACK	BK	REEL / IMAGE	R/I
BLOCK	BLK	REFERENCE LINE	R/L
CENTERLINE	C/L	PERMANENT LIMITED EASEMENT	PLE
CERTIFIED SURVEY MAP	CSM	POINT OF BEGINNING	POB
CONCRETE	CONC	POINT OF CURVATURE	PC
COUNTY	CO	POINT OF COMPOUND CURVE	PCC
COUNTY TRUNK HIGHWAY	CTH	POINT OF INTERSECTION	PI
DISTANCE	DIST	REMAINING	REM
CORNER	COR	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
DOCUMENT NUMBER	DOC	RIGHT	RT
EASEMENT	EASE	RIGHT OF WAY	R/W
EXISTING	EX	SECTION	SEC
GAS VALVE	GV	SEPTIC VENT	SEPV
GRID NORTH	GN	SQUARE FEET	SF
HIGHWAY EASEMENT	HE	STATE TRUNK HIGHWAY	STH
IDENTIFICATION	ID	STATION	STA
LAND CONTRACT	LC	TRAVERSE POINT	TP
LEFT	LT	TEMPORARY LIMITED EASEMENT	TLE
MONUMENT	MON	TRANSPORTATION PROJECT PLAT	TPP
NATIONAL GEODETIC SURVEY	NGS	UNITED STATES HIGHWAY	USH
NUMBER	NO	VOLUME	V



BEGIN RELOCATION
ORDER STA.8+68.00
Y = 153,208.291
X = 368,340.716
APPROXIMATELY 395 FEET EAST OF AND 10 FEET SOUTH OF THE SOUTHWEST CORNER OF SECTION 8, T-10-N, R-20-E, TOWN OF JACKSON, WASHINGTON COUNTY, WI.

END RELOCATION
ORDER STA.11+35.00
Y = 153,199.414
X = 368,607.569
APPROXIMATELY 662 FEET EAST OF AND 19 FEET SOUTH OF THE SOUTHWEST CORNER OF SECTION 8, T-10-N, R-20-E, TOWN OF JACKSON, WASHINGTON COUNTY, WI.

LAYOUT
SCALE 0 2 MI
TOTAL NET LENGTH OF CENTERLINE = 0.050

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN OF JACKSON.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	FEE ACRES REQUIRED			TLE ACRES REQUIRED
			NEW	EXISTING	TOTAL	
1	BRUCE O HAVER AND JOAN H HAVER AND CARRIE ANN HAVER	TLE	--	--	--	0.08
2	JOSEF SCHERER AND ANNAMARIE SCHERER, TRUSTEES OF THE JOSEF SCHERER AND ANNAMARIE SCHERER REVOCABLE LIVING TRUST DATED DECEMBER 31, 1991	FEE/TLE	0.01	0.08	0.09	0.10
3	NATE W. AND SHARON M. RESSEL	FEE/TLE	0.02	0.10	0.12	0.01

RW POINT	STATION	OFFSET	Y	X
1	8+68.00	31.41' LT	153,239.688	368,341.761
2	10+44.97	32.00' LT	153,234.393	368,518.655
3	10+45.00	23.75' LT	153,226.147	368,518.408
4	11+34.92	24.05' LT	153,223.456	368,608.288
5	11+35.08	25.45' RT	153,173.978	368,606.807
6	10+55.00	25.71' RT	153,176.375	368,526.758
7	10+55.03	33.96' RT	153,168.128	368,526.511
8	9+67.03	34.26' RT	153,170.761	368,438.550

TLE POINT	STATION	OFFSET
T1	9+30.00	72.00' LT
T2	10+45.00	72.00' LT
T3	11+11.00	28.97' LT
T4	11+34.90	29.05' LT
T5	11+35.10	30.45' RT
T6	10+55.02	30.71' RT
T7	9+93.00	31.83' LT
T8	9+80.72	53.80' LT
T9	9+75.90	72.00' LT

LINE	BEARING	DISTANCE
1-2	S88°17'08"E	176.97'
2-3	S01°42'52"W	8.25'
3-4	S88°17'08"E	89.92'
5-6	N88°17'08"W	80.08'
6-7	S01°42'52"W	8.25'
7-8	N88°17'08"W	88.00'
8-9	N01°42'52"E	8.25'
9-6	S88°17'08"E	88.00'
T7-2	S88°17'08"E	51.97'
3-TP4	N88°17'08"W	47.40'
TP4-T7	N01°54'19"E	9.43'
T7-2	S88°17'08"E	51.98'
1-T1	N58°41'46"E	74.10'
T1-T9	S88°05'41"E	45.90'
T9-T8	S12°54'57"E	18.83'
T8-T7	S27°17'49"E	25.16'
T7-1	N88°17'08"W	125.00'
T9-T2	S88°05'41"E	69.10'
T2-T3	S54°59'37"E	78.79'
T3-T4	S88°17'08"E	23.90'
T4-4	S01°42'52"W	5.00'
5-T5	S01°42'52"W	5.00'
T5-T6	N88°17'08"W	80.08'
T6-6	N01°42'52"E	5.00'
4-TP1	S01°42'52"W	24.75'
TP1-TP2	N88°17'08"W	129.26'
TP2-TP3	N14°38'14"W	22.62'
TP3-TP7	N27°17'49"W	12.91'
8-TP5	N01°42'52"E	33.00'
TP5-TP1	S88°17'08"E	168.08'



UTILITY INTERESTS REQUIRED

UTILITY NUMBER	OWNER(S)	PARCEL AFFECTED	INTEREST REQUIRED	EASEMENT AFFECTING
80	MADISON AT&T	2	RELEASE OF RIGHTS	NO EASEMENT OF RECORD

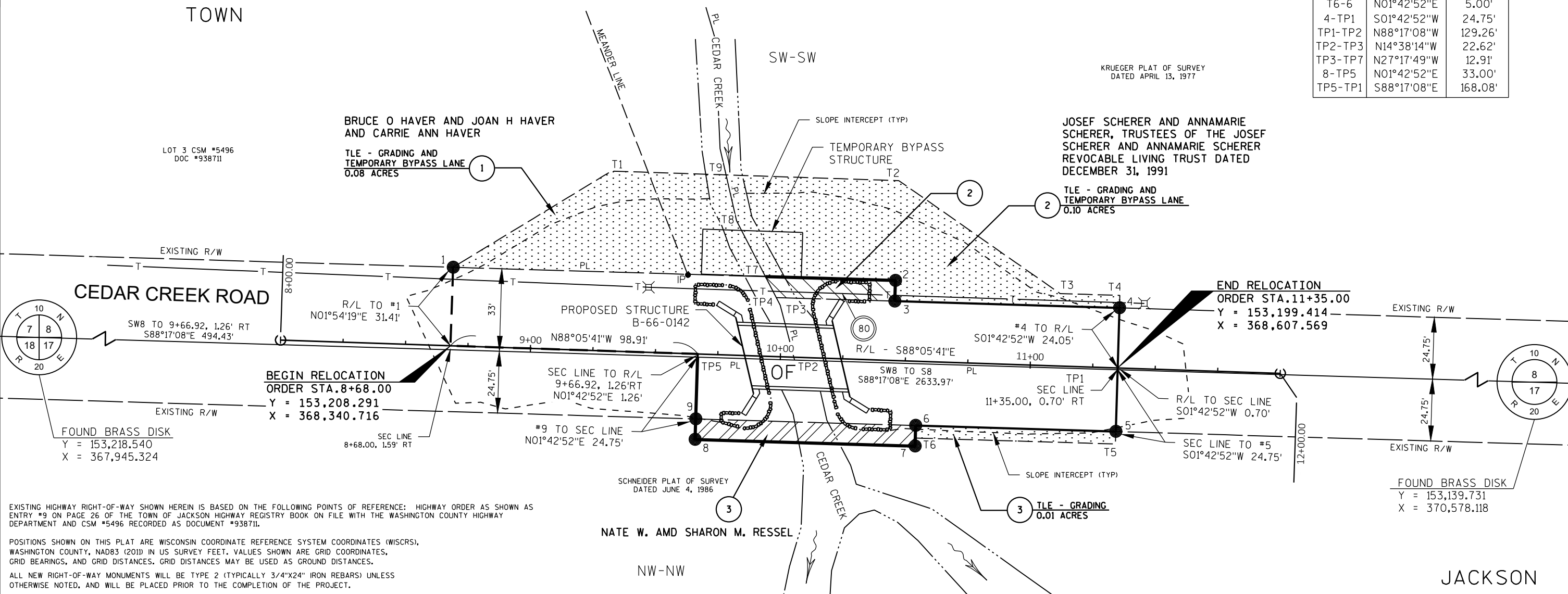
ALIGNMENT INFORMATION

PI = STA 8+00
 Y = 153,210.552
 X = 368,272.754

DA = S88°05'41"E

PI = STA 12+00.00
 Y = 153,197.253
 X = 368,672.533

KRUEGER PLAT OF SURVEY
 DATED APRIL 13, 1977



EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINTS OF REFERENCE: HIGHWAY ORDER AS SHOWN AS ENTRY #9 ON PAGE 26 OF THE TOWN OF JACKSON HIGHWAY REGISTRY BOOK ON FILE WITH THE WASHINGTON COUNTY HIGHWAY DEPARTMENT AND CSM #5496 RECORDED AS DOCUMENT #938711.

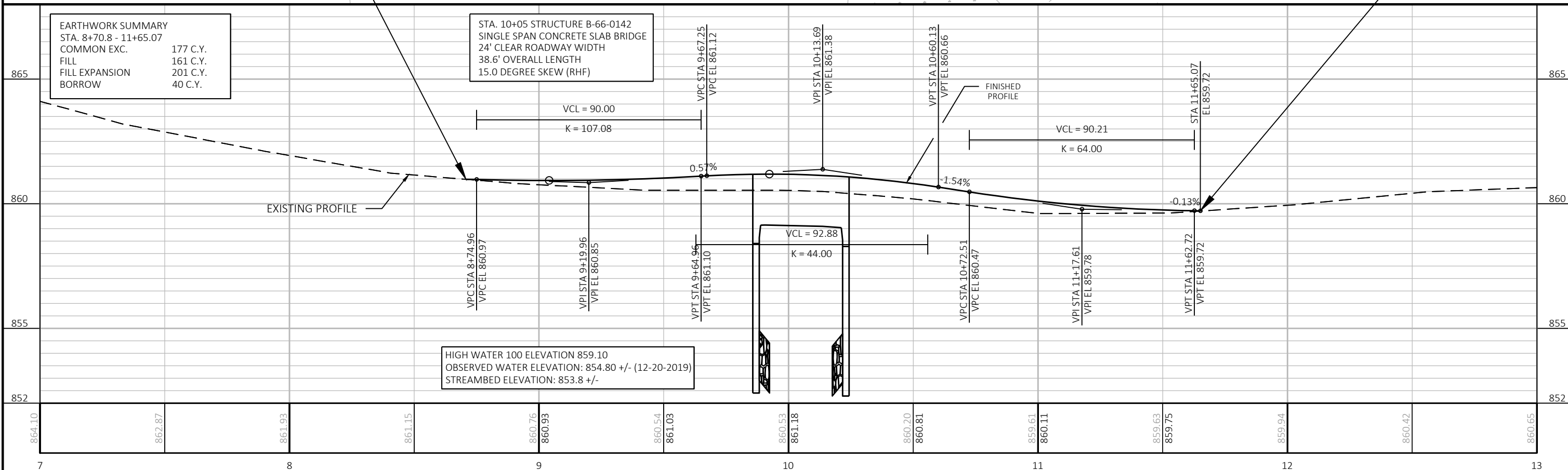
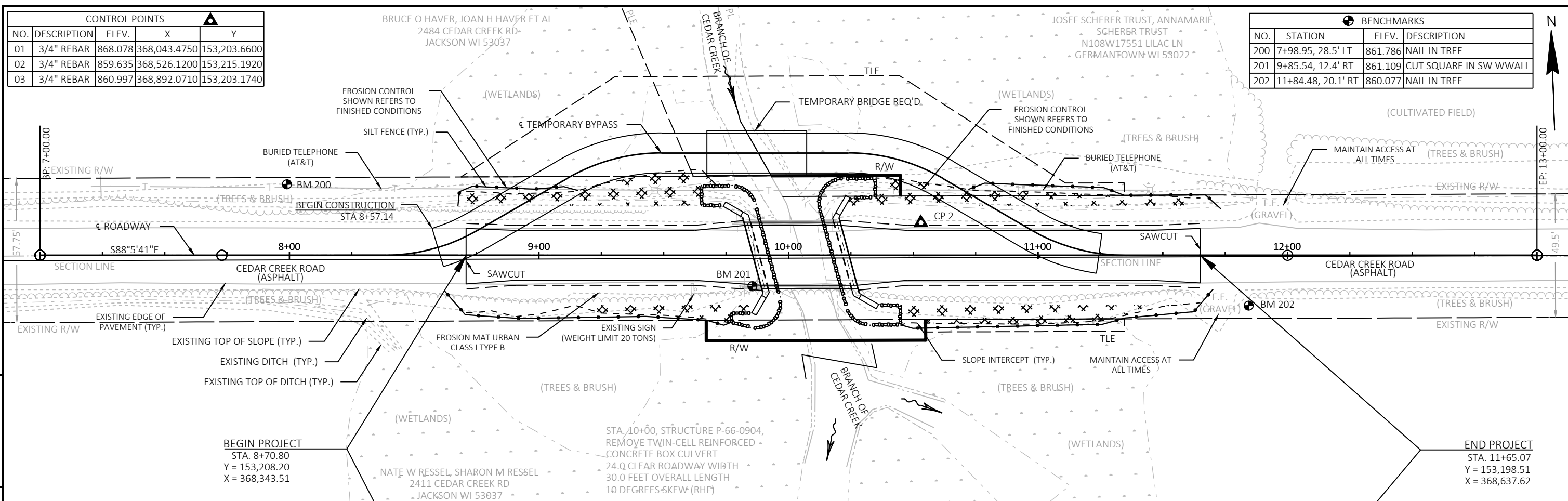
POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), WASHINGTON COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4"x24" IRON REBARS) UNLESS OTHERWISE NOTED, AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

REVISION DATE	DATE 11/29/2020	SCALE, FEET	HWY: CEDAR CREEK ROAD	R/W PROJECT NUMBER 2736-00-00	PLAT SHEET 4.02
	GRID FACTOR NA		COUNTY: WASHINGTON	CONSTRUCTION PROJECT NUMBER 2736-00-70	PS&E SHEET

CONTROL POINTS				
NO.	DESCRIPTION	ELEV.	X	Y
01	3/4" REBAR	868.078	368,043.4750	153,203.6600
02	3/4" REBAR	859.635	368,526.1200	153,215.1920
03	3/4" REBAR	860.997	368,892.0710	153,203.1740

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
200	7+98.95, 28.5' LT	861.786	NAIL IN TREE
201	9+85.54, 12.4' RT	861.109	CUT SQUARE IN SW WALL
202	11+84.48, 20.1' RT	860.077	NAIL IN TREE



PROJECT NO:	2736-00-70	HWY:	CEDAR CREEK ROAD	COUNTY:	WASHINGTON	PLAN AND PROFILE:	CEDAR CREEK ROAD	SHEET	E
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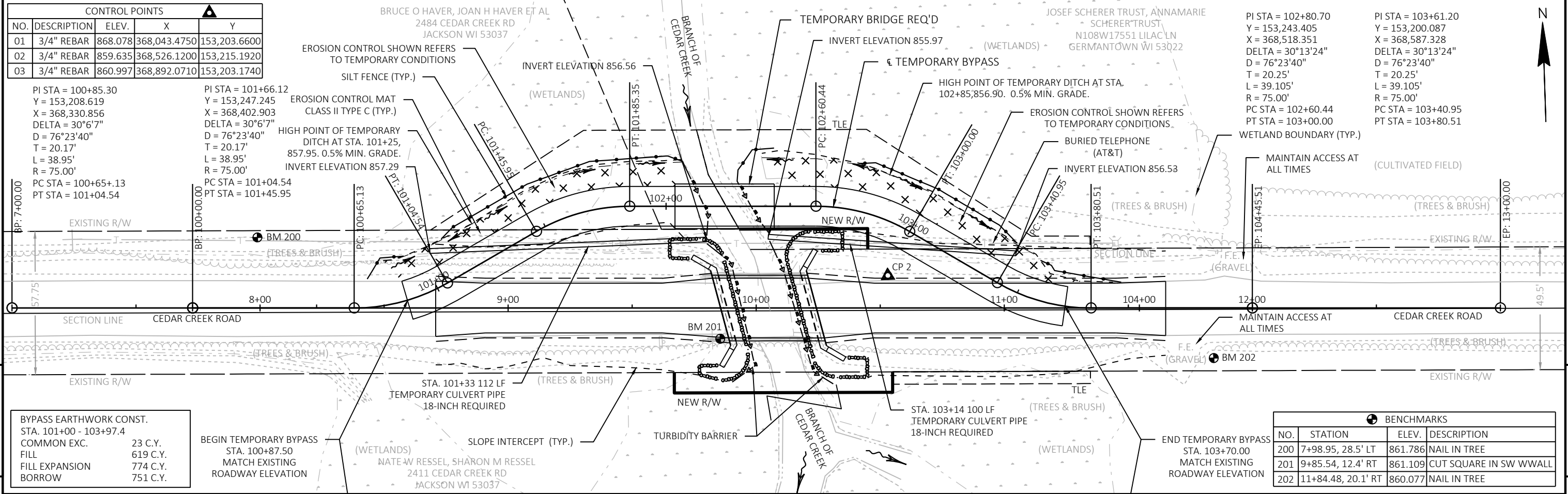
CONTROL POINTS				
NO.	DESCRIPTION	ELEV.	X	Y
01	3/4" REBAR	868.078	368,043.4750	153,203.6600
02	3/4" REBAR	859.635	368,526.1200	153,215.1920
03	3/4" REBAR	860.997	368,892.0710	153,203.1740

PI STA = 100+85.30
 Y = 153,208.619
 X = 368,330.856
 DELTA = 30°6'7"
 D = 76°23'40"
 T = 20.17'
 L = 38.95'
 R = 75.00'
 PC STA = 100+65+13
 PT STA = 101+04.54

PI STA = 101+66.12
 Y = 153,247.245
 X = 368,402.903
 DELTA = 30°6'7"
 D = 76°23'40"
 T = 20.17'
 L = 38.95'
 R = 75.00'
 PC STA = 101+04.54
 PT STA = 101+45.95

PI STA = 102+80.70
 Y = 153,243.405
 X = 368,518.351
 DELTA = 30°13'24"
 D = 76°23'40"
 T = 20.25'
 L = 39.105'
 R = 75.00'
 PC STA = 102+60.44
 PT STA = 103+00.00

PI STA = 103+61.20
 Y = 153,200.087
 X = 368,587.328
 DELTA = 30°13'24"
 D = 76°23'40"
 T = 20.25'
 L = 39.105'
 R = 75.00'
 PC STA = 103+40.95
 PT STA = 103+80.51



5

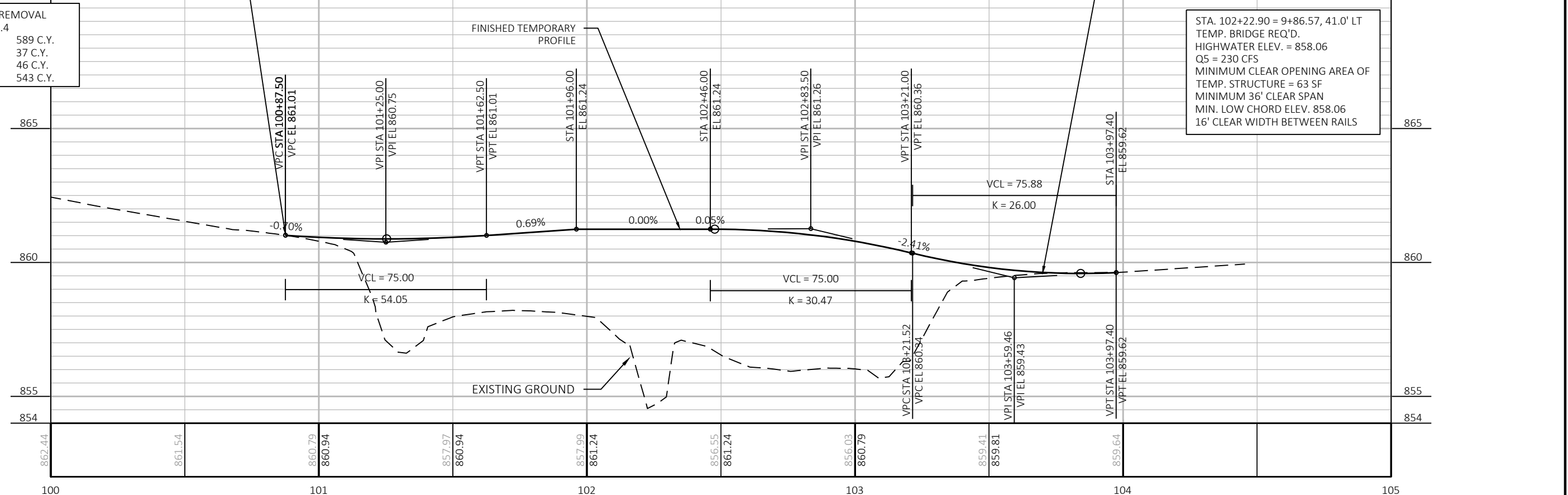
BYPASS EARTHWORK CONST.	
STA. 101+00 - 103+97.4	
COMMON EXC.	23 C.Y.
FILL	619 C.Y.
FILL EXPANSION	774 C.Y.
BORROW	751 C.Y.

5

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
200	7+98.95, 28.5' LT	861.786	NAIL IN TREE
201	9+85.54, 12.4' RT	861.109	CUT SQUARE IN SW WWALL
202	11+84.48, 20.1' RT	860.077	NAIL IN TREE

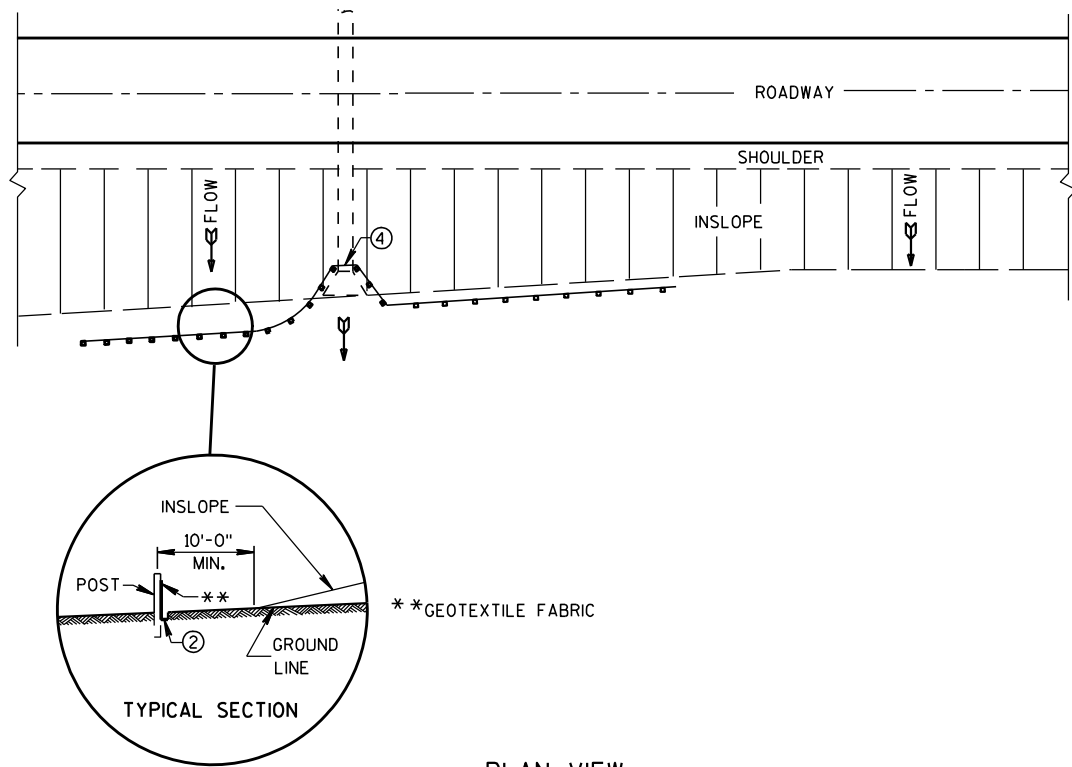
BYPASS EARTHWORK REMOVAL	
STA. 101+00 - 103+97.4	
COMMON EXC.	589 C.Y.
FILL	37 C.Y.
FILL EXPANSION	46 C.Y.
WASTE	543 C.Y.

STA. 102+22.90 = 9+86.57, 41.0' LT
 TEMP. BRIDGE REQ'D.
 HIGHWATER ELEV. = 858.06
 Q5 = 230 CFS
 MINIMUM CLEAR OPENING AREA OF
 TEMP. STRUCTURE = 63 SF
 MINIMUM 36' CLEAR SPAN
 MIN. LOW CHORD ELEV. 858.06
 16' CLEAR WIDTH BETWEEN RAILS

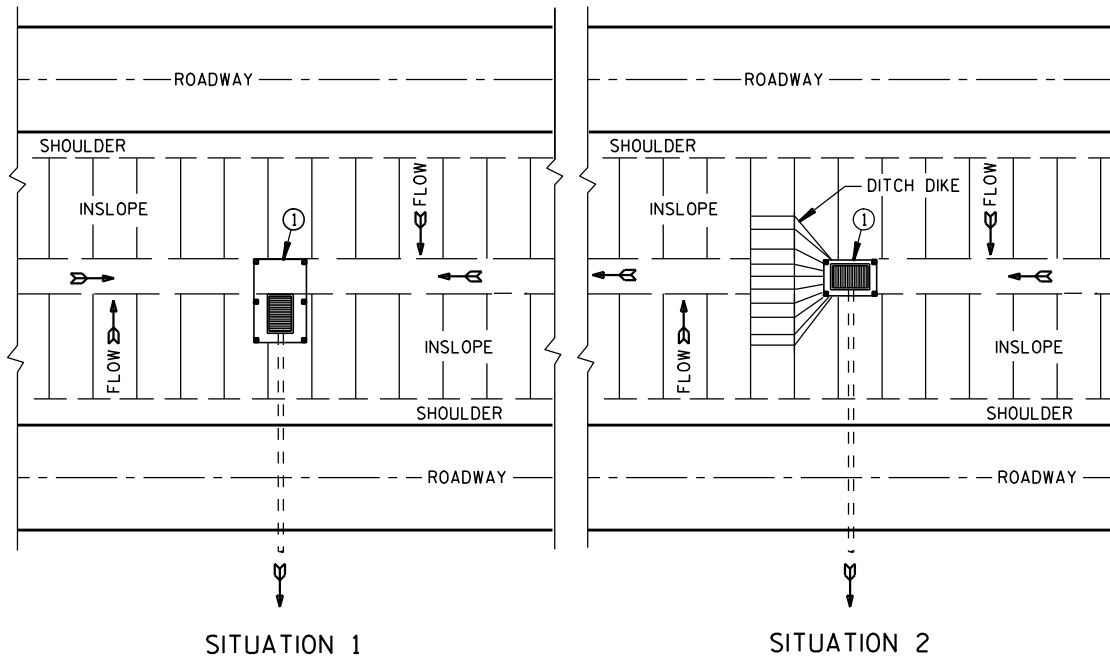


Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15A04-05A	FLEXIBLE DELINEATOR POST
15A04-05C	DELINEATOR POST WITH REFLECTIVE SHEETING
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-08B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-07	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15D31-03	TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

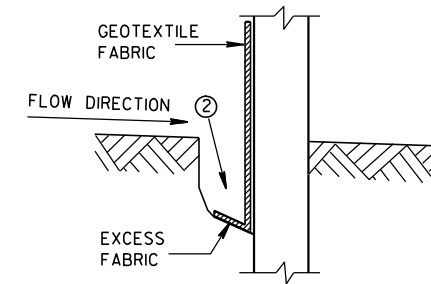


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

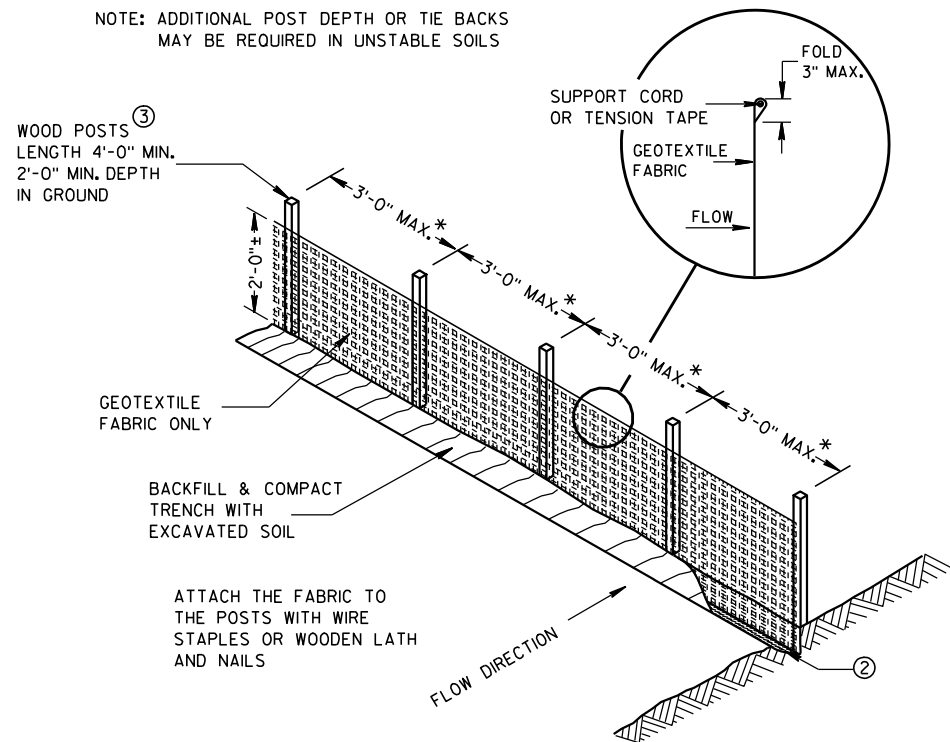
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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 1 1/8" X 1 1/8" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



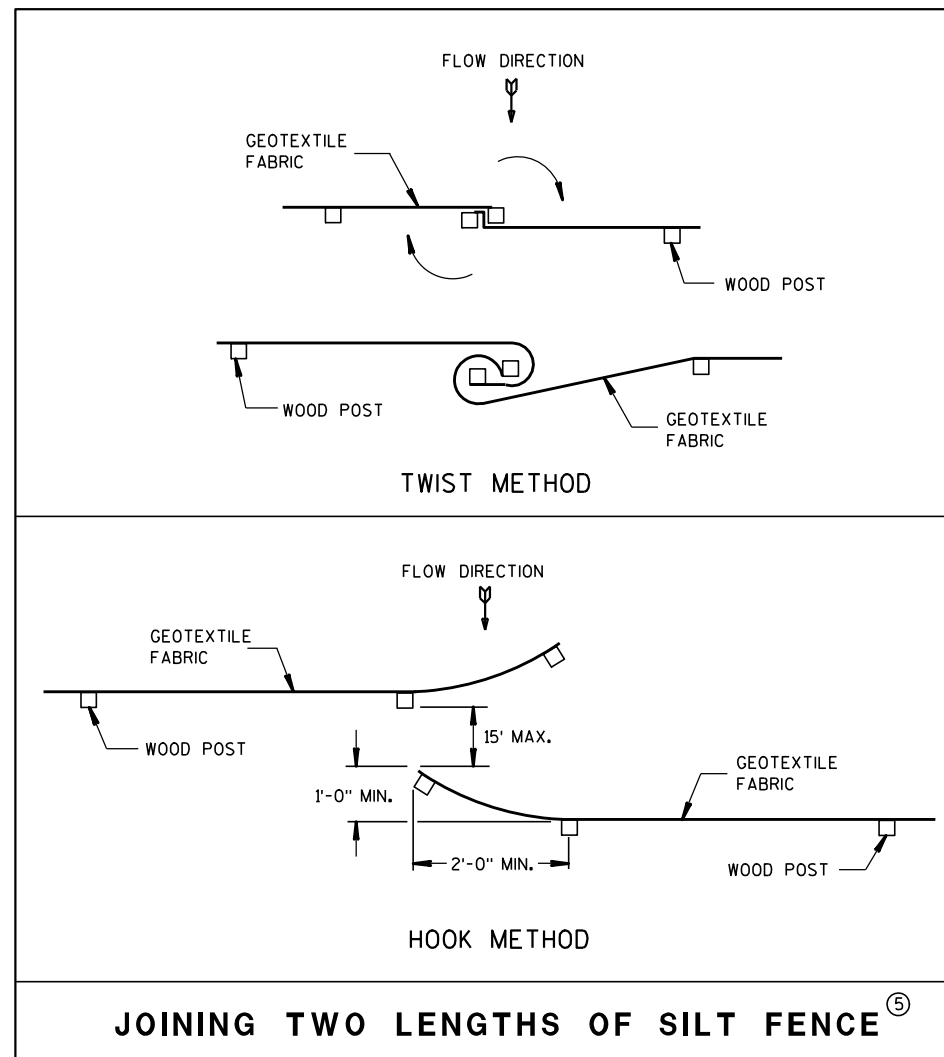
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

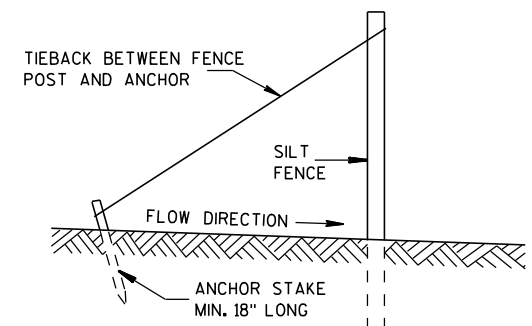


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

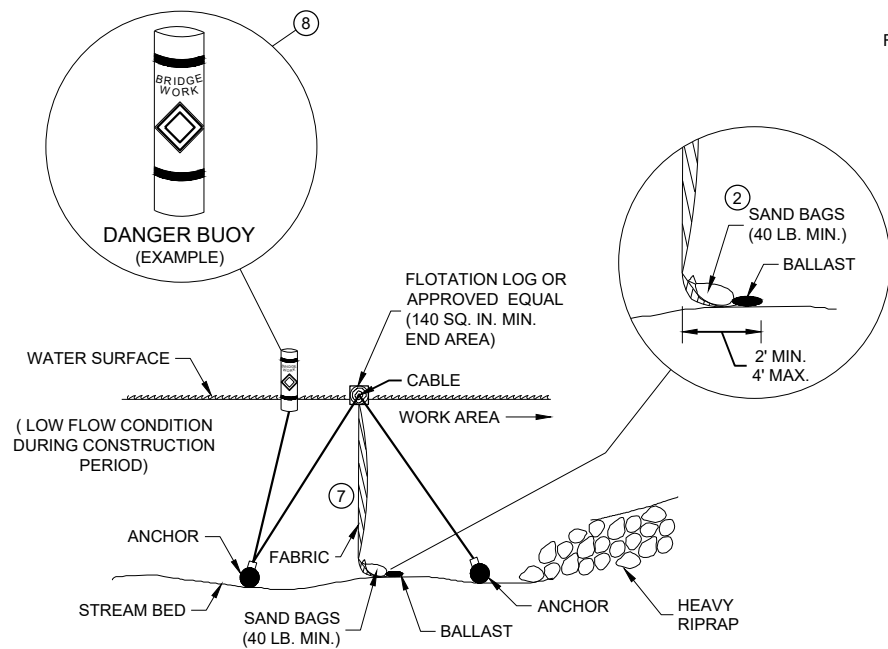


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

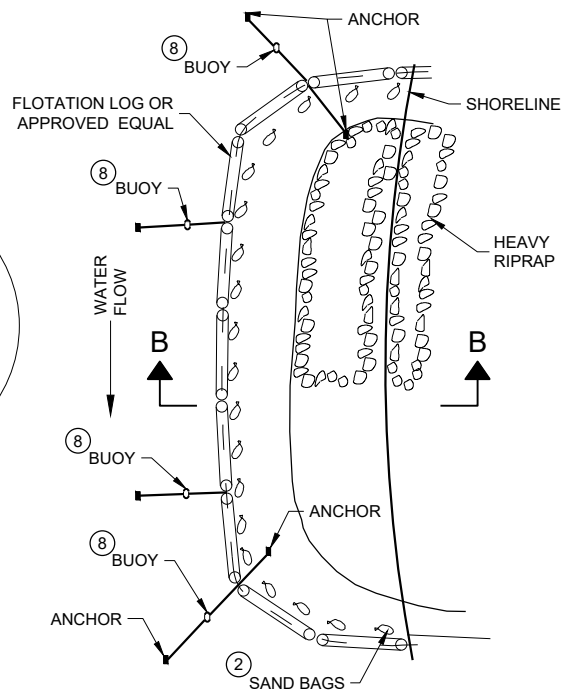
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

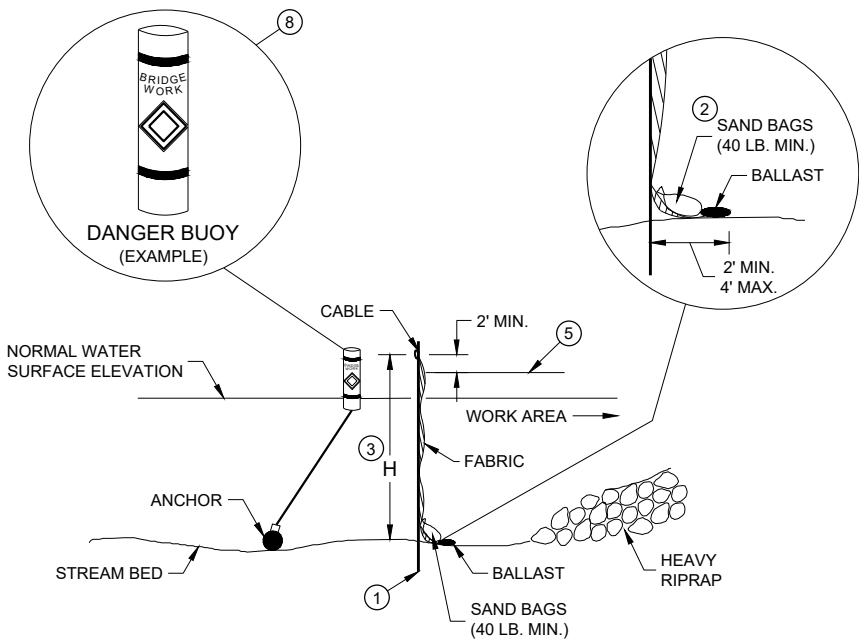


SECTION B - B

**TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6**

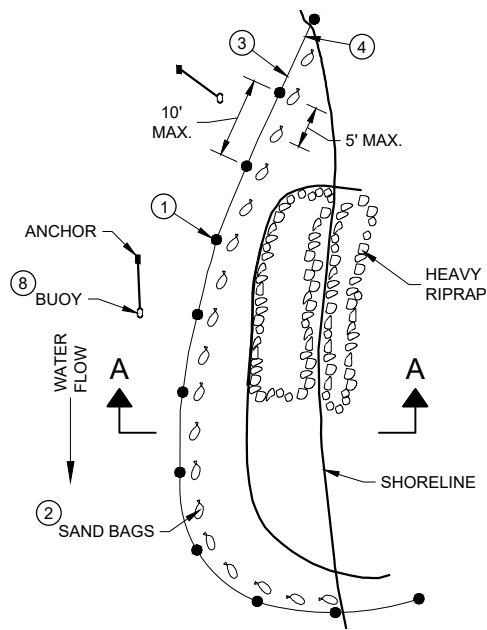


PLAN VIEW



SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW

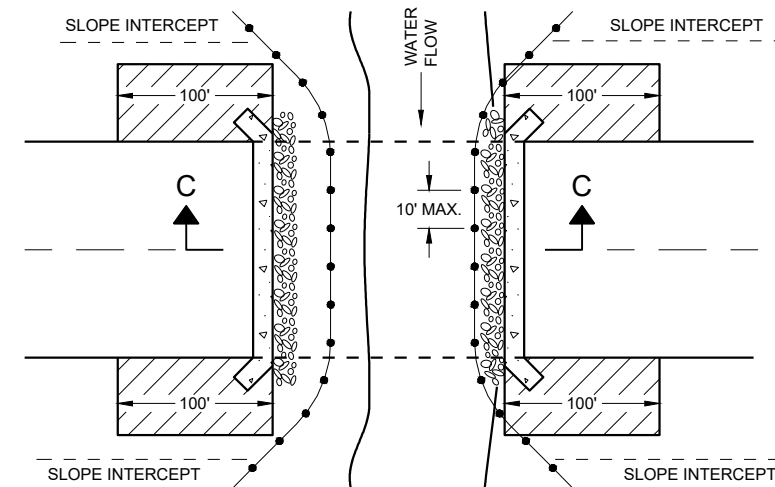
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

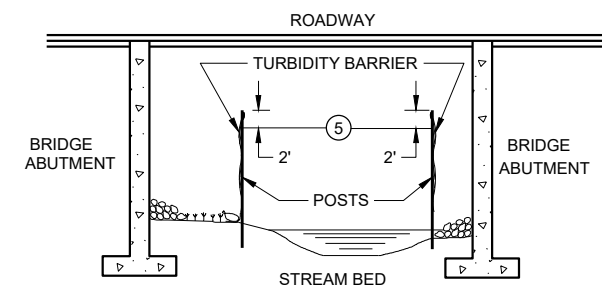
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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
DATE CHIEF ROADWAY DEVELOPMENT
ENGINEER

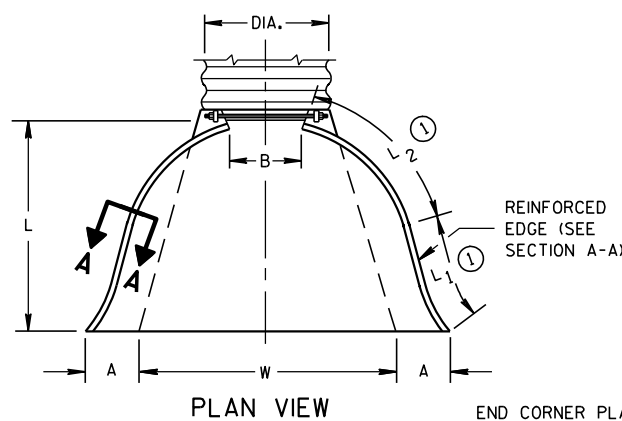
FHWA

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE	BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1	L2	W (±2")		
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

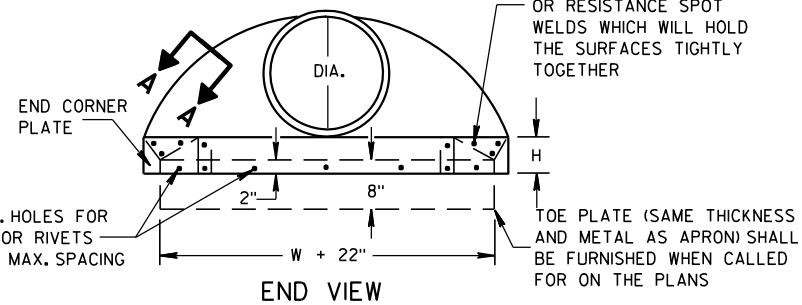
* EXCEPT CENTER PANEL SEE GENERAL NOTES

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

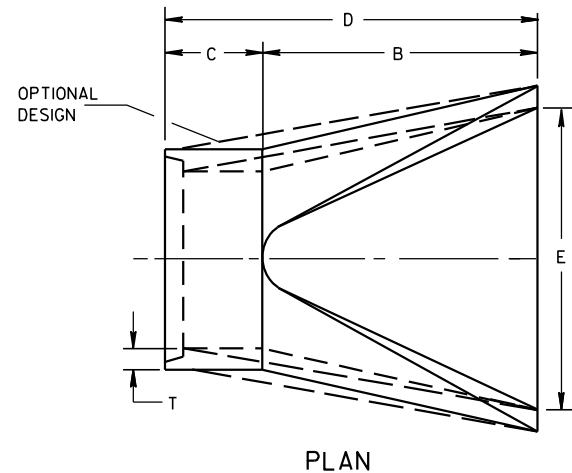
* MINIMUM
** MAXIMUM



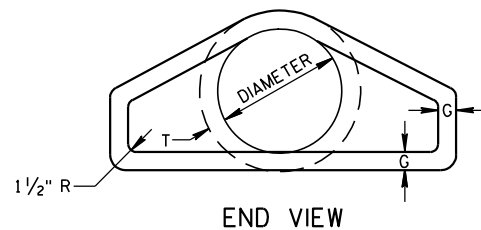
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



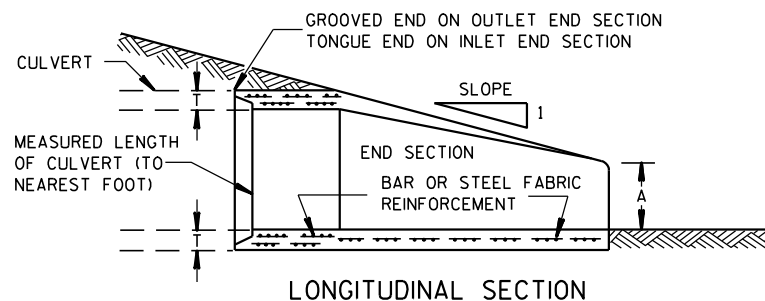
SIDE ELEVATION
METAL ENDWALLS



PLAN

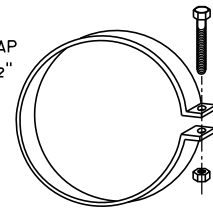


END VIEW



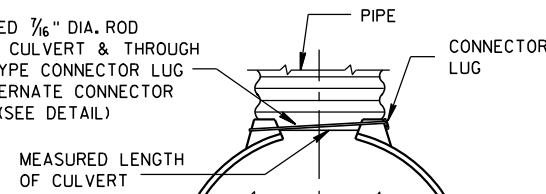
LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



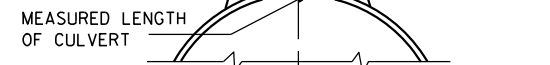
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP

THREADED 3/16" DIA. ROD AROUND CULVERT & THROUGH TANK TYPE CONNECTOR LUG OR ALTERNATE CONNECTOR STRAP (SEE DETAIL)



TYPE 1
FOR 12" THRU 24" CORR. PIPE

THREADED 3/16" DIA. ROD OVER TOP OF APRON, SIDE LUGS TO BE RIVETED TO APRON



TYPE 2
FOR 30" THRU 96" CORR. PIPE

MEASURED LENGTH OF CULVERT

TYPE 3
FOR 42" THRU 96" CORR. PIPE

DIMPLED OR CORRUGATED COUPLING BAND

TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

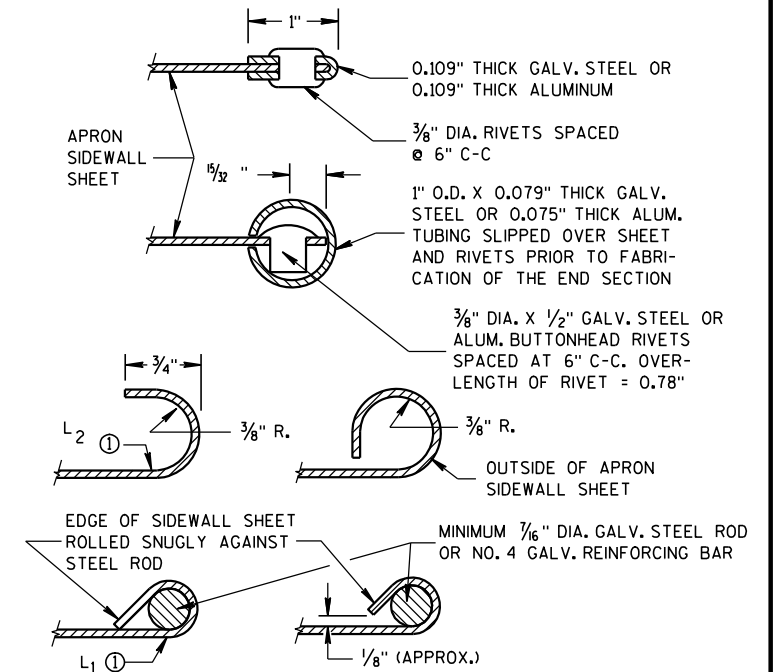
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

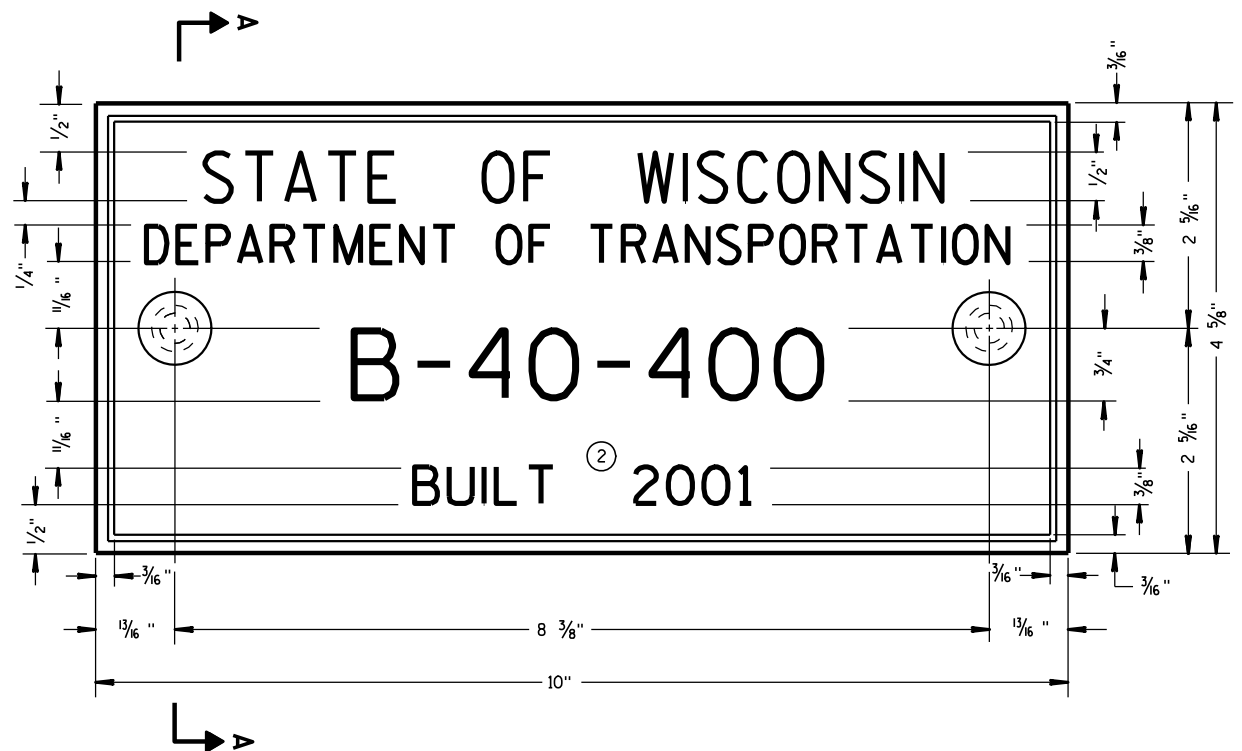
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



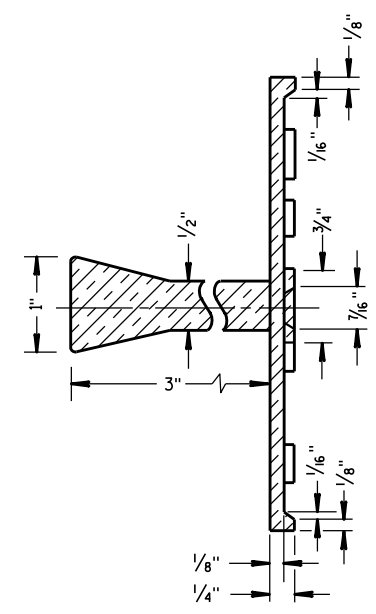
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

GENERAL NOTES

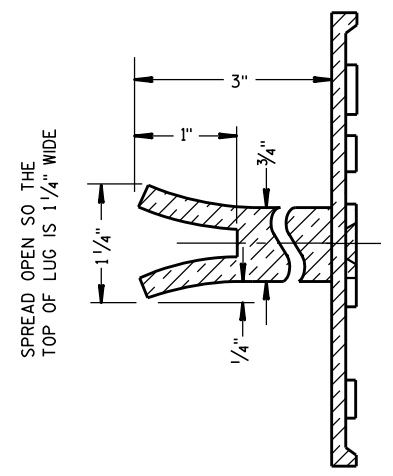
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

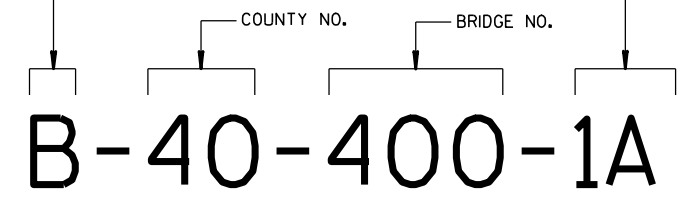
6

6

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

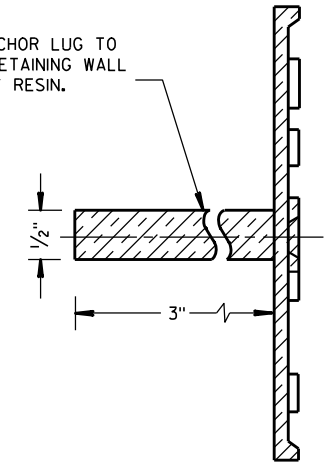
B = BRIDGE
C = CULVERT
R = RETAINING WALL

UNIT NO. FOR MULTIPLE
UNIT BRIDGE



**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

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

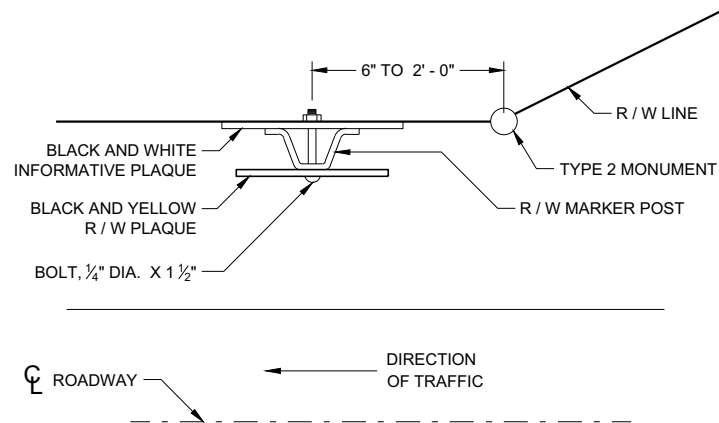


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

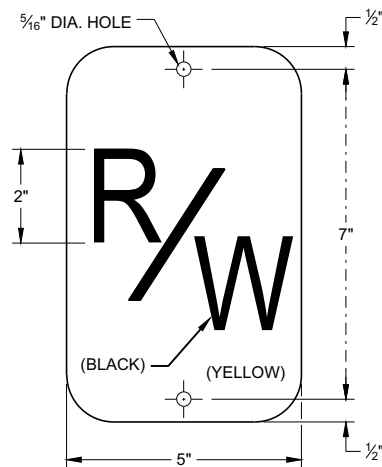
S.D.D. 12 A 3-10

S.D.D. 12 A 3-10

NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 3/26/10	/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	

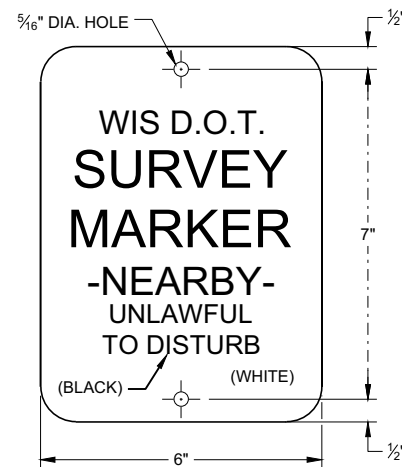


**PLAN VIEW
STEEL MARKER POST**



R / W PLAQUE

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



INFORMATIVE PLAQUE

GENERAL NOTES

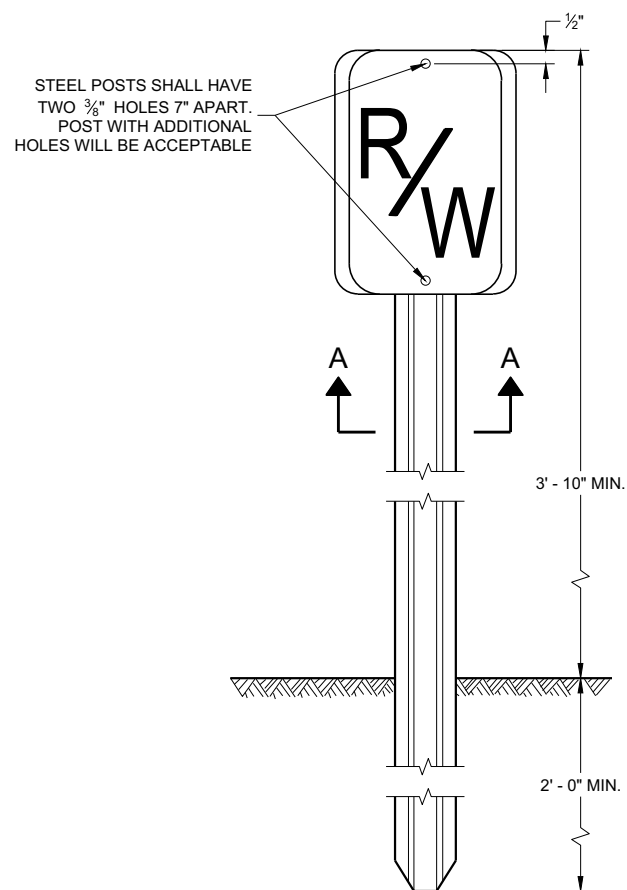
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A STEEL MARKER POST FOR RIGHT -OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

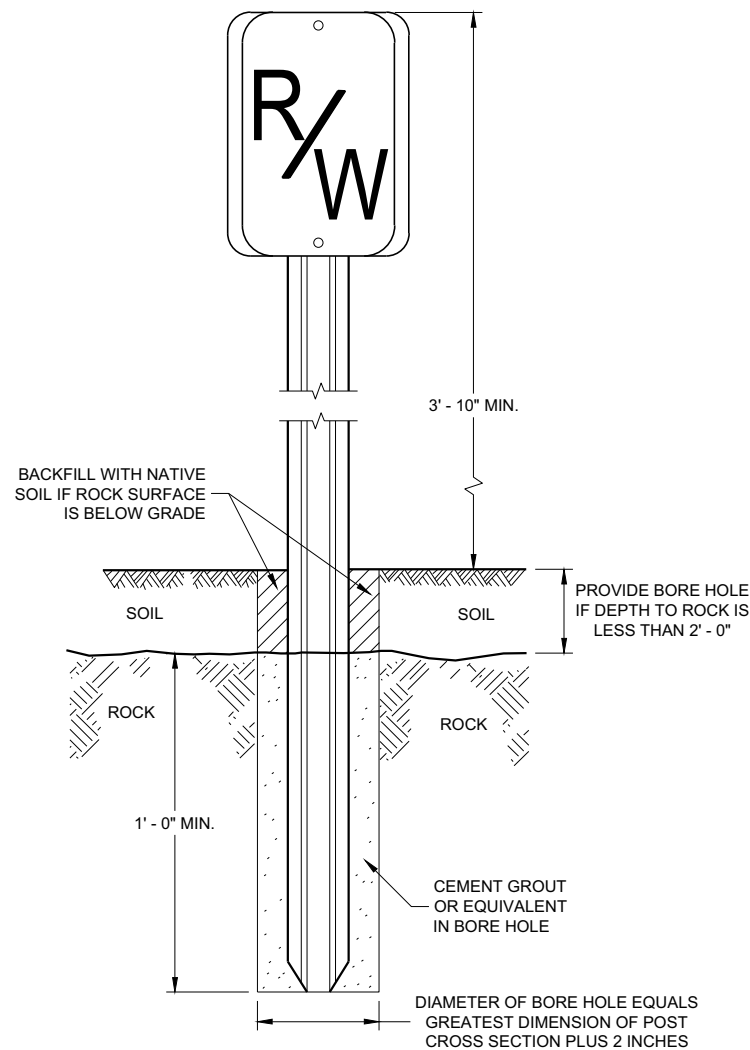
THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. "R/W" AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

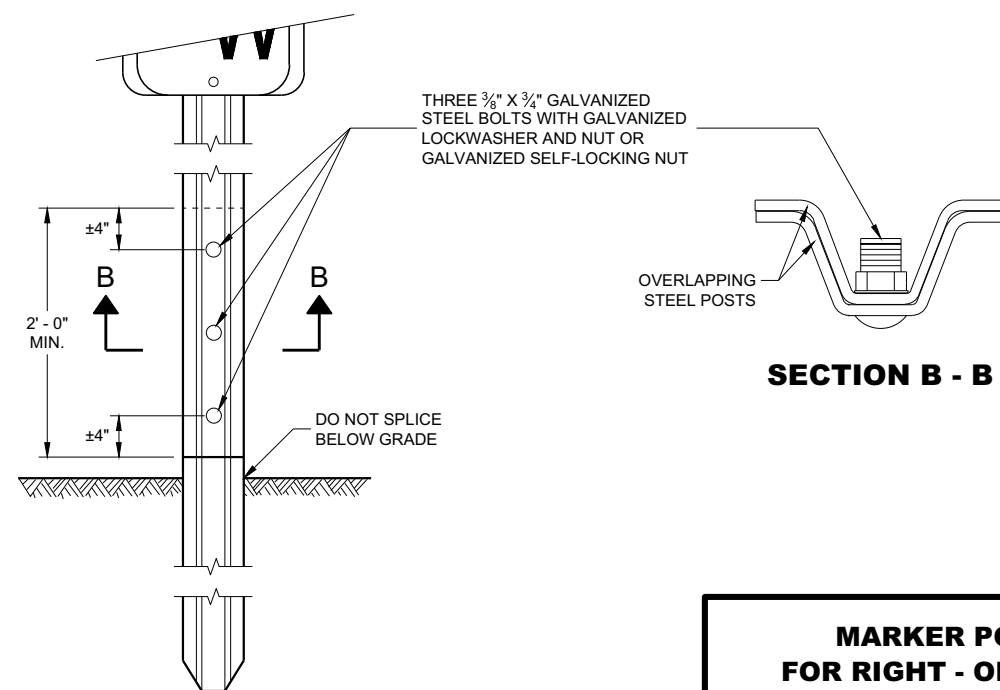
- ① IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' - 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



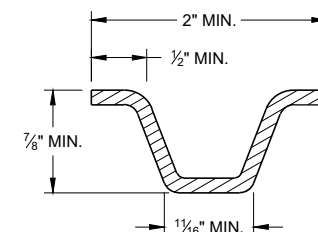
**FRONT VIEW
STEEL MARKER POST**



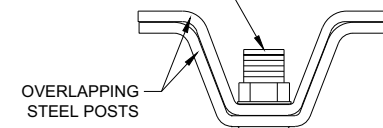
**FRONT VIEW
ROCK INSTALLATION** ①



**FRONT VIEW
SPLICE DETAIL**



MIN. WEIGHT 1.12 LB./FT.
SECTION A - A



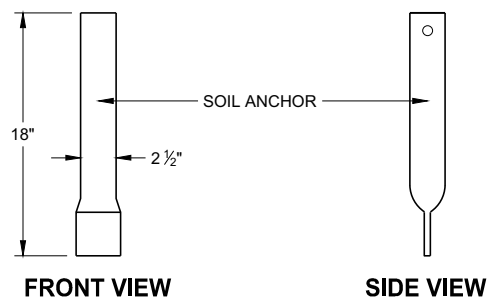
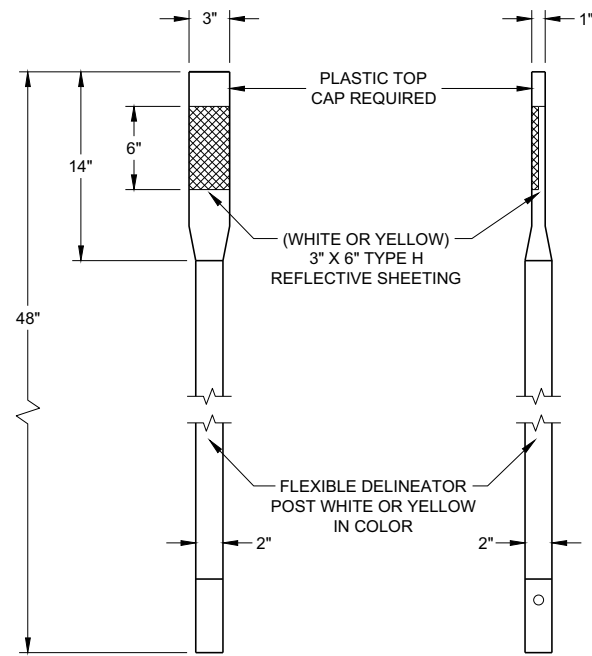
SECTION B - B

**MARKER POST
FOR RIGHT - OF - WAY**

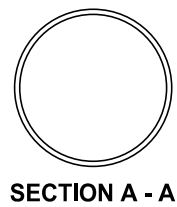
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016 DATE /S/ Ray Kumapayi
DATE CHIEF SURVEYING AND MAPPING ENGINEER

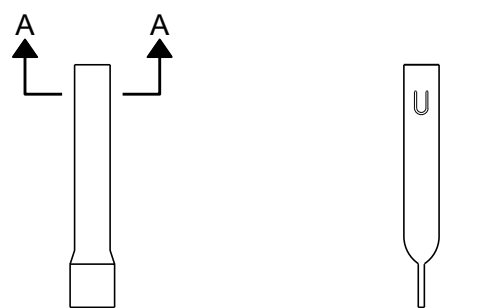
FHWA



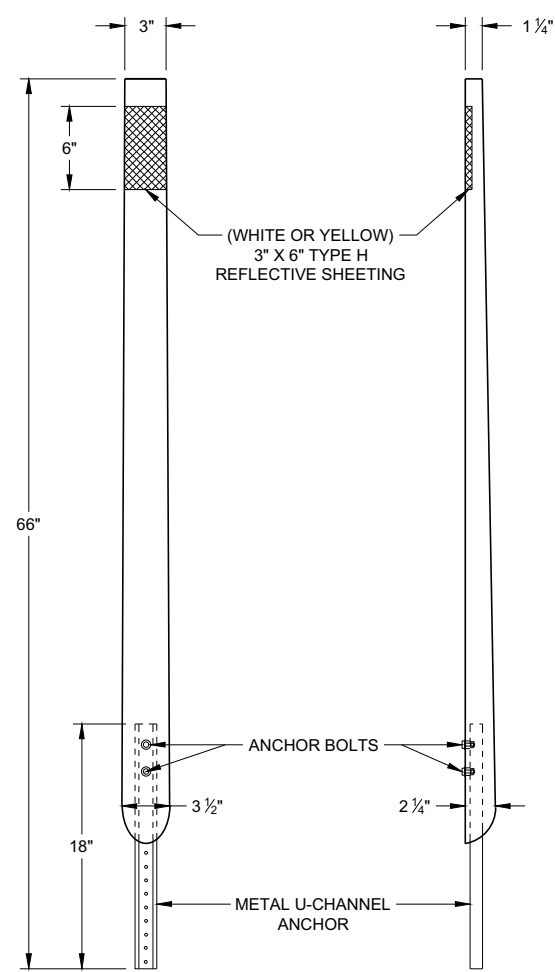
FRONT VIEW SIDE VIEW
ALTERNATE 1



SECTION A - A

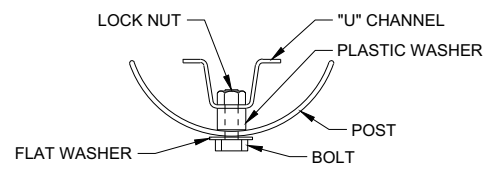


FRONT VIEW SIDE VIEW
ALTERNATE 1

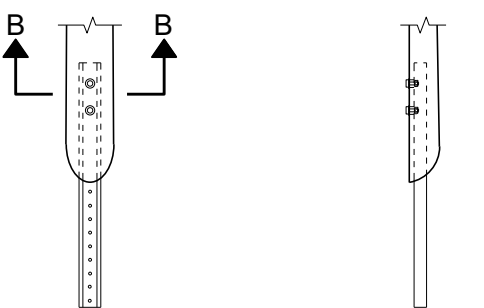


FRONT VIEW SIDE VIEW
ALTERNATE 2

FLEXIBLE DELINEATOR POSTS

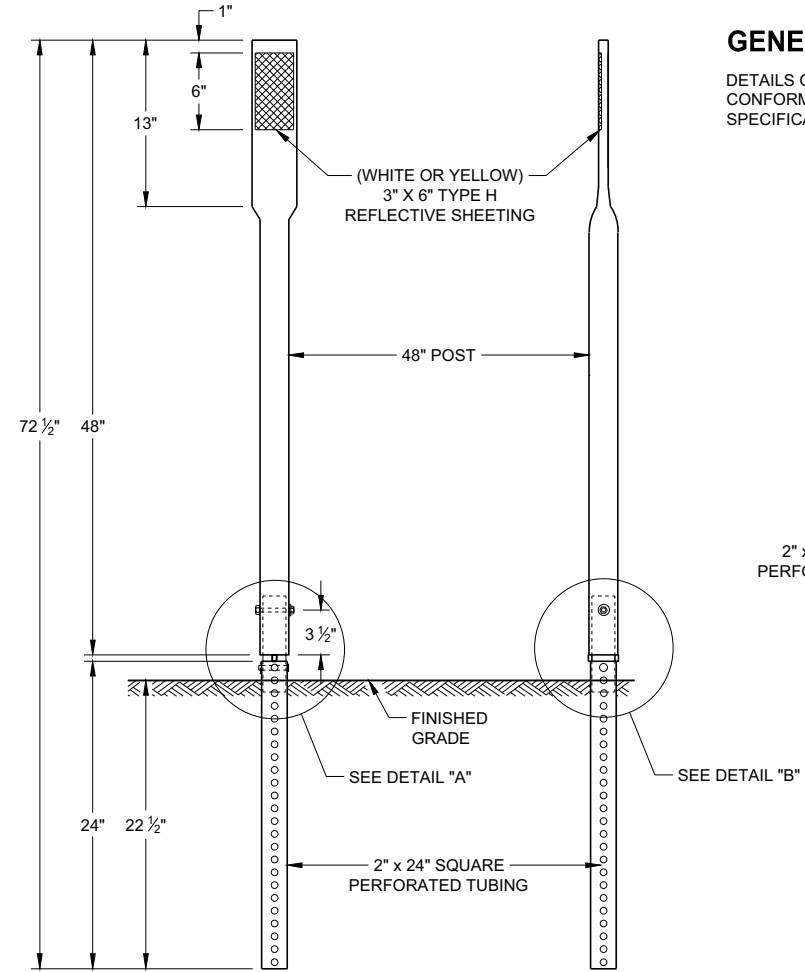


SECTION B - B

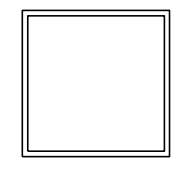


FRONT VIEW SIDE VIEW
ALTERNATE 2

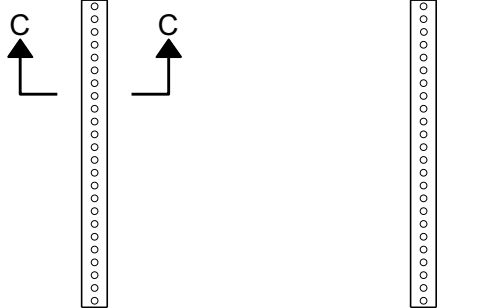
FLEXIBLE MARKER POST ANCHORS



FRONT VIEW SIDE VIEW
ALTERNATE 3



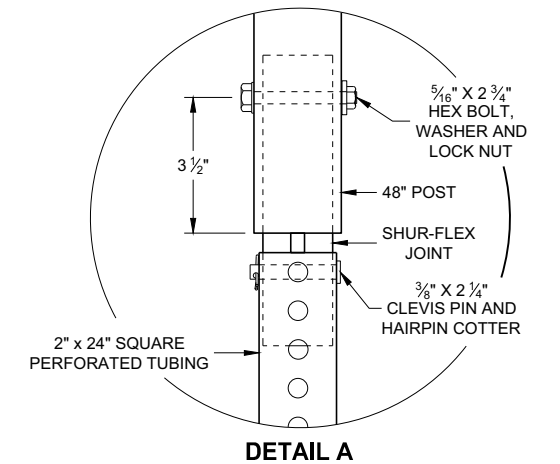
SECTION C - C



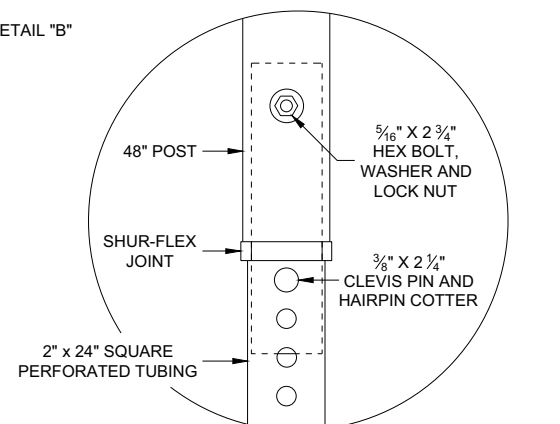
FRONT VIEW SIDE VIEW
ALTERNATE 3

GENERAL NOTES

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



DETAIL A



DETAIL B

REFLECTOR SPACING TABLE

REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

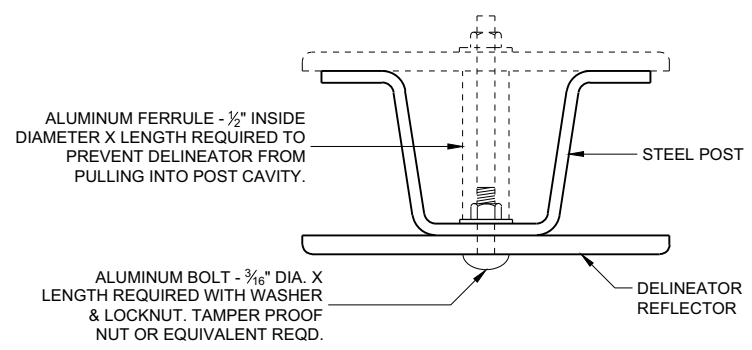
* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER

FLEXIBLE DELINEATOR POST

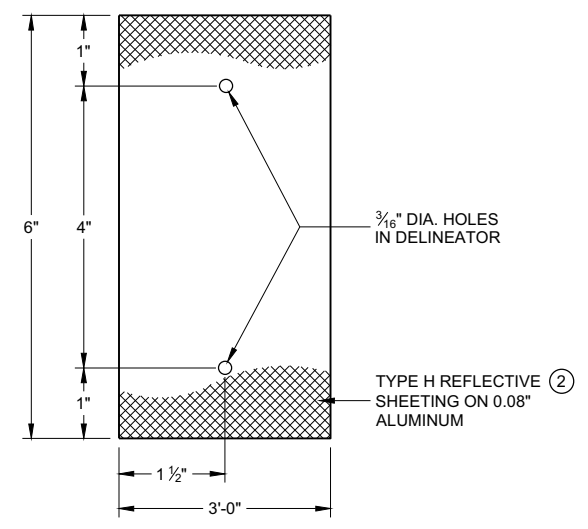
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER

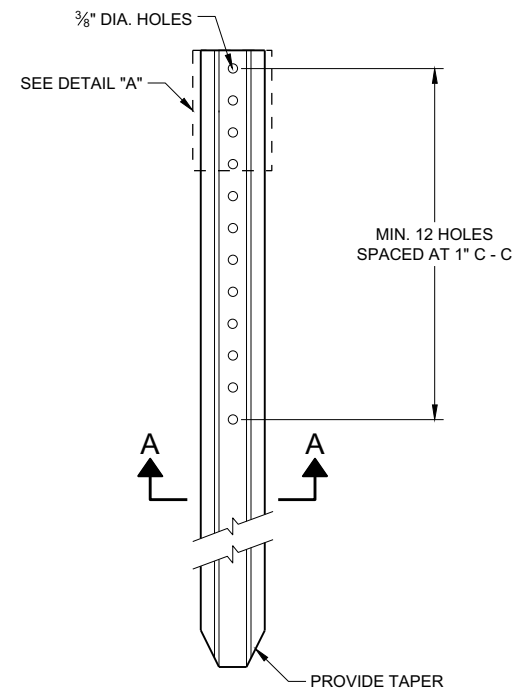
FHWA



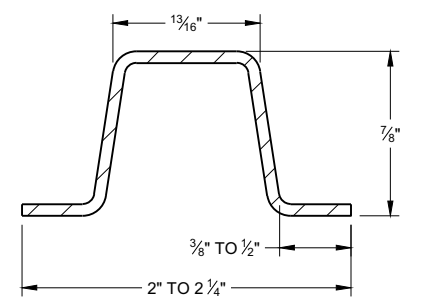
MOUNTING DETAIL FOR DELINEATOR REFLECTOR



DETAIL "A" 3" X 6" DELINEATOR REFLECTOR



DELINEATOR POST



SECTION A - A
WEIGHT 1.12 LBS PER FT. \ 0.1 LB.

REFLECTOR SPACING TABLE

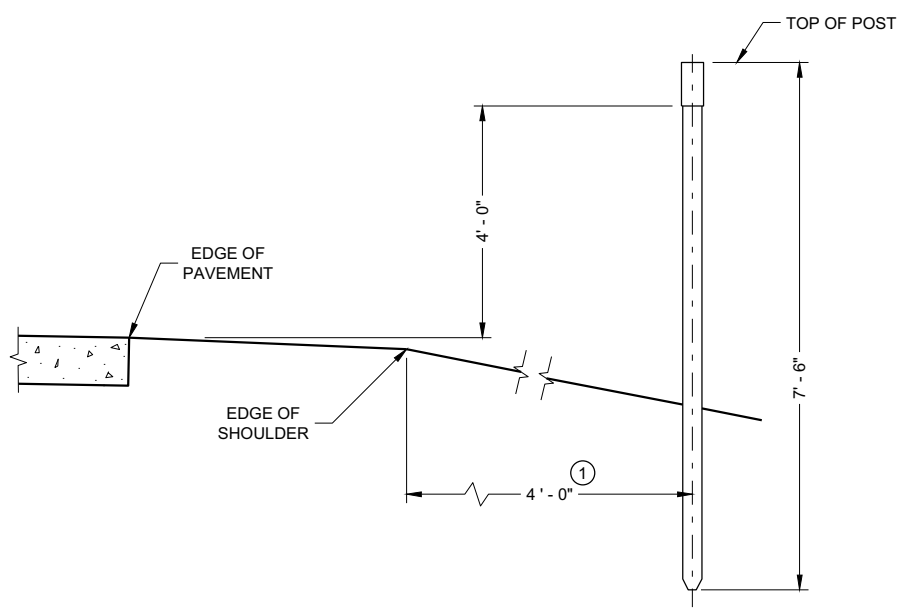
REFLECTOR SPACING	LOCATION
* 100' C-C	RAMPS
400' C-C	MAINLINE

* START AT BEGINNING OF RAMP TAPER AND END AT END OF RAMP TAPER

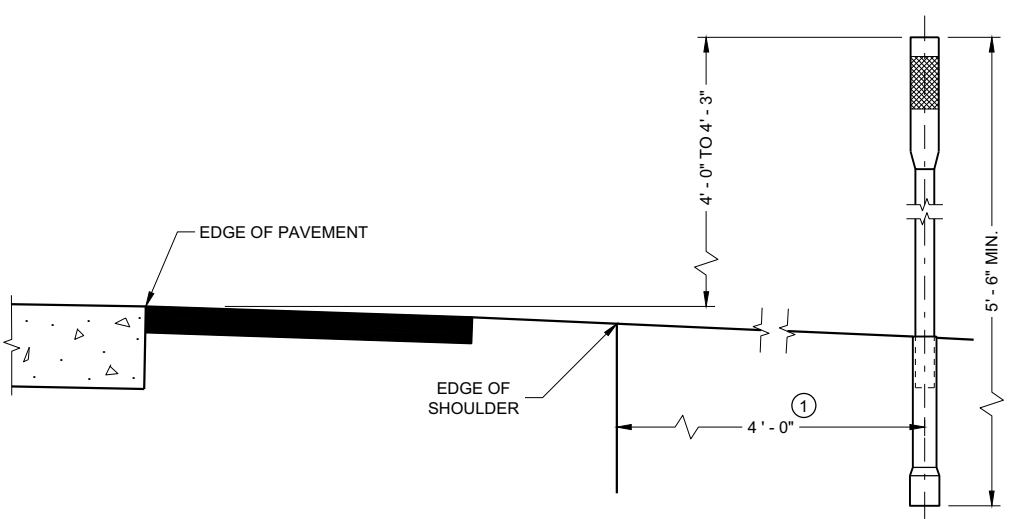
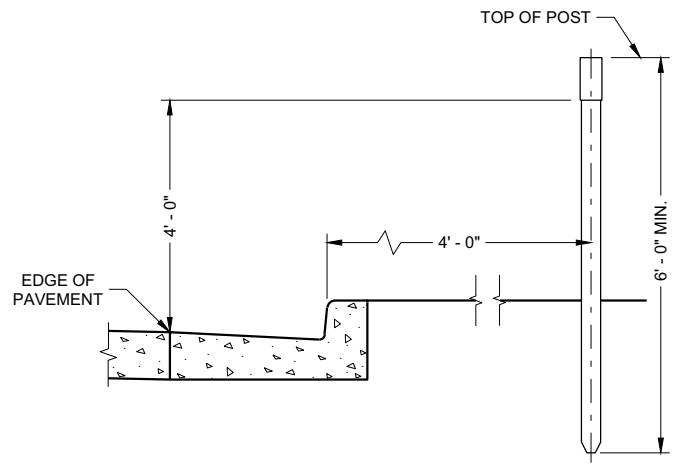
GENERAL NOTES

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

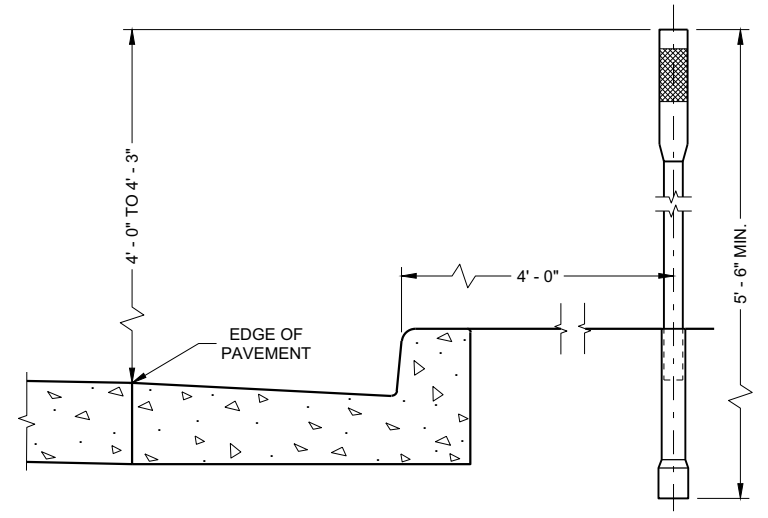
- ① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.
- ② FURNISH TYPE H SHEETING FROM THE APPROVED PRODUCTS LIST.



TYPICAL INSTALLATIONS OF DELINEATOR POSTS



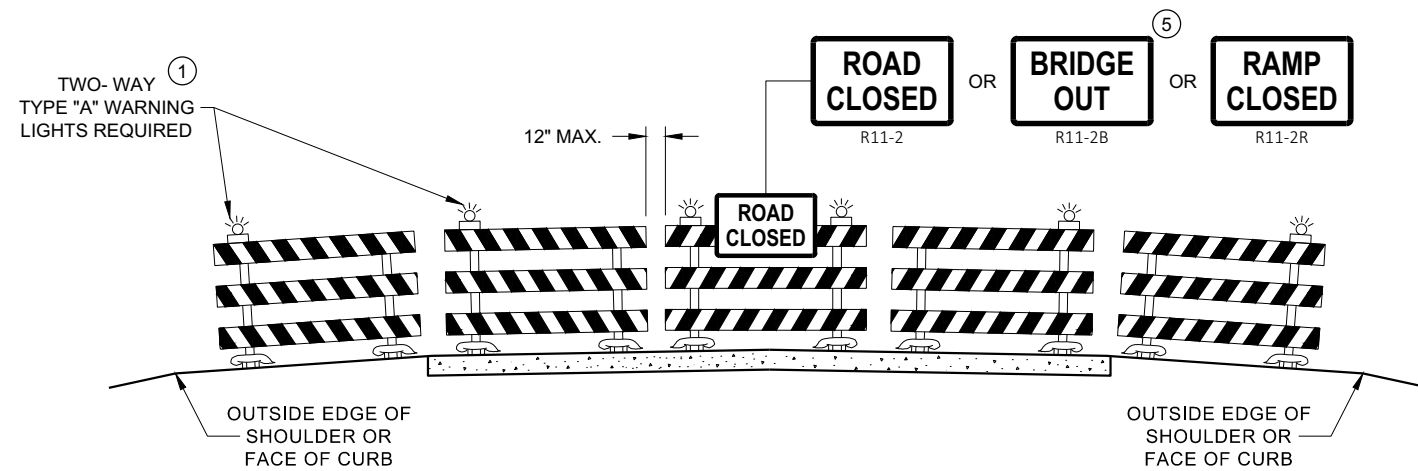
TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS



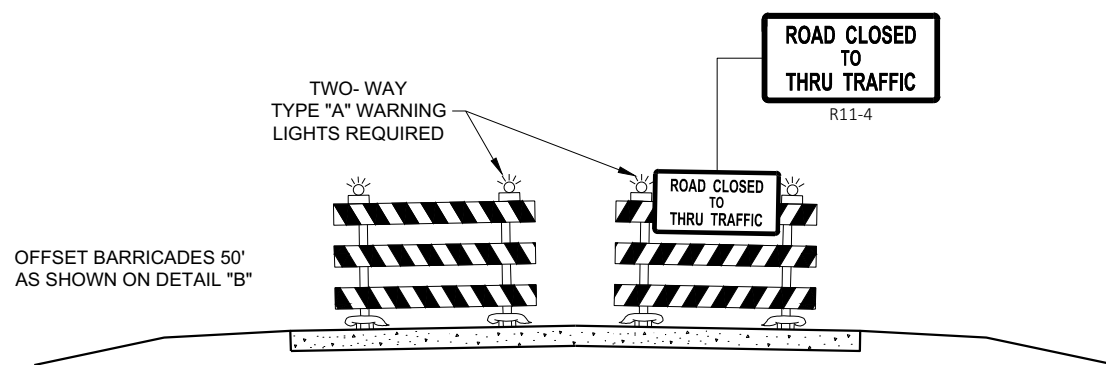
DELINEATOR POST WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
August 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER



**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
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

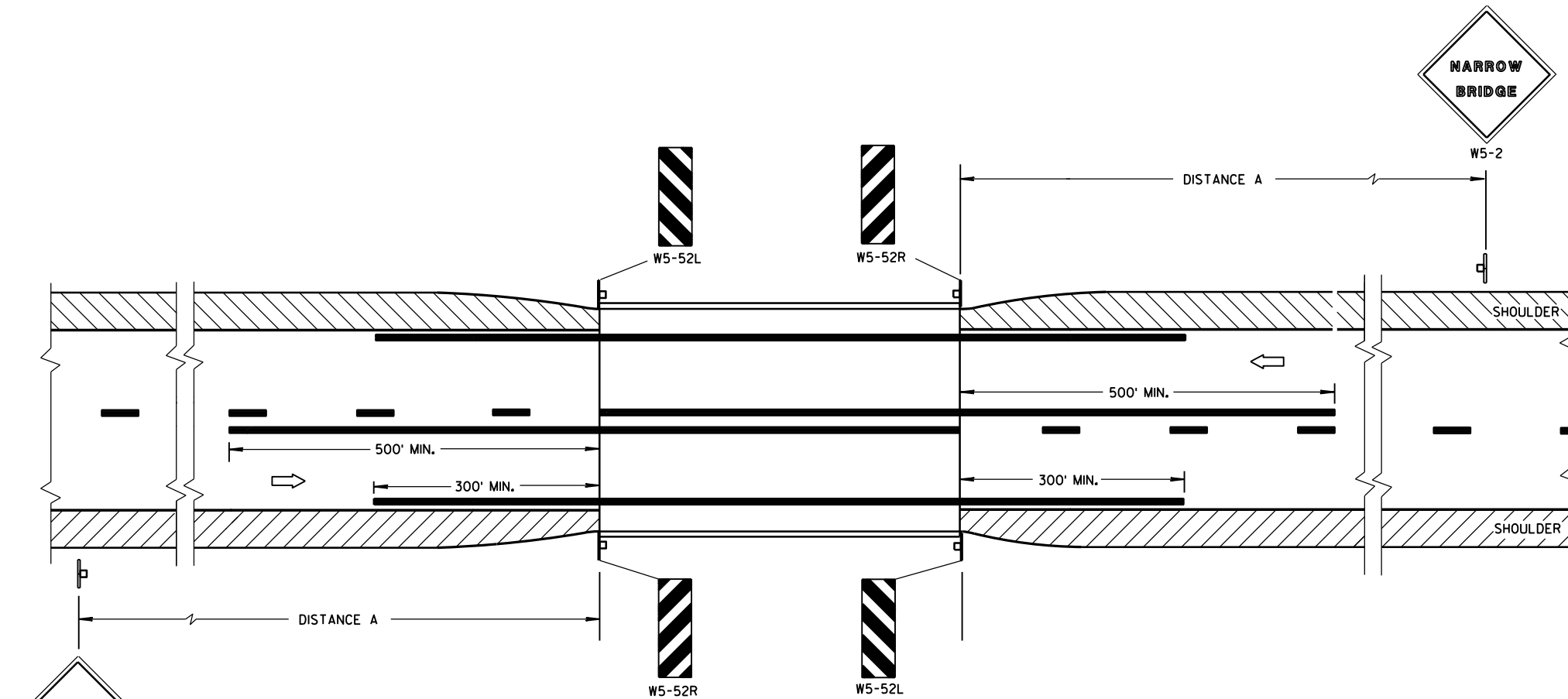
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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.

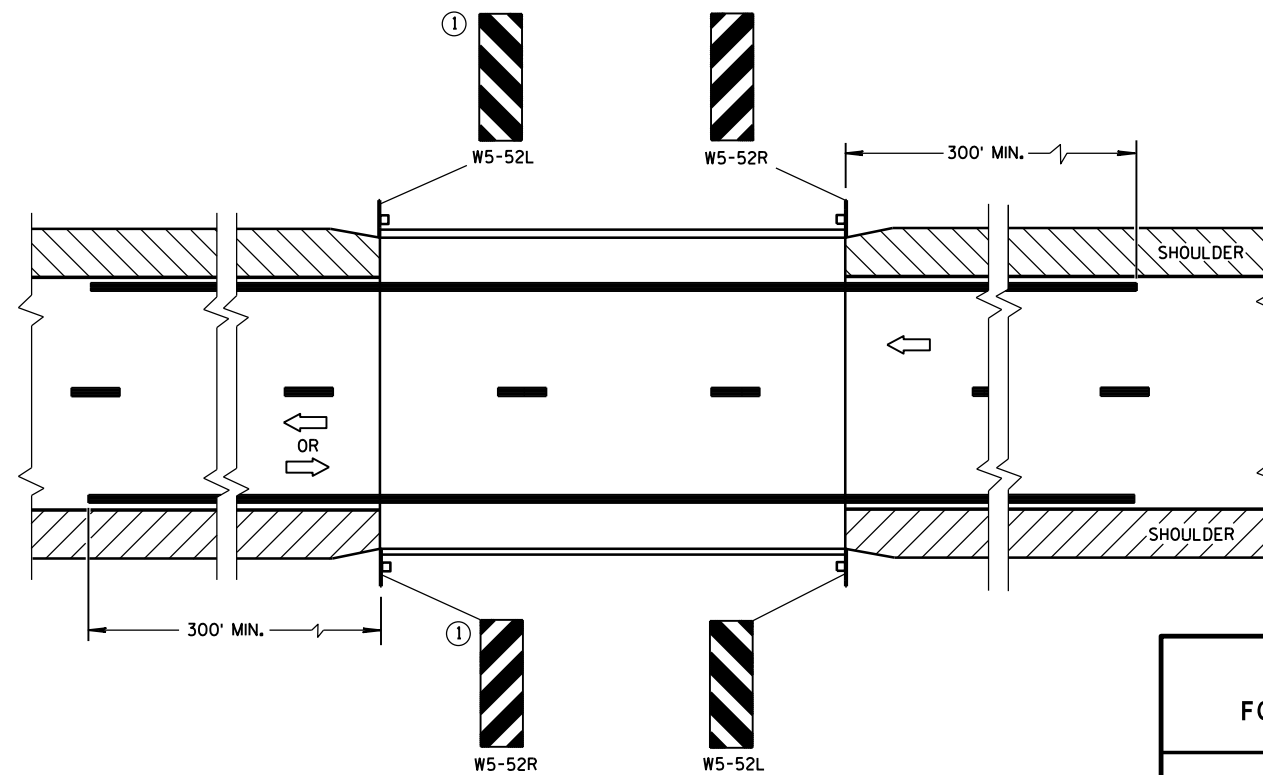
① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC



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.

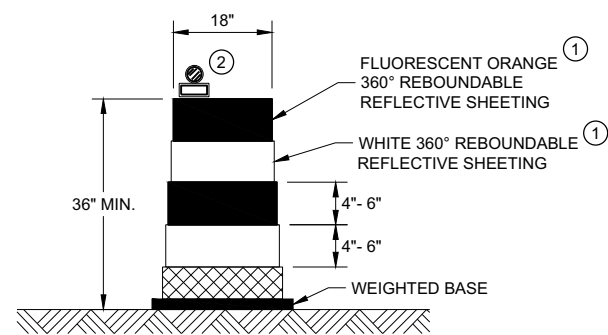
DISTANCE TABLE

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

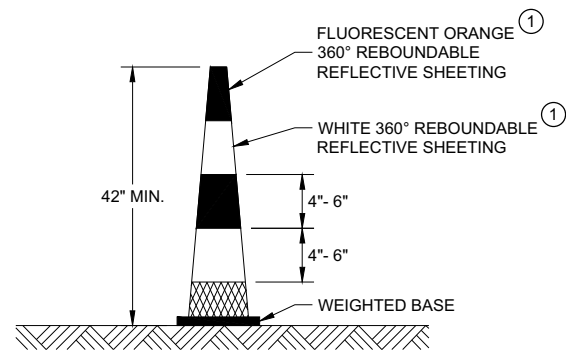
SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

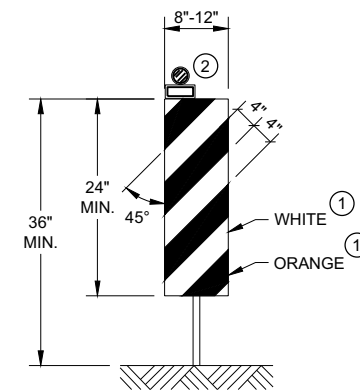


DRUM



42" CONE

DO NOT USE IN TAPERS
 1/2 SPACING OF DRUMS

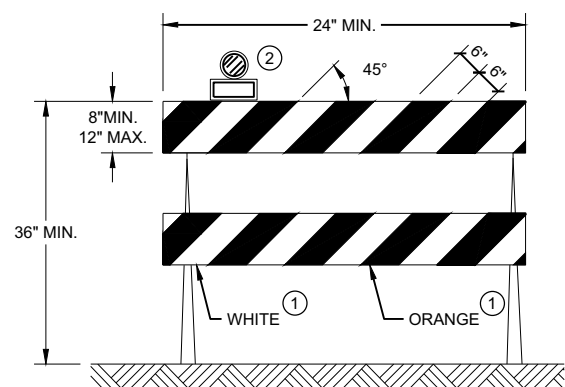


VERTICAL PANEL

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

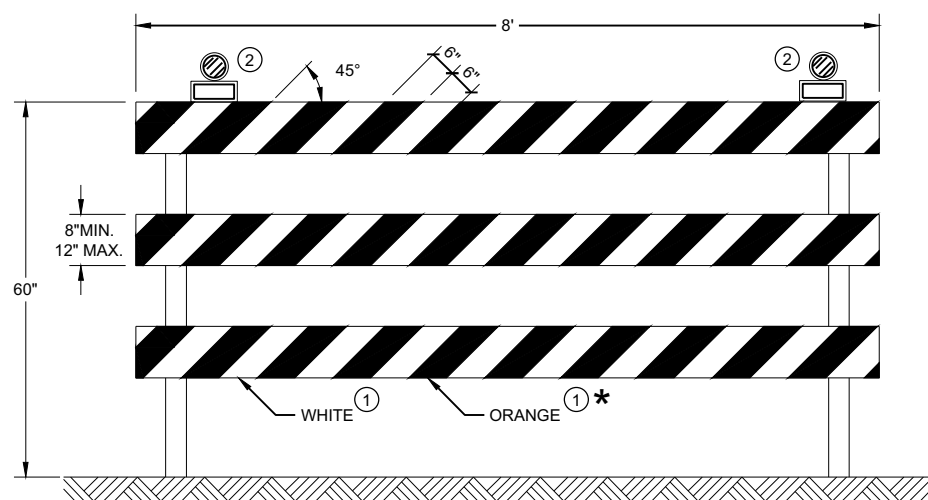
GENERAL NOTES

- 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.



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 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

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

GENERAL NOTES

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

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

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

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

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

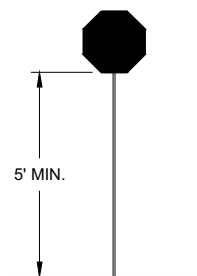
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

- FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.
- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
 - ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FOR 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.



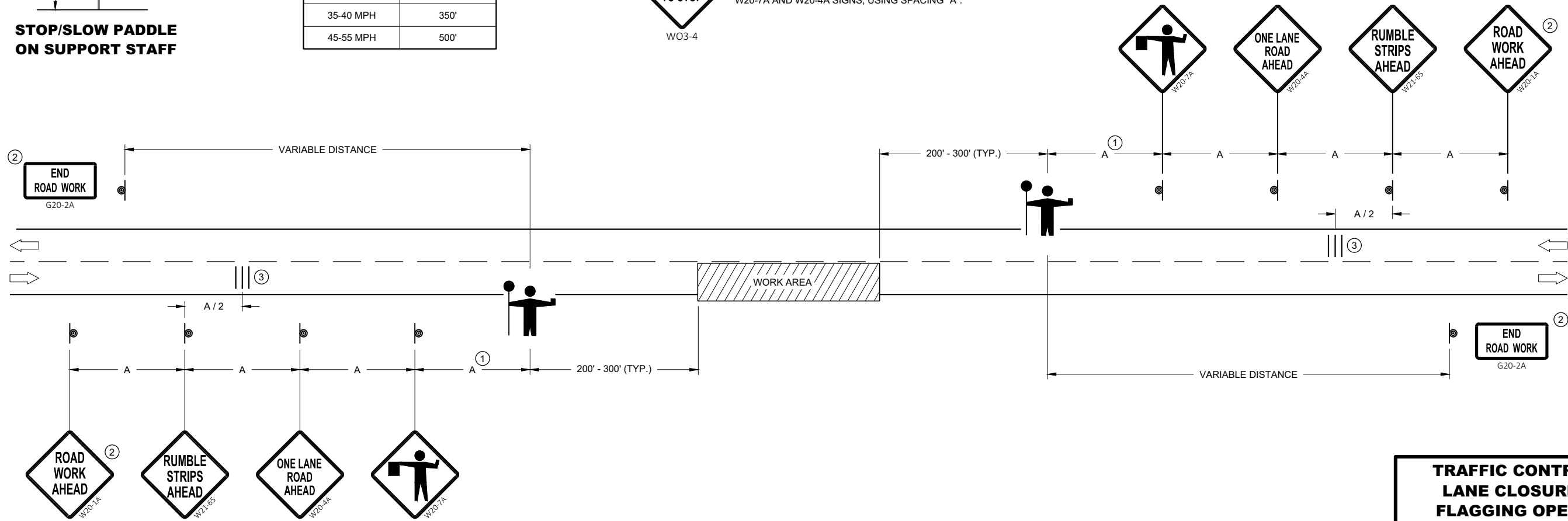
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

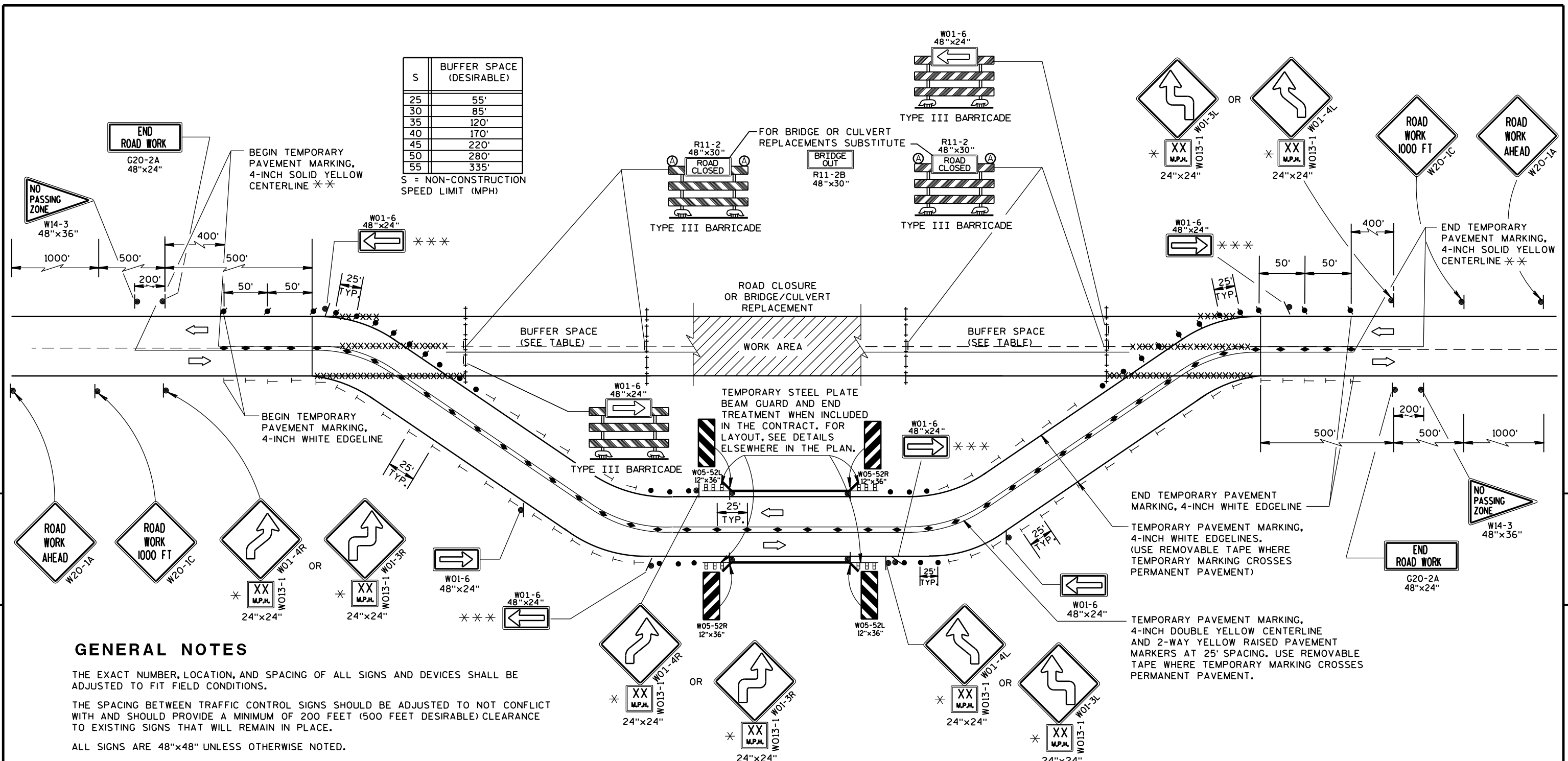
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE May 2019 /S/ Andrew Heidtke
WORK ZONE ENGINEER

FHWA

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

S = NON-CONSTRUCTION SPEED LIMIT (MPH)



GENERAL NOTES

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

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

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

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

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

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

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

* IF ADVISORY SPEED IS GREATER THAN 30 MPH, USE THE W01-4 SIGN. IF ADVISORY SPEED IS 30 MPH OR LESS, USE THE W01-3 SIGN.

** 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.

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

LEGEND

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

TRAFFIC CONTROL, TEMPORARY BYPASS ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

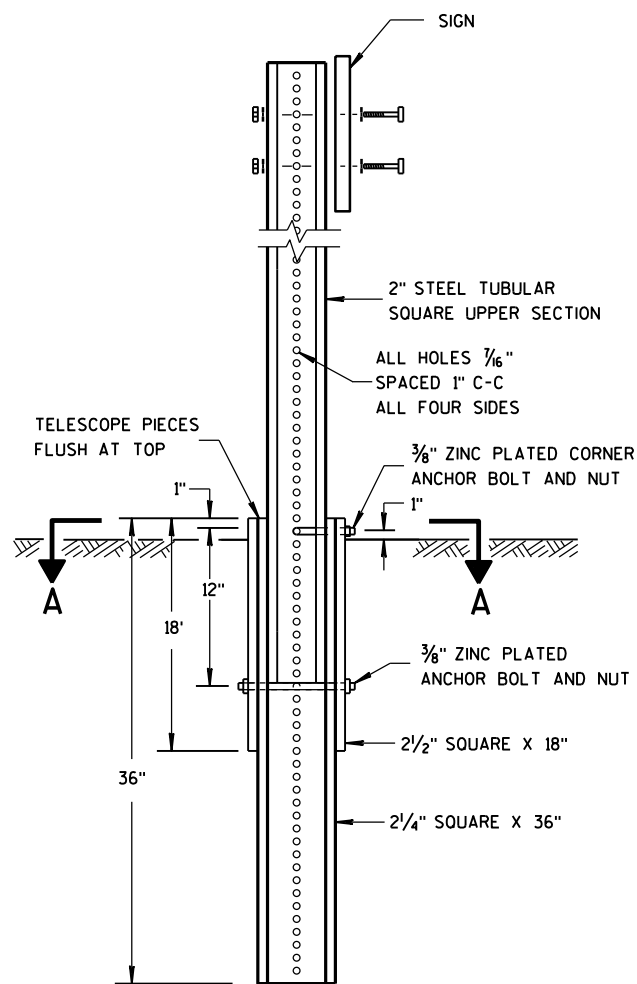
FHWA

6

6

S.D.D. 15 D 31-3

S.D.D. 15 D 31-3



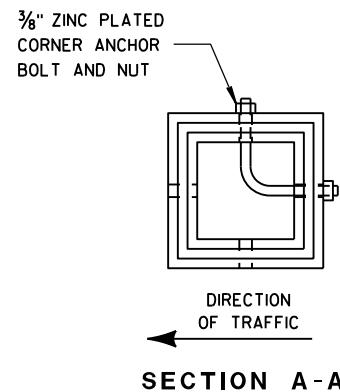
DETAIL OF TUBULAR STEEL SIGN POST

TUBULAR STEEL POSTS

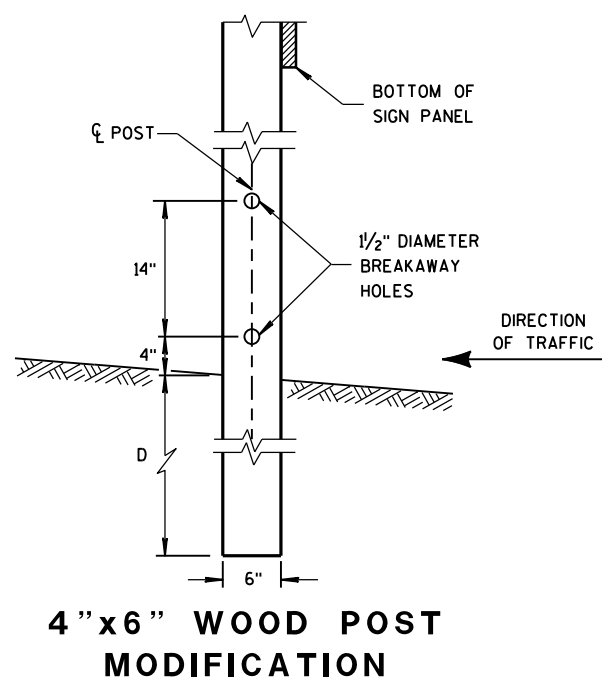
AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS WIDER THAN 3 FEET OR LARGER THAN 9 SQ. FT. SHALL BE MOUNTED ON MULTIPLE POSTS (SEE ABOVE TABLE).

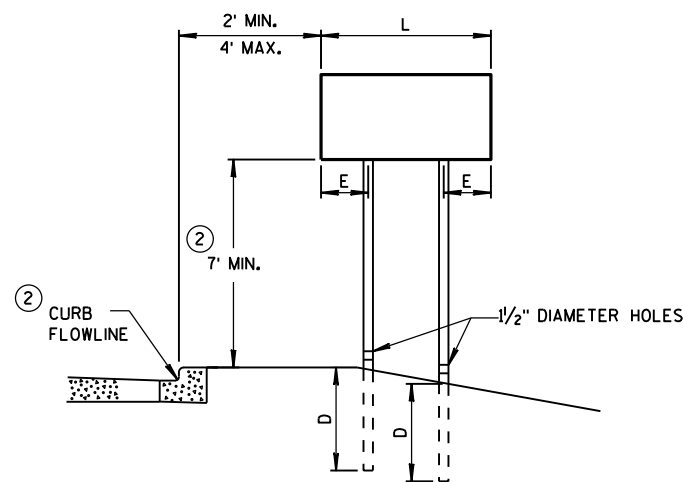
SIGNS LARGER THAN 27 SQ. FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.



SECTION A-A



4" X 6" WOOD POST MODIFICATION

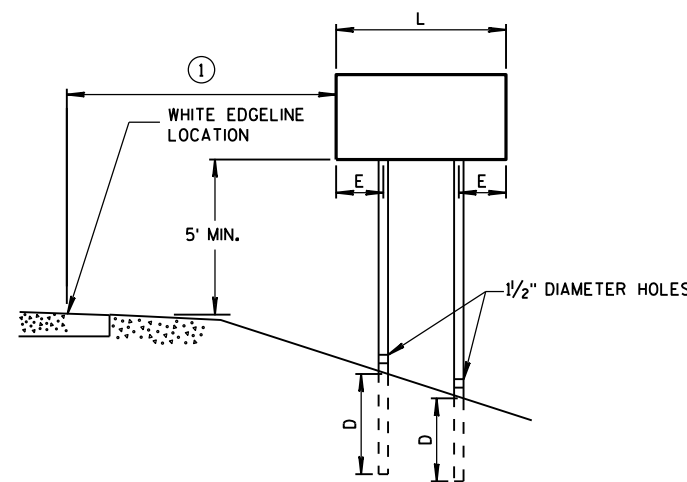


URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

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



RURAL AREA

4" X 6" WOOD POST

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

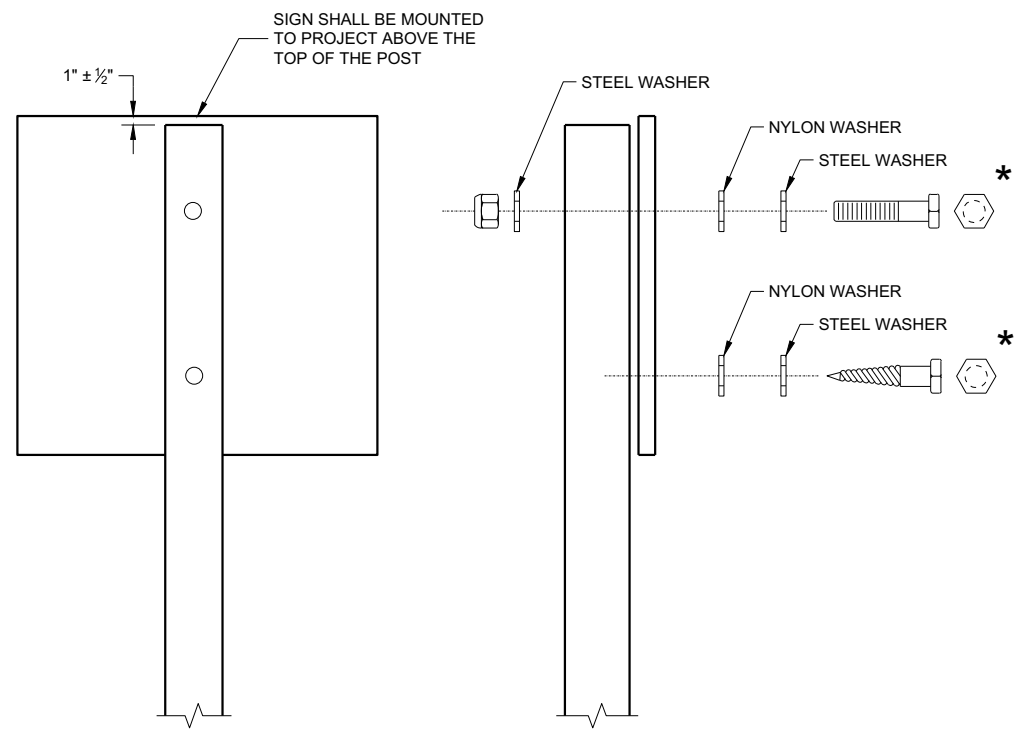
SEE NOTE ③

GENERAL NOTES

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

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

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

SQUARE STEEL POST (2" x 2")
 MACHINE BOLTS - 3/8" x 3 1/4" LENGTH W/NUTS
 RIVETS - 3/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM
 BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,
 GRIP RANGE 0.042 - 0.375 INCH

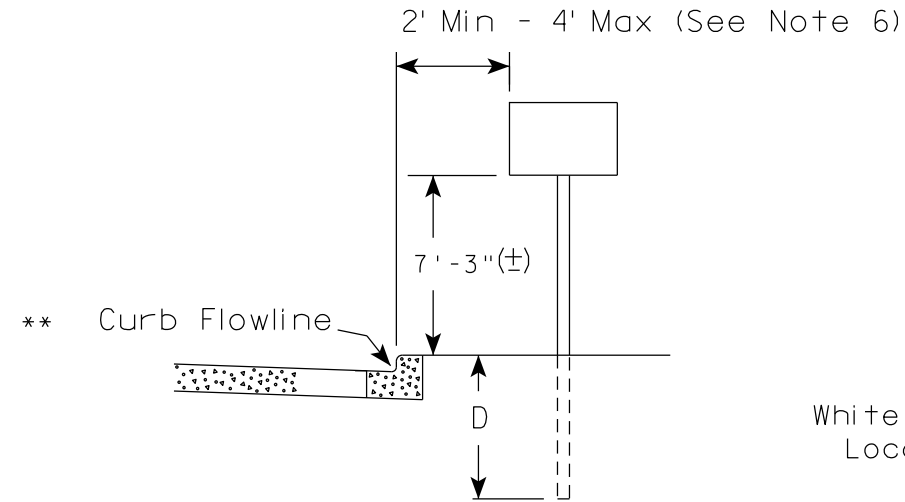
WASHERS (ALL POSTS) -
 1 1/4" O.D. x 3/8" I.D. x 1/16" STEEL
 1 1/4" O.D. x 3/8" I.D. x 0.080 NYLON

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

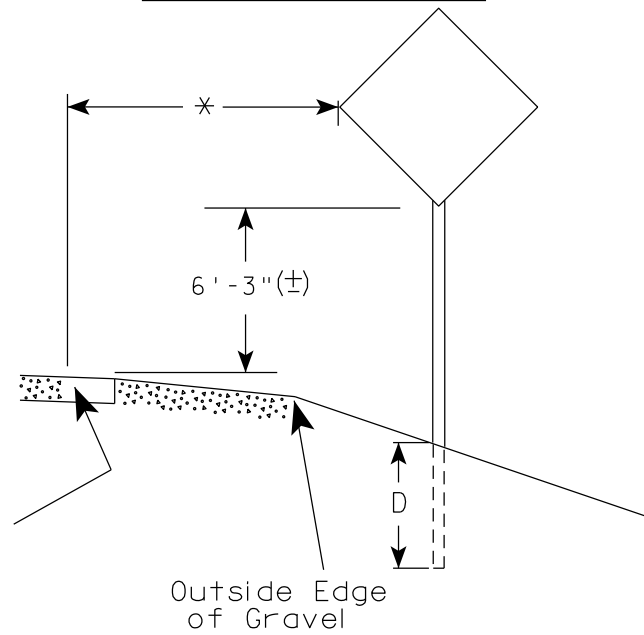
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

URBAN AREA

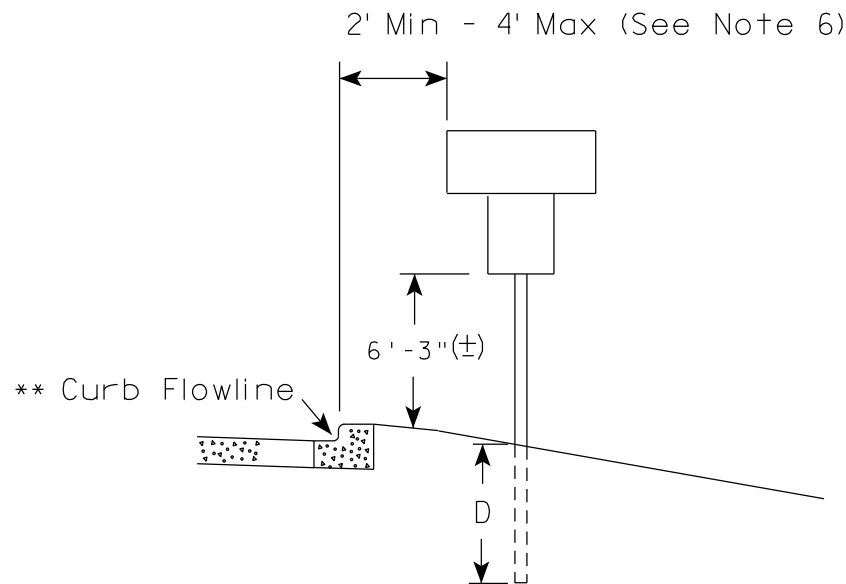
RURAL AREA (See Note 2)



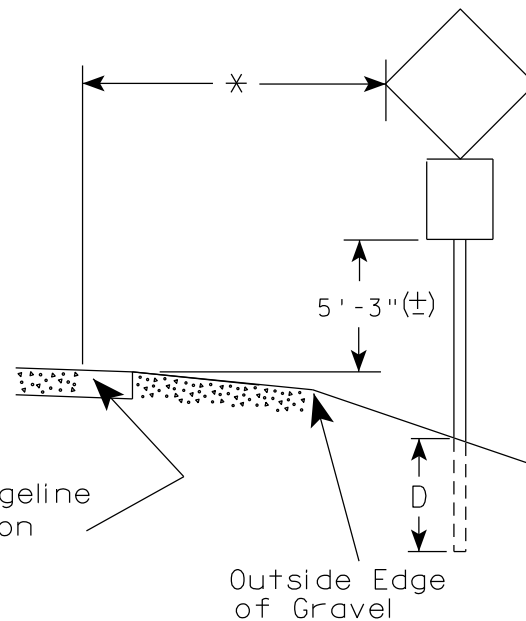
White Edgeline Location



Outside Edge of Gravel



White Edgeline Location



Outside Edge of Gravel

POST EMBEDMENT DEPTH

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

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" (±). 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. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the 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.

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22



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

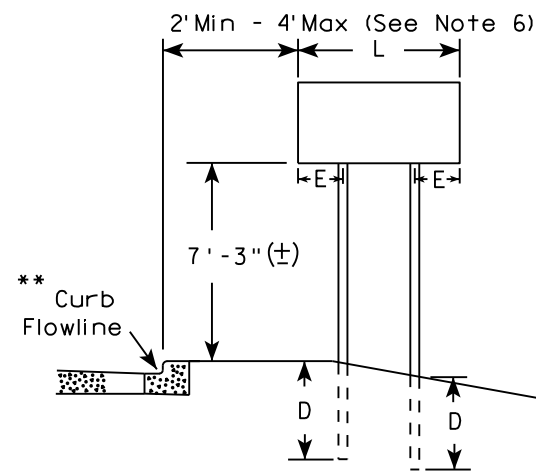
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

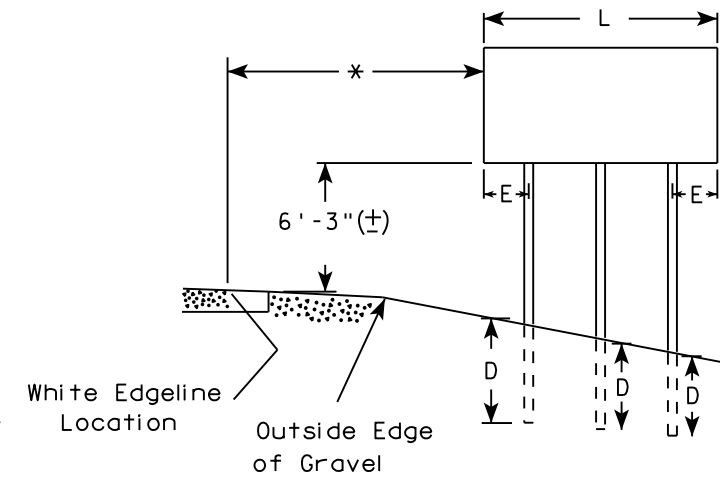
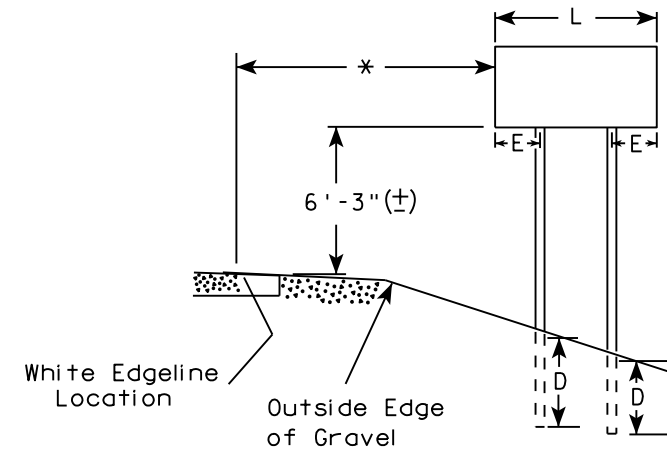
GENERAL NOTES

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

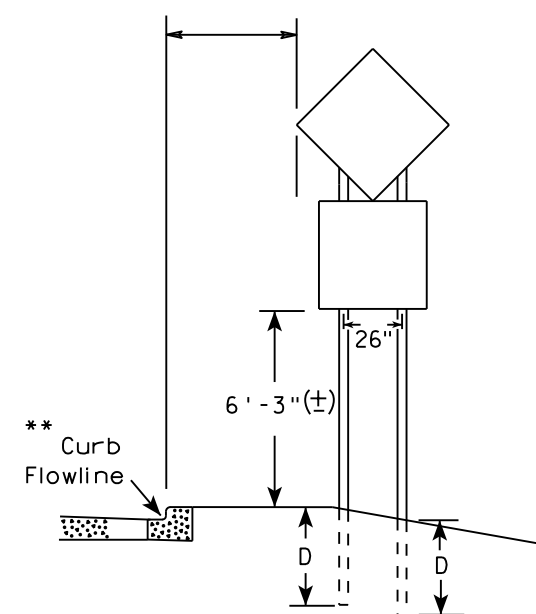
URBAN AREA



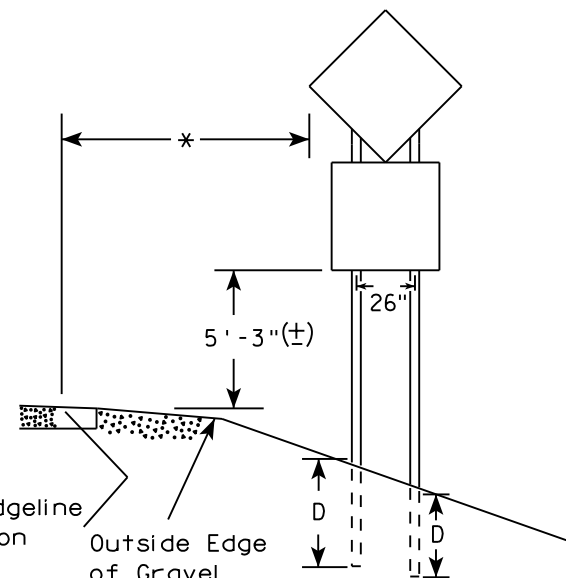
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

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

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

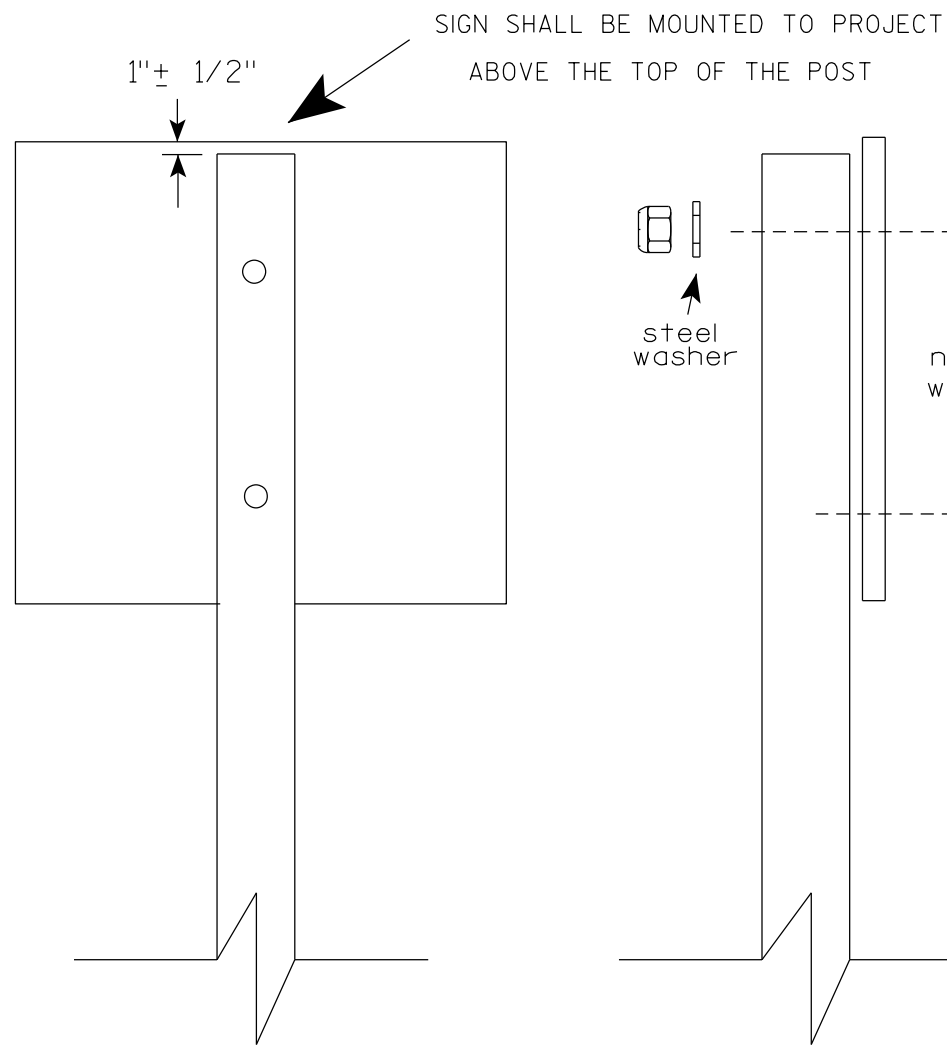
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION
 APPROVED *Matthew R. Rauch*
 For State Traffic Engineer
 DATE 8/21/17 PLATE NO. A4-4.15



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

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

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

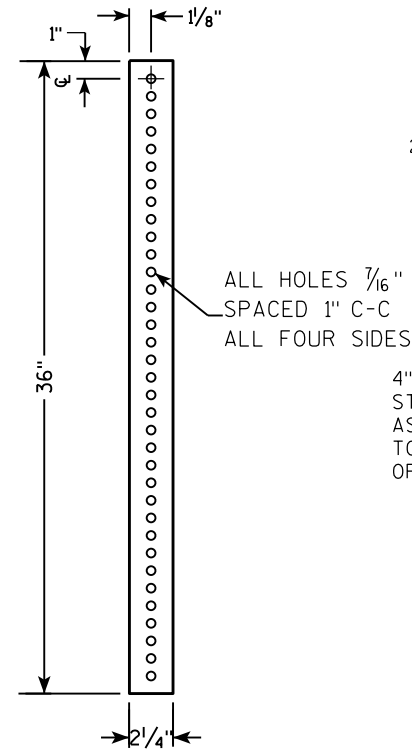
- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE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

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

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

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

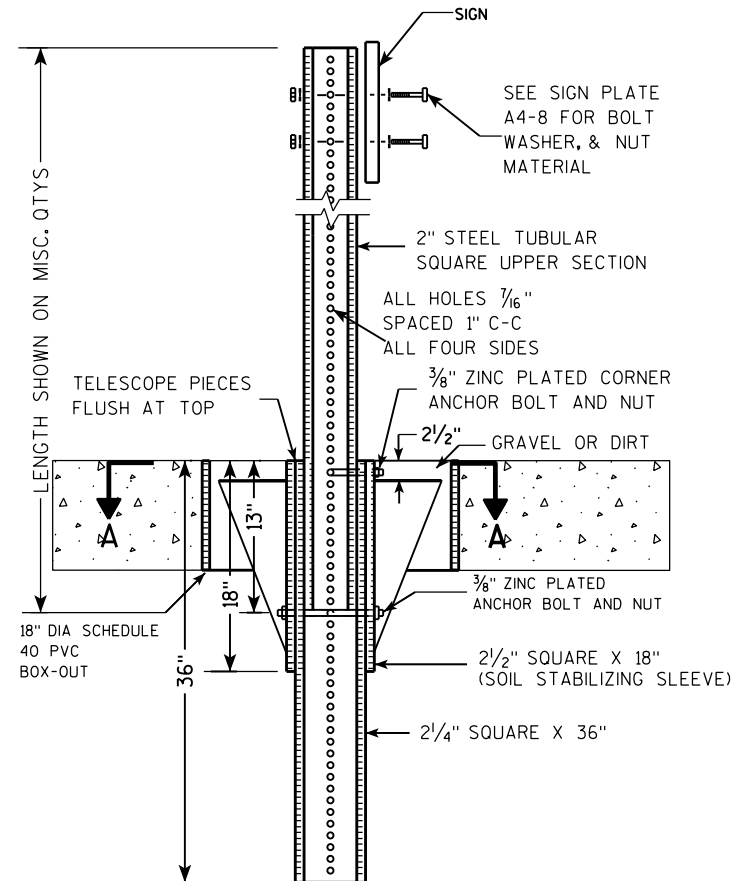
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



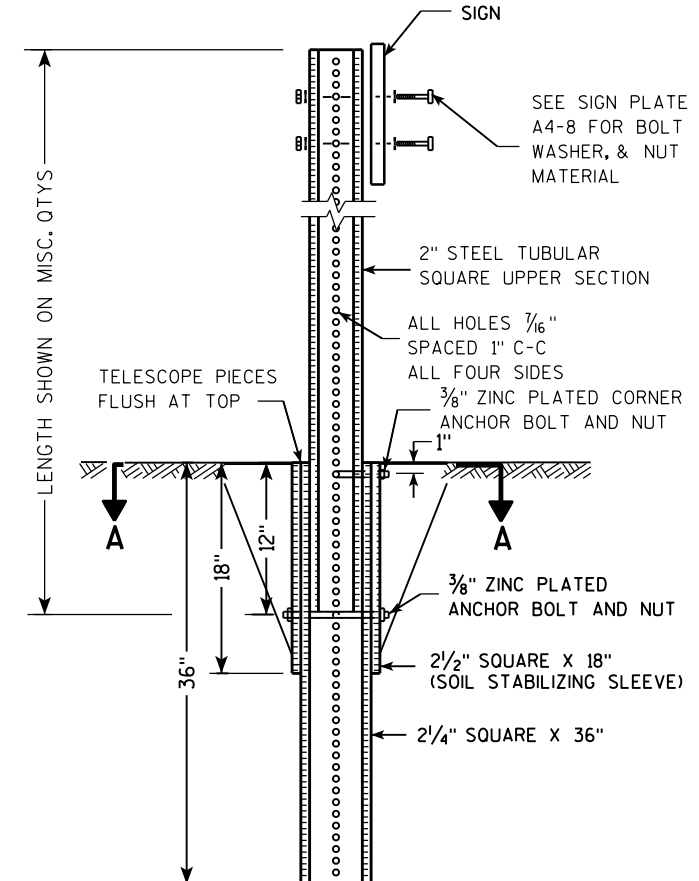
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**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)**



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

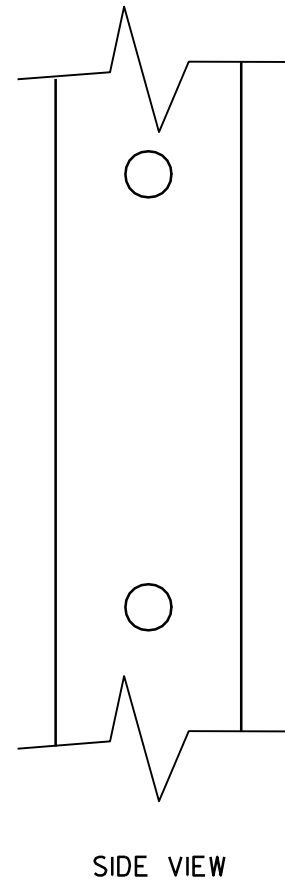
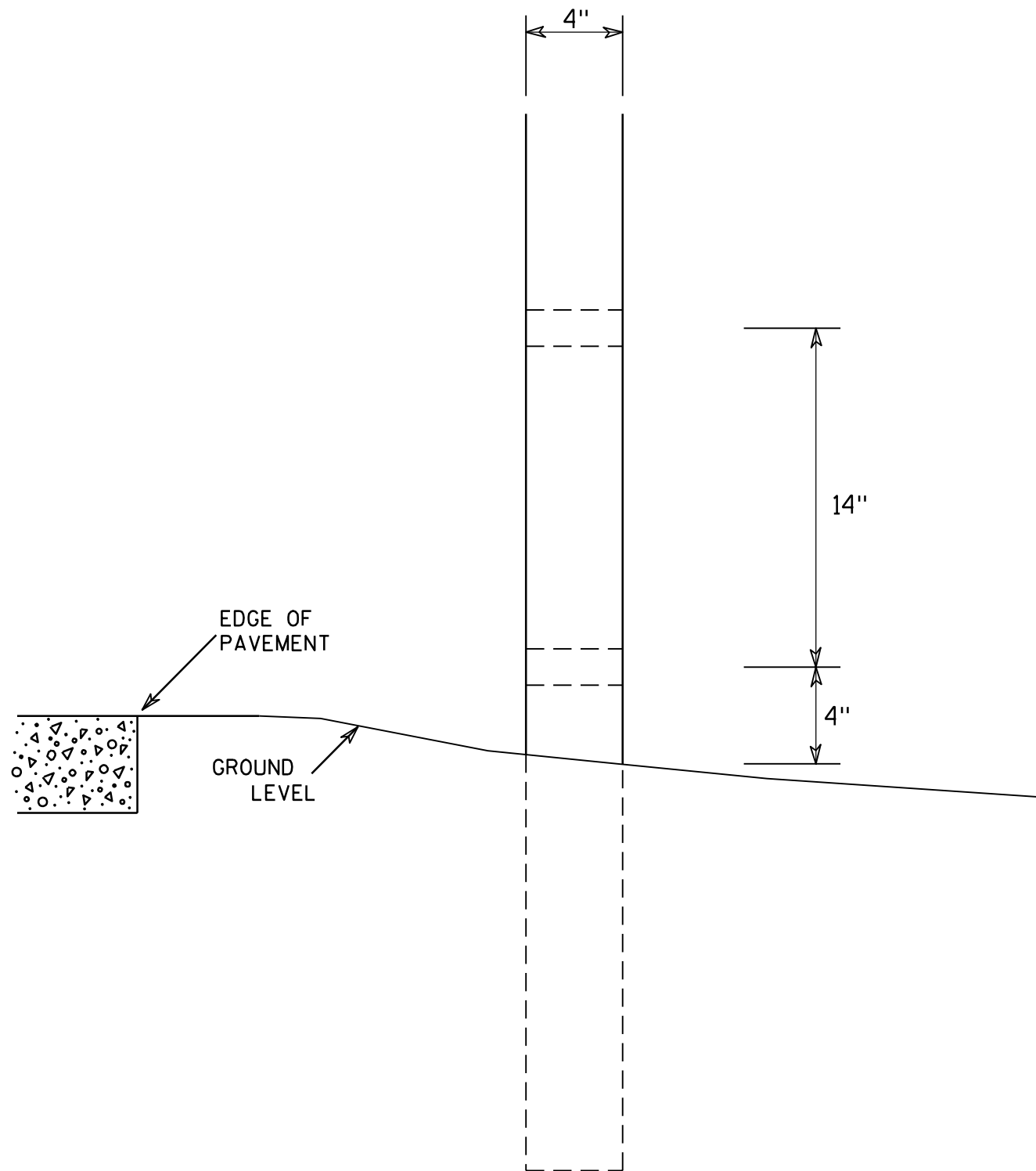
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



GENERAL NOTES

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

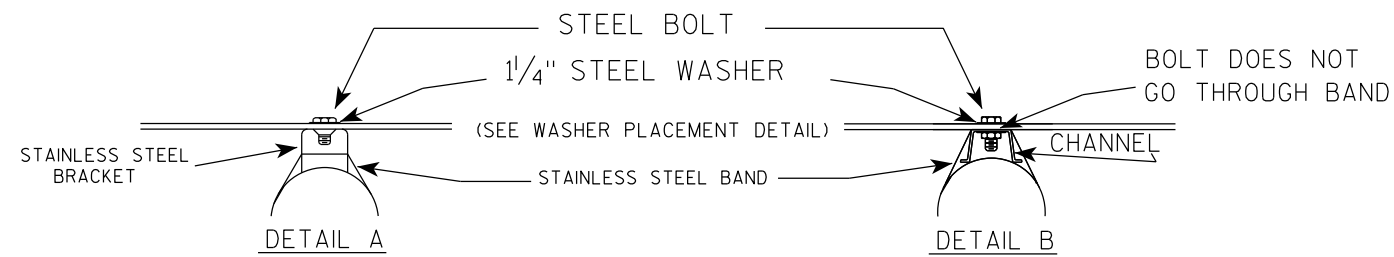
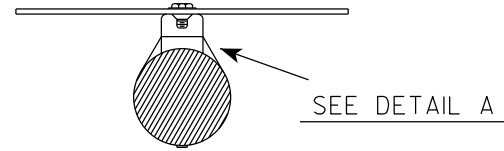
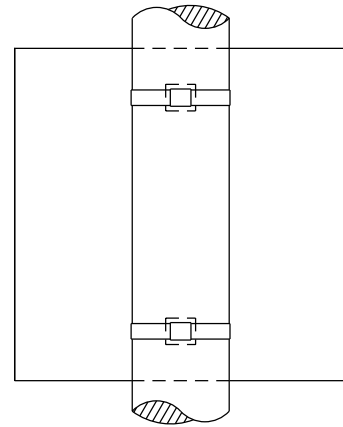
7

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4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE 3/27/97	PLATE NO. A4-11.2

BANDING

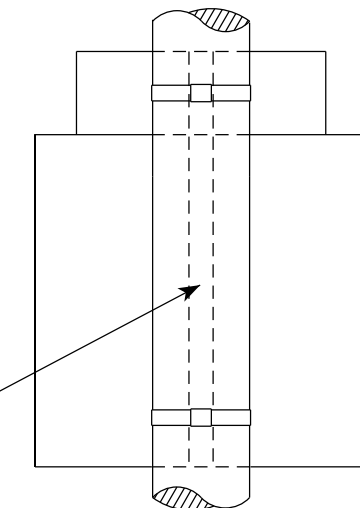
SINGLE SIGN



GENERAL NOTES

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

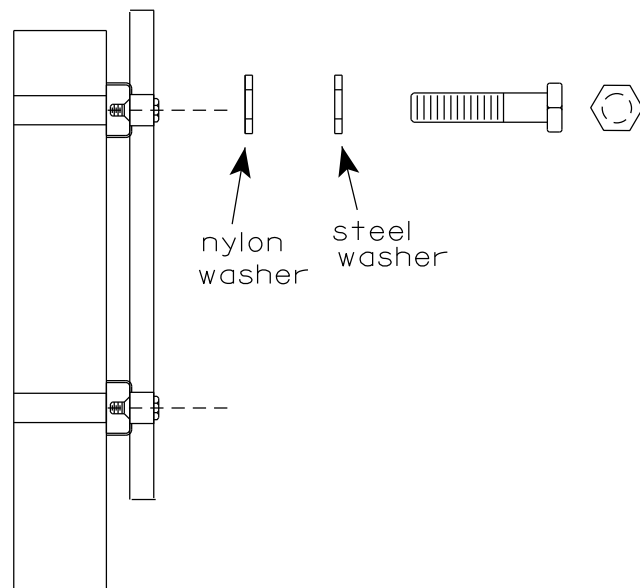
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



WASHER PLACEMENT



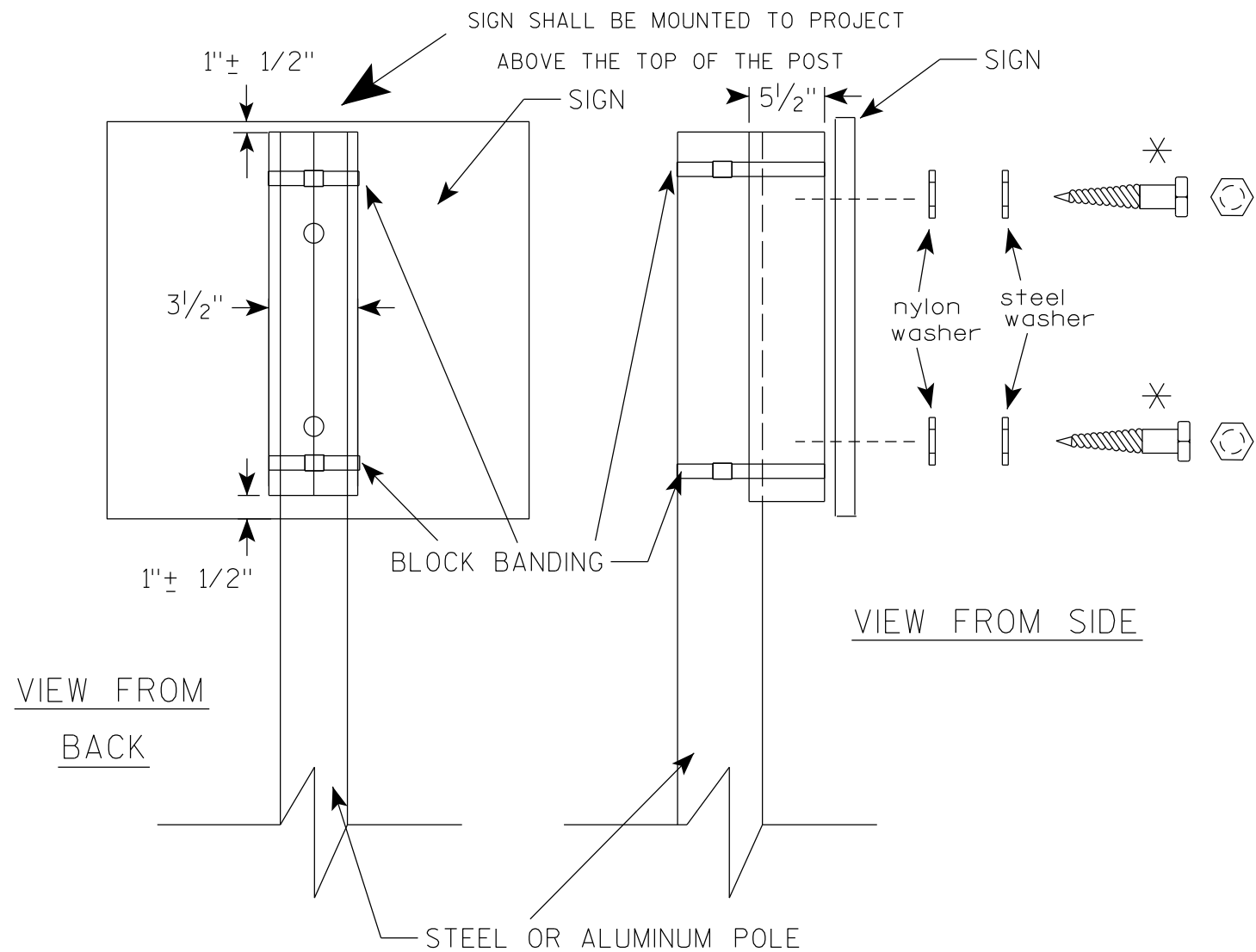
WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

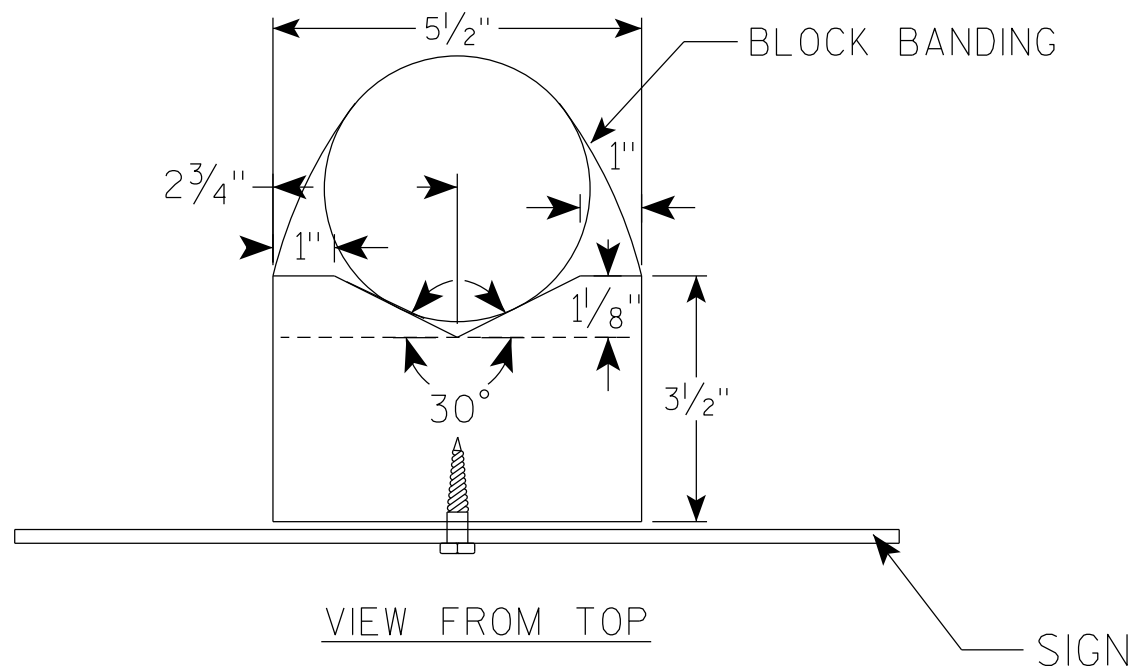
DATE 6/10/19 PLATE NO. A5-9.4



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, 3/4" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

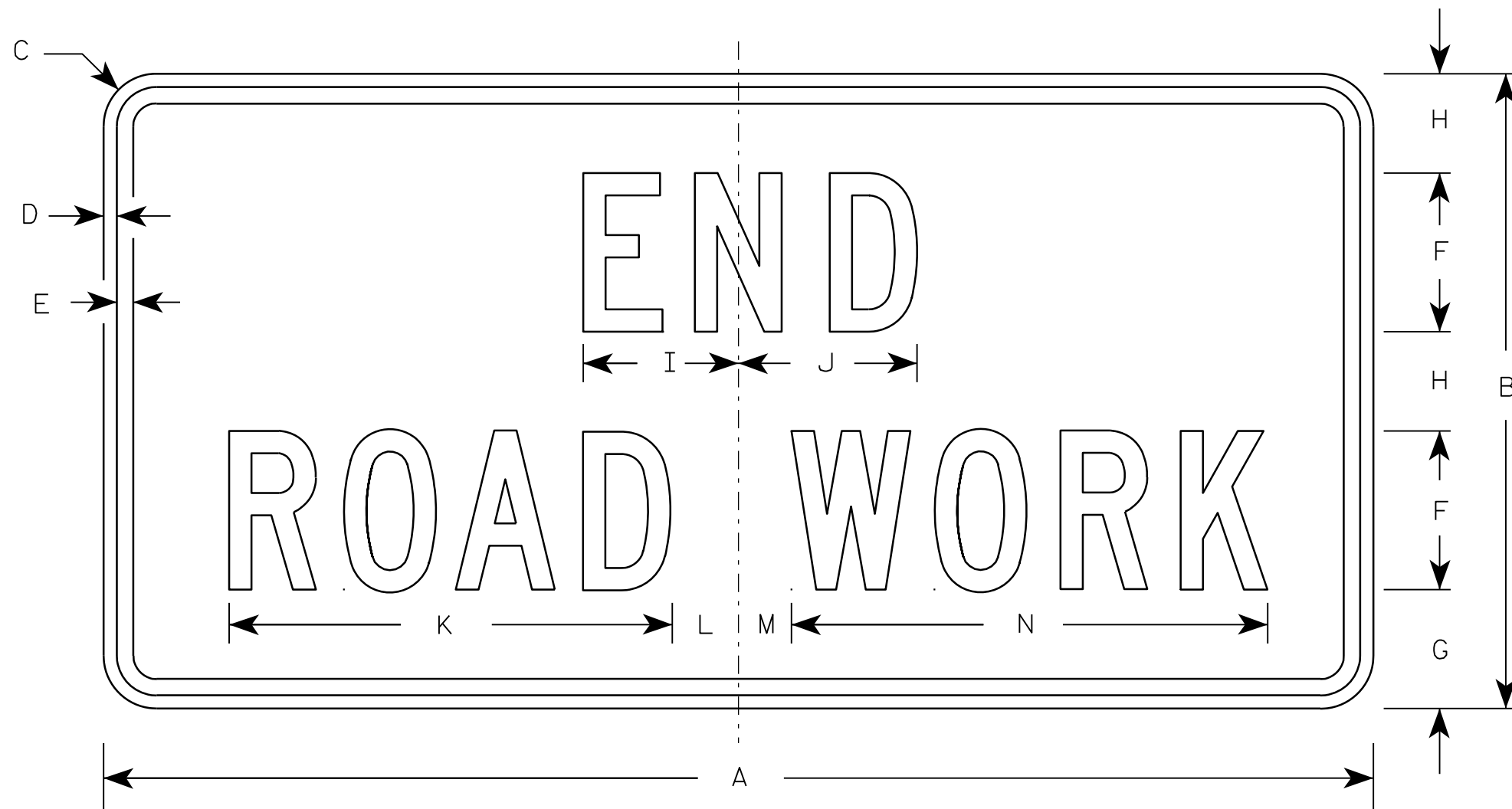
✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"



BLOCK BANDING DETAIL (V-BLOCK OPTION)	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE 6/10/19	PLATE NO. A5-10.2

NOTES

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



G20-2A

7

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Metric equivalent for this sign is:

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

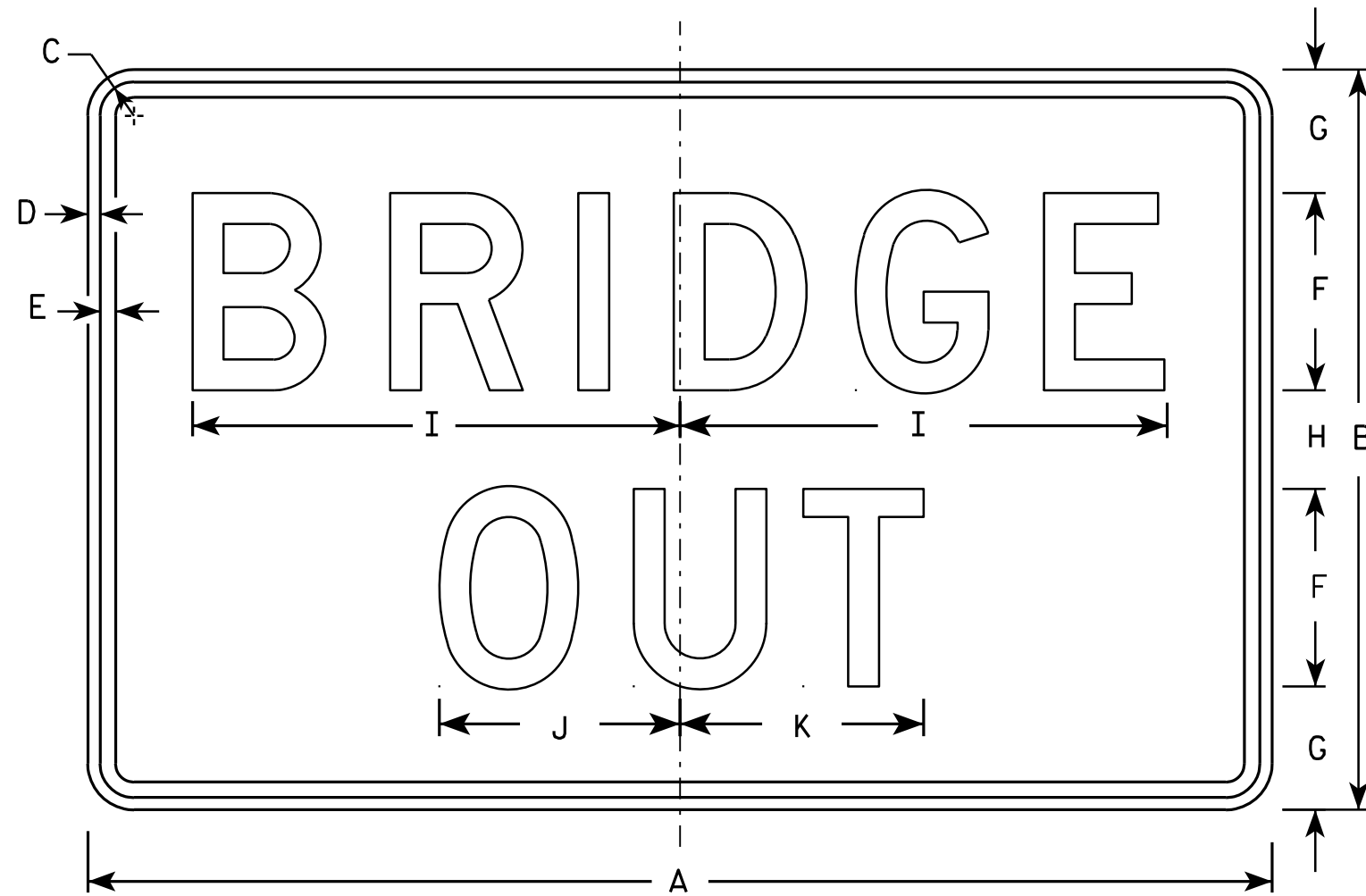
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq.
1	36	18	1 1/8	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5	0.41
2	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0	0.72
3	48	24	1 1/2	1/2	5/8	6	4 1/2	3 3/4	5 7/8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

STANDARD SIGN G20-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/30/09	PLATE NO. G20-2A.8

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

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



R11-2B

7

7

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

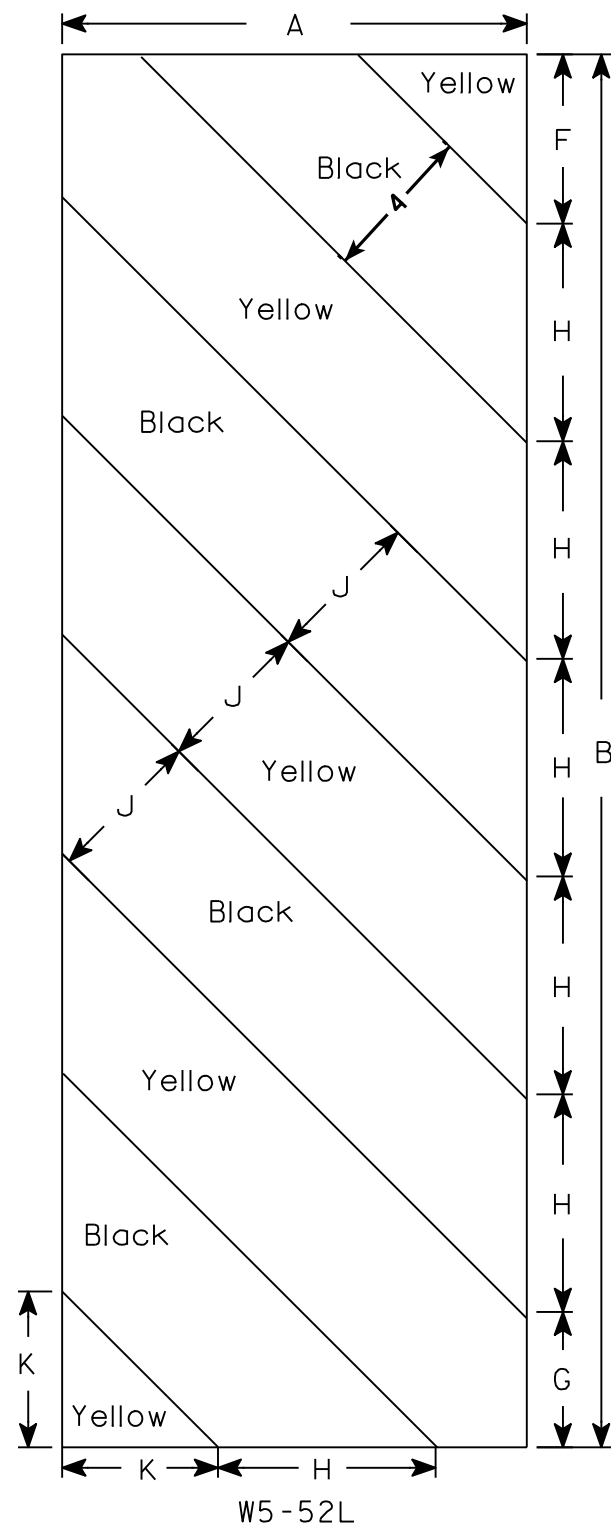
STANDARD SIGN
R11-2B

WISCONSIN DEPT OF TRANSPORTATION

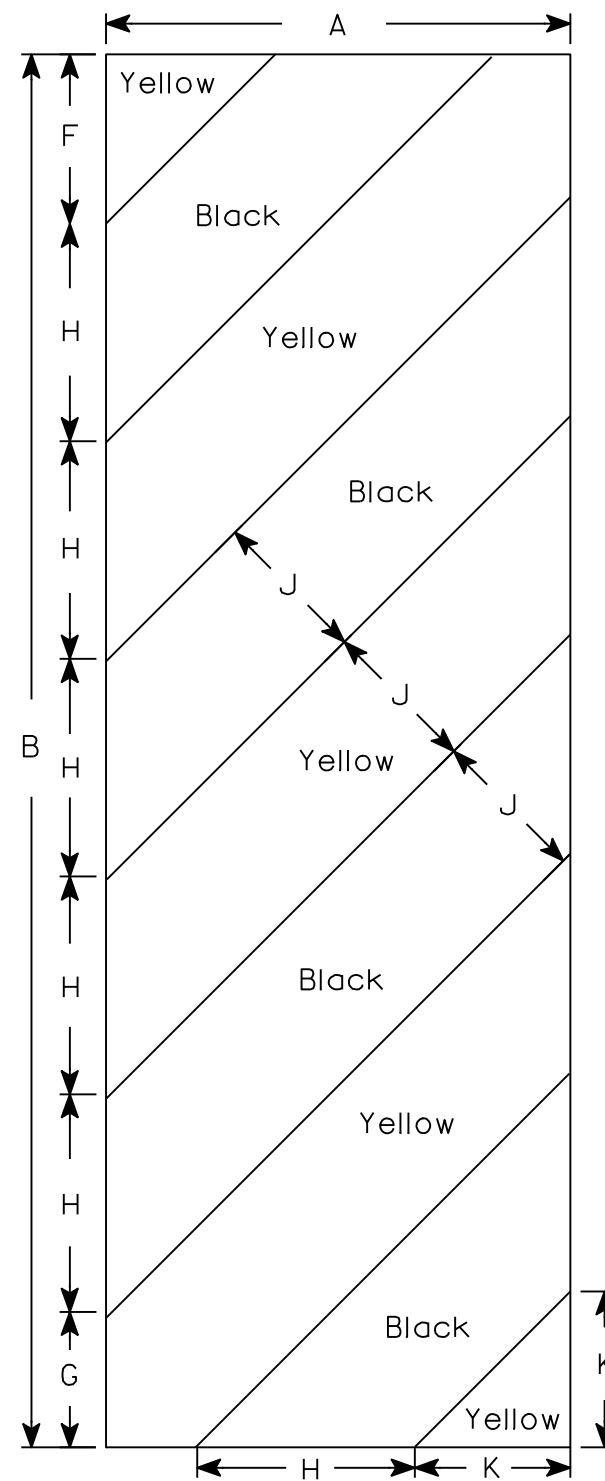
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2B.2

PROJECT NO: _____ SHEET NO: _____ E



W5-52L



W5-52R

NOTES

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

7

7

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

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

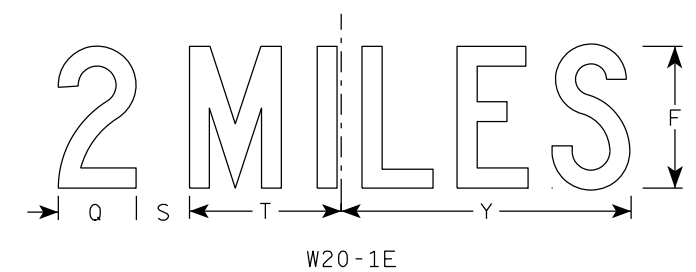
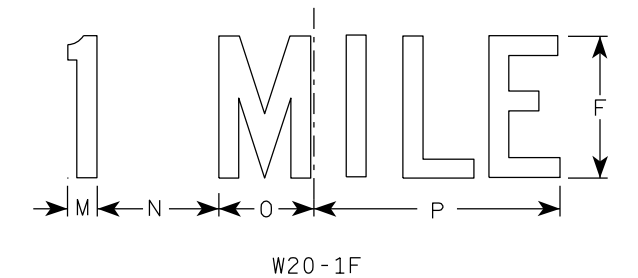
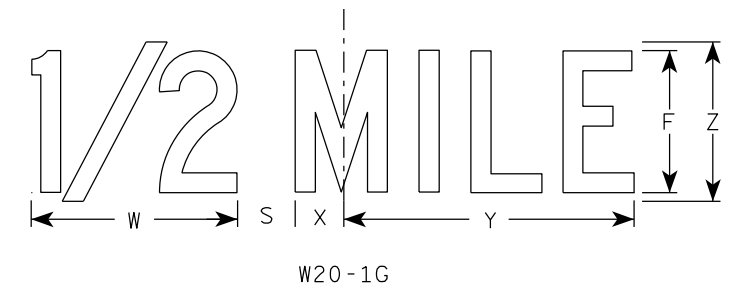
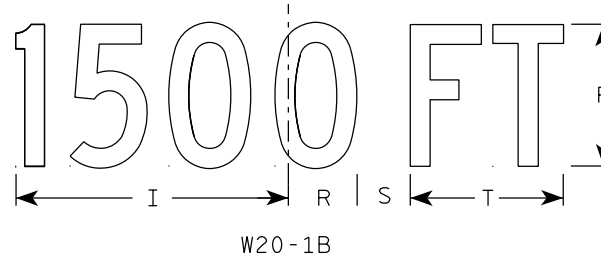
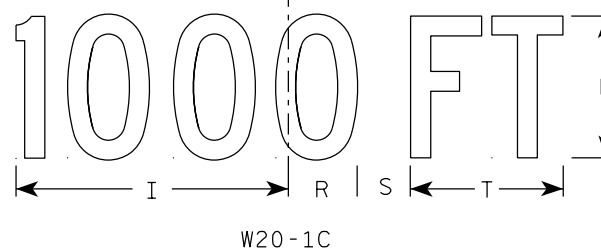
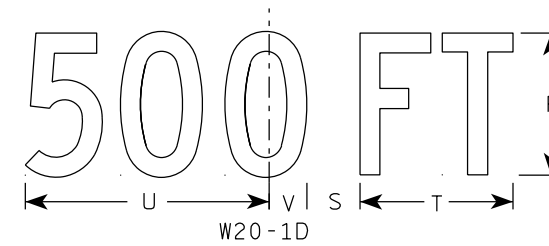
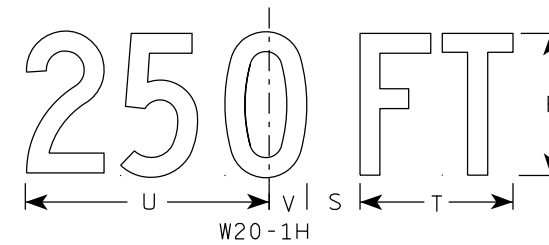
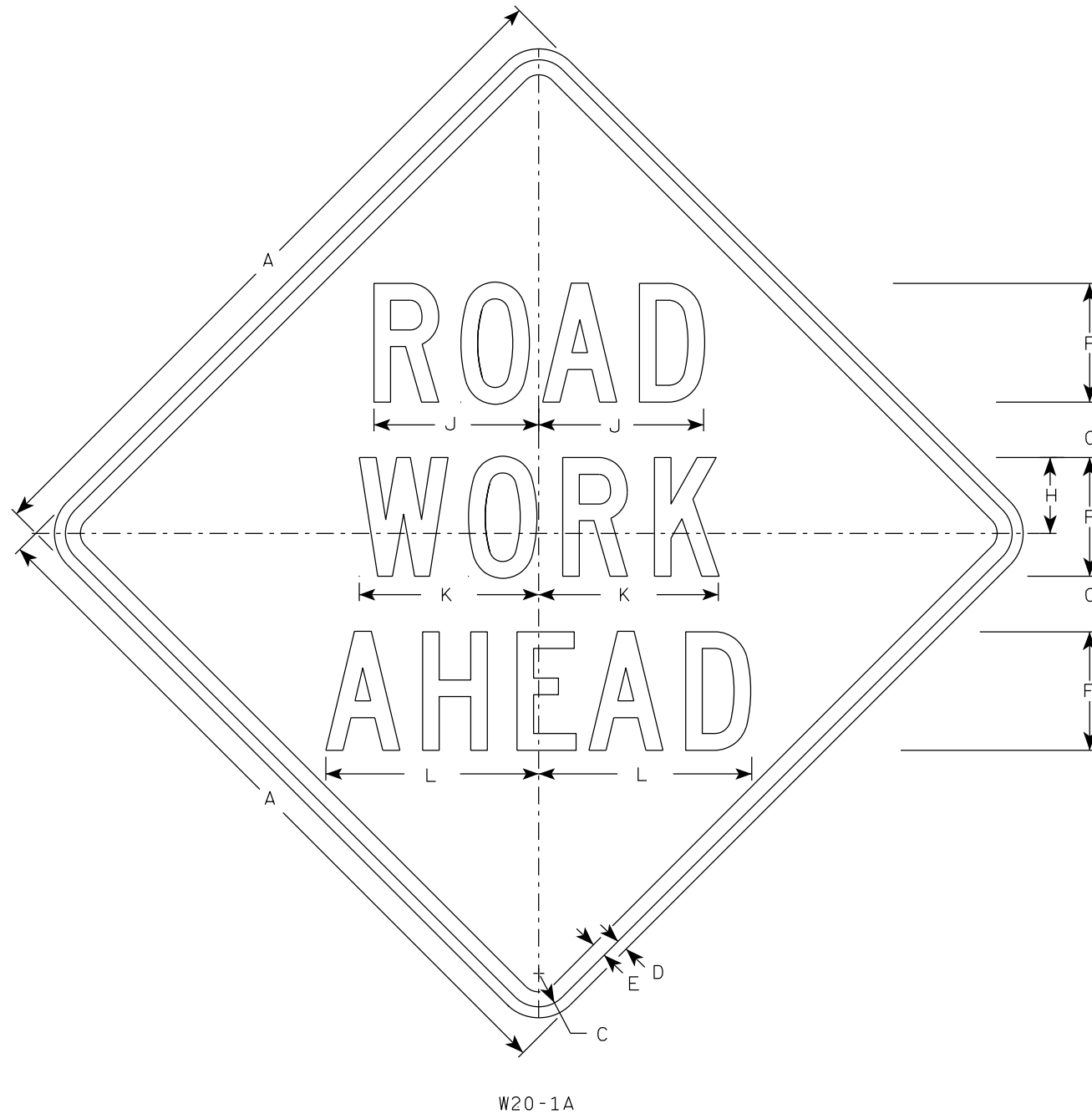
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

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

NOTES

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



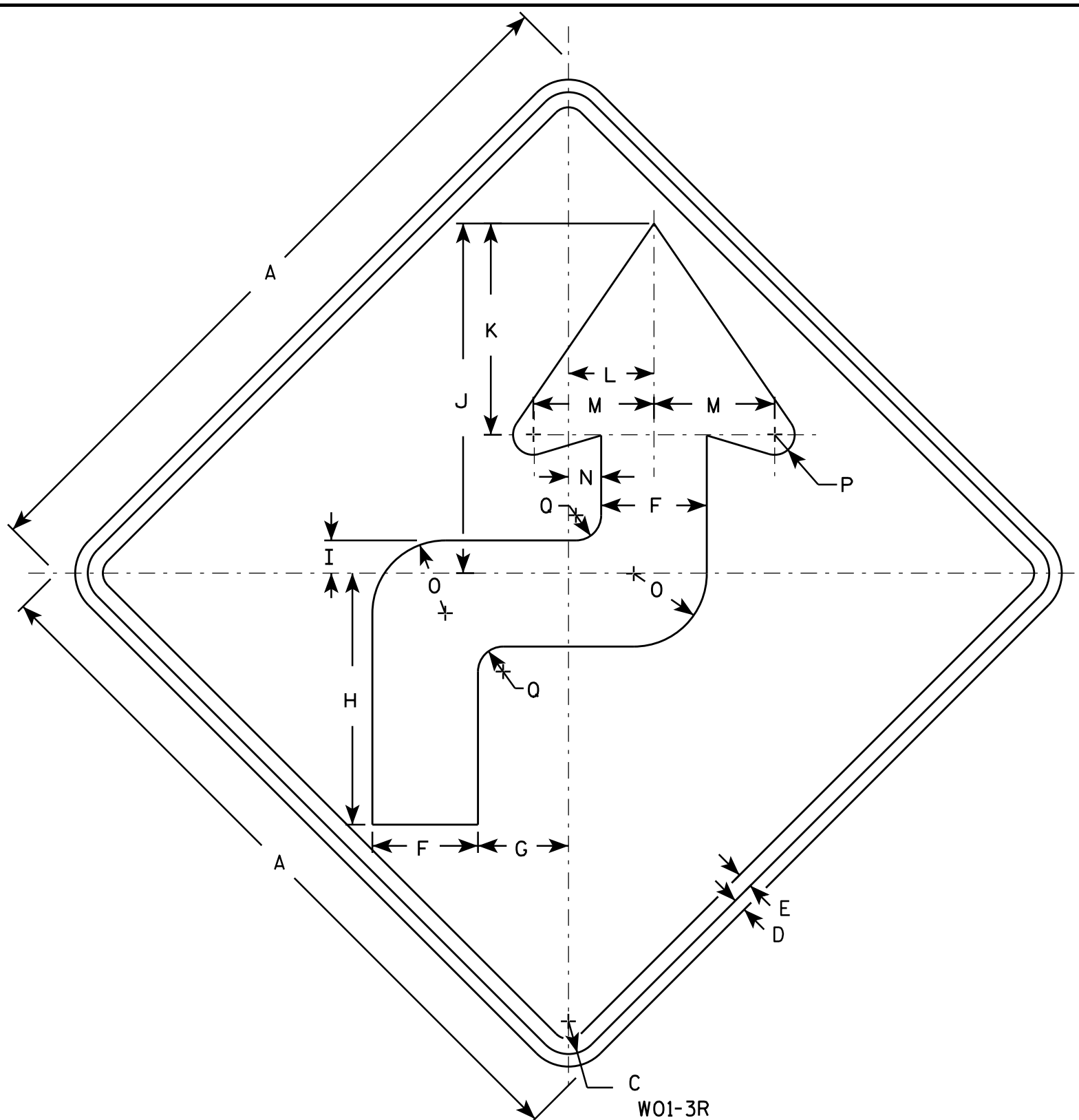
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8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

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

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/25/2020 PLATE NO. W20-1.11



NOTES

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

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5 1/4	4 1/2	12 1/2	1 5/8	17 3/8	10 1/2	4 1/4	6	1 5/8	3 5/8	1	1 1/4										9.0
2S	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
2M	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
3	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
4	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0
5	48		2 1/4	3/4	1	7	6	16 5/8	2 1/4	23 1/4	14	5 5/8	8	2 1/8	4 7/8	1 1/4	1 5/8										16.0

STANDARD SIGN
W01-3

WISCONSIN DEPT OF TRANSPORTATION

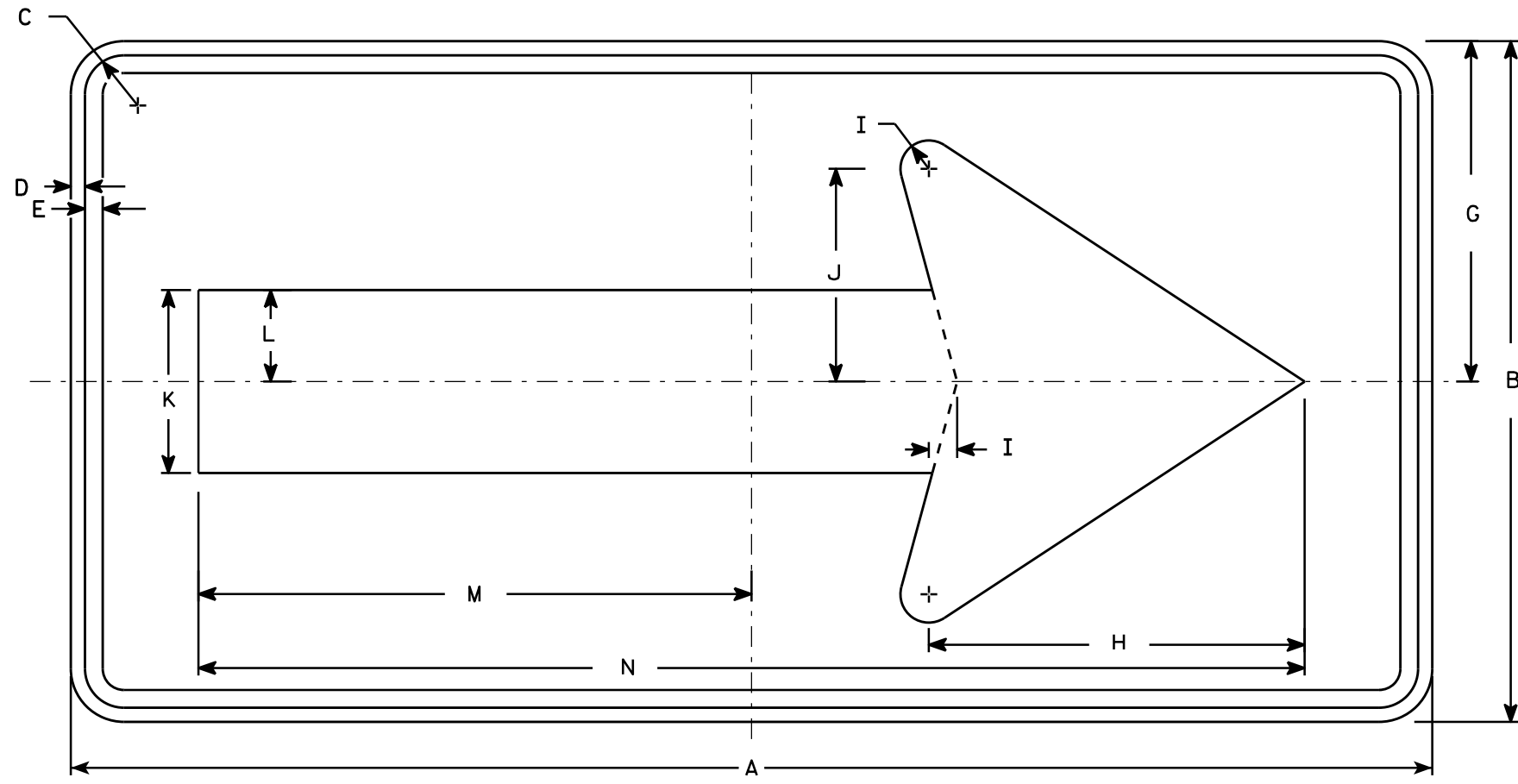
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-3.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**

NOTES

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



W01-6

7

7

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

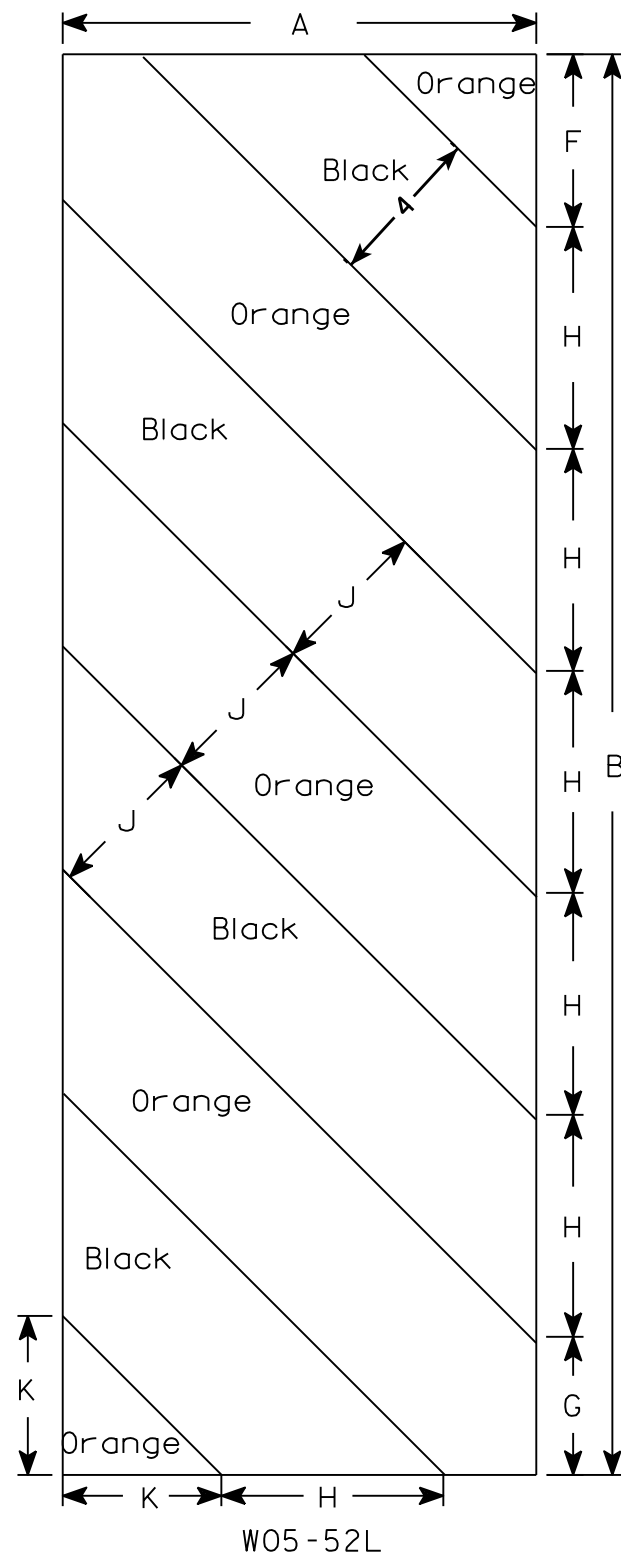
STANDARD SIGN
W01-6

WISCONSIN DEPT OF TRANSPORTATION

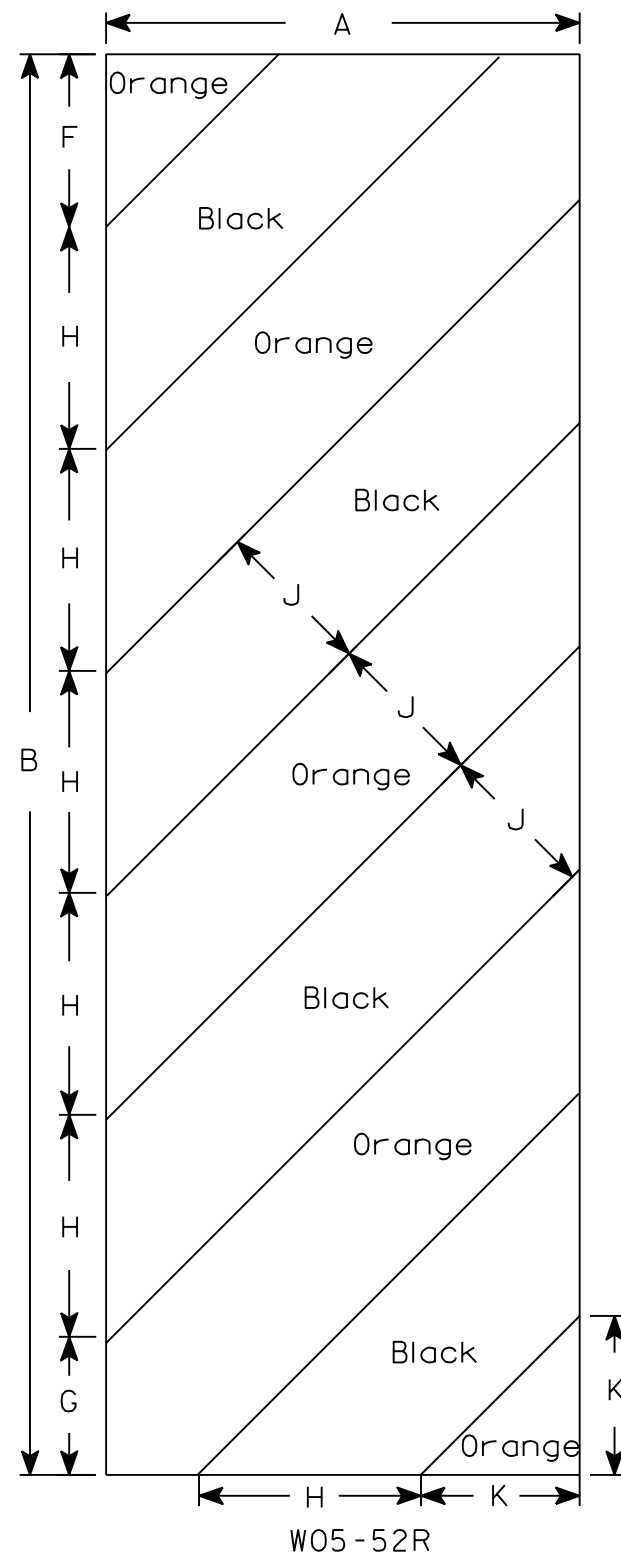
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-6.1

PROJECT NO: _____ HWY: _____ COUNTY: _____ SHEET NO: **E**



W05-52L



W05-52R

NOTES

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

7

7

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

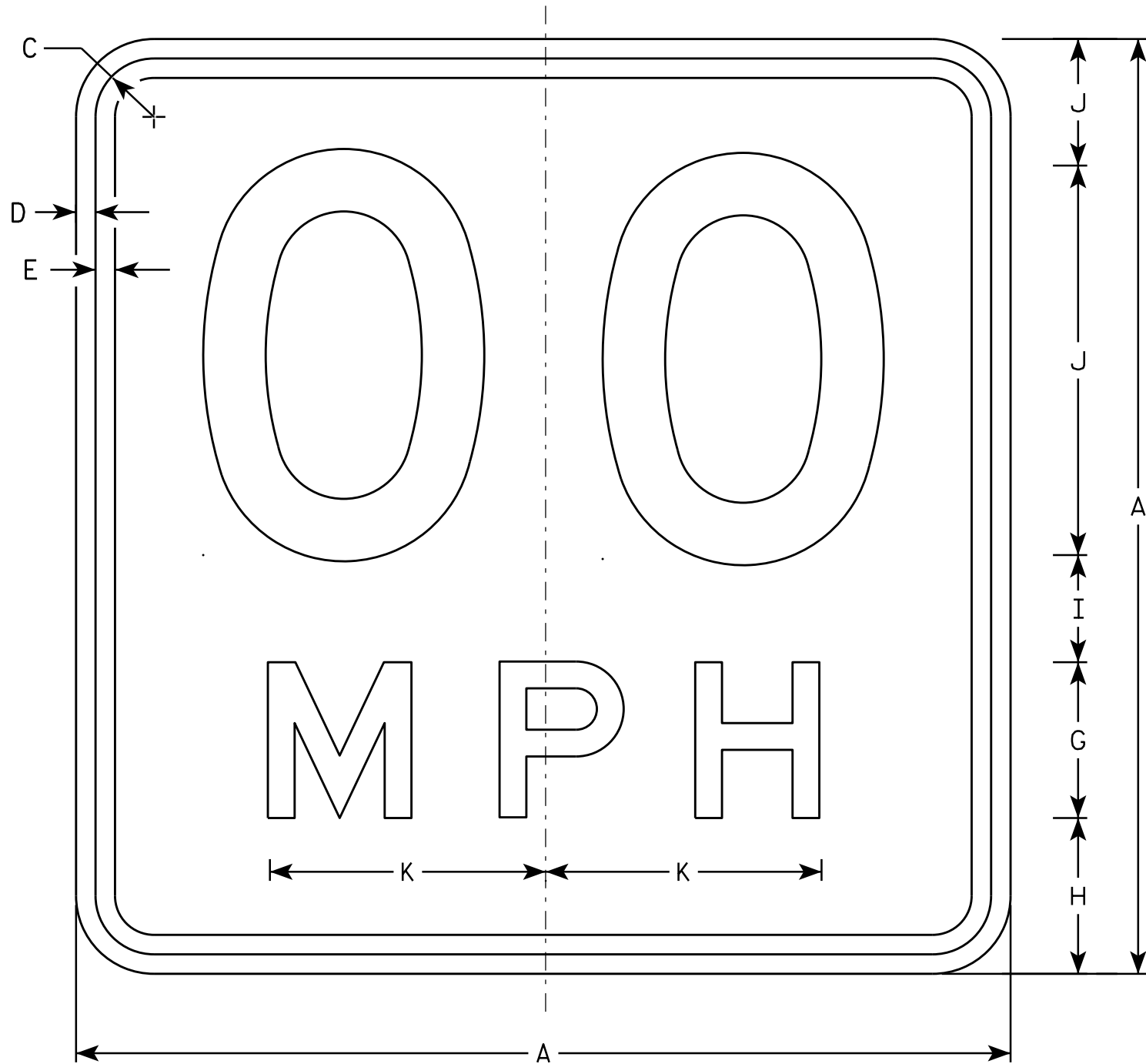
STANDARD SIGN
W05-52L & W05-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Raub*
for State Traffic Engineer

DATE 11/20/13 PLATE NO. W05-52.1

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



W013-1

NOTES

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

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10	4	4	2 3/4	3 1/4	7 1/8																4.00
2S	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
2M	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
3	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
4	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00
5	36		1 5/8	5/8	3/4	16	6	5 1/2	4	4 1/2	10 5/8																9.00

STANDARD SIGN
W013-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

DATE 11/21/13 PLATE NO. W013-1.1

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

DESIGN DATA

LIVE LOAD:
 DESIGN LOADING : HL-93
 INVENTORY RATING FACTOR : 1.11
 OPERATIONAL RATING FACTOR : 1.45
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS.
 STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

TRAFFIC DATA:
 A.A.D.T. (2022) = 30
 A.A.D.T. (2042) = 40
 R.D.S. = 30 MPH

MATERIAL PROPERTIES:
 CONCRETE MASONRY, SLAB $f'_c = 4,000$ P.S.I.
 ALL OTHER $f'_c = 3,500$ P.S.I.
 HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 $f_y = 60,000$ P.S.I.
 PILING CIP CONCRETE $10\frac{3}{4} \times 0.365$ -INCH $f_y = 45,000$ P.S.I.

FOUNDATION DATA:
 ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE $10\frac{3}{4} \times 0.365$ -INCH WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 90'-0" AT BOTH ABUTMENTS.

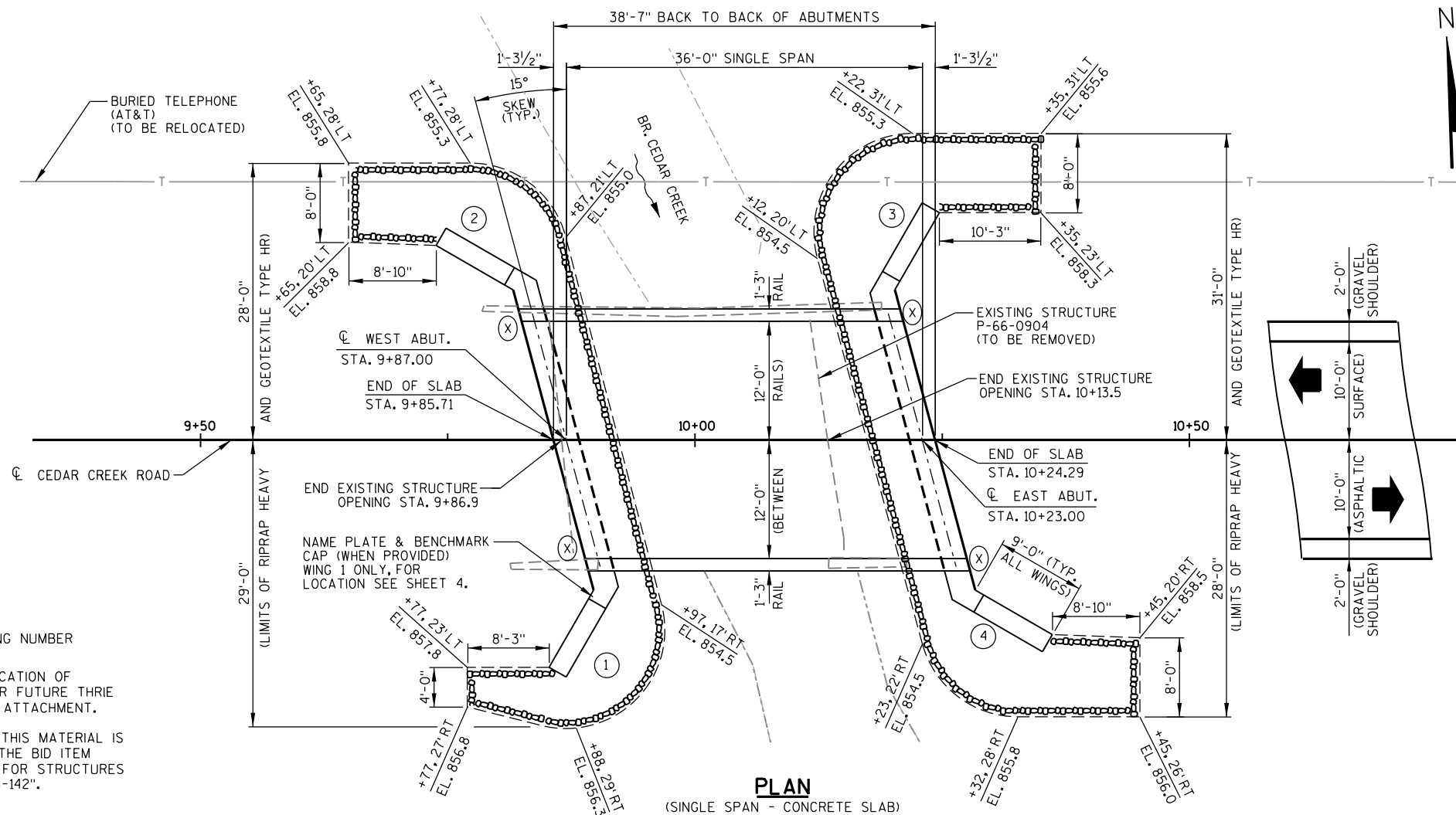
* THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

HYDRAULIC DATA:
100 YEAR FREQUENCY
 DRAINAGE AREA 4.1 SQ. MI.
 Q_{100} 570 C.F.S.
 VELOCITY 4.1 FT./SEC.
 WATERWAY AREA 141 SQ. FT.
 SCOUR CRITICAL CODE 5
 HIGH WATER $_{100}$ ELEVATION 859.10
 Q_2 130 C.F.S.
 Q_2 VELOCITY 1.65 FT./SEC.
 Q_2 ELEVATION 857.19

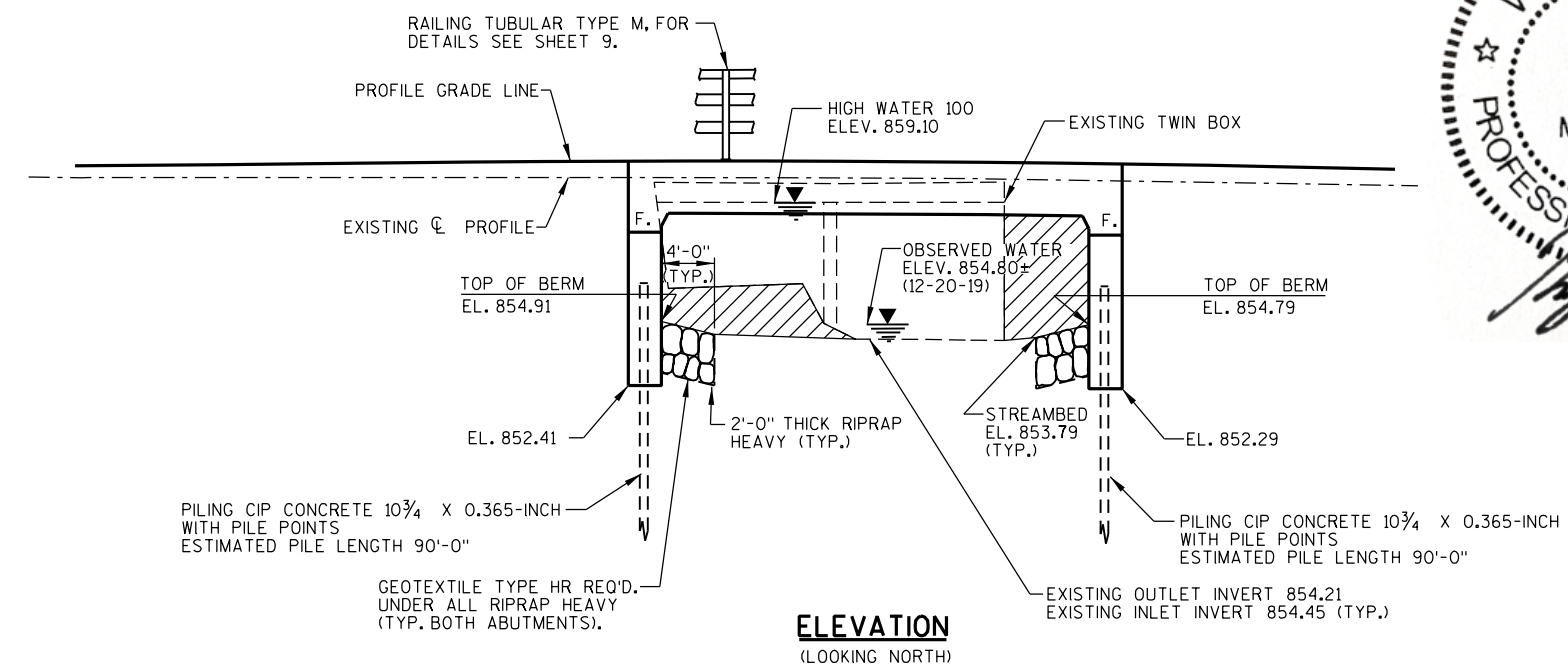
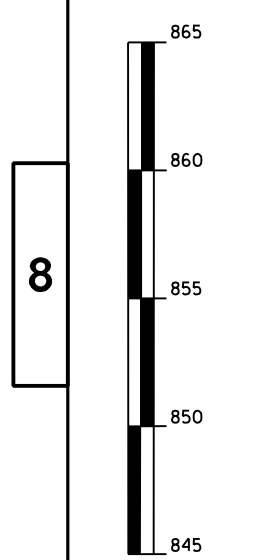
ROADWAY OVERFLOW DESIGN FREQUENCY
 OVERTOPPING FREQUENCY >100 YEARS

TEMPORARY BRIDGE REQUIRED
 HIGH WATER $_5$ ELEVATION 858.06
 Q_5 230 C.F.S.
 MINIMUM CLEAR OPENING AREA OF TEMPORARY STRUCTURE 63 SQ. FT.
 MINIMUM CLEAR SPAN 36 FT.
 MINIMUM LOW CHORD ELEVATION 858.06 .
 MINIMUM WIDTH CLEAR WIDTH BETWEEN RAILS 16 FT.

CONSULTANT DESIGN CONTACT: BRIDGE OFFICE CONTACT:
 KYLE BUSCH, P.E. AARON BONK, P.E.
 (608) 216-2063 (608) 261-0261

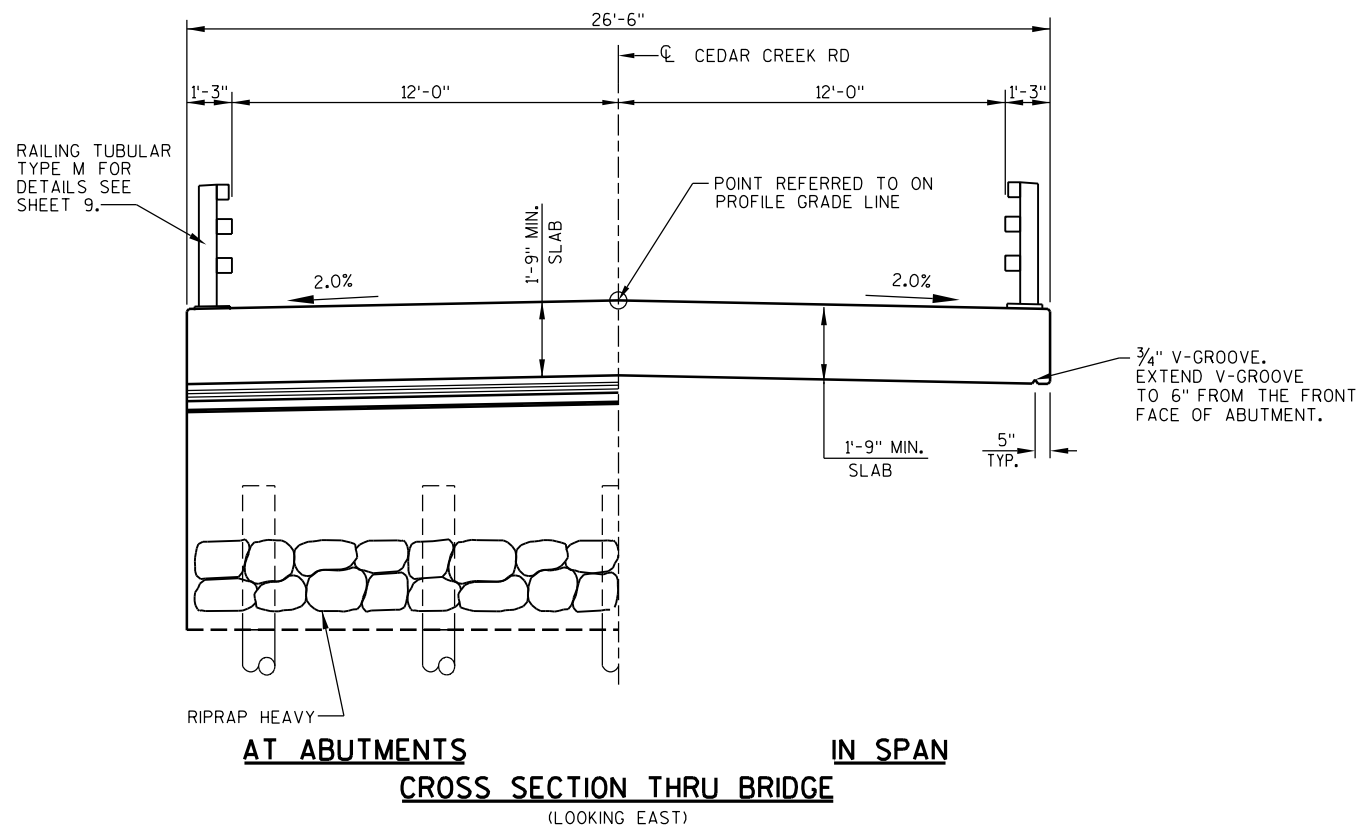


- - INDICATES WING NUMBER
- ⊗ - INDICATES LOCATION OF PROVISION FOR FUTURE THREE BEAM GUARD ATTACHMENT.
- ▨ - REMOVAL OF THIS MATERIAL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURE BRIDGES B-66-142".



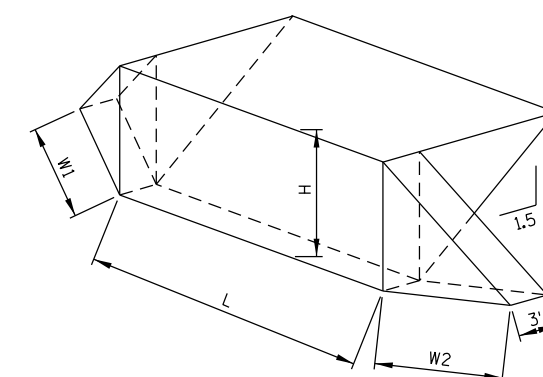
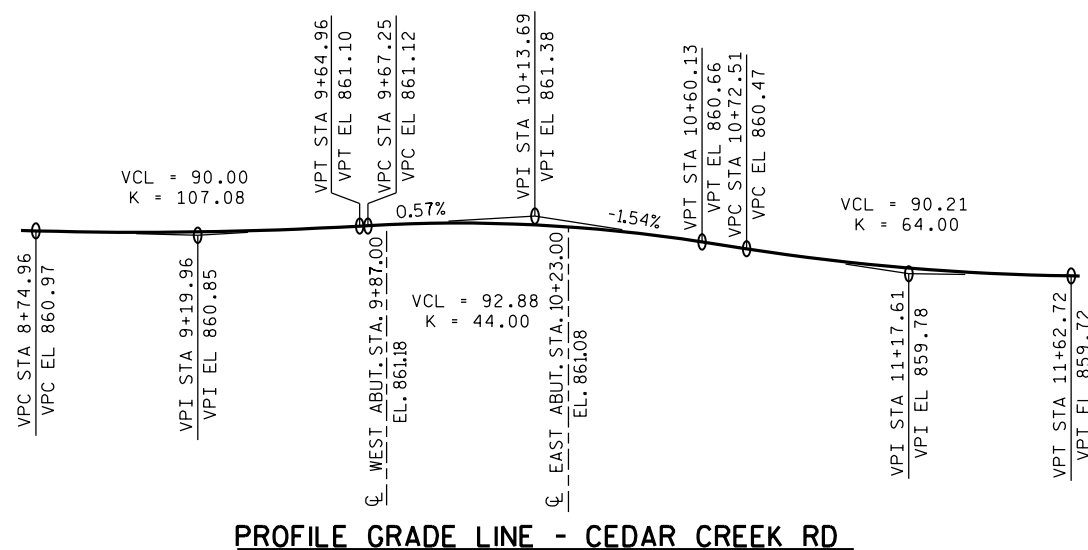
- LIST OF DRAWINGS**
1. GENERAL PLAN
 2. CROSS SECTION, QUANTITIES & NOTES
 3. SUBSURFACE EXPLORATION
 4. WEST ABUTMENT
 5. WEST ABUTMENT DETAILS
 6. EAST ABUTMENT
 7. EAST ABUTMENT DETAILS
 8. SUPERSTRUCTURE
 9. RAILING TUBULAR TYPE M

NO.	DATE	REVISION	BY
ENGINEERING ARCHITECTURE SURVEYING FUNDING PLANNING ENVIRONMENTAL 1702 PANKRATZ STREET, MADISON WI 53704 (608) 242-7779 www.msa-ps.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		ACCEPTED SDR 08/20/21 CHIEF STRUCTURES DESIGN ENGINEER DATE	
STRUCTURE B-66-142			
CEDAR CREEK RD OVER BR CEDAR CREEK			
COUNTY	WASHINGTON	TOWN/CITY/VILLAGE	JACKSON
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	JFM	DESIGN CK'D.	KHB
DRAWN BY	RLR	PLANS CK'D.	KHB
GENERAL PLAN			SHEET 1 OF 9



GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS SHOWN OR NOTED OTHERWISE.
- THE FIRST DIGIT OF A THREE DIGIT BAR MARK AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR MARK SIGNIFY THE BAR SIZE.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE TYPE HR TO THE LIMITS SHOWN ON SHEET 1 AND ON THE ABUTMENT SHEETS OR AS DIRECTED BY THE ENGINEER.
- THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-66-142" FOR THE ABUTMENTS.
- SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.
- THIS STRUCTURE WILL REPLACE EXISTING STRUCTURE P-66-904, A TWIN-CELL REINFORCED CONCRETE BOX CULVERT WITH TOTAL OPENING LENGTH ALONG CL OF CEDAR CREEK RD = 26.6 FT AND ROADWAY CLEAR WIDTH = 24.0 FT.
- REMOVING OLD STRUCTURE SHALL INCLUDE FULL REMOVAL OF THE BOX CULVERT BOTTOM FLOOR AND CUTOFF WALLS.
- BACKFILL PAY LIMITS, BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- AT THE BACKFACE OF ABUTMENTS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.
- EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRE ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 3'-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 FACE.
- 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.
- CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATION.



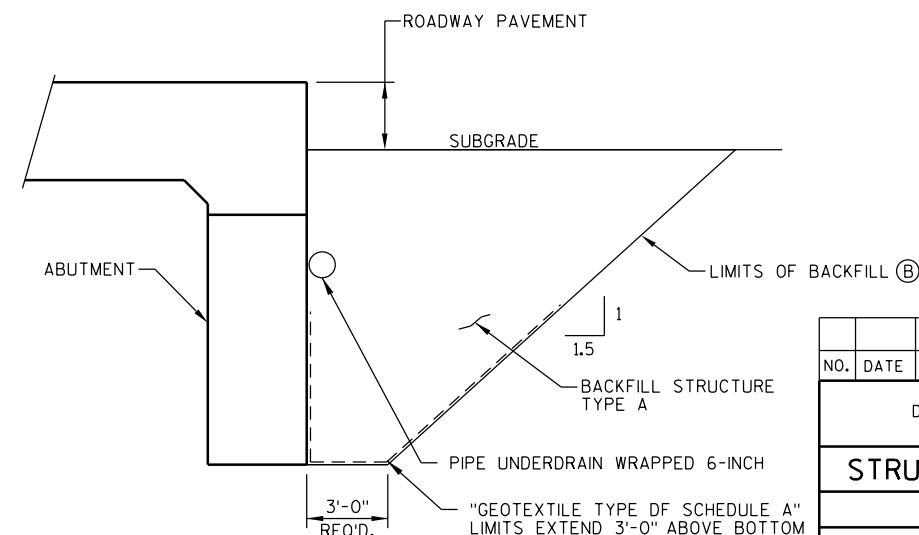
ABUTMENT BACKFILL DIAGRAM

L = OUT-TO-OUT OF ABUTMENT
 H = AVERAGE ABUTMENT FILL HEIGHT
 $W1$ = WING 1 LENGTH
 $W2$ = WING 2 LENGTH
 $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H) + (0.5)(H)(W1+W2)(3.0')$
 $V_{TON} = V_{CF} (2.0)/27$

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	WEST ABUT.	EAST ABUT.	SUPER	TOTAL
203.0250.01	REMOVING STRUCTURE OVER WATERWAY REMOVE DEBRIS (P-66-904)	EACH	-	-	-	1
206.1000.01	EXCAVATION FOR STRUCTURES BRIDGES B-66-142	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	160	160	-	320
502.0100	CONCRETE MASONRY BRIDGES	CY	30	30	71	131
502.3200	PROTECTIVE SURFACE TREATMENT	SY	18	18	134	170
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,085	2,085	-	4,170
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,505	1,505	11,870	14,880
513.4061.01	RAILING TUBULAR TYPE M	LF	-	-	81	81
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	7	7	-	14
526.0100	TEMPORARY STRUCTURE (STATION 9+86.57, 41' LT)	LS	-	-	-	1
550.0500	PILE POINTS	EACH	7	7	-	14
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	630	630	-	1,260
606.0300	RIPRAP HEAVY	CY	37	43	-	80
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	74	74	-	148
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	37	37	-	74
645.0120	GEOTEXTILE TYPE HR	SY	94	106	-	200
NON-BID ITEMS						
	PREFORMED FILLER	SIZE				1/2" & 3/4"

PROFILE GRADE LINE - CEDAR CREEK RD

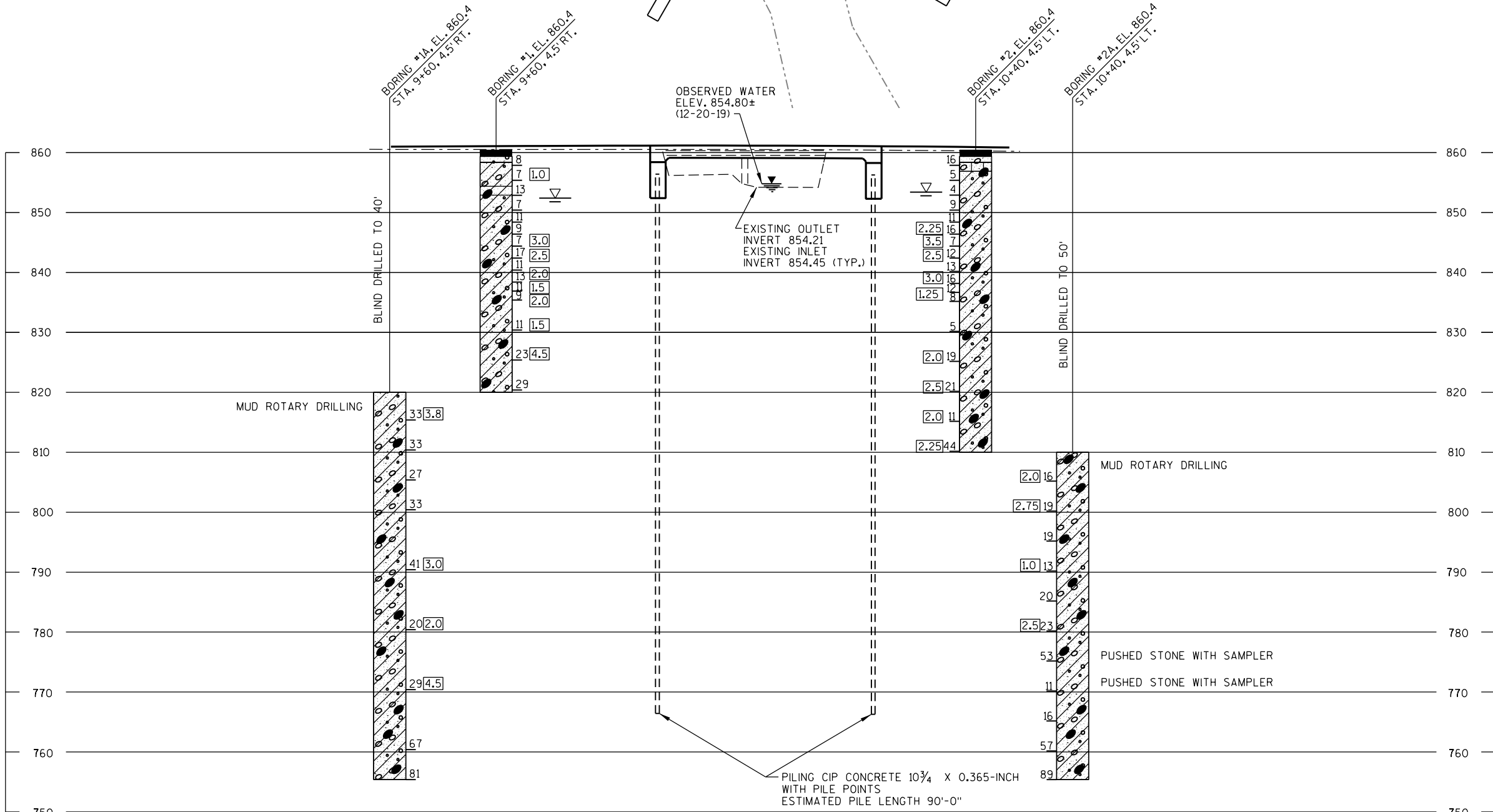
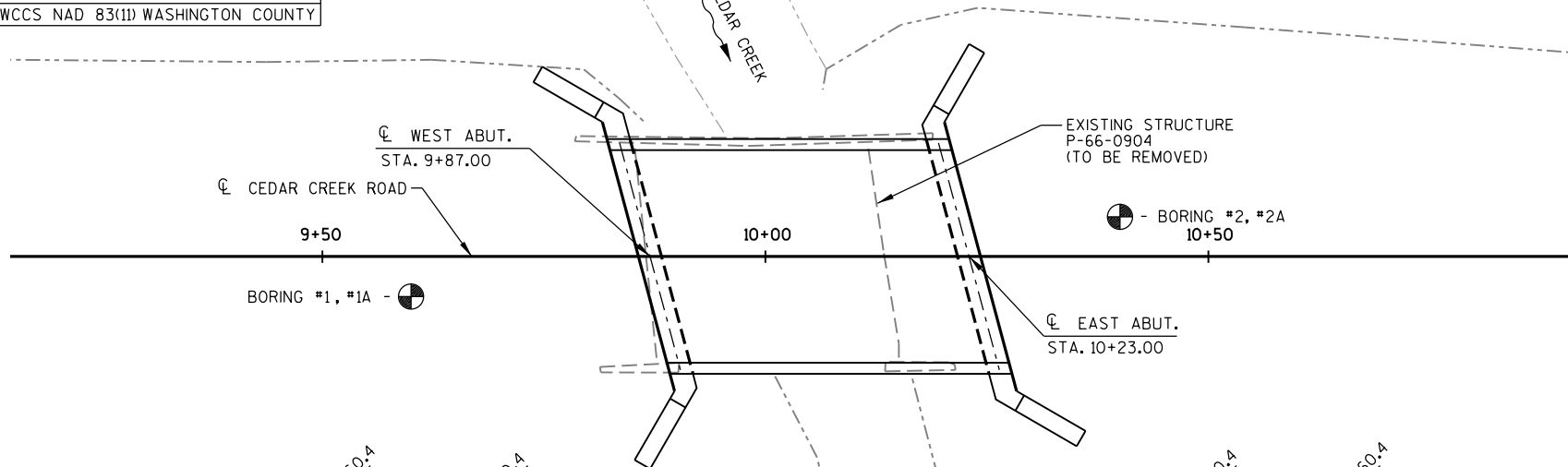


STRUCTURE BACKFILL DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-66-142	
DRAWN BY		CAR	PLANS CK'D. KHB
CROSS SECTION, QUANTITIES & NOTES			SHEET 2 OF 9

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	07-06-2020	153200.73	368432.51
1A	07-08-2020	153200.73	368432.51
2	07-06-2020	153207.07	368512.77
2A	07-07-2020	153207.07	368512.77

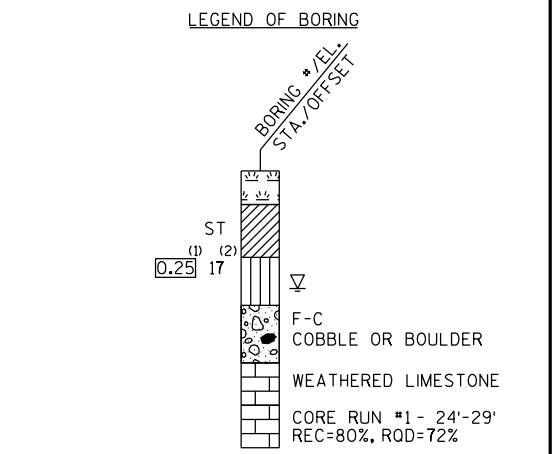
BORINGS COMPLETED BY: NUMMELIN TESTING SERVICES, INC.
 REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.
 ALL COORDINATES REFERENCED TO WCCS NAD 83(11) WASHINGTON COUNTY



STATE PROJECT NUMBER
2736-00-70

MATERIAL SYMBOLS

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



(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

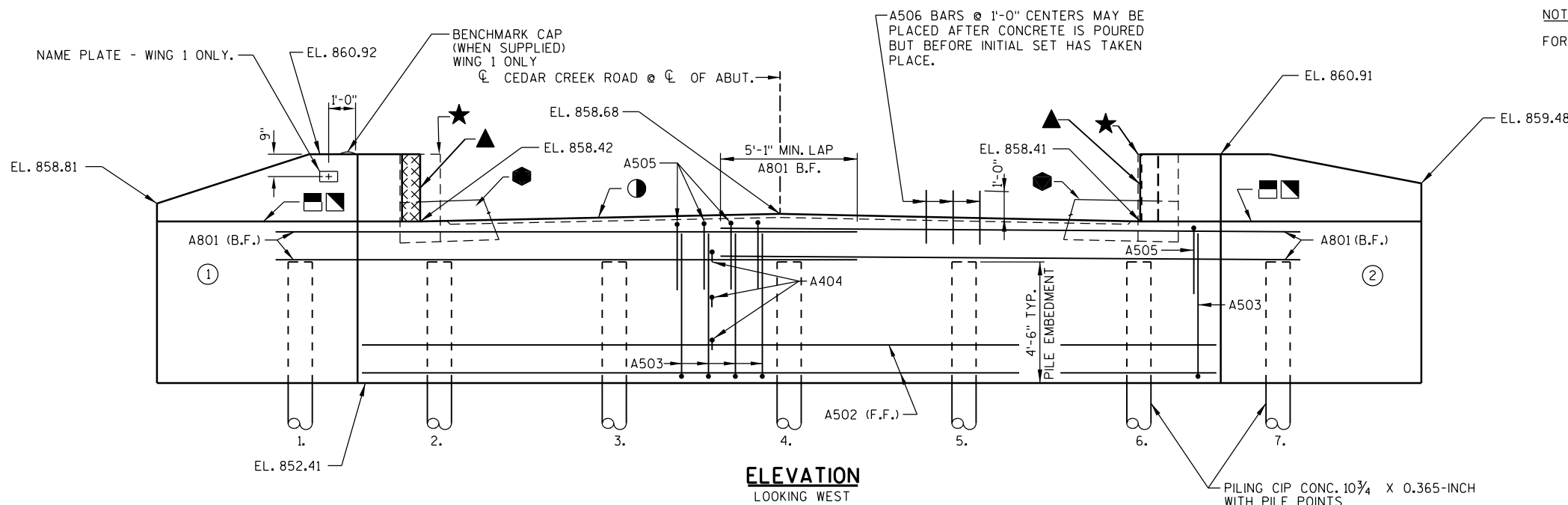
BORINGS WERE COMPLETED AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING TO OBTAIN INFORMATION CONCERNING THE CHARACTER OF SUBSURFACE MATERIALS FOUND AT THE SITE. BECAUSE THE INVESTIGATED DEPTHS ARE LIMITED AND THE AREA OF THE BORINGS IS VERY SMALL IN RELATION TO THE ENTIRE SITE, THE WISCONSIN DEPARTMENT 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-66-142	
DRAWN BY		CAR	PLANS CK'D. KHB
SUBSURFACE EXPLORATION		SHEET 3 OF 9	

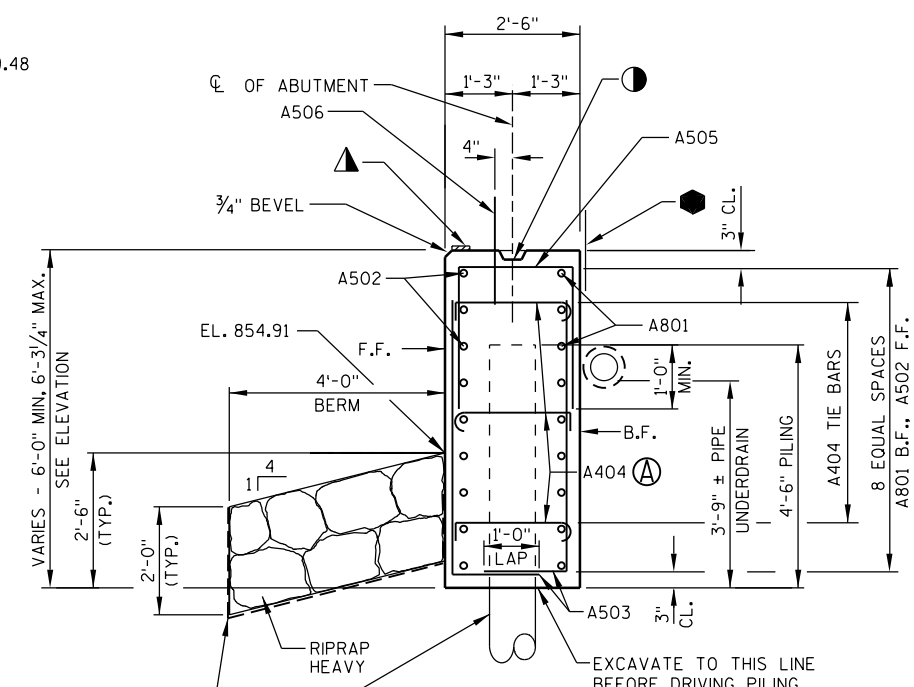
8

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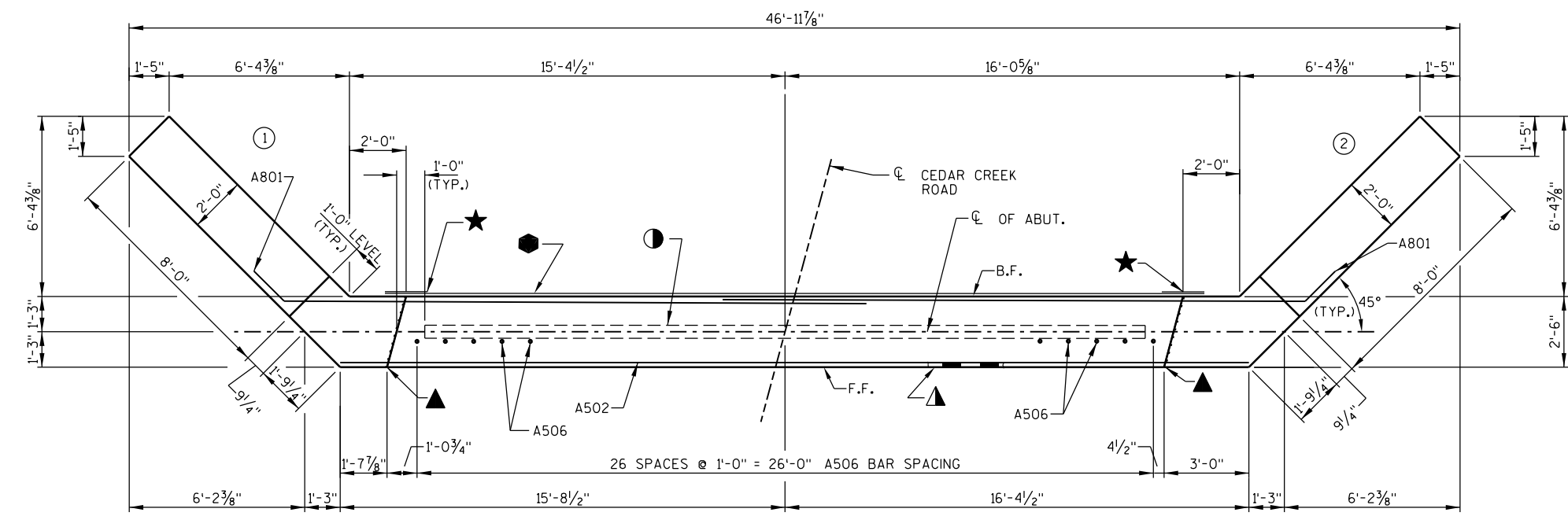
NOTE:
FOR WING DETAILS SEE SHEET 5.



ELEVATION
LOOKING WEST

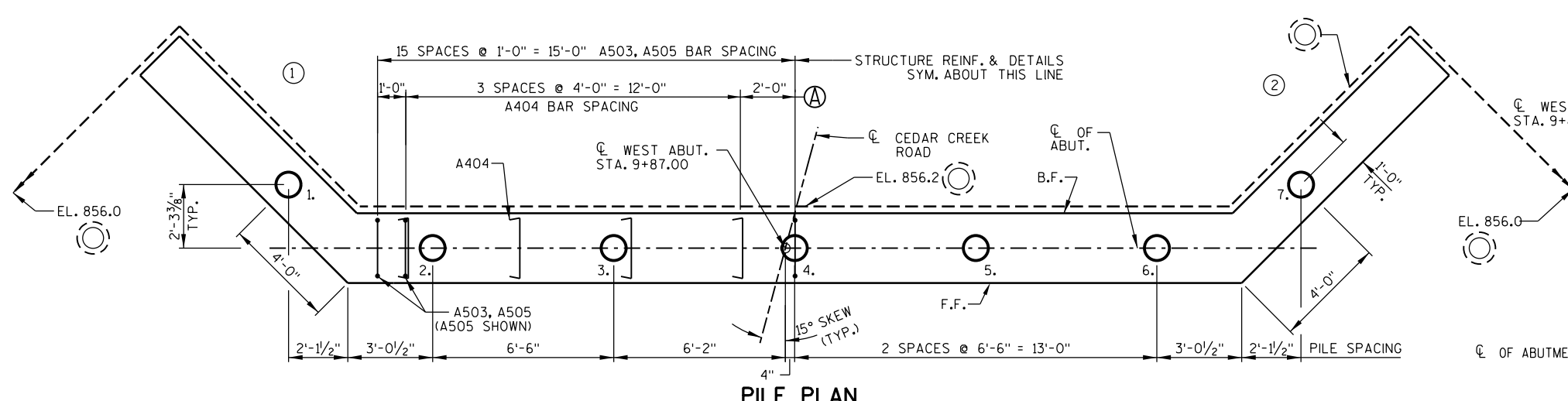


TYPICAL SECTION THRU ABUTMENT

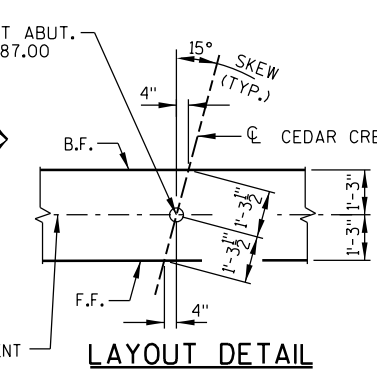


PLAN

- LEGEND**
- — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
 - ▲ — 1/2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
 - ▲ — 4"x 3/4" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
 - ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
 - — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS.
 - — OPTIONAL KEYED CONST. JOINT ON WING FORMED BY BEVELED 2 x 6. IF JOINT IS USED, PLACE ● ON B.F. OF WING. COST OF ● IS INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".
 - ▣ — 3/4" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONSTRUCTION JOINT IS USED.
 - — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT SHIELD AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS, SEE SHEET 5.
 - ⊙ — ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
 - — INDICATES WING NUMBER F.F.—FRONT FACE B.F.—BACK FACE CL.—CLEAR



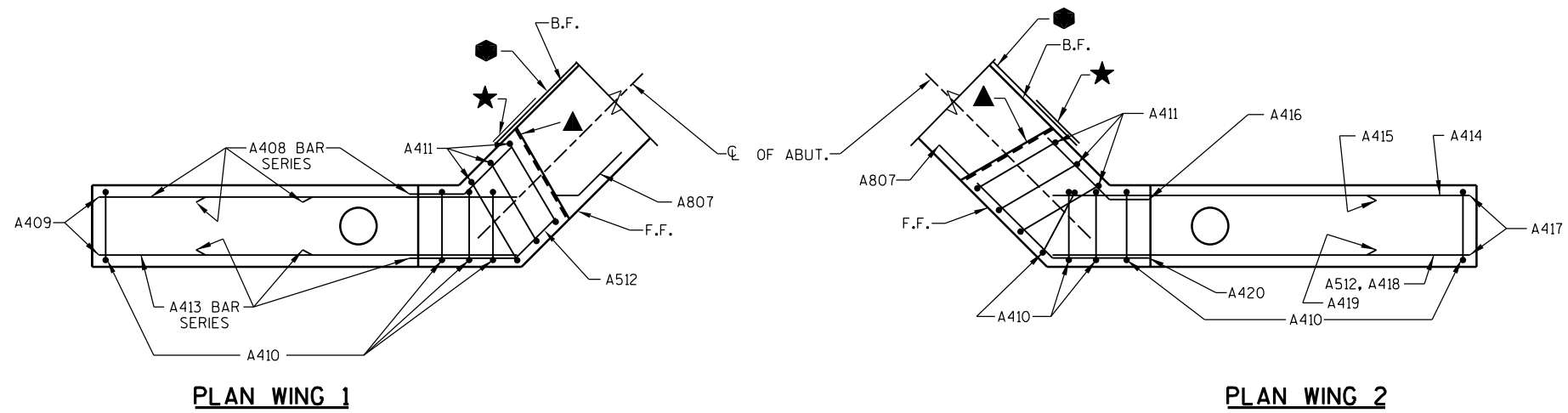
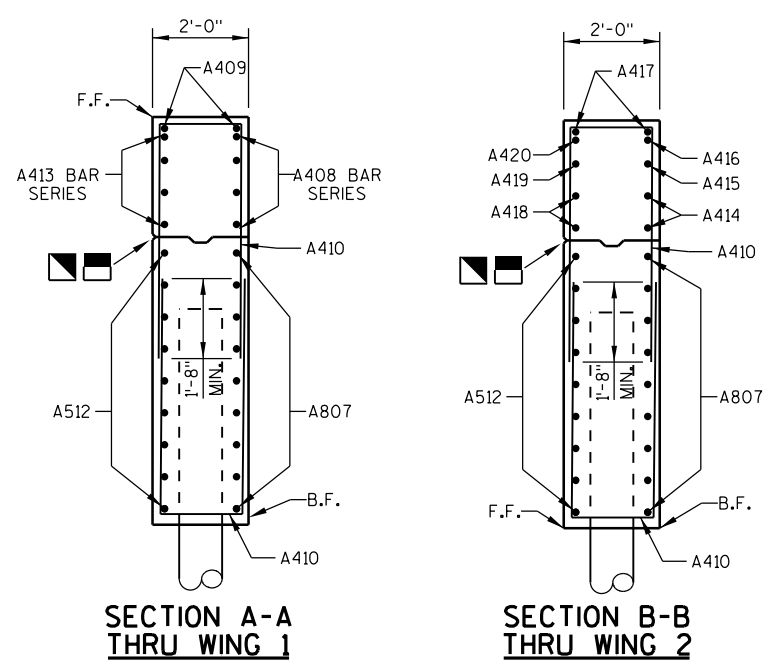
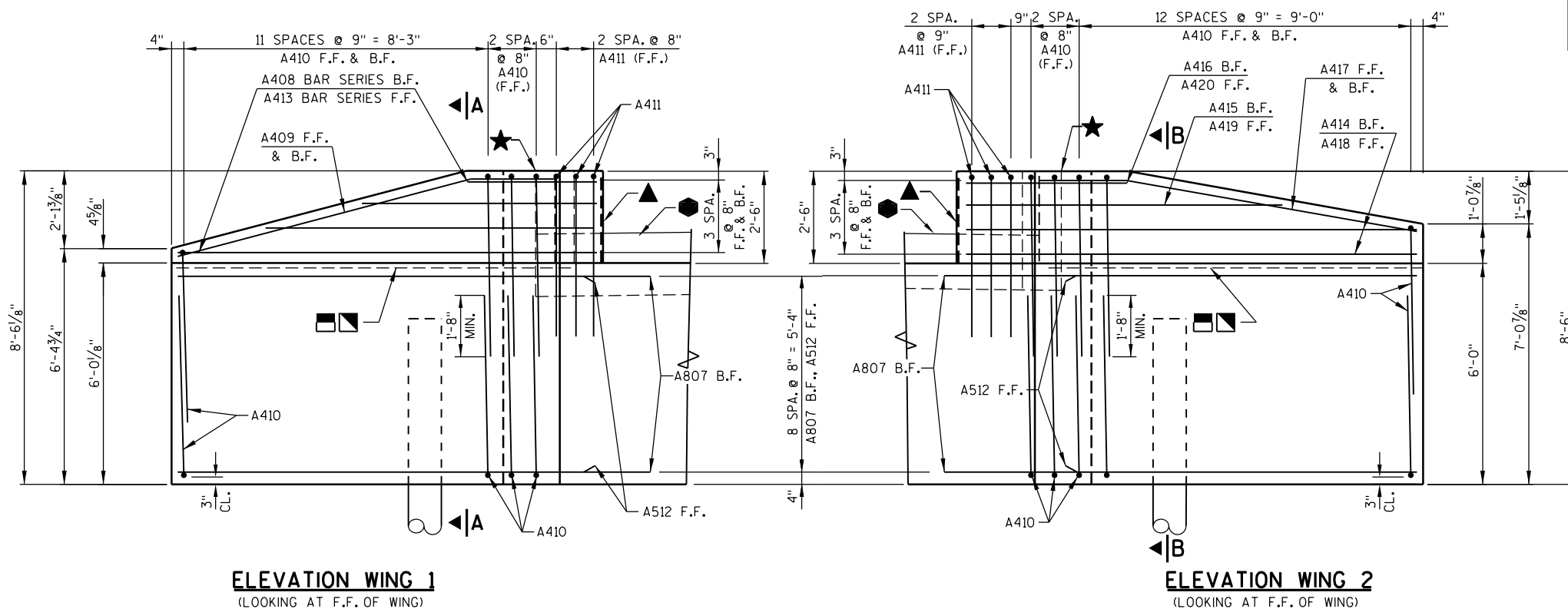
PILE PLAN



LAYOUT DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-66-142	
DRAWN BY RLR		PLANS CK'D. KHB	
WEST ABUTMENT		SHEET 4 OF 9	

SEE LEGEND ON SHEET 4 FOR DESCRIPTION OF



COATED 1505 LBS.
UNCOATED 2085 LBS.

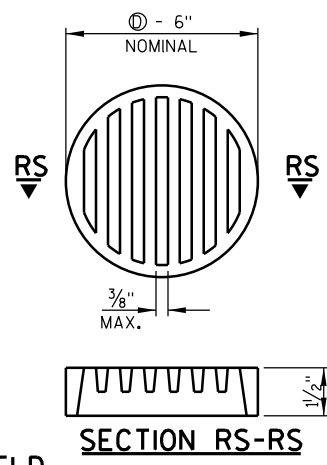
BILL OF BARS (WEST ABUT.)

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
A801	-	18	22'-0"	X		ABUTMENT BODY - B.F. - HORIZ.
A502	-	9	31'-10"			ABUTMENT BODY - F.F. - HORIZ.
A503	-	62	7'-0"	X		ABUTMENT BODY - F.F. & B.F. - VERT.
A404	-	24	3'-0"	X		ABUTMENT BODY - TIES - HORIZ.
A505	-	31	7'-1"	X		ABUTMENT BODY - TOP - VERT.
A506	27	-	2'-0"			ABUTMENT BODY - TOP DOWEL - VERT.
A807	18	-	13'-2"	X		WINGS - B.F. - HORIZ.
A408	4	-	6'-11"	X	⊠	WING 1 - B.F. - HORIZ.
A409	2	-	10'-5"	X		WING 1 - F.F. & B.F. - TOP - HORIZ.
A410	58	-	11'-4"	X		WINGS - F.F. & B.F. - VERT.
A411	6	-	10'-4"	X		WINGS - F.F. & B.F. - TOP - VERT.
A512	18	-	11'-8"	X		WINGS - F.F. - HORIZ.
A413	4	-	7'-9"	X	⊠	WING 1 - F.F. - HORIZ.
A414	2	-	10'-10"	X		WING 2 - B.F. - HORIZ.
A415	1	-	8'-6"	X		WING 2 - B.F. - HORIZ.
A416	1	-	3'-0"	X		WING 2 - B.F. - HORIZ.
A417	2	-	10'-4"	X		WING 2 - F.F. & B.F. - TOP - HORIZ.
A418	2	-	12'-9"	X		WING 2 - F.F. - HORIZ.
A419	1	-	10'-5"	X		WING 2 - F.F. - HORIZ.
A420	1	-	4'-11"	X		WING 2 - F.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY 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. THE RODENT SHIELD, PIPE COUPLING AND SCREWS, SHALL BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".



RODENT SHIELD

⊕ - DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

MARK	A	B
A801	1'-6"	45°
A807	1'-10"	45°
A512	2'-3"	15°
A409	1'-4"	45°
A414	2'-1"	45°
A415	2'-4"	10°
A418	2'-6"	45°
A419	2'-6"	45°
A420	2'-6"	45°

MARK	C	D
A505	2'-7"	2'-2"
A410	4'-11"	1'-8"
A411	4'-2"	2'-2"

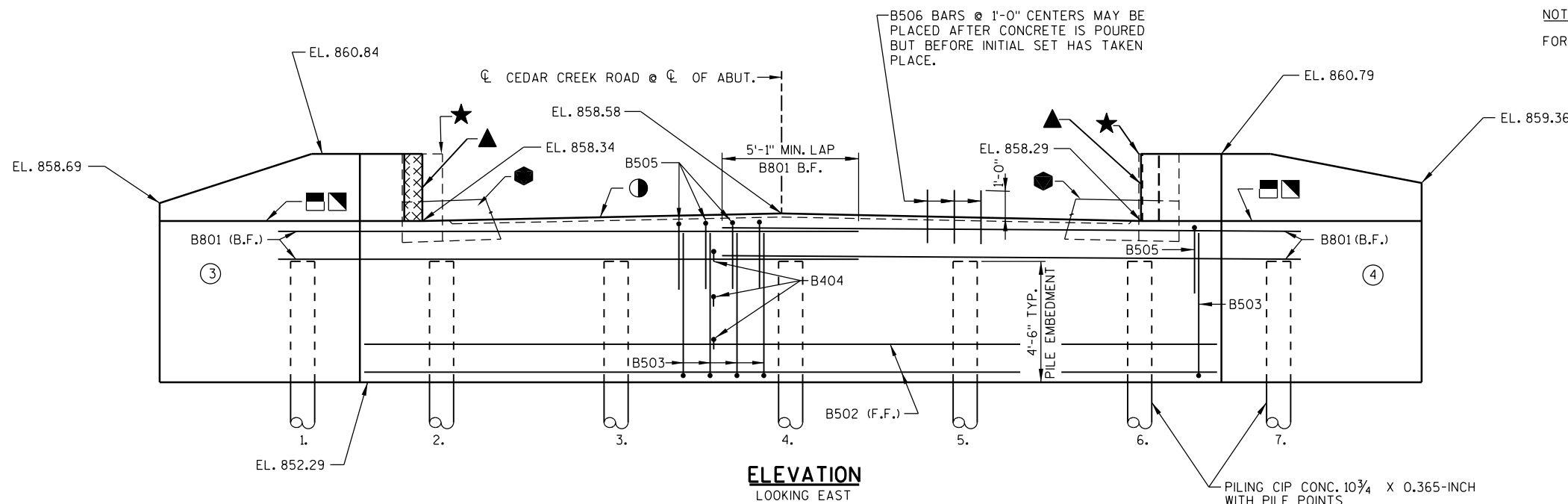
BAR MARK	NO. REQ'D.	LENGTH
A408	1 SERIES OF 4	3'-1" TO 10'-9"
A413	1 SERIES OF 4	3'-11" TO 11'-7"

BAR SERIES TABLE

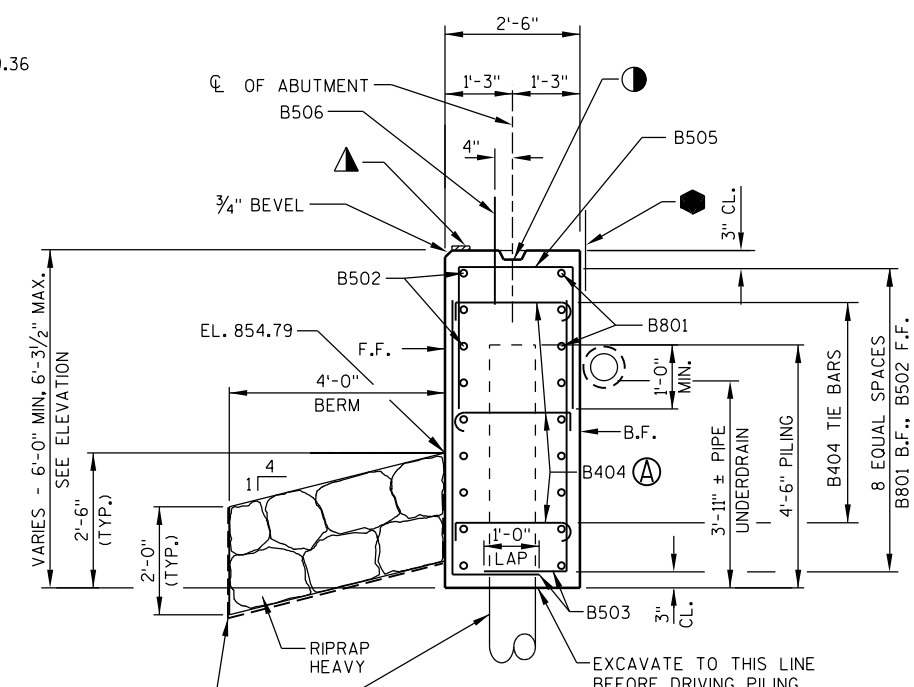
⊠ - LENGTH SHOWN FOR BAR IS AN AVERAGE AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.
BENT BARS IF USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-66-142	
DRAWN BY		PLANS CK'D.	
RLR		KHB	
WEST ABUTMENT DETAILS			SHEET 5 OF 9

NOTE:
FOR WING DETAILS SEE SHEET 7.



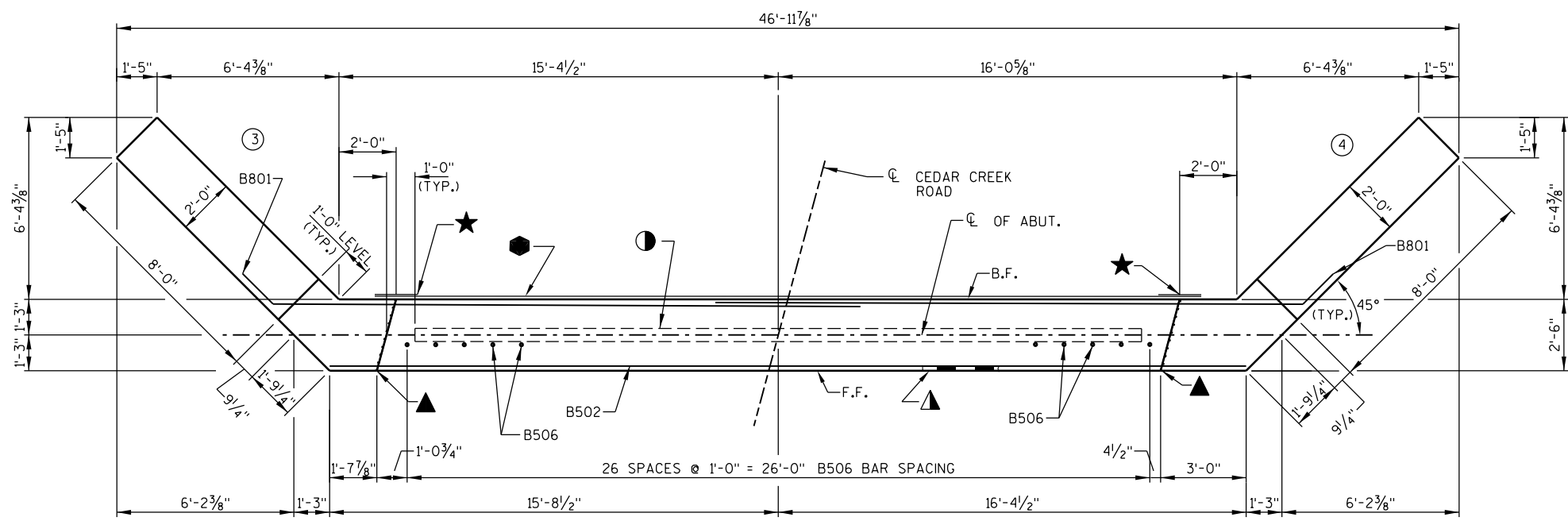
ELEVATION
LOOKING EAST



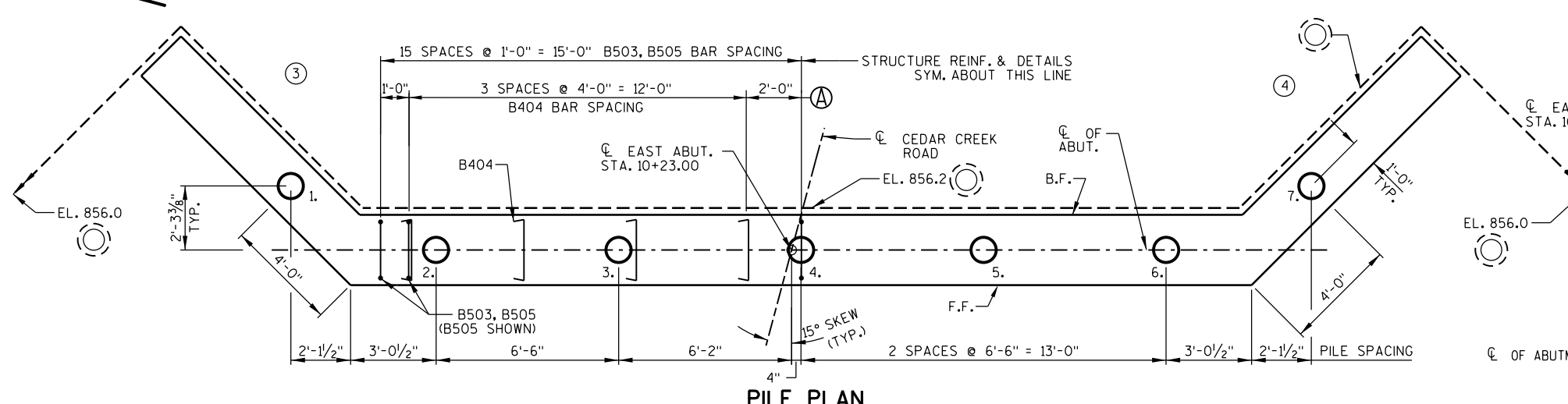
TYPICAL SECTION THRU ABUTMENT

ABUTMENT AND WINGS TO BE SUPPORTED ON PILING CIP CONCRETE 10 3/4 x 0.365-INCH WITH PILE POINTS DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS PER PILE. ESTIMATED PILE LENGTHS ARE 90'-0". SEE SHEET 7 FOR PILE SPLICE DETAILS.

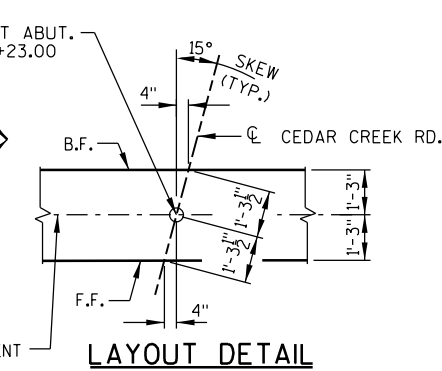
- LEGEND**
- — KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2x6.
 - ▲ — 1/2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
 - ▲ — 4"x 3/4" FILLER, EXTEND FULL LENGTH OF ABUTMENT BETWEEN EDGES OF SLAB.
 - ★ — VERTICAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND FROM 9" BELOW BRIDGE SEAT TO TOP OF WINGS.
 - — HORIZONTAL 18" WIDE RUBBERIZED MEMBRANE WATERPROOFING. EXTEND BETWEEN WINGS.
 - — OPTIONAL KEYED CONST. JOINT ON WING FORMED BY BEVELED 2 x 6. IF JOINT IS USED, PLACE ● ON B.F. OF WING. COST OF ● IS INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES".
 - ▣ — 3/4" "V" GROOVE ON FRONT FACE OF WING WALL, REQUIRED ONLY WHERE CONSTRUCTION JOINT IS USED.
 - — PIPE UNDERDRAIN WRAPPED 6-INCH. EXTEND THRU GEOTEXTILE AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT SHIELD AT ENDS OF PIPE. FOR RODENT SHIELD DETAILS, SEE SHEET 5.
 - ⊙ — ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
 - — INDICATES WING NUMBER F.F.—FRONT FACE B.F.—BACK FACE CL.—CLEAR



PLAN



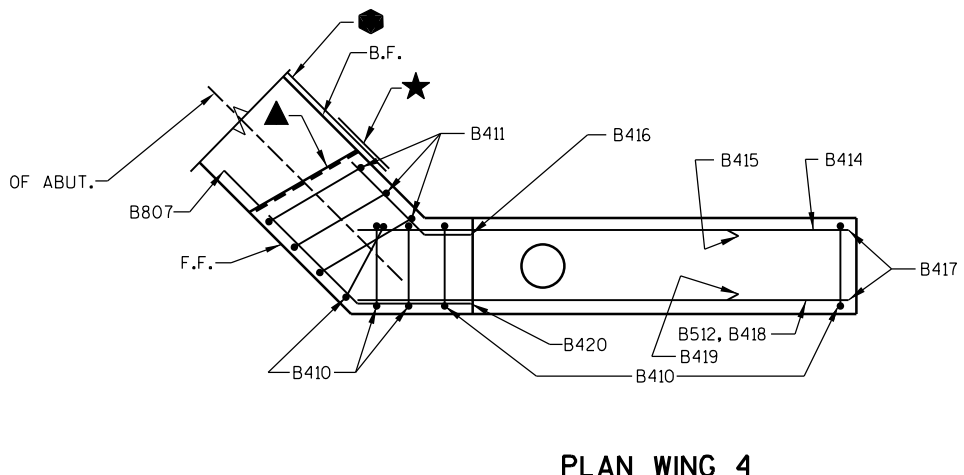
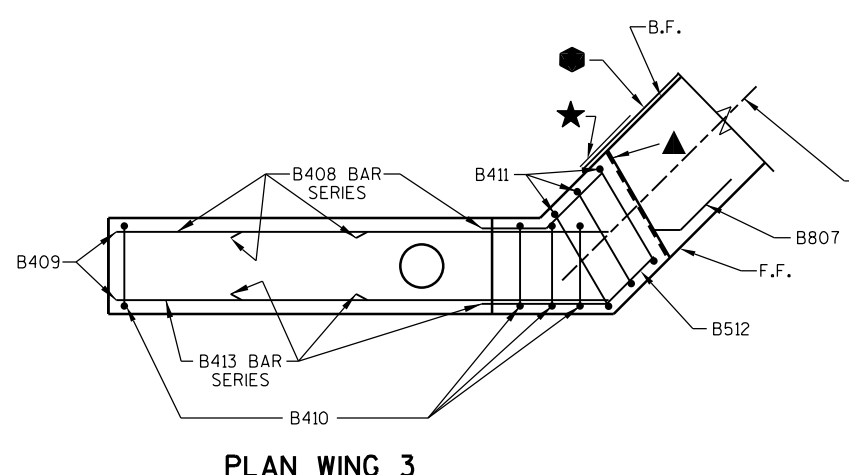
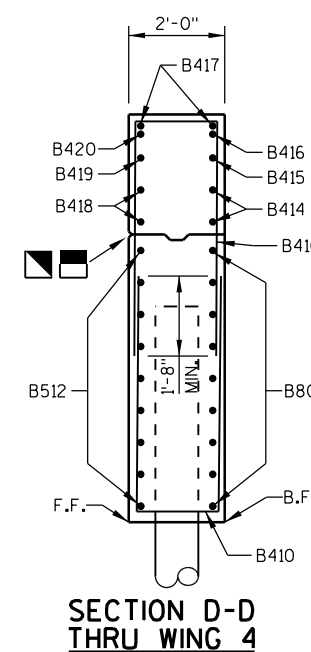
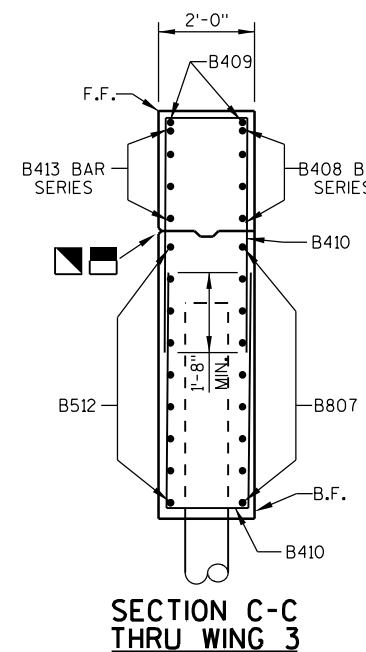
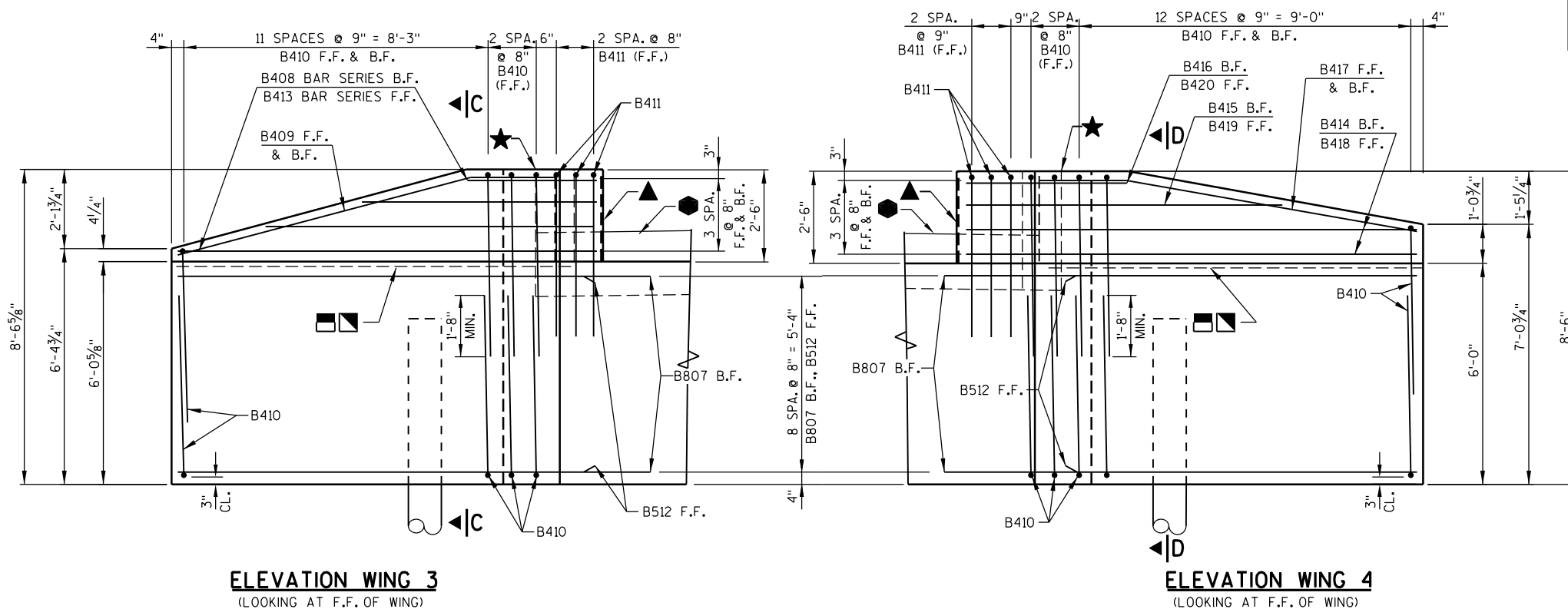
PILE PLAN



LAYOUT DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-66-142	
DRAWN BY RLR		PLANS CK'D. KHB	
EAST ABUTMENT			SHEET 6 OF 9

SEE LEGEND ON SHEET 6 FOR DESCRIPTION OF

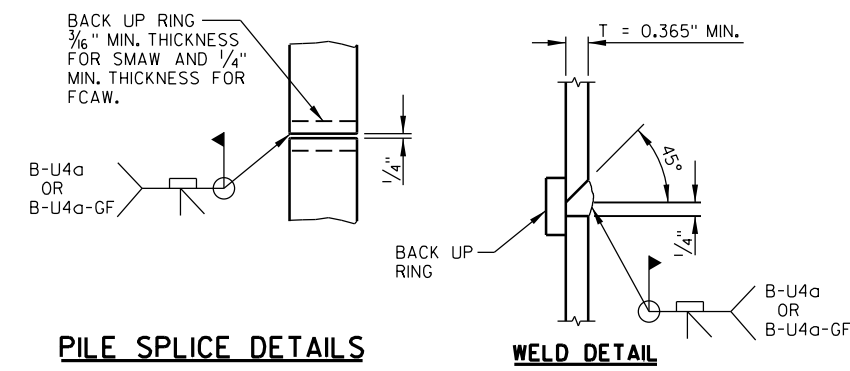


COATED 1505 LBS.
UNCOATED 2085 LBS.

BILL OF BARS (EAST ABUT.)

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
B801	-	18	22'-0"	X		ABUTMENT BODY - B.F. - HORIZ.
B502	-	9	31'-10"			ABUTMENT BODY - F.F. - HORIZ.
B503	-	62	7'-0"	X		ABUTMENT BODY - F.F. & B.F. - VERT.
B404	-	24	3'-0"	X		ABUTMENT BODY - TIES - HORIZ.
B505	-	31	7'-1"	X		ABUTMENT BODY - TOP - VERT.
B506	27	-	2'-0"			ABUTMENT BODY - TOP DOWEL - VERT.
B807	18	-	13'-2"	X		WINGS - B.F. - HORIZ.
B408	4	-	6'-11"	X	⊠	WING 3 - B.F. - HORIZ.
B409	2	-	10'-5"	X		WING 3 - F.F. & B.F. - TOP - HORIZ.
B410	58	-	1'-4"	X		WINGS - F.F. & B.F. - VERT.
B411	6	-	10'-4"	X		WINGS - F.F. & B.F. - TOP - VERT.
B512	18	-	1'-8"	X		WINGS - F.F. - HORIZ.
B413	4	-	7'-9"	X	⊠	WING 3 - F.F. - HORIZ.
B414	2	-	10'-10"	X		WING 4 - B.F. - HORIZ.
B415	1	-	8'-6"	X		WING 4 - B.F. - HORIZ.
B416	1	-	3'-0"	X		WING 4 - B.F. - HORIZ.
B417	2	-	10'-4"	X		WING 4 - F.F. & B.F. - TOP - HORIZ.
B418	2	-	12'-9"	X		WING 4 - F.F. - HORIZ.
B419	1	-	10'-5"	X		WING 4 - F.F. - HORIZ.
B420	1	-	4'-11"	X		WING 4 - F.F. - HORIZ.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.



MARK	A	B
B801	1'-6"	45°
B807	1'-10"	45°
B512	2'-3"	15°
B413	1'-4"	45°
B414	2'-1"	45°
B415	2'-4"	10°
B418	2'-6"	45°
B419		
B420		

MARK	C	D
B505	2'-7"	2'-2"
B410	4'-11"	1'-8"
B411	4'-2"	2'-2"

BAR MARK	NO. REQ'D.	LENGTH
B408	1 SERIES OF 4	3'-1" TO 10'-9"
B413	1 SERIES OF 4	3'-11" TO 11'-7"

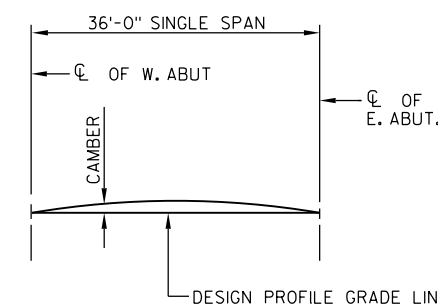
BAR SERIES TABLE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-66-142	
DRAWN BY		PLANS CK'D.	
RLR		KHB	
EAST ABUTMENT DETAILS			SHEET 7 OF 9

BILL OF BARS (COATED) 11,870 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	54	7'-6"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S902	27	38'-2"		SLAB BOTTOM - LONGIT.
S1003	26	30'-5"		SLAB BOTTOM - LONGIT.
S504	94	27'-1"		SLAB TOP & BOTTOM - TRANS.
S505	22	38'-2"		SLAB TOP - LONGIT.
S606	28	12'-0"	X	SLAB TOP @ RAIL POST, 2 PER POST
S607	40	6'-0"		SLAB TOP @ RAIL POST, 4 PER POST
S608	16	6'-0"	X	SLAB TOP @ RAIL END POST AS NOTED

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.
EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT.



CAMBER DIAGRAM

CAMBER SPANS AS SHOWN ABOVE AND IN THE TABLE OF VALUES TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION APPROXIMATES 1/3 OF CAMBER VALUES SHOWN.

GENERAL NOTES

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

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 TRANSVERSE BAR STEEL REINFORCEMENT SHALL BE PLACED ON THE SKEW.

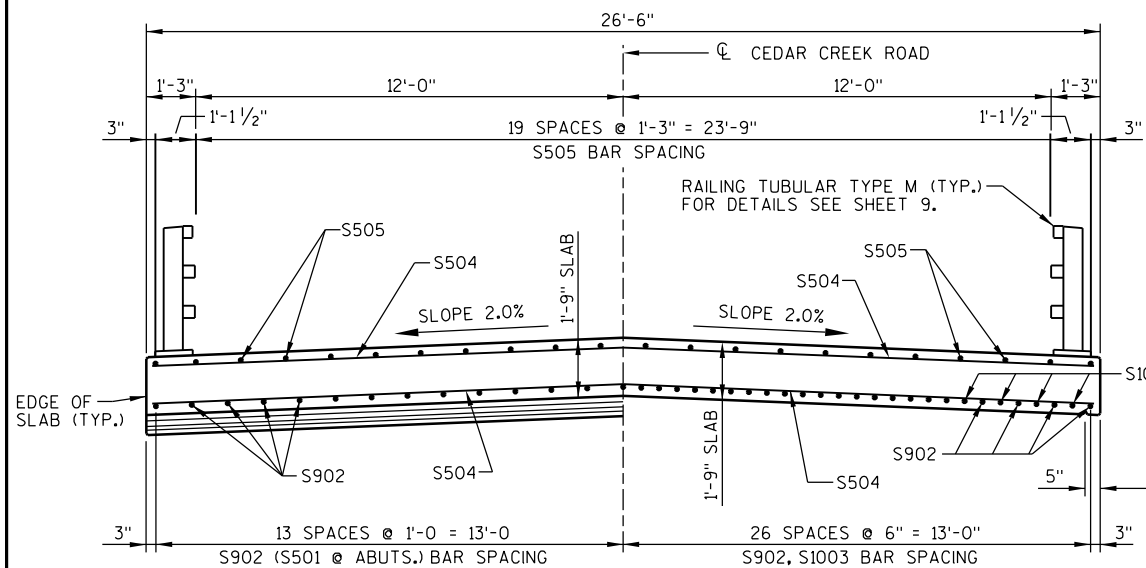
SURVEY TOP OF SLAB ELEVATIONS

LOCATION	SPAN POINT	SOUTH SLAB EDGE	C/L CEDAR CREEK ROAD	NORTH SLAB EDGE
WEST ABUT.	1.0			
	1.5			
EAST ABUT.	2.0			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE CL OF ABUTMENTS AND AT THE 0.5 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG EDGE OF SLAB AND CROWN OR CL. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TOP OF SLAB ELEVATIONS AND CAMBER VALUES

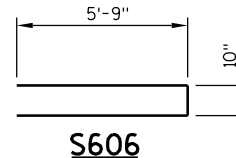
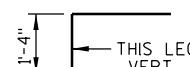
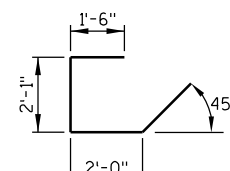
LOCATION	SPAN POINT	SOUTH SLAB EDGE	C/L CEDAR CREEK ROAD	NORTH SLAB EDGE	CAMBER VALUE (INCHES)
WEST ABUT.	1.0	860.92	861.18	860.91	0.00
	1.1	860.92	861.19	860.92	0.29
	1.2	860.92	861.19	860.92	0.55
	1.3	860.91	861.18	860.92	0.75
	1.4	860.90	861.18	860.92	0.88
	1.5	860.89	861.17	860.91	0.93
	1.6	860.88	861.16	860.90	0.88
	1.7	860.86	861.14	860.89	0.75
	1.8	860.84	861.12	860.88	0.55
	1.9	860.82	861.10	860.86	0.29
EAST ABUT.	2.0	860.79	861.08	860.84	0.00



AT ABUTMENTS IN SPAN

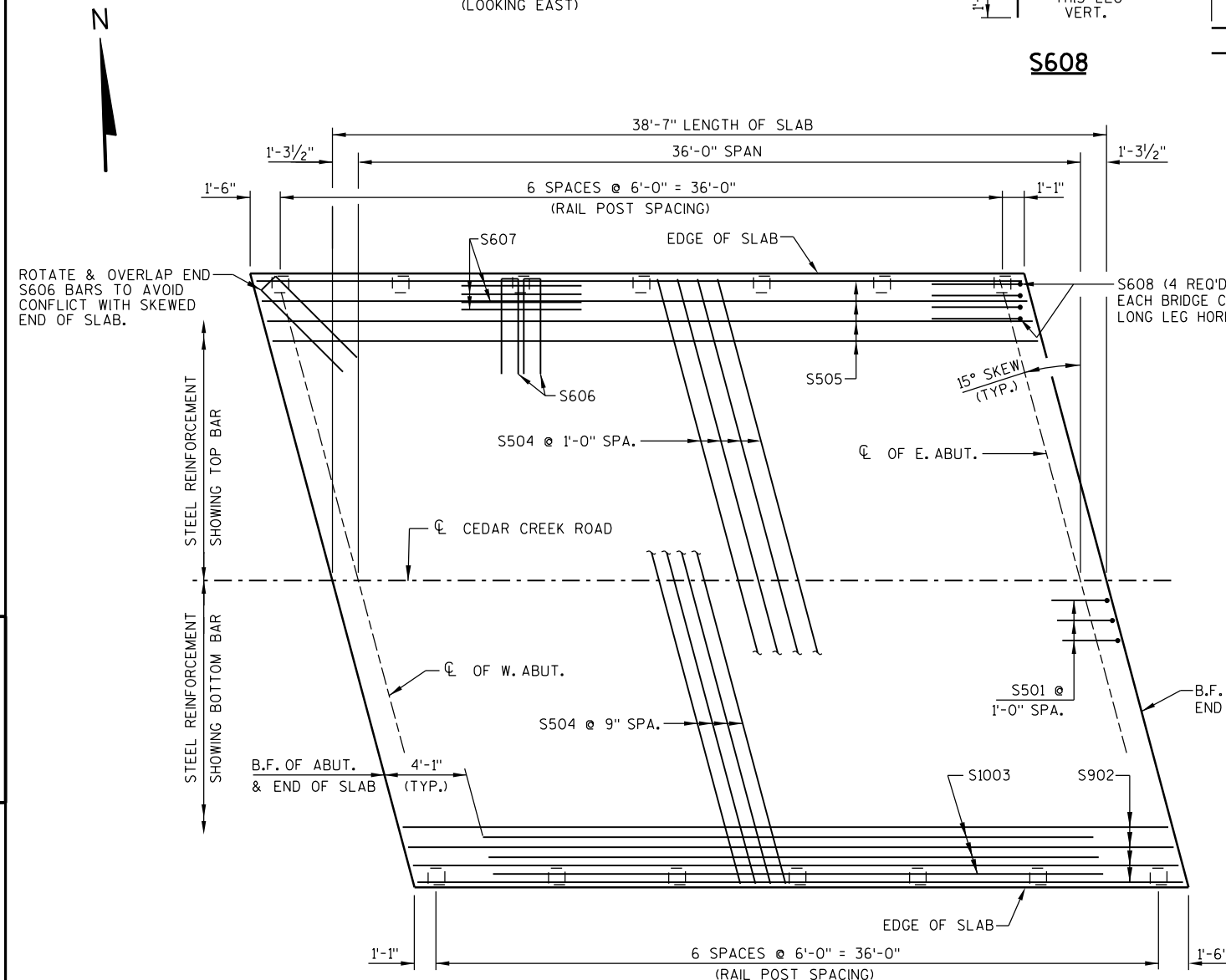
CROSS SECTION THRU BRIDGE

(LOOKING EAST)

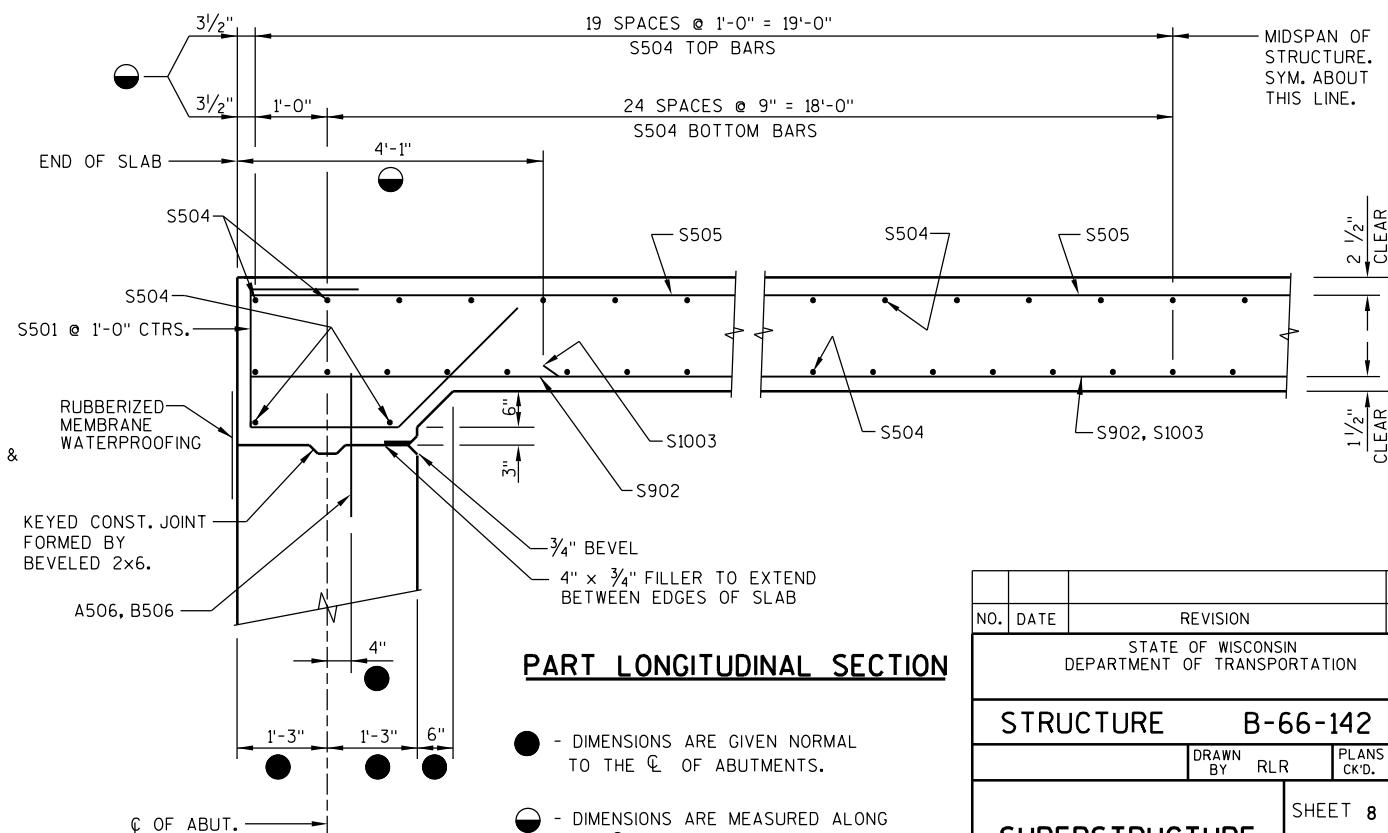


TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE, FOLLOW THIS PROCEDURE:

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



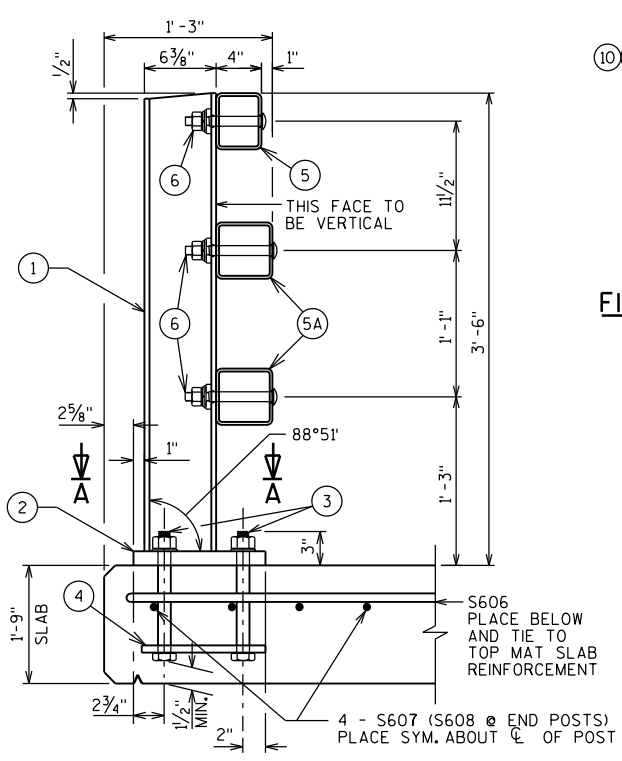
PLAN



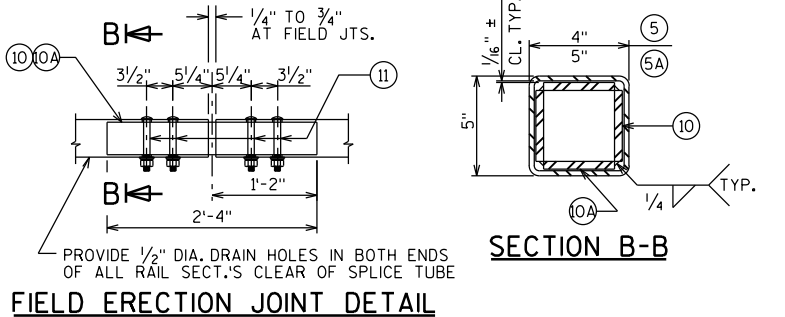
PART LONGITUDINAL SECTION

- - DIMENSIONS ARE GIVEN NORMAL TO THE CL OF ABUTMENTS.
- - DIMENSIONS ARE MEASURED ALONG THE CL OF CEDAR CREEK ROAD.

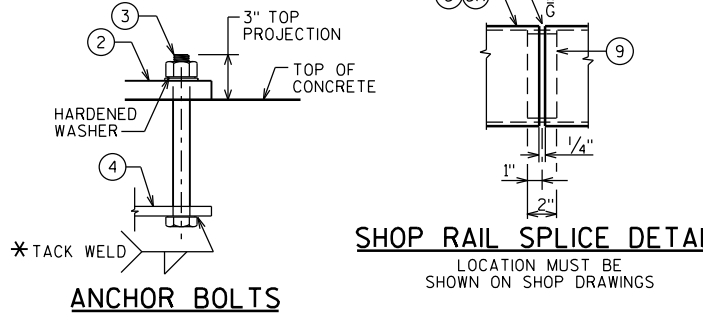
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-66-142	
DRAWN BY		RLR	PLANS CK'D. KHB
SUPERSTRUCTURE		SHEET 8 OF 9	



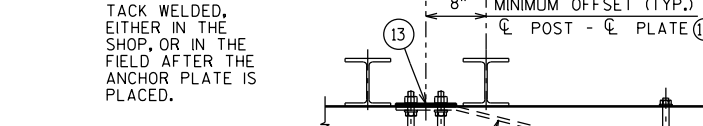
SECTION THRU RAILING ON DECK



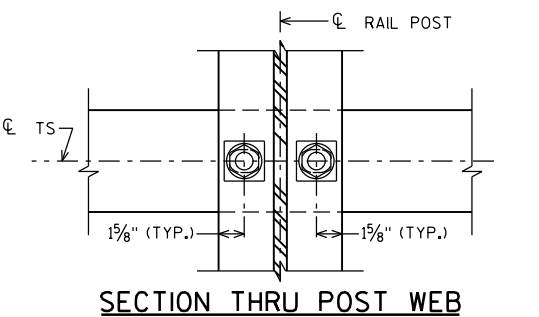
FIELD ERECTION JOINT DETAIL



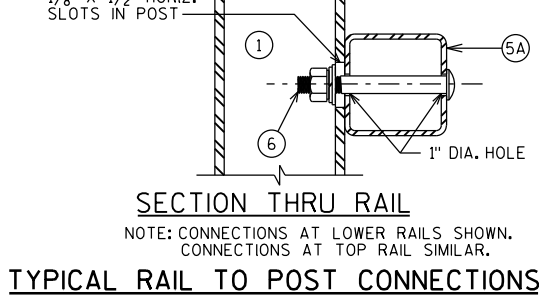
SHOP RAIL SPLICE DETAIL



ANCHOR BOLTS

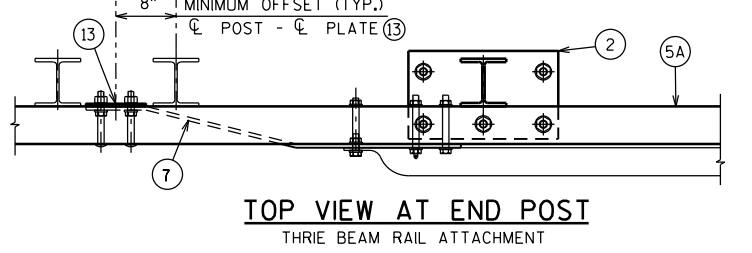


SECTION THRU POST WEB

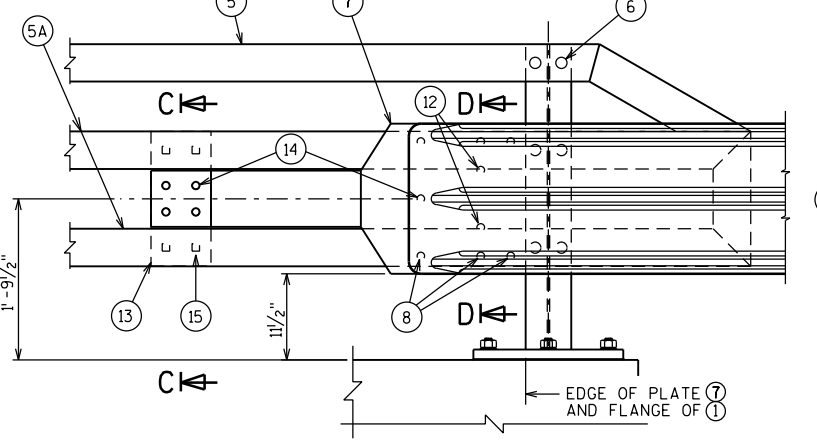


SECTION THRU RAIL

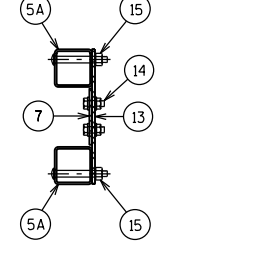
TYPICAL RAIL TO POST CONNECTIONS



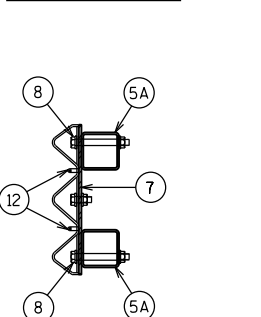
TOP VIEW AT END POST



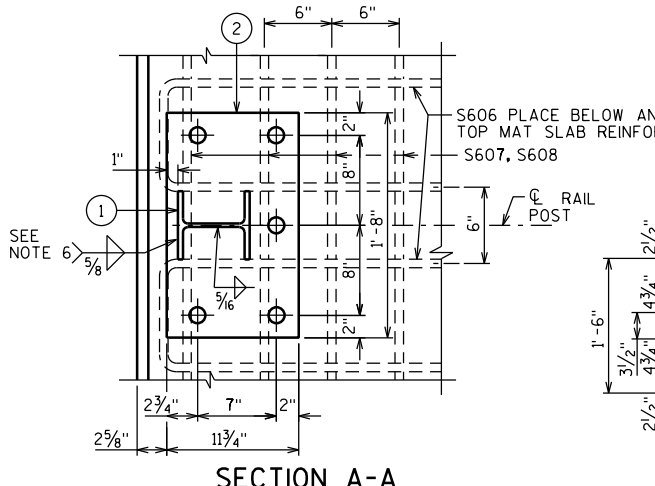
DETAIL AT END POST FOR FUTURE THRIE BEAM ATTACHMENT



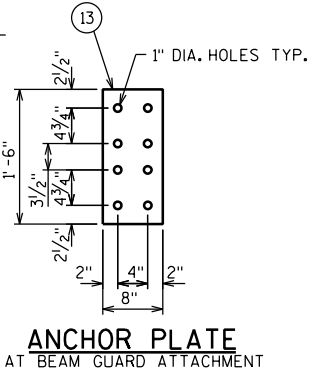
SECTION C-C



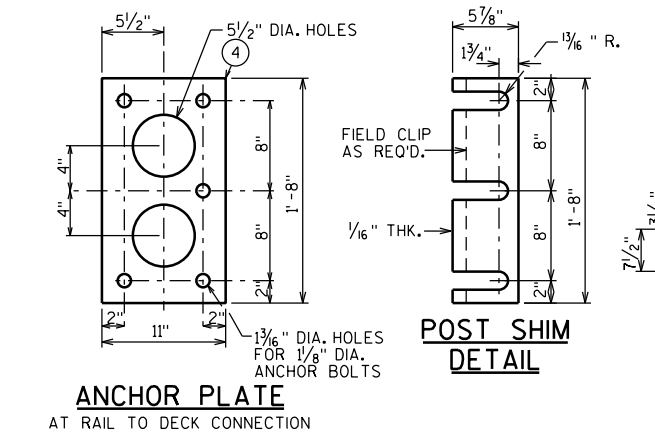
SECTION D-D



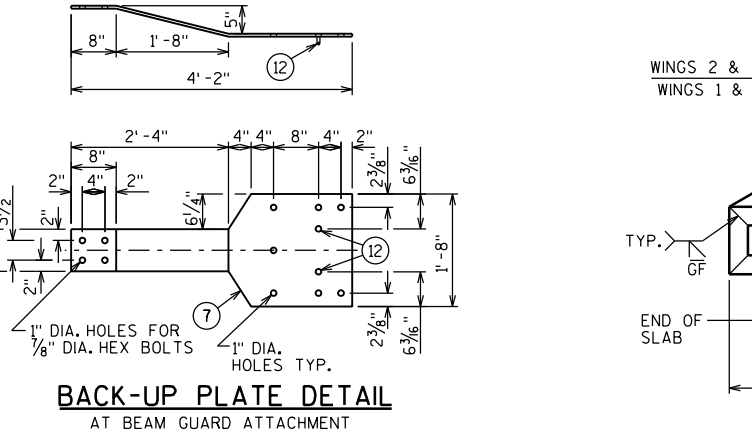
SECTION A-A



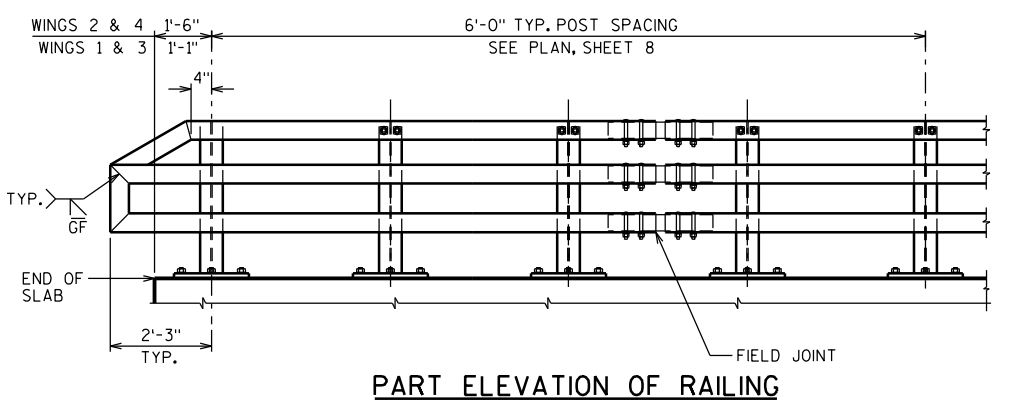
ANCHOR PLATE AT BEAM GUARD ATTACHMENT



ANCHOR PLATE AT RAIL TO DECK CONNECTION



BACK-UP PLATE DETAIL AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

LEGEND

- ① W6 x 25 WITH 1/8" x 1/2" 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 1/4" x 11 3/4" x 1'-8" WITH 1 1/8" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
- ③ ASTM A449 - 1/8" 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'-3" LONG ON CONCRETE SLAB SUPERSTRUCTURE.
- ④ 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 1/8" 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 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" x 1 5/8" x 1 5/8" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- ⑦ 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" x 1 1/2" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
- ⑧ 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
- ⑨ SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- ⑩ 3/8" x 3 3/8" x 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- ⑩A 3/8" x 2 5/8" x 2'-4" PLATE USED IN NO. 5. 3/8" x 3 3/8" x 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- ⑪ 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 5/8" x 1 1/4" LONGIT. SLOTTED HOLES IN PLATE NO. 10A AT FIELD JOINTS AND 1 5/8" x 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A. PROVIDE 1/8" DIA. ROUND HOLES IN TUBES NO. 5 AND NO. 5A.
- ⑫ 7/8" DIA. x 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D.).
- ⑬ 3/8" x 8" x 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
- ⑭ 7/8" DIA. x 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
- ⑮ 1" DIA. HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

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 1/8 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.
10. PAINTING IS NOT REQUIRED.
11. THIS RAILING MEETS AASHTO MANUAL FOR ASSESSING SAFETY HARDWARE (MASH) FOR TEST LEVEL 2 (TL-2).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-66-142	
DRAWN BY RLR		PLANS CK'D. KHB	
RAILING TUBULAR TYPE M		SHEET 9 OF 9	

EARTHWORK PROJECT I.D. 2736-00-70 - PLACEMENT OF TEMPORARY BYPASS

DIVISION	STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
			CUT (2)	EBS EXCAVATION				FACTOR 1.25				
PROJECT I.D. 2736-00-70												
DIVISION 1	100+87.5 - 102+00.0	TEMP BYPASS WEST APPROACH	7	0	0	7	227	284	-277	0	277	
DIVISION 2	102+40 - 103+97.4	TEMP BYPASS EAST APPROACH	16	0	0	16	392	490	-474	0	474	
GRAND TOTAL			23	0	0	23	619	774	-751	0	751	
TOTAL COMMON EXC			23									

EARTHWORK PROJECT I.D. 2736-00-70 - REMOVAL OF TEMPORARY BYPASS

DIVISION	STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
			CUT (2)	EBS EXCAVATION				FACTOR 1.25				
PROJECT I.D. 2736-00-70												
DIVISION 1	101+87.5 - 102+00.0	WEST SIDE APPROACH	220	0	0	220	8	10	210	210	0	
DIVISION 2	102+40 - 103+97.4	EAST SIDE APPROACH	369	0	0	369	29	36	333	333	0	
GRAND TOTAL			589	0	0	589	37	46	543	543	0	

EARTHWORK PROJECT I.D. 2736-00-70 - CEDAR CREEK ROAD

DIVISION	STATION	LOCATION	205.0100 COMMON EXCAVATION (1)		SALVAGED/UNUSABLE PAVEMENT MATERIAL (4)	AVAILABLE MATERIAL (5)	UNEXPANDED FILL	EXPANDED FILL (13)	MASS ORDINATE +/- (14)	WASTE	208.0100 BORROW	COMMENT
			CUT (2)	EBS EXCAVATION				FACTOR 1.25				
PROJECT I.D. 2736-00-70												
1	8+70.8 - 9+81	CEDAR CREEK ROAD - WEST APPROACH	92	0	7	85	83	104	-19	0	19	
2	10+28 - 11+65	CEDAR CREEK ROAD - EAST APPROACH	85	0	8	77	78	98	-21	0	21	
GRAND TOTAL			177	0	15	162	161	201	-40	0	40	

NOTES:

(1) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100

(2) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.

(4) SALVAGED/UNUSABLE PAVEMENT MATERIAL

(5) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL

(13) EXPANDED FILL FACTOR = 1.25

DEPENDENT ON SELECTIONS:

OR

OR

OR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH - REDUCED EBS) * FILL FACTOR

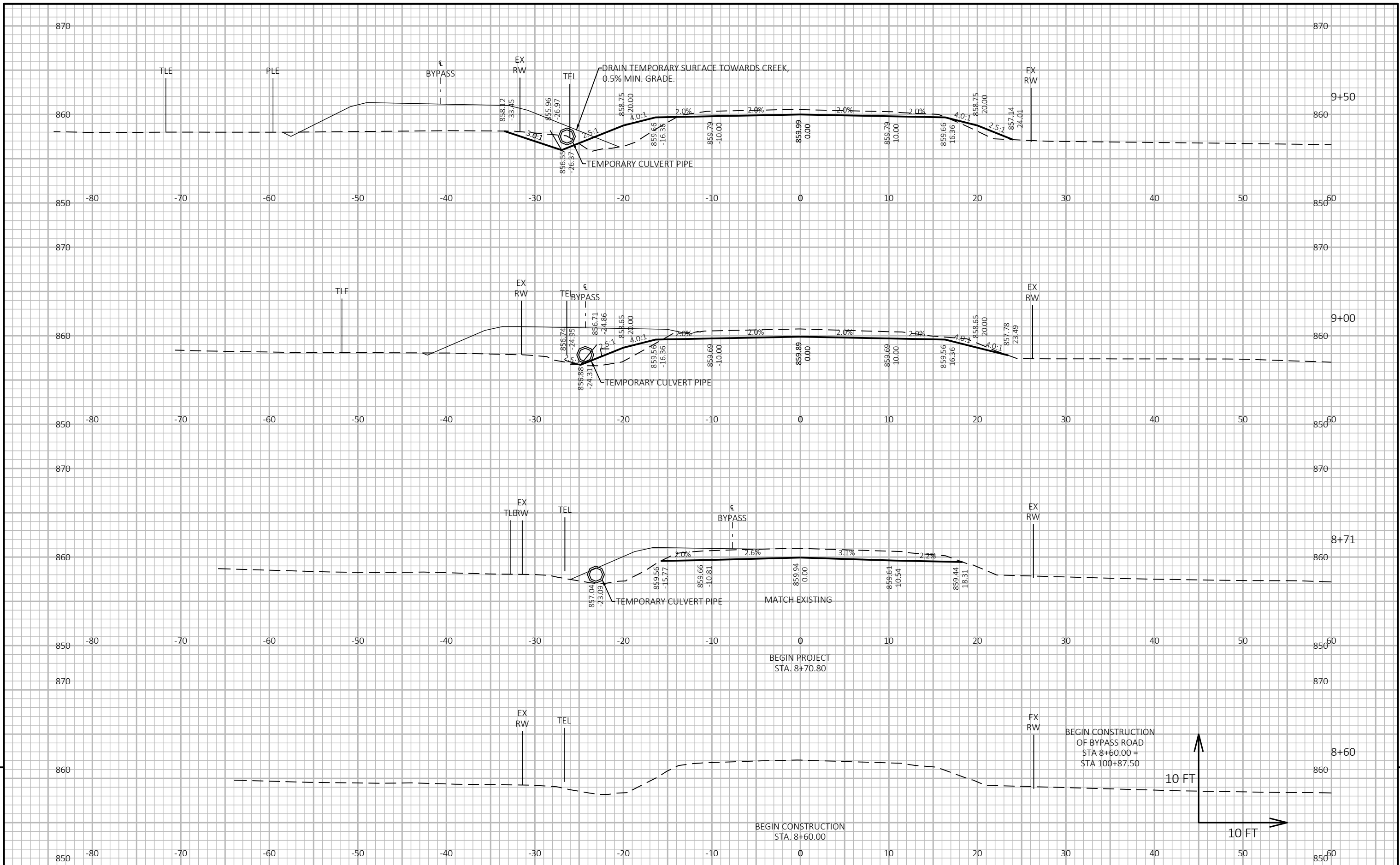
EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED EBS) * FILL FACTOR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK - REDUCED MARSH) * FILL FACTOR

EXPANDED FILL = (UNEXPANDED FILL - EXPANDED ROCK) * FILL FACTOR

(14) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(15) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.



PROJECT NO: 2736-00-70

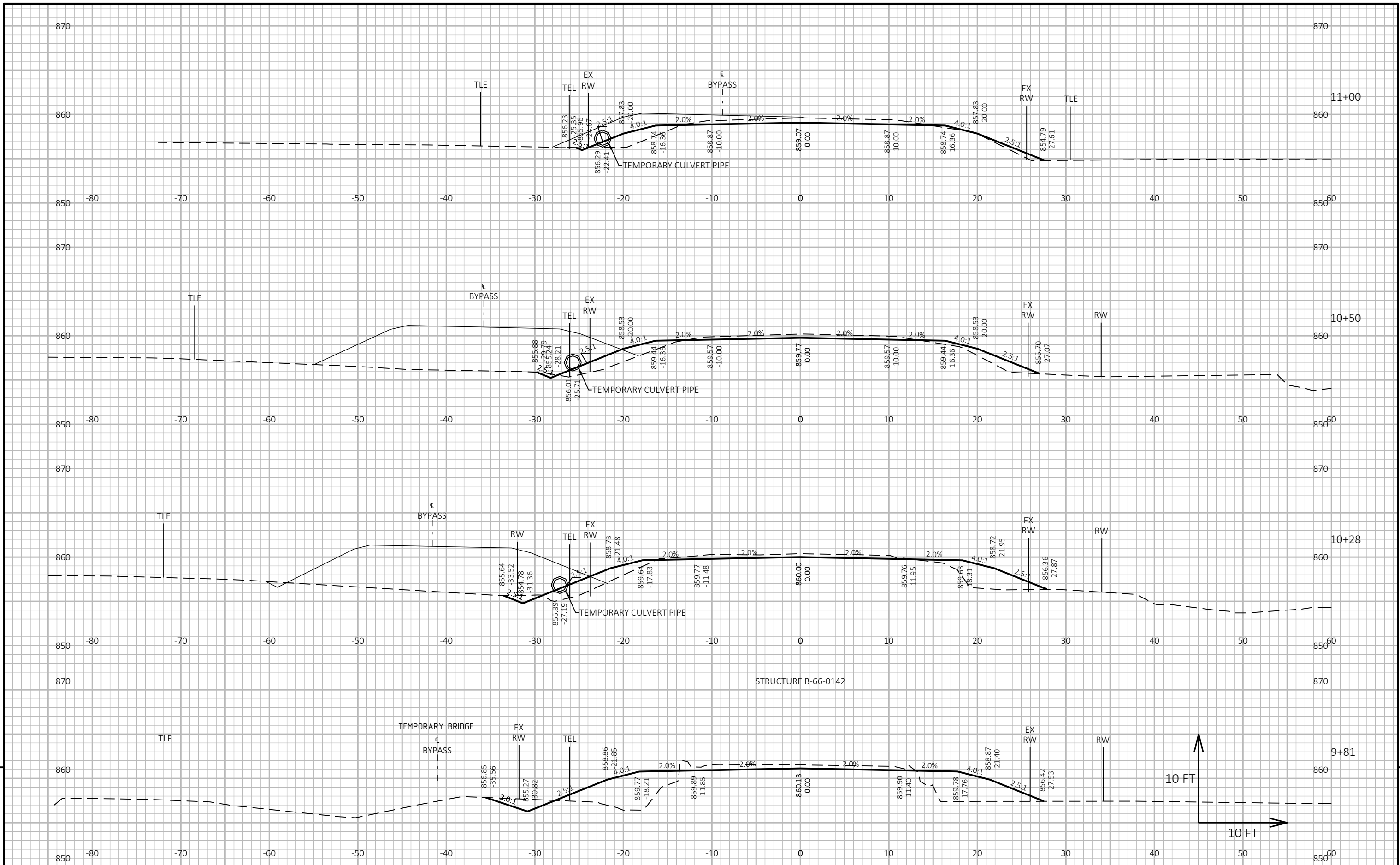
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COUNTY: WASHINGTON

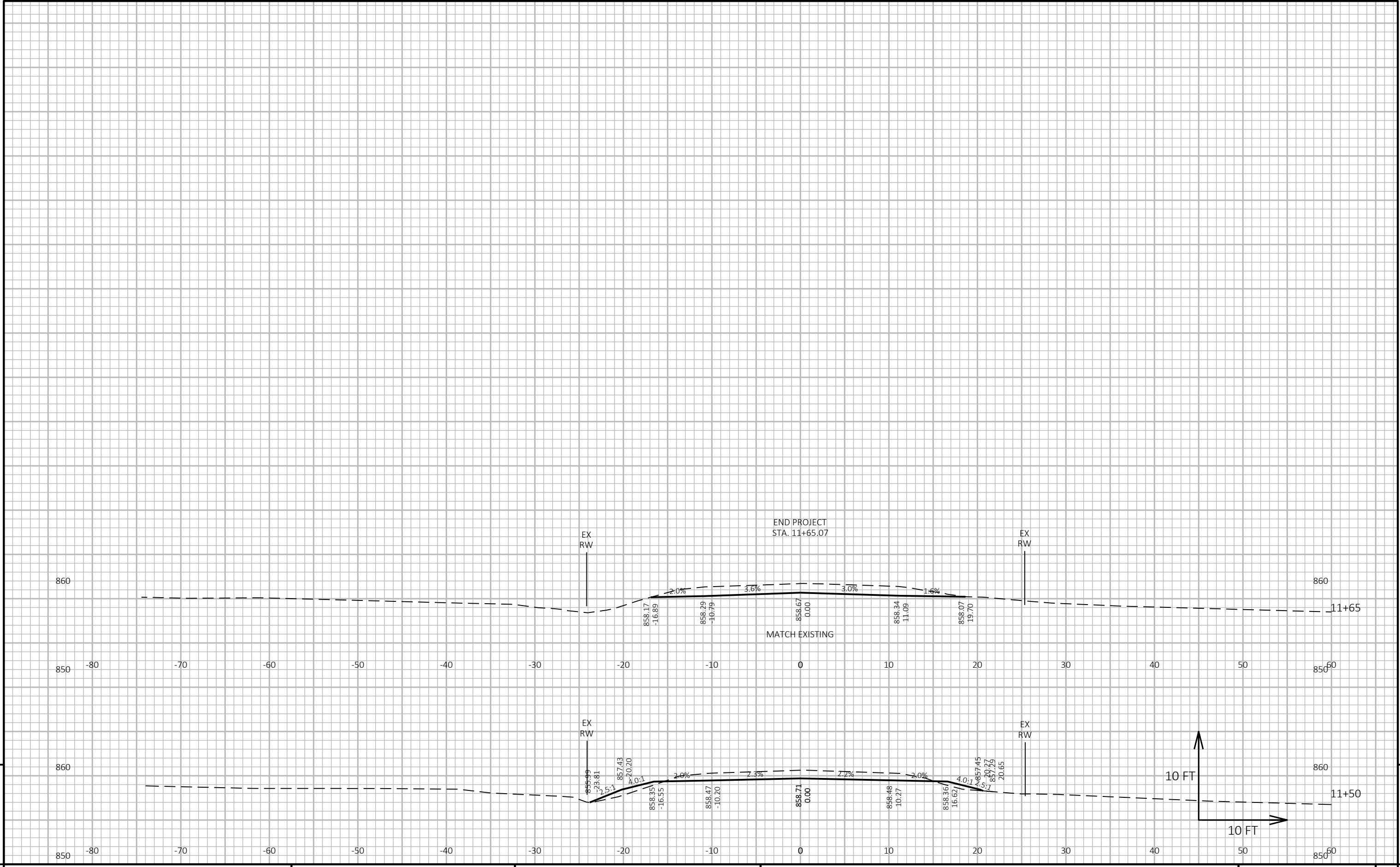
CROSS SECTIONS: MAINLINE CROSS SECTIONS

SHEET

E



PROJECT NO: 2736-00-70 HWY: CEDAR CREEK ROAD COUNTY: WASHINGTON CROSS SECTIONS: MAINLINE CROSS SECTIONS SHEET E

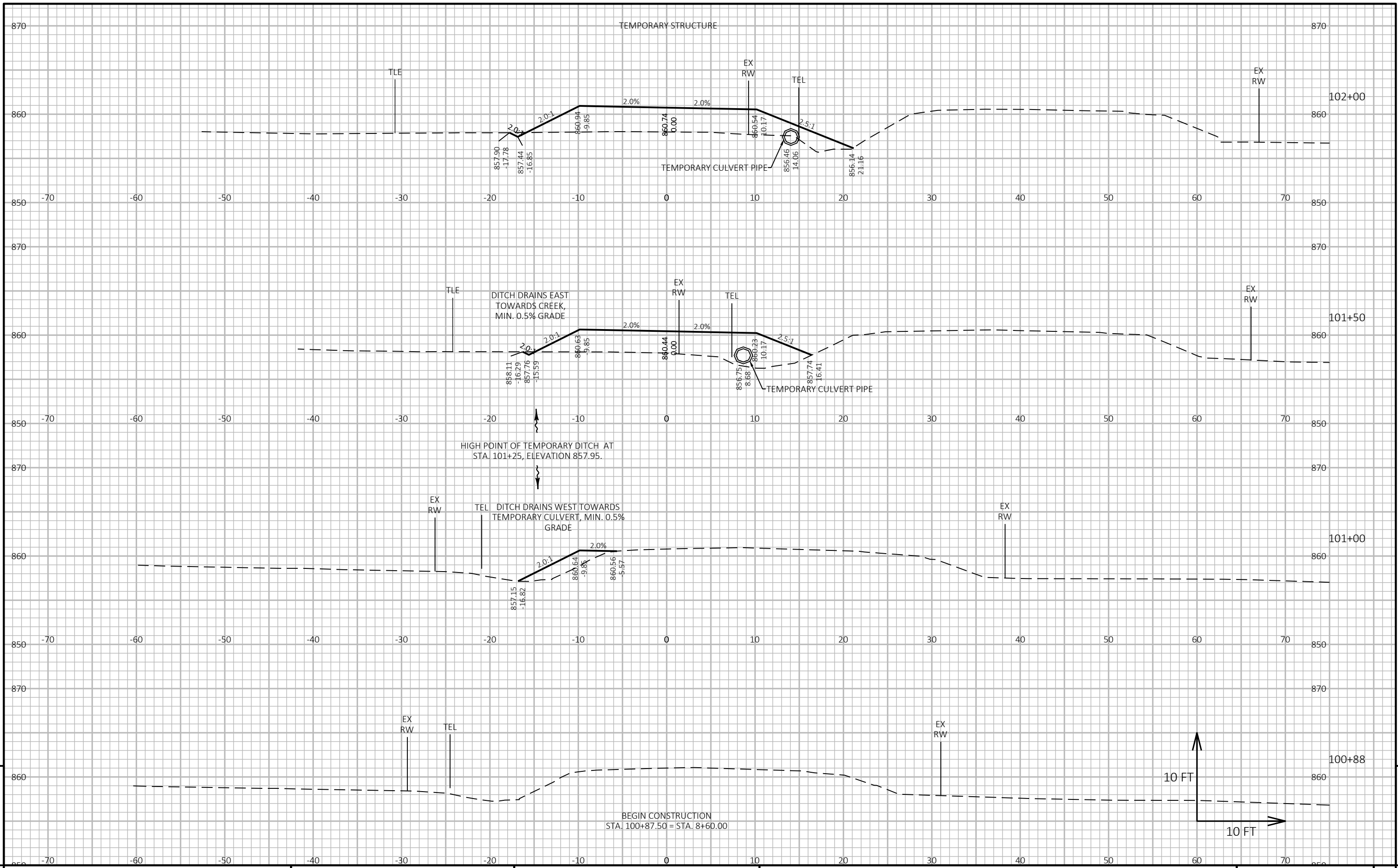


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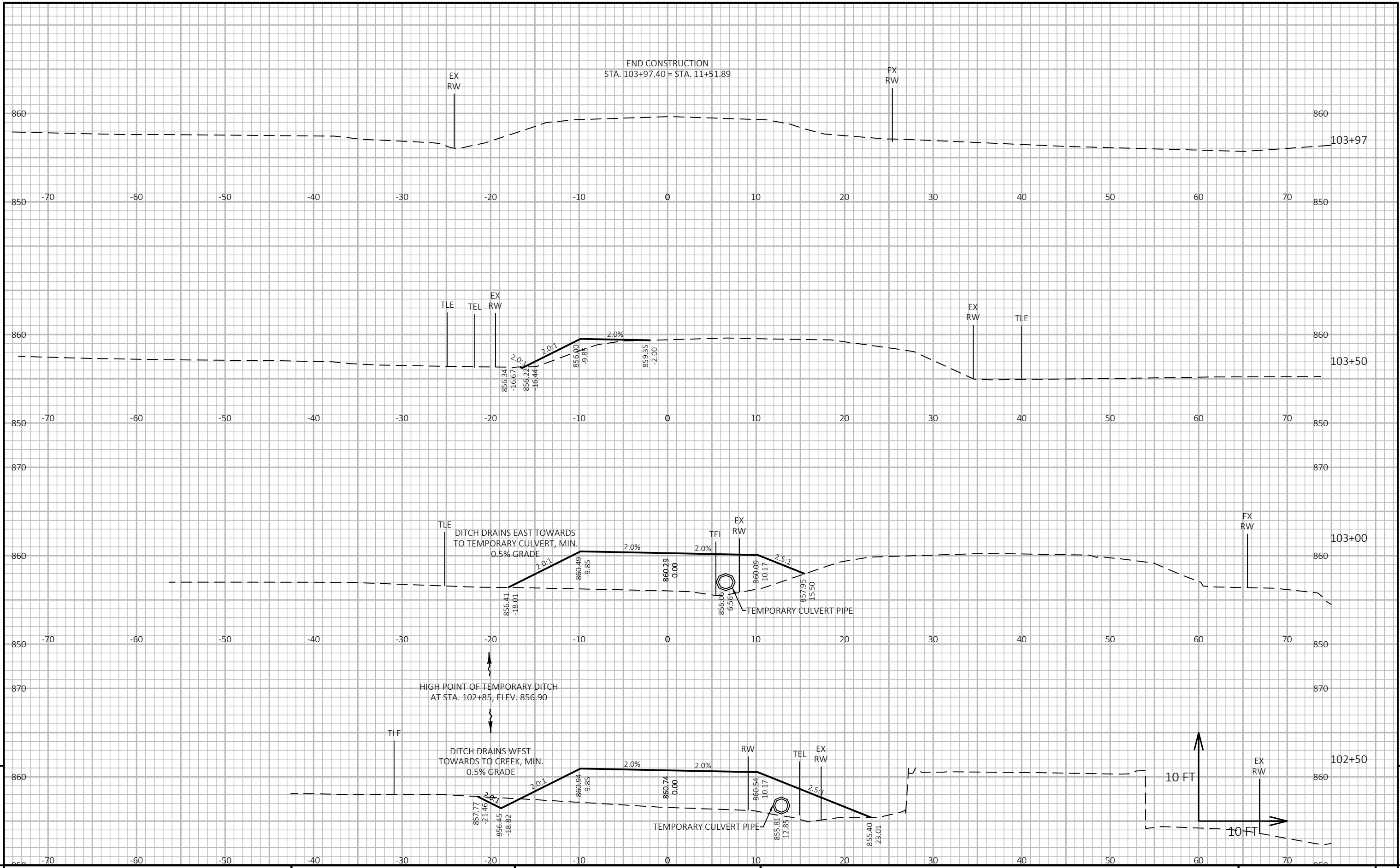
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PROJECT NO: 2736-00-70 HWY: CEDAR CREEK ROAD COUNTY: WASHINGTON CROSS SECTIONS: MAINLINE CROSS SECTIONS SHEET E

FILE NAME: P:\115005\115205\115201\CADD\SHEETS\PLAN\090201-XS.DWG PLOT DATE: 8/18/2021 4:16 PM PLOT BY: CHAD WAGNER PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49



PROJECT NO: 2736-00-70 HWY: CEDAR CREEK ROAD COUNTY: WASHINGTON CROSS SECTIONS: TEMPORARY BYPASS SHEET E



9

9

PROJECT NO: 2736-00-70	HWY: CEDAR CREEK ROAD	COUNTY: WASHINGTON	CROSS SECTIONS: TEMPORARY BYPASS	SHEET	E
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Wisconsin Department of Transportation

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