

MAD
PROJECT ID:
WITH: N/A

5478-00-77

COUNTY:
VERNON

NOVEMBER 2023

ORDER OF SHEETS

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

TOTAL SHEETS = 46



DESIGN DESIGNATION

A.A.D.T. (2024)	=	220
A.A.D.T. (2044)	=	250
D.H.V.	=	36
D.D.	=	62/38
T.	=	14.3%
DESIGN SPEED	=	60 MPH
ESALS	=	51,100

CONVENTIONAL SYMBOLS

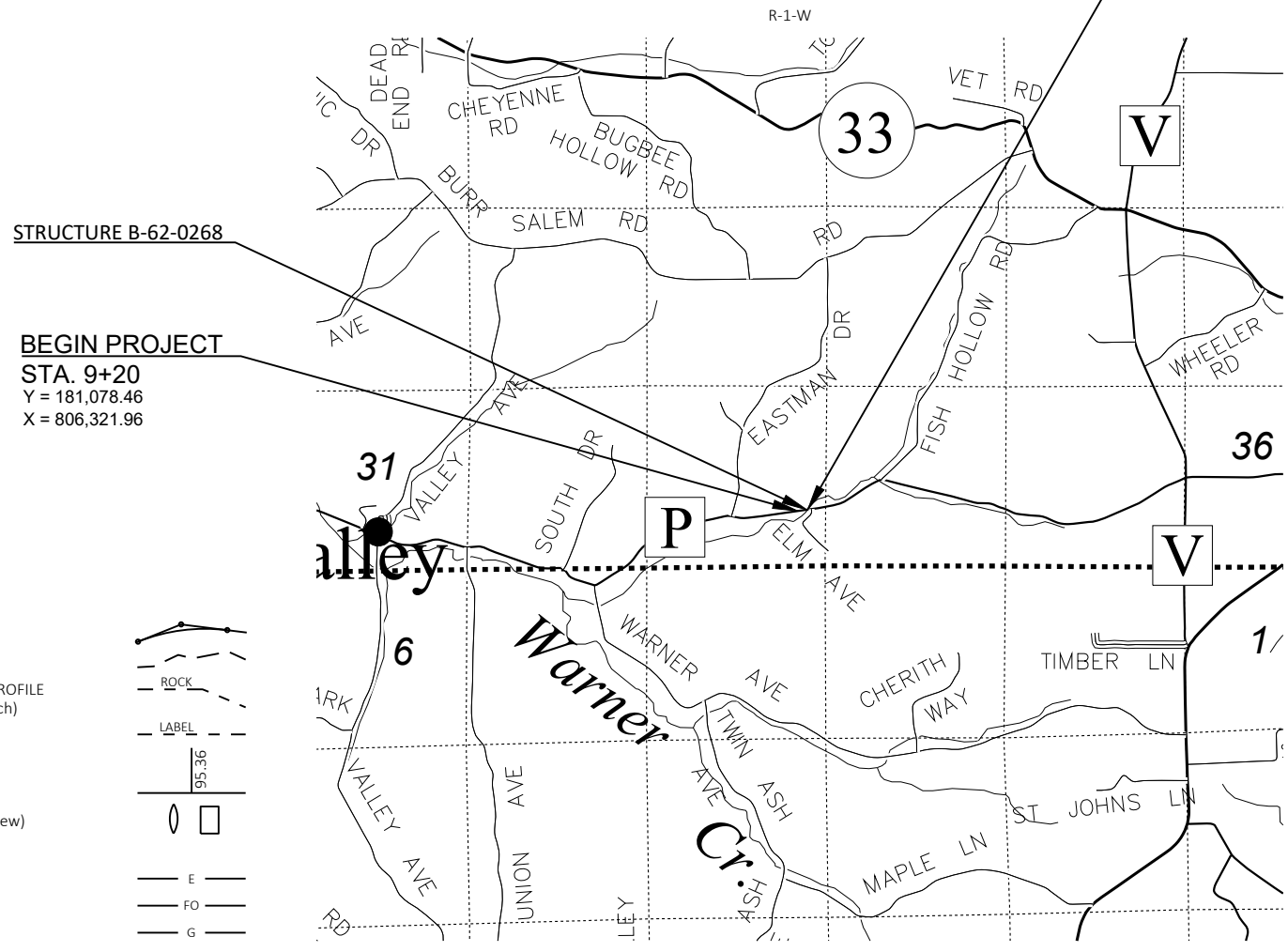
PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

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

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 PLAN OF PROPOSED IMPROVEMENT
 STH 131 -CTH V
 WARNER CREEK BRIDGE, B-62-0268
 CTH P
 VERNON COUNTY

STATE PROJECT NUMBER
 5478-00-77

END PROJECT
 STA 10+65
 Y = 181,099.04
 X = 806,465.50



LAYOUT
 SCALE 0 1 MI
 TOTAL NET LENGTH OF CENTERLINE = 0.027 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), VERNON COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5478-00-77	WISC 2024034	1

ACCEPTED FOR
 VERNON COUNTY
 7/12/23 Phil Hewitt
 Date County Commissioner

ORIGINAL PLANS PREPARED BY

 1702 Pankratz Street, Madison, WI 53704

DATE: 7/12/2023
 (Professional Engineer Signature)

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

PREPARED BY
 Surveyor MSA PROFESSIONAL SERVICES, INC.
 Designer MSA PROFESSIONAL SERVICES, INC.
 Project Manager DELLA KOENIG
 Regional Examiner REGIONAL EXAMINER
 Regional Supervisor KYLE HEMP

APPROVED FOR THE DEPARTMENT
 DATE: 7/17/2023
 (Signature)

E

GENERAL NOTES

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

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

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

THE CONTRACTOR IS RESPONSIBLE FOR THE RESHAPING AND FINISHING OF ALL PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATIONS OUTSIDE THE PLAN CONSTRUCTION LIMITS.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY THESE LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES ARE TO BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THEY ARE NO LONGER NECESSARY.

WETLANDS ARE PRESENT. AREAS OUTSIDE THE SLOPE INTERCEPTS SHALL NOT BE DISTURBED IN WETLAND AREAS.

DESIGN CONTACTS

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

VERNON COUNTY HIGHWAY DEPARTMENT
 ATTN: PHIL HEWITT, HIGHWAY COMMISSIONER
 1335 RAILROAD AVENUE
 VIROQUA, WI 54665
 PHONE: (608) 637-5452
 EMAIL: PHIL.HEWITT@VERNONCOUNTY.ORG

UTILITY CONTACTS

BURIED FIBER OPTIC:
 HILLSBORO TELEPHONE COMPANY
 ATTN: CHAD SCHMIDT
 121 MILL STREET
 HILLSBORO, WI 54634
 PHONE: (608) 489-4415
 EMAIL: CSCHMIDT@HILLSBOROTEL.COM

RUNOFF COEFFICIENT TABLE

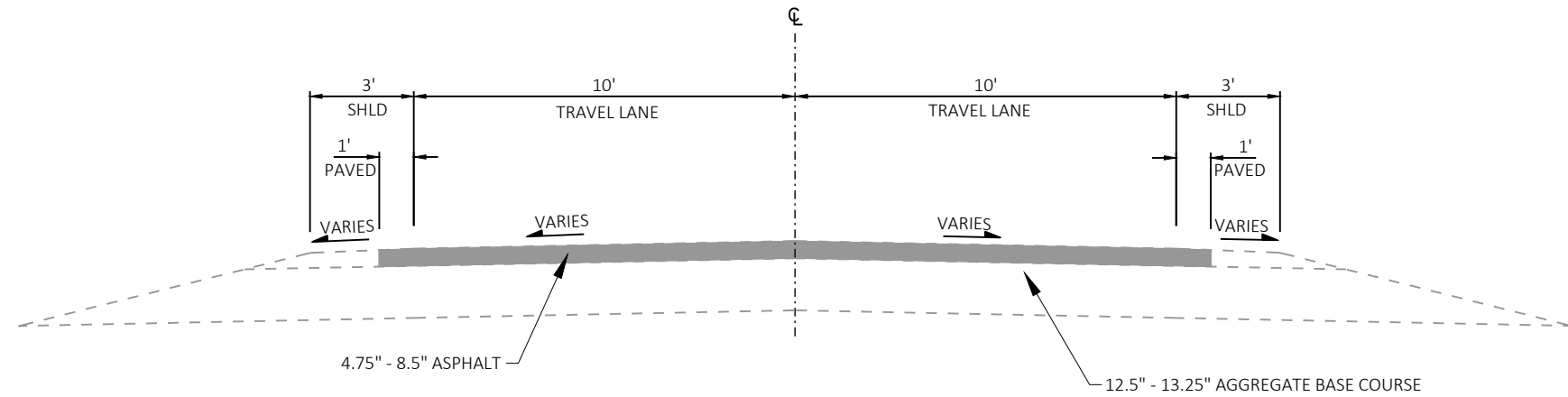
LAND USE:	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

*DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

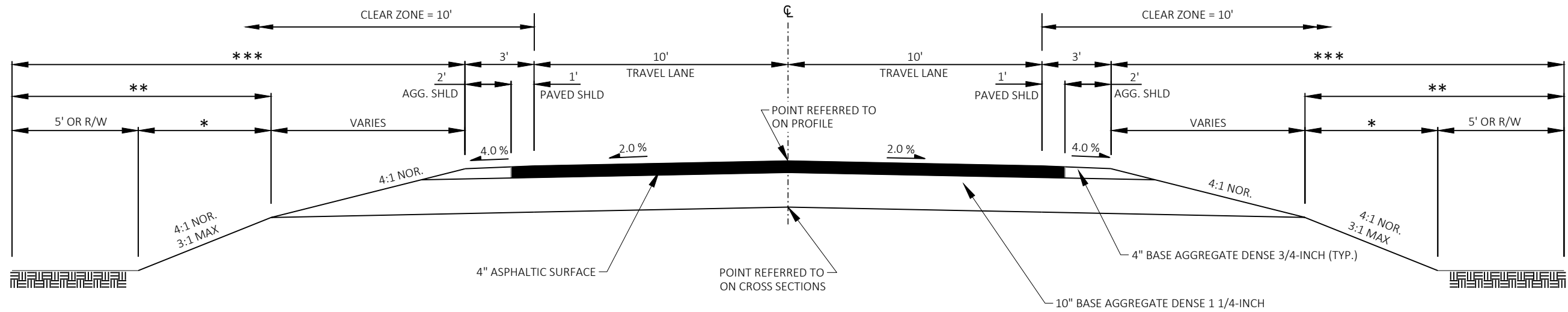


TOTAL PROJECT AREA = 0.22 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.14 ACRES

PROJECT NO: 5478-00-77	HWY: CTH P	COUNTY: VERNON	GENERAL NOTES, ABBREVIATIONS, & UTILITIES	SHEET	E
------------------------	------------	----------------	---	-------	---



EXISTING TYPICAL SECTION
STA 9+20 - STA. 10+65

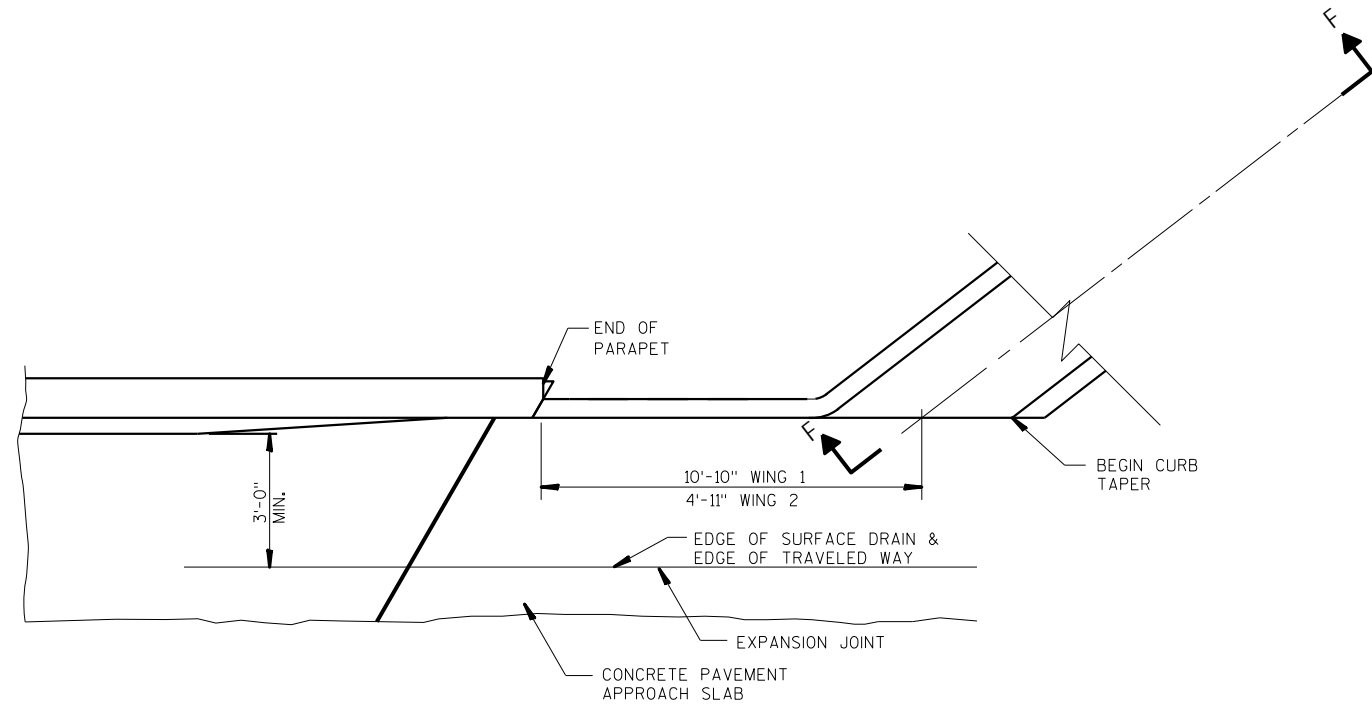


FINISHED TYPICAL SECTION
STA 9+20 - STA. 10+65

NOTES:

- * SALVAGED TOPSOIL
- ** MULCHING LIMITS
- *** SEEDING MIXTURE NO. 70A, SEEDING NURSE CROP, & FERTILIZER TYPE B LIMITS

NOTE:
THE ASPHALTIC SURFACE SHALL TAPER FROM 26.0 FEET AT THE ENDS OF THE CONCRETE APPROACH PAVEMENT TO 22.0 FEET AT ± 31.0 FEET FROM THE CONCRETE APPROACH PAVEMENT ENDS.



CONCRETE SURFACE DRAIN
(WING 1 & 2)

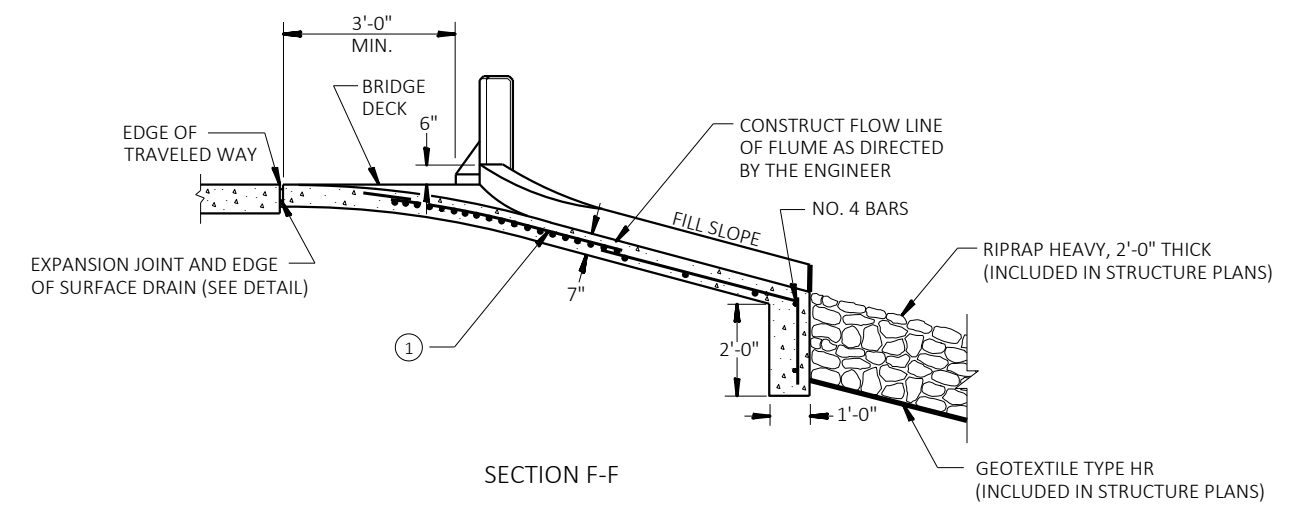
FOR ADDITIONAL FLUME SECTIONS AND DETAILS SEE SDD 8D2, CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES.

GENERAL NOTES

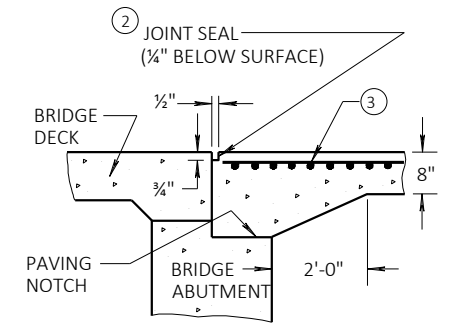
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

- ① MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.



SECTION F-F



CONCRETE PAVEMENT 8-INCH SPECIAL
(WINGS 3 & 4)

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.

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

- ② HOT POURED SEALANT UNLESS OTHERWISE SPECIFIED
- ③ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.

Estimate Of Quantities

5478-00-77

Line	Item	Item Description	Unit	Total	Qty
0002	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-62-954	EACH	1.000	1.000
0004	205.0100	Excavation Common	CY	132.000	132.000
0006	206.1001	Excavation for Structures Bridges (structure) 01. B-62-268	EACH	1.000	1.000
0008	208.0100	Borrow	CY	11.000	11.000
0010	210.1500	Backfill Structure Type A	TON	400.000	400.000
0012	213.0100	Finishing Roadway (project) 01. 5478-00-77	EACH	1.000	1.000
0014	305.0110	Base Aggregate Dense 3/4-Inch	TON	17.000	17.000
0016	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	225.000	225.000
0018	311.0110	Breaker Run	TON	84.000	84.000
0020	415.0410	Concrete Pavement Approach Slab	SY	94.000	94.000
0022	455.0605	Tack Coat	GAL	13.000	13.000
0024	465.0105	Asphaltic Surface	TON	41.000	41.000
0026	502.0100	Concrete Masonry Bridges	CY	168.000	168.000
0028	502.3200	Protective Surface Treatment	SY	170.000	170.000
0030	502.3210	Pigmented Surface Sealer	SY	44.000	44.000
0032	505.0400	Bar Steel Reinforcement HS Structures	LB	4,980.000	4,980.000
0034	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	21,070.000	21,070.000
0036	516.0500	Rubberized Membrane Waterproofing	SY	14.000	14.000
0038	550.2106	Piling CIP Concrete 10 3/4 X 0.365-Inch	LF	254.000	254.000
0040	602.3010	Concrete Surface Drains	CY	4.000	4.000
0042	606.0300	Riprap Heavy	CY	125.000	125.000
0044	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	190.000	190.000
0046	618.0100	Maintenance And Repair of Haul Roads (project) 01. 5478-00-77	EACH	1.000	1.000
0048	619.1000	Mobilization	EACH	1.000	1.000
0050	624.0100	Water	MGAL	6.000	6.000
0052	625.0500	Salvaged Topsoil	SY	103.000	103.000
0054	627.0200	Mulching	SY	213.000	213.000
0056	628.1504	Silt Fence	LF	296.000	296.000
0058	628.1520	Silt Fence Maintenance	LF	296.000	296.000
0060	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0062	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0064	628.6005	Turbidity Barriers	SY	219.000	219.000
0066	629.0210	Fertilizer Type B	CWT	0.500	0.500
0068	630.0171	Seeding Mixture No. 70A	LB	5.000	5.000
0070	630.0400	Seeding Nurse Crop	LB	5.000	5.000
0072	630.0500	Seed Water	MGAL	11.000	11.000
0074	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0076	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0078	642.5001	Field Office Type B	EACH	1.000	1.000
0080	643.0420	Traffic Control Barricades Type III	DAY	1,458.000	1,458.000
0082	643.0705	Traffic Control Warning Lights Type A	DAY	2,268.000	2,268.000
0084	643.0900	Traffic Control Signs	DAY	1,134.000	1,134.000
0086	643.5000	Traffic Control	EACH	1.000	1.000
0088	645.0111	Geotextile Type DF Schedule A	SY	110.000	110.000
0090	645.0120	Geotextile Type HR	SY	230.000	230.000
0092	646.1020	Marking Line Epoxy 4-Inch	LF	472.000	472.000
0094	650.4500	Construction Staking Subgrade	LF	103.000	103.000
0096	650.5000	Construction Staking Base	LF	63.000	63.000
0098	650.6501	Construction Staking Structure Layout (structure) 01. B-62-268	EACH	1.000	1.000

Estimate Of Quantities

5478-00-77

Line	Item	Item Description	Unit	Total	Qty
0100	650.9911	Construction Staking Supplemental Control (project) 01. 5478-00-77	EACH	1.000	1.000
0102	650.9920	Construction Staking Slope Stakes	LF	103.000	103.000
0104	690.0150	Sawing Asphalt	LF	45.000	45.000
0106	715.0502	Incentive Strength Concrete Structures	DOL	1,008.000	1,008.000
0108	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	500.000	500.000
0110	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
0112	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0114	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	175.000	175.000
0116	SPV.0035	Special 01. Excavation, Hauling, and Disposal of Creosote Contaminated Soil	CY	54.000	54.000
0118	SPV.0060	Special 01. Salvage and Reinstall Signs	EACH	1.000	1.000
0120	SPV.0180	Special 01. Concrete Pavement 8-Inch Special	SY	22.000	22.000

EXCAVATION COMMON & BORROW

CATEGORY	STATION	TO	STATION	LOCATION	205.0100	FILL	EXPANDED FILL	WASTE	208.0100
					EXCAVATION				BORROW
					COMMON	CY(1)	CY(2)	CY	CY
0010	9+20	-	9+71.56	MAINLINE	76	7	9	67	-67
0010	10+14.44	-	10+65	MAINLINE	56	68	88	-32	32
0010	---	-	---	UNUSABLE PAVEMENT	---	---	---	---	46
TOTAL 0010					132				11

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

BASE AGGREGATE ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	624.0100
					BASE	BASE	WATER
					AGGREGATE	AGGREGATE	MGAL
					DENSE 3/4-INCH	DENSE 1 1/4-INCH	
					TON	TON	
0010	9+20	-	9+71.56	MAINLINE	9	113	3
0010	10+14.44	-	10+65	MAINLINE	8	112	3
TOTAL 0010					17	225	6

CONCRETE PAVEMENT ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	415.0410	SPV.0180.01
					CONCRETE	SPECIAL (01.
					PAVEMENT	CONCRETE
					APPROACH SLAB	PAVEMENT 8-
					SY	INCH SPECIAL)
					SY	SY
0010	9+51.55	-	9+72.33	LT & RT	47	---
0010	9+51.55	-	9+71.55	LT	---	7
0010	10+05.93	-	10+34.45	RT	---	10
0010	10+13.67	-	10+34.45	LT & RT	47	---
0010	10+19.45	-	10+34.45	LT	---	5
TOTAL 0010					94	22

ASPHALT ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	455.0605	465.0105
					TACK COAT	ASPHALTIC
					GAL	SURFACE
						TON
0010	9+20	-	9+51.55	MAINLINE	7	22
0010	10+34.45	-	10+65	MAINLINE	6	19
TOTAL 0010					13	41

CONCRETE SURFACE DRAINS

CATEGORY	STATION	TO	STATION	LOCATION	602.3010
					CONCRETE
					SURFACE DRAINS
					CY
0010	9+48	-	9+66.55	RT	2
0010	9+71.55	-	9+80.07	LT	2
TOTAL 0010					4

RESTORATION ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	625.0500	627.0200	629.0210	630.0171	630.0400	630.0500
					SALVAGED	MULCHING	FERTILIZER TYPE	SEEDING	SEEDING NURSE	SEED WATER
					TOPSOIL	SY	B	MIXTURE NO.	CROP	MGAL
					SY	SY	CWT	70A	LB	
								LB	LB	
0010	9+20	-	9+63	RT	6	22	0.1	1	1	1
0010	9+20	-	9+81	LT	17	45	0.1	1	1	3
0010	10+05	-	10+65	RT	50	75	0.1	1	1	3
0010	10+32	-	10+65	LT	9	28	0.1	1	1	2
0010	UNDISTRIBUTED				21	43	0.1	1	1	2
TOTAL 0010					103	213	0.5	5	5	11

EROSION CONTROL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	628.1504	628.1520	628.1905	628.1910	628.6005
					SILT FENCE LF	SILT FENCE MAINTENANCE LF	MOBILIZATIONS EROSION CONTROL EACH	MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	TURBIDITY BARRIERS SY
0010	9+20	-	9+96	LT & RT	125	125	---	---	88
0010	9+86	-	10+65	LT & RT	112	112	---	---	87
0010	UNDISTRIBUTED				59	59	3	2	44
TOTAL 0010					296	296	3	2	219

SIGN ITEMS

CATEGORY	STATION	LOCATION	634.0612	637.2230	SPV.0060.01	REMARKS
			POSTS WOOD 4X6-INCH X 12-FT EACH	SIGNS TYPE II REFLECTIVE F SF	SPECIAL (01. SALVAGE AND REINSTALL SIGNS) EACH	
0010	9+63	RT	1	3	---	W5-52R
0010	9+65	LT	---	---	1	PROTECT WI STREAMS & RIVERS
0010	9+80	LT	1	3	---	W5-52L
0010	10+06	RT	1	3	---	W5-52R
0010	10+22	LT	1	3	---	W5-52L
TOTAL 0010			4	12	1	

REMOVING SIGN ITEMS

STATION	LOCATION	638.2602	638.3000	REMARKS
		REMOVING SIGNS TYPE II EACH	REMOVING SMALL SIGN SUPPORTS EACH	
9+55	RT	1	1	REMOVED BY COUNTY
9+72	RT	1	1	REMOVED BY COUNTY
9+90	LT	1	1	REMOVED BY COUNTY
10+09	RT	1	1	REMOVED BY COUNTY
10+26	LT	1	1	REMOVED BY COUNTY
10+37	LT	1	1	REMOVED BY COUNTY
		6	6	

TRAFFIC CONTROL ITEMS

CATEGORY	LOCATION	DAYS	643.0420	643.0705	643.0900	643.5000			
			TRAFFIC CONTROL BARRICADES TYPE III EACH	TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	TRAFFIC CONTROL SIGNS EACH	TRAFFIC CONTROL SIGNS EACH	TRAFFIC CONTROL EACH		
0010	JUNCTION WITH EASTMAN DR	81	2	162	4	324	5	405	-
0010	PROJECT BEGINNING	81	7	567	10	810	2	162	-
0010	PROJECT ENDING	81	7	567	10	810	2	162	-
0010	FISH HOLLOW RD	81	2	162	4	324	5	405	-
0010	5478-00-77	-	-	-	-	-	-	-	1
TOTAL 0010				1,458		2,268		1,134	1

EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL

CATEGORY	STATION	SPV.0035.01
		EXCAVATION, HAULING, AND DISPOSAL OF CREOSOTE CONTAMINATED SOIL CY
0010	9+82.9	27
0010	10+17.2	27
TOTAL		54

CONSTRUCTION STAKING ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	650.4500	650.5000	650.6501.01	650.9911.01	650.9920
					CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-62-268) EACH	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 5478-00-77) EACH	CONSTRUCTION STAKING SLOPE STAKES LF
0010	9+20	-	9+72	MAINLINE	52	---	---	---	52
0010	10+14	-	10+65	MAINLINE	51	---	---	---	51
0010	9+20	-	9+52	MAINLINE	---	32	---	---	---
0010	10+34	-	10+65	MAINLINE	---	31	---	---	---
0010	PROJECT				---	---	1	1	---
TOTAL 0010					103	63	1	1	103


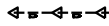

PAVEMENT MARKINGS

CATEGORY	STATION	TO	STATION	LOCATION	646.1020	REMARKS
					MARKING LINE EPOXY 4-INCH LF	
0010	9+20	-	10+65	CL	182	YELLOW, SOLID & SKIPS
0010	9+20	-	10+65	LT & RT	290	WHITE, SOLID
TOTAL 0010					472	

SAWING ASPHALT

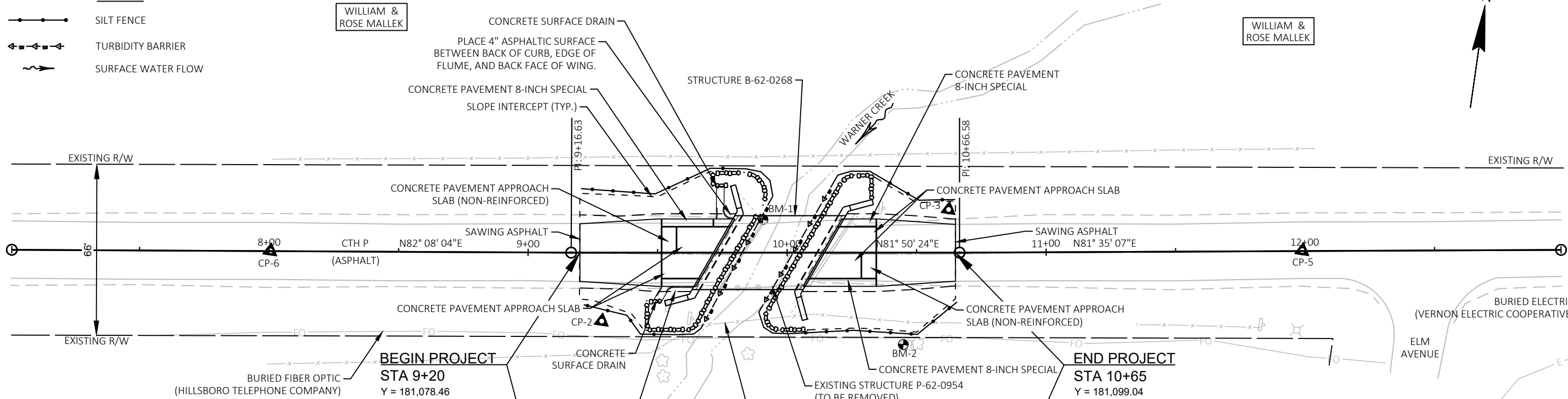
CATEGORY	STATION	LOCATION	690.0150
			SAWING ASPHALT LF
0010	9+20	CTH P	23
0010	10+65	CTH P	22
TOTAL 0010			45

LEGEND

-  SILT FENCE
-  TURBIDITY BARRIER
-  SURFACE WATER FLOW

WILLIAM & ROSE MALLEK

WILLIAM & ROSE MALLEK



BEGIN PROJECT
STA 9+20
 Y = 181,078.46
 X = 806,321.96

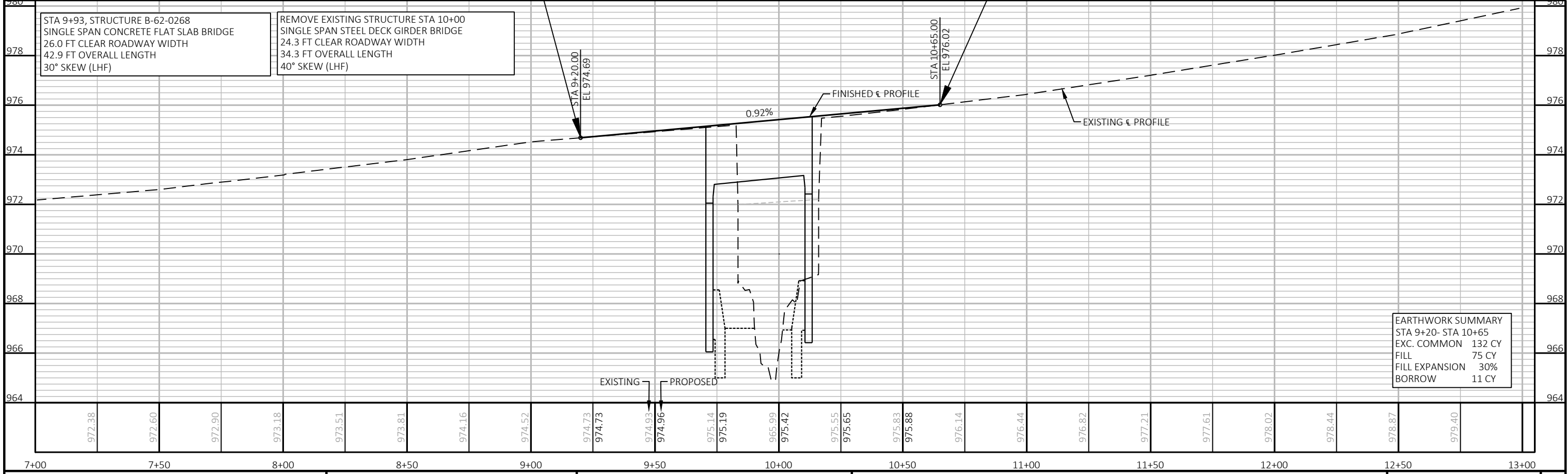
END PROJECT
STA 10+65
 Y = 181,099.04
 X = 806,465.50

BENCHMARKS			
NO.	STATION/OFFSET	DESCRIPTION	ELEV.
1	9+90.69, 12.8' LT	PK NAIL TOP TIMBER NW WING	974.28
2	10+44.83, 35.5' RT	2 - 6 INCH POLE NAILS IN 18 INCH ELM	971.22
3	9+12.04, 60.0' RT	2 - 6 INCH POLE NAILS IN 12 INCH ELM	971.10

CONTROL POINTS				
NO.	STATION/OFFSET	DESCRIPTION	Y	X
6	8+00.45, 0.1' LT	PK NAIL	181,062.17	806,203.53
2	9+28.41, 26.4' RT	3/4" IRON ROD W/ CAP	181,053.49	806,334.04
3	10+62.35, 16.6' LT	3/4" IRON ROD W/ CAP	181,115.12	806,460.51
5	11+98.92, 0.2' LT	PK NAIL	181,118.80	806,597.95

STA 9+93, STRUCTURE B-62-0268
 SINGLE SPAN CONCRETE FLAT SLAB BRIDGE
 26.0 FT CLEAR ROADWAY WIDTH
 42.9 FT OVERALL LENGTH
 30° SKEW (LHF)

REMOVE EXISTING STRUCTURE STA 10+00
 SINGLE SPAN STEEL DECK GIRDER BRIDGE
 24.3 FT CLEAR ROADWAY WIDTH
 34.3 FT OVERALL LENGTH
 40° SKEW (LHF)



EARTHWORK SUMMARY	
STA 9+20- STA 10+65	
EXC. COMMON	132 CY
FILL	75 CY
FILL EXPANSION	30%
BORROW	11 CY

PROJECT NO: 5478-00-77 HWY: CTH P COUNTY: VERNON PLAN AND PROFILE: SHEET: 5

Standard Detail Drawing List

08D02-08A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-08C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13A03-07	CONCRETE PAVEMENT SHOULDERS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C18-08A	CONCRETE PAVEMENT JOINTING
13C19-03	HMA LONGITUDINAL JOINTS
15C02-09A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-12	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-22A	LONGITUDINAL MARKING (MAINLINE)

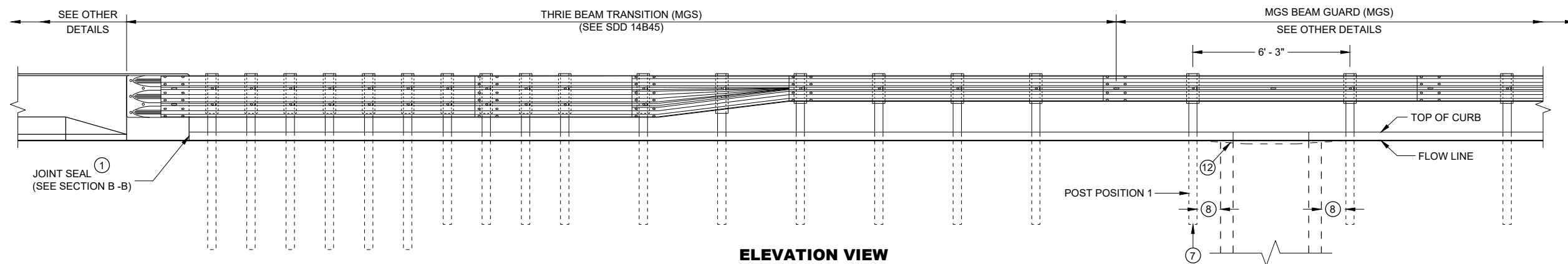
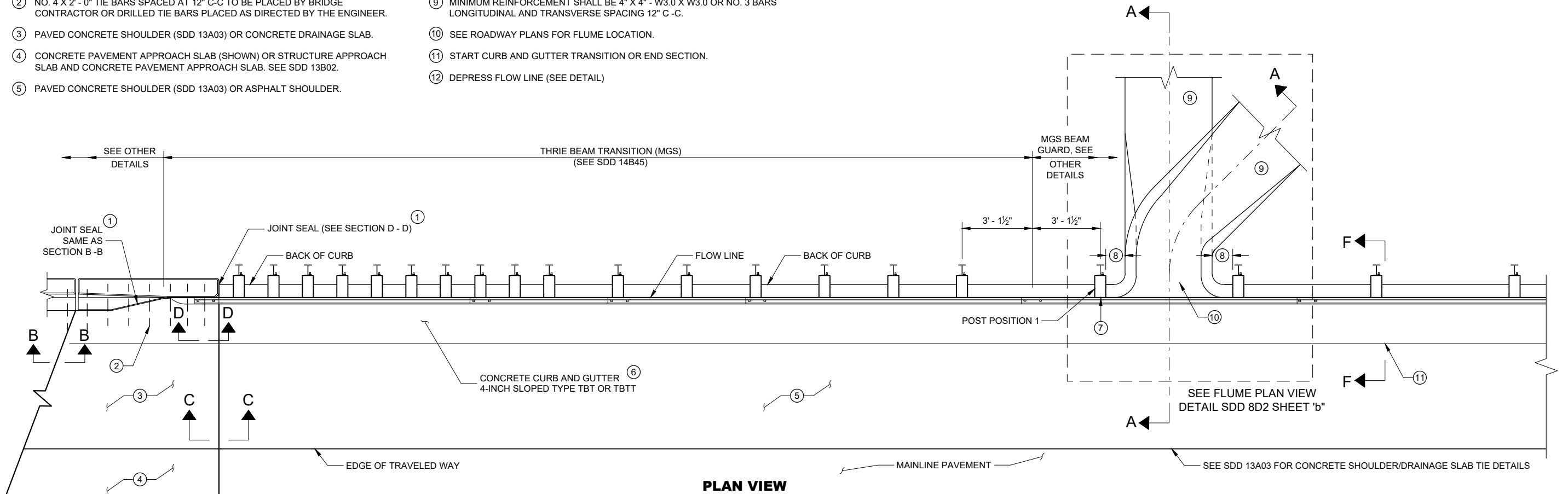
GENERAL NOTES

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.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)



**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

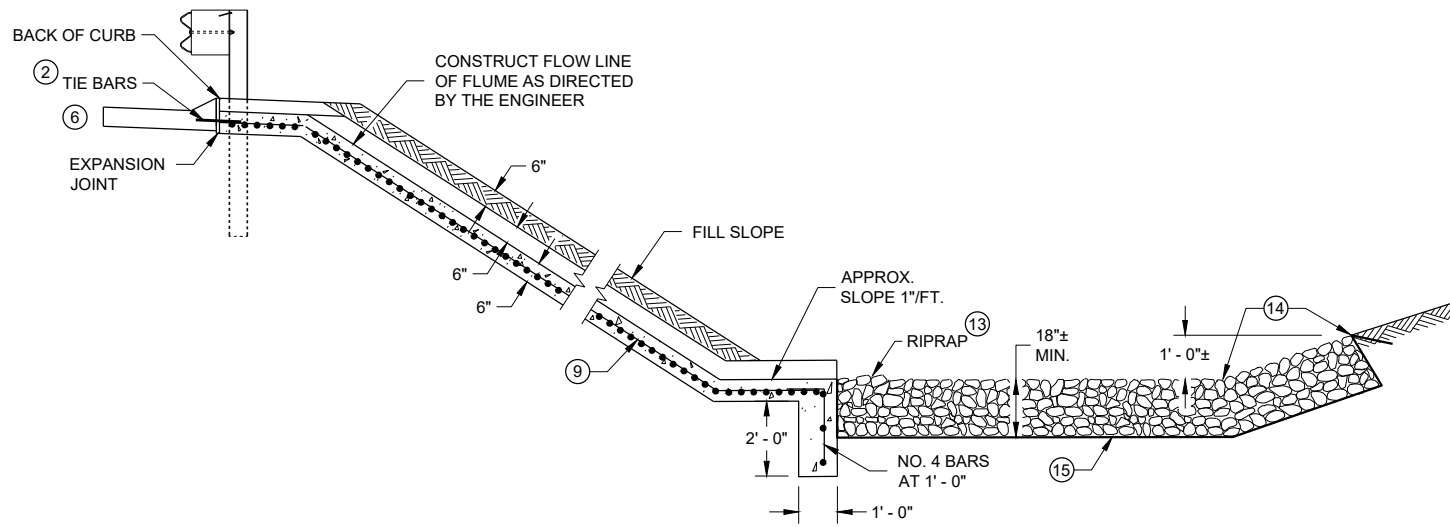
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

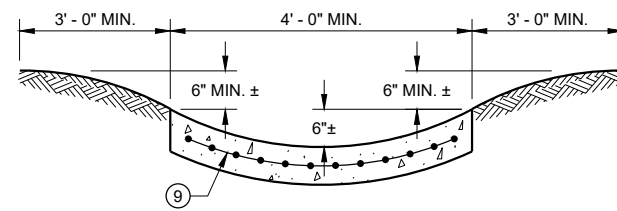
6

SDD 08D02 - 08a

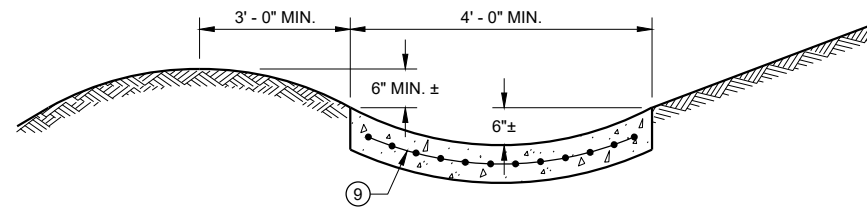
SDD 08D02 - 08a



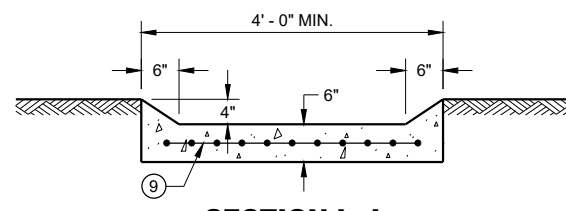
SECTION A - A



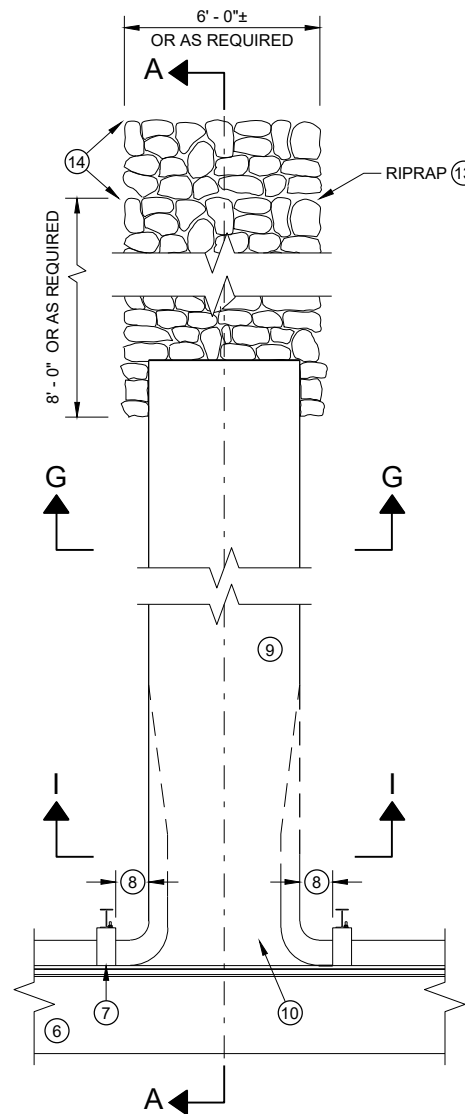
SECTION G - G



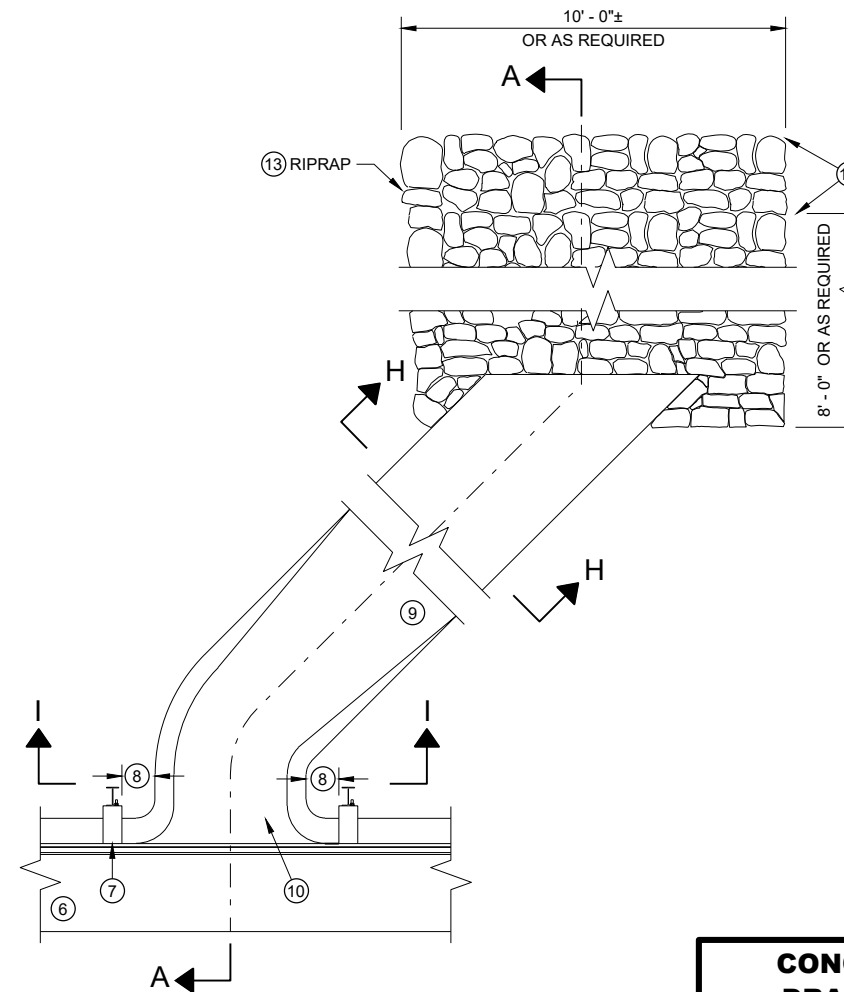
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

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.

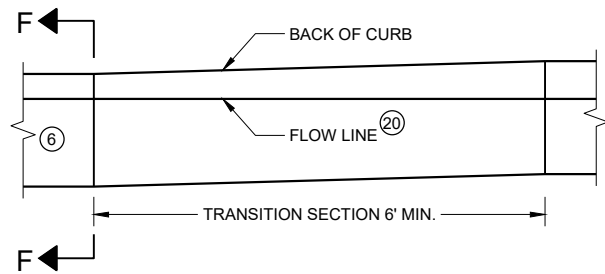
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2'-0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

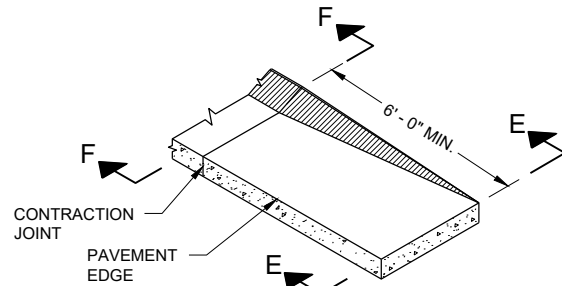
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

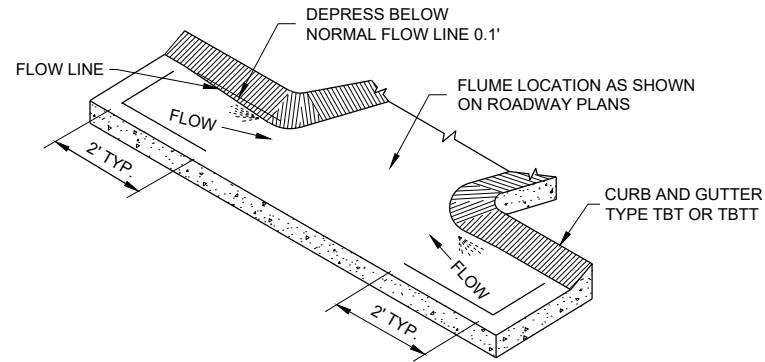
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



**CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



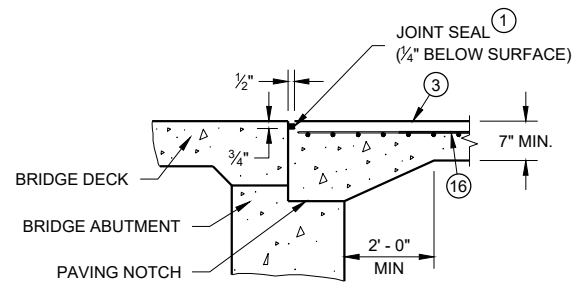
**CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**

GENERAL NOTES

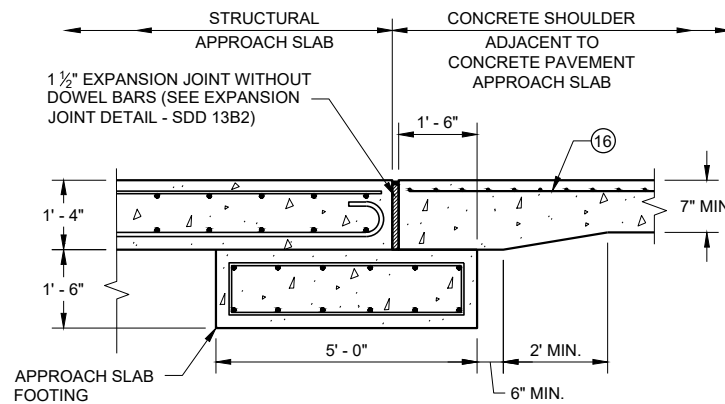
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

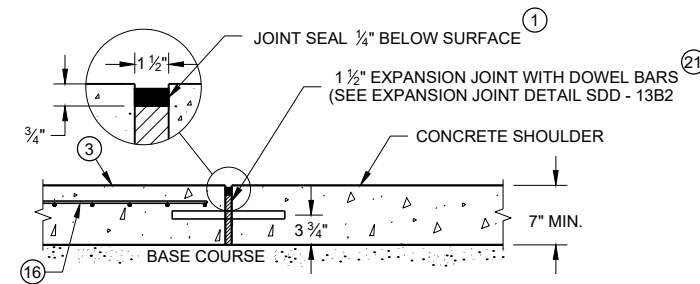
- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑮ GEOTEXTILE TYPE HR.
- ⑯ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑰ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑱ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑲ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑳ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ㉑ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



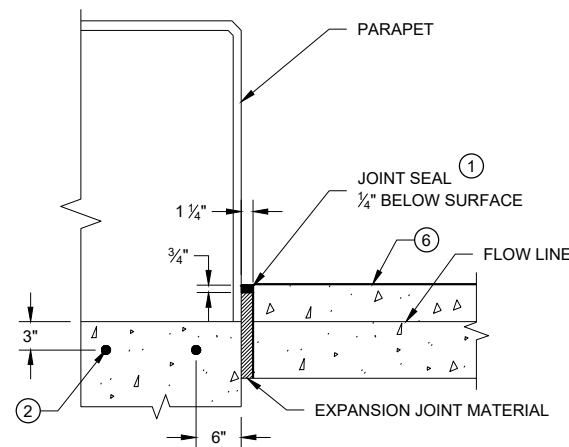
SECTION B-B



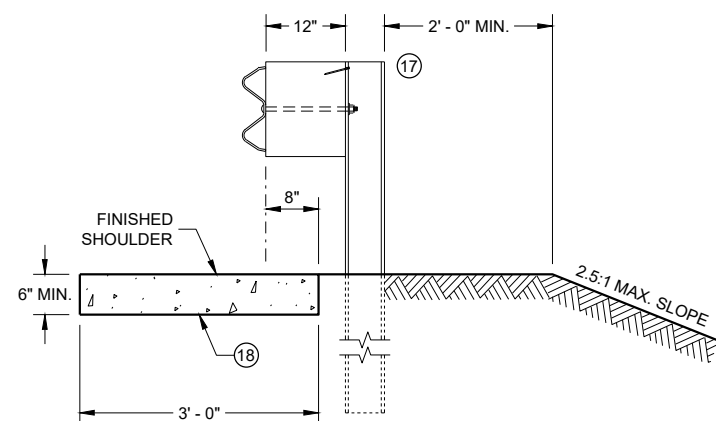
**SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL
APPROACH SLAB AND CONCRETE APPROACH SLAB**



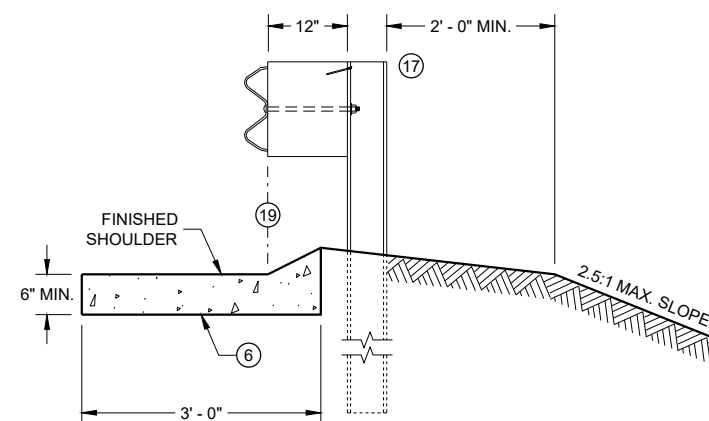
**SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH
WITH CONCRETE SHOULDERS**



SECTION D - D



SECTION E - E



SECTION F - F

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

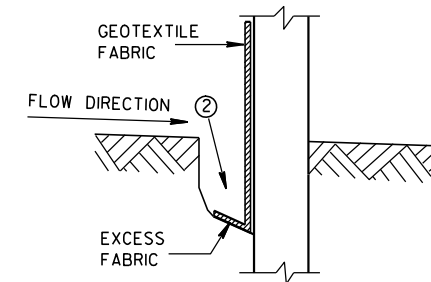


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

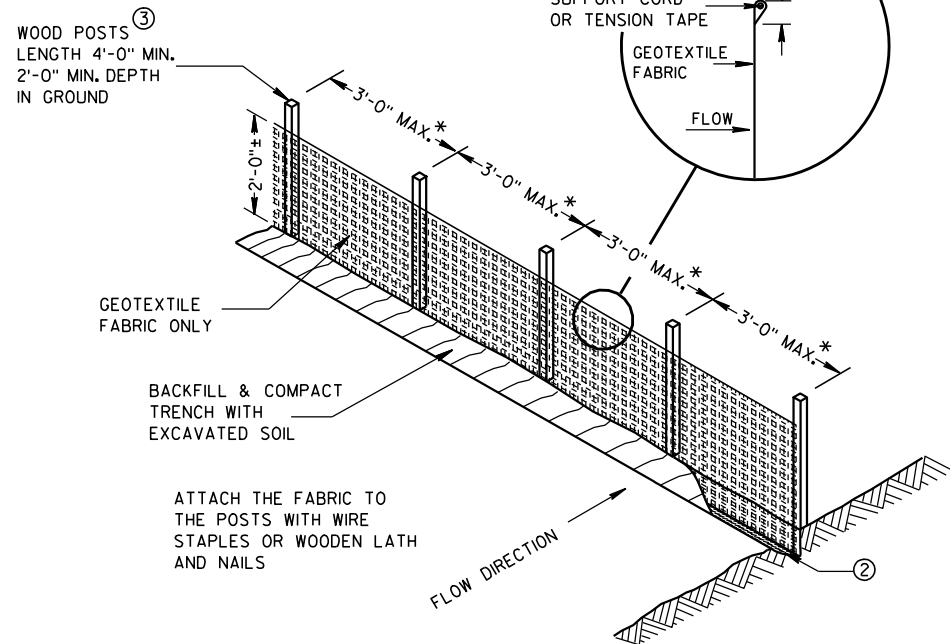
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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.



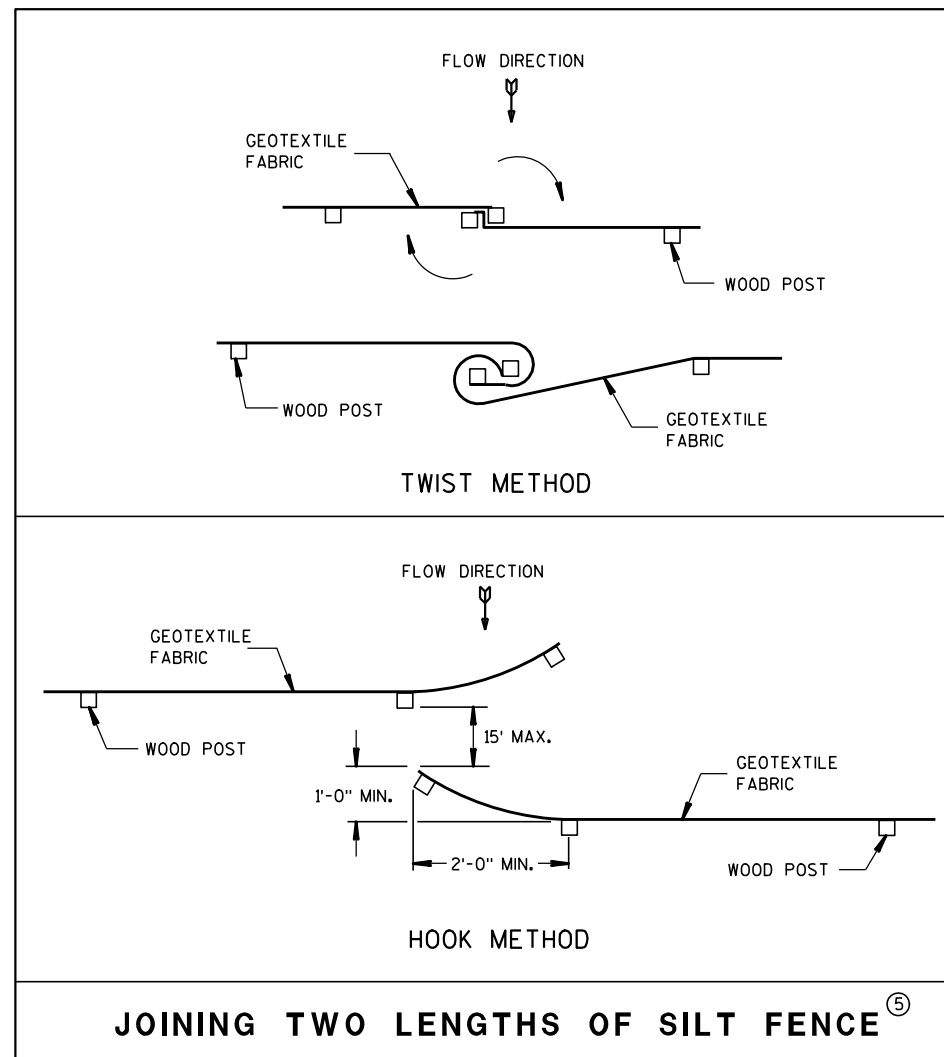
TRENCH DETAIL

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

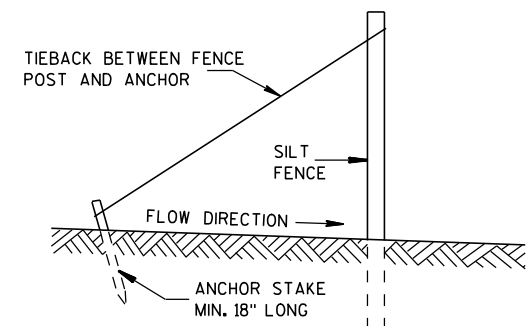


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤

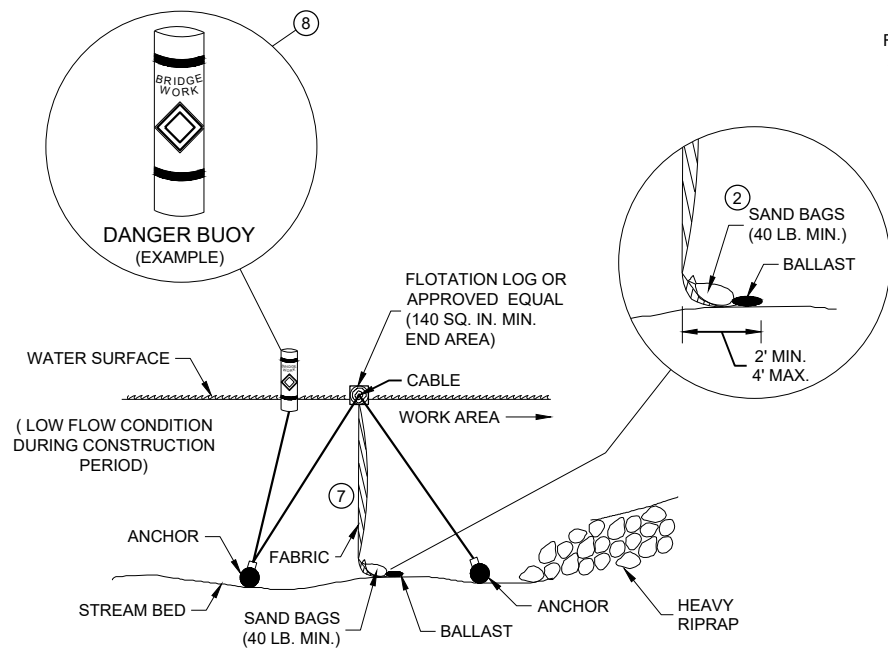


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

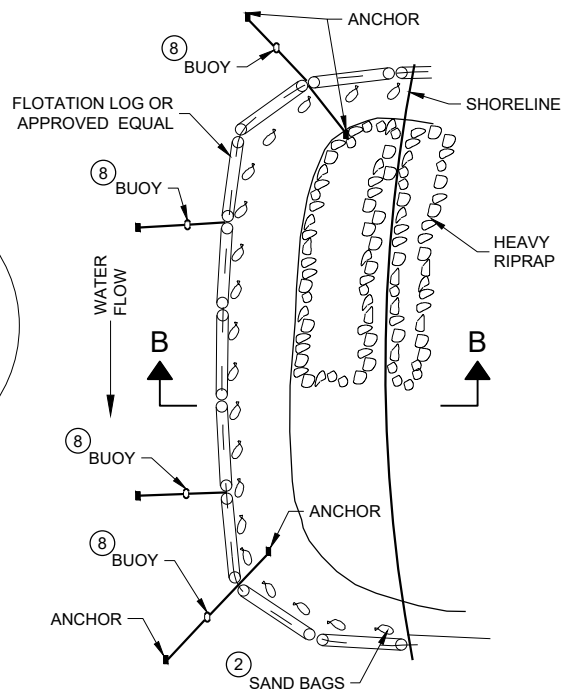
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

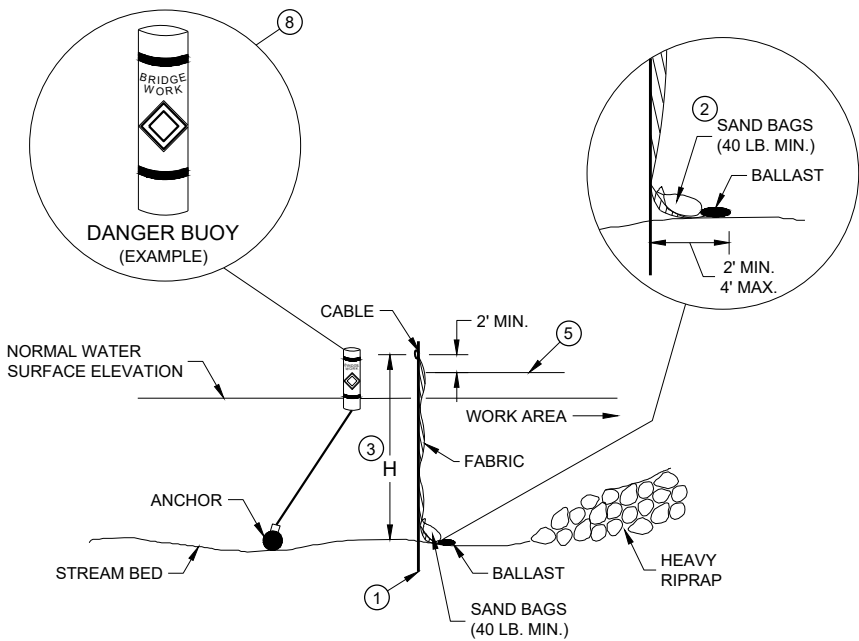


SECTION B - B

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

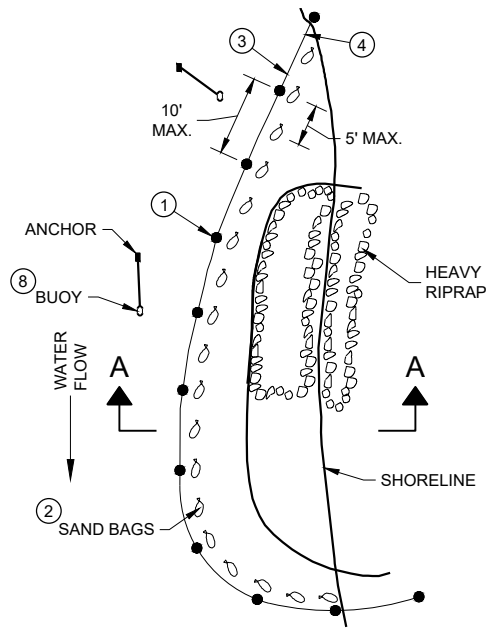


PLAN VIEW



SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW

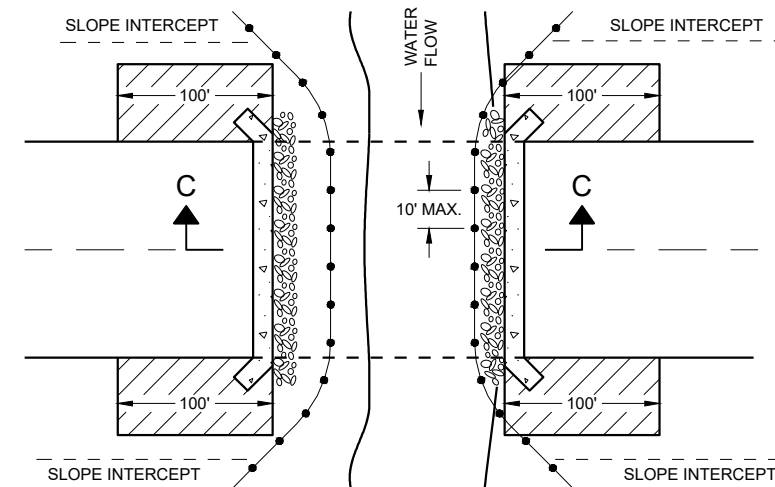
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

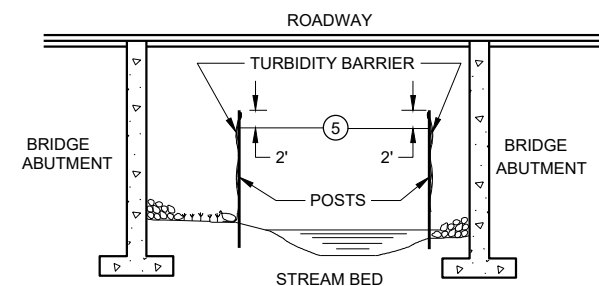
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

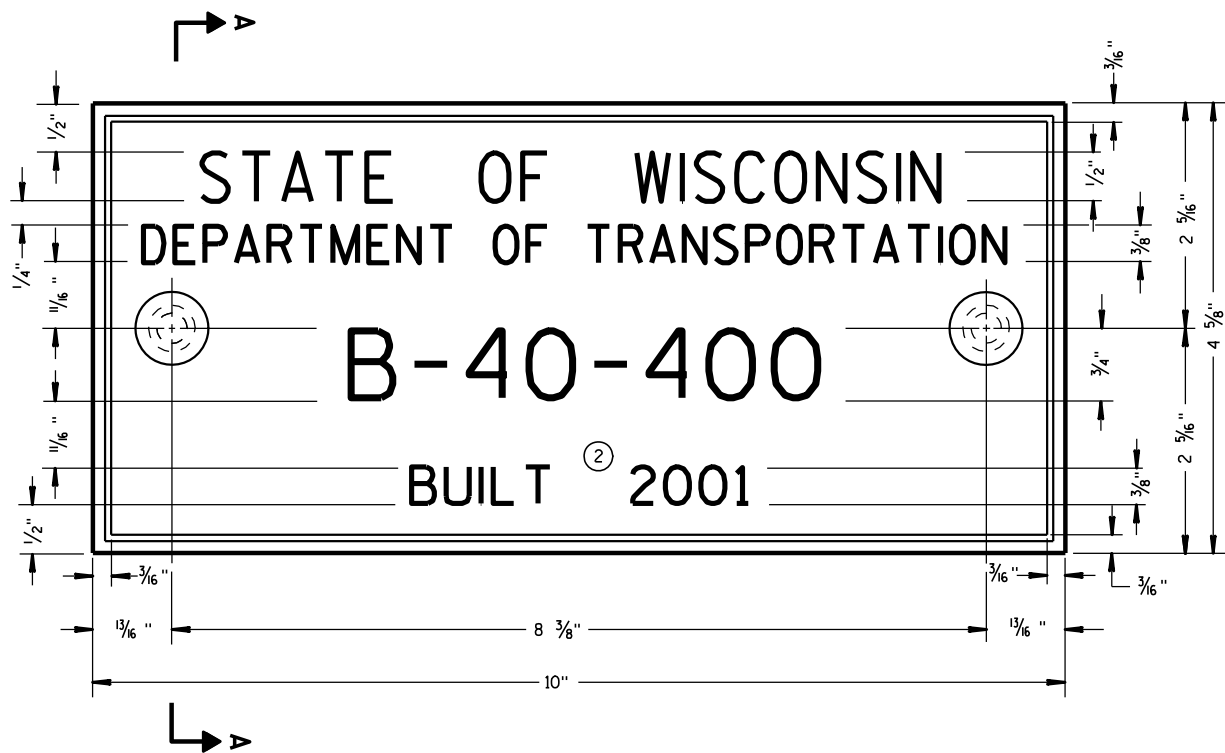
**TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES**

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



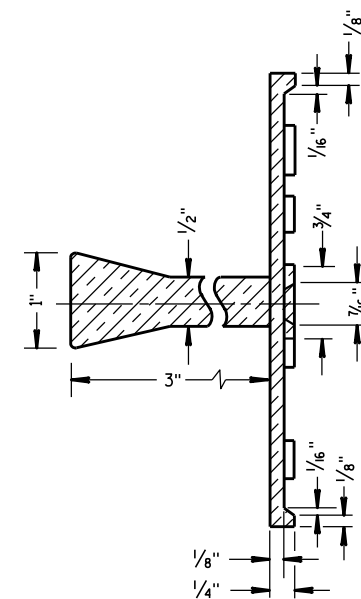
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

GENERAL NOTES

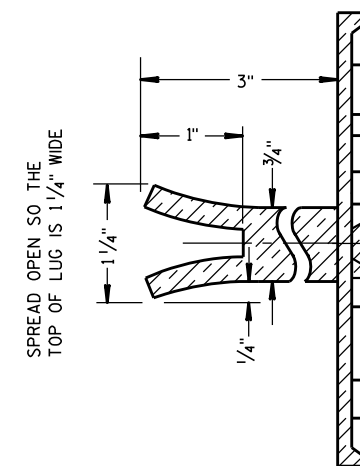
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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.

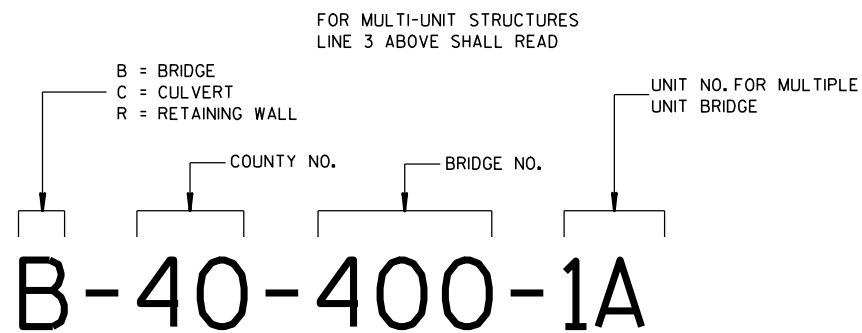


SECTION A-A



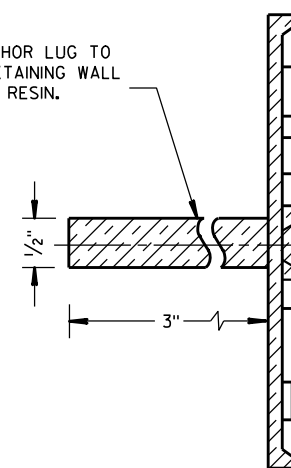
SPREAD OPEN SO THE TOP OF LUG IS 1 1/4" WIDE

ALTERNATE LUG



**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

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

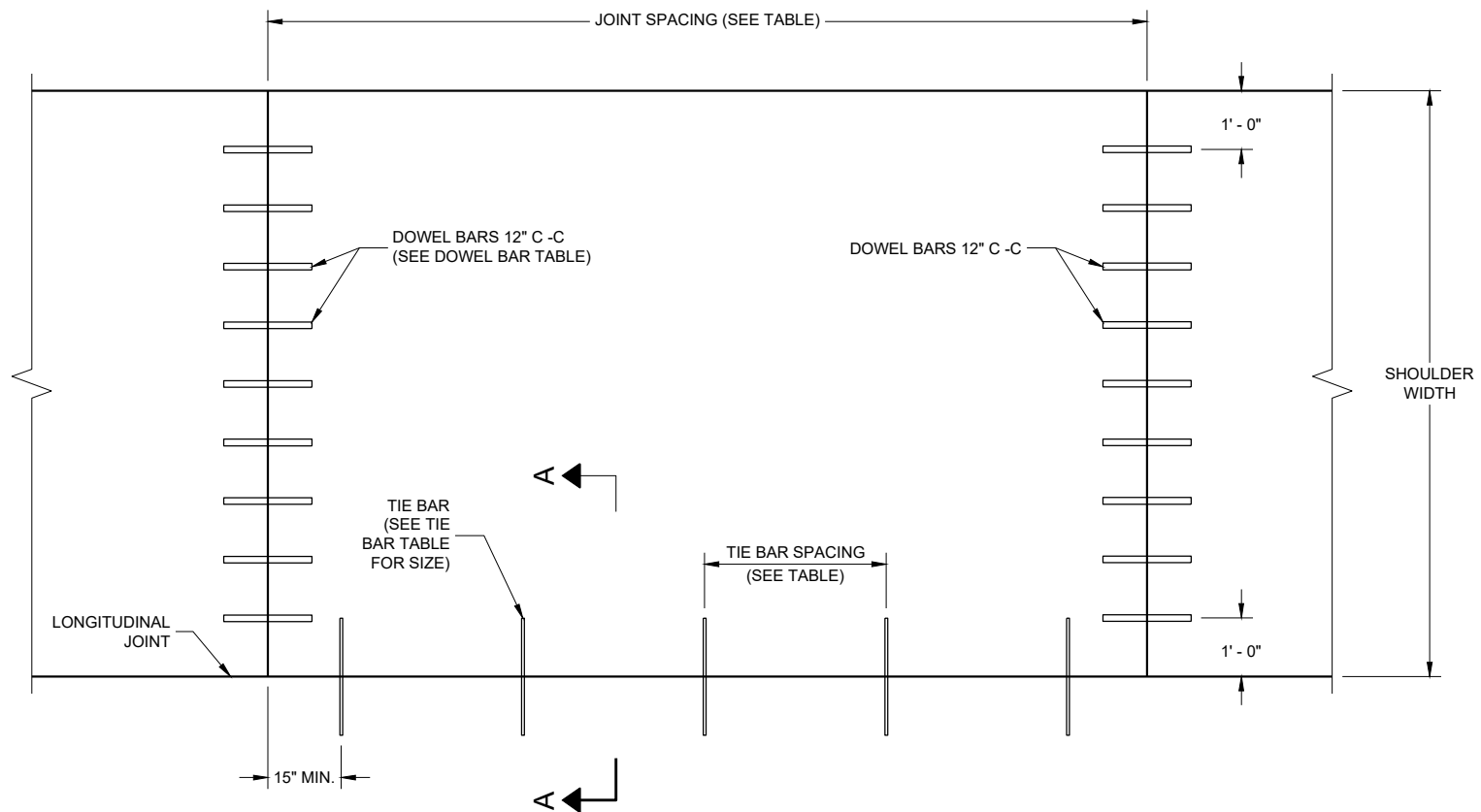


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE 3/26/10 /S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA



**PLAN VIEW
CONCRETE PAVEMENT SHOULDER**

**PAVEMENT DEPTH, DOWEL BAR SIZE
AND JOINT SPACING TABLE**

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER ***	CONTRACTION JOINT SPACING
6", 6 1/2"	NONE	12"
7", 7 1/2"	1"	14"
8" & ABOVE	1 1/4"	15"

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FRO THE AVERAGE THICKNESS OF THE CROSS SECTION.

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
<10 1/2"	NO. 4	30"	36"
>10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BATS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES).

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

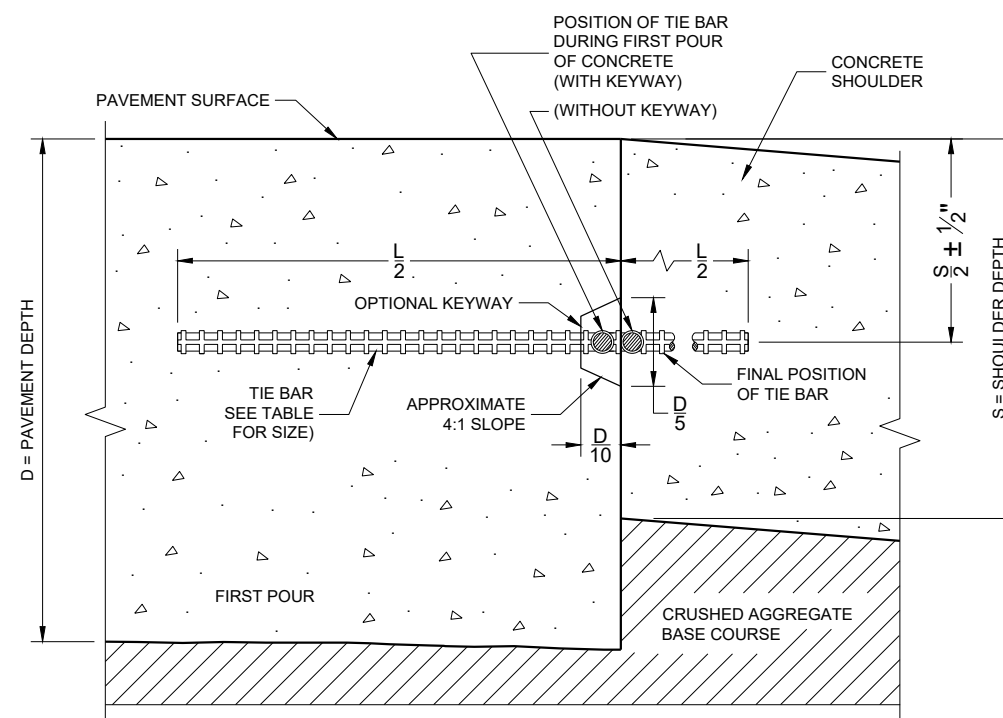
GENERAL NOTES

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

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

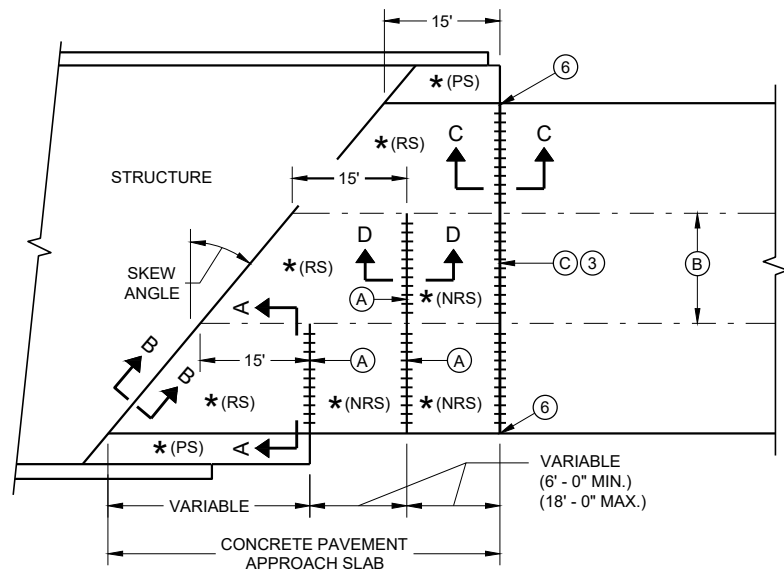


**SECTION A - A
LONGITUDINAL CONSTRUCTION JOINT**

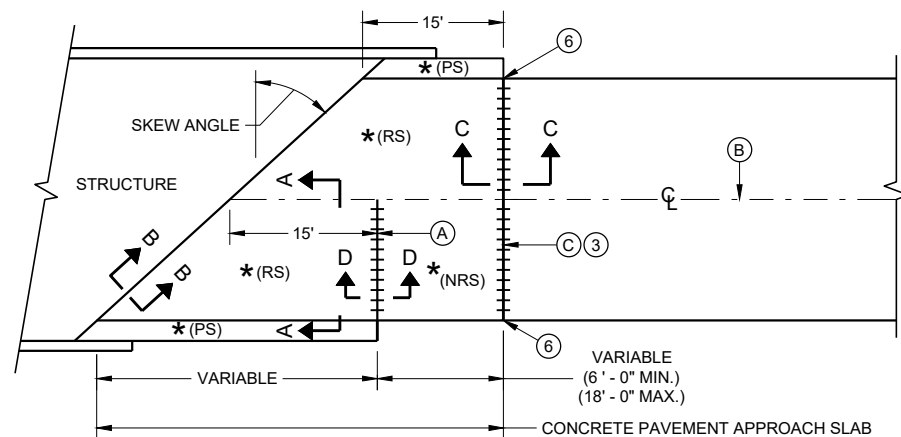
**CONCRETE PAVEMENT
SHOULDERS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

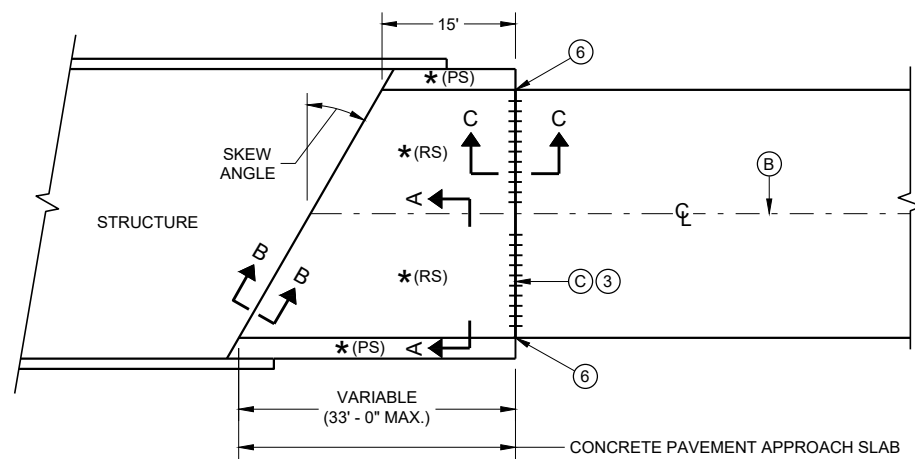
APPROVED
November 2022 /S/ Peter Kemp
DATE PAVEMENT SUPERVISOR



**SKewed APPROACH
(PAVEMENT MORE THAN TWO LANES)**

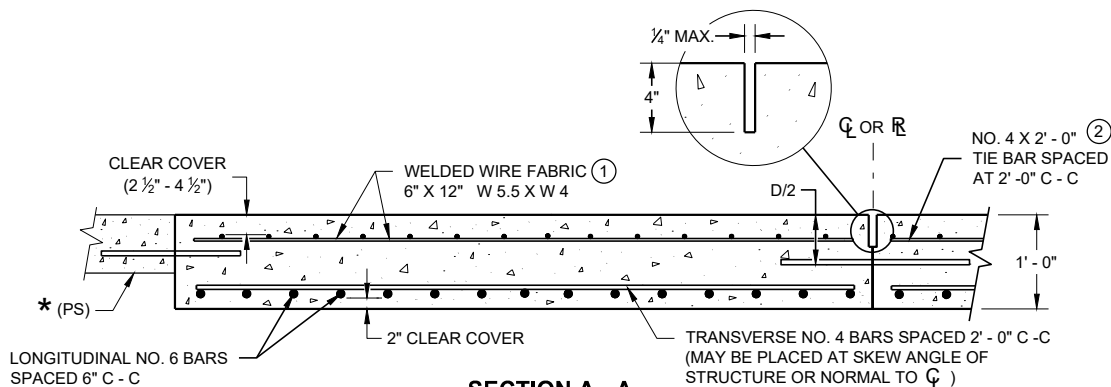


**SKews > 20°
(PAVEMENT WIDTH ≤ 30')**

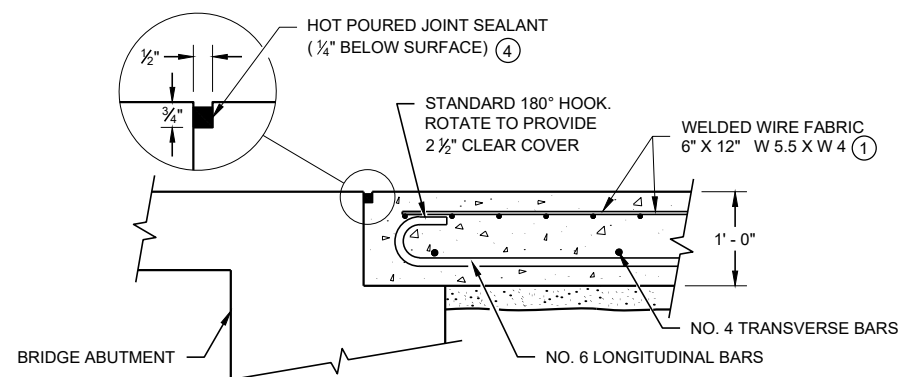


**SKews ≤ 20°
(PAVEMENT WIDTH ≤ 30')**
APPROACH SLAB AND ADJACENT PAVEMENT

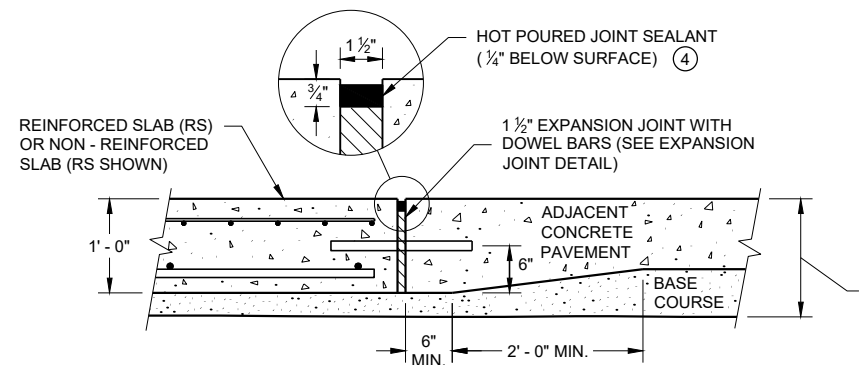
- * (RS) = REINFORCED CONCRETE SLAB
- * (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- * (NRS) = NON - REINFORCED CONCRETE SLAB
- *** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A
REINFORCEMENT POSITIONING DETAIL**



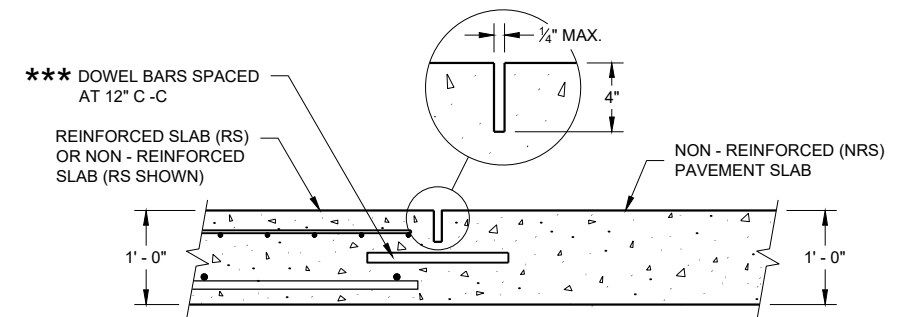
**SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT**



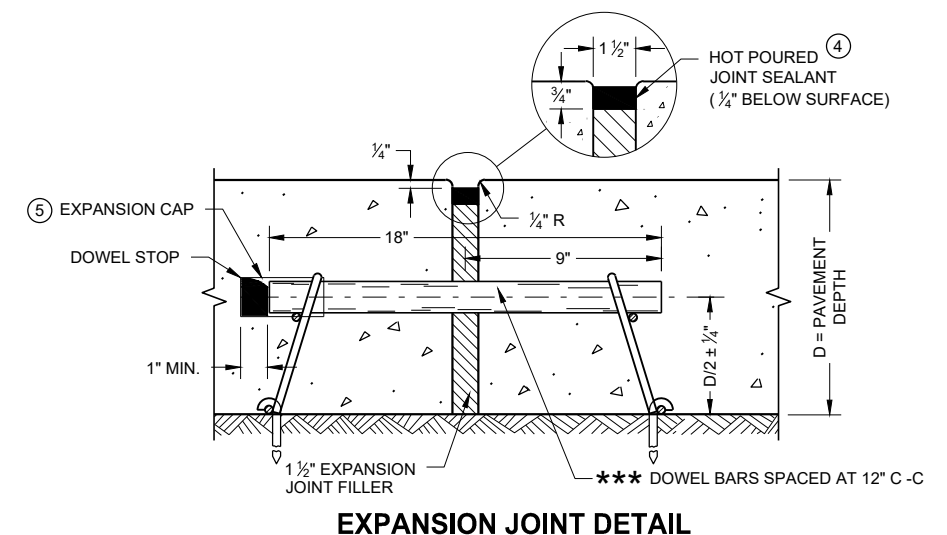
**SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT**

GENERAL NOTES

- THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.
- TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.
- ① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0" C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
 - ② THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
 - ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
 - ④ USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
 - ⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
 - ⑥ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
 - (A) STANDARD CONTRACTION JOINT NORMAL TO \bar{C} OR \bar{R} .
 - (B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
 - (C) 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO \bar{C} OR \bar{R} .



**SECTION D - D
CONTRACTION JOINT**



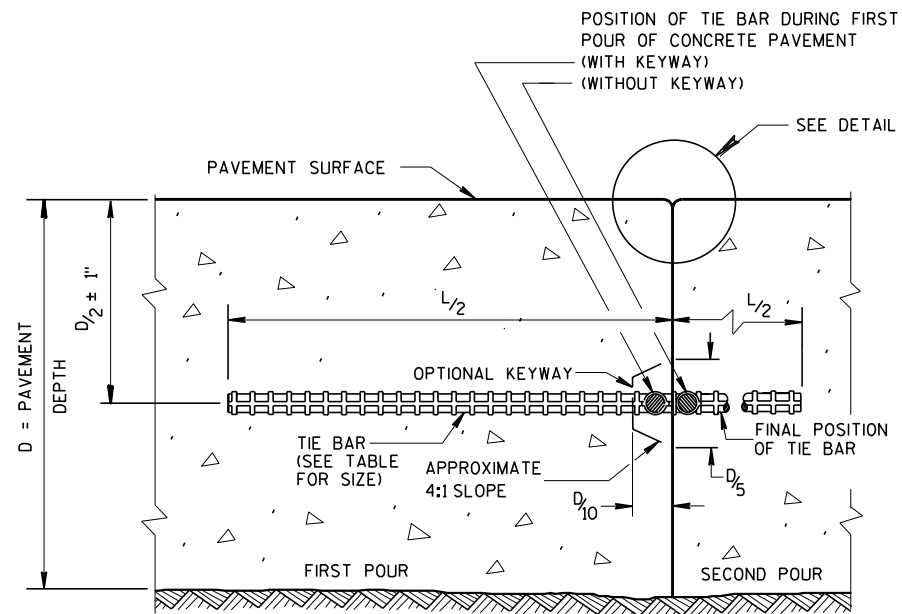
EXPANSION JOINT DETAIL

**CONCRETE PAVEMENT
APPROACH SLAB**

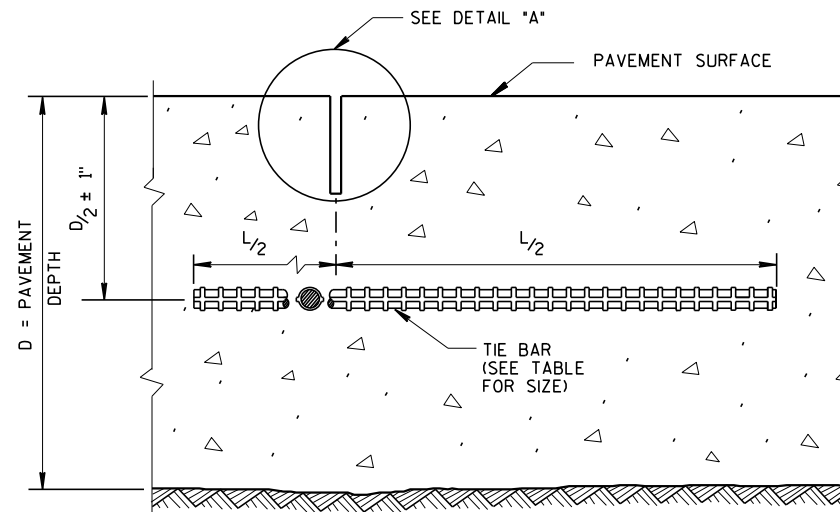
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Peter Kemp, P.E.
DATE DATE PAVEMENT SUPERVISOR

FHWA



CONSTRUCTION JOINT



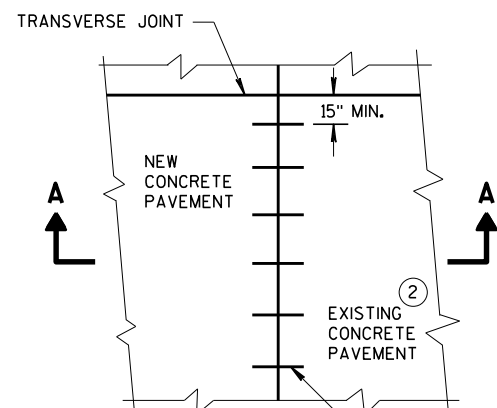
SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

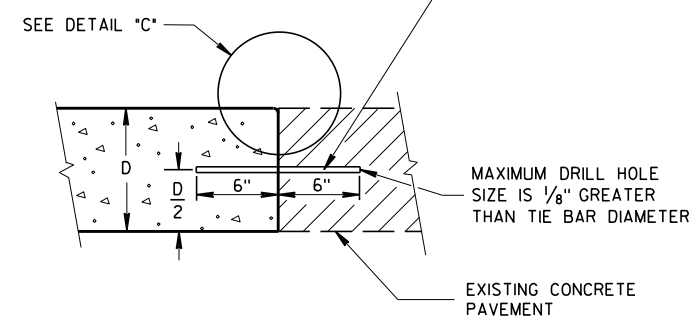
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

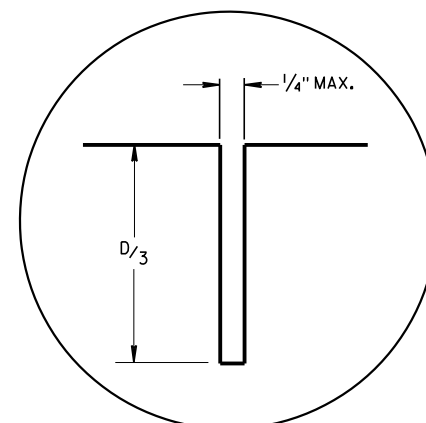


PLAN VIEW

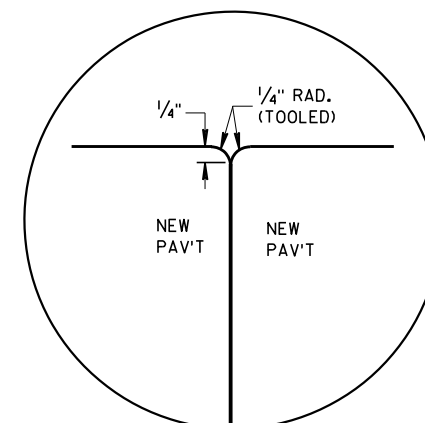
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



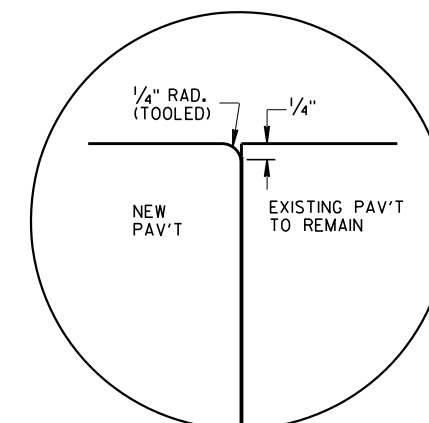
**SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT**



DETAIL "A"



DETAIL "B"



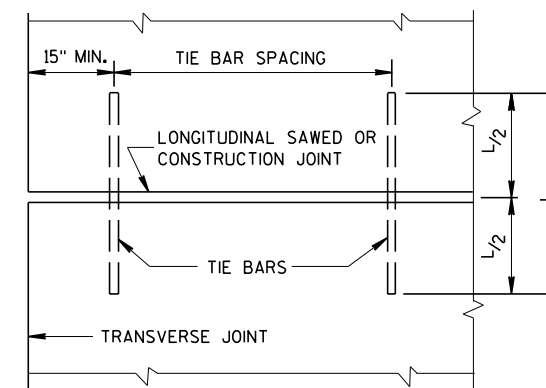
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

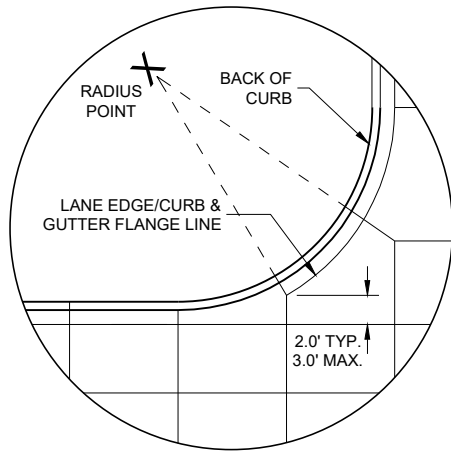


**PLAN VIEW
SHOWING LOCATION OF TIE BARS**

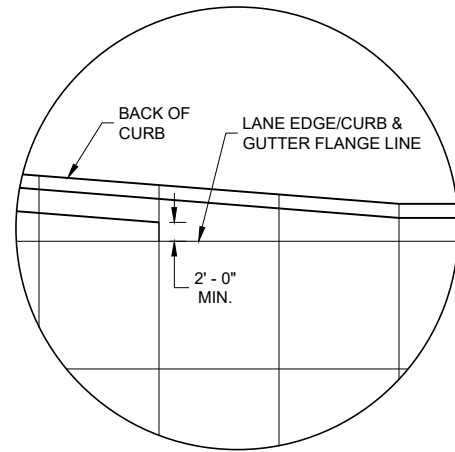
**CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

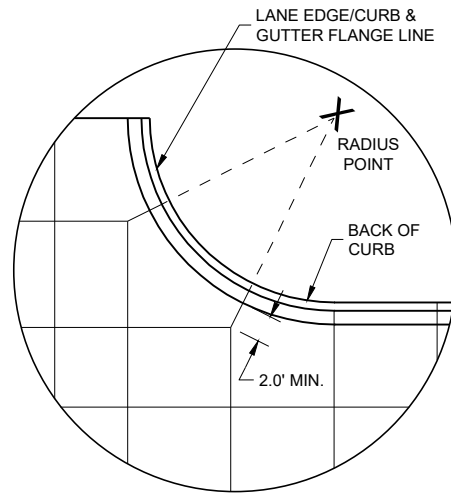
APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA



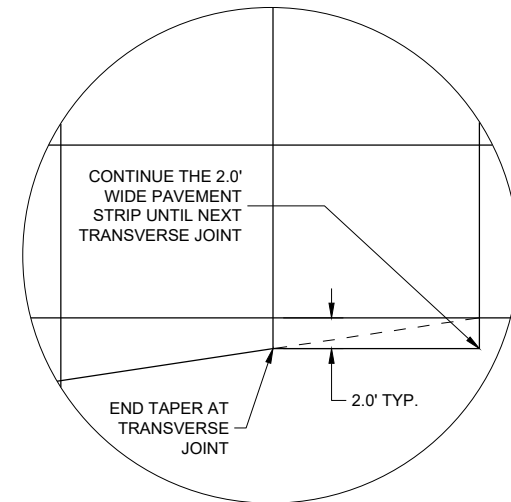
DETAIL "A"



DETAIL "B"



DETAIL "C"

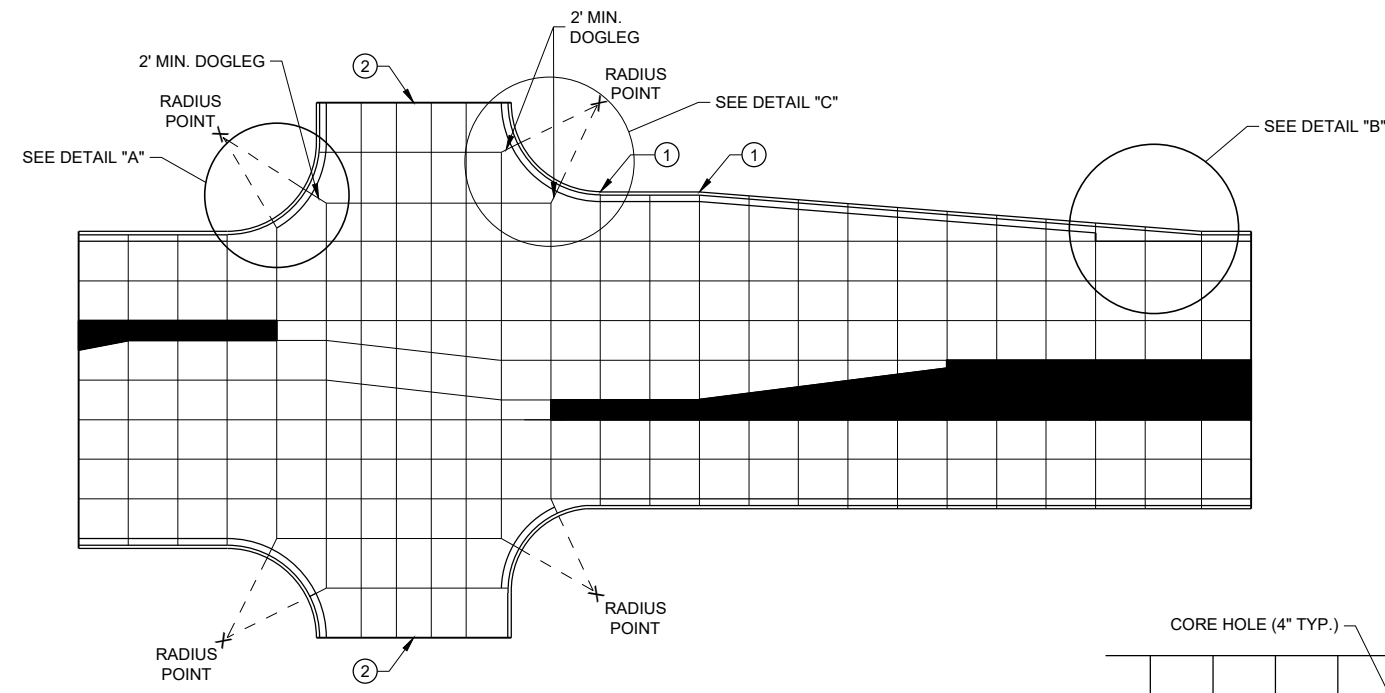


DETAIL "D"

GENERAL NOTES

- THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.
- ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.
- CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.
- ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.
- AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.
- SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.
- AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.
- CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

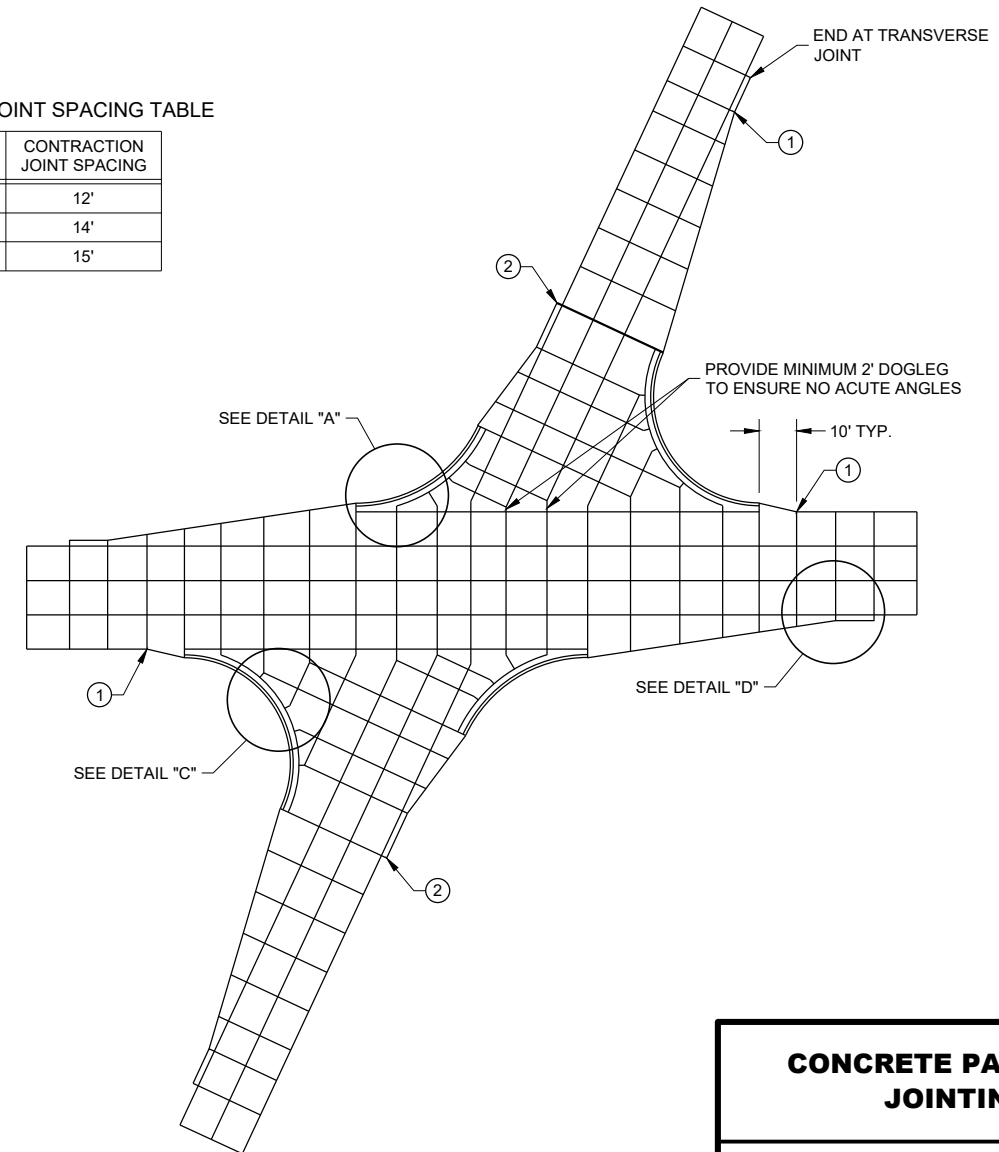
- ① PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
- ② CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
- ③ THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



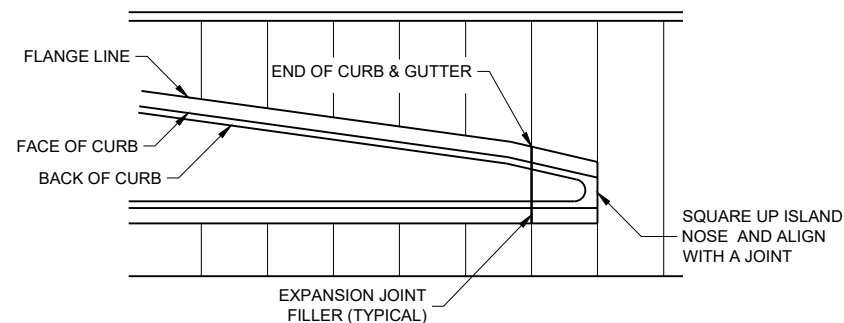
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

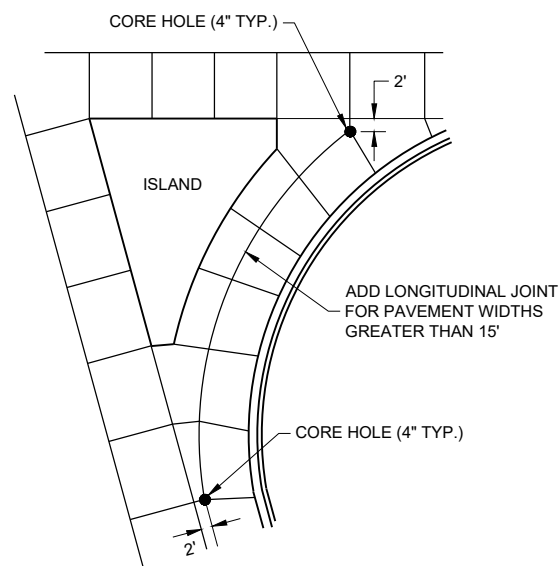
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6 1/2"	12'
7", 7 1/2"	14'
8" & ABOVE	15'



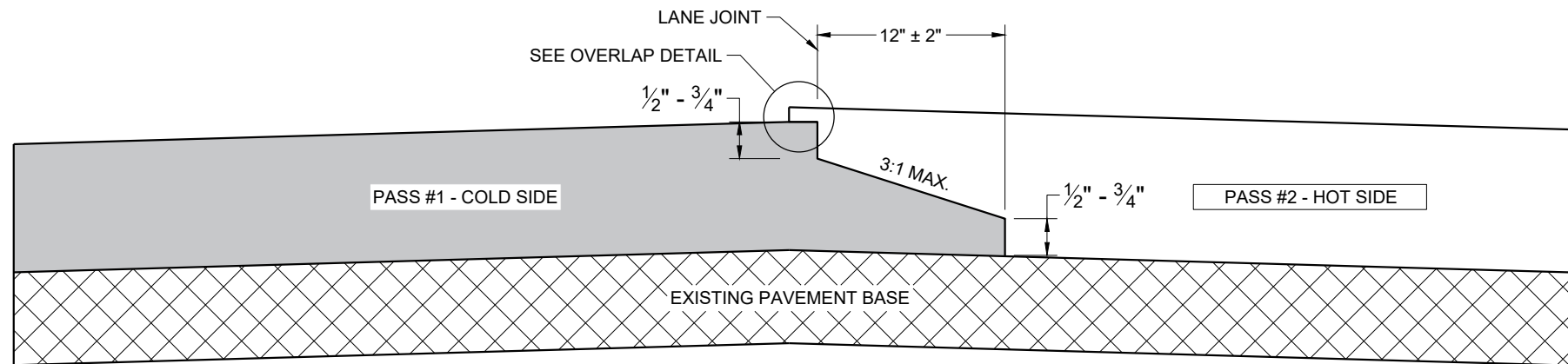
SKEWED INTERSECTION



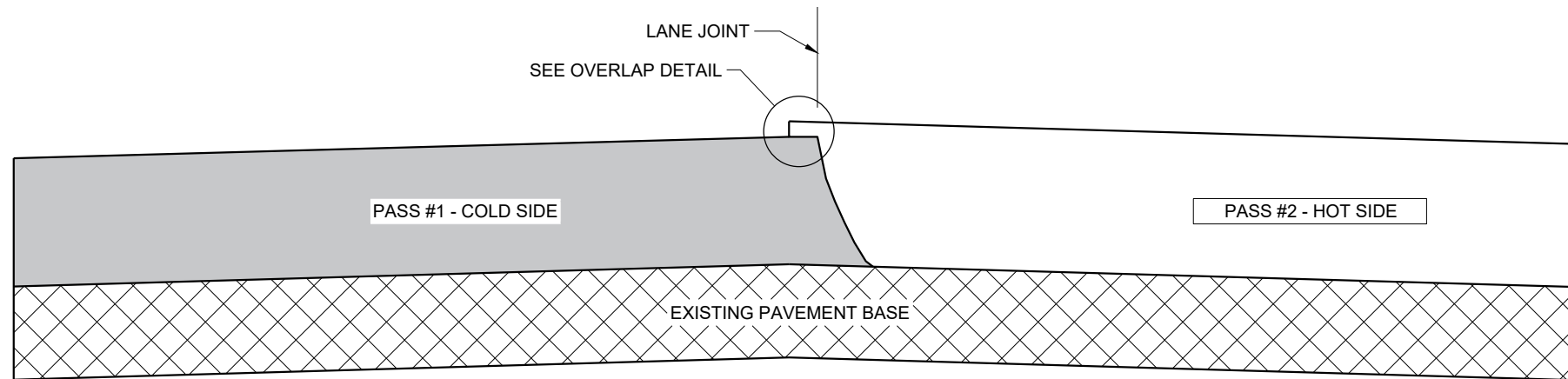
APPROACH TO MEDIAN



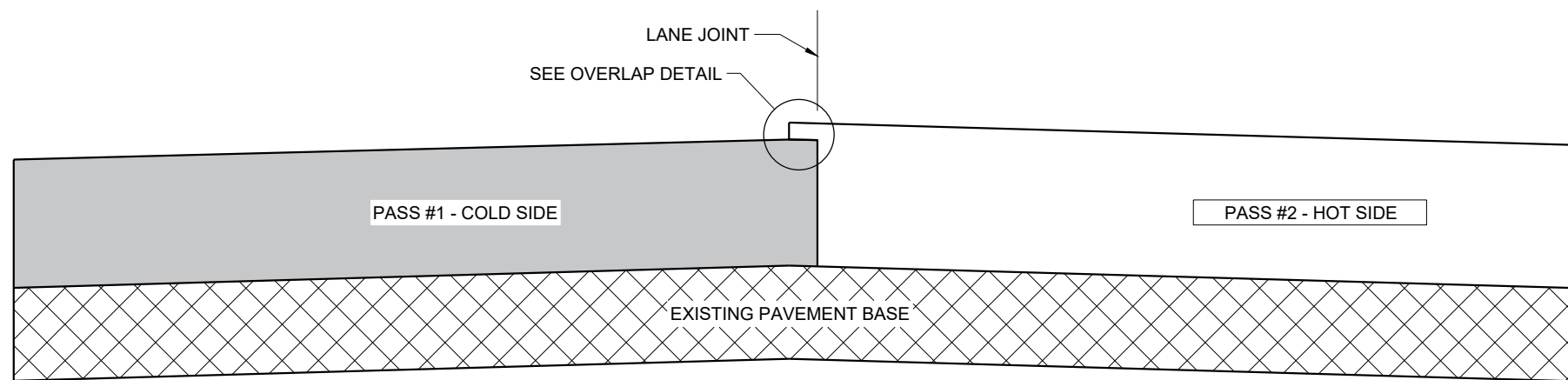
LARGE RIGHT TURN



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

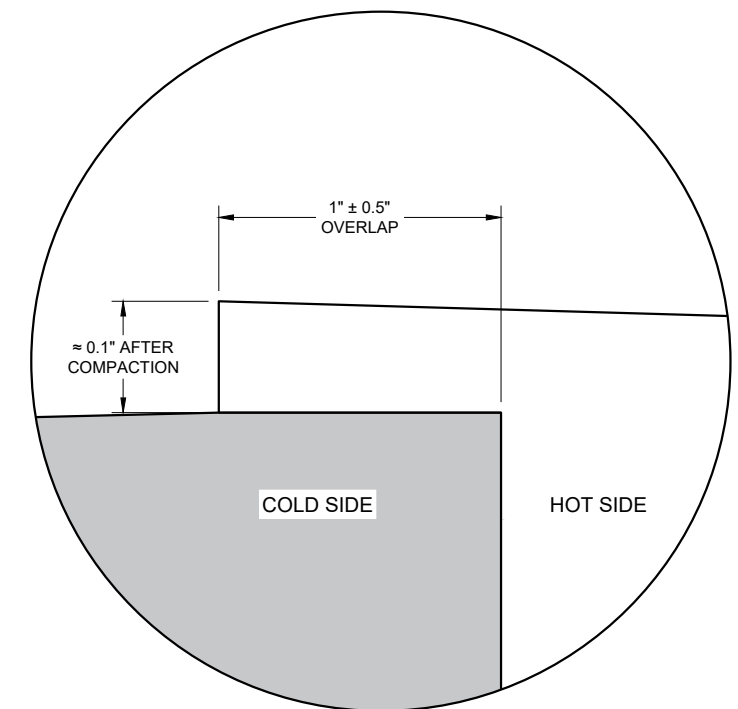
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

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

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

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

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



OVERLAP DETAIL (TYPICAL)

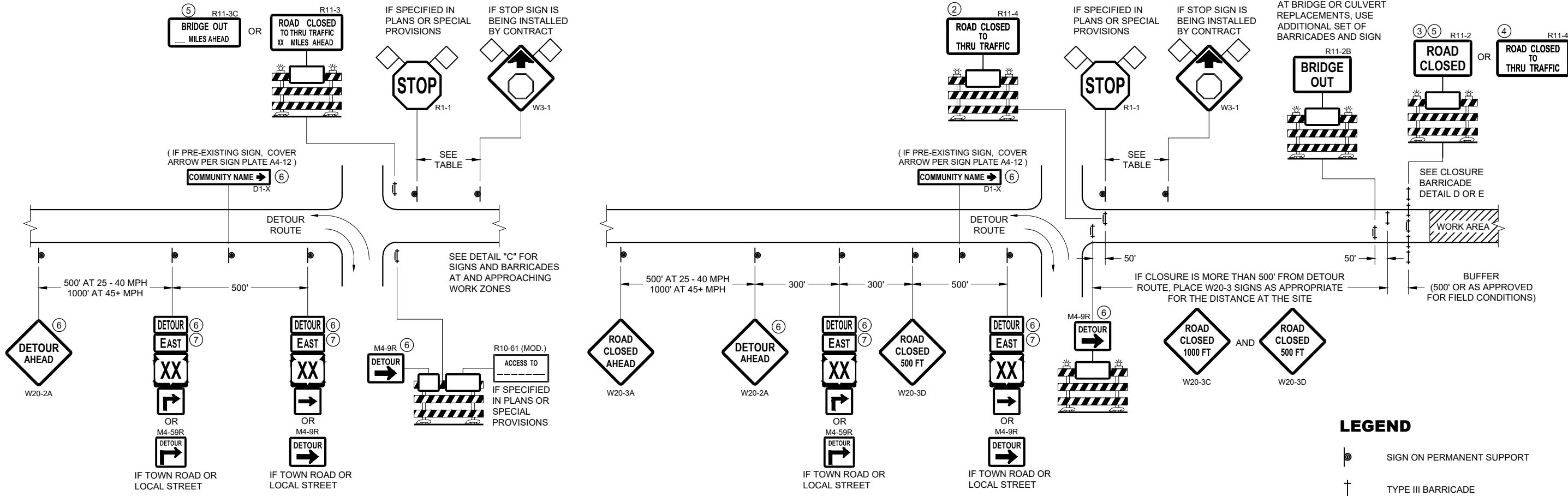
6

6

SDD 13C19 - 03

SDD 13C19 - 03

HMA LONGITUDINAL JOINTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE GREATER THAN OR EQUAL TO 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

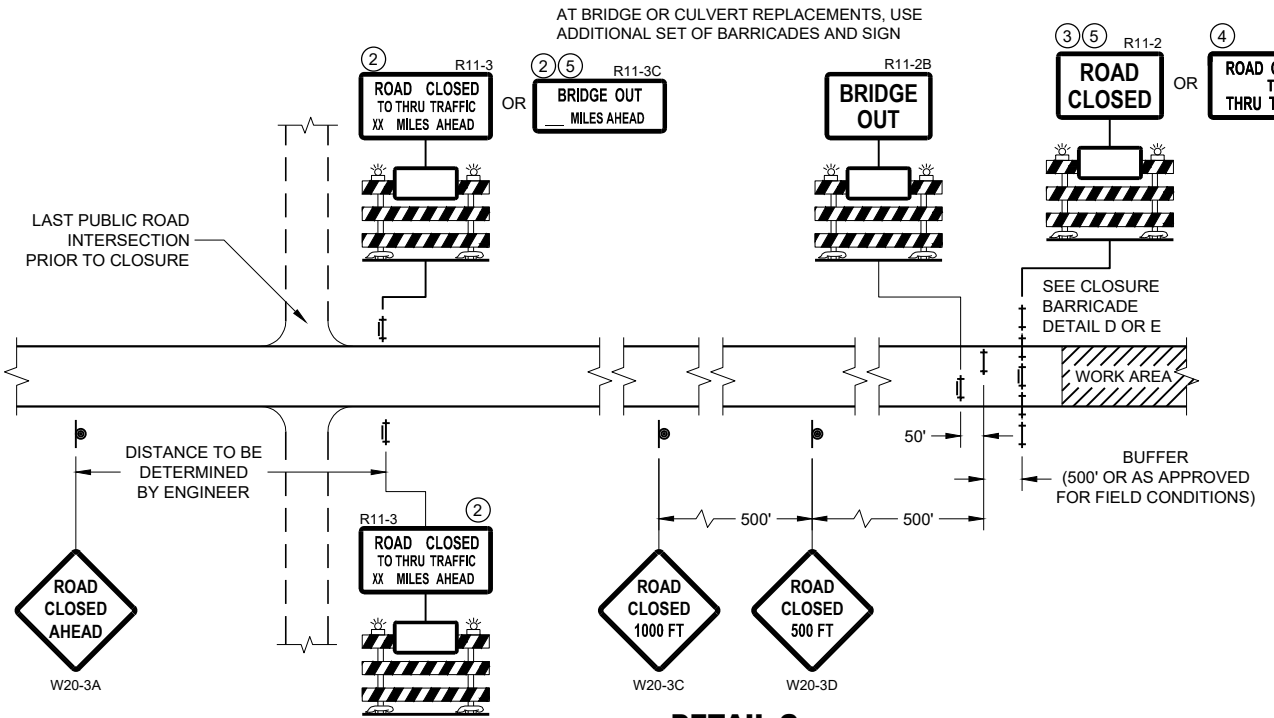
**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

- LEGEND**
- SIGN ON PERMANENT SUPPORT
 - TYPE III BARRICADE
 - TYPE III BARRICADE WITH ATTACHED SIGN
 - TYPE "A" WARNING LIGHT (FLASHING)
 - WORK AREA
 - FLAGS, 16" X 16" MIN. (ORANGE)

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

- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1



**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

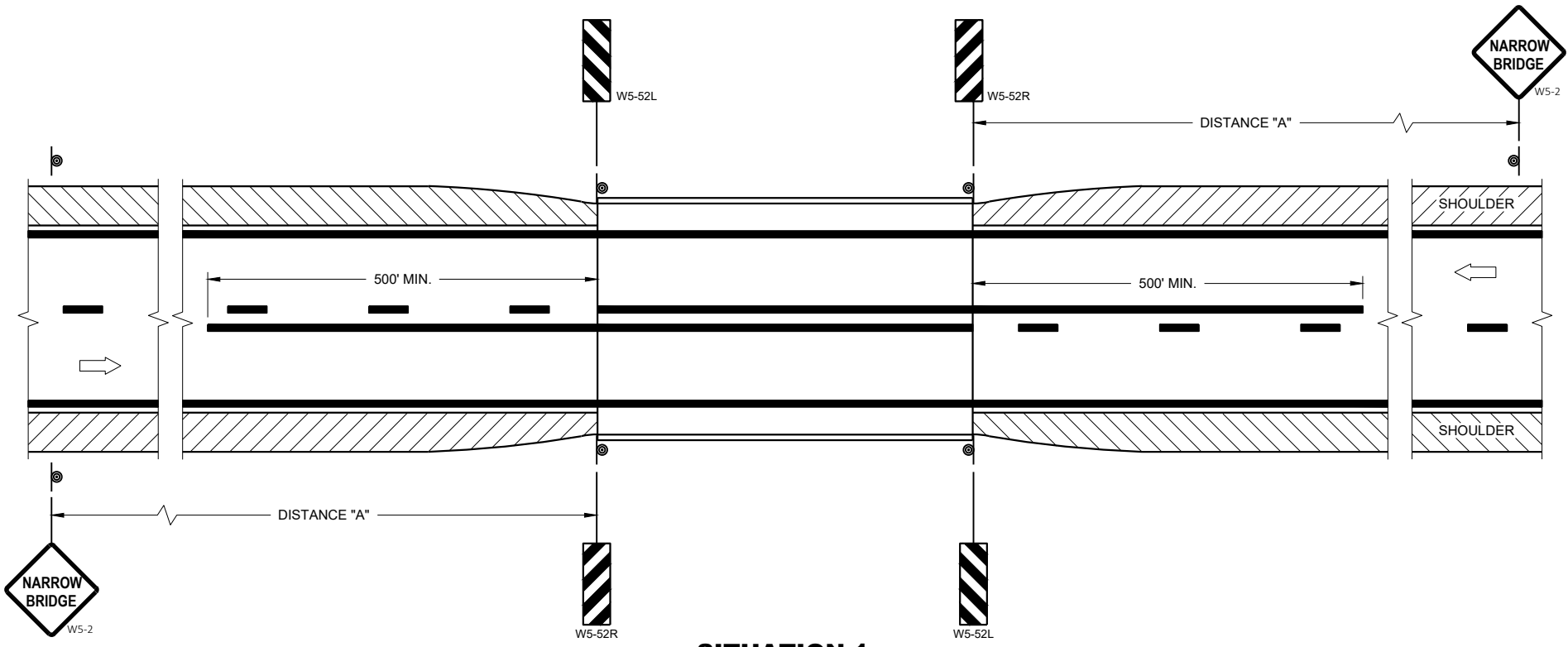
SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

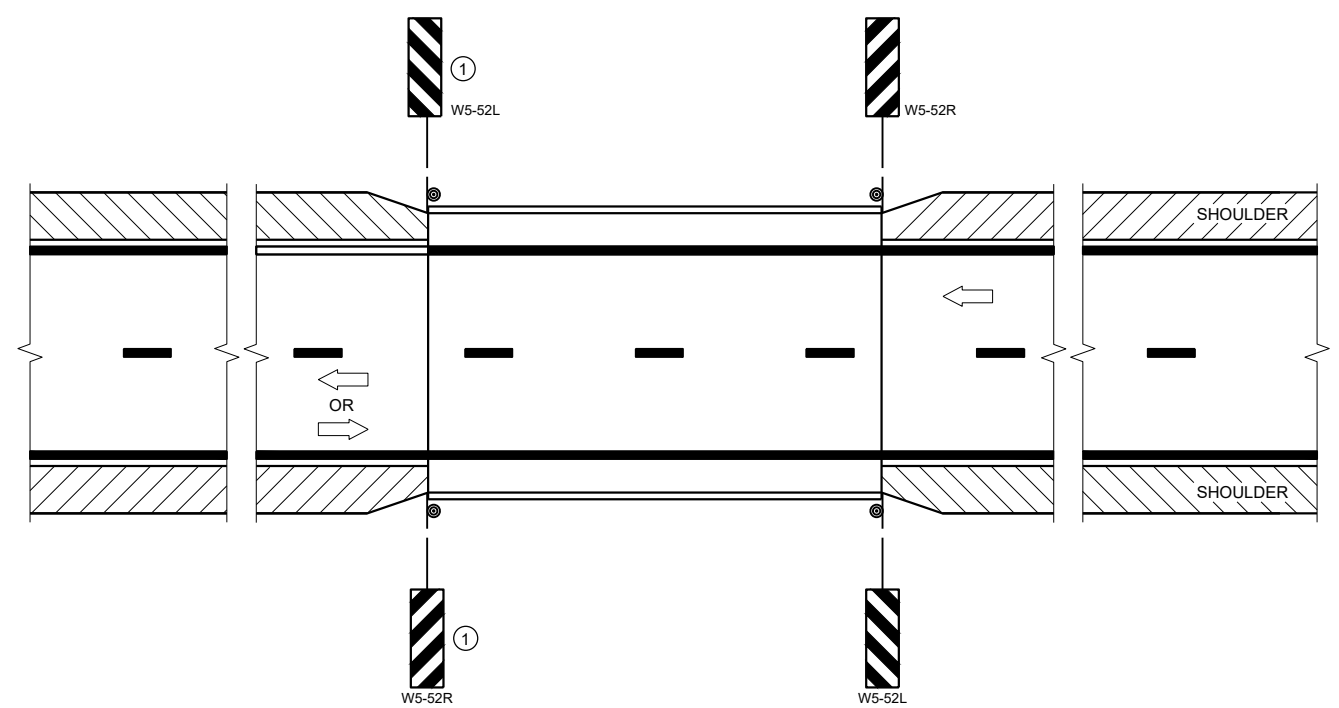
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



SITUATION 1
 WARRANTING CRITERIA:
 BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



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

GENERAL NOTES

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

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

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

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC

DISTANCE TABLE

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

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2023 /S/ Jeannie Silver
 DATE STATE SIGNING AND MARKING ENGINEER




FHWA

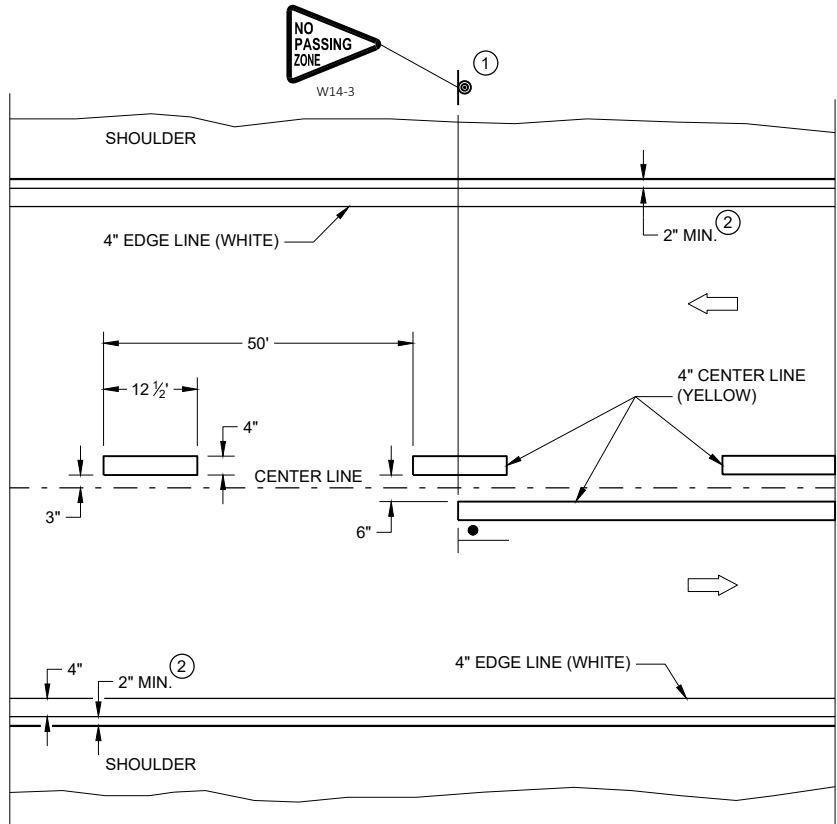
GENERAL NOTES

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

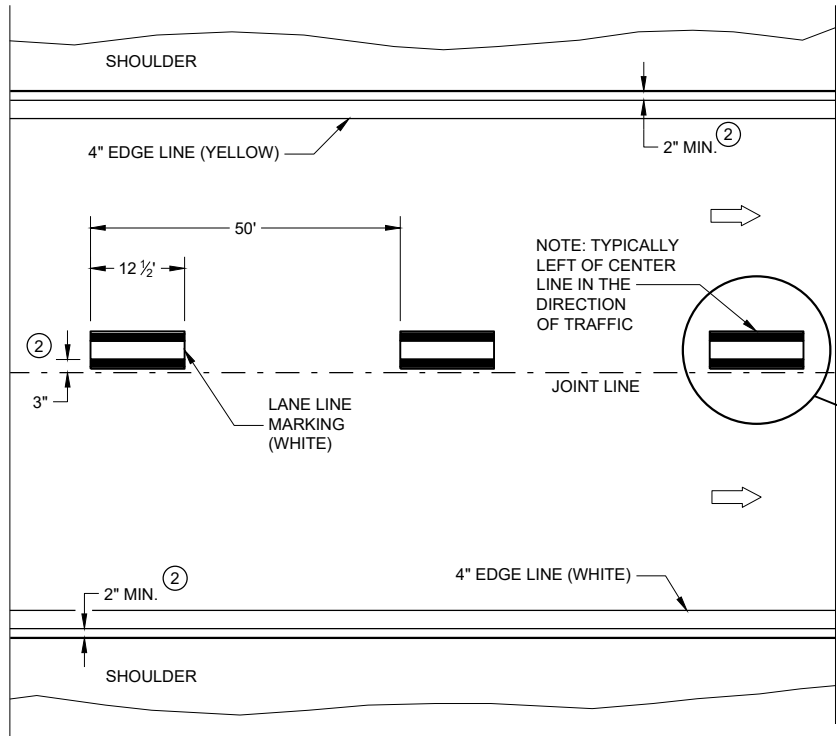
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

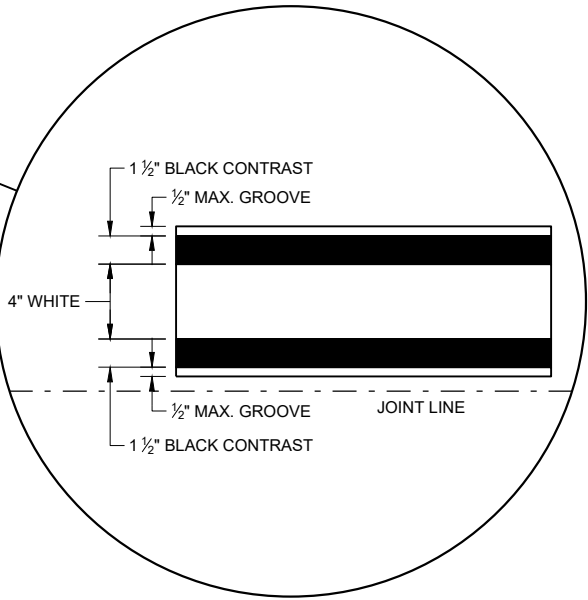


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



6

6

SDD 15C08 - 22a

SDD 15C08 - 22a

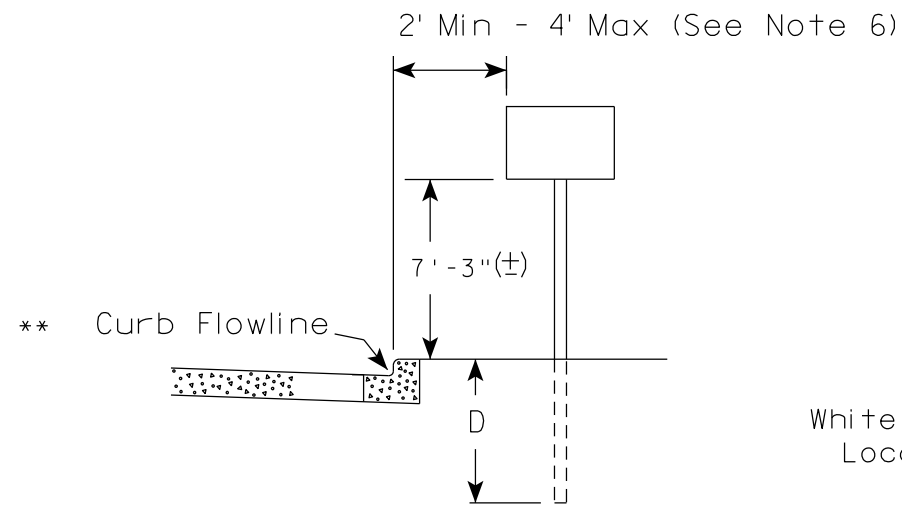
PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

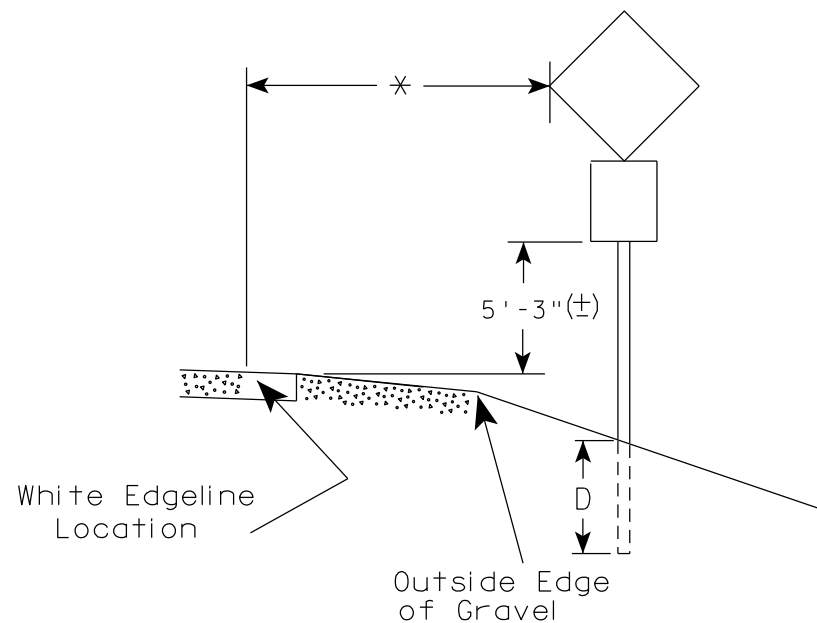
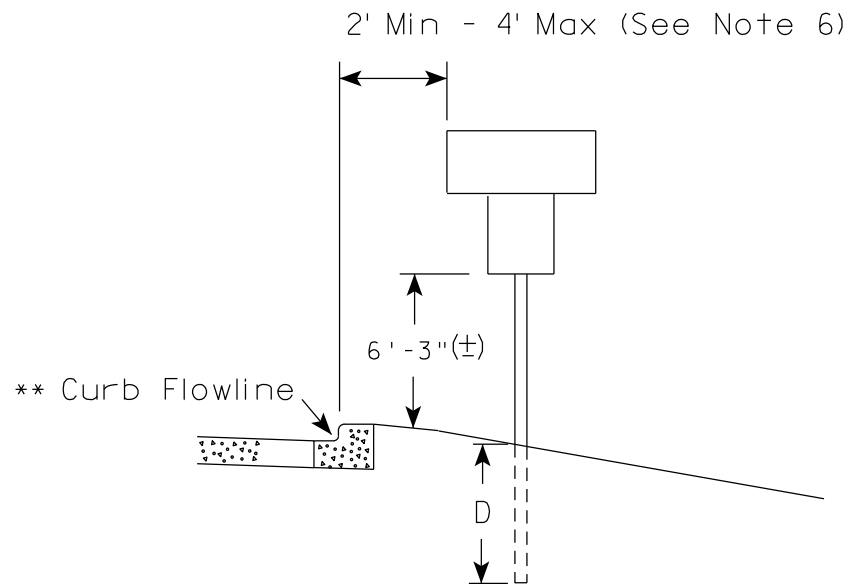
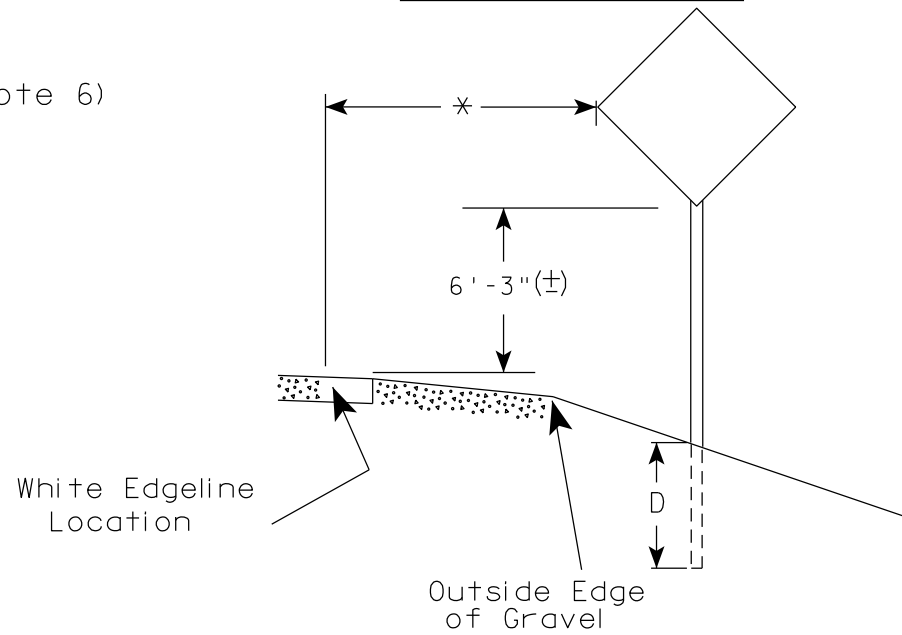
APPROVED
DATE: May 2022 /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER

FHWA

URBAN AREA



RURAL AREA (See Note 2)



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

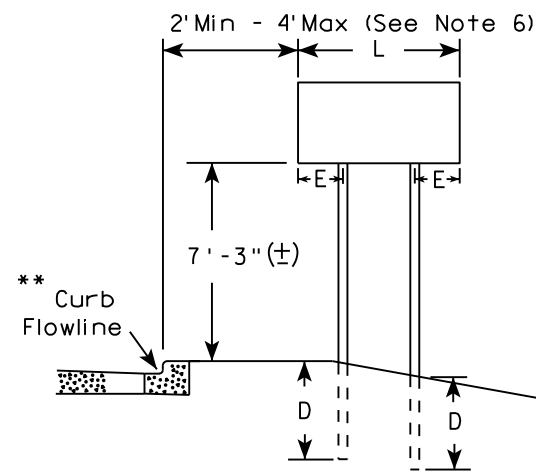
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

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>

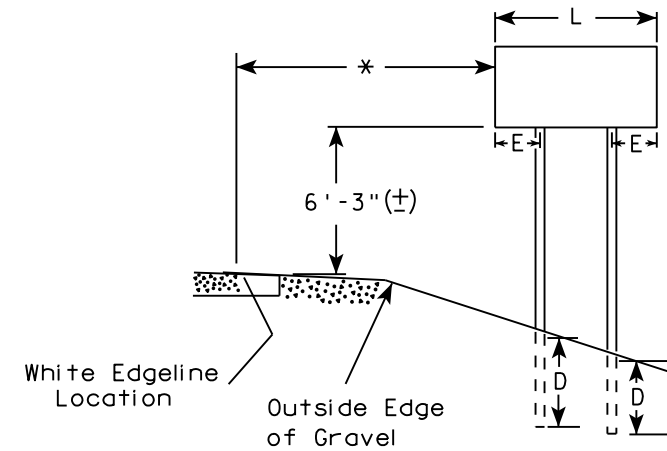
GENERAL NOTES

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" (±).

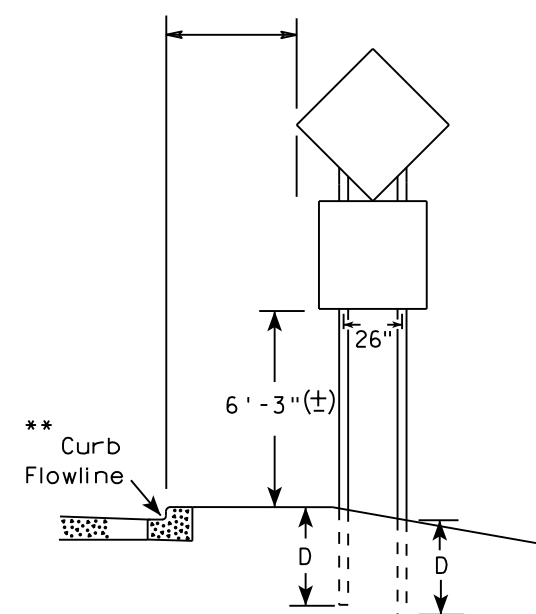
URBAN AREA



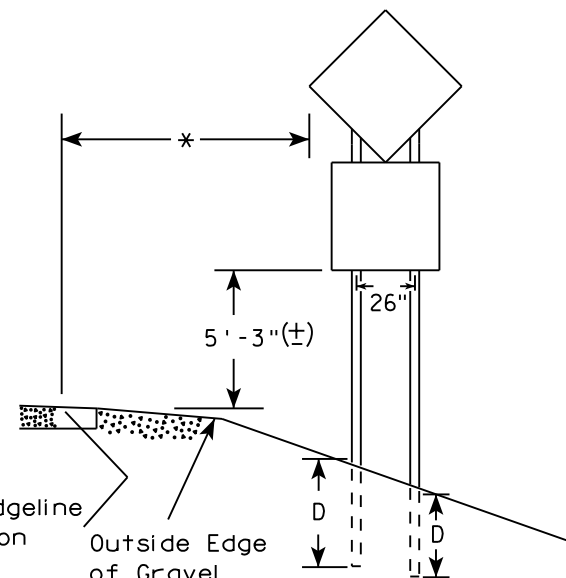
RURAL AREA (See Note 3)



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

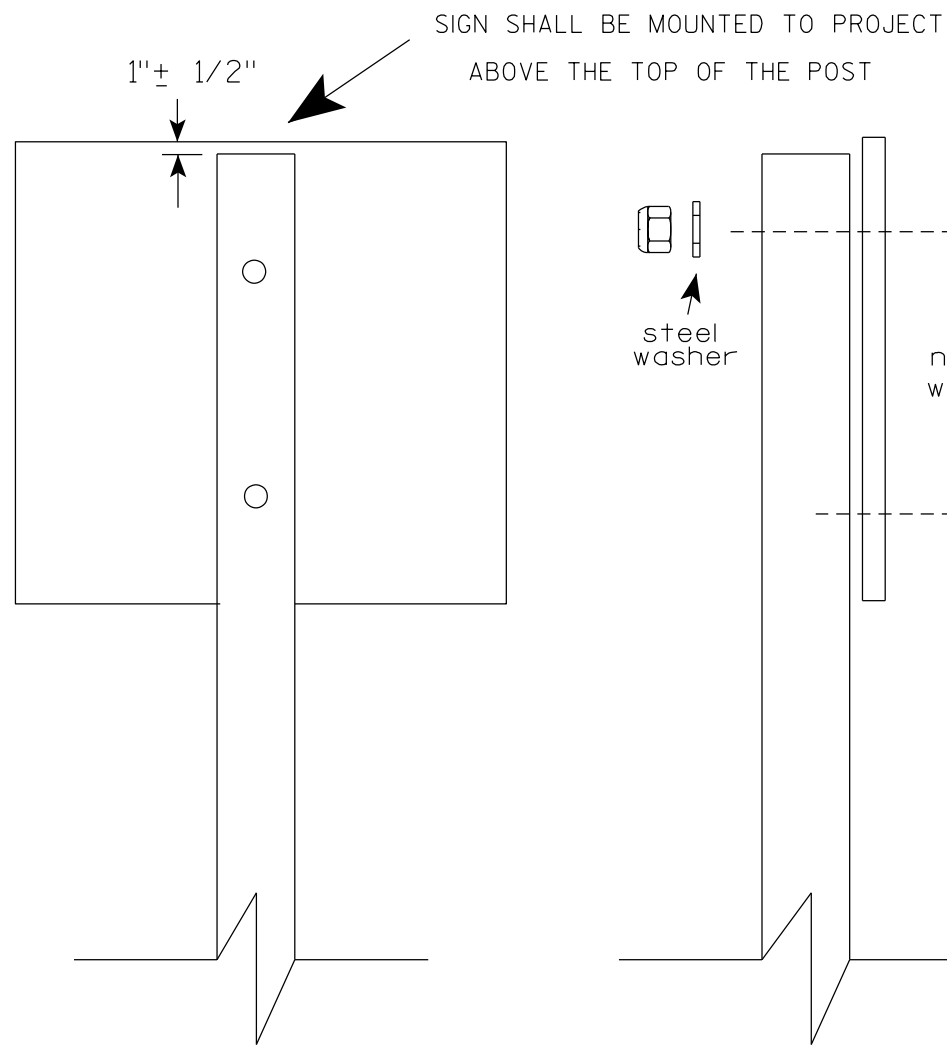
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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 :

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

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

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

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

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS
TO POSTS

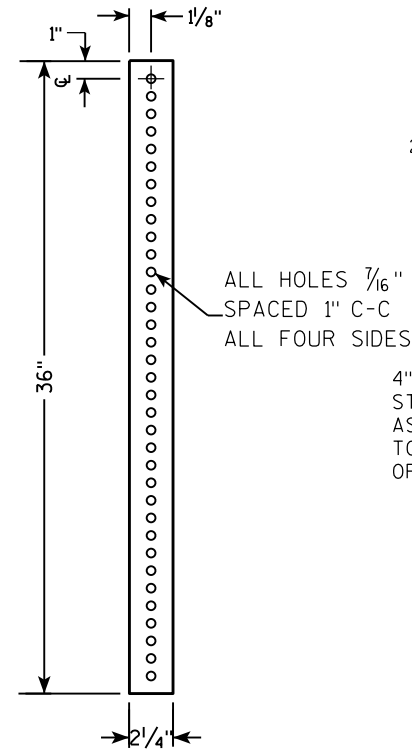
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

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

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

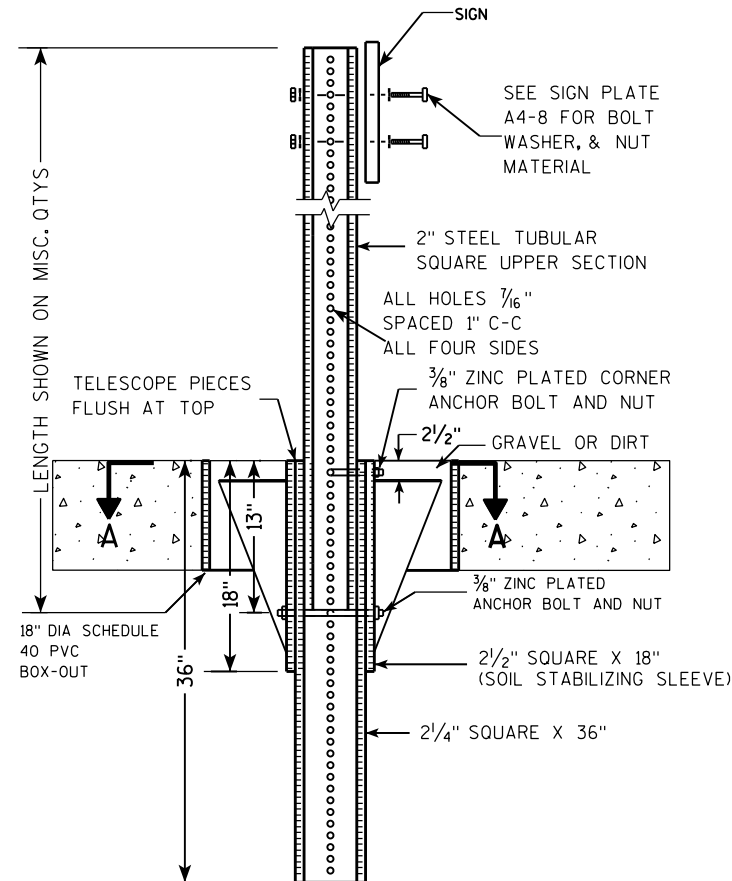
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



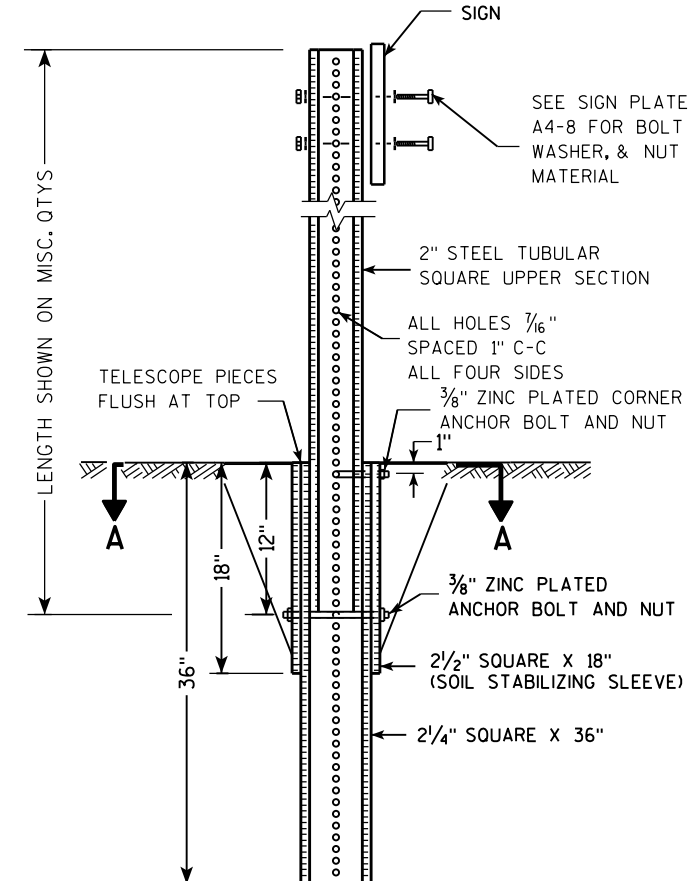
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



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



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



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

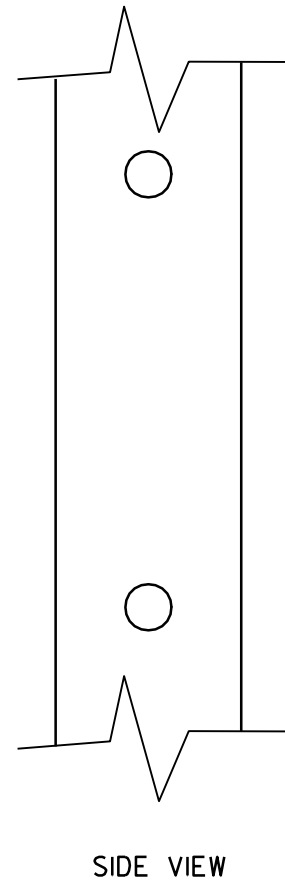
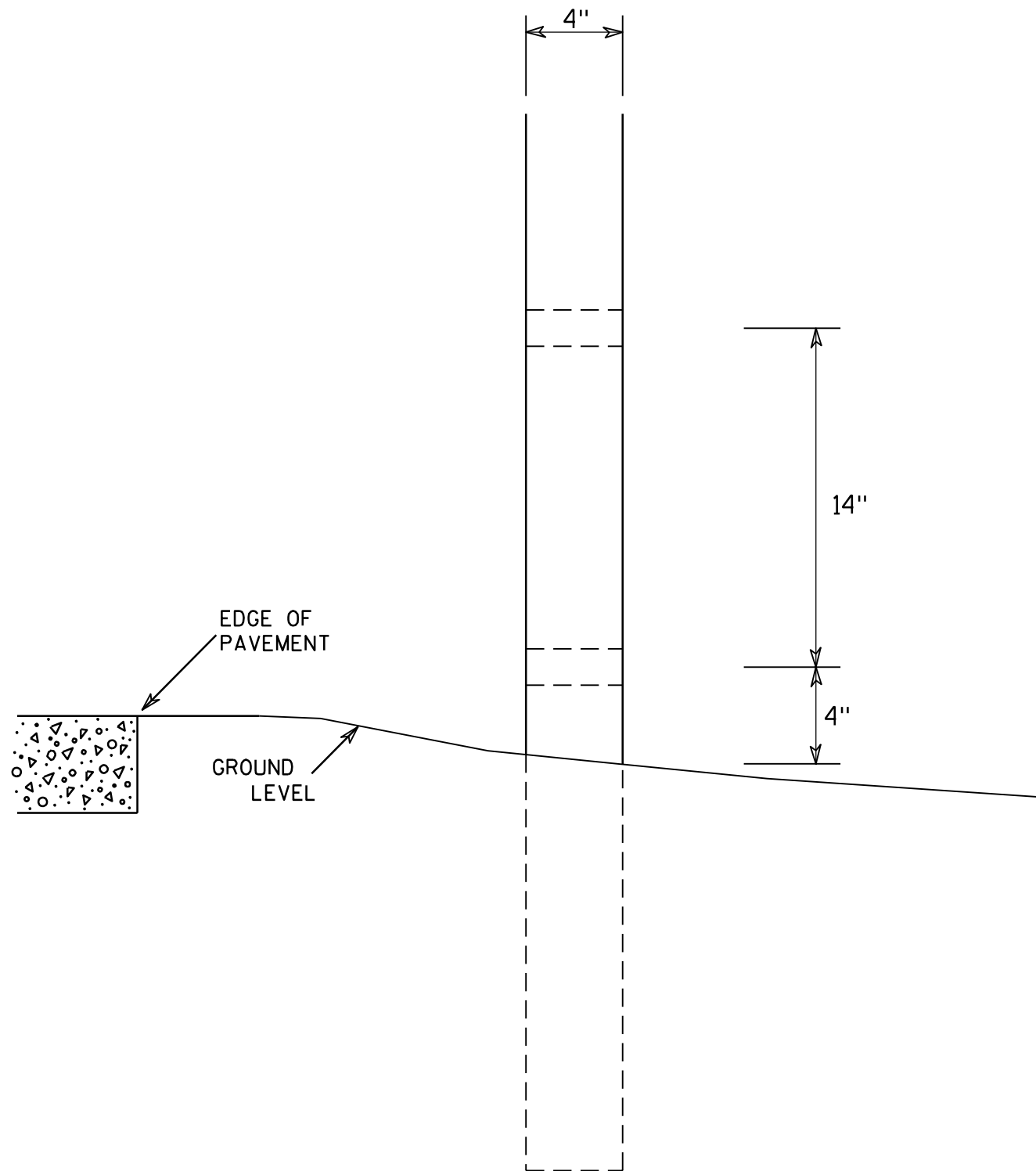
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**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



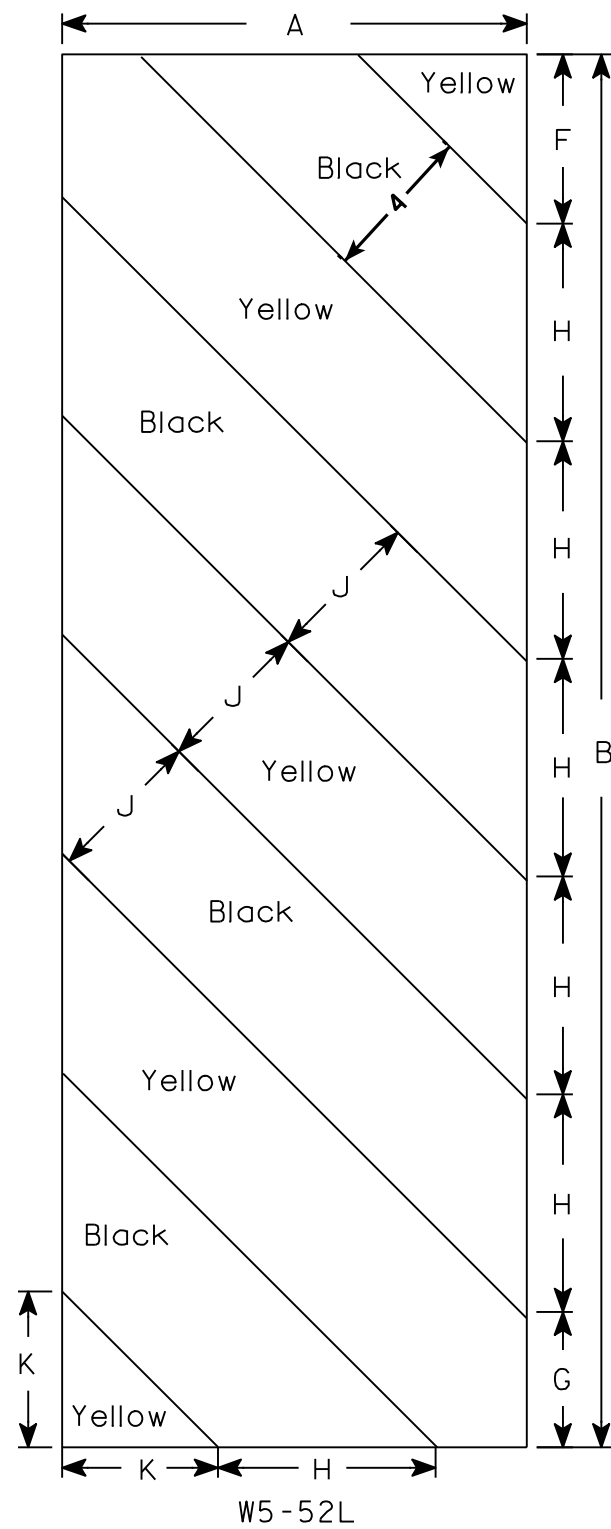
GENERAL NOTES

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

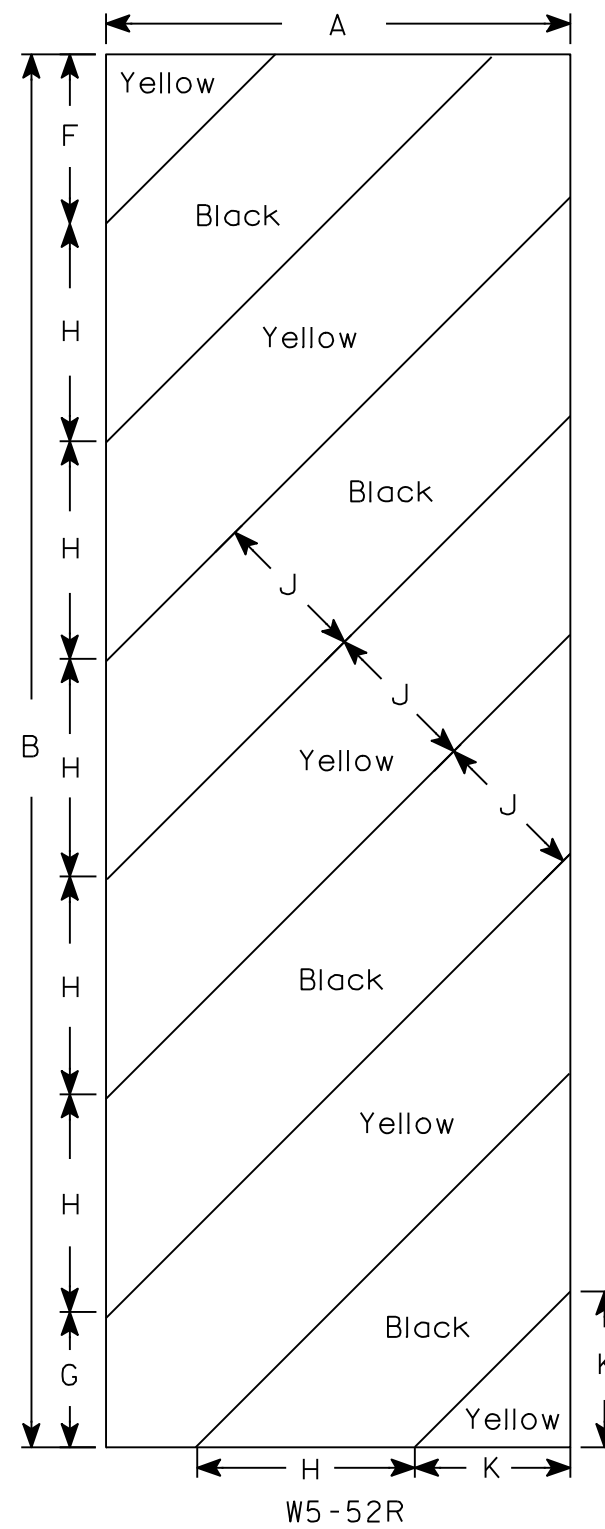
7

7

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



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

DESIGN DATA

LIVE LOAD:
 DESIGN LOADING : HL-93
 INVENTORY RATING FACTOR : 1.05
 OPERATIONAL RATING FACTOR : 1.36
 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. (2024) = 220
 A.A.D.T. (2044) = 250
 R.D.S. = 60 MPH

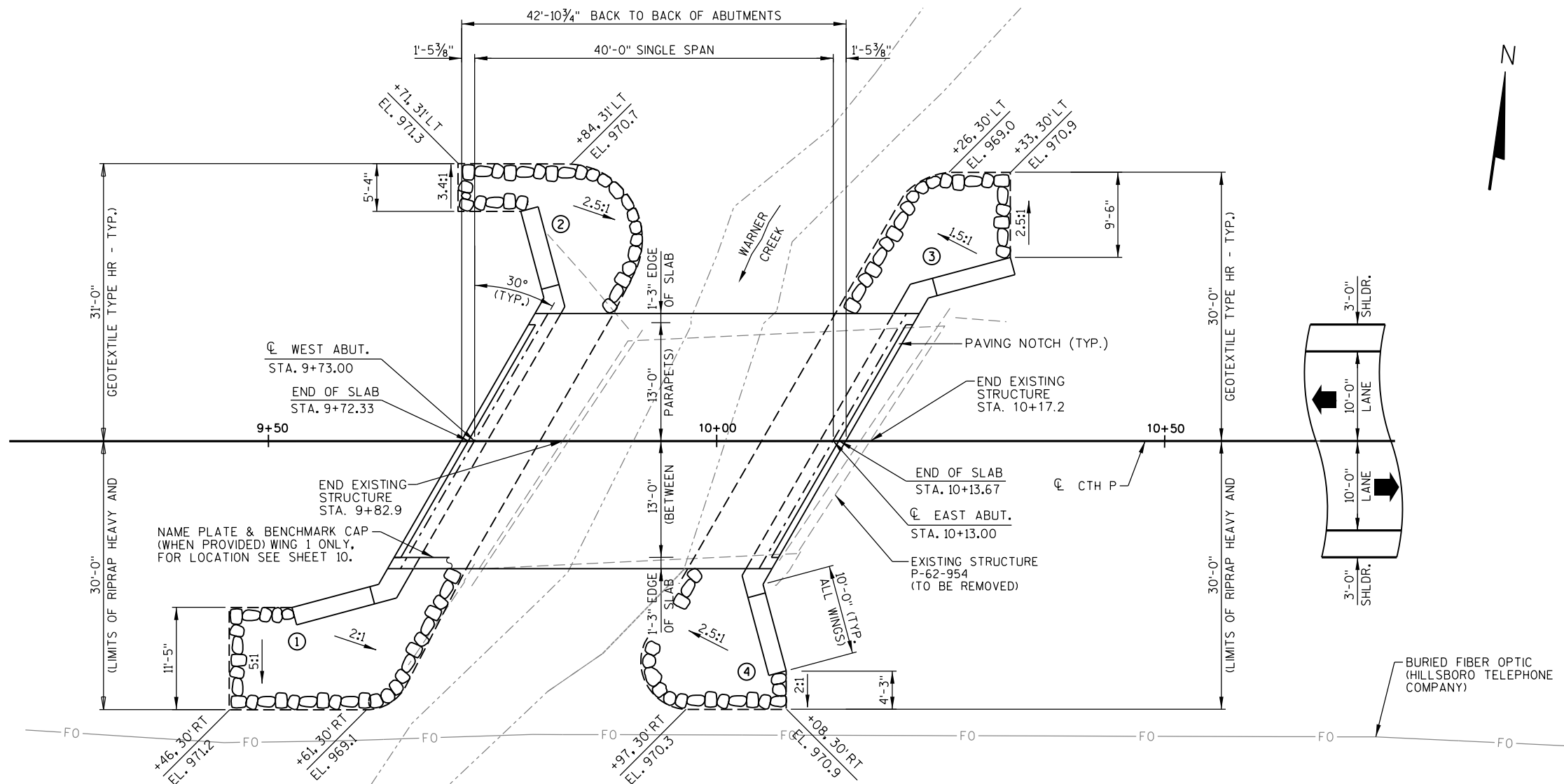
MATERIAL PROPERTIES:
 CONCRETE MASONRY, SLAB AND PARAPETS $f'_c = 4,000$ P.S.I.
 ALL OTHER $f'_c = 3,500$ P.S.I.
 HIGH-STRENGTH BAR STEEL REINFORCEMENT, GRADE 60 $f_y = 60,000$ P.S.I.
 PILING CIP CONCRETE $10\frac{3}{4} \times 0.365$ -INCH $f_y = 45,000$ P.S.I.

FOUNDATION DATA:
 ABUTMENTS TO BE SUPPORTED ON PILING CIP CONCRETE $10\frac{3}{4} \times 0.365$ -INCH DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS * PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED PILE LENGTHS ARE 19'-0" AT THE ABUTMENT BODIES AND 16'-0" AT THE ABUTMENT WINGS.

* 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 3.9 SQ. MI.
 Q₁₀₀ -TOTAL 1,270 C.F.S.
 -THRU BRIDGE 798 C.F.S.
 -OVERTOPPING ROADWAY 472 C.F.S.
 VELOCITY 5.93 FT./SEC.
 WATERWAY AREA 135 SQ. FT.
 SCOUR CRITICAL CODE 5
 HIGH WATER₁₀₀ ELEVATION 971.75
 O₂ 190 C.F.S.
 O₂ VELOCITY 2.26 FT./SEC.
 O₂ ELEVATION 969.95

ROADWAY OVERTOP DESIGN FREQUENCY
 OVERTOPPING FREQUENCY 2 YEARS
 O₂ 190 C.F.S.
 HW₂ 969.95

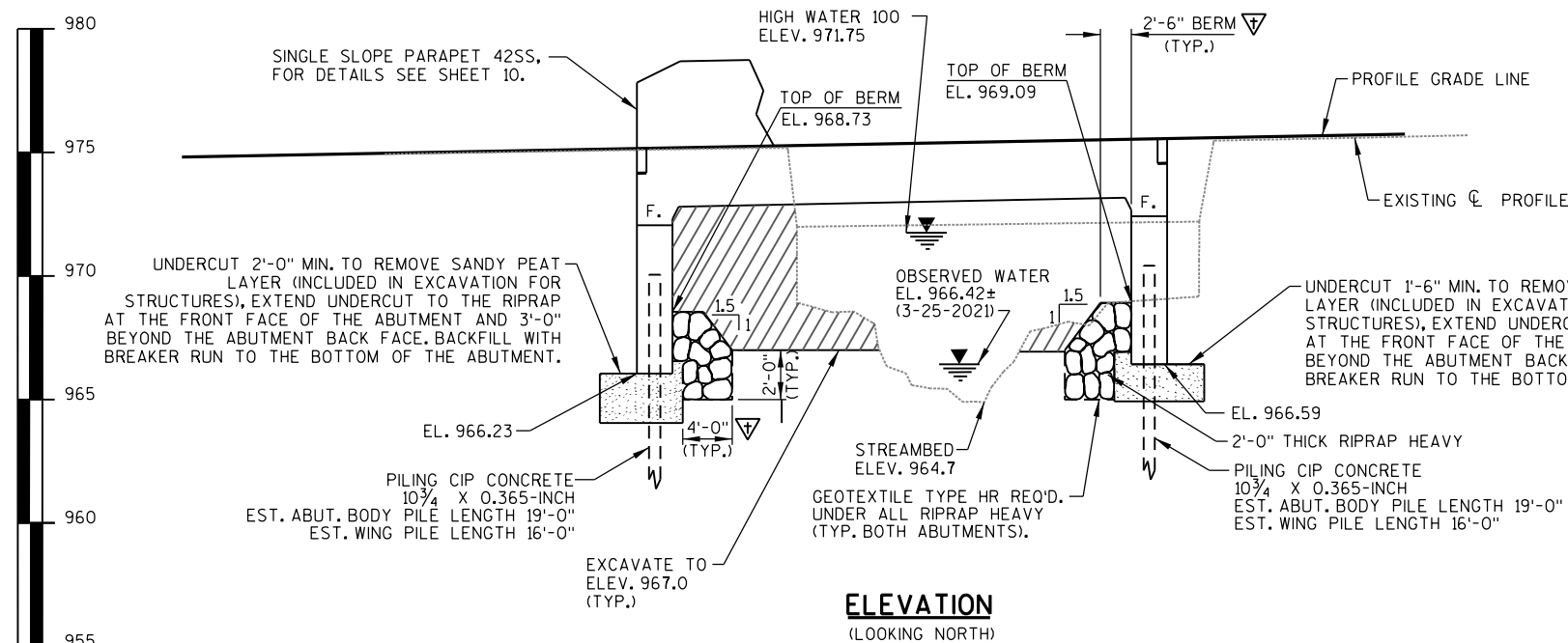


PLAN
 (SINGLE SPAN FLAT CONCRETE SLAB)

○ - INDICATES WING NUMBER

▽ - NORMAL TO ϕ OF SUBSTRUCTURE.

▨ - REMOVAL OF THIS MATERIAL IS INCLUDED IN THE BID ITEM "EXCAVATION FOR STRUCTURES BRIDGES B-62-268".



ELEVATION
 (LOOKING NORTH)

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. SUPERSTRUCTURE DETAILS
10. SINGLE SLOPE PARAPET 42SS

NO.	DATE	REVISION	BY

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

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION
 ACCEPTED *[Signature]* SDR **07/31/23**
 CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-62-268

CTH P OVER WARNER CREEK

COUNTY VERNON TOWN/CITY/VILLAGE FOREST

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY JZ/JDH DESIGN CK'D. JRS DRAWN BY RLR PLANS CK'D. JRS

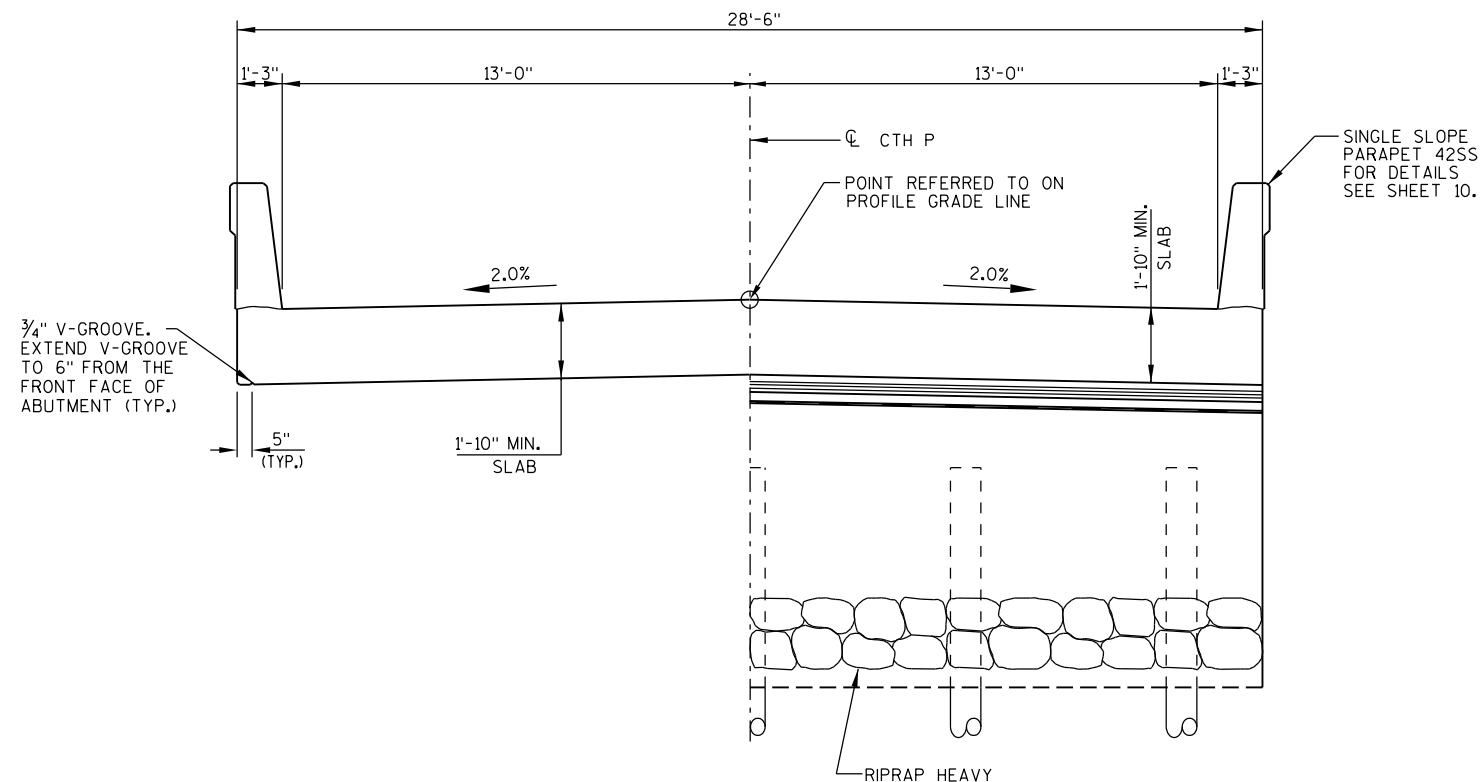
GENERAL PLAN SHEET 1 OF 10



5/31/2023

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

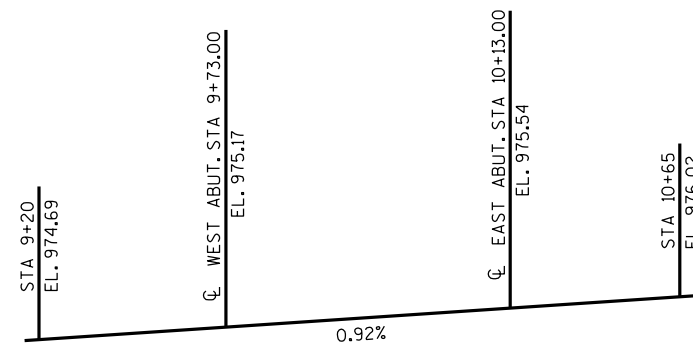
BRIDGE OFFICE CONTACT:
 AARON BONK
 (608) 261-0261



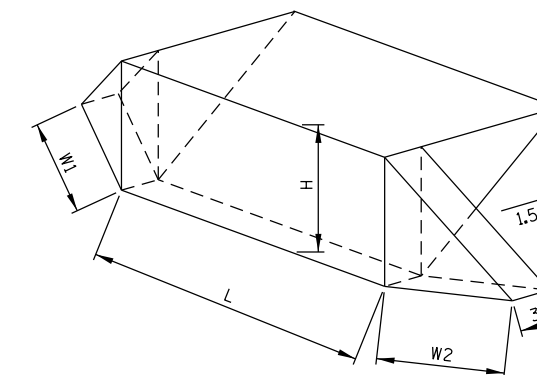
IN SPAN AT ABUTMENTS
CROSS SECTION THRU BRIDGE
(LOOKING EAST)

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.
- DO NOT PLACE FILL ABOVE 3'-0" FROM THE BOTTOM OF ABUTMENT UNTIL THE SUPERSTRUCTURE IS IN PLACE.
- 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-62-268" 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-62-954, A 34.3 FT. LONG STEEL DECK GIRDER BRIDGE WITH CLEAR ROADWAY WIDTH OF 24.3 FT. SUPPORTED ON FULL RETAINING TIMBER ABUTMENTS WITH TIMBER PILING.
- ⓑ- 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 BACK FACE OF THE ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.
- THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND THE ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.
- EXCAVATION SHALL EXTEND BELOW THE ABUTMENT AS DETAILED ON SHEET 1 AND IN THE STRUCTURE BACKFILL DETAIL BELOW. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF ABUTMENT OR TOP OF BREAKER RUN AND EXTEND 2'-0" ABOVE THE BOTTOM OF ABUTMENT.
- PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP OF SLAB, TO THE TOPS OF WINGS, TO THE EXPOSED FRONT FACES OF WINGS, TO THE END 1'-0" OF THE ABUTMENT BODY FRONT FACES, AND TO THE FACE AND TOP OF PAVING NOTCHES.
- PIGMENTED SURFACE SEALER SHALL BE APPLIED TO THE INSIDE FACES, THE TOP FACES, AND THE ENDS OF PARAPETS.
- 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.
- AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.



PROFILE GRADE LINE - CTH P

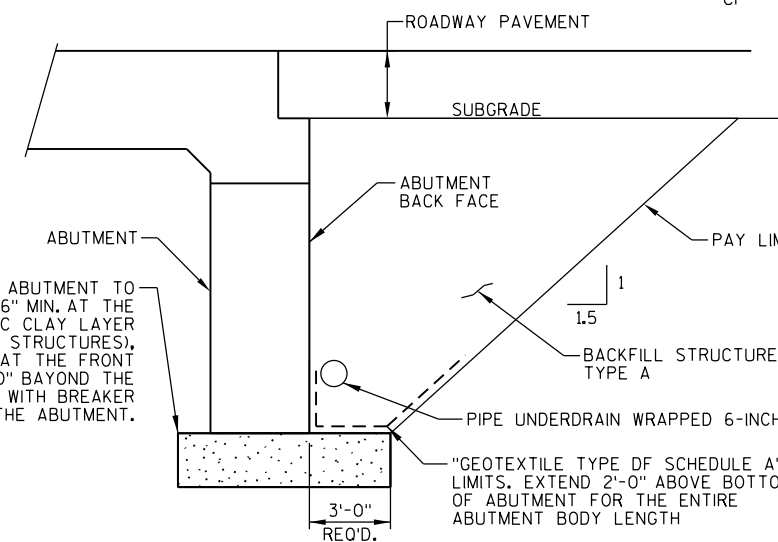


ABUTMENT BACKFILL DIAGRAM

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

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEM	UNIT	WEST ABUT.	EAST ABUT.	SUPER	TOTAL
203.0260.01	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-62-954	EACH	-	-	-	1
206.1001.01	EXCAVATION FOR STRUCTURES BRIDGES B-62-268	EACH	-	-	-	1
ⓑ-210.1500	BACKFILL STRUCTURE TYPE A	TON	200	200	-	400
311.0110	BREAKER RUN	TON	48	36	-	84
502.0100	CONCRETE MASONRY BRIDGES	CY	34.8	34.8	98.3	168
502.3200	PROTECTIVE SURFACE TREATMENT	SY	19	19	132	170
502.3210	PIGMENTED SURFACE SEALER	SY	-	-	44	44
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,490	2,490	-	4,980
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,620	1,620	17,830	21,070
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	7	7	-	14
550.2106	PILING CIP CONCRETE 10 3/4 X 0.365-INCH	LF	127	127	-	254
606.0300	RIPRAP HEAVY	CY	65	60	-	125
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	95	95	-	190
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	55	55	-	110
645.0120	GEOTEXTILE TYPE HR	SY	120	110	-	230
NON-BID ITEMS						
	PREFORMED FILLER	SIZE				1/2" & 3/4"



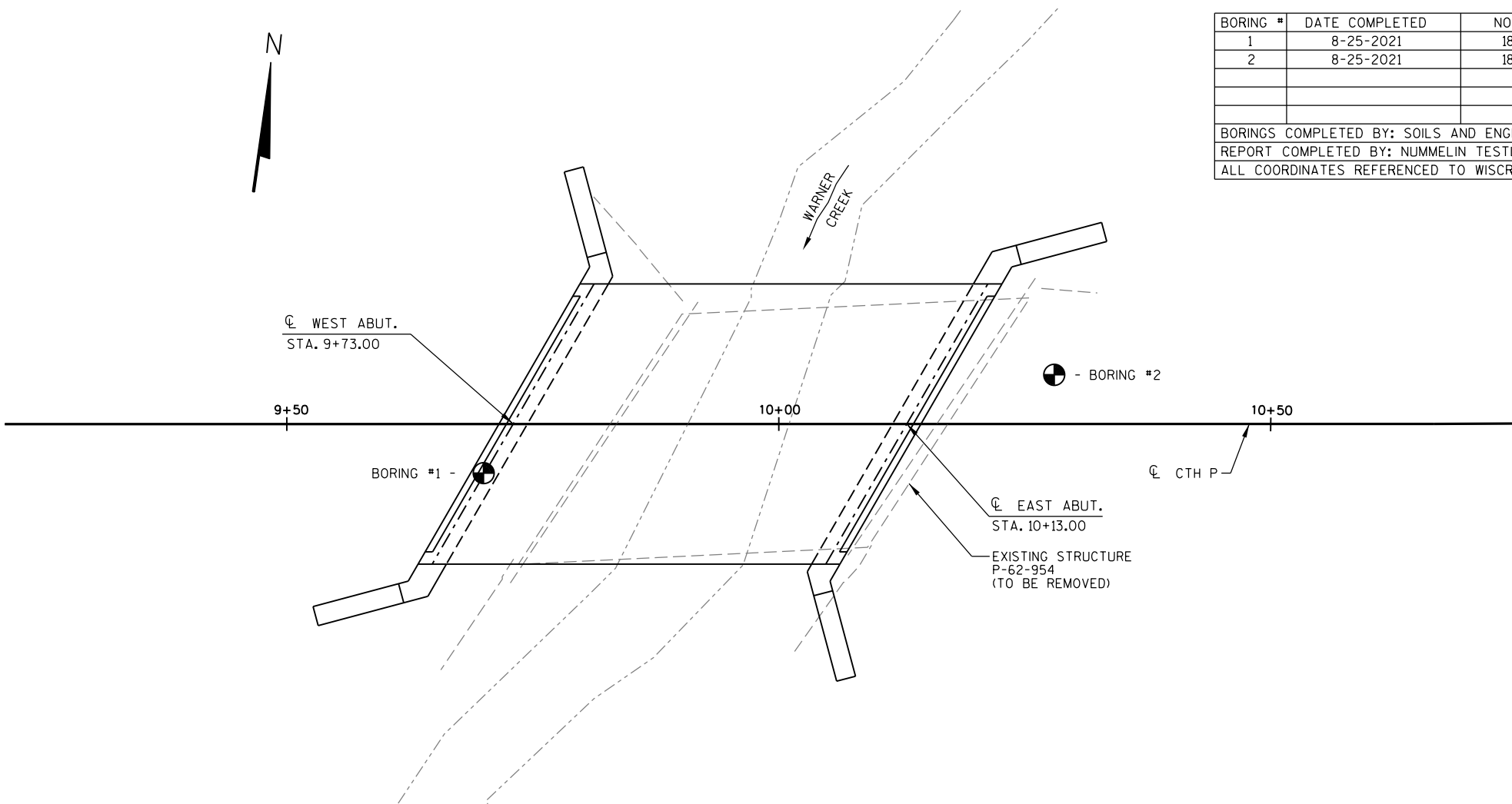
STRUCTURE BACKFILL DETAIL

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-62-268			
DRAWN BY RLR		PLANS CK'D. JRS	
CROSS SECTION, QUANTITIES & NOTES			SHEET 2 OF 10



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	8-25-2021	181,080.2	806,370.6
2	8-25-2021	181,098.4	806,426.5

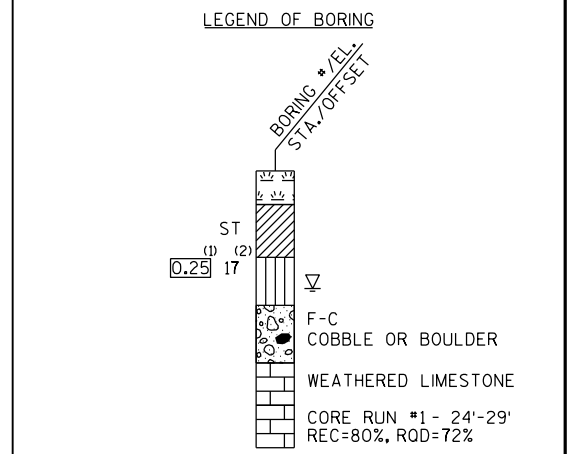
BORINGS COMPLETED BY: SOILS AND ENGINEERING SERVICES, INC.
 REPORT COMPLETED BY: NUMMELIN TESTING SERVICES, INC.
 ALL COORDINATES REFERENCED TO WISCRS NAD 83(2011) VERNON COUNTY



STATE PROJECT NUMBER
5478-00-77

MATERIAL SYMBOLS

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



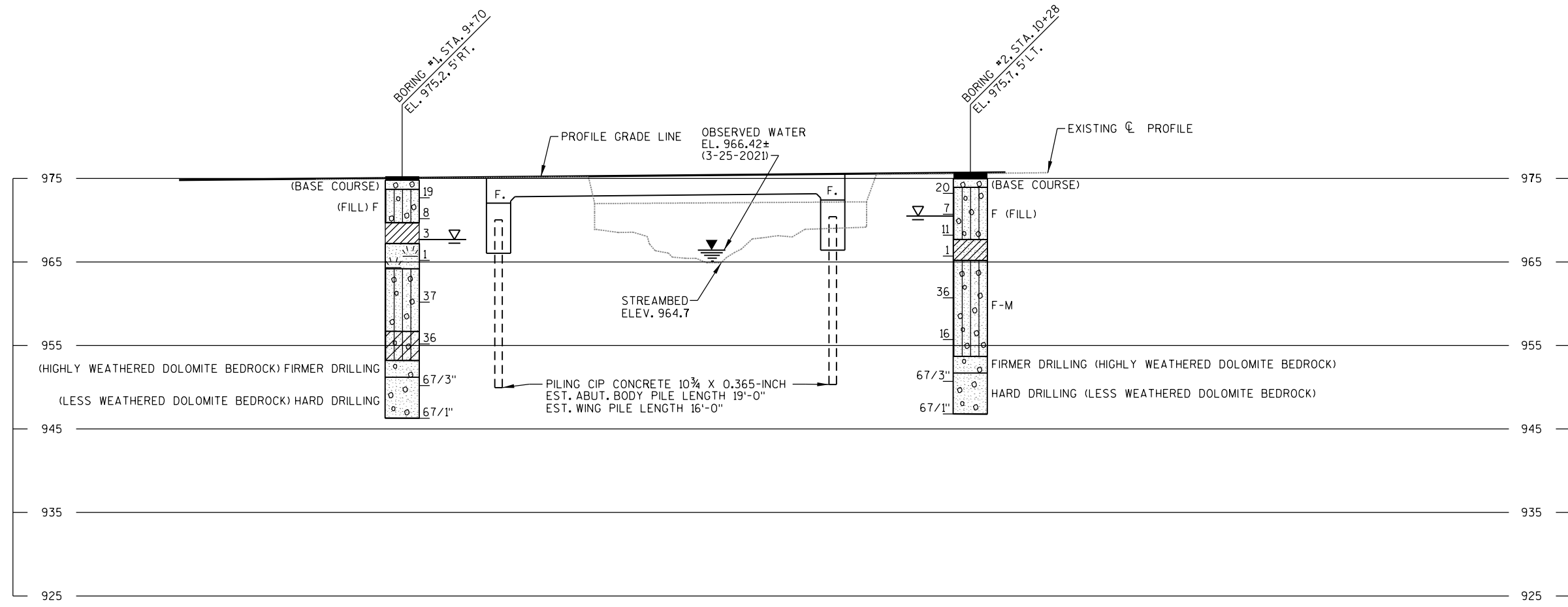
(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
 (2) UNLESS OTHERWISE SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

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.

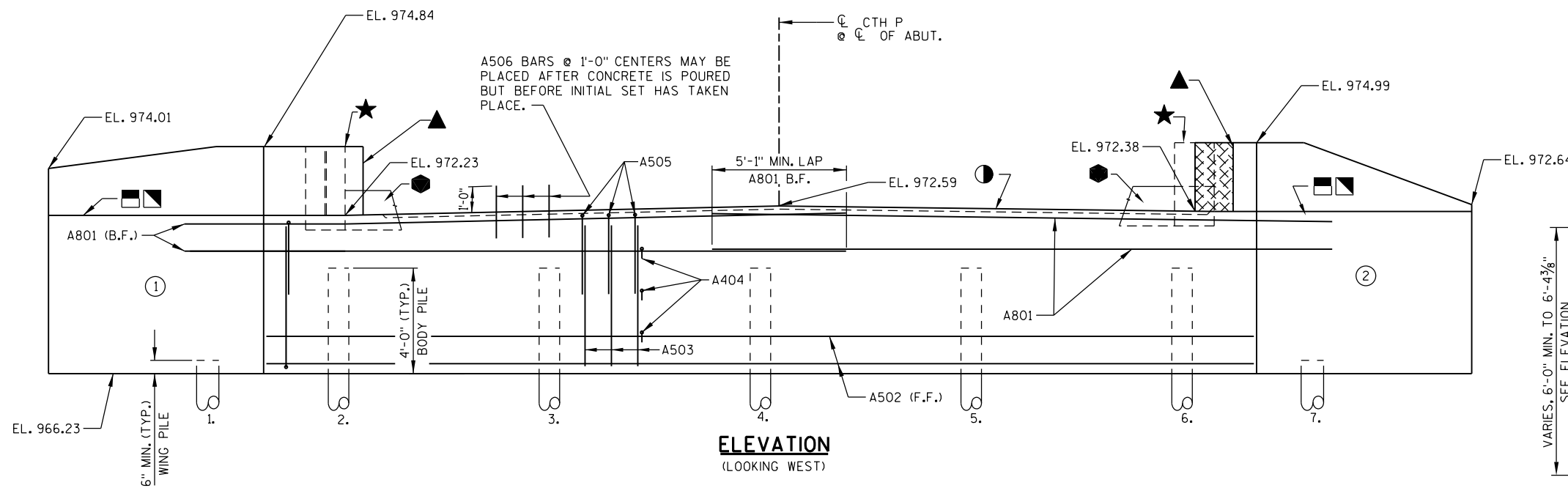


8

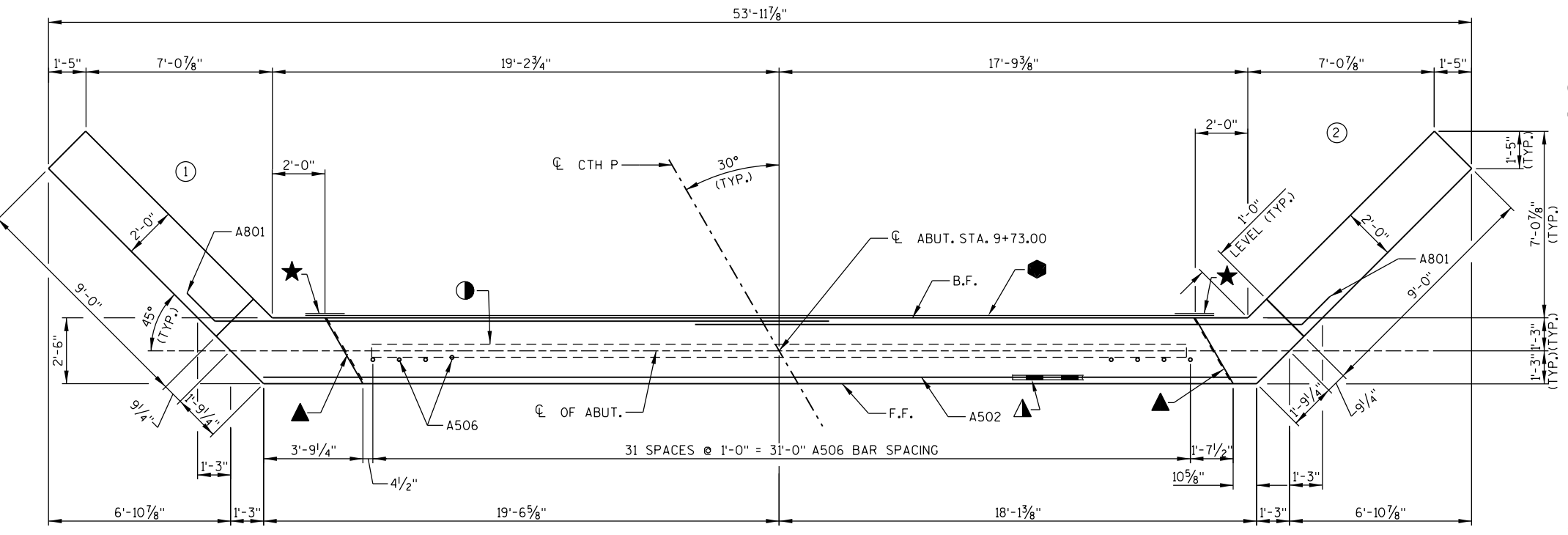
8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-268	
DRAWN BY	RLR	PLANS CK'D.	JRS
SUBSURFACE EXPLORATION		SHEET 3 OF 10	

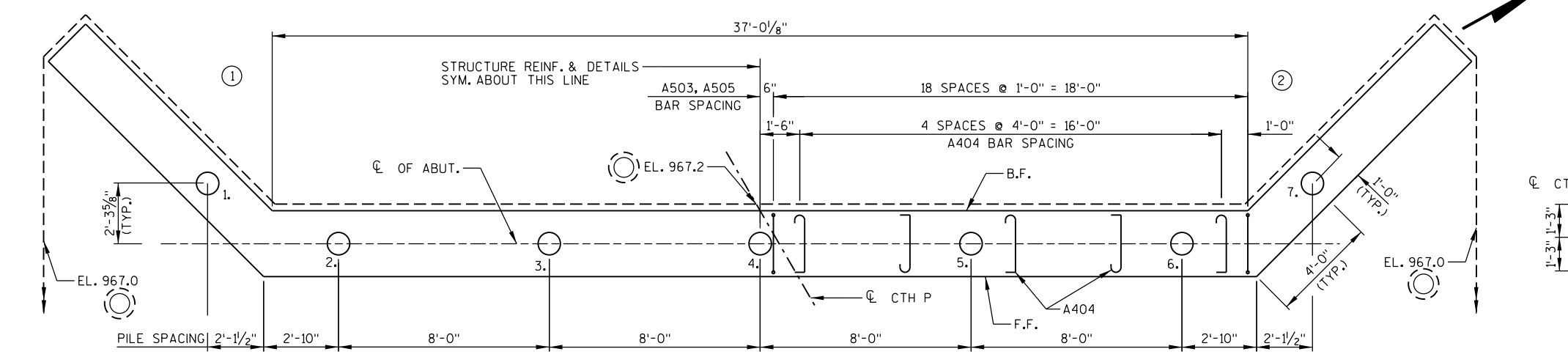
NOTE:
FOR WING DETAILS, SEE SHEET 5.



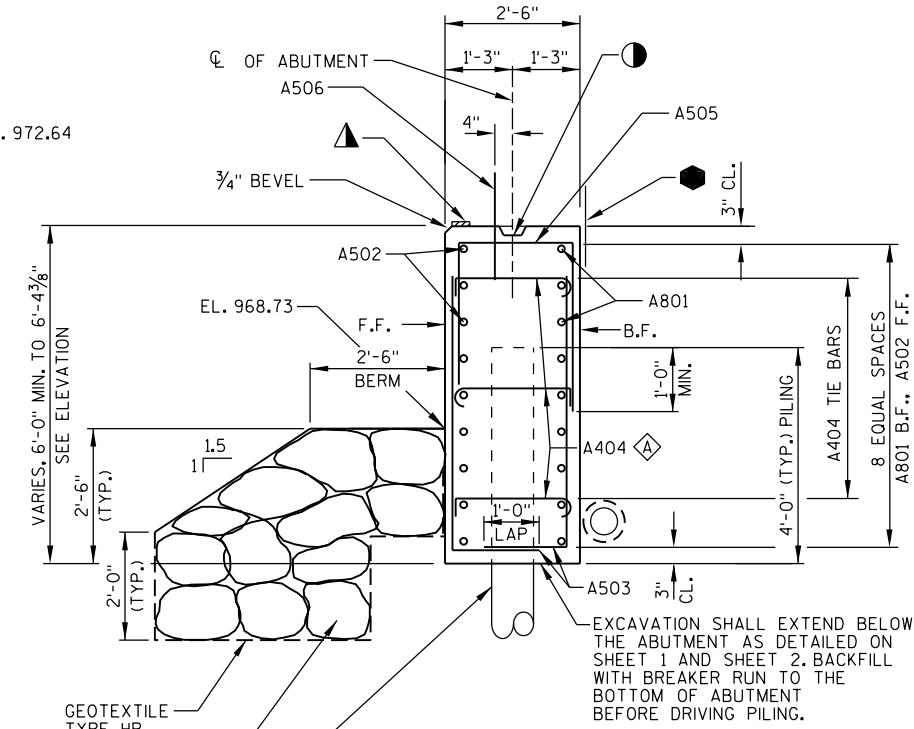
ELEVATION
(LOOKING WEST)



PLAN



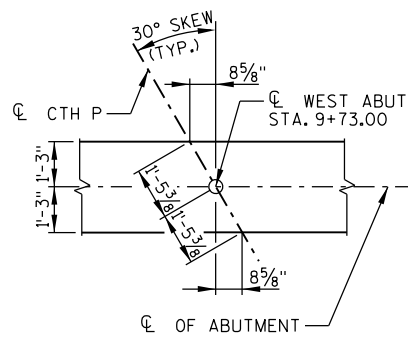
PILE PLAN



TYPICAL SECTION THRU ABUTMENT

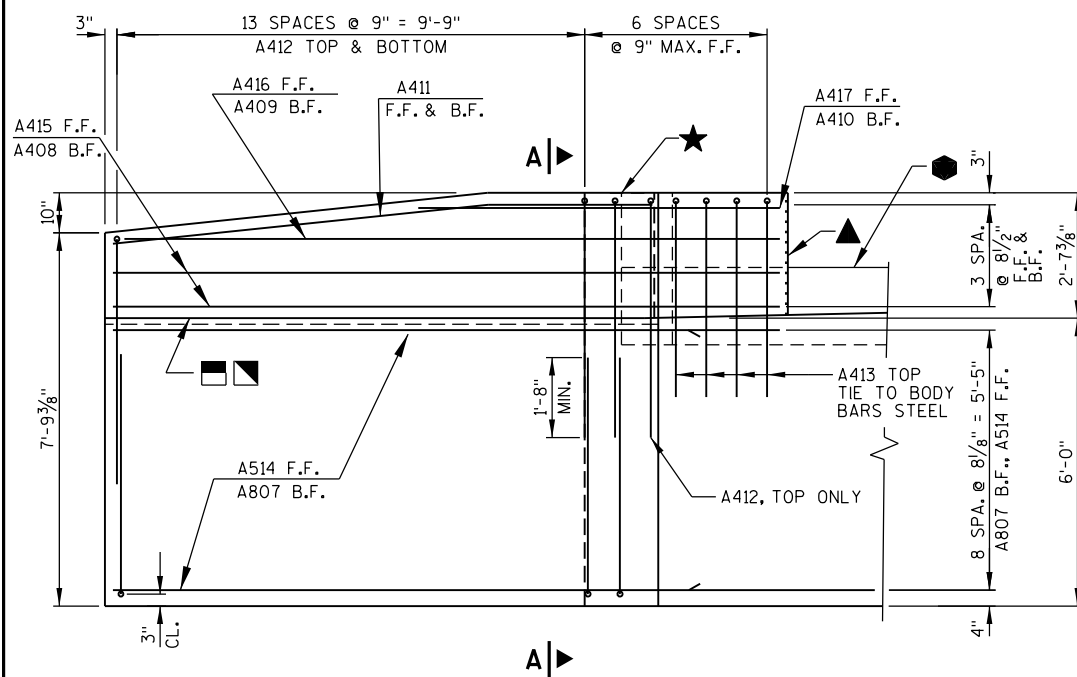
LEGEND

- INDICATES WING NUMBER
 - ◇ ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
 - 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 FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT SHIELD AT ENDS OF PIPE. FOR RODENT DETAILS, SEE SHEET 5.
- F.F. — FRONT FACE B.F. — BACK FACE CL. — CLEAR

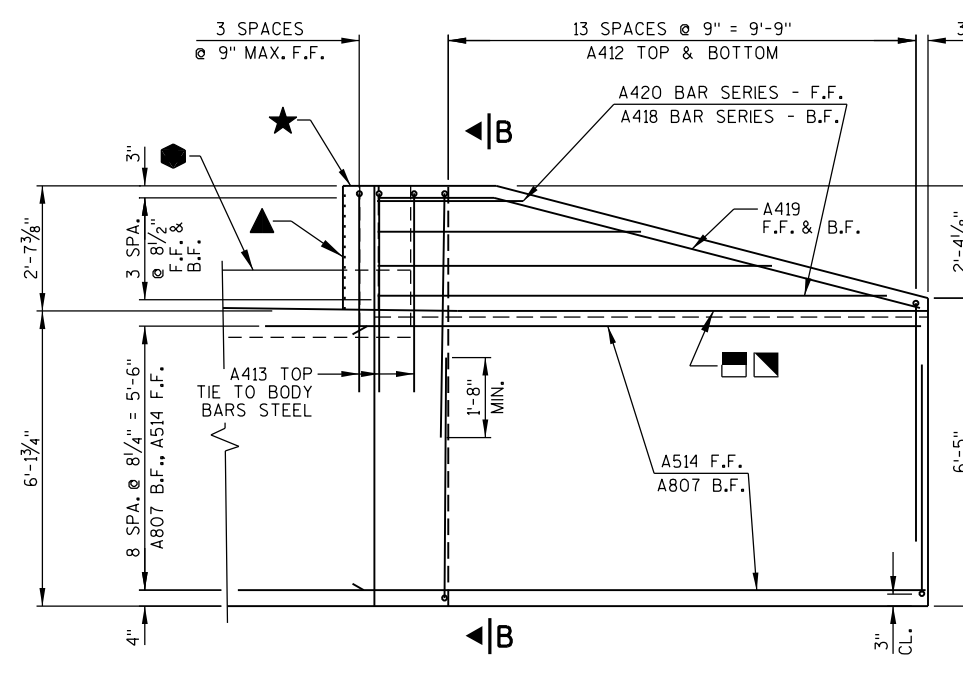


LAYOUT DETAIL

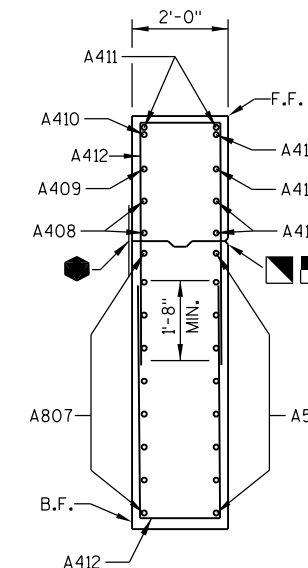
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-268	
DRAWN BY EKK		PLANS CK'D. JDH	
WEST ABUTMENT			SHEET 4 OF 10



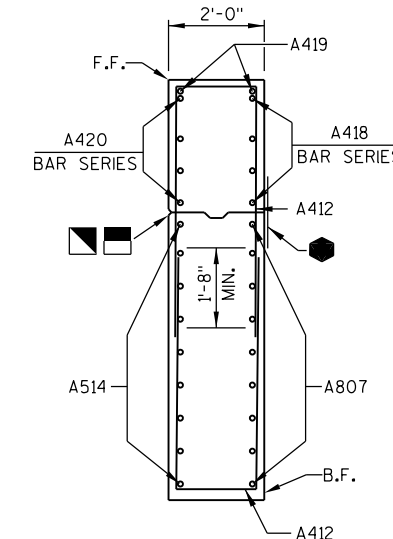
ELEVATION - WING 1
(LOOKING AT F.F. OF WING)



ELEVATION - WING 2
(LOOKING AT F.F. OF WING)



SECTION A-A THRU WING 1

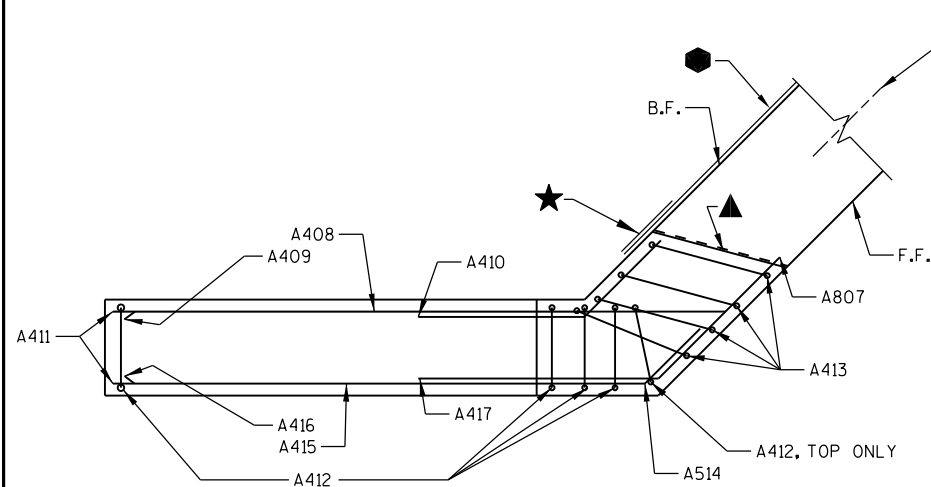


SECTION B-B THRU WING 2

UNCOATED 2490 LBS.
COATED 1620 LBS.

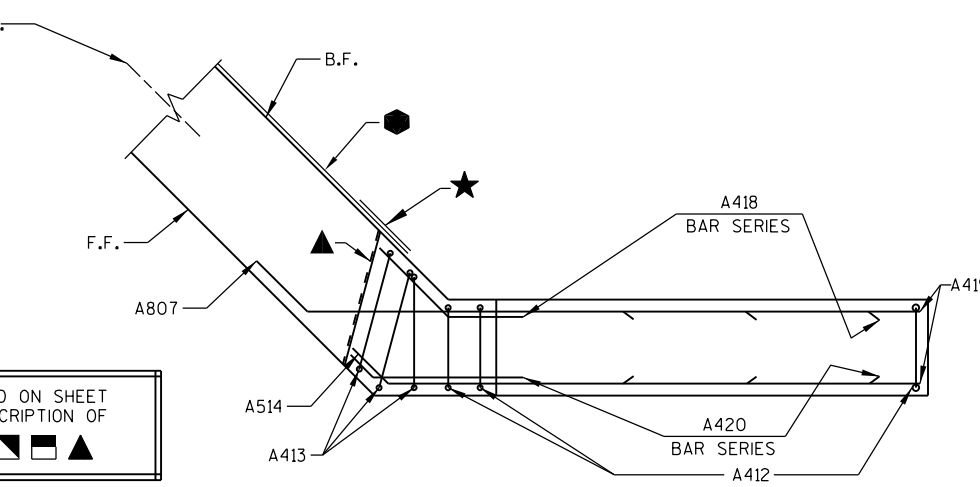
BILL OF BARS (WEST ABUTMENT)

MARK	NUMBER COATED	NUMBER UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
A801	-	18	24'-11"	X		ABUTMENT BODY - B.F. - HORIZ.
A502	-	9	37'-8"			ABUTMENT BODY - F.F. - HORIZ.
A503	-	76	7'-0"	X		ABUTMENT BODY - F.F. & B.F. - VERT.
A404	-	30	3'-0"	X		ABUTMENT BODY - TIES - HORIZ.
A505	-	38	8'-3"	X		ABUTMENT BODY - TOP - VERT.
A506	32	-	2'-0"			ABUTMENT BODY - TOP DOWELS - VERT.
A807	18	-	14'-2"	X		WINGS - B.F. - HORIZ.
A408	2	-	11'-11"	X		WING 1 - B.F. - HORIZ.
A409	1	-	11'-8"	X		WING 1 - B.F. - HORIZ.
A410	1	-	5'-6"	X		WING 1 - B.F. - HORIZ.
A411	2	-	11'-4"	X		WING 1 - F.F. & B.F. - TOP - HORIZ.
A412	59	-	11'-6"	X		WINGS - TOP & BOTTOM - VERT.
A413	7	-	10'-8"	X		WINGS - TOP - VERT.
A514	18	-	12'-9"	X		WINGS - F.F. - HORIZ.
A415	2	-	14'-6"	X		WING 1 - F.F. - HORIZ.
A416	1	-	14'-3"	X		WING 1 - F.F. - HORIZ.
A417	1	-	8'-1"	X		WING 1 - F.F. - HORIZ.
A418	4	-	7'-1"	X	⊙	WING 2 - B.F. - HORIZ.
A419	2	-	11'-7"	X		WING 2 - F.F. & B.F. - TOP - HORIZ.
A420	4	-	7'-5"	X	⊙	WING 2 - F.F. - HORIZ.



PLAN - WING 1

SEE LEGEND ON SHEET 4 FOR DESCRIPTION OF
★ ● ◻ ▲



PLAN - WING 2

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

⊙ - 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 USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.

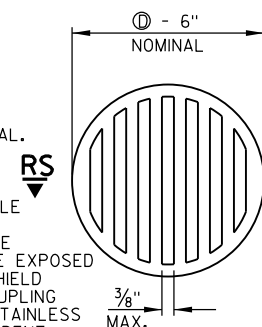
8

RODENT SHIELD NOTES:

ORIENT SHIELD SO SLOTS ARE VERTICAL.

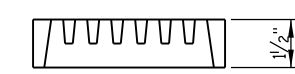
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER.

A PIPE COUPLING IS REQUIRED FOR THE ATTACHEMENT 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".

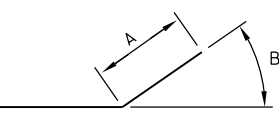


RODENT SHIELD

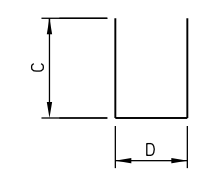
⊙ - DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.



SECTION RS-RS

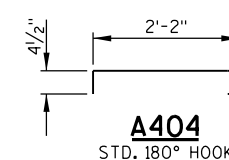


MARK	A	B
A801		
A807	1'-6"	45°
A514		
A408	2'-0"	45°
A409		
A410		
A411	2'-5"	6°
A415		
A416	3'-3"	45°
A417		
A418	1'-9"	45°
A419	2'-5"	15°
A420	9"	45°

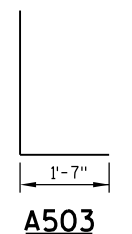


STIRRUPS AND TIES

MARK	C	D
A505	3'-2"	2'-2"
A412	5'-0"	1'-8"
A413	2'-6"	2'-6"



A404
STD. 180° HOOK



A503

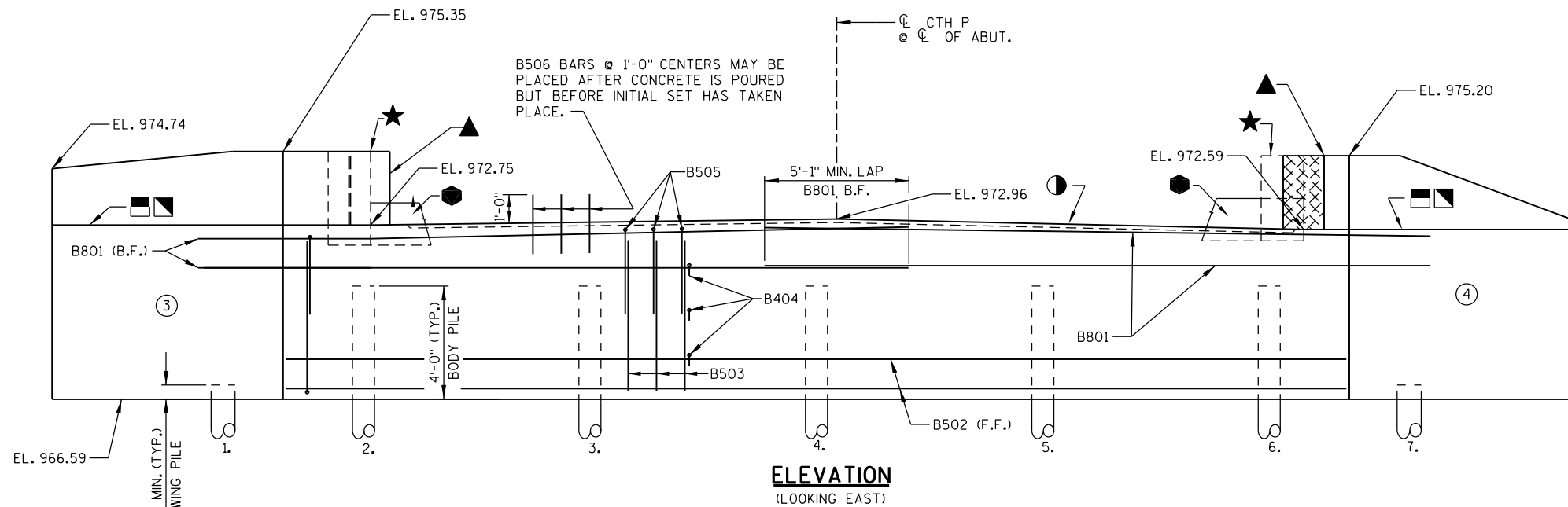
BAR MARK	NO. REQ'D.	LENGTH
A418	1 SERIES OF 4	3'-4" TO 10'-10"
A420	1 SERIES OF 4	3'-9" TO 11'-2"

BAR SERIES TABLE

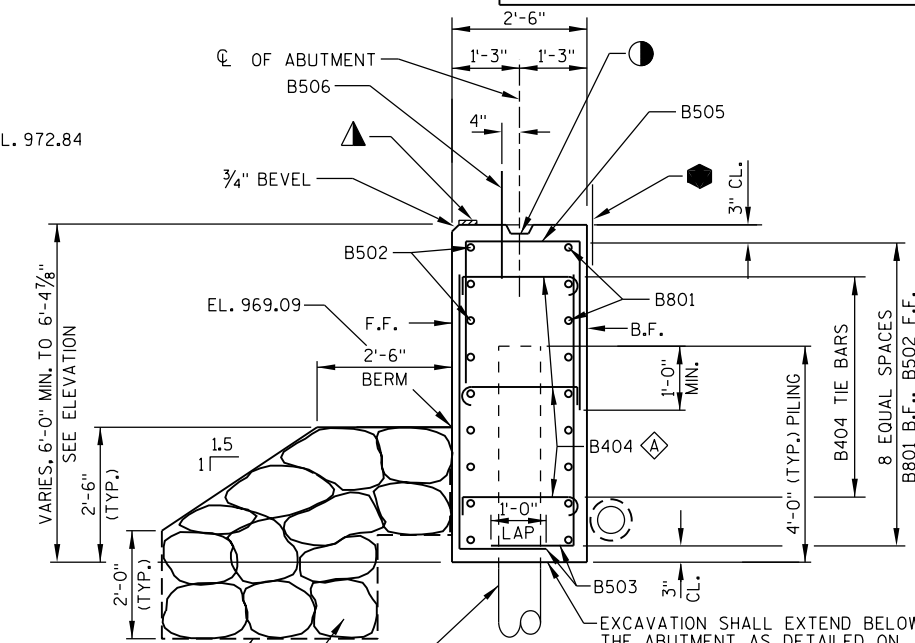
8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-268	
DRAWN BY EKK		PLANS CK'D. JDH	
WEST ABUTMENT DETAILS			SHEET 5 OF 10

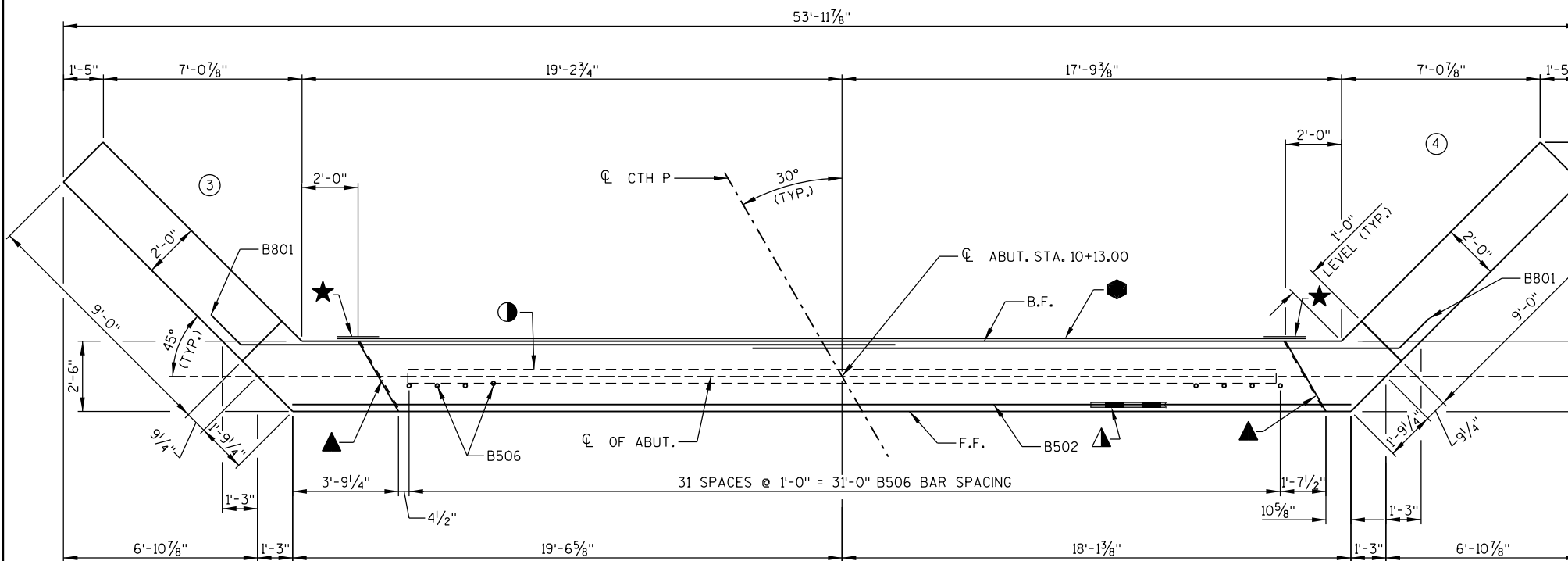
NOTE:
FOR WING DETAILS, SEE SHEET 7.



ELEVATION
(LOOKING EAST)

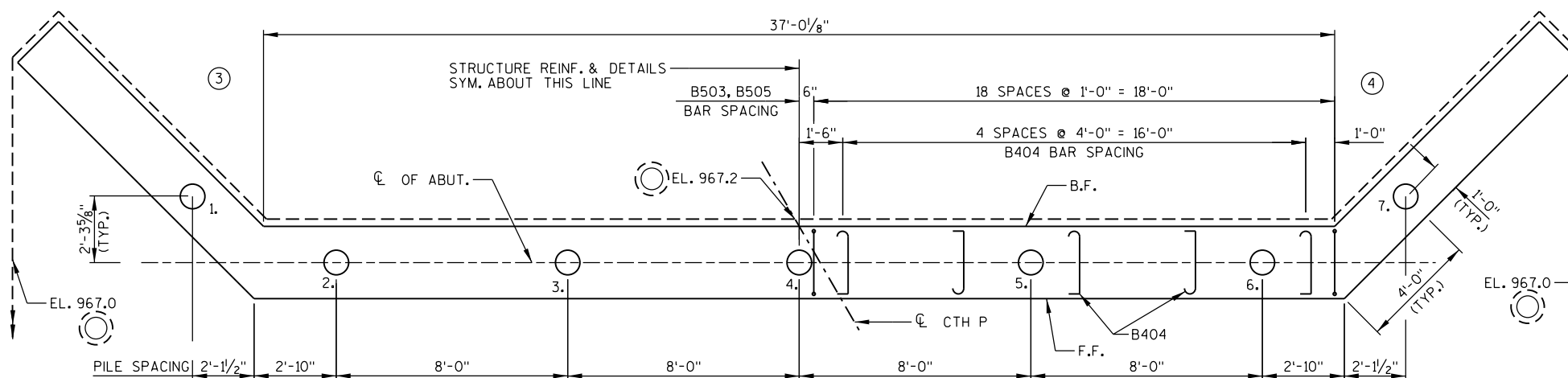


TYPICAL SECTION THRU ABUTMENT

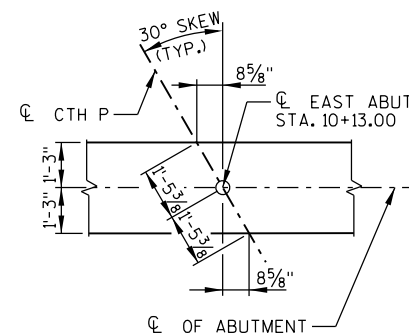


PLAN

- LEGEND**
- — INDICATES WING NUMBER
 - ◊ — ALTERNATE THE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
 - — 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 FABRIC AT FACE OF RIPRAP HEAVY. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. PROVIDE RODENT SHIELD AT ENDS OF PIPE. FOR RODENT DETAILS, SEE SHEET 5.
- F.F. — FRONT FACE B.F. — BACK FACE CL. — CLEAR

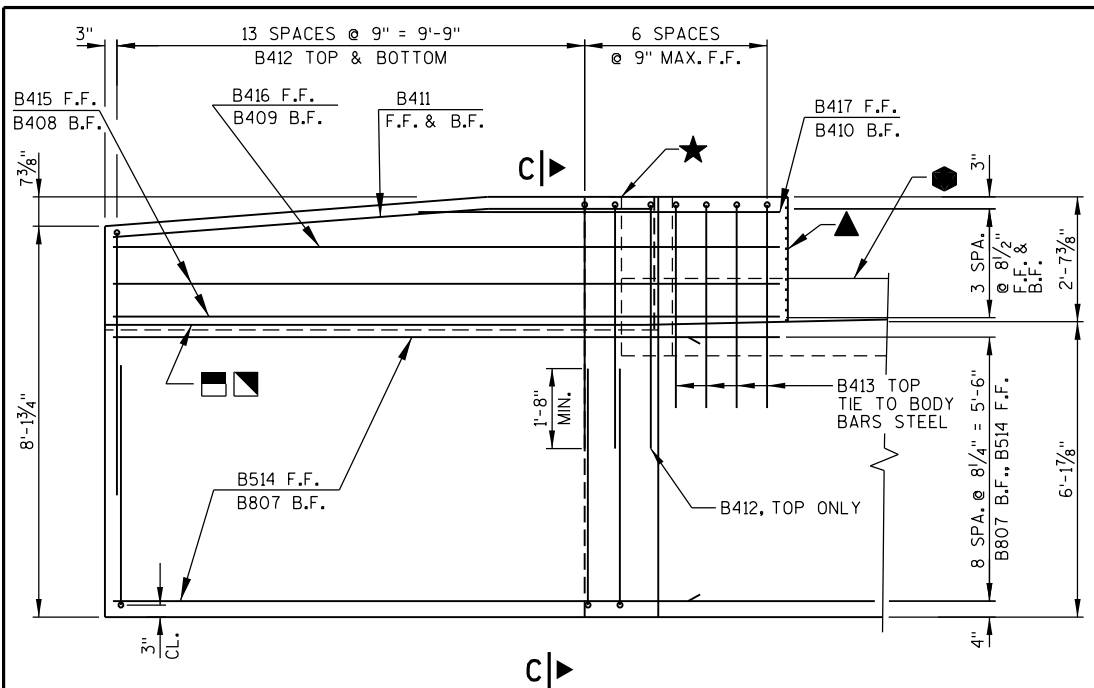


PILE PLAN

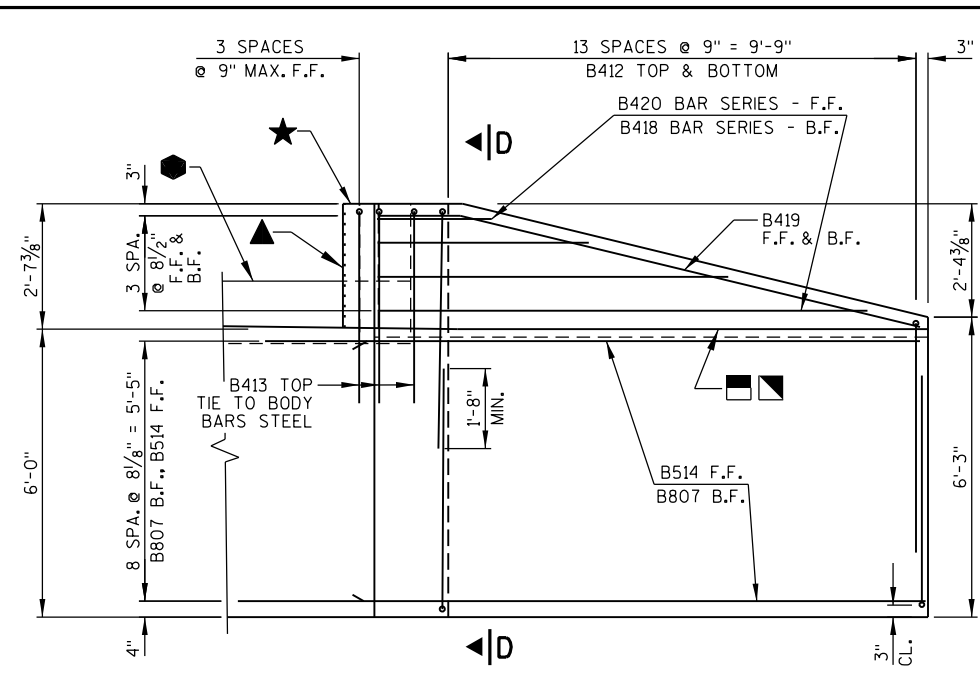


LAYOUT DETAIL

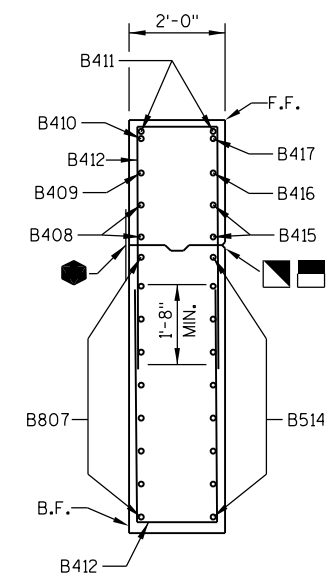
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-268	
DRAWN BY		PLANS CK'D. JDH	
EAST ABUTMENT			SHEET 6 OF 10



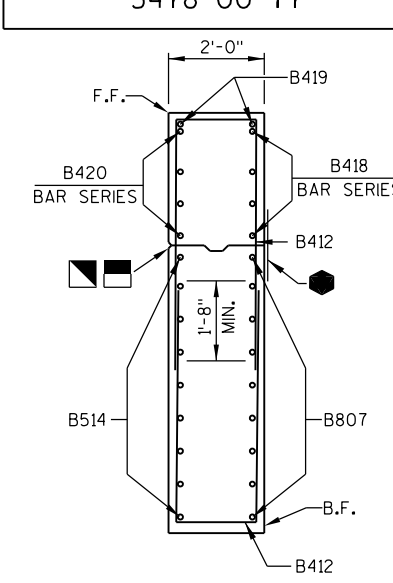
ELEVATION - WING 3
(LOOKING AT F.F. OF WING)



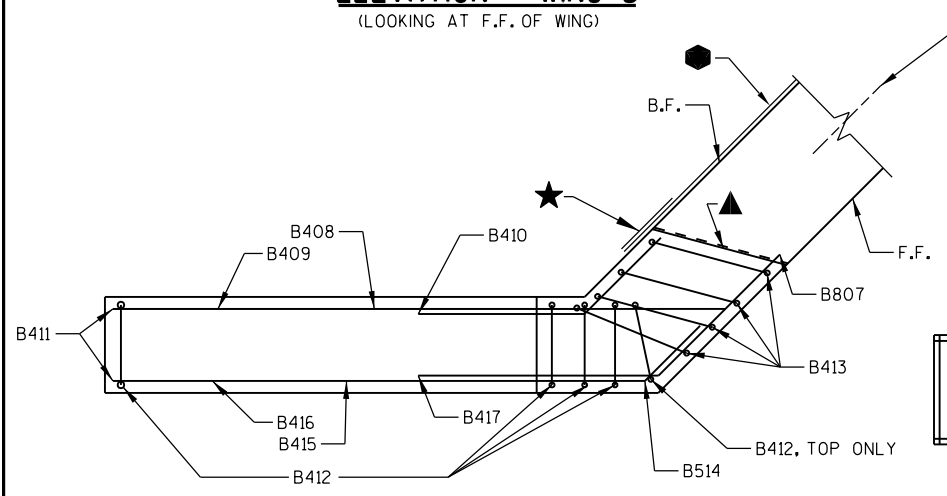
ELEVATION - WING 4
(LOOKING AT F.F. OF WING)



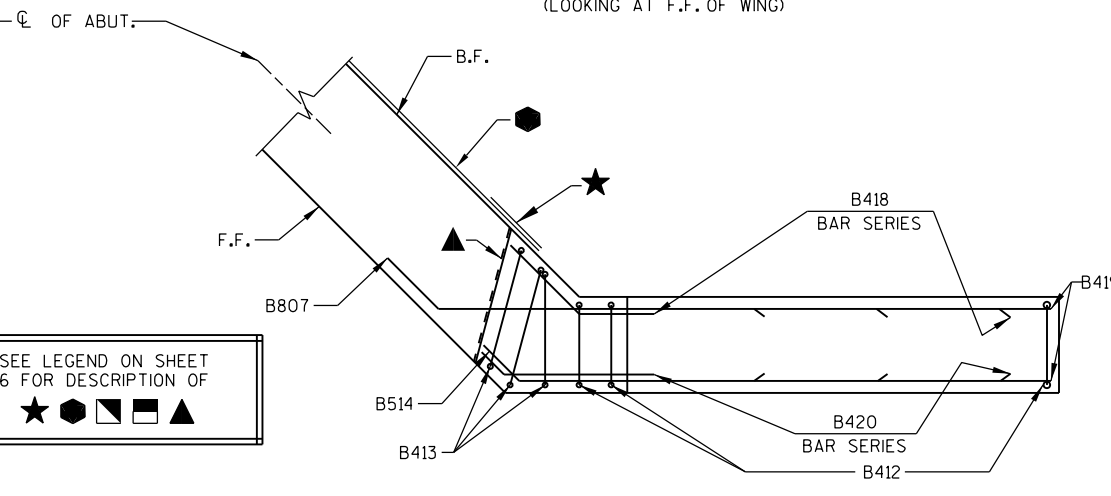
SECTION C-C THRU WING 3



SECTION D-D THRU WING 4



PLAN - WING 3



PLAN - WING 4

BILL OF BARS (EAST ABUTMENT)

**UNCOATED 2490 LBS.
COATED 1620 LBS.**

MARK	NUMBER REQUIRED COATED UNCOATED	LENGTH	BENT	BAR SERIES	LOCATION
B801	- 18	24'-11"	X		ABUTMENT BODY - B.F. - HORIZ.
B502	- 9	37'-8"			ABUTMENT BODY - F.F. - HORIZ.
B503	- 76	7'-0"	X		ABUTMENT BODY - F.F. & B.F. - VERT.
B404	- 30	3'-0"	X		ABUTMENT BODY - TIES - HORIZ.
B505	- 38	8'-3"	X		ABUTMENT BODY - TOP - VERT.
B506	32 -	2'-0"			ABUTMENT BODY - TOP DOWELS - VERT.
B807	18 -	14'-2"	X		WINGS - B.F. - HORIZ.
B408	2 -	11'-11"	X		WING 3 - B.F. - HORIZ.
B409	1 -	11'-11"	X		WING 3 - B.F. - HORIZ.
B410	1 -	5'-6"	X		WING 3 - B.F. - HORIZ.
B411	2 -	11'-3"	X		WING 3 - F.F. & B.F. - TOP - HORIZ.
B412	59 -	11'-6"	X		WINGS - TOP & BOTTOM - VERT.
B413	7 -	10'-8"	X		WINGS - TOP - VERT.
B514	18 -	12'-9"	X		WINGS - F.F. - HORIZ.
B415	2 -	14'-6"	X		WING 3 - F.F. - HORIZ.
B416	1 -	14'-6"	X		WING 3 - F.F. - HORIZ.
B417	1 -	8'-1"	X		WING 3 - F.F. - HORIZ.
B418	4 -	7'-1"	X	⊙	WING 4 - B.F. - HORIZ.
B419	2 -	11'-7"	X		WING 4 - F.F. & B.F. - TOP - HORIZ.
B420	4 -	7'-5"	X	⊙	WING 4 - F.F. - HORIZ.

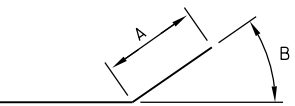
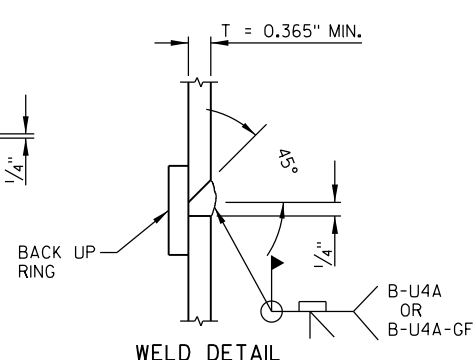
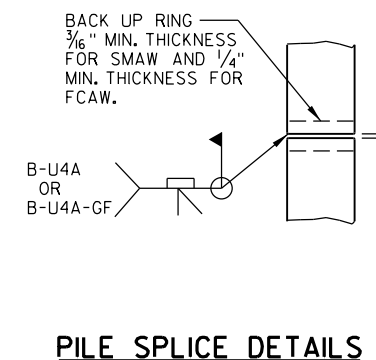
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

⊙ - 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 USED IN BAR SERIES TABLE SHALL BE BENT AFTER CUTTING.

BAR MARK	NO. REQ'D.	LENGTH
B418	1 SERIES OF 4	3'-4" TO 10'-10"
B420	1 SERIES OF 4	3'-9" TO 11'-2"

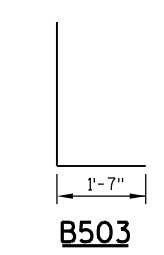
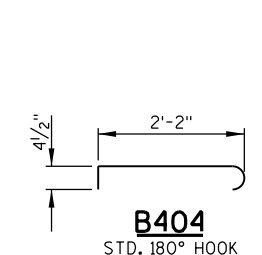
BAR SERIES TABLE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-268	
DRAWN BY EKK		PLANS CK'D. JDH	
EAST ABUTMENT DETAILS			SHEET 7 OF 10



MARK	A	B
B801 B807 B514	1'-6"	45°
B408 B409 B410	2'-0"	45°
B411	2'-5"	5°
B415 B416 B417	3'-3"	45°
B418	1'-9"	45°
B419	2'-5"	14°
B420	9"	45°

STIRRUPS AND TIES		
MARK	C	D
B505	3'-2"	2'-2"
B412	5'-0"	1'-8"
B413	2'-6"	2'-6"



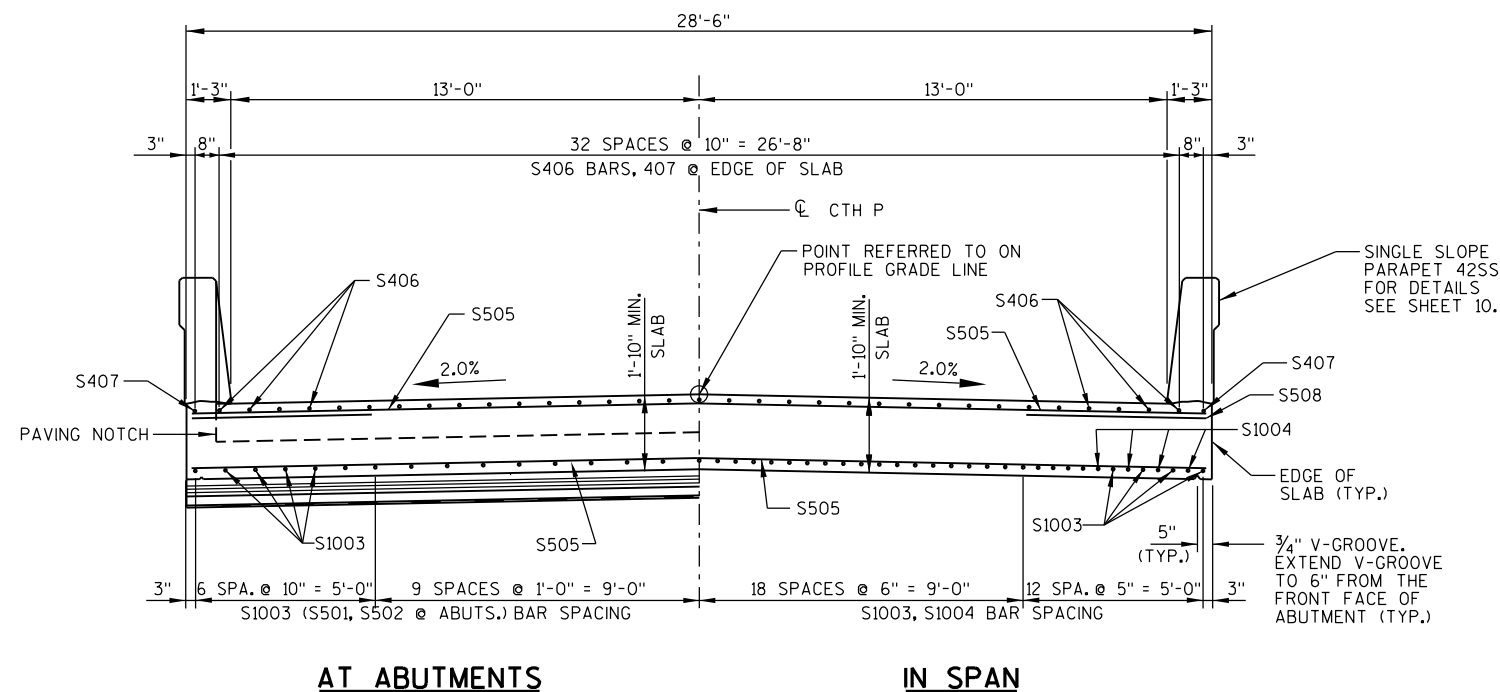
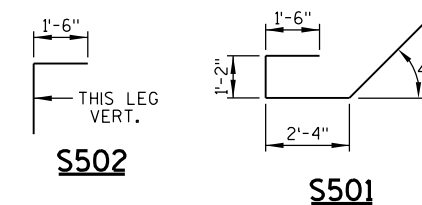
8

8

BILL OF BARS (COATED) 15,430 LBS.

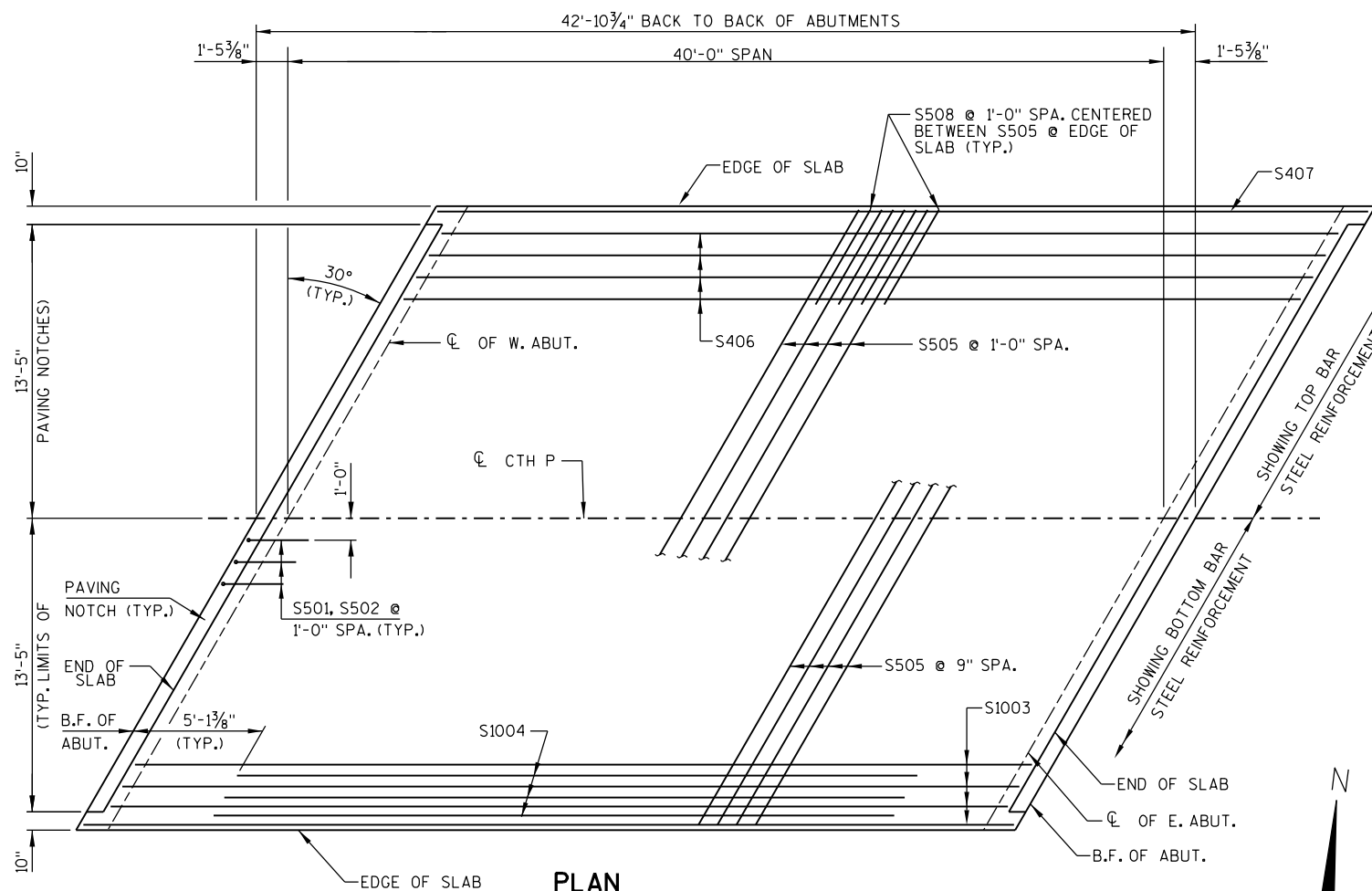
MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
S501	62	6'-9"	X	DIAPHRAGM @ ABUTS. - LONGIT.
S502	61	3'-6"	X	DIAPHRAGM @ ABUTS. - VERT.
S1003	31	42'-6"		SLAB BOTTOM - LONGIT.
S1004	30	32'-8"		SLAB BOTTOM - LONGIT.
S505	103	32'-6"		SLAB TOP & BOTTOM - TRANS.
S406	33	40'-11"		SLAB TOP - LONGIT.
S407	2	42'-6"		SLAB TOP @ EDGE OF SLAB - LONGIT.
S508	82	5'-0"		SLAB TOP @ EDGE OF SLAB - TRANS.

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

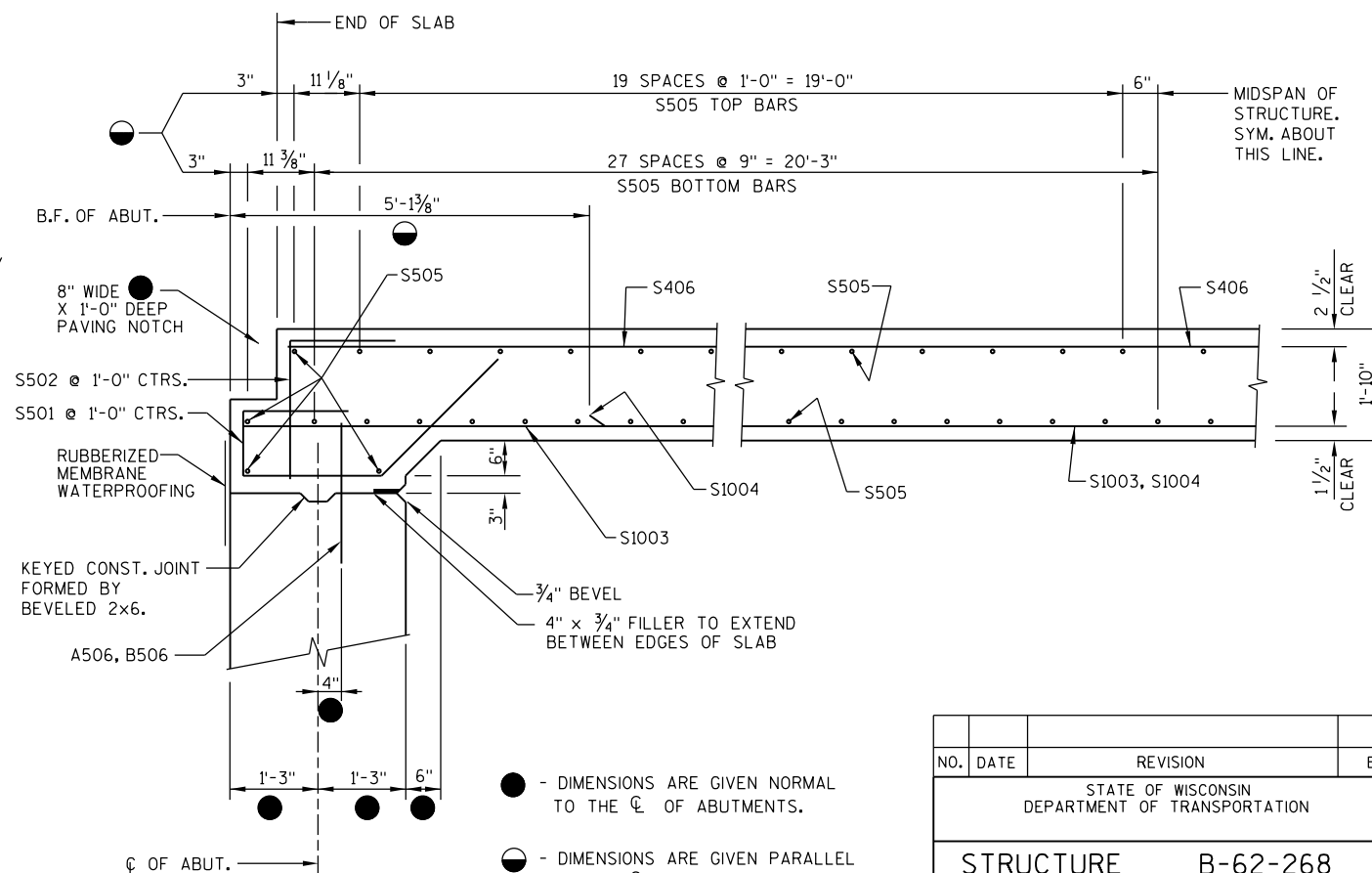


AT ABUTMENTS **IN SPAN**

CROSS SECTION THRU BRIDGE
(LOOKING EAST)



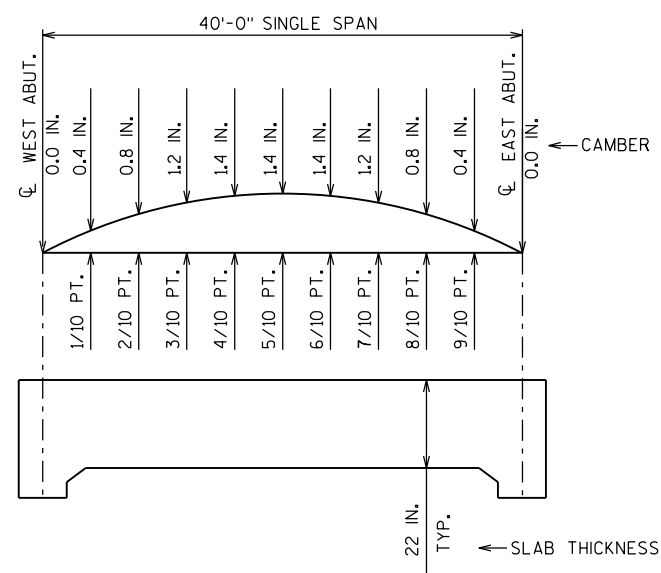
PLAN



PART LONGITUDINAL SECTION

- - DIMENSIONS ARE GIVEN NORMAL TO THE ϕ OF ABUTMENTS.
- - DIMENSIONS ARE GIVEN PARALLEL TO THE ϕ CTH P.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-268	
DRAWN BY EKK		PLANS CK'D. JDH	
SUPERSTRUCTURE		SHEET 8 OF 10	



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

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

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

TOP OF SLAB ELEVATIONS

	C/L BRG WEST ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	C/L BRG EAST ABUT.
SOUTH EDGE OF SLAB	974.84	974.87	974.91	974.95	974.98	975.02	975.06	975.09	975.13	975.17	975.20
C/L CTH P	975.17	975.21	975.25	975.28	975.32	975.36	975.39	975.43	975.47	975.50	975.54
NORTH EDGE OF SLAB	974.99	975.02	975.06	975.10	975.13	975.17	975.21	975.24	975.28	975.32	975.35

SURVEY TOP OF SLAB ELEVATIONS

	← C/L WEST ABUTMENT	5/10 PT.	C/L EAST ABUTMENT
SOUTH GUTTER			
C/L CTH P			
NORTH GUTTER			

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

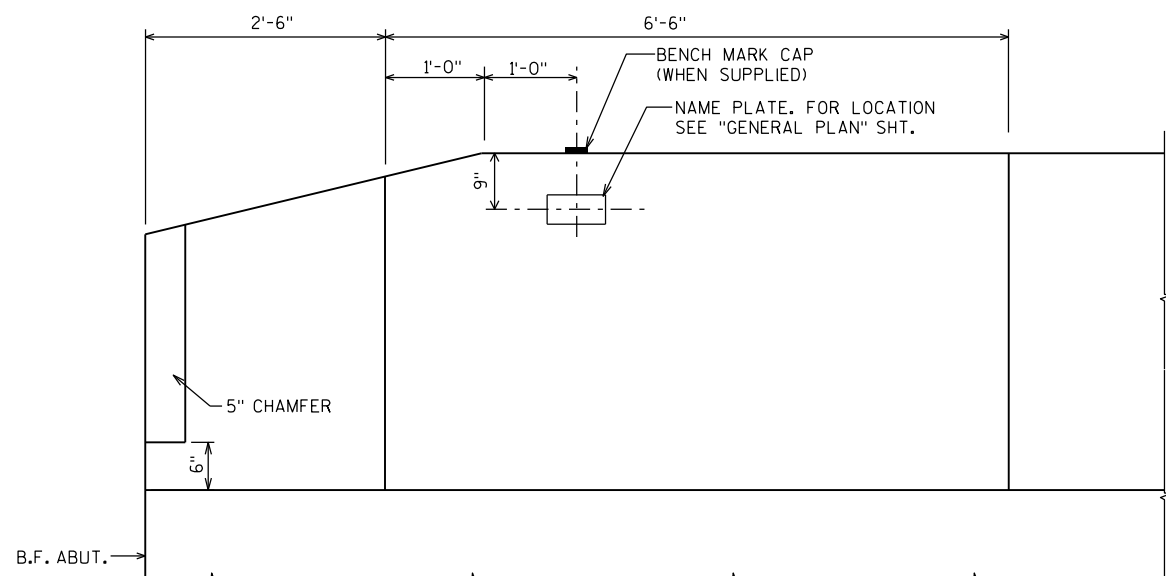
NOTES

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

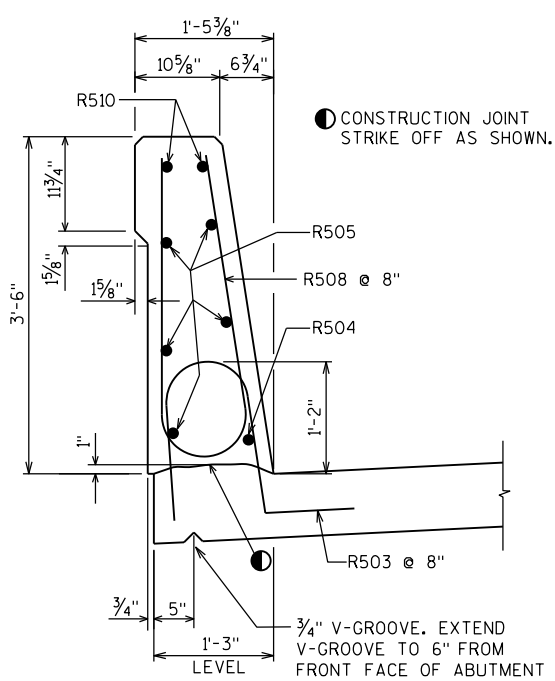
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

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

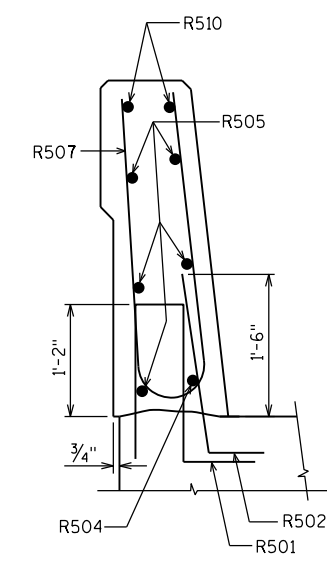
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-268	
DRAWN BY EKK		PLANS CK'D. JDH	
SUPERSTRUCTURE DETAILS		SHEET 9 OF 10	



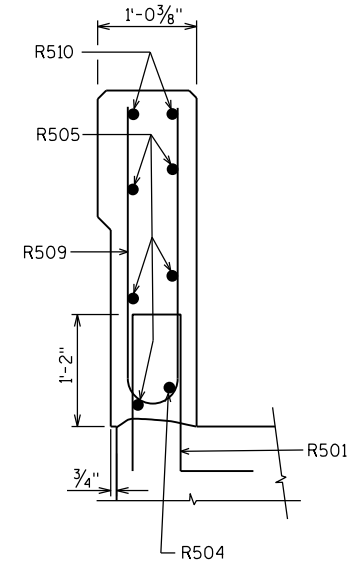
INSIDE ELEVATION



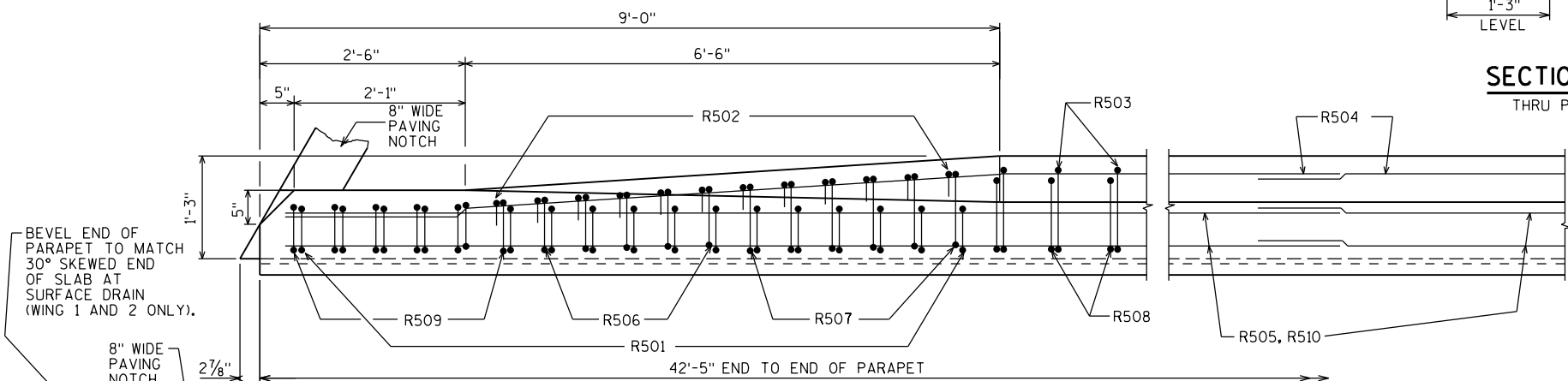
**SECTION C-C
THRU PARAPET**



**SECTION B-B
AT END OF PARAPET**



**SECTION A-A
AT END OF PARAPET**

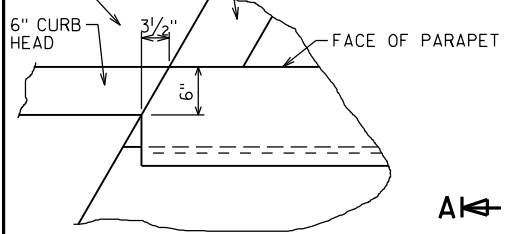


PLAN

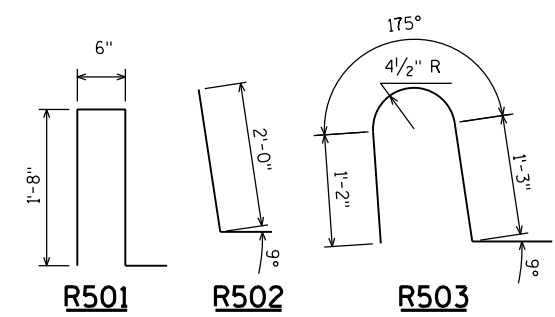
BILL OF BARS (COATED) 2,400 LBS.

MARK	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
R501	68	4'-4"	X		SLAB & PARAPET END - STIRRUP - VERT.
R502	48	2'-9"	X		SLAB & PARAPET END - VERT.
R503	76	4'-5"	X		SLAB & PARAPET - STIRRUP - VERT.
R504	4	22'-0"	X		PARAPET END - BOTTOM - LONGIT.
R505	20	22'-0"			PARAPET - LONGIT.
R506	20	6'-5"	X		PARAPET END - STIRRUP - VERT.
R507	24	6'-6"	X		PARAPET END - STIRRUP - VERT.
R508	76	6'-8"	X		PARAPET - STIRRUP - VERT.
R509	24	5'-5"	X		PARAPET END - STIRRUP - VERT.
R510	4	22'-1"	X		PARAPET TOP - LONGIT.

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR. EPOXY COAT ALL SUPERSTRUCTURE BAR STEEL REINFORCEMENT. LENGTH SHOWN FOR BAR IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS. BEND BAR AFTER CUTTING.



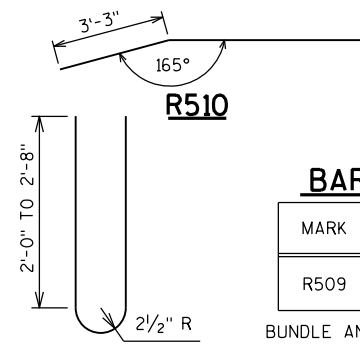
A1



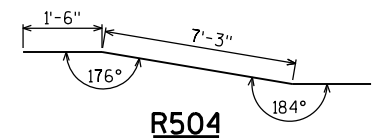
R501

R502

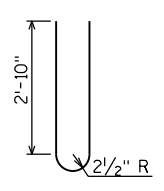
R503



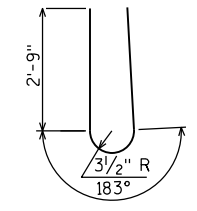
R509



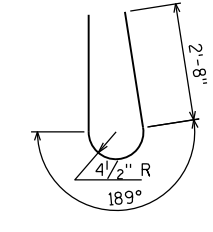
R504



R506



R507

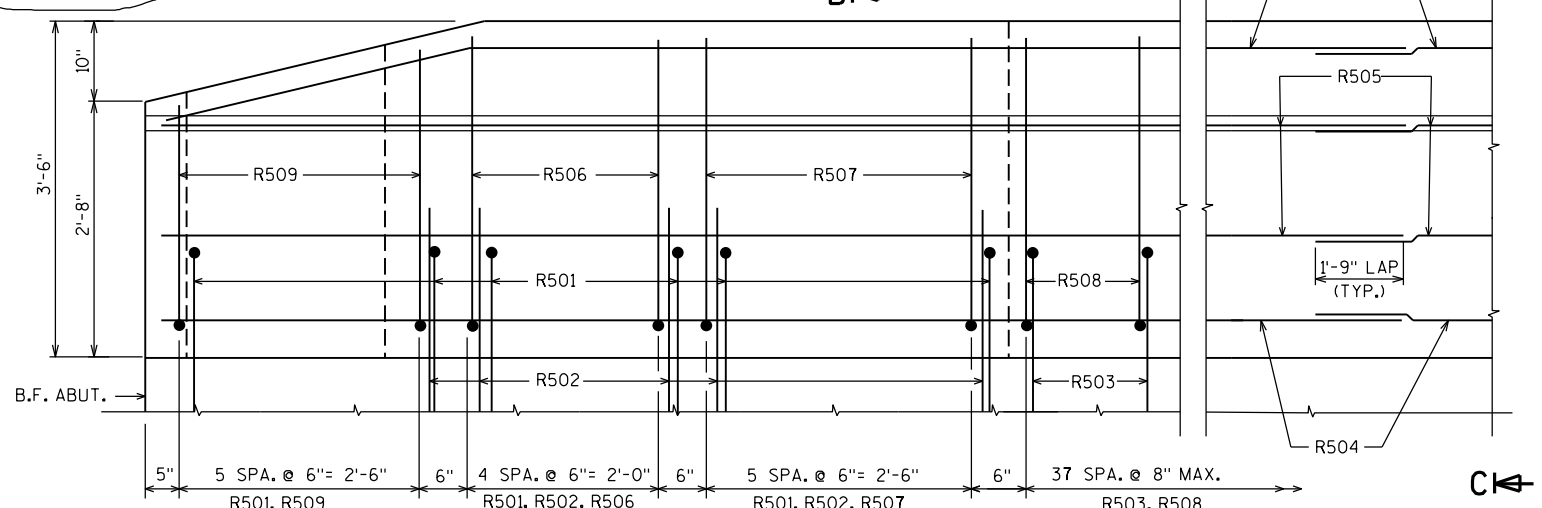


R508

BAR SERIES TABLE

MARK	NO. REOD.	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

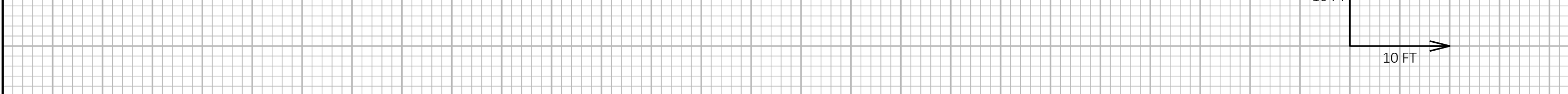
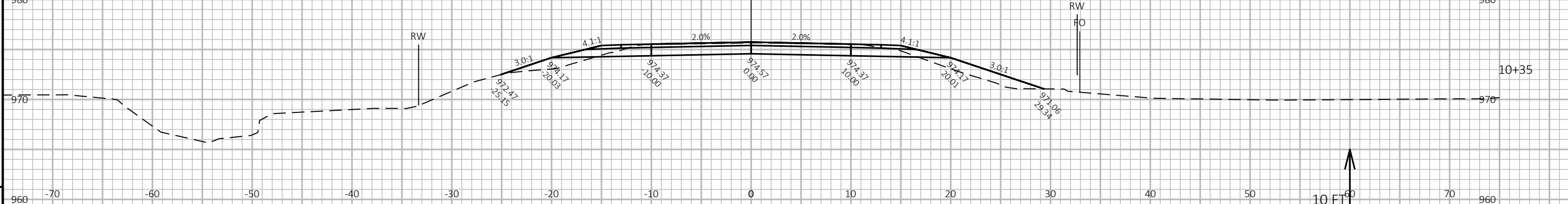
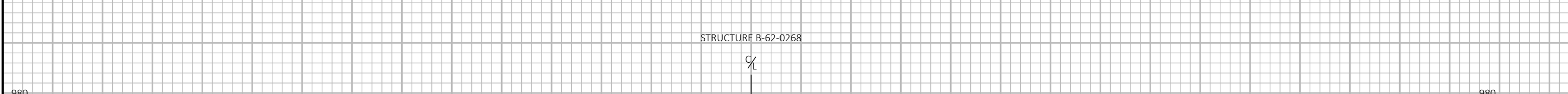
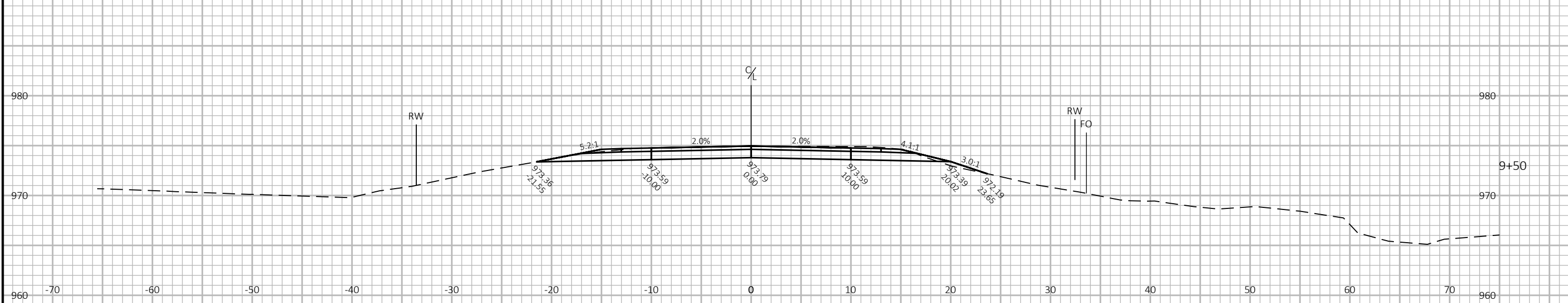
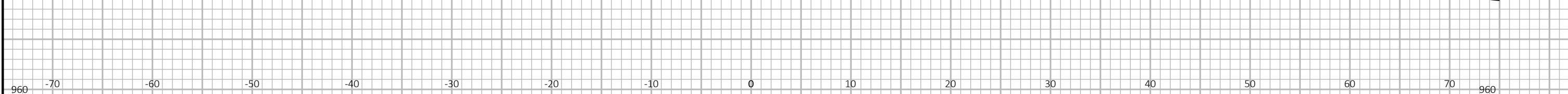
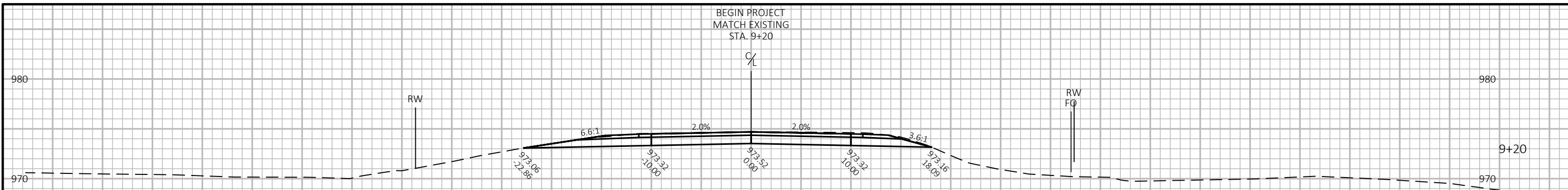


OUTSIDE ELEVATION

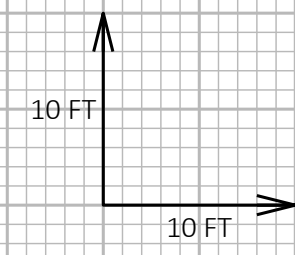
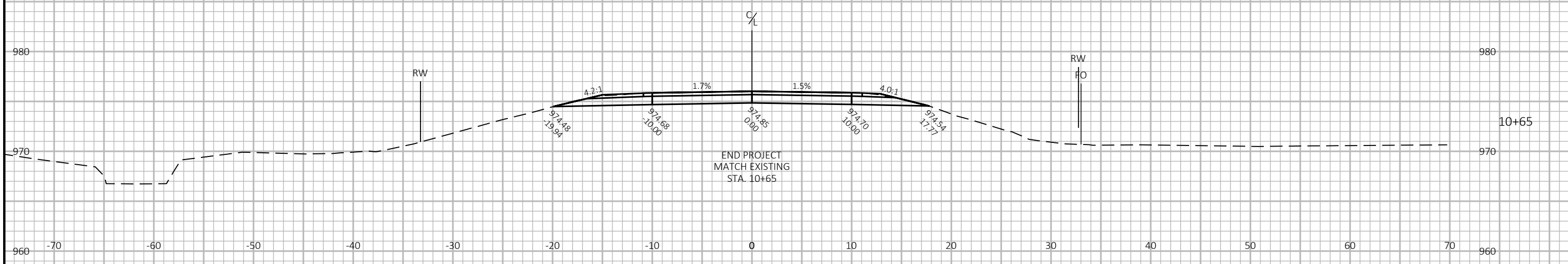
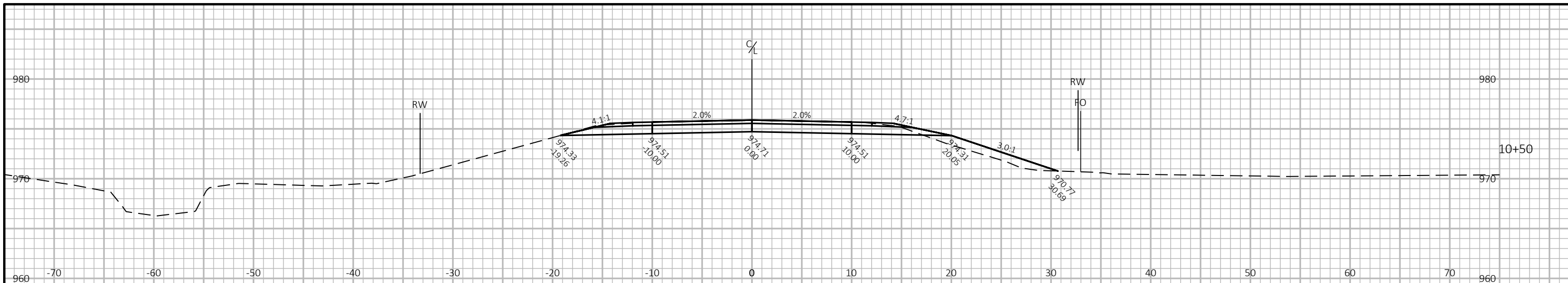
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE		B-62-268	
DRAWN BY EKK		PLANS CK'D. JDH	
SINGLE SLOPE PARAPET 42SS			SHEET 10 OF 10

EARTHWORK SUMMARY

STA	EXCAVATION	EXCAVATION	EXPANDED		WASTE	BORROW
	COMMON	ROCK	FILL (1)	FILL (2)		
	CY	CY	CY	CY	CY	CY
9+20.00	-	-	-	-	-	-
	46.00	0.00	1.00	1.00	45.00	-45.00
9+50.00	-	-	-	-	-	-
	30.00	0.00	6.00	8.00	22.00	-22.00
9+71.56	-	-	-	-	-	-
STRUCTURE B-62-0268						
10+14.44	-	-	-	-	-	-
	16.00	0.00	58.00	75.00	-59.00	59.00
10+35.00	-	-	-	-	-	-
	19.00	0.00	7.00	9.00	10.00	-10.00
10+50.00	-	-	-	-	-	-
	21.00	0.00	3.00	4.00	17.00	-17.00
10+65.00	-	-	-	-	-	-
SUBTOTALS						
W. APPROACH	76.00	0.00	7.00	9.00	67.00	-67.00
E. APPROACH	56.00	0.00	68.00	88.00	-32.00	32.00
UNUSABLE PAVEMENT (3)						46.00
TOTALS	132.00	0.00	75.00	97.00	35.00	11.00
(1) - NOT A BID ITEM - FOR INFORMATIONAL PURPOSES ONLY.						
(2) - FILL EXPANSION 30%						
(3) - EXISTING PAVEMENT BASED ON AVE THK OF 6.75"						



PROJECT NO: 5478-00-77 HWY: CTH P COUNTY: VERNON CROSS SECTIONS: CTH P SHEET E



9

9

PROJECT NO: 5478-00-77	HWY: CTH P	COUNTY: VERNON	CROSS SECTIONS: CTH P	SHEET	E
------------------------	------------	----------------	-----------------------	-------	---

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

<http://www.dot.wisconsin.gov>