

GRE AUGUST 2021
PROJECT ID: 6501-06-71
COUNTY: OUTAGAMIE

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 = 42



DESIGN DESIGNATION

A.A.D.T.	2022	50
A.A.D.T.	2042	55
D.H.V.		50/50
D.D.		
T.		7.0%
DESIGN SPEED		40 MPH
ESALS		17,000

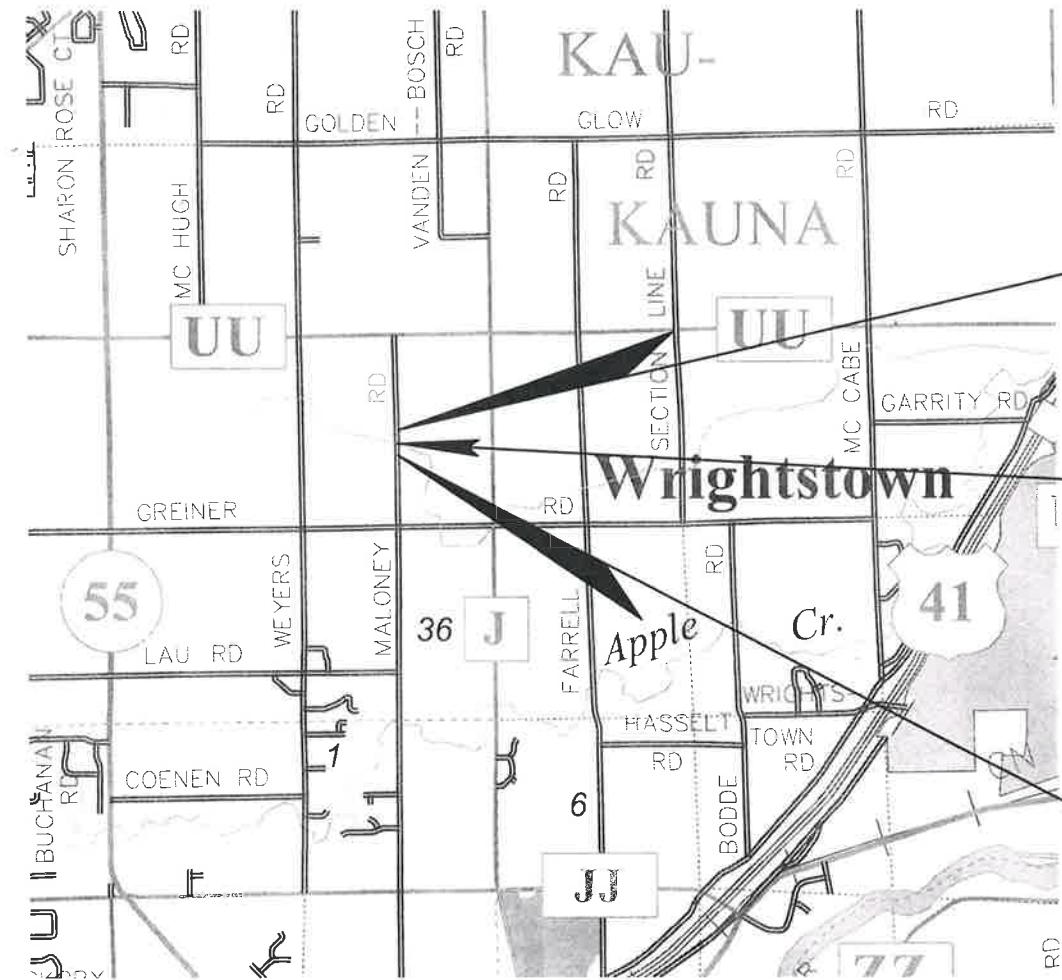
CONVENTIONAL SYMBOLS

PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
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
T FREEDOM, MALONEY ROAD
BRANCH OF APPLE CREEK BRIDGE
LOCAL STREET
OUTAGAMIE COUNTY

STATE PROJECT NUMBER
6501-06-71



END PROJECT 6501-06-71
STA. 10+75.00
Y = 594,155.527
X = 865,360.464

STRUCTURE B-44-476
STA. 9+98.77

BEGIN PROJECT 6501-06-71
STA. 9+25.00
Y = 594,005.529
X = 865,359.636

LAYOUT
SCALE 0 1 MI
TOTAL NET LENGTH OF CENTERLINE = 0.028 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES SYSTEM (WCCS), OUTAGAMIE 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.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6501-06-71		

ACCEPTED FOR
COUNTY OF OUTAGAMIE
Date: 4/28/21 [Signature]
ORIGINAL PLANS PREPARED BY
Mead & Hunt
WISCONSIN PROFESSIONAL ENGINEER
ANGELA B. KERRIGAN
E-39383-006
DE PERE, WI
DATE: 4/27/21 [Signature]
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PREPARED BY
Surveyor: MEAD & HUNT
Designer: MEAD & HUNT
Project Manager: SCOTT EBEL
Regional Examiner:
Regional Supervisor: JAMES THOMPSON
APPROVED FOR THE DEPARTMENT
DATE: 4/28/21 [Signature]
E

GENERAL NOTES

WHEN THE QUANTITY OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD. SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND IN PLACE PRIOR TO BRIDGE REMOVAL.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOIL, FERTILIZED, SEEDED AND EROSION MAT URBAN CLASS I TYPE B.

BEARINGS SHOWN ON THE PLANS ARE GROUND BEARINGS TO THE NEAREST SECOND.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING PAVEMENTS AT REMOVAL LIMITS.

KEEP ALL EQUIPMENT AND MATERIALS OUT OF ADJACENT WETLANDS.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIALS WILL NOT BE PERMITTED IN THE WETLANDS

ORDER OF SECTION 2 SHEETS

TYPICAL SECTIONS
TRAFFIC CONTROL

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	M/L	MAINLINE
AGG	AGGREGATE	NO	NUMBER
ASPH	ASPHALTIC	PE	PRIVATE ENTRANCE
BM	BENCH MARK	PI	POINT OF INTERSECTION
BOC	BACK OF CURB	PL	PROPERTY LINE
C&G	CURB AND GUTTER	PP	POWER POLE
CE	COMMERCIAL ENTRANCE	QTY	QUANTITY
CL	CENTERLINE	RHF	RIGHT-HAND FORWARD
COR	CORNER	RT	RIGHT
CWT	HUNDREDWEIGHT	R/L	REFERENCE LINE
CY	CUBIC YARD	R/W	RIGHT-OF-WAY
DHV	DESIGN HOURLY VOLUME	SF	SQUARE FOOT
DWY	DRIVEWAY	SHLDR	SHOULDER
EL	ELEVATION	SS	STORM SEWER
EX	EXISTING	STA	STATION
EXC	EXCAVATION	SY	SQUARE YARD
FT	FOOT	T	TRUCKS (PERCENT OF)
FTG	FOOTING	TEL	TELEPHONE
HYD	HYDRANT	TLE	TEMPORARY LIMITED EASEMENT
INV	INVERT	TYP	TYPICAL
LB	POUND	UG	UNDERGROUND CABLE
LF	LINEAR FOOT	VAR	VARIABLE
LHF	LEFT-HAND FORWARD	VC	VERTICAL CURVE
LS	LUMP SUM	VPC	VERTICAL POINT OF CURVE
LT	LEFT	VPI	VERTICAL POINT OF INTERSECTION
Mgal	MEGAGALLON	VPT	VERTICAL POINT OF TANGENCY

CONTACTS

OUTAGAMIE COUNTY HIGHWAY DEPT.

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HIGHWAY ENGINEER
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APPLETON, WI 54911
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DNR CONTACT

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DNR NORTHEAST REGIONAL HEADQUARTERS
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GREEN BAY, WI 54313
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EMAIL: MATTHEW.SCHAEVE@WISCONSIN.GOV

TOWN OF FREEDOM

CHARLES KRAMER
TOWN CHAIRPERSON
W2004 COUNTY HIGHWAY S
FREEDOM, WI 54131
PHONE: (920) 788-4548
EMAIL: CKRAMER@TOWNOFFREEDOM.ORG

CONSULTANT CONTACT

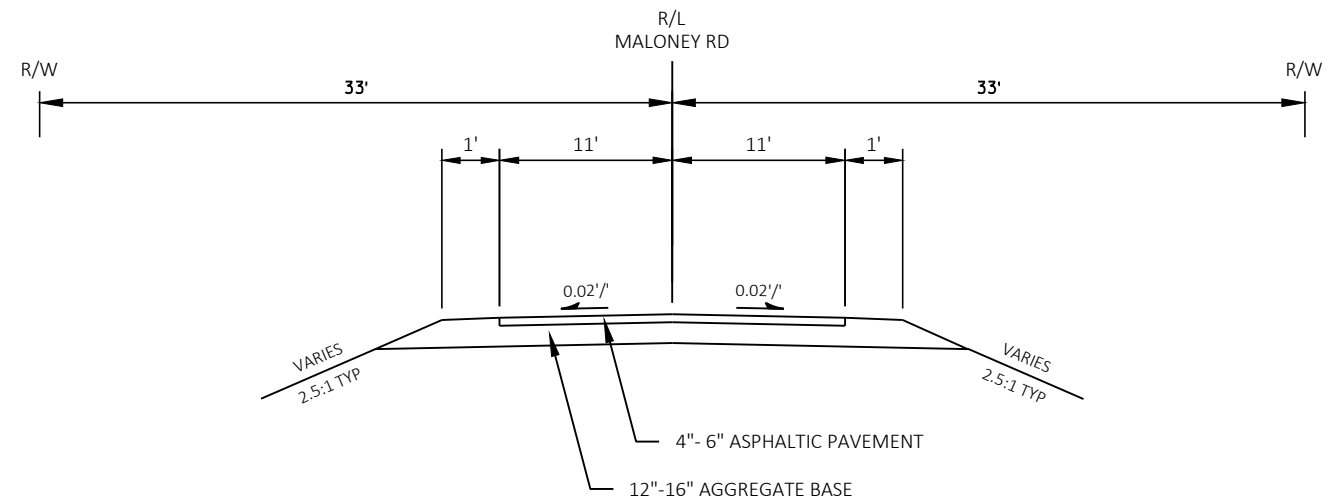
MEAD & HUNT, INC.
1702 LAWRENCE DRIVE
DE PERE, WI 54115
ATTN: MS. ANGELA KERRIGAN, P.E.
PHONE: (920) 496-0500
EMAIL: ANGIE.KERRIGAN@MEADHUNT.COM

RUNOFF COEFFICIENT TABLE

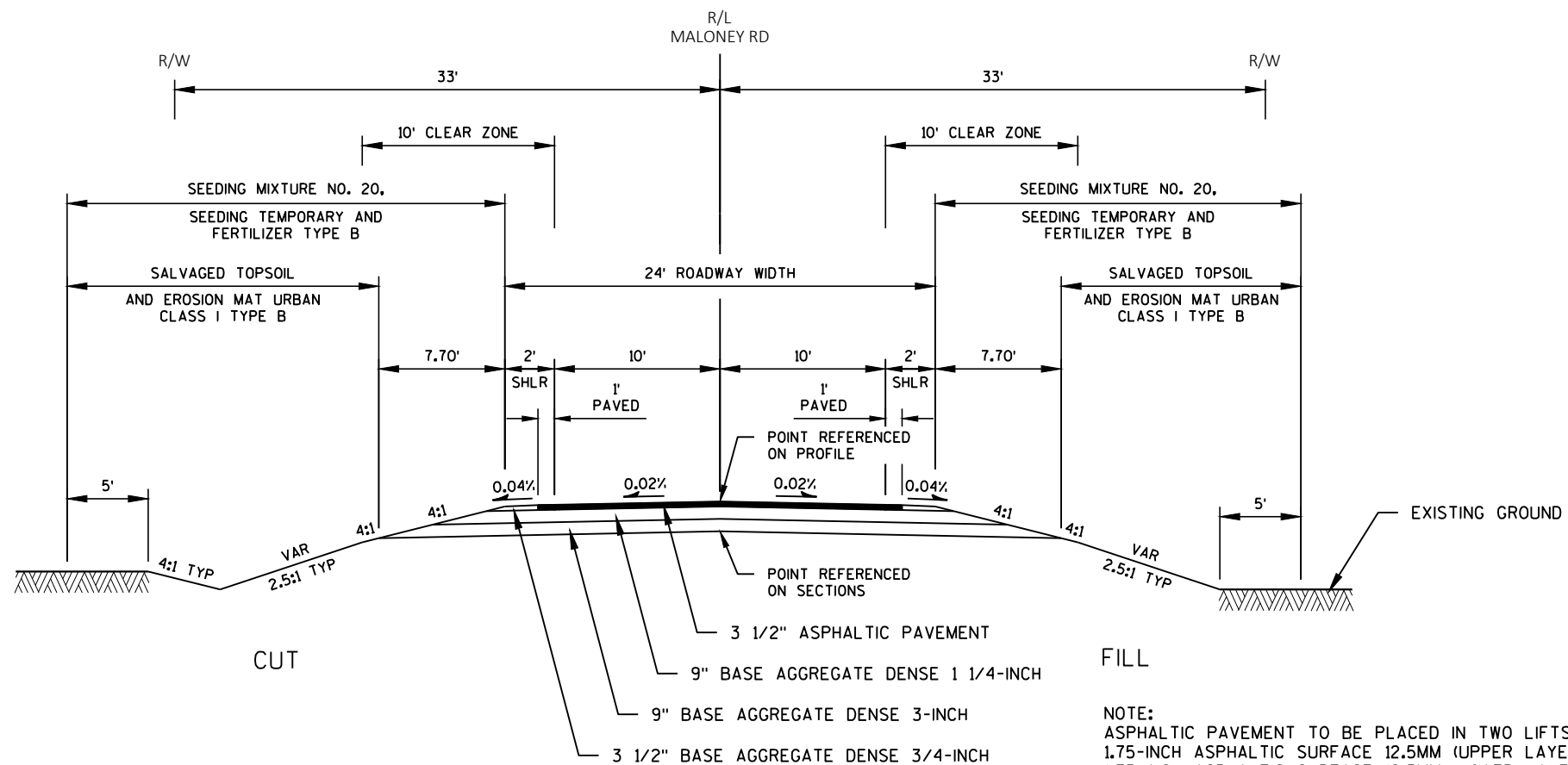
	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33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

TOTAL PROJECT AREA = 0.23 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.17 ACRES



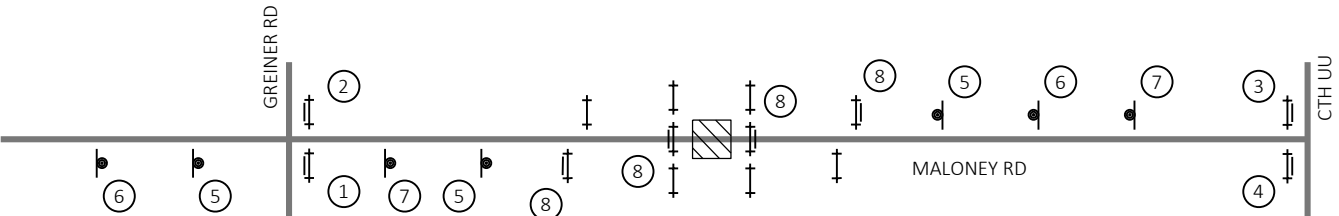
**EXISTING TYPICAL SECTION**

STA 9+25.00 TO STA 9+88.1
STA 10+11.8 TO STA 10+75.00





**PROPOSED TYPICAL SECTION**

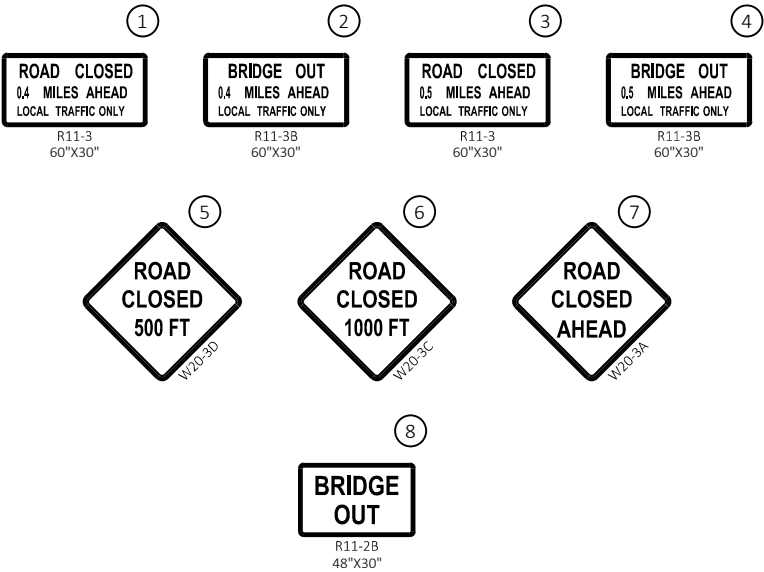
STA 9+25.00 TO STA 9+82.00
STA 10+15.54 TO STA 10+75.00

NOTE:
ASPHALTIC PAVEMENT TO BE PLACED IN TWO LIFTS, USE
1.75-INCH ASPHALTIC SURFACE 12.5MM (UPPER LAYER)
1.75-INCH ASPHALTIC SURFACE 12.5MM (LOWER LAYER)
PAVEMENT STRUCTURE TO BE INSTALLED IN PARALLEL.



LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WTH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  WORK AREA



NOTES

- THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND BARRICADES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.
- THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.
- BARRICADES THAT MUST BE MOVED FOR WORK OPERATIONS SHALL BE IMMEDIATELY RE-ESTABLISHED UPON COMPLETION OR, FOR CONTINUING OPERATIONS, AT THE END OF EACH WORKING DAY.
- ALL SIGNS 48"x48" UNLESS NOTED OTHERWISE.

Estimate Of Quantities By Plan Sets

6501-06-71

Line	Item	Item Description	Unit	Total	Qty
0008	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0014	205.0100	Excavation Common	CY	204.000	204.000
0016	206.1000	Excavation for Structures Bridges (structure) 01. B-44-476	LS	1.000	1.000
0020	210.1500	Backfill Structure Type A	TON	486.000	486.000
0024	213.0100	Finishing Roadway (project) 01. 6501-06-71	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	11.000	11.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	190.000	190.000
0032	305.0130	Base Aggregate Dense 3-Inch	TON	229.000	229.000
0034	450.4000	HMA Cold Weather Paving	TON	59.000	59.000
0036	455.0605	Tack Coat	GAL	23.000	23.000
0038	465.0105	Asphaltic Surface	TON	59.000	59.000
0040	502.0100	Concrete Masonry Bridges	CY	130.000	130.000
0042	502.3200	Protective Surface Treatment	SY	159.000	159.000
0046	505.0400	Bar Steel Reinforcement HS Structures	LB	4,540.000	4,540.000
0048	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,070.000	15,070.000
0050	513.4061	Railing Tubular Type M	LF	71.000	71.000
0052	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0058	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	910.000	910.000
0062	606.0300	Riprap Heavy	CY	117.000	117.000
0064	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	140.000	140.000
0066	619.1000	Mobilization	EACH	0.500	0.500
0068	624.0100	Water	MGAL	10.000	10.000
0070	625.0500	Salvaged Topsoil	SY	344.000	344.000
0072	628.1504	Silt Fence	LF	75.000	75.000
0074	628.1520	Silt Fence Maintenance	LF	150.000	150.000
0076	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0078	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0080	628.2008	Erosion Mat Urban Class I Type B	SY	344.000	344.000
0082	628.6005	Turbidity Barriers	SY	103.000	103.000
0084	628.7504	Temporary Ditch Checks	LF	70.000	70.000
0088	629.0210	Fertilizer Type B	CWT	0.200	0.200
0090	630.0120	Seeding Mixture No. 20	LB	9.000	9.000
0092	630.0200	Seeding Temporary	LB	5.000	5.000
0094	630.0500	Seed Water	MGAL	8.000	8.000
0098	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0100	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0102	638.2602	Removing Signs Type II	EACH	4.000	4.000
0104	638.3000	Removing Small Sign Supports	EACH	4.000	4.000

Estimate Of Quantities By Plan Sets

6501-06-71

Line	Item	Item Description	Unit	Total	Qty
0106	642.5001	Field Office Type B	EACH	0.500	0.500
0108	643.0420	Traffic Control Barricades Type III	DAY	826.000	826.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	1,416.000	1,416.000
0112	643.0900	Traffic Control Signs	DAY	944.000	944.000
0114	643.5000	Traffic Control	EACH	0.500	0.500
0116	645.0111	Geotextile Type DF Schedule A	SY	98.000	98.000
0118	645.0120	Geotextile Type HR	SY	191.000	191.000
0120	650.4500	Construction Staking Subgrade	LF	117.000	117.000
0122	650.5000	Construction Staking Base	LF	117.000	117.000
0124	650.6500	Construction Staking Structure Layout (structure) 01. B-44-476	LS	1.000	1.000
0128	650.9910	Construction Staking Supplemental Control (project) 01. 6501-06-71	LS	1.000	1.000
0132	650.9920	Construction Staking Slope Stakes	LF	117.000	117.000
0134	690.0150	Sawing Asphalt	LF	44.000	44.000
0138	715.0502	Incentive Strength Concrete Structures	DOL	780.000	780.000
0140	999.2000.S	Installing and Maintaining Bird Deterrent System	EACH	1.000	1.000
0142	SPV.0090	Special 01. Flashing Stainless Steel	LF	57.000	57.000

EARTHWORK SUMMARY

FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON CUT (1)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL	AVAILABLE MATERIAL (2)	UNEXPANDED FILL	EXPANDED FILL (FACTOR 1.25)	MASS ORDINATE +/- (3)
9+25 - 9+82	MALONEY RD	98	21	77	30	38	40
10+15.54 - 10+75	MALONEY RD	106	23	83	69	86	-3
TOTAL		204					

- (1)

SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED
- (2)

AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (3)

THE MASS ORDINATE + OR - QUANTITY CALCULATED. PLUS QUANTITY INDICATES AS EXCESS OF MATERIAL.
MINUS INDICATES A SHORTAGE OF MATERIAL.
- TOTAL WASTE = 36

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1-1/4 INCH TON	305.0130 BASE AGGREGATE DENSE 3 INCH TON	624.0100 WATER MGAL
9+25.00	-	9+82.00	MALONEY RD, LT & RT	5	93	112	5
10+15.54	-	10+75.00	MALONEY RD, LT & RT	6	97	117	5
TOTAL				11	190	229	10

ASPHALT SUMMARY

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	450.4000 HMA COLD WEATHER PAVING TON
9+25.00	-	9+82.00	MALONEY RD	11	29	29
10+15.54	-	10+75.00	MALONEY RD	12	30	30
TOTAL				23	59	59

TACK COAT ESTIMATED AT 0.07 GAL/SY

ALL ITEMS ARE IN CATEGORY
0010 UNLESS NOTED
OTHERWISE

LANDSCAPING ITEMS

				625.0500	628.2008	629.0210	630.0120	630.0200	630.0500
				SALVAGED	EROSION MAT	FERTILIZER	SEEDING	**SEEDING	SEED
				TOPSOIL	URBAN CLASS I	TYPE B	MIXTURE	TEMPORARY	WATER
STATION	TO	STATION	LOCATION	SY	SY	CWT	NO. 20	LB	MGAL
9+25.00	-	9+82.00	MALONEY RD, LT & RT	156	156	0.1	4	2	3
10+15.54	-	10+75.00	MALONEY RD, LT & RT	189	189	0.1	5	3	4
TOTAL				344	344	0.2	9	5	8

** SEEDING TEMPORARY AT HALF RATE

SILT FENCE

				628.1504	628.1520
				SILT FENCE	SILT FENCE
				LF	MAINTENANCE
STATION	TO	STATION	LOCATION	LF	LF
9+25.00	-	9+82.00	MALONEY RD, LT & RT	65	130
10+15.54	-	10+75.00	MALONEY RD, LT & RT	0	0
UNDISTRIBUTED				10	20
TOTAL				75	150

TURBIDITY BARRIERS

STATION	LOCATION	628.6005 TURBIDITY BARRIERS SY
9+90	MALONEY RD	50
10+10	MALONEY RD	53
TOTAL		103

MOBILIZATION & FIELD OFFICE

			619.1000*	642.5001*
			MOBILIZATION	FIELD
			EACH	OFFICE
CATEGORY	STATION TO	STATION LOCATION	TYPE B	TYPE B
0010	PROJECT	M/L	0.5	0.5
TOTAL			0.5	0.5

* QUANTITY IS ALSO FOUND IN PROJECT ID 6506-05-71

ALL ITEMS ARE IN CATEGORY
0010 UNLESS NOTED
OTHERWISE

EROSION CONTROL MOBILIZATIONS

				628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7504 TEMPORARY DITCH CHECKS LF
STATION	TO	STATION	LOCATION			
9+25	-	10+75	MALONEY RD, LT & RT	-	-	60
			UNDISTRIBUTED	4	2	10
TOTAL				4	2	70

SIGNING

		634.0614 POSTS WOOD 4x6-INCH x 14-FT	637.2230 SIGNS TYPE II REFLECTIVE F	638.2602 REMOVING SIGNS TYPE II	638.3000 REMOVING SMALL SIGN SUPPORTS	COMMENTS
STATION	LOCATION	EACH	SF	EACH	EACH	
9+70	MALONEY RD, LT & RT	-	-	2	2	
10+27	MALONEY RD, LT & RT	-	-	2	2	
9+70	MALONEY RD, LT & RT	2	6	-	-	W5-52L & W5-52R
10+27	MALONEY RD, LT & RT	2	6	-	-	W5-52L & W5-52R
TOTAL		4	12	4	4	

TRAFFIC CONTROL ITEMS

PROJECT	TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	643.5000 TRAFFIC* CONTROL PROJECT EACH	REMARKS
6501-06-70	14	826	24	1,416	16	944	0.5	59 CALENDAR DAYS
TOTAL		826		1,416		944	0.5	

* QUANTITY IS ALSO FOUND IN PROJECT ID 6506-05-71

ALL ITEMS ARE IN CATEGORY
0010 UNLESS NOTED
OTHERWISE

CONSTRUCTION STAKING

				650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.6500* CONSTRUCTION STAKING STRUCTURE LAYOUT (B-44-476) LS	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
STATION	TO	STATION	LOCATION					
9+25.00	-	9+82.00	MALONEY RD, LT & RT	57	57	-	-	57
10+15.54	-	10+75.00	MALONEY RD, LT & RT	60	60	-	-	60
PROJECT				-	-	1	1	-
TOTAL				117	117	1	1	117

*Category 0020

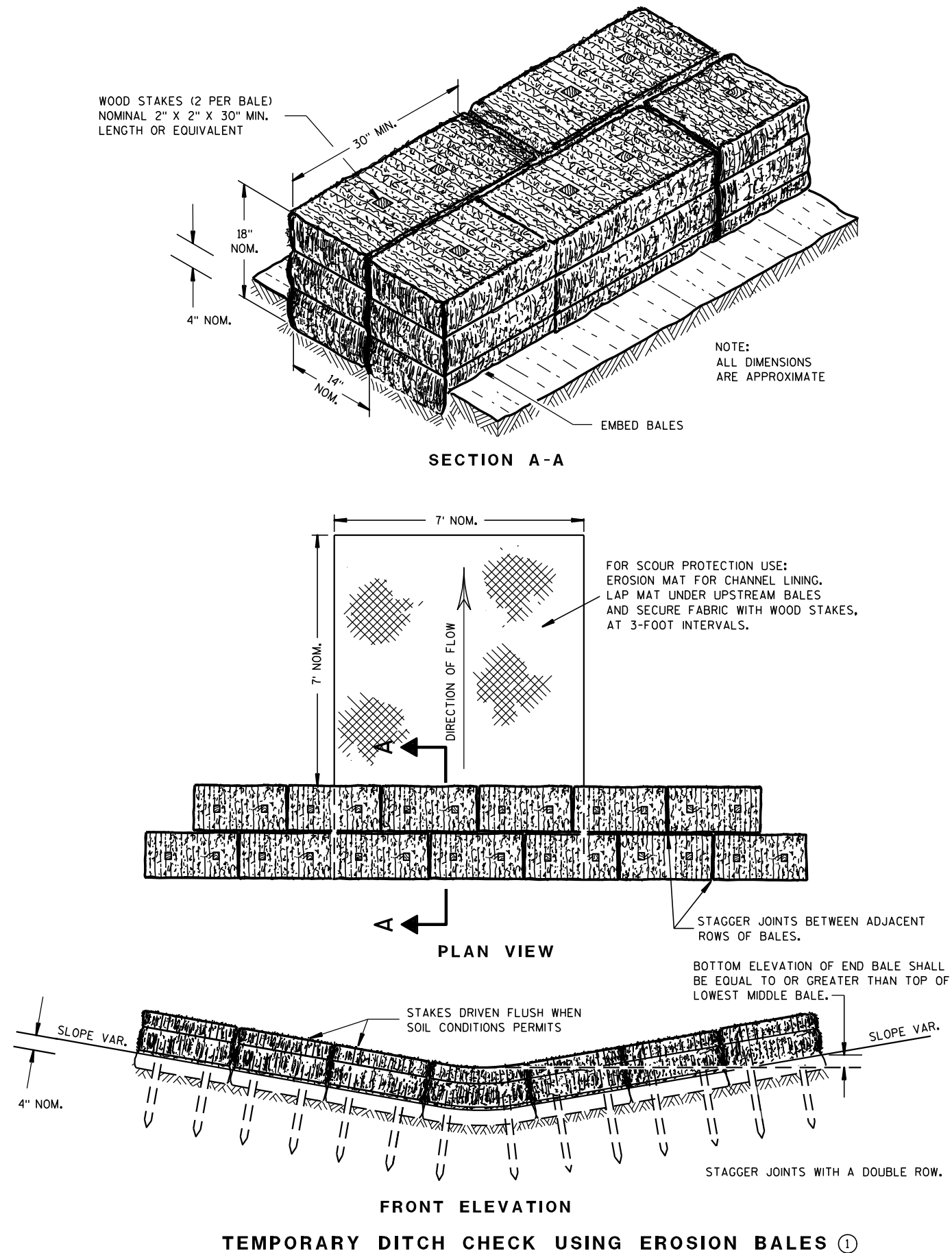
SAWING ASPHALT

STATION	LOCATION	690.0150 SAWING ASPHALT LF
9+25	MALONEY RD	22
10+75	MALONEY RD	22
TOTAL		44

ALL ITEMS ARE IN CATEGORY
0010 UNLESS NOTED
OTHERWISE

Standard Detail Drawing List

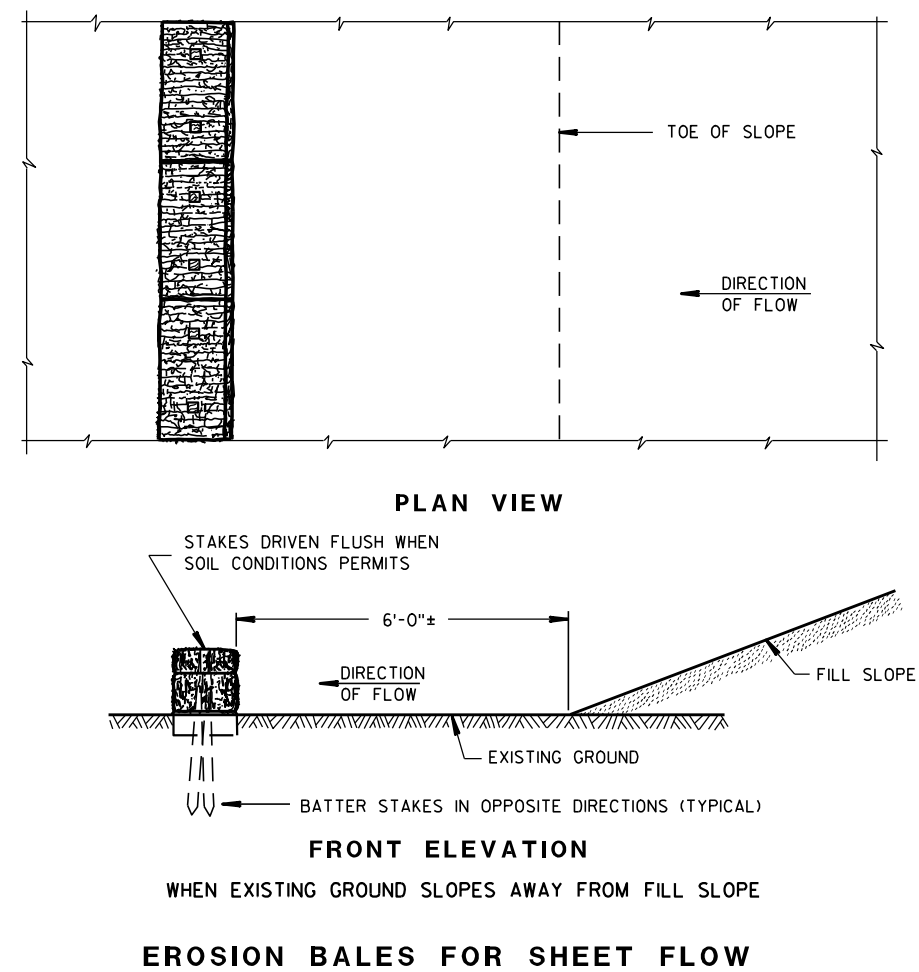
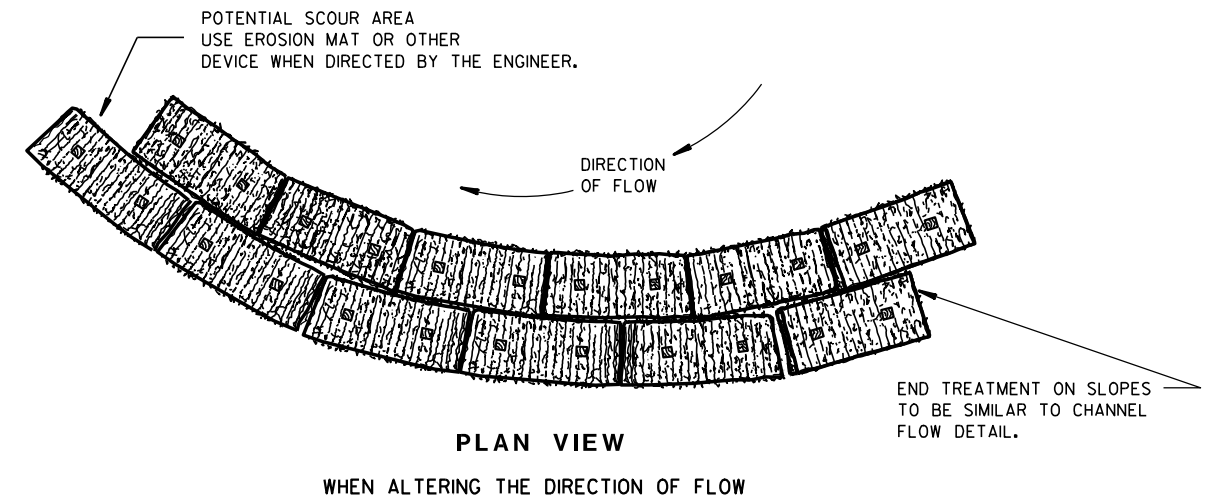
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-08B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



GENERAL NOTES

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

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

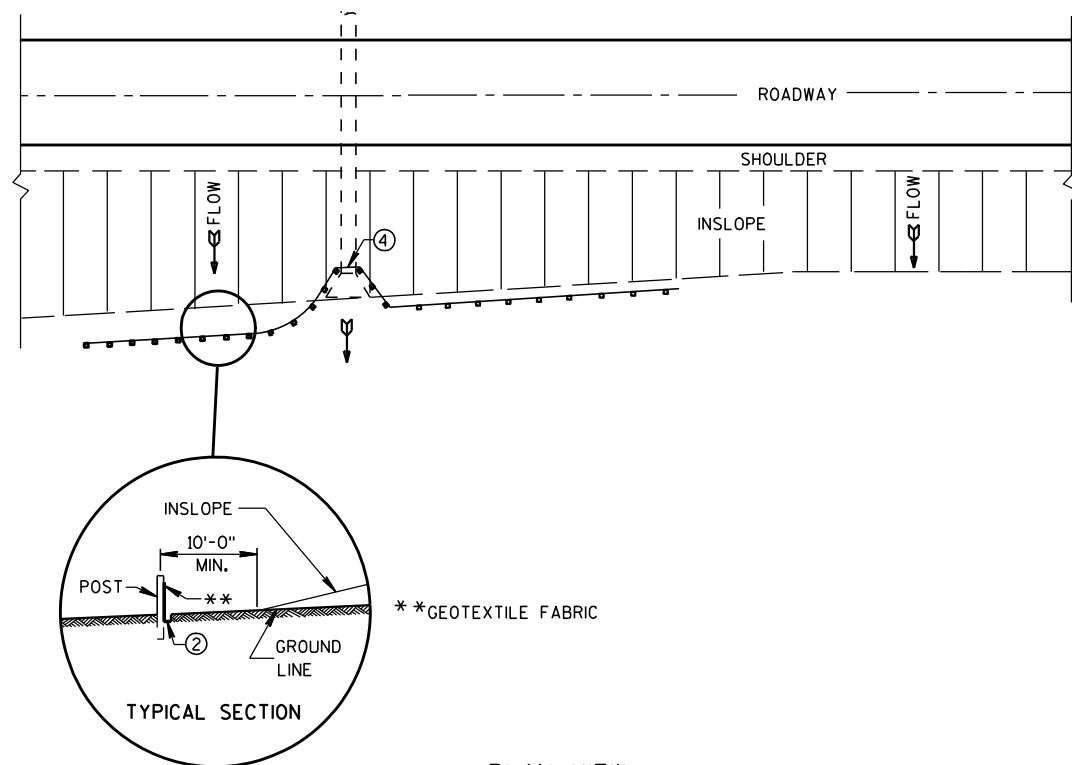
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

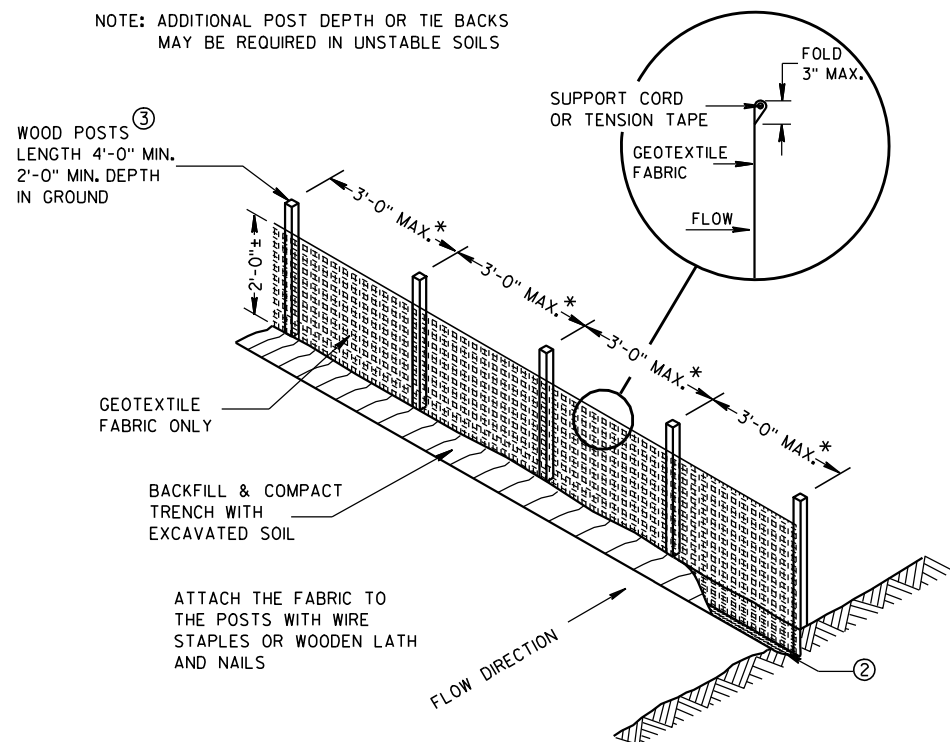
6/04/02
DATE/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



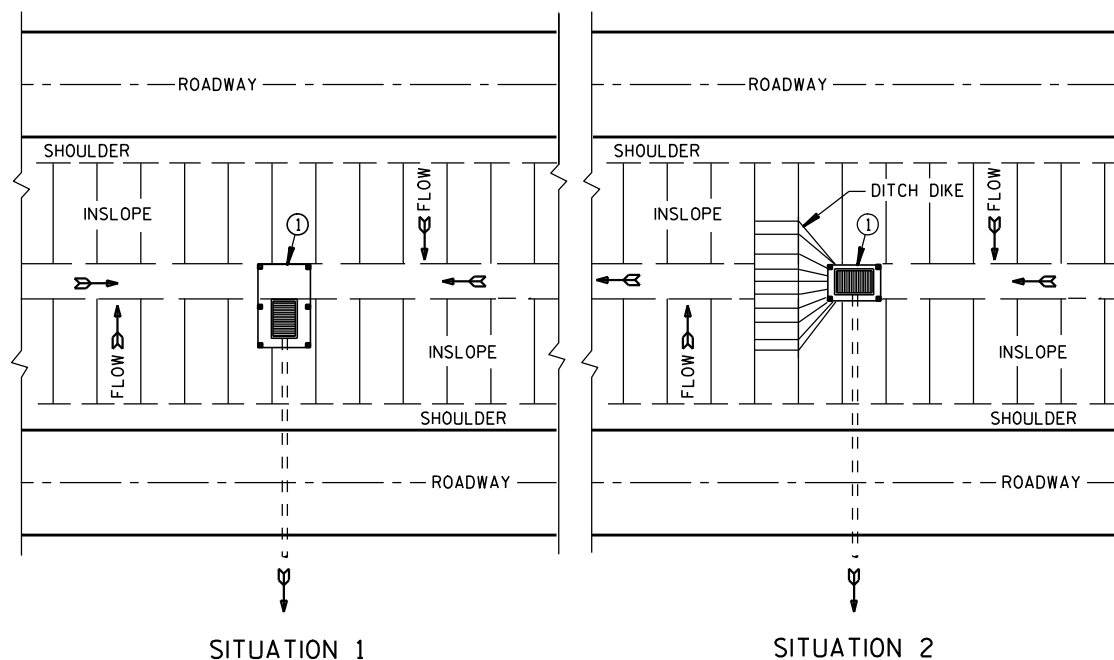
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

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

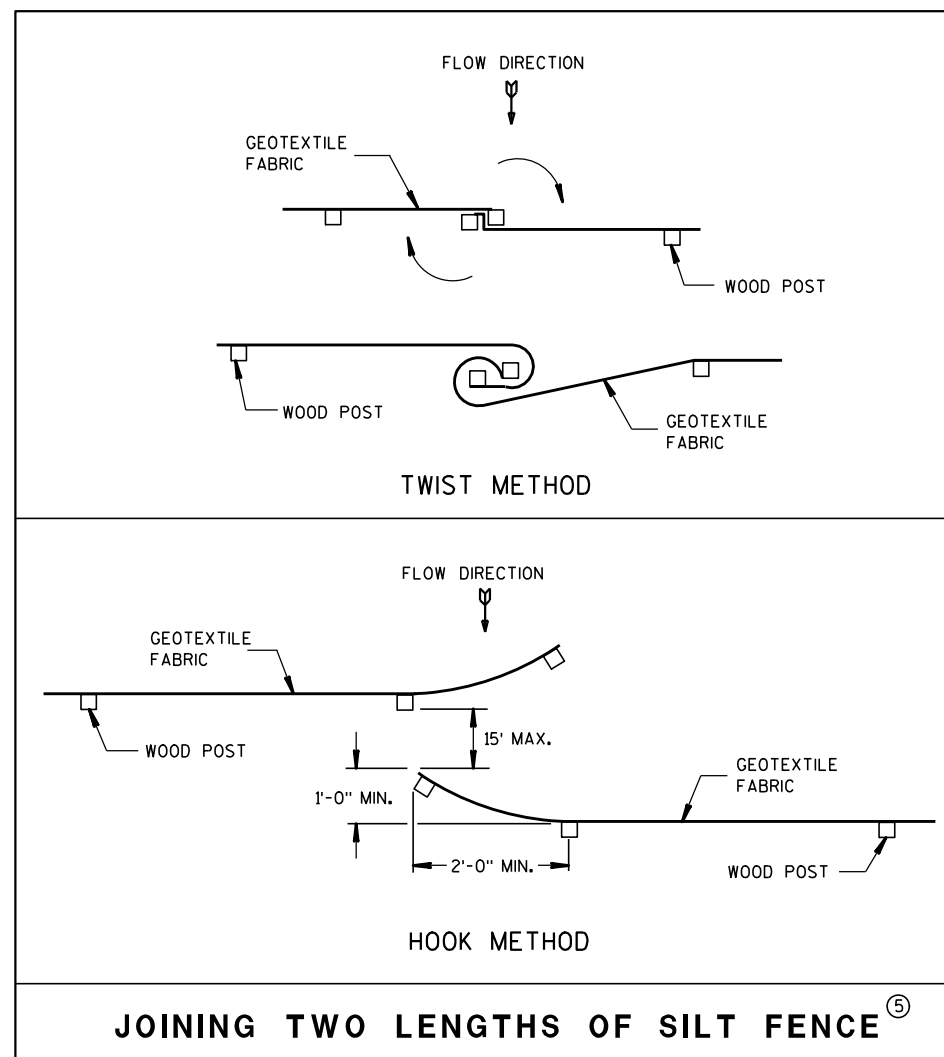


SILT FENCE

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



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

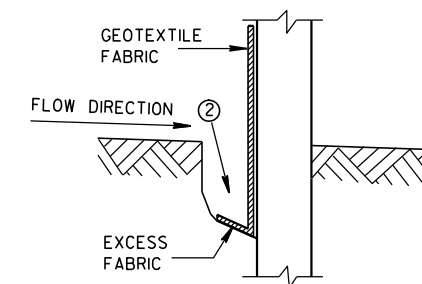


JOINING TWO LENGTHS OF SILT FENCE^⑤

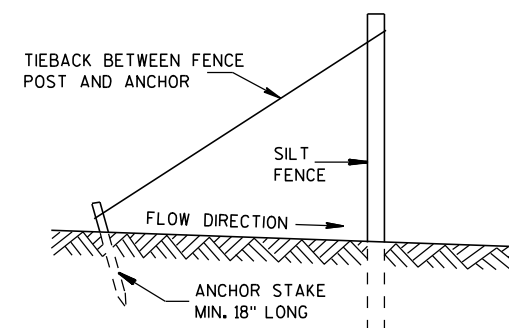
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

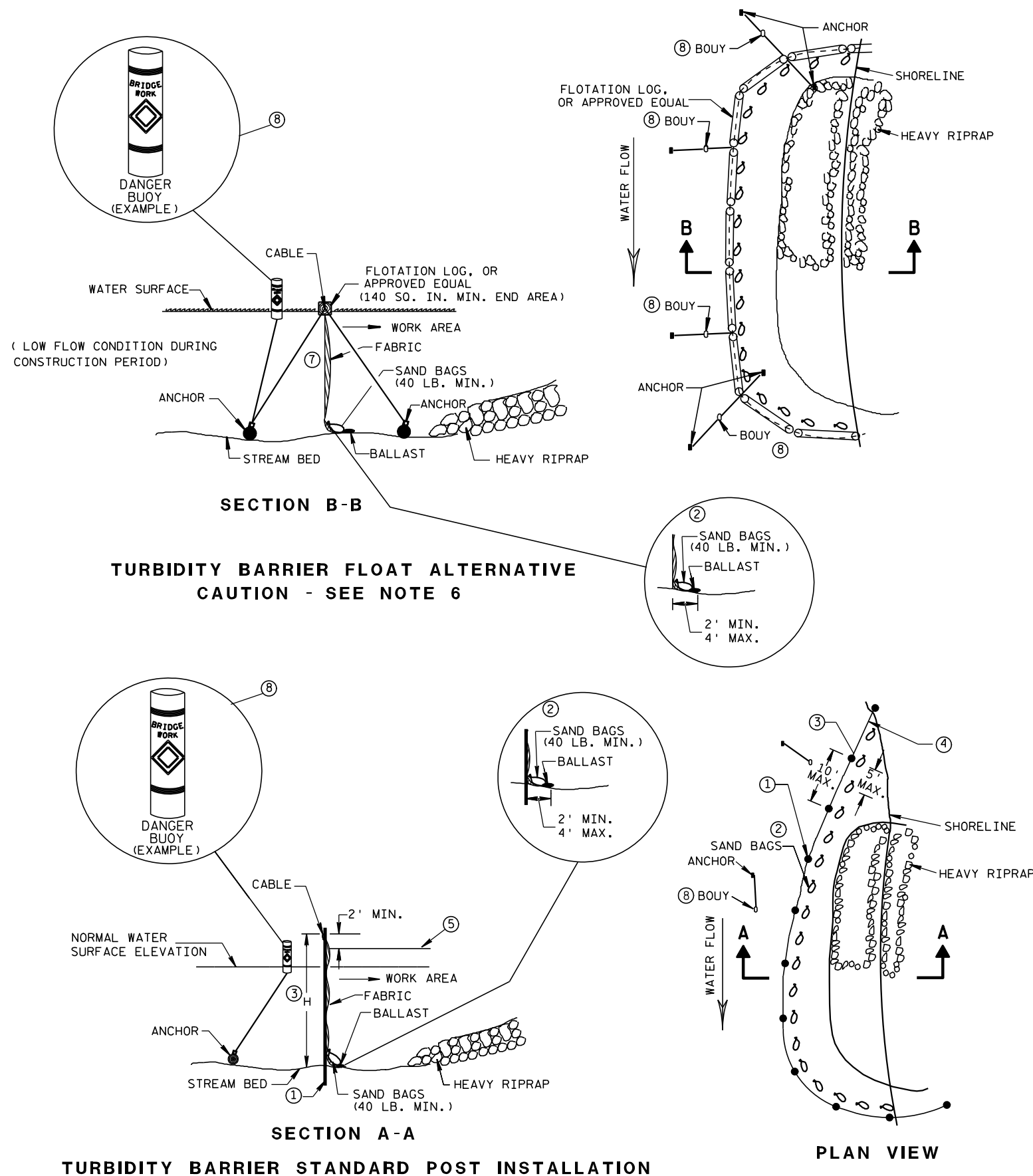
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

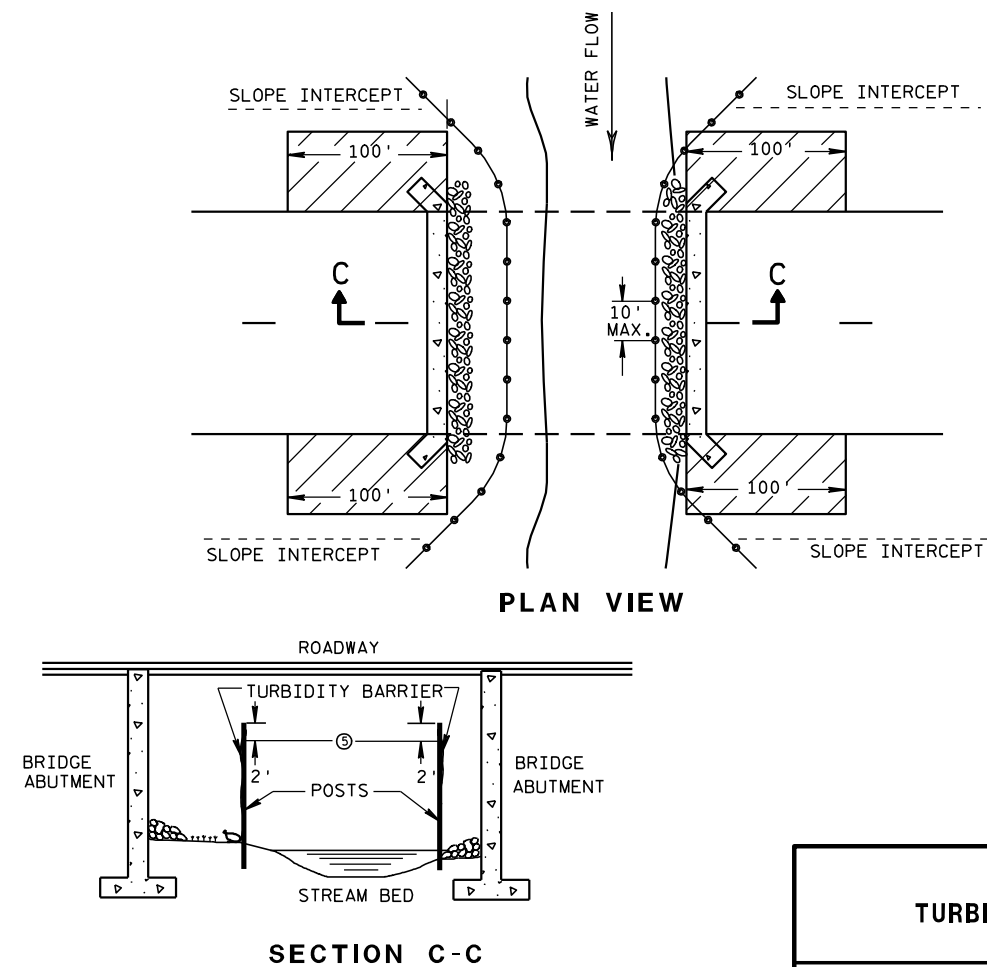


GENERAL NOTES

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

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 SANDBAGS 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 FT., 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 02 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 BED ROCK 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.



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

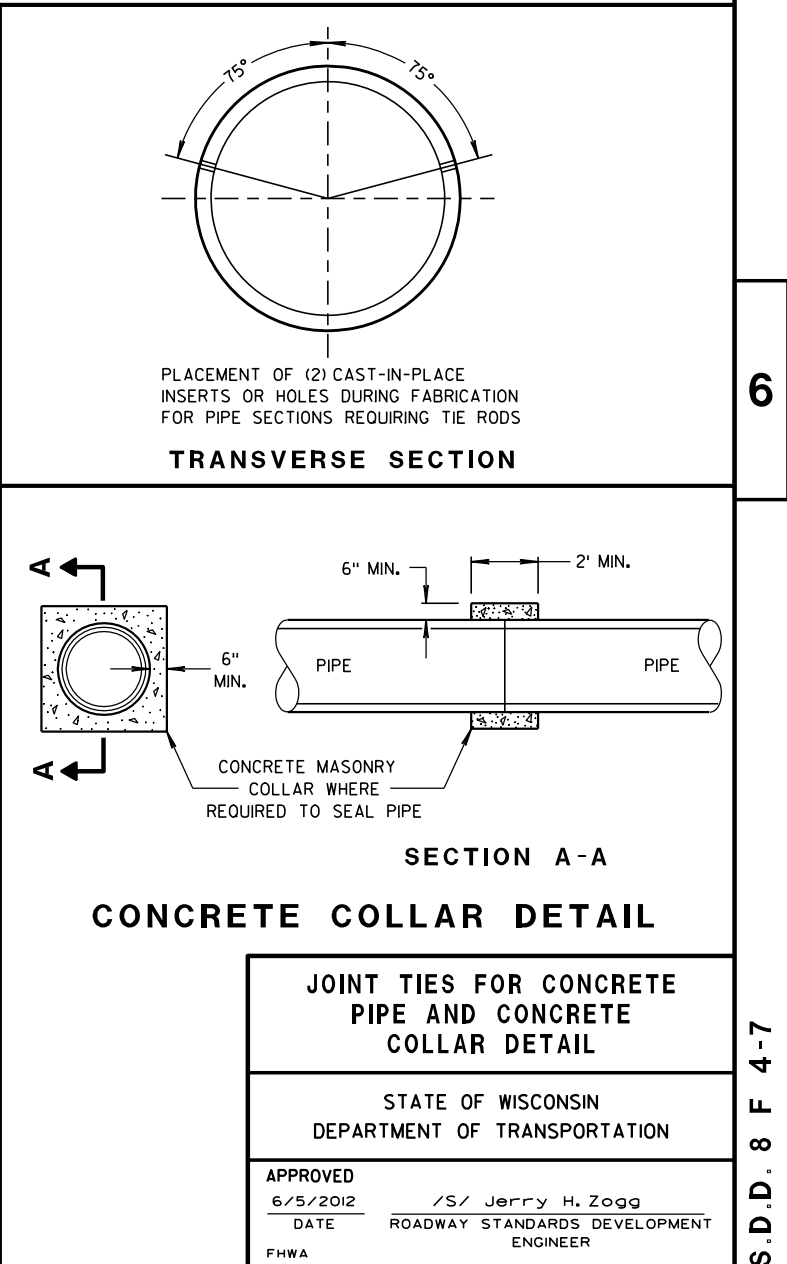
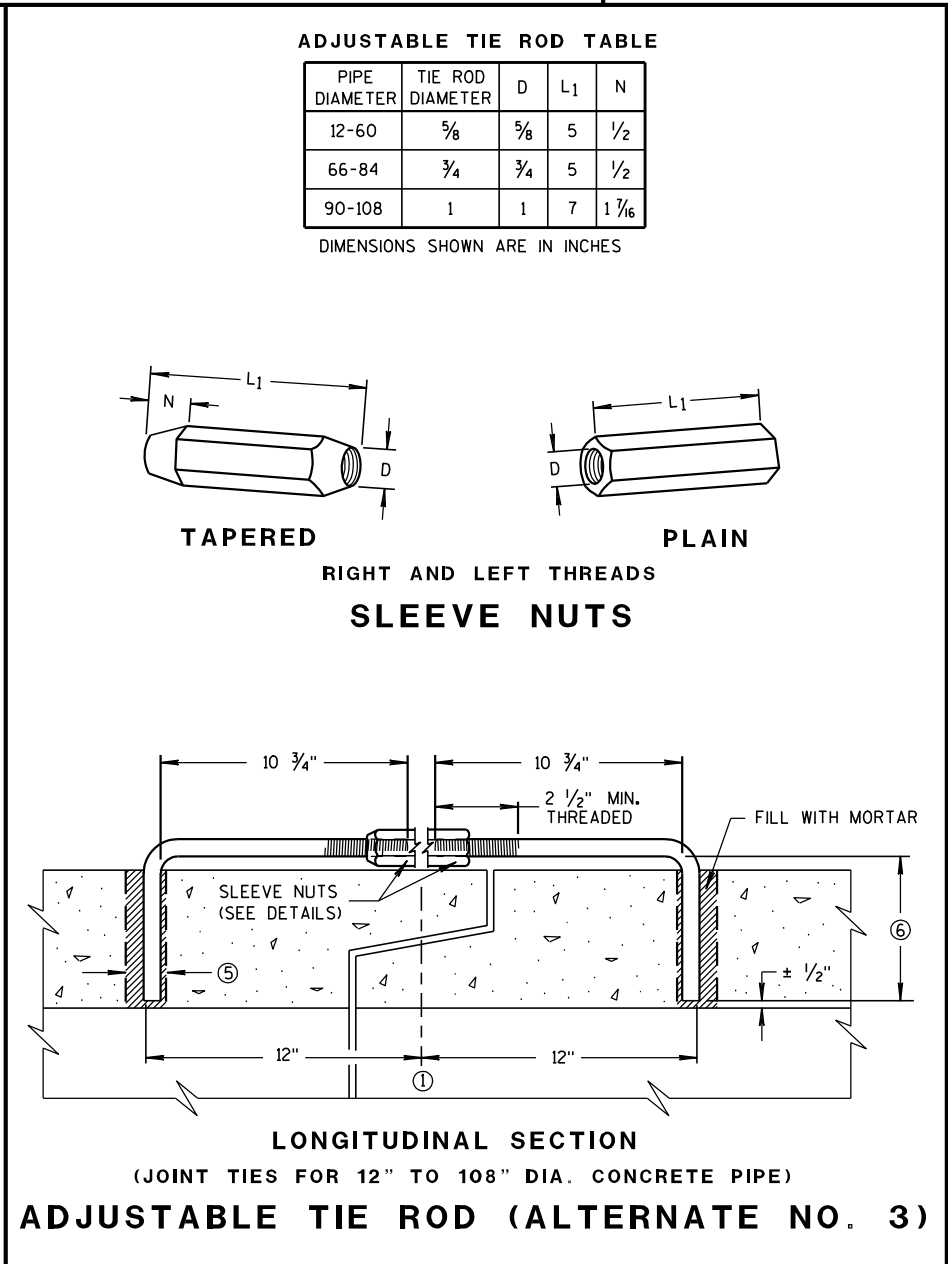
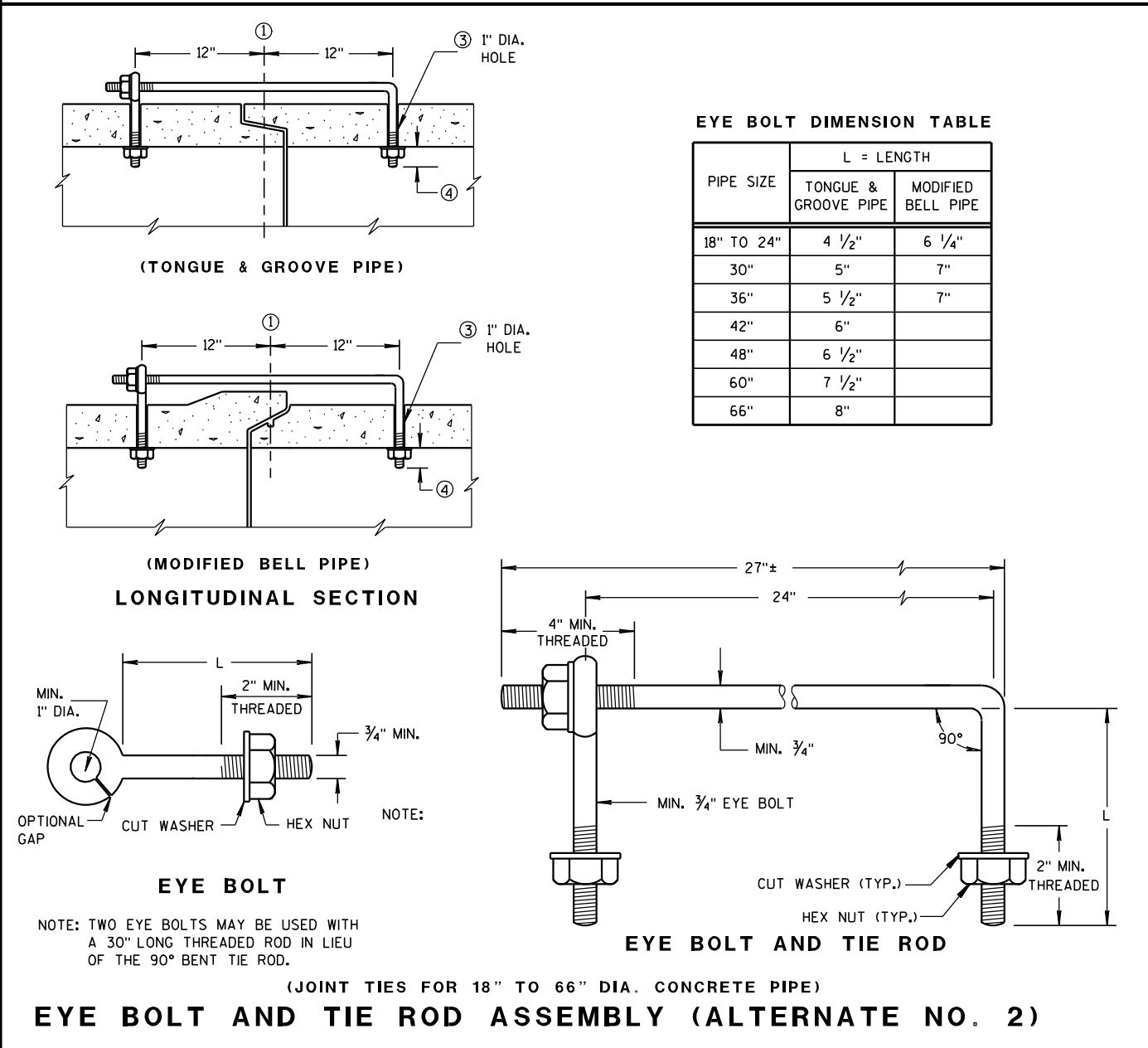
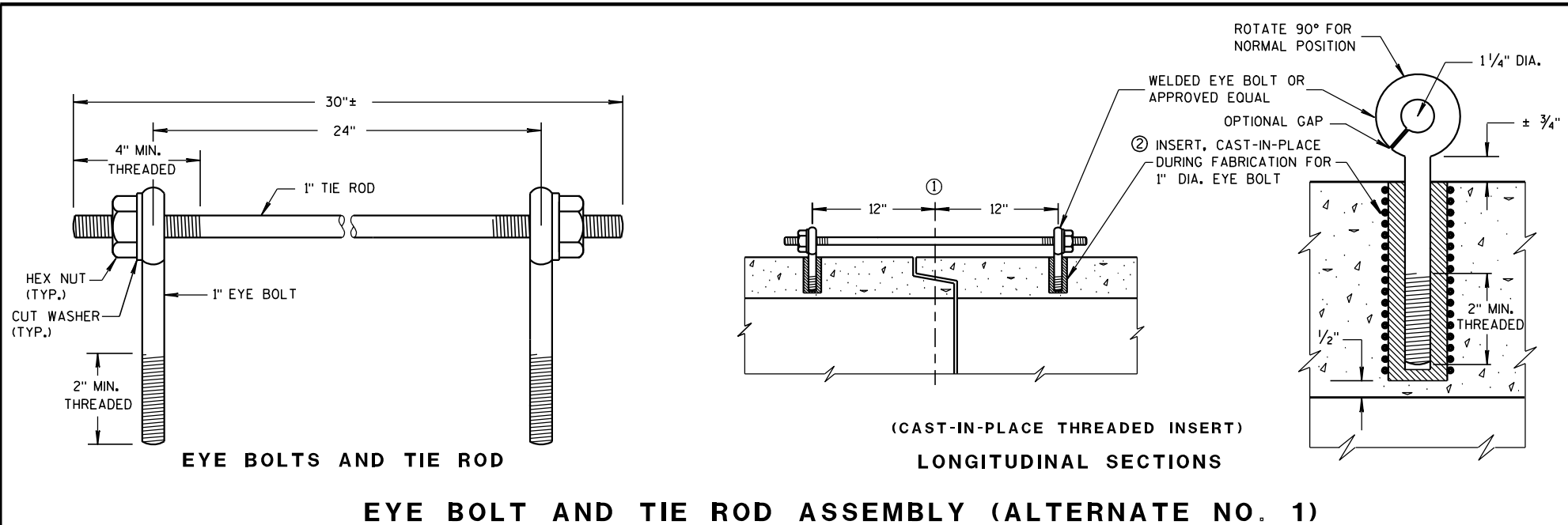
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

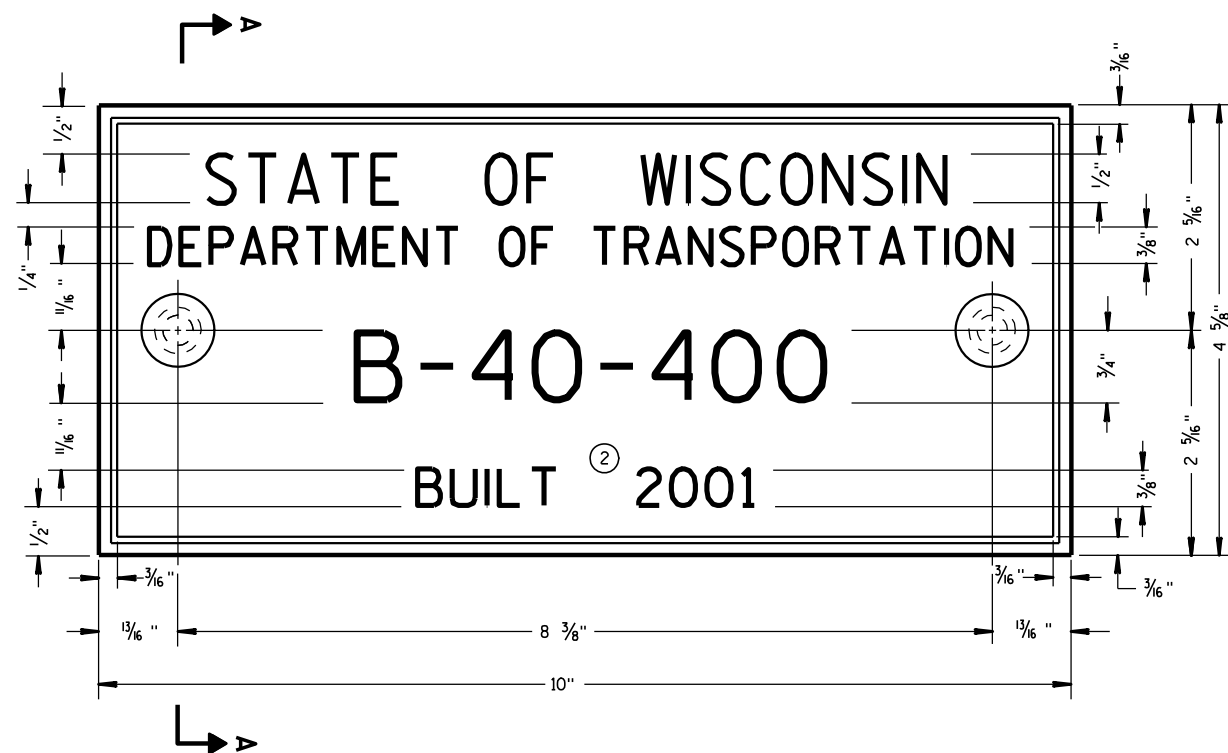
APPROVED

6/04/02
DATE

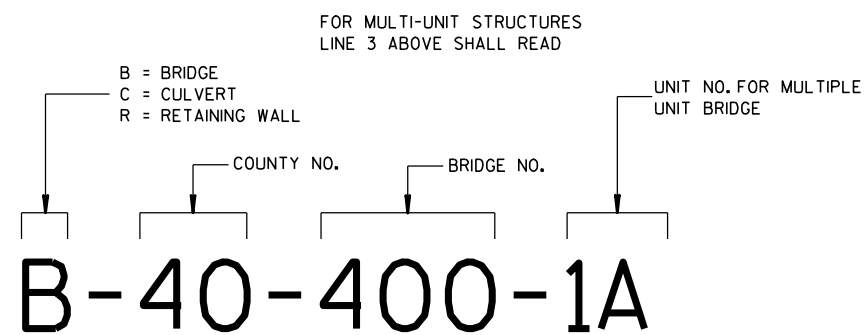
FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER





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



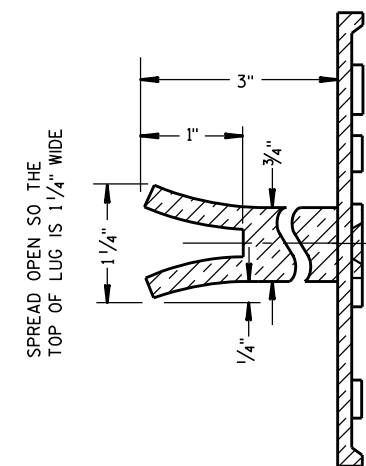
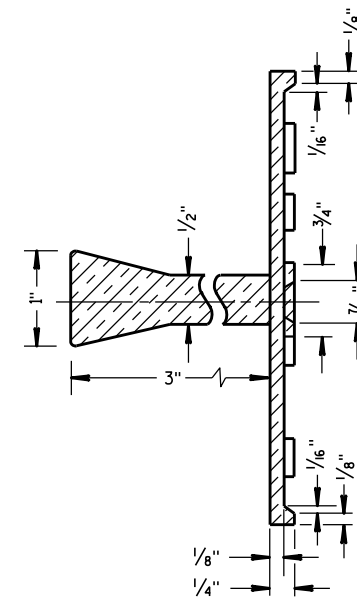
**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

GENERAL NOTES

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

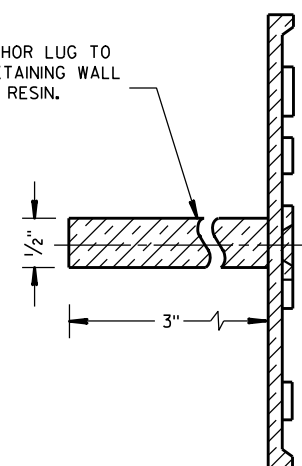
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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



ALTERNATE LUG

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



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

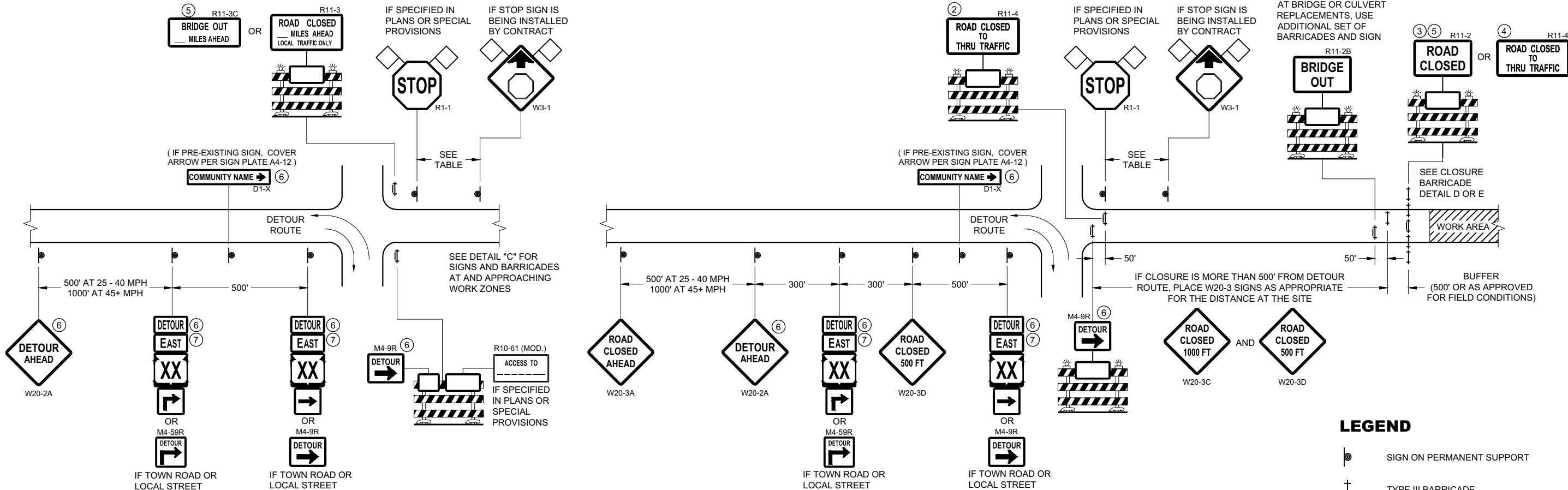
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10
DATE

FHWA

/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



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

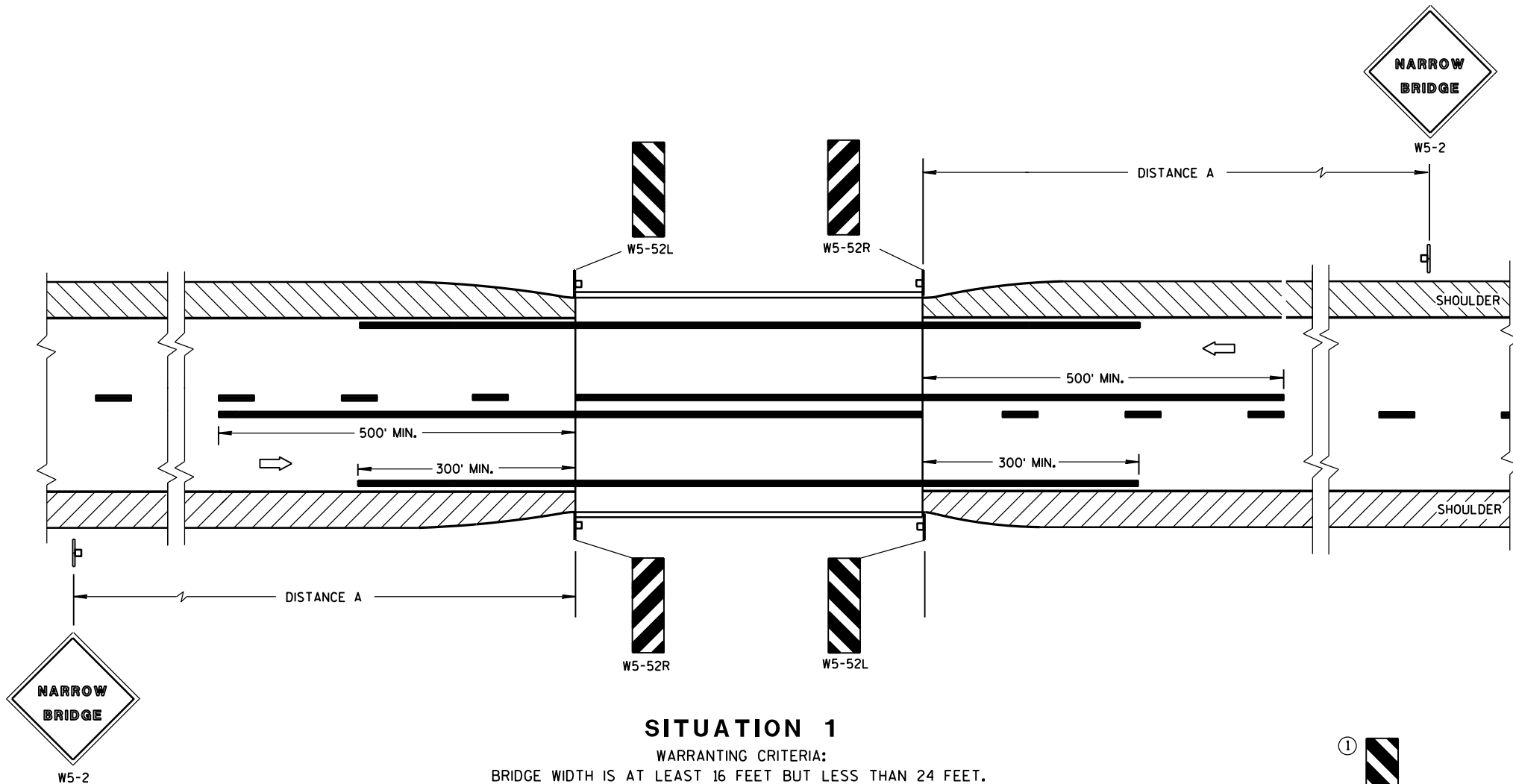
SEE SDD 15C2-SHEET "b" FOR GENERAL NOTES AND FOOTNOTES ① THROUGH ⑦

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



SITUATION 1

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

DISTANCE TABLE

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

GENERAL NOTES

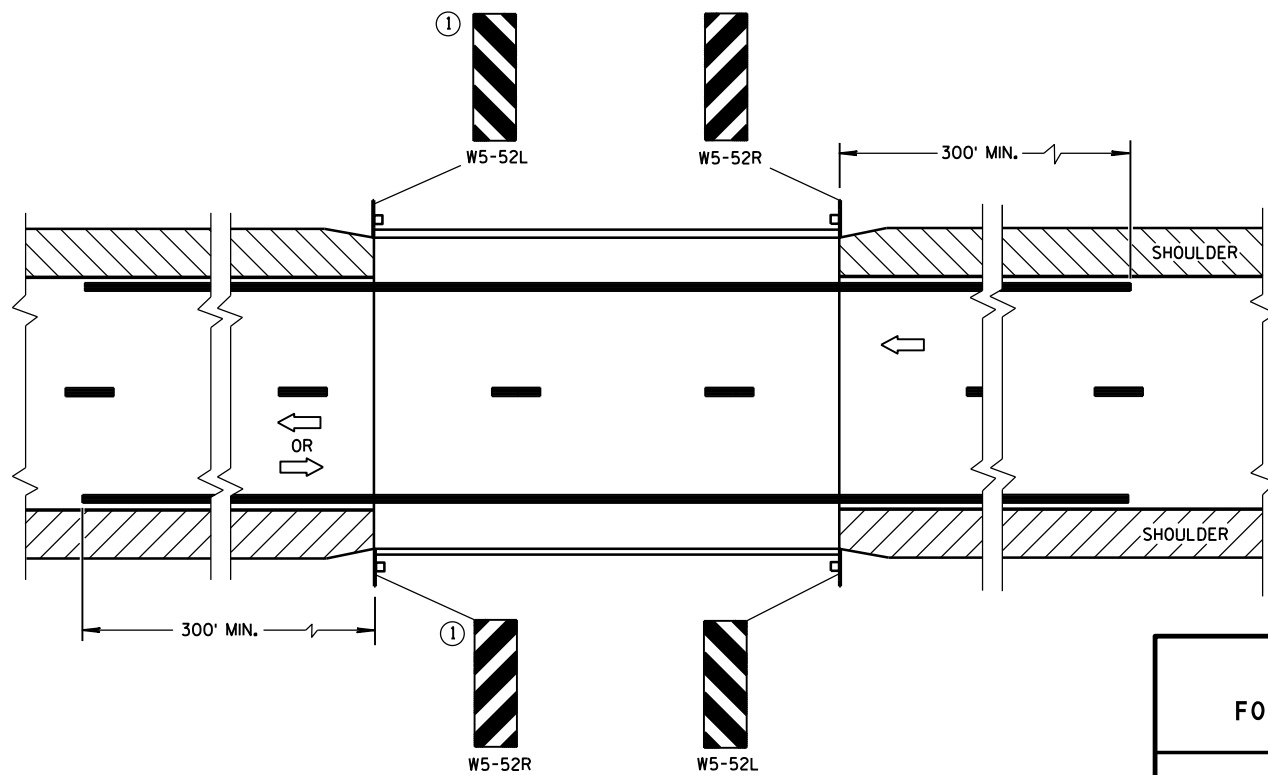
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

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

① OMIT ON ONE-WAY TRAVELLED WAYS.

➡ DIRECTION OF TRAFFIC



SITUATION 2

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

SIGNING & MARKING FOR TWO LANE BRIDGES

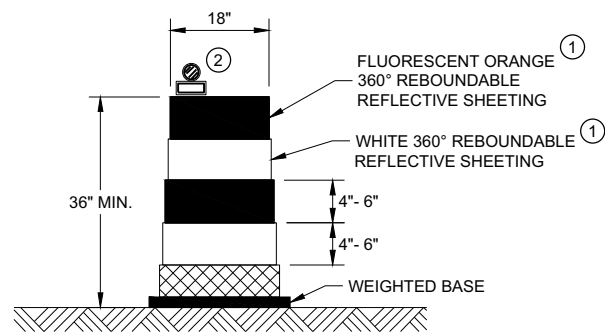
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

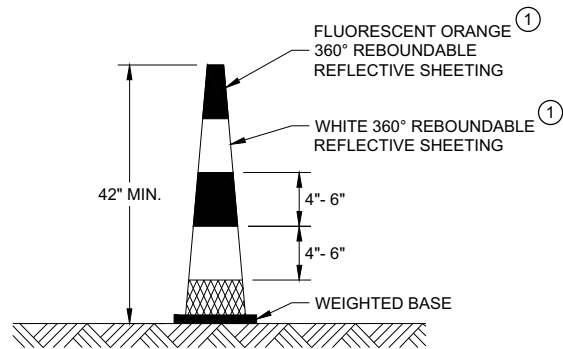
June 2017
DATE

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

FHWA

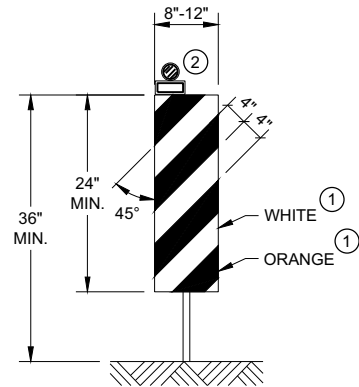


DRUM



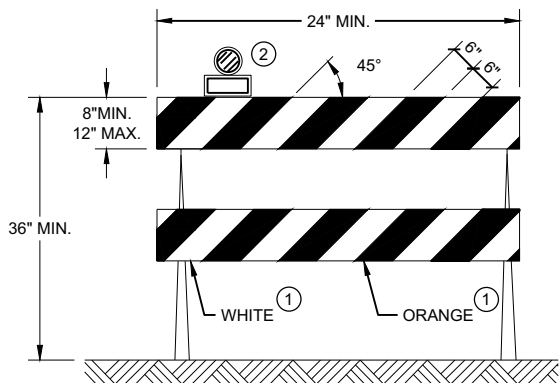
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



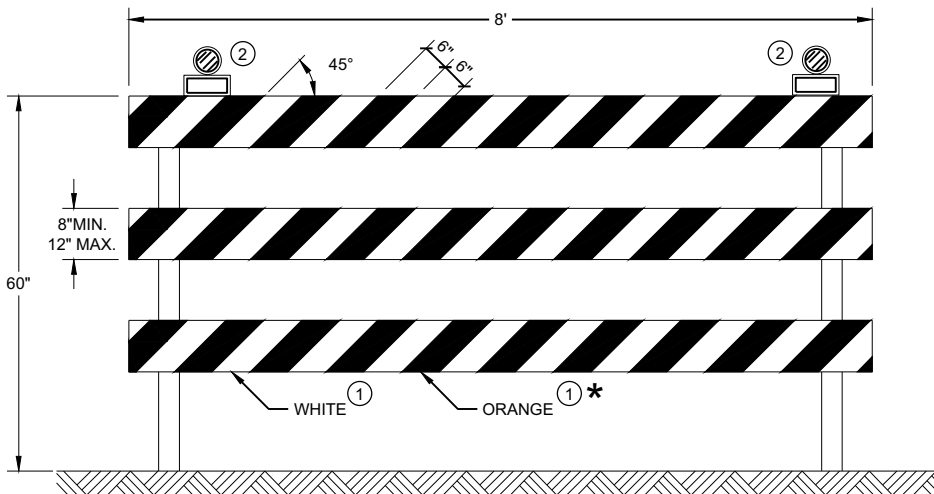
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

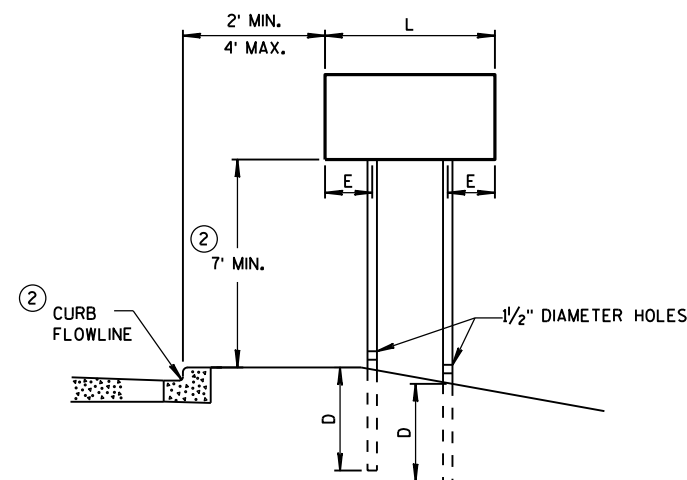
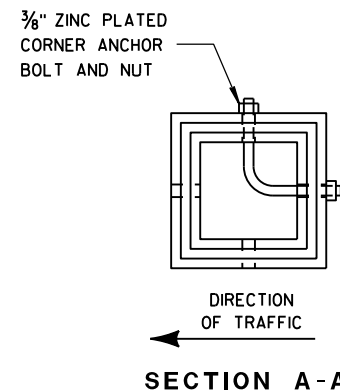
FHWA



TUBULAR STEEL POSTS

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

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

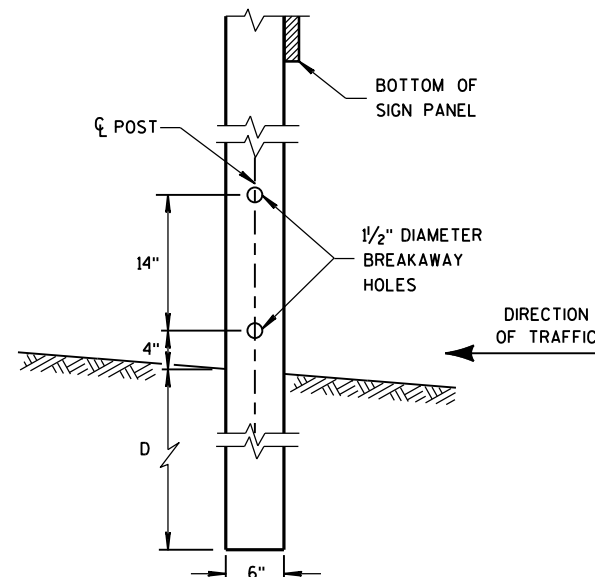


URBAN AREA

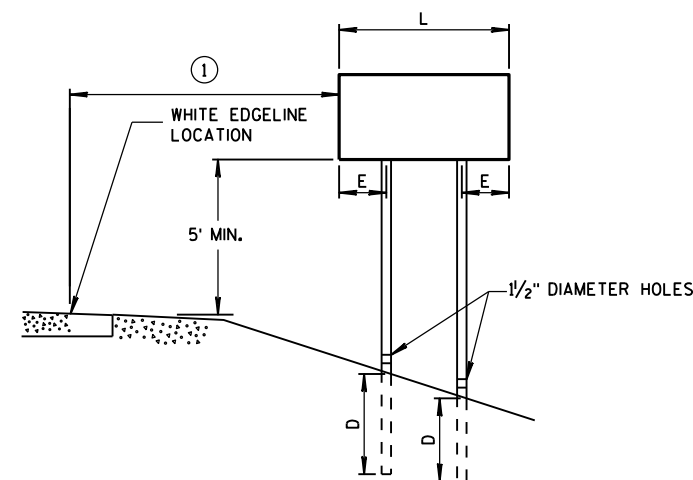
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST EMBEDMENT DEPTH

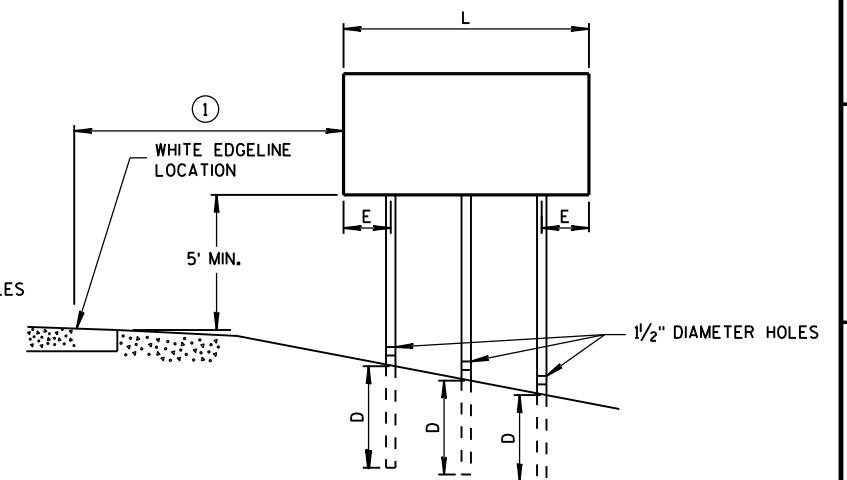
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4" x 6" WOOD POST MODIFICATION



RURAL AREA



GENERAL NOTES

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

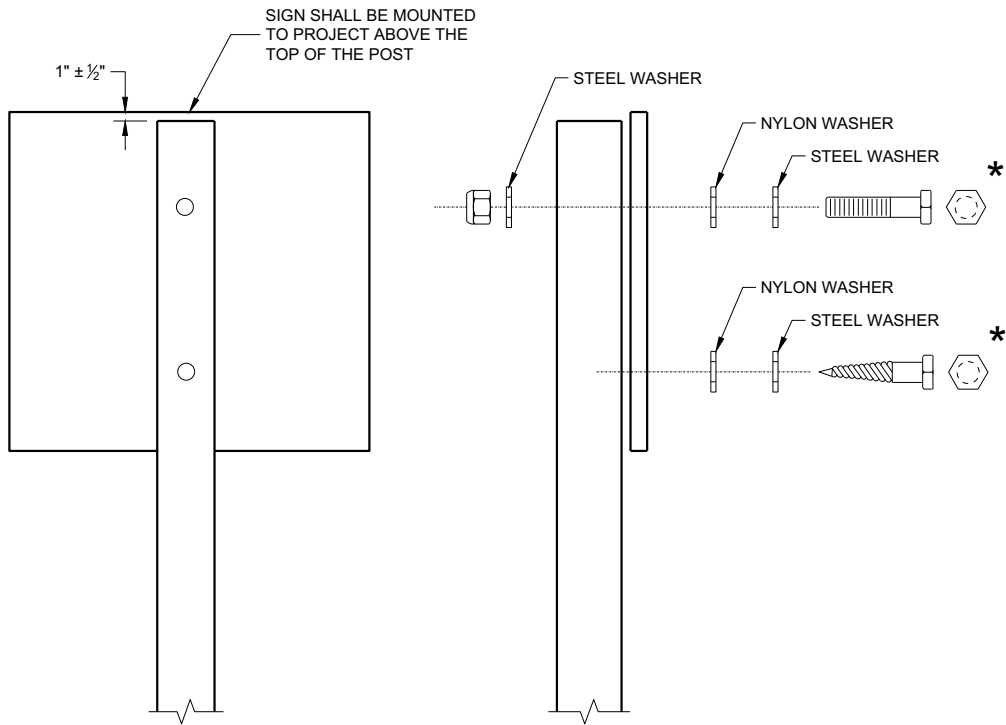
4" X 6" WOOD POST

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

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

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

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

WOOD POST (4" x 6")
LAG SCREWS - ¾" x 3"
MACHINE BOLTS - ⅝" x 6 ½" OR 7" LENGTH W/NUTS

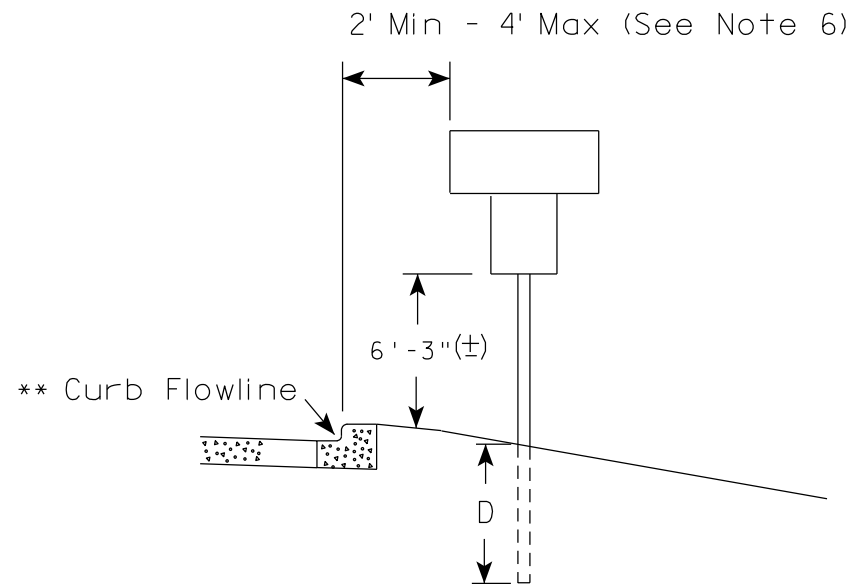
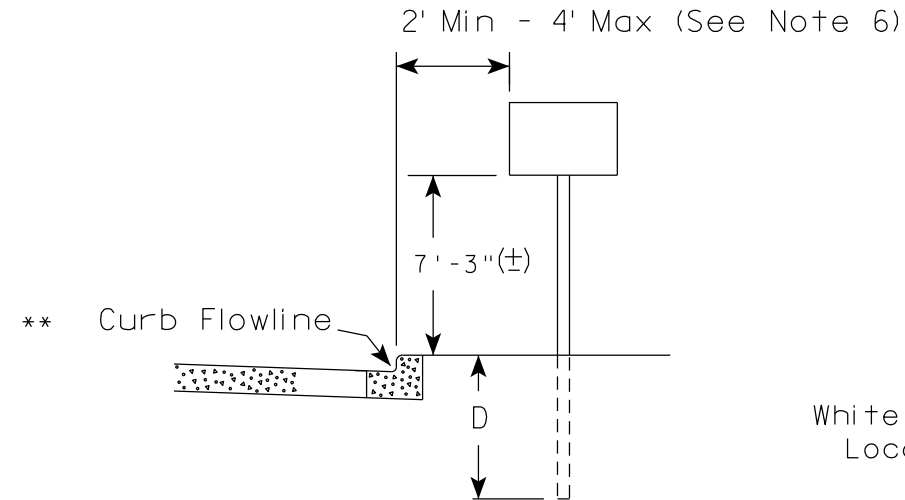
SQUARE STEEL POST (2" x 2")
MACHINE BOLTS - ¾" x 3 ¼" LENGTH W/NUTS
RIVETS - ⅝" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM
BODY/MANDREL O.D. FLANGE 0.720 - 0.765 INCH,
GRIP RANGE 0.042 - 0.375 INCH

WASHERS (ALL POSTS) -
1 ¼" O.D. x ⅜" I.D. x ⅛" STEEL
1 ¼" O.D. x ⅜" I.D. x 0.080 NYLON

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

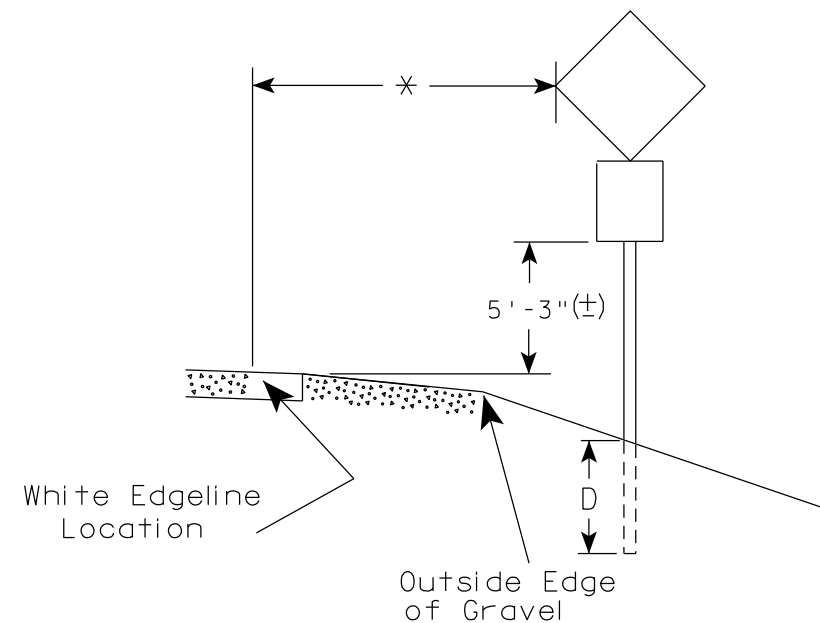
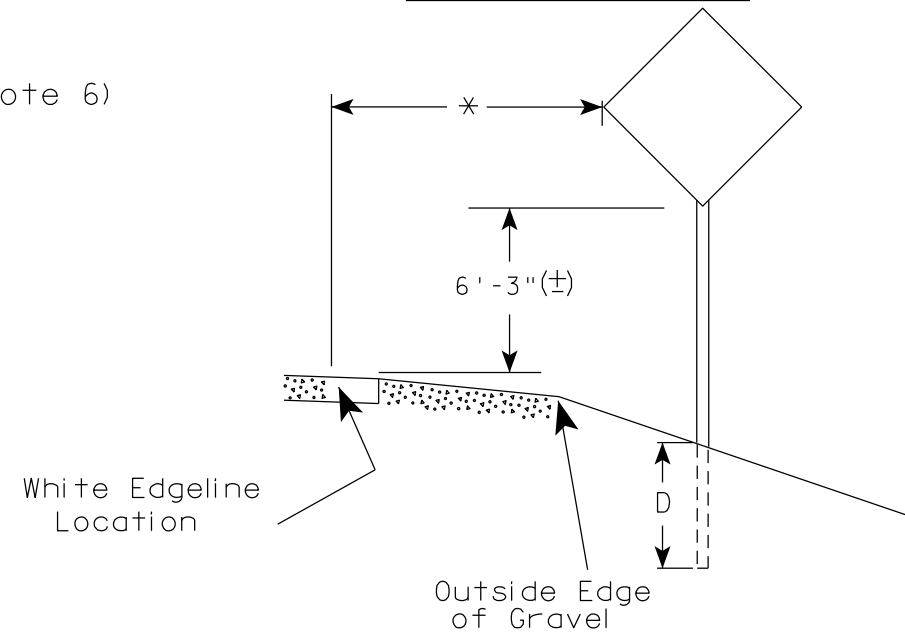
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA



✱✱ 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.

RURAL AREA (See Note 2)



✱ 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.

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.

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

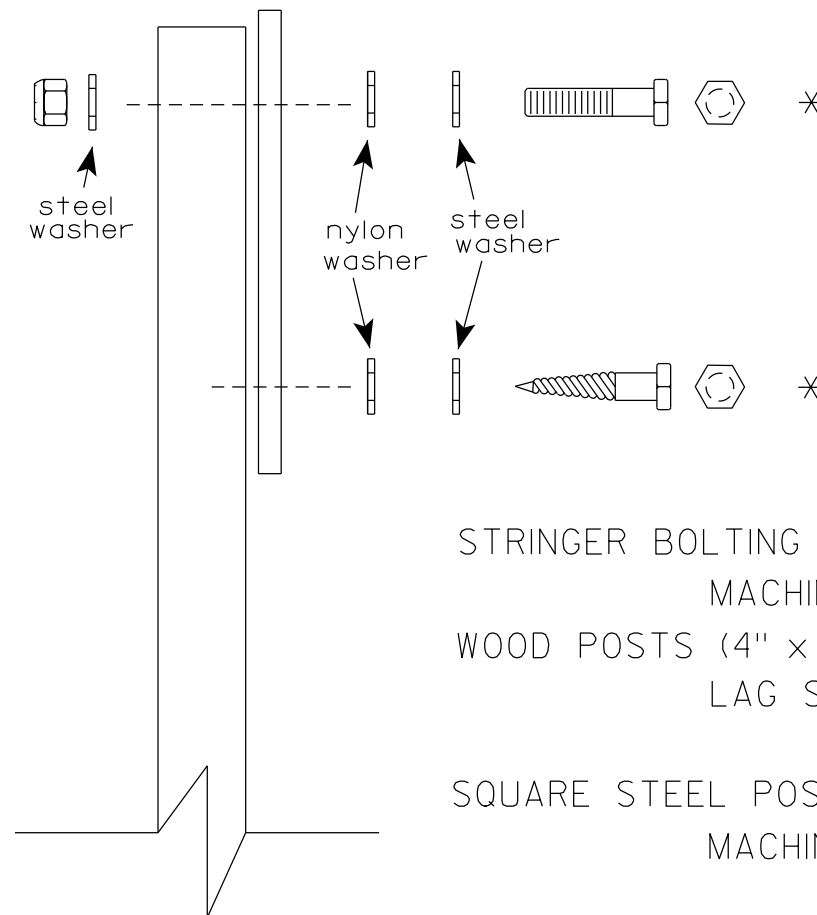
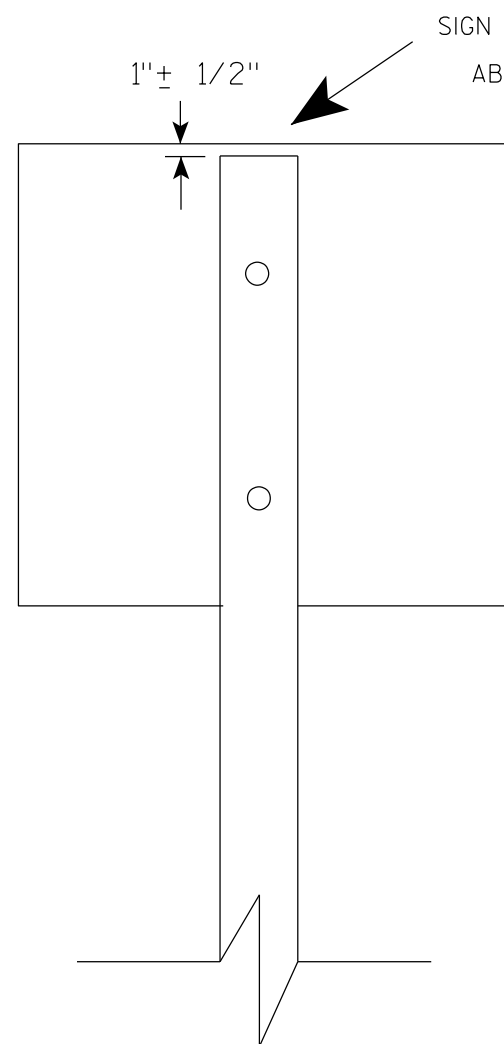
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

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

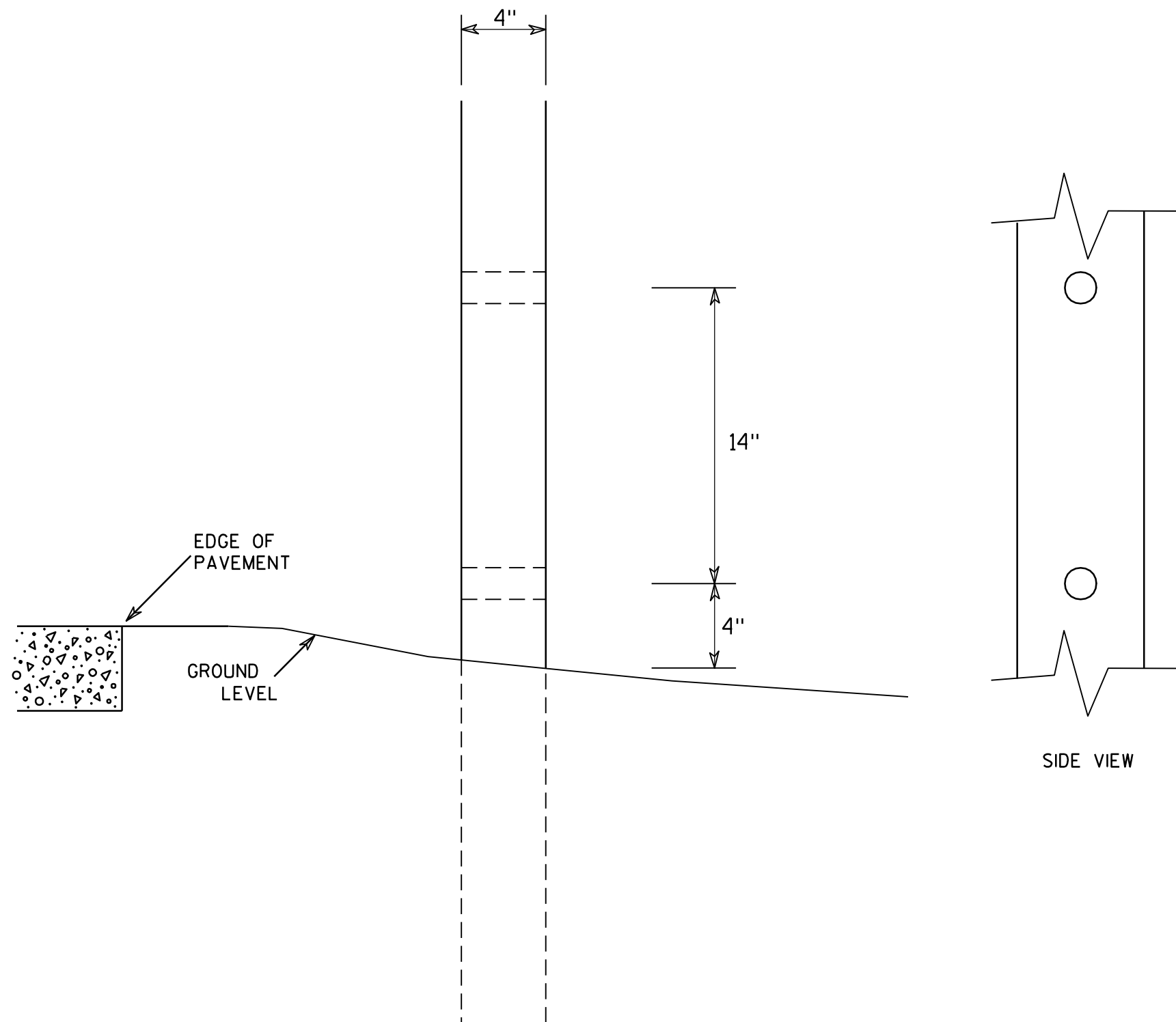
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

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

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

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

DESIGN DATA:

LIVE LOAD:
DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.36
OPERATING RATING FACTOR: 1.76
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 KIPS
STRUCTURE IS DESIGNED FOR A FUTURE WEARING
SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
SUPERSTRUCTURE f'c = 4,000 psi
ALL OTHER f'c = 3,500 psi
BAR STEEL REINFORCEMENT:
GRADE 60 fy = 60,000 psi

FOUNDATION DATA:

ABUTMENTS SUPPORTED ON HP 10X42 STEEL PILING WITH A
REQUIRED DRIVING RESISTANCE OF 100* TONS PER PILE AS
REQUIRED BY THE MODIFIED GATES DYNAMIC EQUATION.
ESTIMATED 65' LONG.

* 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

Q₁₀₀ = 880 C.F.S.
VELOCITY = 5.25 F.P.S.
HW₁₀₀ = EL. 712.38
WATERWAY AREA = 167.5 SQ. FT.
DRAINAGE AREA = 7.0 SQ. MI.
ROADWAY OVERTOPPING = NA
SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY


Q₂ = 260 C.F.S.
VELOCITY = 3.09 F.P.S.
HW₂ = EL. 709.08

TRAFFIC DATA:

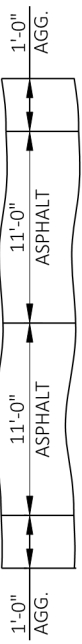
ADT (2022) = 53
ADT (2042) = 78
DESIGN SPEED = 45 MPH

LIST OF DRAWINGS:

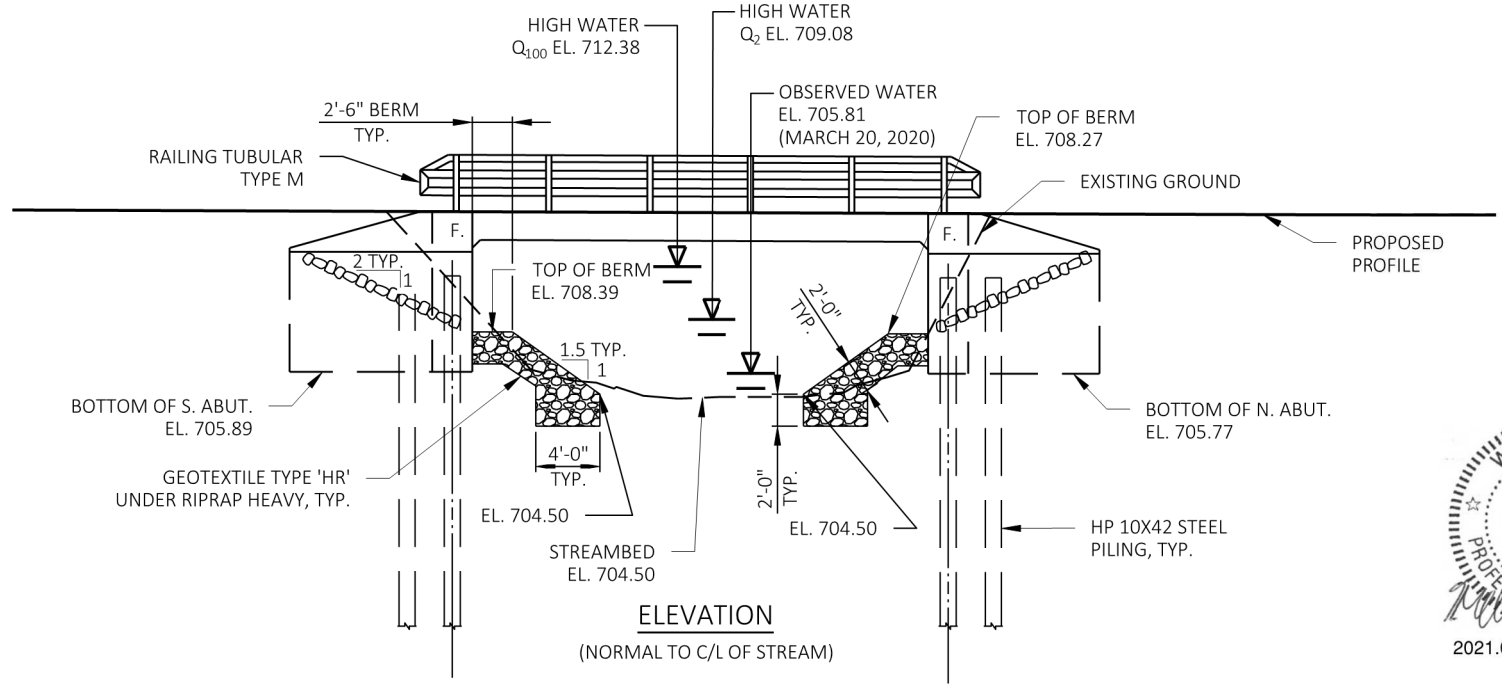
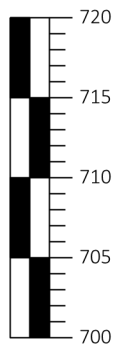
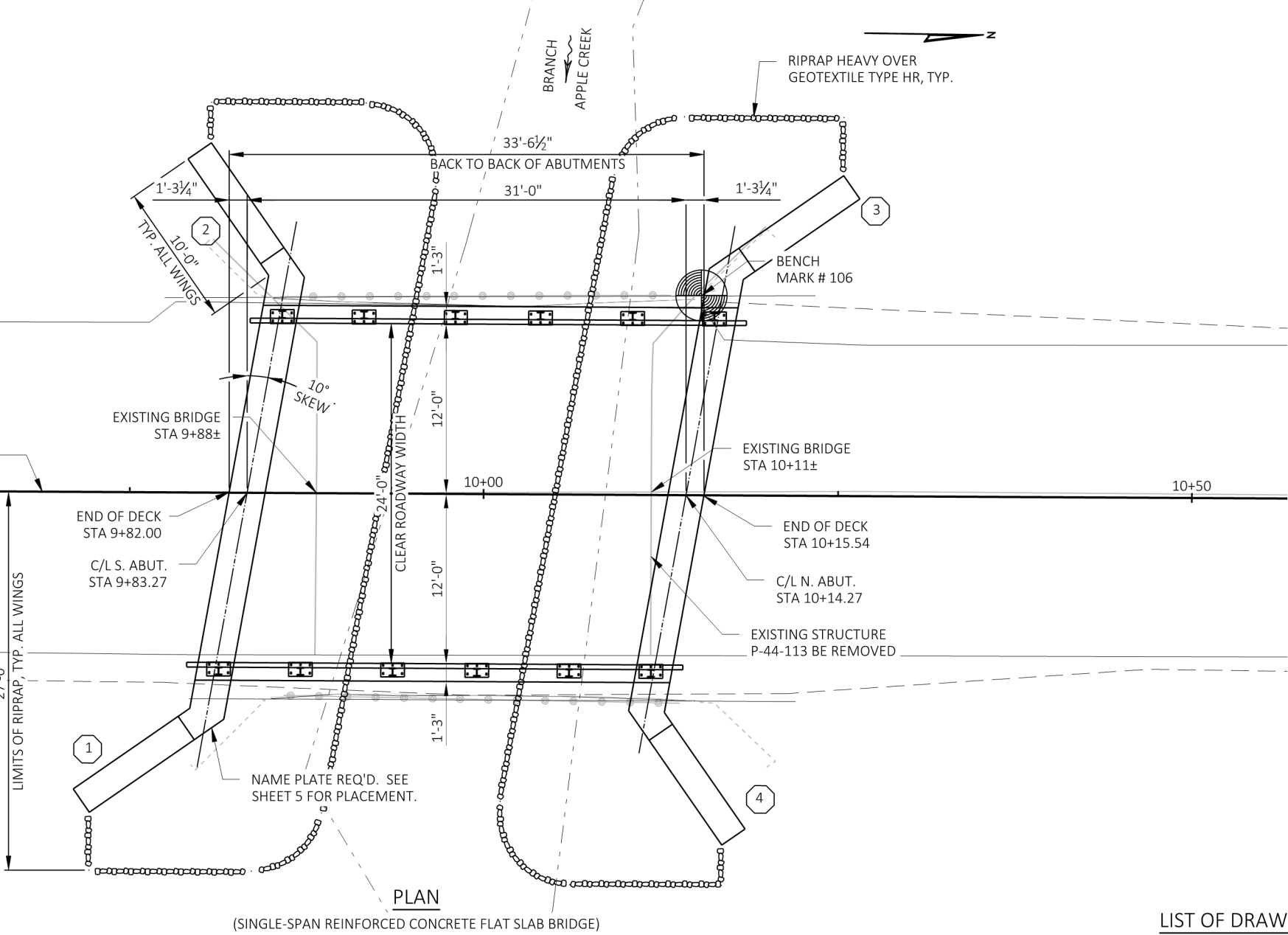
1. GENERAL PLAN
2. TYPICAL SECTION, GENERAL NOTES & QUANTITIES
3. GENERAL DETAILS
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT DETAILS
7. NORTH ABUTMENT
8. NORTH ABUTMENT DETAILS
9. SUPERSTRUCTURE
10. SUPERSTRUCTURE DETAILS
11. TUBULAR STEEL RAILING TYPE M

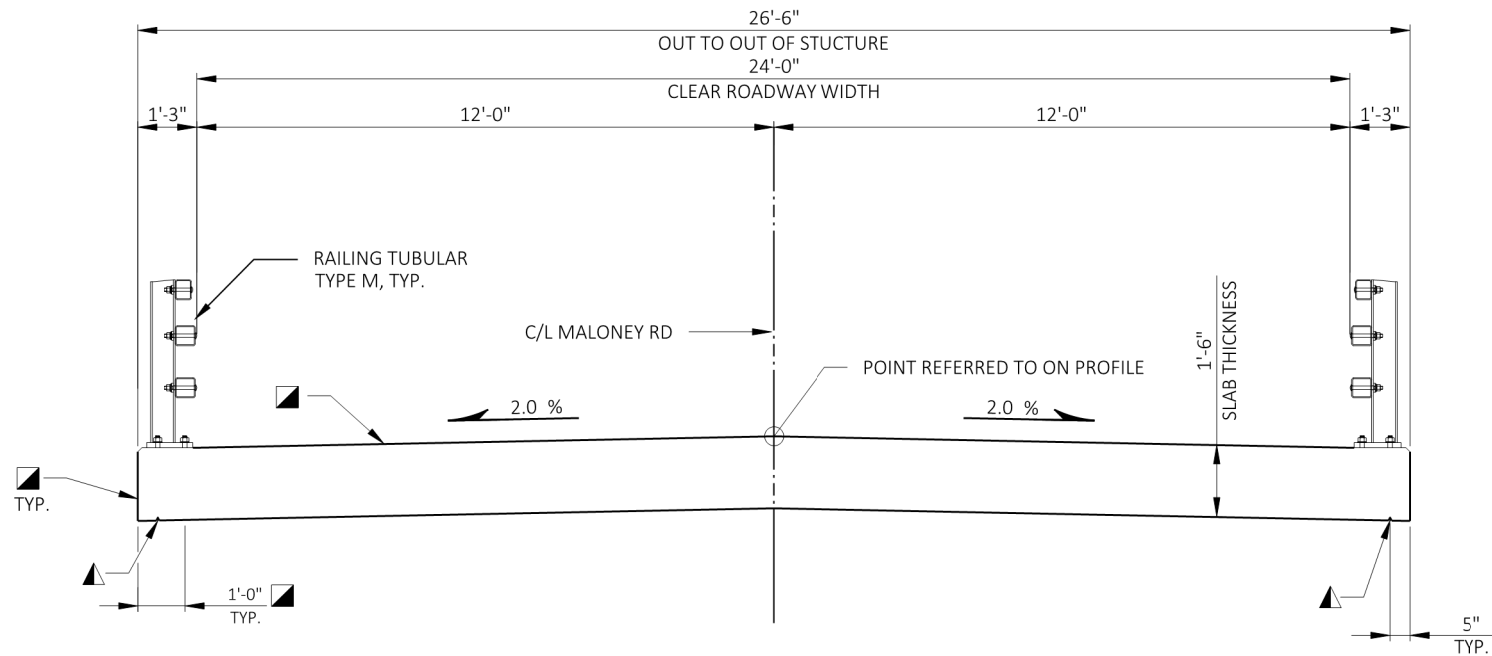
NO.	DATE	REVISION	BY
<div><div><div>Mead & Hunt</div><div>Mead & Hunt, Inc. 2440 Deming Way Middleton, WI 53562 608.273.6380 www.meadhunt.com</div></div><div>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</div><div>ACCEPTED  SDR 05/10/21 CHIEF STRUCTURES DESIGN ENGINEER DATE</div><div>STRUCTURE B-44-476</div><div>MALONEY ROAD OVER BR. OF APPLE CREEK</div><div>COUNTY OUTAGAMIE TOWN/VILLAGE FREEDOM</div><div>DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS</div><div>DESIGNED BY RCP DESIGN CK'D. MKG DRAWN BY TJR PLANS CK'D. MJB</div><div>GENERAL PLAN</div><div>SHEET 1 OF 11</div></div>			

BRIDGE OFFICE CONTACT
AARON BONK, P.E.
TELEPHONE: (608) 261-0261
CONSULTANT CONTACT
MATTHEW BUCKLI, P.E.
TELEPHONE: (608) 443-0441



INDICATES WING NUMBER





CROSS SECTION THRU BRIDGE
(LOOKING NORTH)

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEMS	UNIT	S ABUT	N ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-44-476	LS	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	243	243	---	486
502.0100	CONCRETE MASONRY BRIDGES	CY	38	38	54	130
502.3200	PROTECTIVE SURFACE TREATMENT	SY	22	22	115	159
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2270	2270	---	4540
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1590	1590	11890	15070
513.4061	RAILING TUBULAR TYPE M	LF	---	---	71	71
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6	---	12
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	455	455	---	910
606.0300	RIPRAP HEAVY	CY	59	58	---	117
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	70	70	---	140
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	49	49	---	98
645.0120	GEOTEXTILE TYPE HR	SY	96	95	---	191
513.4061	FLASHING STAINLESS STEEL	LF	---	---	57	57
NON BID ITEMS						
	FILLER	SIZE				1/2" & 3/4"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

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

BEVEL EXPOSED EDGES OF CONCRETE $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.

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

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.

THE EXISTING GROUND LINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

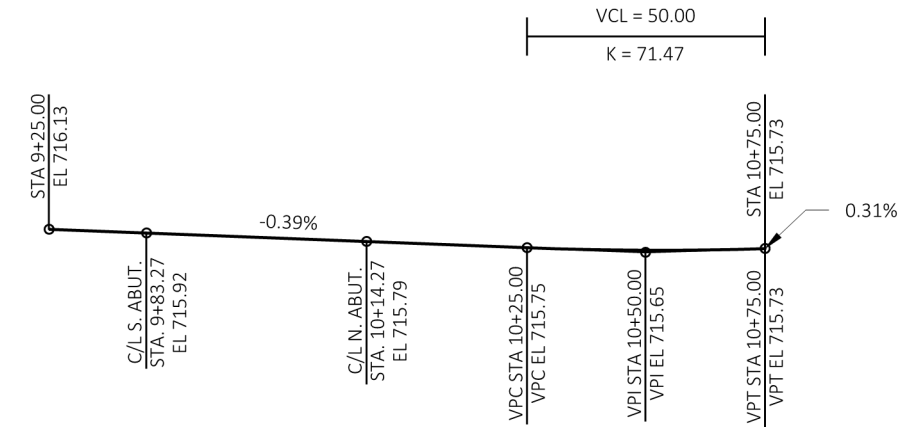
THE QUANTITY FOR BACKFILL STRUCTURE TYPE A IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.

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

ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO NAVD88 (1991) DATUM.

THE EXISTING STRUCTURE TO BE REMOVED IS A 27' LONG BY 23' CLEAR ROADWAY WIDTH, SINGLE-SPAN CONCRETE SLAB BRIDGE (P-44-113).

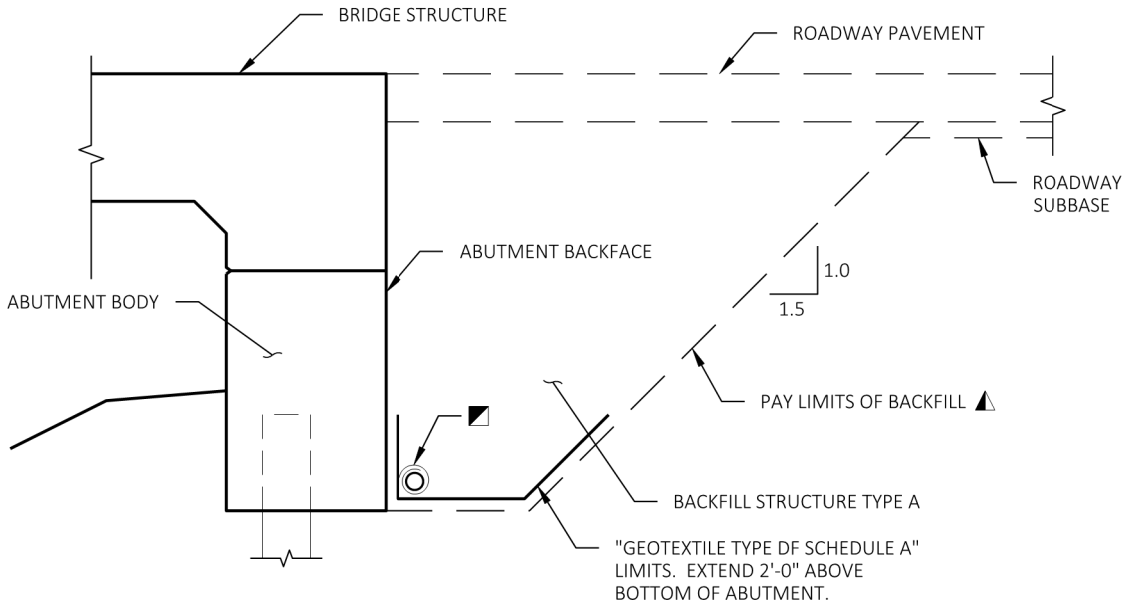
- $\frac{3}{4}$ " V-GROOVE REQ'D. EXTEND TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM.
- COAT WITH "PROTECTIVE SURFACE TREATMENT" AS PER THE STANDARD SPECIFICATIONS. PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE TOP AND EXTERIOR EXPOSED FACE OF WINGS, AND THE END 1'-0" OF THE FRONT FACE OF ABUTMENT.



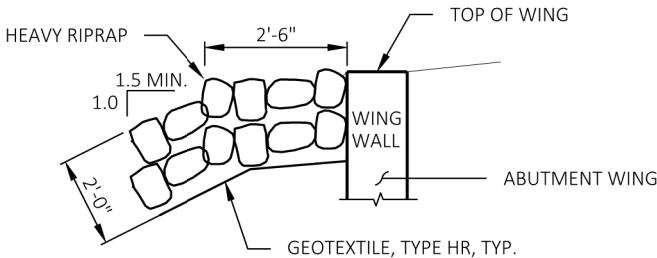
PROFILE GRADE LINE, C/L MALONEY RD

BENCHMARKS			
NO.	STATION	ELEV.	DESCRIPTION
BM101	13+81.8, 9.14' LT	719.09	CP #101 PK
BM102	8+42.6, 8.8' LT	716.83	CP # 102 PK
BM104	7+96.4, 31.37' LT	717.64	SPIKE E SIDE PP 73-605 SW BRIDGE 180 FT
BM106	10+15.2, 14.23' LT	712.84	MARK CROW FOOT TOP NW WING WALL

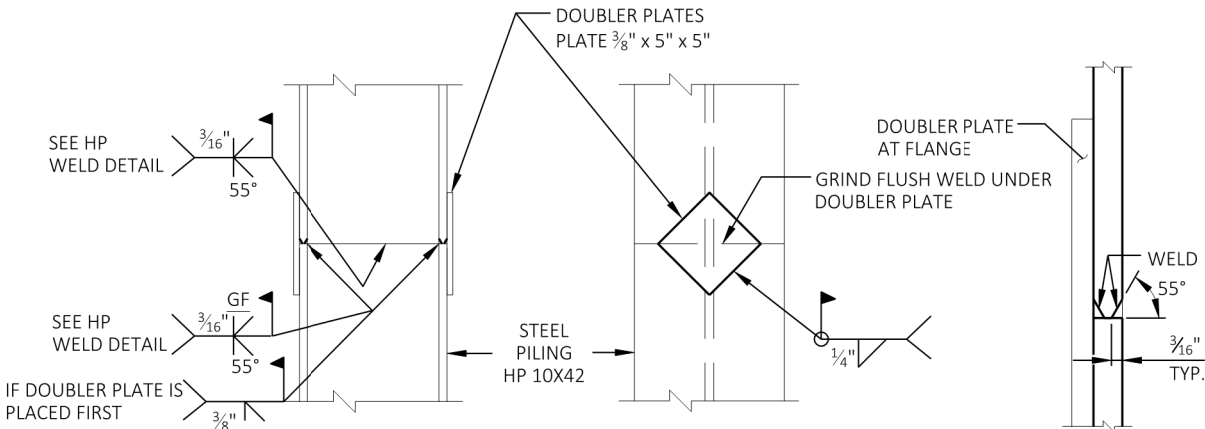
NO.	DATE	REVISION		BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION				
STRUCTURE B-44-476				
		DRAWN BY	TJR	PLANS CK'D. MJB
TYPICAL SECTION, GENERAL NOTES & QUANTITIES			SHEET 2 OF 11	



STRUCTURE BACKFILL & PIPE UNDERDRAIN DETAIL
(TYPICAL AT BOTH ABUTMENTS)

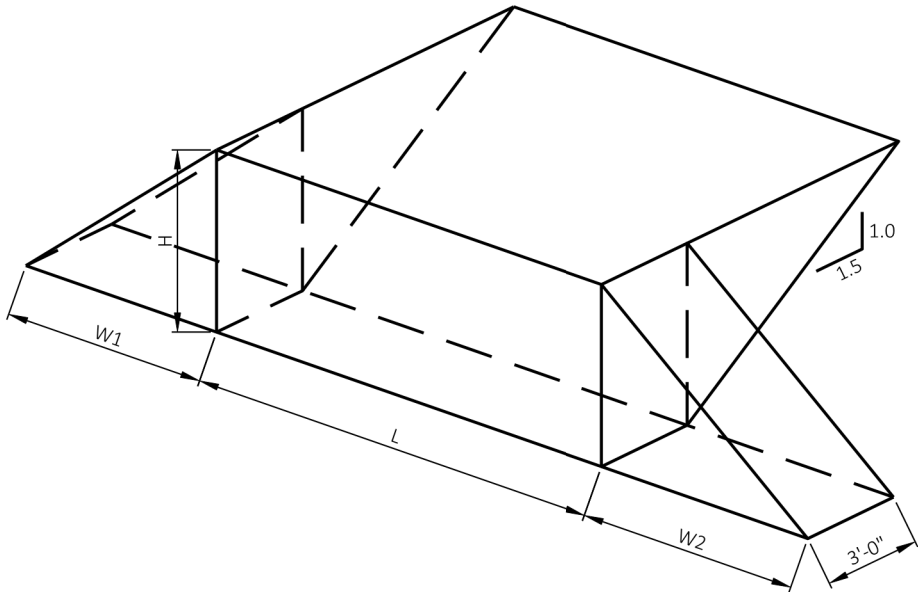


TYPICAL FILL SECTION AT WING



PILE SPLICE DETAILS

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR



ABUTMENT BACKFILL DIAGRAM

- L = OUT TO OUT OF ABUTMENT BODY (FT)
H = AVERAGE ABUTMENT FILL HEIGHT (FT)
W1 = WING 1 LENGTH (FT)
W2 = WING 2 LENGTH (FT)
EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
 $V_{CF} = (L)(3.0)(H) + (L)(0.5)(1.5H)(H) + (3.0)(0.5)(W1+W2)(H)$
 $V_{CY} = V_{CF} (EF) / 27$
 $V_{TON} = V_{CY} (2.0)$

STRUCTURE BACKFILL NOTES

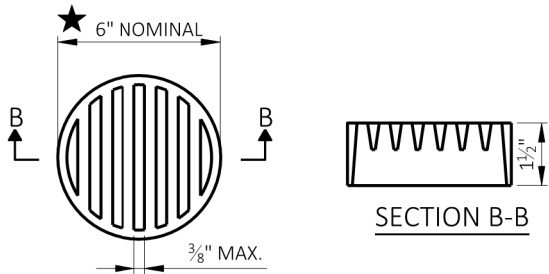
THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-44-476" SHALL BE THE EXISTING GROUNDLINE.

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 ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

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

LEGEND

- ▲ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO THE EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE ABUTMENT SHEETS FOR PLACEMENT.



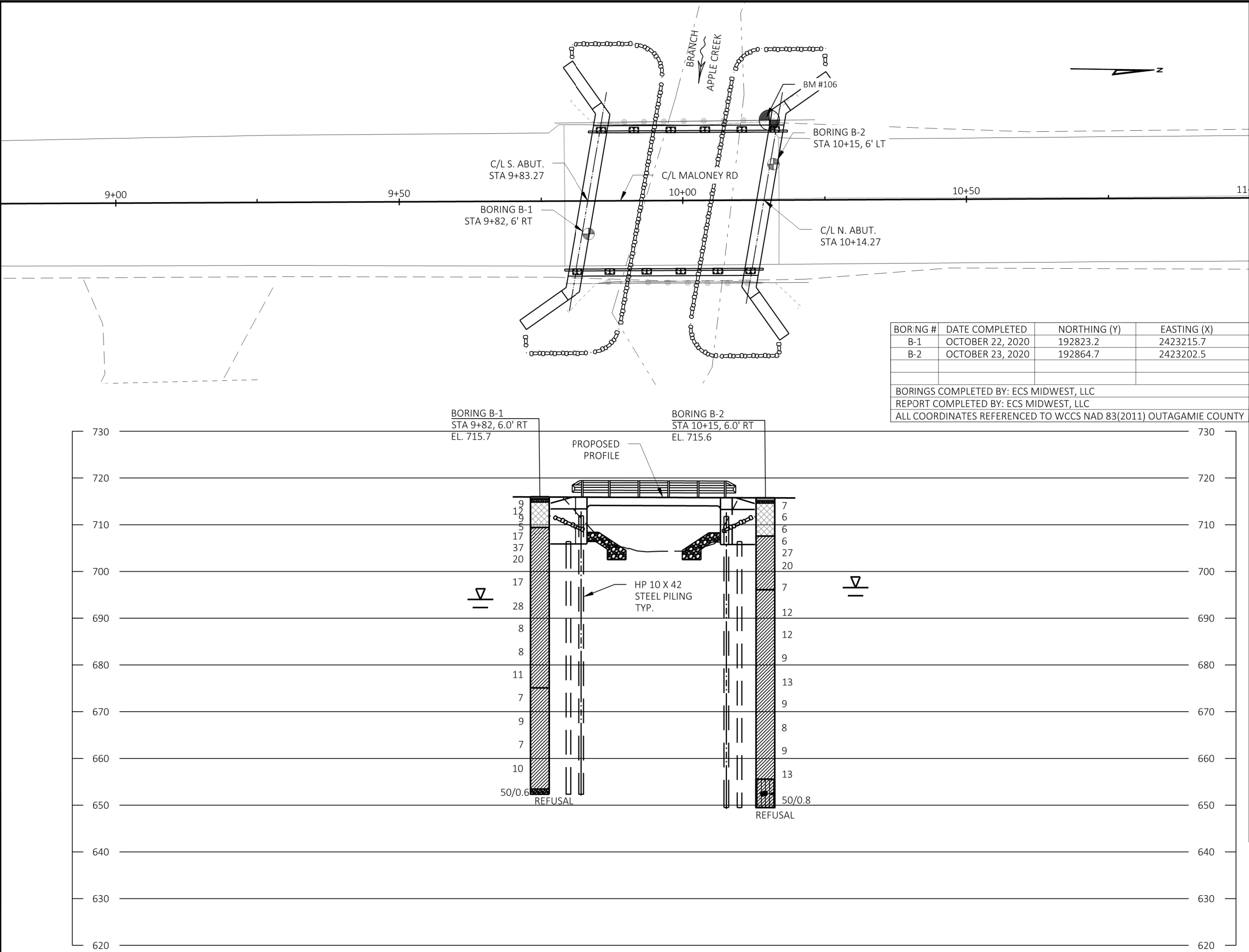
RODENT SHIELD

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

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

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-476			
DRAWN BY		TJR	PLANS CK'D. MJB
GENERAL DETAILS		SHEET 3 OF 11	



STATE PROJECT NUMBER
6501-06-71

MATERIAL SYMBOLS

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

LEGEND OF BORING

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

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING
▼ END OF DRILLING
▽ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.		DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION				
STRUCTURE B-44-476				
DRAWN BY		TJR	PLANS CK'D.	MJB
SUBSURFACE EXPLORATION			SHEET 4 OF 11	

- NOTES:**
- FOR PILE SPLICE DETAILS SEE SHEET 2.
- FOR STRUCTURE BACKFILL AND PIPE UNDERDRAIN DETAILS SEE SHEET 2.
- FILL/ EXCAVATE TO BOTTOM OF SOUTH ABUTMENT EL 705.89 BEFORE DRIVING PILING.
- DO NOT PLACE FILL ABOVE EL. 708.89 UNTIL SUPERSTRUCTURE IS IN PLACE.
- SOUTH ABUTMENT TO BE SUPPORTED ON HP 10-INCH X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED AT 65' LONG.
- 1

18" RUBBERIZED MEMBRANE WATERPROOFING (RMW). SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- 2

½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ½" BELOW SURFACE OF CONCRETE).
- 3

PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 2 FOR RODENT SHIELD DETAILS.
- 4

4" X ¾" PREFORMED JOINT FILLER LENGTH OF ABUTMENT.
- 5

A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- 6

OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY. PROVIDE RMW ON BF IF CONSTRUCTION JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").
- 7

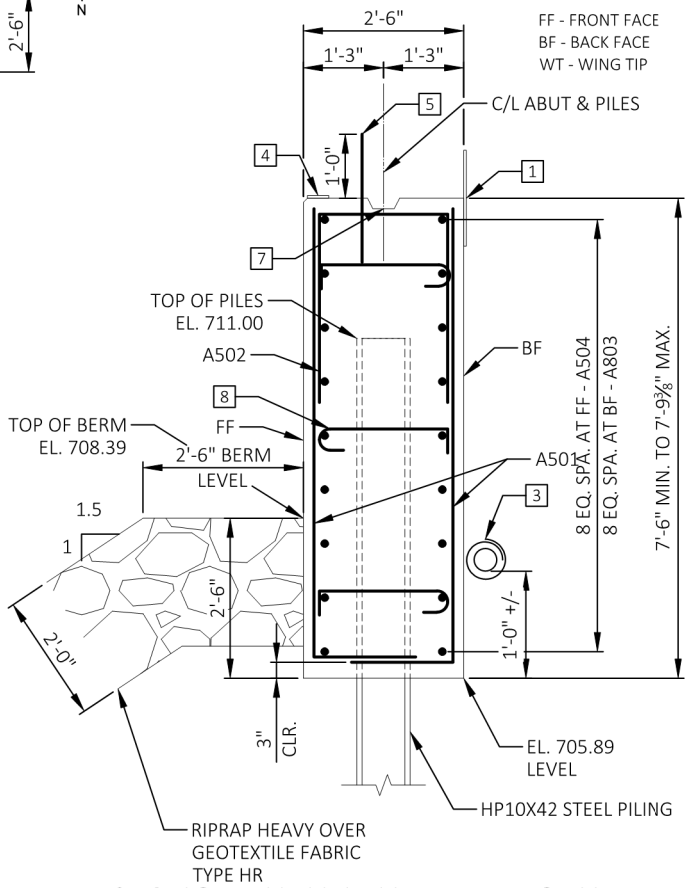
KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY. TERMINATE 1'-0" FROM EDGE OF DECK.
- 8

3-A405 TIE BARS EQUALLY SPACED AT 4'-0" MAX. HORIZONTAL SPACING. ALTERNATE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
- 9

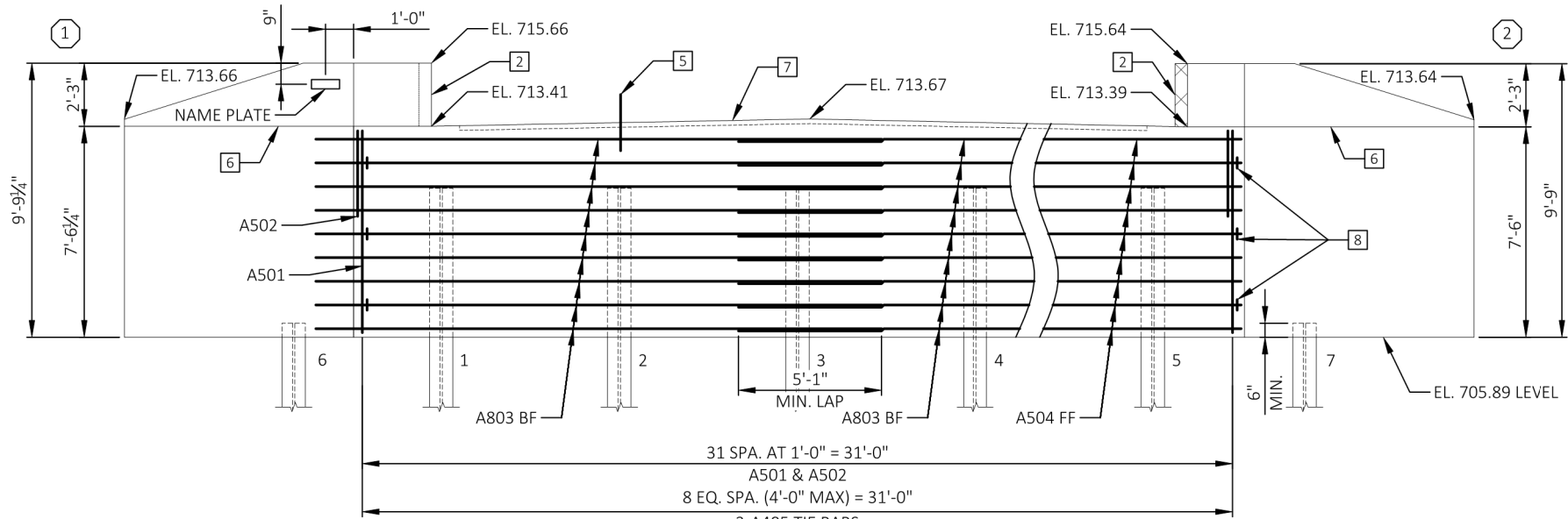
DIMENSION INCLUDES ½" FILLER.
- #

INDICATES WING NUMBER

FF - FRONT FACE
BF - BACK FACE
WT - WING TIP

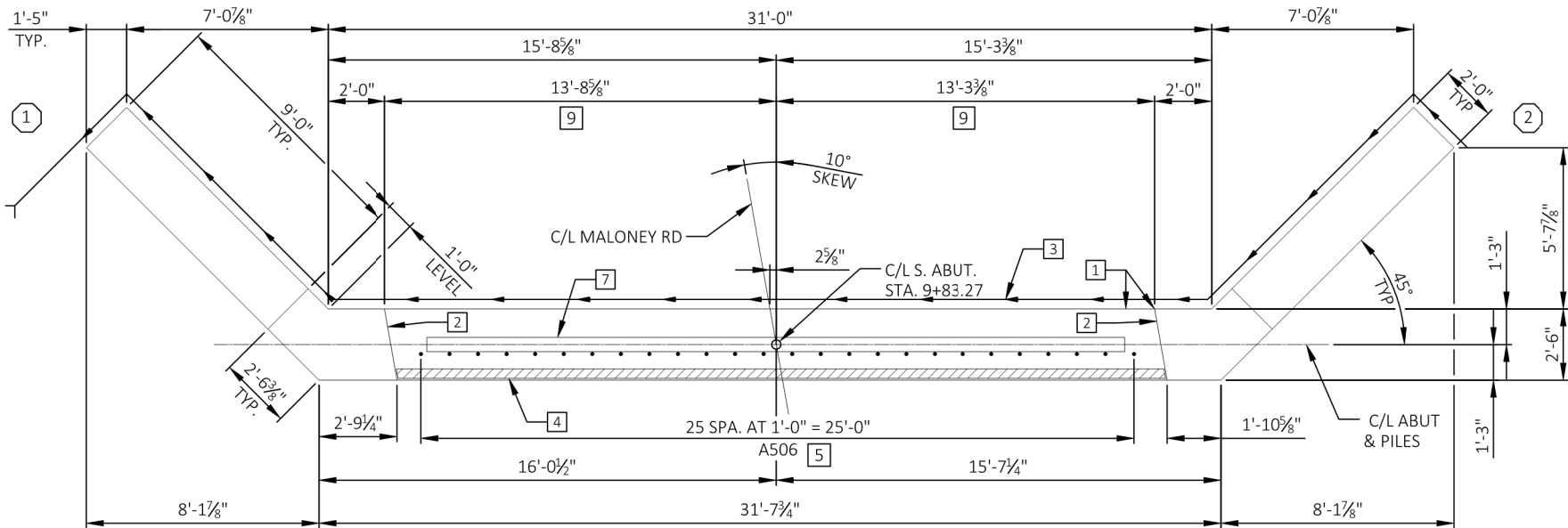


SECTION THRU ABUTMENT BODY

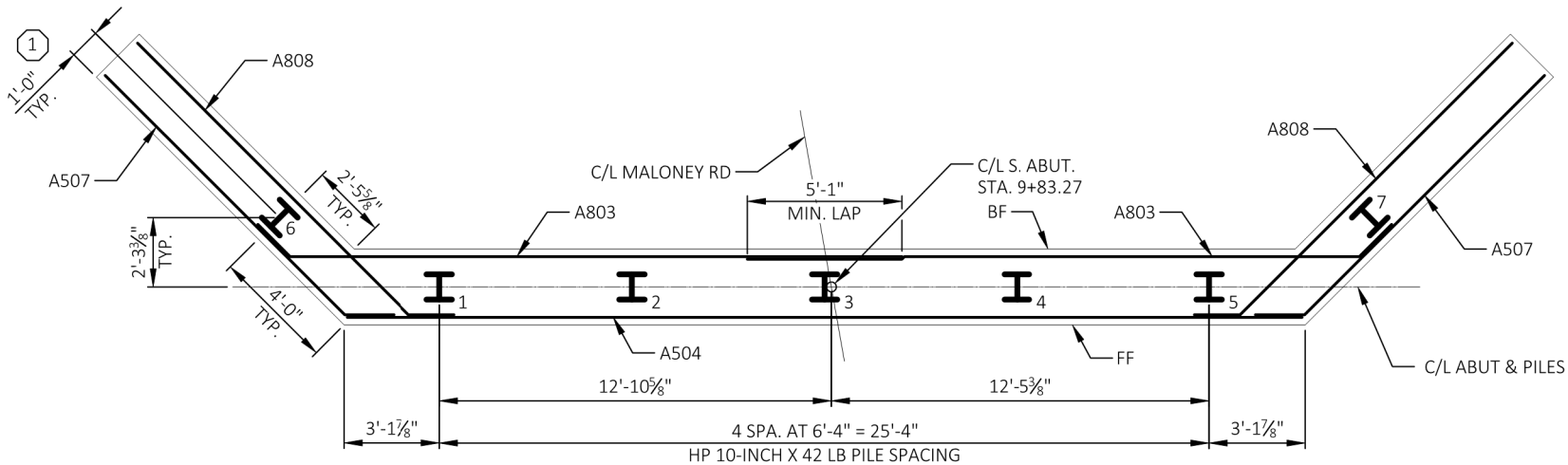


ELEVATION

SOUTH ABUTMENT LOOKING SOUTH

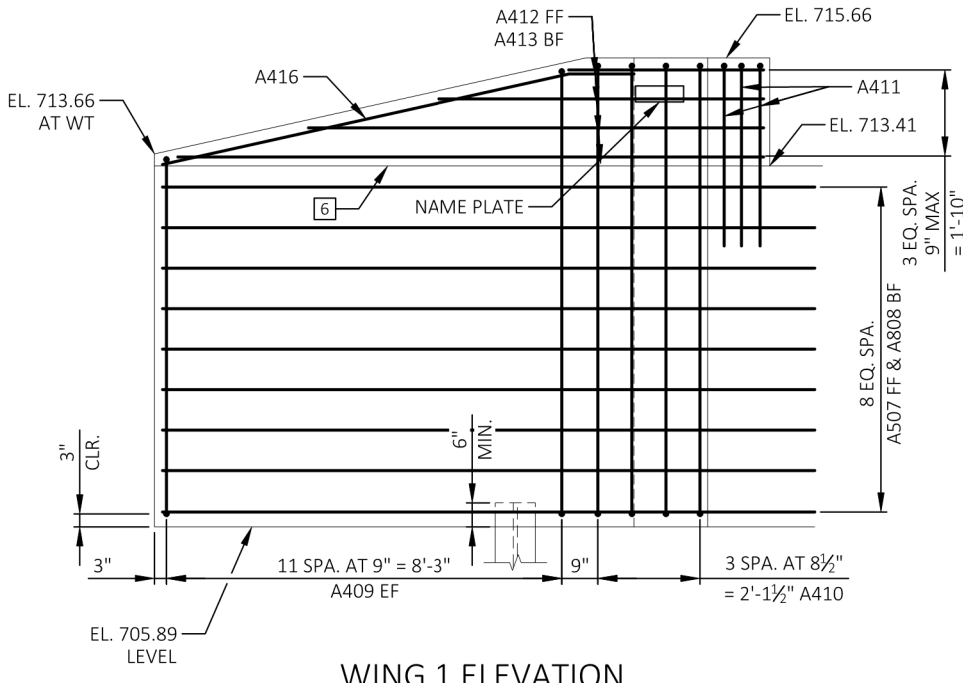


PLAN

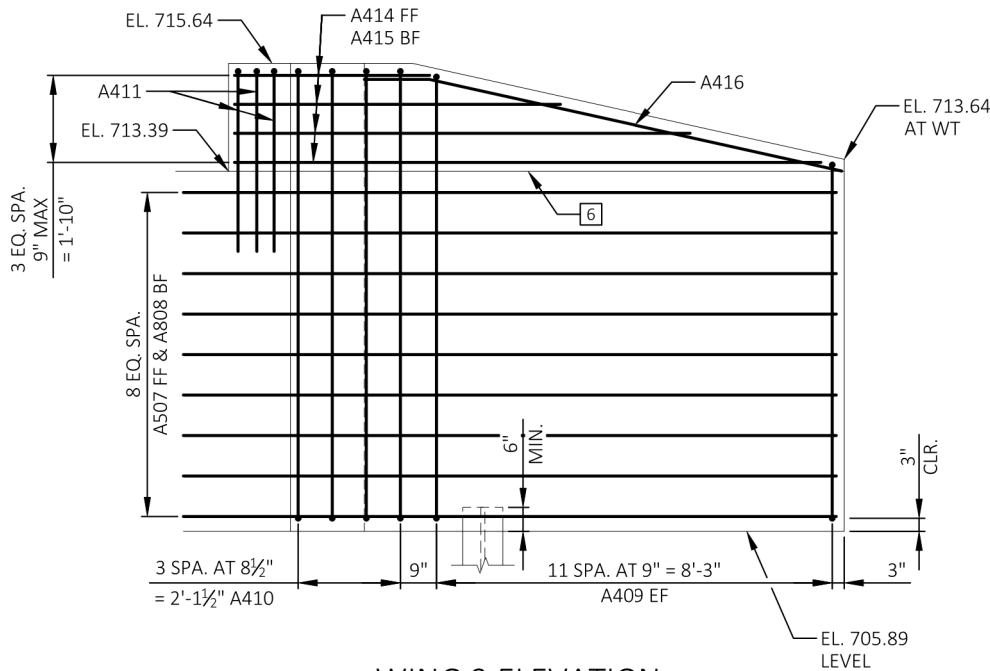


PILE PLAN

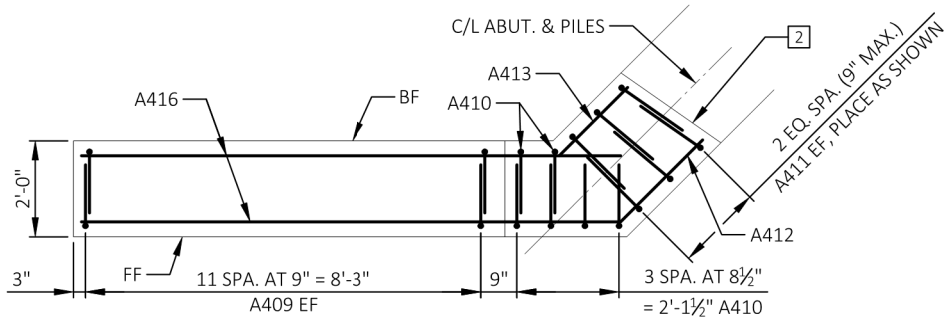
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-476			
DRAWN BY		MJB	PLANS CK'D. RCP
SOUTH ABUTMENT		SHEET	5 OF 11



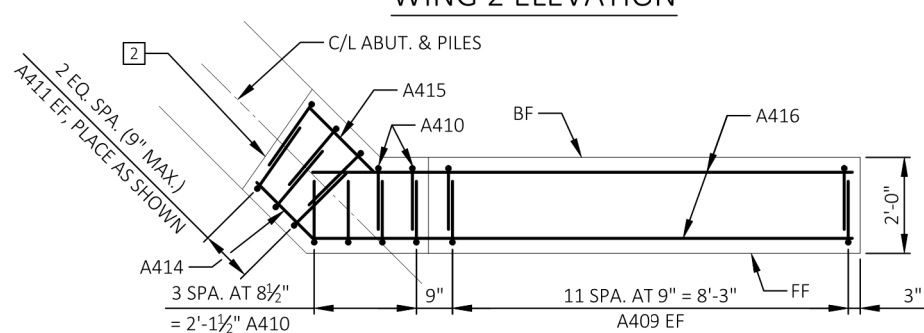
WING 1 ELEVATION



WING 2 ELEVATION



WING 1 PLAN



WING 2 PLAN

BILL OF BARS
SOUTH ABUTMENT

MARK	NUMBER		LENGTH	BENT	BAR SERIES	LOCATION
	COATED	UNCOATED				
			FT - IN			
A501		64	8 - 6	X		ABUTMENT BODY VERT
A502		32	8 - 9	X		ABUTMENT BODY - TOP VERT
A803		18	21 - 11	X		ABUTMENT BODY - BF HORIZ
A504		9	31 - 8			ABUTMENT BODY - FF HORIZ
A405		27	3 - 0	X		ABUTMENT BODY - TIES HORIZ
A506	26		2 - 0			ABUTMENT BODY - DOWELS VERT
A507	18		12 - 9	X		WINGWALL BODY - FF HORIZ
A808	18		14 - 4	X		WINGWALL BODY - BF HORIZ
A409	48		10 - 9	X	X	WINGWALL EF VERT
A410	12		11 - 10	X		WINGWALL EF VERT
A411	12		5 - 4	X		WINGWALL - TOP EF VERT
A412	4		9 - 1	X	X	WING 1 - TOP FF HORIZ
A413	4		7 - 5	X	X	WING 1 - TOP BF HORIZ
A414	4		8 - 3	X	X	WING 2 - TOP FF HORIZ
A415	4		7 - 3	X	X	WING 2 - TOP BF HORIZ
A416	4		11 - 6	X		WINGWALL - TOP HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

LENGTH SHOWN IS AN AVERAGE LENGTH USED FOR CALCULATING BAR WEIGHT ONLY. SEE BARS SERIES TABLE FOR ACTUAL LENGTH.

BAR SERIES TABLE

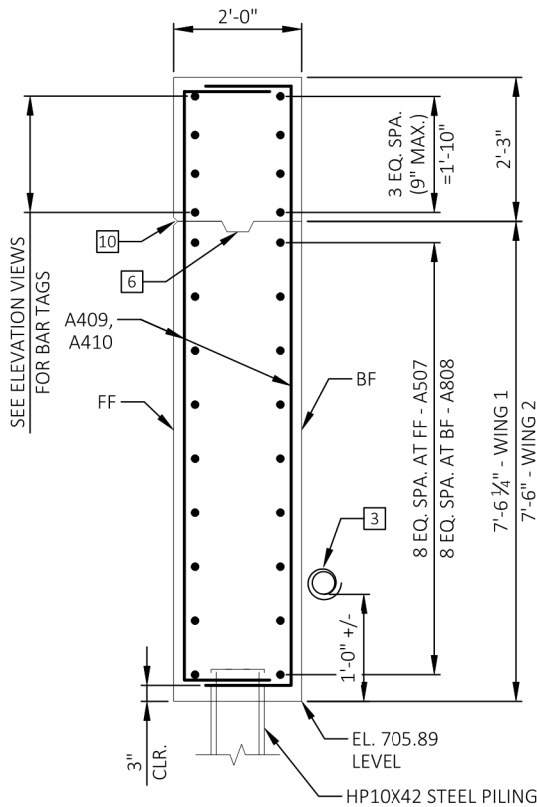
MARK	NO. REQUIRED	LENGTH
A409	4 SERIES OF 12	9'-10" TO 11'-8"
A412	1 SERIES OF 4	4'-11" TO 13'-2"
A413	1 SERIES OF 4	3'-3" TO 11'-6"
A414	1 SERIES OF 4	4'-1" TO 12'-4"
A415	1 SERIES OF 4	3'-1" TO 11'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

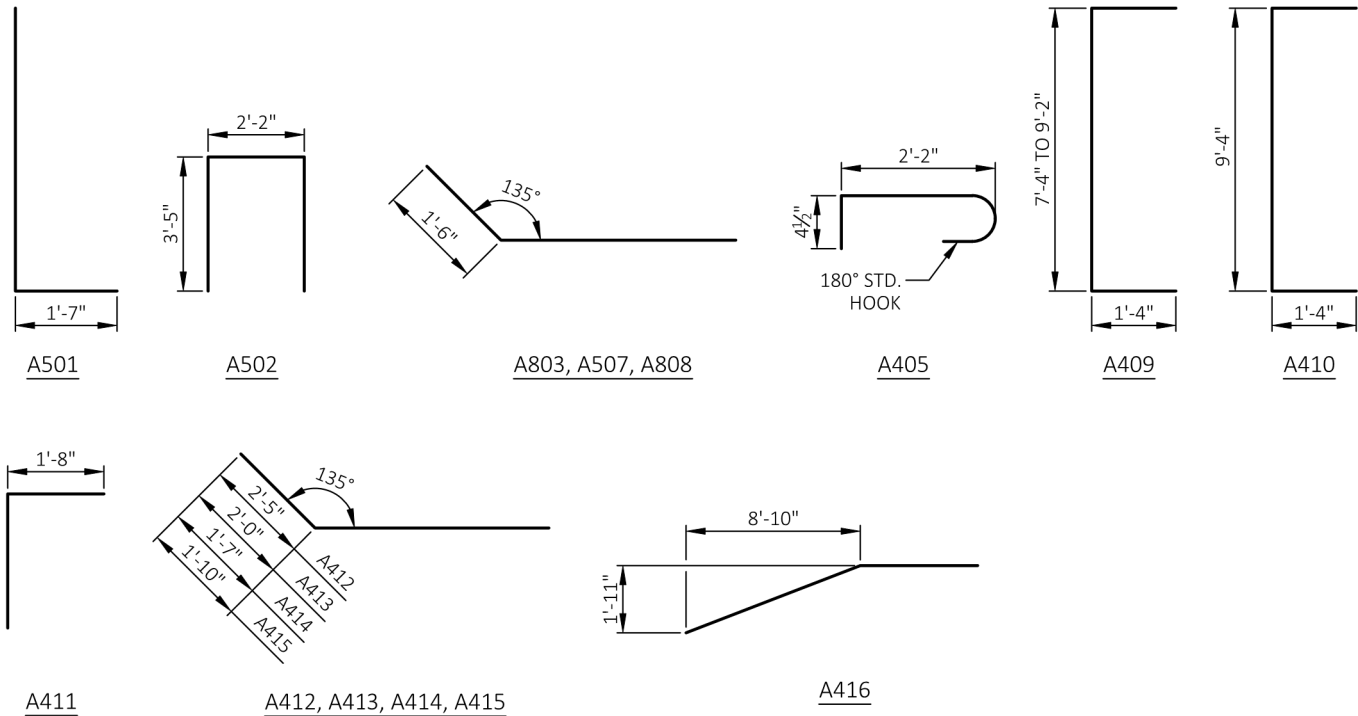
NOTES:

- [2] ½" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ½" BELOW SURFACE OF CONCRETE).
- [3] PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 2 FOR RODENT SHIELD DETAILS.
- [6] OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- [10] ¼" V-GROOVE ON FF.

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP



SECTION THRU WING BODY



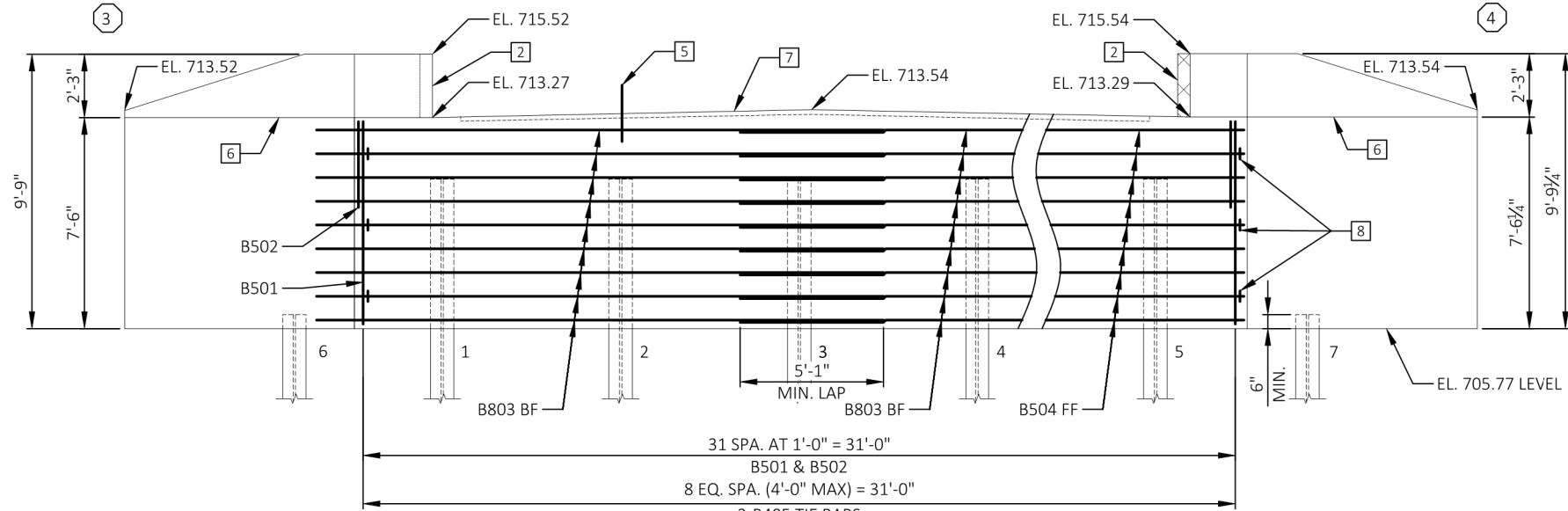
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-476			
DRAWN BY		MJB	PLANS CK'D. RCP
SOUTH ABUTMENT DETAILS		SHEET	6 OF 11

NOTES:

- FOR PILE SPlice DETAILS SEE SHEET 2.
- FOR STRUCTURE BACKFILL AND PIPE UNDERDRAIN DETAILS SEE SHEET 2.
- FILL/ EXCAVATE TO BOTTOM OF NORTH ABUTMENT EL 705.77 BEFORE DRIVING PILING.
- DO NOT PLACE FILL ABOVE ELEVATION 708.77 UNTIL THE SUPERSTRUCTURE IS IN PLACE.
- NORTH ABUTMENT TO BE SUPPORTED ON HP 10-INCH X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 100 TONS PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED AT 65' LONG.

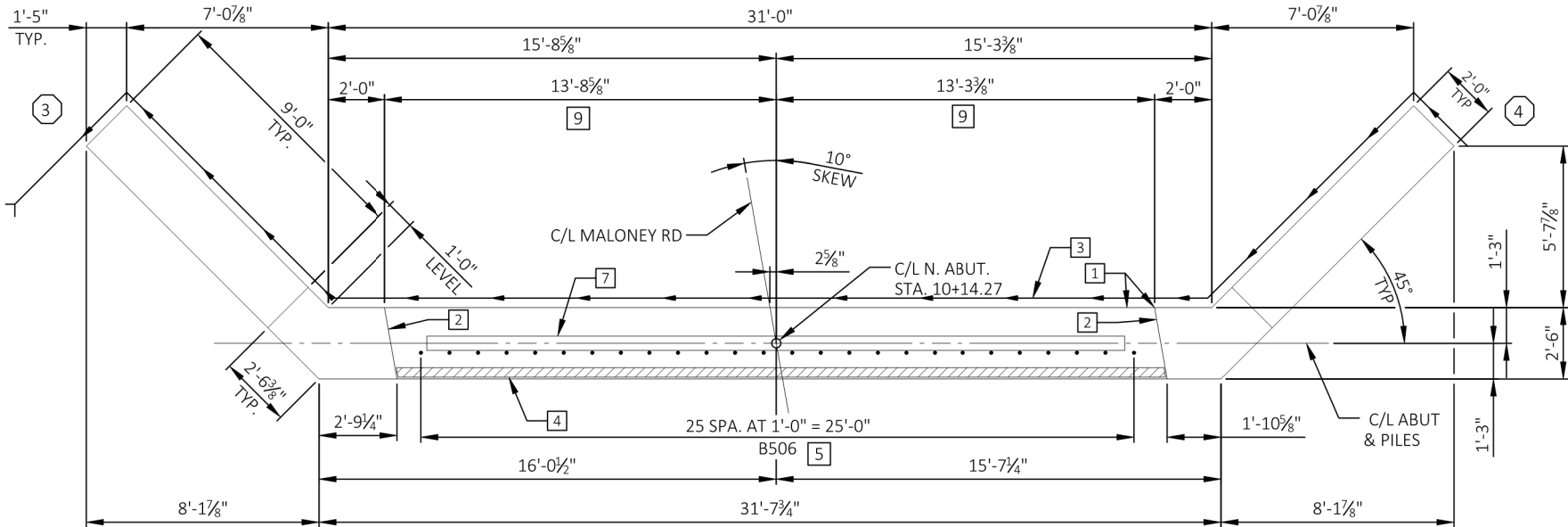
- 1 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW). SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.
- 2 1/2" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/2" BELOW SURFACE OF CONCRETE).
- 3 PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 2 FOR RODENT SHIELD DETAILS.
- 4 4" X 3/4" PREFORMED JOINT FILLER LENGTH OF ABUTMENT.
- 5 B506 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- 6 OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY. PROVIDE RMW ON BF IF CONSTRUCTION JOINT IS USED (COST INCIDENTAL TO BID ITEM "CONCRETE MASONRY BRIDGES").
- 7 KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2"x6" KEYWAY. TERMINATE 1'-0" FROM EDGE OF DECK.
- 8 3-B405 TIE BARS EQUALLY SPACED AT 4'-0" MAX. HORIZONTAL SPACING. ALTERNATE POSITION OF THE 90° AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES.
- 9 DIMENSION INCLUDES 1/2" FILLER.
- # INDICATES WING NUMBER

FF - FRONT FACE
BF - BACK FACE
WT - WING TIP

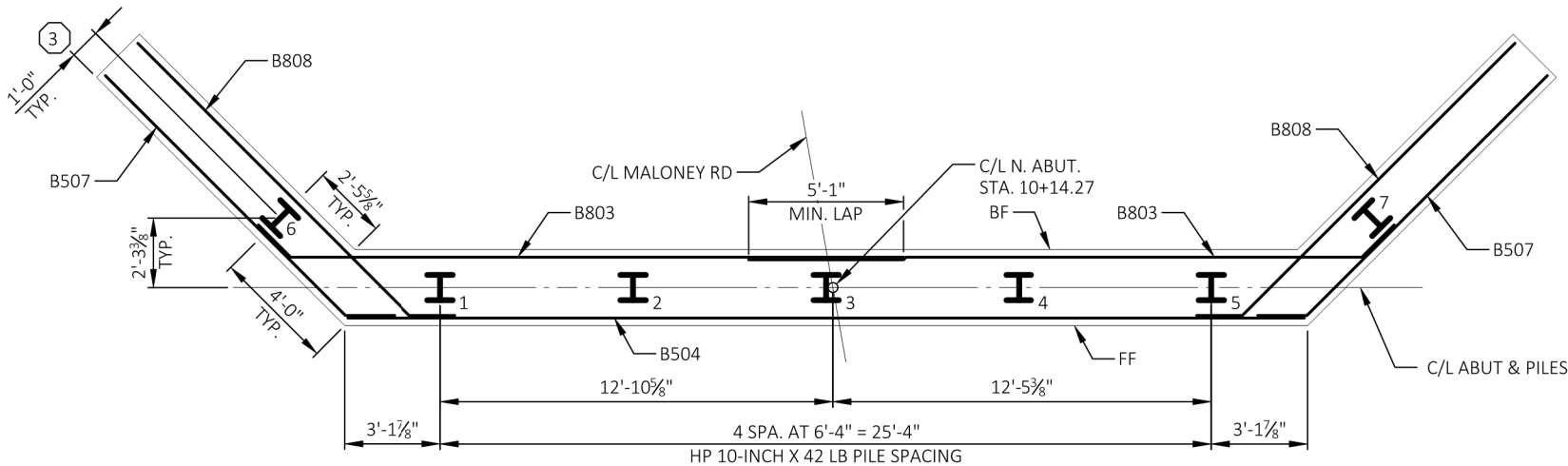


ELEVATION

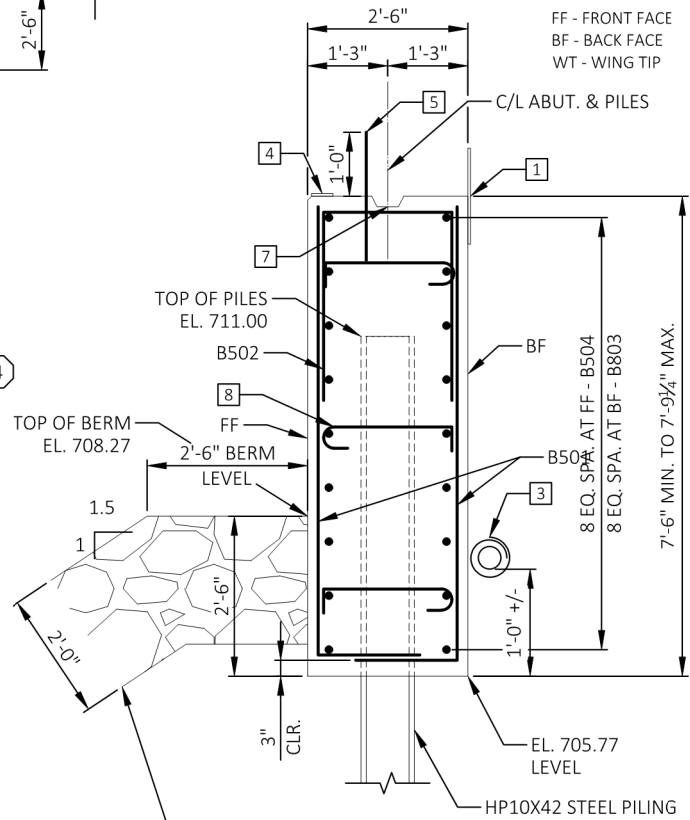
NORTH ABUTMENT LOOKING NORTH



PLAN

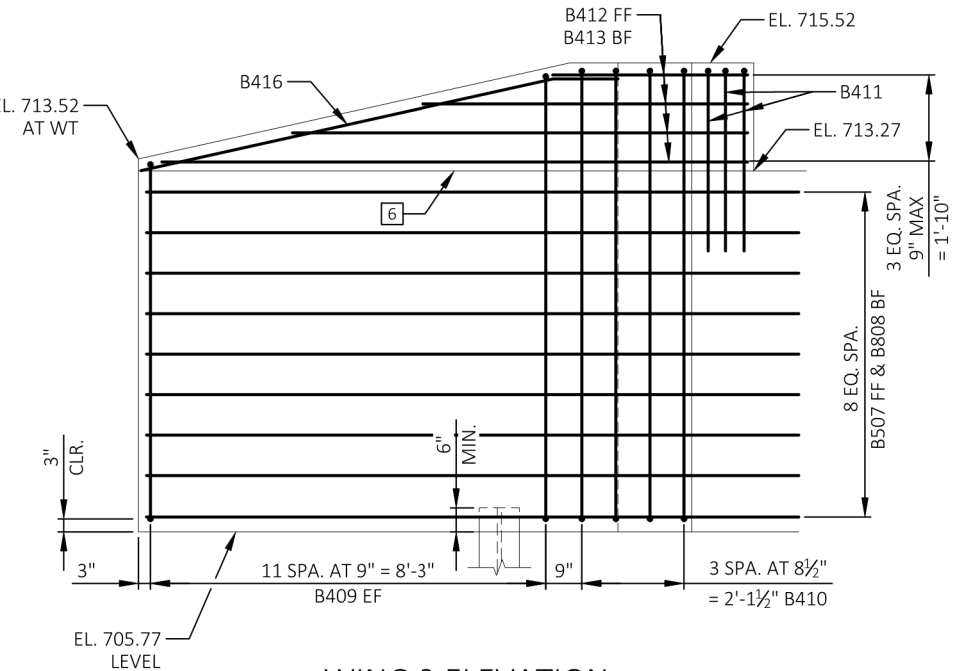


PILE PLAN

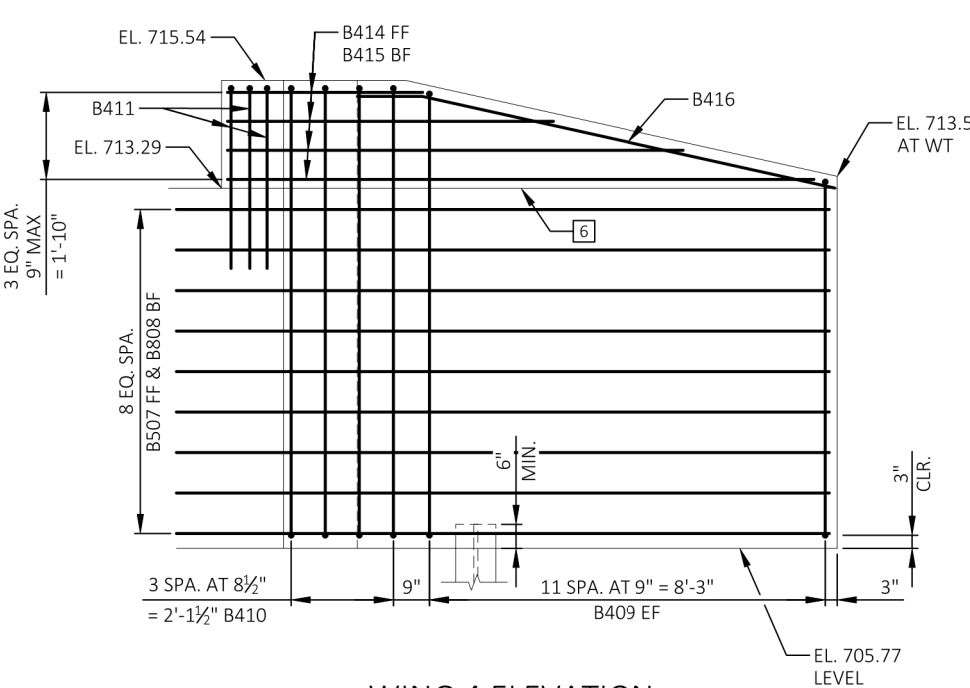


SECTION THRU ABUTMENT BODY

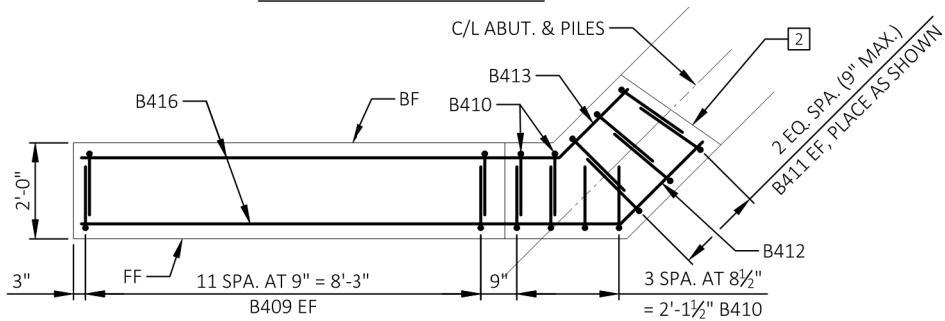
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-476			
DRAWN BY		MJB	PLANS CK'D. RCP
NORTH ABUTMENT		SHEET 7 OF 11	



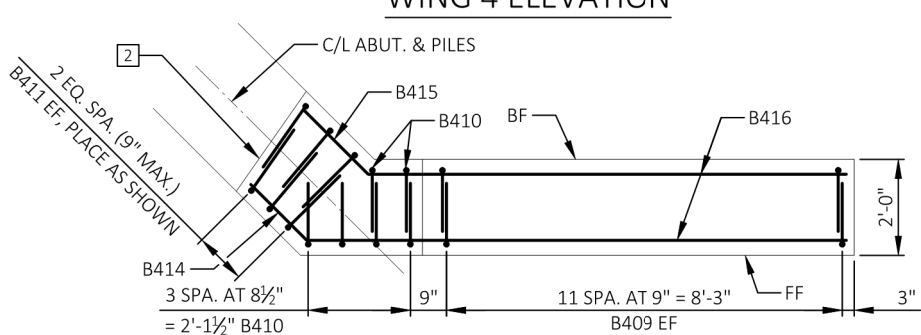
WING 3 ELEVATION



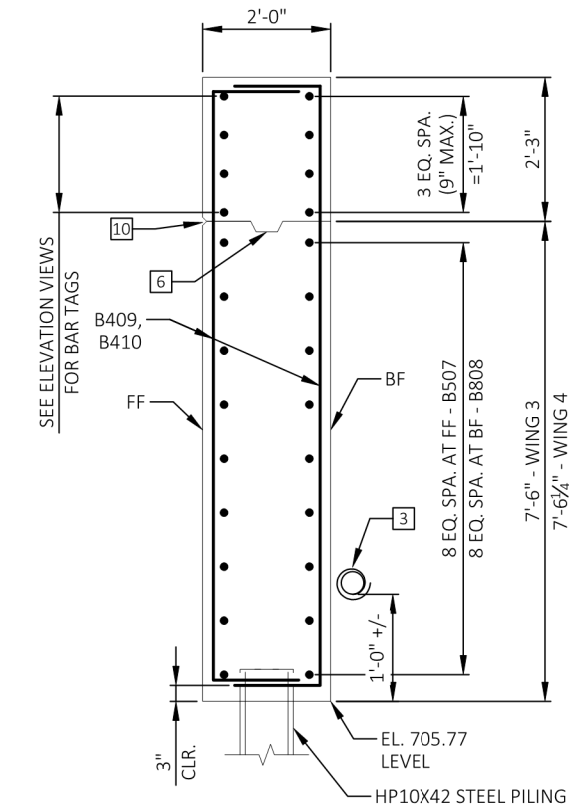
WING 4 ELEVATION



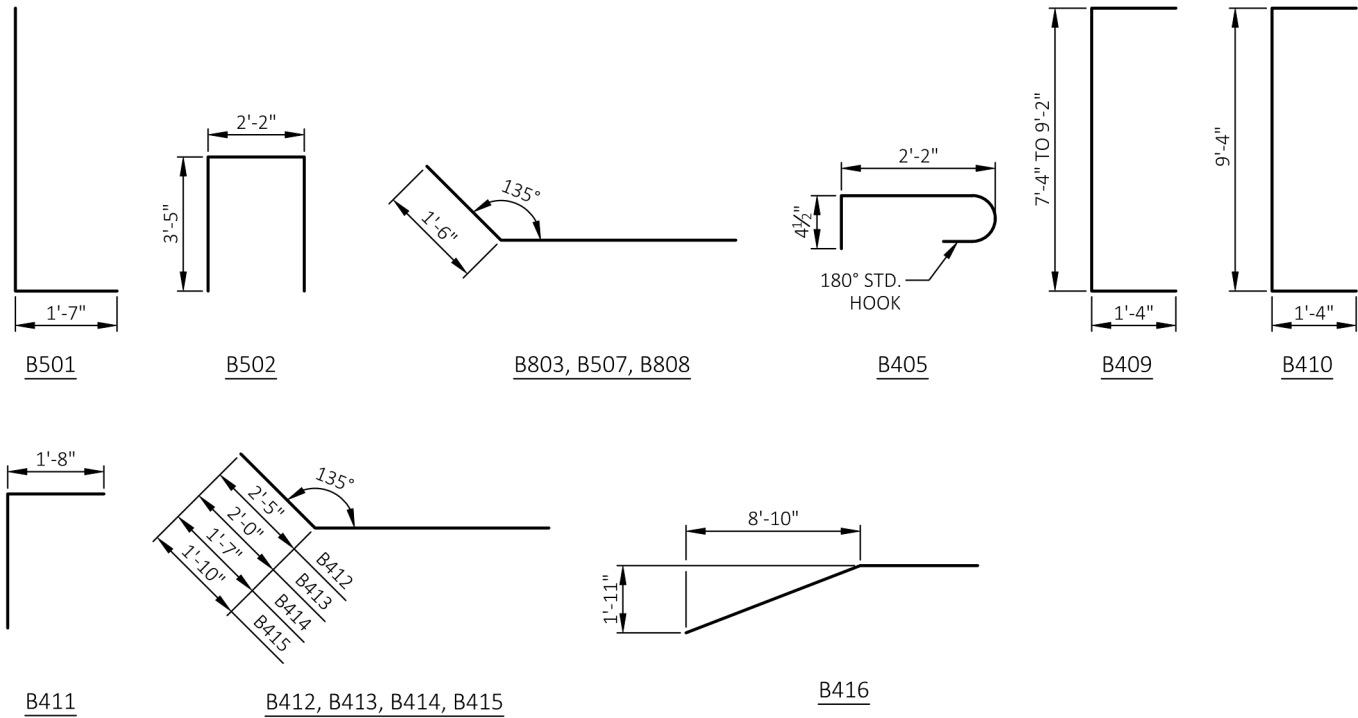
WING 3 PLAN



WING 4 PLAN



SECTION THRU WING BODY



BILL OF BARS
NORTH ABUTMENT

MARK	NUMBER		LENGTH	BENT	BAR SERIES	LOCATION	
	COATED	UNCOATED					
			FT - IN				
B501		64	8 - 6	X		ABUTMENT BODY	VERT
B502		32	8 - 9	X		ABUTMENT BODY - TOP	VERT
B803		18	21 - 11	X		ABUTMENT BODY - BF	HORIZ
B504		9	31 - 8			ABUTMENT BODY - FF	HORIZ
B405		27	3 - 0	X		ABUTMENT BODY - TIES	HORIZ
B506	26		2 - 0			ABUTMENT BODY - DOWELS	VERT
B507	18		12 - 9	X		WINGWALL BODY - FF	HORIZ
B808	18		14 - 4	X		WINGWALL BODY - BF	HORIZ
B409	48		10 - 9	X	X	WINGWALL EF	VERT
B410	12		11 - 10	X		WINGWALL EF	VERT
B411	12		5 - 4	X		WINGWALL - TOP EF	VERT
B412	4		9 - 1	X	X	WING 3 - TOP FF	HORIZ
B413	4		7 - 5	X	X	WING 3 - TOP BF	HORIZ
B414	4		8 - 3	X	X	WING 4 - TOP FF	HORIZ
B415	4		7 - 3	X	X	WING 4 - TOP BF	HORIZ
B416	4		11 - 6	X		WINGWALL - TOP	HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.
▲ LENGTH SHOWN IS AN AVERAGE LENGTH USED FOR CALCULATING BAR WEIGHT ONLY. SEE BARS SERIES TABLE FOR ACTUAL LENGTH.

BAR SERIES TABLE

MARK	NO. REQUIRED	LENGTH
B409	4 SERIES OF 12	9'-10" TO 11'-8"
B412	1 SERIES OF 4	4'-11" TO 13'-2"
B413	1 SERIES OF 4	3'-3" TO 11'-6"
B414	1 SERIES OF 4	4'-1" TO 12'-4"
B415	1 SERIES OF 4	3'-1" TO 11'-4"

BUNDLE AND TAG EACH SERIES SEPARATELY.

NOTES:

- 2 1/2" FILLER - TO EXTEND FROM BRIDGE SEAT TO TOP OF WING. SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/2" BELOW SURFACE OF CONCRETE).
- 3 PIPE UNDERDRAIN WRAPPED (6-INCH) SLOPE 0.5% MIN TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. SEE SHEET 2 FOR RODENT SHIELD DETAILS.
- 6 OPTIONAL CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- 10 3/4" V-GROOVE ON FF.

FF - FRONT FACE
BF - BACK FACE
EF - EACH FACE
WT - WING TIP

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-476			
DRAWN BY		MJB	PLANS CK'D. RCP
NORTH ABUTMENT DETAILS		SHEET 8 OF 11	



- 1 18" RUBBERIZED MEMBRANE WATERPROOFING
- 2 4" X $\frac{3}{4}$ " FILLER ALONG LENGTH OF ABUTMENT
- 3 CONSTRUCTION JOINT FORMED BY BEVELED 2" X 6" KEYWAY.

■ DIMENSIONS SHOWN NORMAL TO C/L OF ABUTMENT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-476			
		DRAWN BY	PLANS CK'D.
		MKG	RCP
SUPERSTRUCTURE		SHEET 9 OF 11	

COATED= 11890 LBS.
UNCOATED= 0 LBS.

BILL OF BARS
SUPERSTRUCTURE

MARK	NUMBER		LENGTH	BENT	BAR SERIES	LOCATION
	COATED	UNCOATED				
			FT - IN			
S501	54		7 - 11	X		SLAB - ABUTMENT TIES VERT
S1002	53		33 - 2			SLAB - BOTTOM LONGIT
S503	54		26 - 6			SLAB - BOTTOM TRANS
S404	27		33 - 2			SLAB - TOP LONGIT
S505	34		26 - 6			SLAB - TOP TRANS
S606	32		6 - 0			RAILING ANCHOR LONGIT
S607	20		12 - 0	X		RAILING ANCHOR TRANS
S608	16		5 - 0	X		RAILING ANCHOR - AT CORNERS LONGIT
S609	4		12 - 0	X		RAILING ANCHOR - AT ACUTE CORNERS TRANS

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

TOP OF DECK ELEVATIONS

SPAN POINT	WEST EDGE OF SLAB		REFERENCE LINE		EAST EDGE OF SLAB	
	STATION	ELEVATION	STATION	ELEVATION	STATION	ELEVATION
C/L S. ABUT.	9+85.61	715.64	9+83.27	715.92	9+80.93	715.66
0.1	9+88.71	715.63	9+86.37	715.90	9+84.03	715.65
0.2	9+91.81	715.62	9+89.47	715.89	9+87.13	715.64
0.3	9+94.91	715.61	9+92.57	715.88	9+90.23	715.62
0.4	9+98.01	715.59	9+95.67	715.87	9+93.33	715.61
0.5	10+01.11	715.58	9+98.77	715.85	9+96.43	715.60
0.6	10+04.21	715.57	10+01.87	715.84	9+99.53	715.59
0.7	10+07.31	715.56	10+04.97	715.83	10+02.63	715.57
0.8	10+10.41	715.54	10+08.07	715.82	10+05.73	715.56
0.9	10+13.51	715.53	10+11.17	715.81	10+08.83	715.55
C/L N. ABUT.	10+16.61	715.52	10+14.27	715.79	10+11.93	715.54

SURVEY TOP OF SLAB ELEVATIONS

	C/L BRG. SOUTH ABUTMENT	5/10 PT.	C/L BRG. NORTH ABUTMENT
WEST EDGE OF SLAB			
C/L MALONEY ROAD			
EAST EDGE OF SLAB			

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

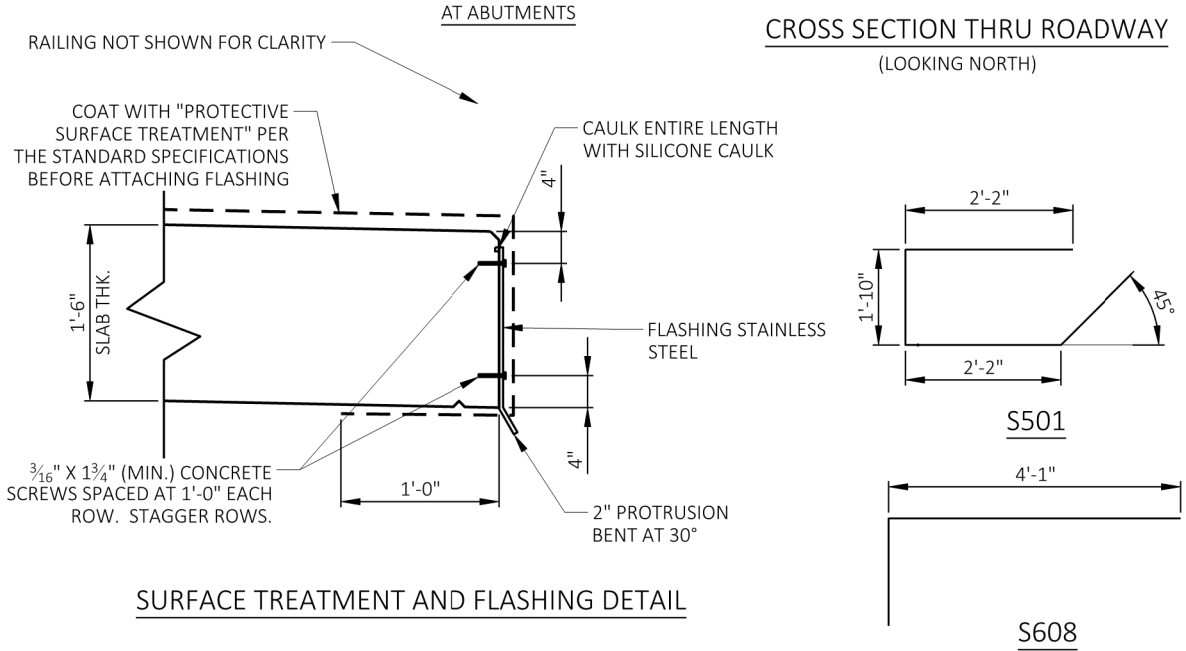
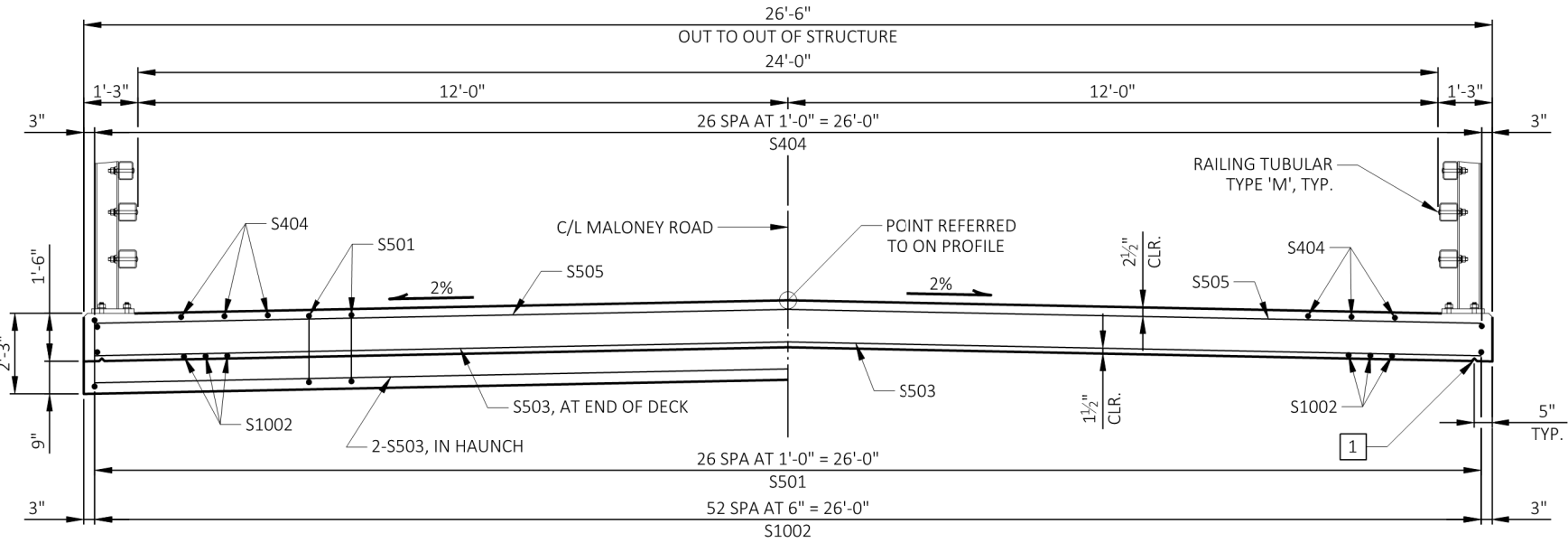
NOTES

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 DISCREPENCIES ARE TO BE PLUS(+).

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 GUTTER LINES AND CROWN OR C/L.

1 3/4" CONTINUOUS V-GROOVE REQ'D. EXTEND TO 6" FROM FRONT FACE OF ABUTMENT DIAPHRAGM.



STAINLESS STEEL FLASHING NOTES

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK, 3/16" CONCRETE SCREWS AND CLEANING THE EDGE OF DECK PRIOR TO ATTACHMENT OF THE FLASHING.

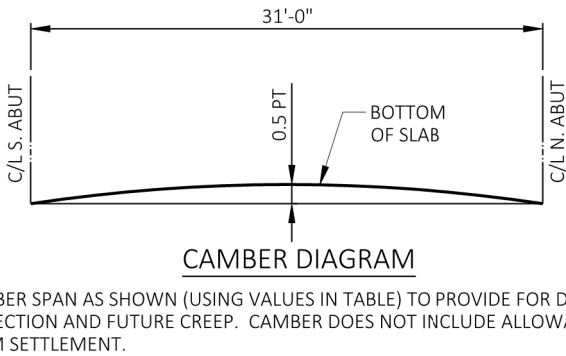
FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

EXTEND FLASHING TO THE F.F. OF ABUTMENT WINGS.

TOP OF FLASHING SHALL BEGIN APPROXIMATELY 1-INCH BELOW TOP OF SLAB SURFACE.

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



SPAN (PT)	CAMBER (IN)
C/L S ABUT	0
0.1	1/4
0.2	1/2
0.3	5/8
0.4	3/4
0.5	3/4
0.6	3/4
0.7	5/8
0.8	1/2
0.9	1/4
C/L N ABUT	0

LEGEND

- 1 W6 x 25 WITH 1 1/2" X 1 1/2" HORIZONTAL SLOTS ON EACH SIDE OF POST FOR BOLT 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
- 2 PLATE 1 1/4" x 11 3/4" x 1'-8" WITH 1 5/16" X 1 5/8" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
- 3 ASTM A449 - 1 1/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-3" LONG IN SLAB.
- 4 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
- 5 TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- 5A TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- 6 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1 5/8" X 1 5/8" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
- 7 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" X 1 1/2" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
- 8 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
- 9 SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
- 10 3/8" X 3 5/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- 10A 3/8" X 2 5/8" X 2'-4" PLATE USED IN NO. 5, 3/8" X 3 5/8" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- 11 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 5/16" X 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 1 5/16" X 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
- 12 7/8" DIA. X 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
- 13 3/8" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
- 14 7/8" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
- 15 1" DIA. HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.
- ▲ TIE TO TOP MAT OF STEEL.

NOTES

BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-44-476" WHICH INCLUDES ALL ITEMS SHOWN.

RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.

THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.

RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE.

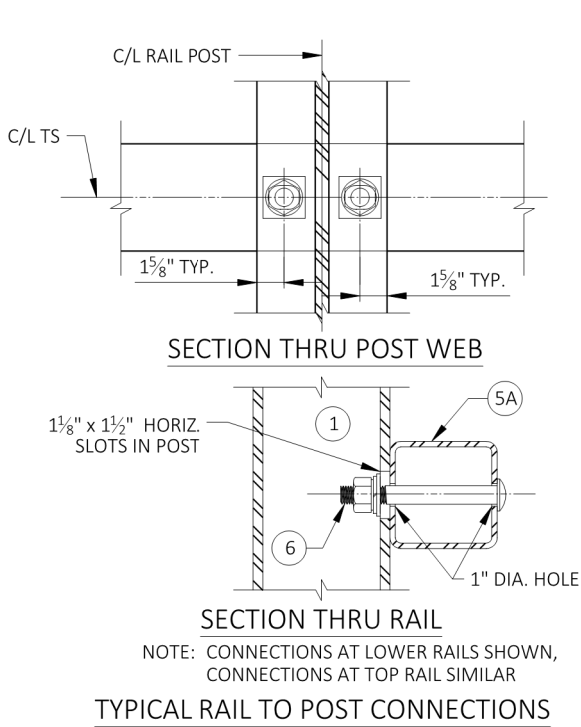
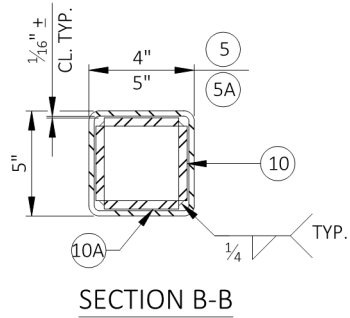
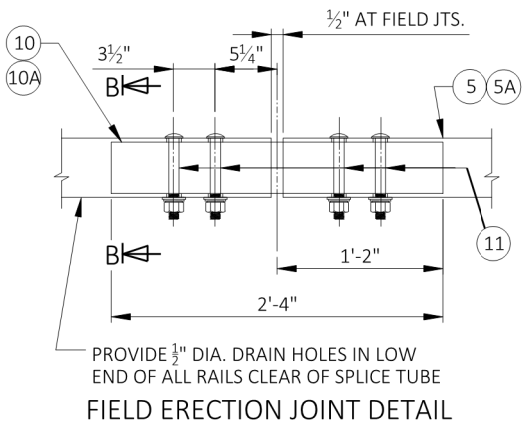
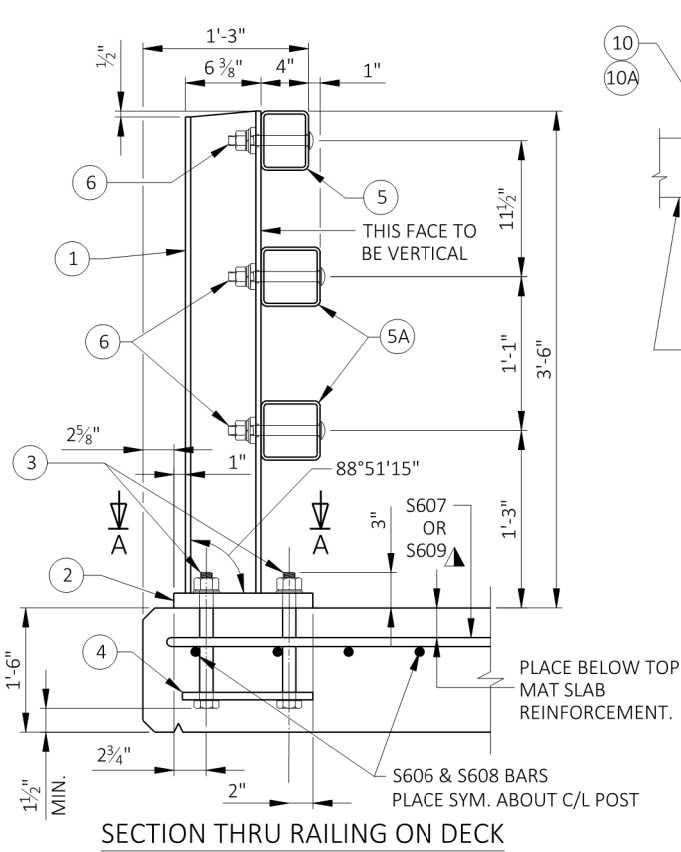
ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.

WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.

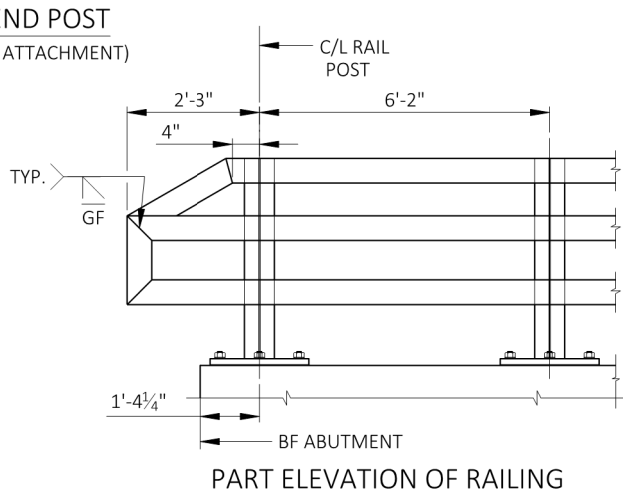
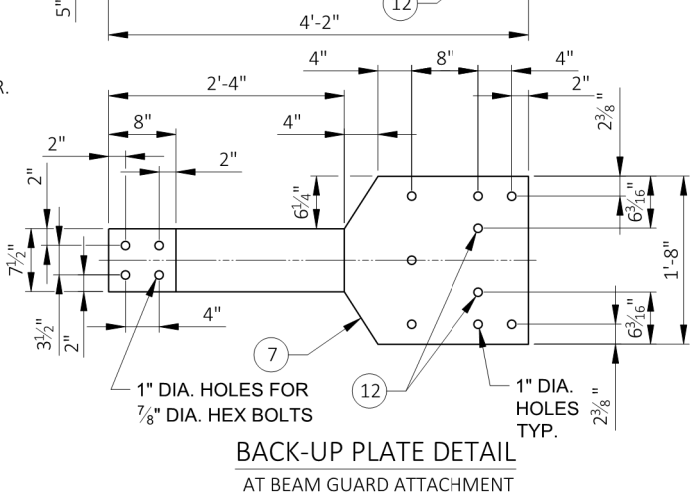
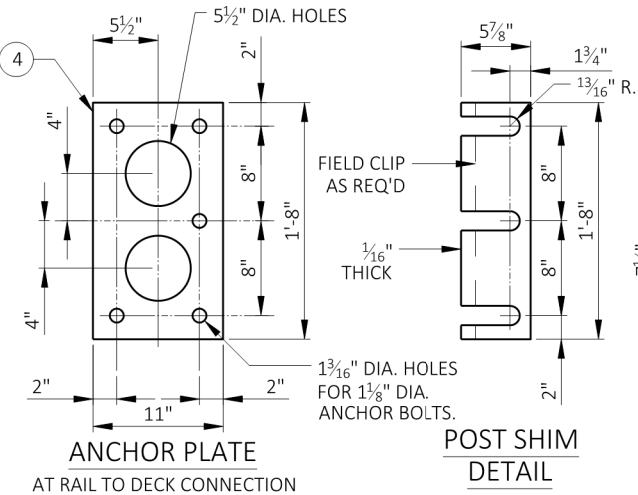
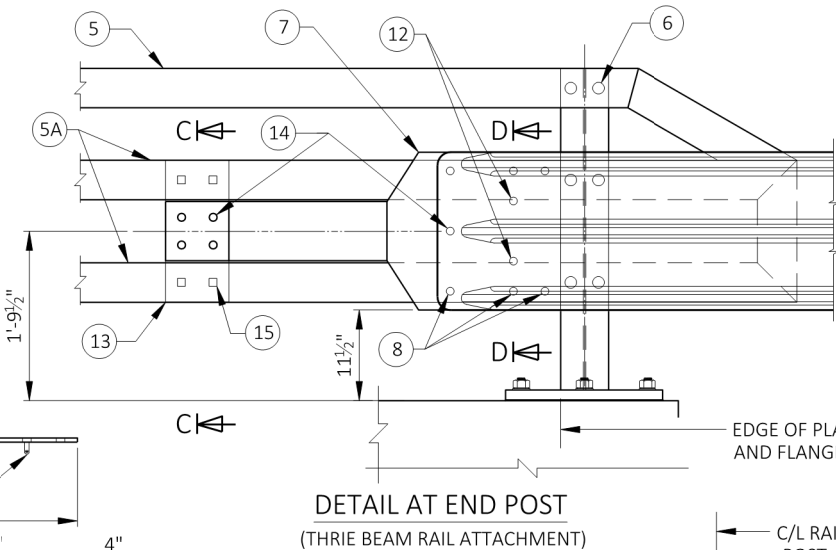
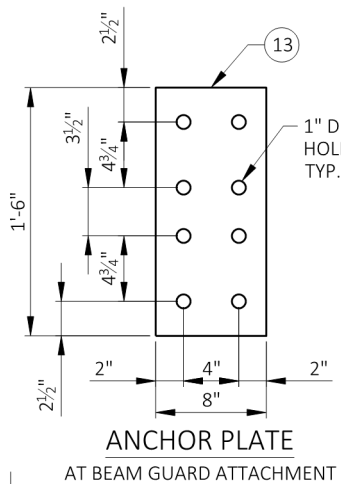
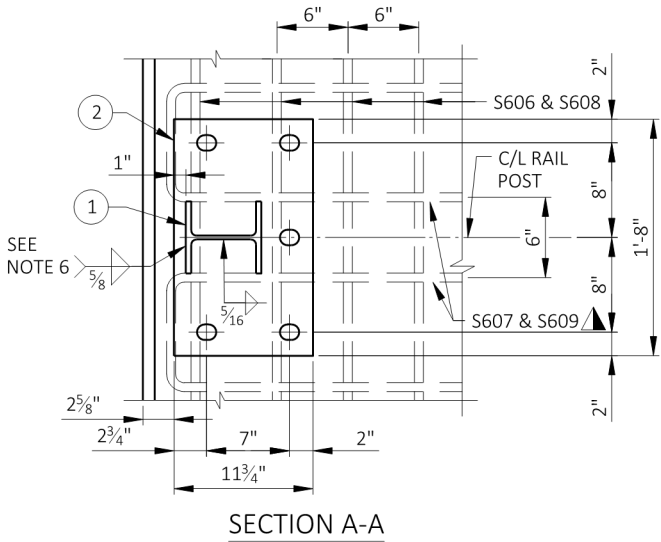
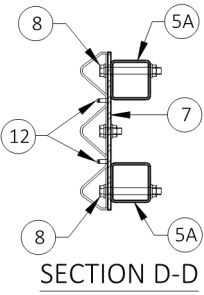
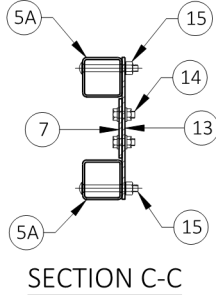
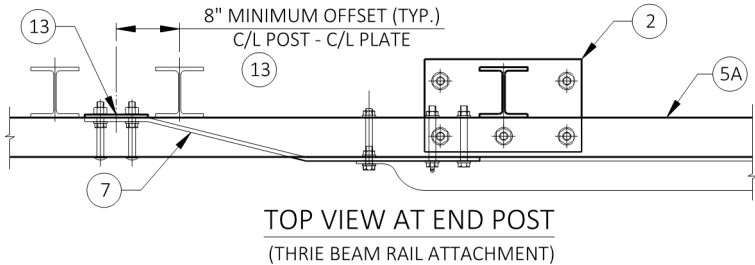
FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.

POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.

ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.



TYPICAL RAIL TO POST CONNECTIONS



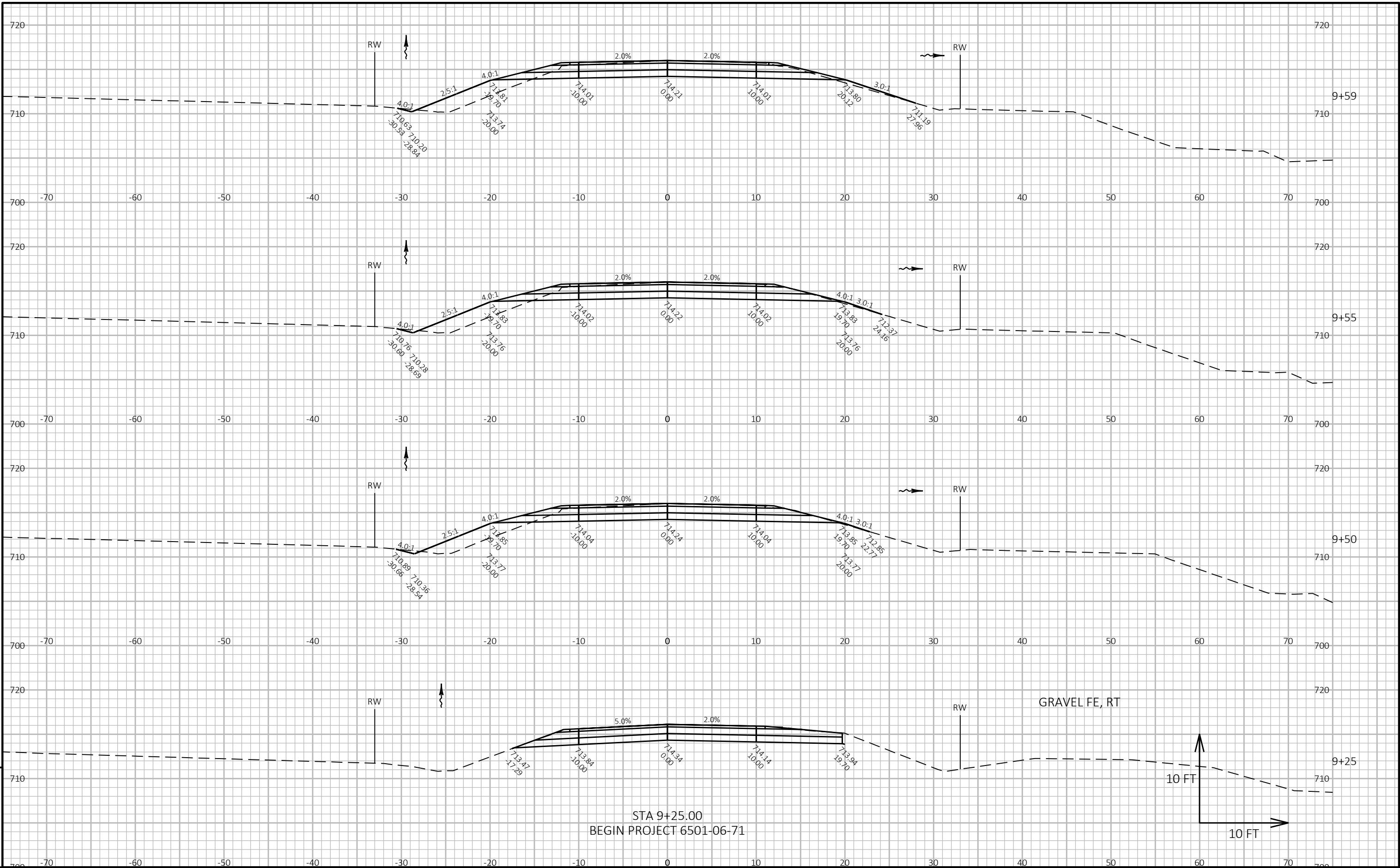
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-476			
DRAWN BY		MKG	PLANS CK'D. RCP
TUBULAR STEEL RAILING TYPE M			SHEET 11 OF 11

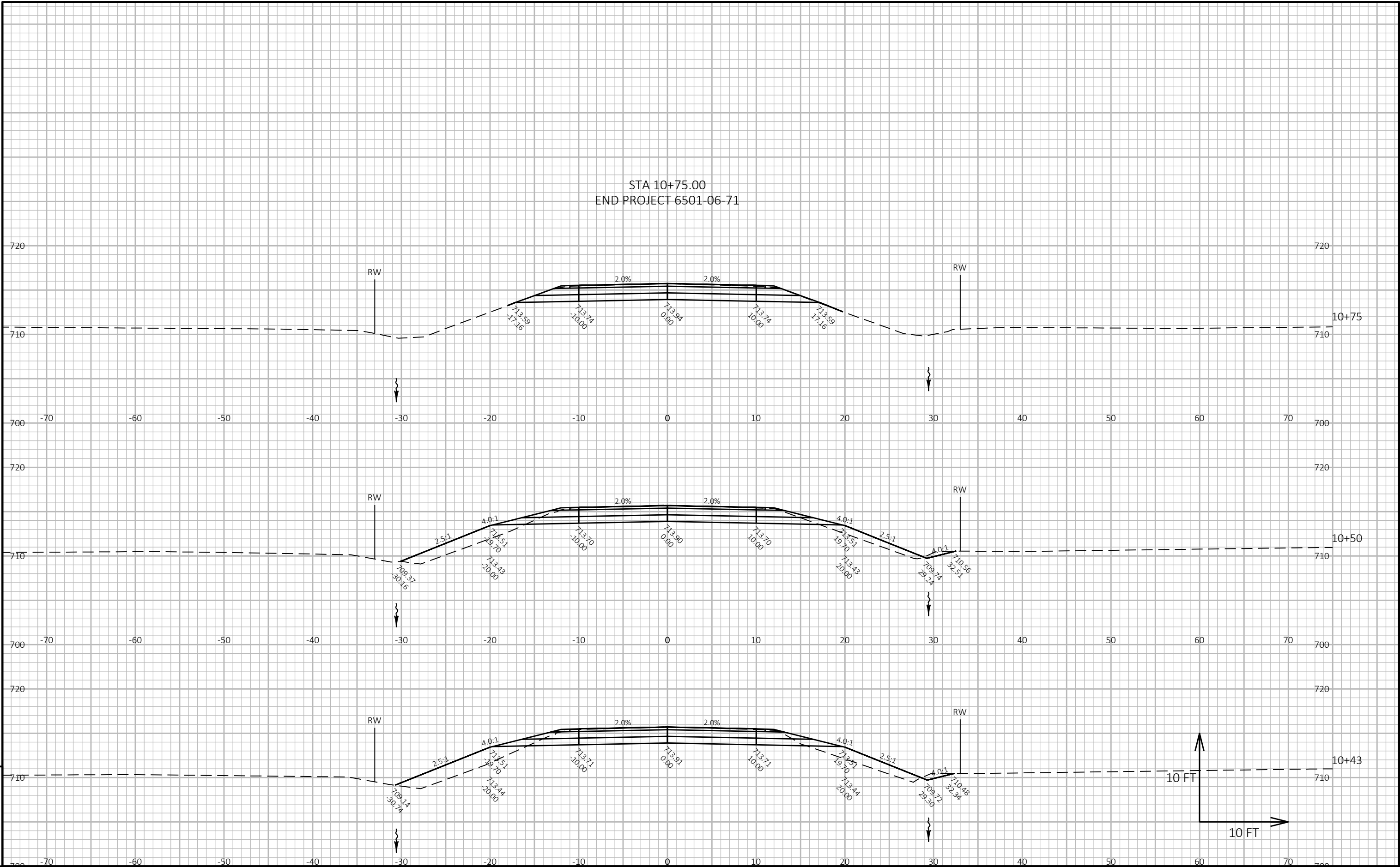
STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 4
9+25	59	11	0	0	0	0	0	0	0
9+50	49	11	16	50	10	7	50	9	31
9+55	49	11	17	9	2	3	59	13	34
9+59	48	11	19	7	2	3	67	16	37
9+71	47	11	29	21	5	11	88	29	39
9+77	47	11	29	11	2	6	98	38	39
9+77	0	0	0	0	0	0	98	38	39
10+18	0	0	0	0	0	0	98	38	39
10+18	48	11	65	0	0	0	98	38	39
10+26	48	11	65	14	3	19	113	62	27
10+38	50	11	44	22	5	24	134	92	13
10+43	50	11	33	9	2	7	144	101	11
10+50	51	11	24	13	3	7	157	110	12
10+75	52	11	0	48	10	11	204	124	36
Colume Total				204	44	99			

Notes

- 1 - Cut (Salvaged/Unused Pavement Material is Included)
- 2 - Salvaged/Unusable Pavement Material (This does not show up in the cross sections)
- 3 - Fill (Does not included Unuseable Pavement volume)
- 4 - The Mass Ordinate + or - quantity calculated. Plus quantity indicates as excess of material. Minus indicates a shortage of material.

No Marsh or EBS is anticipated.





Notes



Wisconsin Department of Transportation

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GRE

AUGUST 2021

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
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 = 44



















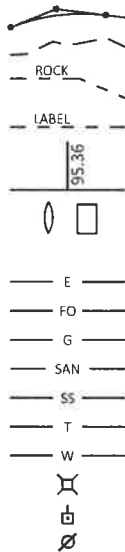
DESIGN DESIGNATION

A.A.D.T. (2022)	=	90
A.A.D.T. (2042)	=	100
D.H.V.	=	
D.D.	=	50/50
T.	=	7.0%
DESIGN SPEED	=	40 MPH
ESALS	=	15,000

CONVENTIONAL SYMBOLS

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

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



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

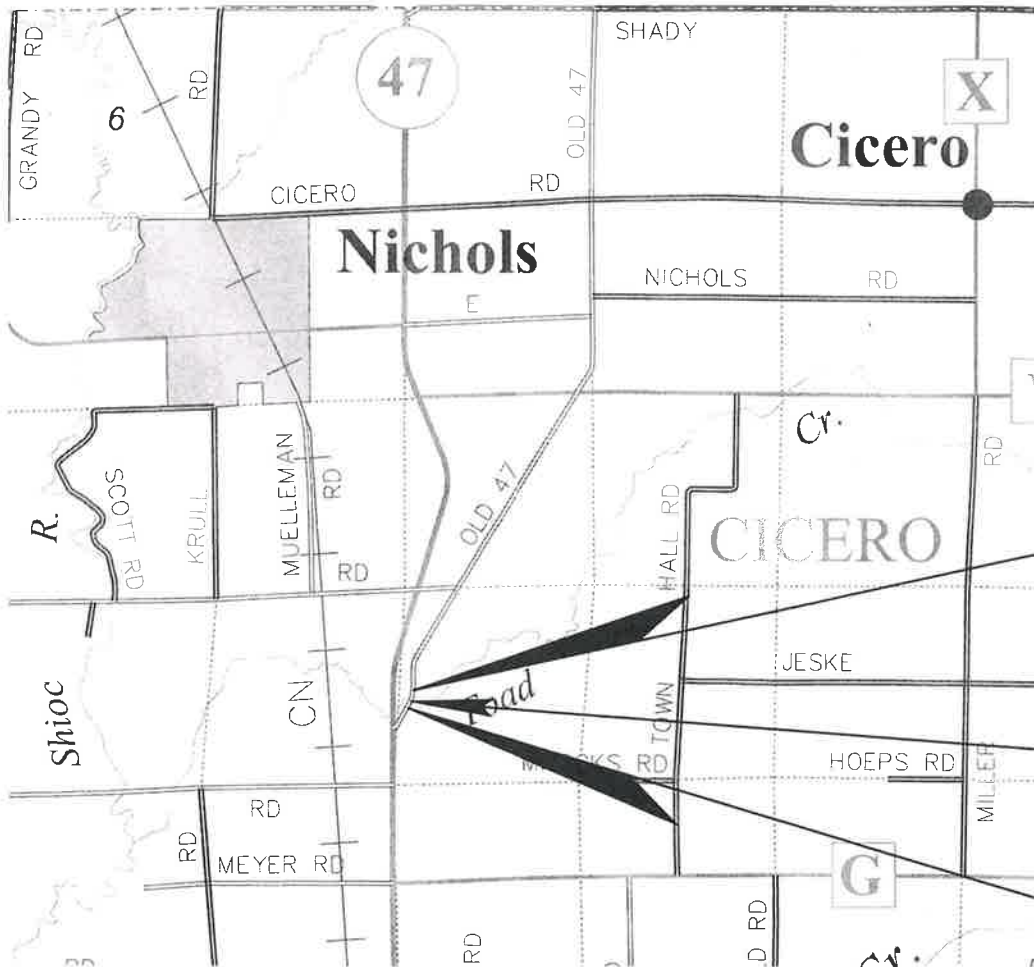
PLAN OF PROPOSED IMPROVEMENT

T CICERO, OLD HIGHWAY 47

TOAD CREEK BRIDGE

LOCAL STREET
OUTAGAMIE COUNTY

STATE PROJECT NUMBER
6506-05-71



END PROJECT 6506-05-71
STA. 10+70.00
Y = 662,631.903
X = 816,423.589

STRUCTURE B-44-478
STA. 9+97.50

BEGIN PROJECT 6506-05-71
STA. 9+25.00
Y = 662,507.494
X = 816,349.142

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

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES SYSTEM (WCCS), OUTAGAMIE COUNTY NADB3 (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.

STATE PROJECT

6506-05-71

FEDERAL PROJECT

PROJECT

CONTRACT

ACCEPTED FOR

COUNTY OF OUTAGAMIE

Date 4/28/21

ORIGINAL PLANS PREPARED BY

Mead & Hunt



DATE: 4/27/21

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	MEAD & HUNT
Designer	MEAD & HUNT
Project Manager	SCOTT EBEL
Regional Examiner	
Regional Supervisor	JAMES THOMPSON

APPROVED FOR THE DEPARTMENT
DATE: 4/28/21

E

GENERAL NOTES

WHEN THE QUANTITY OF BASE AGGREGATE OR ASPHALTIC SURFACE IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD, THE DEPTH OR THICKNESS OF THE LAYER SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

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

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD. SILT FENCE IS TO BE PLACED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER, AND IN PLACE PRIOR TO BRIDGE REMOVAL.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH SALVAGED TOPSOIL, FERTILIZED, SEEDED AND EROSION MAT URBAN CLASS I TYPE B.

BEARINGS SHOWN ON THE PLANS ARE GROUND BEARINGS TO THE NEAREST SECOND.

A VERTICAL SAWCUT SHALL BE MADE THROUGH EXISTING PAVEMENTS AT REMOVAL LIMITS.

KEEP ALL EQUIPMENT AND MATERIALS OUT OF ADJACENT WETLANDS.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIALS WILL NOT BE PERMITTED IN THE WETLANDS.

CONCRETE PAVEMENT REMOVAL IS INCLUDED ON THIS PROJECT. BORING SHOW EXISTING CONCRETE PAVEMENT BELOW PULVERIZE ASPHALT PAVEMENT.

ORDER OF SECTION 2 SHEETS

TYPICAL SECTIONS
TRAFFIC CONTROL
ALIGNMENTS

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	M/L	MAINLINE
AGG	AGGREGATE	NO	NUMBER
ASPH	ASPHALTIC	PE	PRIVATE ENTRANCE
BM	BENCH MARK	PI	POINT OF INTERSECTION
BOC	BACK OF CURB	PL	PROPERTY LINE
C&G	CURB AND GUTTER	PP	POWER POLE
CE	COMMERCIAL ENTRANCE	QTY	QUANTITY
CL	CENTERLINE	RHF	RIGHT-HAND FORWARD
COR	CORNER	RT	RIGHT
CWT	HUNDREDWEIGHT	R/L	REFERENCE LINE
CY	CUBIC YARD	R/W	RIGHT-OF-WAY
DHV	DESIGN HOURLY VOLUME	SF	SQUARE FOOT
DWY	DRIVEWAY	SHLDR	SHOULDER
EL	ELEVATION	SS	STORM SEWER
EX	EXISTING	STA	STATION
EXC	EXCAVATION	SY	SQUARE YARD
FT	FOOT	T	TRUCKS (PERCENT OF)
FTG	FOOTING	TEL	TELEPHONE
HYD	HYDRANT	TLE	TEMPORARY LIMITED EASEMENT
INV	INVERT	TYP	TYPICAL
LB	POUND	UG	UNDERGROUND CABLE
LF	LINEAR FOOT	VAR	VARIABLE
LHF	LEFT-HAND FORWARD	VC	VERTICAL CURVE
LS	LUMP SUM	VPC	VERTICAL POINT OF CURVE
LT	LEFT	VPI	VERTICAL POINT OF INTERSECTION
Mgal	MEGAGALLON	VPT	VERTICAL POINT OF TANGENCY

CONTACTS

OUTAGAMIE COUNTY HIGHWAY DEPT.

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HIGHWAY ENGINEER
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DNR CONTACT

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DNR NORTHEAST REGIONAL HEADQUARTERS
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EMAIL: MATTHEW.SCHAEVE@WISCONSIN.GOV

UTILITIES

CENTURYLINK/LUMENS - COMMUNICATION LINE

MATT GUNDERSON
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CASCO, WI 54205
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EMAIL: MATT.GUNDERSON@CENTURYLINK.COM

TOWN OF CICERO

STEVE HACKL
TOWN CHAIRMAN
W5402 BRUGGER ROAD
BLACK CREEK, WI 54106
PHONE: (920) 833-7527
EMAIL: CHAIRMAN@TOWNOFCICEROWI.COM

CONSULTANT CONTACT

MEAD & HUNT, INC.
1702 LAWRENCE DRIVE
DE PERE, WI 54115
ATTN: MS. ANGELA KERRIGAN, P.E.
PHONE: (920) 496-0500
EMAIL: ANGIE.KERRIGAN@MEADHUNT.COM

WE ENERGIES - ELECTRICITY

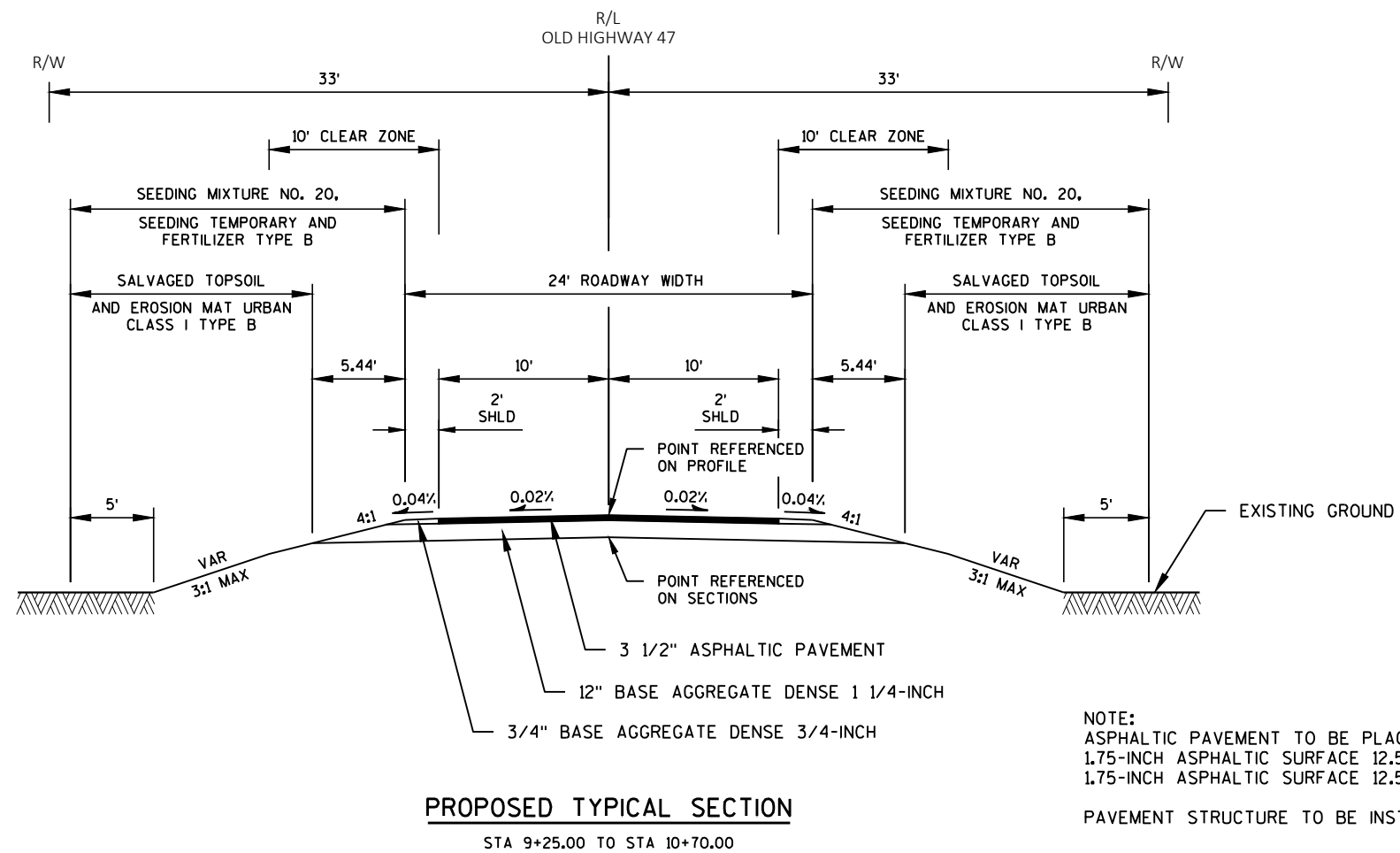
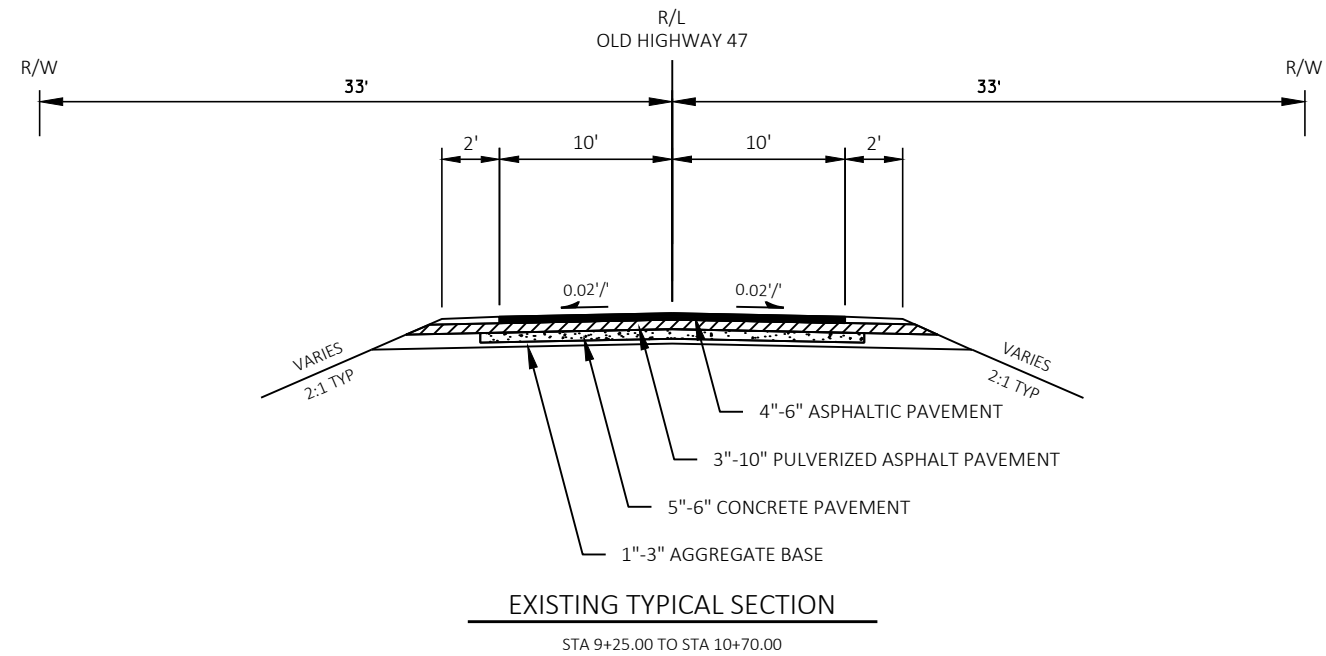
ZACHARY DUGA
800 S LYNNDALE DRIVER
APPLETON, WI 54914
PHONE: (920) 450-9314
EMAIL: ZACHARY.DUGA@WE-ENERGIES.COM

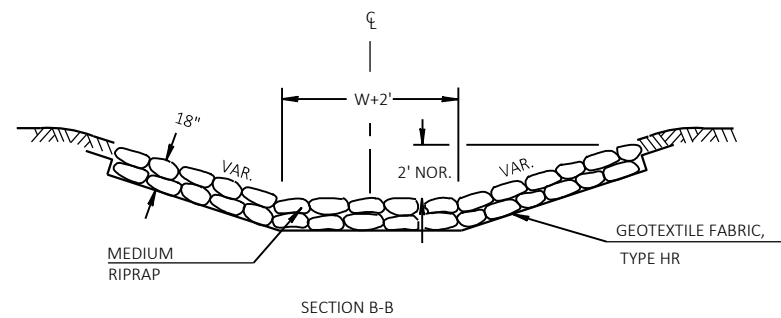
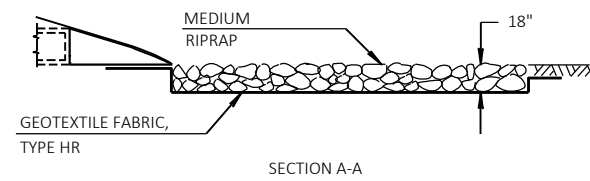
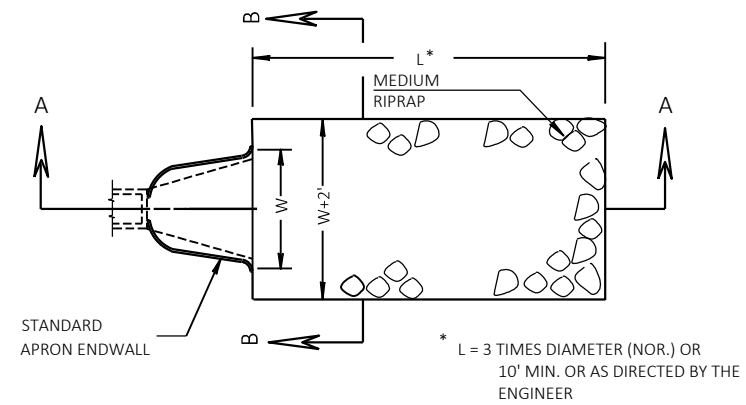
RUNOFF COEFFICIENT TABLE

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

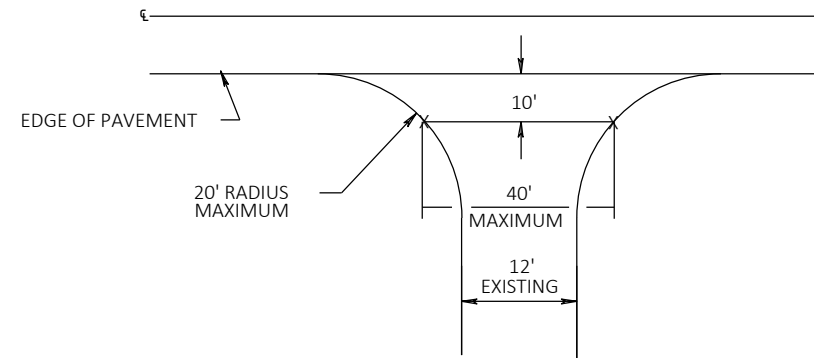
TOTAL PROJECT AREA = 0.27 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.20 ACRES



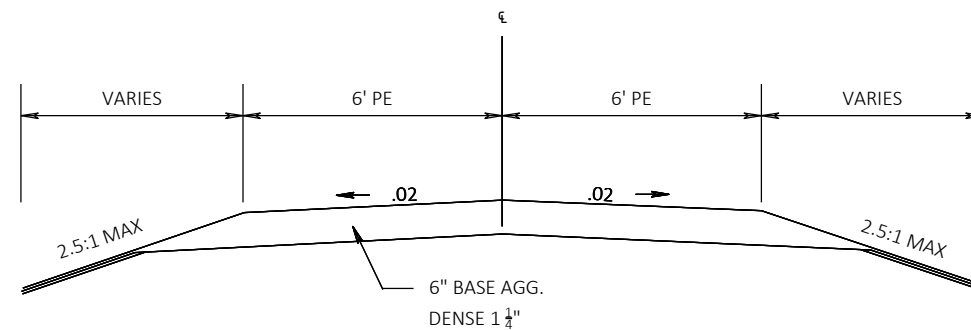




MEDIUM RIPRAP AND GEOTEXTILE FABRIC DETAIL
AT APRON ENDWALL



TYPICAL DRIVEWAY DETAIL



TYPICAL SECTION
FOR PRIVATE ENTRANCES

2

Diagram illustrating the end treatment riprap light and sheeting overlap detail. The left side shows a cross-section of the riprap light with dimensions: 18" height and 2' width. The right side shows a cross-section of the riprap light with dimensions: 2' width and 2' overlap. The diagram also shows wood stakes and flow direction. A note states: "STONE IS CONTINUOUS ALONG CHANNEL".

Diagram illustrating the existing channel bank restoration. The diagram shows a cross-section of the channel bank with dimensions: 2' heavy rip rap, 4' width, and 2' height. The diagram also shows the limit of backfilled bypass channel, previous bypass channel bottom, geotextile fabric 'HR', and side slopes. A note states: "VARIES".

EXISTING CHANNEL BANK RESTORATION

NOTE: PLACE HEAVY RIPRAP AT EACH END OF THE TEMPORARY BYPASS CHANNEL AFTER BACKFILLING AND RESTORATION OF CHANNEL TO SECURE THE STREAM BANK.

Diagram illustrating the typical section of temporary bypass channel. The diagram shows a cross-section of the channel with dimensions: 2' width, 5' width, and 2' height. The diagram also shows the design flow, observed water level, silt fence, backfill coarse aggregate no. 2 (6" min thickness), and polyethylene sheeting. A note states: "VARIES".

TYPICAL SECTION OF TEMPORARY BYPASS CHANNEL

NOTES:
POLY SHEETING AND BACKFILL COARSE AGGREGATE NO. 2 SHALL BE REMOVED AFTER TOAD CREEK IS RESTORED TO ORIGINAL CHANNEL. ALL AREAS OUTSIDE OF OLD HIGHWAY 47 SHALL BE RESTORED PER GRADING PLAN AND CROSS SECTIONS. BACKFILL AREA UNDER OLD HIGHWAY 47 WITH NATIVE MATERIAL.

CAUTION: EXISTING COMMUNICATION FACILITY THAT CROSSES THE TEMPORARY BYPASS AT APPROX. STA 1+87 WILL NOT BE RELOCATED. CONTACT CENTURYLINK 1 DAY IN ADVANCE OF INSTALLATION SO THEY CAN BE ONSITE TO EXPOSE AND SUPPORT THE FACILITY. THE FACILITY IS INTENDED TO BE EXPOSED WHILE THE TEMP. BYPASS IS IN SERVICE AND TO BE PROTECTED DURING EXPOSURE THEN COVERED WHEN TEMP. BYPASS LOCATION IS RESTORED. THE CONTRACTOR SHALL USE CARE AND CAUTION TO MAINTAIN THE INTEGRITY OF THIS FACILITY DURING EXCAVATION, INSTALLATION, AND REMOVAL OF THE TEMPORARY BYPASS CHANNEL.

SANDBAG DIVERSION

RIPRAP LIGHT
SEE DETAIL

CENTURYLINK

STRUCTURE B-44-478 TO BE CONSTRUCTED

STRUCTURE P-44-906 TO BE REMOVED

OLD HIGHWAY 47

WE ENERGIES

TOAD CREEK

RIPRAP LIGHT
SEE DETAIL

SANDBAG DIVERSION

BP: 0+00.00

PC: 0+45.01

PT: 0+66.74

PI: 0+56.23

OH

GUY

N

POST

WZ: 783.68 WATER ELEV

WZ: 783.16 WATER ELEV HIGH

EP: 2+18.09

PT: 1+90.37

PC: 1+65.60

PC: 10+38.75

PI: 1+78.53

11+00

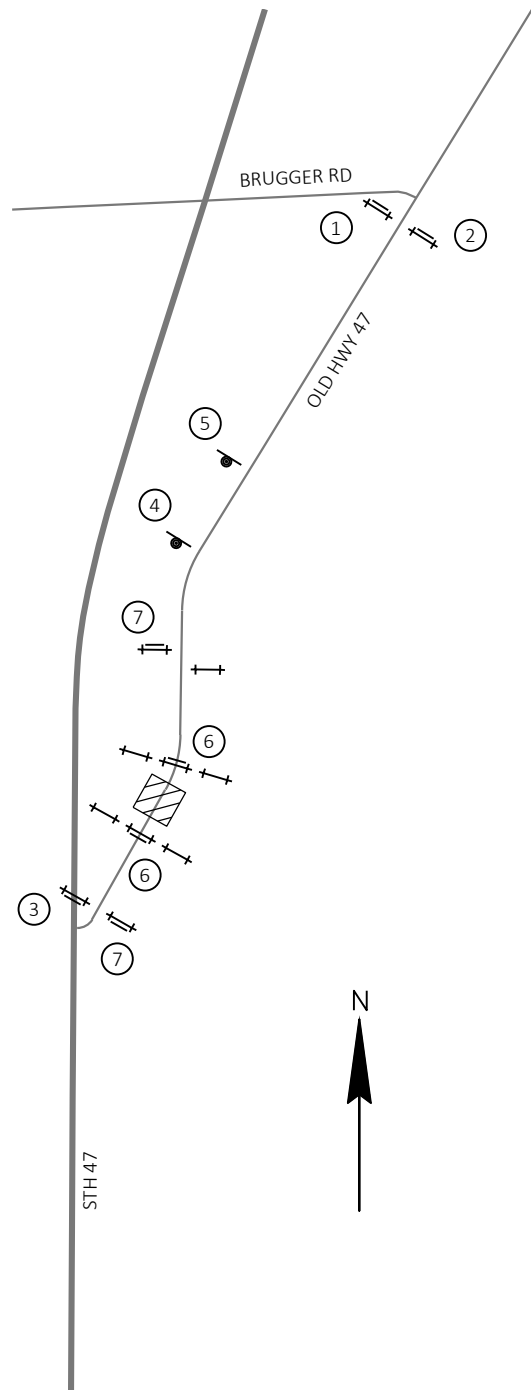
00+00

9+00





790

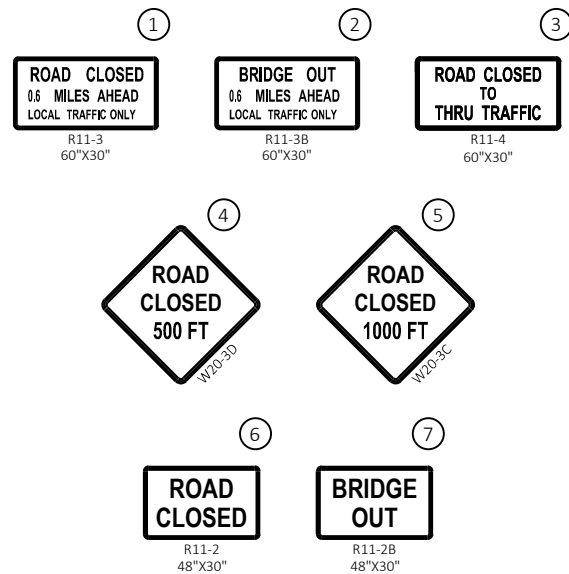
12"

12"



LEGEND

-  TYPE III BARRICADE
-  TYPE III BARRICADE WITH ATTACHED SIGN
-  SIGN ON PERMANENT SUPPORT
-  WORK AREA



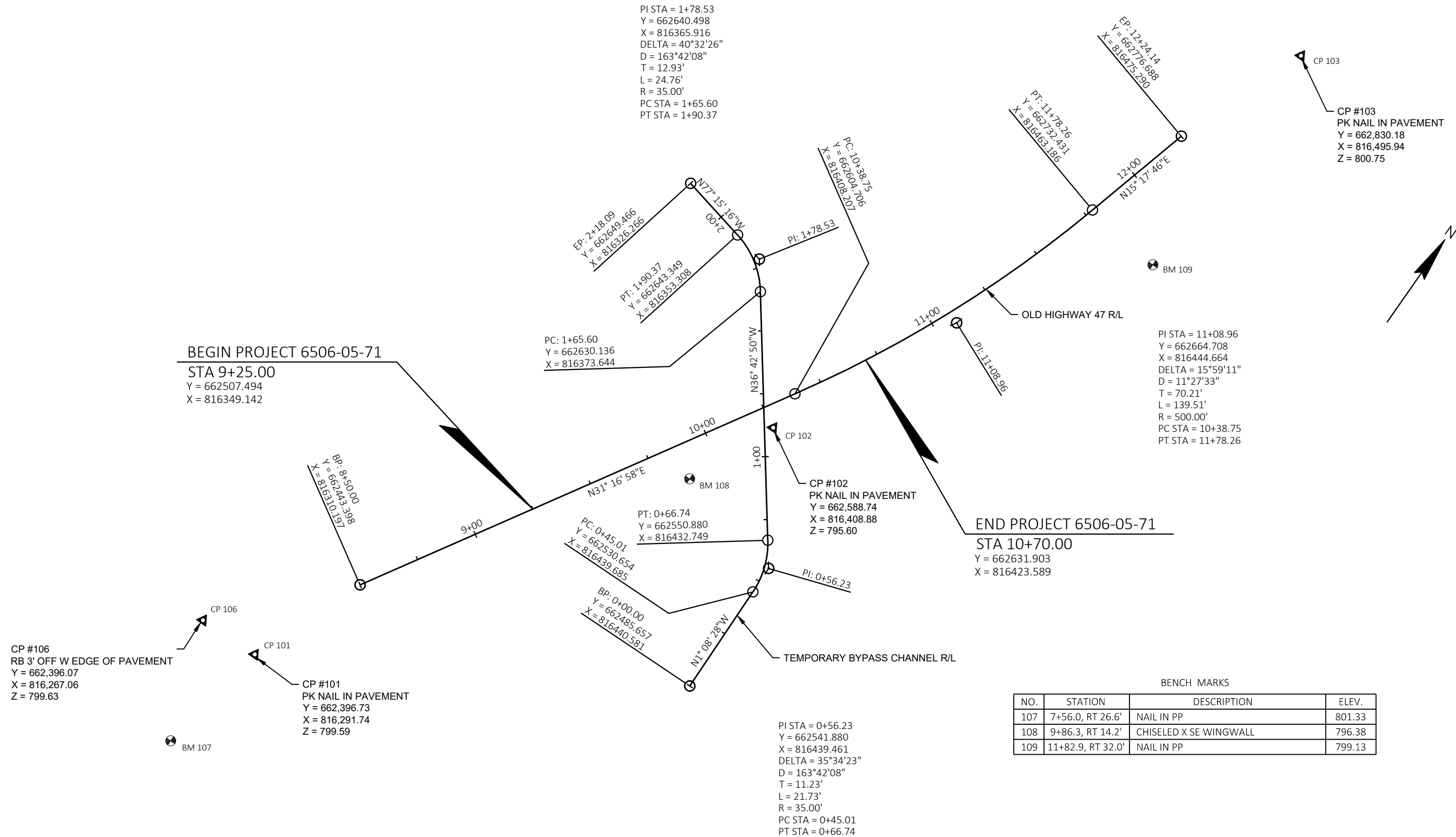
NOTES

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

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

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

ALL SIGNS 48"x48" UNLESS NOTED OTHERWISE.



Estimate Of Quantities By Plan Sets

6506-05-71					
Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	1.000	1.000
0004	201.0205	Grubbing	STA	1.000	1.000
0006	203.0500.S	Removing Old Structure Over Waterway (station) 01. 10+00	LS	1.000	1.000
0010	204.0100	Removing Concrete Pavement	SY	296.000	296.000
0012	204.0170	Removing Fence	LF	42.000	42.000
0014	205.0100	Excavation Common	CY	153.000	153.000
0018	206.2000	Excavation for Structures Culverts (structure) 01. B-44-478	LS	1.000	1.000
0022	210.2500	Backfill Structure Type B	TON	2,520.000	2,520.000
0026	213.0100	Finishing Roadway (project) 02. 6506-05-71	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	41.000	41.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	386.000	386.000
0034	450.4000	HMA Cold Weather Paving	TON	65.000	65.000
0036	455.0605	Tack Coat	GAL	23.000	23.000
0038	465.0105	Asphaltic Surface	TON	65.000	65.000
0044	504.0100	Concrete Masonry Culverts	CY	199.000	199.000
0046	505.0400	Bar Steel Reinforcement HS Structures	LB	19,840.000	19,840.000
0048	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	5,170.000	5,170.000
0052	516.0500	Rubberized Membrane Waterproofing	SY	26.000	26.000
0054	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	2.000	2.000
0056	520.3318	Culvert Pipe Class III-A 18-Inch	LF	30.000	30.000
0060	606.0200	Riprap Medium	CY	3.000	3.000
0066	619.1000	Mobilization	EACH	0.500	0.500
0068	624.0100	Water	MGAL	9.000	9.000
0070	625.0500	Salvaged Topsoil	SY	728.000	728.000
0072	628.1504	Silt Fence	LF	305.000	305.000
0074	628.1520	Silt Fence Maintenance	LF	610.000	610.000
0076	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0078	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0080	628.2008	Erosion Mat Urban Class I Type B	SY	728.000	728.000
0084	628.7504	Temporary Ditch Checks	LF	40.000	40.000
0086	628.7555	Culvert Pipe Checks	EACH	5.000	5.000
0088	629.0210	Fertilizer Type B	CWT	0.500	0.500
0090	630.0120	Seeding Mixture No. 20	LB	20.000	20.000
0092	630.0200	Seeding Temporary	LB	10.000	10.000
0094	630.0500	Seed Water	MGAL	16.000	16.000
0096	633.5200	Markers Culvert End	EACH	4.000	4.000
0102	638.2602	Removing Signs Type II	EACH	4.000	4.000
0104	638.3000	Removing Small Sign Supports	EACH	4.000	4.000

Estimate Of Quantities By Plan Sets

6506-05-71

Line	Item	Item Description	Unit	Total	Qty
0106	642.5001	Field Office Type B	EACH	0.500	0.500
0108	643.0420	Traffic Control Barricades Type III	DAY	1,242.000	1,242.000
0110	643.0705	Traffic Control Warning Lights Type A	DAY	2,208.000	2,208.000
0112	643.0900	Traffic Control Signs	DAY	1,242.000	1,242.000
0114	643.5000	Traffic Control	EACH	0.500	0.500
0118	645.0120	Geotextile Type HR	SY	10.000	10.000
0120	650.4500	Construction Staking Subgrade	LF	145.000	145.000
0122	650.5000	Construction Staking Base	LF	145.000	145.000
0126	650.6500	Construction Staking Structure Layout (structure) 02. B-44-478	LS	1.000	1.000
0130	650.9910	Construction Staking Supplemental Control (project) 02. 6506-05-71	LS	1.000	1.000
0132	650.9920	Construction Staking Slope Stakes	LF	145.000	145.000
0134	690.0150	Sawing Asphalt	LF	40.000	40.000
0136	690.0250	Sawing Concrete	LF	44.000	44.000
0138	715.0502	Incentive Strength Concrete Structures	DOL	1,194.000	1,194.000
0140	999.2000.S	Installing and Maintaining Bird Deterrent System	EACH	1.000	1.000
0144	SPV.0105	Special 01. Temporary Bypass Channel	LS	1.000	1.000

CLEARING & GRUBBING

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
9+00	-	10+00	OLD 47, LT & RT	1	1
TOTAL				1	1

REMOVING CONCRETE PAVEMENT

STATION	TO	STATION	LOCATION	204.0100 REMOVING CONCRETE PAVEMENT SY
9+25.00	-	9+88.00	OLD 47	154
10+12.00	-	10+70.00	OLD 47	142
TOTAL				296

REMOVING FENCE

STATION	TO	STATION	LOCATION	204.0170 REMOVING FENCE LF
9+56.00	-	9+98.00	OLD 47 LT	42
TOTAL				42

EARTHWORK SUMMARY

FROM/TO STATION	LOCATION	205.0100 EXCAVATION COMMON CUT (1)	SALVAGED/ UNUSABLE PAVEMENT MATERIAL (2)	AVAILABLE MATERIAL (2)	UNEXPANDED FILL	EXPANDED FILL (FACTOR 1.25)	MASS ORDINATE +/- (3)	WASTE
9+25 - 10+70	OLD 47	153	44	109	20	25	84	84
TOTAL								84

- (1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED
- (2) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
- (3) THE MASS ORDINATE + OR - QUANTITY CALCULATED. PLUS QUANTITY INDICATES AS EXCESS OF MATERIAL. MINUS INDICATES A SHORTAGE OF MATERIAL.

TOTAL WASTE = 84 CY

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1-1/4 INCH TON	624.0100 WATER MGAL
9+25.00	-	10+70.00	OLD 47	21	326	7
		10+36	DRIVEWAY, RT	20	60	2
TOTAL				41	386	9

ASPHALT SUMMARY

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON	450.4000 HMA COLD WEATHER PAVING TON
9+25.00	-	10+70.00	OLD 47	23	65	65
TOTAL				23	65	65

TACK COAT ESTIMATED AT 0.07 GAL/SY

ALL ITEMS ARE IN CATEGORY
0010 UNLESS NOTED
OTHERWISE

DRAINAGE						
520.1018 520.3318 606.0200 645.0120						
APRON CULVERT PIPE RIPRAP GEOTEXTILE						
ENDWALLS CLASS III-A MEDIUM FABRIC						
FOR CULVERT 18-INCH TYPE HR						
PIPE 18-INCH						
STATION TO STATION	LOCATION	EACH	LF	CY	SY	
10+36	OLD 47, RT	2	30			
10+15	OLD 47, RT			3	10	
TOTAL		2	30	3	10	

MIN THICKNESS CULVERT PIPE CORRUGATED STEEL 18-INCH IS 0.064 INCHES

MOBILIZATION & FIELD OFFICE

642.5001* FIELD OFFICE			
619.1000* MOBILIZATION TYPE B			
STATION TO STATION	LOCATION	EACH	EACH
PROJECT	OLD 47	0.5	0.5
TOTAL		0.5	0.5

SILT FENCE

628.1504 SILT FENCE				628.1520 SILT FENCE MAINTENANCE	
STATION TO STATION				LF	LF
9+25.00	-	10+00.00	OLD 47, LT & RT	125	250
10+00.00	-	10+70.00	OLD 47, LT & RT	100	200
10+00.00	-	10+70.00	OLD 47, LT (AFTER BYPASS RESTORATION)	30	60
UNDISTRIBUTED				50	100
TOTAL				305	610

* QUANTITY IS ALSO FOUND IN PROJECT ID 6501-06-71

LANDSCAPING ITEMS

628.2008 629.0210 630.0120 630.0200 630.0500									
EROSION MAT FERTILIZER SEEDING **SEEDING SEED									
URBAN CLASS I TYPE B MIXTURE TEMPORARY WATER									
TOPSOIL TYPE B NO. 20 LB MGAL									
STATION	TO	STATION	LOCATION	SY	SY	CWT	LB	LB	MGAL
9+25.00	-	10+70.00	OLD 47, LT & RT	728	728	0.5	20	10	16
TOTAL				728	728	0.5	20	10	16

** SEEDING TEMPORARY AT HALF RATE

ALL ITEMS ARE IN CATEGORY
0010 UNLESS NOTED
OTHERWISE

EROSION CONTROL MOBILIZATIONS

				628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.7504 TEMPORARY DITCH CHECKS LF	628.7555 CULVERT PIPE CHECKS EA
STATION	TO	STATION	LOCATION				
9+25	-	10+70	OLD 47	-	-	20	4
UNDISTRIBUTED				5	2	20	1
TOTAL				5	2	40	5

CULVERT MARKERS

				633.5200 MARKERS CULVERT END EACH	COMMENTS
STATION	LOCATION				
9+85	OLD 47			2	LT & RT
10+15	OLD 47			2	LT & RT
TOTAL				4	

SIGNING

		638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENTS
STATION	LOCATION			
9+85	OLD 47, LT & RT	2	2	
10+15	OLD 47, LT & RT	2	2	
TOTAL		4	4	

TRAFFIC CONTROL ITEMS

		643.0420 TRAFFIC CONTROL BARRICADES TYPE III EACH	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A EACH	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A DAY	643.0900 TRAFFIC CONTROL SIGNS EACH	643.0900 TRAFFIC CONTROL SIGNS DAY	643.5000 TRAFFIC* CONTROL PROJECT EACH	REMARKS
PROJECT									
6506-05-71	18	1,242	32	2,208	18	1,242	0.5	69 CALENDAR DAYS	
TOTAL		1,242	2,208	1,242	0.5				

* QUANTITY IS ALSO FOUND IN PROJECT ID 6501-06-71

ALL ITEMS ARE IN CATEGORY
0010 UNLESS NOTED
OTHERWISE

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4500	650.5000	650.6500*	650.9910	650.9920
				CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING STRUCTURE LAYOUT (B-44-478) LS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (6506-05-71) LS	CONSTRUCTION STAKING SLOPE STAKES LF
9+25.00	-	10+70.00	OLD 47, LT & RT	145	145	-	-	145
	PROJECT		OLD 47	-	-	-	1	-
	B-44-478		BOX CULVERT	-	-	1	-	-
	10+36.00		DRIVEWAY, RT	-	-	-	-	-
TOTAL				145	145	1	1	145

*CATEGORY 0020

SAWING

STATION	LOCATION	690.0150	690.0250
		SAWING ASPHALT LF	SAWING CONCRETE LF
9+25	OLD 47	20	22
10+70	OLD 47	20	22
TOTAL		40	44

ALL ITEMS ARE IN CATEGORY
0010 UNLESS NOTED
OTHERWISE

CONVENTIONAL SYMBOLS			
SECTION LINE		PARCEL NUMBER	UTILITY NUMBER
QUARTER LINE			
SIXTEENTH LINE			
NEW REFERENCE LINE			
NEW R/W LINE			
EXISTING R/W LINE			
PROPERTY LINE			
LOT, TIE, AND OTHER MINOR LINES			
SLOPE INTERCEPT			
CORPORATE LIMITS			
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC.)			
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)			

TEMP., LIMITED EASEMENT AREA		ACCESS CONTROLLED BY ACQUISITION	
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)		NO ACCESS (BY STATUTORY AUTHORITY)	
TRANSMISSION STRUCTURES		ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)	
BUILDING		NO ACCESS (NEW HIGHWAY)	
BUILDING (TO BE REMOVED)		NATIONAL GEODETIC SURVEY MONUMENT	
BRIDGE		SIXTEENTH CORNER MONUMENT	
		PARALLEL OFFSETS	

CONVENTIONAL UTILITY SYMBOLS	
WATER	
GAS	
TELEPHONE	
OVERHEAD TRANSMISSION LINES	
ELECTRIC	
CABLE TELEVISION	
FIBER OPTIC	
SANITARY SEWER	
STORM SEWER	
ELECTRIC TOWER	
POWER POLE	
TELEPHONE POLE	
TELEPHONE PEDESTAL	

CURVE DATA ABBREVIATIONS		
LONG CHORD	LCH	
LONG CHORD BEARING	LCB	
RADIUS	R	
DEGREE OF CURVE	D	
CENTRAL ANGLE	Δ / DELTA	
LENGTH OF CURVE	L	
TANGENT	T	
DIRECTION AHEAD	DA	
DIRECTION BACK	DB	

CONVENTIONAL ABBREVIATIONS

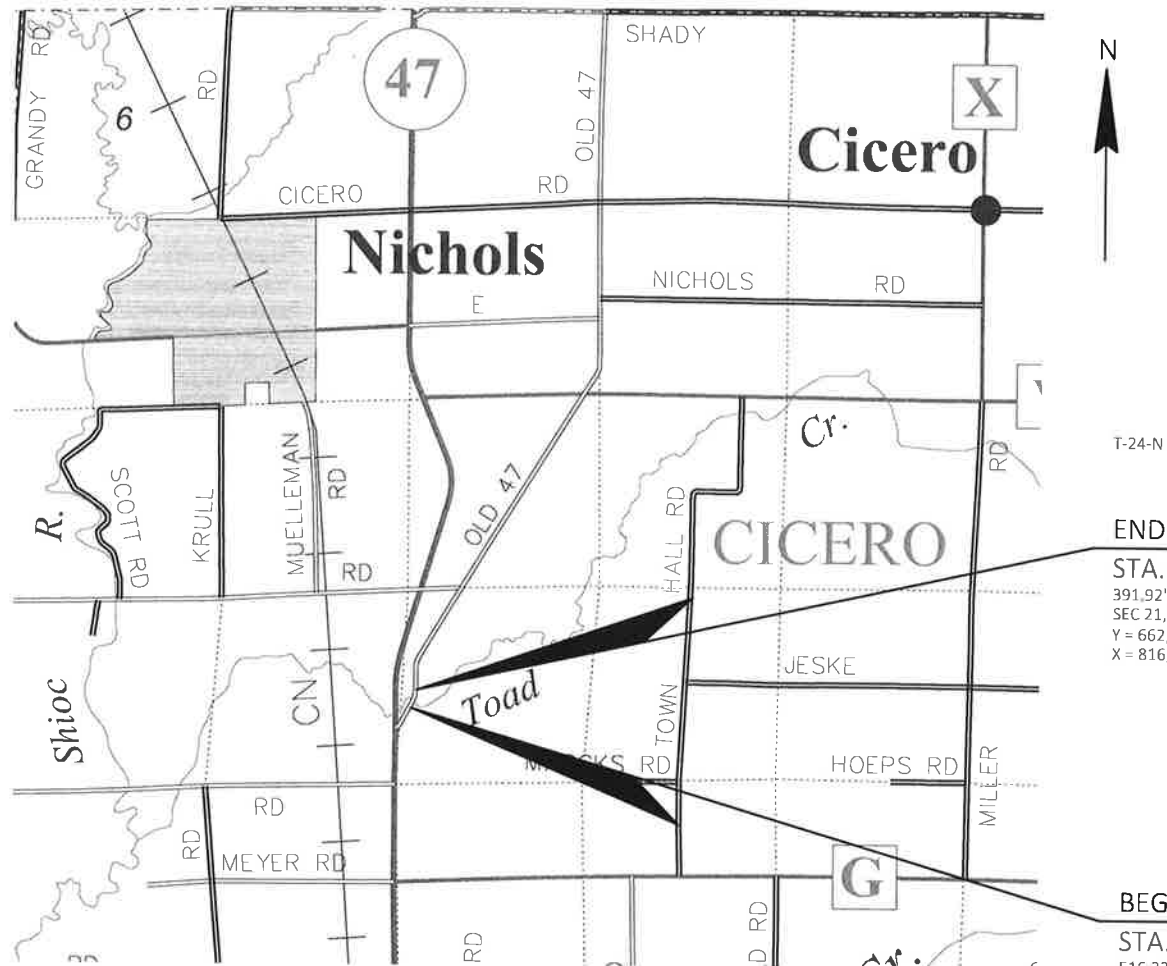
ACCESS RIGHTS	AR	OUTLOT	OL
ACRES	AC	PAGE	P
AHEAD	AH	POINT OF TANGENCY	PT
ALUMINUM	ALUM	PROPERTY LINE	PL
AND OTHERS	ET AL	RECORDED AS	(100')
BACK	BK	REEL / IMAGE	R/I
BLOCK	BLK	REFERENCE LINE	R/L
CENTERLINE	C/L	PERMANENT LIMITED EASEMENT	PLE
CERTIFIED SURVEY MAP	CSM	POINT OF BEGINNING	POB
CONCRETE	CONC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

NOTES:

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

RIGHT-OF-WAY MONUMENTS ARE 3/4" X 24" REBAR AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

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



END RELOCATION ORDER

STA. 10+70.00
391.92' S AND 276.97' E FROM W COR
SEC 21, T-24-N, R-17-E
Y = 662,631.903
X = 816,423.589

BEGIN RELOCATION ORDER

STA. 9+25.00
516.33' S AND 202.52' E FROM W COR
SEC 21, T-24-N, R-17-E
Y = 662,507.494
X = 816,349.142

LAYOUT
SCALE 0 1M

TOTAL NET LENGTH OF CENTERLINE = 0.027 MI

CAUTION:

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

R/W PROJECT NUMBER 6506-05-00	SHEET NUMBER 4.01	TOTAL SHEETS 2
PLAT OF RIGHT OF WAY REQUIRED FOR TOWN OF CICERO, OLD HIGHWAY 47 TOAD CREEK BRIDGE		
LOCAL STREET	OUTAGAMIE	

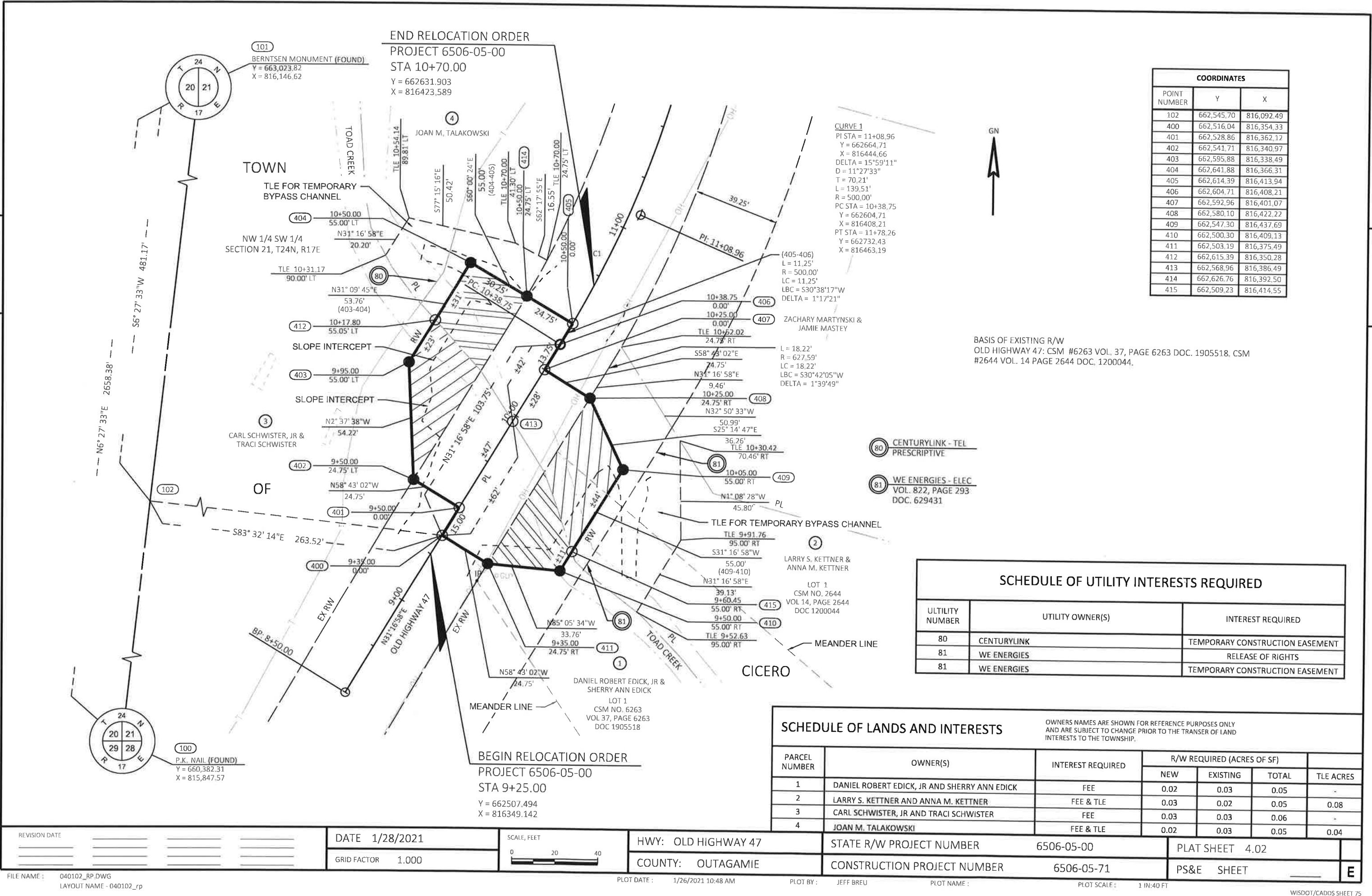
Mead & Hunt



DATE: 1/28/21
(Professional Engineer Signature)

STATE OF WISCONSIN
OUTAGAMIE COUNTY

APPROVED FOR TOWN OF CICERO
DATE: 1/28/21
(Signature)



COORDINATES		
POINT NUMBER	Y	X
102	662,545.70	816,092.49
400	662,516.04	816,354.33
401	662,528.86	816,362.12
402	662,541.71	816,340.97
403	662,595.88	816,338.49
404	662,641.88	816,366.31
405	662,614.39	816,413.94
406	662,604.71	816,408.21
407	662,592.96	816,401.07
408	662,580.10	816,422.22
409	662,547.30	816,437.69
410	662,500.30	816,409.13
411	662,503.19	816,375.49
412	662,615.39	816,350.28
413	662,568.96	816,386.49
414	662,626.76	816,392.50
415	662,509.23	816,414.55

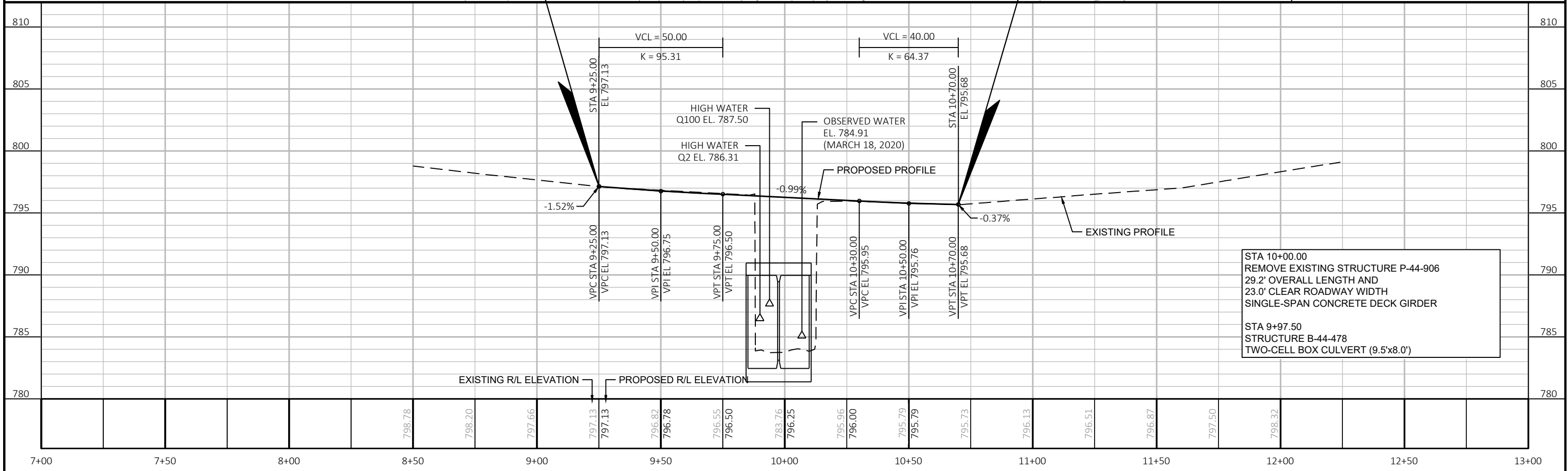
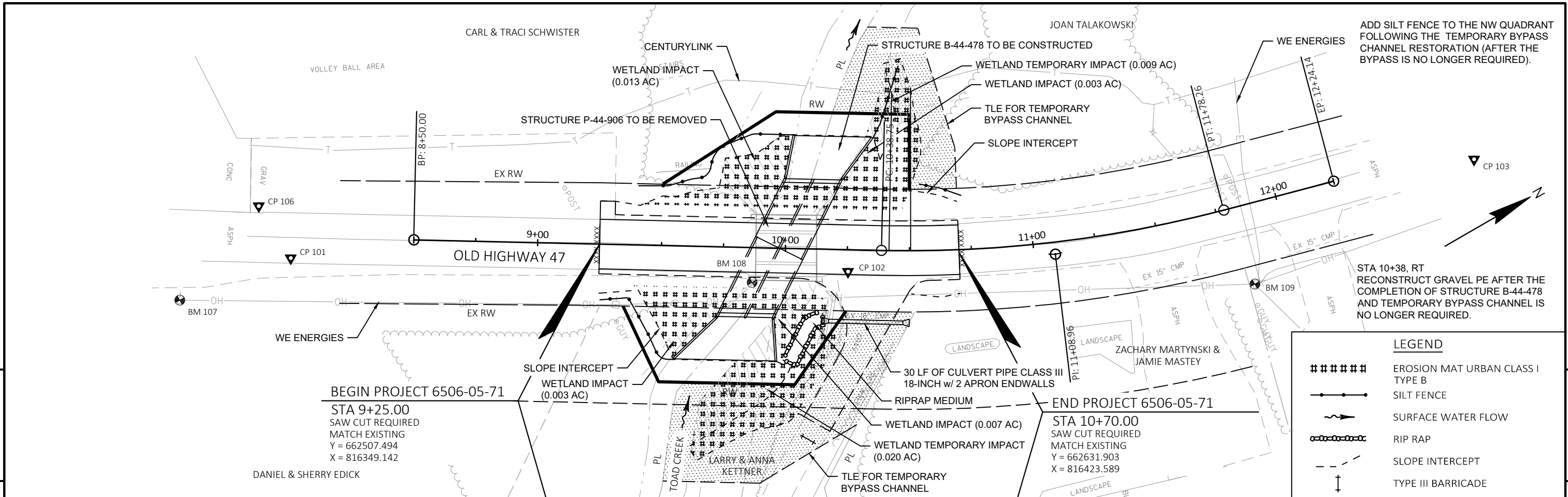
BASIS OF EXISTING R/W
OLD HIGHWAY 47: CSM #6263 VOL. 37, PAGE 6263 DOC. 1905518, CSM #2644 VOL. 14 PAGE 2644 DOC. 1200044.

SCHEDULE OF UTILITY INTERESTS REQUIRED		
UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED
80	CENTURYLINK	TEMPORARY CONSTRUCTION EASEMENT
81	WE ENERGIES	RELEASE OF RIGHTS
81	WE ENERGIES	TEMPORARY CONSTRUCTION EASEMENT

SCHEDULE OF LANDS AND INTERESTS						
PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W REQUIRED (ACRES OF SF)			
			NEW	EXISTING	TOTAL	TLE ACRES
1	DANIEL ROBERT EDICK, JR AND SHERRY ANN EDICK	FEE	0.02	0.03	0.05	-
2	LARRY S. KETTNER AND ANNA M. KETTNER	FEE & TLE	0.03	0.02	0.05	0.08
3	CARL SCHWISTER, JR AND TRACI SCHWISTER	FEE	0.03	0.03	0.06	-
4	JOAN M. TALAKOWSKI	FEE & TLE	0.02	0.03	0.05	0.04

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWNSHIP.

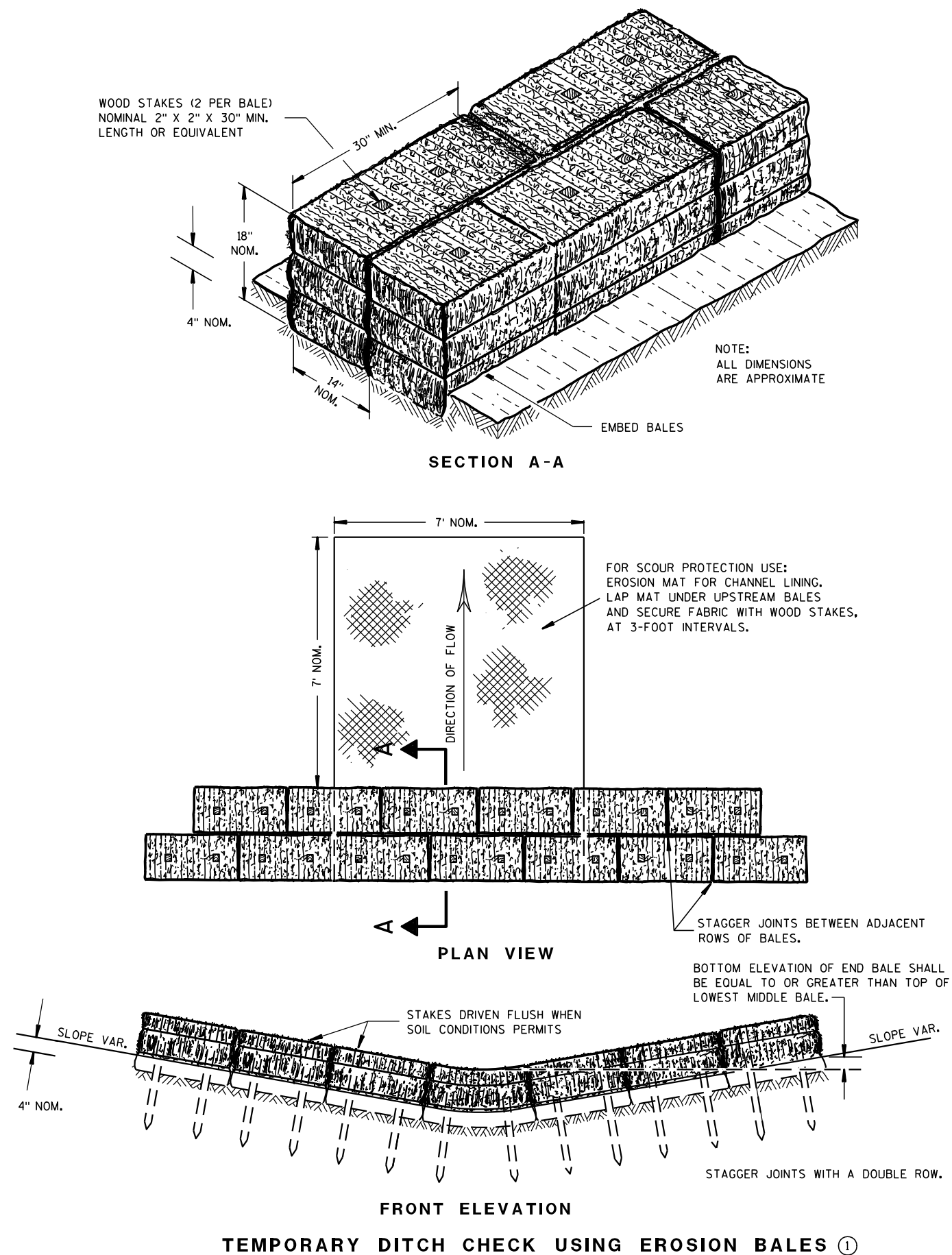
STATE R/W PROJECT NUMBER	6506-05-00	PLAT SHEET	4.02
CONSTRUCTION PROJECT NUMBER	6506-05-71	PS&E SHEET	E



PROJECT NO:	6506-05-71	HWY: OLD HWY 47	COUNTY: OUTAGAMIE	PLAN AND PROFILE:	OLD HWY 47	SHEET	E
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Standard Detail Drawing List

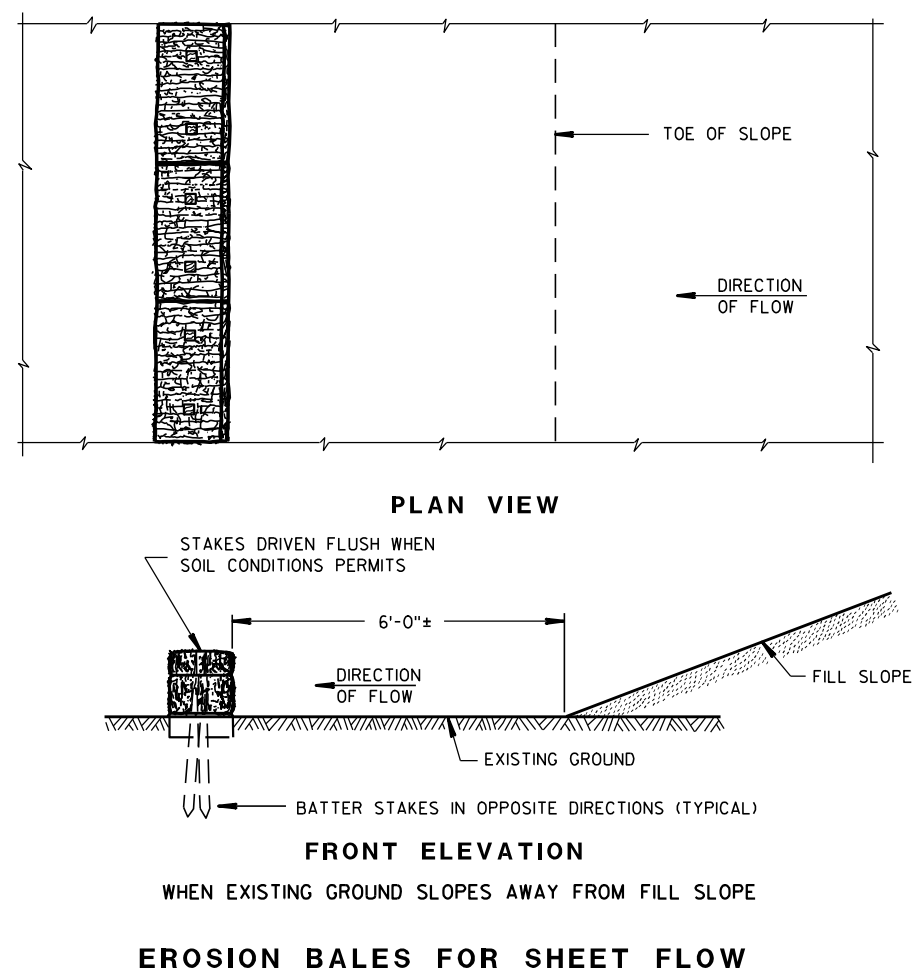
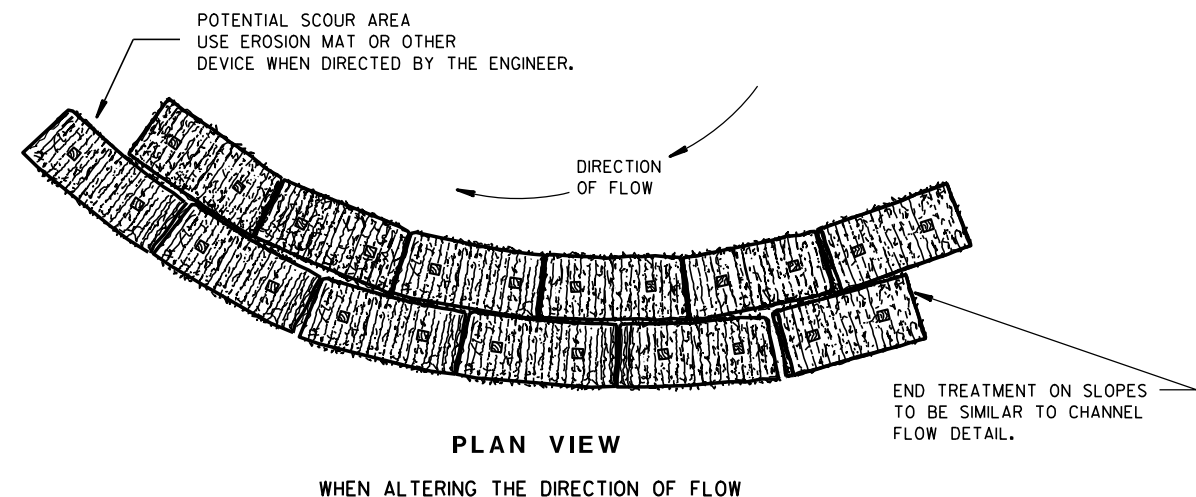
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
12A03-10	NAME PLATE (STRUCTURES)
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS



GENERAL NOTES

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

- ① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

FHWA

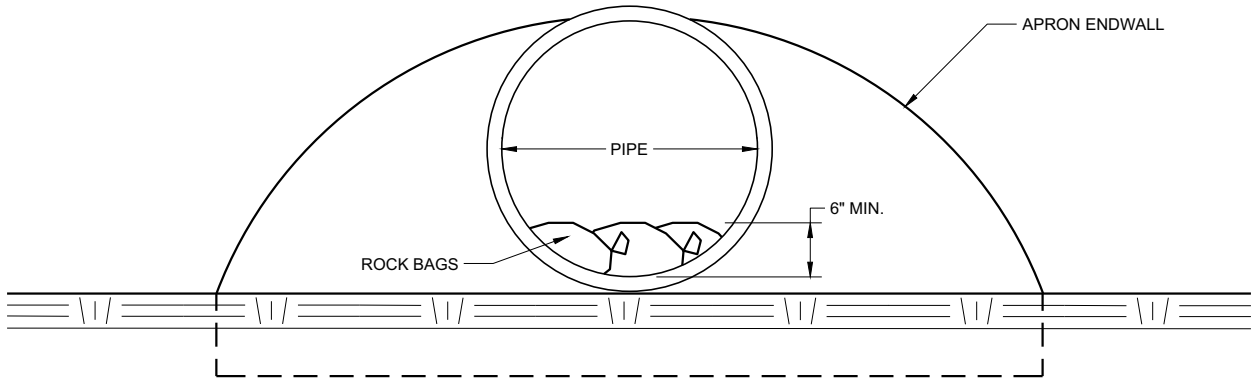
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



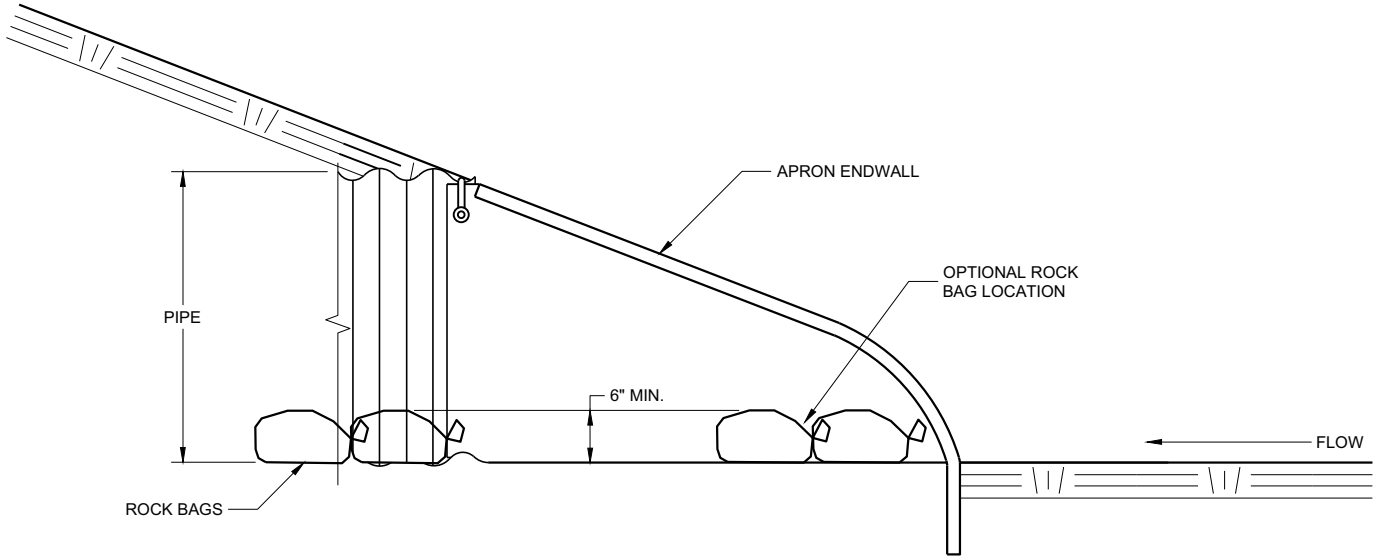
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" 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.



<p style="text-align: center;">SILT FENCE</p>	
<p style="text-align: center;">STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</p>	
<p>APPROVED</p> <p><u>4-29-05</u></p> <p><u>DATE</u></p>	<p><u>/S/ Beth Cannestra</u></p> <p>CHIEF ROADWAY DEVELOPMENT ENGINEER</p>



END VIEW



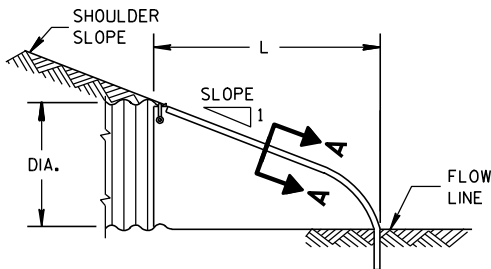
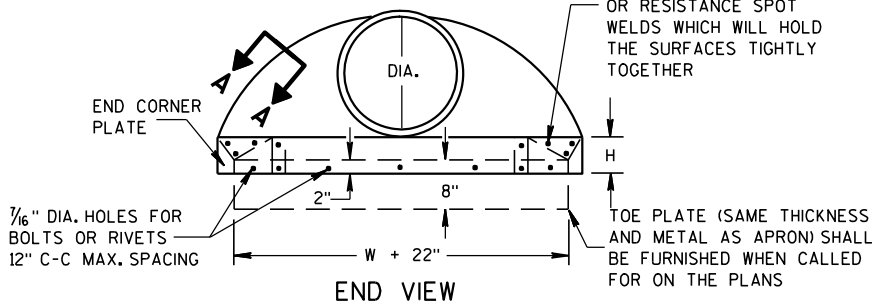
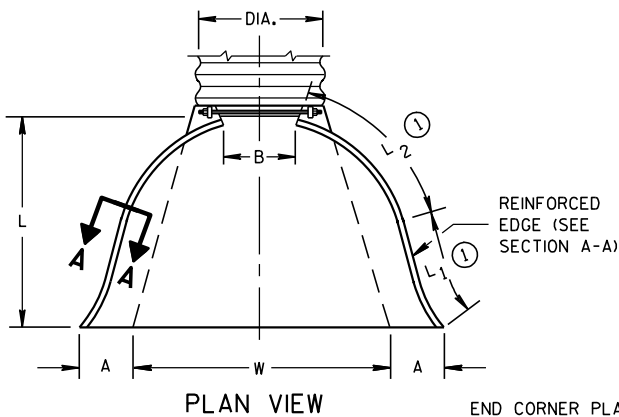
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER
FHWA	

METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)						APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1½")	L ₁ ①	L ₂ ①			W (±2")
12	.064	.060	6	6	6	21	12	17½	24	2½ to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21¾	30	2½ to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28¼	36	2½ to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29⅝	42	2½ to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37¼	48	2½ to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52¼	60	2½ to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59¾	72	2½ to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75⅝	84	2½ to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2¼ to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85½	102	2¼ to 1	3 Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1½ to 1	3 Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1½ to 1	3 Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1½ to 1	3 Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1½ to 1	3 Pc.

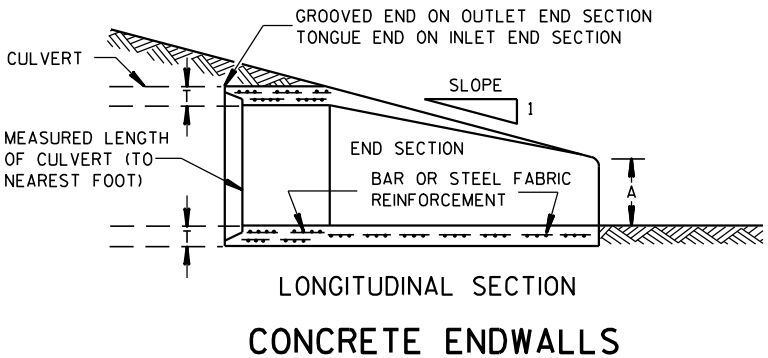
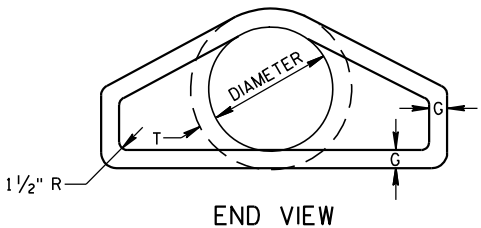
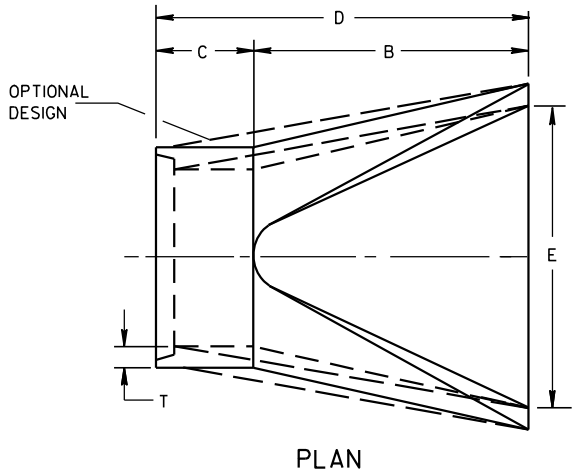
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



SIDE ELEVATION
METAL ENDWALLS

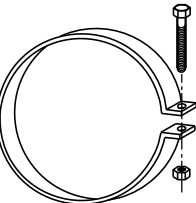
REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ⁷ / ₈	72 ⁷ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43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

* MINIMUM
** MAXIMUM

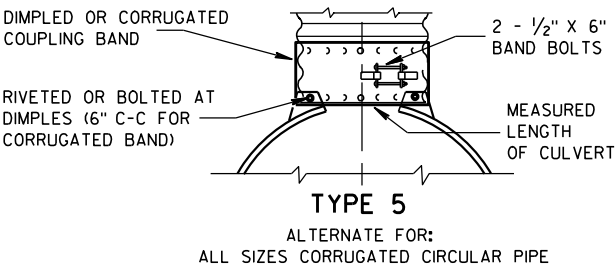
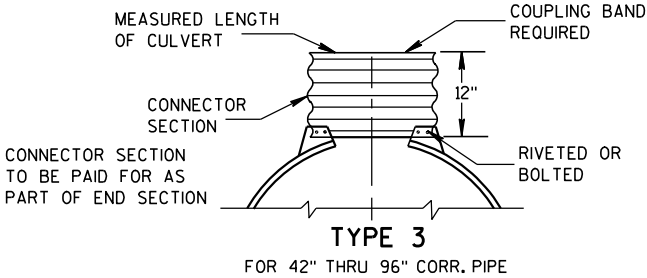
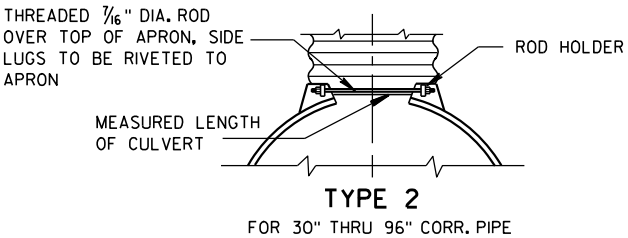
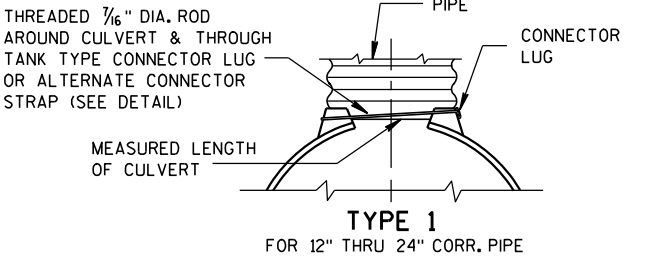


LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



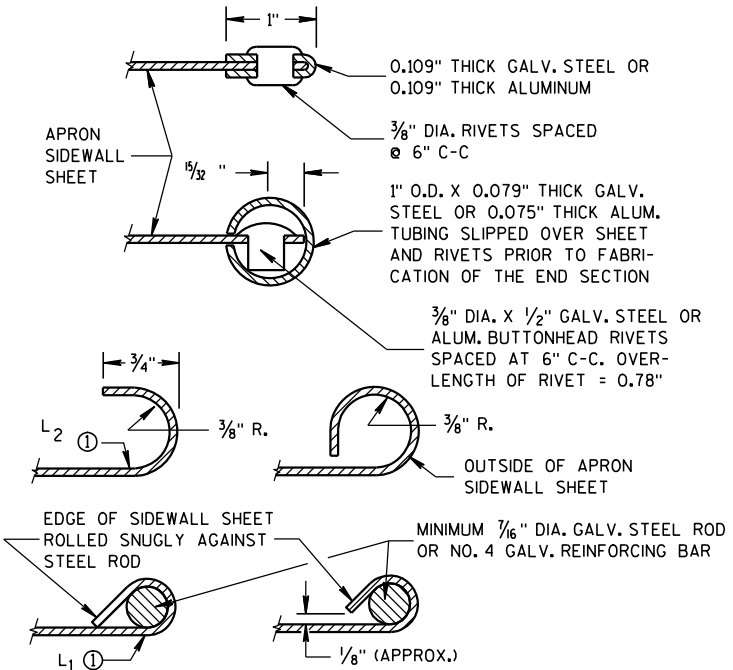
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

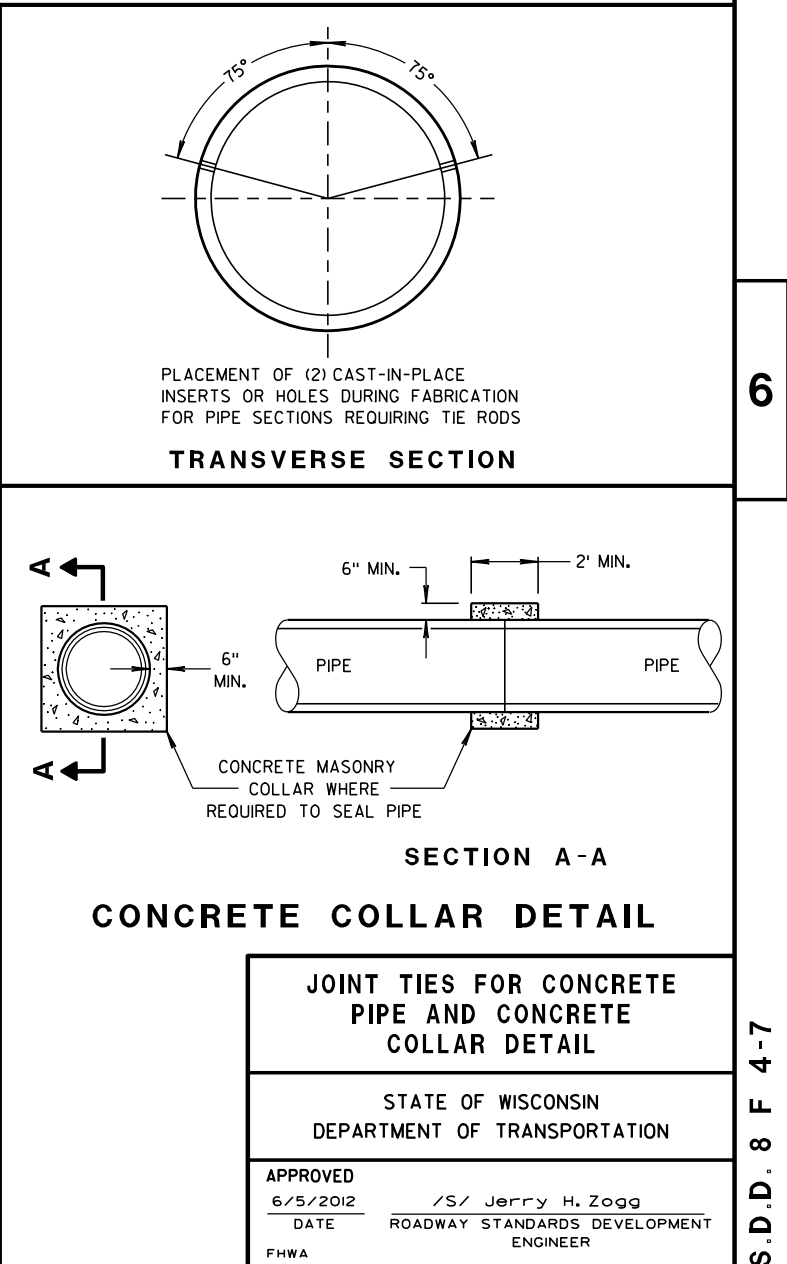
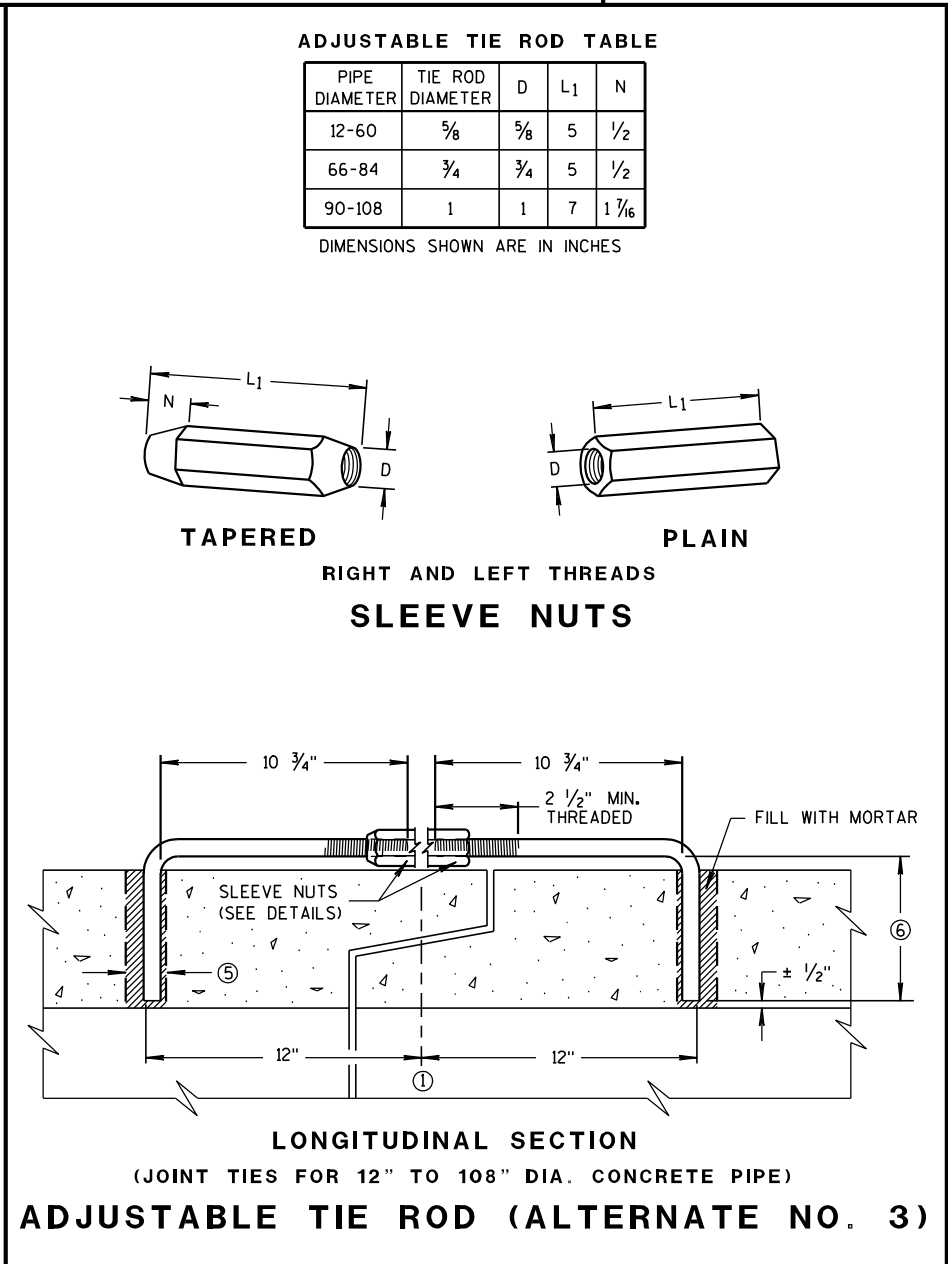
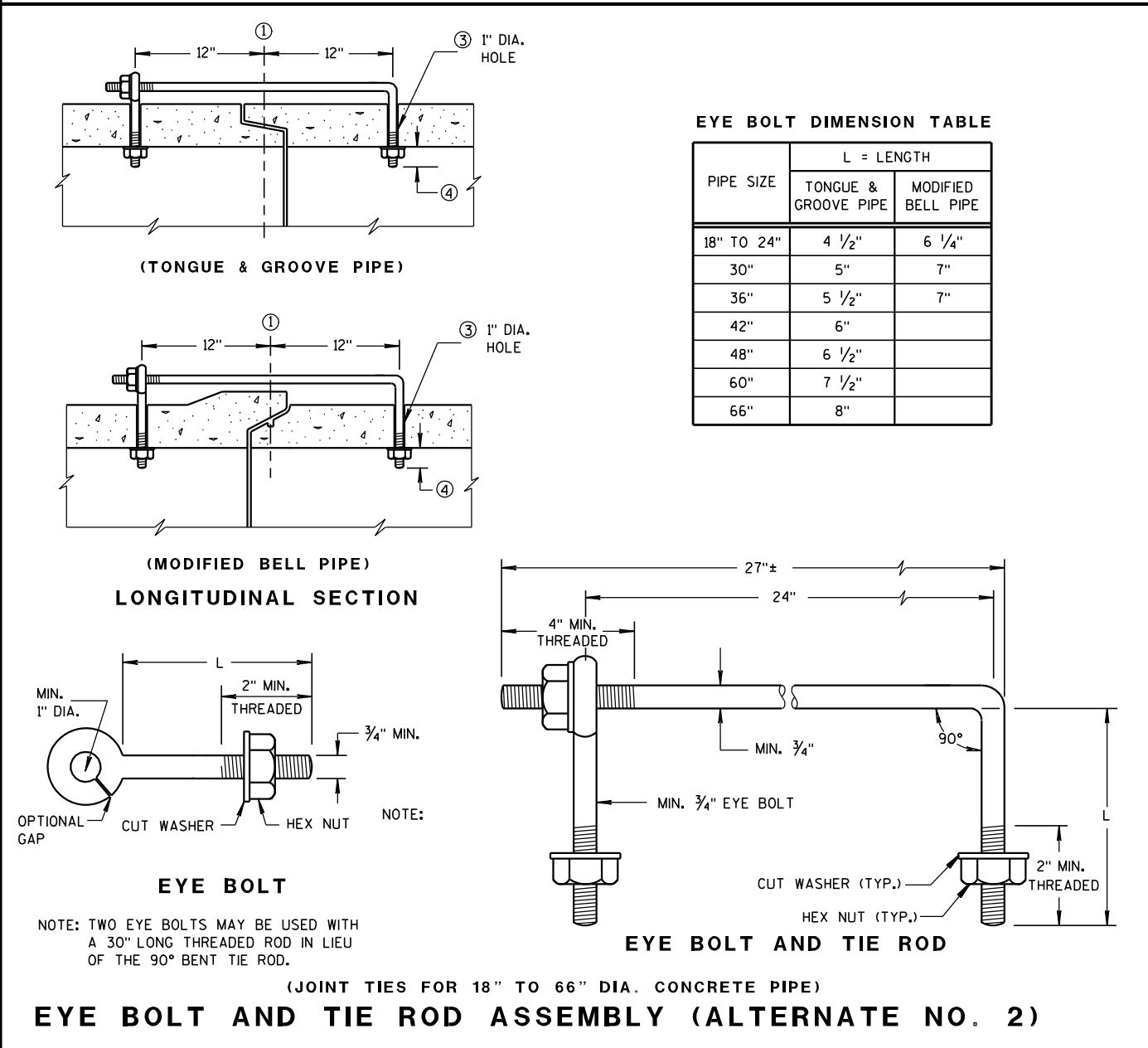
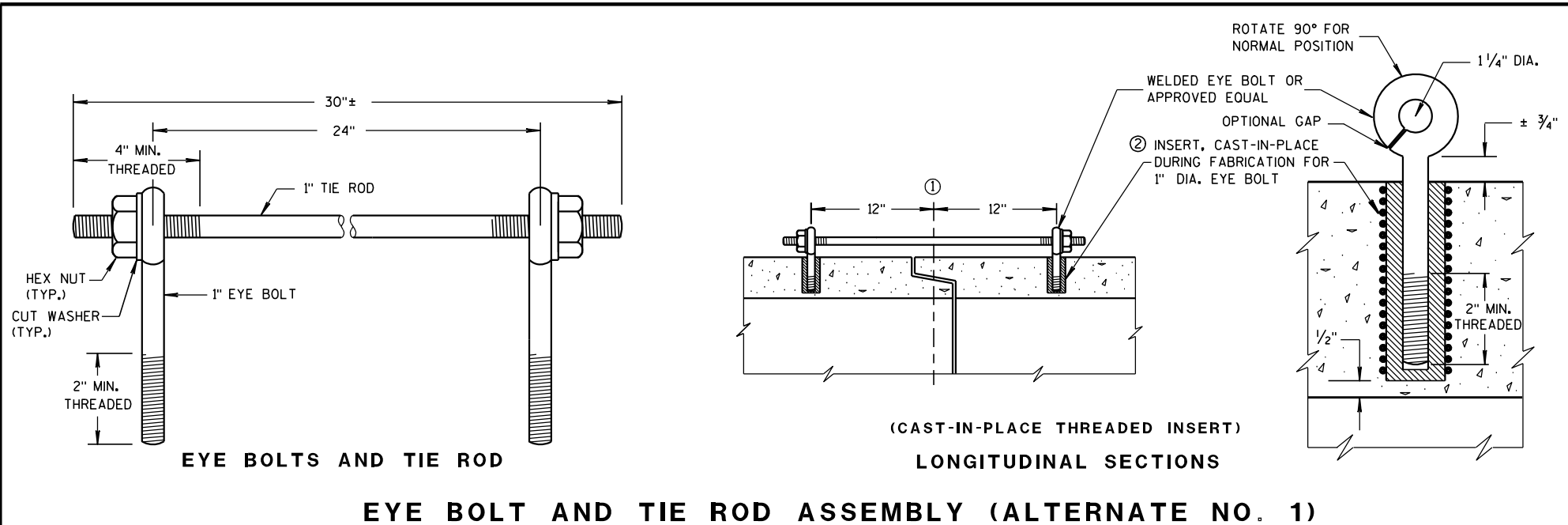
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

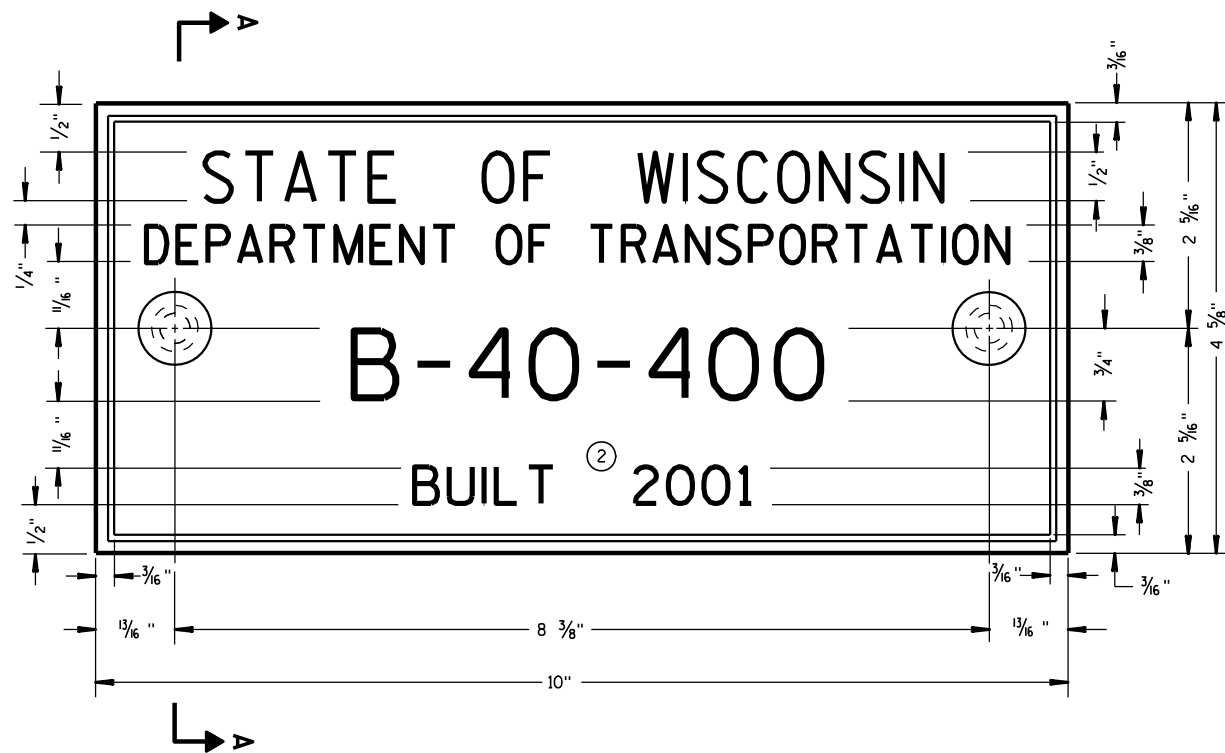
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES.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

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

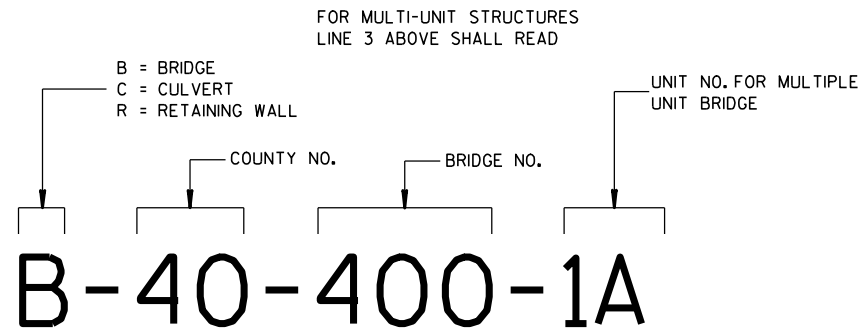
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	





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



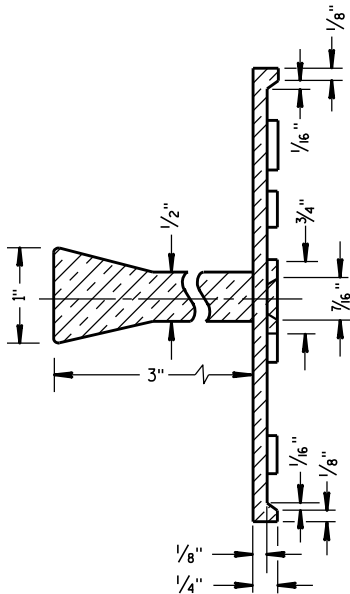
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

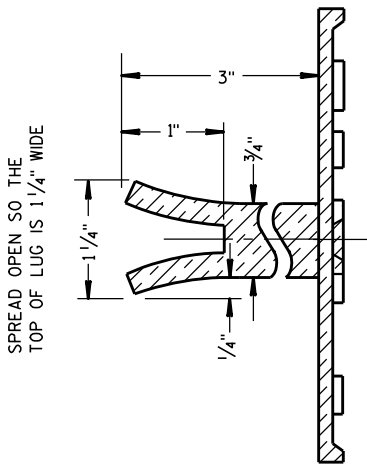
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

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

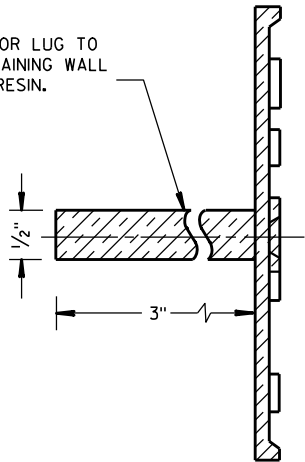


SECTION A-A



ALTERNATE LUG

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

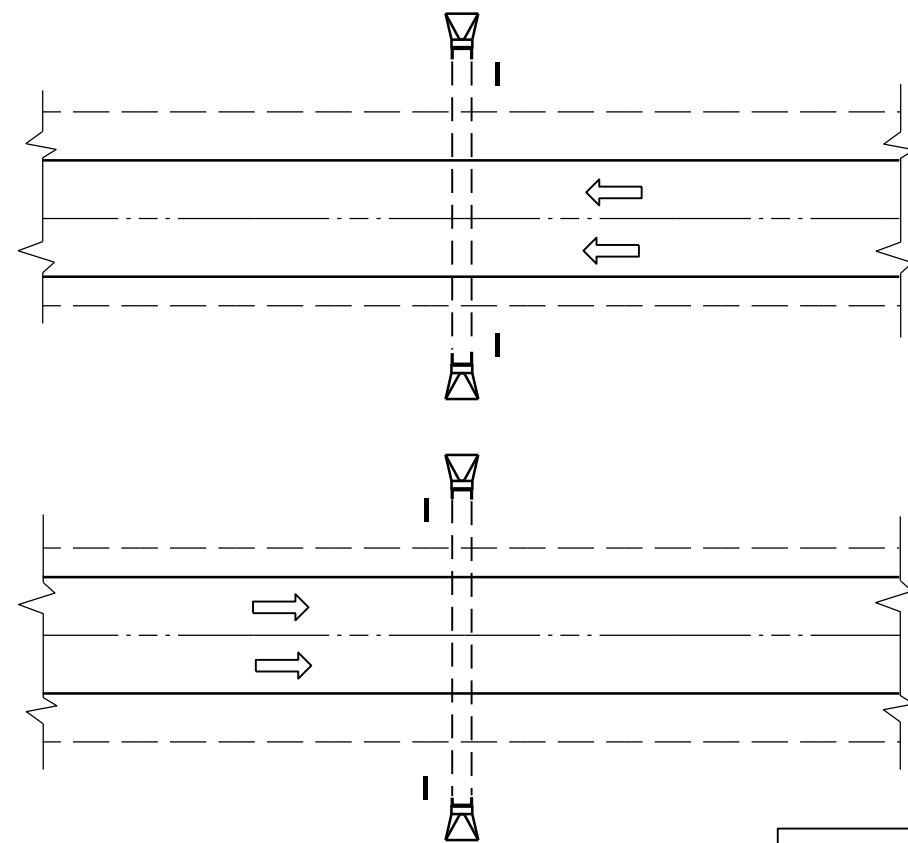


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

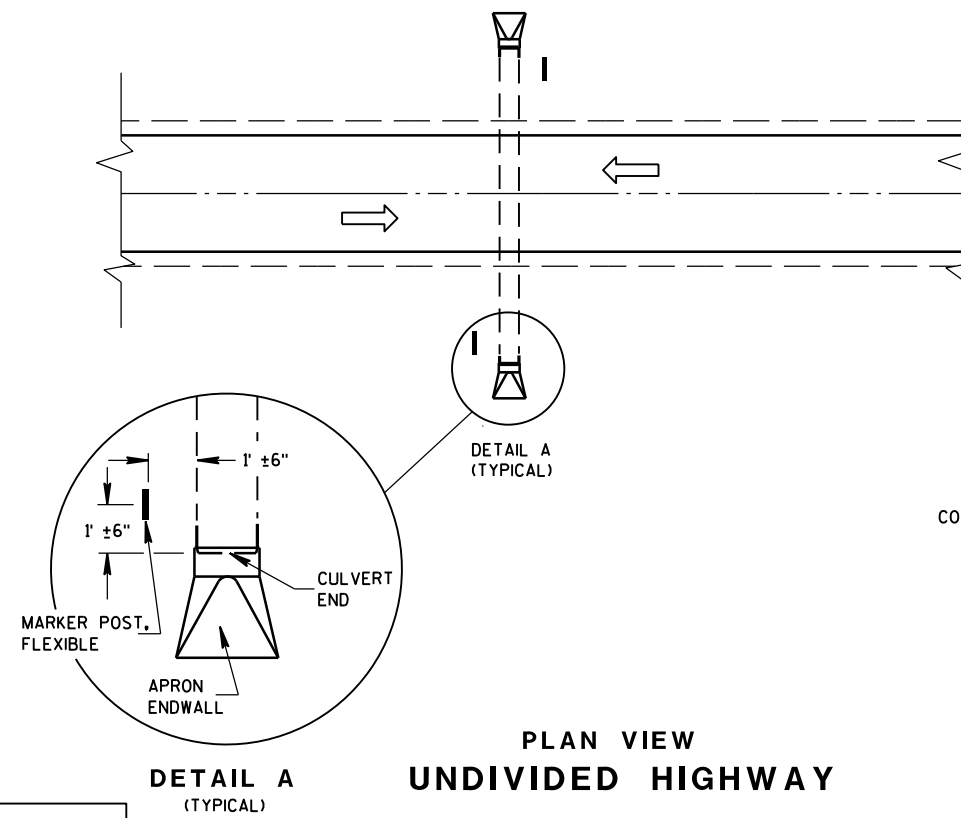
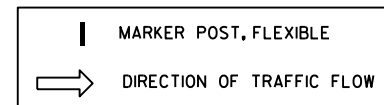
NAME PLATE
(STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
DIVIDED HIGHWAY

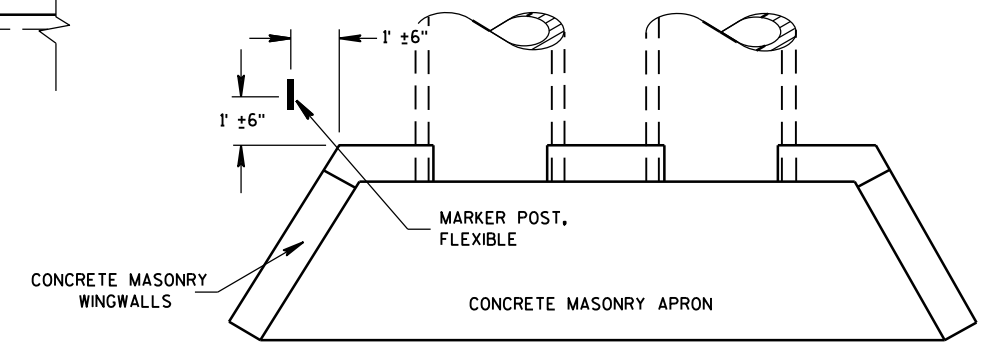


PLAN VIEW
UNDIVIDED HIGHWAY

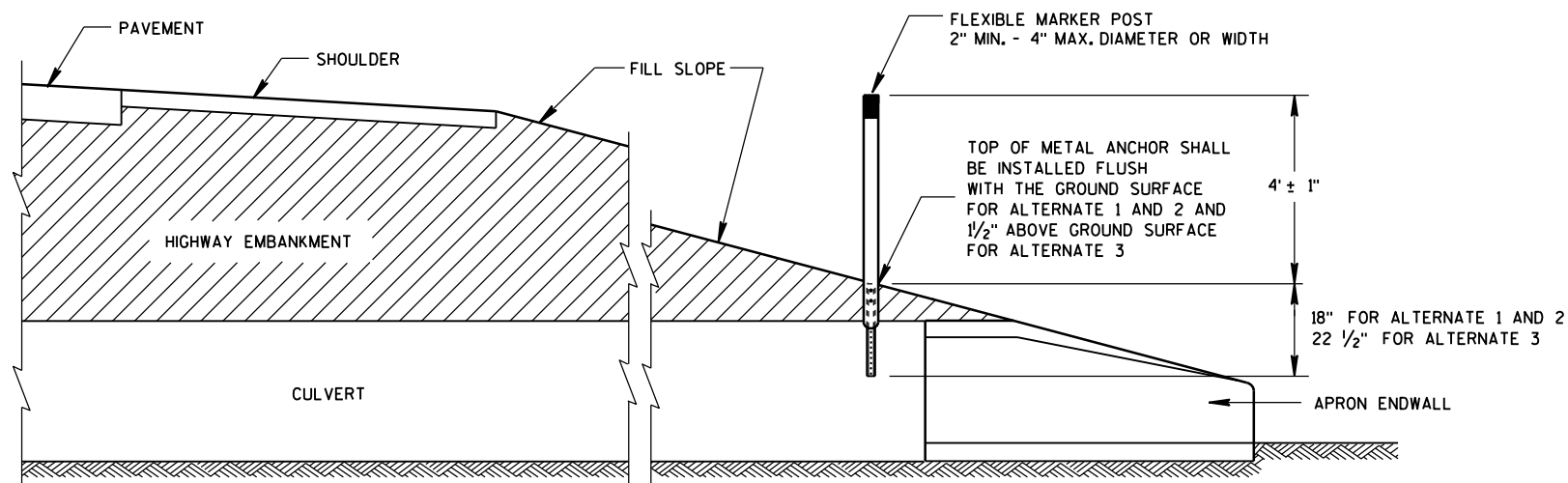
FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

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



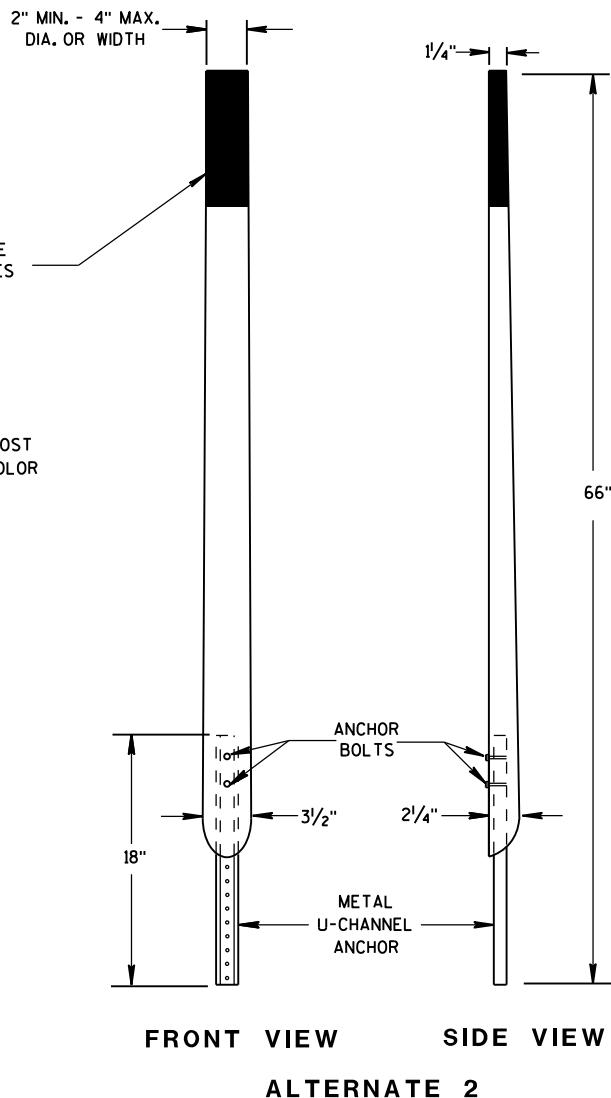
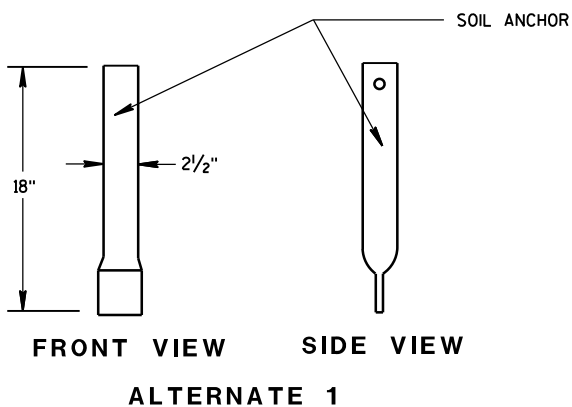
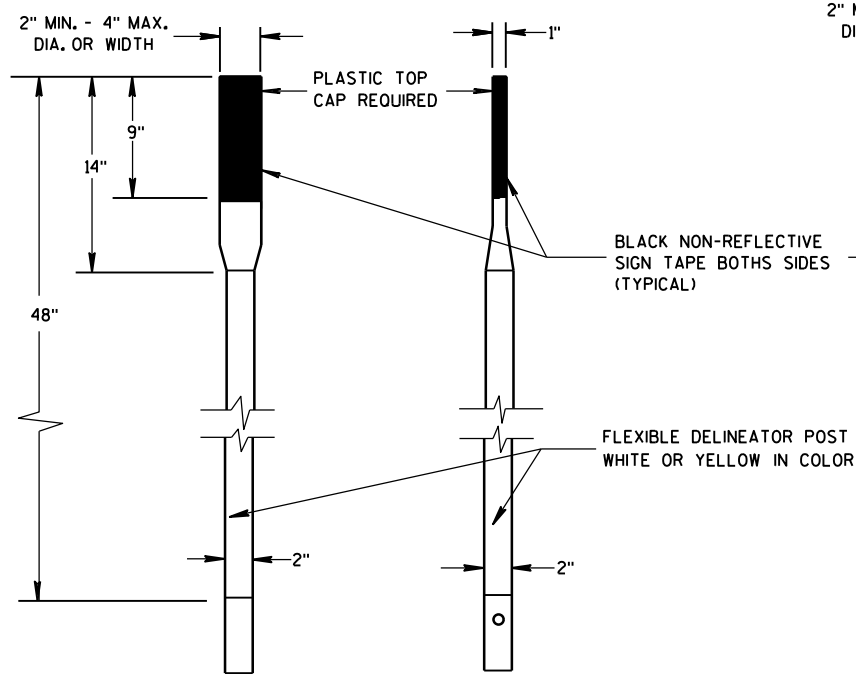
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



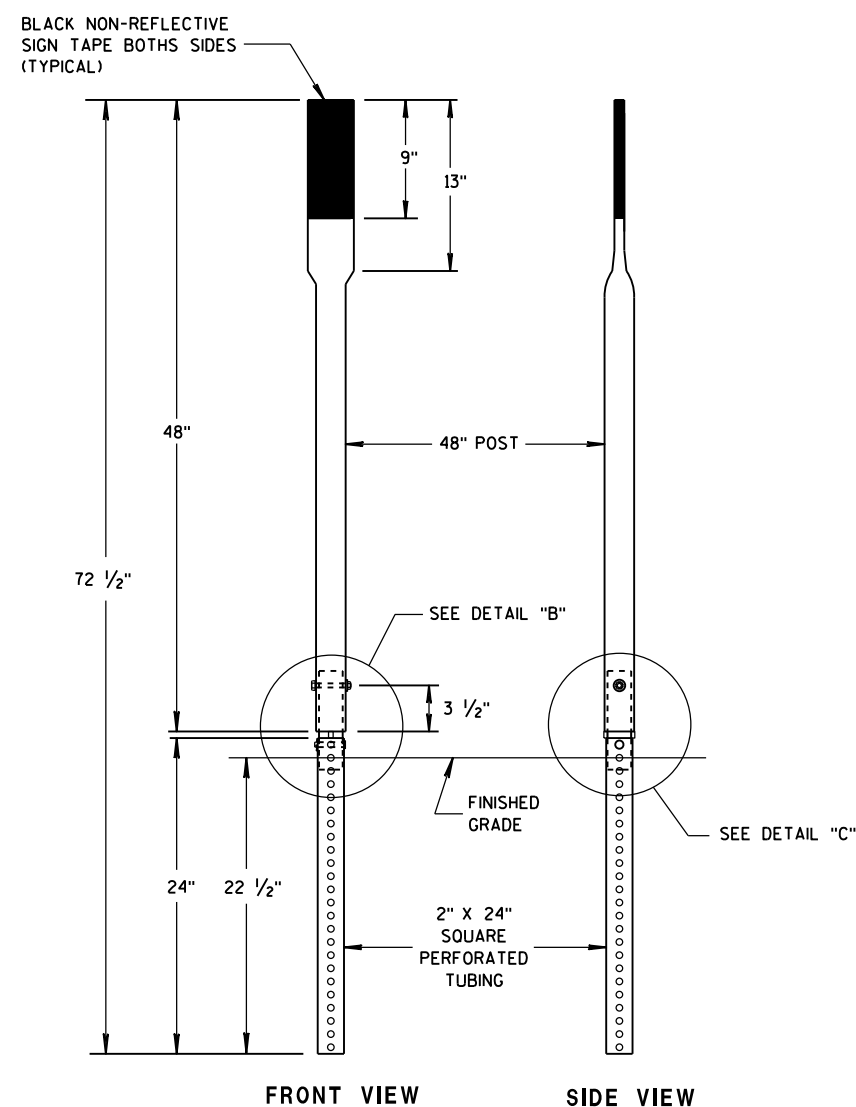
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

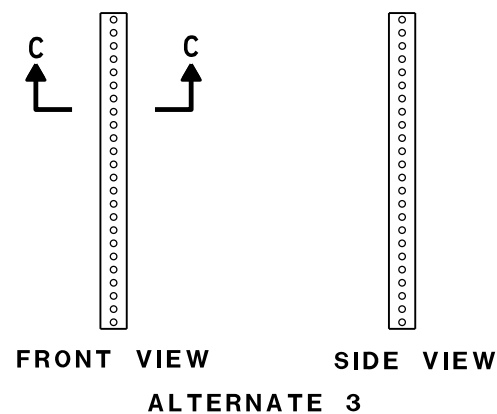
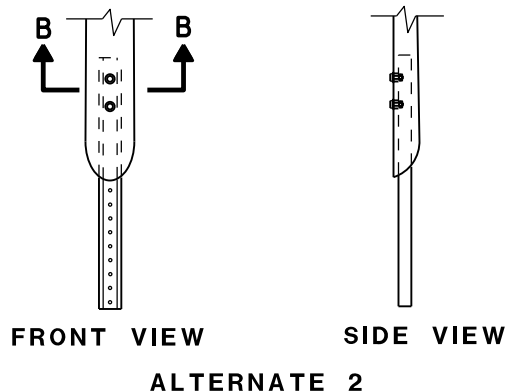
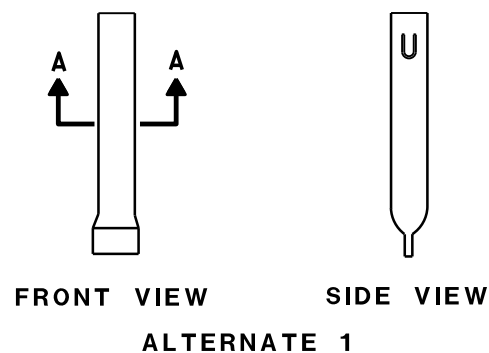
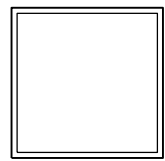
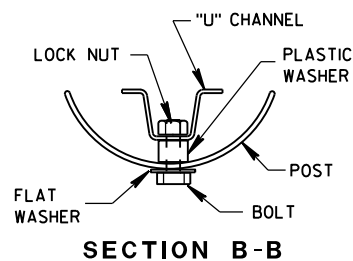
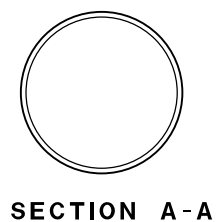
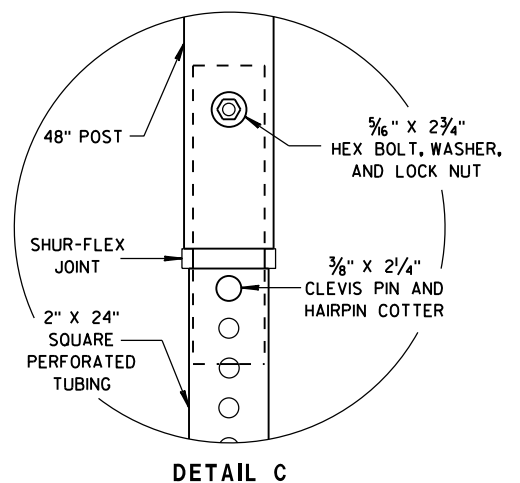
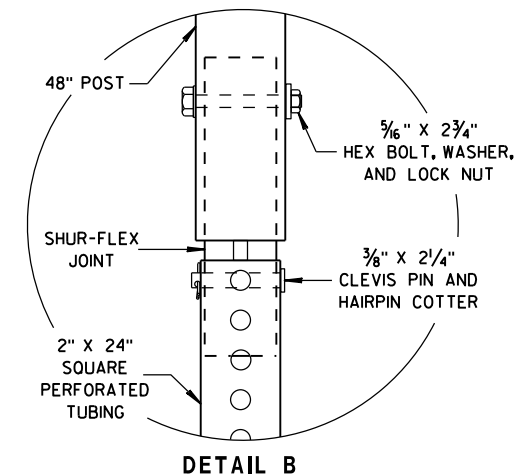
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE MARKER POSTS



SECTION C-C

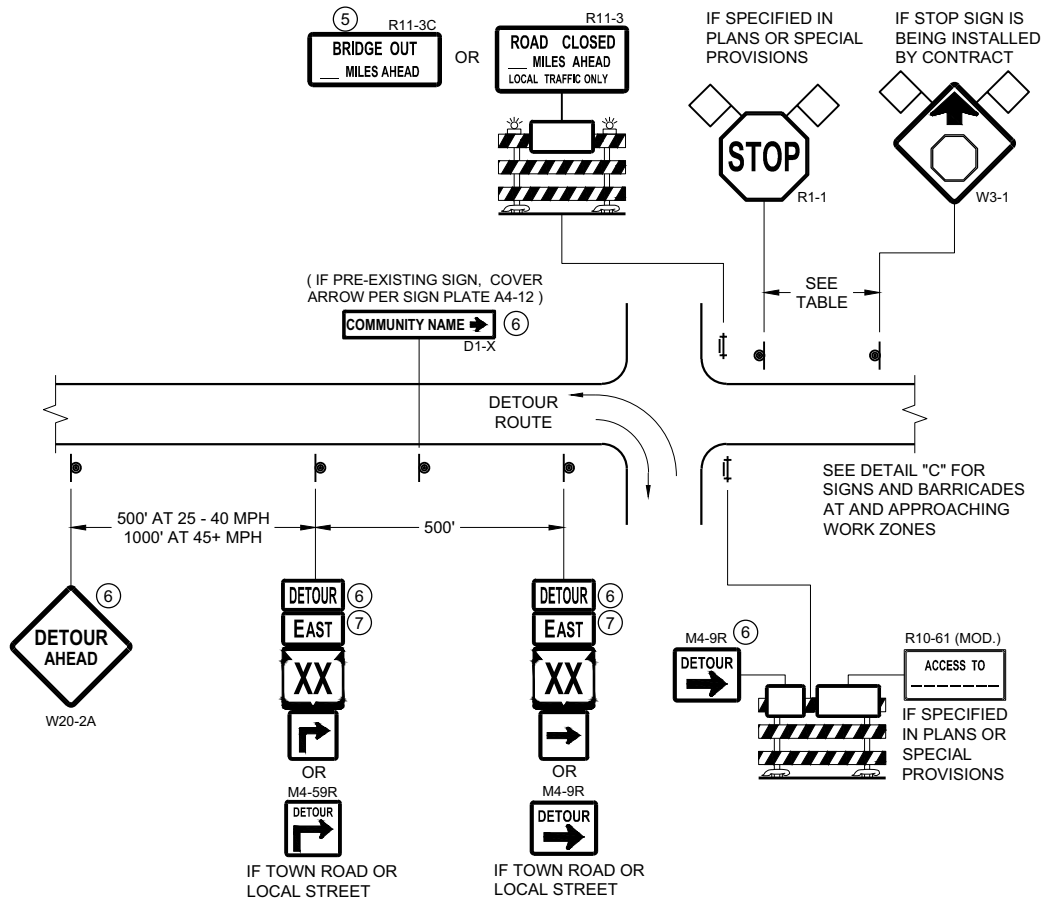


FLEXIBLE MARKER POST ANCHORS

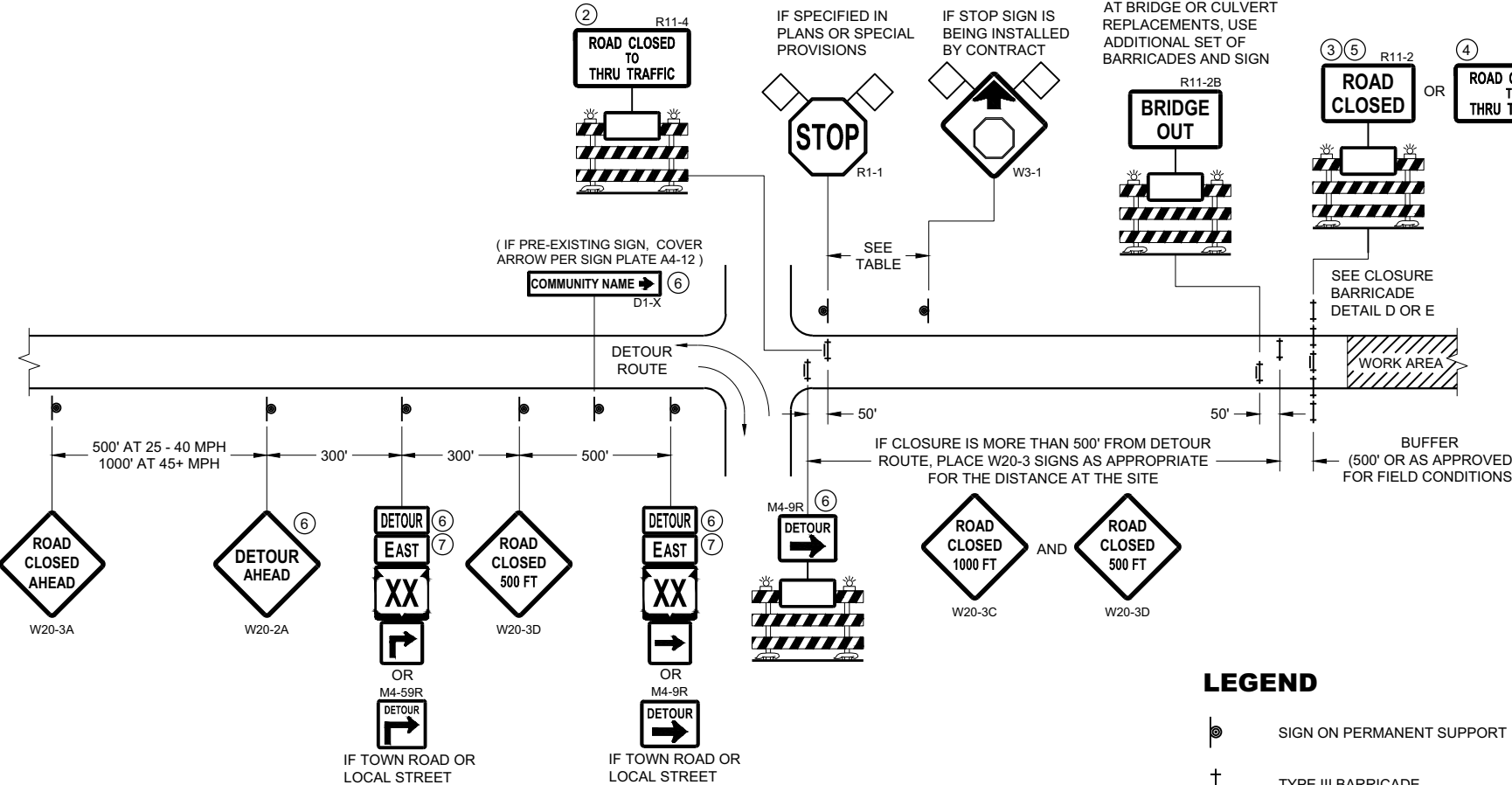
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

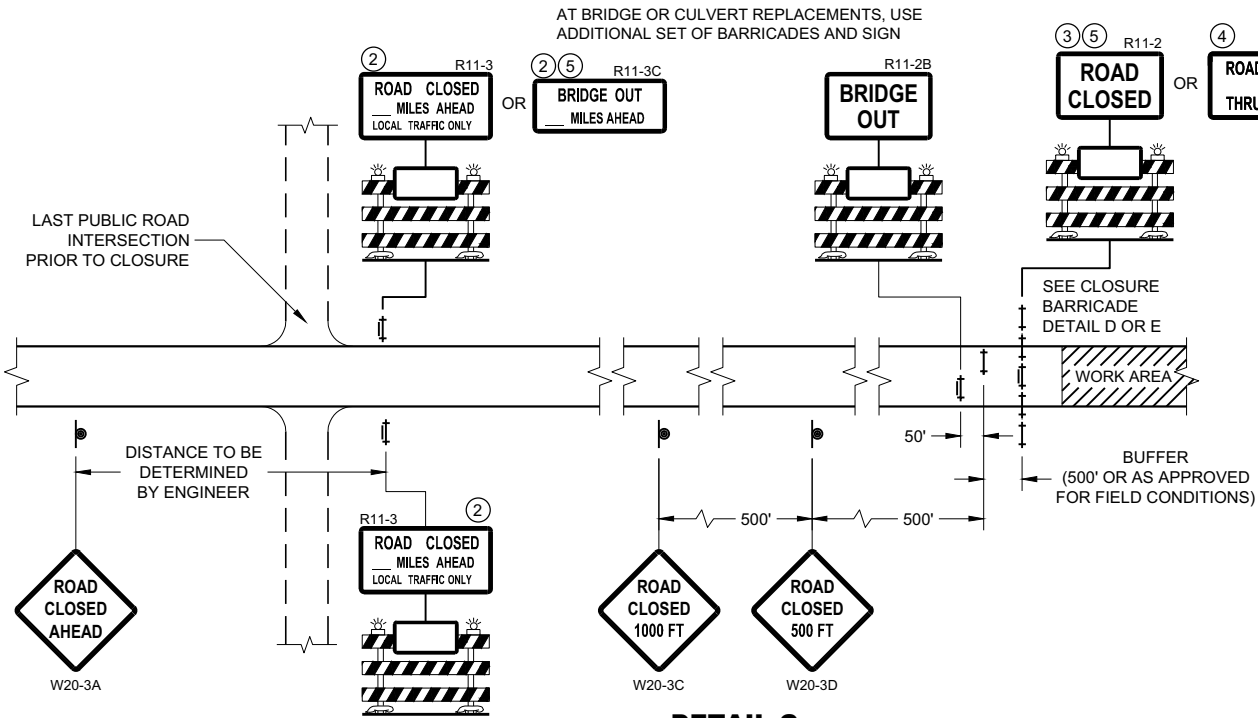
APPROVED
10/1/2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN OR EQUAL TO ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN ½ MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

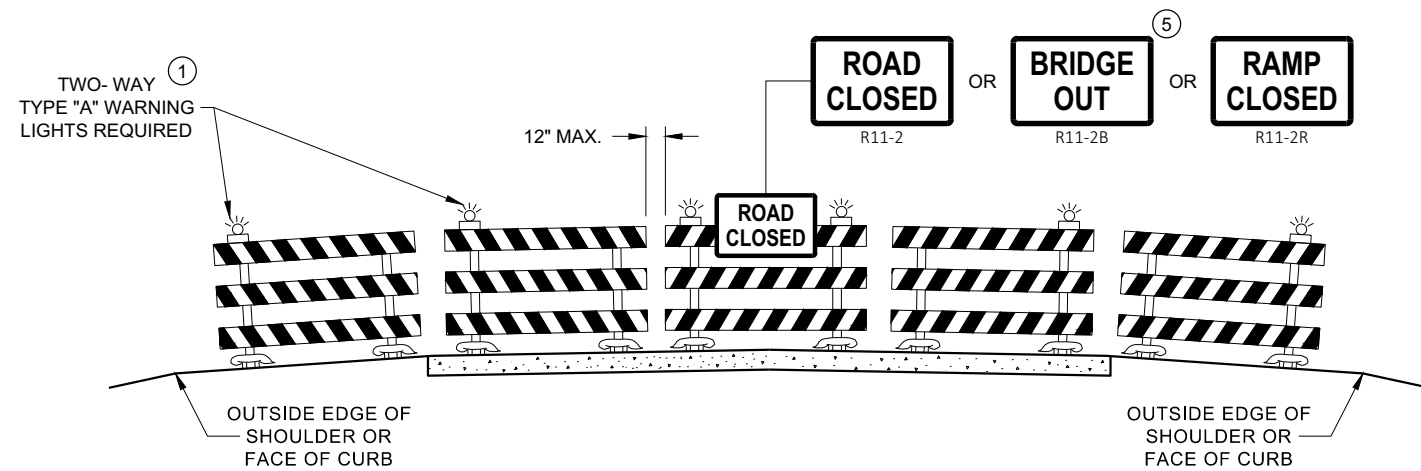
LEGEND

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

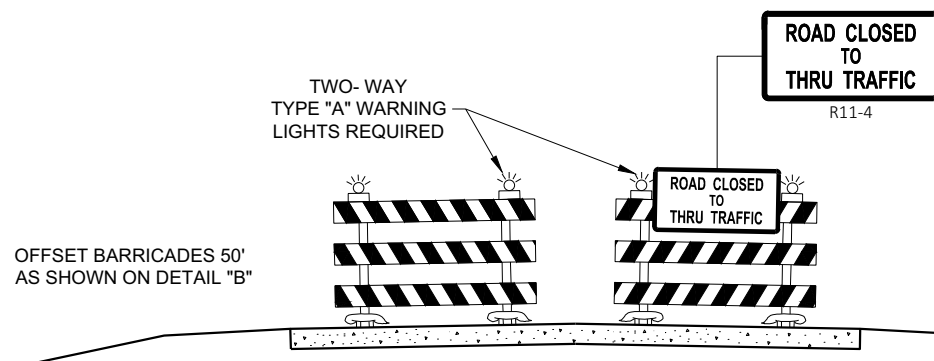
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

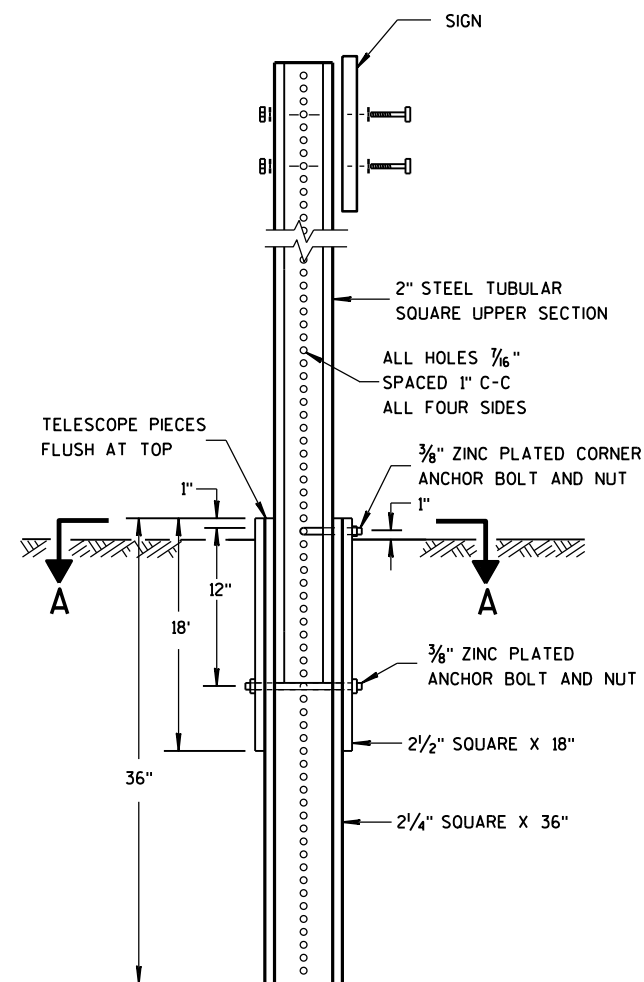
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE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

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

BARRICADES AND SIGNS FOR VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

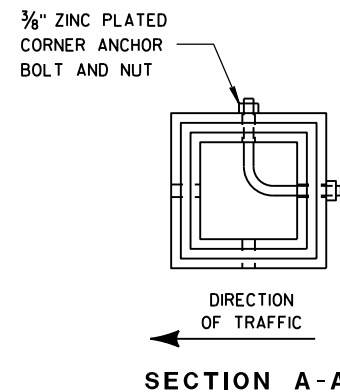


DETAIL OF TUBULAR
STEEL SIGN POST

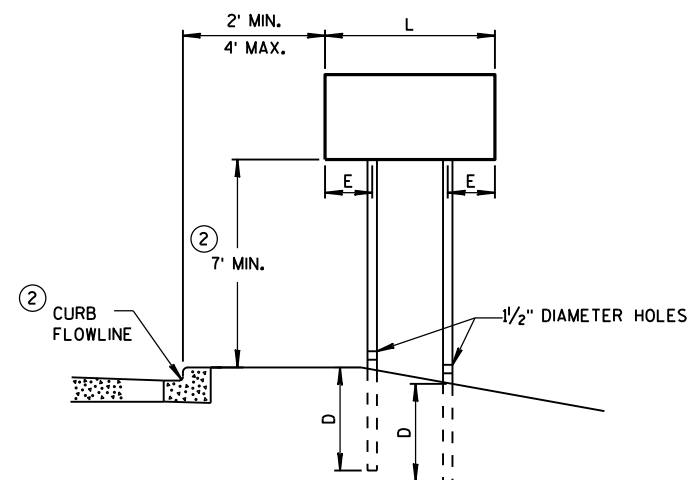
TUBULAR STEEL POSTS

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

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



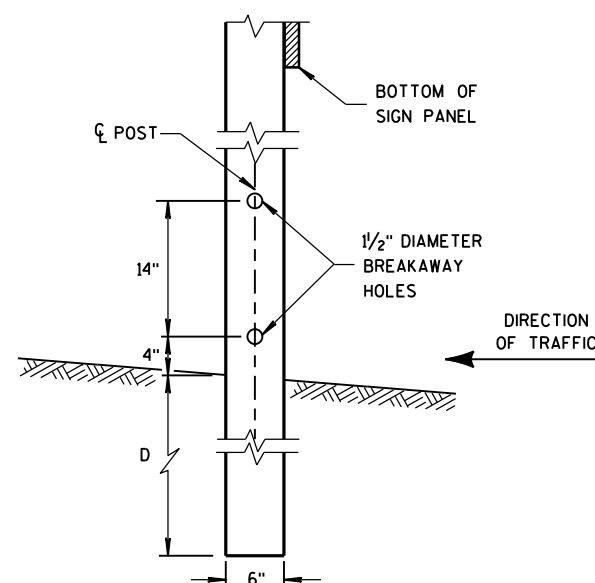
SECTION A-A



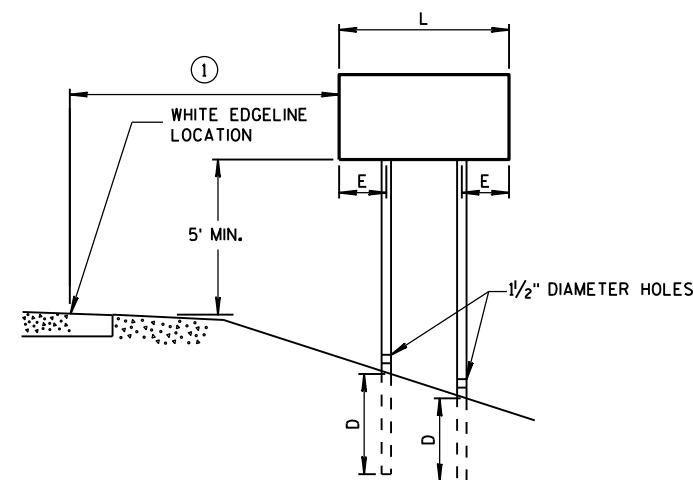
URBAN AREA

POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

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



4 "x6 " WOOD POST
MODIFICATION



RURAL AREA

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

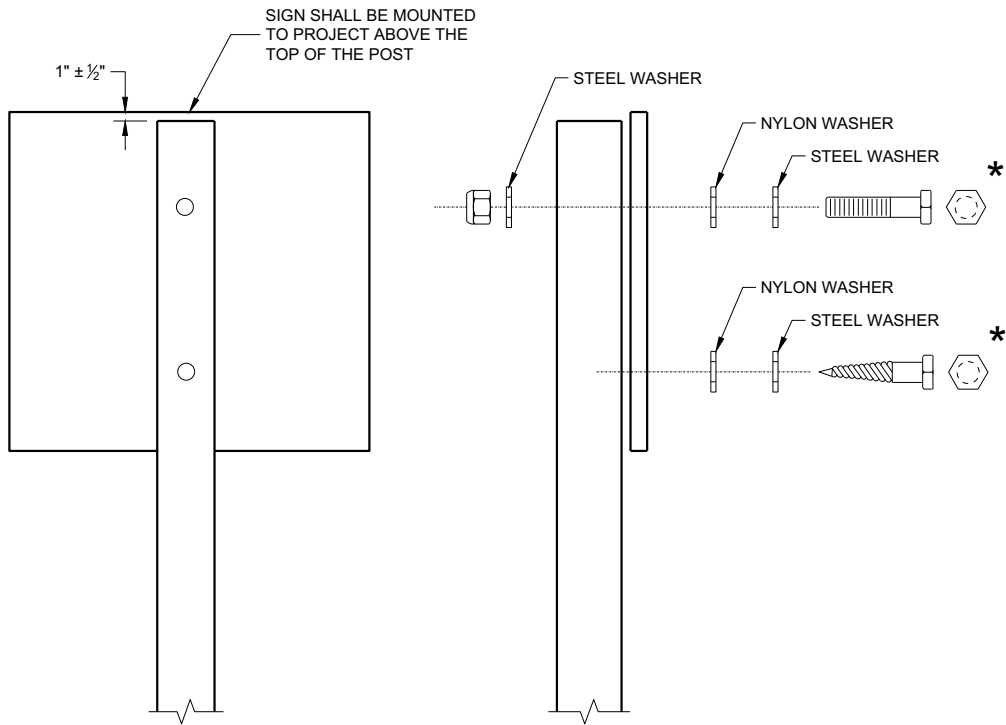
SEE NOTE ③

GENERAL NOTES

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

TEMPORARY TRAFFIC CONTROL
SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



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

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

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

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

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

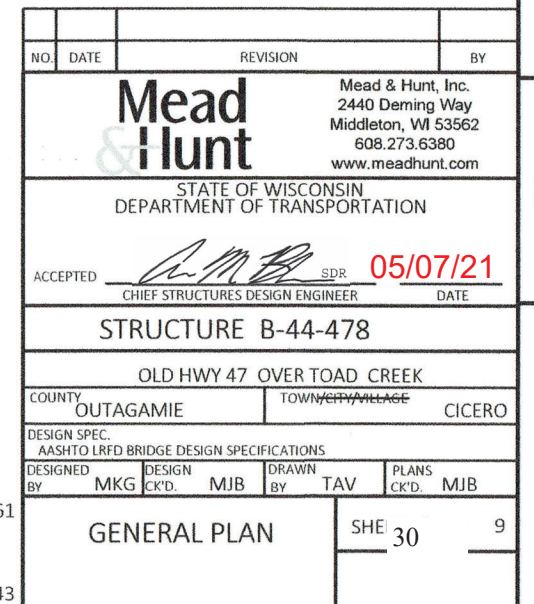
WASHERS (ALL POSTS) -
1 1/4" O.D. x 3/8" I.D. x 1/16" STEEL
1 1/4" O.D. x 3/8" I.D. x 0.080 NYLON

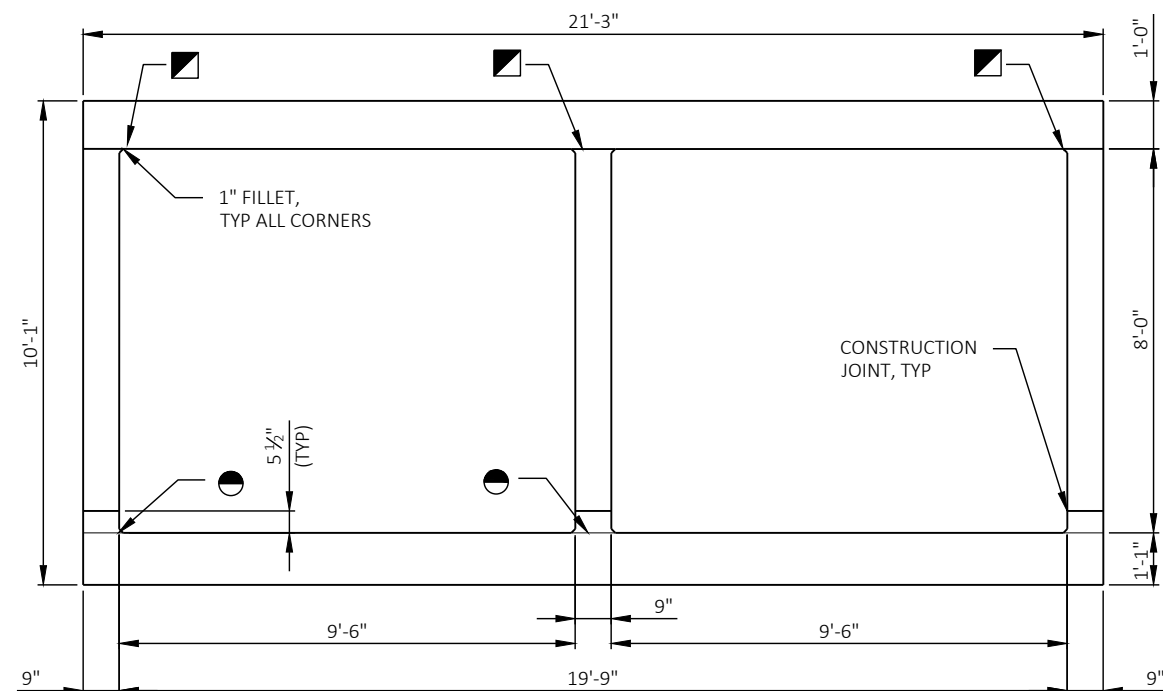
* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION
PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM
SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH
THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER
THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

ATTACHMENT OF SIGNS
TO POSTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

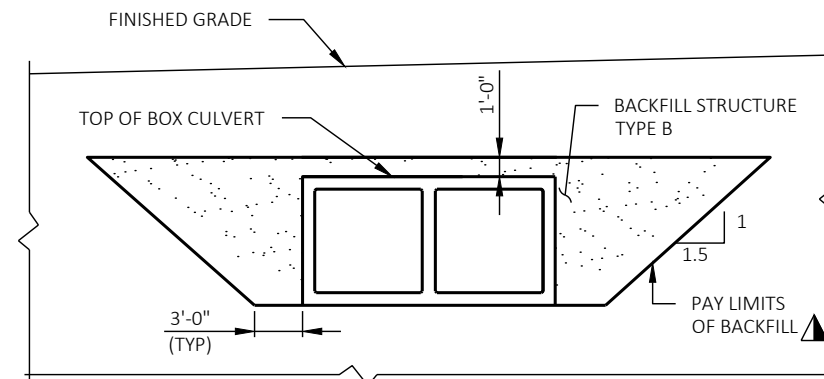
APPROVED
June 2017 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA





 OPTIONAL CONSTRUCTION JOINT. OMIT 1" FILLET IF OPTIONAL CONST. JOINT IS USED.

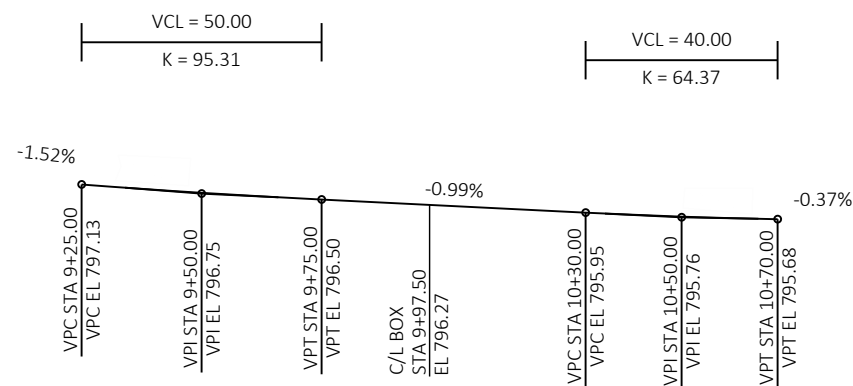
 ALTERNATE CONSTRUCTION JOINT. OMIT 1" FILLET IF ALTERNATE CONST. JOINT IS USED.



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

NO.	STATION	OFFSET	DESCRIPTION	ELEV.
BM 107	7+56.00	26.6' RT	BM SPIKE PP 69 5139 APPROX 220FT SOUTH BRDG	801.333
BM 108	9+86.27	14.18' RT	BM CHISELED X SE WINGWALL	796.375
BM 109	11+82.90	32.02' RT	BM PP 69 5141 SPIKE 150FT N BRDG	799.134

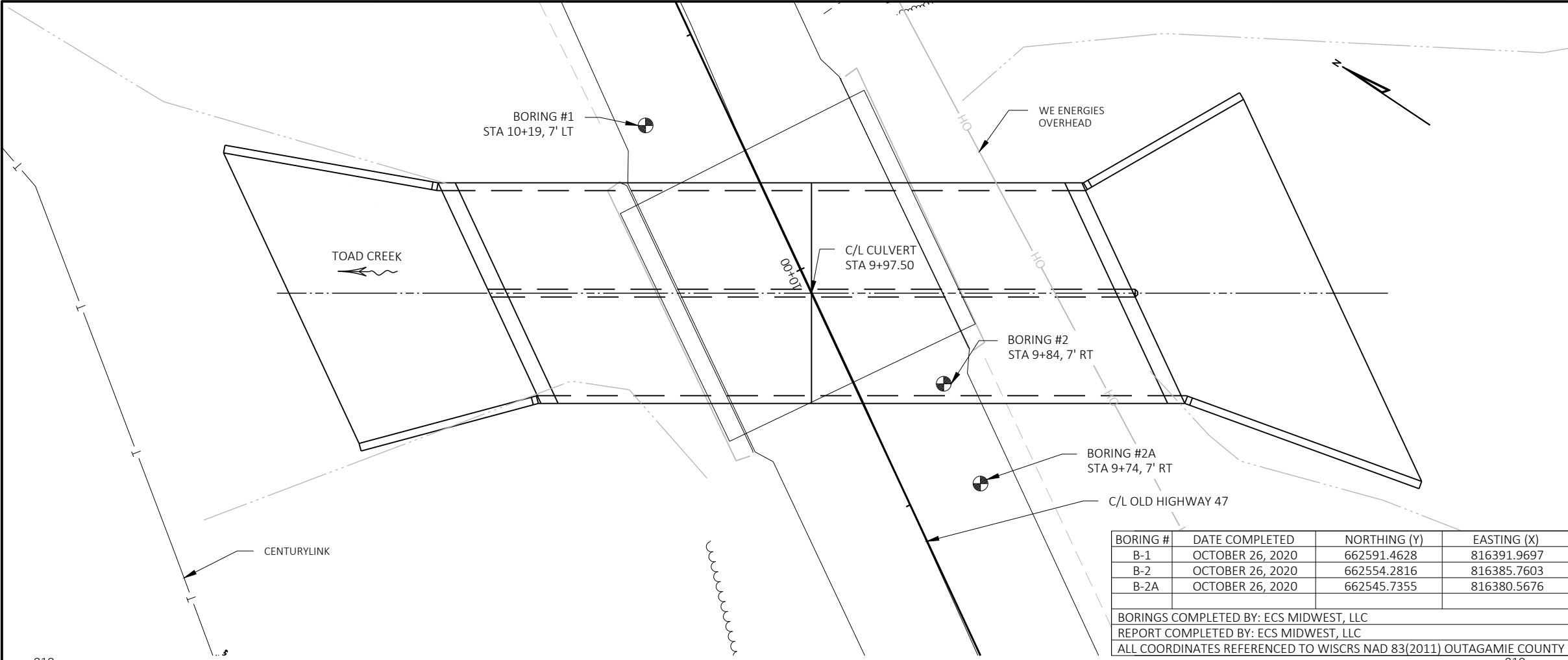
BID ITEM NO.	BID ITEMS	UNIT	TOTALS
203.0500.S	REMOVING OLD STRUCTURE OVER WATERWAY STATION 10+00	LS	1
206.2000	EXCAVATION FOR STRUCTURES CULVERTS B-44-478	LS	1
210.2500	BACKFILL STRUCTURE TYPE B	TON	2520
504.0100	CONCRETE MASONRY CULVERTS	CY	199
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	19840
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	5170
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	26
NON BID ITEMS			
	FILLER	SIZE	3/4"



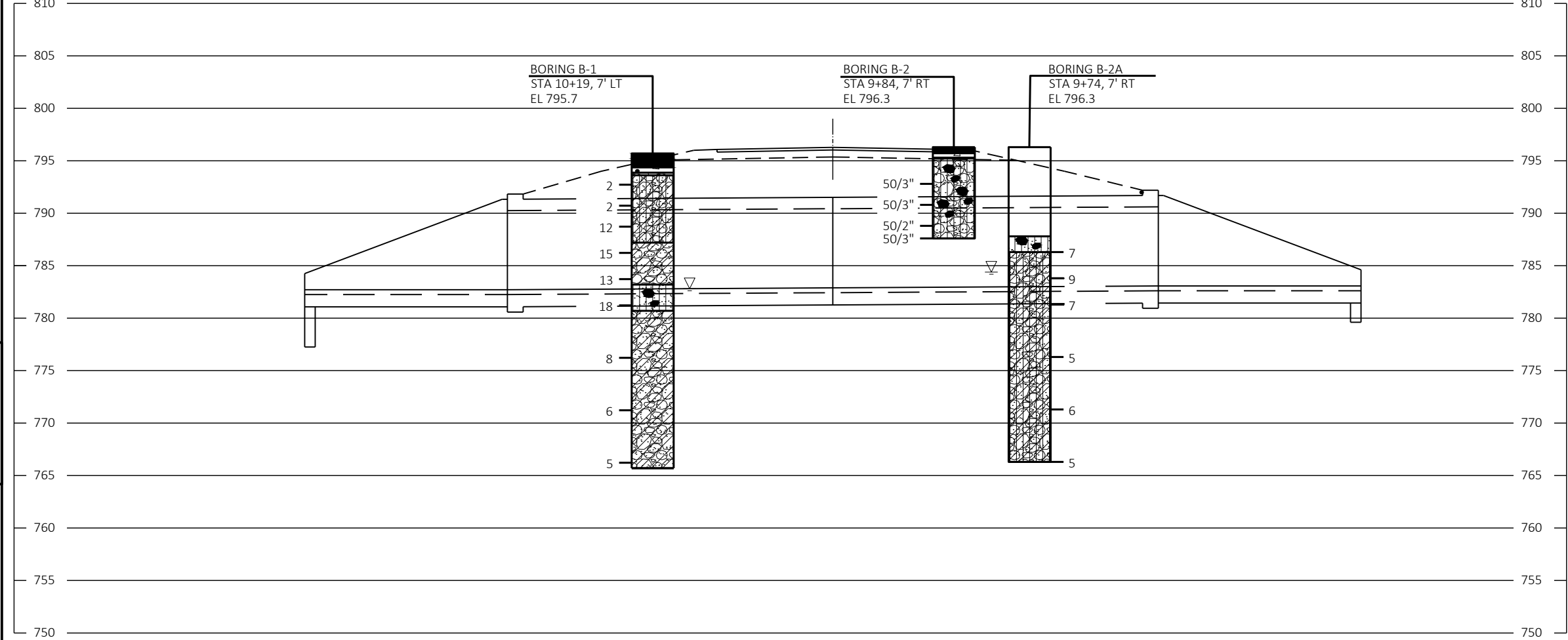
8

LOCATE NAME PLATE ON WING 4. FACE NAME PLATE UPSTATION.

NO.	DATE	REVISION		BY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION					
STRUCTURE B-44-478					
		DRAWN BY	TAV	PLANS CK'D.	MJB
TYPICAL SECTION, GENERAL NOTES & QUANTITIES			SHEET 2 OF 9		



BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
B-1	OCTOBER 26, 2020	662591.4628	816391.9697
B-2	OCTOBER 26, 2020	662554.2816	816385.7603
B-2A	OCTOBER 26, 2020	662545.7355	816380.5676
BORINGS COMPLETED BY: ECS MIDWEST, LLC			
REPORT COMPLETED BY: ECS MIDWEST, LLC			
ALL COORDINATES REFERENCED TO WISCRS NAD 83(2011) OUTAGAMIE COUNTY			



STATE PROJECT NUMBER		
6506-05-71		
MATERIAL SYMBOLS		
ASPHALT	TOPSOIL	PEAT
CONCRETE	FILL	GRAVEL
SAND	CLAY	SILT
BOULDERS OR COBBLES	LIMESTONE	BEDROCK (UNKNOWN)
SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING

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

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

GROUND WATER ELEVATION

AT TIME OF DRILLING

END OF DRILLING

AFTER DRILLING

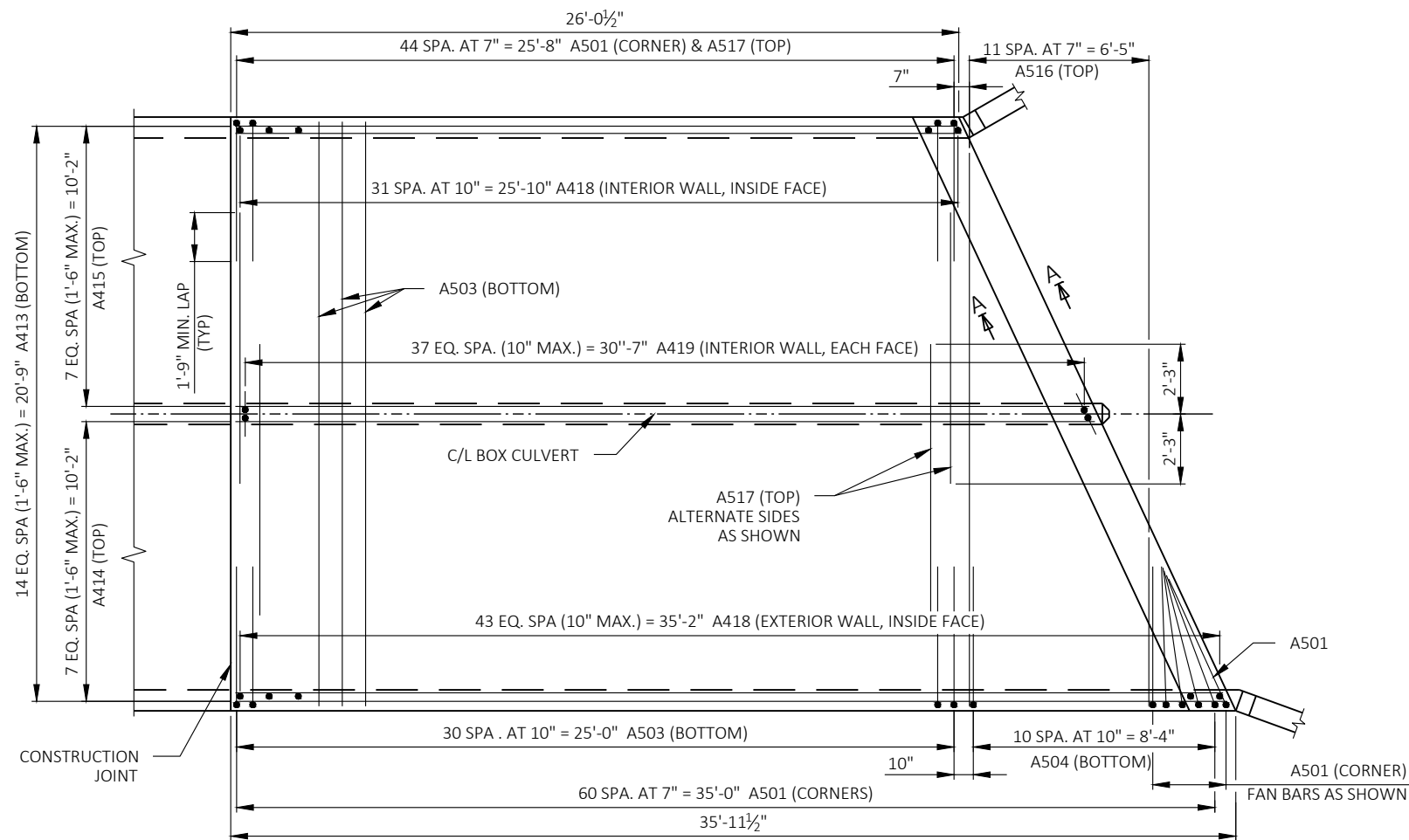
ABBREVIATIONS

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

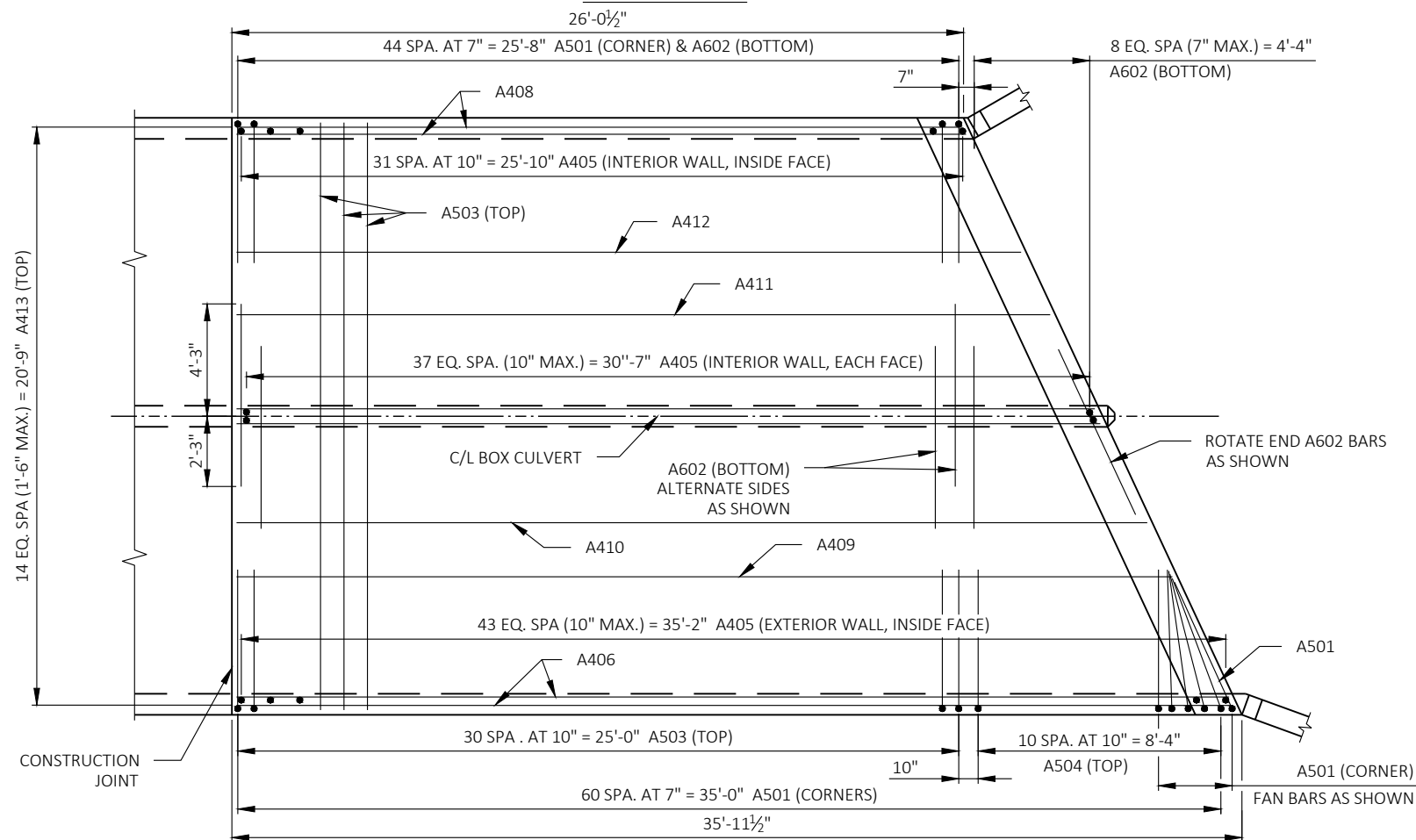
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

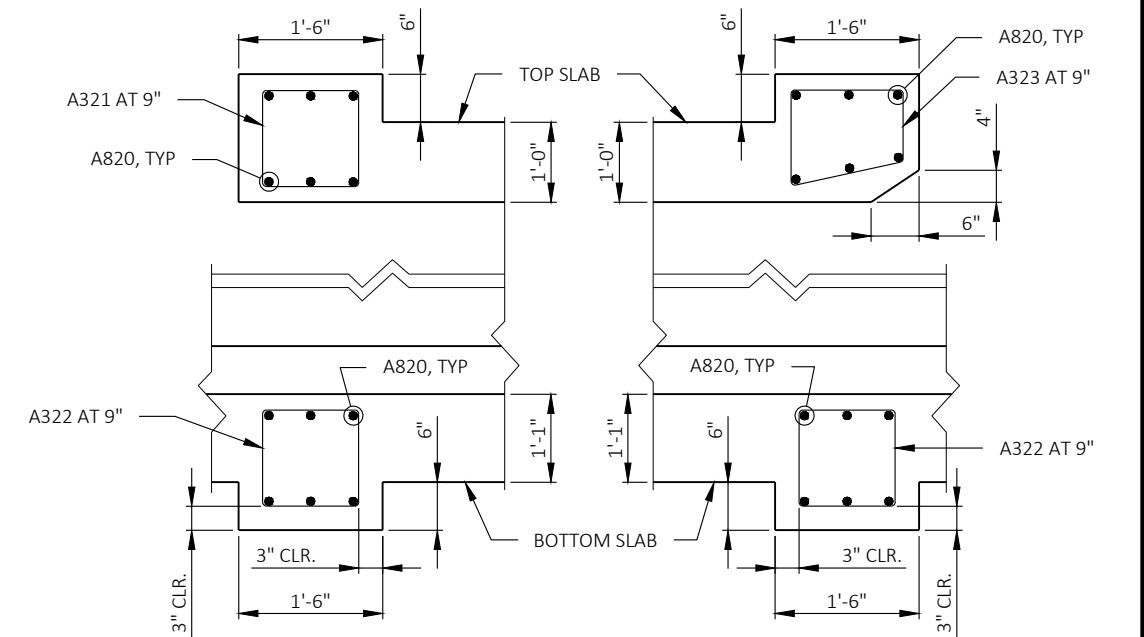
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-478			
DRAWN BY		TAV	PLANS CK'D. MJB
SUBSURFACE EXPLORATION		SHEET 3 OF 9	



TOP SLAB PLAN

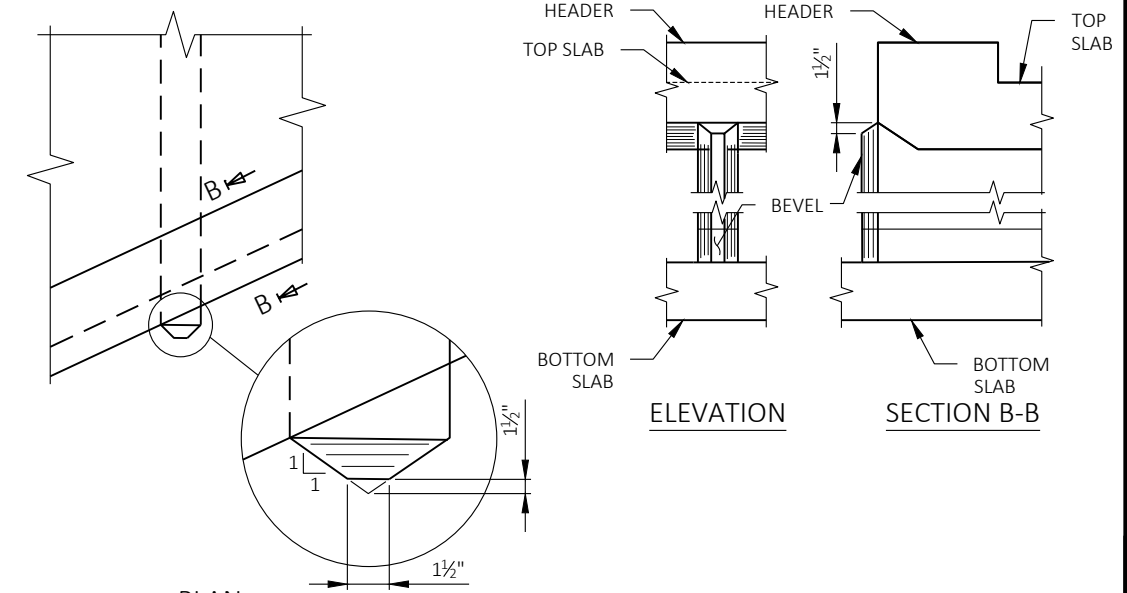


BOTTOM SLAB PLAN



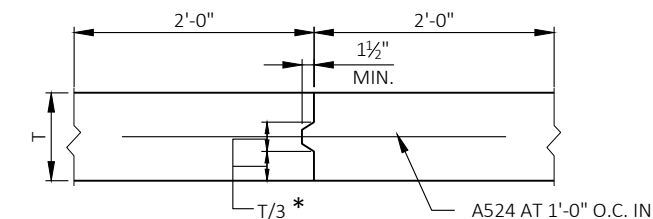
SECTION A- A AT OUTLET

SECTION A- A AT INLET



PLAN

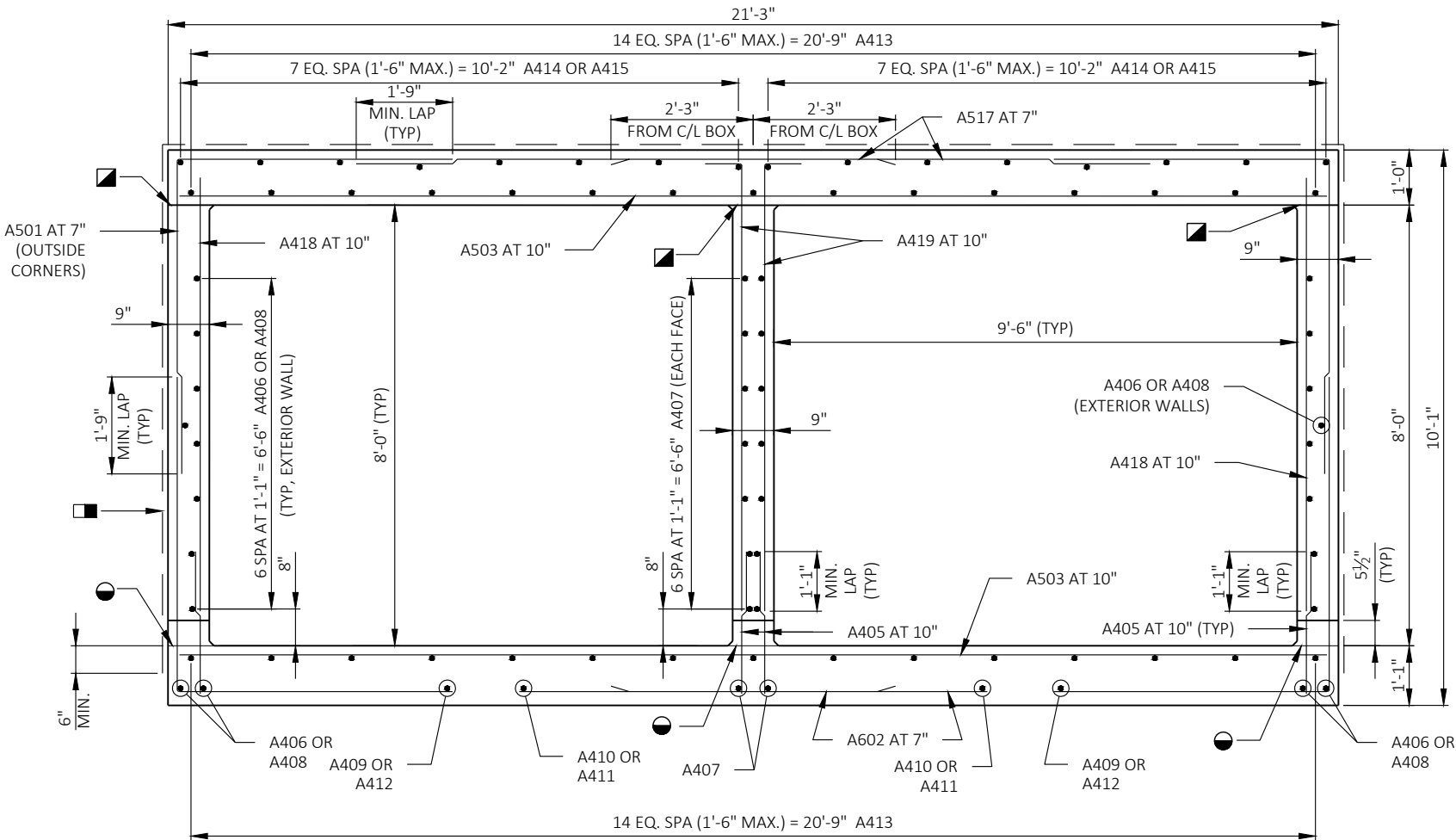
INLET NOSE CENTERWALL DETAILS



TYPICAL VERTICAL CONSTRUCTION JOINT

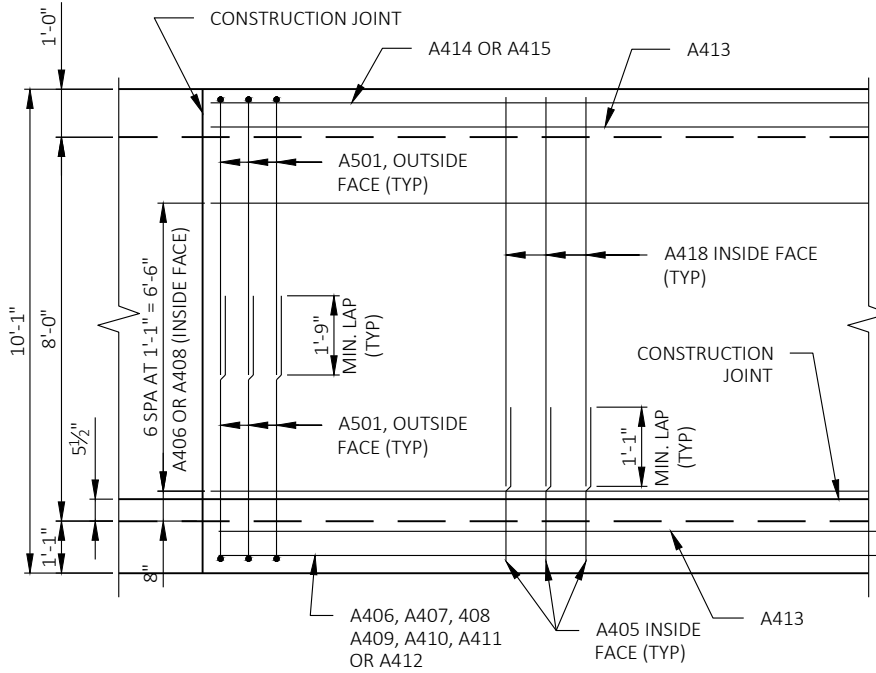
* IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-478			
DRAWN BY		MKG	PLANS CK'D. MJB
BOX CULVERT DETAILS (1 OF 2)		SHEET 4 OF 9	

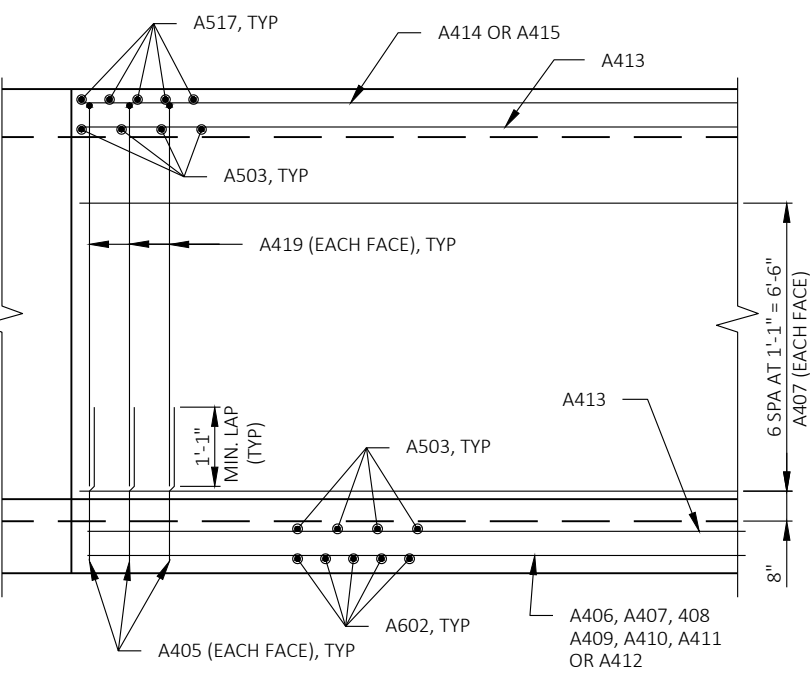


BOX CULVERT SECTION

- ALTERNATE CONSTRUCTION JOINT. OMIT 1" FILLET IF USED.
- OPTIONAL CONSTRUCTION JOINT. OMIT 1" FILLET IF USED.
- 18" MIN. WIDTH RUBBERIZED MEMBRANE WATERPROOFING (RMW) UP WALLS AT VERTICAL CONSTRUCTION JOINTS. EXTEND RMW 6" MIN. BELOW THE TOP OF THE BOTTOM SLAB.



BOX CULVERT WALL REINFORCEMENT ELEVATION
(SINGLE PANEL SHOWN, ALL PANEL REINFORCEMENT SIMILAR)



STATE PROJECT NUMBER	
6506-05-71	
COATED= 0 LBS. UNCOATED= 18050 LBS.	

BILL OF BARS
BOX CULVERT

MARK	NUMBER		LENGTH	BENT	BAR SERIES	LOCATION
	COATED	UNCOATED				
			FT - IN			
A501		428	10 - 9	X		BOX OUTSIDE WALL - CORNERS VERT
A602		108	6 - 6			BOX BOTTOM SLAB TRANS
A503		124	20 - 9			BOX BOTTOM & TOP SLAB TRANS
A504		44	11 - 9		X	BOX BOTTOM & TOP SLAB TRANS
A405		304	2 - 6			WALL DOWELS VERT
A406		20	35 - 3			BOX BOTTOM SLAB & WALL LONG
A407		32	30 - 6			BOX BOTTOM SLAB & WALL LONG
A408		20	25 - 10			BOX BOTTOM SLAB & WALL LONG
A409		2	33 - 3			BOX BOTTOM SLAB LONG
A410		2	32 - 5			BOX BOTTOM SLAB LONG
A411		2	28 - 11			BOX BOTTOM SLAB LONG
A412		2	27 - 11			BOX BOTTOM SLAB LONG
A413		60	30 - 8		X	BOX TOP & BOTTOM SLAB LONG
A414		16	33 - 1		X	BOX TOP SLAB LONG
A415		16	28 - 2		X	BOX TOP SLAB LONG
A516		24	12 - 11		X	BOX TOP SLAB TRANS
A517		90	9 - 4			BOX TOP SLAB TRANS
A418		152	8 - 4			EXTERIOR WALL VERT
A419		152	9 - 2	X		INTERIOR WALL VERT
A820		24	23 - 0			HEADER TRANS
A321		32	5 - 3	X		HEADER VERT
A322		64	4 - 11	X		HEADER VERT
A323		32	5 - 1	X		HEADER VERT
A524		60	4 - 0			CONSTRUCTION JOINT DOWELS HORIZ

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

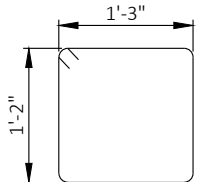
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

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

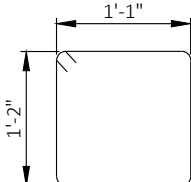
BAR SERIES TABLE ▲

MARK	NO. REQUIRED	LENGTH
A504	4 SERIES OF 11	1'-9" TO 17'-9"
A413	4 SERIES OF 15	25'-10" TO 35'-5"
A414	2 SERIES OF 8	30'-9" TO 35'-5"
A415	2 SERIES OF 8	25'-10" TO 30'-6"
A516	2 SERIES OF 12	6'-0" TO 19'-9"

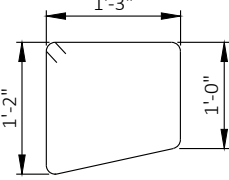
BUNDLE AND TAG EACH SERIES SEPARATELY.



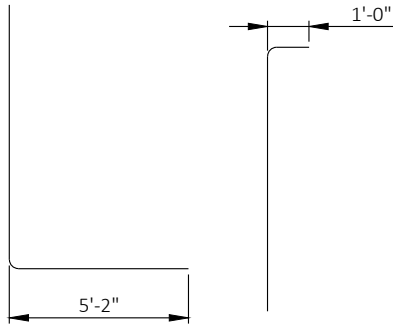
A321



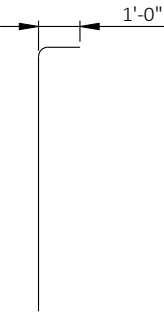
A322



A323

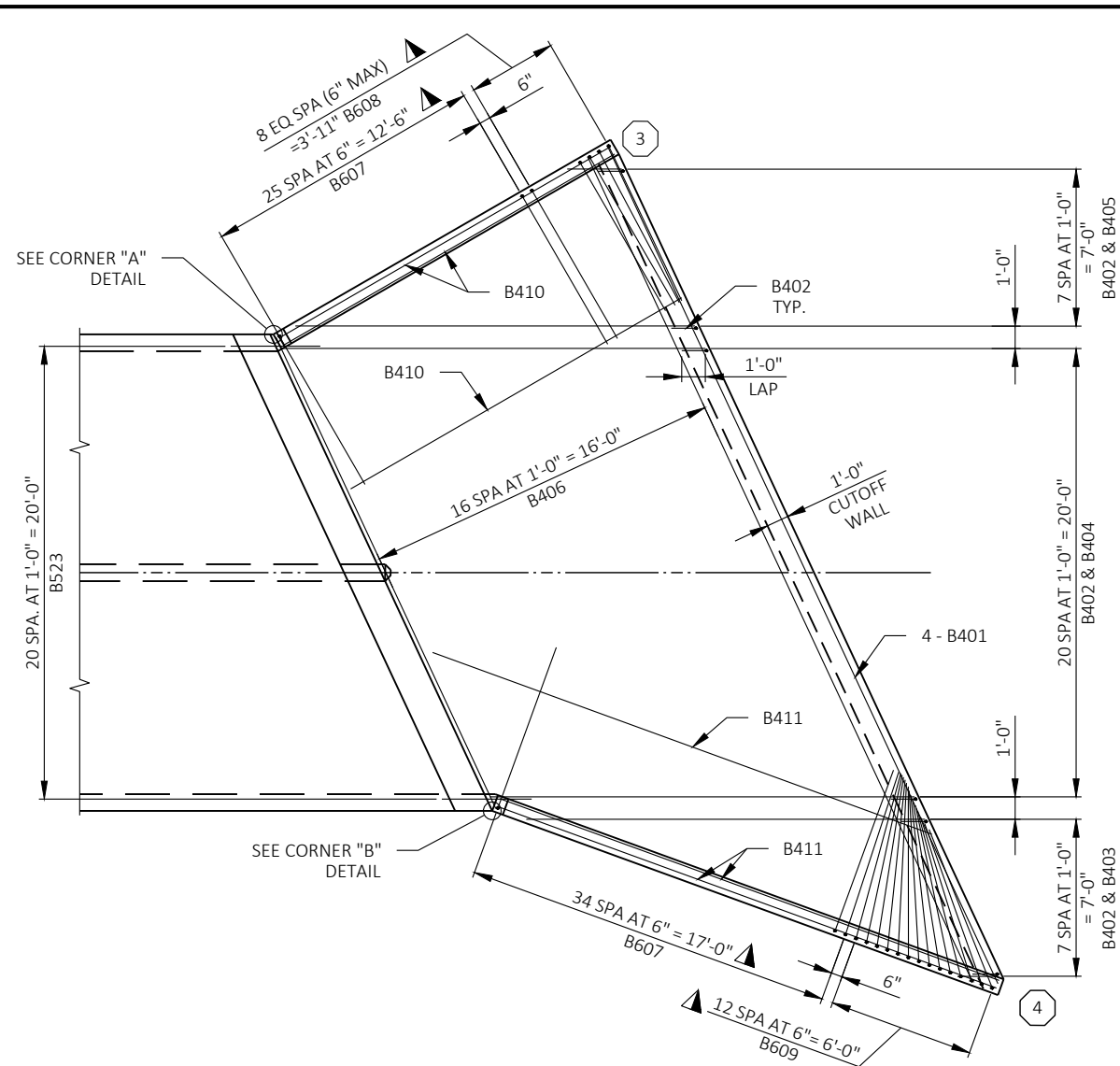


A501



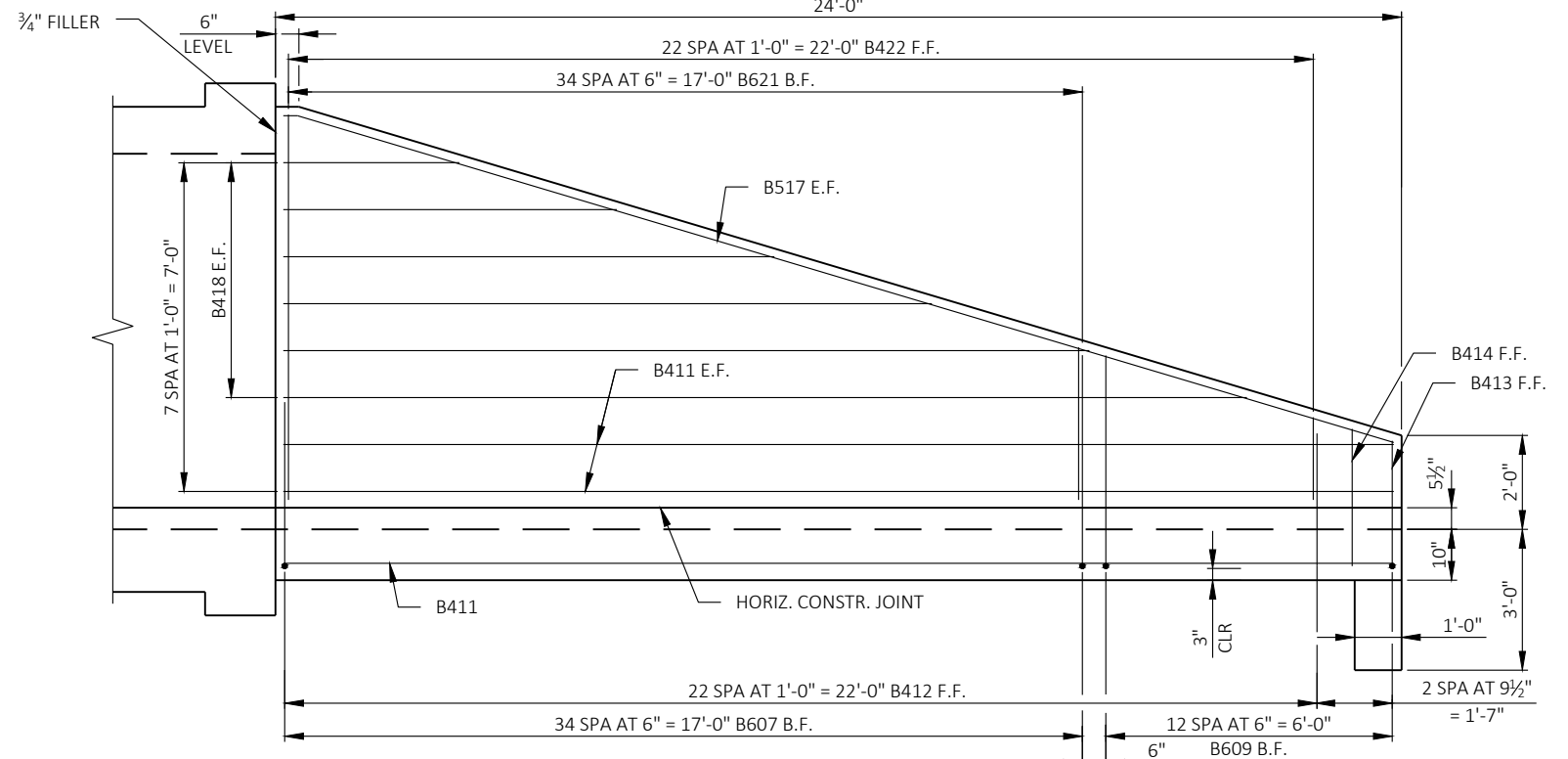
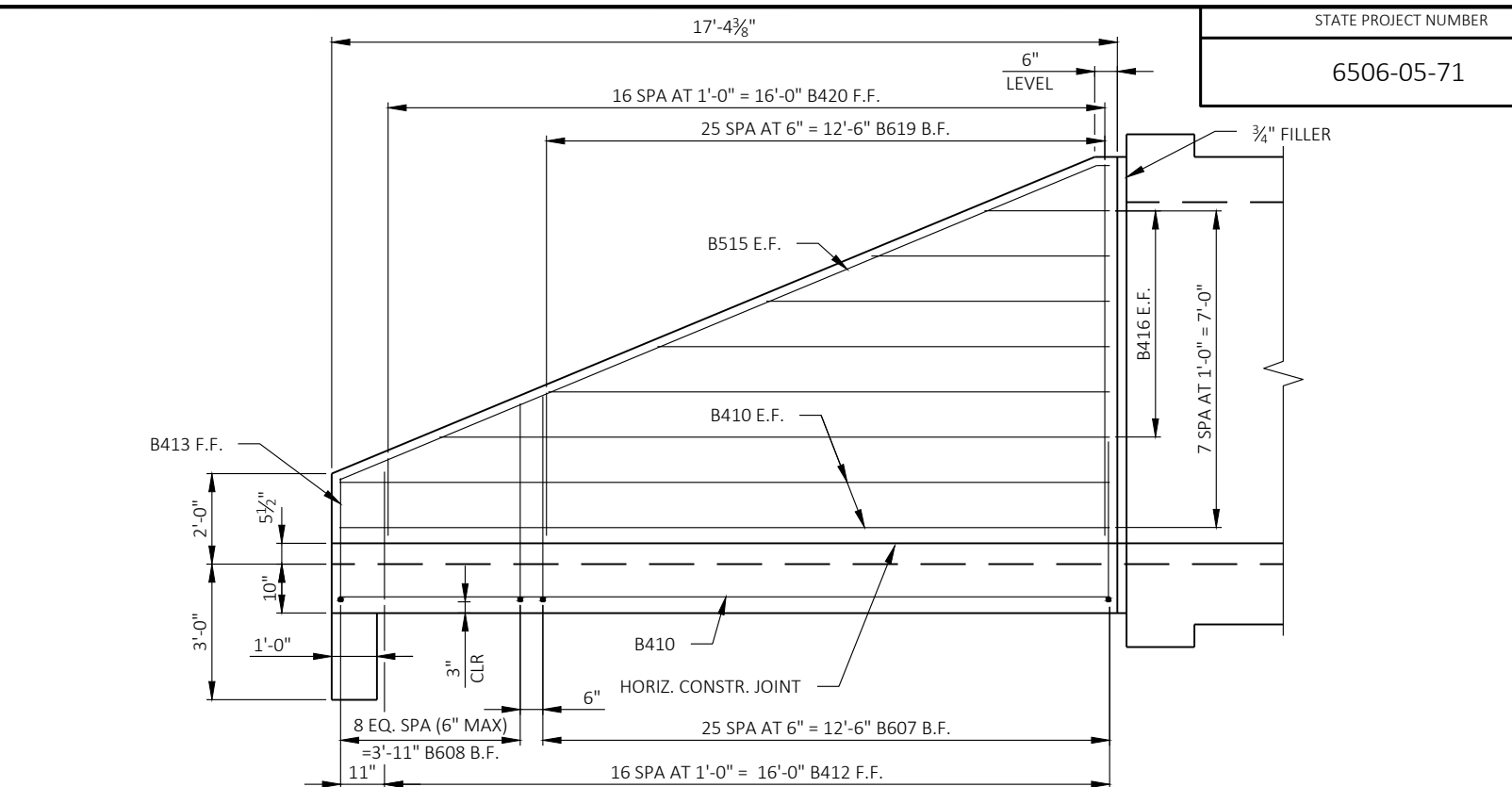
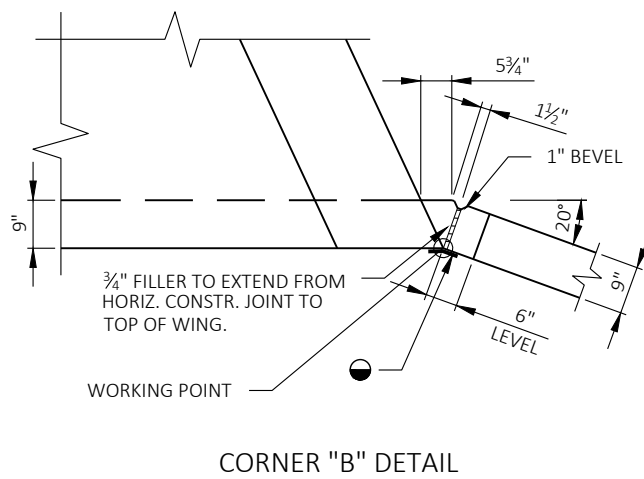
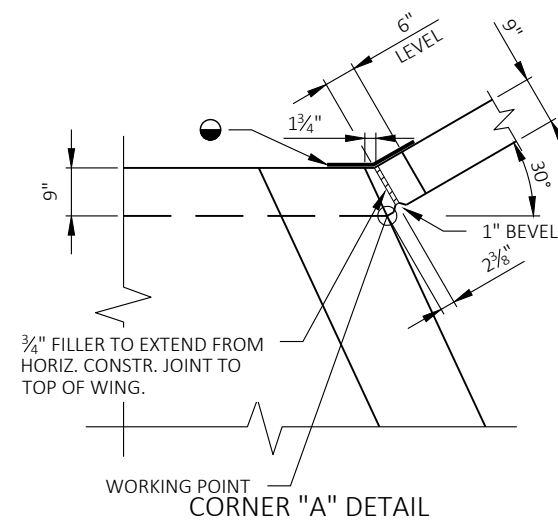
A419

NO.		DATE
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LEGEND

- X WINGWALL NUMBER
- 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM HORIZONTAL CONSTRUCTION JOINT TO TOP OF WALL (FLUSH WITH FACE OF CONCRETE).
- FAN BARS AS SHOWN
- B.F. - BACK FACE
- F.F. - FRONT FACE
- E.F. - EACH FACE



WINGWALL 4 ELEVATION (LOOKING AT BACKFACE)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-478			
DRAWN BY		TAV	PLANS CK'D. MJB
INLET APRON DETAILS (1 OF 2)		SHEET 6 OF 9	

BILL OF BARS
INLET APRON

MARK	NUMBER		LENGTH		BENT	BAR SERIES	LOCATION
	COATED	UNCOATED					
			FT	IN			
B401		4	41	- 2			CUTOFF WALL
B402		37	3	- 5	X		CUTOFF WALL
B403		8	9	- 9		X	APRON
B404		21	18	- 11			APRON
B405		8	10	- 1		X	APRON
B406		17	31	- 10		X	APRON
B607	61		11	- 6	X		WING BF DOWELS
B608	9		10	- 5	X	X	WING 3 BF DOWELS
B609	13		10	- 6	X	X	WING 4 BF DOWELS
B410	7		17	- 0			WING 3
B411	7		23	- 8			WING 4
B412	40		2	- 8			WING FF DOWELS
B413	2		2	- 5			WING FF END DOWELS
B414	1		2	- 8			WING 4 FF DOWEL
B515	2		18	- 2	X		WING 3 TOP
B416	12		8	- 9		X	WING 3
B517	2		24	- 5	X		WING 4 TOP
B418	12		12	- 2		X	WING 4
B619	26		5	- 8		X	WING 3 BF
B420	17		4	- 11		X	WING 3 FF
B621	35		5	- 8		X	WING 4 BF
B422	23		5	- 0		X	WING 4 FF
B523	21		4	- 0			APRON DOWELS

BAR DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BARS.

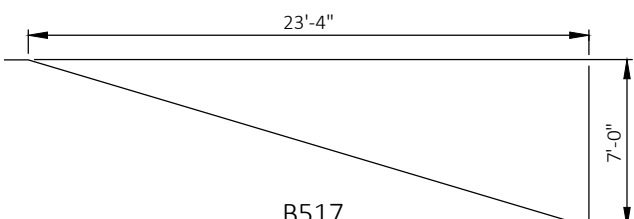
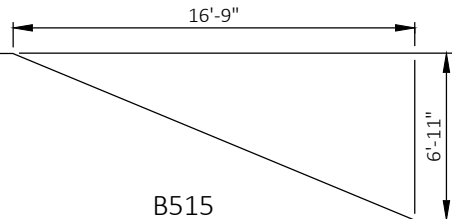
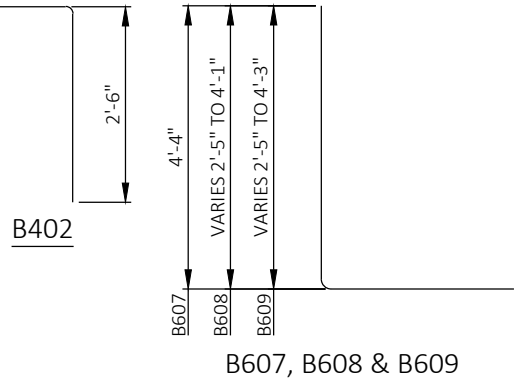
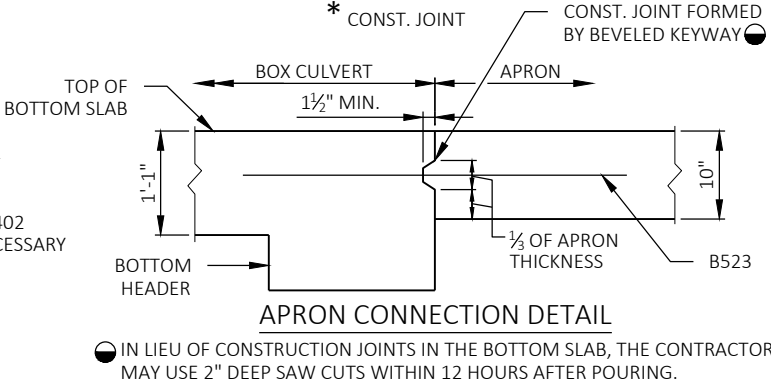
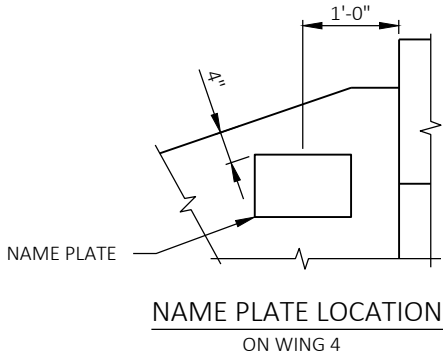
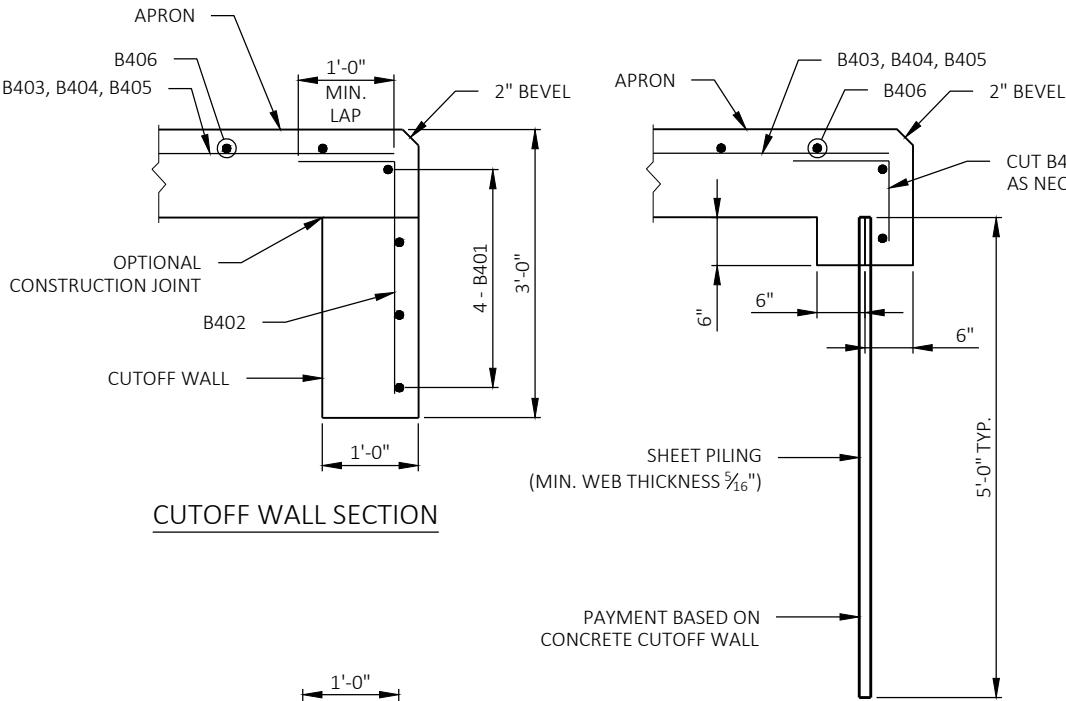
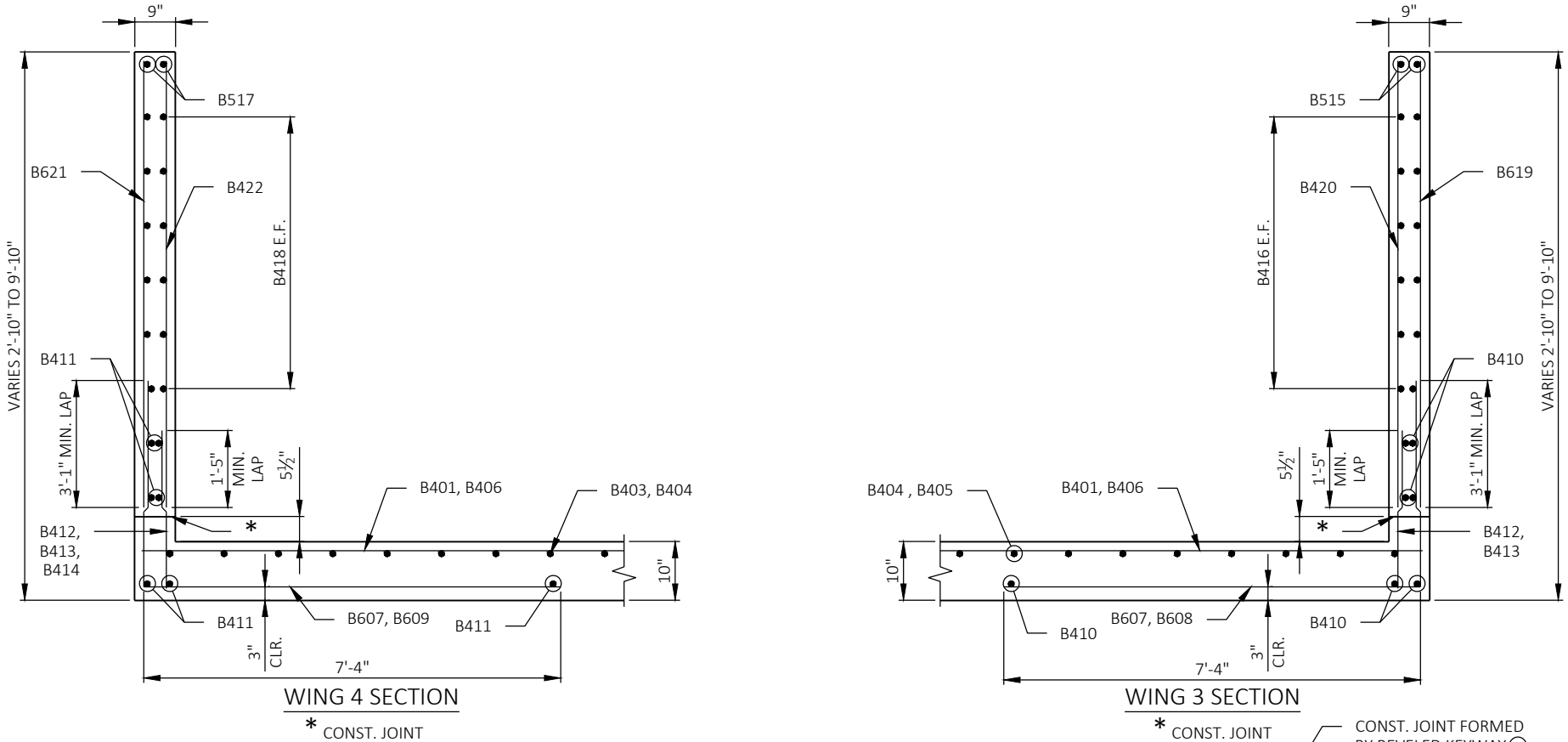
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

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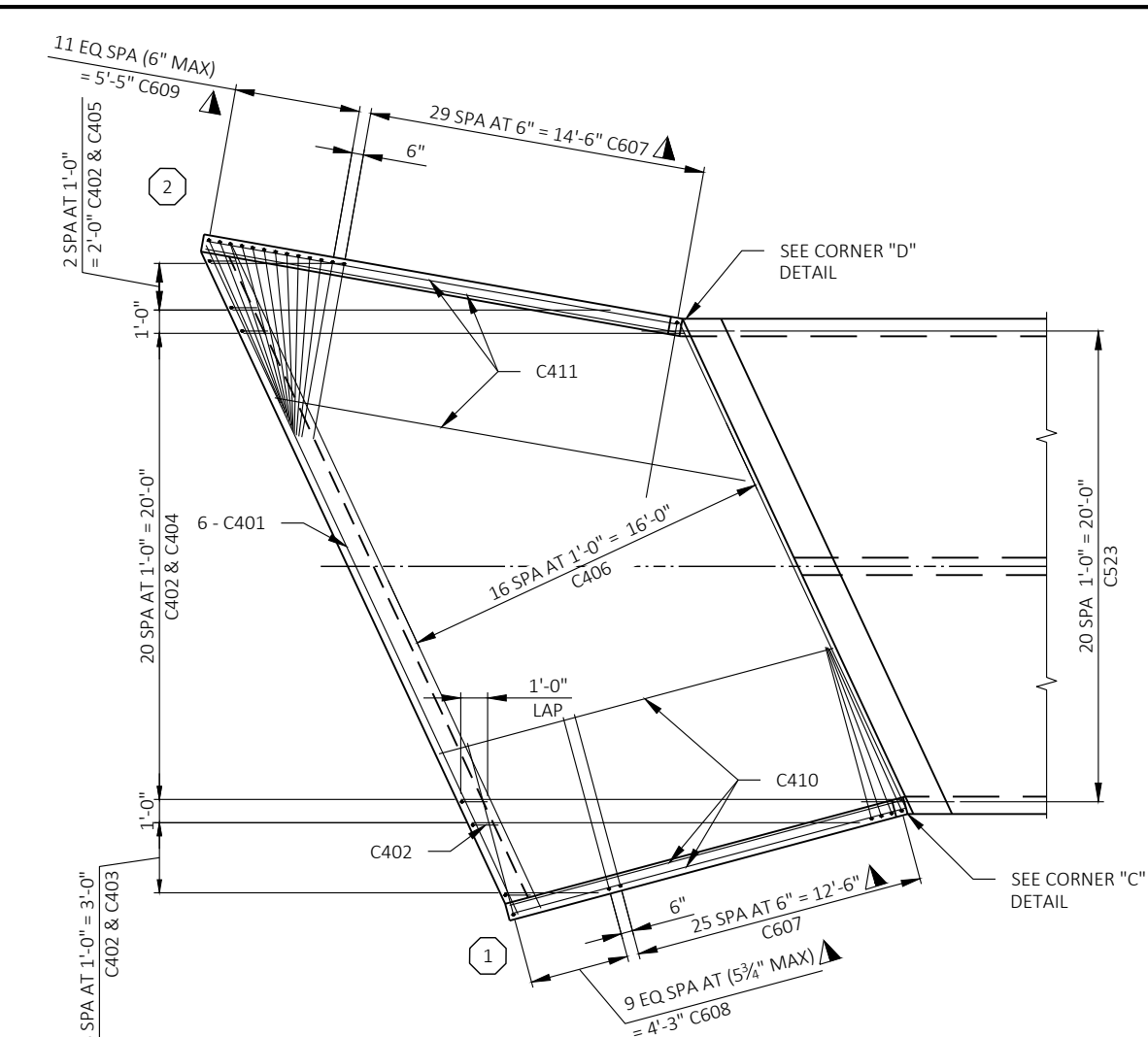
BAR SERIES TABLE ▲

MARK	NO. REQUIRED	LENGTH
B403	1 SERIES OF 8	1'-9" TO 17'-9"
B405	1 SERIES OF 8	2'-5" TO 17'-9"
B406	1 SERIES OF 17	23'-2" TO 40'-6"
B608	1 SERIES OF 9	9'-7" TO 11'-3"
B609	1 SERIES OF 13	9'-7" TO 11'-5"
B416	2 SERIES OF 6	2'-9" TO 14'-9"
B418	2 SERIES OF 6	3'-9" TO 20'-6"
B619	1 SERIES OF 26	3'-1" TO 8'-2"
B420	1 SERIES OF 17	1'-8" TO 8'-2"
B621	1 SERIES OF 35	3'-2" TO 8'-2"
B422	1 SERIES OF 23	1'-9" TO 8'-2"

BUNDLE AND TAG EACH SERIES SEPARATELY.



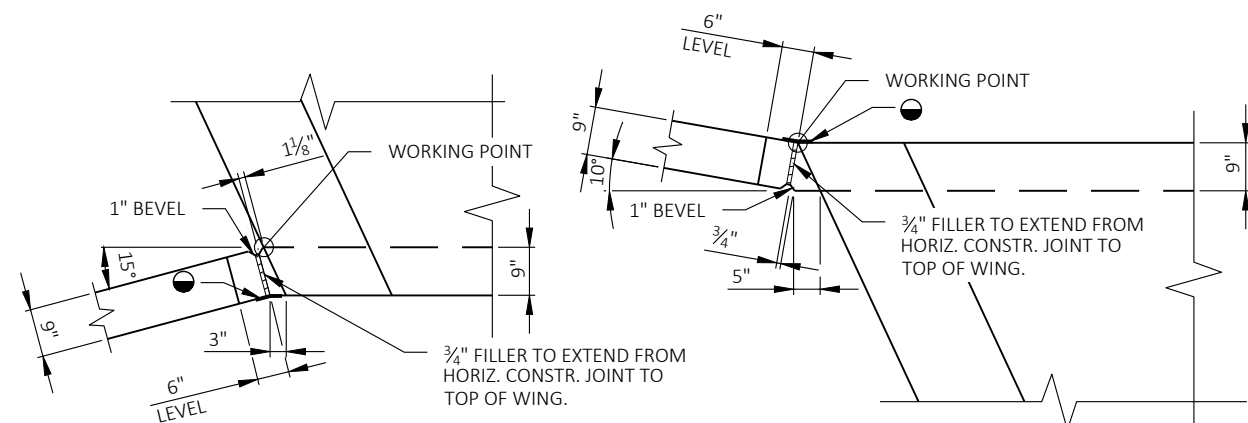
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-478			
	DRAWN BY	MKG	PLANS CK'D. MJB
INLET APRON DETAILS (2 OF 2)			SHEET 7 OF 9



LEGEND

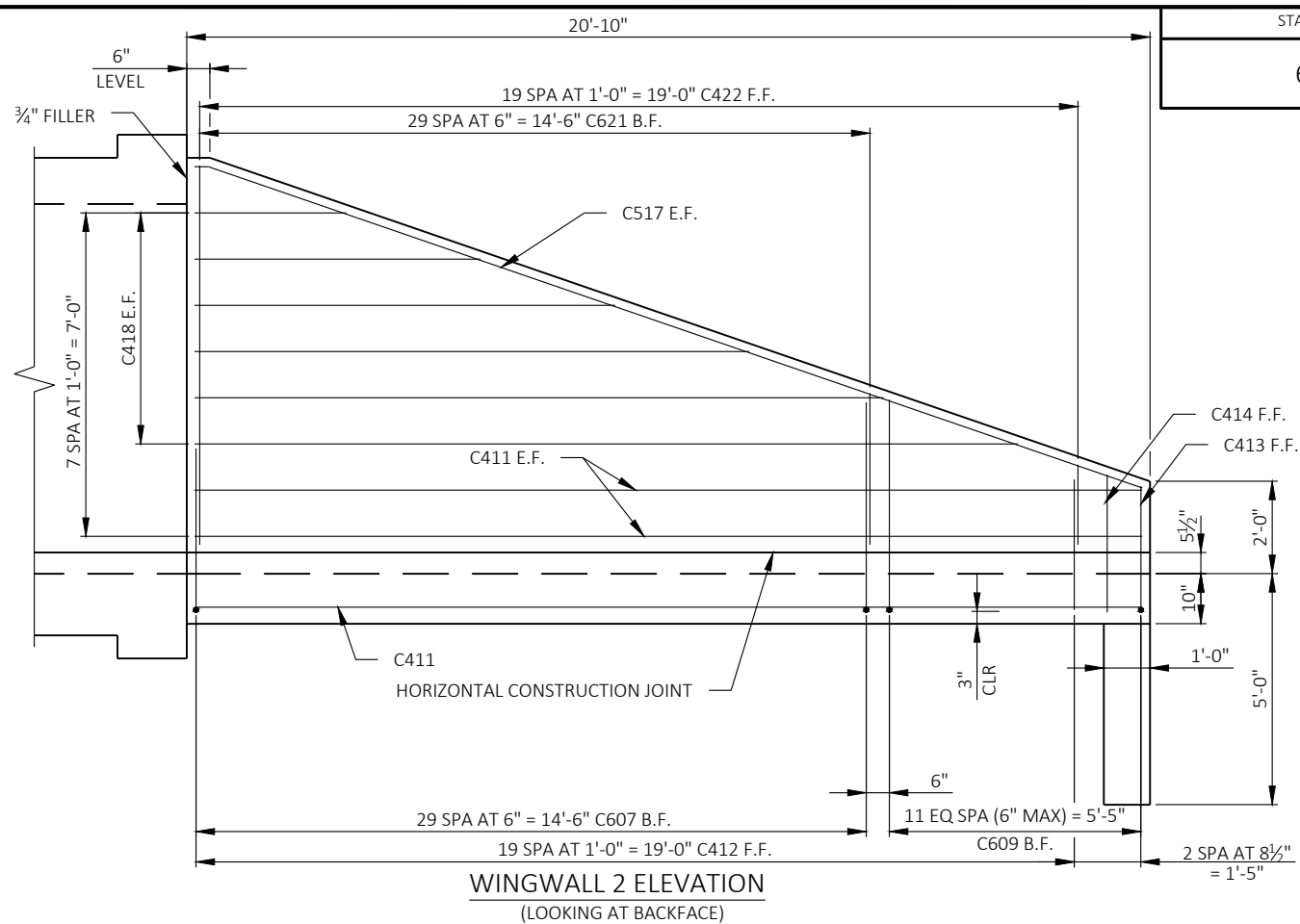
- (X) WINGWALL NUMBER
- 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM HORIZONTAL CONSTRUCTION JOINT TO TOP OF WALL (FLUSH WITH FACE OF CONCRETE).
- ▲ FAN BARS AS SHOWN
- B.F. - BACK FACE
- F.F. - FRONT FACE
- E.F. - EACH FACE

OUTLET APRON PLAN

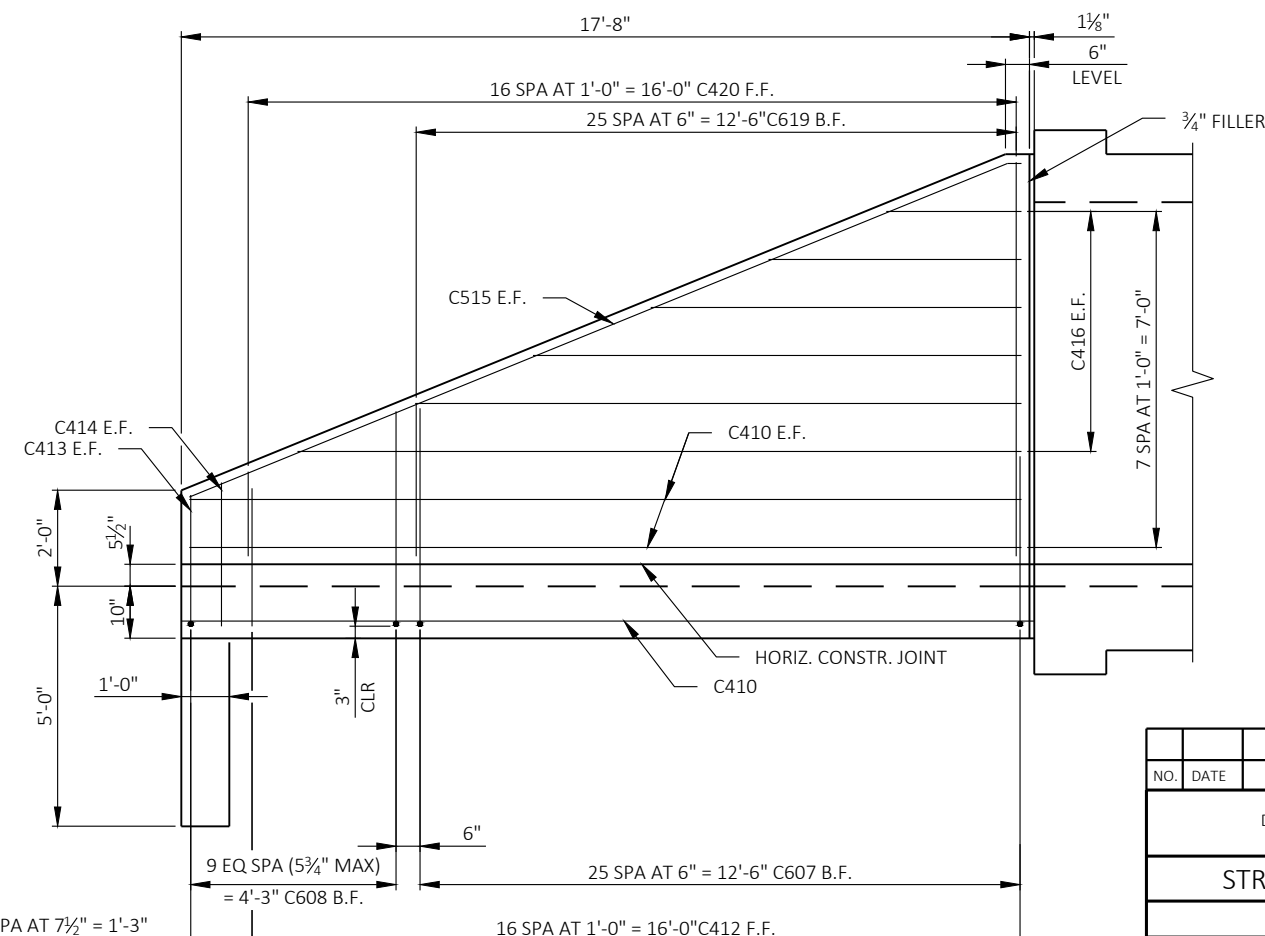


CORNER "C" DETAIL

CORNER "D" DETAIL



WINGWALL 2 ELEVATION
(LOOKING AT BACKFACE)



WINGWALL 1 ELEVATION
(LOOKING AT BACKFACE)

STATE PROJECT NUMBER
6506-05-71

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-478			
DRAWN BY	TAV	PLANS CK'D.	MJB
OUTLET APRON DETAILS (1 OF 2)		SHEET 8 OF 9	

COATED= 2500 LBS.
UNCOATED= 860 LBS.

MARK	NUMBER		LENGTH	BENT	BAR SERIES	LOCATION	
	COATED	UNCOATED					
			FT	IN			
C401		6	31 - 5			CUTOFF WALL	HORIZ
C402		28	5 - 5	X		CUTOFF WALL	VERT
C403		4	10 - 4		X	APRON	LONG
C404		21	18 - 11			APRON	LONG
C405		3	11 - 0		X	APRON	LONG
C406		17	27 - 3		X	APRON	TRANS
C607	56		11 - 6	X		WING BF DOWELS	VERT
C608	10		10 - 5	X	X	WING 1 BF DOWELS	VERT
C609	12		10 - 6	X	X	WING 2 BF DOWELS	VERT
C410	7		17 - 4			WING 1	HORIZ
C411	7		20 - 6			WING 2	HORIZ
C412	37		2 - 8			WING FF DOWELS	VERT
C413	2		2 - 5			WING FF END DOWELS	VERT
C414	2		2 - 9			WING FF END DOWELS	VERT
C515	2		18 - 7	X		WING 1 TOP	HORIZ
C416	12		8 - 11		X	WING 1	HORIZ
C517	2		21 - 5	X		WING 2 TOP	HORIZ
C418	12		10 - 6		X	WING 2	HORIZ
C619	26		5 - 8		X	WING 1 BF	VERT
C420	17		5 - 0		X	WING 1 FF	VERT
C621	30		5 - 9		X	WING 2 BF	VERT
C422	20		4 - 11		X	WING 2 FF	VERT
C523	21		4 - 0			APRON DOWELS	HORIZ

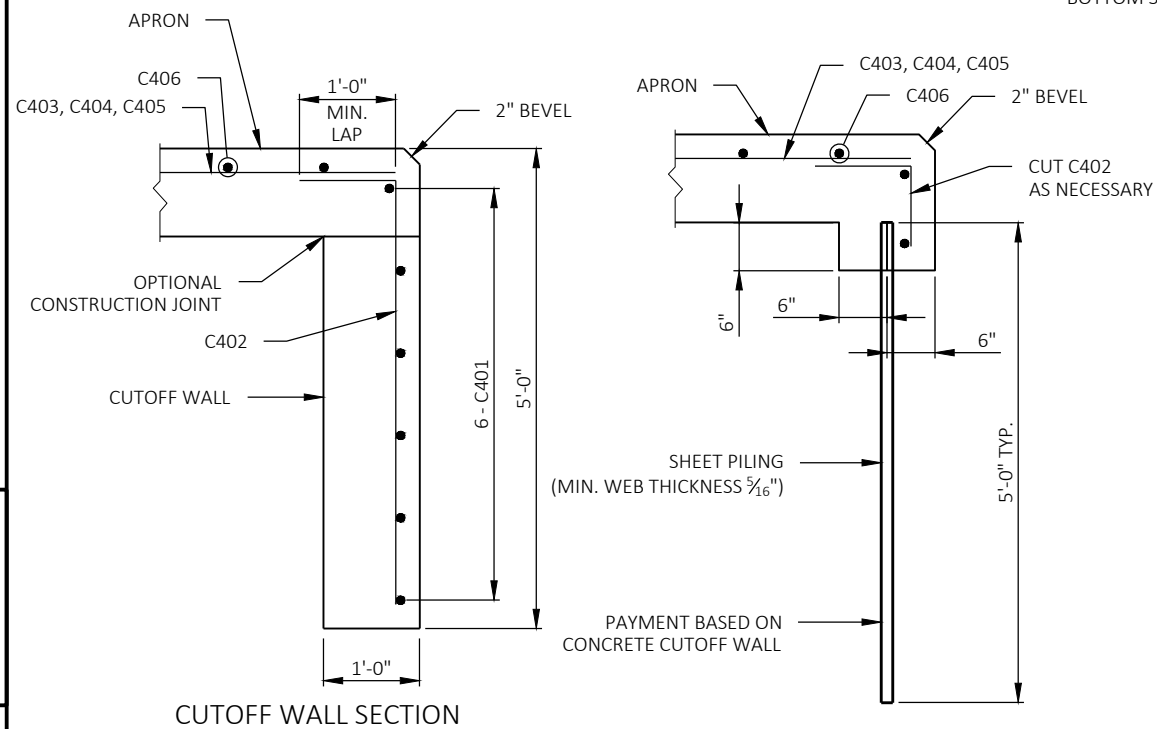
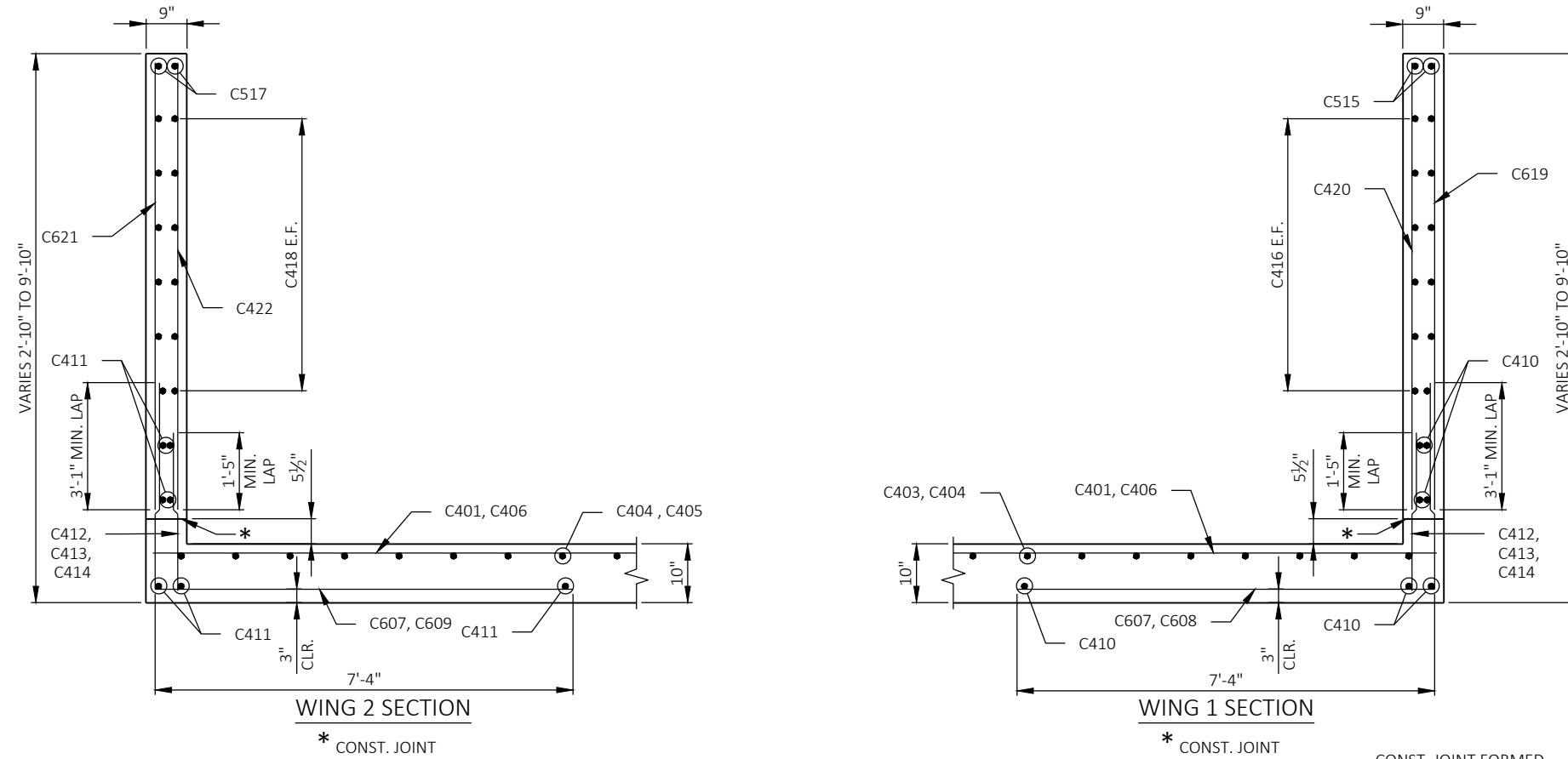
THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.

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

MARK	NO. REQUIRED	LENGTH
C403	1 SERIES OF 4	4'-0" TO 16'-7"
C405	1 SERIES OF 3	5'-9" TO 16'-2"
C406	1 SERIES OF 17	23'-1" TO 31'-5"
C608	1 SERIES OF 10	9'-7" TO 11'-4"
C609	1 SERIES OF 12	9'-7" TO 11'-5"
C416	2 SERIES OF 6	2'-9" TO 15'-0"
C418	2 SERIES OF 6	3'-3" TO 17'-9"
C619	1 SERIES OF 26	3'-2" TO 8'-2"
C420	1 SERIES OF 17	1'-9" TO 8'-2"
C621	1 SERIES OF 30	3'-3" TO 8'-2"
C422	1 SERIES OF 20	1'-8" TO 8'-2"

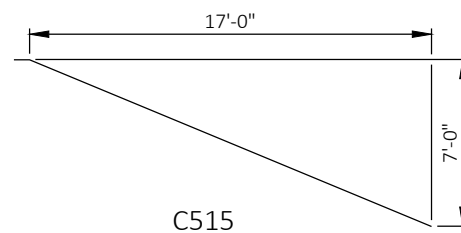
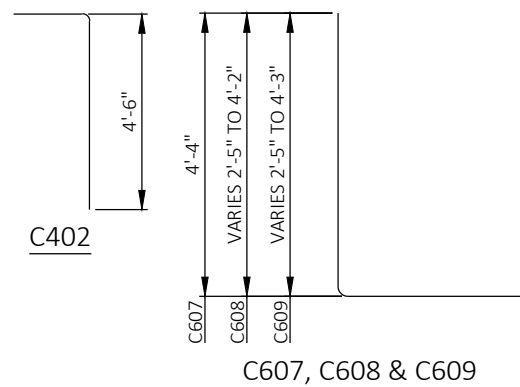
A right triangle is shown with a horizontal base of 20'-2" and a vertical height of 7'-0". The hypotenuse is labeled C517.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-44-478			
		DRAWN BY	PLANS CK'D. MJB
OUTLET APRON DETAILS (2 OF 2)		MKG	SHEET 9 OF 9



APRON CONNECTION DETAIL

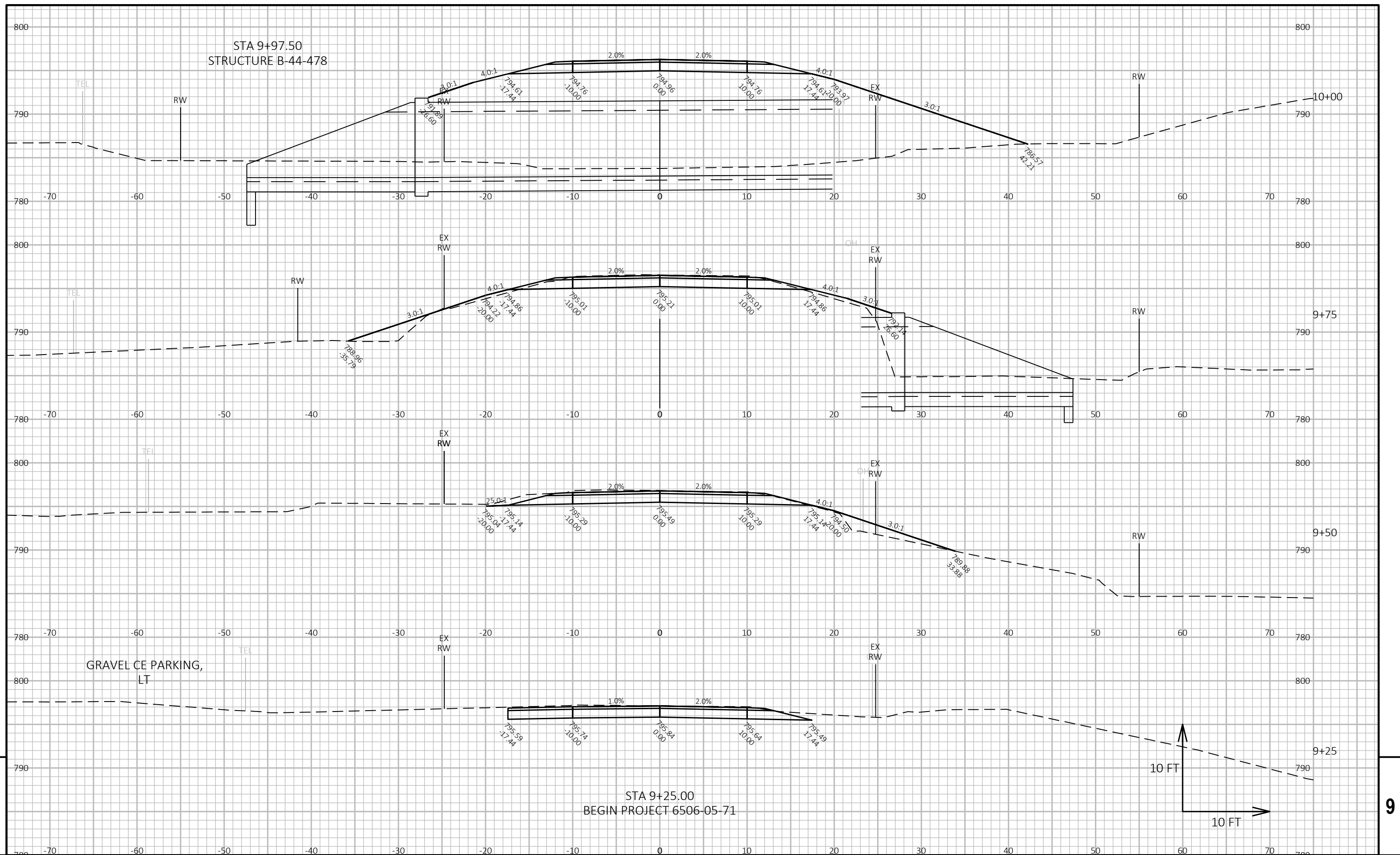
● IN LIEU OF CONSTRUCTION JOINTS IN THE BOTTOM SLAB, THE CONTRACTOR MAY USE 2" DEEP SAW CUTS WITHIN 12 HOURS AFTER POURING.

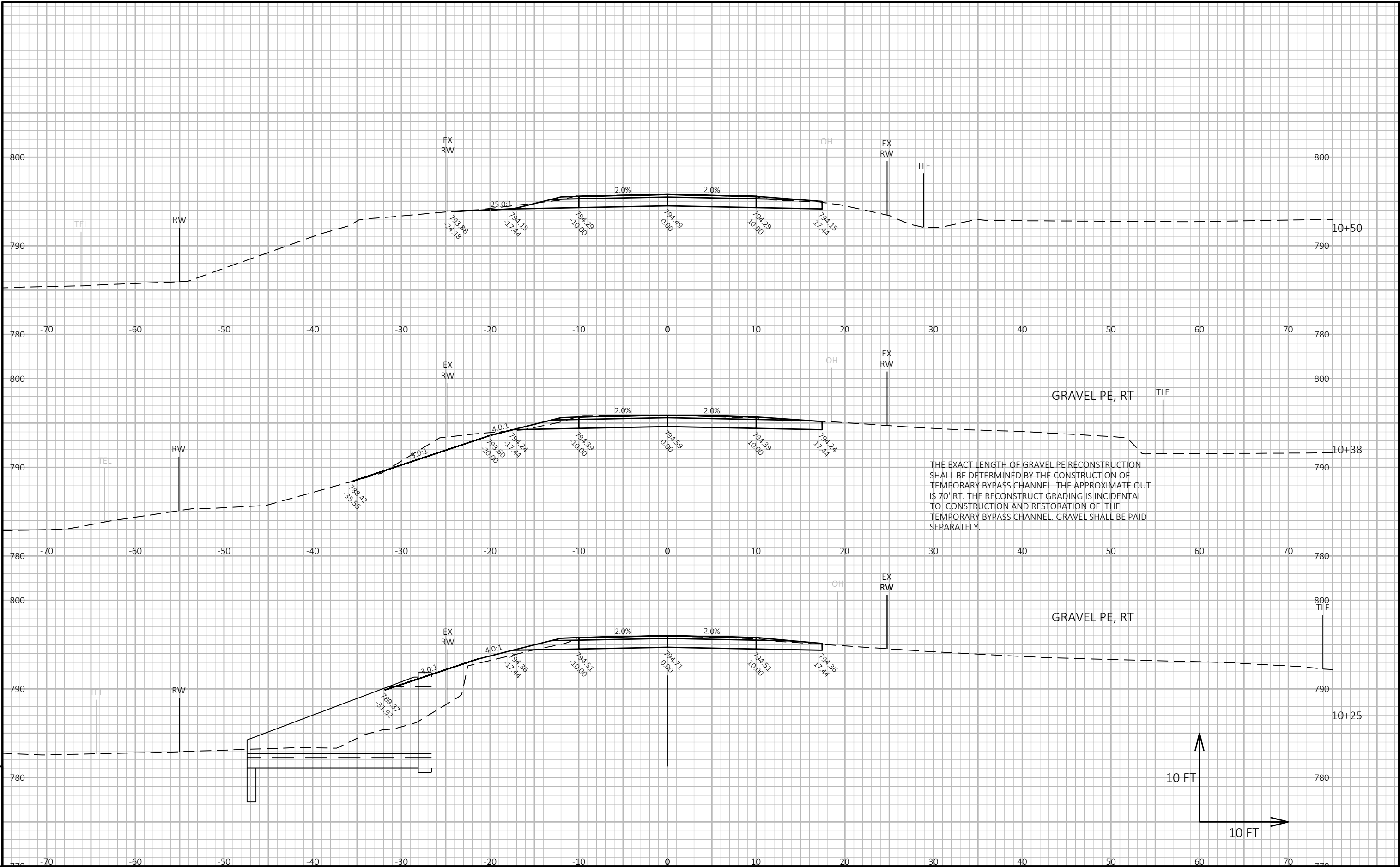


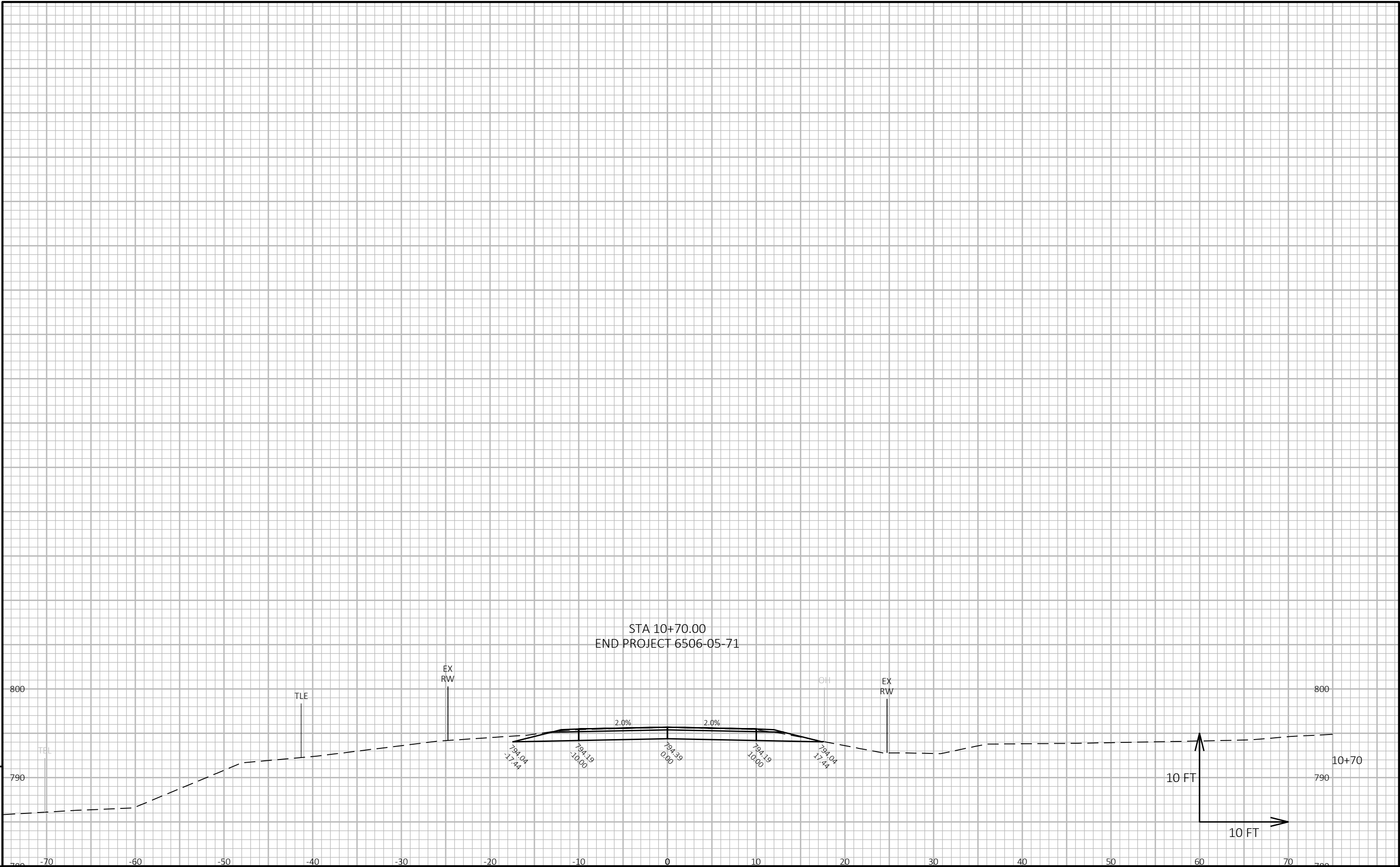
STATION	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
9+25	52	10	0	0	0	0	0	0	0
9+50	43	10	10	44	9	5	44	6	29
9+75	18	10	11	28	9	10	72	18	35
10+00	0	0	0	8	5	5	81	25	33
10+25	18	10	0	9	5	0	89	25	37
10+38	48	10	0	16	5	0	105	25	48
10+50	39	10	0	19	4	0	124	25	62
10+70	38	10	0	29	7	0	153	25	84
Column Total				153	44	20			

Notes
1 - Cut (Salvaged/Unused Pavement Material is Included)
2 - Salvaged/Unusable Pavement Material (This does not show up in the cross sections)
3 - Fill (Does not included Unuseable Pavement volume)
4 - The Mass Ordinate + or - quantity calculated. Plus quantity indicates as excess of material. Minus indicates a shortage of material.

No Marsh or EBS is anticipated.







PROJECT NO: 6506-05-71	HWY: OLD HWY 47	COUNTY: OUTAGAMIE	CROSS SECTIONS: OLD HWY 47	SHEET E
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Notes



Wisconsin Department of Transportation

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through innovation and exceptional service.

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