NEL

APR 2014

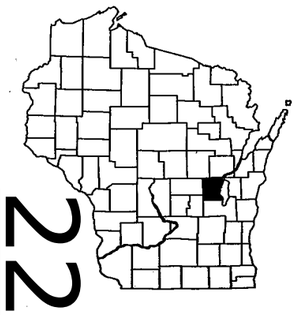
PROJECT ID: 4617-07-71

COUNTY: WINNEBAGO

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 (Includes Erosion Control Plans)
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 = 36



22

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DESIGN DESIGNATION

A.A.D.T. (2014)	=	180
A.A.D.T. (2034)	=	330
D.H.V. (2034)	=	45
D.D.	=	62/38
T. -----	=	5.1
DESIGN SPEED	=	55 MPH
ESALS	=	----------

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 (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE

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

UTILITIES

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T BLACK WOLF, BLACK WOLF AVE

(WILLOW HARBOR CREEK & APPROACHES)
LOCAL STREET
WINNEBAGO COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4617-07-71	WISC 2014111	1
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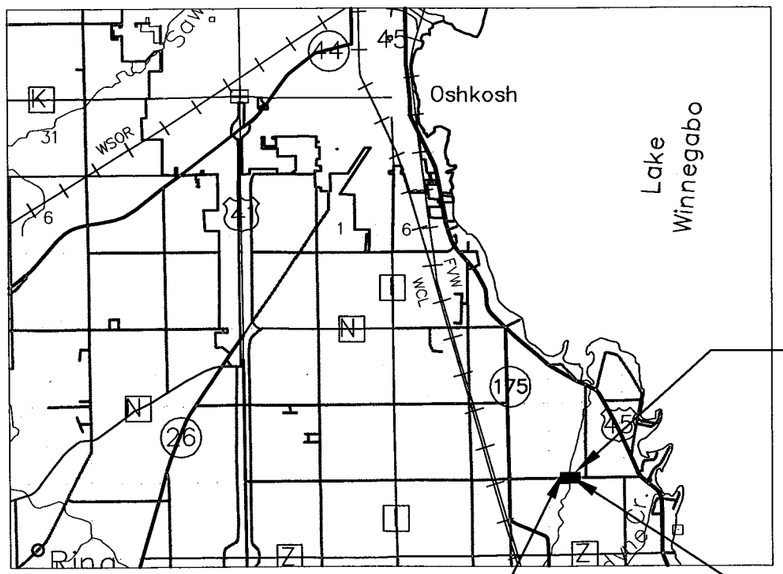
STATE PROJECT NUMBER
4617-07-71



END PROJECT
STA. 53+85.00
N: 438576.545
E: 803722.280

STRUCTURE B-70-0317

BEGIN PROJECT
STA. 50+75.00
N: 438577.920
E: 803412.287

LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.059 MI.

-"COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), WINNEBAGO COUNTY."

ACCEPTED FOR

TOWN of BLACK WOLF

11-21-13 (Date) TOWN CHAIRMAN (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

WISCONSIN JOHN C. BAINTER, JR. E-34975 SHEBOYGAN WI PROFESSIONAL ENGINEER

11/19/13 (Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	TerraTec
Designer	Donohue & Associates
Management Consultant	SEH
C.O. Examiner	

APPROVED FOR THE DEPARTMENT
DATE: 11/26/13 (Management Consultant Signature)
SEH-NE LPMC

E

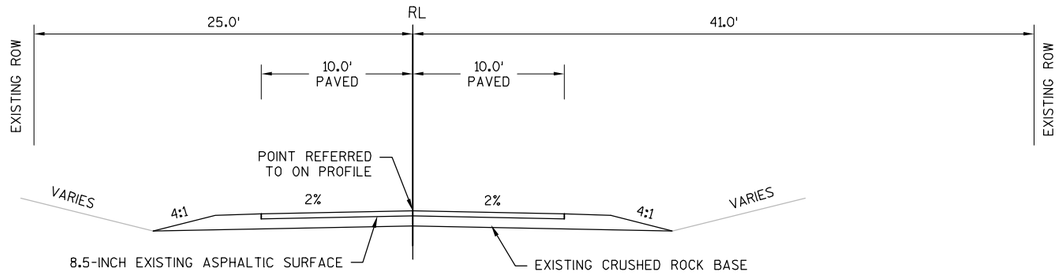
FILE NAME : L:\PROJECTS\12297\DWG\010101_TI.DWG

PLOT DATE : 2/3/2014 2:03 PM

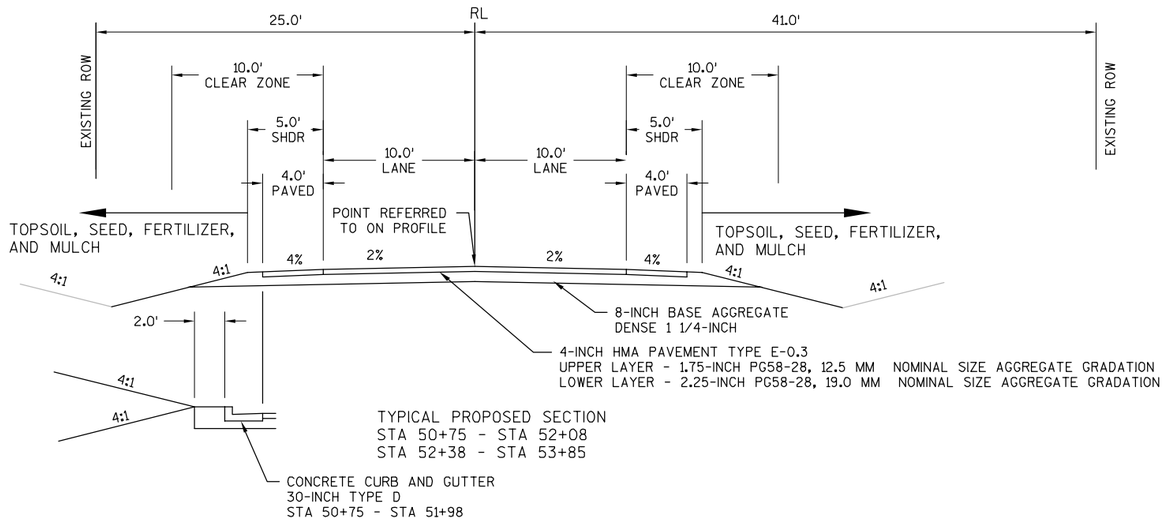
PLOT BY : MOYER, TIM

PLOT NAME : ----------

WISDOT/CADDS SHEET 10



TYPICAL EXISTING SECTION



TYPICAL PROPOSED SECTION
STA 50+75 - STA 52+08
STA 52+38 - STA 53+85

GENERAL NOTES

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY ARE TO BE FERTILIZED, SEEDED AND COVERED AS DIRECTED BY THE ENGINEER.

EROSION CONTROL ITEMS TO BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

NO TREES (AND/OR SHRUBS) ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

CUT VOLUMES SHOWN ON THE EARTHWORK SUMMARY DO NOT INCLUDE QUANTITY GENERATED FROM THE ITEM "EXCAVATION FOR STRUCTURES, BRIDGES" AND THE EXCAVATION REQUIRED TO PLACE THE ITEM "RIPRAP HEAVY".

FILL VOLUMES SHOWN ON THE EARTHWORK SUMMARY DO NOT INCLUDE QUANTITY REQUIRED TO PLACE THE ITEM "BACKFILL STRUCTURE".

WETLANDS EXIST IN THE PROJECT AREA, EQUIPMENT SHALL NOT BE OPERATED OUTSIDE THE SLOPE INTERCEPTS WHERE THERE ARE WETLANDS.

THE WISCONSIN DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR A MONUMENT WHICH SHALL BE SET IN THE STRUCTURE AS DESIGNATED BY THE ENGINEER.

ELEVATIONS REFERENCED ON THIS PLAN ARE BASED ON NGS MONUMENT PID#DH5555 (NAVD 88)

DNR

JAY SCHIEFELBEIN
DNR NORTHEAST REGIONAL HEADQUARTERS
2984 SHAWANO AVE,
GREEN BAY, WI 54313
(920) 360-3784
E-MAIL: JEREMIAH.SCHIEFELBEIN@WISCONSIN.GOV

TOWN OF BLACK WOLF

ROBERT KELLER
380 E. BLACK WOLF AVE
OSHKOSH, WI 54902
(920) 379-0717
E-MAIL: ROB@TOWNOFBLACKWOLF.COM

WINNEBAGO COUNTY

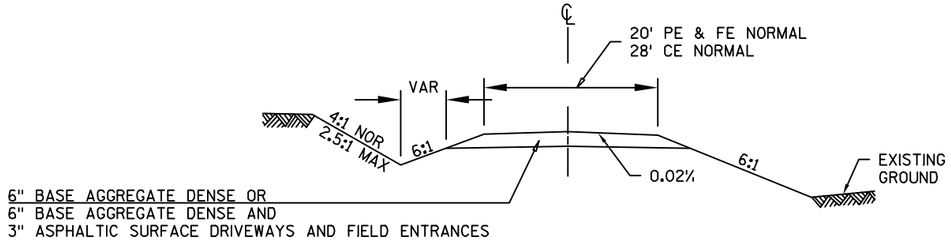
ERNEST WINTERS
WINNEBAGO COUNTY HIGHWAY COMMISSIONER
901 W. CTH Y
OSHKOSH, WI 54903-2765
(920) 232-1750 (OFFICE)
E-MAIL: EWINTERS@CO.WINNEBAGO.WI.US

UTILITIES

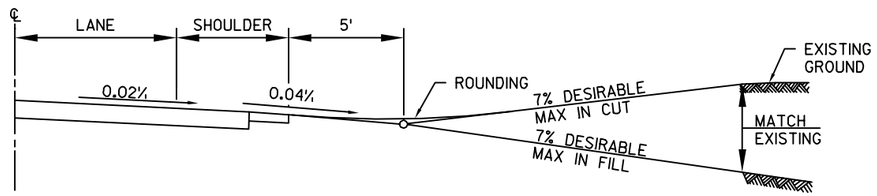
UTILITY: TELEPHONE
AT&T
STEVE WINTER
205 S JEFFERSON ST
GREEN BAY, WI 54301
920-433-4200
SW2793@ATT.COM

UTILITY: GAS
WISCONSIN PUBLIC SERVICE
PAUL SPANGLER
3300 N. MAIN ST
OSHKOSH, WI 54901
920-236-5908 (OFFICE)
920-660-3150 (MOBILE)
PASPANGLER@WISCONSINPUBLICSEVICE.COM

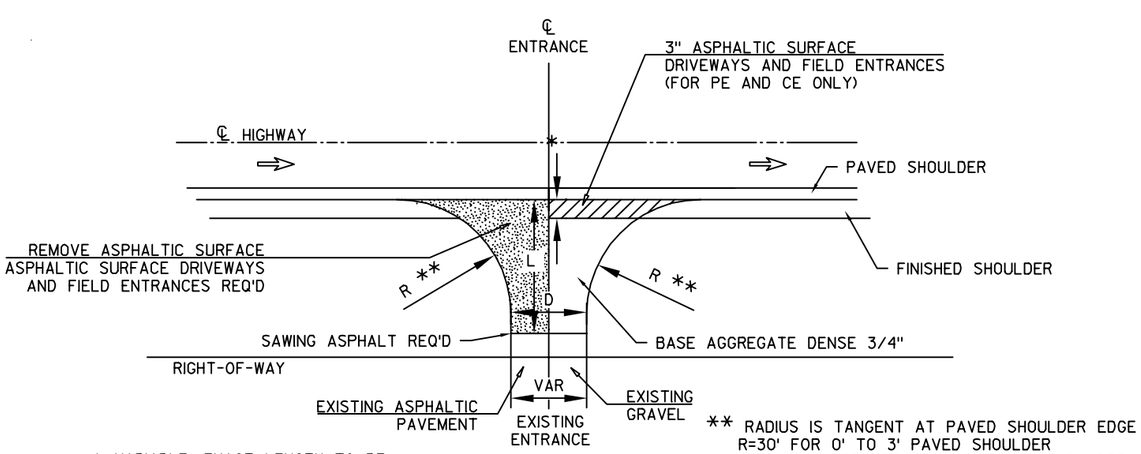
UTILITY: ELECTRIC
WISCONSIN PUBLIC SERVICE
DAVE PETERSEN
3300 N. MAIN ST
OSKOSH, WI 54901
920-236-5910 (OFFICE)
920-680-2036 (MOBILE)
DTPETERSEN@WISCONSINPUBLICSERVICE.COM



TYPICAL CROSS SECTION



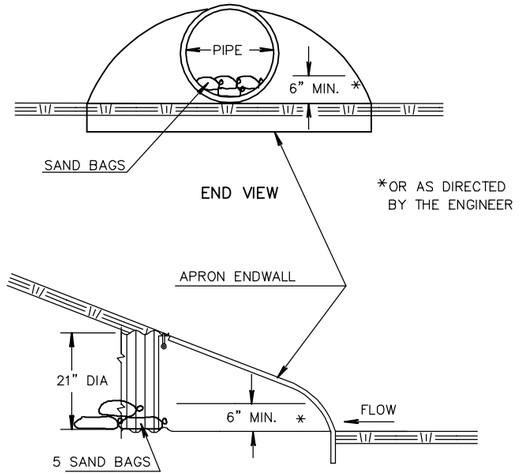
TYPICAL PROFILE VIEW



PLAN VIEW

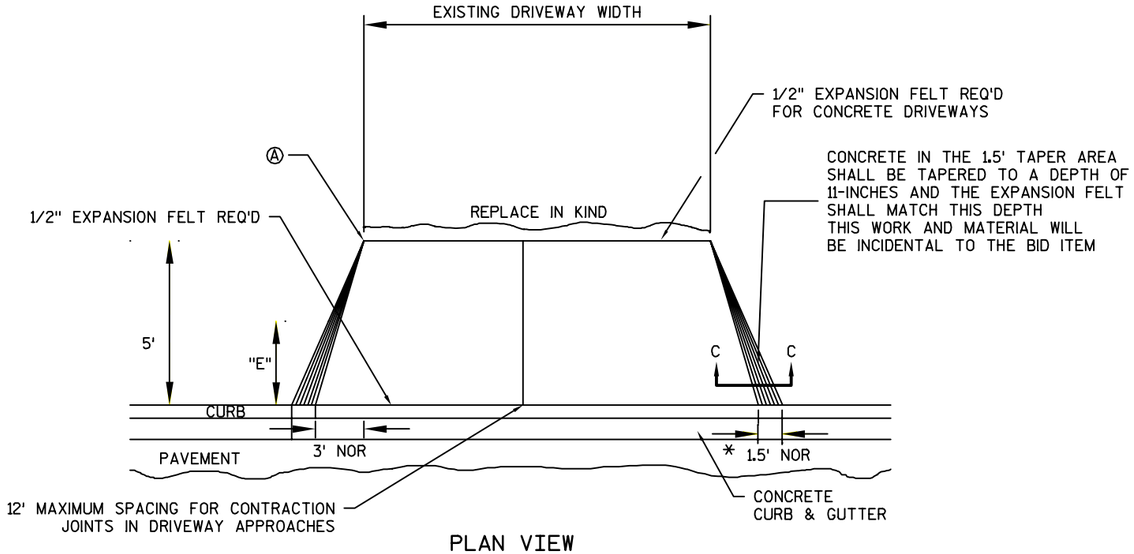
RURAL DRIVEWAY INTERSECTION
(PE, FE & CE)

(FOR NEW CONSTRUCTION)

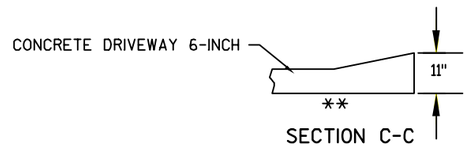


SIDE VIEW

CULVERT PIPE CHECK



PLAN VIEW



SECTION C-C

URBAN DRIVEWAY INTERSECTION

PROJECT NO: 4617-07-71	HWY: BLACK WOLF AVE	COUNTY: WINNEBAGO	PLAN: CONSTRUCTION DETAILS	SHEET 3	E

DATE 05FEB14 — E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	4617-07-71 QUANTITY
0010	203.0100	REMOVING SMALL PIPE CULVERTS	EACH	1.000	1.000
0020	203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. STA 52+23	LS	1.000	1.000
0030	204.0100	REMOVING PAVEMENT **P**	SY	43.000	43.000
0040	205.0100	EXCAVATION COMMON	CY	370.000	370.000
0050	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-70-317	LS	1.000	1.000
0060	210.0100	BACKFILL STRUCTURE	CY	124.000	124.000
0070	213.0100	FINISHING ROADWAY (PROJECT) 01. 4617-07-71	EACH	1.000	1.000
0080	305.0110	BASE AGGREGATE DENSE 3/4-INCH **P**	TON	120.000	120.000
0090	305.0120	BASE AGGREGATE DENSE 1 1/4-INCH **P**	TON	475.000	475.000
0100	416.0160	CONCRETE DRIVEWAY 6-INCH	SY	70.000	70.000
0110	455.0105	ASPHALTIC MATERIAL PG58-28	TON	10.000	10.000
0120	455.0605	TACK COAT	GAL	21.000	21.000
0130	460.1100	HMA PAVEMENT TYPE E-0.3	TON	183.000	183.000
0140	460.2000	INCENTIVE DENSITY HMA PAVEMENT	DOL	120.000	120.000
0150	465.0120	ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	TON	4.000	4.000
0160	465.0315	ASPHALTIC FLUMES	SY	4.000	4.000
0170	502.0100	CONCRETE MASONRY BRIDGES	CY	117.000	117.000
0180	502.3200	PROTECTIVE SURFACE TREATMENT	SY	134.000	134.000
0190	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	3,880.000	3,880.000
0200	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	13,120.000	13,120.000
0210	513.7050	RAILING STEEL TYPE W (STRUCTURE) 01. B-70-317	LS	1.000	1.000
0220	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18.000	18.000
0230	520.0121	CULVERT PIPE CLASS III 21-INCH	LF	44.000	44.000
0240	520.1021	APRON ENDWALLS FOR CULVERT PIPE 21-INCH	EACH	4.000	4.000
0250	550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	350.000	350.000
0260	601.0411	CONCRETE CURB & GUTTER 30-INCH TYPE D	LF	123.000	123.000
0270	606.0300	RIPRAP HEAVY	CY	130.000	130.000
0280	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	164.000	164.000
0290	619.1000	MOBILIZATION	EACH	1.000	1.000
0300	624.0100	WATER	MGAL	4.000	4.000
0310	625.0100	TOPSOIL **P**	SY	655.000	655.000
0320	627.0200	MULCHING **P**	SY	655.000	655.000
0330	628.1504	SILT FENCE	LF	355.000	355.000
0340	628.1520	SILT FENCE MAINTENANCE	LF	355.000	355.000
0350	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	1.000	1.000
0360	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	1.000	1.000
0370	628.6005	TURBIDITY BARRIERS	SY	225.000	225.000
0380	628.7504	TEMPORARY DITCH CHECKS	LF	45.000	45.000
0390	628.7555	CULVERT PIPE CHECKS	EACH	10.000	10.000
0400	629.0210	FERTILIZER TYPE B **P**	CWT	0.400	0.400
0410	630.0140	SEEDING MIXTURE NO. 40 **P**	LB	12.000	12.000
0420	630.0200	SEEDING TEMPORARY **P**	LB	12.000	12.000
0430	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0440	643.0100	TRAFFIC CONTROL (PROJECT) 01. 4617-07-71	EACH	1.000	1.000
0450	643.0420	TRAFFIC CONTROL BARRICADES TYPE III	DAY	1,360.000	1,360.000
0460	643.0705	TRAFFIC CONTROL WARNING LIGHTS TYPE A	DAY	3,060.000	3,060.000
0470	643.0900	TRAFFIC CONTROL SIGNS	DAY	1,190.000	1,190.000
0480	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	148.000	148.000

DATE 05FEB14 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	4617-07-71 QUANTITY
0490	646.0106	PAVEMENT MARKING EPOXY 4-INCH	LF	1,240.000	1,240.000
0500	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	310.000	310.000
0510	650.5000	CONSTRUCTION STAKING BASE	LF	310.000	310.000
0520	650.5500	CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	LF	123.000	123.000
0530	650.6000	CONSTRUCTION STAKING PIPE CULVERTS	EACH	2.000	2.000
0540	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-70-317	LS	1.000	1.000
0550	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	310.000	310.000
0560	690.0150	SAWING ASPHALT	LF	40.000	40.000
0570	690.0250	SAWING CONCRETE	LF	46.000	46.000
0580	715.0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	500.000	500.000
0590	ASP.1T0A	ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	HRS	150.000	150.000
0600	ASP.1T0G	ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	HRS	300.000	300.000
0610	SPV.0195	SPECIAL 01. SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	30.000	30.000

REMOVING PAVEMENT, ITEM NO. 204.0100

LOCATION	DESCRIPTION	SY
51+15, RT	DRIVEWAY	21
51+65, RT	DRIVEWAY	22
TOTAL		**43**

REMOVING SMALL PIPE CULVERTS, ITEM NO. 203.0100

LOCATION	EACH	COMMENT
51+15, RT	1	21-INCH
TOTAL	**1**	

BASE AGGREGATE

LOCATION	#305.0110 BASE AGGREGATE DENSE 3/4-INCH TONS	#305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TONS
50+75 - STRUCTURE	60	200
STRUCTURE - 53+85	60	250
DRIVEWAYS	0	25
TOTALS	**120**	**475**

ASPHALTIC FLUMES, ITEM NO. 465.0315

LOCATION	SY
51+95, LT	4
TOTAL	**4**

ASPHALT ITEMS

LOCATION	#455.0105 ASPHALTIC MATERIAL PG58-28 TON	#455.0605 TACK COAT GAL	#460.1100 HMA PAVEMENT TYPE E-0.3 TON
50+75 - STRUCTURE	5	10	87
STRUCTURE - 53+85	5	11	96
TOTALS	**10**	**21**	**183**

CULVERT PIPE AND ENDWALLS AND CULVERT PIPE CHECKS

LOCATION	#520.0121 CULVERT PIPE CLASS III 21-INCH * LF	#520.1021 APRON ENDWALLS FOR CULVERT PIPE 21-INCH EACH	#628.7555 CULVERT PIPE CHECKS EACH
51+15, RT	24	2	5
51+65, RT	20	2	5
TOTAL	**44**	**4**	**10**

* - MINIMUM WALL THICKNESS IS STEEL 0.064 FOR STEEL AND 0.060 FOR ALUMINUM.

CONCRETE CURB AND GUTTER 30-INCH TYPE D, ITEM NO. 601.0411

LOCATION	LF
50+75 - 51+98, LT	123
TOTAL	**123**

EARTHWORK SUMMARY

DIVISION	CAT	FROM/TO STATION	LOCATION	EXCAVATION COMMON (NOTE 1) (ITEM #205.0100) CUT (NOTE 2)	SALVAGED / UNUSEABLE PAVEMENT MATERIAL (NOTE 3)	AVAILABLE MATERIAL (NOTE 4)	UNEXPANDED FILL (NOTE 5)	EXPANDED FILL (NOTE 6) FACTOR 1.25	MASS ORDINATE +/- (NOTE 7)	WASTE
4617-07-71										
1	0010	50+75 - 51+98	WEST OF BRIDGE	200	0	200	43	54	146	146
2	0010	52+48 - 53+85	EAST OF BRIDGE	170	0	170	6	8	163	163
TOTALS				370	0	370	49	61	309	309

1) NO EBS IS ANTICIPATED. IF EBS IS REQUIRED IT WILL BE PAID AS COMMON EXCAVATION. ITEM NUMBER 205.0100
2) SALVAGED/UNSUABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
3) SALVAGED/UNUSABLE PAVEMENT MATERIAL EQUALS AREA OF PROJECT PAVEMENT REMOVAL * TYPICAL EXISTING PAVEMENT
4) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSUABLE PAVEMENT MATERIAL
5) UNEXPANDED FILL IS A SUM OF CROSS SECTION AREAS FROM EACH DIVISIONAL SHEET
6) EXPANDED FILL FACTOR = 1.25, EXPANDED FILL = (UNEXPANDED FILL) * FILL FACTOR
7) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

PAVEMENT MARKING EPOXY 4-INCH, ITEM NO. 646.0106

LOCATION	DESCRIPTION	LF
50+75 - 53+85, LT	WHITE EDGELINE	310
50+75 - 53+85, CL	DOUBLE YELLOW	620
50+75 - 53+85, RT	WHITE EDGELINE	310
TOTAL		**1240**

DRIVEWAYS

LOCATION	#416.0160 CONCRETE DRIVEWAY 6-INCH SY	#465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES TON
51+15, RT	23	2
51+35, LT	23	0
51+65, RT	24	2
TOTAL	**70**	**4**

MOBILIZATION AND EMEREGENCY MOBILIZATION, EROSION CONTROL

LOCATION	#628.1905 EACH	#628.1910 EACH
PROJECT	1	1
TOTALS	**1**	**1**

WATER, ITEM NO. 624.0100

LOCATION	MGAL	COMMENTS
50+75 - STRUCTURE	2	COMPACATION AND DUST CONTROL
STRUCTURE - 53+85	2	COMPACATION AND DUST CONTROL
TOTALS	**4**	

EROSION CONTROL ITEMS

LOCATION	#625.0100 TOPSOIL SY	#627.0200 MULCHING SY	#628.1504 SILT FENCE LF	#628.1520 SILT FENCE MAINTENANCE LF	#628.7504 TEMPORARY DITCH CHECKS LF	#629.0210 FERTILIZER TYPE B CWT	#630.0140 SEED MIXTURE NO. 40 LBS	#630.0200 SEEDING TEMPORARY LBS
NW QUADRANT	110	110	55	55	0	0.07	2	2
SW QUADRANT	215	215	0	0	30	0.14	4	4
NE QUADRANT	160	160	150	150	15	0.09	3	3
SE QUADRANT	170	170	150	150	0	0.10	3	3
TOTALS	**655**	**655**	**355**	**355**	**45**	**0.40**	**12**	**12**

TURBIDITY BARRIER, ITEM NO. 628.6005

LOCATION	SY
West	105
East	120
TOTALS	**225**

3

CONSTRUCTION STAKING

LOCATION	#650.4500 CONSTRUCTION STAKING SUBGRADE LF	#650.5000 BASE LF	#650.5500 CURB & GUTTER LF	#650.6000 PIPE CULVERTS EACH	#650.9920 SLOPE STAKES LF	*#650.6500 STRUCTURE LAYOUT B-70-0317 LS
50+75 - 53+85	310	310	123	2	310	1
TOTALS	**310**	**310**	**123**	**2**	**310**	**1**

*CATEGORY 0020

SAWING ASPHALT AND SAWING CONCRETE

LOCATION	DESCRIPTION	#690.0150 SAWING ASPHALT LF	#690.0250 SAWING CONCRETE LF
50+75	PROJECT LIMIT	20	---
53+85	PROJECT LIMIT	20	---
51+15, RT	DRIVEWAY	---	12
51+35, LT	DRIVEWAY	---	22
51+65, RT	DRIVEWAY	---	12
TOTALS		**40**	**46**

TRAFFIC CONTROL ITEMS

LOCATION	APPROX SERVICE DAYS	#643.0420 BARRICADES TYPE III NO. IN SERVICE	#643.0420 BARRICADES TYPE III DAYS	#643.0705 WARNING LIGHTS TYPE A NO. IN SERVICE	#643.0705 WARNING LIGHTS TYPE A DAYS	#643.0900 SIGNS NO. IN SERVICE	#643.0900 SIGNS DAYS
PROJECT	85	16	1360	36	3060	14	1190
TOTALS			**1360**		**3060**		**1190**

3

PROJECT NO: 4617-07-71	HWY: BLACK WOLF AVE	COUNTY: WINNEBAGO	MISCELLANEOUS QUANTITIES	SHEET 7	E

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
4617-07-21		
FEDERAL PROJECT NUMBER	4.0	2

PLAT OF RIGHT-OF-WAY REQUIRED FOR

BLACKWOLF AVENUE
BRIDGE OVER WILLOW CREEK

BLACKWOLF AVE. WINNEBAGO COUNTY

CONSTRUCTION PROJECT NUMBER
4617-07-70

4

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	RELEASE OF RIGHTS	ROR
ACCESS RIGHTS	AR	REMAINING	REM.
ACRES	AC.	RIGHT-OF-WAY	R/W
AND OTHERS	ET.AL.	SECTION	SEC.
CENTERLINE	C/L	STATION	STA.
CERTIFIED SURVEY MAP	CSM	TEMPORARY LIMITED EASEMENT	TLE
CORNER	COR.	VOLUME	V.
DOCUMENT	DOC.	**CURVE DATA**	
EASEMENT	EASE.	LONG CHORD	LCH
HIGHWAY EASEMENT	H.E.	LONG CHORD BEARING	LCB
LAND CONTRACT	LC	RADIUS	R
MONUMENT	MON.	DEGREE OF CURVE	D
PAGE	P.	CENTRAL ANGLE OR DELTA	DELTA
PERMANENT LIMITED EASEMENT	PLE	LENGTH OF CURVE	L
PROPERTY LINE	PL	TANGENT	TAN
RECORDED AS	(100')		
REFERENCE LINE	R/L		

CONVENTIONAL SYMBOLS

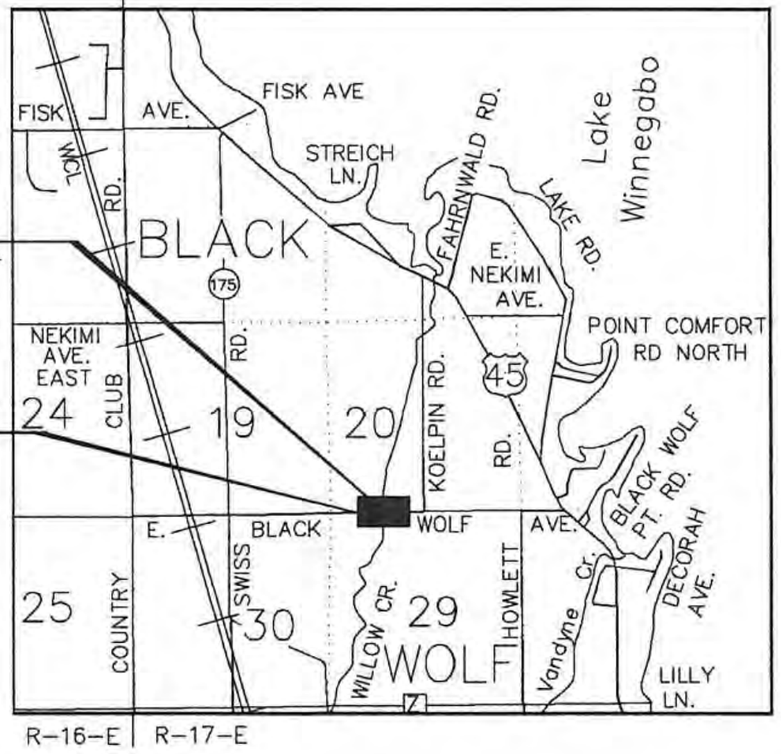
FOUND IRON PIPE/PIN	⌀ (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	• • (SET)	PROPERTY LINE	
R/W STANDARD	▲ ▲ (SET)	LOT & TIE LINES	
SIGN	ISIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT	●	CORPORATE LIMITS	
SECTION CORNER SYMBOL		RESTRICTED ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		RESTRICTED ACCESS (BY ACQUISITION)	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT		QUARTER LINE	
PARCEL NUMBER	12	SIXTEENTH LINE	
SIGN NUMBER (OFF PREMISE)	21	EXISTING CENTERLINE	
BUILDING		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

WATER	—W—	
GAS	—G—	
TELEPHONE	—T—	
OVERHEAD TRANSMISSION LINES	—OH—	
ELECTRIC	—E—	
CABLE TELEVISION	—TV—	
FIBER OPTIC	—FO—	
SANITARY SEWER	—SAN—	
STORM SEWER	—SS—	
	NON COMPENSABLE	COMPENSABLE
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
LIGHT POLE		

END RELOCATION ORDER
STA. 53+85.00
[illegible] NORTH OF AND [illegible] EAST OF THE NORTHWEST CORNER OF THE NORTHWEST 1/4 OF SECTION 29, T.17N., R.17E.
N=438,..76.84
E=803,722.27

BEGIN RELOCATION ORDER
STA. 50+75.00
0.20' NORTH OF AND 1335.83' EAST OF THE NORTHWEST CORNER OF THE NORTHWEST 1/4 OF SECTION 29, T.17N., R.17E.
N=438,577.920
E=803,485.787



LAYOUT

SCALE 0 2000 FT

TOTAL NET LENGTH OF CENTERLINE = 0.059 MI.

N

4

NOTES:

COORDINATES AND BEARINGS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, WINNEBAGO COUNTY, NAD83 (1997) ADJUSTMENT IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT. RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD". PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

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

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

RIGHT-OF-WAY POINTS SHOWN ON THIS PLAT THAT DO NOT CONTAIN THE "R/W MONUMENT (SET)" SYMBOLS HAVE NOT BEEN SET. THE LOCATION IS INACCESSIBLE AND/OR OBSTRUCTED OR AN EXISTING MONUMENT WAS LOCATED AND DETERMINED TO BE IN THE CORRECT POSITION.

ACCEPTED FOR
TOWN OF BLACKWOLF
DATE: 11/26/13 (Signature)

ORIGINAL PLANS PREPARED BY

TERRATEC ENGINEERING, LLC.
1987 N222 EVERGREEN BLVD., STE. 205
CEDARBURG, WI 53012
Tel.: 262.377.9905 - Fax: 262.375.1958

WISCONSIN
ROBERT F. SCHMALZER
1780
COLGATE, WI
LAND SURVEYOR

REVISION	DATE

DATE: 10-7-13 (Signature)

FILE NAME : C:\2012 PROJECTS\BLACK WOLF BRIDGE\CADD FILES\TITLE 4617-07-21.DWG PLOT DATE : 11/26/2013 10:49 AM PLOT BY : BOB TERRATEC PLOT NAME : PLOT SCALE : 1' = 100'
WISDOT/CADDS SHEET 75

TOWN OF BLACKWOLF
WINNEBAGO COUNTY, WI

SW-SW
Sec 20

SE-SW
Sec 20

NW-NW
Sec 29

NE-NW
Sec 29

4

4

GN

N=438568.690
E=802076.450

N=438571.330
E=804708.980

WINN. CO. BERNTSEN MON FD. STA 37+39.15 7.07' RT 600

WINN. CO. BERNTSEN MON FD. STA 63+71.71 2.56' LT 601

LOT 1
CSM 4116
DOC. NO. 1035055

LOT 2
CSM 4116
DOC. NO. 1035055

UNPLATTED
LANDS
DOC. NO. 1589687

UNPLATTED
LANDS
DOC. NO. 981763

UNPLATTED
LANDS
DOC. NO. 813496

LOT 1
CSM 4918
DOC. NO. 1161081

LOT 1
CSM 2621
DOC NO. 815405

LOT 2
CSM 2621
DOC. NO. 815405

UNPLATTED
LANDS
DOC. NO. 1595817

UNPLATTED
LANDS
DOC. NO. 698379

1/16 LINE

1/16 LINE

1 CAROL A. RYMER
TAX KEY NO. 004-0364
UNPLATTED LANDS
DOC. NO. 584946

2 ERIC A. TOURDOT
TAX KEY NO. 004-0363-01
UNPLATTED LANDS
DOC. NO. 1586070

3 CHRIS J. & DARLENE S. KAROSES
TAX KEY NO. 004-0414-01

BLACKWOLF AVENUE

SEC LINE N 89°56'33" E 2632.53'
COR. TO COR.

N 89°54'26" E
REFERENCE LINE

N 89°32'55" E
REFERENCE LINE

REF. LINE = CONST. REF LINE
PROJECT 4617-07-70

EXISTING R/W

VARIES

33.00'

PI: 50+00.00
N=438577.799
E=803337.287

PI: 51+87.35
N=438578.102
E=803528.634

PI: 54+50.44
N=438576.029
E=803787.718

50+00
51+00
52+00
53+00
54+00
54+50

51+90.00
41.00' TLE

50+75.00
25.11' TLE

52+69.00
41.00' TLE

52+89.00
31.00' TLE

53+85.00
31.00' TLE

53+85.00
26.80' TLE

51+96.00
40.88' TLE

52+45.00
40.45' TLE

52+45.00
46.00' TLE

51+96.00
46.08' TLE

TLE FOR GRADING & DWY CONST

TLE FOR GRADING

SLOPE INTERCEPT TYP.

HSE

GARAGE

BLDG

OH

GUY

BEGIN RELOCATION ORDER
STA. 50+75.00
9.230' NORTH OF AND 1335.837' EAST OF THE NORTHWEST CORNER OF THE NORTHWEST 1/4 OF SECTION 29, T.17N., R.17E.
N=438,577.920
E=803,412.287

END RELOCATION ORDER
STA. 53+85.00
7.855' NORTH OF AND 1645.827' EAST OF THE NORTHWEST CORNER OF THE NORTHWEST 1/4 OF SECTION 29, T.17N., R.17E.
N=438,576.545
E=803,722.277

COORDINATE TABLE		
NUMBER	N	E
100	438569.95	803337.30
101	438577.92	803412.29
102	438578.03	803533.28
103	438570.41	803787.68
104	438603.03	803412.25
105	438619.08	803527.61
106	438618.46	803606.60
107	438608.30	803626.52
108	438607.54	803722.52
109	438603.34	803722.49
110	438537.15	803532.96
111	438537.20	803581.96
112	438531.65	803581.92
113	438532.04	803532.92
500	438577.80	803337.29
501	438578.10	803524.63
502	438576.03	803787.72
600	438568.69	802076.45
601	438571.33	804708.98

REFERENCE LINE COURSE TABLE		
NUMBER	DIRECTION	DISTANCE
500-501	N 89°54'26" E	187.35'
501-502	S 89°32'55" E	263.09'

SEC. LINE/REF. LINE TIE TABLE		
NUMBER	DIRECTION	DISTANCE
600-100	N 89°56'33" E	1260.85'
100-500	N 00°05'34" W	7.84'
502-103	S 00°22'06" W	5.62'
103-601	N 89°56'33" E	921.30'

MISC. LINE COURSE TABLE		
NUMBER	DIRECTION	DISTANCE
501-102	N 89°32'55" E	8.65'
101-104	N 00°05'34" W	25.11'
102-110	S 00°27'05" W	40.88'

TLE - LINE COURSE TABLE PARCEL 1 & PARCEL 2		
NUMBER	DIRECTION	DISTANCE
104-105	N 82°04'45" E	116.47'
105-106	S 89°32'55" E	79.00'
106-107	S 62°59'01" E	22.36'
107-108	S 89°32'55" E	96.00'
108-109	S 00°27'05" W	4.20'
109-104	S 89°56'33" W	310.24'

TLE - LINE COURSE TABLE PARCEL 3		
NUMBER	DIRECTION	DISTANCE
110-111	N 89°56'33" E	49.00'
111-112	S 00°27'05" W	5.55'
112-113	N 89°32'55" W	49.00'
113-110	N 00°27'05" E	5.12'

IRON PIPES FOUND		
DESCRIPTION	N	E
1" IP	438545.45	803183.82
REBAR	438605.16	803799.94
1" IP W/CAP	438610.52	803393.05
1" IP	438611.61	803168.88
1" IP	438544.44	803392.56
1" IP	438336.92	803182.01
1" IP	438545.49	803183.84

SCHEDULE OF LANDS AND INTEREST

PARCEL NO.	OWNER	INTEREST REQUIRED	AREA SQ. FT. REQUIRED			TLE
			NEW	EXISTING	TOTAL	SQ. FT. REQUIRED
1	CAROL A. RYMER	TLE	---	---	---	958 SQ. FT.
2	ERIC A. TOURDOT	TLE	---	---	---	1839 SQ. FT
3	CHRIS J. & DARLENE S. KAROSES	TLE	---	---	---	261 SQ. FT.

"OWNERS" NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTERESTS TO THE DEPARTMENT OF TRANSPORTATION.

ROAD NAME	BASIS OF EXISTING R/W	WIDTH	YEAR
BLACKWOLF AVE	TOWN ROAD RECORDS, ROAD NO. 10	66'	1852
BLACKWOLF AVE	CSM 4918, DOC. NO. 1161081	33'	2001
BLACKWOLF AVE	CSM 2621, DOC. NO. 815405	VARIES	1992
BLACKWOLF AVE	CSM 4116, DOC. NO. 1035055	VARIES	1998

REVISION DATE			

DATE: OCT. 7, 2013

GRID FACTOR N/A

SCALE, FEET
0 50 100

HWY: BLACKWOLF AVENUE

COUNTY: WINNEBAGO

STATE R/W PROJECT NUMBER 4617-07-21

CONSTRUCTION PROJECT NUMBER 4617-07-70

PLAT SHEET 4.1

PS&E SHEET _____

E

FILE NAME : C:\2012 PROJECTS\BLACK WOLF BRIDGE\CADD FILES\4617-07-21-RW_005.DWG

PLOT DATE : 10/15/2013 3:08 PM

PLOT BY : BOB TERRATEC

PLOT NAME :

PLOT SCALE : 1:100_XREF

WISDOT/CADD

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
1	52+09,LT	TOP OF REBAR, NW ABUTMENT	760.22

REMOVE OLD BRIDGE P-70-0911
STA. 52+23
SINGLE SPAN CONCRETE SLAB & STEEL GIRDER BRIDGE
26.0' OVERALL LENGTH
30.5' DECK WIDTH

N

BP: 50+00.00
N = 438577.779
E = 803337.287

EP: 54+50.44
N = 438576.029
E = 803787.718

PI: 51+87.35
N = 438578.102
E = 803524.634

CONCRETE CURB & GUTTER 30-INCH TYPE D

SLOPE INTERCEPT (TYP)

+12, 14' LT TO FLANGE

PROPOSED STRUCTURE B-70-317

WETLAND BOUNDARY

HARBOR CREEK

WILLOW

TLE

+50, 14' LT

+50, 14' RT

R/W

END PROJECT STA. 53+85

BEGIN PROJECT STA. 50+75

50+00 | 51+00 N89° 54' 26.04"E 187.35 | 52+00 | 53+00 S89° 32' 54.62"E 263.09 | 54+00 | 54+50

CL WEST ABUT STA 52+08

CL EAST ABUT STA 52+38

BLACK WOLF AVE

+06, 14' RT

ASPHALTIC FLUME

CONC.

ASPH.

RIP RAP HEAVY (TYP)

HSE

GRAVEL DRIVE

BLACK WOLF AVE.

21" CMCP

18" CMCP

OH

T

G

EROSION CONTROL LEGEND

- CULVERT PIPE CHECKS
- TEMPORARY DITCH CHECK
- SILT FENCE
- TURBIDITY BARRIER

24' - CP CLASS III, 21-INCH W/ 2 AEW 21-INCH

REMOVE 142' - CP, 21-INCH

20' - CP CLASS III, 21-INCH W/ 2 AEW 21-INCH

WETLAND BOUNDARY

VCL = 250.00
K = 117.04

VCL = 100.00
K = 93.67

STA 50+20.00 EL 763.92

VPC STA 50+25.00 VPC EL 763.90

VPI STA 50+75.00 VPI EL 763.70

VPT STA 51+25.00 VPT EL 762.97

VPC STA 51+35.00 VPC EL 762.82

VPI STA 52+60.00 VPI EL 760.99

LOW POINT STA 53+06.76 LOW POINT EL 761.56

VPT STA 53+85.00 VPT EL 761.82

STA 53+90.00 EL 761.86

0.40%

-1.47%

0.67%

BRIDGE P-70-317
STA. 52+23
30' CLEAR ROADWAY WIDTH
32.5' OVERALL LENGTH
32' DECK WIDTH

HW2 ELEV = 759.51

STREAMBED ELEV = 753.06
(STREAM WAS DRY ON 10/10/2012 DURING OBSERVATION)

760.00

753.00

49 | 50 | 51 | 52 | 53 | 54 | 55

63.99 | 50+00 | 63.78 63.77 | 63.28 63.30 | 62.56 62.61 | 61.88 62.05 | 61.59 61.70 | 61.57 61.57 | 61.67 61.64 | 61.92 | 62.20

PROJECT NO: 4617-07-71	HWY: BLACK WOLF AVE	COUNTY: WINNEBAGO	ROADWAY PLAN & PROFILE	SHEET 10	E

FILE NAME : L:\PROJECTS\12297\DWG\050102_PNP.DWG PLOT DATE : 3/19/2013 2:25 PM PLOT BY : BAINTER, JOHN PLOT NAME : ----------

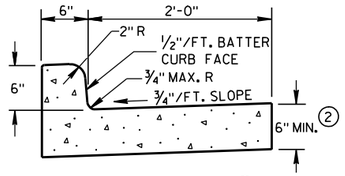
WISDOT/CADDS SHEET 40

Standard Detail Drawing List

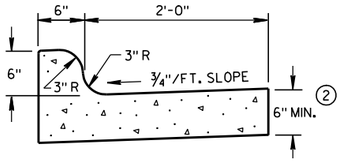
08D01-17	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES

6

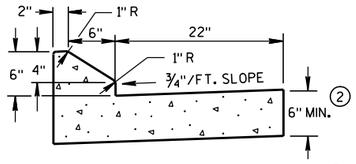
6



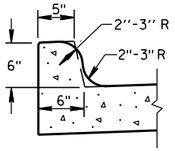
TYPES A & D (1)



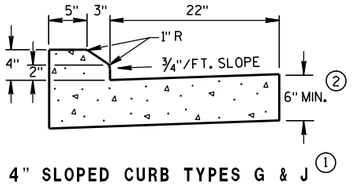
TYPES K & L (1)



6" SLOPED CURB TYPES G & J (1)

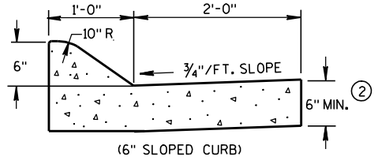


OPTIONAL CURB SHAPE FOR TYPES K & L (1)

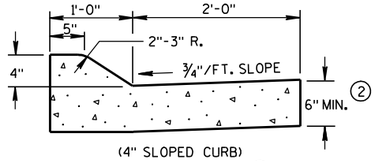


4" SLOPED CURB TYPES G & J (1)

CONCRETE CURB & GUTTER 30"

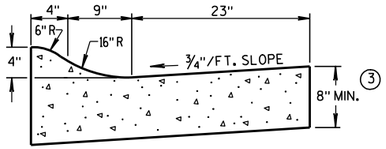


(6" SLOPED CURB)



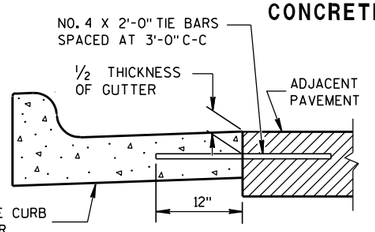
(4" SLOPED CURB)

TYPES A & D (1)

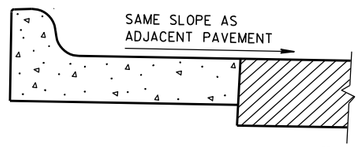


4" SLOPED CURB TYPES R & T (1) (4)

CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION (1)



REVERSE SLOPE GUTTER (5)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

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

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

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

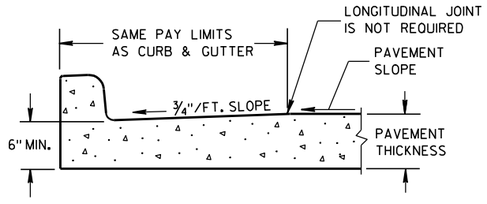
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K AND R.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

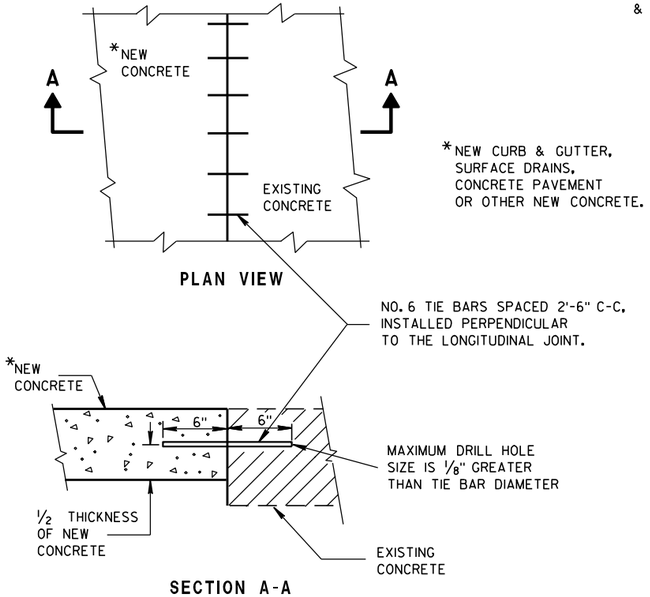
(3) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(4) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

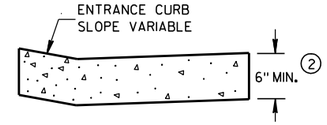
(5) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



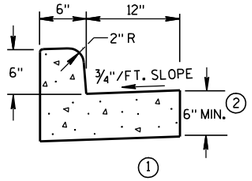
PARTIAL SECTION OF PAVEMENT WITH INTEGRAL CURB & GUTTER



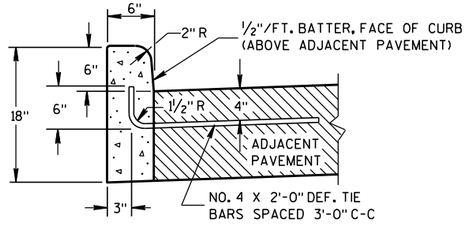
TIE BARS DRILLED INTO EXISTING PAVEMENT



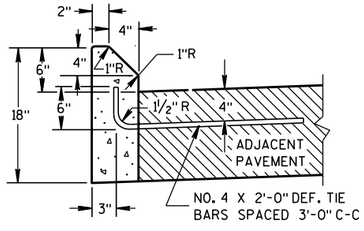
DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)



(1)
TYPES A & D
CONCRETE CURB & GUTTER 18"

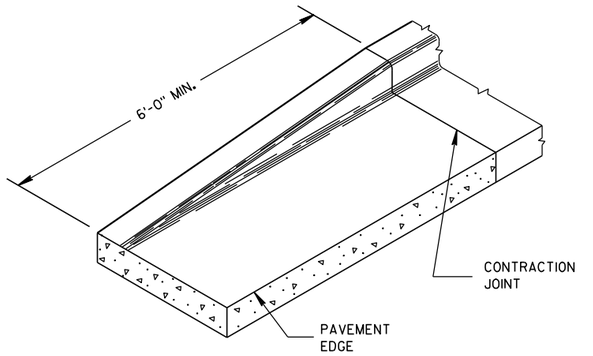


(1)
TYPES A & D



(1)
TYPES G & J

CONCRETE CURB



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/4/08 DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS ENGINEER

FHWA

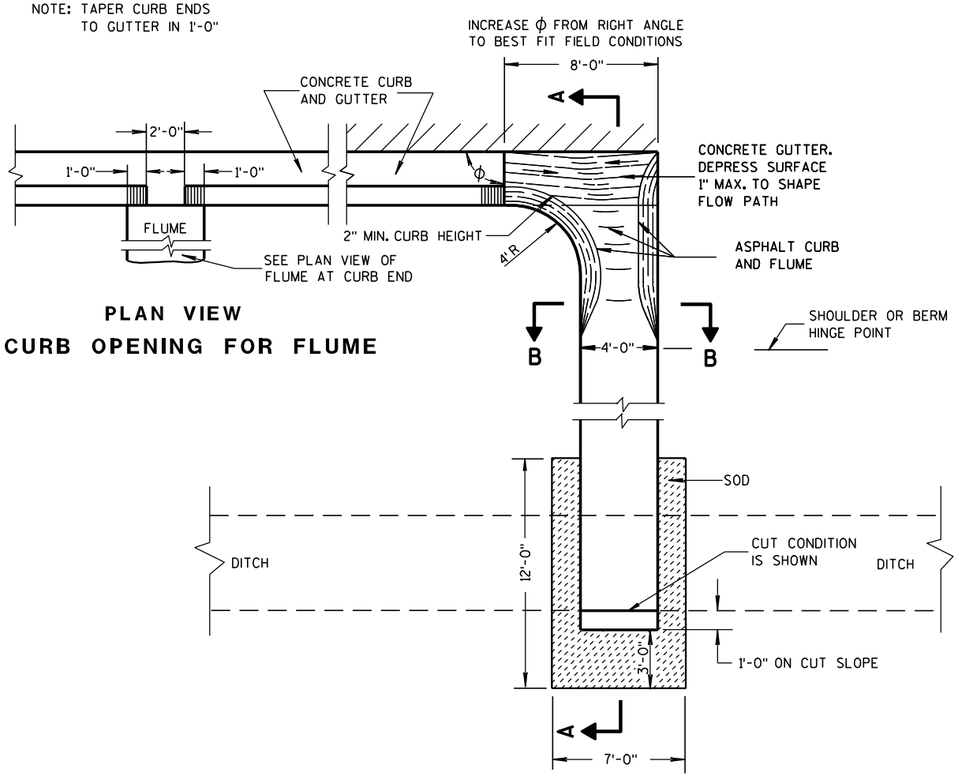
6

S.D.D. 8 D 1-17

6

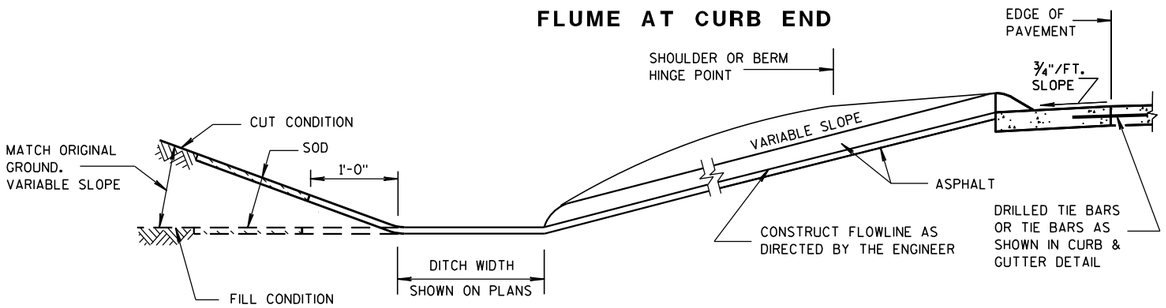
S.D.D. 8 D 1-17

ASPHALTIC FLUME

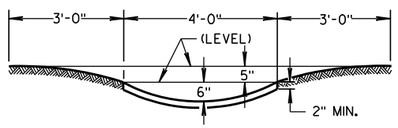


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

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

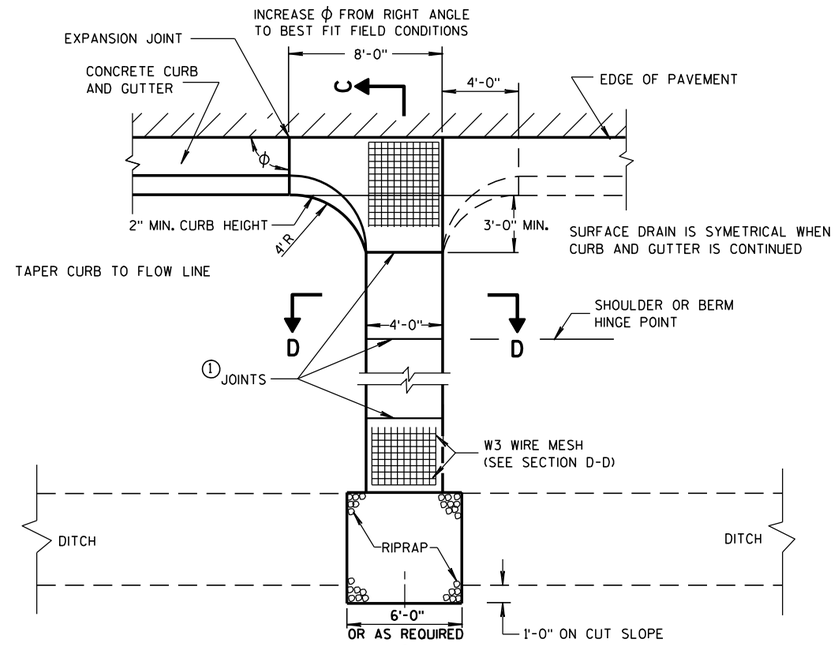
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE ⅛ TO ¼ INCH WIDE BY 1½ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

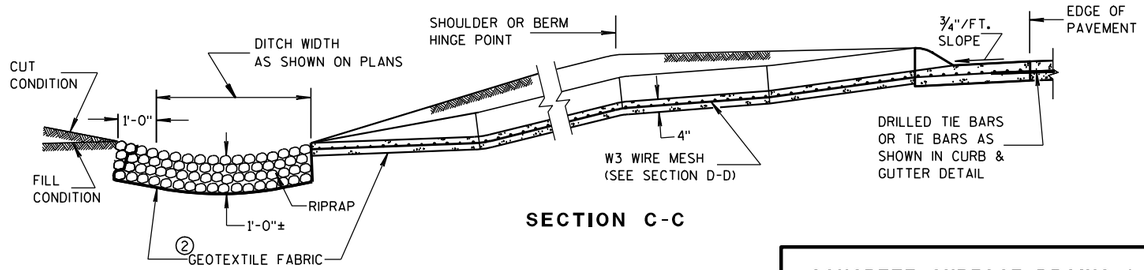
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

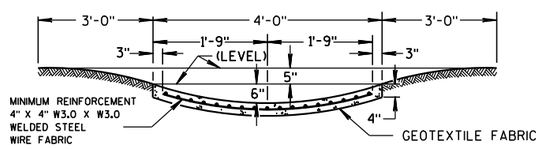
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

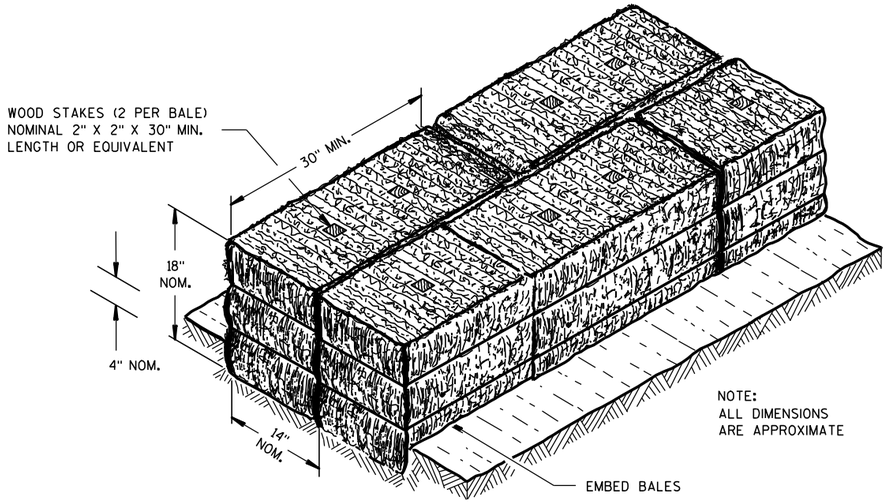
APPROVED
9-4-08 DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
MENT
FHWA

6

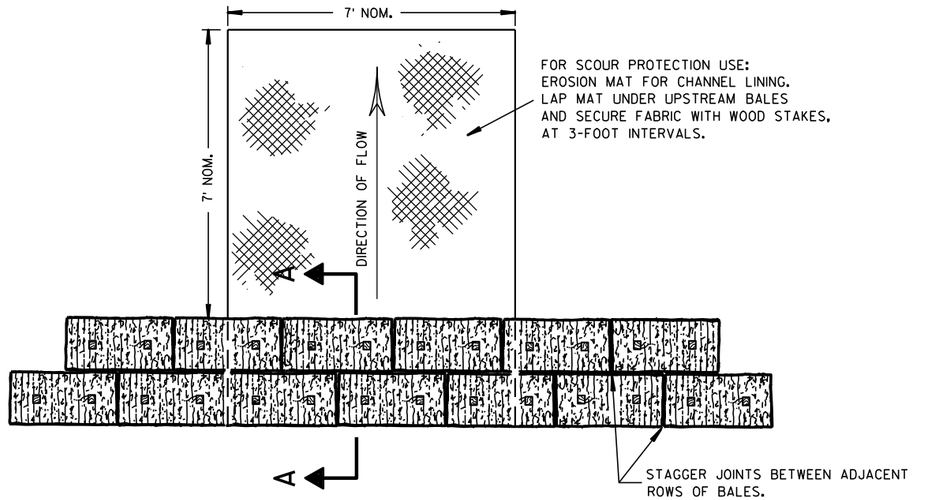
S.D.D. 8 D 4-5

6

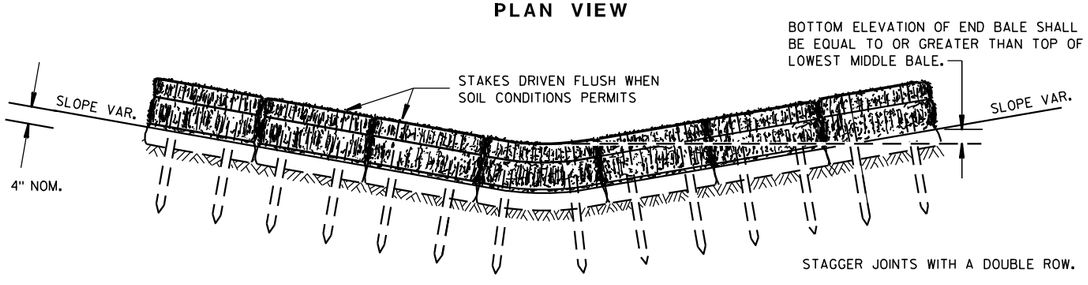
S.D.D. 8 D 4-5



SECTION A-A



PLAN VIEW



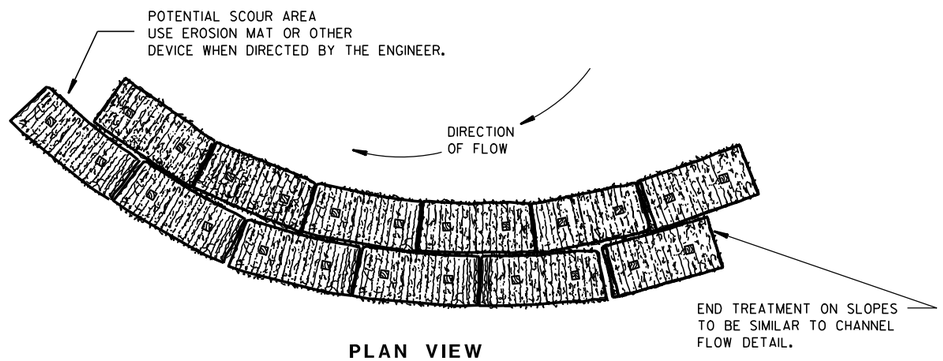
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

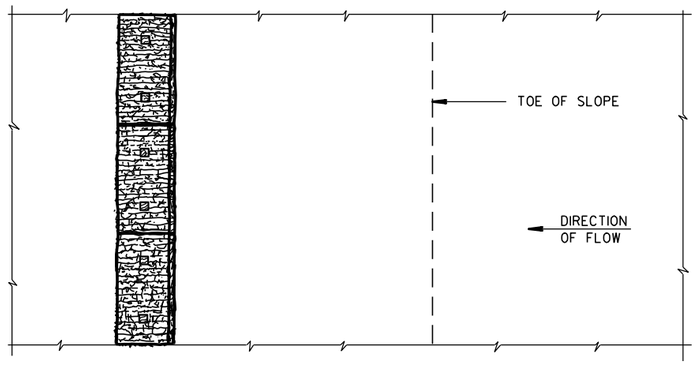
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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.

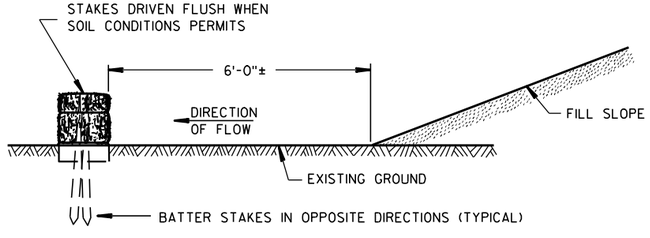


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02 — DATE

/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 E 8-3

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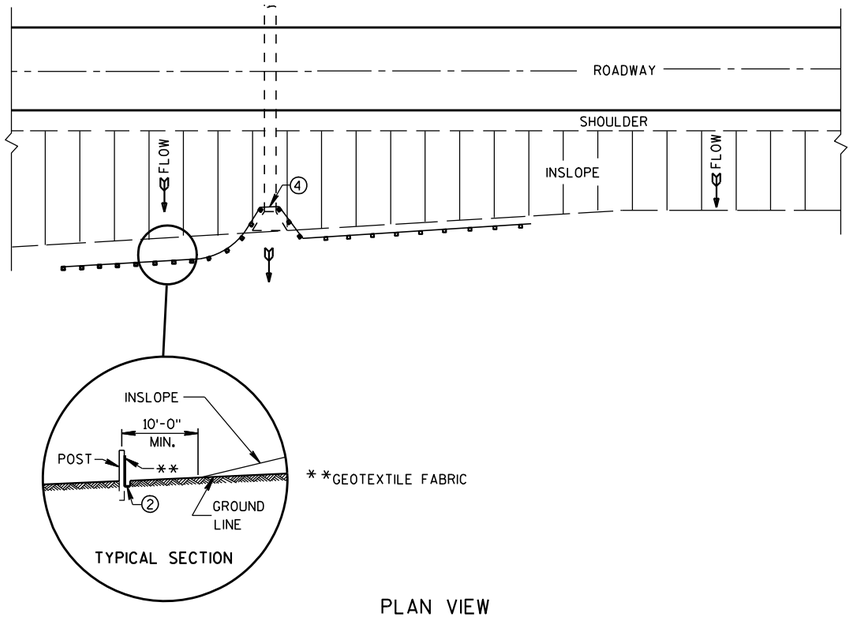
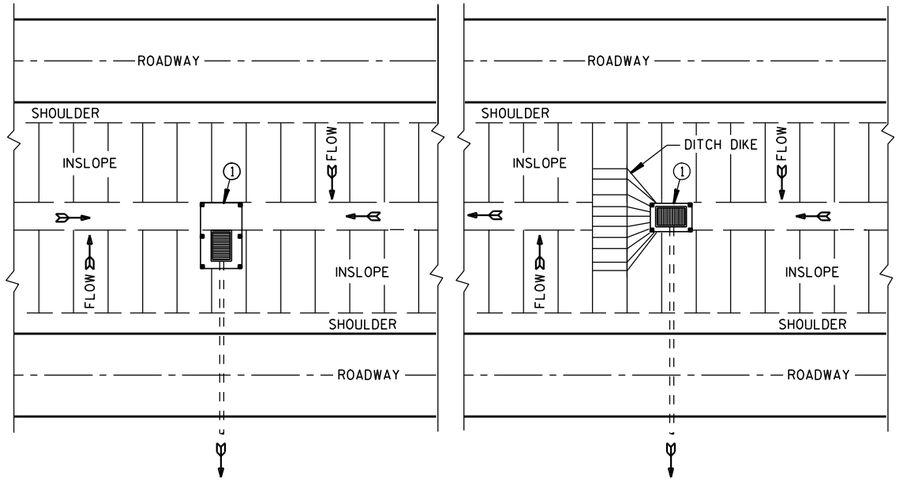
S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

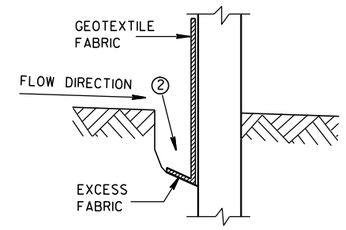
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

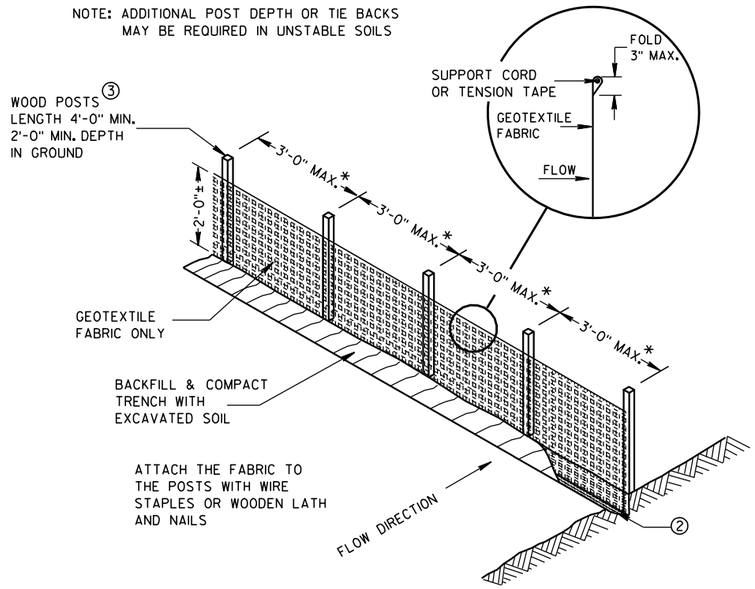
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

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

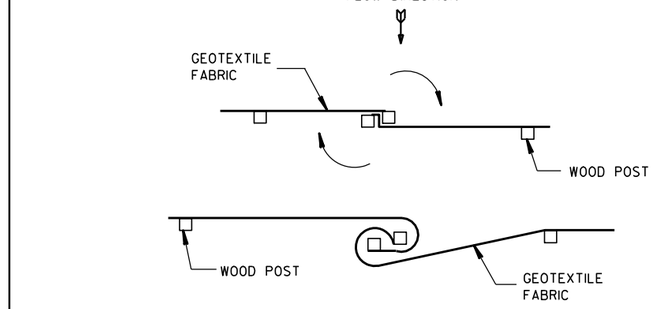


TRENCH DETAIL

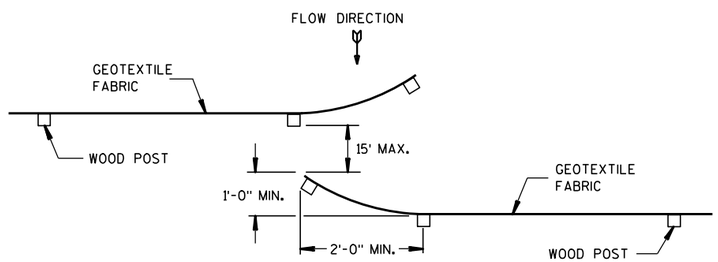


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

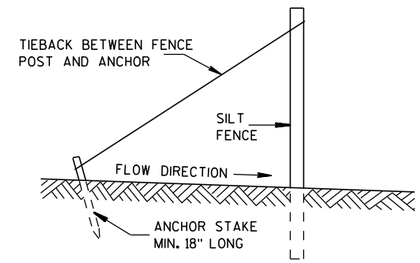


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 9-6

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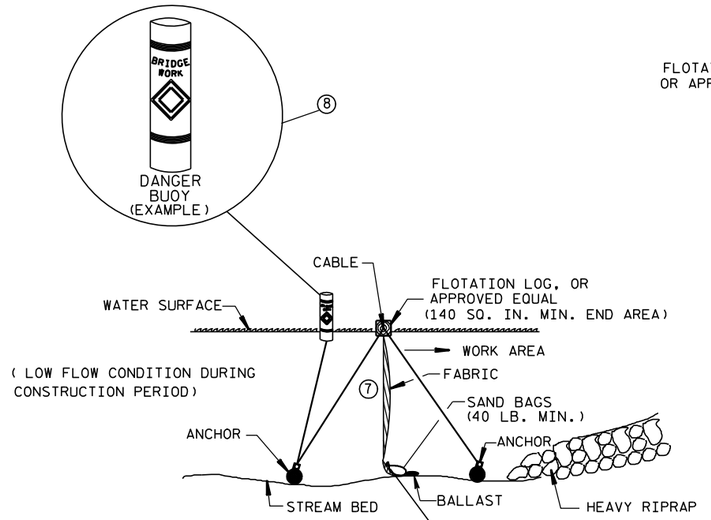
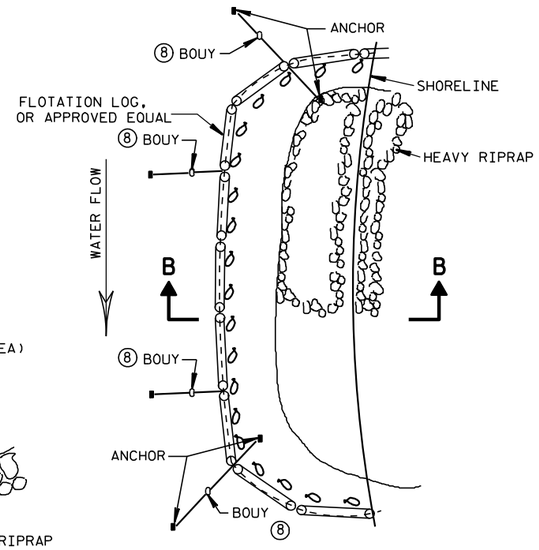
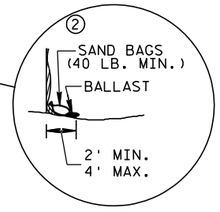
S.D.D. 8 E 9-6

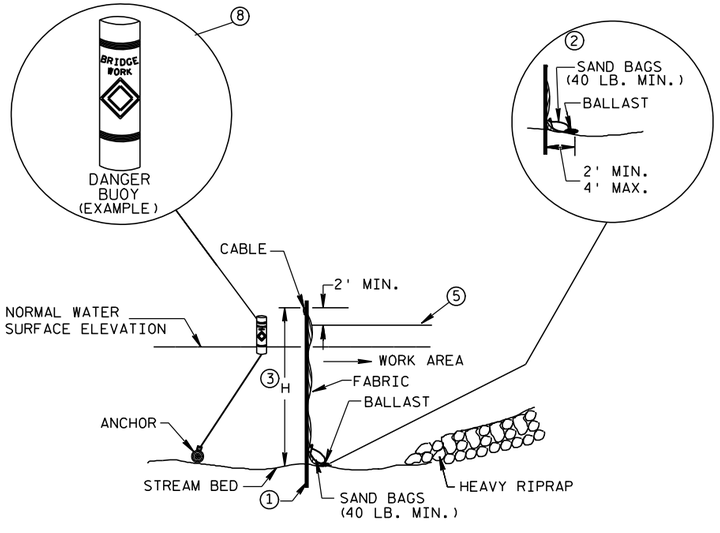


SECTION B-B

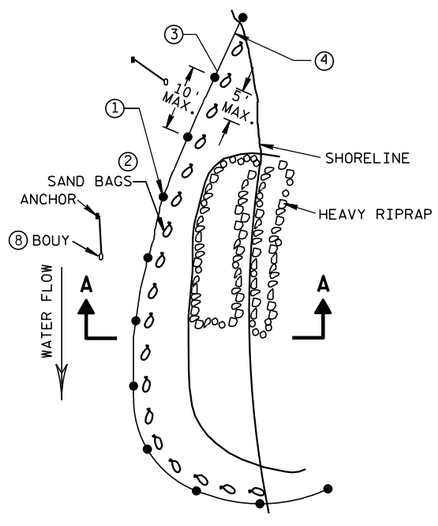




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

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

② 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.

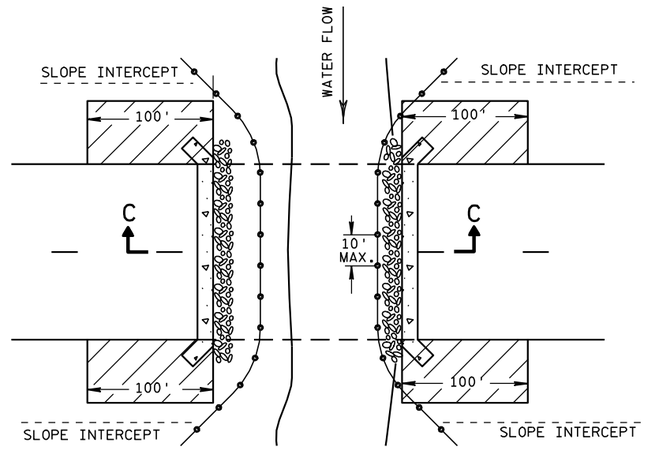
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE O2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

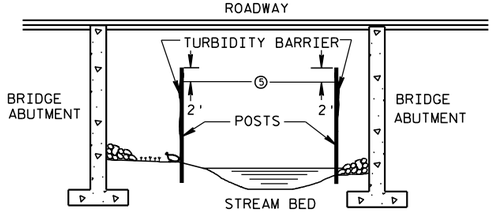
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/04/02 — DATE
/S/ Beth Cannestra — CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2

METAL APRON ENDWALLS

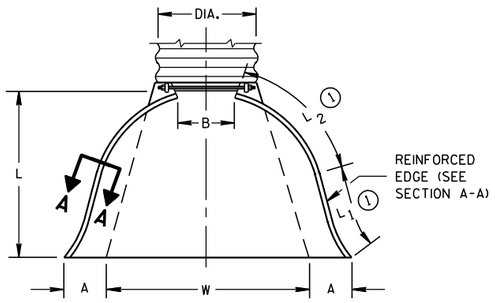
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4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

× EXCEPT CENTER PANEL SEE GENERAL NOTES

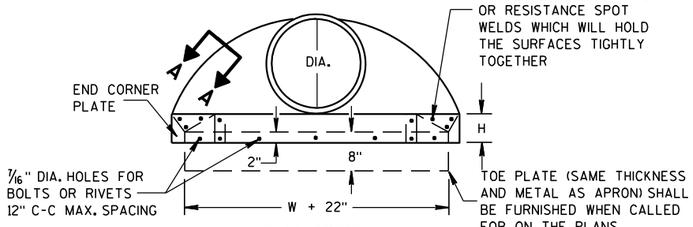
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 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

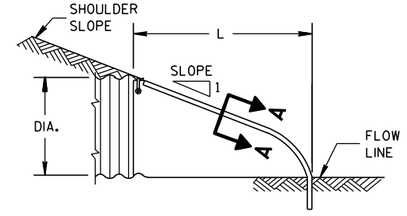
*MINIMUM
**MAXIMUM



PLAN VIEW

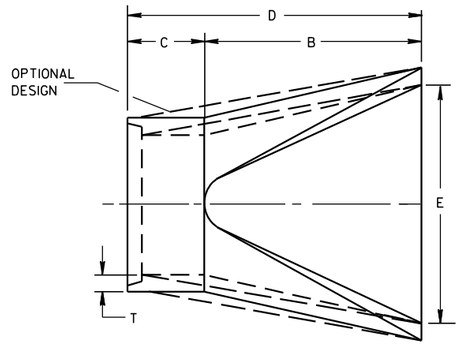


END VIEW

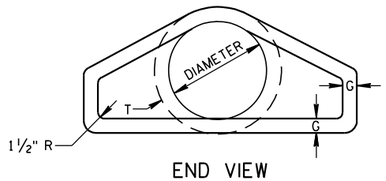


SIDE ELEVATION

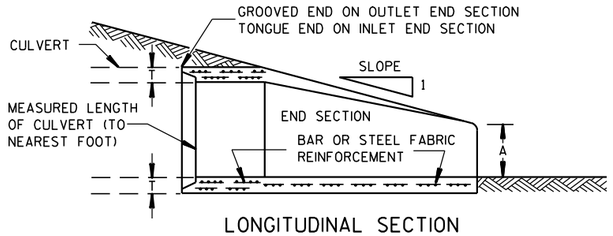
METAL ENDWALLS



PLAN

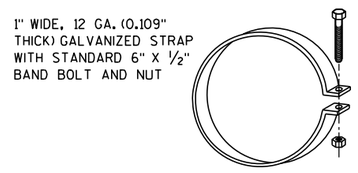


END VIEW



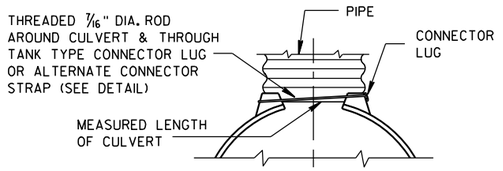
LONGITUDINAL SECTION

CONCRETE ENDWALLS

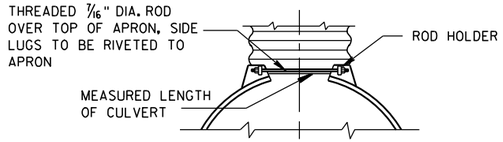


ALTERNATE FOR TYPE 1 CONNECTION

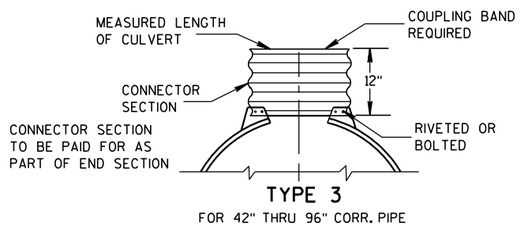
END SECTION CONNECTOR STRAP



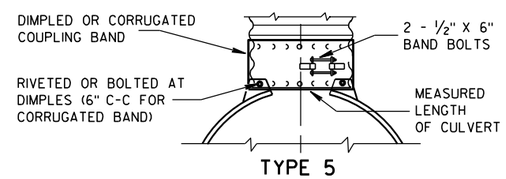
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

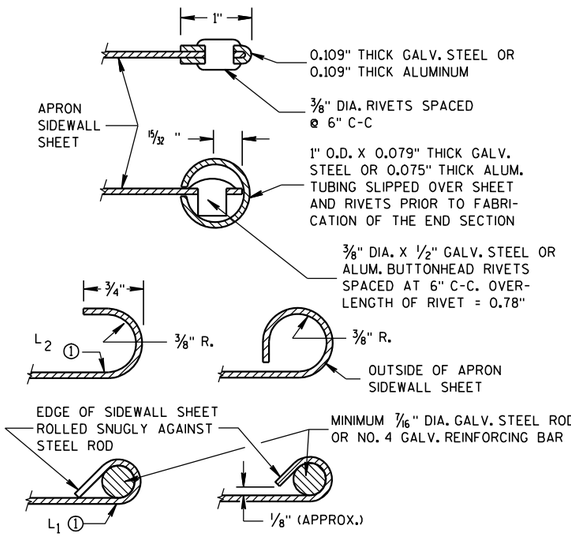
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR 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.

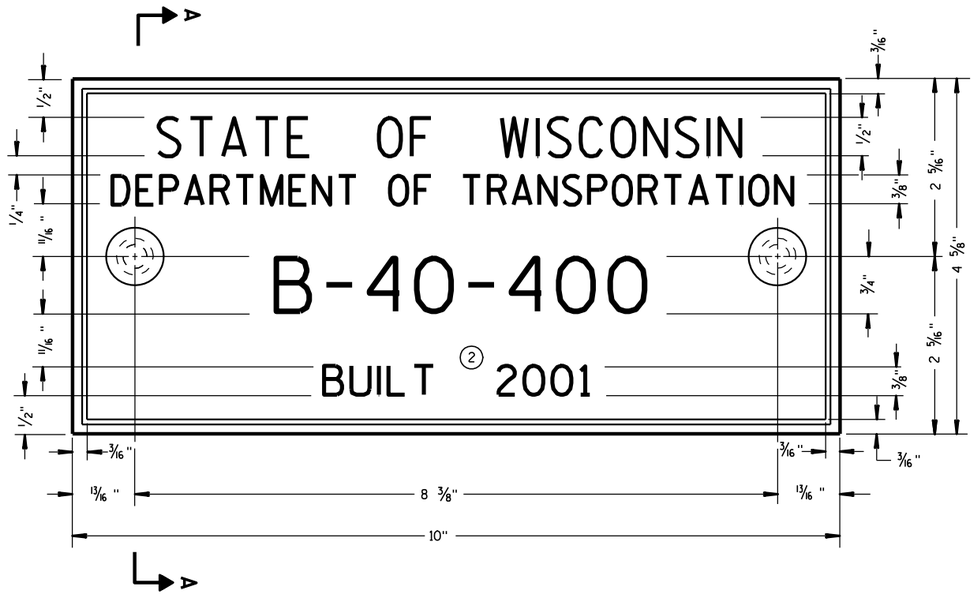
APRON ENDWALLS FOR CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

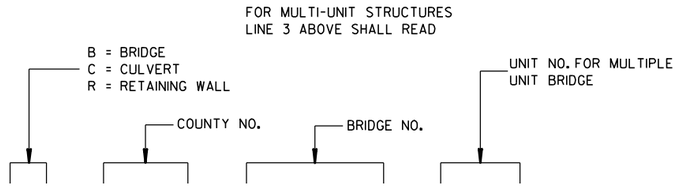
6

S.D.D. 8 F 1-11



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION MULTI-UNIT STRUCTURES

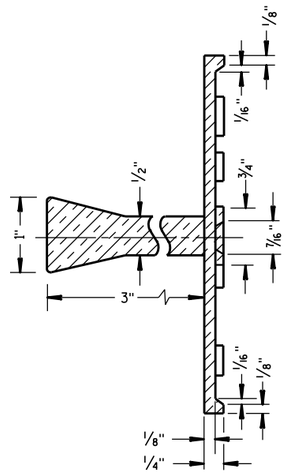
GENERAL NOTES

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.

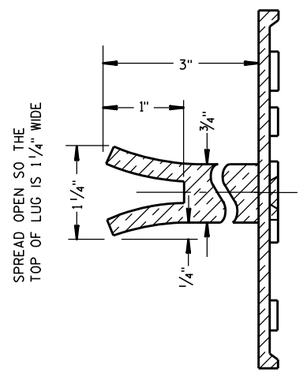
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

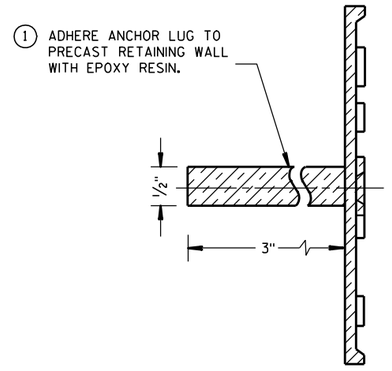
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

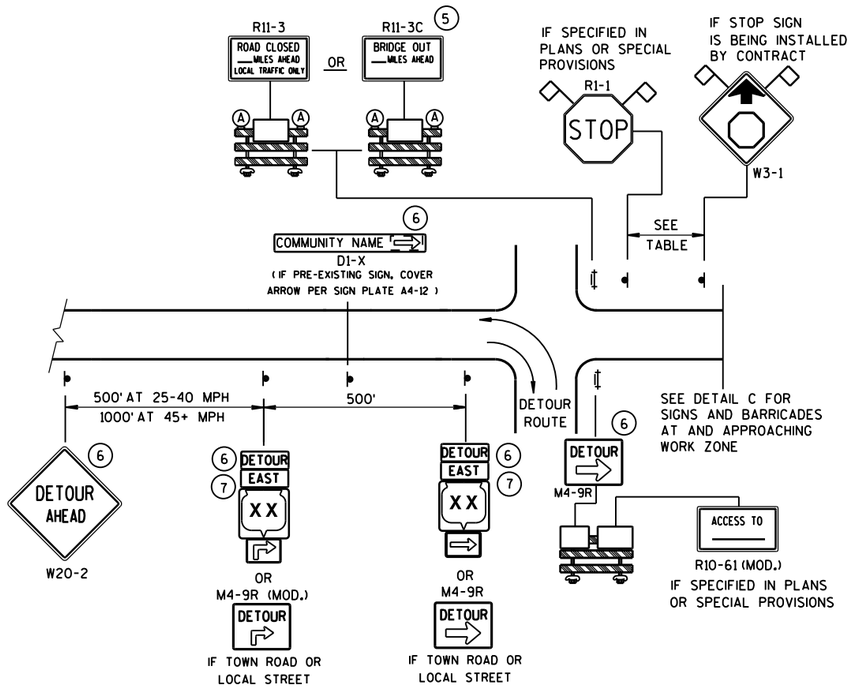
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

6

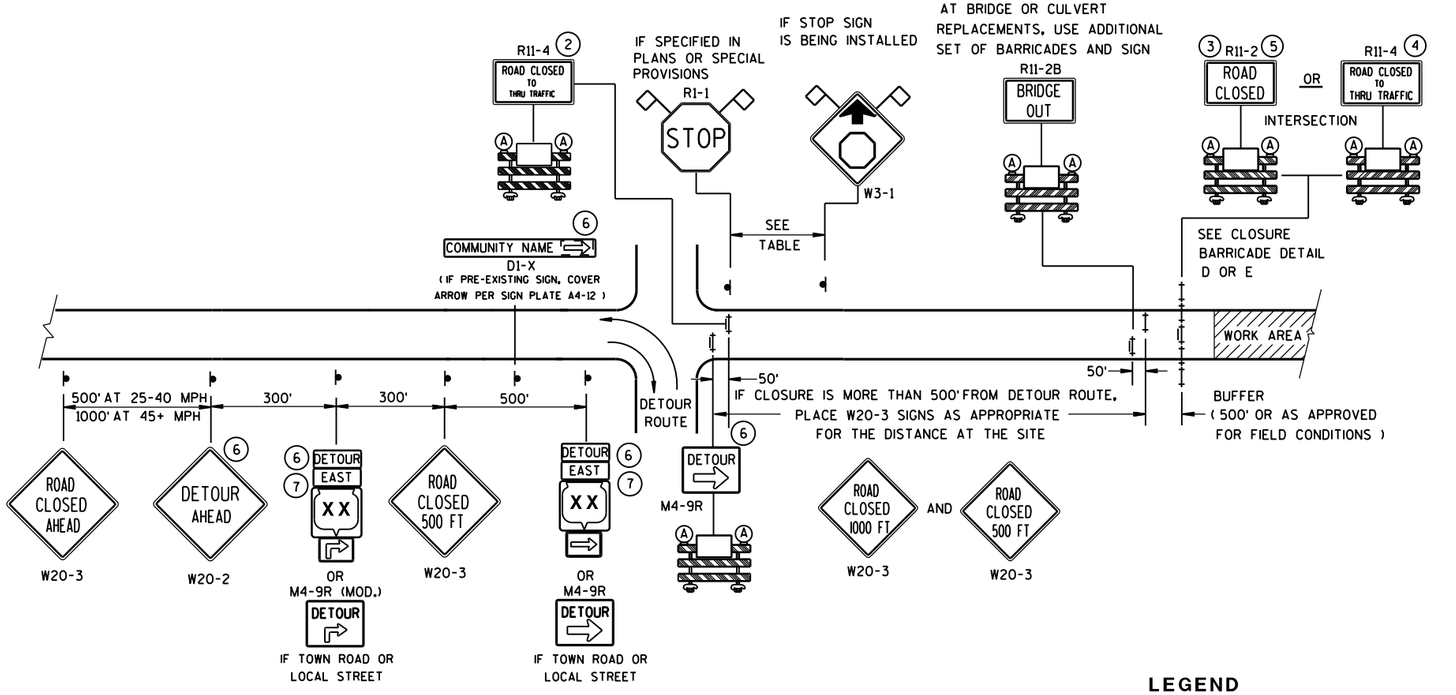
S.D.D. 12 A 3-10



DETAIL A

MAINLINE CLOSURE WITH POSTED DETOUR

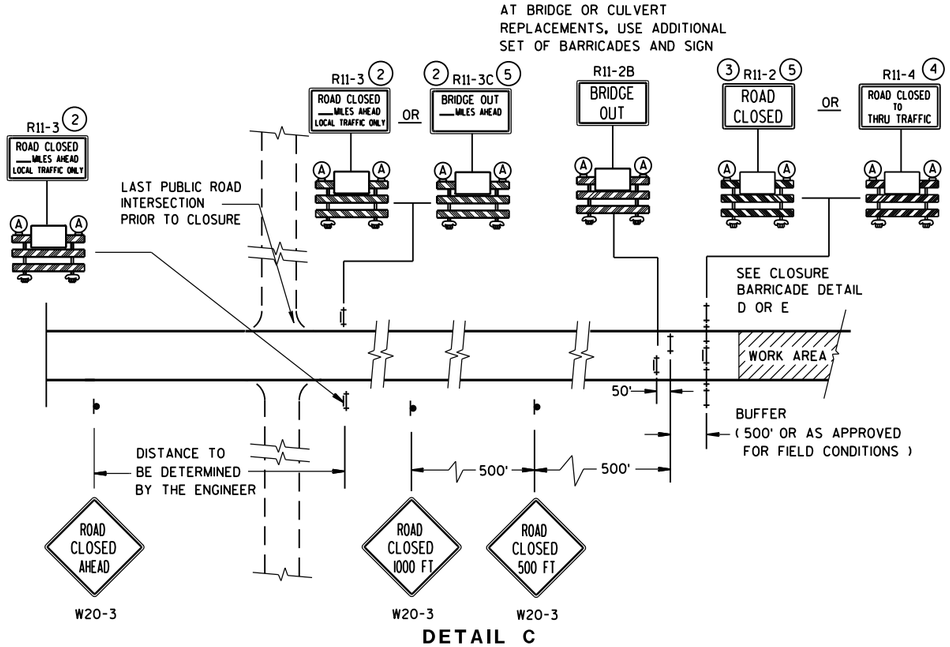
WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



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
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

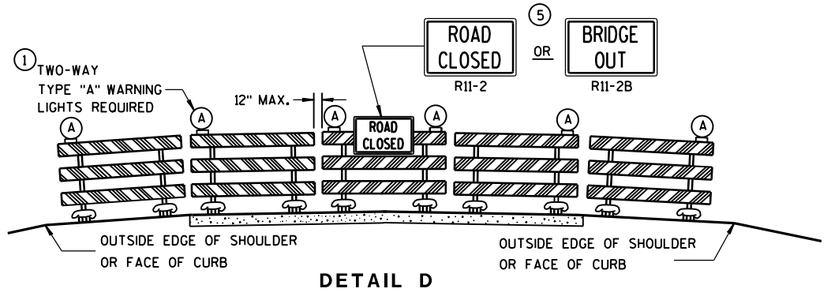
8/2013 DATE

/S/ Travis Feltes
STATE TRAFFIC ENGINEER

FHWA

6

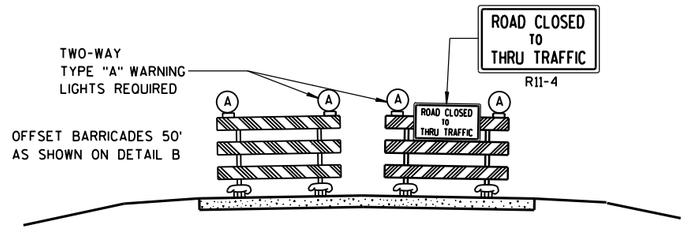
S.D.D. 15 C 2-5a



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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE 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, 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". (30" X 15" 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.)
- M05-1 AND M06-1 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 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 LANE 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.

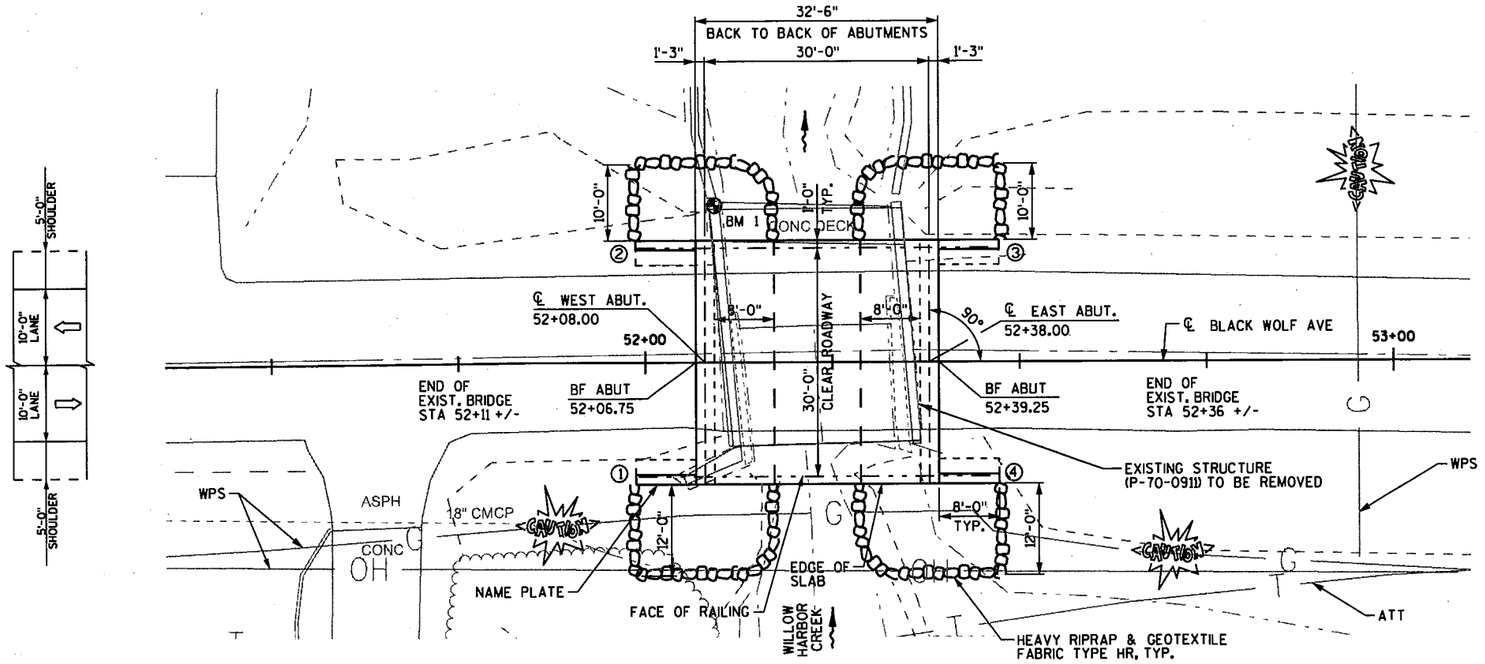
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

8/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
DESIGN
FHWA

6

S.D.D. 15 C 2-5b

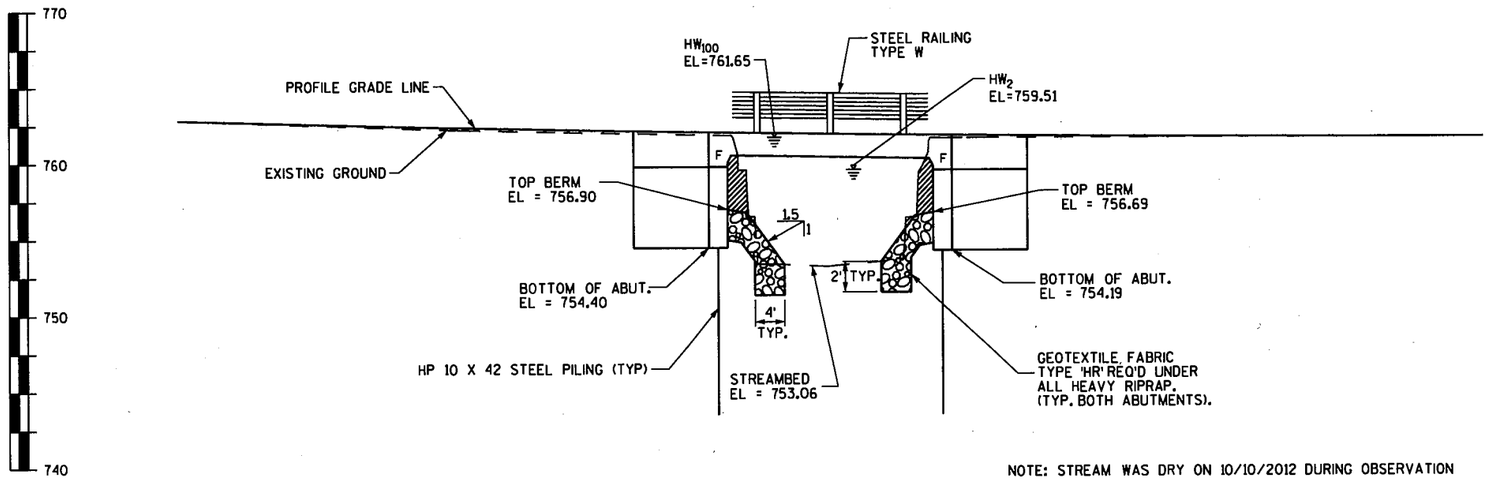


○-INDICATES WING NUMBER

BM *-INDICATES BENCH MARK NUMBER

PLAN

(SINGLE SPAN CONCRETE FLAT SLAB BRIDGE)



NOTE: STREAM WAS DRY ON 10/10/2012 DURING OBSERVATION

ELEVATION

(NORMAL TO ℄ OF STRUCTURE)

COST OF EXCAVATION IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES (B-70-317)"

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
608-266-8489

CONSULTANT CONTACT:
PHIL ENGLEBERT
920-208-0296

STATE PROJECT NUMBER

4617-07-71

DESIGN DATA

LIVE LOAD:

DESIGN RATING: HL-93
INVENTORY RATING FACTOR: 1.23
OPERATING RATING FACTOR: 1.60
MAXIMUM STANDARD PERMIT VEHICLE LOAD = 250 KIPS
STRUCTURE IS DESIGNED FOR 20#/SQ FT FUTURE WEARING SURFACE

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY SLAB ——— f'c = 4,000 psi
CONCRETE MASONRY ALL OTHER ——— f'c = 3,500 psi
HIGH STRENGTH BAR STEEL REINFORCEMENT ——— fy = 60,000 psi

TRAFFIC VOLUME

A.A.D.T. = 180 (2014)
A.A.D.T. = 330 (2034)
DESIGN SPEED = 55 MPH

HYDRAULIC DATA

DRAINAGE AREA = 7.1 SQ. MILES
WATERWAY AREA = 151 SQ. FEET
Q_{100} = 1150 CFS
VELOCITY = 7.61 FPS
HIGH WATER$_{100}$ = EL. 761.65
RDWY OVERTOPPING = N/A
SCOUR CRITICAL CODE = 8

Q_2 = 525 CFS
HIGH WATER$_2$ = EL. 759.51

WISCONSIN
PHILIP J. ENGLEBERT E-16118 SHEBOYGAN, WIS.
PROFESSIONAL ENGINEER

1/27/14

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 140 TONS † PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 35' 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.

BENCH MARKS

NO.	STATION	DESCRIPTION	ELEV.
1	52+09, LT	TOP OF REBAR, NW ABUTMENT	760.22

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).

LIST OF DRAWINGS

1. GENERAL PLAN
2. SECTION, NOTES & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT, WINGS 1 & 2
6. EAST ABUTMENT
7. EAST ABUTMENT, WINGS 3 & 4
8. ABUTMENT BILL OF BARS
9. SUPERSTRUCTURE
10. STEEL RAILING TYPE 'W'

NO.	DATE	REVISION	BY

DONOHUE & ASSOCIATES

ACCEPTED William C. Dreher KAR 01/28/14
CHIEF STRUCTURES DESIGN ENGINEER DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-70-317

BLACK WOLF AVE OVER WILLOW HARBOR CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
WINNEBAGO	BLACK WOLF

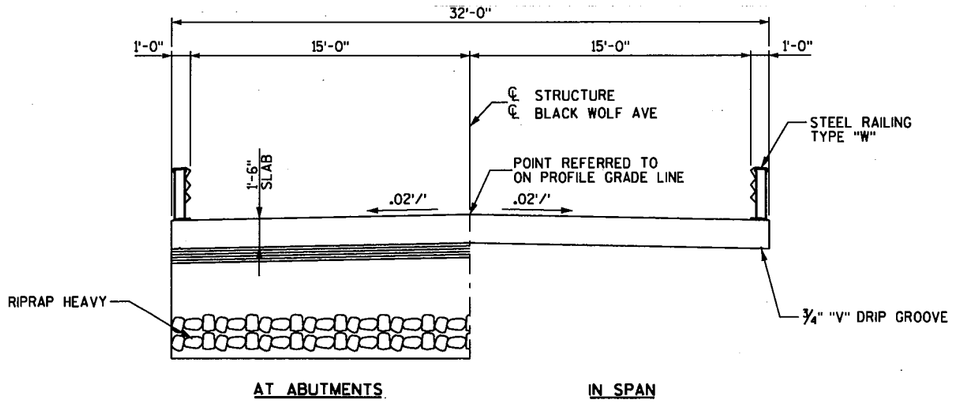
DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
SJG	PJE	SJG	PJE

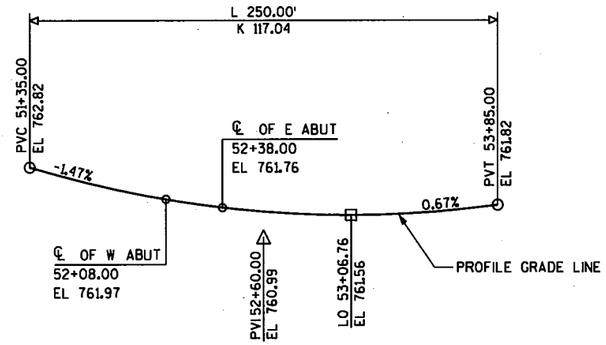
GENERAL PLAN

SHEET 1 OF 10

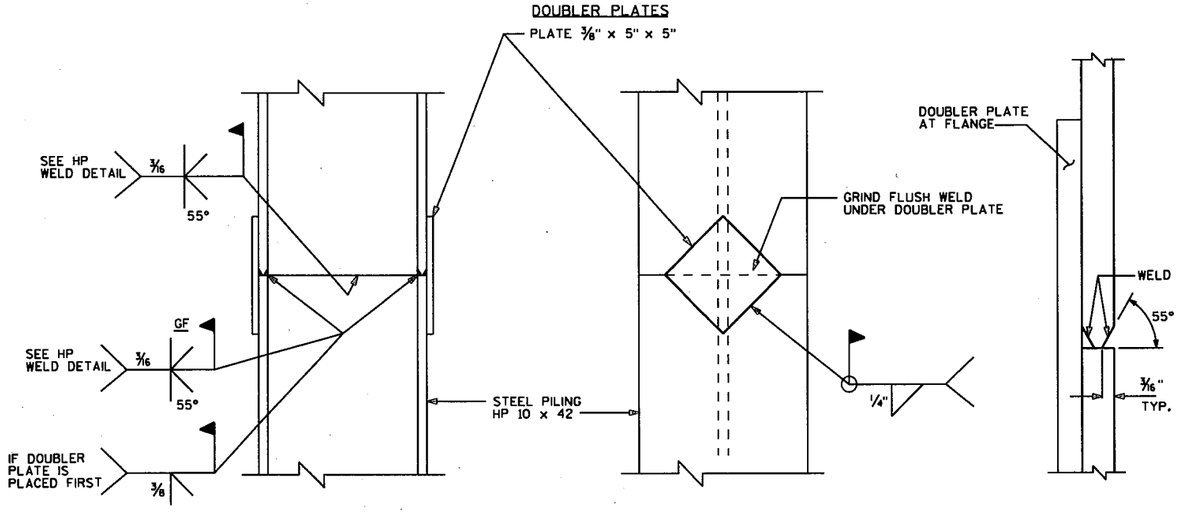
21



CROSS SECTION THROUGH BRIDGE



PROFILE GRADE LINE



STEEL 'HP' SHAPES

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

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.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

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.

ALL VOIDS BETWEEN HEAVY RIPRAP SHALL BE "FILLED" USING "SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR" FROM EL. 754.0 TO THE TOP OF BERM AND INCLUDING THE HORIZONTAL SURFACE OF THE BERM.

THE FINISHED GRADED SECTION SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

THE LOWER LIMITS OF EXCAVATION FOR STRUCTURES FOR THE ABUTMENTS SHALL BE THE BOTTOM OF THE SLOPE PROTECTION.

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.

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

PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND SIDES OF THE DECK AND 1'-0" UNDER DECK AT EDGES.

THIS BRIDGE WILL REPLACE P-70-0911, A SINGLE SPAN CONCRETE BRIDGE WITH TOTAL LENGTH OF 24.0' BETWEEN INSIDE FACE OF ABUTMENTS AND CLEAR ROADWAY WIDTH OF 29.5'.

TOTAL ESTIMATED QUANTITIES

BID ITEMS	BID ITEMS	UNIT	WEST ABUT.	EAST ABUT.	SUPER.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY, MINIMAL DEBRIS, STA 52+23	LS				1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES (B-70-317)	LS				1
210.0100	BACKFILL STRUCTURE	CY	62	62		124
502.0100	CONCRETE MASONRY BRIDGES	CY	27	27	63	117
502.3200	PROTECTIVE SURFACE TREATMENT	SY			134	134
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1940	1940		3880
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1110	1110	10,900	13,120
513.7050	RAILING STEEL TYPE W (B-70-317)	LS				1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9		18
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	175	175		350
606.0300	RIPRAP HEAVY	CY	65	65		130
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	82	82		164
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	74	74		148
SPV.0195.01	SELECT CRUSHED MATERIAL FOR TRAVEL CORRIDOR	TON	15	15		30
	NON-BID ITEMS					
	PREFORMED JOINT FILLER	SIZE				½",¾"

STATE PROJECT NUMBER

4617-07-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-70-317

DRAWN BY SJG | PLANS CK'D. PJE

SECTION, NOTES & QUANTITIES

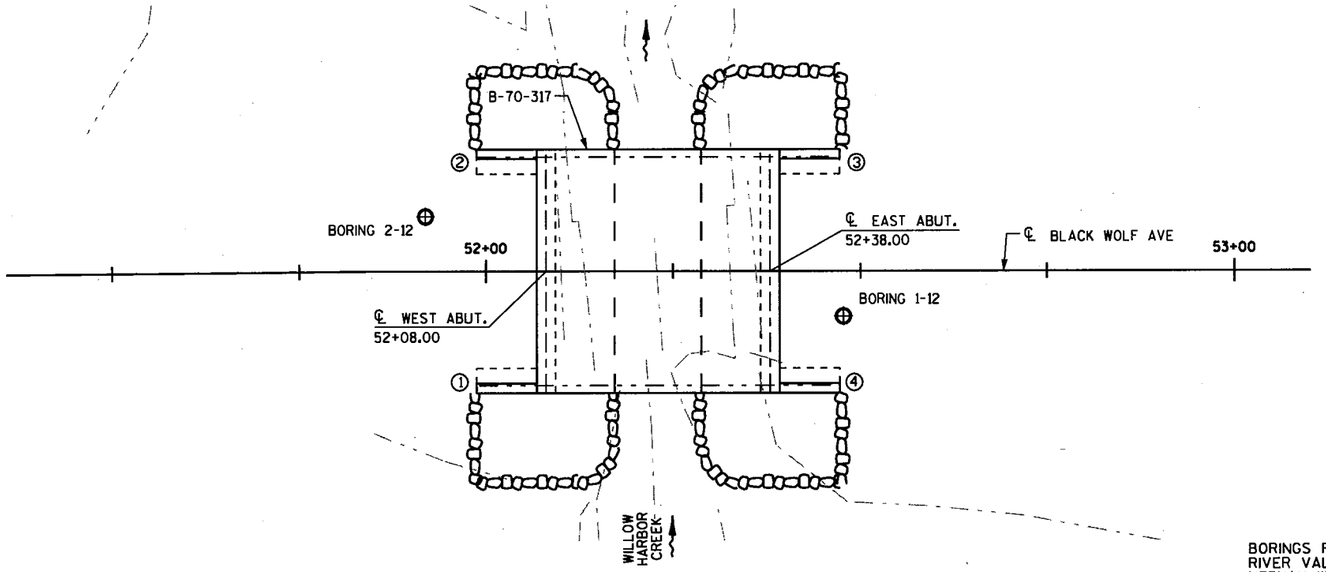
SHEET 2 OF 10

22

8

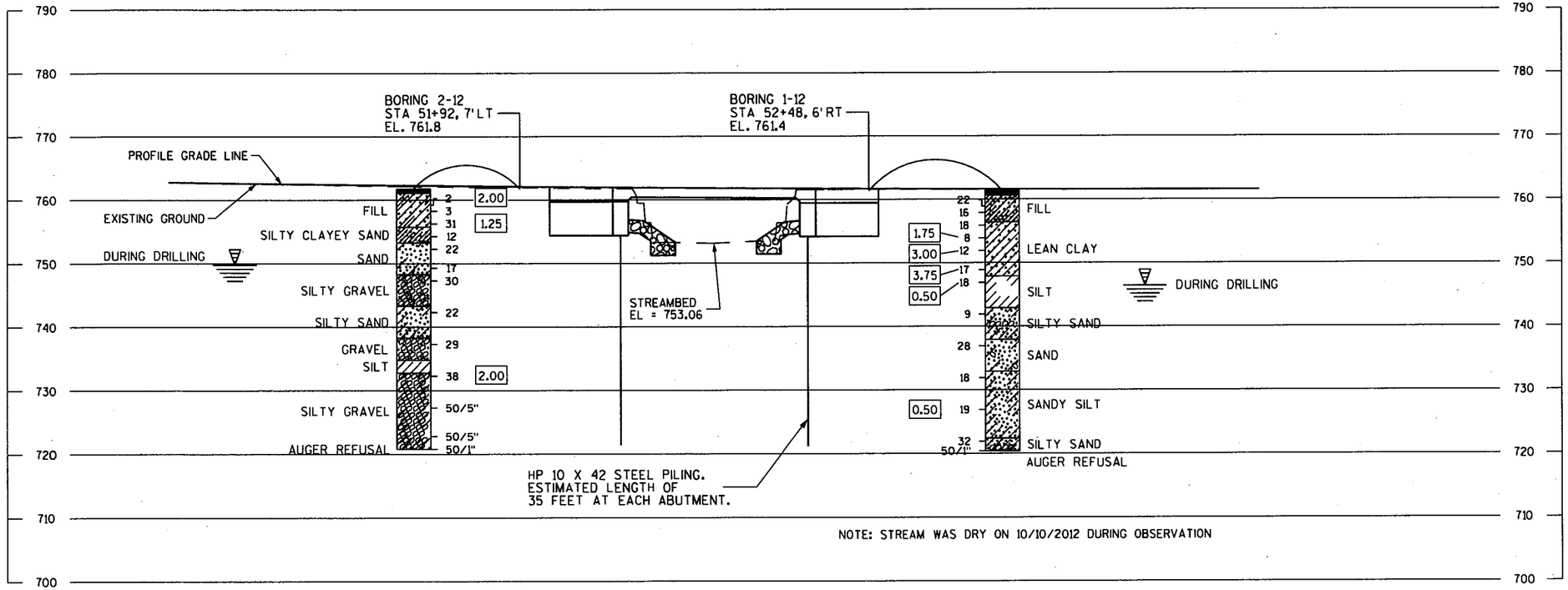
8

FILE NAME : L:\Projects\12297\Dwg\B-70-317\08_02section notes.DGN PLOT DATE : 09/16/13 PLOT TIME : 8:24:12 AM PLOT BY : dnevers



BORINGS PERFORMED BY:
RIVER VALLEY TESTING CORP.
NEENAH, WISCONSIN
OCTOBER 22, 2012

PLANS PREPARED BY DONOHUE & ASSOCIATES, INC.



NOTE: STREAM WAS DRY ON 10/10/2012 DURING OBSERVATION

STATE PROJECT NUMBER

4617-07-71

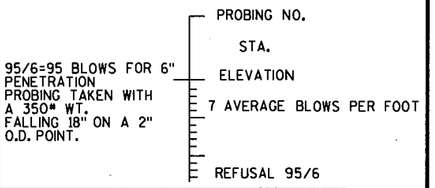
ABBREVIATIONS

F — FINE M — MEDIUM C — COARSE
WS — WEATHERED SO — SOUND

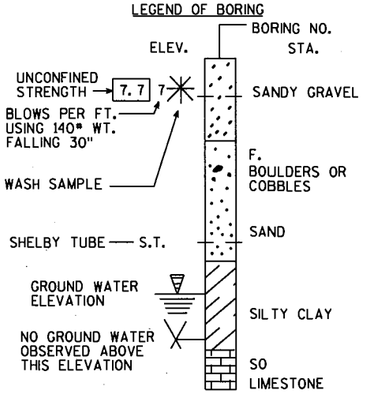
MATERIAL SYMBOLS

TOPSOIL, SAND, GRAVEL, SILT, PEAT, CLAY, SANDSTONE, LIMESTONE, IGNEOUS ROCK

LEGEND OF PROBING



LEGEND OF BORING



UNLESS OTHERWISE SPECIFIED, THE BLOWS PER FOOT AT THE LOCATIONS INDICATED ARE BASED ON DRIVING A 2" O.D. X 1.4" I.D. SPLIT SPOON SAMPLER WITH A 140# HAMMER HAVING A FREE FALL OF 30". THE BLOW COUNT IS TAKEN IN UNDISTURBED SOIL IMMEDIATELY BELOW A CASED OR OPEN HOLE ELIMINATING SIDE FRICTION ON THE DRIVE PIPE.

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE THE DEPTHS INVESTIGATED ARE LIMITED AND THE AREA OF THE BORINGS AND/OR SOUNDINGS IS VERY SMALL IN RELATION TO THE ENTIRE AREA, THE WISCONSIN DEPARTMENT OF TRANSPORTATION DOES NOT WARRANT CONDITIONS BELOW THE DEPTHS INVESTIGATED OR THAT THE CLASSIFICATION OF MATERIAL ENCOUNTERED IN THESE INVESTIGATIONS IS NECESSARILY TYPICAL OF THE ENTIRE SITE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-70-317

DRAWN BY SJG | PLANS CK'D. PJE

SUBSURFACE EXPLORATION

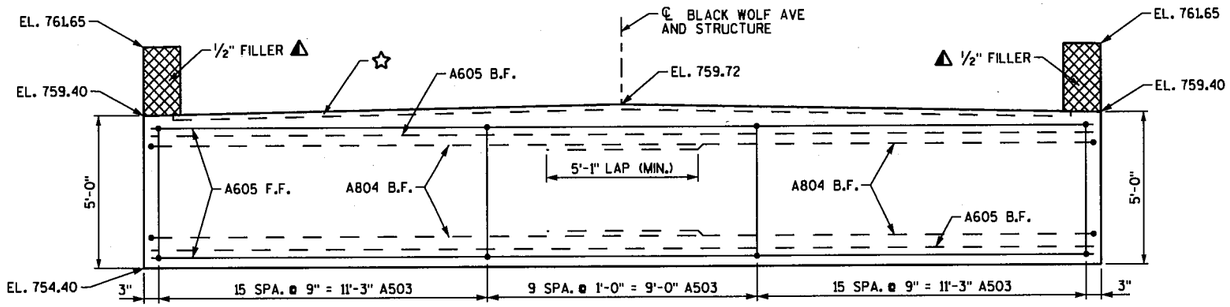
SHEET 3 OF 10

23

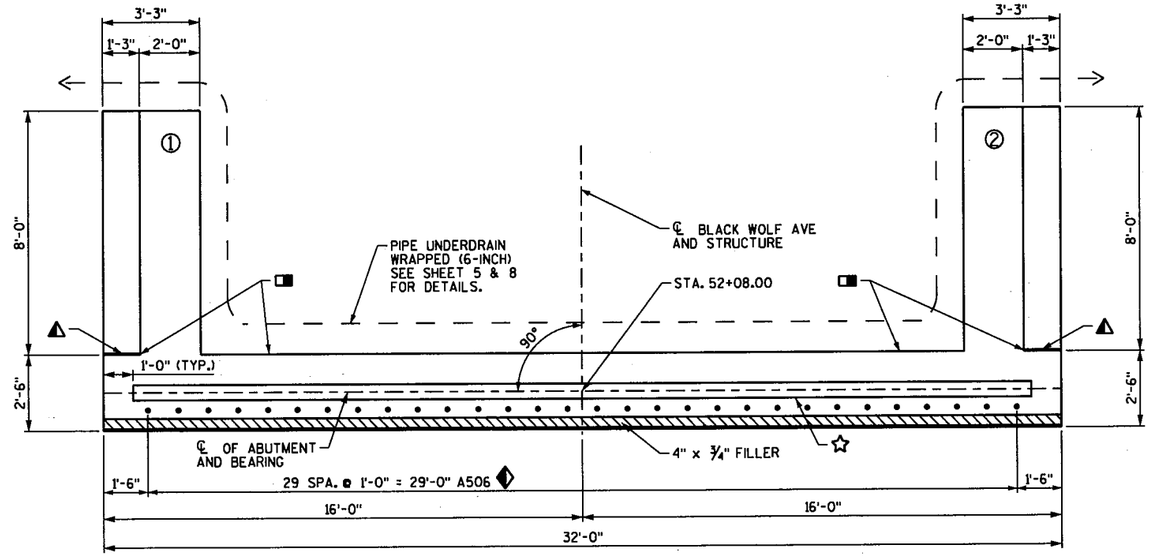
8

8

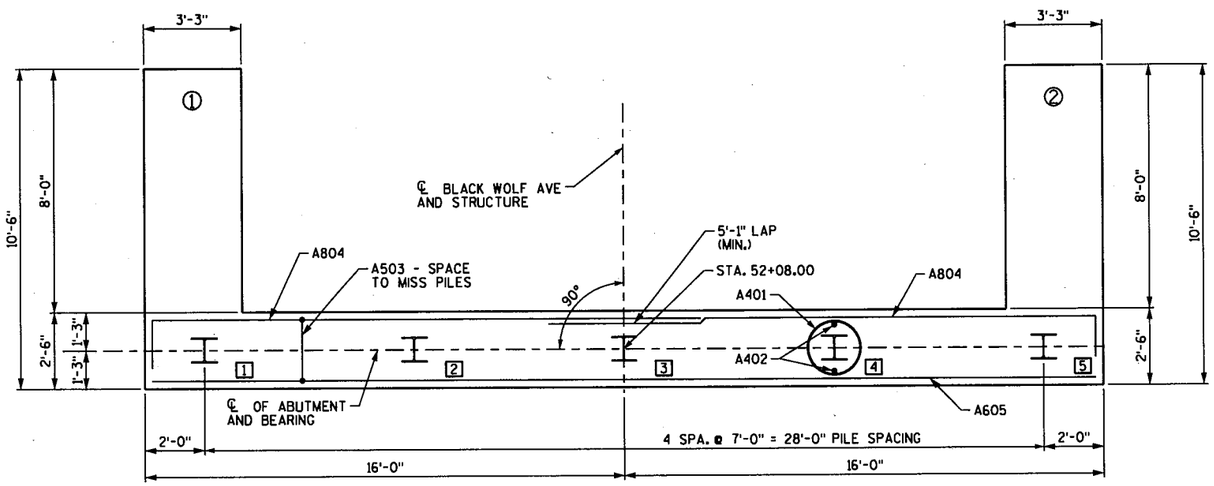
STATE PROJECT NUMBER
4617-07-71



ELEVATION



PLAN



PLAN

N

LEGEND

☆ KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" X 6".

▬ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.

▲ NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE.)

◆ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL CONCRETE SET HAS TAKEN PLACE. EMBED BARS 1'-0".

FOR PILE SPLICE DETAIL SEE SHEET 2

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-317

DRAWN BY SJG | PLANS CK'D. PJE

WEST ABUTMENT

SHEET 4 OF 10

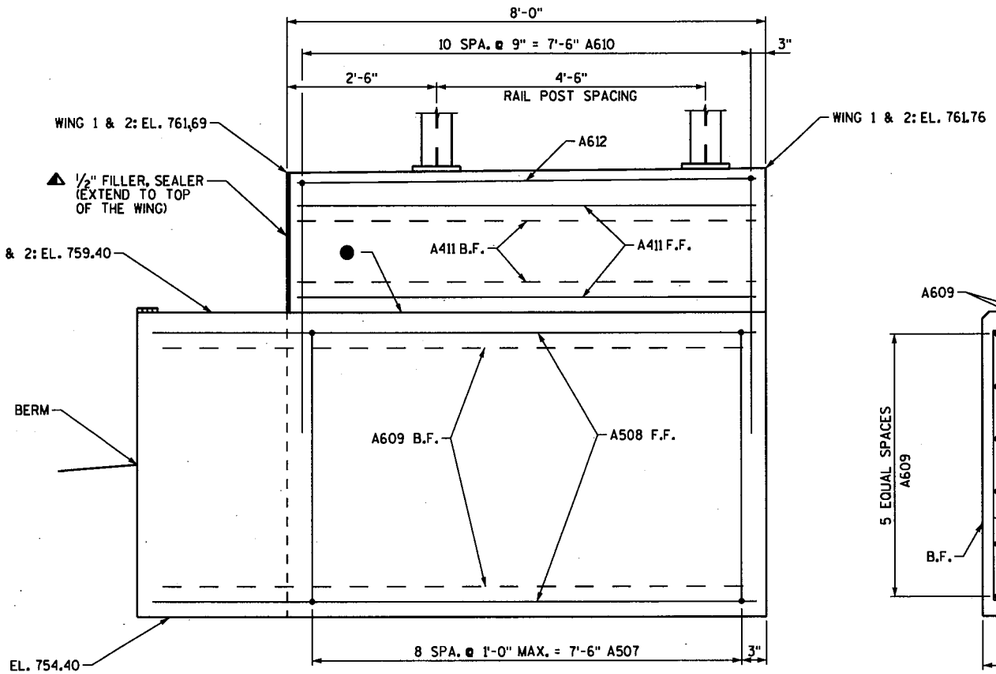
8

8

FILE NAME : L:\Projects\12297\Dwg\B-70-317\08_04west abutment.DGN
PLOT DATE : 07/09/13
PLOT TIME : 3:37:45 PM
PLOT BY : sginal

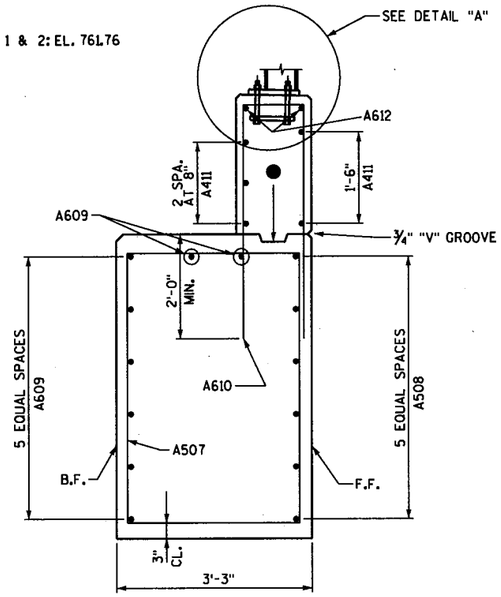
STATE PROJECT NUMBER

4617-07-71

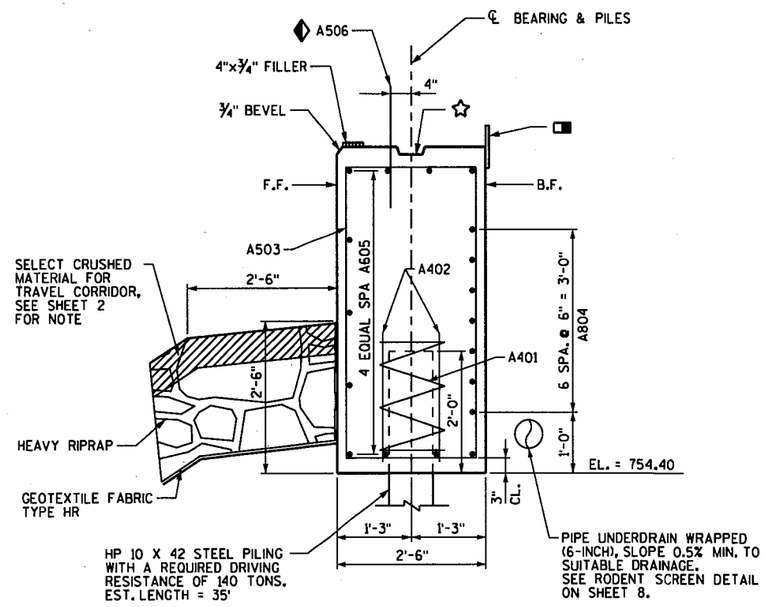


ELEVATION - WING 2

(LOOKING AT FRONT FACE)
(WING 1 SIMILAR)

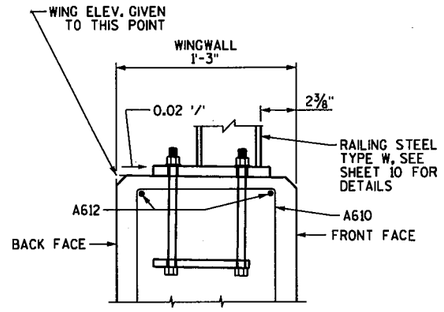


SECTION THRU WING



NOTE: HORIZ. BARS INSIDE THE ABUTMENT BODY NOT OTHERWISE IDENTIFIED ARE A605 BARS.

SECTION THRU ABUT BODY



DETAIL A
TOP OF WING

LEGEND

- ● OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" X 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.
- ▬ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- ▲ NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)
- ◆ A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL CONCRETE SET HAS TAKEN PLACE. EMBED BARS 1'-0".
- ☆ KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" X 6".

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-317

DRAWN BY SJG | PLANS CK'D. PJE

WEST ABUTMENT, WINGS 1 & 2

SHEET 5 OF 10

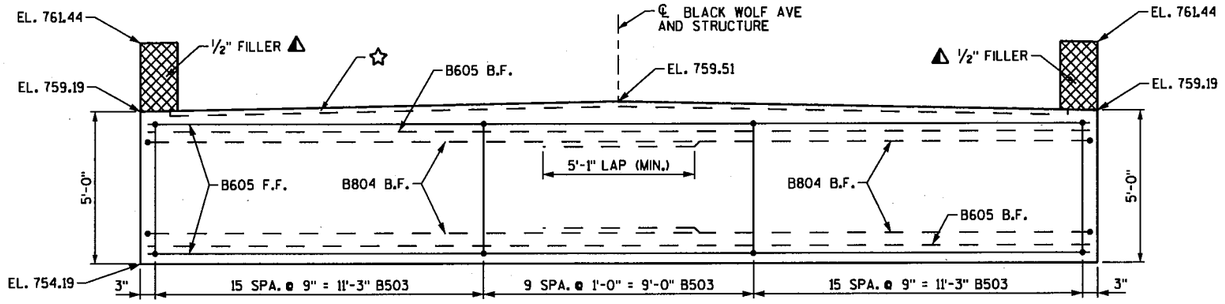
25

8

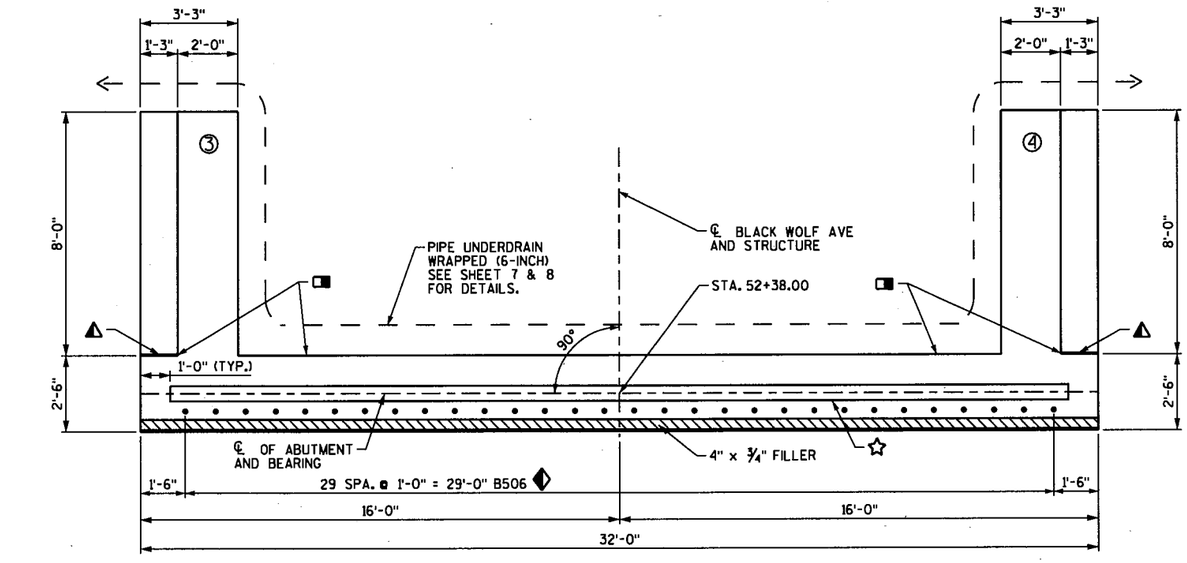
8

STATE PROJECT NUMBER

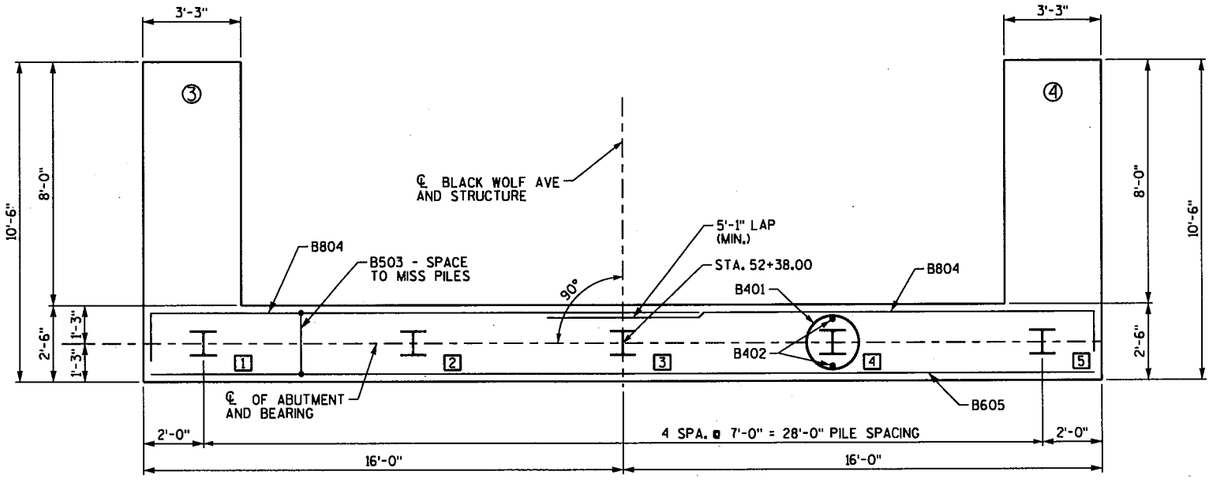
4617-07-71



ELEVATION



PLAN



PLAN

N

LEGEND

☆ KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" X 6".

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◆ B506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL CONCRETE SET HAS TAKEN PLACE. EMBED BARS 1'-0".

FOR PILE SPLICE DETAIL SEE SHEET 2

B.F. DENOTES BACK FACE

F.F. DENOTES FRONT FACE

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-317

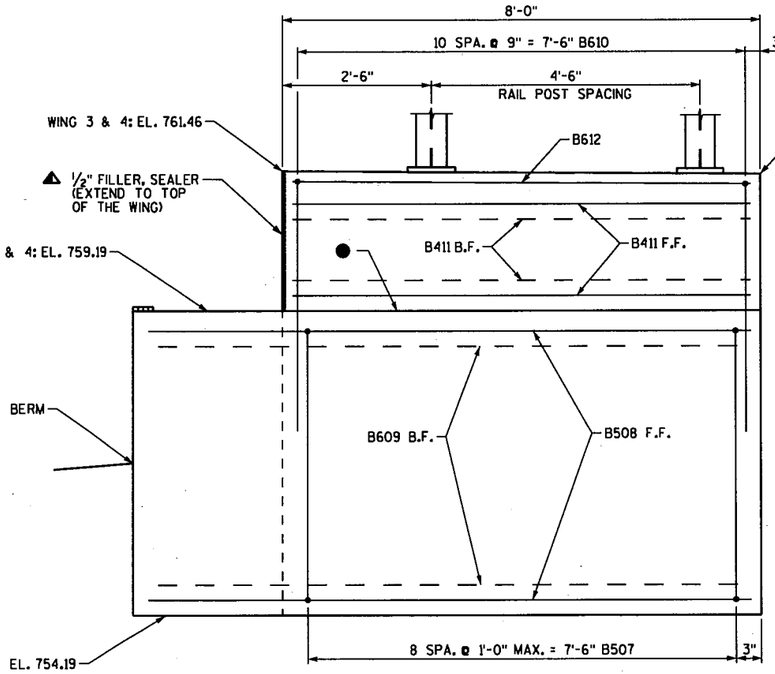
DRAWN BY SJG | PLANS CK'D. PJE

EAST ABUTMENT

SHEET 6 OF 10

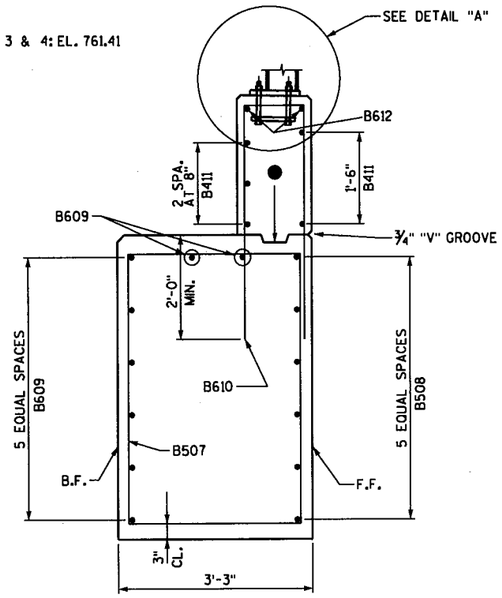
STATE PROJECT NUMBER

4617-07-71

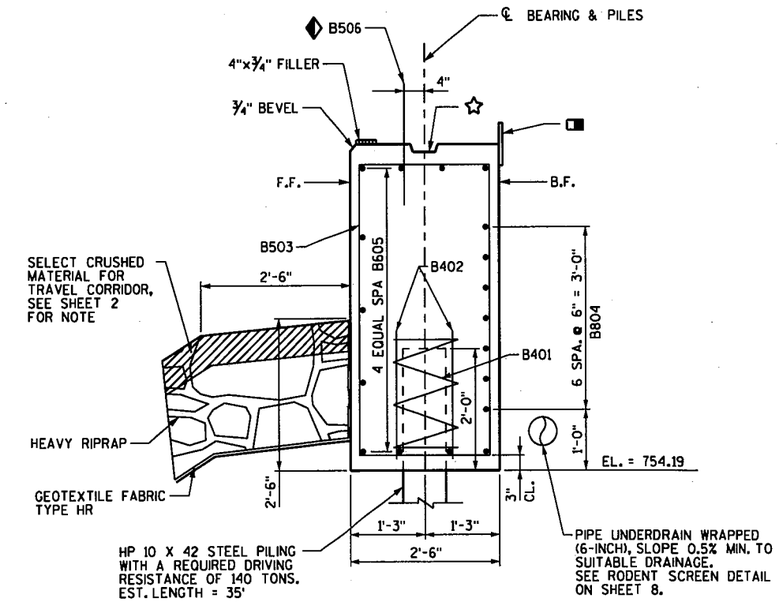


ELEVATION - WING 4

(LOOKING AT FRONT FACE)
(WING 3 SIMILAR)

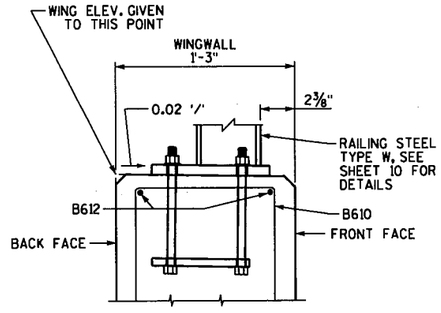


SECTION THRU WING



NOTE: HORIZ. BARS INSIDE THE ABUTMENT BODY NOT OTHERWISE IDENTIFIED ARE B605 BARS.

SECTION THRU ABUT BODY



DETAIL A
TOP OF WING

LEGEND

- ● OPT. KEYED CONST. JOINT - FORMED BY A SURFACED BEVELED 2" X 6" WITH RUBBERIZED MEMBRANE WATERPROOFING ON B.F.
- ▬ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACK FACE.
- ▲ NOTE: SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.)
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NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-317

DRAWN BY SJG | PLANS CK'D. PJE

EAST ABUTMENT, WINGS 3 & 4

SHEET 7 OF 10

27

8

8

FILE NAME : L:\Projects\12297\Dwg\B-70-317\08_07east abut wings.dgn PLOT DATE : 09/16/13 PLOT TIME : 8:07:10 AM PLOT BY : dnevers

STATE PROJECT NUMBER
4617-07-71

BILL OF BARS - WEST ABUTMENT

COATED: 1110 LBS
UNCOATED: 1940 LBS

BAR MARK	COAT	NUMBER REQUIRED	LENGTH	BAR SERIES	BENT	LOCATION
A401		5	28'-0"		X	BODY AT PILES
A402		10	2'-3"			BODY AT PILES
A503		40	13'-9"		X	BODY STIRRUPS
A804		14	19'-8"		X	BODY HORIZONTAL AT BACK FACE
A605		11	31'-8"			BODY HORIZONTAL
A506	X	30	2'-0"			BODY DOWELS
A507	X	18	15'-3"		X	WING STIRRUPS
A508	X	12	10'-2"			WING HORIZONTAL AT FRONT FACE
A609	X	16	9'-11"			WING HORIZONTAL AT BACK FACE
A610	X	22	9'-1"		X	WING VERTICAL
A411	X	10	7'-7"			WING HORIZONTAL AT EACH FACE
A612	X	4	7'-7"			WING HORIZONTAL AT EACH FACE

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

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

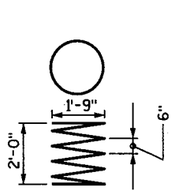
BILL OF BARS - EAST ABUTMENT

COATED: 1110 LBS
UNCOATED: 1940 LBS

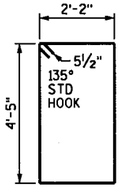
BAR MARK	COAT	NUMBER REQUIRED	LENGTH	BAR SERIES	BENT	LOCATION
B401		5	28'-0"		X	BODY AT PILES
B402		10	2'-3"			BODY AT PILES
B503		40	13'-9"		X	BODY STIRRUPS
B804		14	19'-8"		X	BODY HORIZONTAL AT BACK FACE
B605		11	31'-8"			BODY HORIZONTAL
B506	X	30	2'-0"			BODY DOWELS
B507	X	18	15'-3"		X	WING STIRRUPS
B508	X	12	10'-2"			WING HORIZONTAL AT FRONT FACE
B609	X	16	9'-11"			WING HORIZONTAL AT BACK FACE
B610	X	22	9'-1"		X	WING VERTICAL
B411	X	10	7'-7"			WING HORIZONTAL AT EACH FACE
B612	X	4	7'-7"			WING HORIZONTAL AT EACH FACE

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

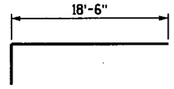
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.



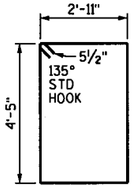
A401
B401



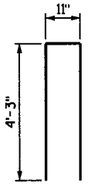
A503
B503



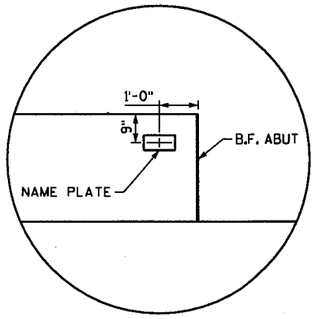
A804
B804



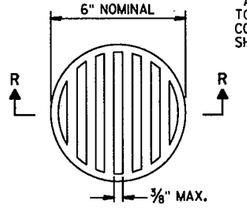
A507
B507

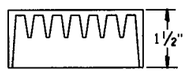


A610
B610



NAME PLATE LOCATION
(WING 1 ONLY)





SECTION R-R

RODENT SCREEN

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

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-317

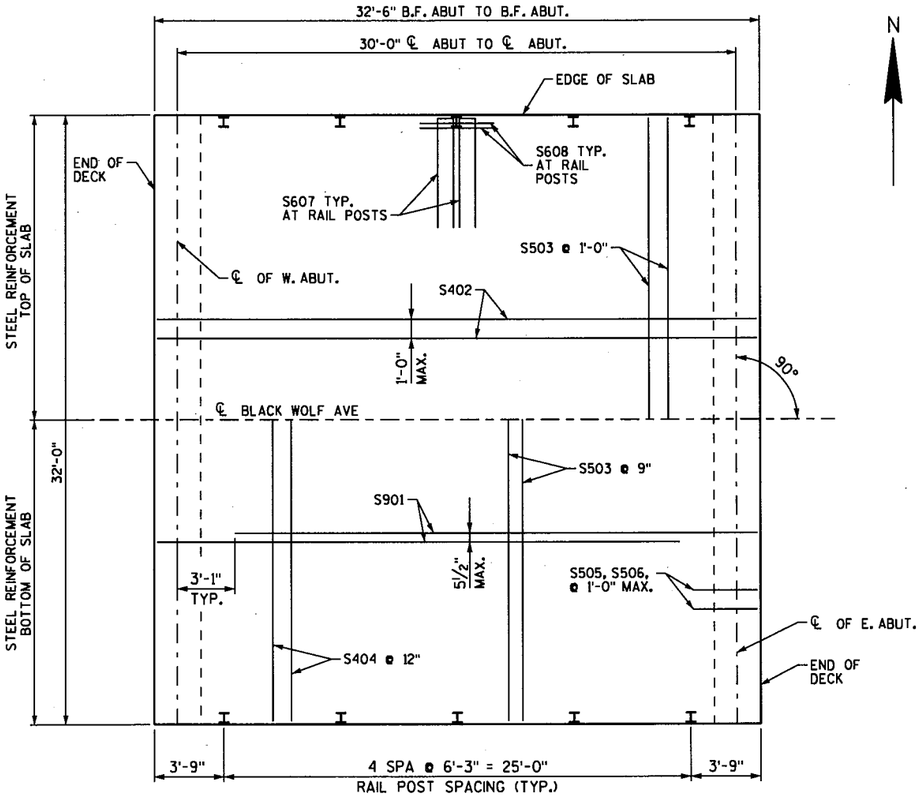
DRAWN BY SJG | PLANS CK'D. PJE

ABUTMENT
BILL OF BARS

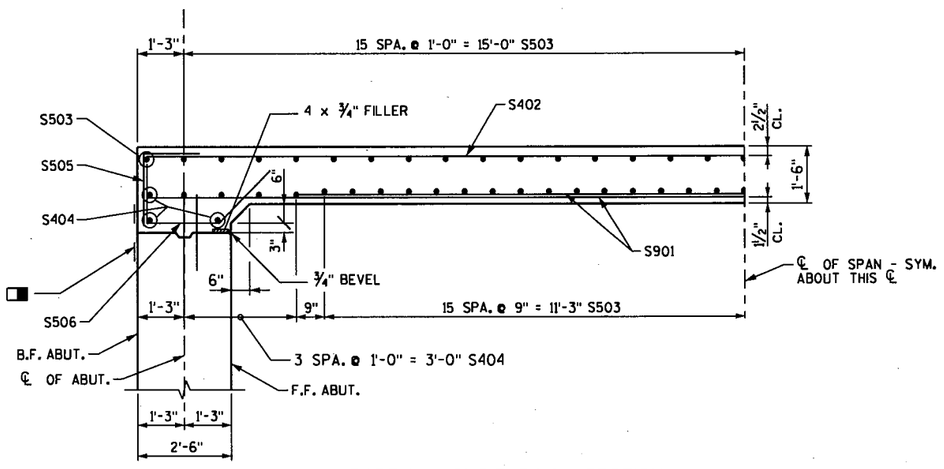
SHEET 8 OF 10

28

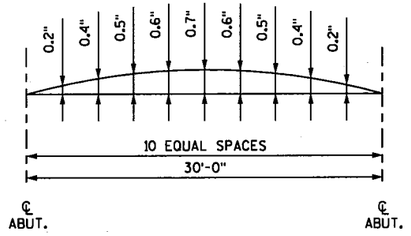
STATE PROJECT NUMBER
4617-07-71



SLAB PLAN



PARTIAL LONGITUDINAL SECTION



CAMBER DIAGRAM

CAMBER SPANS AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

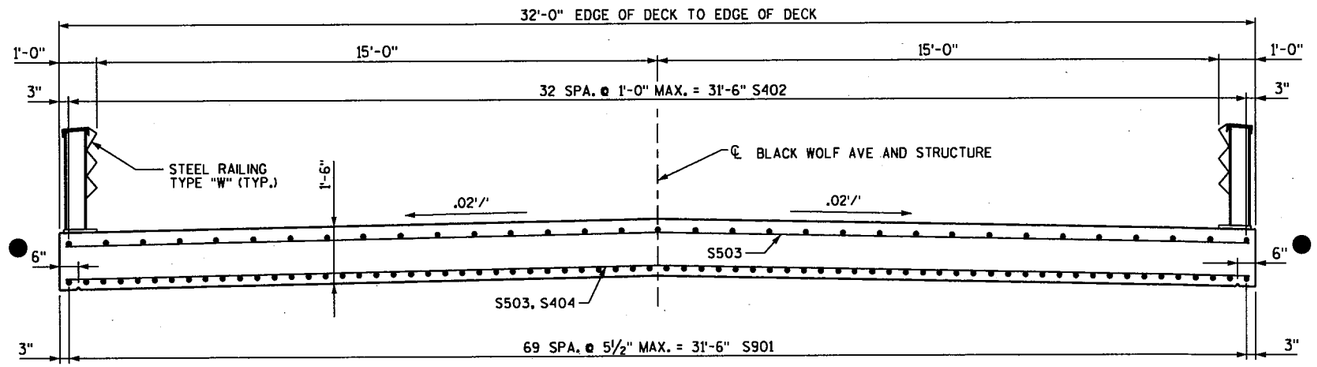
NOTES

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

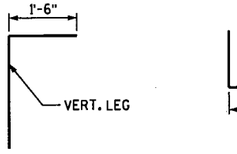
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

● ¾" CONTINUOUS DRIP GROOVE. TERMINATE 2'-0" FROM FRONT FACE OF ABUT.

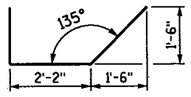
■ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HORIZONTAL AND VERTICAL JOINTS ON BACKFACE.



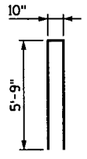
CROSS SECTION THRU ROADWAY



S505



S506



S607

BILL OF BARS - SUPERSTRUCTURE

COATED: 10,900 LBS

BAR MARK	COAT	NUMBER REQUIRED	LENGTH	BAR SERIES	BENT	LOCATION
S901	X	70	28'-0"			SLAB LONGITUDINAL BOTTOM
S402	X	33	32'-2"			SLAB LONGITUDINAL TOP
S503	X	64	31'-8"			SLAB TRANSVERSE TOP & BOTTOM
S404	X	14	31'-8"			SLAB TRANSVERSE BOTTOM
S505	X	66	3'-3"		X	SLAB AT ABUTMENT
S506	X	66	6'-0"		X	SLAB AT ABUTMENT
S607	X	20	12'-0"		X	SLAB AT RAIL POSTS
S608	X	20	4'-0"			SLAB AT RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

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

TOP OF DECK ELEVATIONS

	℄ OF W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	℄ OF E. ABUT.
NORTH EDGE OF SLAB	761.65	761.63	761.61	761.58	761.56	761.54	761.52	761.50	761.48	761.46	761.44
℄	761.97	761.95	761.93	761.90	761.88	761.86	761.84	761.82	761.80	761.78	761.76
SOUTH EDGE OF SLAB	761.65	761.63	761.61	761.58	761.56	761.54	761.52	761.50	761.48	761.46	761.44

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-70-317

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SUPERSTRUCTURE

SHEET 9 OF 10

29

8

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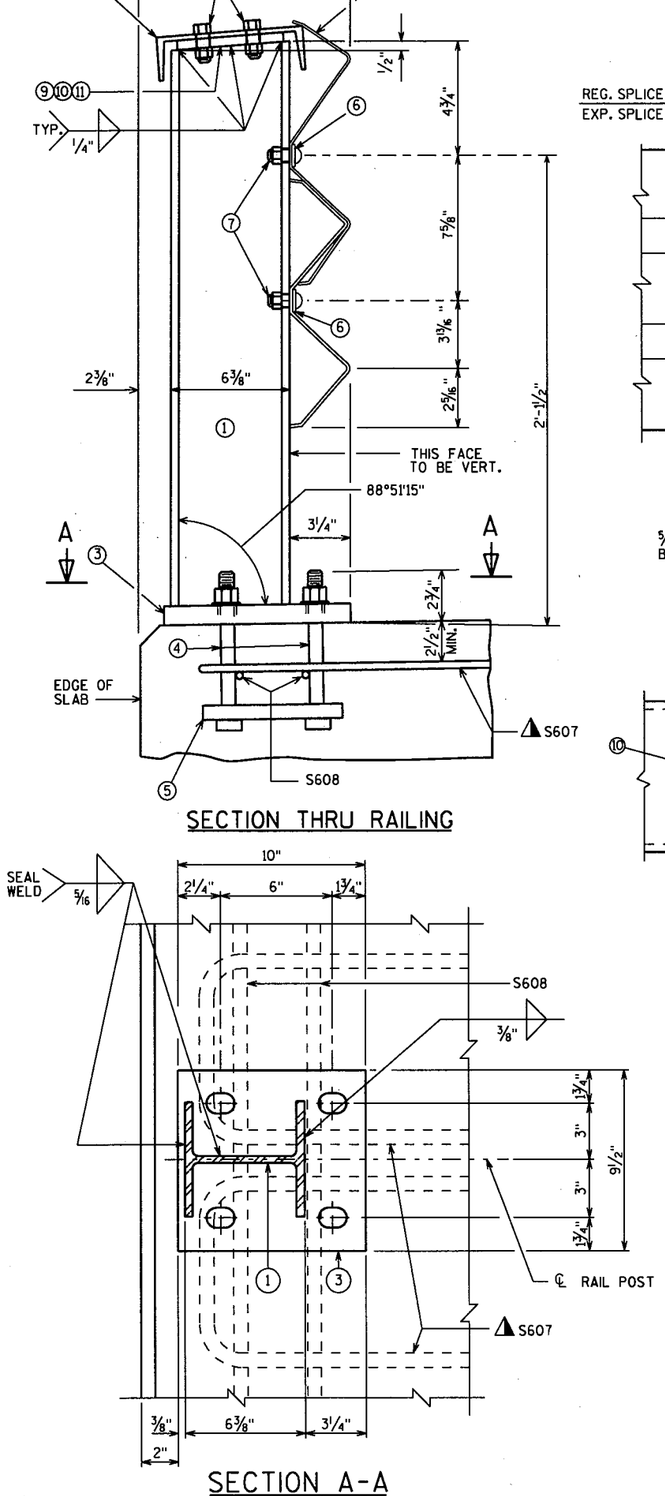
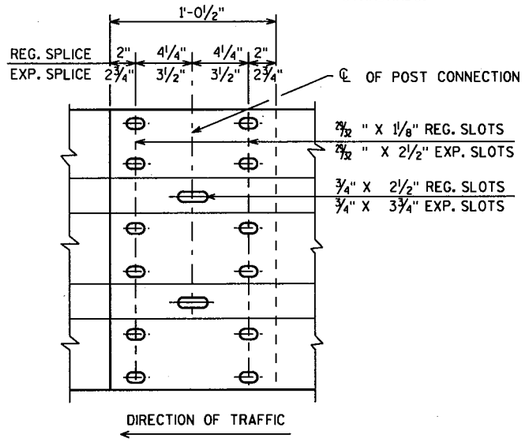
STATE PROJECT NUMBER

4617-07-71

SECTION THRU RAILING



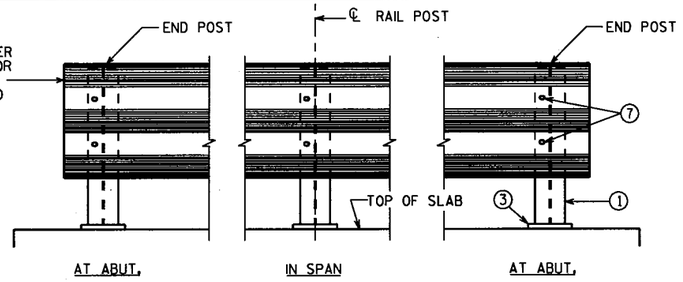
SECTION A-A



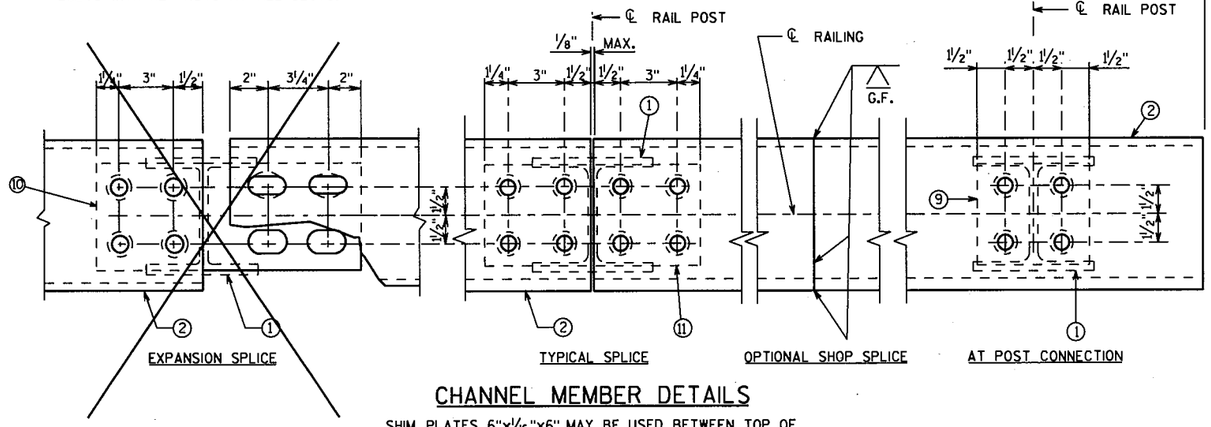
RAIL MEMBER SPLICE

5/8" DIA. BUTTON HEAD OVAL SHOULDER BOLTS WITH HEX NUTS AT ALL SLOTS.

AT END POSTS, RAIL MEMBER SHALL HAVE PROVISIONS FOR A THRIE BEAM CONNECTION AS SHOWN ON SDD 14 B 20 STANDARDS.

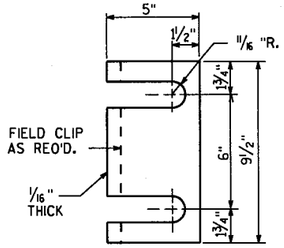


ELEVATION



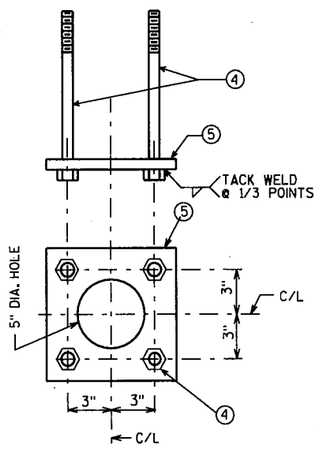
CHANNEL MEMBER DETAILS

SHIM PLATES 6"x1/16"x6" MAY BE USED BETWEEN TOP OF POST AND CHANNEL MEMBER TO ACHIEVE VERT. ALIGNMENT.



POST SHIM DETAIL

(4 PER POST)



ANCHORAGE DETAIL

LEGEND

① W6x25 WITH 2 - 3/4" x 2 1/2" VERT. SLOTS IN FLG. (SLOT ON OTHER SIDE OF WEB IS OPTIONAL) FOR NO. 7. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POSTS VERTICAL AND NORMAL TO GRADE LINE.

② C8x11.5 WITH 13/16 " DIA. HOLES FOR NO. 8.

③ BASE PLATE 1" X 9 1/2" x 10" WITH 1 1/16" x 1 1/2" SLOTTED HOLES FOR ANCHOR BOLTS NO. 4. WELD TO NO. 1 AS SHOWN.

④ A325 - 7/8" DIA. HEX BOLTS (GALVANIZED) WITH A325 NUT AND WASHER. 14" LONG AT END POSTS AND AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 15". USE 8" LONG AT ALL OTHER LOCATIONS. 4 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 3. CHAMFER TOP OF BOLTS BEFORE THREADING.

⑤ 1/4" x 8" x 8" FLAT BAR WITH 13/16 " DIA. HOLES FOR ANCHOR BOLTS NO. 4.

⑥ 1 3/4" x 3" MOUNTING BOLT WASHER (GALVANIZED).

⑦ 5/8" DIA. BUTTON HEAD POST MOUNTING BOLT WITH ROUND WASHER AND NUT.

⑧ 5/8" DIA. x 2" HEX BOLTS WITH NUT AND TWO WASHERS EACH.

⑨ PLATE 1/2" x 5 3/4" x 6" AT BASIC POST CONNECTION. 1 1/4" DIA. HOLES IN PLATE. 13/16 " DIA. HOLES IN CHANNEL.

⑩ ~~PLATE 1/2" x 5 3/4" x 1' 2 1/2". 1 1/4" DIA. HOLES IN PLATE. 13/16 " DIA. HOLES IN CHANNEL. EXPANSION SLOTS ON JOINT SIDE OF POST. 1 1/16 " x 2 1/4" IN PLATE, 13/16 " X 2 1/4" IN CHANNEL. (AT EXPANSION SPLICE.)~~

⑪ PLATE 1/2" x 5 3/4" x 11 1/2". 1 1/4" DIA. HOLES IN PLATE, 13/16 " DIA. HOLES IN CHANNEL. (AT TYPICAL SPLICE.)

GENERAL NOTES

BID ITEM SHALL BE "RAILING STEEL TYPE W B-70-317" WHICH INCLUDES ALL ITEMS SHOWN.

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 CUTS.

ALL MATERIAL EXCEPT ANCHORAGE DETAIL NO. 5 SHALL BE GALVANIZED AFTER FABRICATION.

PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS AND CHANNELS SHALL BE GIVEN A NO. 6 COMMERCIAL BLAST CLEANING BY SSPC SPECS.

ALL MATERIAL USED IN FABRICATION SHALL BE MADE FROM MATERIALS CONFORMING TO ASTM DESIGNATION A709 GRADE 36 UNLESS NOTED OTHERWISE.

FILL BOLT SLOT OPENINGS IN POST SHIMS & PLATE NO. 3 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER.

CHANNEL MEMBER SHALL BE ATTACHED CONTINUOUSLY TO A MINIMUM OF FOUR POSTS AND A MAXIMUM OF EIGHT (EXCEPT AT ABUTMENTS).

AT EXPANSION SLOTS IN RAIL AND CHANNEL MEMBERS, TIGHTEN BOLTS, BACK OFF ONE HALF TURN AND BURR THREADS. RAIL MEMBERS SHALL BE LAPPED IN THE DIRECTION OF TRAFFIC AND THE UPPER RAIL SHALL LAP THE LOWER RAIL.

STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.

⚠ TIE TO TOP MAT OF STEEL.

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STRUCTURE B-70-317

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STEEL RAILING TYPE "W"

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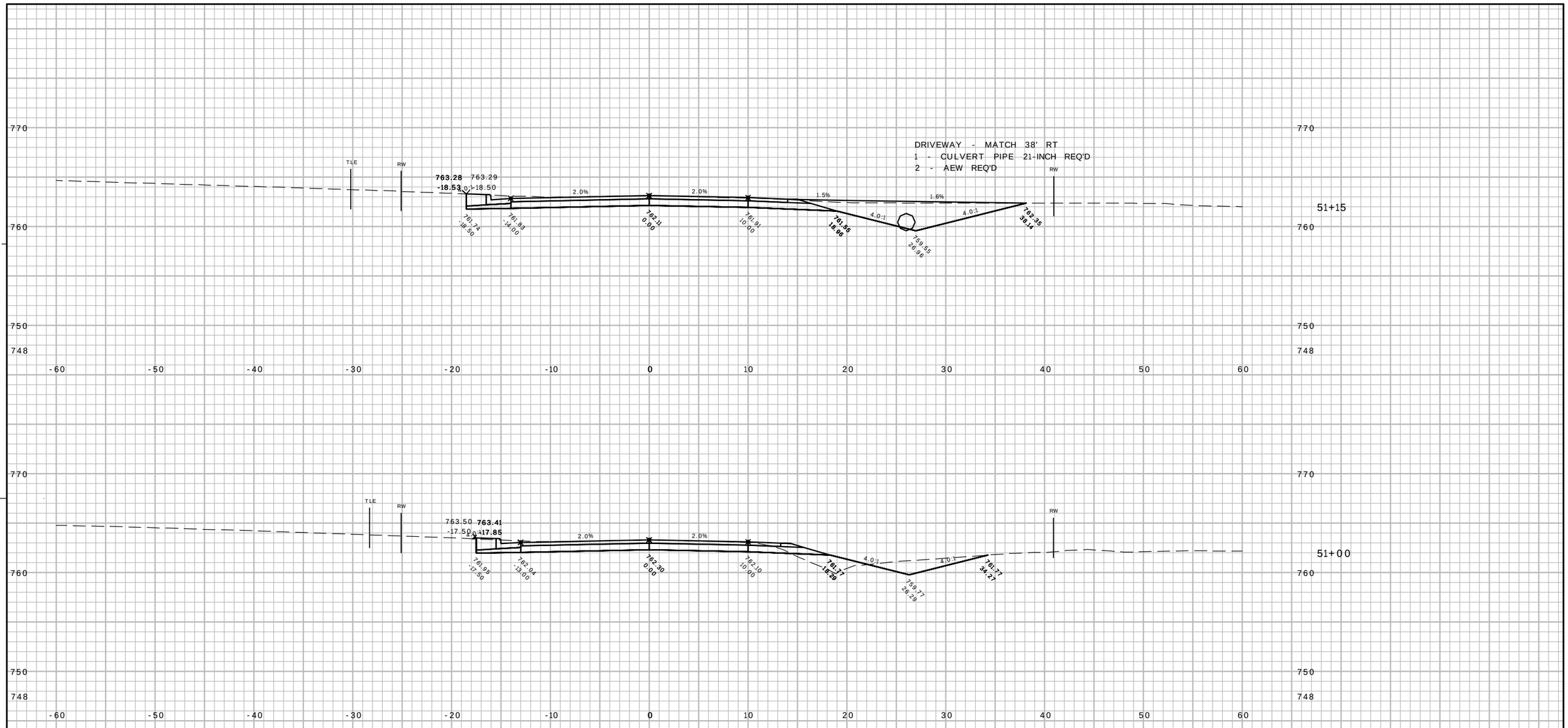

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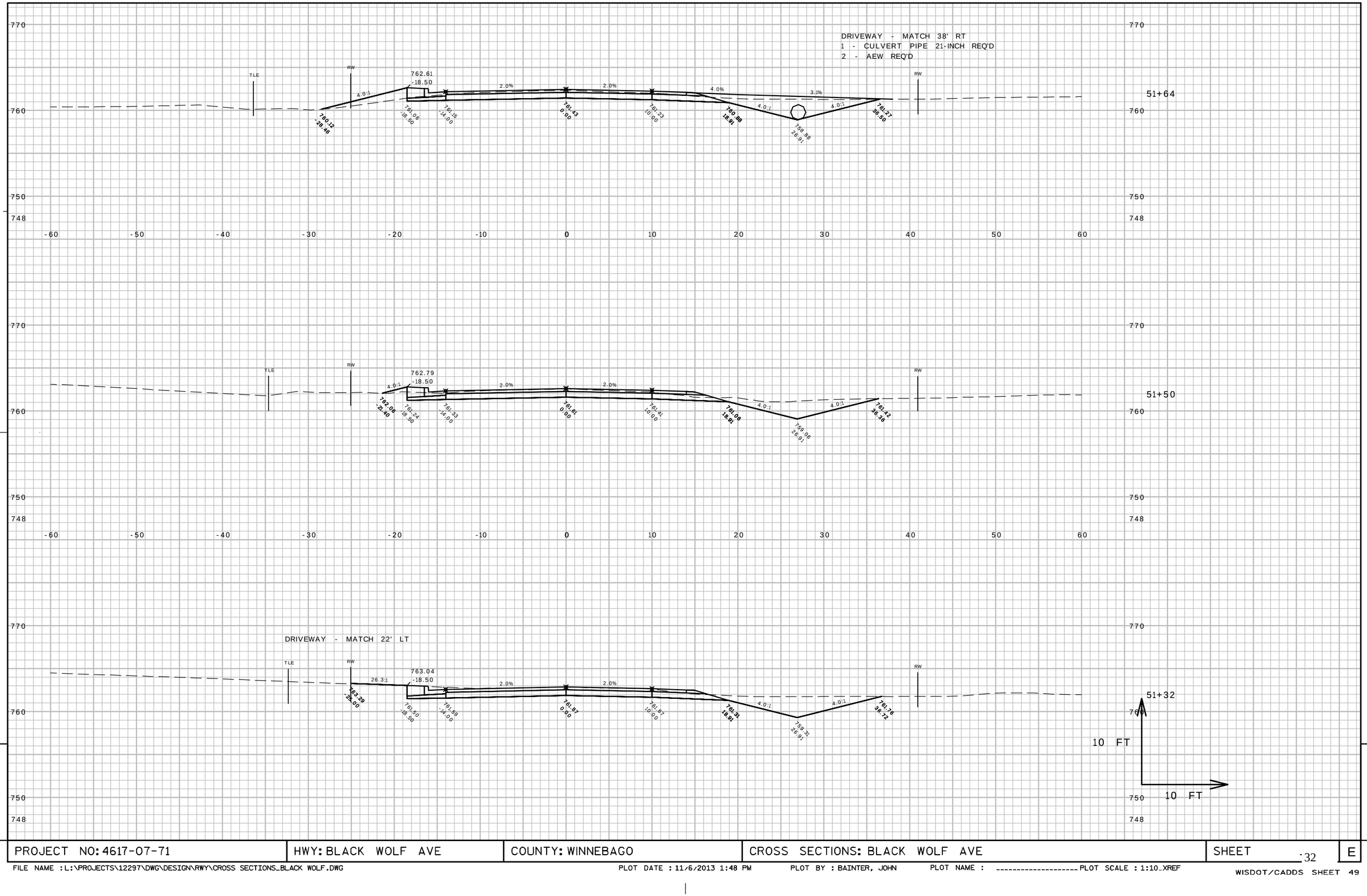
WISDOT/CADDS SHEET 49



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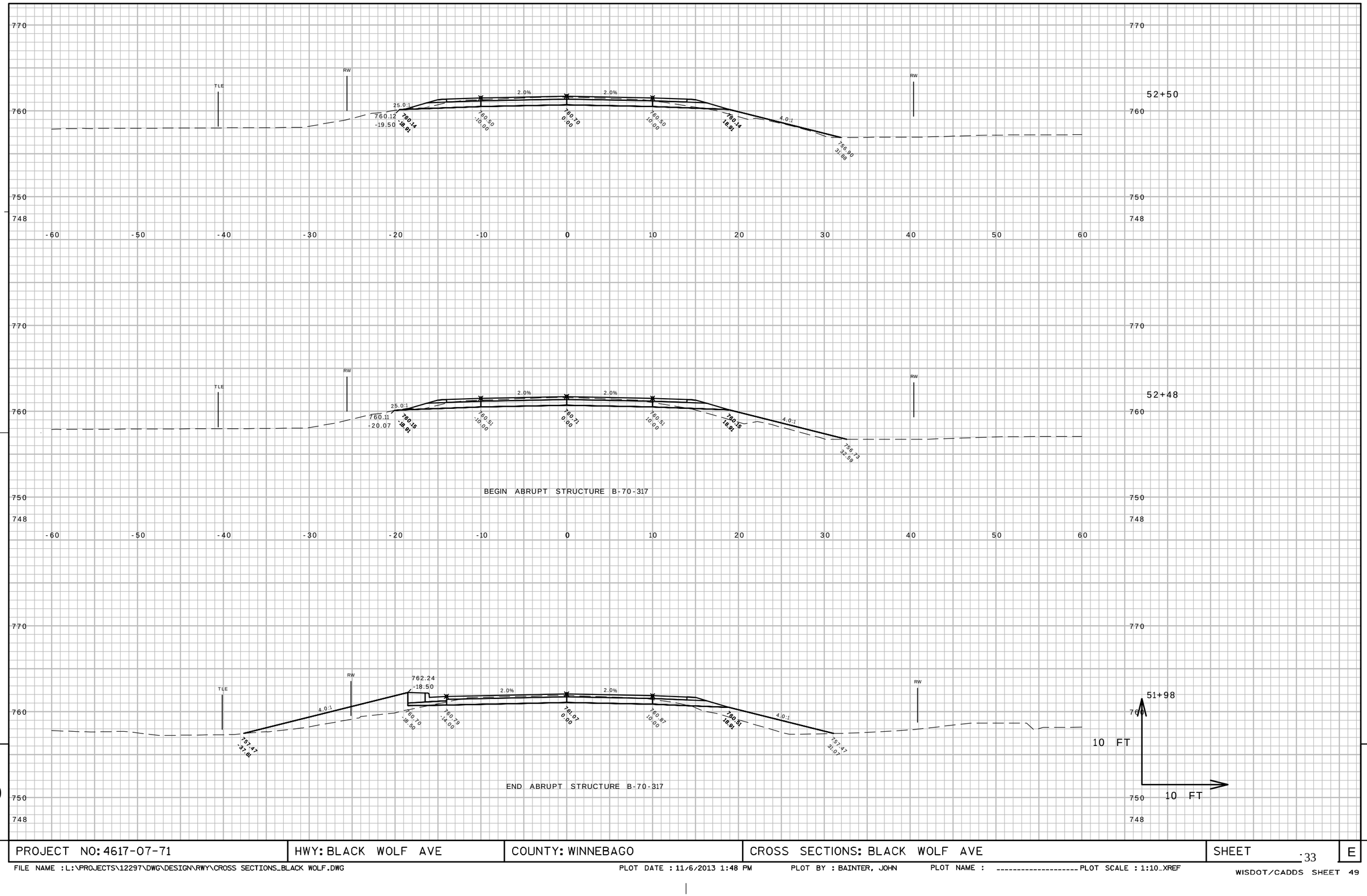

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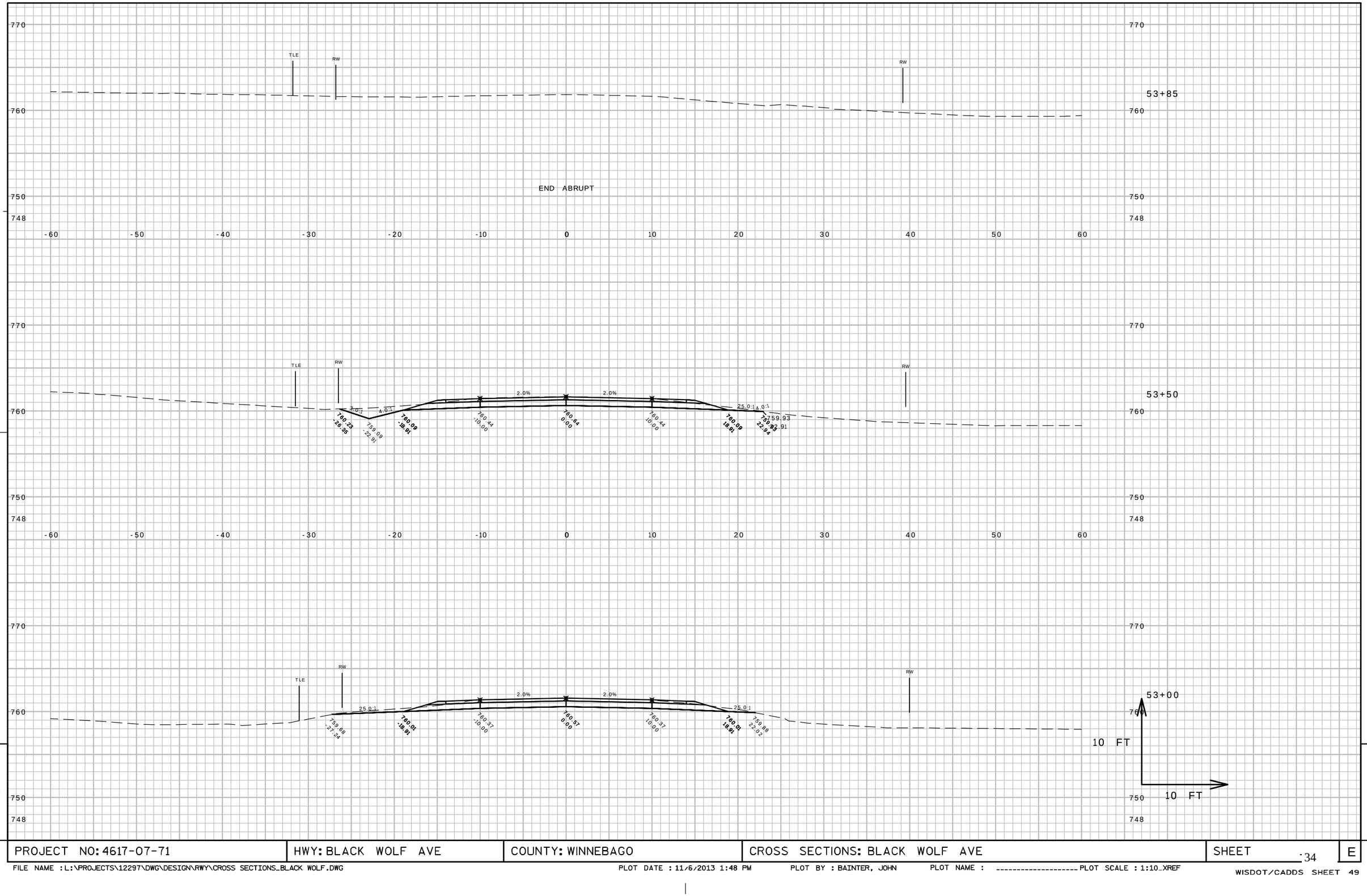

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Notes

Wisconsin Department of Transportation

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