SWL MAR 2017

PROJECT ID: 5025-00-71

WITH: N/A

COUNTY: MONROE

ORDER OF SHEETS

TOTAL SHEETS = 32

DESIGN DESIGNATION

A.A.D.T. (2011)	=	< 100
A.A.D.T. (2038)	=	< 100
D.H.V. (2038)	=	10
D.D. (%)	=	50/50
T. (% OF ADT)	=	5%
DESIGN SPEED	=	55 MPH
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN

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

PROFILE

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

UTILITIES

- OVERHEAD UTILITIES (OH)
- 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

TOWN OF TOMAH, HIAWATHA AVENUE

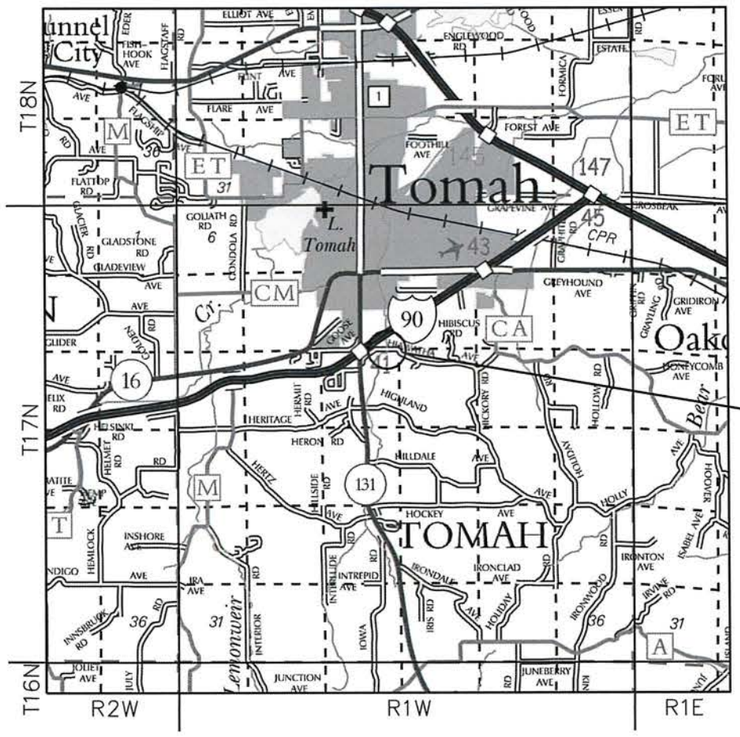
(COUNCIL CREEK BRIDGE, B-41-0302)

TOWN ROAD

MONROE COUNTY

STATE PROJECT NUMBER
5025-00-71

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5025-00-71	WISC 2017097	1



LAYOUT

SCALE 0 2 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.057 MILES

- BEGIN PROJECT
  STA 8+50
  Y - 384606.452
  X - 708739.834
- STRUCTURE
  B-41-0302
- END PROJECT
  STA 11+50
  Y - 384614.285
  X - 709039.722

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MONROE COUNTY, NAD88 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ACCEPTED FOR MONROE COUNTY

10/19/16 DATE — HIGHWAY COMMISSIONER

ACCEPTED FOR TOWN OF TOMAH

10/19/16 DATE — TOWN CHAIRMAN

ORIGINAL PLANS PREPARED BY

Cedar corporation

MENOMONIE - MADISON - GREEN BAY

www.cedarcorp.com

800-472-7372

WISCONSIN JOSHUA A. WEISS 37160 OREGON WI PROFESSIONAL ENGINEER

10/12/16 DATE — (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	CEDAR CORPORATION
Designer	CEDAR CORPORATION
Management Consultant	KL ENGINEERING, INC.

APPROVED FOR THE DEPARTMENT

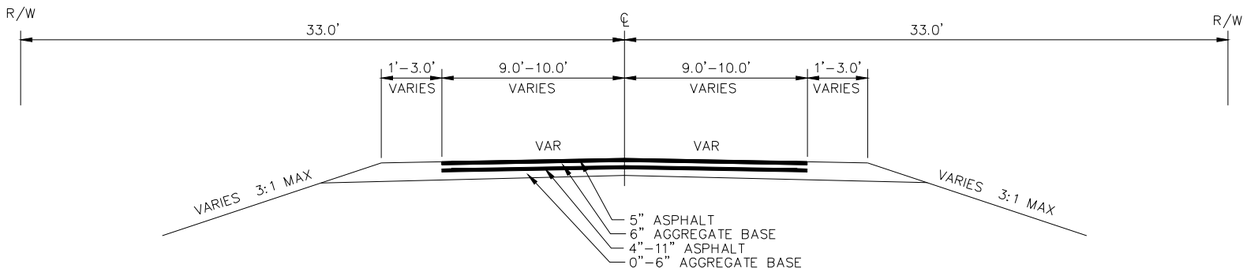
10/27/16 DATE — (Management Consultant Signature)

E

FILE NAME : I:\CLIENTS\M5714 MONROE COUNTY HIGHWAY DEPARTMENT\001 5025-00-00 HIAWATHA AVENUE OVER COUNCIL CREEK\100 CAD\DWG\010101_TIT5714.DWG 10/12/2016 8:33 AM
LAYOUT NAME - ****

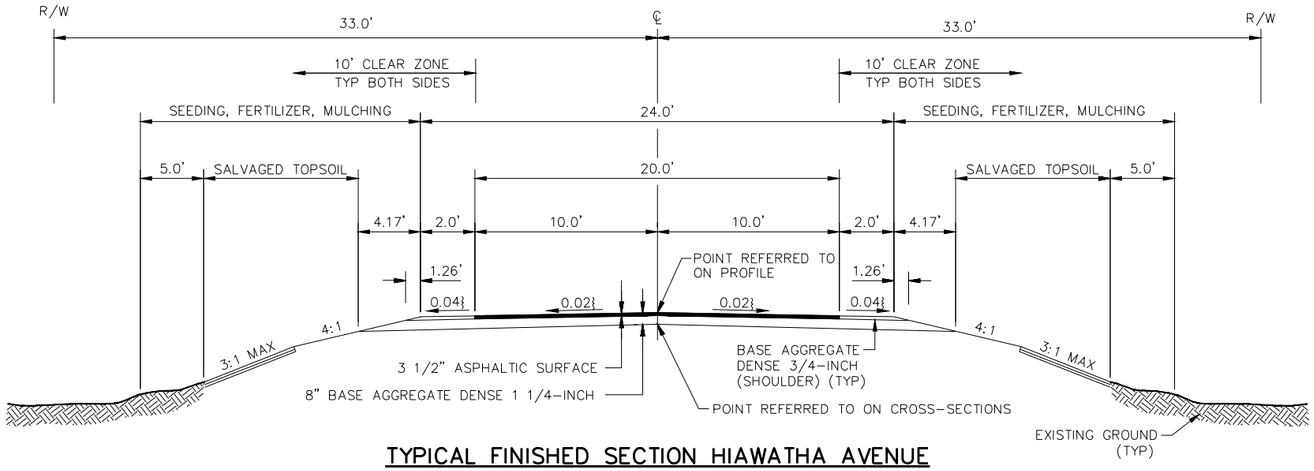
PLOT BY : BRIAN GENSKOW PLOT NAME :

WISDOT/CADDS SHEET 10



EXISTING TYPICAL SECTION HIAWATHA AVENUE

STA 8+50 – STA 11+50



TYPICAL FINISHED SECTION HIAWATHA AVENUE

STA 8+50 – STA 9+80.75
STA 10+19.25– STA 11+50

DNR LIAISON

DNR SERVICE CENTER
3550 MORMON COULEE ROAD
LA CROSSE, WI 54601
(608) 785-9115
KAREN KALVELAGE
karen.kalvelage@wisconsin.gov

DESIGN CONSULTANT

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(608) 249-5046
JOSH A WEISS, P.E.
josh.weiss@cedarcorp.com

MONROE COUNTY

MONROE CO. HIGHWAY DEPART.
803 WASHINGTON STREET
SPARTA, WI 54656
(608) 269-8739
JACK DITTMAR, P.E.
jack.dittmar@co.monroe.wi.us

TOWN OF TOMAH

TOMAH TOWN HALL
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TOMAH, WI 54660
(608) 372-5483
HOWARD L HANSON – CHAIRMAN
townoftomah@certurylink.net

UTILITIES

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338 EAST STATE STREET
MAUSTON, WI 53948
(608) 844-9605
PATRICK MCINTYRE
patrickmcintyre@alliantenergy.com

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

** DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

GENERAL NOTES

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

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

NO TREES OR SHRUBS ARE TO BE REMOVED UNLESS SUCH TREES OR SHRUBS HAVE FIRST BEEN INDICATED FOR REMOVAL BY THE ENGINEER IN THE FIELD.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE YARDAGE AND IS NOT SHOWN ON THE CROSS SECTIONS, BUT IS MEASURED AND PAID FOR AS EXCAVATION COMMON. THE LOCATION OF EBS WILL BE DETERMINED BY THE ENGINEER.

SHRINKAGE IS ESTIMATED AT 25%.

THE 3 1/2" ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1 3/4" LOWER LAYER AND A 1 3/4" UPPER LAYER. USE 1/2" NOMINAL AGGREGATE FOR ASPHALT SURFACE.

BEARINGS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MONROE COUNTY.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE FERTILIZED AND SEEDED AS DIRECTED BY THE ENGINEER. USE SEED MIX NO. 10.

WHEN THE QUANTITY OF THE ITEM OF BASE LAYER OR SURFACE LAYER IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OF 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.

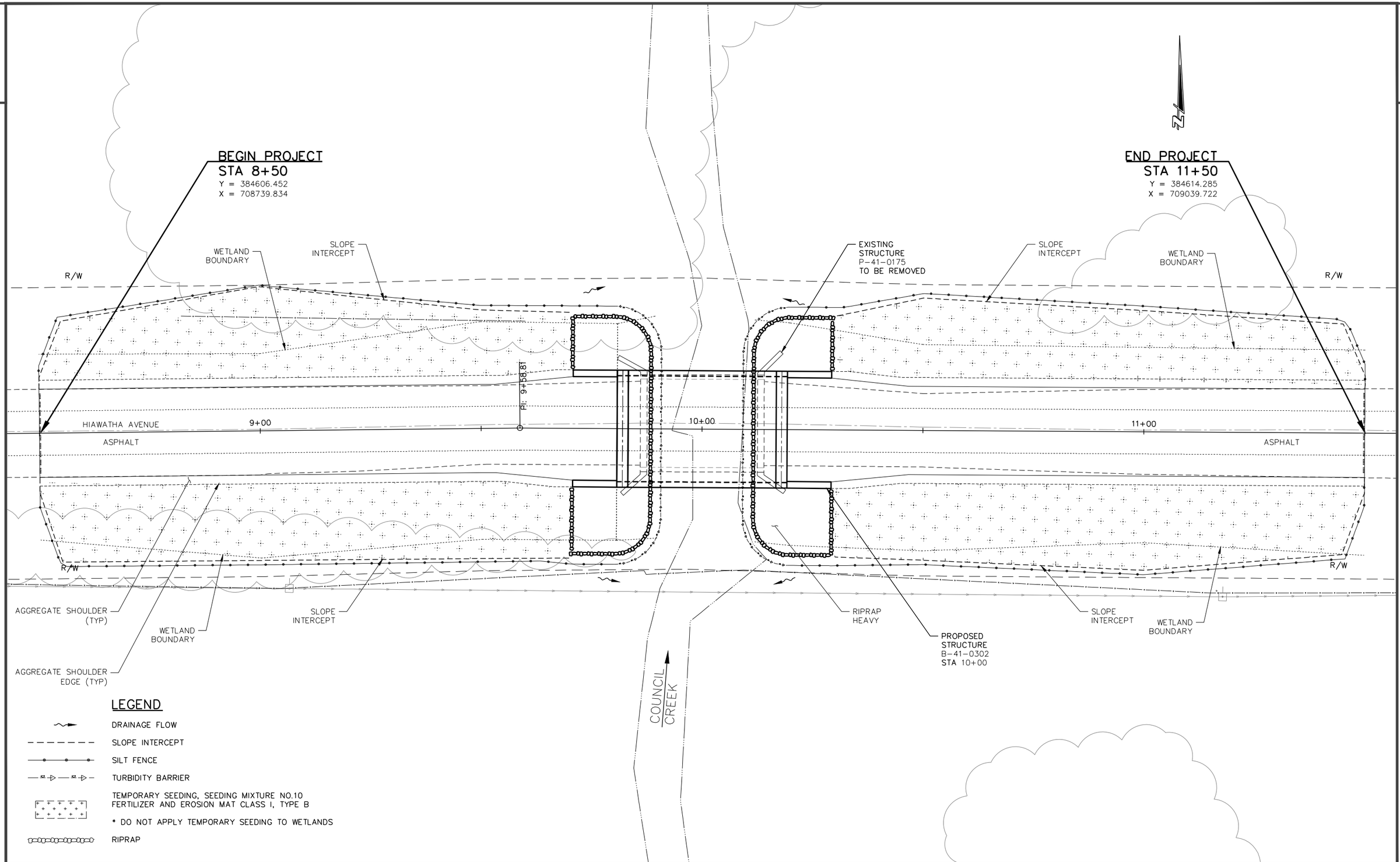
THE BENCHMARK IS REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), MONROE COUNTY.

WETLANDS ARE PRESENT WITHIN THE PROJECT LIMITS. DO NOT OPERATE EQUIPMENT OUTSIDE THE SLOPE INTERCEPTS.

STANDARD ABBREVIATIONS

ABUT	ABUTMENT	OFF	OFFSET
AGG	AGGREGATE	PC	POINT OF CURVATURE
ET AL	AND OTHERS	PI	POINT OF INTERSECTION
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PT	POINT OF TANGENCY
BF	BACK FACE	POL	POINT ON LINE
BM	BENCHMARK	PE	PRIVATE ENTRANCE
C/L OR ℄	CENTERLINE	PL	PROPERTY LINE
Δ	CENTRAL ANGLE OR DELTA	PSI	POUNDS/SQUARE INCH
CLR	CLEAR	PROP	PROPOSED
CONC	CONCRETE	R	RADIUS
CONST	CONSTRUCTION	RR	RAILROAD
COR	CORNER	REBAR	REINFORCEMENT BAR
CMP	CORRUGATED METAL PIPE	REQ'D	REQUIRED
CTH	COUNTY TRUNK HIGHWAY	RT	RIGHT
CR	CREEK	RHF	RIGHT-HAND FORWARD
CFS	CUBIC FEET/SECOND	R/W	RIGHT-OF-WAY
CULV	CULVERT	RD	ROAD
D	DEGREE OF CURVE	SEC	SECTION
DHV	DESIGN HOUR VOLUME	S	SOUTH
DIA	DIAMETER	SE	SOUTHEAST
E	EAST	SW	SOUTHWEST
EL	ELEVATION	STH	STATE TRUNK HIGHWAY
EST	ESTIMATED	STA	STATION
FPS	FEET PER SECOND	SE	SUPER ELEVATION
FE	FIELD ENTRANCE	T	TANGENT
FT	FOOT (FEET)	TEL	TELEPHONE
FTG	FOOTING	TEMP	TEMPORARY
FDN	FOUNDATION	TI	TEMPORARY INTEREST
FF	FRONT FACE	TLE	TEMPORARY LIMITED EASEMENT
IP	IRON PIN	TL OR T/L	TRANSIT LINE
LT	LEFT	T	TRUCKS
LHF	LEFT-HAND FORWARD	TYP	TYPICAL
L	LENGTH OF CURVE	U/G	UNDERGROUND
LF	LINEAR FOOT	USH	UNITED STATES HIGHWAY
MAX	MAXUMUM	VAR	VARIABLE
MI	MILE	V	VELOCITY
MIN	MINIMUM	VPC	VERTICAL POINT OF CURVATURE
NC	NORMAL CROWN	VPI	VERTICAL POINT OF INTERSECTION
N	NORTH	VPT	VERTICAL POINT OF TANGENCY
NE	NORTHEAST	W	WEST
NW	NORTHWEST	YD	YARD
NO	NUMBER		

2



PROJECT NO: 5025-00-71	HWY: HIAWATHA AVENUE	COUNTY: MONROE	EROSION CONTROL	SHEET 3	E

5025-00-71

Line	Item	Item Description	Unit	Total	Qty
0010	201.0105	Clearing	STA	1.500	1.500
0020	201.0205	Grubbing	STA	1.500	1.500
0030	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 10+00	LS	1.000	1.000
0040	205.0100	Excavation Common	CY	306.000	306.000
0050	206.1000	Excavation for Structures Bridges (structure) 01. B-41-0302	LS	1.000	1.000
0060	208.0100	Borrow	CY	1,072.000	1,072.000
0070	210.1500	Backfill Structure Type A	TON	330.000	330.000
0080	213.0100	Finishing Roadway (project) 01. 5025-00-71	EACH	1.000	1.000
0090	305.0110	Base Aggregate Dense 3/4-Inch	TON	30.000	30.000
0100	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	379.000	379.000
0110	465.0105	Asphaltic Surface	TON	112.000	112.000
0120	502.0100	Concrete Masonry Bridges	CY	135.000	135.000
0130	502.3200	Protective Surface Treatment	SY	135.000	135.000
0140	505.0400	Bar Steel Reinforcement HS Structures	LB	3,100.000	3,100.000
0150	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	15,260.000	15,260.000
0160	513.4061	Railing Tubular Type M (structure) 01. B-41-0302	LF	117.000	117.000
0170	516.0500	Rubberized Membrane Waterproofing	SY	16.000	16.000
0180	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	200.000	200.000
0190	606.0300	Riprap Heavy	CY	110.000	110.000
0200	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0210	619.1000	Mobilization	EACH	1.000	1.000
0220	624.0100	Water	MGAL	6.800	6.800
0230	625.0500	Salvaged Topsoil **P**	SY	889.000	889.000
0240	628.1504	Silt Fence	LF	590.000	590.000
0250	628.1520	Silt Fence Maintenance	LF	790.000	790.000
0260	628.1905	Mobilizations Erosion Control	EACH	1.000	1.000
0270	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0280	628.2004	Erosion Mat Class I Type B	SY	889.000	889.000
0290	628.6005	Turbidity Barriers	SY	142.000	142.000
0300	629.0210	Fertilizer Type B **P**	CWT	0.570	0.570
0310	630.0110	Seeding Mixture No. 10 **P**	LB	12.000	12.000
0320	630.0200	Seeding Temporary **P**	LB	19.000	19.000
0330	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0340	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0350	638.2602	Removing Signs Type II	EACH	4.000	4.000
0360	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0370	642.5001	Field Office Type B	EACH	1.000	1.000
0380	643.0100	Traffic Control (project) 01. 5025-00-71	EACH	1.000	1.000

5025-00-71

Line	Item	Item Description	Unit	Total	Qty
0390	643.0420	Traffic Control Barricades Type III	DAY	1,530.000	1,530.000
0400	643.0705	Traffic Control Warning Lights Type A	DAY	2,040.000	2,040.000
0410	643.0900	Traffic Control Signs	DAY	1,190.000	1,190.000
0420	645.0120	Geotextile Type HR	SY	220.000	220.000
0430	650.4500	Construction Staking Subgrade	LF	261.000	261.000
0440	650.5000	Construction Staking Base	LF	261.000	261.000
0450	650.6500	Construction Staking Structure Layout (structure) 01. B-41-0302	LS	1.000	1.000
0460	650.9910	Construction Staking Supplemental Control (project) 01. 5025-00-71	LS	1.000	1.000
0470	650.9920	Construction Staking Slope Stakes	LF	261.000	261.000
0480	690.0150	Sawing Asphalt	LF	40.000	40.000
0490	715.0502	Incentive Strength Concrete Structures	DOL	810.000	810.000
0500	SPV.0085	Special 01. Fiber Reinforcement for Concrete Masonry Bridges	LB	105.000	105.000

3

CLEARING & GRUBBING

STATION - STATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
8+50 - 10+00	1.5	1.5
ITEM TOTALS	1.5	1.5

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
8+50 - 9+80		15	189
10+19 - 11+50		15	190
ITEM TOTAL		30	379

FINISHING ROADWAY

PROJECT	LOCATION	213.0100 EACH
5025-00-71	HIAWATHA AVE	1
ITEM TOTAL		1

3

DIVISION	STATIONING	LOCATION	205.0100 COMMON EXCAVATION (CY)	SALVAGED / UNUSABLE PAVEMENT MATERIAL (1)	AVAILABLE MATERIAL (CY) (2)	UNEXPANDED FILL	EXPANDED FILL	MASS ORDINATE +/- (3)	208.0100 BORROW (CY)
			CUT				FACTOR 1.30		
1	8+50 - 9+80	WEST APPROACH	152	152	0	347	451	-451	451
	UNDISTRIBUTED (4)		0	0	0	65	85	-85	85
DIVISION 1 SUBTOTAL			152	152	0	412	536	-536	536
2	10+19 - 11+50	EAST APPROACH	154	154	0	347	451	-451	451
	UNDISTRIBUTED (4)		0	0	0	65	85	-85	85
DIVISION 2 SUBTOTAL			154	154	0	412	536	-536	536
GRAND TOTAL			306	306	0	825	1072	-1072	1072
TOTAL COMMON EXCAVATION =			306						1072

1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
2) AVAILABLE MATERIAL = CUT MINUS THE SALVAGED/UNUSABLE PAVEMENT MATERIAL
3) THE MASS ORDINATE = A + OR - QUANTITY CALCULATED FOR THE DIVISON. A POSITIVE QUANTITY INDICATES AN EXCESS OF MATERIAL.
4) UNDISTIRBUTED BORROW TO BE USED FOR ROAD SUBGRADE IF SECOND EXISTING ASPHALT LAYER IS PRESENT

NOTE: TABLE QUANTITIES ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

ASPHALTIC SURFACE

STATION	LOCATION	465.0105 TON
8+50 - 9+80		56
10+19 - 11+50		56
ITEM TOTAL		112

EROSION CONTROL ITEMS

STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.6005 TURBIDITY BARRIER SY	628.2004 EROSION MAT CLASS I TYPE B SY
8+50 - 9+80	RT/LT	295	--	--	449
10+19 - 11+50	RT/LT	295	--	--	440
UNDISTIBUTED		--	790	142	--
ITEM TOTAL		590	790	142	889

WATER

STATION - STATION	LOCATION	624.0100 MGAL
8+50 - 11+50	HIAWATHA AVE	6.8
ITEM TOTAL		6.8

MOBILIZATIONS EROSION CONTROL

STATION - STATION	628.1905 EROSION CONTROL EACH	628.1910 EMERGENCY EROSION CONTROL EACH
PROJECT 5025-00-71	1	3
ITEM TOTAL	1	3

SALVAGED TOPSOIL, FERTILIZER, AND SEEDING

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY **P**	629.0210 FERTILIZER TYPE B CWT **P**	630.0110 SEEDING MIXTURE NO. 10 LB **P**	603.0200 SEEDING TEMPORARY LB **P**
8+50 - 9+80	RT/LT	449	0.28	6	8
10+19 - 11+50	RT/LT	440	0.28	6	11
UNDISTRIBUTED		–	–	--	--
ITEM TOTAL		889	0.57	12	19

P Pay Plan Quantity

SIGNING QUANTITIES

LOCATION	SIGN CODE	637.2230 SIGNS TYPE II REFLECTIVE F SF	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
NW BRIDGE CORNER	W5-52 L	3	1	1	1	
SW BRIDGE CORNER	W5-52 R	3	1	1	1	
NE BRIDGE CORNER	W5-52 R	3	1	1	1	
SE BRIDGE CORNER	W5-52 L	3	1	1	1	
ITEM TOTAL		12	4	4	4	

NOTE: TABLE QUANTITIES ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

3

3

TRAFFIC CONTROL

STATION - STATION	LOCATION	643.0100 TRAFFIC CONTROL 5025-00-71 EACH	643.0420 BARRICADES TYPE III DAYS	643.0705 WARNING LIGHTS TYPE A DAYS	643.0900 SIGNS DAYS
HIAWATHA AVE		1	1530	2040	1190
ITEM TOTAL		1	1530	2040	1190

CONSTRUCTION STAKING

STATION - STATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6500* STRUCTURE LAYOUT (B-41-0302) EACH	650.9920 SLOPE STAKES LF
8+50 - 11+50	261	261	1	261
ITEM TOTAL	261	261	1	261

*CATEGORY 0020

SAWING

STATION	LOCATION	690.0150 ASPHALT LF
8+50	BEGIN PROJECT	20
11+50	END PROJECT	20
ITEM TOTAL		40

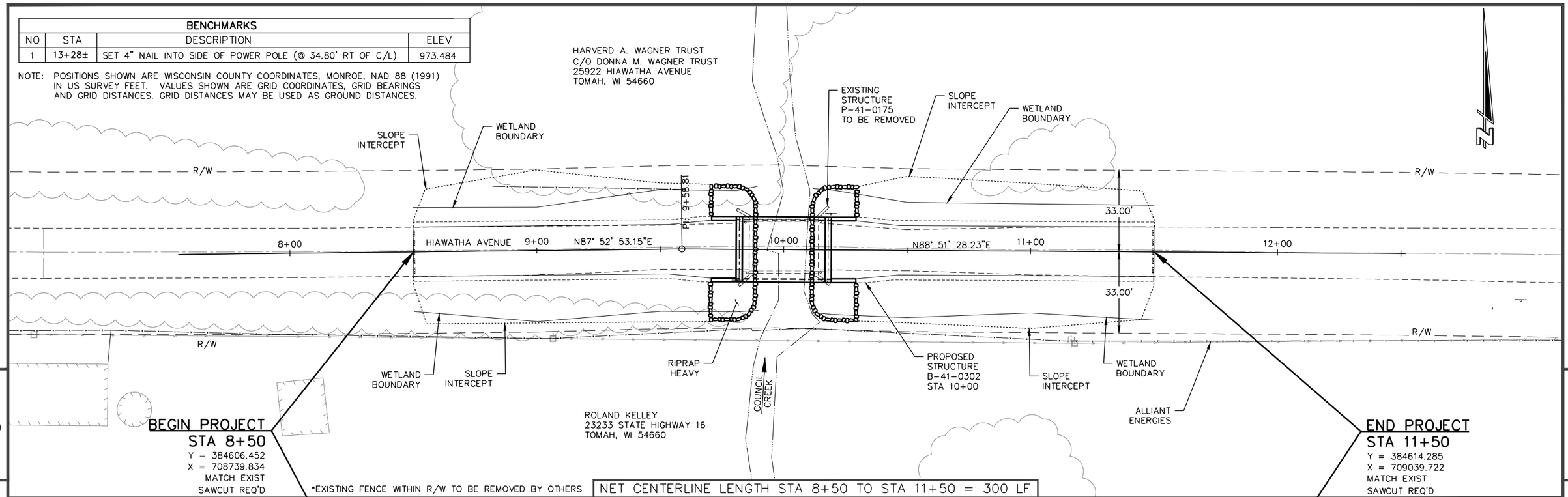
NOTE: TABLE QUANTITIES ARE CATEGORY 0010 UNLESS OTHERWISE NOTED

BENCHMARKS			
NO	STA	DESCRIPTION	ELEV
1	13+28±	SET 4" NAIL INTO SIDE OF POWER POLE (@ 34.80' RT OF C/L)	973.484

NOTE: POSITIONS SHOWN ARE WISCONSIN COUNTY COORDINATES, MONROE, NAD 88 (1991) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

HARVERD A. WAGNER TRUST
C/O DONNA M. WAGNER TRUST
25922 HIAWATHA AVENUE
TOMAH, WI 54660

ROLAND KELLEY
23233 STATE HIGHWAY 16
TOMAH, WI 54660

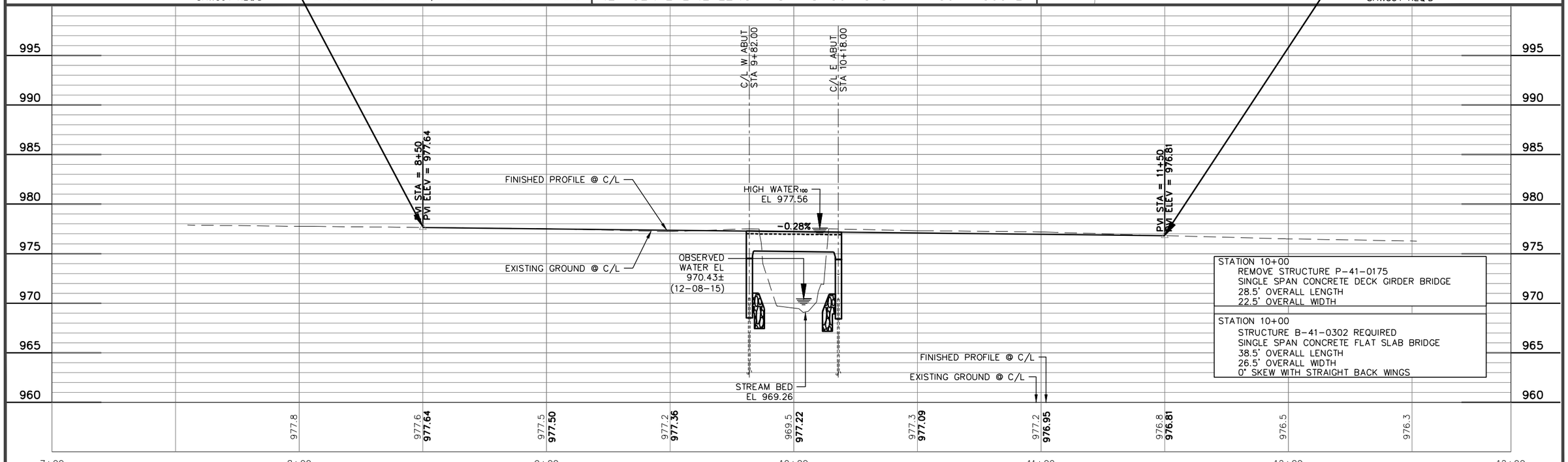


BEGIN PROJECT
STA 8+50
Y = 384606.452
X = 708739.834
MATCH EXIST
SAWCUT REQ'D

*EXISTING FENCE WITHIN R/W TO BE REMOVED BY OTHERS

NET CENTERLINE LENGTH STA 8+50 TO STA 11+50 = 300 LF

END PROJECT
STA 11+50
Y = 384614.285
X = 709039.722
MATCH EXIST
SAWCUT REQ'D



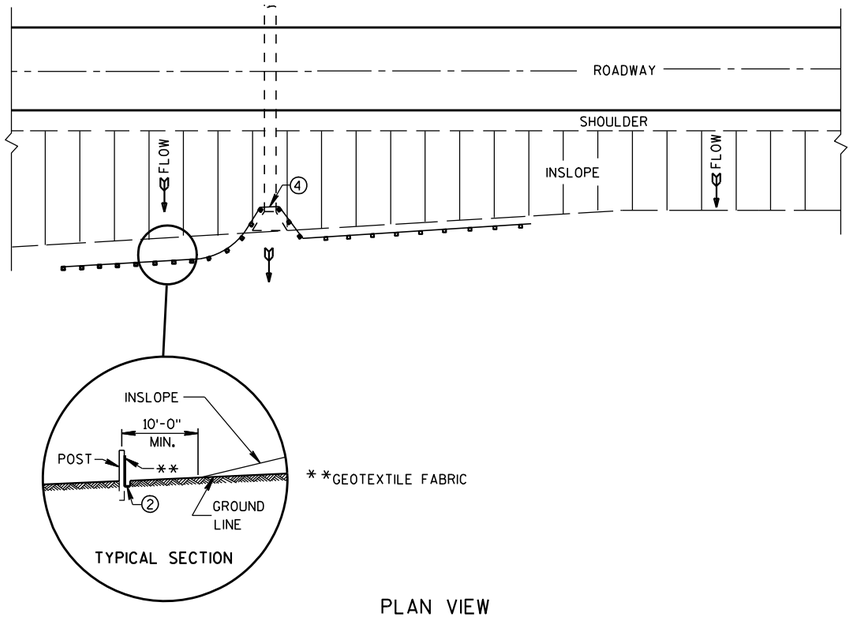
STATION 10+00
REMOVE STRUCTURE P-41-0175
SINGLE SPAN CONCRETE DECK GIRDER BRIDGE
28.5' OVERALL LENGTH
22.5' OVERALL WIDTH

STATION 10+00
STRUCTURE B-41-0302 REQUIRED
SINGLE SPAN CONCRETE FLAT SLAB BRIDGE
38.5' OVERALL LENGTH
26.5' OVERALL WIDTH
0° SKEW WITH STRAIGHT BACK WINGS

PROJECT NO: 5025-00-71	HWY: HIAWATHA AVENUE	COUNTY: MONROE	PLAN AND PROFILE	SHEET 9	E

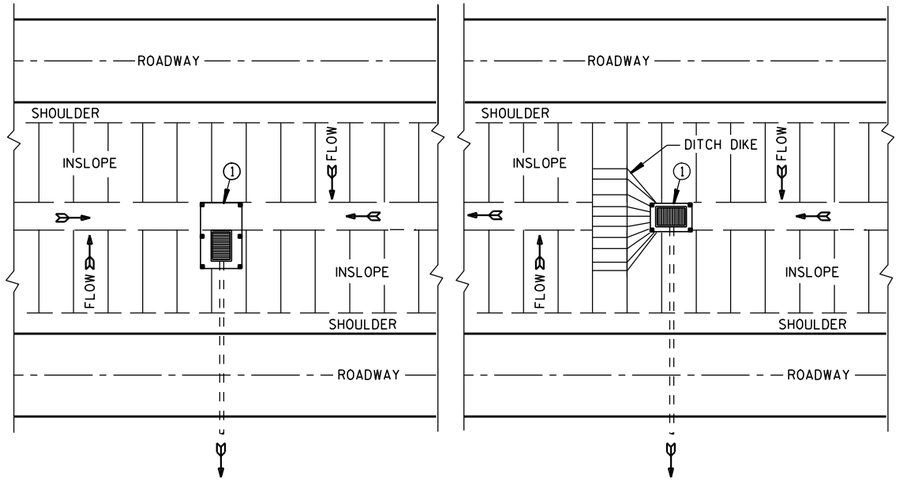
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

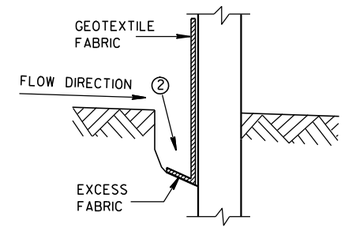
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

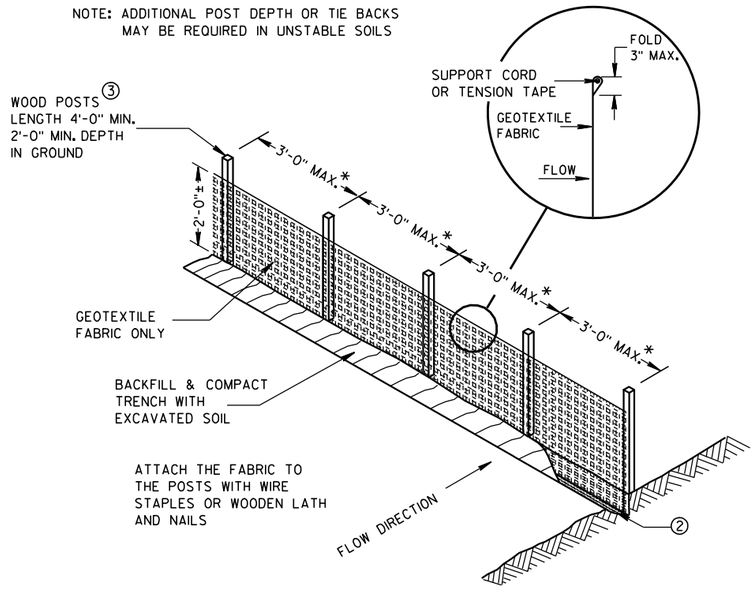
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

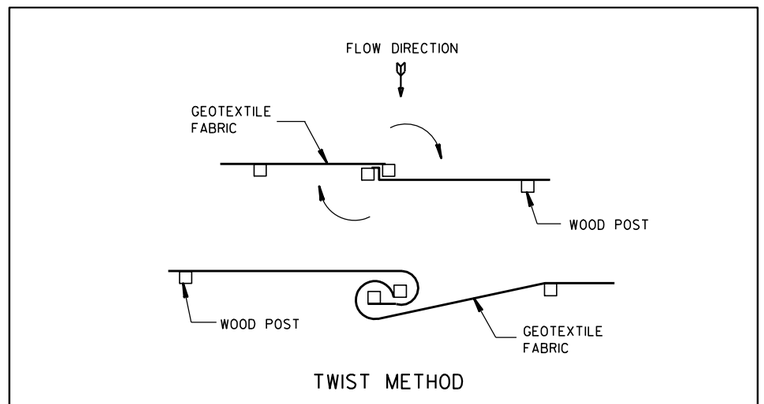
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



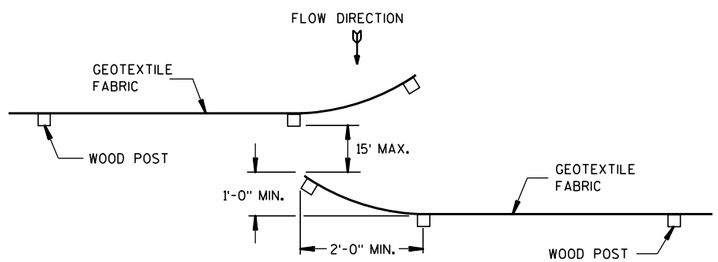
TRENCH DETAIL



SILT FENCE

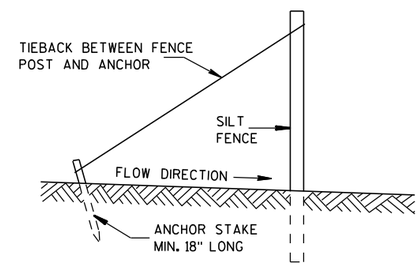


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

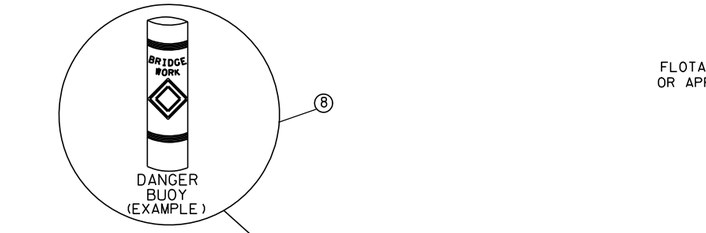
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

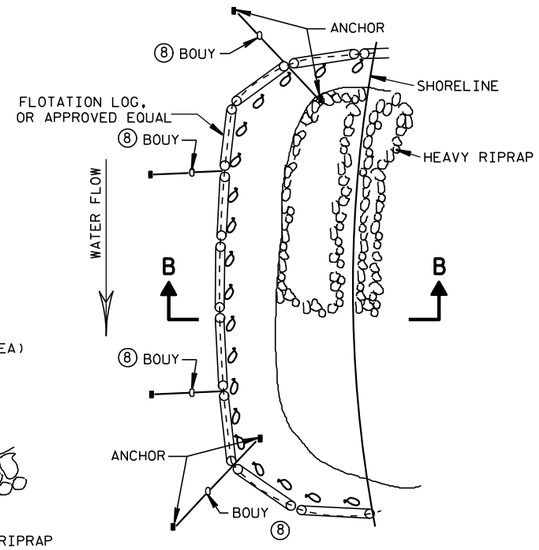
S.D.D. 8 E 9-6

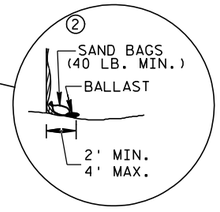
6

S.D.D. 8 E 9-6

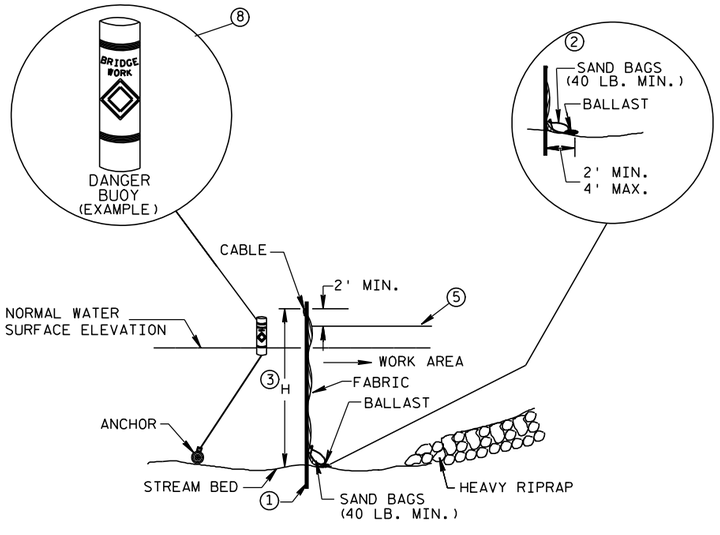


SECTION B-B

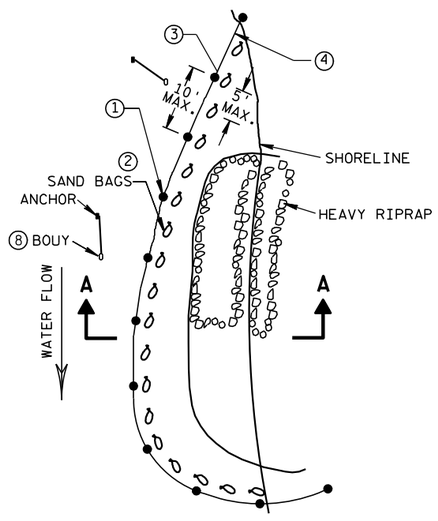




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



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.

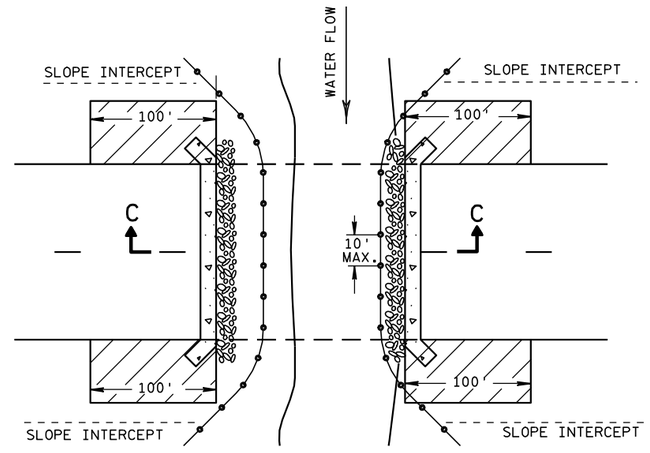
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MIMIMUM BARRIER HEIGHT SHALL BE 2'GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WICHEVER IS GREATER.

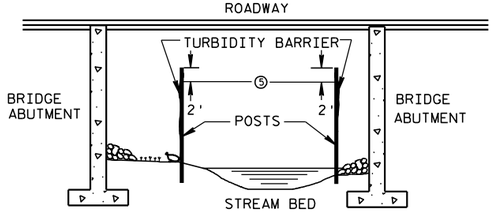
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

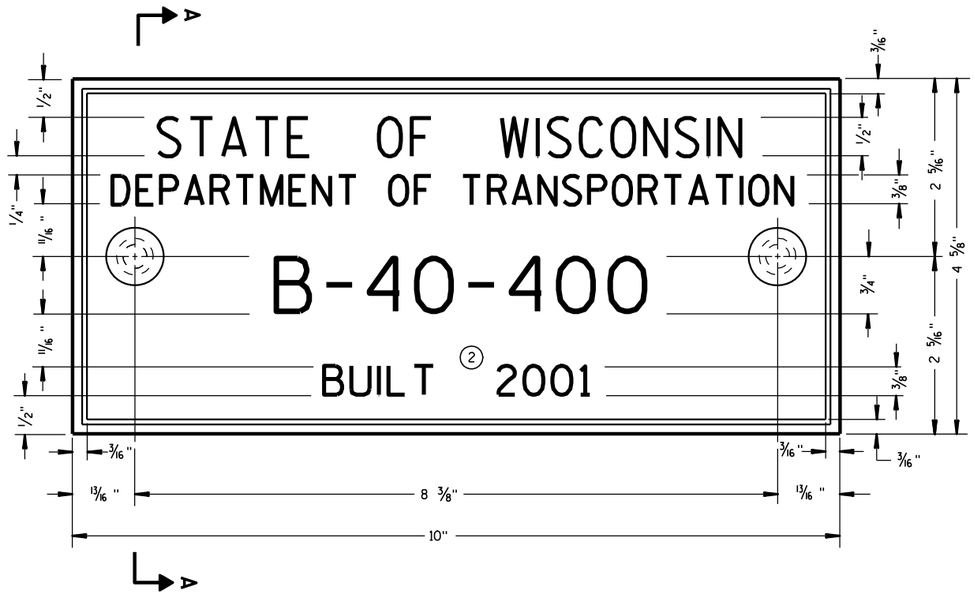
APPROVED
6/04/02 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

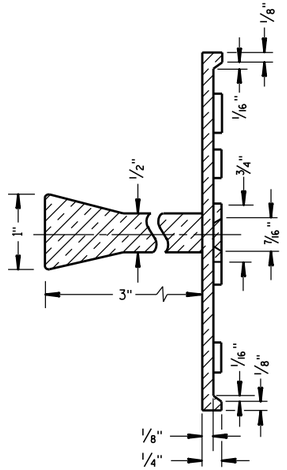
GENERAL NOTES

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.

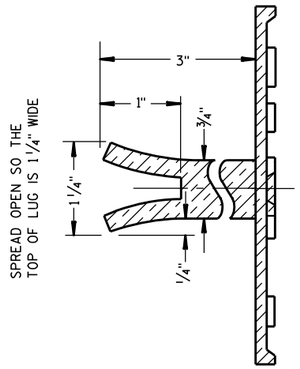
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

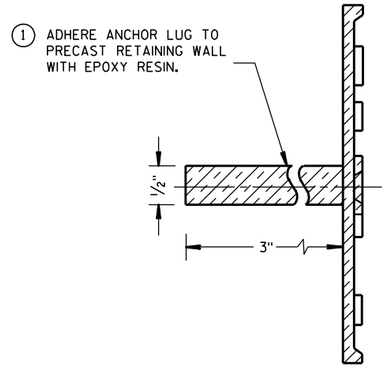
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



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

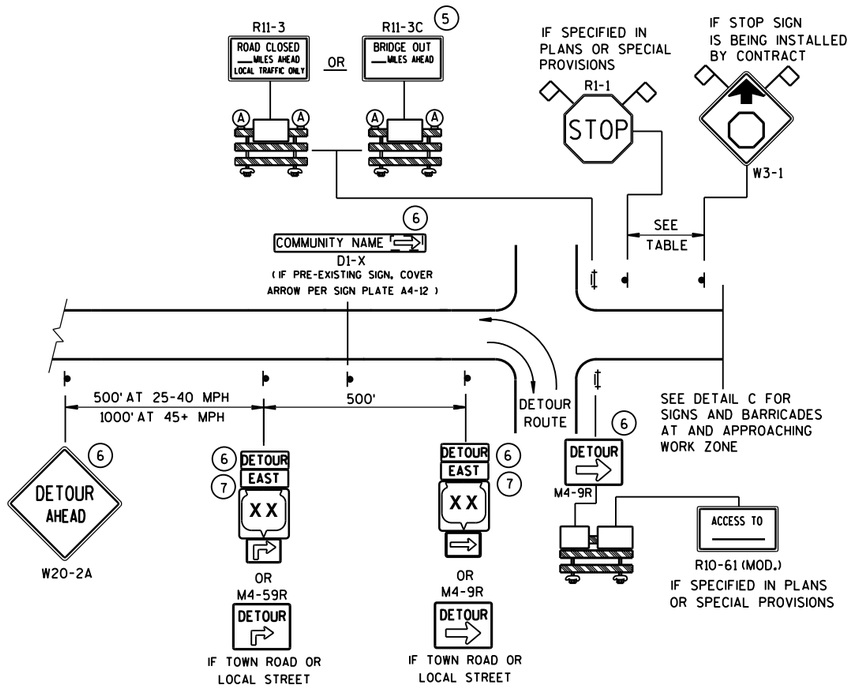
FHWA

6

S.D.D. 12 A 3-10

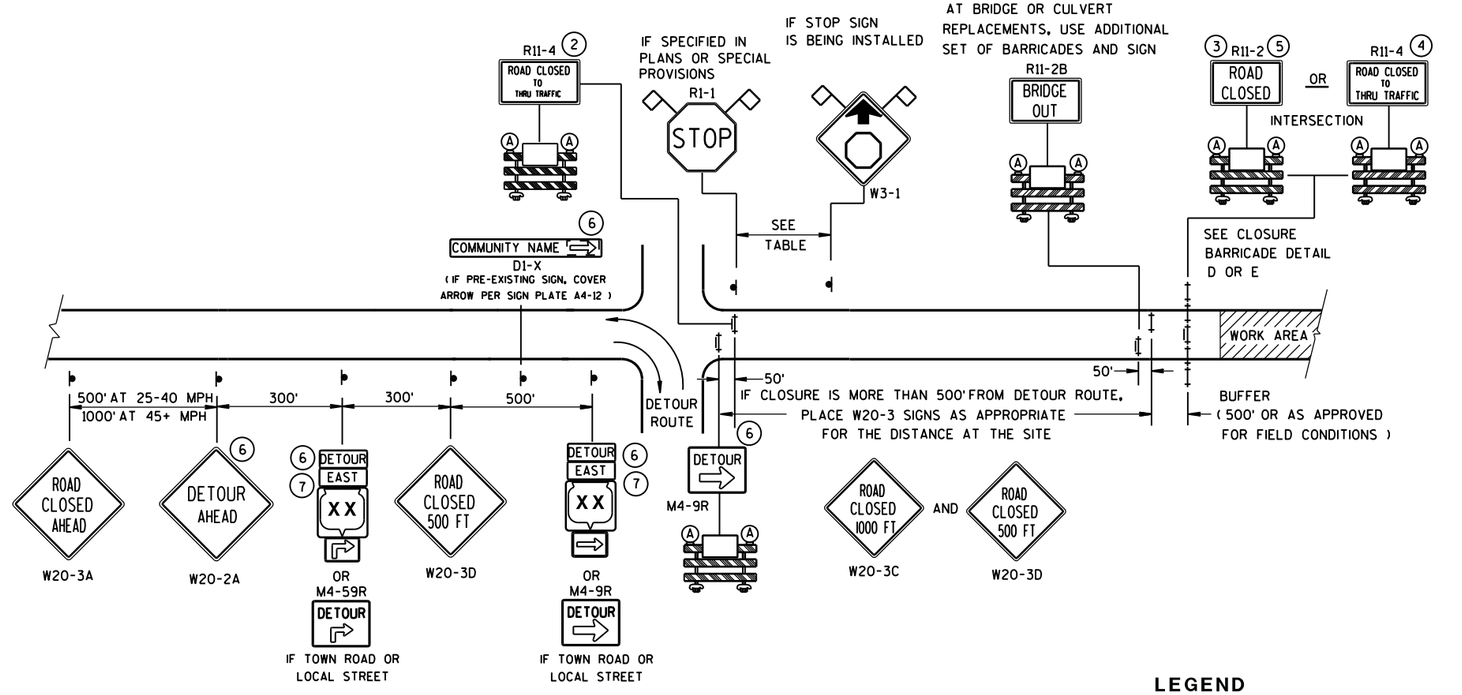
6

S.D.D. 12 A 3-10



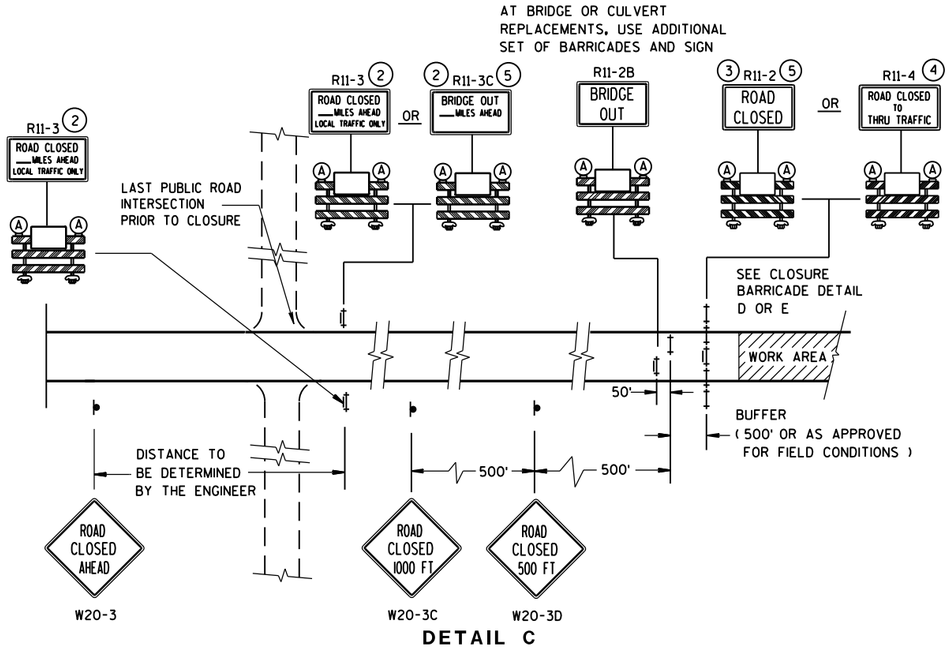
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

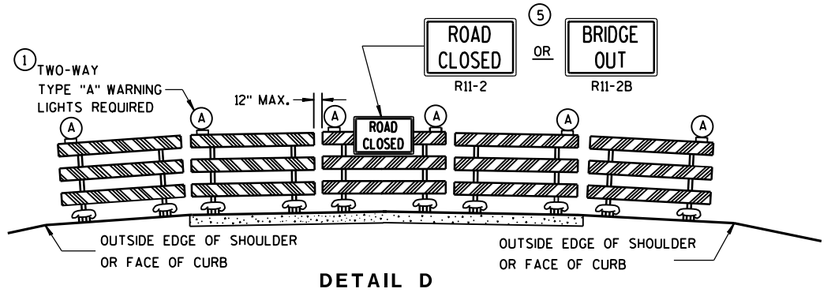
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

S.D.D. 15 C 2-6a

6

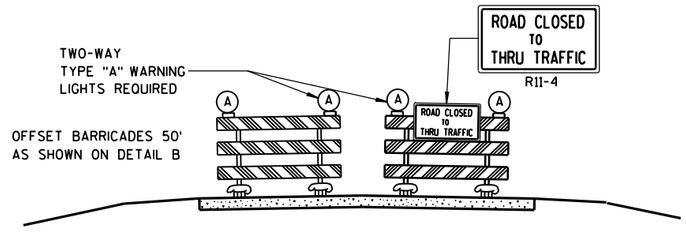
S.D.D. 15 C 2-6a



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

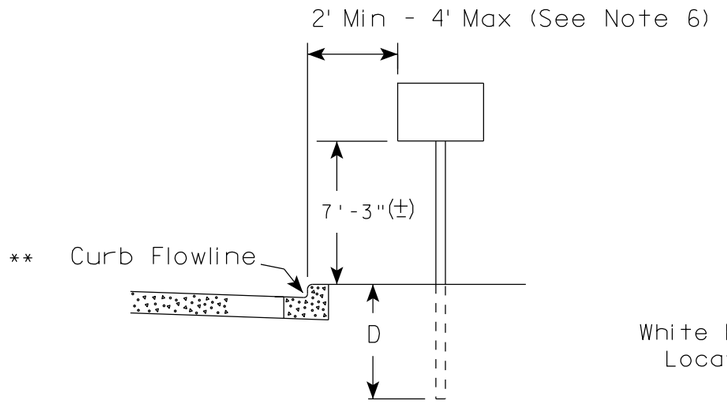
Sept. 2015 — DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO... SAFETY ENGI... — FHWA

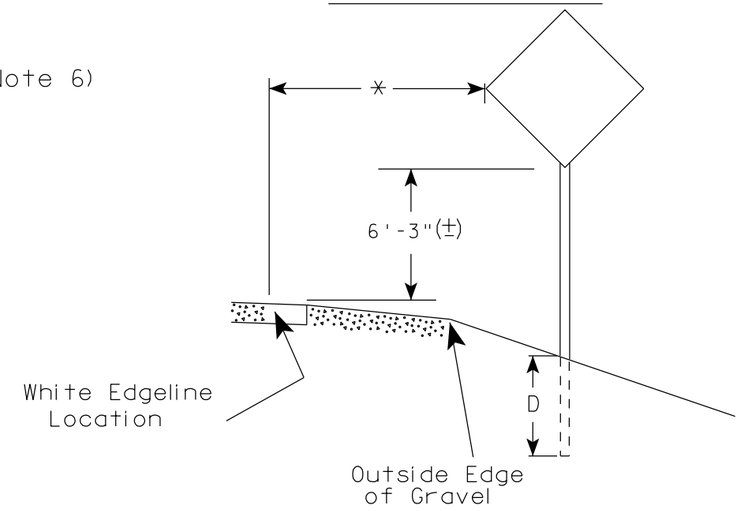
6

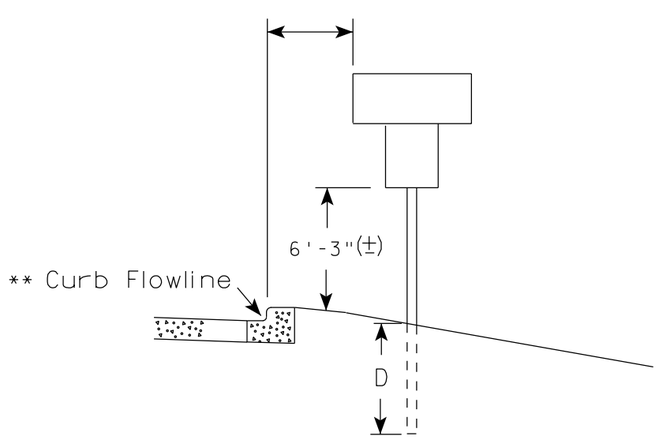
S.D.D. 15 C 2-6b

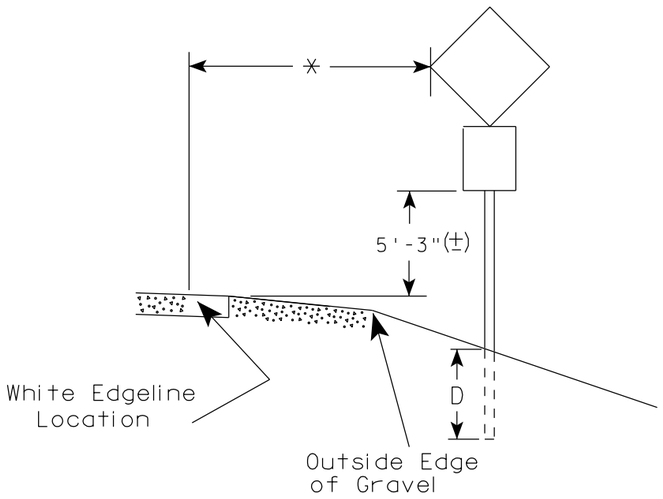
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
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 J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), 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" (±).

POST EMBEDMENT DEPTH

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

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

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

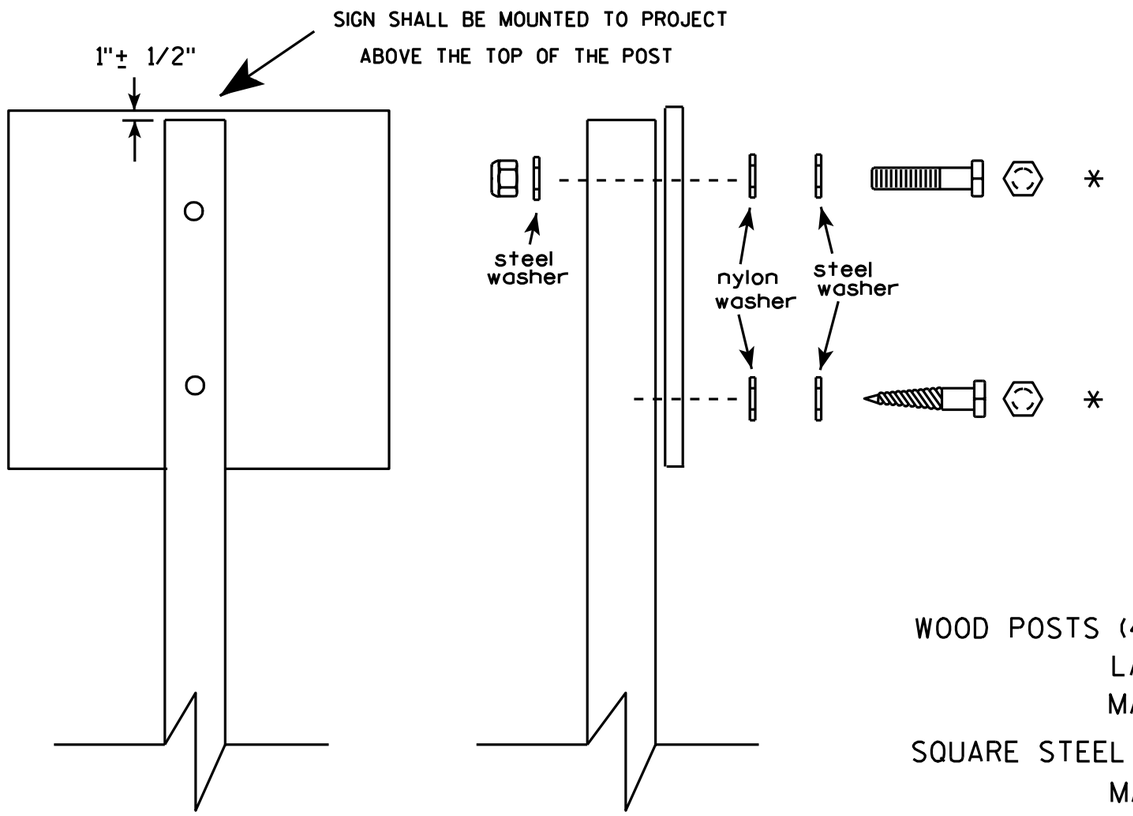
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/12/14 PLATE NO. A4-3.19

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

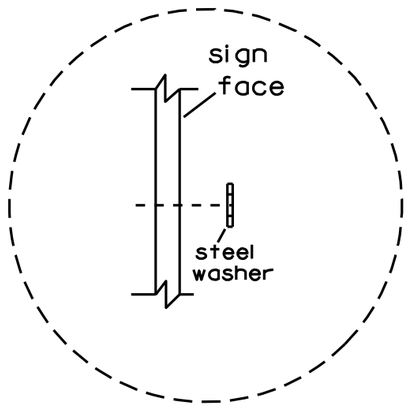
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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.

WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

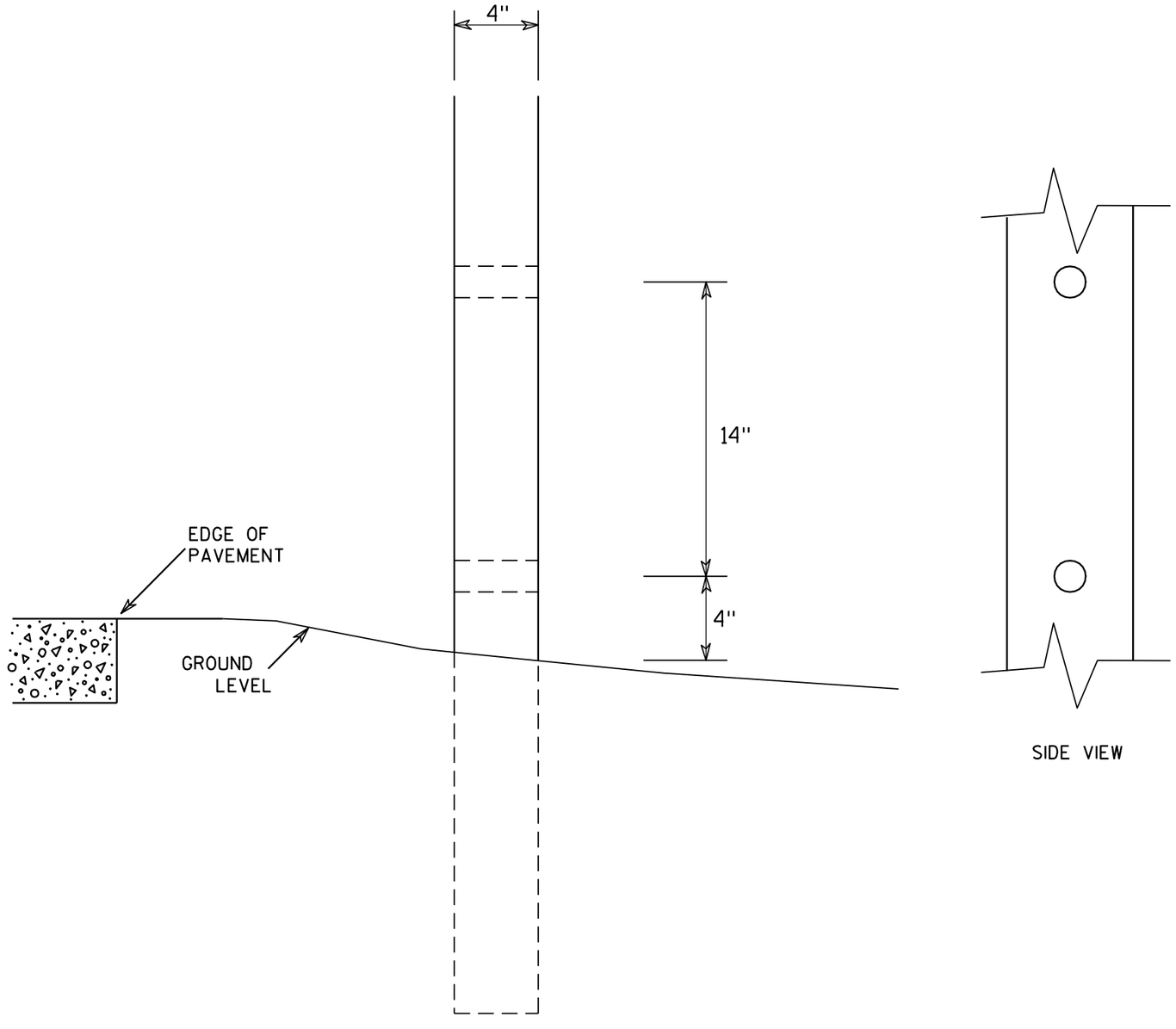
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 17 E



SIDE VIEW

GENERAL NOTES

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

7

7

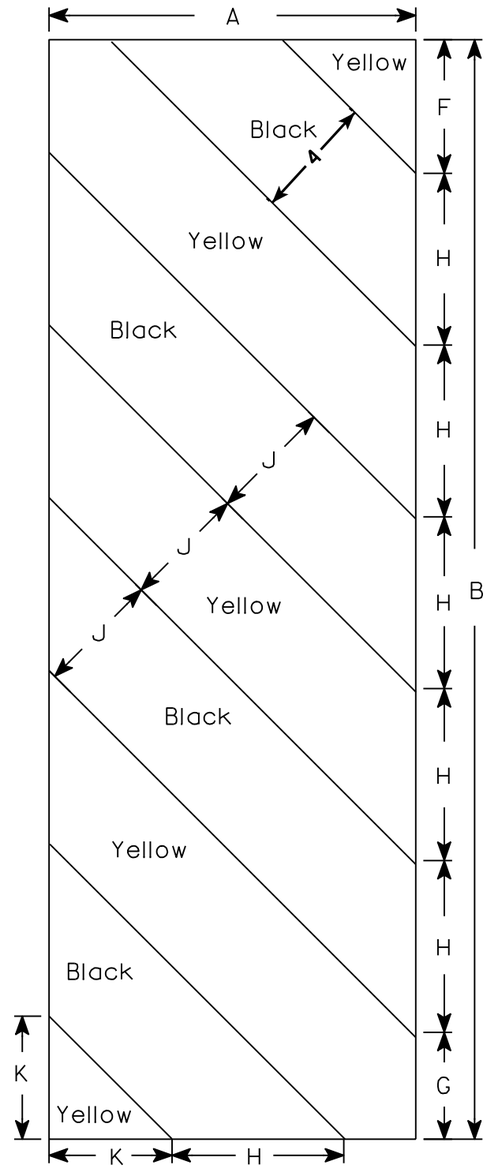
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

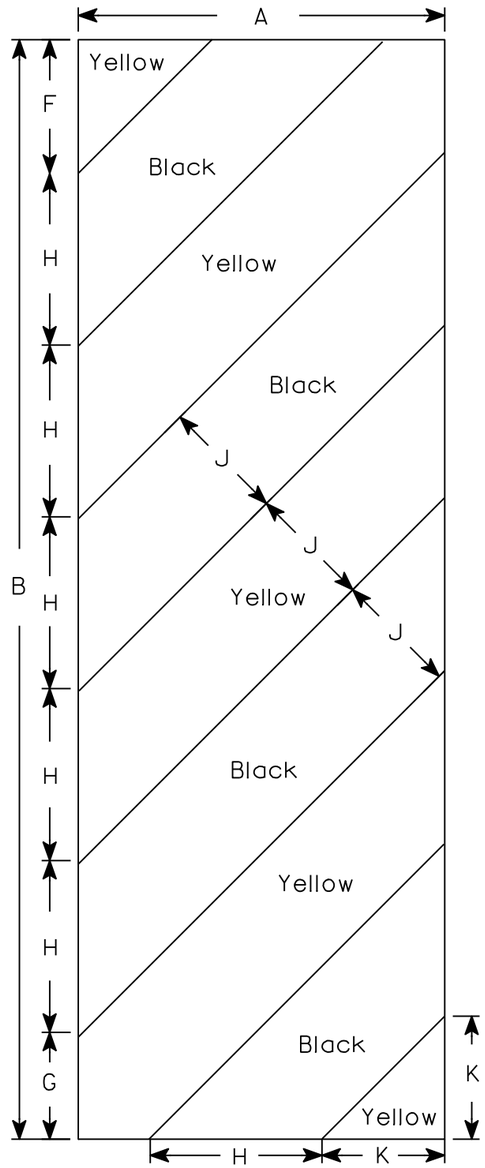
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 18	E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

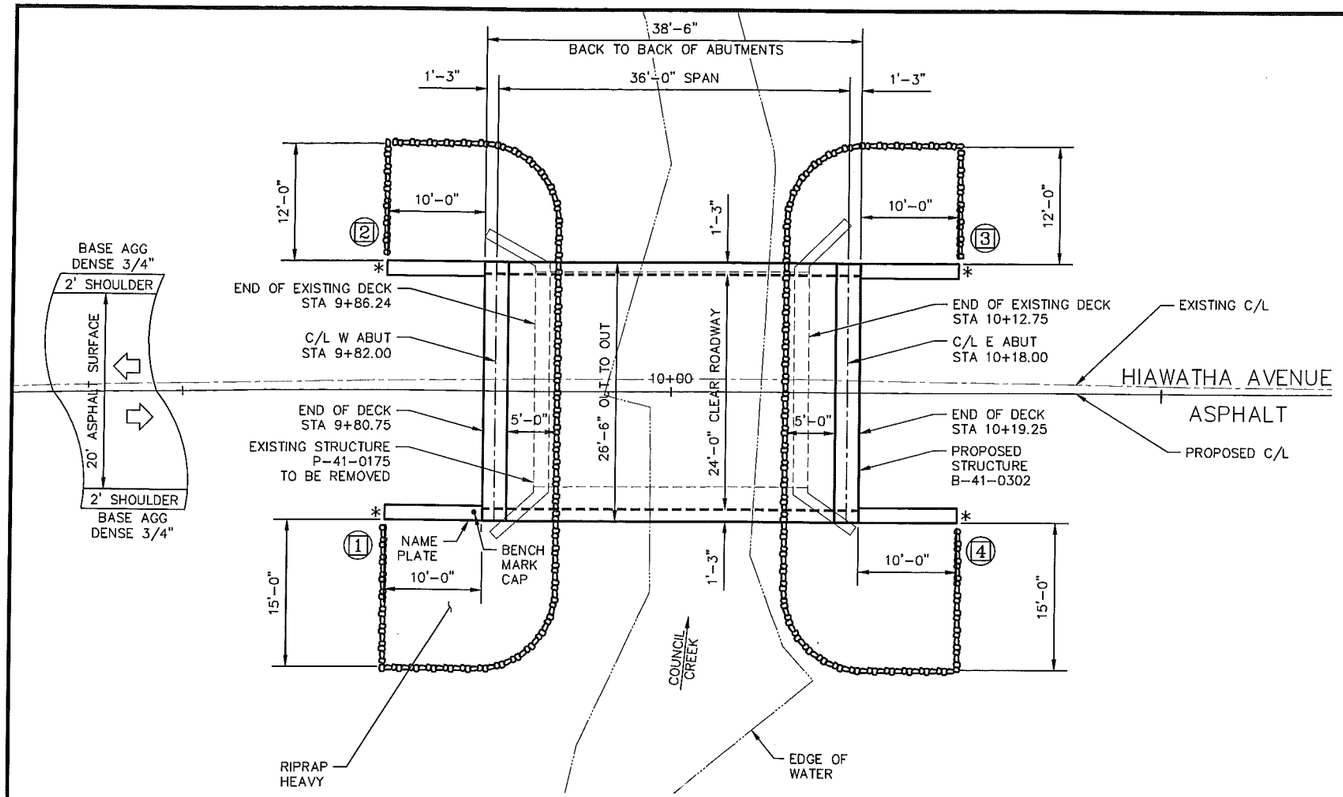
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 19 | E

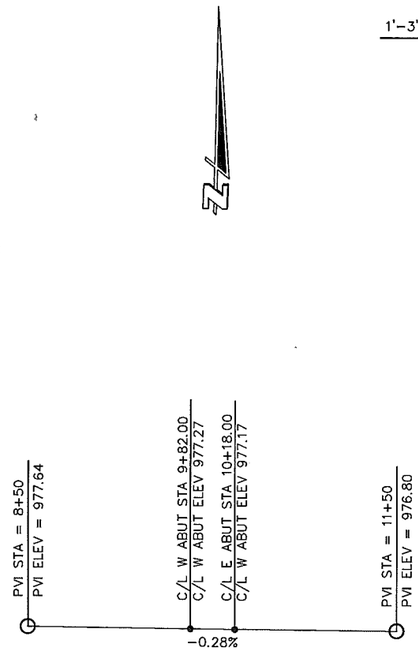


PLAN

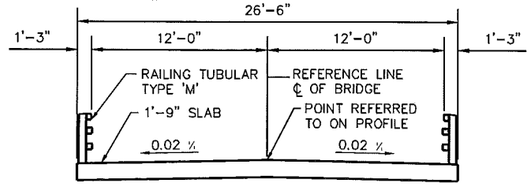
SINGLE SPAN CONCRETE FLAT-SLAB BRIDGE

* PROVIDE THE THRIE BEAM GUARD RAIL ATTACHMENT

(1) INDICATES WING NUMBER



PROPOSED GRADE LINE



CROSS-SECTION THRU ROADWAY

DESIGN DATA

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

LIVE LOAD:

DESIGN LOADING	HL-93
INVENTORY RATING FACTOR	RF = 1.29
OPERATING RATING FACTOR	RF = 1.67
WISCONSIN STANDARD PERMIT VEHICLE (Wis-SPV)	250 KIPS

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY	
SLAB	f'c = 4,000 PSI
ALL OTHER	f'c = 3,500 PSI
BAR STEEL REINFORCEMENT, GRADE 60	fy = 60,000 PSI

HYDRAULIC DATA

100 YEAR FREQUENCY

DRAINAGE AREA	9.5 SQ MILES
Q_{100} TOTAL	2125 CFS
THRU STRUCTURE	924 CFS
OVERFLOW	1201 CFS
VELOCITY - THRU STRUCTURE	5.51 FPS
WATERWAY AREA THRU STRUCTURE	167.6 SQ FT
HIGH WATER$_{100}$ ELEVATION	977.56 FT
SCOUR CRITICAL CODE = 8	

2 YEAR FREQUENCY

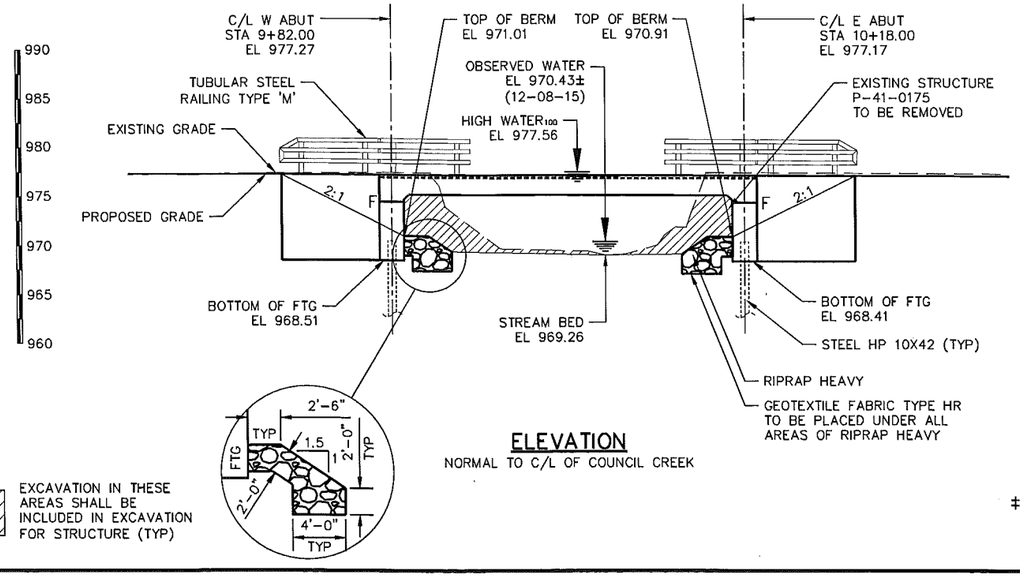
Q_2 TOTAL	410 CFS
HIGH WATER$_2$ ELEVATION	976.15 FT

FREQUENCY OF ROADWAY OVERTOPPING

Q_6 TOTAL	720 CFS
HIGH WATER$_6$ ELEVATION	976.30 FT

TRAFFIC DATA

AADT (2016)	< 100
AADT (2036)	< 100
DESIGN SPEED	55 MPH



ELEVATION

NORMAL TO C/L OF COUNCIL CREEK

EXCAVATION IN THESE AREAS SHALL BE INCLUDED IN EXCAVATION FOR STRUCTURE (TYP)

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10x42, WITH A REQUIRED DRIVING RESISTANCE OF 180 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION.
ESTIMATED LENGTH 30' W ABUTMENT
ESTIMATED LENGTH 20' E ABUTMENT

‡ 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 FORMULA TO DETERMINE DRIVEN PILE CAPACITY.

WISCONSIN
TROY L. PETERSON
E-31102
MENOMONIE
WI
PROFESSIONAL ENGINEER
11-14-16

DESIGN CONTACT:
TROY PETERSON
(715) 232-9081

BRIDGE OFFICE CONTACT:
WILLIAM DREHER
(608) 266-8489

BENCHMARK

STA 13+28±, 34.80' RT OF C/L, SET
4" NAIL INTO SIDE OF POWER POLE
EL 973.48'

LIST OF DRAWINGS

STATE PROJECT NUMBER
5025-00-71

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY
Cedar corporation
MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com 800-472-7372

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
ACCEPTED William C. Dreher SDR 11/18/16
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-41-0302

HIAWATHA AVENUE OVER COUNCIL CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
MONROE	TOMAH

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D.	DRAWN BY	PLANS CK'D.
ATA	TLP	NJT	TLP

GENERAL PLAN

SHEET 1 OF 8

SCALE = 1:2

STATE PROJECT NUMBER

5025-00-71

TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	BID ITEMS	UNIT	W ABUT	E ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA 10+00	LS	———	———	———	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-41-0302	LS	———	———	———	1
210.1500	BACKFILL STRUCTURE TYPE 'A'	TON	165	165	———	330
502.0100	CONCRETE MASONRY BRIDGES	CY	32.3	32.3	70.4	135.0
502.3200	PROTECTIVE SURFACE TREATMENT	SY	———	———	135	135
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1550	1550	———	3100
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1430	1430	12400	15260
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	120	80	———	200
513.4061	RAILING TUBULAR TYPE 'M' (B-41-0302)	LF	———	———	———	117
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	8	8	———	16
606.0300	RIPRAP HEAVY	CY	55	55	———	110
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80	80	———	160
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	110	110	———	220
SPV.0085.01	FIBER REINFORCEMENT FOR CONCRETE MASONRY BRIDGES	LB	———	———	105	105
	NON-BID ITEMS					
	FILLER	SIZE	———	———	———	1/2 & 3/4

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET.

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

ALL REINFORCING BARS ARE ENGLISH. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

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

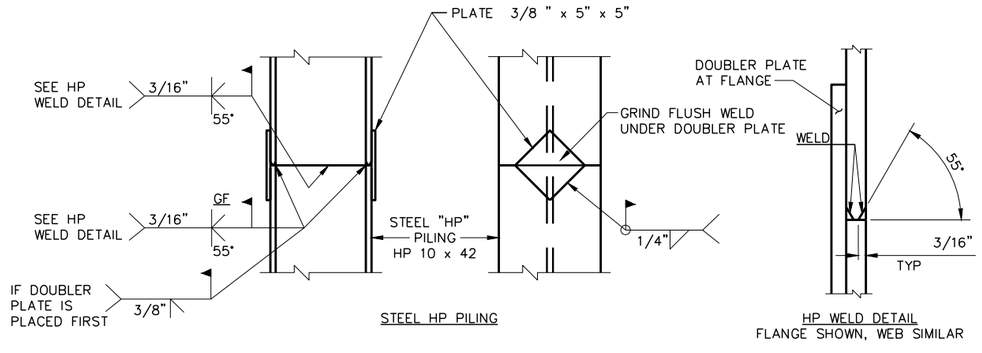
STEEL 'HP' PILE MATERIAL SHALL BE A.S.T.M. DESIGNATION A36.

THE EXISTING STRUCTURE (P-41-0175) IS A 28.5' LONG BY 22.5' WIDTH SINGLE-SPAN CONCRETE DECK BRIDGE.

THE PROTECTIVE SURFACE TREATMENT SHALL BE APPLIED TO THE TOP AND EDGES OF THE SLAB AND TO THE OUTSIDE 1'-0" OF THE UNDERSIDE OF THE SLAB.

AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE IN PLACE BEFORE ABUTMENT CONSTRUCTION AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

THE GRADATION OF THE BACKFILL STRUCTURE SHALL MEET THE REQUIREMENTS OF SECTION 209.2.2 OF THE STANDARD SPECIFICATIONS FOR GRADE 1 MATERIAL.



PILE SPLICE DETAILS

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

Cedar corporation

MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com 800-472-7372

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0302

DRAWN BY NJT | PLANS CK'D. TLP

QUANTITIES & NOTES

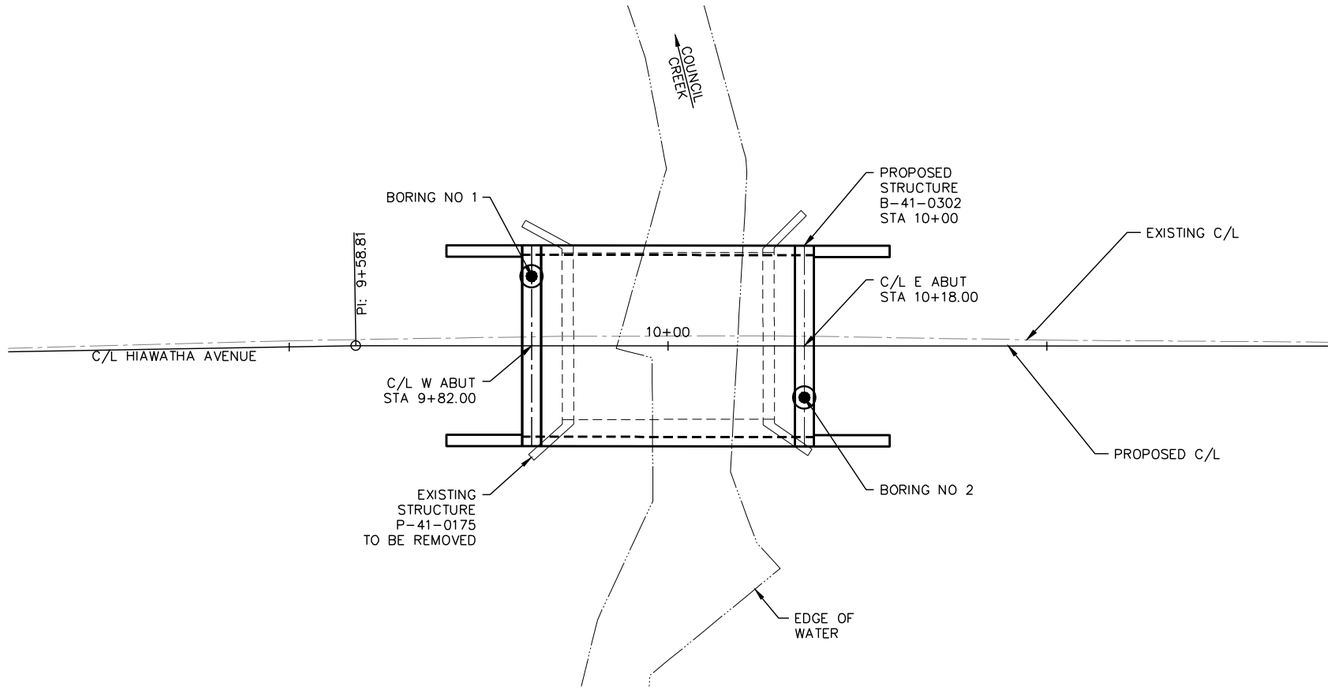
SHEET 2 OF 8

21

SCALE = 1:2

8

8

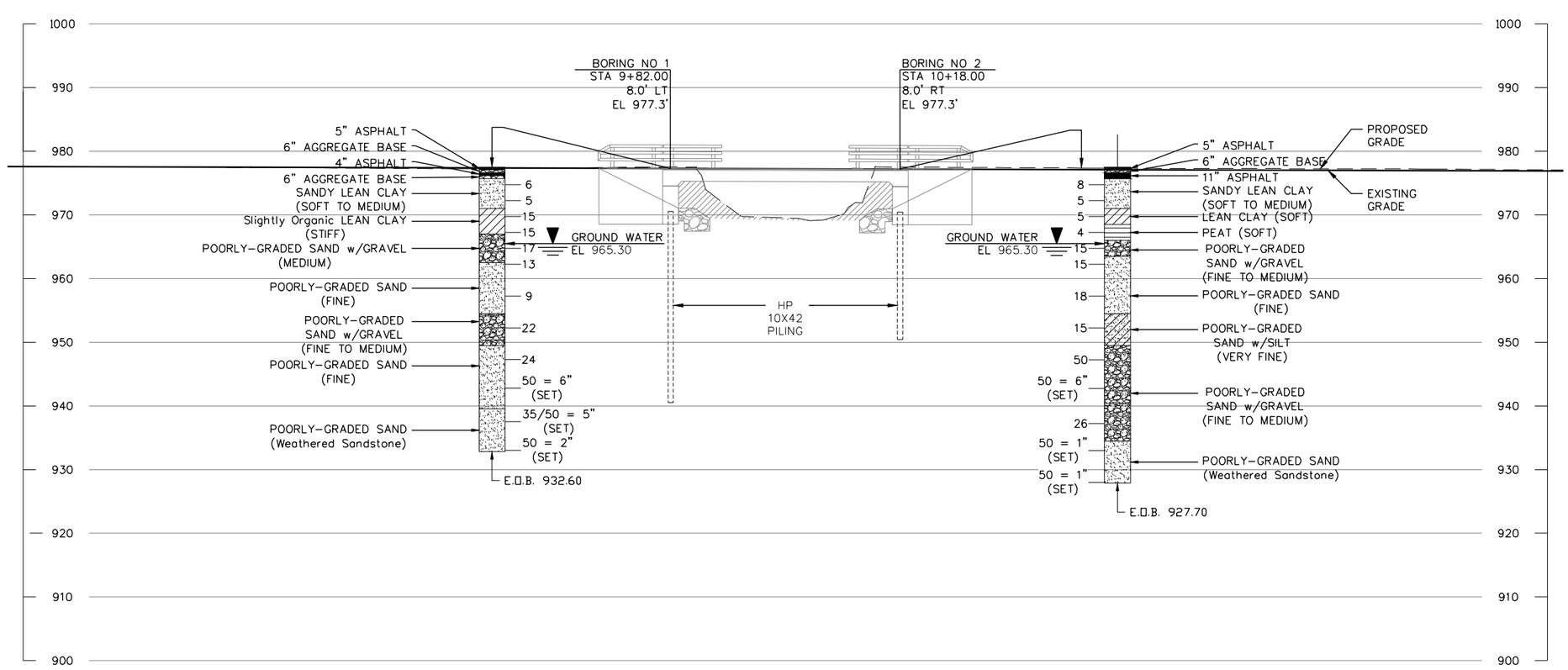


BORINGS TAKEN BY:

CHOSEN VALLEY TESTING, INC.

WISCONSIN OFFICE
135 BUCKNER PLACE
LA CROSSE, WI 54603
(608)782-5505

BORINGS 1 & 2
PERFORMED ON 3/18/2016



STATE PROJECT NUMBER

5025-00-71

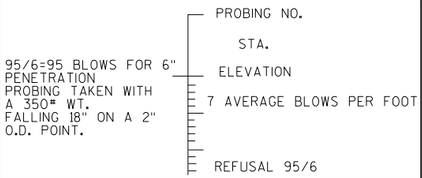
ABBREVIATIONS

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

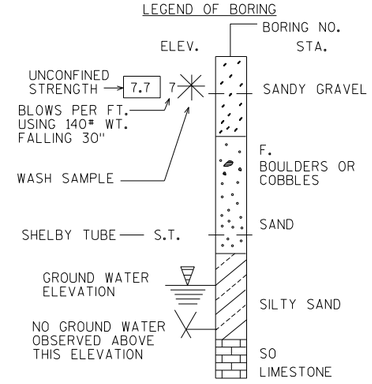
MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY 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-41-0302

DRAWN BY NJT | PLANS CK'D. TLP

SUBSURFACE EXPLORATION

SHEET 3 OF 8

22

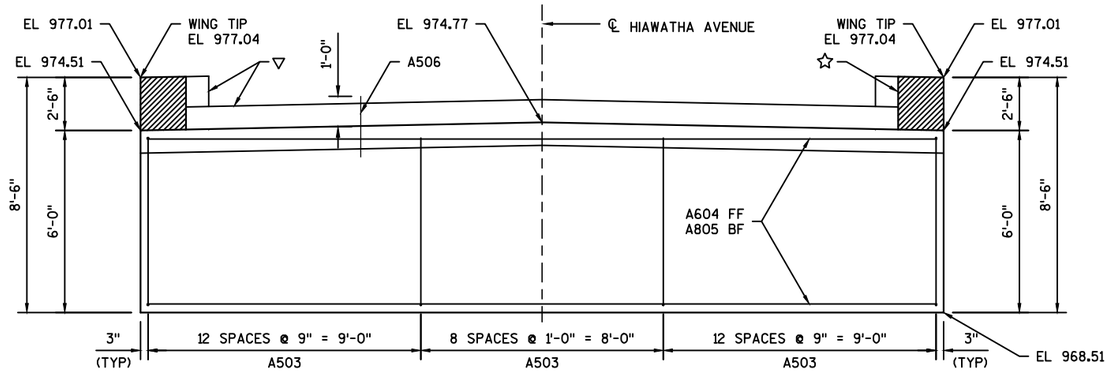
8

8

SCALE = 1:2

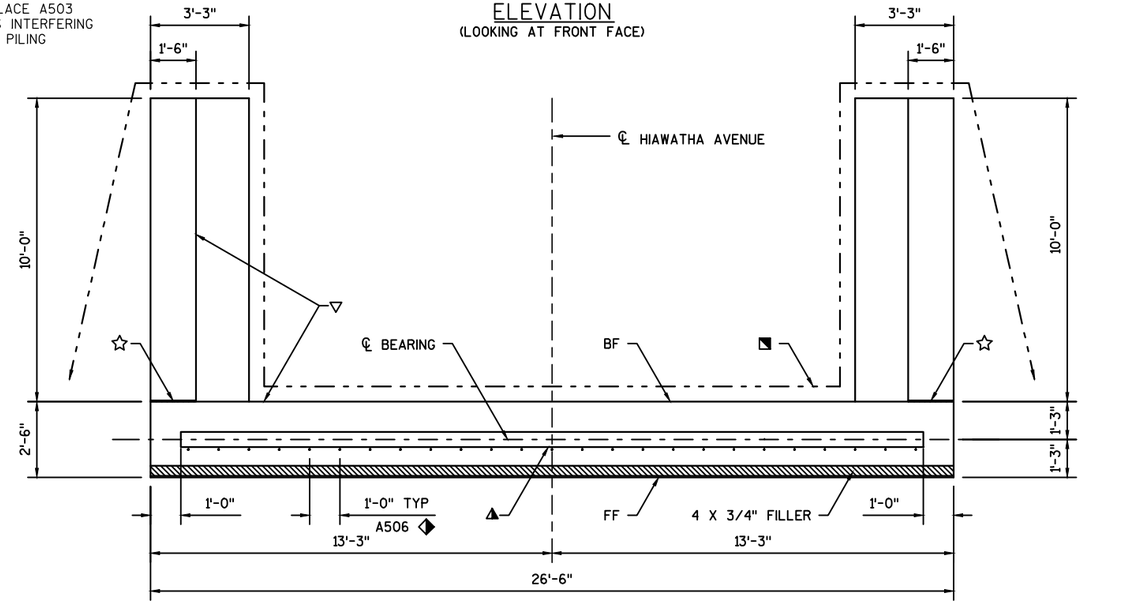
STATE PROJECT NUMBER

5025-00-71

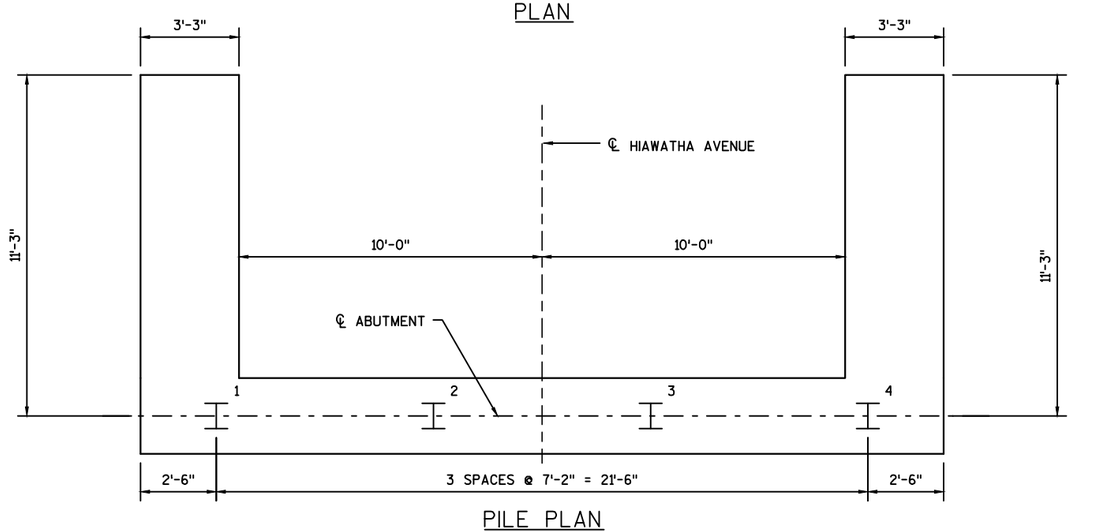


NOTE:
DISPLACE A503 BARS INTERFERING WITH PILING

ELEVATION
(LOOKING AT FRONT FACE)



PLAN



PILE PLAN

BILL OF BARS

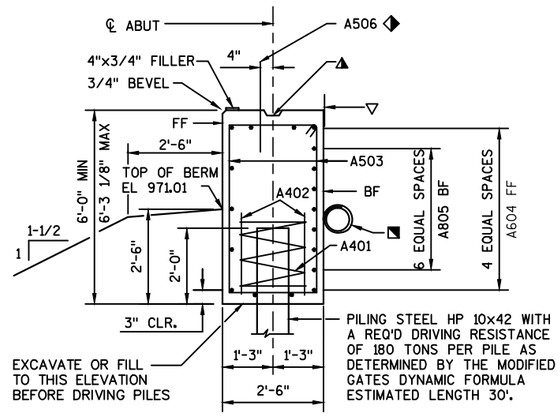
1550* UNCOATED 1430* COATED

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
A401		4	28'-0"		X	BODY - ONE PER PILE
A402		8	2'-3"			BODY - TWO PER PILE
A503		33	15'-9"		X	BODY - STIRRUPS
A604		11	26'-2"			BODY - HORIZ.
A805		7	26'-2"			BODY - HORIZ. BF
A506	X	25	2'-0"			BODY - VERT DOWELS
A607	X	4	9'-8"			WING 1 & 2 - HORIZ. TOP
A408	X	10	9'-8"			WING 1 & 2 - HORIZ.
A609	X	28	9'-5"		X	WING 1 & 2 - VERT. TOP
A510	X	22	17'-6"		X	WING 1 & 2 - VERT. BASE
A511	X	7	11'-6"			WING 1 BASE HORIZ. FF
A512	X	7	11'-6"			WING 2 BASE HORIZ. FF
A613	X	6	11'-10"			WING 1 BASE HORIZ. BF & TOP
A614	X	6	11'-10"			WING 2 BASE HORIZ. BF & TOP
A615	X	2	11'-10"			WING 1 BASE HORIZ. TOP
A616	X	2	11'-10"			WING 2 BASE HORIZ. TOP

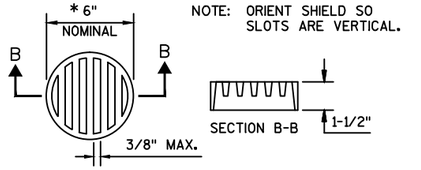
NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

LEGEND

- INDICATES WING NUMBER
- ▽ 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW). SEAL ALL HORIZ. & VERT. JOINTS ON BACK FACE.
- ▲ KEYED CONST. JOINT FORMED BY BEVELED 2" x 6".
- ◆ BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.
- ☆ SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
- ◥ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".



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



RODENT SHIELD DETAIL

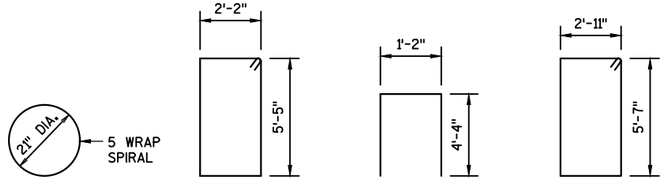
* DIMENSION IS APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

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

SECTION THRU BODY

ALL HORIZ BARS ARE A604 UNLESS OTHERWISE SPECIFIED



NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

Cedar corporation

MENOMONIE - MADISON - GREEN BAY
www.cedarcorp.com 800-472-7372

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0302

DRAWN BY NJT | PLANS CK'D. TLP

WEST ABUTMENT

SHEET 4 OF 8

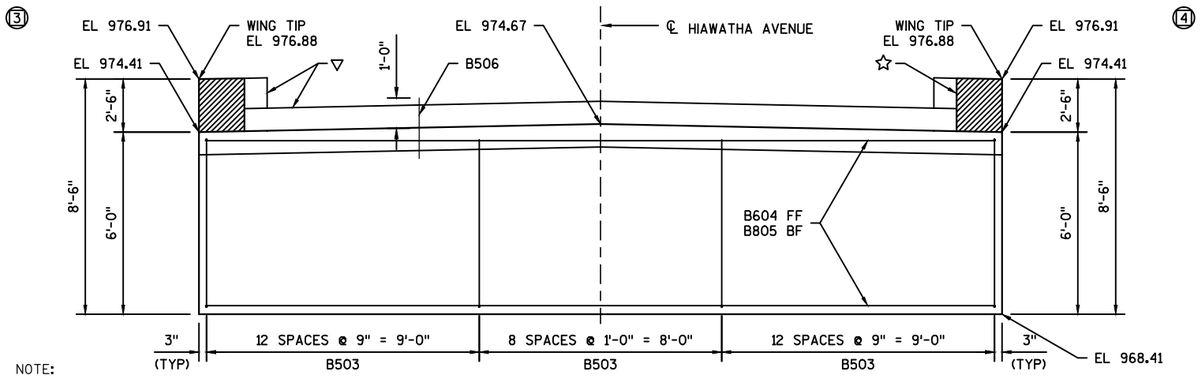
23

8

8

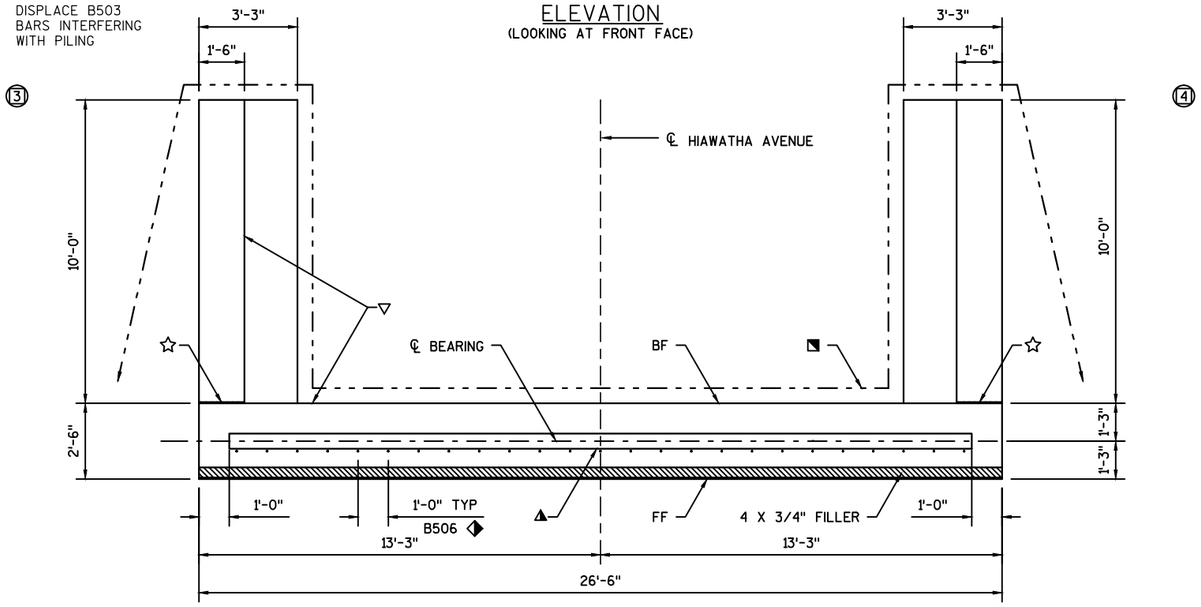
STATE PROJECT NUMBER

5025-00-71

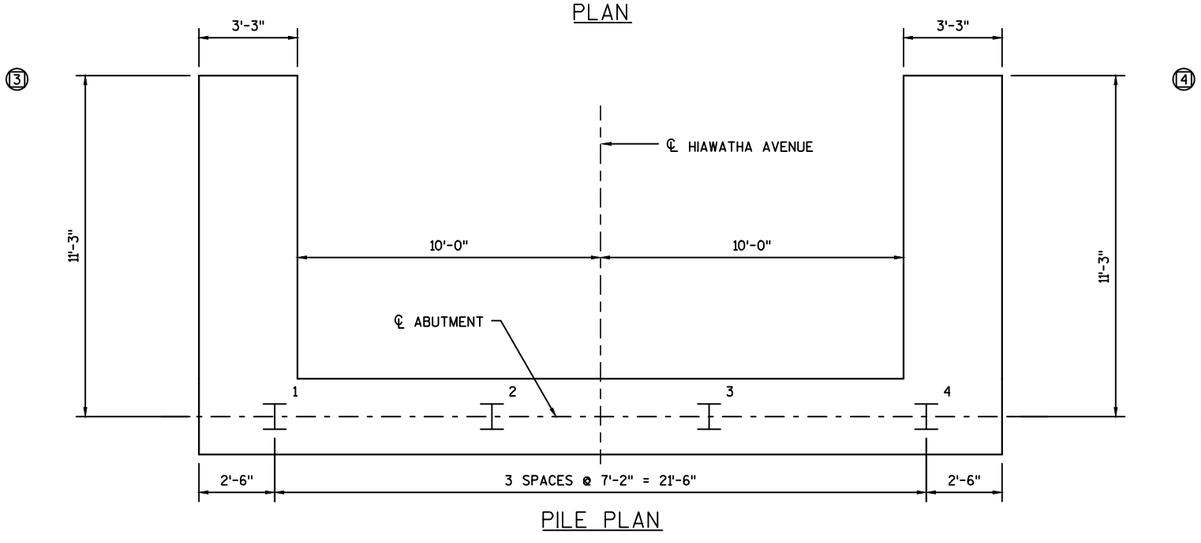


NOTE:
DISPLACE B503 BARS INTERFERING WITH PILING

ELEVATION
(LOOKING AT FRONT FACE)



PLAN



PILE PLAN

BILL OF BARS

1550* UNCOATED 1430* COATED

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B604		11	26'-2"			BODY - HORIZ.
B805		7	26'-2"			BODY - HORIZ. BF
B506	X	25	2'-0"			BODY - VERT DOWELS
B607	X	4	9'-8"			WING 3 & 4 - HORIZ. TOP
B408	X	10	9'-8"			WING 3 & 4 - HORIZ.
B609	X	28	9'-5"		X	WING 3 & 4 - VERT. TOP
B510	X	22	17'-6"		X	WING 3 & 4 - VERT. BASE
B511	X	7	11"-6"			WING 3 BASE HORIZ. FF
B512	X	7	11'-6"			WING 4 BASE HORIZ. FF
B613	X	6	11'-10"			WING 3 BASE HORIZ. BF & TOP
B614	X	6	11'-10"			WING 4 BASE HORIZ. BF & TOP
B615	X	2	11'-10"			WING 3 BASE HORIZ. TOP
B616	X	2	11'-10"			WING 4 BASE HORIZ. TOP

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

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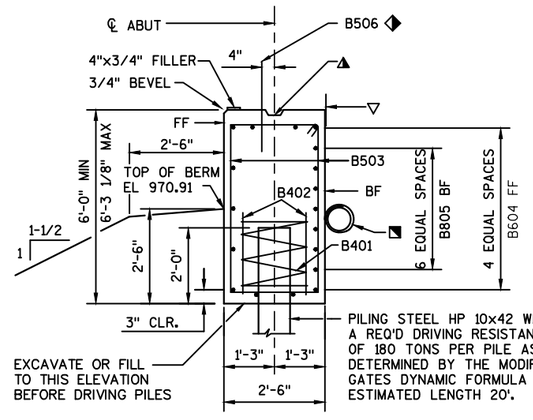
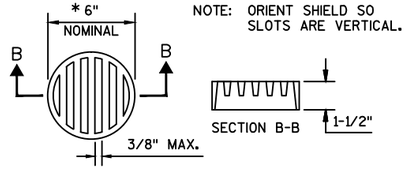
- ☆ SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
- ◥ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".



NOTE: B506 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.



RODENT SHIELD DETAIL

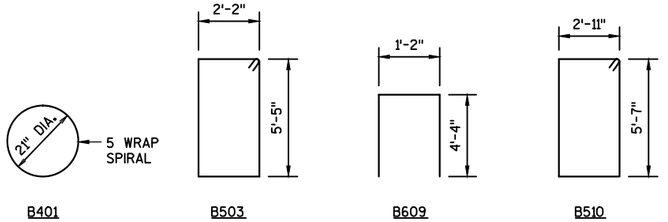
* DIMENSION IS APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

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

SECTION THRU BODY

ALL HORIZ BARS ARE B604 UNLESS OTHERWISE SPECIFIED



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DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0302

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EAST ABUTMENT

SHEET 5 OF 8

24

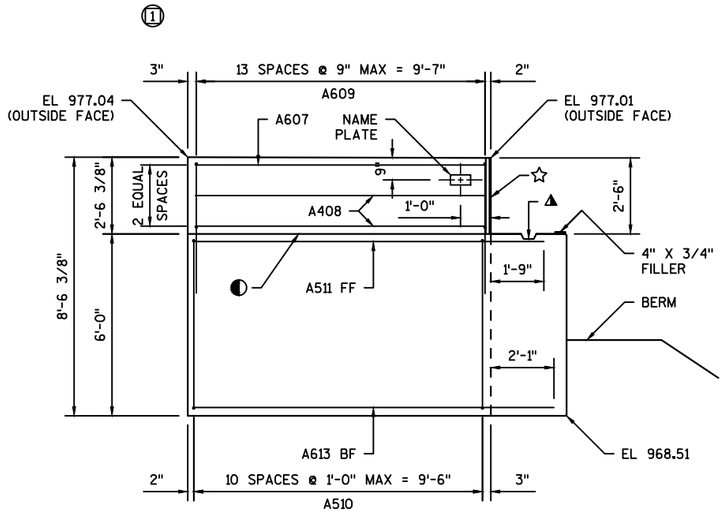
SCALE =

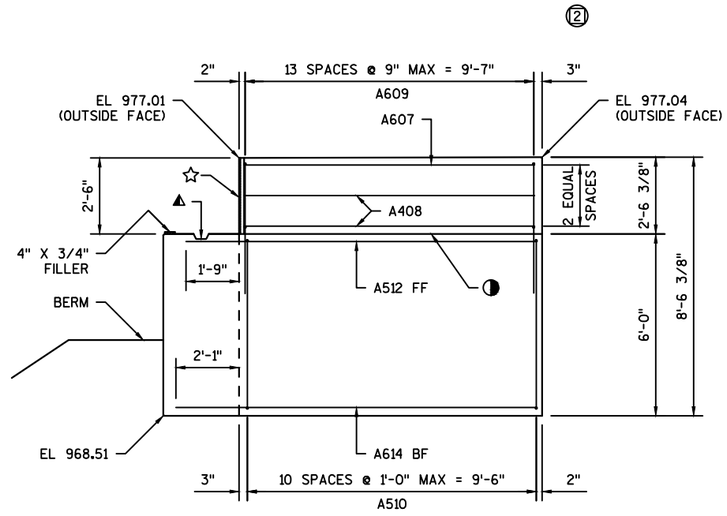
8

8

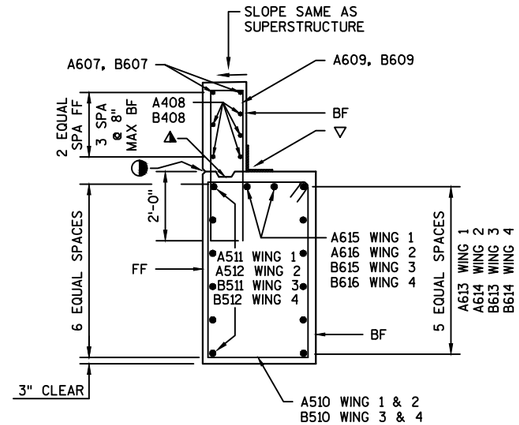
STATE PROJECT NUMBER

5025-00-71



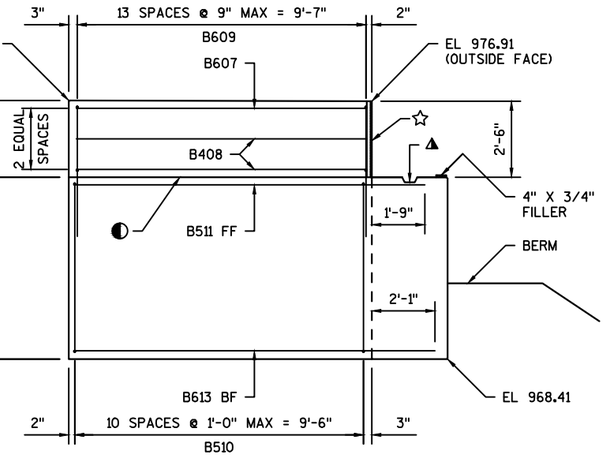


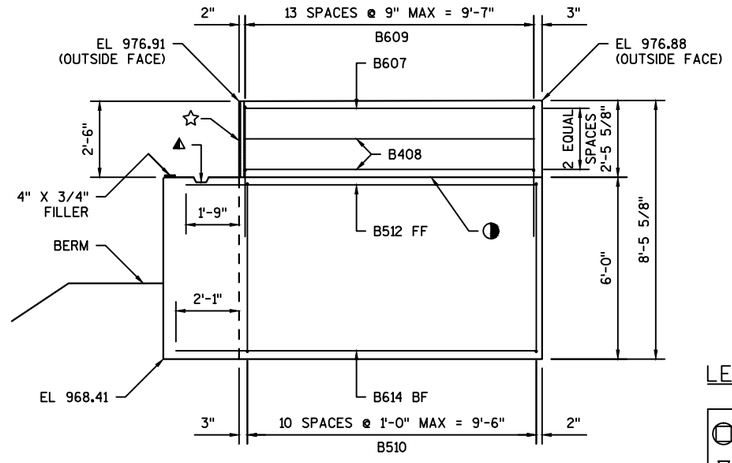
WEST ABUTMENT WINGS



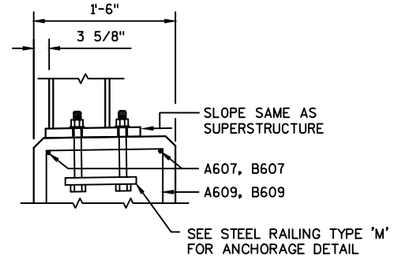
BF = BACK FACE
FF = FRONT FACE

TYPICAL SECTION THRU WING





EAST ABUTMENT WINGS



SPACE A609 & B609 BARS TO MISS ANCHORS FOR RAIL POSTS

SECTION AT TOP OF WING

LEGEND

- ◯ INDICATES WING NUMBER
- ▽ 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW). SEAL ALL HORIZ. & VERT. JOINTS ON BACK FACE.
- ▲ KEYED CONST. JOINT FORMED BY BEVELED 2" × 6".
- ☆ SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
- ◐ OPTIONAL KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" × 6". (18" RMW @ BF & 3/4" 'V' GROOVE @ F.F. OF WING WALL IF JOINT IS USED).

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ABUTMENT DETAILS

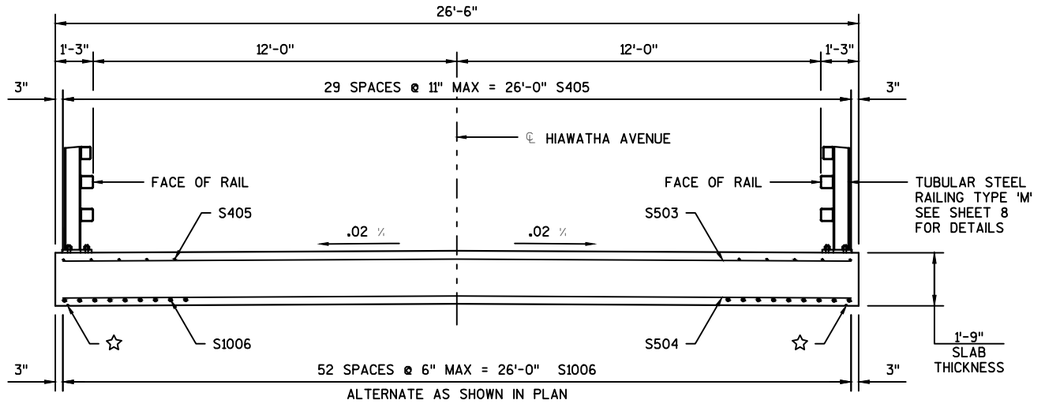
SHEET 6 OF 8

25

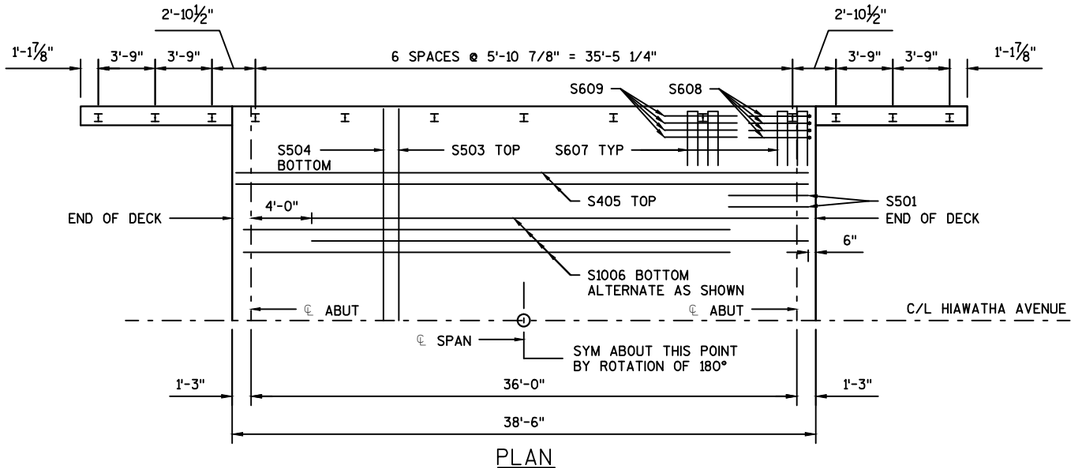
SCALE =

8

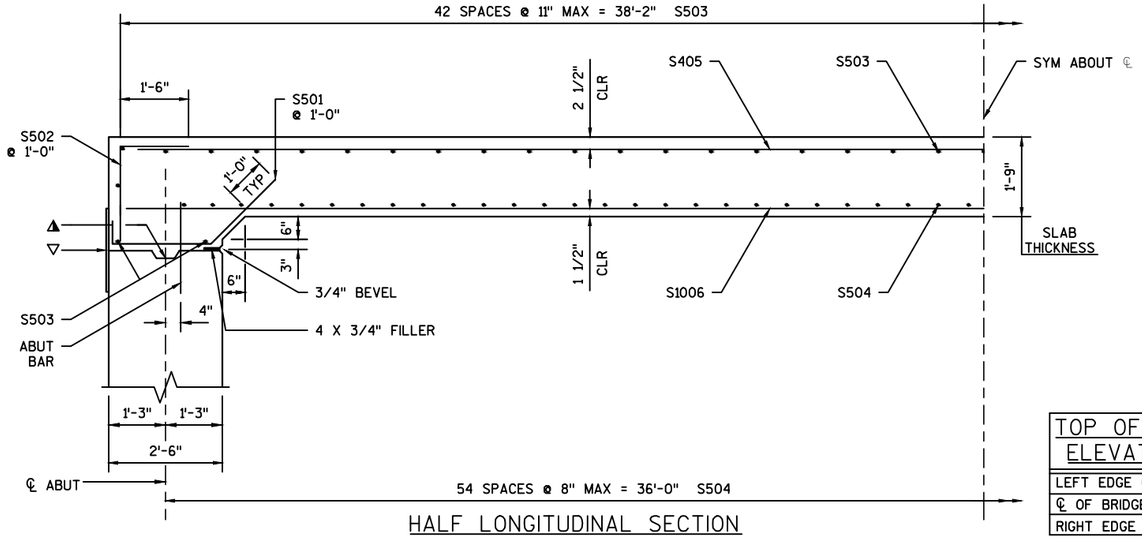
8



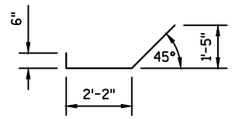
CROSS SECTION THRU ROADWAY



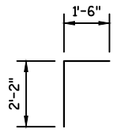
PLAN



HALF LONGITUDINAL SECTION



S501



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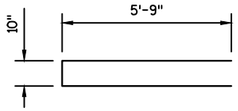
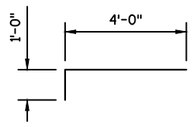
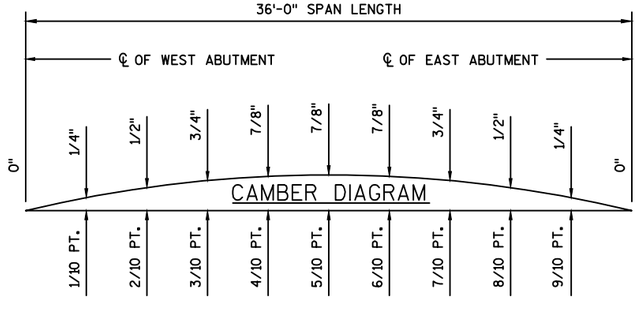


S607



S608



TOP OF DECK ELEVATIONS	WEST ABUT	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	EAST ABUT
LEFT EDGE OF DECK	977.01	977.00	976.99	976.98	976.97	976.96	976.95	976.94	976.93	976.92	976.91
℄ OF BRIDGE DECK	977.27	977.26	977.25	977.24	977.23	977.22	977.21	977.20	977.19	977.18	977.17
RIGHT EDGE OF DECK	977.01	977.00	976.99	976.98	976.97	976.96	976.95	976.94	976.93	976.92	976.91

STATE PROJECT NUMBER

5025-00-71

BILL OF BARS

12400# COATED

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	54	4'-6"		X	AT END OF DECK
S502	X	54	3'-7"		X	AT END OF DECK
S503	X	47	26'-2"			SLAB, TOP, TRANSVERSE
S504	X	55	26'-2"			SLAB, BOTTOM, TRANSVERSE
S405	X	30	38'-2"			SLAB, TOP, LONGITUDINAL
S1006	X	53	32'-6"			SLAB, BOTTOM, LONGITUDINAL
S607	X	28	12'-0"		X	AT RAIL POSTS
S608	X	16	5'-0"		X	AT END RAIL POSTS
S609	X	40	6'-0"			AT INTERIOR RAIL POSTS

NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

GENERAL NOTES

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

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE ℄ OF SUBSTRUCTURE UNITS.

THE SLAB THICKNESS DIMENSION IS MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEADLOAD DEFLECTION & FUTURE FORM SETTLEMENT. DEADLOAD DEFLECTIONS ONLY EQUAL APPROXIMATELY 1/3 OF CAMBER VALUES SHOWN.

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF SLAB ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIERS AND AT ⅝ PTS. TO VERIFY CAMBER, TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR ℄.

LEGEND

- ▽ 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW). SEAL ALL HORIZ. & VERT. JOINTS ON BACK FACE.
- ▲ KEYED CONST. JOINT FORMED BY BEVELED 2" x 6".
- ⊖ 3/4" CONTINUOUS DRIP GROOVE LOCATED 5" FROM EDGE OF DECK. BEGIN 6" AWAY FROM ABUT. FACE.
- * DIMENSIONS MEASURED ALONG ℄ OF BRIDGE
- ** DIMENSIONS MEASURED ALONG ℄ OF SUBSTRUCTURE

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STRUCTURE B-41-0302

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SUPERSTRUCTURE

SHEET 7 OF 8

26

SCALE =

8

8

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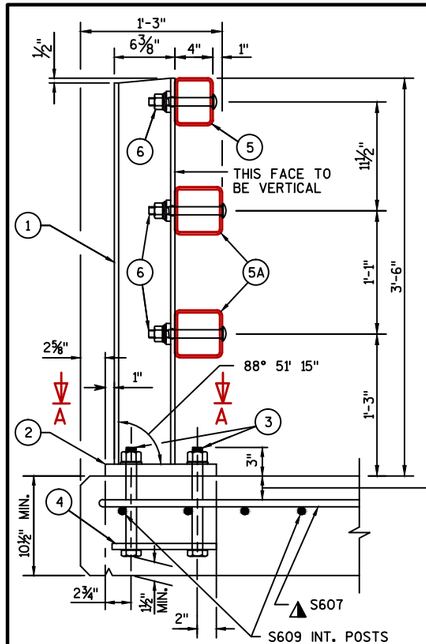
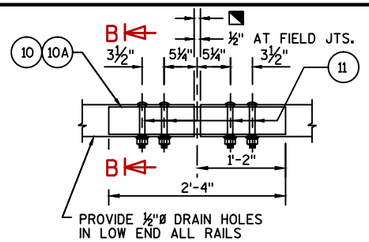
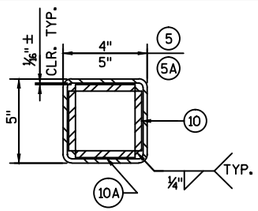


SECTION THRU RAILING ON DECK

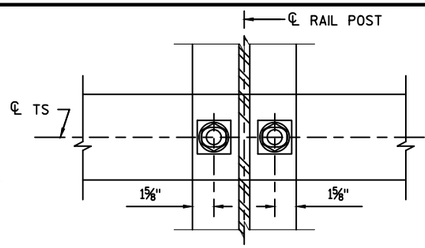
2½" FOR SLABS ON GIRDERS; FOR OTHER STRUCTURES, PLACE BELOW TOP MAT SLAB REINFORCEMENT.



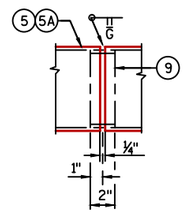
FIELD ERECTION JOINT DETAIL



SECTION B-B

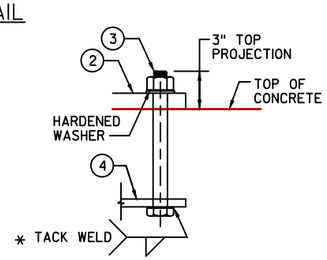


SECTION THRU POST WEB

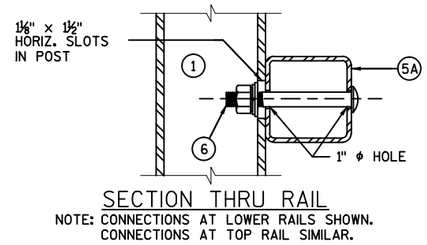


SHOP RAIL SPLICE DETAIL

LOCATION MUST BE SHOWN ON SHOP DRAWINGS



ANCHOR BOLTS



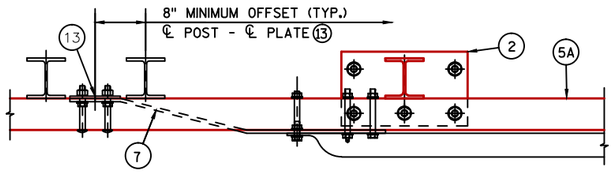
SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS

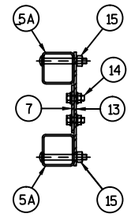
GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE 'M' B-41-0302 WHICH INCLUDES ALL ITEMS SHOWN.
2. RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 ksi. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
3. THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
4. RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
5. ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
6. WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
7. FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
8. POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
9. ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
10. THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

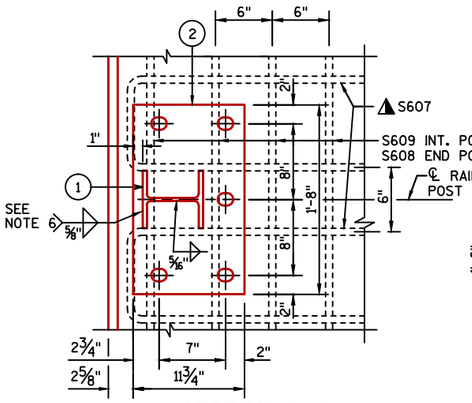


TOP VIEW AT END POST

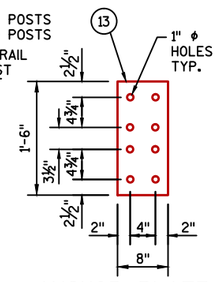
THRIE BEAM RAIL ATTACHMENT



SECTION C-C

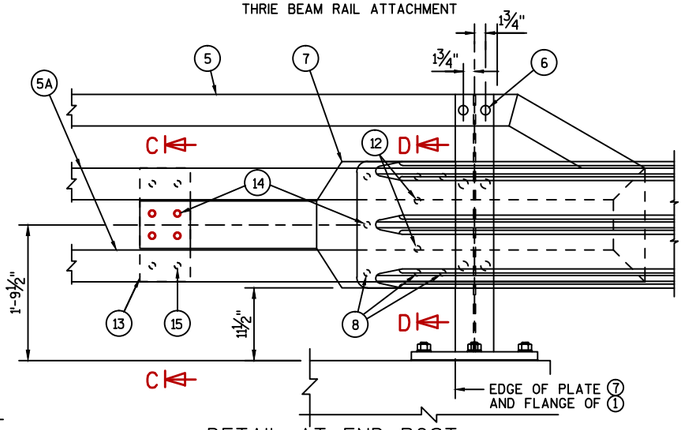


SECTION A-A



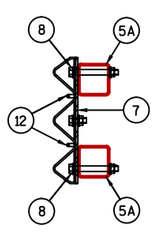
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

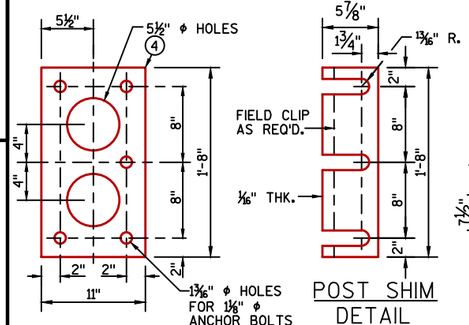


DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT



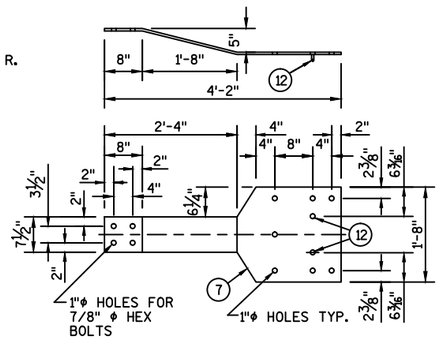
SECTION D-D



ANCHOR PLATE

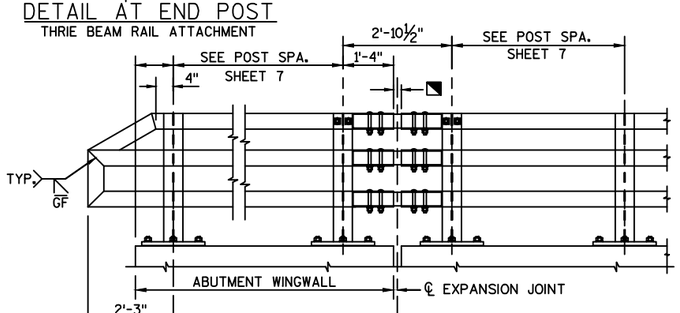
(AT RAIL TO DECK CONNECTION)

POST SHIM DETAIL



BACK-UP PLATE DETAIL

(AT BEAM GUARD ATTACHMENT)



PART ELEVATION OF RAILING

LEGEND

1. W6 x 25 WITH 1⅛" X 1½" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1½" x 11¾" x 1'-8" WITH 1⅝" X 1⅝" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
3. ASTM A449 - 1⅛" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. USE 10¾" LONG AT ALL OTHER LOCATIONS. (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
4. ⅝" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1³⁄₁₆" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. ⅞" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, ⅜" X 1⅝" X 1⅝" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. 1/2" THK. BACK-UP PLATE WITH 2 - ⅞" X 1¼" 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 ⅞" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM ¼" PLATE. PROVIDE "SLIDING FIT".
10. ⅜" X 3⅝" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. ⅜" X 2⅝" X 2'-4" PLATE USED IN NO. 5, ⅜" X 3⅝" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. ⅞" ø A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15⁄16" X 1¼" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 15⁄16" X 2¼" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
12. ⅞" DIA. X 1½" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. ⅜" 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. ⅞" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1" ø HOLES IN TUBES NO. 5A FOR ⅞" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

▲ TIE TO TOP MAT OF STEEL.

* FOR ANCHOR BOLTS IN WINGS, TACK WELD MAY BE USED IN FIELD AFTER ANCHOR PLATE IS IN POSITION IF REQ'D. FOR CONSTRUCTABILITY.

◥ RDWY. OPENING OR 2½" MIN. FOR STRIP SEAL EXP. JOINT & ½" OPENING FOR A1 ABUTMENT.

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

Cedar corporation

MENOMONIE - MADISON - GREEN BAY

www.cedarcorp.com 800-472-7372

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-41-0302

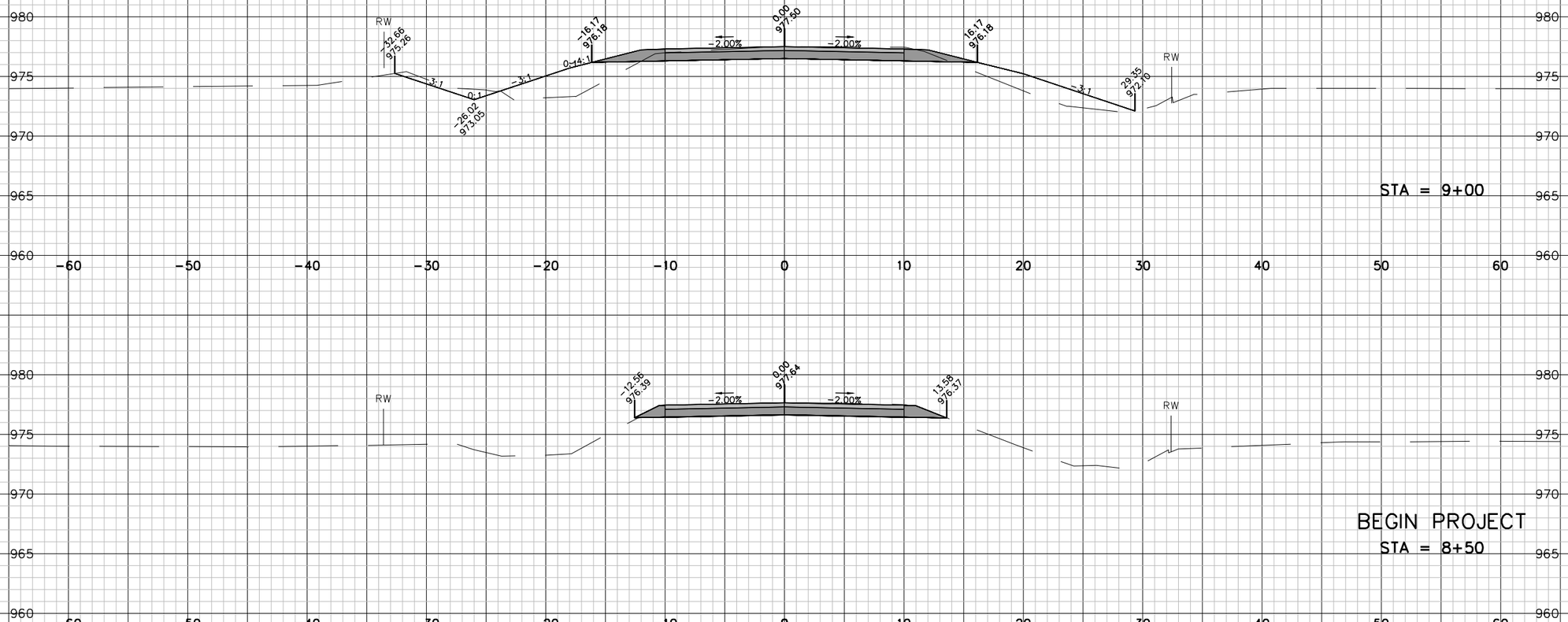
DRAWN BY NJT | PLANS CK'D. TLP

TUBULAR STEEL RAILING TYPE 'M'

SHEET 8 OF 8

27

SCALE =



9

9

PROJECT NO: 5025-00-71	HWY: HIAWATHA AVENUE	COUNTY: MONROE	CROSS SECTIONS	SHEET 28	E

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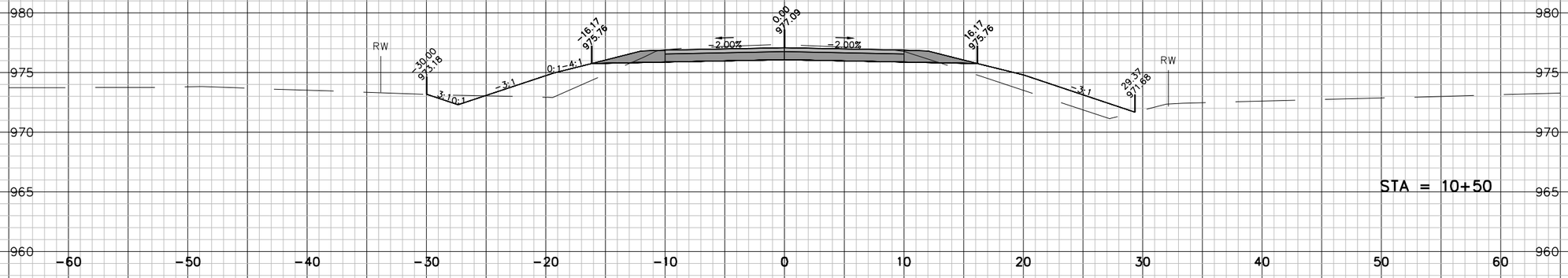
LAYOUT NAME - SECTION SHEET - (1)

PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 49



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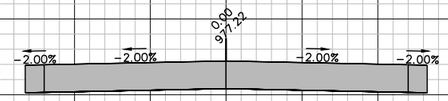
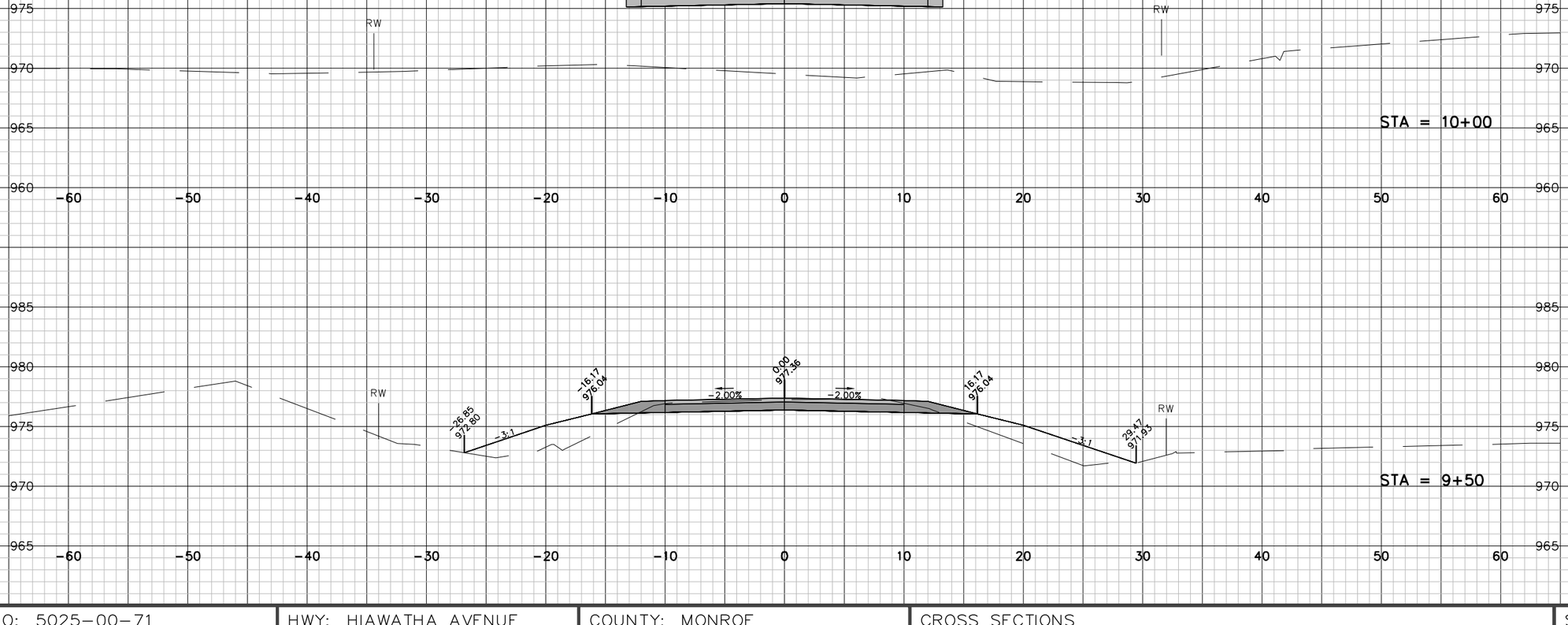
BRIDGE B-41-0302





STA = 10+00

STA = 9+50

10 FT

10 FT

PROJECT NO: 5025-00-71	HWY: HIAWATHA AVENUE	COUNTY: MONROE	CROSS SECTIONS	SHEET 29	E

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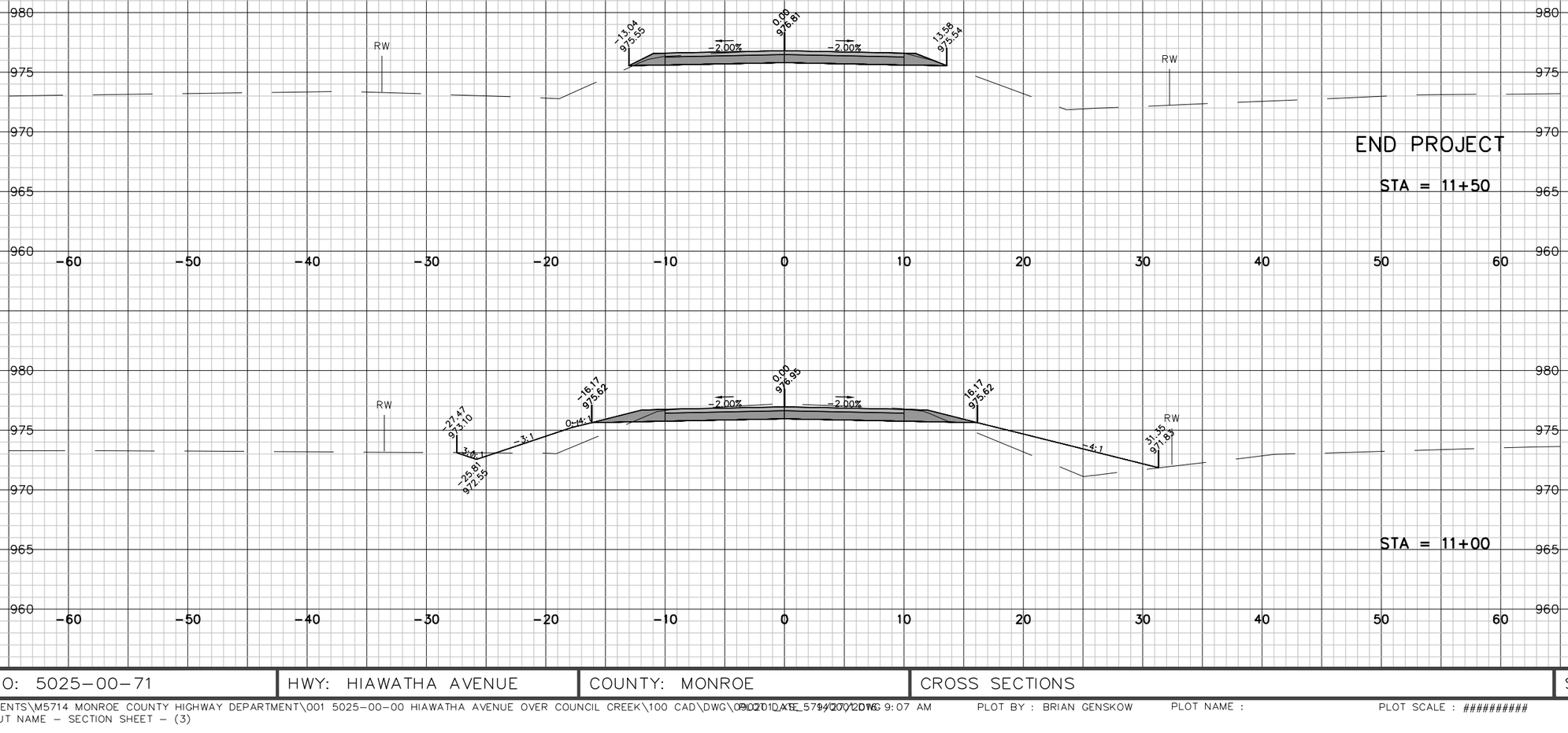
LAYOUT NAME - SECTION SHEET - (2)

PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 49



PROJECT NO: 5025-00-71	HWY: HIAWATHA AVENUE	COUNTY: MONROE	CROSS SECTIONS	SHEET 30	E

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LAYOUT NAME - SECTION SHEET - (3)
PLOT BY : BRIAN GENSKOW PLOT NAME : PLOT SCALE : ########## WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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