SWL DEC 2016

PROJECT ID: 5804-00-74

WITH: N/A

COUNTY: DANE

ORDER OF SHEETS

TOTAL SHEETS = 32

07

N

DESIGN DESIGNATION

A.A.D.T.	2016	=	110
A.A.D.T.	2036	=	110
D.H.V.		=	10
D.D.		=	51/49
T.		=	10%
DESIGN SPEED		=	50 MPH
ESALS		=	24,120

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)
- WETLAND
- 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

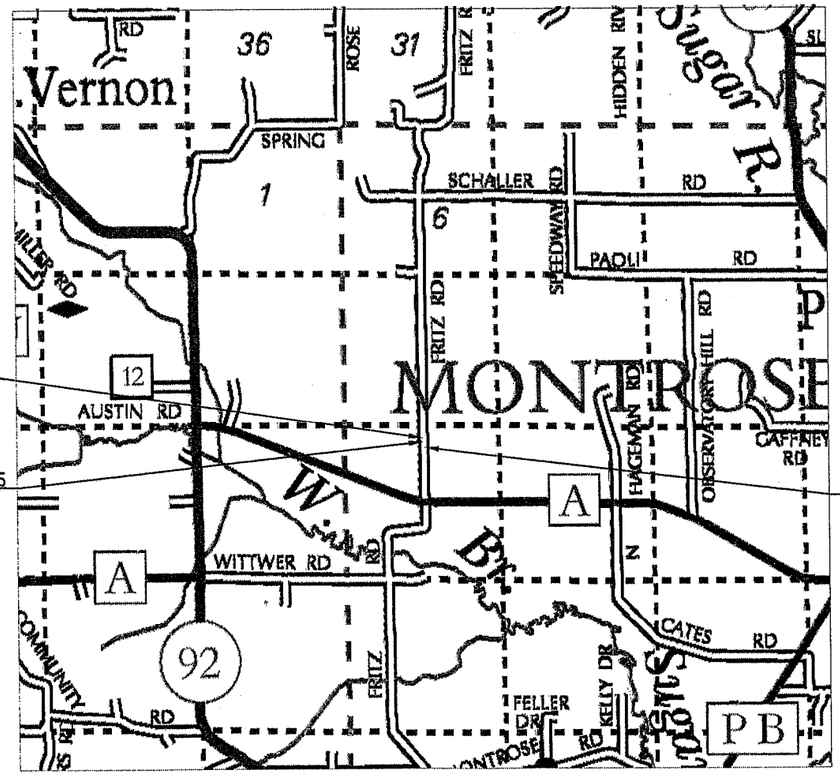
FRITZ ROAD, TOWN OF MONTROSE

(FLYNN CREEK BRIDGE B-13-0675)

TOWN ROAD
DANE COUNTY

STATE PROJECT NUMBER
5804-00-74

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5804-00-74	WISC 2016469	1



BEGIN PROJECT
STA. 1+25
Y=424757.822
X=765324.633

STRUCTURE B-13-0675

END PROJECT
STA. 2+75
Y=424607.824
X=765325.442

LAYOUT
SCALE 0 0.5 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.028 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, DANE COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ACCEPTED FOR
TOWN OF MONTROSE

7-19-16 (Date)

ORIGINAL PLANS PREPARED BY

JSD Professional Services, Inc.
• Engineers • Surveyors • Planners
VERONA REGIONAL OFFICE
161 HORIZON DRIVE, SUITE 101
VERONA, WI 53593
608.848.5060 PHONE 608.848.2255 FAX

WISCONSIN WILLIAM D. KNIGHT 37822 SUN PRAIRIE PROFESSIONAL ENGINEER

7/19/16 (Date) (Professional Engineer)

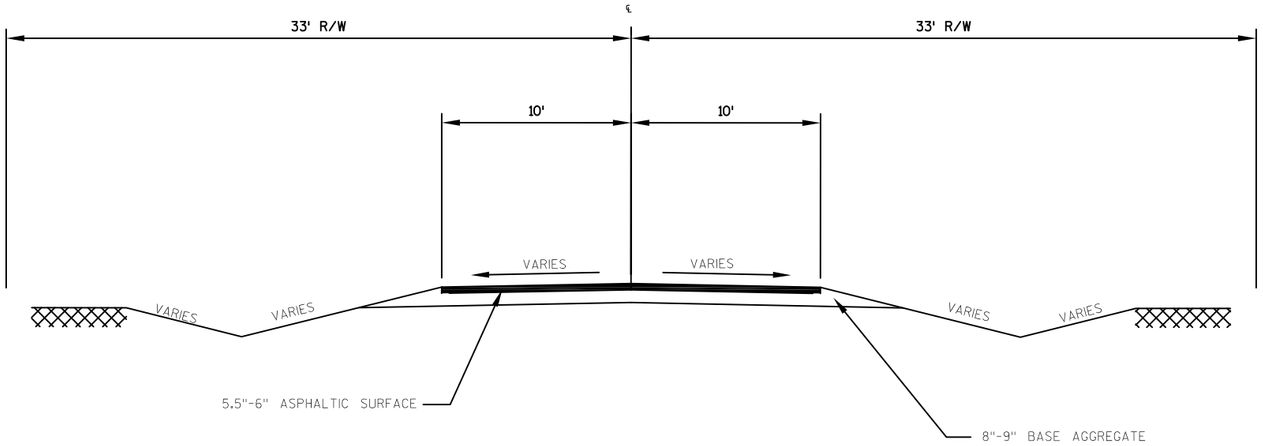
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor JSD PROFESSIONAL SERVICES, INC.
Designer JSD PROFESSIONAL SERVICES, INC.

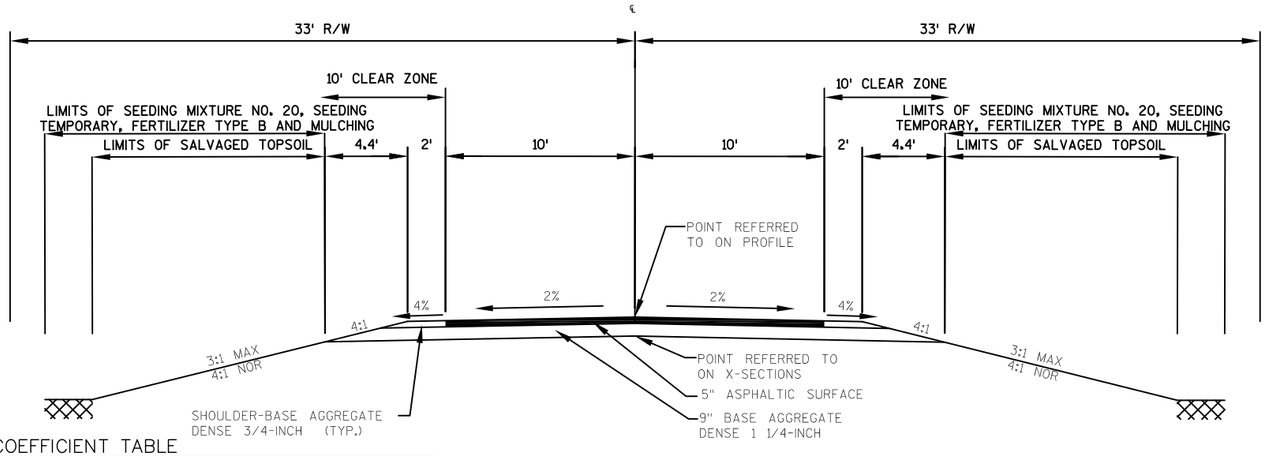
Management Consultant KL Engineering

APPROVED FOR THE DEPARTMENT
DATE: 7/29/16 (Management Consultant Signature)

E



TYPICAL EXISTING SECTION



TYPICAL FINISHED SECTION

NOTE: ASPHALTIC SURFACE SHALL BE PLACED 24' WIDE AT BRIDGE AND TAPER TO 20' WIDE AT END OF APPROACH

RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 0.91 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.32 ACRES

STANDARD ABBREVIATIONS

BM	BENCH MARK
CL	CENTERLINE
EL	ELEVATION
EX	EXISTING
HMA	HOT MIX ASPHALT
K	RATE OF VERTICAL CURVATURE
L	LEFT
MAX	MAXIMUM
R/W	RIGHT OF WAY
R	RIGHT
STA	STATION
TYP	TYPICAL
VCL	VERTICAL CURVE LENGTH
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION

GENERAL NOTES

THE NW AND SW QUADRANTS ARE WETLAND AREAS. DO NOT OPERATE MACHINERY OUTSIDE OF THE SLOPE INTERCEPTS.

ALL ELEVATIONS ON THIS PROJECT ARE REFERENCED TO THE NORTH AMERICAN DATUM OF 2011 NAD 83.

DISTURBED AREAS WITHIN THE RIGHT OF WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, WILL BE FERTILIZED, SEEDED AND MULCHED OR EROSION MAT.

RESTORATION OF EXPOSED SLOPES AND DITCHED SHALL TAKE PLACE IMMEDIATELY AFTER FINISHED GRADING IS COMPLETE.

EXCAVATION BELOW THE SUBGRADE (EBS) SHALL BE MEASURED AND PAID FOR AS EXCAVATION COMMON, THE EXACT LOCATION FOR EBS, AS REQUIRED, WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

CONSTRUCT 5-INCH PAVEMENT WITH A 2 1/4-INCH UPPER LAYER AND A 2 3/4-INCH LOWER LAYER.

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

SAW CUT LOCATIONS SHOWN ON THE PLAN ARE SUBJECTED TO ADJUSTMENT BY THE ENGINEER IN THE FIELD. THE LINE OF SUCH SAW CUTS WILL BE NEATLY DELINEATED THROUGH THE ASPHALT AND/OR CONCRETE PAVEMENT WITHOUT ANY DAMAGE TO THE REMAINING PORTION OF THE EXISTING PAVEMENT.

ELEVATIONS SHOWN ON THE ROADWAY CROSS SECTIONS ARE SUBGRADE ELEVATIONS AT THE CONSTRUCTION REFERENCE LINES.

PROPERTY LINES SHOWN ARE APPROXIMATE.

WisDOT WILL FURNISH A BENCH MARK MONUMENT TO BE SET BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER IN THE FIELD.

UTILITY CONTACTS

ALLIANT ENERGY
1919 ALLIANT ENERGY CENTER WAY
MADISON, WI 53713
ATTN: RICK MARTINGILIO
TELEPHONE: 608-845-1120
EMAIL: rickamartingilio@alliantenergy.com

FRONTIER COMMUNICATIONS
2222 W. WISCONSIN ST.
PORTAGE, WI 53901
ATTN: ROBERT CHURCH
TELEPHONE: 608-742-1817
EMAIL: robert.church@ftr.com

TOWN OF MONTROSE CONTACT

DAN PALMER
TOWN SUPERVISOR
1341 DIANE AVENUE
BELLEVILLE, WI 53508
TELEPHONE: 608-424-3848
EMAIL: montrose@chorus.net

WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONTACT

ERIC HEGGELUND
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
TELEPHONE: 608-275-3266
EMAIL: eric.heggelund@wisconsin.gov

DESIGN CONTACT

JSD PROFESSIONAL SERVICES, INC.
161 HORIZON DRIVE, SUITE 101
VERONA, WI 53593
ATTN: BILL DUNLOP, P.E.
TELEPHONE: 608-848-5060
EMAIL: bill.dunlop@jsdinc.com

DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com
** DENOTES UTILITIES NOT A MEMBER OF DIGGERS HOTLINE

PROJECT NO:5804-00-74	HWY: FRITZ ROAD	COUNTY: DANE	TYPICAL SECTIONS	SHEET	E

DATE 05OCT16 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	5804-00-74 QUANTITY
0010	201.0105	Clearing	STA	2.000	2.000
0020	201.0205	Grubbing	STA	2.000	2.000
0030	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 2+00	LS	1.000	1.000
0040	205.0100	Excavation Common **P**	CY	13.000	13.000
0050	206.1000	Excavation for Structures Bridges (structure) 01. B-13-0675	LS	1.000	1.000
0060	208.0100	Borrow	CY	385.000	385.000
0070	210.1500	Backfill Structure Type A	TON	240.000	240.000
0080	213.0100	Finishing Roadway (project) 01. 5804-00-74	EACH	1.000	1.000
0090	305.0110	Base Aggregate Dense 3/4-Inch	TON	10.000	10.000
0100	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	125.000	125.000
0110	455.0605	Tack Coat	GAL	15.000	15.000
0120	465.0105	Asphaltic Surface	TON	70.000	70.000
0130	502.0100	Concrete Masonry Bridges	CY	137.000	137.000
0140	502.3200	Protective Surface Treatment	SY	138.000	138.000
0150	505.0400	Bar Steel Reinforcement HS Structures	LB	3,440.000	3,440.000
0160	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	16,540.000	16,540.000
0170	513.4061	Railing Tubular Type M (structure) 01. B-13-0675	LF	126.000	126.000
0180	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0190	550.0500	Pile Points	EACH	10.000	10.000
0200	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	350.000	350.000
0210	606.0300	Riprap Heavy	CY	100.000	100.000
0220	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0230	619.1000	Mobilization	EACH	1.000	1.000
0240	624.0100	Water	MGAL	3.000	3.000
0250	625.0500	Salvaged Topsoil	SY	250.000	250.000
0260	627.0200	Mulching	SY	250.000	250.000
0270	628.1504	Silt Fence	LF	300.000	300.000
0280	628.1520	Silt Fence Maintenance	LF	300.000	300.000
0290	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0300	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0310	628.2023	Erosion Mat Class II Type B	SY	300.000	300.000
0320	628.6005	Turbidity Barriers	SY	50.000	50.000
0330	629.0210	Fertilizer Type B	CWT	3.000	3.000
0340	630.0120	Seeding Mixture No. 20	LB	12.000	12.000
0350	630.0200	Seeding Temporary	LB	12.000	12.000
0360	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0370	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0380	638.2602	Removing Signs Type II	EACH	4.000	4.000
0390	638.3000	Removing Small Sign Supports	EACH	4.000	4.000
0400	642.5001	Field Office Type B	EACH	1.000	1.000
0410	643.0100	Traffic Control (project) 01. 5804-00-74	EACH	1.000	1.000
0420	643.0420	Traffic Control Barricades Type III	DAY	1,116.000	1,116.000
0430	643.0705	Traffic Control Warning Lights Type A	DAY	2,232.000	2,232.000
0440	643.0900	Traffic Control Signs	DAY	372.000	372.000
0450	645.0120	Geotextile Type HR	SY	200.000	200.000
0460	650.4500	Construction Staking Subgrade	LF	150.000	150.000
0470	650.5000	Construction Staking Base	LF	150.000	150.000
0480	650.6500	Construction Staking Structure Layout (structure) 01. B-13-0675	LS	1.000	1.000

3

DATE 05OCT16 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	5804-00-74 QUANTITY
0490	650.9910	Construction Staking Supplemental Control (project) 01. 5804-00-70	LS	1.000	1.000
0500	650.9920	Construction Staking Slope Stakes	LF	300.000	300.000
0510	690.0150	Sawing Asphalt	LF	40.000	40.000
0520	715.0502	Incentive Strength Concrete Structures	DOL	820.000	820.000

3

ALL ITEMS ARE CATEGORY 0010 UNLESS OTHERWISE STATED

CLEARING AND GRUBBING

STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
1+25	-	2+75	FRITZ RD	2	2
	TOTALS			2	2

FINISHING

STATION	TO	STATION	LOCATION	213.0100 FINISHING ROADWAY (PROJECT) EACH
1+25	-	2+75	FRITZ ROAD	1
	TOTALS			1

HMA PAVEMENT ITEMS

STATION	TO	STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
1+25	-	2+75	FRITZ ROAD	15	70
	TOTALS			15	70

EROSION CONTROL

LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH	628.2023 EROSION MAT CLASS II TYPE B SY	628.6005 TURBIDITY BARRIER SY
FRITZ ROAD	300	300	3	3	300	50
TOTALS	300	300	3	3	300	50

EXCAVATION COMMON

STATION	TO	STATION	LOCATION	205.0100 EXCAVATION COMMON CY	208.0100 BORROW CY
1+25	-	2+75	FRITZ ROAD	13	385
	TOTALS			13	385

BASE AGGREGATE DENSE

STATION	TO	STATION	LOCATION	305.0110 3/4 INCH TON	305.0120 1 1/4 INCH TON
1+25	-	2+75	FRITZ ROAD	10	128
	TOTALS			10	128

TOPSOIL, MULCHING, FERTILIZER AND SEED

STATION	TO	STATION	LOCATION	624.0100 WATER	625.0500 SALVAGED TOPSOIL	627.0200 MULCHING	629.0210 FERTILIZER TYPE B	630.0120 SEEDING MIXTURE NO 20	630.0200 SEEDING TEMPORARY
				MGAL	SY	SY	CWT	LB	LB
1+25	-	2+75	FRITZ ROAD	3	250	250	3	12	12
		TOTALS		3	250	250	3	12	12

SIGNING

STATION	TO	STATION	LOCATION	634.0612 POSTS WOOD 4x6-INCH x 12 FT	637.2230 SIGNS TYPE II REFLECTIVE F	638.2602 REMOVING SIGNS TYPE II	683.3000 REMOVING SMALL SIGN SUPPORTS
				EACH	SF	EACH	EACH
1+25	-	2+75	FRITZ ROAD	4	12	4	4
	TOTAL			4	12	4	4

SAWING PAVEMENT

STATION	LOC.	690.0150 SAWING ASPHALT
		LF
1+25	FRITZ RD	20
2+75	FRITZ RD	20
	TOTAL	40

TRAFFIC CONTROL SUMMARY

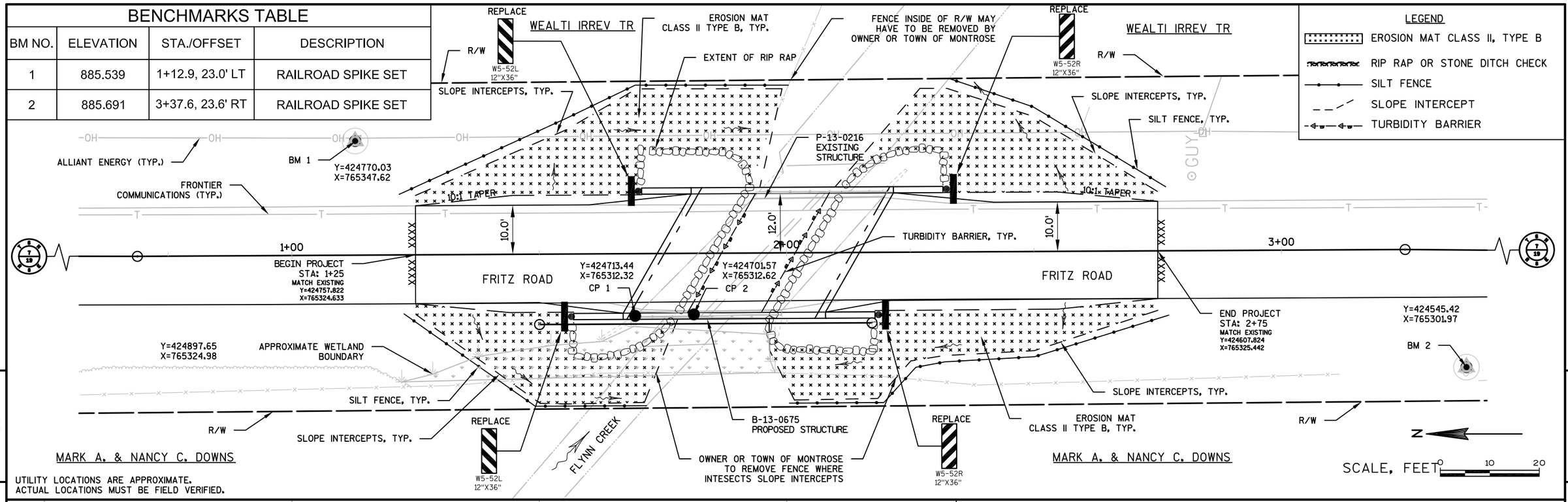
LOCATION		643.0100 TRAFFIC CONTROL (PROJECT)	643.0420 BARRICADES TYPE III	643.0705 WARNING LIGHTS TYPE A (BARRICADES)	643.0900 TRAFFIC CONTROL SIGNS
		EACH	DAYS	DAYS	DAYS
FRITZ ROAD		1	1116	2232	372
	TOTAL	1	1116	2232	372

CONSTRUCTION STAKING

STATION	TO	STATION	LOCATION	650.4500 SUBGRADE	650.5000 BASE	650.6500 CATEGORY 0020 STRUCTURAL LAYOUT	650.9910 SUPPLEMENTAL CONTROL	650.9920 SLOPE STAKES
				LF	LF	LS	LS	LF
1+25	-	2+75	FRITZ ROAD	150	150	1	1	300
	TOTALS			150	150	1	1	300

BENCHMARKS TABLE

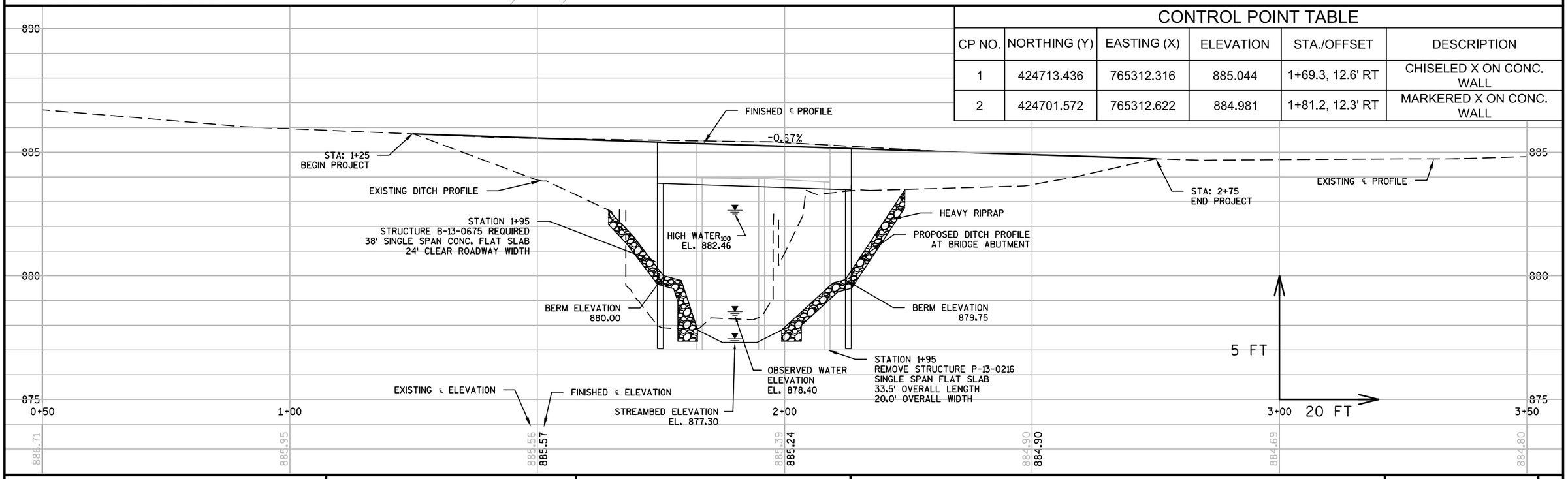
BM NO.	ELEVATION	STA./OFFSET	DESCRIPTION
1	885.539	1+12.9, 23.0' LT	RAILROAD SPIKE SET
2	885.691	3+37.6, 23.6' RT	RAILROAD SPIKE SET



UTILITY LOCATIONS ARE APPROXIMATE.
ACTUAL LOCATIONS MUST BE FIELD VERIFIED.

CONTROL POINT TABLE

CP NO.	NORTHING (Y)	EASTING (X)	ELEVATION	STA./OFFSET	DESCRIPTION
1	424713.436	765312.316	885.044	1+69.3, 12.6' RT	CHISELED X ON CONC. WALL
2	424701.572	765312.622	884.981	1+81.2, 12.3' RT	MARKERED X ON CONC. WALL



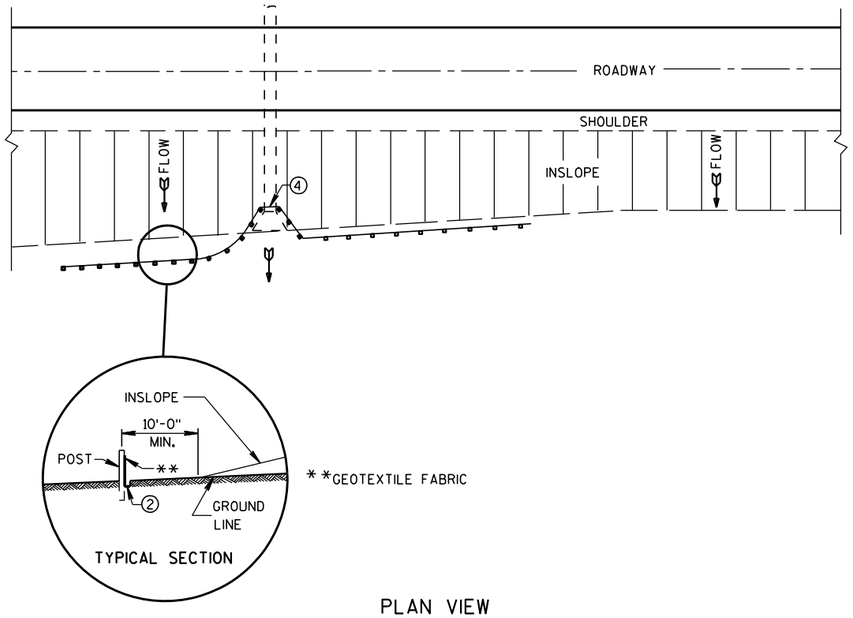
PROJECT NO: 5804-00-74	HWY: FRITZ ROAD	COUNTY: DANE	PLAN AND PROFILE:	SHEET	E

FILE NAME : J:\JSD PROJECTS\13C5997 FRITZ RD BRIDGE (MONTROSE WI)\DWG\05-FRITZ ROAD-5804-00-04.DWG
LAYOUT NAME - ****
PLOT DATE : 9/27/2016 3:34 PM PLOT BY : STEVE KRZYNSKI PLOT NAME : PLOT SCALE : 1" = 20'

Standard Detail Drawing List

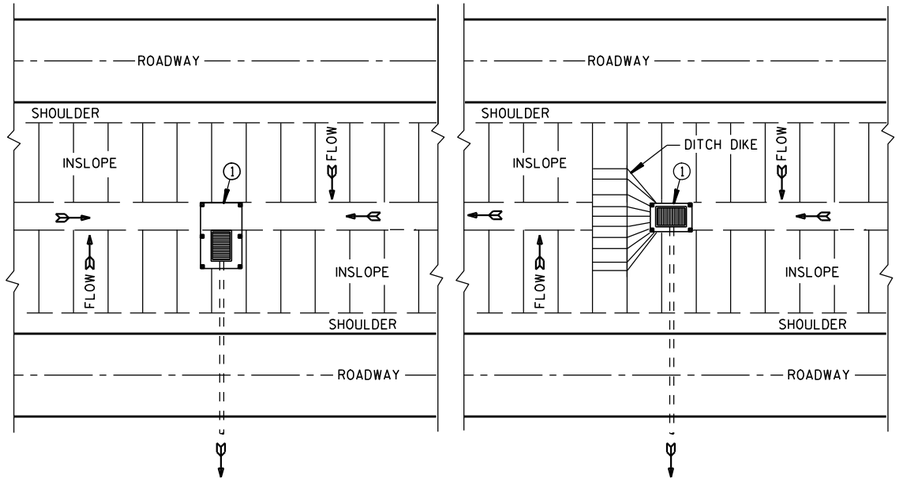
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES

6



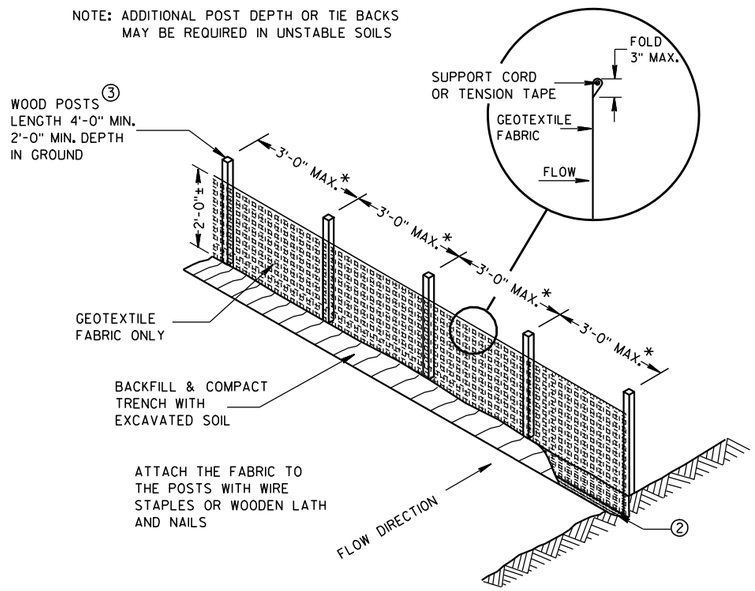
PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



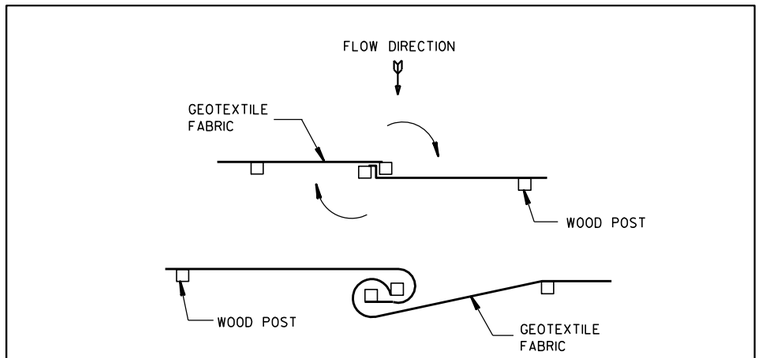
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS



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

SILT FENCE

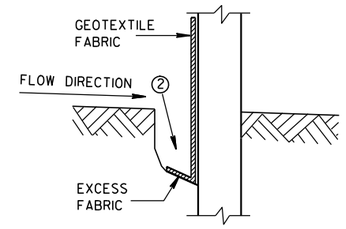


JOINING TWO LENGTHS OF SILT FENCE 5

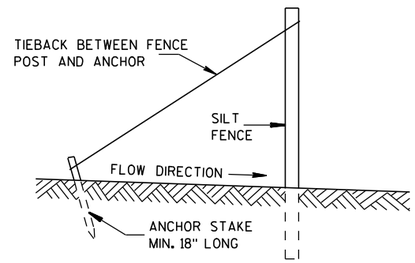
GENERAL NOTES

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

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

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

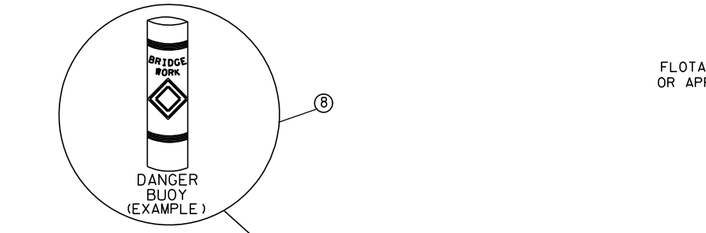
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

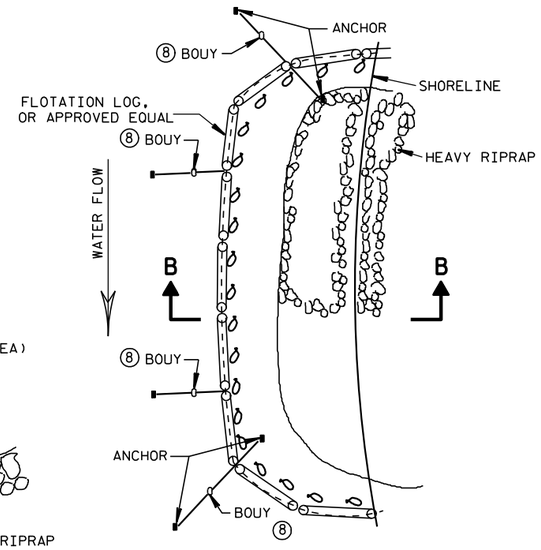
6

S.D.D. 8 E 9-6

6

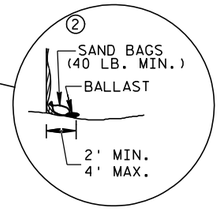
S.D.D. 8 E 9-6

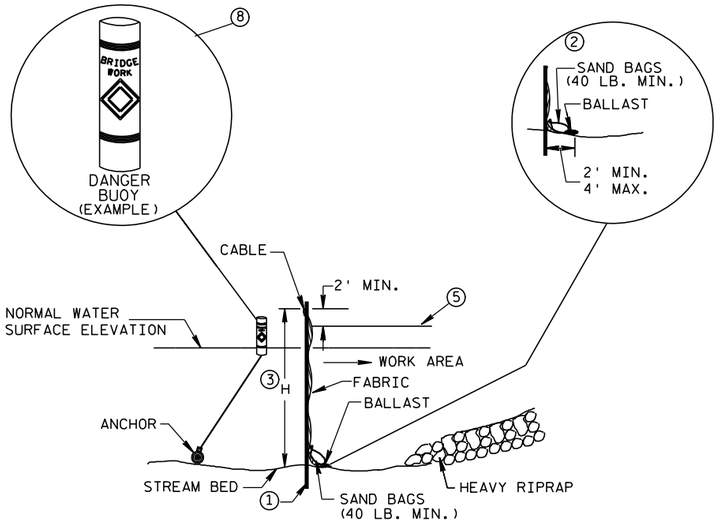




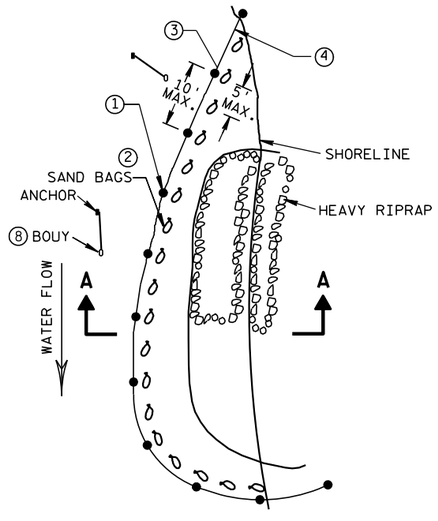
SECTION B-B

TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6





SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

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.

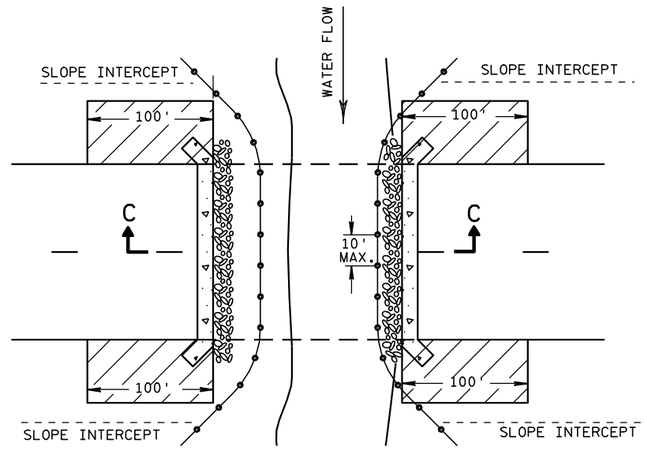
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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.

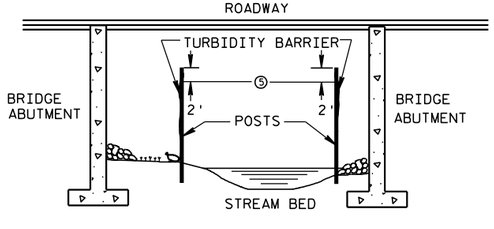
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

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

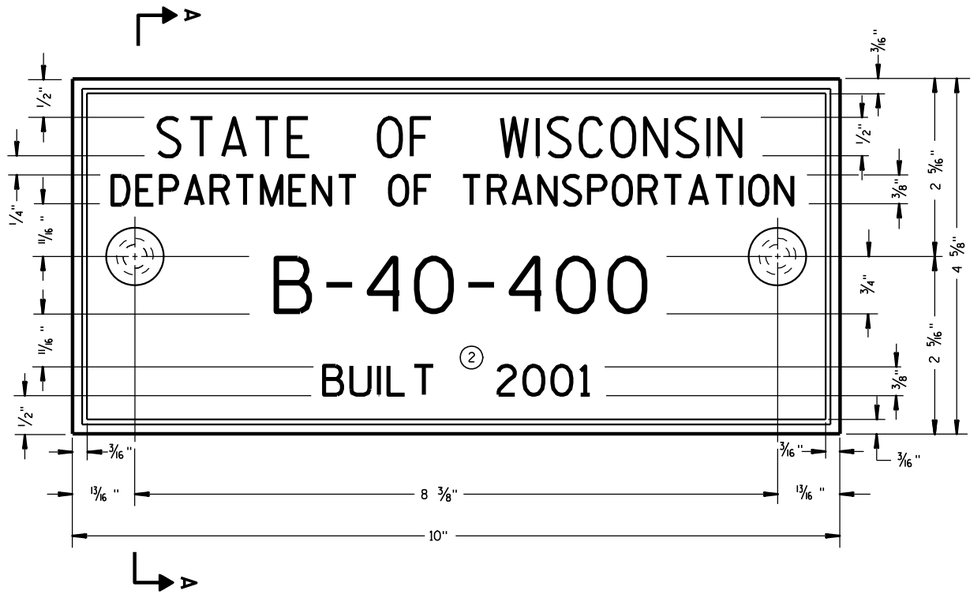
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

TURBIDITY BARRIER PLACEMENT DETAILS

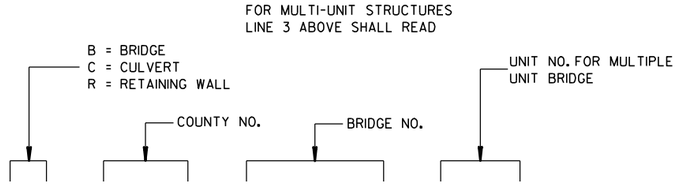
6

S.D.D. 8 E 11-2



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

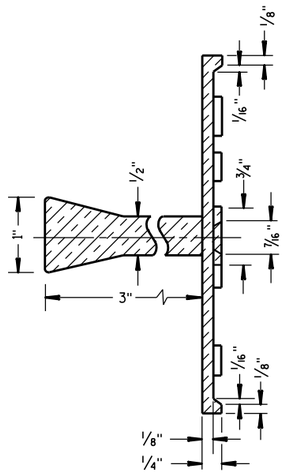
GENERAL NOTES

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.

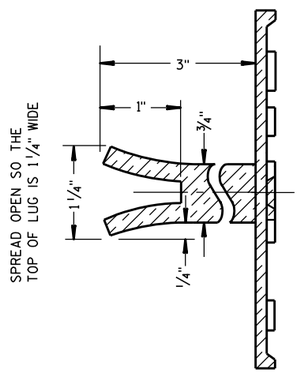
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

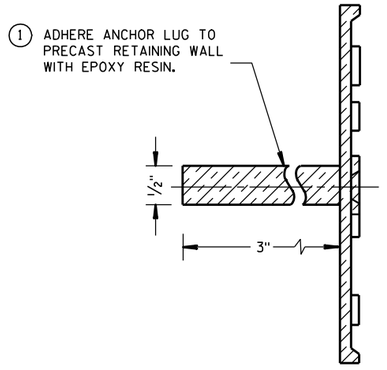
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

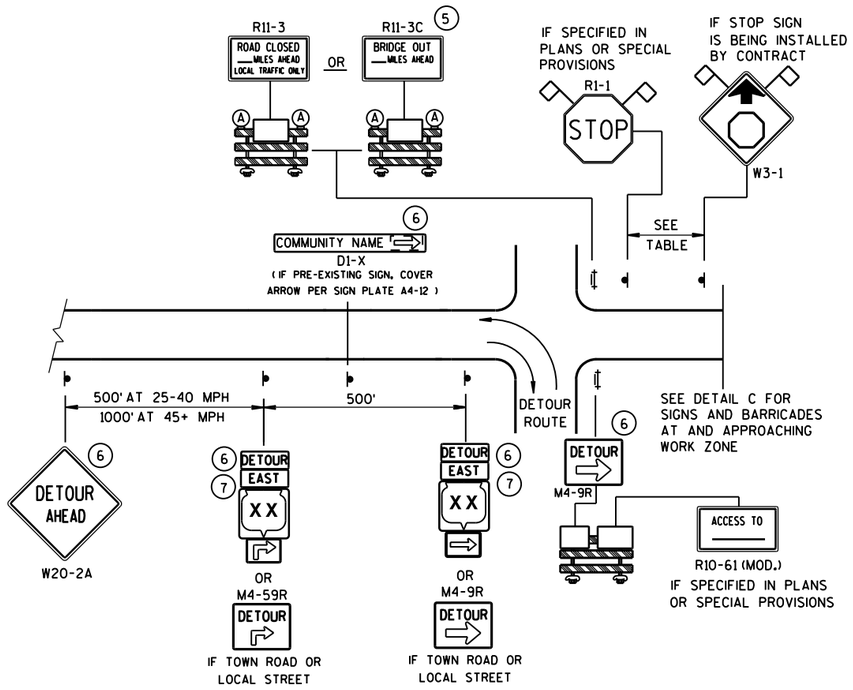
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
3/26/10 DATE	/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	

6

S.D.D. 12 A 3-10

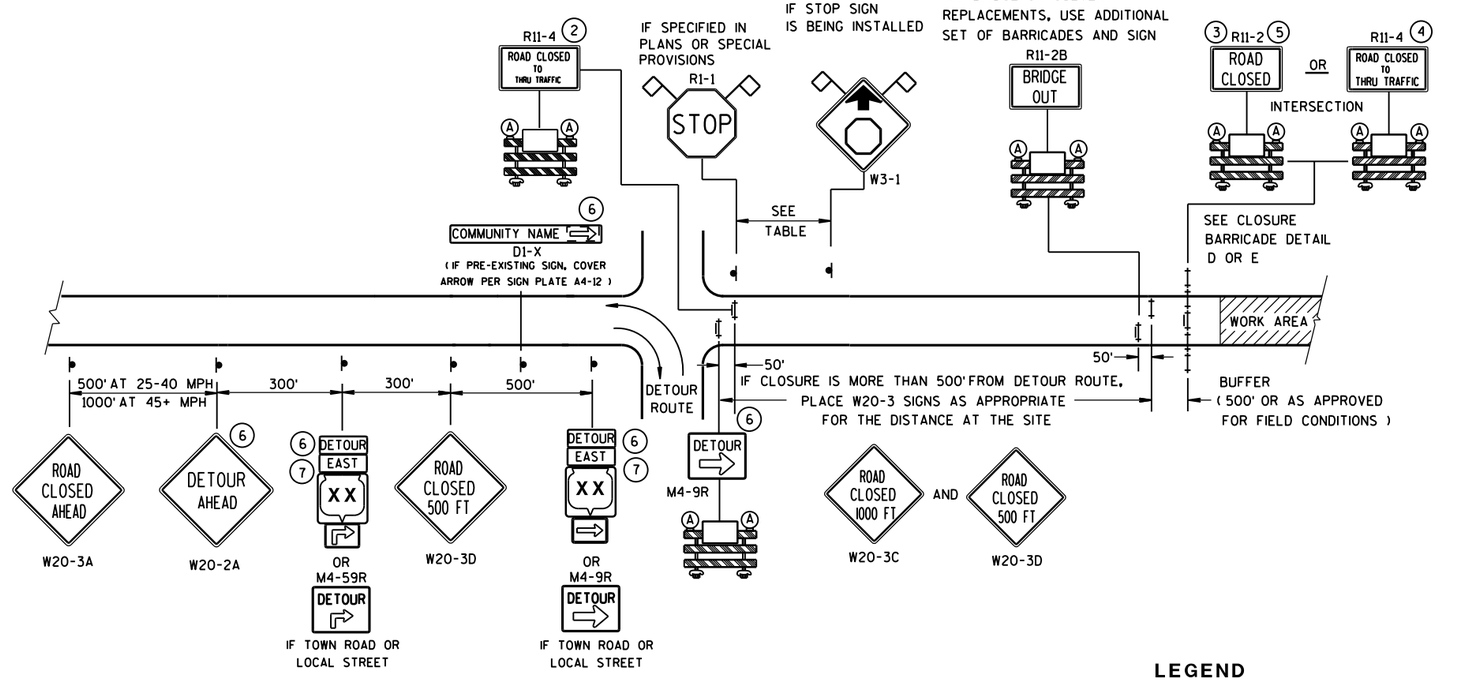
6

S.D.D. 12 A 3-10



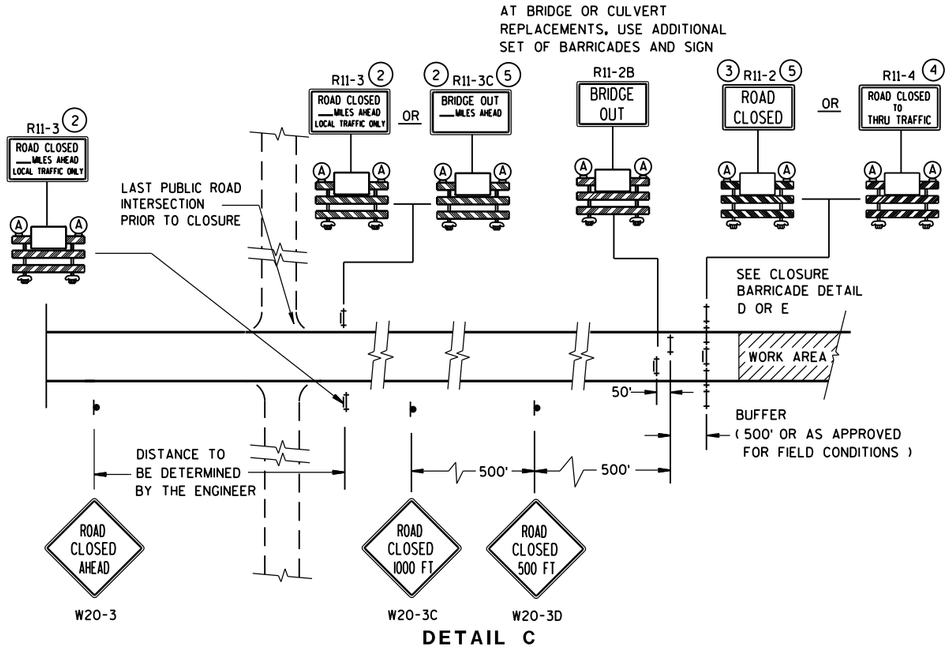
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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

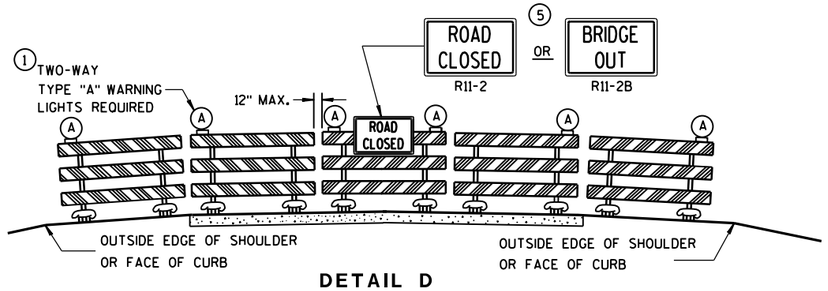
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

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

6

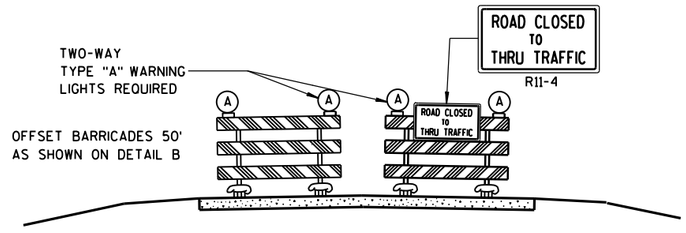
S.D.D. 15 C 2-6a



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

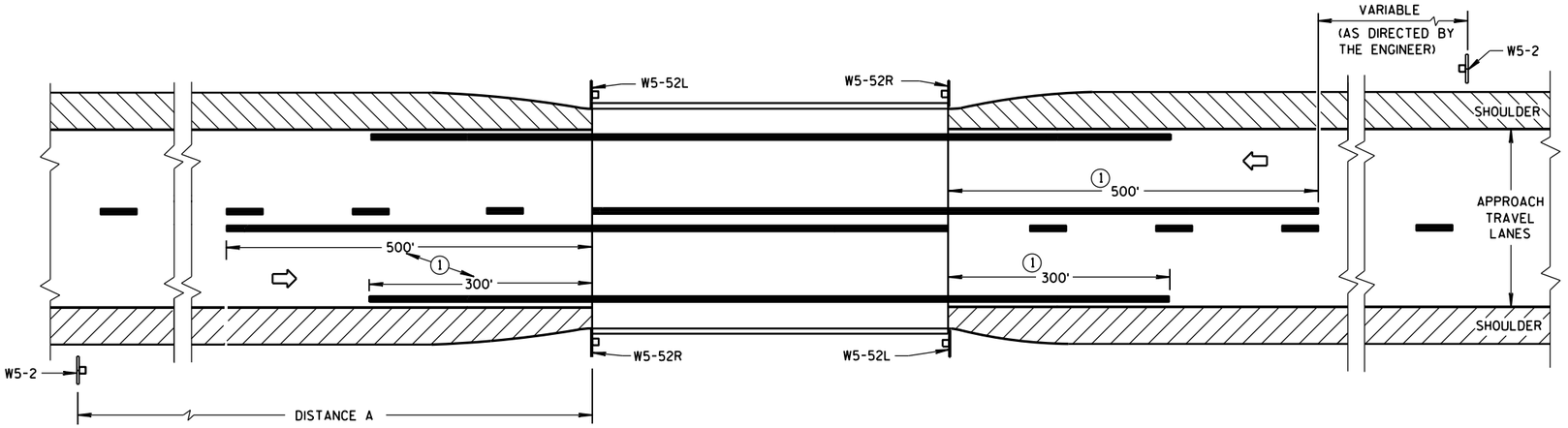
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

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

6

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



GENERAL NOTES

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

PAVEMENT MARKING SHOWN ON THIS DRAWING IS NOT REQUIRED UNLESS OTHERWISE SPECIFIED IN THE CONTRACT. WHEN SPECIFIED, PAVEMENT MARKING SHALL CONFORM TO THIS DRAWING AND OTHER CONTRACT REQUIREMENTS.

(1) MINIMUM DISTANCE UNLESS OTHERWISE SHOWN ON THE PLAN.

(2) FACE OF OBJECT MARKERS W5-52R, AND W5-52L SHALL BE COVERED WITH TYPE F REFLECTIVE SHEETING.

(3) LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.

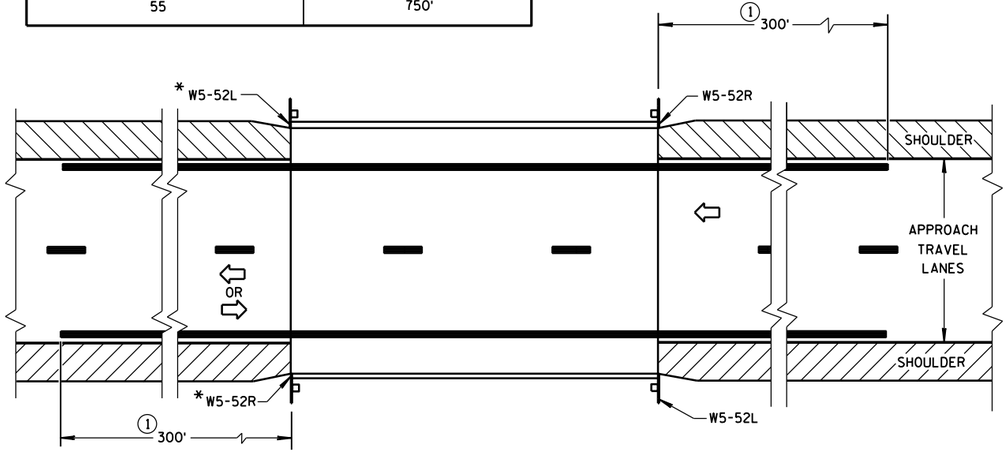
DISTANCE TABLE

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

SITUATION 1

WARRANTING CRITERIA:

BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET

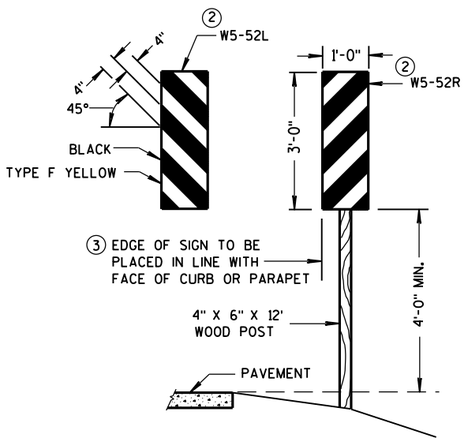


*OMIT ON ONE-WAY TRAVELLED WAYS

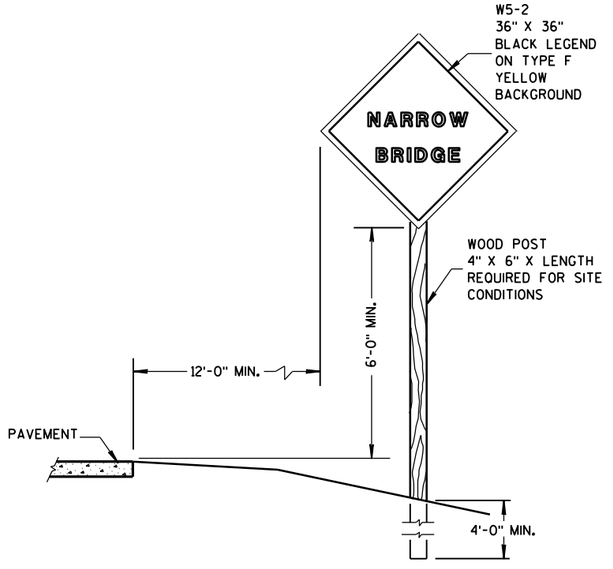
SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE IS LESS THAN 6 FEET WIDER (ON EACH SIDE) THAN APPROACH TRAVEL LANES.



OBJECT MARKER PLACEMENT



SIGN PLACEMENT

SIGNING & MARKING
FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

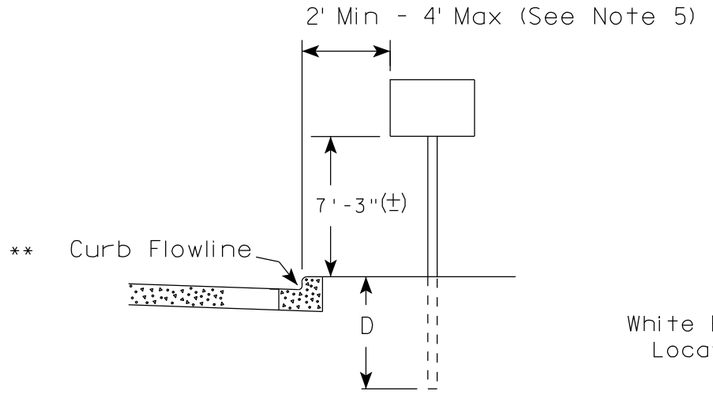
3-2014 DATE

/S/ Travis Feltes STATE TRAFFIC ENGINEER

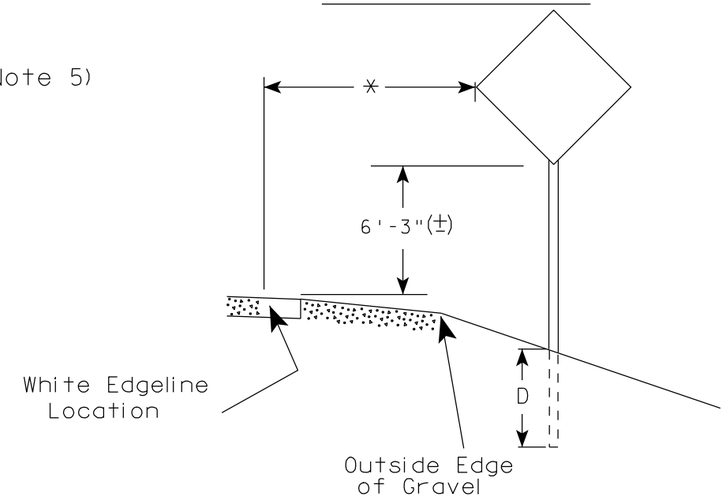
FHWA

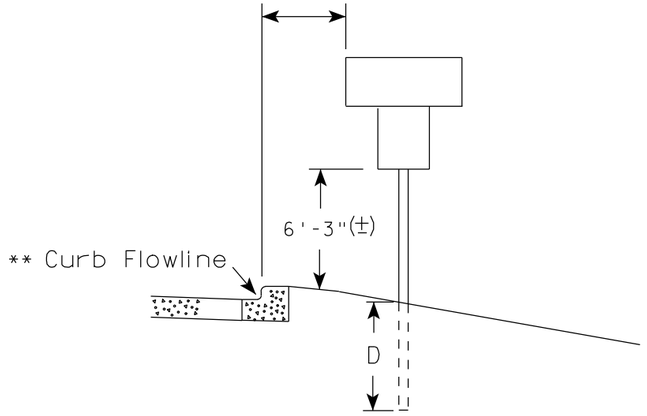
6
S.D.D. 15 C 6-7

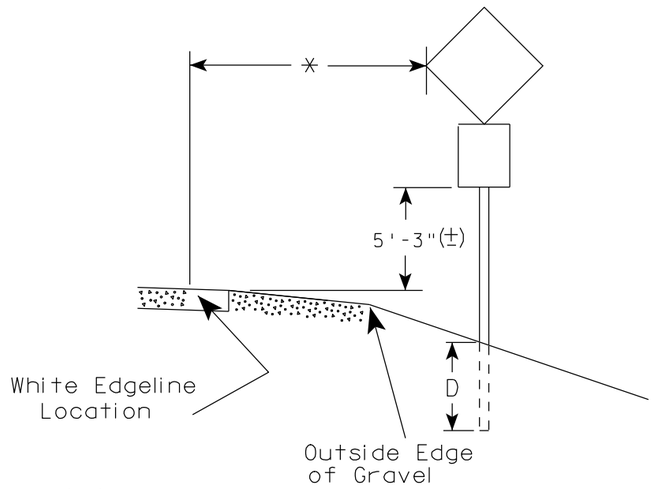
URBAN AREA



RURAL AREA (See Note 2)







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

GENERAL NOTES

1. Signs wider than 4 feet or larger than 20 sq. ft. 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 (A4-5) 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 stop signs (R1-1F) shall be mounted at a height of 5'-3" (±) or as directed 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), Clearance Markers (W5-52), Mile Markers (D10 series) & End of Road Markers (W5-56 & W5-56A) 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'

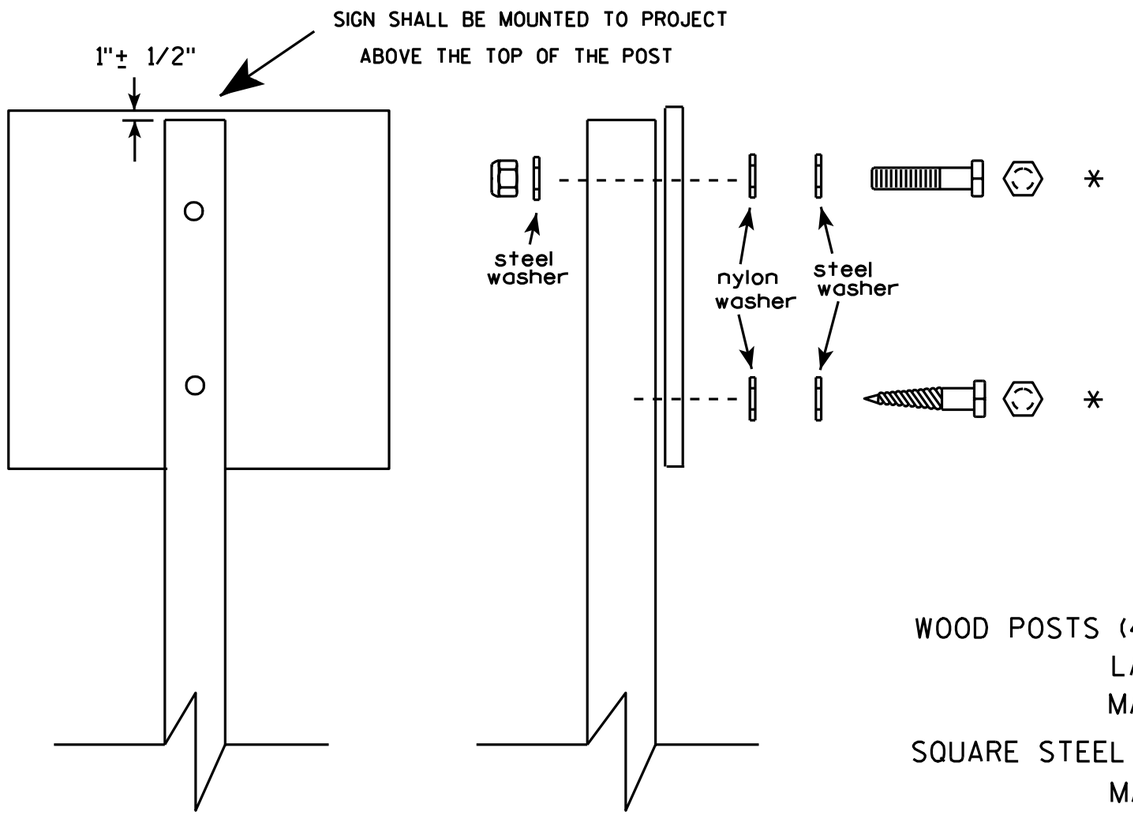
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 9/21/2011 PLATE NO. A4-3.16

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 15	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

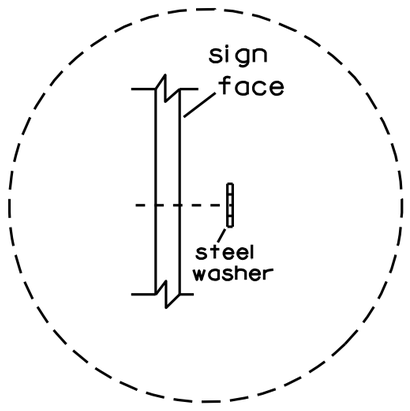
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

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

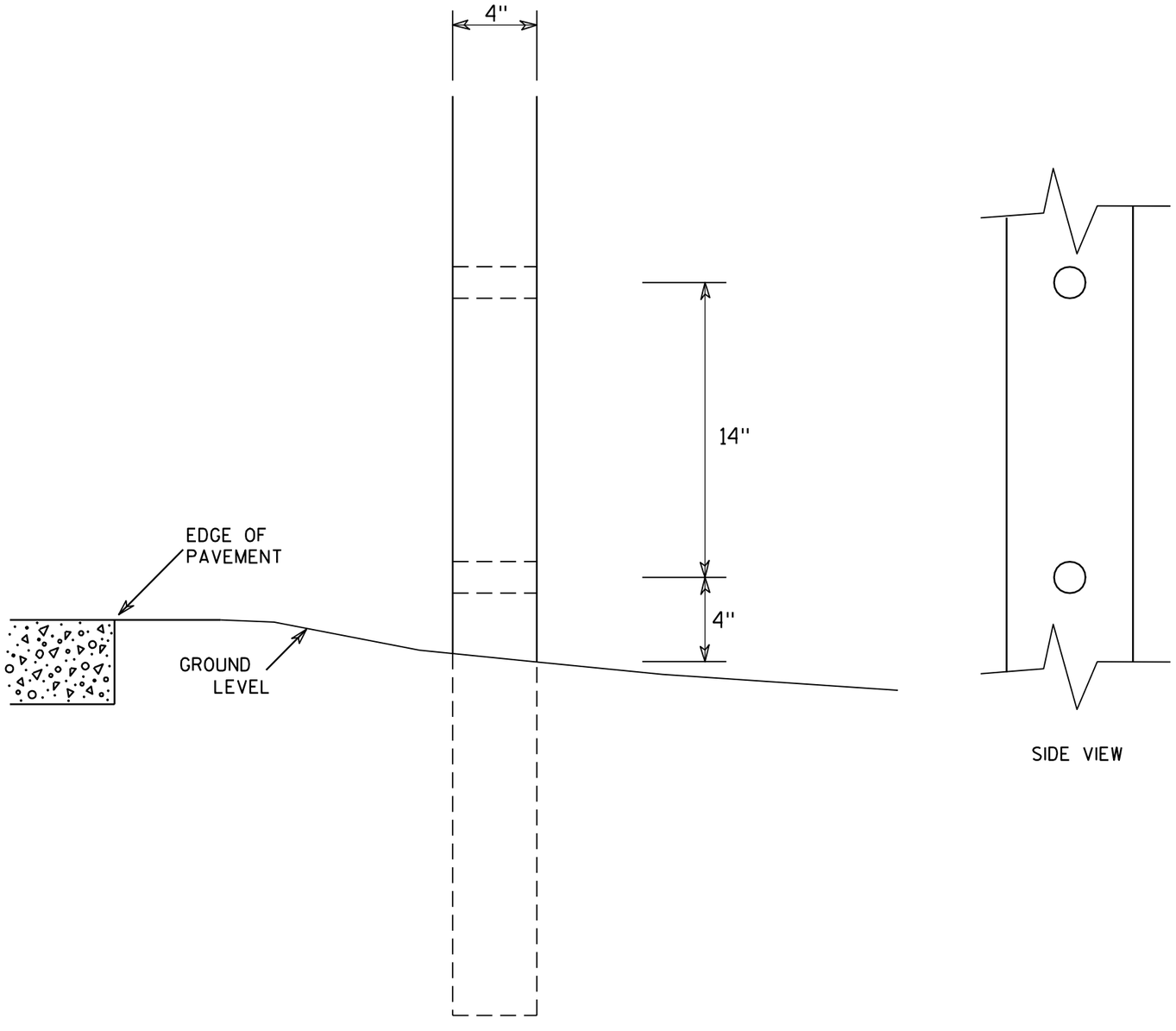
DATE 3/23/10 PLATE NO. A4-8.7

7

7

PROJECT NO:

SHEET NO: 16 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

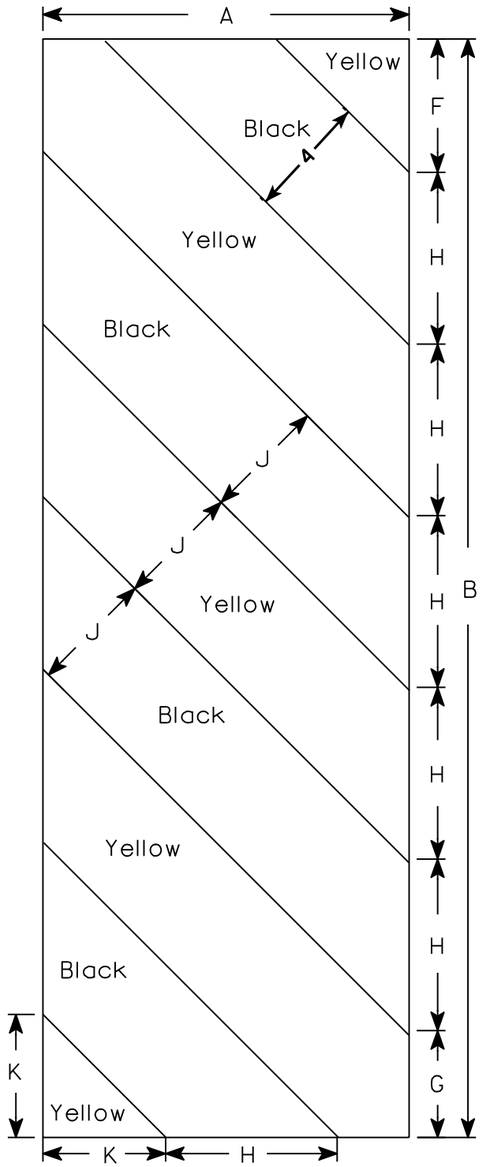
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

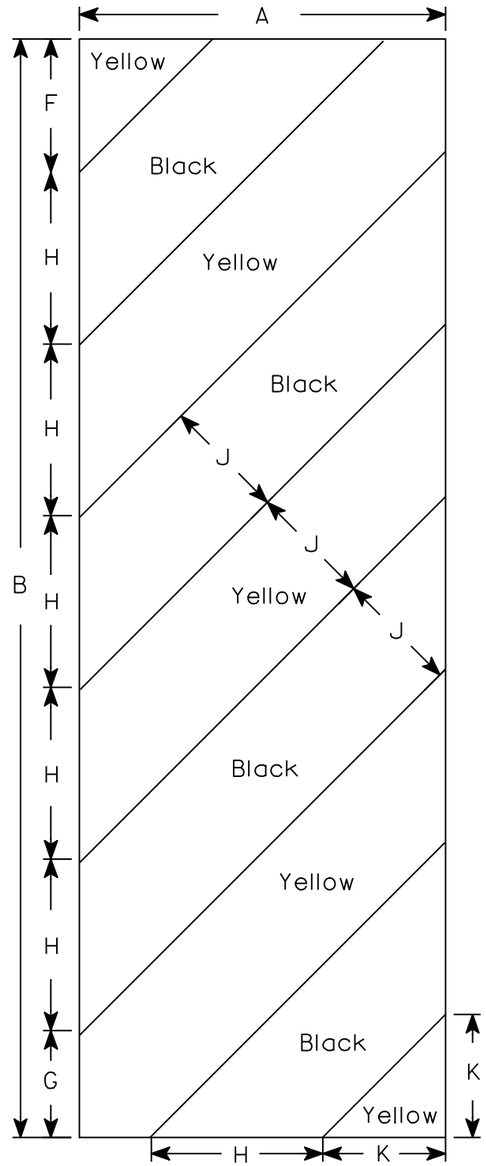
APPROVED Chester J Spang
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 17	E



W5-52L



W5-52R

NOTES

1. Sign is Type II - Type H 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

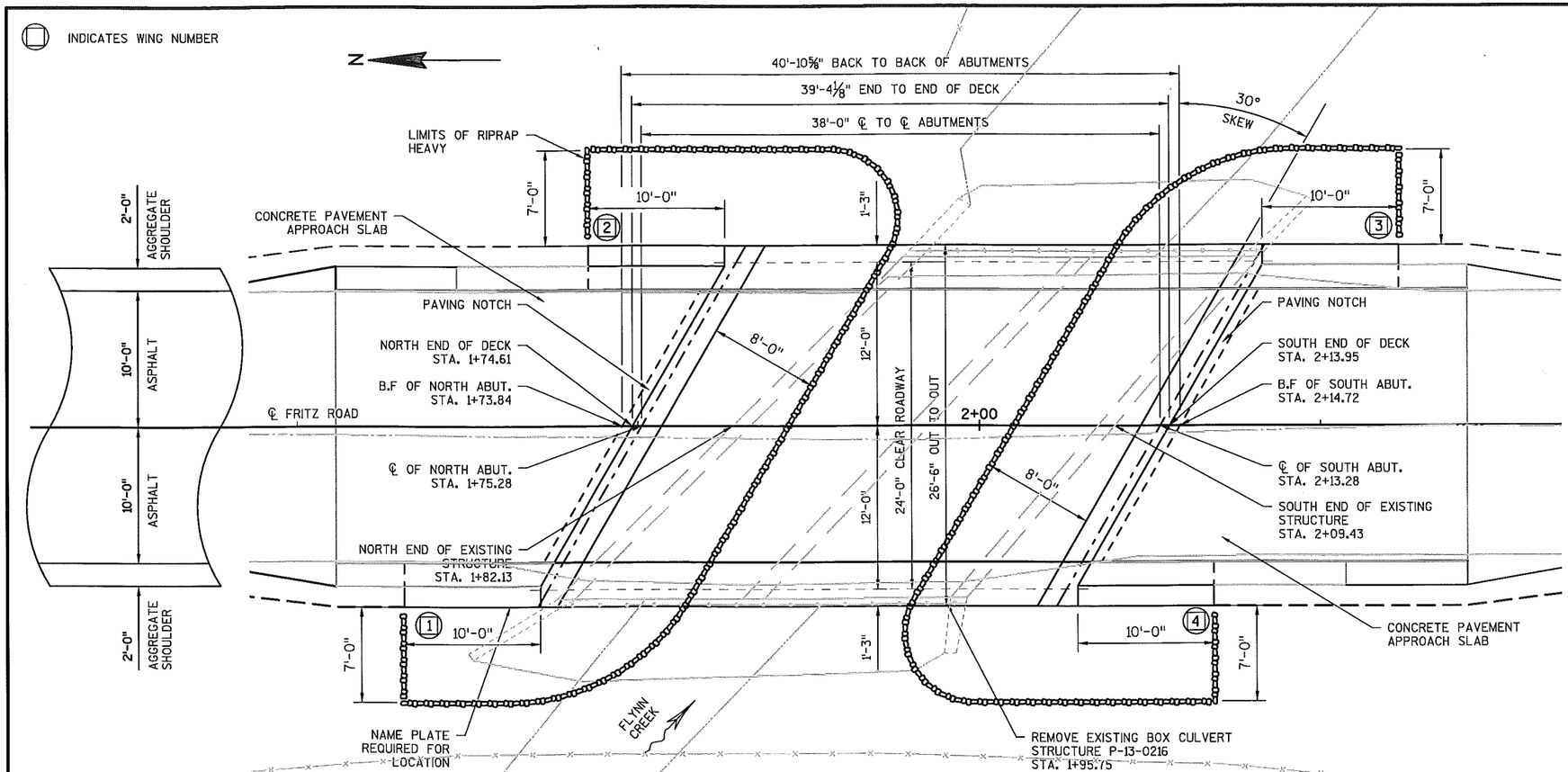
DATE 3/22/11 PLATE NO. W5-52.8

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

STATE PROJECT NUMBER

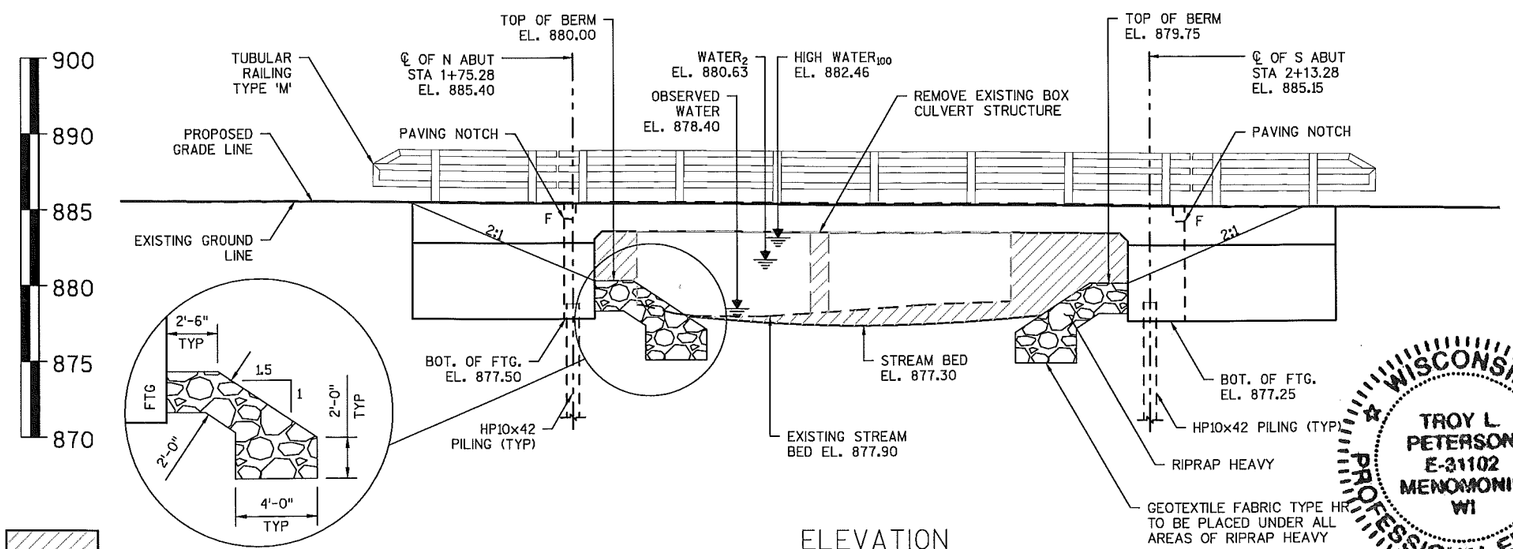
5804-00-74

INDICATES WING NUMBER



PLAN B-13-0675

(SINGLE SPAN REINFORCED CONCRETE SLAB)
SCALE: 1" = 10'



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

ELEVATION

(NORMAL TO ℄ OF FLYNN CREEK FLOOD FLOWS)

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 = 1.11
OPERATING RATING FACTOR	RF = 1.44
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	4.2 SQ MILES
Q_{100} TOTAL	420 CFS
THRU STRUCTURE	420 CFS
VELOCITY - THRU STRUCTURE	3.57 FPS
WATERWAY AREA THRU STRUCTURE	118 SQ FT
HIGH WATER$_{100}$ ELEVATION	882.46 FT
SCOUR CRITICAL CODE = 8	

2 YEAR FREQUENCY

Q_2 TOTAL	160 CFS
HIGH WATER$_2$ ELEVATION	880.63 FT

TRAFFIC DATA

AADT (2016)	110
AADT (2036)	110
DESIGN SPEED	50 MPH

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 35' NORTH ABUTMENT
ESTIMATED LENGTH 35' SOUTH 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 TO DETERMINE DRIVEN PILE CAPACITY.

BENCHMARKS

NO.	STATION/ OFFSET	DESCRIPTION	ELEVATION
1	1+69.32 12.556' RT.	CHISELED "X" ON NORTHWEST CORNER HEADWALL OF CONCRETE BOX CULVERT.	885.04
2	3+37.60 23.64 RT.	RAILROAD SPIKE IN TREE	885.69

LIST OF DRAWINGS

WISCONSIN TROY L. PETERSON E-31102 MENOMONIE WI PROFESSIONAL ENGINEER
9-30-16

DESIGN CONTACT:
TROY PETERSON
(715) 232-9081

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

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 10/03/16
CHIEF STRUCTURES DESIGN ENGINEER — DATE

STRUCTURE B-13-0675

FRITZ ROAD OVER FLYNN CREEK

COUNTY	TOWN/~~CITY/VILLAGE~~
DANE	MONTROSE

DESIGN SPEC.
AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

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

GENERAL PLAN

SHEET 1 OF 8

19

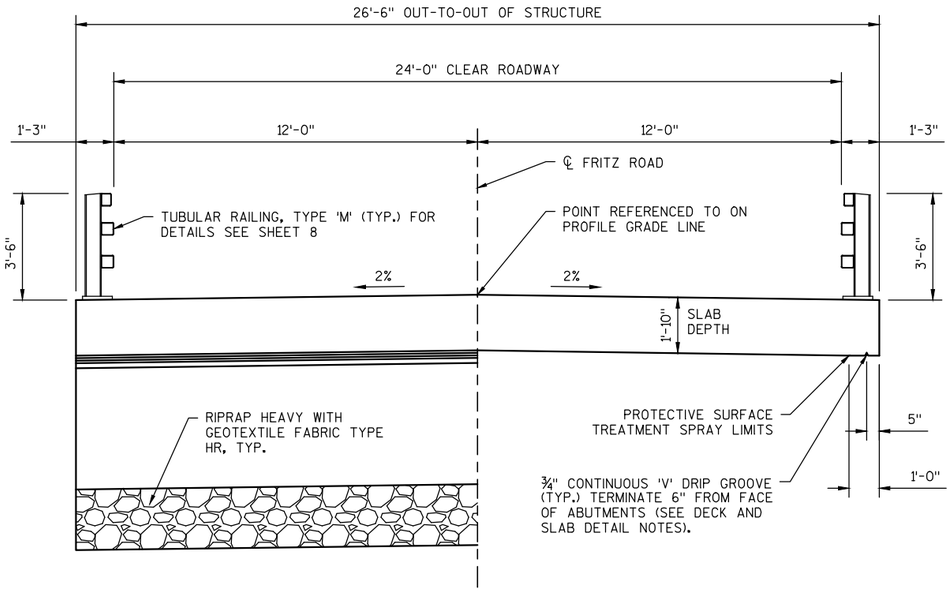
I.D. 5804-00-74

DATE: 6/1/2016

SCALE =

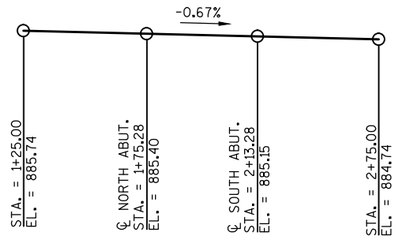
STATE PROJECT NUMBER

5804-00-74



CROSS SECTION THRU ROADWAY

SCALE: 1" = 5'



PROPOSED GRADE ON FRITZ ROAD

NOT TO SCALE

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 SIGNIFIES THE BAR SIZE.

THE STREAM BED IN FRONT OF THE ABUTMENT SHALL BE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

AT ABUTMENTS, CONCRETE POURED UNDER WATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH SECTION 502.3.5.3 OF THE STANDARD SPECIFICATIONS.

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

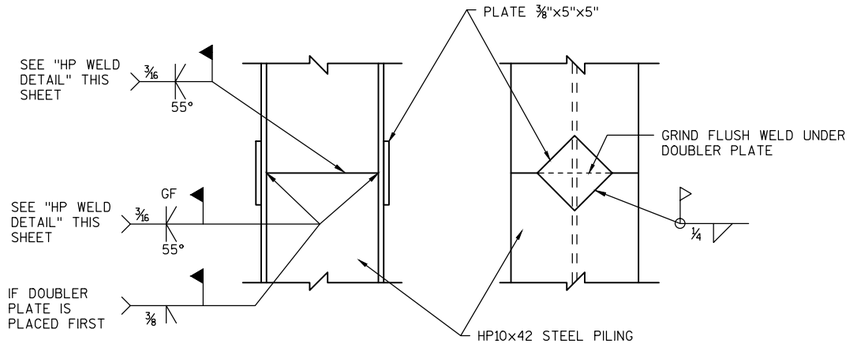
AT THE BACKFACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL.

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

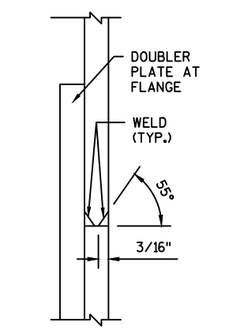
THE EXISTING STRUCTURE (P-13-0216) IS A SINGLE 2 CELL BOX CULVERT WITH AN OVERALL LENGTH OF 24.6', 45° SKEW ANGLE, AND A CLEAR ROADWAY WIDTH OF 20' TO BE REMOVED.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	N. ABUT	SUPER	S. ABUT	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA 2+00	LS	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-13-0675	LS	-	-	-	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	120	-	120	240
502.0100	CONCRETE MASONRY BRIDGES	CY	30.0	77.1	29.9	137.0
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	138	-	138
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1720	-	1720	3440
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1390	13760	1390	16540
513.4061	RAILING TUBULAR TYPE M B-13-0675	LF	-	126	-	126
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	-	9	18
550.0500	PILE POINTS	EACH	5	-	5	10
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	175	-	175	350
606.0300	RIPRAP HEAVY	CY	50	-	50	100
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	80	-	80	160
645.0120	GEOTEXTILE TYPE HR	SY	100	-	100	200
	NON BID ITEMS					
	FILLER	SIZE	-	-	-	½" & ¾"
	NAME PLATE	EACH	-	-	-	1



PILE SPLICE DETAILS



HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

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
STRUCTURES DESIGN SECTION

STRUCTURE B-13-0675

DRAWN BY NJT | PLANS CK'D. TLP

CROSS SECTION QUANTITIES & DETAILS

SHEET 2 OF 8

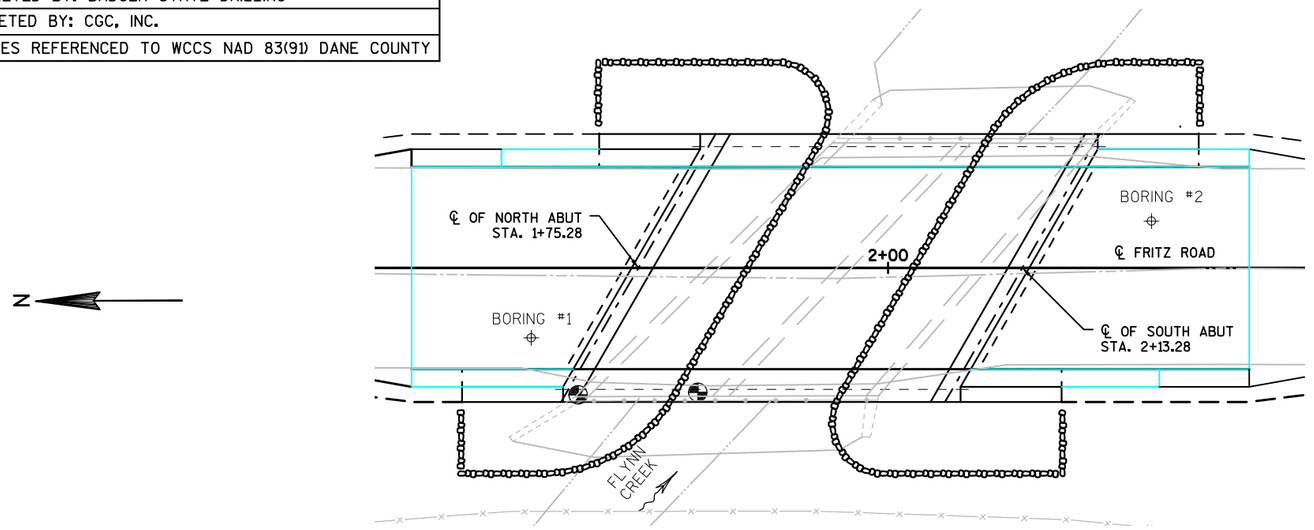
20

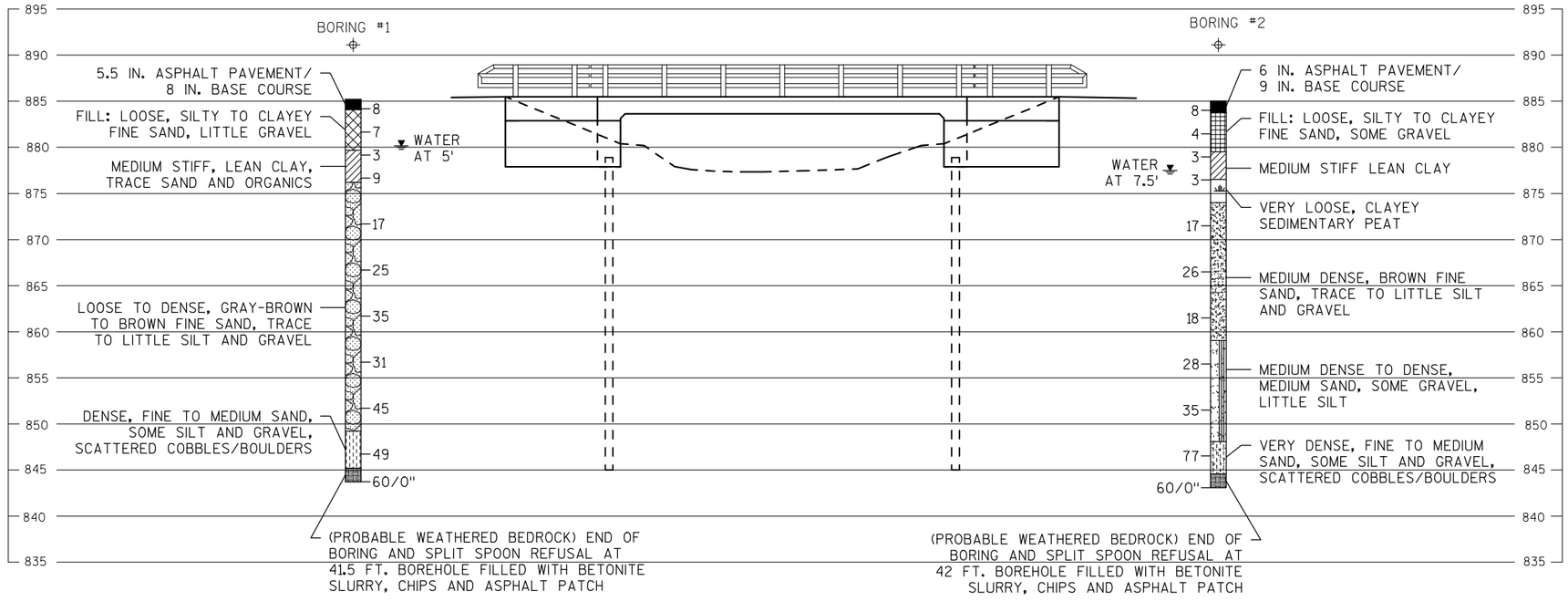
8

8

SCALE =

BORING NO.	DATE COMPLETED	NORTHING	EASTING
1	9/12/2014	424718.097	765317.925
2	9/12/2014	424656.783	765329.823
BORINGS COMPLETED BY: BADGER STATE DRILLING			
REPORT COMPLETED BY: CGC, INC.			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) DANE COUNTY			





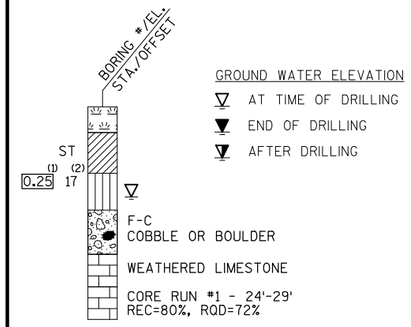
STATE PROJECT NUMBER

5804-00-74

MATERIAL SYMBOLS

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

LEGEND OF BORING



GROUND WATER ELEVATION

- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

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

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

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

ORIGINAL PLANS PREPARED BY

Cedar corporation

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-13-0675

DRAWN BY NJT | PLANS CK'D. TLP

SUBSURFACE EXPLORATION

SHEET 3 OF 8

21

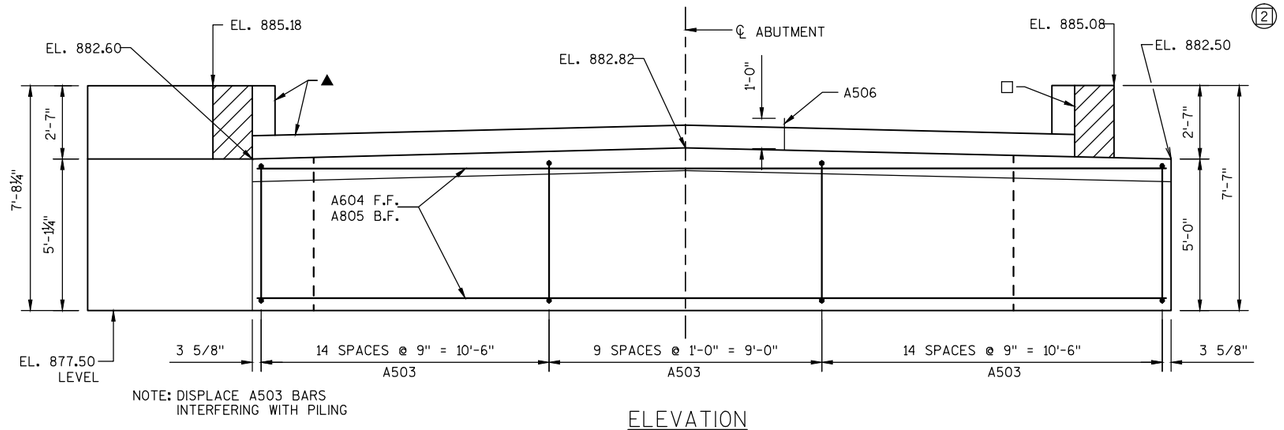
8

8

SCALE =

STATE PROJECT NUMBER

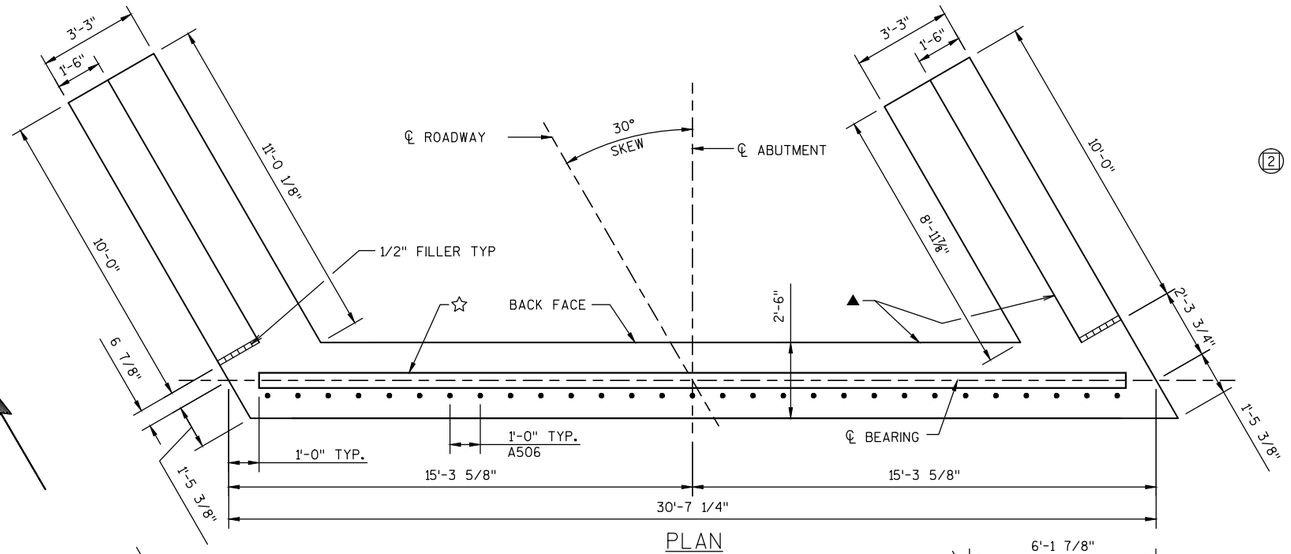
5804-00-74



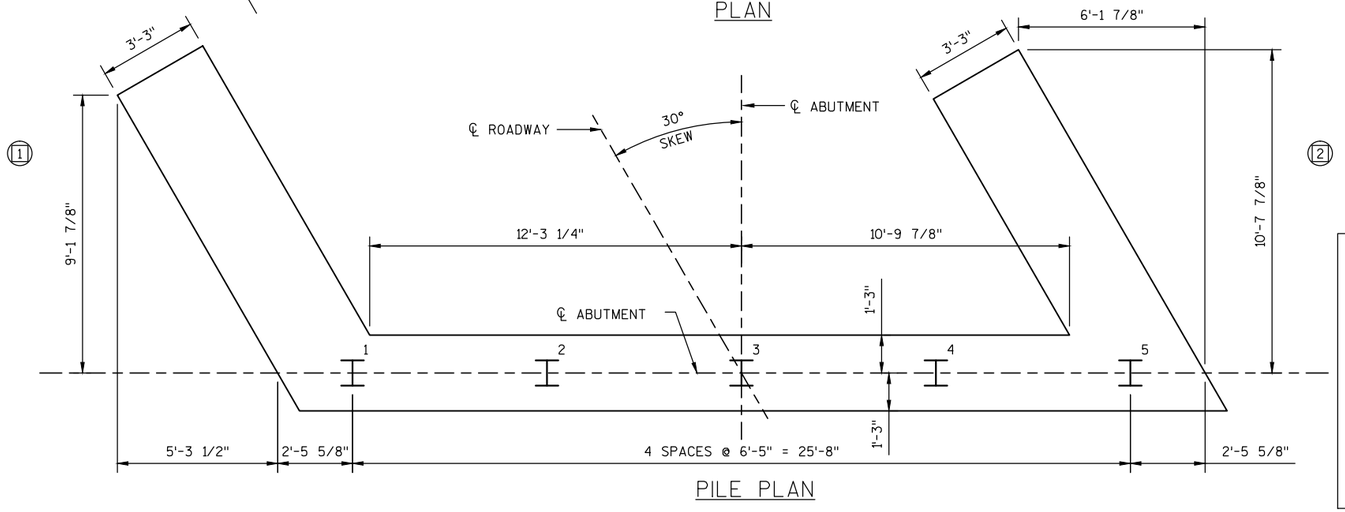
NOTE: DISPLACE A503 BARS INTERFERING WITH PILING

ELEVATION

(LOOKING NORTH)



PLAN



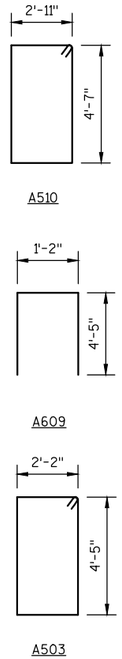
PILE PLAN

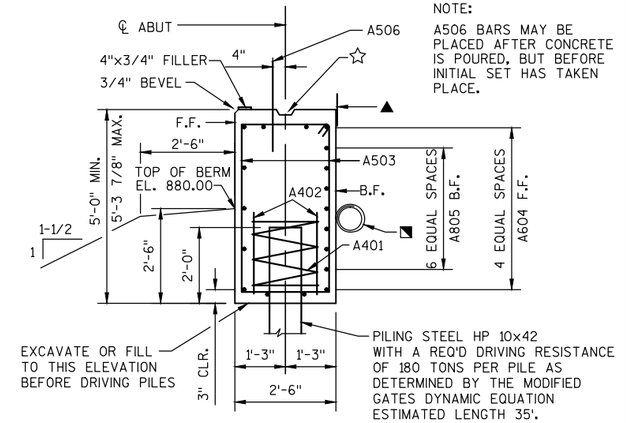
NOTE: BAR DIMENSIONS ARE OUT TO OUT OF BAR. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

BILL OF BARS

1720# UNCOATED 1390# COATED

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
A401		5	28-0	X		BODY - ONE PER PILE
A402		10	2-3			BODY - TWO PER PILE
A503		38	13-9	X		BODY - STIRRUPS
A604		11	30-3			BODY - HORIZ.
A805		7	30-3			BODY - HORIZ. BF
A506	X	29	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	9-8	X		WING 1 & 2 - VERT TOP
A510	X	22	15-6	X		WING 1 & 2 - VERT BASE
A511	X	6	11-8			WING 1 BASE HORIZ FF
A512	X	6	13-1			WING 2 BASE HORIZ FF
A613	X	6	13-0			WING 1 BASE HORIZ BF & TOP
A614	X	6	11-0			WING 2 BASE HORIZ BF & TOP
A615	X	2	12-4			WING 1 BASE HORIZ TOP
A616	X	2	12-0			WING 2 BASE HORIZ TOP

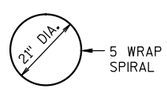




NOTE:
A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED, BUT BEFORE INITIAL SET HAS TAKEN PLACE.

SECTION THRU BODY

ALL HORIZ BARS ARE A604 UNLESS OTHERWISE SPECIFIED



A401

INDICATES WING NUMBER

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

☆ 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 AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

◥ PIPE UNDERDRAIN WRAPPED 16-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

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
STRUCTURES DESIGN SECTION

STRUCTURE B-13-0675

DRAWN BY NJT | PLANS CK'D. TLP

NORTH ABUTMENT

SHEET 4 OF 8

22

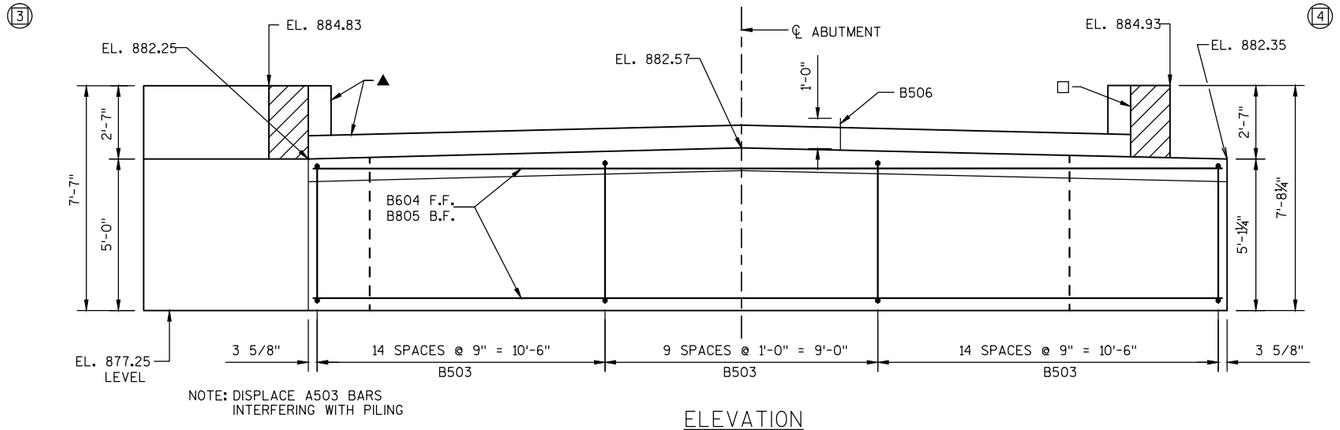
SCALE = 10:1

8

8

STATE PROJECT NUMBER

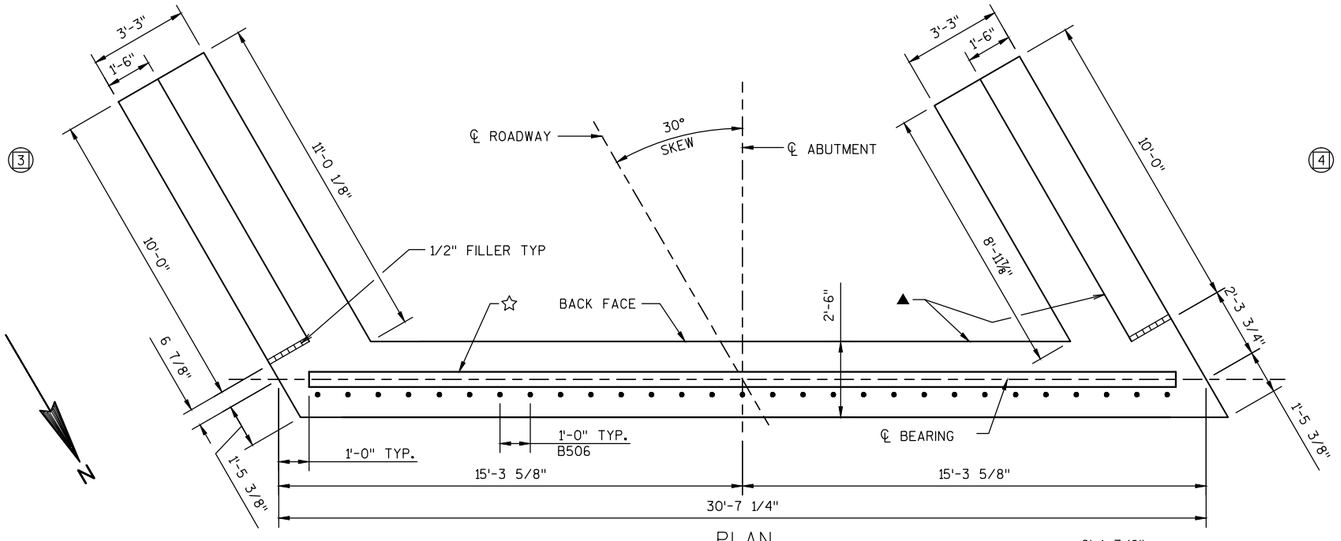
5804-00-74



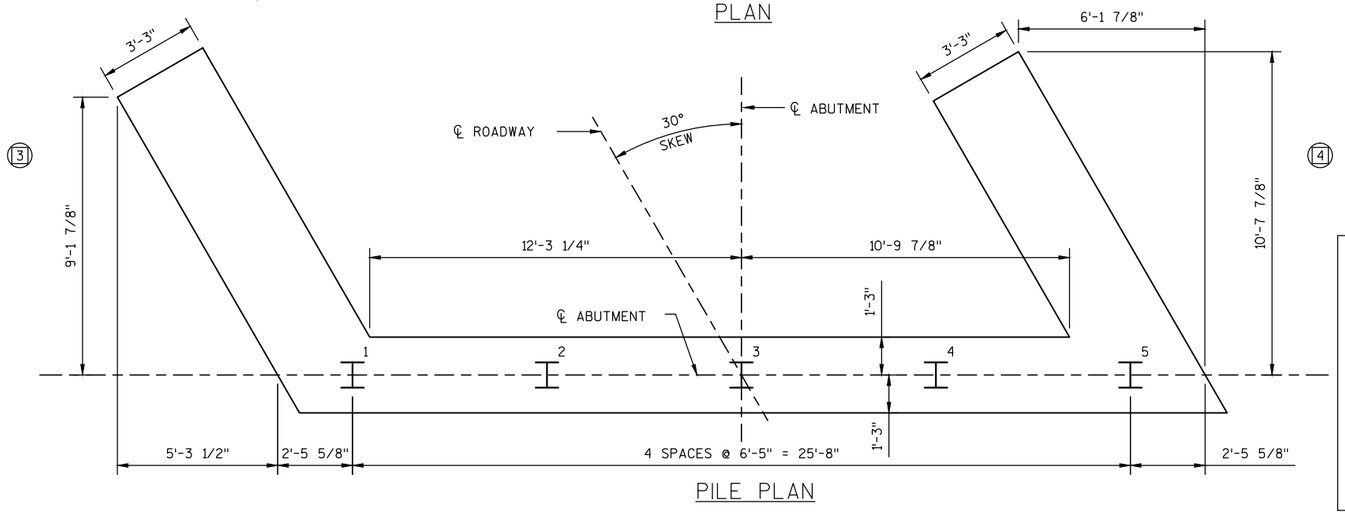
NOTE: DISPLACE A503 BARS INTERFERING WITH PILING

ELEVATION

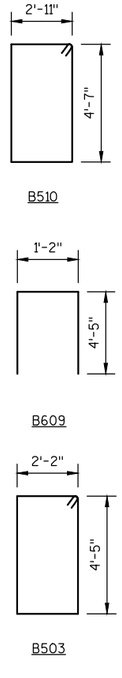
(LOOKING SOUTH)

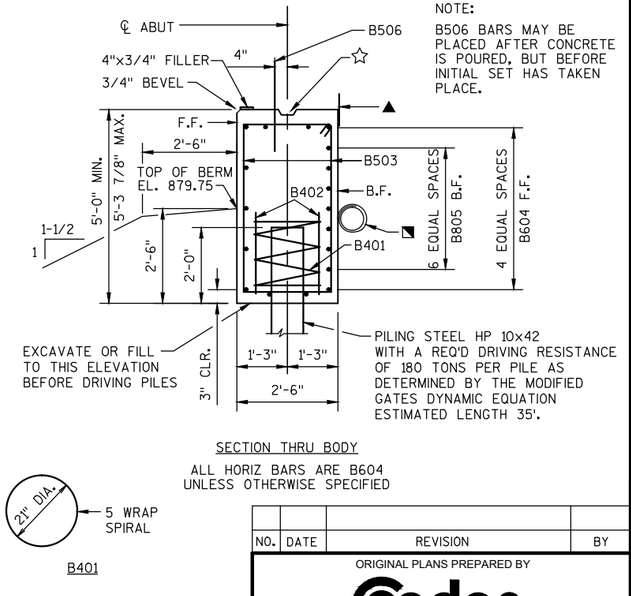


PLAN



PILE PLAN





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

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.

BILL OF BARS

1720# UNCOATED 1390# COATED

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
B401		5	28-0	X		BODY - ONE PER PILE
B402		10	2-3			BODY - TWO PER PILE
B503		38	13-9	X		BODY - STIRRUPS
B604		11	30-3			BODY - HORIZ.
B805		7	30-3			BODY - HORIZ. BF
B506	X	29	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	9-8	X		WING 3 & 4 - VERT TOP
B510	X	22	15-6	X		WING 3 & 4 - VERT BASE
B511	X	6	11-8			WING 3 BASE HORIZ FF
B512	X	6	13-1			WING 4 BASE HORIZ FF
B613	X	6	13-0			WING 3 BASE HORIZ BF & TOP
B614	X	6	11-0			WING 4 BASE HORIZ BF & TOP
B615	X	2	12-4			WING 3 BASE HORIZ TOP
B616	X	2	12-0			WING 4 BASE HORIZ TOP

SECTION THRU BODY

ALL HORIZ BARS ARE B604 UNLESS OTHERWISE SPECIFIED

(3) INDICATES WING NUMBER

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

☆ KEYED CONST. JOINT FORMED BY BEVELED 2" x 6".

□ SEAL ALL EXPOSED HORIZONTAL & VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

◥ PIPE UNDERDRAIN WRAPPED 16-INCH. SLOPE 0.5% MINIMUM TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN. RODENT SHIELD TO BE INCLUDED IN BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

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
STRUCTURES DESIGN SECTION

STRUCTURE B-13-0675

DRAWN BY NJT | PLANS CK'D. TLP

SOUTH ABUTMENT

SHEET 5 OF 8

23

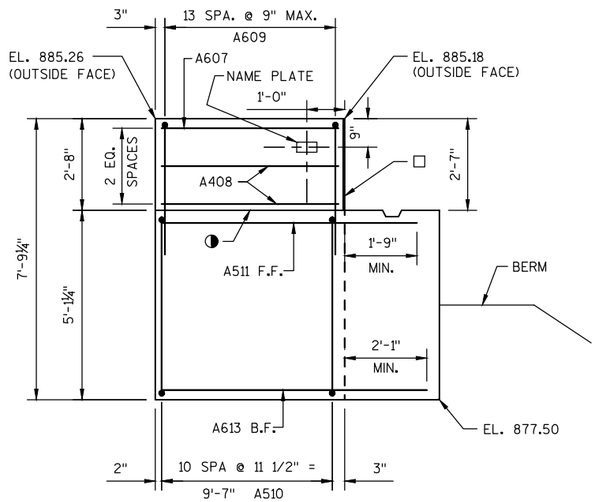
SCALE = 10:1

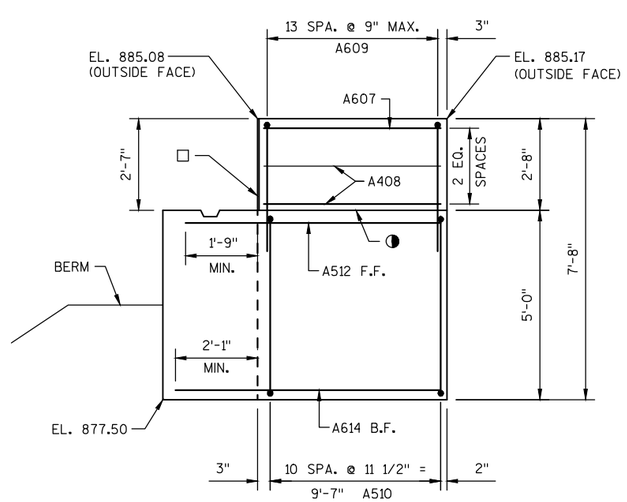
8

8

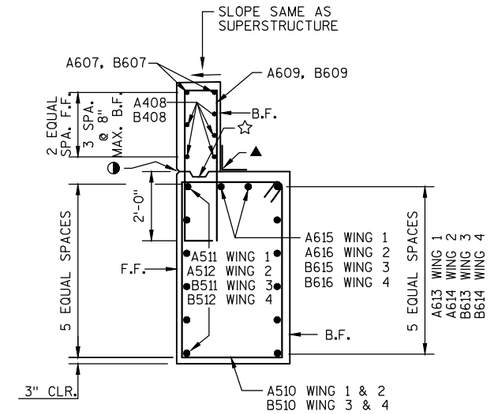
STATE PROJECT NUMBER

5804-00-74



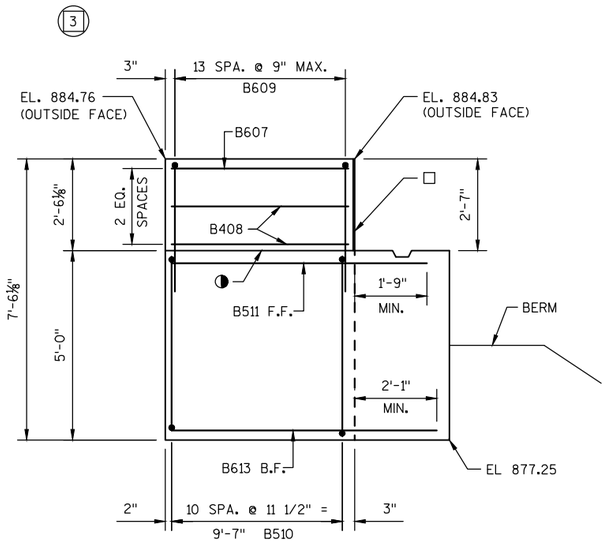


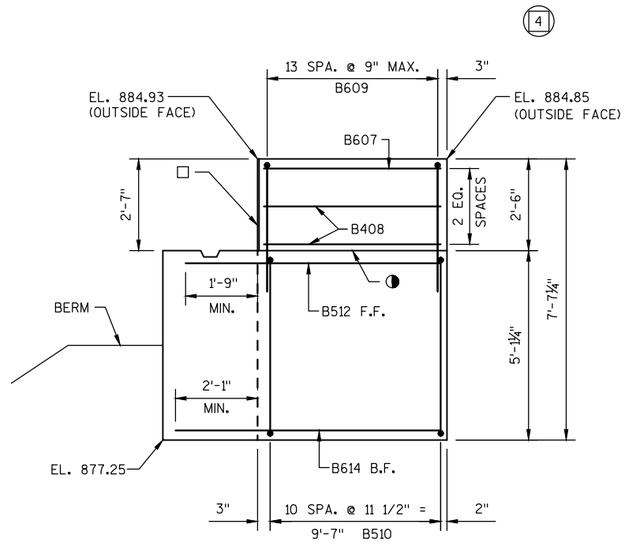
NORTH ABUTMENT WINGS



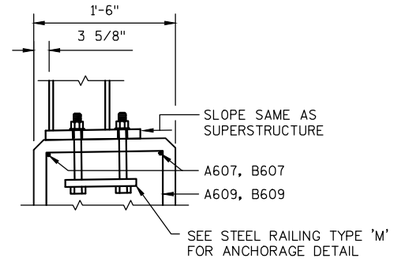
B.F. = BACK FACE
F.F. = FRONT FACE

TYPICAL SECTION THRU WING





SOUTH ABUTMENT WINGS



SPACE A607 & B607 BARS TO MISS ANCHORS FOR RAIL POSTS

SECTION AT TOP OF WING

- INDICATES WING NUMBER
- ▲ 18" RUBBERIZED MEMBRANE WATERPROOFING (RMW) SEAL ALL HORIZ. & VERT. JOINTS ON BACK FACE.
- ◑ 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).
- ☆ KEYED CONSTRUCTION JOINT FORMED BY BEVELED 2" × 6".
- □ 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE).

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
STRUCTURES DESIGN SECTION

STRUCTURE B-13-0675

DRAWN BY NJT | PLANS CK'D. TLP

ABUTMENT DETAILS

SHEET 6 OF 8

24

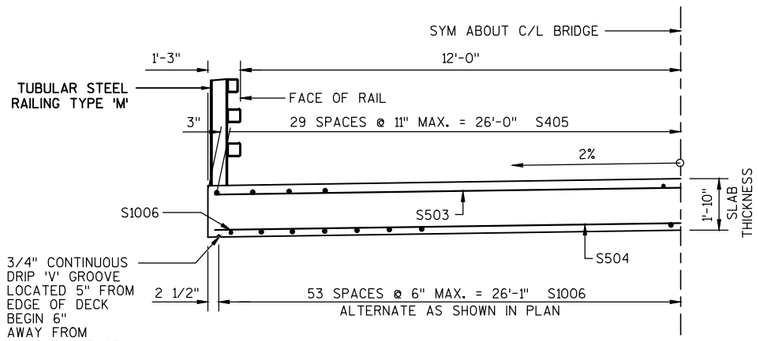
8

8

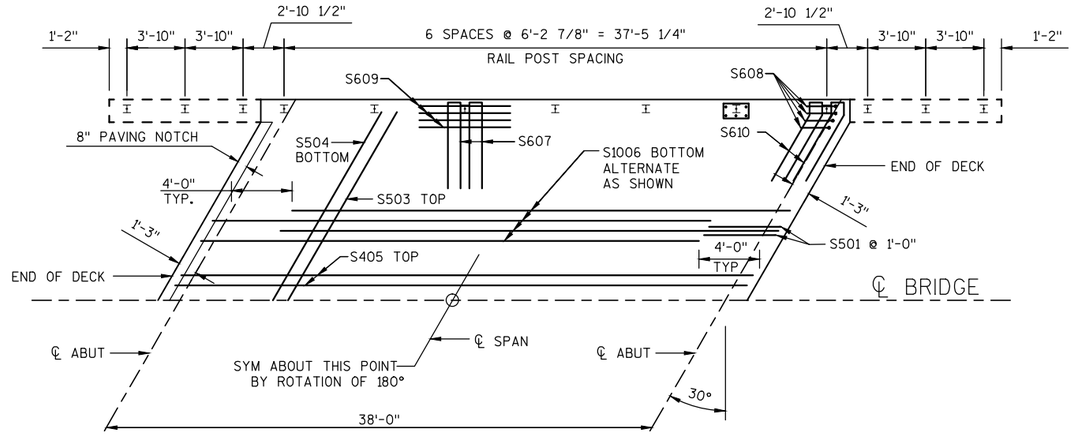
SCALE = 10:1

STATE PROJECT NUMBER

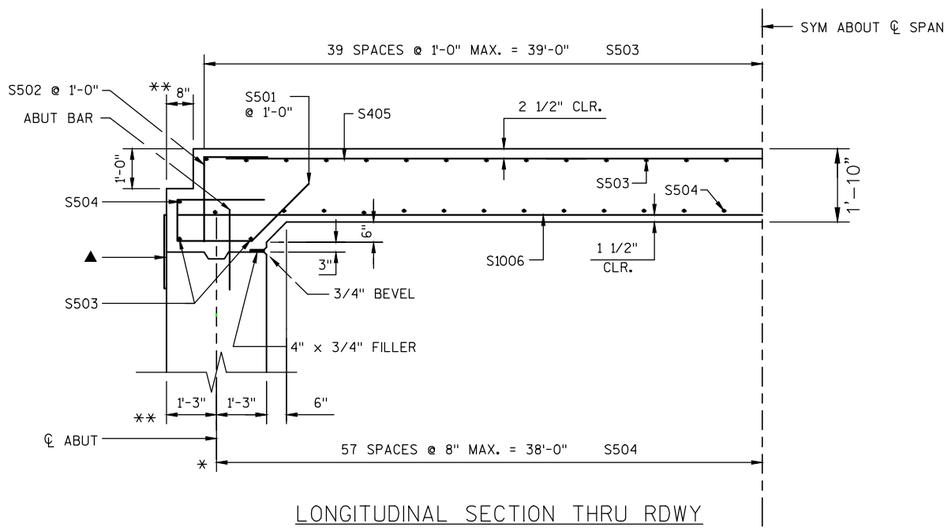
5804-00-74



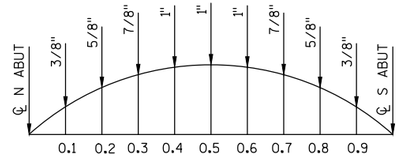
CROSS SECTION THRU RDWY



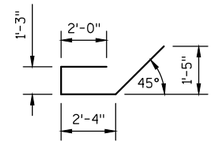
PLAN



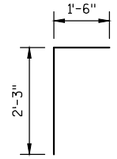
LONGITUDINAL SECTION THRU RDWY



CAMBER DIAGRAM

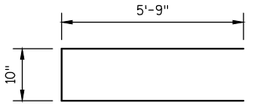


S501

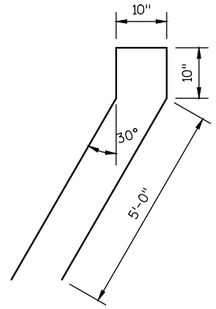


S502

S608



S607



S610

BILL OF BARS

13760# COATED

BAR MARK	COAT	NO. REQD	LENGTH	BENT	BUNDLE	LOCATION
S501	X	62	7-4	X		AT END OF DECK
S502	X	62	3-7	X		AT END OF DECK
S503	X	44	30-2			SLAB, TOP, TRANSVERSE
S504	X	60	30-2			SLAB, BOTTOM, TRANSVERSE
S405	X	30	38-11			SLAB, TOP, LONGITUDINAL
S1006	X	54	34-6			SLAB, BOTTOM, LONGITUDINAL
S607	X	20	12-0	X		AT INTERIOR RAIL POSTS
S608	X	16	5-0	X		AT END RAIL POSTS
S609	X	40	6-0			AT INTERIOR RAIL POSTS
S610	X	8	12-0	X		AT END 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.

TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED 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 DEAD-LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT. DEAD-LOAD DEFLECTIONS ONLY EQUAL APPROXIMATELY 1/3 OF CAMBER VALUES SHOWN.

TOP OF DECK ELEVATIONS

	NORTH ABUT	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	SOUTH ABUT
LEFT EDGE DECK	885.08	885.05	885.03	885.00	884.98	884.95	884.93	884.90	884.88	884.85	884.83
℄ BRIDGE	885.40	885.37	885.35	885.32	885.30	885.27	885.25	885.22	885.20	885.17	885.15
RIGHT EDGE DECK	885.18	885.15	885.13	885.10	885.08	885.05	885.03	885.00	884.98	884.95	884.93

* DIMENSIONS MEASURED ALONG ℄ OF BRIDGE.

** DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE.

▲ 18" RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS ON BACK FACE.

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
STRUCTURES DESIGN SECTION

STRUCTURE B-13-0675

DRAWN BY NJT | PLANS CK'D. TLP

SUPERSTRUCTURE

SHEET 7 OF 8

25

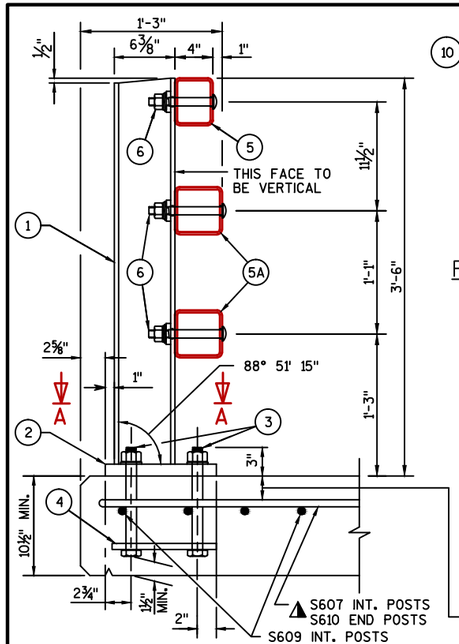
8

8

SCALE = 10:1

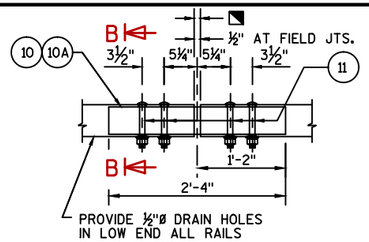
STATE PROJECT NUMBER

5804-00-74

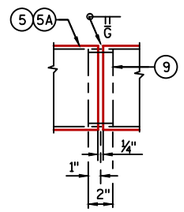


SECTION THRU RAILING ON DECK

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

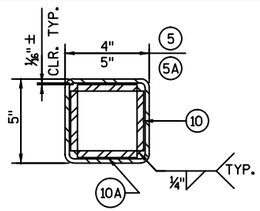


FIELD ERECTION JOINT DETAIL

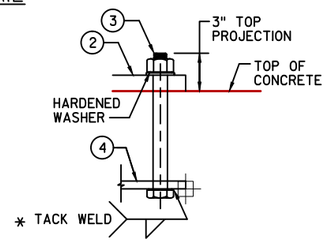


SHOP RAIL SPLICE DETAIL

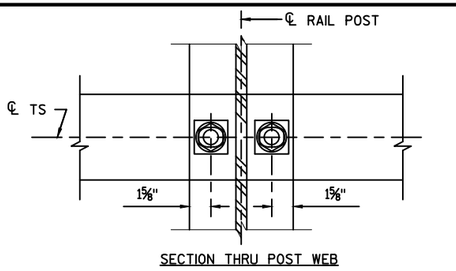
LOCATION MUST BE SHOWN ON SHOP DRAWINGS



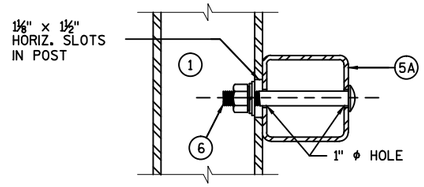
SECTION B-B



ANCHOR BOLTS



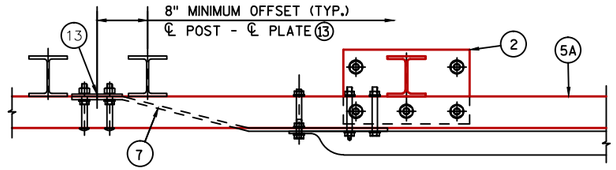
SECTION THRU POST WEB



SECTION THRU RAIL

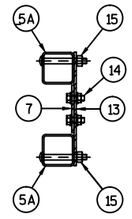
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS

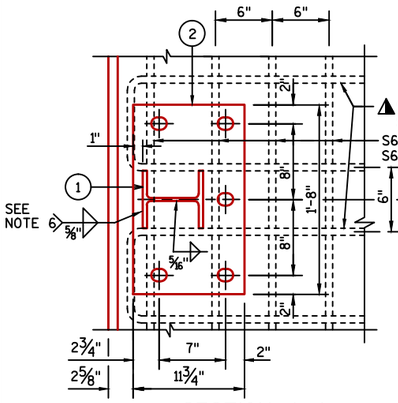


TOP VIEW AT END POST

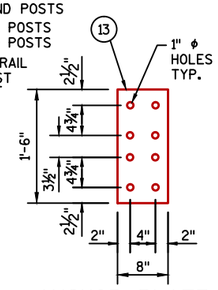
THRIE BEAM RAIL ATTACHMENT



SECTION C-C

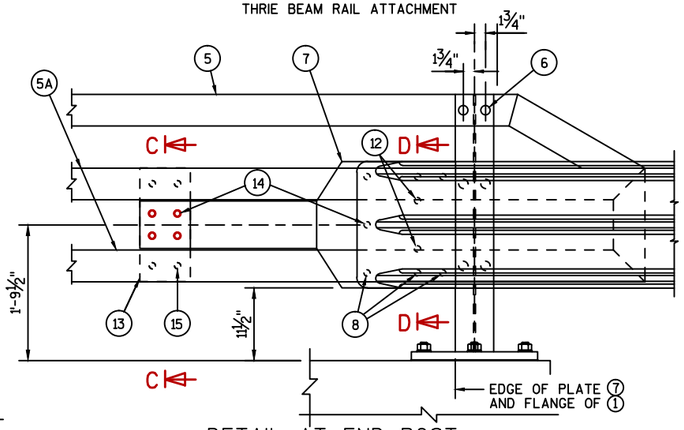


SECTION A-A



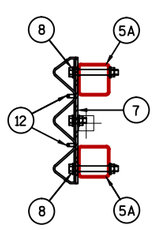
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT

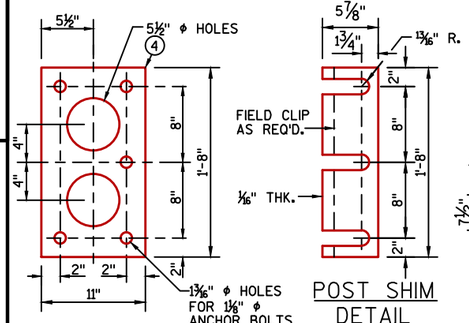


DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT



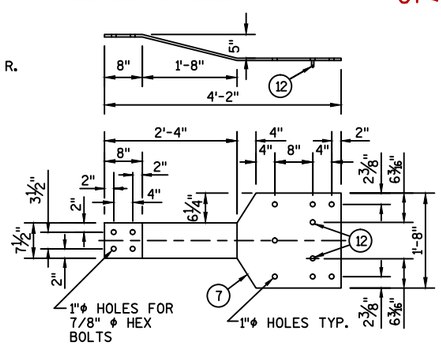
SECTION D-D



ANCHOR PLATE

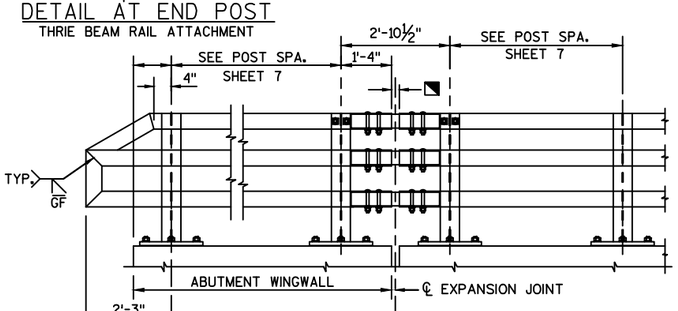
(AT RAIL TO DECK CONNECTION)

POST SHIM DETAIL



BACK-UP PLATE DETAIL

(AT BEAM GUARD ATTACHMENT)



PART ELEVATION OF RAILING

GENERAL NOTES

1. BID ITEM SHALL BE "RAILING TUBULAR TYPE 'M' B-13-0675 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).

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, ³⁄₁₆" 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
STRUCTURES DESIGN SECTION

STRUCTURE B-13-0675

DRAWN BY NJT | PLANS CK'D. TLP

TUBULAR STEEL RAILING TYPE 'M'

SHEET 8 OF 8

26

SCALE = VARIES

			AREA (SF)						Incremental Vol (CY) (Unadjusted)						Cumulative Vol (CY)							
	Real Station																Expanded Marsh		Expanded EBS	Reduced Marsh	Reduced EBS	
STATION		Distance	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut	Expanded Fill	Backfill	Expanded Rock	Backfill	in Fill	In Fill	Mass Ordinate
									Note 1	Note 2	Note 3				Note 1		Note 4		Note 5	Note 6	Note 7	Note 8
1+25.00			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00
1+50.00			5.93	12	29.83	0	0	0	3	0	14	0	0	0	3	17	0	0	0	0	0	-14.52
1+75.00			1.04	0	108.16	0	0	0	3	0	64	0	0	0	6	97	0	0	0	0	0	-91.15
2+25.00			1.86	0	94.61	0	0	0	3	0	188	0	0	0	9	332	0	0	0	0	0	-323.15
2+50.00			3.89	12	9.20	0	0	0	3	0	48	0	0	0	11	392	0	0	0	0	0	-380.56
2+75.00			0	0	0	0	0	0	2	0	4	0	0	0	13	397	0	0	0	0	0	-384.08
										0												
										0												
								Column totals	13	0	318	0	0	0								

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded Marsh Backfill	Will be backfilled with Granular Backfill (or Cut, or Borrow)
5 - Expanded EBS	Will be backfilled with Granular Backfill (or Cut, or Borrow)
6 - Reduced Marsh in Fill	Reduced Marsh Excavation that can be used in Fill
7 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
8 - Mass Ordinate	If Marsh or EBS to be backfilled with Cut or Borrow: [(Cut + Marsh Exc + EBS) - ((Fill - Reduced Marsh in Fill) - (Reduced EBS in Fill) - Expanded Rock) * Fill Factor)]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Granular: [(Cut + EBS + Marsh Exc) - ((Fill - (Reduced Marsh in Fill) - (Reduced EBS in Fill) - (Expanded Rock)) * Fill Factor))]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Granular: [(Cut) - ((Fill - Expanded Rock) * Fill Factor))]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Cut or Borrow: [(Cut) - ((Fill - Expanded Rock) * Fill Factor))]

9

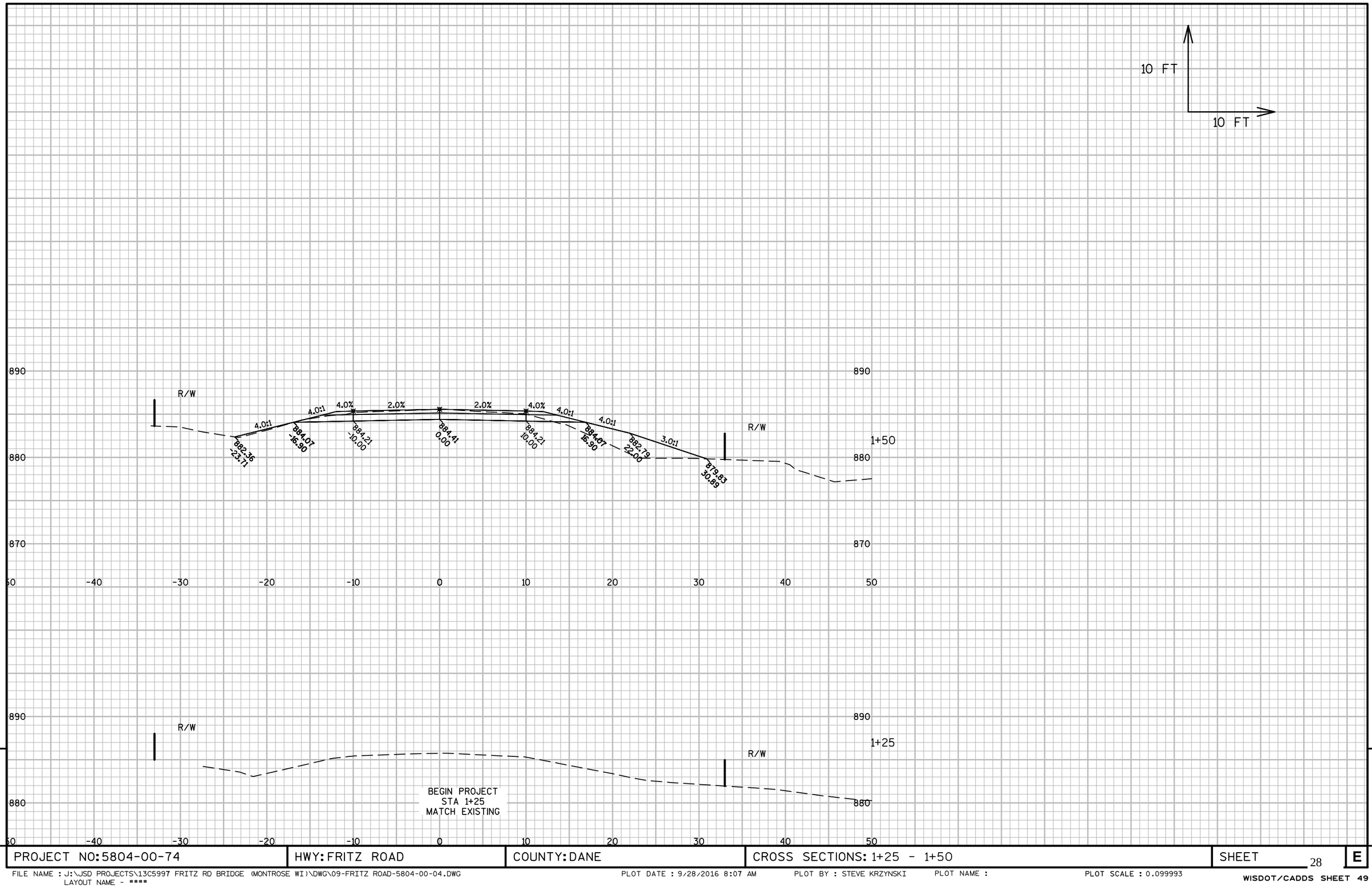
9

PROJECT NO:5804-00-74 | HWY:FRITZ ROAD | COUNTY:DANE | CROSS SECTIONS:EARTHWORK SUMMARY | SHEET 27 | E

FILE NAME : J:\JSD PROJECTS\13C5997 FRITZ RD BRIDGE (MONTROSE WI)\DWG\09-FRITZ ROAD-5804-00-04.DWG
LAYOUT NAME - ****

PLOT DATE : 9/28/2016 8:07 AM PLOT BY : STEVE KRZYNSKI PLOT NAME : PLOT SCALE : ********

WISDOT/CADDS SHEET 49

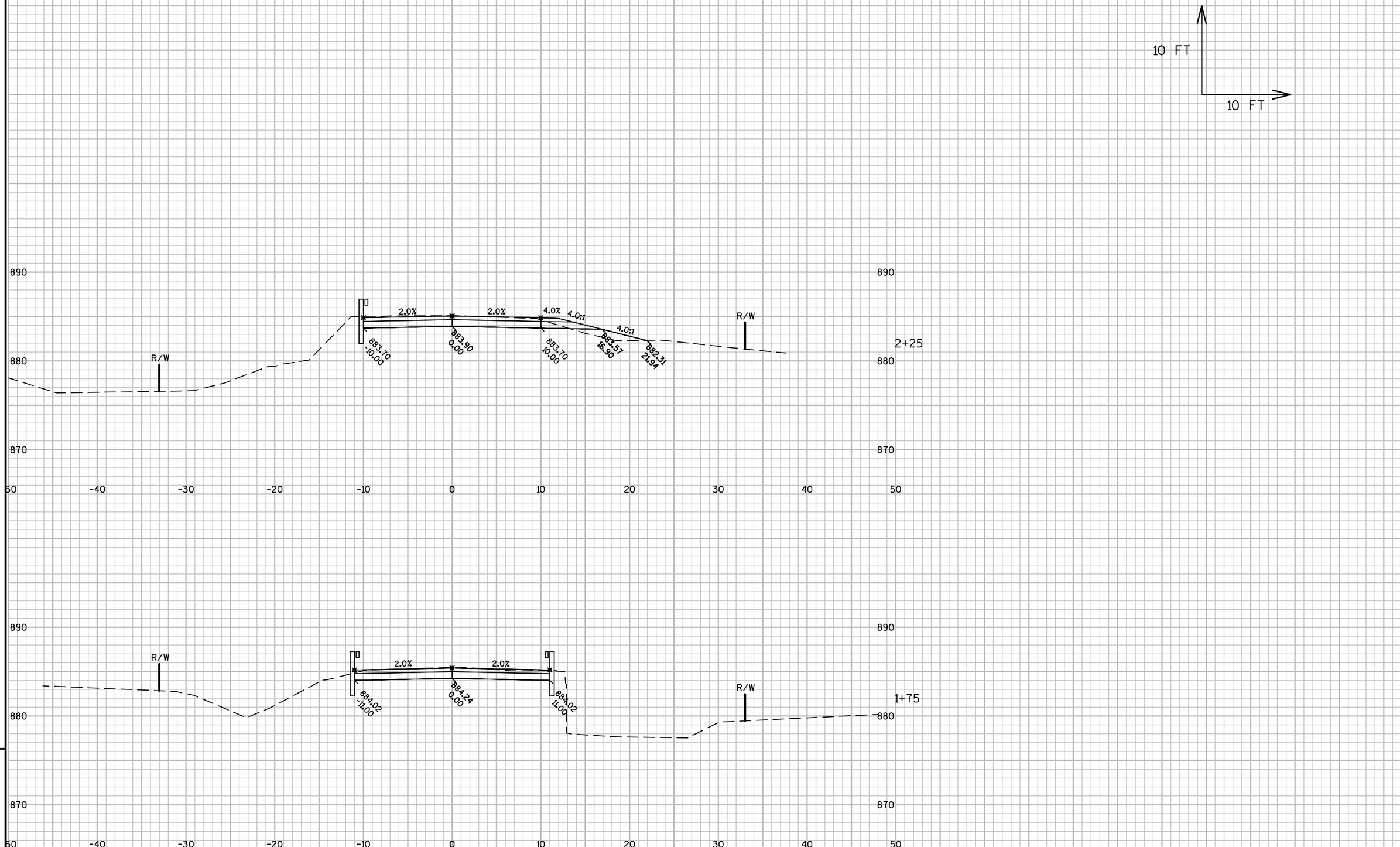


PROJECT NO: 5804-00-74	HWY: FRITZ ROAD	COUNTY: DANE	CROSS SECTIONS: 1+25 - 1+50	SHEET 28	E

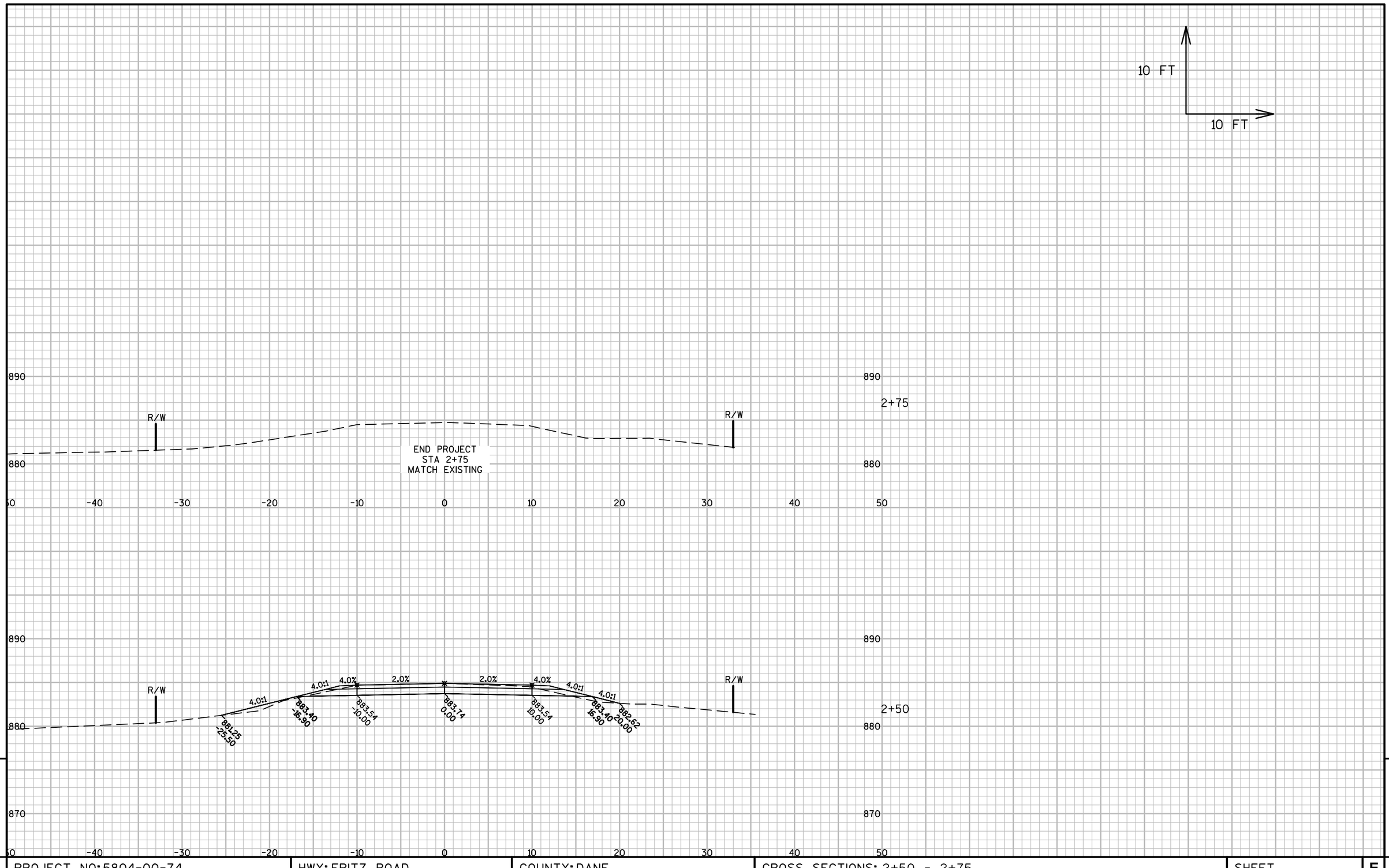
FILE NAME : J:\JSD PROJECTS\13C5997 FRITZ RD BRIDGE (MONTROSE WI)\DWG\09-FRITZ ROAD-5804-00-04.DWG
LAYOUT NAME - ****

PLOT DATE : 9/28/2016 8:07 AM PLOT BY : STEVE KRZYNSKI PLOT NAME : PLOT SCALE : 0.099993

WISDOT/CADDS SHEET 49



PROJECT NO: 5804-00-74	HWY: FRITZ ROAD	COUNTY: DANE	CROSS SECTIONS: 1+75 - 2+25	SHEET 29	E



9

9

PROJECT NO: 5804-00-74	HWY: FRITZ ROAD	COUNTY: DANE	CROSS SECTIONS: 2+50 - 2+75	SHEET 30	E

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov