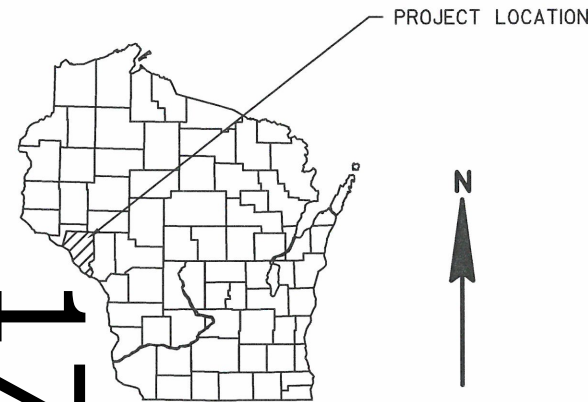


DEC 2014

ORDER OF SHEETS

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

TOTAL SHEETS = 34



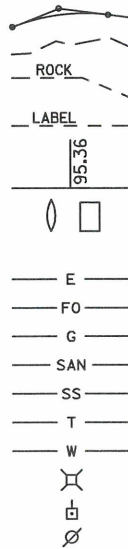
DESIGN DESIGNATION

A.A.D.T. 2015 = 165  
A.A.D.T. 2035 = 220  
D.H.V. = 22  
D.D. = 50/50  
T. = 5 %  
DESIGN SPEED = 40 MPH  
ESALS = 29,200

CONVENTIONAL SYMBOLS

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

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



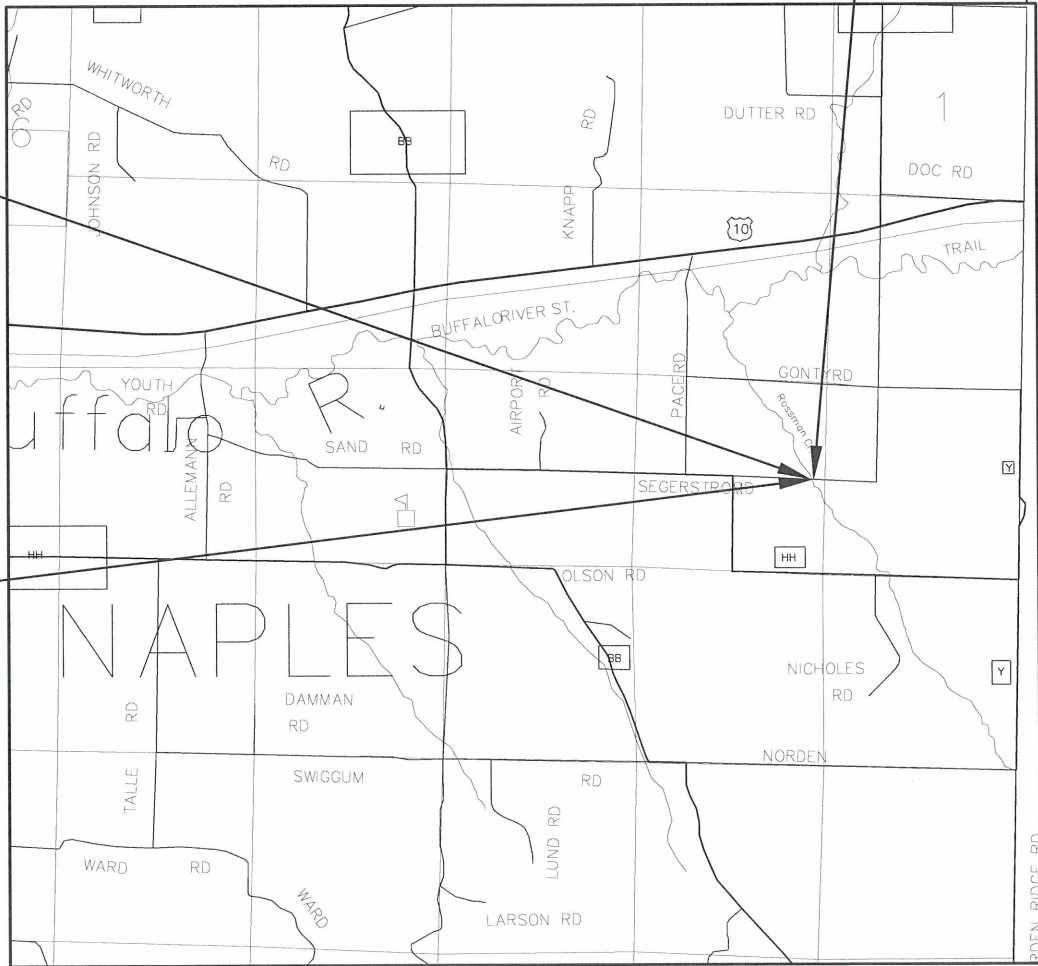
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION  
PLAN OF PROPOSED IMPROVEMENT  
**T NAPLES, SEGERSTROM ROAD**  
ROSSMAN CREEK BRIDGE B-06-0188  
**TOWN ROAD**  
**BUFFALO COUNTY**

STATE PROJECT NUMBER  
7218-00-70

BEGIN PROJECT  
STA 9+25  
Y = 393391.642  
X = 639144.442

STRUCTURE B-06-0188  
STA 10+10

END PROJECT  
STA 11+50



LAYOUT  
SCALE 0 1 MILE

TOTAL NET LENGTH OF CENTERLINE = 0.036

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN  
COUNTY COORDINATE SYSTEM, BUFFALO COUNTY

STATE PROJECT

7218-00-70

FEDERAL PROJECT

PROJECT

WISC 2014450

CONTRACT

1

ACCEPTED FOR  
COUNTY of BUFFALO

7/01/14 *Dan J. B...*  
(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY



(Date) (Signature)

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor SEH  
Designer SEH  
Management Consultant KNIGHT ENGINEERING  
C.O. Examiner

APPROVED FOR THE DEPARTMENT

DATE: 7/23/14 *Ryan B. McKane*  
(Management Consultant Signature)

E

STANDARD ABBREVIATIONS

ABU	ABUTMENT
AC	ACRE
AGG	AGGREGATE
AECPRC	APRON ENDWALL FOR CULVERT
PIPE	REINFORCED CONCRETE
ASPH	ASPHALTIC
AVG	AVERAGE
ADT	AVERAGE DAILY TRAFFIC
BF	BACK FACE
BM	BENCH MARK
BR	BRIDGE
CE	COMMERCIAL ENTRANCE
CL OR C/L OR ☉	CENTER LINE
	CENTRAL ANGLE OR DELTA
CONC	CONCRETE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CPRCHE	CULVERT PIPE REINFORCED CONCRETE
	HORIZONTAL ELLIPTICAL
CR	CREEK
CY	CUBIC YARD
C&G	CURB AND GUTTER
D	DEGREE OF CURVED
HV	DESIGN HOUR VOLUME
DISCH	DISCHARGE
DG	DITCH GRADE
DWY	DRIVEWAY
XEA	ST GRID COORDINATE
EAT	STEEL PLATE BEAM GUARD
	ENERGY ABSORBING TERMINAL
	END POINT OF RADIUS
EOR	ELEVATION
EL	ENTRANCE
ENT	EQUIVALENT SINGLE AXLE LOADS
ESALS	EXCAVATION
EXC	EXCAVATION BELOW SUBGRADE
EBS	EXISTING
EXIST	FACE OF CURB
FC	FACE TO FACE
FF	FERTILIZE
FERT	FIELD ENTRANCE
FE	FLOW LINE
FL	FIBER OPTIC
FO	HUNDREDWEIGHT
CWT	HYDRANT
HYD	INSIDE DIAMETER
ID	INVERT
INV	IRON PIPE ON PIN
IP	LEFT-HAND FORWARD
LHF	LENGTH OF CURVE
L	LINEAR FOOT
LF	LONG CHORD OF CURVE
LC	LUMP SUM
LS	MANHOLE
MH	MID POINT OF RADIUS
MOR	NORMAL CROWN
NC	NUMBER
NO	OBLITERATE
OBLIT	PAVEMENT
PAVT	PRIVATE ENTRANCE
PE	POINT OF VERTICAL REVERSE CURVE
PVRC	QUARTER POINT OF RADIUS
QOR	RADIUS
R	REQUIRED
REQ'D	RESIDENCE OR RESIDENTIAL
RES	RIGHT-HAND FORWARD
LRHF	RIGHT-OF-WAY
R/W	RIVER
R	ROADWAY
RDWY	REFERENCE LINE
R/L OR ☉	SALVAGED
SALV	SANITARY SEWER
SAN	SQUARE FEET
SF	SQUARE YARD
SY	STANDARD DETAIL DRAWINGS
SDD	STATION
STA	STORM SEWER
SS	STORM SEWER PIPE REINFORCED CONCRETE
SSPRC	SUPERELEVATION RATE
SE	TOP OF CURB
TC	TOWN
T OR TN	TRUCKS (PERCENT OF)
T	TYPICAL
TYP	VARIABLE
VAR	VERTICAL CURVE
VC	GRID COORDINATE
YNORTH	YARD
YD	

GENERAL NOTES

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).

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

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

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

THE EXACT LOCATION OF THE EROSION CONTROL DEVICES SHALL BE DETERMINED IN THE FIELD.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, ARE TO BE 4-INCH TOPSOILED, FERTILIZED, AND SEEDED, AND MULCHED.

ALL CURB AND GUTTER RADII, PAVEMENT DIMENSIONS AND STATIONS ARE SHOWN TO THE EDGE OF PAVEMENT UNLESS NOTED OTHERWISE.

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

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 COMMON OR ROCK EXCAVATION.

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

WISDOT MONUMENTS WILL BE SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

BEARINGS SHOWN ON THE PLAN ARE REFERENCED TO THE EXISTING ROADWAY CENTERLINE AND ARE ASSUMED.

3.5-INCH ASPHALTIC SURFACE CONSTRUCTED IN TWO 1.75-INCH LIFTS WITH 12.5-MM NOMINAL AGGREGATE SIZE AND PG58-28 BINDER.

UTILITY CONTACTS

RIVERLAND ENERGY COOP.  
PO BOX 277  
ARCADIA, WI 54612  
TELEPHONE: 608.323.3381  
ATTENTION: DOUG GERRITTS  
EMAIL: DGERRITTS@RIVERLANDENERGY.COM

TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN



Dial 811 or (800) 242-8511

www.DiggersHotline.com

NOTE: WIS. STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE.

\*\*NOT A MEMBER OF DIGGERS HOTLINE

MUNICIPALITY CONTACT

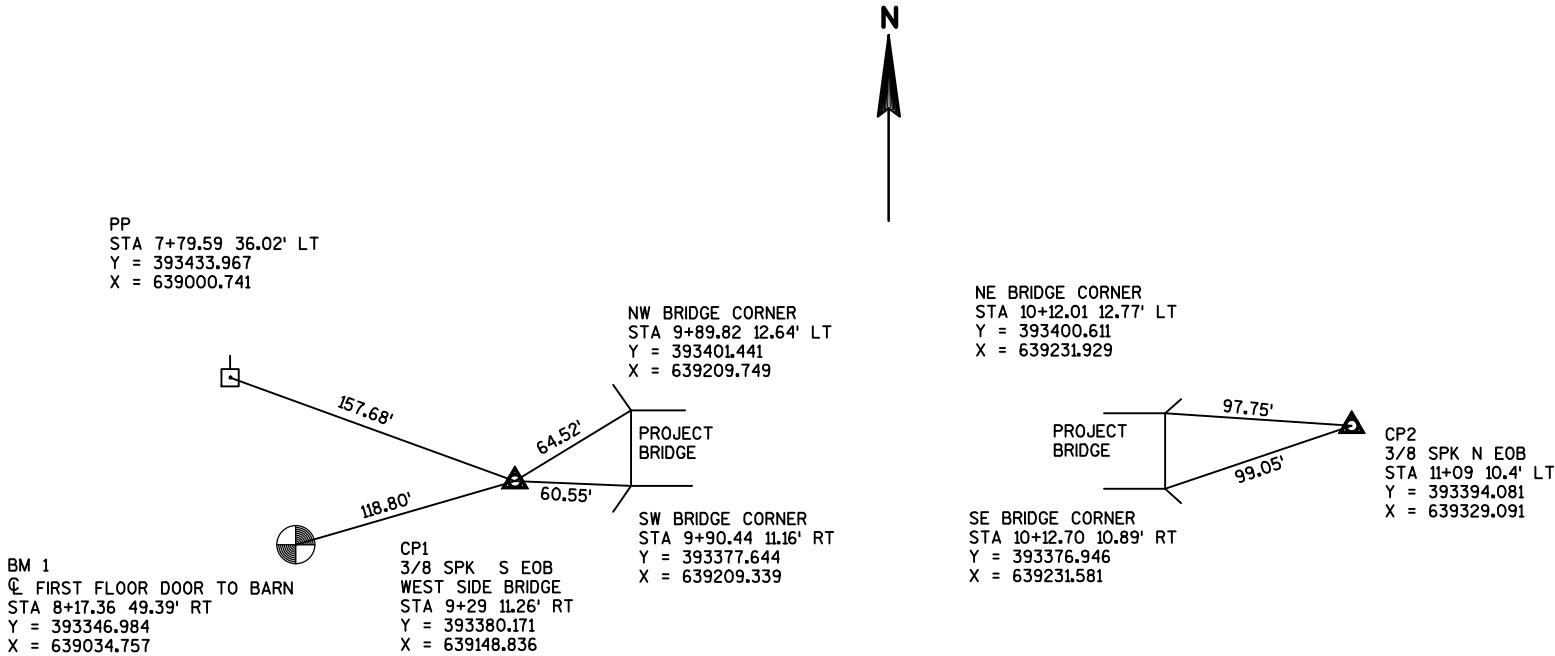
BUFFALO COUNTY HIGHWAY COMMISSIONER  
407 SOUTH 2ND STREET  
ALMA, WI 54610  
TELEPHONE: 608.685.6226  
ATTENTION: DAVID BREVICK  
EMAIL: DAVE.BREVICK@BUFFALOCOUNTY.COM

DESIGN CONTACT

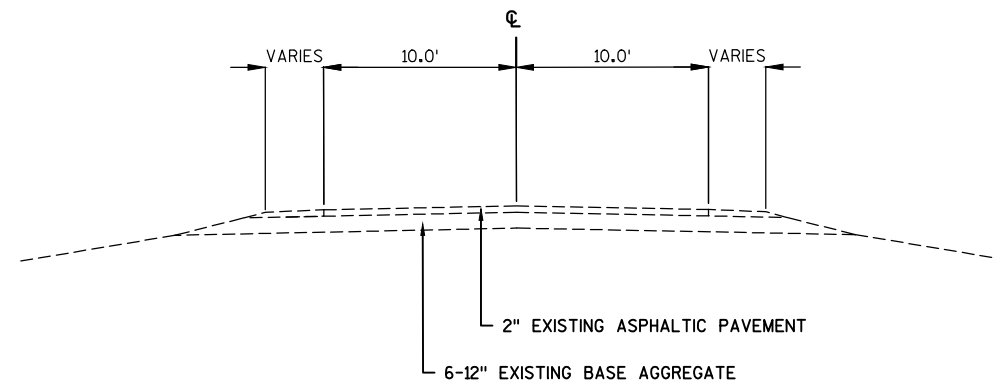
SEH  
10 NORTH BRIDGE STREET  
CHIPPewa FALLS, WI 54729  
TELEPHONE: 715.720.6267  
ATTENTION: DAN GUSTAFSON  
EMAIL: DGUSTAFSON@SEHINC.COM

DNR CONTACT

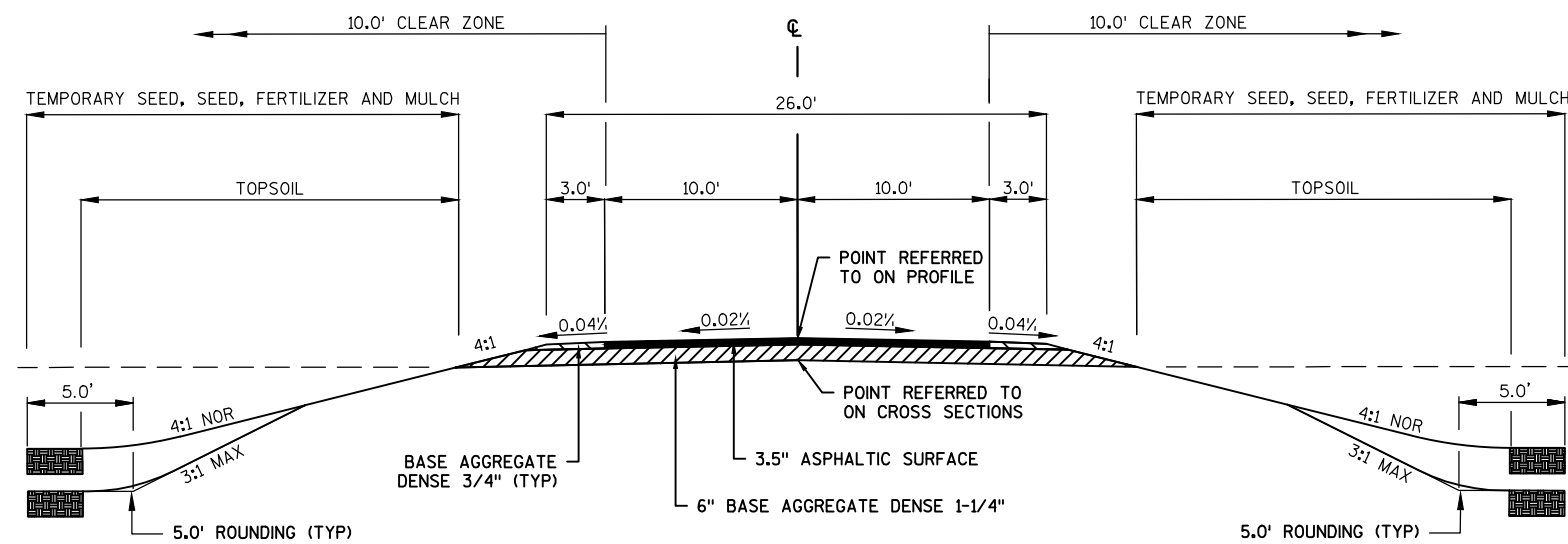
KAREN KALVELAGE  
3550 MORMON COULEE ROAD  
LA CROSSE, WI 54601  
TELEPHONE: 608.785.9115  
EMAIL: KAREN.KALVELAGE@WISCONSIN.GOV



ALIGNMENT CONTROLS



TYPICAL EXISTING SECTION  
STA 9+25 TO STA 11+50



TYPICAL FINISHED SECTION  
STA 9+25 TO STA 9+91.67  
STA 10+28.33 TO STA 11+50

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

DATE 30SEP14		E S T I M A T E O F Q U A N T I T I E S			
LINE				7218-00-70	
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	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. 10+00	LS	1.000	1.000
0040	205.0100	EXCAVATION COMMON	CY	155.000	155.000
0050	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-6-188	LS	1.000	1.000
0060	208.0100	BORROW	CY	192.000	192.000
0070	210.0100	BACKFILL STRUCTURE	CY	144.000	144.000
0080	213.0100	FINISHING ROADWAY (PROJECT) 01. 7218-00-70	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	170.000	170.000
0110	455.0605	TACK COAT	GAL	11.000	11.000
0120	465.0105	ASPHALTIC SURFACE	TON	88.000	88.000
0130	465.0315	ASPHALTIC FLUMES	SY	40.000	40.000
0140	502.0100	CONCRETE MASONRY BRIDGES	CY	121.000	121.000
0150	502.3200	PROTECTIVE SURFACE TREATMENT	SY	130.000	130.000
0160	505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	3,410.000	3,410.000
0170	505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	17,180.000	17,180.000
0180	513.4060	RAILING TUBULAR TYPE M (STRUCTURE) 01. B-6-188	LS	1.000	1.000
0190	516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	18.000	18.000
0200	550.2102	PILING CIP CONCRETE 10 3/4 X 0.219-INCH	LF	800.000	800.000
0210	606.0300	RI PRAP HEAVY	CY	280.000	280.000
0220	612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	60.000	60.000
0230	612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	100.000	100.000
0240	619.1000	MOBILIZATION	EACH	1.000	1.000
0250	625.0100	TOPSOIL	SY	275.000	275.000
0260	627.0200	MULCHING	SY	380.000	380.000
0270	628.1504	SILT FENCE	LF	410.000	410.000
0280	628.1520	SILT FENCE MAINTENANCE	LF	410.000	410.000
0290	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	3.000	3.000
0300	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	3.000	3.000
0310	628.2006	EROSION MAT URBAN CLASS I TYPE A	SY	50.000	50.000
0320	628.6005	TURBIDITY BARRIERS	SY	180.000	180.000
0330	628.7504	TEMPORARY DITCH CHECKS	LF	50.000	50.000
0340	629.0205	FERTILIZER TYPE A	CWT	0.250	0.250
0350	630.0120	SEEDING MIXTURE NO. 20	LB	10.000	10.000
0360	630.0200	SEEDING TEMPORARY	LB	10.000	10.000
0370	634.0612	POSTS WOOD 4X6-INCH X 12-FT	EACH	4.000	4.000
0380	637.2230	SIGNS TYPE II REFLECTIVE F	SF	12.000	12.000
0390	638.2602	REMOVING SIGNS TYPE II	EACH	6.000	6.000
0400	638.3000	REMOVING SMALL SIGN SUPPORTS	EACH	6.000	6.000
0410	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0420	643.0100	TRAFFIC CONTROL (PROJECT) 01. 7218-00-70	EACH	1.000	1.000
0430	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	505.000	505.000
0440	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	191.000	191.000
0450	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-6-188	LS	1.000	1.000
0460	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 7218-00-70	LS	1.000	1.000
0470	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	191.000	191.000
0480	690.0150	SAWING ASPHALT	LF	40.000	40.000



DATE 30SEP14			E S T I M A T E O F Q U A N T I T I E S			
LINE			7218-00-70			
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY	
0490	715. 0502	INCENTIVE STRENGTH CONCRETE STRUCTURES	DOL	726. 000	726. 000	
0500	ASP. 1TOA	ON-THE-JOB TRAINING APPRENTICE AT \$5. 00/HR	HRS	1, 200. 000	1, 200. 000	
0510	ASP. 1TOG	ON-THE-JOB TRAINING GRADUATE AT \$5. 00/HR	HRS	300. 000	300. 000	

3

CLEARING & GRUBBING			
STATION - STATION	LOCATION	201.0105	201.0205
		CLEARING STA	GRUBBING STA
SEGERSTROM ROAD 9+25- 11+25		2	2
ITEM TOTALS		2	2

ASPHALTIC PAVEMENT ITEMS				
STATION - STATION	LOCATION	455.0605	465.0105	465.0315
		TACK COAT GAL	ASPHALTIC SURFACE TON	ASPHALTIC FLUMES SY
SEGERSTROM ROAD 9+25- 9+91.67	LT & RT	4	32	
9+67.75	LT			10
9+77.40	RT			10
10+28.33 - 11+50	LT & RT	7	56	
10+42.60	LT			10
10+80	RT			10
ITEM TOTALS		11	88	40

3

EXCAVATION					
STATION - STATION	LOCATION	205.0100	AIR	EXPAND.	208.0100
		COMMON CY	FILL CY	FILL CY	BORROW CY
SEGERSTROM ROAD 9+25- 10+10	LT & RT	50	224	291	241
10+10 - 11+50	LT & RT	105	43	56	-49
ITEM TOTALS		155	267	347	192

NOTES:  
1) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN COMMON EXCAVATION.  
2) FILL DOES NOT INCLUDE UNUSABLE PAVEMENT EXCAVATION VOLUME.  
3) FILL WILL BE BACKFILLED WITH CUT OR BORROW.  
4) POSITIVE BORROW INDICATES A SHORTAGE OF MATERIAL.  
5) EXPANSION FACTOR = 1.3

MOBILIZATION	
STATION - STATION	619.1000 EACH
SEGERSTROM ROAD CATEGORY 0010 9+25 - 11+50	0.2
CATEGORY 0020 9+25 - 11+50	0.8
ITEM TOTAL	1

FINSHING ROADWAY (7218-00-70)

STATION - STATION	213.0100 EACH
SEGERSTROM ROAD 9+25- 11+50	1
ITEM TOTAL	1

RIPRAP ITEMS			
STATION - STATION	LOCATION	606.0300*	645.0120*
		RIPRAP HEAVY CY	GEOTEXTILE FABRIC TYPE HR SY
SEGERSTOM ROAD 10+45 - 10+75	RT	30	45
ITEM TOTALS		30	45

\*ITEM LOCATED ELSEWHERE IN PLANS

BASE AGGREGATE DENSE			
STATION - STATION	LOCATION	305.0110	305.0120
		3/4-INCH TON	1 1/4-INCH TON
SEGERSTROM ROAD 9+25- 9+91.67	LT & RT	10	65
10+28.33 - 11+50	LT & RT	20	105
ITEM TOTALS		30	170

TOPSOIL, MULCHING AND SEEDING					
STATION - STATION	LOCATION	625.0100	627.0200	629.0205	630.0120
		TOPSOIL SY	MULCHING SY	FERTILIZER TYPE A CWT	SEEDING MIXTURE NO. 20 LB
SEGERSTROM ROAD 9+25- 11+50	LT & RT	275	380	0.25	10
ITEM TOTALS		275	380	0.25	10

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

3

EROSION CONTROL ITEMS					
STATION - STATION	LOCATION	628.1504	628.1520	628.2006	628.7504
		SILT FENCE LF	SILT FENCE MAINTENANCE LF	EROSION MAT URBAN CLASS I TYPE A SY	TEMPORARY DITCH CHECKS LF
SEGERSTROM ROAD 9+25- 11+50 UNDISTRIBUTED		410	410	50	180
ITEM TOTALS		410	410	50	50

TRAFFIC CONTROL (7218-00-70)

STATION - STATION	643.0100 EACH
SEGERSTROM ROAD 9+25- 11+50	1
ITEM TOTAL	1

3

MOBILIZATIONS EROSION CONTROL

STATION - STATION	628.1905	628.1910
	EROSION CONTROL EACH	EROSION CONTROL EACH
SEGERSTROM ROAD 9+25- 11+50	3	3
ITEM TOTALS	3	3

CONSTRUCTION STAKING

STATION - STATION	LOCATION	650.4500	*650.6500	650.9910	650.9920
		SUBGRADE LF	STRUCTURE LAYOUT (B-06-0188) LS	SUPPLEMENTAL CONTROL (7218-00-70) LS	SLOPE STAKES LF
SEGERSTROM ROAD 9+25- 11+50 10+10	LT & RT LT & RT	191	1	1	191
ITEM TOTALS		191	1	1	191

\*CATEGORY 0020.

PERMANENT SIGNING

SIGN GROUP CODE	SIGN CODE	MESSAGE	TYPE II SIZE	637.2230	634.0612	638.2602	638.3000	REMARKS
				SIGNS TYPE II REFLECTIVE F SF	POSTS WOOD 4X6-INCH 12-FT EACH	SIGNS REMOVING TYPE II EACH	SMALL SIGN SUPPORTS EACH	
1-1	W5-52L	CLEARANCE STRIPER	12" X 36"	3	1	1	1	REPLACE
1-2	W5-52R	CLEARANCE STRIPER	12" X 36"	3	1	1	1	REPLACE
1-3	W5-52R	CLEARANCE STRIPER	12" X 36"	3	1	1	1	REPLACE
1-4	W5-52L	CLEARANCE STRIPER	12" X 36"	3	1	1	1	REPLACE
	R12-1	WEIGHT LIMIT XX TONS	24" X 30"			1	1	REMOVE (9+25 RT)
	R12-1	WEIGHT LIMIT XX TONS	24" X 30"			1	1	REMOVE (10+50 LT)
ITEM TOTALS				12	4	6	6	

SAWING ASPHALT

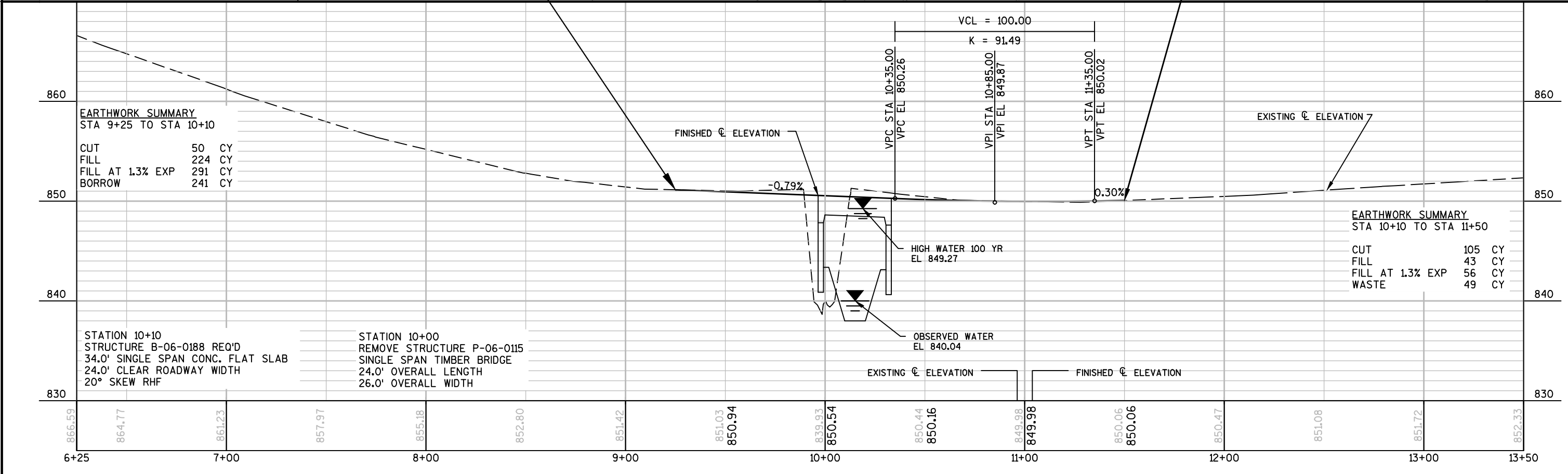
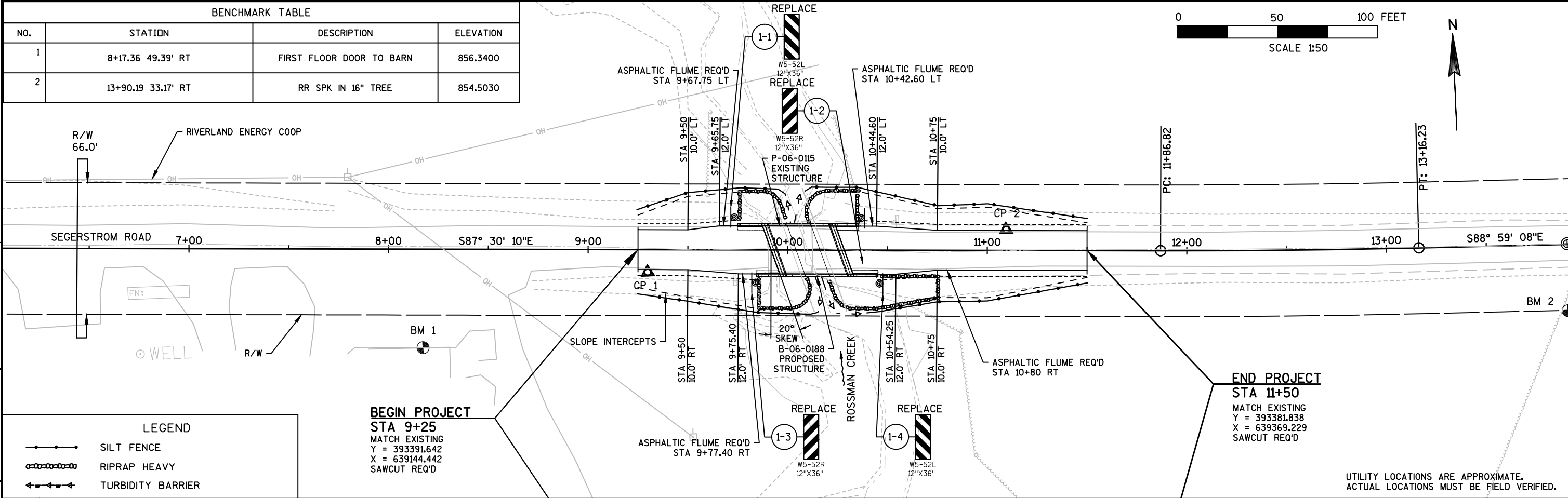
STATION - STATION	LOCATION	690.0150 LF
SEGERSTROM ROAD 9+25 11+50		20 20
ITEM TOTAL		40

FIELD OFFICE TYPE B

STATION - STATION	642.5001 EACH
SEGERSTROM ROAD 9+25- 11+50	1
ITEM TOTAL	1

NOTE: ALL ITEMS AND QUANTITIES ON THIS SHEET ARE FOR ENGINEER ESTIMATE CATEGORY 0010, UNLESS OTHERWISE NOTED.

BENCHMARK TABLE			
NO.	STATION	DESCRIPTION	ELEVATION
1	8+17.36 49.39' RT	FIRST FLOOR DOOR TO BARN	856.3400
2	13+90.19 33.17' RT	RR SPK IN 16" TREE	854.5030





Standard Detail Drawing List

08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-05A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-05B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES

## 6



PLAN VIEW  
FLUME AT CURB END



## 6

S.D.D. 8 D 4-5

- ① JOINTS SHALL BE  $\frac{1}{8}$  TO  $\frac{1}{4}$  INCH WIDE BY  $1\frac{1}{2}$  INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

EXPANSION JOINT

CONCRETE CURB AND GUTTER

8'-0"

4'-0"

EDGE OF PAVEMENT

2" MIN. CURB HEIGHT

4" R

3'-0" MIN.

SURFACE DRAIN IS SYMMETRICAL WHEN CURB AND GUTTER IS CONTINUED

TAPER CURB TO FLOW LINE

JOINTS

SHOULDER OR BERM HINGE POINT

W3 WIRE MESH (SEE SECTION D-D)

RIPRAP

6'-0"

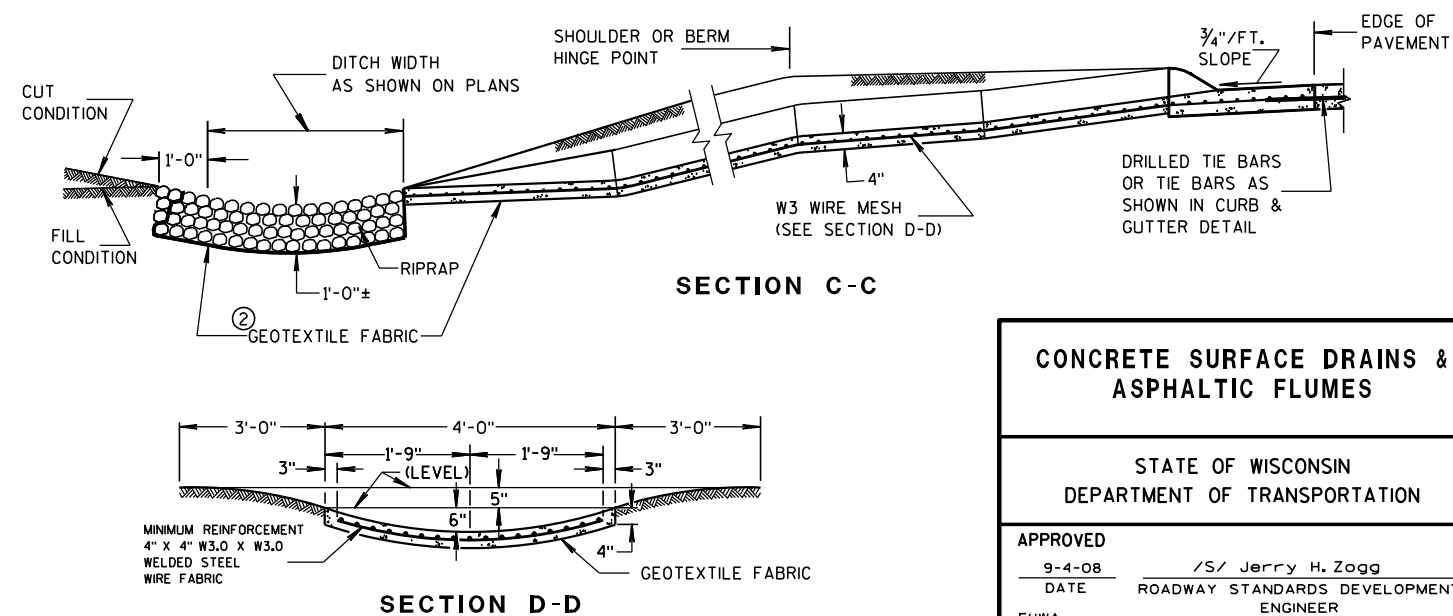
OR AS REQUIRED

1'-0" ON CUT SLOPE

DITCH

PLAN VIEW

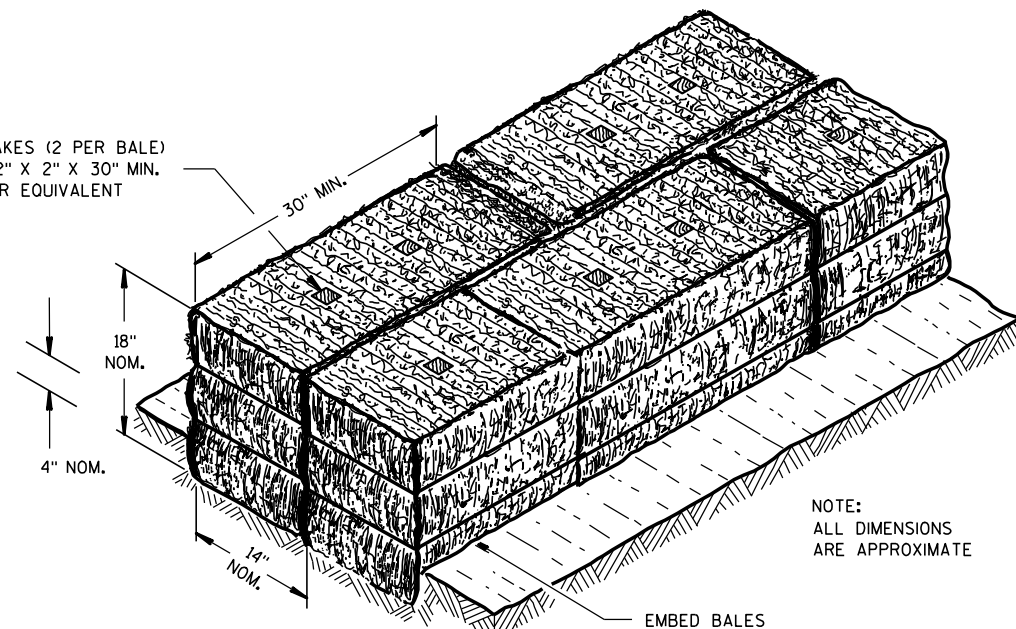
### PLAN VIEW



STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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

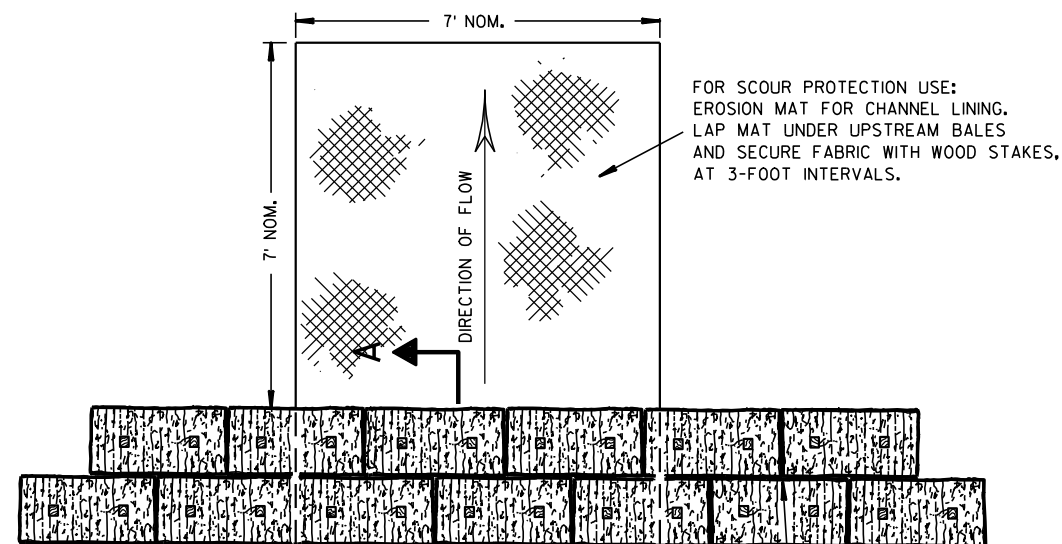
WOOD STAKES (2 PER BALE)  
NOMINAL 2" X 2" X 30" MIN.  
LENGTH OR EQUIVALENT



NOTE:  
ALL DIMENSIONS  
ARE APPROXIMATE

EMBED BALES

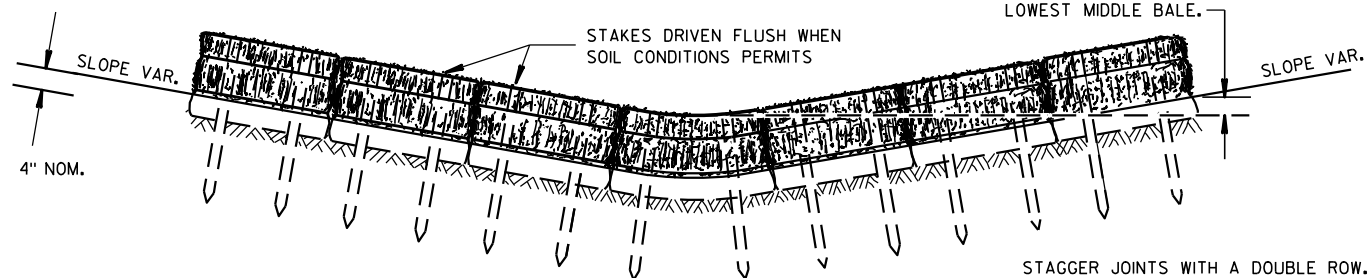
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT  
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL  
BE EQUAL TO OR GREATER THAN TOP OF  
LOWEST MIDDLE BALE.



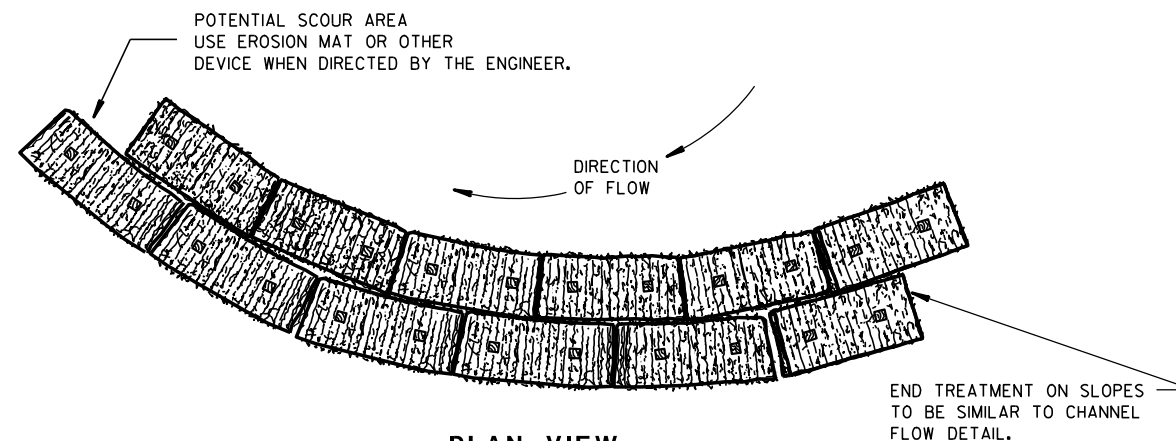
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

## GENERAL NOTES

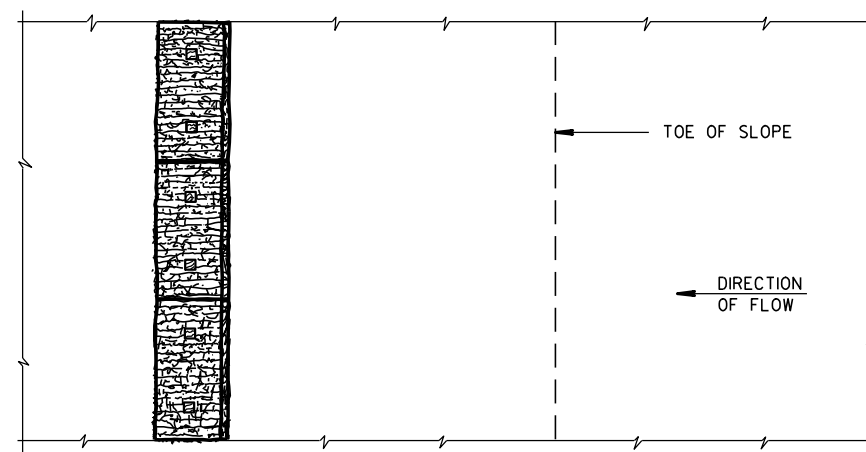
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

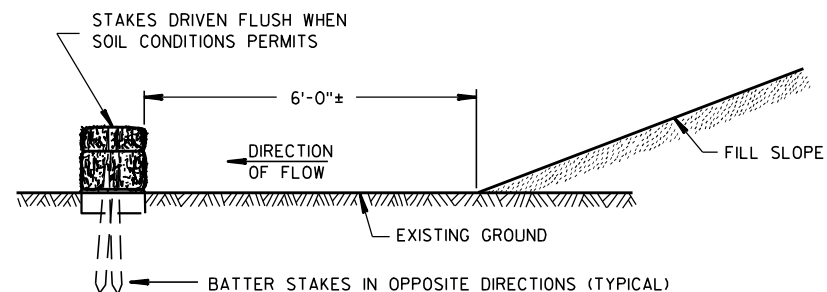


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

## TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02  
DATE

/S/ Beth Canestra  
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

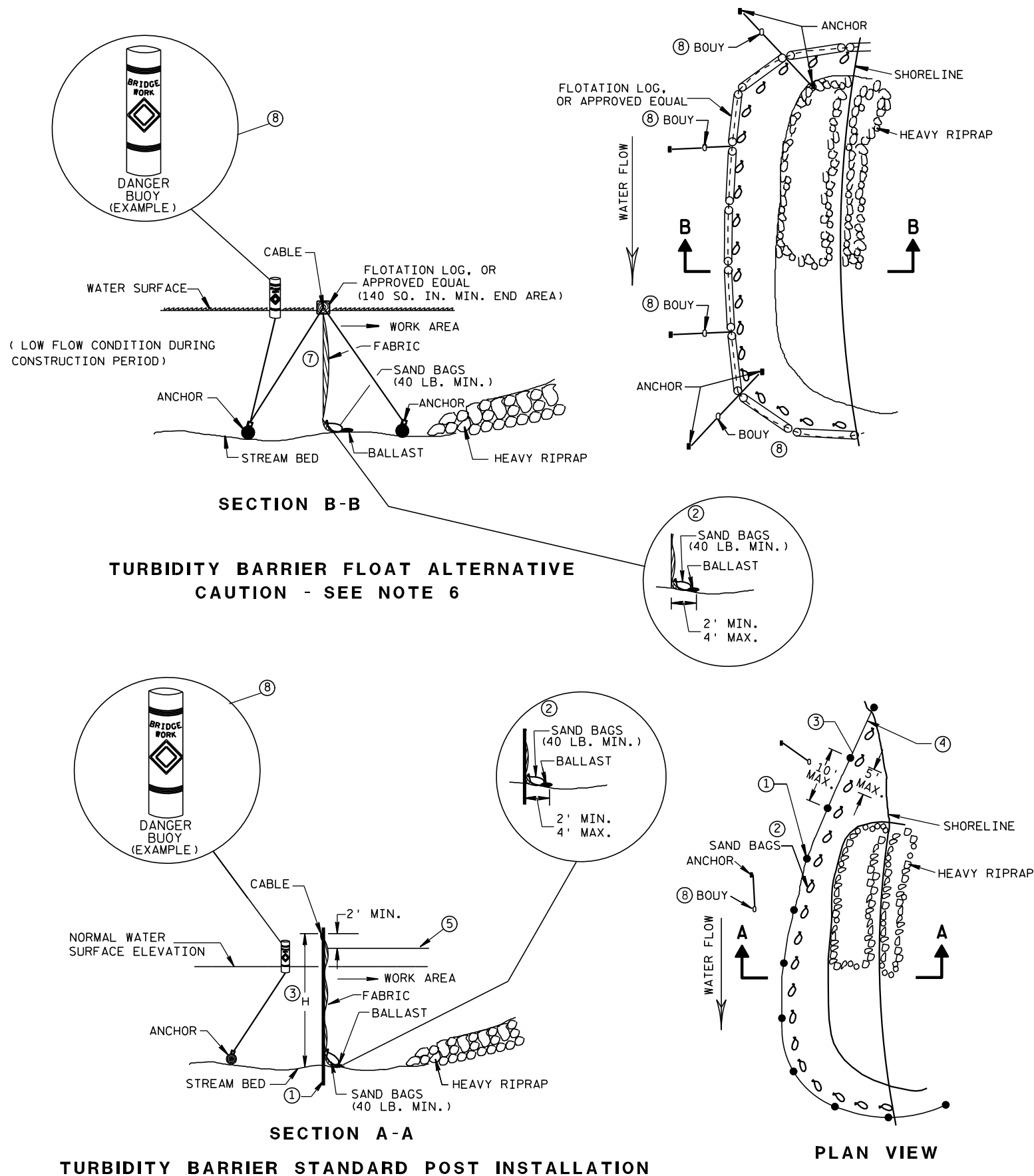


- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1½" X 1½" OF OAK OR HICKORY.
- ④ SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
- ⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



<b>SILT FENCE</b>	
<b>STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION</b>	
<b>APPROVED</b> <u>4-29-05</u> <b>DATE</b>	<u>/S/ Beth Cannestra</u> <b>CHIEF ROADWAY DEVELOPMENT ENGINEER</b>



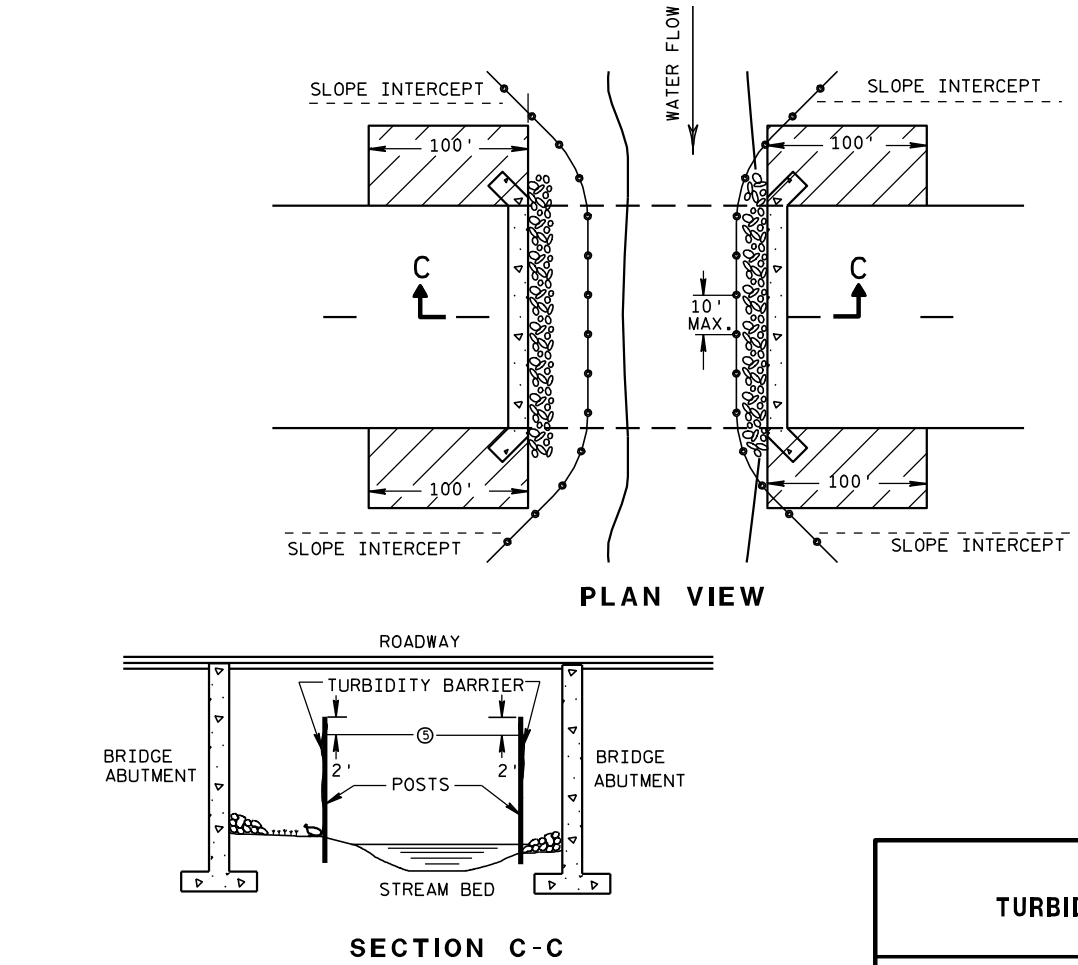


GENERAL NOTES

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

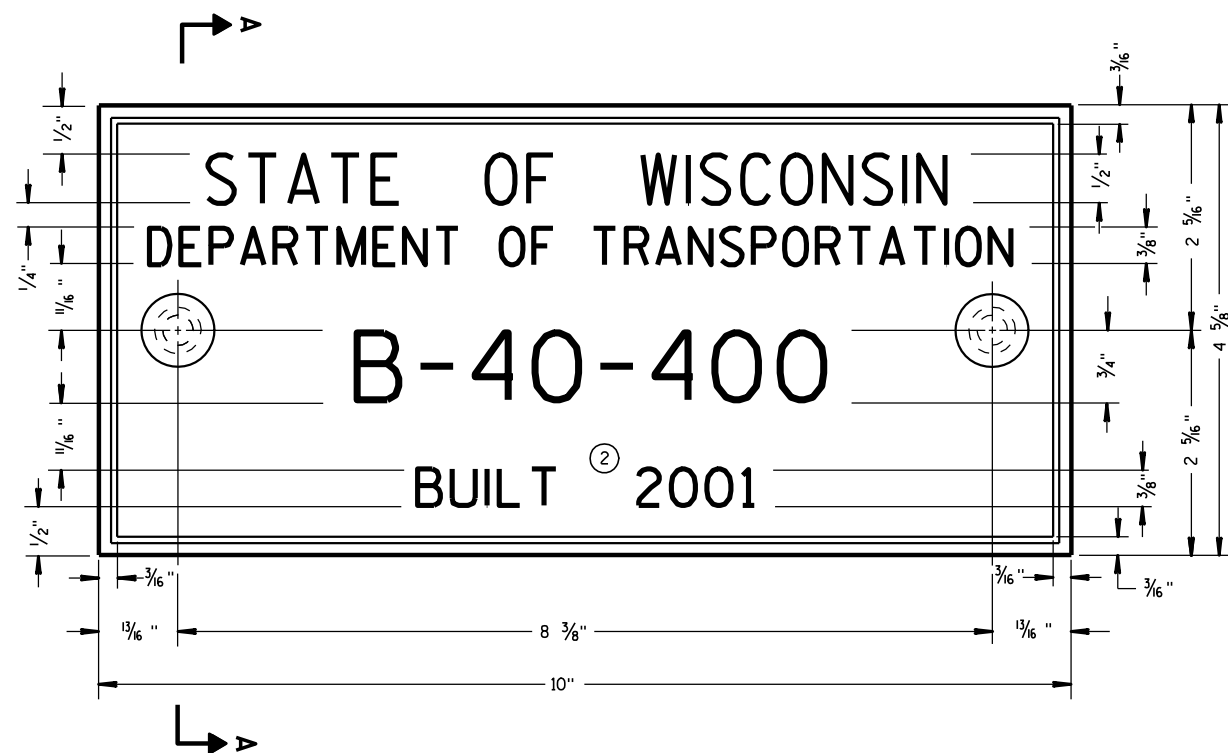
TURBIDITY BARRIER MAY BE REMOVED AT THE ENGINEERS DISCRETION, WHEN PERMANENT EROSION CONTROL MEASURES HAVE BEEN ESTABLISHED.

- ① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.
- ② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.
- ③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.
- ④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
- ⑤ ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE 02 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
- ⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.
- ⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.
- ⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.

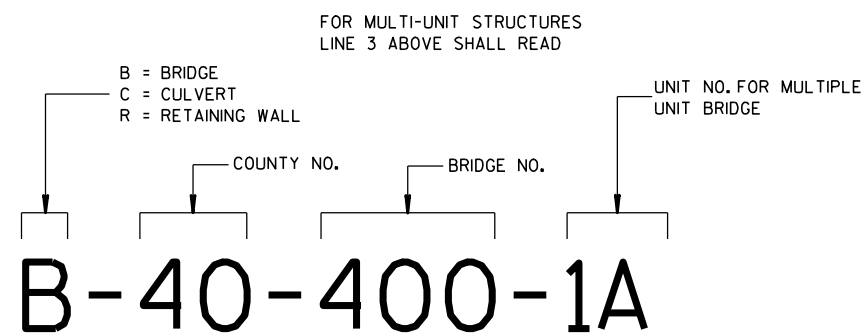


TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 6/04/02 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



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



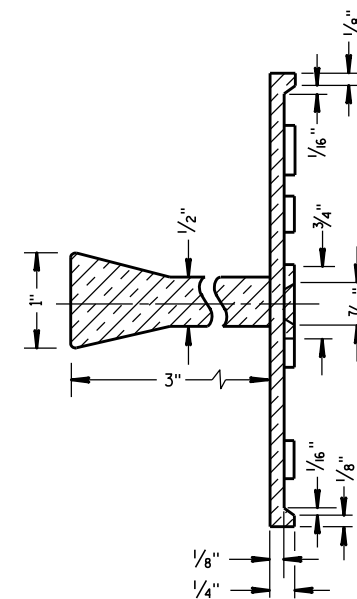
**NUMBERING DESIGNATION  
MULTI-UNIT STRUCTURES**

## GENERAL NOTES

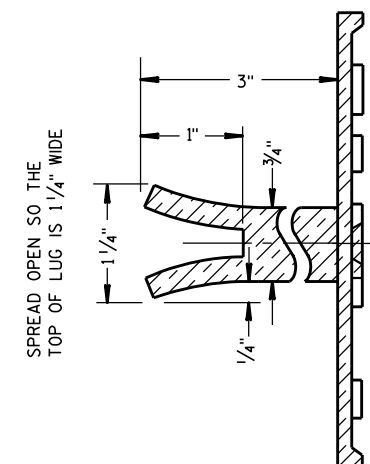
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

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

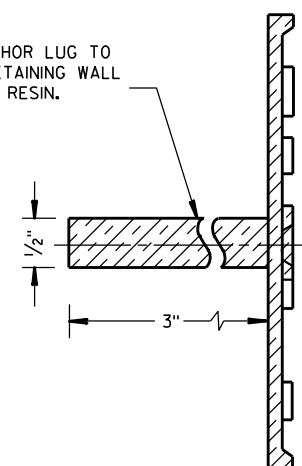


**SECTION A-A**



**ALTERNATE LUG**

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



**ALTERNATE LUG**  
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE  
(STRUCTURES)**

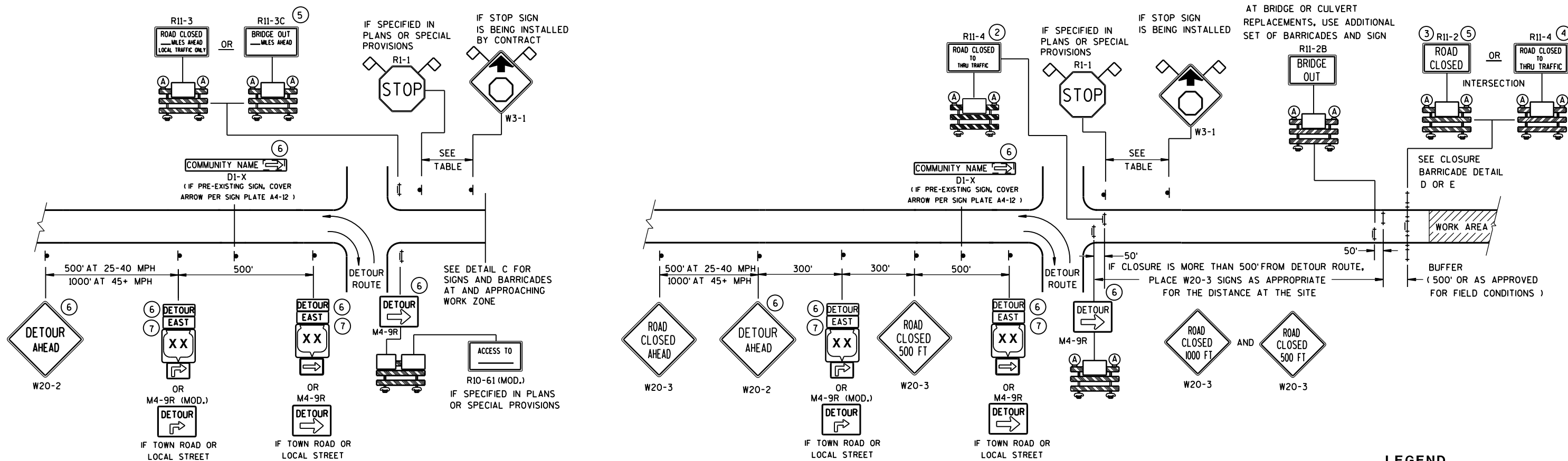
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10  
DATE

FHWA

/S/ Scot Becker  
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



**DETAIL A**  
**MAINLINE CLOSURE WITH POSTED DETOUR**

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

**DETAIL B**  
**MAINLINE CLOSURE WITH POSTED DETOUR**

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

**LEGEND**

- SIGN ON PERMANENT SUPPORT
- ⊥ TYPE III BARRICADE
- ⊥ TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)

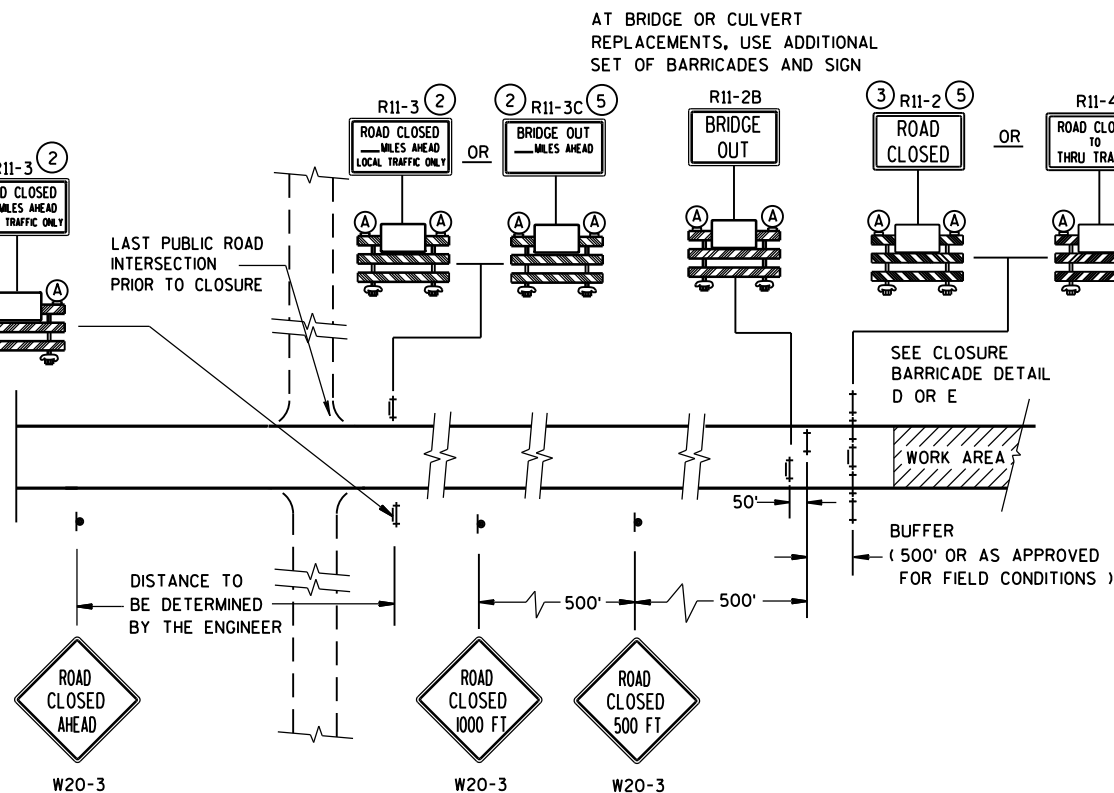
WORK AREA

DETOUR EAST  
M4-8  
M3-X  
XX OR XX OR XX  
M1-4 M1-5A M1-6

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

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



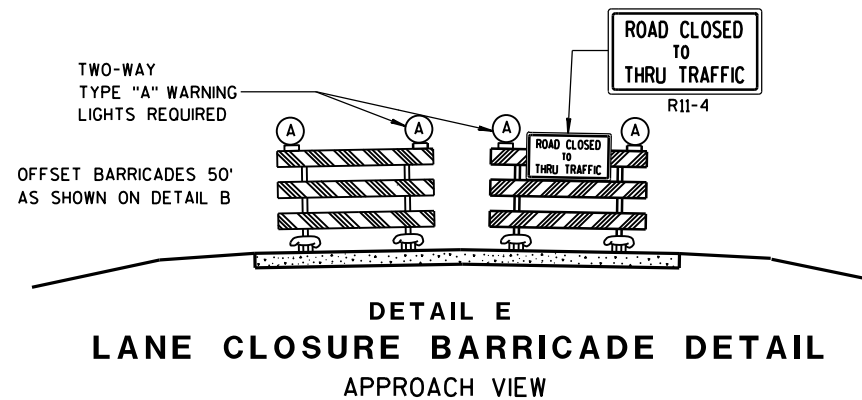
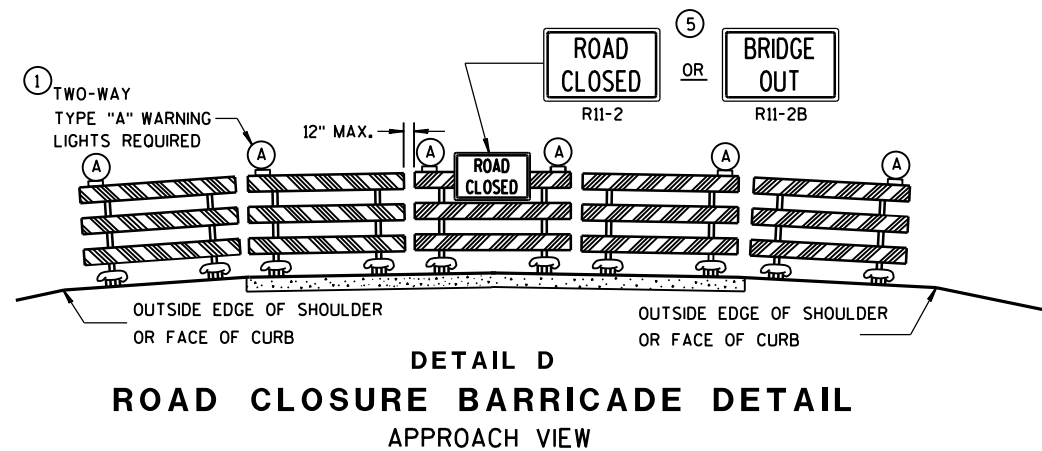
**DETAIL C**  
**MAINLINE CLOSURE, NO POSTED DETOUR**

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

**BARRICADES AND SIGNS  
FOR  
MAINLINE CLOSURES**

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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



SEE SDD 15C2-SHEET "a" FOR LEGEND

## GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

R1-1 SHALL BE 36" X 36".

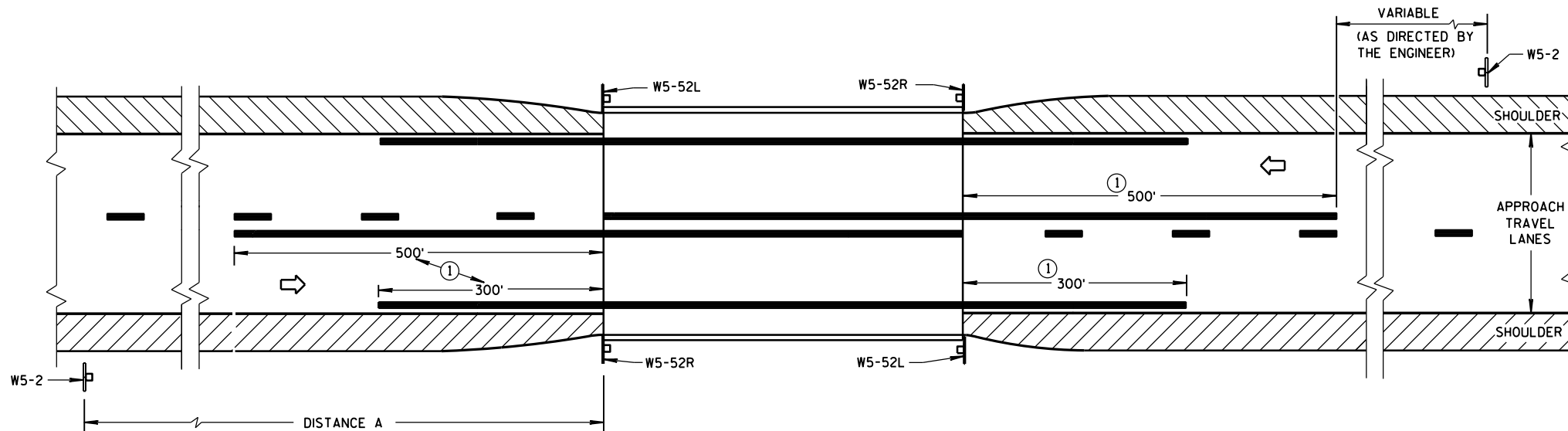
- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- 2 THESE SIGNS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

## BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

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





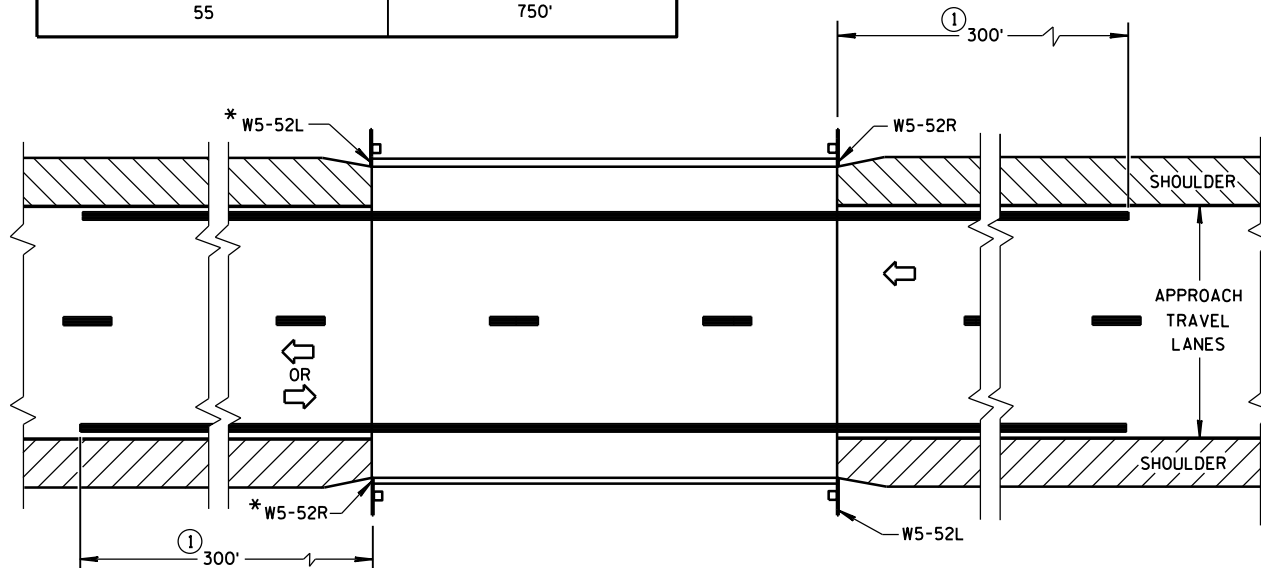
### SITUATION 1

WARRANTING CRITERIA:

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

#### DISTANCE TABLE

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

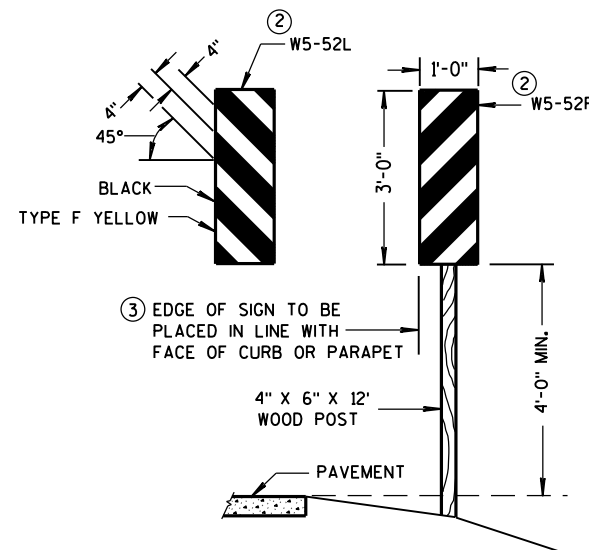


\*OMIT ON ONE-WAY TRAVELLED WAYS

### 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.



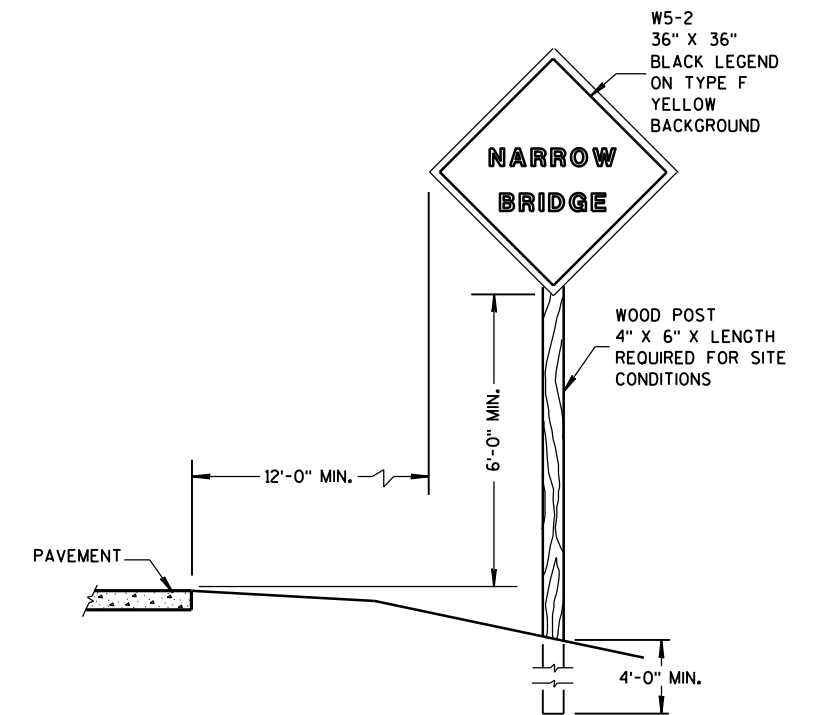
### OBJECT MARKER PLACEMENT

### 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.



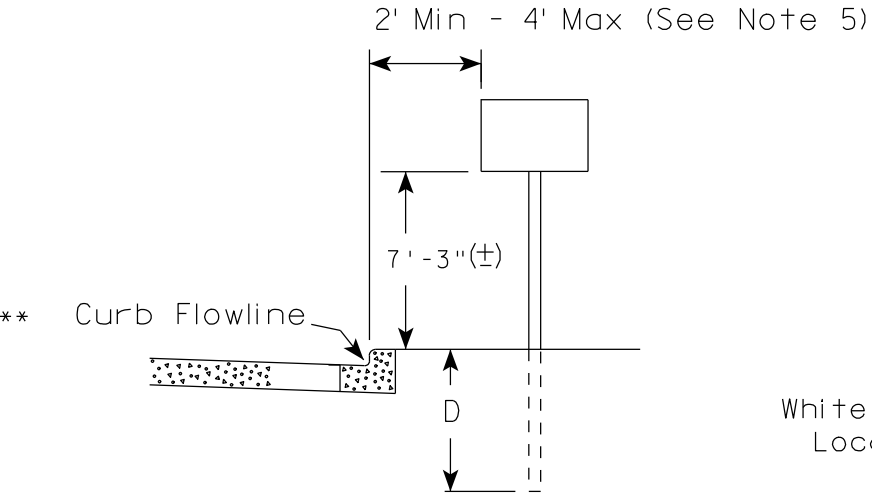
### SIGN PLACEMENT

#### SIGNING & MARKING FOR TWO LANE BRIDGES

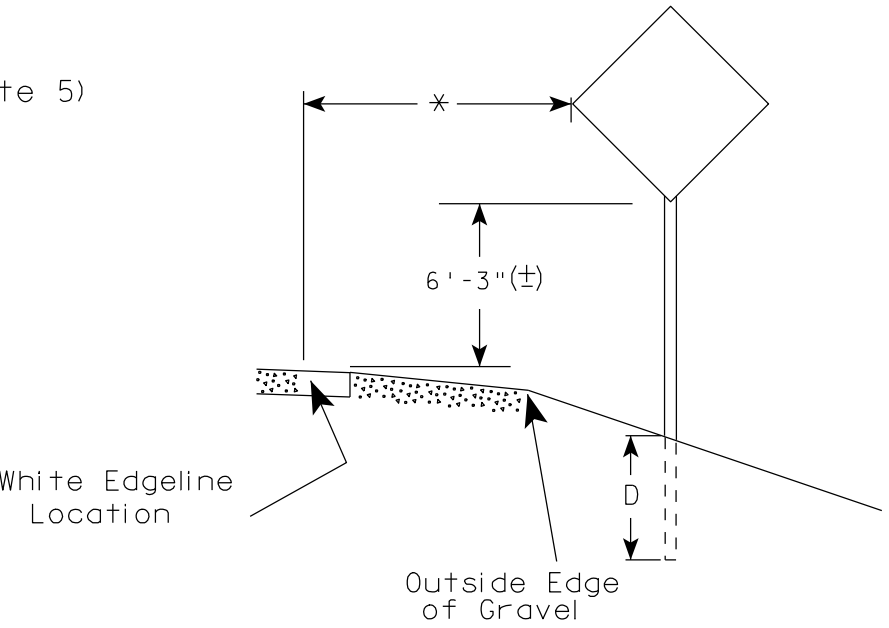
STATE OF WISCONSIN  
DEPARTMENT OF TRANSPORTATION

APPROVED  
3-2014 DATE /S/ Travis Fettes  
STATE TRAFFIC ENGINEER OF DESIGN  
FHWA

URBAN AREA



RURAL AREA (See Note 2)



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'

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

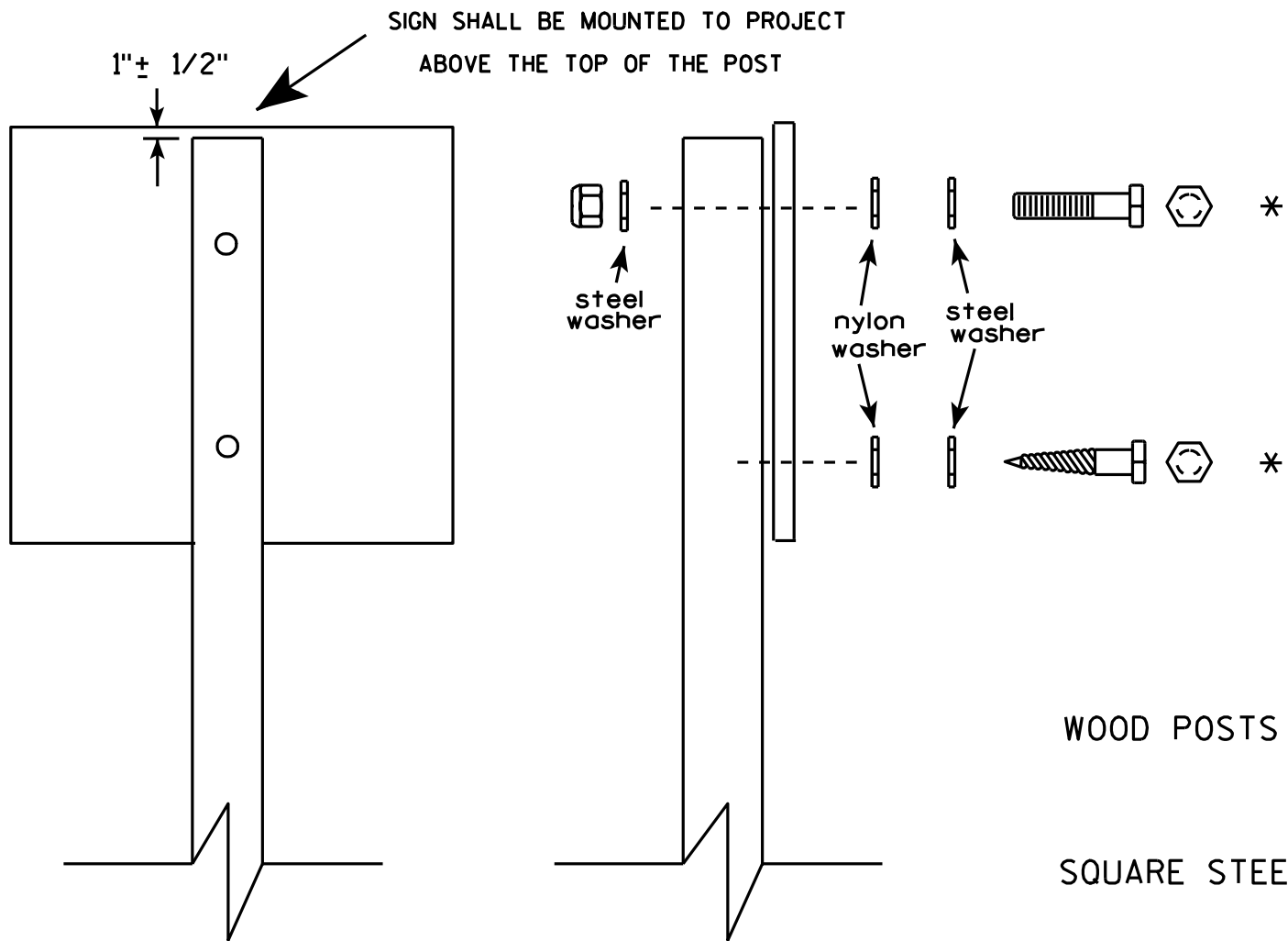
\* \* The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of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

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

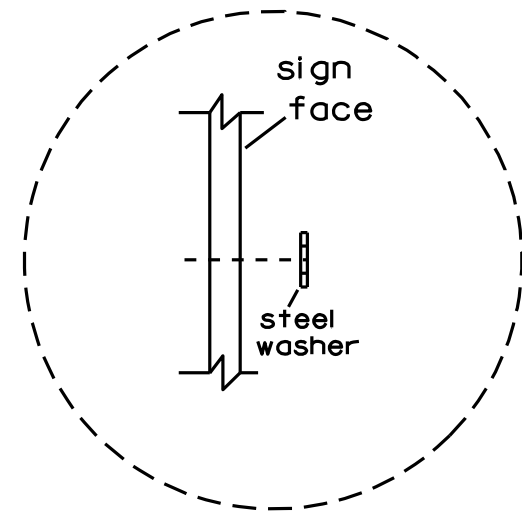


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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.

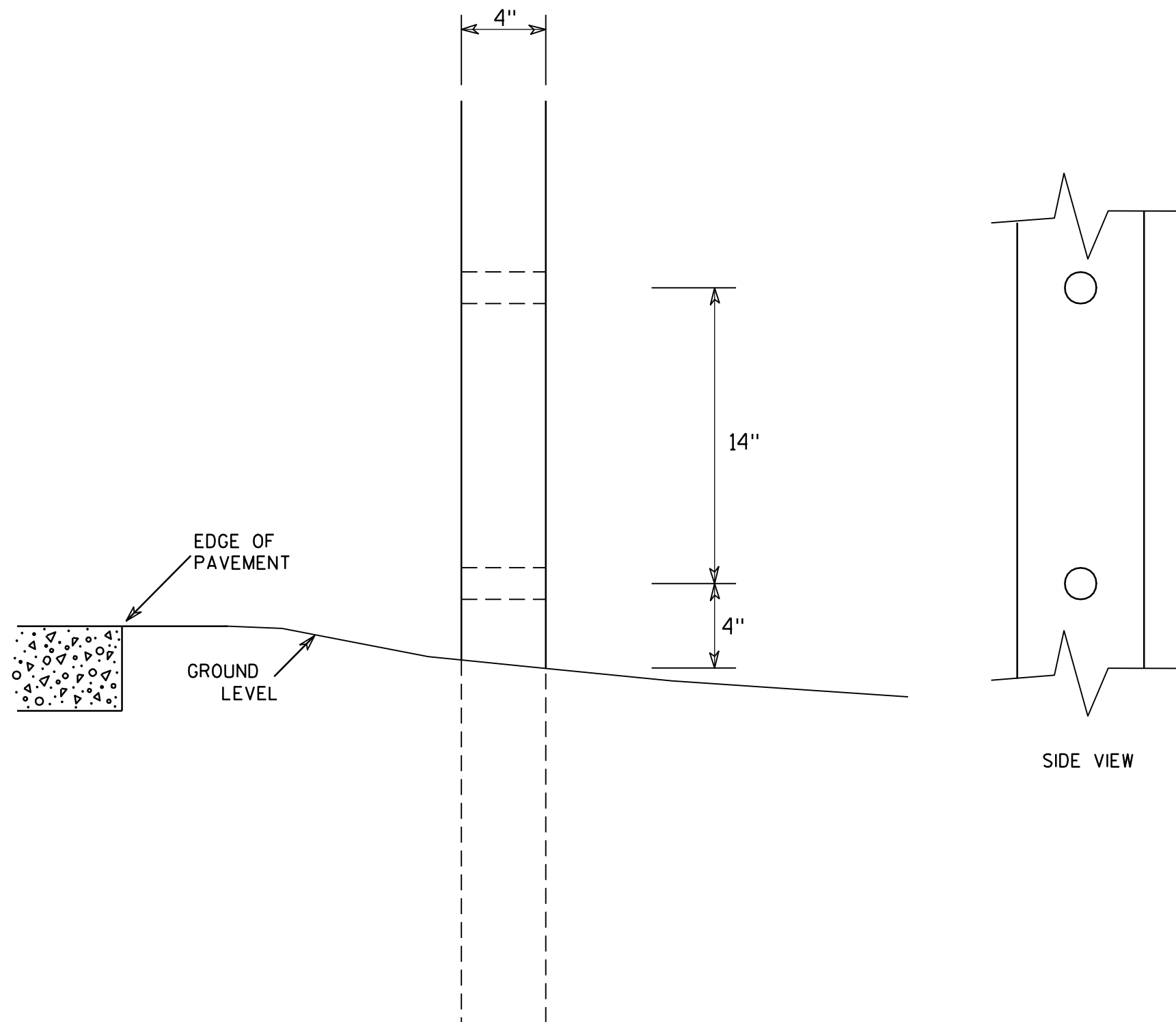


Washer Placement when Sign Has Other Than Type H or Type F Face

\* 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	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 3/23/10	PLATE NO. A4-8.7

7



### GENERAL NOTES

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

7

### 4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

*Chester J. Spang*  
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

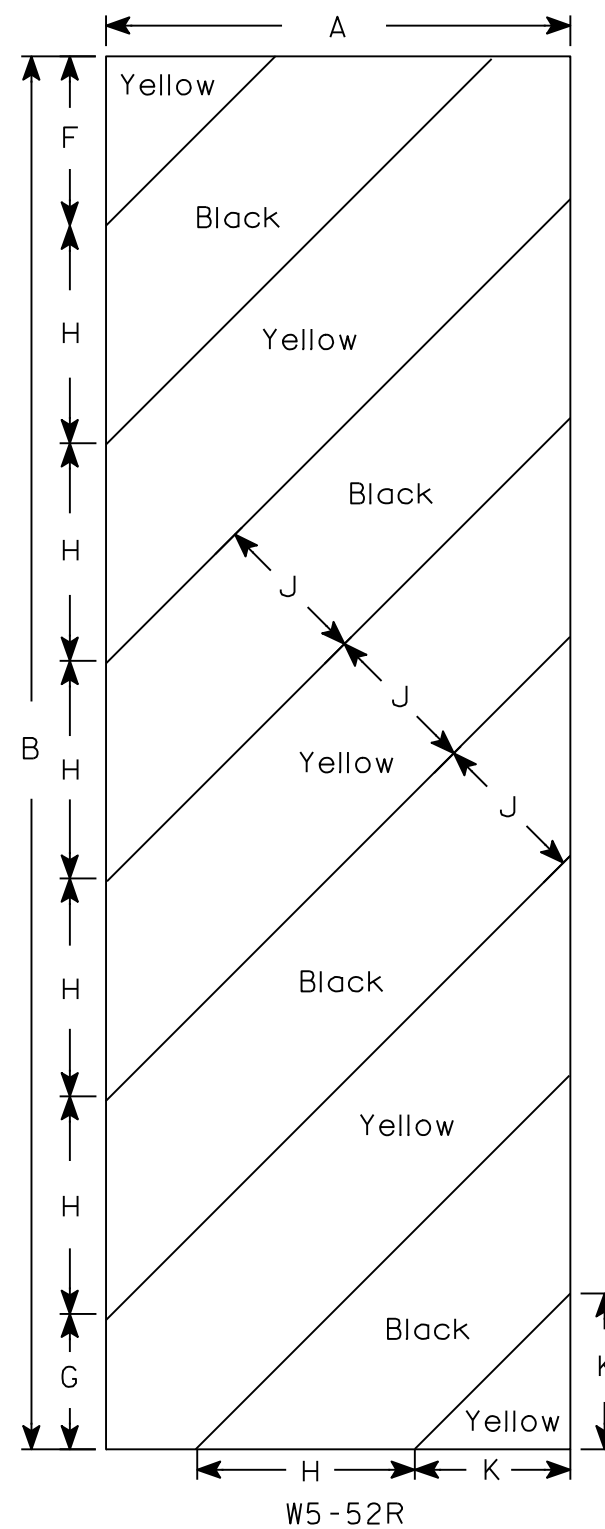
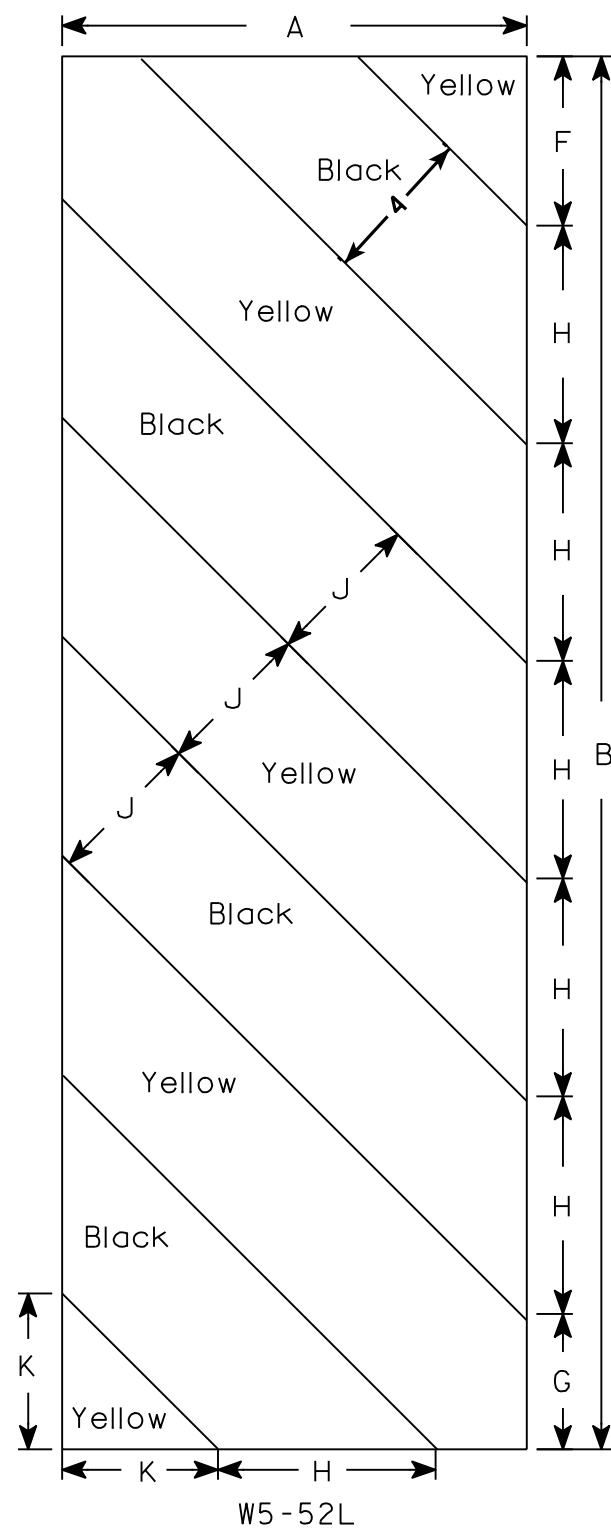
HWY:

COUNTY:

SHEET NO:

E





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.

[illegible]

STANDARD SIGN  
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch  
for State Traffic Engineer  
DATE 5/29/12 PLATE NO. W5-52.9

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

PLOT TIME: 10:24:47 PM

PLOT DATE: 6/18/2014

FILE NAME : S:\AE\B\Buff\c\241545-final-dsgn\51-dr-drawings\20-Structure\bridge\06188g.dgn

STATE PROJECT NUMBER

7218-00-70

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL93  
INVENTORY RATING FACTOR: RF = 1.38  
OPERATING RATING FACTOR: RF = 1.79  
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS  
STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 PSF  
INVENTORY AND OPERATING RATINGS DO NOT INCLUDE FUTURE WEARING SURFACE.

ULTIMATE DESIGN STRESSES:

CONCRETE MASONRY - SLAB  
- ALL OTHER (GRADE A) f'c = 4,000 psi  
f'c = 3,500 psi  
HIGH STRENGTH BAR STEEL REINFORCEMENT  
AASHTO GRADE 60 fy = 60,000 psi

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON CAST-IN-PLACE 10 3/4" x 0.219" PILING WITH A REQUIRED DRIVING RESISTANCE OF 80 TONS\* PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED 50 FEET LONG AT EACH 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.

HYDRAULIC DATA

100 YEAR FREQUENCY  
Q100 1400 CFS  
Q100 THRU BRIDGE 1400 CFS  
VELOCITY 7.42 FPS  
HIGH WATER EL 849.27 FT  
WATERWAY AREA 177 SQ FT  
DRAINAGE AREA 7.8 SQ MI

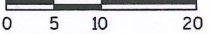
TRAFFIC DATA

ADT (2015) = 165  
ADT (2035) = 220  
DHV = 22  
D = 50 %  
T = 10 %  
DESIGN SPEED = 55 MPH

2 YEAR FREQUENCY

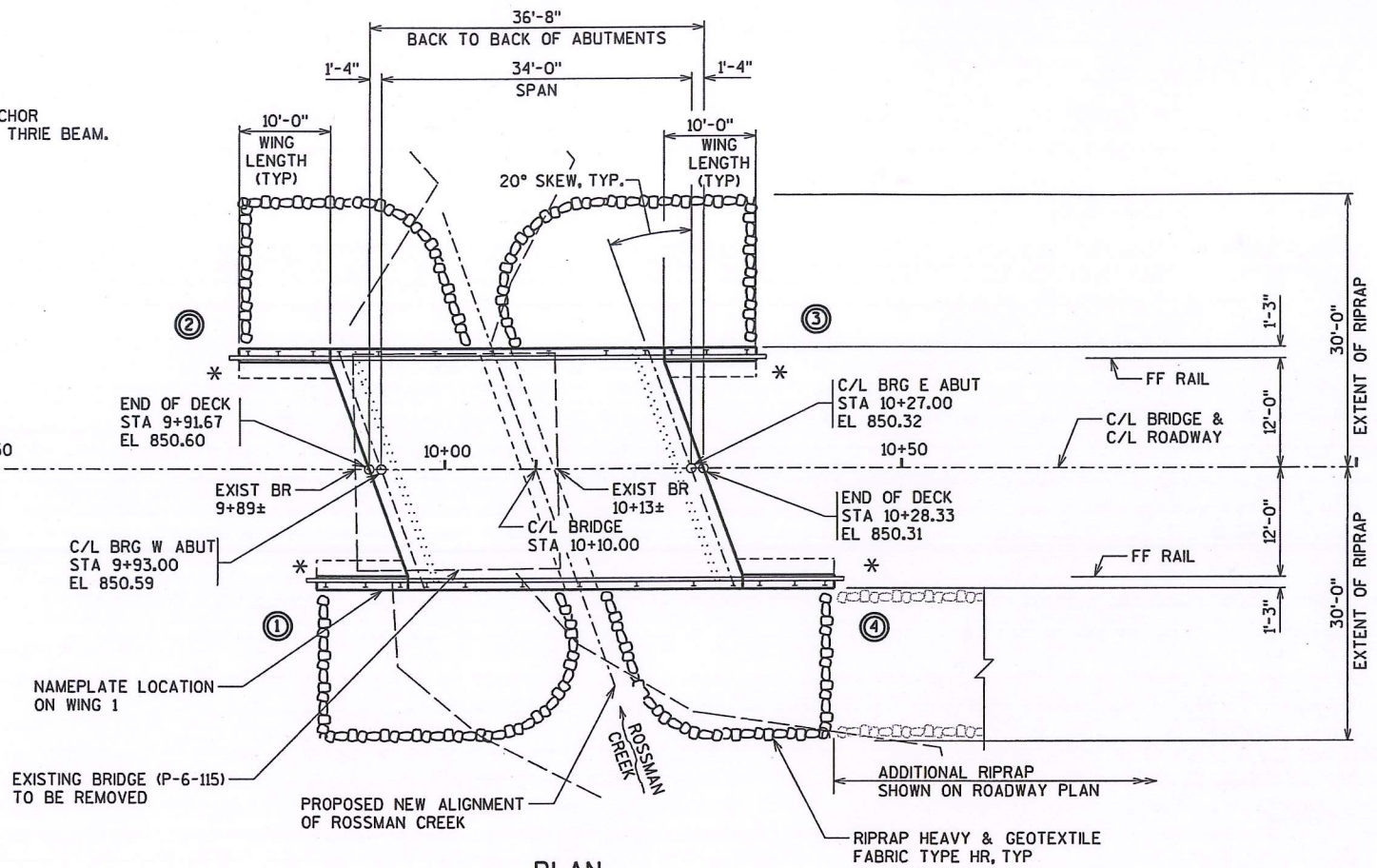
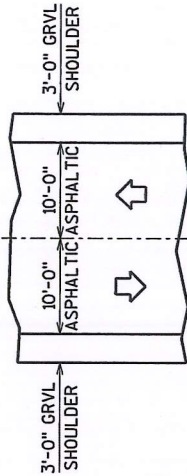
Q2 463 CFS  
HIGH WATER EL 845.17 FT

SCOUR CODE 8



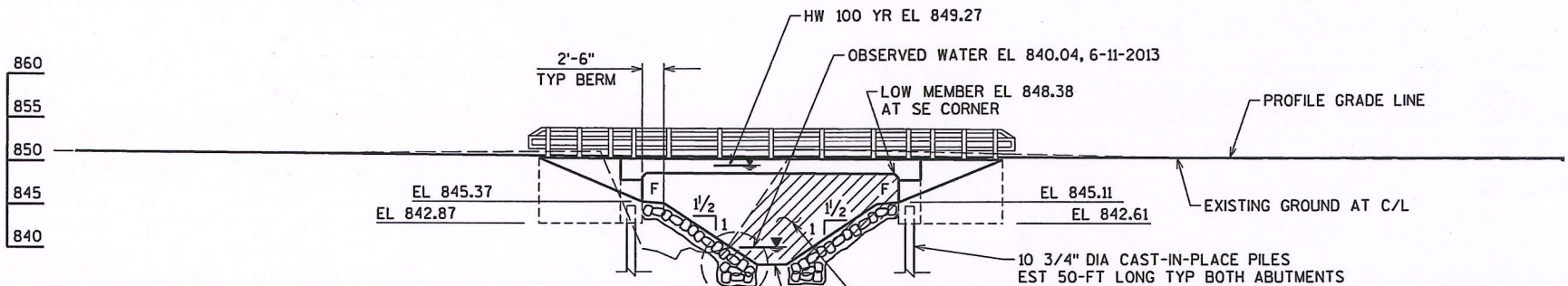
⊙ INDICATES WING.

\* LOCATION OF ANCHOR ASSEMBLIES FOR THREE BEAM.



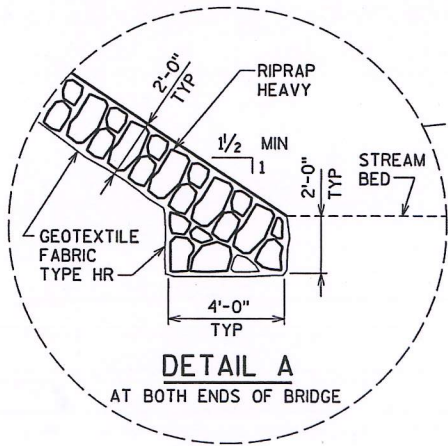
PLAN

SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB



ELEVATION

LOOKING NORMAL TO C/L SUBSTRUCTURES



DETAIL A  
AT BOTH ENDS OF BRIDGE

BENCHMARK (DATUM = NAVD 88)

NO	STATION	DESCRIPTION	ELEV
1	8+17.36 49.39' RT	FIRST FLOOR DOOR TO BARN	856.340
2	13+90.19 33.17' RT	RR SPK IN 16" TREE	854.503

LIST OF DRAWINGS

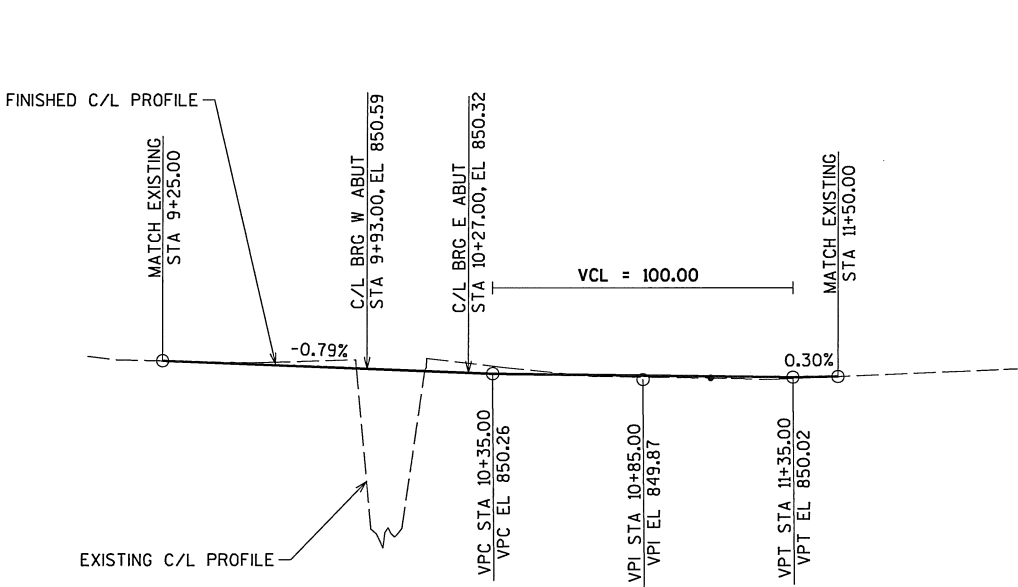
- 1 GENERAL PLAN
- 2 CROSS SECTION AND QUANTITIES
- 3 SUBSURFACE EXPLORATION
- 4-5 WEST & EAST ABUTMENT DETAILS
- 6 SUPERSTRUCTURE DETAILS
- 7 TUBULAR STEEL RAILING TYPE M



SEH CONTACT: CHRIS BLUM, PE, 608.620.6192  
WISDOT BRIDGE OFFICE CONTACT: BILL DREHER, PE, 608.266.8489

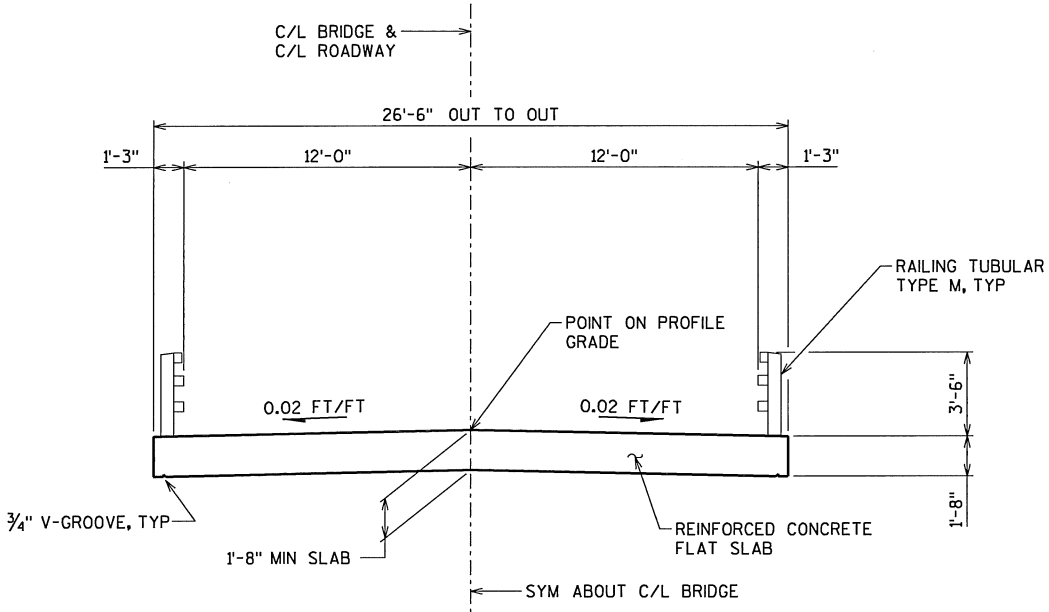
NO.	DATE	REVISION	BY
SHORT ELLIOTT HENDRICKSON INC.			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED			08/05/14
CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-6-188			
SEGERSTROM ROAD OVER ROSSMAN CREEK			
COUNTY	BUFFALO	TOWN/CITY/VILLAGE	NAPLES
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	CJB	DESIGN CK'D. NCT	PLANS CK'D. CJB
GENERAL PLAN			SHEET 1 OF 7





STA 10+00  
 REMOVE EXISTING STRUCTURE (P-6-115)  
 A SINGLE-SPAN STEEL GIRDER, TIMBER DECK WITH TIMBER PILE BRIDGE  
 20-FT CLEAR SPAN LONG x 26' CLEAR WIDTH.

PROFILE GRADE LINE



CROSS SECTION THRU BRIDGE  
 (LOOKING EAST)

GENERAL NOTES

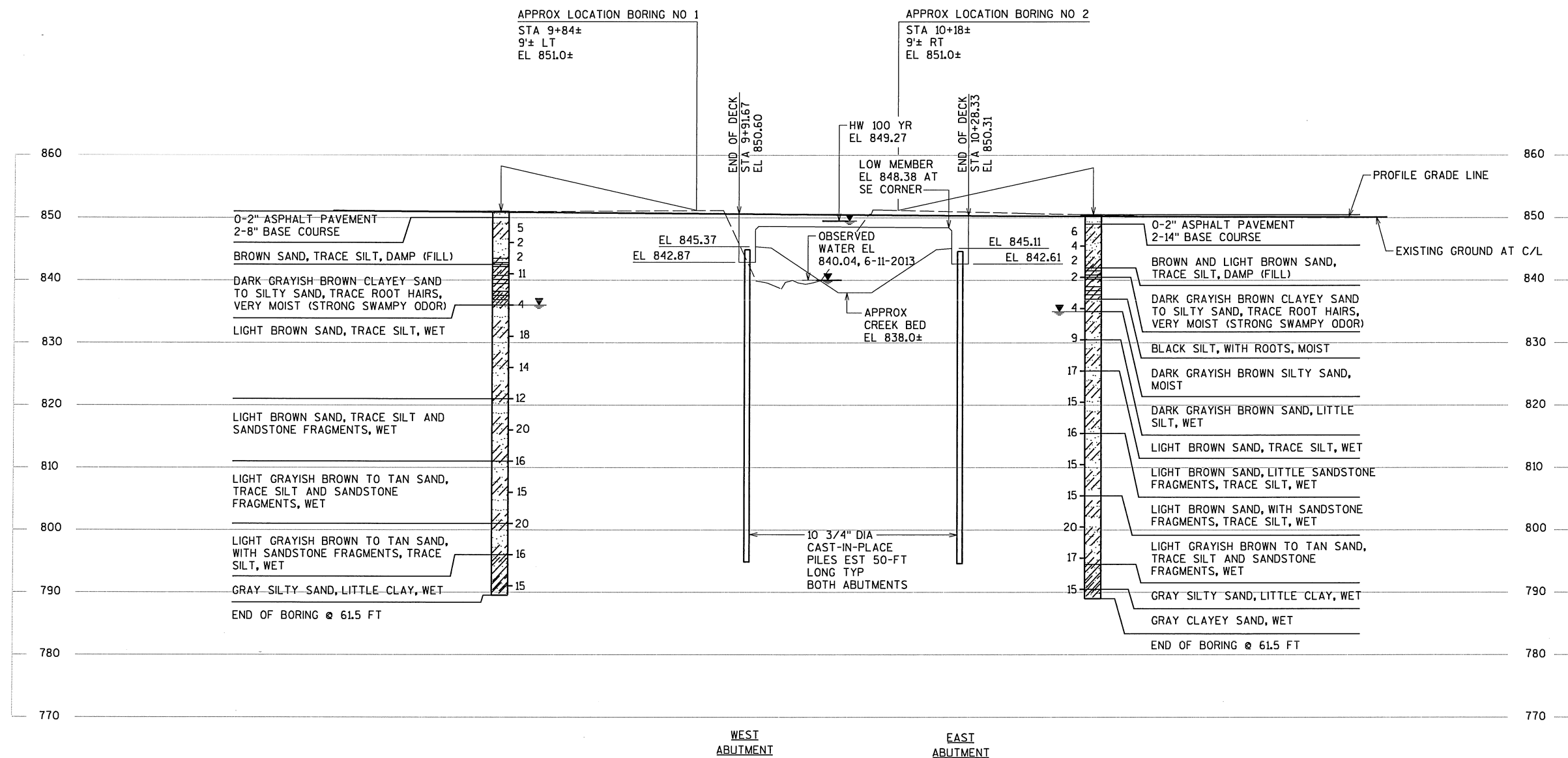
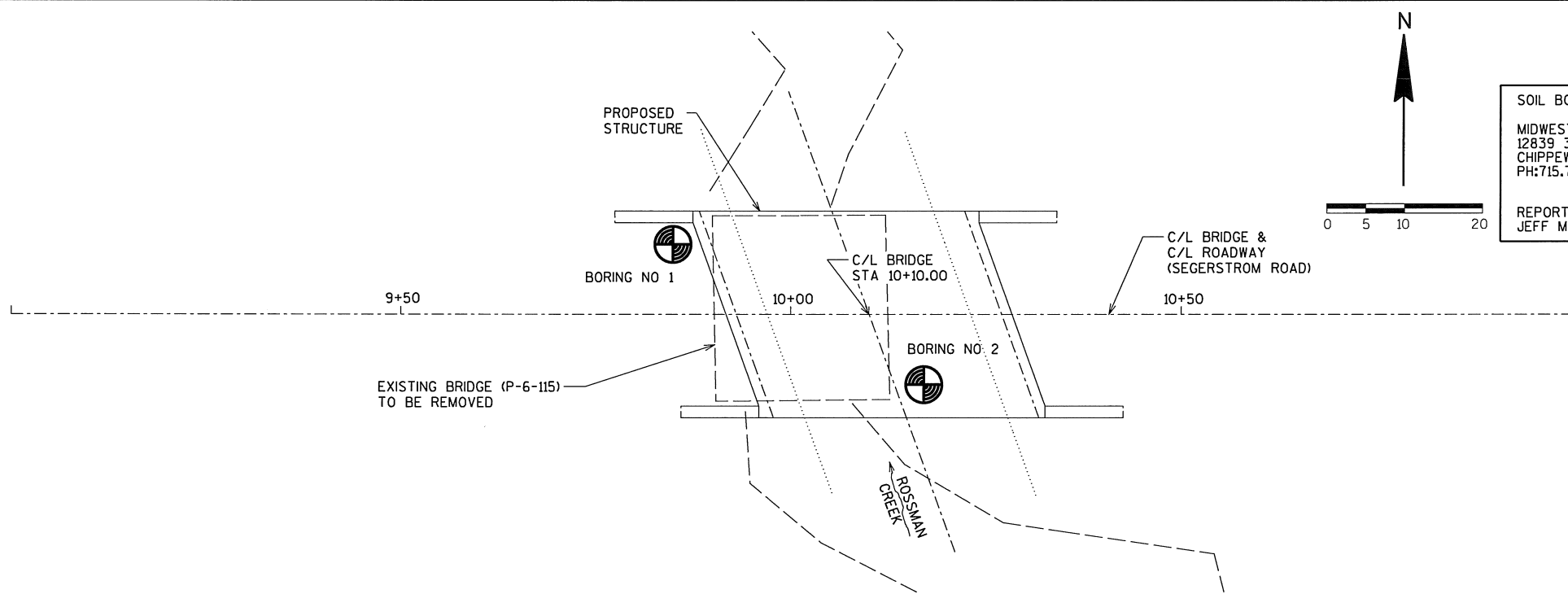
- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- SEE ROADWAY PLANS FOR EXISTING UTILITY LOCATIONS.
- SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE FABRIC TO THE EXTENT SHOWN ON THE GENERAL PLAN SHEET AND IN THE ABUTMENTS DETAILS.
- SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE).
- THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.
- AT ABUTMENTS, ALL SPACES EXCAVATED AND NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL UNLESS OTHERWISE NOTED.
- FILLER SHALL CONFORM TO THE REQUIREMENTS OF AASHTO DESIGNATION :M153 TYPE 1, 2, OR 3 OR AASHTO DESIGNATION :M213.
- COAT WITH "PROTECTIVE SURFACE TREATMENT" PER THE STANDARD SPECIFICATIONS AND THE SUPERSTRUCTURE DETAILS SHEET.
- FOR EXISTING STRUCTURE SEE PROFILE GRADE LINE THIS SHEET.

TOTAL ESTIMATED QUANTITIES - B-6-188

BID ITEM NUMBER	BID ITEMS	UNIT	WEST ABUT	EAST ABUT	SUPER	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 10+00	LS	-	-	-	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-6-188	LS	-	-	-	1
210.0100	BACKFILL STRUCTURE	CY	72	72	-	144
502.0100	CONCRETE MASONRY BRIDGES	CY	28	28	65	121
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-	-	130	130
505.0405	BAR STEEL REINFORCEMENT HS BRIDGES	LB	1,705	1,705	-	3,410
505.0605	BAR STEEL REINFORCEMENT HS COATED BRIDGES	LB	1,530	1,530	14,120	17,180
513.4060	RAILING TUBULAR TYPE M B-6-188	LS	-	-	-	1
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	9	-	18
550.2102	PILING CIP CONCRETE 10 3/4 x 0.219-INCH	LF	400	400	-	800
606.0300	RIPRAP HEAVY	CY	125	125	-	250
① 612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	30	30	-	60
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	50	50	-	100
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	230	230	-	460
	NON-BID ITEMS					
	FILLER	SIZE				1/2 & 3/4

① INCLUDES REINFORCED CONCRETE APRON ENDWALL AND RODENT SHIELD PER SDD REINFORCED CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-6-188			
DRAWN BY		DLF	PLANS CK'D. CJB
CROSS SECTION AND QUANTITIES			SHEET 2 OF 7

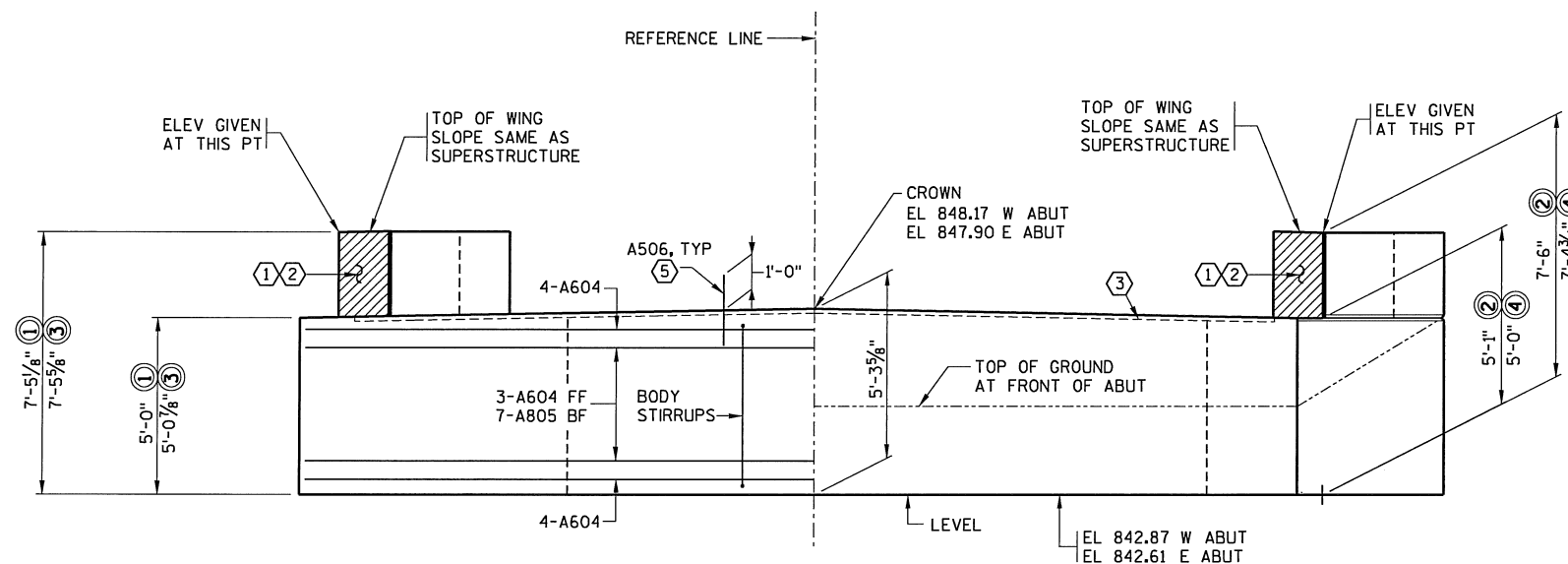


STATE PROJECT NUMBER			
<b>7218-00-70</b>			
<u>ABBREVIATIONS</u>			
F — FINE WS — WEATHERED		M — MEDIUM SO — SOUND	
<u>MATERIAL SYMBOLS</u>			
	TOPSOIL		SILT
	SAND		PEAT
	GRAVEL		CLAY
	SANDSTONE		LIMESTONE
	IGNEOUS ROCK		
<u>LEGEND OF PROBING</u>			
<u>LEGEND OF BORING</u>			
<p>UNLESS OTHERWISE SPECIFIED, 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.</p>			
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION			
<p>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.</p>			
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
<b>STRUCTURE B-6-188</b>			
DRAWN BY		DLF	PLANS CK'D. CJB
<b>SUBSURFACE EXPLORATION</b>			SHEET 3 OF 7

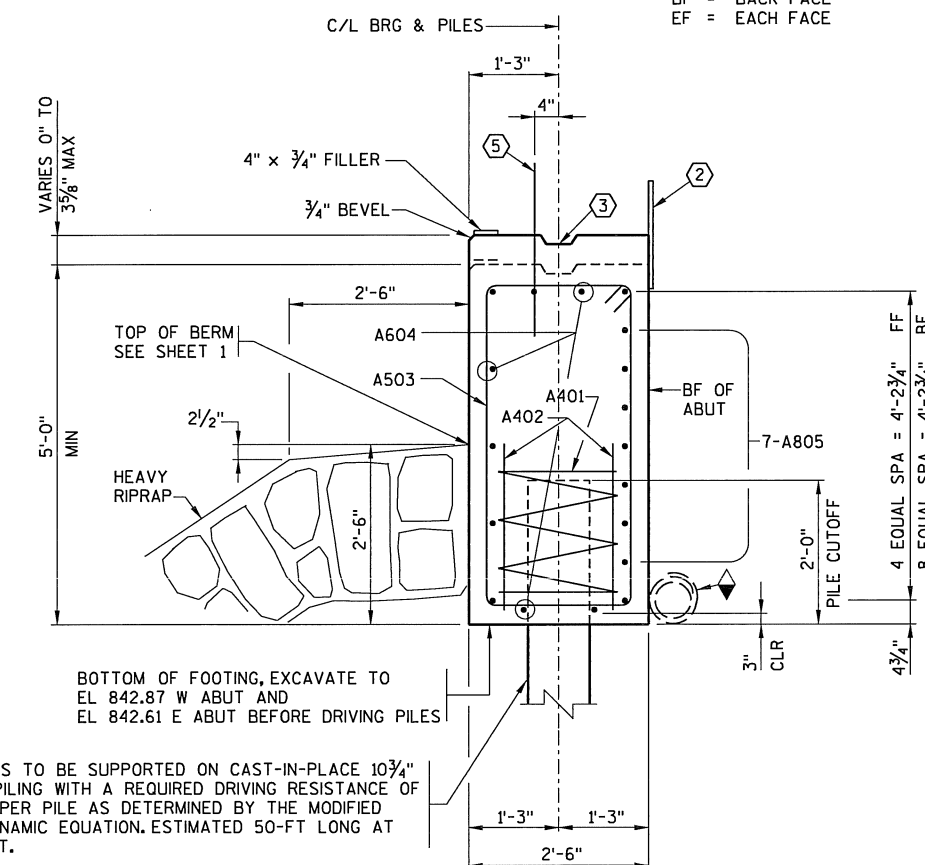
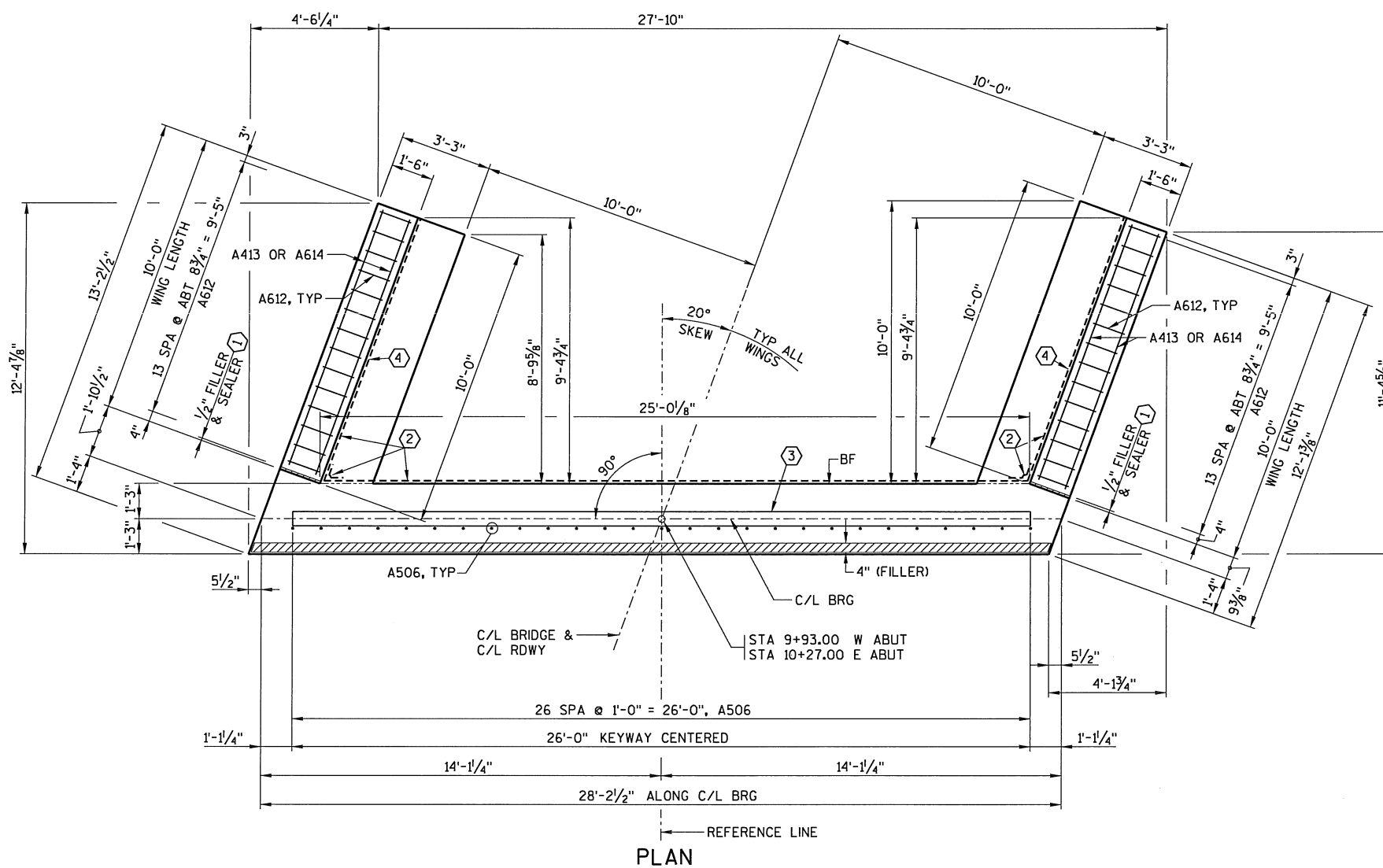
① SEAL ALL EXPOSED HORIZ. AND VERTICAL SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-ASPHALTIC JOINT SEALER, (1" DEEP AND HOLD 1/8" BELOW SURFACE). FILLER INCLUDED IN WING LENGTH.

- W ABUT = WEST ABUTMENT  
E ABUT = EAST ABUTMENT

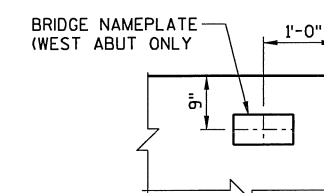
FF = FRONT FACE  
BF = BACK FACE  
EF = EACH FACE



FRONT ELEVATION



TYPICAL SECTION THRU BODY  
ALL HORIZ BARS TO BE A604 UNLESS OTHERWISE SHOWN OF NOTED



### NAMEPLATE LOCATION DETAIL

(ON WING 1 WEST ABUTMENT ONLY)

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-6-188			
		DRAWN BY DLF	PLANS CK'D. CJB
WEST AND EAST ABUTMENT DETAILS		SHEET 4 OF 7	

FF = FRONT FACE  
BF = BACK FACE  
EF = EACH FACE

NOTE: THE FIRST DIGIT OF THE BAR MARK SIGNIFIES THE ENGLISH BAR DIAMETER SIZE.

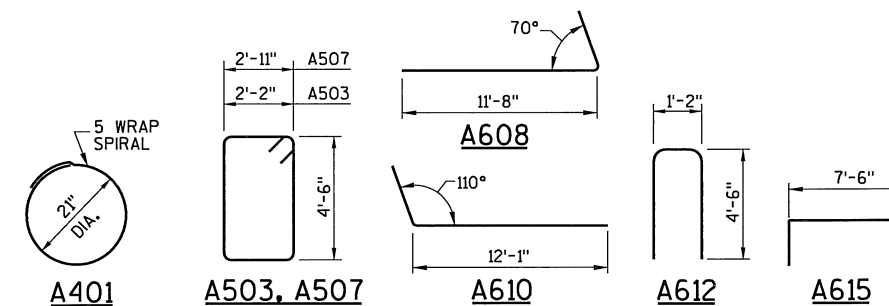
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

\* NO. REQ'D. IS FOR 2 ABUTMENTS. DIVIDE BY 2 FOR EACH ABUTMENT.

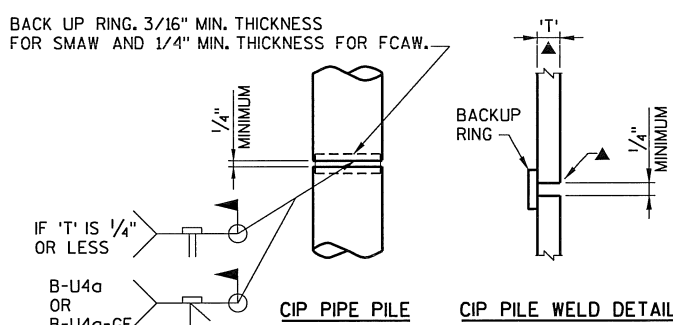
BILL OF BARS				BOTH ABUTMENTS		
BAR MARK	COAT	NO. * REQ'D.	LENGTH (FT-IN)	BAR SERIES	BENT	LOCATION
A401		16	28 - 0		X	BODY AT PILES
A402		32	2 - 3			BODY AT PILES
A503		76	13 - 11		X	BODY STIRRUPS
A604		22	27 - 10			BODY HORIZ
A805		14	27 - 10			BODY HORIZ BF
A506	X	54	2 - 0			BODY DOWELS
A507	X	44	15 - 5		X	WING STIRRUPS
A608	X	16	13 - 2		X	WING HORIZ BF 1 & 3
A509	X	12	12 - 8			WING HORIZ FF 1 & 3
A610	X	16	13 - 7		X	WING HORIZ BF 2 & 4
A511	X	12	11 - 10			WING HORIZ FF 2 & 4
A612	X	56	9 - 10		X	WING VERT
A413	X	20	9 - 7			WING HORIZ EF
A614	X	8	9 - 7			WING HORIZ EF TOP
A615	X	16	9 - 0		X	WING AT RAIL POST

ABUTMENT NOTES

SEE ABUTMENT NOTES ON SHEET 4 ( 1 4 ).



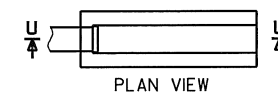
BACK UP RING. 3/16" MIN. THICKNESS  
FOR SMAW AND 1/4" MIN. THICKNESS FOR FCAW.



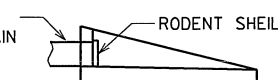
▲ IF 'T' > 1/4" USE SINGLE BEVEL  
GROOVE WELD B-U4g OR B-U4g-GF

### PILE SPLICE DETAIL

NOTE:  
SEE S.D.D.8F6: REINFORCED  
CONCRETE APRON ENDWALL  
FOR PIPE UNDERDRAIN.



PLAN VIEW



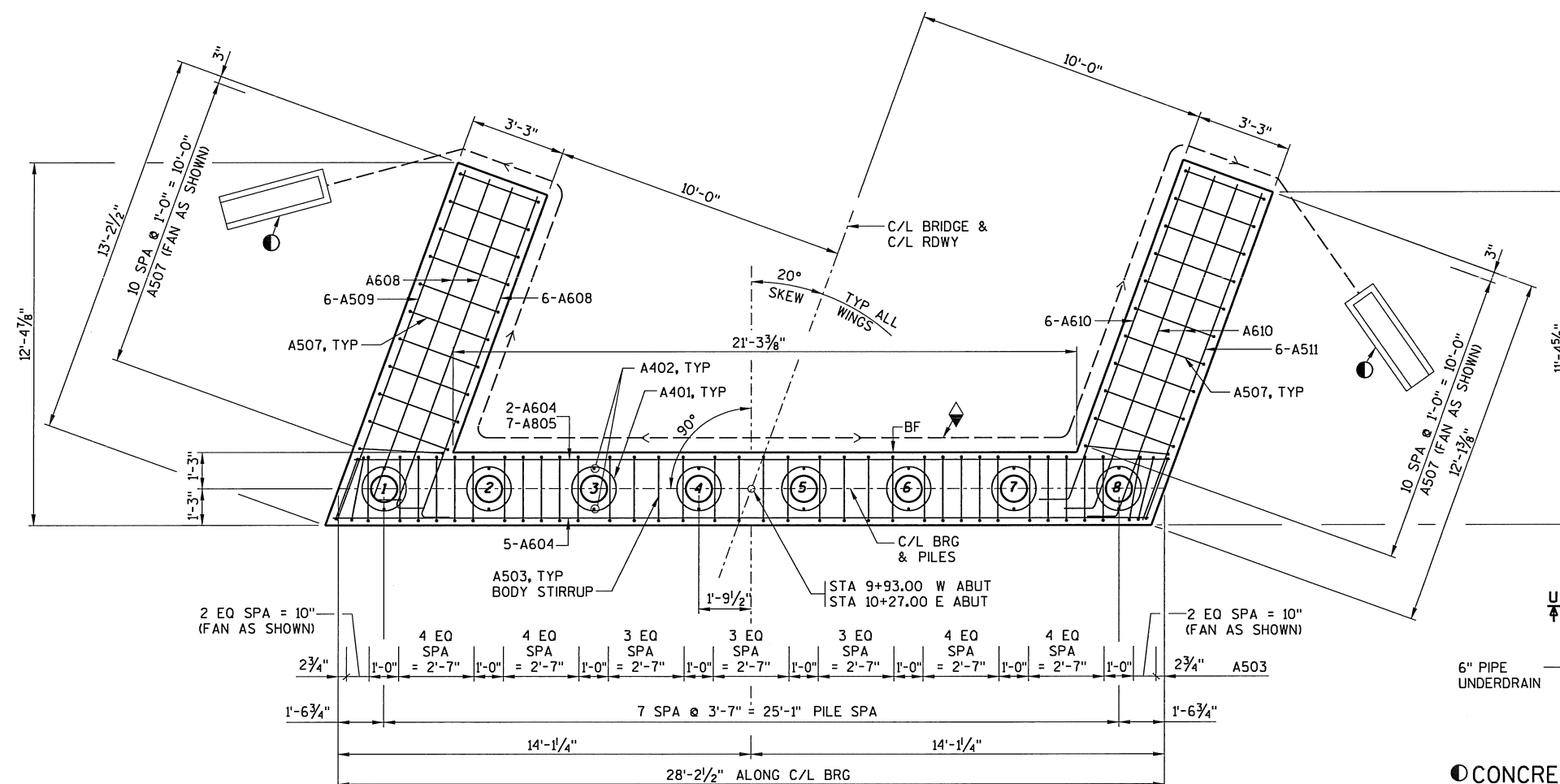
SECTION U-



END VIEW

● CONCRETE APRON ENDWALL FOR UNDERDRAIN

ATTACH RODENT SHIELD PER SDD REINFORCED  
CONCRETE APRON ENDWALL FOR PIPE UNDERDRAIN.  
COST OF CONCRETE APRON ENDWALL AND RODENT  
SHIELD INCIDENTAL TO "PIPE UNDERDRAIN UNPERFORATED".

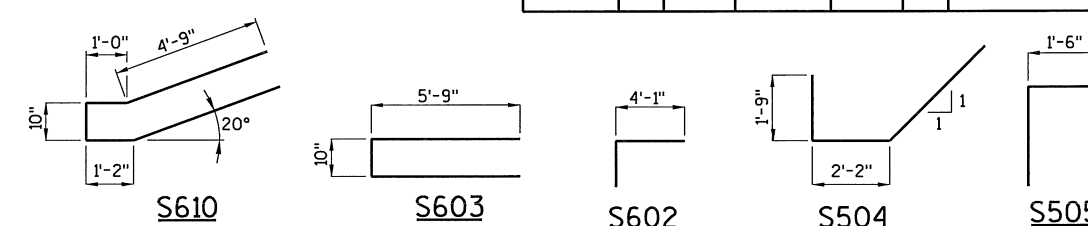


### FOOTING LAYOUT

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-6-188			
DRAWN BY		DLF	PLANS CK'D. CJB
WEST AND EAST ABUTMENT DETAILS			SHEET 5 OF 7

DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT.

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE VERTICAL ROADWAY PROFILE OR ALLOWANCE FOR FORM SETTLEMENT. DEAD LOAD DEFLECTION ONLY EQUALS APPROXIMATELY 1/3 OF CAMBER VALUES SHOWN.



FINAL TOP OF DECK ELEVATIONS											
	WEST ABUT	.1	.2	.3	.4	.5	.6	.7	.8	.9	EAST ABUT
NORTH EDGE OF DECK	850.36	850.34	850.31	850.28	850.26	850.23	850.20	850.18	850.15	850.12	850.10
C/L	850.59	850.56	850.54	850.51	850.48	850.46	850.43	850.40	850.38	850.35	850.32
SOUTH EDGE OF DECK	850.29	850.26	850.24	850.21	850.18	850.15	850.13	850.10	850.07	850.05	850.02

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

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

☒ COAT WITH "PROTECTIVE SURFACE TREATMENT"  
PER THE STANDARD SPECIFICATIONS.

NO.	DATE	REVISION	BY

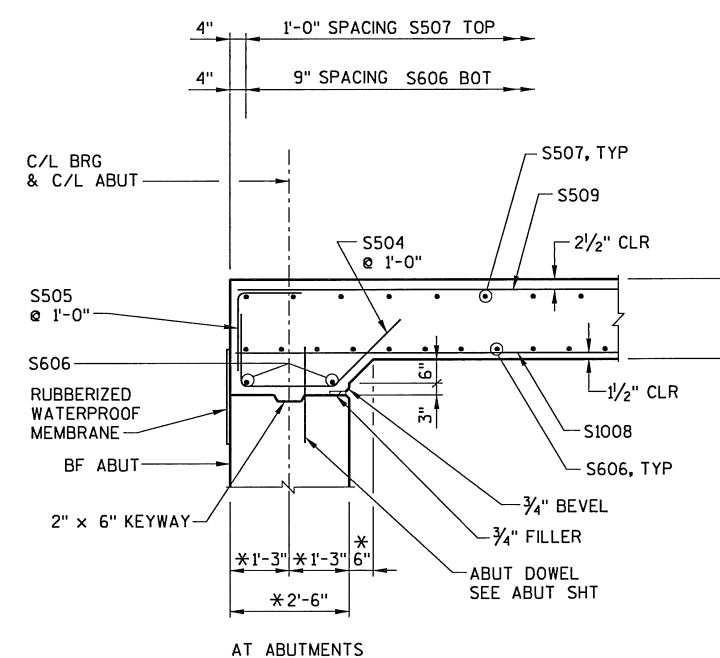
STRUCTURE B-6-188

## SUPERSTRUCTURE DETAILS

SHEET 6 OF 7

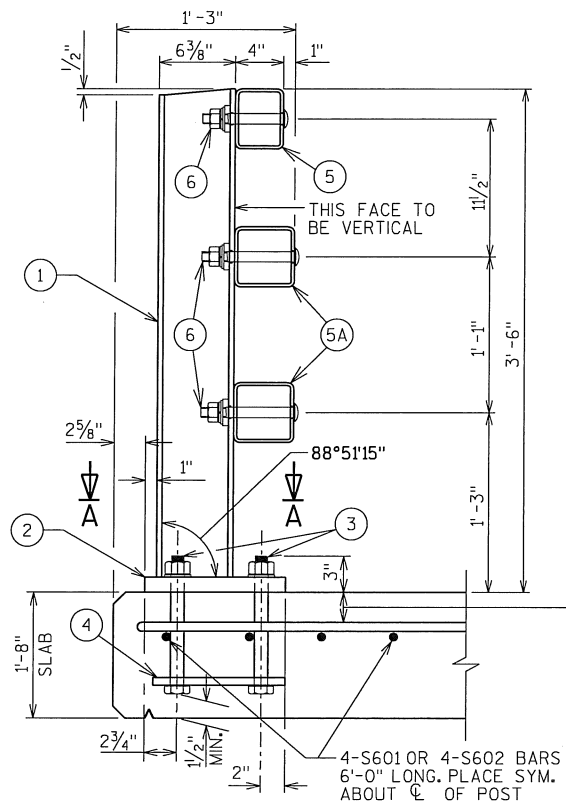


———— INDICATES TOP BAR STEEL REINFORCEMENT  
 - - - - - INDICATES BOTTOM BAR STEEL REINFORCEMENT

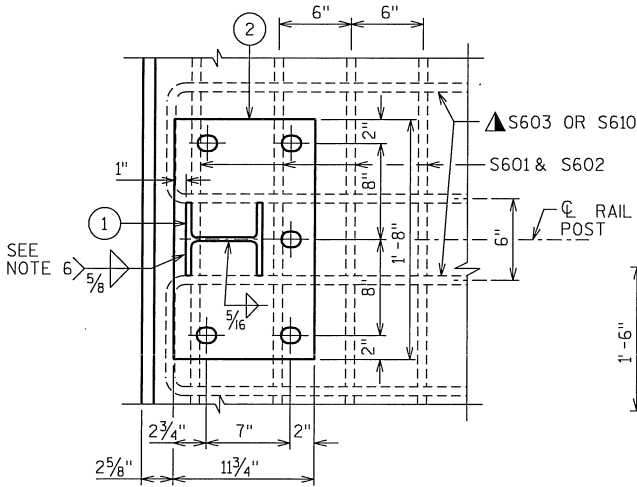


PARTIAL LONGITUDINAL SECTION

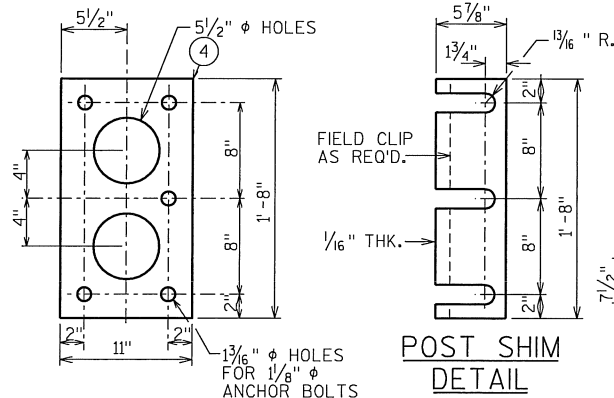
\* DIMENSION IS TAKEN NORMAL  
TO C/L SUBSTRUCTURE UNITS.



SECTION THRU RAILING ON DECK

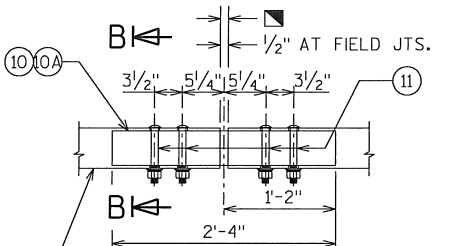


SECTION A-A

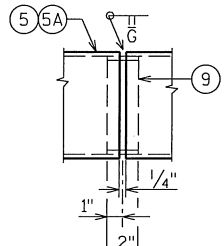


ANCHOR PLATE

AT RAIL TO DECK CONNECTION

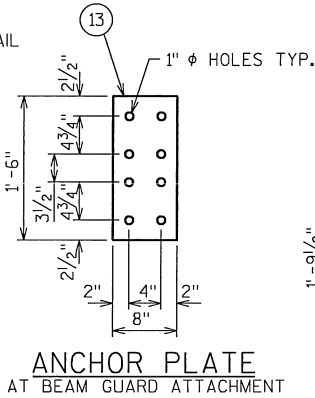


FIELD ERECTION JOINT DETAIL

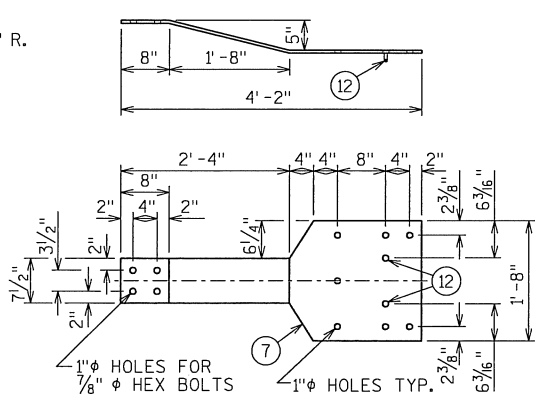


SHOP RAIL SPLICE DETAIL

LOCATION MUST BE SHOWN ON SHOP DRAWINGS

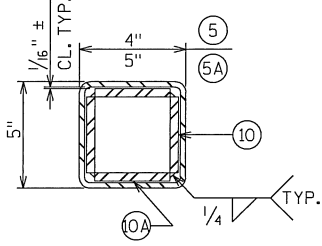


ANCHOR PLATE  
AT BEAM GUARD ATTACHMENT

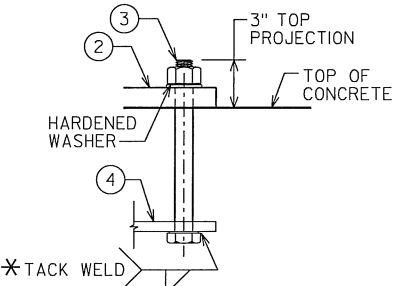


BACK-UP PLATE DETAIL

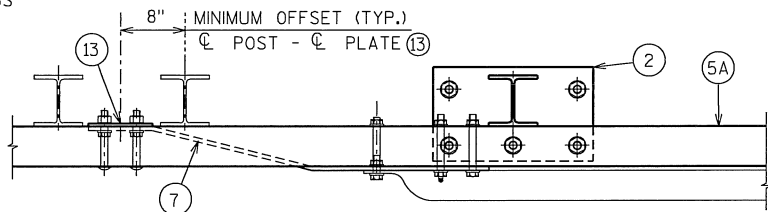
AT BEAM GUARD ATTACHMENT



SECTION B-B

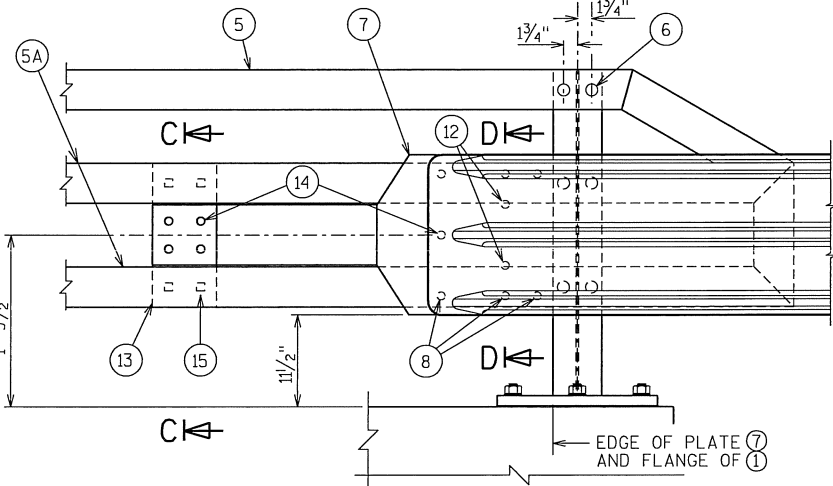


ANCHOR BOLTS



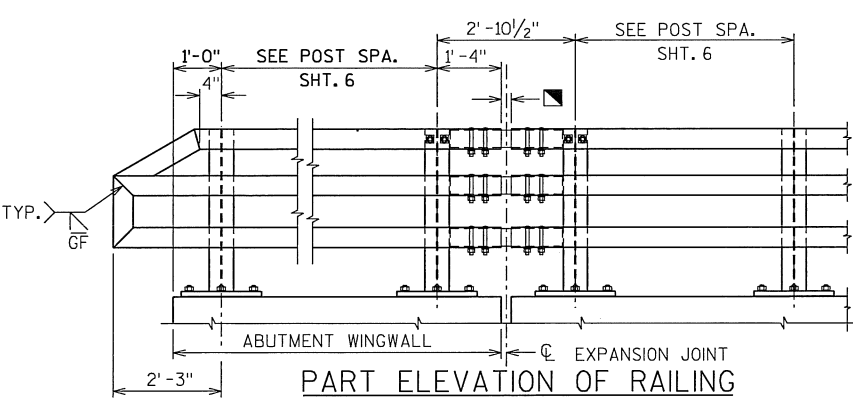
TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT

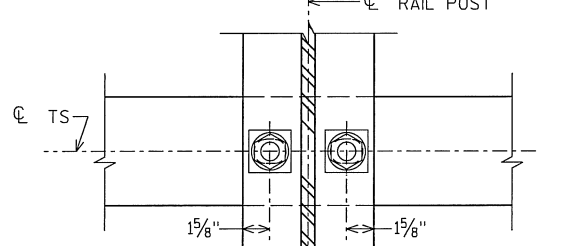


DETAIL AT END POST

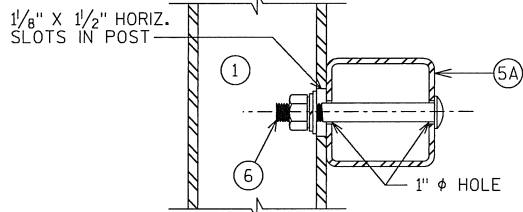
THRIE BEAM RAIL ATTACHMENT



PART ELEVATION OF RAILING



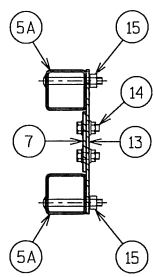
SECTION THRU POST WEB



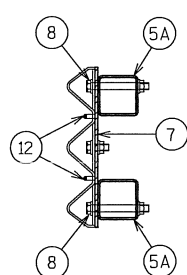
SECTION THRU RAIL

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

TYPICAL RAIL TO POST CONNECTIONS



SECTION C-C



SECTION D-D

LEGEND

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

GENERAL NOTES

- BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-6-188" WHICH INCLUDES ALL ITEMS SHOWN.
- RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY = 50 KSI. ANCHOR PLATES, AND SPLICE TUBE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 36.
- THE NUT SECURING THE POST BASE PLATE TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN.
- RAILS SHALL BE CONTINUOUS OVER A MINIMUM OF THREE (3) POSTS WITHOUT SPLICES WHERE POSSIBLE. RAILS SHALL BE SPLICED IN A PANEL OVER EXPANSION JOINTS.
- ENDS OF TUBE SECTIONS SHALL BE SAWED. GRIND SMOOTH EXPOSED EDGES. ALL CUT ENDS SHALL BE TRUE AND SMOOTH.
- WELD IS THE SAME ON BOTH FLANGES. FLANGE WELD DOES NOT REQUIRE MAGNETIC PARTICLE TESTING.
- FILL BOLT SLOT OPENINGS IN POST SHIMS AND PLATE NO. 2 AND CAULK AROUND PERIMETER OF PLATE NO. 2 WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. STEEL POST SHIMS MAY BE USED UNDER POSTS WHERE REQ'D. FOR ALIGNMENT.
- POST BASE PLATES SHALL BE FLAT WITH ALL SURFACES SMOOTH AND FREE FROM WARP AND ALL EDGES SMOOTH, STRAIGHT AND VERTICAL. ALL PLATE CUTS SHALL BE MACHINE OR MACHINE FLAME CUT.
- ALL MATERIAL SHALL BE GALVANIZED AFTER FABRICATION. PRIOR TO GALVANIZING, ALL STEEL RAILING POSTS & STEEL TUBING SHALL BE GIVEN A NO. 6 BLAST CLEANING BY SSPC SPECIFICATIONS.
- WHEN PAINTING IS REQUIRED, ALL MATERIAL EXCEPT ANCHORAGE DETAIL (NO. 3 & 4) SHALL BE PAINTED OVER GALVANIZING WITH APPROVED TIE COAT AND TOP COAT.
- THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).
- PLACE FIRST BOTTOM LONGITUDINAL BAR CLEAR OF DRIP GROOVE.

▲ 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 CONSTRUCTIBILITY.

■ RDWY. OPENING TO BE 1/2" FOR ABUTMENT.

SEE SHEET 6 FOR RAIL POST SPACING

STATE PROJECT NUMBER

7218-00-70

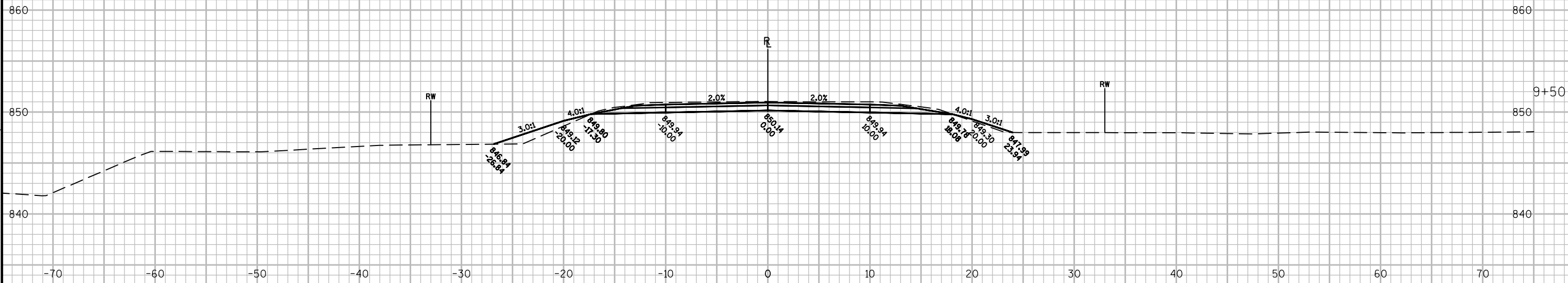
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-6-188			
DRAWN BY DLF		PLANS CKD. CJB	
TUBULAR STEEL RAILING TYPE M			SHEET 7 OF 7



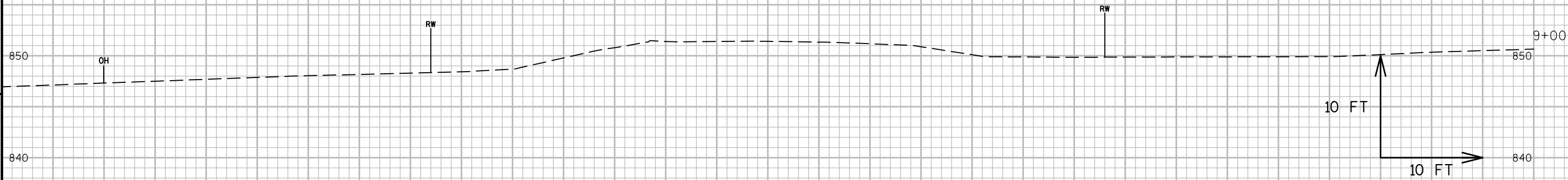
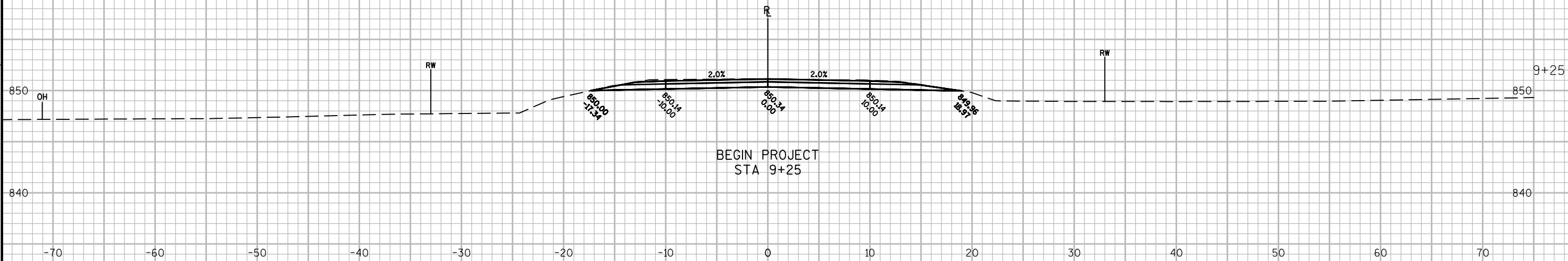
Station	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate	
		Cut	Fill	Cut Note 1	Fill Note 2	Cut 1.00 Note 1	Expanded Fill 1.30 Note 3		Note 4
9+24	0	0	0	0	0	0	0	0	
09+25	1	26	0	0	0	0	0	0	
09+50	25	30	3	26	1	26	2	25	
09+93	43	0	270	24	217	50	284	-234	
9+94	1	0	0	0	5	50	291	-241	
10+26	0	0	0	0	0	50	291	-241	
10+27	1	46	11	1	0	51	291	-240	
10+50	23	27	19	31	13	82	308	-226	
10+75	25	20	5	22	11	104	322	-218	
11+00	25	18	12	18	8	122	332	-211	
11+50	50	18	0	33	11	155	347	-192	
11+51	1	0	0	0	0	155	347	-192	
Notes: 1) Salvaged/Unusable Pavement Material is included in Cut. 2) Does not include Unusable Pavement Excavation volume. 3) Will be backfilled with Cut or Borrow. 4) Plus quantity indicates an excess of material. Minus indicates a shortage of material.									

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

STRUCTURE B-06-0188  
STA 10+10



BEGIN PROJECT  
STA 9+25



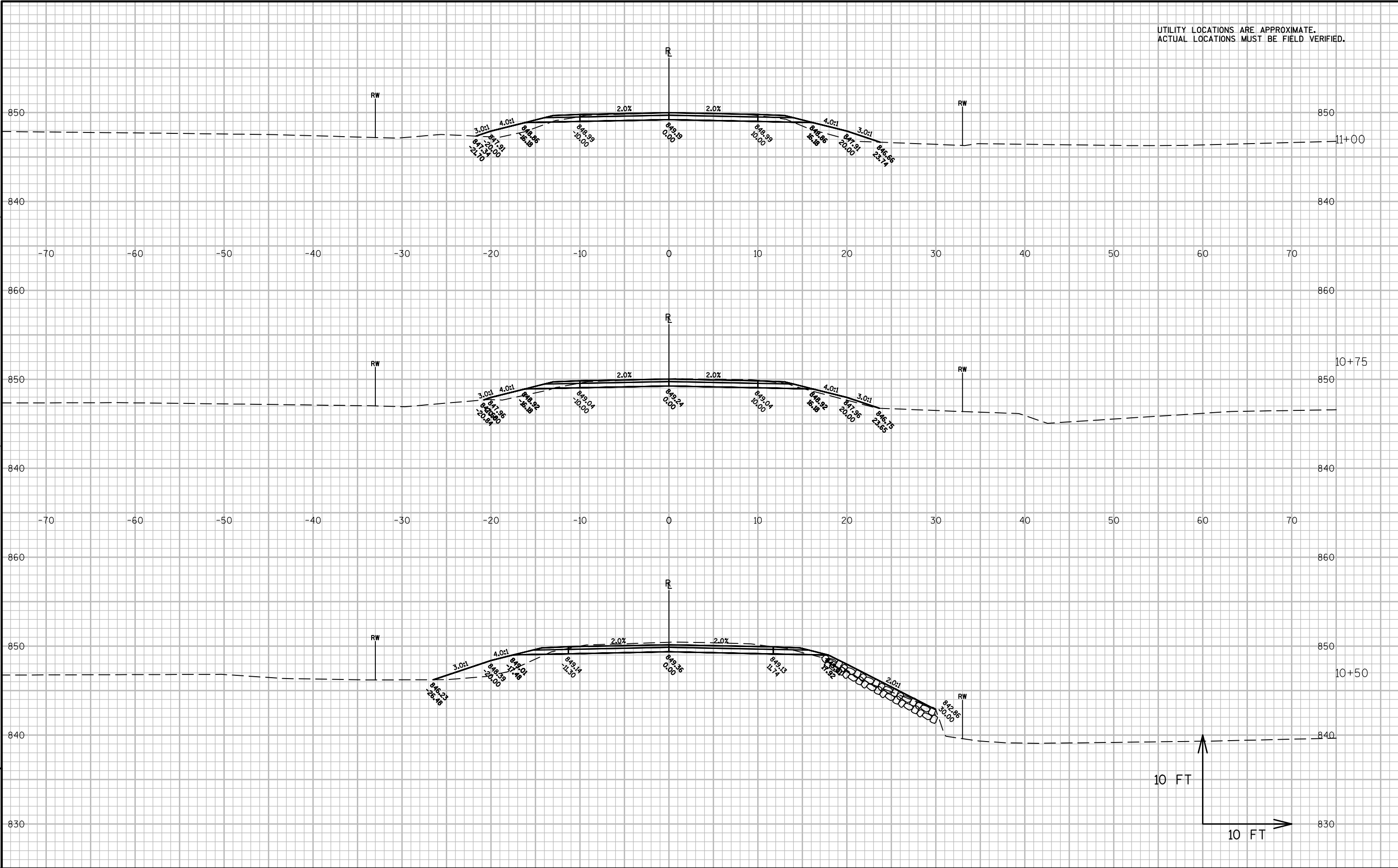
10 FT

10 FT

9

9

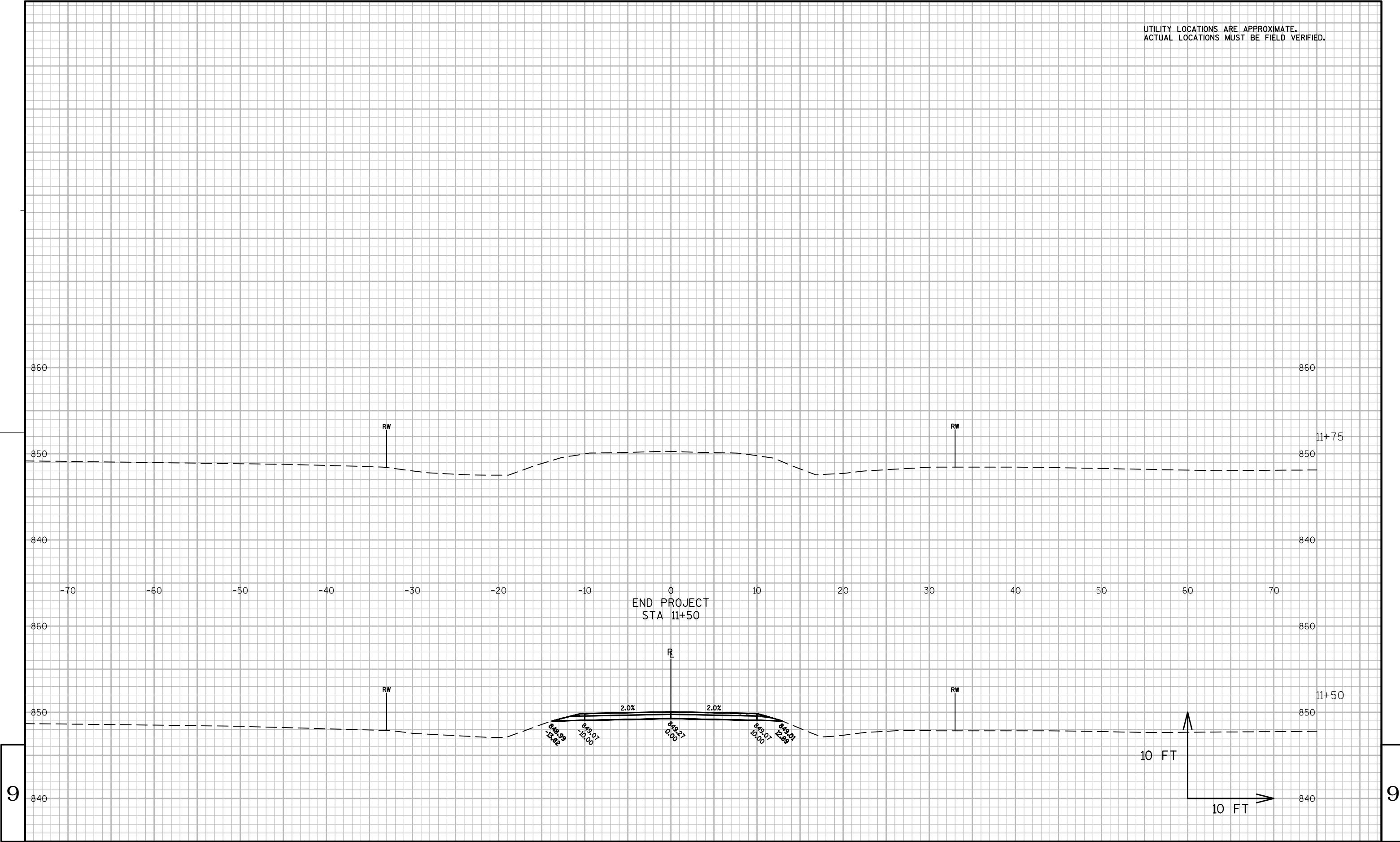
UTILITY LOCATIONS ARE APPROXIMATE.  
ACTUAL LOCATIONS MUST BE FIELD VERIFIED.



9

9

UTILITY LOCATIONS ARE APPROXIMATE.  
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## Notes



## ***Wisconsin Department of Transportation***

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