

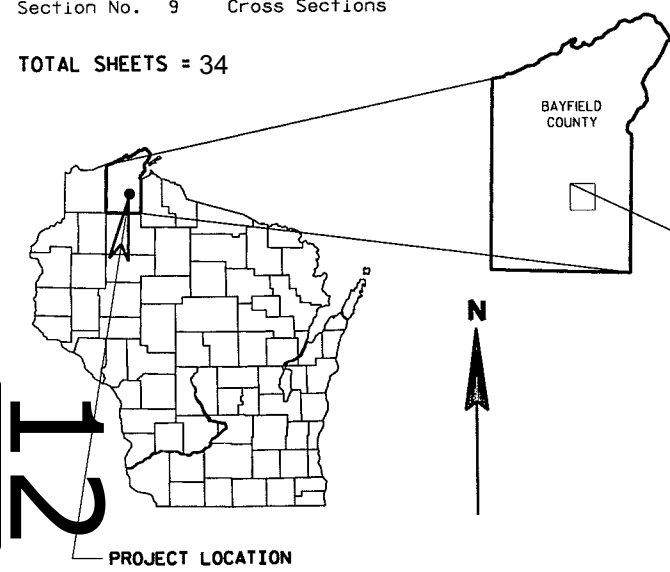
PROJECT ID: 8356-00-70
WITH: N/A

COUNTY: BAYFIELD

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections and Details (Includes Erosion Control Plans)
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plot
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.D.T. (2013)	=	<100
A.D.T. (2033)	=	<100
D.H.V.	=	10
D.	=	50/50
T.	=	5%
DESIGN SPEED	=	25 MPH
ESALS	=	N/A

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	
HIGH VOLTAGE	
MARSH AREA	
WOODED OR SHRUB AREA	

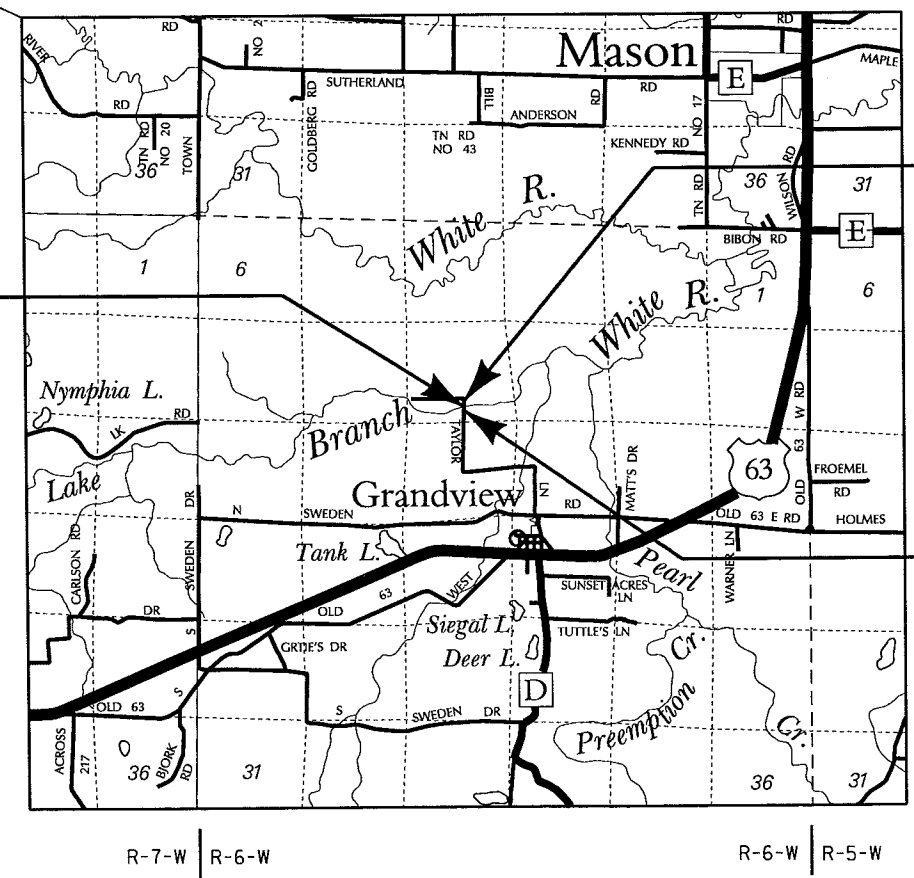
PROFILE

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

LAYOUT

SCALE	
OH	
E	
FO	
G	
SAN	
SS	
T	
W	
UT	
PP	
TP	

STRUCTURE B-04-96



TOTAL NET LENGTH OF CENTERLINE = 0.038 MI.

END PROJECT
STA. 11+00
Y = 384922.68
X = 757845.12

BEGIN PROJECT
STA. 9+00
Y = 384722.70
X = 757842.23

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, (WCCS) BAYFIELD COUNTY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
TOWN OF GRAND VIEW, TAYLOR LANE
(LONG LAKE BRANCH BRIDGE B-04-0096)
TOWN ROAD
BAYFIELD COUNTY

STATE PROJECT NUMBER
8356-00-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8356-00-70	WISC 2013427	1

ACCEPTED FOR
Town of Grand View
Date 5/13/13
Town Chairman

ORIGINAL PLANS PREPARED BY
AYRES ASSOCIATES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

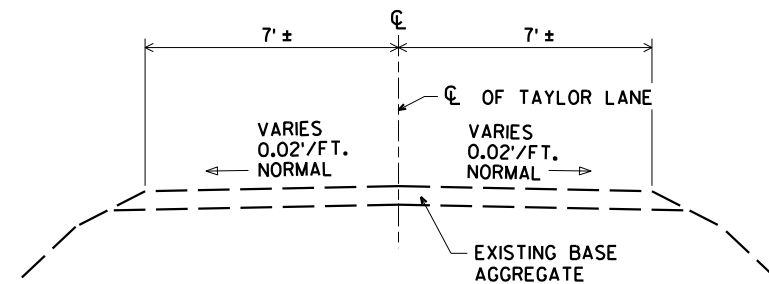
WISCONSIN PROFESSIONAL ENGINEER
DANIEL N. SYDOW
E-38363
WI

DATE 5/10/2013

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor AYRES ASSOCIATES INC
Designer AYRES ASSOCIATES INC
Management Consultant KJOHNSON ENGINEERS INC
C.O. Examiner

APPROVED FOR THE DEPARTMENT
DATE 5/30/13
Manager Consultant Signature



TYPICAL EXISTING SECTION

GENERAL NOTES

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

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

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

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCLUSIVE OF THE ROADBED, SHALL BE FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.

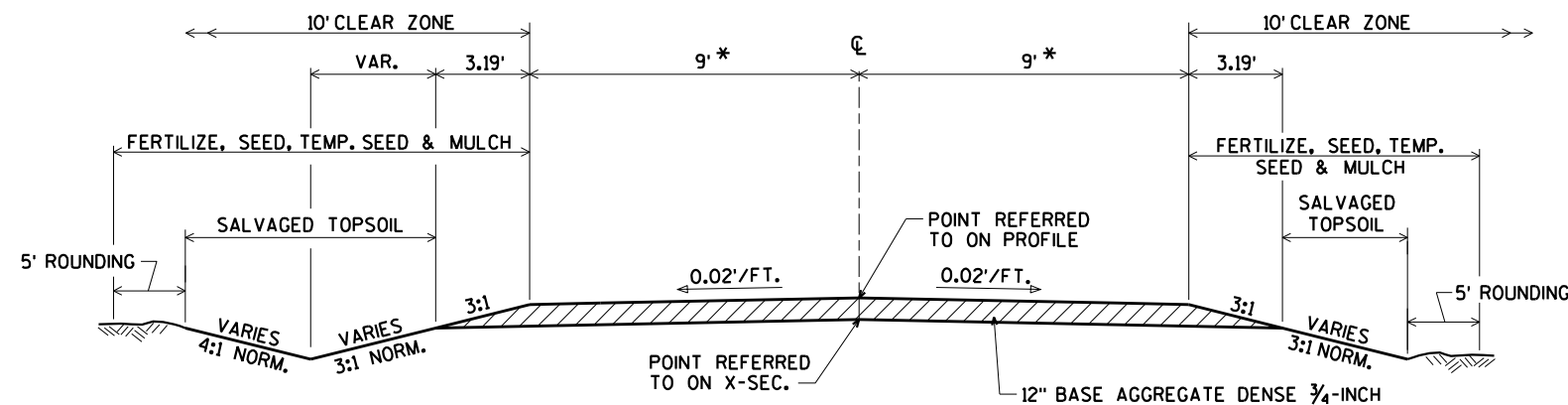
SEED MIXTURE NO. 20 AND SEEDING TEMPORARY SHALL BE USED IN THE PROJECT AND SHALL BE PLACED AS SHOWN IN THE PLANS AND/OR AS DIRECTED BY THE ENGINEER.

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

WETLANDS EXIST IN THE PROJECT AREA. NO DISTURBANCE ALLOWED OUTSIDE THE SLOPE INTERCEPTS.

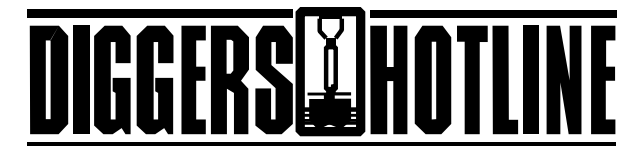
UTILITIES

NO KNOWN UTILITIES IN THE PROJECT AREA



TYPICAL FINISHED SECTION

* TAPER FROM 9 FEET WIDE AT THE ENDS OF THE BRIDGE TO 7 FEET WIDE AT THE ENDS OF THE PROJECT.



Toll Free (800) 242-8511
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

OWNER

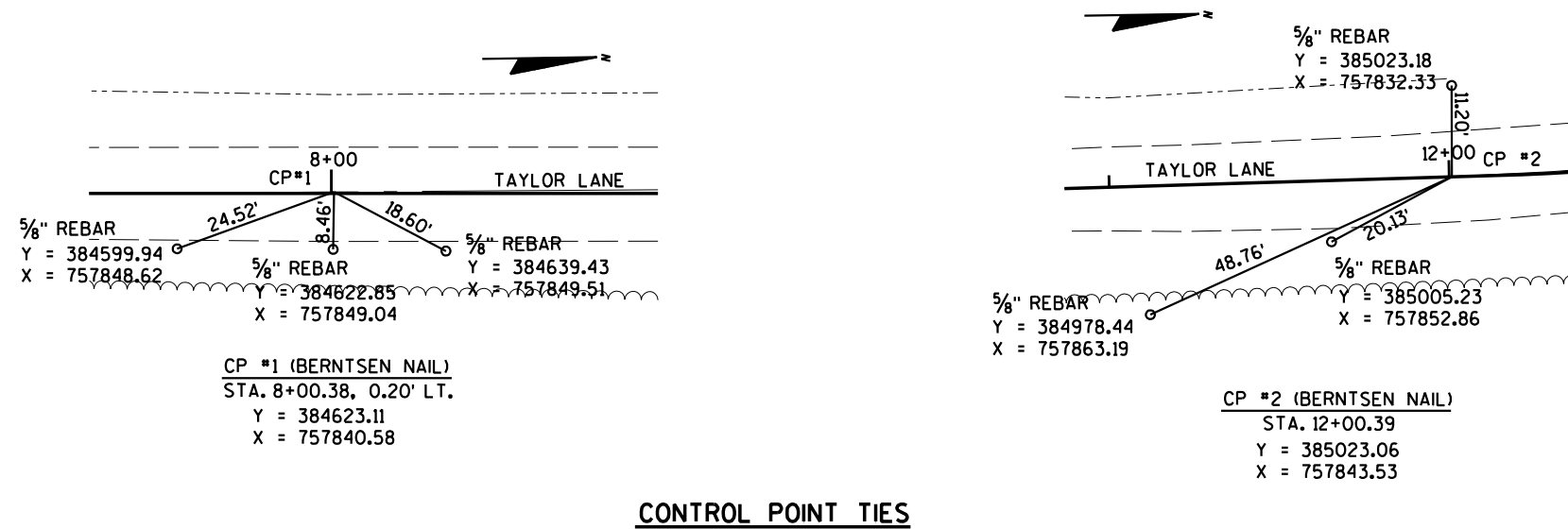
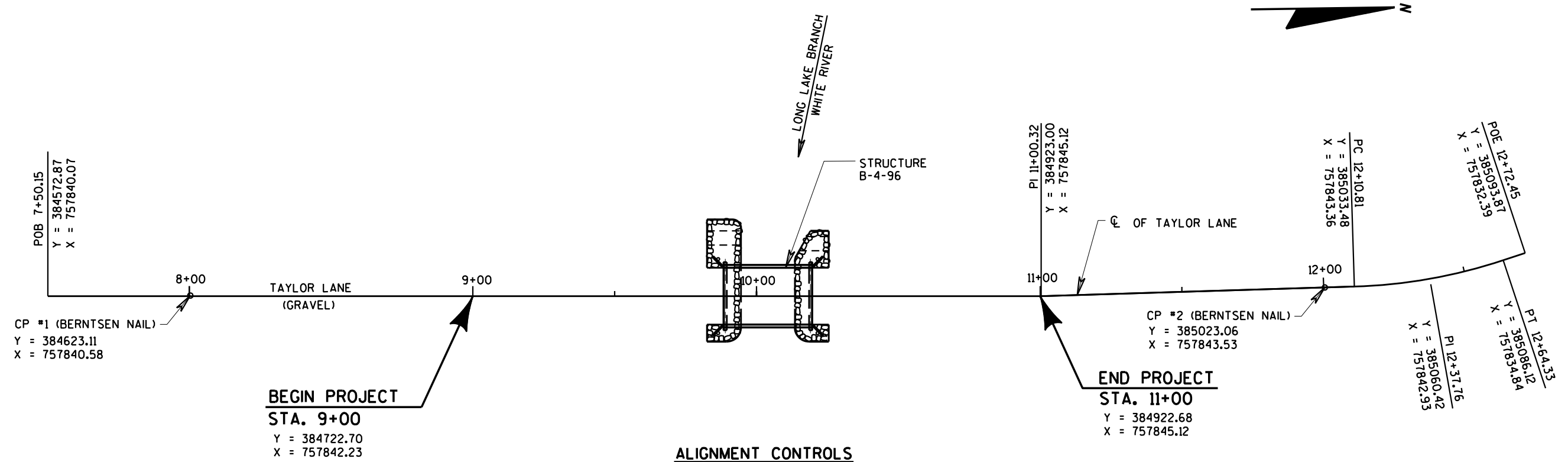
TOWN OF GRANDVIEW
P.O. BOX 96
GRANDVIEW, WI 54839
ATTN: HOWARD SIBBALD
715-763-3131
towngv@cheqnet.net

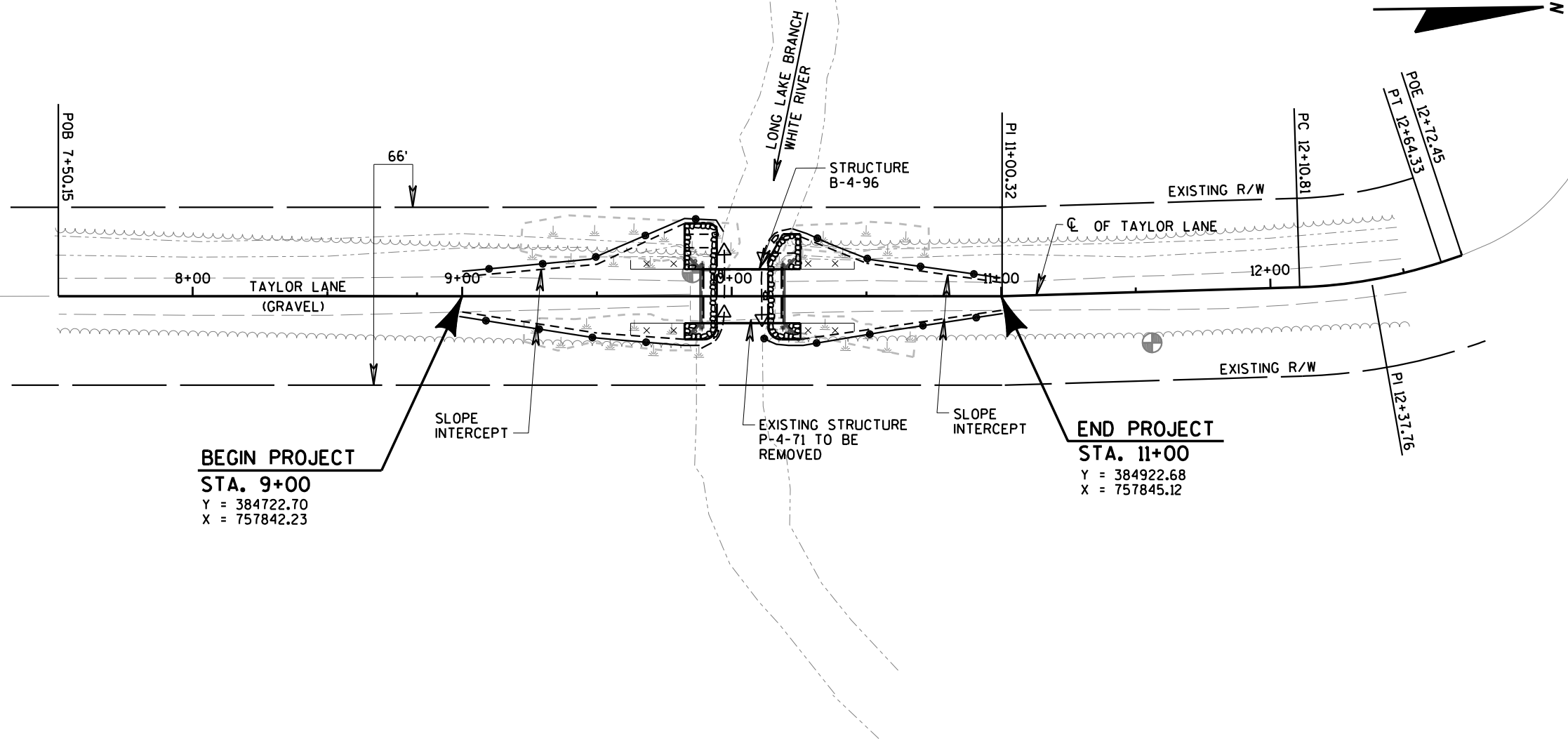
DESIGNER

AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: DANIEL N. SYDOW
715-834-3161
sydowd@AyresAssociates.com

**WISCONSIN DEPARTMENT OF
NATURAL RESOURCES CONTACT:**

SHAWN HASELEU
810 WEST MAPLE STREET
SPOONER, WI. 54801
715-635-4229
shawn.haseleu@wisconsin.gov





	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 = 0.304 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.095 ACRES

HIGH WATER 2 EL. 917.1

- LEGEND
- EROSION MAT CLASS II TYPE C
 - TEMPORARY DITCH CHECKS (UNDISTRIBUTED)
 - SILT FENCE
 - RIPRAP HEAVY
 - TURBIDITY BARRIERS

DATE 26JUN13		E S T I M A T E O F Q U A N T I T I E S			
LINE				8356-00-70	
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 ***P**	CY	75.000	75.000
0050	206.1000	EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-04-0096	LS	1.000	1.000
0060	206.5000	COFFERDAMS (STRUCTURE) 01. B-04-0096	LS	1.000	1.000
0070	210.0100	BACKFILL STRUCTURE	CY	110.000	110.000
0080	213.0100	FINISHING ROADWAY (PROJECT) 01. 8356-00-70	EACH	1.000	1.000
0090	305.0110	BASE AGGREGATE DENSE 3/4-INCH	TON	255.000	255.000
0100	455.0605	TACK COAT	GAL	3.000	3.000
0110	465.0105	ASPHALTIC SURFACE	TON	11.000	11.000
0120	506.0105	STRUCTURAL STEEL CARBON	LB	910.000	910.000
0130	507.0200	TREATED LUMBER AND TIMBER	MBM	14.000	14.000
0140	526.0100	TEMPORARY STRUCTURE (STATION) 01. 1 MILE SOUTHEAST	LS	1.000	1.000
0150	550.0600	PILE REDRIVING	EACH	2.000	2.000
0160	606.0300	RIPRAP HEAVY	CY	65.000	65.000
0170	619.1000	MOBILIZATION	EACH	1.000	1.000
0180	625.0500	SALVAGED TOPSOIL	SY	135.000	135.000
0190	627.0200	MULCHING	SY	380.000	380.000
0200	628.1504	SILT FENCE	LF	465.000	465.000
0210	628.1520	SILT FENCE MAINTENANCE	LF	930.000	930.000
0220	628.1905	MOBILIZATIONS EROSION CONTROL	EACH	5.000	5.000
0230	628.1910	MOBILIZATIONS EMERGENCY EROSION CONTROL	EACH	5.000	5.000
0240	628.2027	EROSION MAT CLASS II TYPE C	SY	60.000	60.000
0250	628.6005	TURBIDITY BARRIERS	SY	105.000	105.000
0260	628.7504	TEMPORARY DITCH CHECKS	LF	50.000	50.000
0270	629.0210	FERTILIZER TYPE B	CWT	0.300	0.300
0280	630.0120	SEEDING MIXTURE NO. 20	LB	11.000	11.000
0290	630.0200	SEEDING TEMPORARY	LB	11.000	11.000
0300	634.0612	POSTS WOOD 4X6-INCH X 12-FT	EACH	6.000	6.000
0310	637.0202	SIGNS REFLECTIVE TYPE II	SF	30.000	30.000
0320	642.5001	FIELD OFFICE TYPE B	EACH	1.000	1.000
0330	643.0100	TRAFFIC CONTROL (PROJECT) 01. 8356-00-70	EACH	1.000	1.000
0340	645.0120	GEOTEXTILE FABRIC TYPE HR	SY	230.000	230.000
0350	650.4500	CONSTRUCTION STAKING SUBGRADE	LF	169.000	169.000
0360	650.6500	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-04-0096	LS	1.000	1.000
0370	650.9910	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 8356-00-70	LS	1.000	1.000
0380	650.9920	CONSTRUCTION STAKING SLOPE STAKES	LF	169.000	169.000
0390	SPV.0090	SPECIAL 01. PILING TREATED TIMBER DELIVERED AND DRIVEN	LF	1,100.000	1,100.000

CLEARING AND GRUBBING (CATEGORY 0010)			
	201.0105 CLEARING STA	201.0205 GRUBBING STA	
STATION TO STATION			
Sta. 9+00 to Sta. 11+00	2	2	
*EARTHWORK SUMMARY (CATEGORY 0010)			
p			
205.0100			
	EXCAVATION COMMON CY	FILL CY	EXPANDED FILL CY
STAGE	STATION TO STATION	LOCATION	WASTE CY
1 / Tay. Ln.	9+00 -9+88.50	Taylor Ln.	42
	10+19.50 - 11+00	Taylor Ln.	29
TOTALS	75	3	4
* NOTE: SHRINKAGE = 30%			
EXCAVATION MARSH - TO BE BACKFILLED WITH BORROW. ITEM NUMBER 205.0400			

213.0100 FINISHING ROADWAY (CATEGORY 0010)

LOCATION	EACH
PROJECT 8356-00-70	1

BASE AGGREGATE DENSE (CATEGORY 0010)

STATION TO STATION	LOCATION	305.0110 3/4-INCH TON
Sta. 9+00 to Sta. 9+88.5	Mainline	135
Sta. 10+19.50 to Sta. 11+00	Mainline	120
TOTALS		255

619.1000 MOBILIZATION

LOCATION	EACH
PROJECT 8356-00-70 (CATEGORY 0010)	0.2
PROJECT 8356-00-70 (CATEGORY 0020)	0.8
TOTAL	1

SALVAGED TOPSOIL, MULCHING, FERTILIZER, SEED & TEMPORARY SEED (CATEGORY 0010)

STATION TO STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING NO. 20 LB	630.0200 SEEDING TEMPORARY LB
		SY	SY	CWT	LB	LB
Sta. 9+00 to Sta. 11+00	Mainline	135	305	0.2	9	9
Undistributed		---	75	0.1	2	2
TOTALS		135	380	0.3	11	11

SILT FENCE & SILT FENCE MAINTENANCE (CATEGORY 0010)

STATION TO STATION	LOCATION	628.1504 LF	628.1520 MAINTENANCE LF
		LF	LF
Sta. 9+00 to Sta. 9+87	RT	90	180
Sta. 9+00 to Sta. 9+95	LT	100	200
Sta. 10+12 to Sta. 11+00	RT	95	190
Sta. 10+20 to Sta. 11+00	LT	85	170
Undistributed		95	190
TOTALS		465	930

MOBILIZATIONS EROSION CONTROL & EMERGENCY EROSION CONTROL (CATEGORY 0010)

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
	EACH	EACH
PROJECT 8356-00-70	5	5

628.2027 EROSION MAT CLASS II TYPE C (CATEGORY 0010)		
STATION TO STATION	LOCATION	SY
Sta. 9+62.50 to Sta. 9+82.50	RT	13
Sta. 9+62.50 to Sta. 9+82.50	LT	12
Sta. 10+25.50 to Sta. 10+45.50	RT	12
Sta. 10+25.50 to Sta. 10+45.50	LT	11
Undistributed		12
TOTAL		60

628.6005 TURBIDITY BARRIERS (CATEGORY 0010)	
LOCATION	SY
South Abutment	45
North Abutment	40
Undistributed	20
TOTAL	105

628.7504 TEMPORARY DITCH CHECKS (CATEGORY 0010)	
LOCATION	LF
UNDISTRIBUTED	50

634.0612 WOOD POSTS 4X6 INCH X 12 FT (CATEGORY 0010)		
STATION	LOCATION	EACH
Sta. 7+50	RT (One Lane Bridge)	1
Sta. 9+88	RT (Object Marker)	1
Sta. 9+88	LT (Object Marker)	1
Sta. 10+20	RT (Object Marker)	1
Sta. 10+20	LT (Object Marker)	1
Sta. 12+50	LT (One Lane Bridge)	1
TOTAL		6

637.0202 SIGNS REFLECTIVE TYPE II (CATEGORY 0010)			
STATION			SF
Sta. 7+50	RT (One Lane Bridge)	W5-3	9
Sta. 9+88	LT (Object Marker)	W5-52L	3
Sta. 9+88	RT (Object Marker)	W5-52R	3
Sta. 10+20	LT (Object Marker)	W5-52R	3
Sta. 10+20	RT (Object Marker)	W5-52L	3
Sta. 12+50	LT (One Lane Bridge)	W5-3	9
TOTAL			30

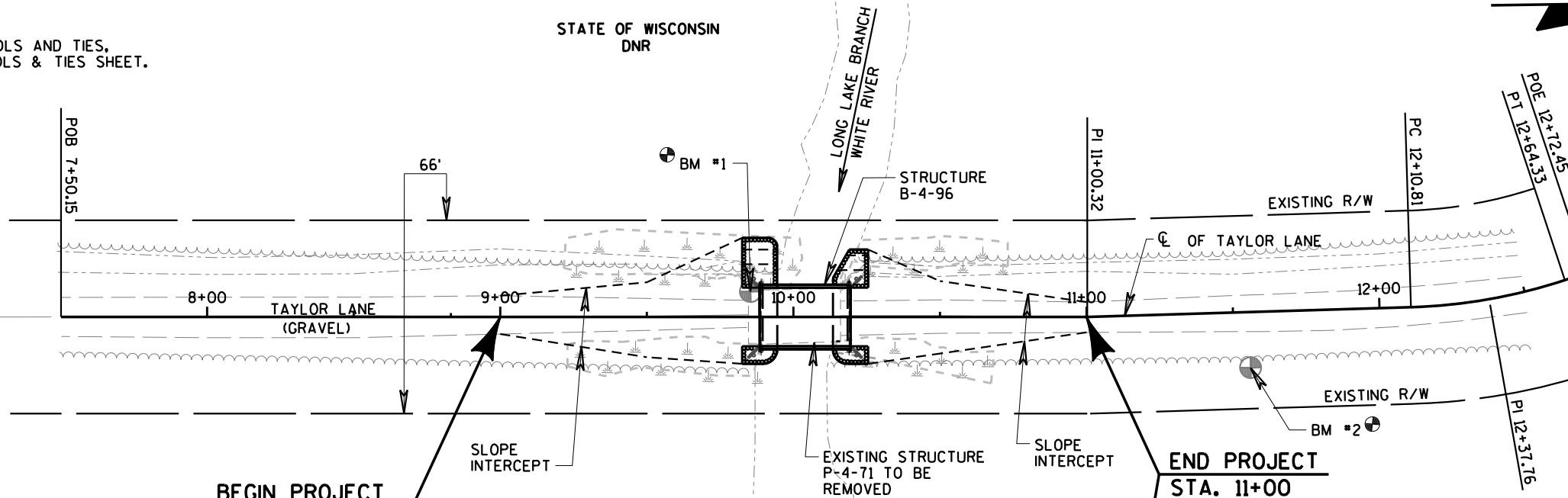
642.5001 FIELD OFFICE TYPE B (CATEGORY 0010)	
LOCATION	EACH
PROJECT 8356-00-70	1

643.0100 TRAFFIC CONTROL (CATEGORY 0010)	
LOCATION	EACH
PROJECT 8356-00-70	1

CONSTRUCTION STAKING					
CATEGORY	LOCATION	650.4500	650.6500	650.9910	650.9920
		SUBGRADE LF	STRUCTURE LAYOUT LS	SUPPLEMENTARY CONTROL LS	SLOPE STAKES LF
0010	Sta. 9+00 to Sta. 11+00	169	---	1	169
0020	B-4-096	---	1	---	---
TOTALS		169	1	1	169

NOTES:
FOR ALIGNMENT CONTROLS AND TIES,
SEE ALIGNMENT CONTROLS & TIES SHEET.

STATE OF WISCONSIN
DNR



ORIGIN OF LEVELS

BAYFIELD CO. GPS POINT ID
304 BURHO (PID AF9926)
NAVD 88

BEGIN PROJECT

STA. 9+00

Y = 384722.70
X = 757842.23

IRENE JOHNSON

NET LENGTH OF CENTERLINE STA. 9+00.00 TO STA. 11+00.00 = 200 LIN. FT.

BENCH MARKS			
NO.	STA.	DESCRIPTION	ELEV.
1	9+85	RR SPK IN SW SIDE OF BRIDGE DECK, 9' LT.	918.15
2	11+55	RR SPK IN 12" DEC. TREE, 19' RT.	917.29

EARTHWORK SUMMARY

STA. 9+00 TO STA. 9+88.50
EXC. COMMON 46 C.Y.
FILL 3 C.Y.
SHR. = 30%
WASTE 42 C.Y.

EARTHWORK SUMMARY

STA. 10+19.50 TO STA. 11+00
EXC. COMMON 29 C.Y.
FILL 0 C.Y.
SHR. = 30%
WASTE 29 C.Y.

EXISTING CL PROFILE

HIGH WATER₁₀₀ EL. 917.8

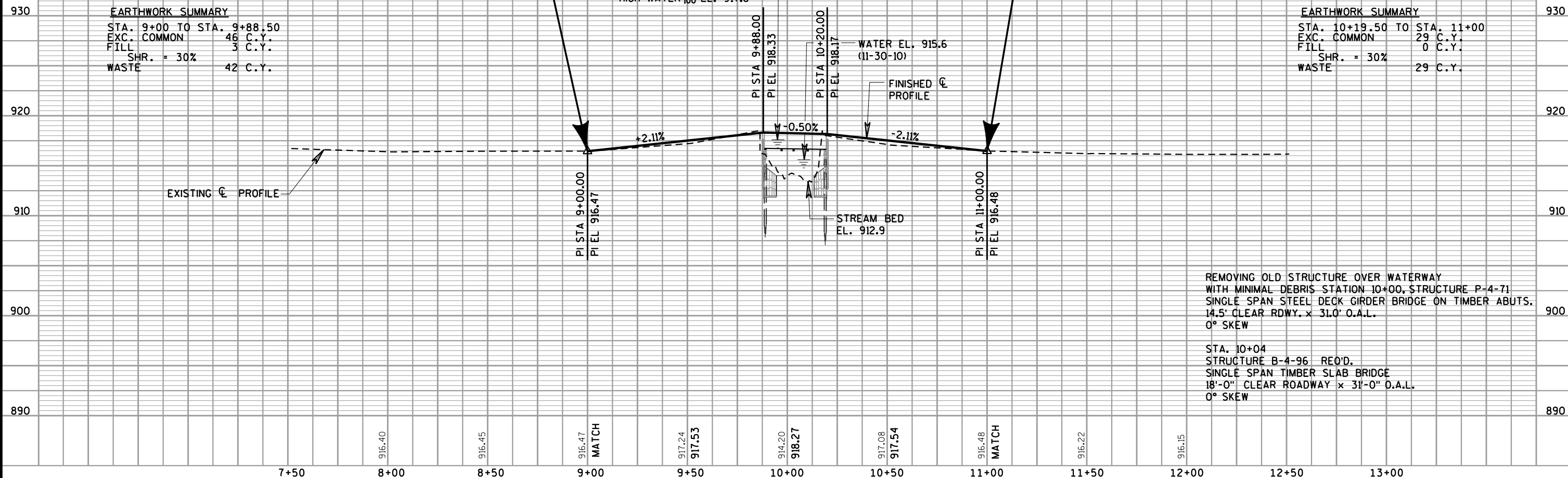
WATER EL. 915.6
(11-30-10)

FINISHED CL
PROFILE

STREAM BED
EL. 912.9

REMOVING OLD STRUCTURE OVER WATERWAY
WITH MINIMAL DEBRIS STATION 10+00, STRUCTURE P-4-71
SINGLE SPAN STEEL DECK GIRDER BRIDGE ON TIMBER ABUTS.
14.5' CLEAR RDWY. x 31.0' O.A.L.
0° SKEW

STA. 10+04
STRUCTURE B-4-96 REQ'D.
SINGLE SPAN TIMBER SLAB BRIDGE
18'-0" CLEAR ROADWAY x 31'-0" O.A.L.
0° SKEW



PROJECT NO: 8356-00-70

HWY: TAYLOR LANE

COUNTY: BAYFIELD

PLAN AND PROFILE

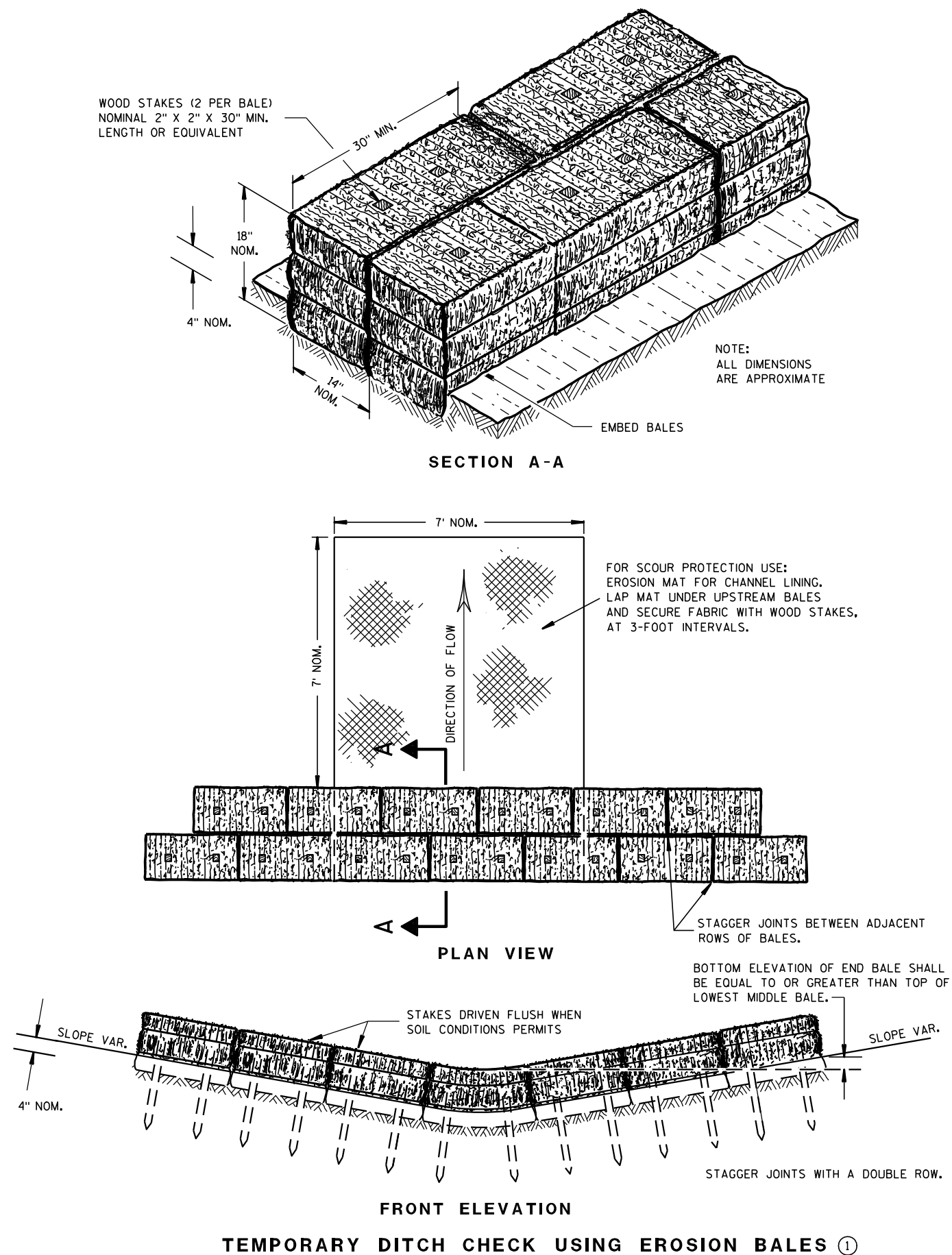
SCALE, FEET 0 25 50

SHEET

E

Standard Detail Drawing List

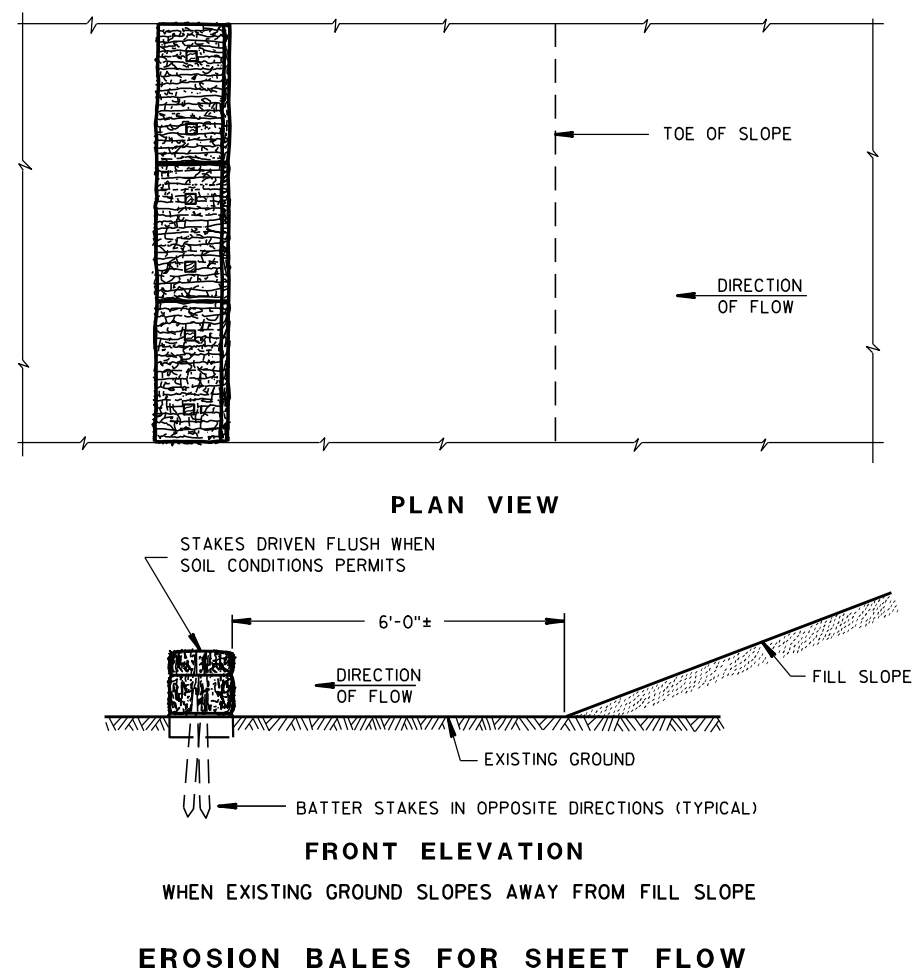
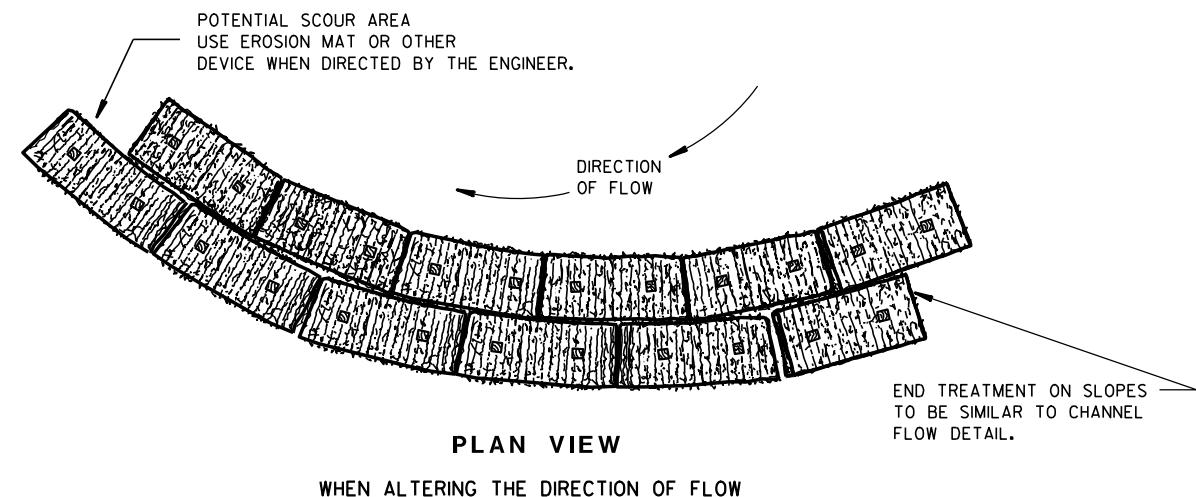
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-04A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-04B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-05	SIGNING & MARKING FOR TWO LANE BRIDGES



GENERAL NOTES

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

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

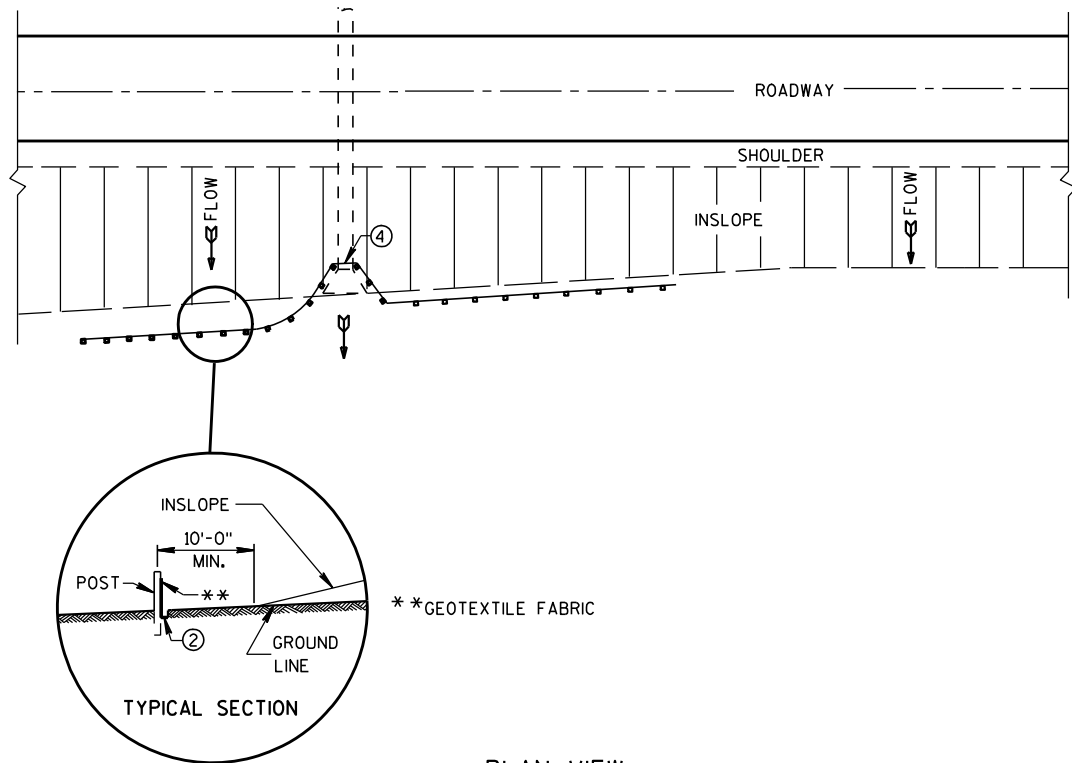
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

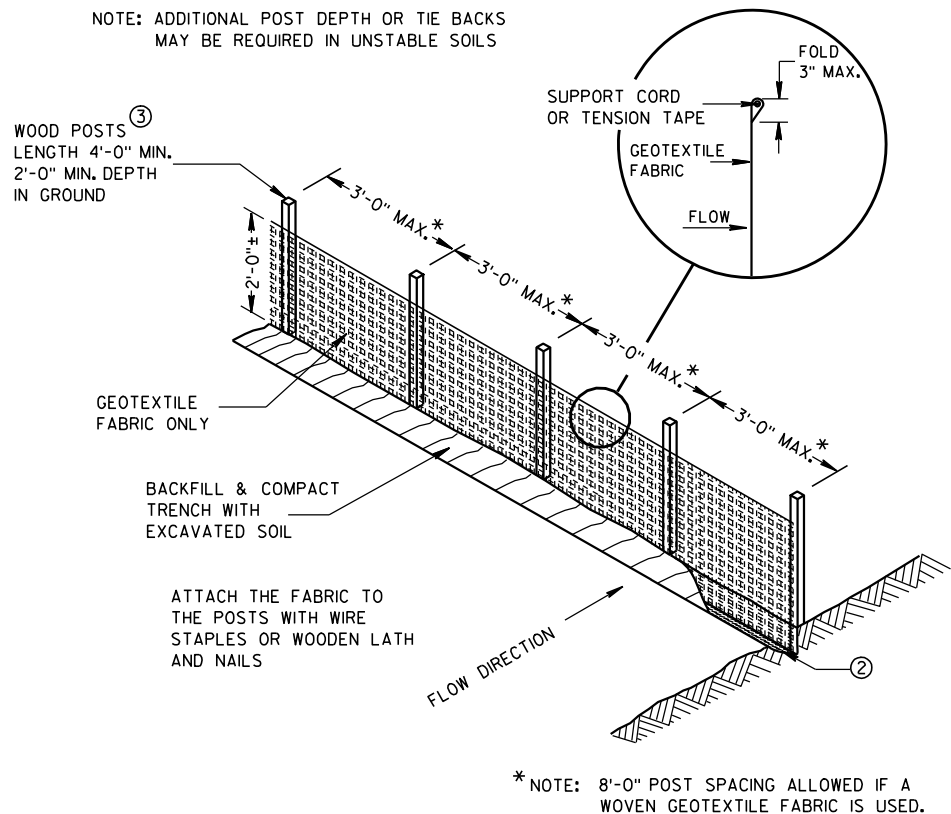
APPROVED

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

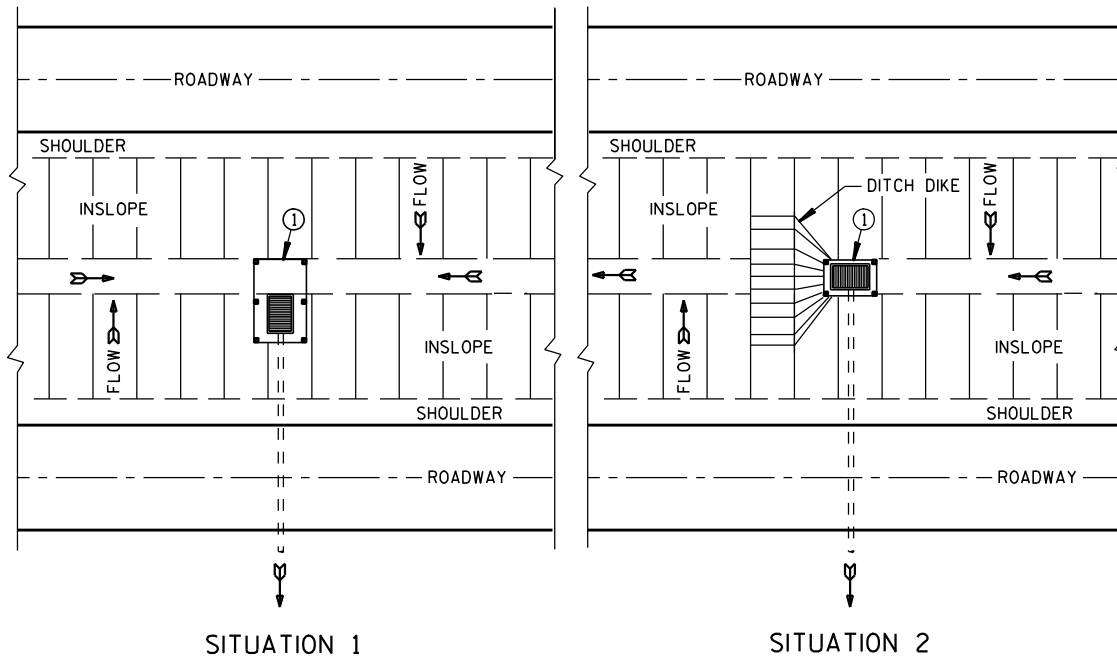
FHWA



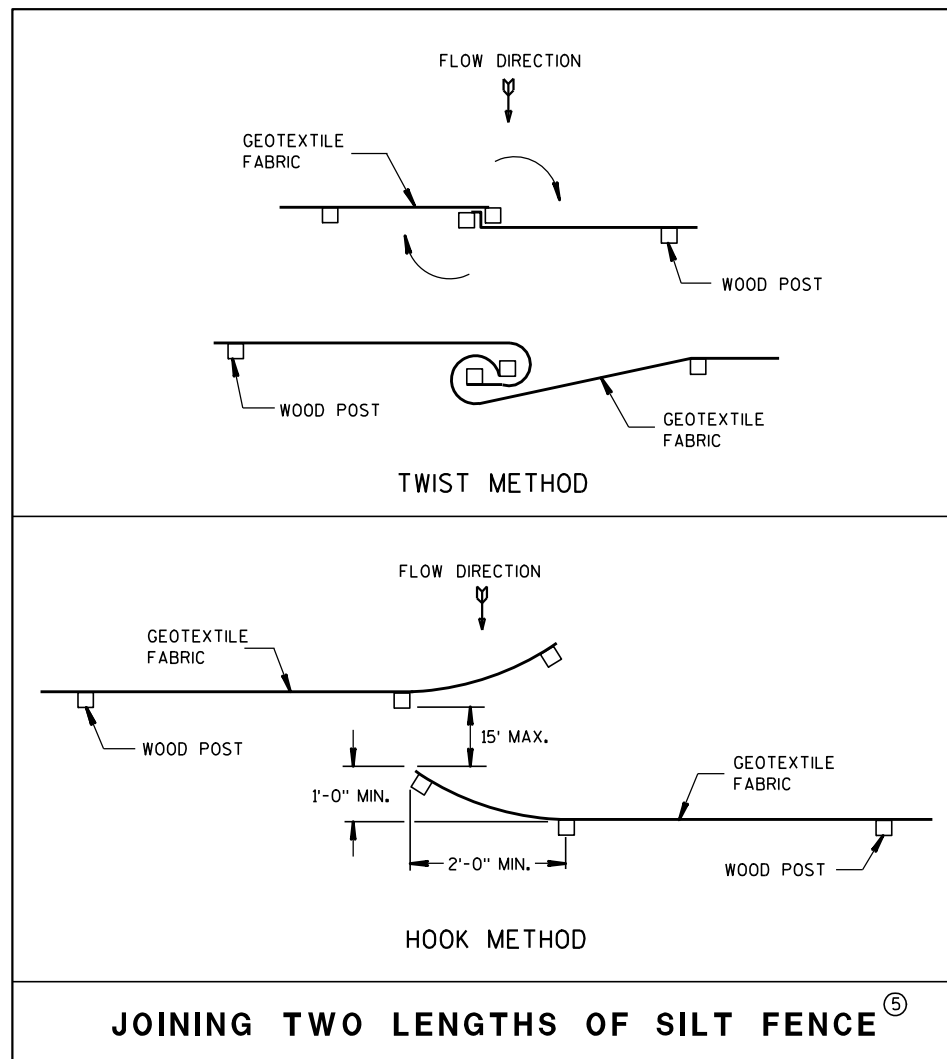
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

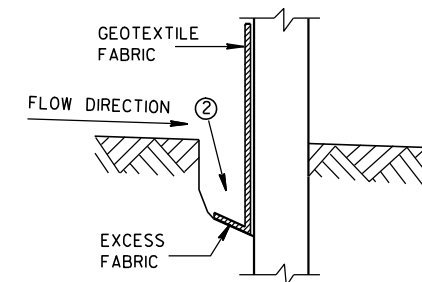


JOINING TWO LENGTHS OF SILT FENCE ⑤

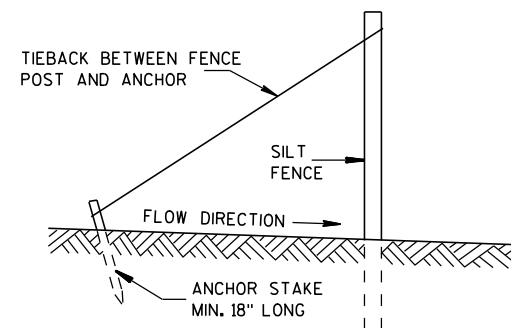
GENERAL NOTES

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

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

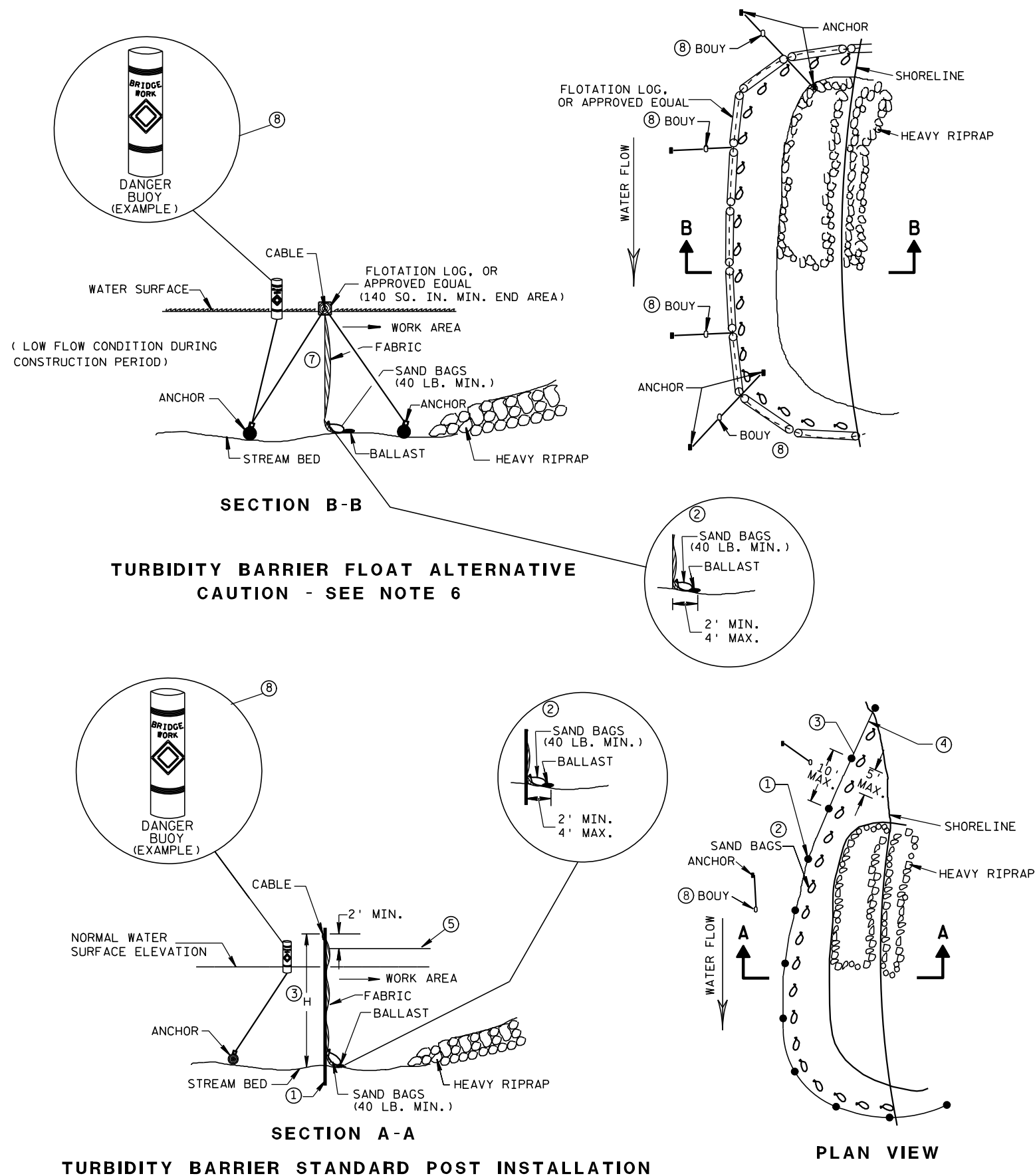


TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	

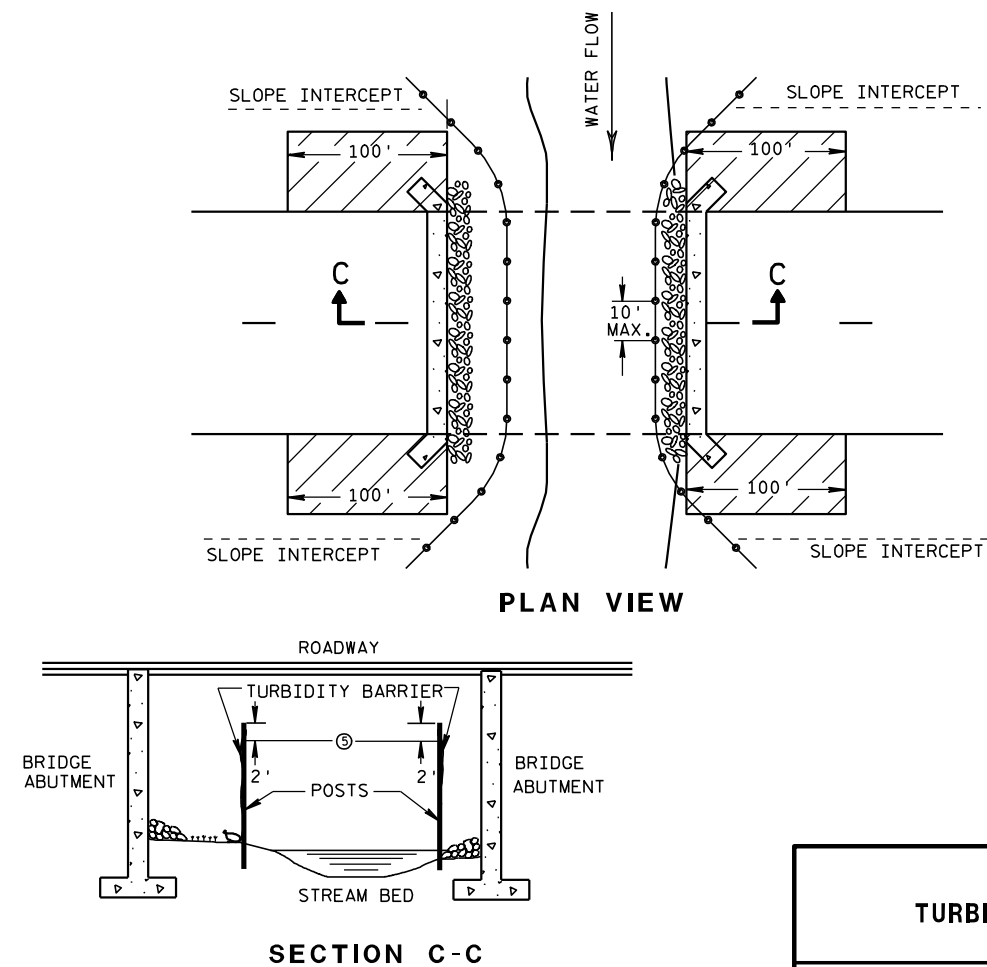


GENERAL NOTES

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

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

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



TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

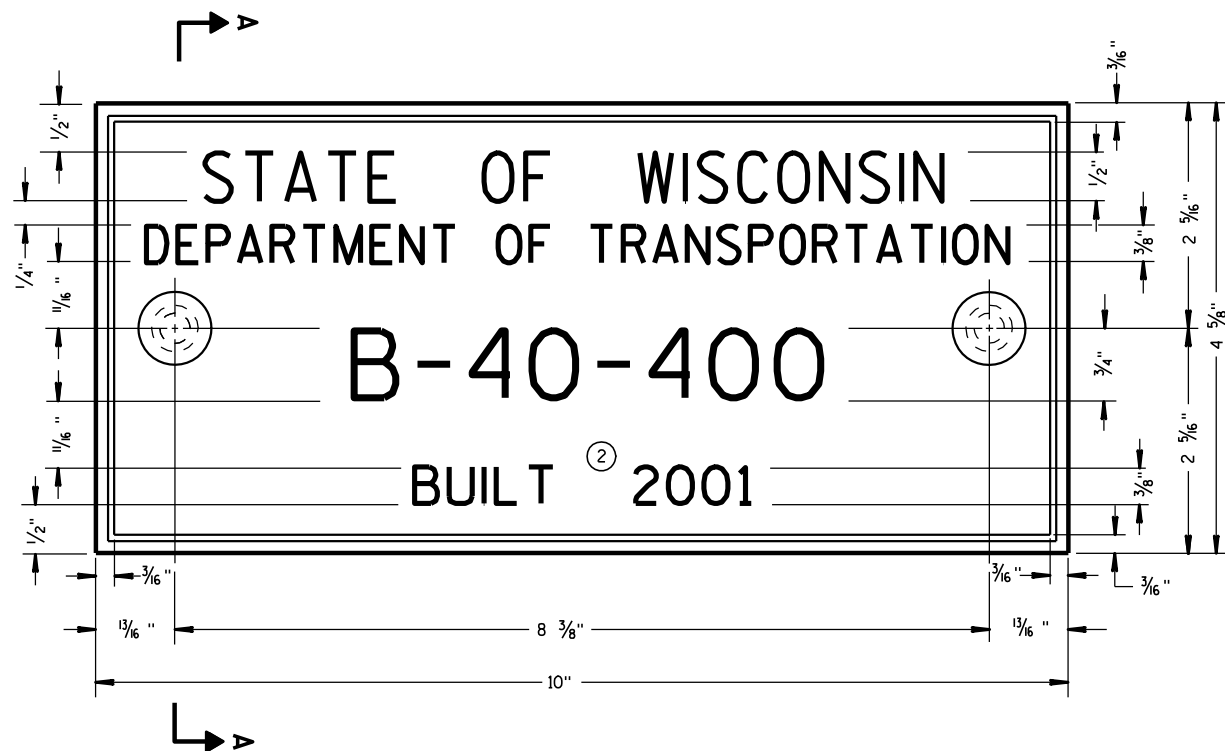
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

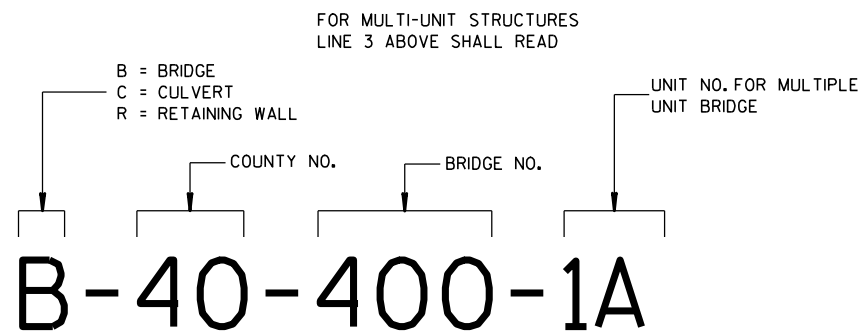
6/04/02
DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



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



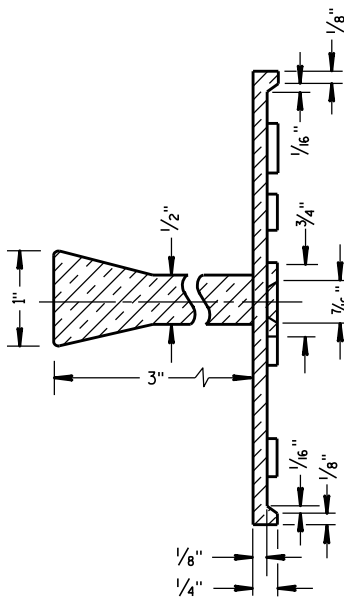
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

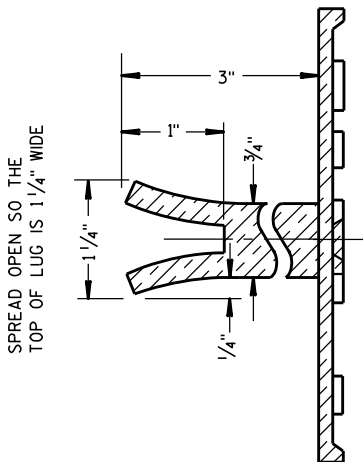
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

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

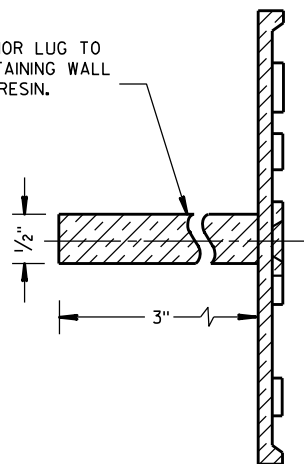


SECTION A-A



ALTERNATE LUG

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

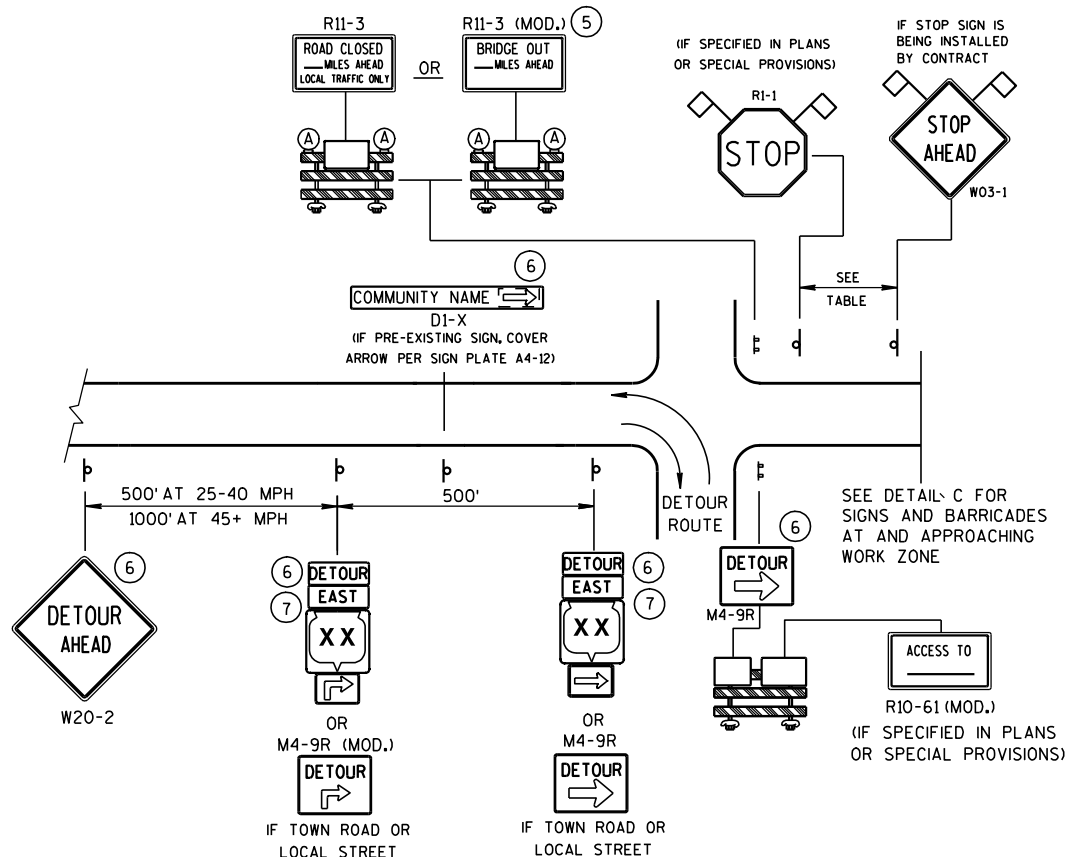


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE
(STRUCTURES)

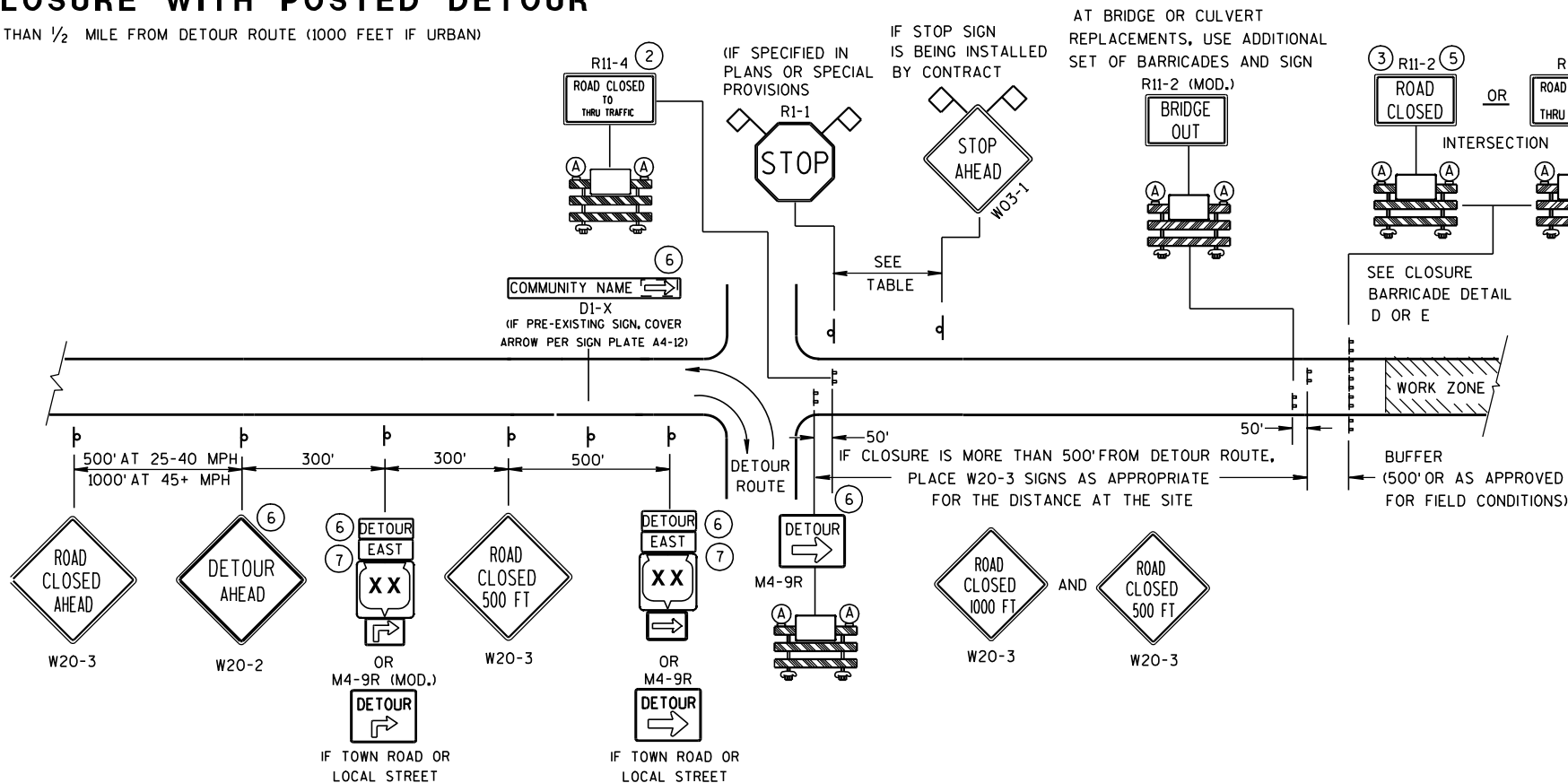
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



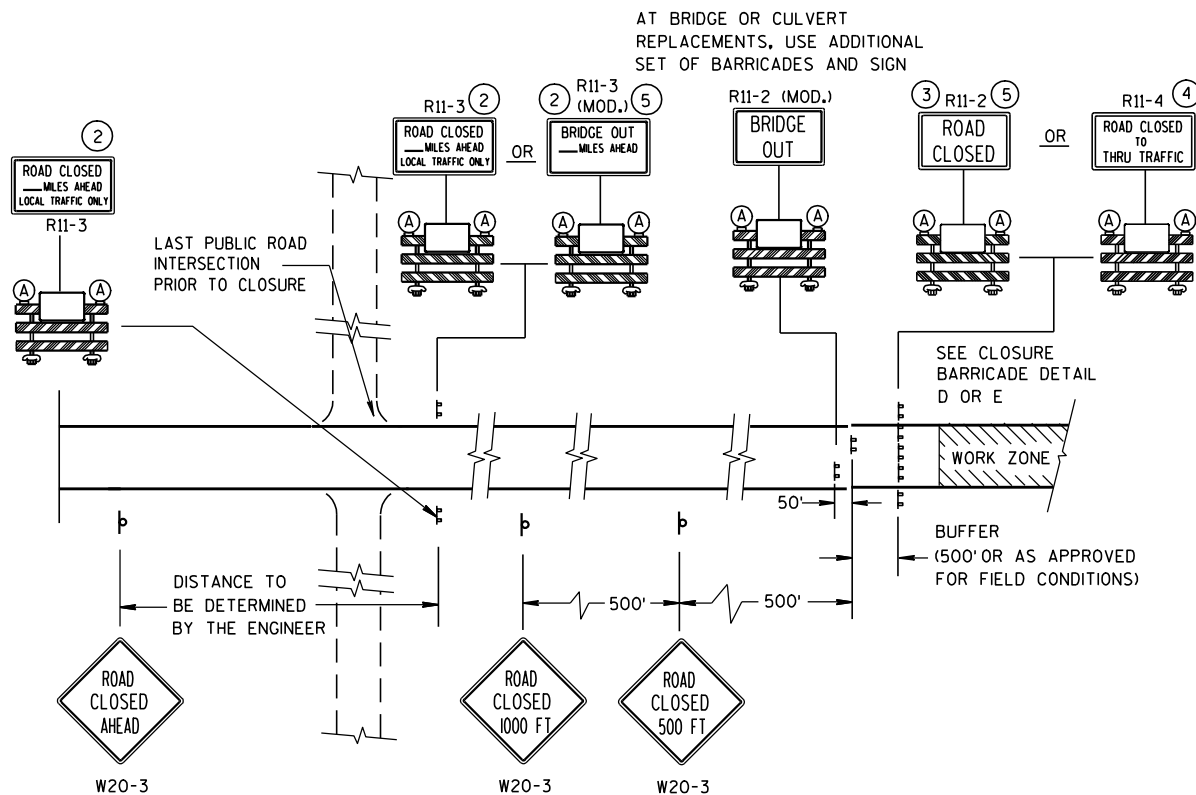
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

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)



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

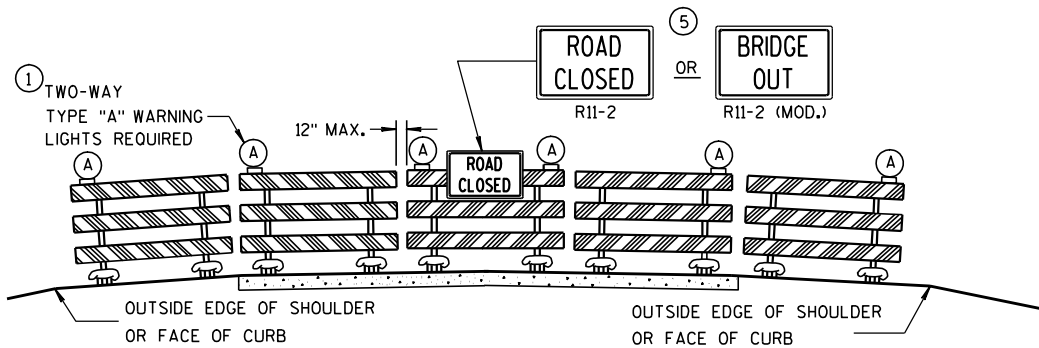
SEE SDD 15C2-4b
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

LEGEND

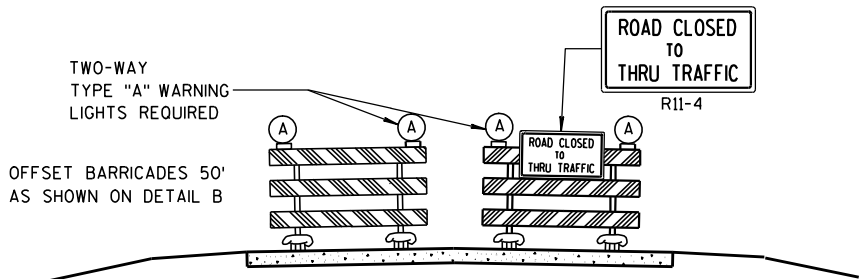
- POST MOUNTED SIGN
- TYPE III BARRICADES
- TYPE "A" LOW INTENSITY FLASHING WARNING LIGHT (FOR NIGHT USE)
- WORK ZONE
- DETOUR EAST M4-8 M3-X
- MI-4 OR MI-5A OR MI-6
- MO5-1 OR MO6-1
- FLAGS, 16" X 16" MIN., (ORANGE)

**BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-4a 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.

THE REFLECTIVE SHEETING USED ON R11-2, R11-3, R11-4, R10-61 AND R1-1 SIGNS SHALL COMPLY WITH SUBSECTION 637.2.2.2 OF THE STANDARD SPECIFICATIONS.

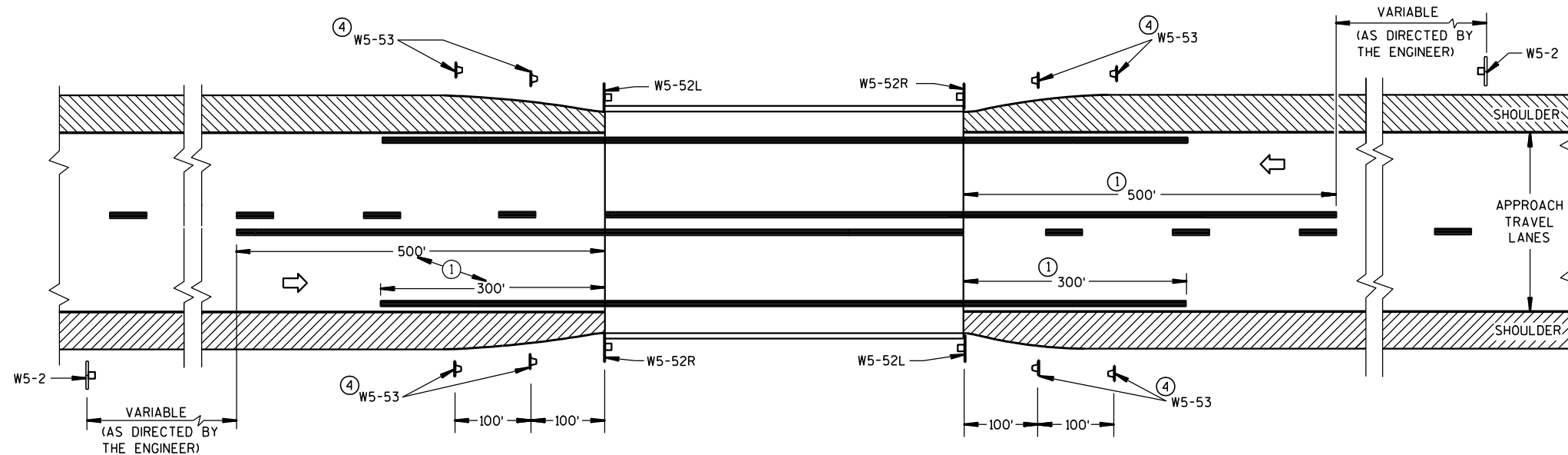
"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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 AND 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.

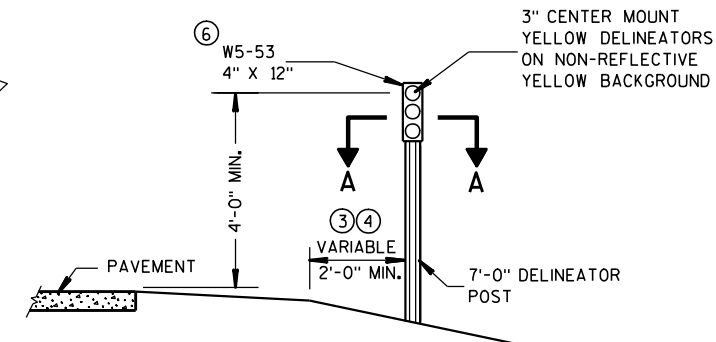
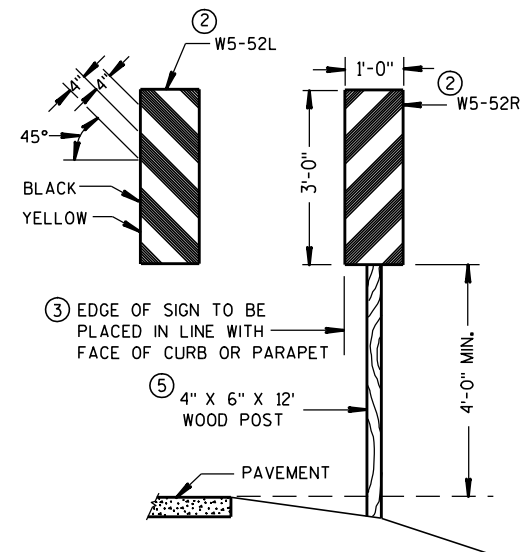
BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
<u>9/16/03</u> DATE	<u>/S/ Thomas N. Notbohm</u> CHIEF SIGNS AND MARKING ENGINEER
FHWA	



SITUATION 1

WARRANTING CRITERION:

BRIDGE WIDTH IS AT LEAST 18 FEET BUT LESS THAN 24 FEET



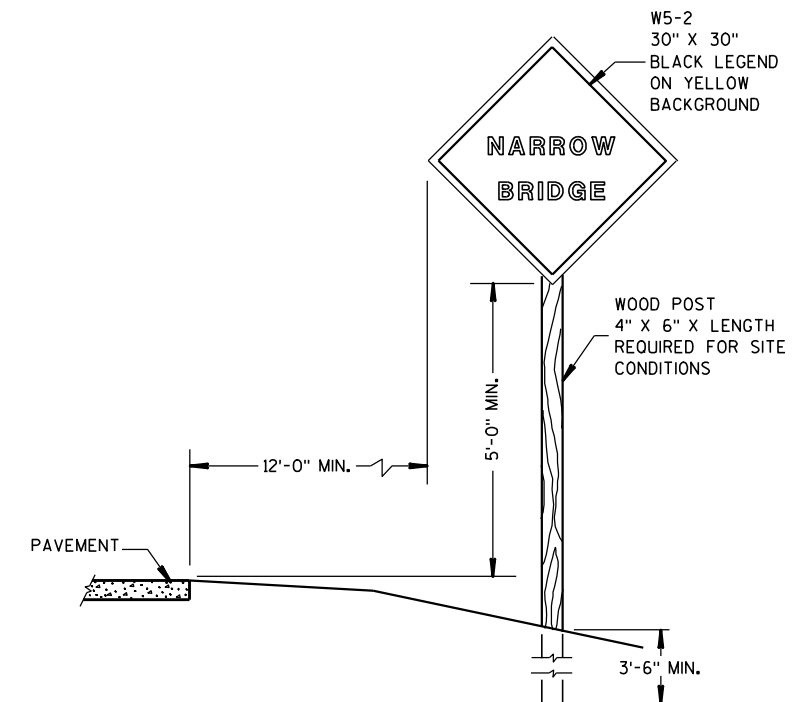
OBJECT MARKER PLACEMENT

GENERAL NOTES

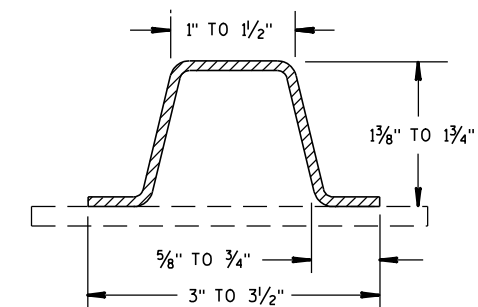
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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 H REFLECTIVE SHEETING.
- ③ LOCATE OBJECT MARKER POST(S) BEHIND GUARDRAIL WHEN PRESENT.
- ④ OBJECT MARKERS (W5-53) SHALL BE LOCATED ALONG A LINE FLARED AWAY FROM THE BRIDGE CORNER TO DELINEATE THE NARROWING OF THE SHOULDER OR BERM.
- ⑤ A 12 FOOT DELINEATOR POST MAY BE USED INSTEAD OF A WOOD POST.
- ⑥ NON-BID ITEM. INCIDENTAL TO OTHER ITEMS.

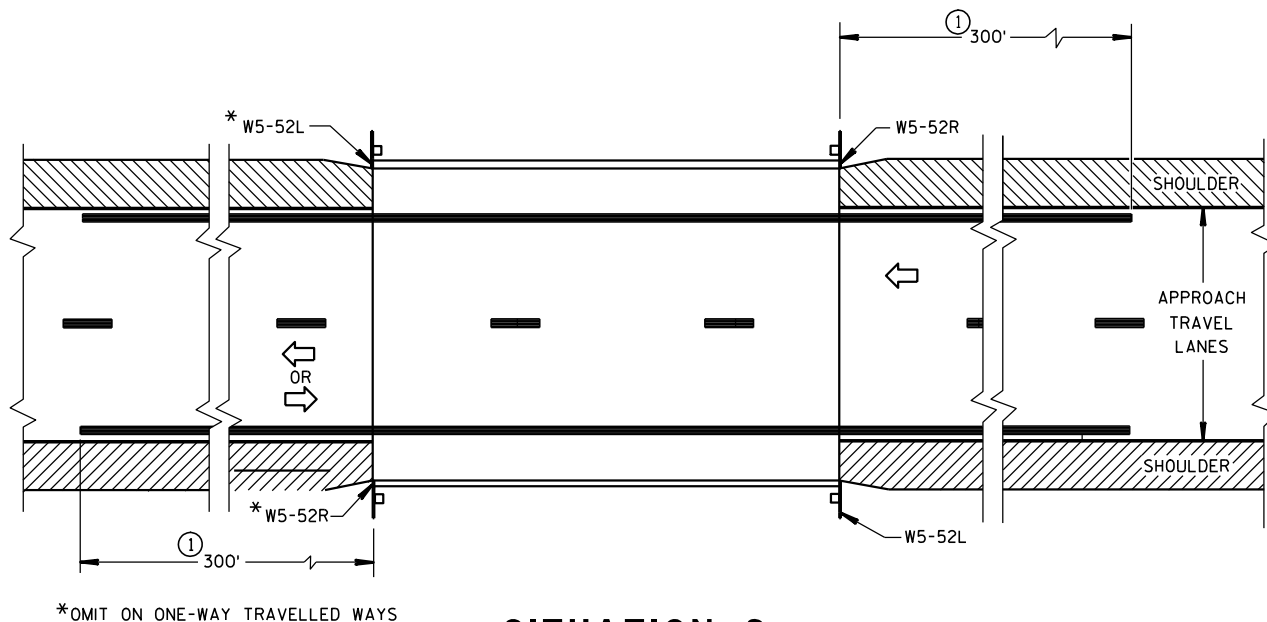


SIGN PLACEMENT



SECTION A-A

(MINIMUM WEIGHT 1.9 LBS. PER FT. AFTER GALVANIZING)



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.

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

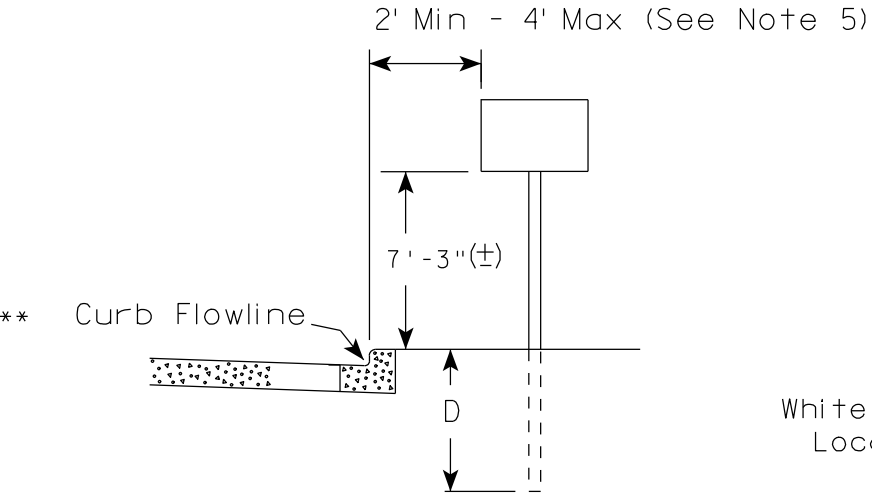
APPROVED

9/5/06
DATE

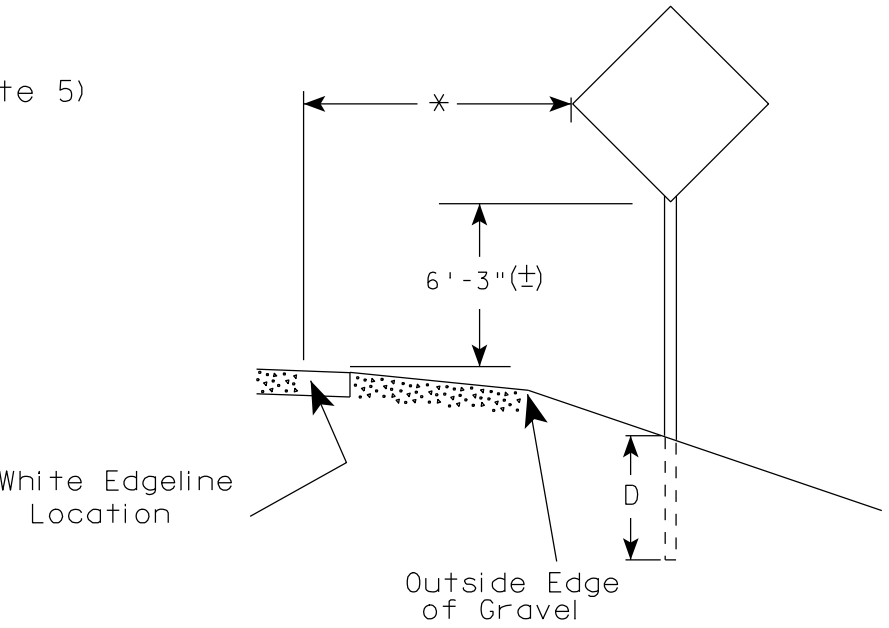
FHWA

/S/ Thomas N. Notbohm
STATE TRAFFIC ENGINEER OF DESIGN

URBAN AREA

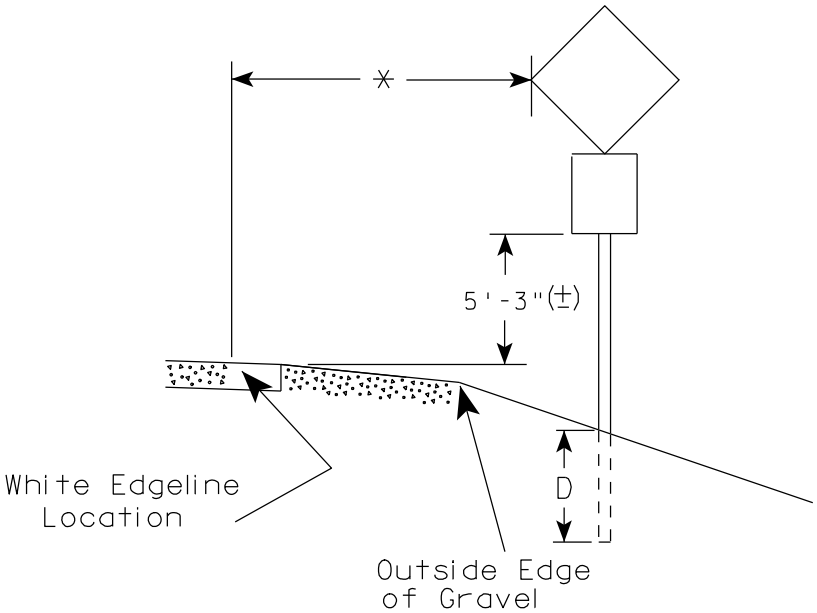
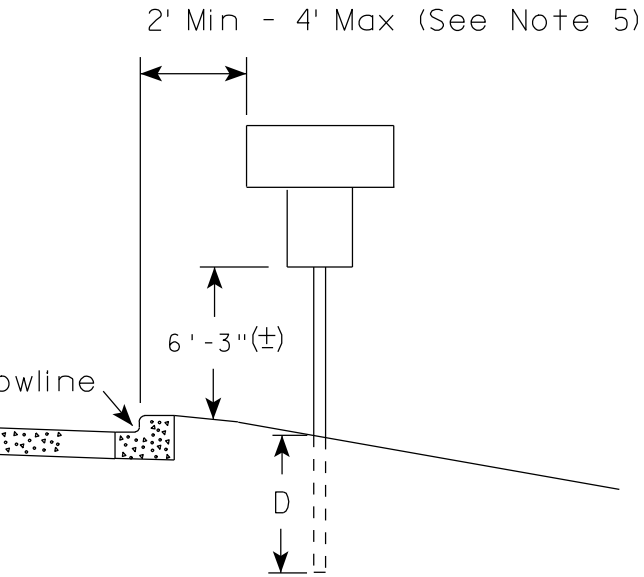


RURAL AREA (See Note 2)



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'

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

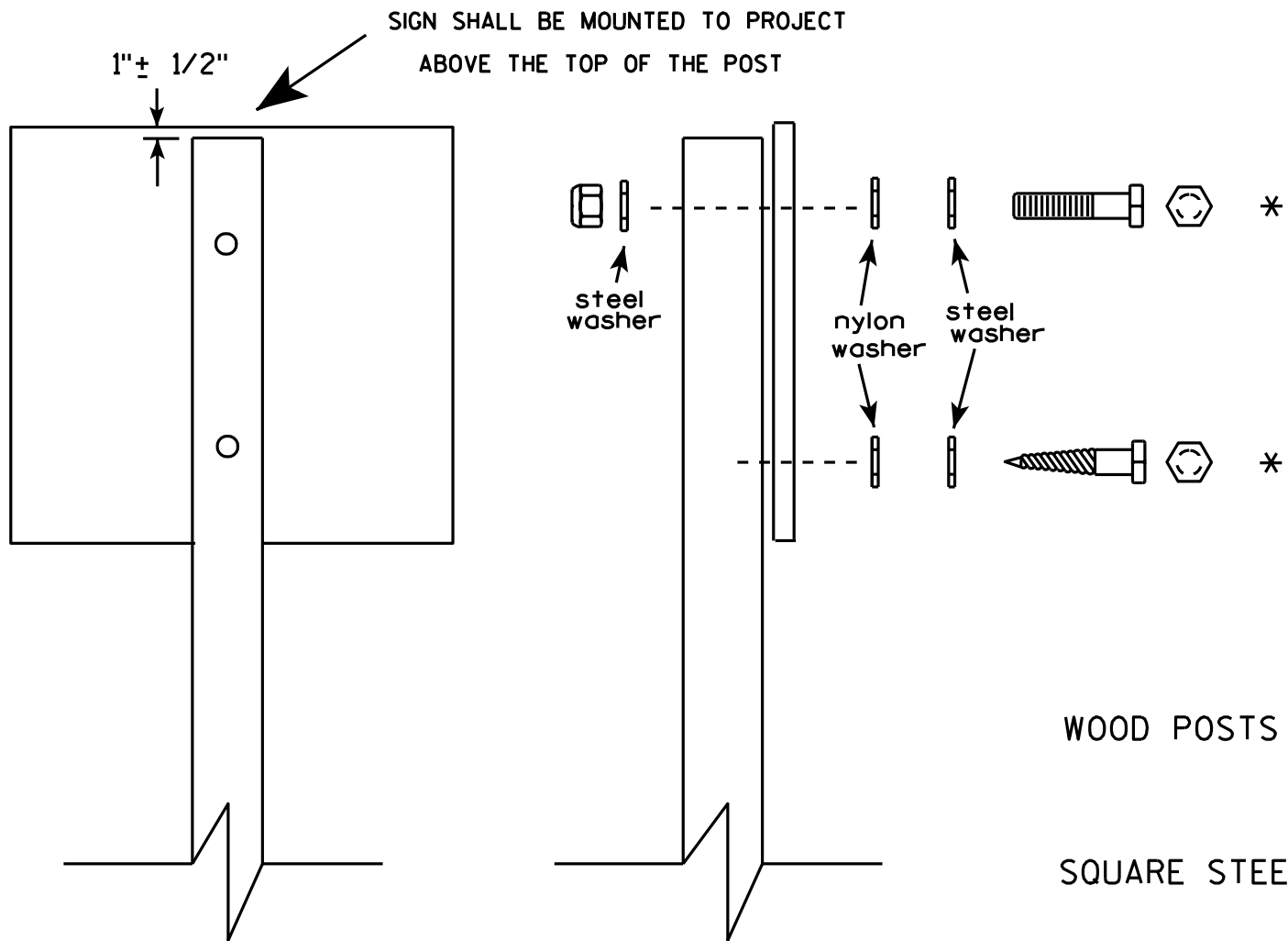
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

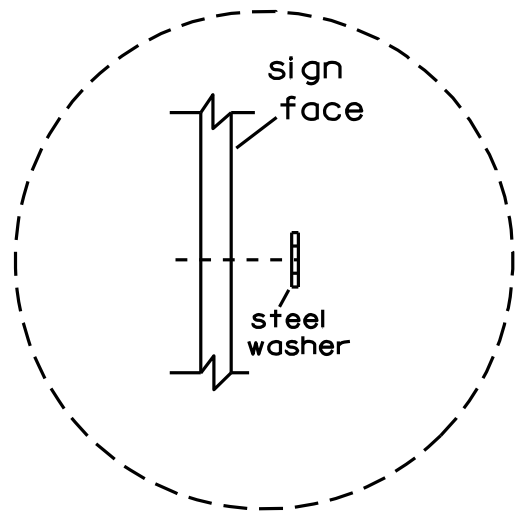


Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

- 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.

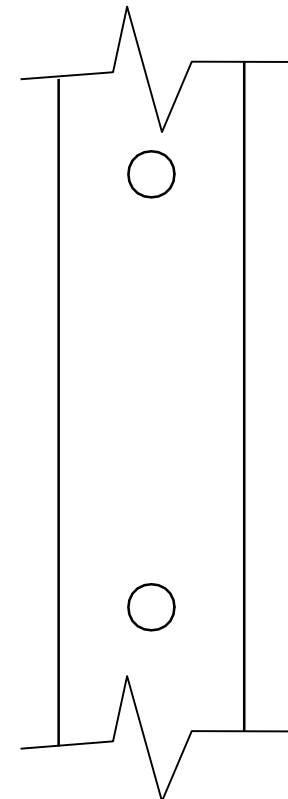
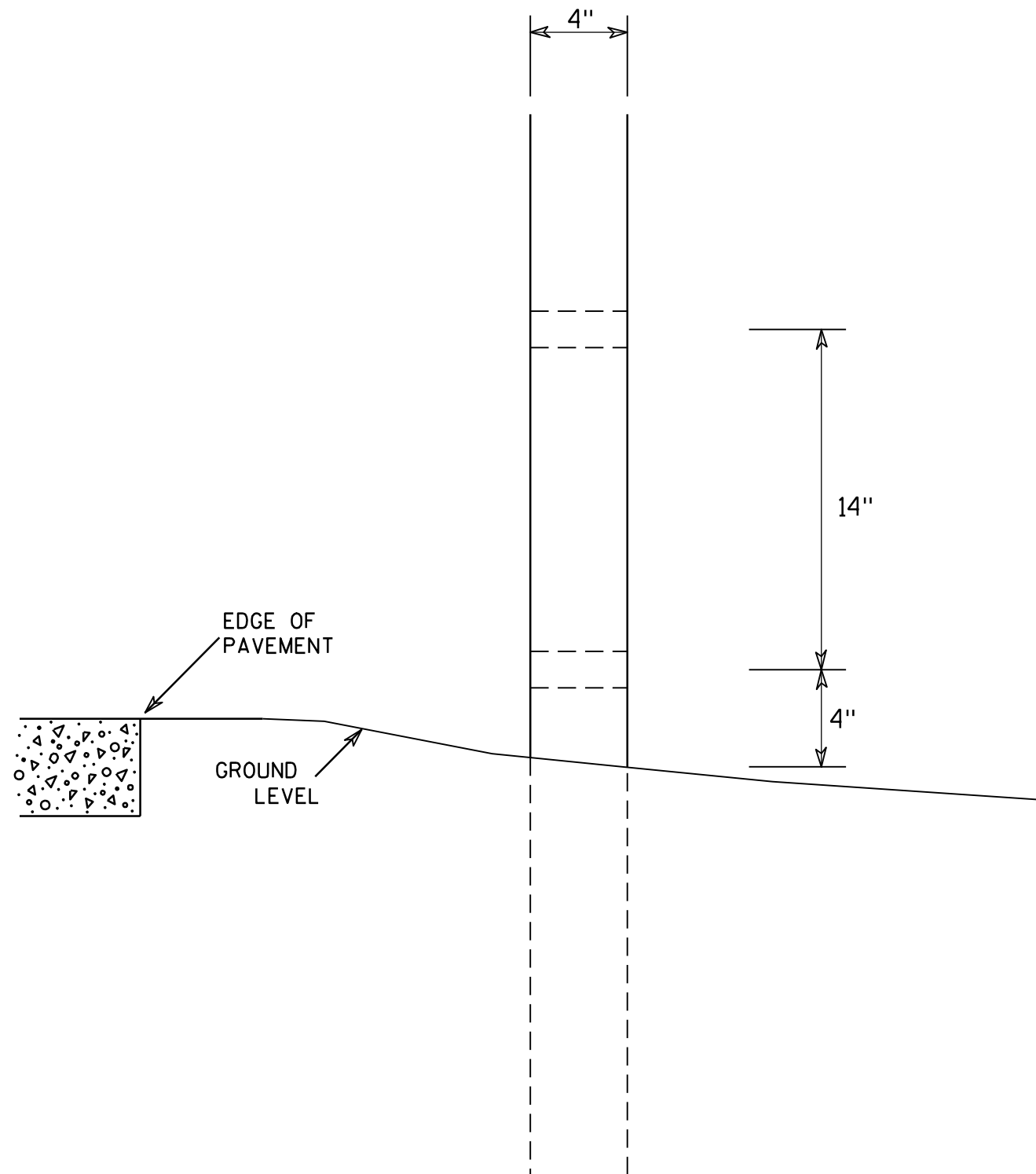
- WOOD POSTS (4" x 4" or 4" x 6")
LAG SCREWS - 3/8" X 3"
MACHINE BOLTS - 5/16" X 6-1/2" or 7" Length w/ nuts
- SQUARE STEEL POSTS (2" x 2")
MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts
RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 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



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.

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

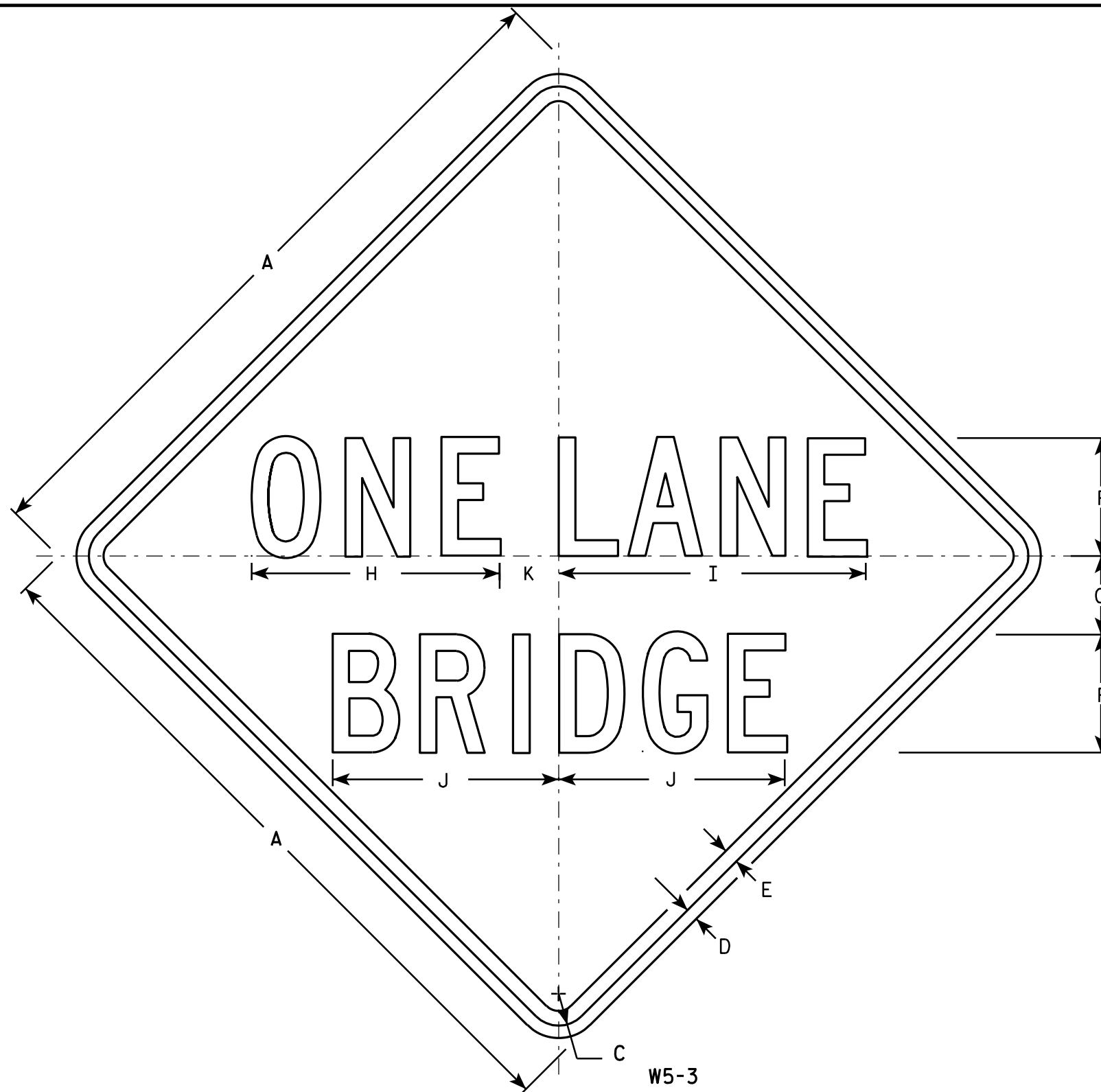
PROJECT NO: 8356-00-70

HWY: TAYLOR LANE

COUNTY: BAYFIELD

SHEET NO:

E



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. Message Series - C
4. 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.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	30		1 3⁄8	1⁄2	5⁄8	5	3 1⁄4	10 1⁄2	13 1⁄8	9 5⁄8	3																6.25
2S	36		1 5⁄8	5⁄8	3⁄4	6	4	12 5⁄8	15 5⁄8	11 1⁄2	4																9.00
2M	36		1 5⁄8	5⁄8	3⁄4	6	4	12 5⁄8	15 5⁄8	11 1⁄2	4																9.00
3	36		1 5⁄8	5⁄8	3⁄4	6	4	12 5⁄8	15 5⁄8	11 1⁄2	4																9.00
4	48		2 1⁄4	3⁄4	1	8	5	16 5⁄8	20 3⁄4	15 3⁄8	5																16.00
5																											

STANDARD SIGN W5-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/22/11 PLATE NO. W5-3.10

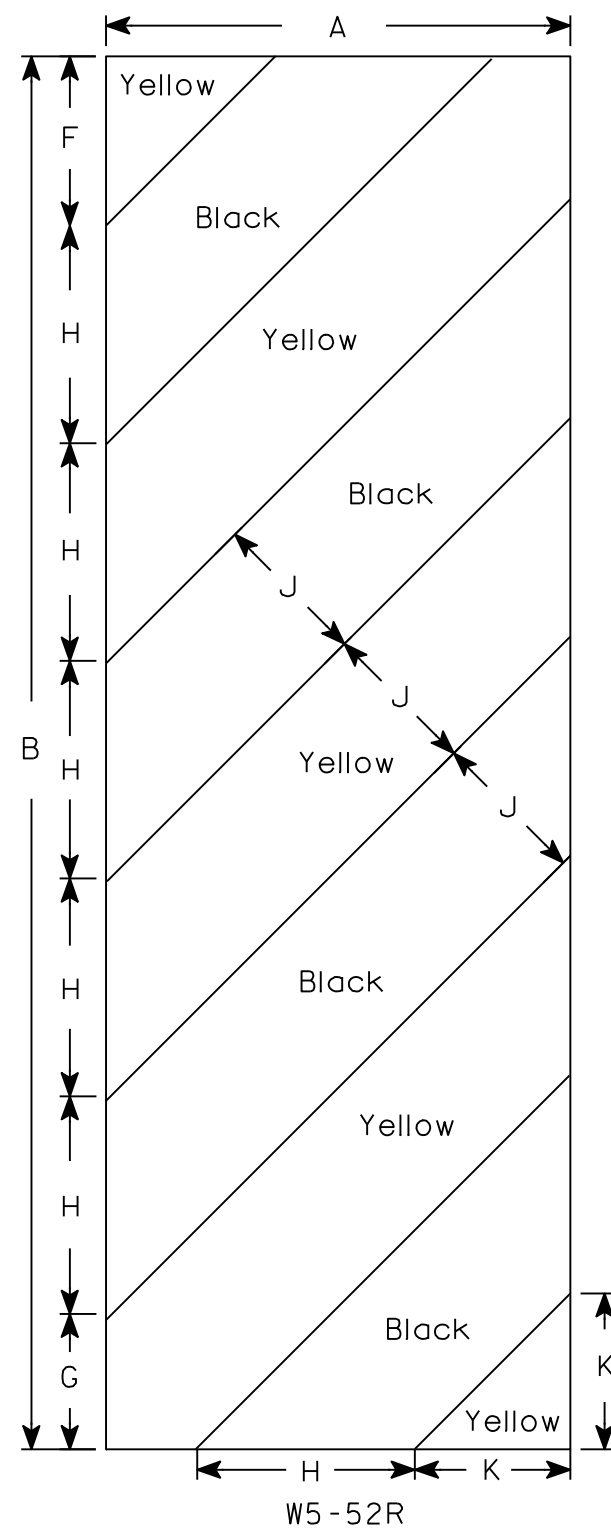
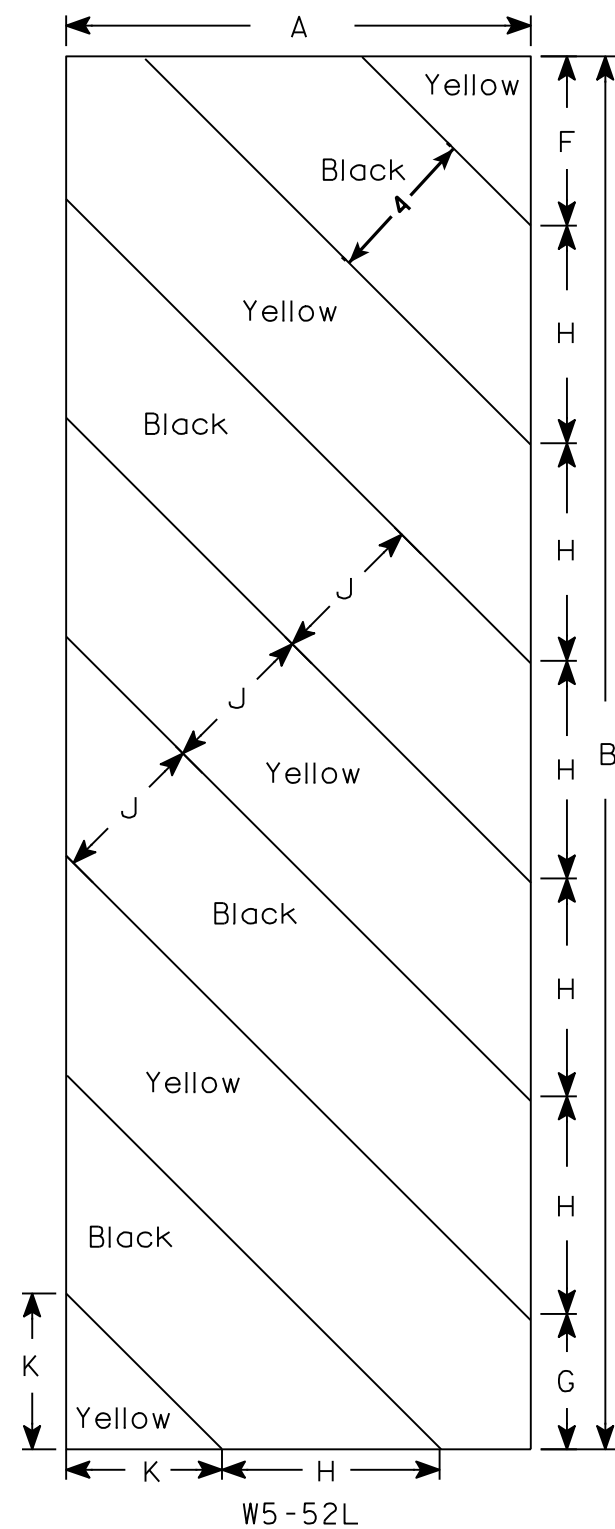
PROJECT NO: 8356-00-70

HWY: TAYLOR LANE

COUNTY: BAYFIELD

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.

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

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

\$PRNAME\$
U:\42-0818.00 - Bayfield Co. Grandview, Taylor Lane\BRIDGE\420818 gp.dgn

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. ABUT.	N. ABUT.	SUPER.	TOTAL
① 203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STATION 10+00	LS	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-4-96	LS	-----	-----	-----	1
206.5000	COFFERDAMS B-4-96	LS	-----	-----	-----	1
210.0100	BACKFILL STRUCTURE	CY	55	55	-----	110
455.0605	TACK COAT	GAL	-----	-----	3	3
465.0105	ASPHALTIC SURFACE	TON	-----	-----	11	11
④ 506.0105	STRUCTURAL CARBON STEEL	LB	-----	-----	910	910
507.0200	TREATED LUMBER AND TIMBER	MBM	1.4	1.4	11.2	14
② 526.0100	TEMPORARY STRUCTURE	LS	-----	-----	-----	1
③ 550.0600	PILE REDRIVING	EACH	1	1	-----	2
606.0300	RIPRAP HEAVY	CY	35	30	-----	65
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	120	110	-----	230
SPV.0090	PILING TREATED TIMBER DELIVERED AND DRIVEN	LF	550	550	-----	1100

- ① EXISTING TIMBER PILES TO BE CUT OFF 2 FEET BELOW GRADE. DO NOT PULL OUT PILES.
- ② TAYLOR LANE IS A DEAD END ROAD. A SINGLE-SPAN TIMBER DECK GIRDER BRIDGE LOCATED APPROX. 1 MILE TO THE SOUTHEAST MUST BE CROSSED TO REACH THE SITE. THE 19' LONG BY 18' WIDE BRIDGE HAS A LOAD RATING OF 30 TONS (TOTAL VEHICLE WEIGHT). PROVIDE TEMPORARY STRUCTURE OVER EXISTING BRIDGE OR STRENGTHEN IT AS NEEDED TO ACCESS THE SITE.
- ③ ALLOW PILES TO SET UP FOR 96 HOURS PRIOR TO REDRIVING.
- ④ GALVANIZE AFTER FABRICATION. CONSIDERED INCIDENTAL TO "STRUCTURAL CARBON STEEL".

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMIT FOR EXCAVATION FOR STRUCTURES AT THE ABUTMENTS.

AT BACKFACE OF ABUTMENTS ALL VOLUME NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE.

ALL TIMBER CONNECTORS AND HARDWARE EXCEPT THOSE OF MALLEABLE IRON SHALL BE GALVANIZED.

TREAT ALL LUMBER AND TIMBER WITH ONE OF THE PRESERVATIVES RECOMMENDED IN THE CONSTRUCTION SPECIFICATIONS.

ALL LUMBER AND TIMBER TO BE ROUGH AND FULL DIMENSION UNLESS NOTED OTHERWISE.

TIMBER CONNECTORS AND HARDWARE SHALL BE INCLUDED IN THE COST FOR "TREATED LUMBER AND TIMBER".

DESTROY THREADS ON ALL BOLTS AT NUT AFTER TIGHTENING, WITH A CENTER PUNCH.

EXPOSED BOLT PROJECTIONS EXCEEDING 1" SHALL BE CUTOFF. REPAIR END OF BOLT BY PAINTING WITH ZINC RICH PRIMER.

ABUTMENT DETAILS SHOWN ARE INTENDED TO FACILITATE CONSTRUCTION BELOW OBSERVED WATER LEVELS.

ALTERNATE DETAILS MAY BE SUBMITTED USING EITHER GALVANIZED STEEL BRIDGE PLANK OR PRECAST CONCRETE PLANK OR ALTERNATE DETAILS FOR TIMBER BACKED ABUTMENT PLANKING SUBJECT TO APPROVAL BY THE ENGINEER.

COVER WING PILE ENDS WITH COAL TAR OR BITUMINOUS COMPOUND.

THE EXISTING STRUCTURE, P-4-71, TO BE REMOVED IS A SINGLE-SPAN STEEL GIRDER BRIDGE WITH TIMBER DECK AND TIMBER ABUTMENTS. THE OVERALL LENGTH IS 31 FEET AND THE CLEAR ROADWAY WIDTH IS 14.5 FEET.

APPLY SURFACE BLOTTER TO TOP OF TIMBER DECK PRIOR TO PLACING ASPHALTIC SURFACE IN ORDER TO REMOVE EXCESS ACCUMULATIONS OF PRESERVATIVE FROM THE DECK SURFACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-4-96			
DRAWN BY		CLS	PLANS CK'D. DNS
QUANTITIES AND NOTES			SHEET 2 OF 8

ORIGINAL PLANS PREPARED BY

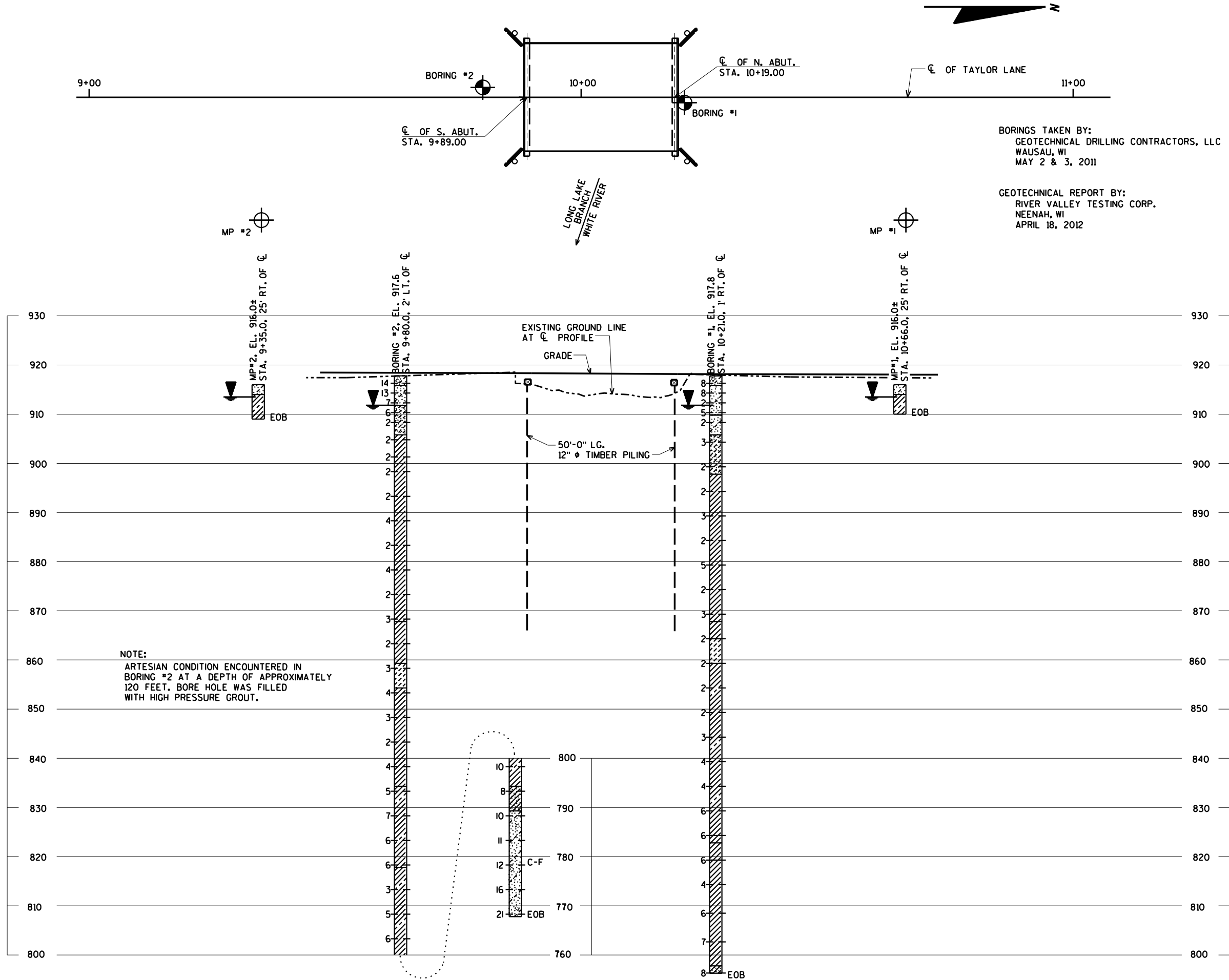
AYRES

ASSOCIATES

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STATE PROJECT NUMBER

8356-00-70

ABBREVIATIONS

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

MATERIAL SYMBOLS

TOPSOIL SILT SANDSTONE
SAND PEAT LIMESTONE
GRAVEL CLAY IGNEOUS ROCK

LEGEND OF PROBING

PROBING NO.
STA.
ELEVATION
7 AVERAGE BLOWS PER FOOT
REFUSAL 95/6

95/6=95 BLOWS FOR 6"
PENETRATION
PROBING TAKEN WITH
A 350# WT.
FALLING 18" ON A 2"
O.D. POINT.

LEGEND OF BORING

ELEV. BORING NO.
STA.

UNCONFINED STRENGTH 7.7
BLOWS PER FT. USING 140# WT. FALLING 30"

WASH SAMPLE

SHELBY TUBE — S.T.

GROUND WATER ELEVATION

NO GROUND WATER OBSERVED ABOVE THIS ELEVATION

SANDY GRAVEL
F. BOULDERS OR COBBLES
SAND
SILTY CLAY
SO
LIMESTONE

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

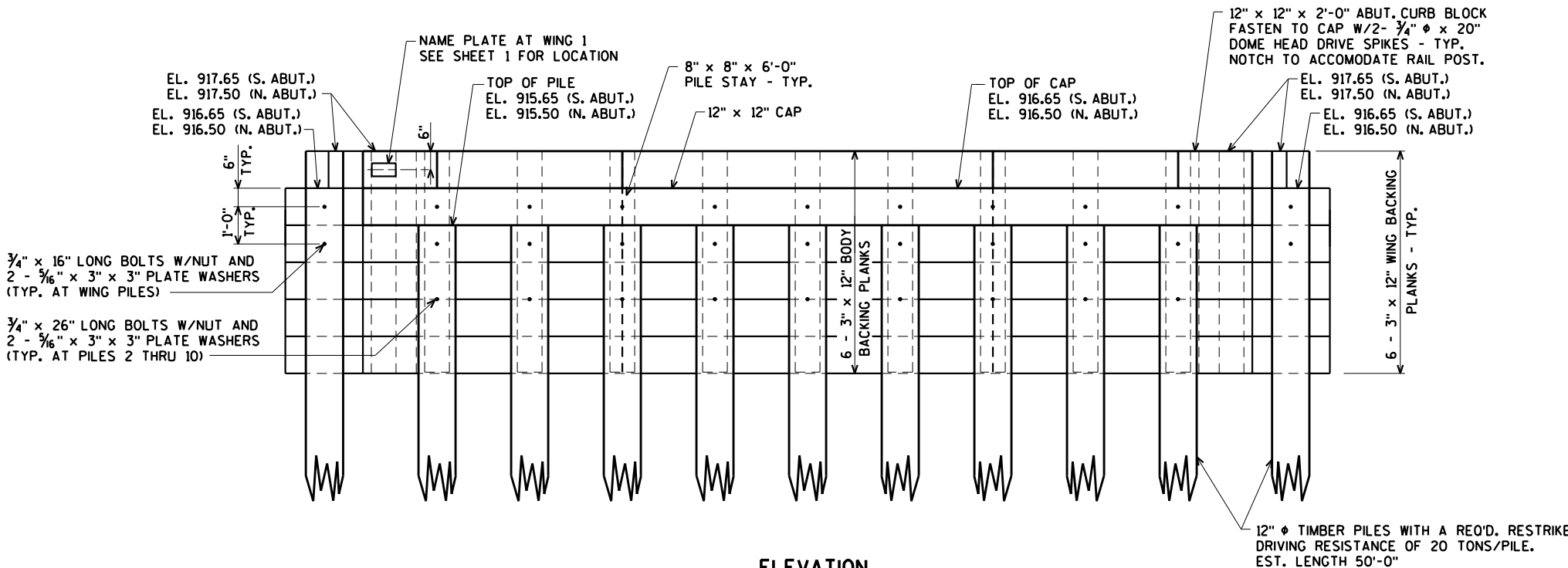
TO OBTAIN RELATIVE DATA CONCERNING THE CHARACTER OF MATERIAL IN AND UPON WHICH THE FOUNDATION MIGHT BE BUILT, BORINGS AND/OR SOUNDINGS WERE MADE AT POINTS APPROXIMATELY AS INDICATED ON THIS DRAWING. THE DATA PRESENTED HEREIN REPRESENTS THE FINDINGS OF THE SUBSURFACE EXPLORATIONS MADE. HOWEVER, BECAUSE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

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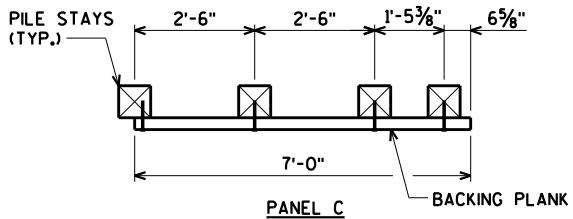
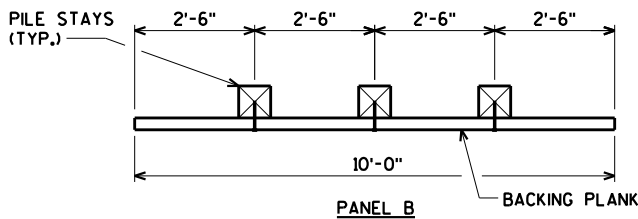
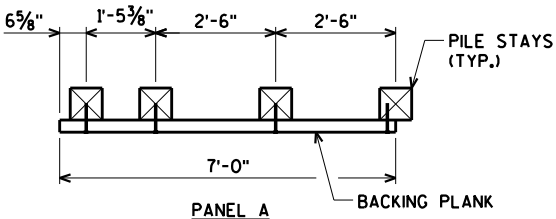
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-4-96			
DRAWN BY		CLS	PLANS CK'D. DNS
SUBSURFACE EXPLORATION			SHEET 3 OF 8

CONSTRUCTION NOTES

INSTALL PREFABRICATED BACKING PLANK
PANELS AND WING PANELS BY BOLTING TO
PILES AT LOCATIONS SHOWN.

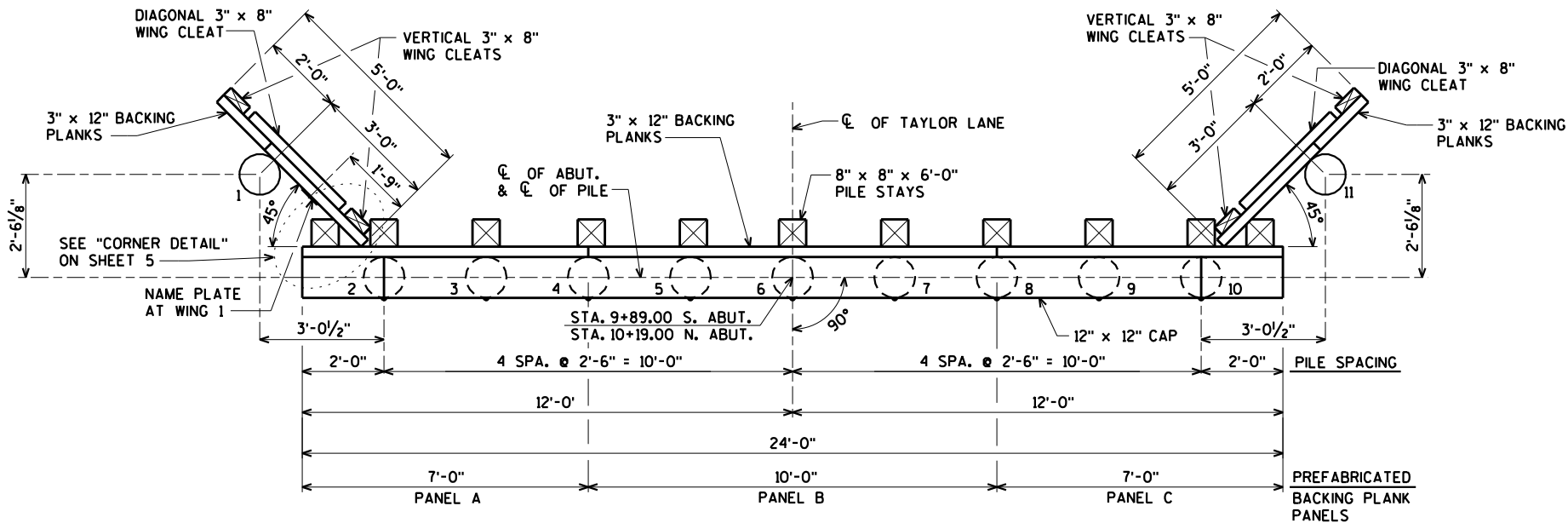


ELEVATION



PREFABRICATED BACKING PLANK PANEL DETAILS

(ATTACH BACKING PLANKS TO PILE STAYS
WITH 60d NAILS AT 6" SPACING)



PLAN

NOTE:

PREFABRICATE WINGS BY ATTACHING BACKING PLANKS
TO WING CLEATS WITH 40d NAILS AT 6" SPACING. BOLT
WING PANELS TO WING PILES AT LOCATIONS SHOWN ABOVE.

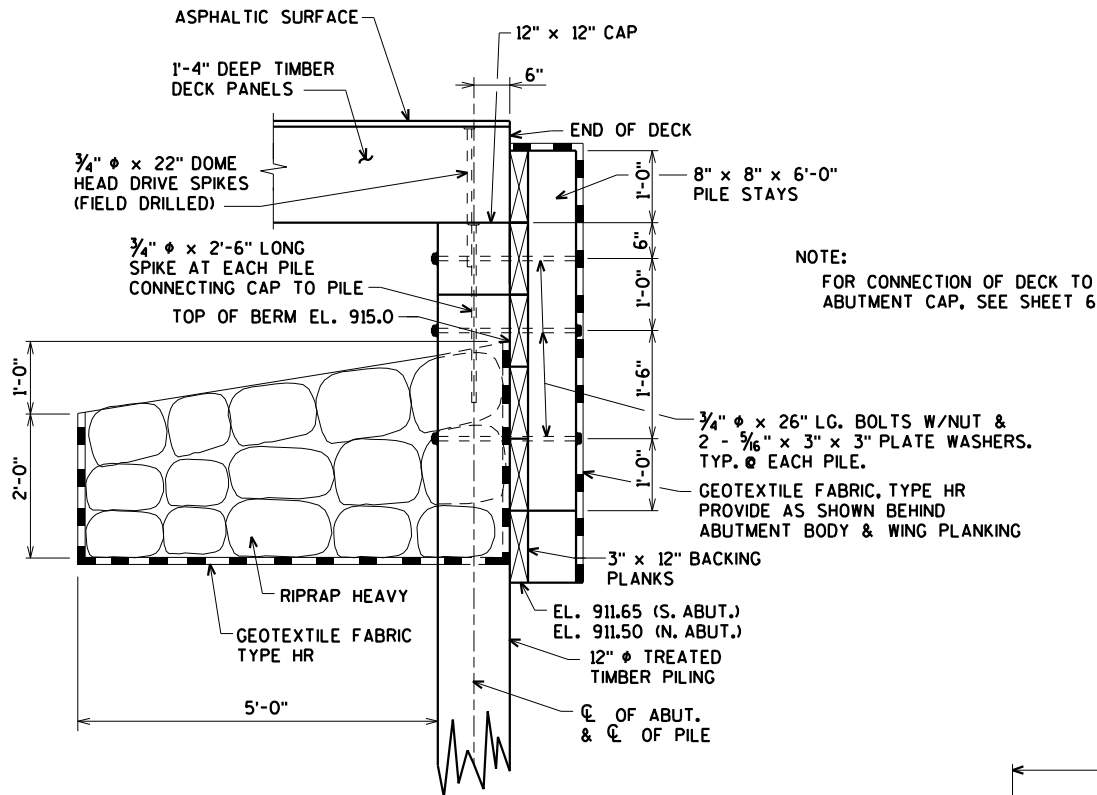
ORIGINAL PLANS PREPARED BY
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STRUCTURE B-4-96			
DRAWN BY		CLS	PLANS CK'D. DNS
ABUTMENTS			SHEET 4 OF 8

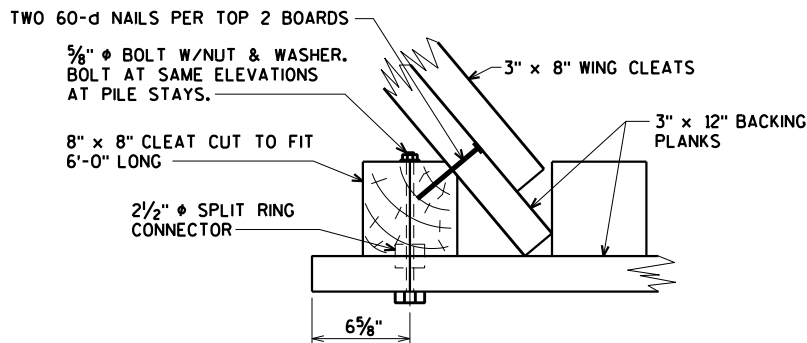
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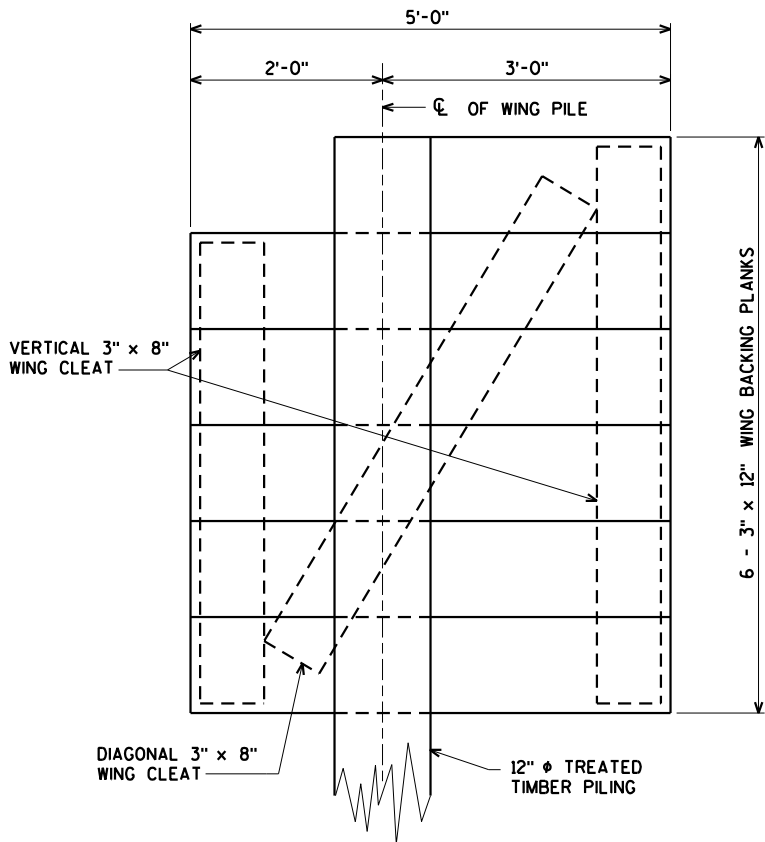
8356-00-70



SECTION THRU ABUTMENT



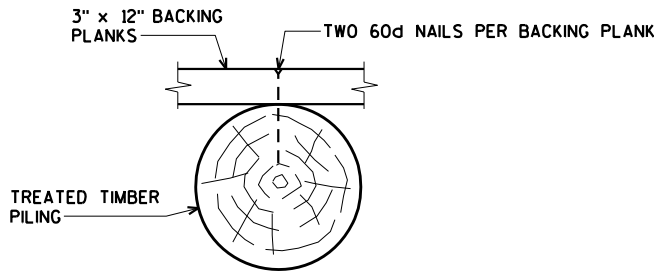
CORNER DETAIL



WING ELEVATION VIEW

BILL OF TIMBER - ONE ABUTMENT

SIZE	NO. REQ'D.	LENGTH	DESCRIPTION
3" x 12"	12	7'-0"	BODY PLANKS (PANEL A & C)
3" x 12"	6	10'-0"	BODY PLANKS (PANEL B)
3" x 12"	10	5'-0"	WING PLANKS
3" x 12"	2	3'-6"	WING TOP PLANKS
12" x 12"	1	24'-0"	PILE CAP
8" x 8"	9	6'-0"	PILE STAYS
8" x 8"	2	6'-0"	BODY CLEAT
3" x 8"	4	5'-0"	WING CLEAT (VERTICAL)
3" x 8"	2	5'-9"	WING CLEAT (DIAGONAL)
12" x 12"	2	2'-0"	CURB BLOCK
TOTAL 1.4 M.B.M. PER ABUTMENT			



BODY & WING PLANK ALTERNATE CONNECTION DETAIL

ALTERNATE CONNECTION DETAIL IF
BACKING PLANKS AND PILE STAYS NOT
PROVIDED AS PREFABRICATED PANELS

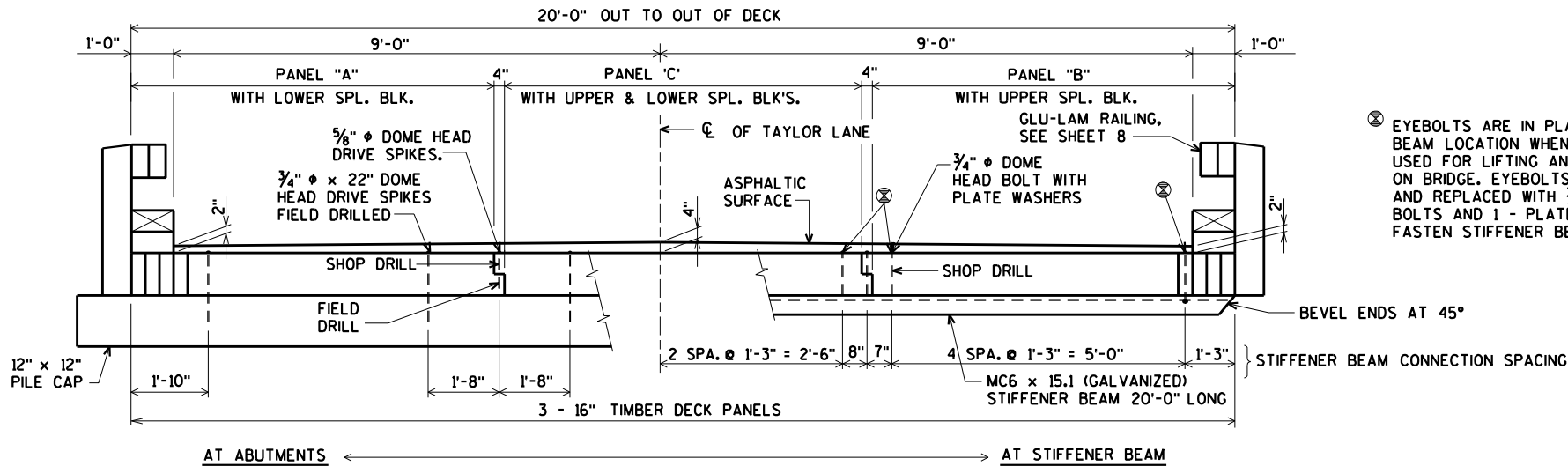
NO.	DATE	REVISION	BY
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STRUCTURE B-4-96			
DRAWN BY		CLS	PLANS CK'D. DNS
ABUTMENT DETAILS			SHEET 5 OF 8

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Eau Claire, WI 54701
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⊗ EYEBOLTS ARE IN PLACE AT STIFFENER BEAM LOCATION WHEN SHIPPED AND ARE USED FOR LIFTING AND PLACING PANELS ON BRIDGE. EYEBOLTS ARE TO BE REMOVED AND REPLACED WITH 3/4" ϕ DOME HEAD BOLTS AND 1 - PLATE WASHER EACH TO FASTEN STIFFENER BEAM.

BILL OF TIMBER - SUPERSTRUCTURE

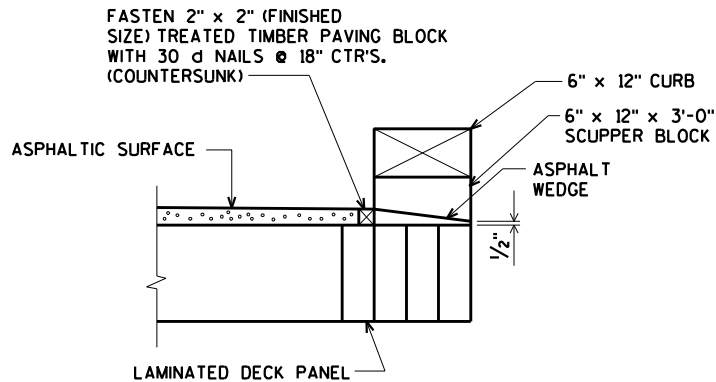
SIZE	NO. REQ'D.	LENGTH	DESCRIPTION
4" x 8"	4	31'-0"	SPLICE BLOCK
4" x 16"	58	31'-0"	DECK
6" x 12"	8	3'-0"	INT. SCRUPPER
6" x 12"	4	3'-0"	END SCRUPPER
6" x 12"	2	31'-0"	CURB
8" x 8"	12	4'-2"	RAIL POST
8" x 4 3/4"	12	0'-10 1/2"	POST BLOCK
6 3/4" x 10 1/2"	2	31'-0"	GLU-LAM RAILING
2" x 2"	2	31'-0"	PAVING BLOCK
TOTAL		11.2 M.B.M.	

CONSTRUCTION NOTES

PANEL "A" IS THE FIRST PANEL TO BE PLACED IN ITS FINAL POSITION ON THE ABUTMENT CAPS AND THEN 1/16" ϕ HOLES ARE TO BE DRILLED THRU DECK AND INTO ABUTMENT CAPS AT LOCATIONS SHOWN. DRIVE 3/4" ϕ x 22" DOME HEAD DRIVE SPIKES. NEXT PLACE PANEL "C" SO ITS UPPER SPLICE BLOCK IS OVER THE SPLICE BLOCK ON PANEL "A" AND DRAW TIGHT TOGETHER WITH A MINIMUM 3 TON LEVER HOIST. THEN DRILL HOLES IN LOWER SPLICE BLOCK OF PANEL "A" AND DRIVE THE 5/8" ϕ DOME HEAD DRIVE SPIKES. DRILL HOLES THRU DECK AND ABUTMENT CAPS AND DRIVE THE 3/4" ϕ x 22" DOME HEAD DRIVE SPIKES. THEREAFTER, SUCCESSIVELY PLACE PANEL "B" IN THE SAME MANNER USING THE LEVER HOIST TO DRAW EACH UNIT UP TIGHT.

ALL HOLES WHERE DOME HEAD DRIVE SPIKES ARE USED ARE TO BE 1/16" SMALLER THAN SPIKE SIZE.

HOLES DRILLED FOR BOLTS ARE TO BE 1/16" ϕ LARGER THAN BOLT SIZE.



DECK SECTION AT CURB

8

8

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STRUCTURE B-4-96			
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SUPERSTRUCTURE			SHEET 6 OF 8

PREFABRICATED TIMBER PANEL NOTES

LAMINATE DECK PLANKS USING 3/8" φ × 15" & 3/8" φ × 11" GALVANIZED RING SHANK NAILS.

FOUR PLANKS SHALL BE FABRICATED FIRST, AS SHOWN, WITH 2-PLANK UNITS BEING ADDED TO MAKE 6'-0" WIDE SECTION. ADD (2) 4" PLANKS TO MAKE 6'-8" PANELS.

SPLICE BLOCK SHALL BE FASTENED WITH 11" GALVANIZED RING SHANK NAILS.

DRILL 5/8" φ HOLES FOR DOME HEAD DRIVE SPIKES IN UPPER SPLICE BLOCK AS SHOWN.

DRILL 1/6" HOLES FOR 3/4" EYEBOLTS FOR HANDLING AND FOR FASTENING SPREADER BEAM WHEN ERECTED.

PLANK TO BE PREBORED BEFORE BEING TREATED.

RING SHANK NAILS SHALL BE SET IN PREBORED HOLES OF 2 & 4 PLANK UNITS BEFORE DRIVING.

NAIL DRIVING SHALL BE DONE WITH A HYDRAULIC PRESS SO THAT PLANKS ARE DRIVEN TO A TIGHT FIT TO MAKE DIMENSIONS OF PANELS.

SAWN LUMBER SHALL COMPLY WITH THE REQUIREMENTS OF AASHTO M168 AND SHALL BE PRESSURE TREATED WITH WOOD PRESERVATIVES IN ACCORDANCE WITH AASHTO M133 AND STANDARD SPECIFICATIONS.

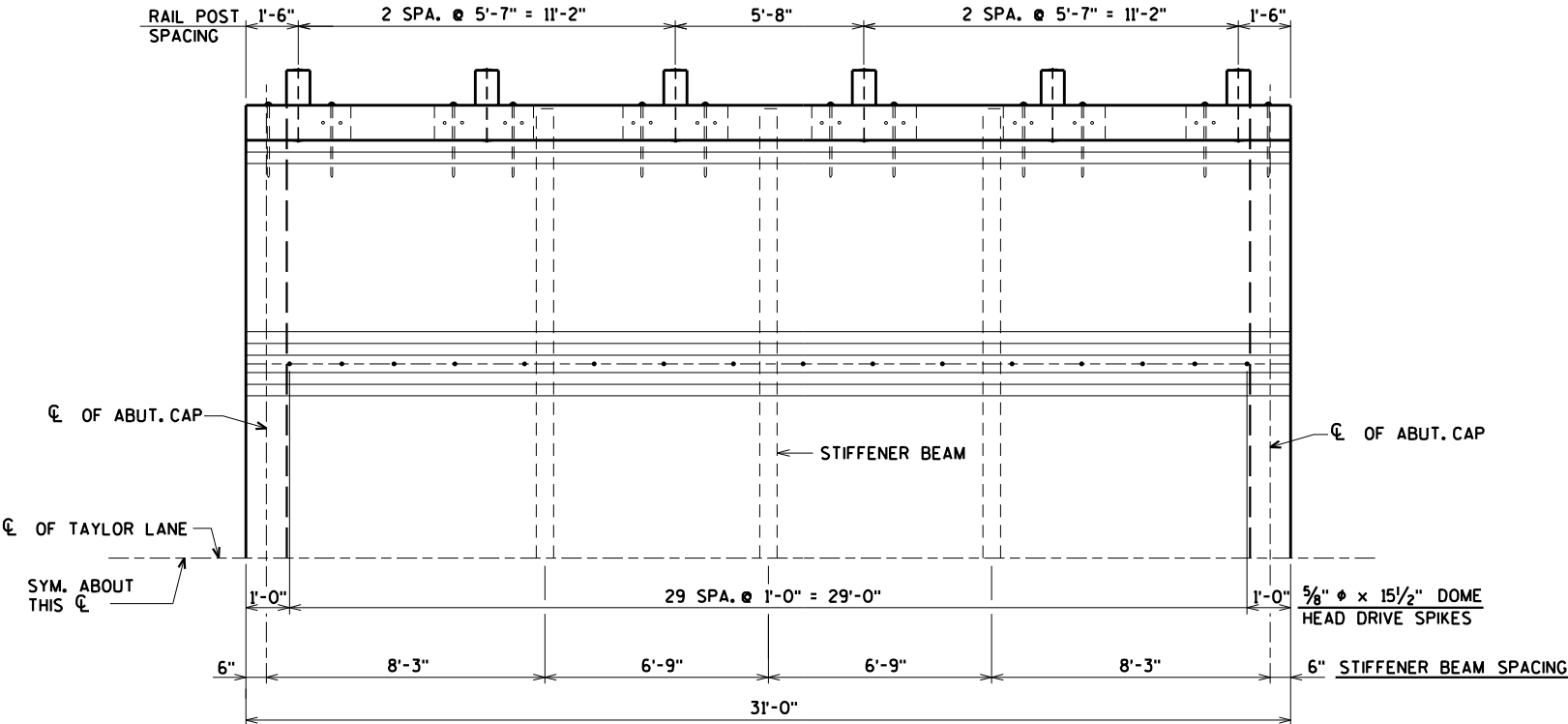
ALL PANELS SHALL BE SURFACED ONE SIDE (SIS) SO THAT PANELS WILL BE WIDTH SHOWN AFTER FABRICATION.

ALL HARDWARE SHALL BE GALVANIZED, INCLUDING RING SHANK NAILS.

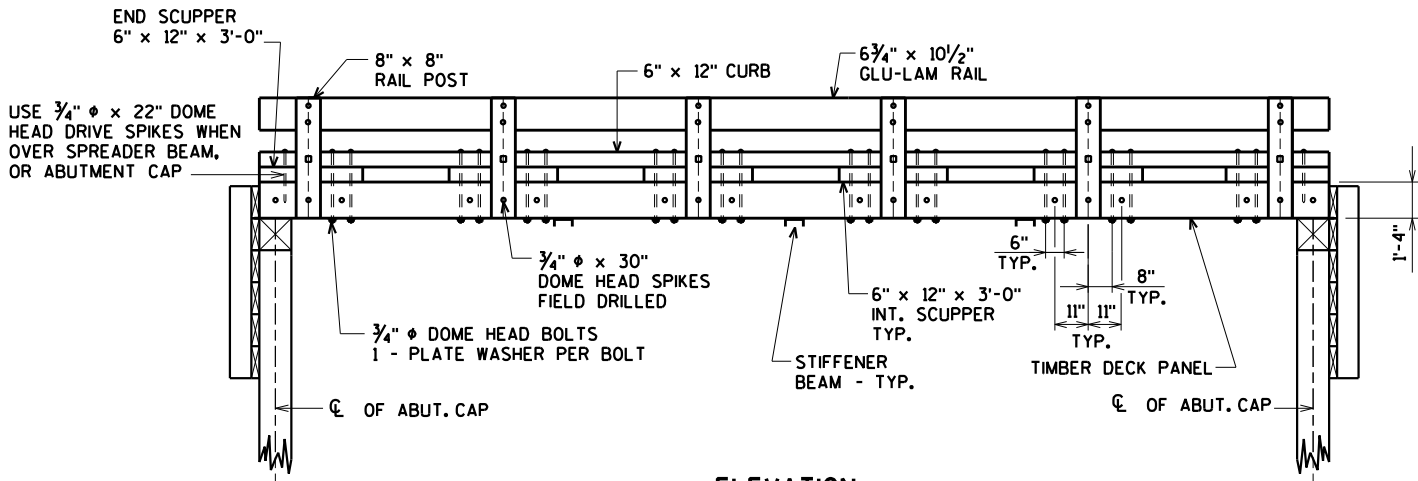
AS AN ALTERNATE, THE DECK MAY BE FABRICATED IN PLACE AND THE SPLICE BLOCK PLANKS & DOME HEAD DRIVE SPIKES OMITTED. ASSEMBLY TO BEGIN AT C/L OF BRIDGE, PROCEEDING TO FINISH AT EACH FACIA. ALL OTHER NOTES APPLY.

MATERIAL SHALL BE VISUALLY GRADED NO. 1 SOUTHERN PINE OR VISUALLY GRADED NO. 1 DOUGLAS FIR-LARCH, OTHER SPECIES AND GRADES OF SAWN LUMBER MAY BE USED, PROVIDED THE MINIMUM TABULATED VALUES ARE NO LESS THAN THE FOLLOWING:

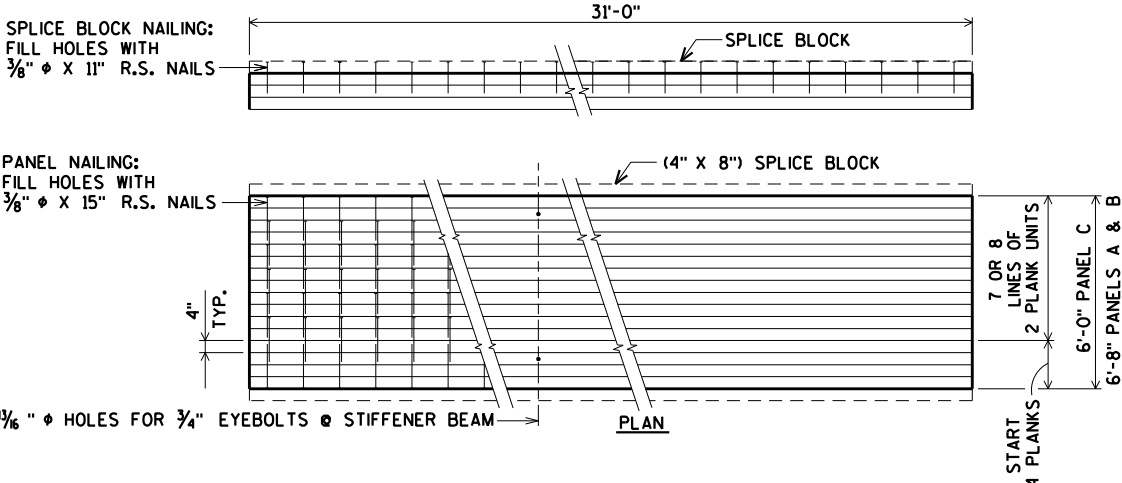
$F_b = 1,500 \text{ LB/IN}^2$ $E = 1,500,000 \text{ LB/IN}^2$



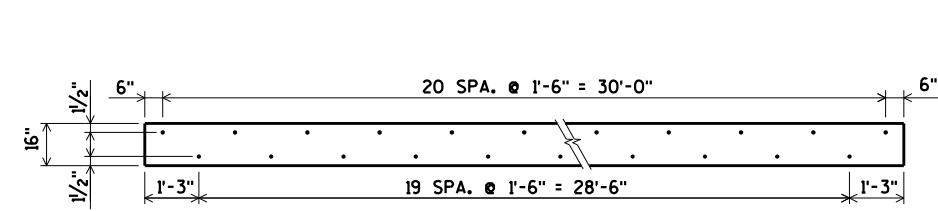
PARTIAL PLAN



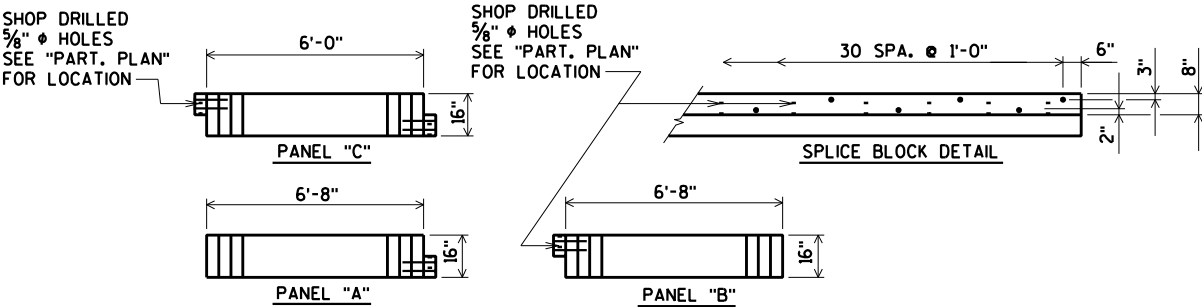
ELEVATION



PANEL DETAILS



(INVERT NAILING PATTERN AT EACH SUCCESSIVE LAMINATION OF (2) 4" PLANKS TO AVOID CONFLICT WITH REPETITIVE NAIL PLACEMENT)



PANEL DETAILS

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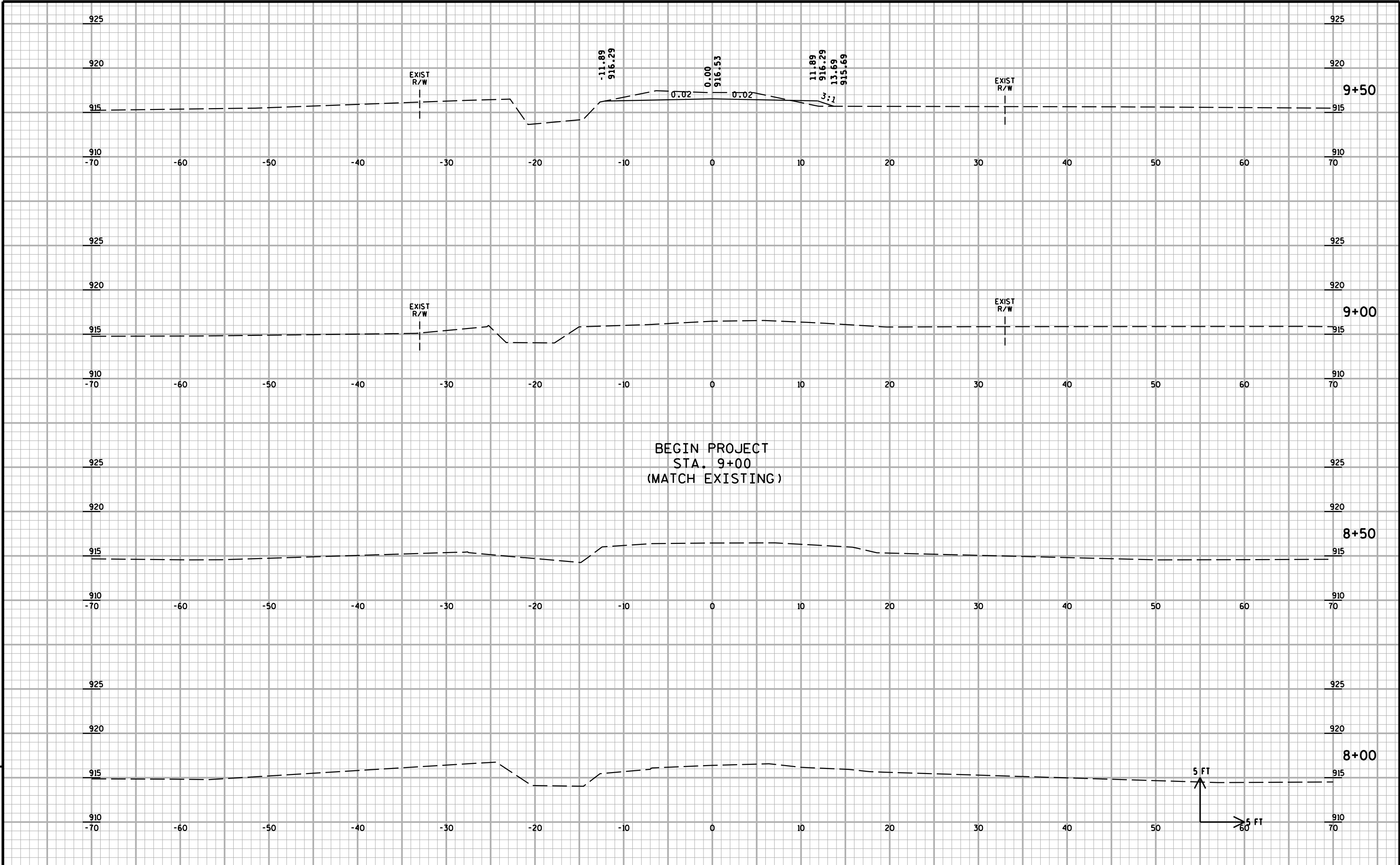
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STRUCTURE B-4-96			
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SUPERSTRUCTURE DETAILS			SHEET 7 OF 8

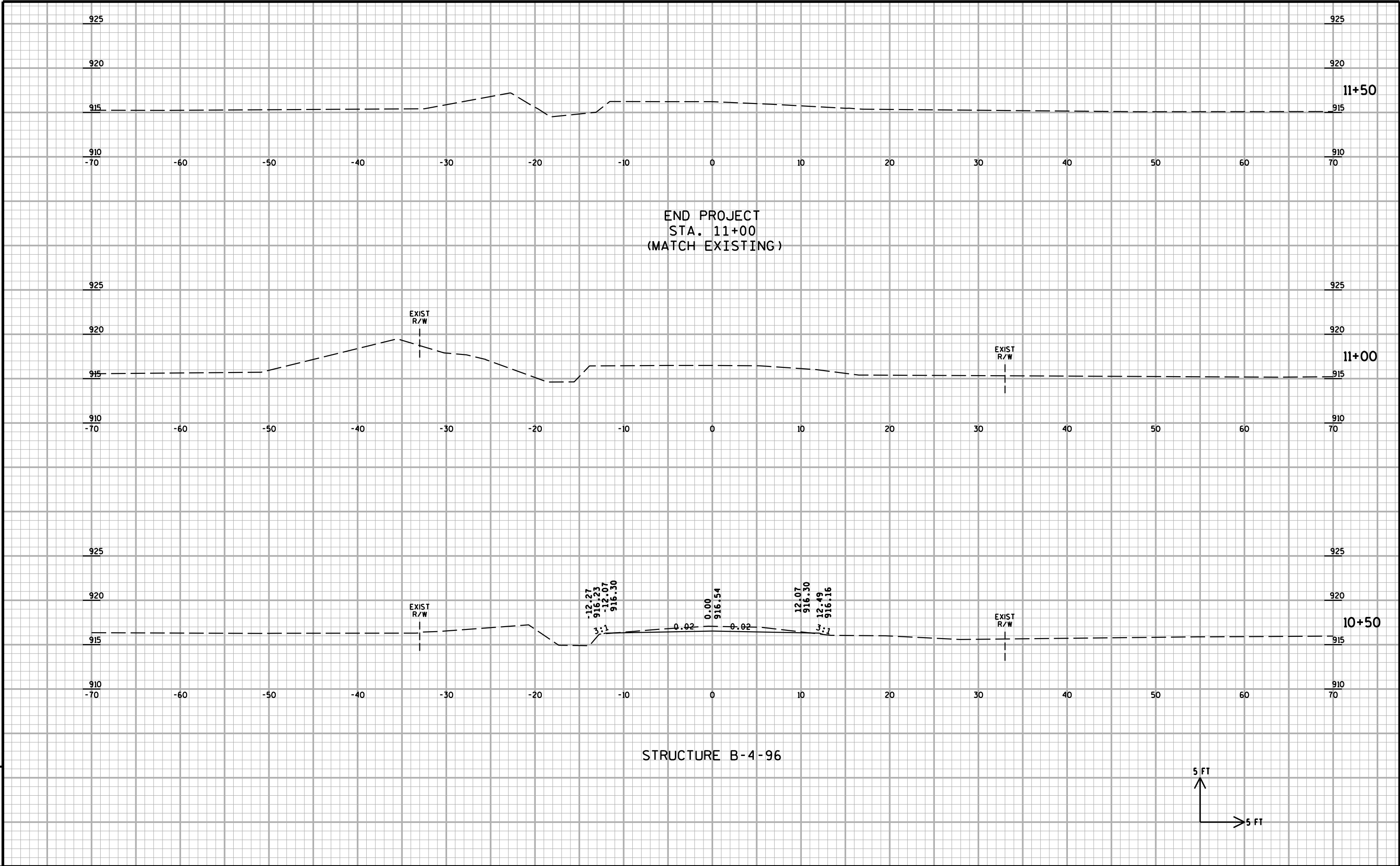


- ① GLULAM RAIL 6 $\frac{3}{4}$ " x 10 $\frac{1}{2}$ "
- ② RAIL SPACER BLOCK 8" x 4 $\frac{3}{4}$ " x 10 $\frac{1}{2}$ "
- ③ SCRUPPER BLOCK 6" x 12" x 3'-0"
- ④ RAIL POST @ STRUCTURE 8" x 8" x 4'-2"
- ⑤ CURB 6" x 12"
- ⑪ STEEL SPLICE PLATE, ASTM A36.
- ⑫ $\frac{3}{4}$ " ϕ x 1'-10" LONG ASTM A307, GRADE 2, DOME-HEAD BOLT
W/ 1-PLATE WASHER PER BOLT.
(2 REQ'D. @ EACH RAIL TO POST CONNECTION,
4 REQ'D. @ EACH RAIL SPLICE).
- ⑮ $\frac{7}{8}$ " ϕ x 9" LONG ASTM A307, GRADE 2,
DOME HEAD BOLT AT RAIL SPLICE DETAIL.
- ⑯ $\frac{3}{4}$ " ϕ x 8" LONG ASTM A307, GRADE 2,
DOME HEAD BOLT (4 REQ'D. @ EACH CURB
SPLICE DETAIL).

DESTROY THREADS ON ALL BOLTS WITH A CENTER PUNCH AFTER TIGHTENING NUT. EXPOSED BOLT PROJECTION OVER 1" SHALL BE CUT OFF. REPAIR END OF BOLT BY PAINTING WITH ZINC RICH PRIMER.

*EARTHWORK SUMMARY (CATEGORY 0010)				
P				
205.0100				
EXCAVATION				
STAGE	STATION	COMMON CY	FILL CY	WASTE CY
1	9+00	26	1	
Taylor Ln.	9+50	20	2	
	9+88.50			42
STRUCTURE (B-4-96)				
	10+19.50			
	10+50	9	0	
	11+00	20	0	
				29
SUBTOTALS		75	3	71
* NOTE:				
FOR BORROW EXCAVATION QUANTITY AND				
SHRINKAGE FACTOR, SEE PLAN SHEET				
BALANCE POINTS.				
EXCAVATION MARSH - TO BE BACKFILLED WITH BORROW.				





9

9

Notes



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