

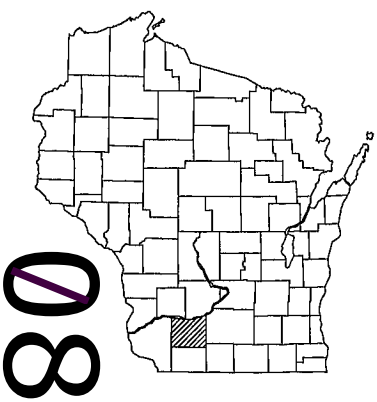
PROJECT ID: 5699-00-75
WITH: N/A

COUNTY: IOWA

ORDER OF SHEETS

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

TOTAL SHEETS = 38



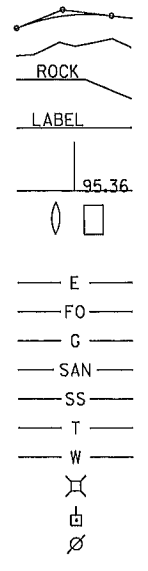
DESIGN DESIGNATION

A.A.D.T. 2016	=	110
A.A.D.T. 2036	=	160
D.H.V. 2036	=	15
D.D.	=	60/40
T.	=	10% ASSUMED
DESIGN SPEED	=	30 MPH
ESALS	=	42,000

CONVENTIONAL SYMBOLS

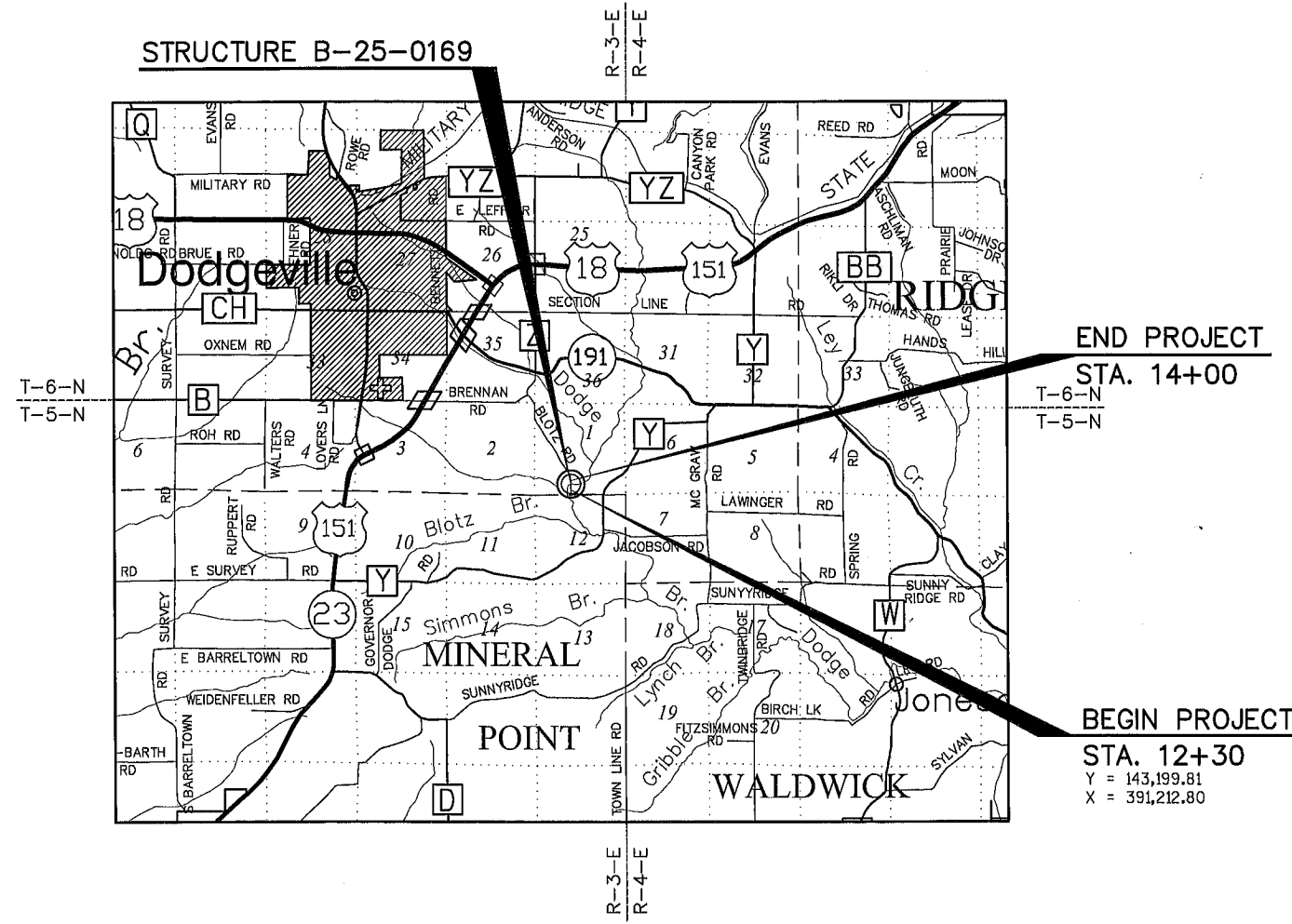
PLAN
CORPORATE LIMITS
PROPERTY LINE
LOT LINE
LIMITED HIGHWAY EASEMENT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE
SLOPE INTERCEPT
REFERENCE LINE
EXISTING CULVERT
PROPOSED CULVERT (Box or Pipe)
COMBUSTIBLE FLUIDS
MARSH AREA
WOODED OR SHRUB AREA

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
TOWN OF DODGEVILLE, BLOTZ ROAD
(DODGE BRANCH BRIDGE B-25-0169)
TOWN ROAD
IOWA COUNTY

STATE PROJECT NUMBER
5699-00-75



LAYOUT
SCALE 0 2 MI.

TOTAL NET LENGTH OF CENTERLINE = 0.032 MI.

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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
5699-00-75	WISC 2016251	1

ACCEPTED FOR
TOWN of DODGEVILLE
1-20-16 Curt Peterson
(Date) (Town Chairperson)

ACCEPTED FOR
COUNTY of IOWA
1-20-16 Craig E. Schaffer
(Date) (Highway Commissioner)

ORIGINAL PLANS PREPARED BY
JEWELL
associates engineers, inc.
Engineers - Surveyors - Architects

WISCONSIN
ELLERY A. SCHAFER
E-41742-6
SPRING GREEN, WI
PROFESSIONAL ENGINEER

1/20/2016 E.A.S.
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	JEWELL ASSOCIATES ENGINEERS, INC.
Designer	JEWELL ASSOCIATES ENGINEERS, INC.
Management Consultant	KL ENGINEERING, INC.

APPROVED FOR THE DEPARTMENT

DATE: 1/20/16
Signature: [Signature]
Management Consultant Signature

E

LIST OF STANDARD ABBREVIATIONS

ABUT	Abutment	INV	Invert	SALV	Salvaged
AC	Acre	IP	Iron Pipe or Pin	SAN S	Sanitary Sewer
AGG	Aggregate	IRS	Iron Rod Set	SEC	Section
AH	Ahead	JT	Joint	SHLDR	Shoulder
<	Angle	JCT	Junction	SHR	Shrinkage
ASPH	Asphaltic	LHF	Left-Hand Forward	SW	Sidewalk
AVG	Average	L	Length of Curve	S	South
ADT	Average Daily Traffic	LIN FT or LF	Linear Foot	SQ	Square
BAD	Base Aggregate Dense	LC	Long Chord of Curve	SF or SQ FT	Square Feet
BK	Back	MH	Manhole	SY or SQ YD	Square Yard
BF	Back Face	MB	Mailbox	STD	Standard
BM	Bench Mark	ML or M/L	Match Line	SDD	Standard Detail Drawings
BR	Bridge	N	North	STH	State Trunk Highways
C or C/L	Center Line	Y	North Grid Coordinate	STA	Station
CC	Center to Center	OD	Outside Diameter	SS	Storm Sewer
CTH	County Trunk Highway	PLE	Permanent Limited Easement	SG	Subgrade
CR	Creek			SE	Superelevation
CR	Crushed	PT	Point	SL or S/L	Survey Line
CY or CU YD	Cubic Yard	PC	Point of Curvature	SV	Septic Vent
CP	Culvert Pipe	PI	Point of Intersection	T	Tangent
C & G	Curb and Gutter	PRC	Point of Reverse Curvature	TEL	Telephone
D	Degree of Curve	PT	Point of Tangency	TEMP	Temporary
DHV	Design Hour Volume	POC	Point On Curve	TI	Temporary Interest
DIA	Diameter	POT	Point on Tangent	TLE	Temporary Limited Easement
E	East	PVC	Polyvinyl Chloride		
X	East Grid Coordinate	PCC	Portland Cement Concrete	t	Ton
ELEC	Electric (al)	LB	Pound	T or TN	Town
EL or ELEV	Elevation	PSI	Pounds Per Square Inch	TRANS	Transition
ESALS	Equivalent Single Axle Loads	PE	Private Entrance	TL or T/L	Transit Line
		R	Radius		Trucks (percent of)
EBS	Excavation Below Subgrade	RR	Railroad	TYP	Typical
FF	Face to Face	R	Range	UNCL	Unclassified
FE	Field Entrance	RL or R/L	Reference Line	UG	Underground Cable
F	Fill	RP	Reference Point	USH	United States Highway
FG	Finished Grade	RCCP	Reinforced Concrete Culvert Pipe	VAR	Variable
FL or F/L	Flow Line			V	Velocity or Design Speed
FT	Foot	REQ'D	Required	VERT	Vertical
FTG	Footing	RES	Residence or Residential	VC	Vertical Curve
GN	Grid North	RW	Retaining Wall	VOL	Volume
HT	Height	RT	Right	WM	Water Main
CWT	Hundredweight	RHF	Right-Hand Forward	WV	Water Valve
HYD	Hydrant	R/W	Right-of-Way	W	West
INL	Inlet	R	River	WB	Westbound
ID	Inside Diameter	RD	Road	YD	Yard
		RDWY	Roadway		

GENERAL NOTES

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

COORDINATES AND BEARINGS ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), IOWA COUNTY.

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

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

DISTURBED AREAS SHOWN WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS ARE TO BE FERTILIZED (TYPE B), SEEDED (USE SEED MIX NO. 20), AND MULCHED AS DIRECTED BY THE ENGINEER. ALL POST CONSTRUCTION WET AREAS SHALL BE SEEDED WITH SEEDING MIXTURE NO. 60.

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

SILT FENCE AND CULVERT PIPE CHECKS SHALL BE PLACED AS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER IN THE FIELD. SILT FENCE SHALL BE PLACED PRIOR TO CONSTRUCTION AND IN PLACE PRIOR TO STRUCTURE REMOVAL.

MULCH ALL MAINLINE SLOPES AS DIRECTED BY THE ENGINEER IN THE FIELD.

FILL EXPANSION IS VARIABLE AND IS ESTIMATED AT 25%.

ADJUST DITCH GRADING AS NECESSARY TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER.

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

3½-INCHES OF ASPHALTIC SURFACE SHALL BE CONSTRUCTED WITH A 1¾-INCH UPPER LAYER AND A 1¾-INCH LOWER LAYER. THE NOMINAL SIZE OF AGGREGATE USED FOR THE LOWER LAYER SHALL BE 12.5 MM.

REMOVAL OF ASPHALTIC SURFACES WHERE AN ABUTTING ASPHALTIC SURFACE IS TO REMAIN IN PLACE SHALL REQUIRE A SAWCUT MEETING THE APPROVAL OF THE ENGINEER IN THE FIELD.

INLET & OUTLET ELEVATIONS FOR CULVERT PIPES AS SHOWN ON THE PLAN MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS.

THE LOCATION OF ALL PERMANENT SIGNING SHALL BE VERIFIED BY THE ENGINEER IN THE FIELD PRIOR TO PLACEMENT.

WETLANDS ARE PRESENT IN THE PROJECT LIMITS. THE CONTRACTOR SHALL NOT OPERATE EQUIPMENT BEYOND THE SLOPE INTERCEPTS FROM STA. 13+06 – STA. 14+00, LT.

CONTACTS

DESIGN CONSULTANT

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FAX: (608) 588-9322
EMAIL: ellery.schaffer@jewellassoc.com

DNR LIAISON

STATE OF WISCONSIN
DNR SOUTH CENTRAL REGION HQ
3911 FISH HATCHERY ROAD
FITCHBURG, WI 53711
ATTN: ANDY BARTA
PHONE: (608) 275-3308
EMAIL: Andrew.Barta@wisconsin.gov

IOWA COUNTY HIGHWAY DEPARTMENT

CRAIG HARDY, COMMISSIONER
1215 NORTH BEQUETTE STREET
DODGEVILLE, WI 53533
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CELL: (608) 574-2935
EMAIL: craig.hardy@iowacounty.org

TOWN OF DODGEVILLE

CURT PETERSON, CHAIRPERSON
108 EAST LEFFLER STREET
DODGEVILLE, WI 53533
PHONE: (608) 935-5808
EMAIL: twnclerk@mhtc.net

UTILITIES

ELECTRIC

ALLIANT ENERGY
ATTN: GREG EWERS
490 SHAKERAG ST.
MINERAL POINT, WI 53565
OFFICE: (608) 458-4209
CELL: (608) 558-7726
EMAIL: gregewers@alliantenergy.com

TELEPHONE

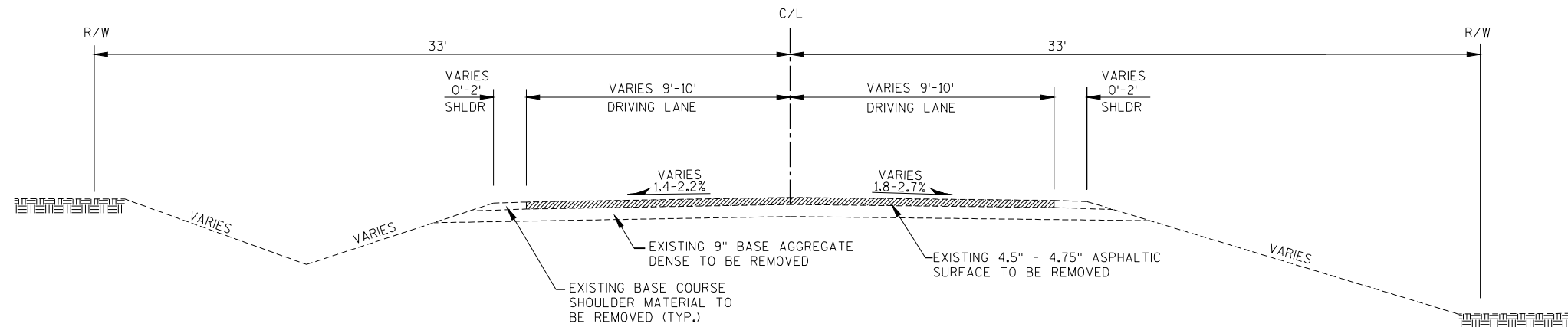
FRONTIER COMMUNICATIONS
ATTN: DANA GILLET
100 COMMUNICATIONS DRIVE
SUN PRAIRIE, WI 53590
PH: (608) 837-1605
EMAIL: Dana.Gillett@ftr.com



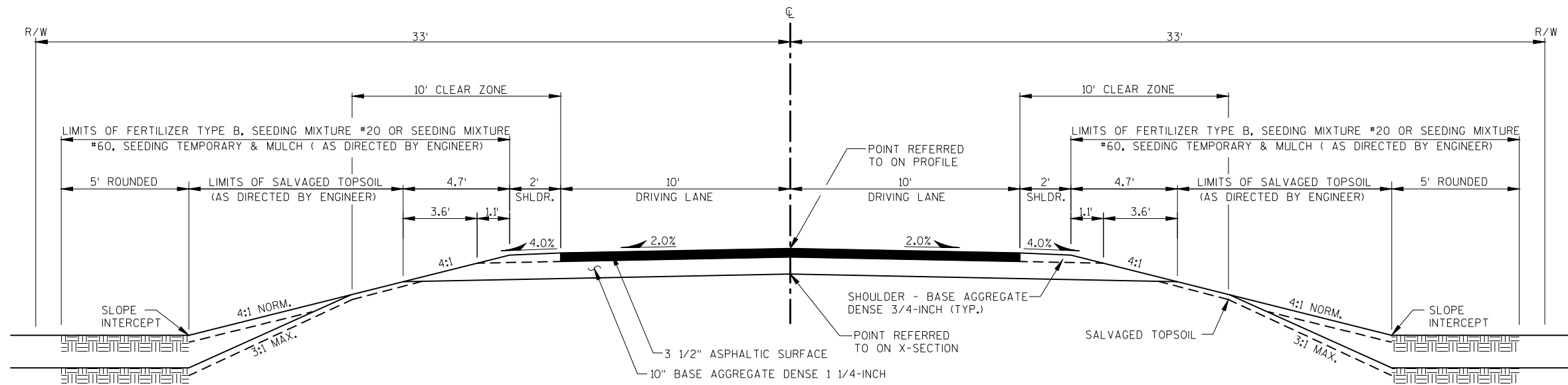
* DENOTES UTILITY IS NOT A MEMBER OF DIGGERS HOTLINE

	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						

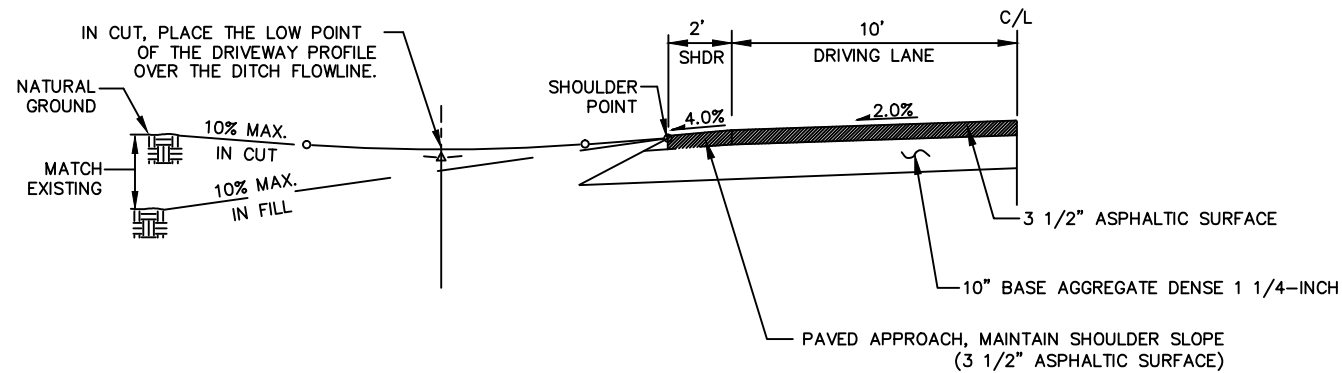
TOTAL PROJECT AREA= 0.33 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.24 ACRES



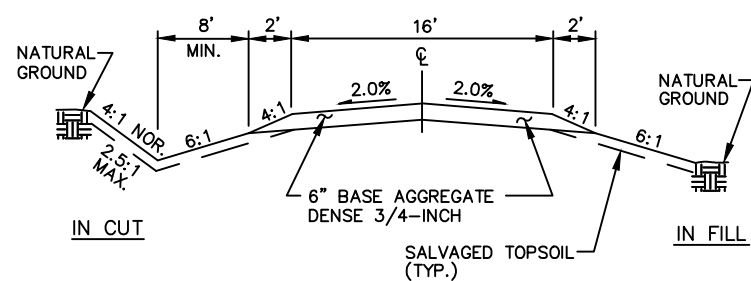
TYPICAL EXISTING SECTION



TYPICAL FINISHED SECTION

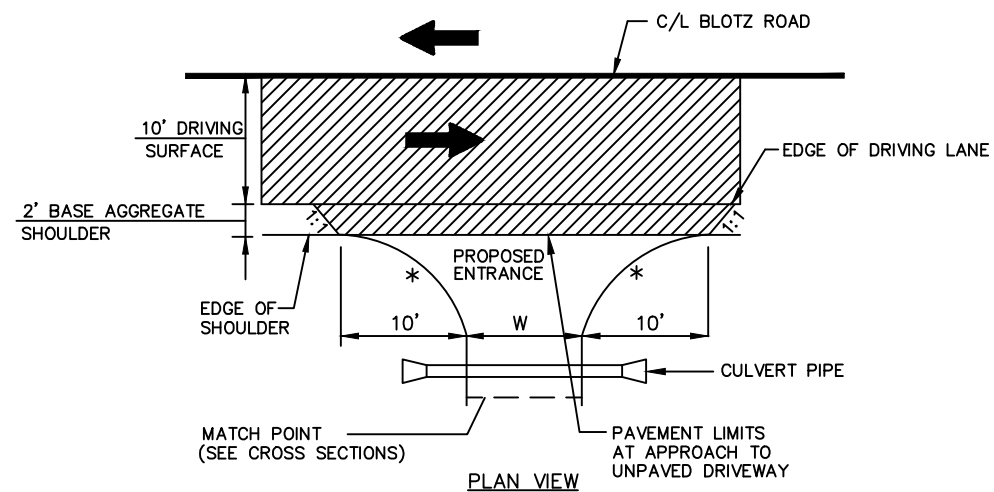


TYPICAL F.E. PROFILE



TYPICAL CROSS-SECTION FOR F.E.

F.E. - STA. 13+64, LT.

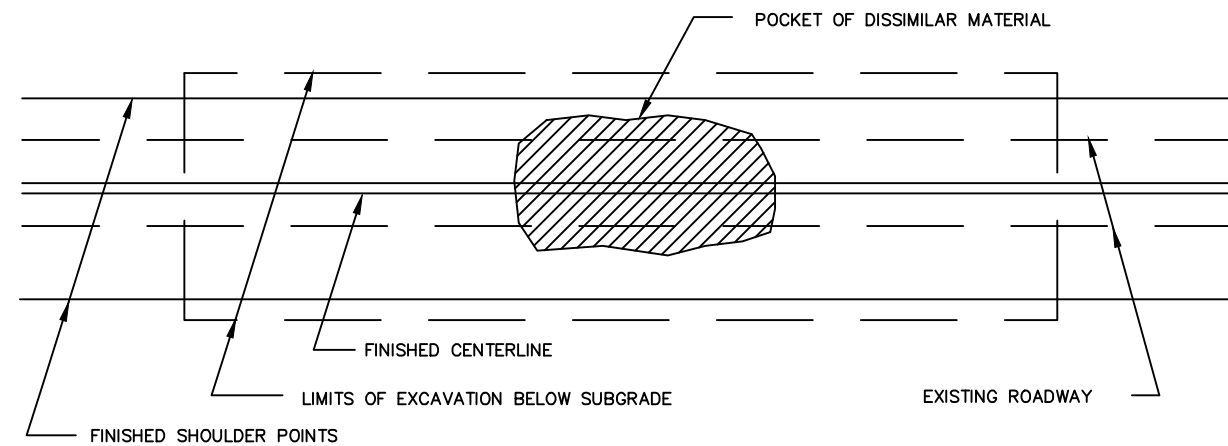


APPROACH AT F.E.

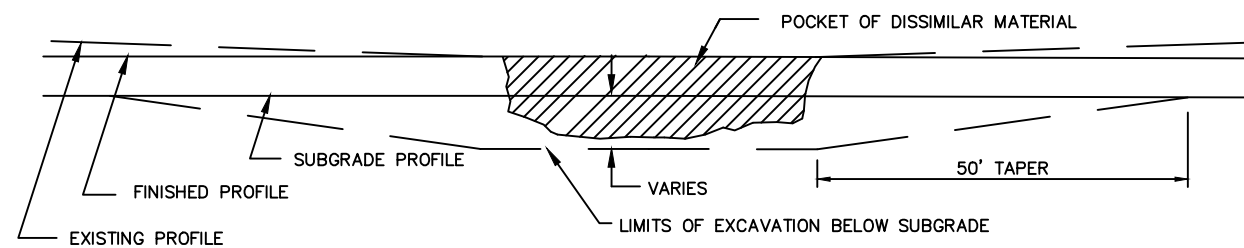
TYPICAL FIELD ENTERANCE (F.E.) DETAILS

LIMITS OF ASPHALTIC SURFACE

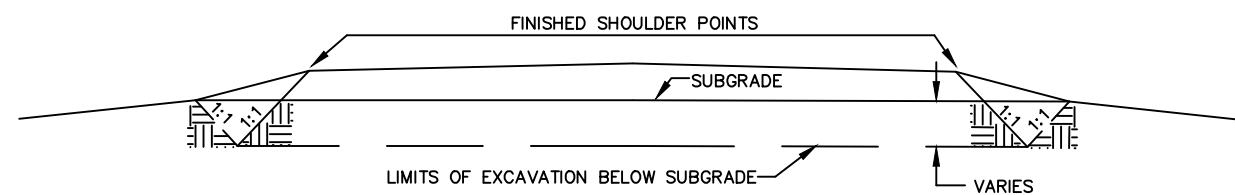
* RADIUS = 10'



PLAN VIEW



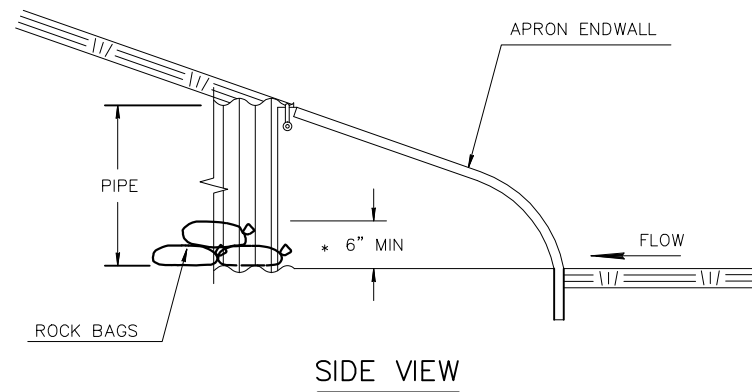
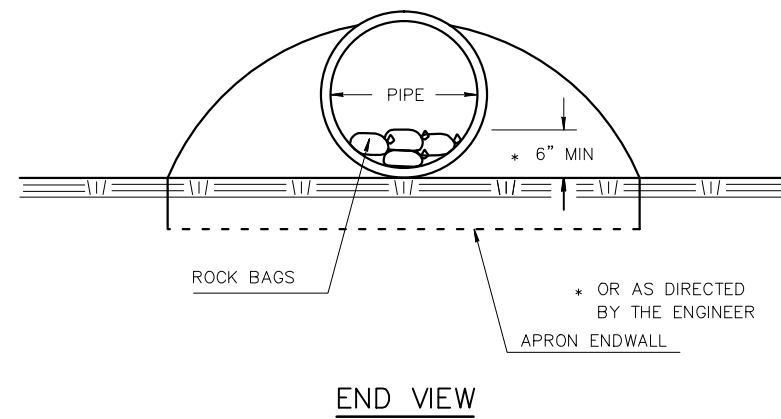
PROFILE VIEW



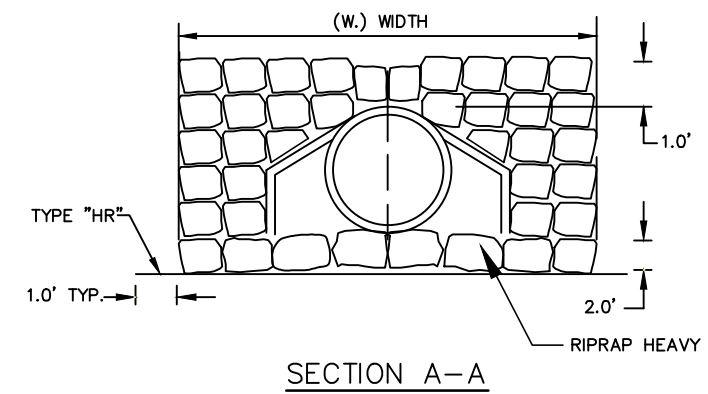
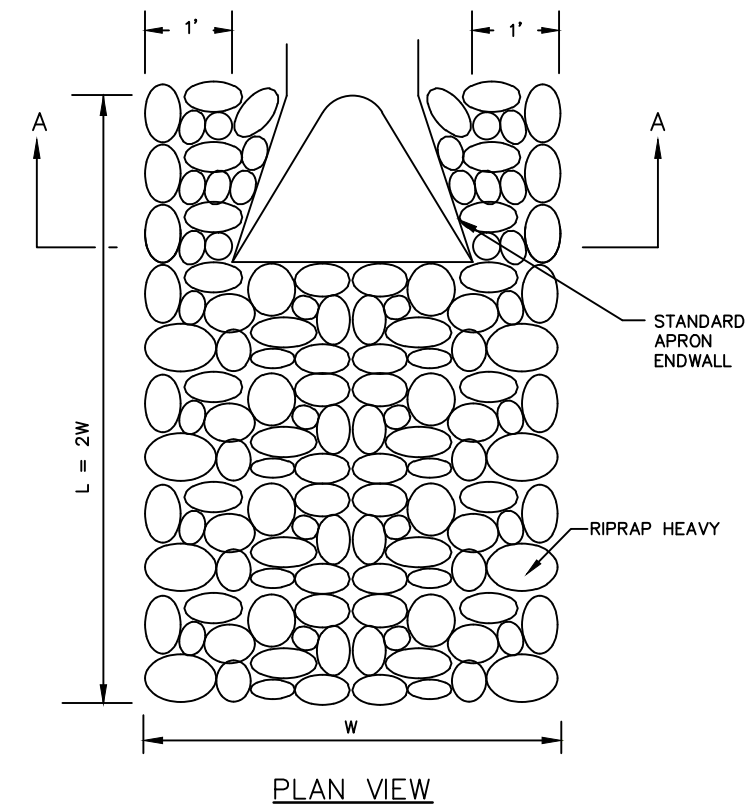
CROSS SECTION VIEW

1. EXACT LOCATION OF E.B.S. (EXCAVATION BELOW SUBGRADE) SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.
2. E.B.S. AREA TO BE BACKFILLED WITH MATERIAL ACCEPTABLE TO THE ENGINEER. BACKFILL MUST BE HOMOGENEOUS WITH ADJOINING FILL MATERIAL.
3. THE FILL SECTION WITHIN 100' OF THE MOUTH OF THE CUT MUST BE KEPT 2' BELOW SUBGRADE UNTIL E.B.S. IS COMPLETED. LATERAL LIMITS OF EXCAVATION SHALL BE THE SUBGRADE SHOULDER POINTS.

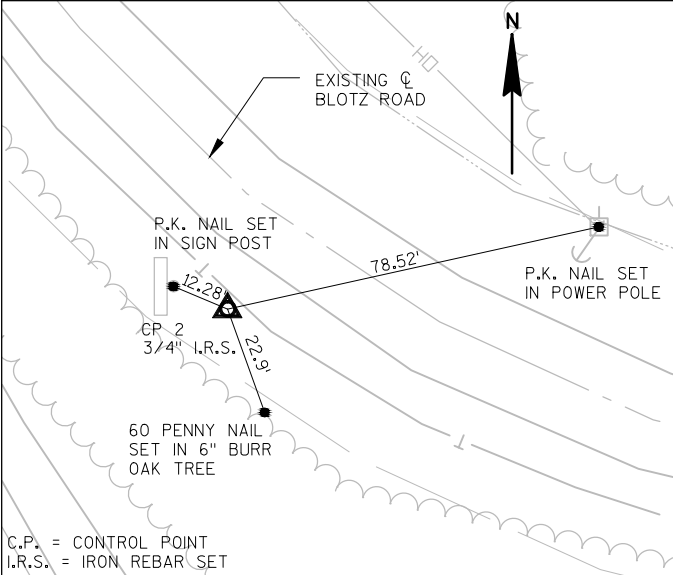
EXCAVATION BELOW SUBGRADE (E.B.S.)



CULVERT PIPE CHECKS



RIPRAP HEAVY DISCHARGE APRON
(UNLESS NOTED OTHERWISE ON PLAN)

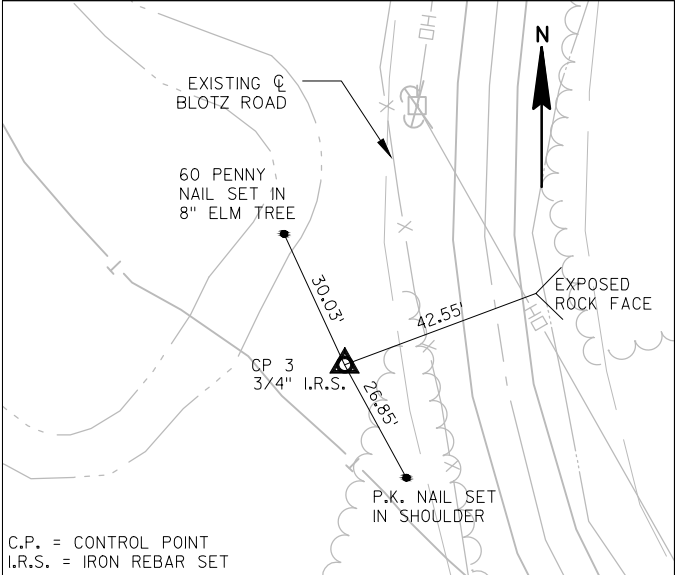


TIES TO C.P.#2

STA. 7+93; 22.3' LT.
Y = 142,790.01
X = 391,332.30

CONTROL POINTS

No.	STATION	DESCRIPTION	Y	X
2	7+93	3/4" REBAR SET 11.6'± SOUTHWEST OF THE EDGE OF ASPHALT, 22.3' LT.	142,790.01	391,332.30
3	10+38	3/4" REBAR SET 5.9'± WEST OF EDGE ASPHALT, 17.3' LT.	143,004.63	391,195.95
4	14+65	3/4" REBAR SET 8.6'± EAST OF THE EDGE OF ASPHALT, 18.1' RT.	143,431.93	391,266.33

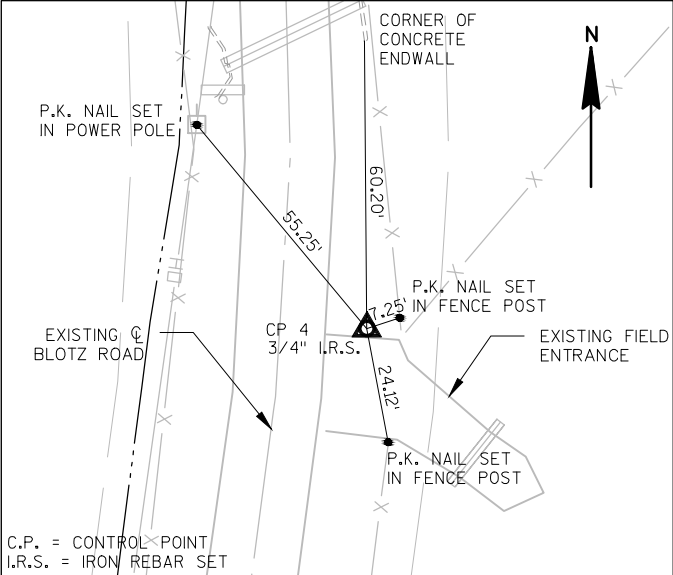


TIES TO C.P.#3

STA. 10+38; 17.3' LT.
Y = 143,004.63
X = 391,195.95

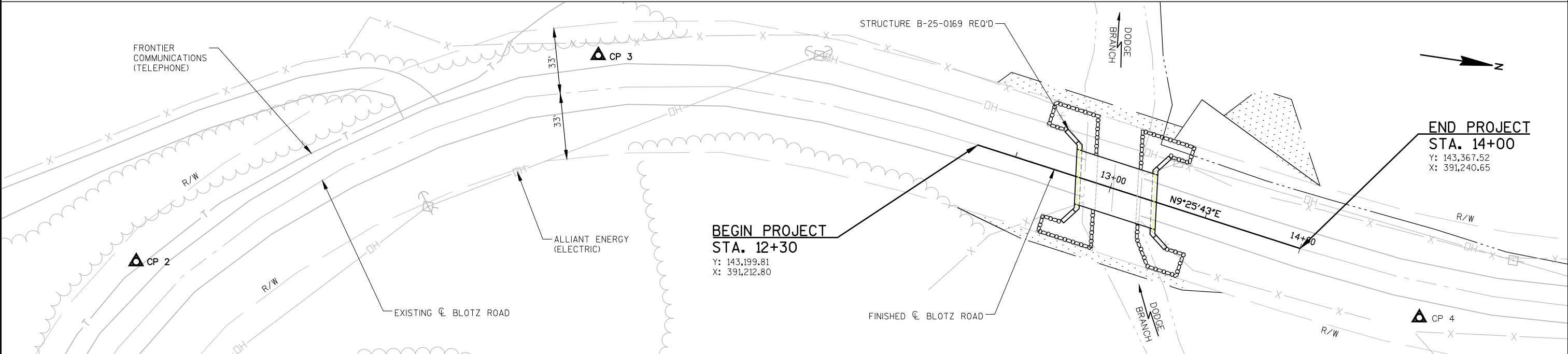
BLOTZ ROAD STATION LAYOUT

STATION	Y	X	COMMENTS
12+30	143,199.81	391,212.80	BEGIN PROJECT
12+50	143,219.54	391,216.07	-
12+81.71	143,250.82	391,221.27	END OF DECK
13+00	143,268.87	391,224.26	-
13+24.29	143,292.83	391,228.24	END OF DECK
13+50	143,318.19	391,232.45	-
14+00	143,367.52	391,240.65	END OF PROJECT



TIES TO C.P.#4

STA. 14+65; 18.1' RT.
Y = 143,431.93
X = 391,266.33



DATE 05MAY16		E S T I M A T E O F Q U A N T I T I E S			
LINE					5699-00-75
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0010	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0020	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. Sta. 13+02	LS	1.000	1.000
0030	205.0100	Excavation Common **P**	CY	150.000	150.000
0040	206.1000	Excavation for Structures Bridges (structure) 01. B-25-0169	LS	1.000	1.000
0050	208.0100	Borrow	CY	25.000	25.000
0060	210.0100	Backfill Structure	CY	220.000	220.000
0070	213.0100	Finishing Roadway (project) 01. 5699-00-75	EACH	1.000	1.000
0080	305.0110	Base Aggregate Dense 3/4-Inch	TON	55.000	55.000
0090	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	270.000	270.000
0100	450.4000	HMA Cold Weather Paving	TON	20.000	20.000
0110	455.0605	Tack Coat	GAL	20.000	20.000
0120	465.0105	Asphaltic Surface	TON	65.000	65.000
0130	502.0100	Concrete Masonry Bridges	CY	142.000	142.000
0140	502.3200	Protective Surface Treatment	SY	150.000	150.000
0150	505.0400	Bar Steel Reinforcement HS Structures	LB	4,250.000	4,250.000
0160	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	16,700.000	16,700.000
0170	513.4061	Railing Tubular Type M (structure) 01. B-25-0169	LF	88.000	88.000
0180	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0190	520.1036	Apron Endwalls for Culvert Pipe 36-Inch	EACH	2.000	2.000
0200	520.3536	Culvert Pipe Class III-B 36-Inch	LF	36.000	36.000
0210	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	310.000	310.000
0220	606.0300	Riprap Heavy	CY	200.000	200.000
0230	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0240	619.1000	Mobilization	EACH	1.000	1.000
0250	624.0100	Water	MGAL	3.000	3.000
0260	625.0500	Salvaged Topsoil **P**	SY	470.000	470.000
0270	627.0200	Mulching **P**	SY	630.000	630.000
0280	628.1504	Silt Fence	LF	640.000	640.000
0290	628.1520	Silt Fence Maintenance	LF	1,280.000	1,280.000
0300	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0310	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0320	628.7555	Culvert Pipe Checks	EACH	5.000	5.000
0330	629.0210	Fertilizer Type B **P**	CWT	1.000	1.000
0340	630.0120	Seeding Mixture No. 20 **P**	LB	16.000	16.000
0350	630.0160	Seeding Mixture No. 60 **P**	LB	1.000	1.000
0360	630.0200	Seeding Temporary **P**	LB	8.000	8.000
0370	630.0300	Seeding Borrow Pit **P**	LB	1.000	1.000
0380	633.5100	Markers Row	EACH	6.000	6.000
0390	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0400	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0410	638.2602	Removing Signs Type II	EACH	9.000	9.000
0420	638.3000	Removing Small Sign Supports	EACH	9.000	9.000
0430	642.5001	Field Office Type B	EACH	1.000	1.000
0440	643.0100	Traffic Control (project) 01. 5699-00-75	EACH	1.000	1.000
0450	645.0120	Geotextile Type HR	SY	380.000	380.000
0460	650.4500	Construction Staking Subgrade	LF	130.000	130.000
0470	650.5000	Construction Staking Base	LF	130.000	130.000
0480	650.6000	Constructi on Staki ng Pi pe Cul verts	EACH	1.000	1.000

DATE 05MAY16		E S T I M A T E O F Q U A N T I T I E S			
LINE					5699-00-75
NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	QUANTITY
0490	650.6500	Construction Staking Structure Layout (structure) 01. B-25-0169	LS	1.000	1.000
0500	650.9910	Construction Staking Supplemental Control (project) 01. 5699-00-75	LS	1.000	1.000
0510	650.9920	Construction Staking Slope Stakes	LF	130.000	130.000
0520	690.0150	Sawing Asphalt	LF	40.000	40.000
0530	715.0502	Incentive Strength Concrete Structures	DOL	852.000	852.000

ALL BID ITEMS ARE CATEGORY 010 UNLESS OTHERWISE NOTED

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	TYPE	LENGTH(FT.)	203.0100 (EA.)
13+64	MAINLINE, LT.	30-INCH CMP	17	1
TOTALS =				1

BASE AGGREGATE DENSE

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)
12+30 - 14+00	MAINLINE	15	247
13+64	F E. - MAINLINE, LT.	35	-
-	UNDISTRIBUTED	5	23
TOTALS =		55	270

EARTHWORK SUMMARY

CATEGORY	FROM/TO STA	LOCATION	**P** (1) 205.0100 COMMON EXCAVATION		SALVAGED/ UNUSABLE PAVEMENT MATERIAL (CY) (4)	AVAILABLE MATERIAL (CY) (5)	205.0400 MARSH EXCAVATION (CY) (6)	205.0200 ROCK EXCAVATION (CY) (7)	REDUCED MARSH IN FILL (CY) FACTOR 0.6 (8)	REDUCED EBS IN FILL (CY) FACTOR 0.8 (9)	EXPANDED MARSH BACKFILL (CY) FACTOR 1.5 (10)	EXPANDED EBS BACKFILL (CY) FACTOR 1.5 (11)	EXPANDED ROCK (CY) FACTOR 1.1 (12)	UNEXPANDED FILL (CY)	EXPANDED FILL (CY) FACTOR 1.25 (13)	MASS ORDINATE +/- (CY) (14)	WASTE (CY)	208.0100 BORROW (CY)	COMMENT:
			CUT (2) (CY)	EBS (3) (CY)															
010	12+30 - 14+00	MAINLINE	150	-	-	150	-	-	-	-	-	-	-	60	75	75	-	-75	
	13+64	MAINLINE, LT.	-	-	-	-	-	-	-	-	-	-	-	80	100	-100	-	100	
TOTALS =			150			150								140	175	-25		25	

NOTES:
1.) COMMON EXCAVATION IS THE SUM OF THE CUT AND EBS EXCAVATION COLUMNS. ITEM NUMBER 205.0100
2.) SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT
3.) EBS EXCAVATION TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL.
4.) SALVAGED/UNUSABLE PAVEMENT MATERIAL
5.) AVAILABLE MATERIAL = CUT - SALVAGED/UNUSABLE PAVEMENT MATERIAL
6.) MARSH EXCAVATION - TO BE BACKFILLED WITH SELECT CRUSHED MATERIAL. ITEM 205.0400
7.) ROCK EXCAVATION. ITEM NUMBER 205.0200
8.) REDUCED MARSH IN FILL - EXCAVATED MARSH MATERIAL IS USABLE IN FILLS OUTSIDE THE 1:1 SLOPE. MARSH IN FILL REDUCTION FACTOR = 0.6
9.) REDUCED EBS IN FILL - EXCAVATED EBS MATERIAL IS USEABLE IN FILLS OUTSIDE 1:1 SLOPE. EBS IN FILL REDUCTION FACTOR = 0.8
10.) EXPANDED MARSH BACKFILL - THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL. MARSH BACKFILL FACTOR = 1.5. ITEM NUMBER 312.0115
11.) EXPANDED EBS BACKFILL - THIS IS TO BE FILLED WITH SELECT CRUSHED MATERIAL. EBS BACKFILL FACTOR = 1.3. ITEM NUMBER 312.0115
12.) EXPANDED ROCK FACTOR = 1.1
13.) EXPANDED FILL FACTOR 1.25: EXPANDED FILL = (UNEXPANDED FILL - REDUCED MARSH IN FILL)*1.25
14.) THE MASS ORDINATE+ OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE CATEGORY. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE CATEGORY.

P PAY PLAN QUANTITY

ASPHALTIC SURFACE

STATION - STATION	LOCATION	455.0605 TACK COAT (GAL)	450.4000 HMA COLD WEATHER PAVING (TON)	465.0105 ASPHALTIC SURFACE (TON)
12+30 - 14+00	MAINLINE	15	15	57
-	UNDISTRIBUTED	5	5	8
TOTALS =		20	20	65

CULVERT PIPE

STATION	LOCATION	520.1036 APRON ENDWALLS FOR CULVERT PIPE 36-INCH (EACH)	520.3536 CULVERT PIPE CLASS III-B 36-INCH (LF)
13+64	MAINLINE, LT.	2	36
TOTALS =		2	36
MINIMUM STEEL THICKNESS = 0.079 INCHES MINIMUM ALUMINUM THICKNESS = 0.105 INCHES			

RIPRAP HEAVY

STATION - STATION	LOCATION	* 606.0300 RIPRAP HEAVY (CY)	* 645.0120 GEOTEXTILE FABRIC TYPE HR (SY)
13+30 - 13+42	MAINLINE, LT.	8	17
-	UNDISTRIBUTED	2	3
TOTALS =		10	20
*MORE LISTED ELSEWHERE			

FINISHING ITEMS								
STATION - STATION	LOCATION	**P** 625.0500 SALVAGED TOPSOIL (SY)	**P** 627.0200 MULCHING (SY)	**P** 629.0210 FERTILIZER TYPE B (CWT)	**P** 630.0120 SEEDING MIXTURE NO. 20 (LB)	**P** #630.0160 SEEDING MIXTURE NO. 60 (LB)	**P** 630.0200 SEEDING TEMPORARY (LB)	**P** 630.0300 SEEDING BORROW PIT (LB)
12+30 - 14+00	MAINLINE	470	610	0.7	16	1.0	8	-
-	BORROW PIT	-	20	0.3	-	-	-	1.0
TOTALS =		470	630	1.0	16	1.0	8	1.0
# STATION 13+07 - STATION 14+00, LT. **P** PAY PLAN QUANTITY								

SILT FENCE			
STATION - STATION	LOCATION	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)
12+30 - 12+93	MAINLINE, RT.	109	218
12+30 - 12+93	MAINLINE, LT.	93	186
13+14 - 14+00	MAINLINE, RT.	107	214
13+14 - 14+00	MAINLINE, LT.	201	402
-	UNDISTRIBUTED	130	260
TOTALS =		640	1280

CULVERT PIPE CHECKS			PERMANENT SIGNING				
STATION	LOCATION	628.7555 CULVERT PIPE CHECKS (EACH)	STATION	DESCRIPTION	SIZE (INCH X INCH)	634.0612 POSTS WOOD 4X6 - INCH X 12-FT (EACH)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)
13+64	MAINLINE, LT.	5	SW QUADRANT STRUCTURE B-25-0169	W5-52L	12X36	1	3.00
TOTALS =		5	SE QUADRANT STRUCTURE B-25-0169	W5-52R	12X36	1	3.00
			NW QUADRANT STRUCTURE B-25-0169	W5-52R	12X36	1	3.00
			NE QUADRANT STRUCTURE B-25-0169	W5-52L	12X36	1	3.00
						4	12.00

REMOVING SIGNS TYPE II AND REMOVING SMALL SIGN SUPPORTS			
LOCATION	DESCRIPTION	638.2602 REMOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)
BLOTZ RD./CTHY INT. (SOUTH OF BRIDGE)	R12-1	1	1
MAINLINE (325 FT SOUTH OF P-25-0118)	R12-1	1	1
SW QUADRANT STRUCTURE P-25-0118	W5-52L	1	1
SE QUADRANT STRUCTURE P-25-0118	W5-52R	1	1
NW QUADRANT STRUCTURE P-25-0118	W5-52R	1	1
NE QUADRANT STRUCTURE P-25-0118	W5-52L	1	1
MAINLINE (200 FT NORTH OF P-25-0118)	R12-1	1	1
BLOTZ RD./BRENNAN RD. INT. (NORTH OF BRIDGE)	R12-1	2	2
TOTALS =		9	9

WATER		MOBILIZATION EROSION CONTROL		MARKERS ROW
PROJECT	624.0100 (MGAL)	628.1905 MOBILIZATIONS EROSION CONTROL (EACH)	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)	633.5100 (EACH)
5699-00-75	3	4	2	1
TOTALS =		4	2	6

CONSTRUCTION STAKING							
		CONSTRUCTION STAKING					
STATION - STATION	LOCATION	650.4500 SUBGRADE (LF)	650.5000 BASE (LF)	650.6000 PIPE CULVERTS (EACH)	*650.6500 STRUCTURE LAYOUT (B-25-0169) (LS)	650.9910 SUPPLEMENTAL CONTROL (01. 5699-00-75) (LS)	650.9920 SLOPES STAKES (LF)
12+30 - 14+00	MAINLINE	130	130	-	-	-	130
13+64	F.E. - MAINLINE, LT.	-	-	1	-	-	-
-	PROJECT	-	-	-	1	1	-
TOTALS =		130	130	1	1	1	130
*CATEGORY 020							

SAWING ASPHALT		
STATION	LOCATION	690.0150 (LF)
12+30	MAINLINE	20
14+00	MAINLINE	20
TOTALS =		40

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	PROPERTY LINE	PL
ACCESS RIGHTS	AR	RECORDED AS	(100')
ACRES	AC.	REFERENCE LINE	R/L
AND OTHERS	ET.AL.	RELEASE OF RIGHTS	ROR
BARN	B.	REMAINING	REM.
CENTERLINE	C/L	RIGHT-OF-WAY	R/W
CERTIFIED SURVEY MAP	CSM	SECTION	SEC.
CORNER	COR.	SHED	S.
CONVEYANCE OF RIGHTS	CR	STATION	STA.
DOCUMENT	DOC.	TEMPORARY LIMITED EASEMENT	TLE
EASEMENT	EASE.	VOLUME	V.
GARAGE	G.		
HIGHWAY EASEMENT	H.E.	CURVE DATA	
HOUSE	H.	LONG CHORD	LCH
HOUSE TRAILER	H.T.	LONG CHORD BEARING	LCB
LAND CONTRACT	LC	RADIUS	R
MONUMENT	MON.	DEGREE OF CURVE	D
PAGE	P.	CENTRAL ANGLE OR DELTA	DELTA
PERMANENT LIMITED EASEMENT	PLE	LENGTH OF CURVE	L
		TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND SURVEY MONUMENT (WITH POINT NUMBER)	1040	PROPOSED R/W LINE	
R/W MONUMENT	• (SET)	EXISTING H.E. LINE	
R/W STANDARD	▲ (SET)	PROPERTY LINE	
SIGN	ISIGN	LOT & TIE LINES	
SECTION CORNER MONUMENT	⊕	SLOPE INTERCEPTS	
SECTION CORNER SYMBOL	⊕	CORPORATE LIMITS	
FEE (HATCH VARIES)	///	NO ACCESS (BY PREVIOUS ACQUISITION/CONTROL)	
TEMPORARY LIMITED EASEMENT	///	NO ACCESS (BY ACQUISITION)	
PERMANENT LIMITED EASEMENT	///	NO ACCESS (BY STATUTORY AUTHORITY)	
R/W BOUNDARY POINT	RWB20	SECTION LINE	
PARCEL NUMBER	8	QUARTER LINE	
UTILITY PARCEL NUMBER	92	SIXTEENTH LINE	
SIGN NUMBER (OFF PREMISE)	21-1	EXISTING CENTERLINE	
BUILDING		PROPOSED REFERENCE LINE	
		PARALLEL OFFSET	
		ENCROACHMENT	
		HIGHWAY EASEMENT	

CONVENTIONAL UTILITY SYMBOLS

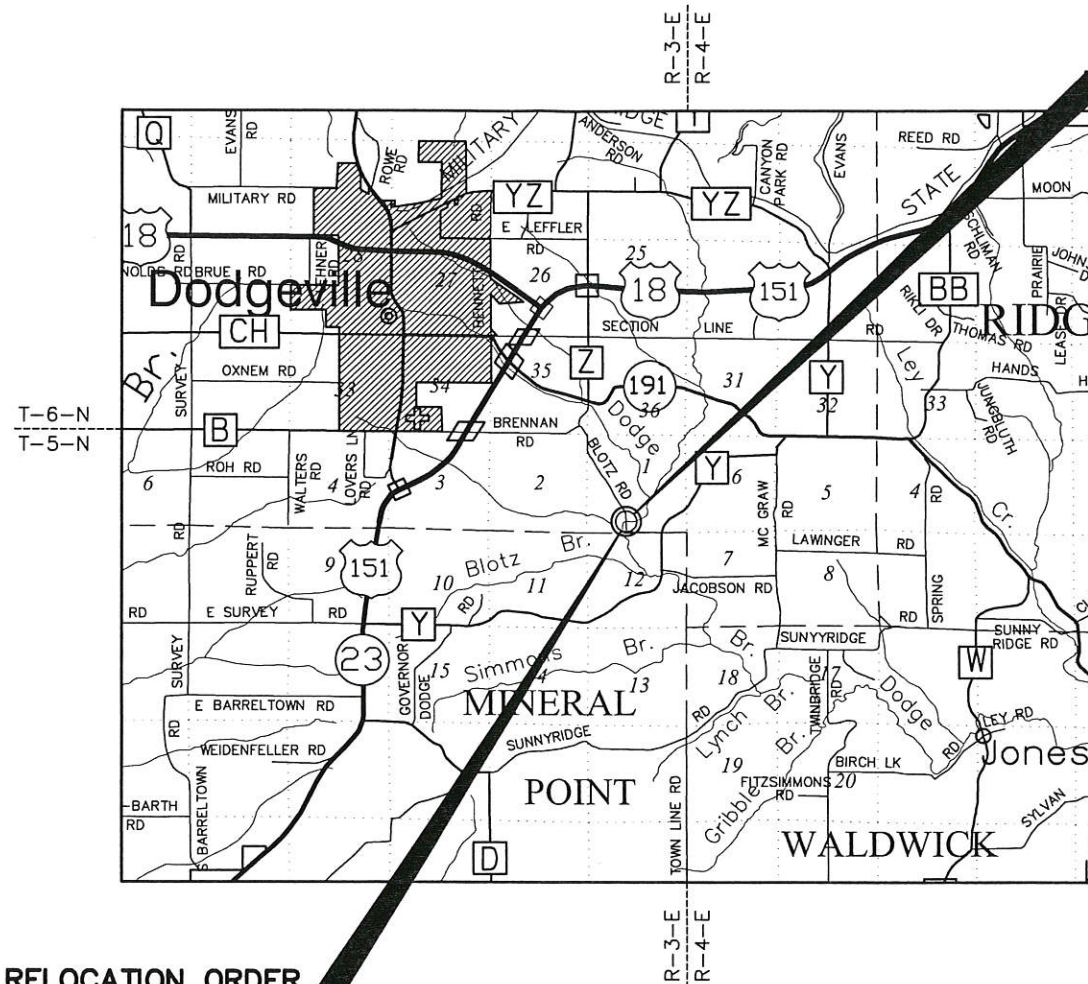
WATER	W	SANITARY SEWER	SAN
GAS	G	STORM SEWER	SS
TELEPHONE	T		
OVERHEAD	OH	NON	COMPENSABLE
TRANSMISSION LINES		COMPENSABLE	
ELECTRIC	E	POWER POLE	
CABLE TELEVISION	TV	TELEPHONE POLE	
FIBER OPTIC	FO	TELEPHONE PEDESTAL	
		ELECTRIC TOWER	

NOTES

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, IOWA COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 MONUMENTS (TYPICALLY 3/4" X 24" REBAR) AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM OR OTHER "SURVEYS OF PUBLIC RECORD."



BEGIN RELOCATION ORDER

STA. 12+30

485.05' NORTH AND 576.90' WEST OF THE S¼ CORNER OF SECTION 1, T.5N., R.3E., TOWN OF DODGEVILLE, IOWA COUNTY, WI
Y = 143,199.81
X = 391,212.80

END RELOCATION ORDER

STA. 14+00

652.75' NORTH AND 549.05' WEST OF THE S¼ CORNER OF SECTION 1, T.5N., R.3E., TOWN OF DODGEVILLE, IOWA COUNTY, WI
Y = 143,367.52
X = 391,240.65

RECEIVED

BY DATE

Greg Klesendorf 10/2/15

RECEIVED

BY DATE

Greg Klesendorf 10/7/15

JEWELL

associates engineers, inc.

Engineers - Surveyors - Architects

560 SUNRISE DRIVE
SPRING GREEN, WI 53588
PHONE : 608.588.7484
FAX : 608.588.9322

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FOR THE TOWN OF DODGEVILLE, IOWA COUNTY, WISCONSIN AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



Frederick G. Gruber 9/10/15

REVISION DATE

APPROVED FOR THE TOWN OF DODGEVILLE

DATE: 10/6/15 Curt Peterson

NAME/TITLE
Chairman

COORDINATE TABLE - HIGHWAY EASEMENT (HE) POINTS				
PT.#	STATION	OFFSET	Y	X
1	12+30.00	33.00' RT.	143194.41	391245.35
2	12+30.00	33.00' LT.	143205.22	391180.24
3	13+23.19	33.00' LT.	143297.17	391195.51
4	13+30.33	56.21' LT.	143307.98	391173.87
5	14+00.00	33.00' LT.	143372.92	391208.09
6	14+00.00	33.00' RT.	143362.11	391273.20

COORDINATE TABLE - TEMPORARY LIMITED EASEMENT (TLE) POINTS				
PT.#	STATION	OFFSET	Y	X
20	12+35.00	40.00' LT.	143211.30	391174.16
21	13+25.36	40.00' LT.	143300.44	391188.96
22	13+43.28	51.82' LT.	143320.05	391180.23
23	13+56.00	70.00' LT.	143335.58	391164.38
24	13+73.00	70.00' LT.	143352.35	391167.17
25	13+70.00	33.00' RT.	143332.52	391268.28
26	13+50.00	38.00' RT.	143311.97	391269.94
27	12+65.00	38.00' RT.	143228.12	391256.02

TLE LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
2 TO 20	N45° 02' 01"W	8.60'
20 TO 21	N09° 25' 43"E	90.36'
21 TO 4	N63° 26' 56"W	16.87'
4 TO 22	N27° 47' 14"E	13.64'
22 TO 23	N45° 34' 46"W	22.19'
23 TO 24	N09° 25' 44"E	17.00'
24 TO 5	N63° 18' 37"E	45.80'
6 TO 25	S09° 25' 43"W	30.00'
25 TO 26	S04° 36' 27"E	20.62'
26 TO 27	S09° 25' 43"W	85.00'
27 TO 1	S17° 33' 32"W	35.36'

SCHEDULE OF LANDS & INTERESTS REQUIRED

PARCEL NUMBER	OWNER (S)	INTEREST REQUIRED	H.E. ACRES REQ'D.	T.L.E. ACRES
1	TIMOTHY F. AND LAURA JEAN BLOTZ	HE, TLE	0.02	0.05

NOTE: AREAS SHOWN IN THE TOTAL ACRES COLUMN MAY BE APPROXIMATE AND ARE DERIVED FROM THE TAX ROLLS OR OTHER AVAILABLE SOURCES AND MAY NOT INCLUDE LANDS OF THE OWNER WHICH ARE NOT CONTIGUOUS TO THE AREA TO BE ACQUIRED. OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN OF DODGEVILLE.

RIGHT OF WAY LINE TABLE		
POINT TO POINT	BEARING	DISTANCE
1 TO 2	N80° 34' 17"W	66.00'
2 TO 3	N09° 25' 43"E	93.21'
3 TO 4	N63° 26' 56"W	24.19'
4 TO 5	N27° 47' 14"E	73.41'
5 TO 6	S80° 34' 17"E	66.00'
6 TO 1	S09° 25' 43"W	170.00'

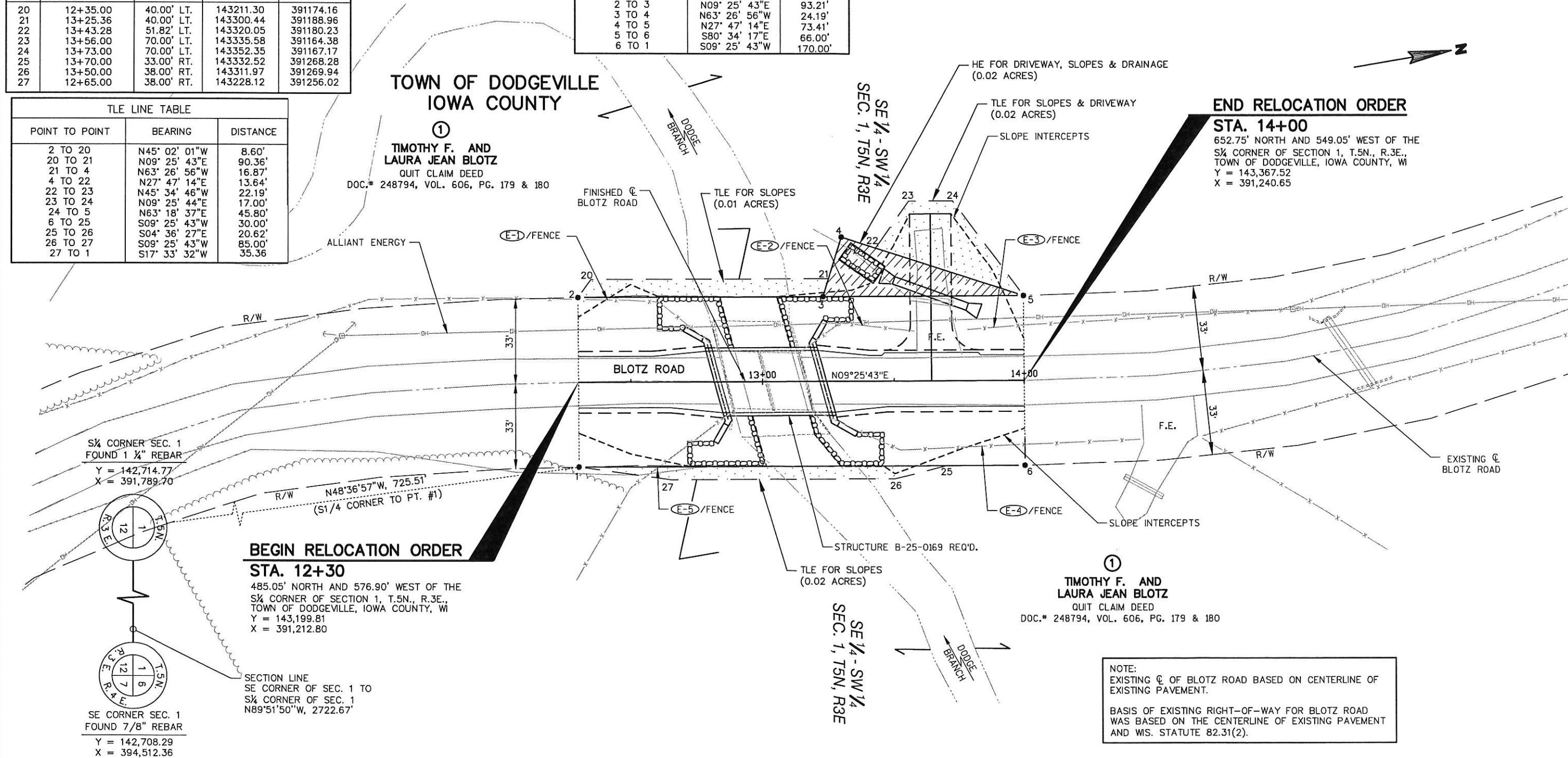
ENCROACHMENT TABLE			
NUMBER	OWNER	LOCATION	ENCROACHMENT TYPE
E-1	TIMOTHY F. AND LAURA JEAN BLOTZ	STA. 12+29 - STA. 12+84, LT.	FENCE
E-2	TIMOTHY F. AND LAURA JEAN BLOTZ	STA. 13+14 - STA. 13+58, LT.	FENCE
E-3	TIMOTHY F. AND LAURA JEAN BLOTZ	STA. 13+78 - STA. 14+00, LT.	FENCE
E-4	TIMOTHY F. AND LAURA JEAN BLOTZ	STA. 13+20 - STA. 14+00, RT.	FENCE
E-4	TIMOTHY F. AND LAURA JEAN BLOTZ	STA. 12+56 - STA. 12+89, RT.	FENCE

TOWN OF DODGEVILLE IOWA COUNTY

①
TIMOTHY F. AND
LAURA JEAN BLOTZ
QUIT CLAIM DEED
DOC.# 248794, VOL. 606, PG. 179 & 180

END RELOCATION ORDER

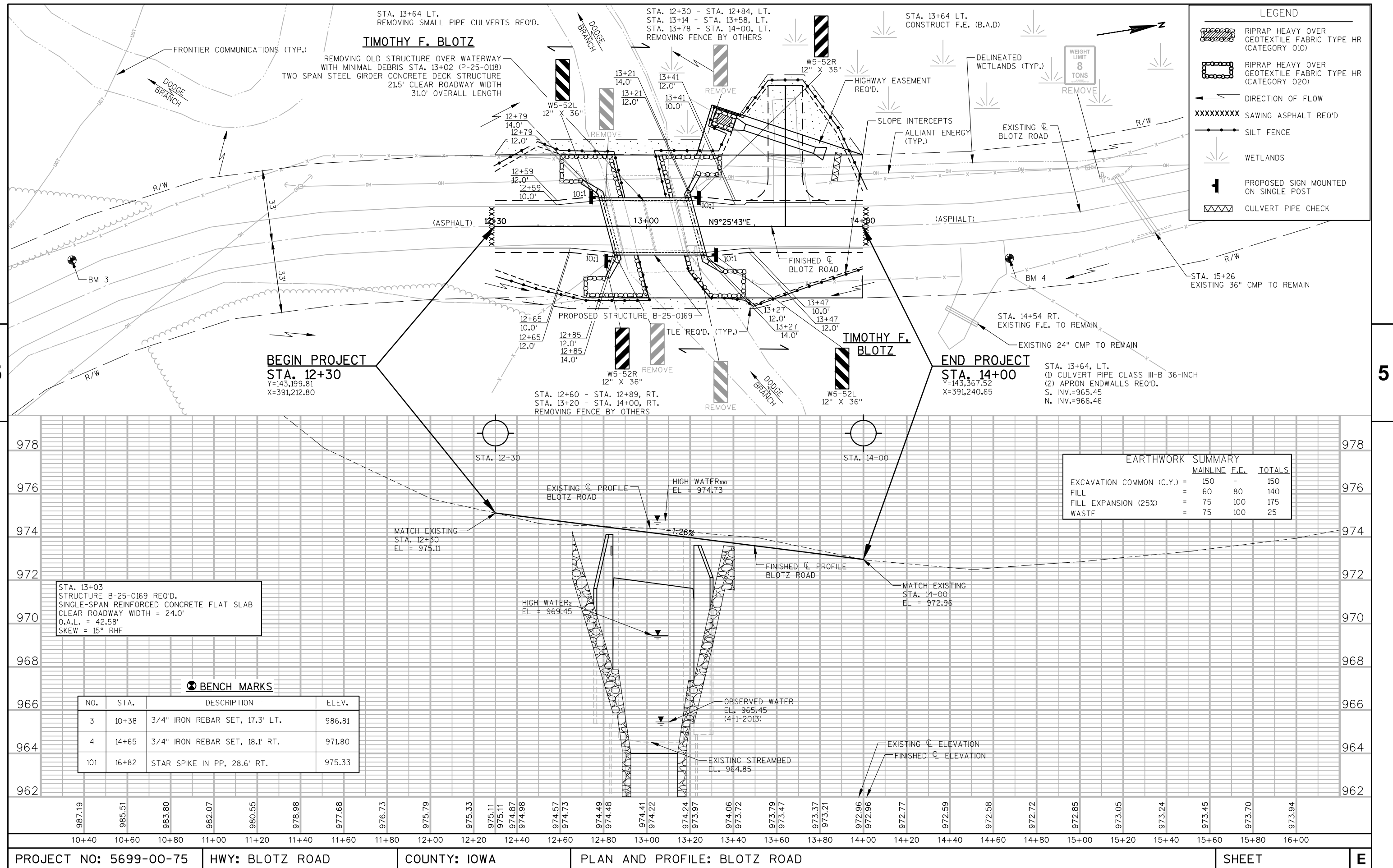
STA. 14+00
652.75' NORTH AND 549.05' WEST OF THE
S¼ CORNER OF SECTION 1, T.5N., R.3E.,
TOWN OF DODGEVILLE, IOWA COUNTY, WI
Y = 143,367.52
X = 391,240.65



NOTE:
EXISTING C. OF BLOTZ ROAD BASED ON CENTERLINE OF
EXISTING PAVEMENT.

BASIS OF EXISTING RIGHT-OF-WAY FOR BLOTZ ROAD
WAS BASED ON THE CENTERLINE OF EXISTING PAVEMENT
AND WIS. STATUTE 82.31(2).

REVISION DATE	DATE 9/10/15	SCALE, FEET 0 20 40	HWY: BLOTZ ROAD	STATE R/W PROJECT NUMBER: 5699-00-05	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: IOWA	CONSTRUCTION PROJECT NUMBER: 5699-00-75	PS&E SHEET E



Standard Detail Drawing List

08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
12A03-10	NAME PLATE (STRUCTURES)
15A01-12A	MARKER POST FOR RIGHT-OF-WAY
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-07	SIGNING & MARKING FOR TWO LANE BRIDGES



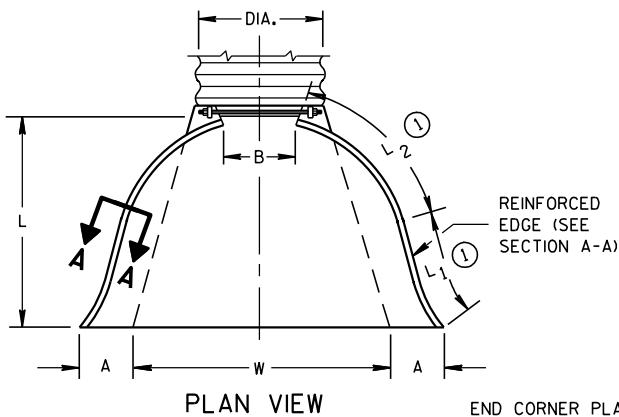
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS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



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

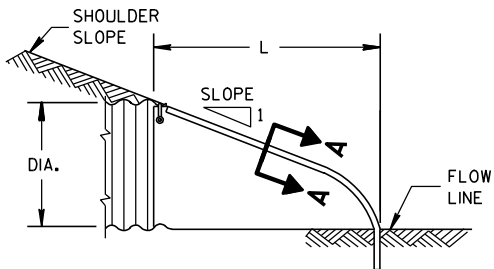
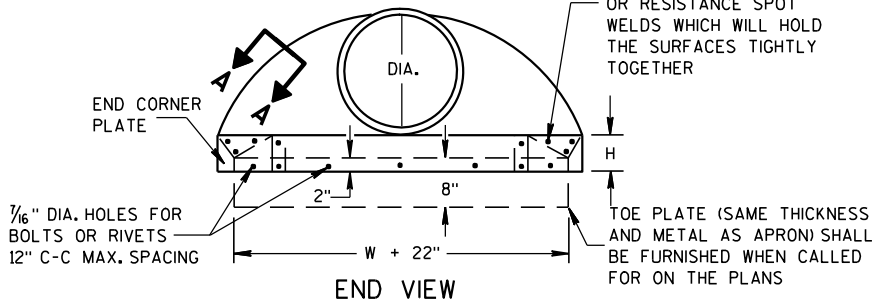
METAL APRON ENDWALLS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)						APPROX. SLOPE	BODY	
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L ₁ ①	L ₂ ①			W (±2")
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060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

* EXCEPT CENTER PANEL
SEE GENERAL NOTES



END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER

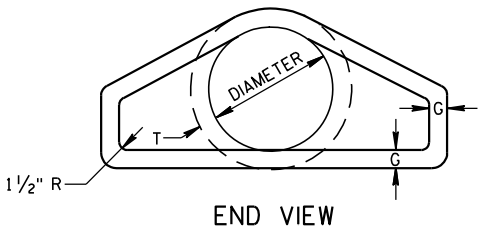
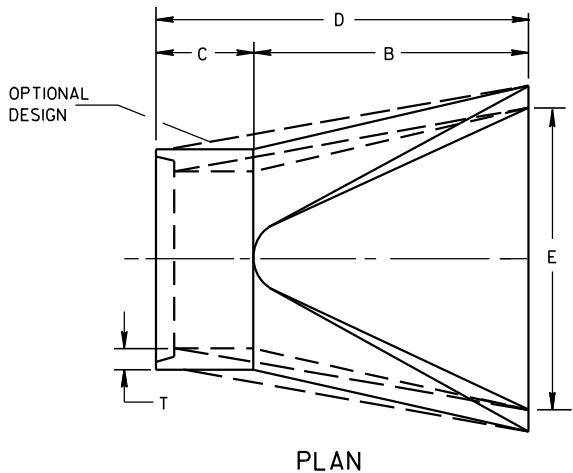
TOE PLATE (SAME THICKNESS AND METAL AS APRON) SHALL BE FURNISHED WHEN CALLED FOR ON THE PLANS



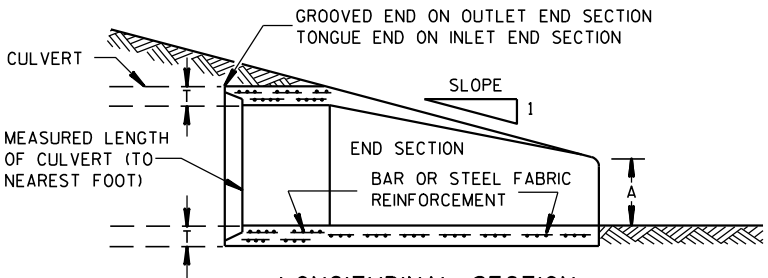
SIDE ELEVATION
METAL ENDWALLS

REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ¹ / ₈	72 ¹ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ¹ / ₂	9	27	46	73	36	2 ¹ / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43 ¹ / ₂	30	73 ¹ / ₂	48	3	3 to 1
27	3 ¹ / ₄	10 ¹ / ₂	49 ¹ / ₂	24	73 ¹ / ₂	54	3 ¹ / ₄	3 to 1
30	3 ¹ / ₂	12	54	19 ³ / ₄	73 ¹ / ₂	60	3 ¹ / ₂	3 to 1
36	4	15	63	34 ³ / ₄	97 ³ / ₄	72	4	3 to 1
42	4 ¹ / ₂	21	63	35	98	78	4 ¹ / ₂	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 ¹ / ₂	27	65	33 ¹ / ₄ -35	98 ¹ / ₄ -100	90	5 ¹ / ₂	2 ¹ / ₂ to 1
60	6	30-35	60	39	99	96	5	2 to 1
66	6 ¹ / ₂	24-30	72-78	21-27	99	102	5 ¹ / ₂	2 to 1
72	7	24-36	78	21	99	108	6	2 to 1
78	7 ¹ / ₂	24-36	78	21	99	114	6 ¹ / ₂	2 to 1
84	8	36	90 ¹ / ₂	21	111 ¹ / ₂	120	6 ¹ / ₂	1 ¹ / ₂ to 1
90	8 ¹ / ₂	41	87 ¹ / ₂	24	111 ¹ / ₂	132	6 ¹ / ₂	1 ¹ / ₂ to 1

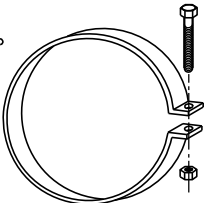
* MINIMUM
** MAXIMUM



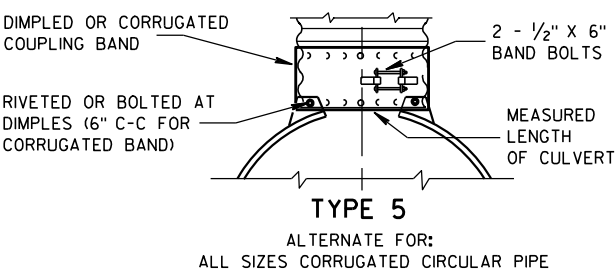
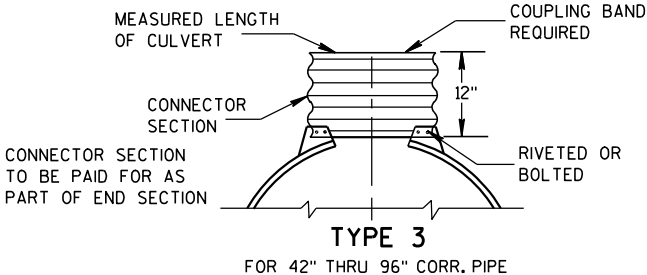
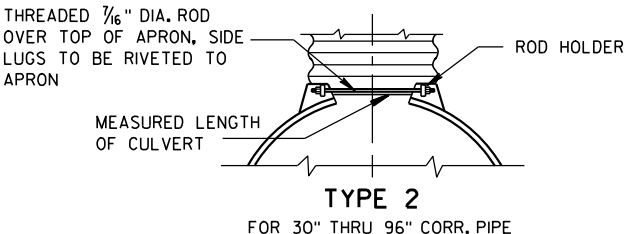
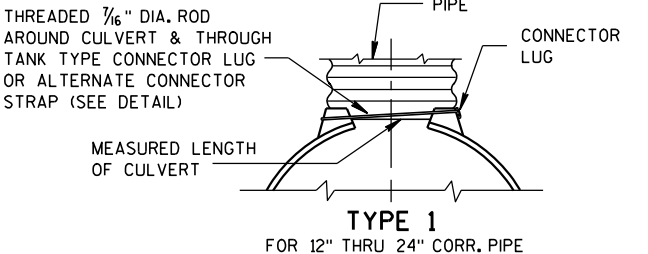
LONGITUDINAL SECTION
CONCRETE ENDWALLS



1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



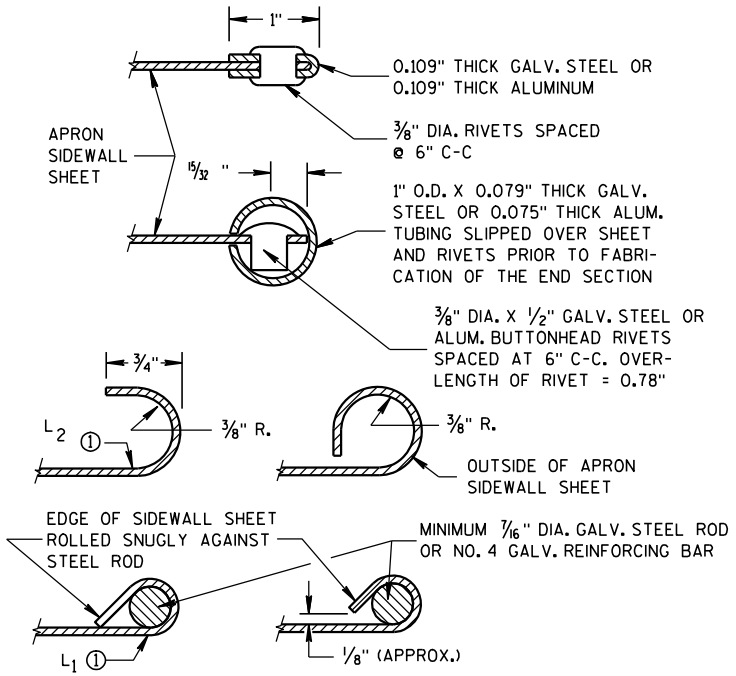
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

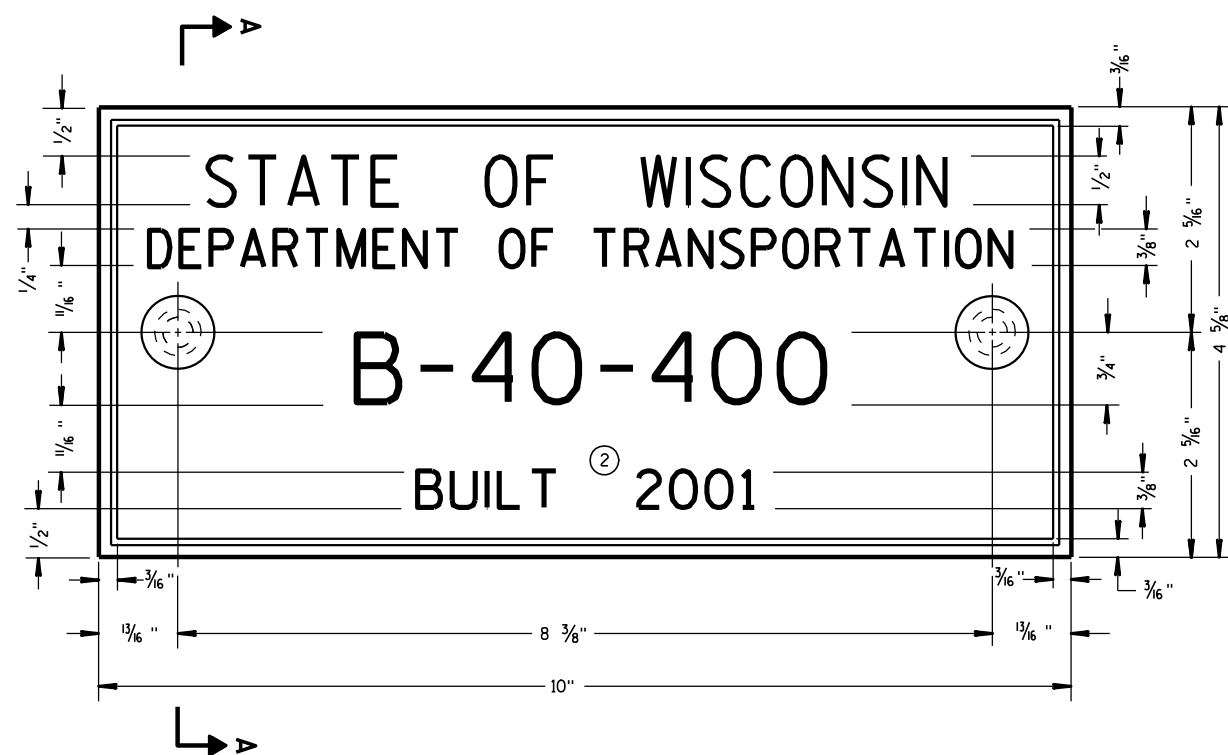
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

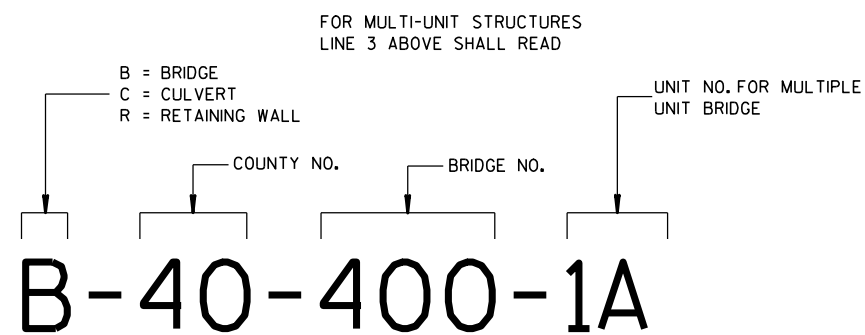
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 11/30/94 DATE	/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA	



TYPICAL NAME PLATE

(BRIDGES, CULVERTS, AND RETAINING WALLS)



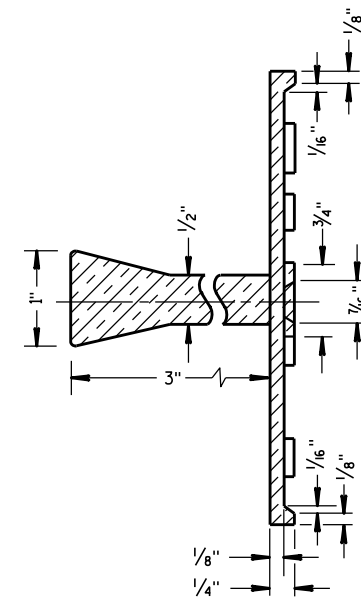
NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

GENERAL NOTES

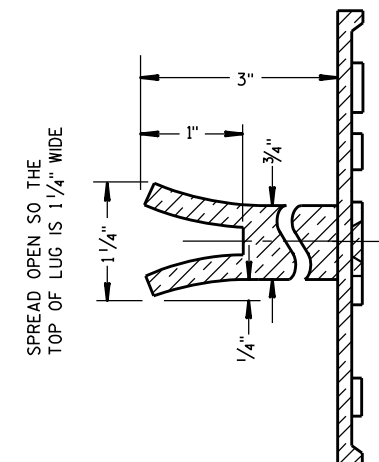
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

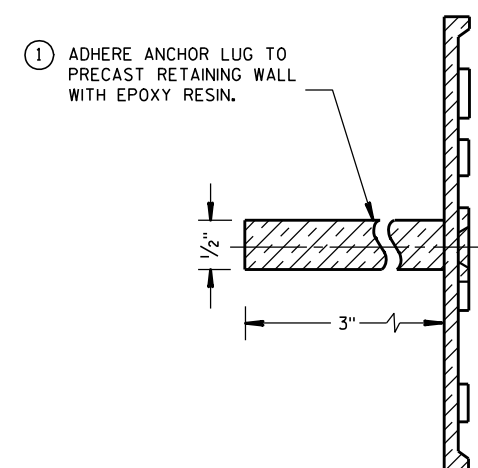
- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG

(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE
(STRUCTURES)

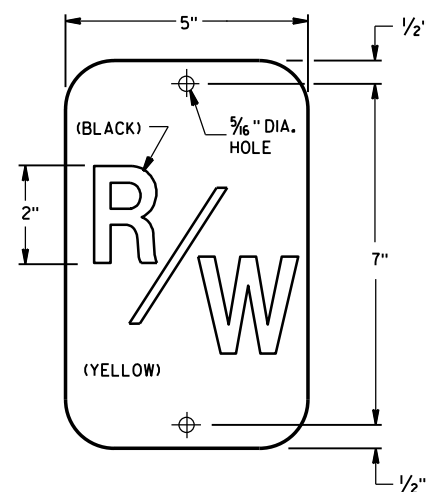
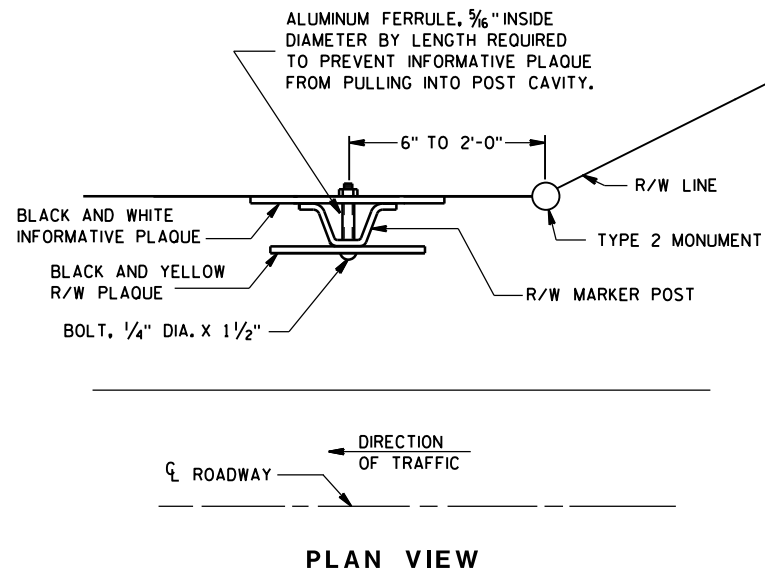
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

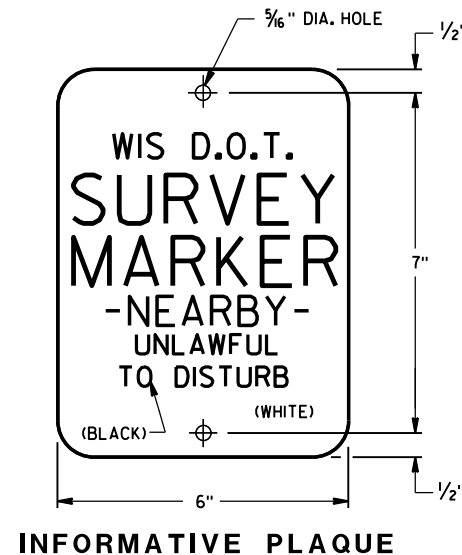
3/26/10
DATE

FHWA

/S/ Scot Becker
CHIEF STRUCTURAL DEVELOPMENT ENGINEER



THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



GENERAL NOTES

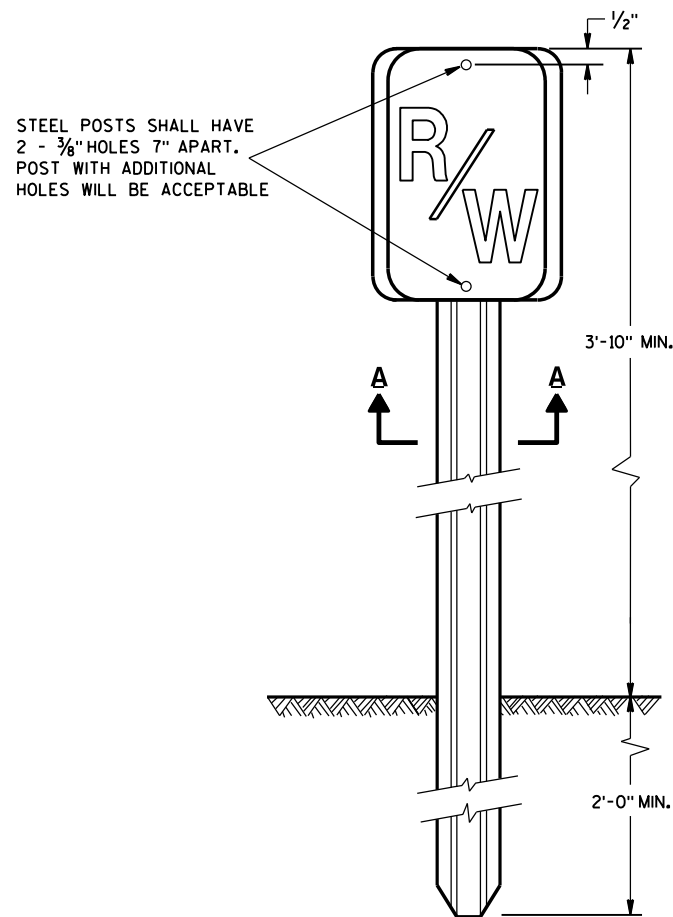
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

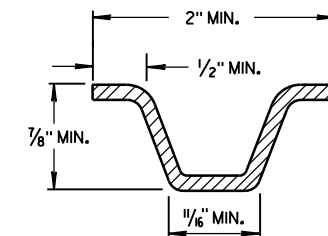
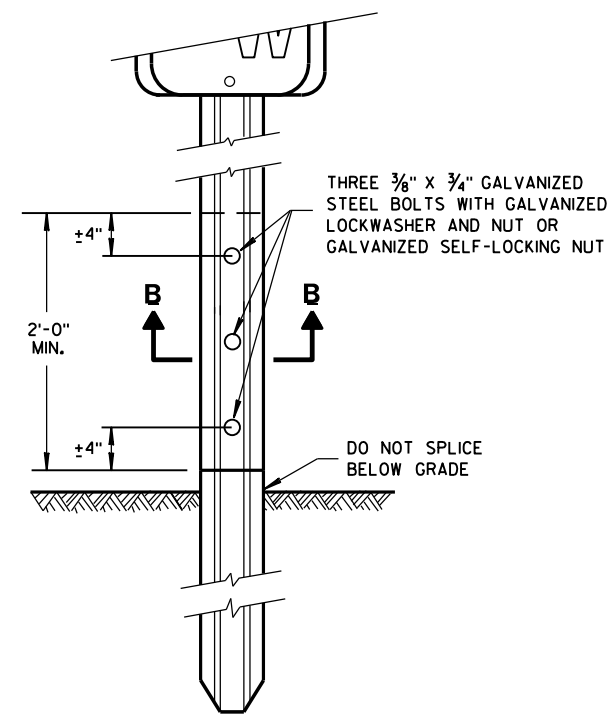
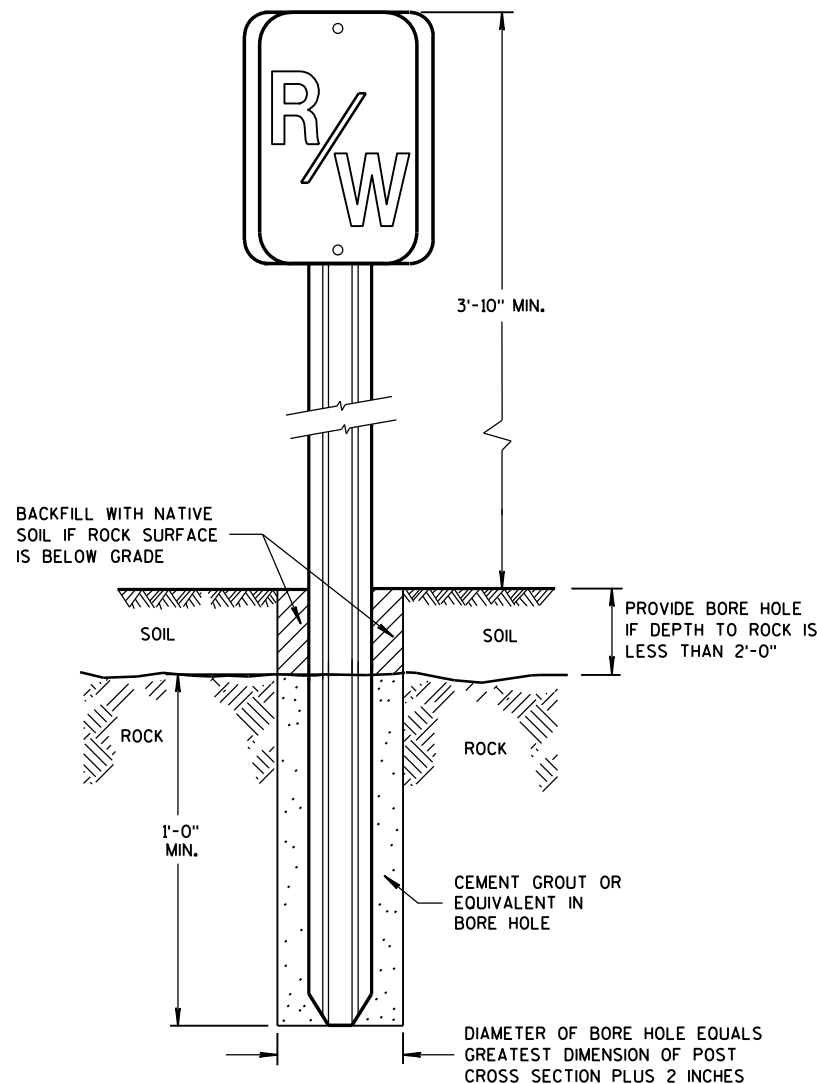
THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

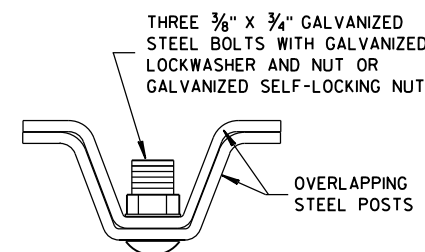
- ① IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



STEEL POSTS SHALL HAVE 2 - 5/8" HOLES 7" APART. POST WITH ADDITIONAL HOLES WILL BE ACCEPTABLE



MIN. WEIGHT 1.12 LB./FT.
SECTION A-A

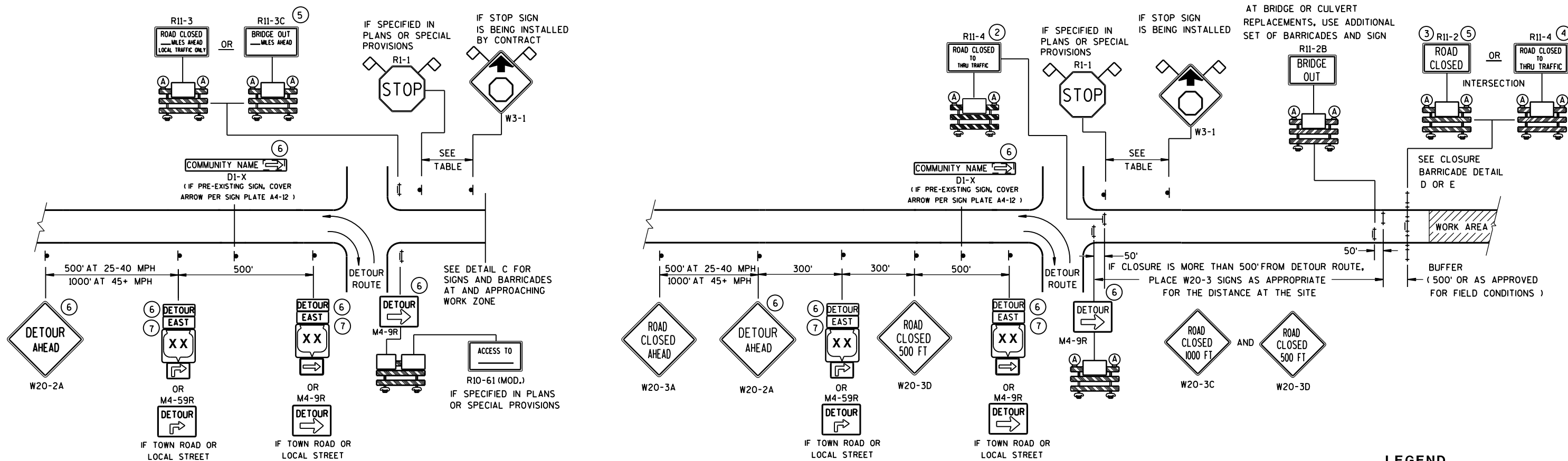


SECTION B-B

**MARKER POST
FOR RIGHT-OF-WAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 /S/ Ray Kumapayi
DATE CHIEF SURVEYING AND MAPPING ENGINEER
FHWA



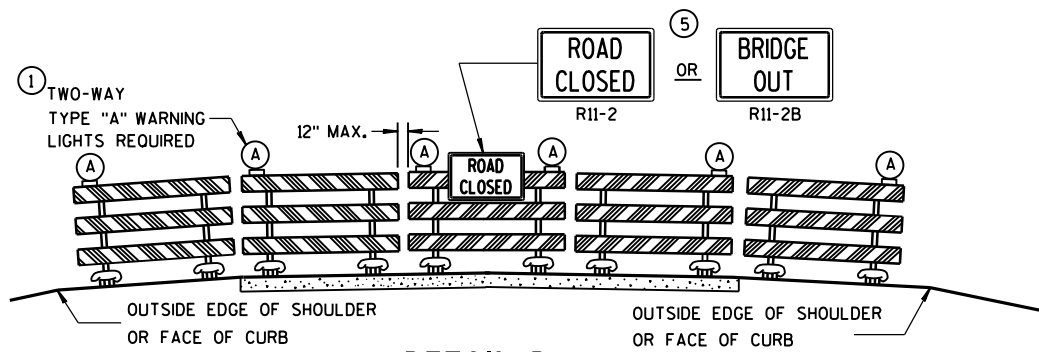
DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

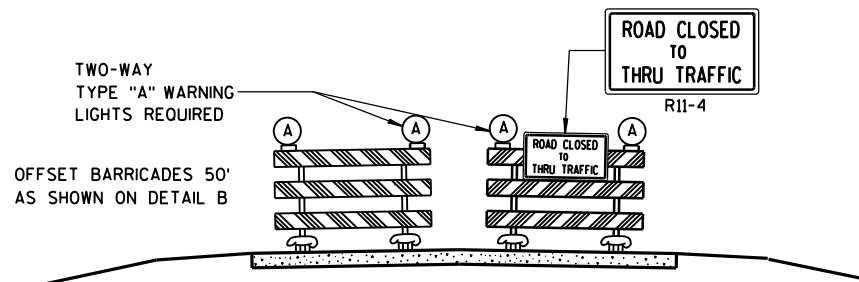
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2-SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

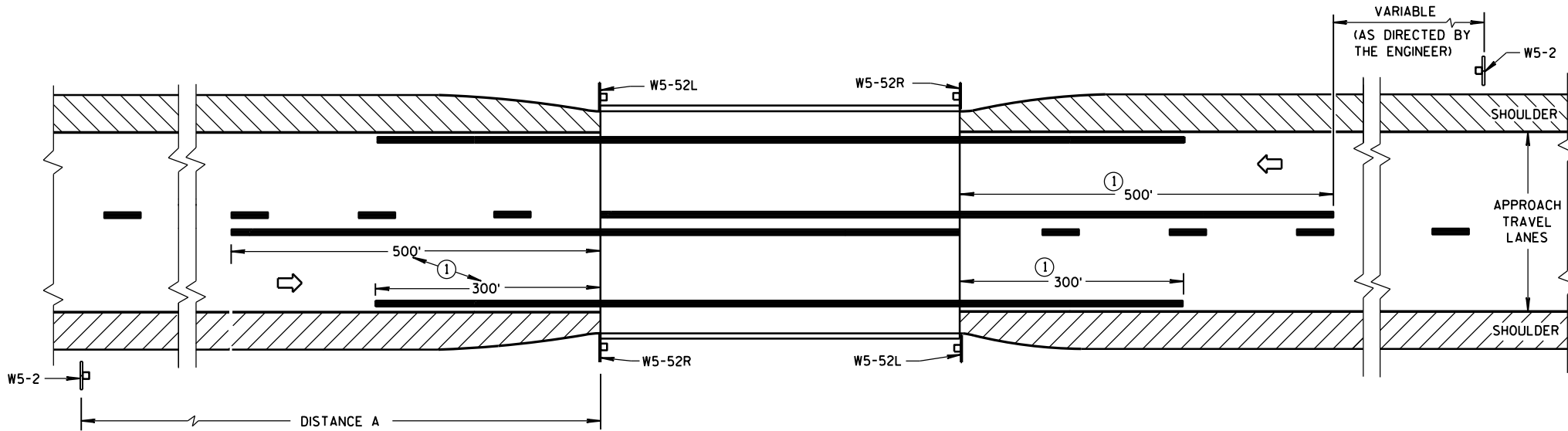
"WO AND "MO" SIGNS ARE THE SAME AS "W" AND "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

- R11-2 SHALL BE 48" X 30".
- R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".
- M4-9 SHALL BE 30" X 24".
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1-1 SHALL BE 36" X 36".

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

BARRICADES AND SIGNS FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
Sept. 2015 DATE	/S/ Peter Amokobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



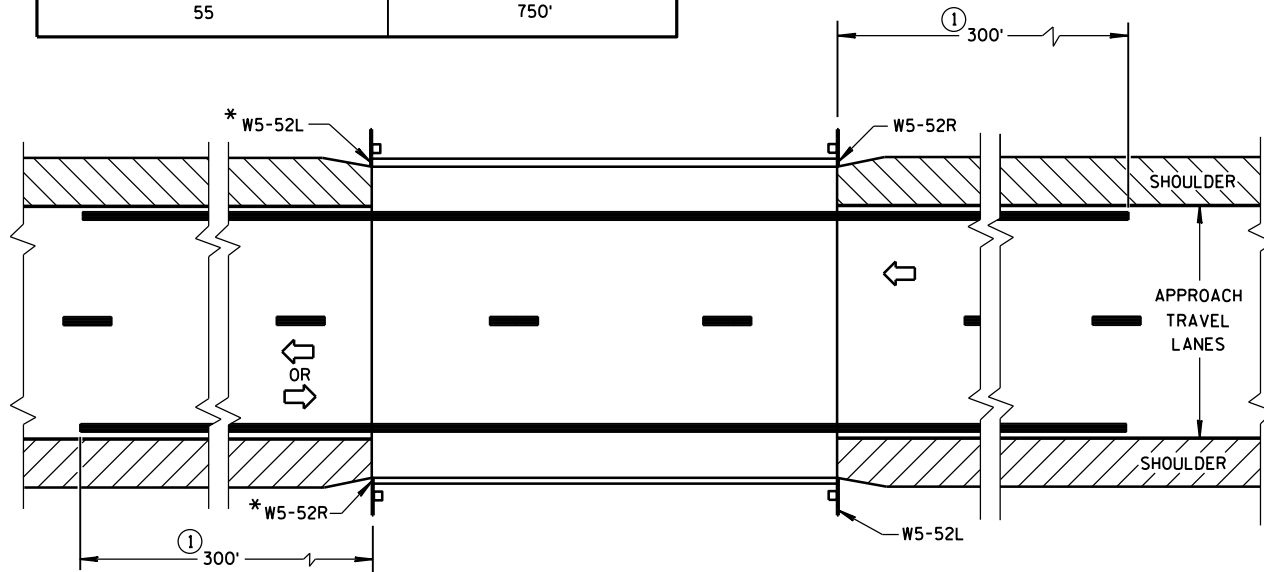
SITUATION 1

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'

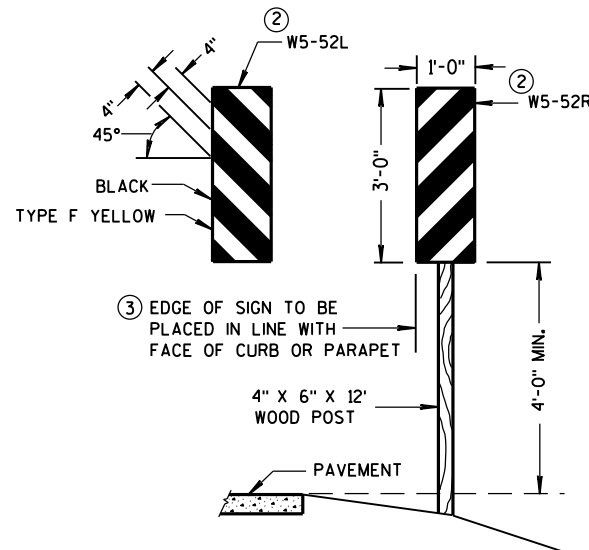


*OMIT ON ONE-WAY TRAVELLED WAYS

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.



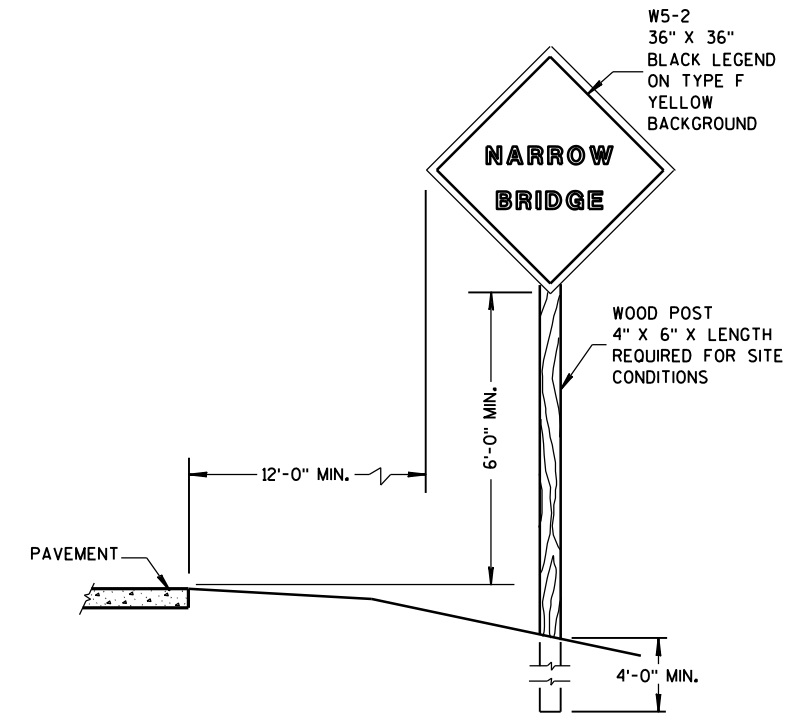
OBJECT MARKER PLACEMENT

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

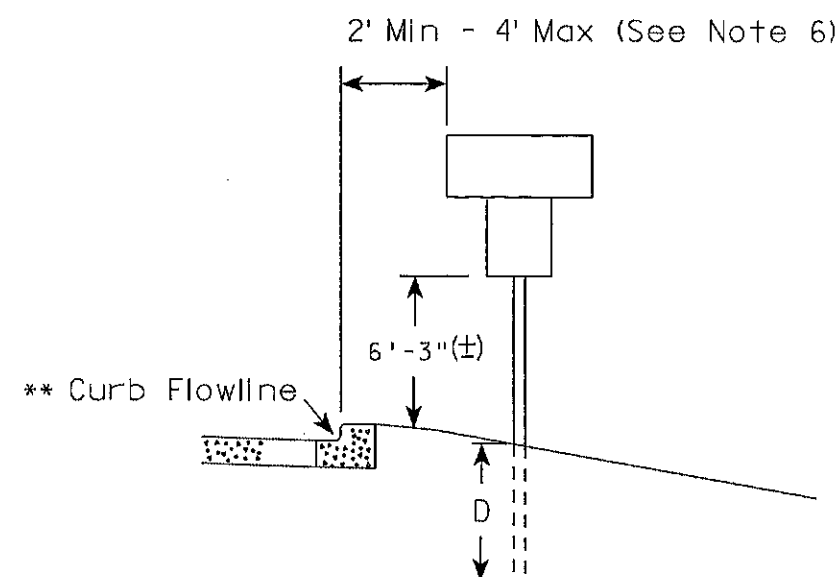
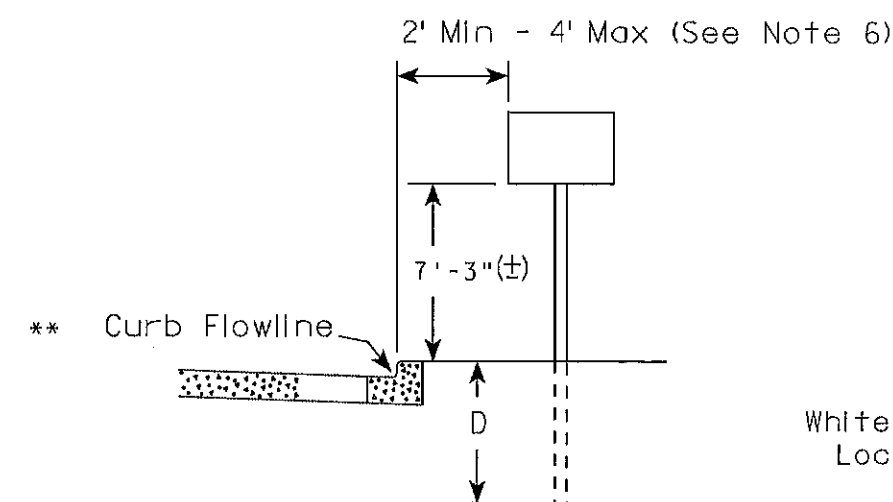
APPROVED

3-2014
DATE

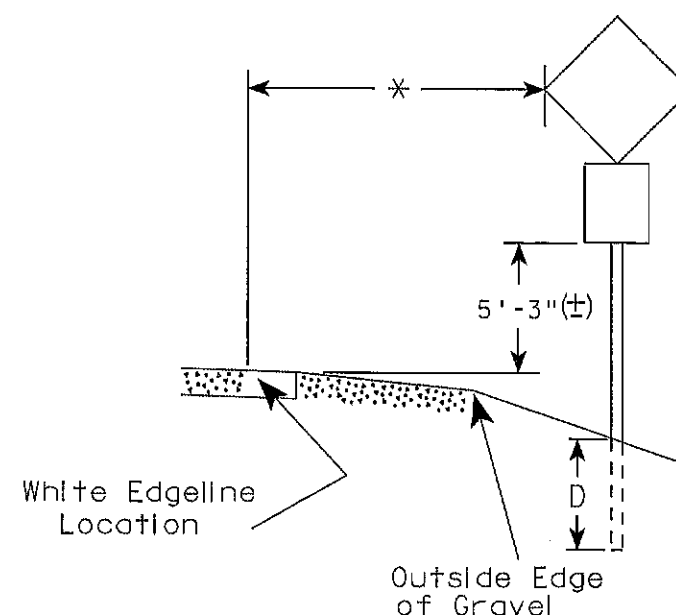
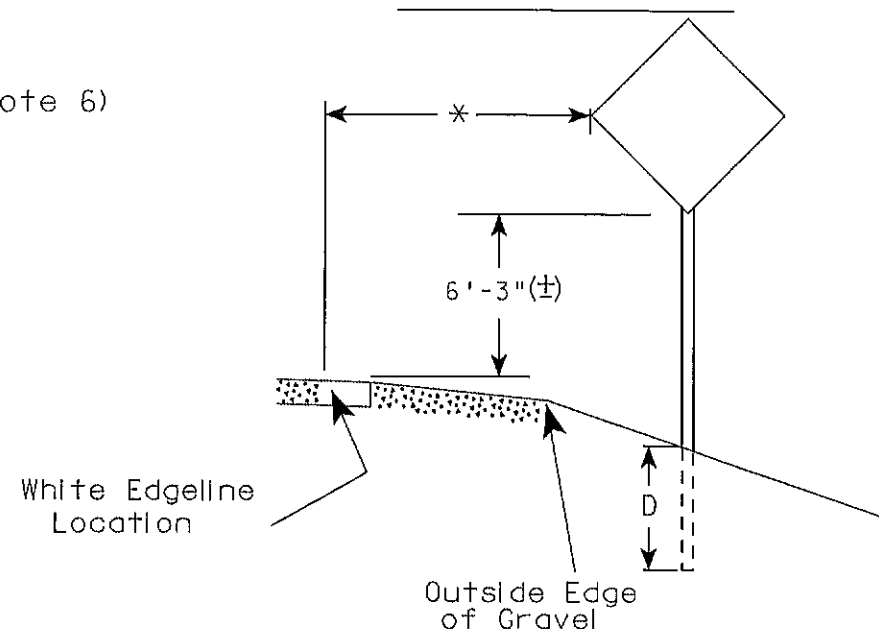
FHWA

/S/ Travis Fettes
STATE TRAFFIC ENGINEER OF DESIGN

URBAN AREA



RURAL AREA (See Note 2)



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.

GENERAL NOTES

1. Signs wider than 4 feet, 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'-3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as 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), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

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

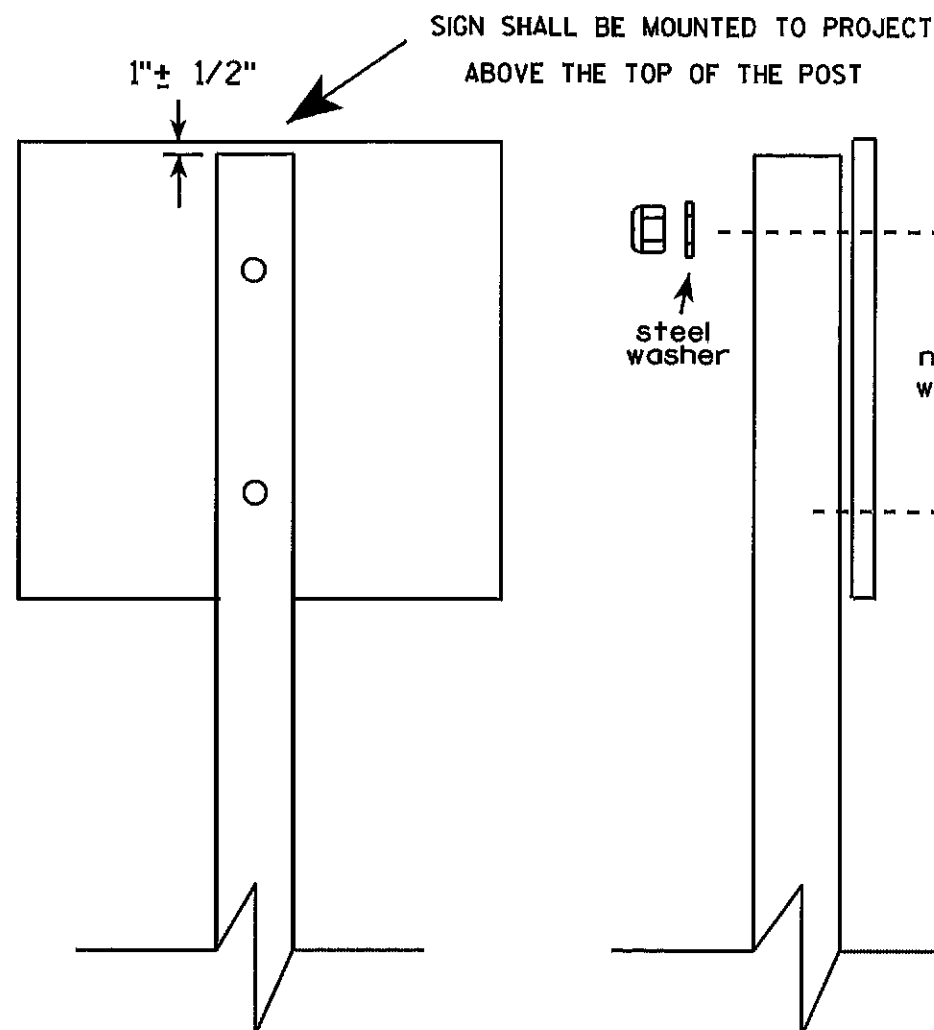
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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

- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- 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 - $\frac{3}{8}$ " X 3"

MACHINE BOLTS - $\frac{5}{16}$ " X 6-1/2" or 7" Length w/ nuts

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts

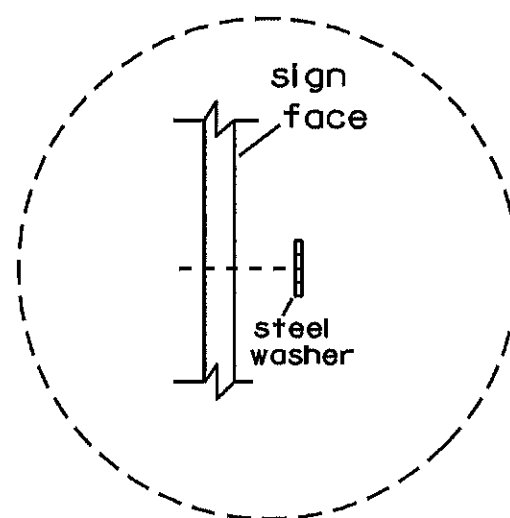
RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL

O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL

1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON for all Type H signs.



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

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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

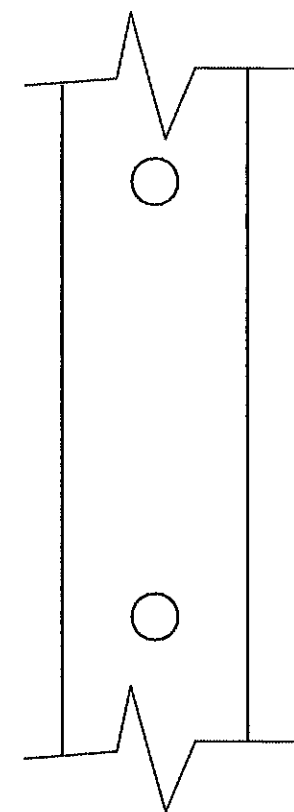
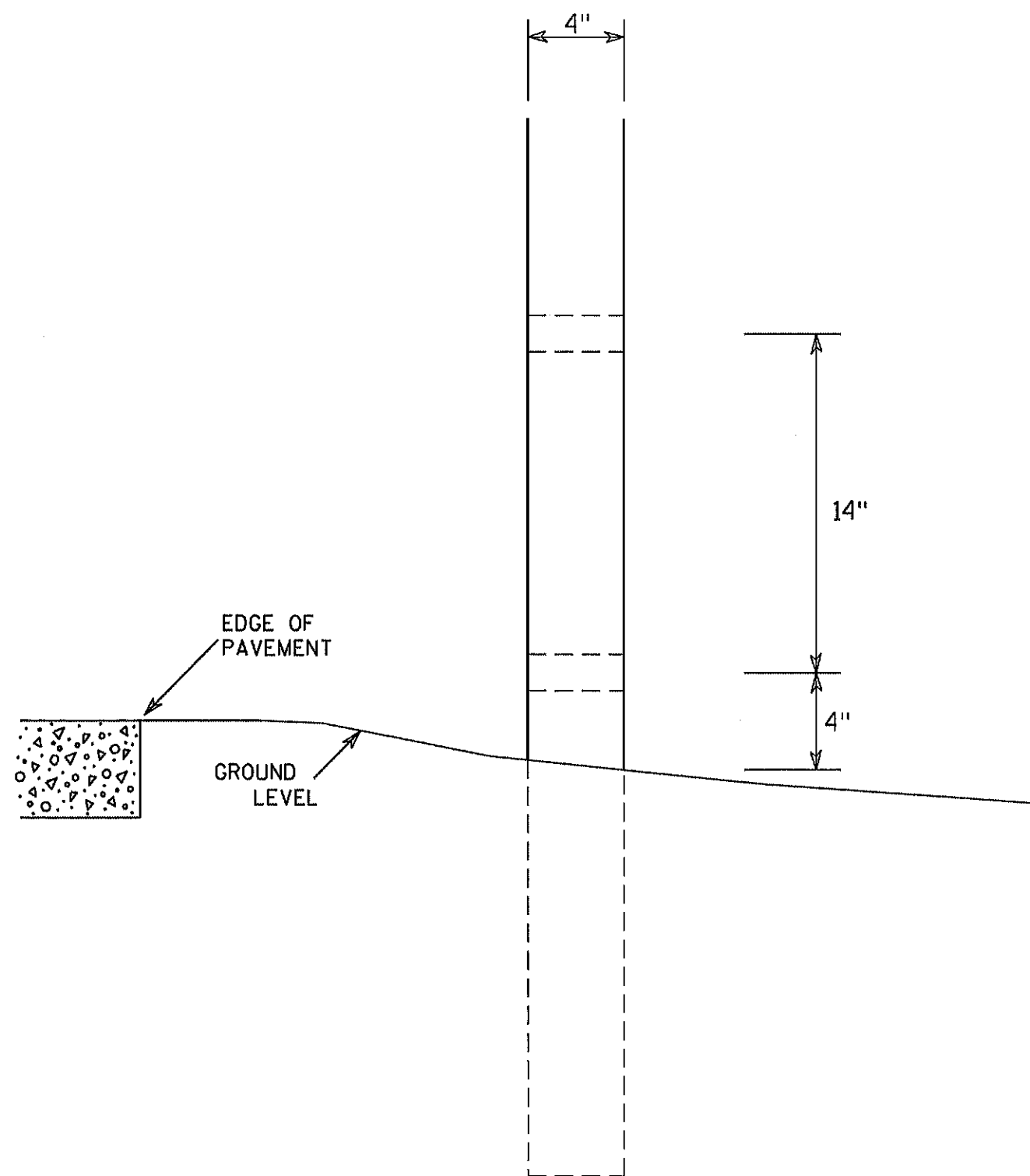
APPROVED *Matthew R. Rauch*
For State Traffic Engineer

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

PROJECT NO:

SHEET NO:

E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST
MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Christen J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

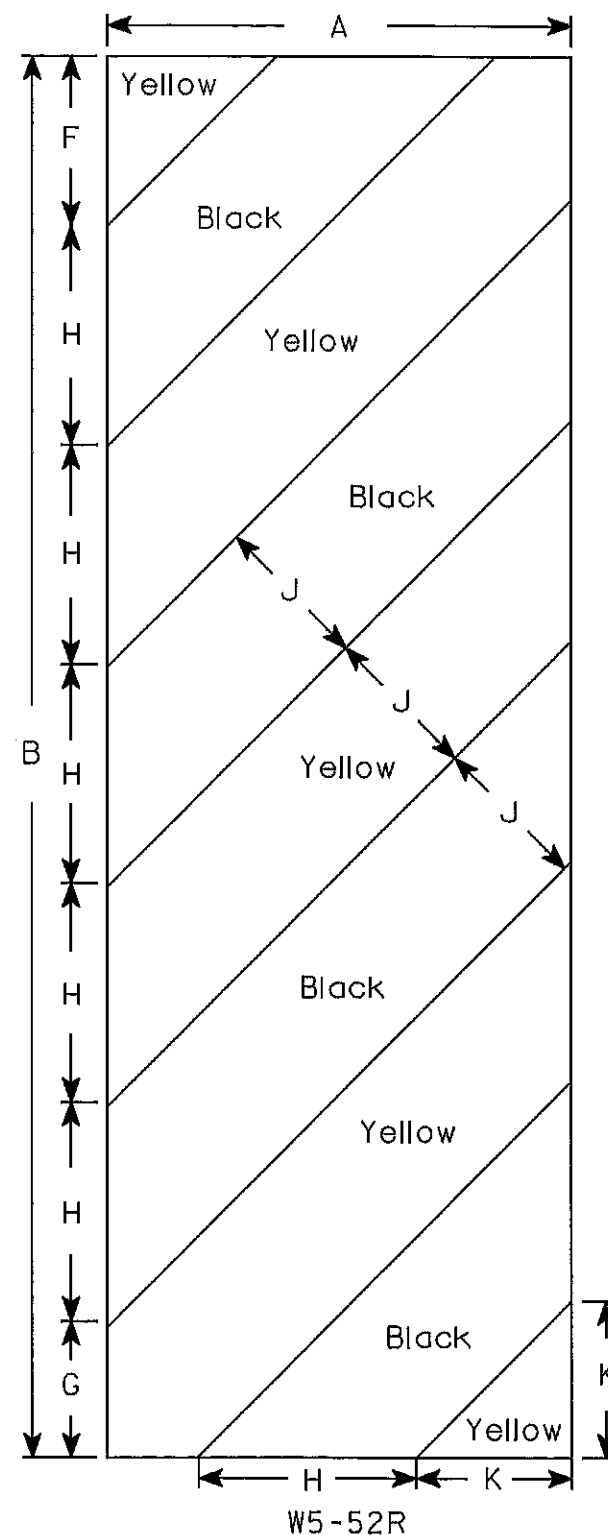
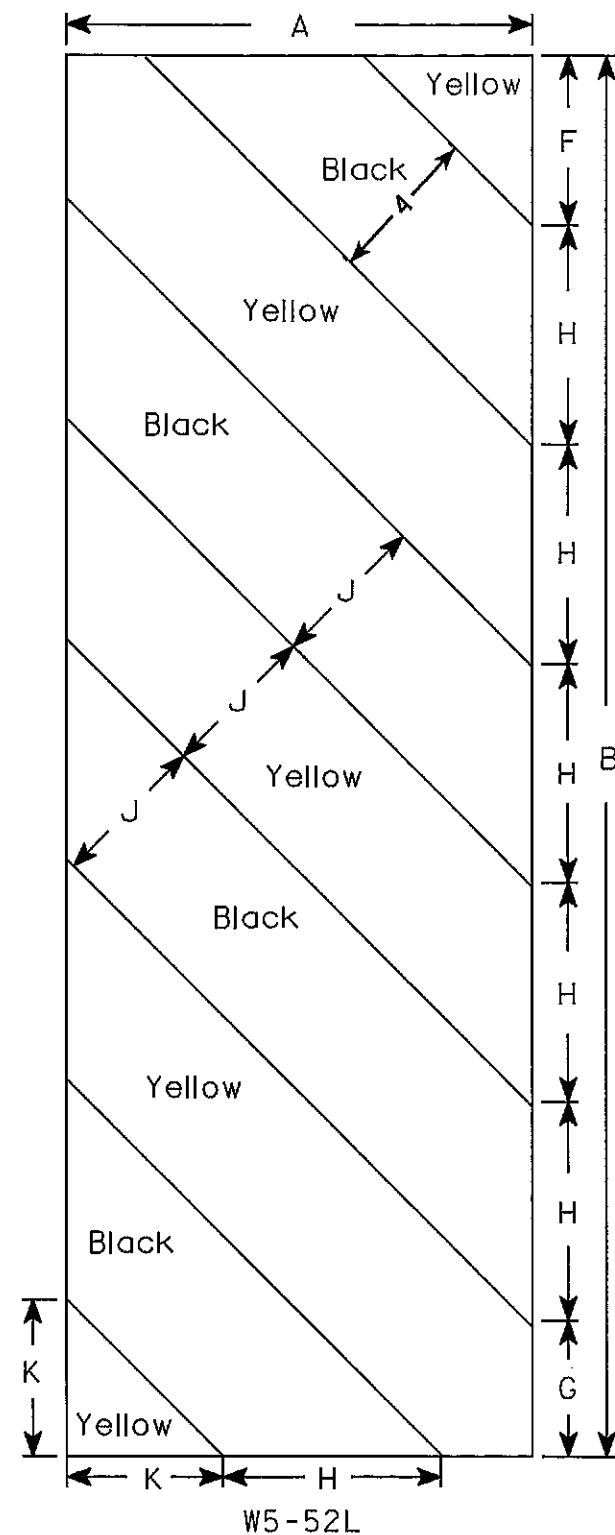
PROJECT NO:

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.

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 5/16																6.75
4																											
5																											

STANDARD SIGN
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

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

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

DESIGN DATA**LIVE LOAD:**

DESIGN LOADING _____ HL-93
 INVENTORY RATING FACTOR _____ RF=1.11
 OPERATING RATING FACTOR _____ RF=1.44
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) _____ 250 KIPS

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 P.S.F.

MATERIAL PROPERTIES:

CONCRETE MASONRY, SLAB _____ $f'_c = 4,000$ P.S.I.
 ALL OTHER _____ $f'_c = 3,500$ P.S.I.
 HIGH-STRENGTH BAR STEEL _____ $f_y = 60,000$ P.S.I.
 REINFORCEMENT, GRADE 60 _____

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON PILING STEEL HP 10-INCH X 42 LB DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATE 22 FT PILE LENGTHS AT BOTH ABUTMENTS.

**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.

TRAFFIC DATA

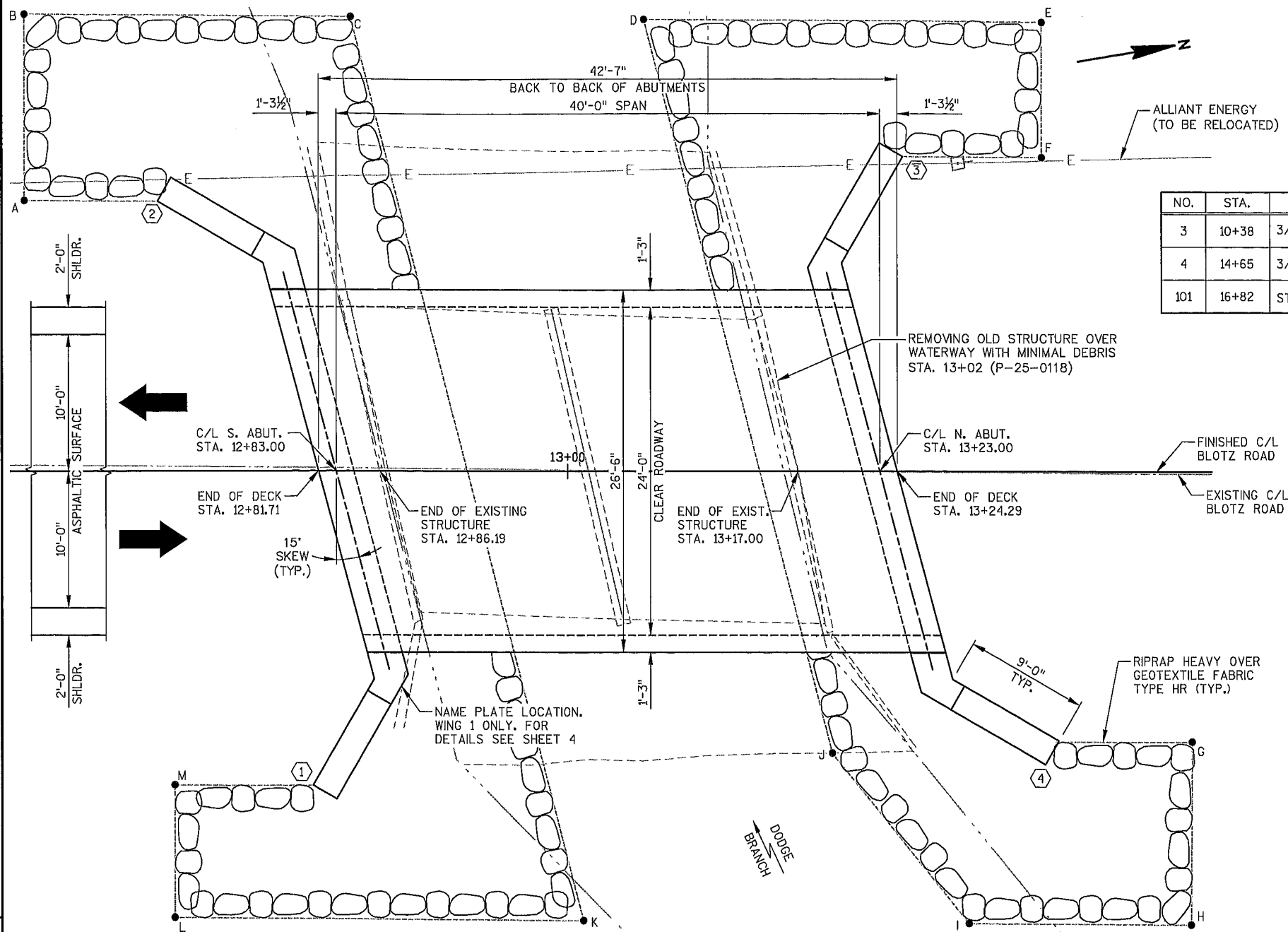
A.D.T. (2016) _____ 110
 A.D.T. (2036) _____ 160
 DESIGN SPEED _____ 30 M.P.H.

HYDRAULIC DATA

100 YEAR FREQUENCY
 DRAINAGE AREA _____ 13.5 SQ. MI.
 Q₁₀₀ TOTAL _____ 4,080 C.F.S.
 THROUGH STRUCTURE _____ 2510 C.F.S.
 OVERTOPPING ROADWAY _____ 1570 C.F.S.
 VELOCITY - THROUGH STRUCTURE _____ 10.1 F.P.S.
 WATERWAY AREA - THROUGH STRUCTURE _____ 247.5 SQ. FT.
 HIGH WATER₁₀₀ ELEVATION _____ 974.73
 SCOUR CRITICAL CODE _____ 5

DESIGN ROADWAY OVERFLOW FREQUENCY _____
 ROADWAY OVERTOPPING FREQUENCY _____ 7 YRS
 Q_{OVERTOPPING} _____ 1690 C.F.S.

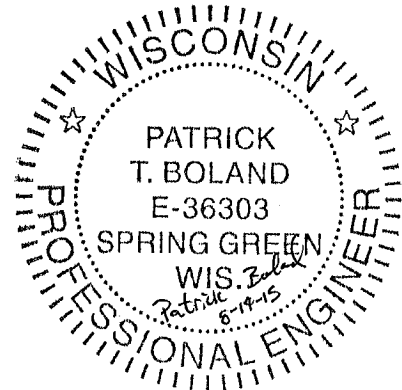
EROSION CONTROL
 Q₂ _____ 710 C.F.S.
 HIGH WATER₂ ELEVATION _____ 969.45

**BENCH MARKS**

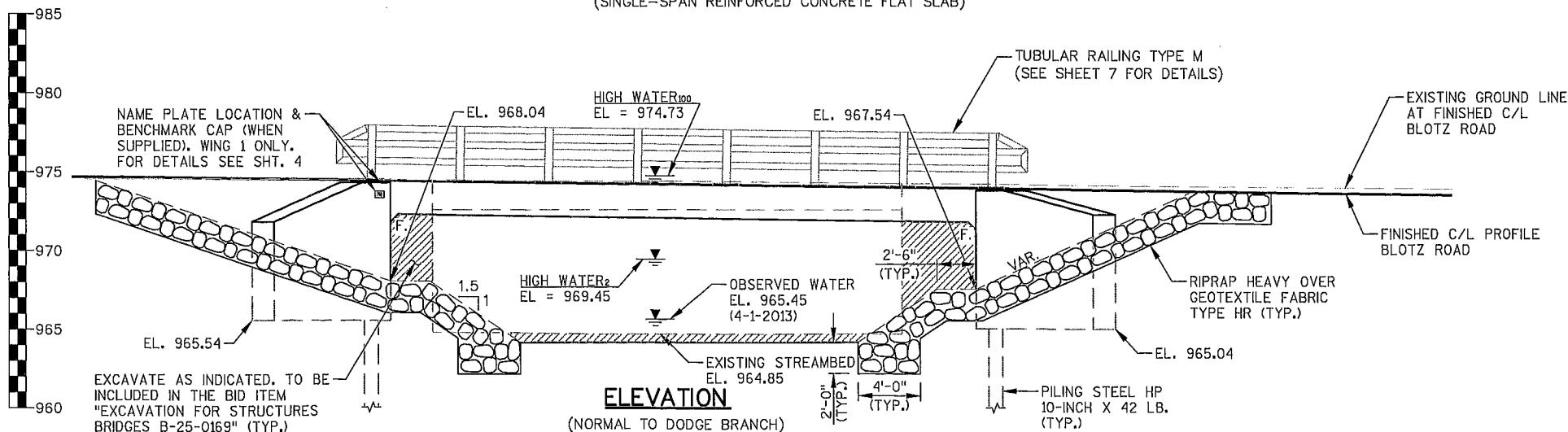
NO.	STA.	DESCRIPTION	ELEV.
3	10+38	3/4" IRON REBAR SET, 17.3' LT.	986.81
4	14+65	3/4" IRON REBAR SET, 18.1' RT.	971.80
101	16+82	STAR SPIKE IN PP, 28.6' RT.	975.33

RIPRAP HEAVY LAYOUT

POINT	STATION	OFFSET
A	12+60	20' LT.
B	12+60	33' LT.
C	12+84	33' LT.
D	13+06	33' LT.
E	13+35	33' LT.
F	13+35	23' LT.
G	13+46	20' RT.
H	13+46	33' RT.
I	13+30	33' RT.
J	13+20	21' RT.
K	13+01	33' RT.
L	12+71	33' RT.
M	12+71	23' RT.



PLAN B-25-0169
 (SINGLE-SPAN REINFORCED CONCRETE FLAT SLAB)

**LIST OF DRAWINGS**

- GENERAL PLAN
- CROSS SECTION AND QUANTITIES
- SUBSURFACE EXPLORATION
- ABUTMENTS
- ABUTMENT DETAILS
- SUPERSTRUCTURE
- TUBULAR RAILING TYPE M

DESIGN CONSULTANT

PATRICK BOLAND, PE
 (608) 588-7484

BRIDGE OFFICE CONTACT

WILLIAM DREHER, PE
 (608) 266-8489

NO.	DATE	REVISION	BY
JEWELL associates engineers, inc. Engineers - Architects - Surveyors			
660 SUNRISE DRIVE SPRING GREEN, WI 53588 PHONE: (608) 588-7484 FAX: (608) 588-9322			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED <i>William C. Dreher</i> SDR 04/08/16 CHIEF STRUCTURES DESIGN ENGINEER DATE			
STRUCTURE B-25-0169			
BLOTZ ROAD OVER DODGE BRANCH			
COUNTY	IOWA	TOWN/CITY/VILLAGE	DODGEVILLE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	RBH	DESIGN CK'D	PTB
DRAWN BY	RBH	PLANS CK'D	PTB
GENERAL PLAN			SHEET 1 OF 7

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED. BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

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

JOINT FILLER SHALL CONFORM TO A.A.S.H.T.O. DESIGNATION M53, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M213.

THE SLOPE OF FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH RIPRAP HEAVY AND GEOTEXTILE FABRIC TYPE HR TO THE EXTENT SHOWN ON SHEET 1 AND IN THE ABUTMENT DETAILS, OR AS DIRECTED BY THE ENGINEER IN THE FIELD.

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

THE QUANTITY FOR BACKFILL STRUCTURE, BID ITEM 210.0100, IS CALCULATED BASED ON THE APPLICABLE FIGURES 12.6-1 AND 12.6-2 IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION BRIDGE MANUAL.

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

APPLY PROTECTIVE SURFACE TREATMENT TO THE TOP OF THE DECK, THE SIDES OF THE DECK AND EXTERIOR 12" OF THE UNDERSIDE OF THE DECK (CONCRETE MATERIAL ONLY).

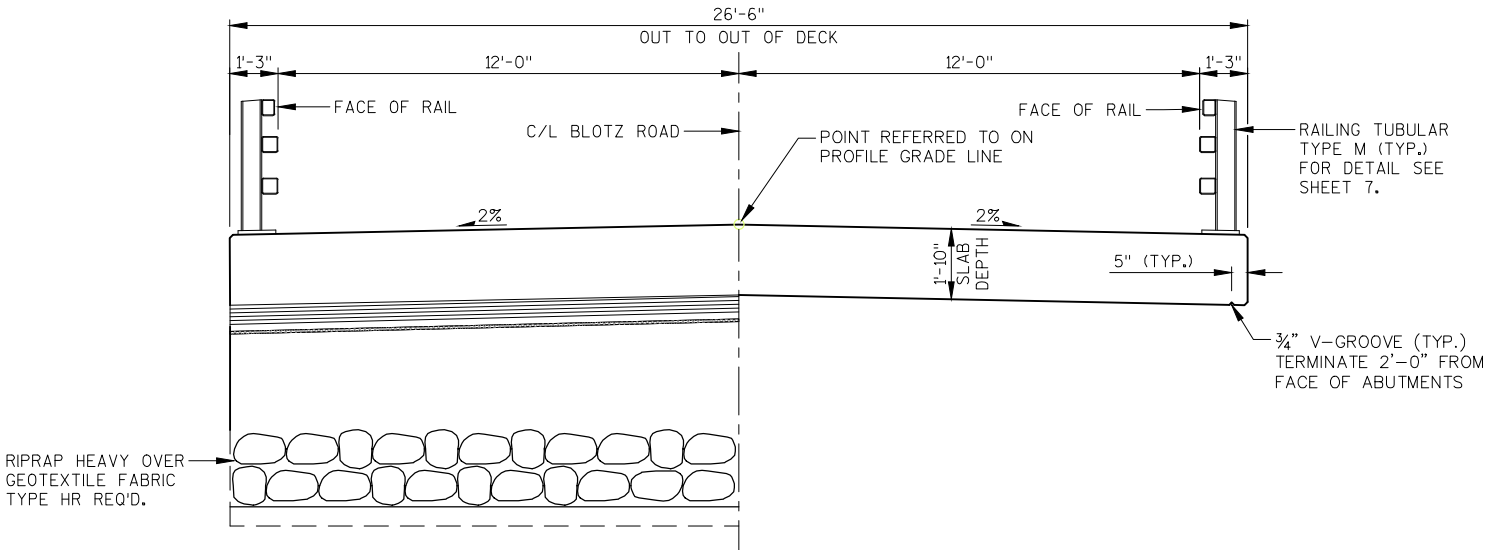
THE EXISTING STRUCTURE (P-25-0118) IS A TWO SPAN STEEL GIRDER, CONCRETE DECK STRUCTURE SUPPORTED ON CONCRETE ABUTMENTS WITH A CONCRETE FLOOR. THE STRUCTURE HAS A 21.5' CLEAR ROADWAY WIDTH AND A 31.0' OVERALL LENGTH AND SHALL BE REMOVED.

ALL STATIONS AND ELEVATIONS SHOWN ARE IN FEET.

THE EXISTING GROUNDLINE SHALL BE THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES.

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

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

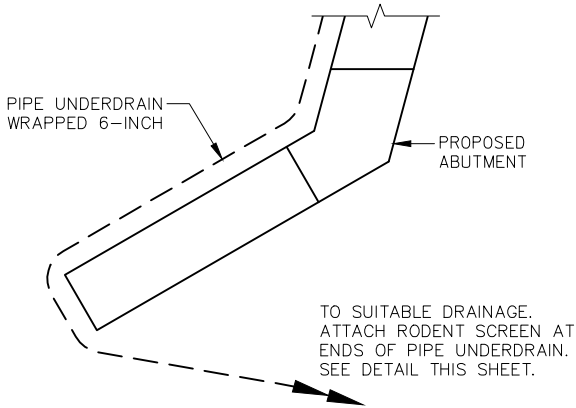


AT ABUTMENT

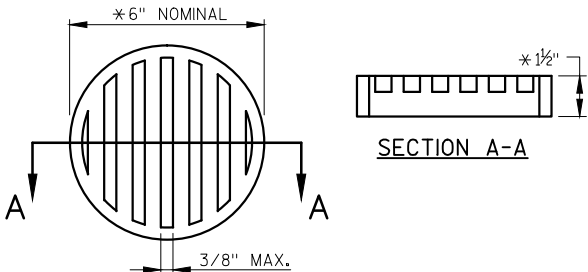
IN SPAN

PROPOSED CROSS-SECTION THROUGH ROADWAY

(LOOKING NORTH)



PIPE UNDERDRAIN DETAIL



RODENT SCREEN

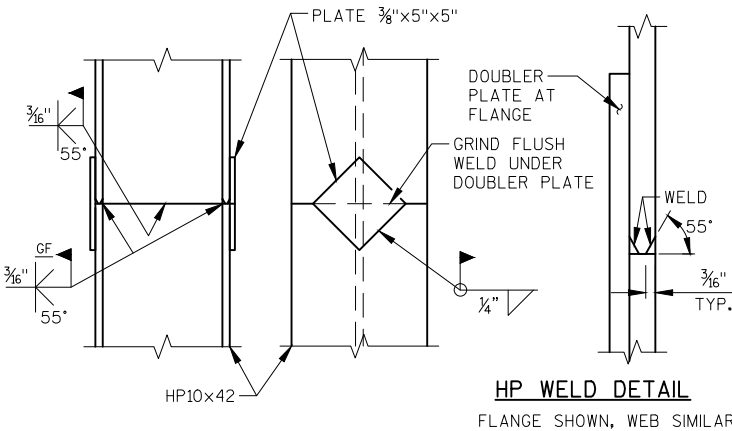
NOTES:

*DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING.

ORIENT SCREEN SO SLOTS ARE VERTICAL.

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

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

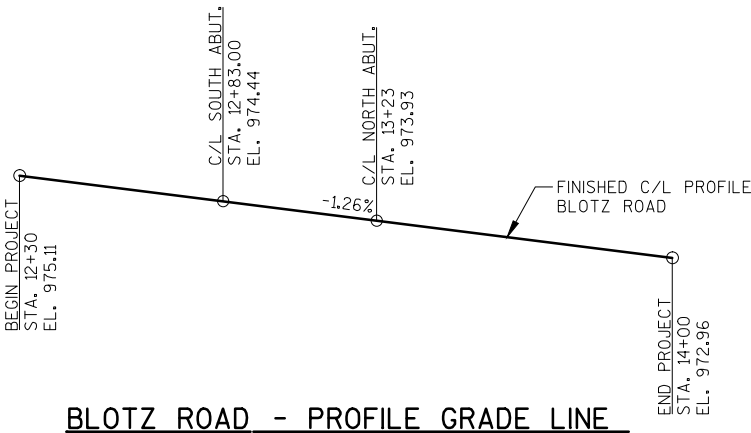


HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

PILE SPLICE DETAIL

STEEL "HP" PILE MATERIAL SHALL BE ASTM A 572 GRADE 50.

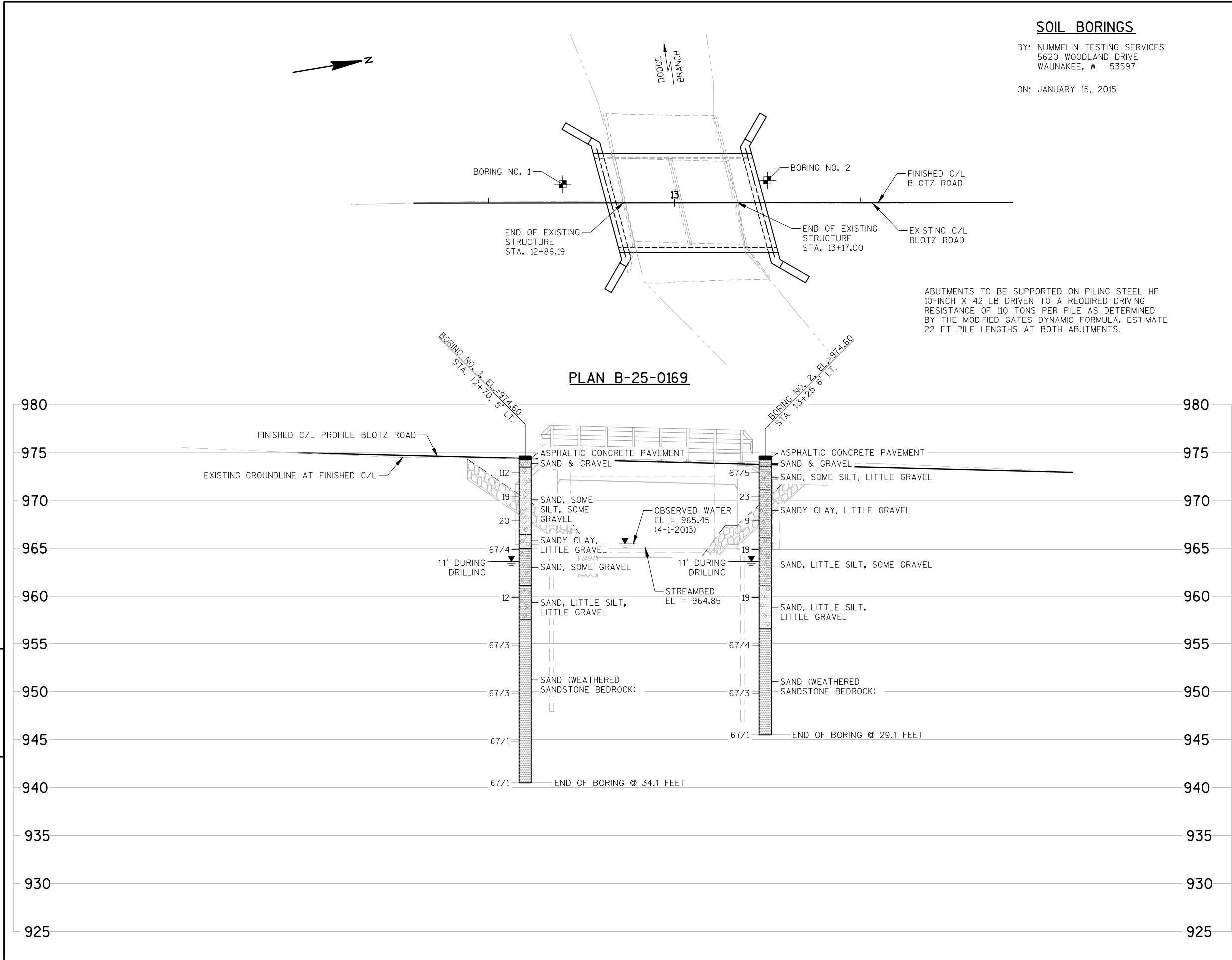












BLOTZ ROAD - PROFILE GRADE LINE

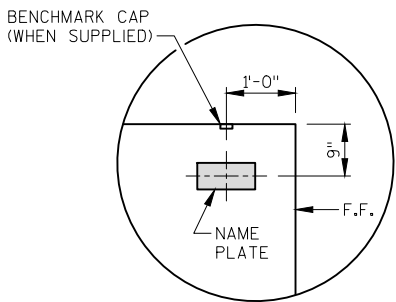
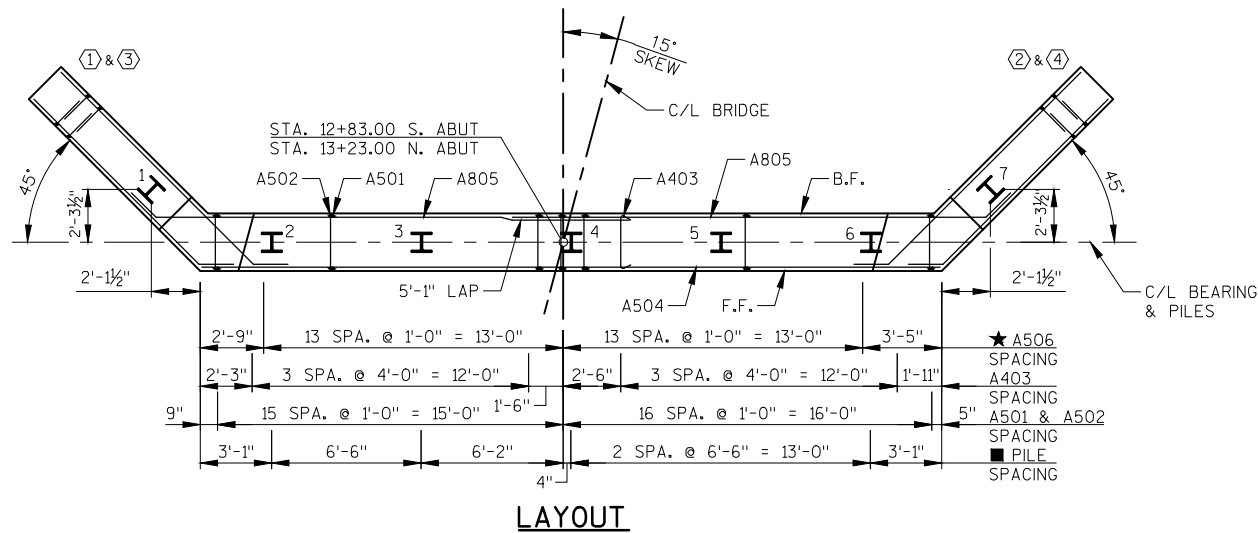
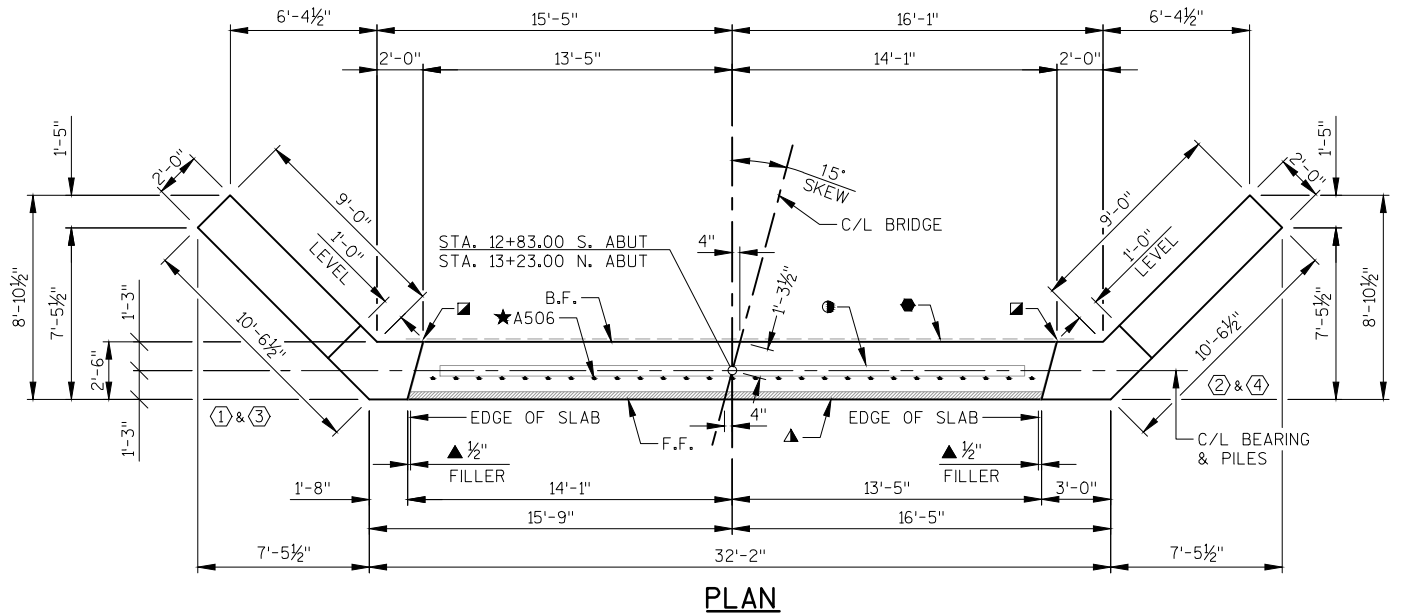
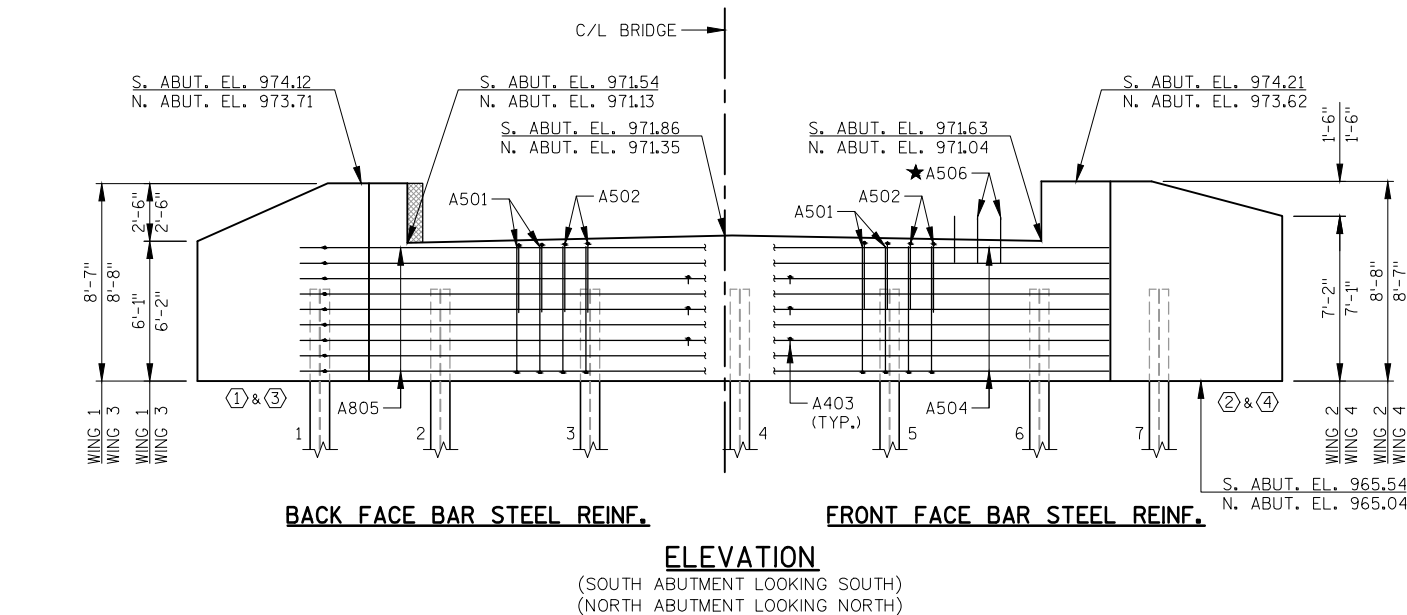
TOTAL ESTIMATED QUANTITIES

ITEM NUMBER	ITEM DESCRIPTION	UNIT	S. ABUT.	SUPER	N. ABUT.	TOTALS
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA. 13+02	LS	--	--	--	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-25-0169	LS	--	--	--	1
210.0100	BACKFILL STRUCTURE	CY	110	--	110	220
502.0100	CONCRETE MASONRY BRIDGES	CY	30.6	80.8	30.6	142
502.3200	PROTECTIVE SURFACE TREATMENT	SY	--	150	--	150
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,125	--	2,125	4,250
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,380	13,940	1380	16,700
513.4061	RAILING TUBULAR TYPE M B-25-0169	LF	--	88	--	88
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	--	6	12
550.1100	PIILING STEEL HP 10-INCH X 42 LB	LF	155	--	155	310
606.0300	RIPRAP HEAVY	CY	100	--	90	190
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	--	75	150
645.0120	GEOTEXTILE FABRIC TYPE HR	SY	190	--	170	360
NON-BID ITEMS						
	FILLER	SIZE	--	--	--	1/2" & 3/4"

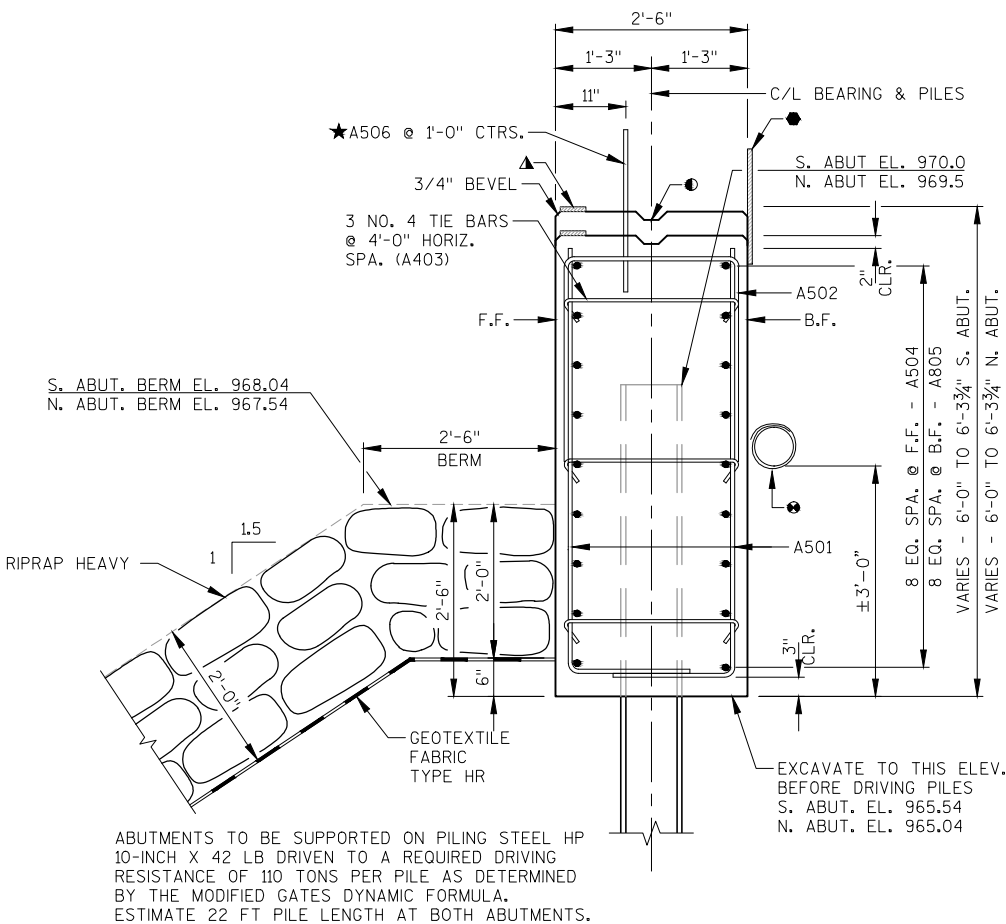
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-25-0169			
DRAWN BY		RBH	PLANS CK'D. PTB
CROSS SECTIONS AND QUANTITIES			SHEET 2 OF 7



STATE PROJECT NUMBER			
5699-00-75			
ABBREVIATIONS			
F—Fine		M—Medium	
Ws—Weathered		So—Sound	
C—Course			
MATERIAL SYMBOLS			
	Asphalt		Silt
	Sand		Peat
	Gravel		Clay
			Sandstone
			Limestone
			Igneous Rock
LEGEND OF PROBING			
<p>PROBING No.: Elevation Station</p> <p>95/6 = 96 Blows for 6" Penetration. Probing Taken with a 350# Weight Falling 18" on a 2" O.D. Point.</p> <p>7 Average Blows Per Foot</p> <p>Refusal 95/6</p>			
LEGEND OF BORING			
<p>Boring No.: Elevation Station</p> <p>Unconfined Strength →  7.7 8 *</p> <p>Blows Per Ft. Using 140# Wt. Falling 30"</p> <p>Wash Sample →</p> <p>Shelby Tube — S.T.</p> <p>No Ground Water Observed Above This Elevation</p> <p>Ground Water Elevation</p> <p>Sandy Gravel</p> <p>Boulders or Cobbles</p> <p>F. Sand</p> <p>Silty Clay</p> <p>So. Limestone</p>			
<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			
STRUCTURE B-25-0169			
DRAWN BY		TMS	PLANS CK'D. PTB
SUBSURFACE EXPLORATION		SHEET 3 OF 7	



NAME PLATE AND BENCHMARK CAP DETAIL



TYPICAL SECTION THROUGH ABUTMENT BODY

LEGEND

- KEYED CONSTRUCTION JOINT FORMED BY SURFACED & BEVELED 2x6.
- VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING EXTEND FROM 9" BELOW BRIDGE SEAT TO 1" BELOW TOP OF WINGS.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. (HORIZONTAL)
- 1/2" FILLER EXTEND AS SHOWN. SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF FILLER WITH NON-STAINING GRAY, NON-BITUMINOUS JOINT SEALER. (1" DEEP & HOLD 1/8" BELOW SURFACE OF CONCRETE)
- 3/4" x 4" PREFORMED FILLER, EXTEND FULL LENGTH OF ABUTMENTS BETWEEN EDGES OF SLAB.
- A506 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE IT HAS TAKEN ITS INITIAL SET. EMBED BAR 1'-0".
- PILE SPACING MEASURED AT BASE OF SHAFT.
- PIPE UNDERDRAIN WRAPPED (6-INCH), SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SCREEN AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 2. RODENT SCREEN TO BE INCLUDED IN THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH."

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY. SEE SHEET 5 FOR BILL OF BARS.

DO NOT PLACE FILL HIGHER THAN 3 FEET FROM BOTTOM OF ABUTMENT UNTIL SUPERSTRUCTURE IS IN PLACE.

SPACE REINFORCEMENT TO MISS PILING

F.F. — FRONT FACE

B.F. — BACK FACE

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-25-0169			
DRAWN BY		RBH	PLANS CK'D. PTB
ABUTMENTS		SHEET 4 OF 7	

NOTES

SOME BARS HAVE BEEN OMITTED FOR CLARITY.
SEE THIS SHEET FOR BILL OF BARS.

**BILL OF BARS
TWO ABUTMENTS SHOWN****2.760 LB (COATED)
4.250 LB (UNCOATED)**

BAR MARK	NO. REQ'D.	LENGTH	BENT	COAT	BAR SERIES	LOCATION
A501	128	7'-0"	X			BODY - VERT. - F.F. & B.F.
A502	64	7'-6"	X			BODY - VERT. - TOP
A403	48	2'-8"	X			TIE BARS
A504	18	32'-2"				BODY - HORIZ. - F.F.
A805	36	22'-1"	X			BODY - HORIZ. - B.F.
A506	54	2'-0"		X		BODY - VERT. - DOWELS
A407	44	9'-4"	X	X	*	WING 1 & 3 - VERT. - F.F. & B.F.
A408	22	8'-2"		X		WINGS - VERT.
A409	4	3'-6"		X		WINGS - VERT. - TOP
A510	36	11'-9"	X	X		WINGS - HORIZ. - F.F.
A811	36	13'-3"	X	X		WINGS - HORIZ. - B.F.
A412	4	7'-0"		X		WING 1 & 3 - HORIZ. - F.F. & B.F.
A413	4	4'-8"		X		WING 1 & 3 - HORIZ. - F.F. & B.F.
A414	4	2'-2"		X		WING 1 & 3 - HORIZ. - F.F. & B.F.
A415	4	9'-2"	X	X		WING 1 & 3 - HORIZ. - F.F. & B.F.
A416	8	8'-10"	X	X		WING 1 & 3 - HORIZ. - TOP
A417	44	9'-10"	X	X	*	WING 2 & 4 - VERT. - F.F. & B.F.
A418	4	8'-10"		X		WING 2 & 4 - HORIZ. - F.F. & B.F.
A419	4	7'-0"		X		WING 2 & 4 - HORIZ. - F.F. & B.F.
A420	4	3'-0"		X		WING 2 & 4 - HORIZ. - F.F. & B.F.
A421	4	8'-11"	X	X		WING 2 & 4 - HORIZ. - F.F. & B.F.
A422	8	10'-2"	X	X		WING 2 & 4 - HORIZ. - TOP

NOTES: THE FIRST DIGIT OF A BAR MARK SIGNIFIES THE BAR SIZE.

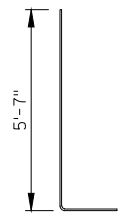
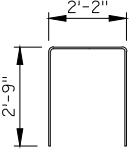
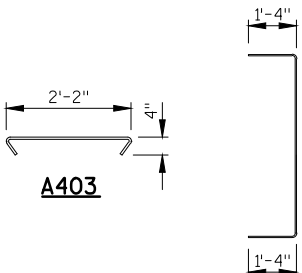
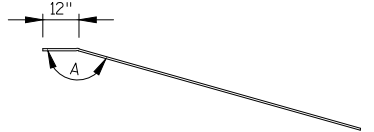
DIMENSIONS IN BENDING DETAILS ARE OUT TO OUT OF BAR.

* LENGTH SHOWN IS AN AVERAGE LENGTH ONLY. SEE BAR SERIES TABLE FOR ACTUAL LENGTHS.

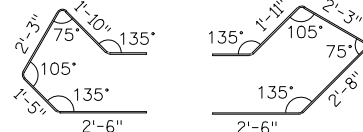
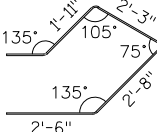
BAR SERIES TABLE

BAR MARK	NO. REQ'D.	LENGTH
A407	4 SERIES OF 11	10'-6" TO 8'-2"
A417	4 SERIES OF 11	10'-6" TO 9'-2"

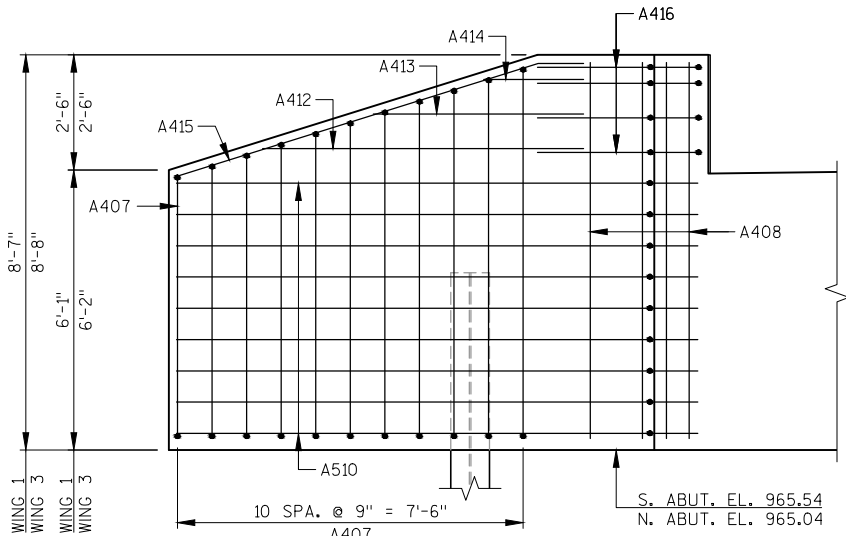
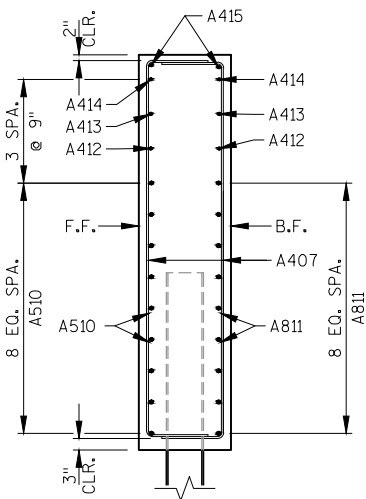
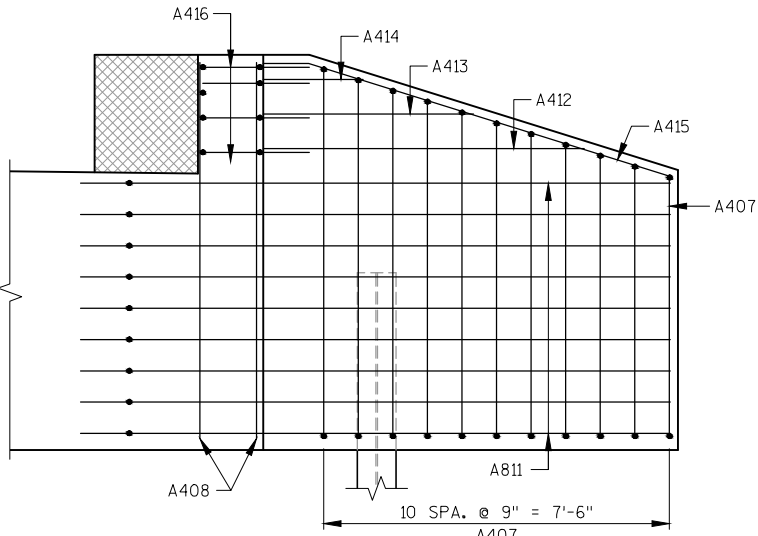
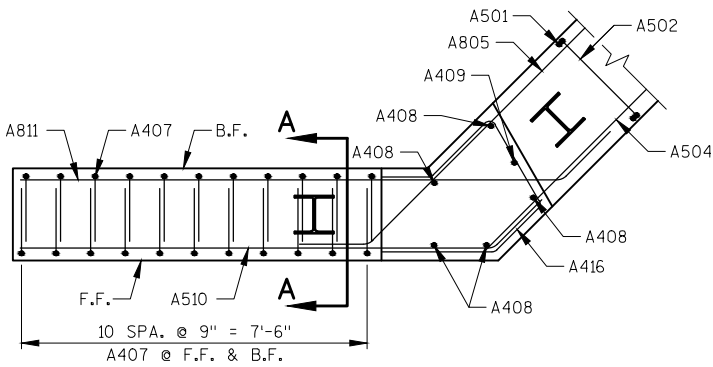
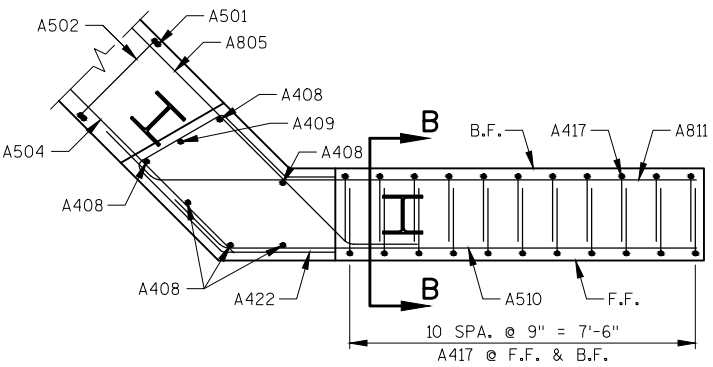
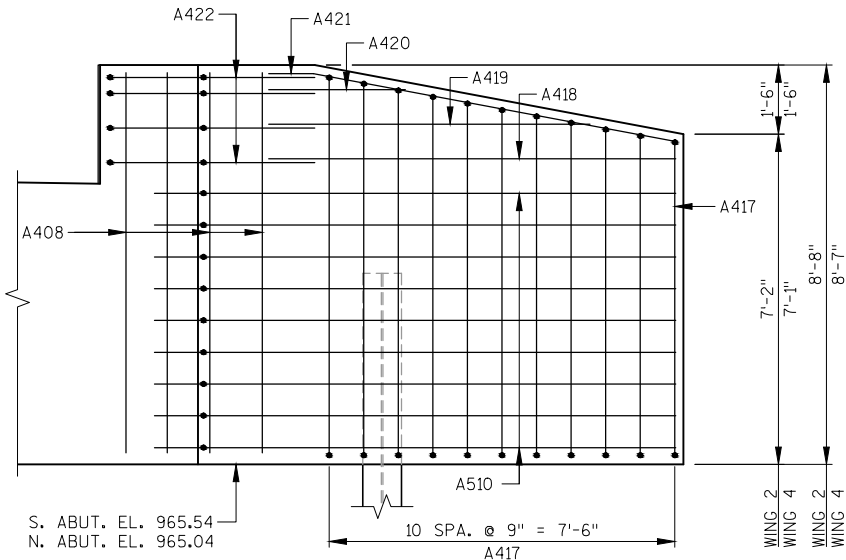
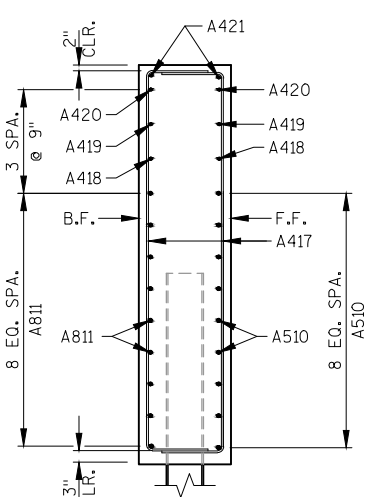
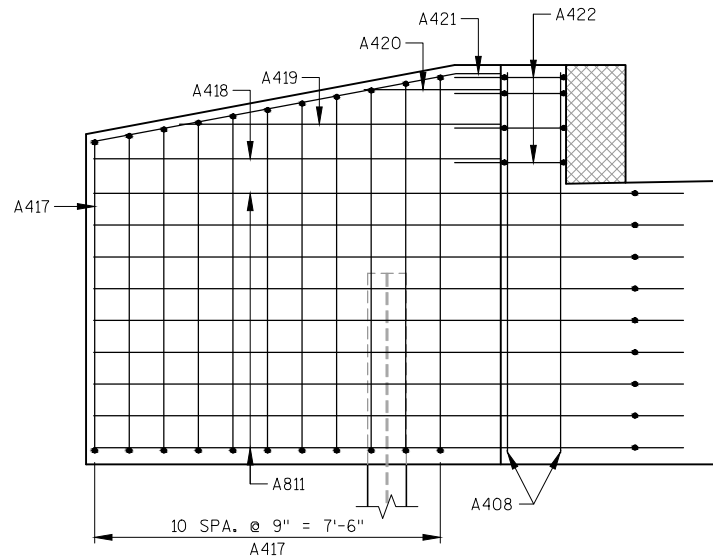
BUNDLE AND TAG EACH SERIES SEPARATELY.

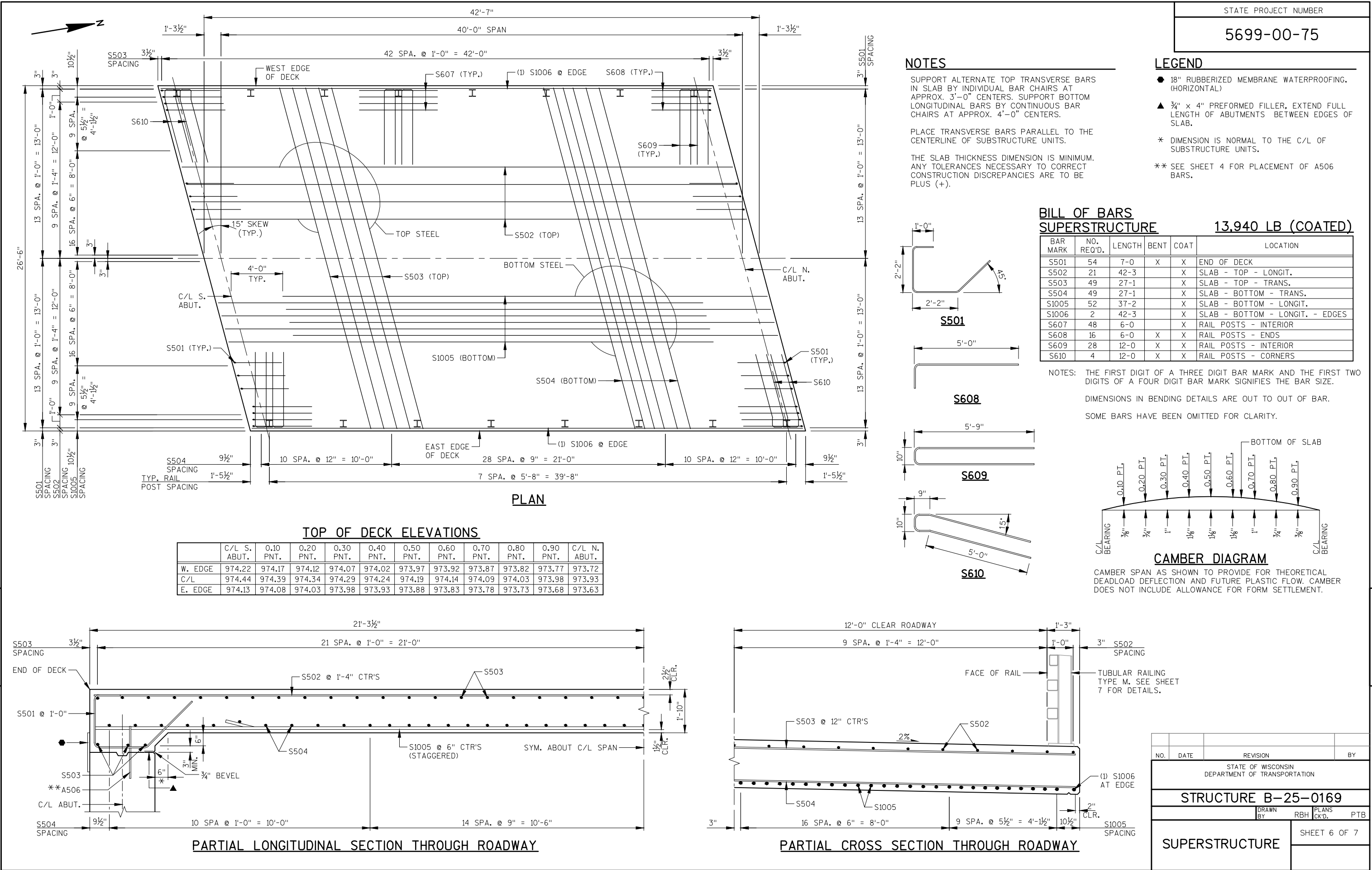
**A501****A502****A407 & A417****A805, A510 & A811****A415 & A421**

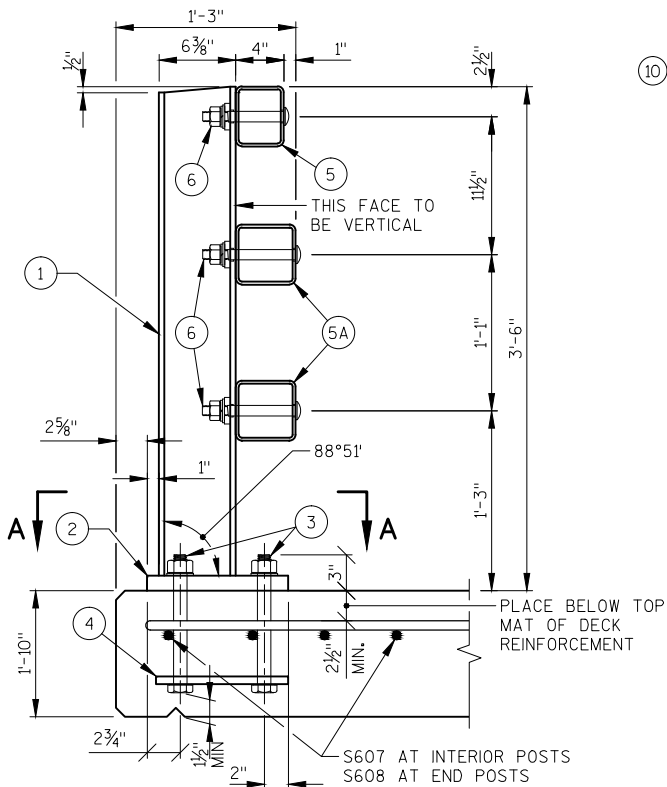
MARK	'A'
A415	162'39'
A421	169'23'

**A416****A422**

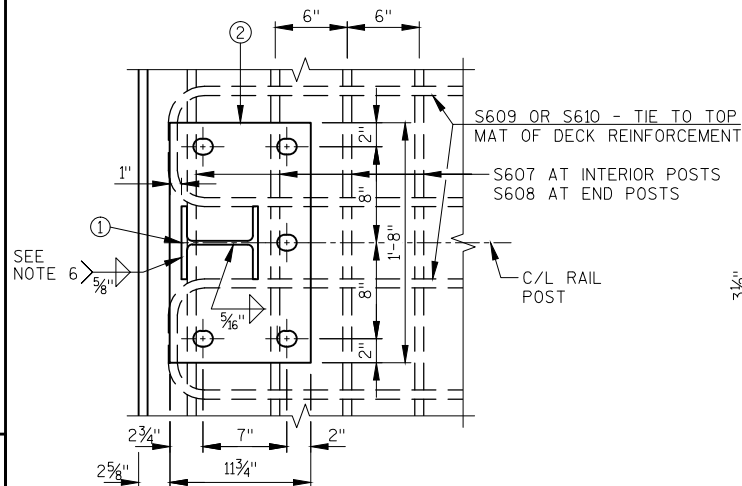
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-25-0169			
DRAWN BY		RBH	PLANS CK'D. PTB
ABUTMENT DETAILS			SHEET 5 OF 7

**F.F. ELEVATION - WING 1 & 3****SECTION A-A****B.F. ELEVATION - WING 1 & 3****PLAN VIEW - WING 1 & 3****PLAN VIEW - WING 2 & 4****F.F. ELEVATION - WING 2 & 4****SECTION B-B****B.F. ELEVATION - WING 2 & 4**

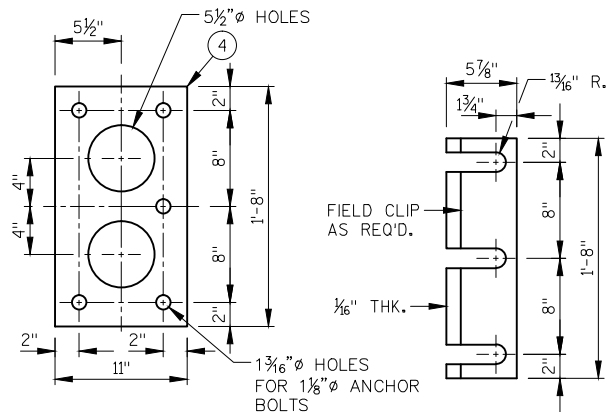




SECTION THROUGH RAILING ON DECK

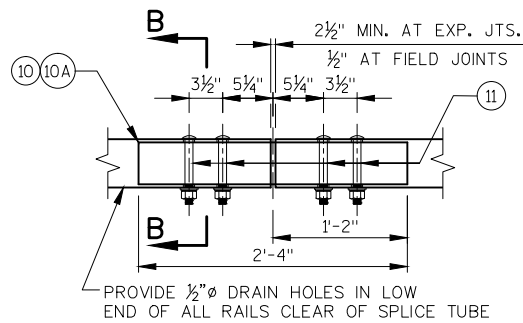


SECTION A-A

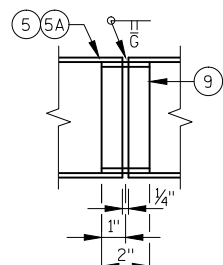


ANCHOR PLATE
AT RAIL TO DECK CONNECTION

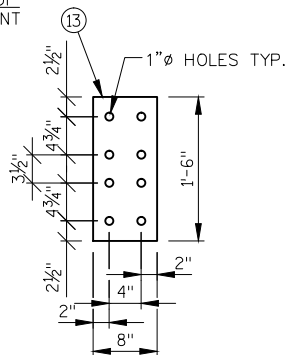
POST SHIM
DETAIL



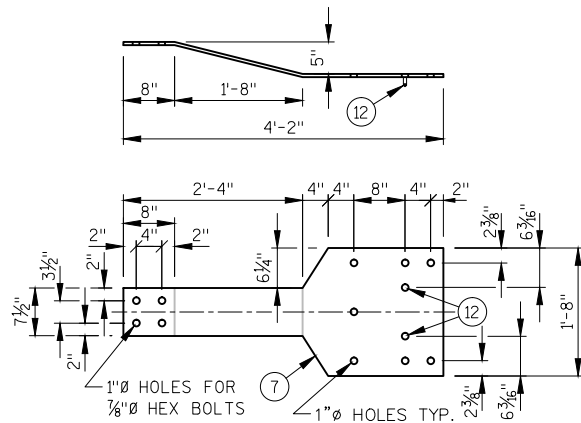
FIELD ERECTION JOINT DETAIL



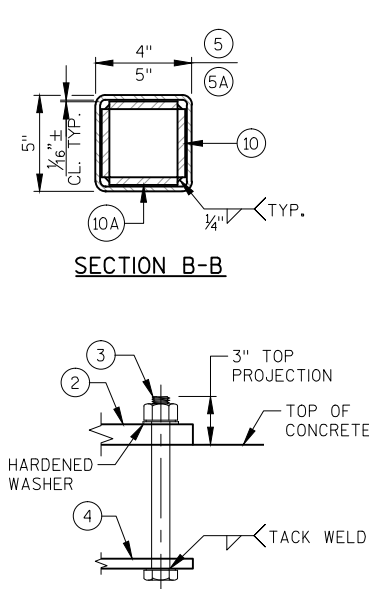
SHOP RAIL
SPLICE DETAIL
(LOCATION MUST BE
SHOWN ON SHOP DRAWINGS)



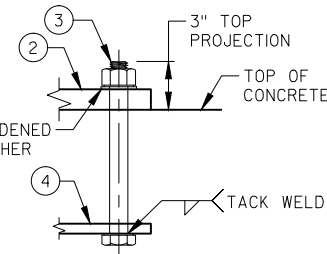
ANCHOR PLATE
AT BEAM GUARD ATTACHMENT



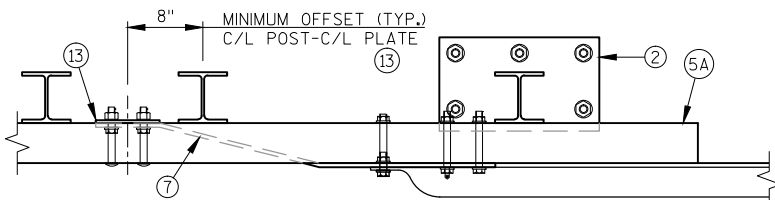
BACK-UP PLATE DETAIL



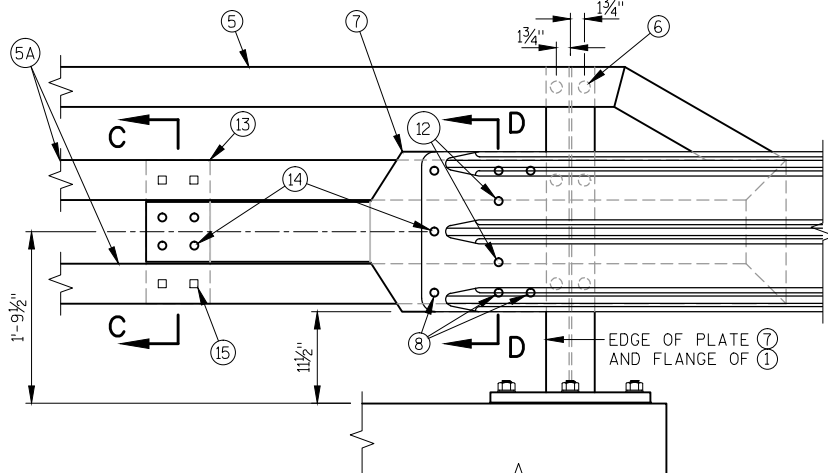
SECTION B-B



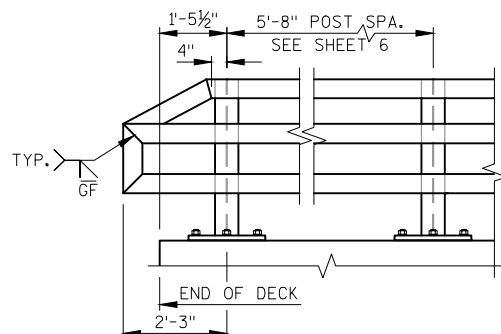
ANCHOR BOLTS



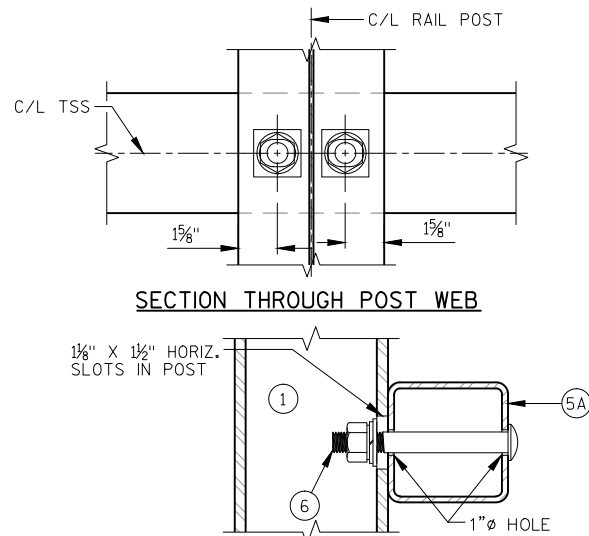
TOP VIEW AT END POST
(THRIE BEAM RAIL ATTACHMENT)



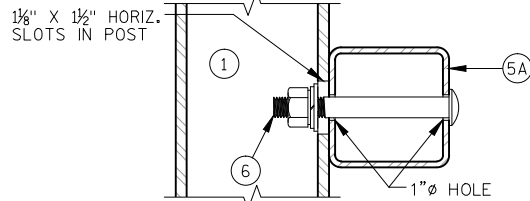
DETAIL AT END POST
(THRIE BEAM RAIL ATTACHMENT)



PART ELEVATION OF RAILING



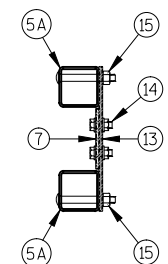
SECTION THROUGH POST WEB



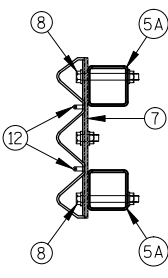
SECTION THROUGH RAIL

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

TYPICAL RAIL TO POST CONNECTIONS



SECTION C-C



SECTION D-D

STATE PROJECT NUMBER

5699-00-75

LEGEND

- W6x25 WITH 1 1/4" x 1 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 1/4"x11 3/4"x1'-8" WITH 1 3/8"x1 1/2" SLOTTED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN. SLOTS PARALLEL TO SHORT SIDE OF PLATE.
- ASTM A449 - 1 1/2" 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. 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.
- 5/8"x11"x1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/8" DIA. HOLES FOR ANCHOR BOLTS NO. 3
- TSS 5x4x1/4 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- 5A TSS 5x5x1/4 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
- 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/8"x1 1/2"x1 1/2" WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION).
- 1/2" THK. BACK-UP PLATE WITH 2 - 7/8"x1 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 3/4" PLATE. PROVIDE "SLIDING FIT".
- 3/8"x3 3/8"x2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
- 10A 3/8"x2 3/8"x2'-4" PLATE USED IN NO. 5, 3/8"x3 3/8"x2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
- 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 1 1/2"x1 1/2" LONGIT. SLOTTED HOLES AT FIELD JOINTS AND 1 1/2"x2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS IN PLATE NO. 10A.
- 7/8" DIA. BY 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
- 3/8"x8"x1'-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" DIA. HOLES IN TUBES NO. 5A FOR 7/8" A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

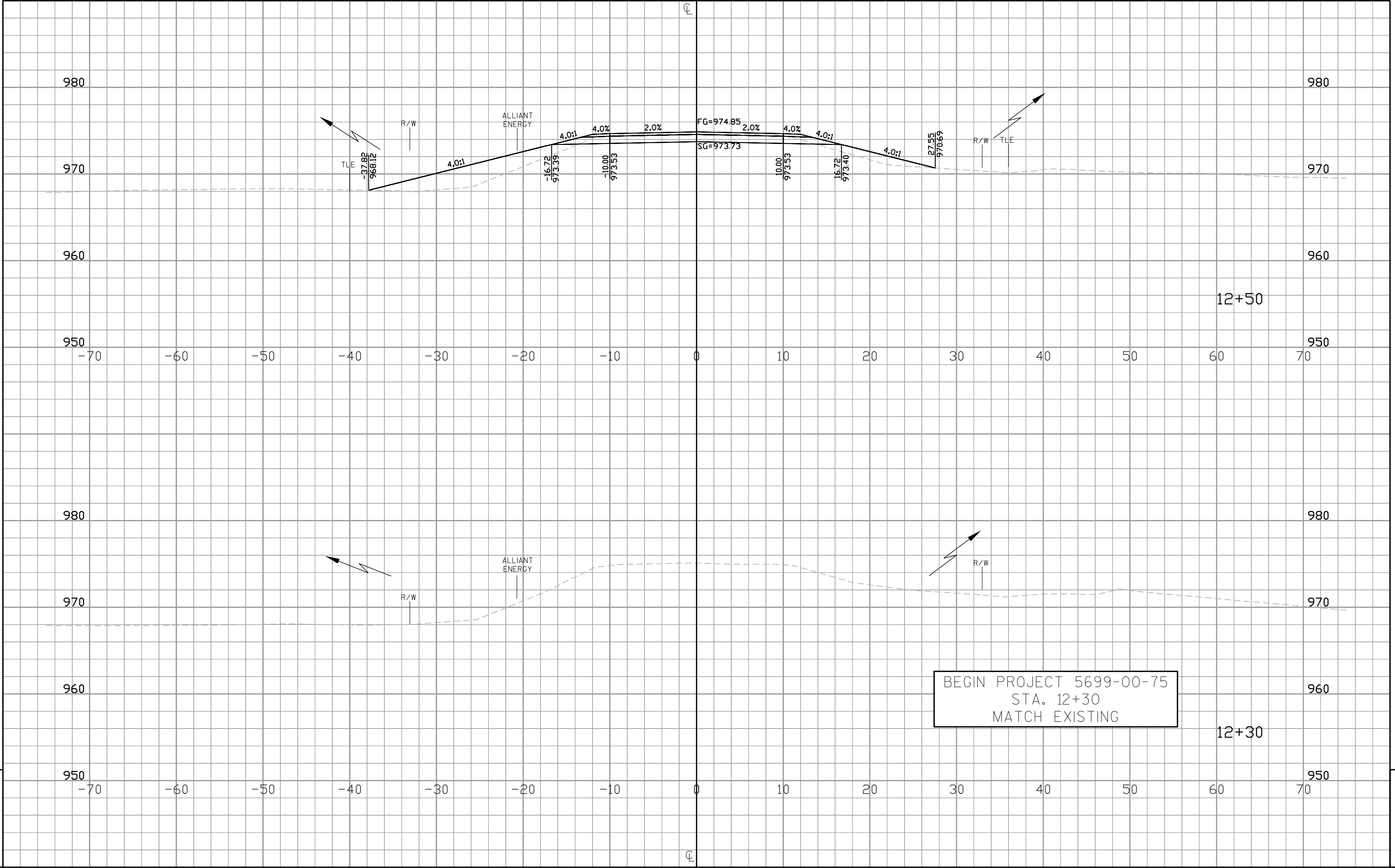
- BID ITEM SHALL BE "RAILING TUBULAR TYPE M B-25-0169" WHICH INCLUDES ALL ITEMS SHOWN.
- RAIL POST AND BASE PLATES SHALL CONFORM TO THE REQUIREMENTS OF ASTM A709 GRADE 50. HOLLOW RAILING STRUCTURAL TUBING SHALL CONFORM TO THE REQUIREMENTS OF ASTM A500 GRADE B OR C WITH A CERTIFIED FY=50 KSI. ANCHOR PLATES 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 1/2 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 S.S.P.C. SPECIFICATIONS.
- THIS RAILING MEETS NCHRP REPORT 350 EVALUATION CRITERIA FOR TEST LEVEL 4 (TL-4).

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-25-0169			
DRAWN BY		RBH	PLANS CK'D. PTB
TUBULAR RAILING TYPE M			SHEET 7 OF 7

EARTHWORK-MAINLINE

STATION	AREA (SF)					INCREMENTAL VOL (CY)								CUMMULATIVE VOLUME (CY)							
	SALVAGED/ UNUSABLE					SALVAGED/ UNUSABLE		REDUCED MARSH IN FILL		FILL	SELECT CRUSHED MATERIAL		CUT 1.00	REDUCED MARSH IN FILL		FILL	SELECT CRUSHED MATERIAL		MASS ORDINATE		
	CUT	PAV'T MATERIAL	FILL	MARSH EX	EBS	CUT NOTE 1	PAV'T MATERIAL NOTE 2	FILL NOTE 3	MARSH EX	(0.6) NOTE 4	(25%)	(1.5)		EBS	EX	(0.6) NOTE 4	(25%) NOTE 5	(1.5)		EBS	NOTE 6
12+30	32	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12+50	21	0	29	0	0	21	0	11	0	0	15	0	0	21	11	0	0	15	0	6	
12+82	21	0	43	0	0	27	0	44	0	0	54	0	0	48	55	0	0	69	0	-21	
12+82	0	0	0	0	0	0	0	0	0	0	0	0	0	48	55	0	0	69	0	-21	
13+24	0	0	0	0	0	0	0	0	0	0	0	0	0	48	55	0	0	69	0	-21	
13+24	37	0	3	0	0	0	0	0	0	0	0	0	0	48	55	0	0	69	0	-21	
13+50	37	0	3	0	0	37	0	3	0	0	3	0	0	85	58	0	0	72	0	13	
14+00	32	0	0	0	0	65	0	2	0	0	3	0	0	150	60	0	0	75	0	75	
COLUMN SUBTOTALS						150	0	60	0	0	75	0	0								
MAINLINE						150	0	60	0	0	75	0	0	150	60	0	0	75	0	75	
FE						-	0	80	0	0	100	0	0	150	140	0	0	175	0	-25	

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
4 - REDUCED MARSH IN FILL	REDUCED MARSH THAT CAN BE USED IN FILL
5 - FILL (25%)	FILL 25%: (FILL -REDUCED MARSH IN FILL)*1.25
6 - MASS ORDINATE	(CUT - FILL (25%))



9

9

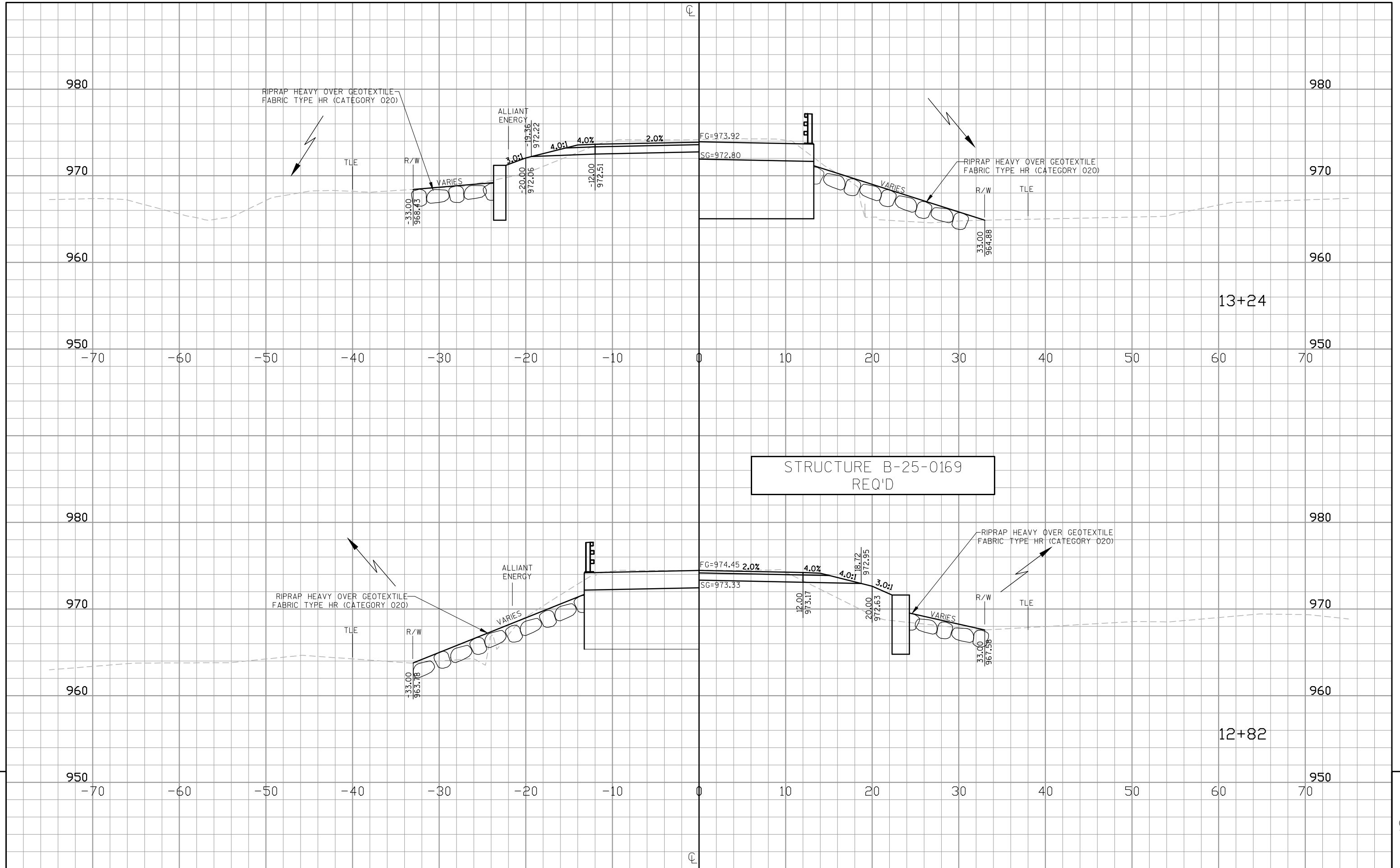
PROJECT NO: 5699-00-75	HWY: BLOTZ ROAD	COUNTY: IOWA	CROSS SECTIONS: MAINLINE	SHEET	E
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FILE NAME : S:\PROJECTS\K19210 BLOTZ ROAD STRUCTURE T. OF DODGEVILLE\DESIGN\CORRIDORS\BLOTZ CORRIDOR.DWG
LAYOUT : MODEL

PLOT DATE : 11/25/2015
PLOT TIME : 1:18:01 PM

PLOT BY : STRINE, THERESA

PLOT SCALE : 1 IN:10 FT



Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

<http://www.dot.wisconsin.gov>