NEL DECEMBER 2017

PROJECT ID: 6188-01-71

WITH: N/A

COUNTY: FOND DU LAC

18

ORDER OF SHEETS

TOTAL SHEETS = 58

DESIGN DESIGNATION 6188-01-71

A.A.D.T.	(2018)	=	280 VPD
A.A.D.T.	(2038)	=	300 VPD
D.H.V.		=	62
D.D.		=	60/40
T.		=	4.8%
DESIGN SPEED		=	45 MPH
ESALS		=	36,500 (HMA)

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 (300'EIF)
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

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

UTILITIES
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

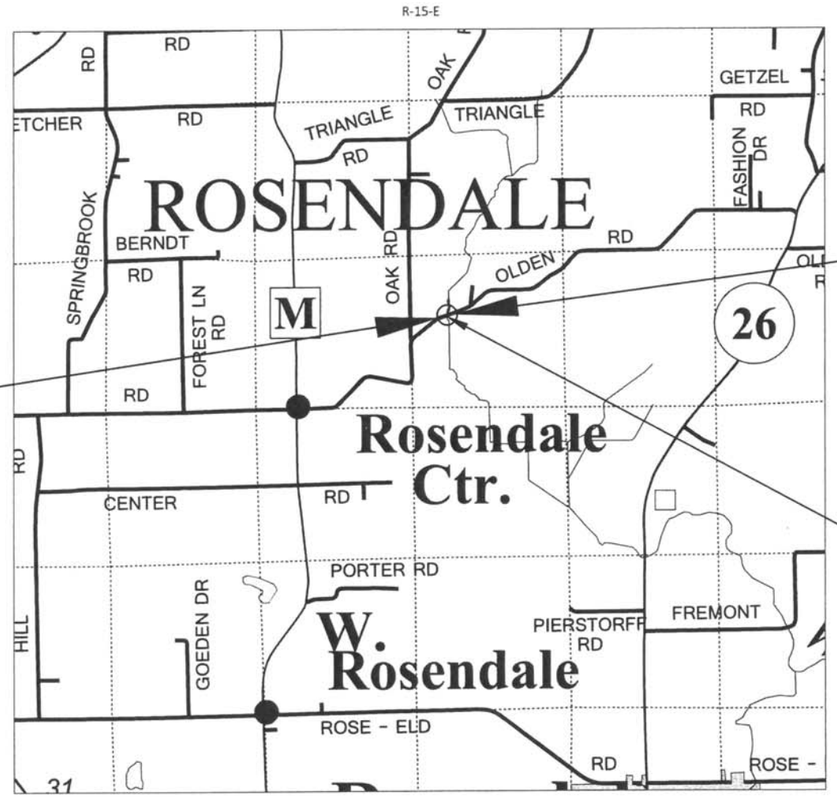
T ROSENDALE, OLDEN RD

FOND DU LAC RIVER BRIDGE

LOCAL STREET
FOND DU LAC COUNTY

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6188-01-71	WISC 2018017	1

STATE PROJECT NUMBER
6188-01-71



BEGIN PROJECT
STA 18+00
Y=415758.966
X=749984.916

END PROJECT
STA 22+00

STRUCTURE B-20-230
STA 20+00

LAYOUT
SCALE 0 1 MI

TOTAL NET LENGTH OF CENTERLINE = 0.076 MI

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

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (2012) (NAVD 88-2012).

ACCEPTED FOR
TOWN OF ROSENDALE
Date 7-25-17 (Kenneth Kamps, Town Chair)

ORIGINAL PLANS PREPARED BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac
85 South Pioneer Road, Suite 300 • Fond du Lac, WI 54935
(920) 924-5720 • fax (920) 924-5725

WISCONSIN
ANDREW L. KLEMP
E-33645
FOND DU LAC, WI
PROFESSIONAL ENGINEER

7/26/17 (Date) ANDREW L. KLEMP, PE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
- Surveyor: GREMMER & ASSOCIATES, INC.
- Designer: GREMMER & ASSOCIATES, INC.
- Management Consultant: JT ENGINEERING

APPROVED FOR THE DEPARTMENT
DATE: 7/31/17 (Mangement Consultant Signature)

E

GENERAL NOTES

ALL DISTANCES AND STATIONING SHOWN ON THIS PLAN ARE GROUND VALUES.

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.

THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

A VERTICAL SAW CUT SHALL BE MADE THROUGH EXISTING DRIVEWAYS, SIDEWALKS AND PAVEMENTS AT THE REMOVAL LIMITS, AND WHERE NEW ASPHALT ABUTS EXISTING PAVEMENT TO CREATE A SMOOTH CONTINUOUS VERTICAL FACE. SAWCUT SLURRY SHALL BE ACTIVELY MANAGED TO PREVENT RELEASE OF SLURRY INTO WATERWAY AND WETLANDS.

SAWCUT LOCATIONS SHOWN ON THE PLANS ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD.

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

SALVAGED TOPSOIL, SEED AND EROSION MAT AS SHOWN IN PLANS OR AS DIRECTED BY THE ENGINEER SHALL BE PLACED ON ALL DISTURBED AREAS, EXCLUSIVE OF THE AREA OCCUPIED BY THE NEW PAVEMENTS, SIDEWALKS, ENTRANCES, AND RELATED STRUCTURES.

NO FERTILIZER SHALL BE APPLIED WITHIN 20 FEET OF A BODY OF WATER OR WETLAND.

SECTIONS AS SHOWN ON THE CROSS-SECTIONS INCLUDE THE THICKNESS OF SALVAGED TOPSOIL WHERE REQUIRED.

EROSION CONTROL ITEMS SHOWN ARE APPROXIMATE, THE EXACT LOCATION SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. EROSION CONTROL ITEMS TO BE INSTALLED PRIOR TO UPSLOPE WORK. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THAT THE MEASURE IS NO LONGER NECESSARY. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EROSION CONTROL MEASURE AS DIRECTED BY THE ENGINEER.

INSTALL SAFETY EDGE ON ASPHALTIC SURFACE PAVEMENTS WITH ASPHALTIC SURFACE PAVED SHOULDER OF 3 FEET OR LESS.

ASPHALTIC SURFACE WEIGHT CALCULATIONS ARE BASED ON 110 LBS/SY-INCH.

PLACE 4.0" ASPHALTIC SURFACE IN TWO LAYERS OF THE FOLLOWING THICKNESSES:
UPPER LAYER THICKNESS = 1.75" NOMINAL GRADATION SIZE = 12.5 MM
LOWER LAYER THICKNESS = 2.25" NOMINAL GRADATION SIZE = 19.0 MM

ABBREVIATIONS

AEW	APRON ENDWALL
AGG	AGGREGATE
AH	AHEAD
ASP	ASPHALT
BK	BACK
BAD	BASE AGGREGATE DENSE
BM	BENCH MARK
CC	CENTER OF CURVATURE
CE	COMMERCIAL ENTRANCE
C&G	CURB AND GUTTER
C/L	CENTER OR CONSTRUCTION LINE
CONC	CONCRETE
CP	CULVERT PIPE
CPCM	CULVERT PIPE CORRUGATED METAL
CPCS	CULVERT PIPE CORRUGATED STEEL
CPRC	CULVERT PIPE REINFORCED CONCRETE
CS	CURVE SPIRAL, THE POINT OF CHANGE IN ALIGNMENT FROM CURVE TO SPIRAL
CSD	CONCRETE SURFACE DRAIN
CY	CUBIC YARD
D	DEGREE OF CURVE
Δ	DELTA
DISCH	DISCHARGE
E	EXTERNAL DISTANCE FROM MIDPOINT OF CIRCULAR CURVE FROM ANGLE INTERSECTION
EB	EASTBOUND
ELEV	ELEVATION
FE	FIELD ENTRANCE
HMA	HOT MIX ASPHALT
HP	HIGH POINT
HT	HEIGHT
INV	INVERT
L	LENGTH OF CURVE
LHF	LEFT HAND FORWARD
LP	LOW POINT
Ls	LENGTH OF SPIRAL
LT	LEFT
MAX	MAXIMUM
MIN	MINIMUM
M/L	MATCHLINE
NB	NORTHBOUND
NC	NORMAL CROWN
NOM	NOMINAL
NORM	NORMAL
PAVT	PAVEMENT
PC	POINT OF CURVE
PCC	POINT OF COMPOUND CURVE
PE	PRIVATE ENTRANCE
PI	POINT OF INTERSECTION
PLE	PERMANENT LIMITED EASEMENT
PT	POINT OF TANGENT
R	RADIUS OF CURVE
R/L	REFERENCE LINE
R/W	RIGHT OF WAY
RC	REVERSE CROWN
RCAEW	APRON ENDWALL FOR CULVERT PIPE REINFORCED CONCRETE
RCP	REINFORCED CONCRETE PIPE
REQ'D	REQUIRED
RHF	RIGHT HAND FORWARD
RO	RUN OFF LENGTH
RT	RIGHT
SALV	SALVAGED
SB	SOUTHBOUND
SC	SPIRAL CURVE, THE POINT OF CHANGE IN ALIGNMENT FROM SPIRAL TO CURVE
SDD	STANDARD DETAIL DRAWING
SE	SUPER ELEVATION
SEG	SEGMENT
SF	SQUARE FOOT
SS	STORM SEWER
ST	SPIRAL TANGENT, THE POINT OF CHANGE IN ALIGNMENT FROM SPIRAL TO TANGENT
STA	STATION
SY	SQUARE YARD
T	TANGENT LENGTH
TLE	TEMPORARY LIMITED EASEMENT
TS	TANGENT SPIRAL, THE POINT OF CHANGE IN ALIGNMENT FROM TANGENT TO SPIRAL
TYP	TYPICAL
V	VELOCITY OR DESIGN SPEED
VC	VERTICAL CURVE
VCL	VERTICAL CURVE LENGTH
VPC	POINT OF VERTICAL CURVE
VPI	POINT OF VERTICAL INTERSECTION
VPRC	POINT OF VERTICAL REVERSE CURVE
VPT	POINT OF VERTICAL TANGENT
WB	WESTBOUND

ORDER OF SECTION 2 SHEETS

UTILITIES

COMMUNICATIONS

CENTURYLINK
201 STARK STREET
RANDOLPH, WI 53956
ATTN: TIM KROEZE
PHONE: (920) 326-2224
EMAIL: tim.kroeze@centurylink.com

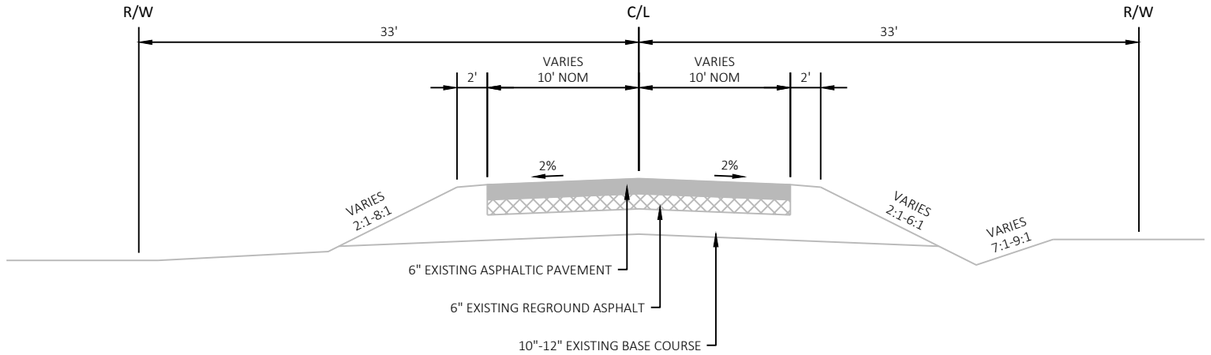
* DENOTES NON-MEMBER OF DIGGERS HOTLINE

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

DNR AREA LIAISON

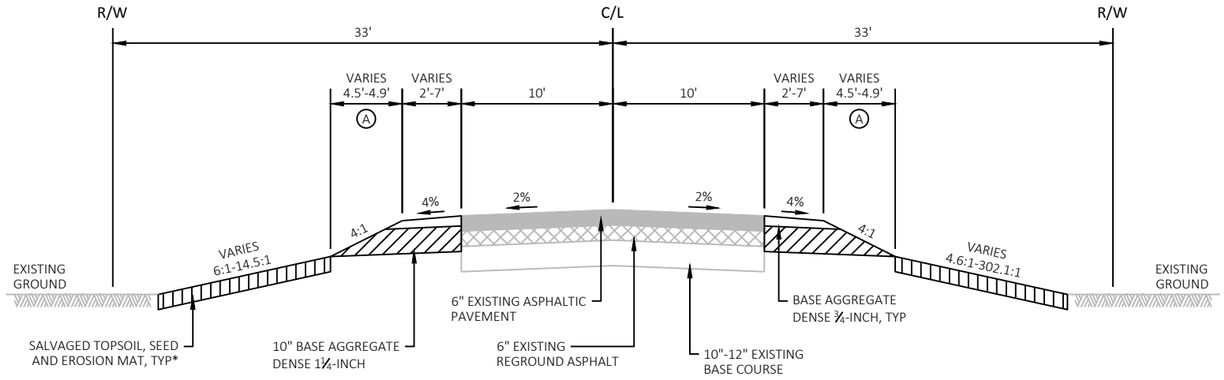
WISCONSIN DEPT. OF NATURAL RESOURCES
2984 SHAWANO AVENUE
GREEN BAY, WI 54313-6727
ATTN: JEREMIAH SCHIEFELBEIN
PHONE: (920)-360-3784
EMAIL: Jeremiah.Schiefelbein@wisconsin.gov

2



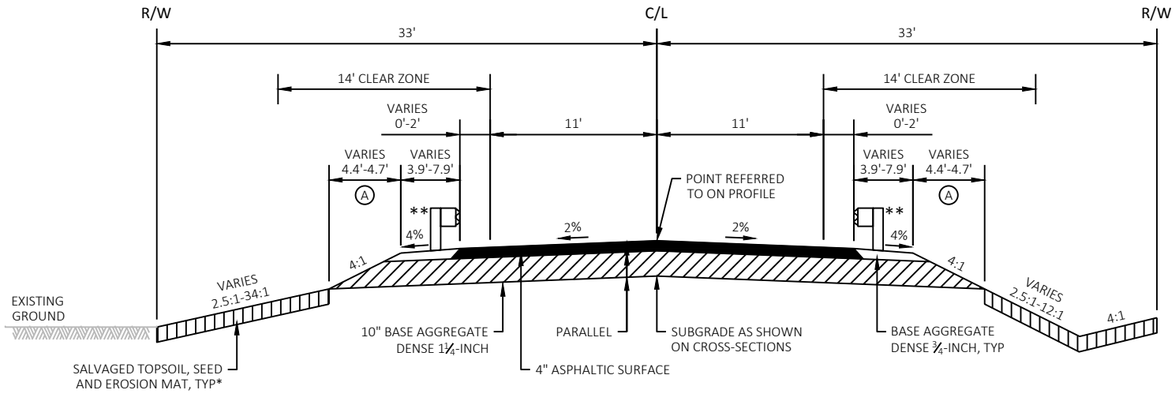
TYPICAL EXISTING SECTION

OLDEN ROAD
STA 17+20 - STA 19+89
STA 20+11 - STA 22+75



TYPICAL FINISHED SECTION

OLDEN ROAD
STA 17+22.69 - STA 18+00
STA 22+00 - STA 22+75.24



TYPICAL FINISHED SECTION

OLDEN ROAD
STA 18+00 - STA 19+83.75
STA 20+16.25 - STA 22+00

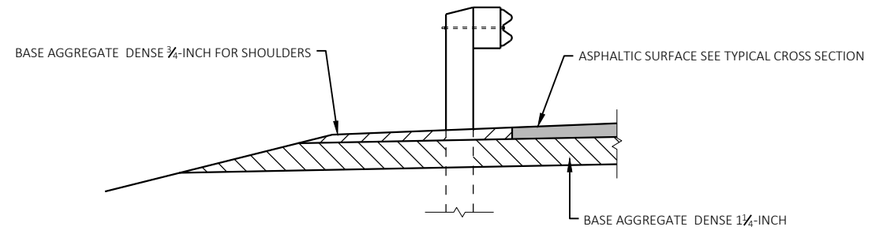
NOTES:

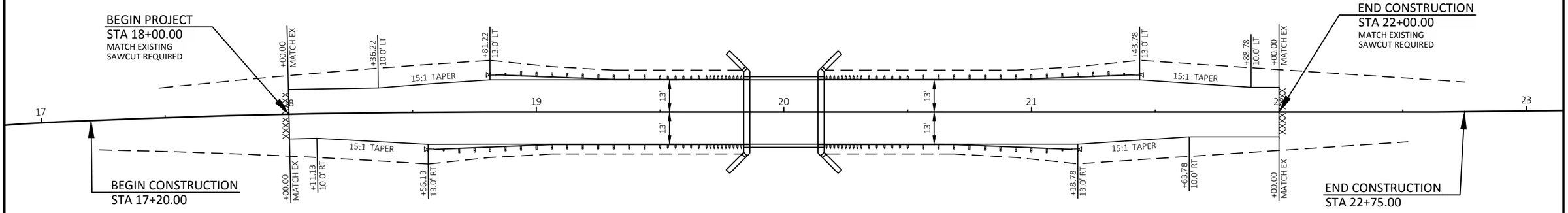
(A) SEEDING

* SEE MISCELLANEOUS QUANTITIES AND EROSION CONTROL PLANS FOR LOCATIONS AND TYPES.

** SEE PLANS FOR BEAM GUARD LOCATIONS.

PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	TYPICAL SECTIONS: OLDEN ROAD	SHEET 3	E





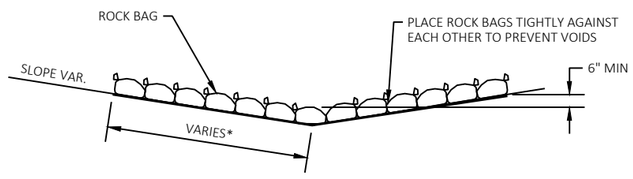
DETAIL FOR ASPHALTIC SHOULDER AT GUARDRAIL

	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			.25 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

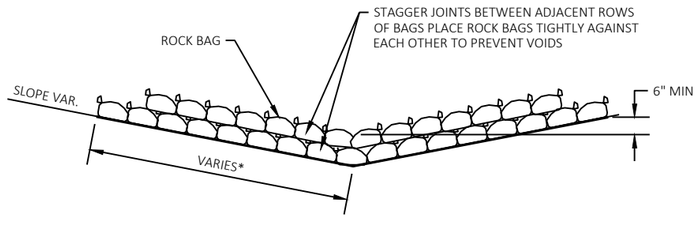
TOTAL PROJECT AREA = 0.837 ACRES

TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.613 ACRES

RUNOFF COEFFICIENT TABLE



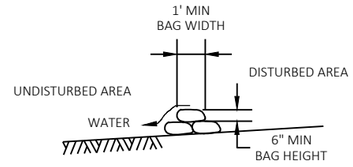
SIDE VIEW (SINGLE LAYER)



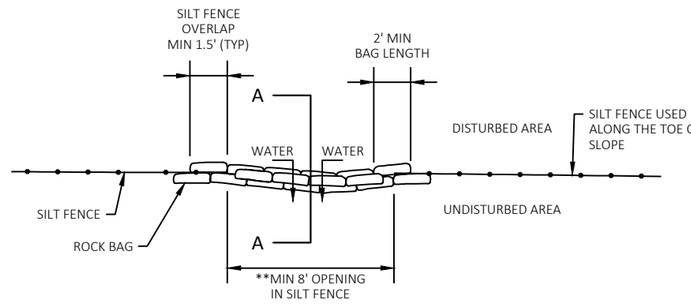
* LENGTH AND NUMBER OF BAGS MAY VARY DEPENDING ON DESIRED DEPTH OF WATER POOL

SIDE VIEW (MULTIPLE LAYER)

ROCK BAGS USED FOR DITCH CHECKS



SECTION A-A



** 17 ROCK BAGS MINIMUM PER 8' OPENING.

PLAN VIEW

ROCK BAGS USED FOR SILT FENCE RELIEF POINT

ROCK BAGS DETAIL

PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CONSTRUCTION DETAILS	SHEET 4	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-021001-CD.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 10/9/2017 1:46 PM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

N

JAMES E AUER 1997 REVOCABLE TRUST

JAMES E AUER 1997 REVOCABLE TRUST

WEST BRANCH
FOND DU LAC RIVER

WETLAND LIMITS, TYP

SILT FENCE

ROCK BAGS FOR SILT
FENCE RELIEF POINT

TURBIDITY
BARRIER

ROCK BAGS FOR SILT
FENCE RELIEF POINT

SILT FENCE

ROCK BAGS FOR
DITCH CHECK

EXISTING R/W

EXISTING R/W

17+00

18+00

19+00

20+00

21+00

22+00

23+00

OLDEN ROAD

EXISTING R/W

SILT FENCE

SILT FENCE

SLOPE INTERCEPT, TYP

ROCK BAGS FOR SILT
FENCE RELIEF POINT

ROCK BAGS FOR SILT
FENCE RELIEF POINT

ROCK BAGS FOR SILT
FENCE RELIEF POINT

EXISTING R/W

BEGIN PROJECT
STA 18+00.00

UNITED STATES OF AMERICA

KEVEN P. BEATTIE TRUST SHARES

END PROJECT
STA 22+00.00

LEGEND

- SLOPE INTERCEPT
- SILT FENCE
- TURBIDITY BARRIER
- EROSION MAT URBAN CLASS I TYPE B
- RIPRAP HEAVY
- ROCK BAGS FOR SILT FENCE RELIEF POINTS
- ROCK BAGS FOR DITCH CHECKS
- SURFACE WATER FLOW PROPOSED
- SURFACE WATER FLOW EXISTING

FINISHING ITEMS FOR SALVAGED TOPSOIL, SEED, AND EROSION MAT ARE SHOWN ON TYPICAL SECTIONS AND MISCELLANEOUS QUANTITIES.

PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	EROSION CONTROL PLAN: OLDEN ROAD	SHEET 5	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-022001-EC.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 7/31/2017 11:06 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2

2

N

WEST BRANCH
FOND DU LAC RIVER

102
W5-52L
12"X36"

104
W5-52R
12"X36"

106
REMOVE

EXISTING R/W

EXISTING R/W

17+00

18+00

19+00

20+00

21+00

22+00

23+00

OLDEN ROAD

EXISTING R/W

EXISTING R/W

101
REMOVE

103
W5-52R
12"X36"

105
W5-52L
12"X36"

107
W1-5L
30"X30"

108
REMOVE

BEGIN PROJECT
STA 18+00.00

END PROJECT
STA 22+00.00

LEGEND

XXX SIGN - REMOVE EXISTING

XXX SIGN - PLACE NEW

EXISTING SIGN

PROPOSED SIGN MOUNTED ON POST(S)

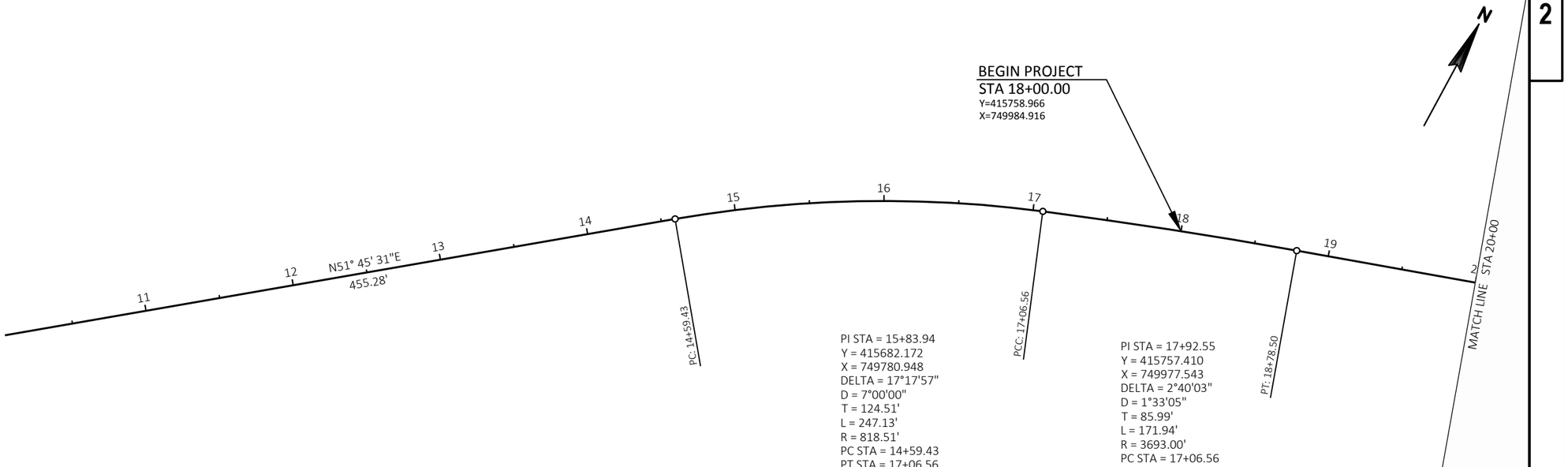
PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	SIGNING PLAN: OLDEN ROAD	SHEET 6	E

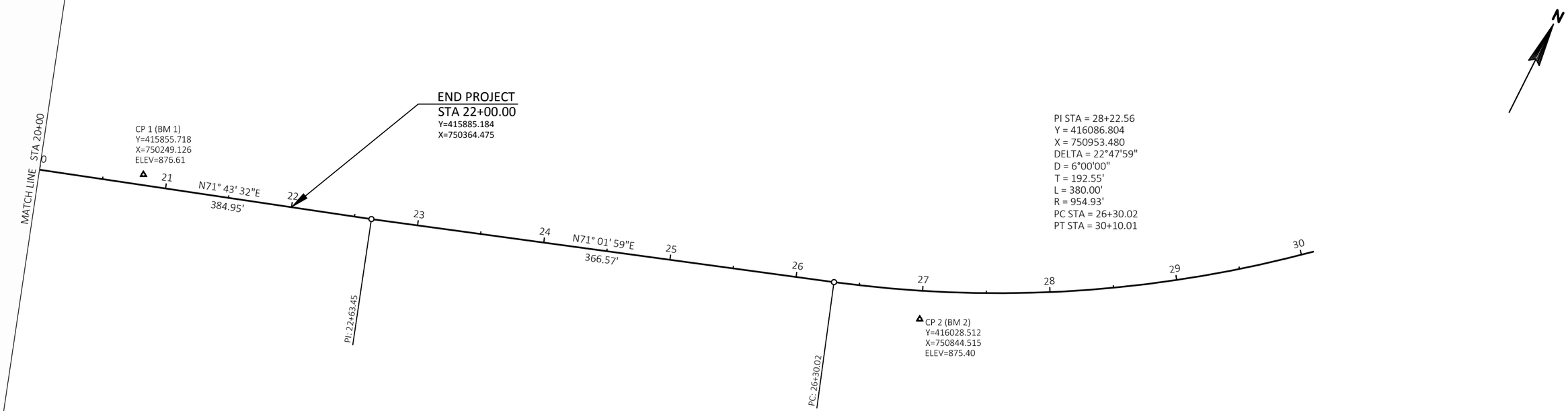
FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-023201-PS.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 7/31/2017 11:07 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

2





PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	ALIGNMENT DIAGRAM	SHEET 7	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-027201-AD.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 7/31/2017 11:07 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : 1 IN:80 FT
WISDOT/CADDS SHEET 44

6188-01-71

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	2.000	2.000
0004	201.0205	Grubbing	STA	2.000	2.000
0006	203.0600.S	Removing Old Structure Over Waterway With Minimal Debris (station) 01. 20+00	LS	1.000	1.000
0008	204.0165	Removing Guardrail	LF	175.000	175.000
0010	205.0100	Excavation Common	CY	690.000	690.000
0012	206.1000	Excavation for Structures Bridges (structure) 01. B-20-230	LS	1.000	1.000
0014	210.1500	Backfill Structure Type A	TON	239.000	239.000
0016	213.0100	Finishing Roadway (project) 01. 6188-01-71	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	145.000	145.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,055.000	1,055.000
0022	311.0110	Breaker Run	TON	76.000	76.000
0024	455.0605	Tack Coat	GAL	54.000	54.000
0026	465.0105	Asphaltic Surface	TON	230.000	230.000
0028	502.0100	Concrete Masonry Bridges **P**	CY	119.000	119.000
0030	502.3200	Protective Surface Treatment	SY	94.000	94.000
0032	502.3210	Pigmented Surface Sealer	SY	27.000	27.000
0034	505.0400	Bar Steel Reinforcement HS Structures **P**	LB	4,376.000	4,376.000
0036	505.0600	Bar Steel Reinforcement HS Coated Structures **P**	LB	14,998.000	14,998.000
0038	516.0500	Rubberized Membrane Waterproofing	SY	12.000	12.000
0040	550.0500	Pile Points	EACH	14.000	14.000
0042	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	385.000	385.000
0044	606.0300	Riprap Heavy	CY	94.000	94.000
0046	612.0206	Pipe Underdrain Unperforated 6-Inch	LF	16.000	16.000
0048	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	104.000	104.000
0050	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0052	614.2300	MGS Guardrail 3	LF	100.000	100.000
0054	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0056	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0058	619.1000	Mobilization	EACH	1.000	1.000
0060	624.0100	Water	MGAL	18.000	18.000
0062	625.0500	Salvaged Topsoil	SY	1,425.000	1,425.000
0064	628.1504	Silt Fence	LF	1,145.000	1,145.000
0066	628.1520	Silt Fence Maintenance	LF	1,145.000	1,145.000
0068	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0070	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0072	628.2008	Erosion Mat Urban Class I Type B	SY	1,425.000	1,425.000
0074	628.6005	Turbidity Barriers	SY	135.000	135.000
0076	628.7560	Tracking Pads	EACH	2.000	2.000

6188-01-71

Line	Item	Item Description	Unit	Total	Qty
0078	628.7570	Rock Bags	EACH	125.000	125.000
0080	629.0210	Fertilizer Type B	CWT	0.200	0.200
0082	630.0130	Seeding Mixture No. 30	LB	36.000	36.000
0084	630.0200	Seeding Temporary	LB	27.000	27.000
0086	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	4.000	4.000
0088	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	1.000	1.000
0090	637.2230	Signs Type II Reflective F	SF	18.250	18.250
0092	638.2602	Removing Signs Type II	EACH	3.000	3.000
0094	638.3000	Removing Small Sign Supports	EACH	3.000	3.000
0096	642.5001	Field Office Type B	EACH	1.000	1.000
0098	643.0420	Traffic Control Barricades Type III	DAY	1,184.000	1,184.000
0100	643.0705	Traffic Control Warning Lights Type A	DAY	2,072.000	2,072.000
0102	643.0900	Traffic Control Signs	DAY	1,184.000	1,184.000
0104	643.5000	Traffic Control	EACH	1.000	1.000
0106	645.0111	Geotextile Type DF Schedule A	SY	92.000	92.000
0108	645.0120	Geotextile Type HR	SY	140.000	140.000
0110	650.4500	Construction Staking Subgrade	LF	368.000	368.000
0112	650.5000	Construction Staking Base	LF	368.000	368.000
0114	650.6500	Construction Staking Structure Layout (structure) 01. B-20-230	LS	1.000	1.000
0116	650.9910	Construction Staking Supplemental Control (project) 01. 6188-01-71	LS	1.000	1.000
0118	650.9920	Construction Staking Slope Stakes	LF	520.000	520.000
0120	690.0150	Sawing Asphalt	LF	41.000	41.000
0122	715.0502	Incentive Strength Concrete Structures	DOL	714.000	714.000
0124	ASP.1T0A	On-the-Job Training Apprentice at $5.00/HR	HRS	150.000	150.000
0126	ASP.1T0G	On-the-Job Training Graduate at $5.00/HR	HRS	300.000	300.000

3

CLEARING AND GRUBBING ITEMS

STATION - STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
CATEGORY CODE 0010			
18+00 - 20+00	LT & RT	2	2
	TOTALS	**2**	**2**

REMOVING GUARDRAIL

STATION - STATION	LOCATION	204.0165 LF
CATEGORY CODE 0010		
19+45 - 19+87	LT	44
19+46 - 19+88	RT	43
20+11 - 20+52	LT	41
20+13 - 20+58	RT	47
	TOTAL	**175**

BASE AGGREGATE DENSE AND WATER ITEMS

STATION - STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH TON	311.0110 BREAKER RUN TON	624.0100 WATER MGAL
CATEGORY CODE 0010					
17+23 - 19+84	LT & RT	74	528	--	8
20+16 - 22+75	LT & RT	71	527	--	8
UNDISTRIBUTED EBS		--	--	76	2
	TOTALS	**145**	**1,055**	**76**	**18**

BASE AGGREGATE DENSE 3/4-INCH WEIGHT CALCULATIONS BASED ON 2.1 TONS/CY.
BASE AGGREGATE DENSE 1 1/4-INCH WEIGHT CALCULATIONS BASED ON 2.0 TONS/CY.
BREAKER RUN WEIGHT CALCULATIONS BASED ON 1.8 TONS/CY.

3

Division	From/To Station	Location	205.0100 Excavation Common (1)		Salvaged/Unusable Pavement Material (4)	Available Material (5)	Unexpanded Fill	Expanded Fill (6)	Mass Ordinate +/- (7)	Waste	Comment:
			Cut (2)	EBS Excavation (3)							
Division 1								Factor 1.30			
OLDEN ROAD	17+22/22+75		648		141	507	71	92	415	415	
UNDISTRIBUTED				42							
Division 1 Subtotal			648	42	141	507	71	92	415	415	
Grand Total			648	42	141	507	71	92	415	415	
Total Common Exc			690								

Notes:
(1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
(2) Salvaged/Unsuable Pavement Material is included in Cut.
(3) EBS Excavation to be backfilled with Breaker Run.
(4) Salvaged/Unusable Pavement Material = Length * Typical Width * Typical Depth (6")
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
(6) Expanded Fill Factor = 1.30. Expanded Fill = Unexpanded Fill * Fill Factor
(7) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

ALL ITEMS ARE CATEGORY CODE 0010 UNLESS OTHERWISE NOTED

3

ASPHALTIC ITEMS

STATION - STATION	LOCATION	455.0605 TACK COAT GAL	465.0105 ASPHALTIC SURFACE TON
CATEGORY CODE 0010			
18+00 - 19+84	LT & RT	27	115
20+16 - 22+00	LT & RT	27	115
	TOTALS	**54**	**230**

TACK COAT CALCULATIONS BASED ON 0.050 GAL/SY.
ASPHALTIC SURFACE WEIGHT CALCULATIONS BASED ON 110 LB/SY/IN.

STEEL PLATE BEAM GUARD ITEMS

STATION - STATION	LOCATION	614.2300 MGS GUARDRAIL 3 LF	614.2500 MGS THRIE BEAM TRANSITION LF	614.2610 MGS GUARDRAIL TERMINAL EAT EACH
CATEGORY CODE 0010				
18+56 - 19+84	RT	37.5	39.4	1.0
18+81 - 19+84	LT	12.5	39.4	1.0
20+16 - 21+19	RT	12.5	39.4	1.0
20+16 - 21+44	LT	37.5	39.4	1.0
	TOTALS	**100.0**	**157.6**	**4.0**

SILT FENCE ITEMS

STATION - STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANE LF
CATEGORY CODE 0010			
17+08 - 19+77	RT	270	270
17+30 - 19+86	LT	261	261
20+11 - 22+55	RT	248	248
20+17 - 22+31	LT	214	214
UNDISTRIBUTED		152	152
	TOTALS	**1,145**	**1,145**

3

RESTORATION ITEMS

STATION - STATION	LOCATION	625.0500 SALVAGED TOPSOIL SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0130 SEED MIX NO. 30 LB	630.0200 SEEDING TEMPORARY LB
CATEGORY CODE 0010						
17+23 - 19+84	LT & RT	573	573	--	15	11
20+16 - 22+75	LT & RT	664	664	0.2	16	12
UNDISTRIBUTED		188	188	--	5	4
	TOTALS	**1,425**	**1,425**	**0.2**	**36**	**27**

NOTES: TEMPORARY SEED TO BE PLACED IN CONJUNCTION WITH PERMANENT SEED AT A RATE OF 1.5 LBS/ 1000 SF.
FERTILIZER SHALL ONLY BE ALLOWED FROM STATION 21+45 RT TO STATION 22+52 RT.

MOBILIZATIONS EROSION CONTROL ITEMS

LOCATION	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
CATEGORY CODE 0010		
PROJECT 6188-01-71	5	3
TOTALS	**5**	**3**

ROCK BAGS

STATION	LOCATION	628.7570 EACH
CATEGORY CODE 0010		
19+80	LT & RT	34
20+20	LT & RT	34
21+60	RT	17
22+30	LT	20
UNDISTRIBUTED		20
	TOTAL	**125**

TURBIDITY BARRIERS

STATION - STATION	LOCATION	628.6005 SY
CATEGORY CODE 0010		
19+77 - 19+94	LT & RT	61
20+06 - 20+17	LT & RT	55
UNDISTRIBUTED		19
	TOTAL	**135**

TRACKING PADS

STATION	LOCATION	628.7560 EACH
CATEGORY CODE 0010		
18+00	LT & RT	1
22+00	LT & RT	1
	TOTAL	**2**

ALL ITEMS ARE CATEGORY CODE 0010 UNLESS OTHERWISE NOTED

3

SIGNING ITEMS

SIGN NUMBER	STATION	LOCATION	SIGN CODE	SIZE	634.0612 POSTS WOOD 4X6X12 EACH	634.0616 POSTS WOOD 4X6X16 EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH
CATEGORY CODE 0010									
101	19+69	RT	--	---	--	--	--	1	1
102	19+83	LT	W5-52L	12X36	1	--	3.00	--	--
103	19+83	RT	W5-52R	12X36	1	--	3.00	--	--
104	20+17	LT	W5-52R	12X36	1	--	3.00	--	--
105	20+17	RT	W5-52L	12X36	1	--	3.00	--	--
106	20+31	LT	--	---	--	--	--	1	1
107	22+00	RT	W1-5L	30X30	--	1	6.25	--	--
108	22+00	RT	--	---	--	--	--	1	1
				TOTALS	**4**	**1**	**18.25**	**3**	**3**

TRAFFIC CONTROL ITEMS

	NUMBER OF DAYS IN SERVICE	643.0420 BARRICADES TYPE III NO. REQ'D	643.0420 BARRICADES TYPE III TOTAL DAY	643.0705 WARNING LIGHTS TYPE A NO. REQ'D	643.0705 WARNING LIGHTS TYPE A TOTAL DAY	643.0900 SIGNS NO. REQ'D	643.0900 SIGNS TOTAL DAY
CATEGORY CODE 0010							
OLDEN ROAD / CTH M	74	2	148	4	296	2	148
OLDEN ROAD / OAK ROAD	74	2	148	4	296	3	222
WEST SIDE OF PROJECT	74	5	370	8	592	4	296
EAST SIDE OF PROJECT	74	5	370	8	592	5	370
OLDEN ROAD / STH 26	74	2	148	4	296	2	148
	TOTALS	16	**1,184**	28	**2,072**	16	**1,184**

3

CONSTRUCTION STAKING ITEMS

STATION - STATION	LOCATION	650.4500 SUBGRADE LF	650.5000 BASE LF	650.6500 STRUCTURE LAYOUT LS	650.9910 SUPPLEMENTAL CONTROL LS	650.9920 SLOPE STAKES LF
CATEGORY CODE 0010						
17+23 - 18+00	LT & RT	--	--	--	1	77
18+00 - 19+84	LT & RT	184	184	--	--	184
20+16 - 22+00	LT & RT	184	184	--	--	184
22+00 - 22+75	LT & RT	--	--	--	--	75
CATEGORY CODE 0010 SUBTOTALS		368	368	--	1	520
CATEGORY CODE 0020						
B-20-230		--	--	1	--	--
CATEGORY CODE 0020 SUBTOTALS		--	--	1	--	--
	TOTALS	**368**	**368**	**1**	**1**	**520**

SAWING ASPHALT

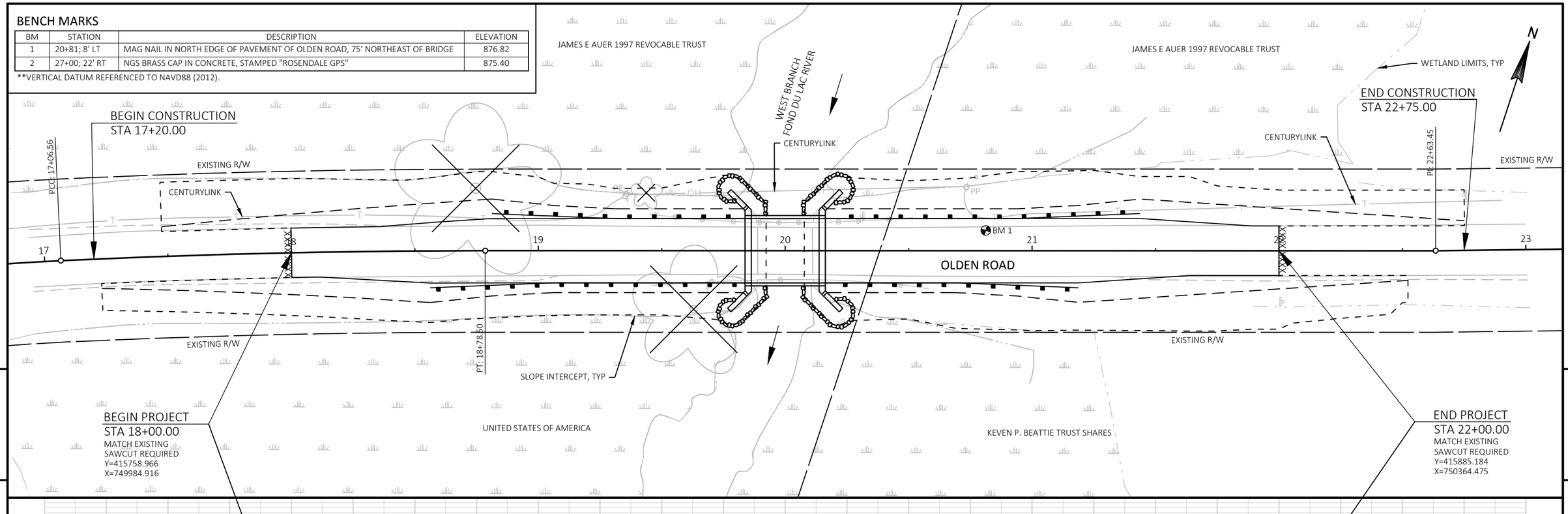
STATION - STATION	LOCATION	690.0150 LF
CATEGORY CODE 0010		
18+00	LT & RT	20
22+00	LT & RT	21
	TOTAL	**41**

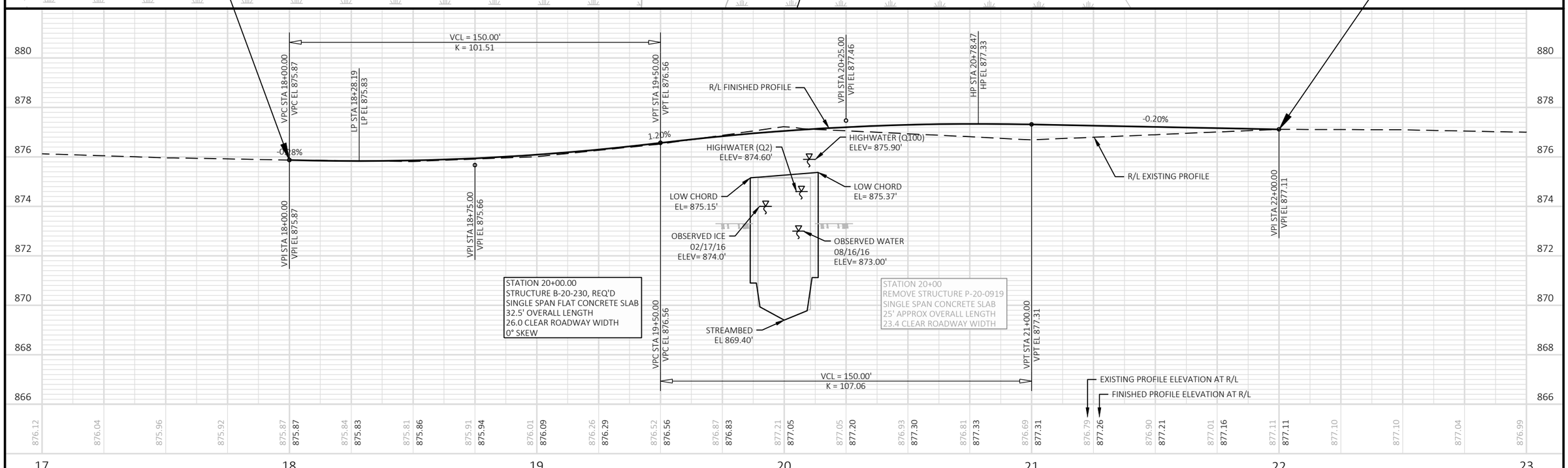
ALL ITEMS ARE CATEGORY CODE 0010 UNLESS OTHERWISE NOTED

BENCH MARKS

BM	STATION	DESCRIPTION	ELEVATION
1	20+81; 8' LT	MAG NAIL IN NORTH EDGE OF PAVEMENT OF OLDEN ROAD, 75' NORTHEAST OF BRIDGE	876.82
2	27+00; 22' RT	NGS BRASS CAP IN CONCRETE, STAMPED "ROSENDALE GPS"	875.40

**VERTICAL DATUM REFERENCED TO NAVD88 (2012).



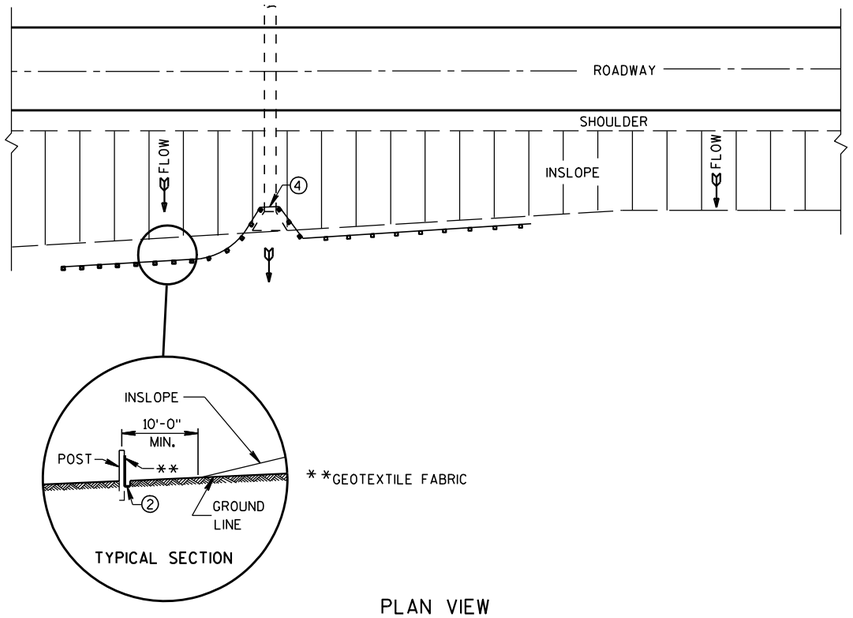


PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	PLAN AND PROFILE: OLDEN ROAD	SHEET 13	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-050101-PP.DWG
LAYOUT NAME - Sheet-01
PLOT DATE : 7/31/2017 11:08 AM
PLOT BY : AARON SARAUER
PLOT NAME :
PLOT SCALE : ##########
WISDOT/CADDS SHEET 44

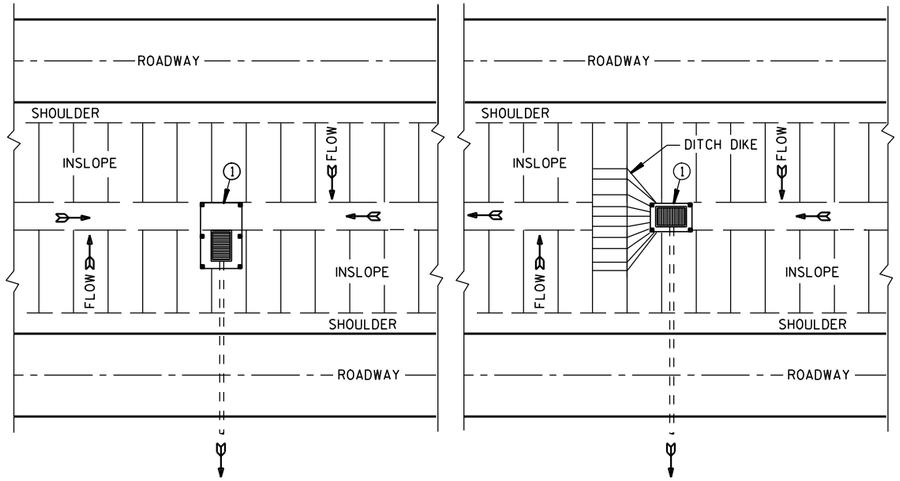
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E14-01	TRACKING PAD
12A03-10	NAME PLATE (STRUCTURES)
14B29-01	SAFETY EDGE
14B42-04A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-04C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-04A	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04B	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04C	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04D	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
14B45-04E	MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C06-08	SIGNING & MARKING FOR TWO LANE BRIDGES



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

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

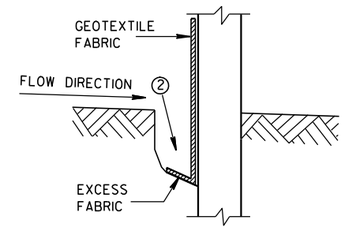
① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.

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

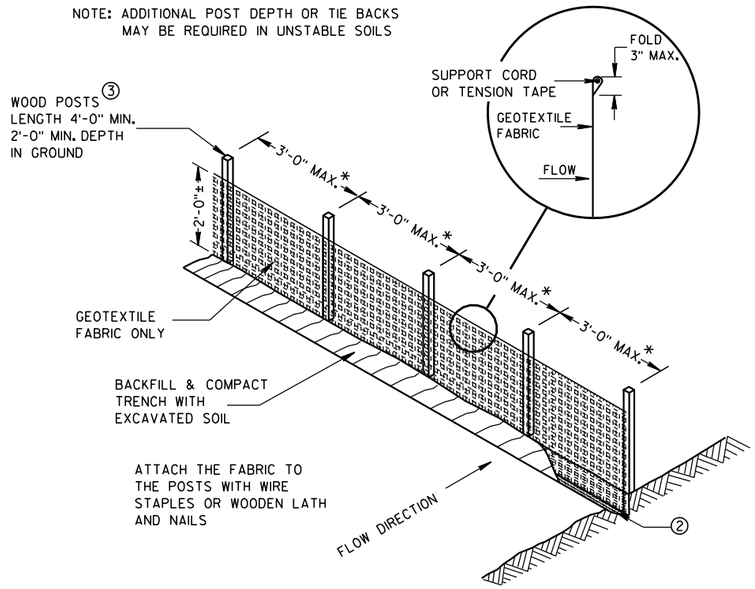
③ WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.

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

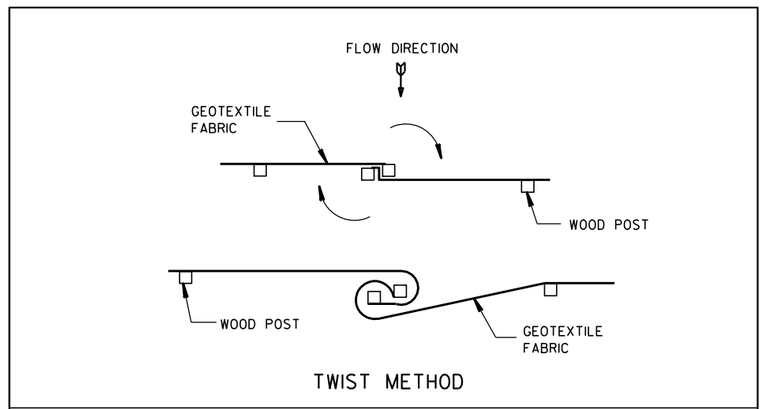
⑤ CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.



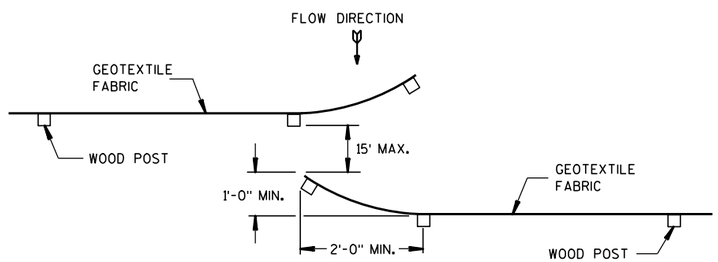
TRENCH DETAIL



SILT FENCE

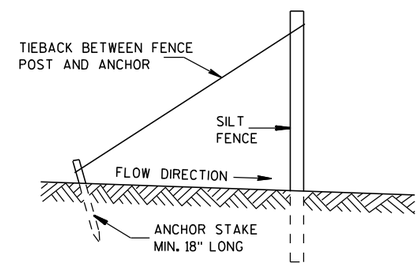


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

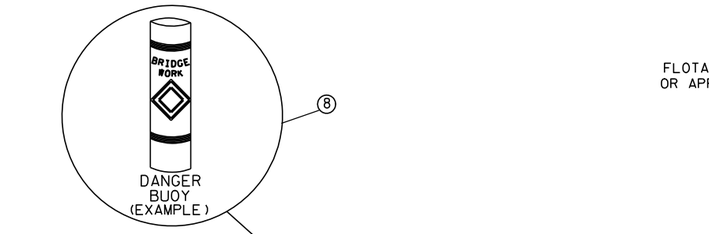
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

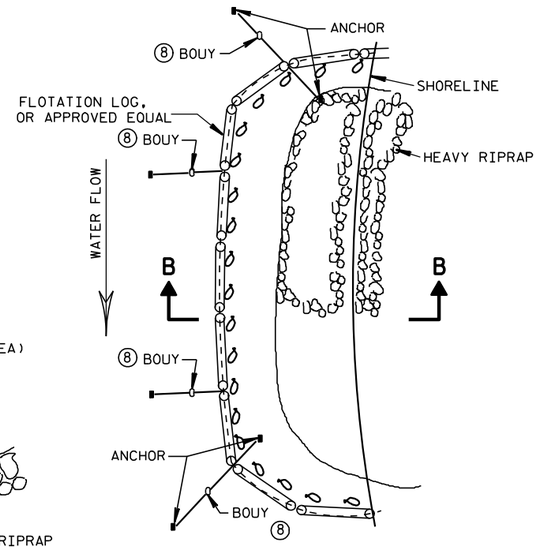
S.D.D. 8 E 9-6

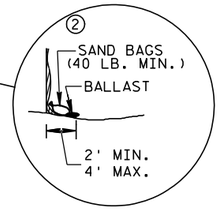
6

S.D.D. 8 E 9-6

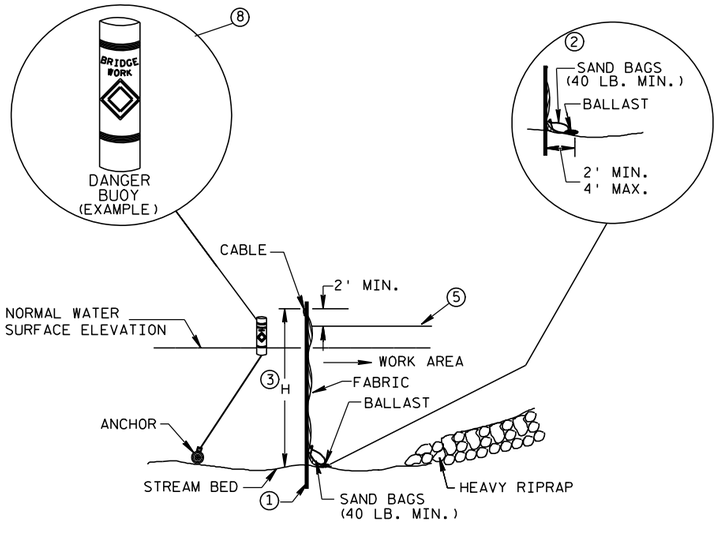


SECTION B-B

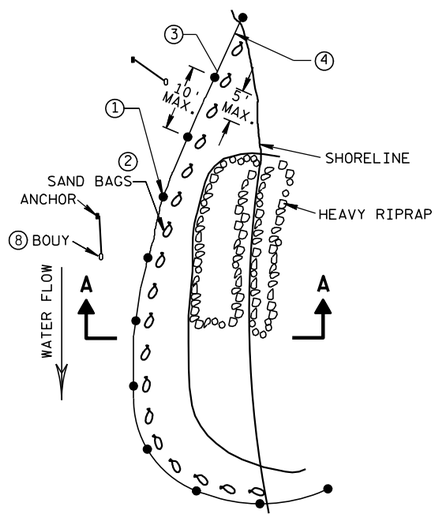




TURBIDITY BARRIER FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A-A



PLAN VIEW

TURBIDITY BARRIER STANDARD POST INSTALLATION

TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

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

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

① DRIVEN STEEL POSTS, PIPES, OR CHANNELS. LENGTH SHALL BE SUFFICIENT TO SECURELY SUPPORT BARRIER AT HIGH WATER ELEVATIONS.

② SANDBAGS TO BE USED AS ADDITIONAL BALLAST WHEN ORDERED BY THE ENGINEER TO MEET ADVERSE FIELD CONDITIONS. SPACE AS APPROPRIATE FOR SITE CONDITIONS.

③ WHEN BARRIER HEIGHT, H, EXCEEDS 8 FT., POST SPACING MAY NEED TO BE DECREASED.

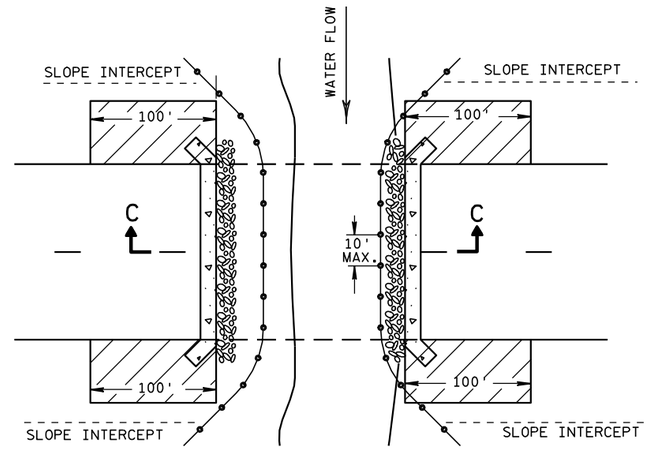
④ IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.

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

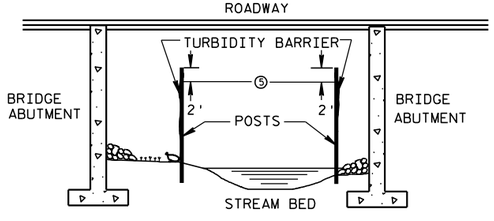
⑥ FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BED ROCK PREVENTS THE INSTALLATION OF POSTS.

⑦ ALLOW SUFFICIENT SLACK VERTICALLY AND HORIZONTALLY SO THAT SEDIMENT BUILD UP WILL NOT SEPARATE OR LOWER THE TURBIDITY BARRIER.

⑧ USE AS DIRECTED BY COAST GUARD OR DNR PERMIT WHEN WORKING IN NAVIGABLE WATERWAYS.



PLAN VIEW



SECTION C-C

TURBIDITY BARRIER DETAIL SHOWING TYPICAL PLACEMENT AT STRUCTURES

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

6

S.D.D. 8 E 11-2

6

S.D.D. 8 E 11-2

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.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

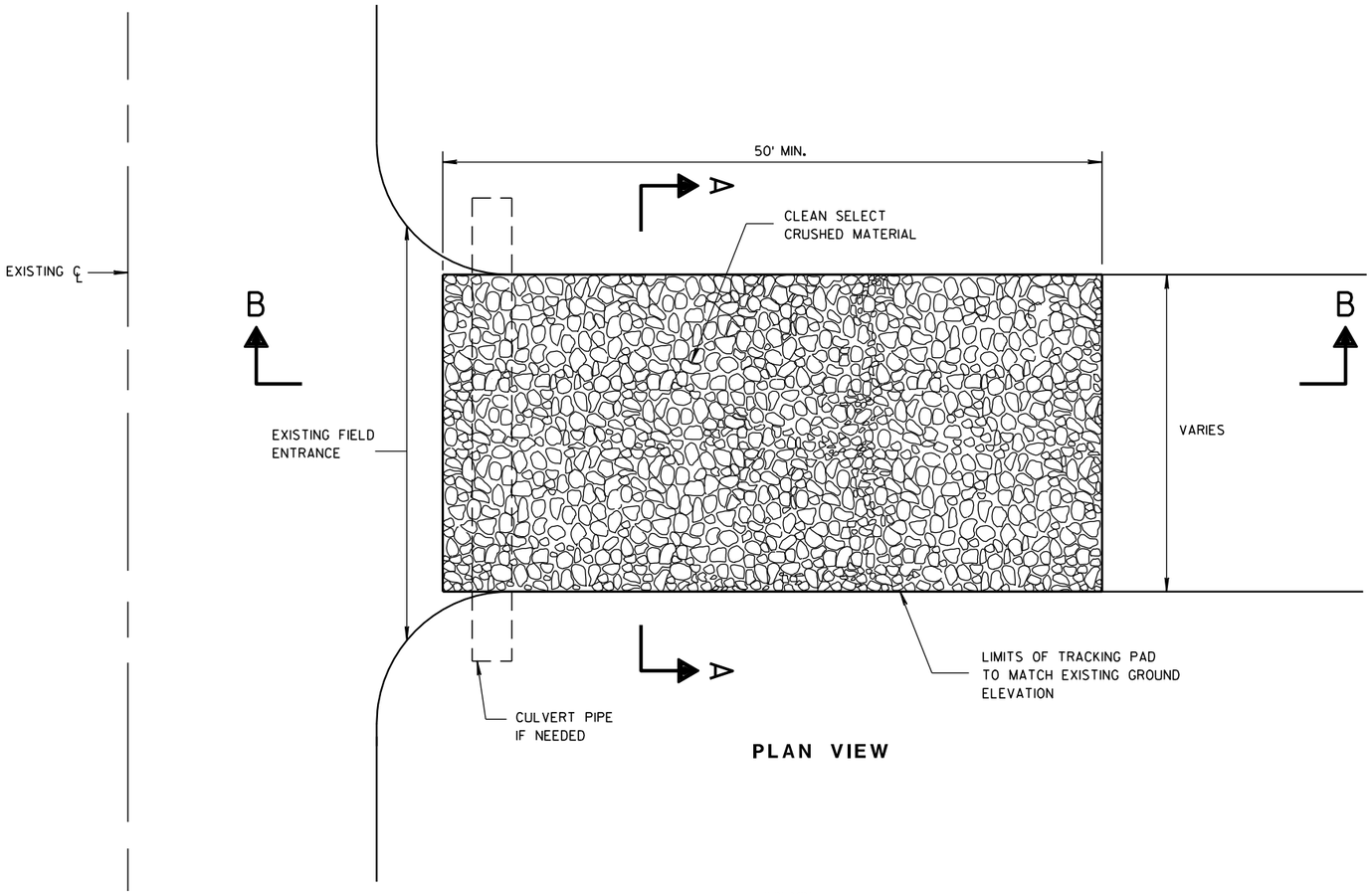
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

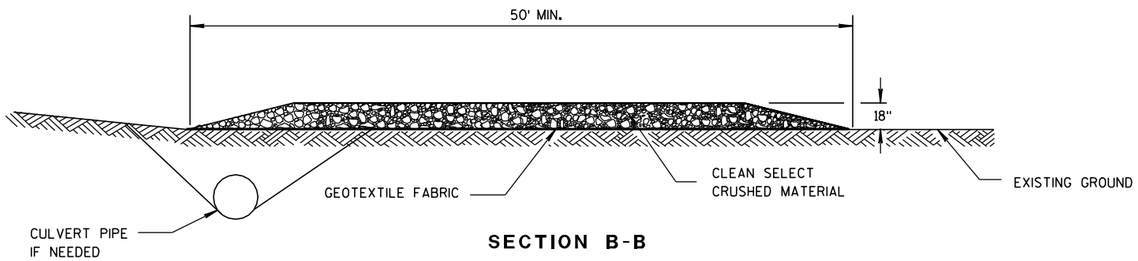
SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

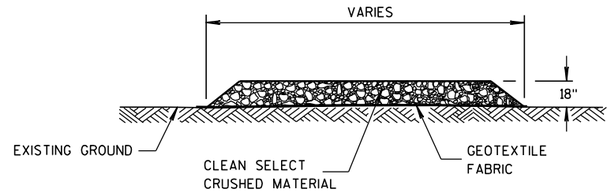
THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



PLAN VIEW



SECTION B-B



SECTION A-A

TRACKING PAD

TRACKING PAD

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/24/2011 — DATE
/S/ Jerry H. Zoda — ROADWAY STANDARDS ENGINEER
ENT
FHWA

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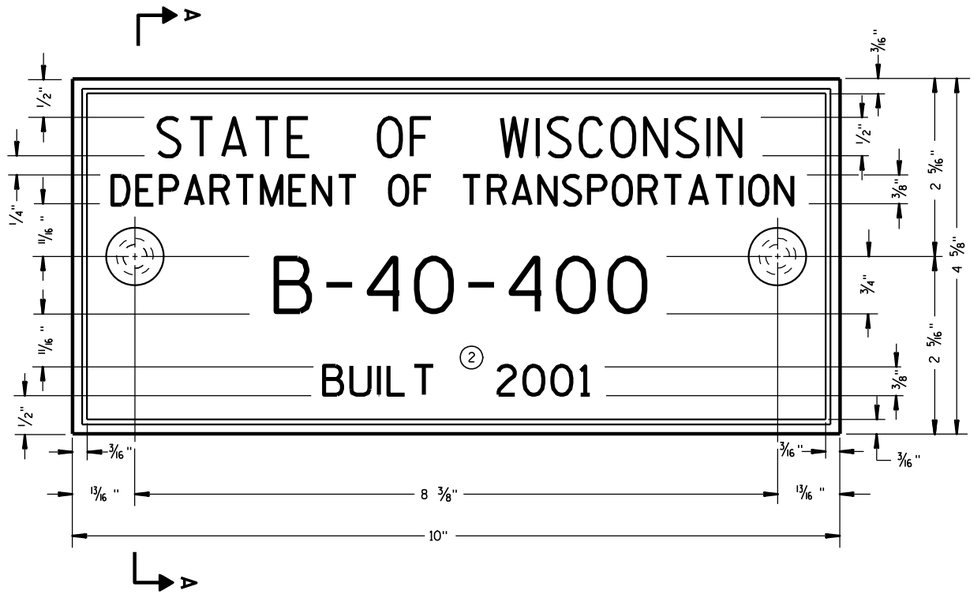
S.D.D. 8 E 14-1

S.D.D. 8 E 14-1



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

FOR MULTI-UNIT STRUCTURES
LINE 3 ABOVE SHALL READ

B = BRIDGE
C = CULVERT
R = RETAINING WALL

COUNTY NO.

BRIDGE NO.

UNIT NO. FOR MULTIPLE UNIT BRIDGE

B-40-400-1A

NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES

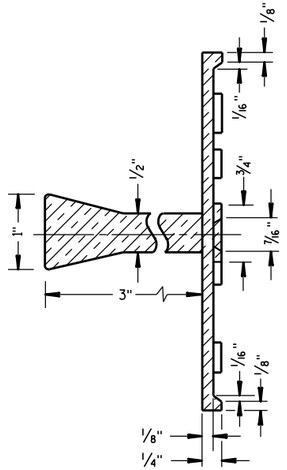
GENERAL NOTES

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

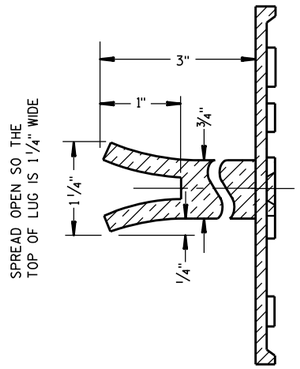
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

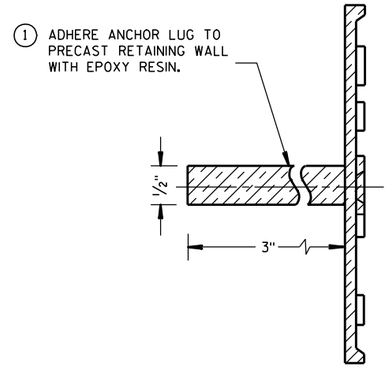
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOP ENGINEER

FHWA

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S.D.D. 12 A 3-10

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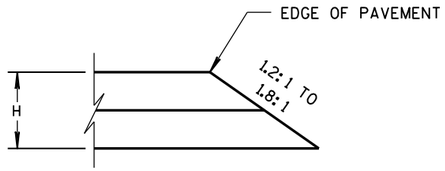
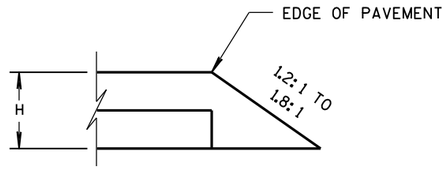
S.D.D. 12 A 3-10



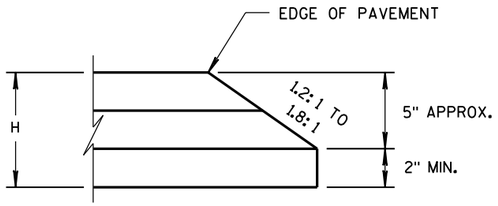
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



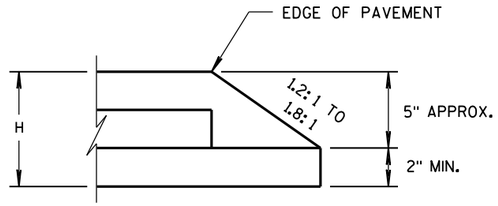
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

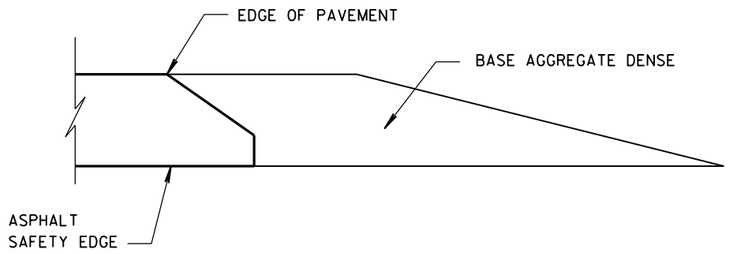
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

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S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

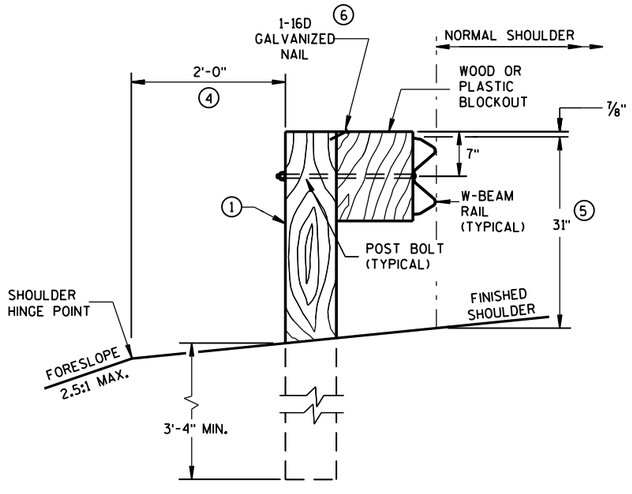
② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

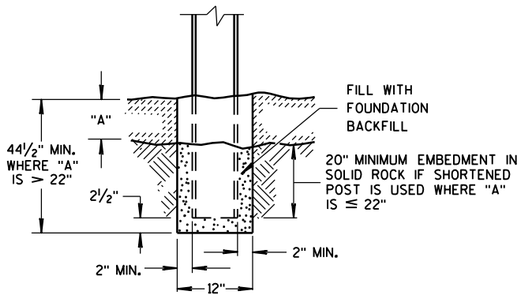
⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



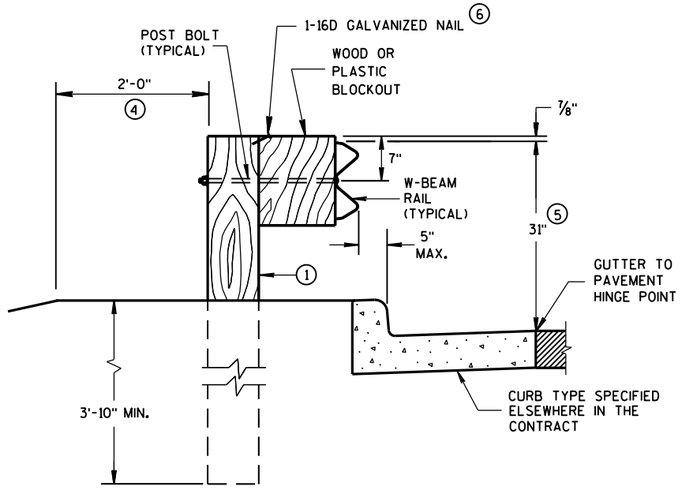
END VIEW

LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



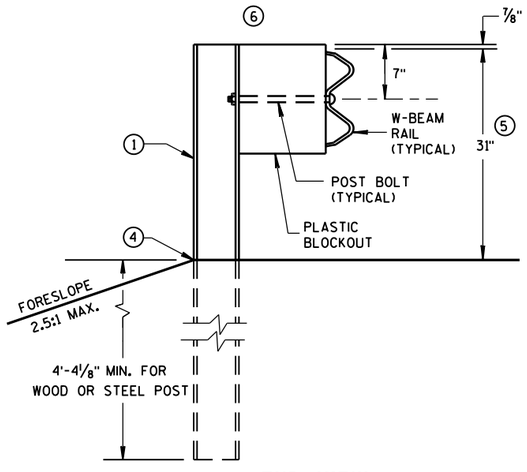
END VIEW

SETTING STEEL OR WOOD POST IN ROCK ③



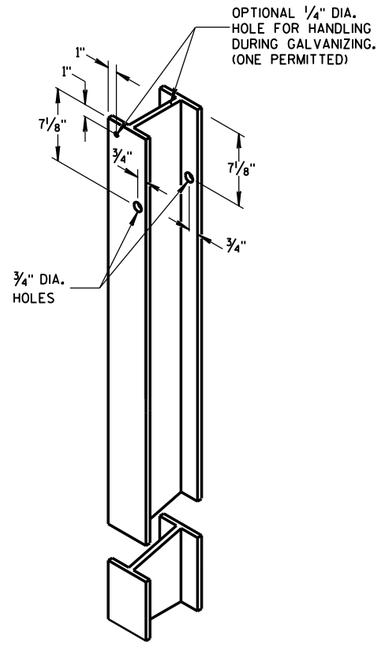
END VIEW

LOCATED ALONG A CURBED ROADWAY

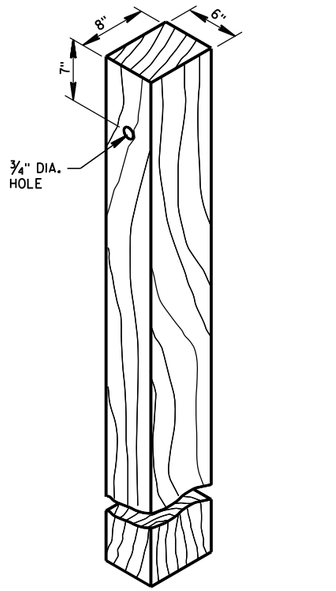


END VIEW

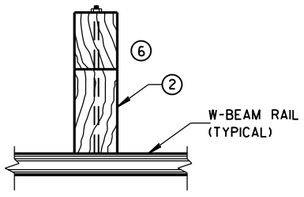
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



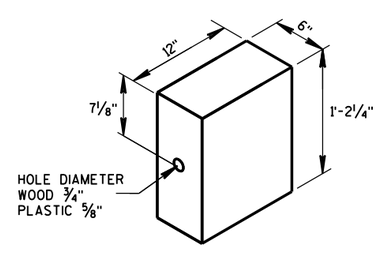
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) ①



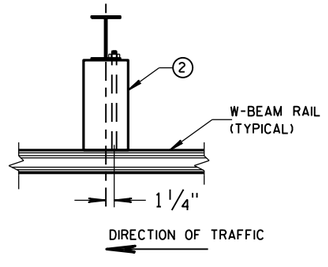
WOOD POST
(6" X 8") NOMINAL ①



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT ②



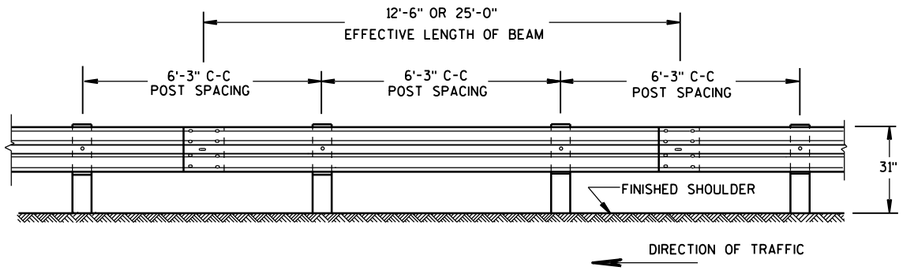
PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

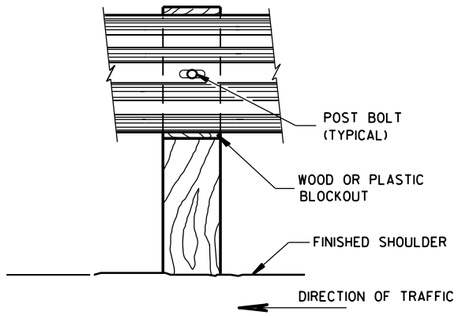
6

S.D.D. 14 B 42-4a



FRONT VIEW

POST SPACING STANDARD INSTALLATION



FRONT VIEW AT WOOD POST

7. PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

8. DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

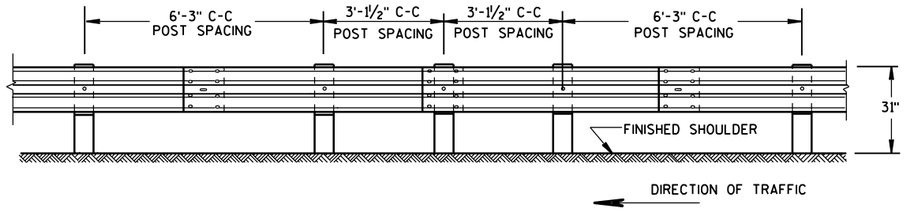
9. REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

10. PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

11. 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

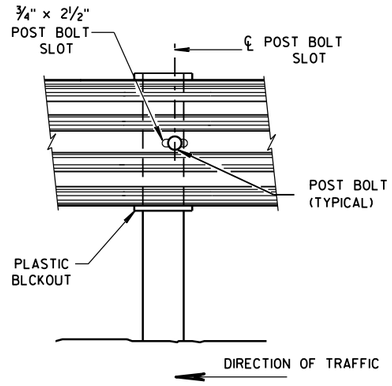
POST BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 5/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A 5/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 5/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

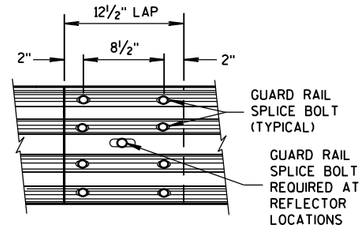


FRONT VIEW

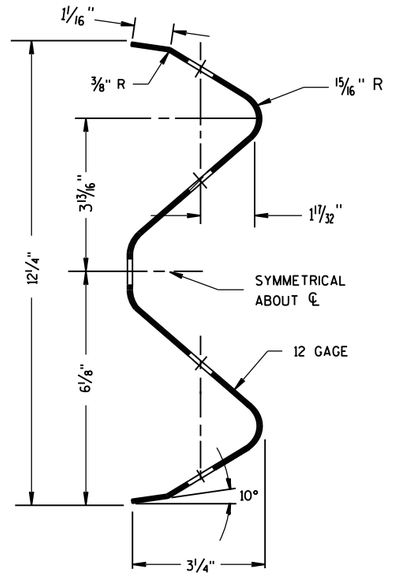
HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)



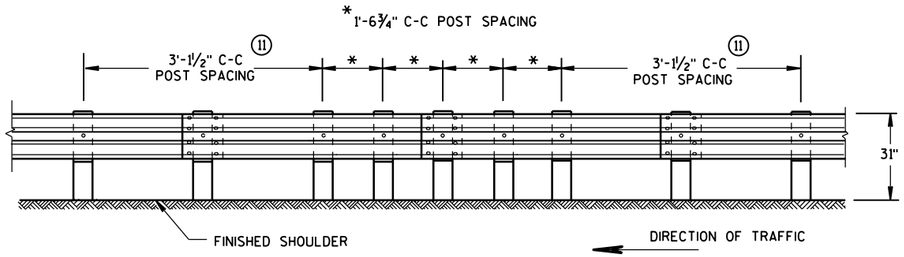
FRONT VIEW AT STEEL POST



FRONT VIEW
MID-SPAN BEAM SPLICE

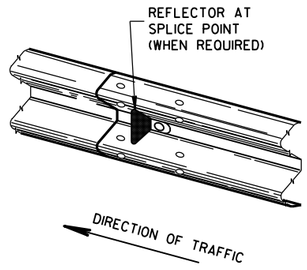


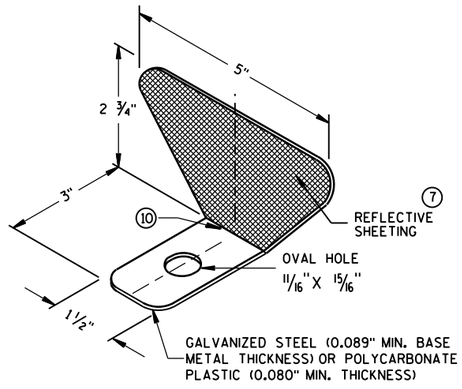
SECTION THRU W-BEAM RAIL



FRONT VIEW

QUARTER POST SPACING (QS)





ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION (7)

REFLECTOR SPACING (8)

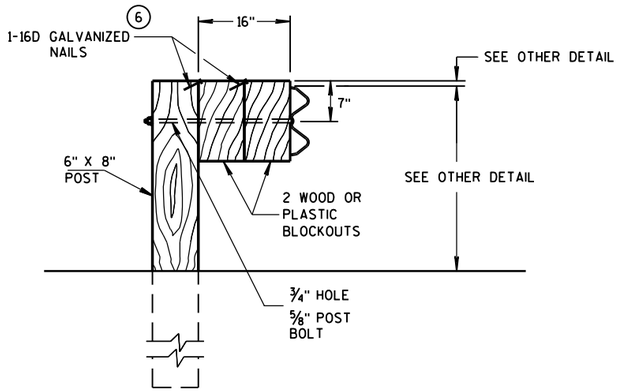
	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200'	50' C-C	1	3
	> 200'	100' C-C	1	
TWO WAY TRAFFIC	< 200'	25' C-C	1 (9)	6
	> 200'	50' C-C	1	
TWO WAY TRAFFIC	< 200'	50' C-C	2	3
	> 200'	100' C-C	2 (10)	

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

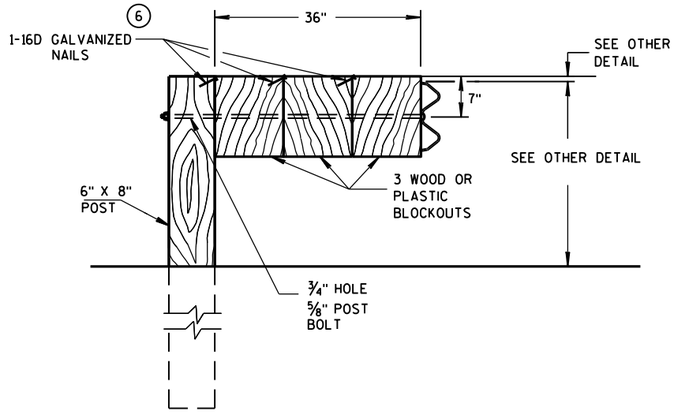
6

S.D.D. 14 B 42-4b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

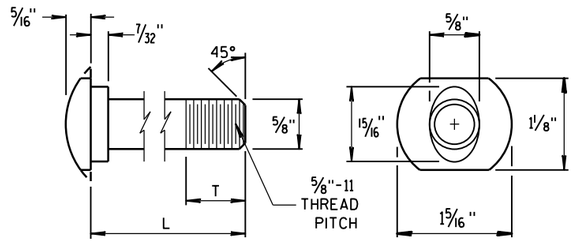


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

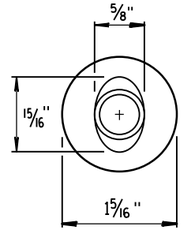
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

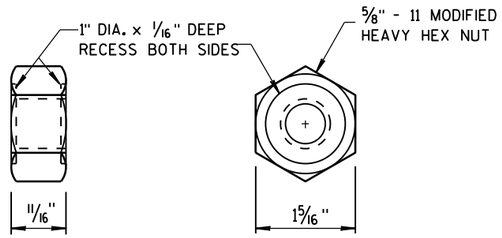


POST BOLT TABLE

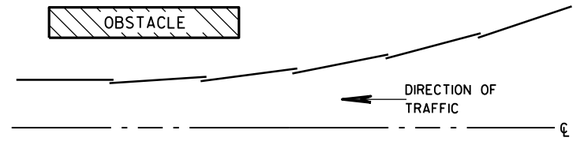
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

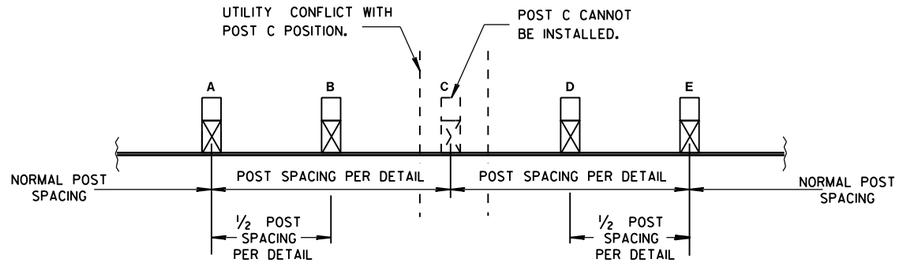


POST BOLT, SPLICE BOLT AND RECESS NUT

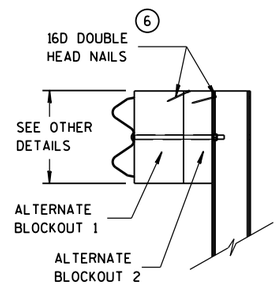


PLAN VIEW

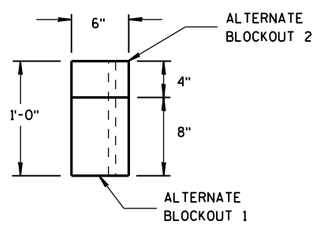
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

GENERAL NOTES

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

(D) THE TOP OF THE STEEL TUBE ON POST 1 AND POST 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

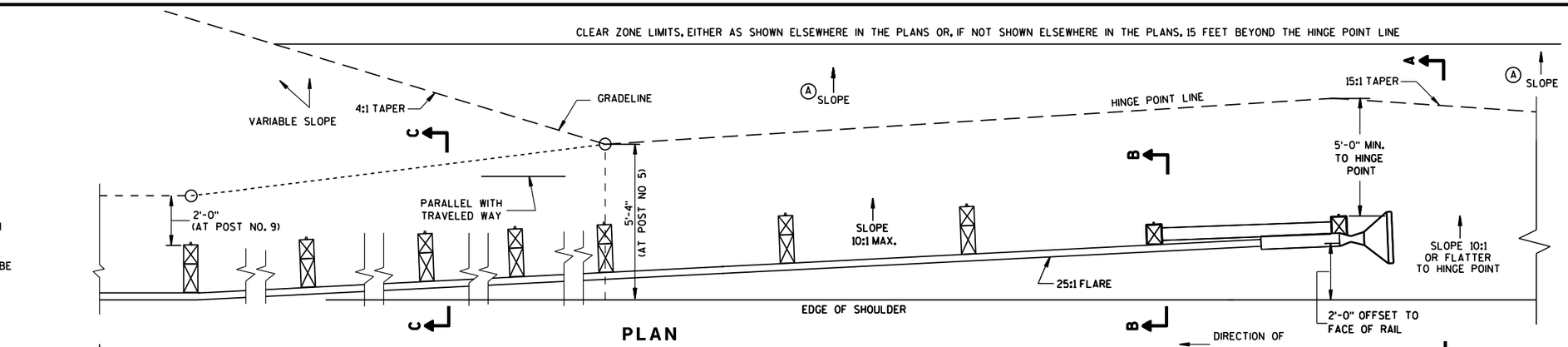
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

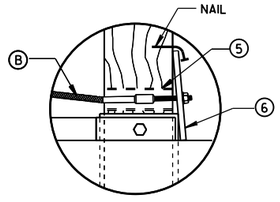
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

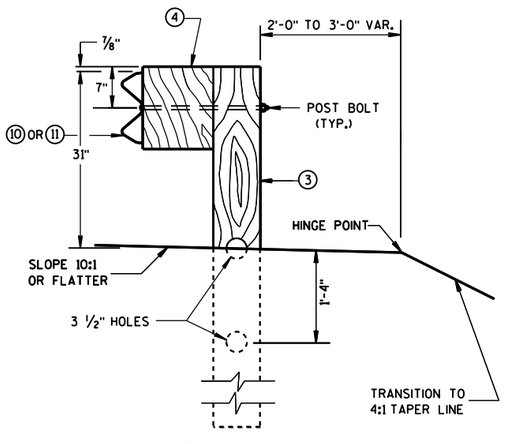
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

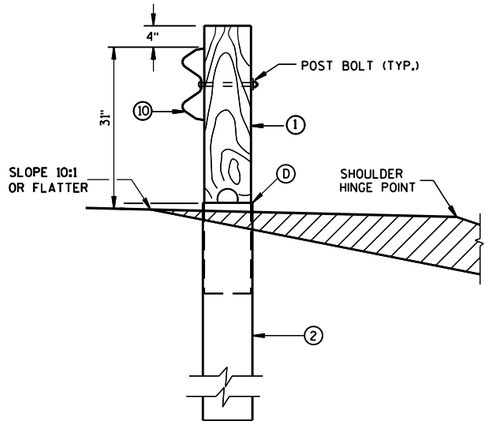


ELEVATION



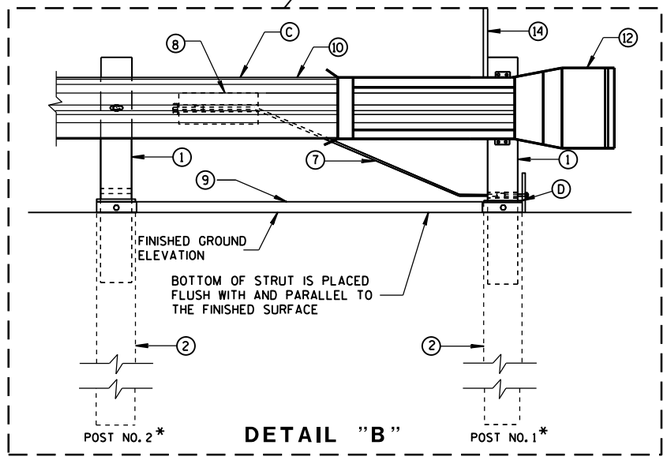


SECTION C-C
TYPICAL AT POST NOS. 3-9



SECTION B-B
TYPICAL AT POST NO. 2*

SECTION A-A
TYPICAL AT POST NO. 1*

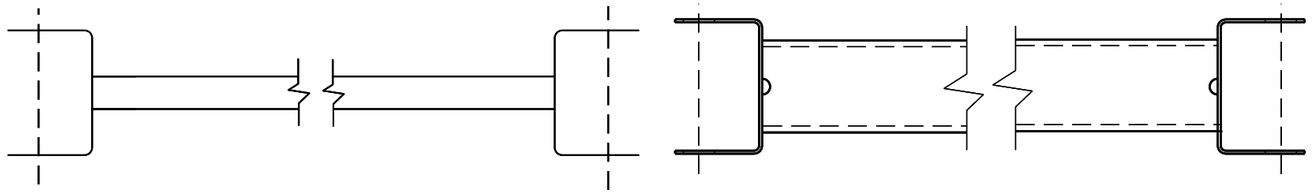


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

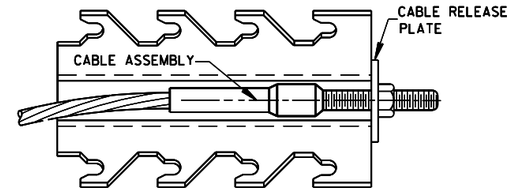
S.D.D. 14 B 44-2a



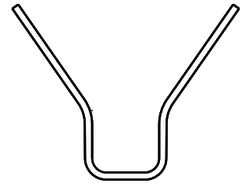
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

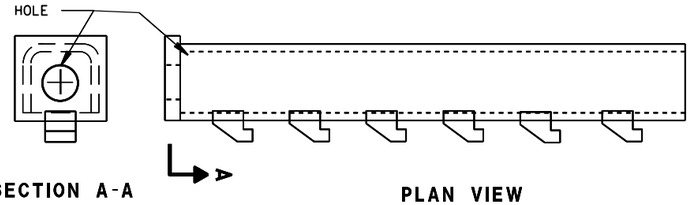
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



FRONT VIEW



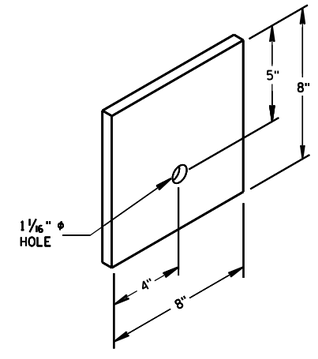
SECTION B-B



SECTION A-A

PLAN VIEW

GENERIC ANCHOR CABLE BOX (8) (H)



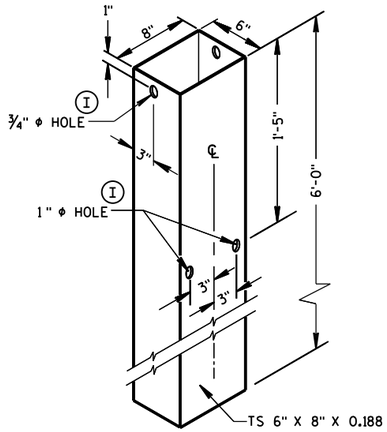
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

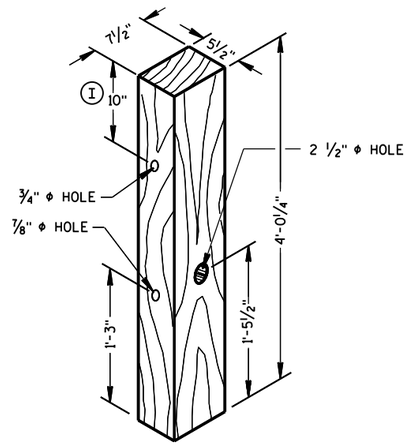
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 14 B 44-2b

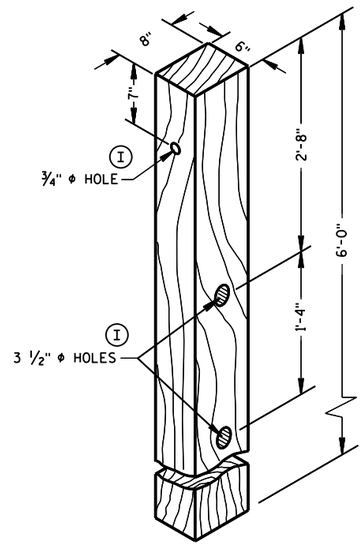


FOUNDATION TUBE (2)



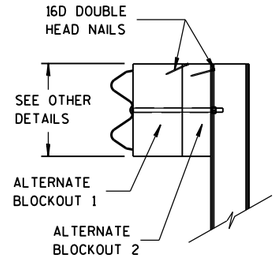
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

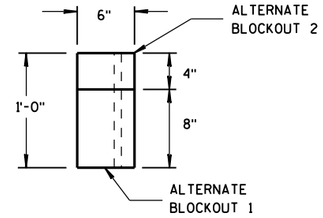


POSTS NUMBER 3-9

WOOD CRT POST (3)

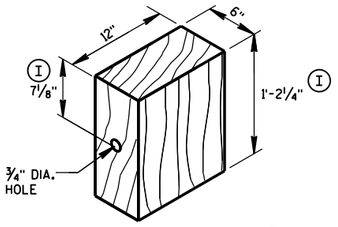


SIDE VIEW



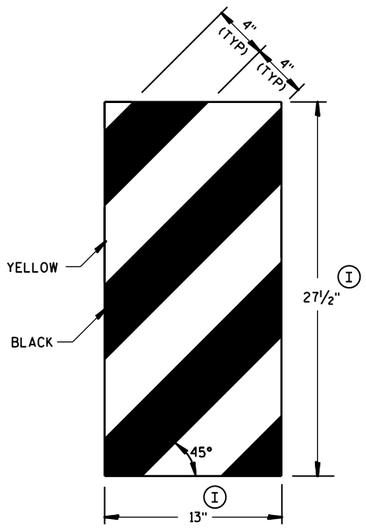
TOP VIEW

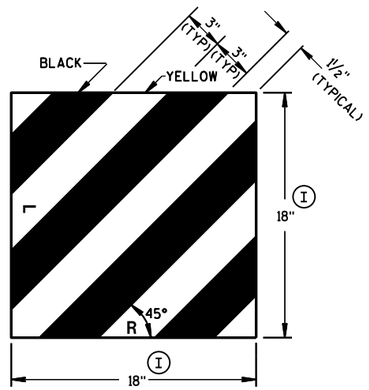
ALTERNATE WOOD BLOCKOUT DETAIL



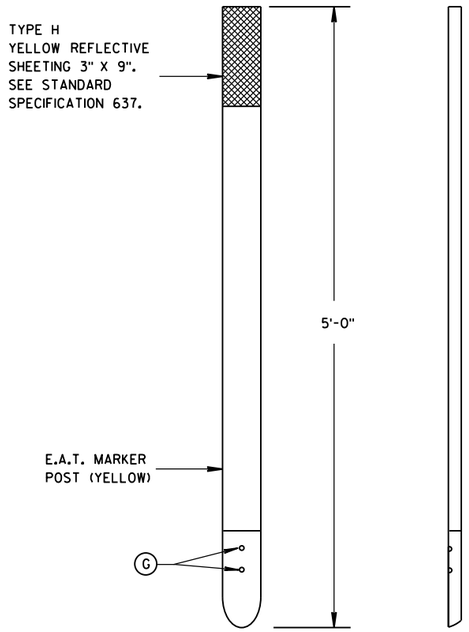
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





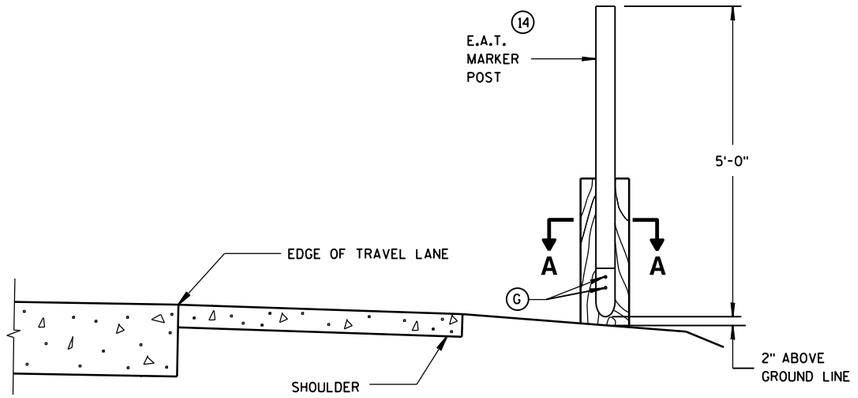
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

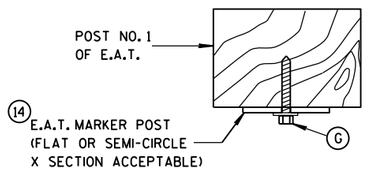
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

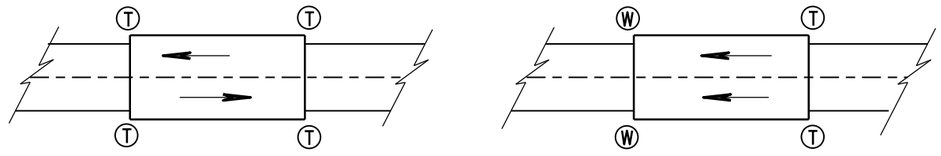
MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-2c



TWO WAY TRAFFIC

ONE WAY TRAFFIC

Ⓣ THRIE BEAM CONNECTION

Ⓦ W-BEAM CONNECTION WHEN REQUIRED

TYPICAL LOCATIONS OF THRIE BEAM AND W-BEAM CONNECTIONS TO BRIDGE

GENERAL NOTES

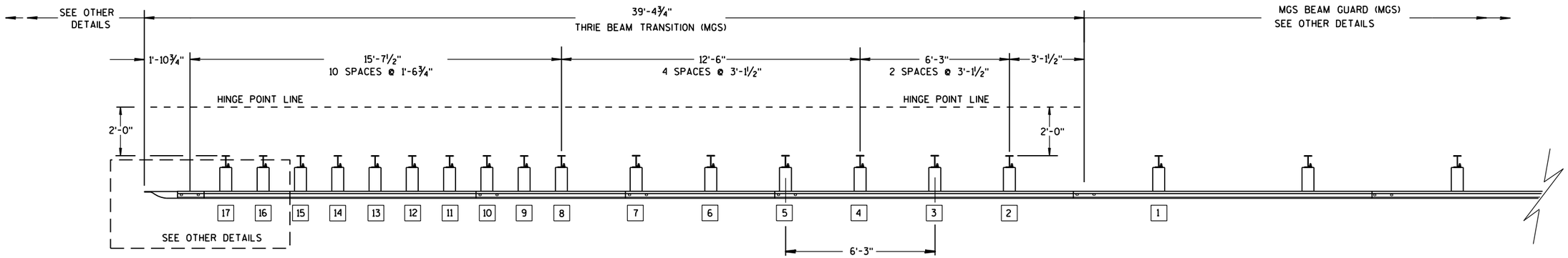
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2½", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

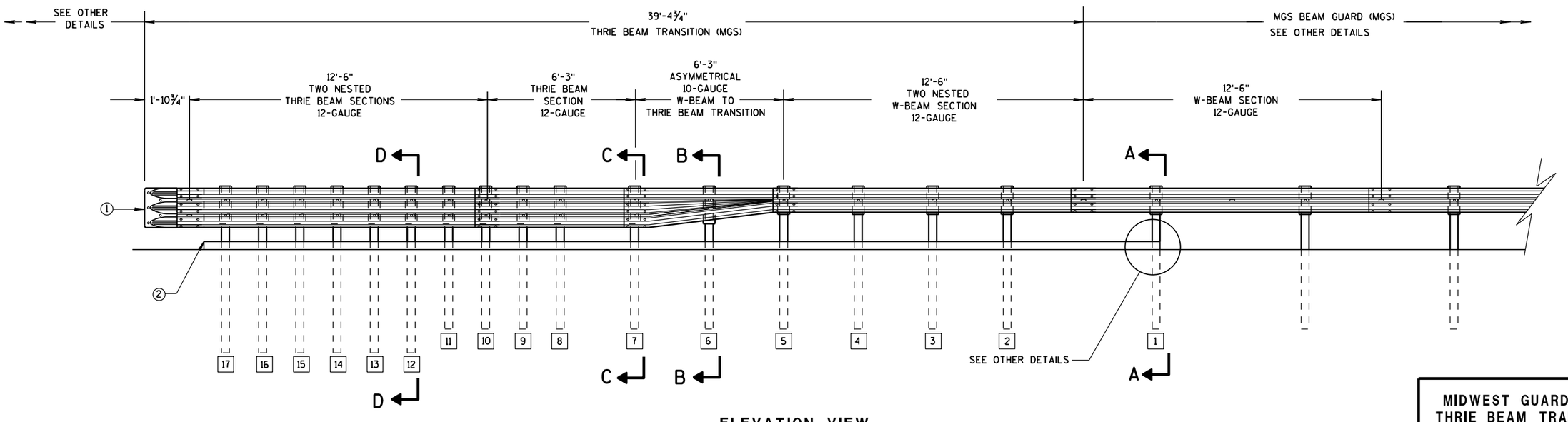
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.



PLAN VIEW



ELEVATION VIEW

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 45-4a

6

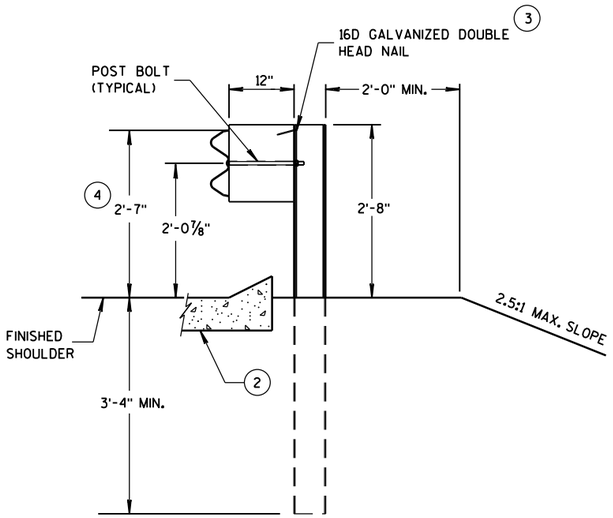
S.D.D. 14 B 45-4a

GENERAL NOTES

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE_FEATURE SEE PLAN FOR INFORMATION.

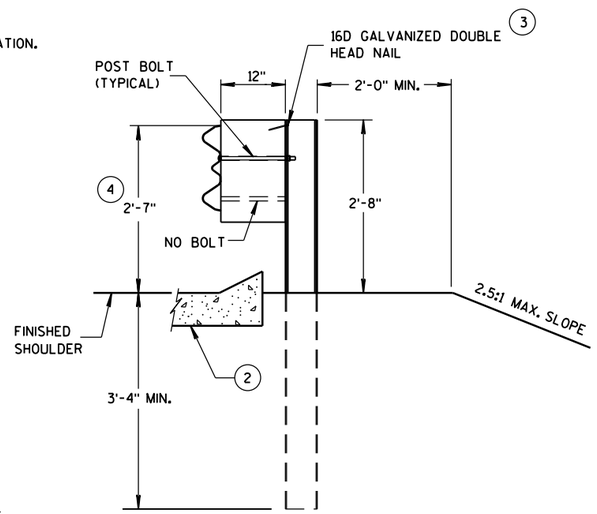
(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



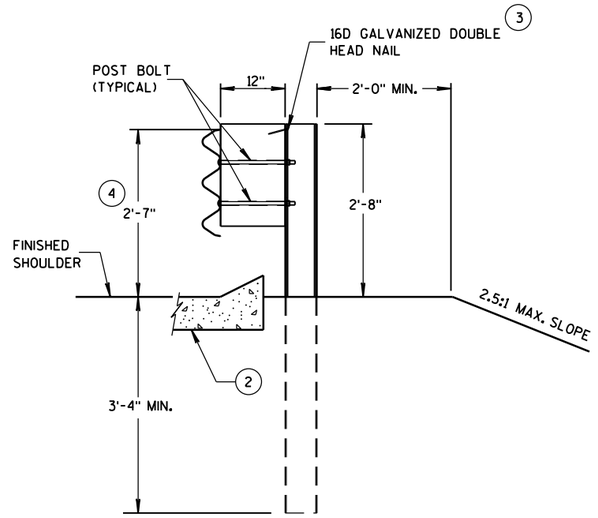
SECTION A-A

POSTS 1-5



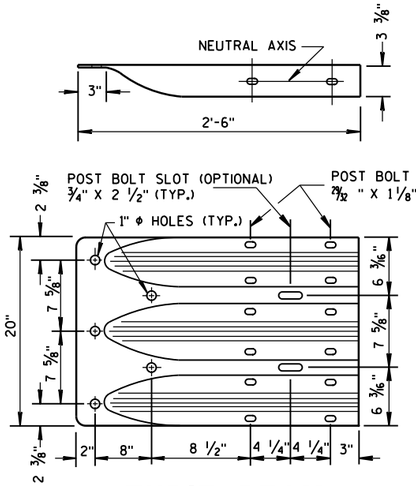
SECTION B-B

POST 6



SECTION C-C

POSTS 7-11



THRIE BEAM TERMINAL CONNECTOR

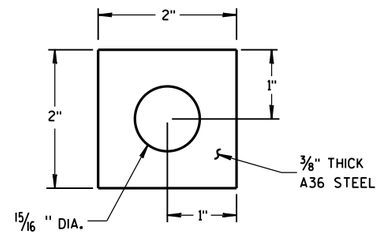
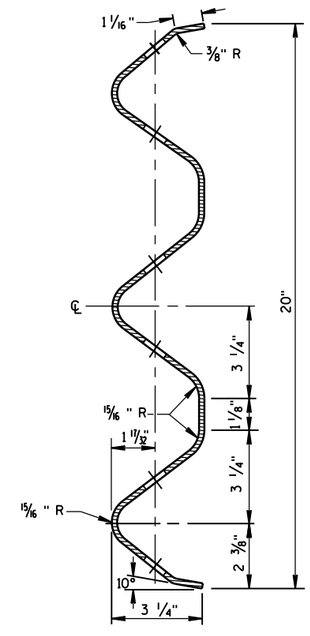
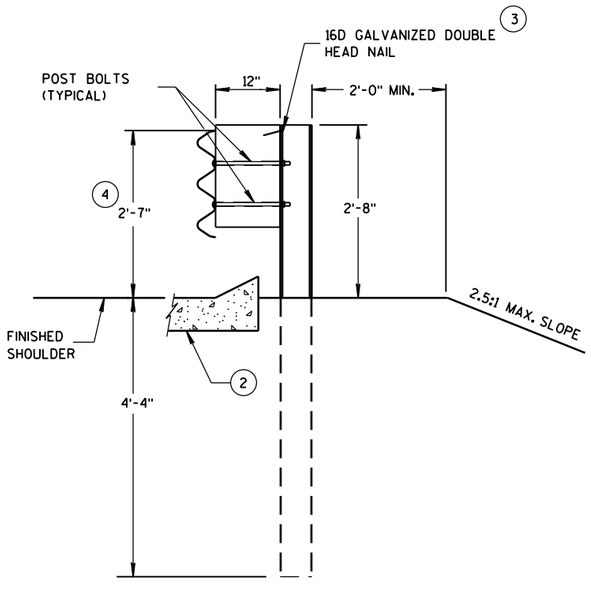


PLATE WASHER DETAIL

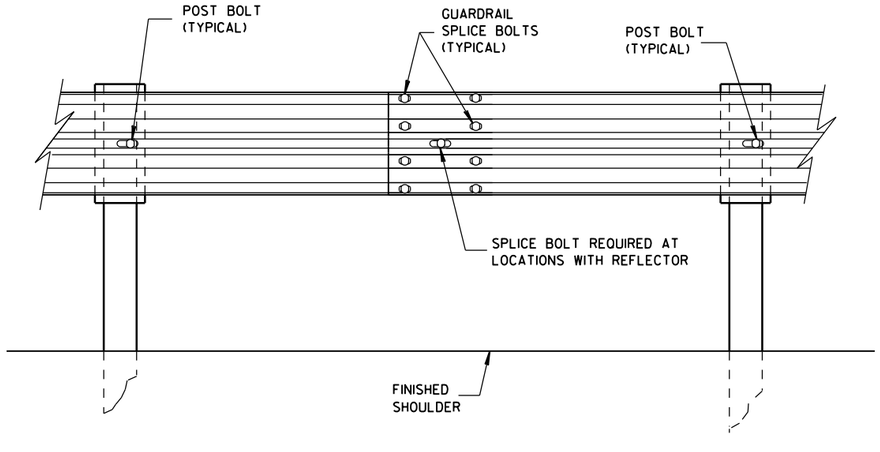


SECTION THRU THRIE BEAM RAIL ELEMENT



SECTION D-D

POSTS 12-17



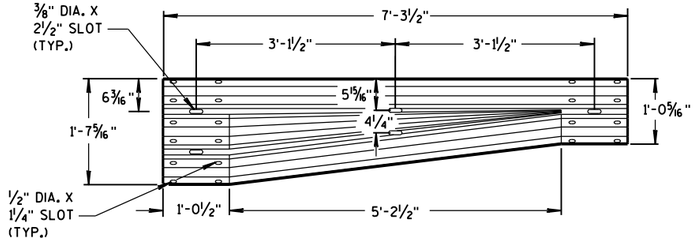
SPLICE DETAIL

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

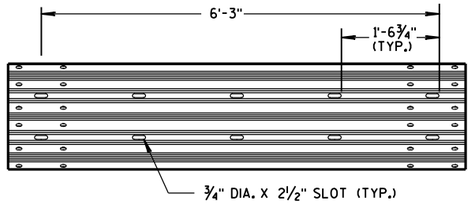
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

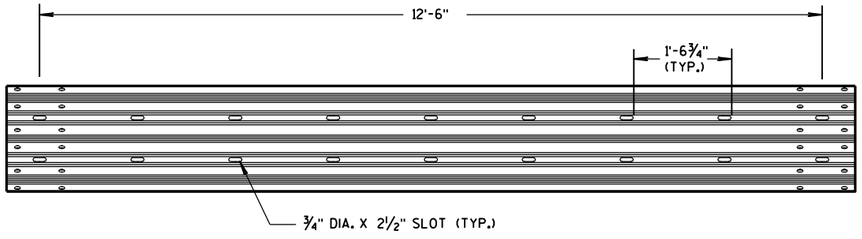
S.D.D. 14 B 45-4b



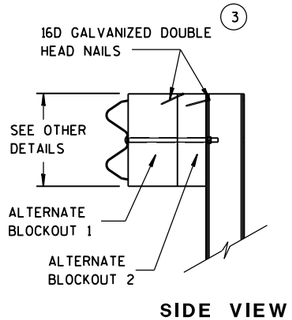
W-BEAM TO THRIE BEAM TRANSITION SECTION



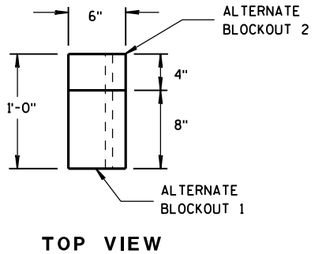
6'-3" THRIE BEAM SECTION



12'-6" THRIE BEAM SECTION

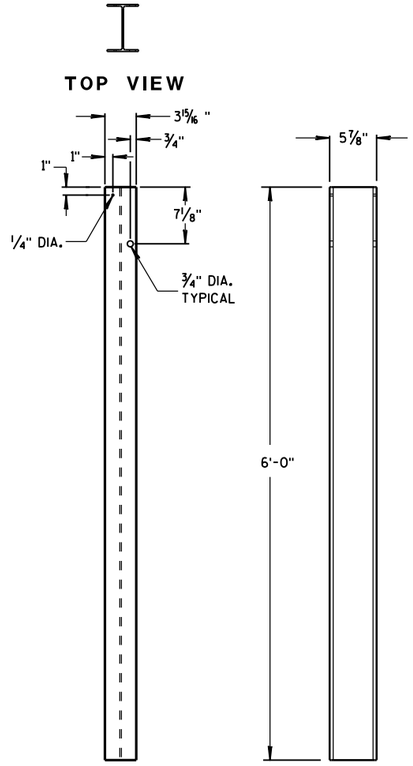


SIDE VIEW

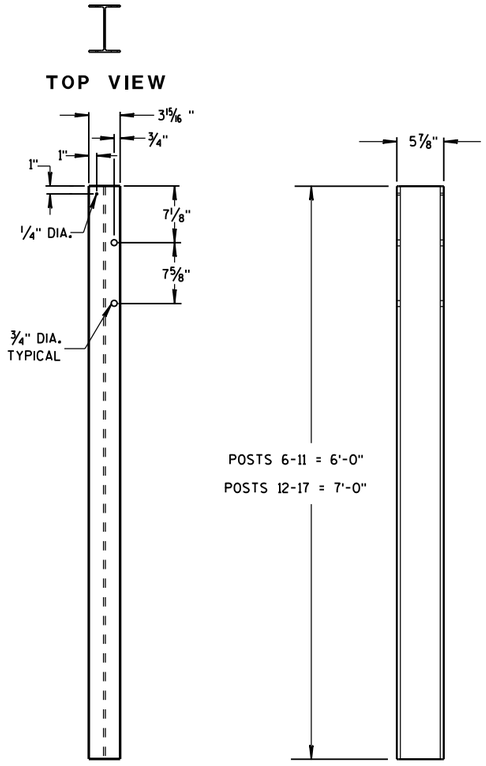


TOP VIEW

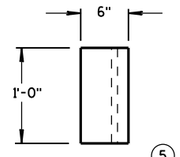
ALTERNATE WOOD BLOCKOUT DETAIL



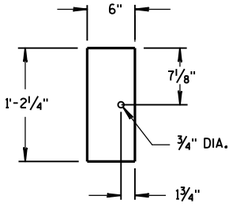
STEEL POSTS 1-5



STEEL POSTS 6-17

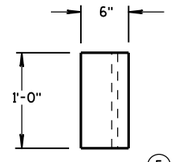


TOP VIEW (5)

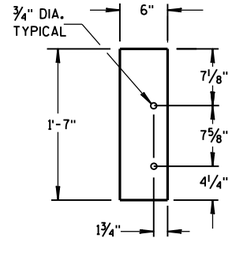


FRONT VIEW

BLOCKOUT POSTS 1-5



TOP VIEW (5)



FRONT VIEW

BLOCKOUT POSTS 6-17

GENERAL NOTES

STEEL POSTS ARE W6X9 OR W6X8.5.

BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.

(3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

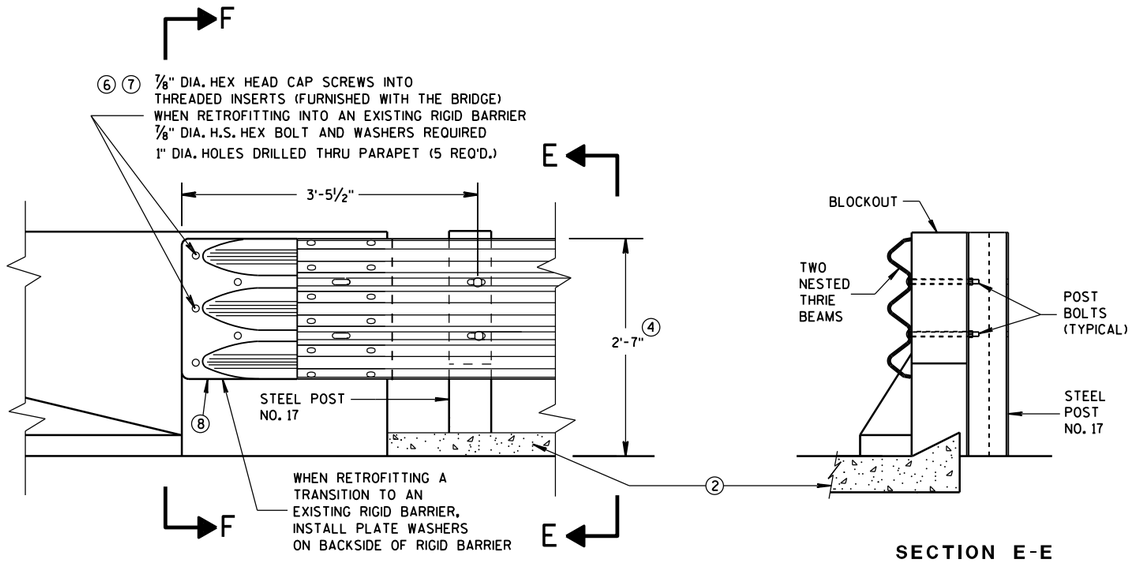
(5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

S.D.D. 14 B 45-4c
S.D.D. 14 B 45-4c



FRONT VIEW

SECTION E-E

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

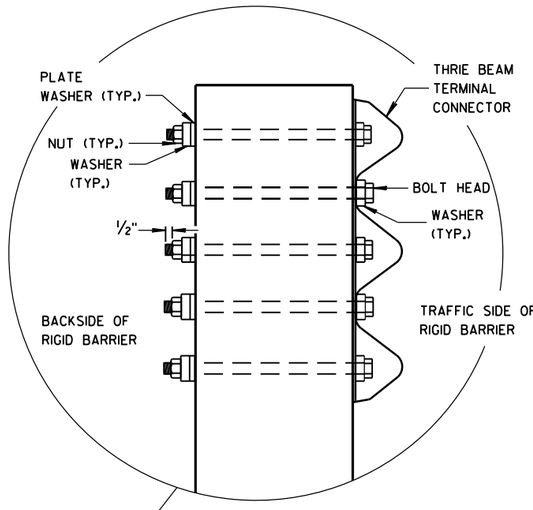
② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

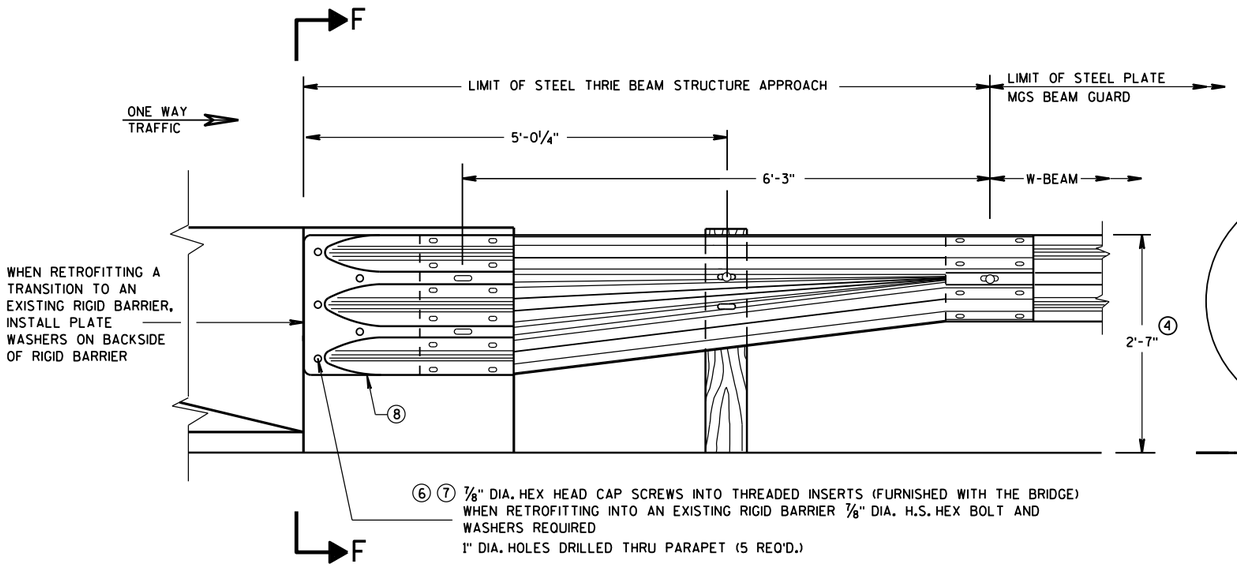
④ TOLERANCE FOR TOP OF BEAM IS ± 1".

⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

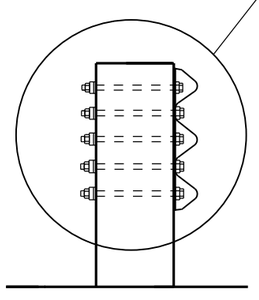
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

⑧ THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

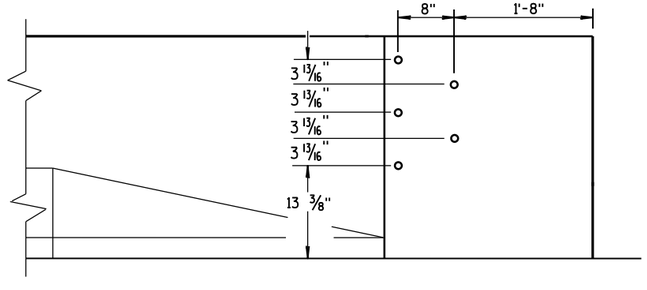




FRONT VIEW



SECTION F-F



DRILL HOLE LOCATION

W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

NT

6

S.D.D. 14 B 45-4d

6

S.D.D. 14 B 45-4d

GENERAL NOTES

THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSTION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

(2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.

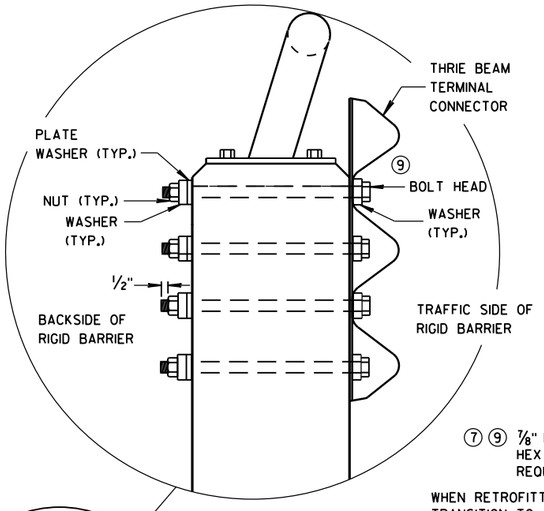
(4) TOLERANCE FOR TOP OF BEAM IS ± 1".

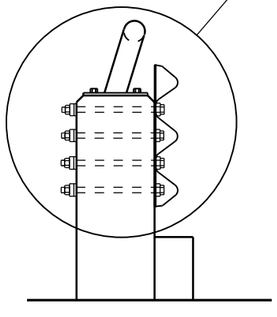
(6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

(7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/8" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.

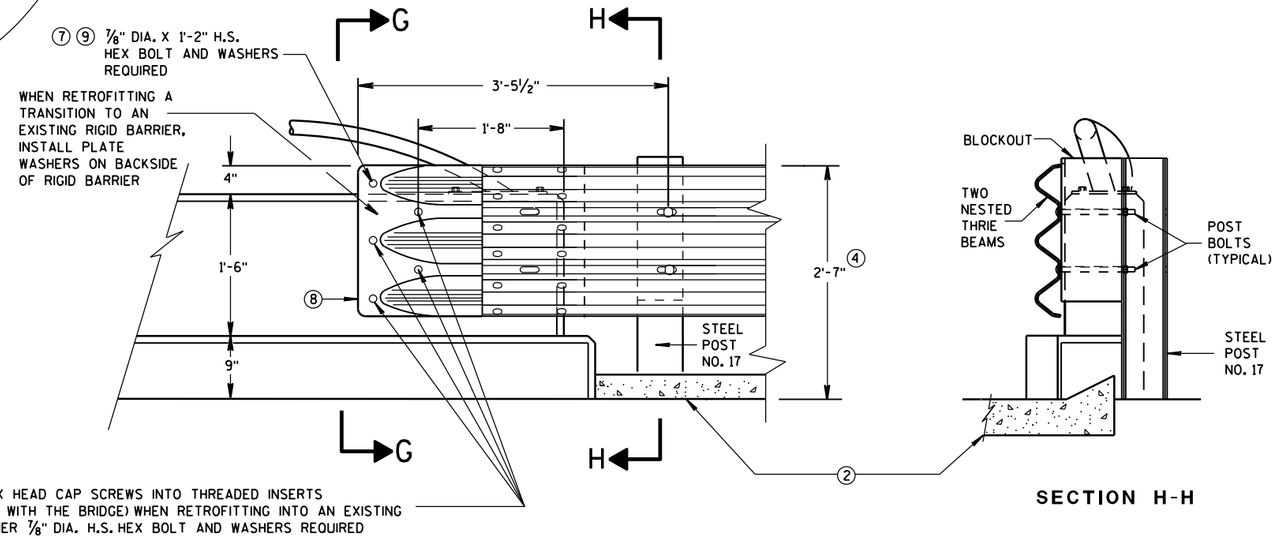
(8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".

(9) BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.





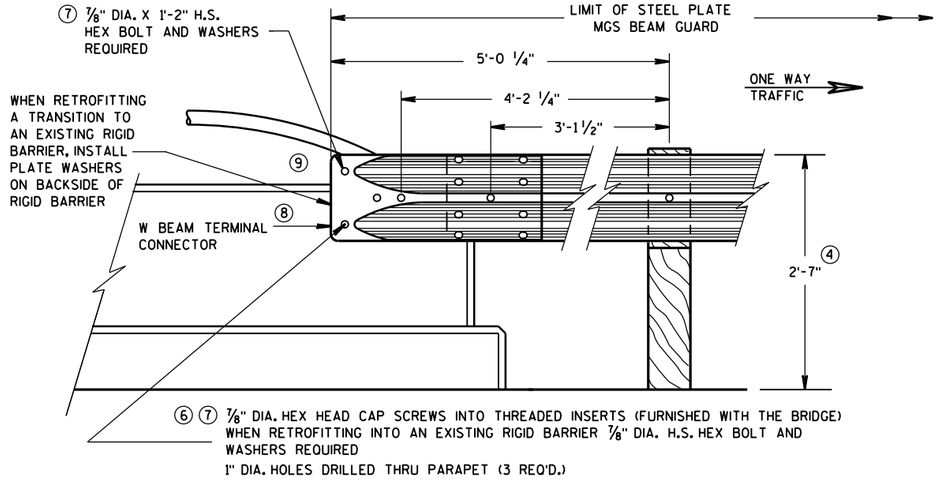
SECTION G-G



FRONT VIEW

SECTION H-H

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS



FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

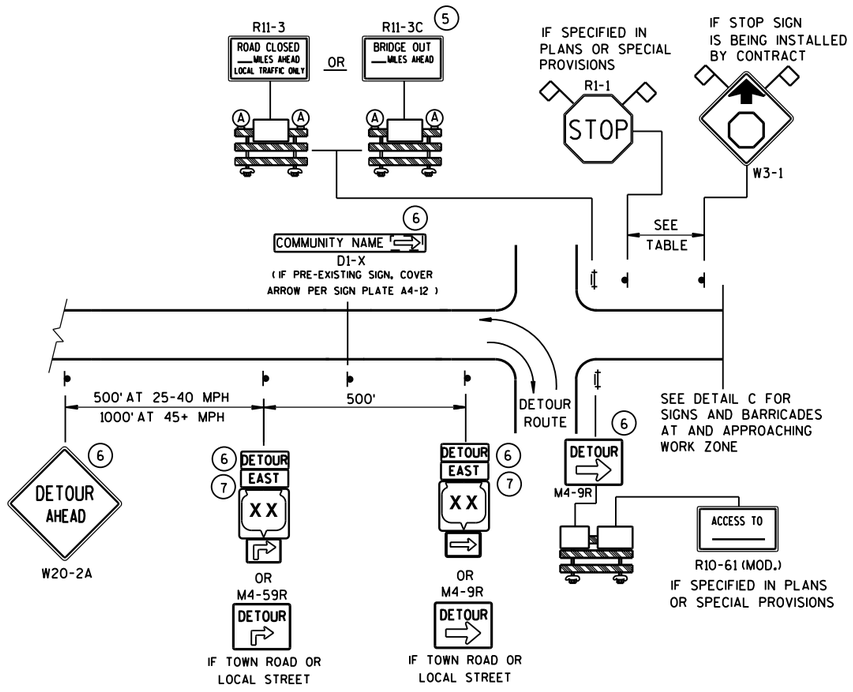
NT

6

S.D.D. 14 B 45-4e

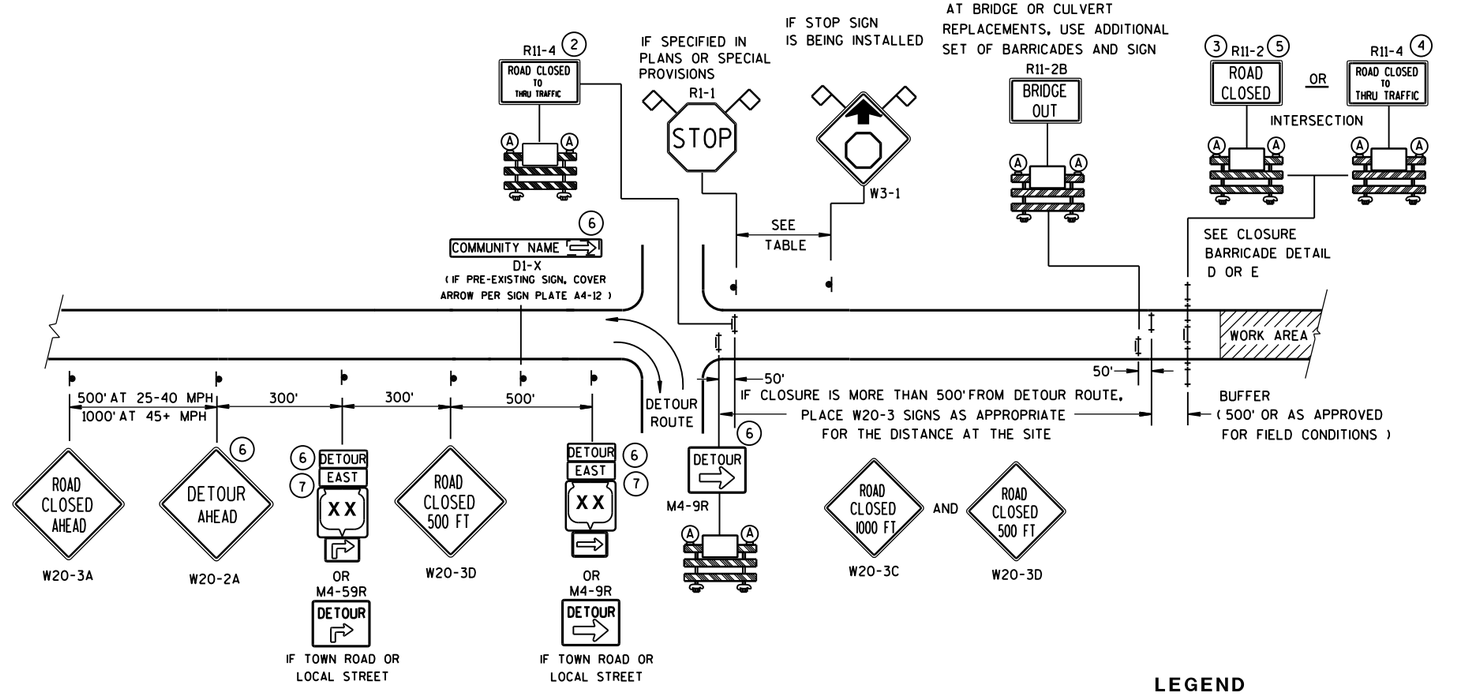
6

S.D.D. 14 B 45-4e



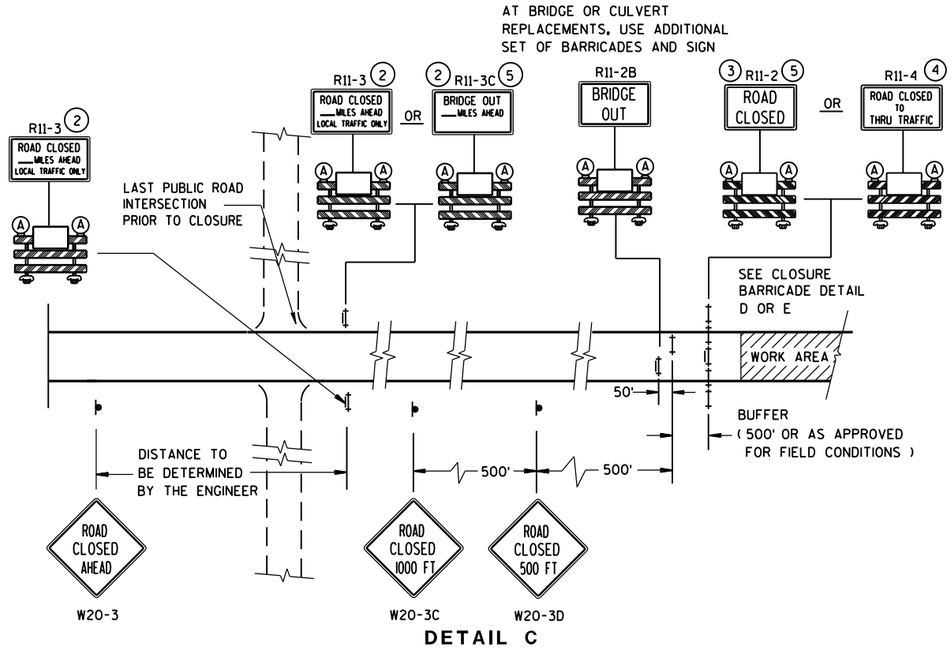
DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE LESS THAN ½ MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

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

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

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- DETOUR / EAST — M4-8 / M3-X
- XX — M1-4; COUNTY XX — M1-5A; XX — M1-6
- M05-1 OR M06-1
- FLAGS, 16" X 16" MIN., (ORANGE)

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

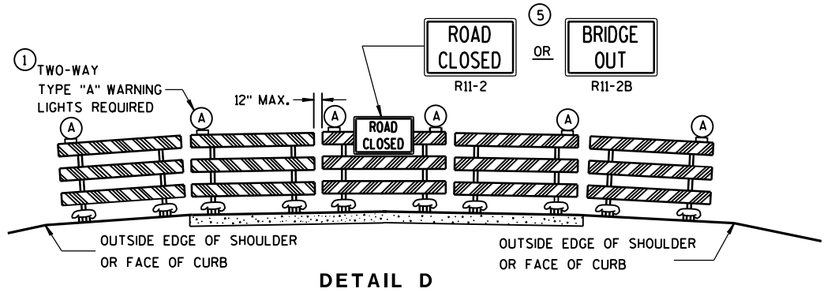
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA

6

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

6

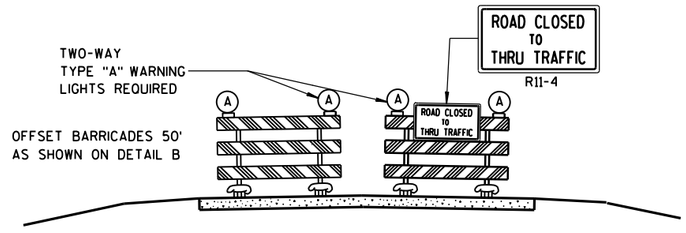
S.D.D. 15 C 2-6a



DETAIL D

ROAD CLOSURE BARRICADE DETAIL

APPROACH VIEW



DETAIL E

LANE CLOSURE BARRICADE DETAIL

APPROACH VIEW

SEE SDD 15C2-SHEET "**a**" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

(1) TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).

(2) THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.

(3) FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.

(4) FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.

(5) FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.

(6) INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.

(7) "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

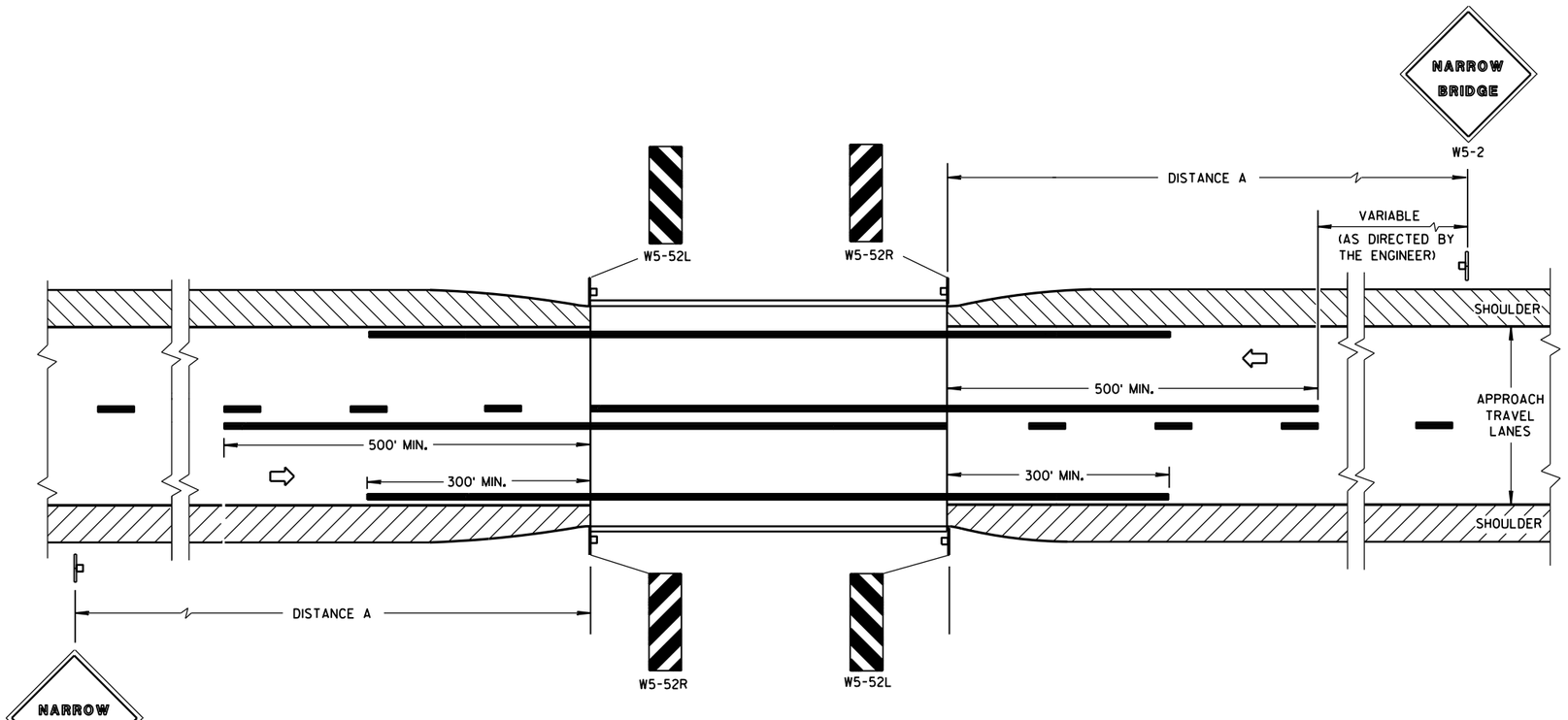
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 — DATE

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

6

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

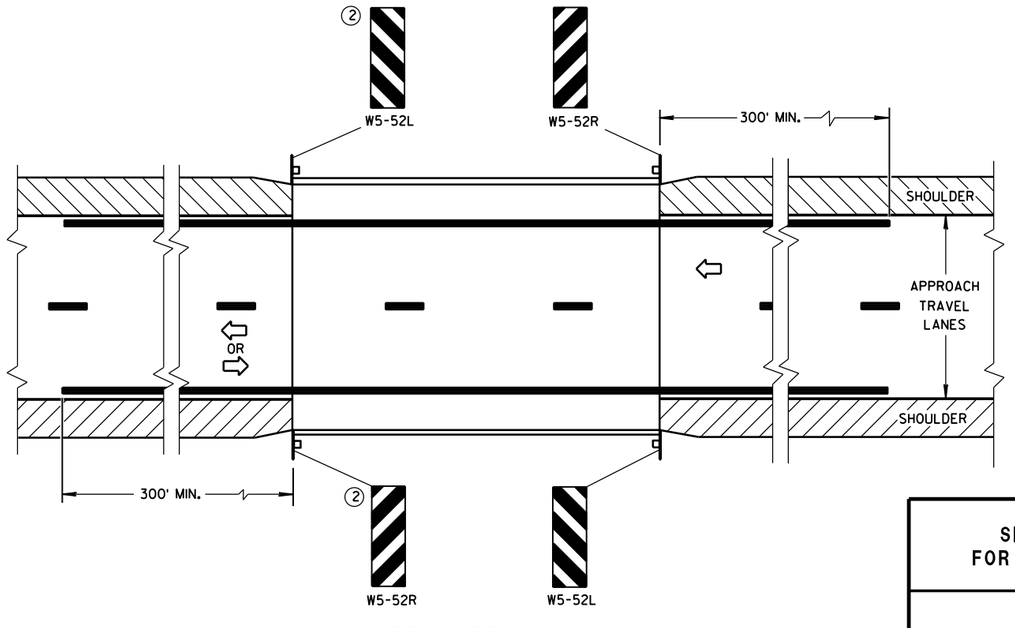


SITUATION 1

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'



SITUATION 2

WARRANTING CRITERIA:

1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET.

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.

① LOCATE W5-52 SIGN POST(S) BEHIND GUARDRAIL WHEN PRESENT.

② OMIT ON ONE-WAY TRAVELLED WAYS.

③ EDGE OF W5-52 SIGN SHALL BE PLACED IN LINE WITH FACE OF CURB OR PARAPET.

SIGNING & MARKING FOR TWO LANE BRIDGES

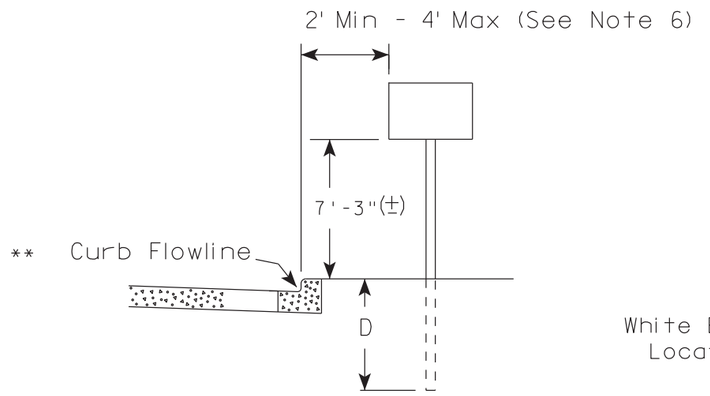
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MARKING ENGINEER
FHWA

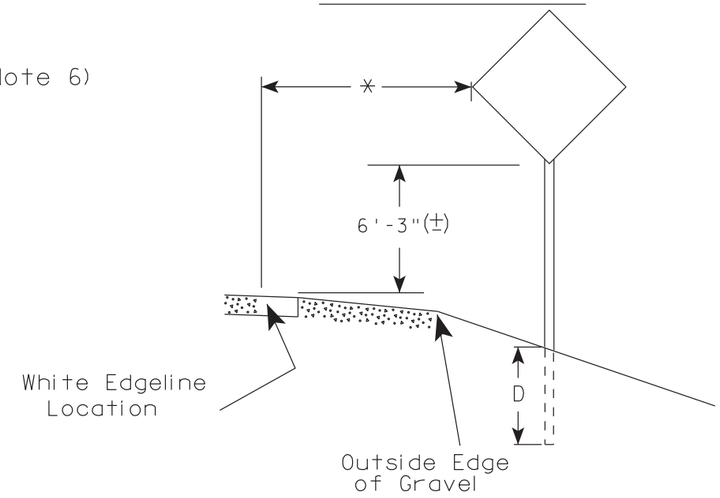
6

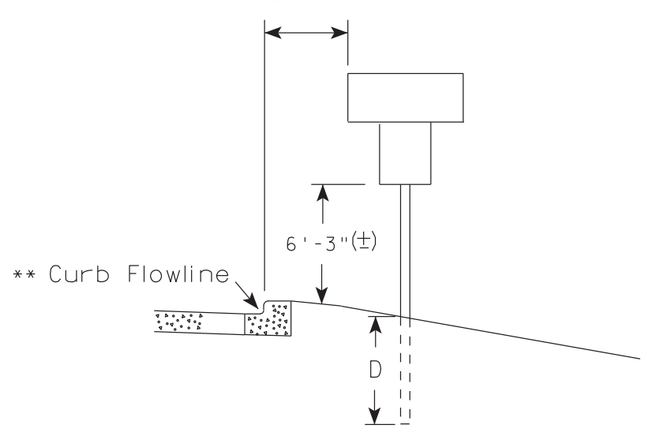
S.D.D. 15 C 6-8

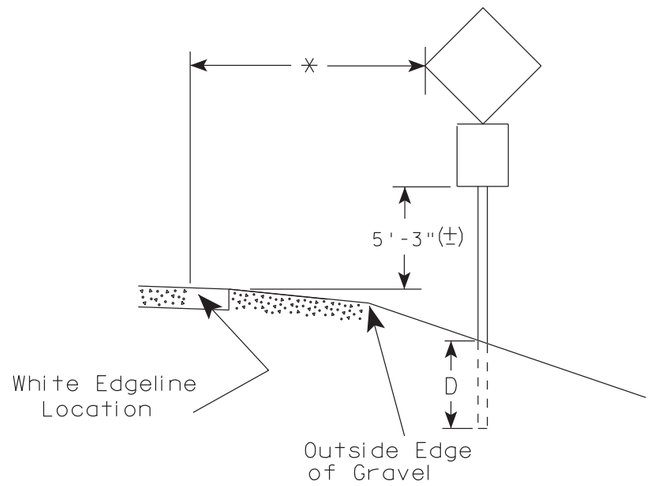
URBAN AREA



RURAL AREA (See Note 2)







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

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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

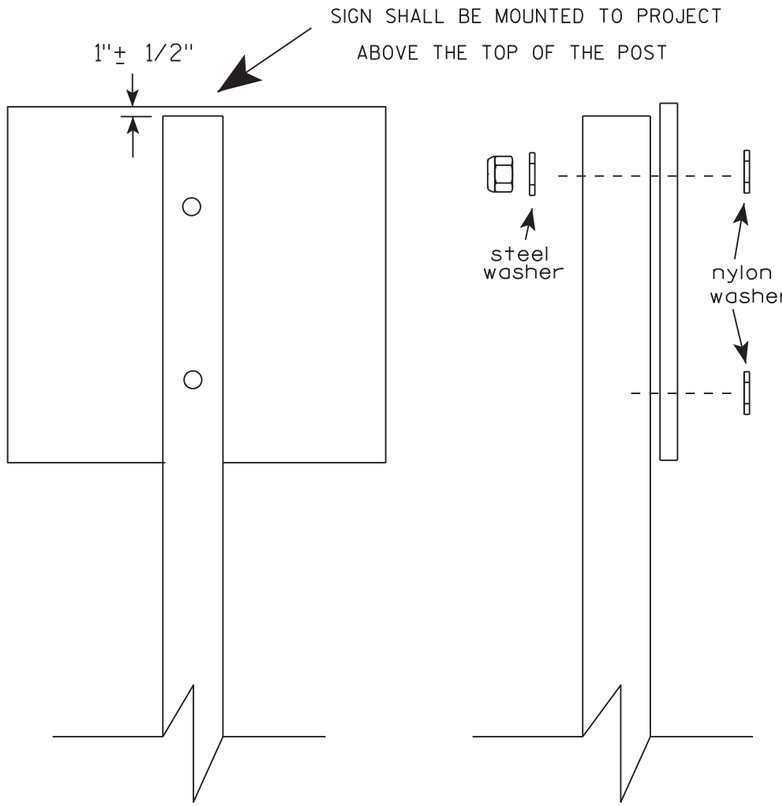
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 34	E

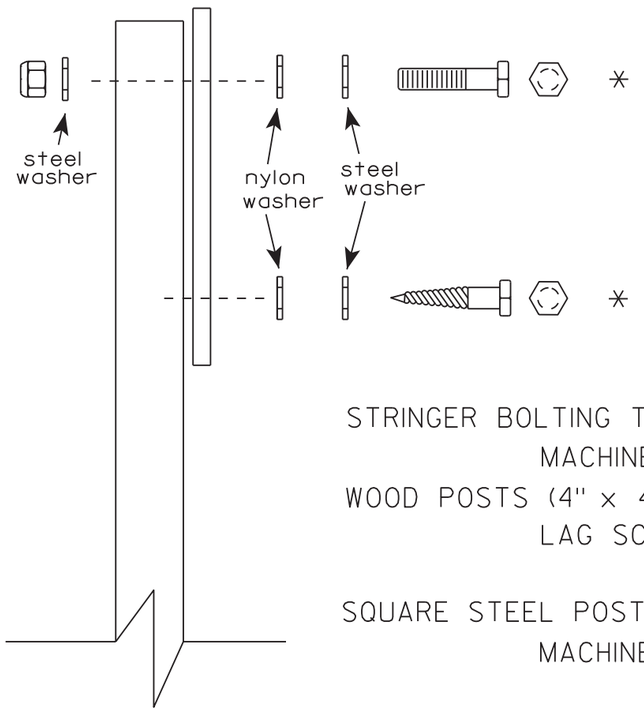
FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A43.DGN PLOT DATE : 23-JUL-2015 15:21 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 99.237937:1.000000

WISDOT/CADDS SHEET 42

7

7





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.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

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

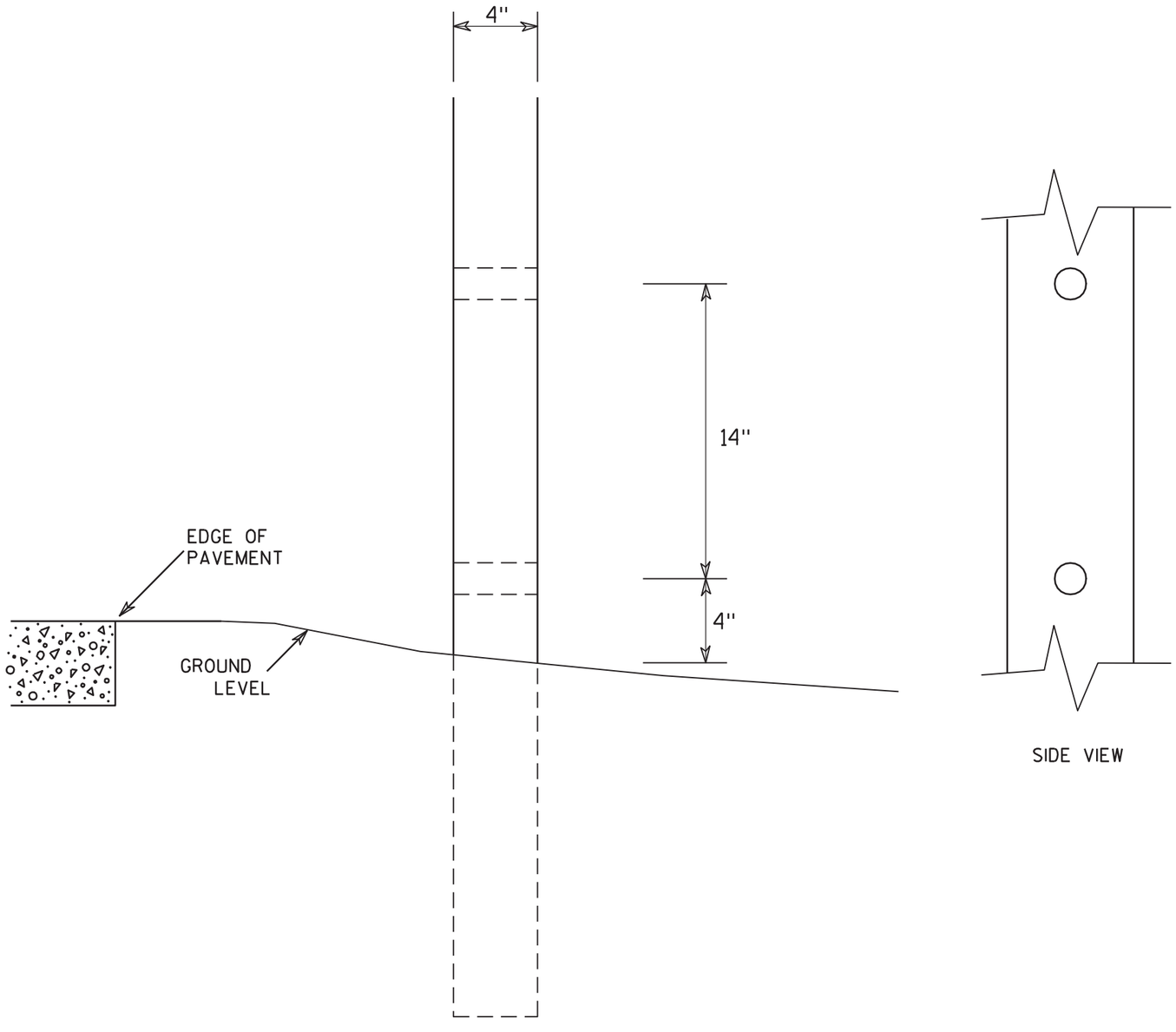
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/11/16 PLATE NO. A4-8.8



SIDE VIEW

GENERAL NOTES

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

7

7

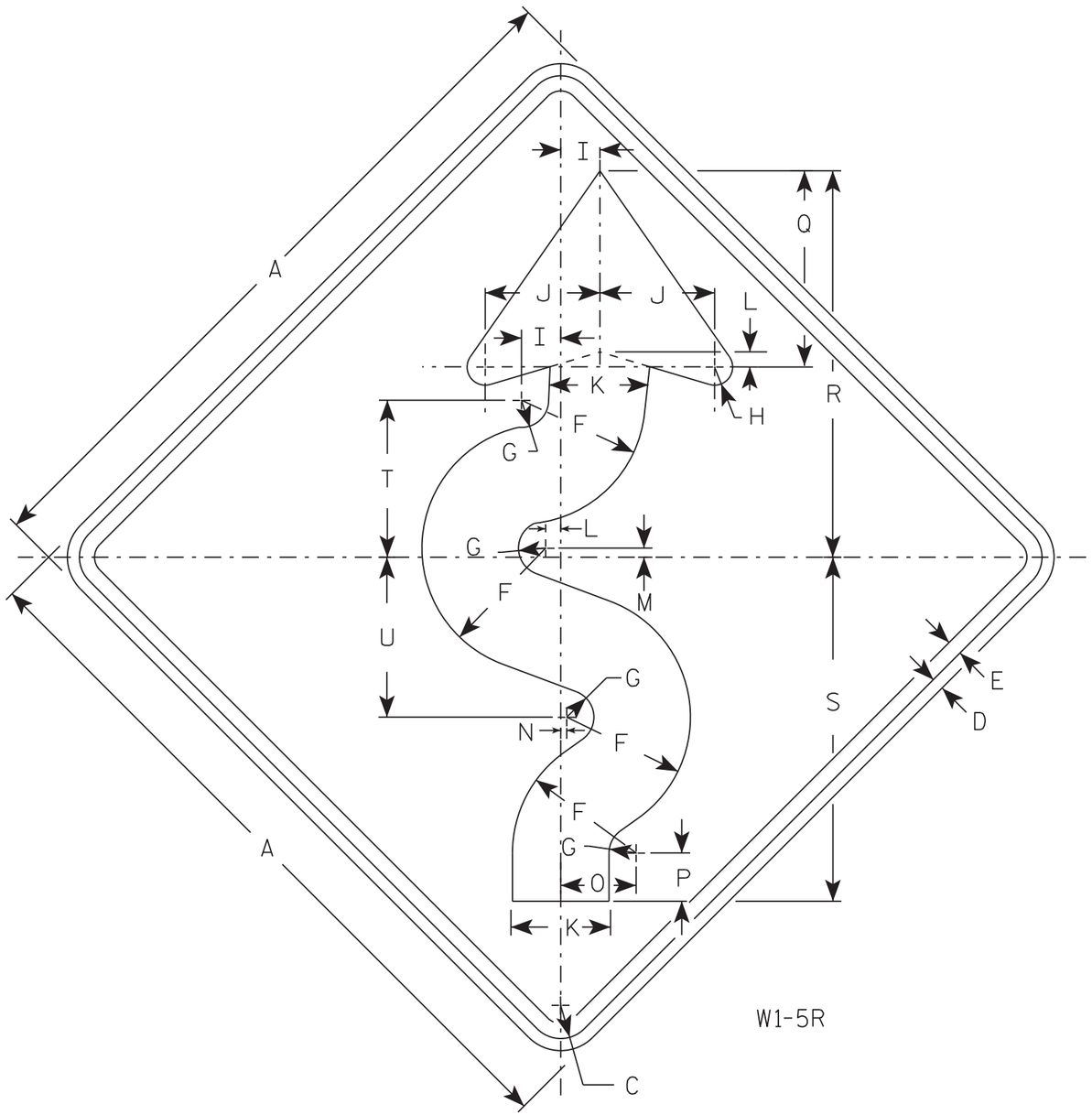
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 36	E



W1-5R

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Yellow
   Message - Black
3. W1-5L is the same as W1-5R except the arrow is reversed along the vertical centerline.
4. If used with W13-1 of 30 MPH or less, use 36" sign for Size 2S.

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	24		1 1/8	3/8	1/2	4 1/8	7/8	5/8	1 1/4	3 3/4	3 1/4	1/2	1/4	1/8	2 1/2	1 5/8	6 1/2	12 3/4	11 3/8	5 1/4	5 1/4						4.0
2S	30		1 3/8	1/2	5/8	5 1/8	1 1/8	3/4	1 5/8	4 3/4	4 1/8	5/8	3/8	1/4	3 1/8	2	8 1/8	16	14 1/4	6 1/2	6 5/8						6.25
2M	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
3	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
4	36		1 5/8	5/8	3/4	6 1/4	1 3/8	1	1 7/8	5 5/8	4 7/8	3/4	3/8	1/4	3 3/4	2 7/8	9 3/4	19 1/8	17 1/8	7 3/4	7 7/8						9.0
5	48		2 1/4	3/4	1	8 1/4	1 3/4	1 1/4	2 1/2	7 1/2	6 1/2	1	1/2	3/8	5	3 1/4	13	25 1/2	22 3/4	10 3/8	10 1/2						16.0

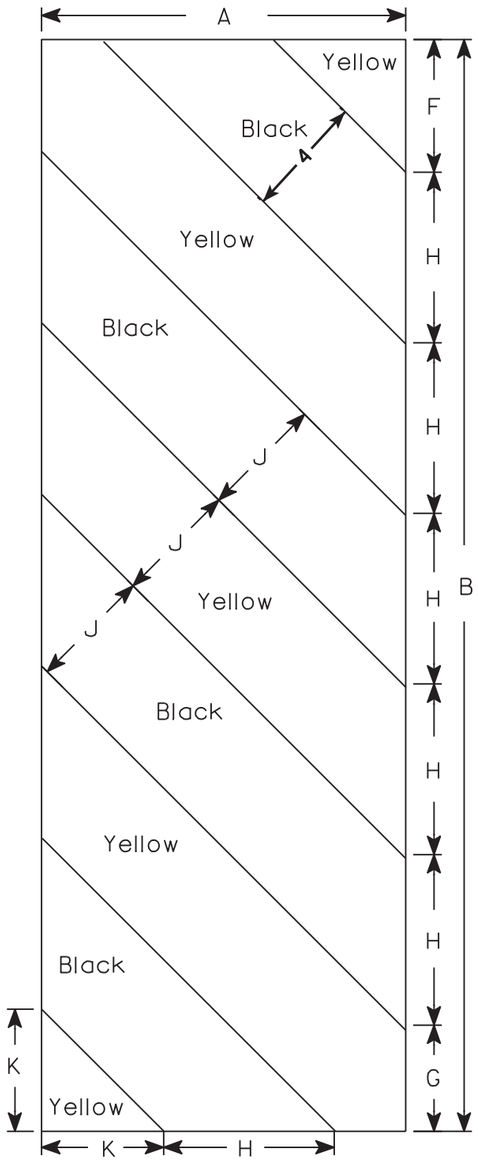
STANDARD SIGN
W1-5

WISCONSIN DEPT OF TRANSPORTATION

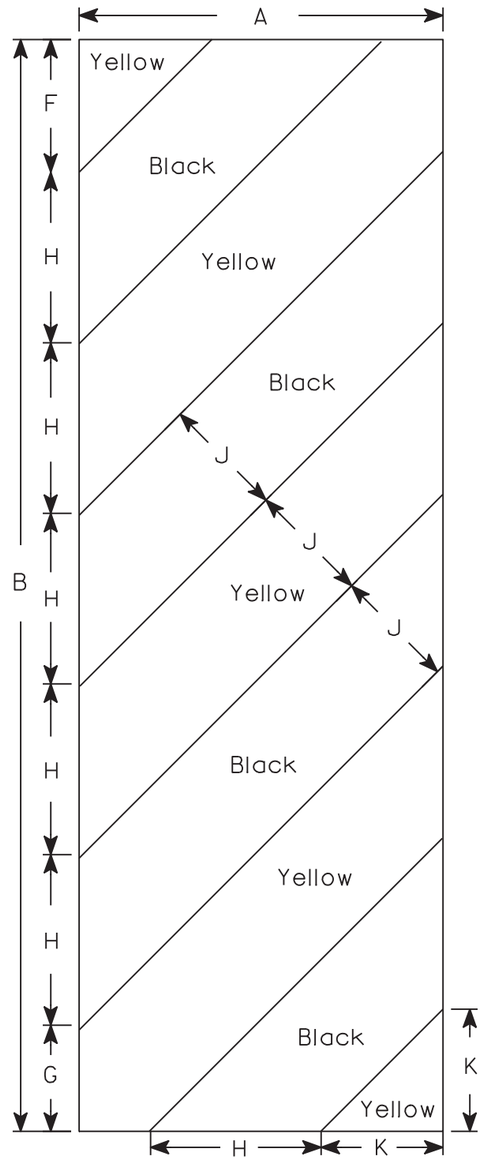
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/1/16 PLATE NO. W1-5.9

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 37 | E



W5-52L



W5-52R

NOTES

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

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

STANDARD SIGN

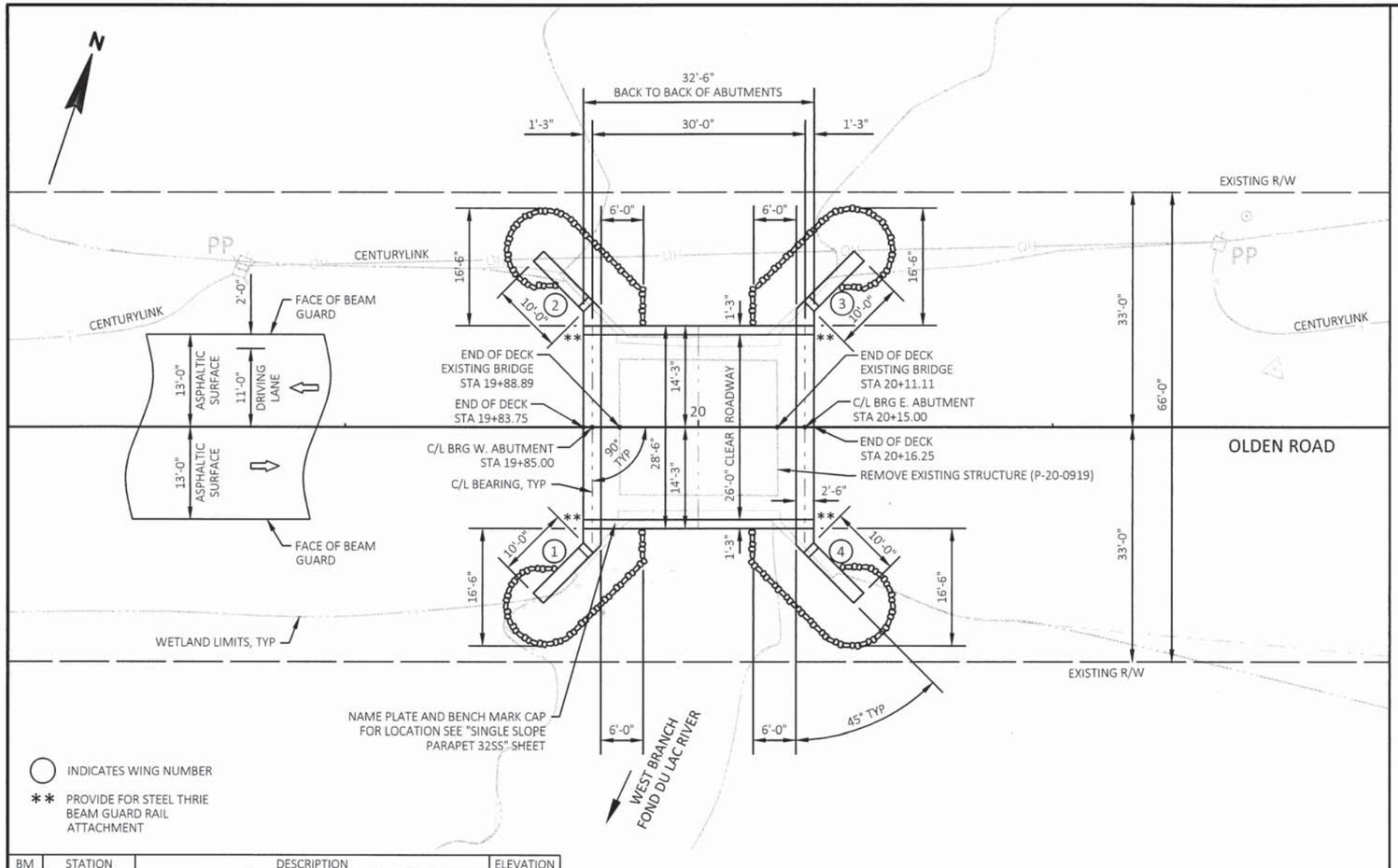
W5-52L & W5-52R

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew L Rauch
for State Traffic Engineer

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

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 38	E



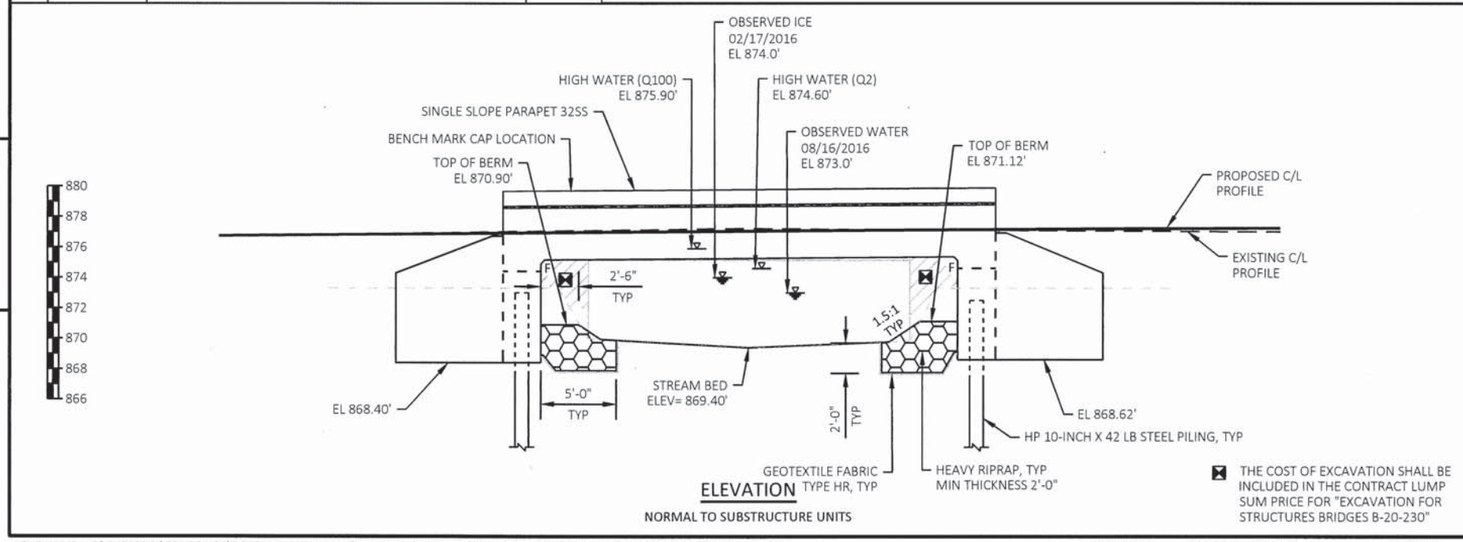
○ INDICATES WING NUMBER

** PROVIDE FOR STEEL THRIE BEAM GUARD RAIL ATTACHMENT

BM	STATION	DESCRIPTION	ELEVATION
1	20+81; 8' LT	MAG NAIL IN NORTH EDGE OF PAVEMENT OF OLDEN ROAD, 75' NORTHEAST OF BRIDGE	876.82
2	27+00; 22' RT	NGS BRASS CAP IN CONCTRETE, STAMPED "ROSENDALE GPS"	875.40

PLAN

SINGLE SPAN FLAT CONCRETE SLAB



ELEVATION

NORMAL TO SUBSTRUCTURE UNITS

▣ THE COST OF EXCAVATION SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-20-230"

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALL DIMENSIONS ARE IN INCHES (IN) EXCEPT AS NOTED.

ALL STATIONS AND ALL ELEVATIONS ARE IN FEET (FT).

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO NAVD88.

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

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

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

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION: M153, TYPE I,II OR III; OR M213.

THE EXISTING GROUND LINE AT THE ABUTMENTS SHALL BE THE UPPER LIMIT OF EXCAVATION FOR STRUCTURE.

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

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

THIS STRUCTURE WILL REPLACE A SINGLE SPAN CONCRETE SLAB (P-20-0919).

ALL REINFORCING BARS ARE ENGLISH AND THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFY THE BAR SIZE.

DESIGN DATA

DESIGN LOAD	HL-93
INVENTORY RATING FACTOR	RF=1.09
OPERATING RATING FACTOR	RF=1.41
MAX STD PERMIT VEHICLE (WIS SPV)	250 KIPS

STRUCTURE WILL BE DESIGNED FOR A FUTURE WEARING SURFACE OF 20 LBS PER SQ FT

MATERIAL PROPERTIES

CONCRETE:	SLAB	f'c = 4,000 psi
	ALL OTHER	f'c = 3,500 psi
REINFORCING STEEL GRADE 60		fy = 60,000 psi

* 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.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10-INCH X 42 LB STEEL PILING WITH A REQUIRED DRIVING RESISTANCE OF 100 TONS* PER PILE. AS DETERMINED BY THE MODIFIED GATES DYNAMIC EQUATION. ESTIMATED PILE LENGTH FOR WEST ABUTMENT IS 25 FT. ESTIMATED PILE LENGTH FOR EAST ABUTMENT IS 30 FT. PILING REQUIRES THE USE OF PILE POINTS.

HYDRAULIC DATA

FOR PROPOSED CONDITIONS

Q100 (TOTAL)	= 640 cfs
Q STRUCTURE	= 638 cfs
Q ROADWAY	= 2 cfs
VELOCITY-THRU BRIDGE	= 5.8 ft/s
HIGH WATER (Q100)	= 875.90 ft
Q2	= 190 cfs
HIGH WATER (Q2)	= 874.60 ft
WATERWAY AREA-THRU BRIDGE	= 111 ft²
DRAINAGE AREA	= 10 mi²
CRITICAL SCOUR CODE	= 5
OVERTOPPING FREQUENCY	= 80-YEAR
OVERTOPPING ELEVATION	= 875.82 ft
DISCHARGE @ OVERTOPPING EL	= 620 cfs

TRAFFIC DATA

(OLDEN ROAD)

ADT	(2018)	280 vpd
ADT	(2038)	300 vpd
RDS		45 MPH

STATE PROJECT NUMBER

6188-01-71

WISCONSIN
RYAN T. ARNDT
E-41765
FOND DU LAC, WI
6-22-17
PROFESSIONAL ENGINEER

LIST OF DRAWINGS

BRIDGE OFFICE CONTACT:
BILL DREHER 608-266-8489

CONSULTANT CONTACT:
THOMAS LANSER 920-924-5720

NO.	DATE	REVISION	BY

GREMMER & ASSOCIATES, INC.
CONSULTING ENGINEERS
Stevens Point • Fond du Lac

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED William C. Dreher SDR — CHIEF STRUCTURES DESIGN ENGINEER — 08/09/17 DATE

STRUCTURE B-20-230

BRIDGE OVER WEST BRANCH FOND DU LAC RIVER

COUNTY	TOWN/CITY/VILLAGE
FOND DU LAC	ROSENDALE

DESIGN SPEC: AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	DESIGN CK'D	DRAWN BY	PLANS CK'D
RTA	ALK	AJS	ALK

GENERAL PLAN

SHEET 1 OF 8

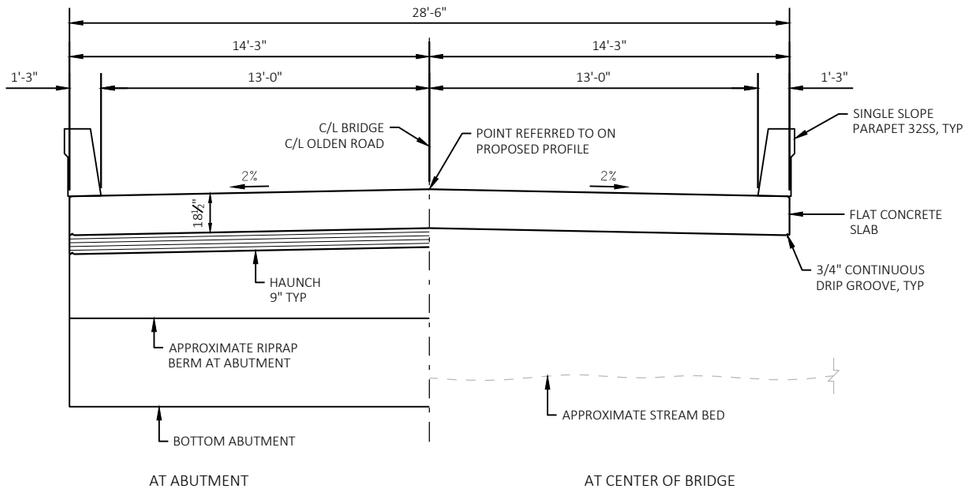
39

8

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-080101-BR.DWG
LAYOUT NAME - 61880100-080101-BR-SHEET-01
PLOT DATE : 6/21/2017 10:43 AM PLOT BY : AARON SARAUER PLOT NAME :

STATE PROJECT NUMBER

6188-01-71

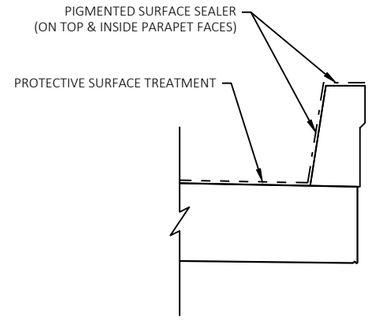


CROSS-SECTION THROUGH STRUCTURE

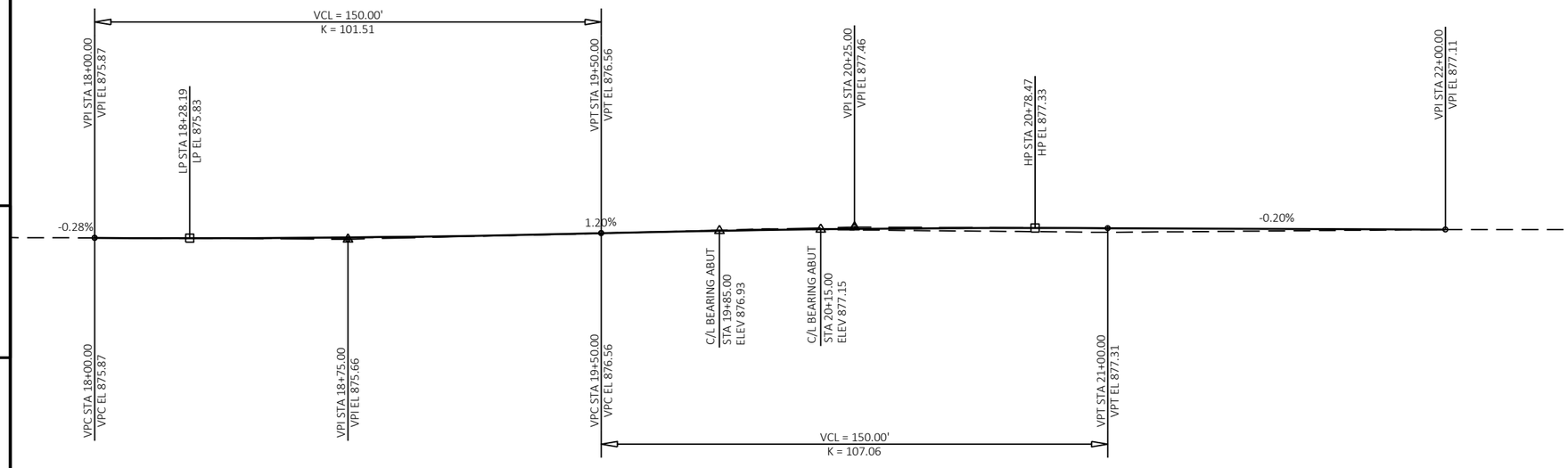
LOOKING EAST

TOTAL ESTIMATED QUANTITIES

ITEM NO.	BID ITEMS	UNIT	W ABUT	E ABUT	SUPER	TOTAL
203.0600.S	REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS STA 20+00	LS	---	---	---	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-20-230	LS	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	118	121	---	239
502.0100	CONCRETE MASONRY BRIDGES	CY	31	31	57	119
502.3200	PROTECTIVE SURFACE TREATMENT	SY	---	---	94	94
502.3210	PIGMENTED SURFACE SEALER	SY	---	---	27	27
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	2,188	2,188	---	4,376
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,515	1,514	11,969	14,998
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	6	6	---	12
550.0500	PILE POINTS	EACH	7	7	---	14
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	175	210	---	385
606.0300	RIPRAP HEAVY	CY	46	48	---	94
612.0206	PIPE UNDERDRAIN UNPERFORATED 6-INCH	LF	8	8	---	16
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	52	52	---	104
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	---	---	4	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	46	46	---	92
645.0120	GEOTEXTILE TYPE HR	SY	69	71	---	140
	NON-BID ITEMS					
-----	JOINT FILLER	SIZE				1/2" & 3/4"



SURFACE DETAIL



FINISHED REFERENCE LINE PROFILE

OLDEN ROAD

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

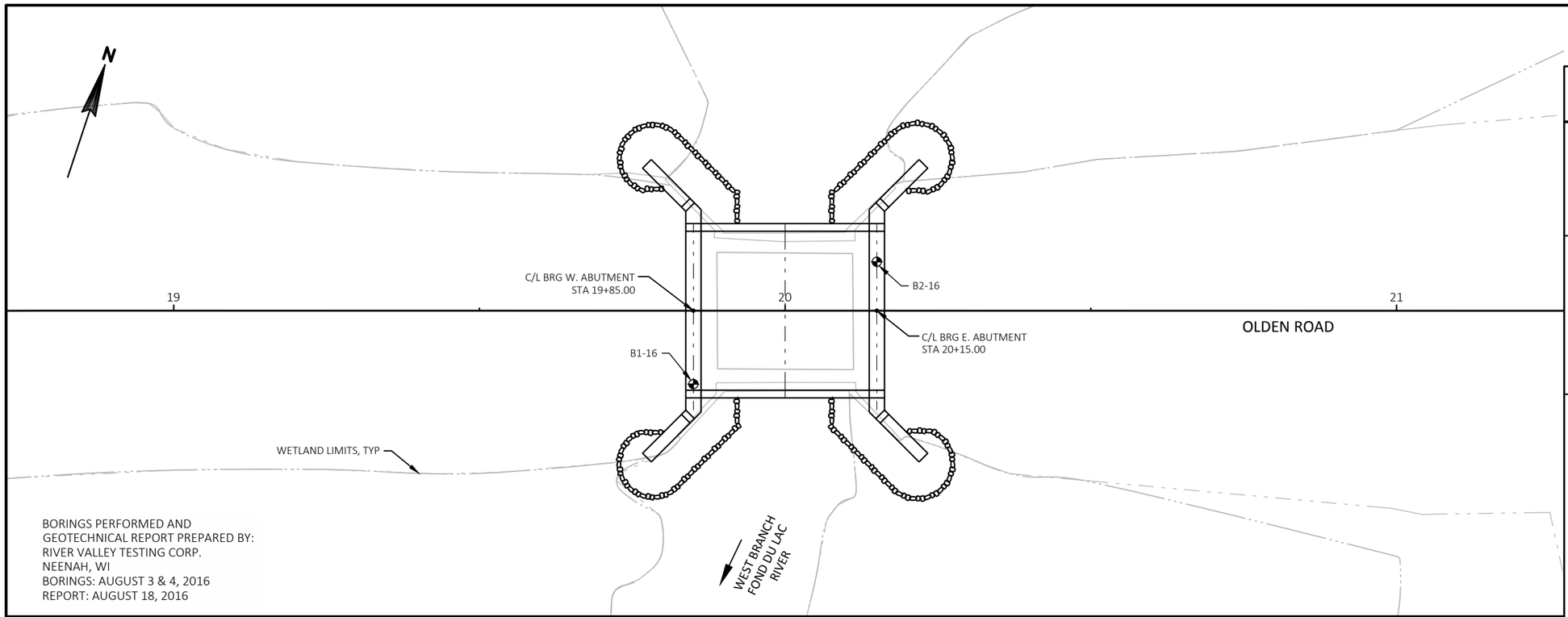
B-20-230

DRAWN BY AJS | PLANS CK'D ALK

QUANTITIES AND CROSS SECTIONS

SHEET 2

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-080102-BR.DWG
LAYOUT NAME - 61880100-080102-BR-SHEET-02
PLOT DATE : 6/22/2017 4:00 PM
PLOT BY : AARON SARAUER
PLOT NAME :



BORINGS PERFORMED AND
GEOTECHNICAL REPORT PREPARED BY:
RIVER VALLEY TESTING CORP.
NEENAH, WI
BORINGS: AUGUST 3 & 4, 2016
REPORT: AUGUST 18, 2016

STATE PROJECT NUMBER

6188-01-71

ABBREVIATIONS

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

MATERIAL SYMBOLS

TOPSOIL, SILT, SANDSTONE
SAND, PEAT, LIMESTONE
GRAVEL, CLAY, IGNEOUS ROCK

LEGEND OF PROBING

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

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

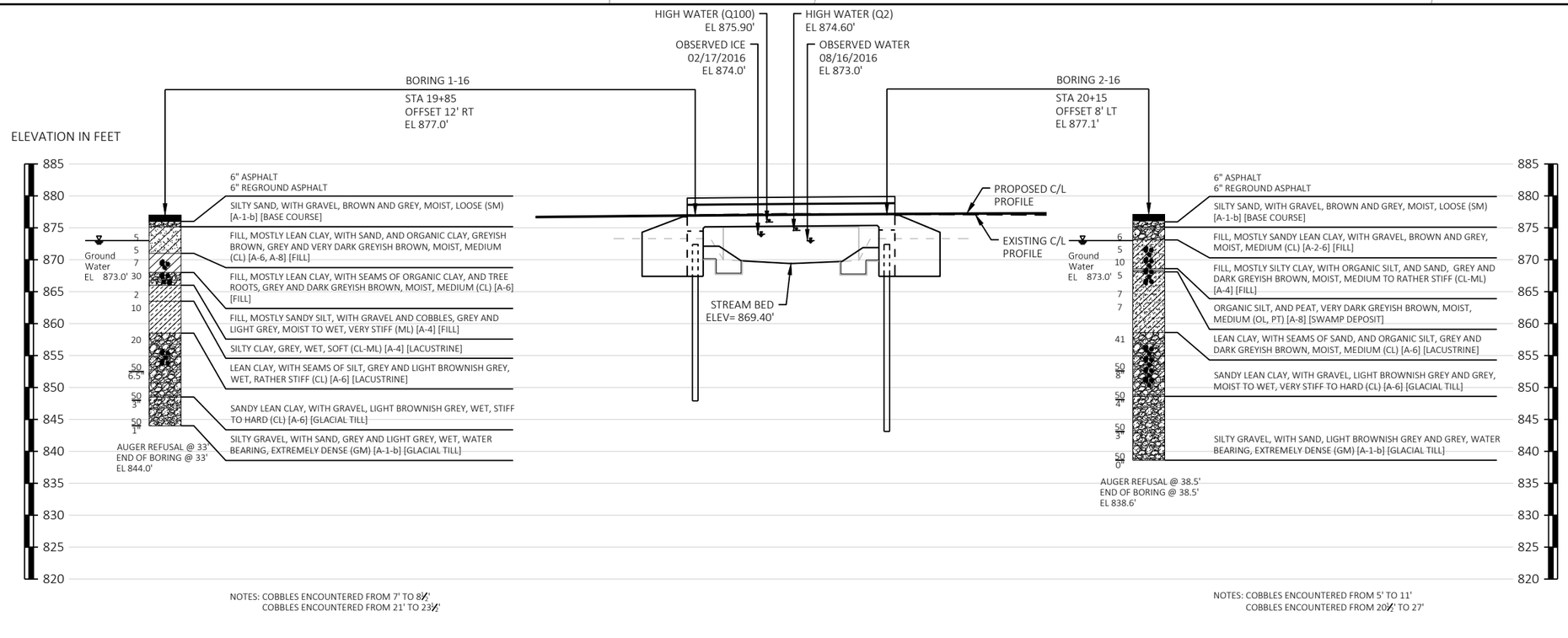
LEGEND OF BORING

BORING NO.
STA
ELEV
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.
BOULDER 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.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

B-20-230

DRAWN BY AJS | PLANS CK'D ALK

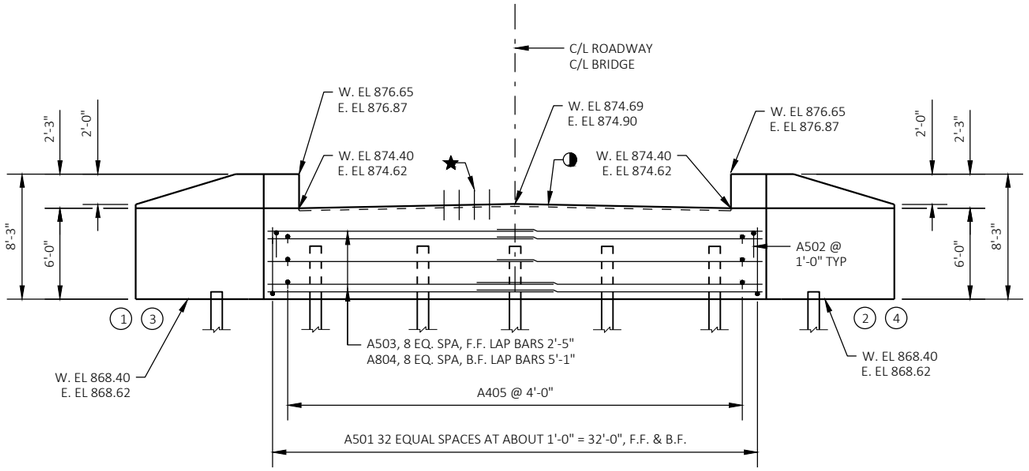
SUBSURFACE EXPLORATION

SHEET 3

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-080103-BR.DWG
LAYOUT NAME - 61880100-080103-BR-SHEET-03
PLOT DATE : 6/16/2017 3:46 PM PLOT BY : AARON SARAUER PLOT NAME :

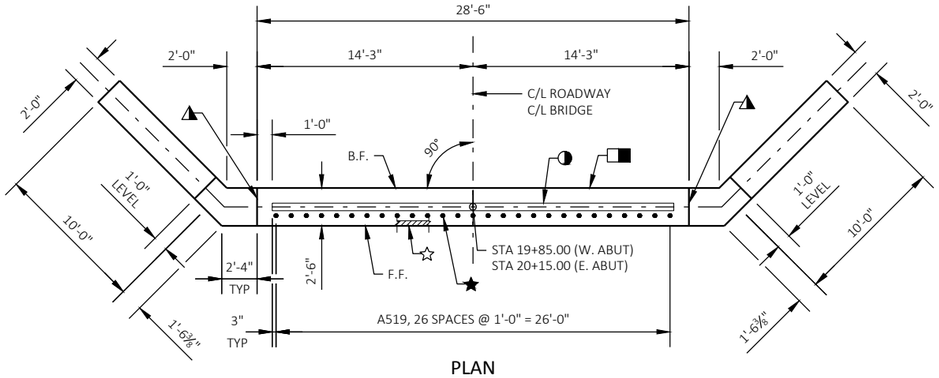
STATE PROJECT NUMBER

6188-01-71

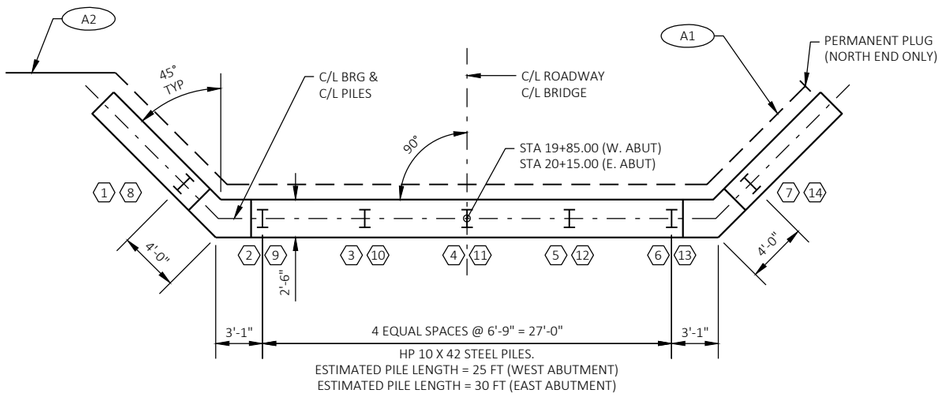


ELEVATION

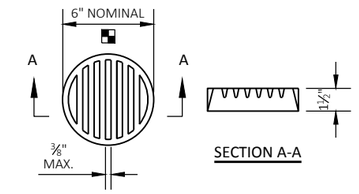
(LOOKING WEST FOR WEST ABUTMENT)
(LOOKING EAST FOR EAST ABUTMENT)



PLAN



PILE PLAN



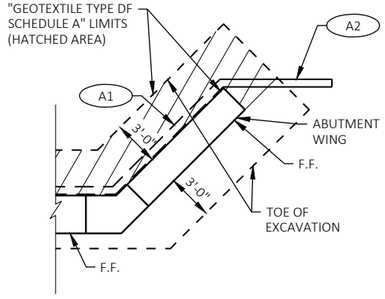
SECTION A-A

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

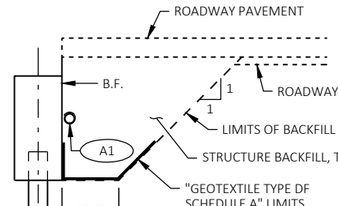
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN UNPERFORATED".

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

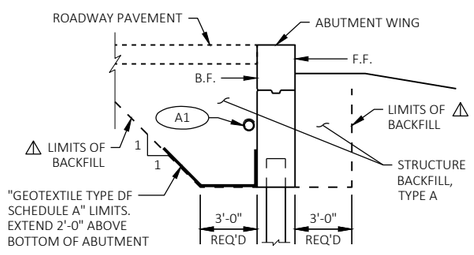
RODENT SHIELD DETAIL



ABUTMENT PLAN WITH WING



TYPICAL SECTION THRU ABUTMENT



TYPICAL SECTION THRU WING

NOTES:

THE UPPER LIMITS OF EXCAVATION FOR STRUCTURES SHALL BE THE EXISTING GROUND LINE.

⚠ BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.

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

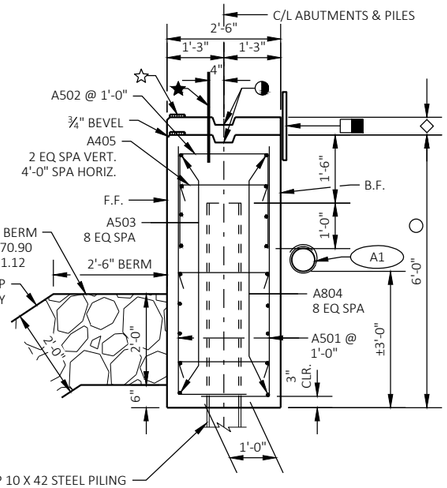
EXCAVATION BELOW THE ABUTMENT AND ABUTMENT BEDDING MATERIALS REQUIRES ENGINEER APPROVAL. GEOTEXTILE SHALL BE SET AT THE BOTTOM OF EXCAVATION AND EXTEND 2'-0" ABOVE BOTTOM OF ABUTMENT.

STRUCTURE BACKFILL LIMITS DETAIL

(TYPICAL AT BOTH ABUTMENTS)

LEGEND

(1)	INDICATES WING NUMBER
⬡1	INDICATES PILE NUMBER
F.F.	FRONT FACE
B.F.	BACK FACE
▬	RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND CONTINUOUS BETWEEN CORNERS AND FROM SEAT TO TOP OF WINGS, TO BE PLACED FLUSH WITH SURFACE OF CONCRETE.
◭	½" PREFORMED FILLER TO EXTEND FROM TOP OF ABUTMENT BODY TO TOP OF WINGS, SEAL ALL EXPOSED SURFACES OF FILLER WITH NON-STAINING, GRAY, NON-BITUMINOUS JOINT SEALER (1" DEEP & HOLD ⅛" BELOW SURFACE OF CONC.).
◑	CONSTRUCTION JOINT KEYWAY FORMED WITH A SURFACED BEVELED 2"X6".
★	A519 BARS COATED AT 1'-0" (2'-0" LONG). THESE BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE.
☆	4" X ¾" CORK FILLER.
○	DIMENSION IS FROM BOTTOM OF ABUTMENT TO LOW BEAM SEAT OR LOW SIDE OF SLAB TYPE SUPERSTRUCTURE.
◇	VARIES 0" - 3 ½" ADJUST HEIGHT OF A502 AND TOP A503, A804 BARS TO MATCH ABUTMENT SLOPE.



TYPE A5 WITH FIXED SEAT

(A1) PIPE UNDERDRAIN WRAPPED, 6 INCH, SLOPED 0.5% MIN. TO SUITABLE DRAINAGE. PERMANENT PLUG ON UPSTREAM END TO BE INCLUDED IN BID PRICE FOR "PIPE UNDERDRAIN WRAPPED 6-INCH".

(A2) PIPE UNDERDRAIN UNPERFORATED, 6 INCH. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT OUTLET END AS DETAILED ON THIS SHEET. RODENT SHIELD TO BE INCLUDED IN BID PRICE FOR "PIPE UNDERDRAIN UNPERFORATED 6-INCH"

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

B-20-230

DRAWN BY MJK | PLANS CK'D ALK

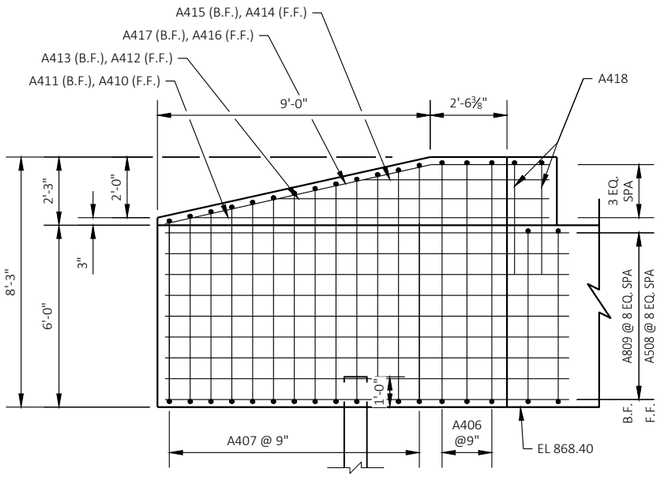
ABUTMENTS

SHEET 4

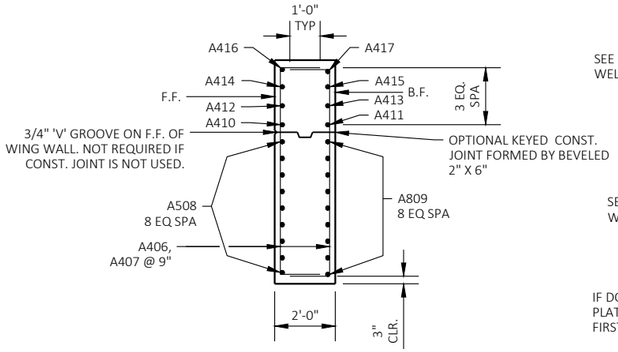
8

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-080104-BR.DWG
LAYOUT NAME - 61880100-080104-BR - SHEET-04

PLOT DATE : 6/21/2017 10:49 AM PLOT BY : AARON SARAUER PLOT NAME :

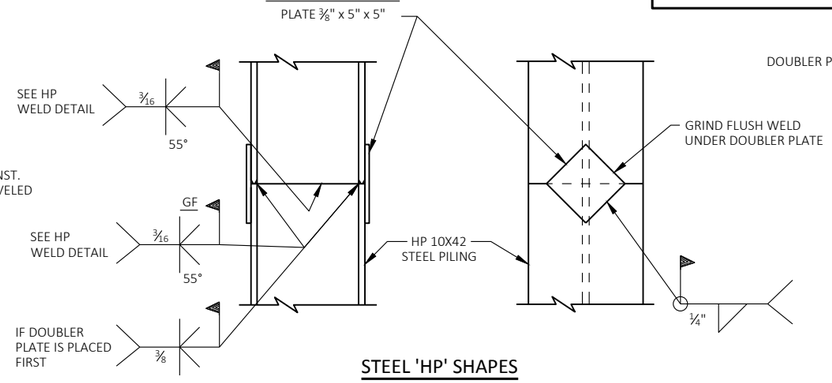


WINGS 1 & 2 ELEVATION

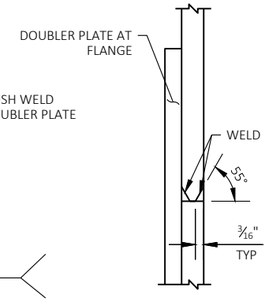


WINGS 1 & 2 SECTION

DOUBLER PLATES



STEEL 'HP' SHAPES

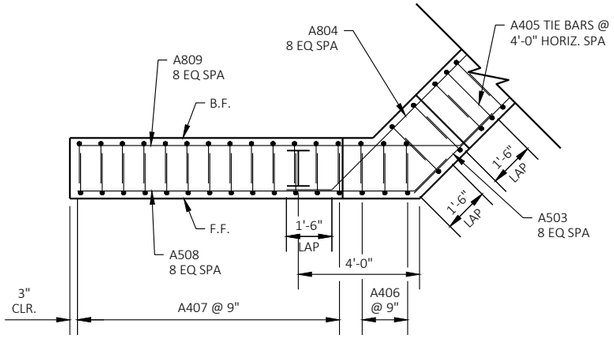


HP WELD DETAIL

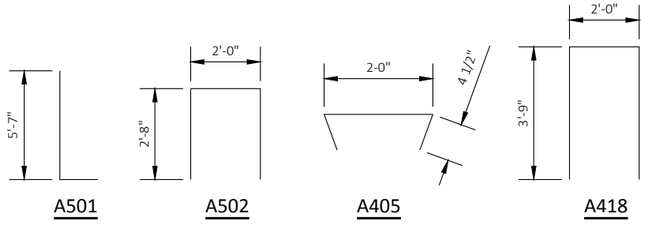
FLANGE SHOWN, WEB SIMILAR

WINGS 3 & 4 ELEVATION

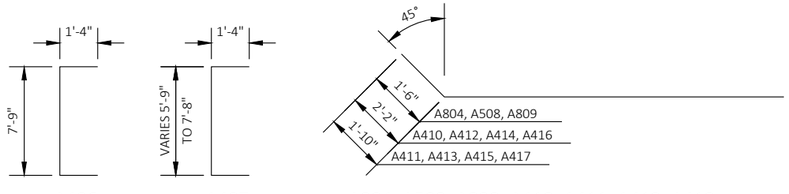
WINGS 3 & 4 SECTION



PLAN - WINGS



A501 A502 A405 A418



A406 A407 A804, A508, A809, A410, A411, A412, A413, A414, A415, A416, A417

BILL OF BARS - ABUTMENTS

BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
A501		132	7'-0"	X		BODY - VERTICAL - STIRRUPS
A502		66	7'-1"	X		BODY - VERTICAL - STIRRUPS - TOP
A503		36	17'-8"			BODY - HORIZONTAL - F.F.
A804		36	22'-8"	X		BODY - HORIZONTAL - B.F.
A405		48	2'-7"	X		BODY - TIES
A406	X	24	10'-3"	X		WINGS - VERTICAL AT BODY
△ A407	X	104	9'-2"	X	X	WINGS - VERTICAL - STIRRUPS
A508	X	36	12'-7"	X		LOWER WINGS - HORIZONTAL - F.F.
A809	X	36	14'-4"	X		LOWER WINGS - HORIZONTAL - B.F.
A410	X	4	13'-5"	X		UPPER WINGS - HORIZONTAL - F.F.
A411	X	4	11'-7"	X		UPPER WINGS - HORIZONTAL - B.F.
A412	X	4	9'-11"	X		UPPER WINGS - HORIZONTAL - F.F.
A413	X	4	8'-0"	X		UPPER WINGS - HORIZONTAL - B.F.
A414	X	4	7'-3"	X		UPPER WINGS - HORIZONTAL - F.F.
A415	X	4	5'-4"	X		UPPER WINGS - HORIZONTAL - B.F.
☒ A416	X	4	13'-6"	X		UPPER WINGS - HORIZONTAL - TOP - F.F.
☒ A417	X	4	11'-8"	X		UPPER WINGS - HORIZONTAL - TOP - B.F.
A418	X	8	9'-2"	X		UPPER WINGS - VERTICAL - OVER ABUT BODY
A519	X	54	2'-0"			BODY - DOWELS

☒ AN ADDITIONAL FIELD BEND WILL BE REQUIRED TO FIT THESE BARS IN THE WINGS, OVER THE ABUTMENT BODY

BAR SERIES -

BAR MARK	NO. REQUIRED	LENGTH
A407	8 SERIES OF 13	8'-3" TO 10'-2"

NOTES:

1. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.
2. BAR DIMENSIONS ARE OUT TO OUT OF BAR.
3. FILL/EXCAVATE TO BOTTOM OF FOOTING ELEVATION BEFORE DRIVING PILING.

LEGEND

F.F. FRONT FACE

B.F. BACK FACE

△ LENGTH SHOWN FOR BARS IS AN AVERAGE LENGTH AND SHOULD ONLY BE USED FOR BAR WEIGHT CALCULATIONS. SEE BAR SERIES TABLE FOR ACTUAL LENGTH.

STATE PROJECT NUMBER

6188-01-71

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

B-20-230

DRAWN BY MJK | PLANS CK'D ALK

ABUTMENT DETAILS

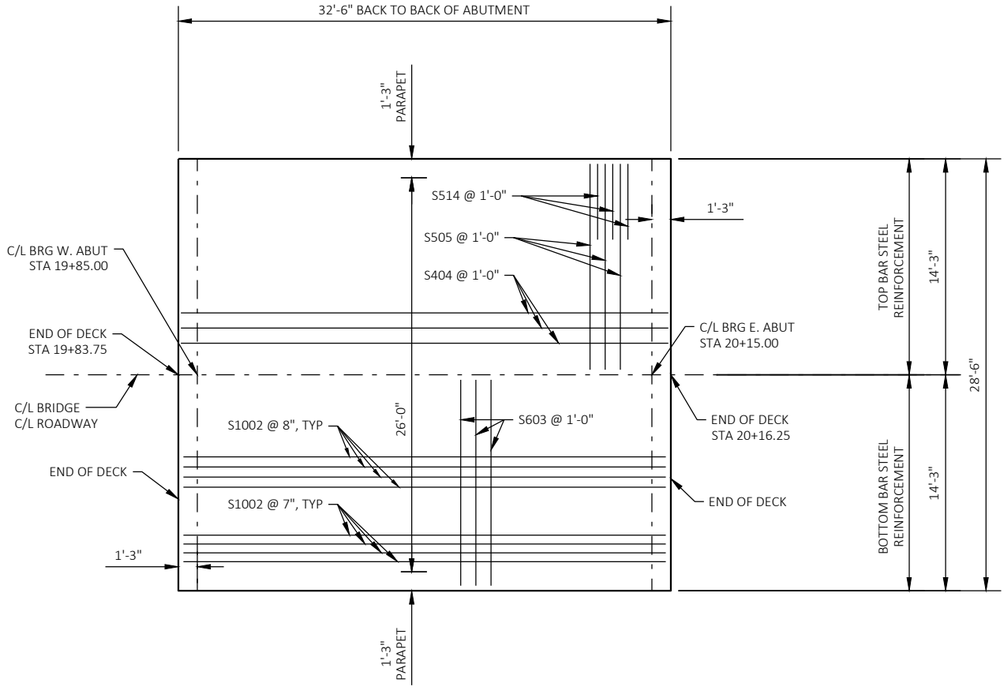
SHEET 5

43

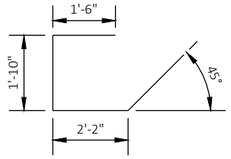
8

8

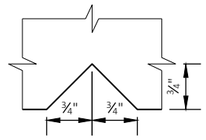
STATE PROJECT NUMBER
6188-01-71



PLAN



S501



DRIP GROOVE DETAIL

3/4" V-GROOVE TERMINATE 0'-6" FROM FRONT FACE OF ABUTMENTS

GENERAL NOTES:

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

TRANSVERSE BARS SHALL BE PLACED PARALLEL TO THE C/L OF THE SUBSTRUCTURE UNITS.

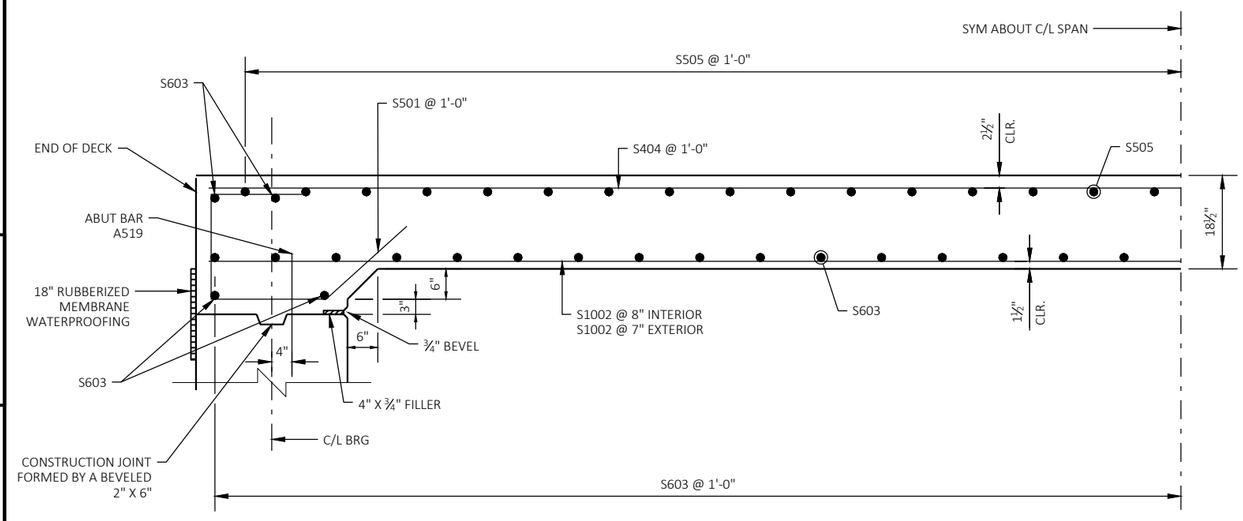
ALL SLAB THICKNESS DIMENSIONS ARE MINIMUM. ANY TOLERANCES NECESSARY TO CORRECT CONSTRUCTION DISCREPANCIES ARE TO BE PLUS (+).

BILL OF BARS - SUPERSTRUCTURE

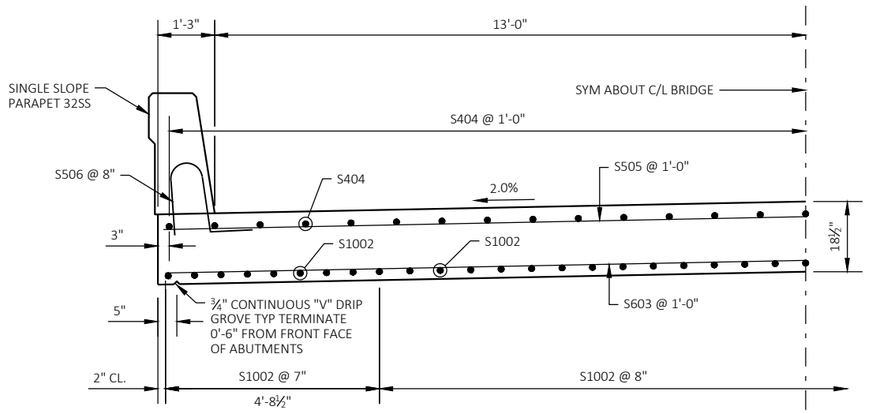
BAR MARK	COAT	NO. REQUIRED	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	58	6'-11"	X		AT END OF DECK
S1002	X	45	32'-2"			DECK - BOTTOM - LONGITUDINAL - INTERIOR
S603	X	41	28'-2"			DECK - BOTTOM - TRANSVERSE
S404	X	29	32'-2"			DECK - TOP - LONGITUDINAL
S505	X	33	28'-2"			DECK - TOP - TRANSVERSE
S514	X	64	5'-0"			DECK - TOP - PARAPET REINFORCEMENT

NOTES:

1. THE FIRST OR FIRST TWO DIGITS OF A BAR MARK SIGNIFIES THE BAR SIZE.
2. BAR DIMENSIONS ARE OUT TO OUT OF BAR.



LONGITUDINAL SECTION



CROSS SECTION THROUGH ROADWAY

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

B-20-230

DRAWN BY MJK | PLANS CK'D ALK

SUPERSTRUCTURE

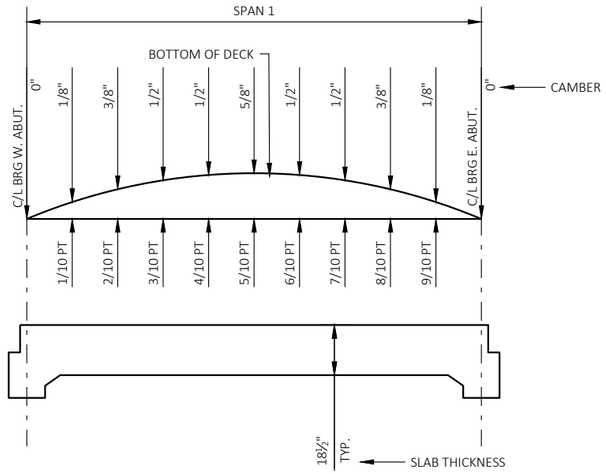
SHEET 6

8

8

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-080104-BR.DWG
LAYOUT NAME - 61880100-080104-BR - SHEET-06
PLOT DATE : 6/21/2017 2:51 PM
PLOT BY : AARON SARAUER
PLOT NAME :

STATE PROJECT NUMBER
6188-01-71



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTIONS.
CAMBER SPANS AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION AND FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.
PARAPETS, SIDEWALKS AND MEDIANS PLACED ON TOP OF THE SLAB SHALL BE POURED AFTER FALSEWORK HAS BEEN RELEASED.

TO DETERMINE FALSEWORK ELEVATION AT EDGE OF SLAB, CROWN OR REFERENCE LINE FOLLOW THIS PROCEDURE:

	TOP OF SLAB ELEVATION AT FINAL GRADE
LESS	SLAB THICKNESS
PLUS	CAMBER
PLUS	FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
EQUALS	TOP OF SLAB FALSEWORK ELEVATION.

SURVEY TOP OF SLAB ELEVATIONS

	ABUTMENT	5/10	ABUTMENT
N. GUTTER			
CROWN OR R/L			
S. GUTTER			

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE C/L OF ABUTMENTS AND AT 5/10 PTS. TO VERIFY CAMBER. TAKE ELEVATIONS ALONG GUTTER LINES AND CROWN OR R/L. RECORD THE ELEVATIONS IN THE ABOVE TABLE FOR THE "AS BUILT" PLANS.

TOP OF DECK ELEVATIONS AT FINAL GRADE

	C/L BRG. W. ABUT.	1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10	C/L BRG. E. ABUT.
STATION	19+85	19+88	19+91	19+94	19+97	20+00	20+03	20+06	20+09	20+12	20+15
N. EDGE OF DECK	876.64	876.66	876.69	876.71	876.73	876.76	876.78	876.80	876.82	876.84	876.86
CROWN OR R/L	876.93	876.95	876.98	877.00	877.02	877.05	877.07	877.09	877.11	877.13	877.15
S. EDGE OF DECK	876.64	876.66	876.69	876.71	876.73	876.76	876.78	876.80	876.82	876.84	876.86

NOTES:

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

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

8

8

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

B-20-230

DRAWN BY MJK | PLANS CK'D ALK

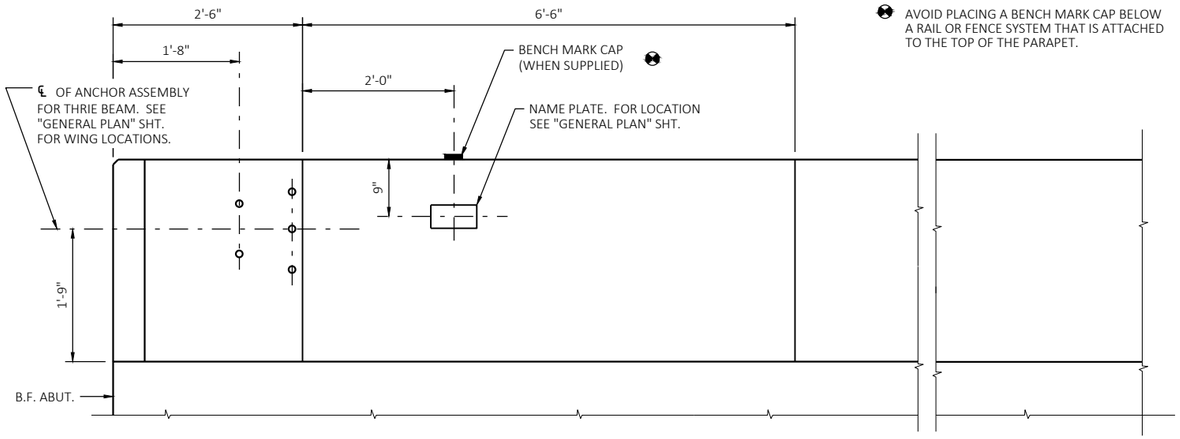
SUPERSTRUCTURE DETAILS

SHEET 7

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-080104-BR.DWG
LAYOUT NAME - 61880100-080104-BR - SHEET-07
PLOT DATE : 6/16/2017 3:46 PM PLOT BY : AARON SARAUER PLOT NAME :

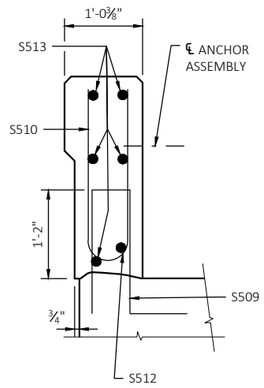
STATE PROJECT NUMBER

6188-01-71

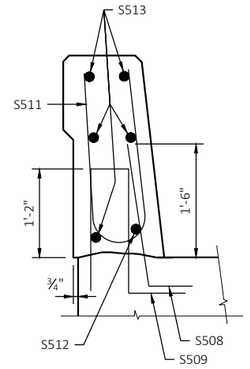


INSIDE ELEVATION

AVOID PLACING A BENCH MARK CAP BELOW A RAIL OR FENCE SYSTEM THAT IS ATTACHED TO THE TOP OF THE PARAPET.



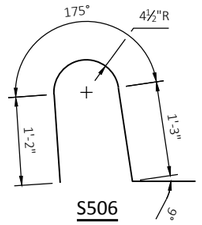
SECTION A



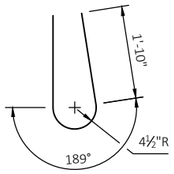
SECTION B

BILL OF BARS

BAR MARK	COAT	SUPER LEFT	SUPER RIGHT	LENGTH	BENT	BAR SERIES	LOCATION
S506	X	23	23	4'-5"	X		PARAPET VERT
S507	X	23	23	5'-0"	X		PARAPET VERT
S508	X	24	24	2'-9"	X		PARAPET VERT
S509	X	34	34	4'-4"	X		PARAPET VERT
S510	X	22	22	4'-9"	X		PARAPET VERT
S511	X	12	12	4'-10"	X		PARAPET VERT
S512	X	2	2	16-11"	X		PARAPET HORIZ
S513	X	10	10	17'-10"			PARAPET HORIZ



S506



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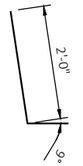

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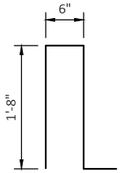

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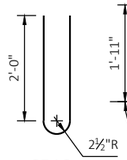

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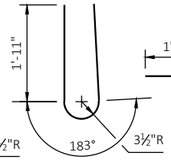

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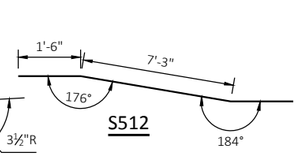

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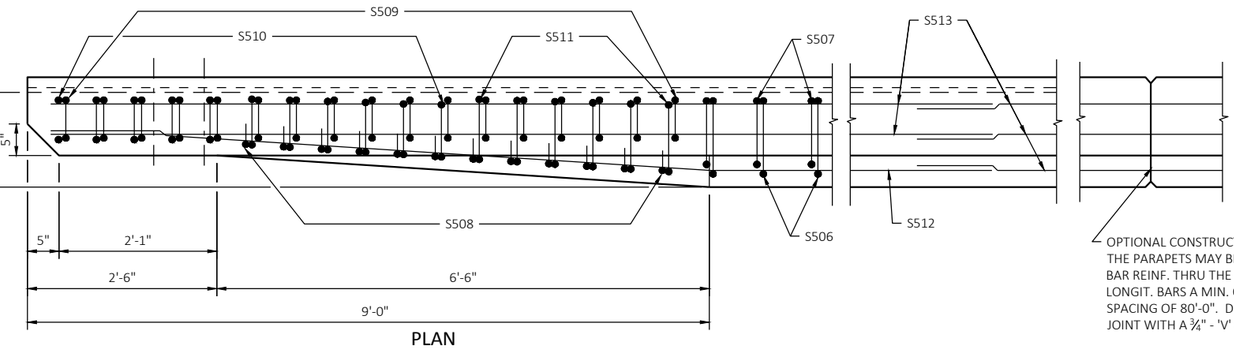
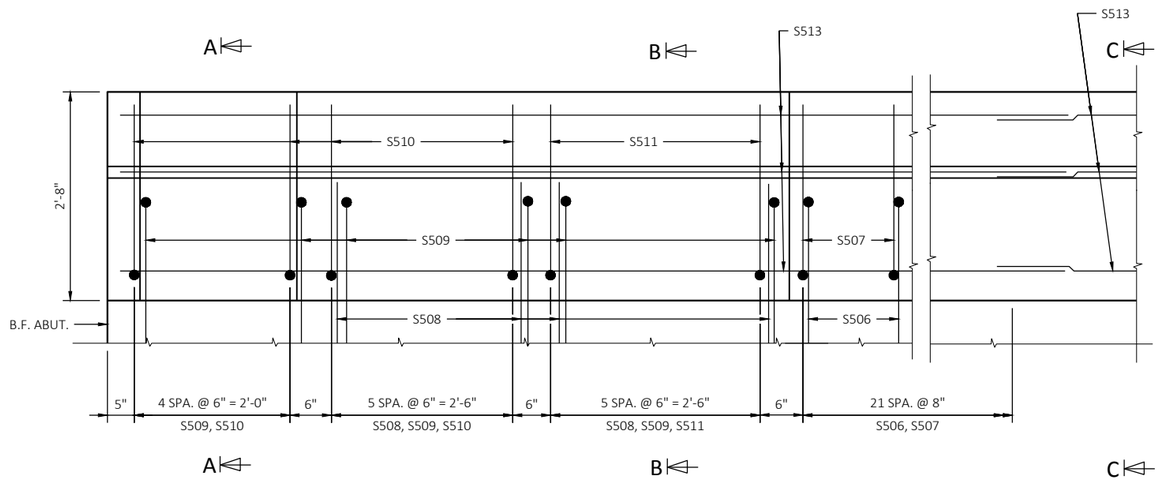
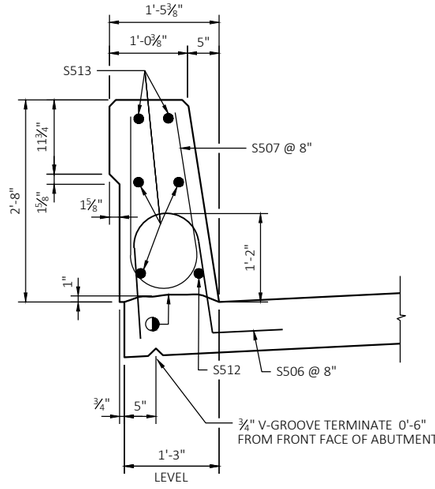


PLAN

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A ¾" - 'V' GROOVE.

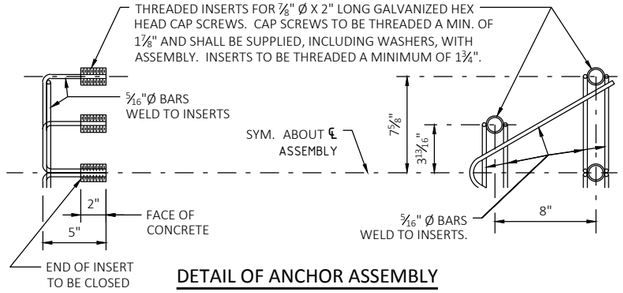


OUTSIDE ELEVATION



SECTION C

◑ CONST. JOINT - STRIKE OFF AS SHOWN.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.

ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

B-20-230

DRAWN BY MJK | PLANS CK'D ALK

SINGLE SLOPE PARAPET 32SS

SHEET 8

8

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-080104-BR.DWG
LAYOUT NAME - 61880100-080104-BR - SHEET-08
PLOT DATE : 6/19/2017 7:33 AM PLOT BY : AARON SARAUER PLOT NAME :

OLDEN ROAD

Station	Real Station	Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		
			Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.30	Mass Ordinate
					Note 1	Note 2	Note 1		Note 3
17+22.69	1723	0	7	0	0	0	0	0	0
17+50	1750	27	26	0	17	0	17	0	17
18+00	1800	50	46	0	67	0	84	0	84
18+11.13	1811	11	46	0	19	0	103	0	103
18+36.22	1836	25	46	0	43	0	146	0	145
18+50	1850	14	48	1	24	0	170	1	169
18+56.13	1856	6	50	2	11	0	181	1	179
18+81.22	1881	25	51	2	47	2	227	4	224
19+00	1900	19	42	1	32	1	260	5	255
19+06.22	1906	6	40	1	9	0	269	5	264
19+31.22	1931	25	39	4	37	2	306	8	298
19+50	1950	19	38	4	27	3	332	11	321
19+83.75	1984	34	51	8	56	8	388	22	366
19+92.5	1993	9	0	0	8	1	396	23	373
20+07.5	2008	15	0	0	0	0	396	23	373
20+16.25	2016	9	44	10	7	2	403	26	378
20+50	2050	34	23	12	42	14	445	44	401
20+68.78	2069	19	19	8	15	7	460	53	407
20+93.78	2094	25	18	5	17	6	476	61	416
21+00	2100	6	18	5	4	1	480	62	418
21+18.78	2119	19	23	6	14	4	495	67	428
21+43.78	2144	25	30	4	24	5	519	73	446
21+50	2150	6	32	4	7	1	526	74	452
21+63.78	2164	14	34	4	17	2	543	77	466
21+88.78	2189	25	37	5	33	4	576	83	494
22+00	2200	11	39	4	16	2	592	85	507
22+50	2250	50	12	1	47	5	639	92	548
22+75.24	2275	25	7	0	9	1	648	92	556
			Column Totals		648	71			

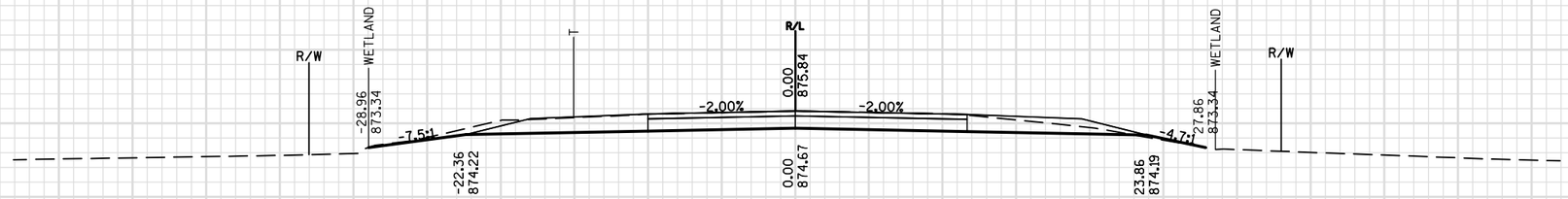
NOTES	
1 - CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL IS INCLUDED IN CUT.
2 - FILL	DOES NOT INCLUDE PAVEMENT EXCAVATION VOLUME.
3 - MASS ORDINATE	[(CUT) - ((FILL) * FILL FACTOR)]

PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS:	SHEET 48	E

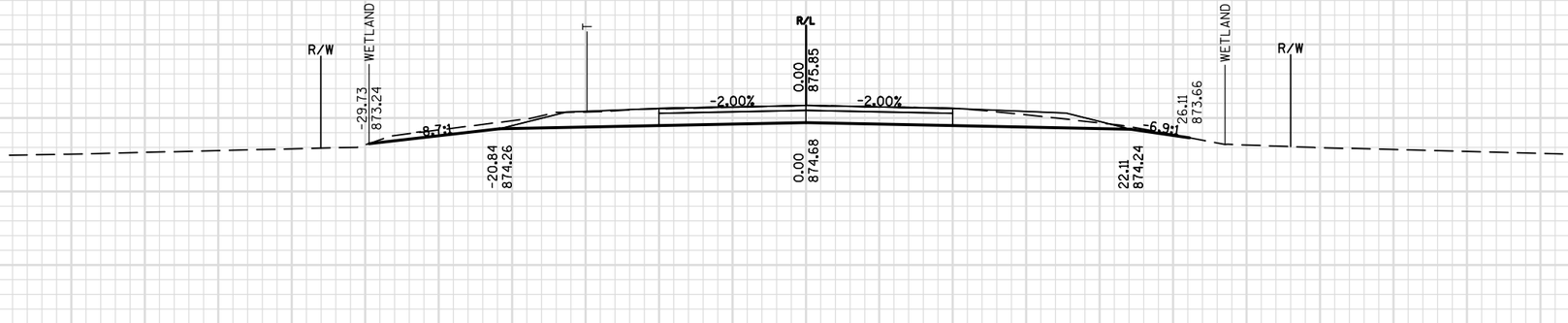
FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-090102-XS.DWG
LAYOUT NAME - Sheet-01

PLOT DATE : 7/31/2017 11:08 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



18+36.22
TAPER LT



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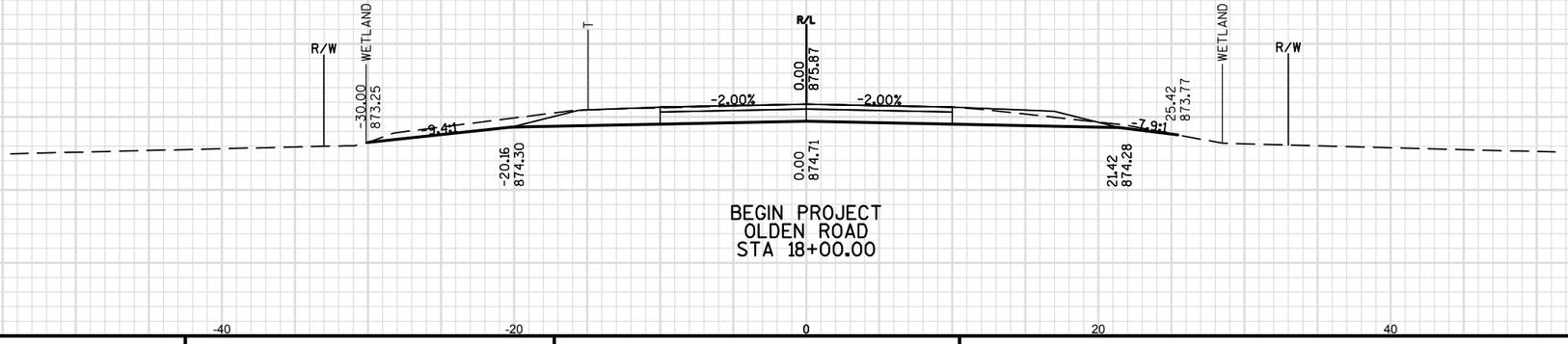
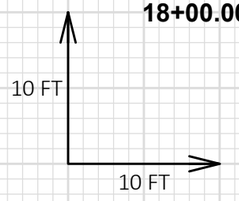
TAPER RT



18+00.00

BEGIN PROJECT
OLDEN ROAD
STA 18+00.00



9

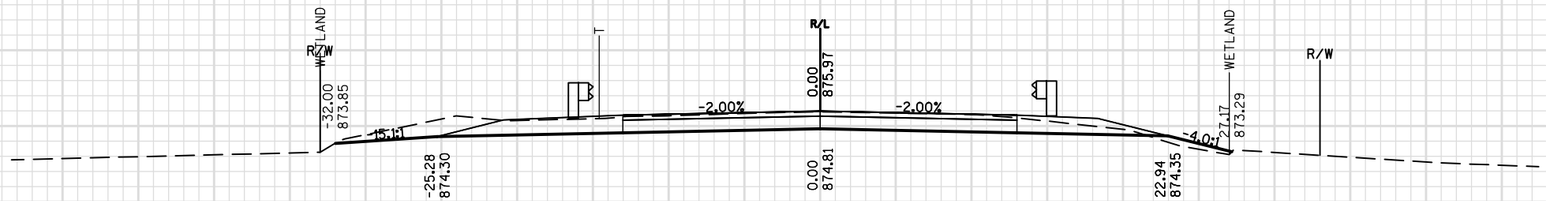
9

PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTONS	SHEET 49	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-090102-XS.DWG
LAYOUT NAME - Sheet-02

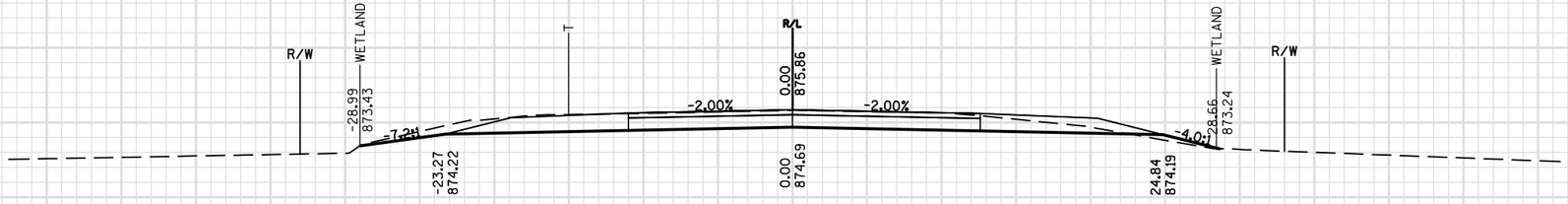
PLOT DATE : 7/31/2017 11:08 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

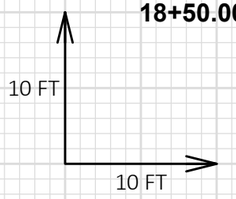


18+81.22
POST 1 LT/POST 5 RT

18+56.13
POST 1 RT



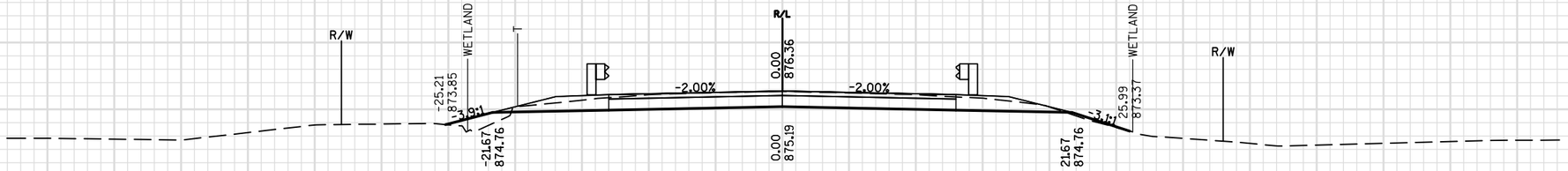
18+50.00



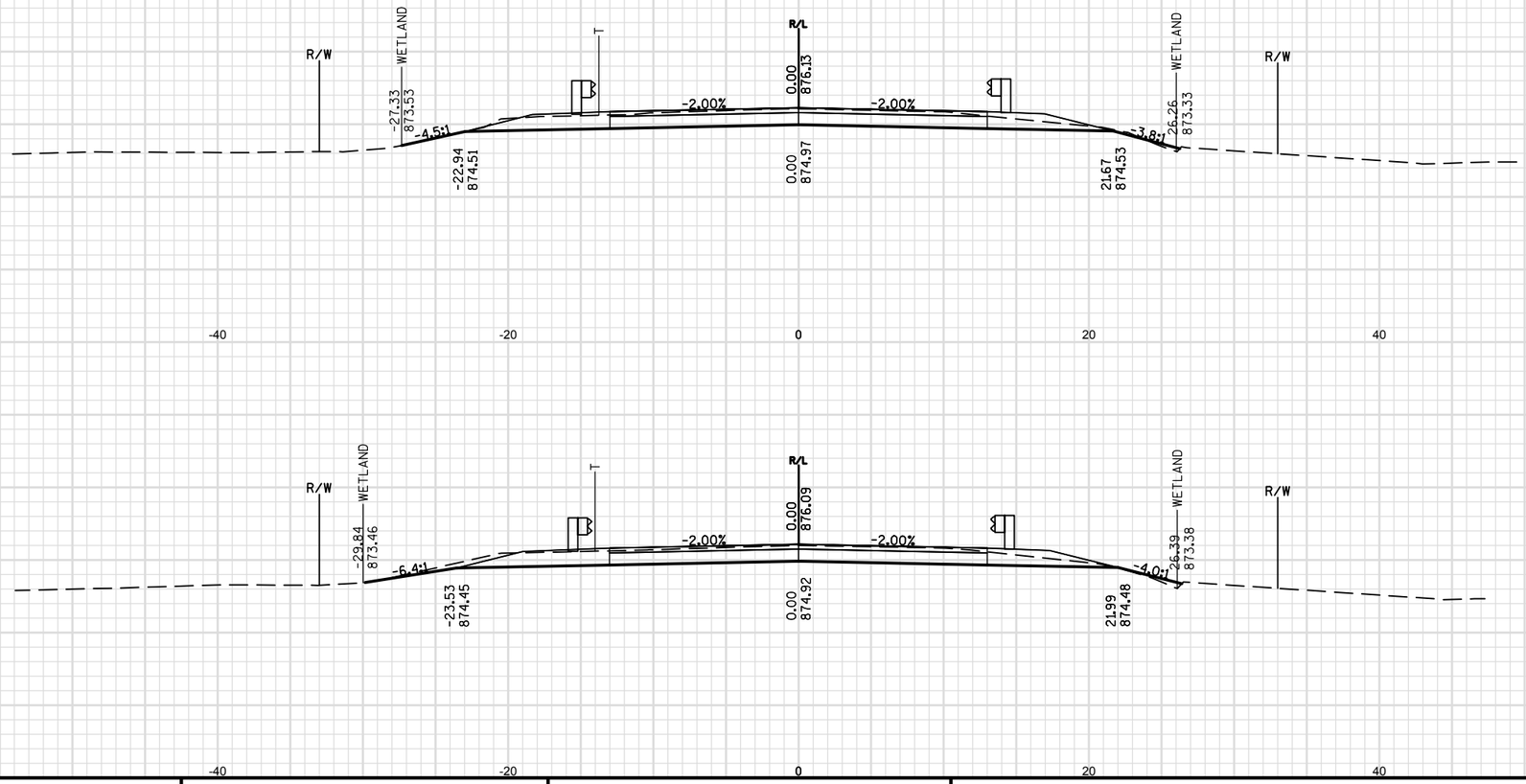
9 9

PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTONS	SHEET 50 E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-090102-XS.DWG
LAYOUT NAME - Sheet-03
PLOT DATE : 7/31/2017 11:08 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

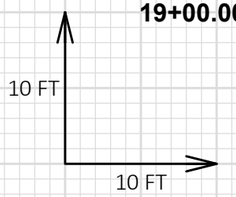


19+31.22
POST 9 LT



19+06.22
POST 5 LT/POST 9 RT

19+00.00



9

9

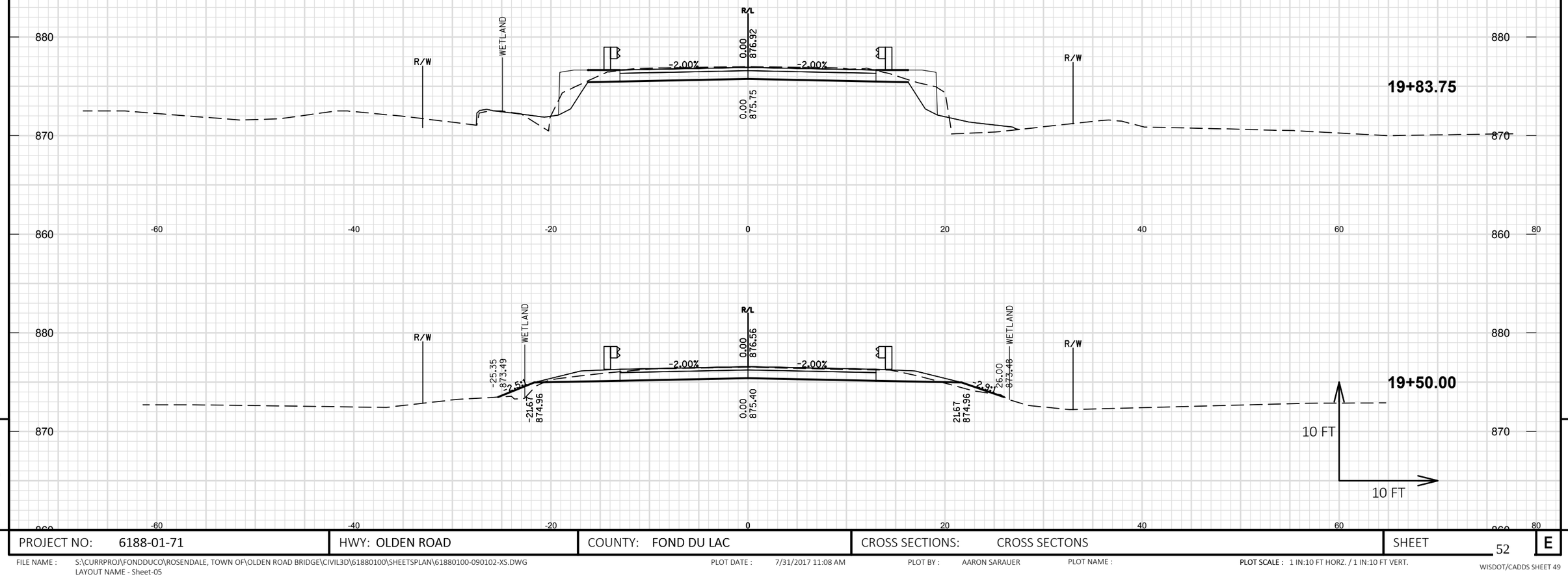
PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTONS	SHEET 51	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-090102-XS.DWG
LAYOUT NAME - Sheet-04

PLOT DATE : 7/31/2017 11:08 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

STRUCTURE B-20-230 ABUTMENT
STA 19+83.75



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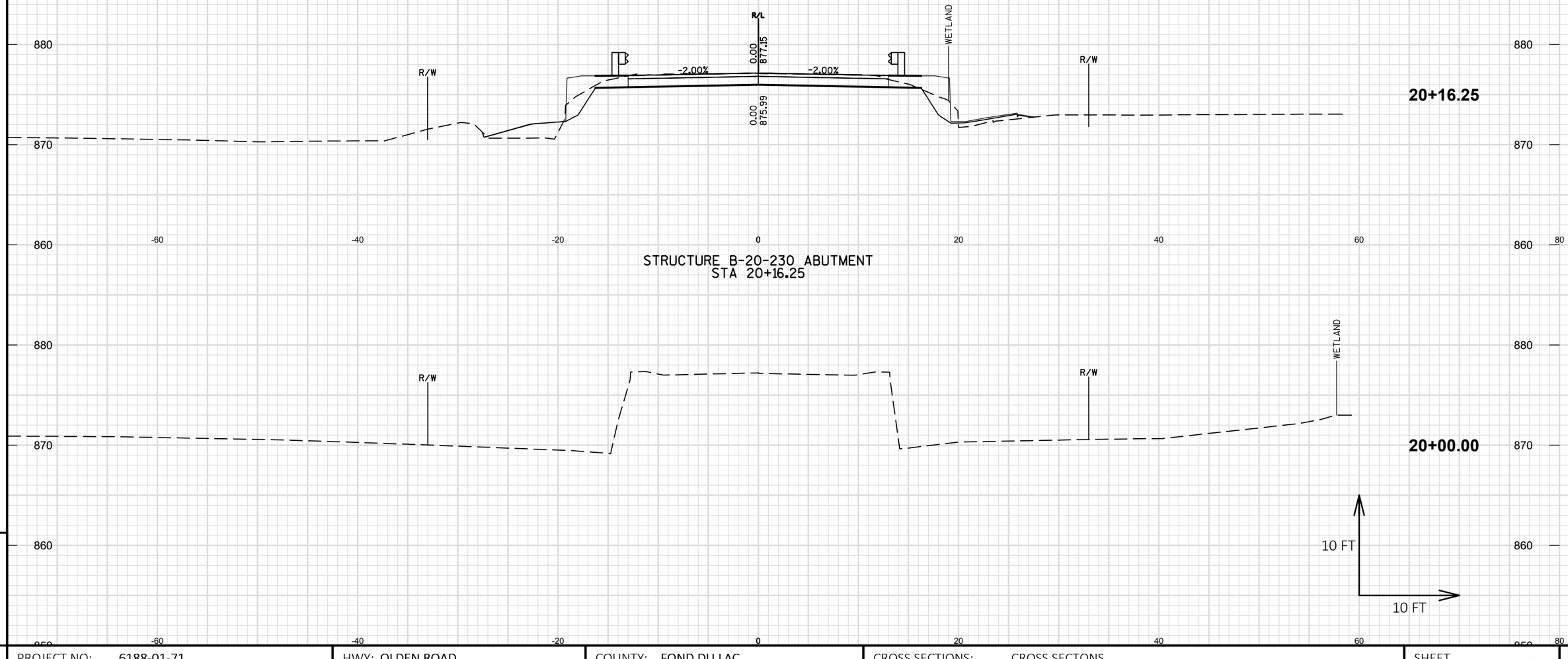
9

PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTONS	SHEET 52	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-090102-XS.DWG
LAYOUT NAME - Sheet-05

PLOT DATE : 7/31/2017 11:08 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTONS	SHEET 53	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-090102-XS.DWG
LAYOUT NAME - Sheet-06

PLOT DATE : 7/31/2017 11:08 AM PLOT BY : AARON SARAUER PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

20+93.78
POST 5 RT/POST 9 LT

20+68.78
POST 9 RT

20+50.00

10 FT

10 FT

9

9

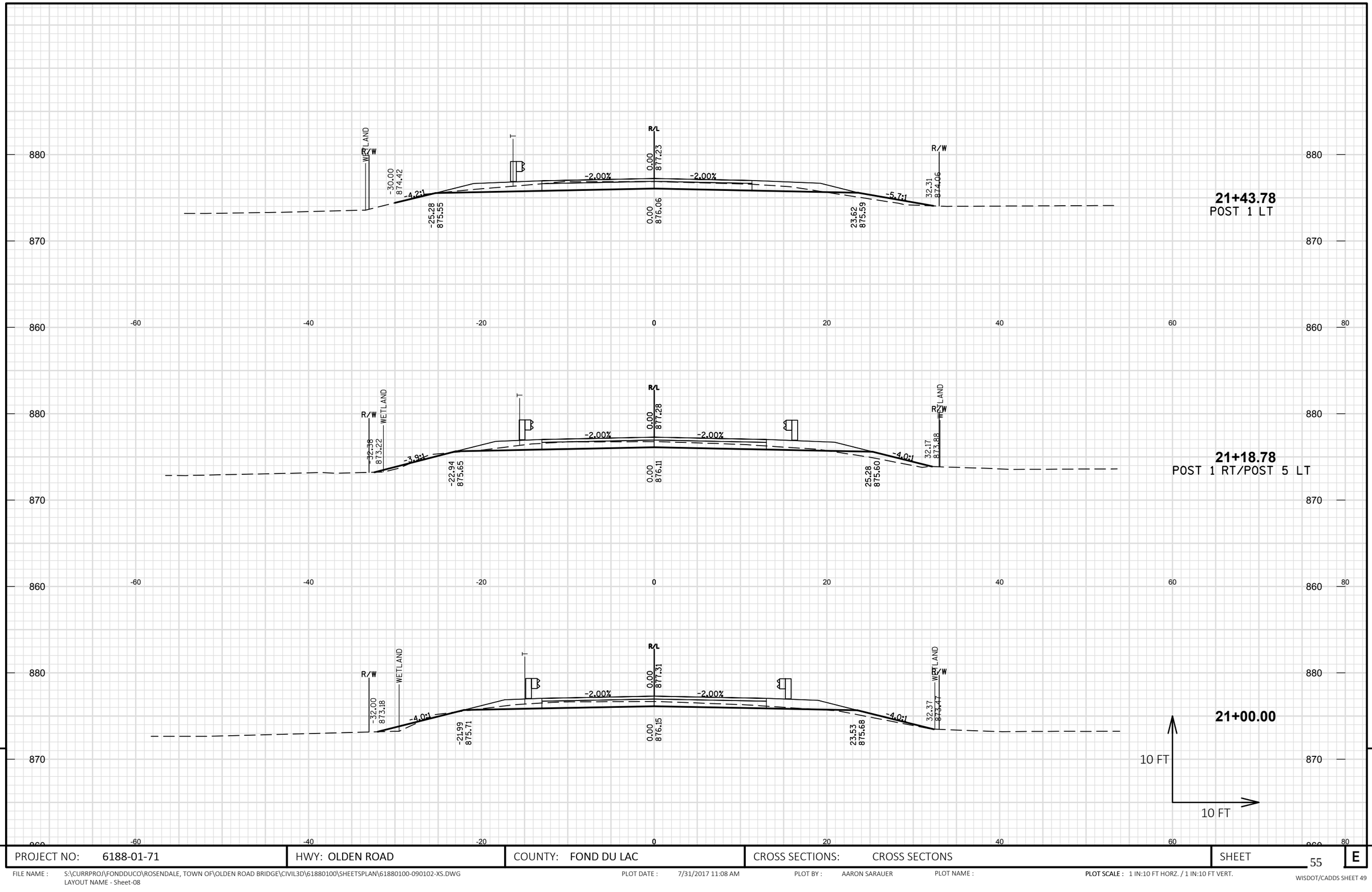
PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTONS	SHEET 54	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-090102-XS.DWG
LAYOUT NAME - Sheet-07

PLOT DATE : 7/31/2017 11:08 AM PLOT BY : AARON SARAUER PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

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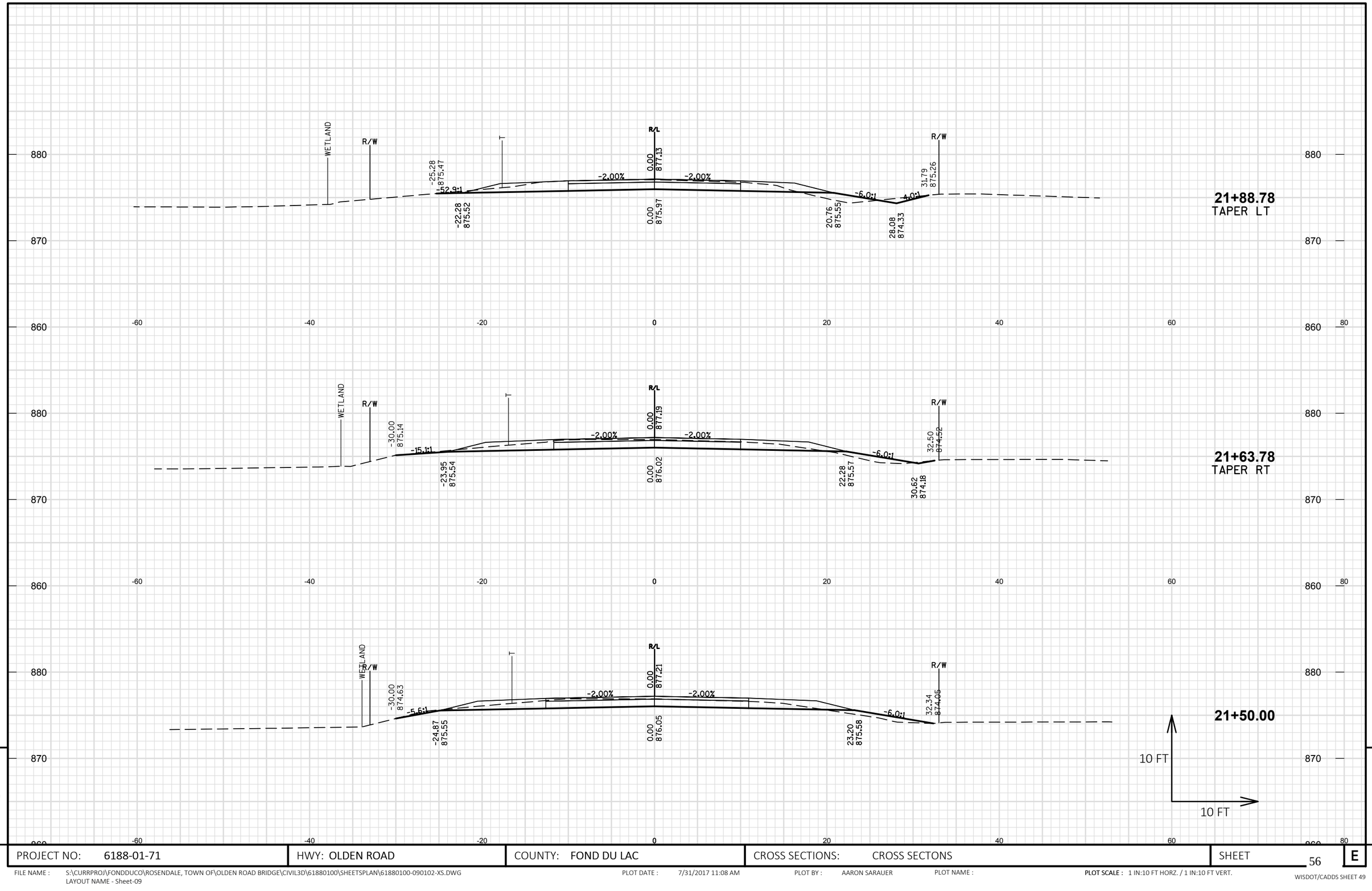
PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTONS	SHEET 55	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-090102-XS.DWG
LAYOUT NAME - Sheet-08

PLOT DATE : 7/31/2017 11:08 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

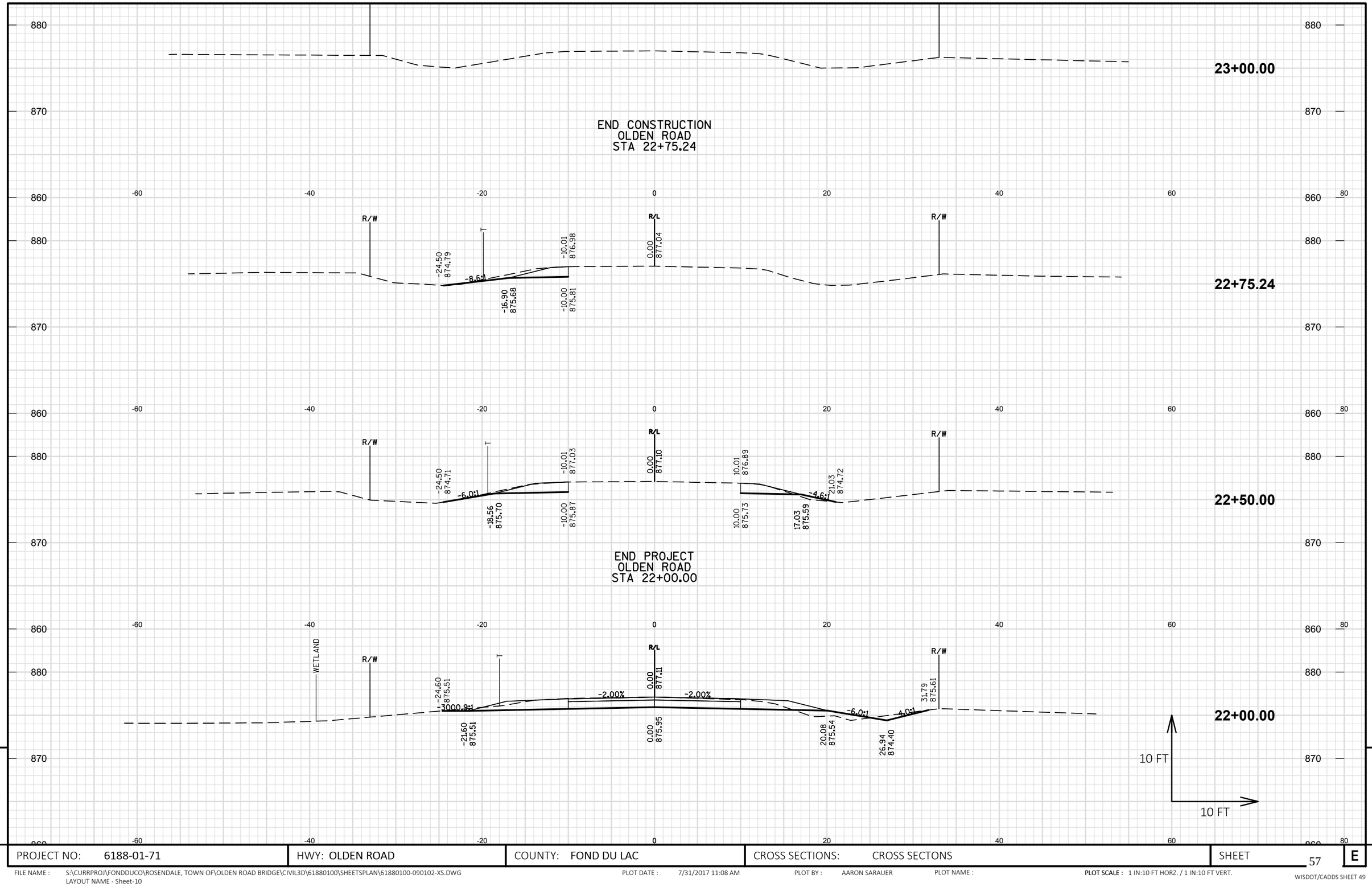
9

PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTONS	SHEET 56	E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-090102-XS.DWG
LAYOUT NAME - Sheet-09

PLOT DATE : 7/31/2017 11:08 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 6188-01-71	HWY: OLDEN ROAD	COUNTY: FOND DU LAC	CROSS SECTIONS: CROSS SECTONS	SHEET 57 E

FILE NAME : S:\CURRPROJ\FONDDUCO\ROSENDALE, TOWN OF\OLDEN ROAD BRIDGE\CIVIL3D\61880100\SHEETSPLAN\61880100-090102-XS.DWG
LAYOUT NAME - Sheet-10

PLOT DATE : 7/31/2017 11:08 AM PLOT BY : AARON SARAUER PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
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