PROJECT ID: 7834-00-70
WITH: N/A

COUNTY: CLARK

22

EAU | SEPTEMBER 2022

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7834-00-70	———	—

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

T RESEBURG, BROEK ROAD

BR S FK EAU CLAIRE RIVER BR B100390

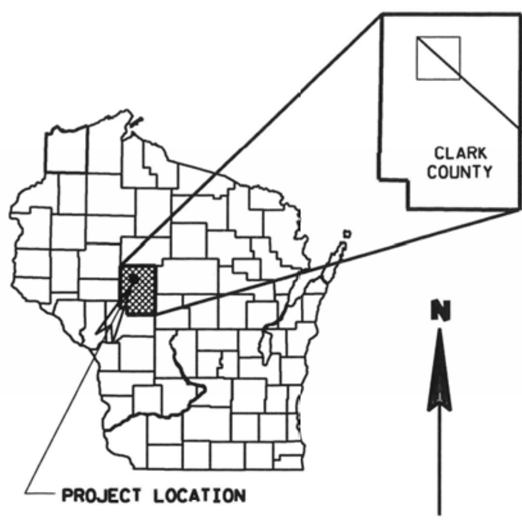
LOC STR
CLARK COUNTY

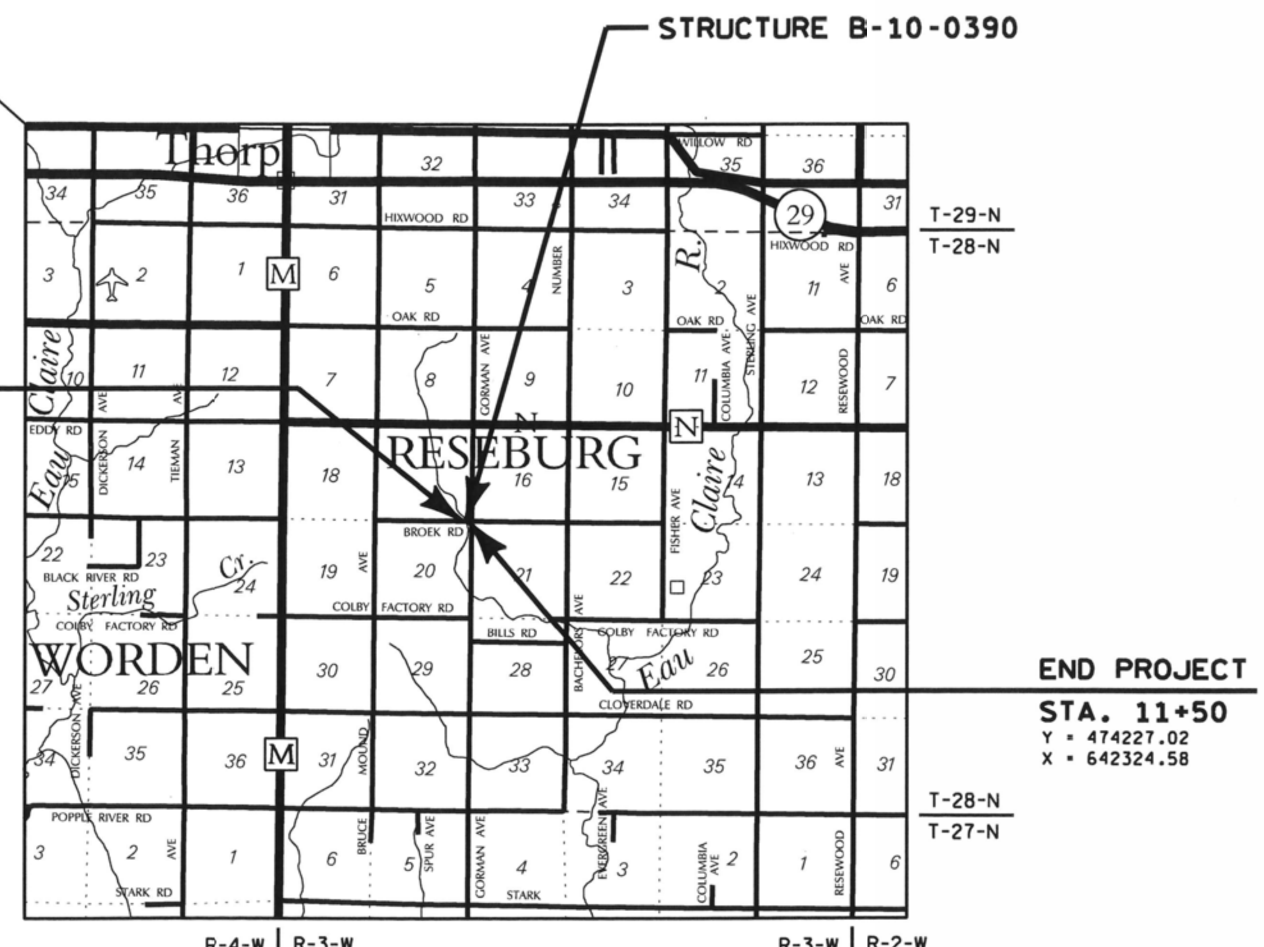
STATE PROJECT NUMBER
7834-00-70

ORDER OF SHEETS

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

TOTAL SHEETS = 46





LAYOUT
SCALE 0 1 MI.

DESIGN DESIGNATION

A.A.D.T. (2022)	=	<100
A.A.D.T. (2042)	=	<100
D.H.V.	=	10
D.	=	50/50
T.	=	5%
DESIGN SPEED	=	35 MPH
ESALS	=	N/A

CONVENTIONAL SYMBOLS

PLAN

CORPORATE LIMITS
PROPERTY LINE (PL + 58.1)
LOT LINE
LIMITED HIGHWAY EASEMENT
EXISTING RIGHT OF WAY
PROPOSED OR NEW R/W LINE
SLOPE INTERCEPT
REFERENCE LINE
EXISTING CULVERT
PROPOSED CULVERT (Box or Pipe)
COMBUSTIBLE FLUIDS (CAUTION)
HIGH VOLTAGE (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

OVERHEAD ELECTRIC — OH —
ELECTRIC — E —
FIBER OPTIC — FO —
GAS — G —
SANITARY SEWER — SAN —
STORM SEWER — SS —
TELEPHONE — T —
WATER — W —
UTILITY PEDESTAL
POWER POLE
TELEPHONE POLE

TOTAL NET LENGTH OF CENTERLINE = 0.049 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), CLARK COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ACCEPTED FOR
Town of Reseburg
10-7-2021 (Date) [signature] (Town Chairman)

ORIGINAL PLANS PREPARED BY

AYRES
3433 Oakwood Hills Parkway
Eau Claire, WI 54701
www.AyresAssociates.com

DATE 10-8-2021

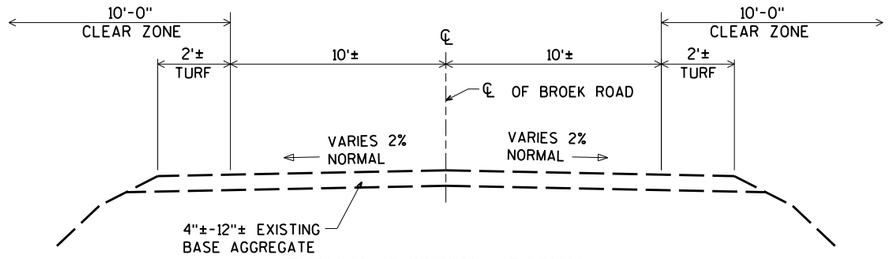
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	AYRES ASSOCIATES INC
Designer	AYRES ASSOCIATES INC
Project Manager	MATTHEW THORNSEN, PE
Region Examiner	TOU YANG, PE
Regional Supervisor	TYLER RONGSTAD, PE

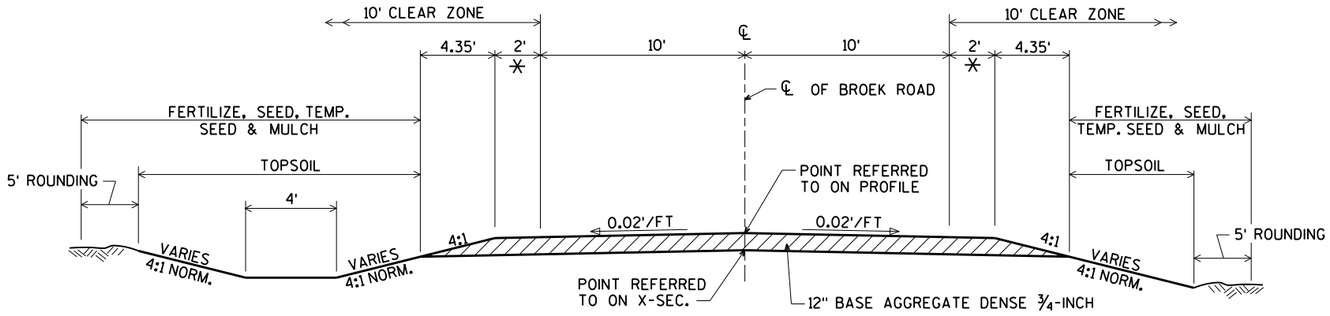
APPROVED FOR THE DEPARTMENT
DATE: 10/25/2021 [signature] (Signature)

E



TYPICAL EXISTING SECTION

STA. 8+90 TO STA. 11+50



TYPICAL FINISHED SECTION

STA. 8+90 TO STA. 9+36.55
STA. 9+83.45 TO STA. 11+50

⚹ THE BASE AGGREGATE SHOULDER SHALL BE 5.25 FEET WIDE AT THE ENDS OF THE BRIDGE WINGWALLS AND TAPER TO 2 FEET AT 50 FEET FROM END OF THE BRIDGE.

GENERAL NOTES

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

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

EXCAVATION FOR STRUCTURES SHALL INCLUDE FURNISHING, PLACEMENT AND COMPACTION OF ANY FILL MATERIAL REQUIRED TO PROVIDE A SUITABLE FOUNDATION FOR SUBSTRUCTURE UNITS.

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.

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

THE LOCATION AND WIDTH OF THE EXISTING RIGHT-OF-WAY WAS NOT DETERMINED FOR THIS PROJECT. THE INFORMATION SHOWN IS ASSUMED AND AYRES ASSOCIATES DOES NOT WARRANT ITS ACCURACY.

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

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

UTILITIES

LUMEN TECHNOLOGIES
425 ELLINGSON AVENUE
HAWKINS, WI 54530
ATTN: BRIAN HUHN
608-615-7347
715-563-8294 (CELL)
Brian.huhn@lumen.com

CLARK ELECTRIC COOPERATIVE
124 NORTH MAIN STREET
P.O. BOX 190
GREENWOOD, WI 54437
ATTN: KENT WEIGEL
715-267-7955
715-207-8883 (CELL)
kweigel@cecoop.com

⚹ ⚹ DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

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

WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONTACT:

BRAD BETTHAUSER
473 GRIFFITH AVENUE
WISCONSIN RAPIDS, WI 54494
715-421-7851
Bradley.Betthauser@Wisconsin.gov

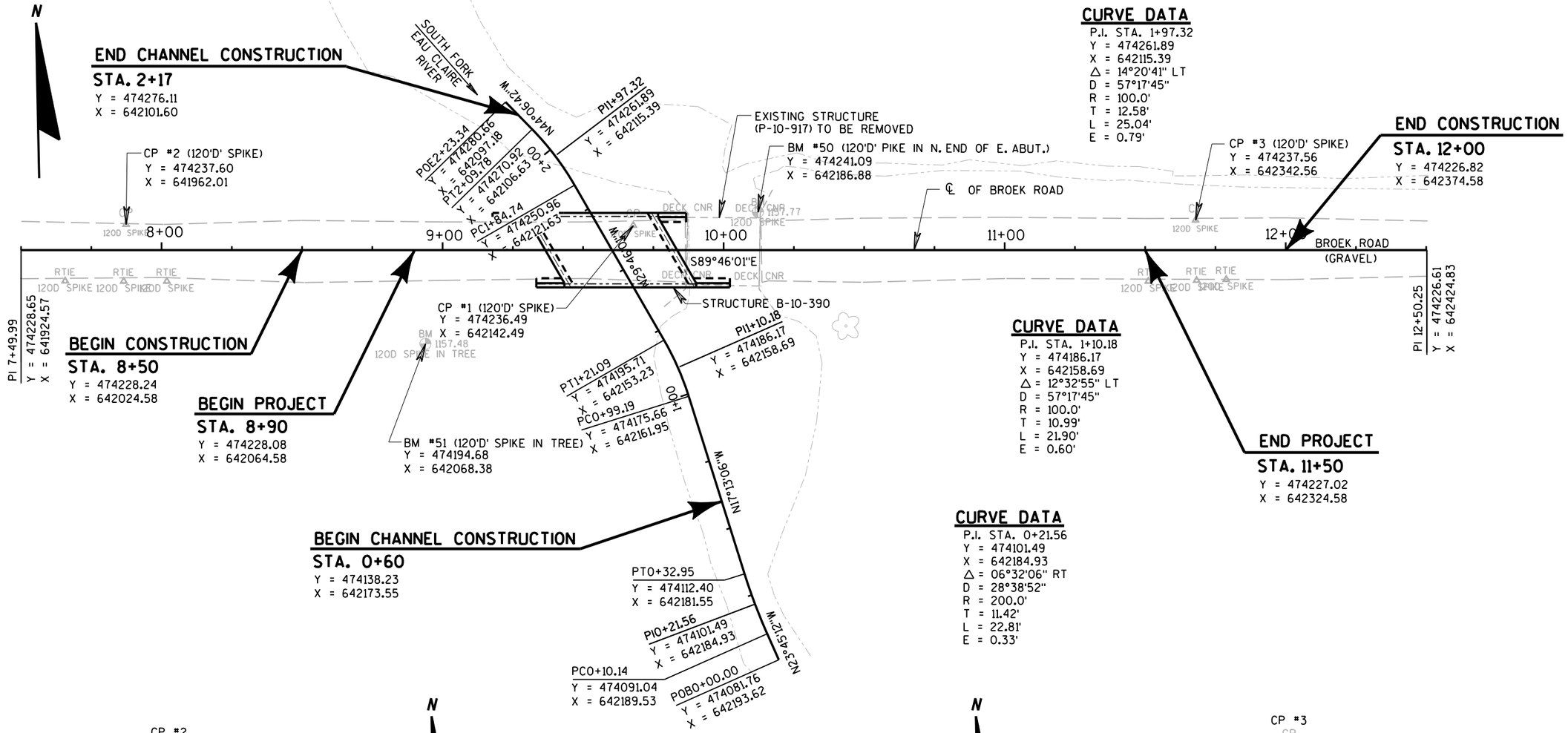
TOWN CONTACT

TOWN OF RESEBURG, CHAIRMAN
W9169 OAK ROAD
THORP, WI 54771
ATTN: MATT GRAJKOWSKI
715.669.3319
jrvet2003@yahoo.com

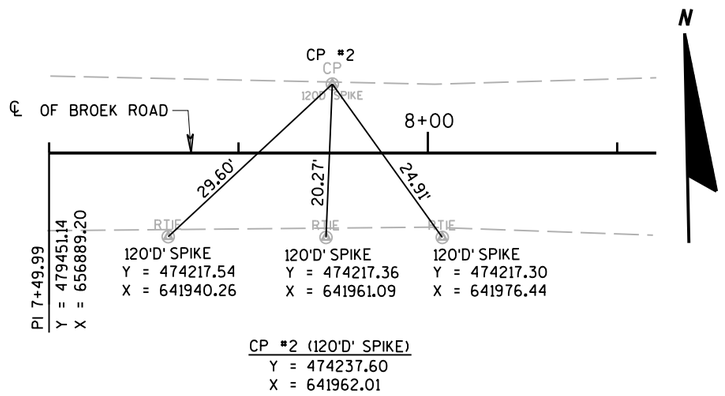
DESIGNER

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

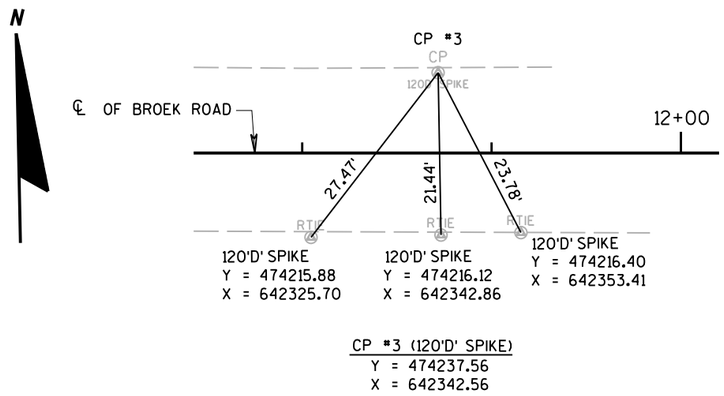
PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	TYPICAL SECTIONS AND GENERAL NOTES	SHEET 2	E



ALIGNMENT CONTROLS



CP #2 (120'D' SPIKE)
Y = 474237.60
X = 641962.01



CP #3 (120'D' SPIKE)
Y = 474237.56
X = 642342.56

ALIGNMENT TIES

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	ALIGNMENT CONTROLS & TIES	SHEET 3	E

2

CHANNEL ALIGNMENT DATA

P.I. STA. 1+97.32
Y = 474261.89
X = 642115.39
Δ = 14°20'41" LT
D = 57°17'45"
R = 100.0'
T = 12.58'
L = 25.04'
E = 0.79'

N

SOUTH FORK EAU CLAIRE RIVER

RIVERBANK ARMOR - TYP.

PLE

SLOPE INTERCEPT

POE2+23.34

N44°06'42"W

PI1+97.32

46'-10¾"

BACK TO BACK OF ABUTMENTS

44'-0"

1'-5⅜"

1'-5⅜"

66'

EXISTING R/W

BARBED WIRE

PC1+09.98

90°±

RIPRAP HEAVY - TYP

30° - TYP.

SLOPE INTERCEPT

32'-6"

36'-3"

PC1+84.76

TOE OF RIPRAP STA. 9+49.9±

℄ OF W. ABUT STA. 9+38.00

END OF DECK STA. 9+36.55

END OF DECK EX. BRIDGE STA. 9+87.1±

END OF DECK STA. 9+83.45

℄ OF E. ABUT. STA. 9+82.00

END OF DECK EX. BRIDGE STA. 10+12.9±

9+00

10+00

11+00

SECTION LINE

BROEK ROAD (GRAVEL)

℄ OF BROEK ROAD

BENCH MARK CAP

TOE OF RIPRAP STA. 9+70.7±

N29°46'10"W

29'-6"

34'-2"

EXISTING STRUCTURE (P-10-917) TO BE REMOVED

NAME PLATE

STRUCTURE B-10-390

2:1 - TYP.

24" RCCP

BM 117.48 120D SPIKE IN TREE

EXISTING R/W

PI1+21.09

PI1+10.18

SLOPE INTERCEPT

CLARK ELECTRIC COOPERATIVE

1+00

PC0+99.18

LUMEN TECHNOLOGIES

PROPOSED CHANNEL REALIGNMENT

CHANNEL SLOPE INTERCEPT

N17°13'06"W

PLE

PT0+32.95

CHANNEL ALIGNMENT DATA

P.I. STA. 1+10.18
Y = 474186.17
X = 642158.69
Δ = 12°32'55" LT
D = 57°17'45"
R = 100.0'
T = 10.99'
L = 21.90'
E = 0.60'

STA. 0+60.00
EL. 1149.02

+0.48%

STA. 2+17.00
EL. 1149.77

SOUTH FORK EAU CLAIRE RIVER CHANNEL PROFILE

VARIES 18' - 20'

2:1

2:1

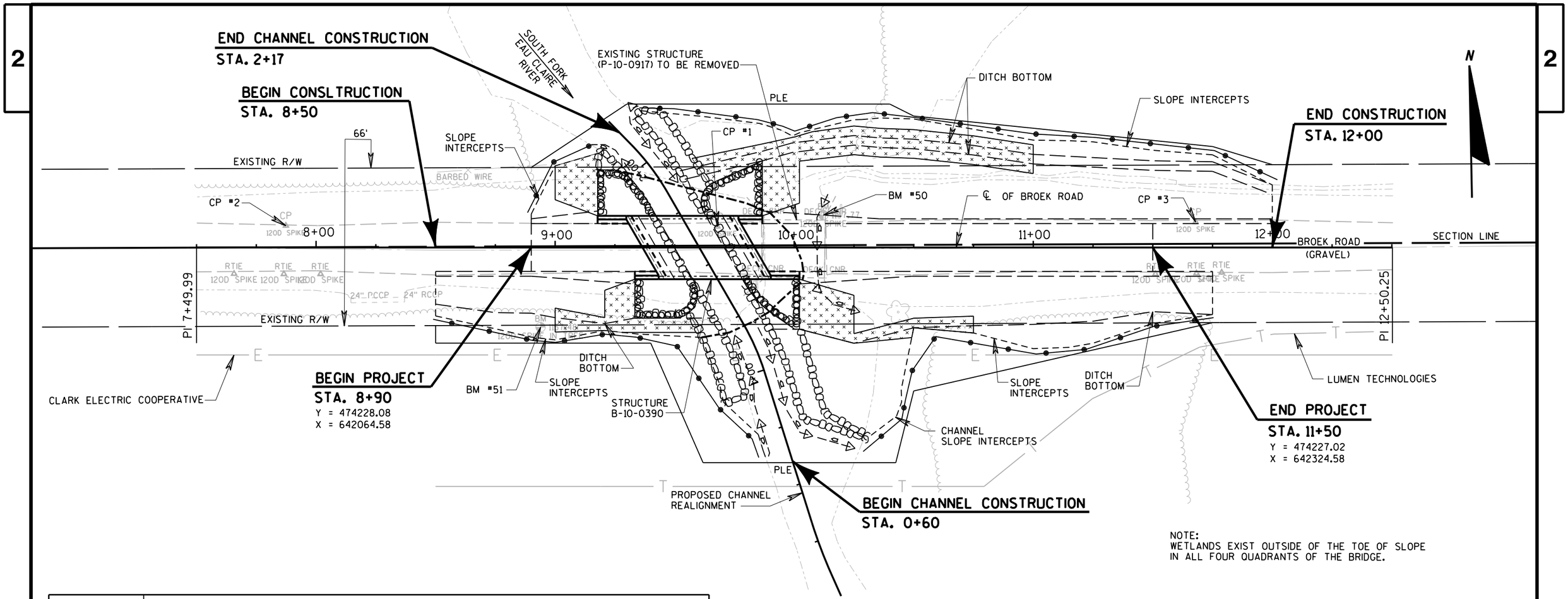
GEOTEXTILE TYPE HR

RIPRAP HEAVY - TYP.

TYPICAL CHANNEL DETAIL

(SEE CROSS SECTIONS FOR FURTHER DETAILS)

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	CHANNEL DETAILS	SCALE, FEET 0 10 20	SHEET 4	E



NOTE:
WETLANDS EXIST OUTSIDE OF THE TOE OF SLOPE IN ALL FOUR QUADRANTS OF THE BRIDGE.

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

HIGH WATER$_2$ EL. 1153.3

LEGEND

- EROSION MAT CLASS II TYPE C
- SILT FENCE
- RIPRAP HEAVY
- TURBIDITY BARRIER
- COFFERDAM

TOTAL PROJECT AREA = 0.780 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.648 ACRES

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	EROSION CONTROL	SCALE, FEET 0 20 40	SHEET 5	E

Estimate Of Quantities

7834-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	4.000	4.000
0004	201.0205	Grubbing	STA	4.000	4.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-10-0917	EACH	1.000	1.000
0008	205.0100	Excavation Common	CY	473.000	473.000
0010	206.1000	Excavation for Structures Bridges (structure) 01. B-10-0390	LS	1.000	1.000
0012	206.5000	Cofferdams (structure) 01. B-10-0390	LS	1.000	1.000
0014	208.0100	Borrow	CY	1,103.000	1,103.000
0016	210.1500	Backfill Structure Type A	TON	260.000	260.000
0018	213.0100	Finishing Roadway (project) 01. 7834-00-70	EACH	1.000	1.000
0020	305.0110	Base Aggregate Dense 3/4-Inch	TON	465.000	465.000
0022	502.0100	Concrete Masonry Bridges	CY	163.000	163.000
0024	502.3200	Protective Surface Treatment	SY	170.000	170.000
0026	505.0400	Bar Steel Reinforcement HS Structures	LB	3,800.000	3,800.000
0028	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	19,910.000	19,910.000
0030	506.0105	Structural Steel Carbon	LB	522.000	522.000
0032	513.4061	Railing Tubular Type M	LF	142.800	142.800
0034	516.0500	Rubberized Membrane Waterproofing	SY	20.000	20.000
0036	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	275.000	275.000
0038	606.0300	Riprap Heavy	CY	290.000	290.000
0040	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0042	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7834-00-70	EACH	1.000	1.000
0044	619.1000	Mobilization	EACH	1.000	1.000
0046	623.0200	Dust Control Surface Treatment	SY	630.000	630.000
0048	624.0100	Water	MGAL	5.000	5.000
0050	625.0100	Topsoil	SY	1,470.000	1,470.000
0052	627.0200	Mulching	SY	1,775.000	1,775.000
0054	628.1504	Silt Fence	LF	850.000	850.000
0056	628.1520	Silt Fence Maintenance	LF	1,700.000	1,700.000
0058	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0060	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0062	628.2027	Erosion Mat Class II Type C	SY	505.000	505.000
0064	628.6005	Turbidity Barriers	SY	290.000	290.000
0066	629.0210	Fertilizer Type B	CWT	1.400	1.400
0068	630.0120	Seeding Mixture No. 20	LB	64.000	64.000
0070	630.0200	Seeding Temporary	LB	64.000	64.000
0072	630.0300	Seeding Borrow Pit	LB	6.000	6.000
0074	630.0500	Seed Water	MGAL	51.000	51.000
0076	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	4.000	4.000
0078	637.2230	Signs Type II Reflective F	SF	12.000	12.000
0080	638.2602	Removing Signs Type II	EACH	6.000	6.000
0082	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0420	Traffic Control Barricades Type III	DAY	1,620.000	1,620.000
0088	643.0705	Traffic Control Warning Lights Type A	DAY	2,520.000	2,520.000
0090	643.0900	Traffic Control Signs	DAY	1,260.000	1,260.000
0092	643.5000	Traffic Control	EACH	1.000	1.000
0094	645.0111	Geotextile Type DF Schedule A	SY	110.000	110.000
0096	645.0120	Geotextile Type HR	SY	585.000	585.000
0098	650.4500	Construction Staking Subgrade	LF	280.000	280.000

Estimate Of Quantities

7834-00-70

Line	Item	Item Description	Unit	Total	Qty
0100	650.6500	Construction Staking Structure Layout (structure) 01. B-10-0390	LS	1.000	1.000
0102	650.9910	Construction Staking Supplemental Control (project) 01. 7834-00-70	LS	1.000	1.000
0104	650.9920	Construction Staking Slope Stakes	LF	437.000	437.000
0106	715.0502	Incentive Strength Concrete Structures	DOL	948.000	948.000
0108	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 10+00	EACH	1.000	1.000
0110	SPV.0090	Special 01. Flashing Stainless Steel	LF	93.800	93.800

3

CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105 CLEARING STA	201.0205 GRUBBING STA
0010	8+50	-	12+00	LT/RT	4	4
				TOTAL 0010	4	4

BROEK ROAD EARTHWORK SUMMARY

From/To Station	Location	Common Excavation (1) (Item 205.0100) Cut	Unexpanded Fill	Expanded Fill (2) Factor 1.30	Mass Ordinate +/- (3)	Waste	Borrow (Item 208.0100)	Comment:
8+50 to 12+00	BROEK ROAD	244	762	991	-747	0	747	
0+60 to 2+17	CHANNEL REALIGNMENT	229	450	585	-356	0	356	
	TOTAL	**473**					**1,103**	

1) Common Excavation is the Cut. Item number 205.0100.

2) Expanded Fill. Factor = 1.30; Expanded Fill = Unexpanded Fill * Fill Factor

3) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material on the project.

4) All quantities shown in CY.

BASE AGGREGATE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH TON	624.0100 WATER MGAL	REMARKS
0010	8+50	-	9+36.55	LT/RT	110	1	WEST APPROACH
0010	9+83.45	-	12+00	LT/RT	355	4	EAST APPROACH
				TOTAL 0010	465	5	

3

EROSION CONTROL

CATEGORY	STATION	TO	STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF	628.2027 EROSION MAT CLASS II TYPE C SY	628.6005 TURBIDITY BARRIERS SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0200 SEEDING TEMPORARY LB	630.0300 SEEDING BORROW PIT LB	630.0500 SEED WATER MGAL
0010	8+90.00	-	9+36.55	LT	45	30	45	90	40	70	0.00	2	2		2
0010	8+50.00	-	9+36.55	RT	190	190	150	300	65		0.20	7	7	5	6
0010	9+83.45	-	12+00	LT	795	730	275	550	215	160	0.60	26	26		21
0010	9+83.45	-	11+75	RT	440	470	210	420	85		0.30	15	15		12
0010		UNDISTRIBUTED			-	355	170	340	100	60	0.30	14	14	1	10
				TOTAL 0010	1,470	1,775	850	1,700	505	290	1.4	64	64	6	51

SIGNS

CATEGORY	STATION	LOCATION	634.0614 POSTS WOOD 4X6-INCH X 14-FT EACH	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	9+83	RT	-	-	1	1	R12-1: WEIGHT LIMIT 5 TONS
0010	9+86	LT	1	3	1	1	W5-52L: CLEARANCE STRIPER DOWN RIGHT
0010	9+86	RT	1	3	1	1	W5-52R: CLEARANCE STRIPER DOWN LEFT
0010	10+14	LT	1	3	1	1	W5-52R: CLEARANCE STRIPER DOWN LEFT
0010	10+14	RT	1	3	1	1	W5-52L: CLEARANCE STRIPER DOWN RIGHT
0010	10+18	LT	-	-	1	1	R12-1:WEIGHT LIMIT 5 TONS
		TOTAL 0010	4	12	6	6	

TRAFFIC CONTROL

CATEGORY	LOCATION	DURATION DAYS	643.0420 TRAFFIC CONTROL BARRICADES TYPE III NO.	643.0420 DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO.	643.0705 DAY	643.0900 TRAFFIC CONTROL SIGNS NO.	643.0900 DAY	643.5000 TRAFFIC CONTROL EACH
0010	PER SDD 15C2	90	18	1,620	28	2,520	14	1,260	-
0010	BROEK ROAD	-	-	-	-	-	-	-	1
	TOTAL 0010			1,620		2,520		1,260	1

NOTES:
NO SIGNED DETOUR. ROAD CLOSED SIGNS TO BE PLACED AT ADJACENT INTERSECTIONS. (SDD 15C2 DETAILS C,D, & E)

3

3

STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.6500.01 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-10-0390) LS	650.9910.01 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 7834-00-70) LS	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
0010	8+50	-	12+00	MAINLINE	280	-	-	280
0010	0+60	-	2+17	CHANNEL REALIGNMENT	-	-	-	157
0010	8+50	-	12+00	PROJECT 7834-00-70	-	-	1	-
				TOTAL 0010	280	0	1	437
0020	9+36.55	-	9+83.45	B-10-0390	-	1	-	-
				TOTAL 0020	0	1	0	0
				PROJECT TOTAL	280	1	1	437

INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM

CATEGORY	LOCATION	999.2000.S INSTALLING AND MAINTAINING BIRD DETERRENT SYSTEM EACH
0010	10+00	1
	TOTAL 0010	1

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W LINE
PROPERTY LINE
LOT, TIE, AND OTHER MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)
FEE ACQUISITION AREA (HATCHING VARIES BY OWNER)
TEMP. LIMITED EASEMENT AREA
EASEMENT AREA (HIGHWAY, PERMANENT LIMITED, OR RESTRICTED DEVELOPMENT)
TRANSMISSION STRUCTURES
BUILDING
BUILDING (TO BE REMOVED)
BRIDGE

PARCEL NUMBER
PRW POINT NUMBER
SECTION CORNER
NOTATION FOR COMBUSTABLE FLUIDS
NOTATION FOR HIGH VOLTAGE TRANSMISSION LINES
ACCESS CONTROLLED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
NATIONAL GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
PARALLEL OFFSETS

UTILITY NUMBER
TLE POINT NUMBER
R/W MONUMENT
NON-MONUMENTED R/W POINT
FOUND IRON PIN
VALVE (GAS, WATER, ETC.)
SIGN
OFF-PREMISE SIGN

CONVENTIONAL ABBREVIATIONS

ACCESS RIGHTS	AR	OUTLOT	OL
ACRES	AC	PAGE	P
AHEAD	AH	POINT OF TANGENCY	PT
ALUMINUM	ALUM	PROPERTY LINE	PL
AND OTHERS	ET AL	RECORDED AS	(100')
BACK	BK	REEL / IMAGE	R/I
BLOCK	BLK	REFERENCE LINE	R/L
CENTERLINE	C/L	PERMANENT LIMITED EASEMENT	PLE
CERTIFIED SURVEY MAP	CSM	POINT OF BEGINNING	POB
CONCRETE	CONC	POINT OF CURVATURE	PC
COUNTY	CO	POINT OF COMPOUND CURVE	PCC
COUNTY TRUNK HIGHWAY	CTH	POINT OF INTERSECTION	PI
DISTANCE	DIST	REMAINING	REM
CORNER	COR	RESTRICTIVE DEVELOPMENT EASEMENT	RDE
DOCUMENT NUMBER	DOC	RIGHT	RT
EASEMENT	EASE	RIGHT OF WAY	R/W
EXISTING	EX	SECTION	SEC
GAS VALVE	GV	SEPTIC VENT	SEPV
GRID NORTH	GN	SQUARE FEET	SF
HIGHWAY EASEMENT	HE	STATE TRUNK HIGHWAY	STH
IDENTIFICATION	ID	STATION	STA
LAND CONTRACT	LC	TELEPHONE PEDESTAL	TP
LEFT	LT	TEMPORARY LIMITED EASEMENT	TLE
MONUMENT	MON	TRANSPORTATION PROJECT PLAT	TPP
NATIONAL GEODETIC SURVEY	NGS	UNITED STATES HIGHWAY	USH
NUMBER	NO	VOLUME	V

(50) CLARK ELECTRIC COOPERATIVE
NO EASEMENTS OF RECORD

(51) LUMEN TECHNOLOGIES
V. 349, PG. 441, DOC. NO. 369205 - PARCEL 2

CONVENTIONAL UTILITY SYMBOLS

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

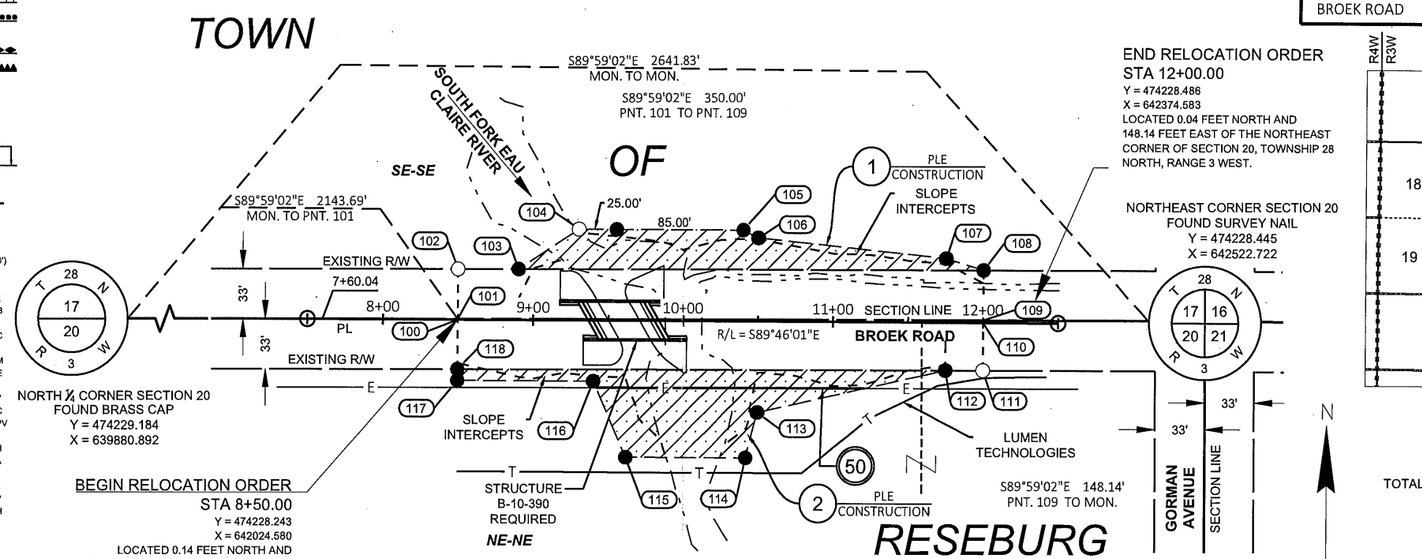
CURVE DATA ABBREVIATIONS

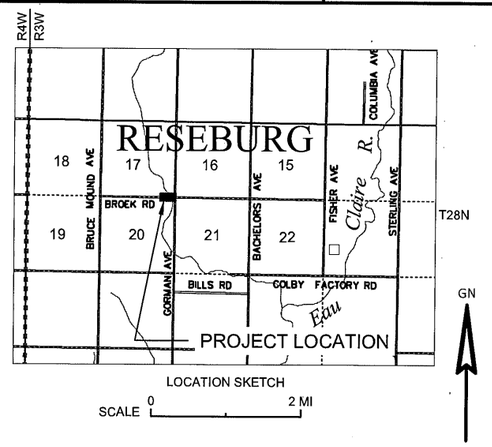
LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE	Δ / DELTA
LENGTH OF CURVE	L
TANGENT	T
DIRECTION AHEAD	DA
DIRECTION BACK	DB

SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NO.	OWNER(S)	INTEREST REQUIRED	R/W REQUIRED (AC) PLE
1	DAVID C. JACQUE	PLE	0.127
2	JOSEPH BOROWSKI AND GERALDINE M. BOROWSKI	PLE	0.187
50	CLARK ELECTRIC COOPERATIVE	RELEASE OF RIGHTS	
51	LUMEN TECHNOLOGIES	RELEASE OF RIGHTS	

OWNER'S NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE TOWN.





TOTAL NET LENGTH OF CENTERLINE = 0.066 MI.

R/W COURSE TABLE		
COURSE	BEARING	DISTANCE
100 - 101	N00°13'59"E	0.34'
101 - 102	N00°13'59"E	33.00'
102 - 103	S89°59'02"E	40.00'
103 - 108	S89°59'02"E	310.00'
108 - 109	S00°13'59"W	33.00'
109 - 110	S00°13'59"W	1.67'
110 -111	S00°13'59"W	31.33'
111 - 112	N89°59'02"W	25.00'
112 - 118	N89°59'02"W	325.00'
118 - 100	N00°13'59"E	32.66'

PLE COURSE TABLE		
COURSE	BEARING	DISTANCE
103 - 104	N56°42'05"E	47.99'
104 - 105	S89°46'01"E	110.00'
105 - 106	S63°12'06"E	11.18'
106 - 107	S83°56'34"E	125.65'
107 - 108	S72°53'40"E	26.12'
108 - 103	N89°59'02"W	310.00'

PLE COURSE TABLE		
COURSE	BEARING	DISTANCE
112 - 113	S77°21'28"W	128.22'
113 - 114	S14°16'10"W	30.92'
114 - 115	N89°46'01"W	80.63'
115 - 116	N23°23'46"W	54.58'
116 - 117	N89°46'01"W	90.00'
117 - 118	N00°13'59"E	7.34'
118 - 112	S89°59'02"E	325.00'

PLE STATION & OFFSET TABLE		
POINT NAME	STATION	OFFSET
104	9+30.00	60.00' LT
105	10+40.00	60.00' LT
106	10+50.00	55.00' LT
107	11+75.00	42.25' LT
113	10+50.00	60.00' RT
114	10+42.50	90.00' RT
115	9+61.87	90.00' RT
116	9+40.00	40.00' RT
117	8+50.00	40.00' RT

R/W STATION & OFFSET TABLE		
POINT NAME	STATION	OFFSET
100	8+50.00	0.00'
101	8+50.00	0.34' LT
102	8+50.00	33.34' LT
103	8+90.00	33.49' LT
108	12+00.00	34.67' LT
109	12+00.00	1.67' LT
110	12+00.00	0.00'
111	12+00.00	31.33' RT
112	11+75.00	31.43' RT
118	8+50.00	32.66' RT

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), CLARK COUNTY, NAD83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

A **PERMANENT LIMITED EASEMENT** (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE PURPOSES, AS DEFINED HEREIN, INCLUDING THE RIGHT TO OPERATE THE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHT TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, PROVIDING SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

THIS PLAT IS A GRAPHIC REPRESENTATION AND IS FOR REFERENCE PURPOSE ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES AND ACCESS RIGHTS

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 (¾"x24" CAPPED IRON REBAR WEIGHING 1.50 LBS.LIN. FT.) AND ARE PLACED PRIOR TO OR AT THE TIME OF LAND TITLE TRANSFER.

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

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

EXISTING ROAD RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINT OF REFERENCE:

EXISTING RIGHT OF WAY OF BROEK ROAD WAS DETERMINED FROM THE MEASURED SECTION LINE BETWEEN SECTIONS 17 AND 20, T28N, R3W WITH AN ASSUMED WIDTH OF 66'.

R/W PROJECT NUMBER	SHEET NUMBER	TOTAL SHEETS
7834-00-00		
CONSTRUCTION PROJECT NUMBER 7834-00-70	4.01	1

PLAT OF RIGHT OF WAY REQUIRED FOR

BRUCE MOUND AVENUE - GORMAN AVENUE

BROEK ROAD BRIDGE B-10-390

BROEK ROAD | CLARK COUNTY

APPROVED FOR TOWN OF RESEBURG

3-31-22 DATE — Matt Drajewski TOWN CHAIRMAN

PLAT PREPARED BY AYRES

THE SURVEY IS PREPARED AT THE REQUEST OF THE TOWN OF RESEBURG

THE FIELD SURVEY WAS PERFORMED IN MARCH 2020.

THIS SURVEY IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

WISCONSIN
CHRISTOPHER R. BADTKE S-3150 EAU CLAIRE WI
LAND SURVEYOR

04/23/2021
CHRISTOPHER R. BADTKE, P.L.S. S-3150 — DATE

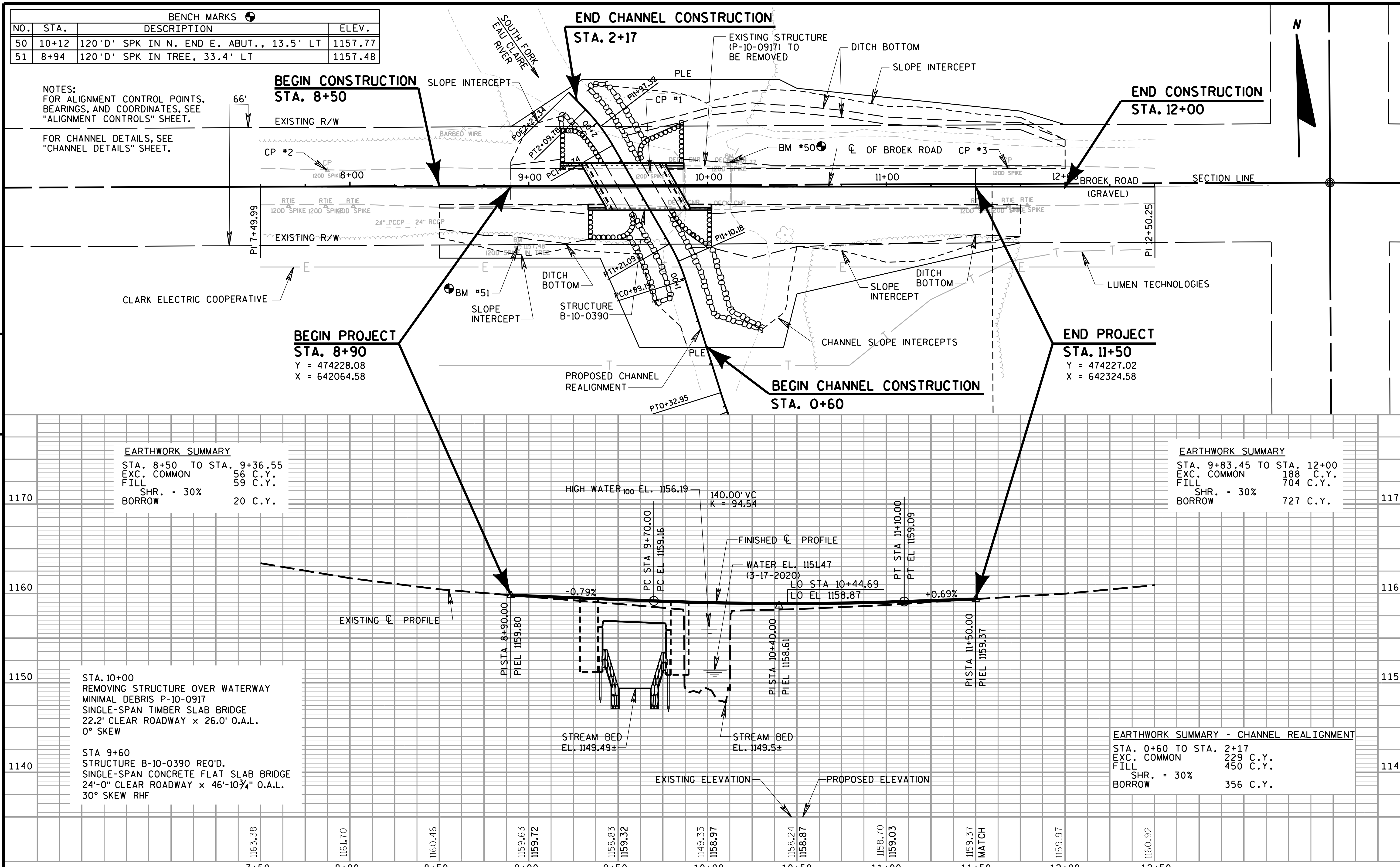
REVISION DATE
03/22/2022

BENCH MARKS

NO.	STA.	DESCRIPTION	ELEV.
50	10+12	120'D' SPK IN N. END E. ABUT., 13.5' LT	1157.77
51	8+94	120'D' SPK IN TREE, 33.4' LT	1157.48

NOTES:
FOR ALIGNMENT CONTROL POINTS, BEARINGS, AND COORDINATES, SEE "ALIGNMENT CONTROLS" SHEET.

FOR CHANNEL DETAILS, SEE "CHANNEL DETAILS" SHEET.



N
SOUTH FORK EAU CLAIRE RIVER
END CHANNEL CONSTRUCTION
STA. 2+17
EXISTING STRUCTURE (P-10-0917) TO BE REMOVED
DITCH BOTTOM
SLOPE INTERCEPT
BEGIN CONSTRUCTION
STA. 8+50
END CONSTRUCTION
STA. 12+00
66'
EXISTING R/W
BARBED WIRE
PLE
CP #1
CP #2
CP #3
BM #50
℄ OF BROEK ROAD
8+00
9+00
10+00
11+00
12+00
BROEK ROAD (GRAVEL)
SECTION LINE
PI 7+49.99
PI 12+50.25
CLARK ELECTRIC COOPERATIVE
LUMEN TECHNOLOGIES
BM #51
SLOPE INTERCEPT
DITCH BOTTOM
STRUCTURE B-10-0390
CHANNEL SLOPE INTERCEPTS
BEGIN PROJECT
STA. 8+90
Y = 474228.08
X = 642064.58
END PROJECT
STA. 11+50
Y = 474227.02
X = 642324.58
PROPOSED CHANNEL REALIGNMENT
BEGIN CHANNEL CONSTRUCTION
STA. 0+60
PT0+32.95
HIGH WATER100 EL. 1156.19
140.00' VC
K = 94.54
FINISHED ℄ PROFILE
WATER EL. 1151.47 (3-17-2020)
LO STA 10+44.69
LO EL 1158.87
-0.79%
+0.69%
PC STA 9+70.00
PC EL 1159.16
PT STA 11+10.00
PT EL 1159.09
EXISTING ℄ PROFILE
PI STA 8+90.00
PI EL 1159.80
PI STA 10+40.00
PI EL 1158.61
PI STA 11+50.00
PI EL 1159.37
STREAM BED EL. 1149.49±
STREAM BED EL. 1149.5±
EXISTING ELEVATION
PROPOSED ELEVATION
1170
1160
1150
1140
1163.38
1161.70
1160.46
1159.63
1159.72
1158.83
1159.32
1149.33
1158.97
1158.24
1158.87
1158.70
1159.03
1159.37
MATCH
1159.97
1160.92
7+50
8+00
8+50
9+00
9+50
10+00
10+50
11+00
11+50
12+00
12+50
5

EARTHWORK SUMMARY

STA. 8+50 TO STA. 9+36.55
EXC. COMMON 56 C.Y.
FILL 59 C.Y.
SHR. = 30%
BORROW 20 C.Y.

EARTHWORK SUMMARY

STA. 9+83.45 TO STA. 12+00
EXC. COMMON 188 C.Y.
FILL 704 C.Y.
SHR. = 30%
BORROW 727 C.Y.

STA. 10+00
REMOVING STRUCTURE OVER WATERWAY
MINIMAL DEBRIS P-10-0917
SINGLE-SPAN TIMBER SLAB BRIDGE
22.2' CLEAR ROADWAY x 26.0' O.A.L.
0° SKEW

STA 9+60
STRUCTURE B-10-0390 REQ'D.
SINGLE-SPAN CONCRETE FLAT SLAB BRIDGE
24'-0" CLEAR ROADWAY x 46'-10¾" O.A.L.
30° SKEW RHF

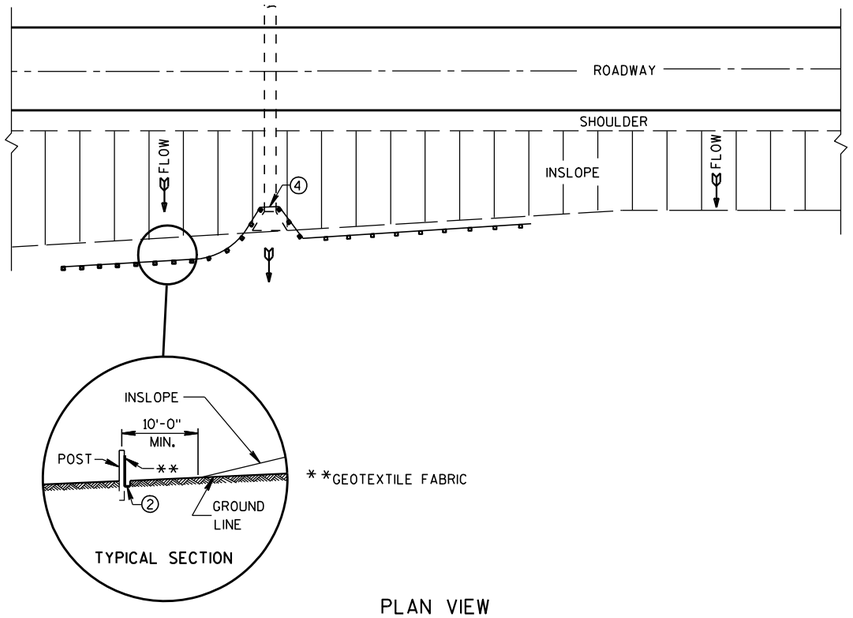
EARTHWORK SUMMARY - CHANNEL REALIGNMENT

STA. 0+60 TO STA. 2+17
EXC. COMMON 229 C.Y.
FILL 450 C.Y.
SHR. = 30%
BORROW 356 C.Y.

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	PLAN AND PROFILE	SCALE, FEET 0 25 50	SHEET	E

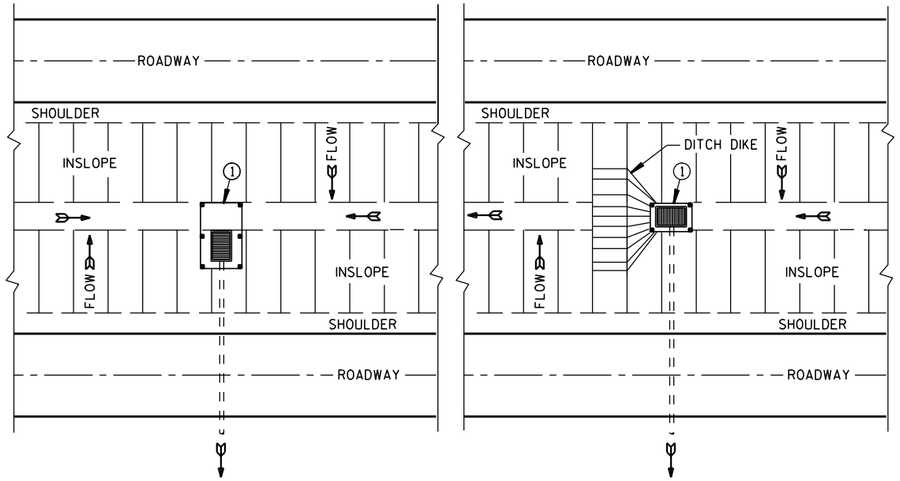
Standard Detail Drawing List

08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-09	SIGNING & MARKING FOR TWO LANE BRIDGES
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



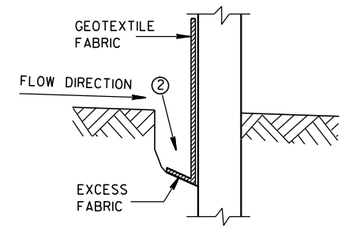
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

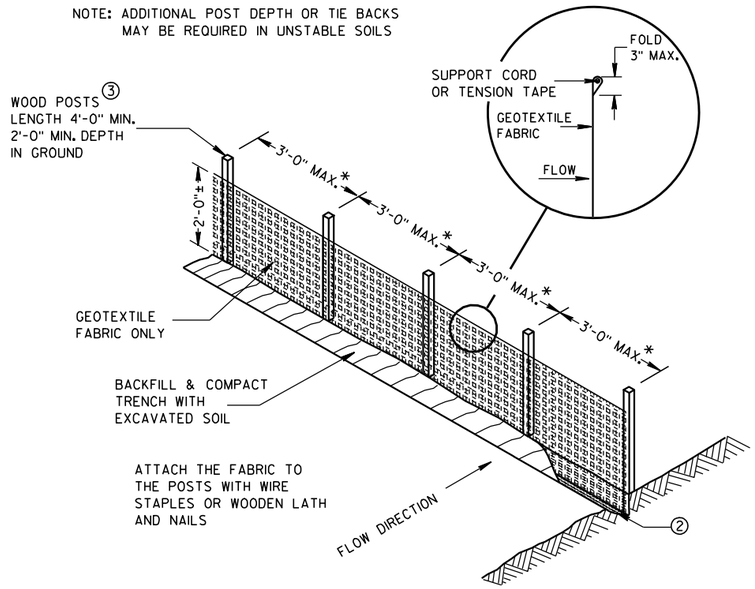
GENERAL NOTES

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

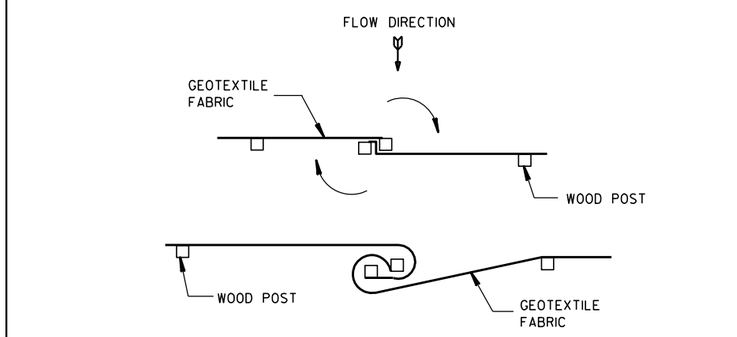
1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL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



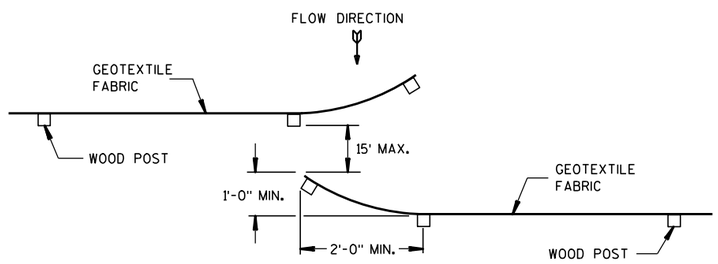
TRENCH DETAIL



SILT FENCE

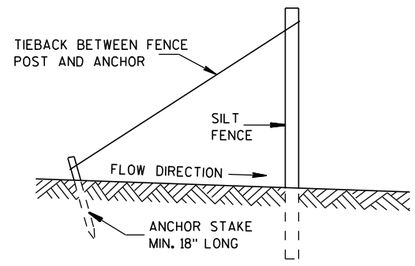


TWIST METHOD



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

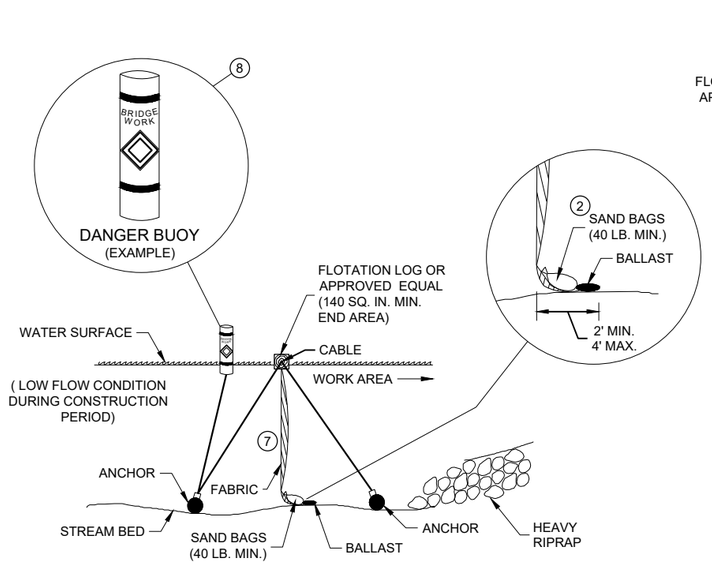
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

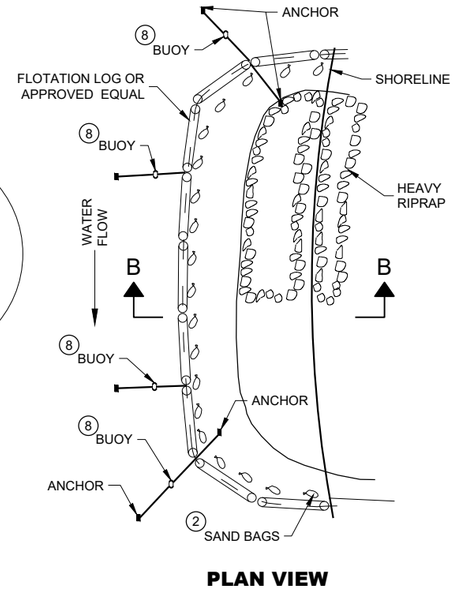
S.D.D. 8 E 9-6

6

S.D.D. 8 E 9-6

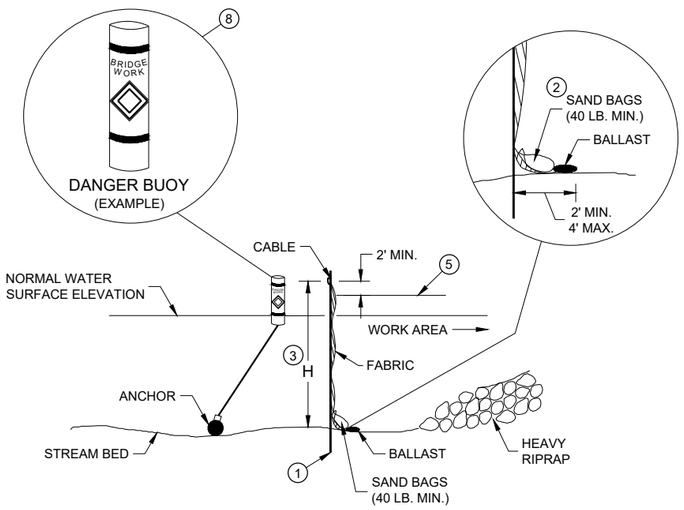


SECTION B - B

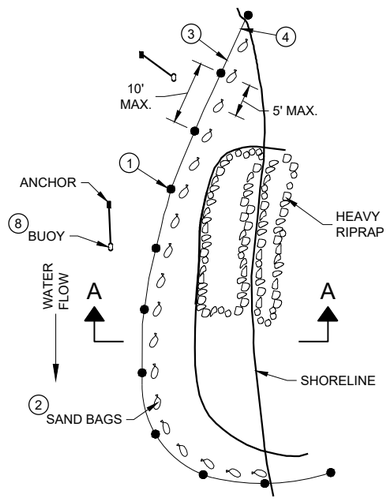


PLAN VIEW

TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6



SECTION A - A



PLAN VIEW

TURBIDITY BARRIER - STANDARD POST INSTALLATION

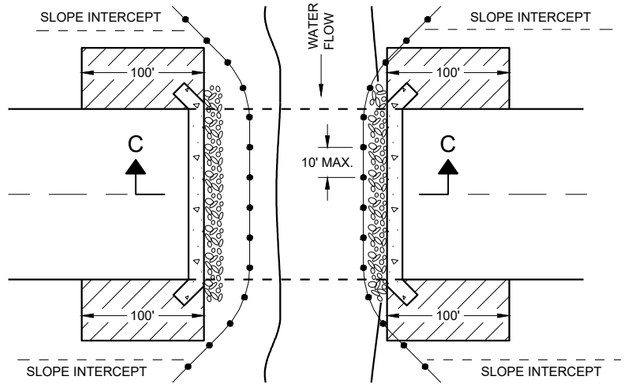
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

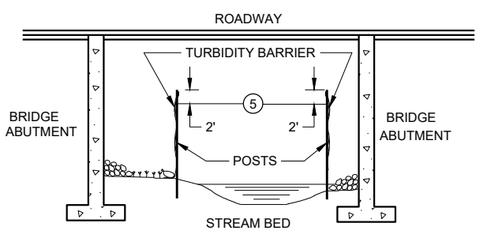
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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. SAND BAGS 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 FEET, POST SPACING MAY NEED TO BE DECREASED.
4. IN WATERWAYS SUBJECT TO FLUCTUATING WATER ELEVATIONS, PROVISIONS SHOULD BE MADE TO ALLOW THE WATER TO EQUALIZE ON EACH SIDE OF THE BARRIER. THIS MAY BE ACCOMPLISHED BY LEAVING A PORTION OF THE BARRIER OPEN ON THE UPSTREAM END.
5. ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION PERIOD. MINIMUM BARRIER HEIGHT SHALL BE 2' GREATER THAN EITHER THE Q2 ELEVATION OR THE ESTIMATED HIGH WATER ELEVATION DURING CONSTRUCTION, WHICHEVER IS GREATER.
6. FLOAT ALTERNATIVE WILL ONLY BE ALLOWED WITH WRITTEN APPROVAL OF THE ENGINEER, AND IS MEANT FOR LOCATIONS WHERE BEDROCK 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

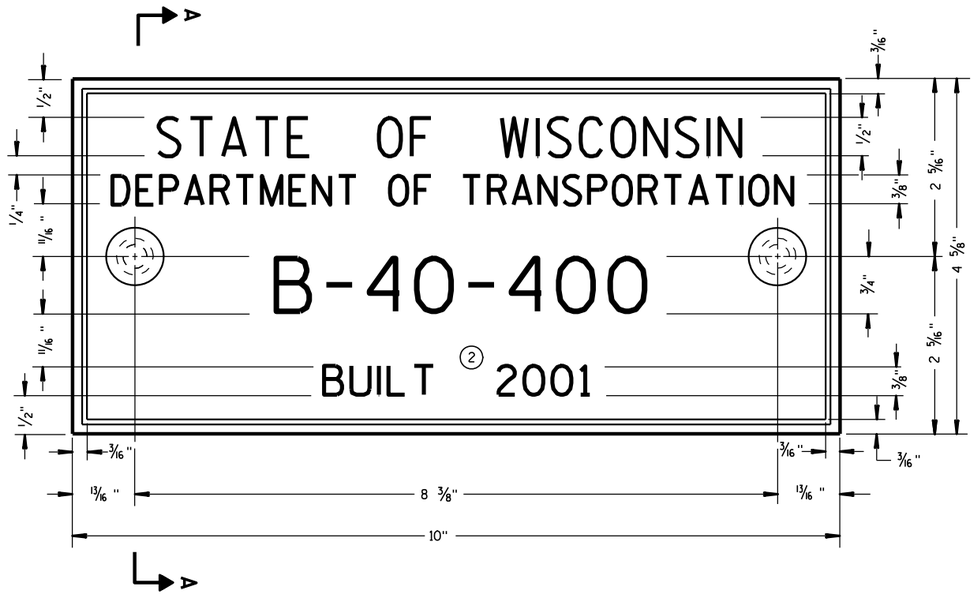
TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/4/02
DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOI
ENGINEER

FHWA

6
SDD 08E11 - 02



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

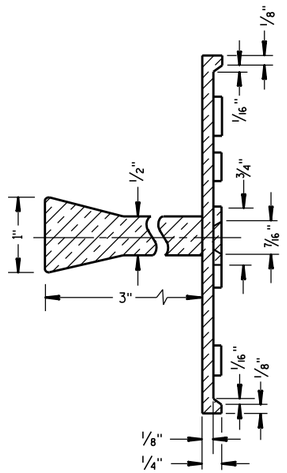
GENERAL NOTES

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.

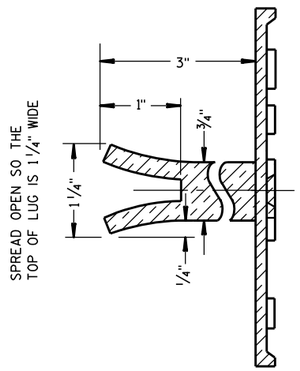
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

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

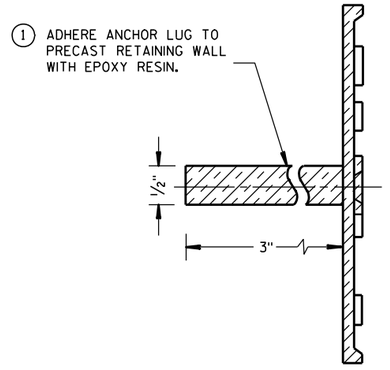
(2) REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A



ALTERNATE LUG



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

NAME PLATE (STRUCTURES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

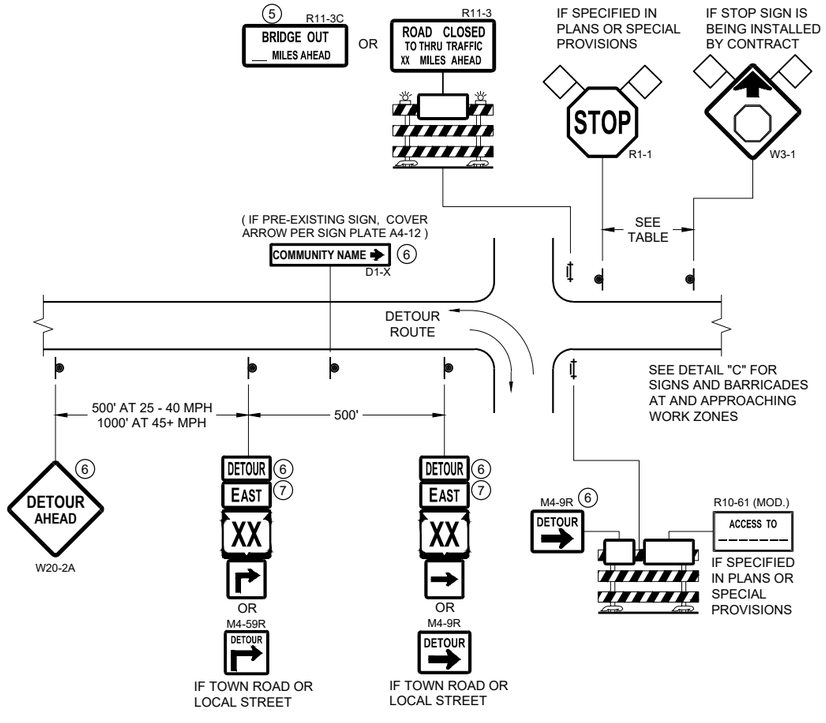
3/26/10 DATE

/S/ Scot Beck -- CHIEF STRUCTURAL DEVELOPMENT ENGINEER

FHWA

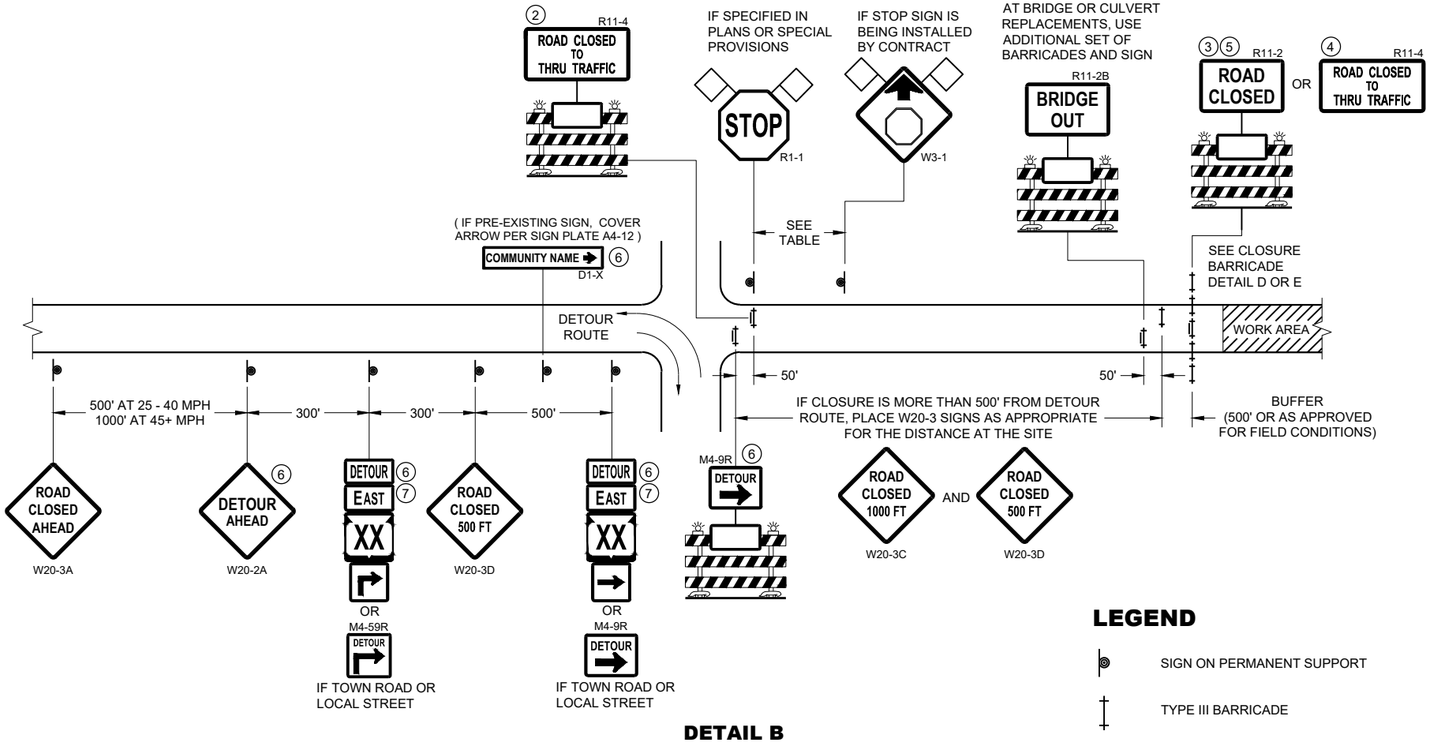
6

S.D.D. 12 A 3-10



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR

WORK ZONE GREATER THAN OR EQUAL TO 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)

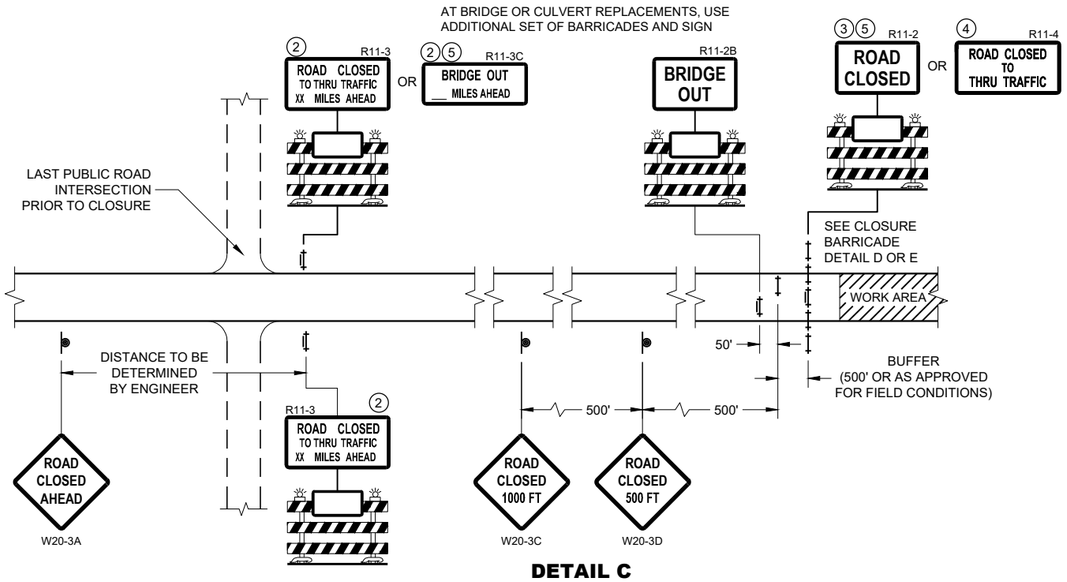
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)

DETOUR M4 - 8
EAST M3 - X
XX M1 - 4 OR XX M1 - 6 OR COUNTY X M1 - 5A
M05 - 1 OR M06 - 1



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

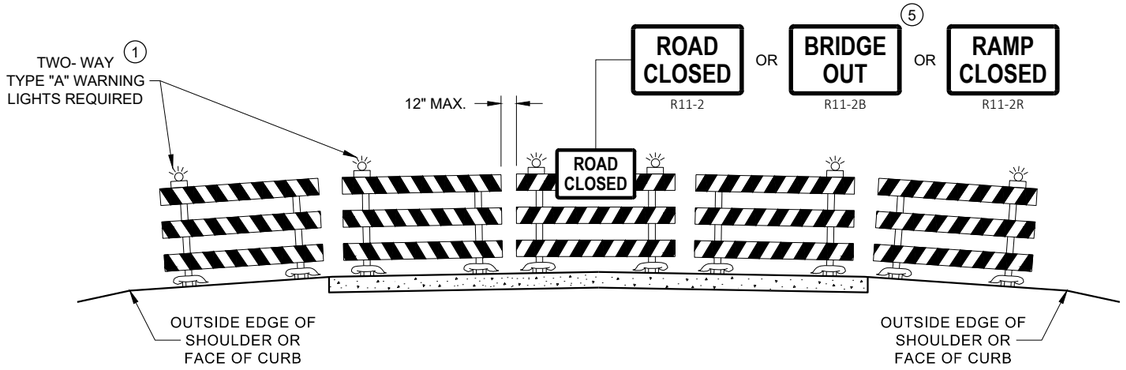
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER

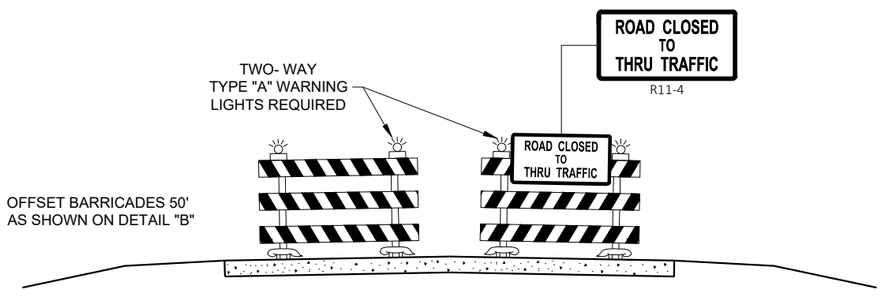
FHWA

SDD 15C02 - 08a

SDD 15C02 - 08a



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 THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL 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 SHALL, 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" (36" X 18" 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)
- MO5 - 1 AND MO6 - 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 AN 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 ROAD 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 VARIOUS CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEE
FHWA

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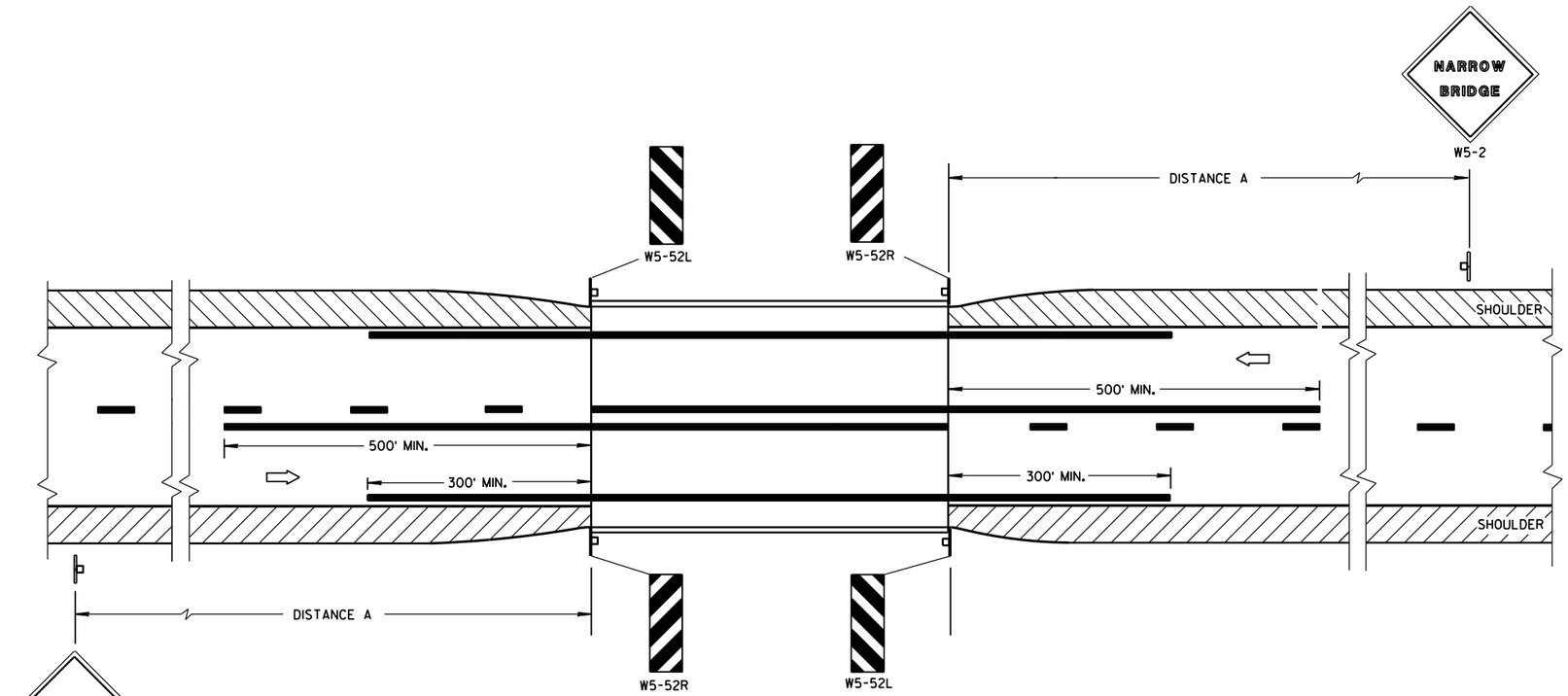
SDD 15C02 - 08b

6

SDD 15C02 - 08b



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'

GENERAL NOTES

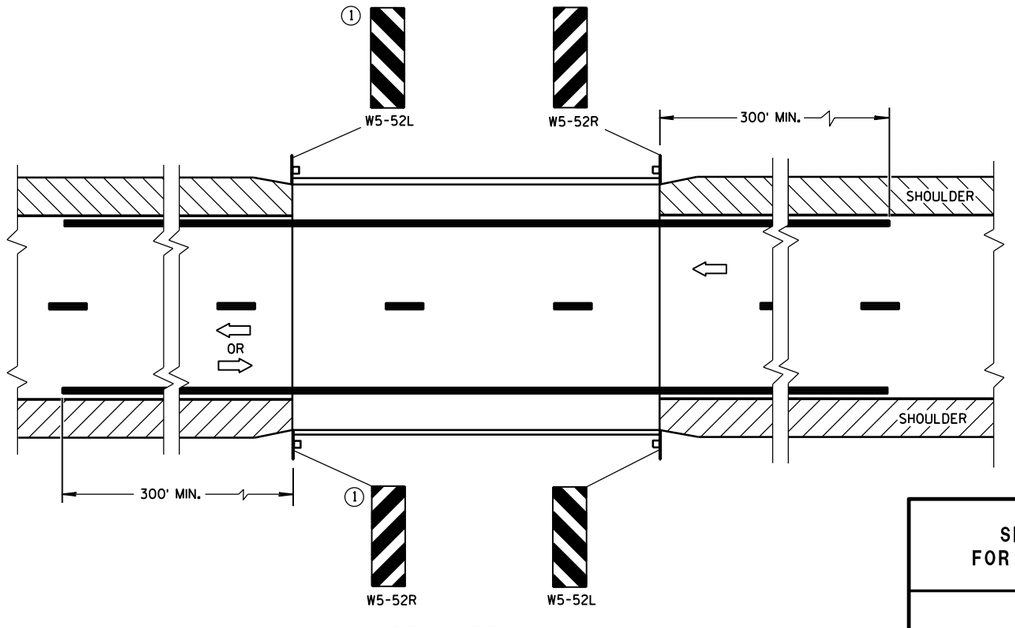
DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

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

PLACE THE EDGE OF THE W5-52 SIGN IN LINE WITH FACE OF CURB OR PARAPET.

(1) OMIT ON ONE-WAY TRAVELLED WAYS.

⇨ DIRECTION OF TRAFFIC



SITUATION 2

WARRANTING CRITERIA:

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

SIGNING & MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

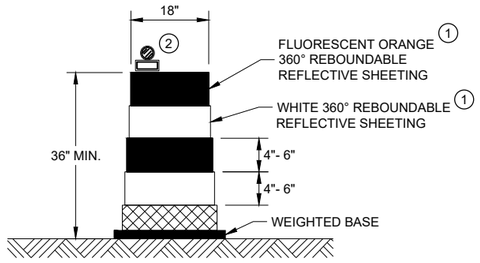
APPROVED
June 2017 — DATE
/S/ Matthew R. Rauch — STATE SIGNING AND MAR[illegible]EER
FHWA

6

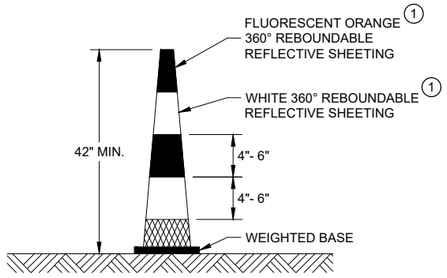
S.D.D. 15 C 6-9

GENERAL NOTES

1. REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
2. LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

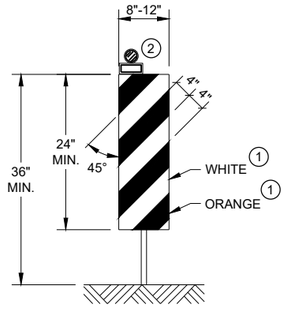


DRUM



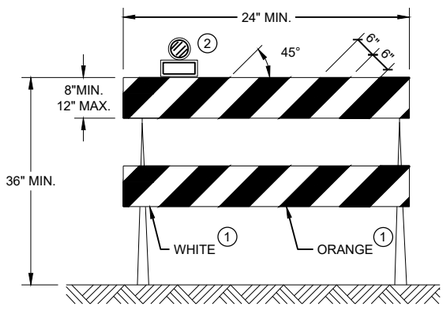
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



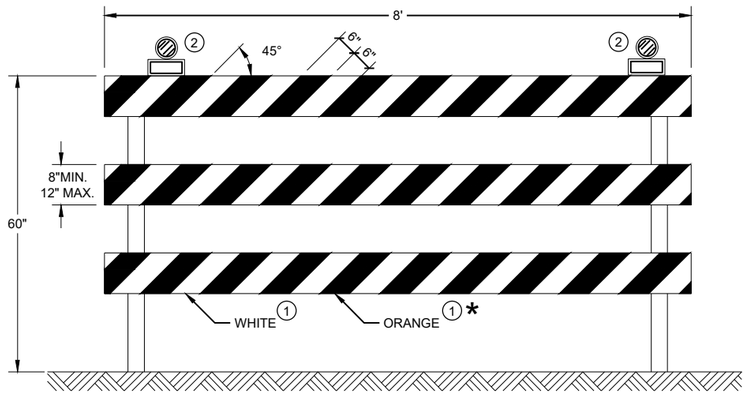
VERTICAL PANEL

THE STRIPES SHALL SLOPE DOWNWARD TO
THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE II BARRICADE

FOR RAILS LESS THAN 36" LONG, 4" WIDE STRIPES
MAY BE USED. ALL STRIPES SHALL SLOPE DOWNWARD
TO THE TRAFFIC SIDE FOR CHANNELIZATION.



TYPE III BARRICADE

IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2021 — DATE
/S/ Andrew Heidtke — WORK ZONE ENGINEER
FHWA

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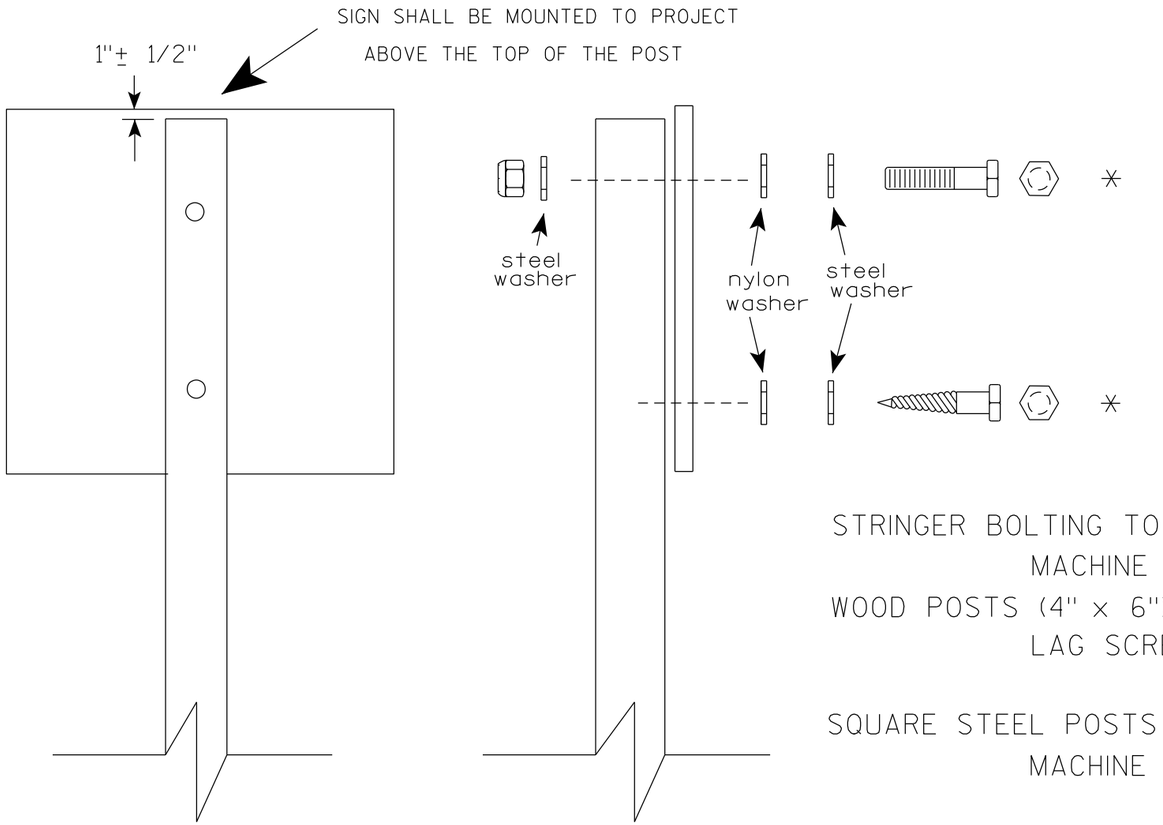
SDD15C11 - 09b

6

SDD15C11 - 09b



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 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

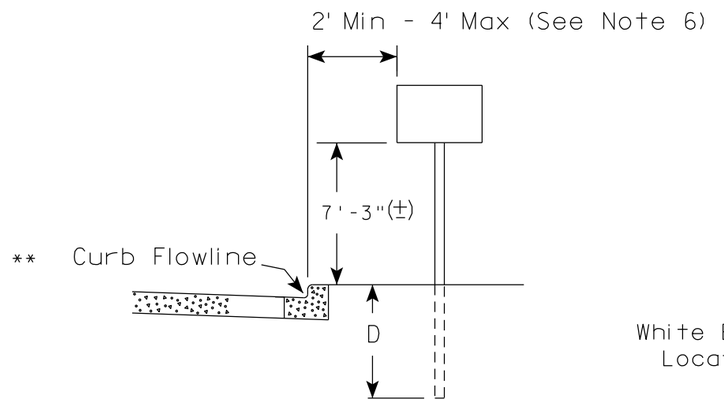
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

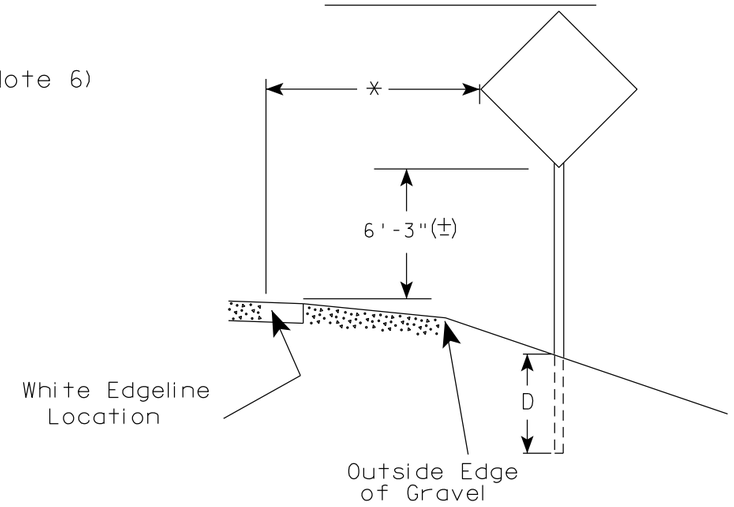
DATE 4/1/2020 PLATE NO. A4-8.9

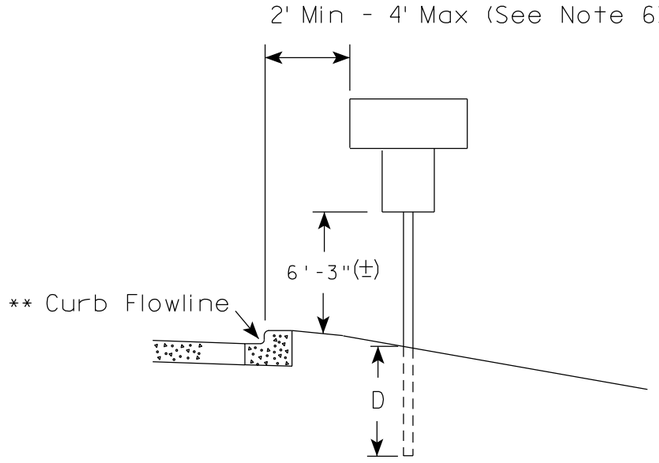
PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK		SHEET NO: 21	E

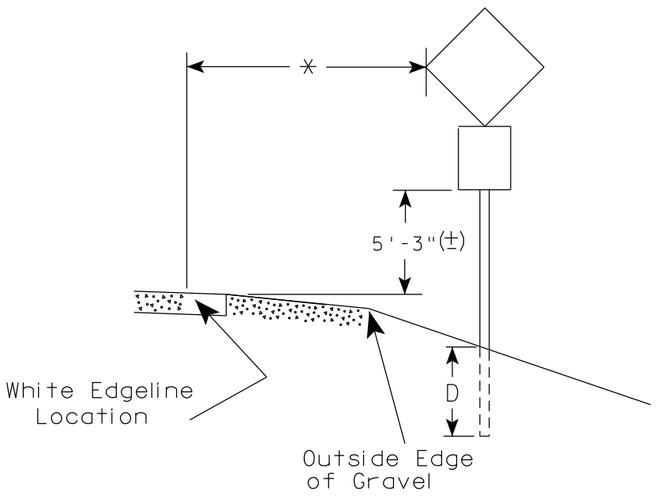
URBAN AREA



RURAL AREA (See Note 2)







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 or behind barrier wall, see A4-10 sign plate.
   The Double Arrow sign (W12-1D) 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" (±).
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 signs mounted on traffic signal poles is 5'- 3" (±).
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. The (±) tolerance for mounting height is 3 inches.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.

POST EMBEDMENT DEPTH

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

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

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

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

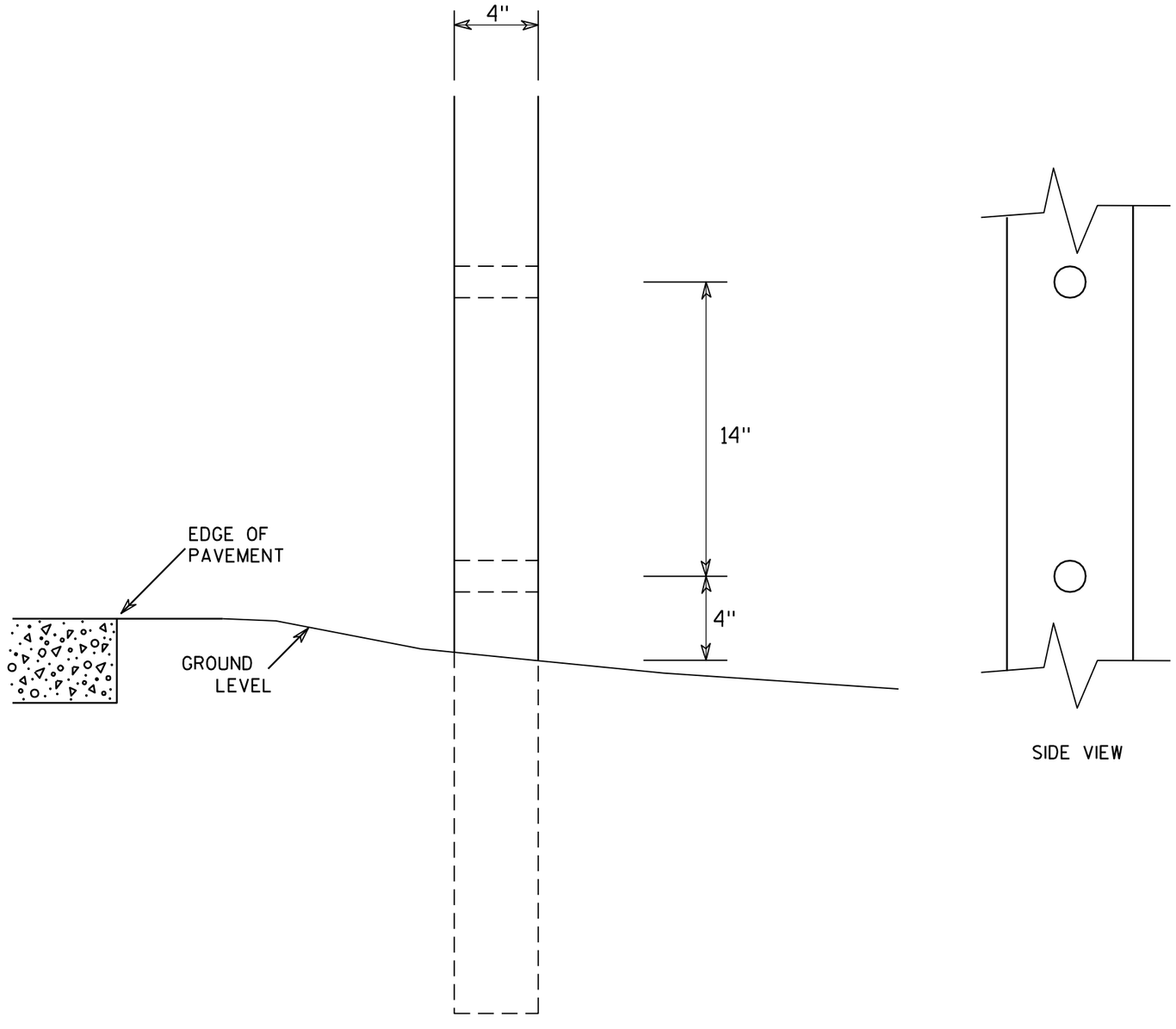
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/13/2020 PLATE NO. A4-3.22

7

7

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK		SHEET NO: 22	E



SIDE VIEW

GENERAL NOTES

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

7

7

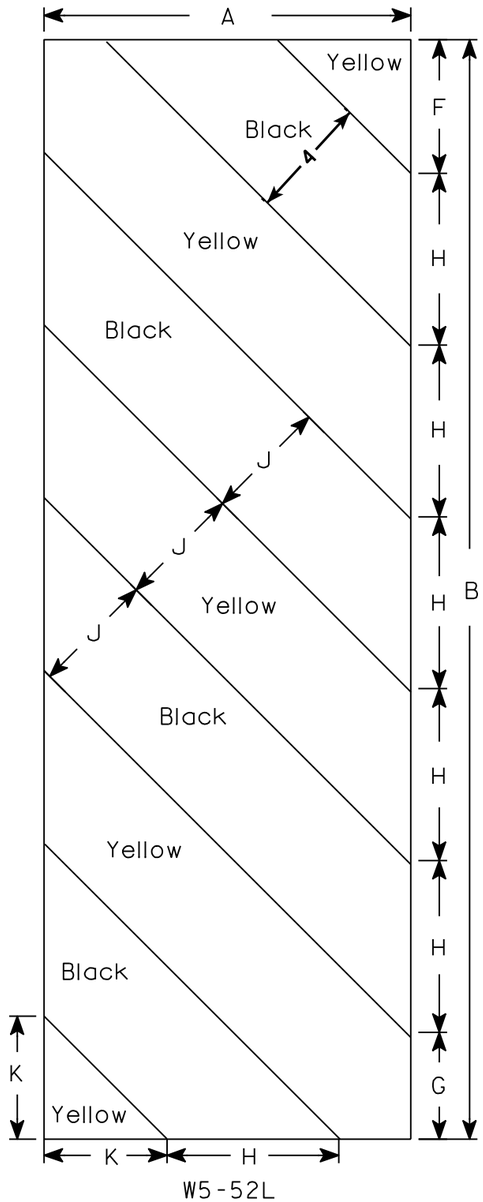
4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

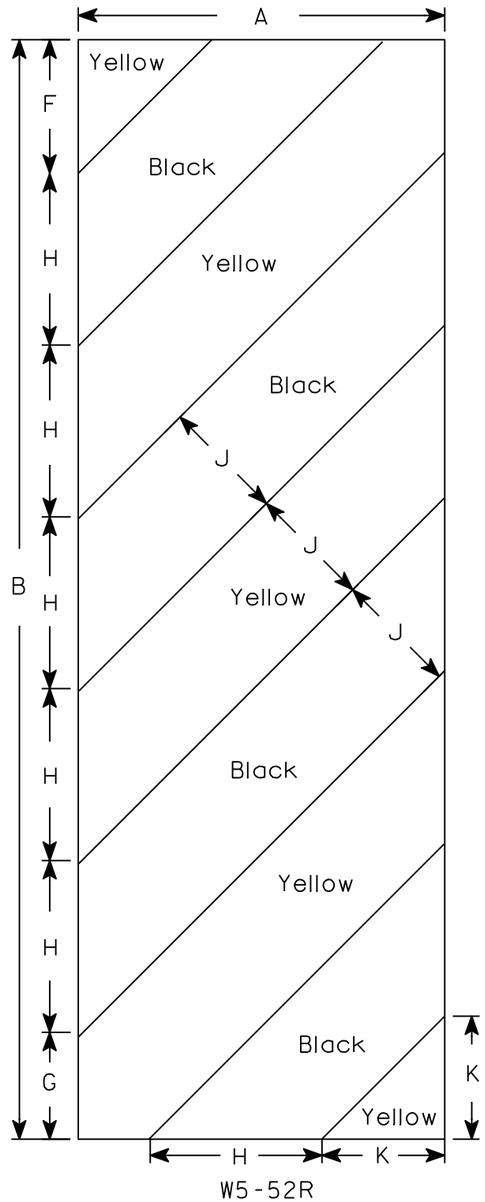
APPROVED Chester J Spang for State Traffic Engineer

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

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK		SHEET NO: 23	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

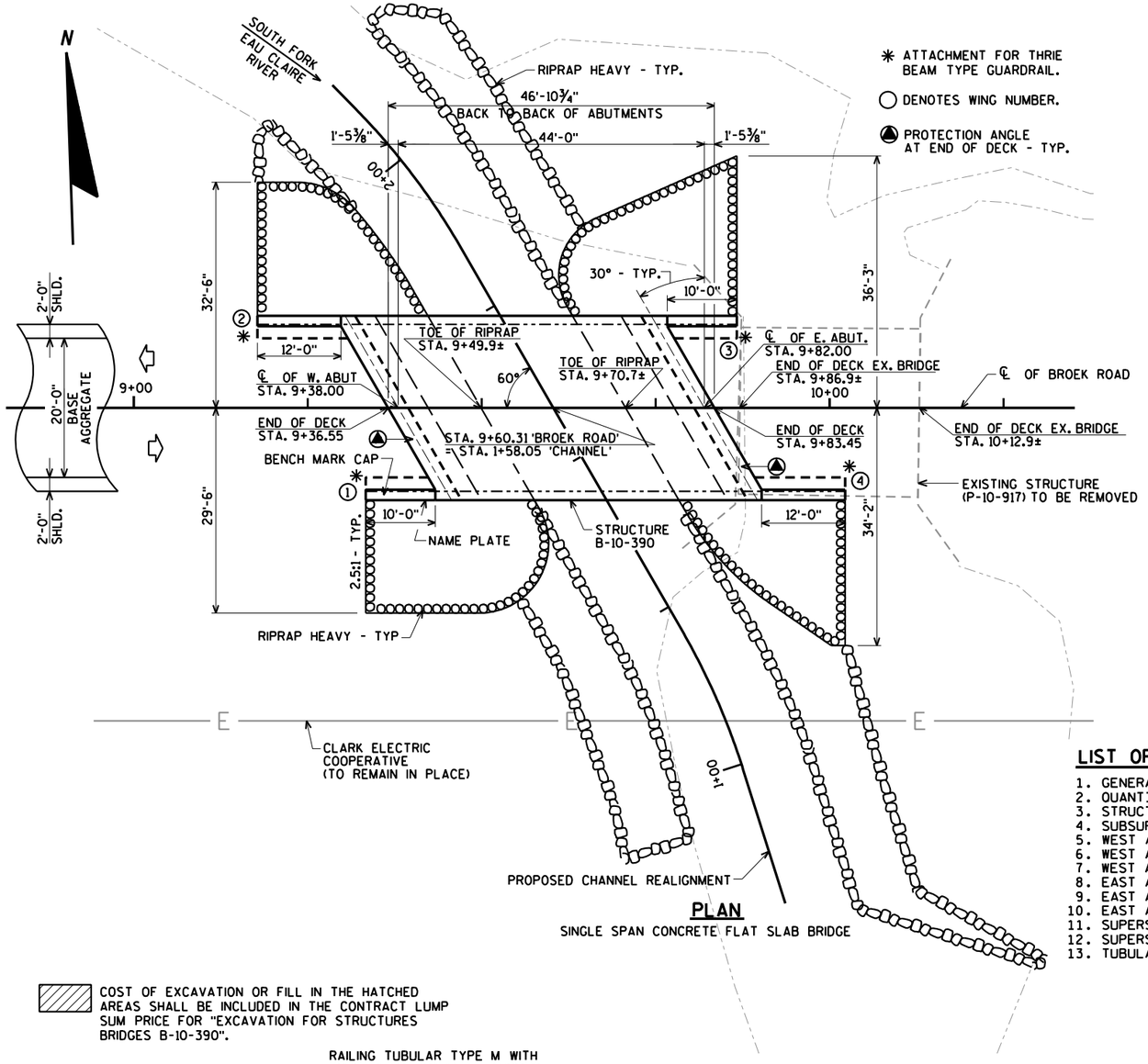
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

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

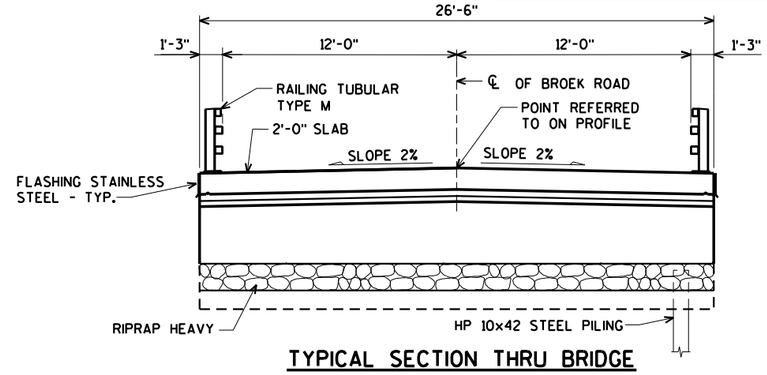
PROJECT NO: 7834-00-70 | HWY: BROEK ROAD | COUNTY: CLARK | SHEET NO: 24 | E

STATE PROJECT NUMBER
7834-00-70



PLAN

SINGLE SPAN CONCRETE FLAT SLAB BRIDGE



TYPICAL SECTION THRU BRIDGE

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
INVENTORY RATING FACTOR: 1.06
OPERATING RATING FACTOR: 1.38
WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV) = 250 KIPS

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

MATERIAL PROPERTIES:

CONCRETE MASONRY	SUPERSTRUCTURE f'_c	4,000 p.s.i.
	ALL OTHER f'_c	3,500 p.s.i.
HIGH STRENGTH BAR STEEL REINFORCEMENT (GRADE 60)	f_y	60,000 p.s.i.

HYDRAULIC DATA:

100 YEAR FREQUENCY	2 YEAR FREQUENCY
Q_{100} = 1,080 c.f.s.	Q_2 = 300 c.f.s.
VEL.= 7.7 f.p.s.	VEL.= 3.8 f.p.s.
HW_{100} = EL. 1156.19	HW_2 = EL. 1153.30
WATERWAY AREA = 140 sq. ft.	
DRAINAGE AREA = 6.2 sq. mi.	
SCOUR CRITICAL CODE = 5	
DATUM = NAVD88 (2012)	

FOUNDATION DATA:

ABUTMENTS TO BE SUPPORTED ON HP 10 X 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS ‡ PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 30'-0" WEST ABUTMENT AND 25'-0" EAST ABUTMENT.

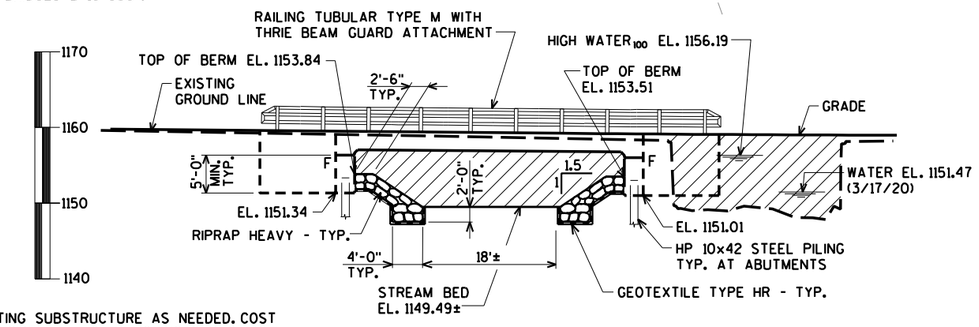
‡THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE DRIVEN PILE CAPACITY.

TRAFFIC DATA:

A.A.D.T. = <100 (2022)
A.A.D.T. = <100 (2042)
R.D.S. = 35 M.P.H.

LIST OF DRAWINGS

COST OF EXCAVATION OR FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-10-390".



REMOVE EXISTING SUBSTRUCTURE AS NEEDED. COST CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE" ITEM. TYPICAL AT ALL SUBSTRUCTURES.

ELEVATION

(NORMAL TO ℄ OF RIVER)

WISCONSIN DANIEL N. SYDOW E-38363 WI PROFESSIONAL ENGINEER

04/27/2022

BRIDGE OFFICE CONTACT:
AARON BONK
(608)-261-0261

CONSULTANT CONTACT:
DAN SYDOW
(715)-834-3161

NO.	DATE	REVISION	BY

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 04/27/22
CHIEF STRUCTURES DESIGN ENGINEER DATE

STRUCTURE B-10-390

BROEK ROAD OVER BR S FK EAU CLAIRE RIVER

COUNTY CLARK
TOWN ~~CITY/VILLAGE~~ RESEBURG

DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS

DESIGNED BY	ZSS	DESIGN CK'D.	JLB	DRAWN BY	JLB/CLP	PLANS CK'D.	DNS

GENERAL PLAN

SHEET 1 OF 13
25

4/27/2022
PENTABLE:BReau_shd_util.tbl

DATE:
DATE:
DATE:
CHECKED BY:
BACK CHECKED BY:
CORRECTED BY:

8

8

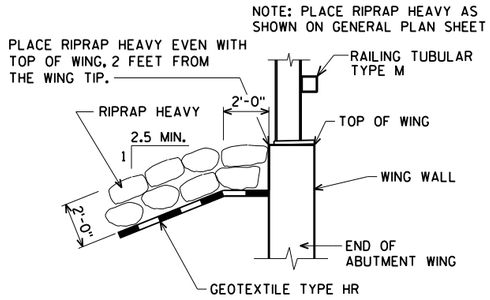
I:±42±42-1209.00 - Clark Co, Tn Reseburg, Broek Road±CADD±Final±421209 gp.dgn

I.D.

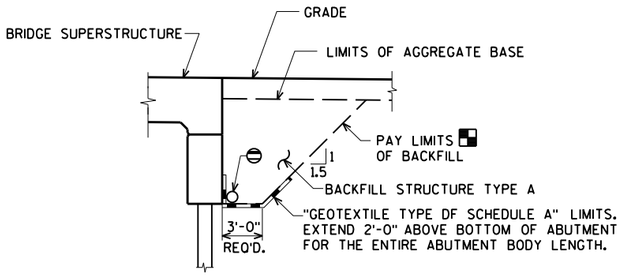
DATE:

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	W. ABUT.	E. ABUT.	SUPER.	TOTAL
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-10-917	EACH	-----	-----	-----	1
206.1000	EXCAVATION FOR STRUCTURES BRIDGES B-10-390	LS	-----	-----	-----	1
206.5000	COFFERDAMS B-10-390	LS	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	130	130	-----	260
502.0100	CONCRETE MASONRY BRIDGES	CY	33.2	33	96.6	163
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	170	170
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,900	1,900	-----	3,800
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,560	1,560	16,790	19,910
506.0105	STRUCTURAL STEEL CARBON	LB	-----	-----	522	522
513.4061	RAILING TUBULAR TYPE M	LF	24.5	24.5	93.8	142.8
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	10	10	-----	20
550.1100	PILING STEEL HP 10-INCH x 42 LB	LF	150	125	-----	275
606.0300	RIPRAP HEAVY	CY	135	155	-----	290
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	75	-----	150
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	55	55	-----	110
645.0120	GEOTEXTILE TYPE HR	SY	265	320	-----	585
SPV.0090.01	FLASHING STAINLESS STEEL	LF	-----	-----	93.8	93.8
	NON-BID ITEMS					
	FILLER	SIZE	-----	-----	-----	½" & ¾"

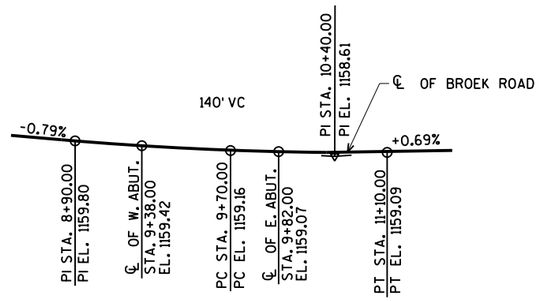


TYPICAL FILL SECTION AT WING TIPS



BACKFILL STRUCTURE LIMITS THRU ABUTMENT

- BACKFILL PAY LIMITS. BACKFILL BEYOND BACKFILL PAY LIMITS SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES. LIMITS OF EXCAVATION SHALL BE DETERMINED BY THE CONTRACTOR.
- PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 3.



PROFILE GRADE LINE
(BROEK ROAD)

BENCH MARK:
120D SPIKE
STA. 10+12.3, 13.5' LT.
EL. 1157.77

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

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

THE FIRST DIGIT OF A THREE DIGIT BAR NO. AND THE FIRST TWO DIGITS OF A FOUR DIGIT BAR NO. SIGNIFIES THE BAR SIZE.

JOINT FILLER SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. DESIGNATION M 153, TYPE I, II OR III OR A.A.S.H.T.O. DESIGNATION M 213.

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

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

THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-10-390" SHALL BE THE EXISTING GROUNDLINE.

THE EXISTING STRUCTURE, P-10-917, TO BE REMOVED, IS A 23.7-FT. LONG SINGLE-SPAN NAIL-LAMINATED TIMBER FLAT SLAB BRIDGE ON TIMBER ABUTMENTS WITH A 22.2-FT. CLEAR ROADWAY WIDTH.

THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQURIED DIRECTLY BEHIND ABUTMENTS AND ABUTMENTS WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATION FOR STRUCTURES.

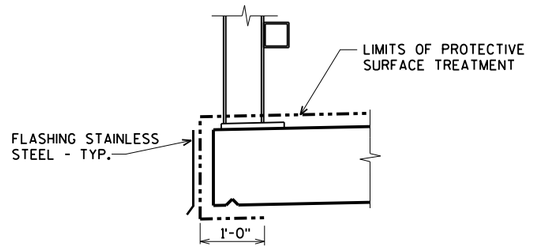
PROTECTIVE SURFACE TREATMENT IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.

BEVEL EXPOSED EDGES OF CONCRETE ¾" UNLESS NOTED OTHERWISE.

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.

EXTENT OF BELOW GRADE SUBSTRUCTURES ARE NOT KNOWN. REMOVE EXISTING SUBSTRUCTURES AS NEEDED TO BUILD NEW SUBSTRUCTURES. COST OF SUBSTRUCTURE REMOVAL IS CONSIDERED INCIDENTAL TO "REMOVING STRUCTURE" BID ITEM.

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.



PROTECTIVE SURFACE TREATMENT DETAIL

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-390

DRAWN BY JLB/CLP | PLANS CK'D. ZSS

QUANTITIES AND NOTES

SHEET 2 OF 13
26

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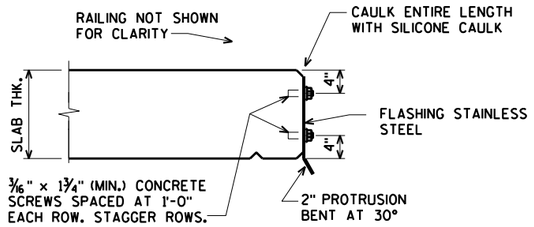


FLASHING DETAIL FOR NEW BRIDGES WITH OPEN RAILING

THE BID ITEM "FLASHING STAINLESS STEEL" SHALL INCLUDE PROVIDING AND INSTALLING THE STAINLESS STEEL FLASHING, SILICONE CAULK, 3/16" CONCRETE SCREWS AND CLEANING THE EDGE OF THE SLAB PRIOR TO ATTACHMENT OF THE FLASHING.

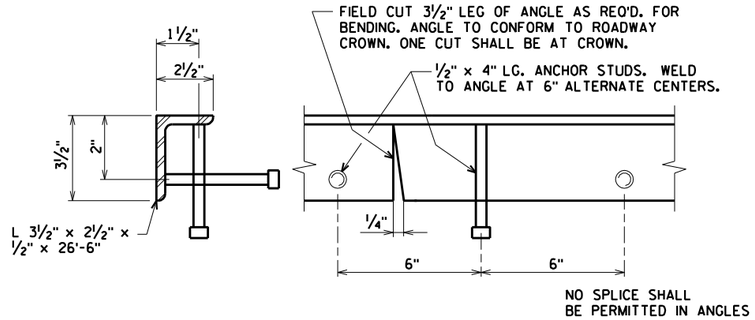
FLASHING TO BE INSTALLED AFTER PROTECTIVE SURFACE TREATMENT APPLICATION.

CONCRETE SCREWS SHALL BE 410 STAINLESS STEEL.

EXTEND FLASHING TO BACK FACE OF ABUTMENT.

TOP OF FLASHING TO BEGIN APPROX. 1-INCH BELOW TOP OF SLAB SURFACE.

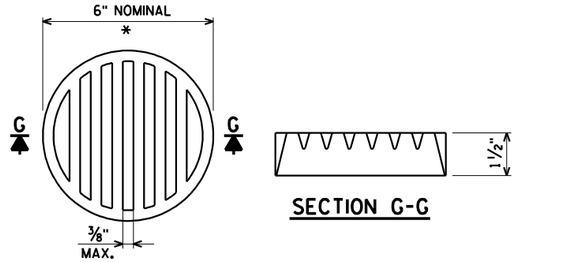
THE FLASHING IS TO BE A CONSTANT HEIGHT BASED ON THE THINNEST SLAB DEPTH OVER THE BRIDGE LENGTH.



⚠ PROTECTION ANGLE DETAIL

(ANGLE AND STUDS TO BE PAID FOR AT THE UNIT PRICE BID FOR "STRUCTURAL STEEL CARBON". (NO PAINT REQ'D.)

SANDBLAST PROTECTION ANGLE AFTER FABRICATION IN ACCORDANCE WITH SSPC SP. #6 "COMMERCIAL BLAST CLEANING". AFTER BLAST CLEANING, THE PROTECTION ANGLE SHALL BE HOT DIPPED GALVANIZED.



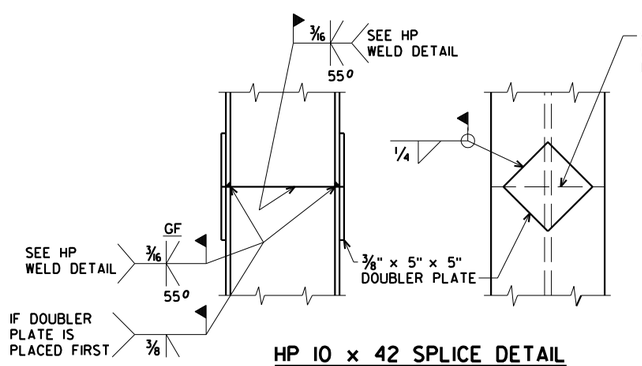
SECTION G-G

* 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 WRAPPED 6-INCH".

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 SHEET METAL SCREWS.

RODENT SHIELD DETAIL



HP 10 x 42 SPLICE DETAIL

HP WELD DETAIL

FLANGE SHOWN, WEB SIMILAR

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-390

DRAWN BY CLP | PLANS CK'D. ZSS

STRUCTURE DETAILS

SHEET 3 OF 13
27

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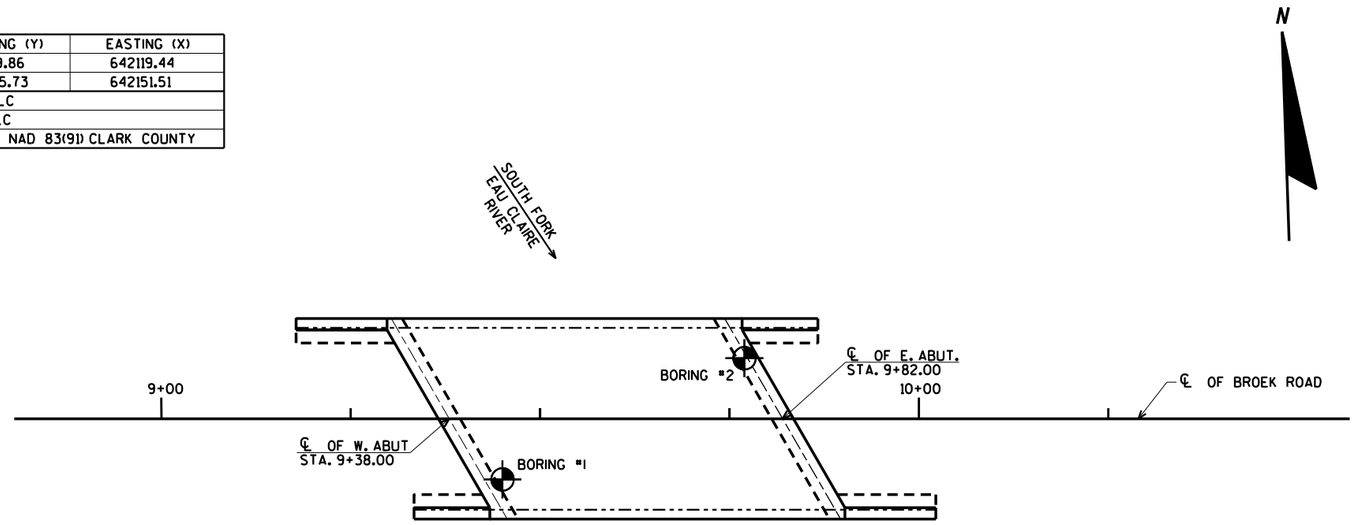
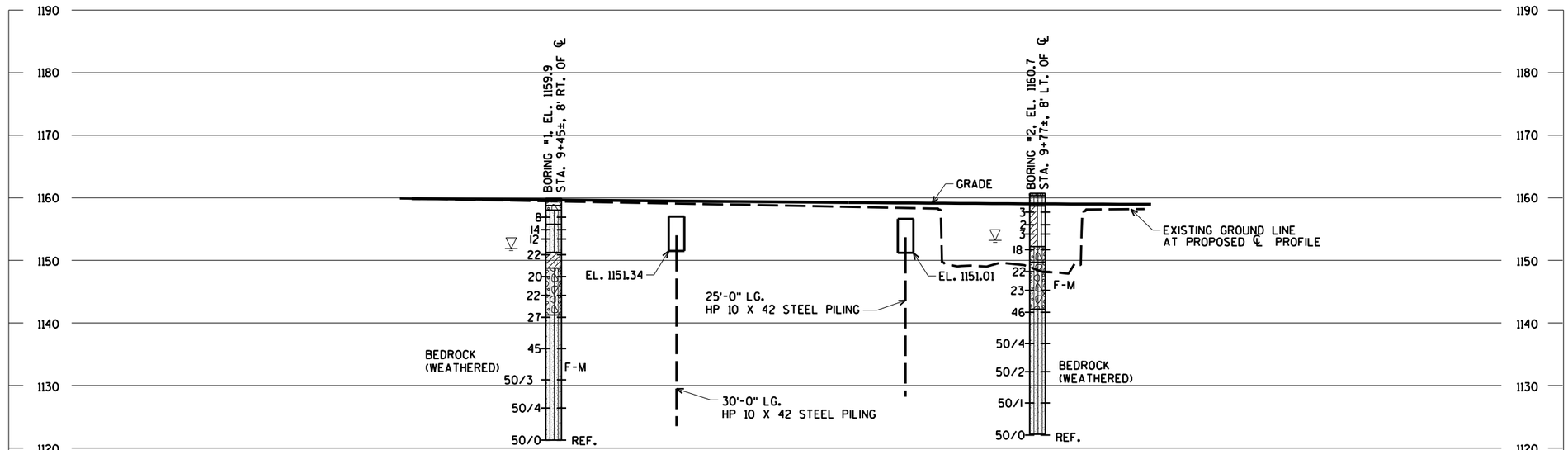
BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	9/16/2020	474219.86	642119.44
2	9/16/2020	474235.73	642151.51
BORINGS COMPLETED BY: ECS MIDWEST, LLC			
REPORT COMPLETED BY: ECS MIDWEST, LLC			
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) CLARK COUNTY			





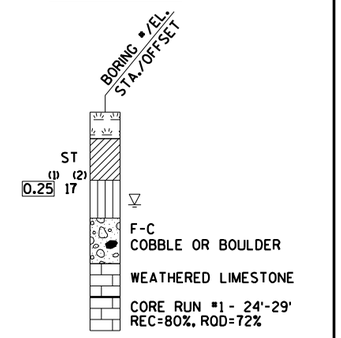
STATE PROJECT NUMBER

7834-00-70

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

- ▽ AT TIME OF DRILLING
- ▼ END OF DRILLING
- ▼ AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-390

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SUBSURFACE EXPLORATION

SHEET 4 OF 13
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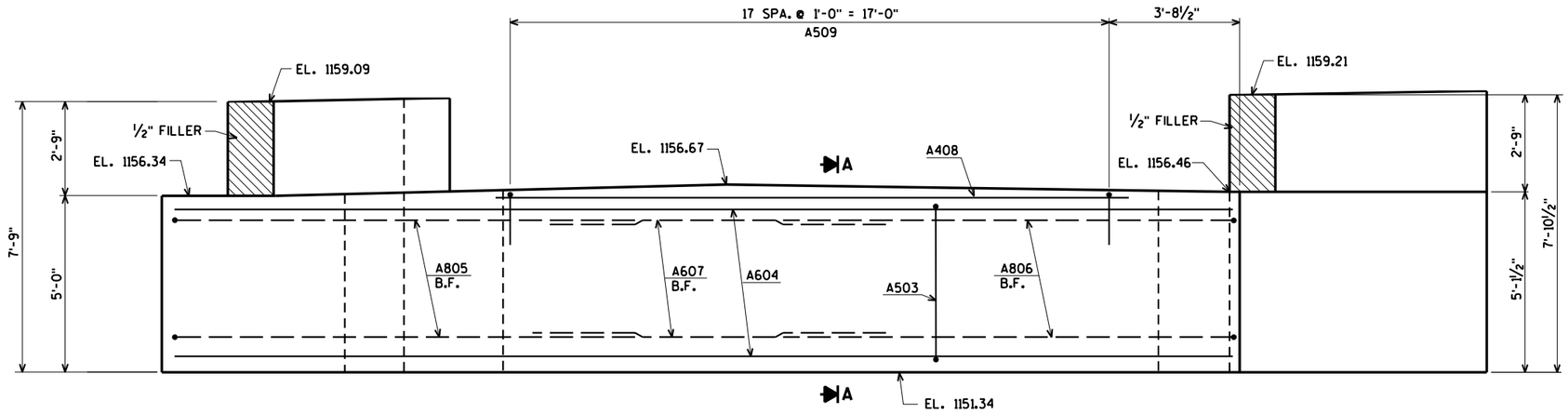
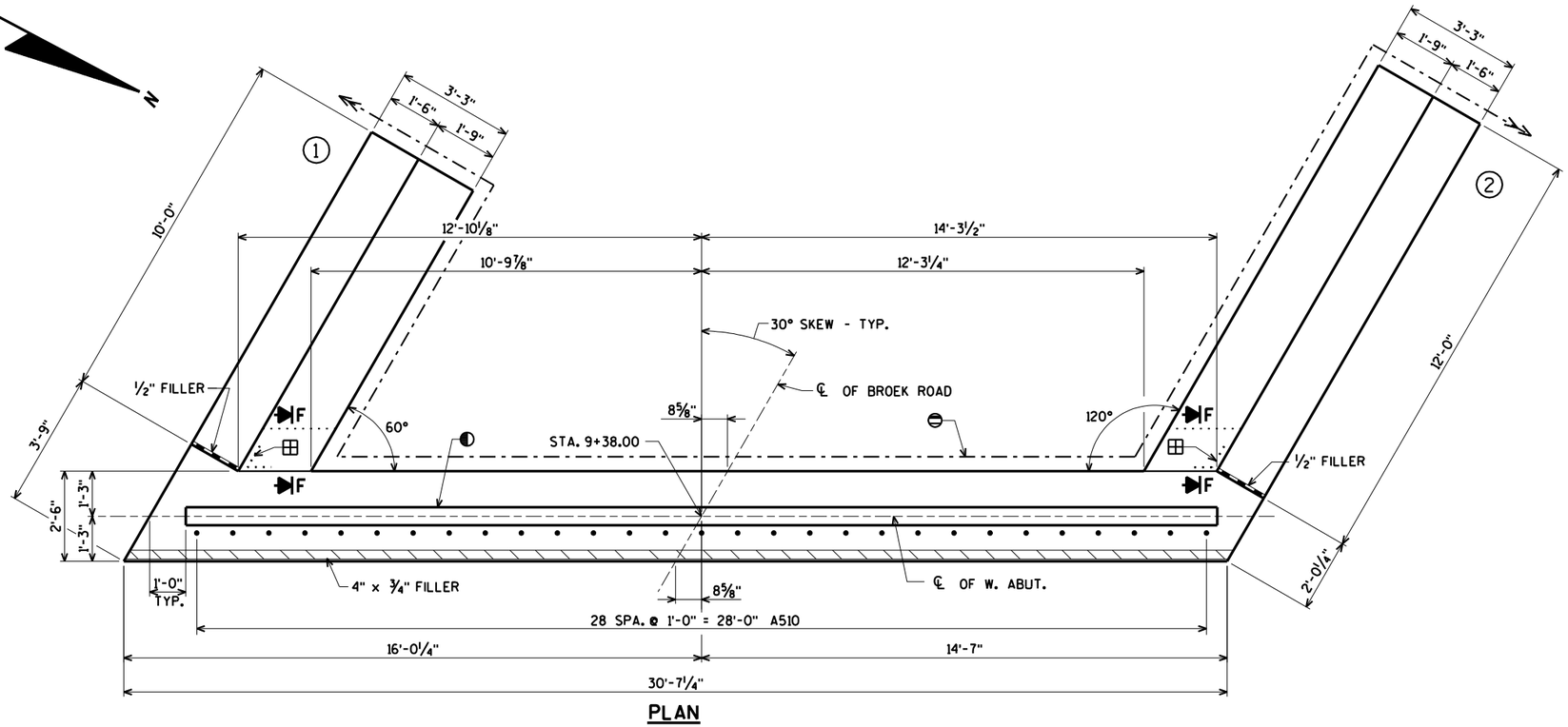
STATE PROJECT NUMBER
7834-00-70

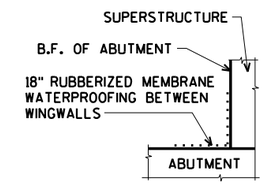
NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



ELEVATION
(LOOKING WEST)



PLAN



SECTION F

FOR SECTION A SEE SHEET 7.

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 3. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

⊞ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WINGWALL.

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-390

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WEST ABUTMENT

SHEET 5 OF 13
29

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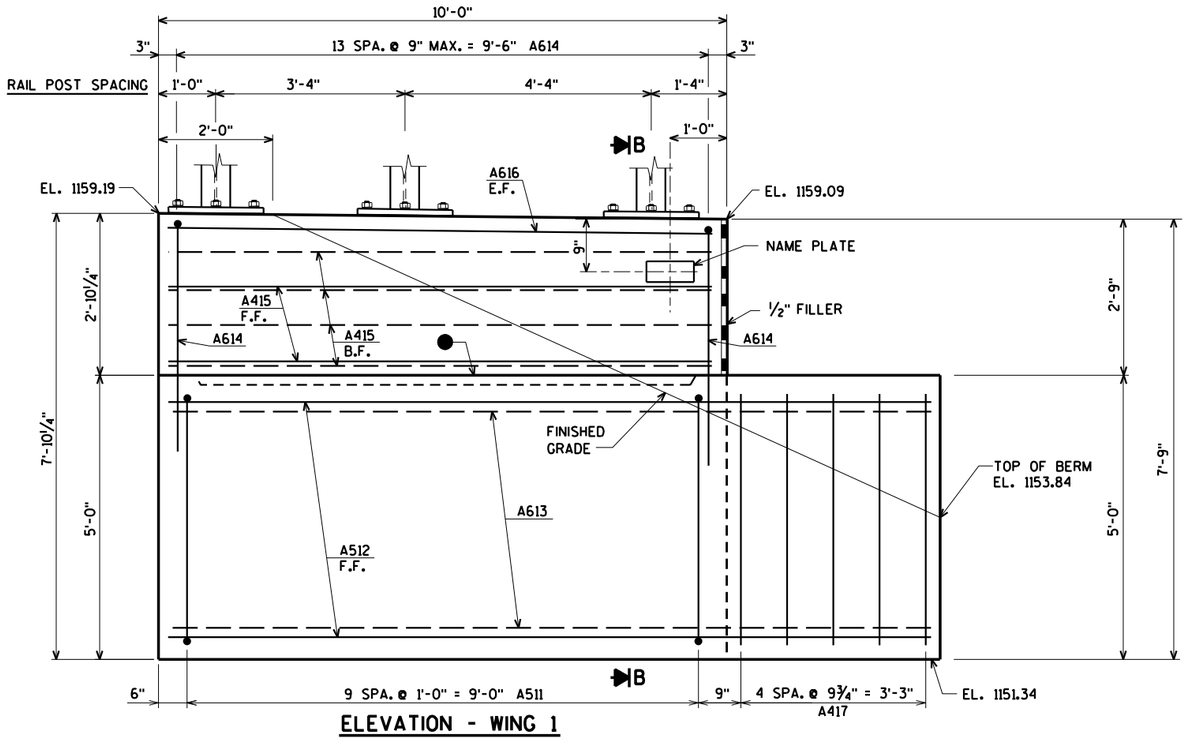
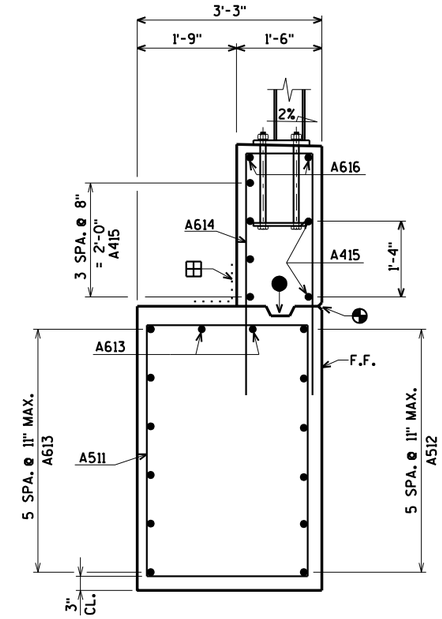
STATE PROJECT NUMBER

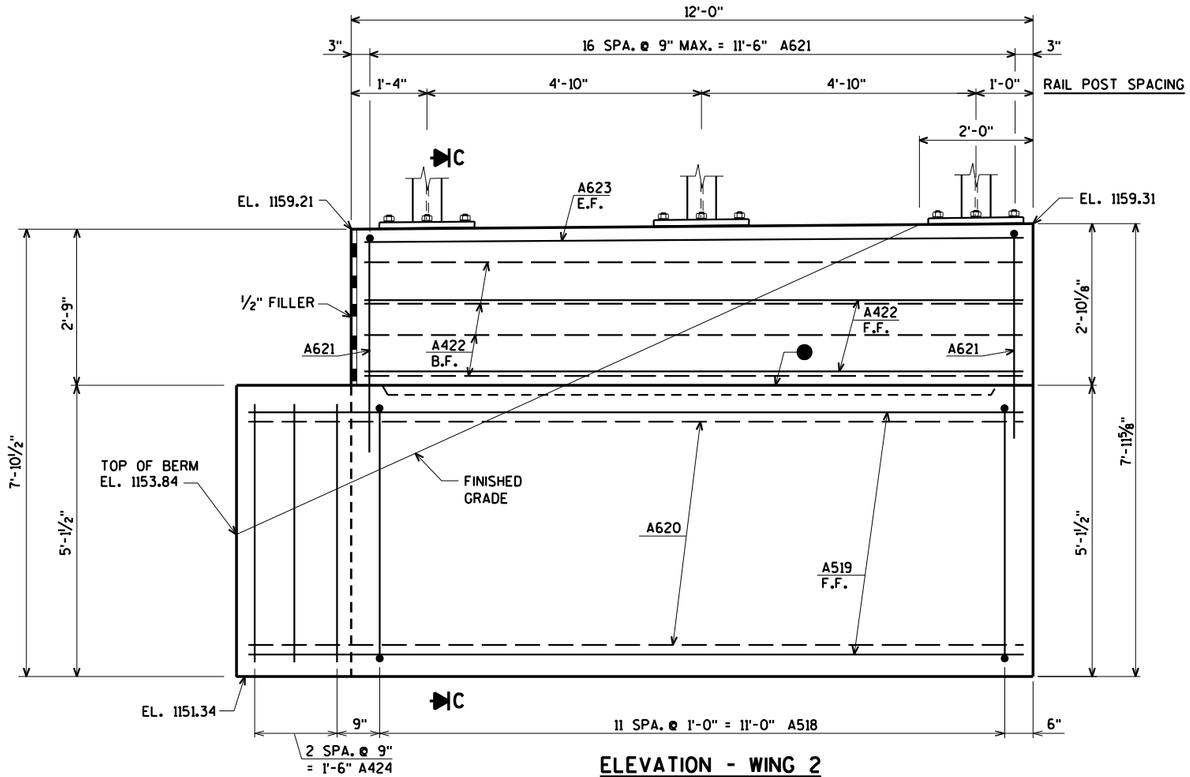
7834-00-70



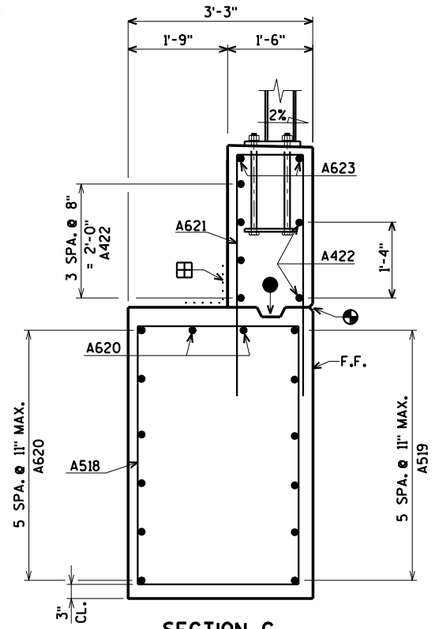
ELEVATION - WING 1



SECTION B



ELEVATION - WING 2



SECTION C

- ● ¾" "V" GROOVE ON FRONT FACE OF WINGWALL. ONLY REQUIRED IF OPTIONAL CONSTRUCTION JOINT IS USED.
- ● OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- ⊞ 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HOIRZONTAL AND VERTICAL JOINTS ON BACKFACE.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-390

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WEST ABUTMENT WING DETAILS

SHEET 6 OF 13
30

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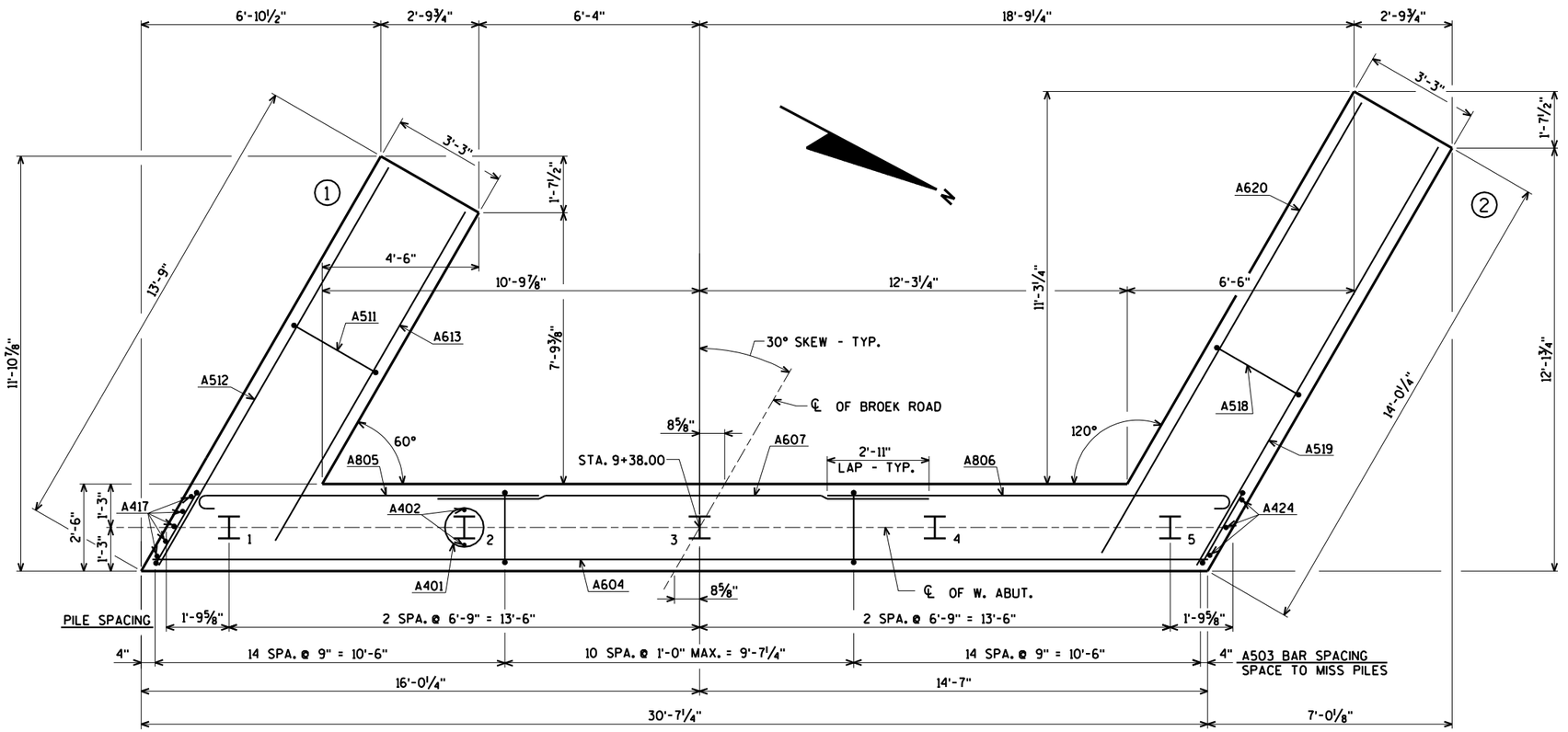
STATE PROJECT NUMBER

7834-00-70

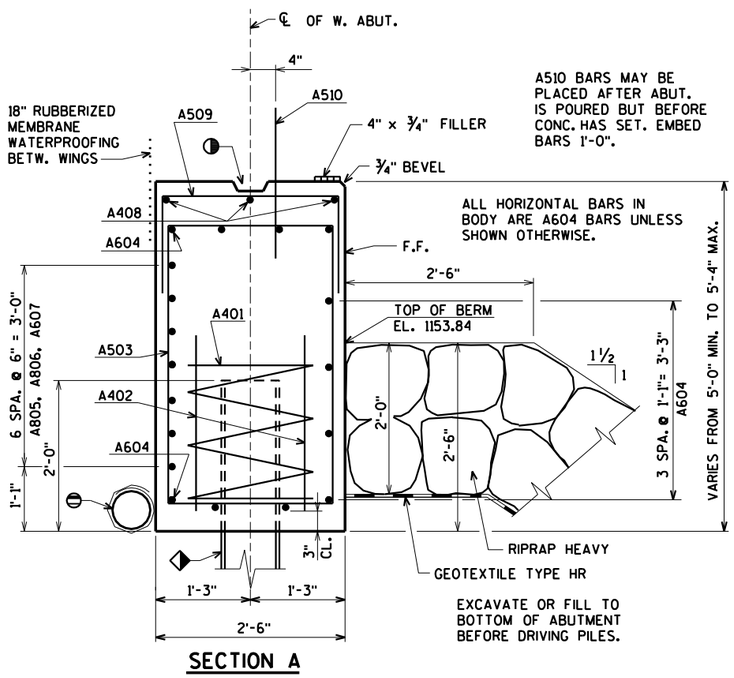
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,560# COATED 1,900# UNCOATED LOCATION
A401		5	28-0	X		BODY @ PILES
A402		10	2-3			BODY @ PILES
A503		39	14-2	X		BODY VERT.
A604		11	30-1			BODY HORIZ.
A805		7	10-11	X		BODY HORIZ. @ WING 1 B.F.
A806		7	12-11	X		BODY HORIZ. @ WING 2 B.F.
A607		7	14-2			BODY HORIZ. BETW. WINGS B.F.
A408		3	18-0			BODY HORIZ. TOP
A509		18	4-11	X		BODY VERT. TOP
A510	X	29	2-0			BODY DOWELS
A511	X	10	15-8	X		WING 1 VERT.
A512	X	6	13-2			WING 1 HORIZ. F.F.
A613	X	8	10-11			WING 1 HORIZ. B.F. & TOP
A614	X	14	10-6	X		WING 1 VERT.
A415	X	6	9-8			WING 1 HORIZ. E.F.
A616	X	2	9-8			WING 1 HORIZ. E.F.
A417	X	5	4-7			BODY VERT. END @ WING 1
A518	X	12	15-10	X		WING 2 VERT.
A519	X	6	13-7			WING 2 HORIZ. F.F.
A620	X	8	14-11			WING 2 HORIZ. B.F. & TOP
A621	X	17	10-6	X		WING 2 VERT.
A422	X	6	11-8			WING 2 HORIZ. E.F.
A623	X	2	11-8			WING 2 HORIZ. E.F.
A424	X	3	4-8			BODY VERT. END @ WING 2

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PILE LAYOUT



SECTION A

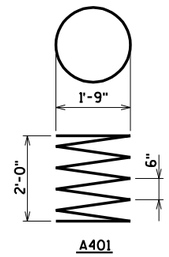
FOR LOCATION OF SECTION A SEE SHEET 5.

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 3. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

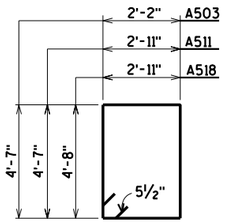
◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" × 6".

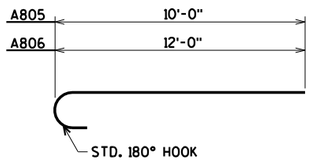
◆ ABUTMENT TO BE SUPPORTED ON HP 10 × 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE. ESTIMATED LENGTH 30'-0".

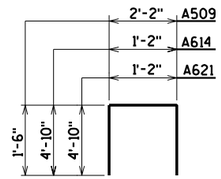
FOR PILE SPLICE DETAIL SEE SHEET 3.



A401







NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-390

DRAWN BY CLP | PLANS CK'D. ZSS

WEST ABUTMENT PILE LAYOUT & BILL OF BARS

SHEET 7 OF 13
31

ORIGINAL PLANS PREPARED BY

AYRES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com

7/12/2021
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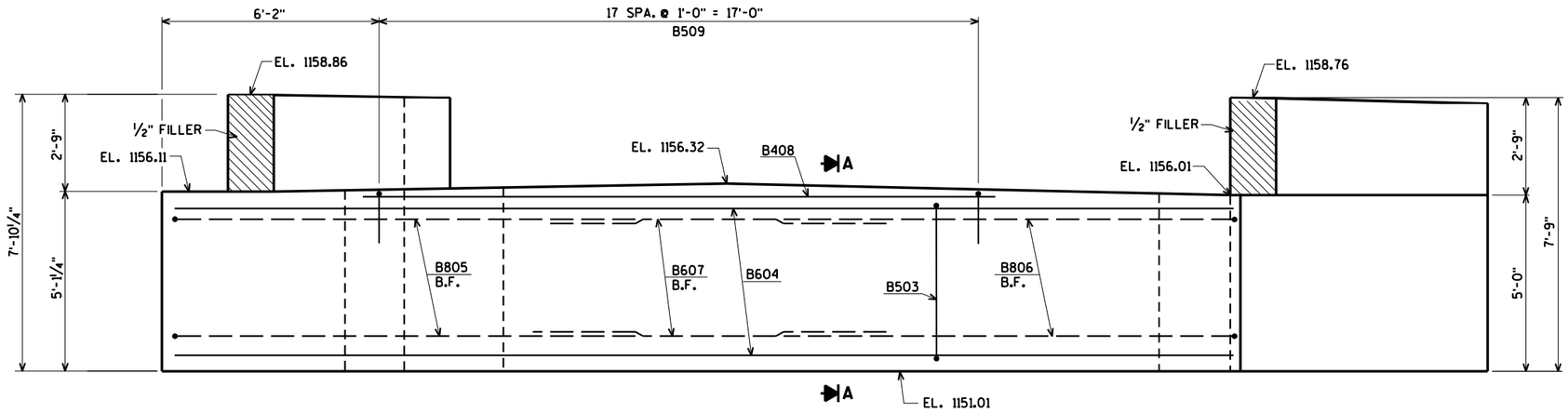
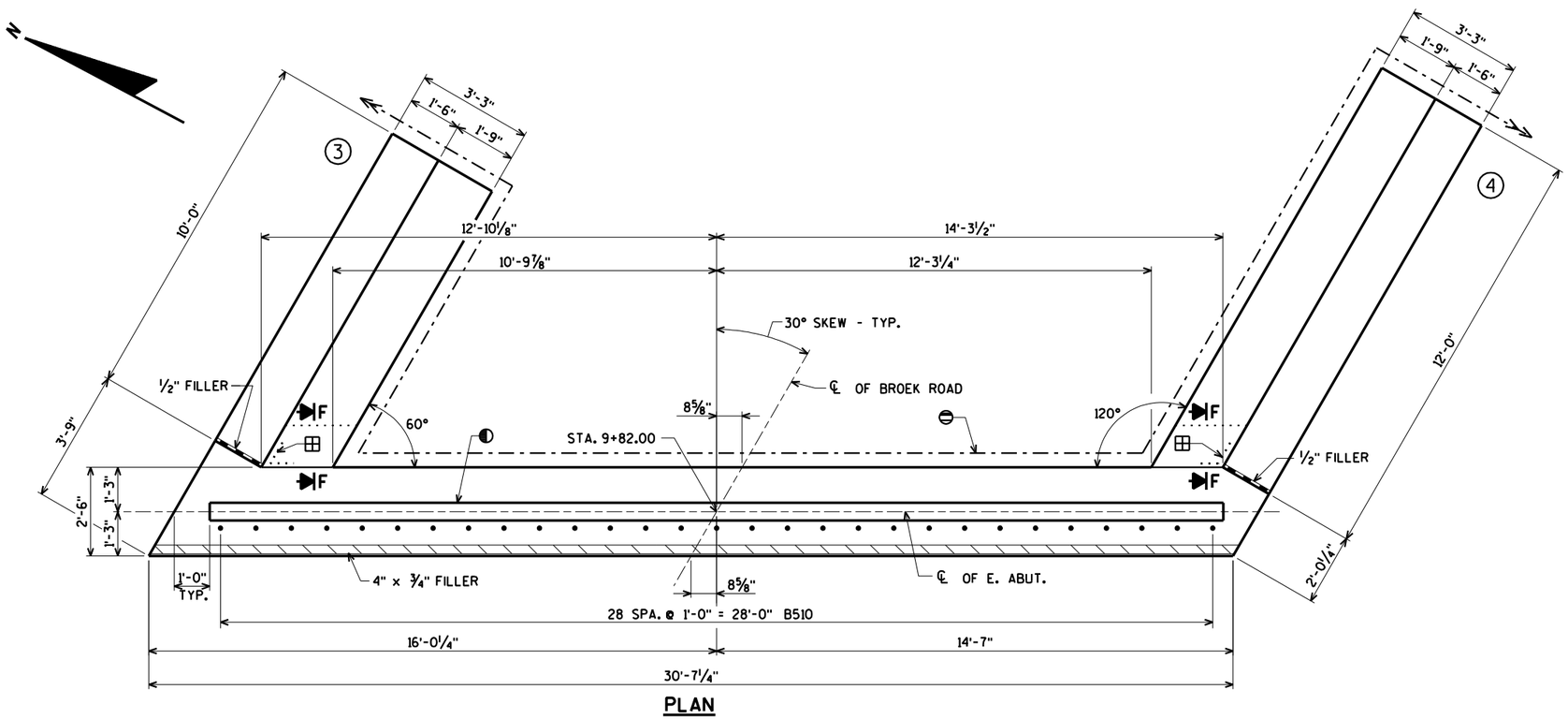
8

STATE PROJECT NUMBER
7834-00-70

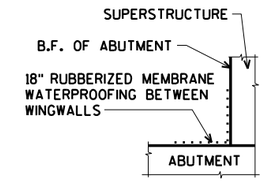
NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF ½" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD ⅛" BELOW SURFACE OF CONCRETE).



ELEVATION
(LOOKING EAST)



PLAN



SECTION F

FOR SECTION A SEE SHEET 10.

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 3. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" x 6".

⊞ VERTICAL 18" RUBBERIZED MEMBRANE WATERPROOFING TO EXTEND FROM BRIDGE SEAT TO TOP OF WINGWALL.

FOR PILE SPLICE DETAIL SEE SHEET 3.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
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STRUCTURE B-10-390

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EAST ABUTMENT

SHEET 8 OF 13
32

ORIGINAL PLANS PREPARED BY
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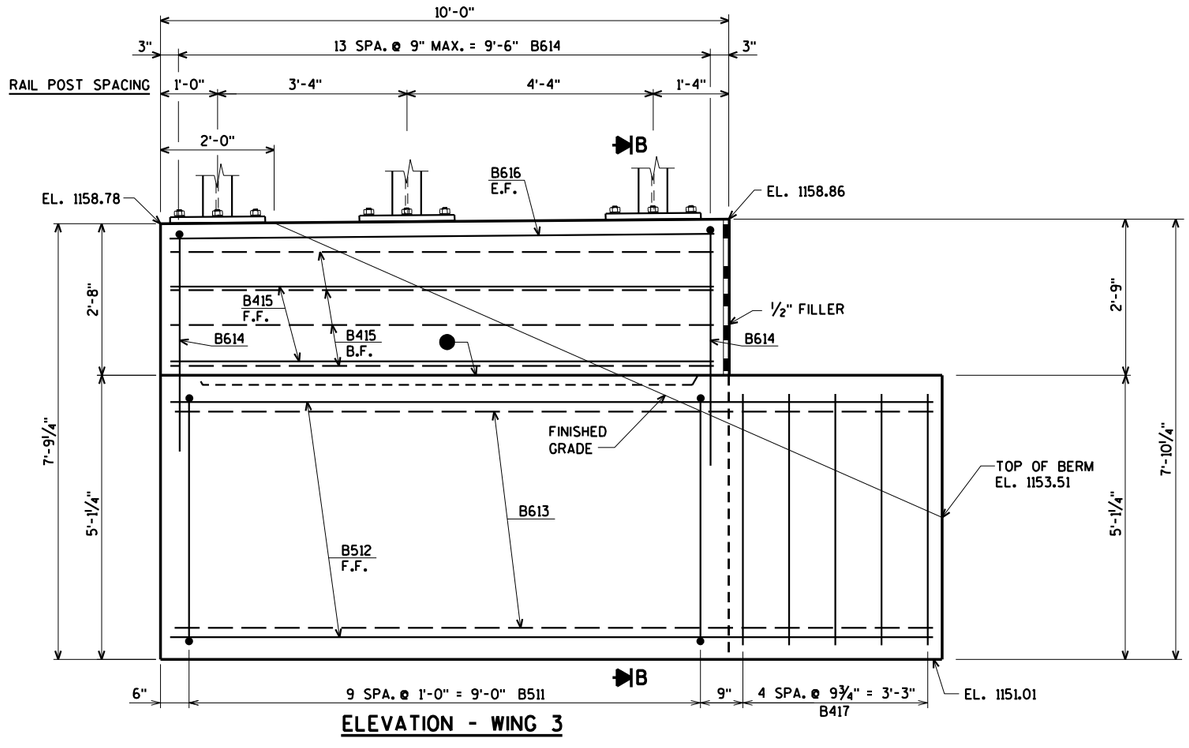
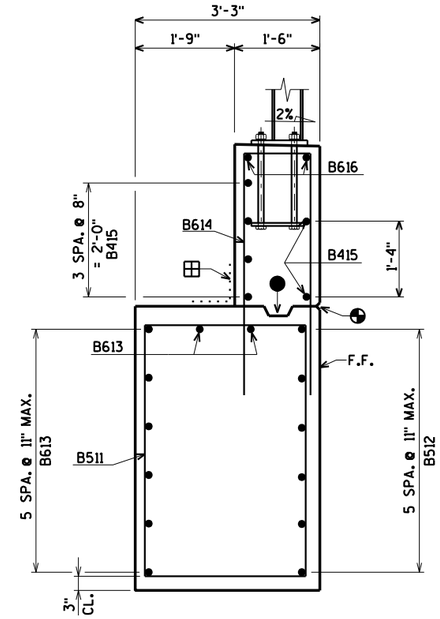
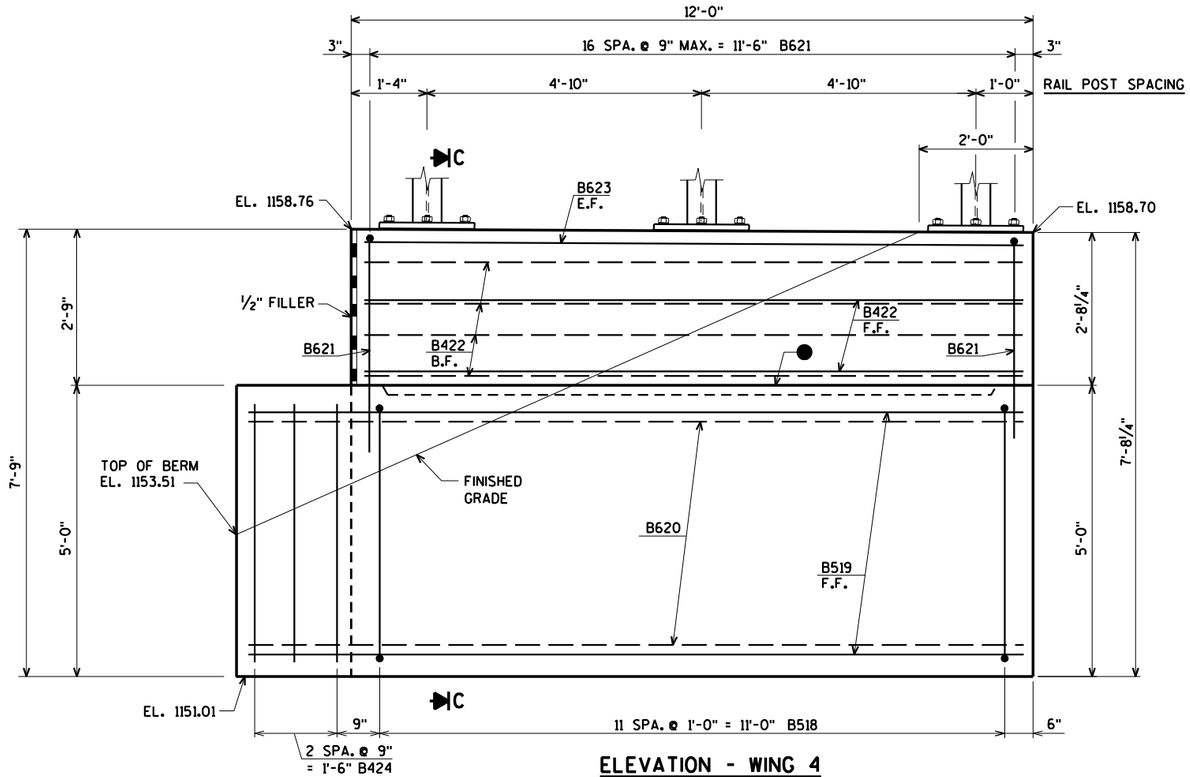


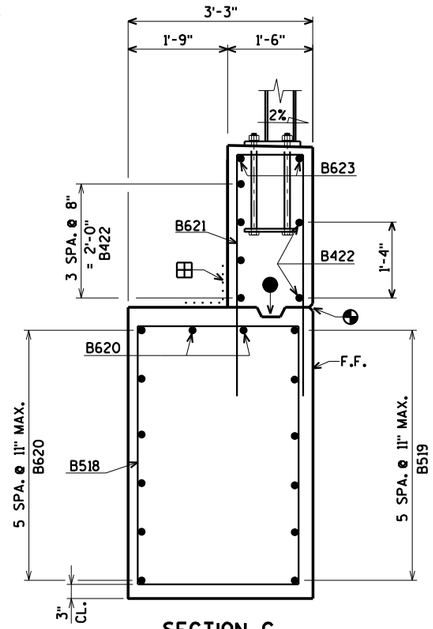
ELEVATION - WING 3



SECTION B



ELEVATION - WING 4



SECTION C

- ¾" "V" GROOVE ON FRONT FACE OF WINGWALL. ONLY REQUIRED IF OPTIONAL CONSTRUCTION JOINT IS USED.
- OPT. CONST. JOINT FORMED BY A BEVELED 2" x 6" KEYWAY WITH MEMBRANE ON BACKFACE.
- 18" RUBBERIZED MEMBRANE WATERPROOFING. SEAL ALL HOIRZONTAL AND VERTICAL JOINTS ON BACKFACE.

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EAST ABUTMENT WING DETAILS

SHEET 9 OF 13
33

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STATE PROJECT NUMBER

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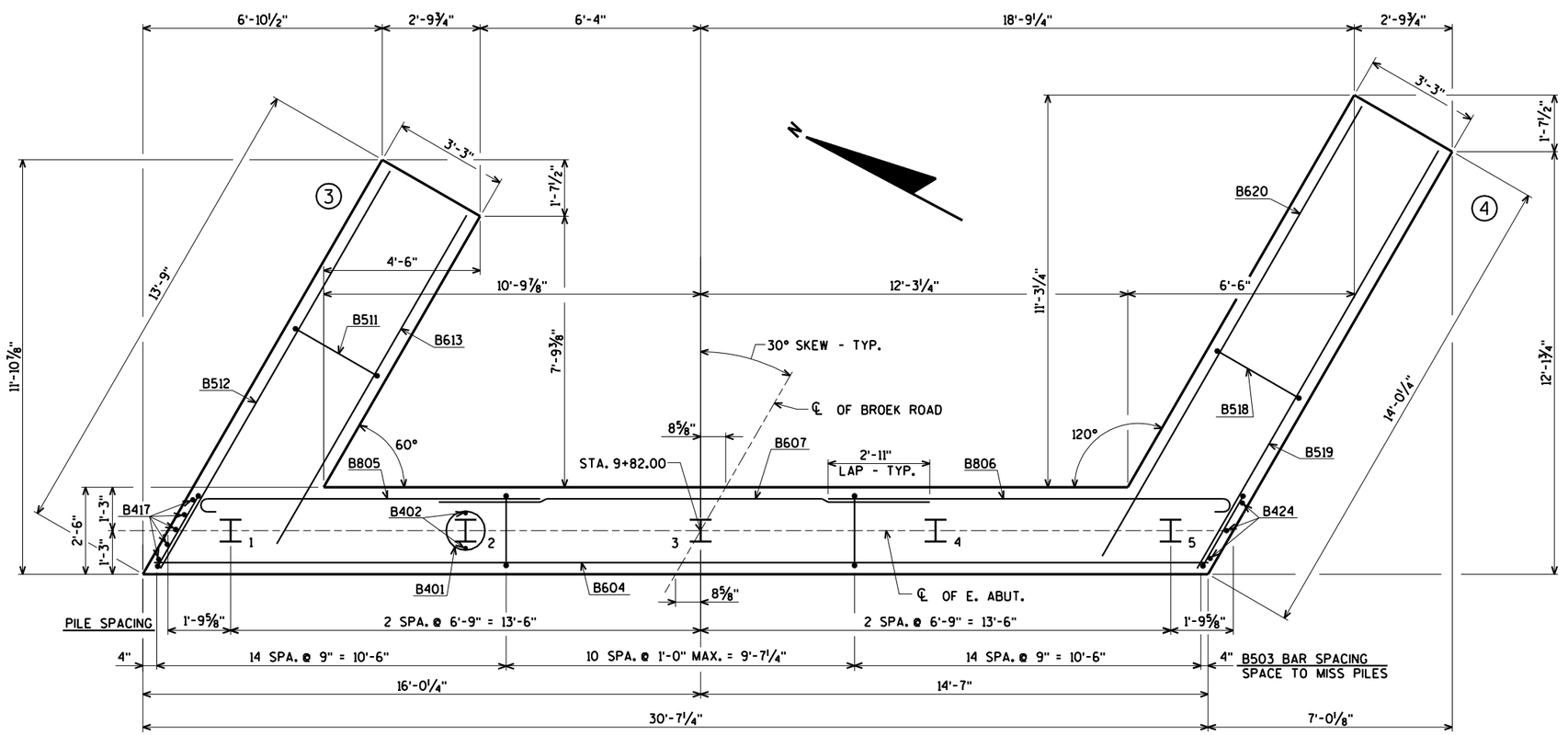
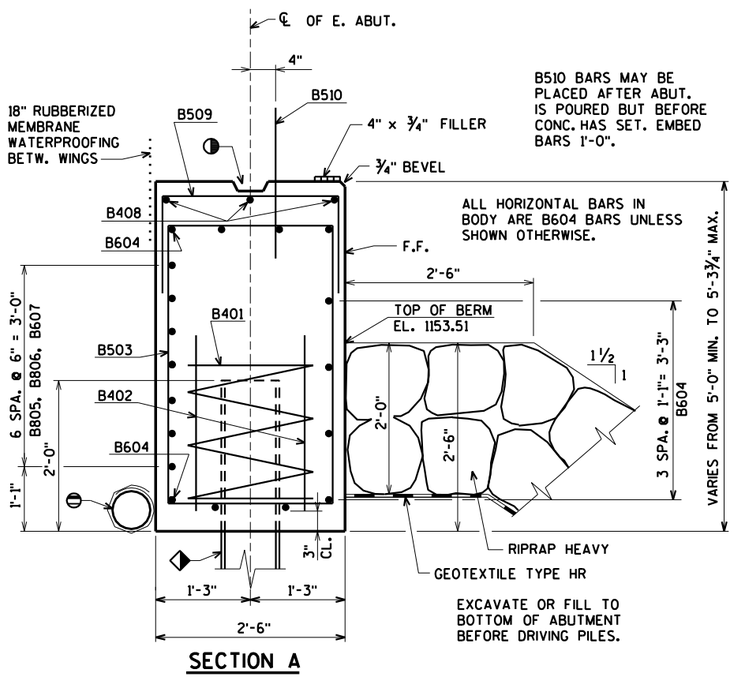
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR SERIES	1,560# COATED 1,900# UNCOATED LOCATION
B401		5	28-0	X		BODY @ PILES
B402		10	2-3			BODY @ PILES
B503		39	14-2	X		BODY VERT.
B604		11	30-1			BODY HORIZ.
B805		7	10-11	X		BODY HORIZ. @ WING 3 B.F.
B806		7	12-11	X		BODY HORIZ. @ WING 4 B.F.
B607		7	14-2			BODY HORIZ. BETW. WINGS B.F.
B408		3	18-0			BODY HORIZ. TOP
B509		18	4-11	X		BODY VERT. TOP
B510	X	29	2-0			BODY DOWELS
B511	X	10	15-10	X		WING 3 VERT.
B512	X	6	13-2			WING 3 HORIZ. F.F.
B613	X	8	10-11			WING 3 HORIZ. B.F. & TOP
B614	X	14	10-6	X		WING 3 VERT.
B415	X	6	9-8			WING 3 HORIZ. E.F.
B616	X	2	9-8			WING 3 HORIZ. E.F.
B417	X	5	4-8			BODY VERT. END @ WING 3
B518	X	12	15-8	X		WING 4 VERT.
B519	X	6	13-7			WING 4 HORIZ. F.F.
B620	X	8	14-11			WING 4 HORIZ. B.F. & TOP
B621	X	17	10-6	X		WING 4 VERT.
B422	X	6	11-8			WING 4 HORIZ. E.F.
B623	X	2	11-8			WING 4 HORIZ. E.F.
B424	X	3	4-7			BODY VERT. END @ WING 4

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PILE LAYOUT



SECTION A

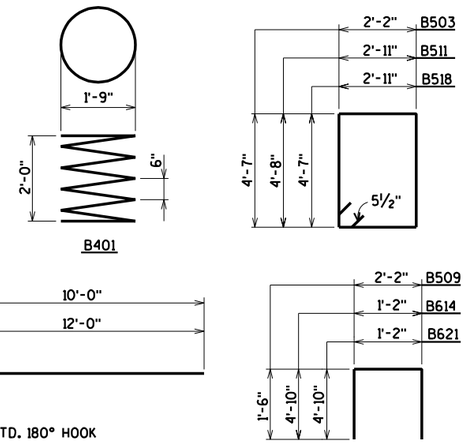
FOR LOCATION OF SECTION A SEE SHEET 8.

⊖ PIPE UNDERDRAIN WRAPPED 6-INCH. SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN AS DETAILED ON SHEET 3. RODENT SHIELD TO BE INCIDENTAL TO BID PRICE OF "PIPE UNDERDRAIN WRAPPED 6-INCH".

◑ KEYED CONST. JOINT - FORMED BY A BEVELED 2" × 6".

◑ ABUTMENT TO BE SUPPORTED ON HP 10 × 42 STEEL PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 140 TONS PER PILE. ESTIMATED LENGTH 25'-0".

FOR PILE SPLICE DETAIL SEE SHEET 3.



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-390

DRAWN BY CLP | PLANS CK'D. ZSS

EAST ABUTMENT PILE LAYOUT & BILL OF BARS

SHEET 10 OF 13
34

ORIGINAL PLANS PREPARED BY
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www.AyresAssociates.com

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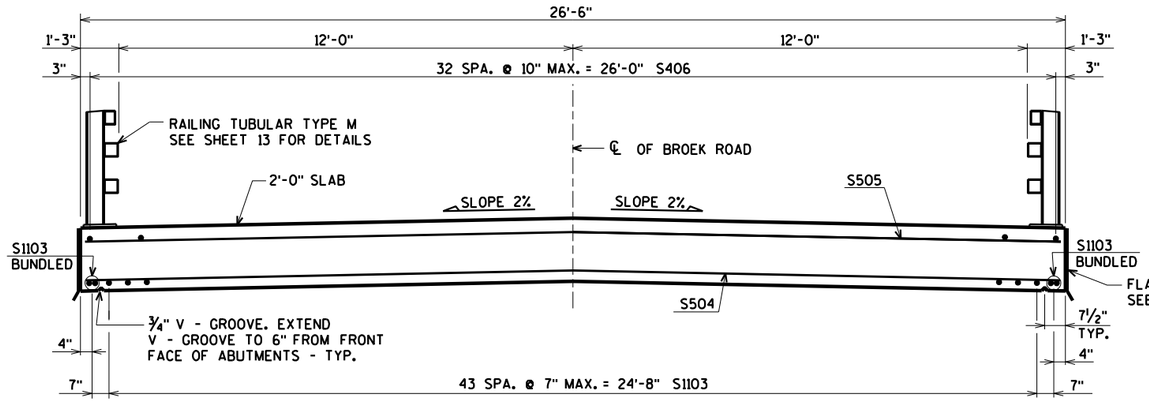


TYPICAL SECTION THRU BRIDGE

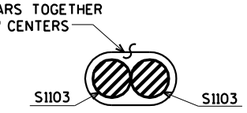
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

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

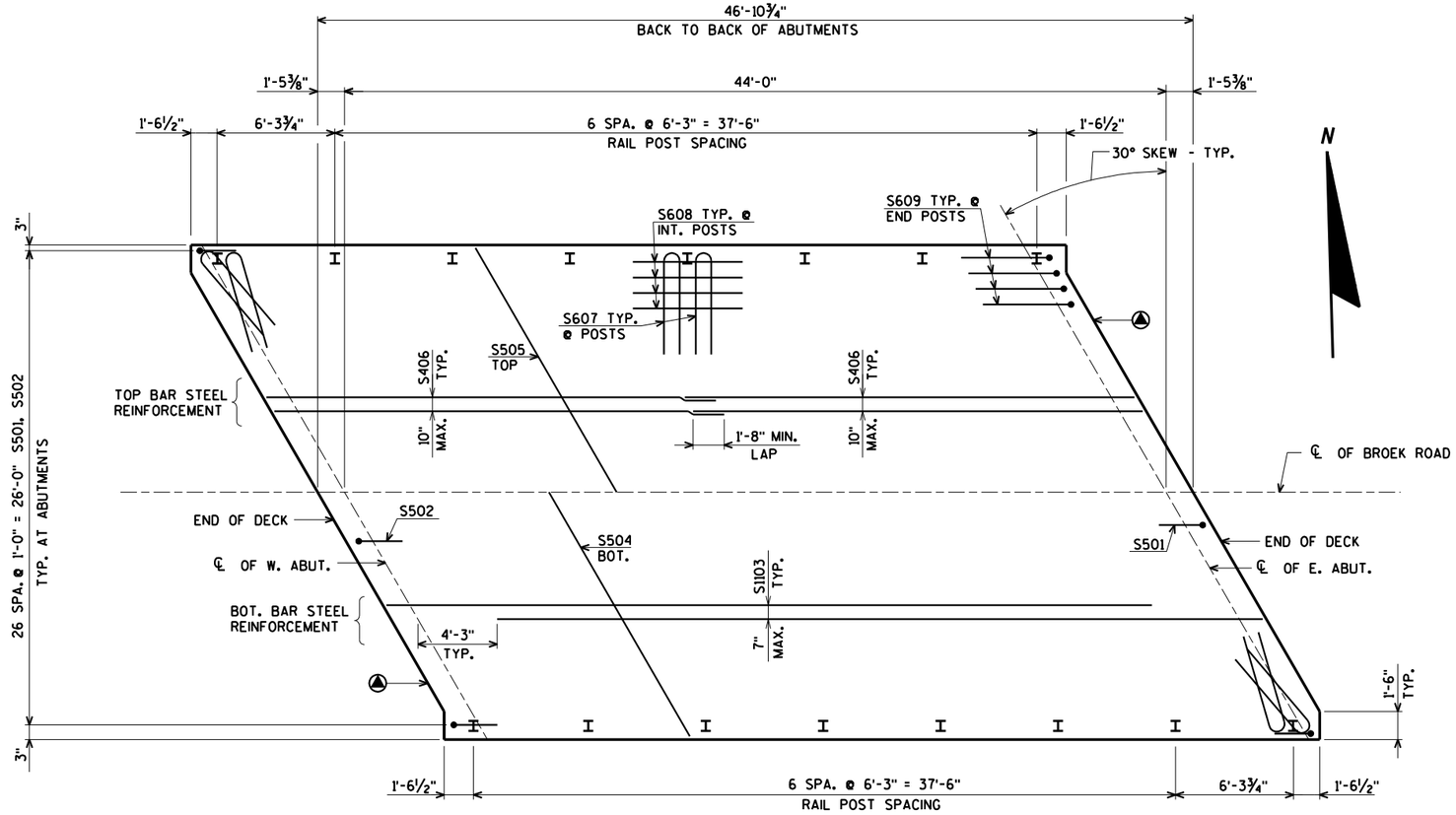
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED BAR	SERIES	16,790# COATED LOCATION
S501	X	54	6-3	X			SLAB @ ABUT.
S502	X	54	3-9	X			SLAB @ ABUT.
S1103	X	48	41-0		X		SLAB LONG. BOT.
S504	X	66	30-2				SLAB TRANS. BOT.
S505	X	47	30-2				SLAB TRANS. TOP
S406	X	66	24-1				SLAB LONG. TOP
S607	X	32	12-0	X			SLAB @ RAIL POSTS
S608	X	48	6-0				SLAB @ INT. RAIL POSTS
S609	X	16	6-0	X			SLAB @ END RAIL POSTS

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.

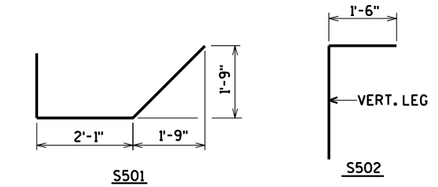


BUNDLING DETAIL

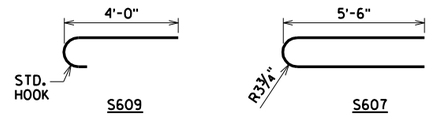


PLAN

PROTECTION ANGLE - FOR DETAIL SEE SHEET 3



S501 S502



S609 S607

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-390

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SUPERSTRUCTURE

SHEET 11 OF 13
35

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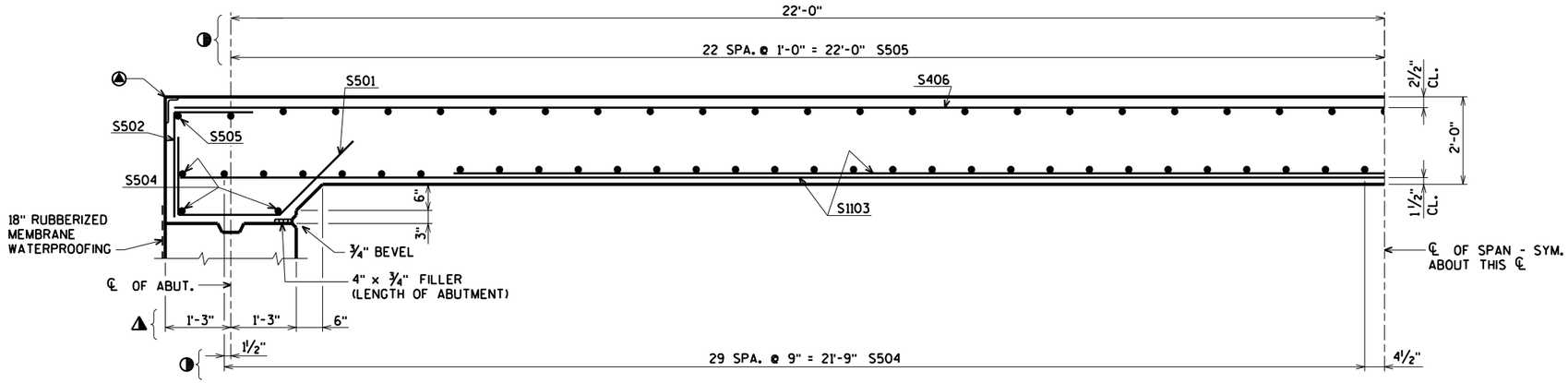
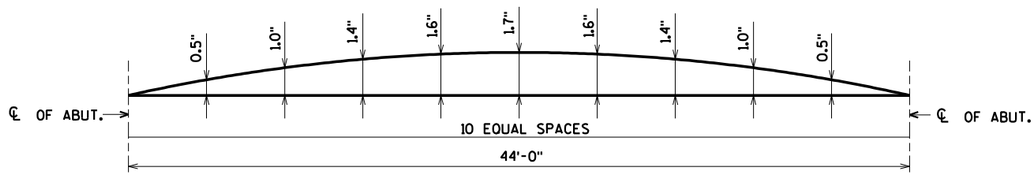


PART LONGITUDINAL SECTION



CAMBER DIAGRAM

CAMBER SPAN AS SHOWN TO PROVIDE FOR DEAD LOAD DEFLECTION & FUTURE CREEP. CAMBER DOES NOT INCLUDE ALLOWANCE FOR FORM SETTLEMENT.

TOP OF DECK ELEVATIONS

LOCATION	℄ OF W. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ OF E. ABUT.
N. EDGE OF SLAB	1159.21	1159.18	1159.14	1159.11	1159.07	1159.04	1159.00	1158.97	1158.93	1158.90	1158.86
℄ OF STRUCTURE	1159.42	1159.38	1159.35	1159.31	1159.28	1159.24	1159.20	1159.17	1159.14	1159.10	1159.07
S. EDGE OF SLAB	1159.09	1159.05	1159.02	1158.98	1158.95	1158.91	1158.88	1158.85	1158.82	1158.79	1158.76

ELEVATIONS SHOWN ARE FINISHED DECK AND DO NOT INCLUDE ALLOWANCES OF DEAD LOAD DEFLECTION AND FUTURE CREEP.

⑧ PROTECTION ANGLE - FOR DETAIL SEE SHEET 3.

△ DIMENSIONS MEASURED NORMAL TO ℄ OF SUBSTRUCTURE.

◑ DIMENSIONS MEASURED ALONG ℄ OF BROEK ROAD.

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	℄ OF W. ABUT.	5/10 PTS.	℄ OF E. ABUT.
N. EDGE OF SLAB			
℄ OF STRUCTURE			
S. EDGE OF SLAB			

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-390

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SUPERSTRUCTURE DETAILS

SHEET 12 OF 13
36

ORIGINAL PLANS PREPARED BY
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STATE PROJECT NUMBER

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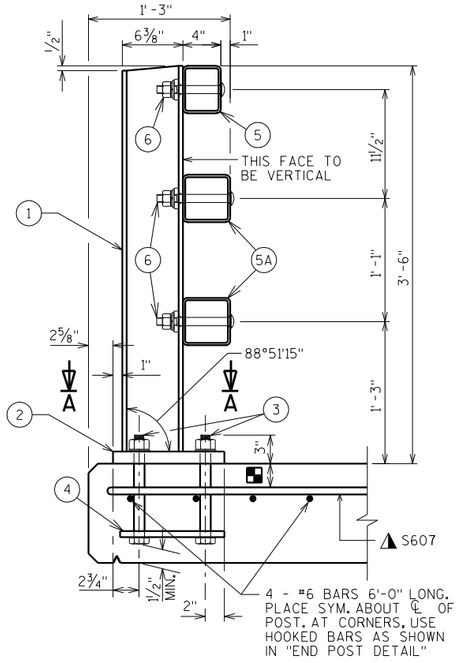
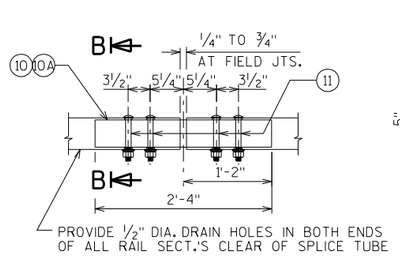
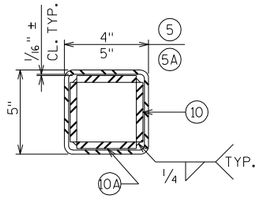


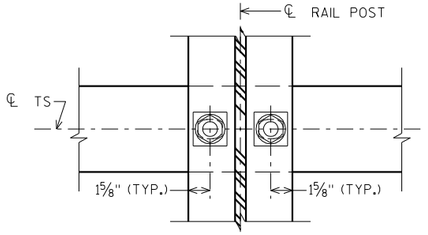
SECTION THRU RAILING ON DECK



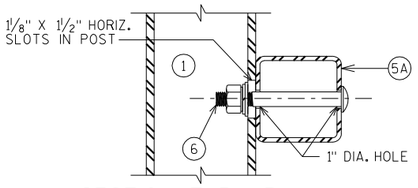
FIELD ERECTION JOINT DETAIL



SECTION B-B



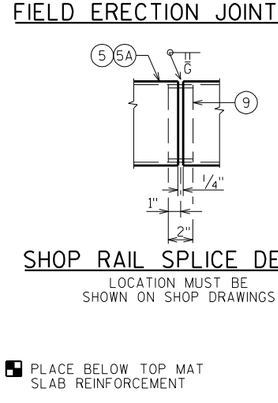
SECTION THRU POST WEB



SECTION THRU RAIL

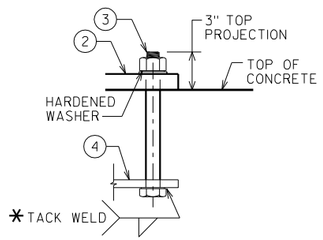
NOTE: CONNECTIONS AT LOWER RAILS SHOWN. CONNECTIONS AT TOP RAIL SIMILAR.

TYPICAL RAIL TO POST CONNECTIONS



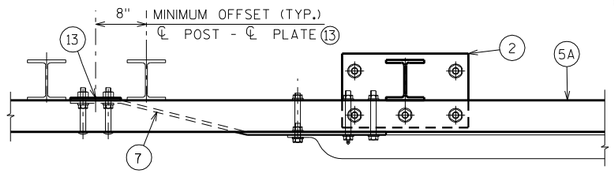
SHOP RAIL SPLICE DETAIL

LOCATION MUST BE SHOWN ON SHOP DRAWINGS



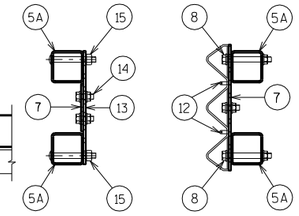
ANCHOR BOLTS

■ PLACE BELOW TOP MAT SLAB REINFORCEMENT



TOP VIEW AT END POST

THRIE BEAM RAIL ATTACHMENT

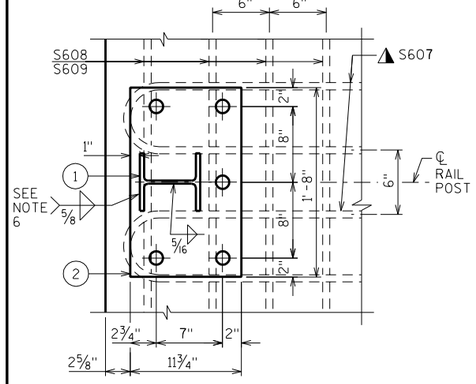


LEGEND

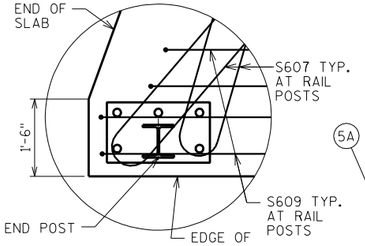
1. W6 x 25 WITH 1 1/8" X 1 1/2" HORIZ. SLOTS ON EACH SIDE OF POST FOR BOLT NO. 6. CUT BOTTOM OF POST TO MATCH CROSS SLOPE OF ROADWAY. PLACE POST VERTICAL. PLACE POSTS NORMAL TO GRADE LINE.
2. PLATE 1 1/4" x 11 3/4" x 1'-8" WITH 1 7/16" DIA. OVERSIZED HOLES FOR ANCHOR BOLTS NO. 3. WELD TO NO. 1 AS SHOWN.
3. ASTM A449 - 1 1/8" DIA. ANCHOR BOLTS WITH NUT AND HARDENED WASHER (ALL GALVANIZED). 5 REQ'D. PER POST. THREAD 3" AND PLACE NORMAL TO PLATE NO. 2. CHAMFER TOP OF BOLTS BEFORE THREADING. USE 1'-9" LONG IN ABUTMENT WINGS. AT POSTS ON CONCRETE SLAB SUPERSTRUCTURES WHERE THE SLAB THICKNESS IS > 16" USE 1'-3" LONG. ~~USE 10 3/4" LONG AT ALL OTHER LOCATIONS.~~ (AN EQUIVALENT THREADED ROD WITH NUTS AND HARDENED WASHERS MAY BE SUBSTITUTED FOR ANCHOR BOLTS IN WINGS IF REQ'D. FOR CONSTRUCTABILITY.)
4. 5/8" x 11" x 1'-8" ANCHOR PLATE (GALVANIZED) WITH 1 3/16" DIA. HOLES FOR ANCHOR BOLTS NO. 3
5. TS 5 x 4 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
5A. TS 5 x 5 x 0.25 STRUCTURAL TUBING. ATTACH TO NO. 1 WITH NO. 6.
6. 7/8" DIA. A325 SLOTTED ROUND HEAD BOLT WITH NUT, 3/16" X 1 5/8" X 1 5/8" MIN. WASHER, AND LOCK WASHER (2 REQ'D. AT EACH RAIL TO POST LOCATION.)
7. 1/2" THK. BACK-UP PLATE WITH 2 - 7/8" X 1 1/2" THREADED SHOP WELDED STUDS (NO. 12). BOLT TO RAIL AS SHOWN IN DETAIL. REQUIRED AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYMMETRICALLY ABOUT TUBES NO. 5A.
8. 1" DIA. HOLES IN PLATE NO. 7 & TUBES NO. 5A FOR 7/8" DIA. A325 BOLTS WITH HEX NUTS AND WASHERS. 6 HOLES IN TUBES AND PLATE NO. 7.
9. SPLICE SLEEVE FABRICATED FROM 1/4" PLATE. PROVIDE "SLIDING FIT".
10. 3/8" X 3 5/8" X 2'-4" PLATE. 2 PER RAIL. USED IN NO. 5 & 5A.
10A. 3/8" X 2 5/8" X 2'-4" PLATE USED IN NO. 5, 3/8" X 3 5/8" X 2'-4" PLATE USED IN NO. 5A. 2 PER RAIL.
11. 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER, AND LOCK WASHER. USE 15/16" X 1 1/4" LONGIT. SLOTTED HOLES AT FIELD JOINTS ~~AND 15/16" X 2 1/4" MIN. LONGIT. SLOTTED HOLES AT EXP. JOINTS~~ IN PLATE NO. 10A.
12. 7/8" DIA. X 1 1/2" LONG THREADED SHOP WELDED STUDS (2 REQ'D).
13. 3/8" X 8" X 1'-6" PLATE. BOLT TO RAIL AS SHOWN IN DETAIL. REQ'D. AT THRIE BEAM GUARD RAIL ATTACHMENTS ONLY. PLACE SYM. ABOUT TUBES NO. 5A.
14. 7/8" DIA. X 2" LONG A325 HEX BOLT WITH NUT AND WASHER (5 REQ'D.).
15. 1" DIA. HOLES IN TUBES NO. 5A FOR 7/8" DIA. A325 ROUND HEAD BOLT WITH NUT, WASHER AND LOCK WASHER (4 REQ'D.). 4 HOLES IN TUBES.

GENERAL NOTES

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

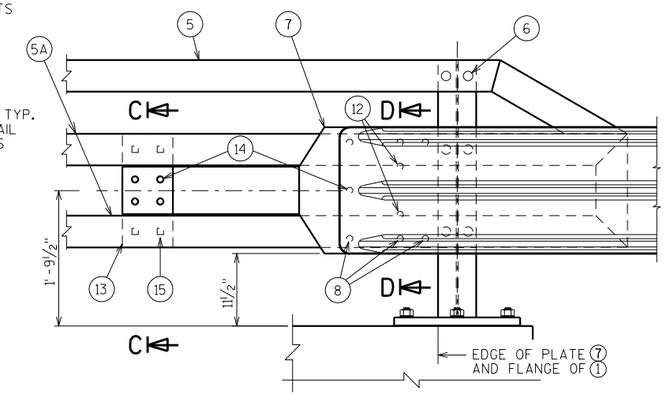


SECTION A-A



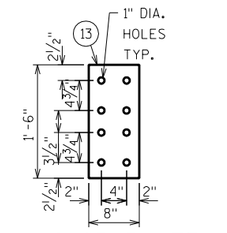
END POST DETAIL

REINFORCEMENT AT CORNERS



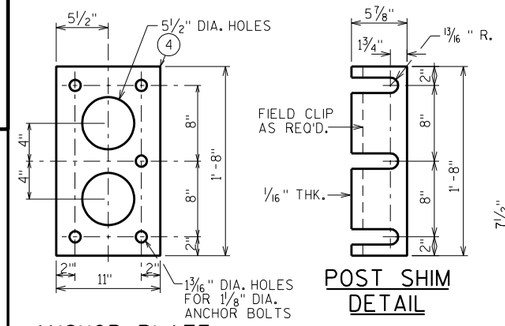
DETAIL AT END POST

THRIE BEAM RAIL ATTACHMENT



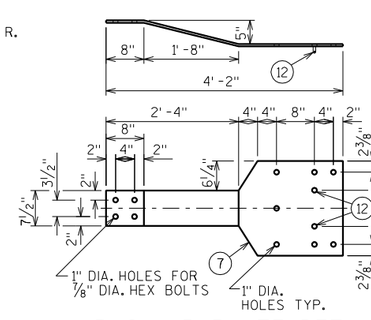
ANCHOR PLATE

AT BEAM GUARD ATTACHMENT



ANCHOR PLATE

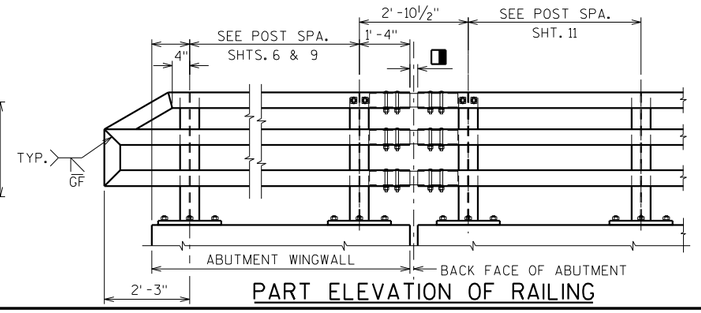
AT RAIL TO DECK CONNECTION



POST SHIM DETAIL

BACK-UP PLATE DETAIL

AT BEAM GUARD ATTACHMENT



PART ELEVATION OF RAILING

◨ 1/4" TO 3/4" OPENING AT A1 ABUTMENTS.

◭ TIE TO TOP MAT OF STEEL.

✱ ANCHOR BOLT ASSEMBLY MAY BE TACK WELDED, EITHER IN THE SHOP, OR IN THE FIELD AFTER THE ANCHOR PLATE IS PLACED.

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

STRUCTURE B-10-390

DRAWN BY CLP | PLANS CK'D. ZSS

TUBULAR STEEL RAILING TYPE 'M'

SHEET 13 OF 13

37

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

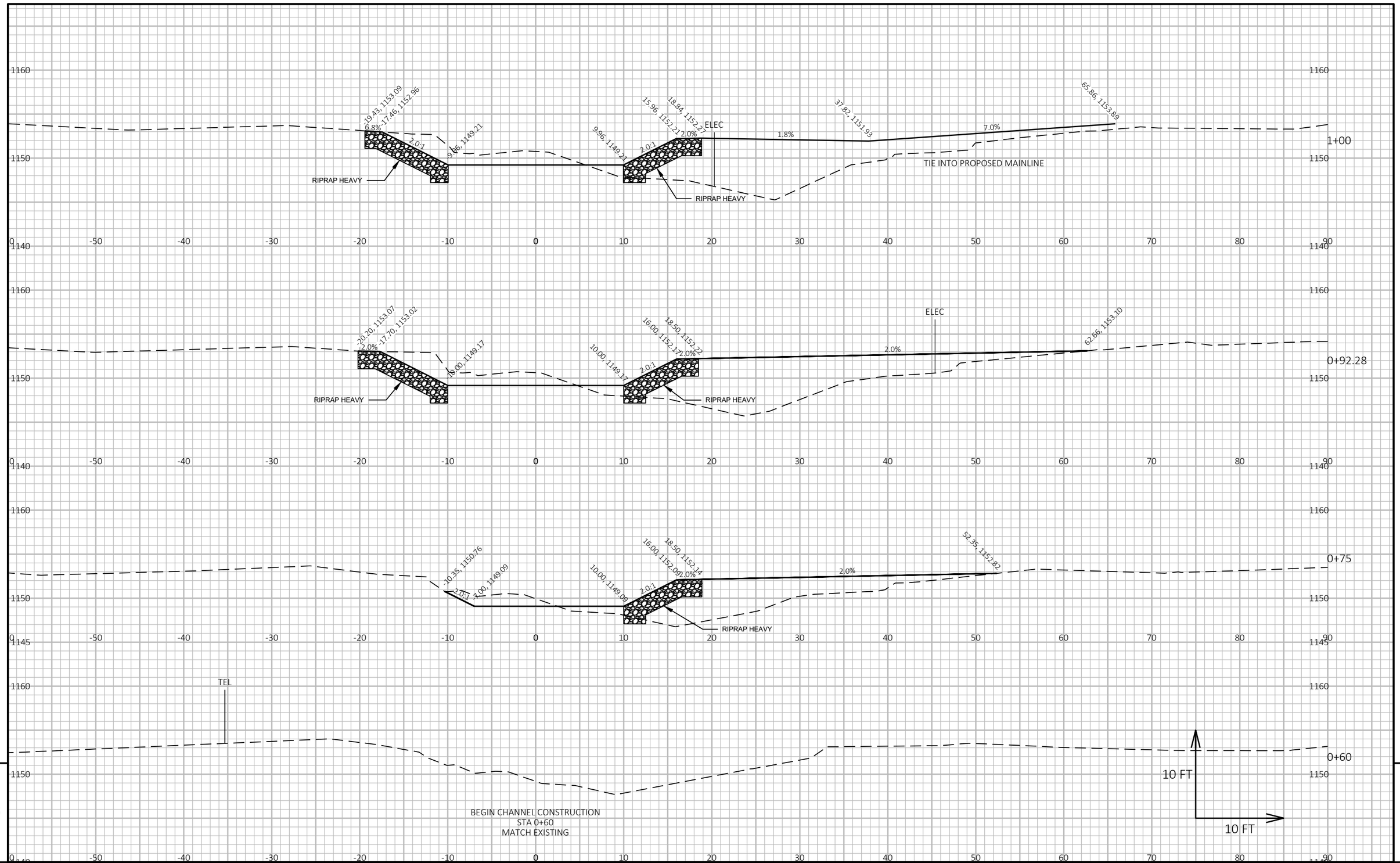
8

8

SF EAU CLAIRE RIVER CHANNEL REALIGNMENT COMPUTER EARTHWORK

Station	Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut	Expanded Fill	
						1.00	1.30	
				Note 1	Note 2	Note 1		Note 3
0+60	--	0.0	0.0					
0+75	15	12.5	87.0	3	24	3	31	-28
0+92.28	17	30.4	144.3	14	74	17	128	-110
1+00	8	30.1	148.8	9	42	26	182	-156
1+25	25	59.5	180.7	41	153	67	380	-313
1+43	18	59.5	180.7	40	120	107	537	-430
BRIDGE	--	--	--	--	--	--	--	--
1+75	--	221.7	20.4	--	--	--	--	--
2+00	25	25.1	35.4	114	26	221	571	-349
2+17	17	0.0	0.0	8	11	229	585	-356
				229	450			

Note 1 - Cut	Volume need to be cut.
Note 2 - Fill	Volume needed to be filled.
Note 3 - Mass Ordinate	(Cut) - (Fill * 1.30)



9

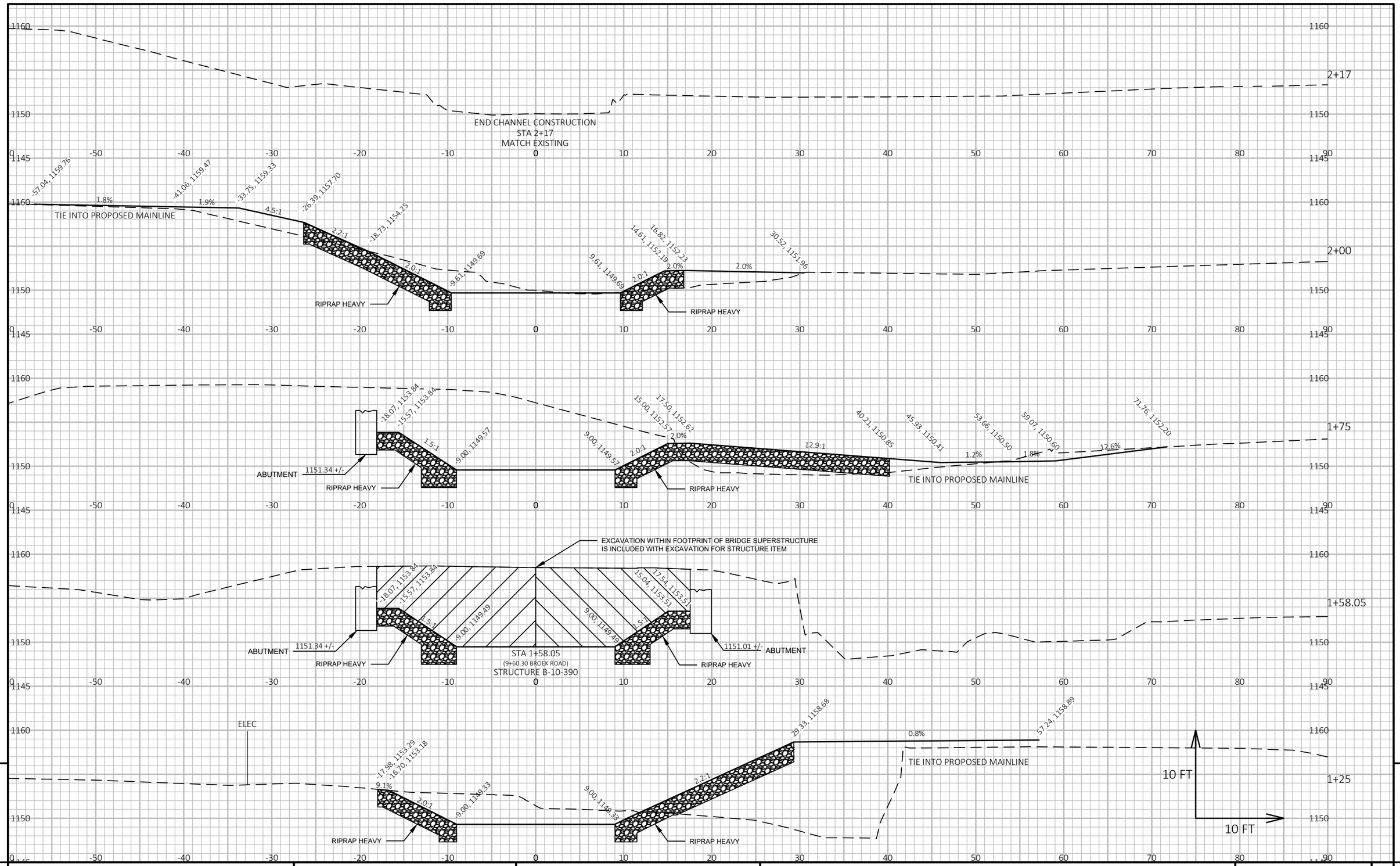
9

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	CROSS SECTIONS: EAU CLAIRE RIVER	SHEET 39	E

FILE NAME : I:\42\42-1209.00 - CLARK CO, TN RESEBURG, BROEK ROAD\ROADWAY\C3D_AHR WORKING\DESIGN\421209_RIVER EMBANKMENT CRDR_XS.DWG
LAYOUT NAME - 01

PLOT DATE : 3/18/2022 8:28 AM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



9

9

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	CROSS SECTIONS: EAU CLAIRE RIVER	SHEET 40	E

FILE NAME : I:\42\42-1209.00 - CLARK CO, TN RESEBURG, BROEK ROAD\ROADWAY\C3D_AHR WORKING\DESIGN\421209_RIVER EMBANKMENT CRDR_XS.DWG
LAYOUT NAME - 02

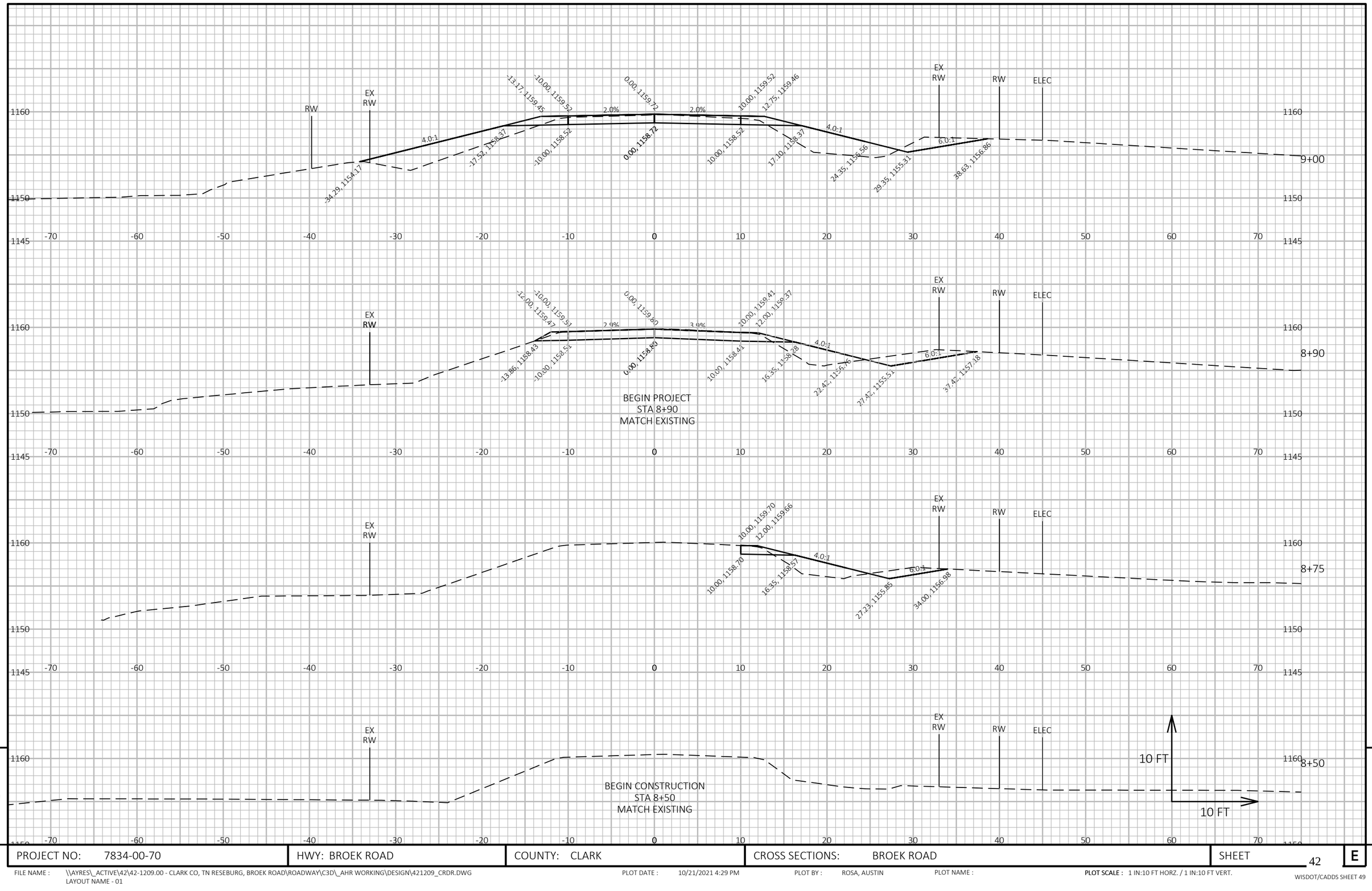
PLOT DATE : 3/18/2022 8:28 AM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

BROEK ROAD COMPUTER EARTHWORK

Station	Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut	Expanded Fill	
						1.00	1.30	
				Note 1	Note 2	Note 1		Note 3
8+50	--	3.0	0.0					
8+75	25	8.1	13.0	5	6	5	8	-3
8+90	15	35.4	13.1	12	7	17	17	0
8+90		12.6	13.1					
9+00	10	28.2	56.8	8	13	25	34	-9
9+17.77	18	20.8	22.4	16	26	41	68	-27
9+33.34	16	22.8	0.0	13	6	53	76	-23
9+36.55	3	22.8	0.0	3	0	56	76	-20
BRIDGE	--	--	--	--	--	--	--	--
9+83.45	--	4.8	111.8	--	--	--	--	--
9+86.66	3	4.8	111.8	1	13	57	94	-37
10+02.23	16	8.2	307.6	4	121	60	251	-190
10+25	23	21.5	210.5	13	218	73	535	-462
10+50	25	19.2	67.1	19	129	92	702	-610
10+75	25	35.4	47.2	25	53	117	771	-654
11+00	25	44.6	44.5	37	42	154	826	-672
11+25	25	44.6	51.6	41	44	195	884	-688
11+50	25	34.3	49.4	37	47	232	945	-713
11+50		9.7	33.9					
11+75	25	5.8	21.5	7	26	239	978	-739
12+00	25	3.7	0.0	4	10	244	991	-747
				244	762			

Note 1 - Cut	Volume need to be cut.
Note 2 - Fill	Volume needed to be filled.
Note 3 - Mass Ordinate	(Cut) - (Fill * 1.30)



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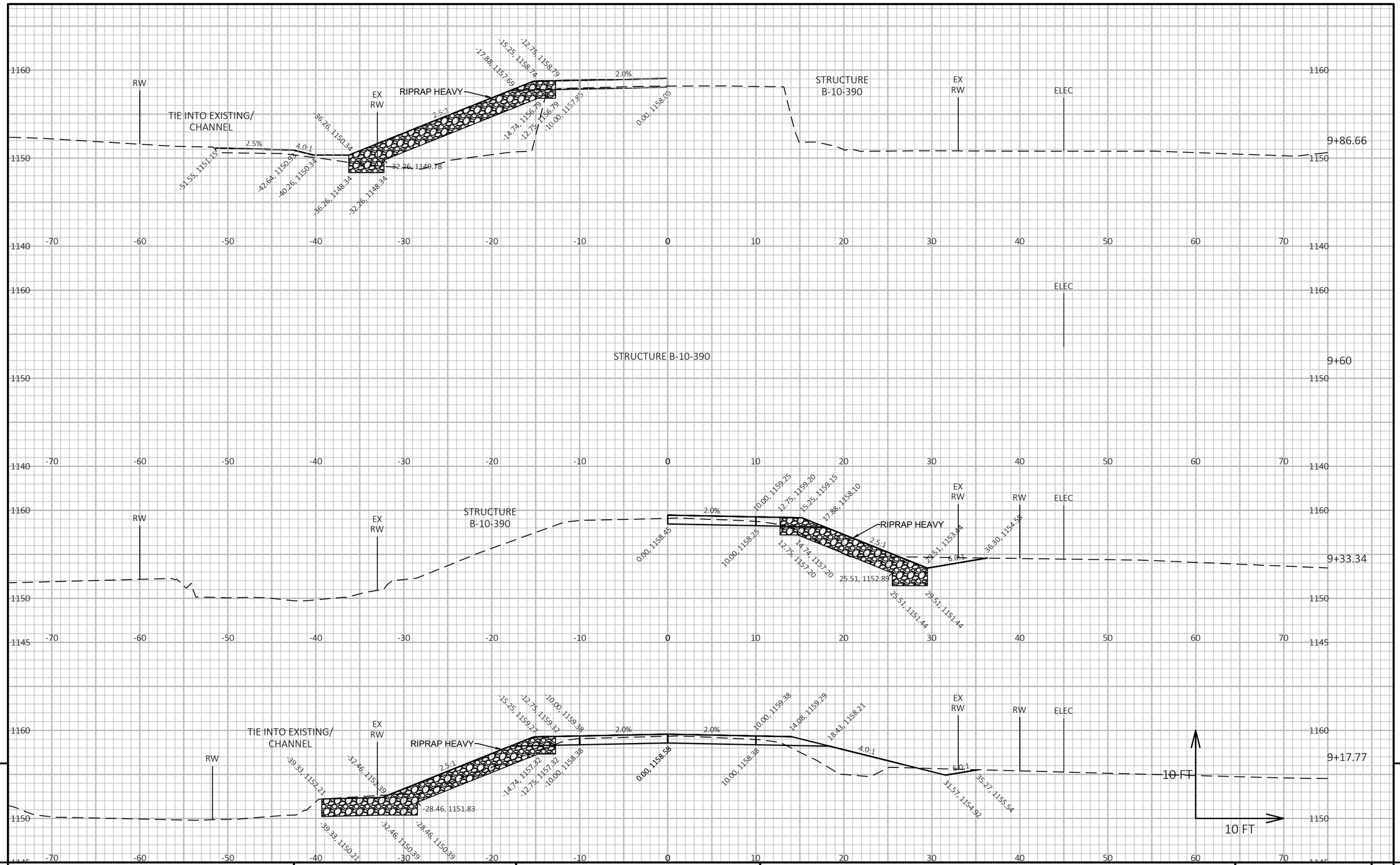
9

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	CROSS SECTIONS: BROEK ROAD	SHEET 42	E

FILE NAME : \\AYRES_ACTIVE\42\42-1209.00 - CLARK CO, TN RESEBURG, BROEK ROAD\ROADWAY\C3D_AHR WORKING\DESIGN\421209_CRDR.DWG
LAYOUT NAME - 01

PLOT DATE : 10/21/2021 4:29 PM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.



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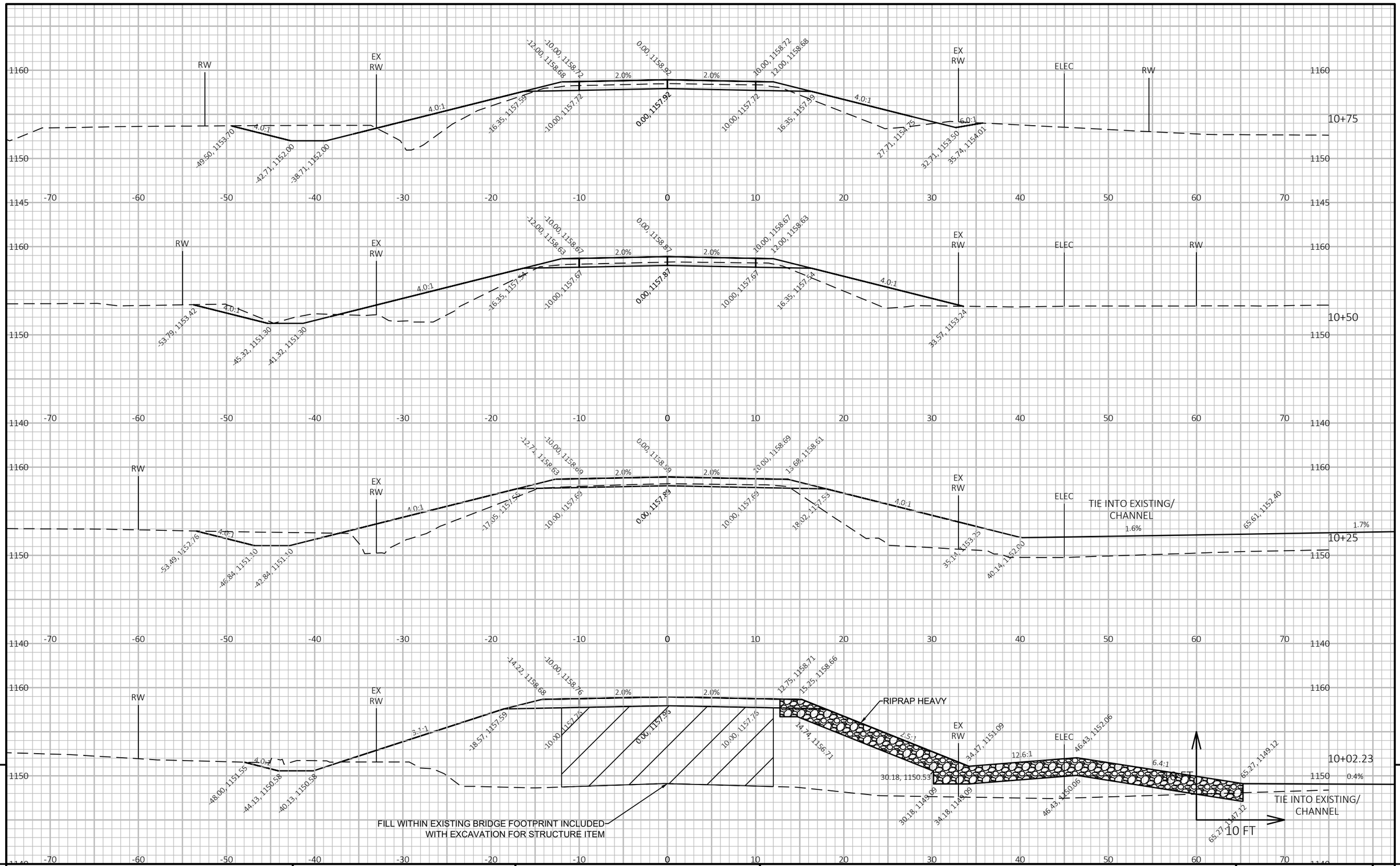
9

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	CROSS SECTIONS: BROEK ROAD	SHEET 43	E

FILE NAME : \\AYRES_ACTIVE\42\42-1209.00 - CLARK CO, TN RESEBURG, BROEK ROAD\ROADWAY\C3D_AHR WORKING\DESIGN\421209_CRDR.DWG
LAYOUT NAME - 02

PLOT DATE : 10/21/2021 4:29 PM PLOT BY : ROSA, AUSTIN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



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9

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	CROSS SECTIONS: BROEK ROAD	SHEET 44	E

FILE NAME : \\AYRES_ACTIVE\42\42-1209.00 - CLARK CO, TN RESEBURG, BROEK ROAD\ROADWAY\C3D_AHR WORKING\DESIGN\421209_CRDR.DWG
LAYOUT NAME - 03

PLOT DATE : 10/21/2021 4:29 PM PLOT BY : ROSA, AUSTIN PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

PROJECT NO: 7834-00-70	HWY: BROEK ROAD	COUNTY: CLARK	CROSS SECTIONS: BROEK ROAD	SHEET 45	E

FILE NAME : \\AYRES_ACTIVE\42\42-1209.00 - CLARK CO, TN RESEBURG, BROEK ROAD\ROADWAY\C3D_AHR WORKING\DESIGN\421209_CRDR.DWG
LAYOUT NAME - 04

PLOT DATE : 10/21/2021 4:29 PM PLOT BY : ROSA, AUSTIN PLOT NAME : **PLOT SCALE :** 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49

Wisconsin Department of Transportation

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