

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

SOUTH COUNTY LINE - GLEN FLORA

MAIN CREEK BRIDGE B-54-0140

CTH B

RUSK COUNTY

STATE PROJECT NUMBER
8793-00-73

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8793-00-73	WISC 2023300	1

ORDER OF SHEETS

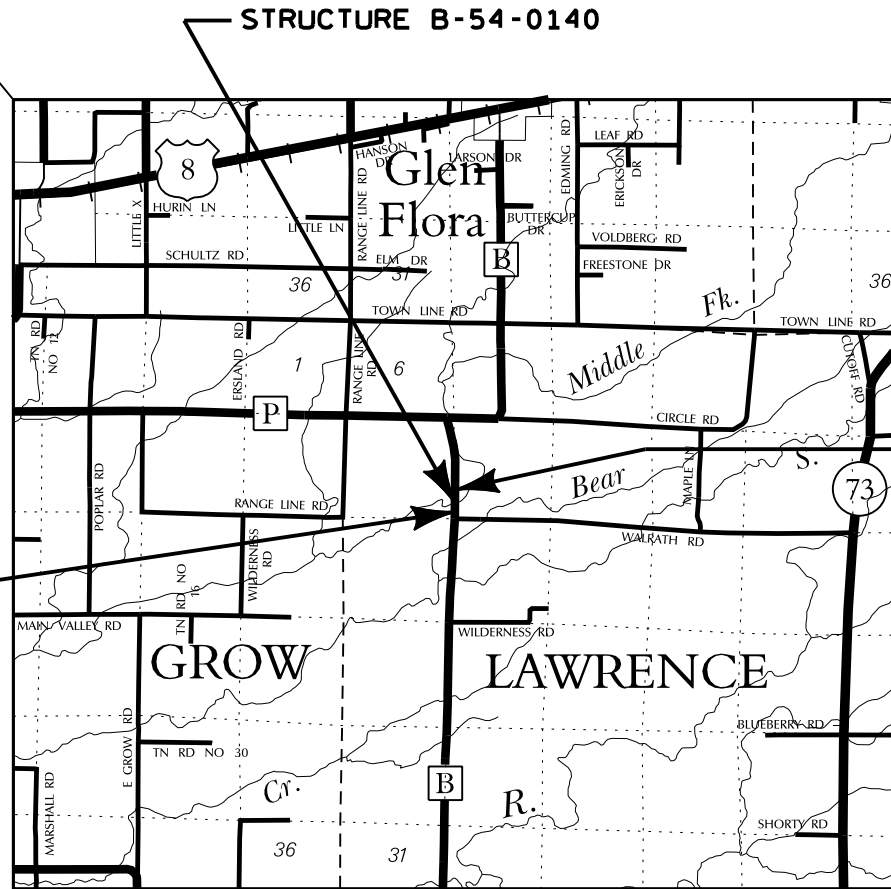
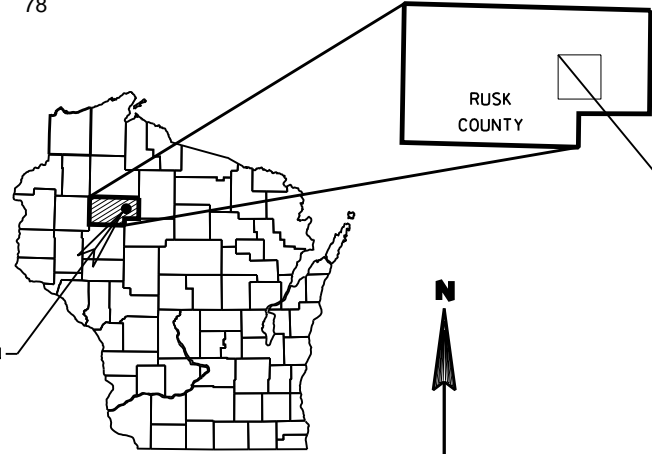
Section No. 1	Title
Section No. 2	Typical Sections and Details (Includes Erosion Control Plans)
Section No. 3	Estimate of Quantities
Section No. 3	Miscellaneous Quantities
Section No. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section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

TOTAL SHEETS = 78

PROJECT ID: 8793-00-73
WITH: N/A

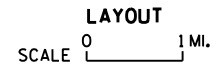
38

COUNTY: RUSK



T-35-N
T-34-N
END PROJECT
STA. 22+75
Y = 554535.65
X = 864017.20

BEGIN PROJECT
STA. 17+00
Y = 553960.71
X = 864008.95



TOTAL NET LENGTH OF CENTERLINE = 0.109 MI.

DESIGN DESIGNATION

A.A.D.T. (2023)	=	550
A.A.D.T. (2043)	=	740
D.H.V.	=	55
D.	=	50/50
T.	=	5%
DESIGN SPEED	=	50 MPH
ESALS	=	59,000

CONVENTIONAL SYMBOLS PLAN

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

PROFILE

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

ACCEPTED FOR

County of Rusk

Date 10/20/22 Highway Commissioner

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



10/20/2022

**STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION**

PREPARED BY

Surveyor AYRES ASSOCIATES INC

Designer AYRES ASSOCIATES INC

PROJECT MANAGER PAULA GROOM, PE

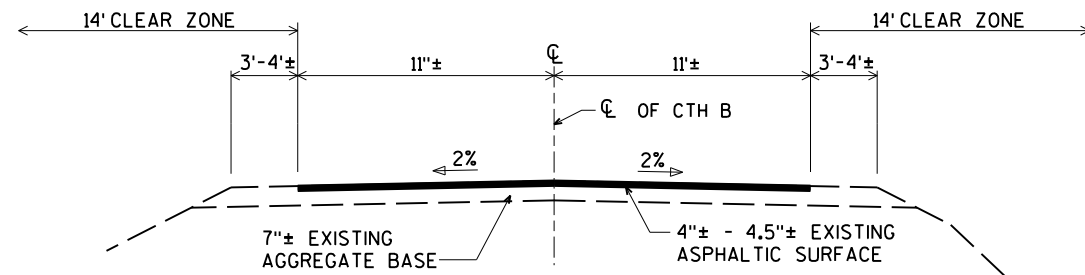
Regional Examiner TOU YANG, PE

Regional Supervisor TYLER RONGSTAD, PE

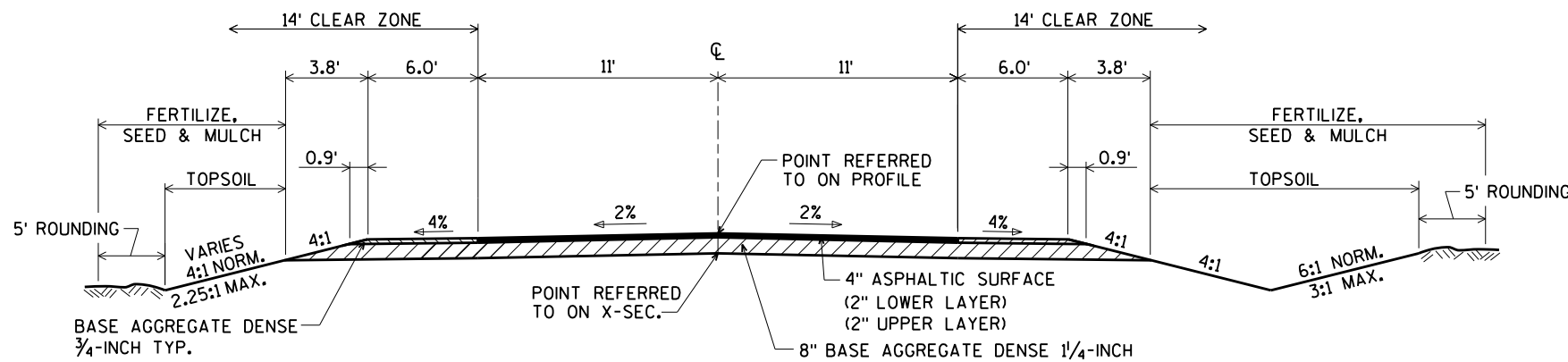
APPROVED FOR THE DEPARTMENT

DATE: 10/20/2022 (Signature)

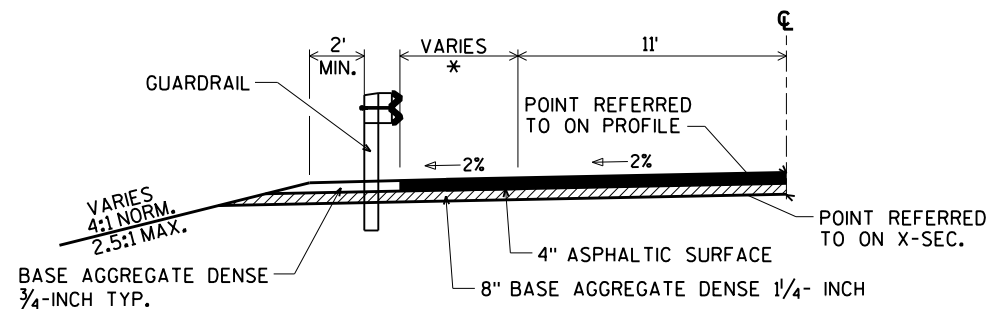
E



TYPICAL EXISTING SECTION
STA. 12+25 - STA. 22+75



TYPICAL FINISHED SECTION
STA. 12+25 - STA. 19+57.75
STA. 20+42.25 - STA. 22+75



TYPICAL FINISHED HALF SECTION WITH GUARDRAIL
* 3' MIN (AT END OF BRIDGE)
5' MAX (AT END TERMINAL)

GENERAL NOTES

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

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

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

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

ASPHALTIC REMOVAL IS INCLUDED IN THE ITEM EXCAVATION COMMON.

THE DEPARTMENT OF TRANSPORTATION WILL FURNISH THE CONTRACTOR WITH A MONUMENT TO BE INSTALLED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER.

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

ASPHALT SURFACE SHALL USE 1/2" (12.5 mm) NOMINAL AGGREGATE SIZE.

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

UTILITIES

LUMEN TECHNOLOGIES 425 ELLINGSON AVENUE P.O. BOX 78 HAWKINS, WI 54530 ATTN: BRIAN HUHN 608-615-7347 715-563-8294 (CELL) brian.huhn@lumen.com	JUMP RIVER ELECTRIC COOPERATIVE 1102 WEST 9TH STREET NORTH P.O. BOX 99 LADYSMITH, WI 54848 ATTN: JORDAN BEHREANDT 715-532-5524 717-661-2448 (CELL) jbehreandt@jrec.com
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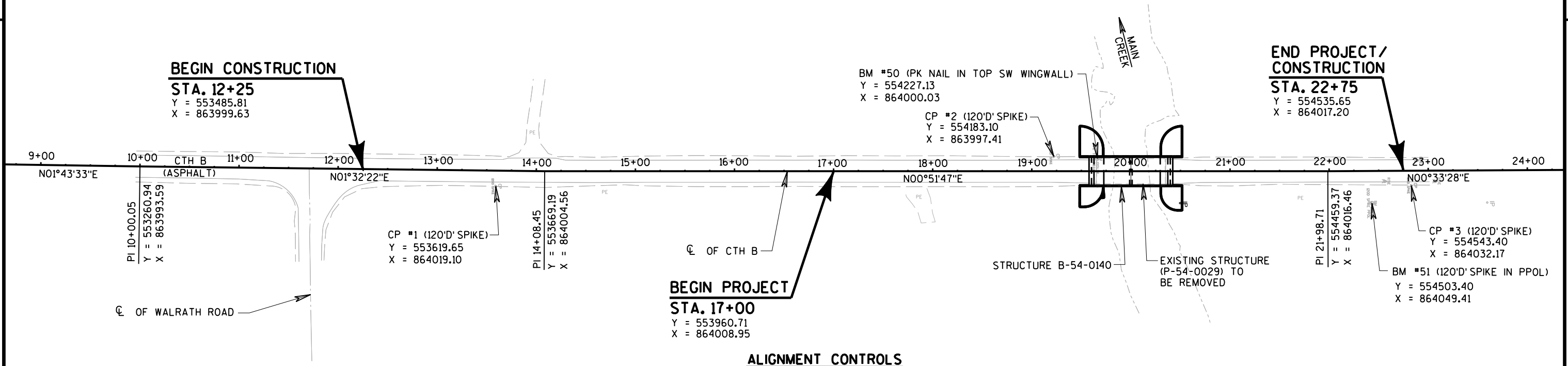
* * DENOTES UTILITIES THAT ARE NOT DIGGERS HOTLINE MEMBERS

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

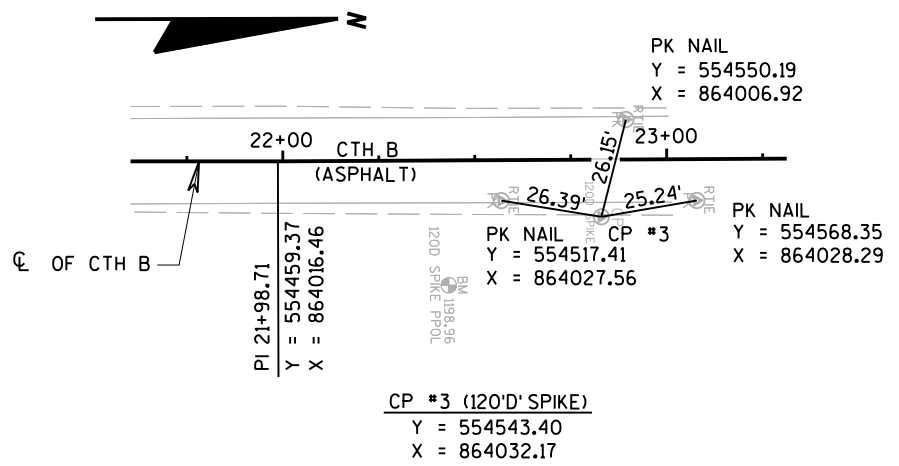
WISCONSIN DEPARTMENT OF NATURAL RESOURCES CONTACT:
LEAH NICOL
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
715-934-9014
Leah.Nicol@Wisconsin.gov

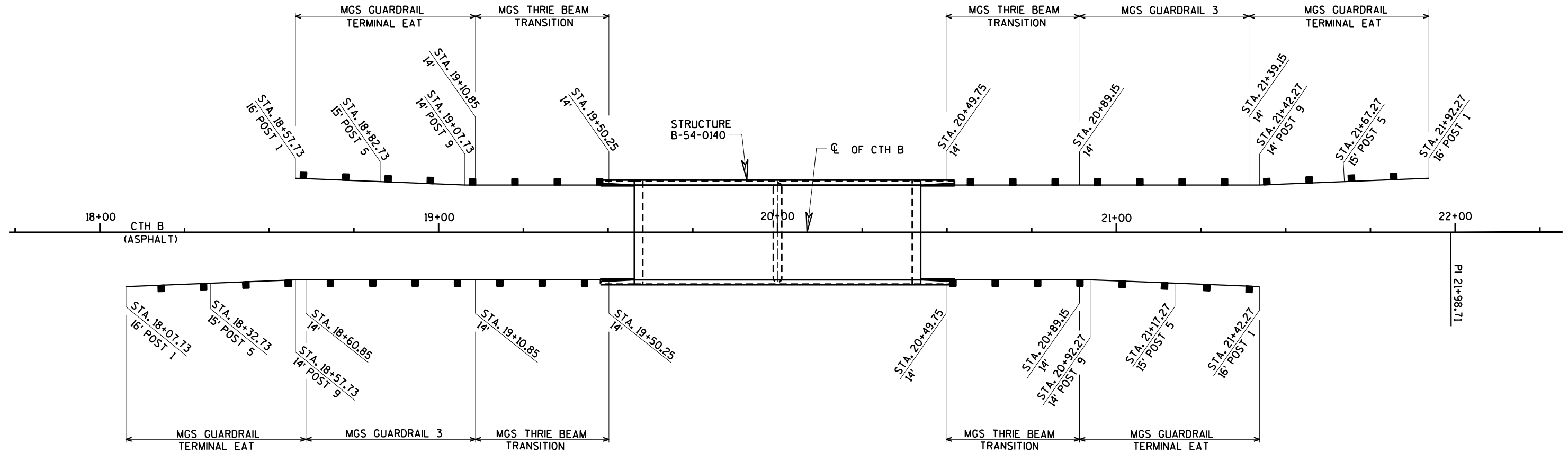
COUNTY CONTACT
RUSK COUNTY, COMMISSIONER
N4711 HIGHWAY 27
LADYSMITH, WI 54848
ATTN: SCOTT EMCH
715-532-2633
semch@ruskcountywi.us

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

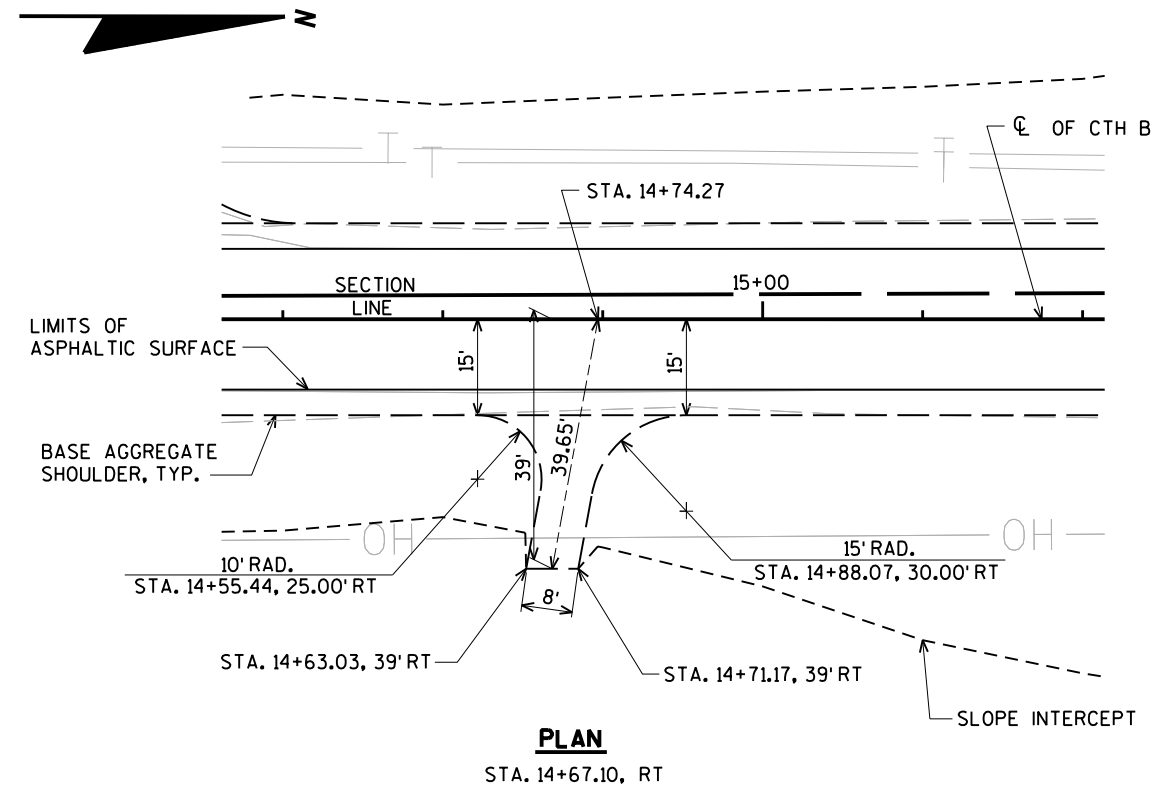
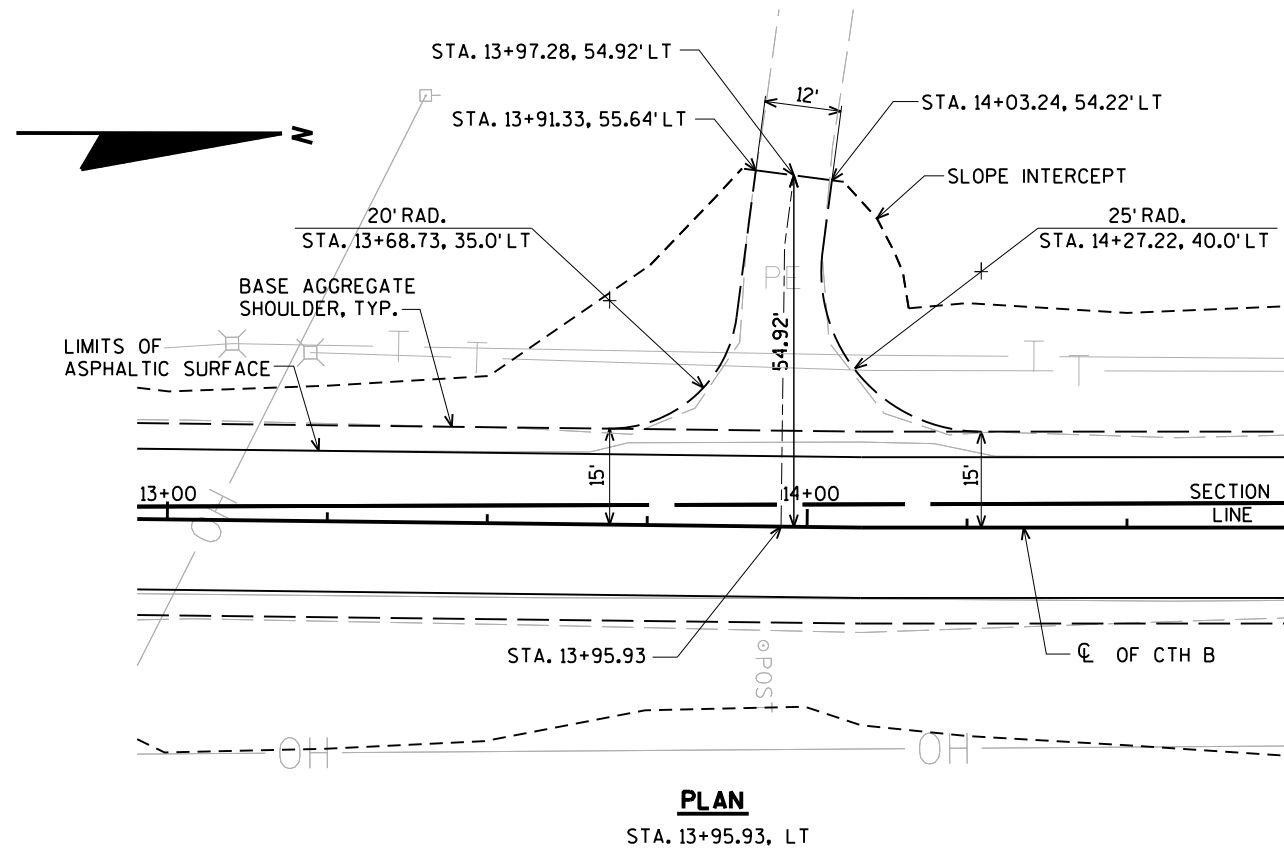


ALIGNMENT CONTROLS

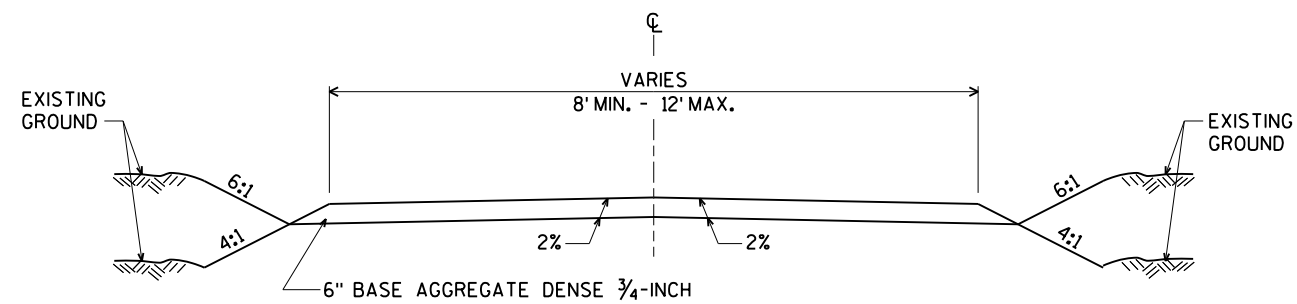




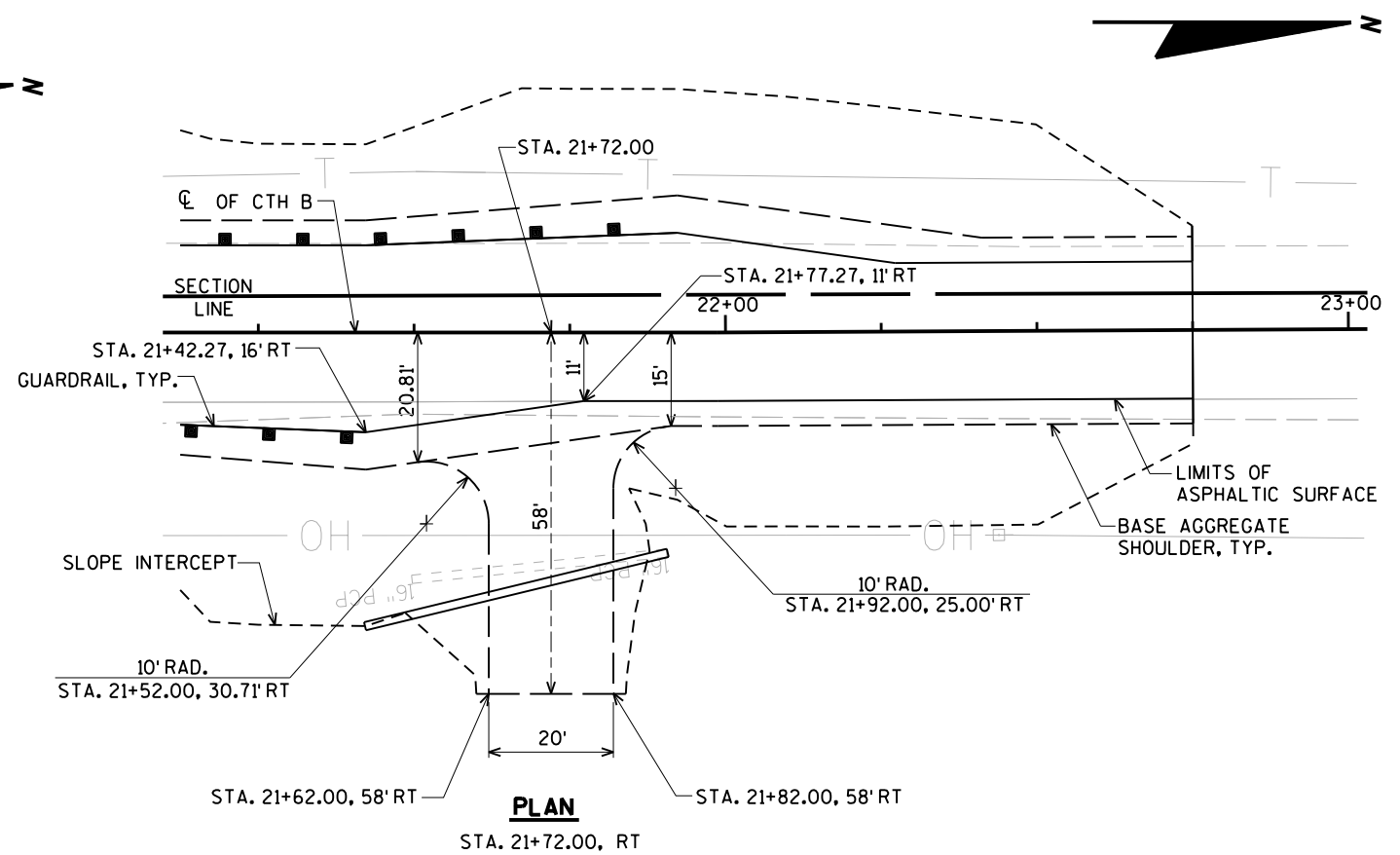
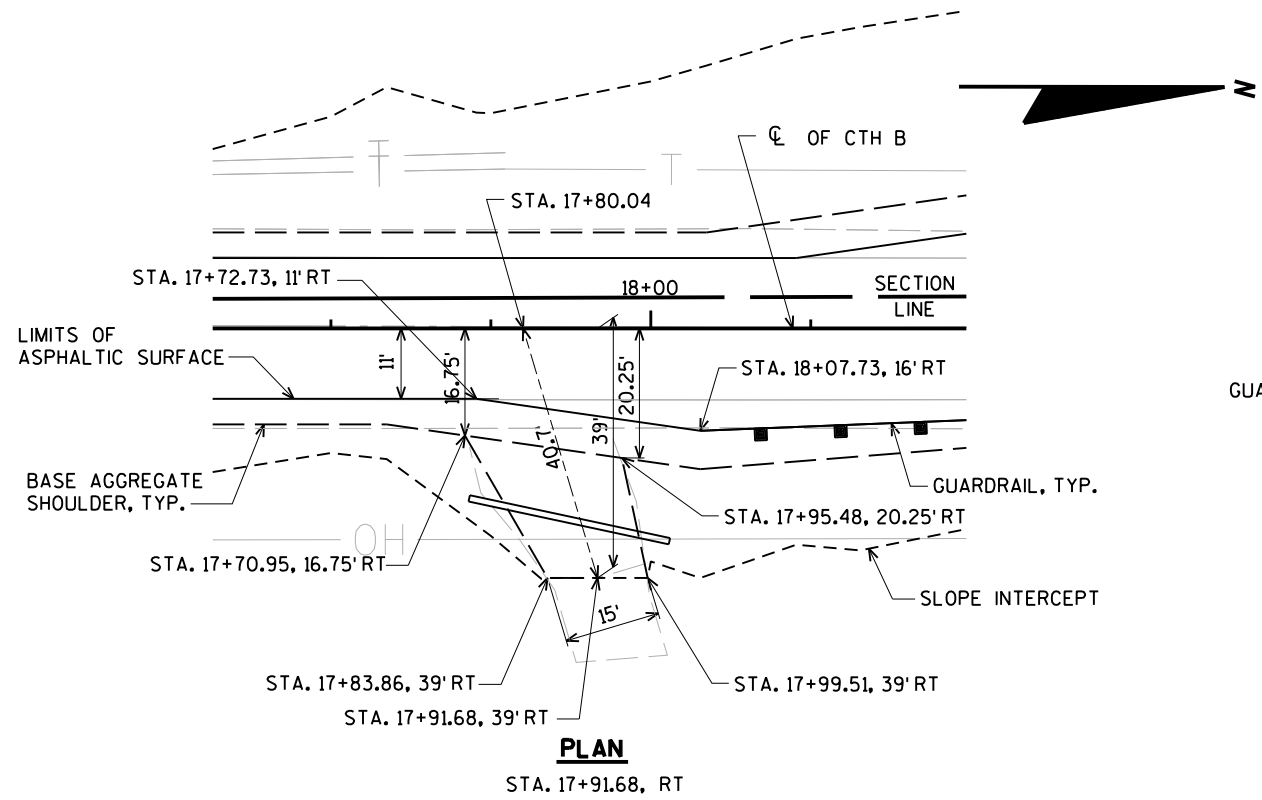
GUARDRAIL LAYOUT



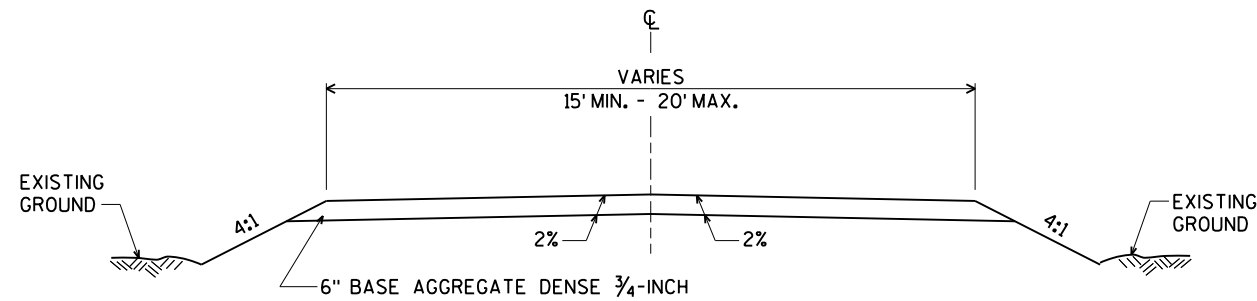
NOTE:
SEE PLAN AND PROFILE
SHEET FOR PIPE INFORMATION



TYPICAL CROSS SECTION
PRIVATE ENTRANCE DETAILS

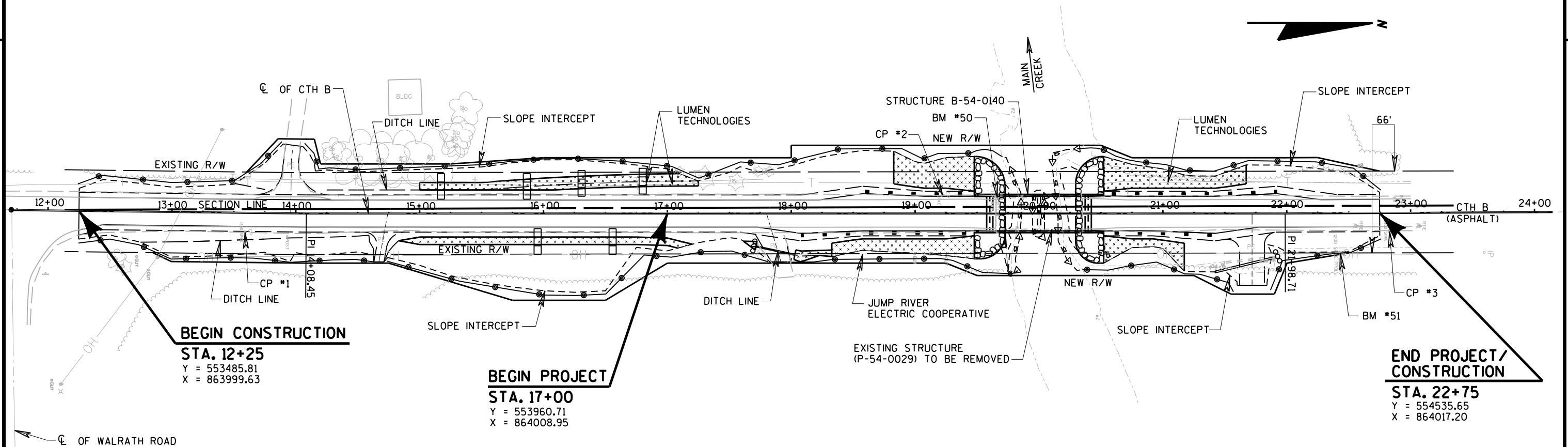


NOTE:
SEE PLAN AND PROFILE
SHEET FOR PIPE INFORMATION



TYPICAL CROSS SECTION

PRIVATE ENTRANCE DETAILS



	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 WATER₂ EL. 1196.76

- LEGEND**
- EROSION MAT CLASS II TYPE C
 - SILT FENCE
 - TURBIDITY BARRIER
 - RIPRAP HEAVY
 - CULVERT PIPE CHECKS
 - TEMPORARY DITCH CHECKS

TOTAL PROJECT AREA = 2.222 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 1.691 ACRES

Estimate Of Quantities

8793-00-73

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	10.000	10.000
0004	201.0205	Grubbing	STA	10.000	10.000
0006	203.0100	Removing Small Pipe Culverts	EACH	1.000	1.000
0008	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. P-54-0029	EACH	1.000	1.000
0010	205.0100	Excavation Common	CY	2,396.000	2,396.000
0012	206.1001	Excavation for Structures Bridges (structure) 01. B-54-1040	EACH	1.000	1.000
0014	210.1500	Backfill Structure Type A	TON	220.000	220.000
0016	213.0100	Finishing Roadway (project) 01. 8793-00-73	EACH	1.000	1.000
0018	305.0110	Base Aggregate Dense 3/4-Inch	TON	295.000	295.000
0020	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,665.000	1,665.000
0022	455.0605	Tack Coat	GAL	365.000	365.000
0024	465.0105	Asphaltic Surface	TON	580.000	580.000
0026	502.0100	Concrete Masonry Bridges	CY	268.000	268.000
0028	502.3200	Protective Surface Treatment	SY	265.000	265.000
0030	505.0400	Bar Steel Reinforcement HS Structures	LB	5,370.000	5,370.000
0032	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	43,660.000	43,660.000
0034	516.0500	Rubberized Membrane Waterproofing	SY	18.000	18.000
0036	521.3112	Culvert Pipe Corrugated Steel 12-Inch	LF	32.000	32.000
0038	530.0118	Culvert Pipe Corrugated Polyethylene 18-Inch	LF	50.000	50.000
0040	550.0500	Pile Points	EACH	18.000	18.000
0042	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	670.000	670.000
0044	606.0300	Riprap Heavy	CY	280.000	280.000
0046	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	150.000	150.000
0048	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0050	614.2300	MGS Guardrail 3	LF	100.000	100.000
0052	614.2500	MGS Thrie Beam Transition	LF	160.000	160.000
0054	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0056	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8793-00-73	EACH	1.000	1.000
0058	619.1000	Mobilization	EACH	1.000	1.000
0060	623.0200	Dust Control Surface Treatment	SY	3,670.000	3,670.000
0062	624.0100	Water	MGAL	20.000	20.000
0064	625.0100	Topsoil	SY	4,270.000	4,270.000
0066	627.0200	Mulching	SY	4,815.000	4,815.000
0068	628.1504	Silt Fence	LF	2,280.000	2,280.000
0070	628.1520	Silt Fence Maintenance	LF	6,840.000	6,840.000
0072	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0074	628.1910	Mobilizations Emergency Erosion Control	EACH	4.000	4.000
0076	628.2027	Erosion Mat Class II Type C	SY	1,240.000	1,240.000
0078	628.6005	Turbidity Barriers	SY	555.000	555.000
0080	628.7504	Temporary Ditch Checks	LF	102.500	102.500
0082	628.7555	Culvert Pipe Checks	EACH	4.000	4.000
0084	629.0210	Fertilizer Type B	CWT	4.300	4.300
0086	630.0120	Seeding Mixture No. 20	LB	170.000	170.000
0088	630.0200	Seeding Temporary	LB	170.000	170.000
0090	630.0500	Seed Water	MGAL	136.000	136.000
0092	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	5.000	5.000
0094	637.2230	Signs Type II Reflective F	SF	18.250	18.250
0096	638.2602	Removing Signs Type II	EACH	5.000	5.000
0098	638.3000	Removing Small Sign Supports	EACH	5.000	5.000

Estimate Of Quantities

8793-00-73

Line	Item	Item Description	Unit	Total	Qty
0100	642.5001	Field Office Type B	EACH	1.000	1.000
0102	643.0420	Traffic Control Barricades Type III	DAY	1,980.000	1,980.000
0104	643.0705	Traffic Control Warning Lights Type A	DAY	3,080.000	3,080.000
0106	643.0900	Traffic Control Signs	DAY	1,540.000	1,540.000
0108	643.5000	Traffic Control	EACH	1.000	1.000
0110	645.0111	Geotextile Type DF Schedule A	SY	100.000	100.000
0112	645.0120	Geotextile Type HR	SY	505.000	505.000
0114	646.1020	Marking Line Epoxy 4-Inch	LF	3,415.000	3,415.000
0116	650.4500	Construction Staking Subgrade	LF	966.000	966.000
0118	650.5000	Construction Staking Base	LF	966.000	966.000
0120	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
0122	650.6501	Construction Staking Structure Layout (structure) 01. B-54-1040	EACH	1.000	1.000
0124	650.9911	Construction Staking Supplemental Control (project) 01. 8793-00-73	EACH	1.000	1.000
0126	650.9920	Construction Staking Slope Stakes	LF	966.000	966.000
0128	690.0150	Sawing Asphalt	LF	131.000	131.000
0130	715.0502	Incentive Strength Concrete Structures	DOL	1,608.000	1,608.000
0132	999.2005.S	Maintaining Bird Deterrent System (station) 01. 20+00	EACH	1.000	1.000
0134	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0136	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

3

CLEARING AND GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105	201.0205
					CLEARING STA	GRUBBING STA
0030	13+00	-	17+00	LT/RT	4	4
0010	17+00	-	22+75	LT/RT	6	6
TOTAL					10	10
TOTAL 0010					6	6
TOTAL 0030					4	4

BASE AGGREGATE DENSE

CATEGORY	STATION	TO	STATION	LOCATION	305.0110	305.0120	624.0100	REMARKS
					BASE AGGREGATE DENSE 3/4-INCH TON	BASE AGGREGATE DENSE 1 1/4-INCH TON	WATER MGAL	
0030	12+25	-	17+00	LT/RT	135	760	9	WEST APPROACH
0010	17+00	-	19+57.75	LT/RT	75	475	6	WEST APPROACH
0010	20+42.25	-	22+75	LT/RT	85	430	5	EAST APPROACH
TOTAL					295	1,665	20	
TOTAL 0010					160	905	11	
TOTAL 0030					135	760	9	

CULVERT PIPE

CATEGORY	STATION	LOCATION	203.0100	521.3112	530.0118	628.7555
			REMOVAL SMALL PIPE CULVERTS EACH	CULVERT PIPE CORRUGATED STEEL 12-INCH LF	CULVERT PIPE CORRUGATED POLYETHYLENE 18-INCH LF	CULVERT PIPE CHECKS EACH
0010	17+91.68	PERT	-	32	-	2
0010	21+72	PERT	1	-	50	2
TOTAL 0010			1	32	50	4

CTH B EARTHWORK SUMMARY

Category	From/To Station	Location	Common Excavation (1) (Item 205.0100)	Unexpanded Fill	Expanded Fill (2)	Mass Ordinate +/- (3)	Waste	Borrow (Item 208.0100)	Comment:
			Cut		Factor 1.30				
0030	12+25 - 17+00	MAINLINE	2215	27	35	2180	-	-	
0010	17+00 - 19+57.75	MAINLINE	52	1085	1411	-1359	-	-	
0010	20+42.25 - 22+25	MAINLINE	129	308	400	-271	550	0	
TOTAL			2396						
TOTAL 0010			181						
TOTAL 0030			2215						

- 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.

ASPHALT ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	* TACK COAT GAL	** ASPHALTIC SURFACE TON	REMARKS
					0030	12+25	
0010	17+00	-	19+57.75	MAINLINE	105	165	
0010	20+42.25	-	22+75	MAINLINE	96	155	
TOTAL					365	580	
TOTAL 0010					201	320	
TOTAL 0030					164	260	

- NOTES:**
- * TACK COAT APPLICATION RATE = 0.07 GAL/SY
 - ** ASSUMED HMA AT 112 LBS/SY/IN

GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	614.2300	614.2500	614.2610
					MGS GUARDRAIL 3 LF	MGS THRIE BEAM TRANSITION LF	MGS GUARDRAIL TERMINAL EAT EACH
0010	18+07.73	-	19+50.25	RT	50	40	1
0010	18+57.73	-	19+50.25	LT	--	40	1
0010	20+49.75	-	21+42.27	RT	--	40	1
0010	20+49.75	-	21+92.27	LT	50	40	1
TOTAL 0010					100	160	4

3

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	LOCATION	EACH
0030	CTH B	1
TOTAL 0030		1

618.0100.01
MAINTENANCE AND
REPAIR OF HAUL
ROADS (PROJECT)
(01. 8793-00-73)

EXTRA ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	213.0100.01 FINISHING ROADWAY (PROJECT) (01. 8793-00-73) EACH	623.0200 DUST CONTROL SURFACE TREATMENT SY	628.1905 MOBILIZATIONS EROSION CONTROL EACH	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL EACH
0030	12+25		17+00	PROJECT-WIDE	--	1670	--	--
0010	17+00	-	22+75	PROJECT-WIDE	1	2000	4	4
TOTAL					1	3,670	4	4

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	630.0500 SEED WATER MGAL
0010	17+00	-	19+50	LT	700	645	280	840	210	205	0.5	24	24	19
0010	17+00	-	19+50	RT	370	310	270	810	210		0.3	15	15	12
0010	20+50	-	22+75	LT	455	380	255	765	210	240	0.4	17	17	13
0010	20+50	-	22+75	RT	415	470	240	720	90		0.4	16	16	13
0030	12+25	-	17+00	LT	985	1,070	485	1,455	195		0.8	35	35	28
0030	12+25	-	17+00	RT	1,345	1,490	490	1,470	145		1.0	45	45	37
0010			UNDISTRIBUTED		-	450	260	780	180	110	0.9	18	18	14
TOTAL					4,270	4,815	2,280	6,840	1,240	555	4.3	170	170	136
TOTAL 0030					2,330	2,560	975	2,925	340	0	1.8	80	80	65
TOTAL 0010					1,940	2,255	1,305	3,915	900	555	2.5	90	90	71

TEMPORARY DITCH CHECKS

CATEGORY	STATION	LOCATION	628.7504 TEMPORARY DITCH CHECKS LF
0030	15+17	LT	12.5
0030	15+83	LT	15.0
0030	15+94	RT	12.5
0030	16+30	LT	15.0
0030	16+60	RT	12.5
0030	16+78	LT	15.0
0030	UNDISTRIBUTED		20.0
TOTAL 0010			102.5

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	19+47	LT	1	3	1	1	W5-52L
0010	19+47	RT	1	3	1	1	W5-52R
0010	20+53	LT	1	3	1	1	W5-52R
0010	20+53	RT	1	3	1	1	W5-52L
0010	20+71	LT	1	6.25	1	1	W2-2L
TOTAL 0010			5	18.25	5	5	

TRAFFIC CONTROL

CATEGORY	LOCATION	DURATION DAYS	NO.	643.0420 TRAFFIC CONTROL BARRICADES TYPE III DAY	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A NO.	643.0900 TRAFFIC CONTROL SIGNS DAY	643.5000 TRAFFIC CONTROL EACH
0010	PER SDD 15C2	110	18	1,980	28	3,080	14
0010	CTH B	-	-	-	-	-	-
TOTAL 0010				1,980	3,080	1,540	1

3

3

MARKING LINE

646.1020

4-INCH MARKING LINE EPOXY

CATEGORY	STATION	TO	STATION	LOCATION	4-INCH MARKING LINE EPOXY		REMARKS
					YELLOW LF	WHITE LF	
0030	12+25.00	-	17+00.00	C/L	595	-	YELLOW SOLID & DASHED CENTERLINE
0030	12+25.00	-	17+00.00	LT	-	475	WHITE EDGELINE
0030	12+25.00	-	17+00.00	RT	-	475	WHITE EDGELINE
0010	17+00.00	-	22+75.00	C/L	720	-	YELLOW SOLID & DASHED CENTERLINE
0010	17+00.00	-	22+75.00	LT	-	575	WHITE EDGELINE
0010	17+00.00	-	22+75.00	RT	-	575	WHITE EDGELINE
SUBTOTALS					1,315	2,100	

TOTAL	3,415
TOTAL 0010	1,870
TOTAL 0030	1,545

STAKING

CATEGORY	STATION	TO	STATION	LOCATION	650.4500	650.5000	650.6000	650.6501.01	650.9911.01	650.9920
					CONSTRUCTION STAKING SUBGRADE LF	CONSTRUCTION STAKING BASE LF	CONSTRUCTION STAKING PIPE CULVERTS EACH	CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) (01. B-54-0140) LS	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) (01. 8793-03-73) LS	CONSTRUCTION STAKING SLOPE STAKES LF
0010	17+00.00	-	22+75.00	MAINLINE	491	491	2	-	-	491
0010	17+00.00	-	22+75.00	PROJECT 8793-00-73	-	-	-	-	1	-
TOTAL 0010					491	491	2	0	1	491
0020	19+47.75	-	20+52.25	B-54-0140	-	-	-	1	-	-
TOTAL 0020					0	0	0	1	0	0
0030	12+25.00	-	17+00.00	MAINLINE	475	475	-	-	-	475
TOTAL 0030					475	475	0	0	0	475
PROJECT TOTAL					966	966	2	1	1	966

SAWING ASPHALT

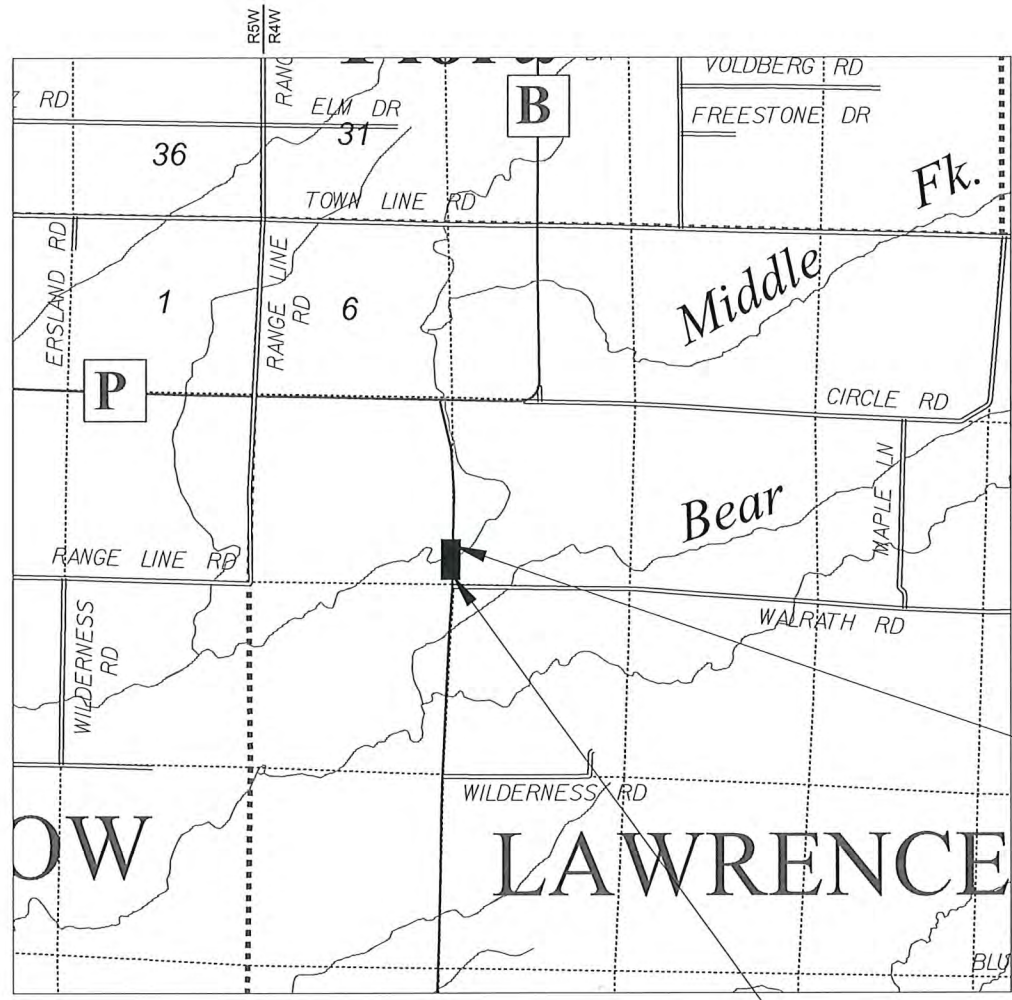
CATEGORY	STATION	-	STATION	LOCATION	690.0150
					SAWING ASPHALT LF
0030	12+25	-	12+25	MAINLINE	27
0030	13+66	-	14+29	PE LT	63
0010	22+75	-	22+75	MAINLINE	22
UNDISTRIBUTED					19
TOTAL					131
TOTAL 0030					90
TOTAL 0010					41

MAINTAINING BIRD DETERRENT SYSTEM

CATEGORY	STATION	999.2005.S
		MAINTAINING BIRD DETERRENT SYSTEM EACH
0010	20+00	1
TOTAL 0010		1

CONVENTIONAL SYMBOLS

SECTION LINE		SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	
QUARTER LINE		SECTION CORNER MONUMENT		NON-MONUMENTED R/W POINT	
SIXTEENTH LINE		GEODETIC SURVEY MONUMENT		FOUND IRON PIN (1-INCH UNLESS NOTED)	
NEW REFERENCE LINE		SIXTEENTH CORNER MONUMENT		OFF-PREMISE SIGN	
NEW R/W LINE		SIGN		COMPENSABLE	
EXISTING R/W OR HE LINE		NON-COMPENSABLE		NON-COMPENSABLE	
PROPERTY LINE		ELECTRIC POLE		TELEPHONE POLE	
LOT, TIE & OTHER MINOR LINES		PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)		PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)	
SLOPE INTERCEPT		ACCESS RESTRICTED BY ACQUISITION		NO ACCESS (BY STATUTORY AUTHORITY)	
CORPORATE LIMITS		NO ACCESS (BY PREVIOUS PROJECT OR CONTROL)		ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)	
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)		NO ACCESS (NEW HIGHWAY)		NO ACCESS (NEW HIGHWAY)	
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)		PARCEL NUMBER (25)		UTILITY NUMBER (40)	
TEMPORARY LIMITED EASEMENT AREA		PRW POINT NUMBER (100)		TLE POINT NUMBER (T150)	
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)		PARALLEL OFFSETS			
TRANSMISSION STRUCTURES					
BUILDING					
TO BE REMOVED					
BRIDGE					
CULVERT					



END RELOCATION ORDER
 STA 22+75.00
 Y = 554535.651
 X = 864017.202
 LOCATED 1104.43 FEET NORTH AND 19.13 FEET EAST OF THE SOUTHWEST CORNER OF SECTION 8, TOWNSHIP 34 NORTH, RANGE 4 WEST.

BEGIN RELOCATION ORDER
 STA 12+85.00
 Y = 553545.788
 X = 864001.281
 LOCATED 114.57 FEET NORTH AND 3.16 FEET EAST OF THE SOUTHWEST CORNER OF SECTION 8, TOWNSHIP 34 NORTH, RANGE 4 WEST.

LAYOUT
 SCALE 0 1 MI
 TOTAL NET LENGTH OF CENTERLINE = 0.188 MILES

R/W PROJECT NUMBER 8793-00-03	SHEET NUMBER 4.01	TOTAL SHEETS 2
CONSTRUCTION PROJECT NUMBER 8793-00-73		
PLAT OF RIGHT OF WAY REQUIRED FOR SOUTH COUNTY LINE - GLEN FLORA MAIN CREEK BRIDGE B-54-0140		
CTH B		RUSK COUNTY

CONVENTIONAL ABBREVIATIONS

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

NOTES:
 POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), RUSK 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.
 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 (3/4"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.
 ALL EXISTING IRON PINS ARE 1" IRON PIPES UNLESS OTHERWISE NOTED.
 EXISTING HIGHWAY RIGHT-OF-WAY SHOWN HEREIN IS BASED ON THE FOLLOWING POINT OF REFERENCE:
 EXISTING HIGHWAY RIGHT-OF-WAY FOR CTH "B" SHOWN HEREIN WAS DETERMINED FROM CSM 940 AND IS PRESUMED TO BE 66 FEET IN WIDTH CENTERED ON THE EXISTING CENTERLINE OF THE TRAVELED WAY PER STATE STATUTE 82.31(2).

CONVENTIONAL UTILITY SYMBOLS

WATER	
GAS	
TELEPHONE	
OVERHEAD TRANSMISSION LINES	
ELECTRIC	
CABLE TELEVISION	
FIBER OPTIC	
SANITARY SEWER	
STORM SEWER	
ELECTRIC TOWER	

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

APPROVED FOR
 RUSK COUNTY HIGHWAY DEPARTMENT
 7/26/22
 DATE HIGHWAY COMMISSIONER

PLAT PREPARED BY
AYRES

THE SURVEY IS PREPARED AT THE REQUEST OF THE RUSK COUNTY HIGHWAY DEPARTMENT.
 THE FIELD SURVEY WAS PERFORMED IN AUGUST 2021.
 THIS SURVEY IS ACCURATE TO THE BEST OF MY KNOWLEDGE AND BELIEF.



REVISION DATE

CHRISTOPHER R. BADTKE, P.L.S. DATE 06/01/2022 S-3150

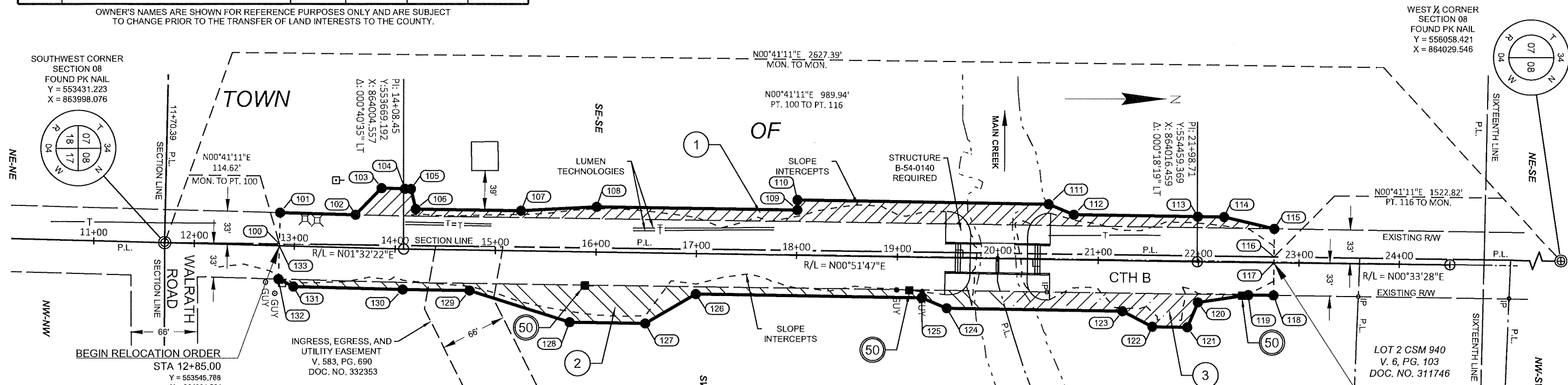
SCHEDULE OF LANDS AND INTERESTS REQUIRED

PARCEL NO.	OWNER(S)	INTEREST REQUIRED	R/W (ACRES)		
			NEW	EXISTING	TOTAL
1	ROBERT E. WINTERS AND DIANE D. WINTERS REVOCABLE TRUST	FEE	0.289	0.655	0.944
2	STEVEN F. ZIERMAN	FEE	0.239	0.607	0.846
3	JOHN KLARKOWSKI	FEE	0.103	0.238	0.341

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

UTILITY INTERESTS REQUIRED

UTILITY NUMBER	UTILITY OWNER(S)	INTEREST REQUIRED	EASEMENTS
50	JUMP RIVER ELECTRIC COOPERATIVE	RELEASE OF RIGHTS	NO EASEMENT OF RECORD - PARCELS 2 AND 3
51	LUMEN TECHNOLOGIES	RELEASE OF RIGHTS	V. 232, PG. 143, DOC. NO. 210159 - PARCEL 1



R/W STATION & OFFSET TABLE

POINT	STATION	OFFSET	POINT	STATION	OFFSET
100	12+85.00	1.79' LT	117	22+75.00	0.00'
101	12+85.00	32.96' LT	118	22+75.00	32.15' RT
102	13+60.00	32.89' LT	119	22+50.00	32.06' RT
103	13+85.00	60.00' LT	120	22+00.00	40.00' RT
104	14+08.80	60.00' LT	121	21+90.00	65.00' RT
105	14+15.00	60.00' LT	122	21+55.00	65.00' RT
106	14+20.00	40.00' LT	123	21+25.00	50.00' RT
107	15+25.00	40.00' LT	124	19+50.00	50.00' RT
108	16+00.00	45.00' LT	125	19+25.00	40.00' RT
109	18+00.00	45.00' LT	126	17+00.00	40.00' RT
110	18+00.00	55.00' LT	127	16+50.00	70.00' RT
111	20+50.00	55.00' LT	128	15+75.00	70.00' RT
112	20+75.00	45.00' LT	129	14+75.00	40.00' RT
113	21+98.83	45.00' LT	130	14+08.21	40.00' RT
114	22+25.00	45.00' LT	131	13+00.00	40.00' RT
115	22+75.00	33.85' LT	132	12+85.00	33.04' RT
116	22+75.00	5.90' LT	133	12+85.00	0.00' RT

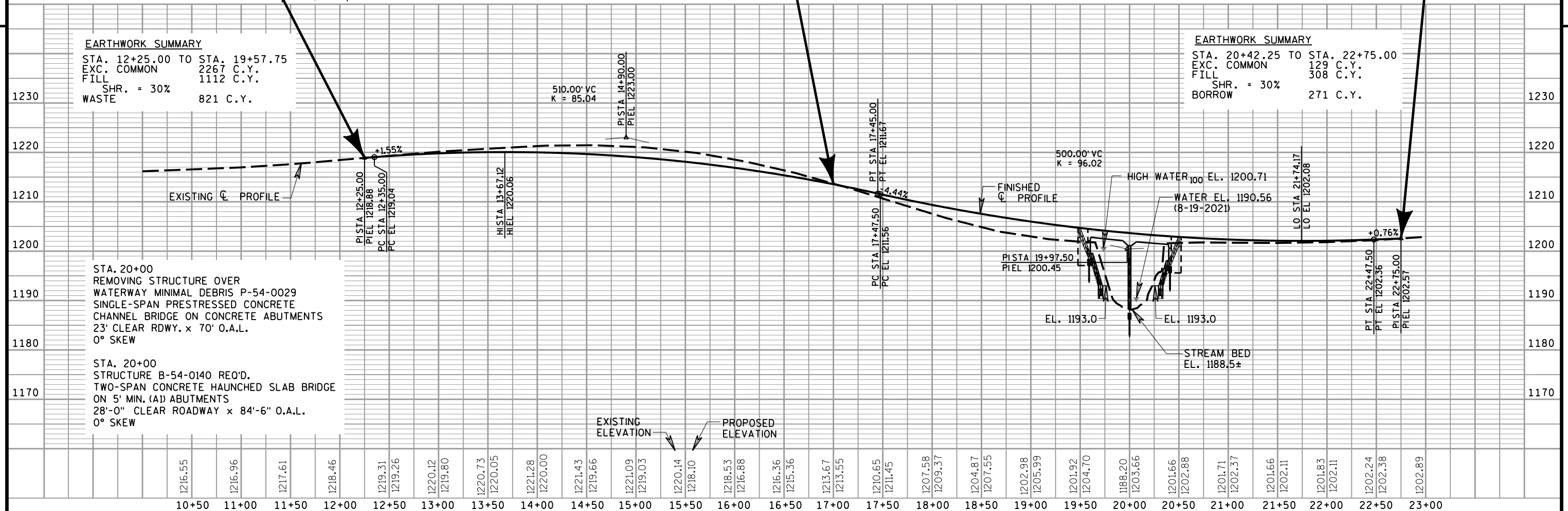
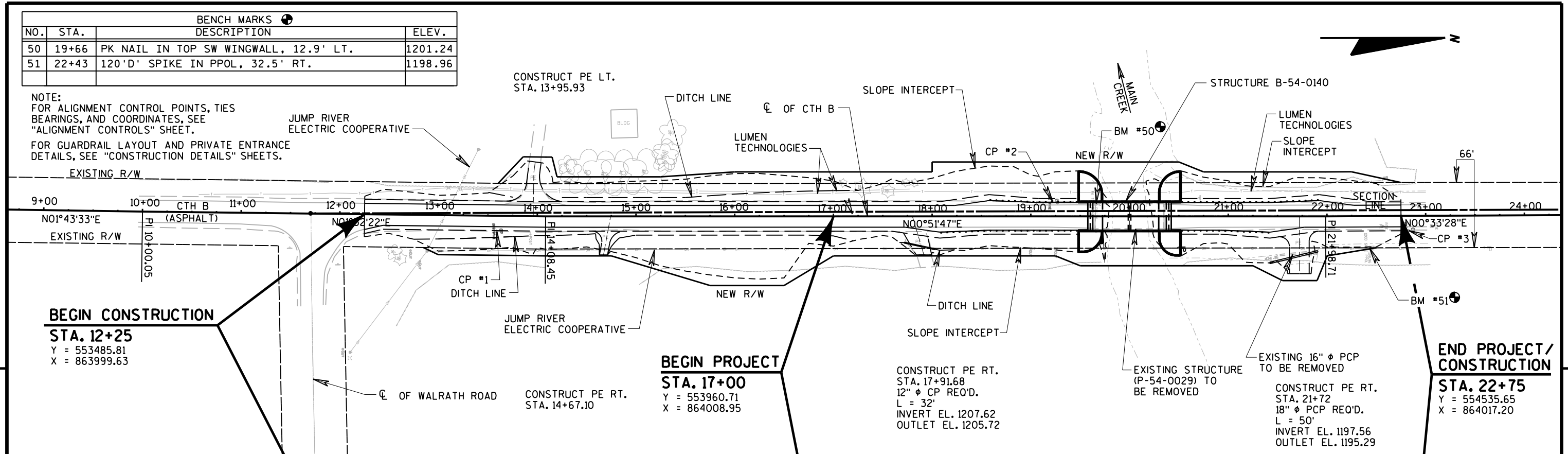
R/W COURSE TABLE

COURSE	BEARING	DISTANCE	COURSE	BEARING	DISTANCE	COURSE	BEARING	DISTANCE
100-101	N88°27'38"W	31.17'	112-113	N00°51'47"E	123.59'	123-124	S00°51'47"W	175.00'
101-102	N01°35'39"E	75.00'	113-114	N00°33'28"E	26.17'	124-125	S22°39'52"W	26.93'
102-103	N45°46'52"W	36.88'	114-115	N13°07'46"E	51.23'	125-126	S00°51'47"W	225.00'
103-104	N01°32'22"E	23.09'	115-116	S89°26'32"E	27.95'	126-127	S30°06'03"E	58.31'
104-105	N00°51'47"E	6.20'	116-117	S89°26'32"E	5.90'	127-128	S00°51'47"W	75.00'
105-106	N76°49'36"E	20.62'	117-118	S89°26'32"E	32.15'	128-129	S17°33'44"W	104.40'
106-107	N00°51'47"E	105.00'	118-119	S00°46'34"W	25.00'	129-130	S00°51'47"W	66.79'
107-108	N02°57'04"W	75.17'	119-120	S08°28'13"E	50.63'	130-131	S01°32'22"W	108.68'
108-109	N00°51'47"E	200.00'	120-121	S66°55'19"E	27.01'	131-132	S26°25'46"W	16.54'
109-110	N89°08'13"W	10.00'	121-122	S00°51'47"W	35.00'	132-133	N88°27'38"W	33.04'
110-111	N00°51'47"E	250.00'	122-123	S27°25'41"W	33.54'	133-100	N88°27'38"W	1.79'
111-112	N22°39'52"E	26.93'						

REVISION DATE	DATE 06/01/2021	SCALE, FEET	HWY: COUNTY HIGHWAY B	STATE R/W PROJECT NUMBER 8793-00-03	PLAT SHEET 4.02
	GRID FACTOR	0 50 100	COUNTY: RUSK	CONSTRUCTION PROJECT NUMBER 8793-00-73	PS&E SHEET

BENCH MARKS			
NO.	STA.	DESCRIPTION	ELEV.
50	19+66	PK NAIL IN TOP SW WINGWALL, 12.9' LT.	1201.24
51	22+43	120'D' SPIKE IN PPOL, 32.5' RT.	1198.96

NOTE:
FOR ALIGNMENT CONTROL POINTS, TIES BEARINGS, AND COORDINATES, SEE "ALIGNMENT CONTROLS" SHEET.
FOR GUARDRAIL LAYOUT AND PRIVATE ENTRANCE DETAILS, SEE "CONSTRUCTION DETAILS" SHEETS.



EARTHWORK SUMMARY

STA. 12+25.00 TO STA. 19+57.75	
EXC. COMMON	2267 C.Y.
FILL	1112 C.Y.
SHR. = 30%	
WASTE	821 C.Y.

EARTHWORK SUMMARY

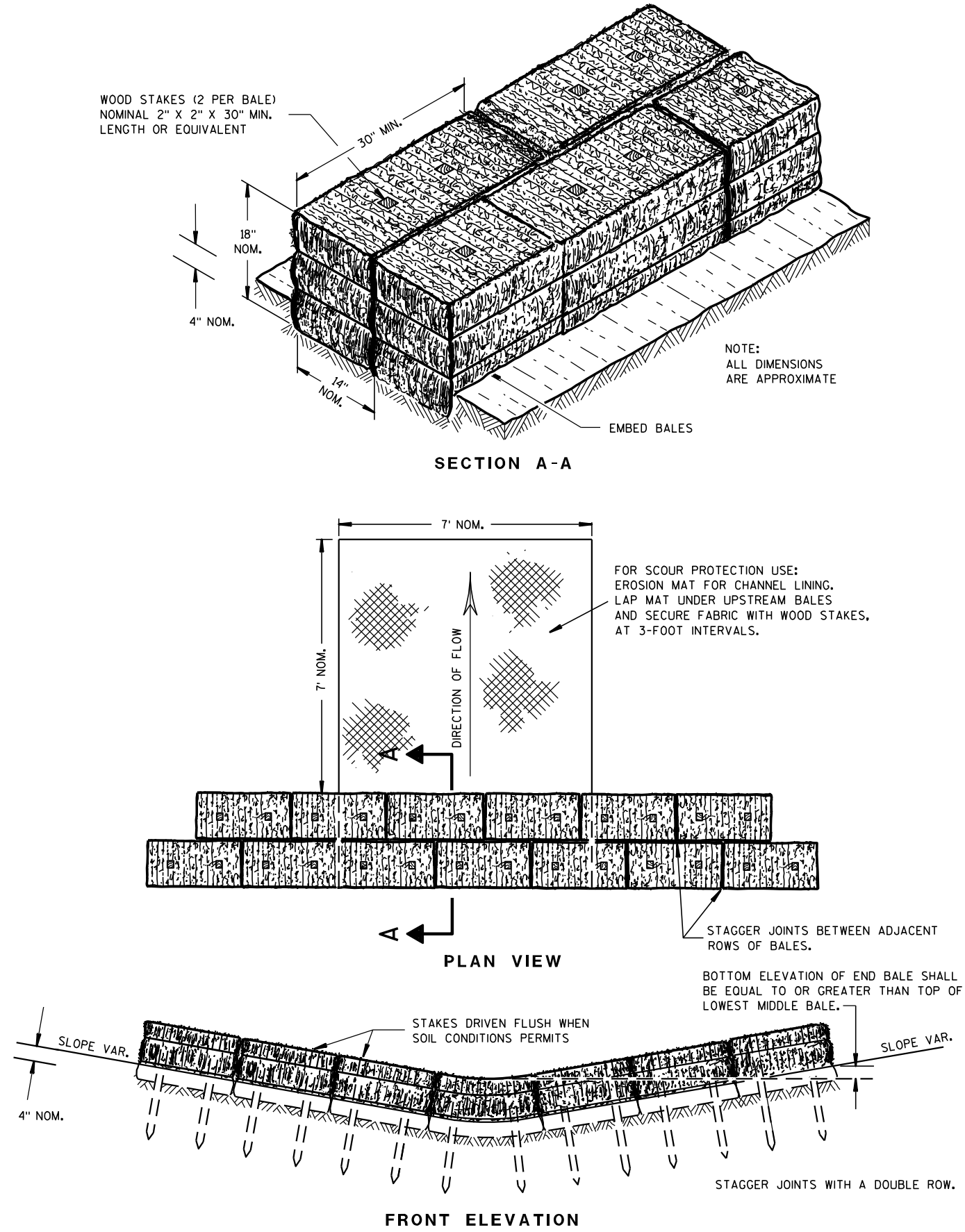
STA. 20+42.25 TO STA. 22+75.00	
EXC. COMMON	129 C.Y.
FILL	308 C.Y.
SHR. = 30%	
BORROW	271 C.Y.

STA. 20+00
REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-54-0029 SINGLE-SPAN PRESTRESSED CONCRETE CHANNEL BRIDGE ON CONCRETE ABUTMENTS 23' CLEAR RDWY. x 70' O.A.L. 0° SKEW

STA. 20+00
STRUCTURE B-54-0140 REQ'D. TWO-SPAN CONCRETE HAUNCHED SLAB BRIDGE ON 5' MIN. (A) ABUTMENTS 28'-0" CLEAR ROADWAY x 84'-6" O.A.L. 0° SKEW

Standard Detail Drawing List

08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
08E15-01	CULVERT PIPE CHECK
12A03-10	NAME PLATE (STRUCTURES)
14B42-07A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-07D	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-04A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-04C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B45-05A	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05B	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05C	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05D	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C06-10	SIGNING & MARKING FOR TWO LANE BRIDGES
15C08-22A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS

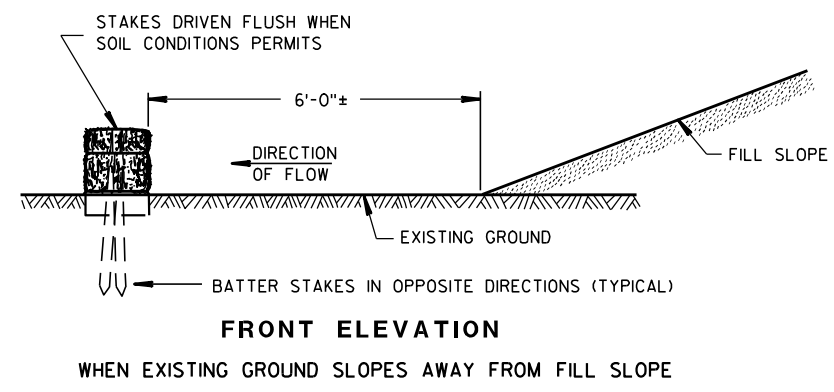
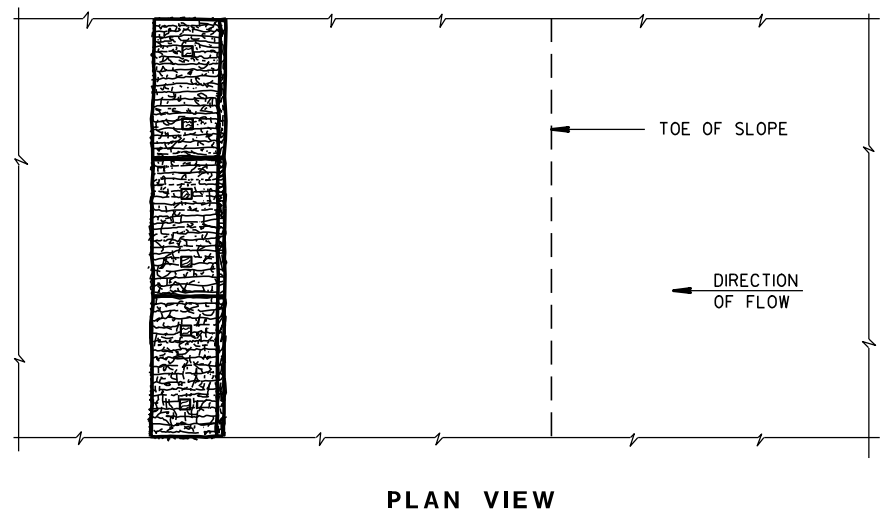
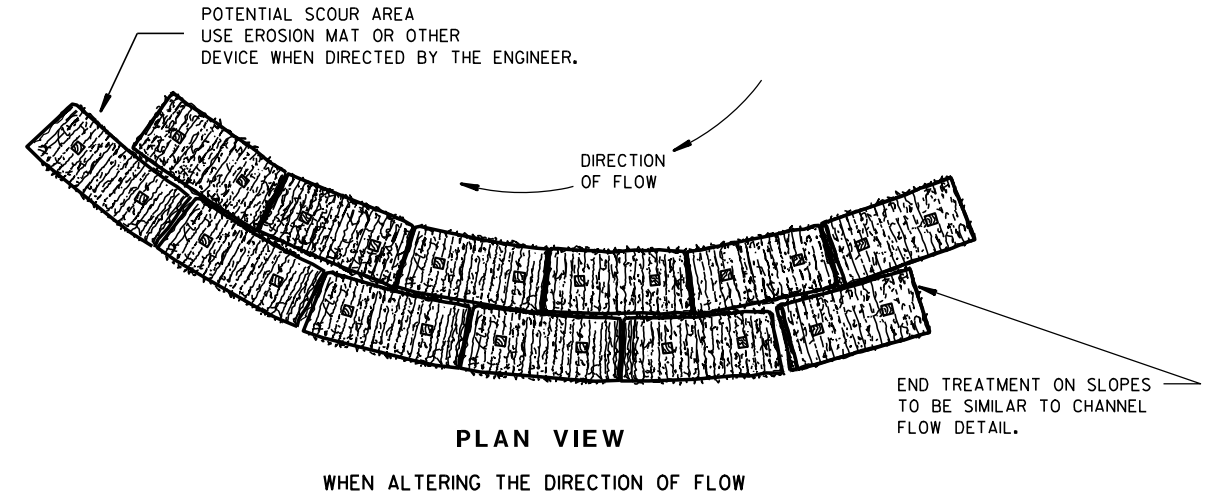


TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

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

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

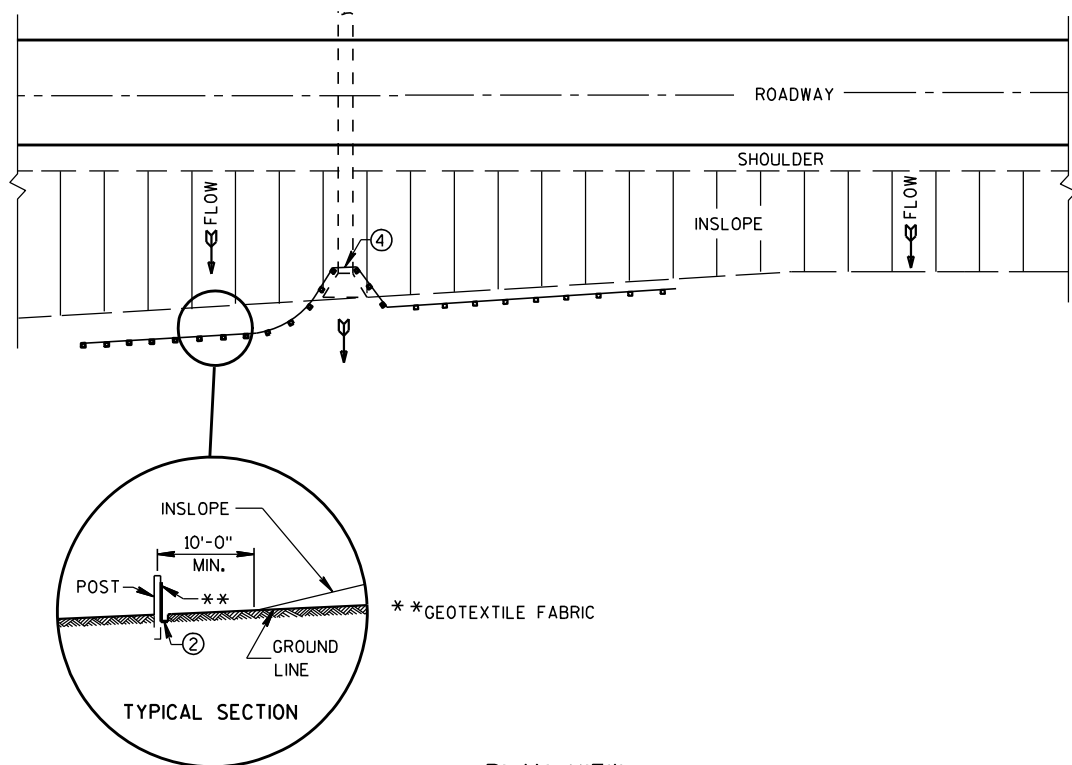


EROSION BALES FOR SHEET FLOW

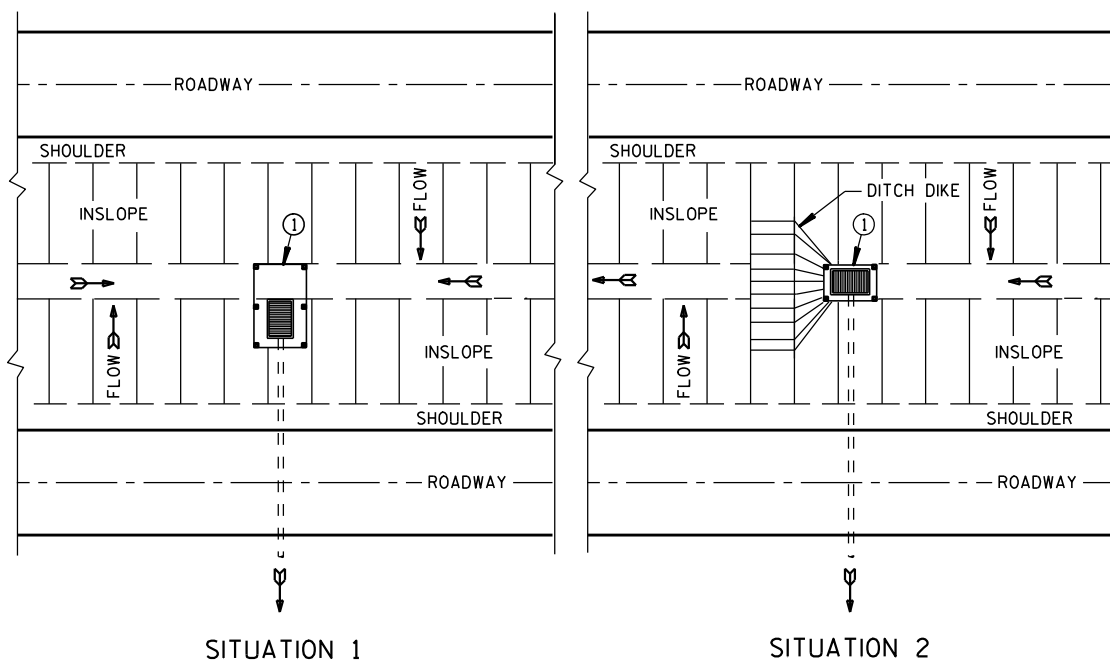
TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

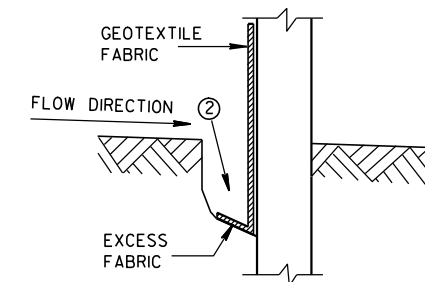


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

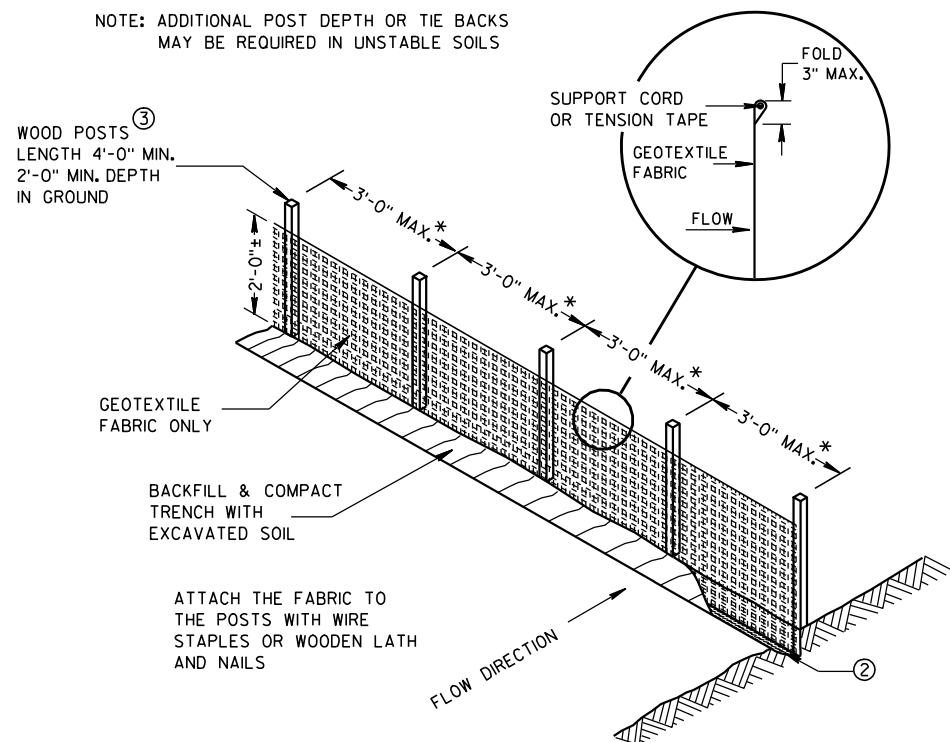
GENERAL NOTES

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

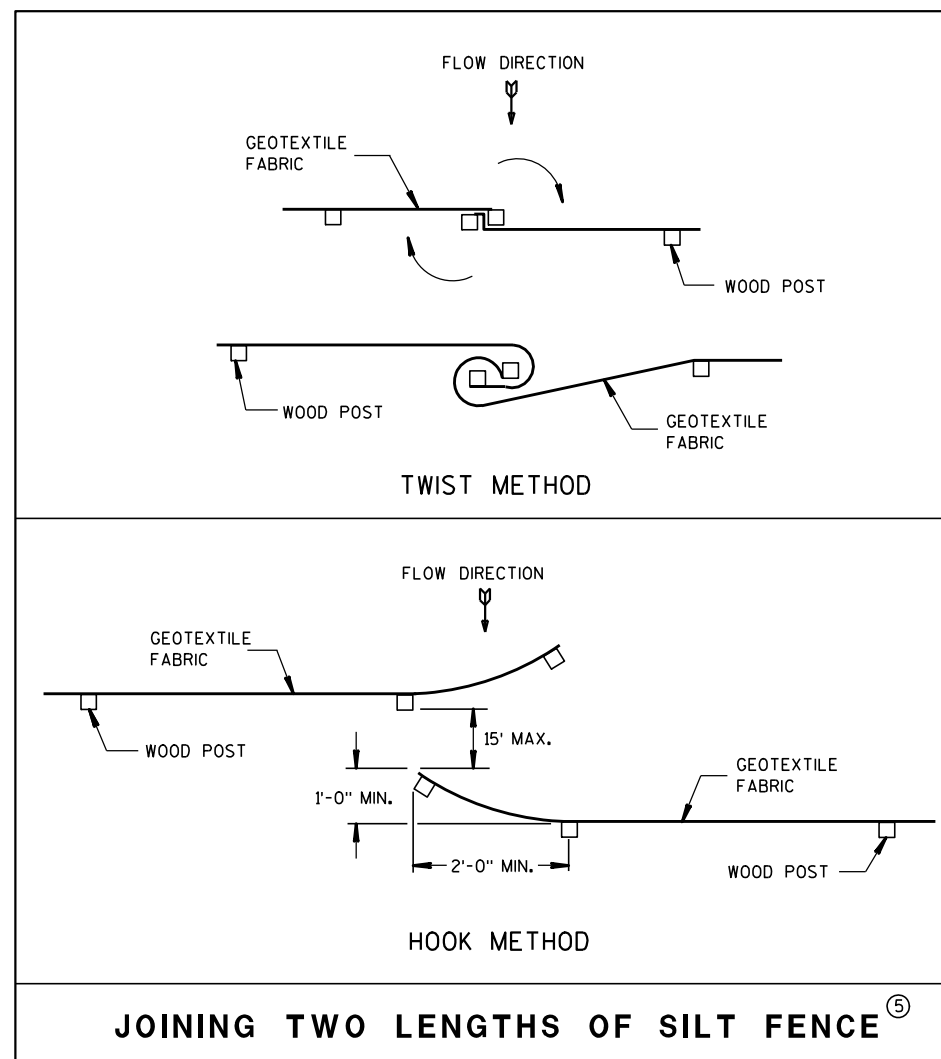
- ① HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
- ② FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
- ③ WOOD POSTS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



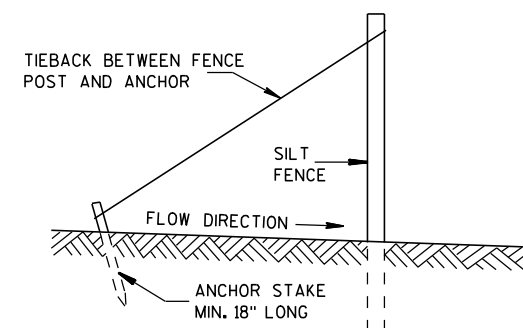
TRENCH DETAIL



SILT FENCE



JOINING TWO LENGTHS OF SILT FENCE ⑤

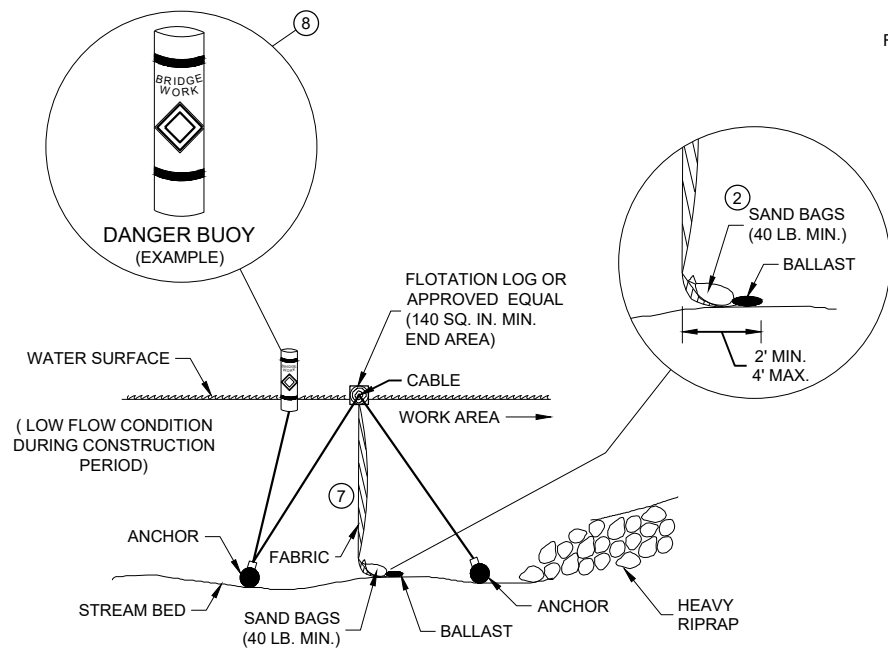


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

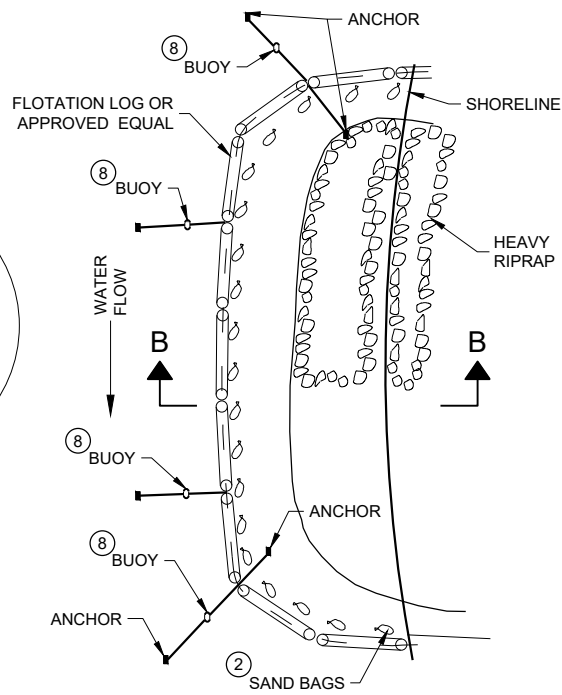
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

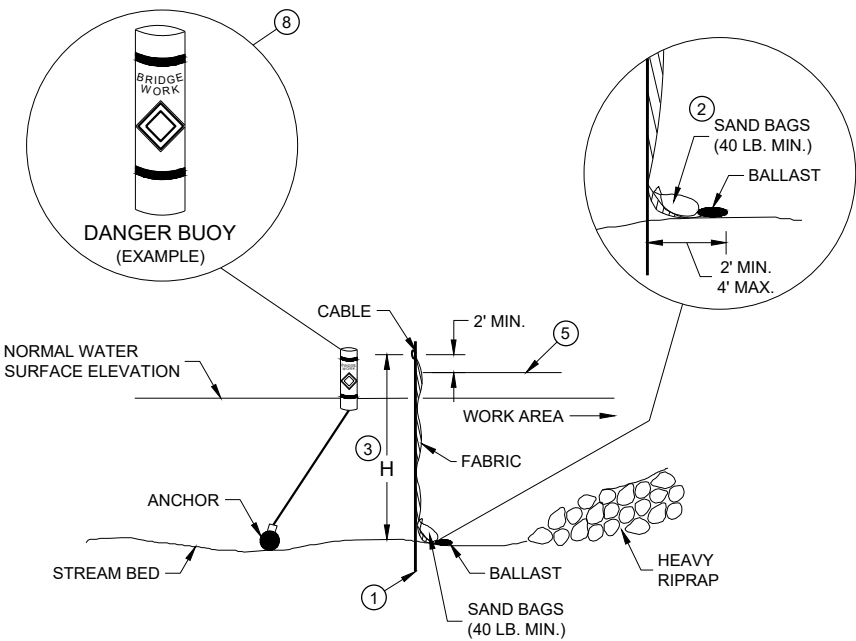


SECTION B - B

**TURBIDITY BARRIER - FLOAT ALTERNATIVE
CAUTION - SEE NOTE 6**

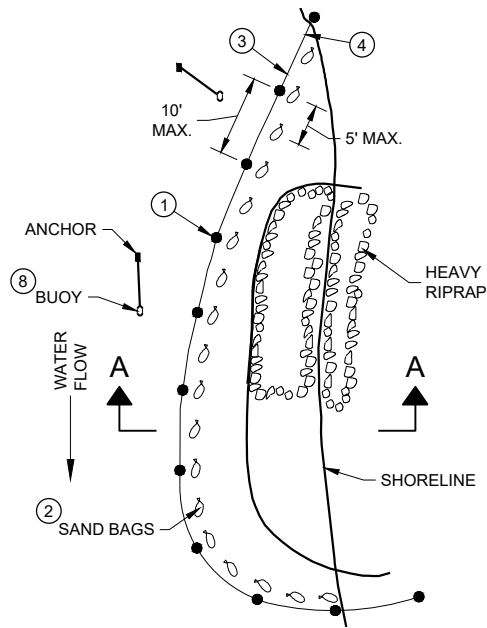


PLAN VIEW



SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW

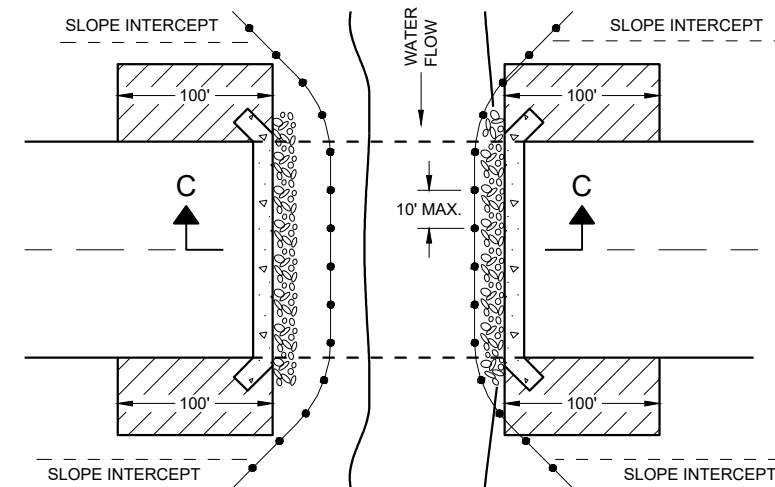
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

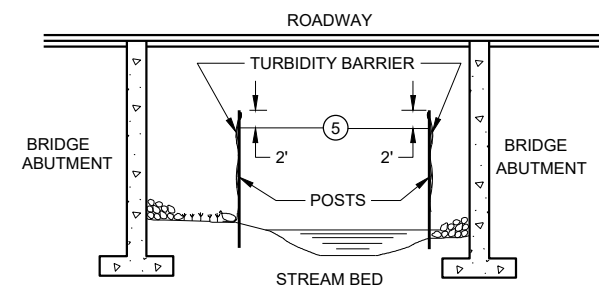
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

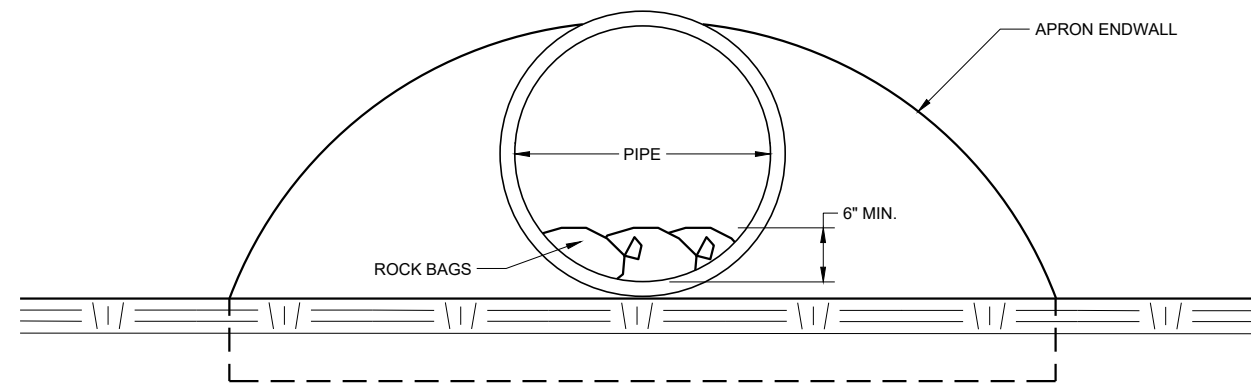
**TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES**

TURBIDITY BARRIER

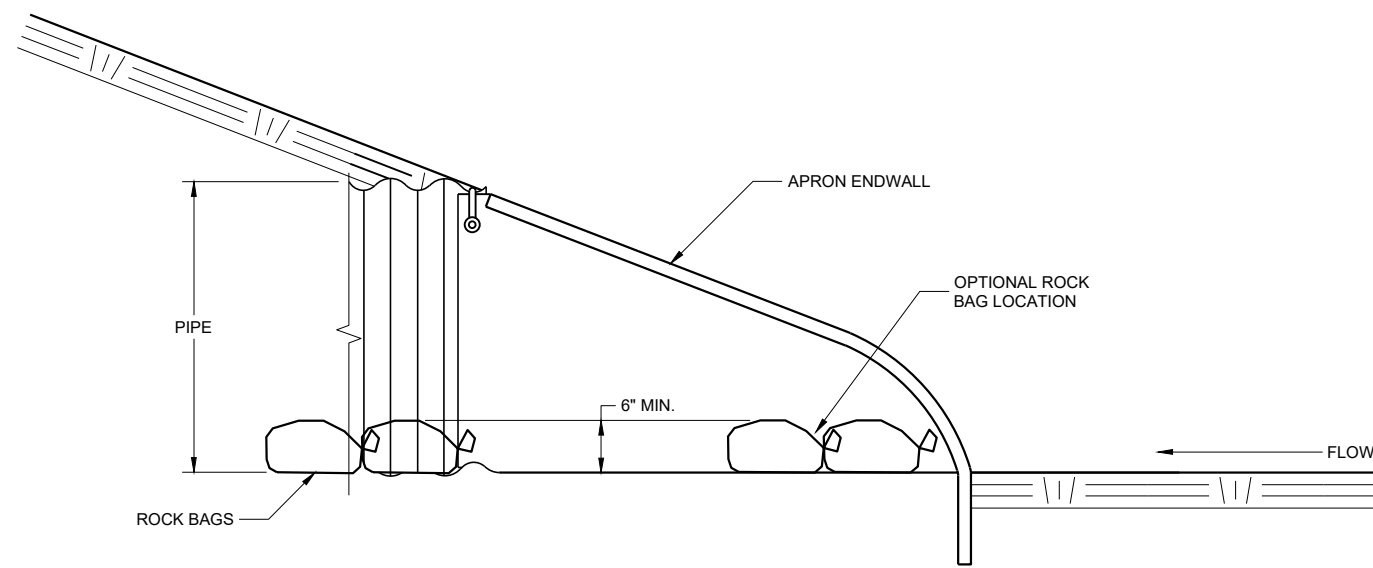
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



END VIEW



SIDE VIEW

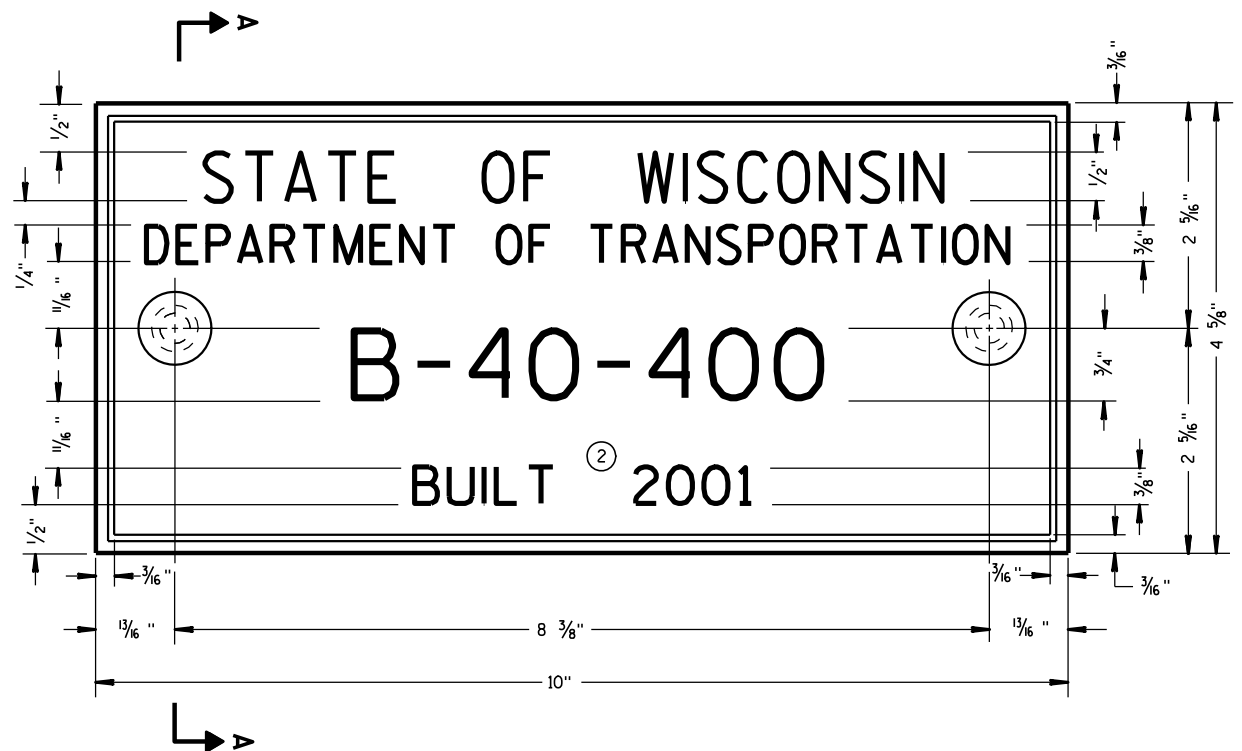
CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Daniel Schave
DATE EROSION CONTROL ENGINEER

FHWA



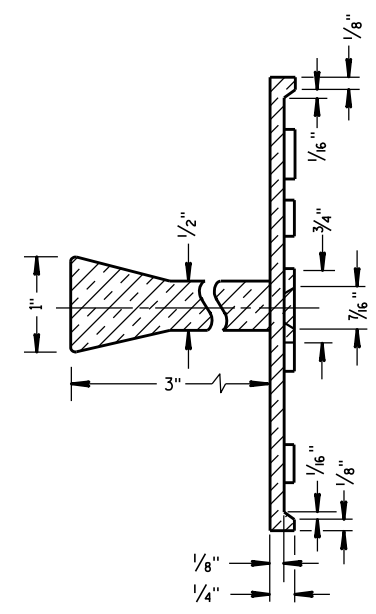
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

GENERAL NOTES

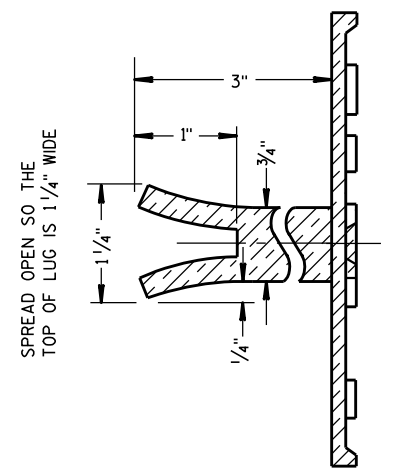
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

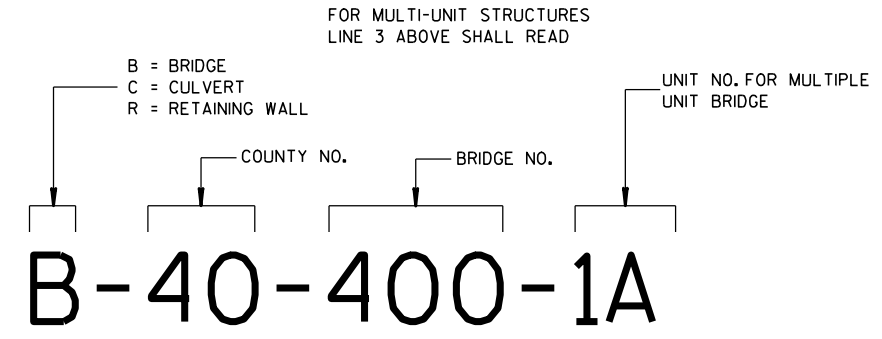
- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A

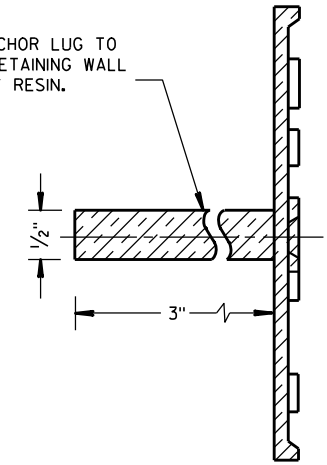


ALTERNATE LUG



**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

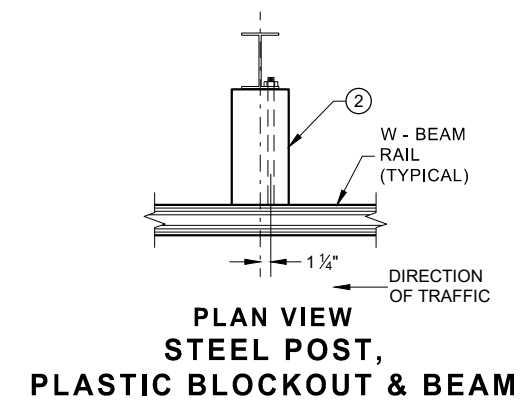
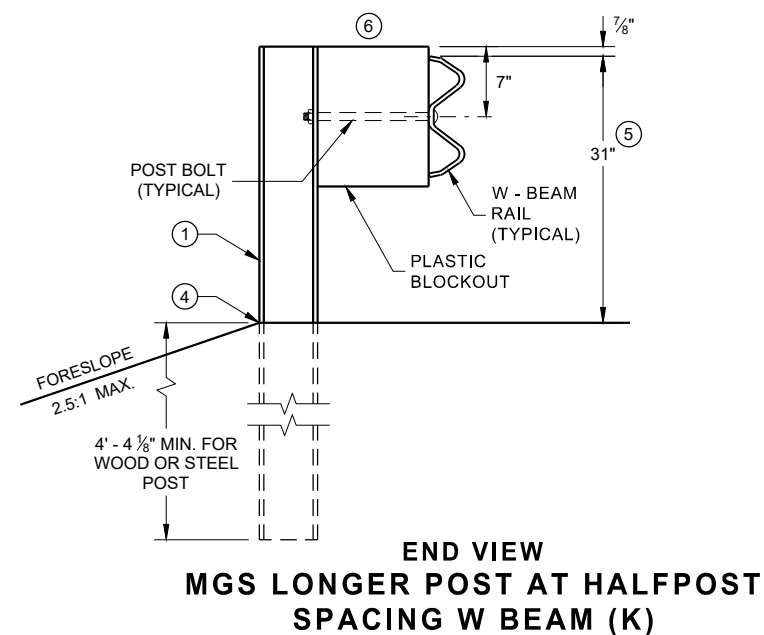
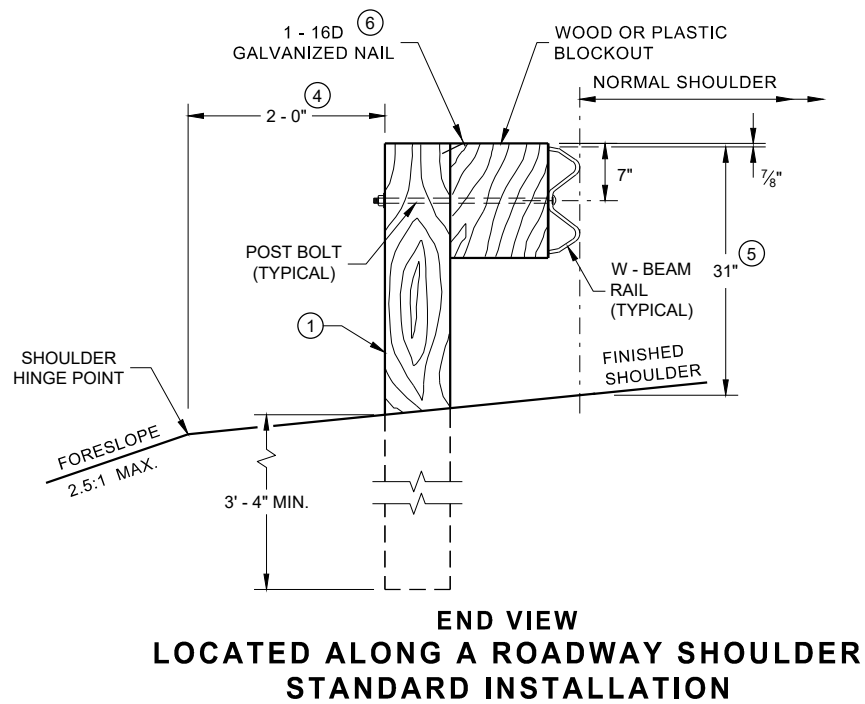
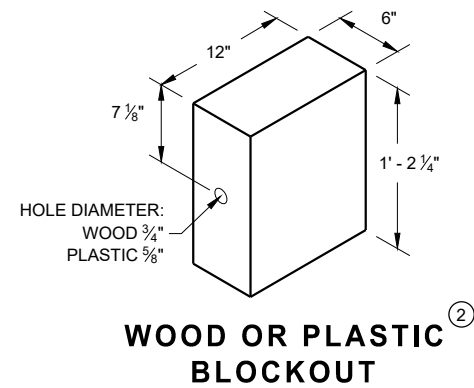
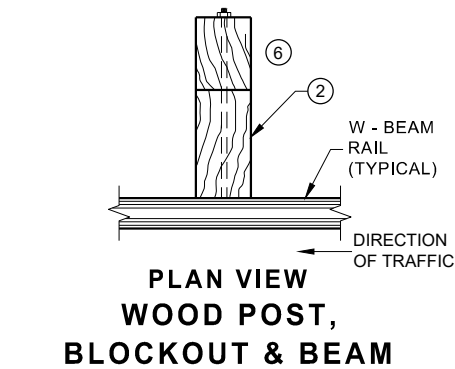
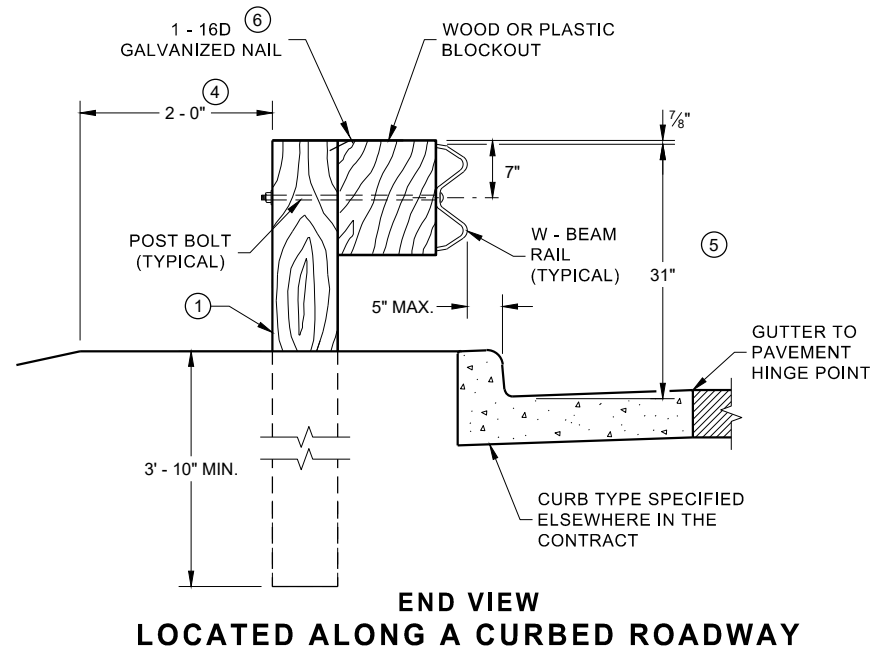
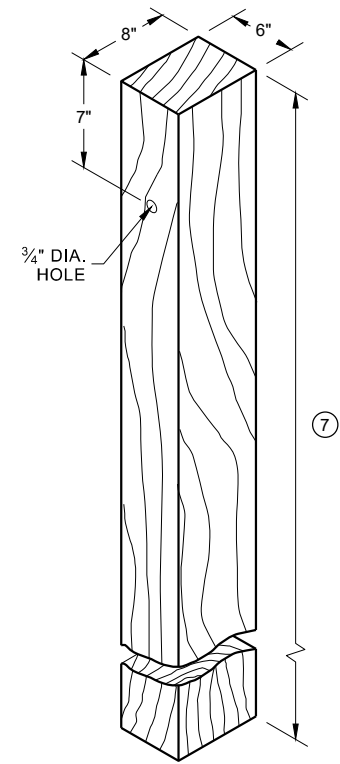
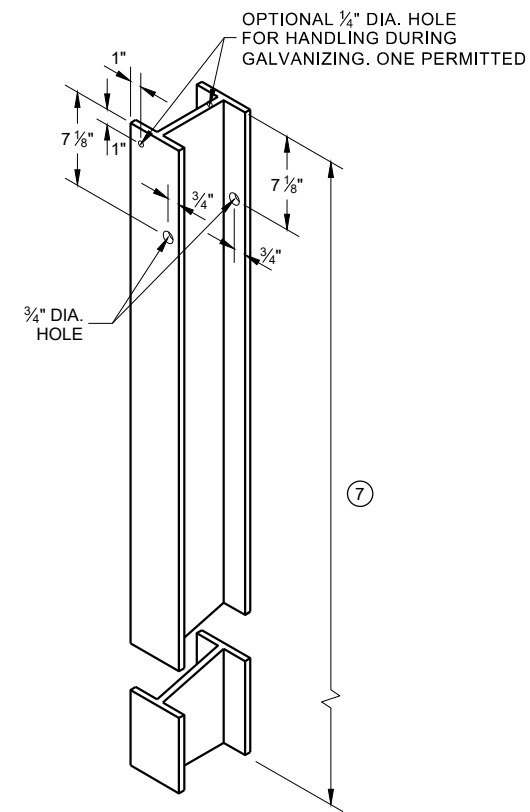
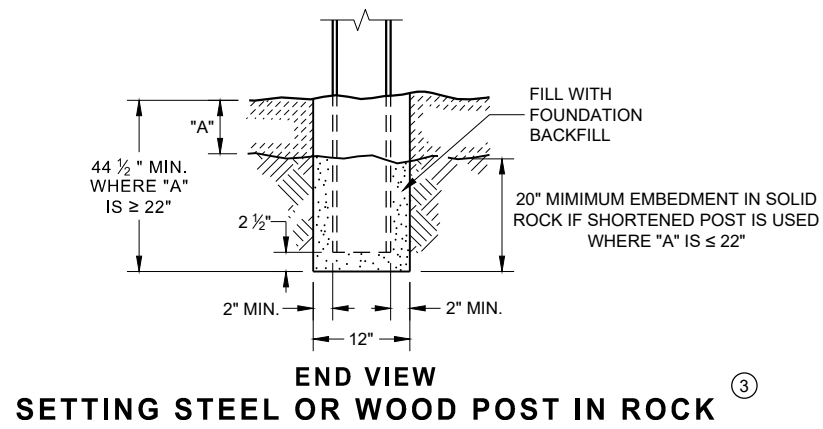
- ① ADHERE ANCHOR LUG TO PRECAST RETAINING WALL WITH EPOXY RESIN.



ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

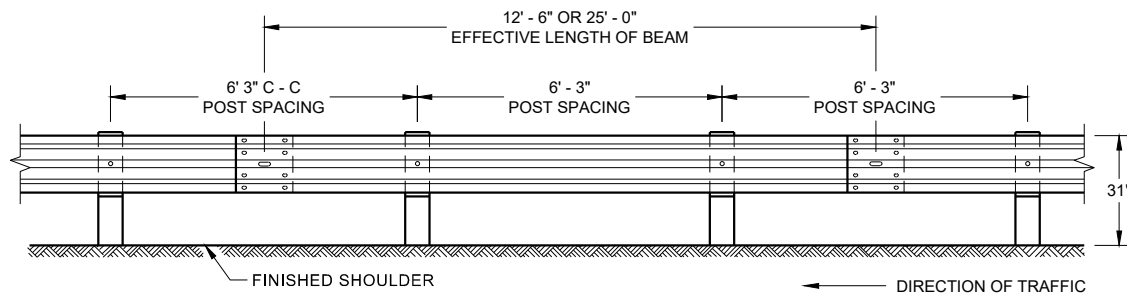
NAME PLATE (STRUCTURES)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE 3/26/10	/S/ Scot Becker CHIEF STRUCTURAL DEVELOPMENT ENGINEER
FHWA	

- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.
- ③ IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2 1/2" INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AND INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.
- ④ WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).
- ⑤ FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS $\pm 1"$. FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27 3/4" TO 32".
- ⑥ WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ⑦ TOTAL POST LENGTH FOR TYPE K IS 7' - 0". TOTAL POST LENGTH FOR OTHER MGS TYPES IS 6' - 0".

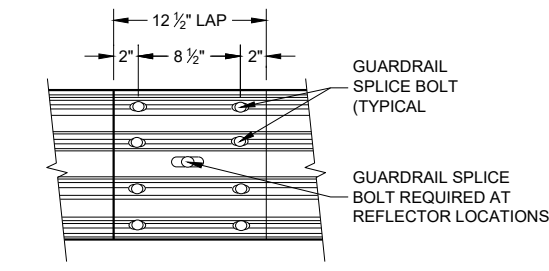


**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



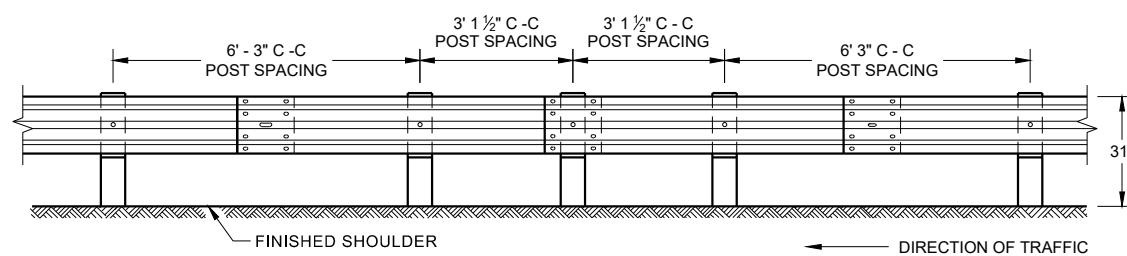
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



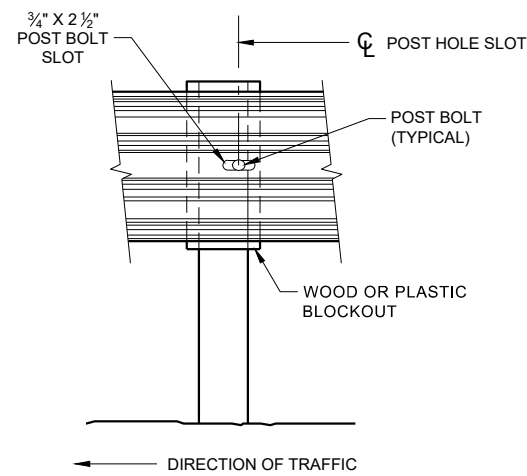
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

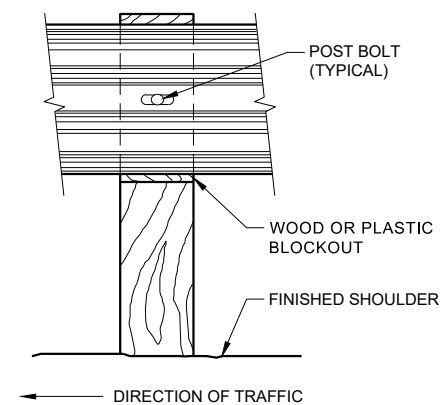
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND 3/8" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.
- GUARD RAIL SPLICE BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES 3/8" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



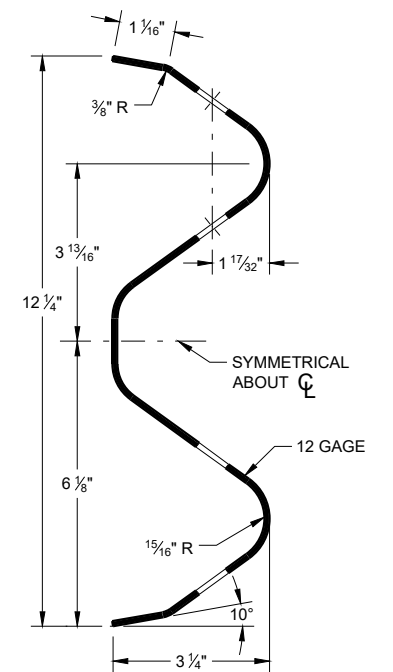
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



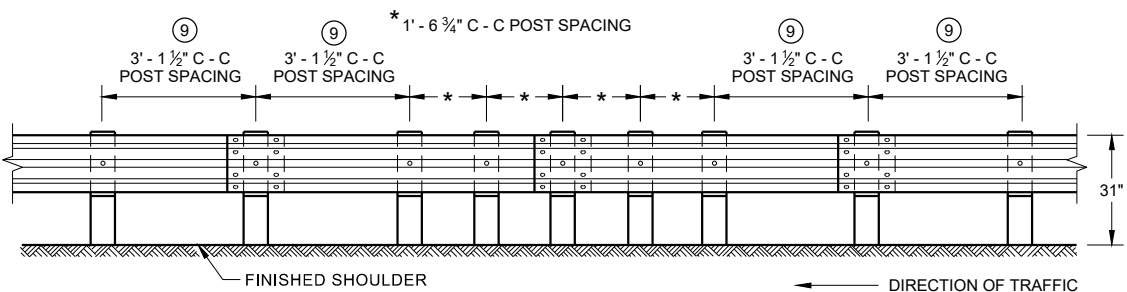
FRONT VIEW AT STEEL POST



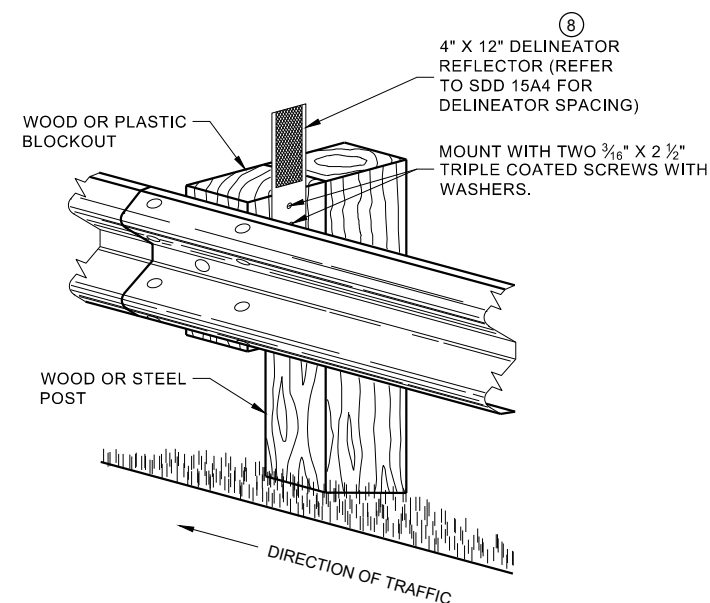
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



**FRONT VIEW
QUARTER POST SPACING (QS)**



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

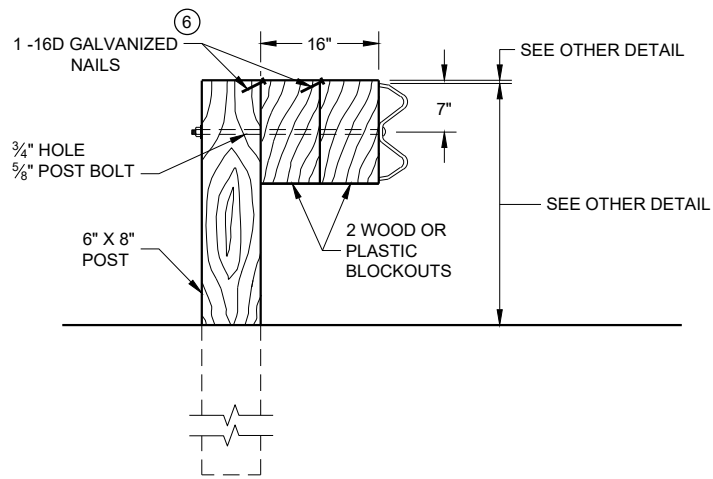
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

SDD 14B42 - 07b

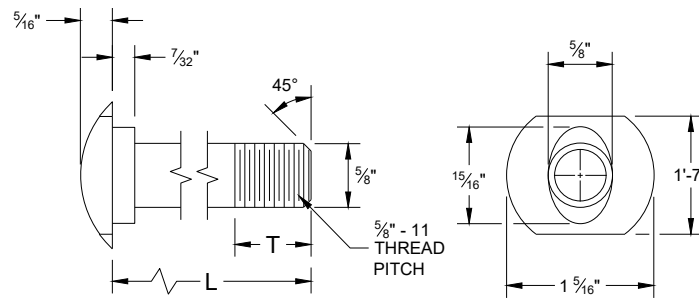


DETAIL FOR 16" BLOCKOUT DEPTH

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

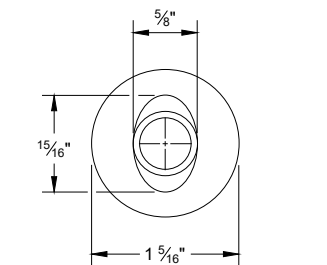
NOTE:

1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 3/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

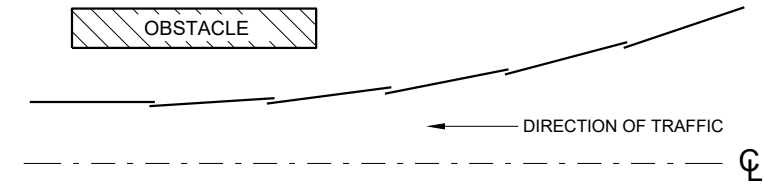


POST BOLT TABLE

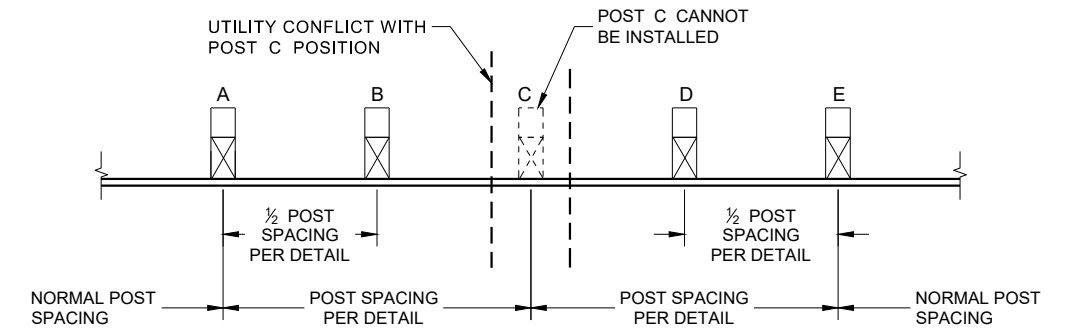
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



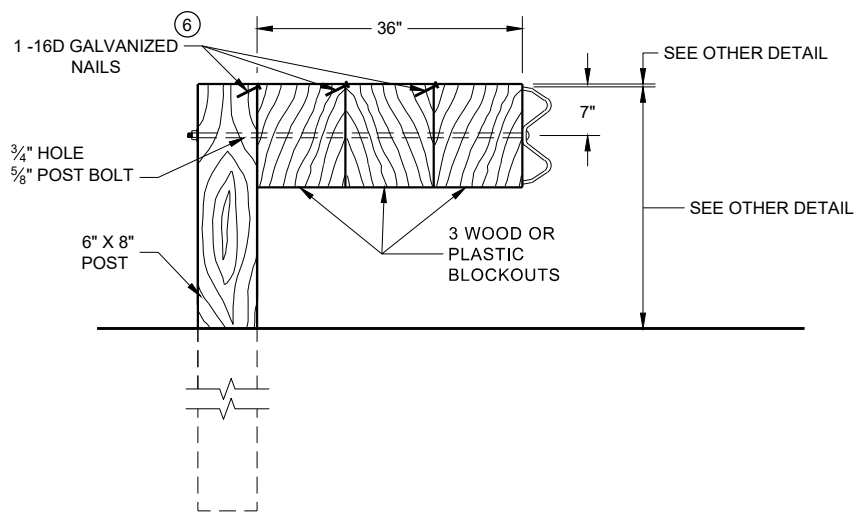
ALTERNATE BOLT HEAD



**PLAN VIEW
BEAM LAPPING DETAIL**

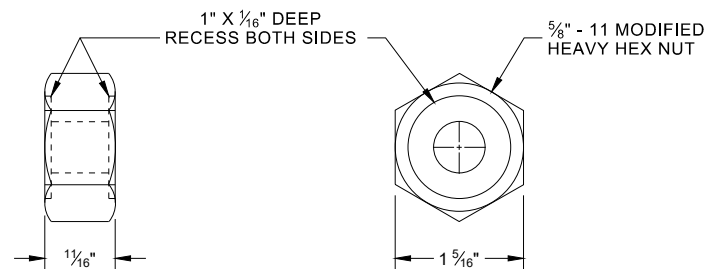


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

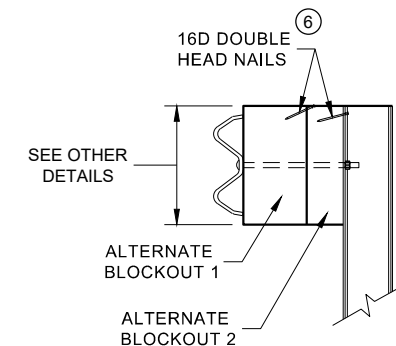


DETAIL FOR 36" BLOCKOUT DEPTH

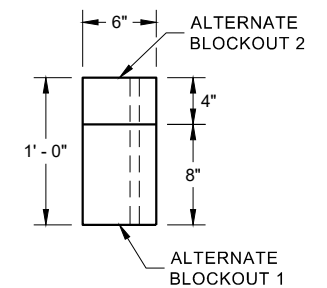
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.



**POST BOLT, SPLICE BOLT
AND RECESS NUT**



SIDE VIEW



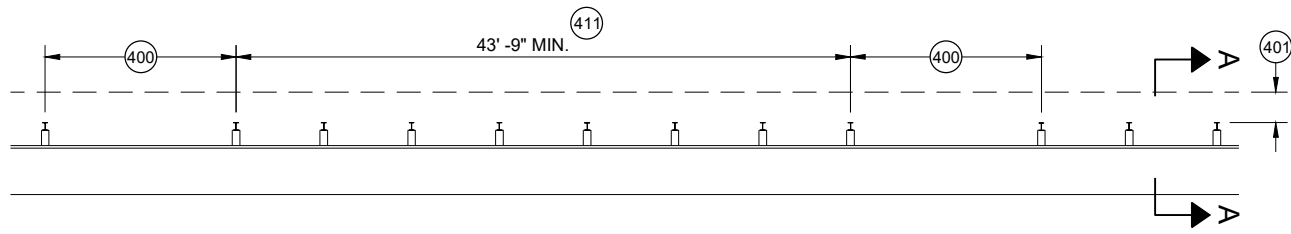
PLAN VIEW

**ALTERNATE WOOD
BLOCKOUT DETAIL**

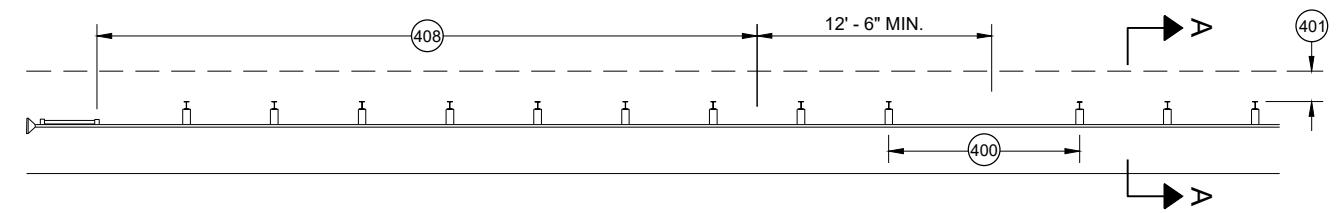
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

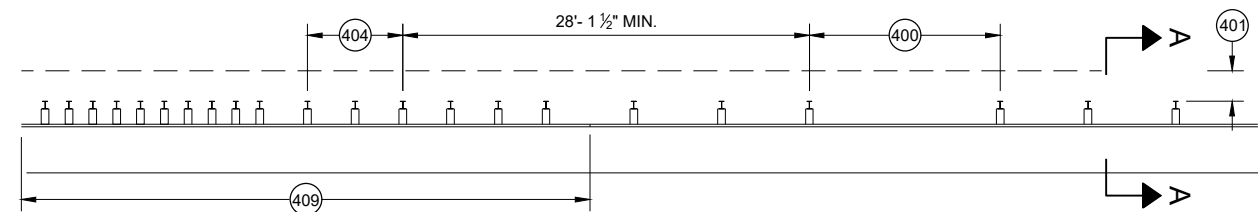
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



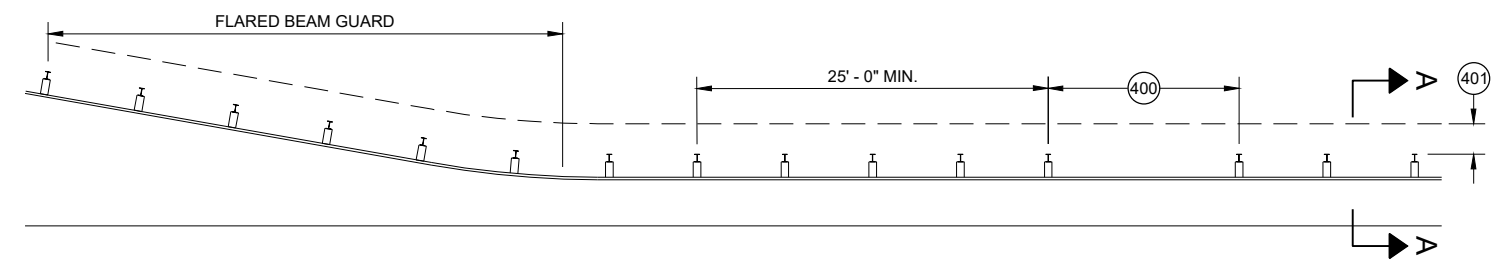
MISSING POST IN MGS GUARDRAIL



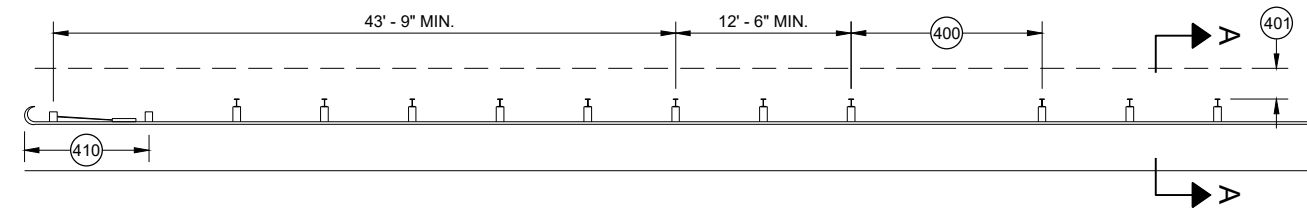
MISSING POST IN MGS GUARDRAIL NEAR EAT



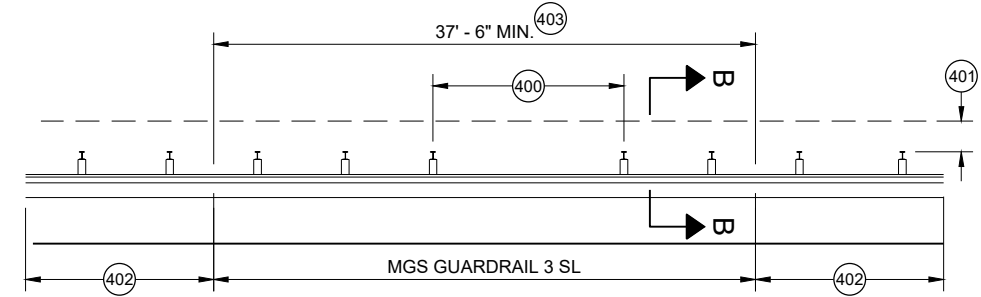
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

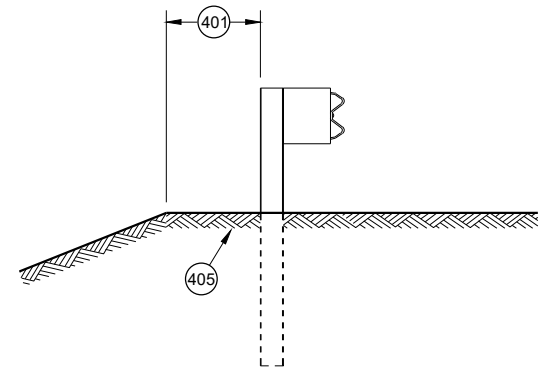


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

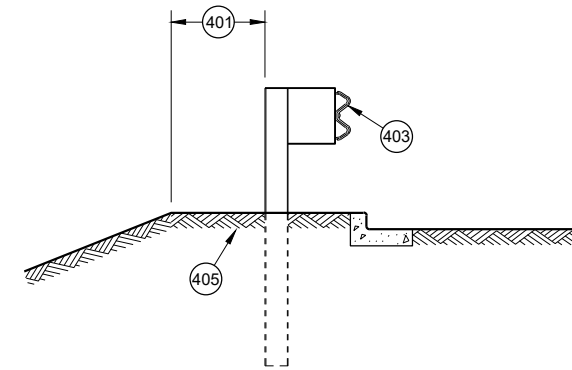


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- 400 MAX SPAN 12' - 6"
- 401 2' MIN.
- 402 MGS GUARDRAIL 3
- 403 NESTING BEAM GUARD
- 404 ASYMMETRIC TRANSITION
- 405 SOIL WELL DRAINED AND COMPACTED
- 406 SEE OTHER DRAWINGS IN THIS SDD
- 407 SEE OTHER DRAWINGS FOR MIN. SPACING BETWEEN SPANS
- 408 SEE SDD 14B44
- 409 SEE SDD 14B45
- 410 SEE SDD 14B47
- 411 MINIMUM DISTANCE BETWEEN MISSING POST SPANS.



SECTION A - A



SECTION B - B

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
<small>FHWA</small>	

GENERAL NOTES

- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
 - (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
 - (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. SEE MANUFACTURER'S INFORMATION.
 - (D) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF - TAPPING SCREWS. ONE SCREW PER CORNER.
 - (E) HARDWARE MAY VARY BETWEEN MANUFACTURER. SEE MANUFACTURER'S DRAWING FOR INFORMATION.
- DIMENSIONS MAY VARY, MANUFACTURER'S INFORMATION.

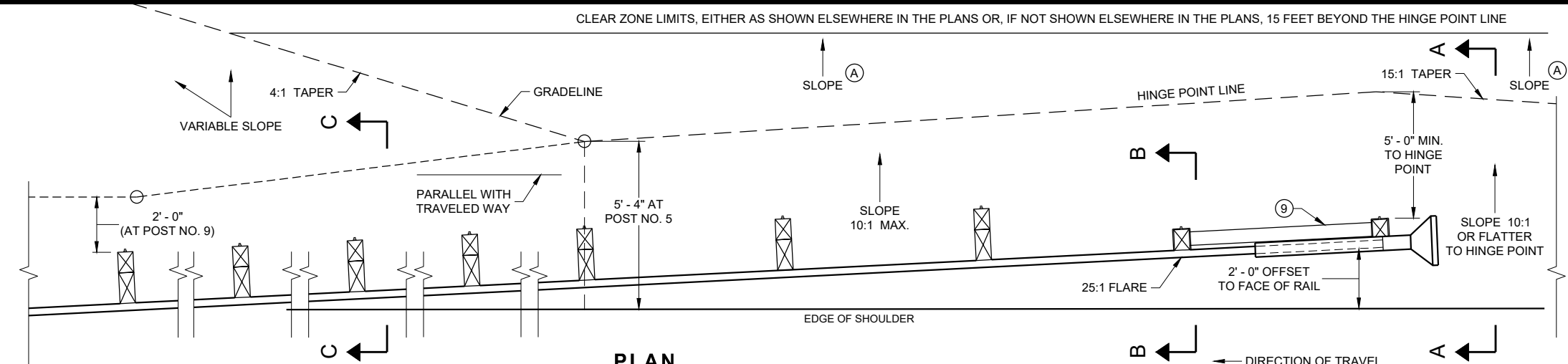
SEE SDD 14B42 FOR MORE INFORMATION.

* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

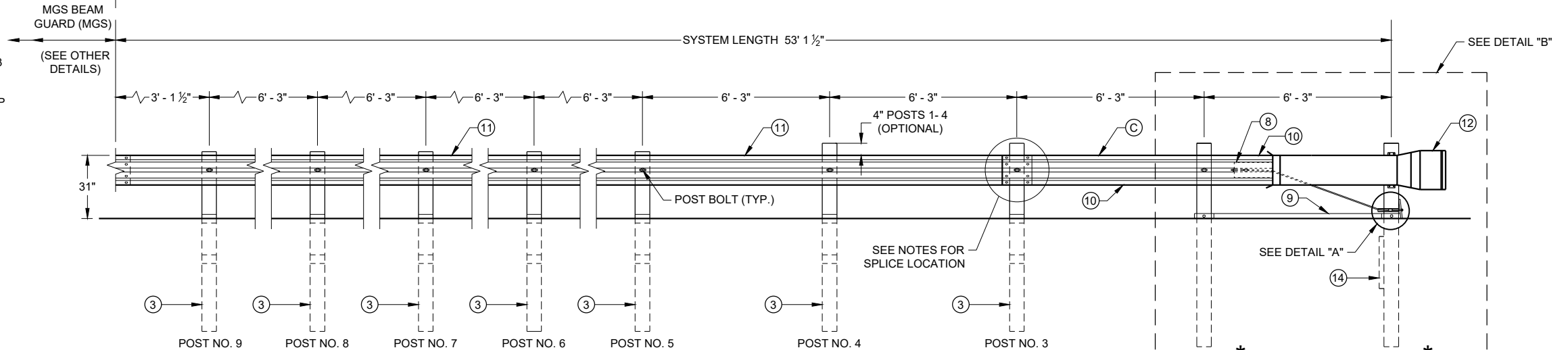
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

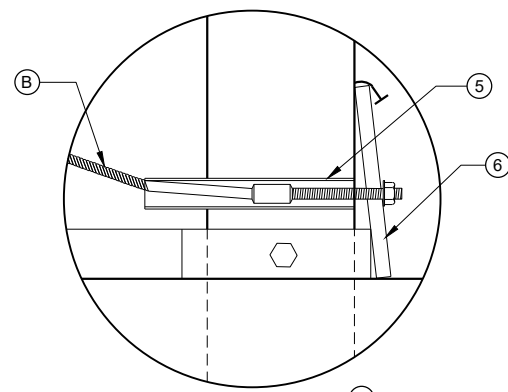
THE CENTER OF THE UPPER 3 1/2" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE. WOOD BLOCKS ON POSTS NUMBERED 3 THROUGH 9 MAY BE ADJUSTED UP TO 3" ABOVE THE TOP OF POST.



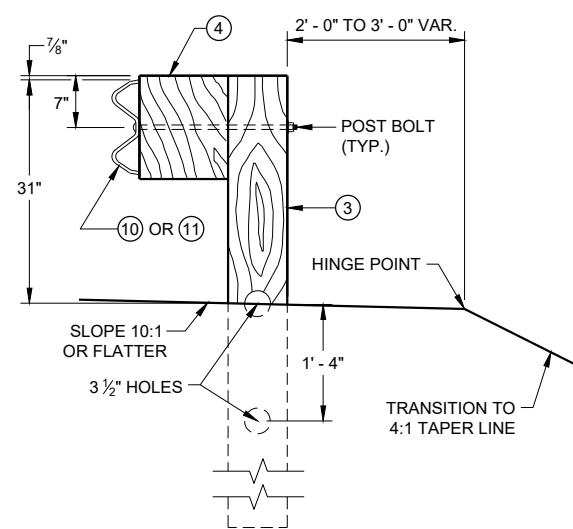
PLAN



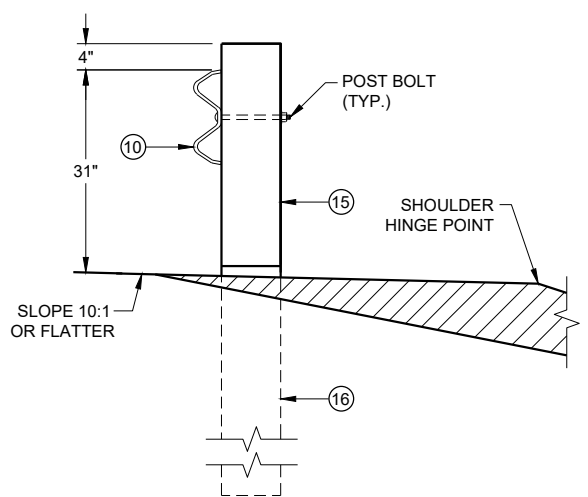
ELEVATION



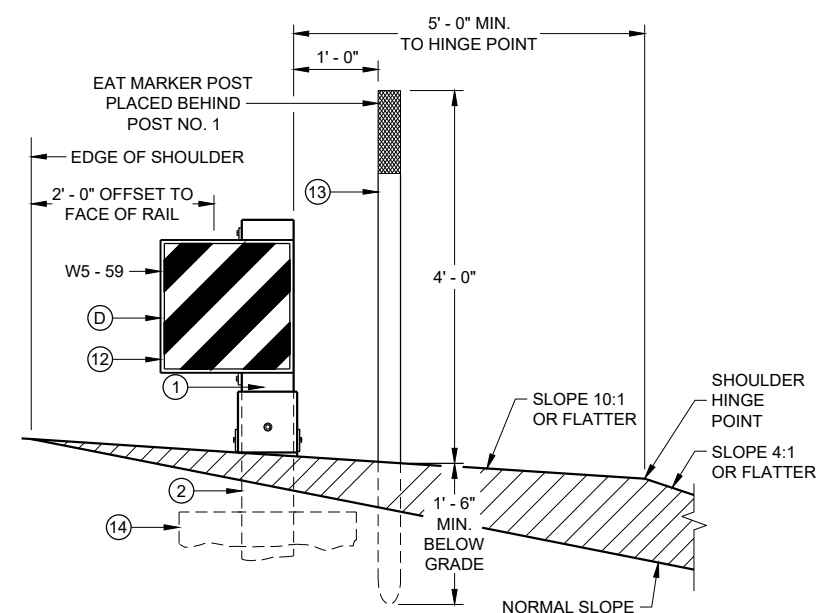
DETAIL "A"



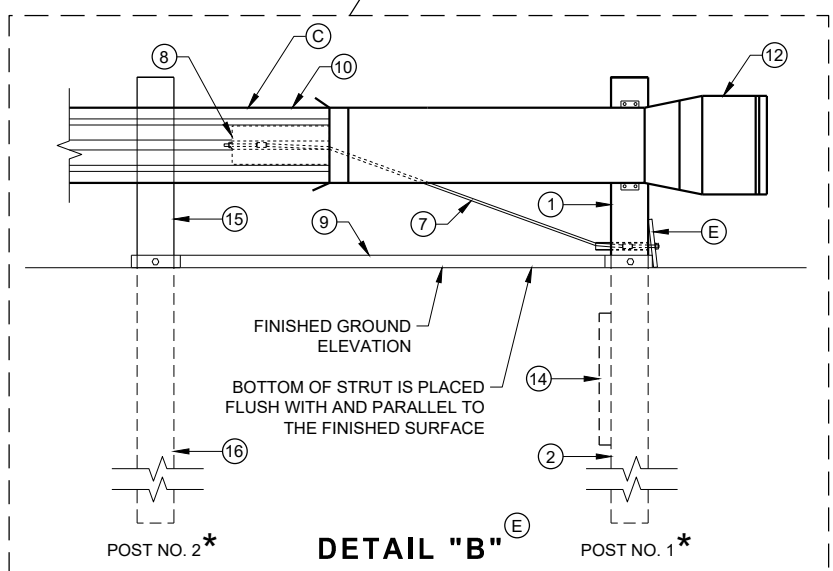
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



**SECTION B - B
TYPICAL AT POST NO. 2***



**SECTION A - A
TYPICAL AT POST NO. 1***



DETAIL "B"

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

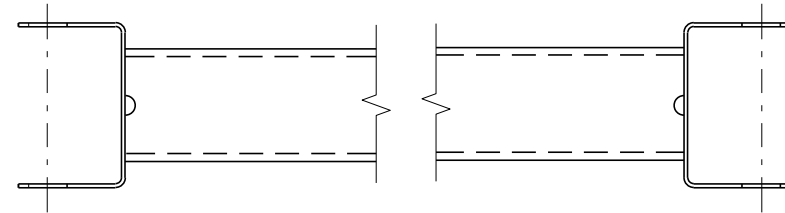
6

SDD 14B44 - 04a

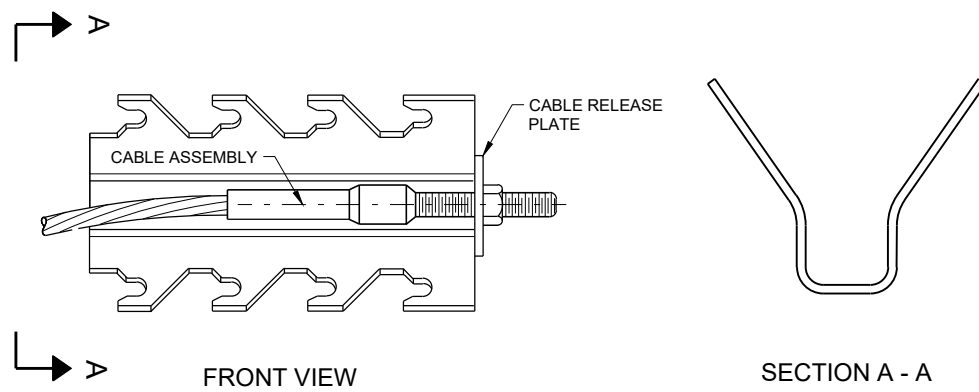
SDD 14B44 - 04a

BILL OF MATERIALS

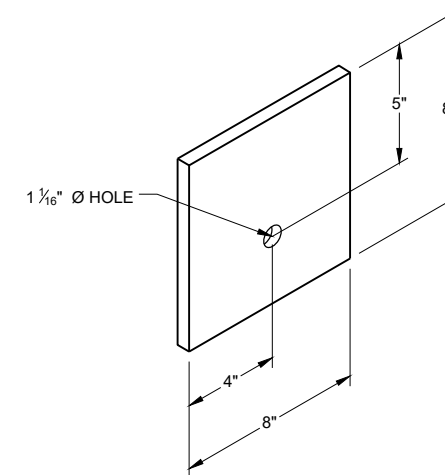
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
⑪	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
⑫	IMPACT HEAD
⑬	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)
⑭	SOIL PLATE
⑮	UPPER POST NO. 2
⑯	LOWER POST NO. 2



GENERIC GROUND STRUT ⑨ ⑤



GENERIC ANCHOR CABLE BOX ⑨ ⑤



BEARING PLATE ⑥ ⑤

6

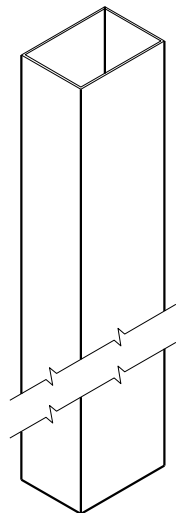
6

SDD 14B44 - 04b

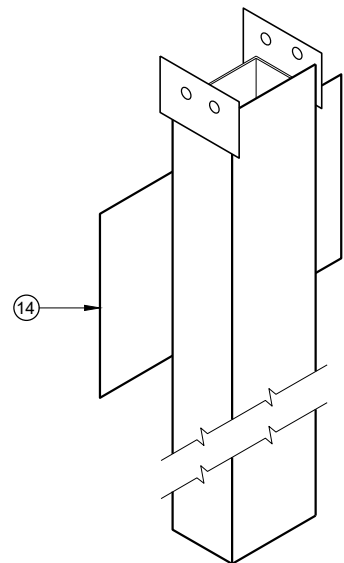
SDD 14B44 - 04b

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

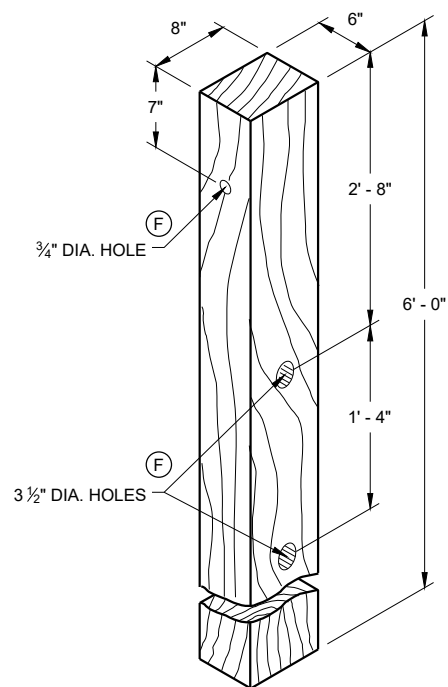
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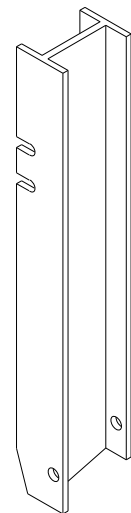
UPPER POST NO. 1 ⁽¹⁾ (E)



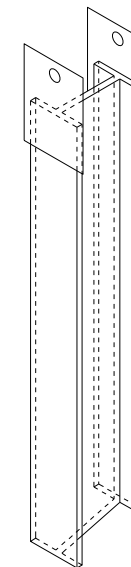
LOWER POST NO. 1 ⁽²⁾ (E)



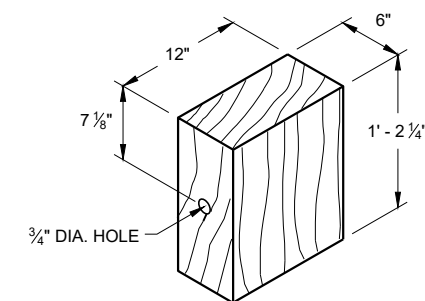
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

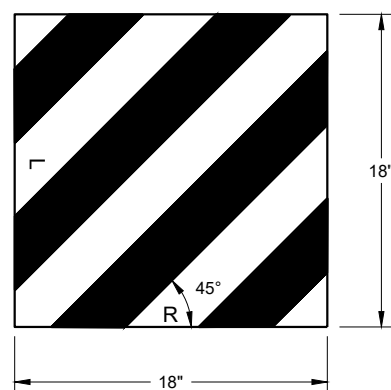


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



WOOD BLOCKOUT ⁽⁴⁾
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2

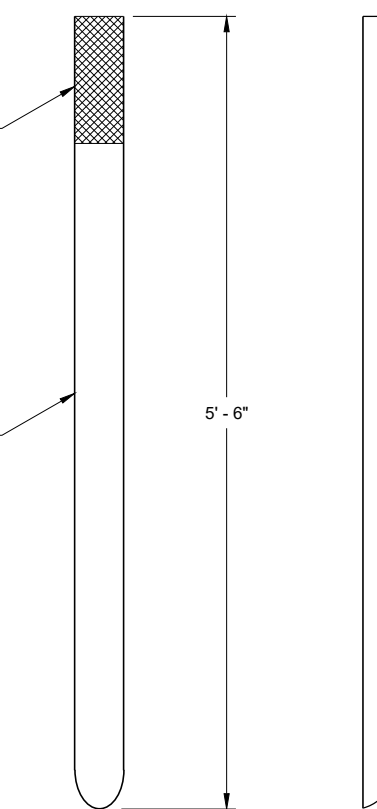
6



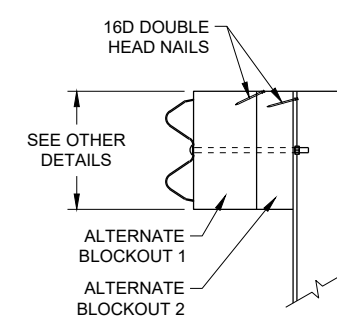
REFLECTIVE SHEETING DETAIL ^(E)

TYPE H
YELLOW REFLECTIVE
SHEETING 3" X 9".
SEE STANDARD
SPECIFICATION 637.

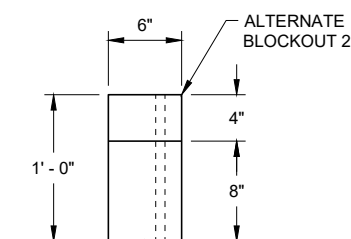
E.A.T. MARKER
POST (YELLOW)



FRONT VIEW SIDE VIEW
E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

6

SDD 14B44 - 04c

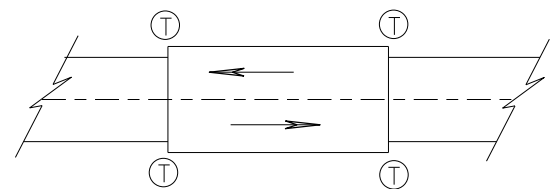
SDD 14B44 - 04c

**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

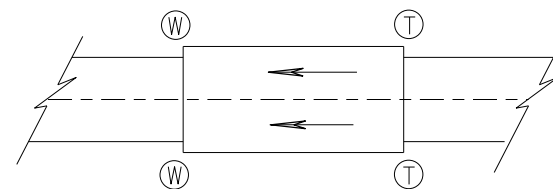
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APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA



TWO WAY TRAFFIC



ONE WAY TRAFFIC

(T) THRIE BEAM CONNECTION

(W) W-BEAM CONNECTION WHEN REQUIRED

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

GENERAL NOTES

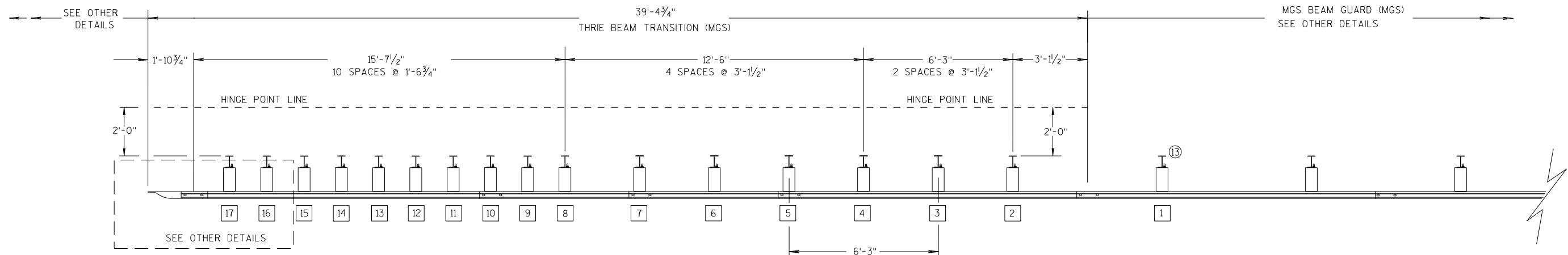
IF ROCK IS ENCOUNTERED, REMOVE ROCK TO FULL DEPTH OF POST PLUS 2 1/2", AND 12" DIAMETER AROUND POST. SEE 14B42 FOR MORE DETAILS.

TRANSITION USES STEEL POSTS ONLY.

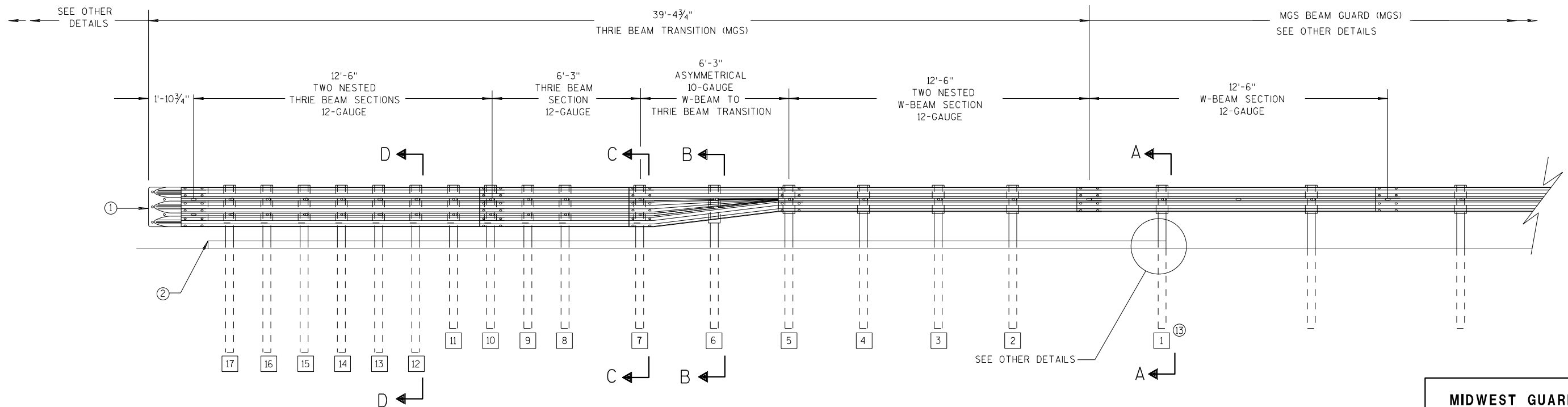
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

- ① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD14B42



PLAN VIEW



ELEVATION VIEW

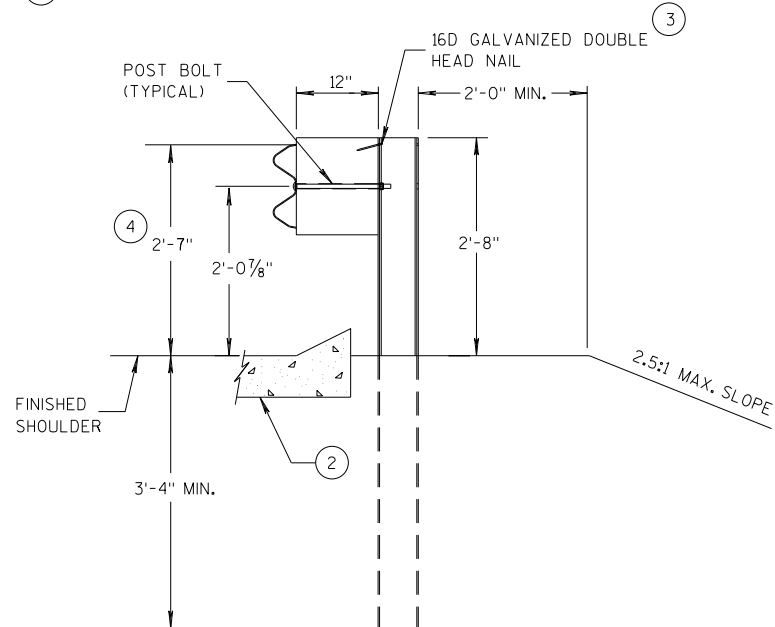
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

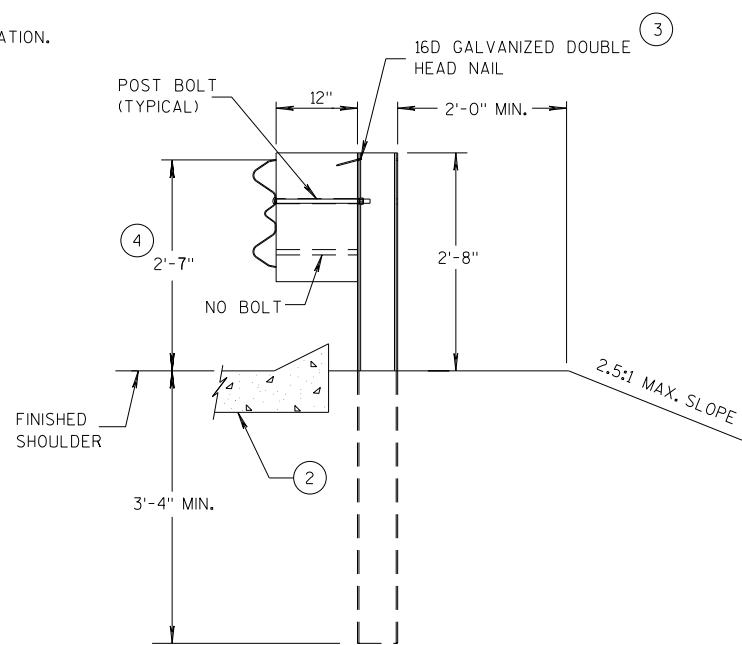
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GENERAL NOTES

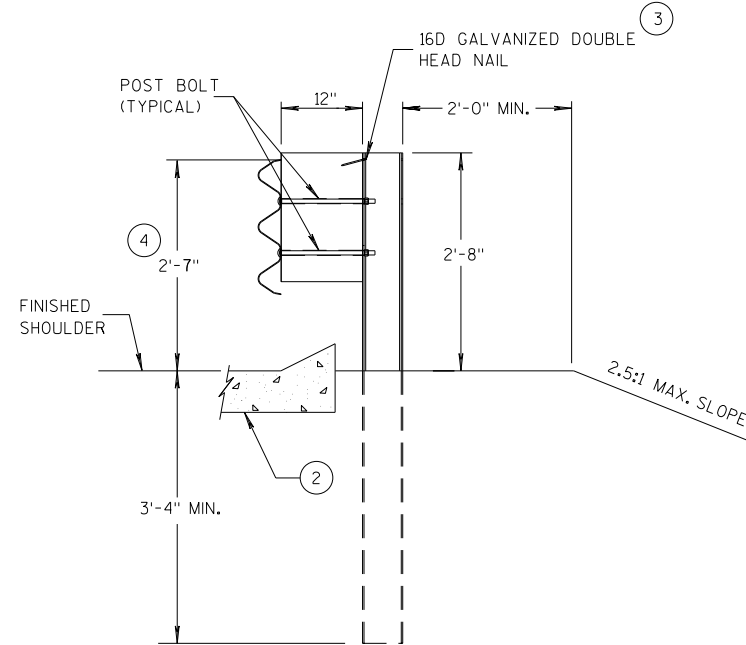
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".
- ⑬ STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42



**SECTION A-A
POSTS 1-5**



**SECTION B-B
POST 6**



**SECTION C-C
POSTS 7-11**

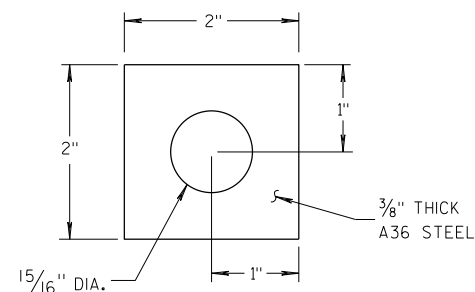
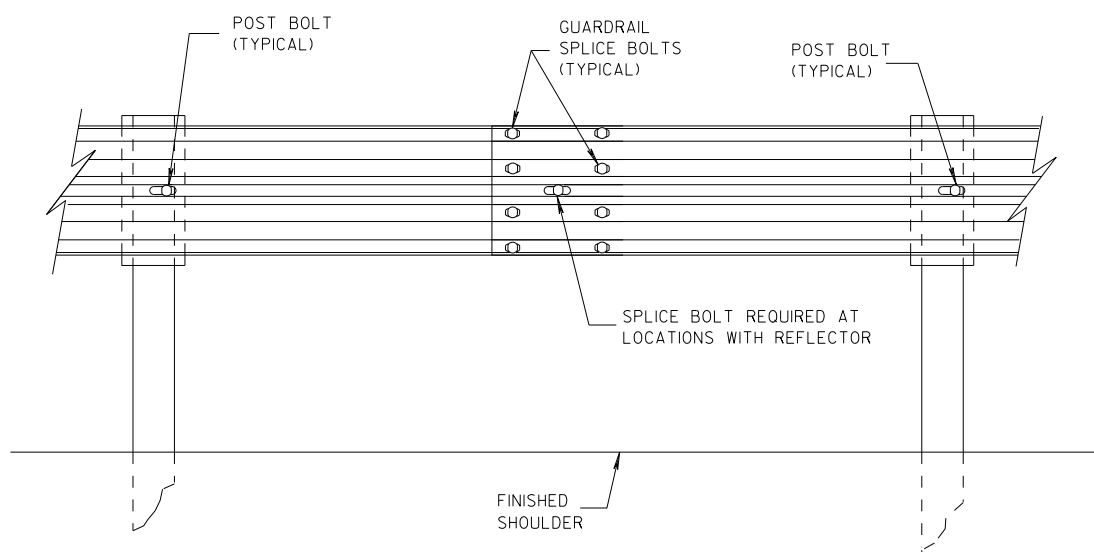
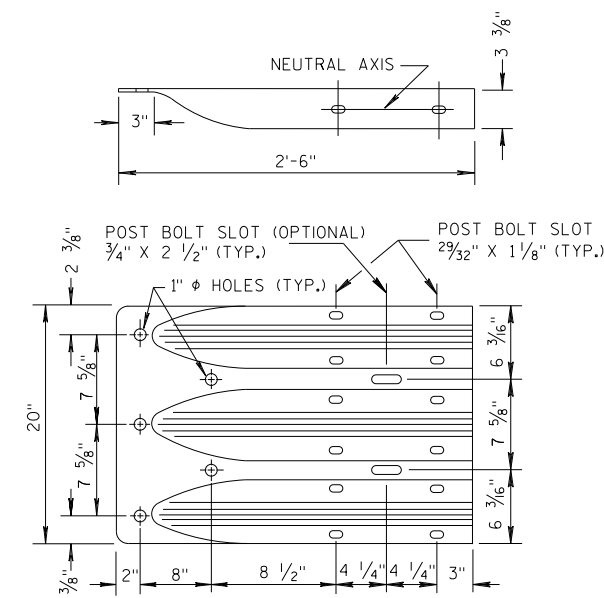


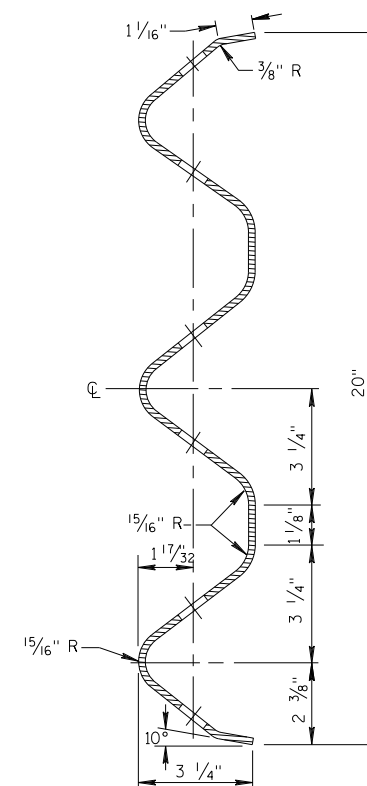
PLATE WASHER DETAIL



SPLICE DETAIL



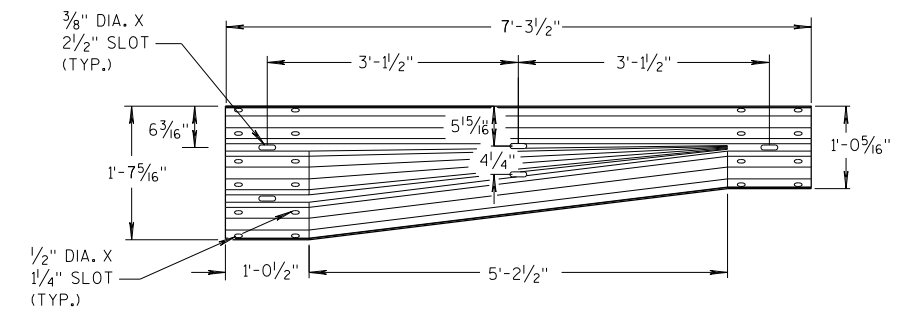
**THRIE BEAM
TERMINAL CONNECTOR**



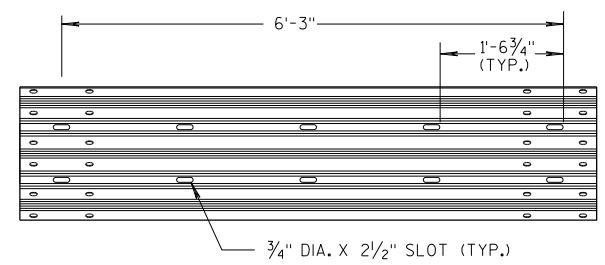
**SECTION THRU THRIE
BEAM RAIL ELEMENT**

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

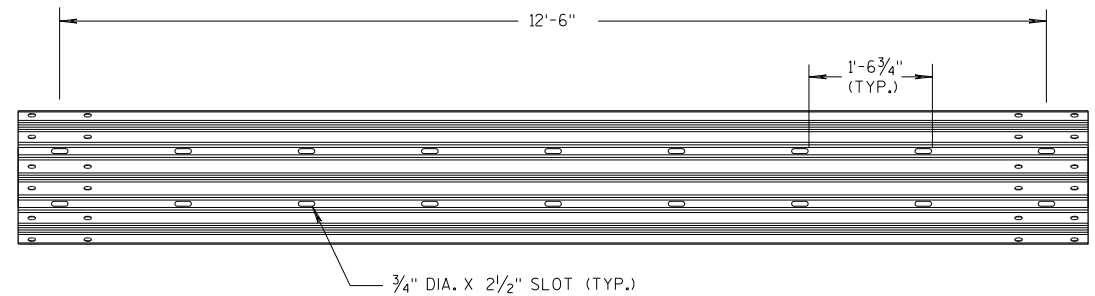
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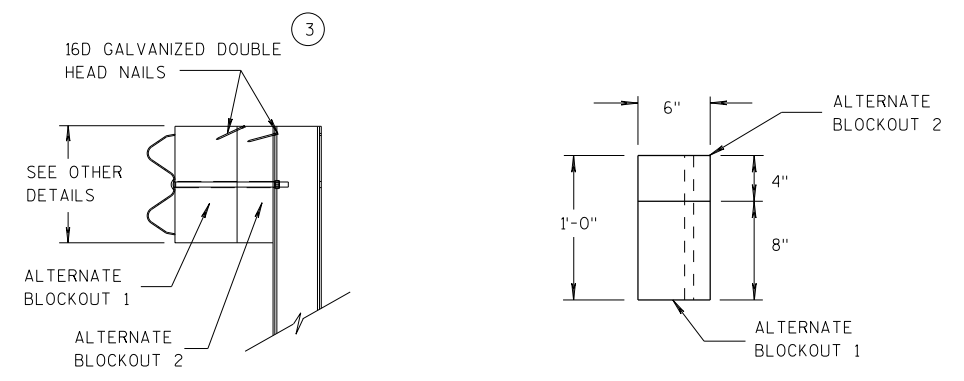
W-BEAM TO THRIE BEAM TRANSITION SECTION



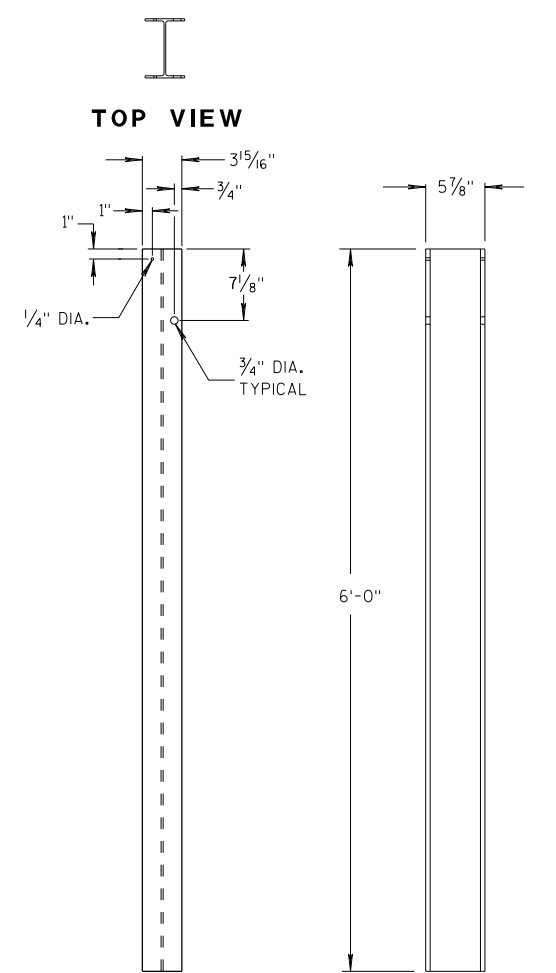
6'-3\"/>



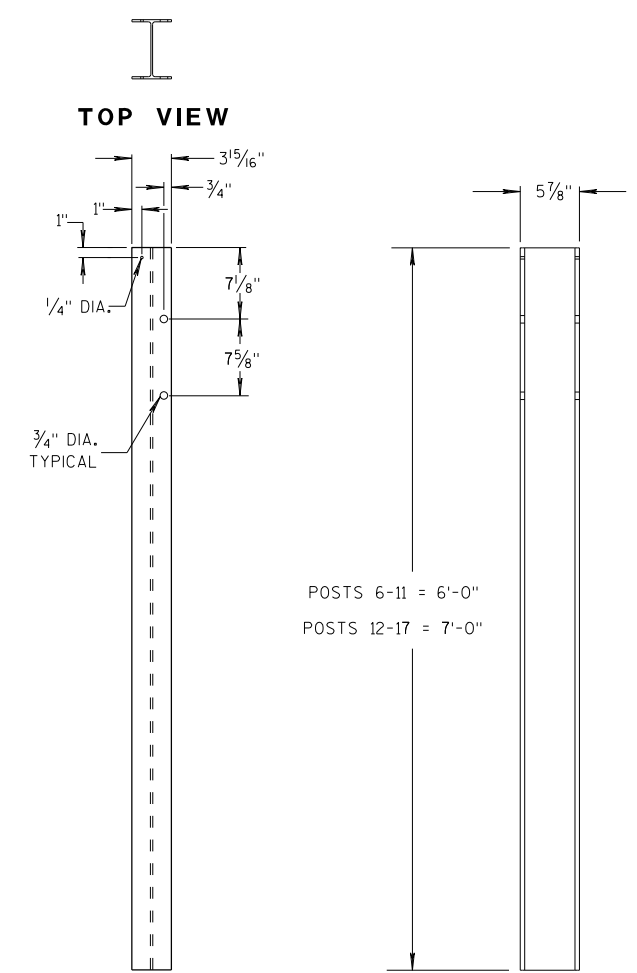
12'-6\"/>



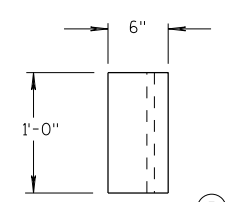
ALTERNATE WOOD BLOCKOUT DETAIL



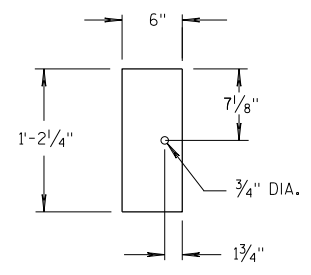
STEEL POSTS 1-5



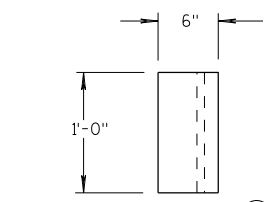
STEEL POSTS 6-17



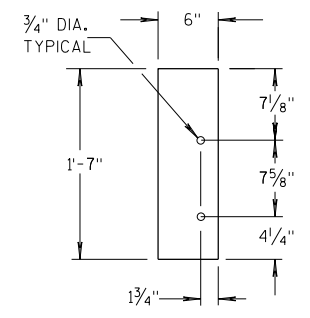
TOP VIEW



**FRONT VIEW
BLOCKOUT
POSTS 1-5**



TOP VIEW



**FRONT VIEW
BLOCKOUT
POSTS 6-17**

GENERAL NOTES

- STEEL POSTS ARE W6X9 OR W6X8.5.
- BOLT HOLES FOR POST ARE ON FRONT AND OF SIDE OF POST.
- (3) WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- (5) WOOD BLOCKS MAY BE CONSTRUCTED OUT OF 2 WOOD BLOCKS. SEE ALTERNATE WOOD BLOCK DETAIL.
- (13) STEEL OR WOOD POST IS ACCEPTABLE AT POST 1. SEE SDD 14B42.

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

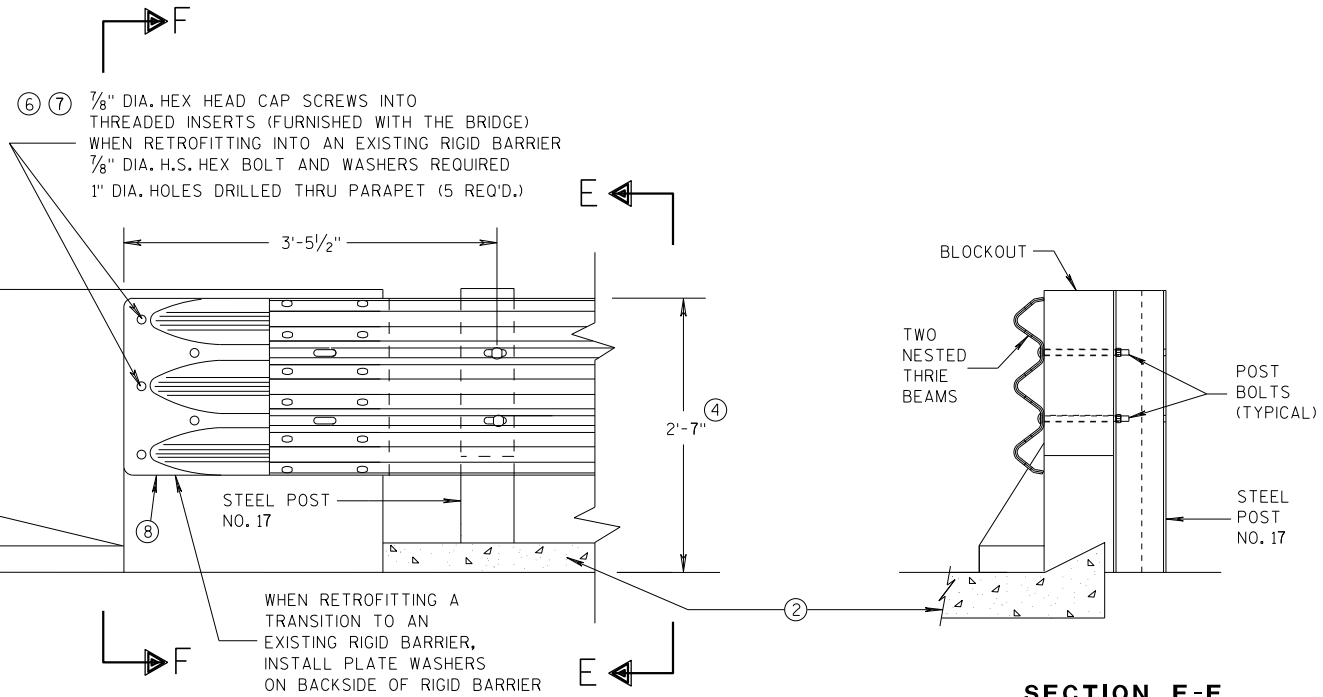
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6

6

S.D.D. 14 B 45-5c

S.D.D. 14 B 45-5c



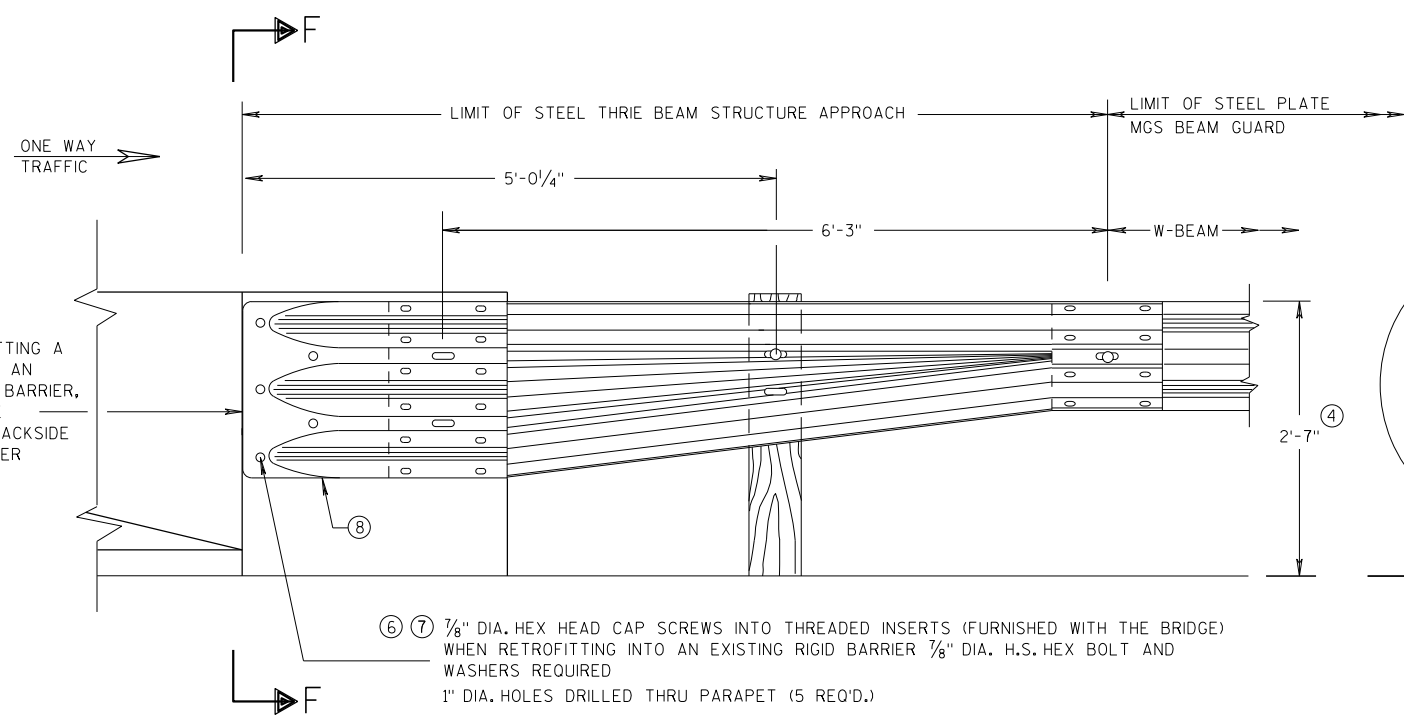
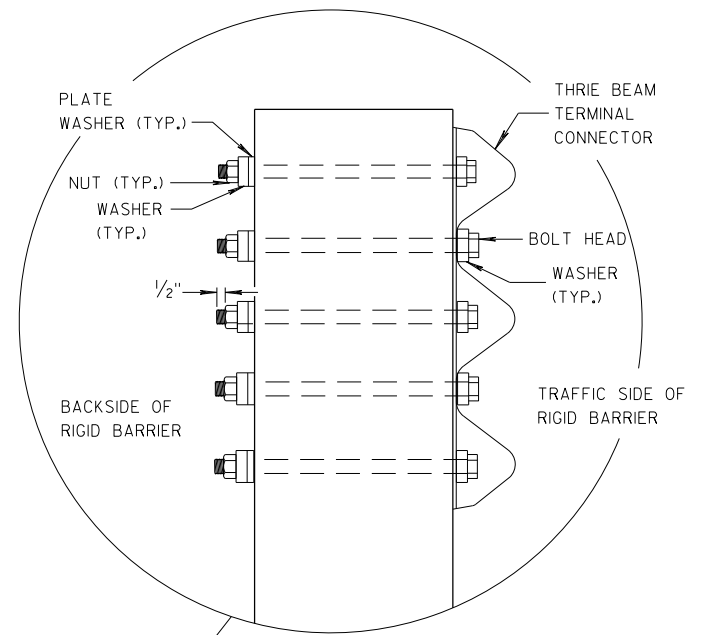
FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

SECTION E-E

GENERAL NOTES

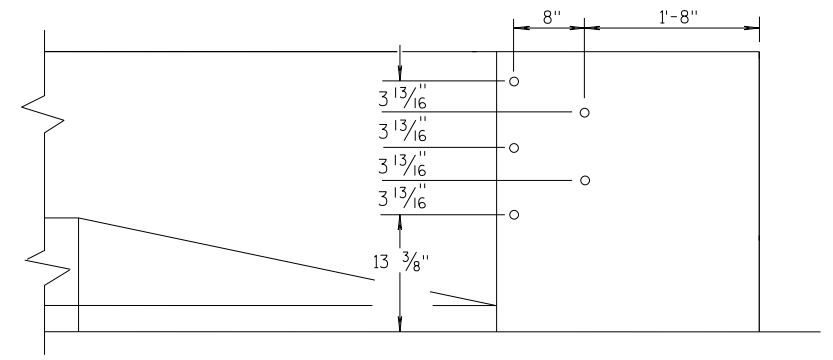
- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- (2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
 - (4) TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
 - (6) DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
 - (7) BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTOR PLATE. BOLTS THAT EXTEND THROUGH THE PARAPET AND OUT THE BACK FACE REQUIRE A HARDENED ROUND STEEL WASHER THAT IS 2" O.D. X 5/32" THICK AND ONE PLATE WASHER. REPAIR ANY DAMAGED CONCRETE FROM BOLT INSTALLATION.
 - (8) THE RECESS FOR A W-BEAM CONNECTION, WHICH EXISTS ON SOME PARAPETS OF THIS TYPE, SHALL BE FILLED WITH A TREATED TIMBER BLOCKOUT. BLOCKOUT SIZE IS 1'-6" X 2'-0" X 3 1/2".



FRONT VIEW

**W BEAM TRANSITION AND CONNECTION TO BRIDGE PARAPETS WITH SQUARE ENDS
(USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)**

SECTION F-F

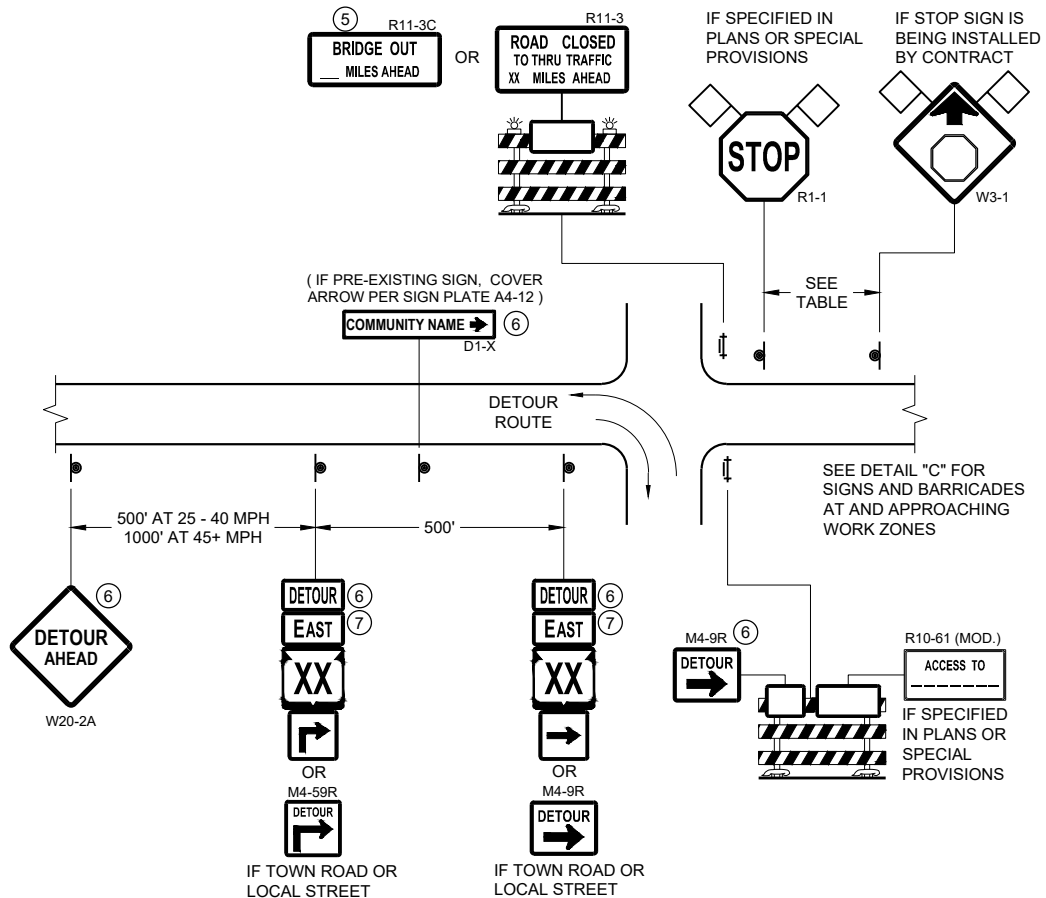


DRILL HOLE LOCATION

**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

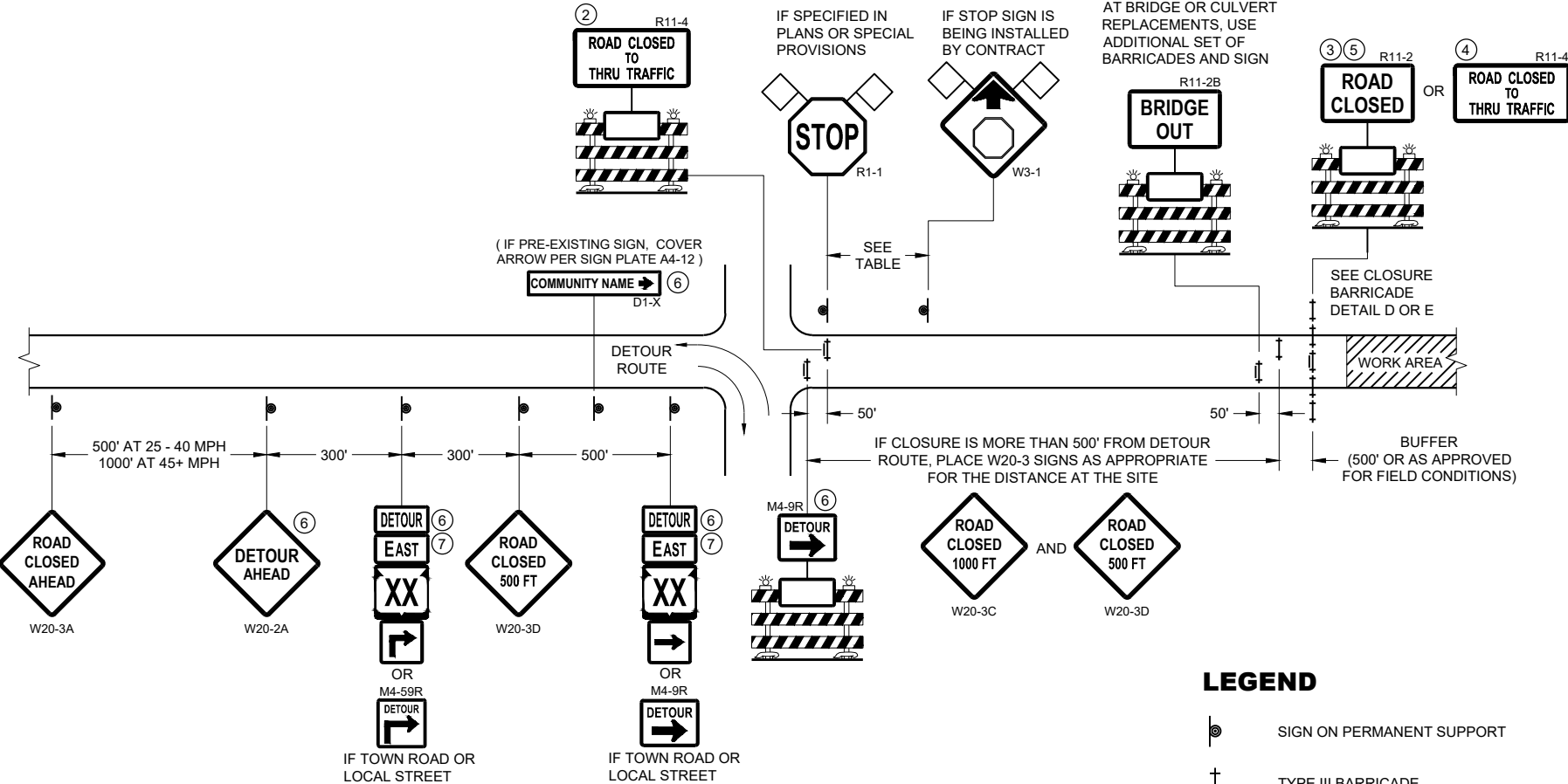
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APPROVED
DATE 07/2018
DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



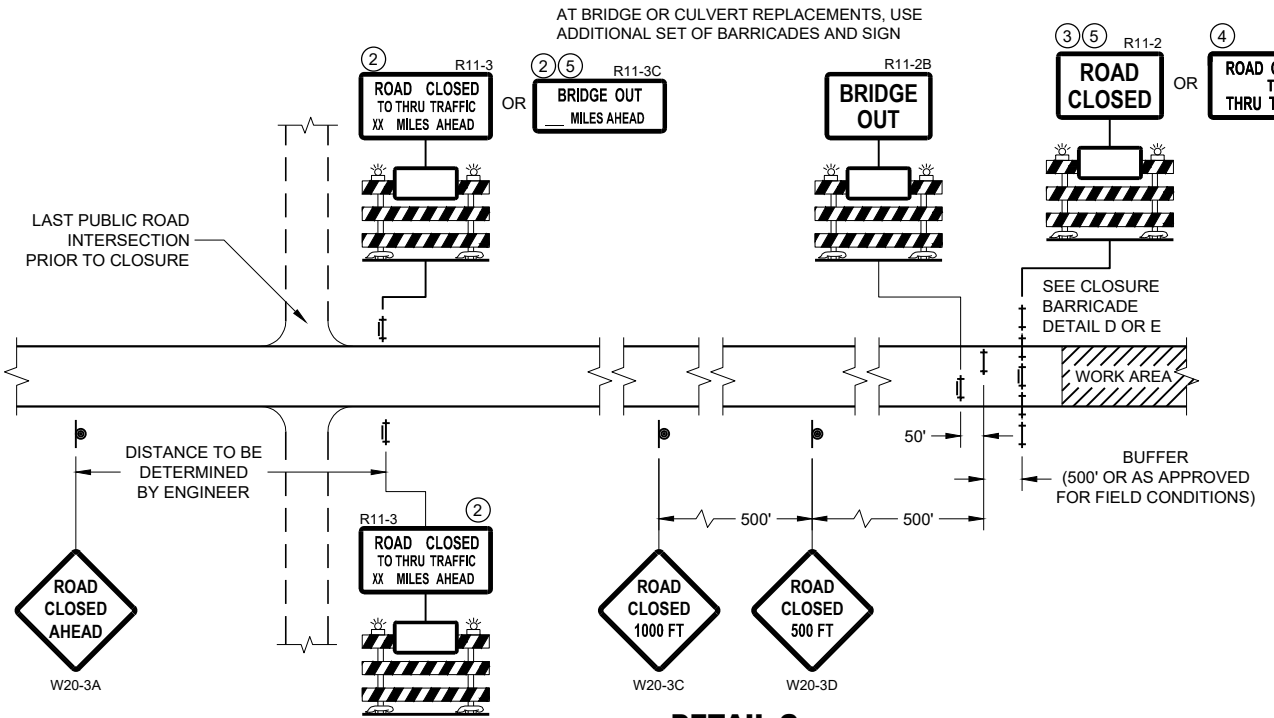
**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

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



**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

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



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

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)
- M4 - 8
- M3 - X
- M1 - 4 OR M1 - 6 OR M1 - 5A
- M05 - 1 OR M06 - 1

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

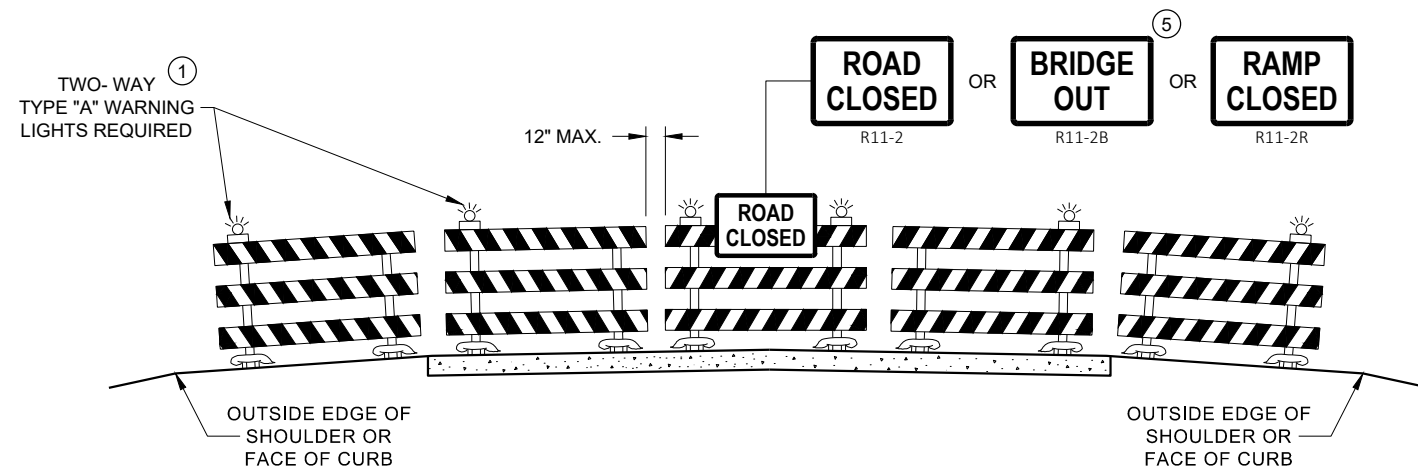
SEE SDD 15C2-SHEET "b"
FOR GENERAL NOTES
AND FOOTNOTES ① THROUGH ⑦

**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

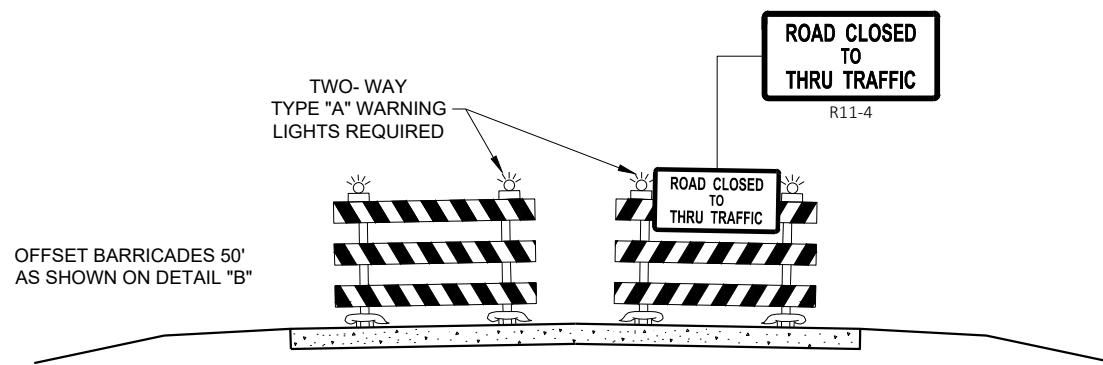
STATE OF WISCONSIN
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APPROVED
February 2020 /S/ Andrew Heidtke
DATE DATE WORK ZONE ENGINEER

FHWA



**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"

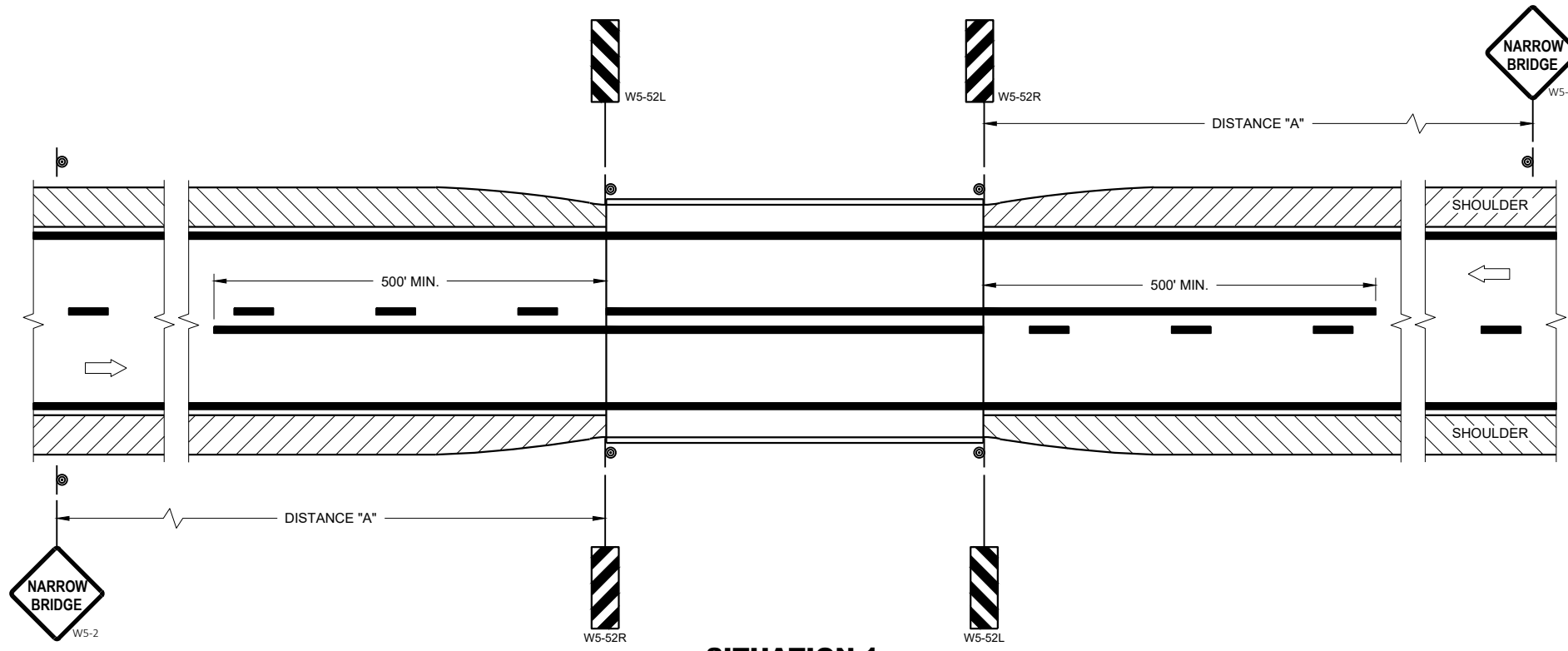
- ① TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8 FOOT LIGHT SPACING).
- ② THESE SIGNS 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**

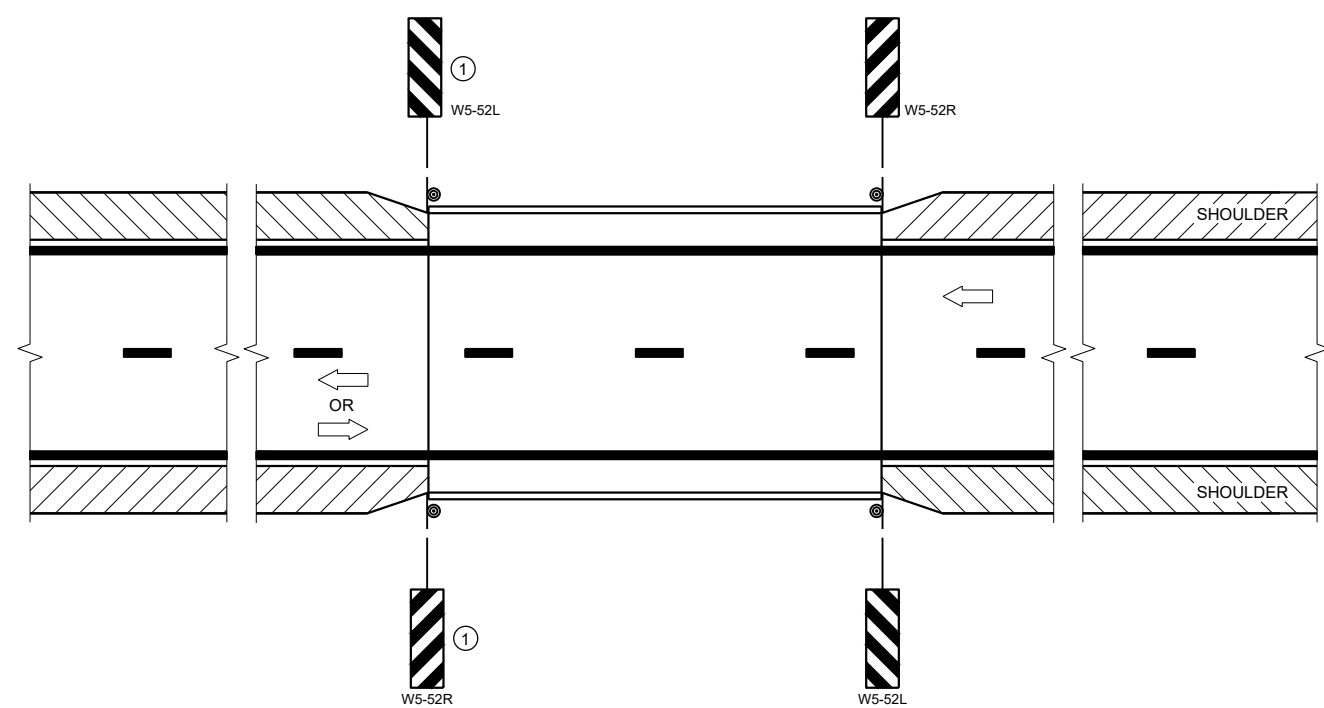
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APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA



SITUATION 1
 WARRANTING CRITERIA:
 BRIDGE WIDTH IS AT LEAST 16 FEET BUT LESS THAN 24 FEET.



SITUATION 2
 WARRANTING CRITERIA:
 1. BRIDGE WIDTH IS AT LEAST 24 FEET AND
 2. BRIDGE SHOULDER WIDTH IS LESS THAN 6 FEET

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THE 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.

ON BRIDGE ONLY PROJECTS, PLACE 300 FEET OF EDGELINE.

OMIT EDGELINES ON ROADWAYS WITHOUT EXISTING EDGELINES.

① OMIT ON ONE-WAY TRAVELED WAYS.

LEGEND

- ⊙ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC

DISTANCE TABLE

POSTED OR 85TH PERCENTILE SPEED	DISTANCE "A"
25	150'
30	200'
35	250'
40	300'
45	400'
50	550'
55	700'

SIGNING AND MARKING FOR TWO LANE BRIDGES

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 May 2022 /S/ Jeannie Silver
 DATE STATE SIGNING AND MARKING ENGINEER




FHWA

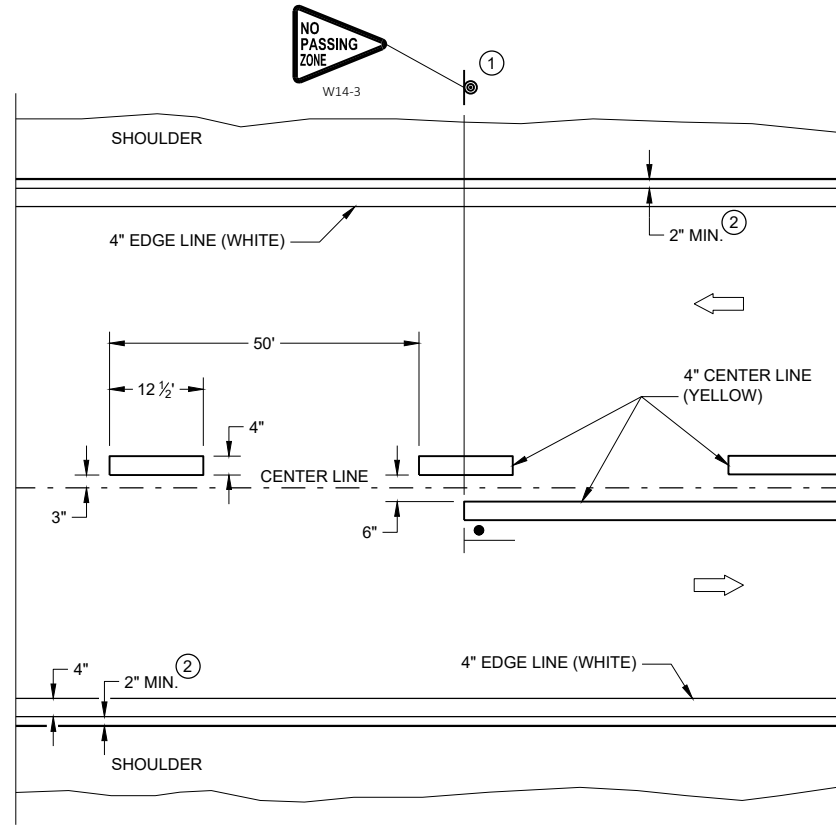
GENERAL NOTES

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

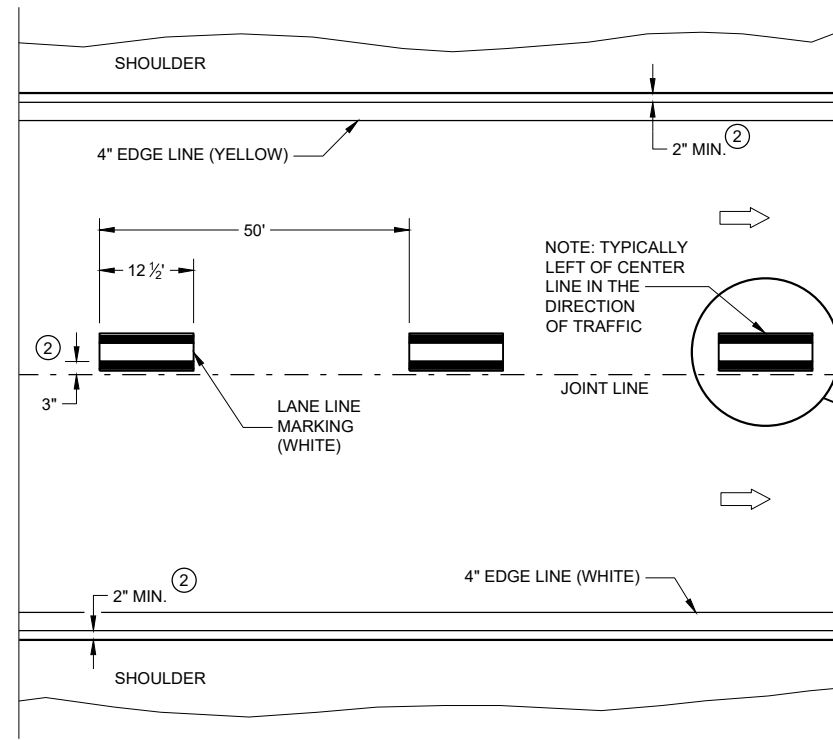
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

-  "T" MARKING
-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC

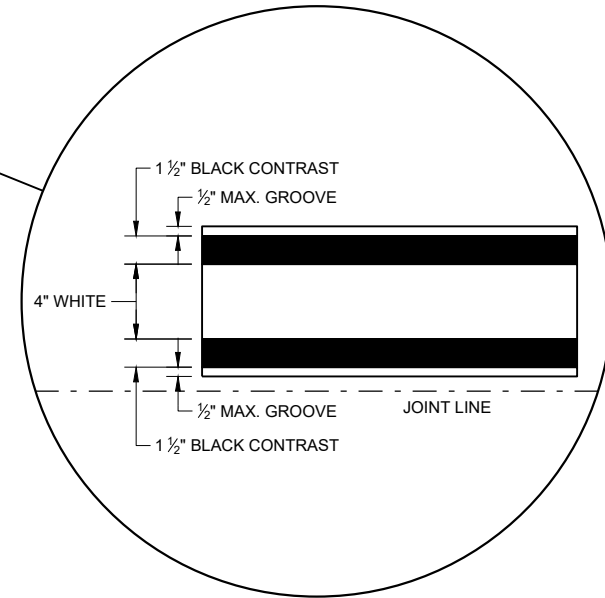


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



6

6

SDD 15C08 - 22a

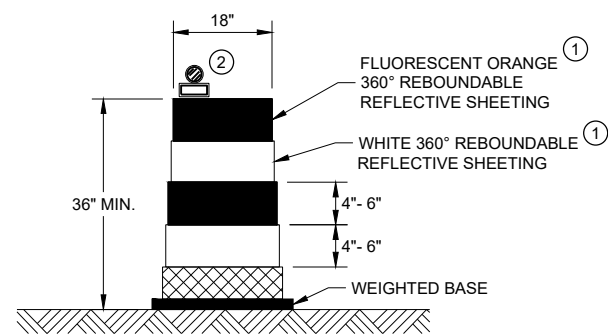
SDD 15C08 - 22a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

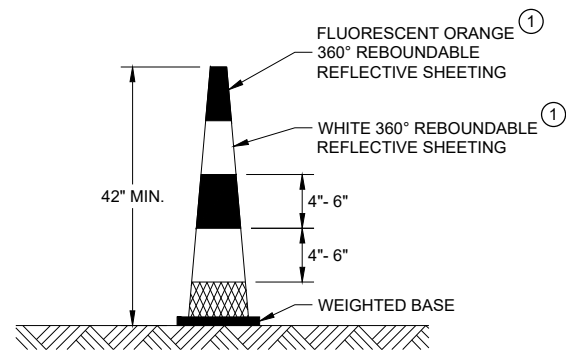
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Jeannie Silver
STATEWIDE SIGNING AND MARKING ENGINEER

FHWA

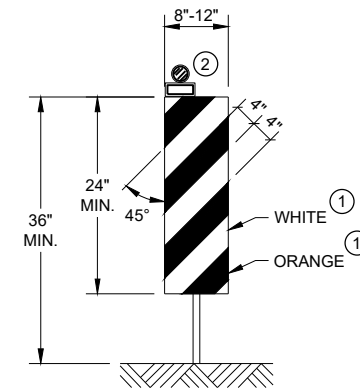


DRUM



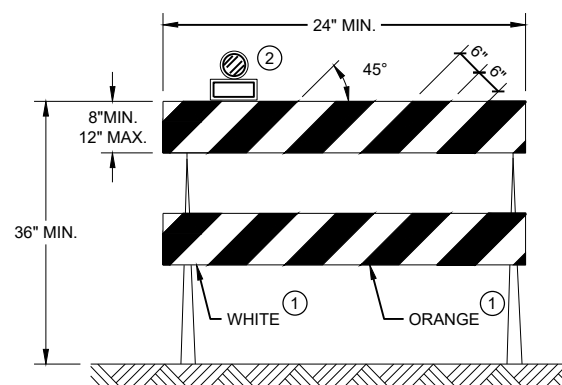
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS



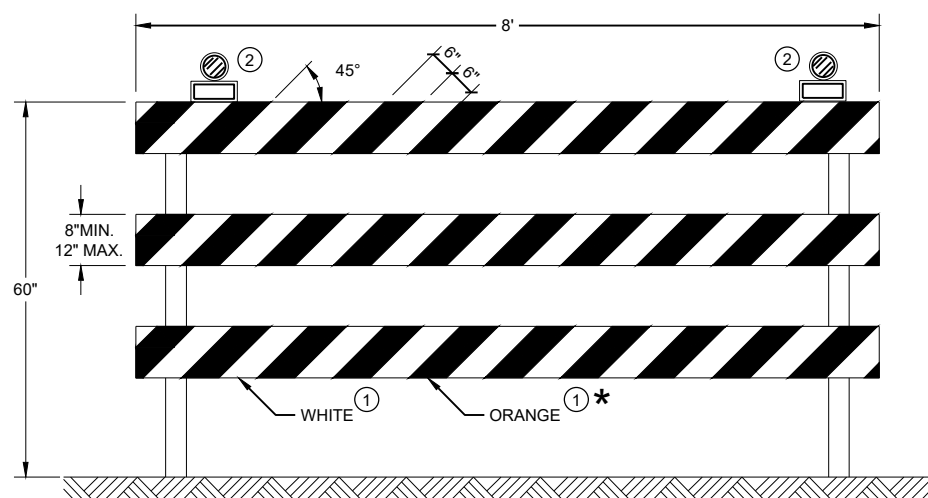
VERTICAL PANEL

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.

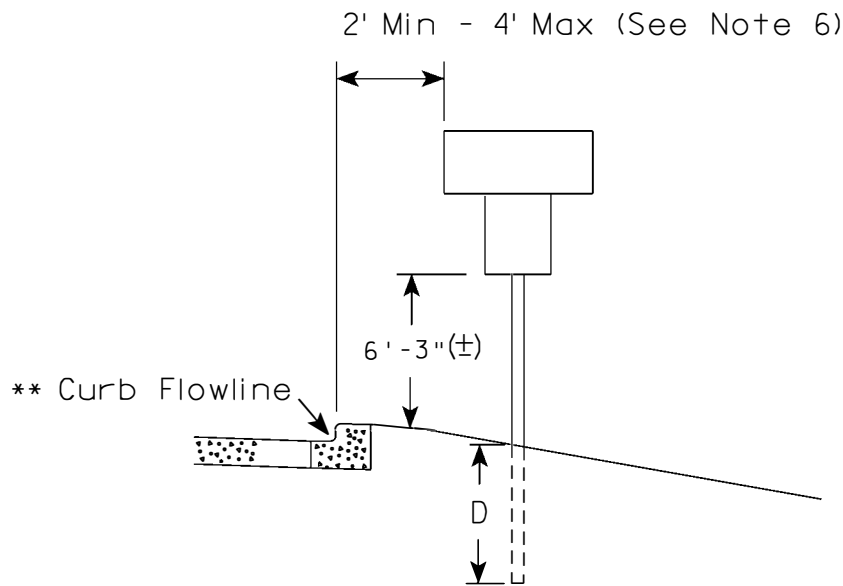
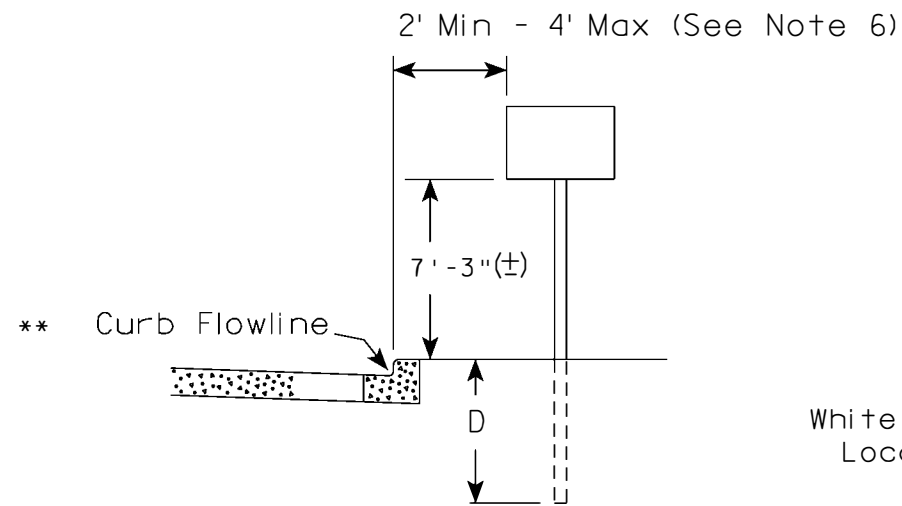
* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

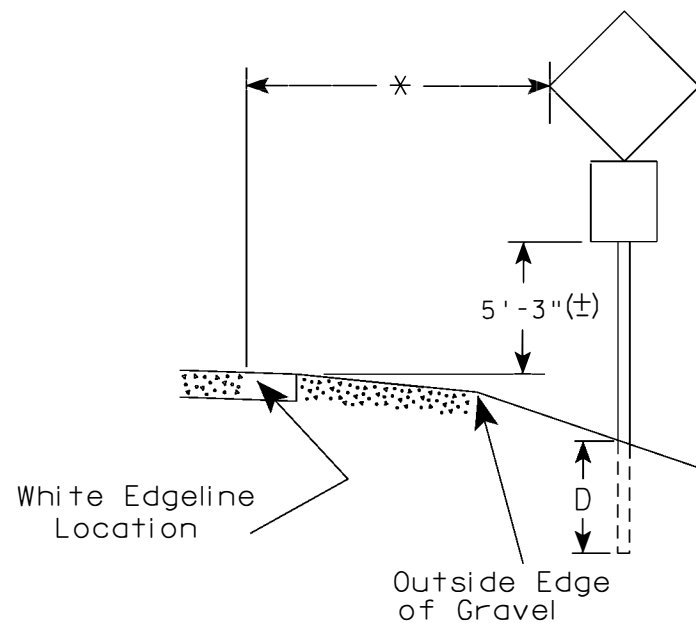
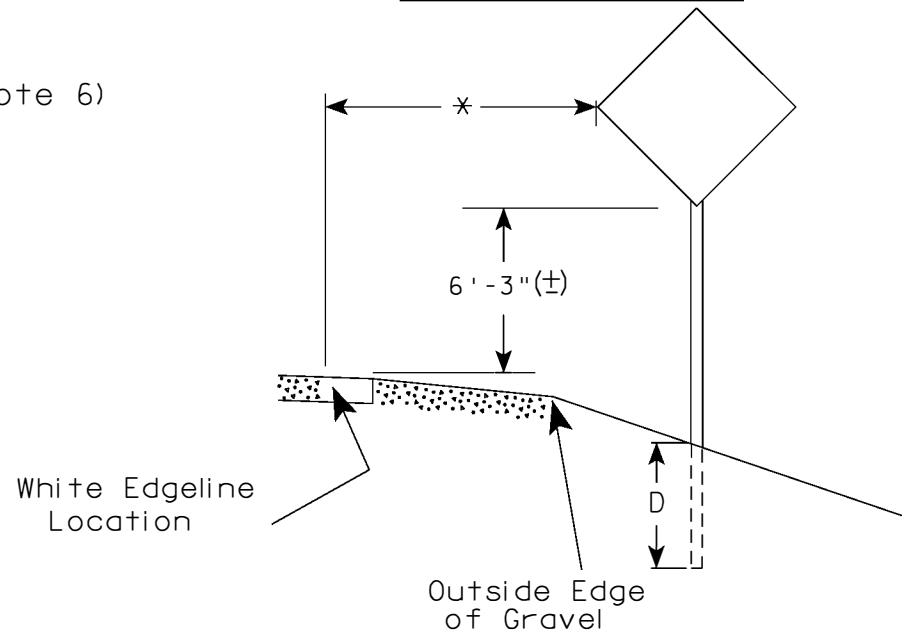
- ① REFLECTIVE SHEETING SHALL FOLLOW THE REQUIREMENTS IN THE APPROVED PRODUCTS LISTING FOR SIGN SHEETING.
- ② LOCATION OF WARNING LIGHTS WHEN SHOWN ON THE PLAN.

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
<small>FHWA</small>	

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 directed 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.

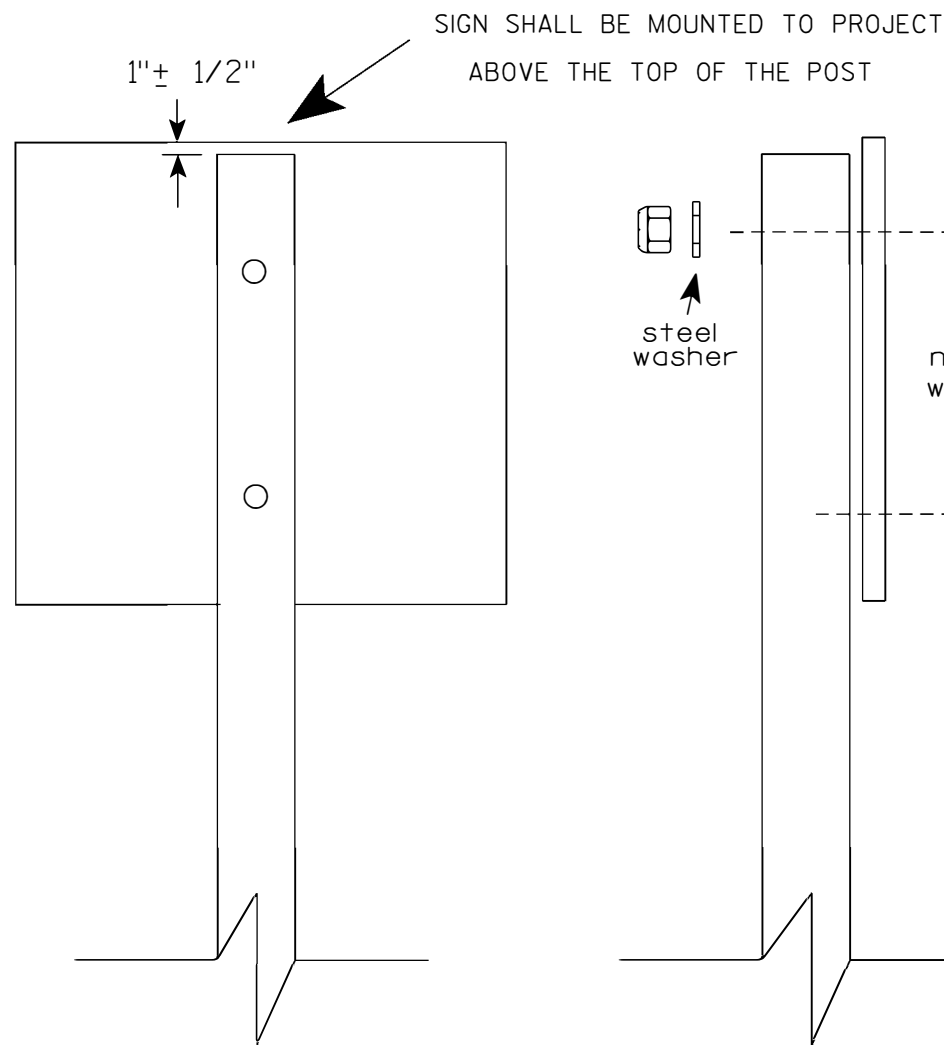
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raush*
for State Traffic Engineer

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



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

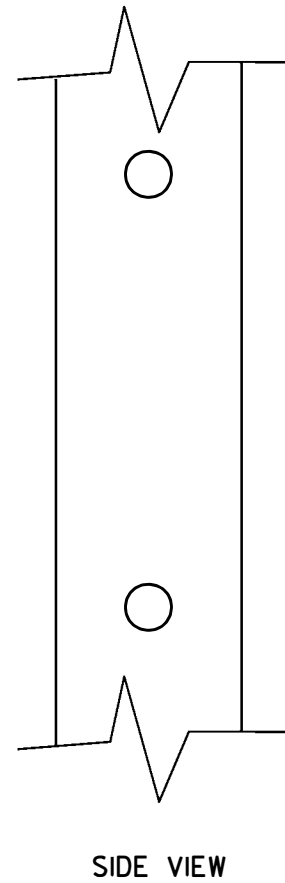
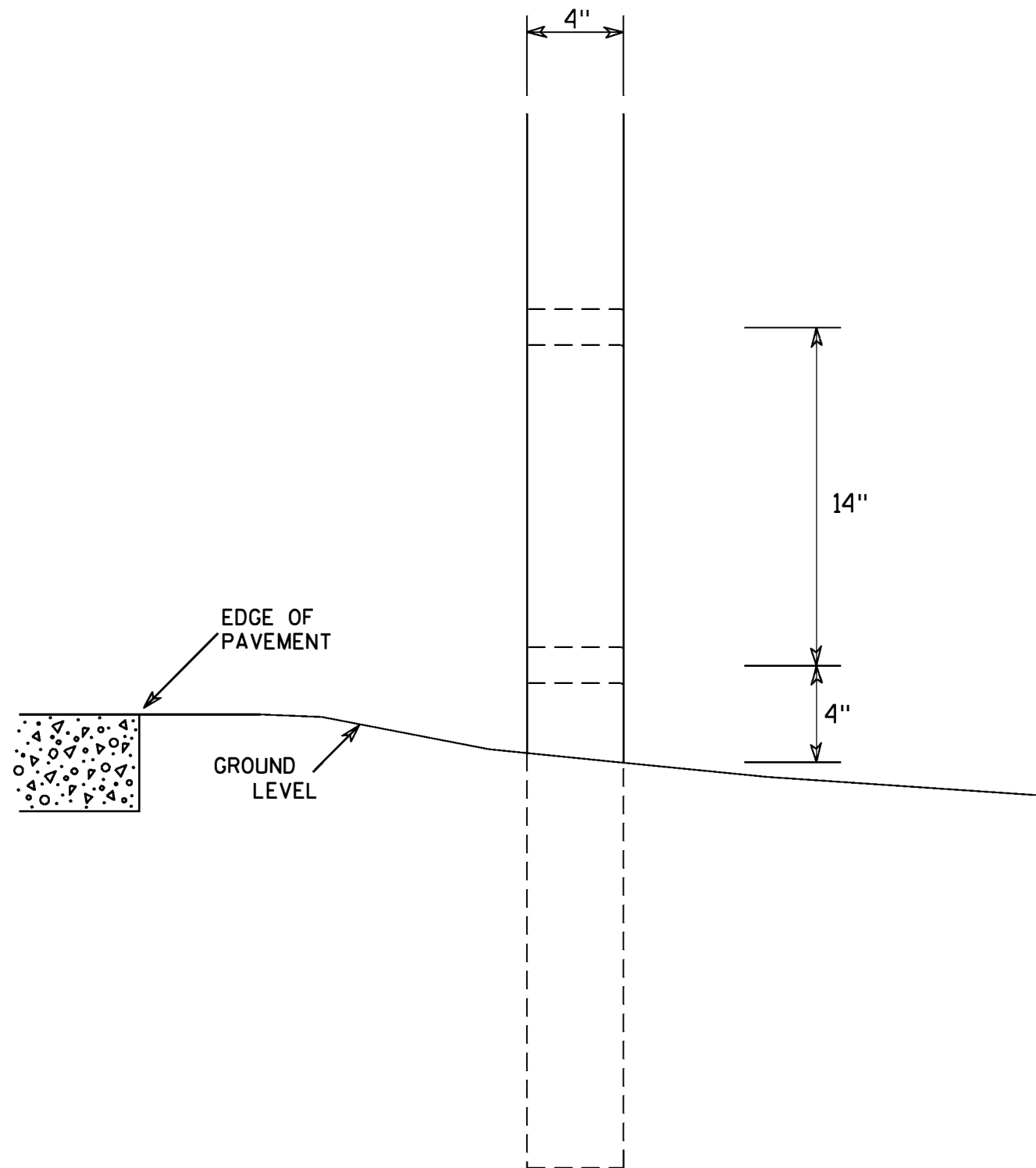
- Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
- Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

- STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)
- MACHINE BOLTS - $\frac{5}{16}$ " X 1-3/4" Length w/ lock nuts
- WOOD POSTS (4" x 6")
- LAG SCREWS - $\frac{3}{8}$ " X 3" (NO STRINGERS ON BACK OF SIGN)
 $\frac{3}{8}$ " X 4" (STRINGERS ON BACK OF SIGN)
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - $\frac{3}{8}$ " X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
 $\frac{3}{8}$ " X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)
- RIVETS - $\frac{9}{32}$ " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
 O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH
- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
- 1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> For State Traffic Engineer
DATE <u>4/1/2020</u>	PLATE NO. <u>A4-8.9</u>



GENERAL NOTES

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

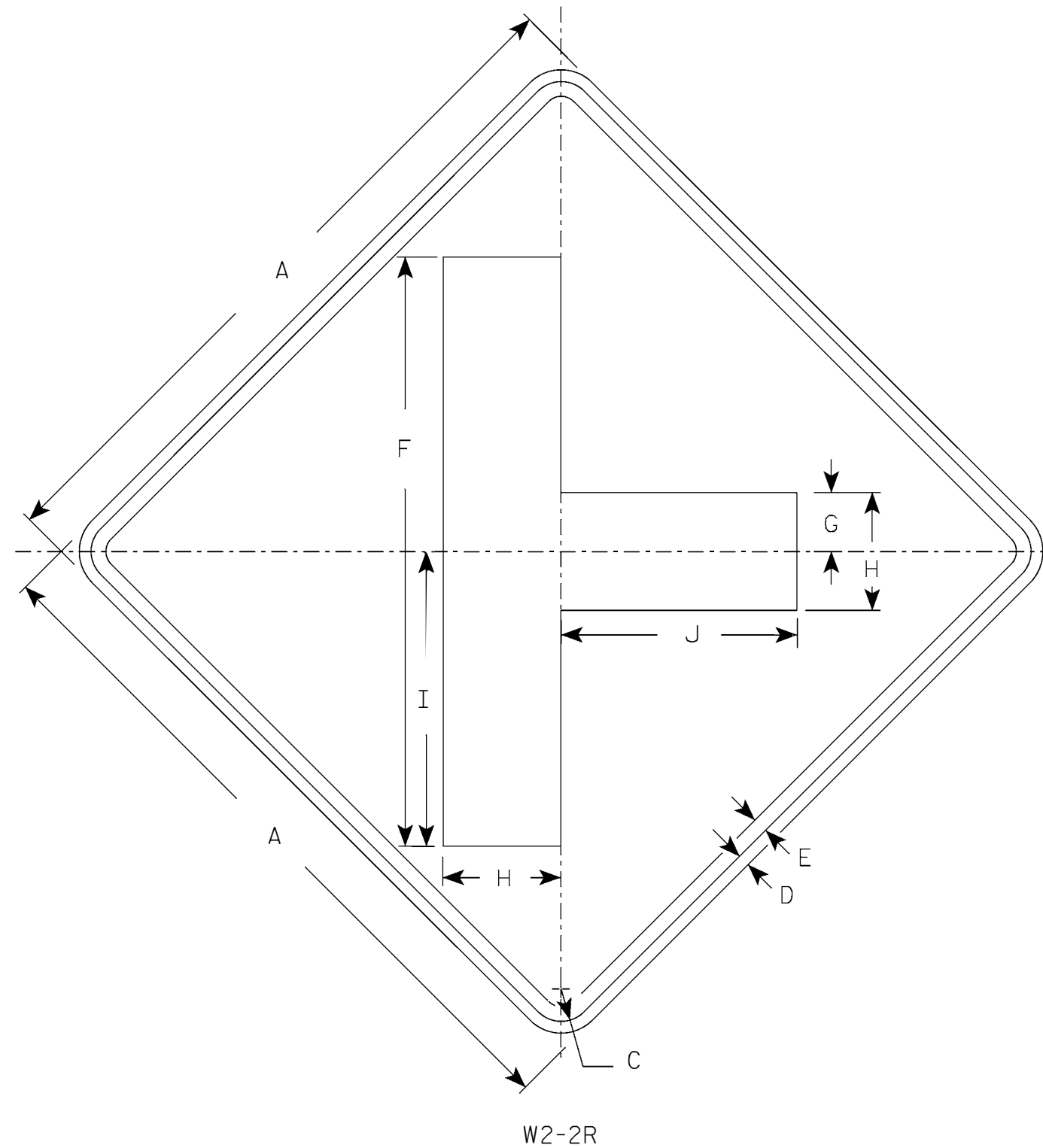
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7

4 X 6 WOOD POST MODIFICATIONS	
<i>WISCONSIN DEPT OF TRANSPORTATION</i>	
APPROVED	<i>Chester J Spang</i> for State Traffic Engineer
DATE <u>3/27/97</u>	PLATE NO. <u>A4-11.2</u>

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Yellow
Message - Black
3. W2-2L same as W2-2R but is rotated 180° when mounted.

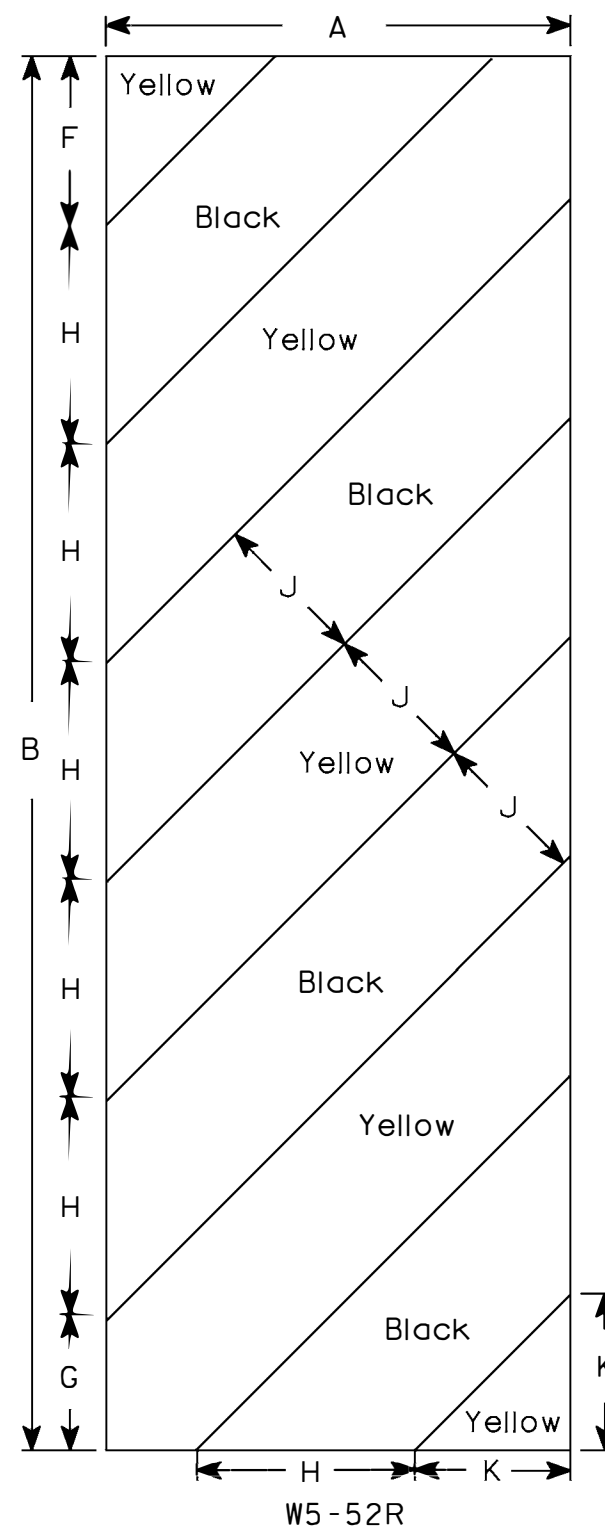
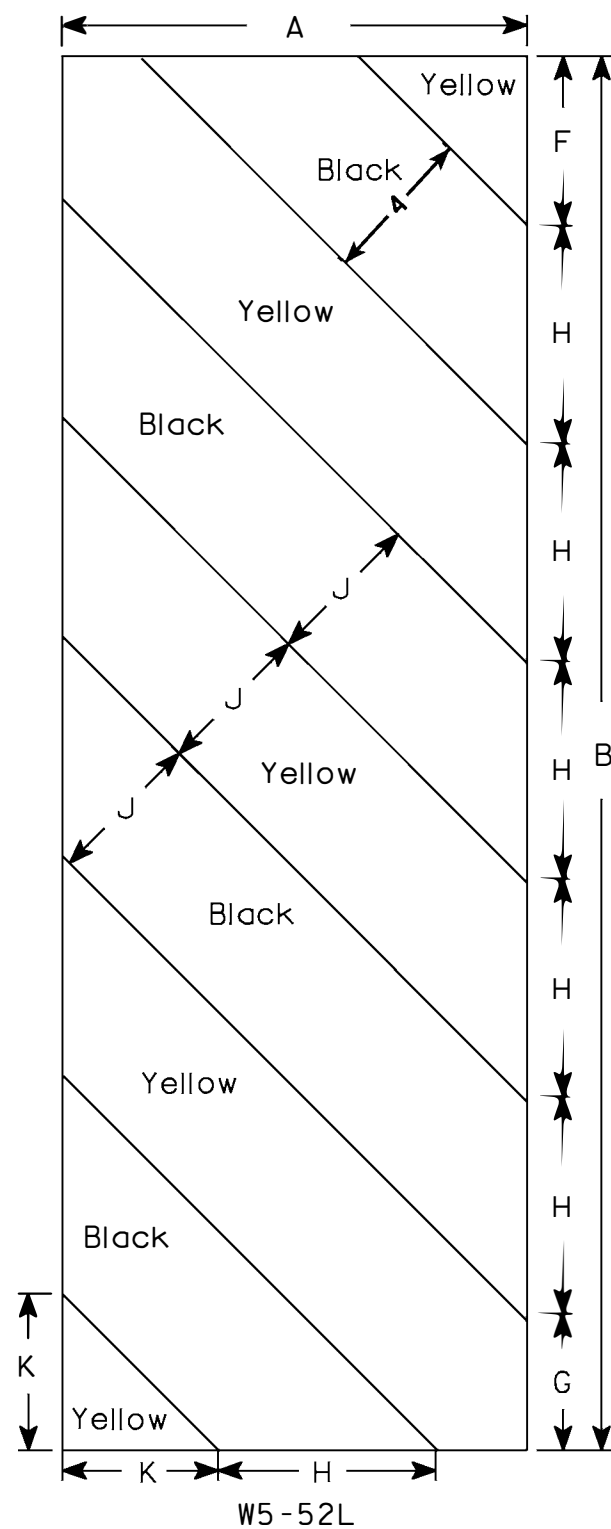


W2-2R

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	20	2	4	10	8																	4.0
2S	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
2M	30		1 3/8	1/2	5/8	25	2 1/2	5	12 1/2	10																	6.25
3	36		1 5/8	5/8	3/4	30	3	6	15	12																	9.0
4	48		2 1/4	3/4	1	40	4	8	20	16																	16.0
5																											

STANDARD SIGN
W2-2 L&R

WISCONSIN DEPT OF TRANSPORTATION
 APPROVED *Matthew R. Rauch*
 for State Traffic Engineer
 DATE 11/18/2021 PLATE NO. W2-2.7



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.

7

7

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

STANDARD SIGN
W5-52L & W5-52R

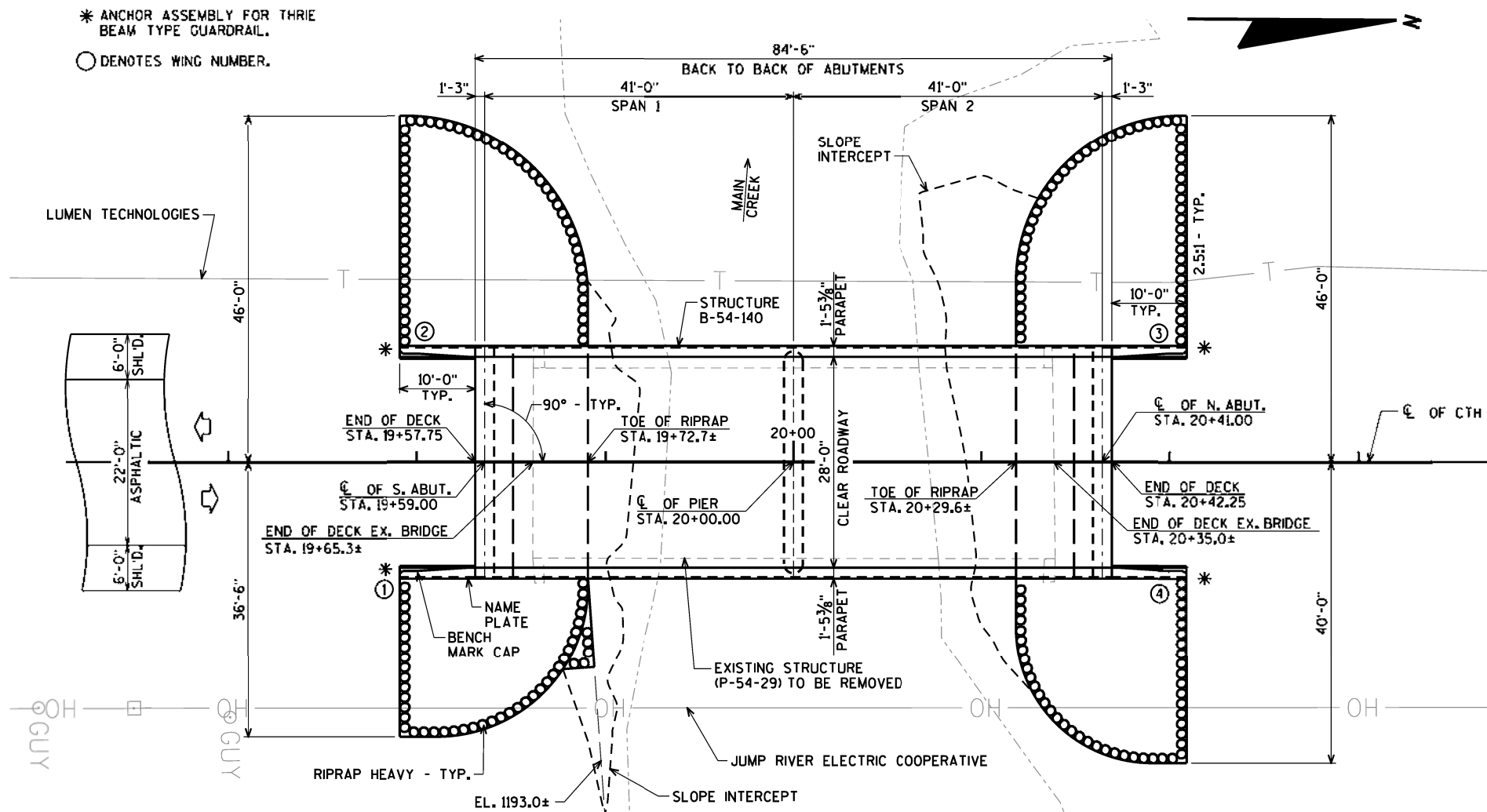
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

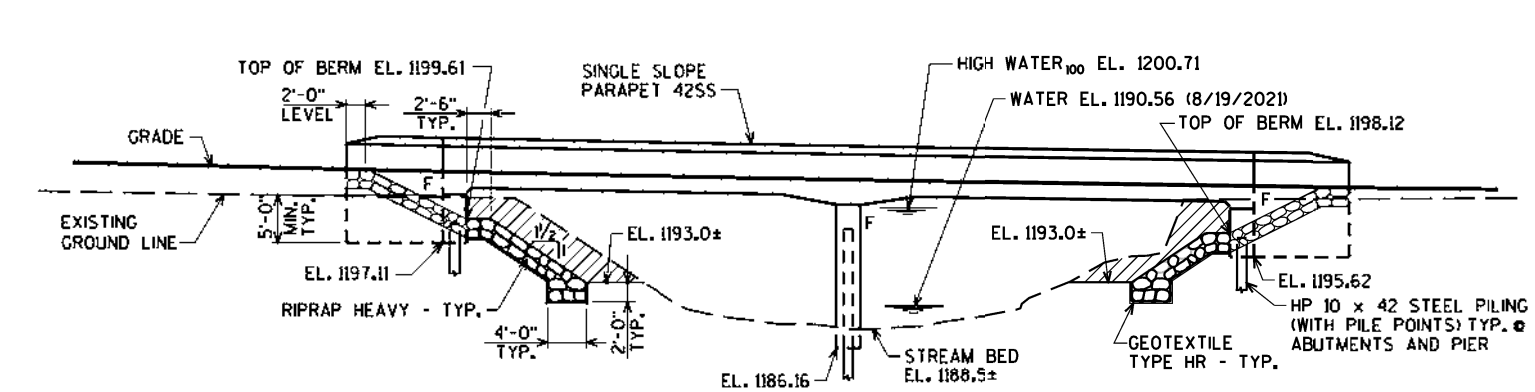
DATE 5/29/12 PLATE NO. W5-52.9

* ANCHOR ASSEMBLY FOR THRIE BEAM TYPE GUARDRAIL.

○ DENOTES WING NUMBER.



PLAN
TWO SPAN CONCRETE HAUNCHED SLAB BRIDGE



ELEVATION

LIST OF DRAWINGS

1. GENERAL PLAN
2. QUANTITIES, TYPICAL SECTION, AND NOTES
3. STRUCTURE DETAILS
4. SUBSURFACE EXPLORATION
5. SOUTH ABUTMENT
6. SOUTH ABUTMENT WING DETAILS
7. SOUTH ABUTMENT PILE LAYOUT & BILL OF BARS
8. NORTH ABUTMENT
9. NORTH ABUTMENT WING DETAILS
10. NORTH ABUTMENT PILE LAYOUT & BILL OF BARS
11. PIER
12. SUPERSTRUCTURE
13. SUPERSTRUCTURE PLAN
14. SUPERSTRUCTURE DETAILS
15. SINGLE SLOPE PARAPET 42SS

COST OF EXCAVATION AND FILL IN THE HATCHED AREAS SHALL BE INCLUDED IN THE CONTRACT LUMP SUM PRICE FOR "EXCAVATION FOR STRUCTURES BRIDGES B-54-140".

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

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
 INVENTORY RATING FACTOR: 1.08
 OPERATING RATING FACTOR: 1.40
 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
 $Q_{100} = 4,400$ c.f.s.
 VEL. = 8.1 f.p.s.
 $HW_{100} = EL. 1200.71$
 WATERWAY AREA = 542 sq. ft.
 DRAINAGE AREA = 44.9 sq. mi.
 ROADWAY OVERTOPPING = N/A
 SCOUR CRITICAL CODE = 5
 DATUM = NAVD88 (2012)

2 YEAR FREQUENCY
 $Q_2 = 1,710$ c.f.s.
 VEL. = 5.6 f.p.s.
 $HW_2 = EL. 1196.76$

FOUNDATION DATA:

SOUTH ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS # PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 35'-0".

NORTH ABUTMENT TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 110 TONS # PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 35'-0".

PIER TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 180 TONS # PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED LENGTH 40'-0".

* 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. = 550 (2023)
 A.A.D.T. = 740 (2043)
 R.D.S. = 50 M.P.H.

FOR TYPICAL SECTION AND PROFILE GRADE LINE SEE SHEET 2



08/31/2022

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

CONSULTANT CONTACT:
 ARLEN BEAUDETTE
 (715)-834-3161

NO.	DATE	REVISION	BY
ORIGINAL PLANS PREPARED BY			
AVRES 3433 Oakwood Hills Parkway Eau Claire, WI 54701 www.AyresAssociates.com			
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
ACCEPTED		SDR 12/02/22	DATE
CHEF STRUCTURES DESIGN ENGINEER			
STRUCTURE B-54-140			
CTH B OVER MAIN CREEK			
COUNTY	RUSK	TOWN/VILLAGE	LAWRENCE
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	ZSS	DESIGN CK'D.	JLB
DRAWN BY	JLB/CLP	PLANS CK'D.	AEB
GENERAL PLAN			SHEET 1 OF 15

8/18/2022
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DATE: DATE:
 CHECKED BY: BACK CHECKED BY:
 CORRECTED BY:

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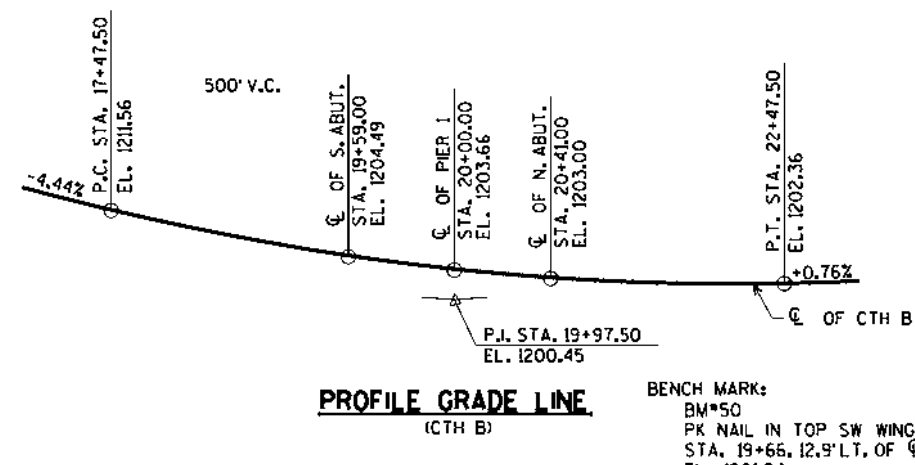
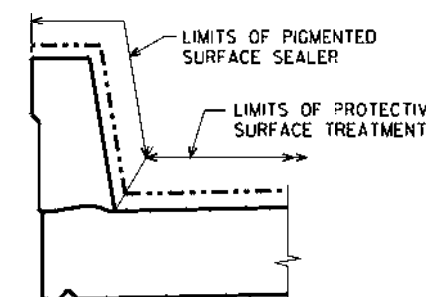
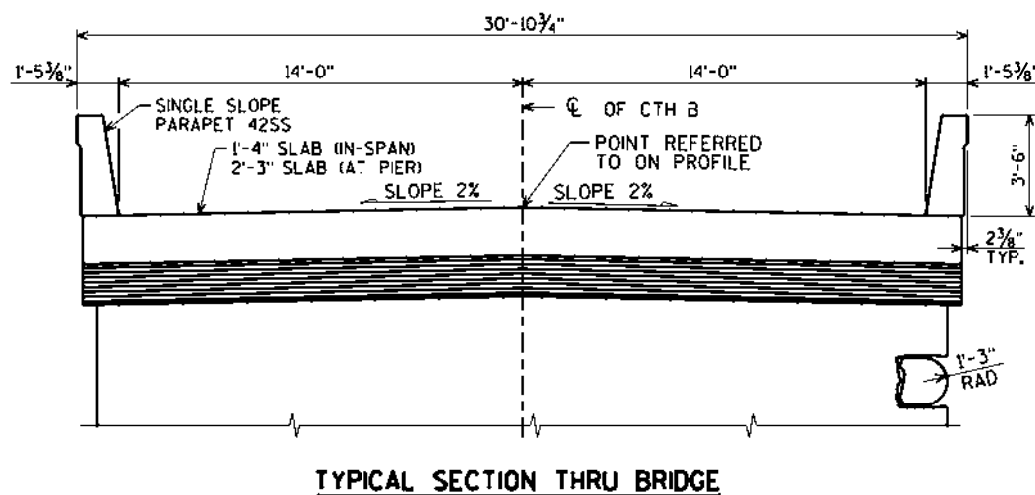
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TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	S. ABUT.	PIER	N. ABUT.	SUPER.	TOTAL
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS P-54-29	EACH	-----	-----	-----	-----	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-54-140	EACH	-----	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	110	-----	110	-----	220
502.0100	CONCRETE MASONRY BRIDGES	CY	31.4	40.2	31.2	164.8	268
502.3200	PROTECTIVE SURFACE TREATMENT	SY	-----	-----	-----	265	265
502.3210	PIGMENTED SURFACE SEALER	SY	10	-----	10	85	105
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	1,740	1,890	1,740	-----	5,370
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	1,980	60	1,980	39,640	43,660
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	9	-----	9	-----	18
550.0500	PILE POINTS	EACH	5	8	5	-----	18
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	175	320	175	-----	670
606.0300	RIPRAP HEAVY	CY	145	-----	135	-----	280
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	75	-----	75	-----	150
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	2	-----	2	-----	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	50	-----	50	-----	100
645.0120	GEOTEXTILE TYPE HR	SY	260	-----	245	-----	505
NON-BID ITEMS							
	FILLER	SIZE	-----	-----	-----	-----	1/2" & 3/4"

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 ALTERNATIVE METHOD IS APPROVED BY THE ENGINEER.
 THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-54-140" SHALL BE THE EXISTING GROUNDLINE.
 THE EXISTING STRUCTURE, P-54-29, TO BE REMOVED, IS A SINGLE SPAN CONCRETE PRESTRESSED CHANNEL BRIDGE ON CONCRETE ABUTMENTS, 70.0 FT. LONG WITH A 23.0 FT. CLEAR ROADWAY WIDTH.
 AT THE BACK FACE OF ABUTMENTS, ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH BACKFILL STRUCTURE TYPE A.
 PROTECTIVE SURFACE TREATMENT AND PIGMENTED SURFACE SEALER IS TO BE APPLIED AS SHOWN IN DETAIL ON THIS SHEET.
 BEVEL EXPOSED EDGES OF CONCRETE 3/4" 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.
 THE BACKFILL QUANTITIES ARE BASED ON THE PAY LIMITS SHOWN ON THE PLANS AND MAY NOT REFLECT ACTUAL PLACED QUANTITIES. "BACKFILL STRUCTURE TYPE A" REQUIRED DIRECTLY BEHIND ABUTMENTS AND ABUTMENT WINGS FOR 3 FEET. BACKFILL PLACED BEYOND PAY LIMITS OR EXCEEDING PLAN QUANTITIES SHALL BE INCIDENTAL TO EXCAVATIONS FOR STRUCTURES.
 AT PIER, CONCRETE POURED UNDERWATER WILL BE ALLOWED AND SHALL BE DONE IN ACCORDANCE WITH STANDARD SPEC 502.3.5.3. CONCRETE POURED UNDERWATER SHALL NOT EXCEED 10.0 FEET IN DEPTH, UNLESS APPROVED OTHERWISE.
 EXTENT OF BELOW GRADE SUBSTRUCTURES ARE UNKNOWN. REMOVE EXISTING SUBSTRUCTURES AS NEEDED TO BUILD NEW SUBSTRUCTURES. COST OF SUBSTRUCTURE REMOVAL IS CONSIDERED INCIDENT TO "REMOVING STRUCTURE" BID ITEM.



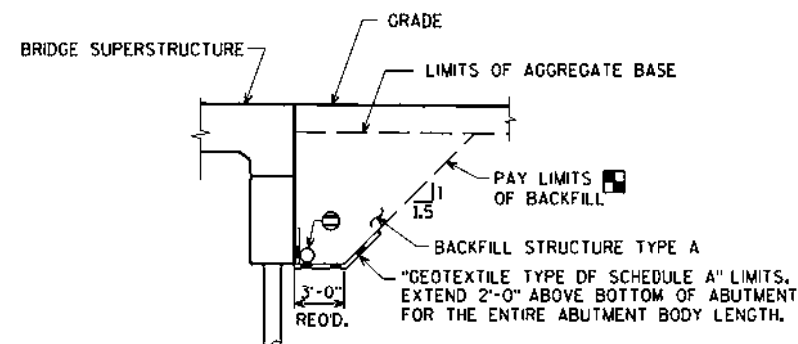
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-140			
DRAWN BY: JLB		PLANS CKD: ZSS	
QUANTITIES, TYPICAL SECTION, AND NOTES			SHEET 2 OF 15

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

8/24/2022 PENTABLE:BRcou_shd_util.tbl

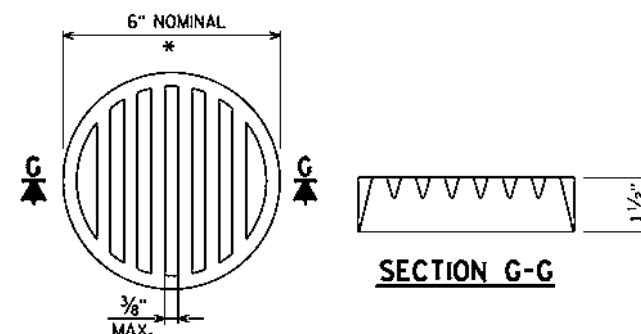
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BACKFILL STRUCTURE LIMITS

- 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 THIS SHEET.

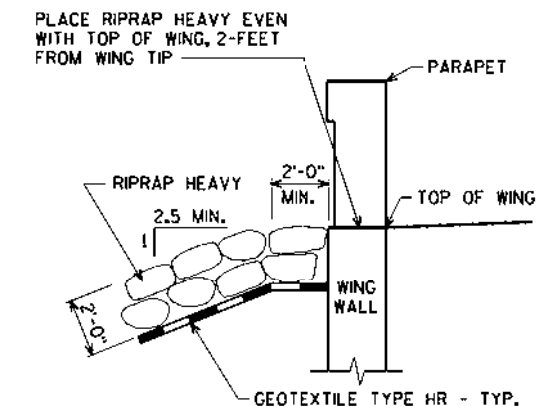


* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

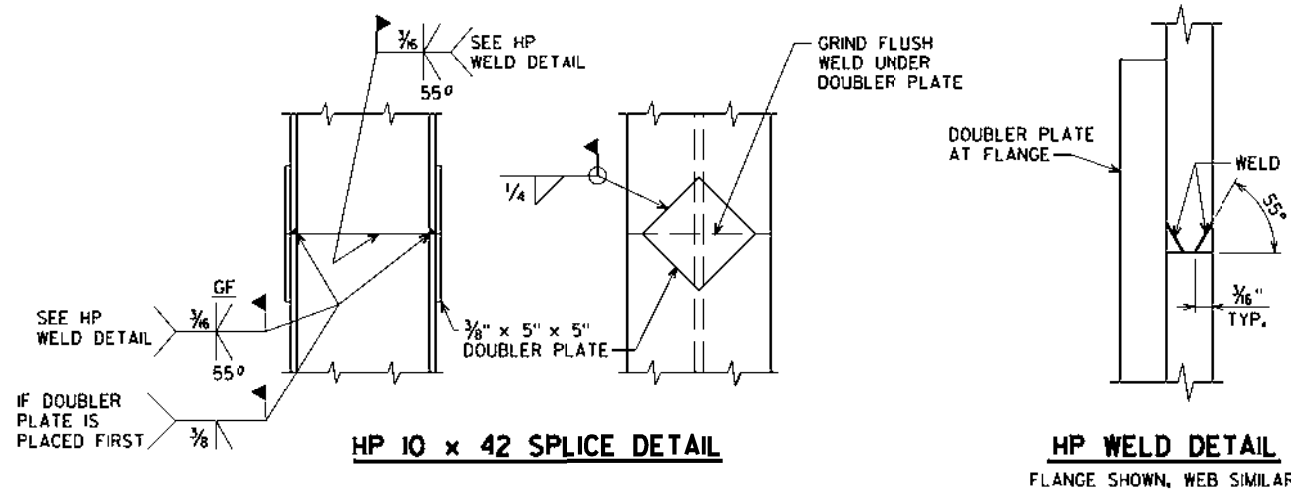
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 x 1-INCH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

RODENT SHIELD DETAIL



TYPICAL FILL SECTION AT WING TIPS

NOTE: PLACE RIPRAP HEAVY AS SHOWN ON GENERAL PLAN SHEET



HP 10 x 42 SPLICE DETAIL

HP WELD DETAIL
FLANGE SHOWN, WEB SIMILAR

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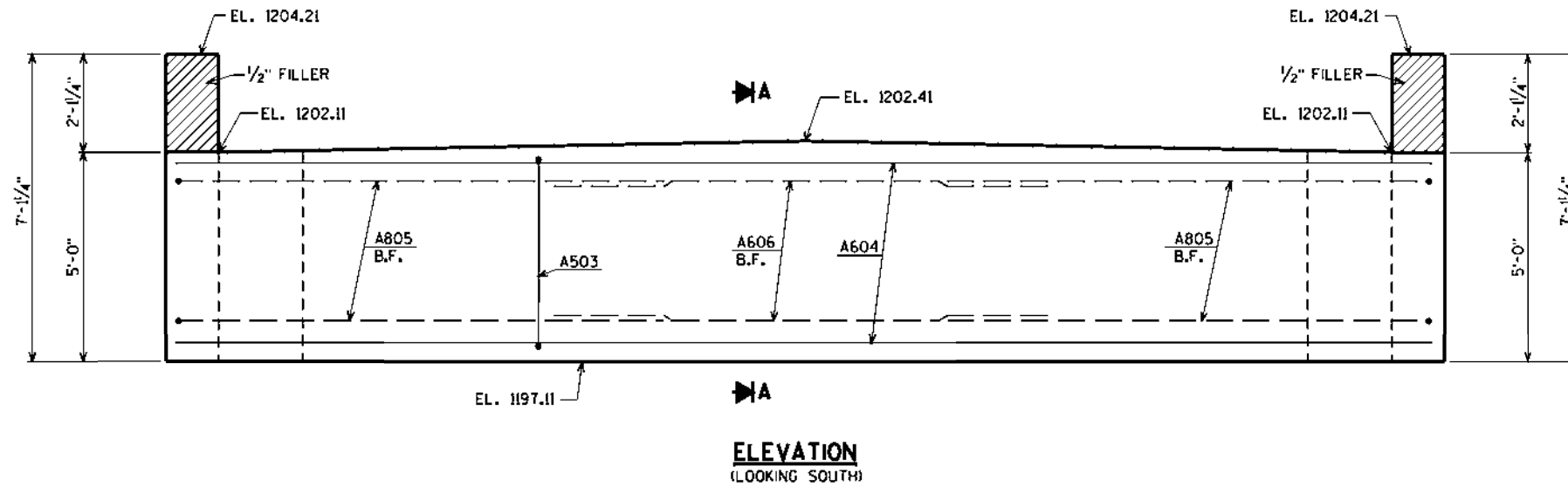
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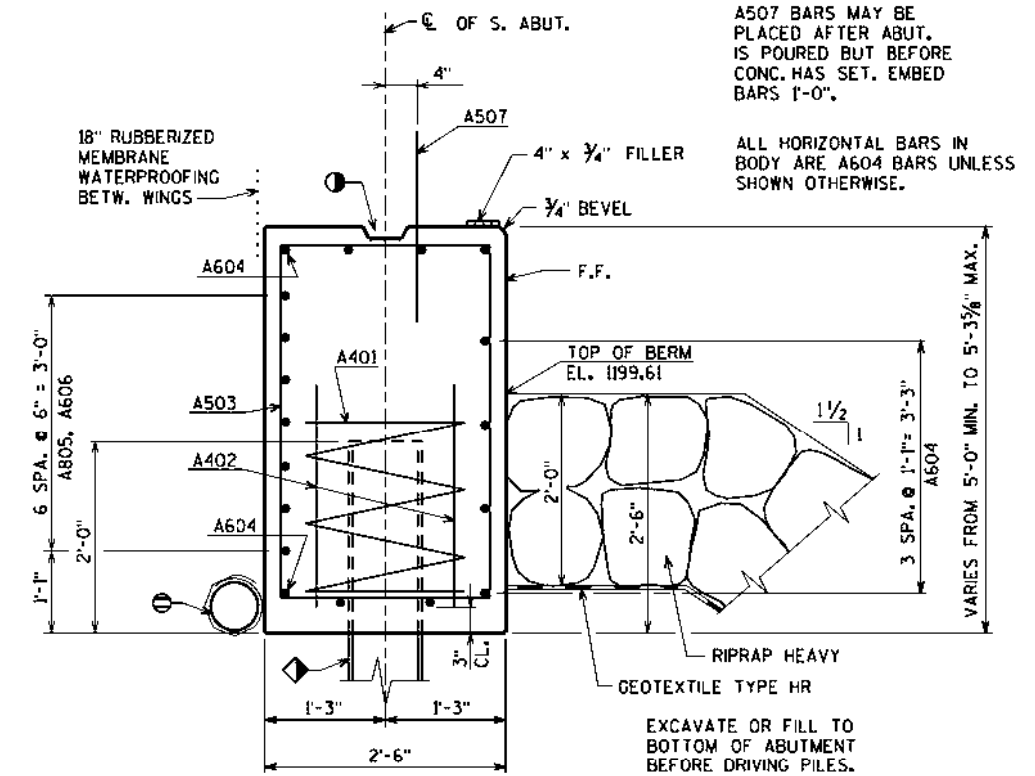
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-140			
DRAWN BY	JLB	PLANS CKD.	ZSS
STRUCTURE DETAILS			SHEET 3 OF 15

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NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF
1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT
SEALER, 1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.

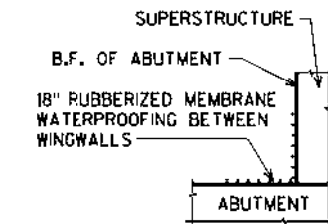


ELEVATION
(LOOKING SOUTH)



SECTION A

◆ ABUTMENT TO BE SUPPORTED ON
HP 10 x 42 STEEL PILING (WITH PILE
POINTS) DRIVEN TO A REQUIRED DRIVING
RESISTANCE OF 110 TONS PER PILE.
ESTIMATED LENGTH 35'-0".



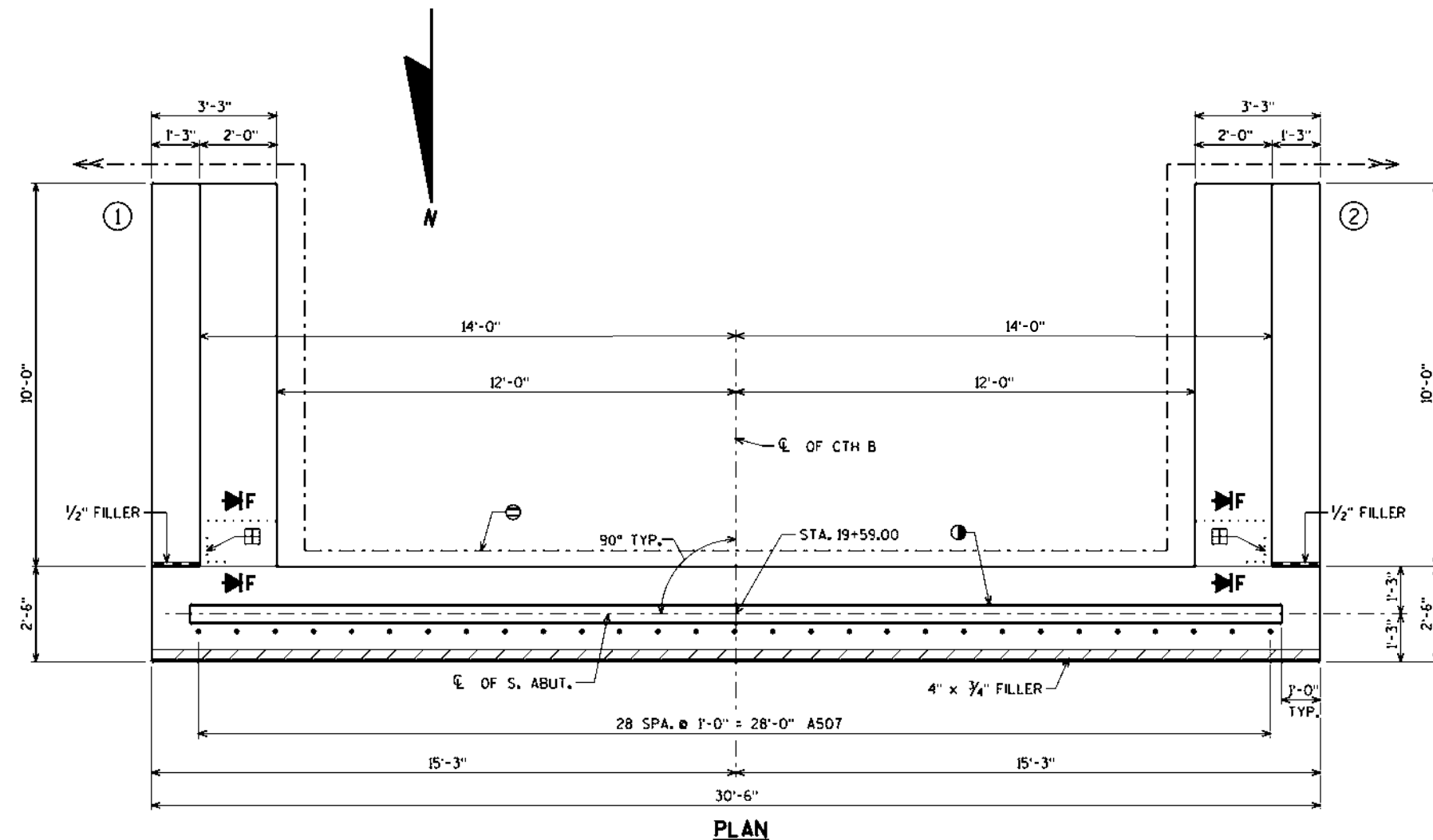
SECTION F

⊙ 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.

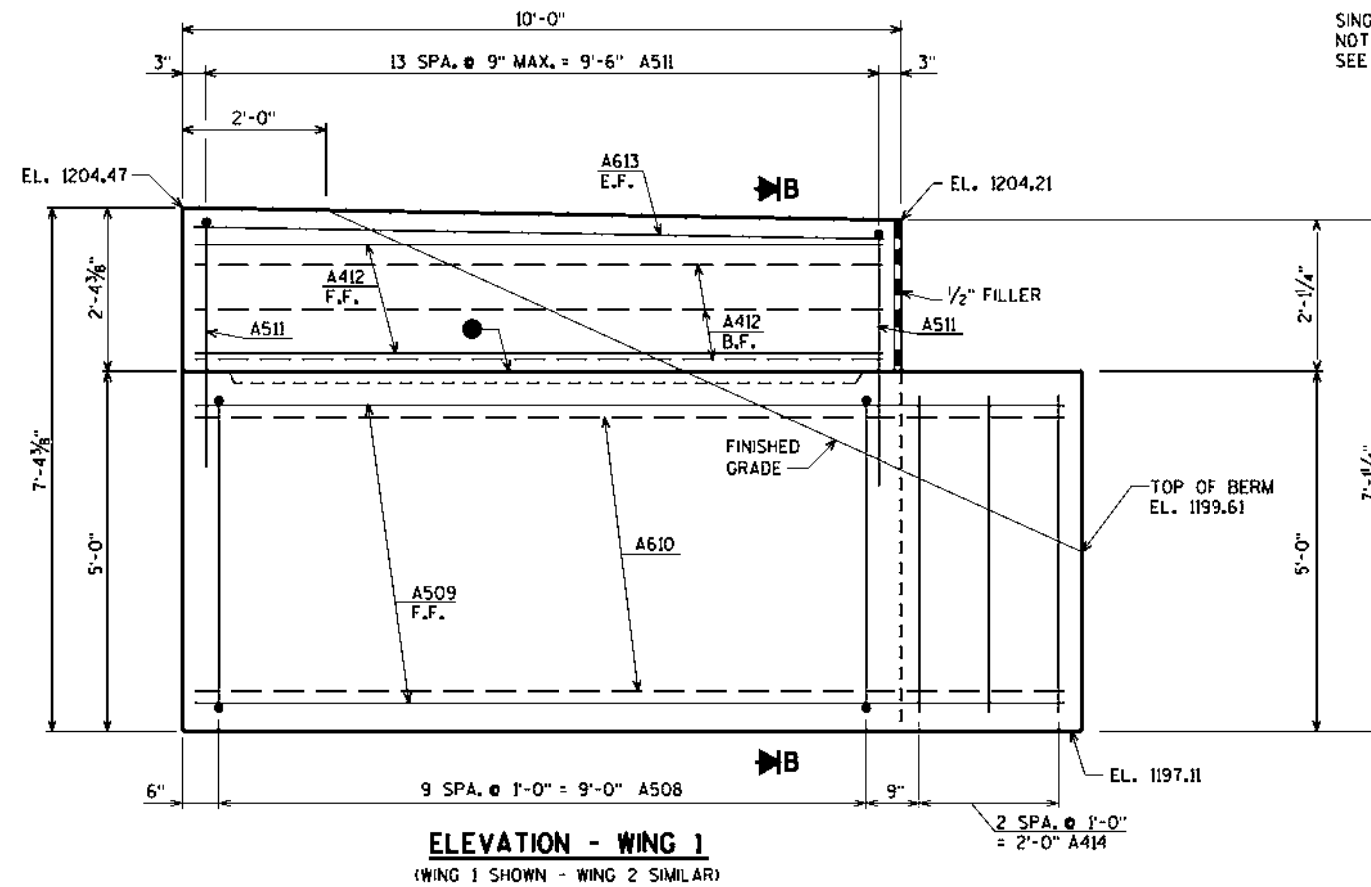
FOR PILE SPLICE DETAIL SEE SHEET 3.



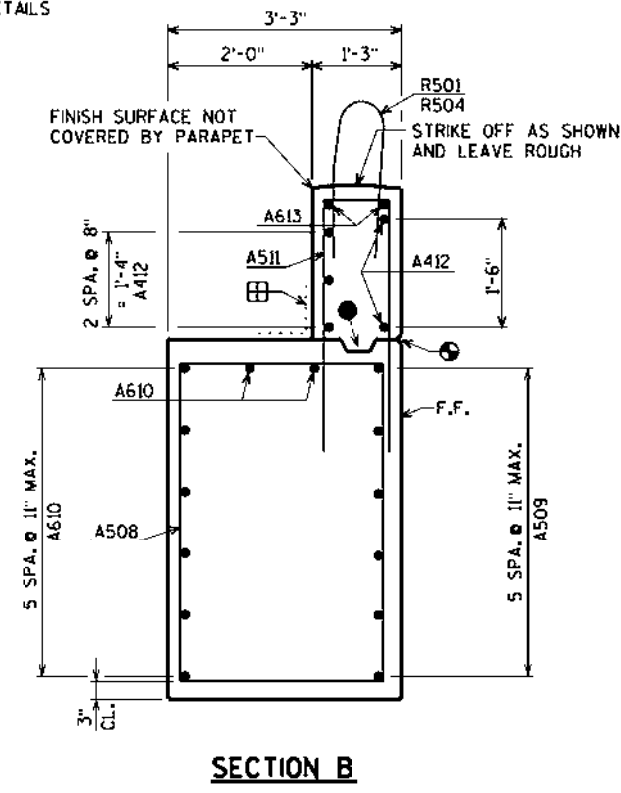
PLAN

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STRUCTURE B-54-140			
DRAWN BY CLP		PLANS CKD. ZSS	
SOUTH ABUTMENT			SHEET 5 OF 15



SINGLE SLOPE 42SS PARAPET
 NOT SHOWN FOR DETAILS
 SEE SHEET 15



- ⊕ 1/4" "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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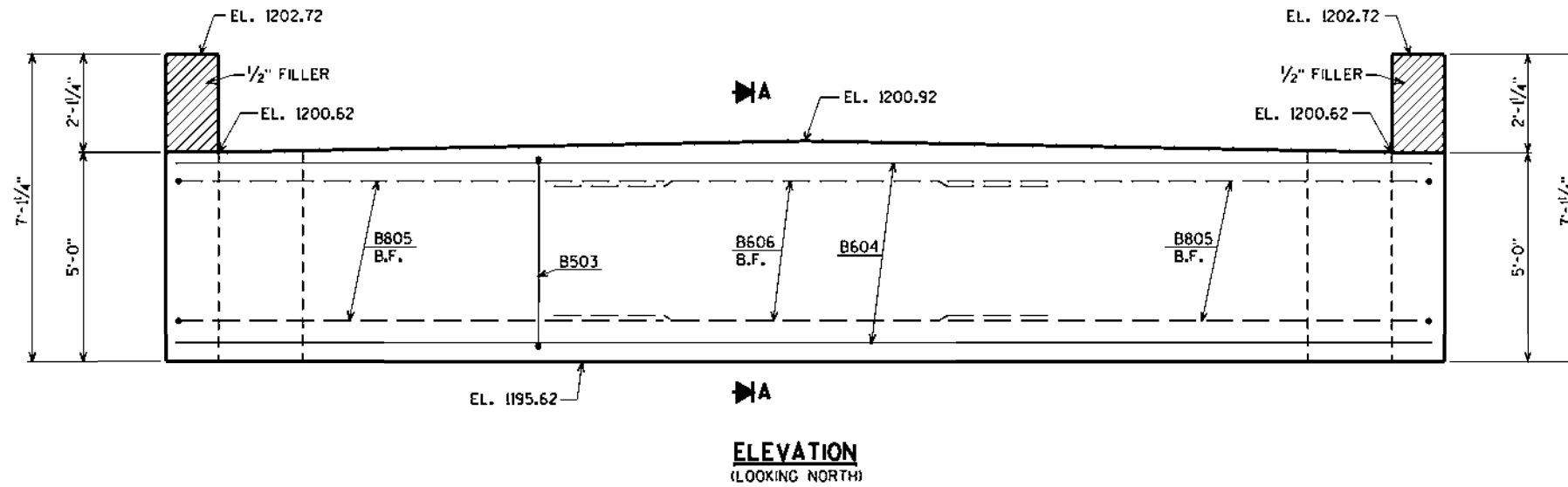
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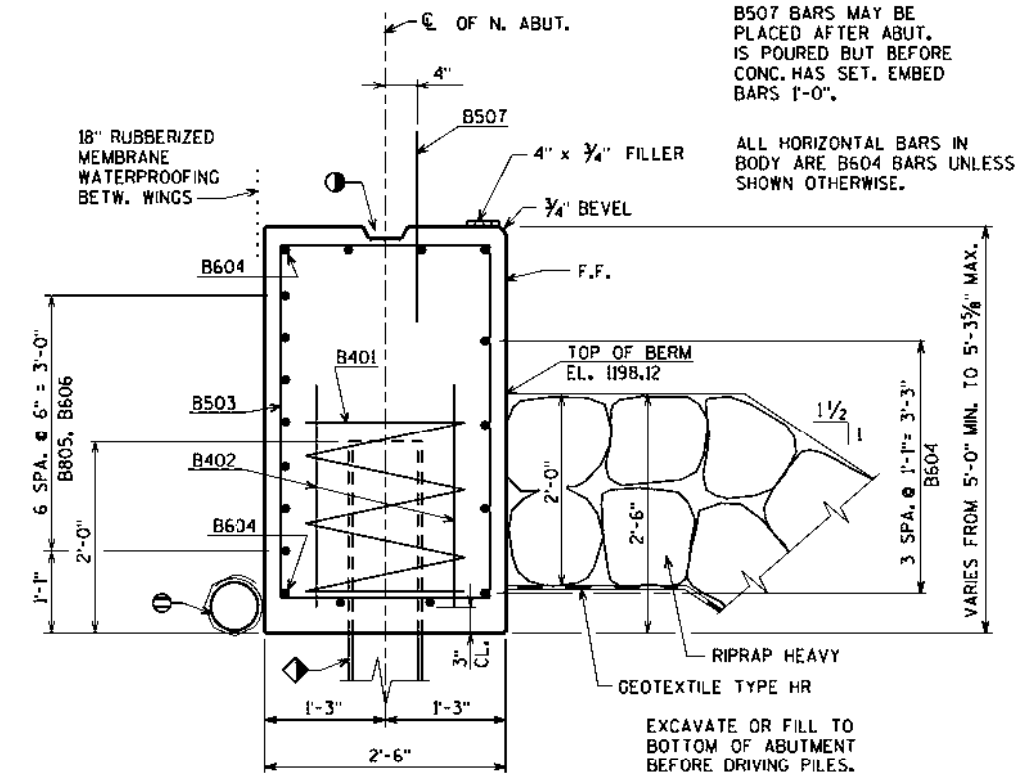
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-140			
DRAWN BY		CLP	PLANS CKD. ZSS
SOUTH ABUTMENT WING DETAILS			SHEET 6 OF 15

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NOTE:
SEAL ALL EXPOSED HORIZONTAL AND VERTICAL SURFACES OF
1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT
SEALER, 1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE.

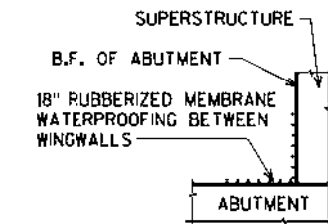


ELEVATION
(LOOKING NORTH)



SECTION A

◆ ABUTMENT TO BE SUPPORTED ON
HP 10 x 42 STEEL PILING (WITH PILE
POINTS) DRIVEN TO A REQUIRED DRIVING
RESISTANCE OF 110 TONS PER PILE.
ESTIMATED LENGTH 35'-0".



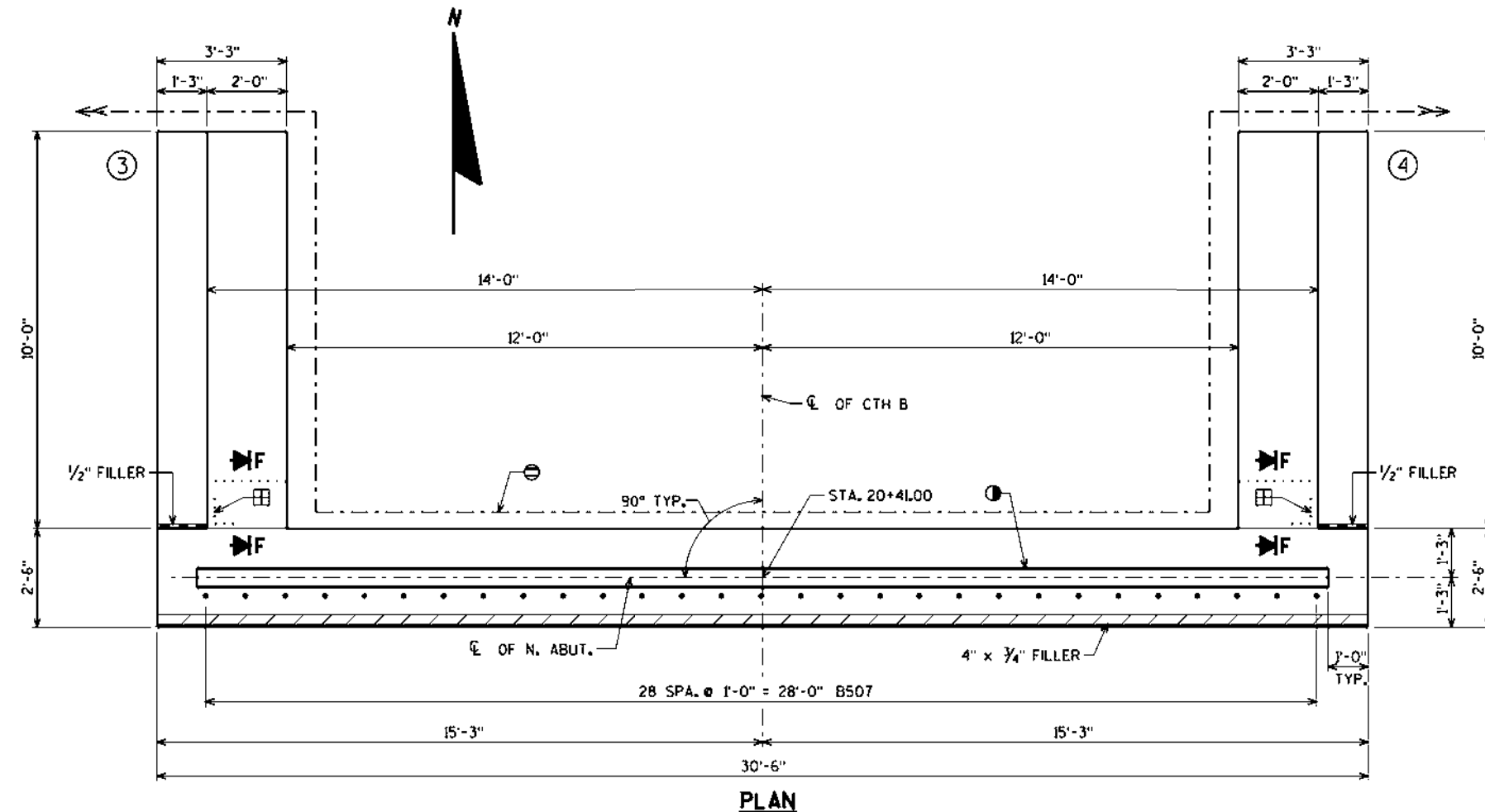
SECTION F

⊙ 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.



PLAN

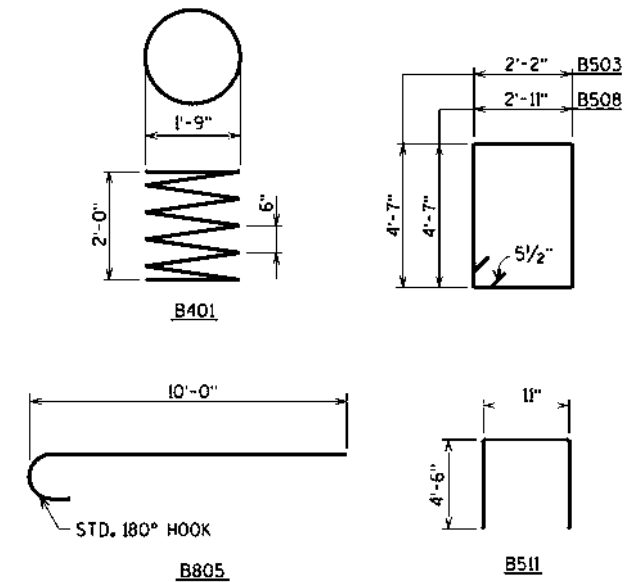
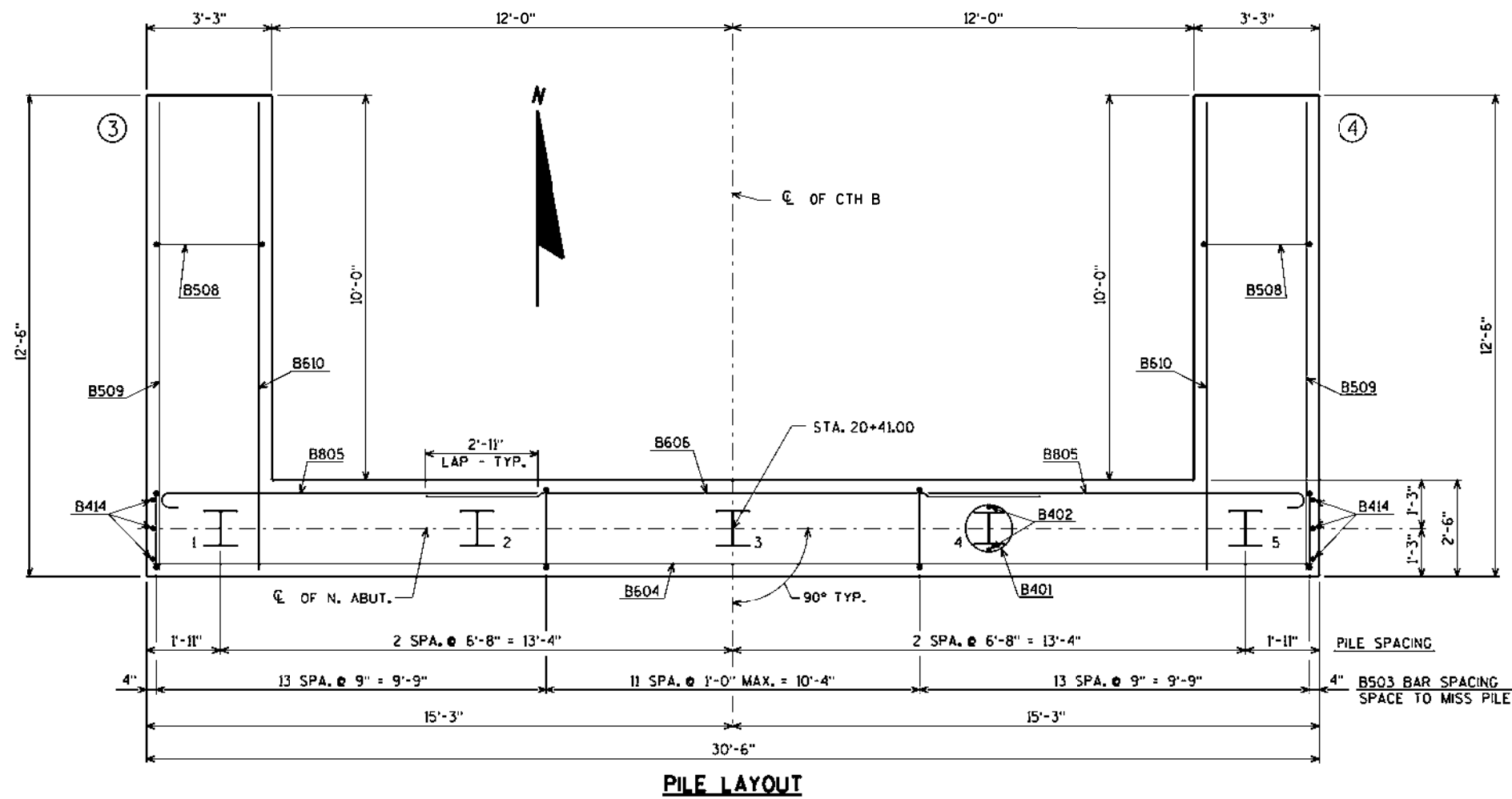
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-140			
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NORTH ABUTMENT			SHEET 8 OF 15

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BILL OF BARS

BAR NO.	COATED BAR	NO. REOD.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	1,250# COATED	1,740# UNCOATED
							LOCATION	
B401		5	28-0	X		BODY @ PILES		
B402		10	2-3			BODY @ PILES		
B503		38	14-2	X		BODY VERT.		
B604		11	30-2			BODY HORIZ.		
B805		14	10-11	X		BODY HORIZ. @ WING B.F.		
B606		7	16-0			BODY HORIZ. BETW. WINGS B.F.		
B507	X	29	2-0			BODY DOWELS		
B508	X	20	15-8	X		WINGS 3 & 4 VERT.		
B509	X	12	12-2			WINGS 3 & 4 HORIZ. F.F.		
B610	X	16	12-2			WINGS 3 & 4 HORIZ. B.F. & TOP		
B511	X	28	9-8	X		WINGS 3 & 4 VERT.		
B412	X	10	9-7			WINGS 3 & 4 HORIZ. E.F.		
B613	X	4	9-7			WINGS 3 & 4 HORIZ. E.F.		
B414	X	6	4-7			BODY VERT. END @ WINGS 3 & 4		

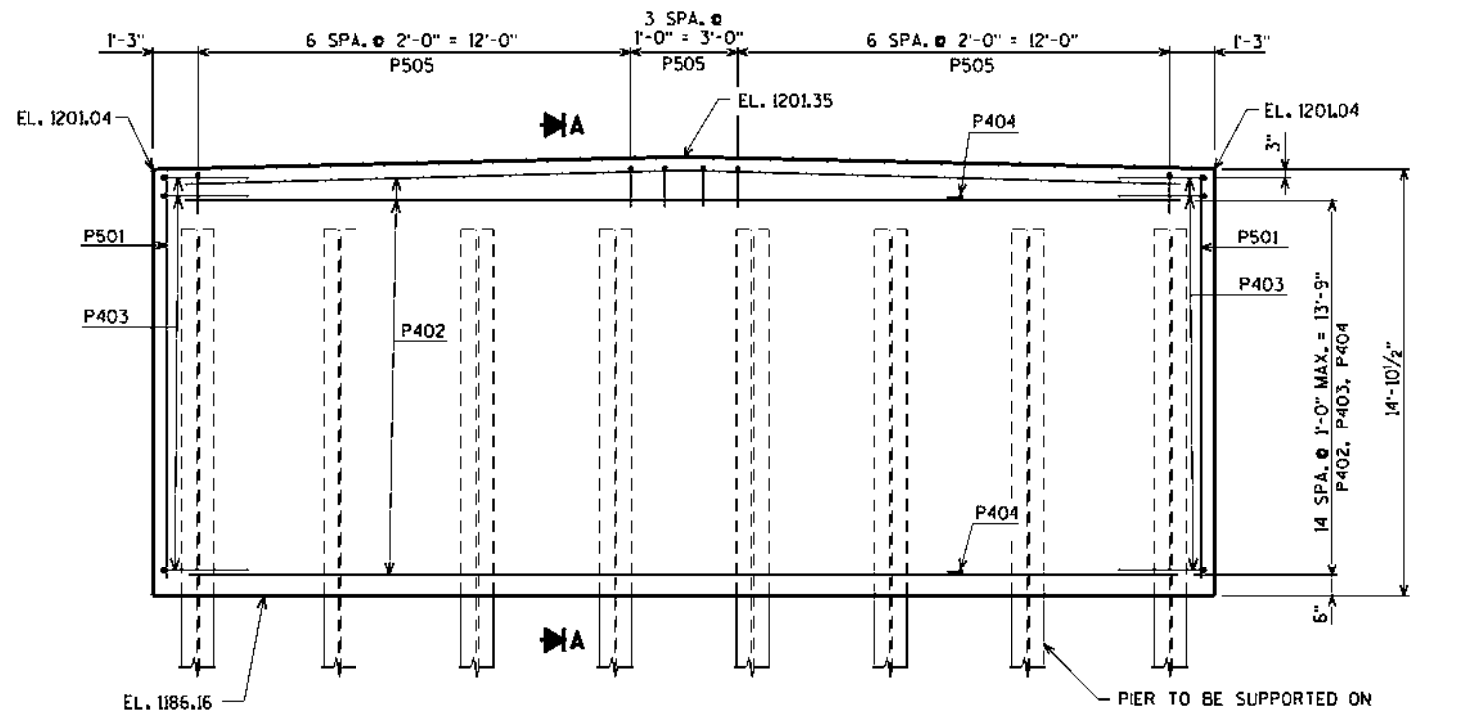
BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



FOR PILE SPLICE DETAIL SEE SHEET 3.

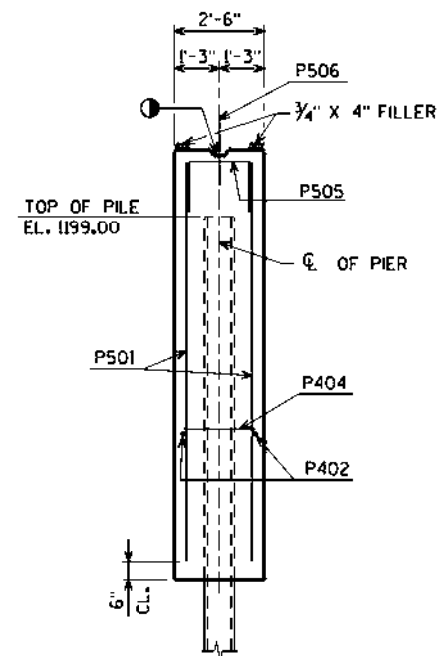
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-140			
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NORTH ABUTMENT PILE LAYOUT & BILL OF BARS			SHEET 10 OF 15

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ELEVATION
(LOOKING NORTH)

PIER TO BE SUPPORTED ON HP 10 x 42 STEEL PILING (WITH PILE POINTS) DRIVEN TO A REQ'D. DRIVING RESISTANCE OF 180 TONS PER PILE ESTIMATED LENGTH 40'-0".



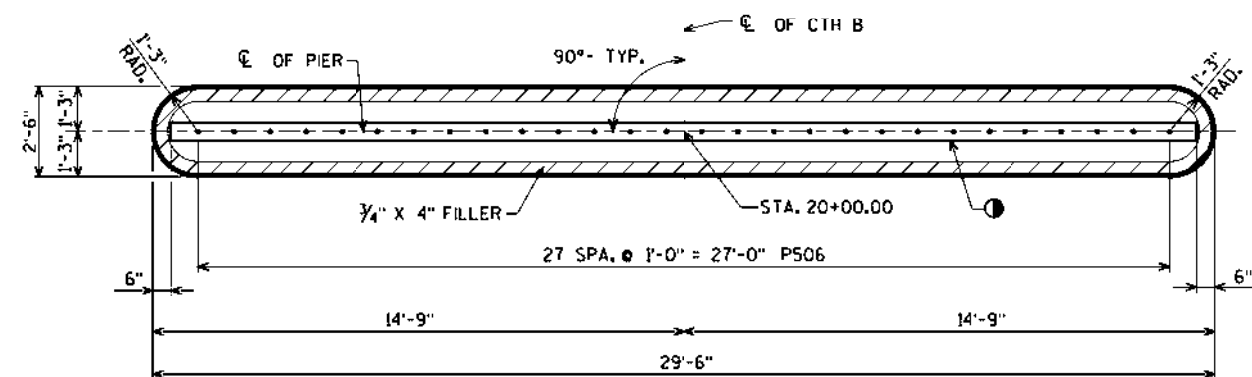
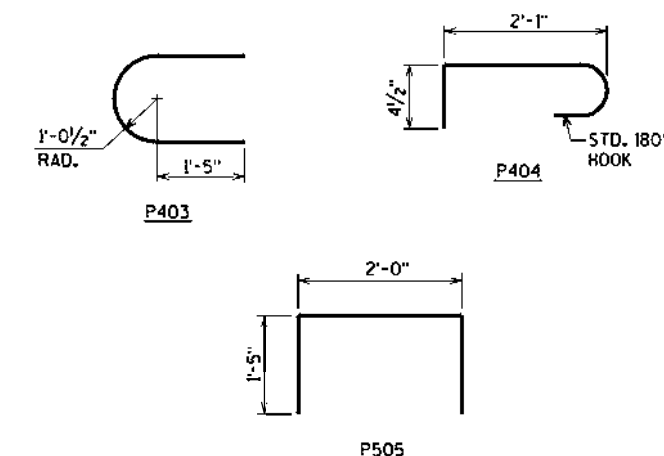
SECTION A

P506 BARS MAY BE PLACED AFTER PIER IS POURED BUT BEFORE CONC. HAS SET. EMBED BARS 1'-0".

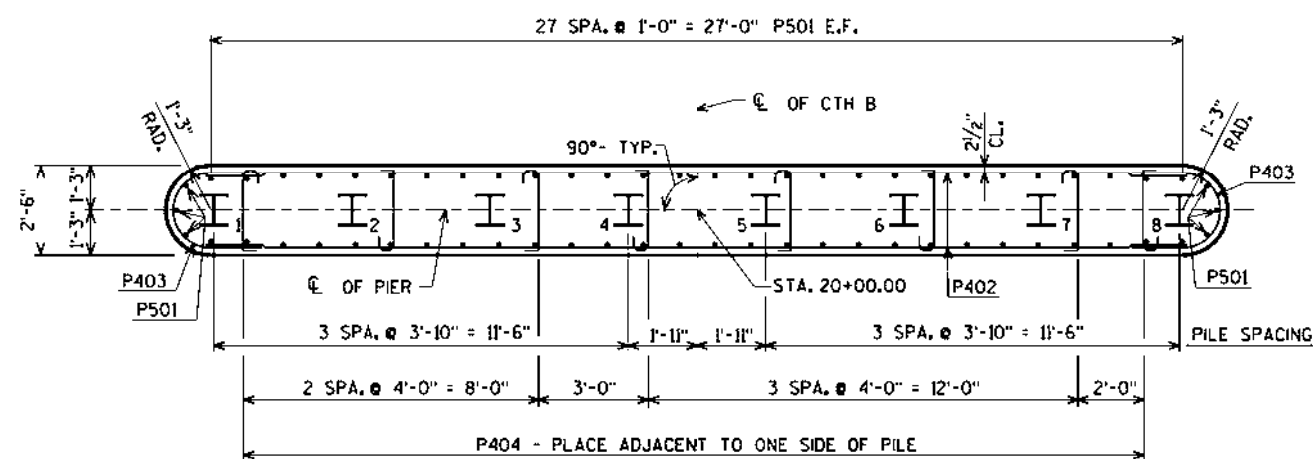
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	60° COATED 1,890° UNCOATED	
							LOCATION	
P501		62	14-3				COLUMN VERT.	
P402		30	27-0				COLUMN HORIZ.	
P403		30	6-1	X			COLUMN HORIZ.	
P404		120	2-10	X			COLUMN TIES	
P505		16	4-7	X			COLUMN TOP	
P506	X	28	2-0				COLUMN DOWELS	

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



PLAN



PILE LAYOUT

P404 - PLACE ADJACENT TO ONE SIDE OF PILE
ALTERNATE THE POSITION OF THE 90°
AND 180° HOOKS AT EACH VERTICAL LAYER OF TIES

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

FOR PILE SPLICE DETAIL SEE SHEET 3.

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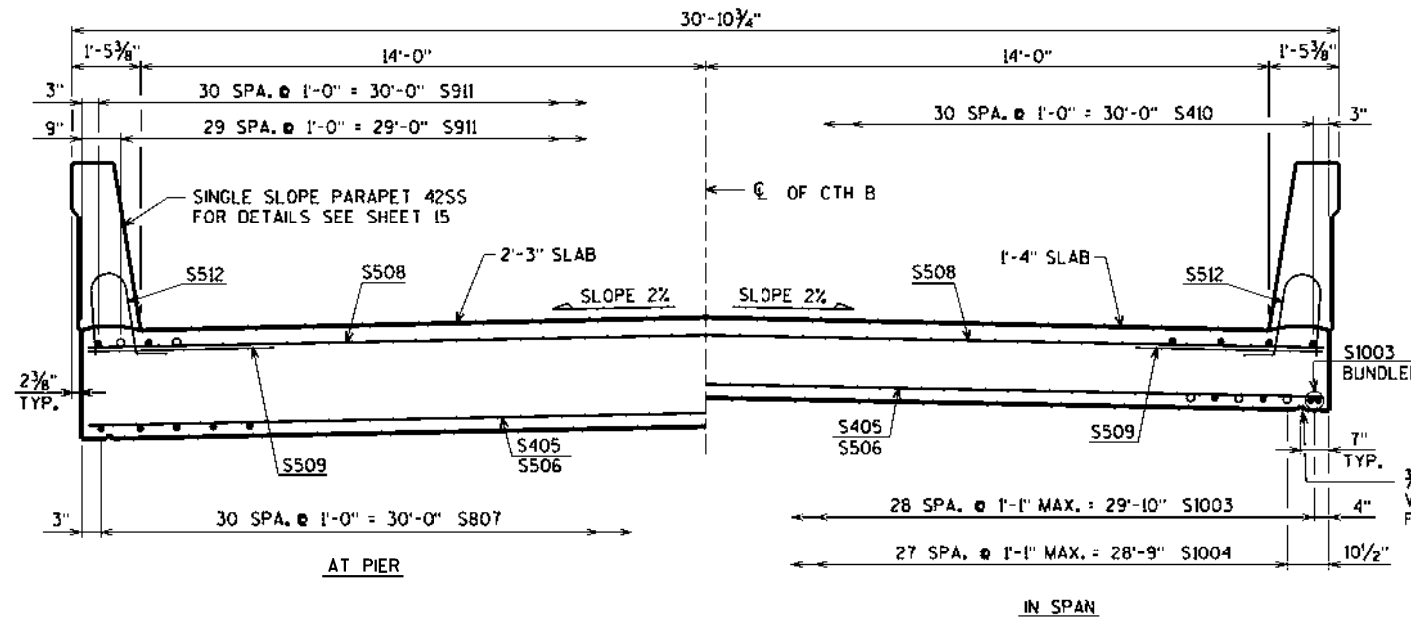
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STRUCTURE B-54-140

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PIER SHEET 11 OF 15



TYPICAL SECTION THRU BRIDGE

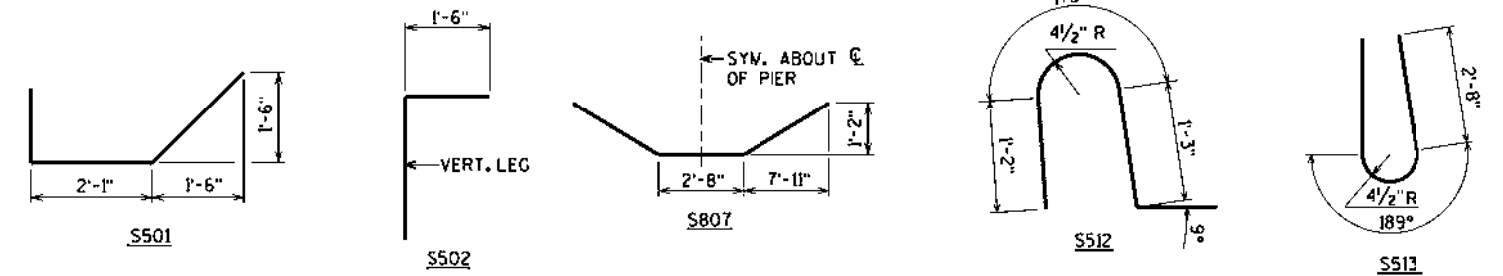
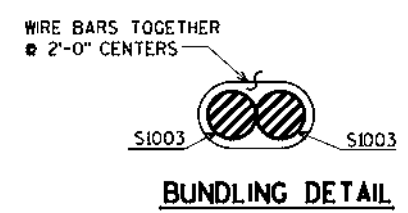
TOP TRANSVERSE BARS IN SLAB SHALL BE SUPPORTED BY INDIVIDUAL BAR CHAIRS AT APPROXIMATELY 3'-0" CENTERS EACH WAY. BOTTOM LONGITUDINAL BARS SHALL BE SUPPORTED BY CONTINUOUS BAR CHAIRS AT APPROXIMATELY 4'-0" CENTERS.

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

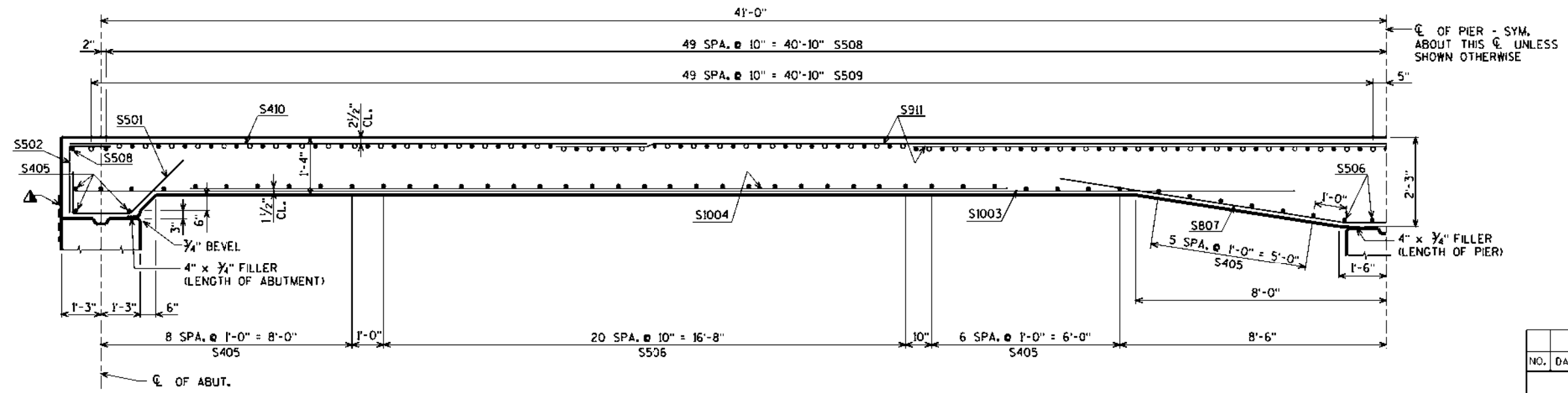
BILL OF BARS

BAR NO.	COATED BAR	NO. REQ'D.	LENGTH	BENT BAR	BUNDLED	BAR SERIES	LOCATION
							39,640* COATED
							LOCATION
S501	X	62	5-7	X			SLAB @ ABUT.
S502	X	62	3-1	X			SLAB @ ABUT.
S1003	X	62	39-3	X			SLAB LONG. BOT.
S1004	X	56	26-4				SLAB LONG. BOT.
S405	X	50	30-2				SLAB TRANS. BOT.
S506	X	46	30-2				SLAB TRANS. BOT.
S807	X	31	18-8	X			SLAB LONG. BOT. @ PIER
S508	X	101	30-2				SLAB TRANS. TOP
S509	X	100	5-0				SLAB TRANS. TOP @ EDGES
S410	X	62	12-3				SLAB LONG. TOP
S911	X	61	46-7				SLAB LONG. TOP @ PIER
S512	X	254	4-5	X			PARAPET VERT.
S513	X	254	6-8	X			PARAPET VERT.
S514	X	32	43-7				PARAPET HORIZ.

BENDING DIMENSIONS ARE OUT TO OUT OF BARS.



▲ 18" RUBBERIZED MEMBRANE WATERPROOFING



PART LONGITUDINAL SECTION

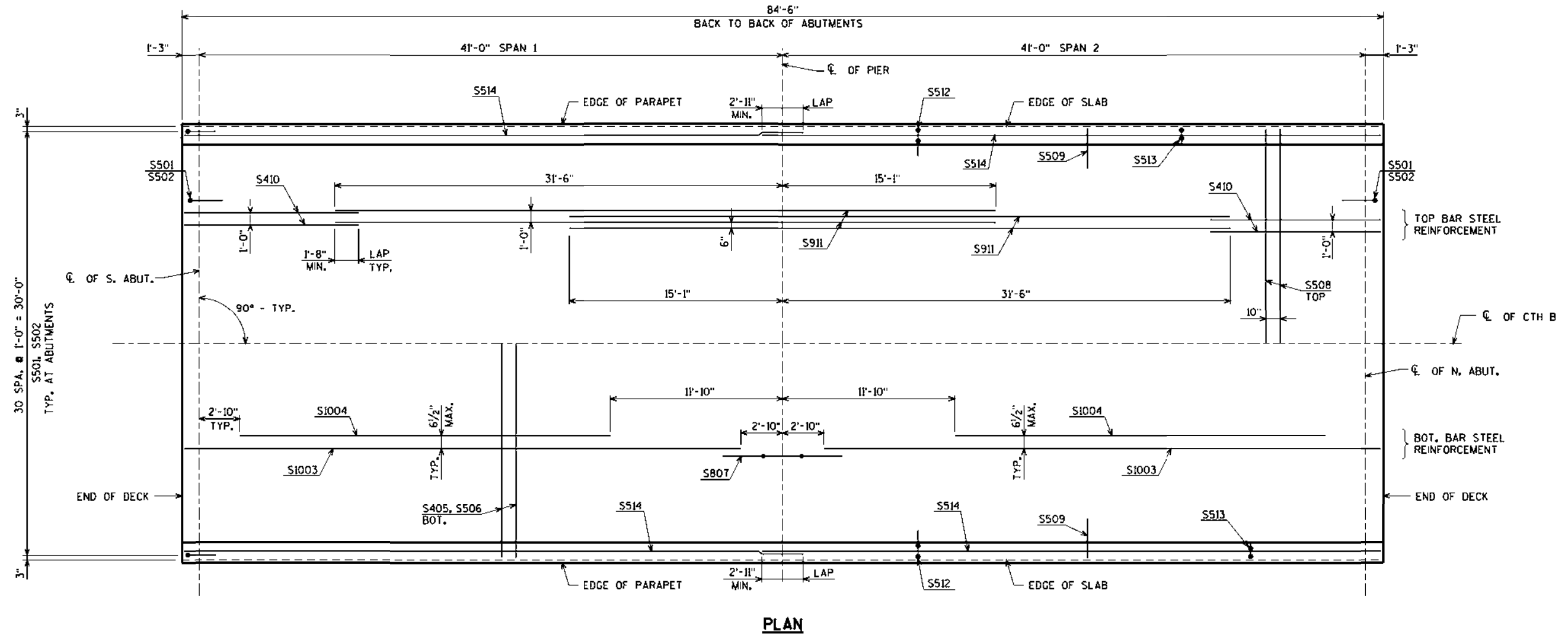
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-140			
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SUPERSTRUCTURE			SHEET 12 OF 15

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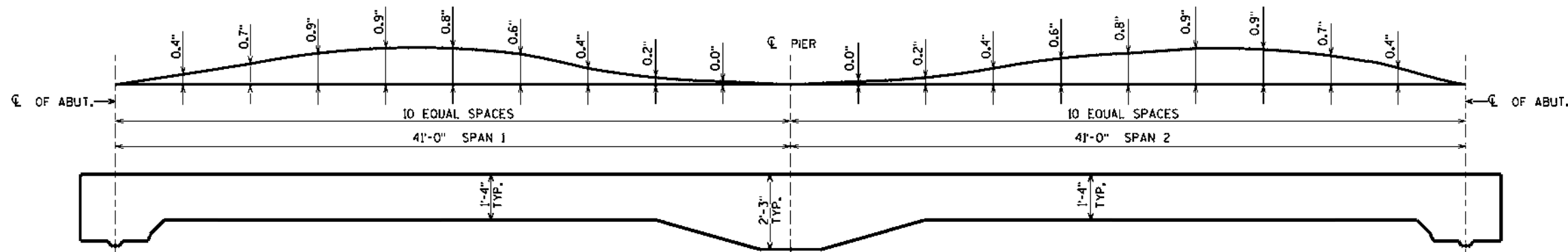
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-140			
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SUPERSTRUCTURE PLAN			SHEET 13 OF 15

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TOP OF DECK ELEVATIONS

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

LOCATION	℄ OF S. ABUT.	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ OF PIER	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	℄ OF N. ABUT.
W. EDGE OF SLAB	1204.21	1204.12	1204.03	1203.94	1203.86	1203.77	1203.69	1203.61	1203.53	1203.45	1203.38	1203.31	1203.23	1203.16	1203.10	1203.03	1202.96	1202.90	1202.84	1202.78	1202.72
℄ OF STRUCTURE	1204.49	1204.40	1204.31	1204.22	1204.14	1204.05	1203.97	1203.89	1203.81	1203.73	1203.66	1203.59	1203.51	1203.44	1203.38	1203.31	1203.24	1203.18	1203.12	1203.06	1203.00
E. EDGE OF SLAB	1204.21	1204.12	1204.03	1203.94	1203.86	1203.77	1203.69	1203.61	1203.53	1203.45	1203.38	1203.31	1203.23	1203.16	1203.10	1203.03	1202.96	1202.90	1202.84	1202.78	1202.72



CAMBER AND SLAB THICKNESS DIAGRAM

CAMBER SHOWN IS BASED ON 3 TIMES DEAD LOAD DEFLECTION.

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

PARAPETS PLACED ON TOP OF THE SLAB SHALL BE Poured AFTER FALSEWORK HAS BEEN RELEASED.

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

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

SURVEY TOP OF SLAB ELEVATIONS

LOCATION	℄ OF S. ABUT.	5/10 PT. SPAN 1	℄ OF PIER	5/10 PT. SPAN 2	℄ OF N. ABUT.
WEST EDGE OF SLAB					
℄ OF STRUCTURE					
EAST EDGE OF SLAB					

PRIOR TO RELEASING SLAB FALSEWORK, TAKE TOP OF DECK ELEVATIONS AT THE ℄ OF ABUTMENTS, THE ℄ OF PIER 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.

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NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION			
STRUCTURE B-54-140			
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SUPERSTRUCTURE DETAILS			SHEET 14 OF 15

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BILL OF BARS NOTE: REINFORCEMENT WEIGHT INCLUDED IN ABUTMENT QUANTITIES.

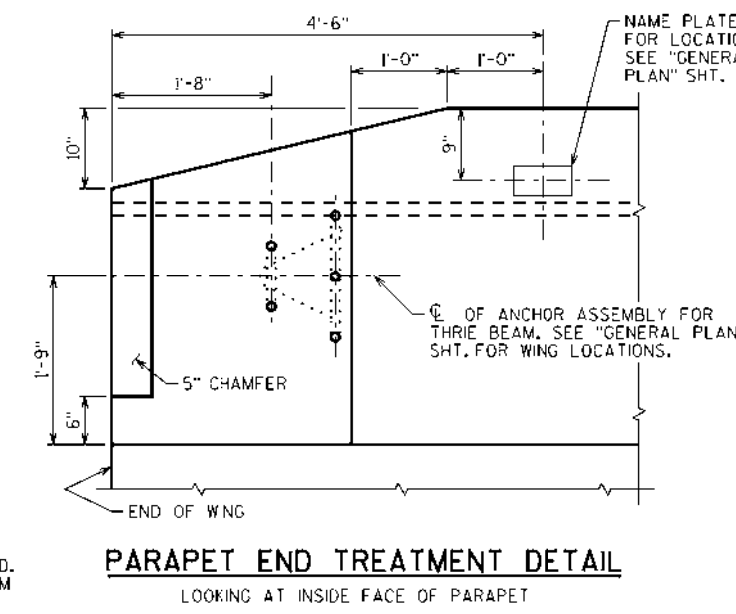
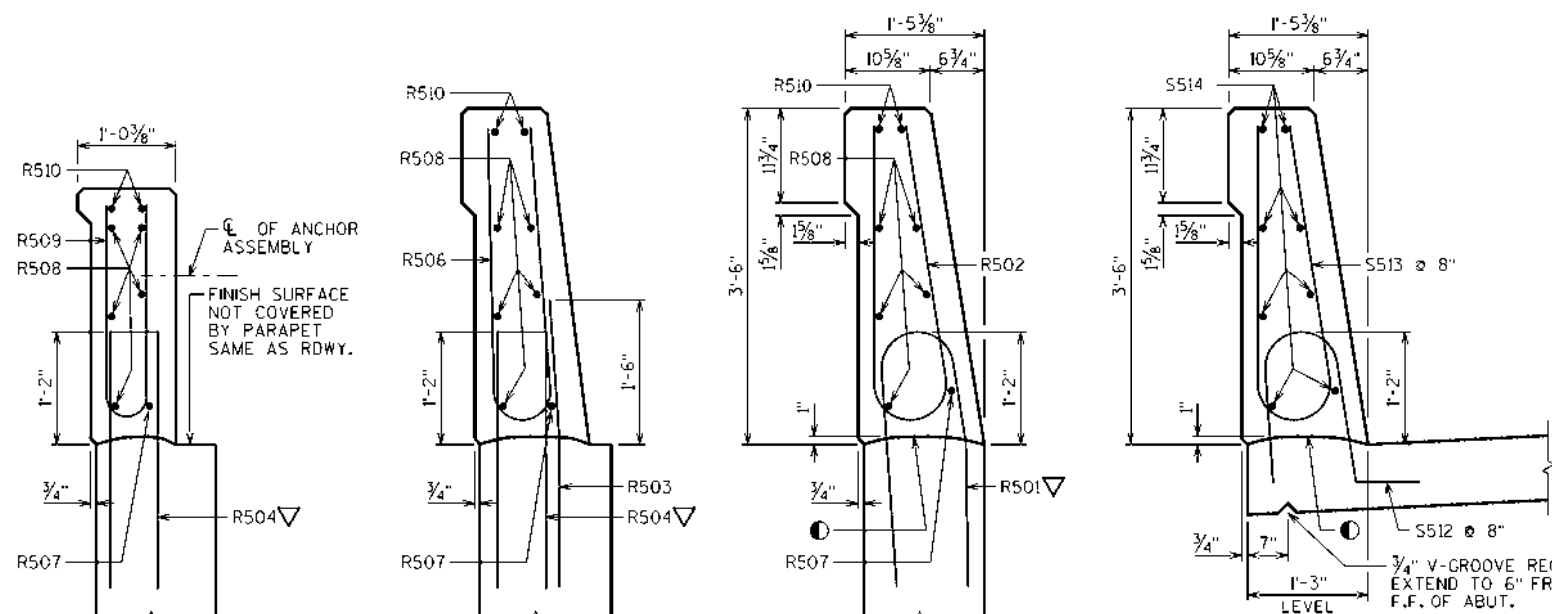
BAR MARK	COUPLER	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	6	6	5'-10"	X		PARAPET VERT.
R502	X	6	6	6'-8"	X		PARAPET VERT.
R503	X	24	24	3'-0"	X		PARAPET VERT.
R504	X	34	34	5'-7"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	9'-7"	X		PARAPET HORIZ.
R508	X	10	10	9'-7"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	▲	PARAPET VERT.
R510	X	4	4	9'-7"	X		PARAPET HORIZ.

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

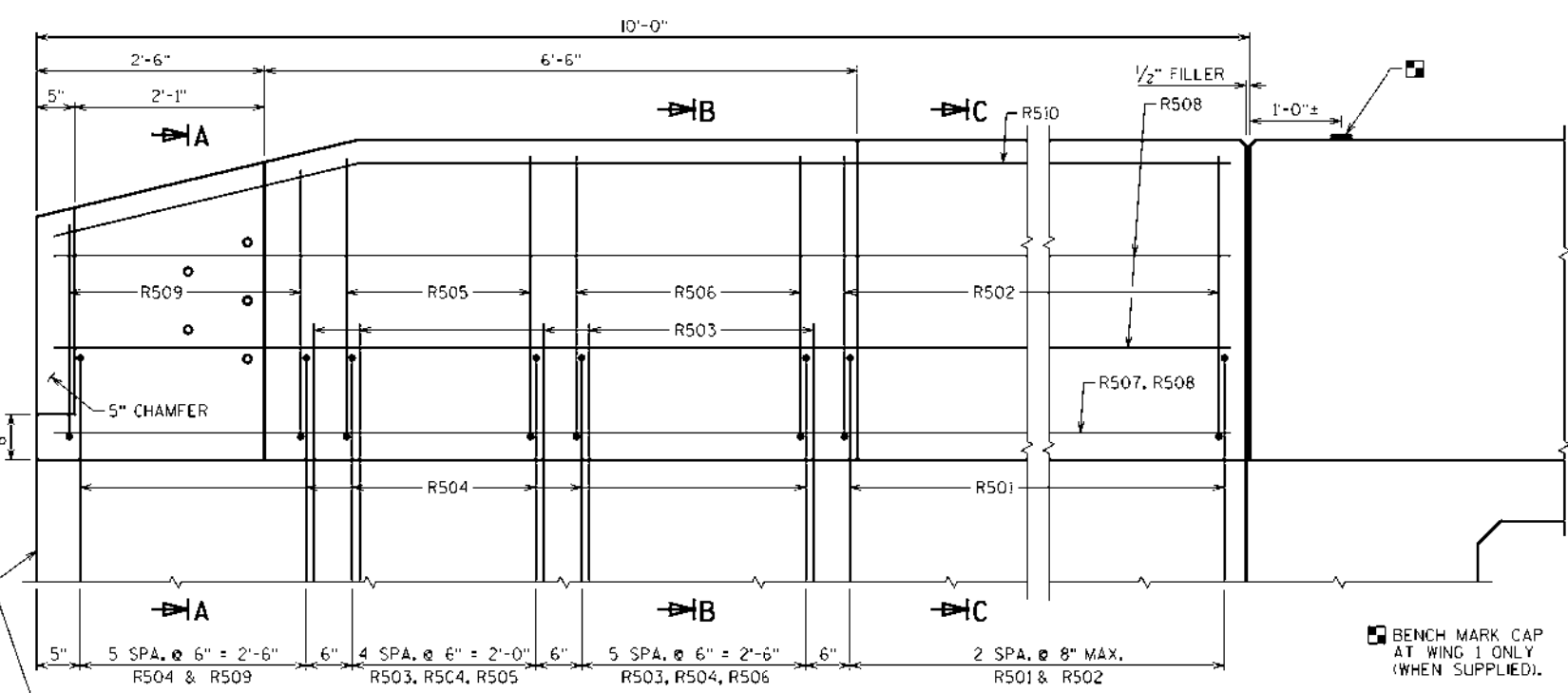
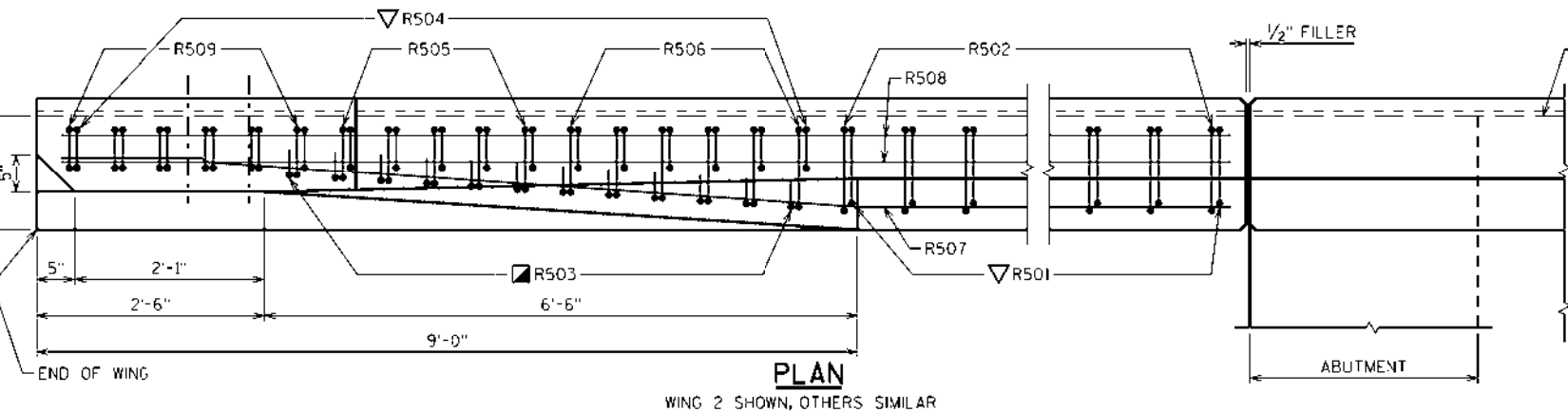
BAR SERIES TABLE

BAR MARK	NO. REQ'D	LENGTH
R509	4 SERIES OF 6	4'-9" TO 6'-1"

BUNDLE AND TAG EACH SERIES SEPARATELY.

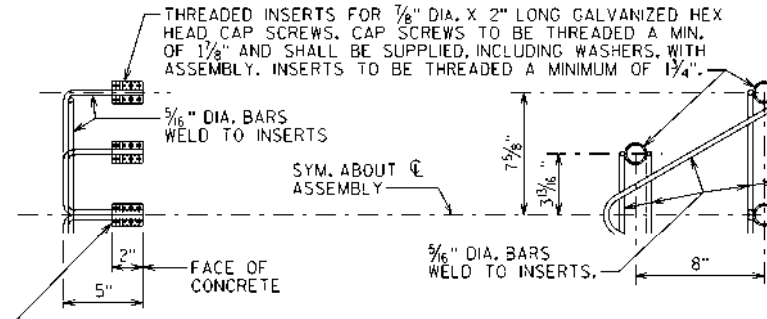
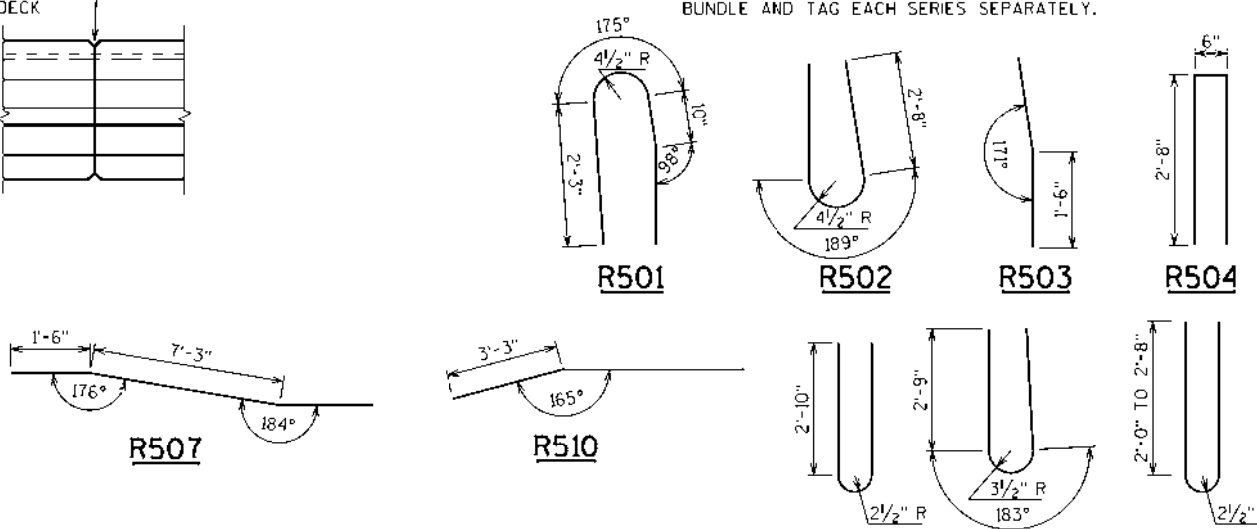


SECTION A-A SECTION B-B SECTION C-C SECTION THRU PARAPET ON BRIDGE



INSIDE ELEVATION WING 2 SHOWN, OTHERS SIMILAR

OPTIONAL CONSTRUCTION JOINTS IN THE PARAPETS MAY BE USED. RUN BAR REINF. THRU THE JOINT. LAP LONGIT. BARS A MIN. OF 1'-9". MIN. JOINT SPACING OF 80'-0". DEFINE CONST. JOINT WITH A 3/4" V-GROOVE.



DETAIL OF ANCHOR ASSEMBLY

NOTE: HEX HEAD CAP SCREWS & WASHERS TO BE GALVANIZED IN ACCORDANCE WITH AASHTO M232 CLASS C.
ASSEMBLY SHALL BE BID ITEM "ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD", EACH.

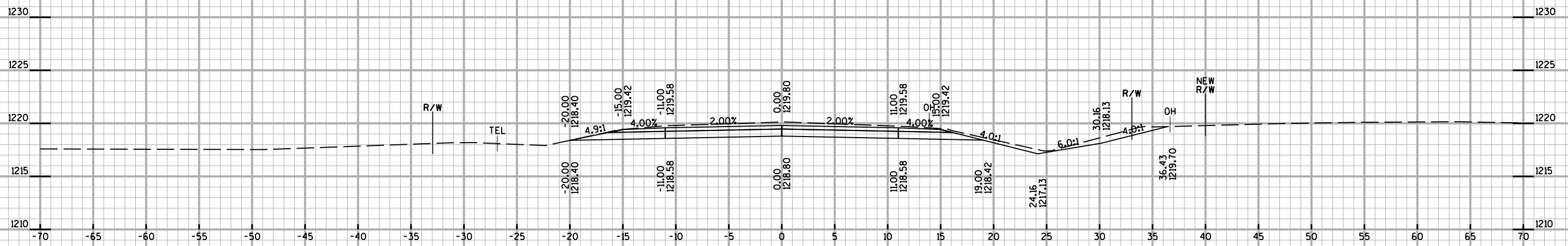
- CONST. JOINT - STRIKE OFF AS SHOWN
- R503 BARS MAY BE PLACED AFTER CONCRETE IS POURED BUT BEFORE INITIAL SET HAS TAKEN PLACE. USE CARE TO PLACE R503 BARS CORRECTLY ALONG TRANSITION OF PARAPET.
- ▽ R501 AND R504 BARS TO BE TIED TO WING STEEL BEFORE WING IS POURED.

NO.	DATE	REVISION	BY
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STRUCTURE B-54-140			
DRAWN BY		CLP	PLANS Ckd. ZSS
SINGLE SLOPE PARAPET 42SS			SHEET 15 OF 15

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CTH B COMPUTER EARTHWORK

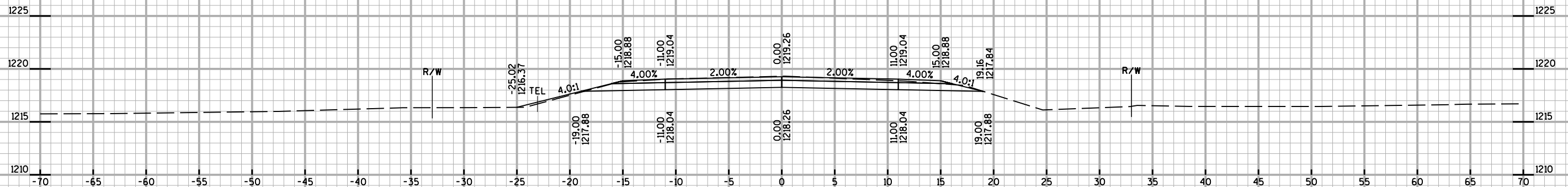
Station	Distance	Area (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Expanded		
						1.00	1.30	
				Note 1	Note 2	Note 1		Note 3
12+25	--	34.8	0.0	--	--			
12+50	25	31.8	0.9	31	0	31	1	30
12+75	25	34.6	0.6	31	1	62	1	60
13+00	25	47.5	0.0	38	0	100	2	98
13+25	25	55.9	0.0	48	0	147	2	146
13+50	25	65.4	0.0	56	0	204	2	202
13+75	25	78.6	4.4	67	2	270	4	266
13+95.93	21	134.4	3.1	83	3	353	8	345
14+00	4	117.6	2.9	19	0	372	9	363
14+25	25	120.7	15.1	110	8	482	19	463
14+50	25	128.7	0.0	115	7	598	29	569
14+67.1	17	159.6	8.8	91	3	689	32	657
14+75	8	159.5	0.0	47	1	736	34	702
15+00	25	159.0	0.0	147	0	883	34	849
15+25	25	175.4	0.0	155	0	1038	34	1004
15+50	25	198.6	0.0	173	0	1211	34	1177
15+75	25	229.9	0.0	198	0	1409	34	1376
16+00	25	244.6	0.0	220	0	1629	34	1595
16+25	25	224.3	0.0	217	0	1846	34	1812
16+50	25	168.4	0.0	182	0	2028	34	1994
16+75	25	91.8	0.5	120	0	2148	34	2114
17+00	25	52.3	2.1	67	1	2215	36	2180
17+00	--	52.3	2.1	--	--	--	--	--
17+25	25	20.8	3.9	34	3	2249	39	2210
17+50	25	4.9	15.0	12	9	2261	51	2211
17+75	25	1.8	46.5	3	28	2264	88	2177
17+91.68	17	2.5	80.2	1	39	2265	139	2127
18+00	8	1.3	86.6	1	26	2266	172	2094
18+07.73	8	2.3	103.4	1	27	2266	207	2060
18+25	17	0.0	146.6	1	80	2267	311	1956
18+32.73	8	0.0	162.6	0	44	2267	369	1899
18+50	17	0.0	188.1	0	112	2267	515	1753
18+57.73	8	0.0	200.1	0	56	2267	587	1681
18+75	17	0.0	210.9	0	131	2267	758	1510
18+82.73	8	0.0	212.6	0	61	2267	837	1431
19+00	17	0.0	184.1	0	127	2267	1001	1266
19+07.73	8	0.0	174.6	0	51	2267	1068	1199
19+25	17	0.0	193.4	0	118	2267	1221	1046
19+47.75	23	0.0	114.8	0	130	2267	1390	878
19+57.75	10	0.0	114.8	0	43	2267	1445	821
BRIDGE	--	--	--	--	--	--	--	--
20+42.25	--	0.0	31.8	--	--	--	--	--
20+52.25	10	0.0	31.8	0	12	2267	1461	806
20+75	23	2.7	41.1	1	31	2268	1501	767
20+92.27	17	7.6	31.1	3	23	2271	1531	740
21+00	8	9.3	28.0	2	8	2274	1542	732
21+17.27	17	11.9	41.9	7	22	2281	1571	710
21+25	8	12.8	45.2	4	12	2284	1587	697
21+42.27	17	14.0	51.7	9	31	2293	1627	665
21+50	8	14.8	50.2	4	15	2297	1646	650
21+67.27	17	18.9	44.8	11	30	2308	1686	622
21+75	8	20.2	45.9	6	13	2313	1702	610
21+92.27	17	19.7	47.8	13	30	2326	1741	584
22+00	8	19.2	22.7	6	10	2332	1754	577
22+25	25	21.8	37.2	19	28	2351	1790	560
22+50	25	23.3	27.5	21	30	2371	1829	542
22+75	25	30.0	0.0	25	13	2396	1846	550
				2396	1420			



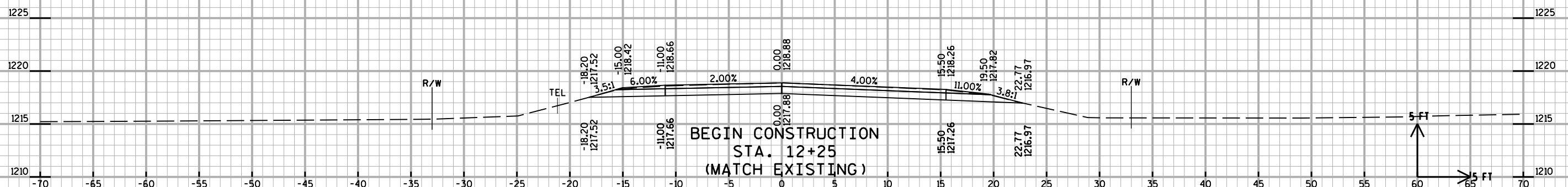
13+00



12+75

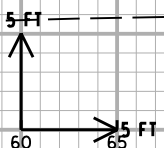


12+50



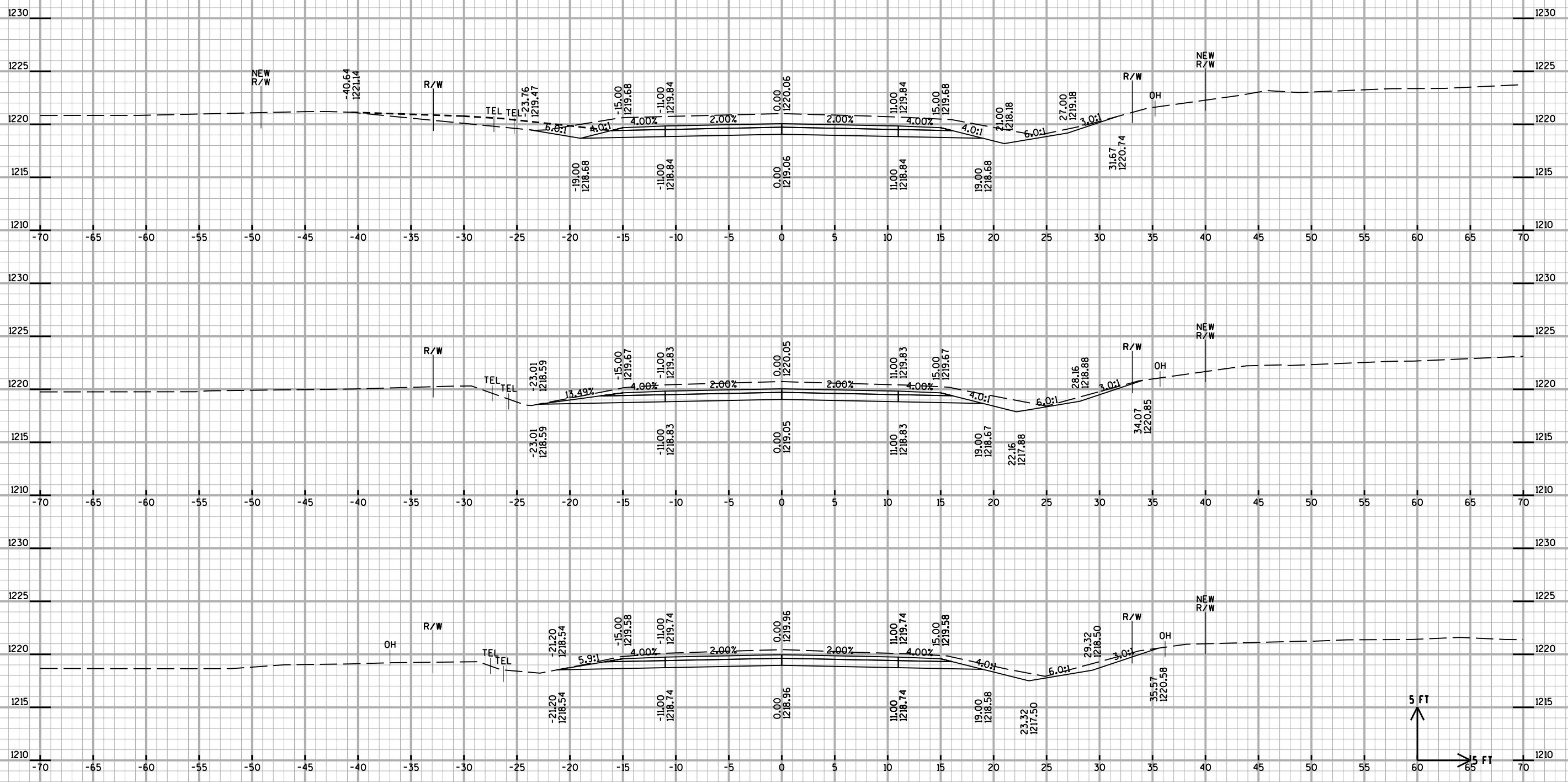
12+25

BEGIN CONSTRUCTION
STA. 12+25
(MATCH EXISTING)

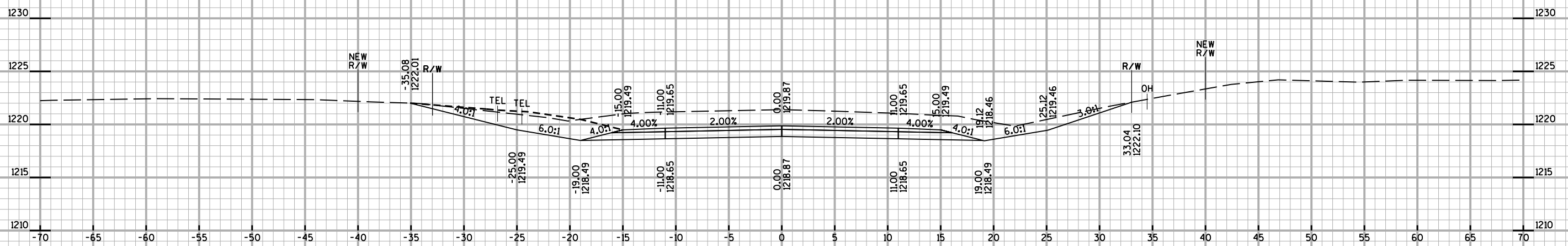


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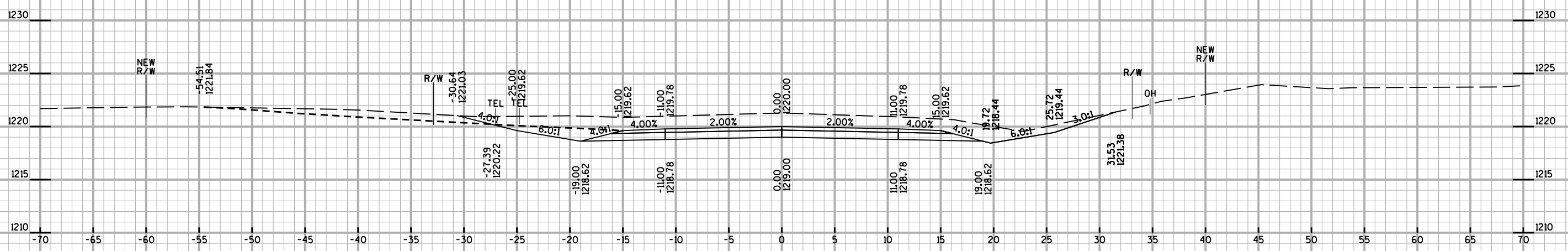
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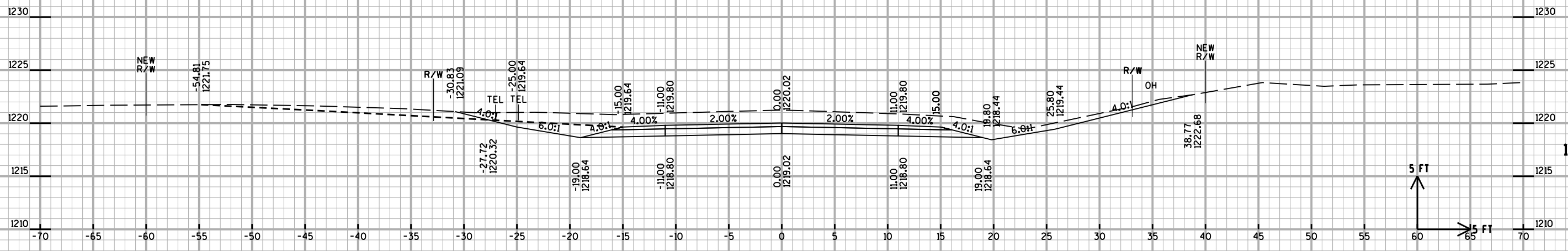
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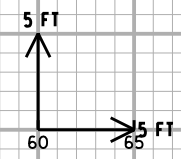
14+25



14+00

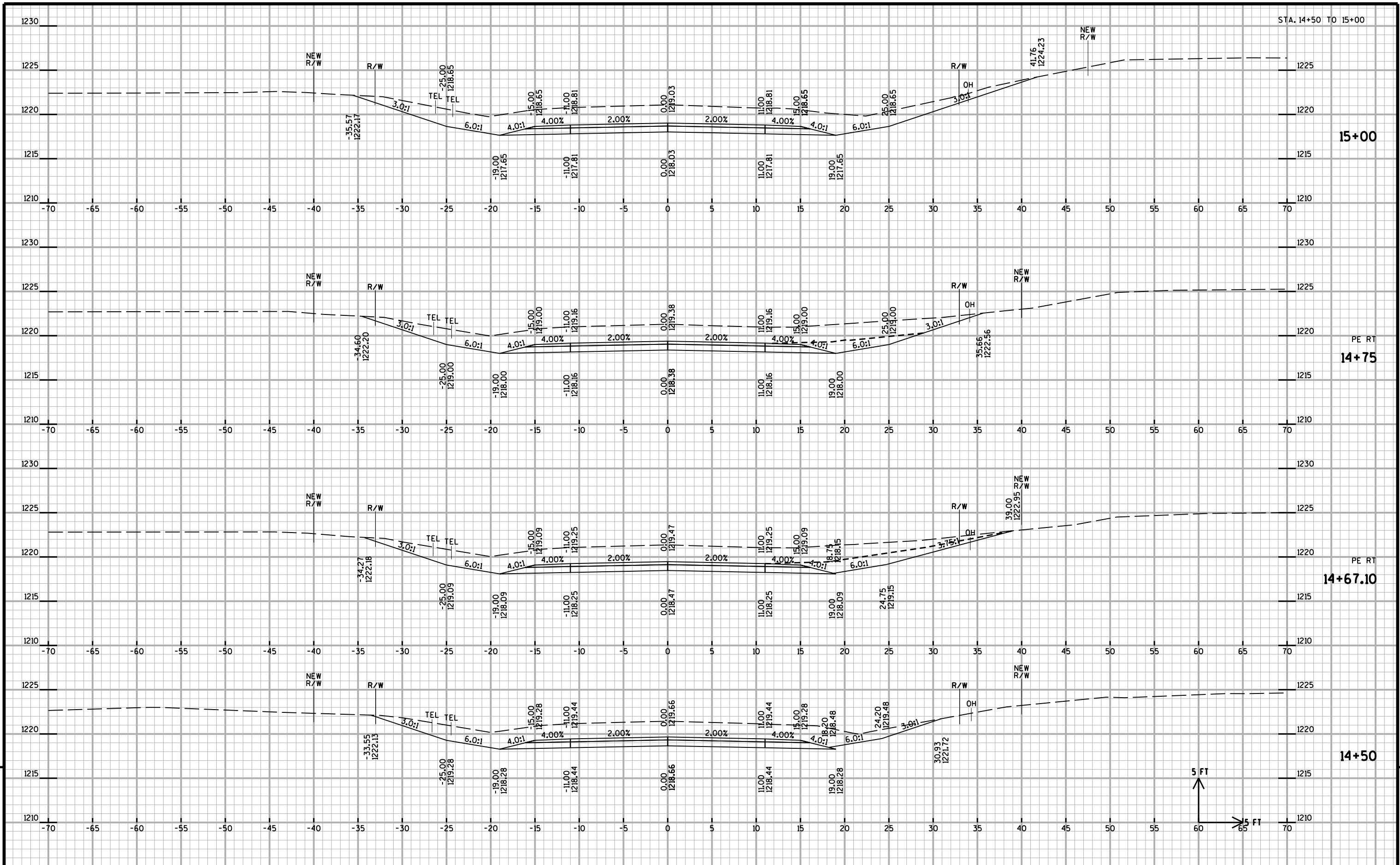


13+95.93

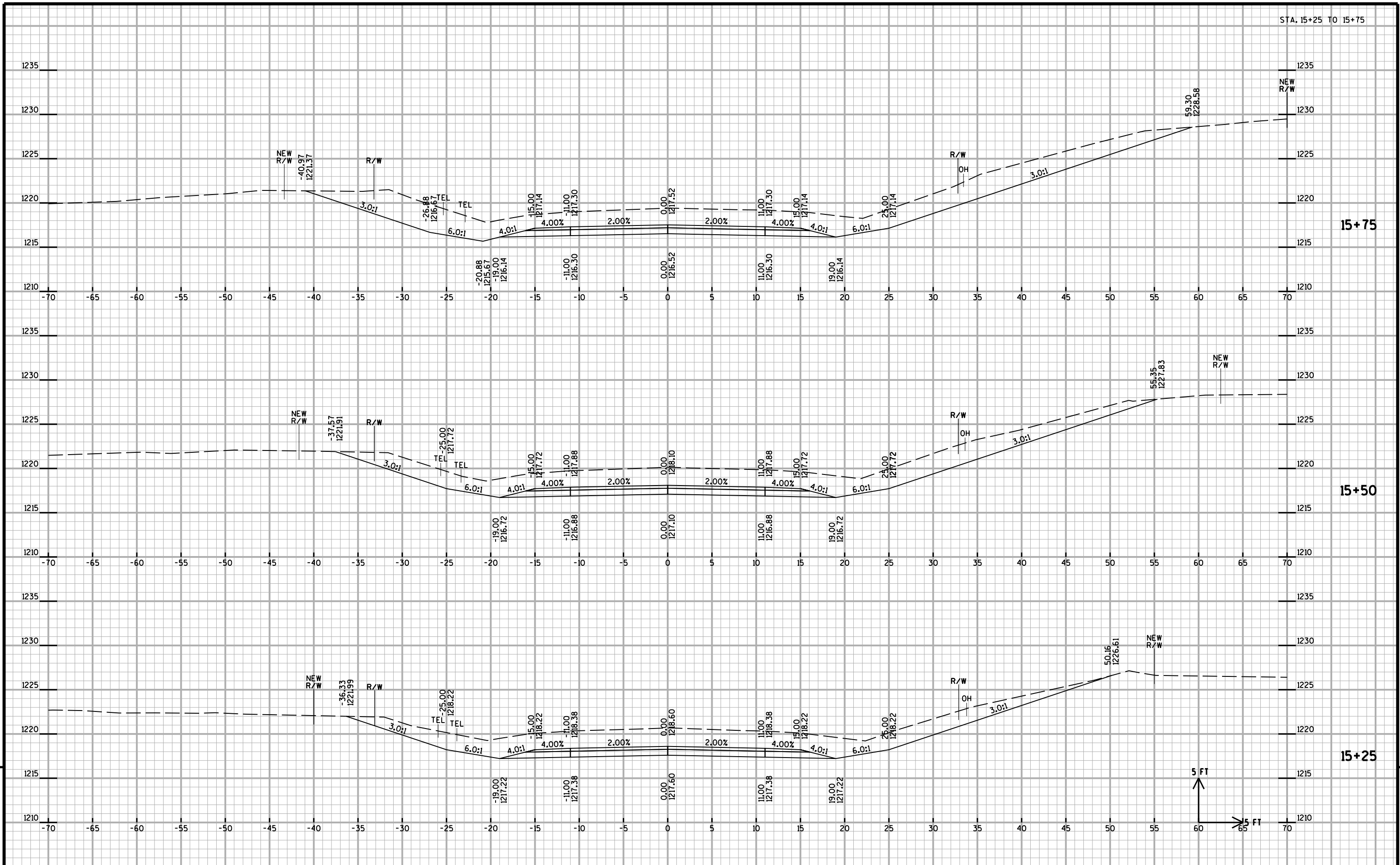


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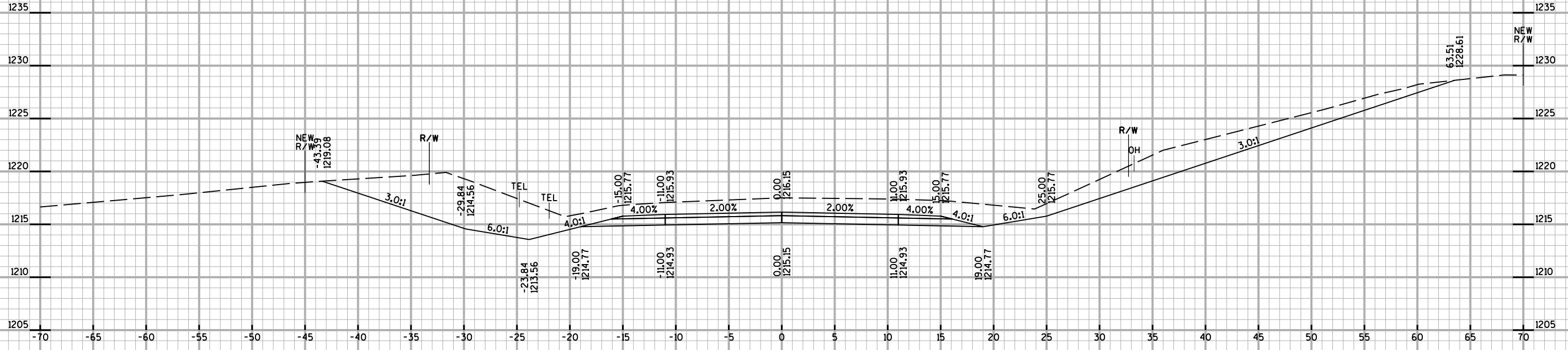
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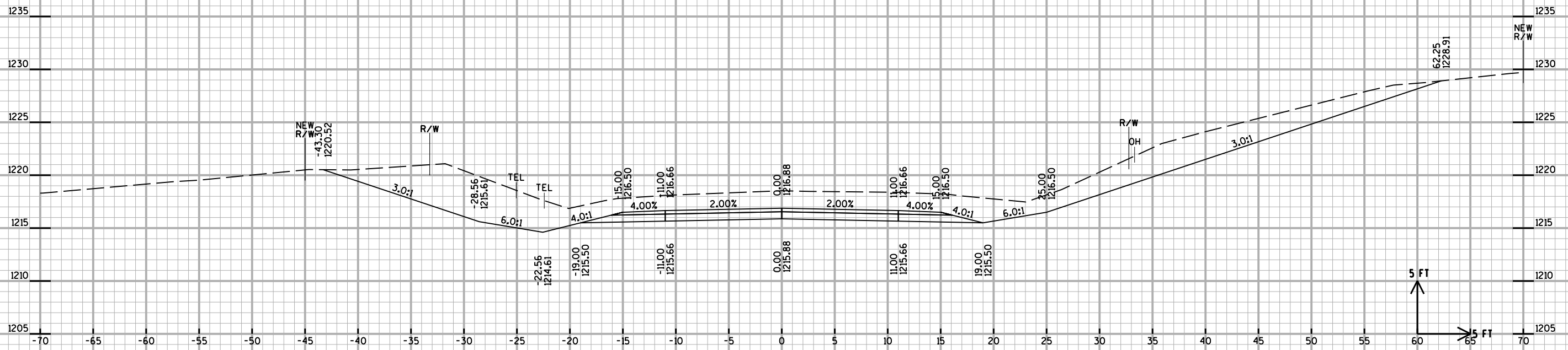
PROJECT NO: 8793-00-73 HWY: CTH B COUNTY: RUSK CROSS SECTIONS SHEET E



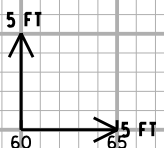
PROJECT NO: 8793-00-73 HWY: CTH B COUNTY: RUSK CROSS SECTIONS SHEET E



16+25

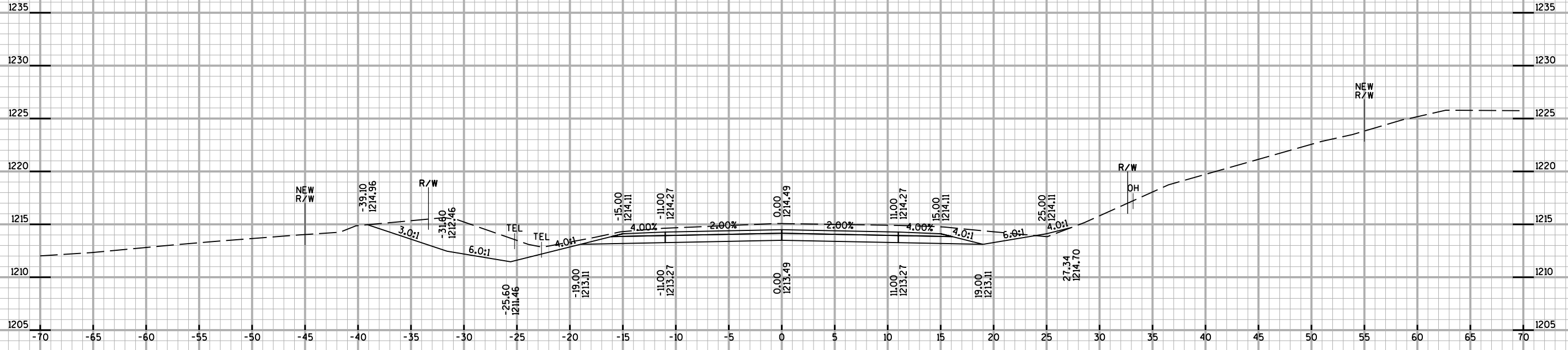


16+00

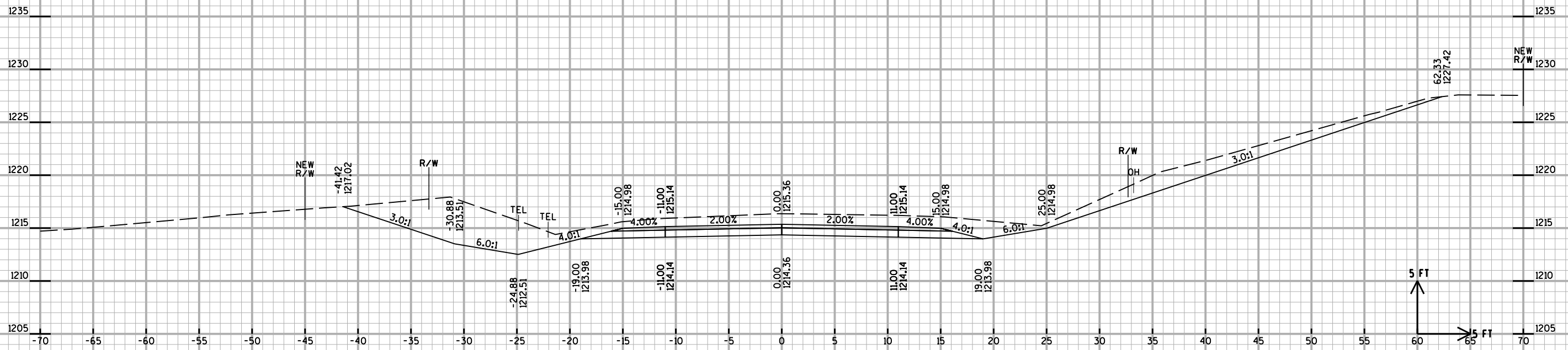


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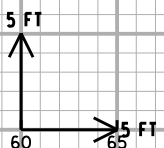
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16+75

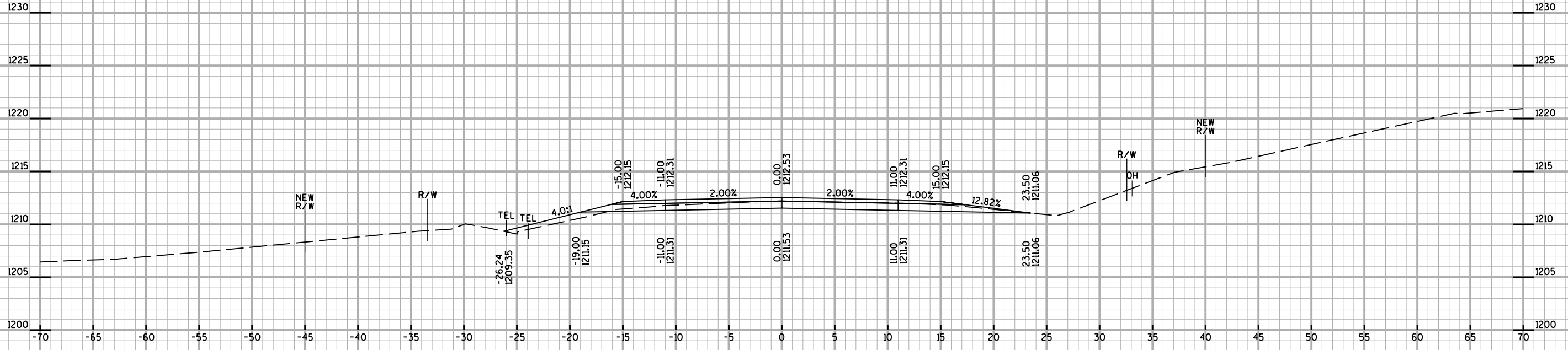


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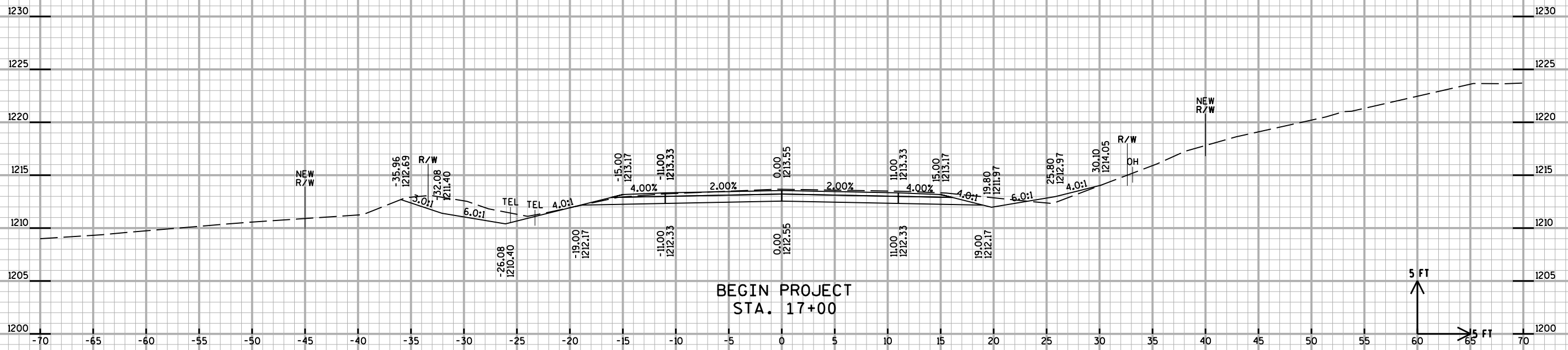


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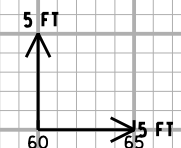


17+25



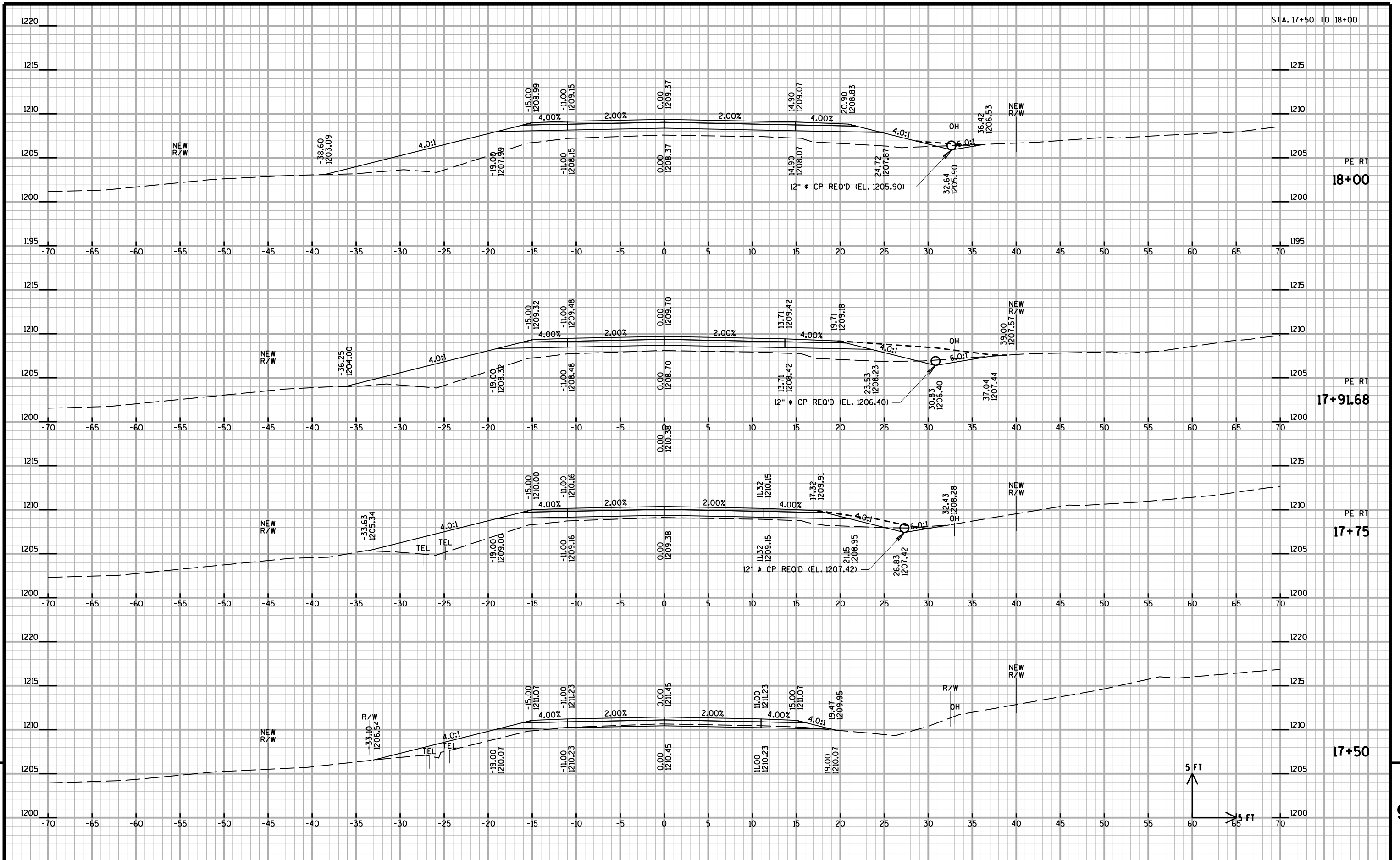
17+00

BEGIN PROJECT
STA. 17+00

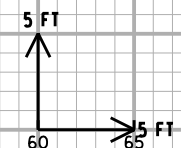
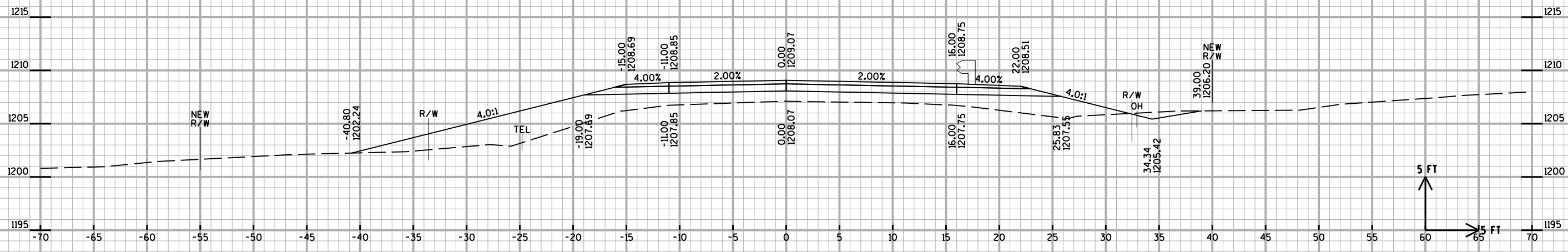
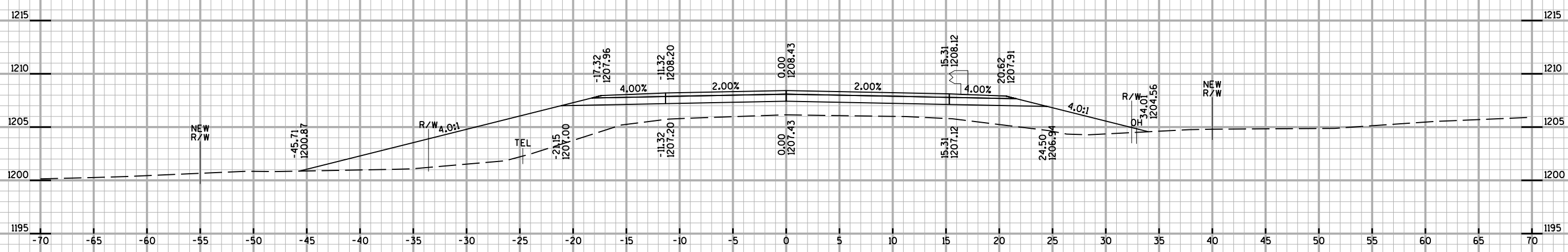
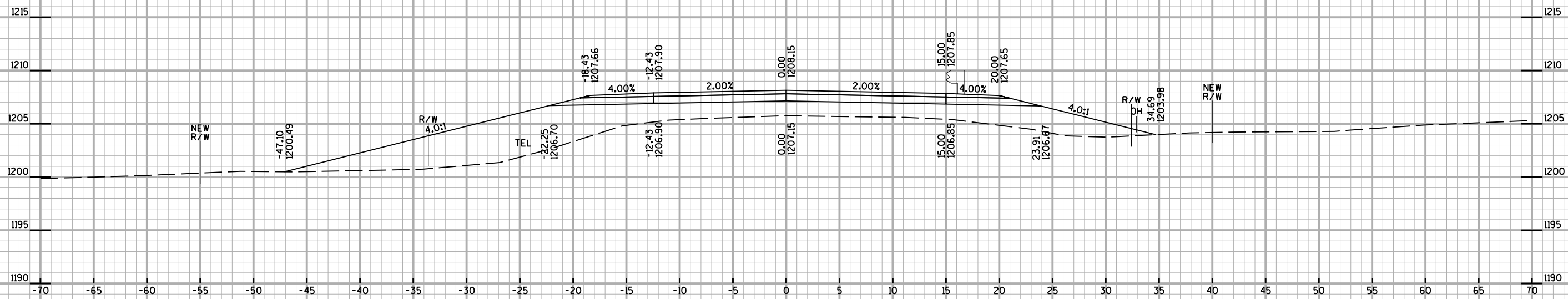


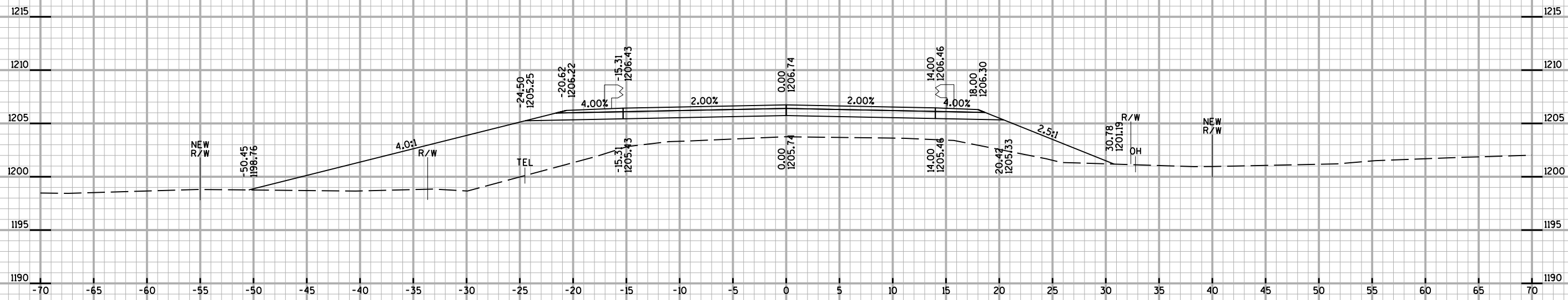
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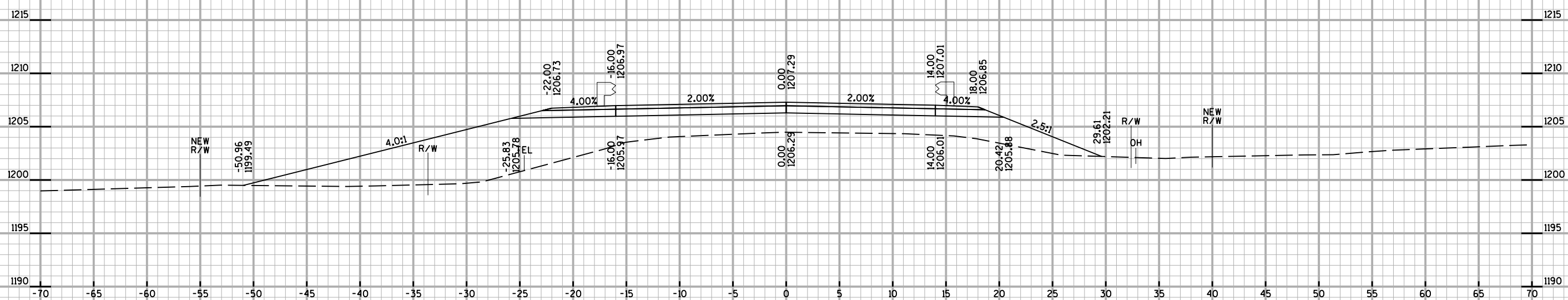


PROJECT NO: 8793-00-73 HWY: CTH B COUNTY: RUSK CROSS SECTIONS SHEET E

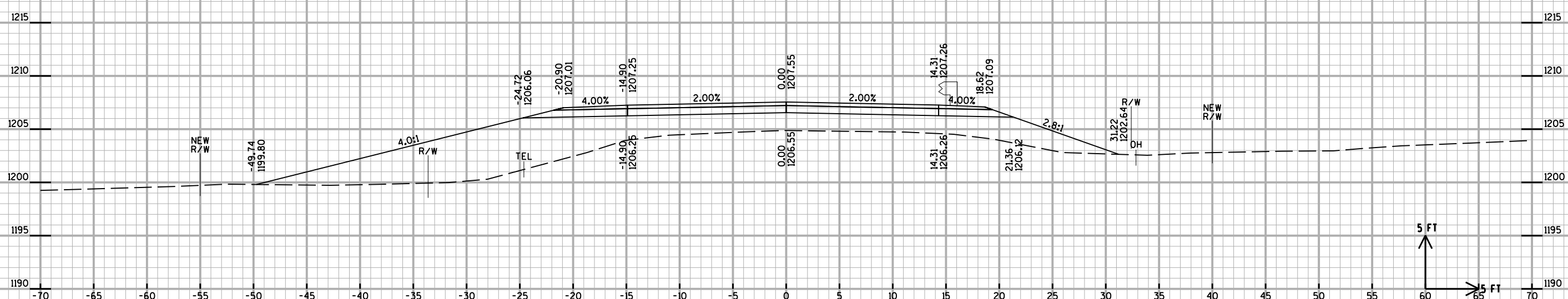




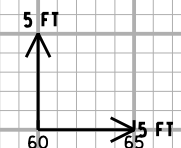
18+75



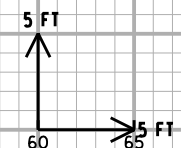
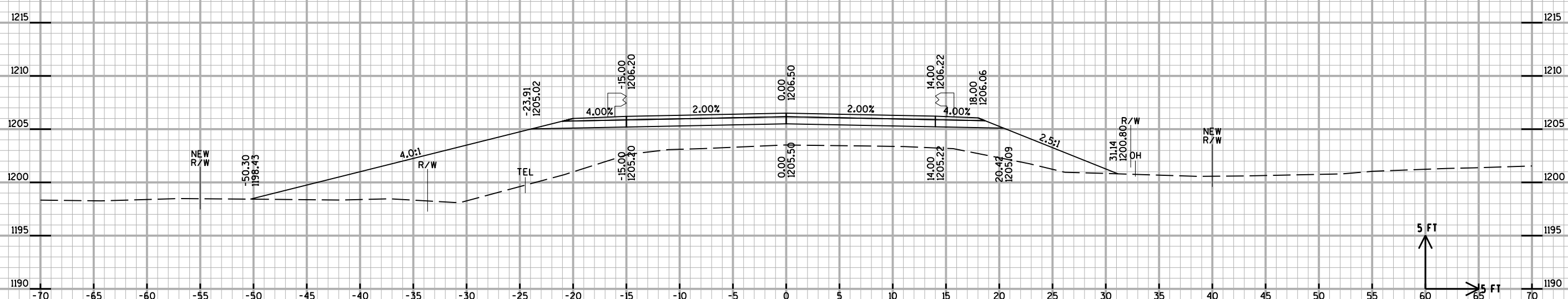
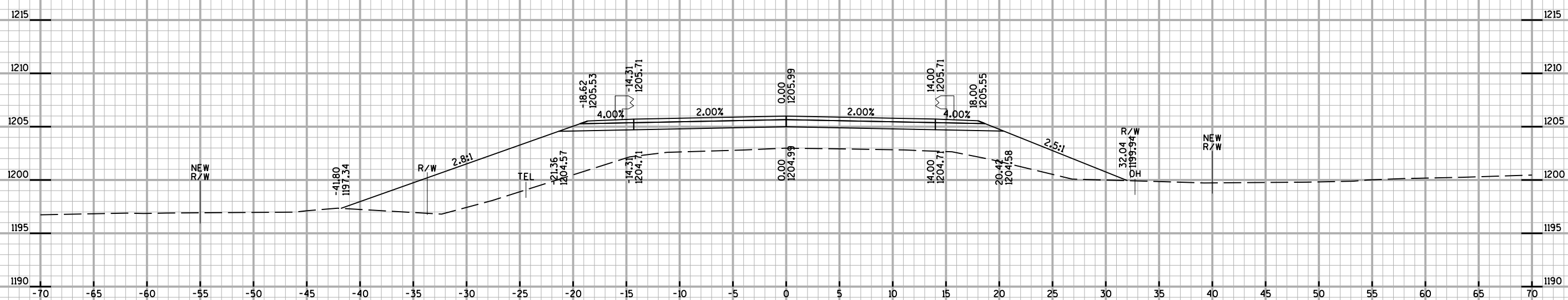
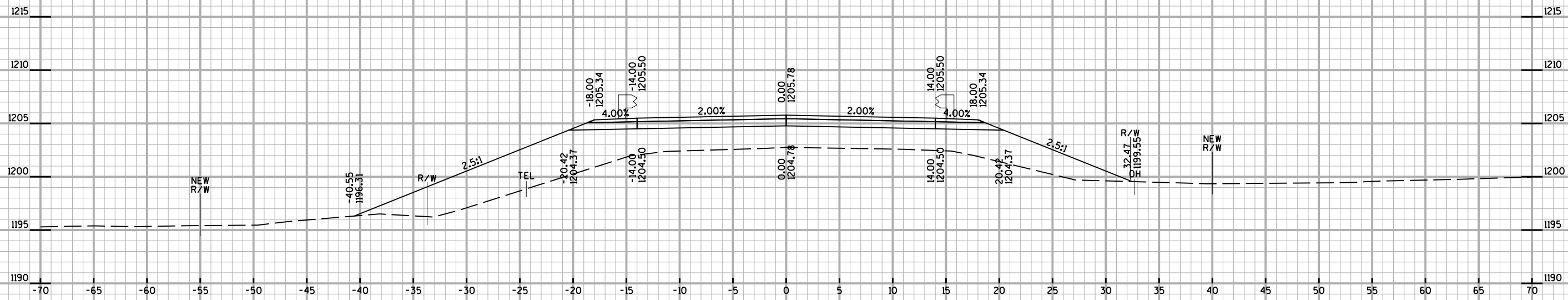
POST 1 LT
POST 9 RT
18+57.73



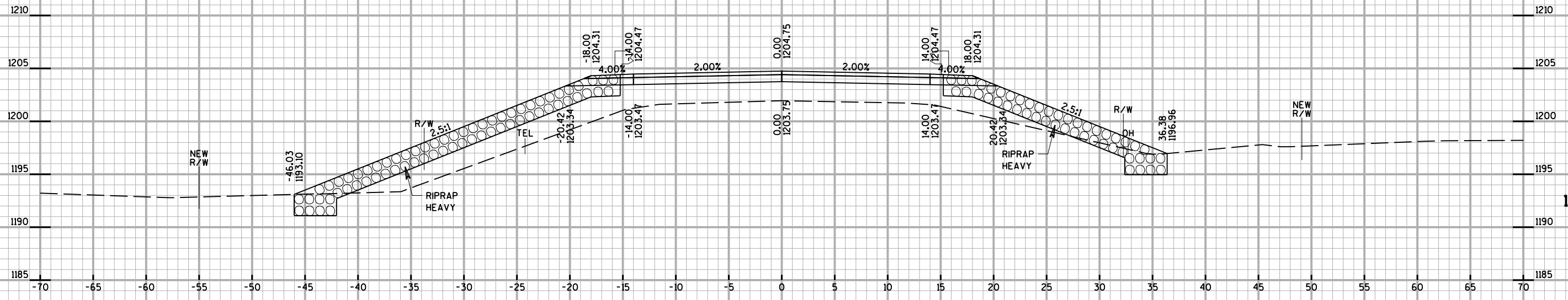
18+50



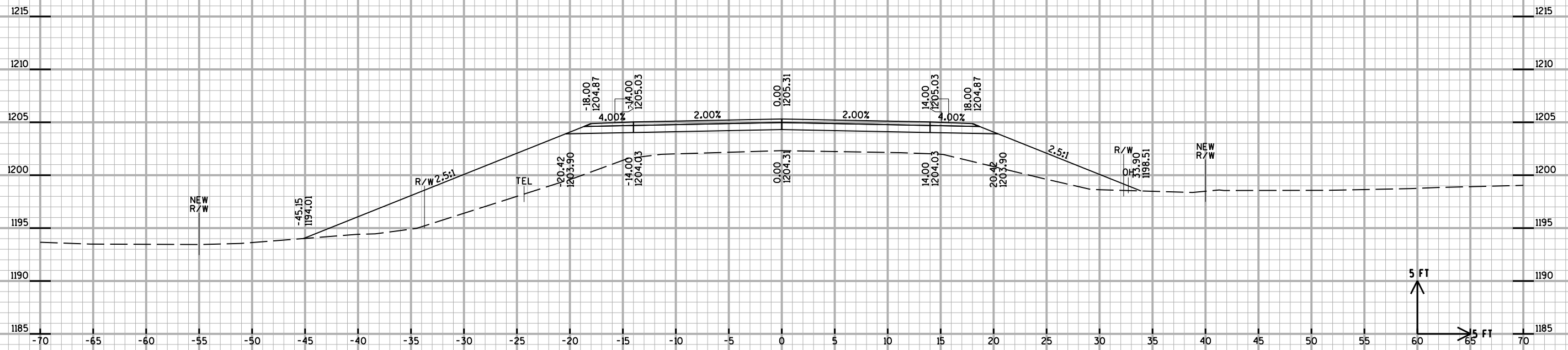
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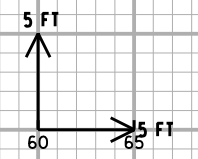
STRUCTURE B-54-0140



19+47.75

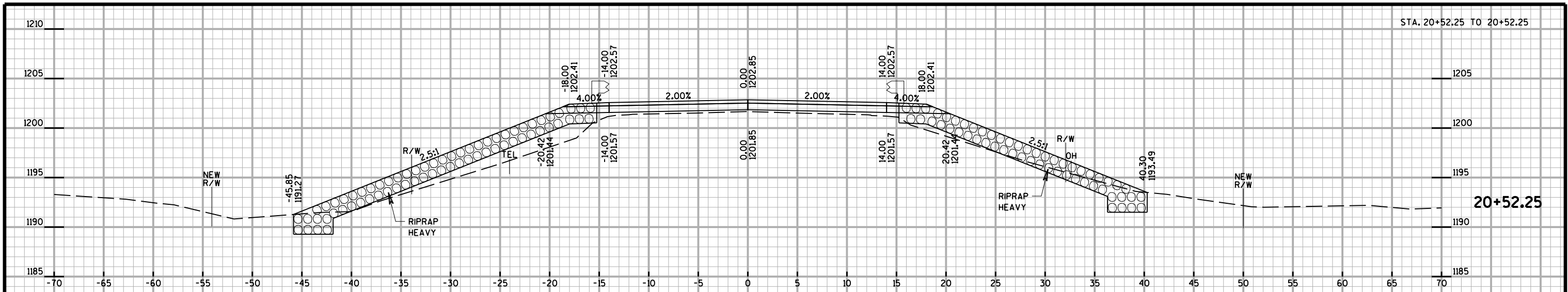


19+25

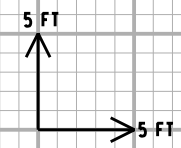


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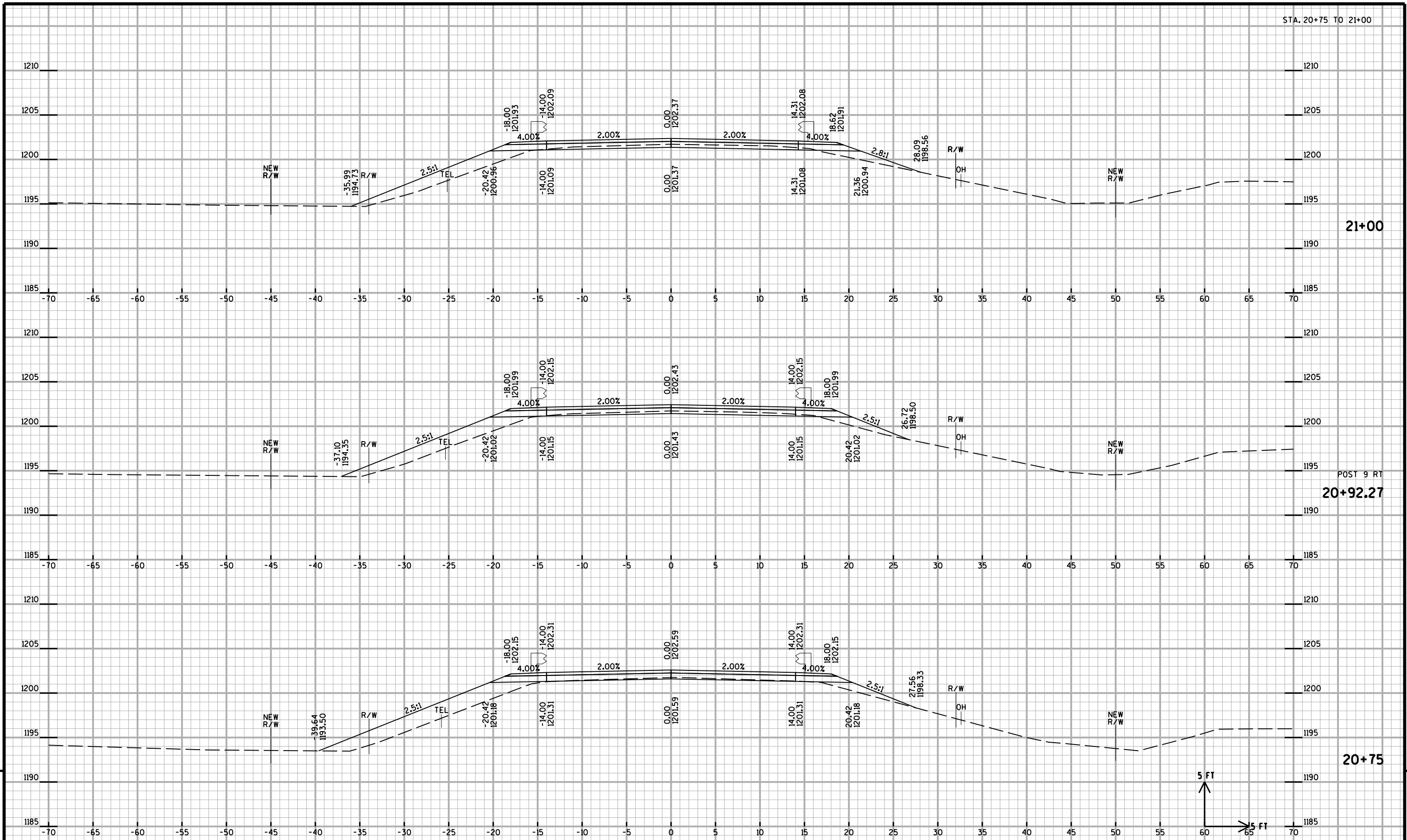
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STRUCTURE B-54-0140



9 9



STA. 20+75 TO 21+00

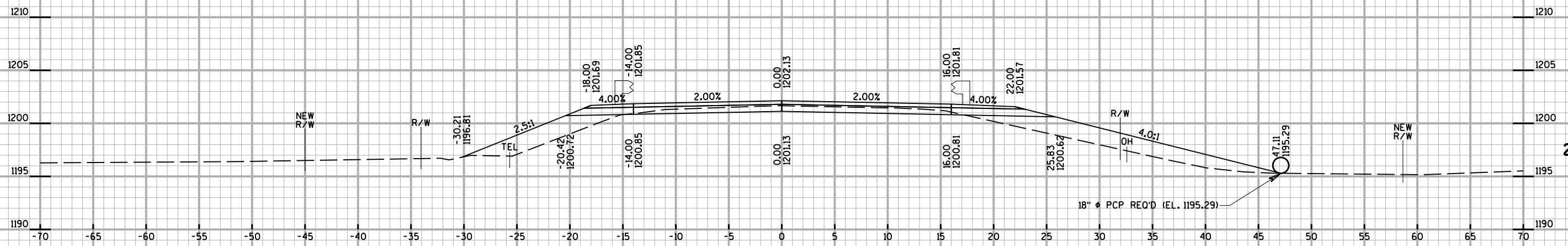
21+00

POST 9 RT
20+92.27

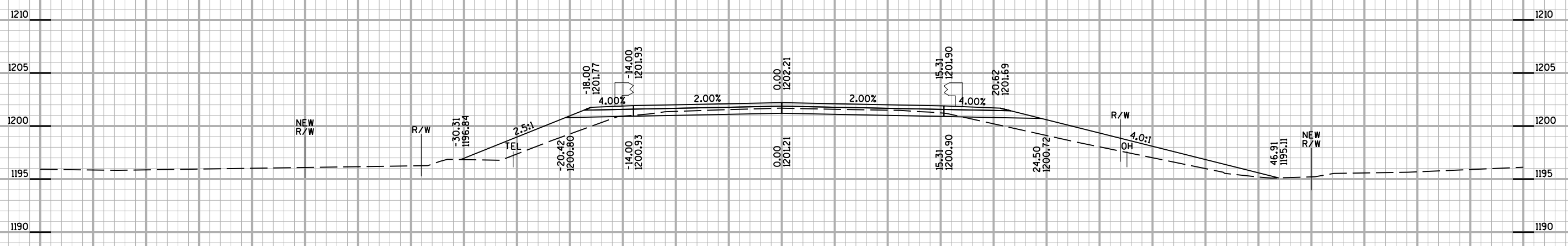
20+75

9

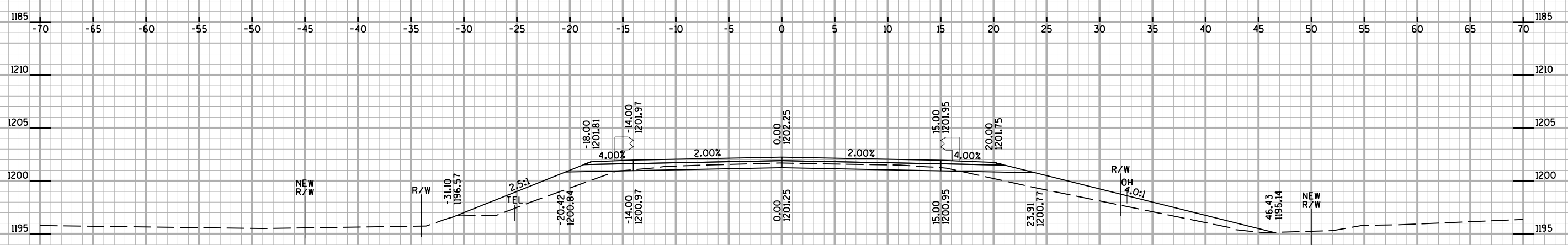
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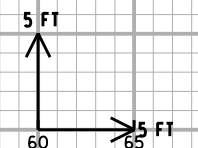
POST 1 RT
POST 9 LT
21+42.27



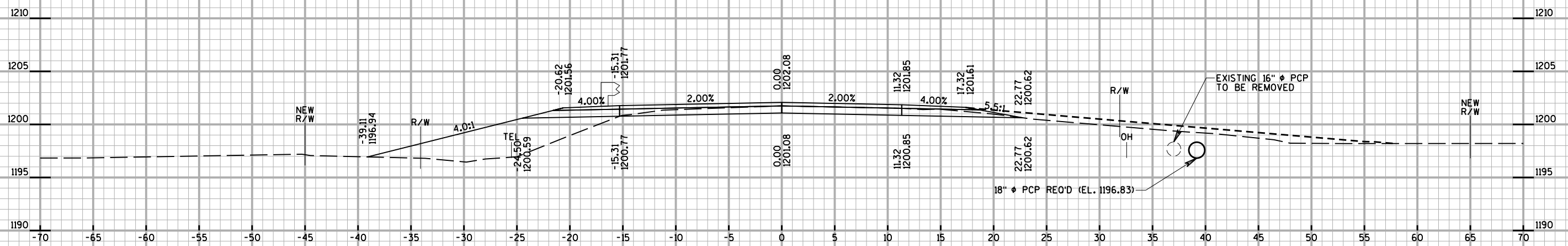
21+25



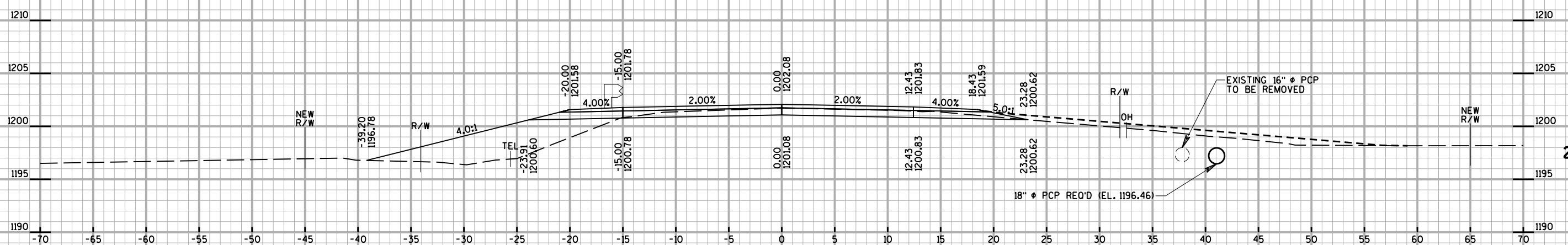
POST 5 RT
21+17.27



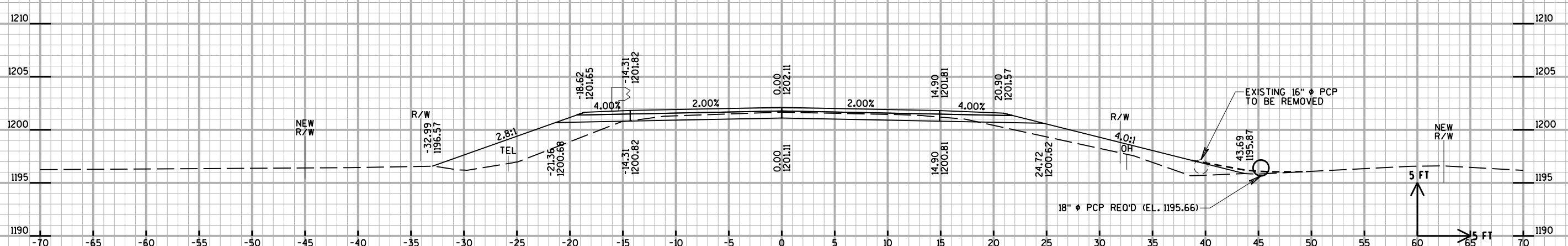
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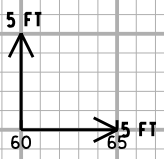
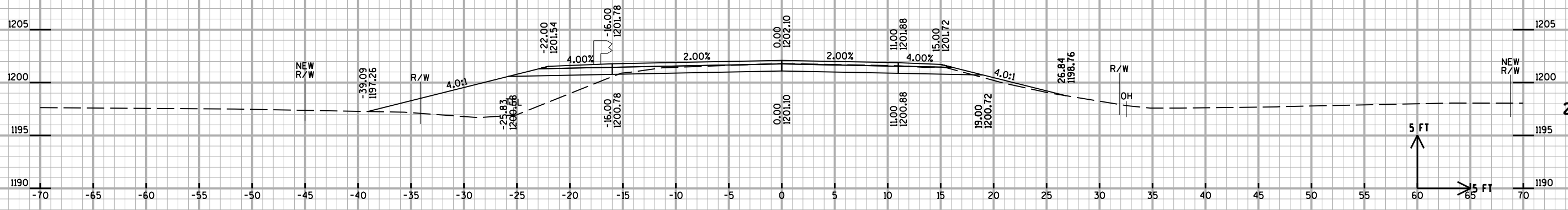
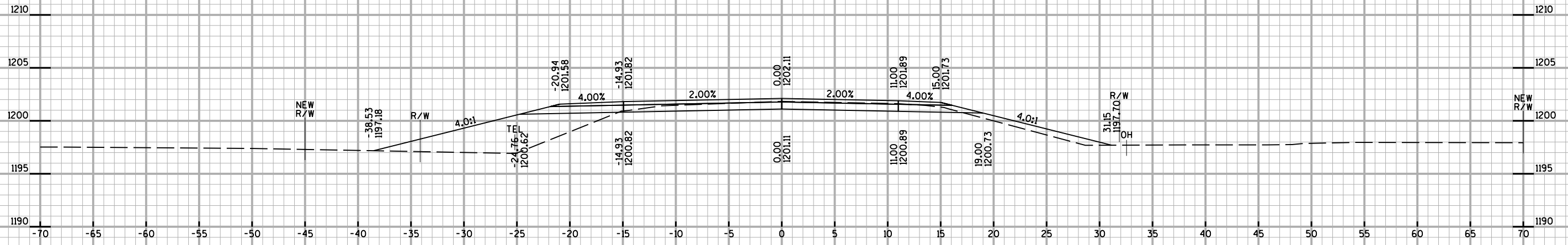
PE RT
21+75



PE RT
POST 5 LT
21+67.27



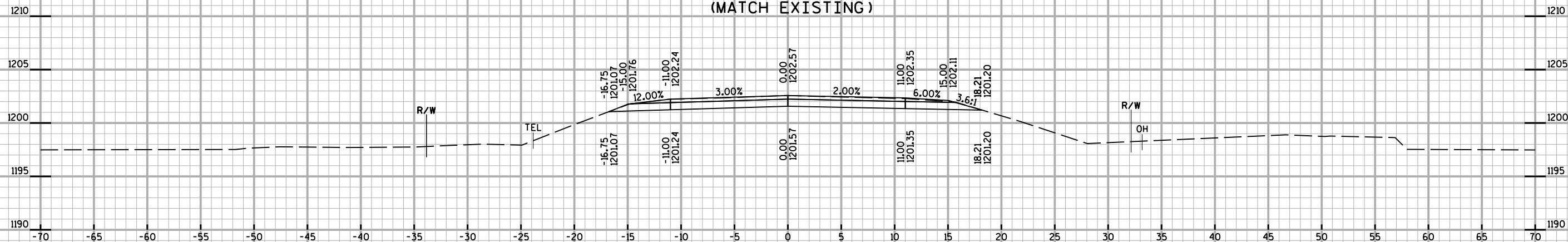
21+50



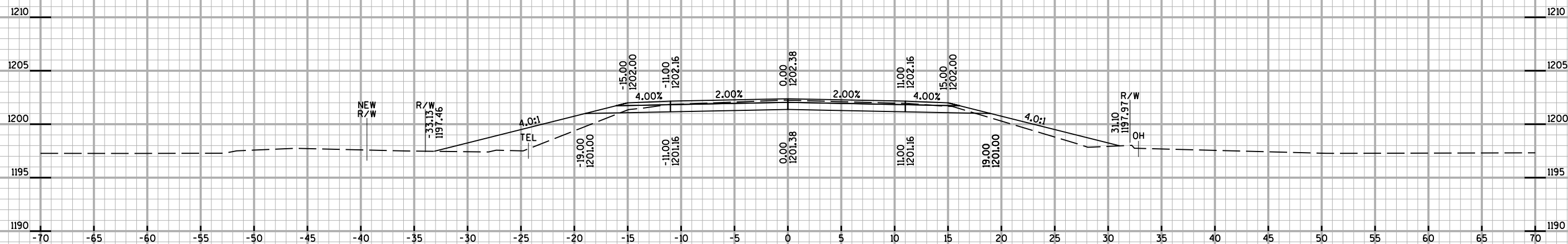
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9

END CONSTRUCTION/PROJECT
STA. 22+75
(MATCH EXISTING)



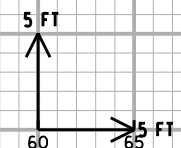
22+75



22+50



22+25



9

9



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