

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7520-00-08	WISC 2023171	1

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

BLAIR - MERRILLAN

HALLS CREEK BRIDGE B-27-0168

STH 95

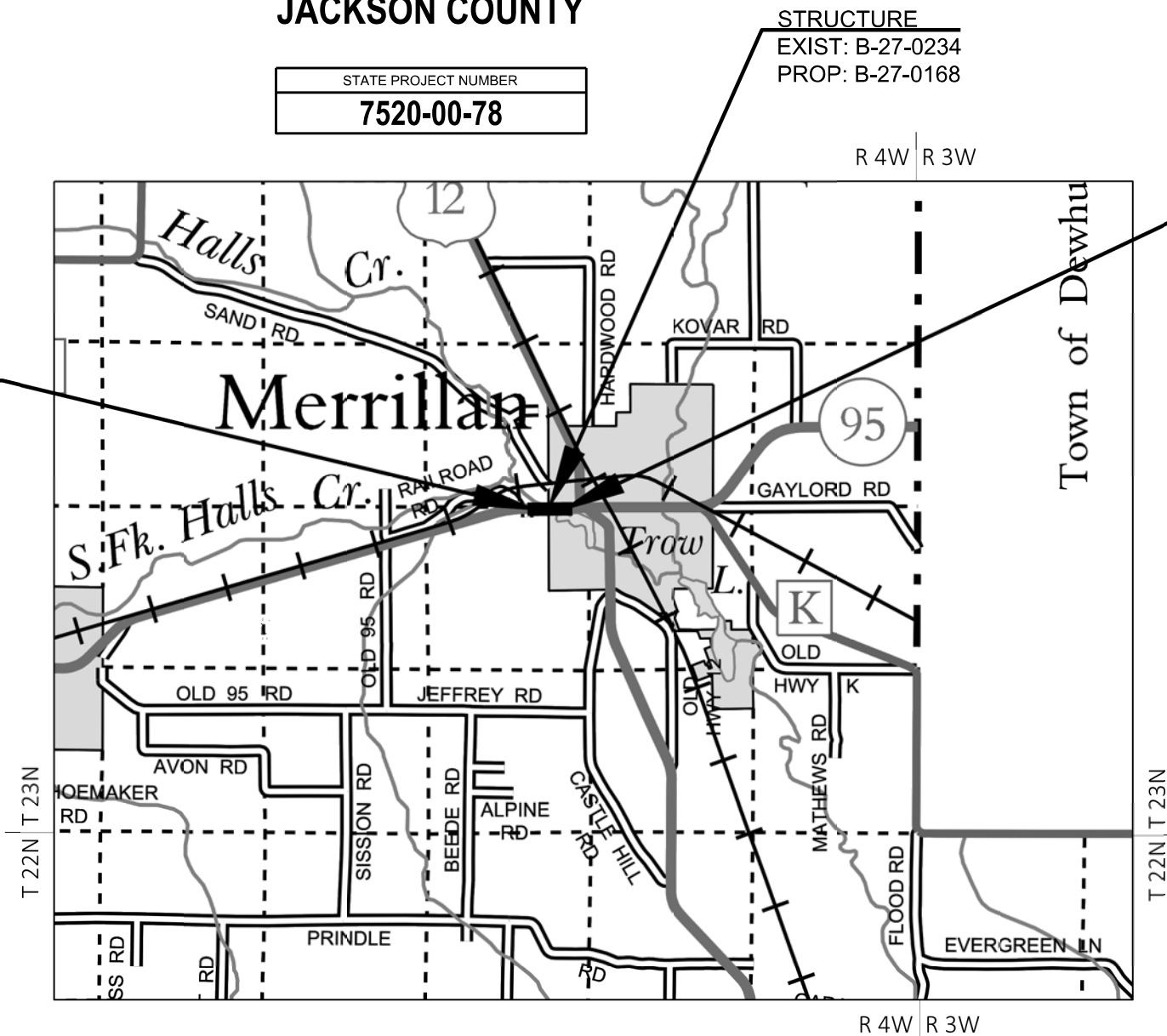
JACKSON COUNTY

STATE PROJECT NUMBER
7520-00-78

STRUCTURE
EXIST: B-27-0234
PROP: B-27-0168

END PROJECT
STA 545+36.75
N: 154187.9923
E: 88220.3142

BEGIN PROJECT
STA 534+75
N: 154163.9780
E: 87158.8398



TOTAL NET LENGTH OF CENTERLINE = 0.20 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), JACKSON COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (1988). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
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 = 92



36

DESIGN DESIGNATION 7520-00-08

A.A.D.T.	2022	=	1700
A.A.D.T.	2032	=	1900
D.H.V.		=	230
D.D.		=	60/40
T.		=	11%
DESIGN SPEED		=	60 MPH
ESALS		=	

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY: Surveyor _____ WISDOT
Designer: _____ ALLISSA MUNDEN
Project Manager: _____ JESSICA BOWKER
Regional Examiner: _____ TOU YANG
Regional Supervisor: _____ TYLER RONGSTAD

APPROVED FOR THE DEPARTMENT
DATE: 10/31/2022
Tyler Rongstad
(Signature)

PROJECT ID: 7520-00-78
WITH: 7520-00-79

COUNTY: JACKSON

E

LIST OF STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
AH	AHEAD
APPROX	APPROXIMATE
AEW	APRON ENDWALL
ASPH	ASPHALTIC
ADT	AVERAGE DAILY TRAFFIC
AVG	AVERAGE
AZ	AZIMUTH
BK	BACK
BEG	BEGIN
BM	BENCH MARK
CL	CENTER LINE
CONC	CONCRETE
CONST	CONSTRUCTION
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
X-SEC	CROSS SECTION
CR	CRUSHED
CFS	CUBIC FEET/SECOND
CY OR CU YD	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
DOT	DEPARTMENT OF TRANSPORTATION
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
DISCH OR DIS	DISCHARGE
EA	EACH
ELECT	ELECTRIC
EL OR ELEV	ELEVATION
EMB	EMBANKMENT
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FERT	FERTILIZE
FE	FIELD ENTRANCE
FIN	FINISHED
FT	FOOT
FL	FLOW LINE
GA	GAUGE
HORIZ	HORIZONTAL
CWT	HUNDREDWEIGHT
INL	INLET
LT	LEFT
LHF	LEFT-HAND FORWARD
LIN	LINEAR
LIN FT	LINEAR FOOT
LS	LUMP SUM
MAX	MAXIMUM
MI	MILE
MISC	MISCELLANEOUS
NE	NORTH EAST
NW	NORTH WEST
PAV'T	PAVEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
POT	POINT ON TANGENT
LB	POUND
PE	PRIVATE ENTRANCE
PROJ	PROJECT
R	RANGE
REQ'D	REQUIRED
RT	RIGHT
RHF	RIGHT-HAND FORWARD
RW	RIGHT OF WAY
RD	ROAD
SHR	SHRINKAGE
SL	SLOPE
SE	SOUTH EAST
SW	SOUTH WEST
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAY
STA	STATION
SPPA	STRUCTURAL PLATE PIPE ARCH
STRUCT	STRUCTURE
SURF	SURFACE
TEL	TELEPHONE
TN	TOWN
T	TRUCKS (PERCENT OF)
UNCL	UNCLASSIFIED
UG	UNDERGROUND
V	VELOCITY OR DESIGN SPEED
VC	VERTICAL CURVE

UTILITIES

COMMUNICATION

CENTURYLINK
TOM MURRAY
333 N FRONT STREET
P.O. BOX 4800
LA CROSSE, WI 54602
PH: 608-615-4169
EMAIL: tom.l.murray@lumen.com

TRI-COUNTY COMMUNICATIONS
BUCK WEBB
417 5TH AVENUE N
P.O. BOX 578
STRUM, WI 54770
PH: 715-695-2691
EMAIL: bwebb@tccpro.net

ELECTRICITY

JACKSON ELECTRIC COOPERATIVE
ERIC STEIEN
N6868 CO HWY F
PO BOX 546
BLACK RIVER FALLS, WI 54615
PH: 715-284-5385
EMAIL: esteien@jackelec.com

GAS/PETROLEUM

WE ENERGIES
LATROY BRUMFIELD
333 WEST EVERETT STREET
ROOM A299
MILWAUKEE, WI 53203
PH: 414-221-5617
EMAIL: LaTroy.Brumfield@we-energies.com
24-HOUR EMERGENCY 800-261-5325

WISCONSIN DOT

DEPARTMENT OF TRANSPORTATION
NORTHWEST REGION
718 WEST CLAIREMONT AVE
EAU CLAIRE, WI 54701
ATTN: JESSICA BOWKER
EMAIL: Jessica.Bowker@dot.wi.gov
PH: 715-577-2963

WISCONSIN DNR - LIASON

DEPARTMENT OF NATURAL RESOURCES
WEST CENTRAL REGION
1300 W. CLAIREMONT AVE
EAU CLAIRE, WI 54701
ATTN: BRAD BETTHAUSER
EMAIL: Bradley.Bethhauser@Wisconsin.gov
PH: 715-213-9064

JACKSON COUNTY HIGHWAY DEPT.

119 HARRISON STREET
BLACK RIVER FALLS, WI 54615
ATTN: JAY BOREK, HIGHWAY COMMISSIONER
EMAIL: jay.borek@co.jackson.wi.us

GENERAL NOTES

EXISTING ELEVATIONS SHALL BE VERIFIED IN THE FIELD.

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

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN AND PROVIDE DOCUMENTATION TO THE ENGINEER.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE EARTHWORK. EBS IS MEASURED AND PAID FOR AS EXCAVATION COMMON, EXACT LOCATION OF EBS WILL BE DETERMINED BY THE ENGINEER.

SHRINKAGE OF EARTHWORK IS VARIABLE. AN AVERAGE FACTOR FOR EXCAVATION COMMON IS 25%.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN IN THE PLANS IS APPROXIMATE, THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

SEED, FERTILIZE, AND INSTALL EROSION MAT TO ALL TOPSOIL AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

SEED MIXTURE NO. 20 SHALL BE USED THROUGHOUT THE PROJECT, EXCEPT LAWN AREAS WHERE NO. 40 SHALL BE USED.

DO NOT APPLY FERTILIZER WITHIN 20 FEET OF BODY OF WATER OR WETLAND.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY, OR THE FLOODPLAIN OF ANY WETLANDS.

TRAFFIC CONTROL DEVICE NUMBER, LOCATION, AND SPACING SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

SIGN PLATE DETAILS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" UNLESS OTHERWISE APPROVED FOR IN THE PLAN.

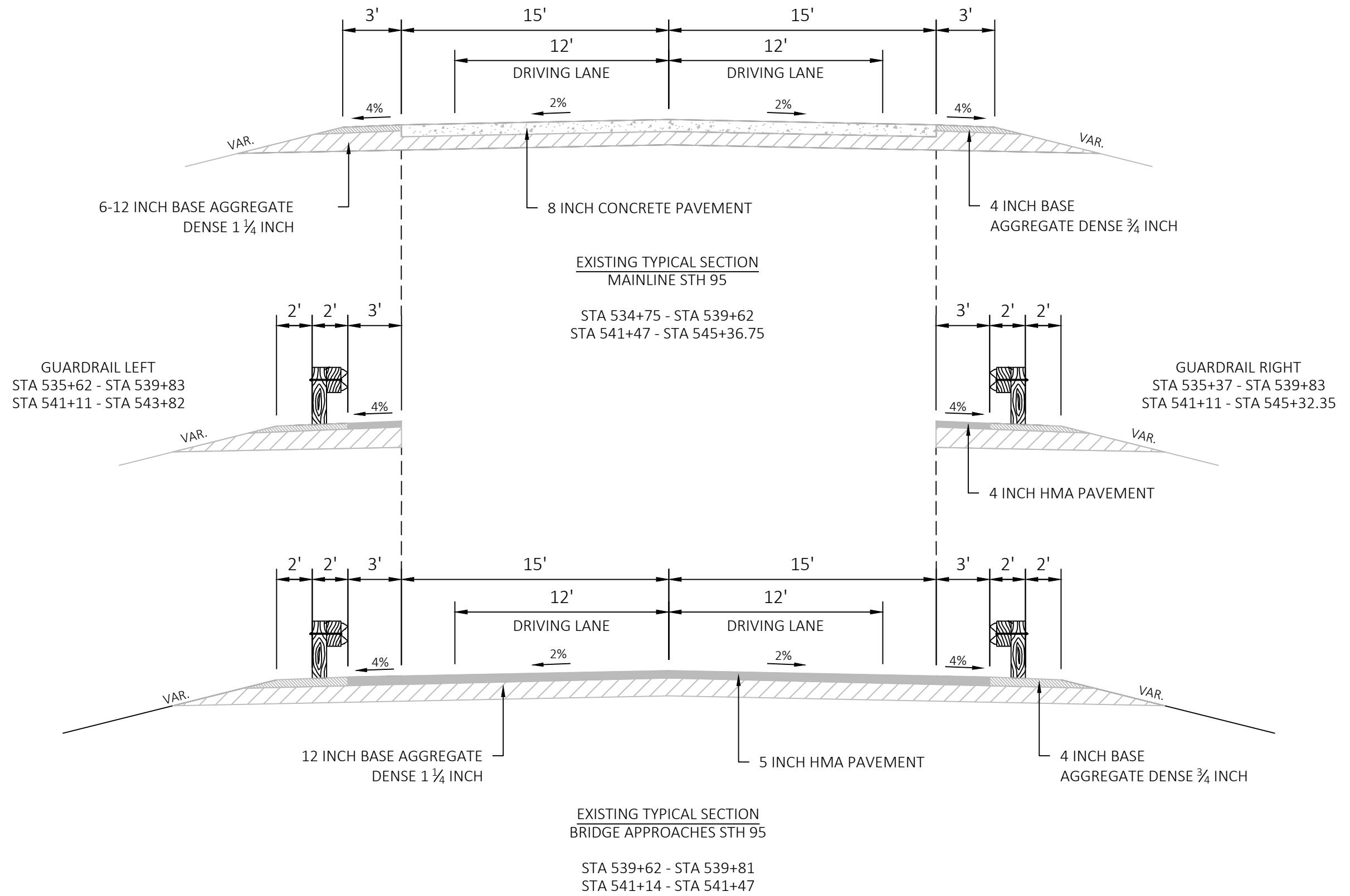
THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

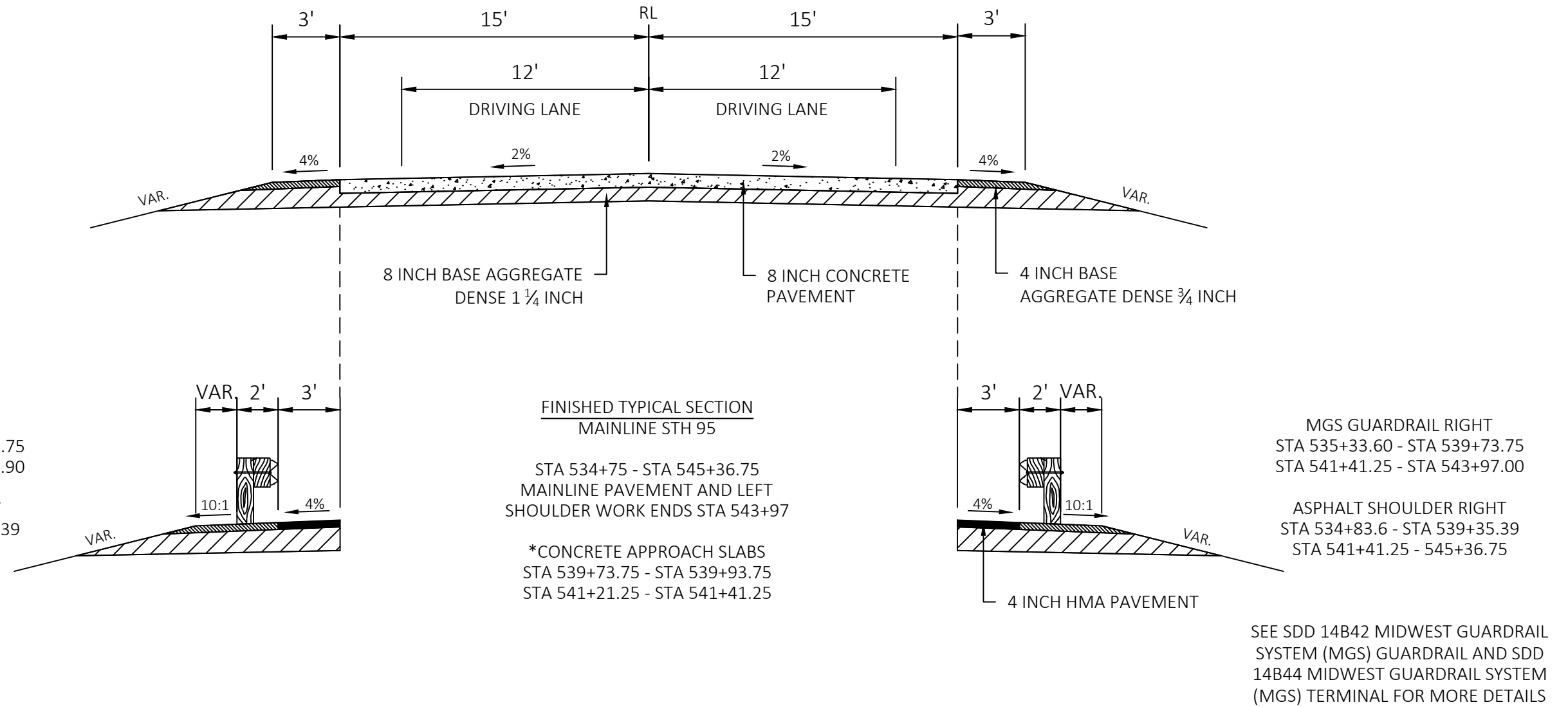
THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

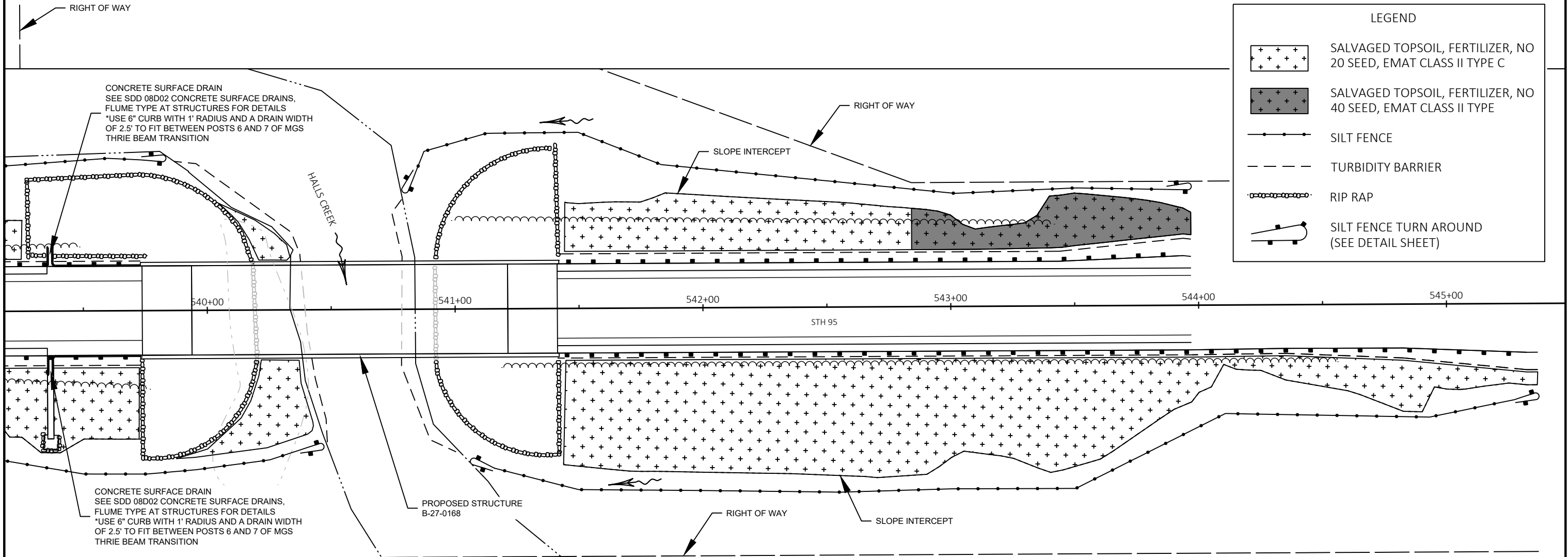
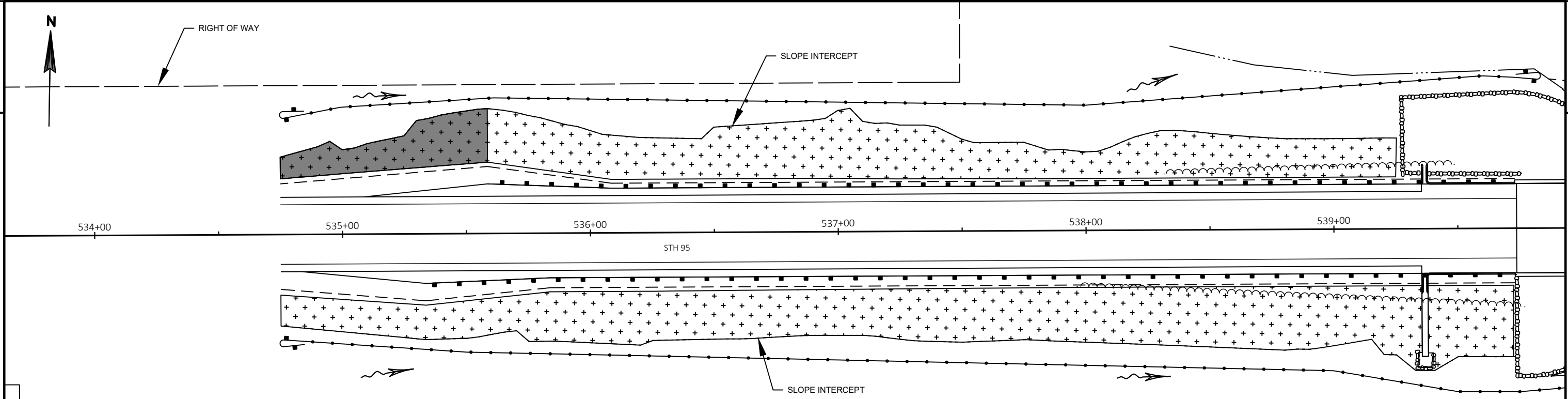
A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.

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



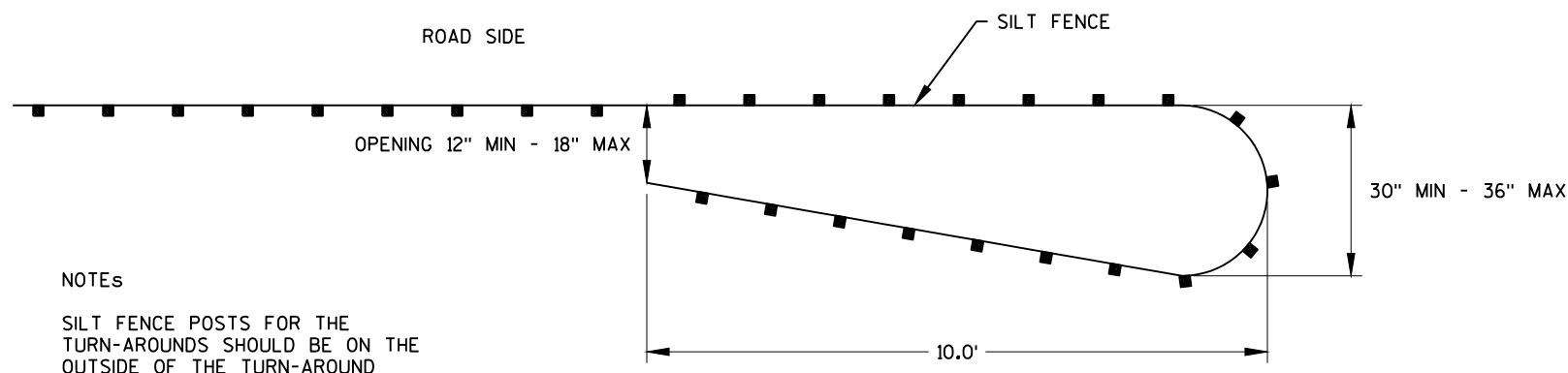




LEGEND

- SALVAGED TOPSOIL, FERTILIZER, NO 20 SEED, EMAT CLASS II TYPE C
- SALVAGED TOPSOIL, FERTILIZER, NO 40 SEED, EMAT CLASS II TYPE
- SILT FENCE
- TURBIDITY BARRIER
- RIP RAP
- SILT FENCE TURN AROUND (SEE DETAIL SHEET)

PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON EROSION CONTROL PLAN SHEET **E**

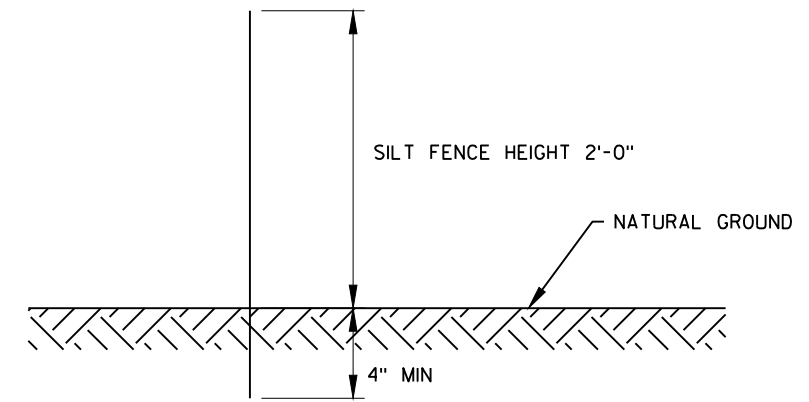


NOTES

SILT FENCE POSTS FOR THE TURN-AROUNDS SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND

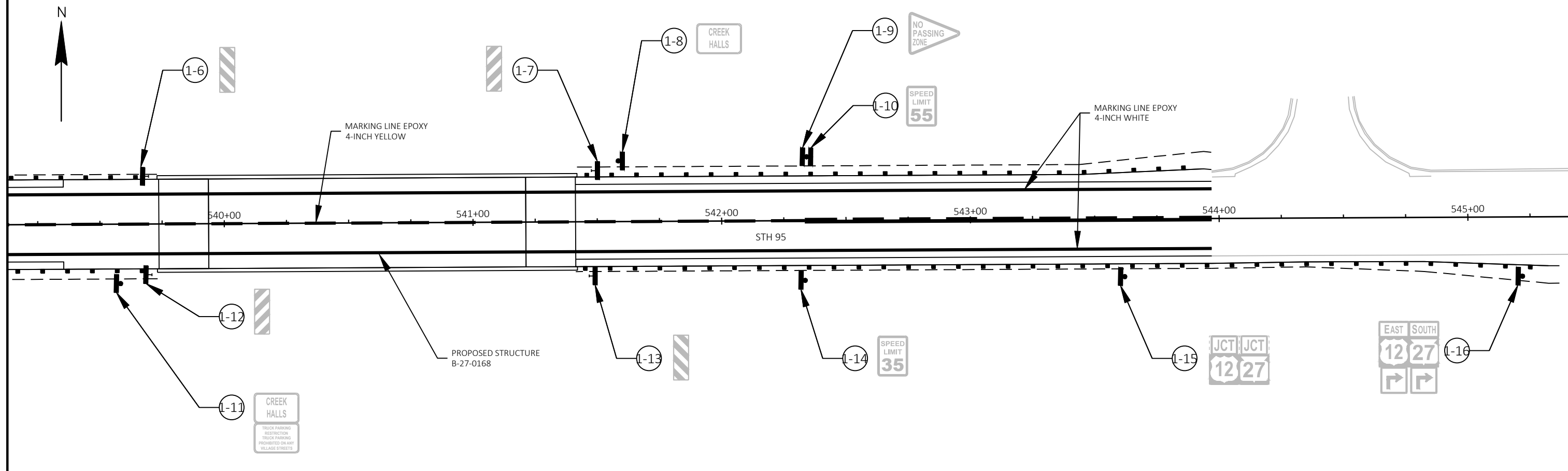
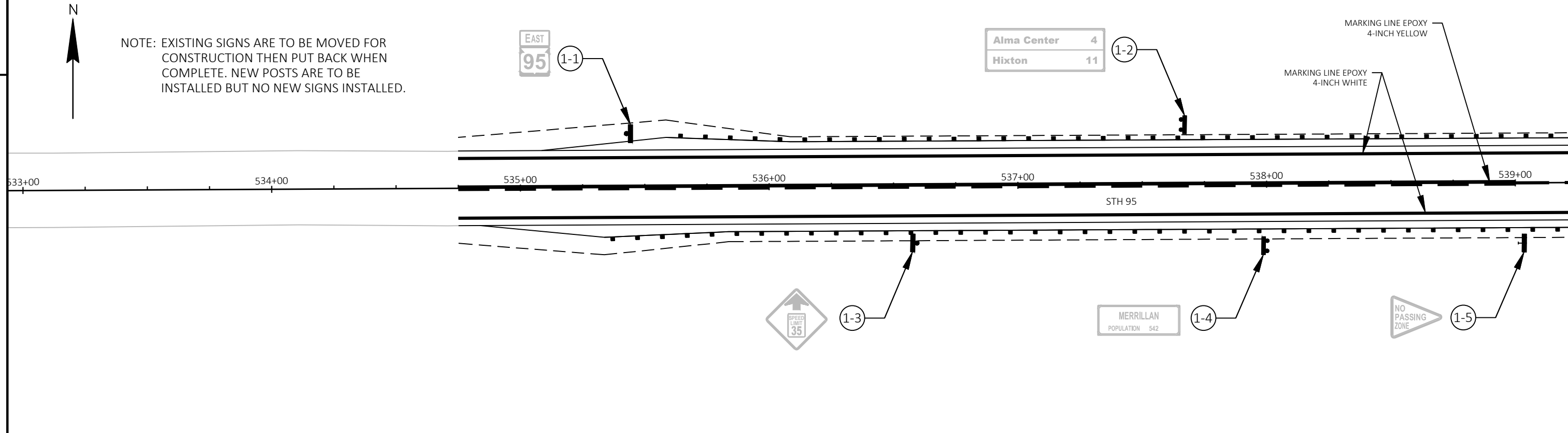
TURN AROUND DETAILS ARE PAID UNDER "SILT FENCE" ITEM

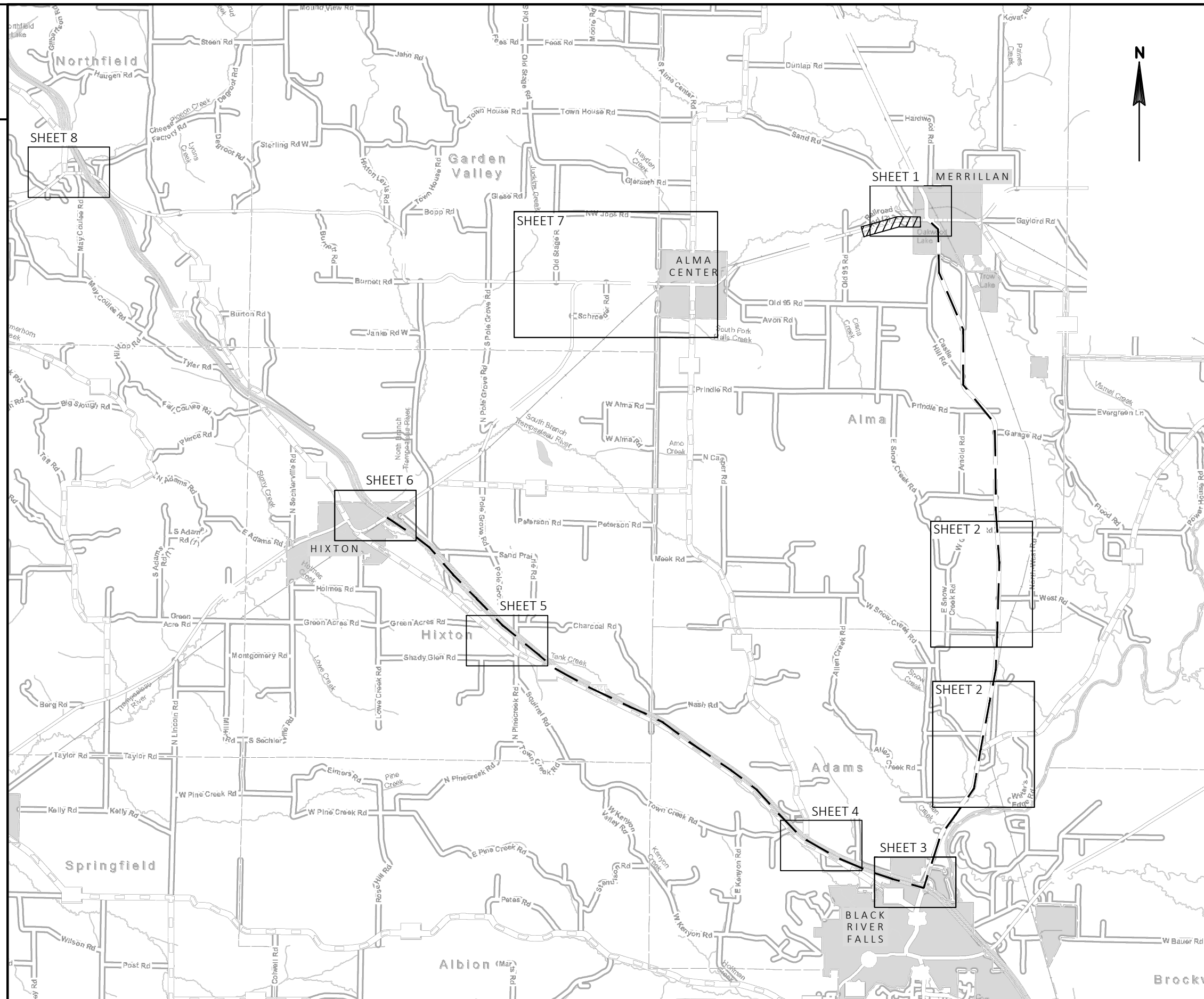
PLAN VIEW



SIDE VIEW

NOTE: EXISTING SIGNS ARE TO BE MOVED FOR CONSTRUCTION THEN PUT BACK WHEN COMPLETE. NEW POSTS ARE TO BE INSTALLED BUT NO NEW SIGNS INSTALLED.





LEGEND

- DETOUR ROUTE (STH 95)
- SIGNS COVERED
- EXISTING SIGN
- POST MOUNTED SIGN
- TYPE III BARRICADE W/ SIGN

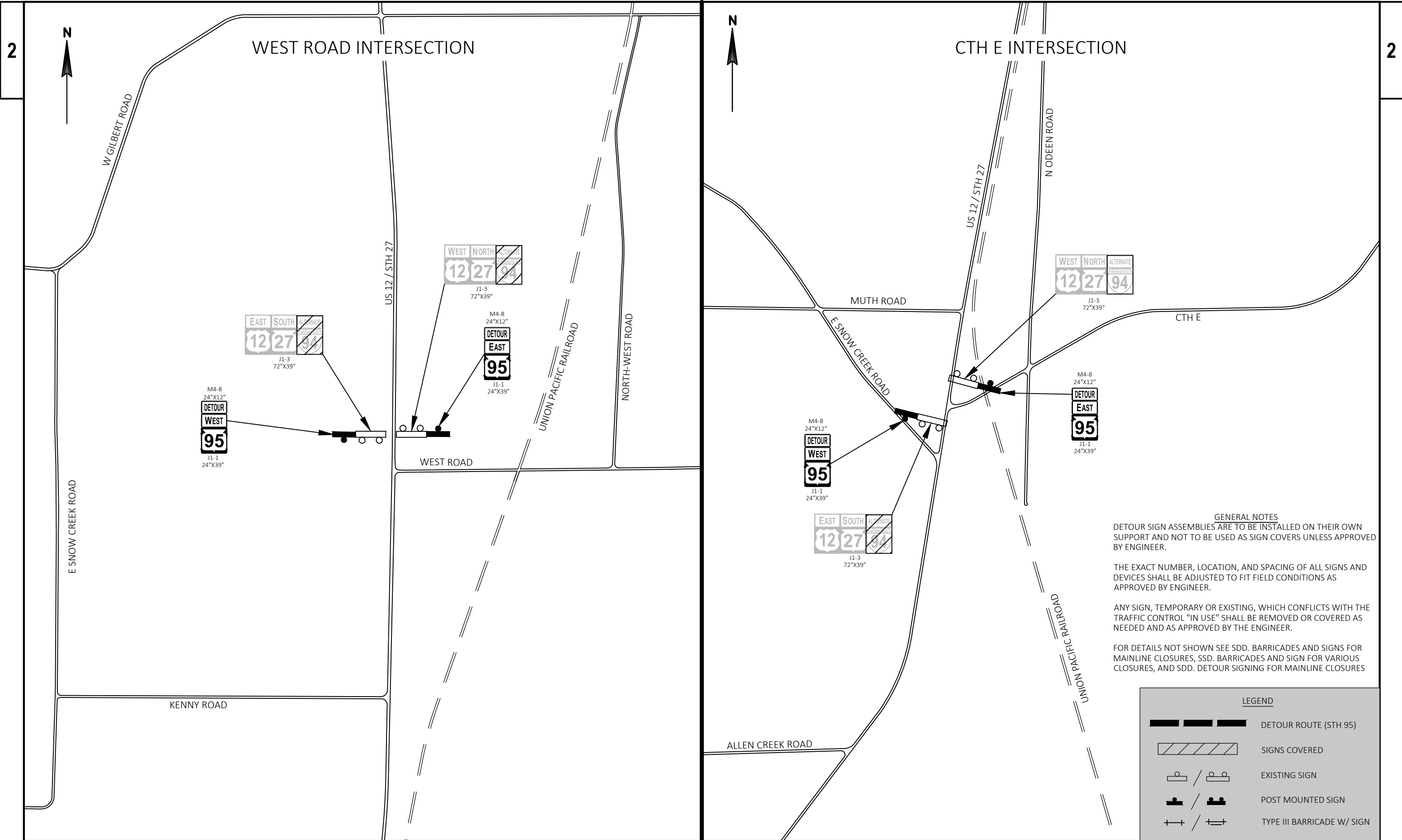
GENERAL NOTES

DETOUR SIGN ASSEMBLIES ARE TO BE INSTALLED ON THEIR OWN SUPPORT AND NOT TO BE USED AS SIGN COVERS UNLESS APPROVED BY ENGINEER.

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

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

FOR DETAILS NOT SHOWN SEE SDD. BARRICADES AND SIGNS FOR MAINLINE CLOSURES, SSD. BARRICADES AND SIGN FOR VARIOUS CLOSURES, AND SDD. DETOUR SIGNING FOR MAINLINE CLOSURES



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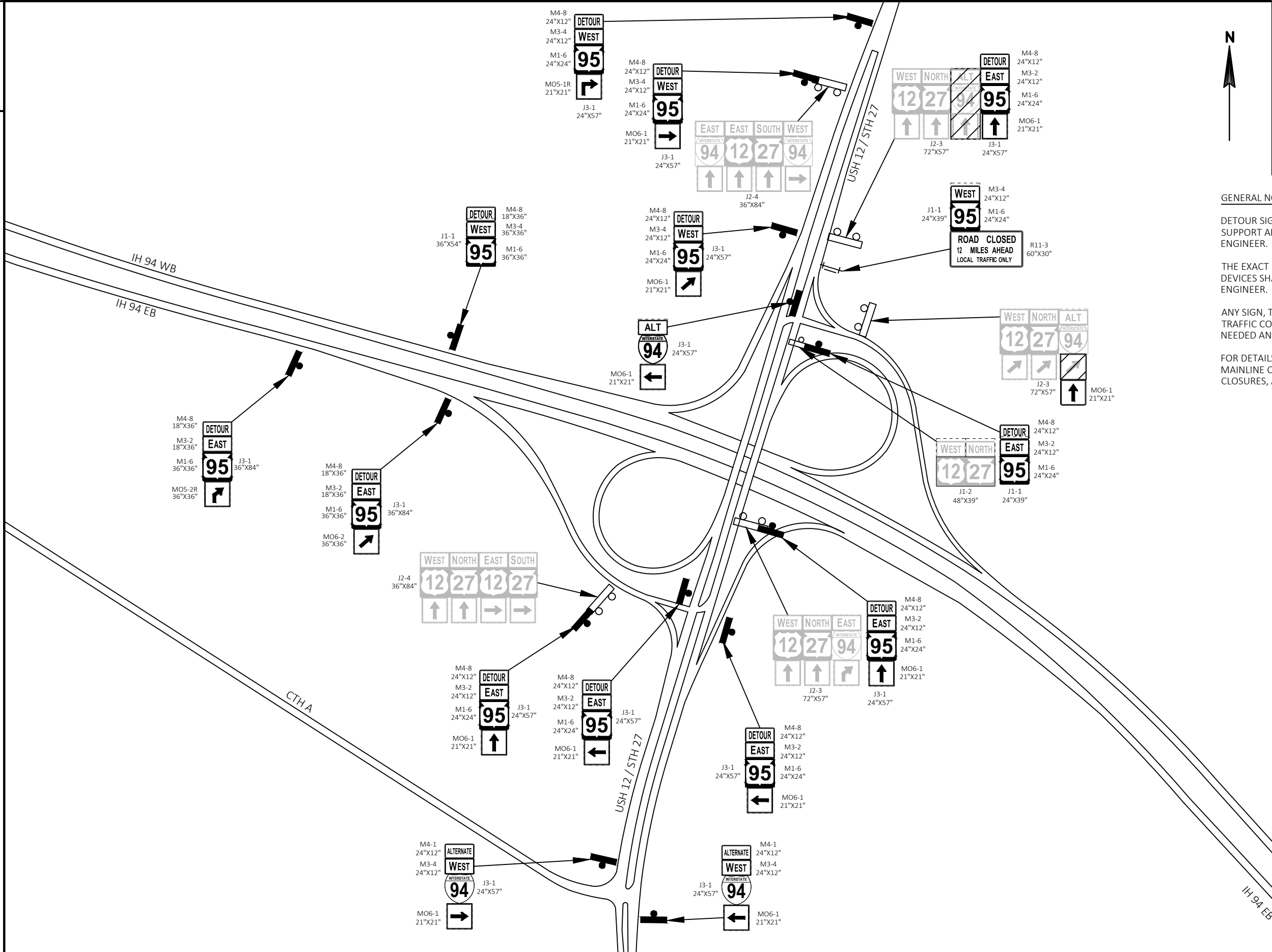
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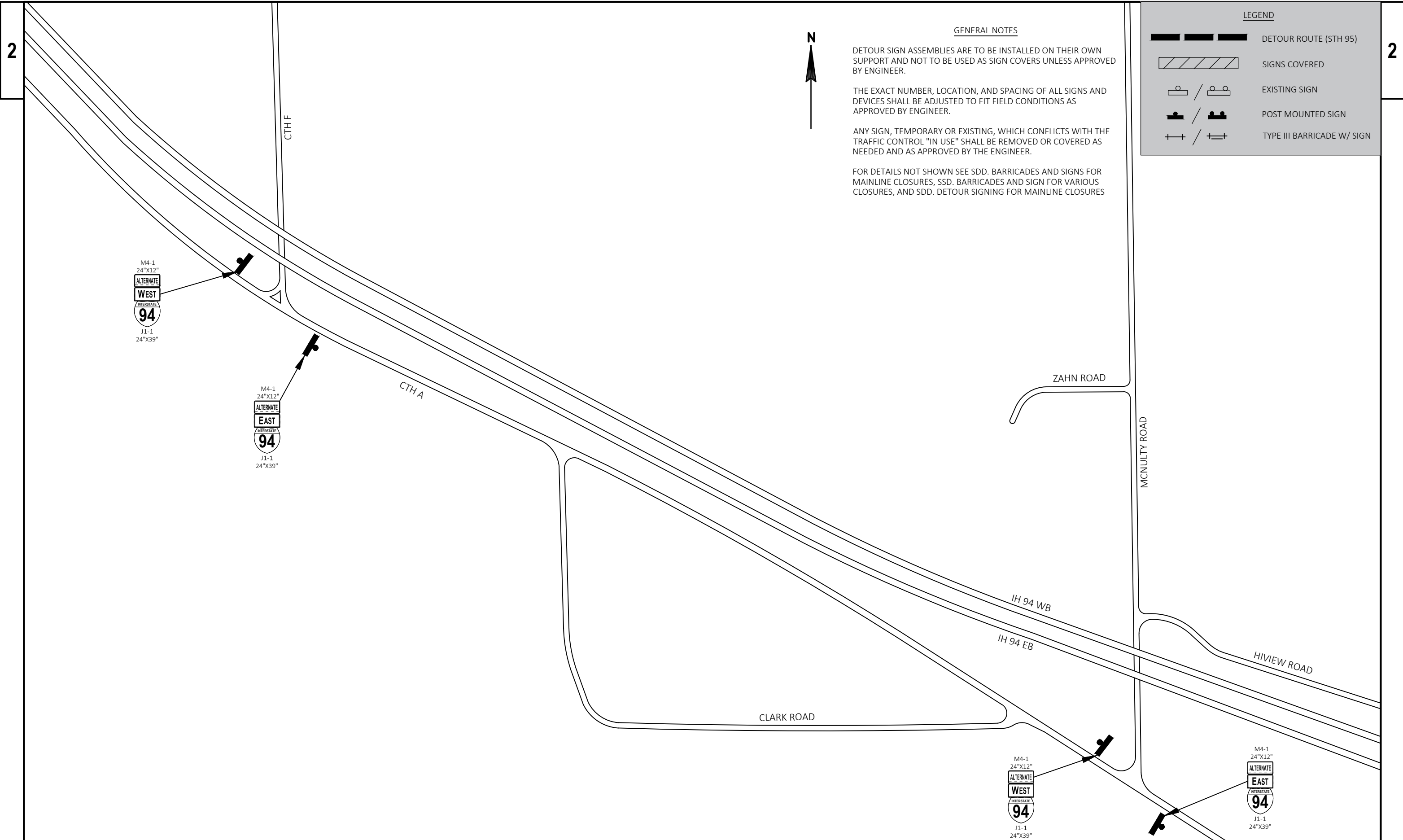
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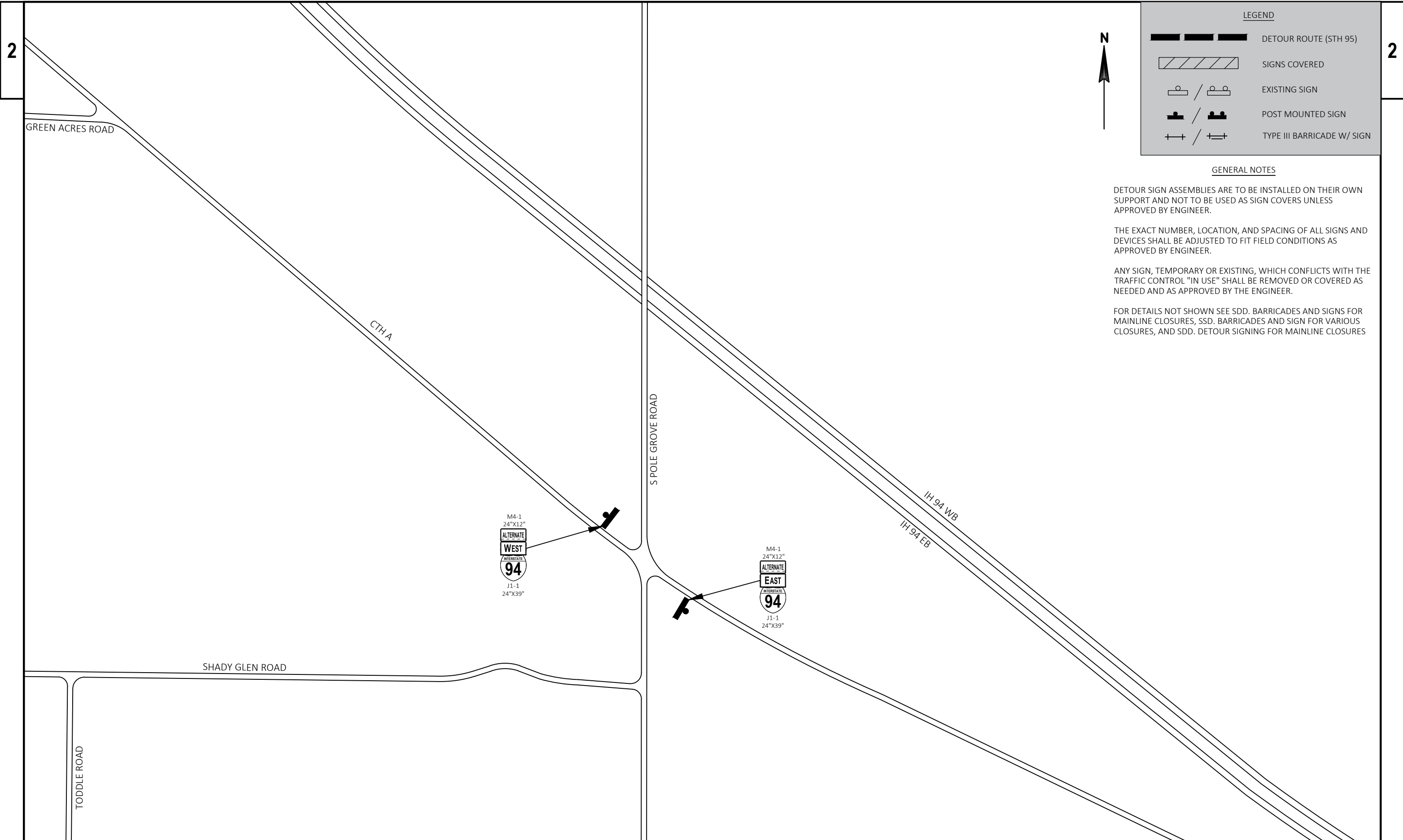
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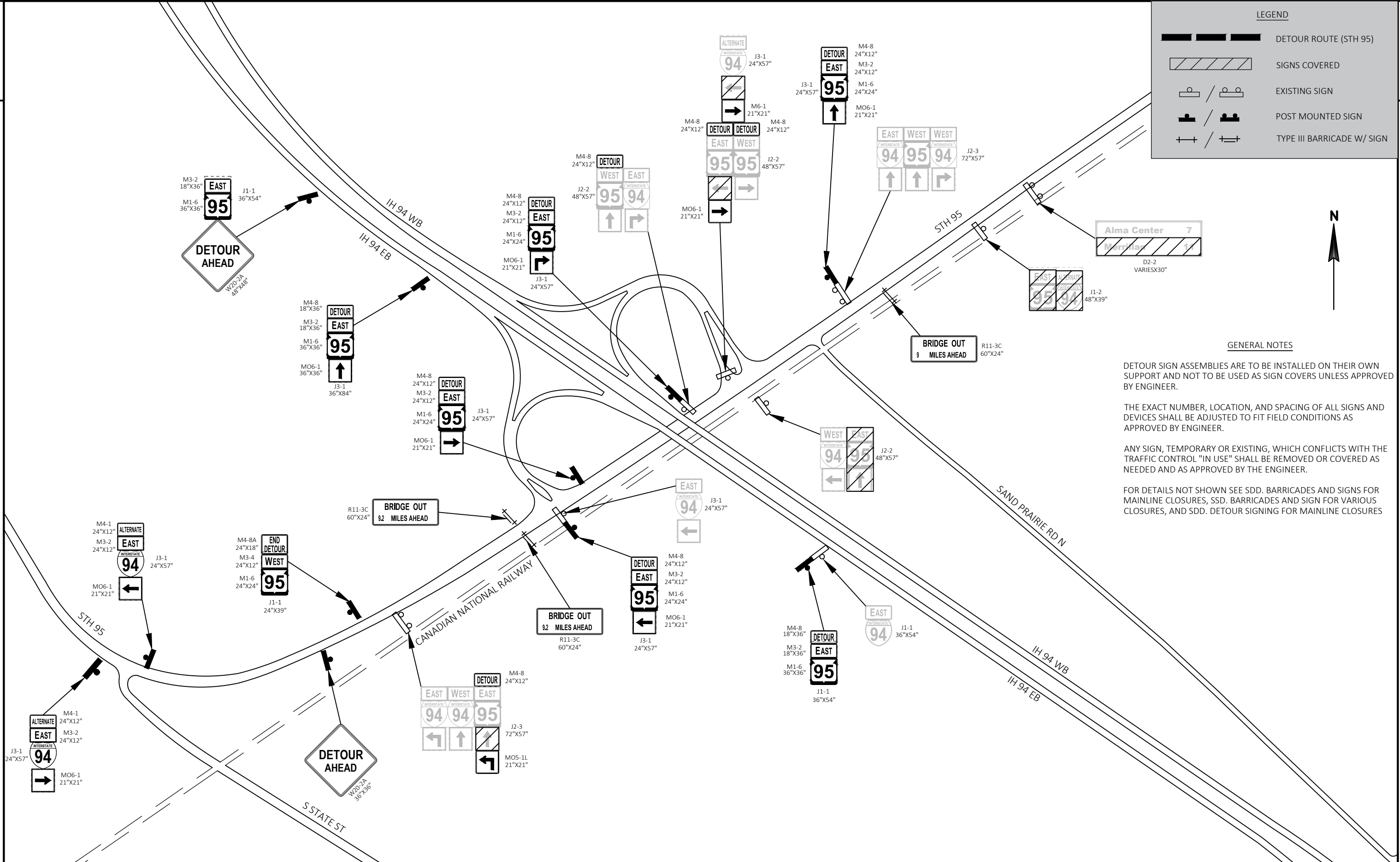
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PROJECT NO: 7520-00-78	HWY: STH 95	COUNTY: JACKSON	TRAFFIC CONTROL: DETOUR PLAN - SHEET 5	SHEET	E
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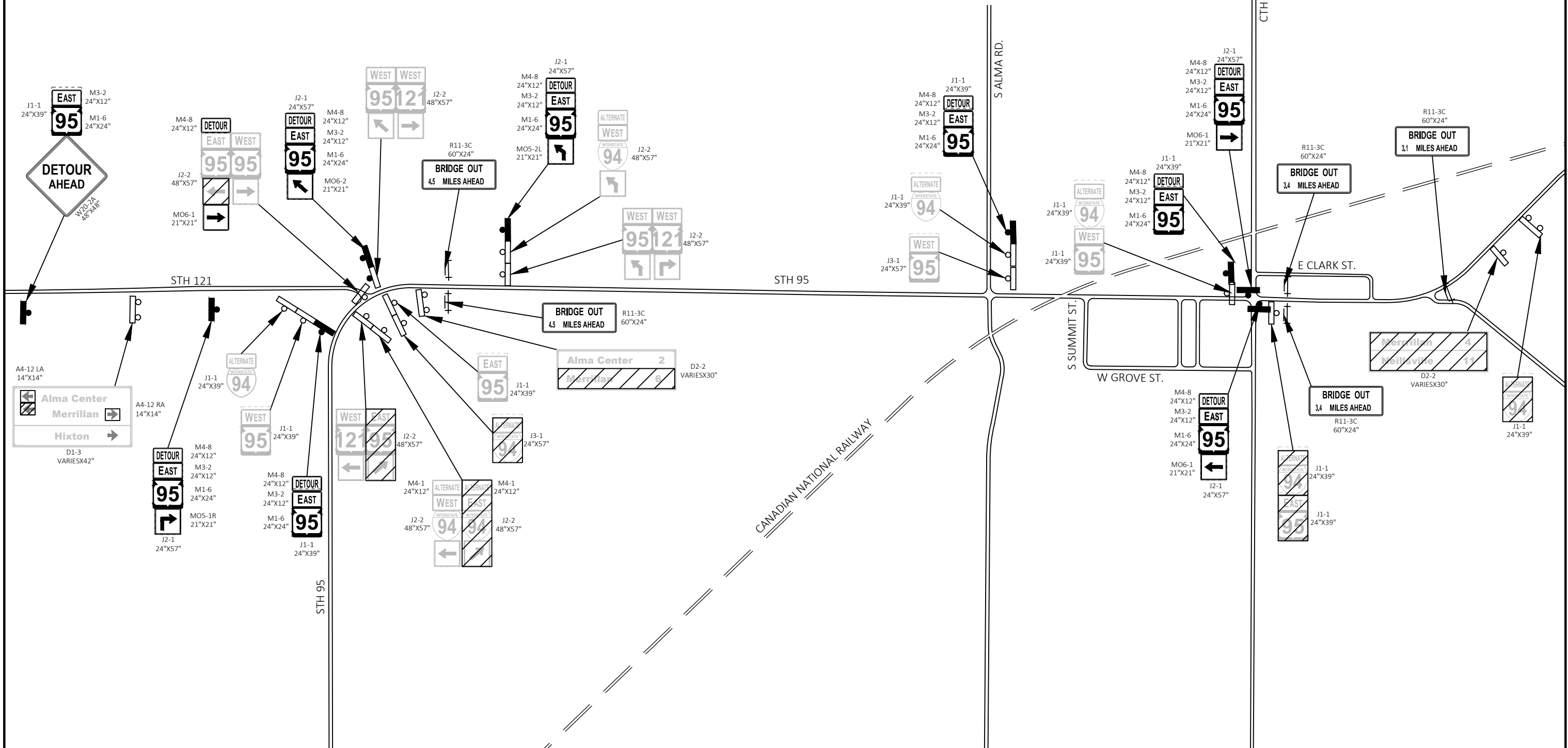
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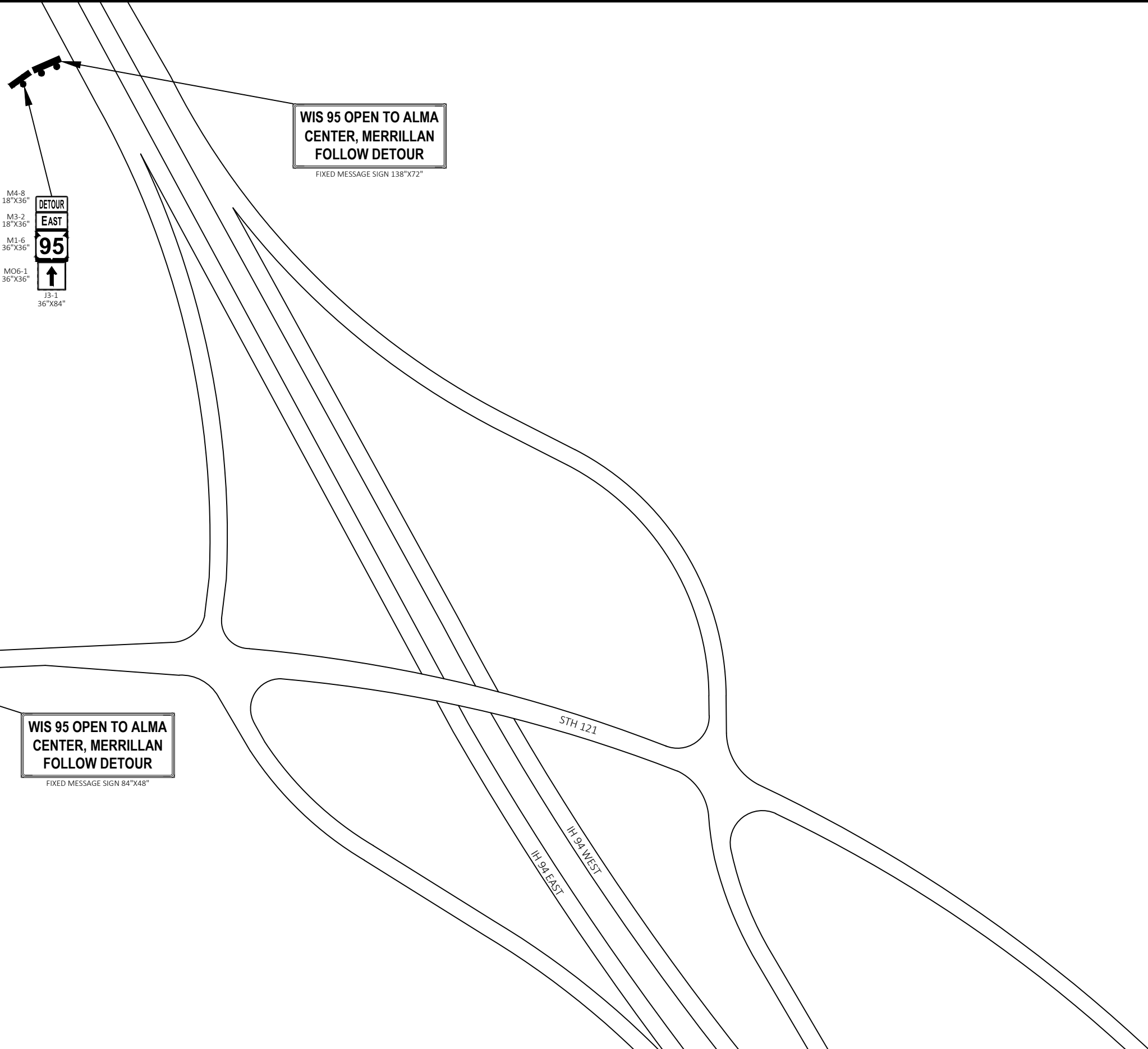
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**WIS 95 OPEN TO ALMA
CENTER, MERRILLAN
FOLLOW DETOUR**

FIXED MESSAGE SIGN 138"X72"

M4-8
18"X36"
M3-2
18"X36"
M1-6
36"X36"
MO6-1
36"X36"
J3-1
36"X84"



**WIS 95 OPEN TO ALMA
CENTER, MERRILLAN
FOLLOW DETOUR**

FIXED MESSAGE SIGN 84"X48"

M4-8
24"X12"
M3-2
24"X12"
M1-6
24"X24"
MO6-1
21"X21"
J3-1
24"X57"



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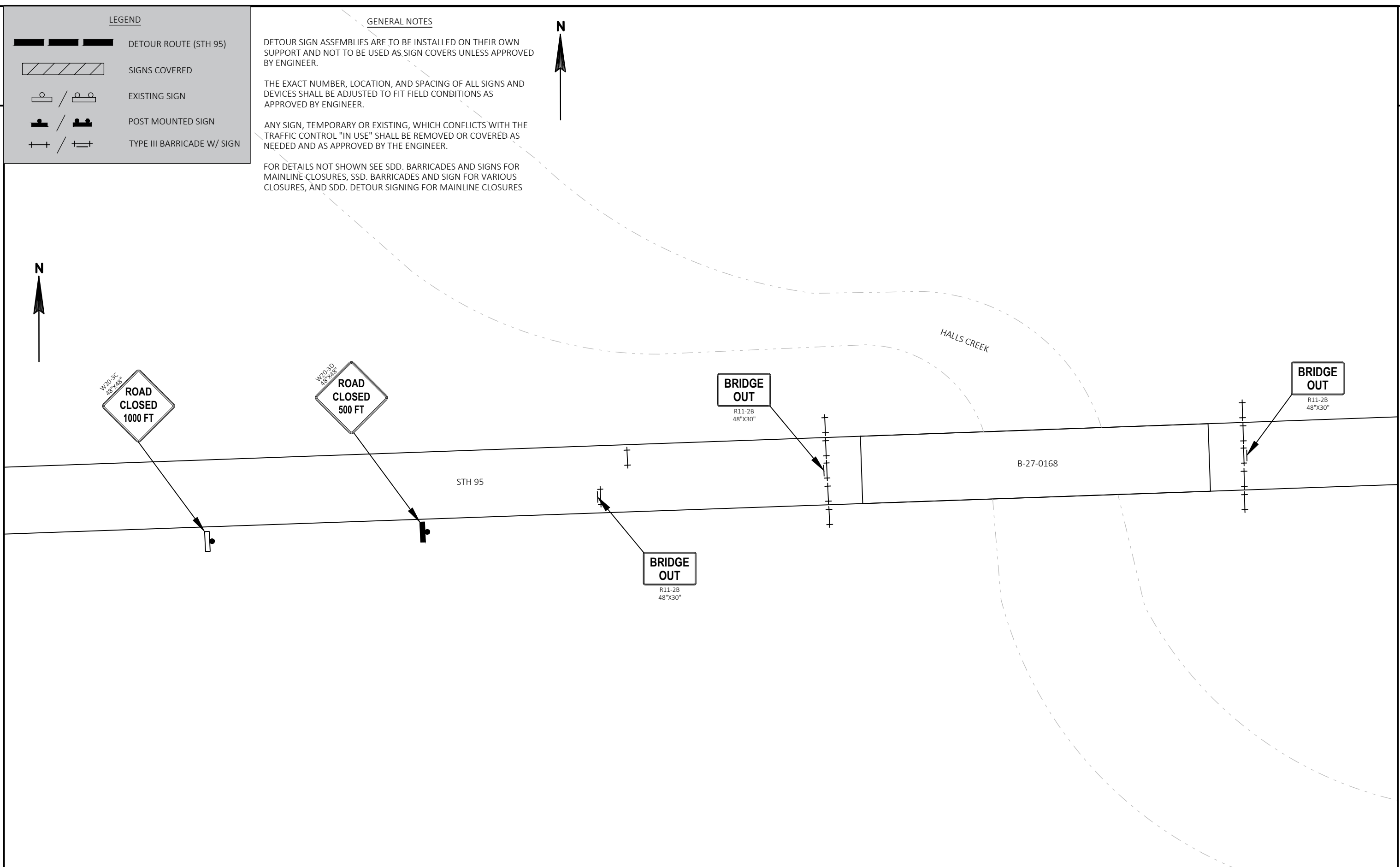
GENERAL NOTES

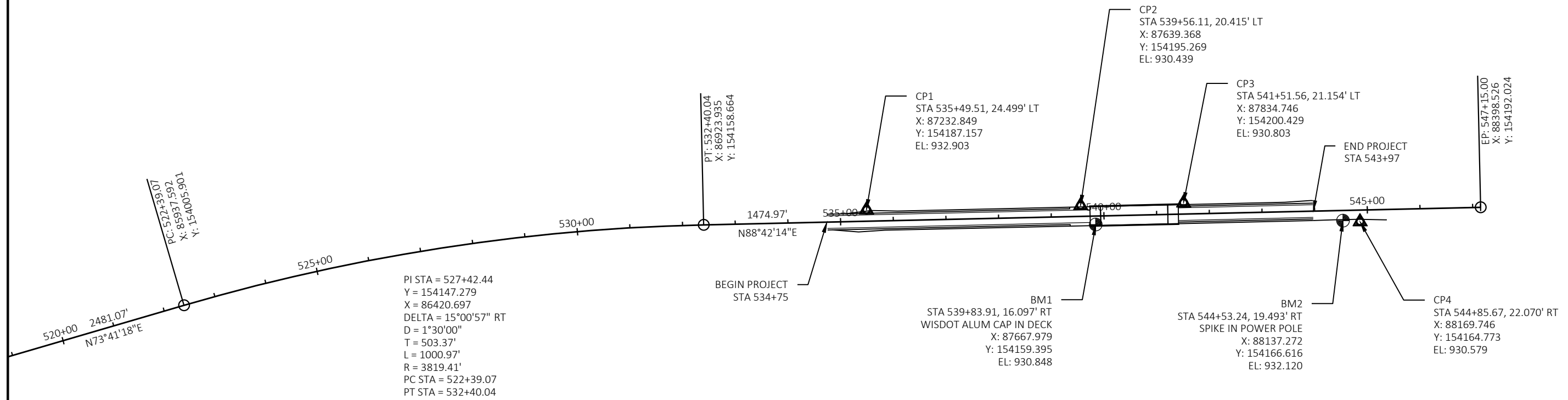
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Estimate Of Quantities By Plan Sets

7520-00-78

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	11.000	11.000
0004	201.0205	Grubbing	STA	11.000	11.000
0006	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 01. B-27-0234	EACH	1.000	1.000
0010	204.0100	Removing Concrete Pavement	SY	2,460.000	2,460.000
0012	204.0165	Removing Guardrail	LF	1,559.000	1,559.000
0014	205.0100	Excavation Common	CY	1,901.000	1,901.000
0016	206.1001	Excavation for Structures Bridges (structure) 01. B-27-0234	EACH	1.000	1.000
0020	208.0100	Borrow	CY	758.000	758.000
0022	210.1100	Backfill Structure Type A	CY	744.000	744.000
0024	213.0100	Finishing Roadway (project) 01. 7520-00-78	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	202.000	202.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	2,376.000	2,376.000
0032	415.0080	Concrete Pavement 8-Inch	SY	2,516.000	2,516.000
0034	415.0410	Concrete Pavement Approach Slab	SY	160.000	160.000
0036	416.0620	Drilled Dowel Bars	EACH	58.000	58.000
0038	416.1010	Concrete Surface Drains	CY	1.500	1.500
0040	465.0105	Asphaltic Surface	TON	119.000	119.000
0042	465.0315	Asphaltic Flumes	SY	7.000	7.000
0044	502.0100	Concrete Masonry Bridges	CY	381.000	381.000
0046	502.3200	Protective Surface Treatment	SY	565.000	565.000
0048	502.3210	Pigmented Surface Sealer	SY	166.000	166.000
0050	503.0172	Prestressed Girder Type I 72W-Inch	LF	504.000	504.000
0052	505.0400	Bar Steel Reinforcement HS Structures	LB	5,040.000	5,040.000
0054	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	47,910.000	47,910.000
0056	506.2605	Bearing Pads Elastomeric Non-Laminated	EACH	8.000	8.000
0058	506.4000	Steel Diaphragms (structure) 01. B-27-0168	EACH	6.000	6.000
0060	516.0500	Rubberized Membrane Waterproofing	SY	24.000	24.000
0064	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	660.000	660.000
0066	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	78.000	78.000
0068	606.0200	Riprap Medium	CY	4.000	4.000
0070	606.0300	Riprap Heavy	CY	1,407.000	1,407.000
0072	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	160.000	160.000
0074	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0076	614.2300	MGS Guardrail 3	LF	1,137.500	1,137.500
0078	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0080	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0082	618.0100	Maintenance And Repair of Haul Roads (project) 01. 7520-00-78	EACH	1.000	1.000
0086	619.1000	Mobilization	EACH	0.700	0.700
0088	624.0100	Water	MGAL	51.000	51.000
0090	625.0500	Salvaged Topsoil	SY	3,998.000	3,998.000
0092	628.1504	Silt Fence	LF	1,951.000	1,951.000
0094	628.1520	Silt Fence Maintenance	LF	1,951.000	1,951.000
0096	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0098	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0100	628.2027	Erosion Mat Class II Type C	SY	3,998.000	3,998.000
0102	628.6005	Turbidity Barriers	SY	141.000	141.000
0104	629.0210	Fertilizer Type B	CWT	2.500	2.500
0106	630.0120	Seeding Mixture No. 20	LB	125.000	125.000
0108	630.0140	Seeding Mixture No. 40	LB	11.000	11.000

Estimate Of Quantities By Plan Sets

7520-00-78

Line	Item	Item Description	Unit	Total	Qty
0110	630.0200	Seeding Temporary	LB	135.000	135.000
0112	630.0500	Seed Water	MGAL	90.000	90.000
0114	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	12.000	12.000
0116	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	5.000	5.000
0118	638.2102	Moving Signs Type II	EACH	17.000	17.000
0120	638.3000	Removing Small Sign Supports	EACH	17.000	17.000
0122	642.5001	Field Office Type B	EACH	0.700	0.700
0124	643.0420	Traffic Control Barricades Type III	DAY	1,077.000	1,077.000
0126	643.0705	Traffic Control Warning Lights Type A	DAY	2,155.000	2,155.000
0128	643.0900	Traffic Control Signs	DAY	12,474.000	12,474.000
0130	643.0920	Traffic Control Covering Signs Type II	EACH	23.000	23.000
0132	643.1000	Traffic Control Signs Fixed Message	SF	68.000	68.000
0134	643.5000	Traffic Control	EACH	0.700	0.700
0136	645.0111	Geotextile Type DF Schedule A	SY	74.000	74.000
0138	645.0120	Geotextile Type HR	SY	1,966.000	1,966.000
0140	645.0130	Geotextile Type R	SY	204.000	204.000
0142	646.1020	Marking Line Epoxy 4-Inch	LF	2,075.000	2,075.000
0144	650.6501	Construction Staking Structure Layout (structure) 01. B-27-0168	EACH	1.000	1.000
0148	650.7000	Construction Staking Concrete Pavement	LF	754.000	754.000
0150	650.9911	Construction Staking Supplemental Control (project) 01. 7520-00-78	EACH	1.000	1.000
0154	650.9920	Construction Staking Slope Stakes	LF	754.000	754.000
0156	690.0150	Sawing Asphalt	LF	3.000	3.000
0158	690.0250	Sawing Concrete	LF	60.000	60.000
0160	715.0502	Incentive Strength Concrete Structures	DOL	2,286.000	2,286.000
0162	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	754.800	754.800
0164	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 01. 540+48	EACH	1.000	1.000
0168	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0170	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000

3

CLEARING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105 STA
0010	534+75	-	545+36.75	STH 95	11.0
TOTAL 0010					11.0

FINISHING ROADWAY (7520-00-08)

CATEGORY	LOCATION	213.0100 EACH
0010	STH 64	1
TOTAL 0010		1

3

GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0205 STA
0010	534+75	-	545+36.75	STH 95	11.0
TOTAL 0010					11.0

BASE AGGREGATE DENSE 3/4-INCH (2.1 TON/CY)

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 TON
0010	534+75	-	539+94	SHOULDERS	129
0010	541+21	-	543+97	SHOULDERS	56
0010	544+00	-	545+36.75	RT SHOULDER	17
TOTAL 0010					202.0

REMOVING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 SY
0010	534+75	-	539+62	STH 95	1614.0
0010	541+47	-	543+97	STH 95	846.0
TOTAL 0010					2460.0

BASE AGGREGATE DENSE 1 1/4-INCH (2 TON/CY)

CATEGORY	STATION	TO	STATION	LOCATION	305.0120 TON
0010	534+00	-	539+82	STH 95	1515
0010	541+13	-	544+00	STH 95	765
0010	544+00	-	545+36.75	RT SHOULDER	96
TOTAL 0010					2376.0

EARTHWORK (FILL EXPANSION FACTOR: 1.25)

CATEGORY	STATION	TO	STATION	LOCATION	COMMON 205.0100 CY	UNUSABLE MATERIAL CY	USEABLE MATERIAL CY	EXPANDED FILL CY	BORROW 208.0100 CY
0010	534+75	-	539+94	STH 95	1483	359	1124	716	0
0010	541+21	-	543+97	STH 95	363	188	175	933	758
0010	544+00	-	545+36.75	STH 95	55	0	55	11.37	0
TOTAL 0010					1901	547	1354	1660	758

CONCRETE PAVEMENT 8-INCH

CATEGORY	STATION	TO	STATION	LOCATION	415.0080 SY
0010	534+75	-	539+74	STH 95	1663.0
0010	541+41	-	543+97	STH 95	853.0
TOTAL 0010					2516.0

PROJECT NO: 7520-00-78

HWY: STH 95

COUNTY: JACKSON

MISCELLANEOUS QUANTITIES

SHEET

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CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO	STATION	LOCATION	415.0410 SY
0010	539+74	-	539+94	STH 95	80.0
0010	541+21	-	541+41	STH 95	80.0
TOTAL 0010					160.0

ASPHALTIC SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	465.0105 TON
0010	534+84	-	539+35	RT SHLD	34
0010	535+09	-	593+35	LT SHLD	33
0010	541+41	-	543+97	LT SHLD	21
0010	541+41	-	543+97	RT SHLD	19
0010	544+00	-	545+36.75	RT SHLD	12
TOTAL 0010					119.0

ASPHALTIC FLUMES

CATEGORY	STATION	LOCATION	465.0315 SY
0010	539+37	RT SLOPE	7.0
TOTAL 0010			7.0

DRILLED DOWEL BARS

CATEGORY	STATION	LOCATION	416.0610 EACH
0010	534+75	STH 95	29
0010	543+97	STH 95	29
TOTAL 0010			58

RIPRAP MEDIUM

CATEGORY	STATION	LOCATION	606.0200 CY
0010	539+39	R SHLD	4.0
TOTAL 0010			4.0

RIPRAP HEAVY

CATEGORY	STATION	LOCATION	606.0300 CY
0010	539+39	R SHLD	117.0
TOTAL 0010			117.0

CONCRETE SURFACE DRAINS

CATEGORY	STATION	LOCATION	416.0620 CY
0010	539+37	LT SHLD	0.75
0010	539+37	RT SHLD	0.75
TOTAL 0010			1.5

GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	REMOVING GUARDRAIL 204.0165 LF	MGS GUARDRAIL 614.2300 LF	MGS THRIE BEAM 614.2500 LF	TERMINAL EAT 614.2610 EACH
0010	535+34	-	539+74	RT SHLD	446.0	350.0	39.4	1.0
0010	535+59	-	539+74	LT SHLD	421.0	325.0	39.4	1.0
0010	541+41	-	545+32	RT SHLD	421.0	300.0	39.4	1.0
0010	541+41	-	543+94	LT SHLD	271.0	162.5	39.4	1.0
TOTAL 0010					1559.0	1137.5	157.6	4.0

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A

CATEGORY	STATION	TO	STATION	LOCATION	601.0551 SY
0010	539+35	-	539+74	RT SIDE	39.0
0010	539+35	-	539+74	LT SIDE	39.0
TOTAL 0010					78.0

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	LOCATION	618.0100 EACH
0010	STH 95	1
TOTAL 0010		1

MOBILIZATION

CATEGORY	LOCATION	619.1000 EACH
0010	STH 95	0.7
TOTAL 0010		0.7

MOBILIZATIONS EROSION CONTROL

CATEGORY	LOCATION	628.1905 EACH	EMERGENCY 628.1910 EACH
0010	STH 95	2	2
TOTAL 0010		2	2

628 - SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	SILT FENCE	MAINTENANCE
					628.1504	628.1520
					LF	LF
0010	534+75	-	540+46	RT SIDE	554.0	554.0
0010	534+75	-	539+87	LT SIDE	489.0	489.0
0010	541+03	-	545+36.75	RT SIDE	420.0	420.0
0010	540+80	-	543+97	LT SIDE	312.0	312.0
TURNAROUNDS					176.0	176.0
TOTAL 0100					1951.0	1951.0

WATER (20 GAL/TON AGG)

CATEGORY	STATION	TO	STATION	LOCATION	624.0100
					MGAL
0010	534+75	-	539+94	SHOULDERS	3
0010	541+21	-	545+36.75	SHOULDERS	1
0010	534+00	-	539+82	STH 95	30
0010	541+13	-	545+36.75	STH 95	17
TOTAL 0010					51

TURBIDITY BARRIER

CATEGORY	LOCATION	628.6005
		LF
0010	HALLS W BANK	79.0
0010	HALLS E BANK	62.0
TOTAL 0010		141.0

FIELD OFFICE TYPE B

CATEGORY	LOCATION	642.5001
		EACH
0010	STH 95	0.7
TOTAL 0010		0.7

PERMANENT SIGNING

CATEGORY	SIGN #	NEW STATION	SIGN CODE	DESCRIPTION	SIZE (WXH) INCHES	WOOD POSTS	STEEL POSTS	REMOVE SIGN	MOVING
						4X6-IN 14-FT	2X2-IN 12-FT	SUPPORTS	SIGNS TYPE II
						634.0614	634.0812	638.3000	638.2102
						EACH	EACH	EACH	EACH
0010	1-1	535+44 L	J4-1	DIR. ASSEMBLY (1 PANEL)	24 X 36	1	-	1	1
0010	1-2	537+67 L	D1-2	TWO DESTINATIONS (MILES)	VAR. X 30	2	-	2	1
0010	1-3	536+58 R	W3-5	SPEED LIMIT 35 AHEAD	36 X 36	1	-	1	1
0010	1-4	537+99 R	I2-3	MERRILLAN POPULATION	VAR. X 24	2	-	2	1
0010	1-5	539+03 R	W14-3	NO PASSING ZONE	48 X 36	-	1	1	1
0010	1-6	539+77 L	W5-52L	CHEVRON LEFT	12 X 36	-	1	1	1
0010	1-7	541+17 L	W5-52R	CHEVRON RIGHT	12 X 36	-	1	1	1
0010	1-8	541+27 L		HALLS CREEK		1	-	1	1
0010	1-9	542+33 L	W14-3	NO PASSING ZONE	48 X 36	1	-	1	1
0010	1-10	542+33 L	R2-1	SPEED LIMIT 55	24 X 30	-	-	-	1
0010	1-11	539+66 R		HALLS CREEK		1	-	1	1
		539+66 R		TRUCK PARKING RESTRICTION		-	-	-	1
0010	1-12	539+77 R	W5-52R	CHEVRON RIGHT	12 X 36	-	1	1	1
0010	1-13	541+17 R	W5-52L	CHEVRON LEFT	12 X 36	-	1	1	1
0010	1-14	542+33 R	R2-1	SPEED LIMIT 35	24 X 30	1	-	1	1
0010	1-15	543+61 R	J1-2	DIR. ASSEMBLY (2 PANELS)	48 X 39	1	-	1	1
0010	1-16	545+21 R	J2-2	DIR. ASSEMBLY (2 PANELS)	48 X 57	1	-	1	1
TOTAL 0100						12.0	5.0	17.0	17.0

LANDSCAPING

CATEGORY	STATION	TO	STATION	LOCATION	SALVAGED	EMAT URBAN	FERTILIZER	SEEDING	SEEDING	TEMP	SEED
					TOPSOIL	CLASS II	TYPE C	TYPE B	NO. 20 MIX	NO. 40 MIX	SEEDING
					625.0500	628.2027	629.0210	630.0120	630.0140	630.0200	630.0500
					SY	SY	CWT	LB	LB	LB	MGAL
0010	534+75	-	540+42	RT SLOPE	1242.0	1242.0	0.78	34.0	-	34.0	28.0
0010	537+75	-	540+33	LT SLOPE	899.0	899.0	0.57	21.0	4.0	24.0	20.0
0010	541+44	-	545+36.75	RT SLOPE	1359.0	1359.0	0.86	37.0	-	37.0	31.0
0010	541+44	-	543+97	LT SLOPE	498.0	498.0	0.31	8.0	5.0	13.0	11.0
UNDISTRIBUTED								25.0	2.0	27.0	
TOTAL 0010					3998.0	3998.0	2.5	125.0	11.0	135.0	90.0

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TRAFFIC CONTROL

CATEGORY	STAGE	BARRICADES	LIGHTS	SIGNS	*COVER SIGNS FIXED MESSAGE	
		TYPE III 643.0420	TYPE A 643.0705		TYPE II 643.0920	SIGN 643.1000
		DAY	DAY	DAY	EACH	SF
0010	MERRILLAN	227	454	1418	8	-
0010	STH 12	-	-	680	3	-
0010	BL RV FALLS	-	-	3459	1	-
0010	HIXTON	-	-	2722	4	-
0010	ALMA CENTER	284	567	2268	6	-
0010	OTHER	567	1134	1928	-	68
TOTAL 0010		1077	2155	12474	23	68

*PROJECT IS A SINGLE CYCLE, SIGNS WILL REMAIN COVERED FOR THE DURATION OF THE PROJECT

CONSTRUCTION STAKING CONCRETE PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	650.7000
					LF
0010	534+75	-	539+73	STH 95	498
0010	541+41	-	543+97	STH 95	256
TOTAL 0010					754.0

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CONSTRUCTION STAKING STRUCTURE LAYOUT

CATEGORY	LOCATION	650.6501
		EACH
0010	B-27-0168	1
TOTAL 0010		1

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (7520-00-08)

CATEGORY	LOCATION	650.9911
		EACH
0010	STH 95	1
TOTAL 0010		1

TRAFFIC CONTROL

CATEGORY	LOCATION	643.5000
		EACH
0010	STH 95	0.7
TOTAL 0010		0.7

GEOTEXTILE TYPE R

CATEGORY	STATION	LOCATION	645.0130
			SY
0010	539+39	R SHLD	11.0
0010	539+39	L SHLD	193.0
TOTAL 0010			204.0

CONSTRUCTION STAKING SLOPE STAKES

CATEGORY	STATION	TO	STATION	LOCATION	650.9920
					LF
0010	534+75	-	539+73	STH 95	498
0010	541+41	-	543+97	STH 95	256
TOTAL 0010					754.0

MARKING LINE EPOXY 4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	646.1020	REMARKS
					LF	
0010	534+75	-	543+97	RT EDGELINE	922	WHITE
0010	534+75	-	543+97	LT EDGELINE	922	WHITE
0010	534+75	-	543+97	CL SKIPS	231	YELLOW
0010	534+75	-	539+00	CL SOLID LT	425	YELLOW
0010	542+33	-	543+97	CL SOLID RT	164	YELLOW
TOTAL 0010					2075.0	

SAWING ASPHALT

CATEGORY	STATION	LOCATION	690.0150
			LF
0010	545+36.75	RT SHLD	3.0
TOTAL 0010			3.0

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690.0250
			LF
0010	534+75	STH 95	30.0
0010	543+97	STH 95	30.0
TOTAL 0010			60.0

PROJECT NO: 7520-00-78

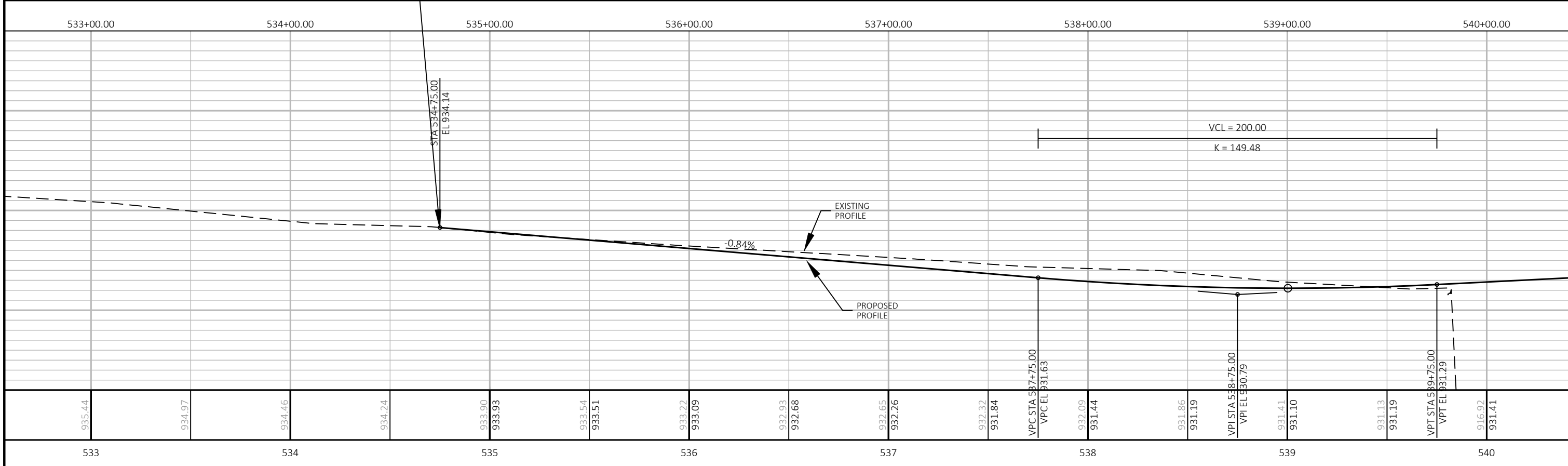
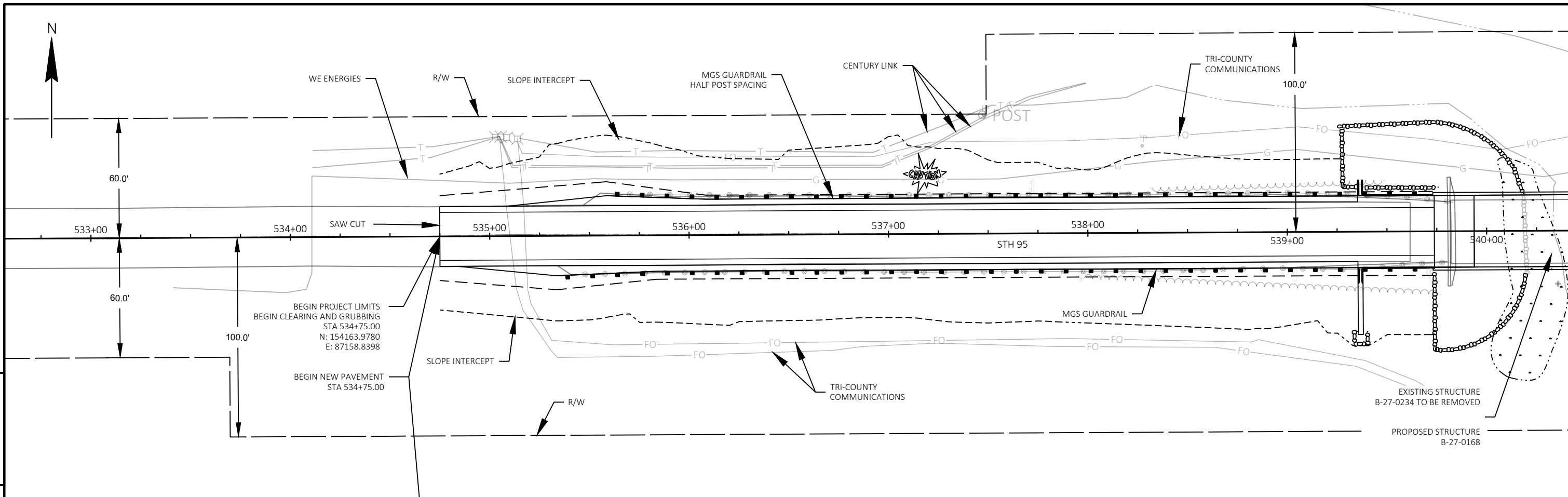
HWY: STH 95

COUNTY: JACKSON

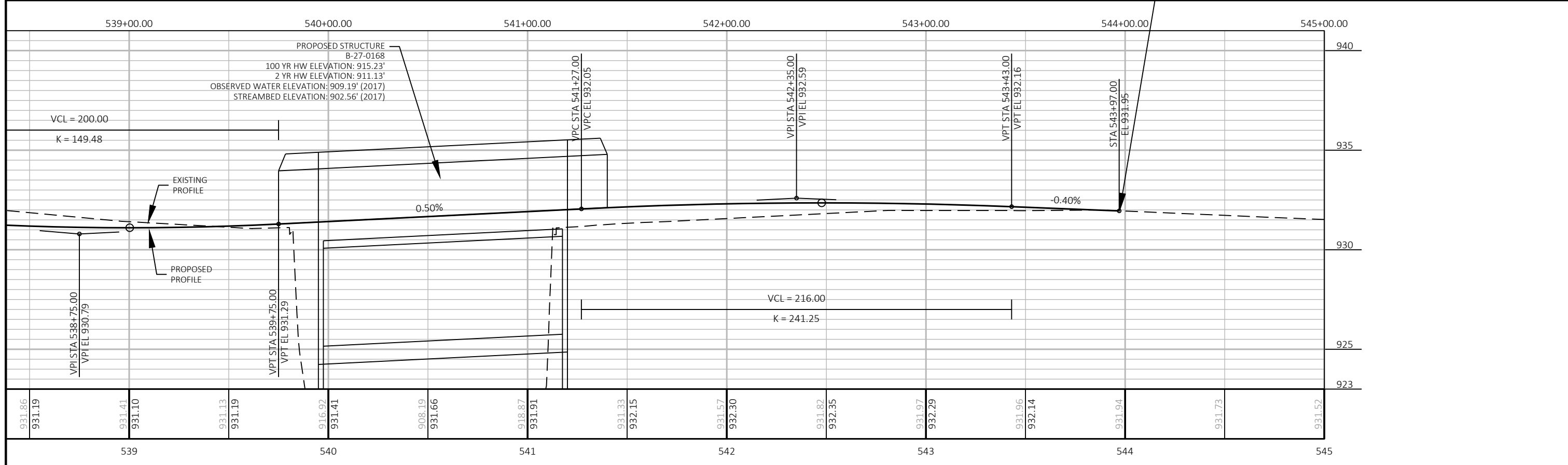
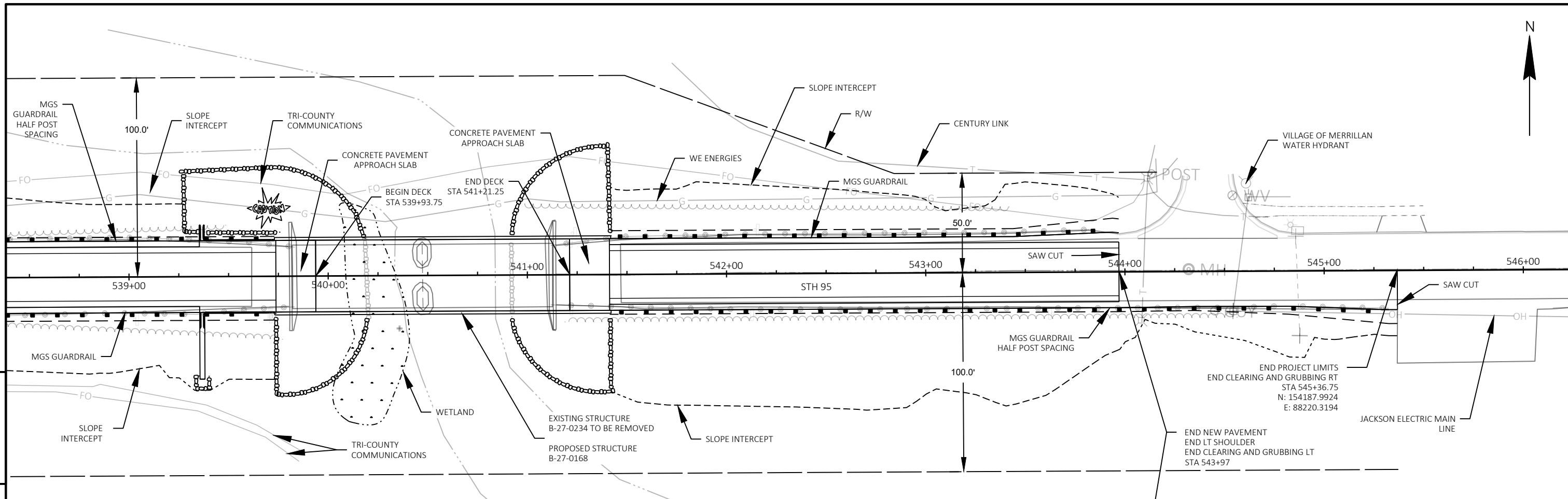
MISCELLANEOUS QUANTITIES

SHEET

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PROJECT NO: 7520-00-78	HWY: STH 95	COUNTY: JACKSON	PLAN AND PROFILE:	SHEET	E
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PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON PLAN AND PROFILE: B-27-0168 HALLS CREEK SHEET: 5

Standard Detail Drawing List

08D02-07A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13A03-06	CONCRETE PAVEMENT SHOULDERS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
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)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-21A	LONGITUDINAL MARKING (MAINLINE)

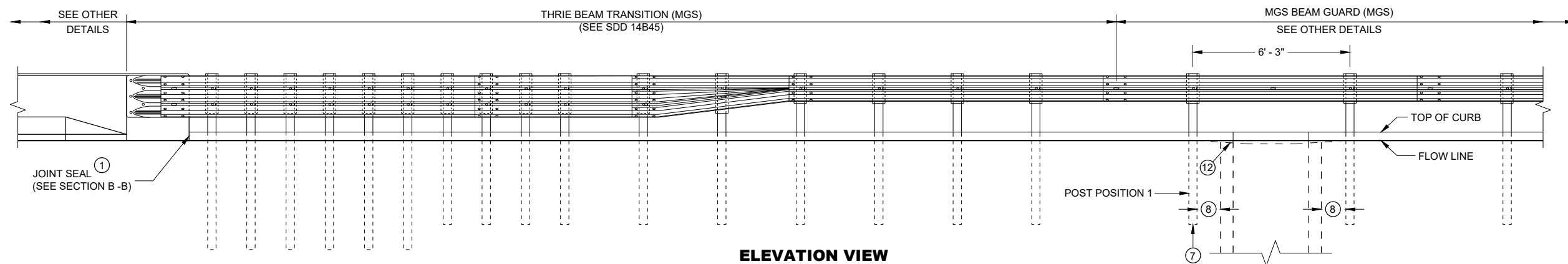
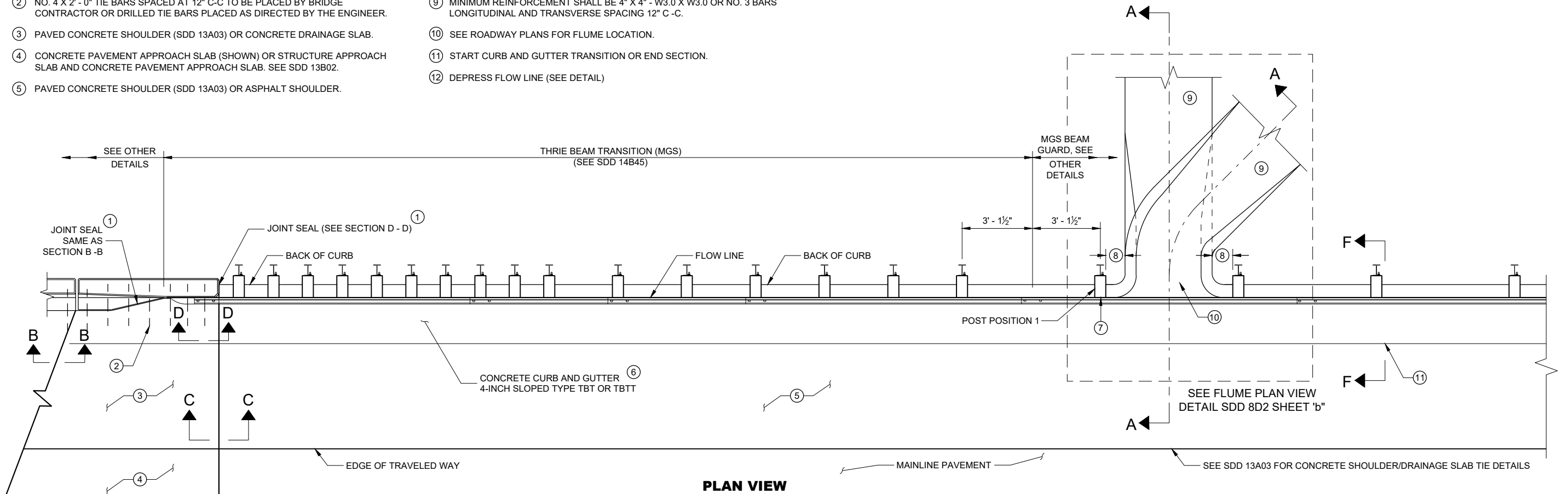
GENERAL NOTES

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.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)



**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

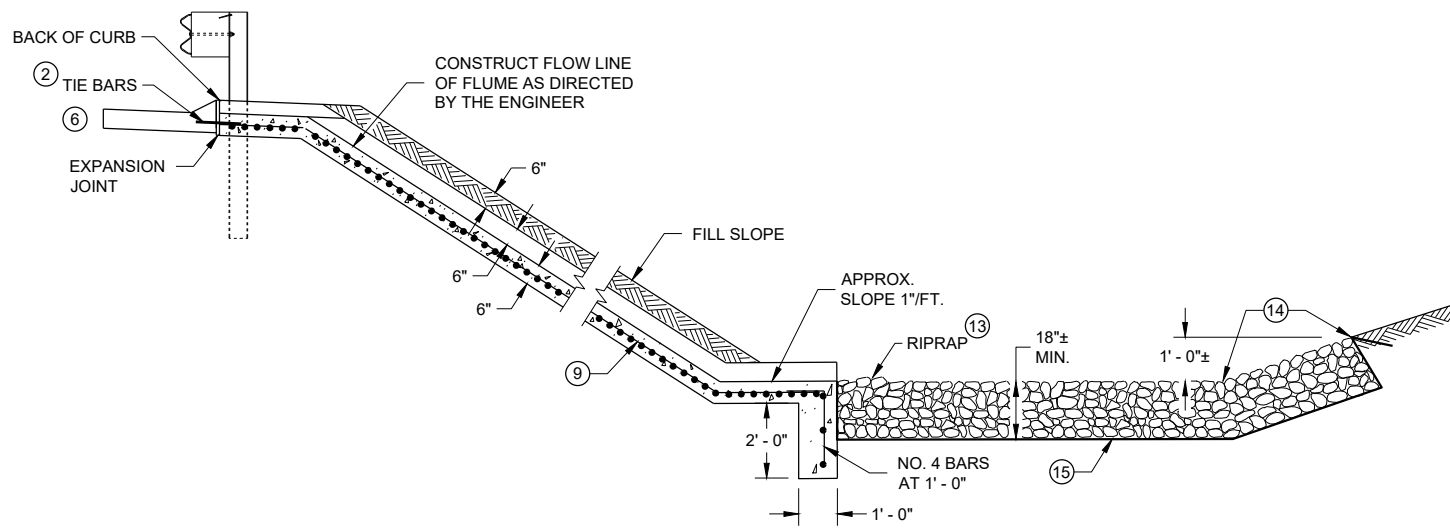
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

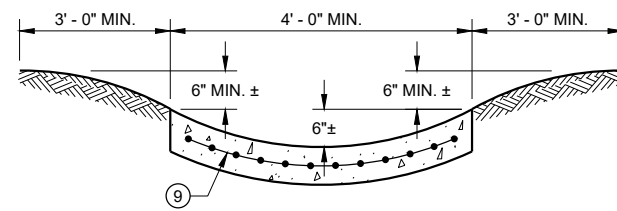
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SDD 08D02 - 07a

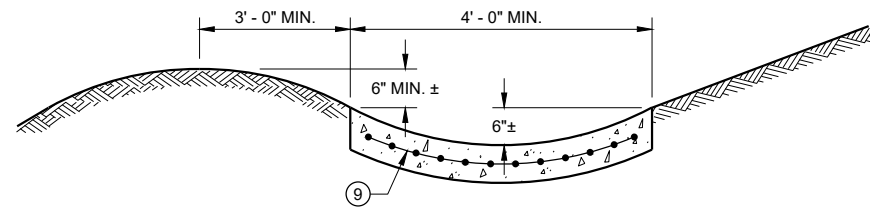
SDD 08D02 - 07a



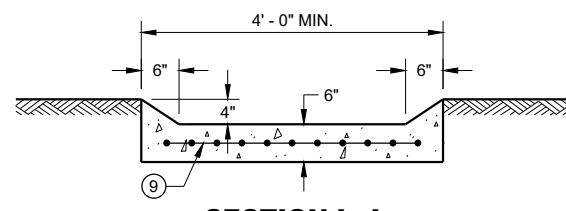
SECTION A - A



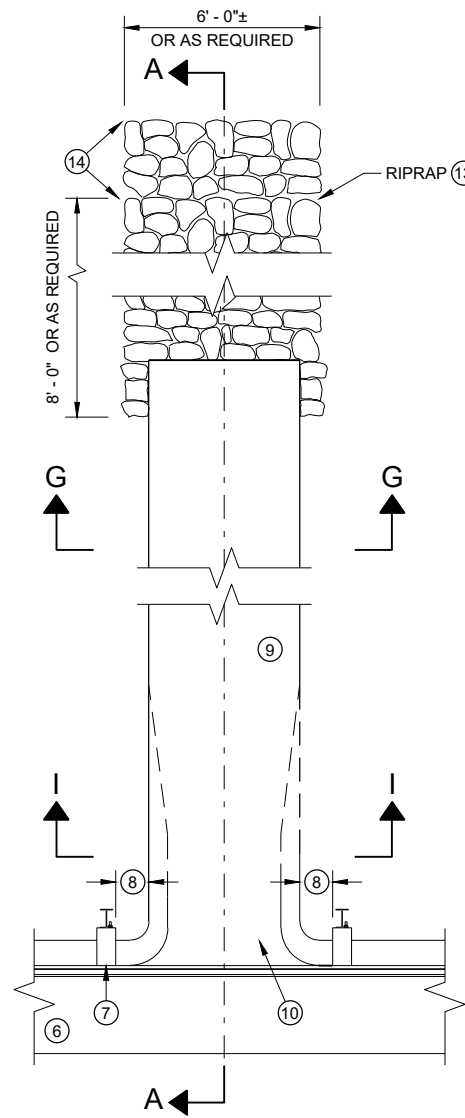
SECTION G - G



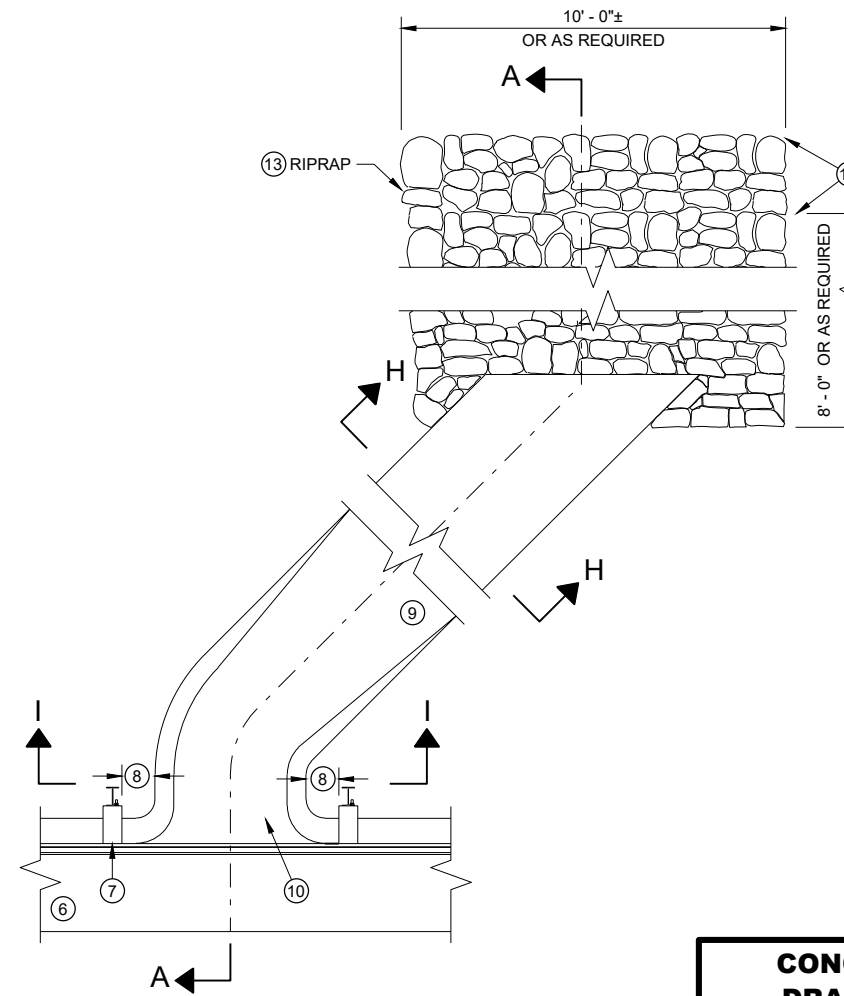
SECTION H - H



SECTION I - I



**PLAN VIEW
PERPENDICULAR FLUME**



**PLAN VIEW
SKEWED FLUME**

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.

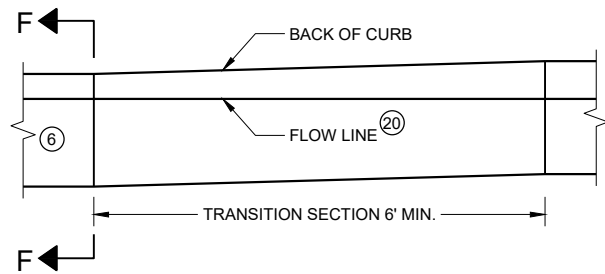
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2'-0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

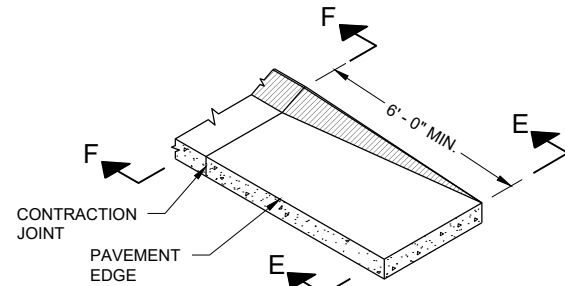
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C -C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
- ⑮ GEOTEXTILE FABRIC TYPE HR.

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

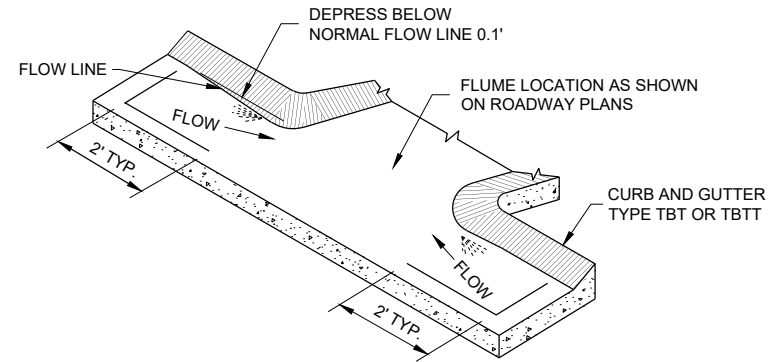
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



**CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



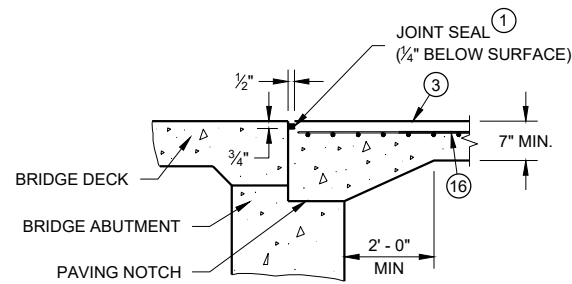
**CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**

GENERAL NOTES

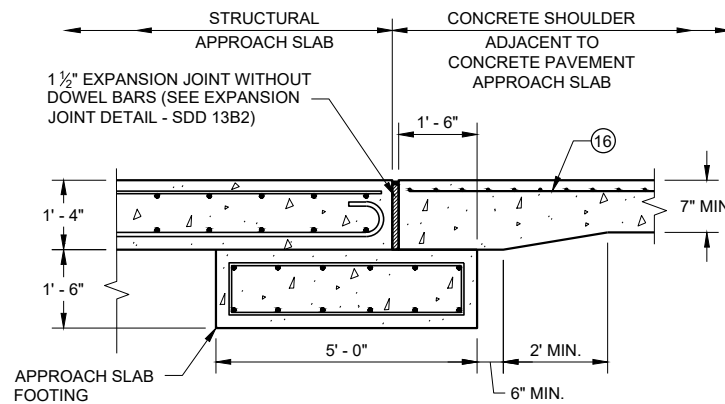
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

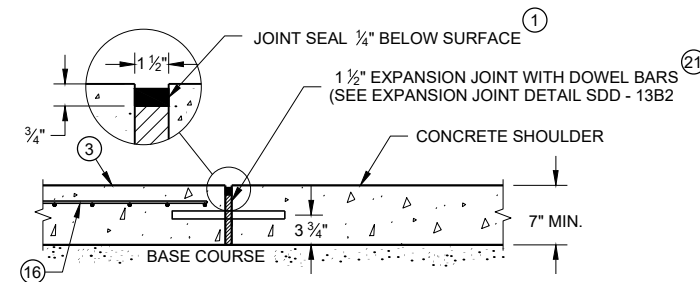
- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑮ GEOTEXTILE FABRIC TYPE HR.
- ⑯ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑰ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑱ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑲ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑳ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ㉑ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



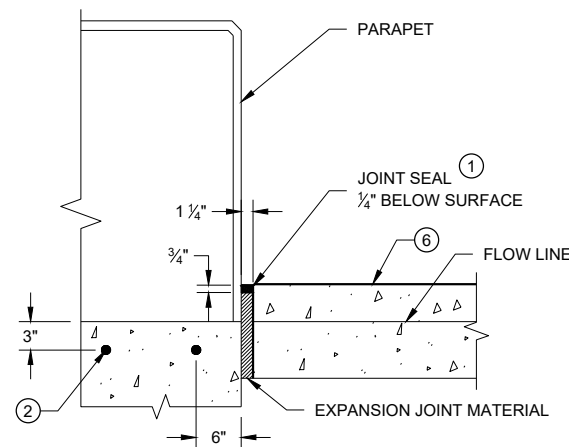
SECTION B-B



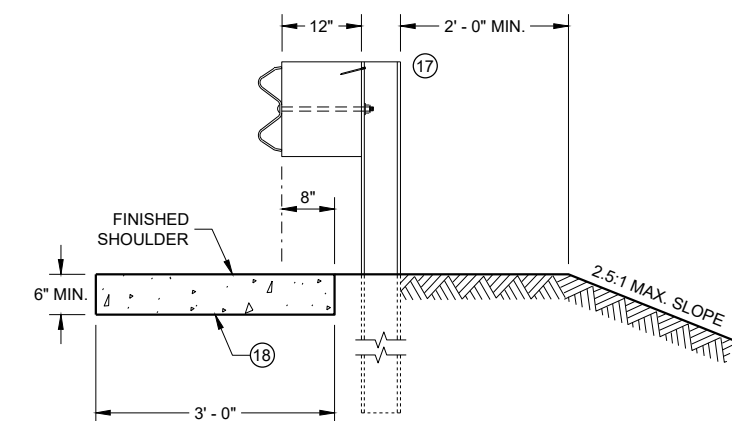
**SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL
APPROACH SLAB AND CONCRETE APPROACH SLAB**



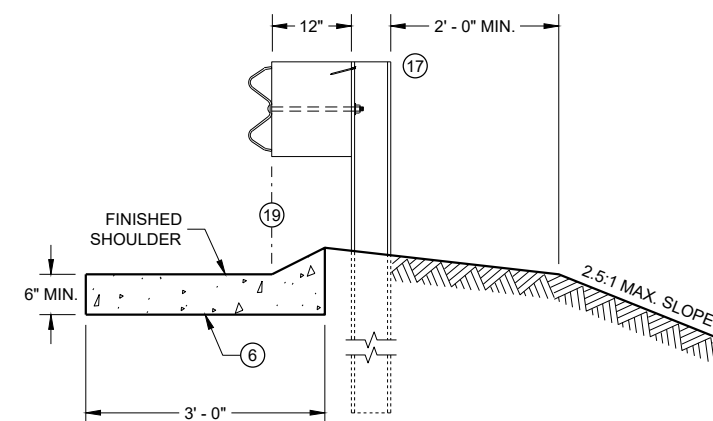
**SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH
WITH CONCRETE SHOULDERS**



SECTION D - D



SECTION E - E



SECTION F - F

6

6

SDD08D02 - 07C

SDD08D02 - 07C

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

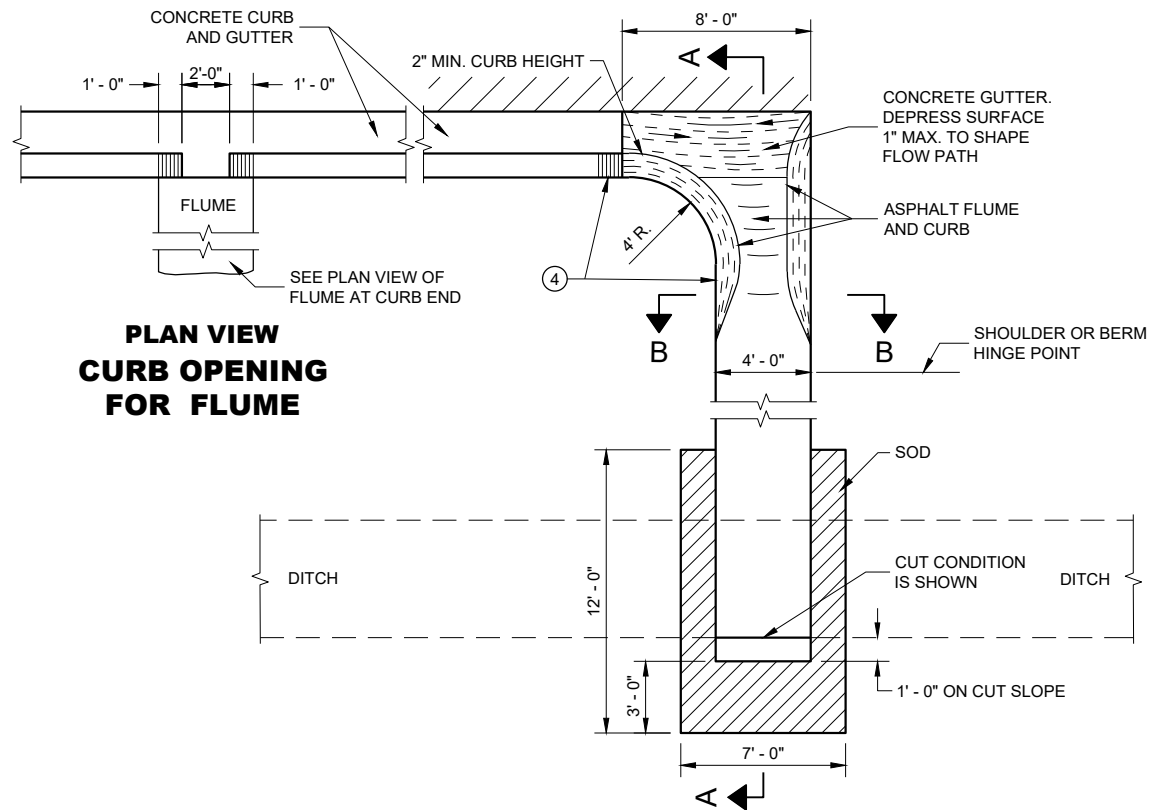
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

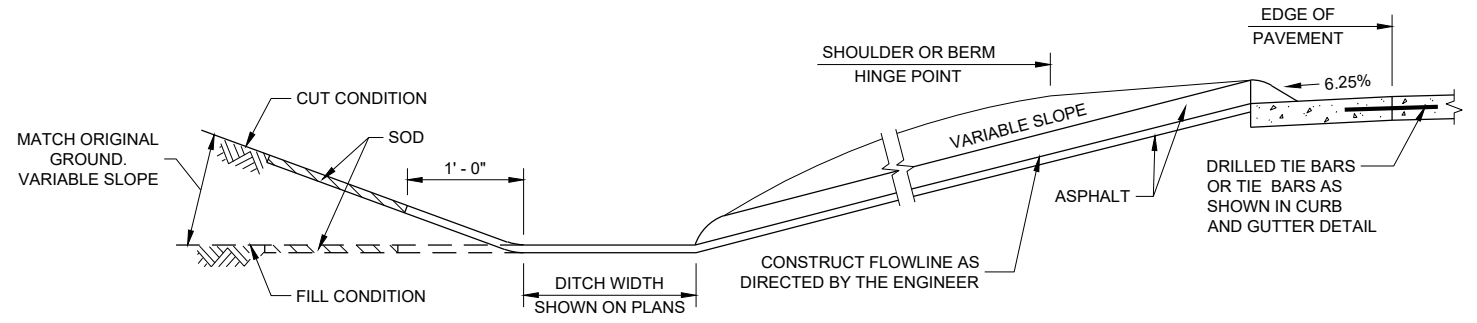
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

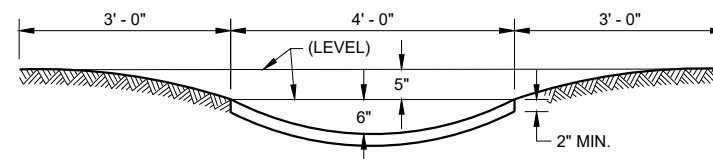
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

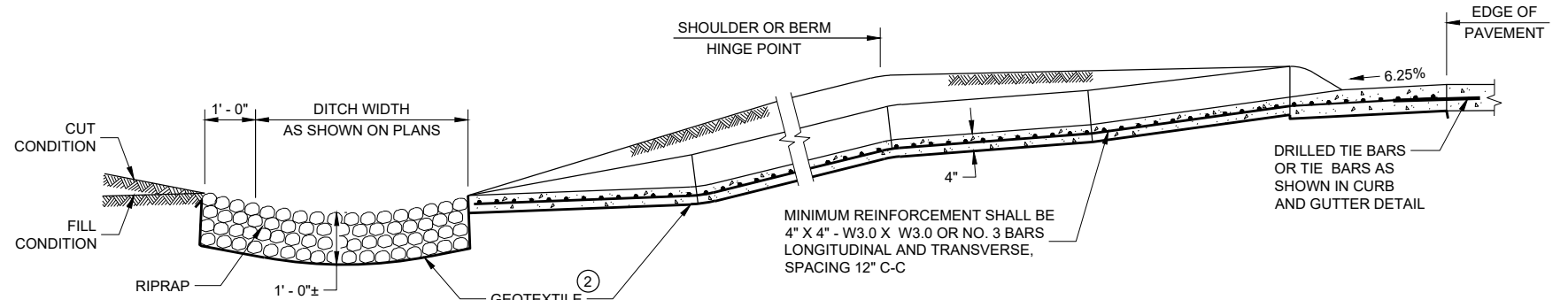
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



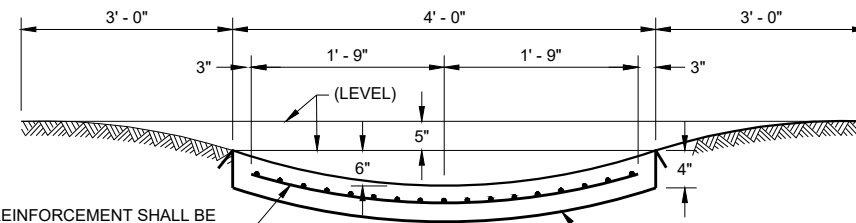
SECTION A - A



SECTION B - B

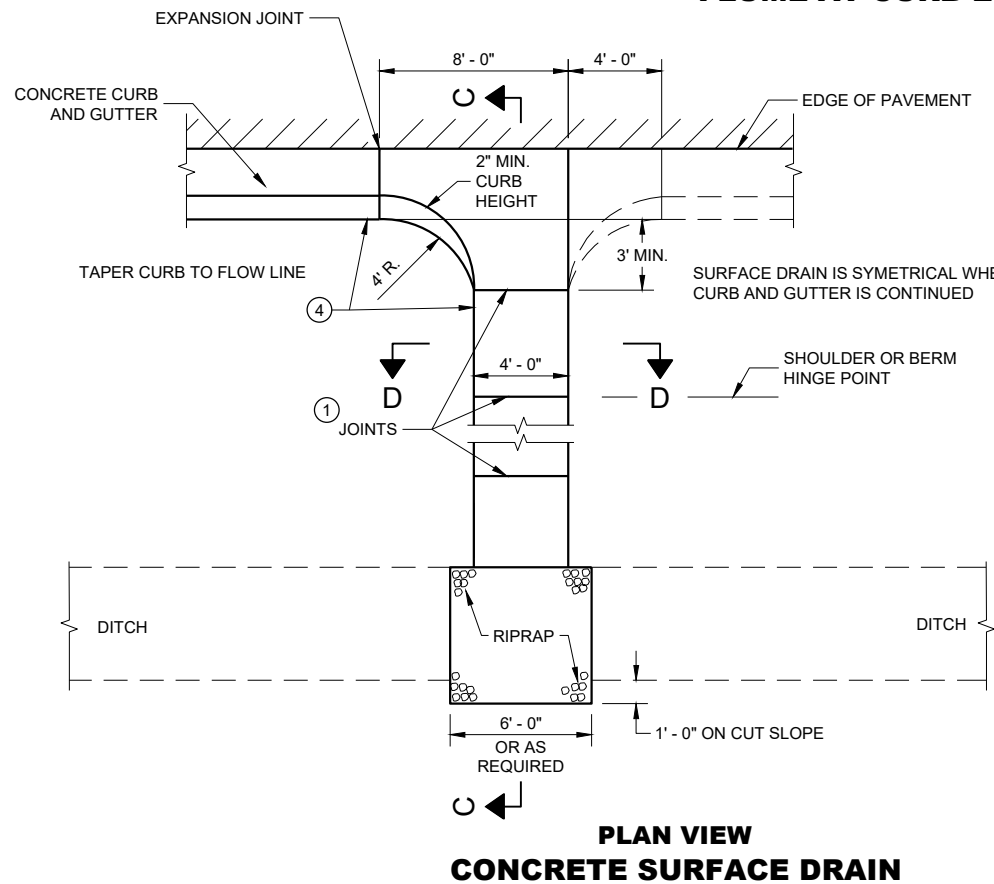


SECTION C - C



SECTION D - D

MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C



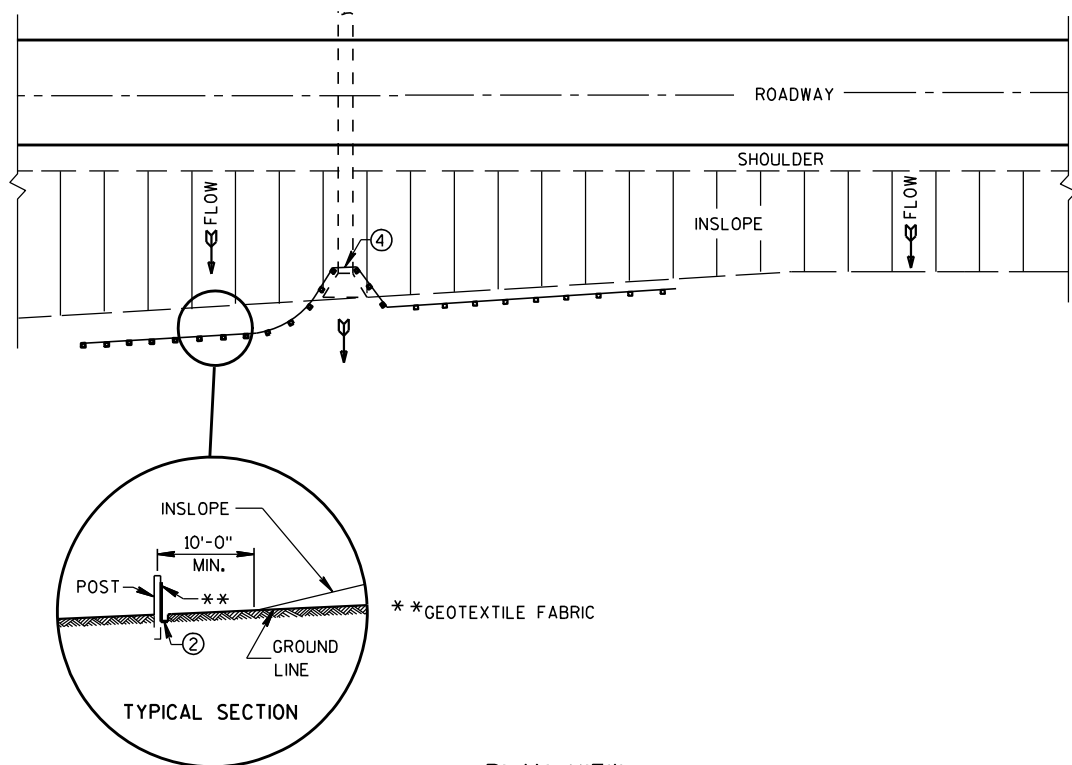
**PLAN VIEW
CONCRETE SURFACE DRAIN**

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

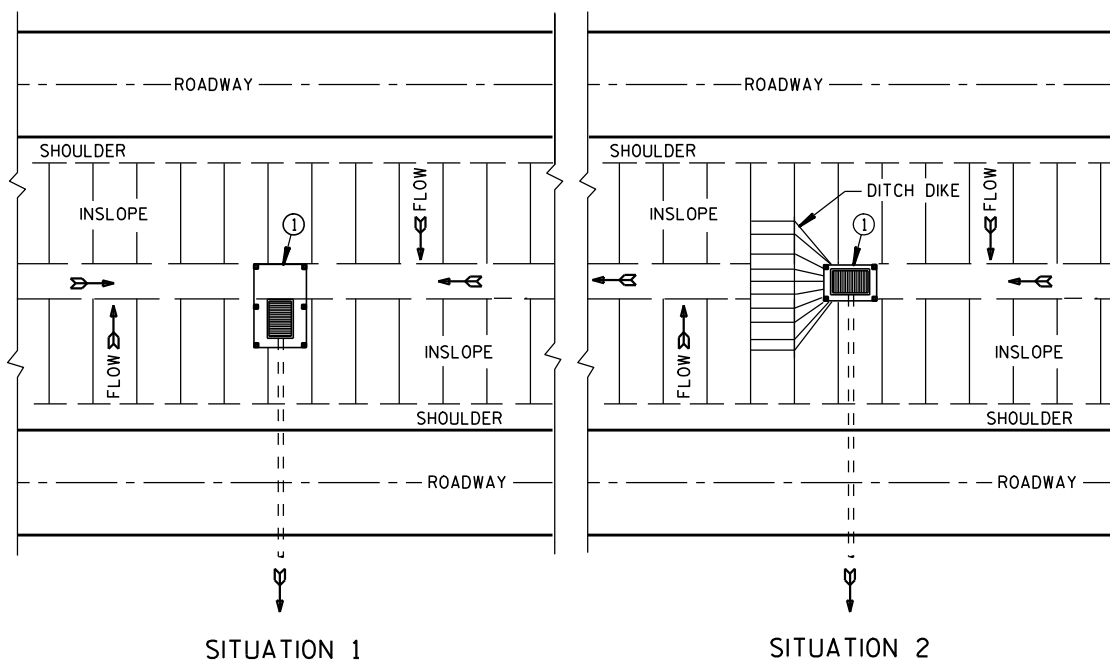
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

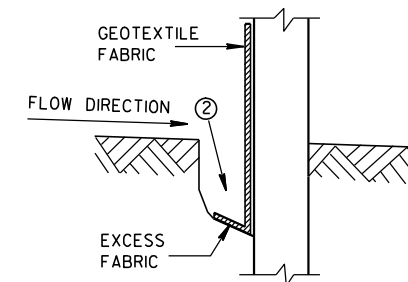


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

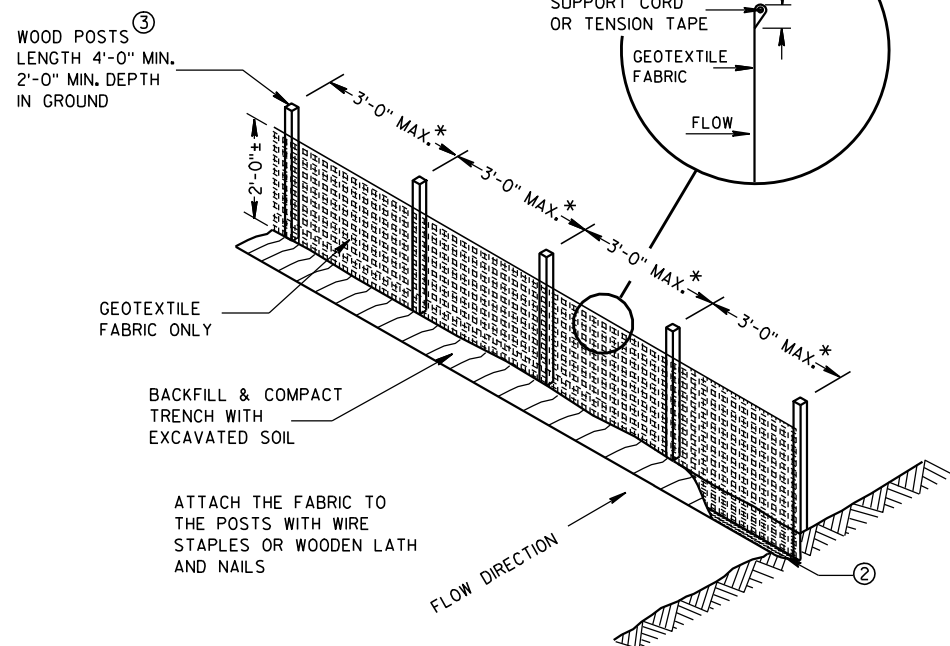
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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.



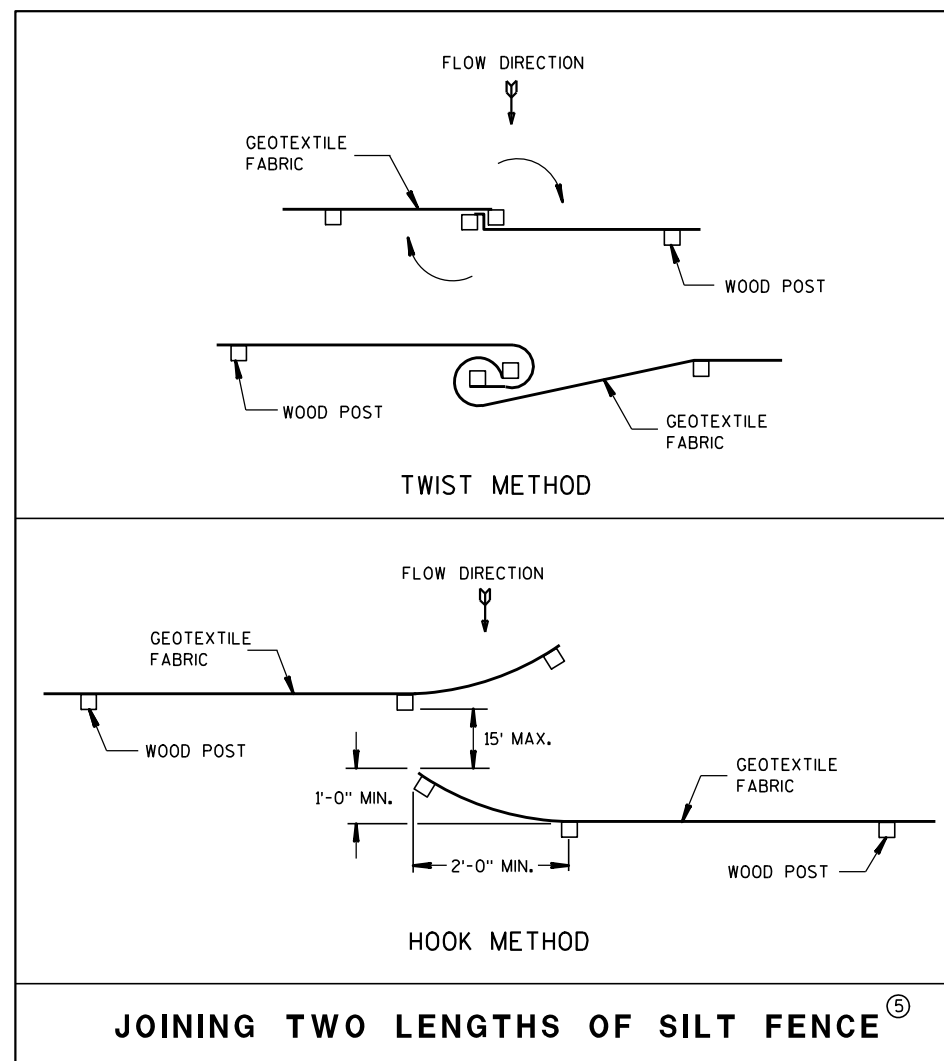
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

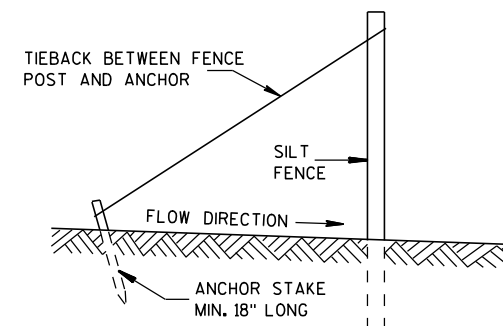


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

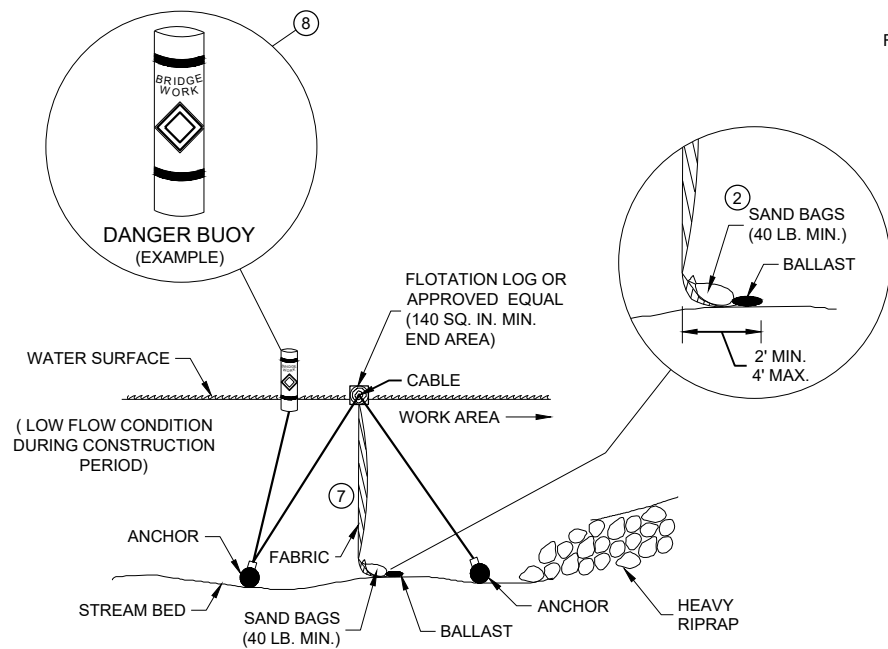


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

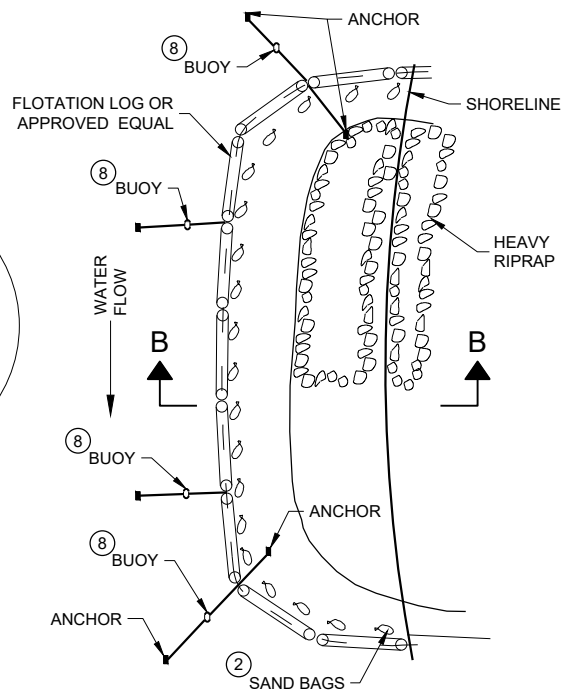
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

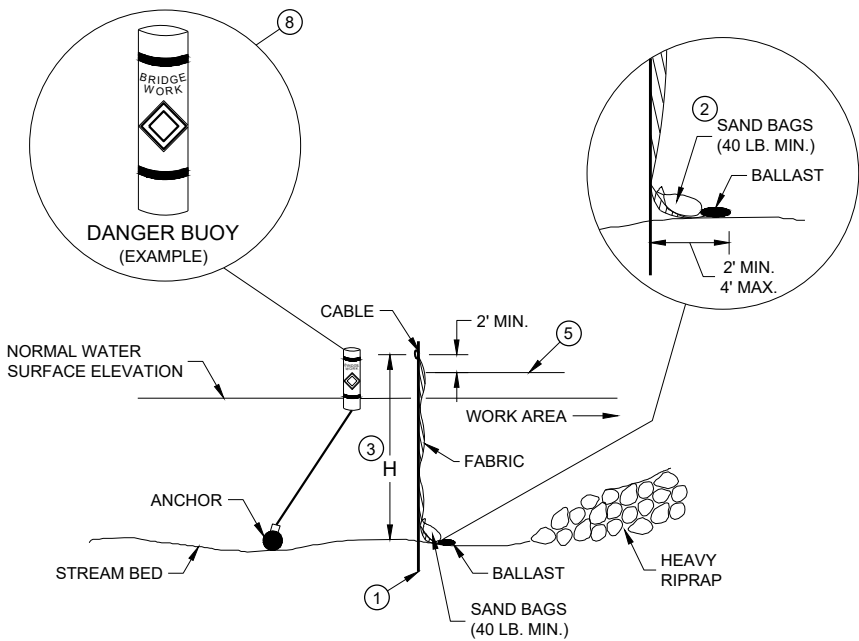


SECTION B - B

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

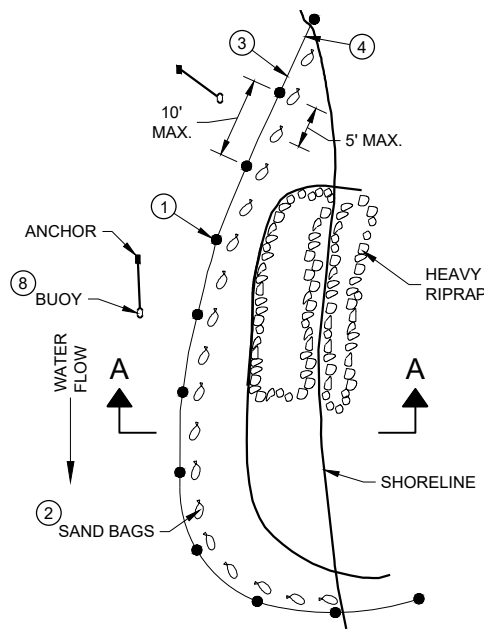


PLAN VIEW



SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW

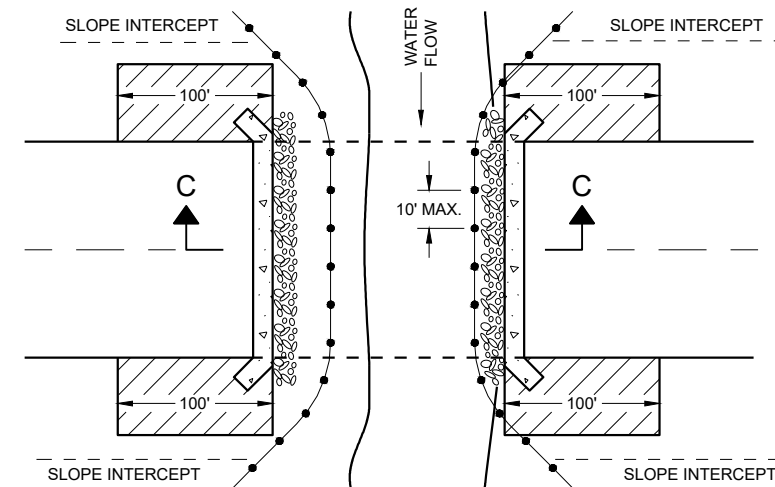
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

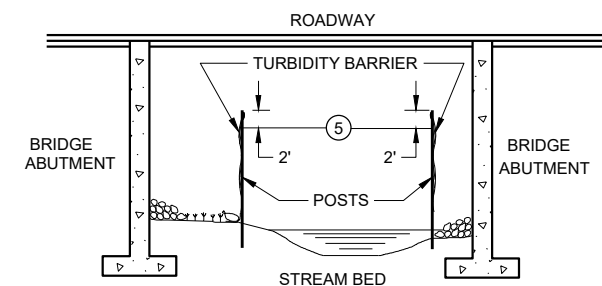
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

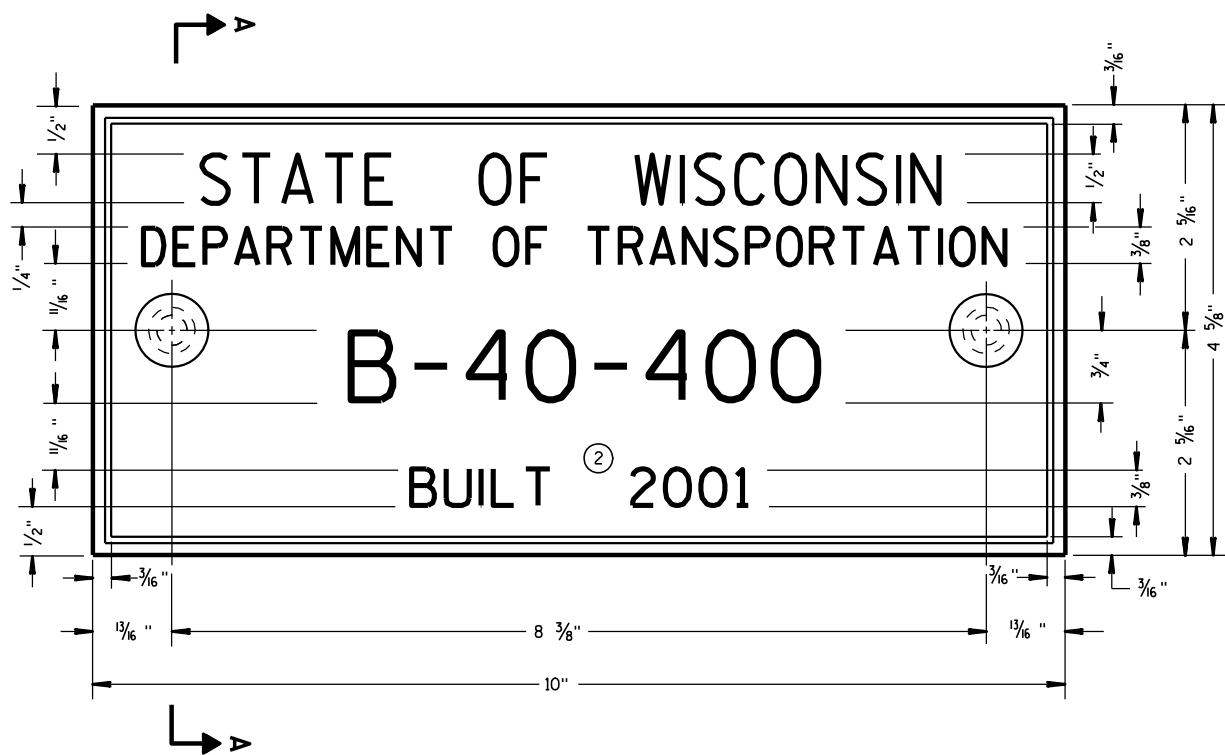
**TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES**

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



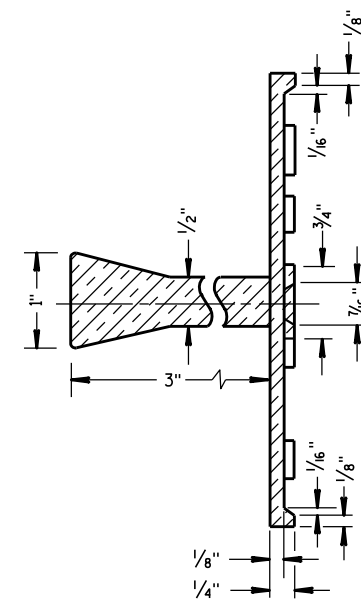
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

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.

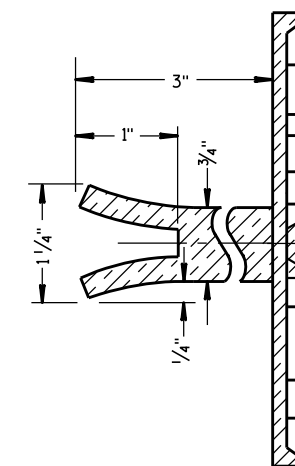
THE BRIDGE NUMBER AND YEAR BUILT SHOWN ON THIS DRAWING ARE EXAMPLES ONLY. SEE CONSTRUCTION PLANS FOR INDIVIDUAL NUMBERING AND YEAR BUILT.

- 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.

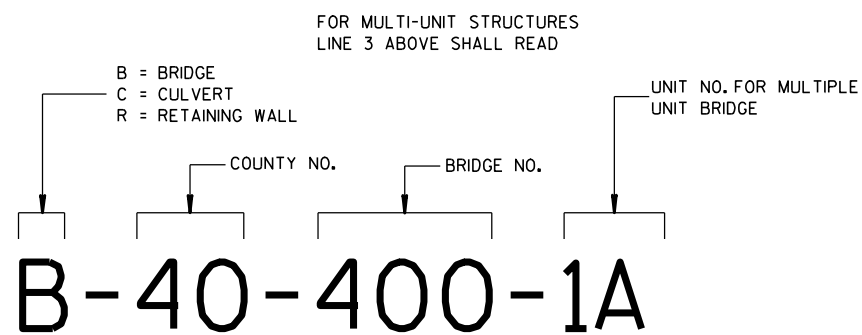


SECTION A-A

SPREAD OPEN SO THE TOP OF LUG IS 1 1/4" WIDE

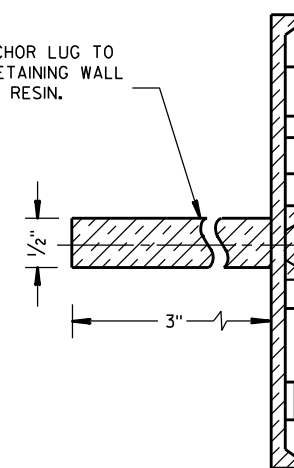


ALTERNATE LUG



**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

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

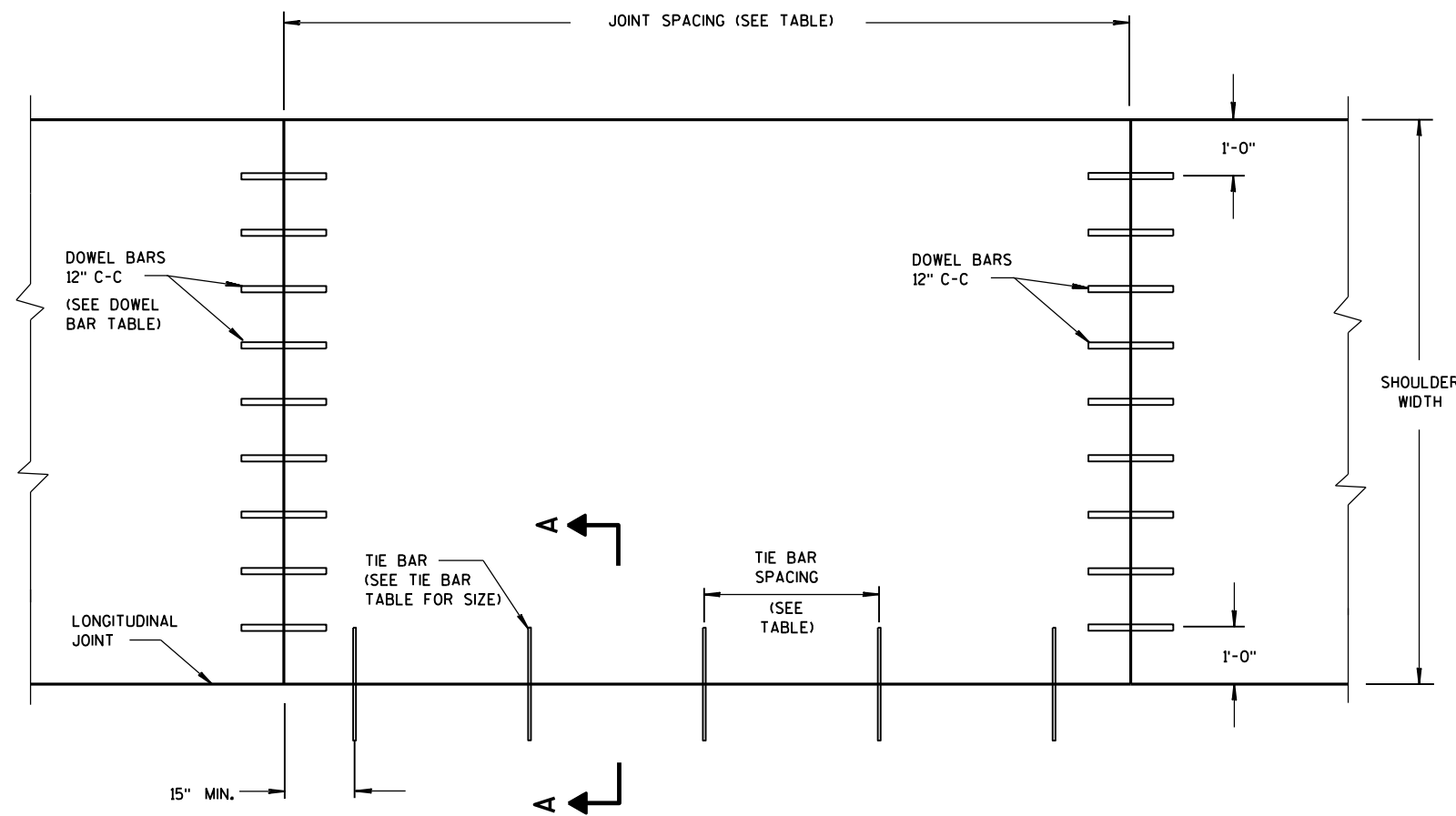


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
CONCRETE PAVEMENT SHOULDER

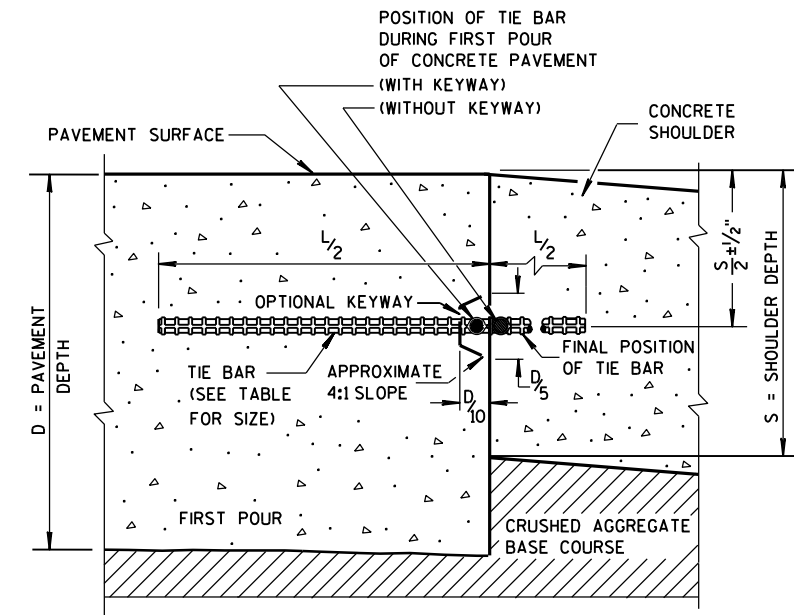
GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT

6

6

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

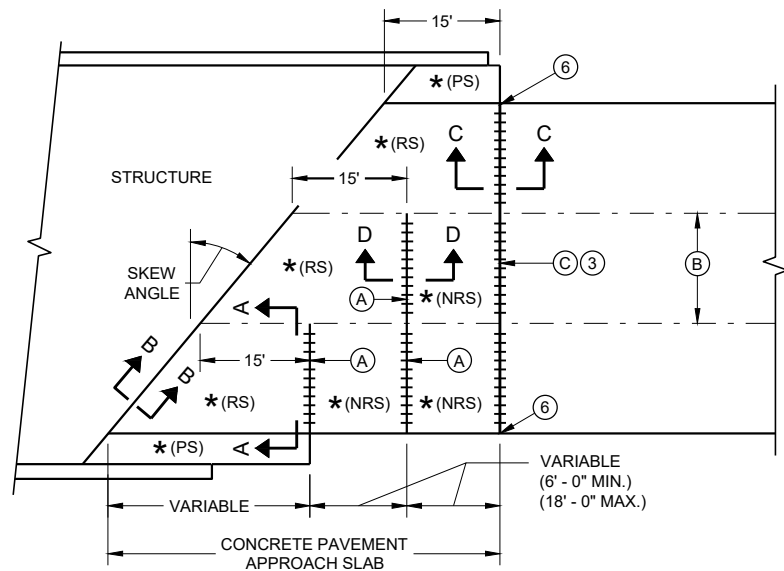
CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

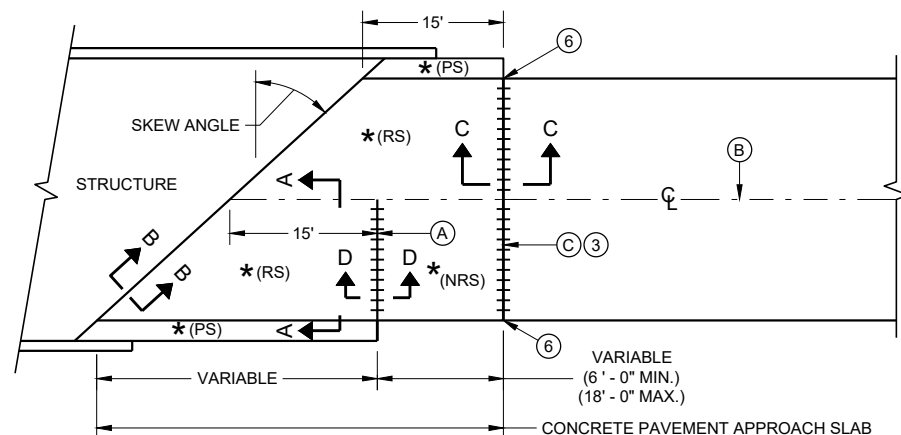
APPROVED
June, 2015 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA

S.D.D. 13 A 3-6

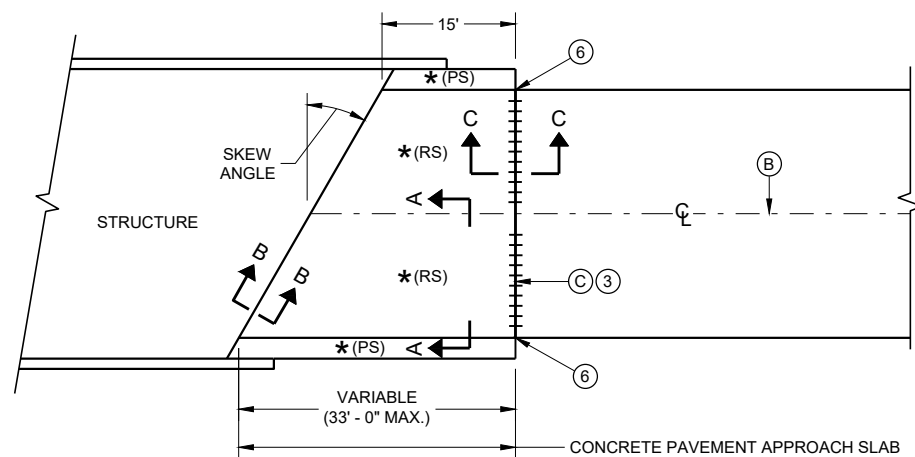
S.D.D. 13 A 3-6



**SKewed APPROACH
(PAVEMENT MORE THAN TWO LANES)**

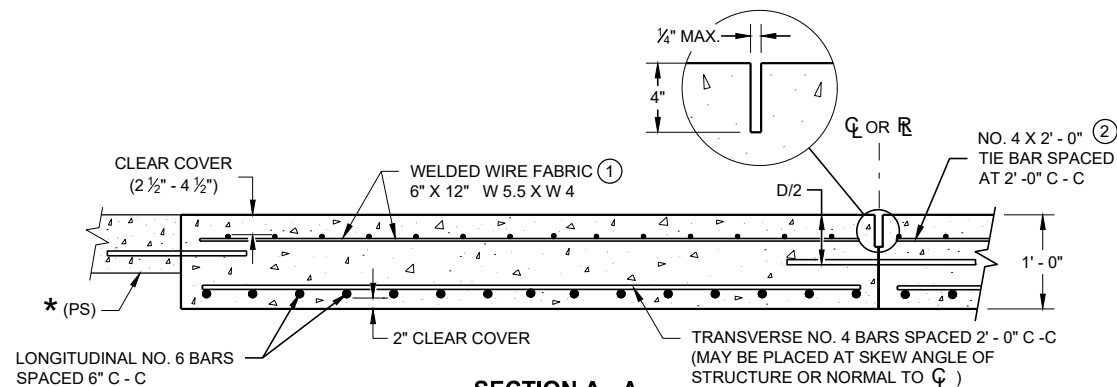


**SKews > 20°
(PAVEMENT WIDTH ≤ 30')**

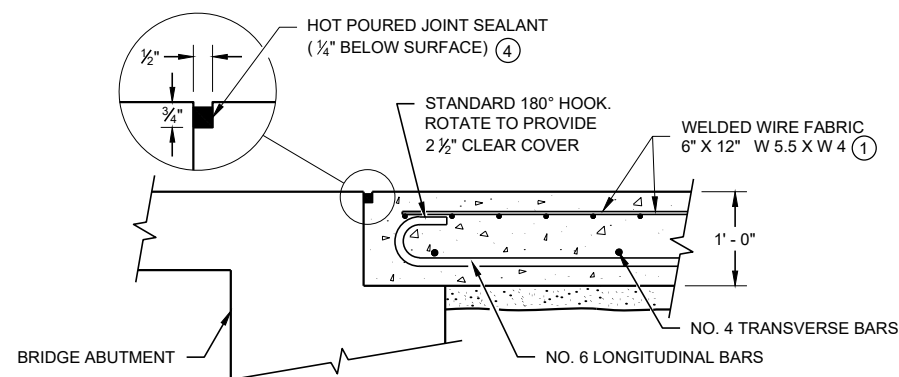


**SKews ≤ 20°
(PAVEMENT WIDTH ≤ 30')**
APPROACH SLAB AND ADJACENT PAVEMENT

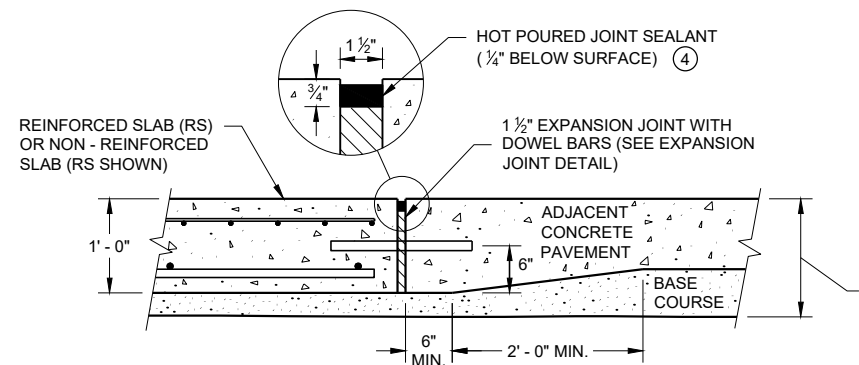
- * (RS) = REINFORCED CONCRETE SLAB
- * (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- * (NRS) = NON - REINFORCED CONCRETE SLAB
- *** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A
REINFORCEMENT POSITIONING DETAIL**



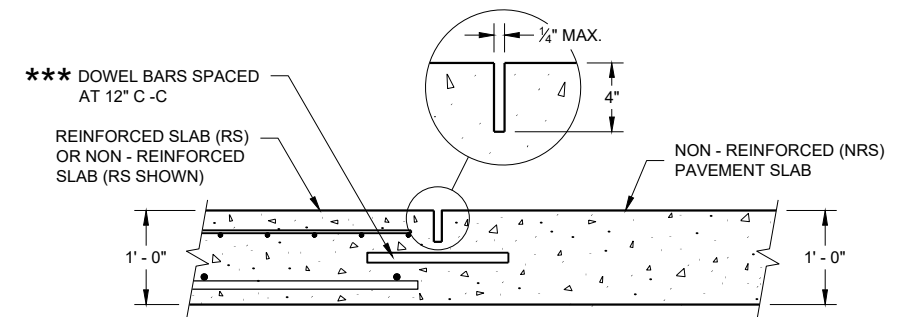
**SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT**



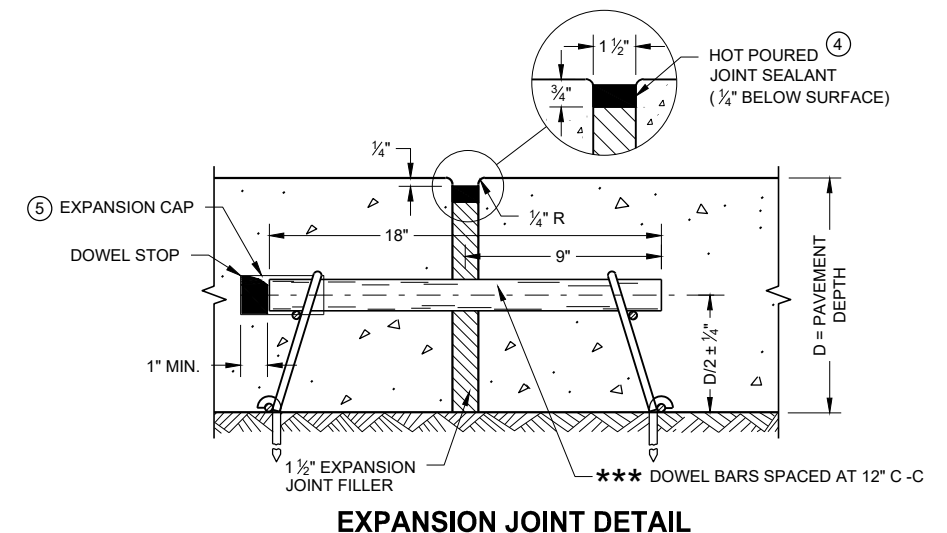
**SECTION C - C
TRANSITION DETAIL
APPROACH SLAB TO ADJACENT PAVEMENT**

GENERAL NOTES

- THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.
- TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.
- ① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0" C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
 - ② THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
 - ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
 - ④ USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
 - ⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
 - ⑥ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
 - (A) STANDARD CONTRACTION JOINT NORMAL TO \bar{C} OR \bar{R} .
 - (B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
 - (C) 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO \bar{C} OR \bar{R} .



**SECTION D - D
CONTRACTION JOINT**



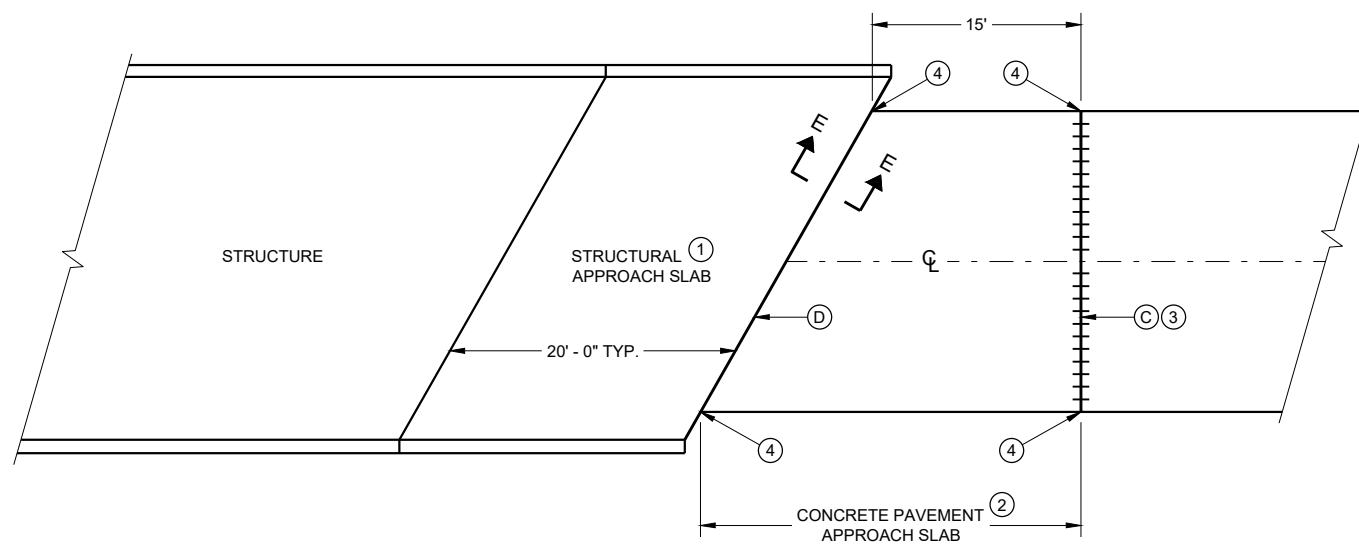
EXPANSION JOINT DETAIL

**CONCRETE PAVEMENT
APPROACH SLAB**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Peter Kemp, P.E.
DATE DATE PAVEMENT SUPERVISOR

FHWA

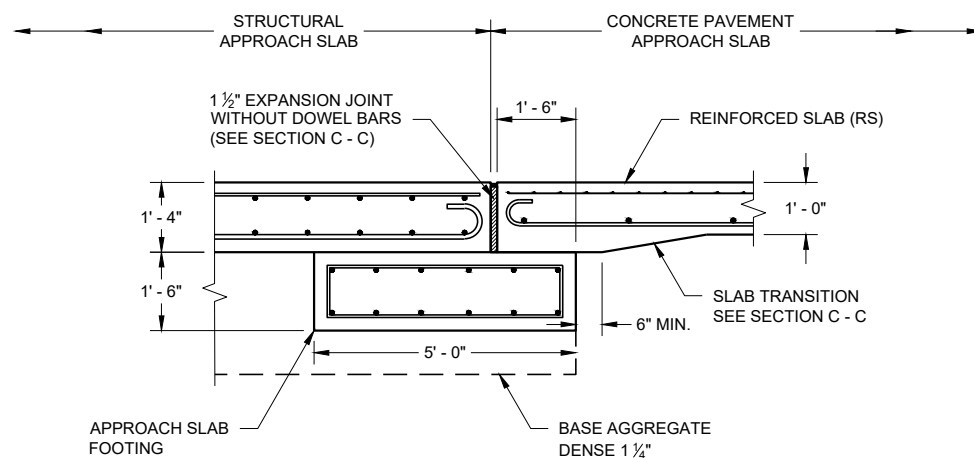


GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

- ① SEE BRIDGE PLAN.
- ② CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS
- ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- ④ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
- Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO CL OR RL .
- Ⓓ 1½" EXPANSION JOINT (NO DOWELS)

BRIDGE APPROACHES

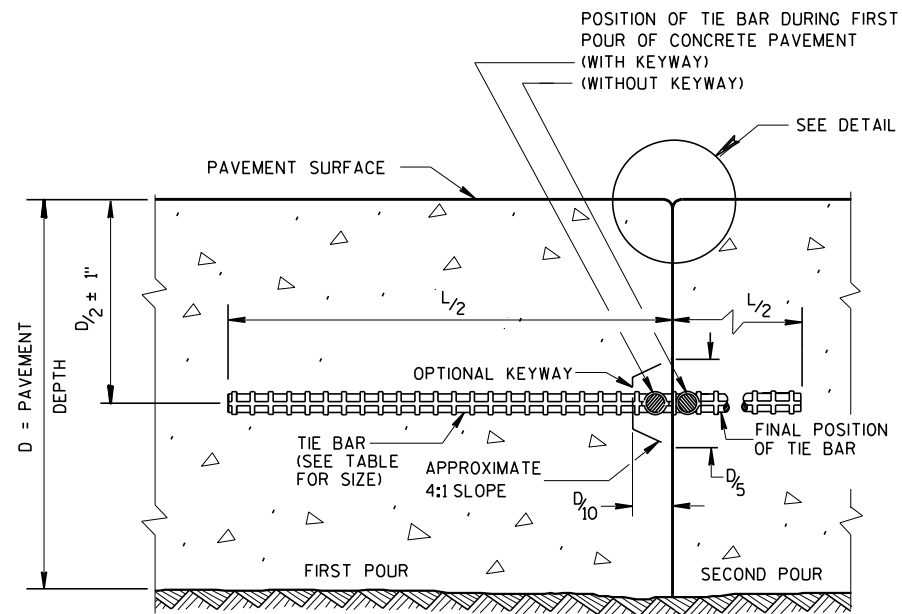


**SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH**

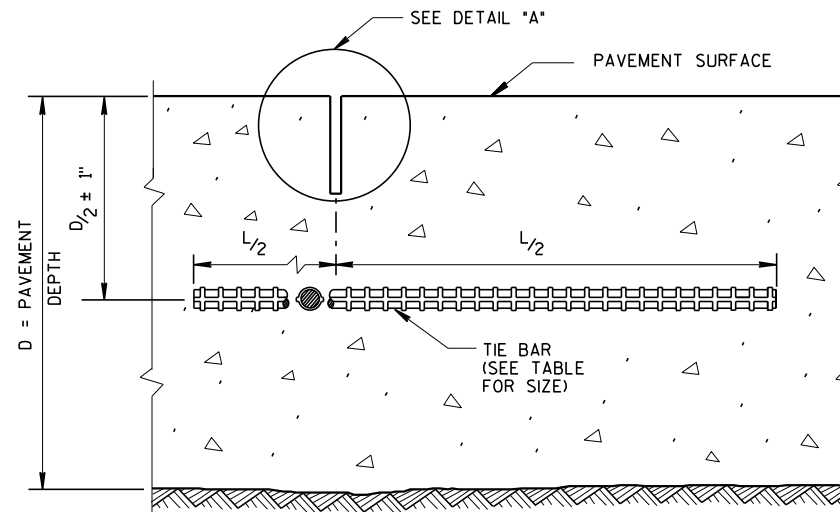
**STRUCTURAL APPROACH SLAB
AND CONCRETE PAVEMENT
APPROACH SLAB**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Peter Kemp P.E.
DATE PAVEMENT SUPERVISOR
FHWA



CONSTRUCTION JOINT



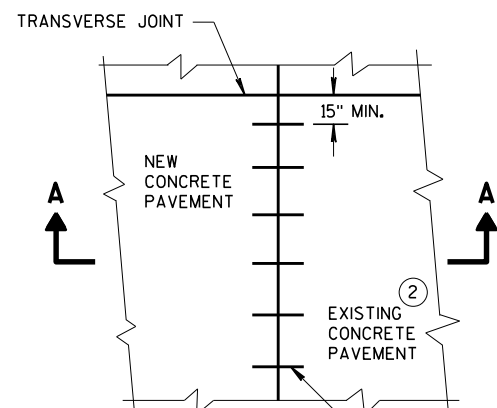
SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

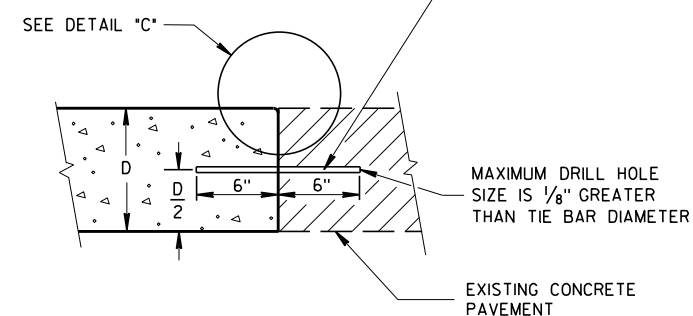
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

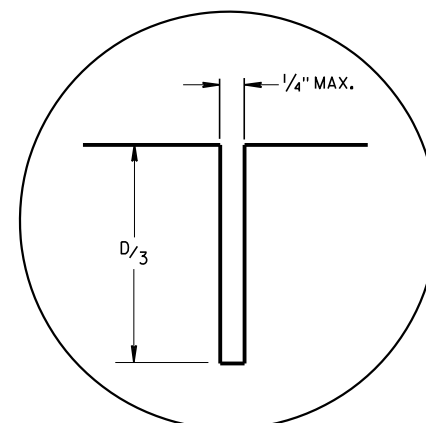


PLAN VIEW

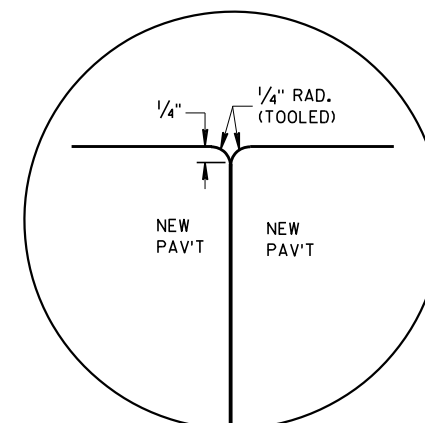
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



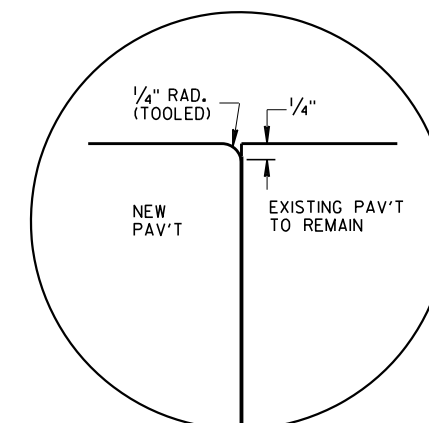
**SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT**



DETAIL "A"



DETAIL "B"



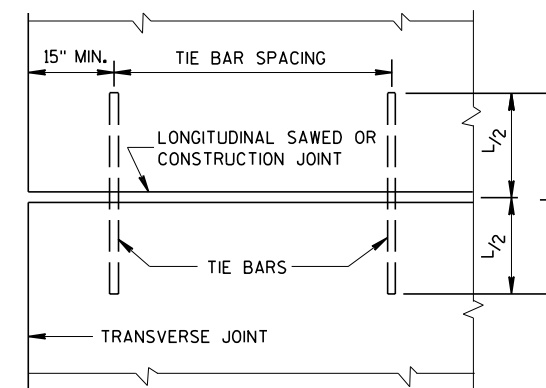
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

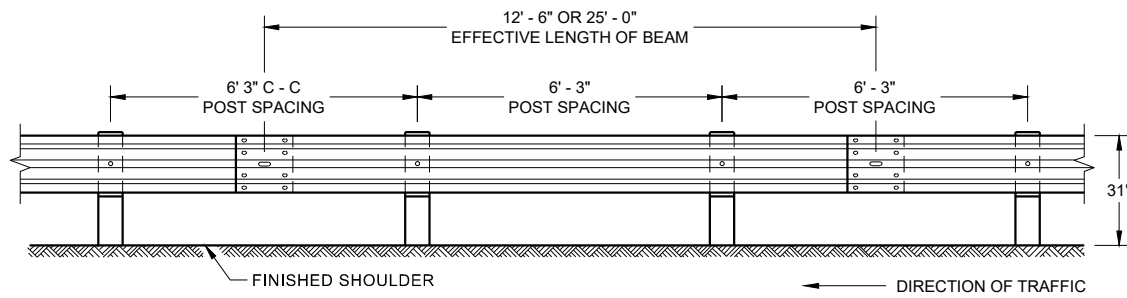


**PLAN VIEW
SHOWING LOCATION OF TIE BARS**

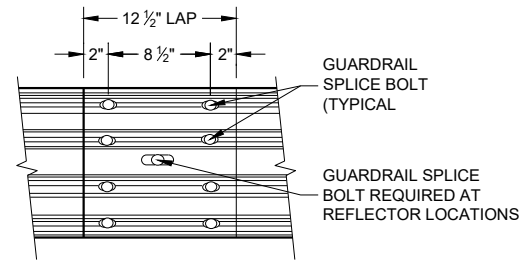
**CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA



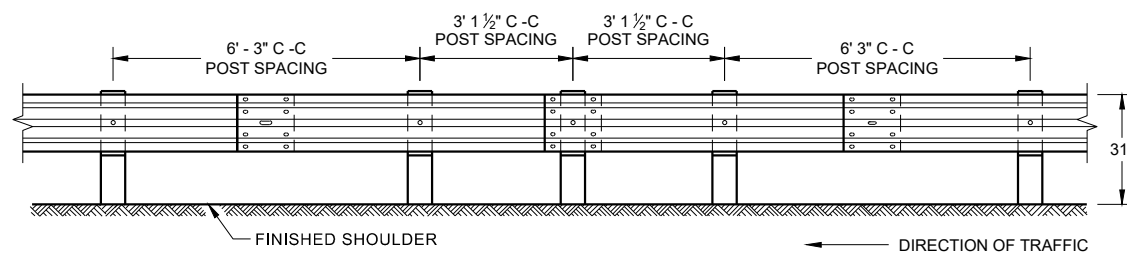
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



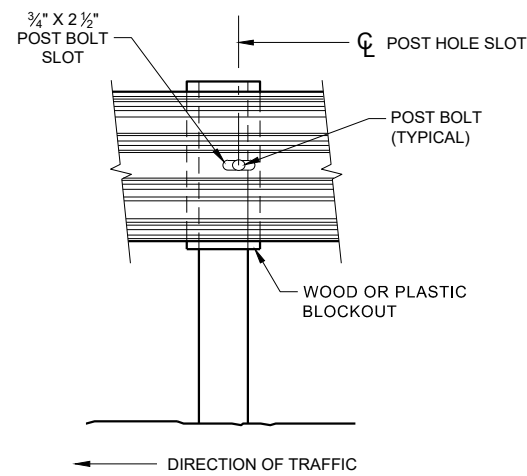
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

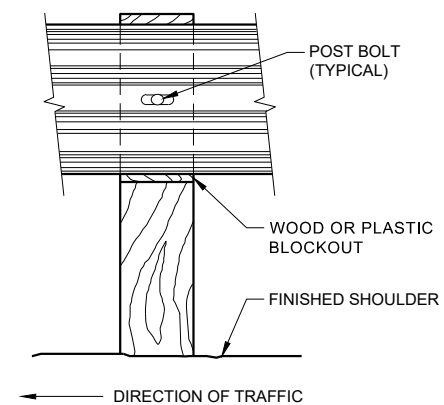
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER 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.



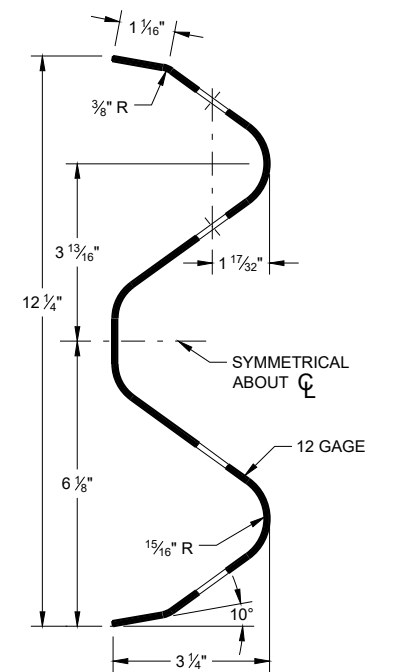
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



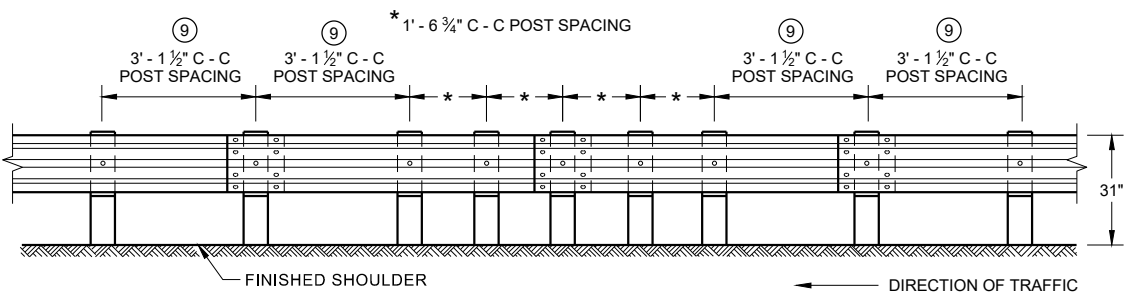
FRONT VIEW AT STEEL POST



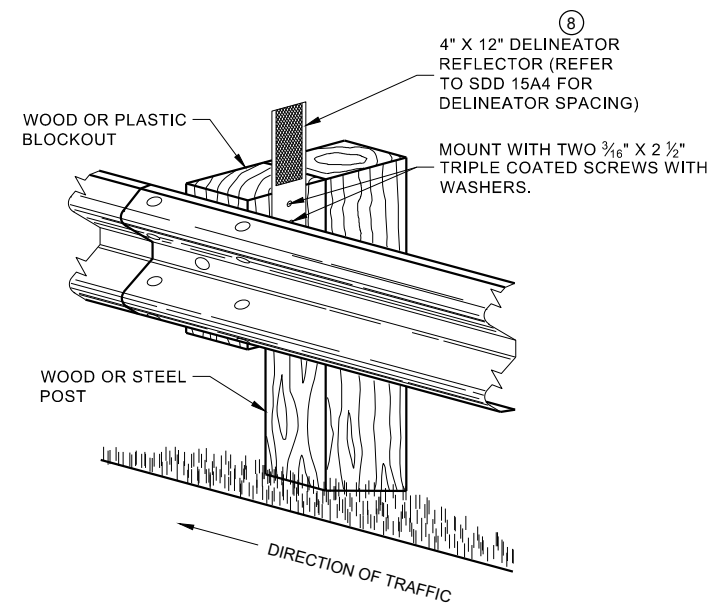
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



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



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

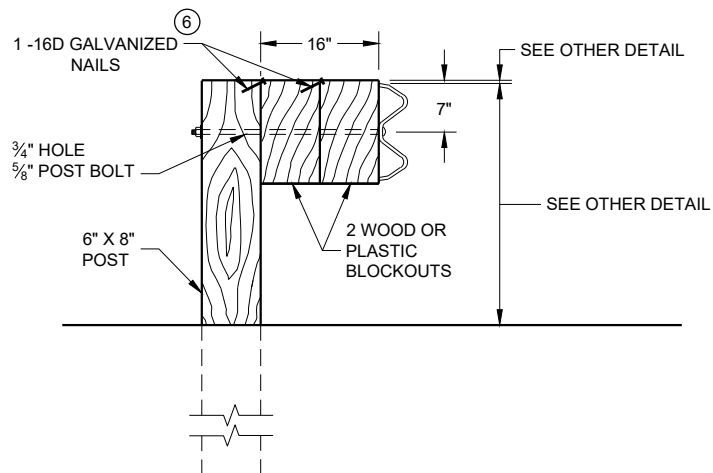
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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SDD 14B42 - 07b

SDD 14B42 - 07b

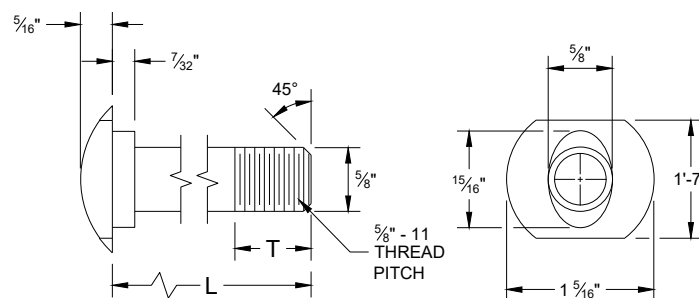


DETAIL FOR 16" BLOCKOUT DEPTH

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.

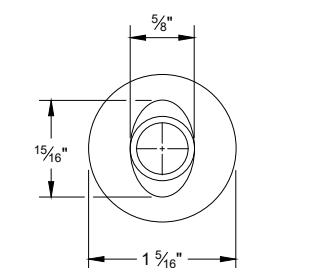
NOTE:

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.

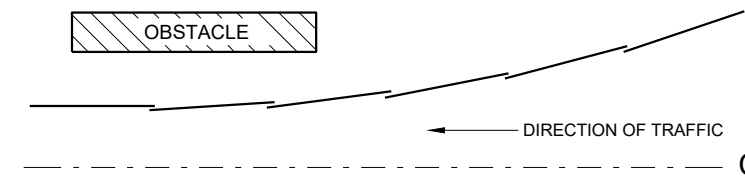


POST BOLT TABLE

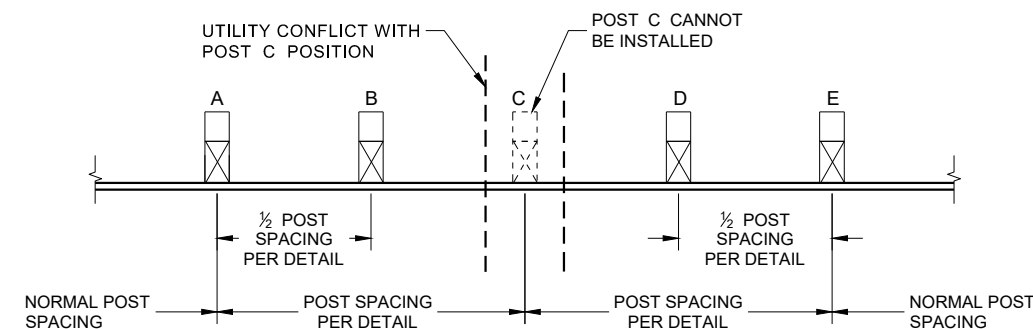
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



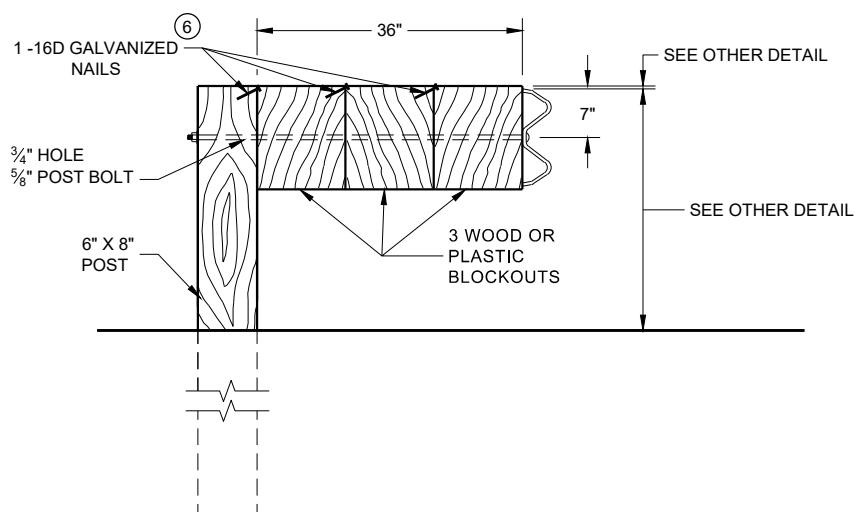
ALTERNATE BOLT HEAD



**PLAN VIEW
BEAM LAPPING DETAIL**

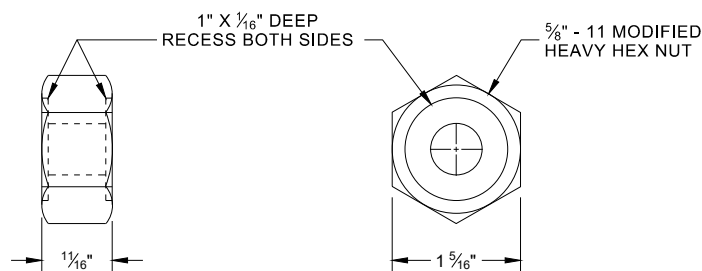


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

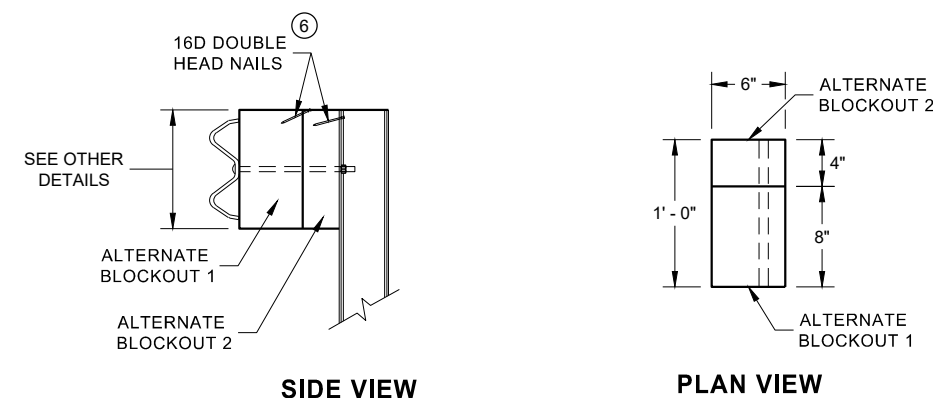


DETAIL FOR 36" BLOCKOUT DEPTH

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**

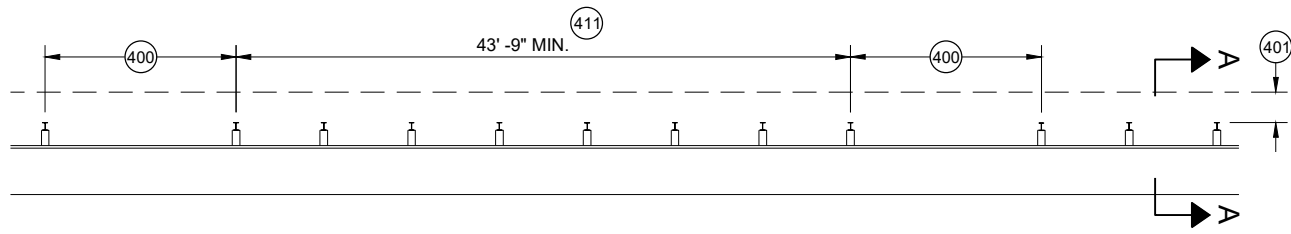


**ALTERNATE WOOD
BLOCKOUT DETAIL**

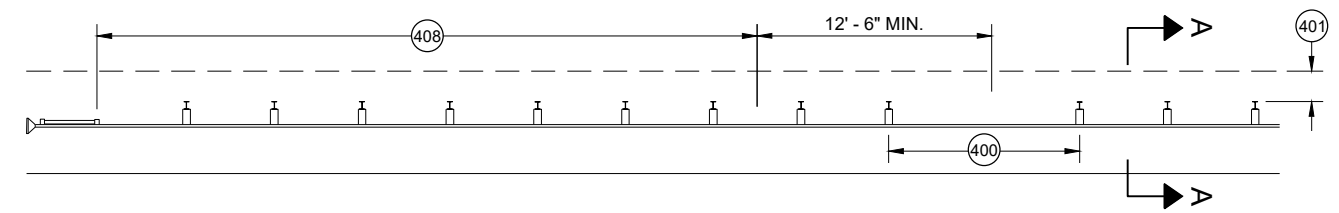
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

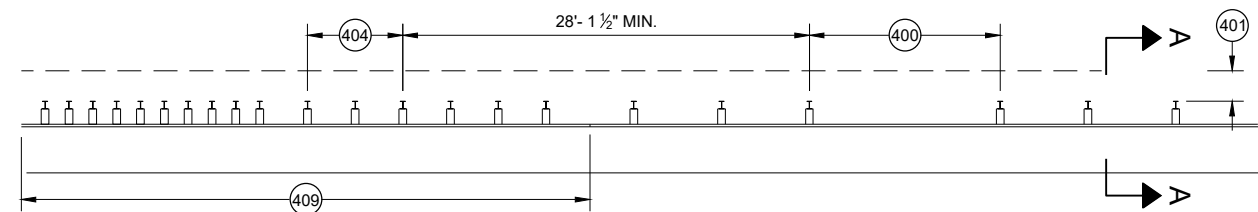
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



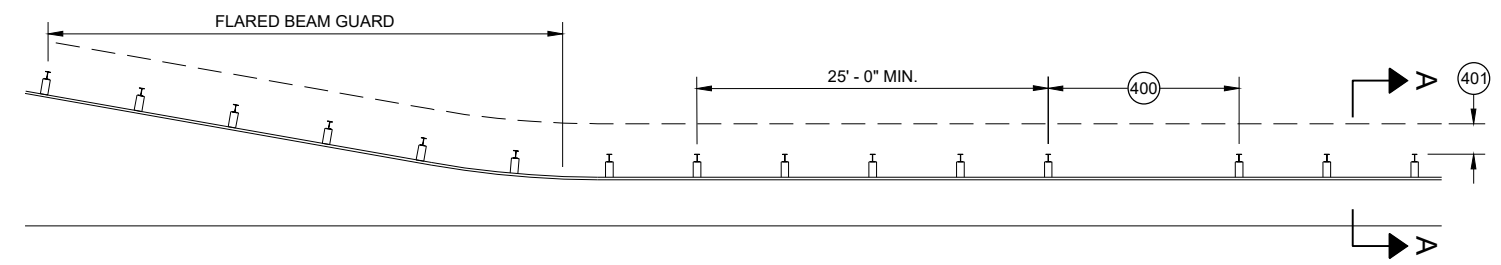
MISSING POST IN MGS GUARDRAIL



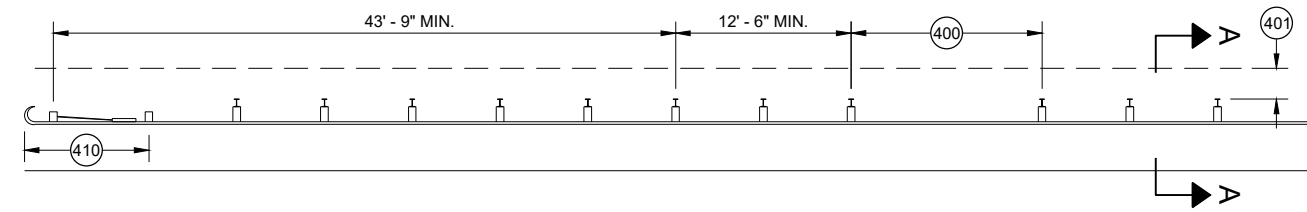
MISSING POST IN MGS GUARDRAIL NEAR EAT



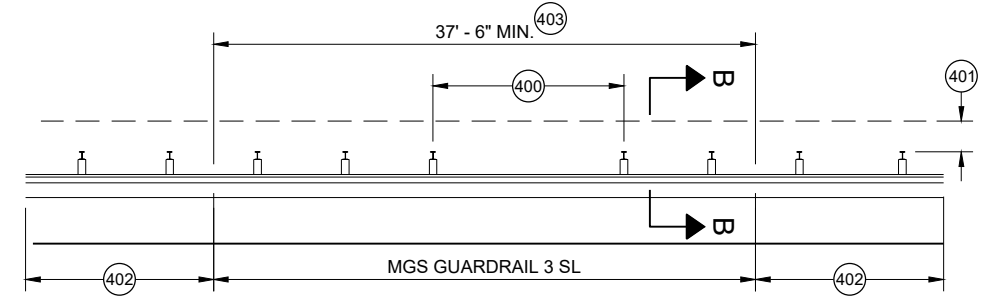
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

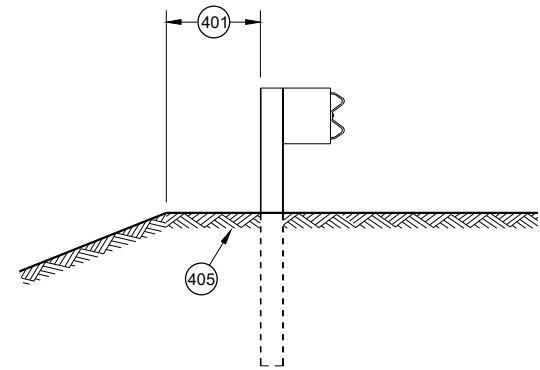


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

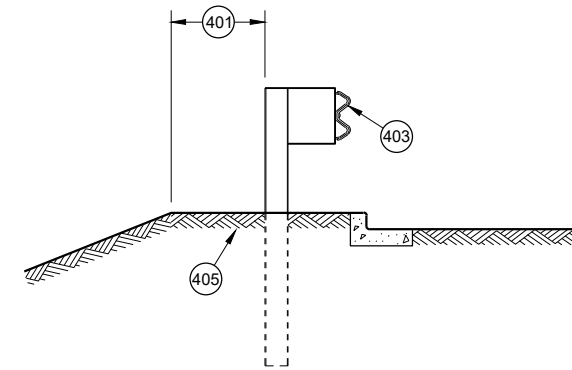


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- 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.

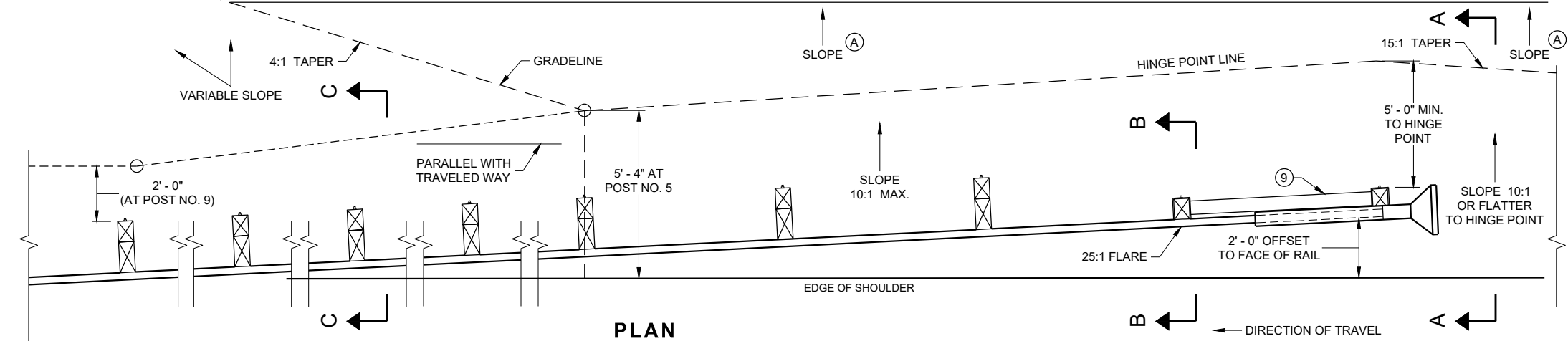
* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

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

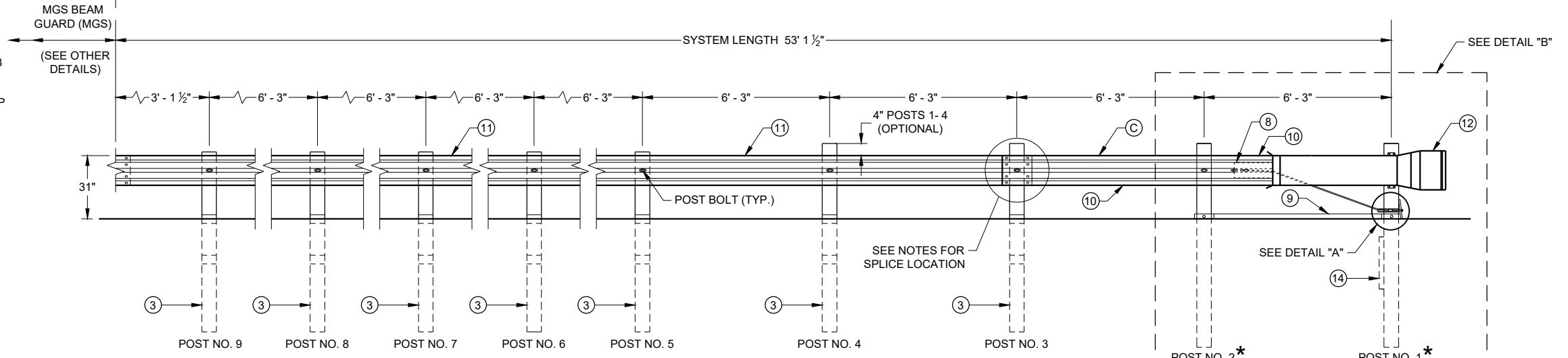
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

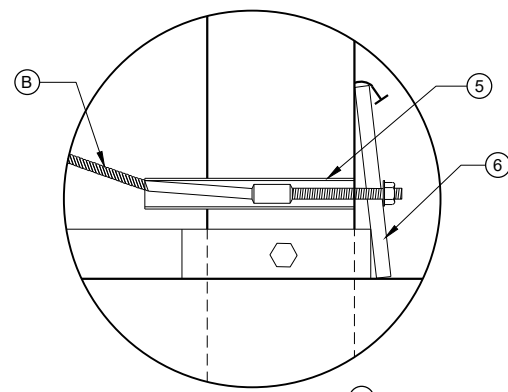
CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



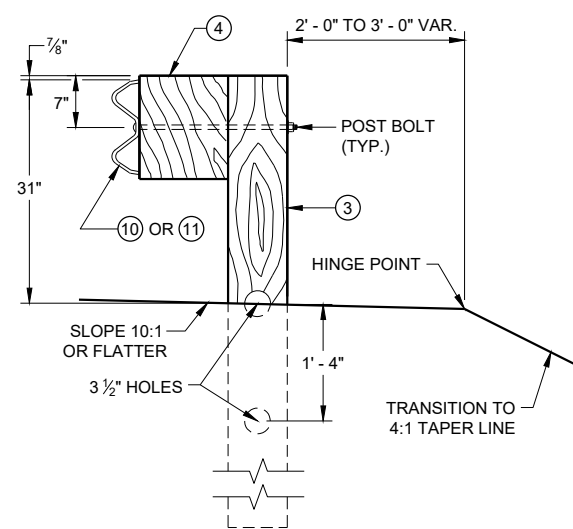
PLAN



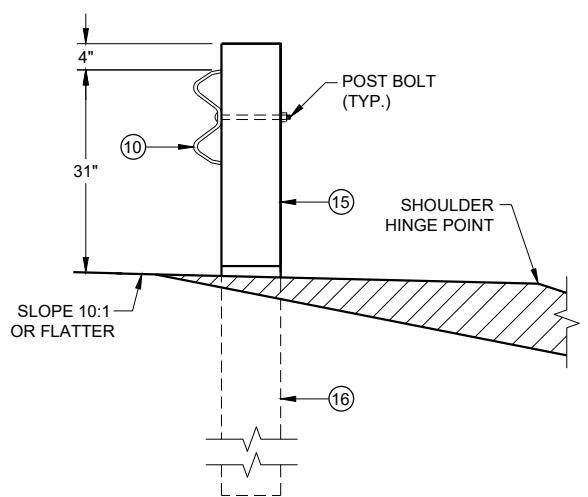
ELEVATION



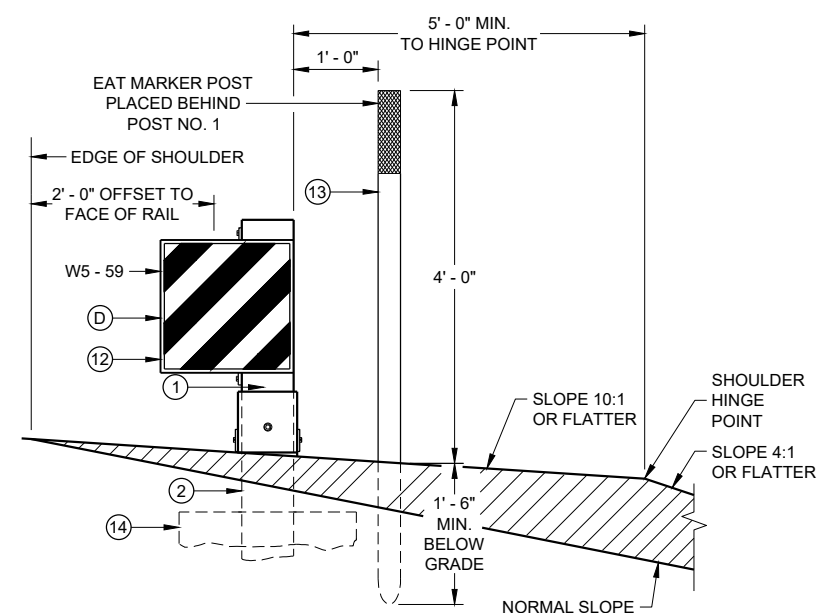
DETAIL "A"



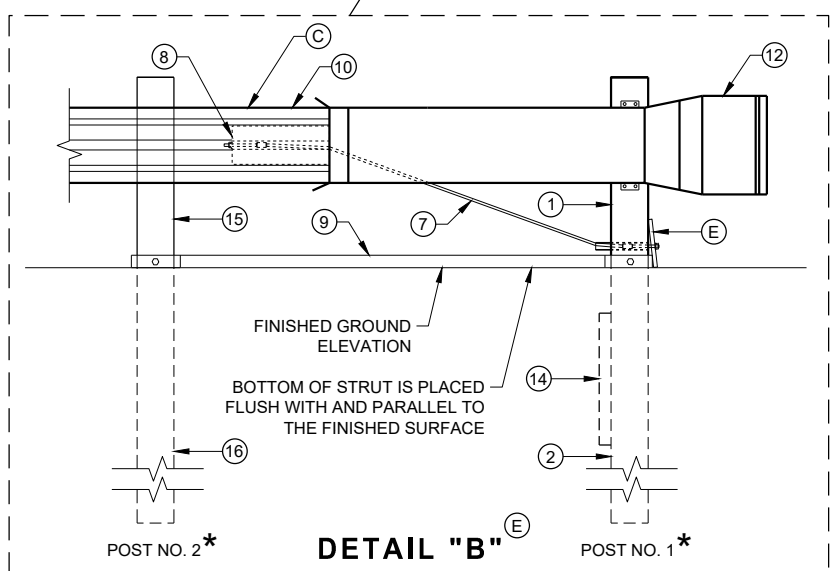
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



**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

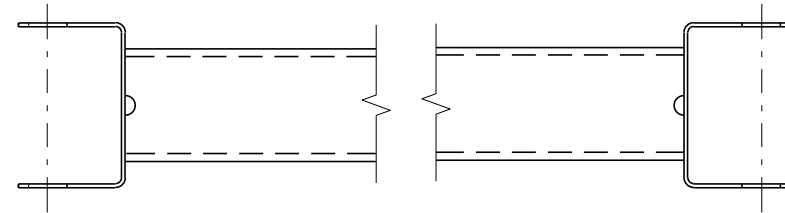
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SDD 14B44 - 04a

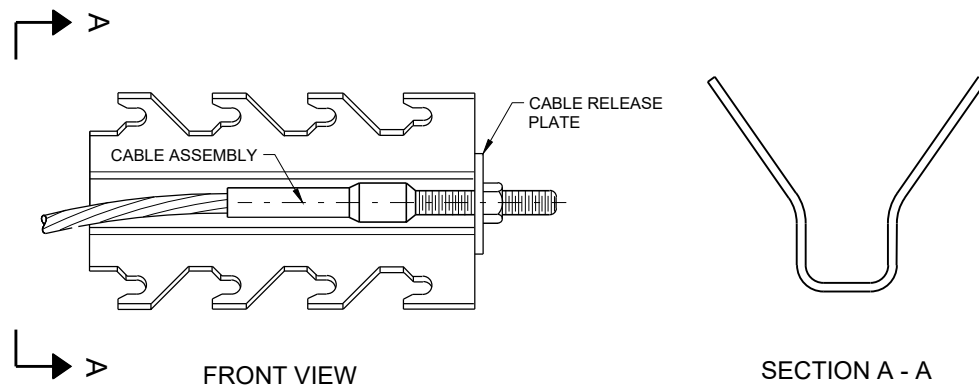
SDD 14B44 - 04a

BILL OF MATERIALS

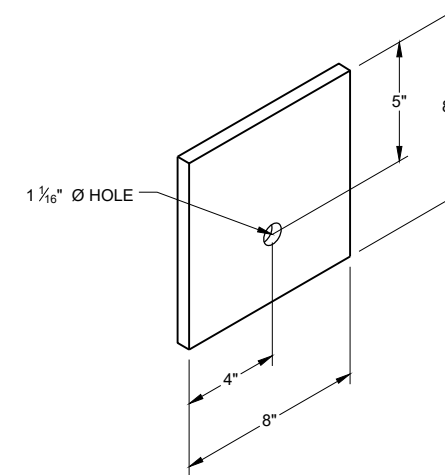
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL 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



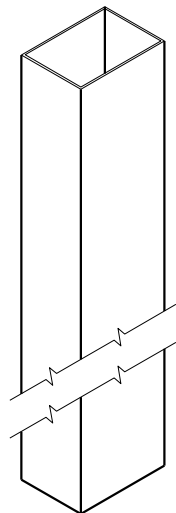
GENERIC GROUND STRUT ⑨ ⑤



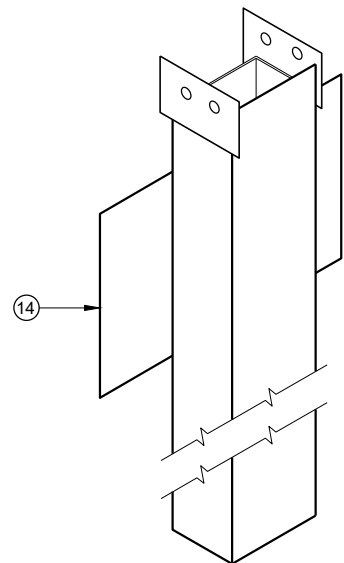
GENERIC ANCHOR CABLE BOX ⑨ ⑤



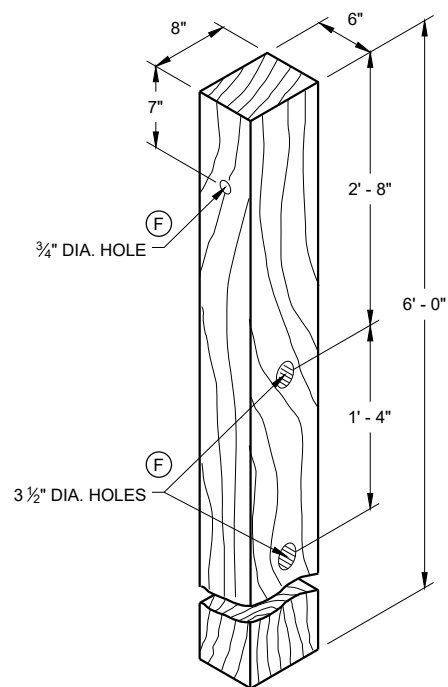
BEARING PLATE ⑥ ⑤



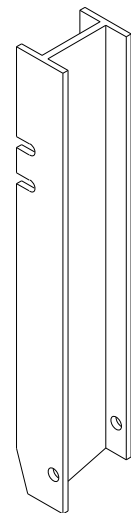
UPPER POST NO. 1 ⁽¹⁾ (E)



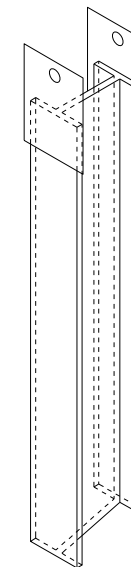
LOWER POST NO. 1 ⁽²⁾ (E)



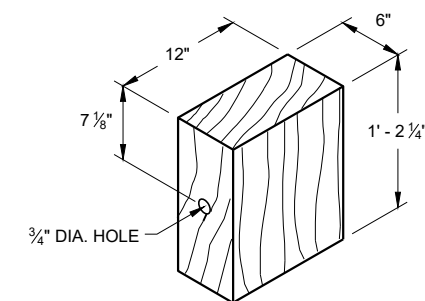
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

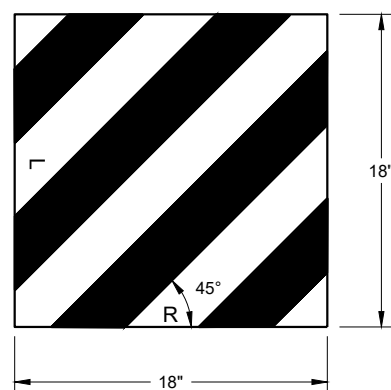


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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

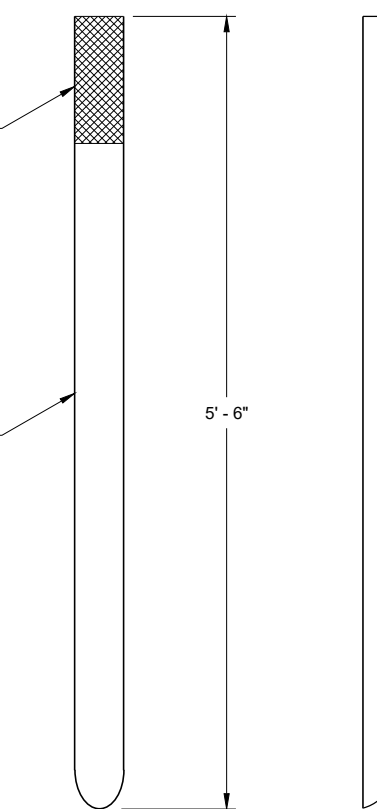
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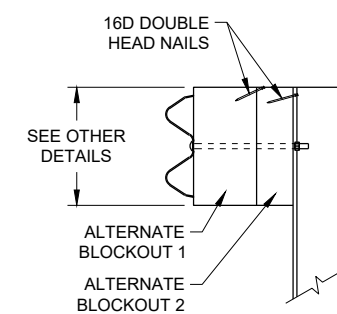
REFLECTIVE SHEETING DETAIL ^(E)

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

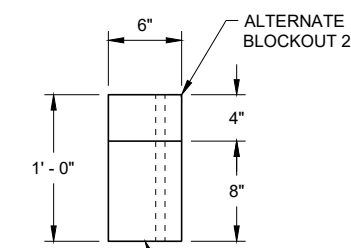
E.A.T. MARKER
POST (YELLOW)



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



SIDE VIEW



TOP VIEW

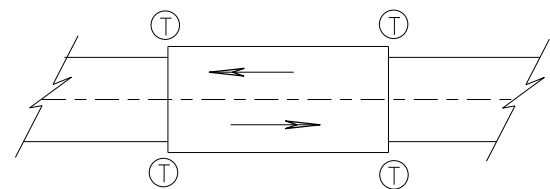
ALTERNATE WOOD
BLOCKOUT DETAIL

6

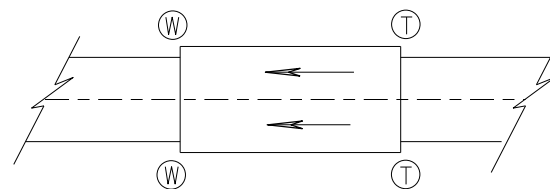
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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.

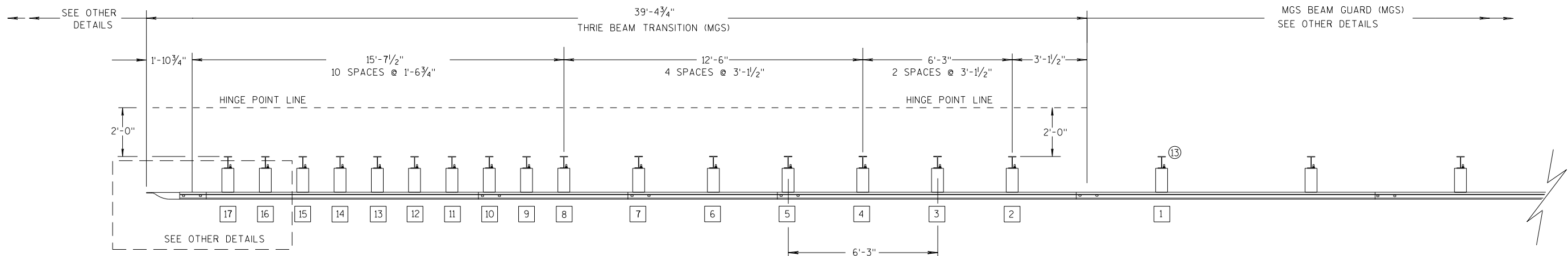
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

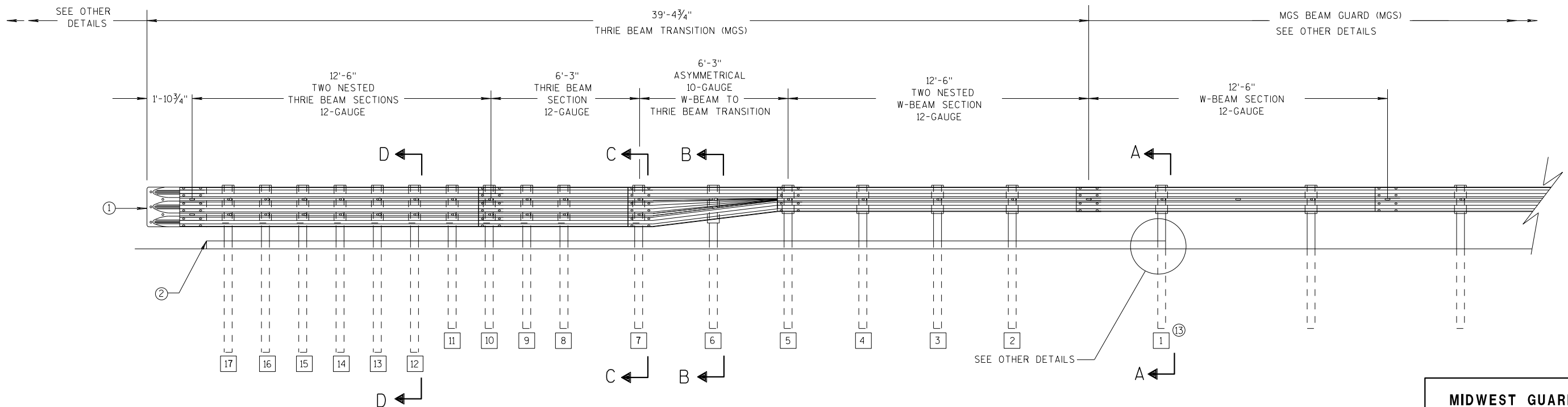
① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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

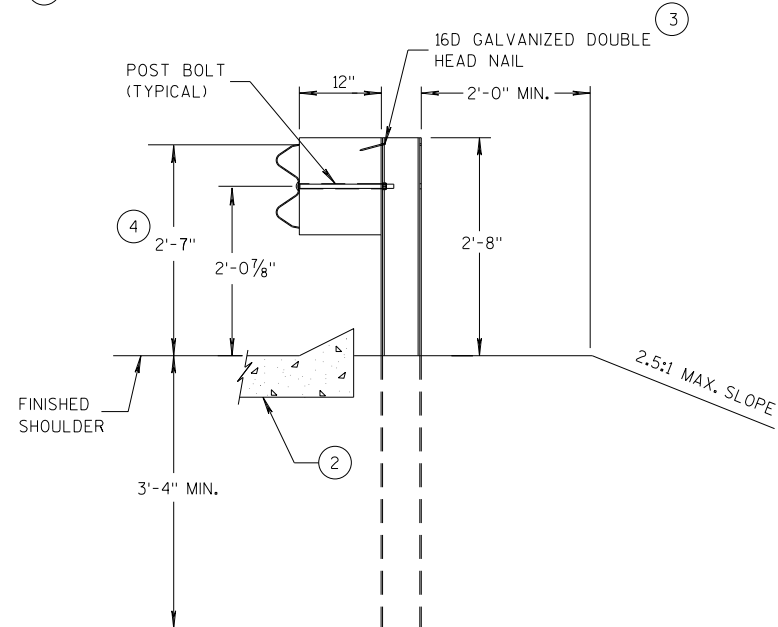
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION

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

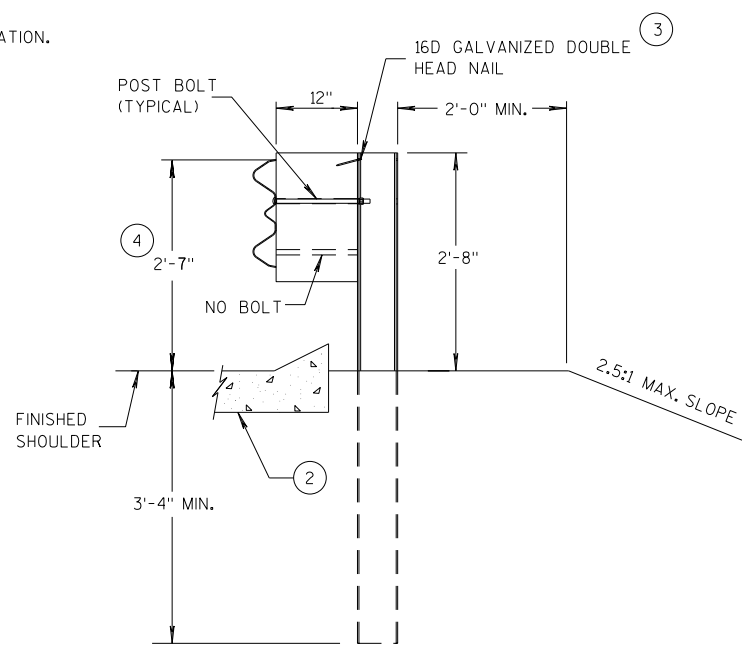
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

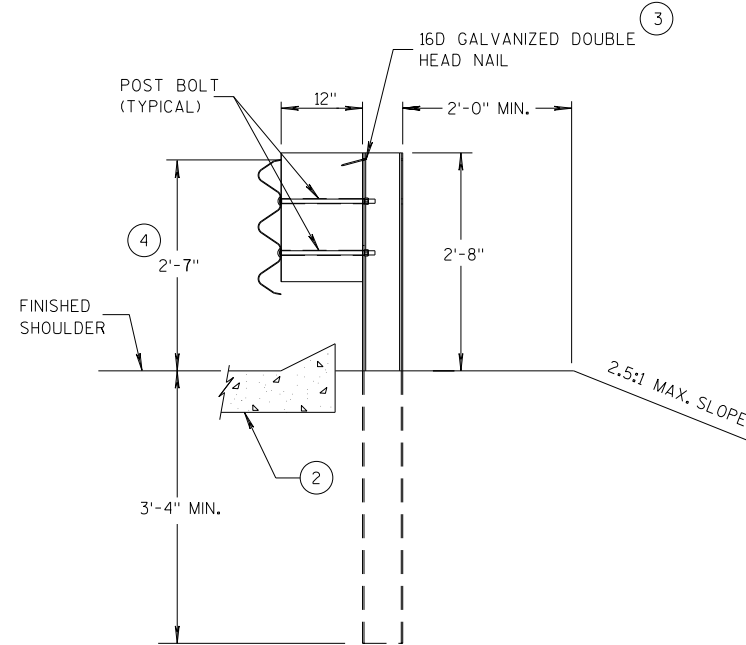
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".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



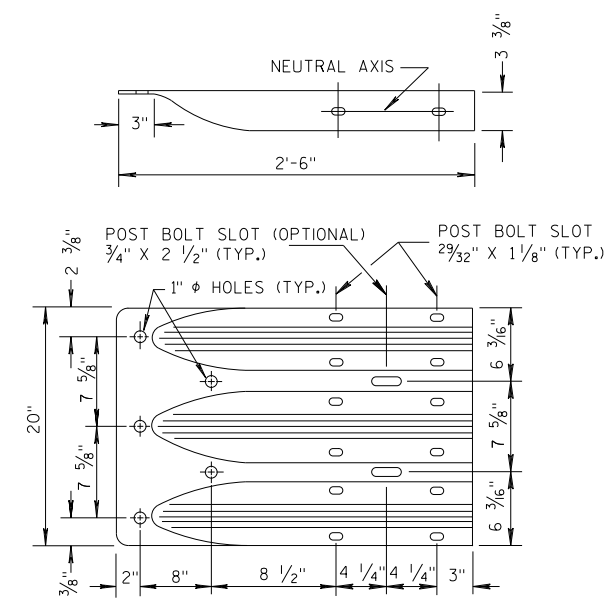
**SECTION A-A
POSTS 1-5**



**SECTION B-B
POST 6**



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



**THRIE BEAM
TERMINAL CONNECTOR**

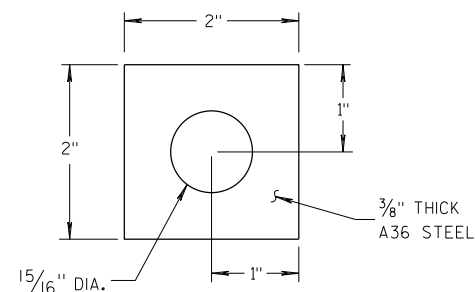
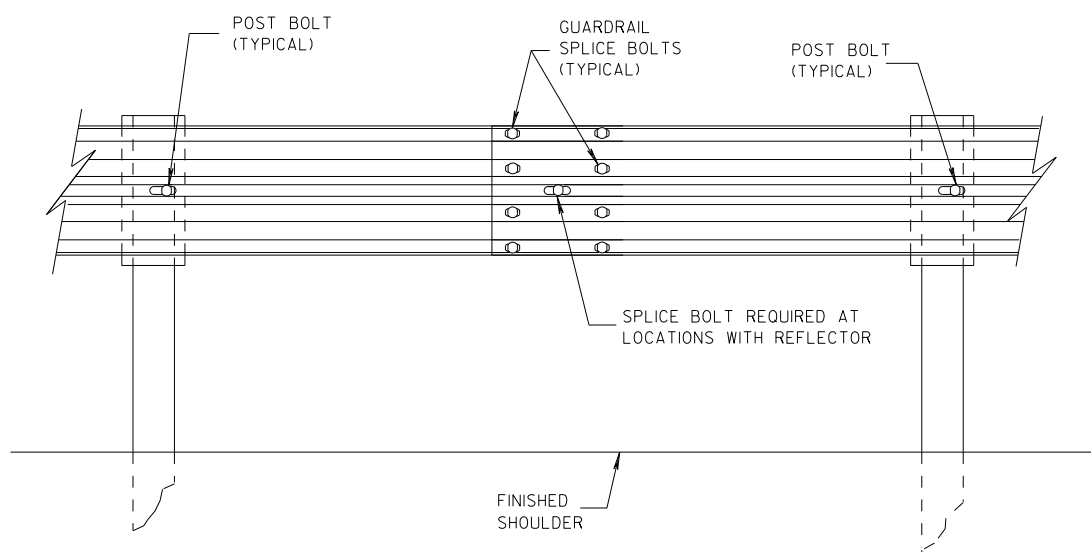
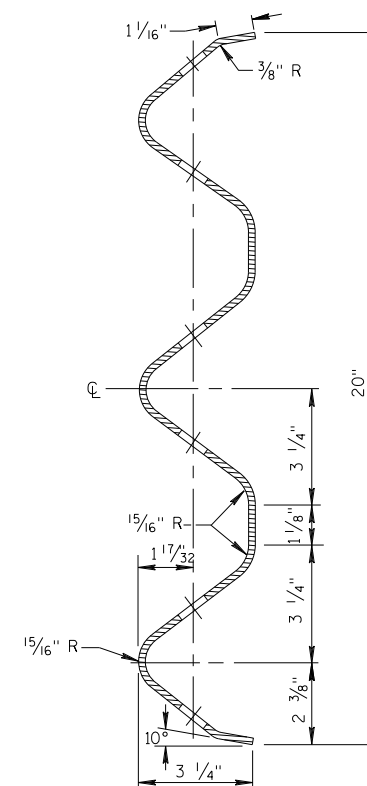


PLATE WASHER DETAIL



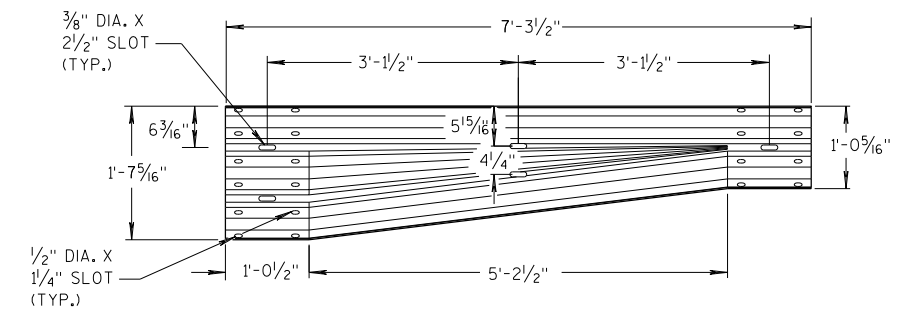
SPLICE DETAIL



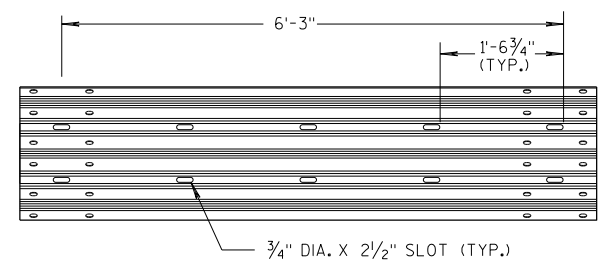
**SECTION THRU THRIE
BEAM RAIL ELEMENT**

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

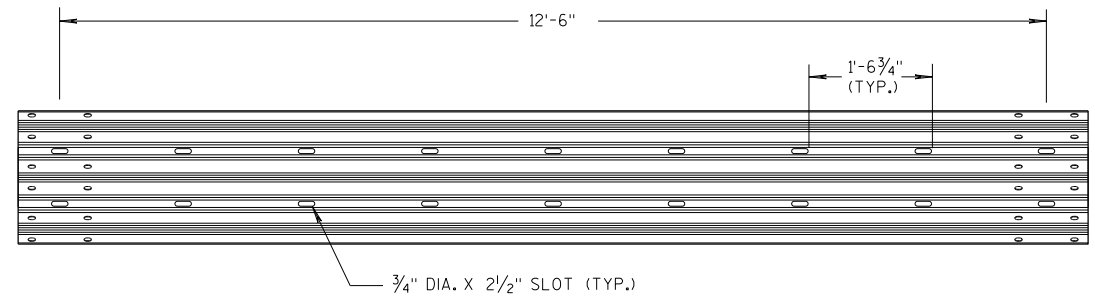
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



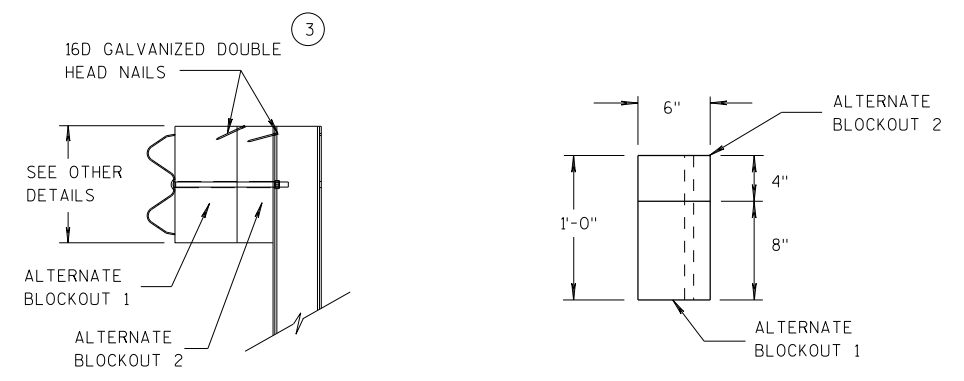
W-BEAM TO THRIE BEAM TRANSITION SECTION



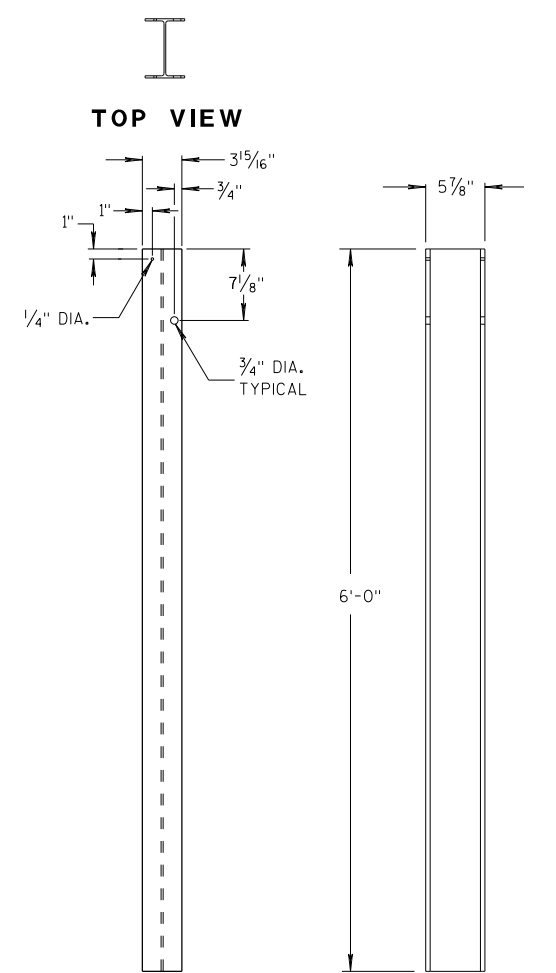
6'-3\"/>



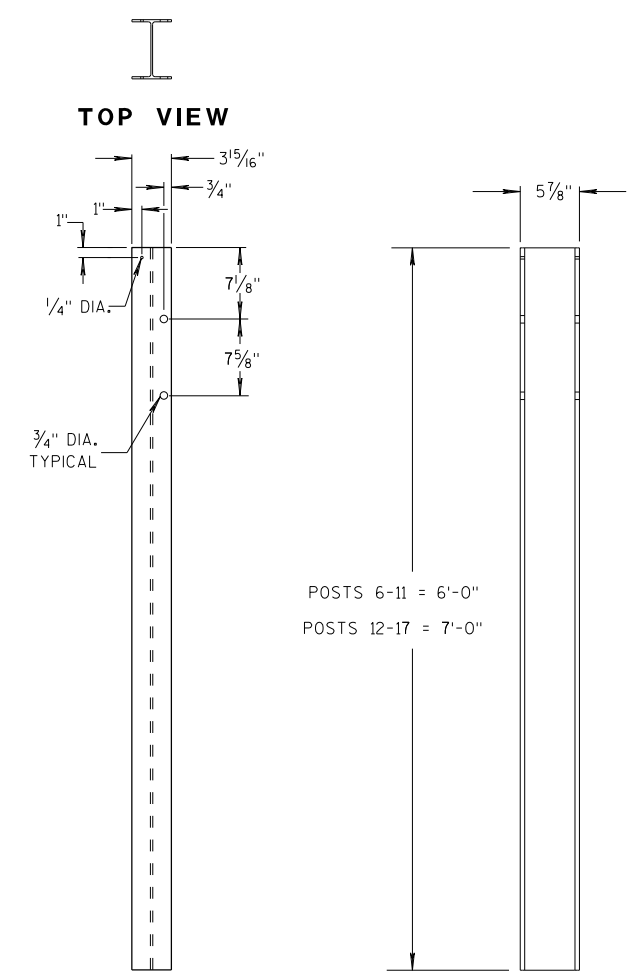
12'-6\"/>



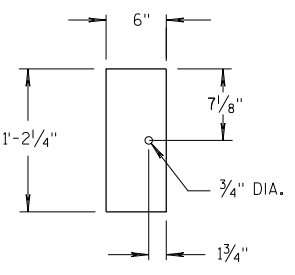
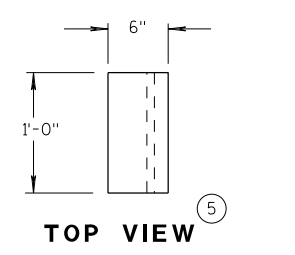
ALTERNATE WOOD BLOCKOUT DETAIL



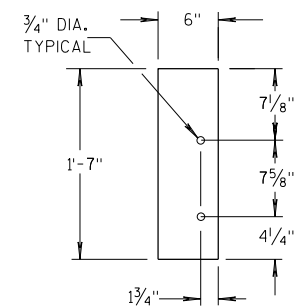
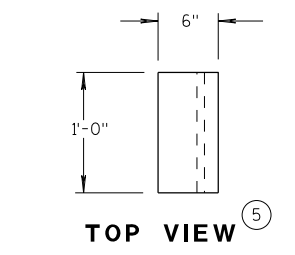
STEEL POSTS 1-5



STEEL POSTS 6-17



BLOCKOUT POSTS 1-5



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)**

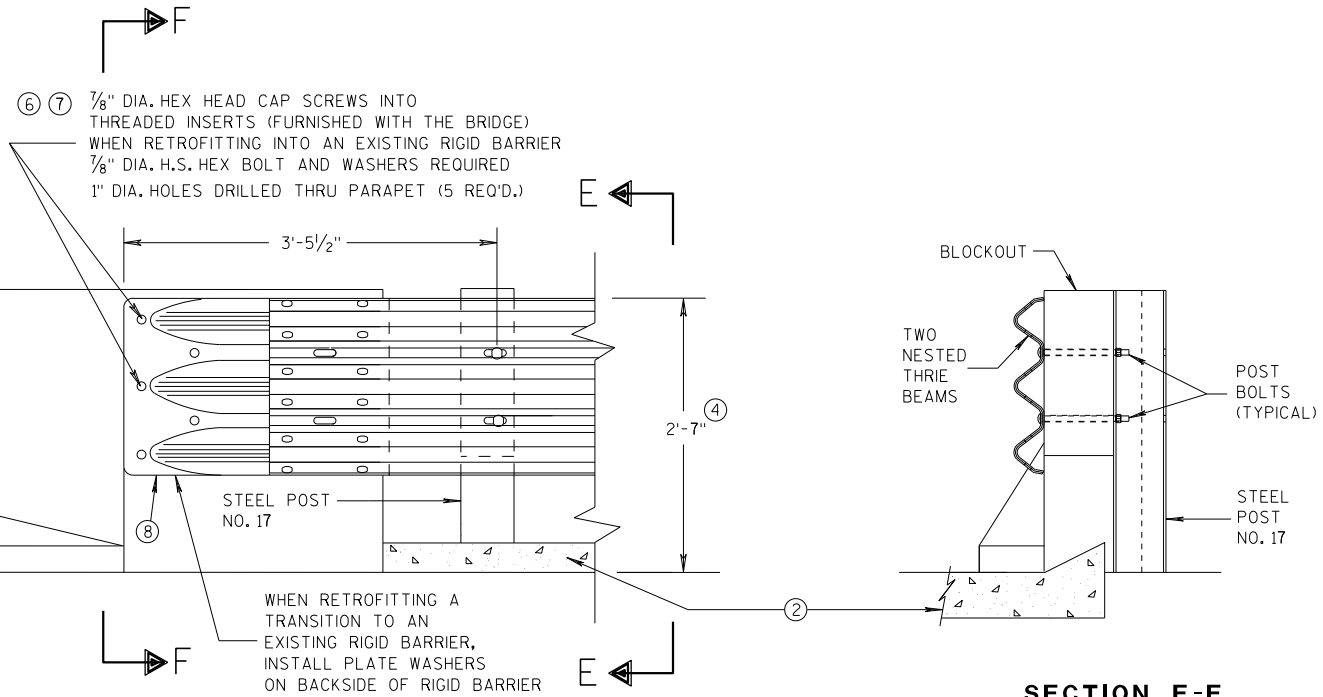
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

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

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



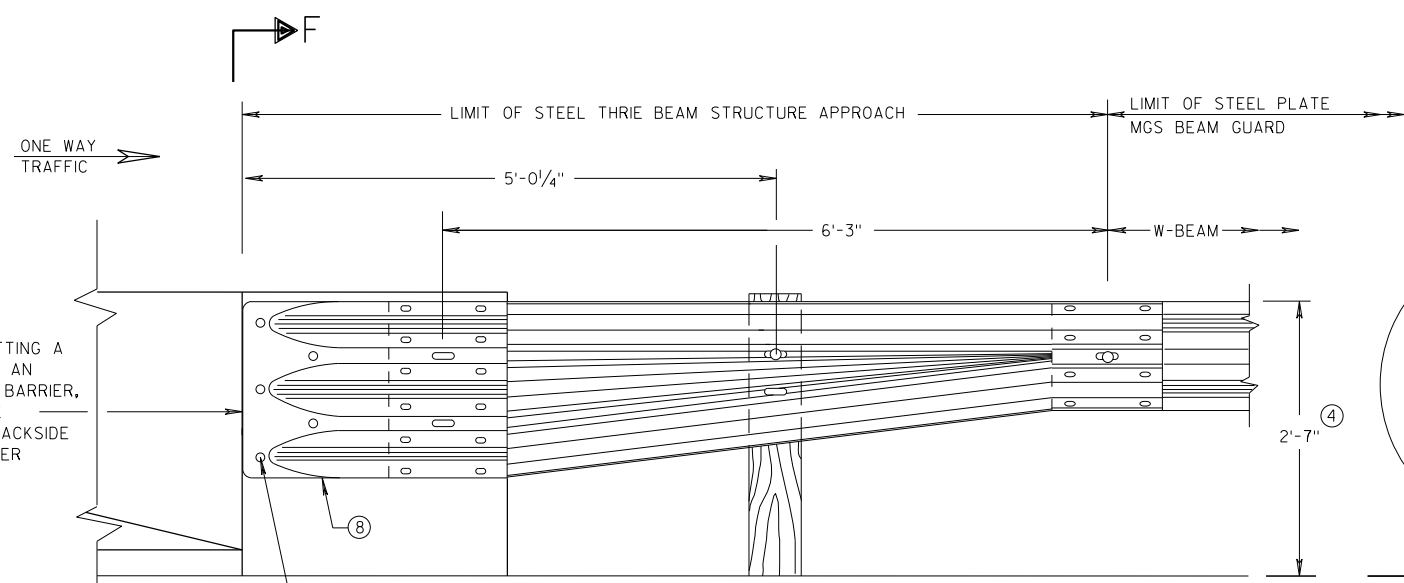
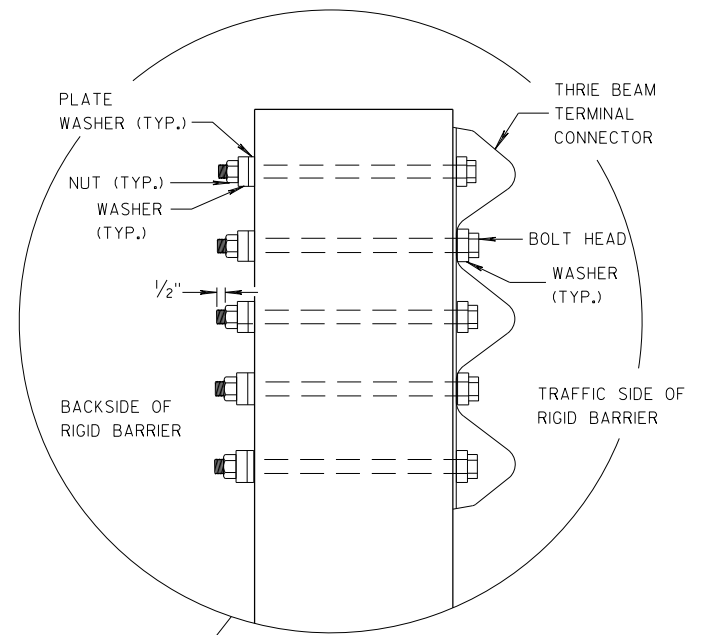
FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

SECTION E-E

GENERAL NOTES

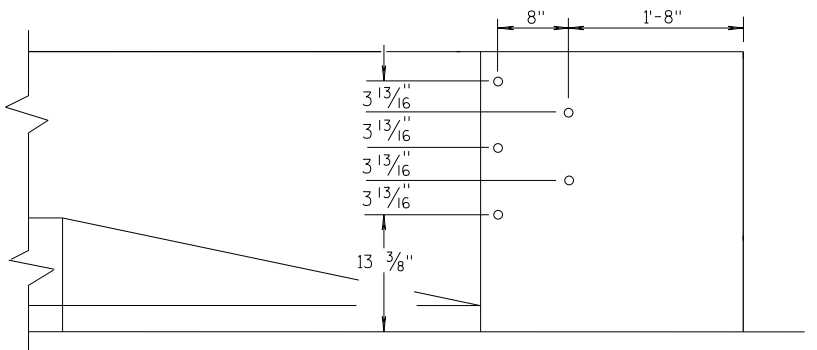
- THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.
- (2) OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
 - (4) TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
 - (6) DRILLING BOLT HOLES THROUGH THE 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)**

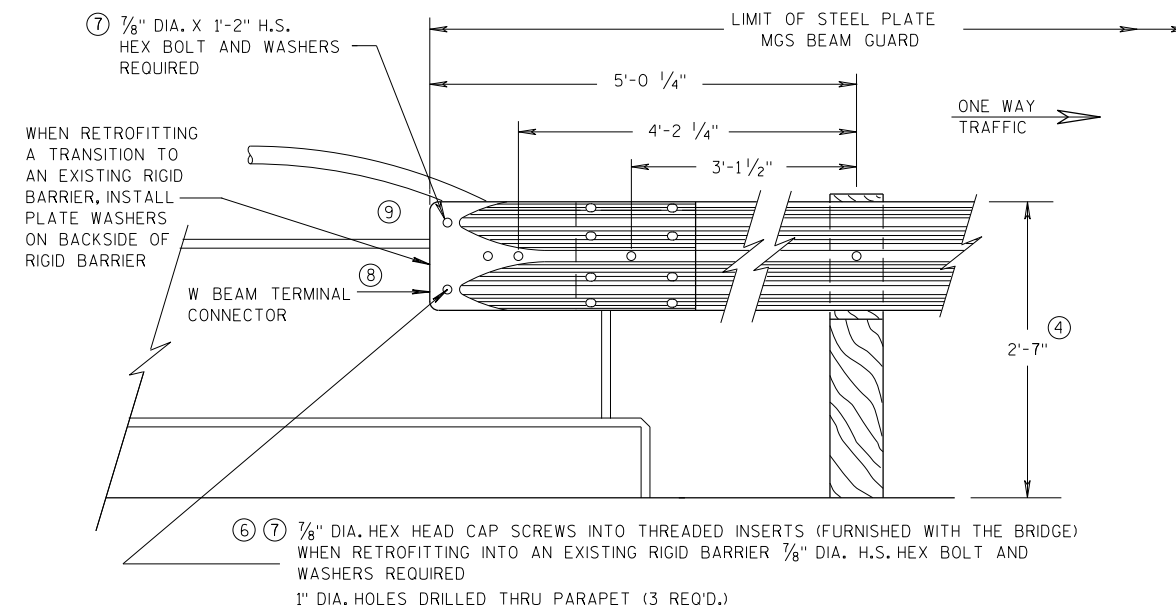
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

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

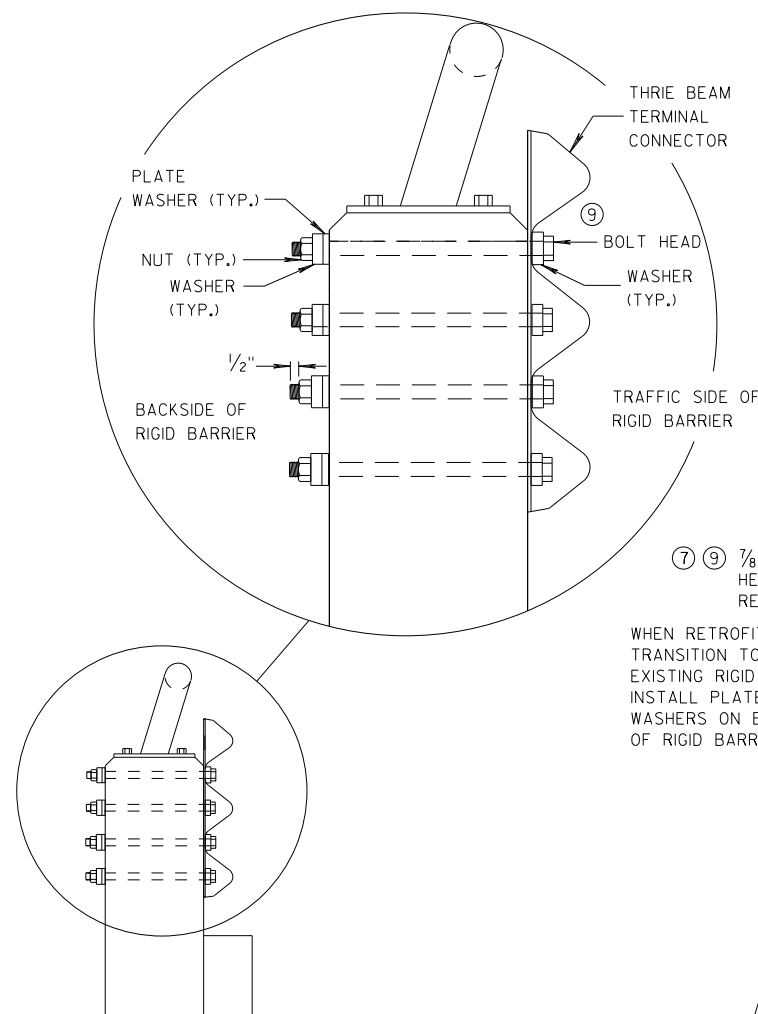
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑥ DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.
- ⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH 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".
- ⑨ BOLT, NUT AND WASHERS NOT REQUIRED FOR THIS LOCATION WHEN RETROFITTING AN EXISTING PAPAPET AND THE HOLE IS EITHER ABOVE PARAPET OR WITHIN 4 INCHES OF THE EDGE OF PARAPET.



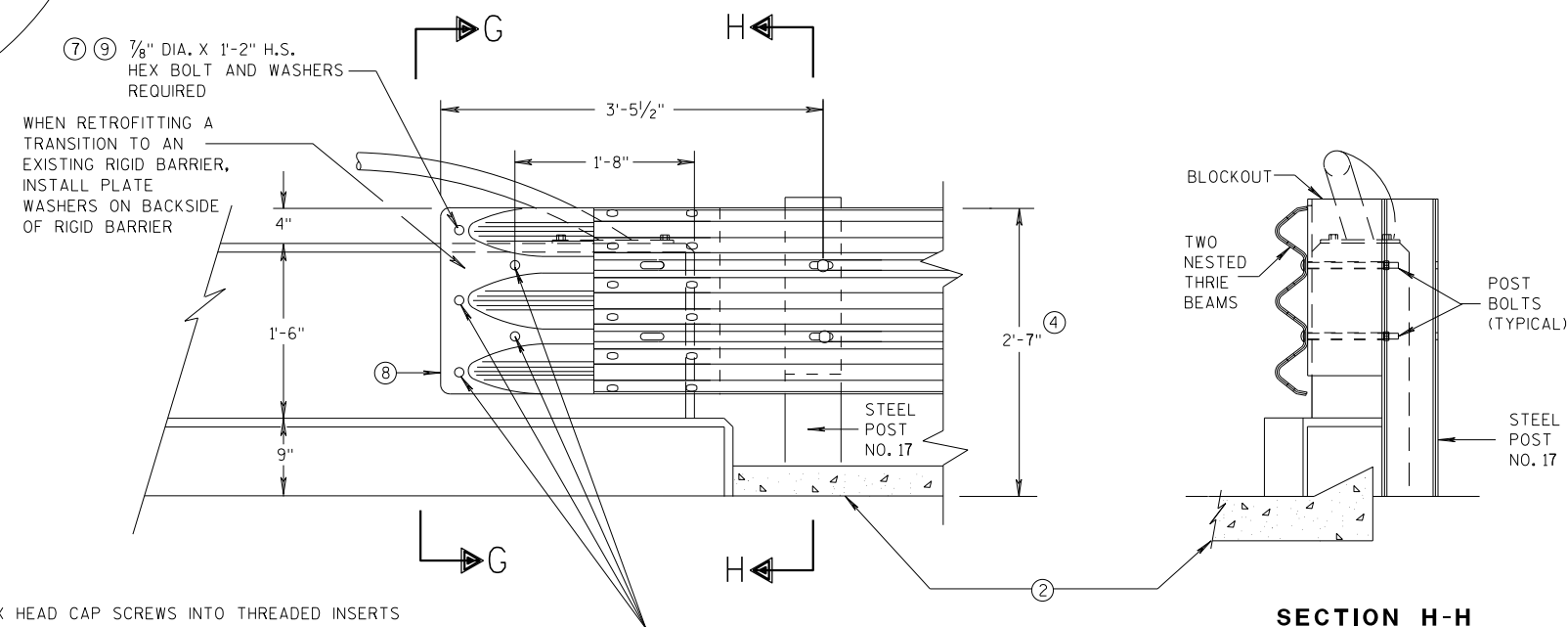
FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET

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



SECTION G-G



FRONT VIEW

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

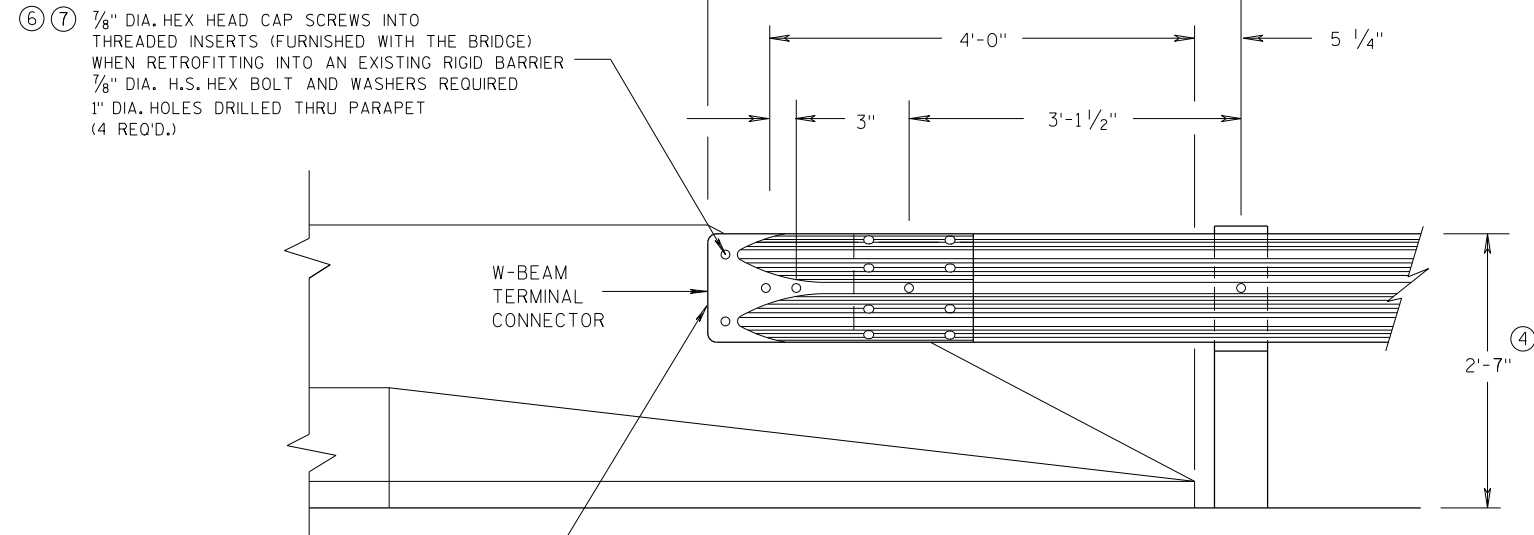
- ⑥ ⑦ 7/8" DIA. HEX HEAD CAP SCREWS INTO THREADED INSERTS (FURNISHED WITH THE BRIDGE) WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER 7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED 1" DIA. HOLES DRILLED THRU PARAPET (4 REQ'D.)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

ONE WAY
TRAFFIC



FRONT VIEW

**W BEAM CONNECTION TO
PARAPETS WITH SLOPED ENDS**

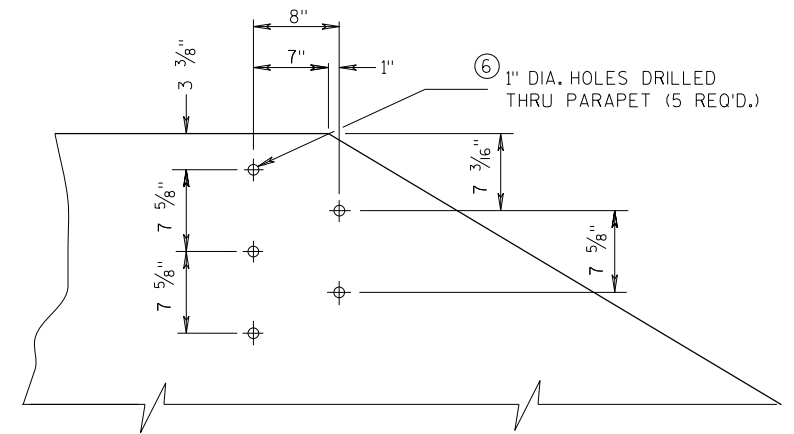
(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

WHEN RETROFITTING A TRANSITION
TO AN EXISTING RIGID BARRIER,
INSTALL PLATE WASHERS ON
BACKSIDE OF RIGID BARRIER.

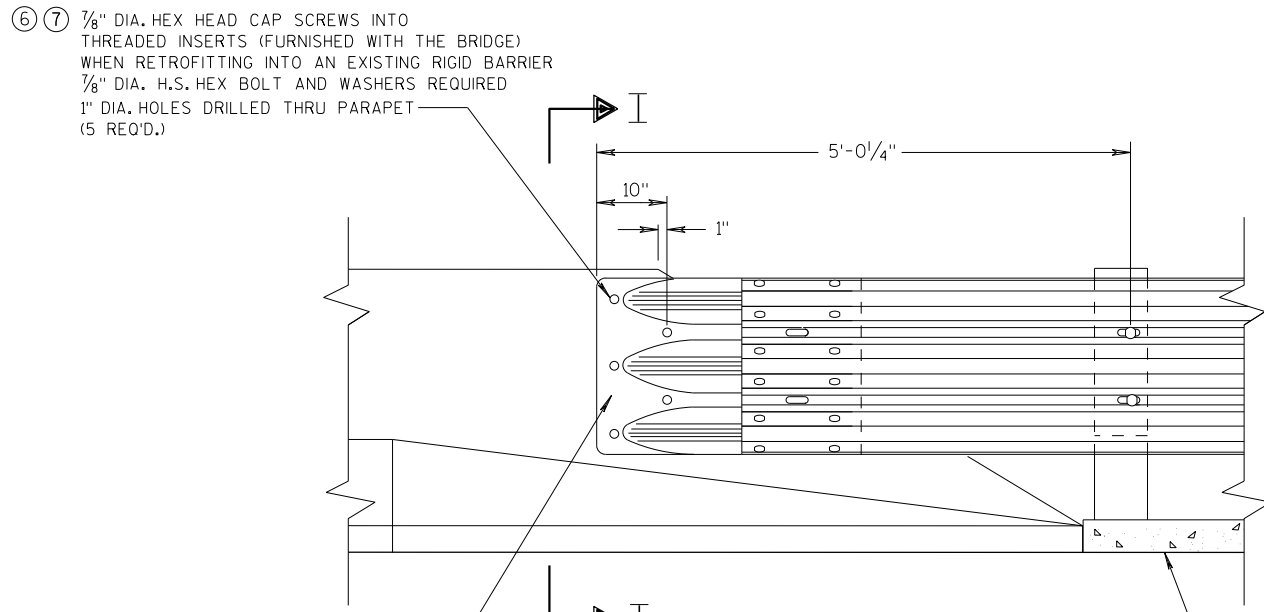
⑥ ⑦ 7/8" DIA. HEX HEAD CAP SCREWS INTO
THREADED INSERTS (FURNISHED WITH THE BRIDGE)
WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET
(4 REQ'D.)

GENERAL NOTES

- 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.



**DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION**

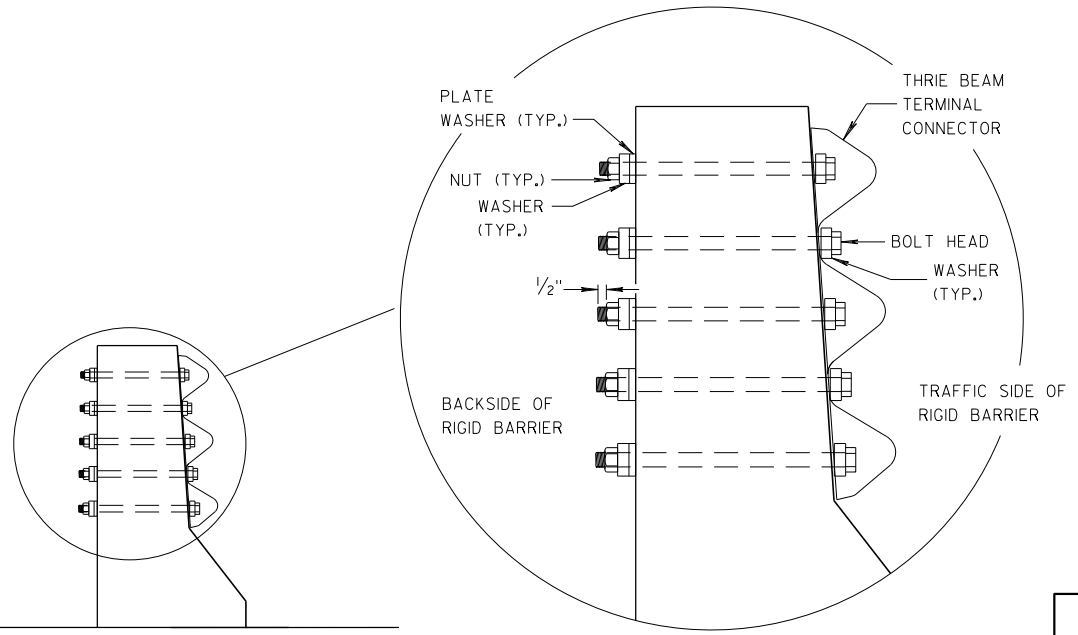


FRONT VIEW

**THRIE BEAM CONNECTION TO BRIDGE
PARAPETS WITH SLOPED ENDS**

WHEN RETROFITTING A TRANSITION
TO AN EXISTING RIGID BARRIER,
INSTALL PLATE WASHERS ON
BACKSIDE OF RIGID BARRIER.

⑥ ⑦ 7/8" DIA. HEX HEAD CAP SCREWS INTO
THREADED INSERTS (FURNISHED WITH THE BRIDGE)
WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET
(5 REQ'D.)

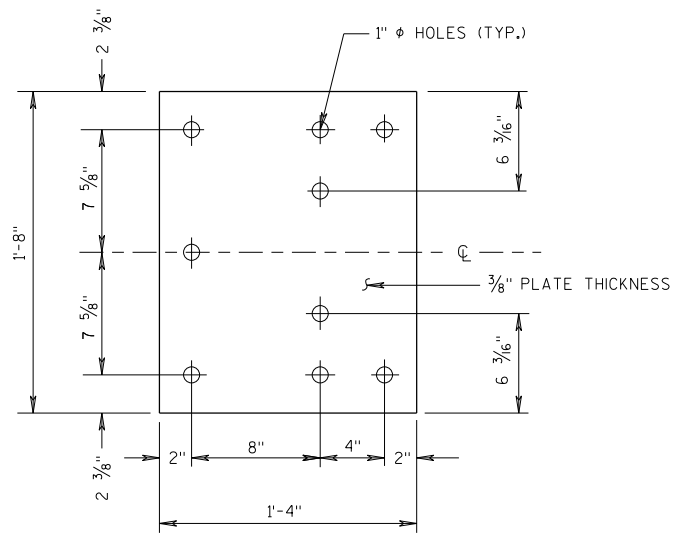


SECTION I-I

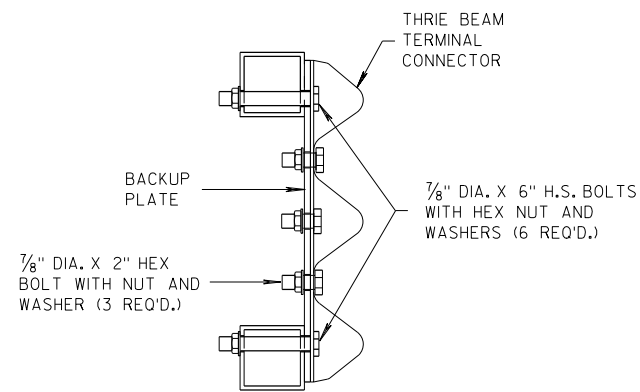
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

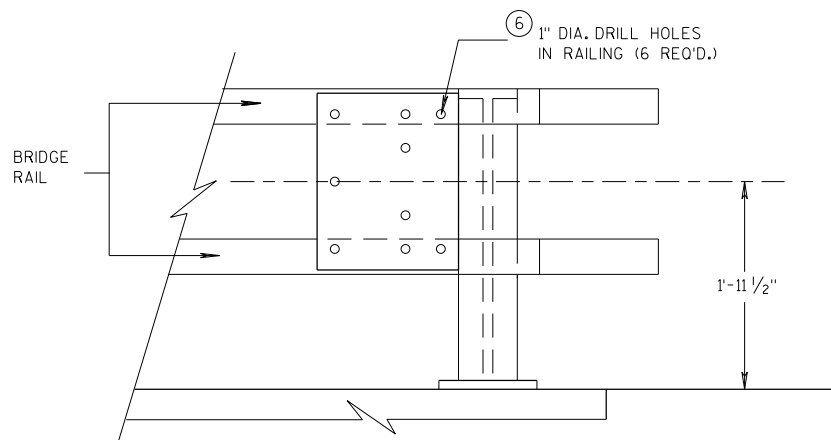
APPROVED
DATE 07/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



BACK-UP PLATE DETAIL



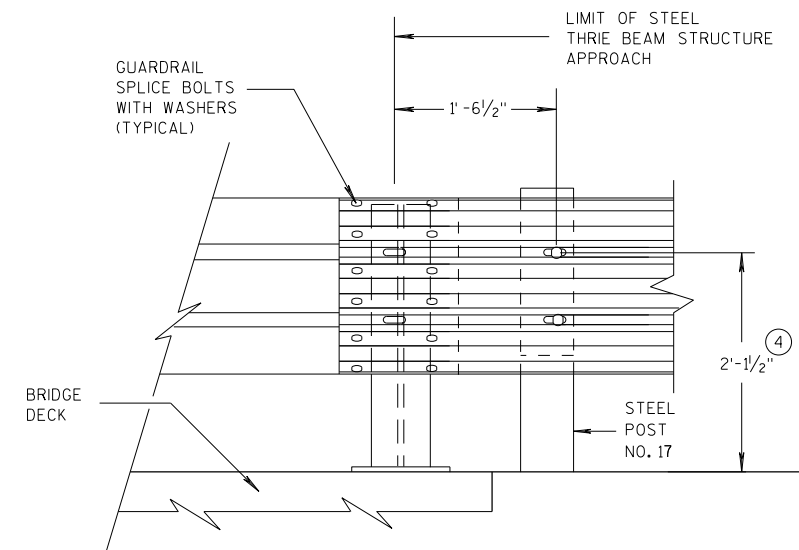
SECTION J-J



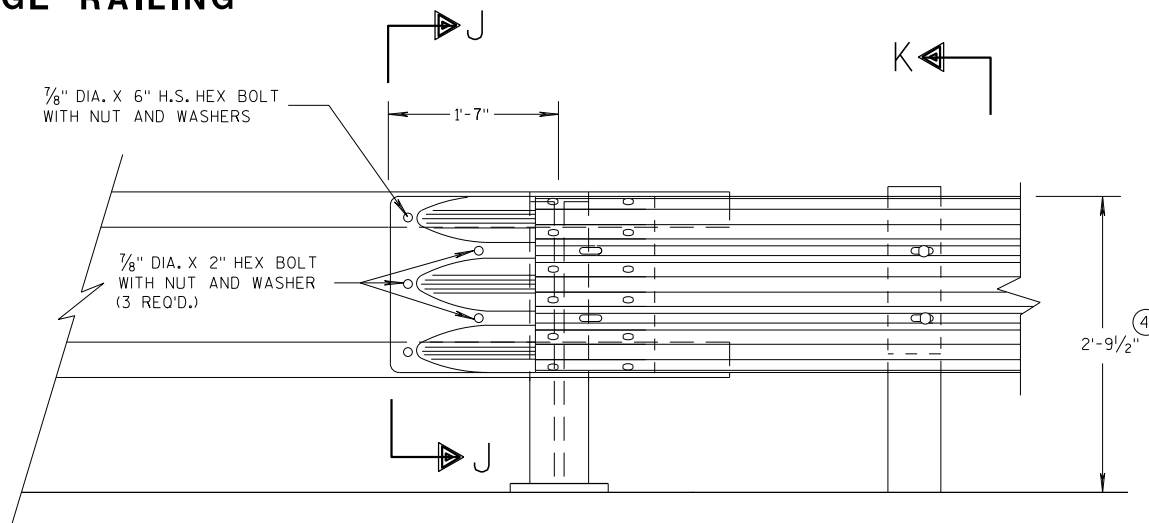
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1'$.
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

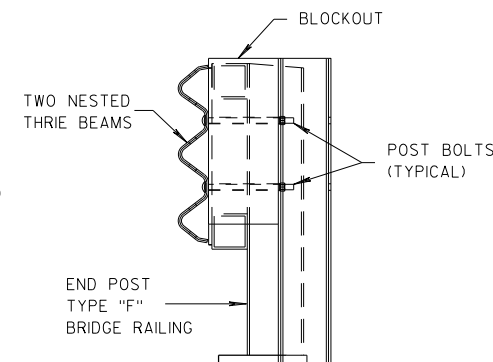


**FRONT VIEW
THRIE BEAM CONNECTION TO
STEEL RAILING TYPE "W"**



FRONT VIEW

**THRIE BEAM CONNECTION TO
TUBULAR RAILING TYPE "F"**



SECTION K-K

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

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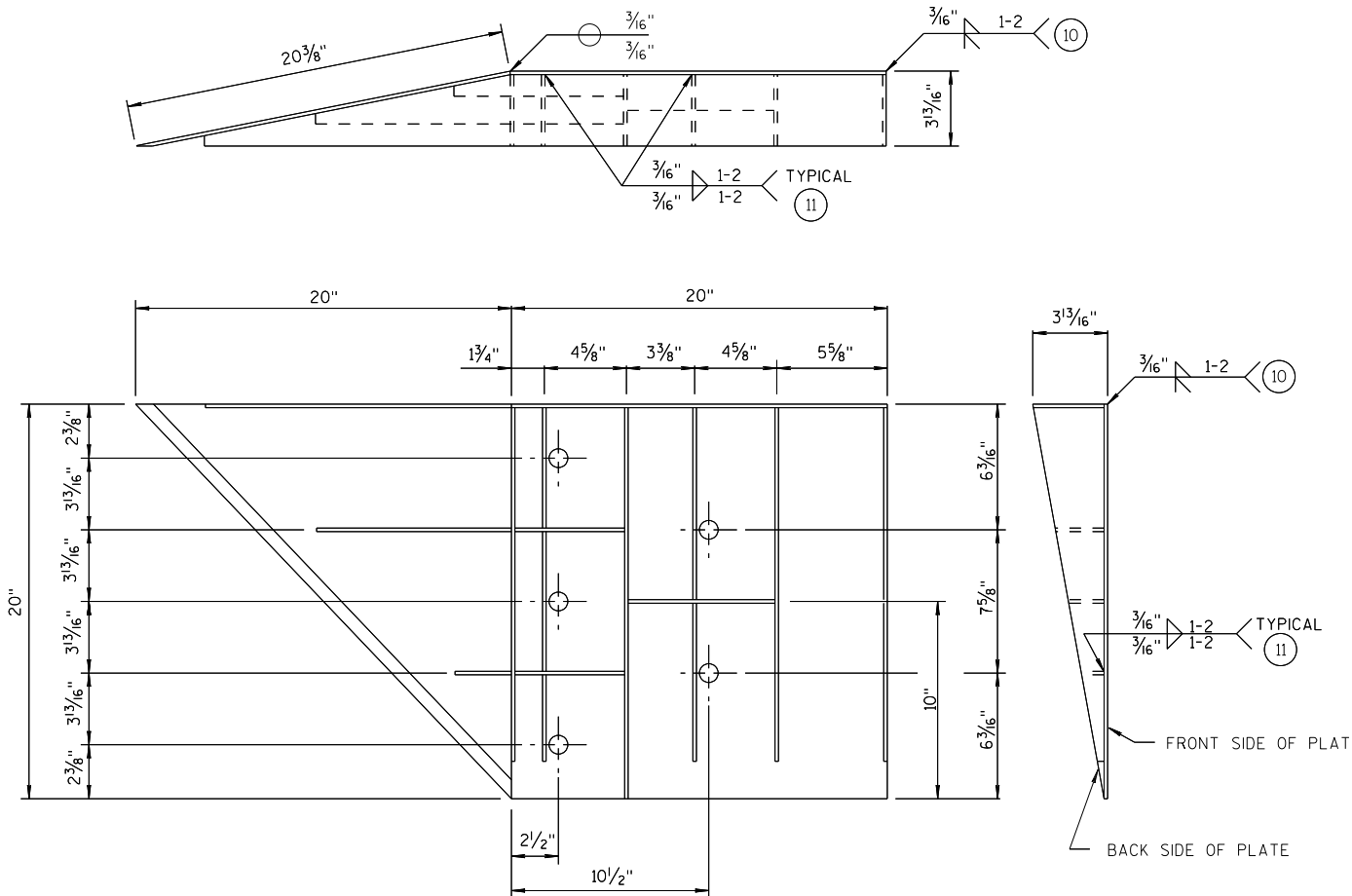
S.D.D. 14 B 45-59

S.D.D. 14 B 45-59

GENERAL NOTES

- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

- (10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- (11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION
(VIEWED FROM BACK SIDE OF PLATE)

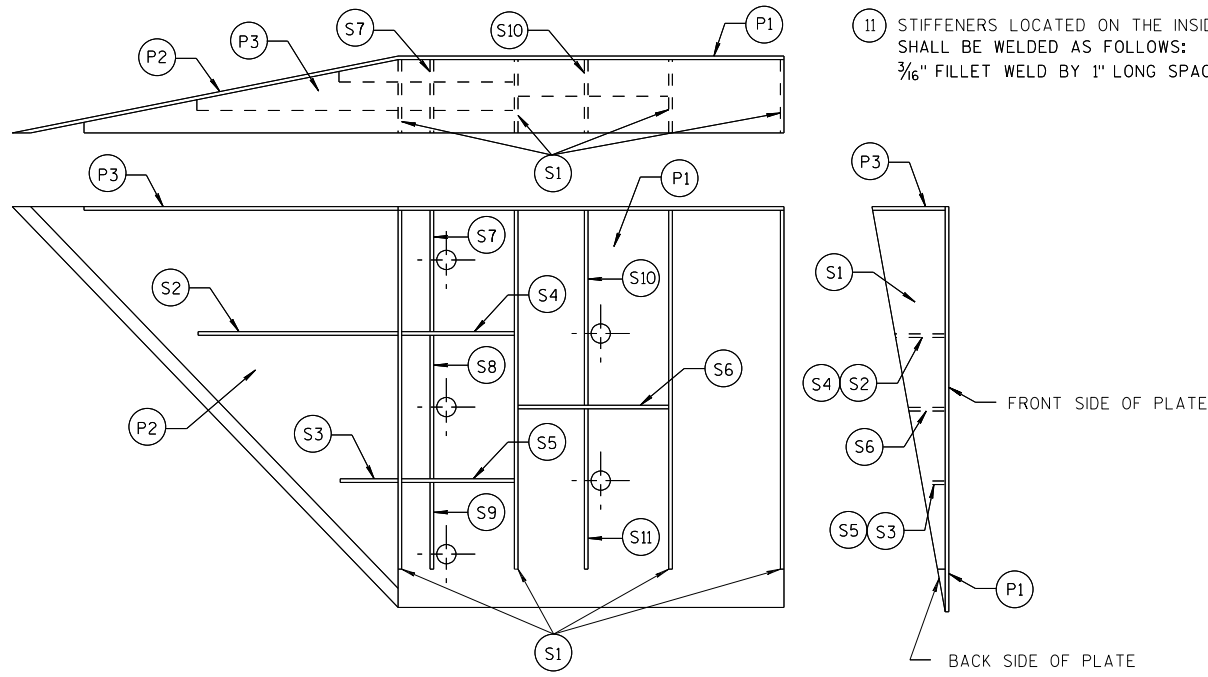


PLATE AND STIFFENER IDENTIFICATION
(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 3/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 1/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 3/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 7/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 3/16" x 6" x 3 5/8" x 5 7/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 3/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 3/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

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S.D.D. 14 B 45-51

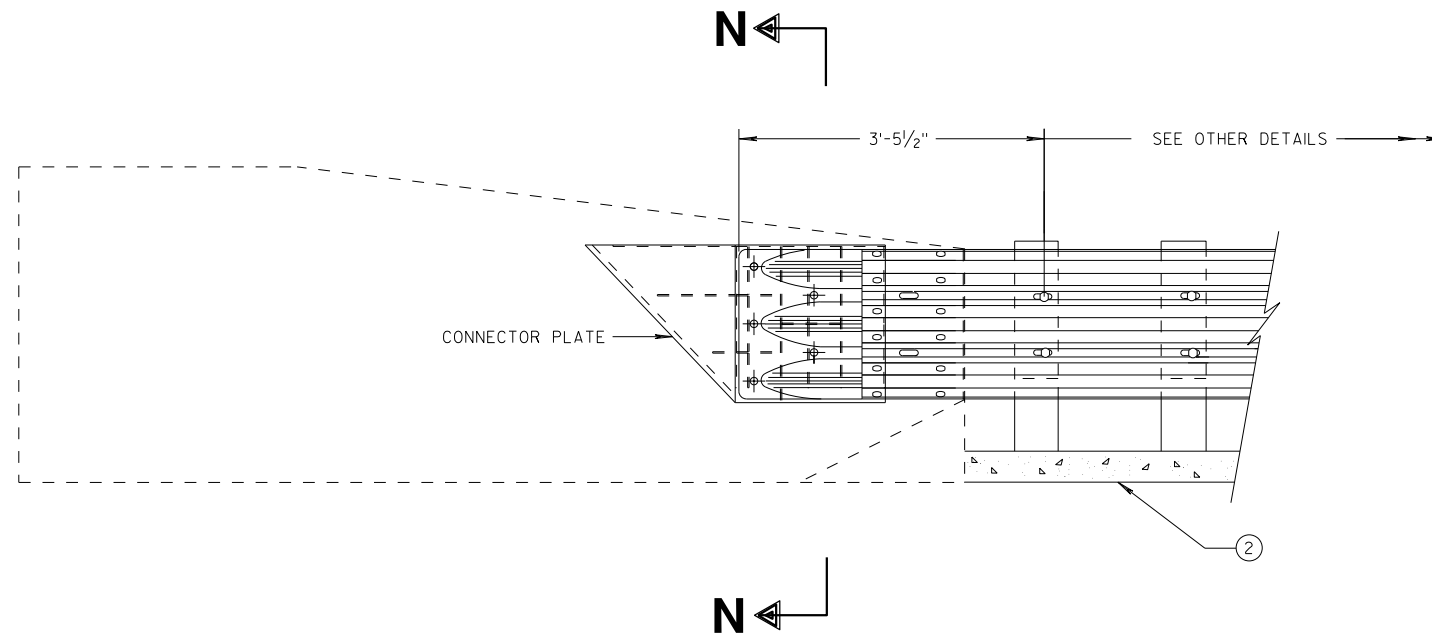
S.D.D. 14 B 45-51

GENERAL NOTES

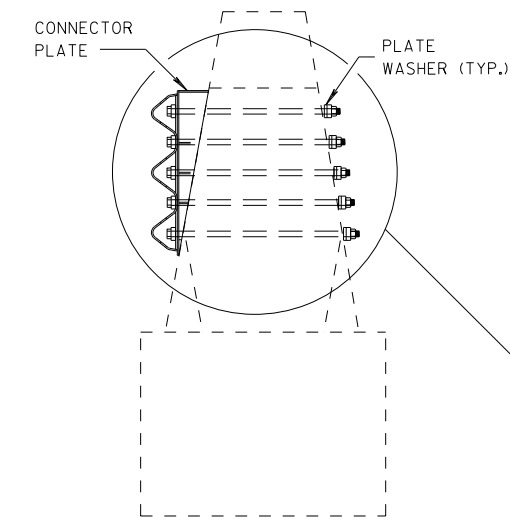
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

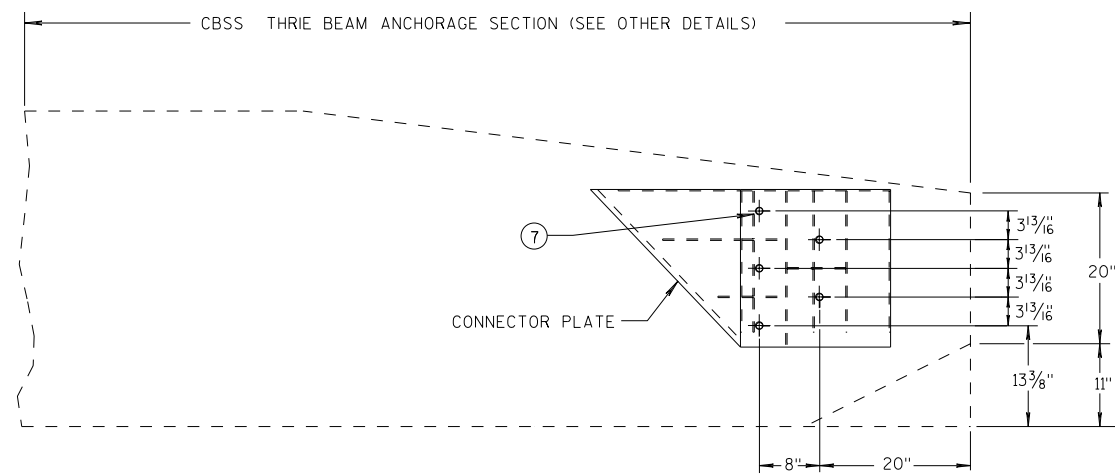
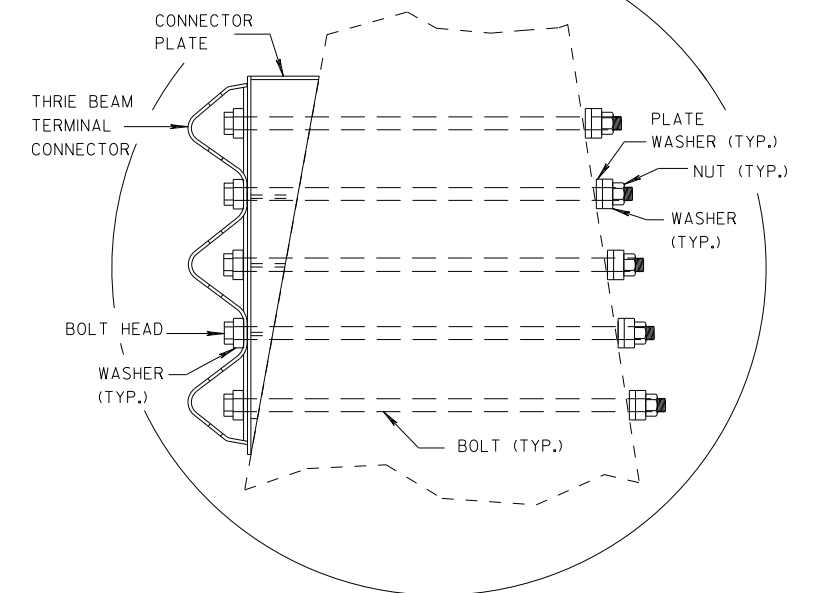
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTION PLATE. 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.



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



SECTION N-N

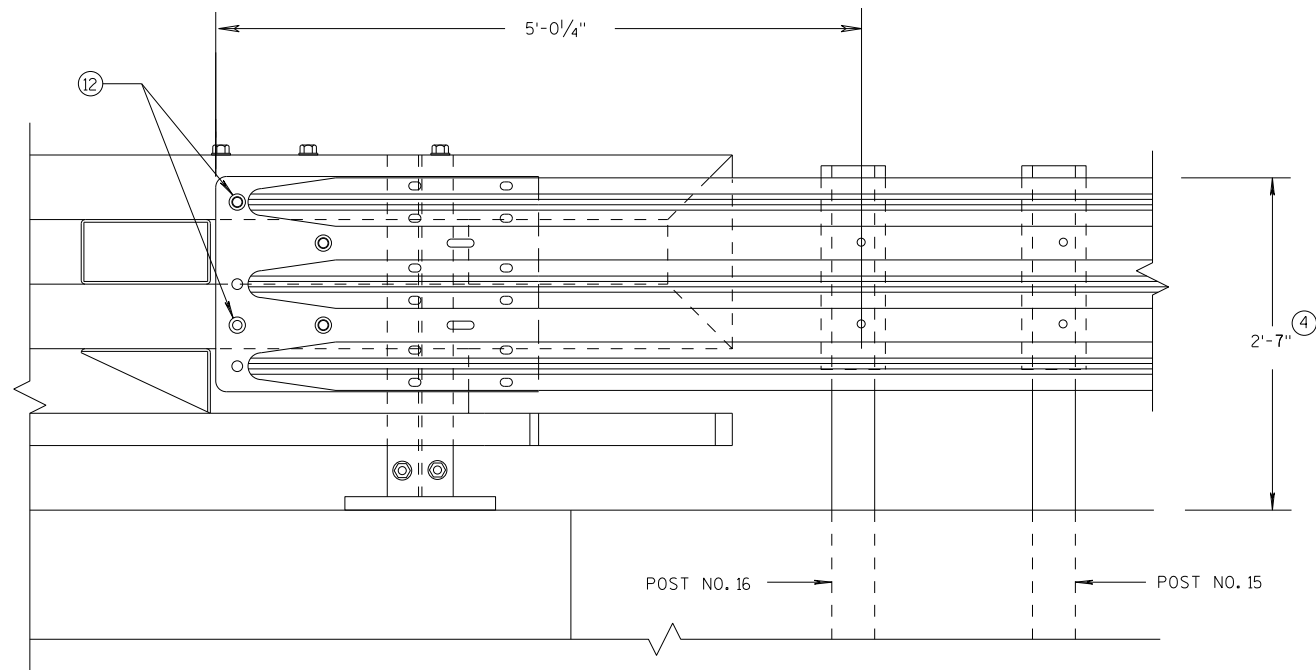


SINGLE SLOPE CONNECTION PLATE PLACEMENT

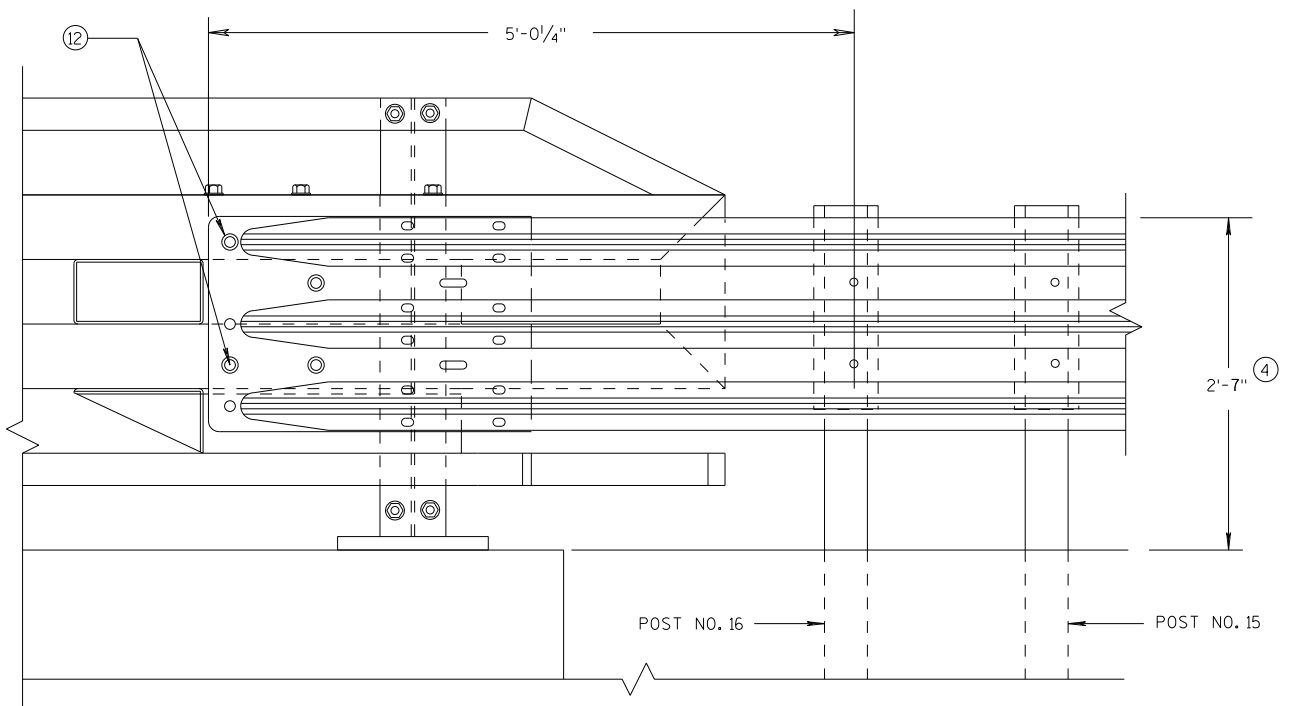
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



**ELEVATION OF DETAIL AT NY3 END POST
THRIE BEAM RAIL ATTACHMENT**



**ELEVATION OF DETAIL AT NY4 END POST
THRIE BEAM RAIL ATTACHMENT**

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS ± 1".
- ⑫ 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

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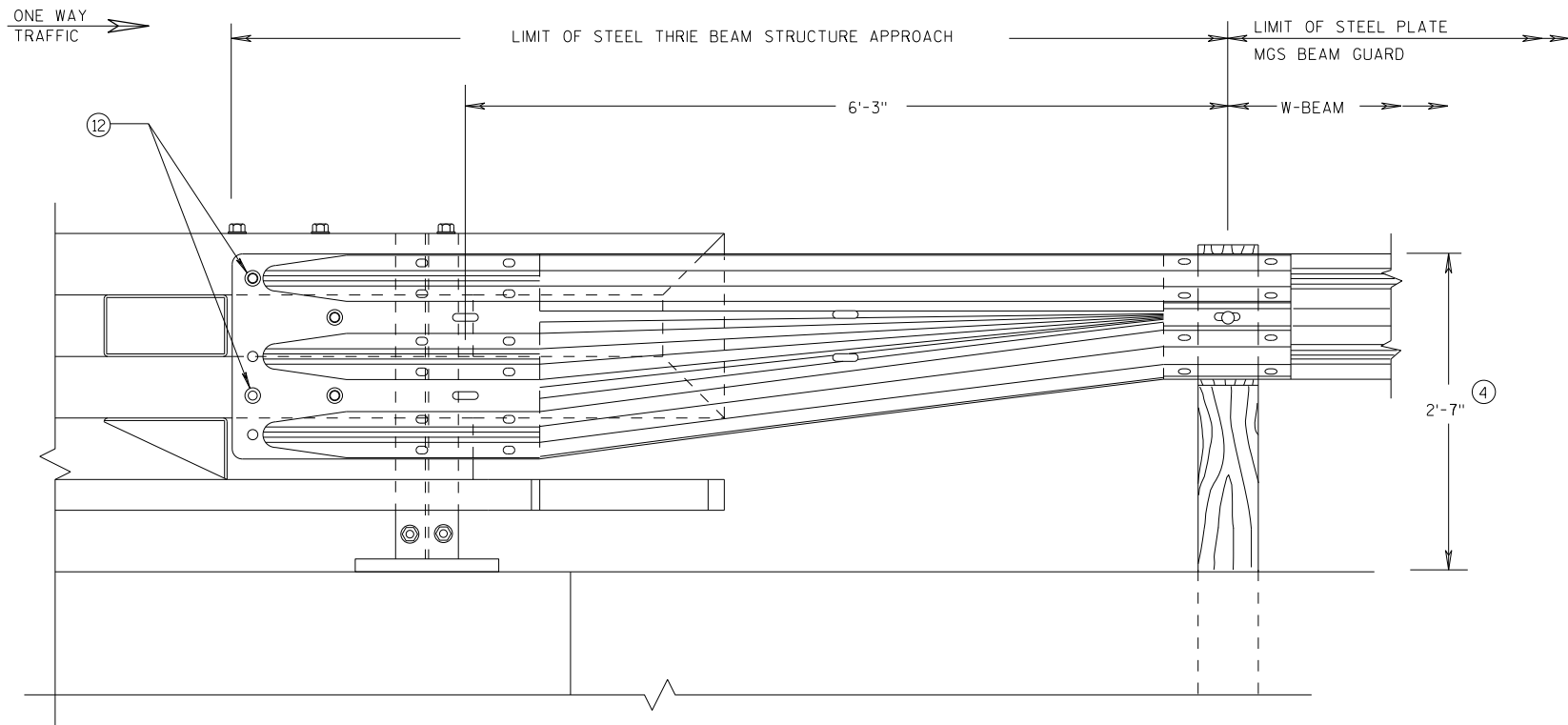
S.D.D. 14 B 45-5k

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

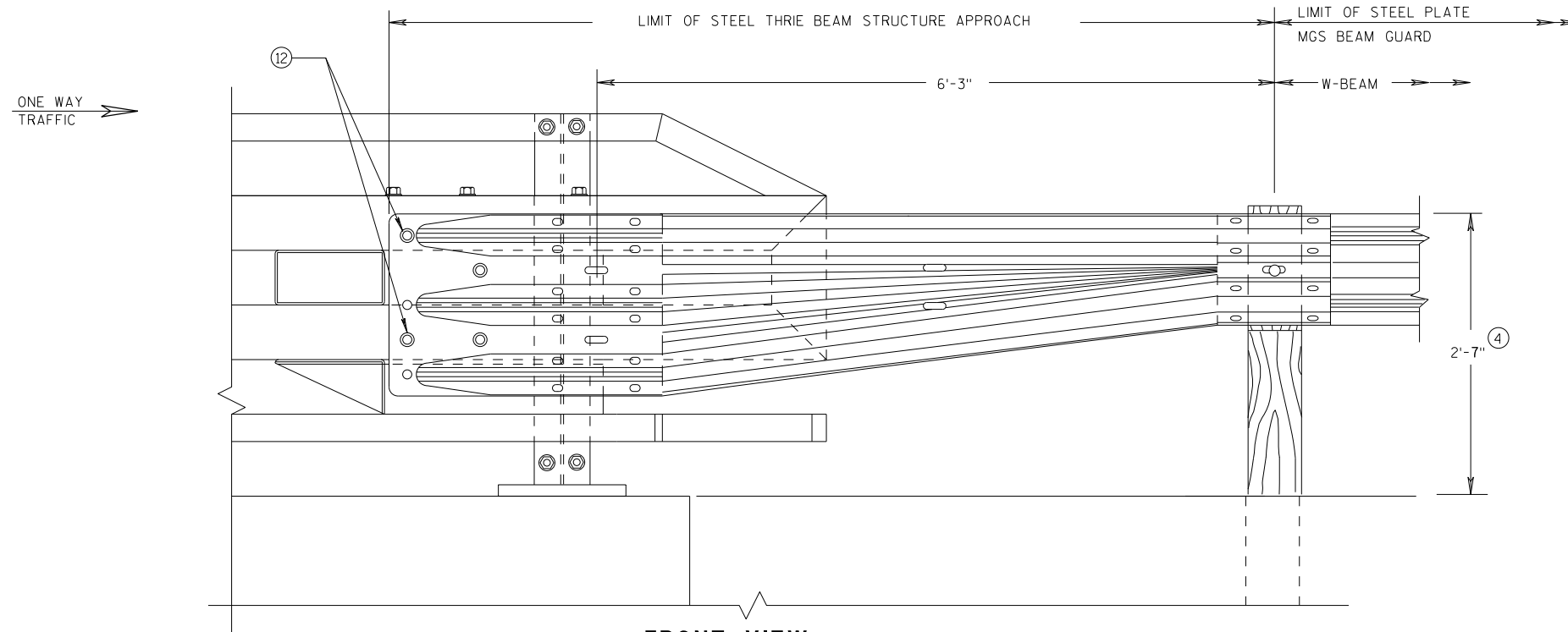
APPROVED
DATE 7/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY3"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1"$.
- ⑫ 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND $\frac{1}{2}$ -INCH BEYOND NUT.

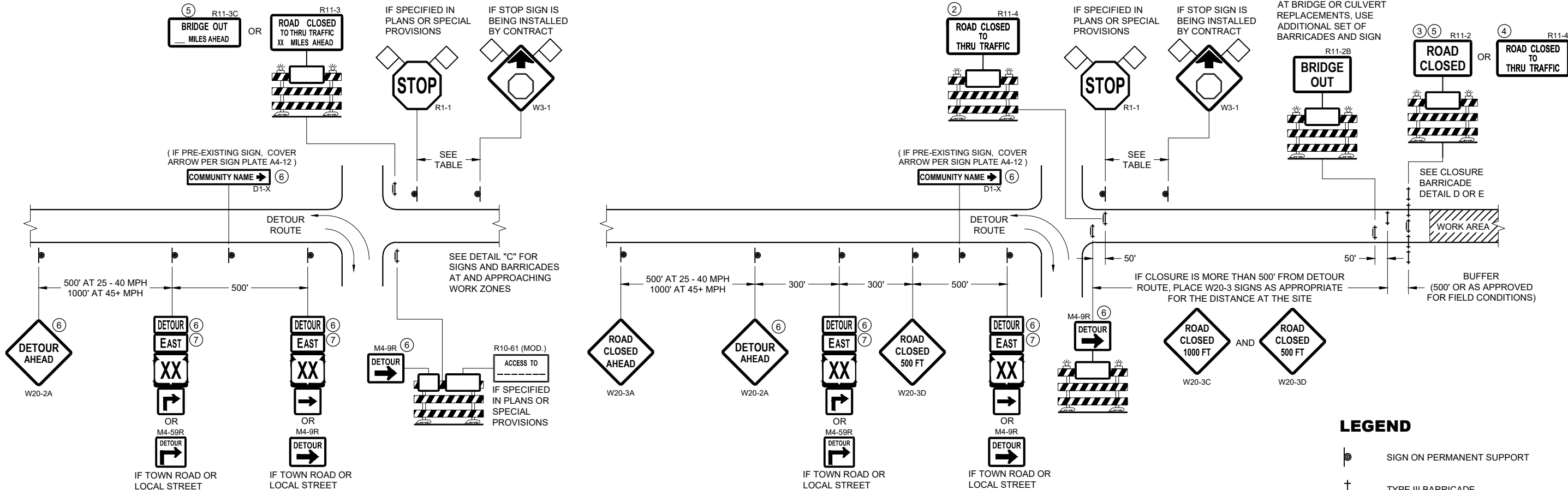


FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY4"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
 DEPARTMENT OF TRANSPORTATION

APPROVED
 DATE 7/2018 /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)

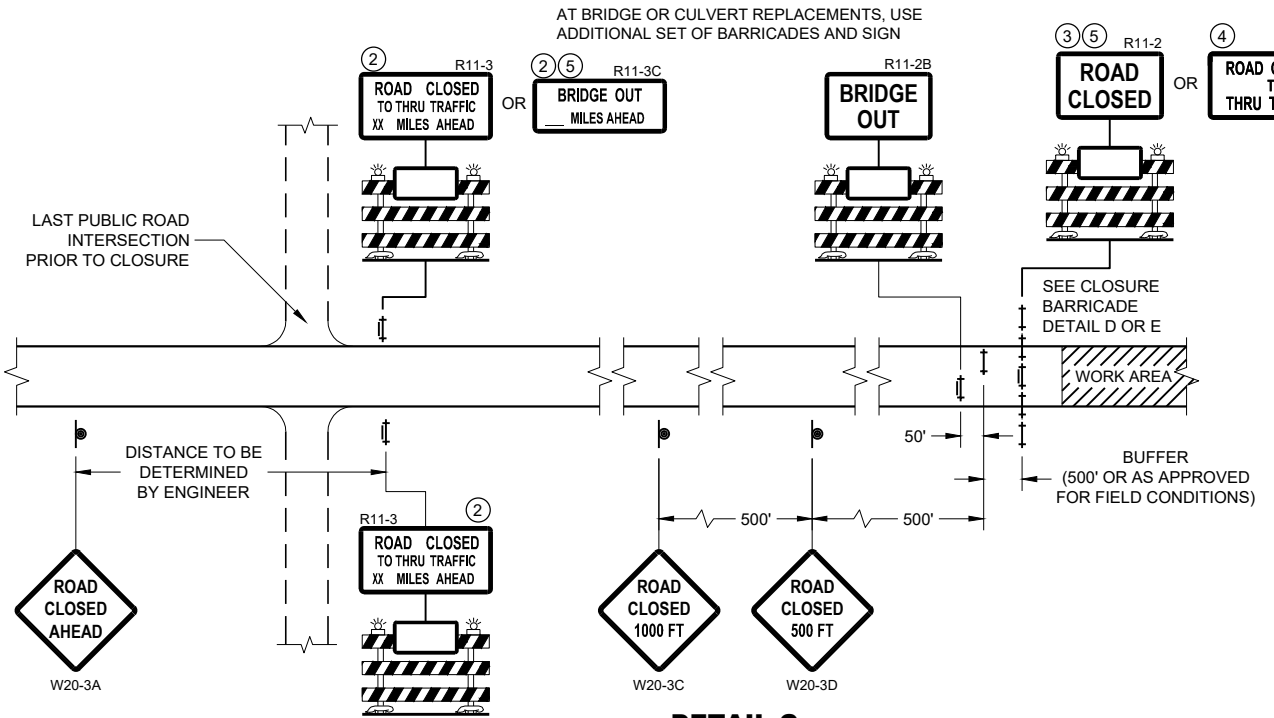
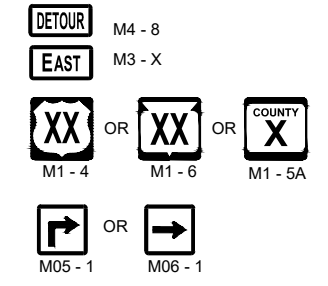
**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

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

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)

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



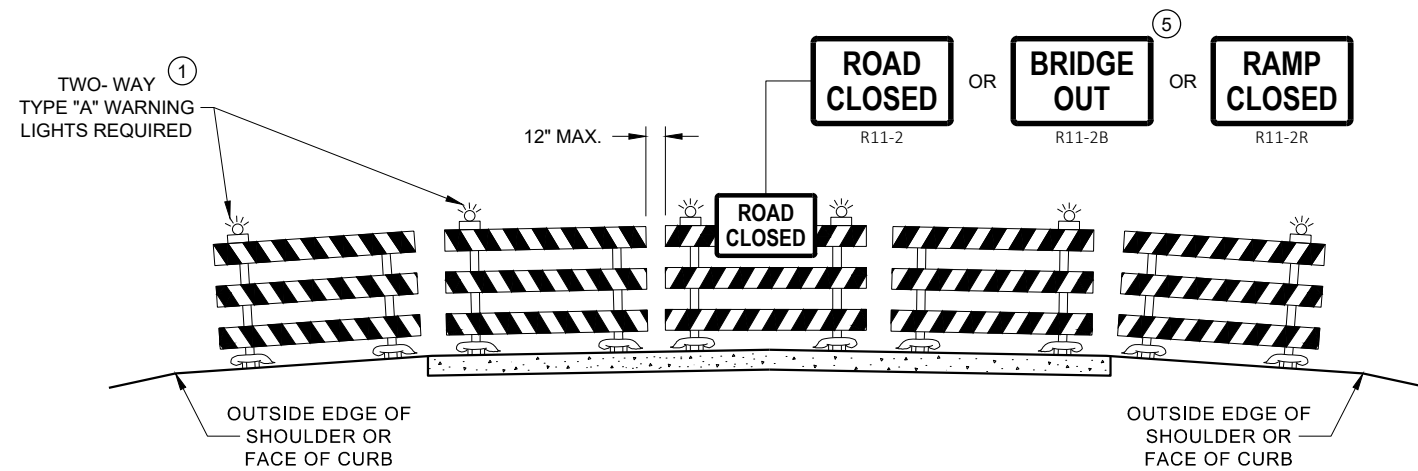
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

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

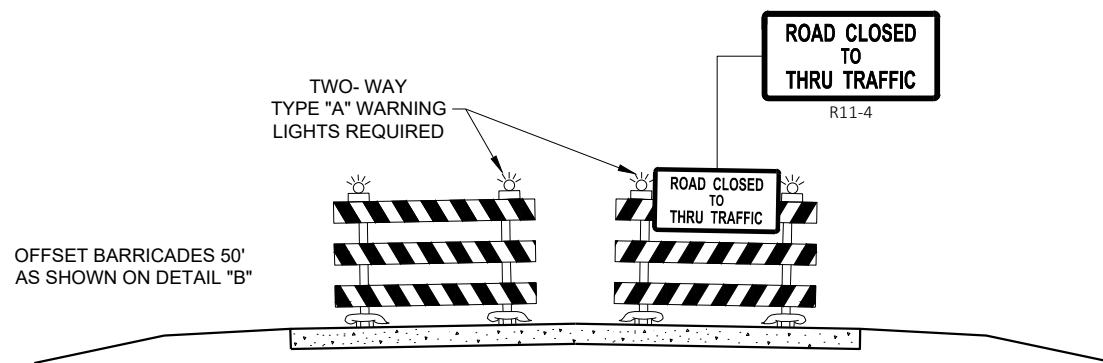
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

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. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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.

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

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

SIGN SIZES SHALL BE AS FOLLOWS:

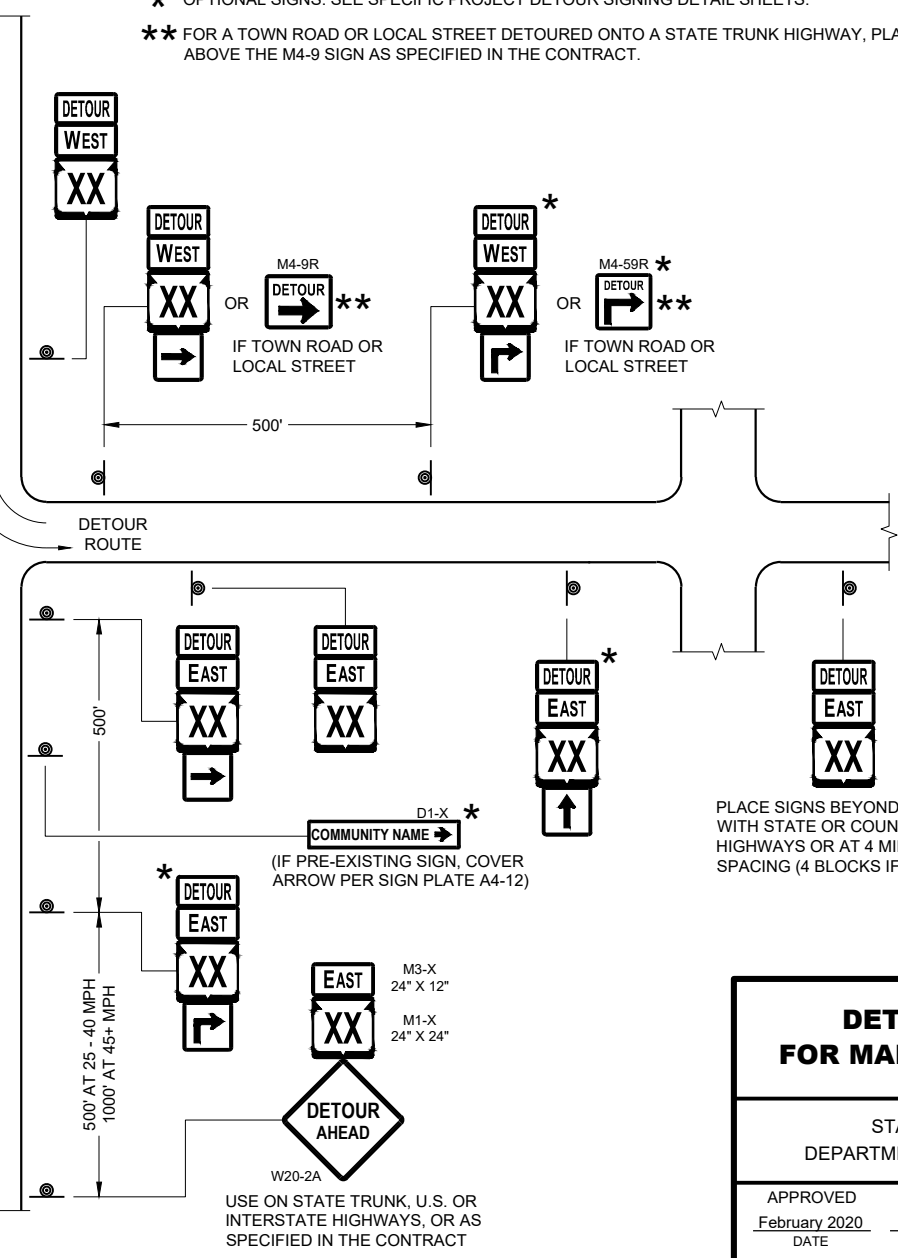
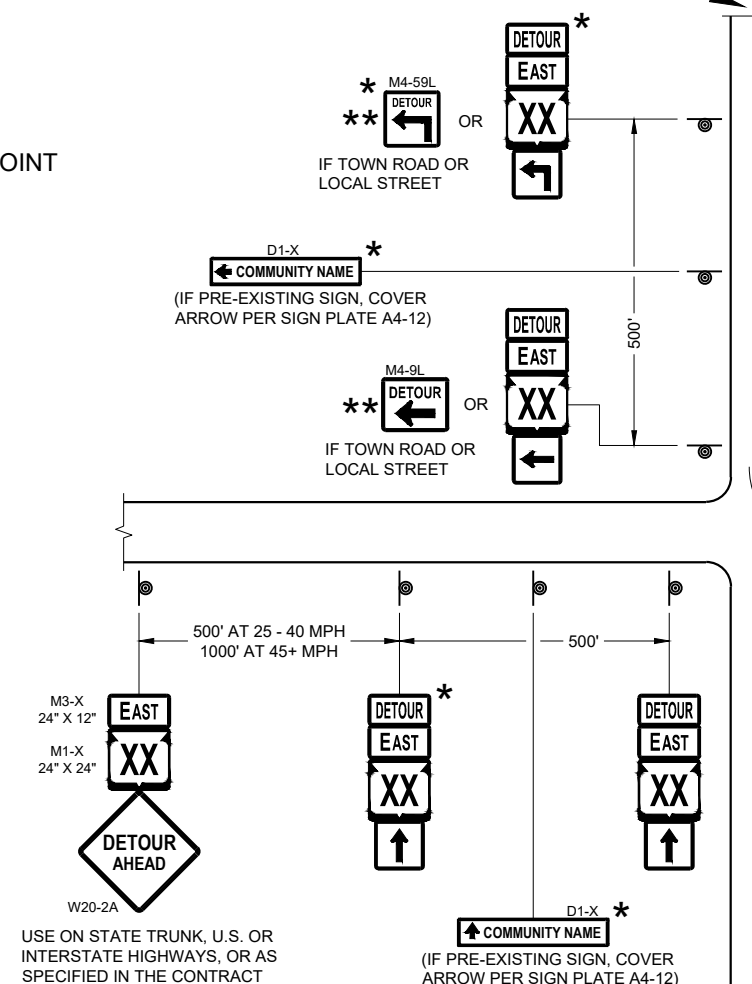
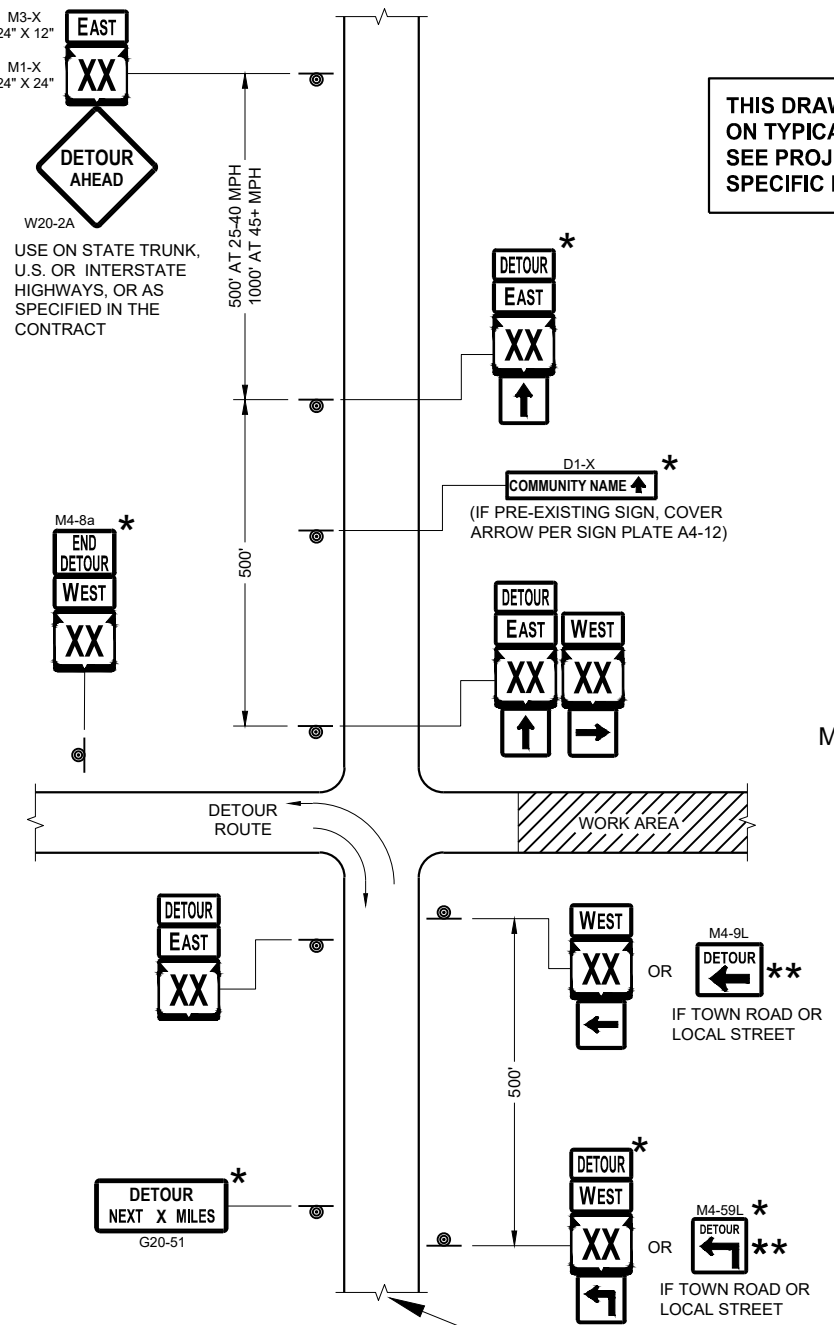
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-9R SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT

DETAIL F DETOUR SIGNING



SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"




DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

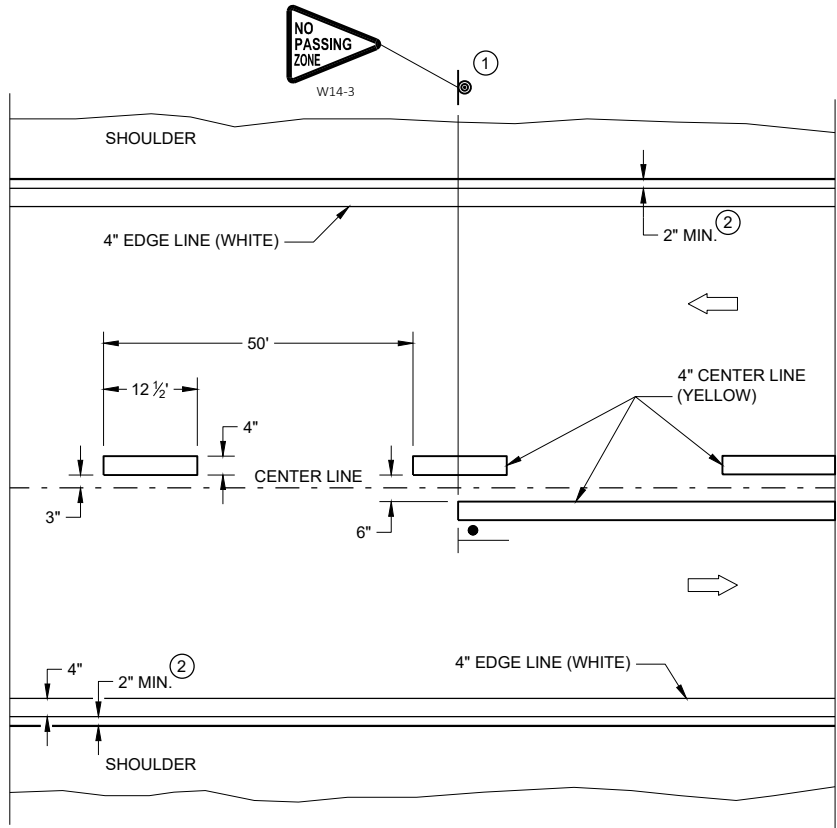
GENERAL NOTES

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

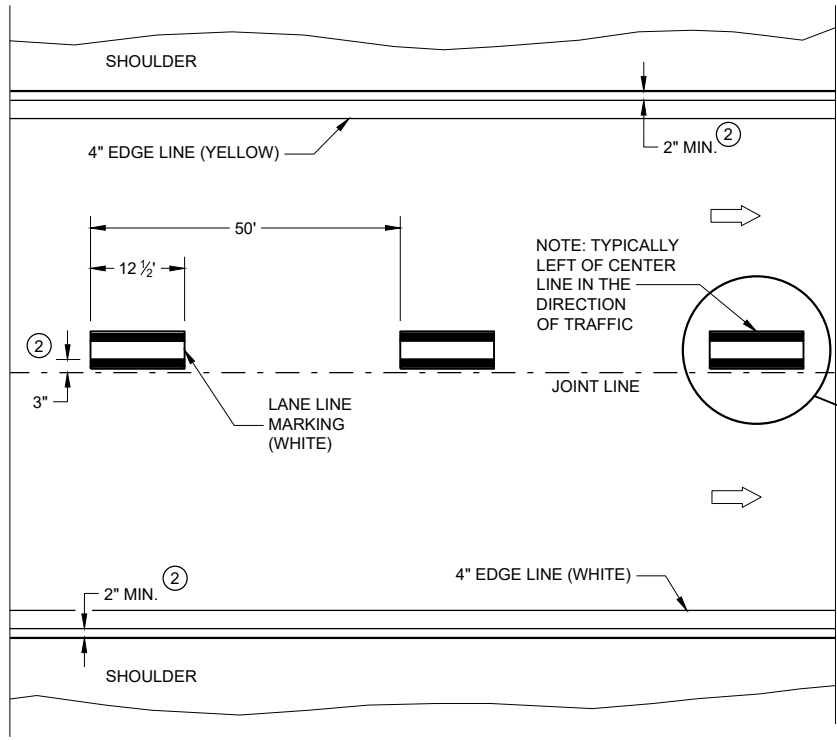
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

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

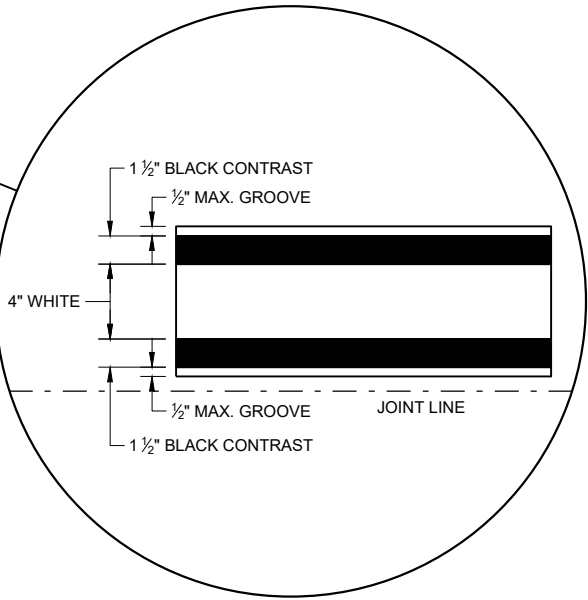


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



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SDD 15C08 - 21a

SDD 15C08 - 21a

PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

DESIGN DATA

LIVE LOAD

DESIGN LOADING: HL-93
 INVENTORY RATING: RF=1.20
 OPERATING RATING: RF=1.69
 WISCONSIN STANDARD PERMIT VEHICLE (WIS-SPV): 250 (KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY: _____ $F'_c = 4,000$ PSI
 SUPERSTRUCTURE _____ $F'_c = 3,500$ PSI
 ALL OTHER _____

BAR STEEL REINFORCEMENT: _____ $F_y = 60,000$ PSI
 GRADE 60 _____

72W" PRESTRESSED GIRDERS: _____ $F'_c = 8,000$ PSI
 CONCRETE MASONRY _____
 STRANDS: 0.6" DIA. WITH ULTIMATE TENSILE STRENGTH OF 270,000 P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 12 X 53 PILING DRIVEN TO A REQUIRED DRIVING RESISTANCE OF 220 TONS ** PER PILE AS DETERMINED BY THE MODIFIED GATES DYNAMIC FORMULA. ESTIMATED 30'-0" LONG AT WEST ABUTMENT ESTIMATED 30'-0" LONG AT EAST ABUTMENT

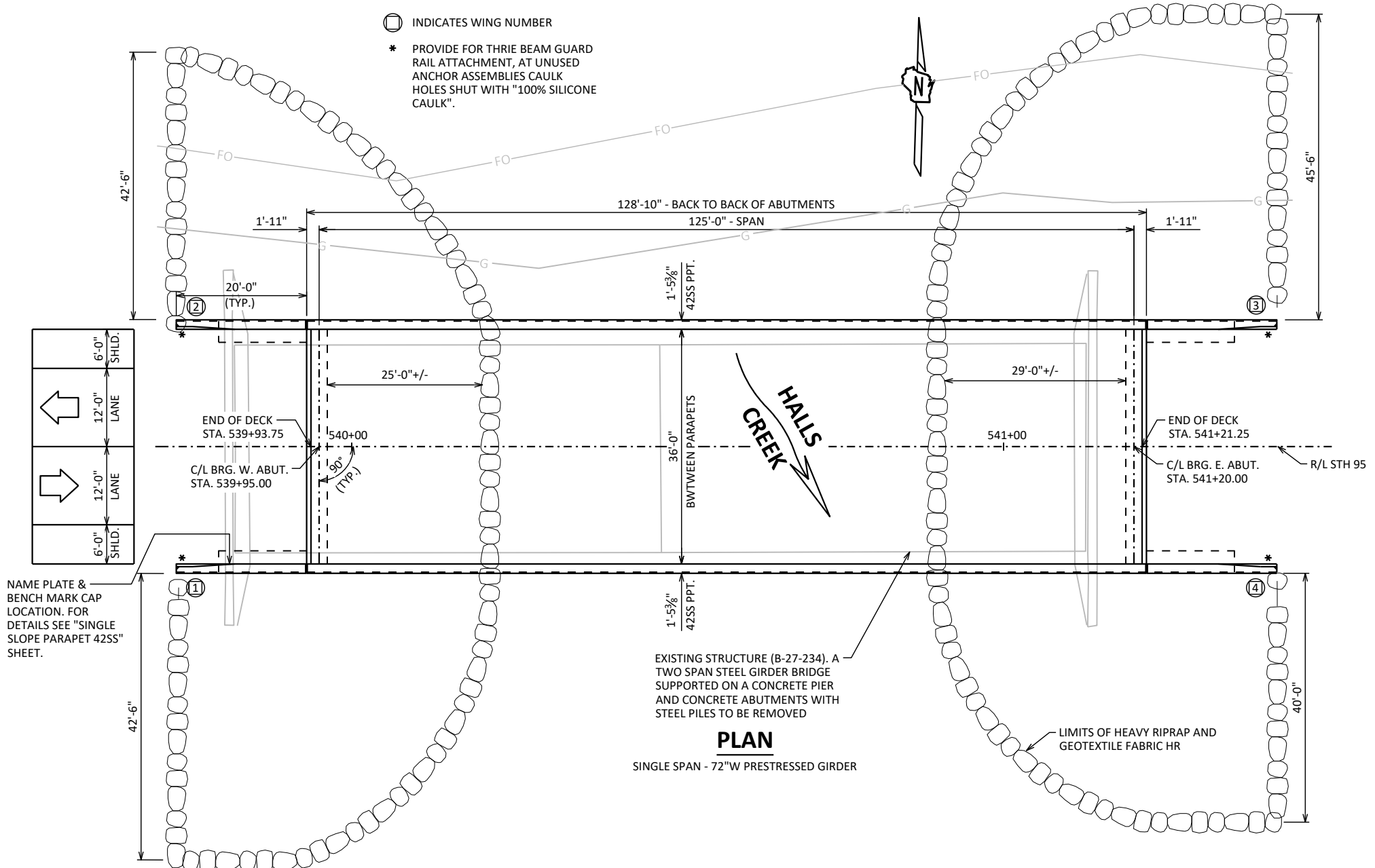
**THE FACTORED AXIAL RESISTANCE OF PILES IN COMPRESSION USED FOR DESIGN IS THE REQUIRED DRIVING RESISTANCE MULTIPLIED BY A RESISTANCE FACTOR OF 0.5 USING MODIFIED GATES TO DETERMINE PILE CAPACITY.

HYDRAULIC DATA

100-YEAR FREQUENCY:
 $Q_{100} = 3,300$ C.F.S.
 $V_{100} = 5.21$ F.P.S.
 $HW_{100} = EL. 915.23$
 WATERWAY AREA = 574.91 SQ. FT.
 DRAINAGE AREA = 46.1 SQ. MI.
 SCOUR CRITICAL CODE = 5
 2-YEAR FREQUENCY:
 $Q_{100} = 930$ C.F.S.
 $V_{100} = 2.45$ F.P.S.
 $HW_{100} = EL. 911.13$

TRAFFIC DATA

STH 95
 ADT = 2,100 (2042)
 R.D.S. = 60 M.P.H.

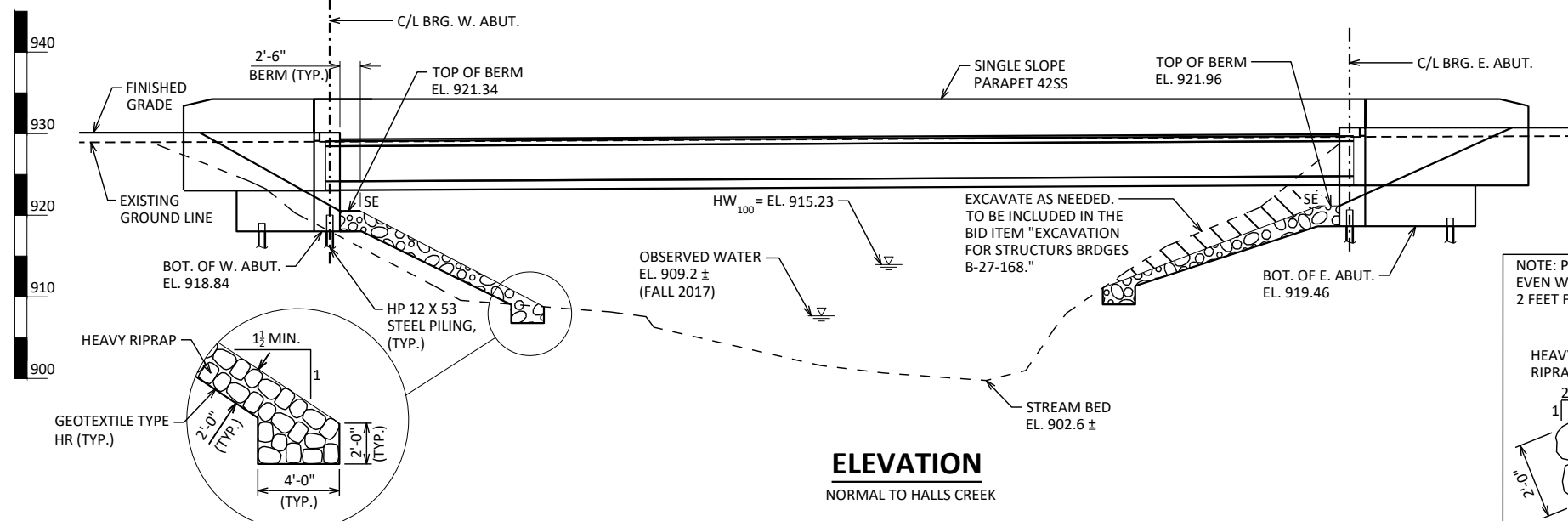


PLAN
 SINGLE SPAN - 72"W PRESTRESSED GIRDER

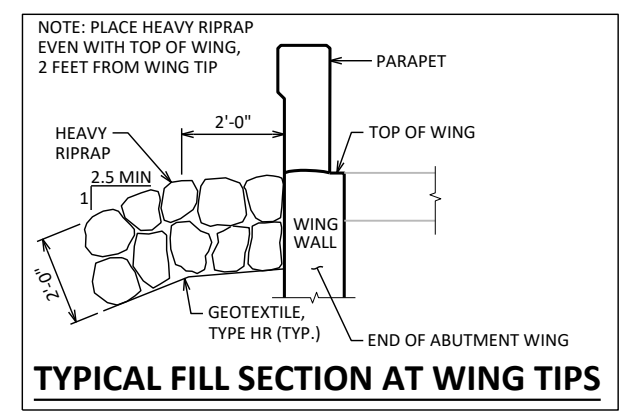
LIST OF DRAWINGS:

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. 72W" PRESTRESSED GIRDER DETAILS 1
9. 72W" PRESTRESSED GIRDER DETAILS 2
10. STEEL DIAPHRAGMS
11. SUPERSTRUCTURE
12. SUPERSTRUCTURE DETAILS
13. SINGLE SLOPE PARAPET 42SS

STRUCTURE DESIGN CONTACTS:
 ISATOU CEESAY (608) 266-9557
 LAURA SHADEWALD (608) 267-9592

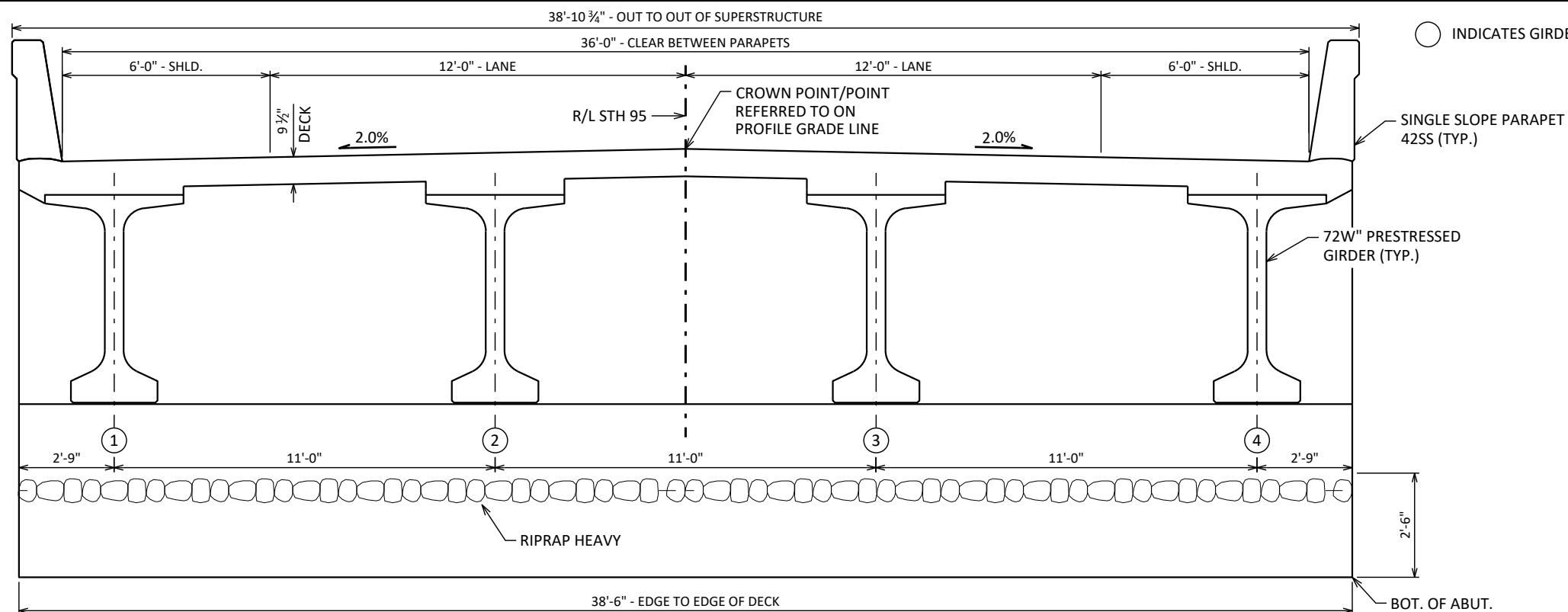


ELEVATION
 NORMAL TO HALLS CREEK

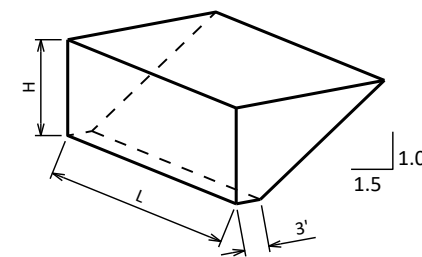


TYPICAL FILL SECTION AT WING TIPS

NO.	DATE	REVISION	BY
ACCEPTED		 CHIEF STRUCTURES DESIGN ENGINEER	
		11/17/22 DATE	
STRUCTURE B-27-168			
STH 95 OVER HALLS CREEK			
COUNTY	JACKSON	VILLAGE	MERRILLAN
DESIGN SPEC.	AASHTO LRFD BRIDGE DESIGN SPECIFICATION		
DESIGNED BY	IFC	DESIGNED CK'D	MWB
DRAWN BY	MWB	PLANS CK'D	MWB
GENERAL PLAN			SHEET 1 OF 13

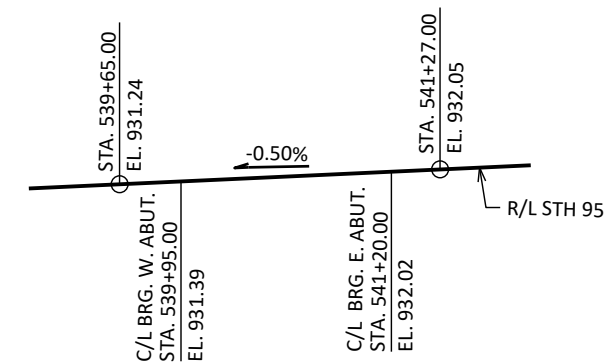


CROSS SECTION THRU ROADWAY LOOKING EAST



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

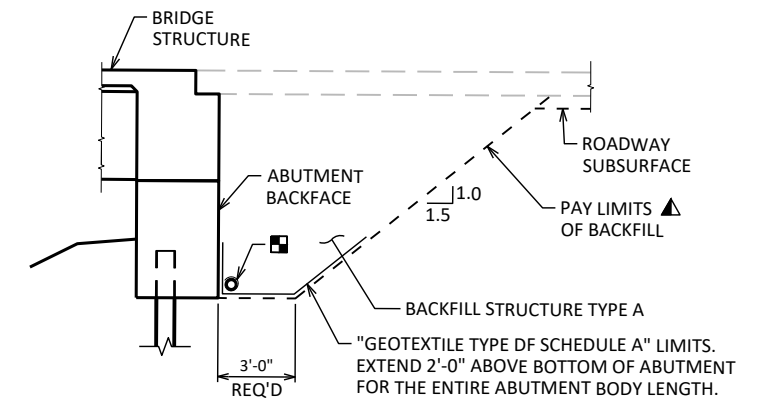
L = OUT TO OUT OF ABUTMENT BODY INCLUDING WINGS (FT)
 H = AVERAGE ABUTMENT FILL HEIGHT (FT)
 EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
 $V_{CF} = (L)(3.0')(H) + (L)(0.5)(1.5H)(H)$
 $V_{CY} = V_{CF} / 27$
 $V_{TON} = V_{CY} (2.0)$



PROFILE GRADE LINE - R/L STH 95

GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.
- THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-27-168 SHALL BE THE EXISTING GROUNDLINE.
- AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.
- 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 QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.
- ELASTOMERIC BEARING PADS NEED NOT BE INDIVIDUALLY MOLDED PROVIDED THE CUT EDGES ARE SMOOTH AND TRUE.
- PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF DECK SURFACE AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.
- PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON WINGS.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.
- THE HAUNCH CONCRETE QUANTITY IS BASED ON THE AVERAGE HAUNCH SHOWN ON THE "72W PRESTRESSED GIRDER DETAILS 2" SHEET.



TYPICAL SECTION THRU ABUTMENT

- ▲ BACKFILL PAY LIMITS. BACKFILL BEYOND 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.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	WEST ABUT.	EAST ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-27-234	EACH	-----	-----	-----	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-27-168	EACH	-----	-----	-----	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	-----	372	372	744
502.0100	CONCRETE MASONRY BRIDGES	CY	273.4	53.7	53.7	381
502.3200	PROTECTIVE SURFACE TREATMENT	SY	565	-----	-----	565
502.3210	PIGMENTED SURFACE SEALER	SY	166	-----	-----	166
503.0172	PRESTRESSED GIRDER TYPE I 72W-INCH	LF	504	-----	-----	504
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	-----	2,520	2,520	5,040
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	40,470	3,720	3,720	47,910
506.2605	BEARING PADS ELASTOMERIC NON-LAMINATED	EACH	8	-----	-----	8
506.4000	STEEL DIAPHRAGMS B-27-168	EACH	6	-----	-----	6
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	-----	12	12	24
550.1120	PILING STEEL HP 12-INCH X 53 LB	LF	-----	330	330	660
606.0300	RIPRAP HEAVY	CY	-----	590	700	1,290
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	-----	80	80	160
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	-----	-----	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	-----	37	37	74
645.0120	GEOTEXTILE TYPE HR	SY	-----	906	1,060	1,966
	NON-BID ITEMS					
	FILLER	SIZE				1/2", 3/4"

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
CROSS SECTION & QUANTITIES			SHEET 2

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	9/08/2021	154167	87658
2	9/08/2021	154189	87805

BORINGS COMPLETED BY: AET
REPORT COMPLETED BY: WISDOT
ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JACKSON COUNTY
COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT



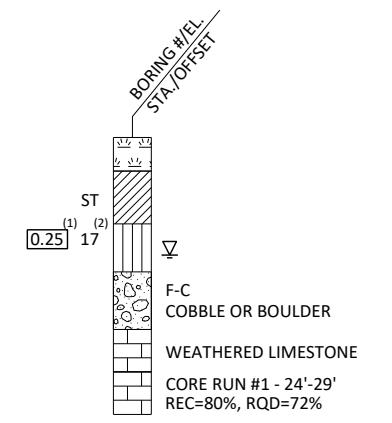
STATE PROJECT NUMBER

7520-00-78

MATERIAL SYMBOLS

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

LEGEND OF BORING



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

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

GROUND WATER ELEVATION

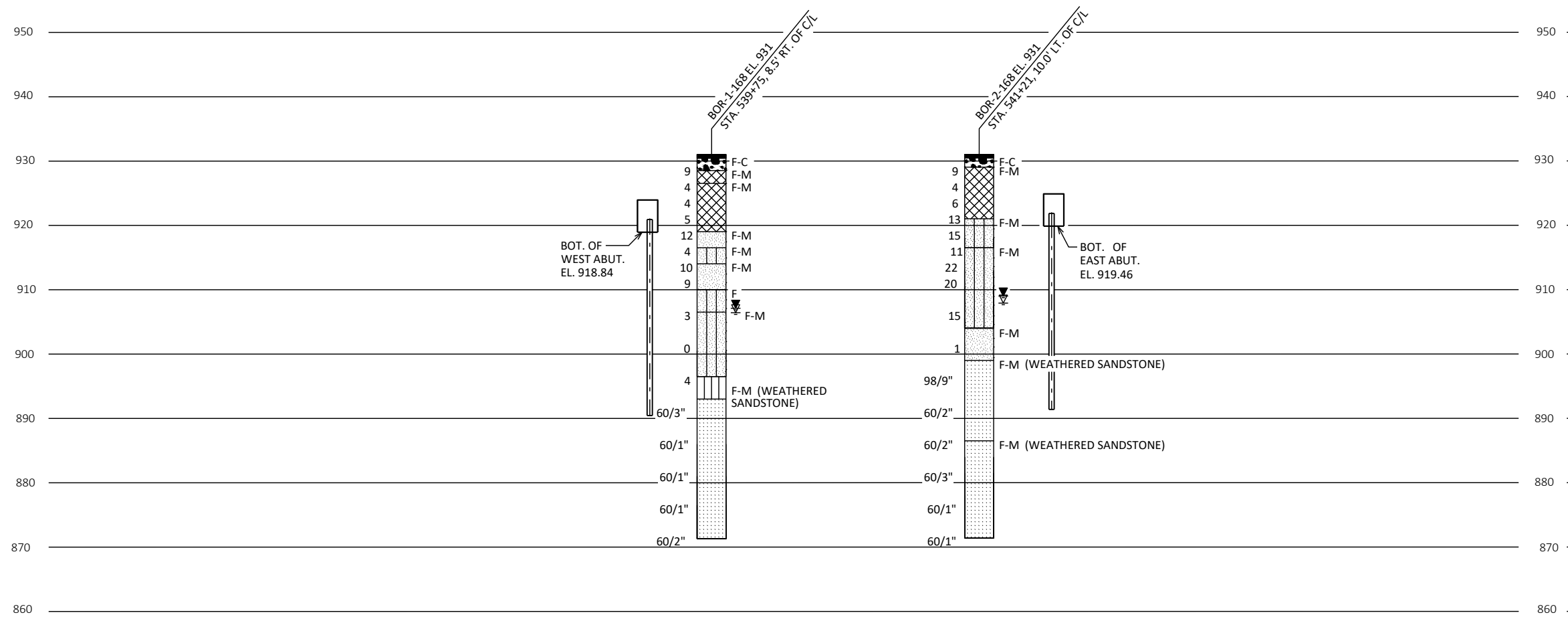
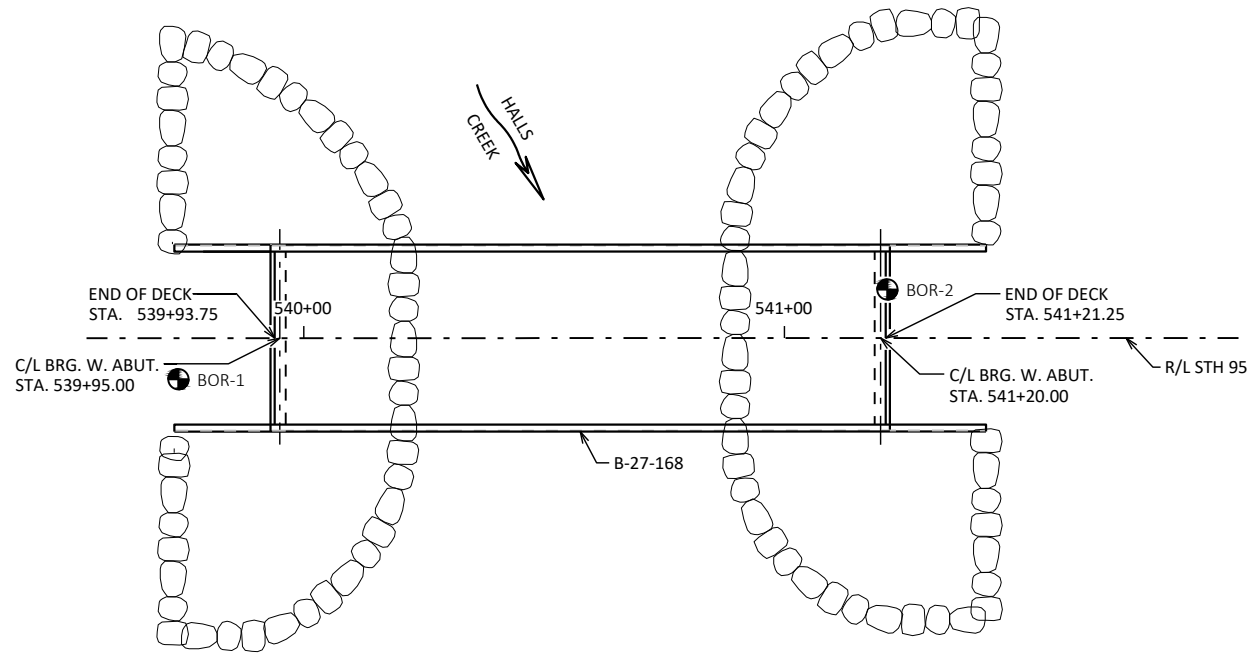
- AT TIME OF DRILLING
- END OF DRILLING
- AFTER DRILLING

ABBREVIATIONS

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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



NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-168

DRAWN BY TLP/MJH PLANS CK'D MWB

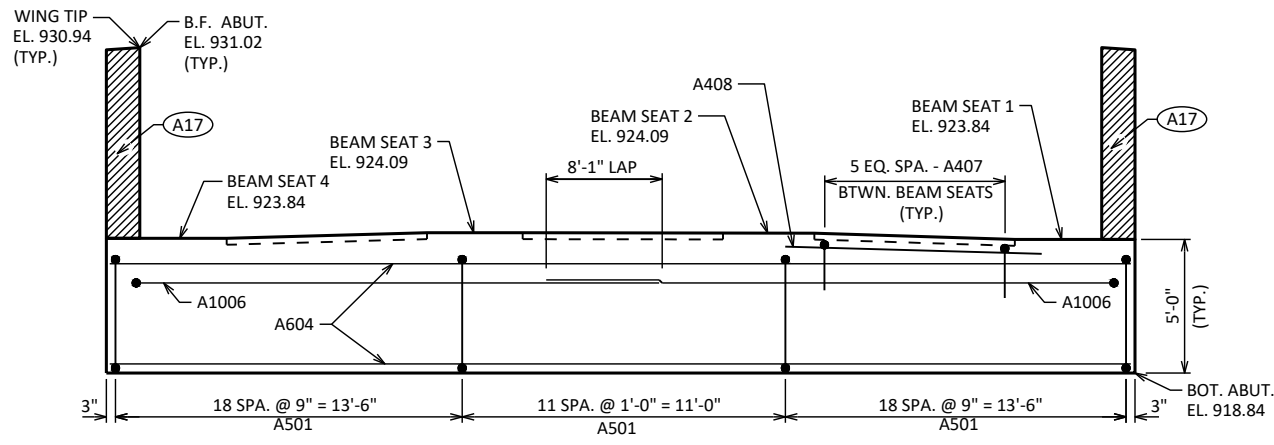
SUBSURFACE EXPLORATION

SHEET 3

SCALE =

8

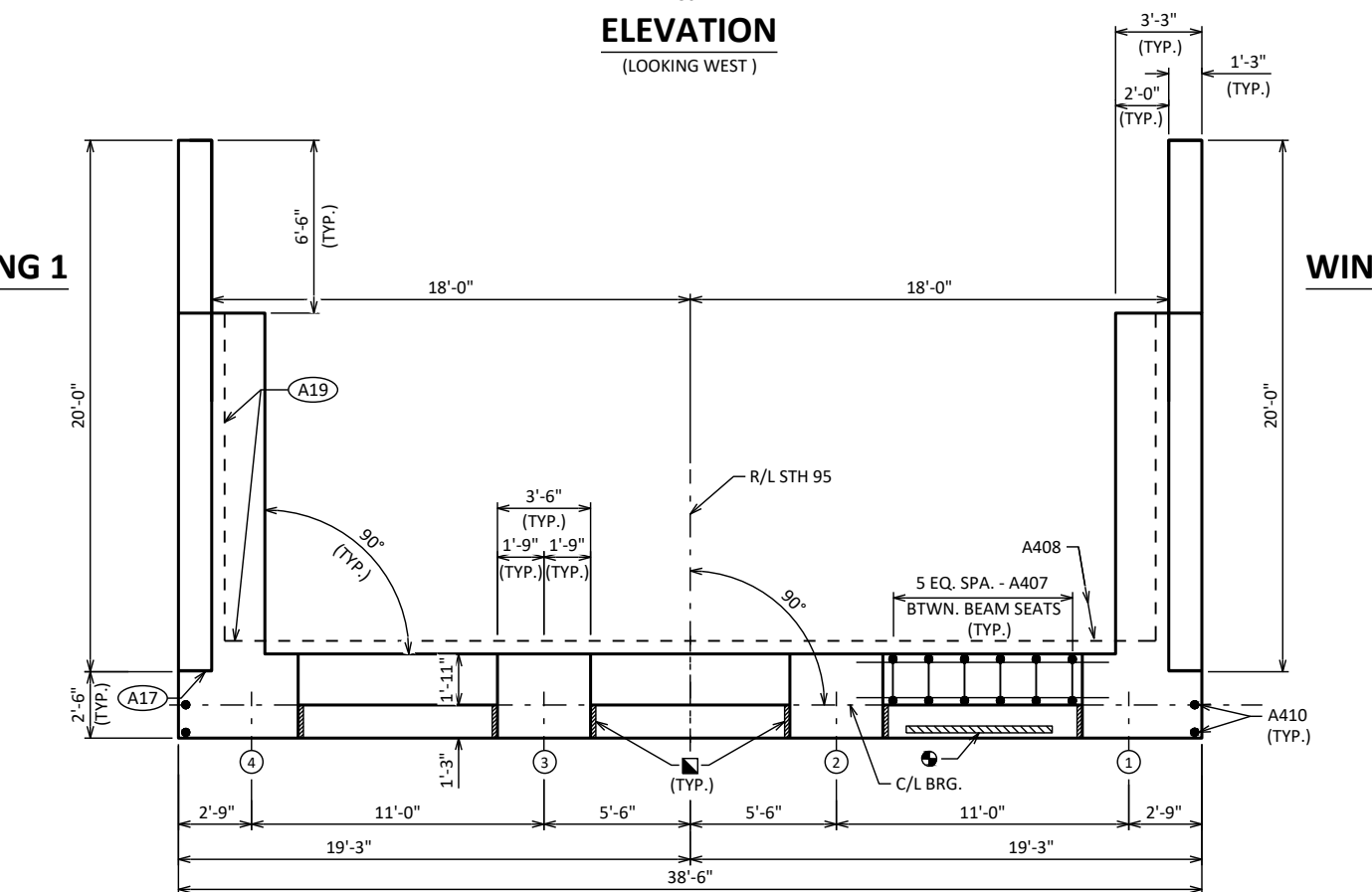
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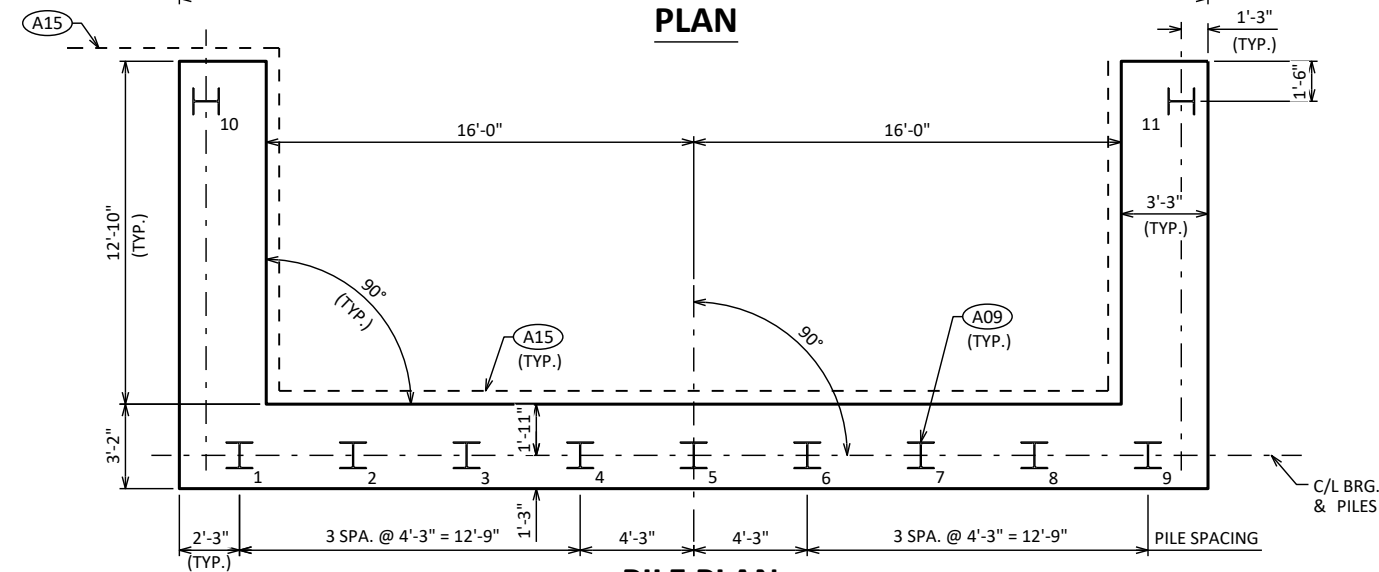
ELEVATION
(LOOKING WEST)

WING 1

WING 2

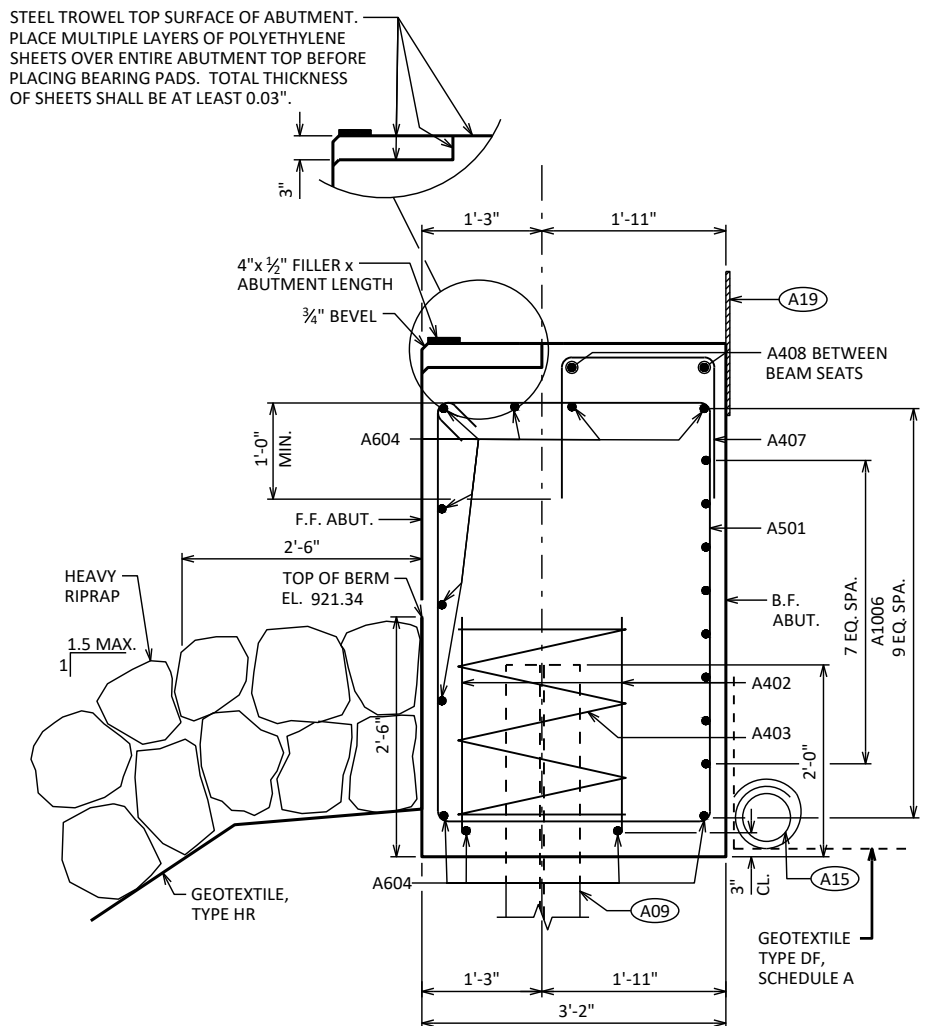


PLAN



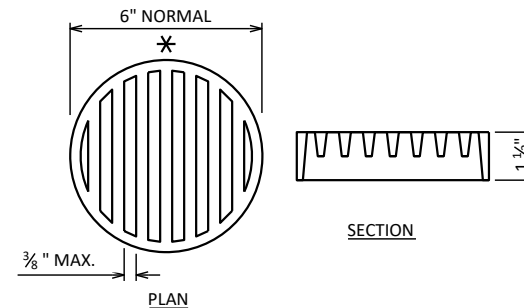
PILE PLAN

STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".



SECTION THRU BODY

- 4" X 1/2" PREFORMED JOINT FILLER X ABUTMENT LENGTH
- 3/4" CORK FILLER ON VERTICAL BEAM SEAT FACES.
- (A09) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 3/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.



RODENT SHIELD DETAIL

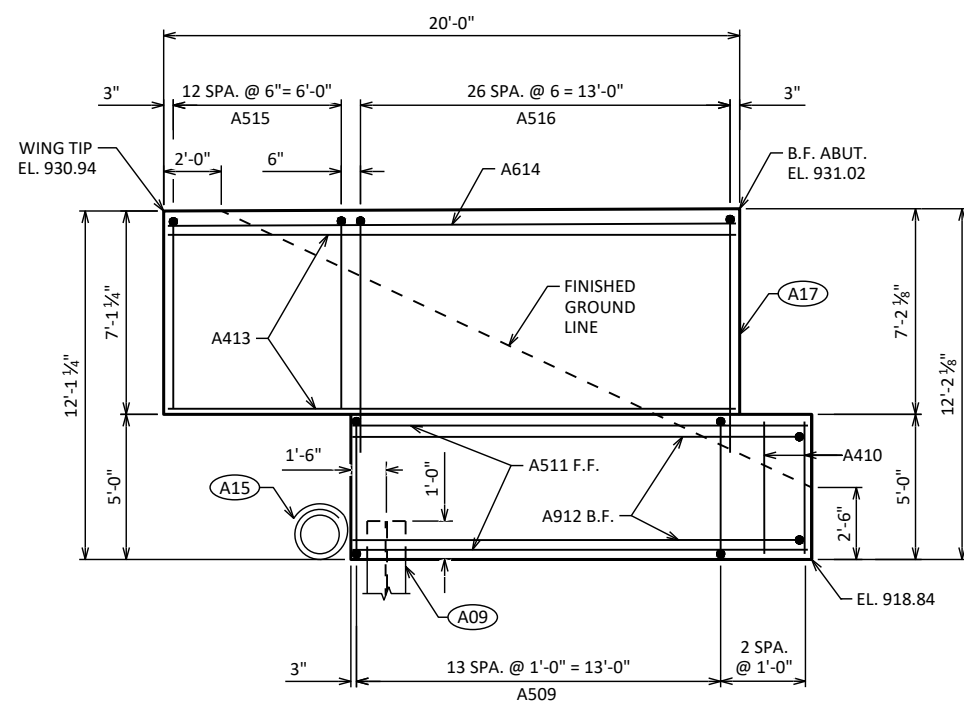
* DIMENSIONS ARE APPROXIMATE. THE GRATE IS SIZED TO FIT INTO A PIPE COUPLING. ORIENT SO SLOTS ARE VERTICAL.

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

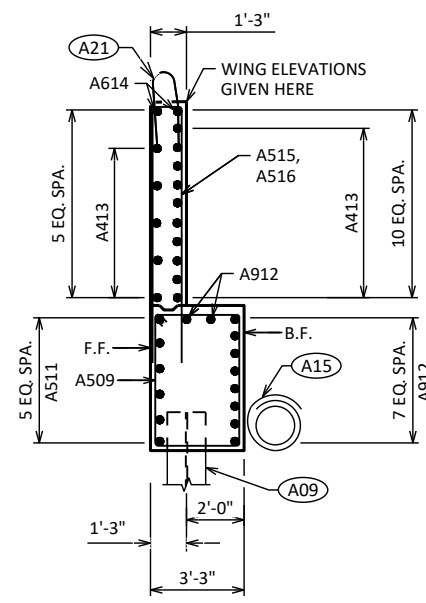
THE RODENT SHIELD SHALL BE A PVC GRATE SIMILAR TO THIS DETAIL. THE GRATE IS COMMERCIALY AVAILABLE AS A FLOOR STRAINER. A PIPE COUPLING IS REQUIRED FOR THE ATTACHMENT OF THIS SHIELD TO THE EXPOSED END OF THE PIPE UNDERDRAIN. THE SHIELD SHALL BE FASTENED TO THE PIPE COUPLING WITH TWO OR MORE NO. 10 X 1-INCH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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
WEST ABUTMENT			SHEET 4

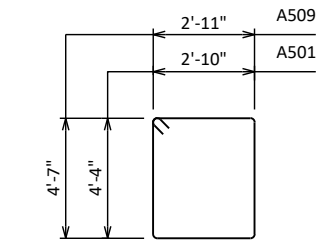
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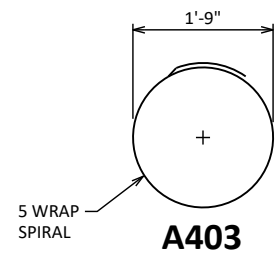
WING 1 ELEVATION



WING 1 SECTION



A501, A509

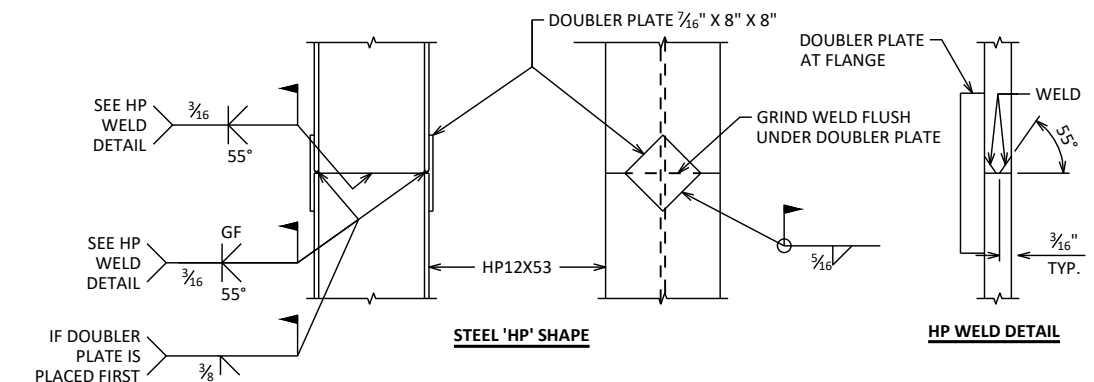


A403

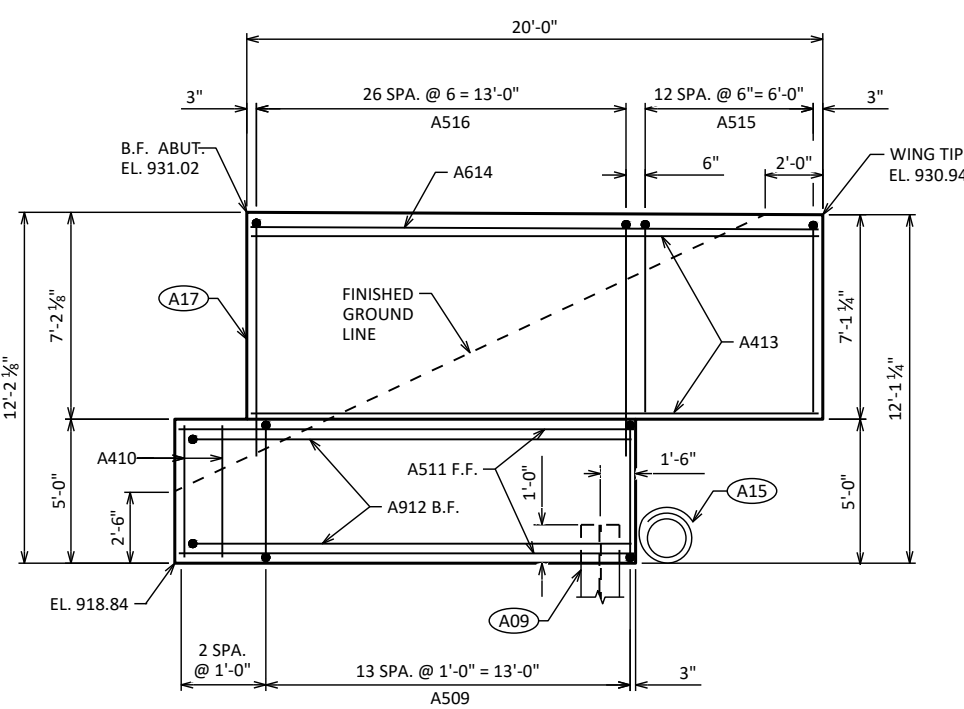
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

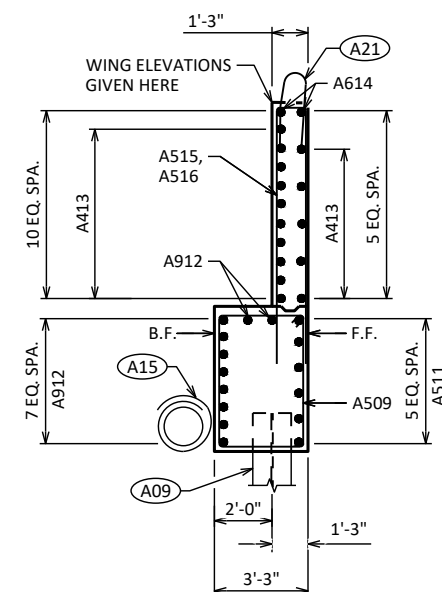
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		48	15'-0"	X		BODY - STIRRUPS
A402		18	2'-3"			PILES - 2 PER BODY PILE
A403		9	28'-0"	X		PILES - 1 PER BODY PILE
A604		11	38'-2"			BODY - HORIZ. F.F., TOP & BOT.
		NOT	USED			
A1006		8	24'-7"	X		BODY - HORIZ. - B.F.
A407		18	3'-11"	X		BODY - BTWN. BEAM SEATS - VERT.
A408		6	9'-2"			BODY - BTWN. BEAM SEATS - HORIZ.
A509	X	28	15'-8"	X		WINGS 1 & 2 - STIRRUPS
A410		4	4'-7"			WINGS 1 & 2 - VERT. - ABUT. ENDS
A511	X	12	13'-0"			WINGS 1 & 2 - HORIZ. - F.F. - LOWER WINGS
A912	X	20	16'-10"	X		WINGS 1 & 2 - HORIZ. - B.F. - LOWER WINGS
A413	X	30	19'-8"			WINGS 1 & 2 - HORIZ. - UPPER WINGS
A614	X	4	19'-8"			WINGS 1 & 2 - HORIZ. - UPPER WINGS - TOP
A515	X	26	14'-2"	X		WINGS 1 & 2 - VERT. - UPPER WINGS - WINGS TIP
A516	X	54	18'-8"	X		WINGS 1 & 2 - VERT. - UPPER WINGS



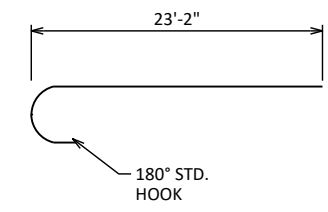
'HP' PILE DETAILS



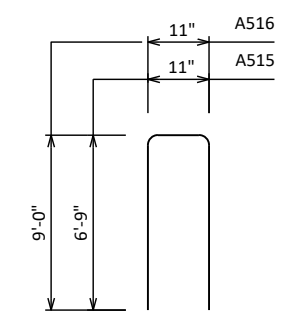
WING 2 ELEVATION



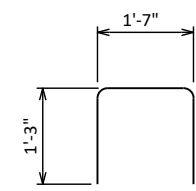
WING 2 SECTION



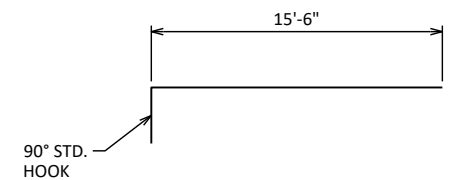
A1006



A515, A516



A407



A912

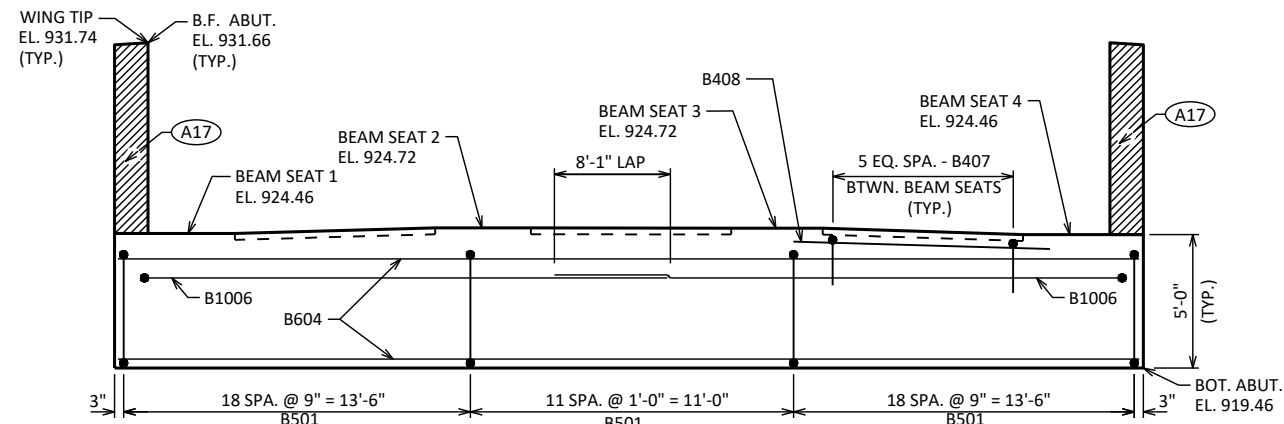
- (A09) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A21) FOR PPT. BARS AND DIMENSIONS, SEE "SINGLE SLOPE PARAPET 42SS" SHEET.

8

8

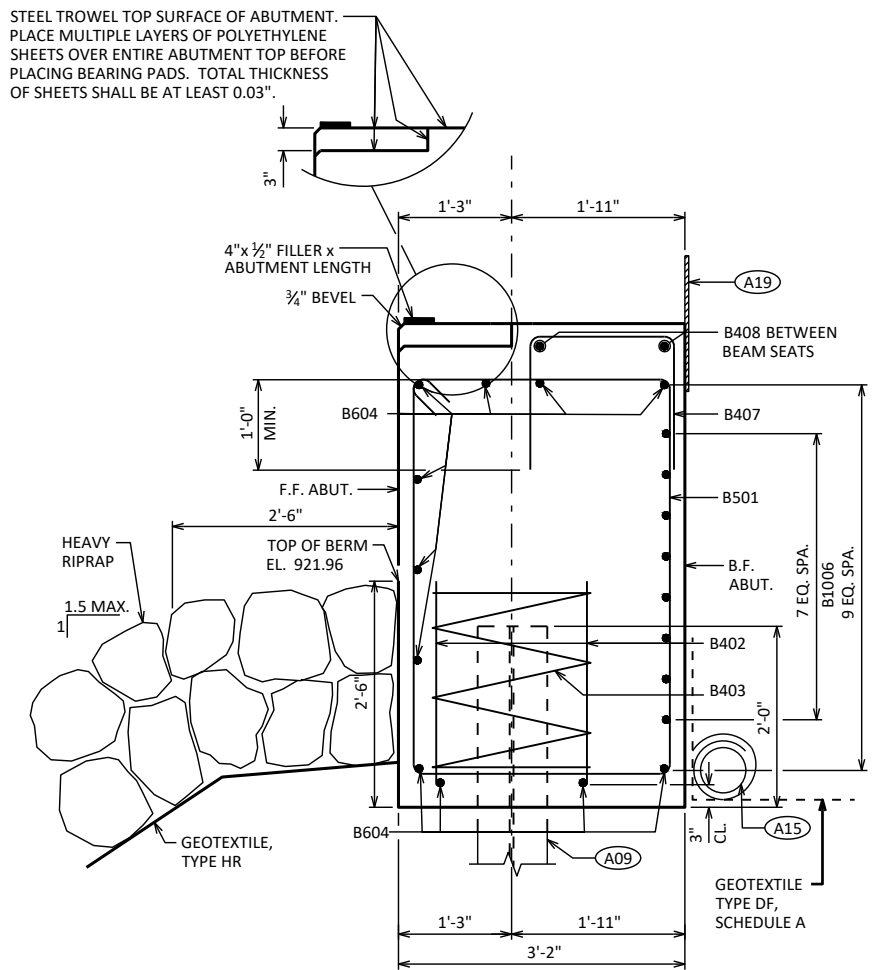
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
WEST ABUTMENT DETAILS			SHEET 5

SCALE =



ELEVATION
(LOOKING EAST)

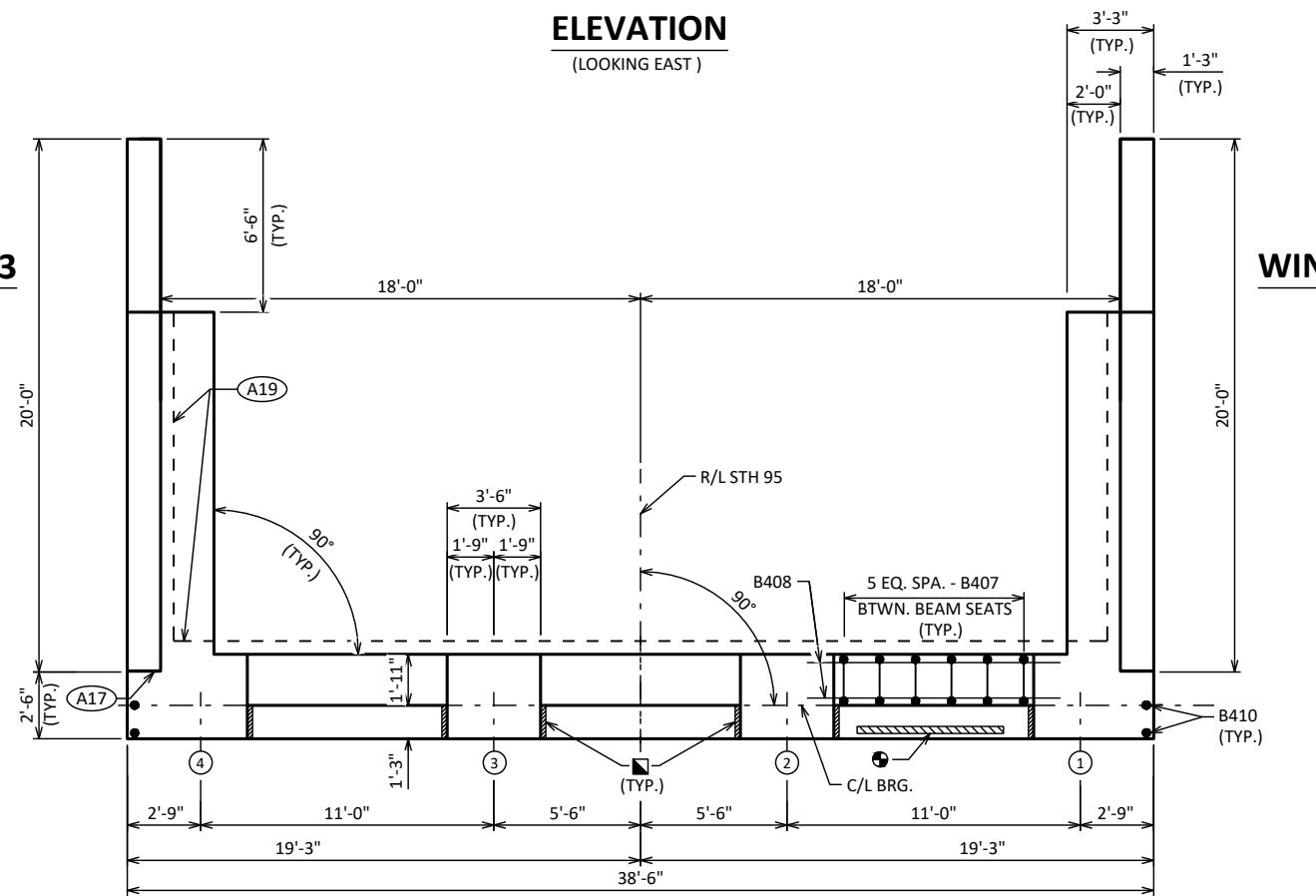
STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".



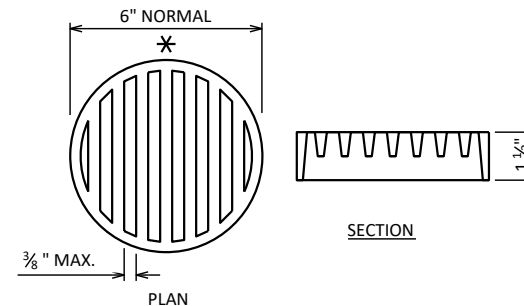
SECTION THRU BODY

WING 3

WING 4



PLAN



RODENT SHIELD DETAIL

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

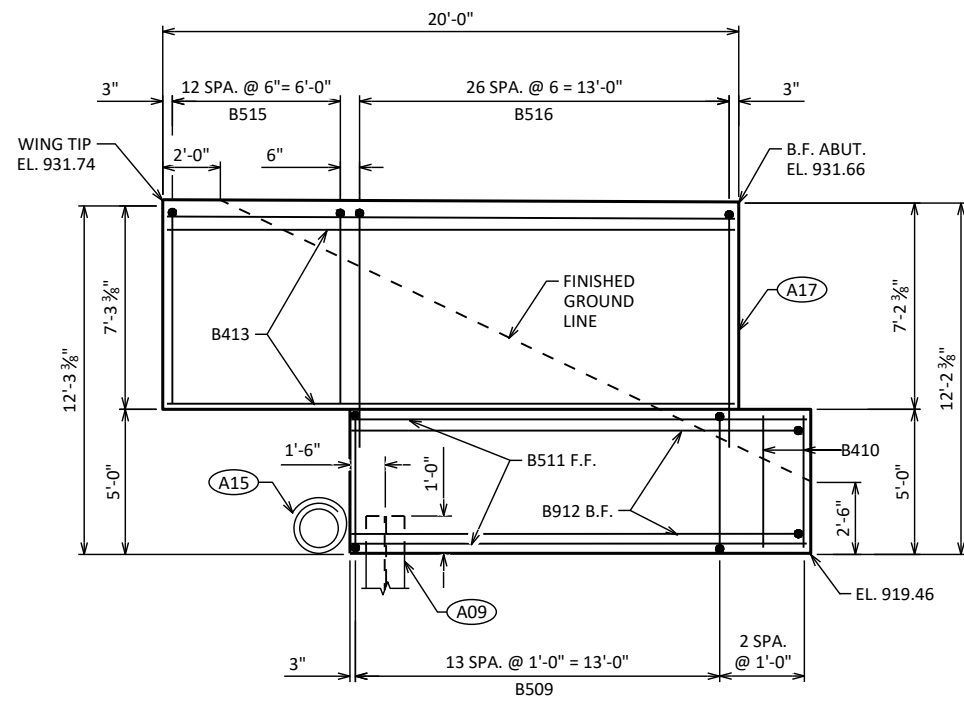
THE RODENT SHIELD, PIPE COUPLING AND SCREWS SHALL BE CONSIDERED INCIDENTAL TO THE BID ITEM "PIPE UNDERDRAIN WRAPPED 6-INCH".

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.

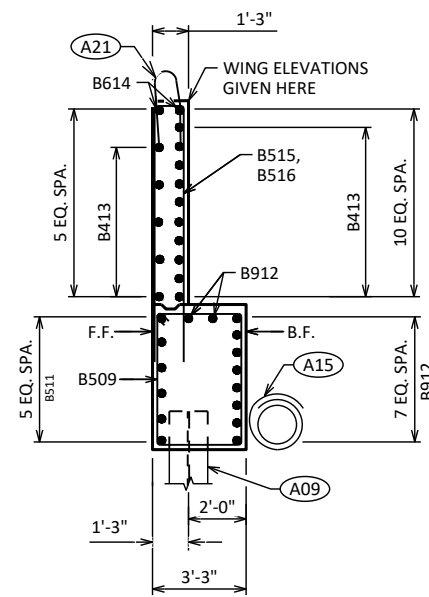
- 4" X 1/2" PREFORMED JOINT FILLER X ABUTMENT LENGTH
- 3/4" CORK FILLER ON VERTICAL BEAM SEAT FACES.
- (A09) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE.
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- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
EAST ABUTMENT			SHEET 6

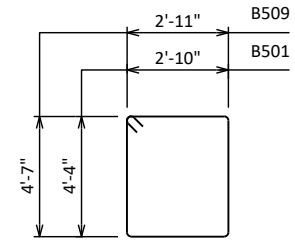
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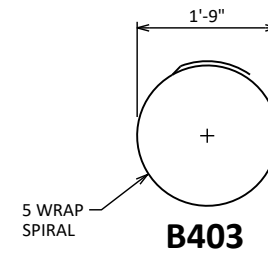
WING 3 ELEVATION



WING 3 SECTION



B501, B509

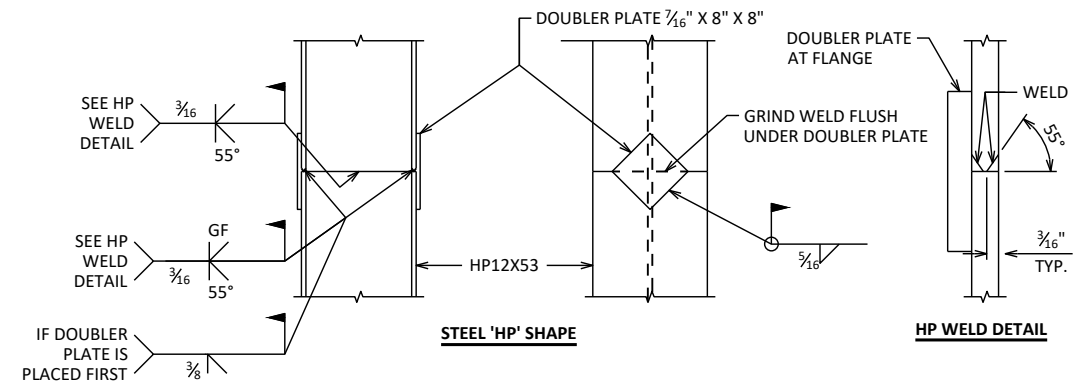


B403

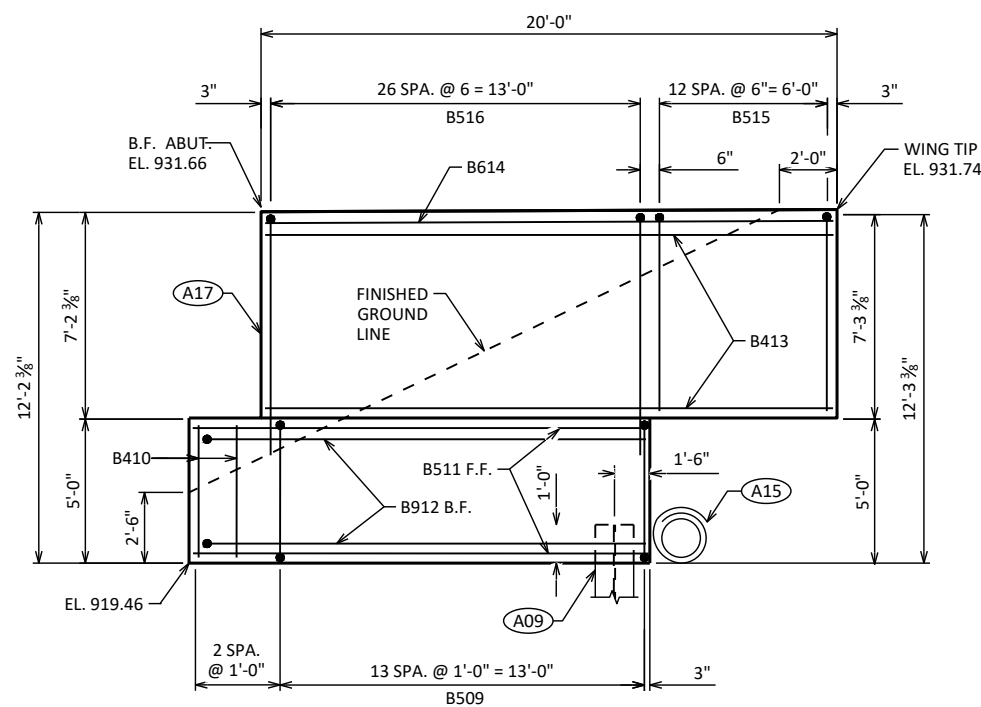
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

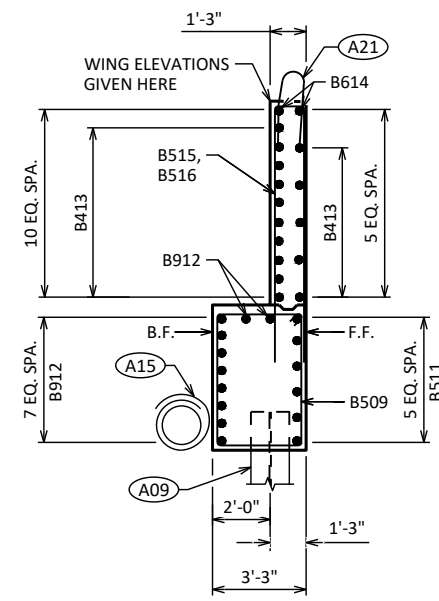
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		48	15'-0"	X		BODY - STIRRUPS
B402		18	2'-3"			PILES - 2 PER BODY PILE
B403		9	28'-0"	X		PILES - 1 PER BODY PILE
B604		11	38'-2"			BODY - HORIZ. F.F., TOP & BOT.
		NOT USED				
B1006		8	24'-7"	X		BODY - HORIZ. - B.F.
B407		18	3'-11"	X		BODY - BTWN. BEAM SEATS - VERT.
B408		6	9'-2"			BODY - BTWN. BEAM SEATS - HORIZ.
B509	X	28	15'-8"	X		WINGS 3 & 4 - STIRRUPS
B410		4	4'-7"			WINGS 3 & 4 - VERT. - ABUT. ENDS
B511	X	12	13'-0"			WINGS 3 & 4 - HORIZ. - F.F. - LOWER WINGS
B912	X	20	16'-10"	X		WINGS 3 & 4 - HORIZ. - B.F. - LOWER WINGS
B413	X	30	19'-8"			WINGS 3 & 4 - HORIZ. - UPPER WINGS
B614	X	4	19'-8"			WINGS 3 & 4 - HORIZ. - UPPER WINGS - TOP
B515	X	26	14'-8"	X		WINGS 3 & 4 - VERT. - UPPER WINGS - WINGS TIP
B516	X	54	18'-8"	X		WINGS 3 & 4 - VERT. - UPPER WINGS



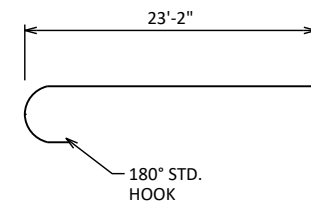
'HP' PILE DETAILS



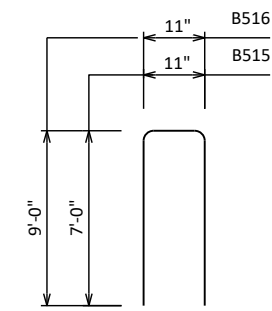
WING 4 ELEVATION



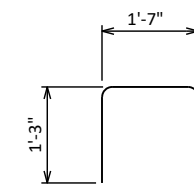
WING 4 SECTION



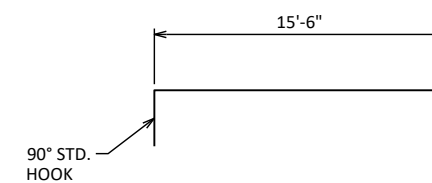
B1006



B515, B516



B407



B912

- (A09) SUPPORT ABUTMENT ON HP 12 X 53 STEEL PILING, ESTIMATED 30'-0" LONG WITH A REQUIRED DRIVING RESISTANCE OF 220 TONS PER PILE.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A21) FOR PPT. BARS AND DIMENSIONS, SEE "SINGLE SLOPE PARAPET 425S" SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
EAST ABUTMENT DETAILS			SHEET 7

SCALE =

NOTES

TOP OF GIRDER TO BE ROUGH FLOATED AND BROOMED TRANSVERSELY, EXCEPT THE OUTSIDE 15" OF GIRDER, WHICH SHALL RECEIVE A SMOOTH FINISH. AN APPROVED CONCRETE SEALER SHALL BE APPLIED TO ALL SMOOTH SURFACES INCLUDING THE OUTSIDE 15" OF THE TOP FLANGE.

DO NOT APPLY CONCRETE SEALER OR EPOXY TO SURFACES RECEIVING APPLICATION OF CONCRETE STAINING.

THE GIRDERS SHALL BE PROVIDED WITH A SUITABLE LIFTING DEVICE FOR HANDLING AND ERECTING THE GIRDERS.

STRANDS SHALL BE FLUSH WITH END OF GIRDER. FOR GIRDER ENDS EMBEDDED COMPLETELY IN CONCRETE, END OF STRANDS SHALL BE COATED WITH NON-BITUMINOUS JOINT SEALER. FOR GIRDER ENDS THAT ARE FINALLY EXPOSED, COAT THE GIRDER ENDS, EXPOSED STRAND ENDS AND ALL NON-BONDING SURFACES WITHIN 2 FEET OF THE GIRDER ENDS WITH A NON-PIGMENTED EPOXY CONFORMING TO AASHTO M-235 TYPE III, GRADE 2, CLASS B OR C. THE EPOXY SHALL BE APPLIED AT LEAST 3 DAYS AFTER MOIST CURING HAS CEASED AND PRIOR TO THE APPLICATION OF THE SEALER.

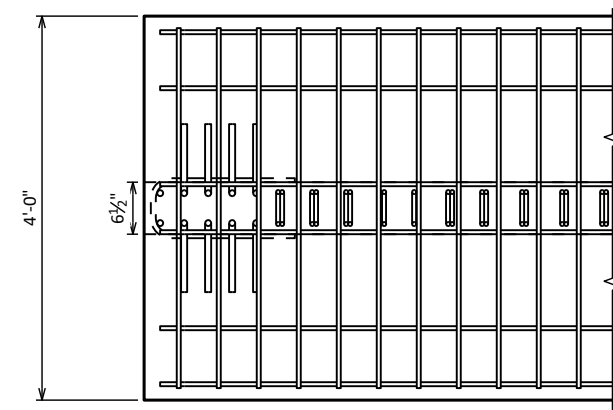
ALL GIRDERS SHALL BE CAST FULL LENGTH AS SHOWN.

SPACING SHOWN FOR #4 STIRRUPS IS FOR GRADE 60 REINFORCEMENT.

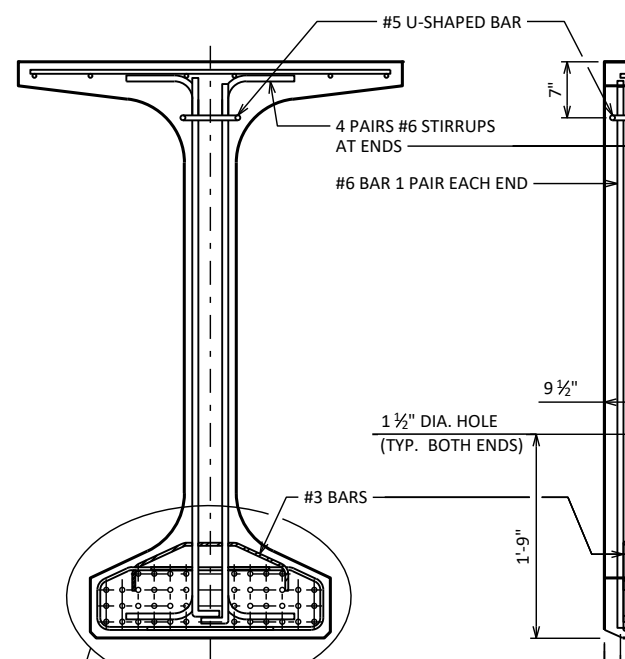
AN EQUIVALENT OF WELDED WIRE FABRIC (WWF) ASTM A1064 MAY BE SUBSTITUTED FOR THE STIRRUP REINFORCEMENT SHOWN, UPON ACCEPTANCE OF THE STRUCTURES MAINTENANCE SECTION. IF USED, WWF SUBSTITUTION DETAILS SHALL BE SUBMITTED ELECTRONICALLY TO THE WISDOT FABRICATION LIBRARY AND ACCEPTED PRIOR TO SHOP DRAWING SUBMITTAL.

PRESTRESSING STRANDS SHALL BE (0.6" DIA.)-7 WIRE LOW-RELAXATION STRANDS WITH AN ULTIMATE STRENGTH OF 270,000 PSI.

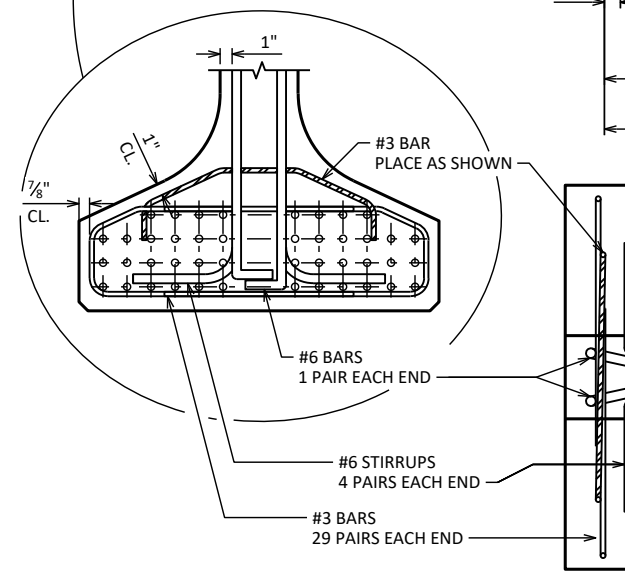
FOR DIAPHRAGM INSERT & CONNECTION DETAILS SEE "STEEL DIAPHRAGMS" SHEET.



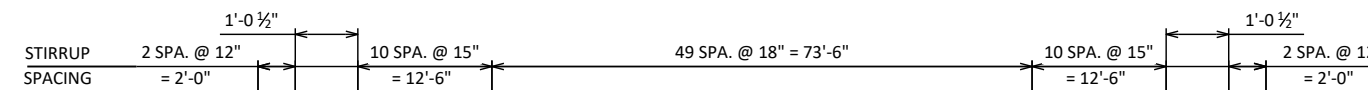
TOP FLANGE



SECTION A-A

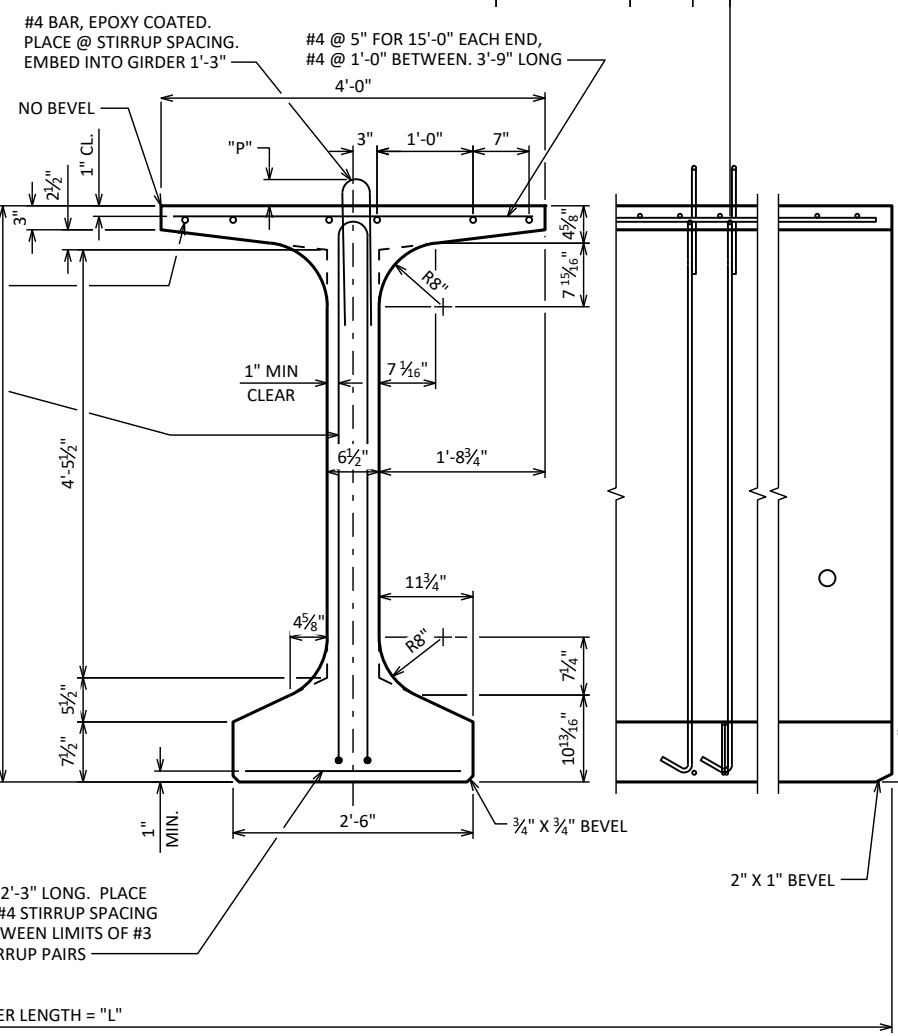


BOTTOM FLANGE



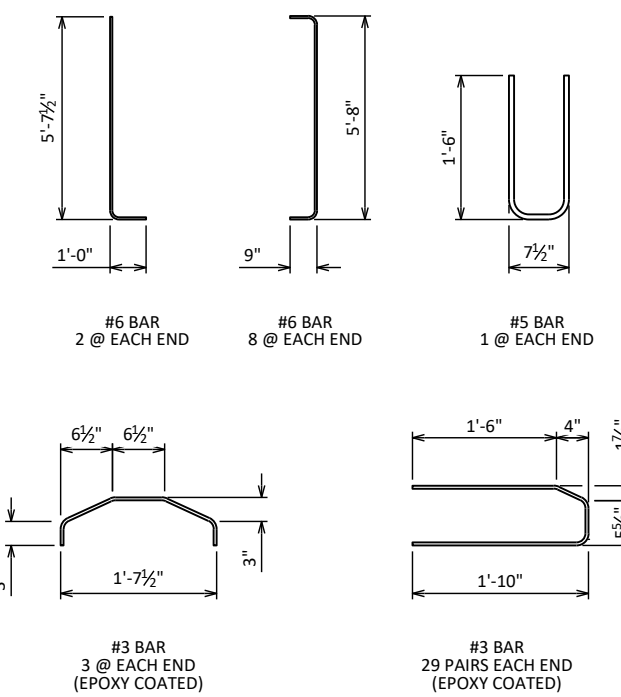
A

A



SIDE VIEW & TYP. SECTION IN SPAN

- (A) DETAIL TYP. AT EACH END
- (B) 6 #4 BARS, FULL LENGTH, MIN. LAP = 1'-11"

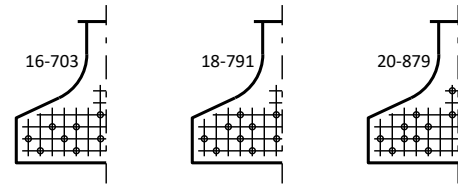


* MINIMUM CYLINDER STRENGTH OF CONCRETE @ TIME OF TRANSFER OF PRESTRESS FORCE.

SPAN	GIRDER	GIRDER LENGTH "L" (FEET)	DEAD LOAD DEFL. (IN.)									CONC. STRGTH. f _c (P.S.I.)	"P" (IN.)			DIA. OF STRAND (IN.)	TOTAL NO. OF STRANDS	f _{ci} (P.S.I.) *	DRAPED PATTERN (IN.)				UNDRAPE PATTERN	
			1/10	2/10	3/10	4/10	5/10	6/10	7/10	8/10	9/10		1ST 1/3 OF GIRDER	MID 1/3 OF GIRDER	END 1/3 OF GIRDER				"A"	"B" MIN.	"B" MAX.	"C"	TOTAL NO. OF STRANDS	f _{ci} (P.S.I.) *
			1	2	3	4	5	6	7	8	9		8	7	8				65	20	23	5		
1	2&3	126	0.7	1.3	1.7	2.0	2.1	2.0	1.7	1.3	0.7	8,000	8	7	8	0.6	44	6,800	65	20	23	5		
1	1&4	126	0.5	1.0	1.4	1.6	1.7	1.6	1.4	1.0	0.5	8,000	8	7	8	0.6	44	6,800	65	20	23	5		

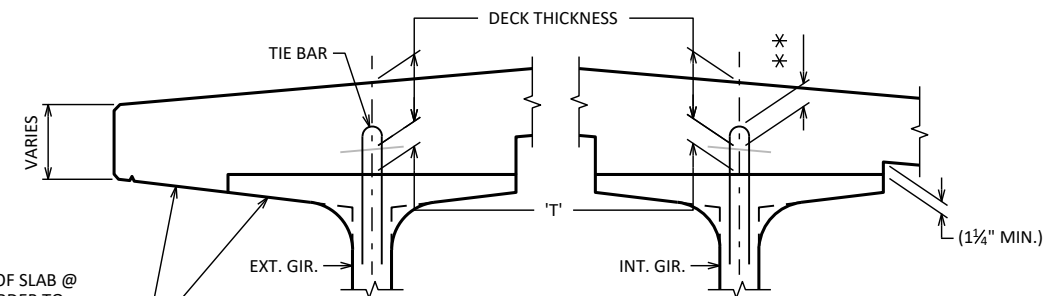
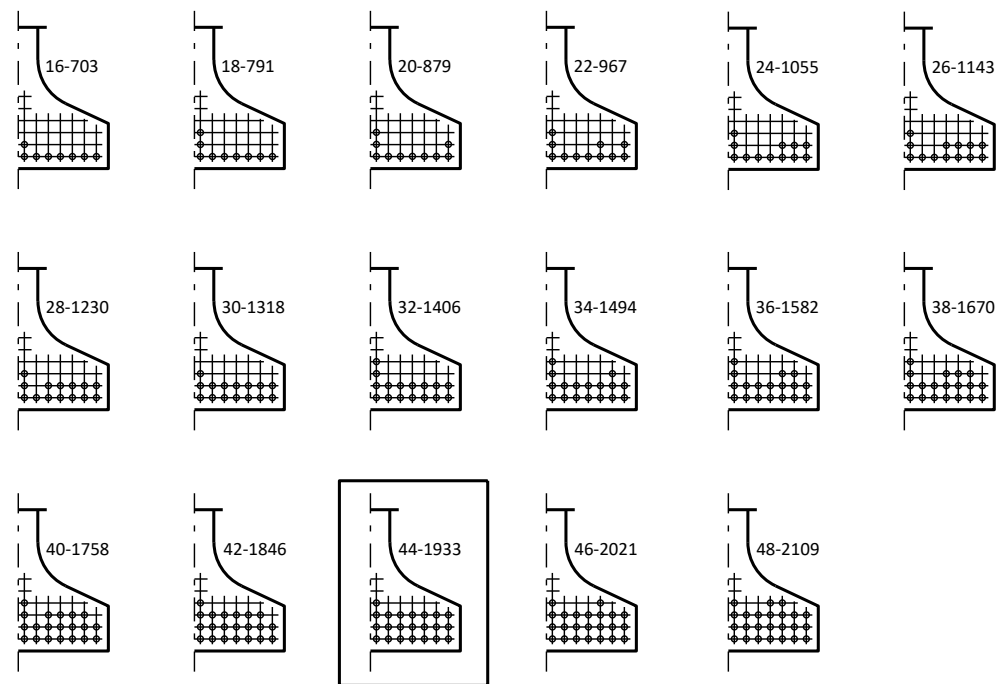
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
72W"		SHEET 8	
PRESTRESSED		GIRDER DETAILS 1	

SCALE =



STANDARD ARRANGEMENTS TO RAISE CENTER OF GRAVITY TO AVOID DRAPING OF STRANDS

0.6" DIA. STRANDS



DECK HAUNCH DETAIL

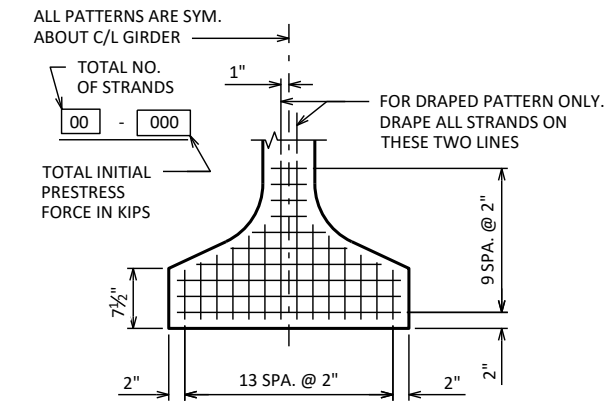
SLOPE BTM OF SLAB @ EXTERIOR GIRDER TO MATCH THE SLOPE OF THE BTM OF TOP FLANGE

IF 1 1/4" MINIMUM HAUNCH HEIGHT AT EDGE OF GIRDER CANNOT BE MAINTAINED, THE GRADE LINE MAY BE REVISED BY THE ENGINEER AT THE OPTION OF THE CONTRACTOR, THE PLAN DECK THICKNESS SHALL BE HELD. NOTIFY THE STRUCTURES SECTION IF THE GRADE LINE IS RAISED FROM THE PLAN PROFILE BY MORE THAN 1/2" OR, IF 3" MINIMUM DECK EMBEDMENT OF TIE BAR CANNOT BE OBTAINED.

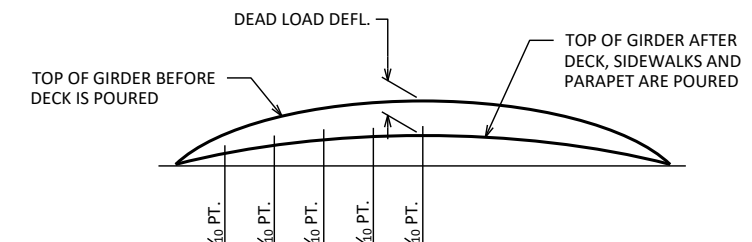
TO DETERMINE 'T', ELEV. OF TOP OF GIR'S. AT C/L OF SUBSTRUCTURE UNITS & AT 1/10 POINTS OF EACH SPAN SHALL BE TAKEN. THEN FOLLOW THIS PROCESS:

$$\begin{aligned}
 & \text{TOP OF DECK ELEV. AT FINAL GRADE} \\
 & - \text{TOP OF GIRDER ELEVATION} \\
 & + \text{DEAD LOAD DEFLECTION} \\
 & - \text{DECK THICKNESS} \\
 \hline
 & = \text{HAUNCH HEIGHT 'T'}
 \end{aligned}$$

NOTE: AN AVERAGE HAUNCH ('T') OF 3 3/4" WAS USED IN THE QUANTITY "CONCRETE MASONRY BRIDGES".



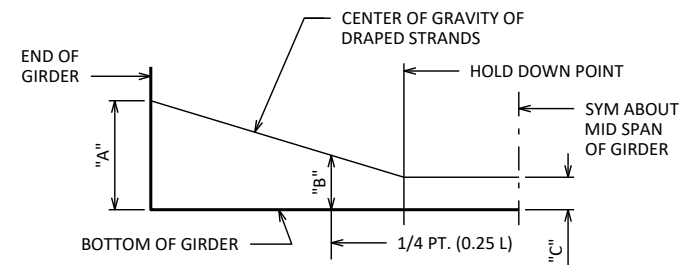
TYP. STRAND PATTERN



DEAD LOAD DEFLECTION DIAGRAM

ARRANGEMENT AT C/L SPAN - FOR GIRDERS WITH DRAPED STRANDS

0.6" DIA. STRANDS



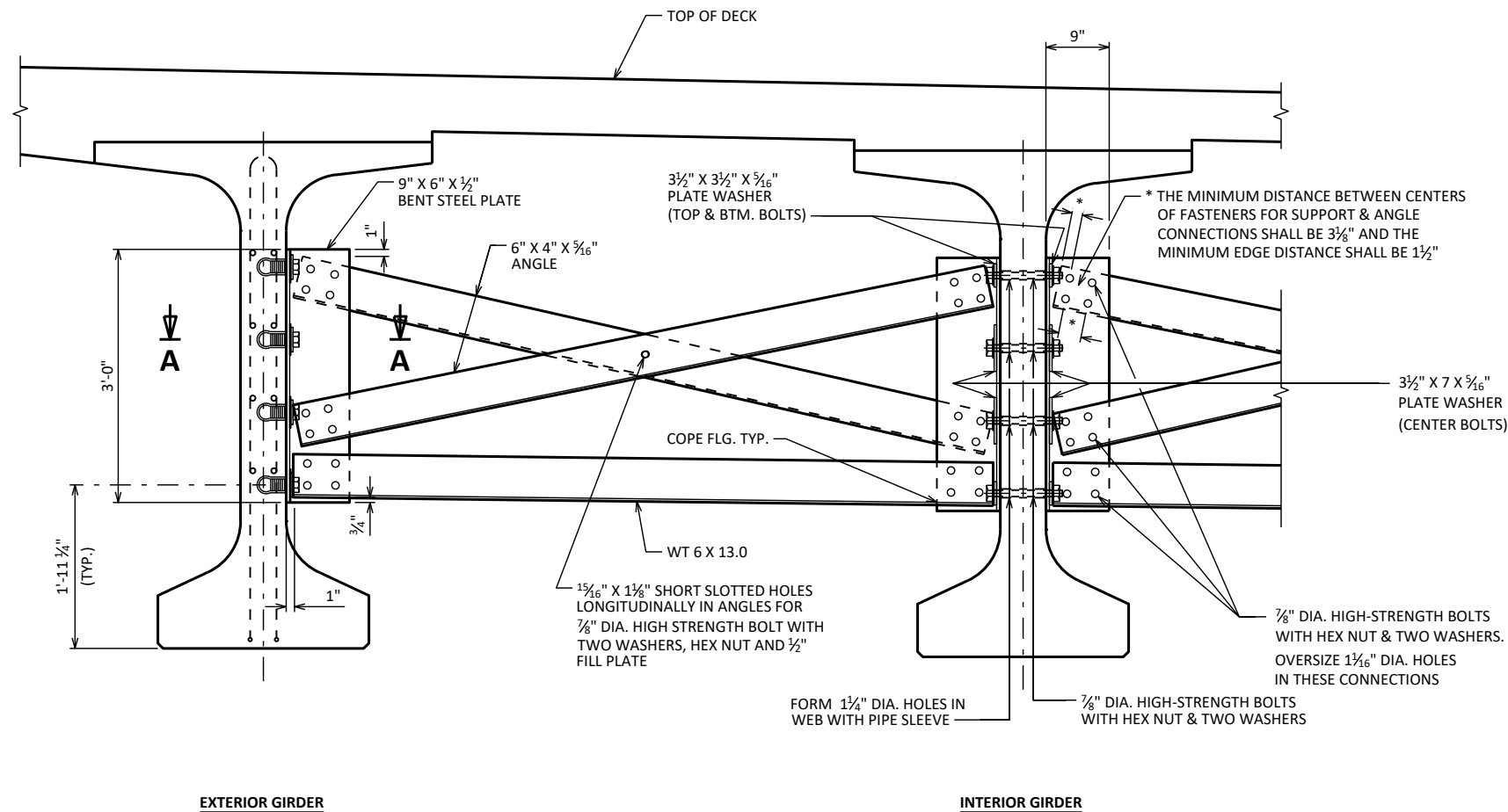
DRAPED STRAND PROFILE

* THE THEORETICAL INITIAL CAMBER VALUE AT THE TIME OF STRAND RELEASE AT MIDSPAN MULTIPLIED BY A FACTOR OF 1.4 TO ACCOUNT FOR CAMBER GROWTH FROM THE TIME OF STRAND RELEASE TO JOBSITE PLACEMENT.

SPAN	CAMBER (IN.) *
1	3.91

THESE VALUES ARE NOT TO BE USED IN DETERMINING 'T', USE ACTUAL GIRDER SHOTS.
THESE VALUES ARE FOR INFORMATIONAL PURPOSES ONLY.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
72W" PRESTRESSED GIRDER DETAILS 2			SHEET 9



PART TRANSVERSE SECTION AT DIAPHRAGM

NOTES

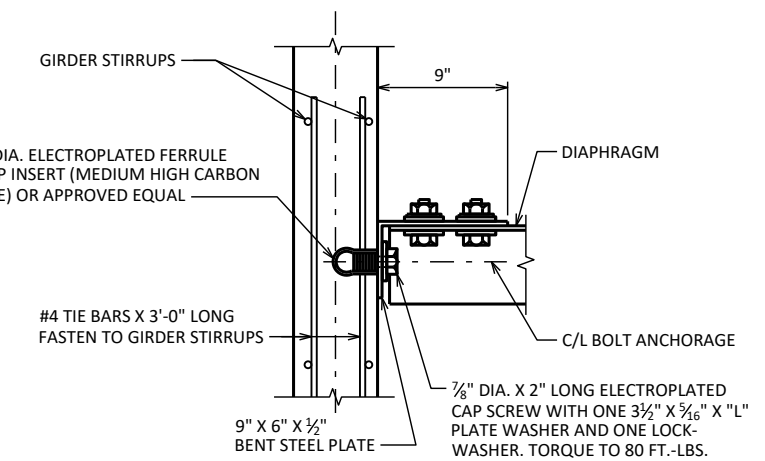
ALL DIAPHRAGM MATERIAL NOT EMBEDDED IN THE CONCRETE GIRDER SHALL BE PAID FOR AT THE UNIT PRICE BID FOR "STEEL DIAPHRAGMS B-27-168", EACH.

EACH DIAPHRAGM BETWEEN GIRDERS SHALL CONSTITUTE ONE UNIT.

ALL DIAPHRAGM STRUCTURAL STEEL SHALL BE ASTM A709 GRADE 36.

ALL DIAPHRAGM MATERIAL INCLUDING BOLTS, NUTS AND WASHERS SHALL BE GALVANIZED AFTER FABRICATION.

STEEL DIAPHRAGM TO CONCRETE WEB CONNECTION SHALL BE SNUG-TIGHT PLUS 1/4 TURN, UNLESS NOTED OTHERWISE. HIGH STRENGTH BOLTS FOR WEB CONNECTION SHALL MEET THE REQUIREMENTS FOR ASTM A325 OR ASTM A449.

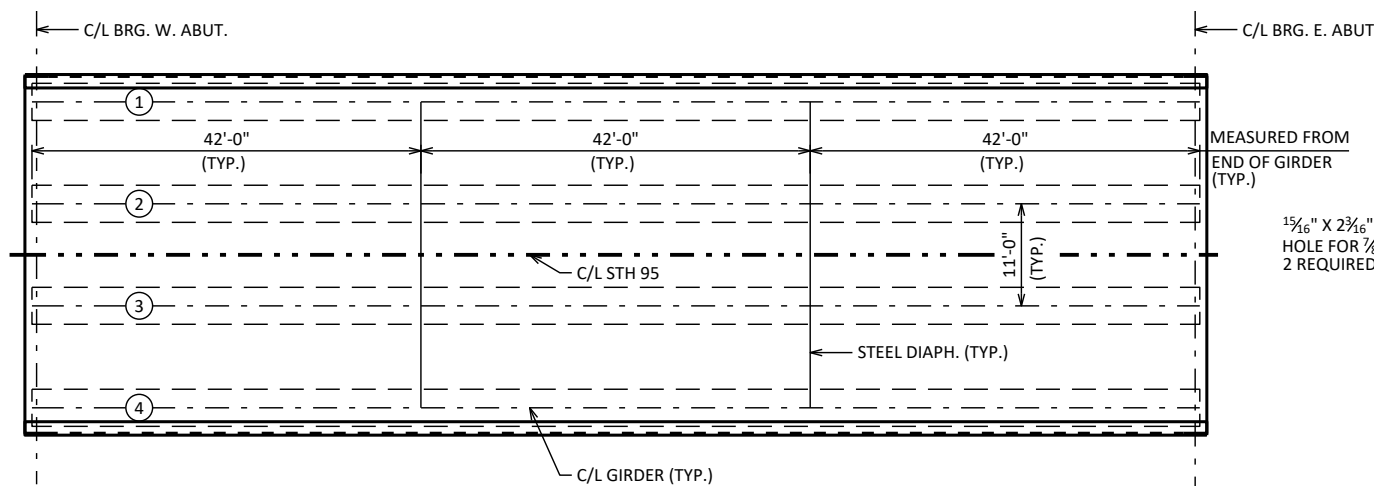


SECTION A-A

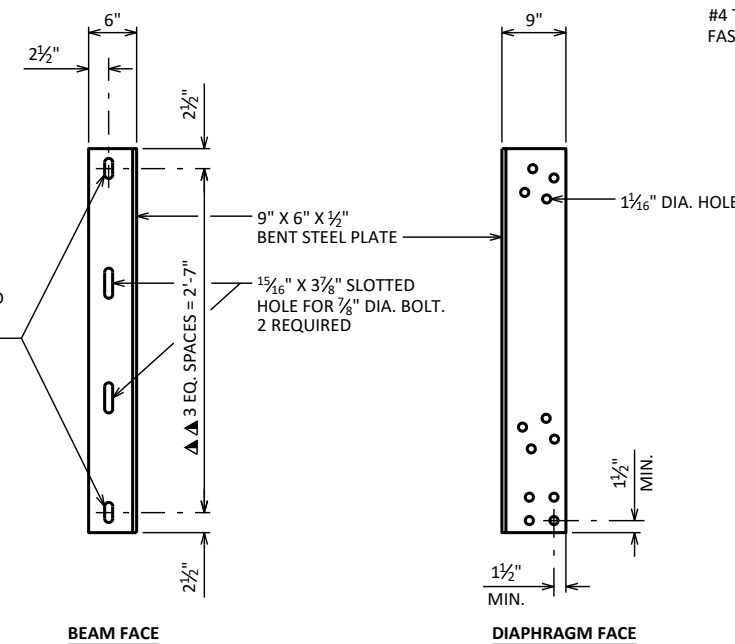
(FOR EXTERIOR ATTACHMENT)

"L" = 3 1/2"; TOP AND BOTTOM BOLTS
"L" = 7"; CENTER BOLTS

○ INDICATES GIRDER NUMBERS



INTERMEDIATE STEEL DIAPHRAGM LAYOUT



DIAPHRAGM SUPPORT

▲▲ BOLT HOLES SHALL BE SPACED SO AS TO MISS PRESTRESSED STRANDS IN CONCRETE BEAMS.

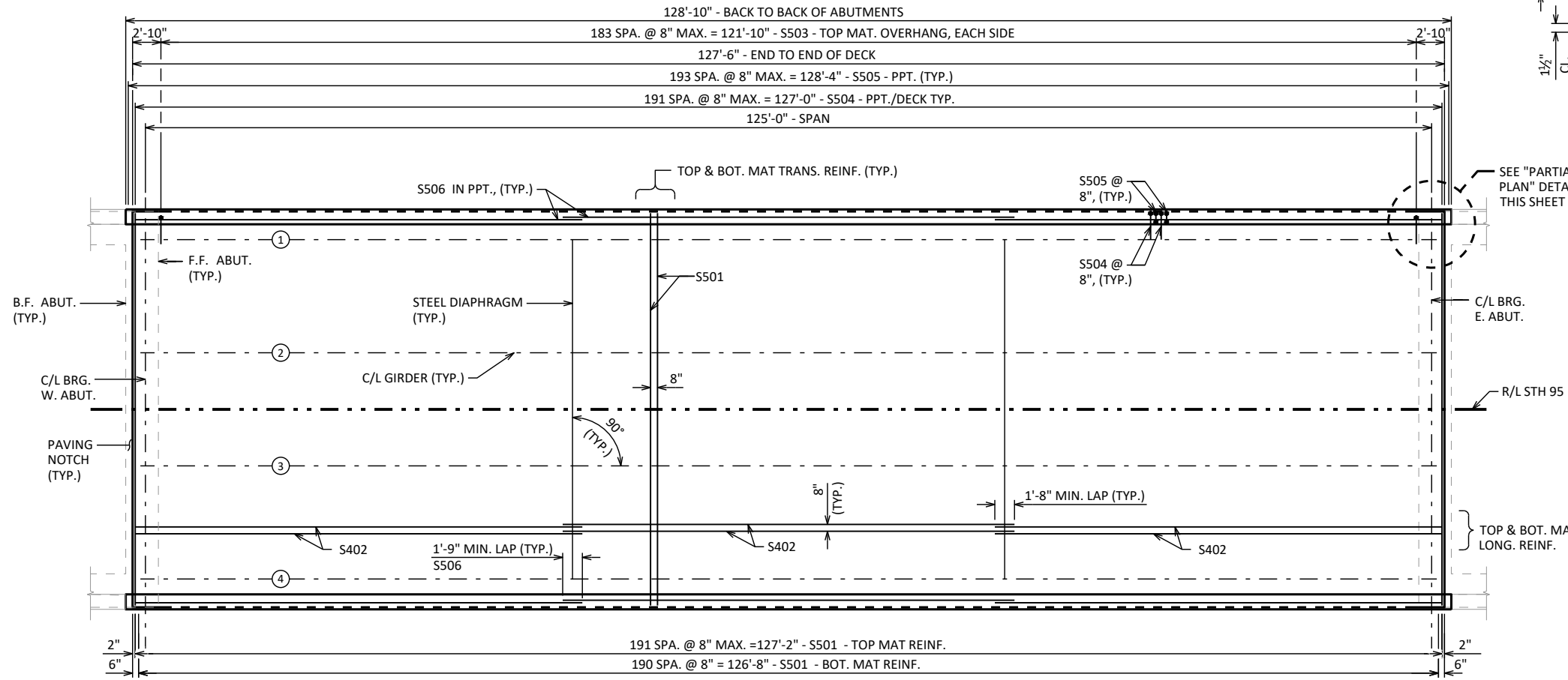
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
STEEL DIAPHRAGMS			SHEET 10

SCALE =

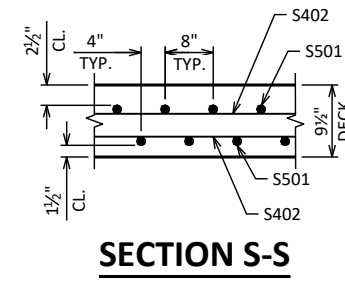
○ INDICATES GIRDER NUMBER

STATE PROJECT NUMBER

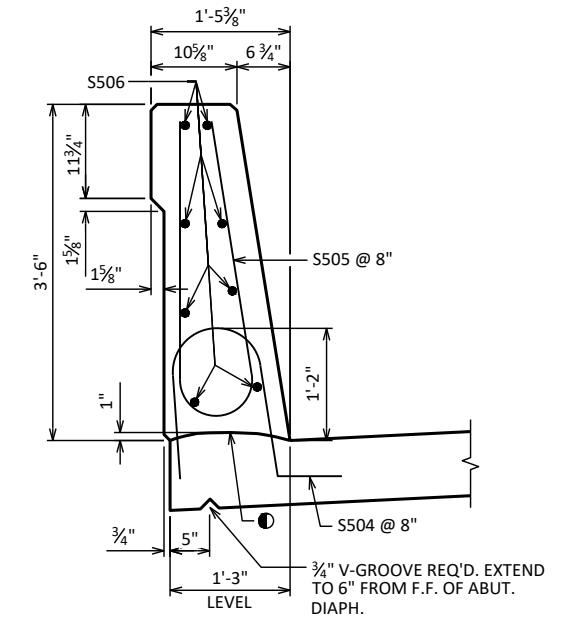
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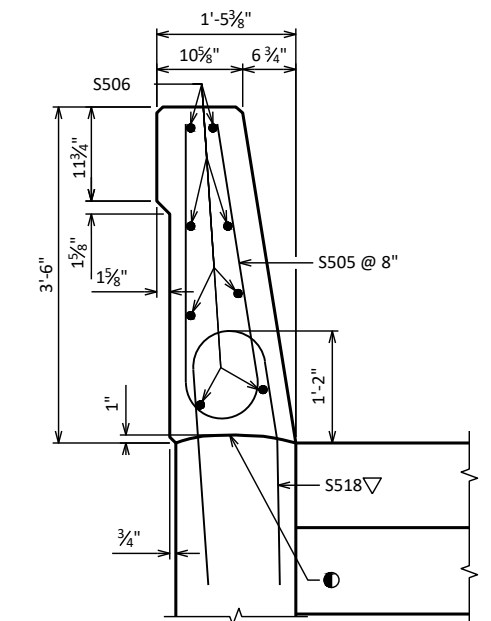
PLAN



SECTION S-S

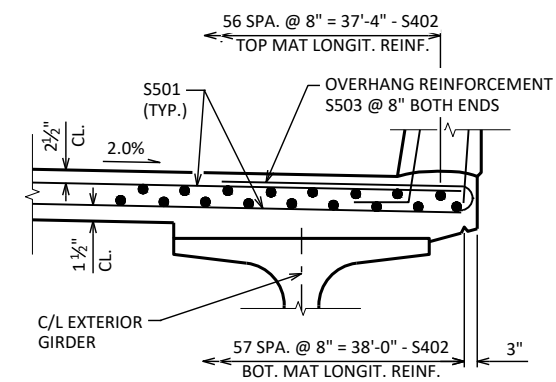


SECTION THRU PARAPET AT DECK

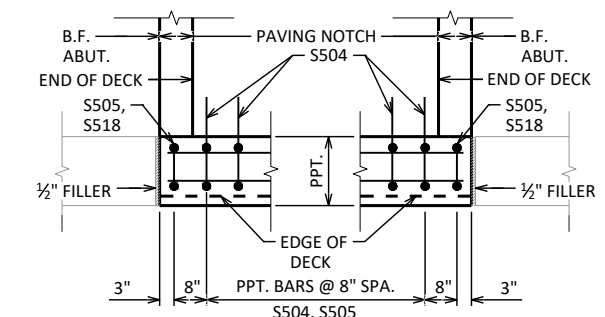


SECTION THRU PARAPET AT PAVING NOTCH

- ▽ S518 BARS TO BE TIED TO DIAPHRAGM STEEL BEFORE DIAPHRAGM IS POURED.
- CONST. JOINT - STRIKE OFF AS SHOWN

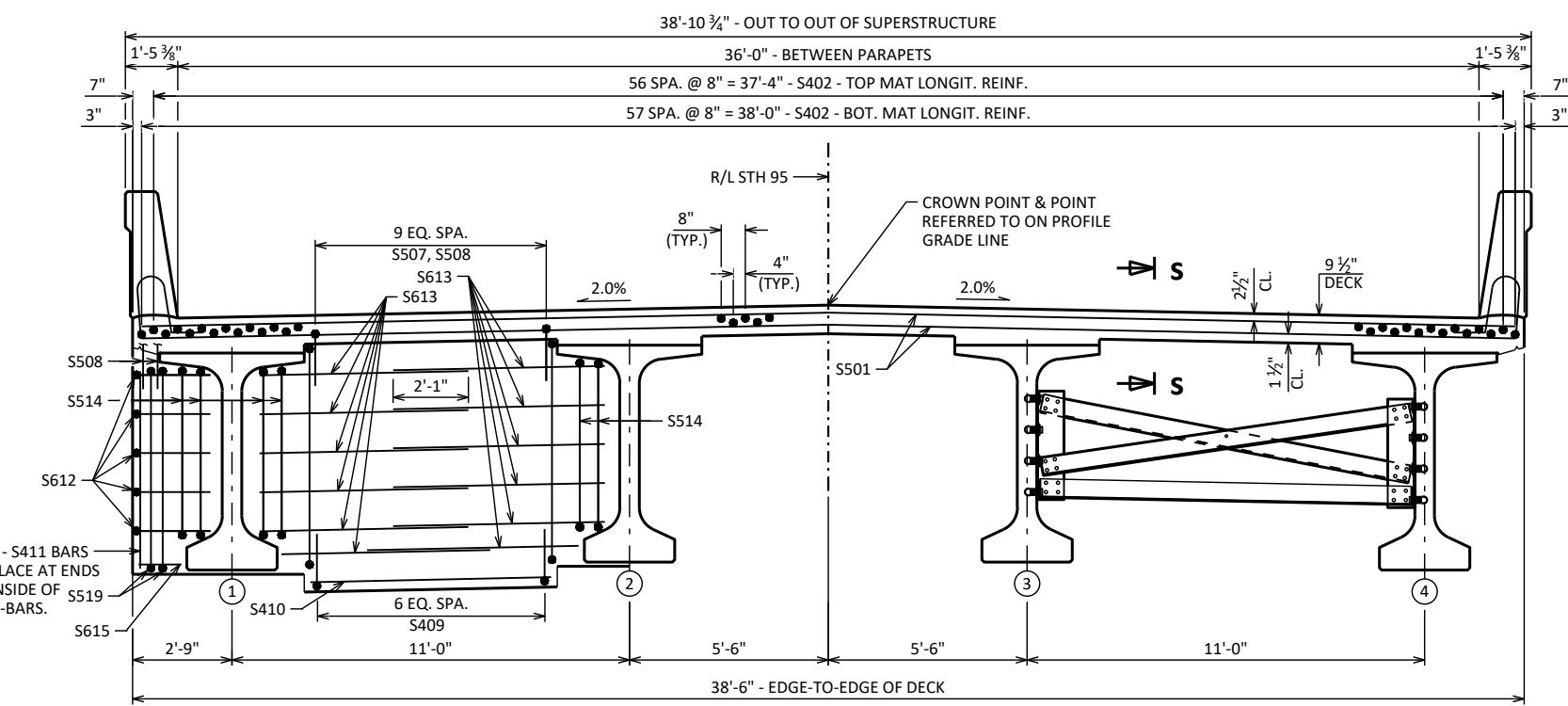


EDGE OF DECK DETAIL



PARTIAL PLAN DETAIL OF PARAPET REINF.

(SHOWING SOUTH CORNERS OF WEST & EAST ABUTMENTS. DETAIL TYP. OF BOTH EDGES OF SUPERSTRUCTURE)



CROSS SECTION THRU DECK

LOOKING UPSTATION

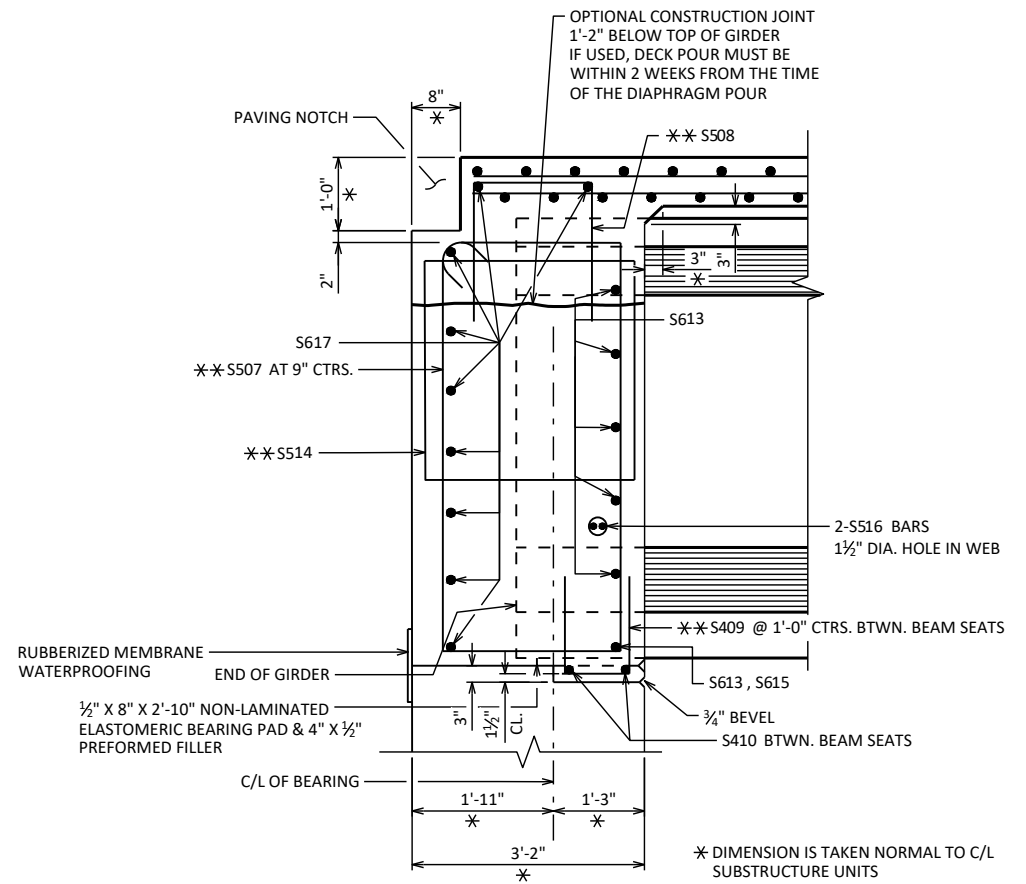
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
SUPERSTRUCTURE			SHEET 11

SCALE =

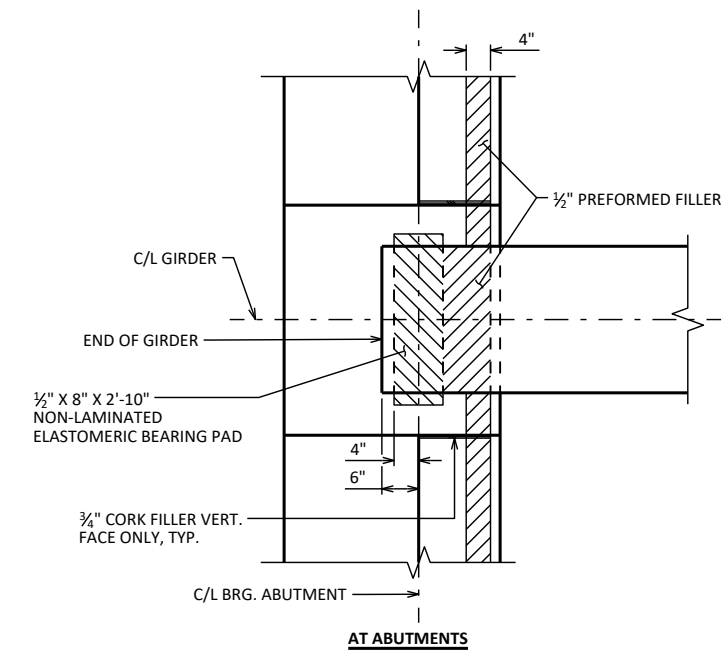
BILL OF BARS

NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.

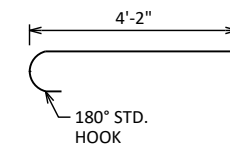
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	383	38'-2"			TOP & BOT. MAT - TRANSVERSE
S402	X	345	43'-7"			TOP & BOT. MAT. - LONGITUDINAL
S503	X	368	4'-9"	X		TOP MAT - TRANSVERSE - EDGE OF DECK
S504	X	384	4'-5"	X		DECK & PPT. - VERT.
S505	X	388	6'-8"	X		PPT. - VERT.
S506	X	48	44'-0"			PPT. - HORIZ.
S507	X	60	18'-2"	X		ABUT. DIAPH. - VERT. - STIRRUP
S508	X	68	6'-7"	X		ABUT. DIAPH. - VERT.
S409	X	42	2'-9"	X		ABUT. DIAPH. - VERT. - BTWN. BEAM SEATS
S410	X	12	7'-2"			ABUT. DIAPH. - HORIZ. - BTWN. BEAM SEATS
S411	X	8	6'-0"			ABUT. DIAPH. - VERT. - END
S612	X	24	10'-6"	X		ABUT. DIAPH. - HORIZ. ENDS
S613	X	36	6'-2"			ABUT. DIAPH. - HORIZ. F.F.
S514	X	32	15'-4"	X		ABUT. DIAPH. - VERT. UNDER FLANGES
S615	X	4	1'-5"			ABUT. DIAPH. - HORIZ. ENDS
S516	X	16	6'-0"			ABUT. DIAPH. - HORIZ. - THRU GIR.
S617	X	18	33'-6"			ABUT. DIAPH. - HORIZ.
S518	X	4	5'-10"	X		PPT. - VERT. - AT PAVING NOTCH
S519	X	8	17'-6"	X		ABUT. DIAPH. - VERT. - UNDER FLANGES - EXT. GIRDERS



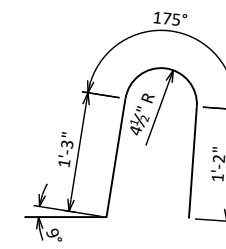
PART. LONGIT. SECTION



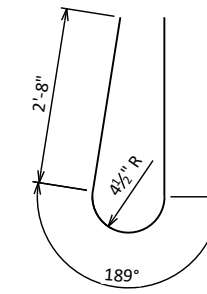
BEARING PAD DETAIL



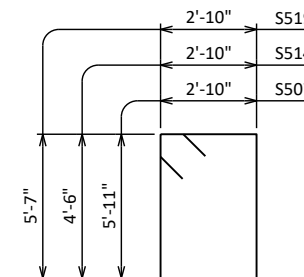
S503



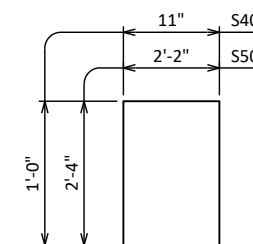
S504



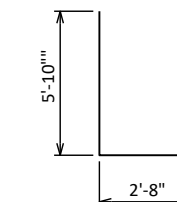
S505



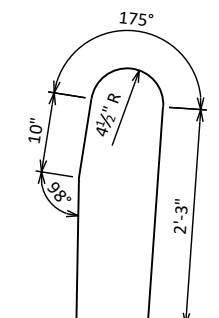
S507, S514, S519



S508, S409



S612



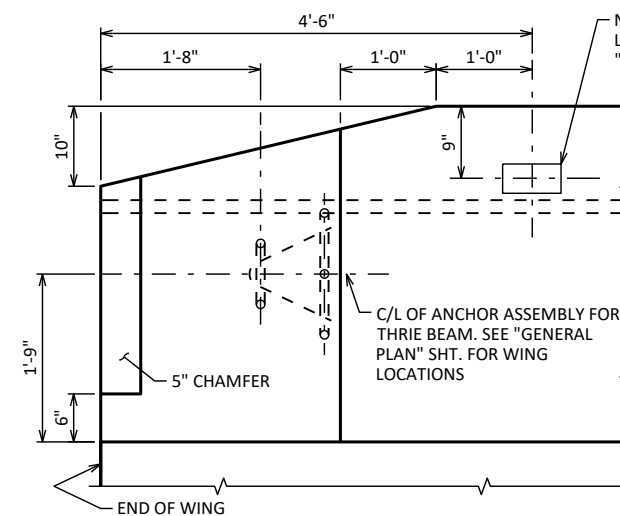
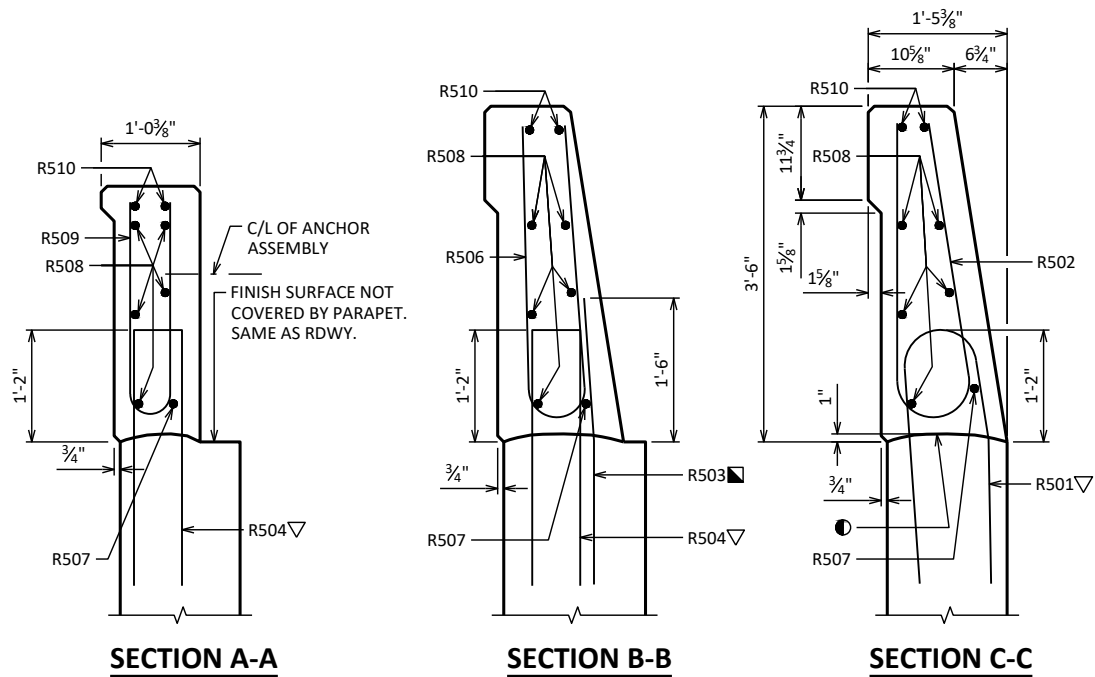
S518

TOP OF DECK ELEVATIONS

LOCATION	WEST ABUT	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	EAST ABUT.
N EOD	931.03	931.09	931.16	931.22	931.28	931.34	931.41	931.47	931.53	931.59	931.66
GIRDER 1	931.06	931.12	931.19	931.25	931.31	931.37	931.44	931.50	931.56	931.62	931.69
GIRDER 2	931.28	931.34	931.41	931.47	931.53	931.59	931.66	931.72	931.78	931.84	931.91
R/L STH 95	931.39	931.45	931.52	931.58	931.64	931.70	931.77	931.83	931.89	931.95	932.02
GIRDER 3	931.28	931.34	931.41	931.47	931.53	931.59	931.66	931.72	931.78	931.84	931.91
GIRDER 4	931.06	931.12	931.19	931.25	931.31	931.37	931.44	931.50	931.56	931.62	931.69
S EOD	931.03	931.09	931.16	931.22	931.28	931.34	931.41	931.47	931.53	931.59	931.66

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
SUPERSTRUCTURE DETAILS			SHEET 12

SCALE =

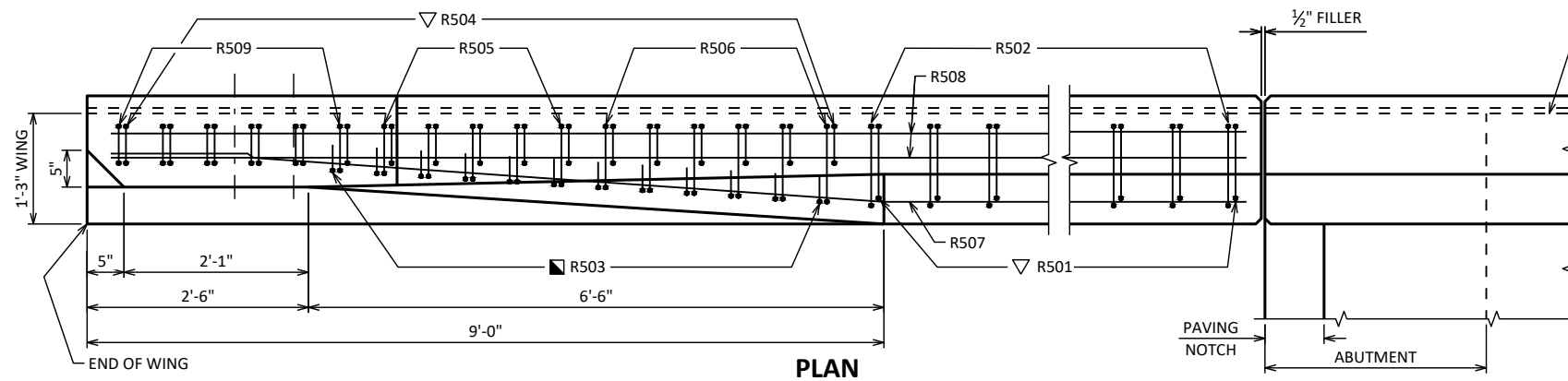


PARAPET END TREATMENT DETAIL
 LOOKING AT INSIDE FACE OF PARAPET

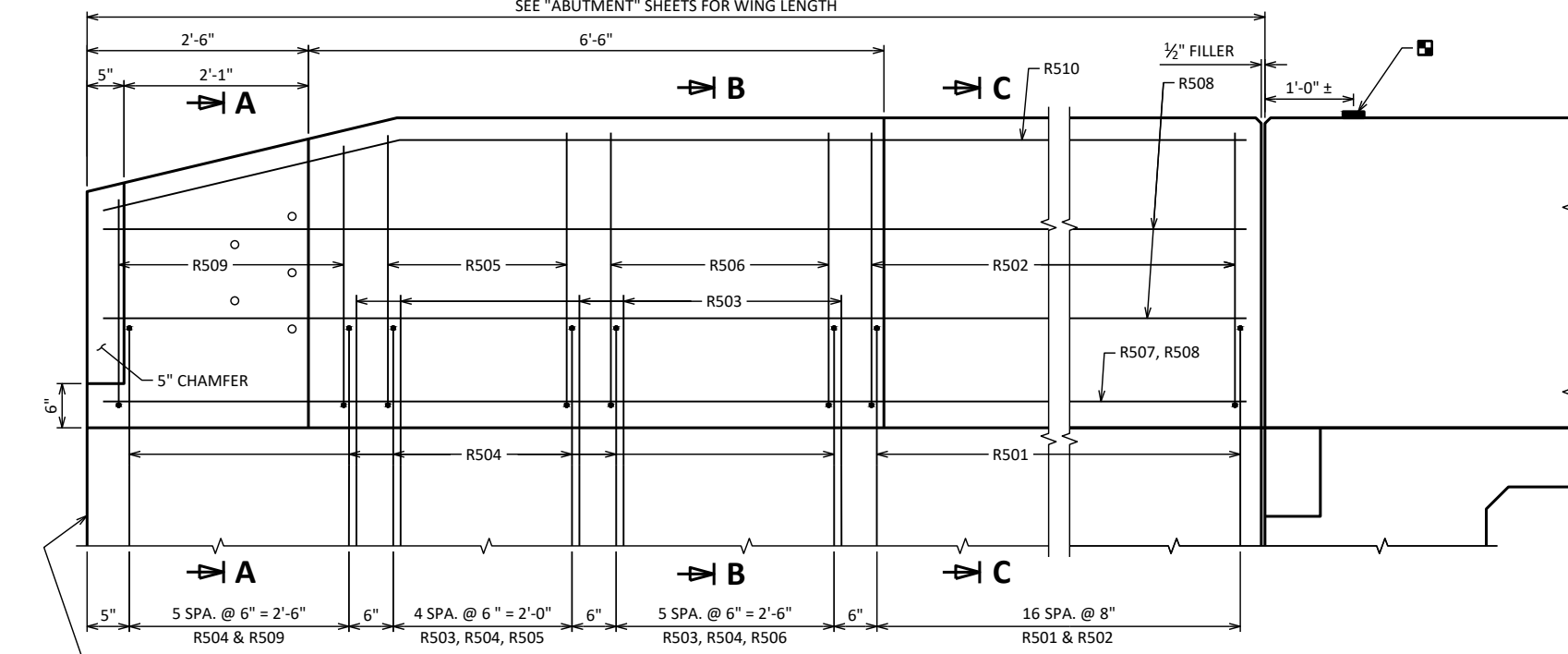
BILL OF BARS

BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	34	34	5'-10"	X		PARAPET VERT.
R502	X	34	34	6'-8"	X		PARAPET VERT.
R503	X	22	22	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	19'-8"	X		PARAPET HORIZ.
R508	X	10	10	19'-8"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	▲	PARAPET VERT.
R510	X	4	4	19'-8"	X		PARAPET HORIZ.

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



PLAN
 NW CORNER SHOWN, OTHERS SIMILAR



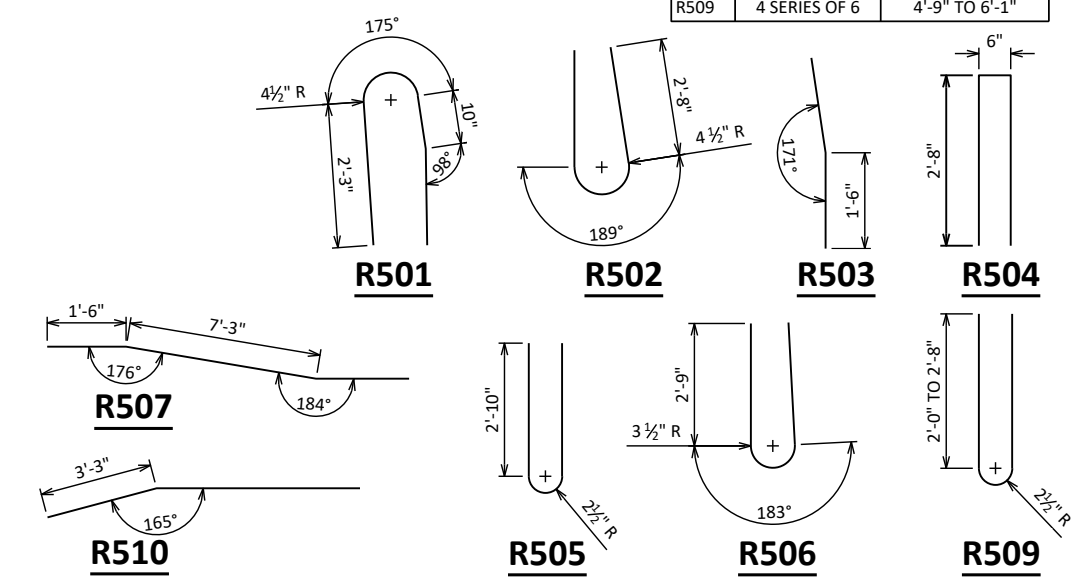
INSIDE ELEVATION
 NW CORNER SHOWN, OTHERS SIMILAR

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

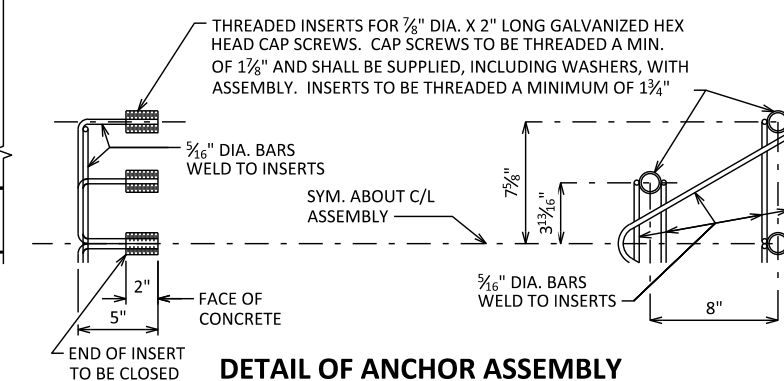
BAR SERIES TABLE

BUNDLE AND TAG EACH SERIES SEPARATELY.

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



■ BENCH MARK CAP



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-168			
DRAWN BY MJH		PLANS CK'D MWB	
SINGLE SLOPE PARAPET 42SS			SHEET 13

8

8

SCALE =

WEST SIDE STA 534+75 - STA 539+93.75

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)
534+75.000	61.53	0.00	0.00	4.55	0.00	0.00
535+00.000	62.07	57.22	57.22	9.05	7.87	7.87
535+25.000	64.47	58.59	115.81	13.50	13.05	20.92
535+33.600	65.57	20.71	136.52	17.93	6.26	27.18
535+50.000	67.92	40.54	177.06	26.25	16.77	43.95
535+58.600	70.12	21.98	199.04	29.81	11.16	55.11
535+75.000	72.45	43.30	242.34	18.54	18.36	73.47
535+83.600	74.48	23.40	265.74	12.19	6.12	79.59
536+00.000	73.16	44.84	310.58	6.86	7.23	86.82
536+08.600	72.79	23.25	333.82	5.67	2.49	89.31
536+25.000	74.21	44.65	378.47	7.36	4.95	94.26
536+50.000	76.40	69.73	448.20	8.37	9.10	103.36
536+75.000	80.60	72.69	520.88	7.93	9.43	112.79
537+00.000	86.97	77.58	598.46	6.49	8.34	121.13
537+25.000	97.60	85.45	683.91	2.31	5.09	126.22
537+50.000	90.09	86.89	770.80	10.95	7.67	133.89
537+75.000	91.48	84.06	854.86	10.22	12.25	146.14
538+00.000	98.70	88.05	942.91	3.26	7.80	153.94
538+25.000	103.24	93.49	1036.39	5.46	5.04	158.98
538+50.000	97.80	93.07	1129.47	10.66	9.33	168.31
538+75.000	88.26	86.14	1215.61	15.66	15.23	183.54
539+00.000	76.61	76.33	1291.94	24.79	23.41	206.95
539+25.000	67.32	66.64	1358.57	34.32	34.21	241.16
539+50.000	60.08	58.98	1417.55	44.42	45.57	286.73
539+75.000	46.67	49.42	1466.98	48.81	53.95	340.68
539+93.750	0.00	16.21	1483.18	816.99	375.78	716.46

Unusable Material	Area (SF)	Depth (LF)	Volume (CF)	Volume (CY)
Concrete Pavement	14527.81	0.667	9685.21	358.71

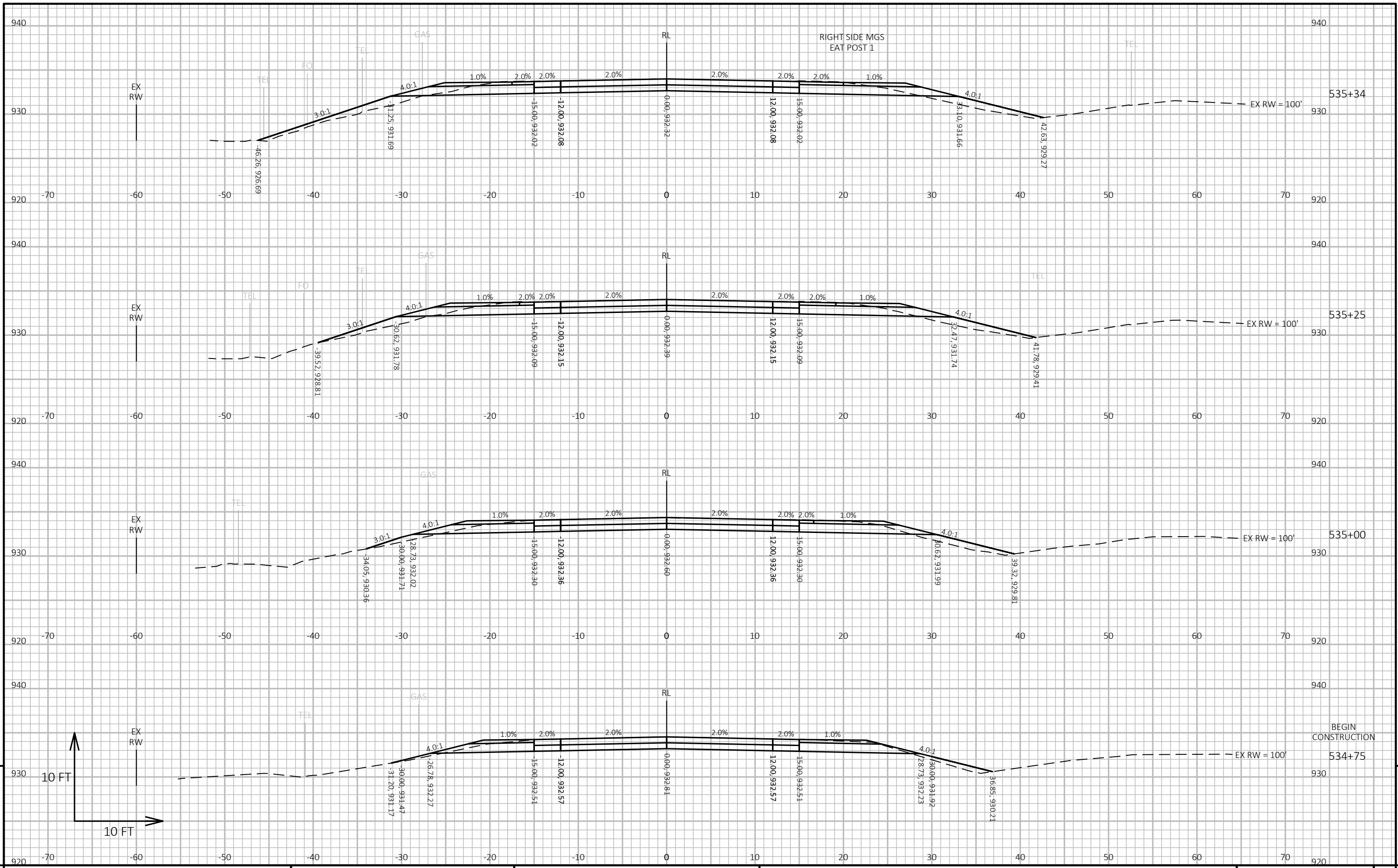
EAST SIDE STA 541+21.25 - STA 543+97

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)
541+21.250	16.26	0.00	0.00	111.22	0.00	0.00
541+50.000	20.32	19.48	19.48	84.02	129.93	129.93
541+75.000	22.48	19.82	39.29	105.88	109.89	239.83
542+00.000	25.70	22.30	61.60	127.11	134.83	374.66
542+25.000	29.48	25.54	87.14	109.34	136.84	511.50
542+50.000	34.10	29.43	116.57	83.40	111.54	623.04
542+75.000	39.25	33.95	150.53	61.30	83.74	706.78
543+00.000	42.65	37.92	188.45	32.10	54.05	760.83
543+25.000	46.01	41.05	229.49	36.71	39.83	800.66
543+43.900	49.23	33.33	262.83	49.55	37.74	838.40
543+50.000	48.23	11.01	273.84	55.63	14.85	853.25
543+68.900	50.32	34.49	308.33	42.70	43.02	896.27
543+75.000	51.09	11.46	319.78	36.77	11.22	907.49
543+93.900	54.97	37.12	356.91	15.97	23.07	930.56
543+97.000	57.02	6.43	363.34	11.72	1.99	932.55

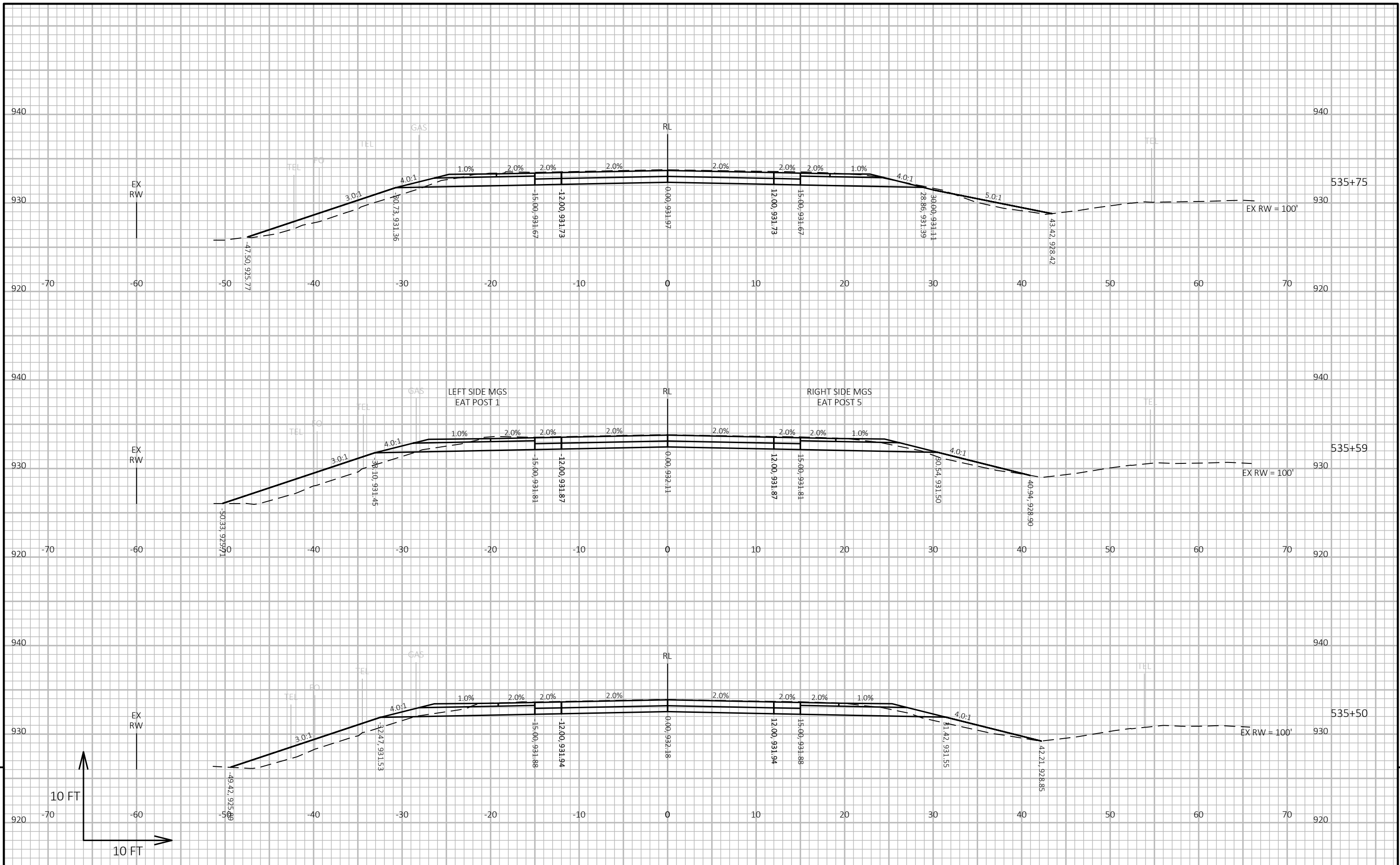
EAST SIDE STA 544+00 - 545+36.75

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)
544+00.000	8.36	0	0	3.84	0	0
544+25.000	8.28	7.71	7.71	0.04	2.24	2.24
544+50.000	9.16	8.08	15.78	3.21	1.88	4.12
544+75.000	11.89	9.75	25.53	1.83	2.92	7.04
544+82.413	15.06	3.7	29.23	0	0.31	7.36
545+00.000	9.66	8.05	37.28	3.02	1.23	8.58
545+07.413	9.55	2.64	39.92	3.93	1.19	9.78
545+25.000	13.14	7.39	47.3	0	1.6	11.37
545+32.341	19.78	4.48	51.78	0	0	11.37
545+36.476	23.9	3.35	55.12	0	0	11.37

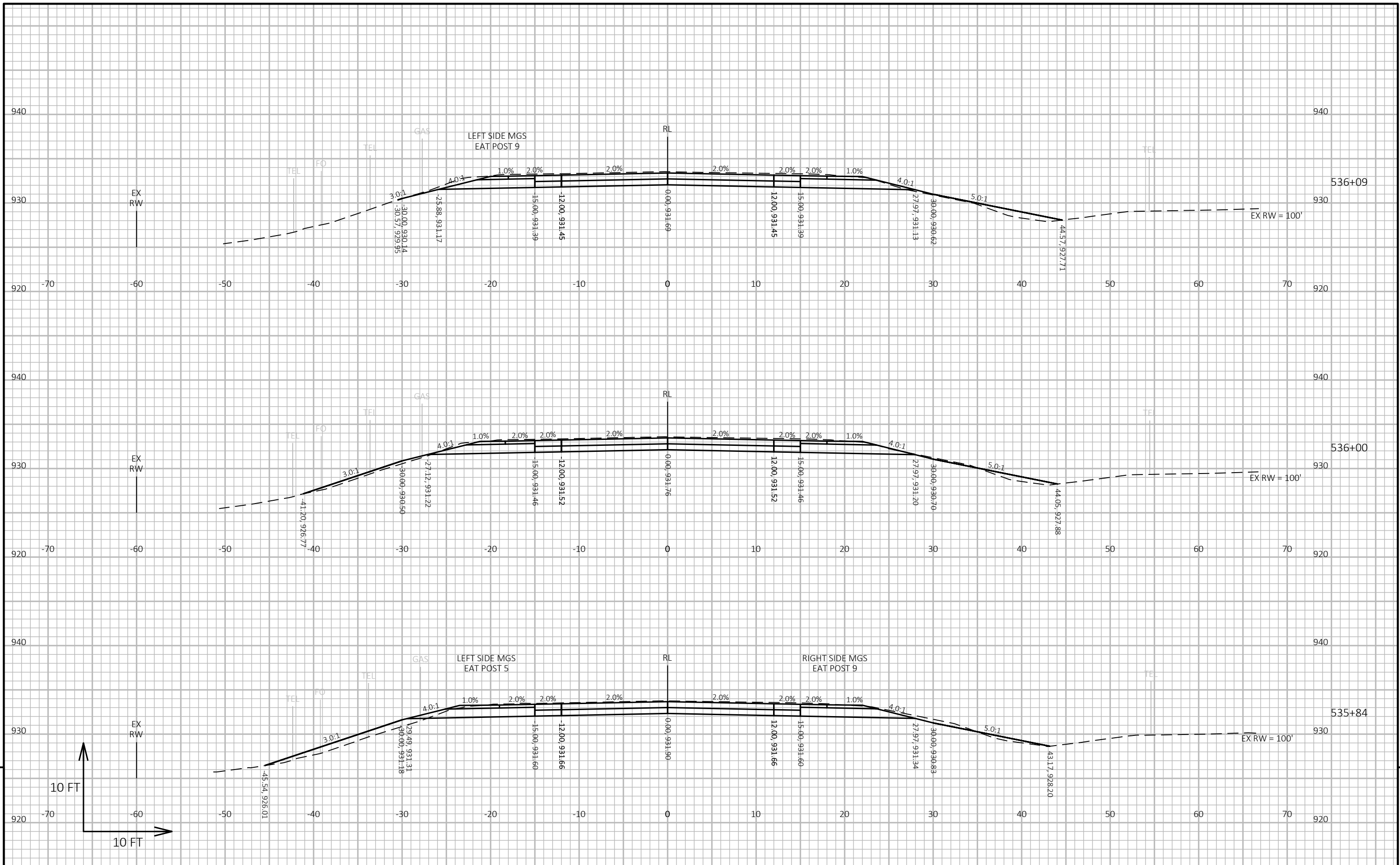
Unusable Material	Area (SF)	Depth (LF)	Volume (CF)	Volume (CY)
Concrete Pavement	7617.86	0.667	5078.57	188.10



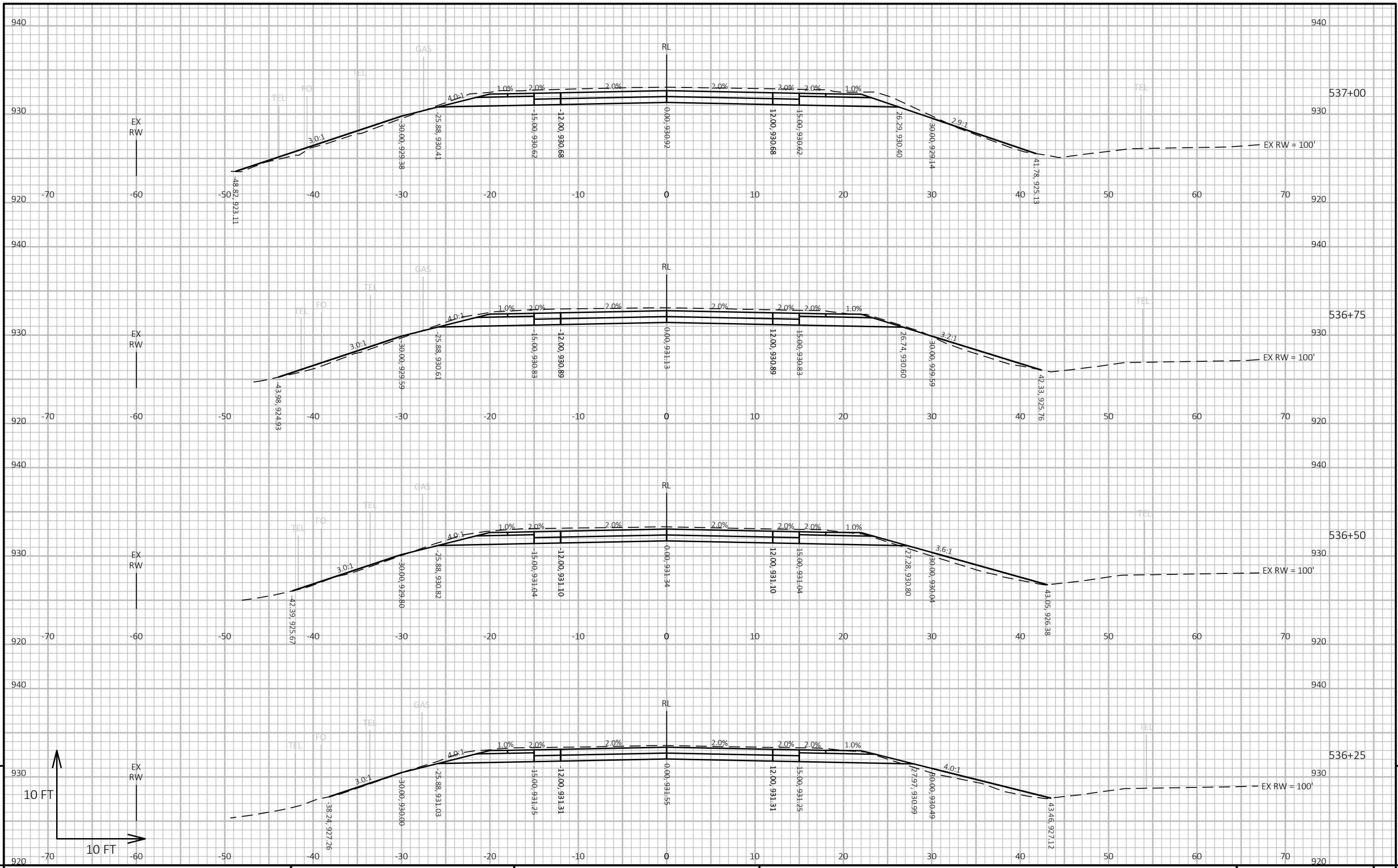
PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E



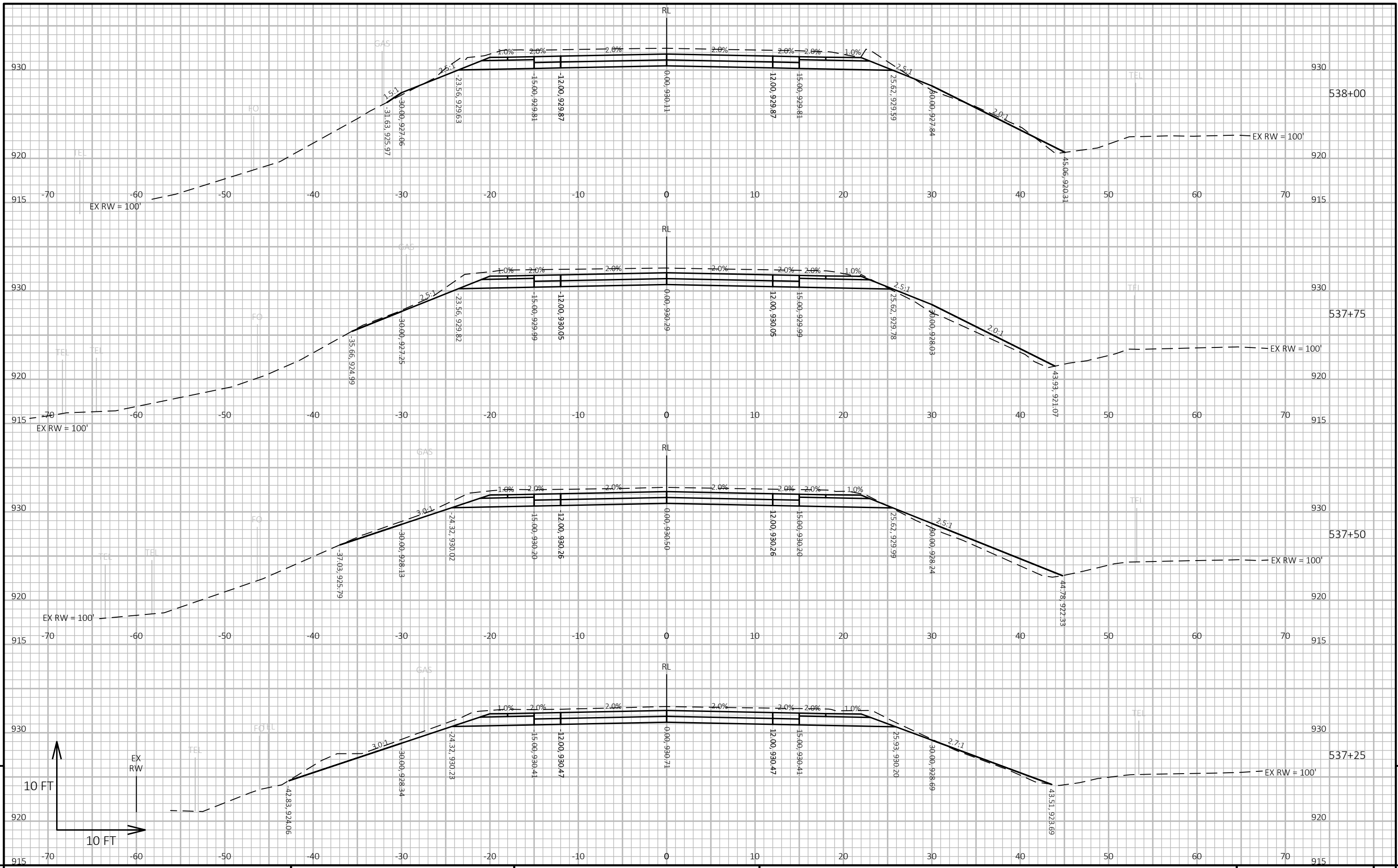
PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E



PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E



PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET **9**



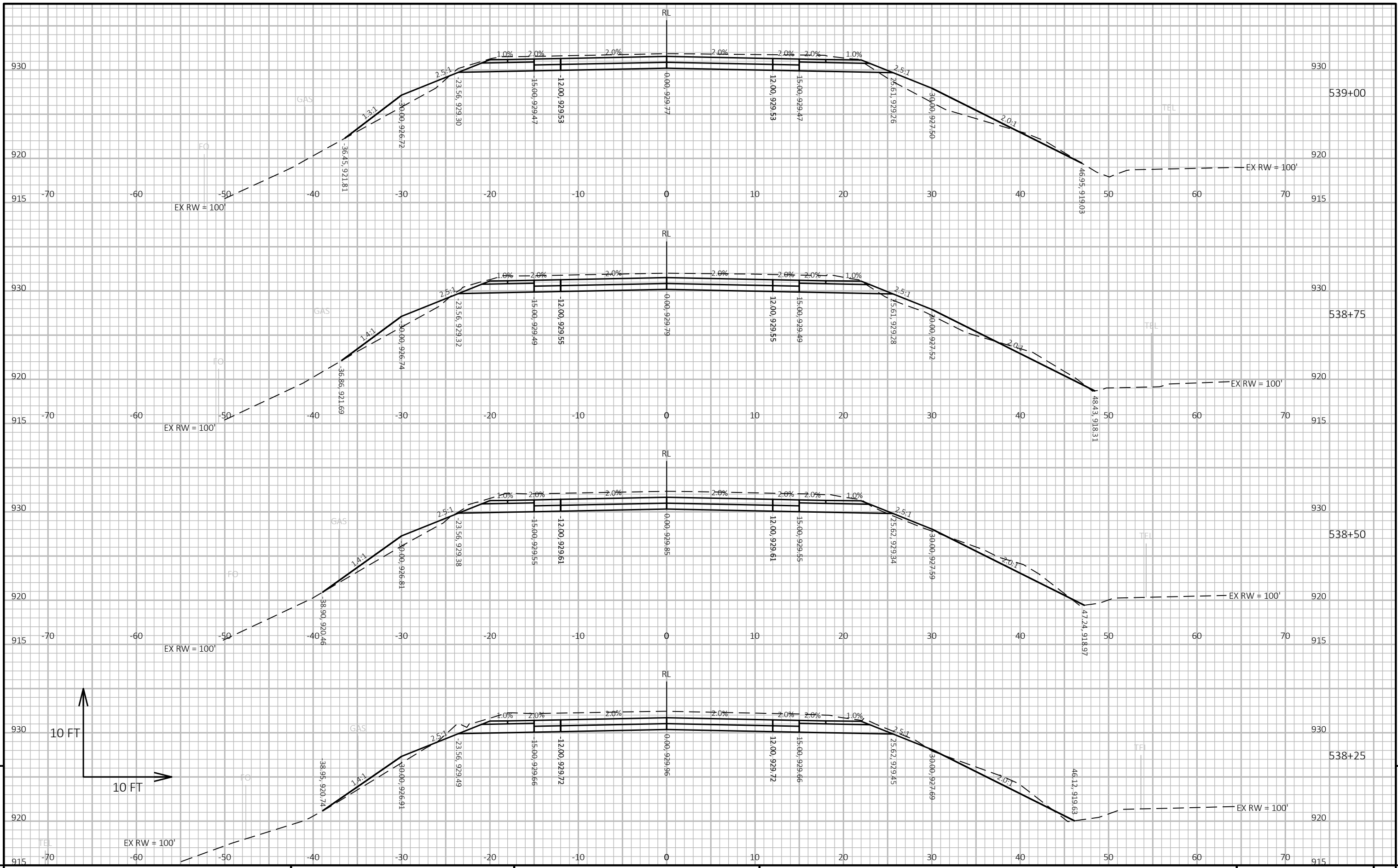
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PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E

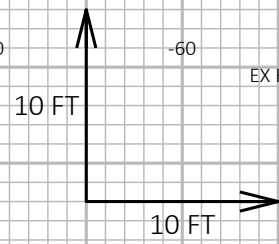
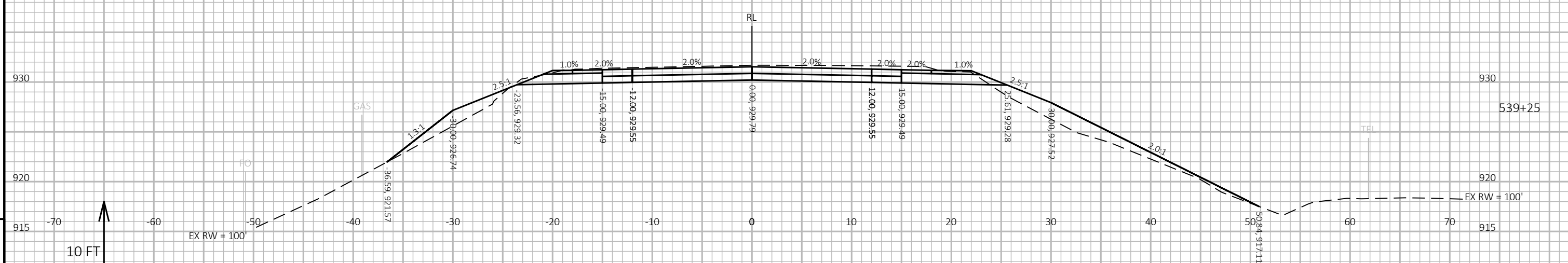
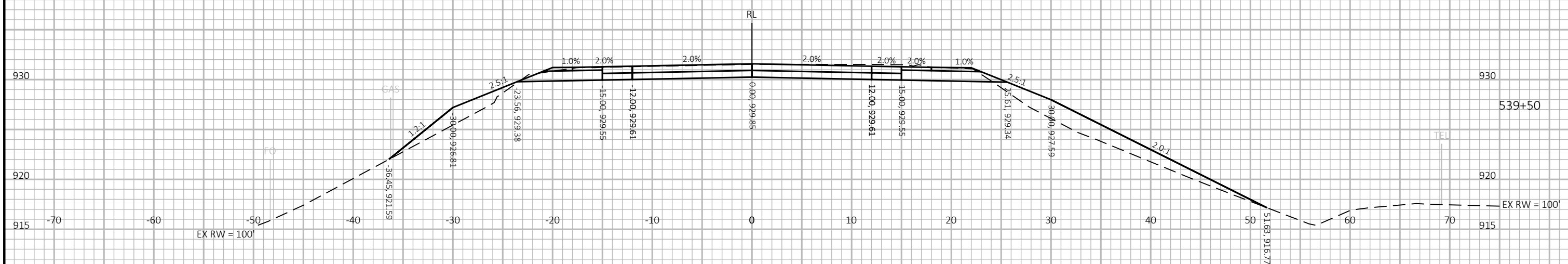
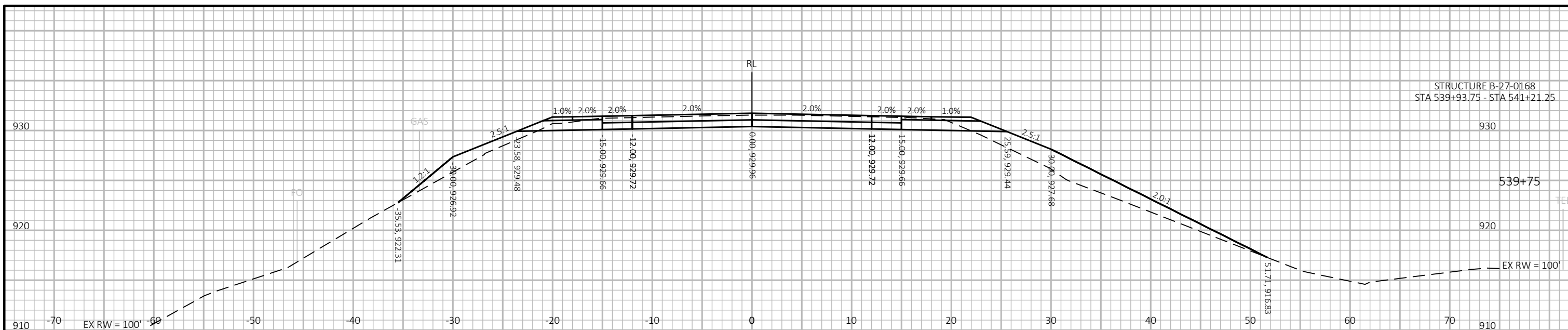
FILE NAME : D:\WORK\75200008 C3D\SHEETSPLAN\HALLS\090201-X5-HALLS.DWG PLOT DATE : 7/29/2022 9:59 AM PLOT BY : MUNDEN, ALLISSA L PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 05



PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET **9**

STRUCTURE B-27-0168
STA 539+93.75 - STA 541+21.25



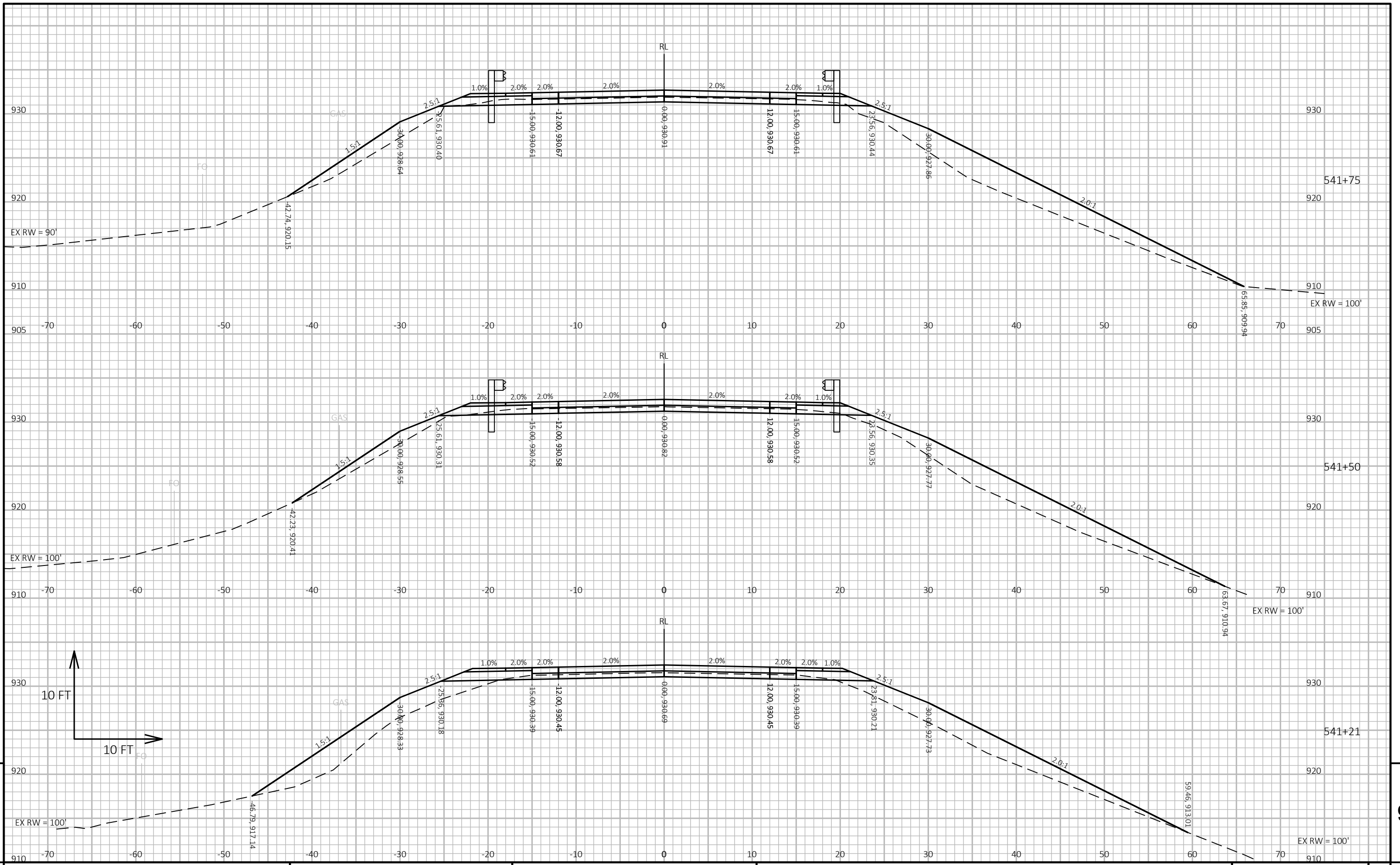
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9

PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E

FILE NAME : D:\WORK\75200008 C3D\SHEETSPLAN\HALLS\090201-X5-HALLS.DWG PLOT DATE : 7/29/2022 9:59 AM PLOT BY : MUNDEN, ALLISSA L PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 07



PROJECT NO: 7520-00-78

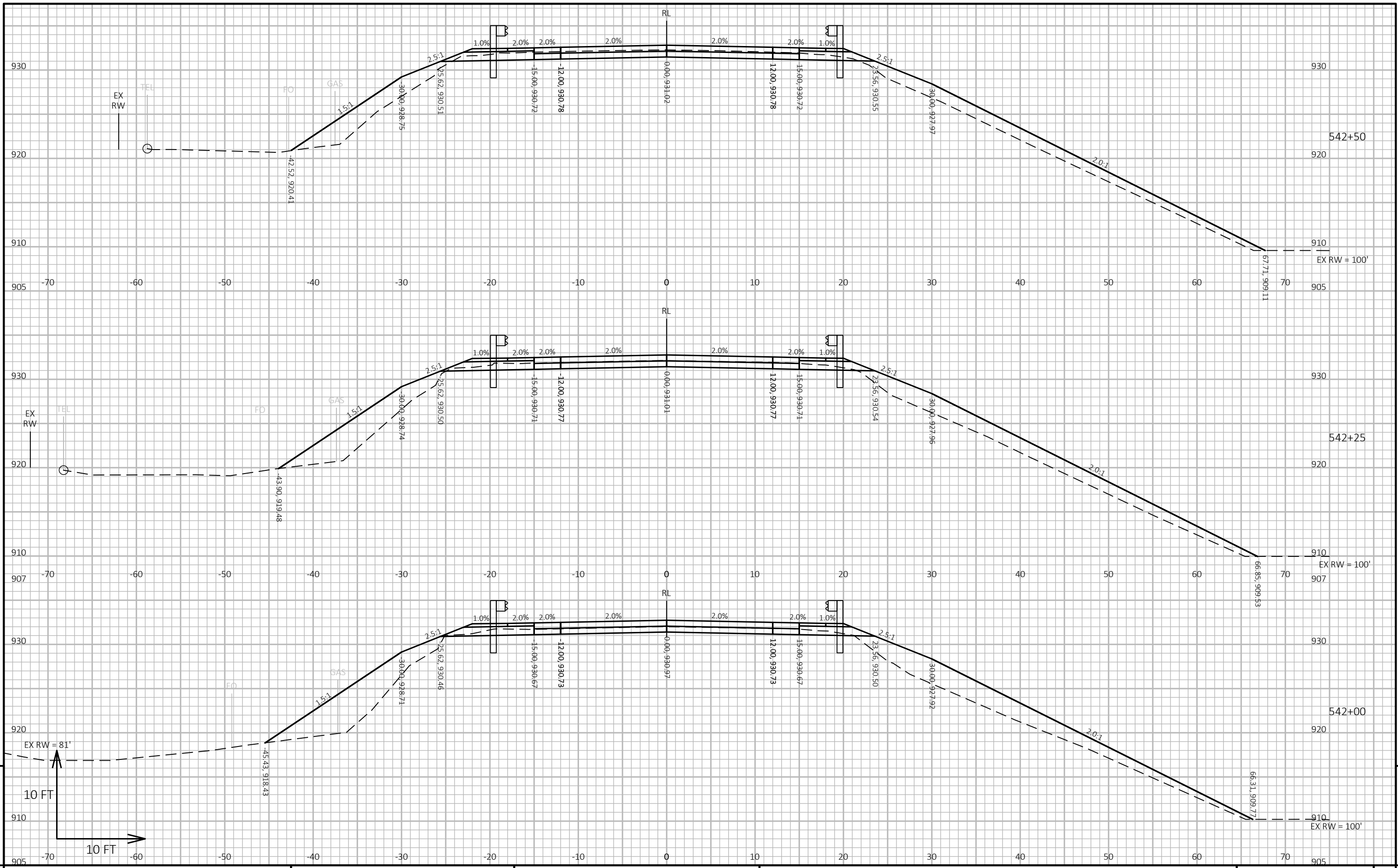
HWY: STH 95

COUNTY: JACKSON

CROSS SECTIONS:

SHEET

E



PROJECT NO: 7520-00-78

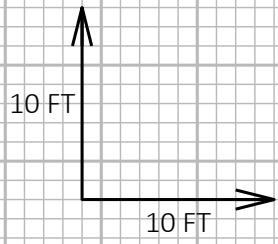
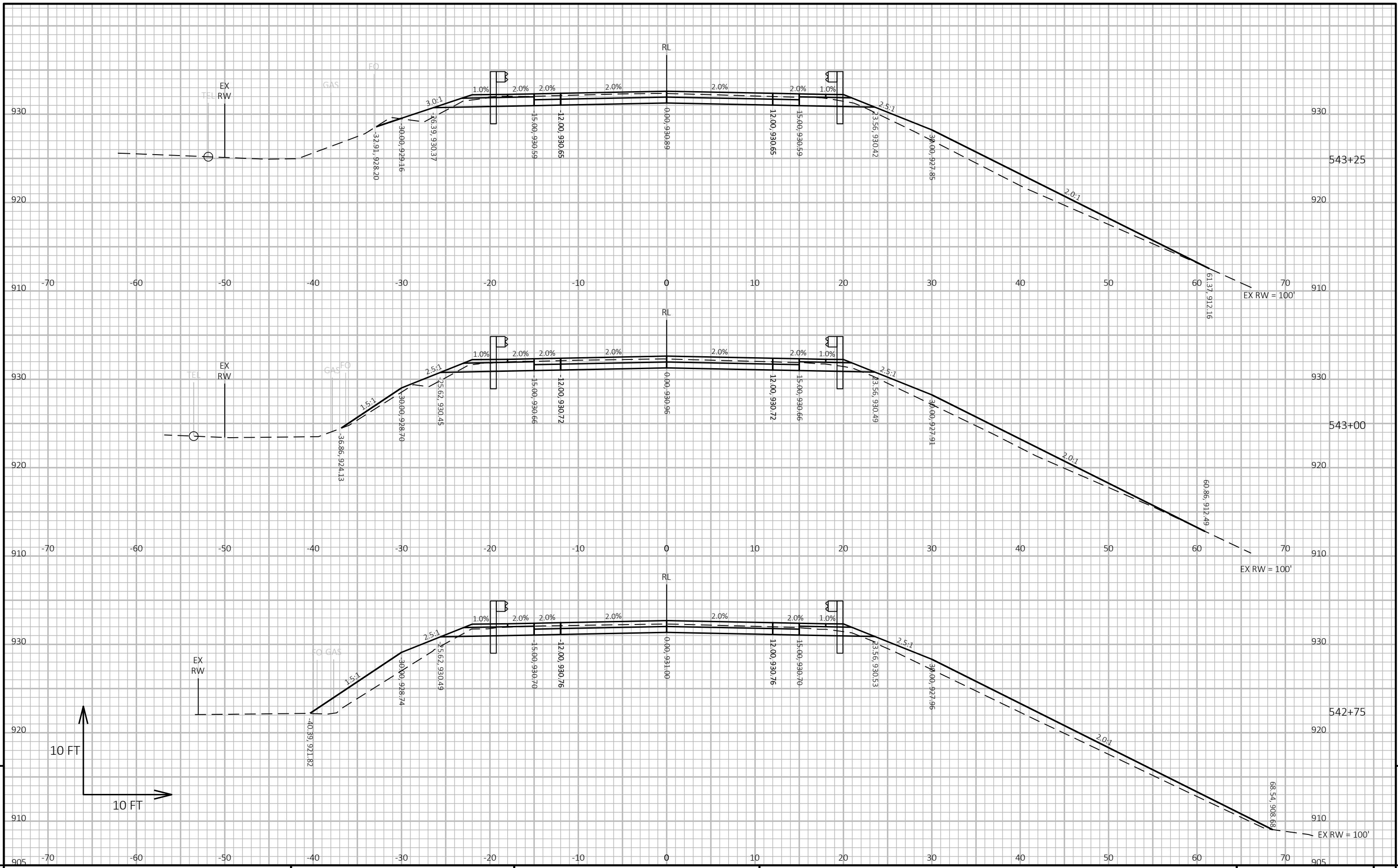
HWY: STH 95

COUNTY: JACKSON

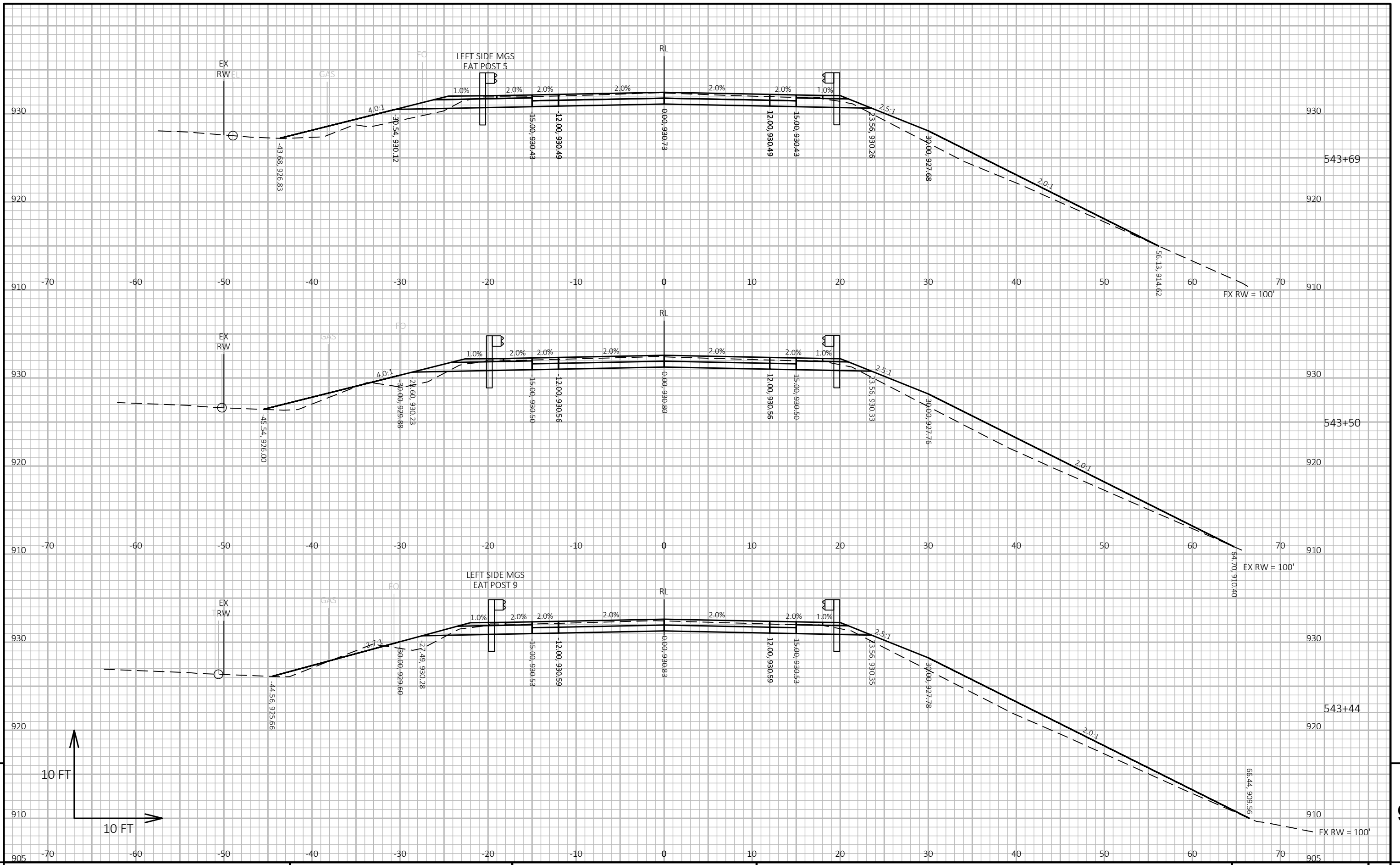
CROSS SECTIONS:

SHEET

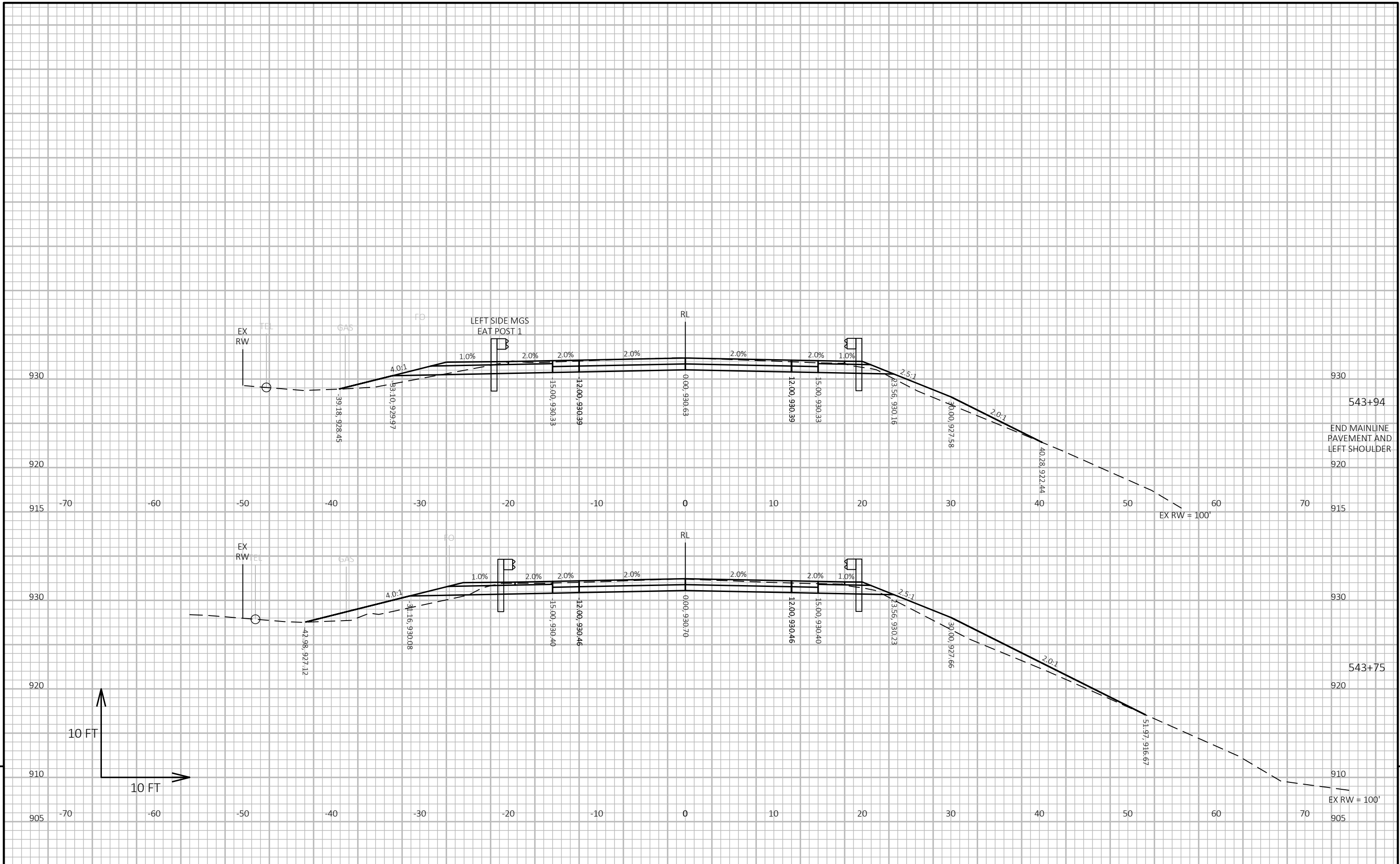
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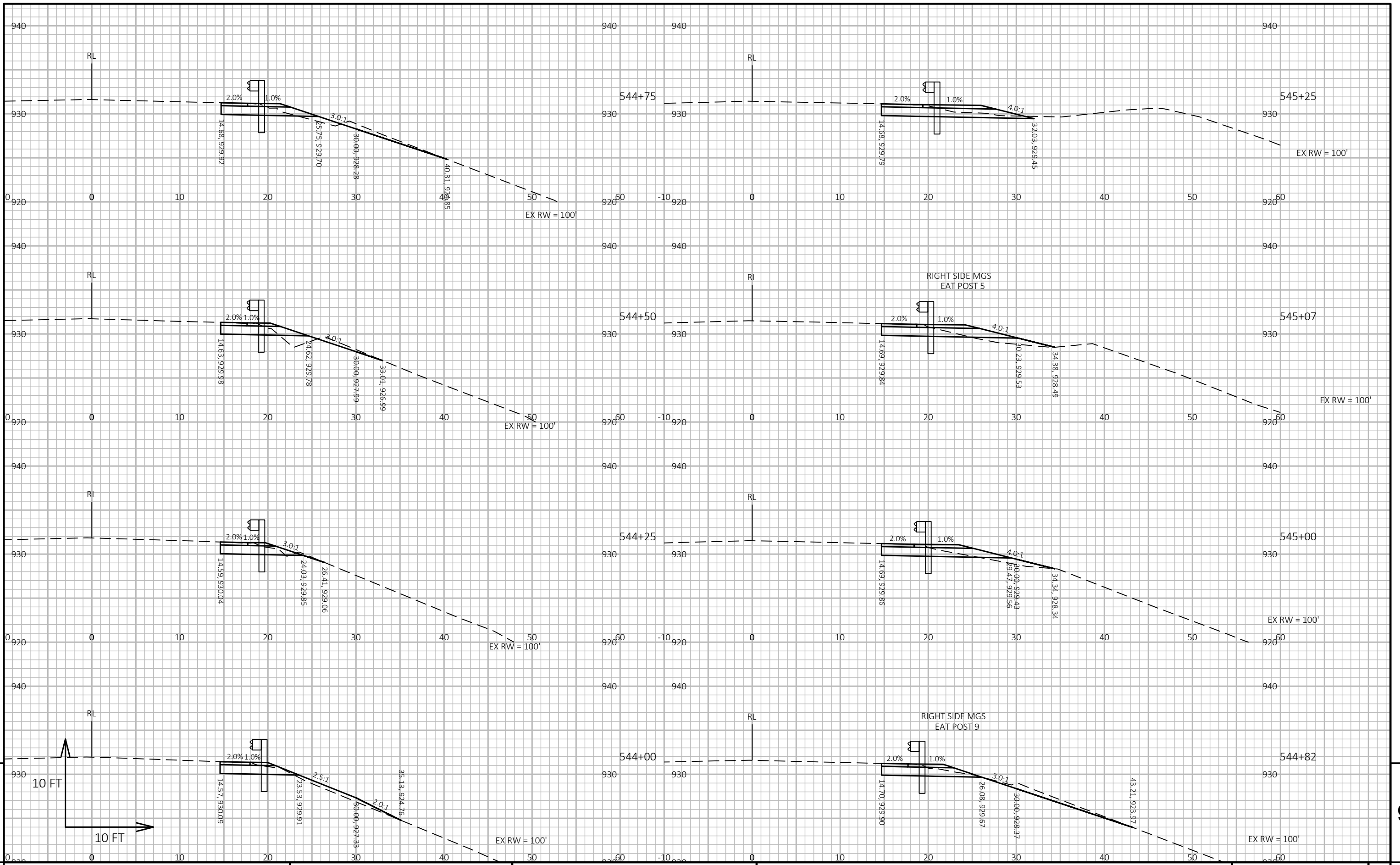
PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E



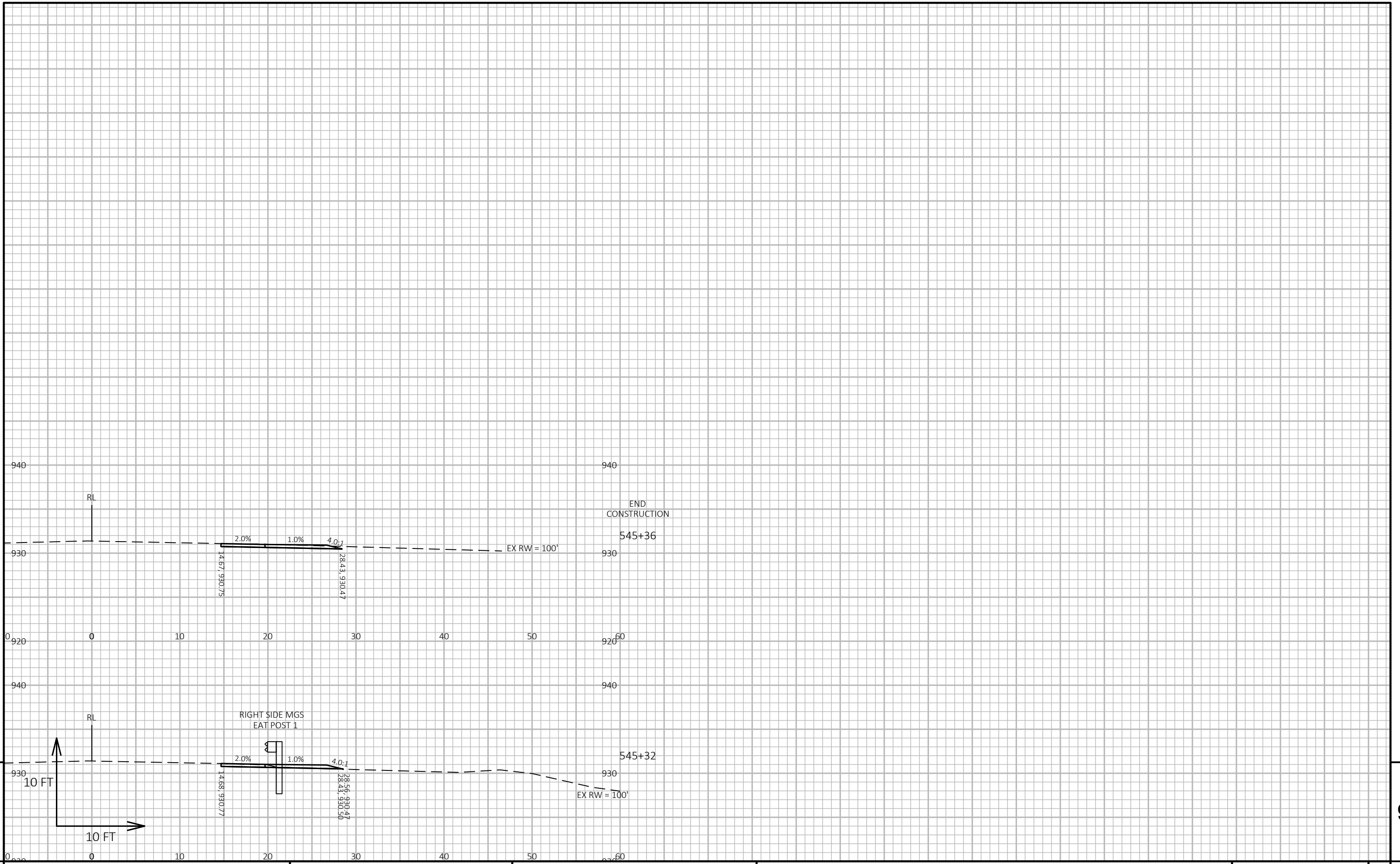
PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E



PROJECT NO: 7520-00-78	HWY: STH 95	COUNTY: JACKSON	CROSS SECTIONS:	SHEET	E
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PROJECT NO: 7520-00-78 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E



PROJECT NO: 7520-00-78

HWY: STH 95

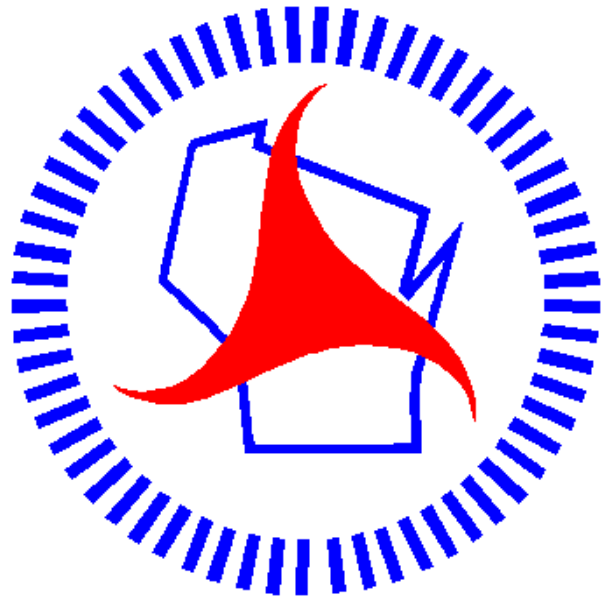
COUNTY: JACKSON

CROSS SECTIONS:

SHEET

E

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
7520-00-09	WISC 2023172	1

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

BLAIR - MERRILLAN

CISNA CREEK BRIDGE B-27-0169

STH 95

JACKSON COUNTY

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
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 = 84



36

DESIGN DESIGNATION 7520-00-09

A.A.D.T.	2010	=	1,500
A.A.D.T.	2022	=	1,700
D.H.V.		=	150
D.D.		=	60/40
T.		=	9%
DESIGN SPEED		=	60 MPH
ESALS		=	

CONVENTIONAL SYMBOLS

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

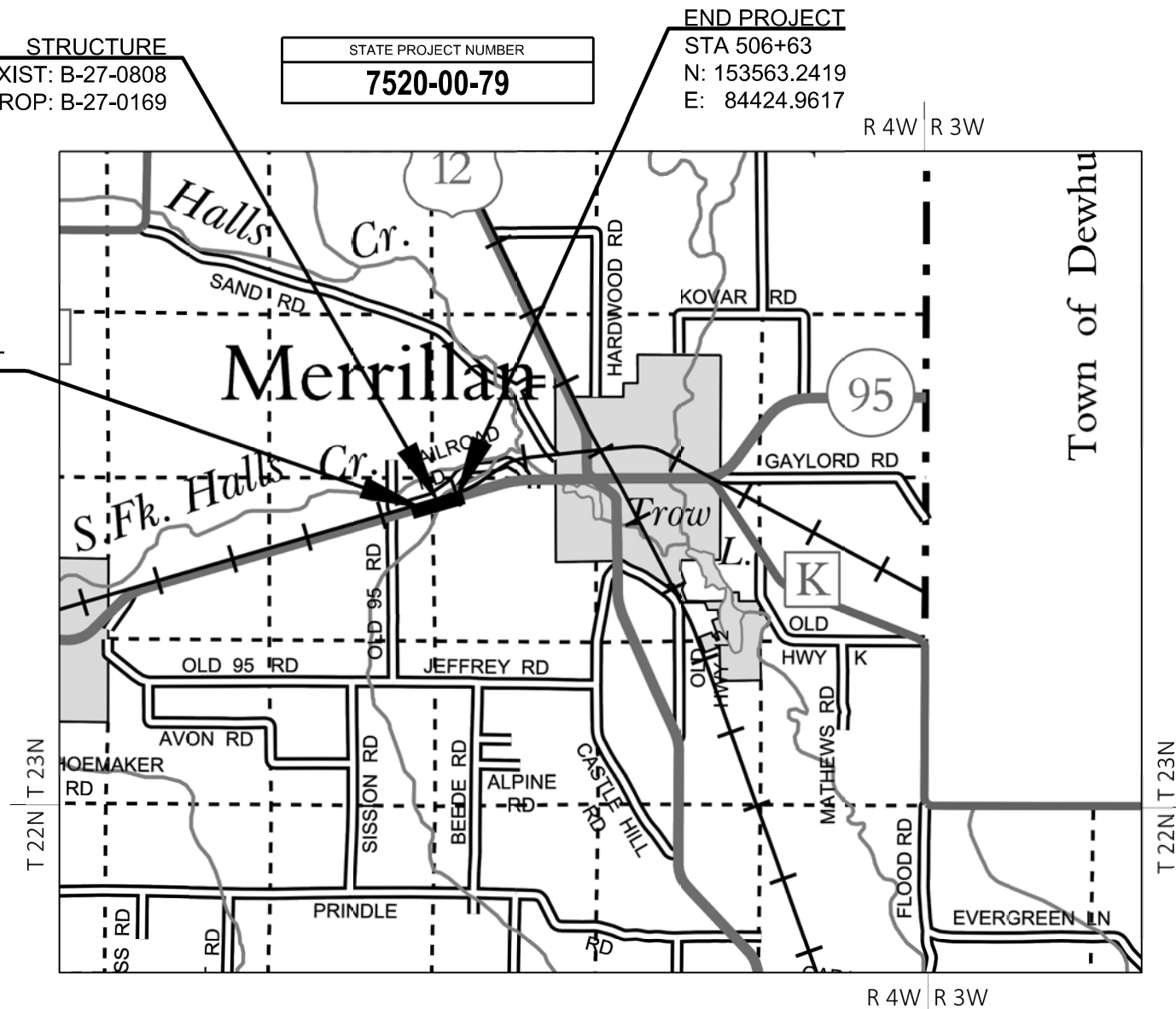
PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE (To be noted as such)	
SPECIAL DITCH	
GRADE ELEVATION	
CULVERT (Profile View)	
UTILITIES	
ELECTRIC	
FIBER OPTIC	
GAS	
SANITARY SEWER	
STORM SEWER	
TELEPHONE	
WATER	
UTILITY PEDESTAL	
POWER POLE	
TELEPHONE POLE	

STRUCTURE
EXIST: B-27-0808
PROP: B-27-0169

STATE PROJECT NUMBER
7520-00-79

END PROJECT
STA 506+63
N: 153563.2419
E: 84424.9617

BEGIN PROJECT
STA 500+60
N: 153393.8816
E: 83846.2337



TOTAL NET LENGTH OF CENTERLINE = 0.114 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), JACKSON COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (1988). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	Surveyor _____ WISDOT
Designer	_____ ALLISSA MUNDEN
Project Manager	_____ JESSICA BOWKER
Regional Examiner	_____ TOU YANG
Regional Supervisor	_____ TYLER RONGSTAD
APPROVED FOR THE DEPARTMENT	
DATE: 10/31/2022	Tyler Rongstad
(Signature)	

E

LIST OF STANDARD ABBREVIATIONS

ABUT	ABUTMENT
AC	ACRE
AGG	AGGREGATE
AH	AHEAD
APPROX	APPROXIMATE
AEW	APRON ENDWALL
ASPH	ASPHALTIC
ADT	AVERAGE DAILY TRAFFIC
AVG	AVERAGE
AZ	AZIMUTH
BK	BACK
BEG	BEGIN
BM	BENCH MARK
CL	CENTER LINE
CONC	CONCRETE
CONST	CONSTRUCTION
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAY
X-SEC	CROSS SECTION
CR	CRUSHED
CFS	CUBIC FEET/SECOND
CY OR CU YD	CUBIC YARD
CULV	CULVERT
CP	CULVERT PIPE
DOT	DEPARTMENT OF TRANSPORTATION
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
DISCH OR DIS	DISCHARGE
EA	EACH
ELECT	ELECTRIC
EL OR ELEV	ELEVATION
EMB	EMBANKMENT
EBS	EXCAVATION BELOW SUBGRADE
EXIST	EXISTING
FERT	FERTILIZE
FE	FIELD ENTRANCE
FIN	FINISHED
FT	FOOT
FL	FLOW LINE
GA	GAUGE
HORIZ	HORIZONTAL
CWT	HUNDREDWEIGHT
INL	INLET
LT	LEFT
LHF	LEFT-HAND FORWARD
LIN	LINEAR
LIN FT	LINEAR FOOT
LS	LUMP SUM
MAX	MAXIMUM
MI	MILE
MISC	MISCELLANEOUS
NE	NORTH EAST
NW	NORTH WEST
PAV'T	PAVEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY
POT	POINT ON TANGENT
LB	POUND
PE	PRIVATE ENTRANCE
PROJ	PROJECT
R	RANGE
REQ'D	REQUIRED
RT	RIGHT
RHF	RIGHT-HAND FORWARD
RW	RIGHT OF WAY
RD	ROAD
SHR	SHRINKAGE
SL	SLOPE
SE	SOUTH EAST
SW	SOUTH WEST
STD	STANDARD
SDD	STANDARD DETAIL DRAWINGS
STH	STATE TRUNK HIGHWAY
STA	STATION
SPPA	STRUCTURAL PLATE PIPE ARCH
STRUCT	STRUCTURE
SURF	SURFACE
TEL	TELEPHONE
TN	TOWN
T	TRUCKS (PERCENT OF)
UNCL	UNCLASSIFIED
UG	UNDERGROUND
V	VELOCITY OR DESIGN SPEED
VC	VERTICAL CURVE

UTILITIES

COMMUNICATION

CENTURYLINK
TOM MURRAY
333 N FRONT STREET
P.O. BOX 4800
LA CROSSE, WI 54602
PH: 608-615-4169
EMAIL: tom.l.murray@lumen.com

TRI-COUNTY COMMUNICATIONS
BUCK WEBB
417 5TH AVENUE N
P.O. BOX 578
STRUM, WI 54770
PH: 715-695-2691
EMAIL: bwebb@tccpro.net

ELECTRICITY

JACKSON ELECTRIC COOPERATIVE
ERIC STEIEN
N6868 CO HWY F
PO BOX 546
BLACK RIVER FALLS, WI 54615
PH: 715-284-5385
EMAIL: esteien@jackelec.com

GAS/PETROLEUM

WE ENERGIES
LATROY BRUMFIELD
333 WEST EVERETT STREET
ROOM A299
MILWAUKEE, WI 53203
PH: 414-221-5617
EMAIL: LaTroy.Brumfield@we-energies.com
24-HOUR EMERGENCY 800-261-5325

WISCONSIN DOT

DEPARTMENT OF TRANSPORTATION
NORTHWEST REGION
718 WEST CLAIREMONT AVE
EAU CLAIRE, WI 54701
ATTN: JESSICA BOWKER
EMAIL: Jessica.Bowker@dot.wi.gov
PH: 715-577-2963

WISCONSIN DNR - LIASON

DEPARTMENT OF NATURAL RESOURCES
WEST CENTRAL REGION
1300 W. CLAIREMONT AVE
EAU CLAIRE, WI 54701
ATTN: BRAD BETTHAUSER
EMAIL: Bradley.Bethhauser@Wisconsin.gov
PH: 715-213-9064

JACKSON COUNTY HIGHWAY DEPT.

119 HARRISON STREET
BLACK RIVER FALLS, WI 54615
ATTN: JAY BOREK, HIGHWAY COMMISSIONER
EMAIL: jay.borek@co.jackson.wi.us

GENERAL NOTES

EXISTING ELEVATIONS SHALL BE VERIFIED IN THE FIELD.

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

PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN AND PROVIDE DOCUMENTATION TO THE ENGINEER.

EXCAVATION BELOW SUBGRADE (EBS) IS NOT USED TO BALANCE EARTHWORK. EBS IS MEASURED AND PAID FOR AS EXCAVATION COMMON, EXACT LOCATION OF EBS WILL BE DETERMINED BY THE ENGINEER.

SHRINKAGE OF EARTHWORK IS VARIABLE. AN AVERAGE FACTOR FOR EXCAVATION COMMON IS 25%.

WHEN THE QUANTITY OF THE ITEMS OF BASE AGGREGATE IS MEASURED FOR PAYMENT BY THE TON, THE DEPTH OR THICKNESS OF THE LAYER SHOWN IN THE PLANS IS APPROXIMATE, THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF MATERIAL AS DIRECTED BY THE ENGINEER.

THE EROSION CONTROL ITEMS SHOWN ON THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

SEED, FERTILIZE, AND INSTALL EROSION MAT TO ALL TOPSOIL AREAS WITHIN 7 WORKING DAYS AFTER GRADING WORK IS COMPLETED.

DO NOT APPLY FERTILIZER WITHIN 20 FEET OF BODY OF WATER OR WETLAND.

TEMPORARY STORAGE OF ANY EXCAVATED MATERIAL WILL NOT BE PERMITTED IN WETLANDS, FLOODWAY, OR THE FLOODPLAIN OF ANY WETLANDS.

TRAFFIC CONTROL DEVICE NUMBER, LOCATION, AND SPACING SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.

SIGN PLATE DETAILS SHALL BE IN ACCORDANCE WITH THE FEDERAL HIGHWAY ADMINISTRATION "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" UNLESS OTHERWISE APPROVED FOR IN THE PLAN.

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

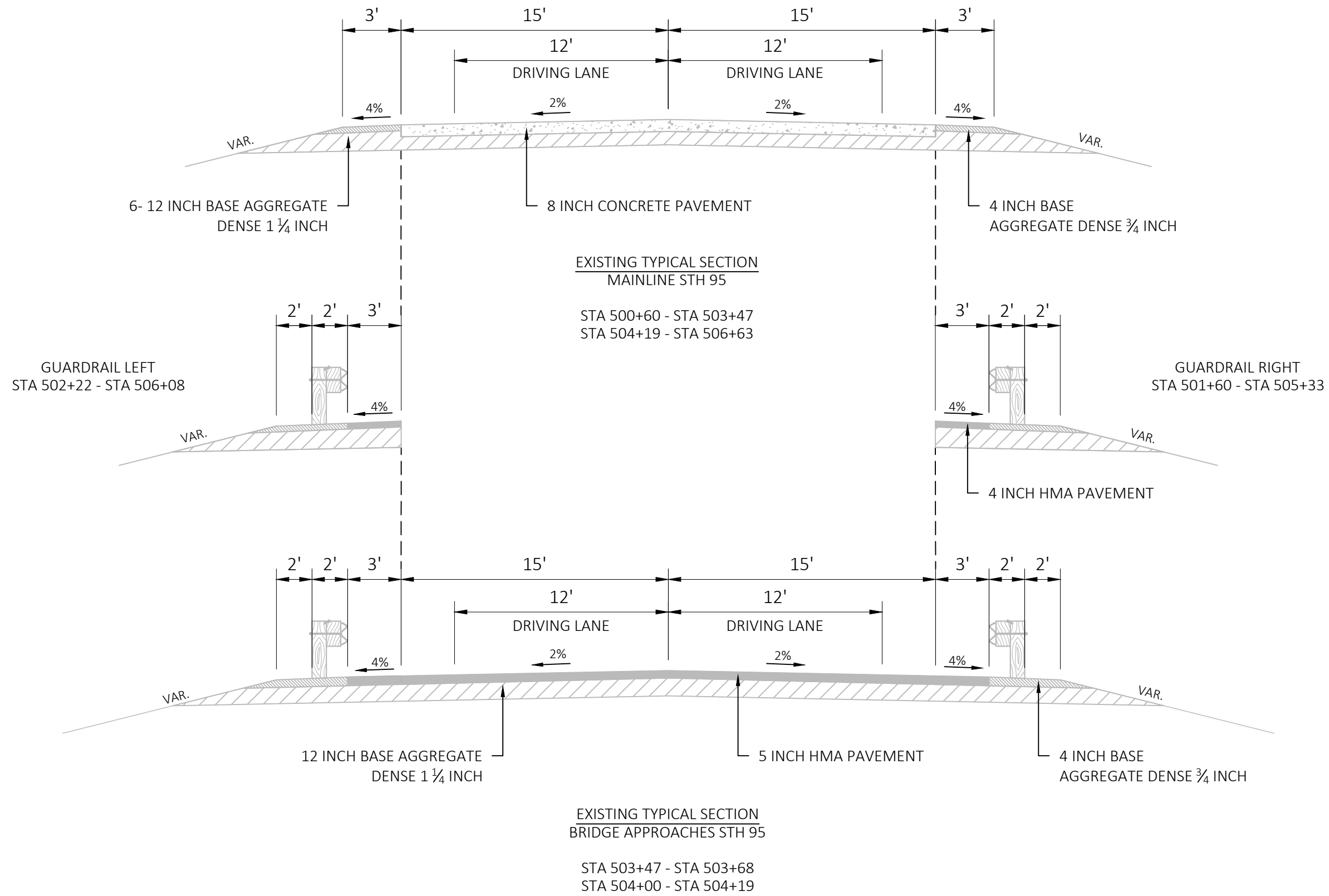
THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY UTILITY WHICH IS NOT A MEMBER OF THE DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

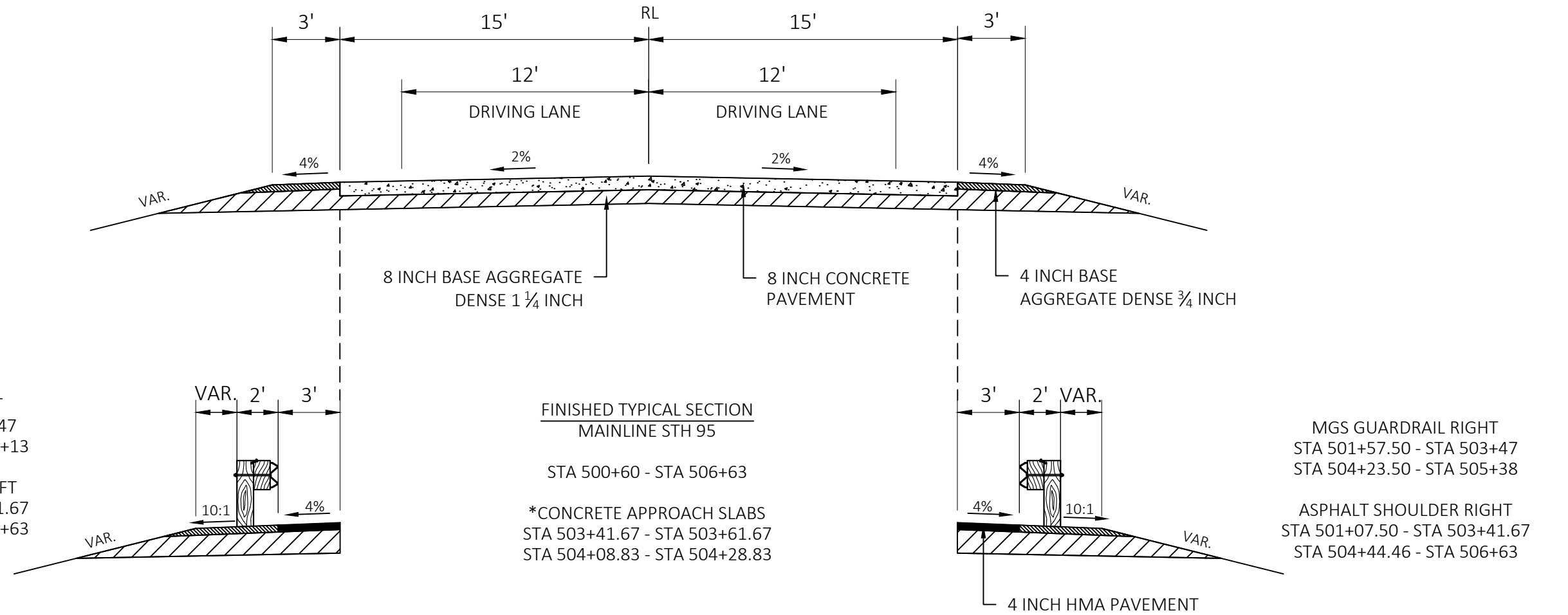
A SAWED JOINT WILL BE REQUIRED WHERE NEW PAVEMENT IS TO MEET AN EXISTING PAVED SURFACE.

DETAILS OF CONSTRUCTION NOT SHOWN SHALL BE IN ACCORDANCE WITH THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS.



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





MGS GUARDRAIL LEFT
 STA 502+20 - STA 503+47
 STA 504+23.50 - STA 506+13

ASPHALT SHOULDER LEFT
 STA 501+70 - STA 503+41.67
 STA 504+44.46 - STA 506+63

FINISHED TYPICAL SECTION
MAINLINE STH 95

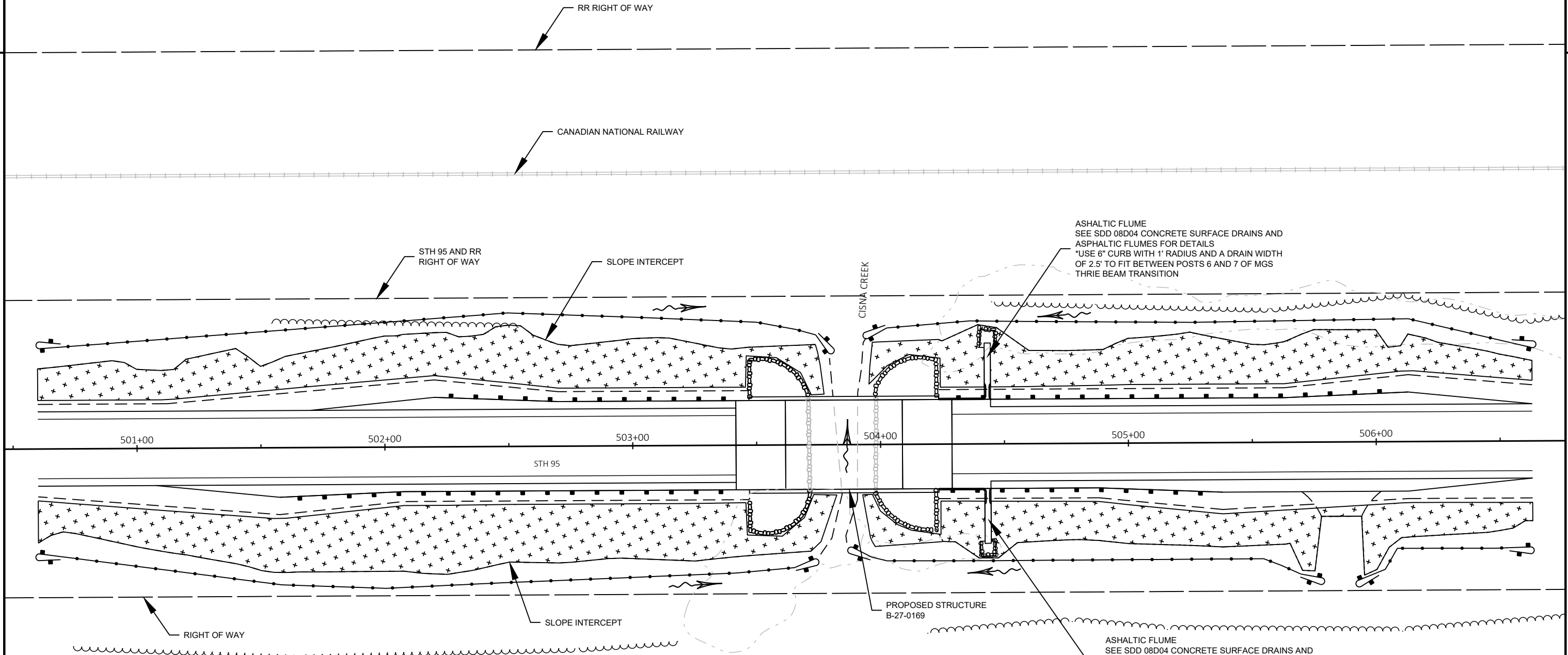
STA 500+60 - STA 506+63

*CONCRETE APPROACH SLABS
 STA 503+41.67 - STA 503+61.67
 STA 504+08.83 - STA 504+28.83

MGS GUARDRAIL RIGHT
 STA 501+57.50 - STA 503+47
 STA 504+23.50 - STA 505+38

ASPHALT SHOULDER RIGHT
 STA 501+07.50 - STA 503+41.67
 STA 504+44.46 - STA 506+63

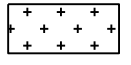

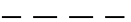


SEE SDD 14B42 MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL AND SDD 14B44 MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL FOR MORE DETAILS

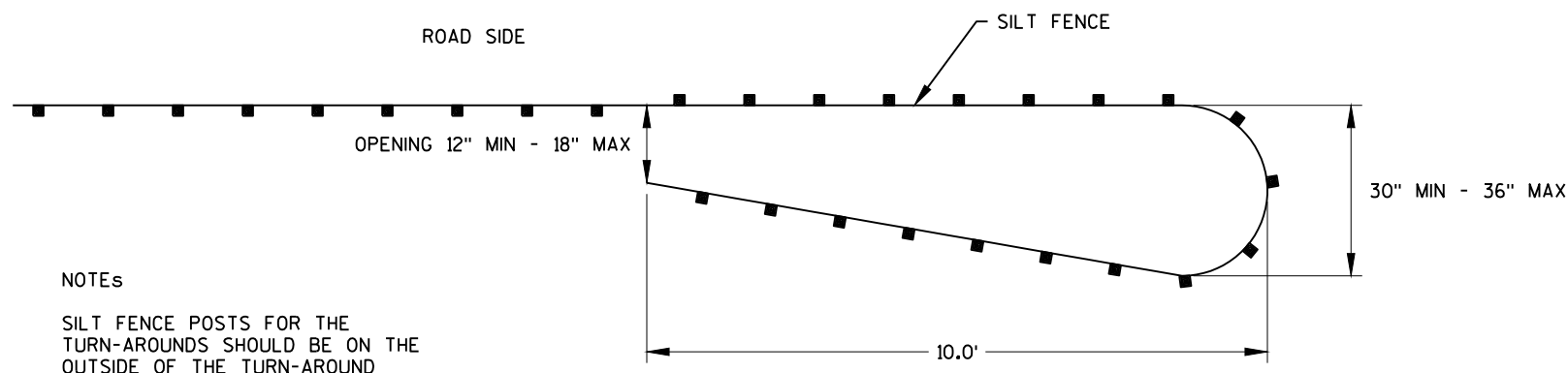


ASHALTIC FLUME
SEE SDD 08D04 CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES FOR DETAILS
*USE 6" CURB WITH 1' RADIUS AND A DRAIN WIDTH OF 2.5' TO FIT BETWEEN POSTS 6 AND 7 OF MGS THRIE BEAM TRANSITION

ASHALTIC FLUME
SEE SDD 08D04 CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES FOR DETAILS
*USE 6" CURB WITH 1' RADIUS AND A DRAIN WIDTH OF 2.5' TO FIT BETWEEN POSTS 6 AND 7 OF MGS THRIE BEAM TRANSITION

LEGEND

-  SALVAGED TOPSOIL, FERTILIZER, NO 20 SEED, EMAT CLASS II TYPE C
-  SILT FENCE
-  TURBIDITY BARRIER
-  RIP RAP
-  SILT FENCE TURN AROUND (SEE DETAIL SHEET)

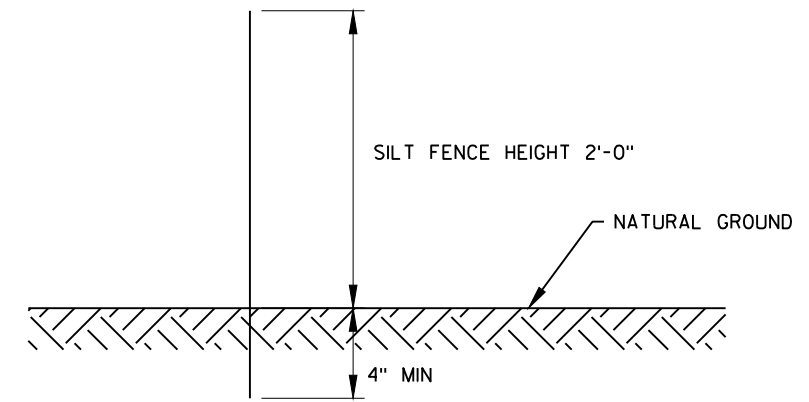


NOTES

SILT FENCE POSTS FOR THE TURN-AROUNDS SHOULD BE ON THE OUTSIDE OF THE TURN-AROUND

TURN AROUND DETAILS ARE PAID UNDER "SILT FENCE" ITEM

PLAN VIEW



SIDE VIEW



NOTE: EXISTING SIGNS ARE TO BE MOVED FOR CONSTRUCTION THEN PUT BACK WHEN COMPLETE. NEW POSTS ARE TO BE INSTALLED BUT NO NEW SIGNS INSTALLED.

CANADIAN NATIONAL RAIL



2-1



2-2

2-3



MARKING LINE EPOXY 4-INCH YELLOW

501+00

502+00

503+00

504+00

505+00

506+00

STH 95

MARKING LINE EPOXY 4-INCH WHITE

PROPOSED STRUCTURE B-27-0169



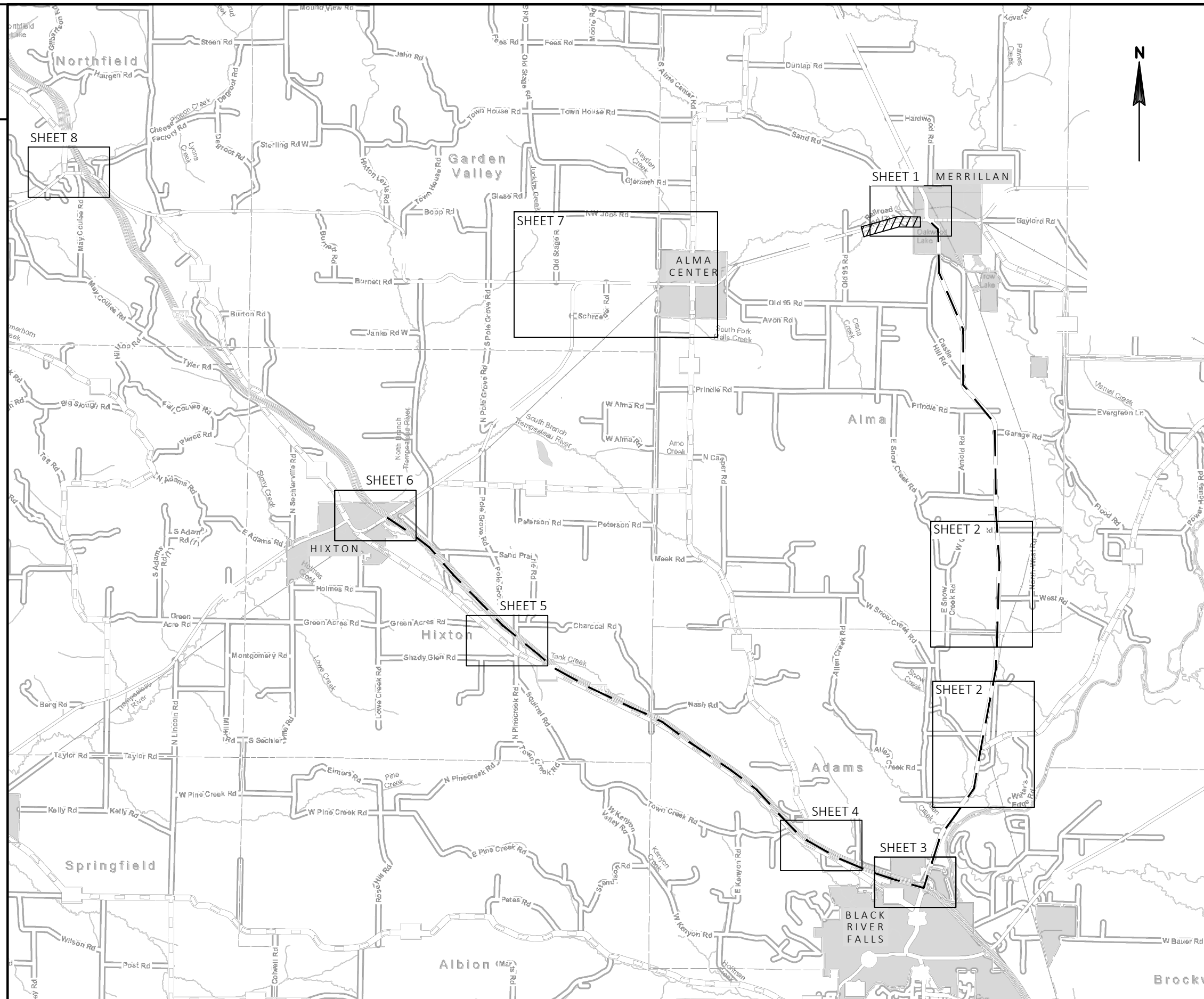
2-4

2-5


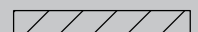





2-6





LEGEND

-  DETOUR ROUTE (STH 95)
-  SIGNS COVERED
-  EXISTING SIGN
-  POST MOUNTED SIGN
-  TYPE III BARRICADE W/ SIGN

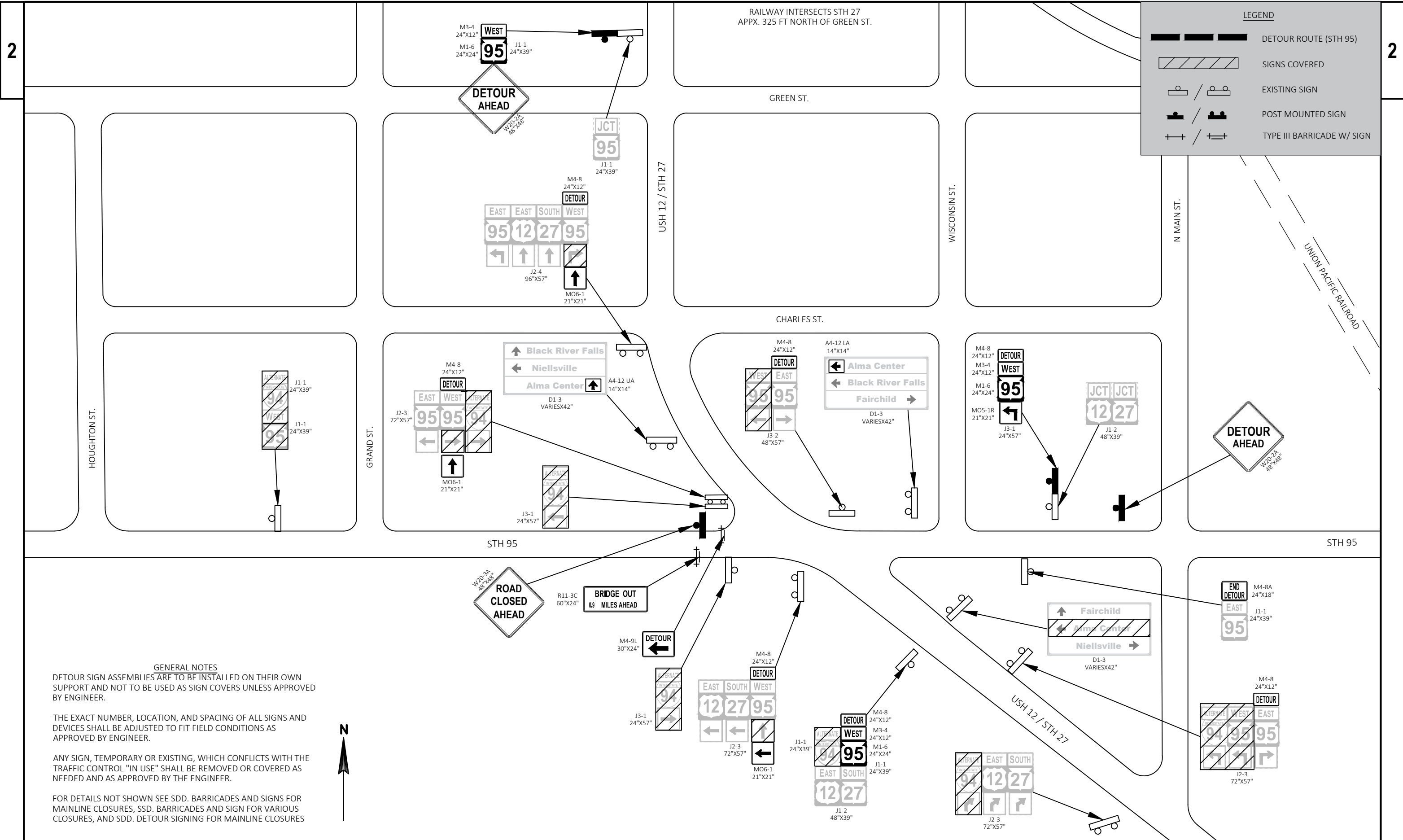
GENERAL NOTES

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

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

FOR DETAILS NOT SHOWN SEE SDD. BARRICADES AND SIGNS FOR MAINLINE CLOSURES, SSD. BARRICADES AND SIGN FOR VARIOUS CLOSURES, AND SDD. DETOUR SIGNING FOR MAINLINE CLOSURES



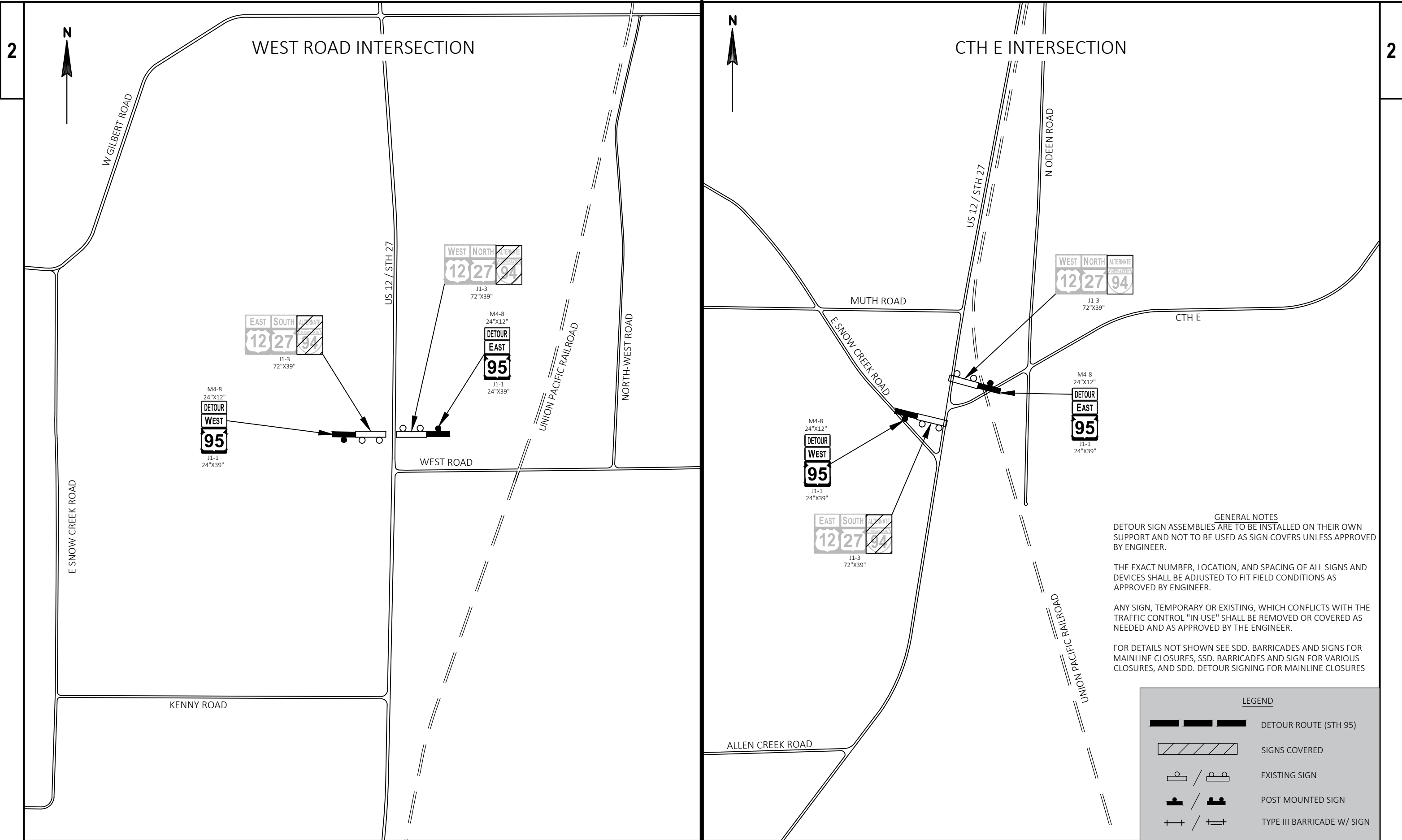
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GENERAL NOTES

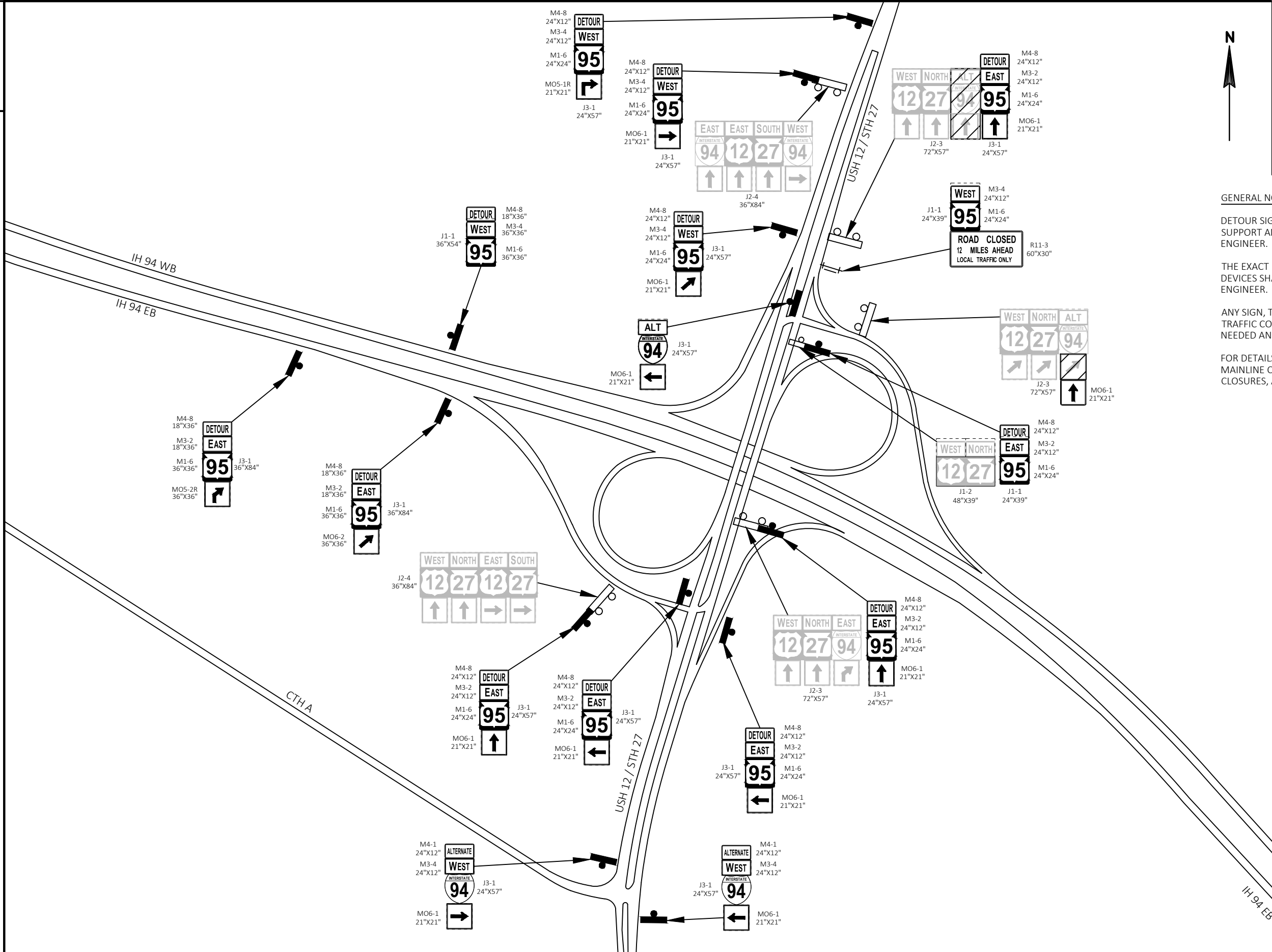
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LEGEND	
	DETOUR ROUTE (STH 95)
	SIGNS COVERED
	EXISTING SIGN
	POST MOUNTED SIGN
	TYPE III BARRICADE W/ SIGN



LEGEND

- DETOUR ROUTE (STH 95)
- SIGNS COVERED
- EXISTING SIGN
- POST MOUNTED SIGN
- TYPE III BARRICADE W/ SIGN

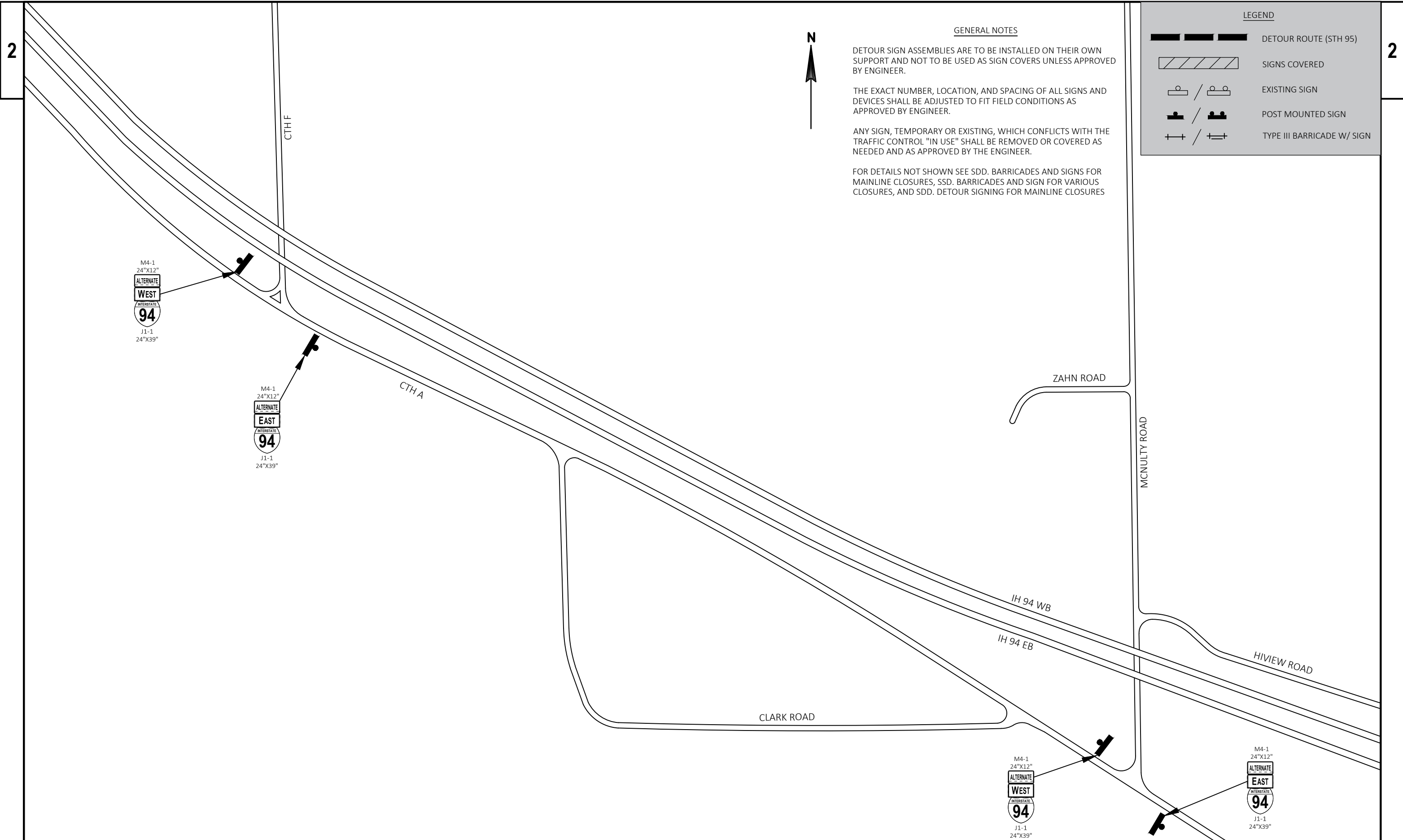
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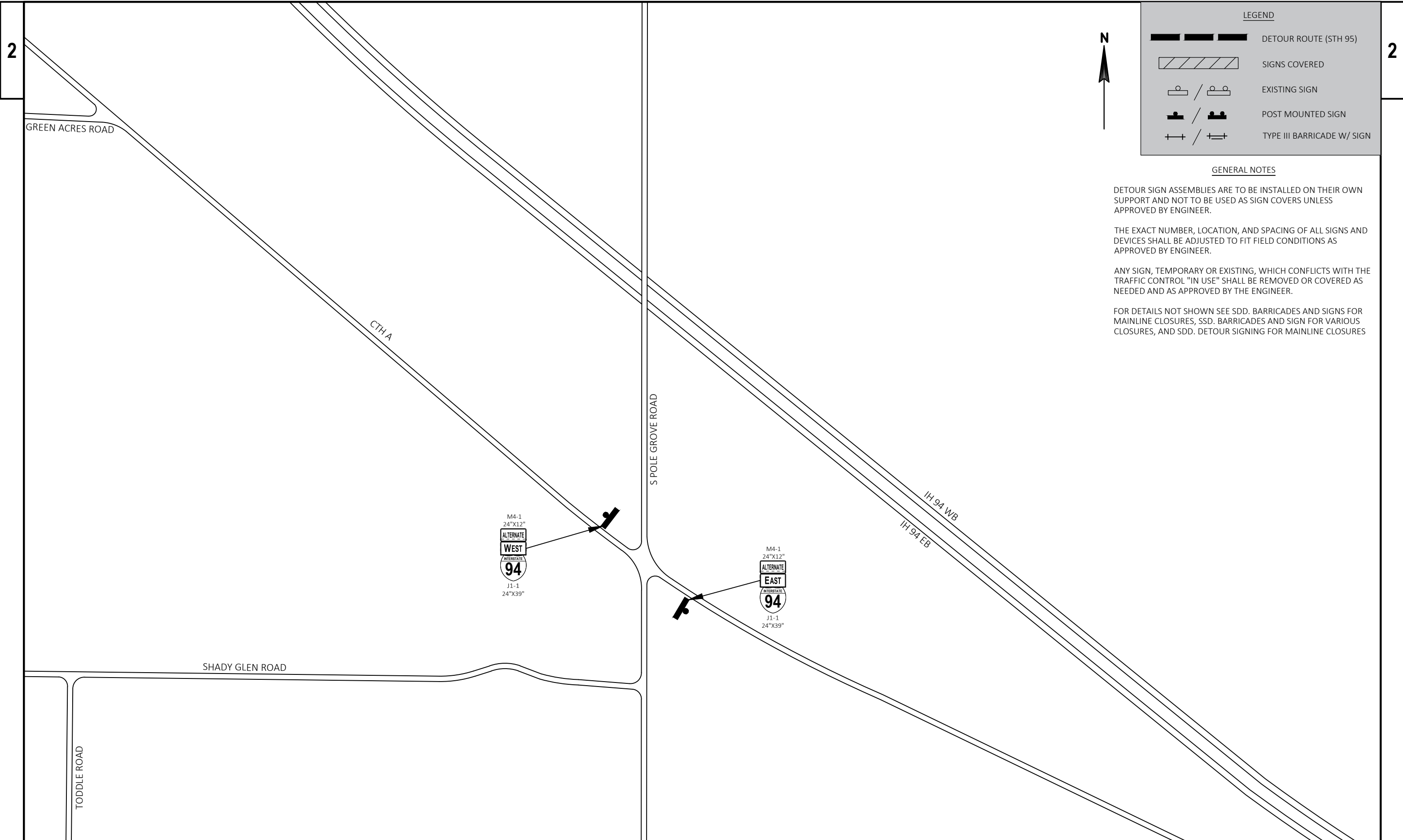
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LEGEND

-  DETOUR ROUTE (STH 95)
-  SIGNS COVERED
-  EXISTING SIGN
-  POST MOUNTED SIGN
-  TYPE III BARRICADE W/ SIGN



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PROJECT NO: 7520-00-79

HWY: STH 95

COUNTY: JACKSON

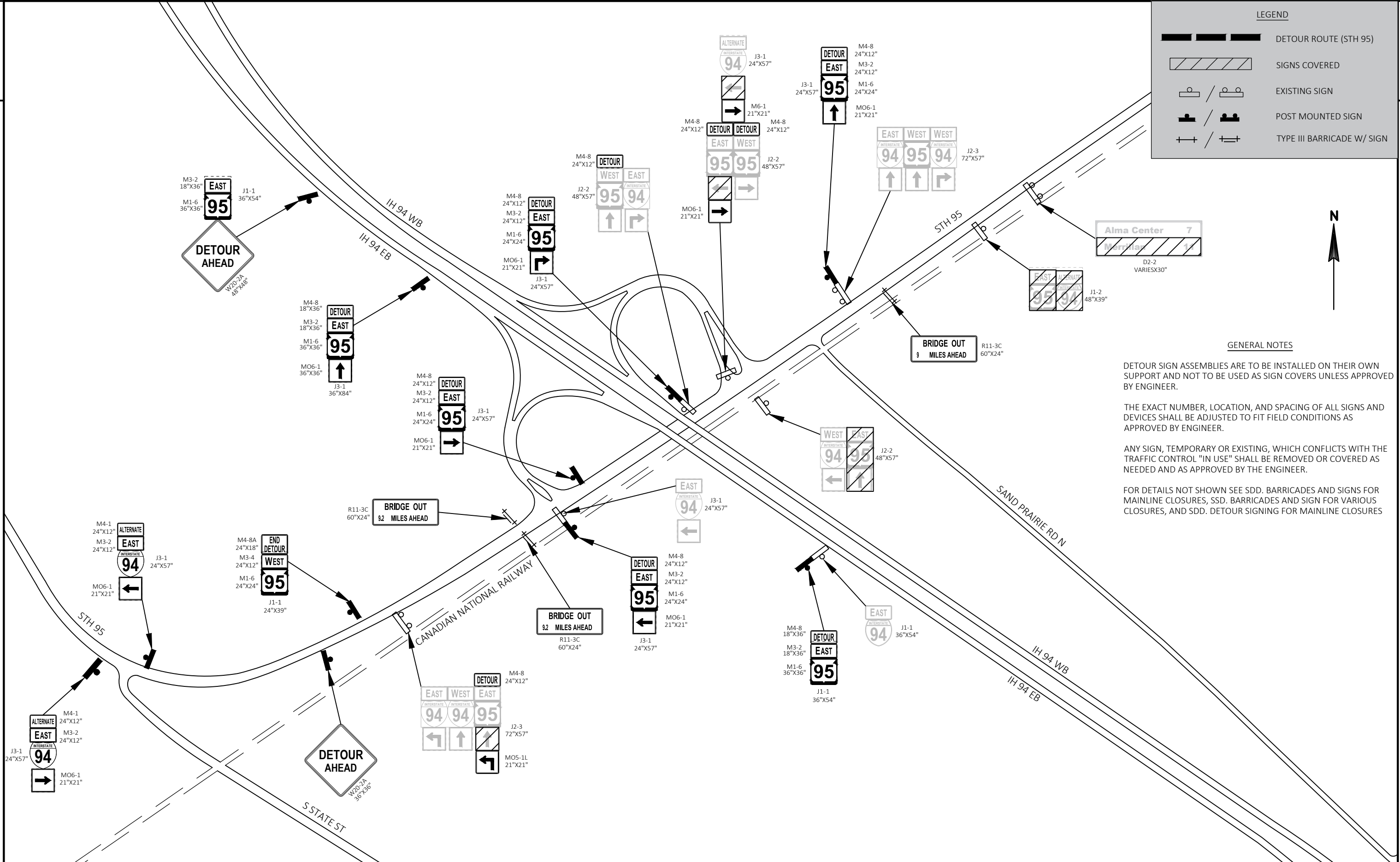
TRAFFIC CONTROL: DETOUR PLAN - SHEET 5

SHEET

E

LEGEND

- DETOUR ROUTE (STH 95)
- SIGNS COVERED
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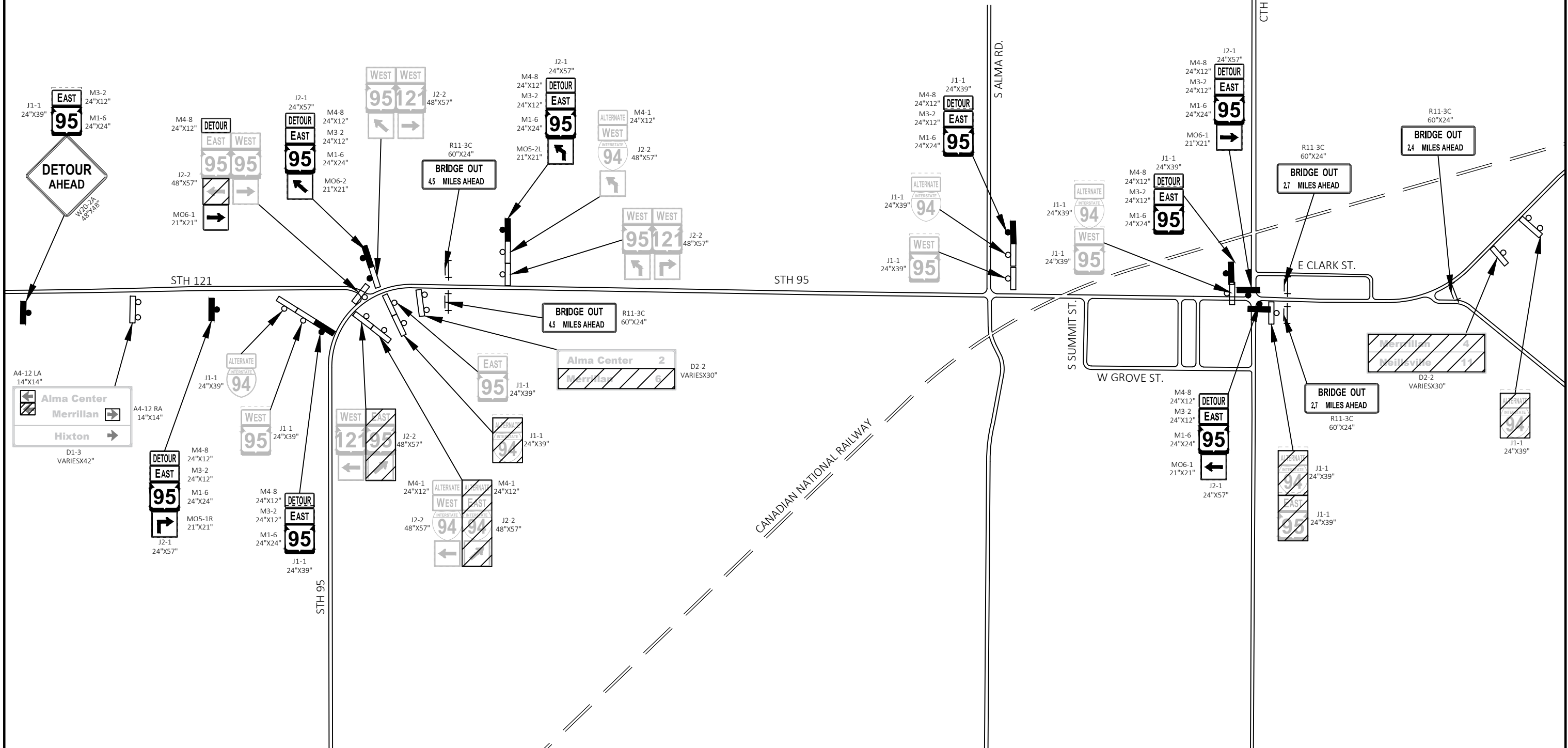
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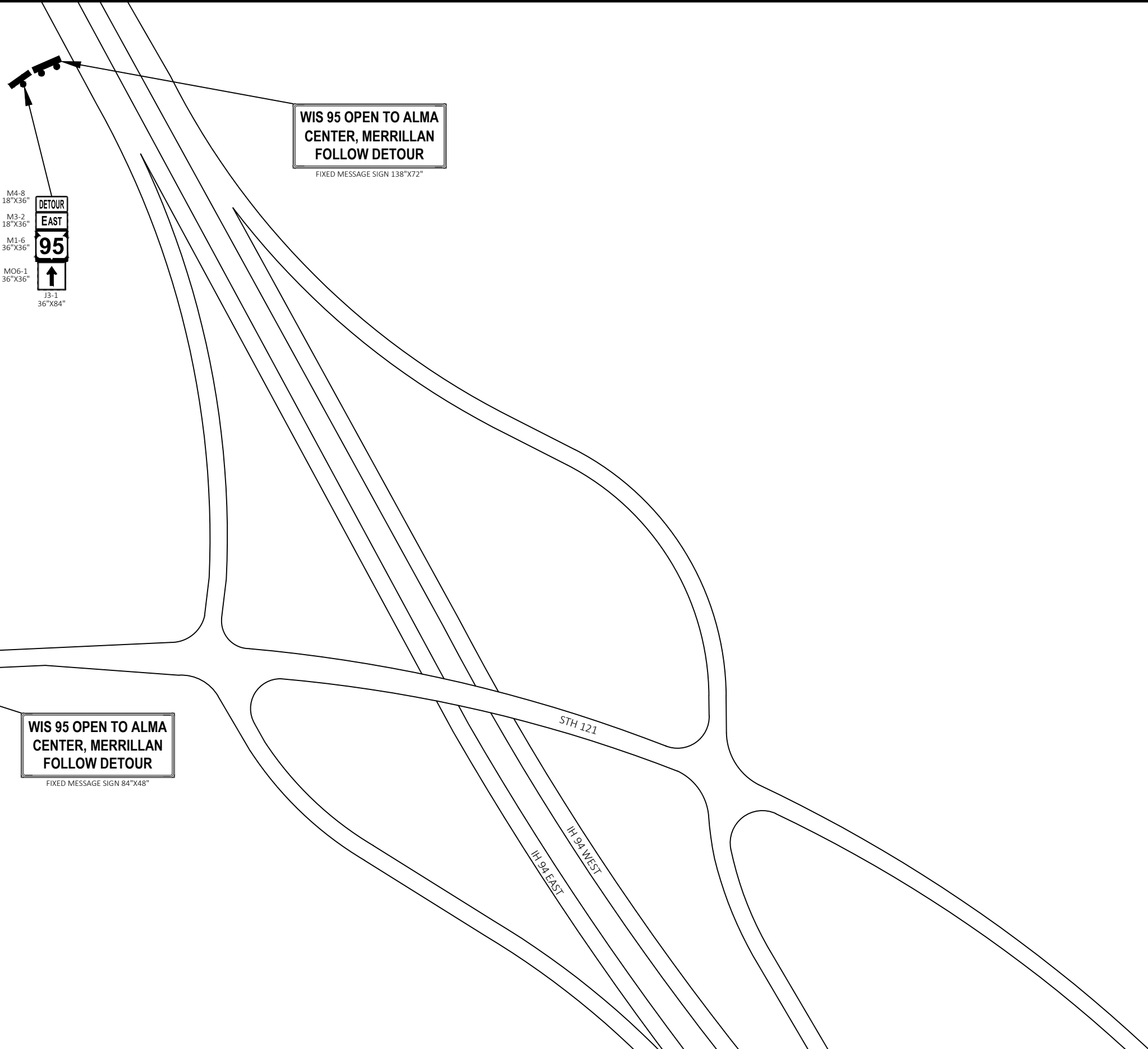
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M4-8
18"x36"
M3-2
18"x36"
M1-6
36"x36"
MO6-1
36"x36"
J3-1
36"x84"

**WIS 95 OPEN TO ALMA
CENTER, MERRILLAN
FOLLOW DETOUR**

FIXED MESSAGE SIGN 138"x72"

**WIS 95 OPEN TO ALMA
CENTER, MERRILLAN
FOLLOW DETOUR**

FIXED MESSAGE SIGN 84"x48"

M4-8
24"x12"
M3-2
24"x12"
M1-6
24"x24"
MO6-1
21"x21"
J3-1
24"x57"

LEGEND

-  DETOUR ROUTE (STH 95)
-  SIGNS COVERED
-  EXISTING SIGN
-  POST MOUNTED SIGN
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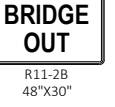
CANADIAN NATIONAL RAILWAY

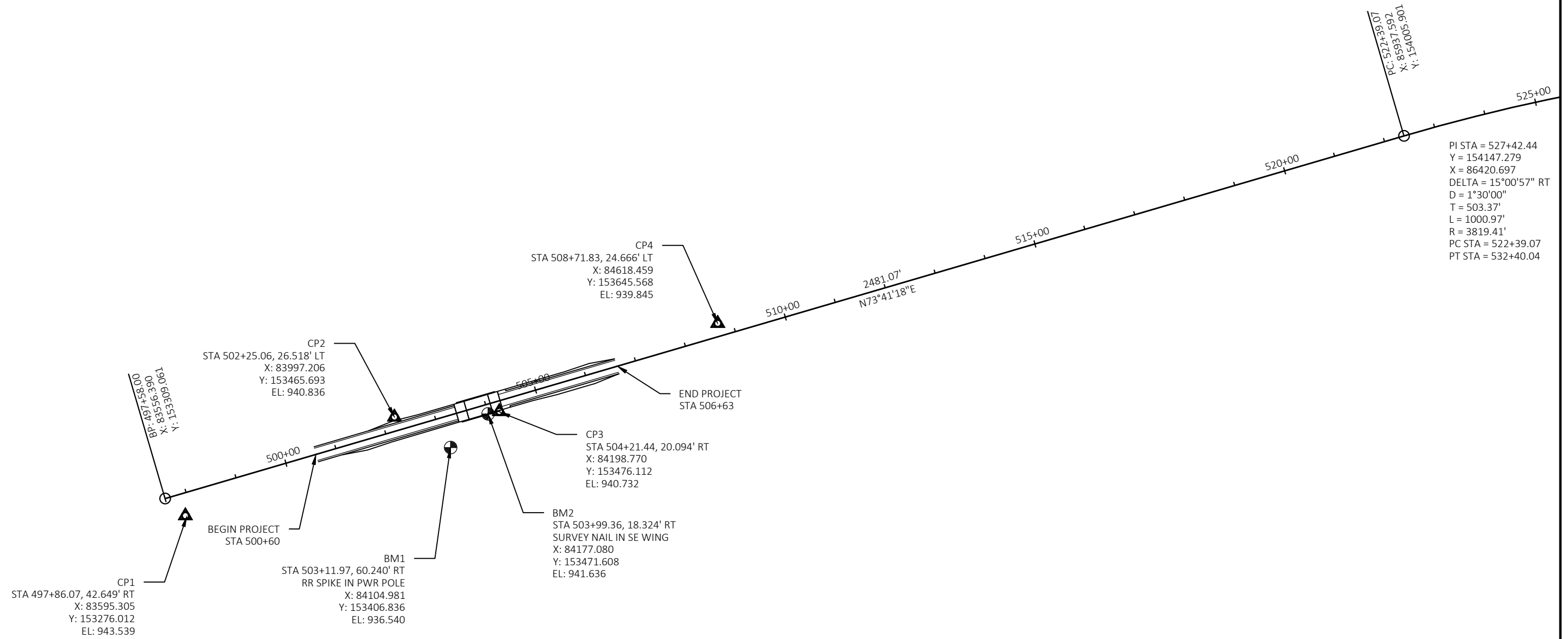
CISNA CREEK

B-27-0169

STH 95

STH 95





Estimate Of Quantities By Plan Sets

7520-00-79

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	6.000	6.000
0004	201.0205	Grubbing	STA	6.000	6.000
0008	203.0260	Removing Structure Over Waterway Minimal Debris (structure) 02. B-27-0808	EACH	1.000	1.000
0010	204.0100	Removing Concrete Pavement	SY	1,770.000	1,770.000
0012	204.0165	Removing Guardrail	LF	757.000	757.000
0014	205.0100	Excavation Common	CY	1,290.000	1,290.000
0018	206.1001	Excavation for Structures Bridges (structure) 02. B-27-0808	EACH	1.000	1.000
0022	210.1100	Backfill Structure Type A	CY	324.000	324.000
0026	213.0100	Finishing Roadway (project) 02. 7520-00-79	EACH	1.000	1.000
0028	305.0110	Base Aggregate Dense 3/4-Inch	TON	183.000	183.000
0030	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,761.000	1,761.000
0032	415.0080	Concrete Pavement 8-Inch	SY	1,719.000	1,719.000
0034	415.0410	Concrete Pavement Approach Slab	SY	160.000	160.000
0036	416.0620	Drilled Dowel Bars	EACH	58.000	58.000
0038	416.1010	Concrete Surface Drains	CY	1.000	1.000
0040	465.0105	Asphaltic Surface	TON	69.000	69.000
0042	465.0315	Asphaltic Flumes	SY	9.000	9.000
0044	502.0100	Concrete Masonry Bridges	CY	256.000	256.000
0046	502.3200	Protective Surface Treatment	SY	208.000	208.000
0048	502.3210	Pigmented Surface Sealer	SY	75.000	75.000
0052	505.0400	Bar Steel Reinforcement HS Structures	LB	4,180.000	4,180.000
0054	505.0600	Bar Steel Reinforcement HS Coated Structures	LB	29,330.000	29,330.000
0060	516.0500	Rubberized Membrane Waterproofing	SY	24.000	24.000
0062	550.0020	Pre-Boring Rock or Consolidated Materials	LF	240.000	240.000
0064	550.1100	Piling Steel HP 10-Inch X 42 Lb	LF	320.000	320.000
0066	601.0551	Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A	LF	32.000	32.000
0068	606.0200	Riprap Medium	CY	8.000	8.000
0070	606.0300	Riprap Heavy	CY	372.000	372.000
0072	612.0406	Pipe Underdrain Wrapped 6-Inch	LF	148.000	148.000
0074	614.0150	Anchor Assemblies for Steel Plate Beam Guard	EACH	4.000	4.000
0076	614.2300	MGS Guardrail 3	LF	262.500	262.500
0078	614.2500	MGS Thrie Beam Transition	LF	157.600	157.600
0080	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000
0084	618.0100	Maintenance And Repair of Haul Roads (project) 02. 7520-00-79	EACH	1.000	1.000
0086	619.1000	Mobilization	EACH	0.300	0.300
0088	624.0100	Water	MGAL	6.000	6.000
0090	625.0500	Salvaged Topsoil	SY	2,148.000	2,148.000
0092	628.1504	Silt Fence	LF	1,309.000	1,309.000
0094	628.1520	Silt Fence Maintenance	LF	1,309.000	1,309.000
0096	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0098	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0100	628.2027	Erosion Mat Class II Type C	SY	2,148.000	2,148.000
0102	628.6005	Turbidity Barriers	SY	37.000	37.000
0104	629.0210	Fertilizer Type B	CWT	1.400	1.400
0106	630.0120	Seeding Mixture No. 20	LB	71.000	71.000
0110	630.0200	Seeding Temporary	LB	71.000	71.000
0112	630.0500	Seed Water	MGAL	48.000	48.000
0116	634.0812	Posts Tubular Steel 2x2-Inch X 12-FT	EACH	6.000	6.000
0118	638.2102	Moving Signs Type II	EACH	6.000	6.000

Estimate Of Quantities By Plan Sets

7520-00-79

Line	Item	Item Description	Unit	Total	Qty
0120	638.3000	Removing Small Sign Supports	EACH	6.000	6.000
0122	642.5001	Field Office Type B	EACH	0.300	0.300
0124	643.0420	Traffic Control Barricades Type III	DAY	462.000	462.000
0126	643.0705	Traffic Control Warning Lights Type A	DAY	923.000	923.000
0128	643.0900	Traffic Control Signs	DAY	5,346.000	5,346.000
0130	643.0920	Traffic Control Covering Signs Type II	EACH	9.000	9.000
0132	643.1000	Traffic Control Signs Fixed Message	SF	41.000	41.000
0134	643.5000	Traffic Control	EACH	0.300	0.300
0136	645.0111	Geotextile Type DF Schedule A	SY	74.000	74.000
0138	645.0120	Geotextile Type HR	SY	619.000	619.000
0140	645.0130	Geotextile Type R	SY	22.000	22.000
0142	646.1020	Marking Line Epoxy 4-Inch	LF	1,357.000	1,357.000
0146	650.6501	Construction Staking Structure Layout (structure) 02. B-27-0169	EACH	1.000	1.000
0148	650.7000	Construction Staking Concrete Pavement	LF	526.000	526.000
0152	650.9911	Construction Staking Supplemental Control (project) 02. 7520-00-79	EACH	1.000	1.000
0154	650.9920	Construction Staking Slope Stakes	LF	526.000	526.000
0158	690.0250	Sawing Concrete	LF	60.000	60.000
0160	715.0502	Incentive Strength Concrete Structures	DOL	1,536.000	1,536.000
0162	715.0720	Incentive Compressive Strength Concrete Pavement	DOL	515.700	515.700
0166	999.2000.S	Installing and Maintaining Bird Deterrent System (station) 02. 503+85	EACH	1.000	1.000
0172	SPV.0060	Special 01. Riprap Removal with Minimal Disturbance Bridge B-27-0808	EACH	1.000	1.000

CLEARING

CATEGORY	STATION	TO	STATION	LOCATION	201.0105 STA
0010	500+60	-	506+63	R SLOPE	6.0
TOTAL 0010					<u>6.0</u>

FINISHING ROADWAY (7520-00-09)

CATEGORY	LOCATION	213.0100 EACH
0010	STH 95	1
TOTAL 0010		<u>1</u>

GRUBBING

CATEGORY	STATION	TO	STATION	LOCATION	201.0205 STA
0010	500+60	-	506+63	STH 95	6.0
TOTAL 0010					<u>6.0</u>

BASE AGGREGATE DENSE 3/4-INCH (2.1 TON/CY)

CATEGORY	STATION	TO	STATION	LOCATION	305.0110 TON
0010	500+60	-	503+62	SHOULDERS	100.0
0010	504+09	-	506+63	SHOULDERS	80.0
0010	505+75	-	505+98	DRIVEWAY	3.0
TOTAL 0010					<u>183.0</u>

REMOVING PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 SY
0010	500+60	-	503+47	STH 95	957.0
0010	504+19	-	506+63	STH 95	813.0
TOTAL 0010					<u>1770.0</u>

BASE AGGREGATE DENSE 1 1/4-INCH (2 TON/CY)

CATEGORY	STATION	TO	STATION	LOCATION	305.0120 TON
0010	500+60	-	503+62	STH 95	938.0
0010	504+09	-	506+63	STH 95	823.0
TOTAL 0010					<u>1761.0</u>

EARTHWORK (FILL EXPANSION FACTOR: 1.25)

CATEGORY	STATION	TO	STATION	LOCATION	COMMON 205.0100 CY	UNUSABLE MATERIAL CY	USEABLE MATERIAL CY	EXPANDED FILL CY
0010	500+60	-	503+62	STH 95	617	213	404	242
0010	504+09	-	506+63	STH 95	673	181	492	108
TOTAL 0010					<u>1290</u>	<u>394</u>	<u>896</u>	<u>350</u>

CONCRETE PAVEMENT 8-INCH

CATEGORY	STATION	TO	STATION	LOCATION	415.0080 SY
0010	500+60	-	503+42	STH 95	938.0
0010	504+29	-	506+63	STH 95	781.0
TOTAL 0010					<u>1719.0</u>

CONCRETE PAVEMENT APPROACH SLAB

CATEGORY	STATION	TO	STATION	LOCATION	415.0410 SY
0010	503+42	-	503+62	STH 95	80.0
0010	504+09	-	504+29	STH 95	80.0
TOTAL 0010					160.0

ASPHALTIC SURFACE

CATEGORY	STATION	TO	STATION	LOCATION	465.0105 TON
0010	501+08	-	503+42	RT SHLD	18
0010	501+70	-	503+72	LT SHLD	13
0010	504+44	-	506+63	LT SHLD	17
0010	504+44	-	506+63	RT SHLD	21
TOTAL 0010					69.0

ASPHALTIC FLUMES

CATEGORY	STATION	LOCATION	465.0315 SY
0010	504+43	RT SLOPE	5.0
0010	504+43	LT SLOPE	4.0
TOTAL 0010			9.0

DRILLED DOWEL BARS

CATEGORY	STATION	LOCATION	416.0620 EACH
0010	500+60	STH 95	29
0010	506+63	STH 95	29
TOTAL 0010			58

RIPRAP MEDIUM

CATEGORY	STATION	LOCATION	606.0200 CY
0010	504+43	LT SLOPE	4.0
0010	504+43	RT SLOPE	4.0
TOTAL 0010			8.0

CONCRETE SURFACE DRAINS

CATEGORY	STATION	LOCATION	416.1010 CY
0010	504+43	LT SHLD	0.5
0010	504+43	RT SHLD	0.5
TOTAL 0010			1.0

MGS GUARDRAIL

CATEGORY	STATION	TO	STATION	LOCATION	REMOVING	THRIE BEAM	TERMINAL	
					GUARDRAIL	GUARDRAIL 3	TRANSITION	EAT
					204.0165	614.2300	614.2500	614.2610
					LF	LF	LF	EACH
0010	501+57	-	503+47	RT SHLD	207.0	100.0	39.4	1.0
0010	502+20	-	503+47	LT SHLD	176.0	37.5	39.4	1.0
0010	504+24	-	505+38	RT SHLD	166.0	25.0	39.4	1.0
0010	504+24	-	506+13	LT SHLD	208.0	100.0	39.4	1.0
TOTAL 0010					757.0	262.5	157.6	4.0

CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE A

CATEGORY	STATION	TO	STATION	LOCATION	601.0551 SY
0010	504+29	-	504+45	RT SIDE	16.0
0010	504+29	-	504+45	LT SIDE	16.0
TOTAL 0010					32.0

MAINTENANCE AND REPAIR OF HAUL ROADS

CATEGORY	LOCATION	618.0100 EACH
0010	STH 95	1
TOTAL 0010		1

MOBILIZATION

CATEGORY	LOCATION	619.1000 EACH
0010	STH 95	0.3
TOTAL 0010		0.3

MOBILIZATIONS EROSION CONTROL

CATEGORY	LOCATION	628.1905	EMERGENCY
		EACH	EACH
0010	STH 95	2	2
TOTAL 0010		2	2

3

WATER (15 GAL/TON AGG)

CATEGORY	STATION	TO	STATION	LOCATION	624.0100 MGAL
0010	500+60	-	503+62	SHOULDERS	1.0
0010	504+09	-	506+63	SHOULDERS	1.0
0010	500+60	-	503+62	STH 95	2.0
0010	504+09	-	506+63	STH 95	2.0
TOTAL 0010					6.0

TURBIDITY BARRIER

CATEGORY	LOCATION	628.6005 SY
0010	CISNA W BANK	18.0
0010	CISNA E BANK	19.0
TOTAL 0010		37.0

FIELD OFFICE TYPE B

CATEGORY	LOCATION	642.5001 EACH
0010	STH 95	0.3
TOTAL 0010		0.3

628 - SILT FENCE

CATEGORY	STATION	TO	STATION	LOCATION	SILT FENCE 628.1504 LF	MAINTENANCE 628.1520 LF
0010	500+60	-	503+76	RT SIDE	297	297
0010	500+60	-	503+79	LT SIDE	306	306
0010	503+88	-	506+63	RT SIDE	233	233
0010	503+94	-	506+63	LT SIDE	253	253
TURNAROUNDS					220	220
TOTAL 0100					1309.0	1309.0

LANDSCAPING

CATEGORY	STATION	TO	STATION	LOCATION	SALVAGED TOPSOIL 625.0500 SY	EMAT URBAN CLASS II TYPE C 628.2027 SY	FERTILIZER TYPE B 629.0210 CWT	SEEDING NO. 20 MIX 630.0120 LB	SEEDING TEMPORARY 630.0200 LB	SEED WATER 630.0500 MGAL
0010	500+60	-	503+82	RT SLOPE	722.0	722.0	0.45	19.0	19.0	16
0010	500+60	-	503+77	LT SLOPE	557.0	557.0	0.35	15.0	15.0	13
0010	503+93	-	506+63	RT SLOPE	414.0	414.0	0.26	11.0	11.0	9
0010	503+96	-	506+63	LT SLOPE	455.0	455.0	0.29	12.0	12.0	10
UNDISTRIBUTED								14.0	14.0	
TOTAL 0010					2148.0	2148.0	1.40	71.0	71.0	48.0

PERMANENT SIGNING

CATEGORY	SIGN #	APPX STATION	SIGN CODE	DESCRIPTION	SIZE (WXH) INCHES	POSTS STEEL 2X2-IN 12-FT 634.0614 EACH	MOVING SIGNS TYPE II 638.2102 EACH	REMOVE SIGN SUPPORTS 638.3000 EACH
0010	2-1	503+65 L	W5-52L	CHEVRON LEFT	12 X 36	1	1	1
0010	2-2	504+02 L	W5-52R	CHEVRON RIGHT	12 X 36	1	1	1
0010	2-3	504+09 L	R12-1	WEIGHT LIMIT 45 TONS	24 X 30	1	1	1
0010	2-4	503+58 R	R12-1	WEIGHT LIMIT 45 TONS	24 X 30	1	1	1
0010	2-5	503+67 R	W5-52R	CHEVRON RIGHT	12 X 36	1	1	1
0010	2-6	504+04 R	W5-52L	CHEVRON LEFT	12 X 36	1	1	1
TOTAL 0100						6.0	6.0	6.0

3

3

TRAFFIC CONTROL

CATEGORY	LOCATION	BARRICADES	LIGHTS	SIGNS	*COVER SIGNS FIXED MESSAGE	
		TYPE III 643.0420	TYPE A 643.0705		TYPE II 643.0920	SIGN 643.1000
		DAY	DAY	DAY	EACH	EACH
0010	MERRILLAN	97	194	608	4	-
0010	US 12	-	-	292	1	-
0010	BL RV FALLS	-	-	1482	1	-
0010	HIXTON	-	-	1166	2	-
0010	ALMA CENTER	122	243	972	3	-
0010	OTHER	243	486	826	-	41
TOTAL 0010		462	923	5346	9	41

*PROJECT IS A SINGLE CYCLE, SIGNS WILL REMAIN COVERED FOR THE DURATION OF THE PROJECT

CONSTRUCTION STAKING CONCRETE PAVEMENT

CATEGORY	STATION	TO	STATION	LOCATION	650.7000
					LF
0010	500+60	-	503+47	STH 95	287
0010	504+24	-	506+63	STH 95	239
TOTAL 0010					526.0

3

TRAFFIC CONTROL

CATEGORY	LOCATION	643.5000
		EACH
0010	STH 95	0.3
TOTAL 0010		0.3

GEOTEXTILE TYPE R

CATEGORY	STATION	LOCATION	645.0130
			SY
0010	504+37	R DITCH	11.0
0010	504+37	L DITCH	11.0
TOTAL 0010			22.0

CONSTRUCTION STAKING STRUCTURE LAYOUT

CATEGORY	LOCATION	650.6501
		EACH
0010	B-27-0169	1
TOTAL 0010		1

CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (7520-00-09)

CATEGORY	LOCATION	650.9911
		EACH
0010	STH 95	1
TOTAL 0010		1

CONSTRUCTION STAKING SLOPE STAKES

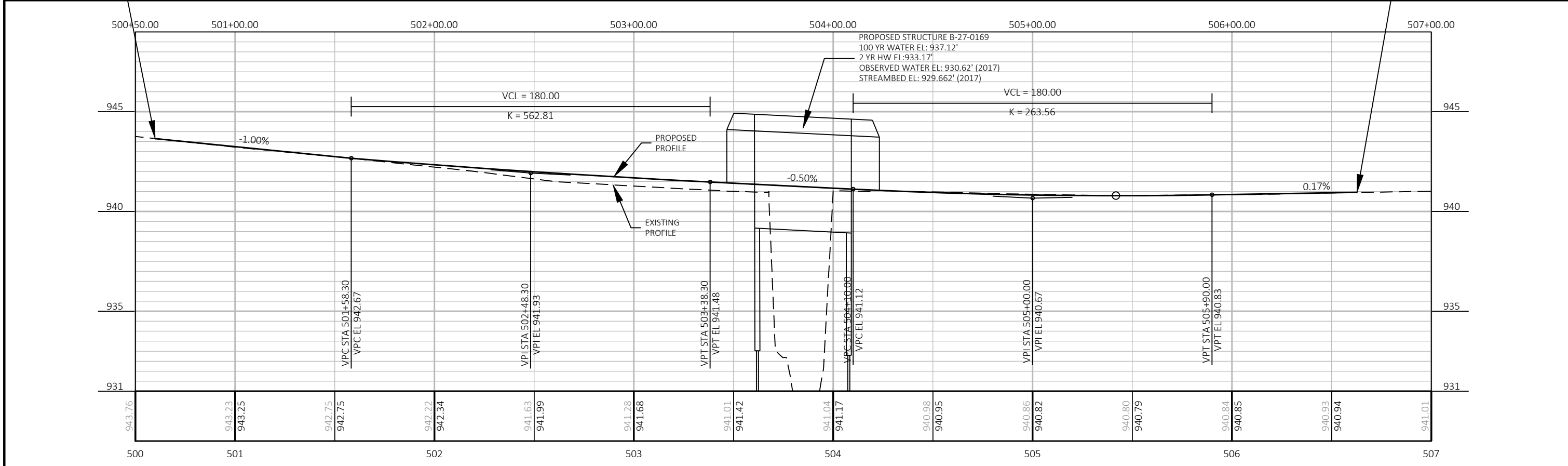
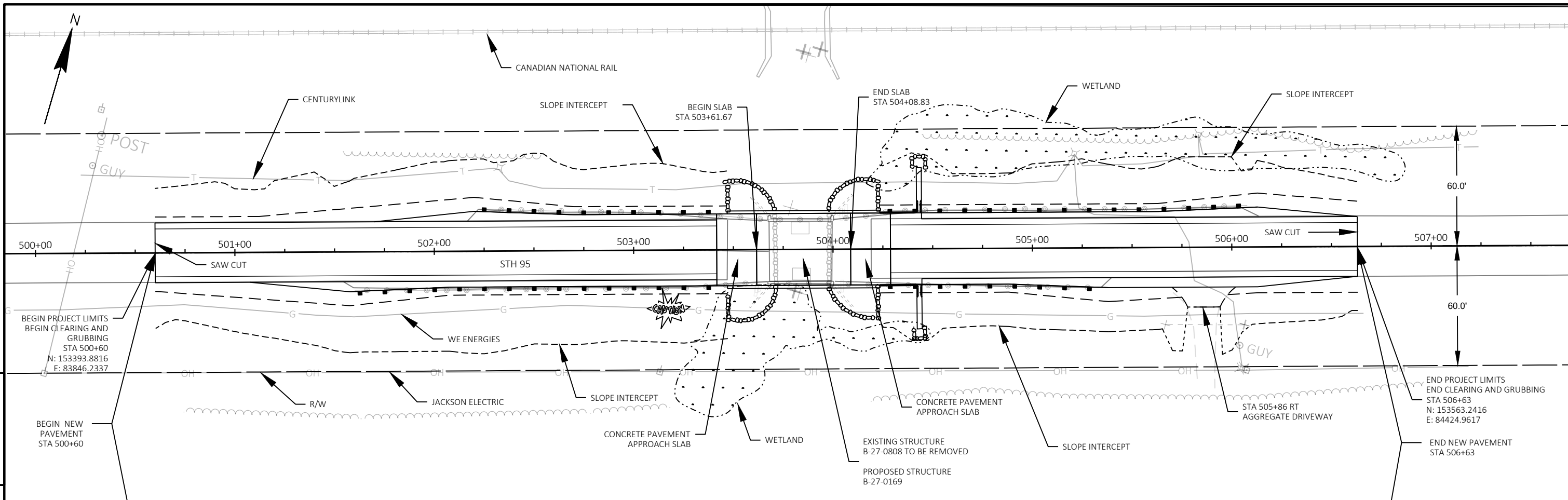
CATEGORY	STATION	TO	STATION	LOCATION	650.9920
					LF
0010	500+60	-	503+47	STH 95	287
0010	504+24	-	506+63	STH 95	239
TOTAL 0010					526.0

MARKING LINE EPOXY 4-INCH

CATEGORY	STATION	TO	STATION	LOCATION	646.1020	REMARKS
					LF	
0010	500+60	-	50+63	RT EDGELINE	603	WHITE
0010	500+60	-	506+63	LT EDGELINE	603	WHITE
0010	500+60	-	506+63	CL SKIPS	151	YELLOW
TOTAL 0010					1357.0	

SAWING CONCRETE

CATEGORY	STATION	LOCATION	690.0250
			LF
0010	500+60	STH 95	30.0
0010	506+63	STH 95	30.0
TOTAL 0010			60.0



PROJECT NO: 7520-00-79 HWY: STH 95 COUNTY: JACKSON PLAN AND PROFILE: SHEET: E

Standard Detail Drawing List

08D02-07A	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07B	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D02-07C	CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES
08D04-06	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08E09-06	SILT FENCE
08E11-02	TURBIDITY BARRIER
12A03-10	NAME PLATE (STRUCTURES)
13A03-06	CONCRETE PAVEMENT SHOULDERS
13B02-09A	CONCRETE PAVEMENT APPROACH SLAB
13B02-09B	STRUCTURAL APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB
13C01-19	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
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)
14B45-05E	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05F	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05G	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05H	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05I	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05J	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05K	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
14B45-05L	MIDWEST GUARDRAIL SYSTEM THREE BEAM TRANSITION (MGS)
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-08C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C08-21A	LONGITUDINAL MARKING (MAINLINE)

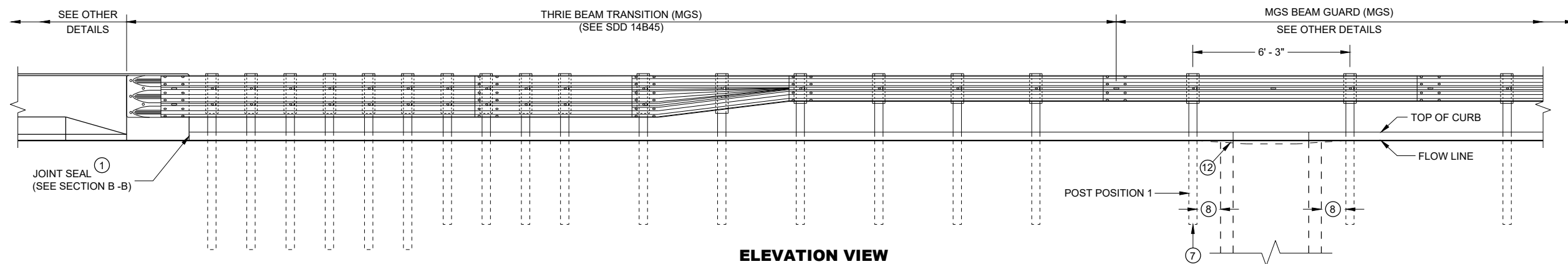
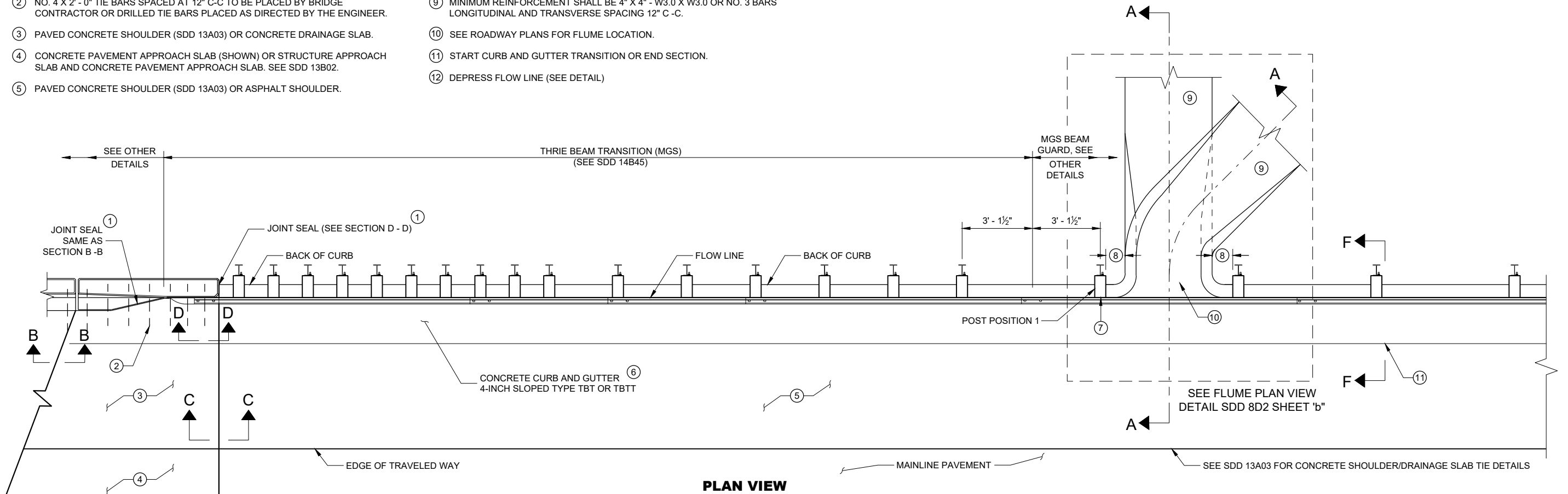
GENERAL NOTES

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.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.

- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)



**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

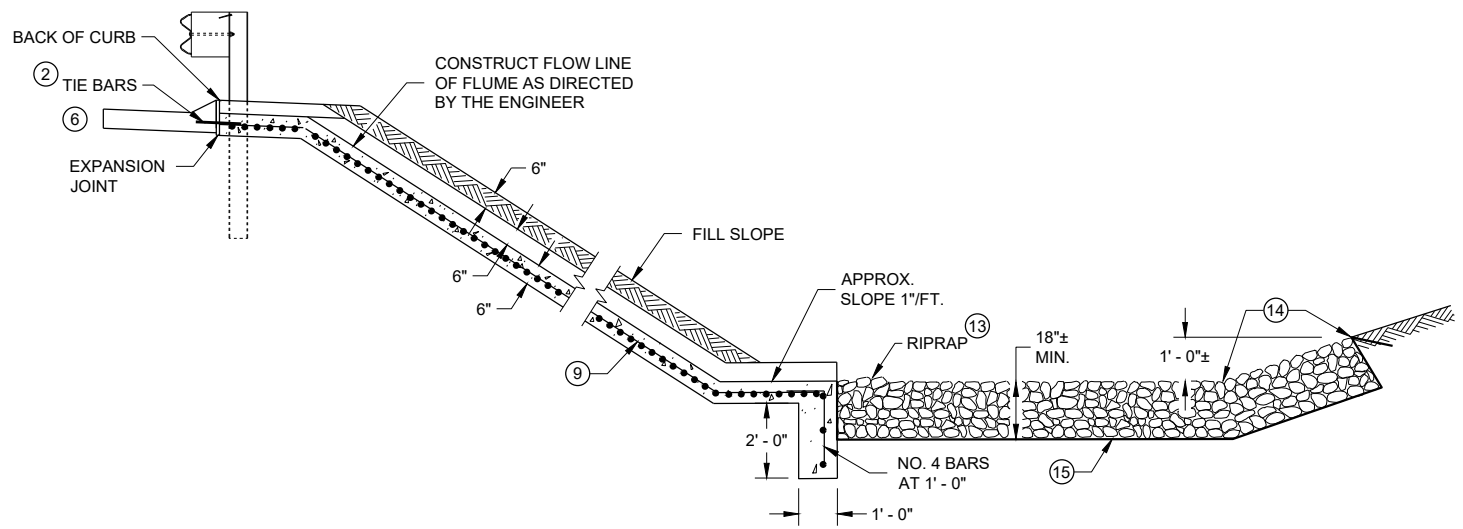
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

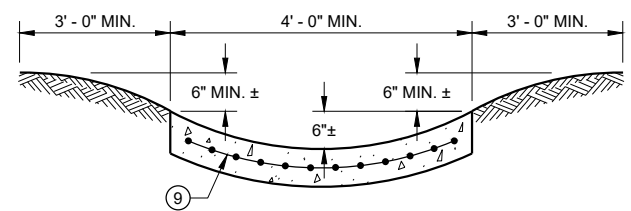
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SDD 08D02 - 07a

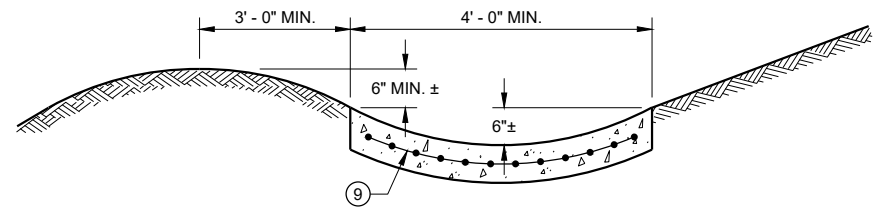
SDD 08D02 - 07a



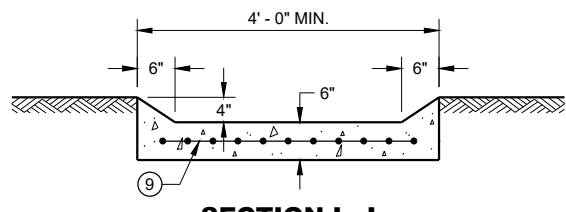
SECTION A - A



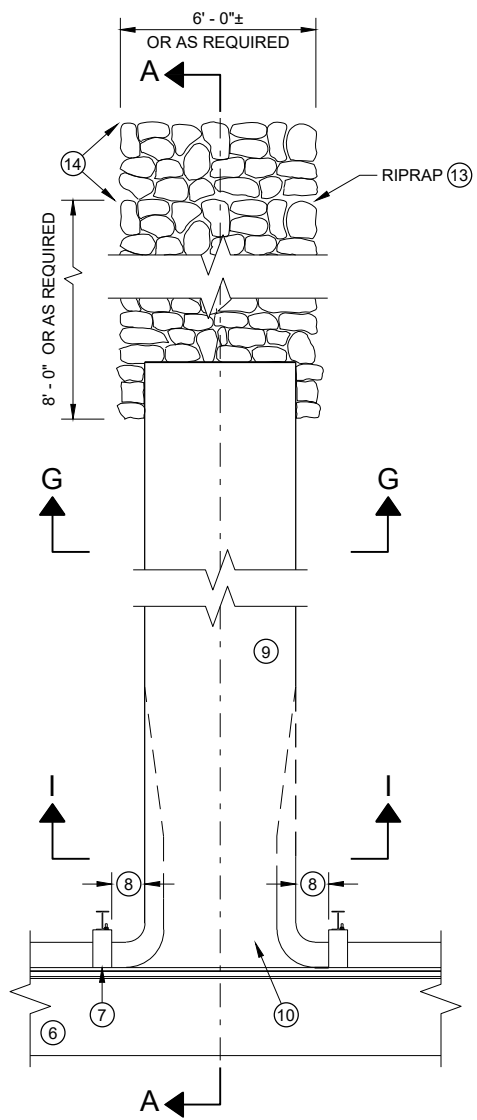
SECTION G - G



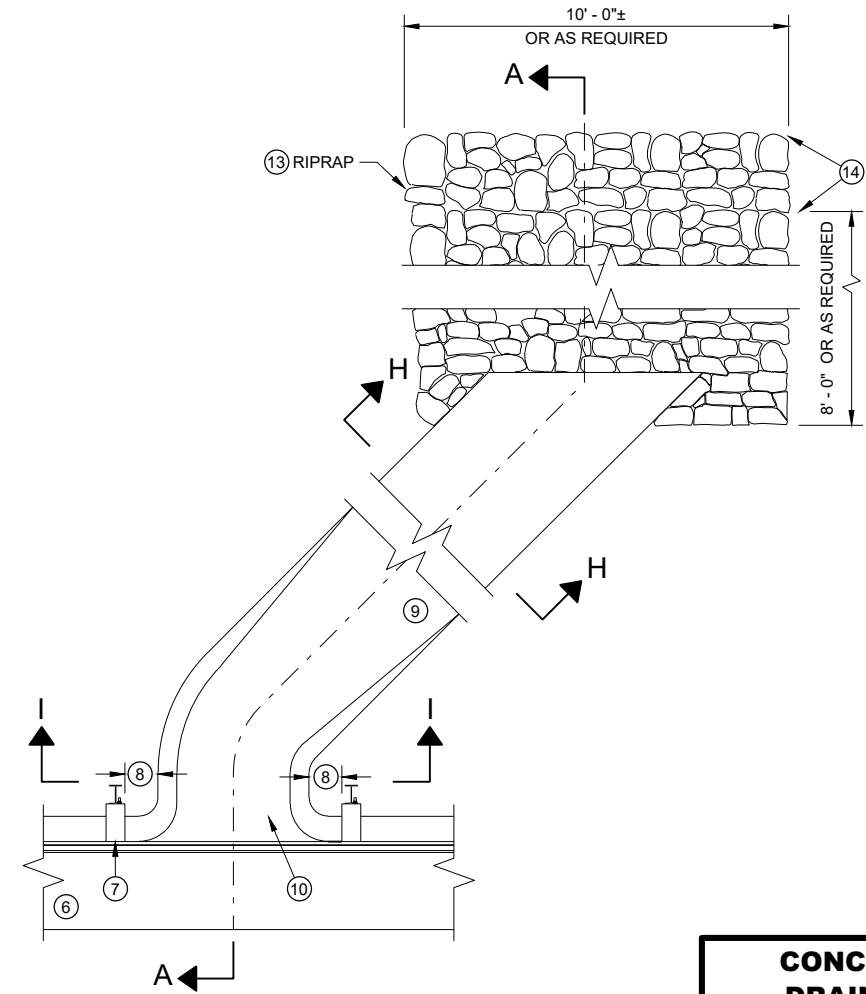
SECTION H - H



SECTION I - I



PLAN VIEW PERPENDICULAR FLUME



PLAN VIEW SKEWED FLUME

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.

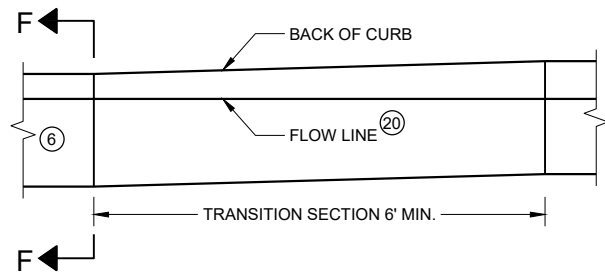
ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2'-0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2'-0" TIE BARS SPACED AT 3'-0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.

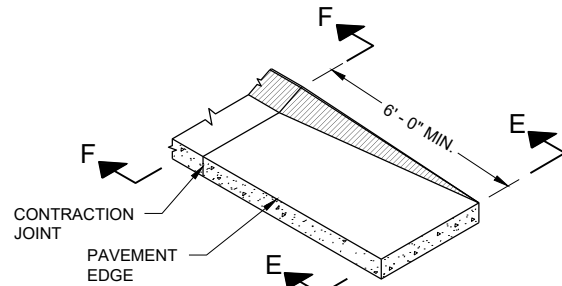
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH AS REQUIRED.
- ⑮ GEOTEXTILE FABRIC TYPE HR.

CONCRETE SURFACE DRAINS FLUME TYPE AT STRUCTURES

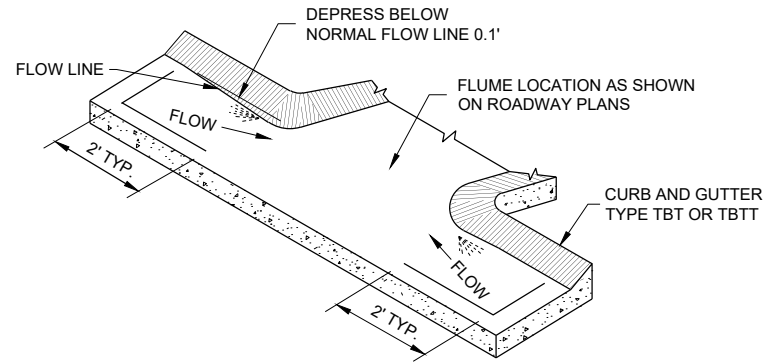
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CURB AND GUTTER TRANSITION SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



**CURB AND GUTTER END SECTION
CONCRETE CURB AND GUTTER 4-INCH SLOPED
36 INCH TYPE TBT OR TBTT**



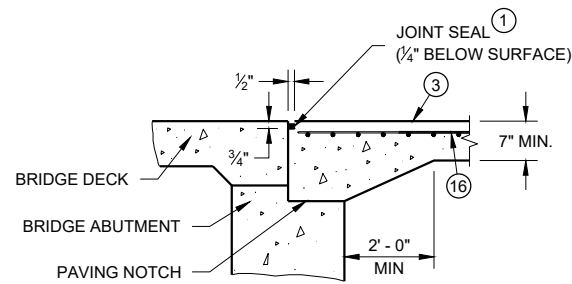
**CURB AND GUTTER FLOW LINE DEPRESSION
AT FLUMES CONCRETE CURB AND GUTTER
4-INCH SLOPED 36 INCH TYPE TBT OR TBTT**

GENERAL NOTES

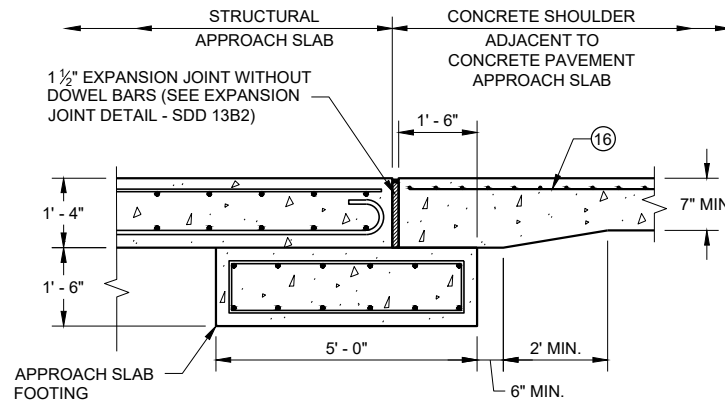
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

ALL STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

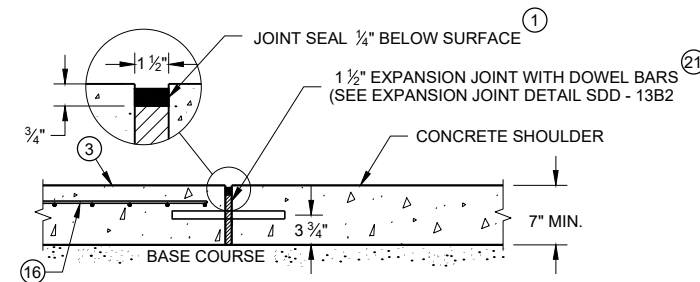
- ① USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
- ② NO. 4 X 2' - 0" TIE BARS SPACED AT 12" C-C TO BE PLACED BY BRIDGE CONTRACTOR OR DRILLED TIE BARS PLACED AS DIRECTED BY THE ENGINEER.
- ③ PAVED CONCRETE SHOULDER (SDD 13A03) OR CONCRETE DRAINAGE SLAB.
- ④ CONCRETE PAVEMENT APPROACH SLAB (SHOWN) OR STRUCTURE APPROACH SLAB AND CONCRETE PAVEMENT APPROACH SLAB. SEE SDD 13B02 AND STRUCTURE PLANS.
- ⑤ PAVED CONCRETE SHOULDER (SDD 13A03) OR ASPHALT SHOULDER.
- ⑥ CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE TBT OR TBTT. USE TYPE TBTT CURB WITH NO. 4 X 2' - 0" TIE BARS SPACED AT 3' - 0" C-C ONLY WHEN ADJACENT TO CONCRETE PAVEMENTS.
- ⑦ PLACE FLUME BEFORE MSG THRIE BEAM TRANSITION POST 1 (SEE SDD 14B45)
- ⑧ CENTER FLUME BETWEEN POSTS. 6-INCH MINIMUM SEPARATION FROM OUTSIDE EDGE OF FLUME TO POSTS.
- ⑨ MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑩ SEE ROADWAY PLANS FOR FLUME LOCATION.
- ⑪ START CURB AND GUTTER TRANSITION OR END SECTION.
- ⑫ DEPRESS FLOW LINE (SEE DETAIL)
- ⑬ MEDIUM RIPRAP UNLESS OTHERWISE SPECIFIED.
- ⑭ LIMITS OF ADDITIONAL RIPRAP WHEN SPECIAL DITCH IS REQUIRED.
- ⑮ GEOTEXTILE FABRIC TYPE HR.
- ⑯ MINIMUM REINFORCEMENT SHALL BE 6" X 6" - W4.0 X W4.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE SPACING 12" C-C.
- ⑰ MSG THRIE BEAM TRANSITION POST 1. SEE SDD 14B45 FOR ADDITIONAL CONSTRUCTION DETAILS AND ACCEPTABLE MATERIALS.
- ⑱ MAINTAIN WIDTH, THICKNESS AND CROSS SLOPE OF ADJACENT TYPE TBT OR TBTT CURB. SEE NOTE 6 FOR TIE BAR SPACING.
- ⑲ ALIGN FACE OF POST BLOCK WITH FLOW LINE.
- ⑳ MAINTAIN FLOW LINE AT EDGE OF PAVEMENT/FACE OF BEAM GUARD AS APPLICABLE.
- ㉑ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING HMA PAVEMENTS.



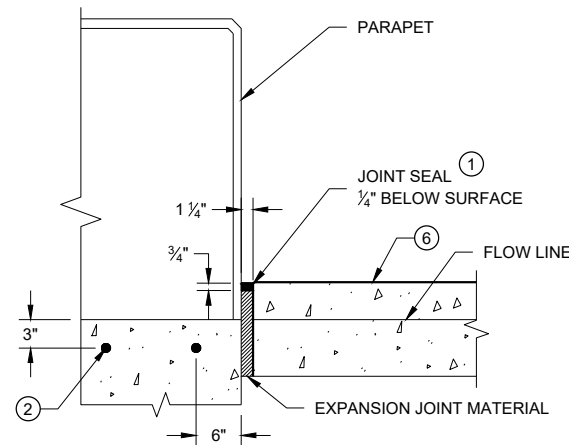
SECTION B-B



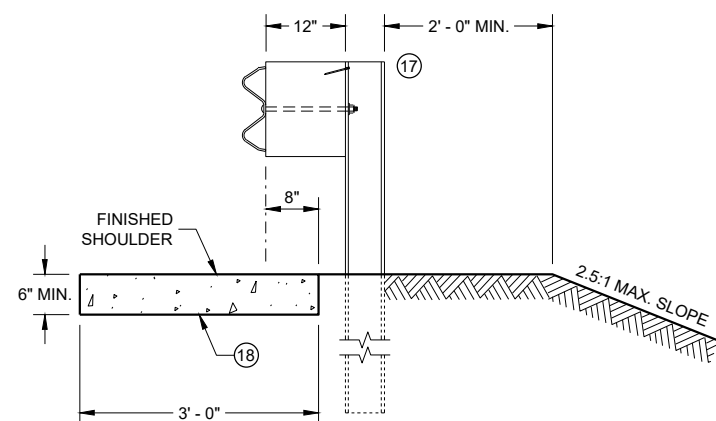
**SECTION C - C
JOINT DETAIL FOR BRIDGE WITH STRUCTURAL
APPROACH SLAB AND CONCRETE APPROACH SLAB**



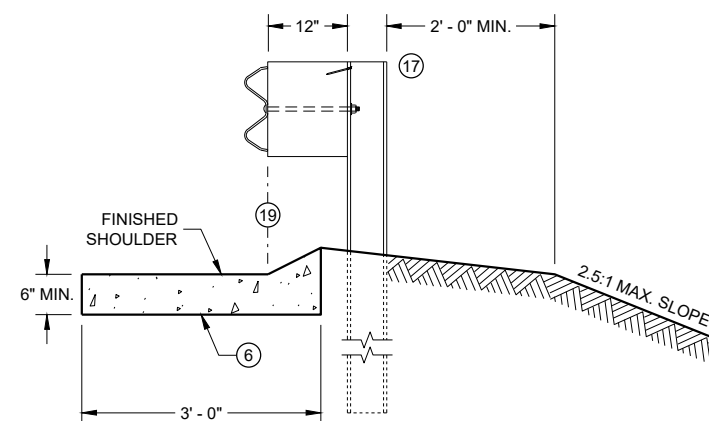
**SECTION C - C
JOINT DETAIL FOR BRIDGE APPROACH
WITH CONCRETE SHOULDERS**



SECTION D - D



SECTION E - E



SECTION F - F

**CONCRETE SURFACE
DRAINS FLUME TYPE
AT STRUCTURES**

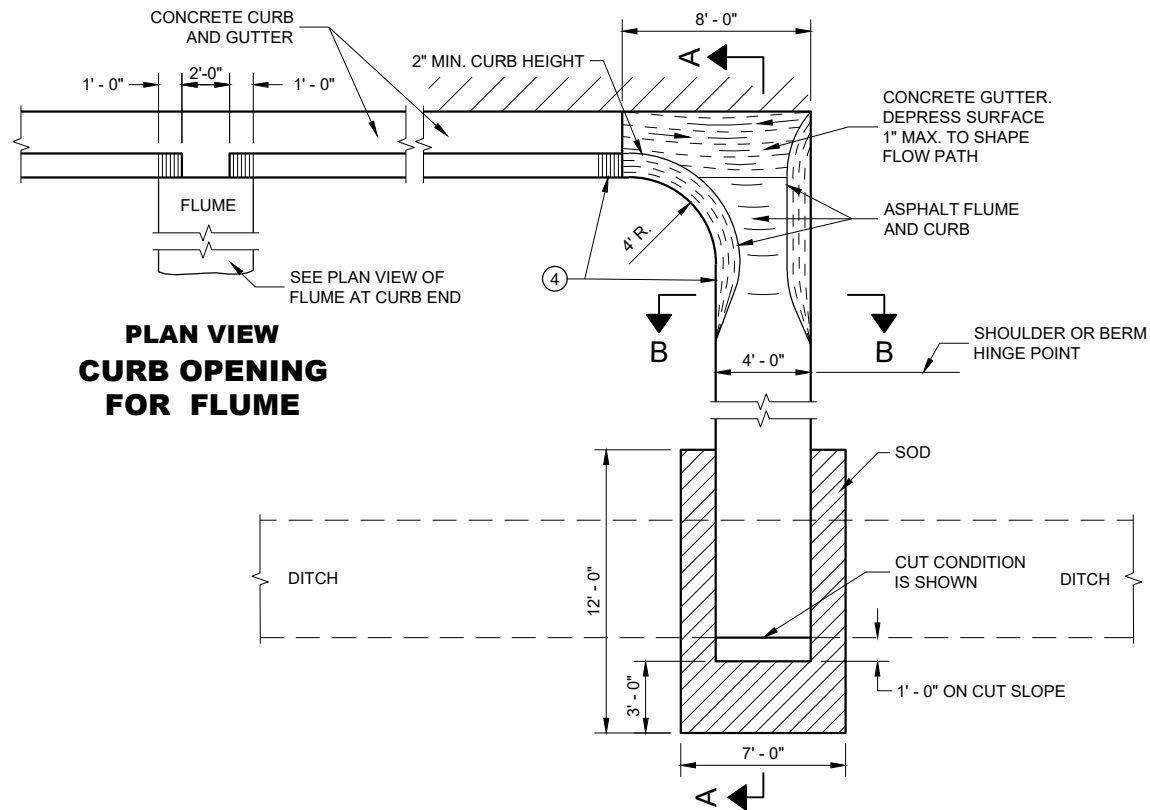
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
February 2020 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

FHWA

NOTE: TAPER CURB ENDS TO GUTTER IN 1' - 0"

ASPHALTIC FLUME



**PLAN VIEW
CURB OPENING
FOR FLUME**

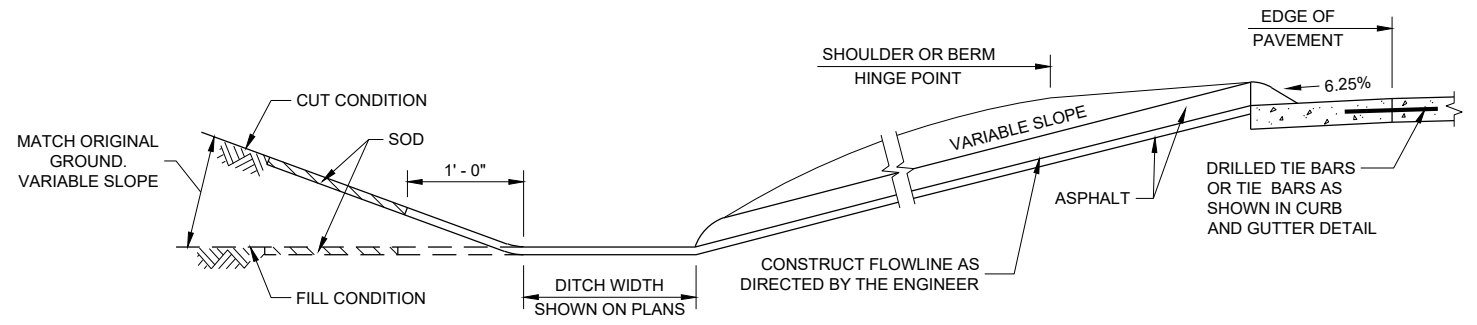
**PLAN VIEW
FLUME AT CURB END**

GENERAL NOTES

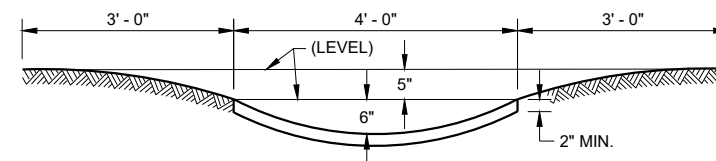
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

4" X 4" - W3.0 X W3.0 CONCRETE REINFORCEMENT SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

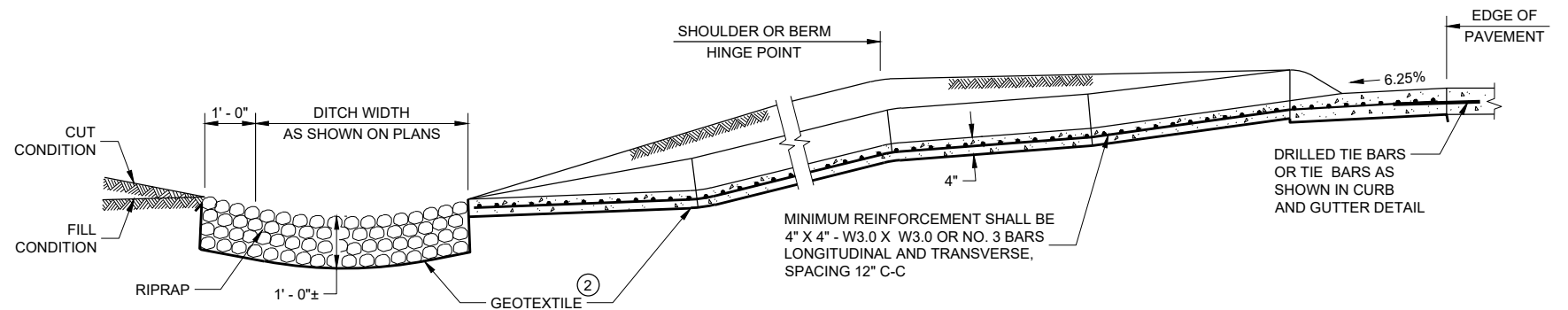
- ① JOINTS SHALL BE 1/8" TO 1/4" WIDE BY 1 1/2" DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.
- ③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED.
- ④ ANGLE OF FLUME IN RELATION TO BACK OF CURB TO BE CONSTRUCTED PER THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. ANGLE OF FLUME MAY BE OTHER THAN 90 DEGREES AS SHOWN.



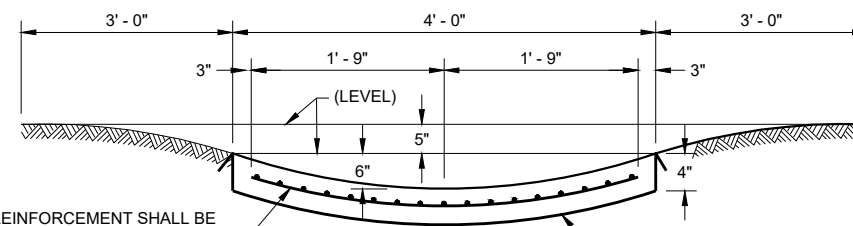
SECTION A - A



SECTION B - B

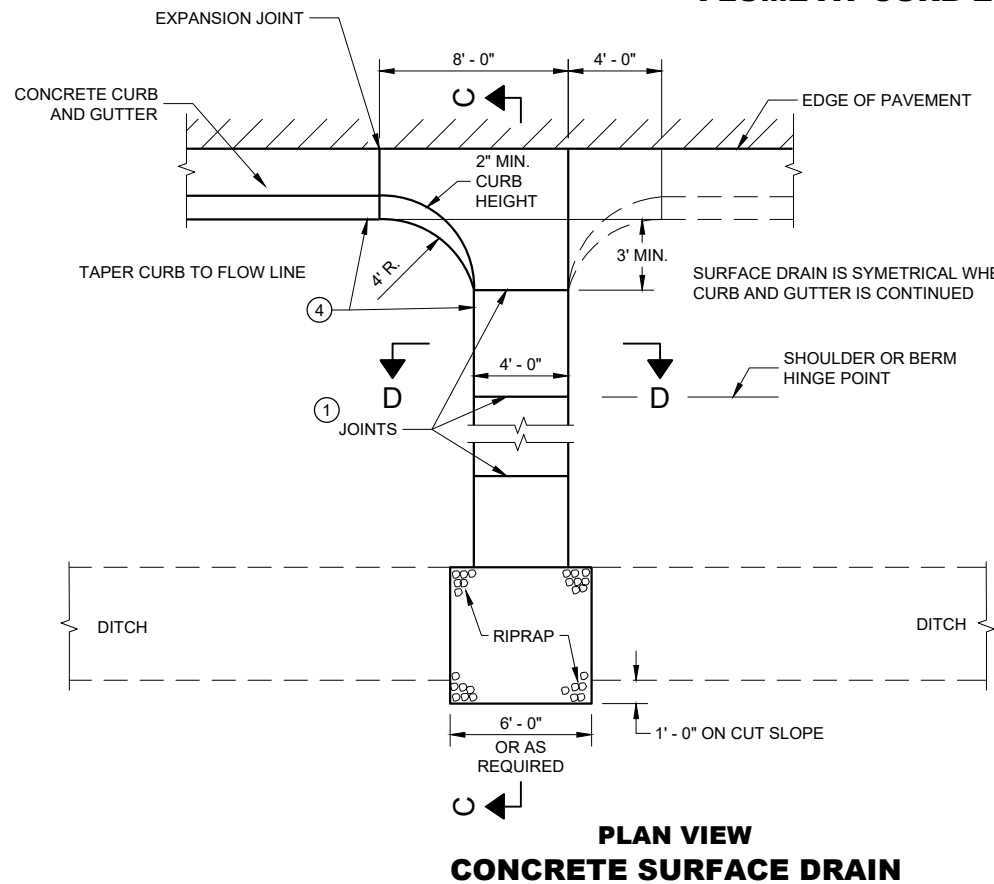


SECTION C - C



SECTION D - D

MINIMUM REINFORCEMENT SHALL BE 4" X 4" - W3.0 X W3.0 OR NO. 3 BARS LONGITUDINAL AND TRANSVERSE, SPACING 12" C-C



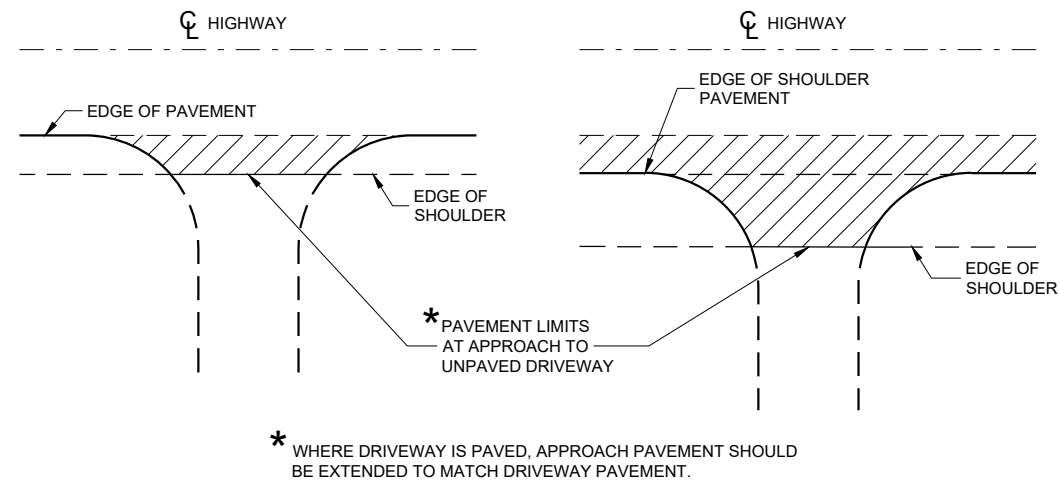
**PLAN VIEW
CONCRETE SURFACE DRAIN**

CONCRETE SURFACE DRAINS AND ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2021 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER

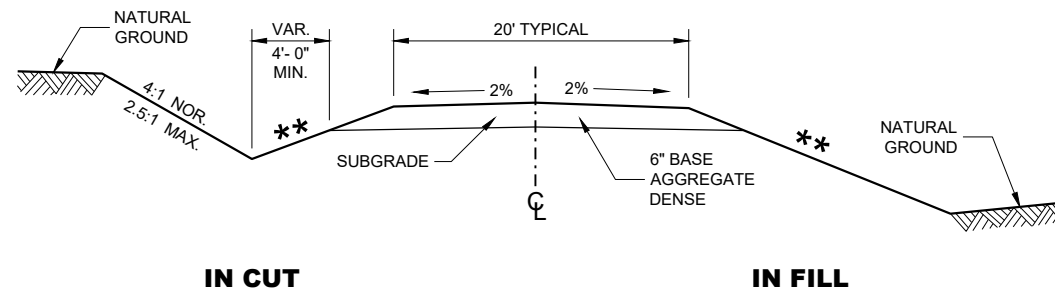
FHWA



PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

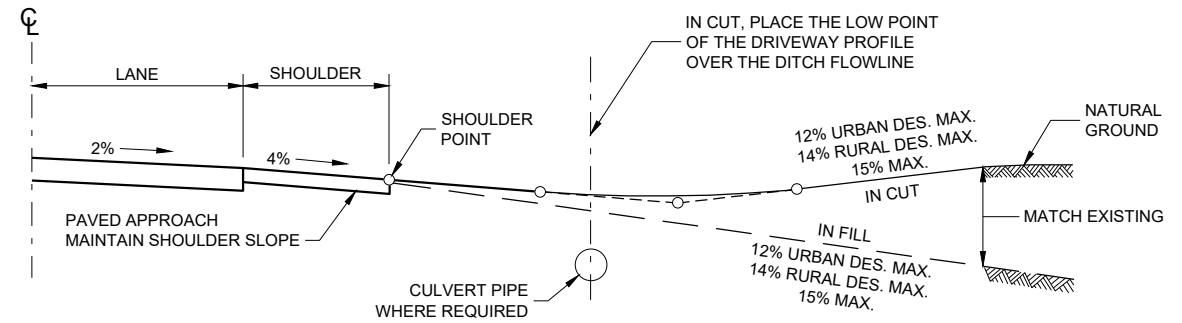
**RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB AND GUTTER OR SIDEWALK)**



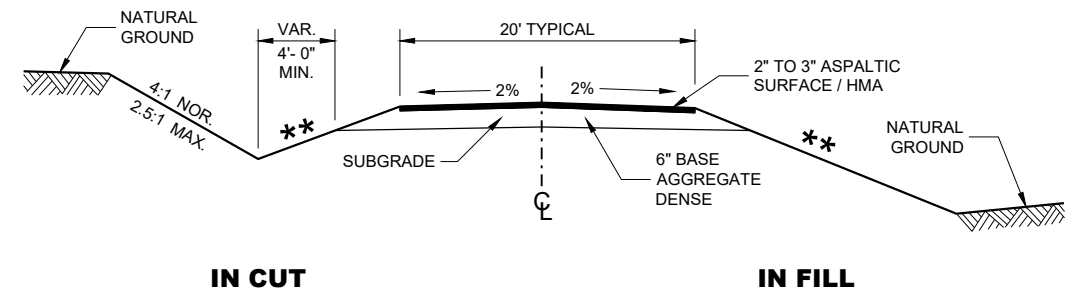
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
AGGREGATE SURFACE**

** SLOPE CAN VARY WITH SPEED. SEE 11-45-30.6.2

POSTED SPEED MPH	MAX. SLOPE
<35	4:1
≥ 35 TO < 60	6:1
≥60	10:1



TYPICAL DRIVEWAY PROFILES



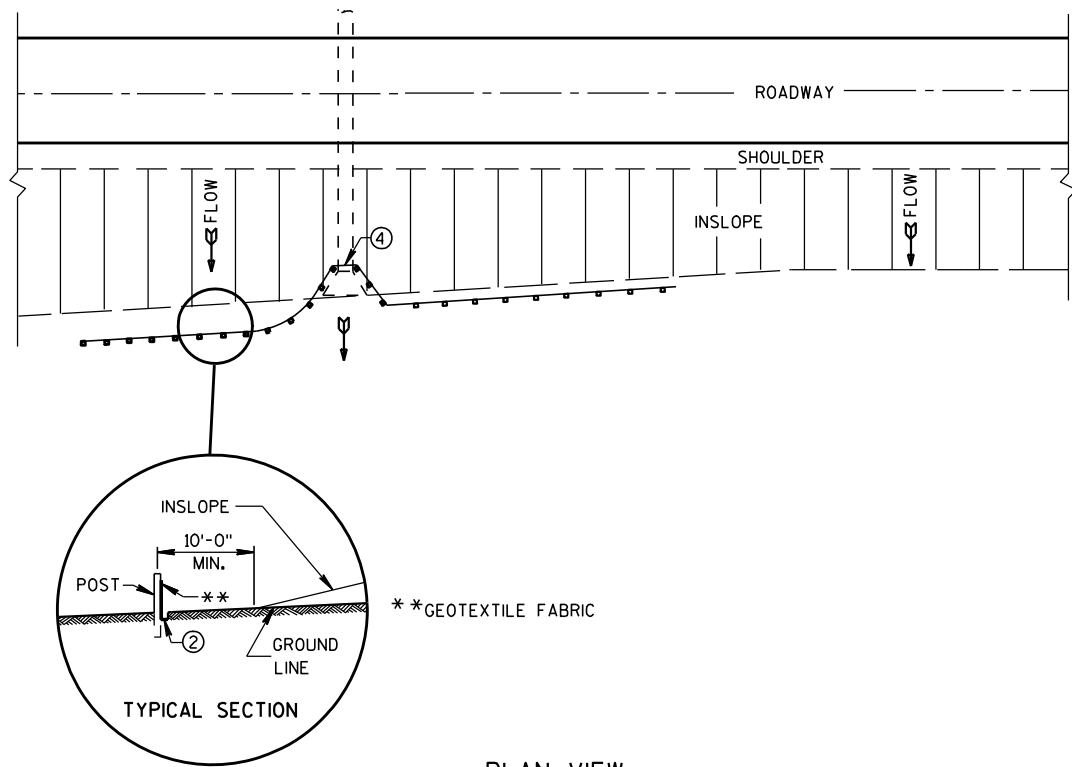
**TYPICAL CROSS SECTION FOR
PRIVATE DRIVE OR FIELD ENTRANCE
ASPHALTIC SURFACE**

DRIVEWAYS WITHOUT CURB AND GUTTER

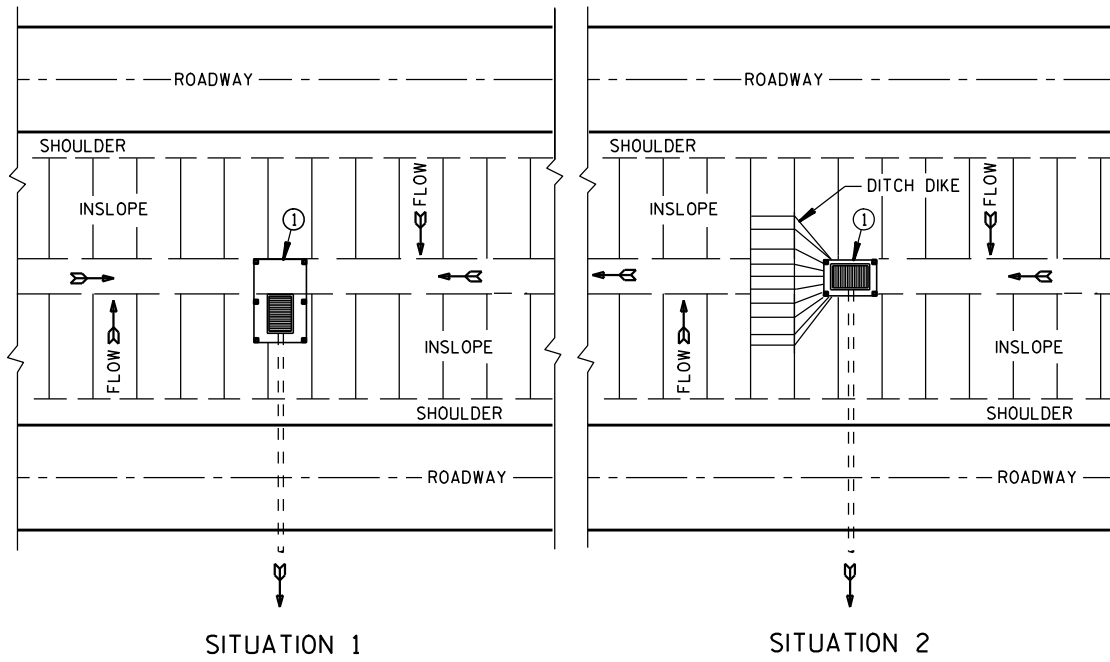
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December 2017 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR

FHWA



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

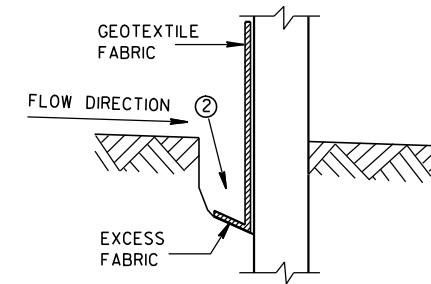


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

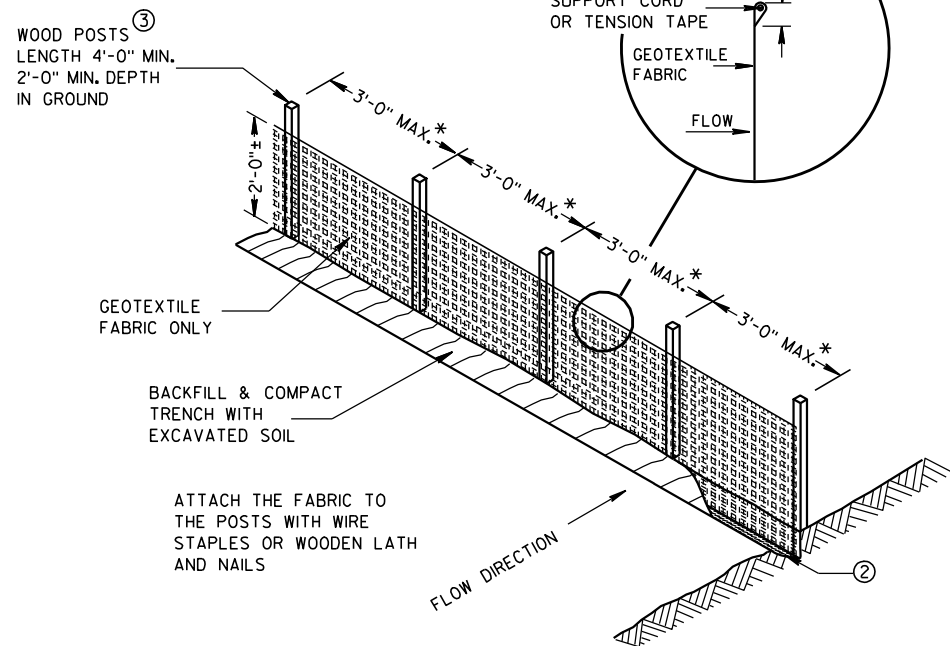
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

- 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.



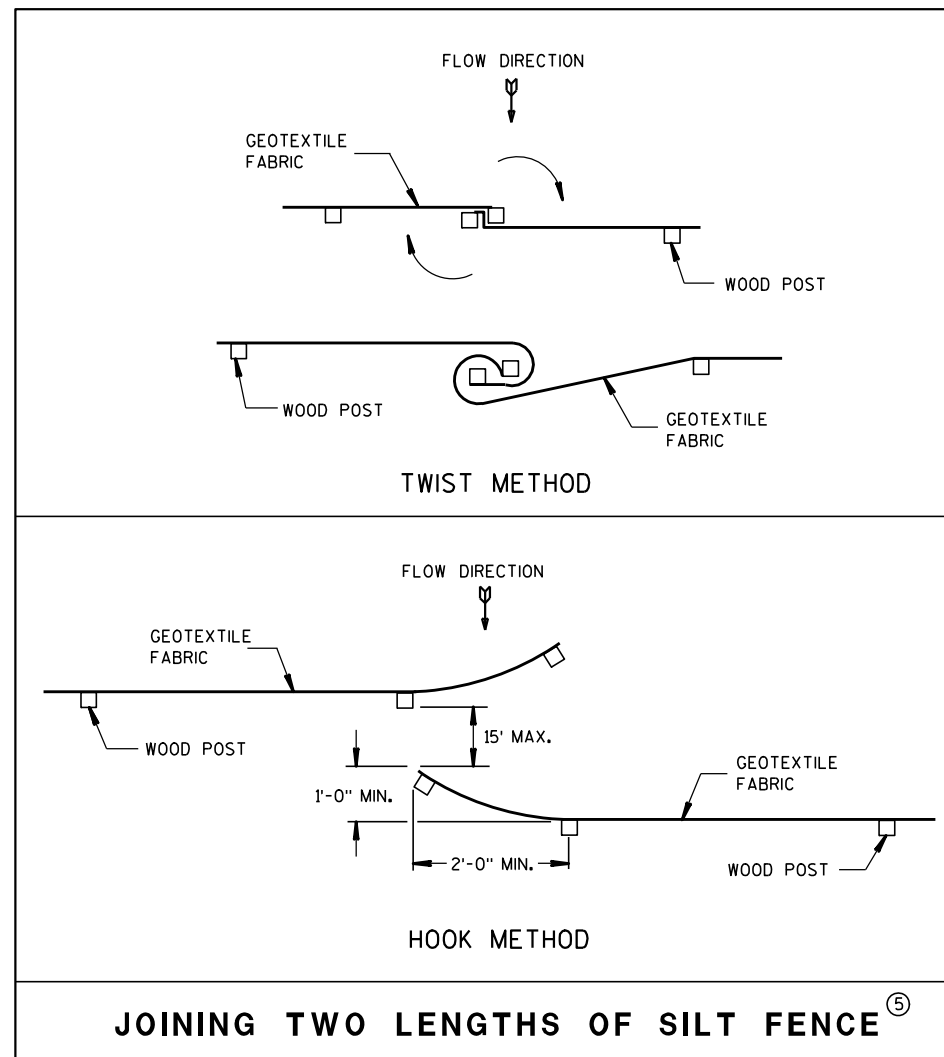
TRENCH DETAIL

NOTE: ADDITIONAL POST DEPTH OR TIE BACKS MAY BE REQUIRED IN UNSTABLE SOILS

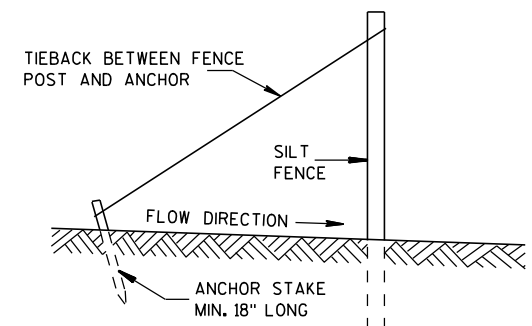


SILT FENCE

* NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.



JOINING TWO LENGTHS OF SILT FENCE ⑤

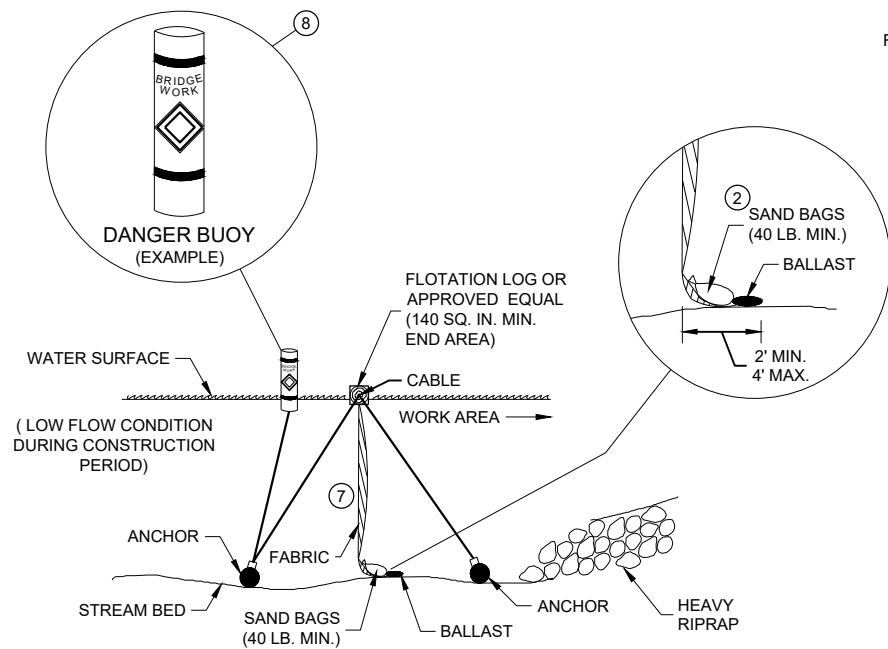


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

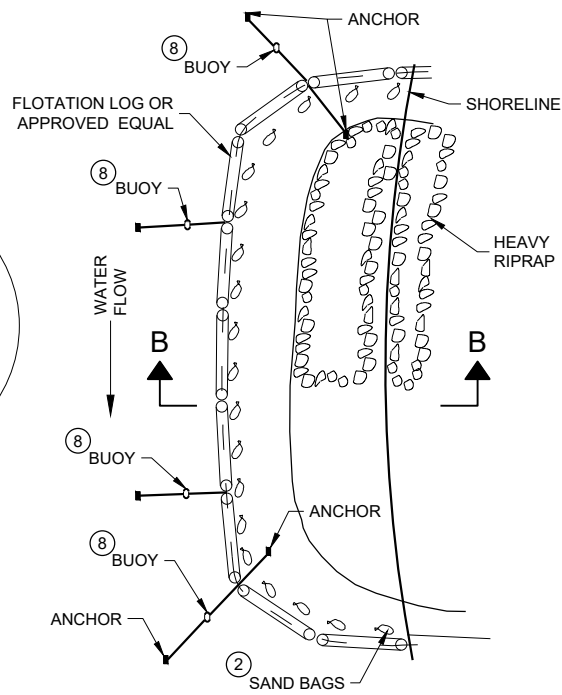
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

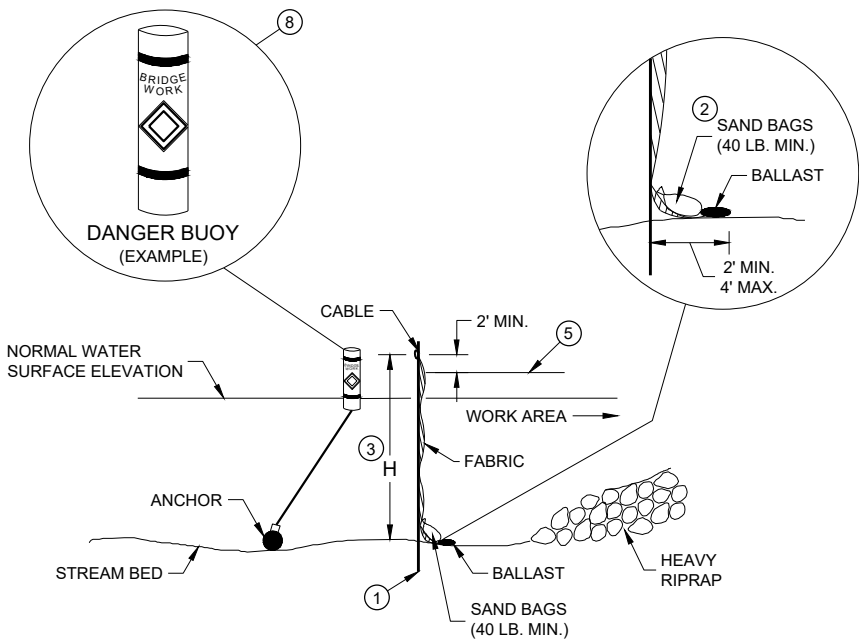


SECTION B - B

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

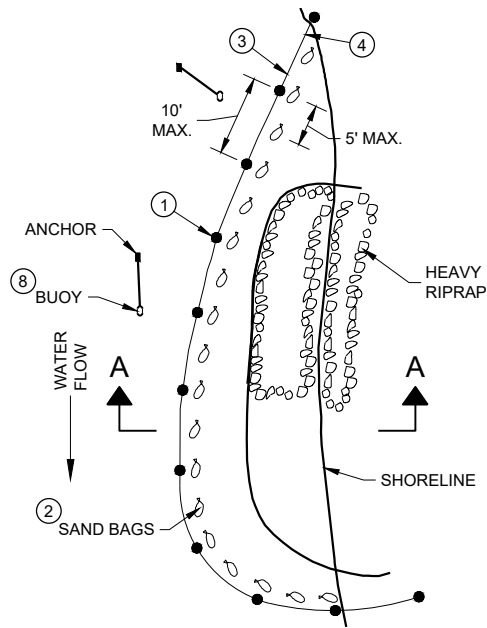


PLAN VIEW



SECTION A - A

TURBIDITY BARRIER - STANDARD POST INSTALLATION



PLAN VIEW

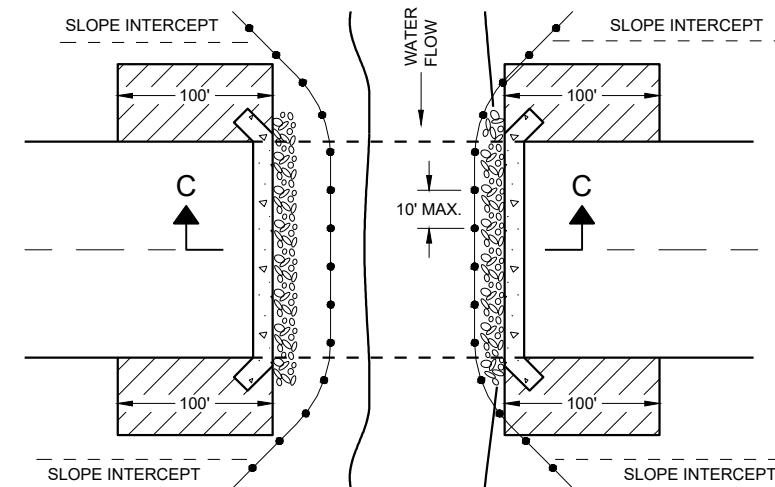
TURBIDITY BARRIER PLACEMENT DETAILS

GENERAL NOTES

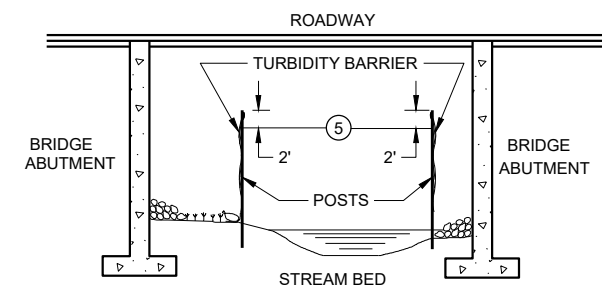
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

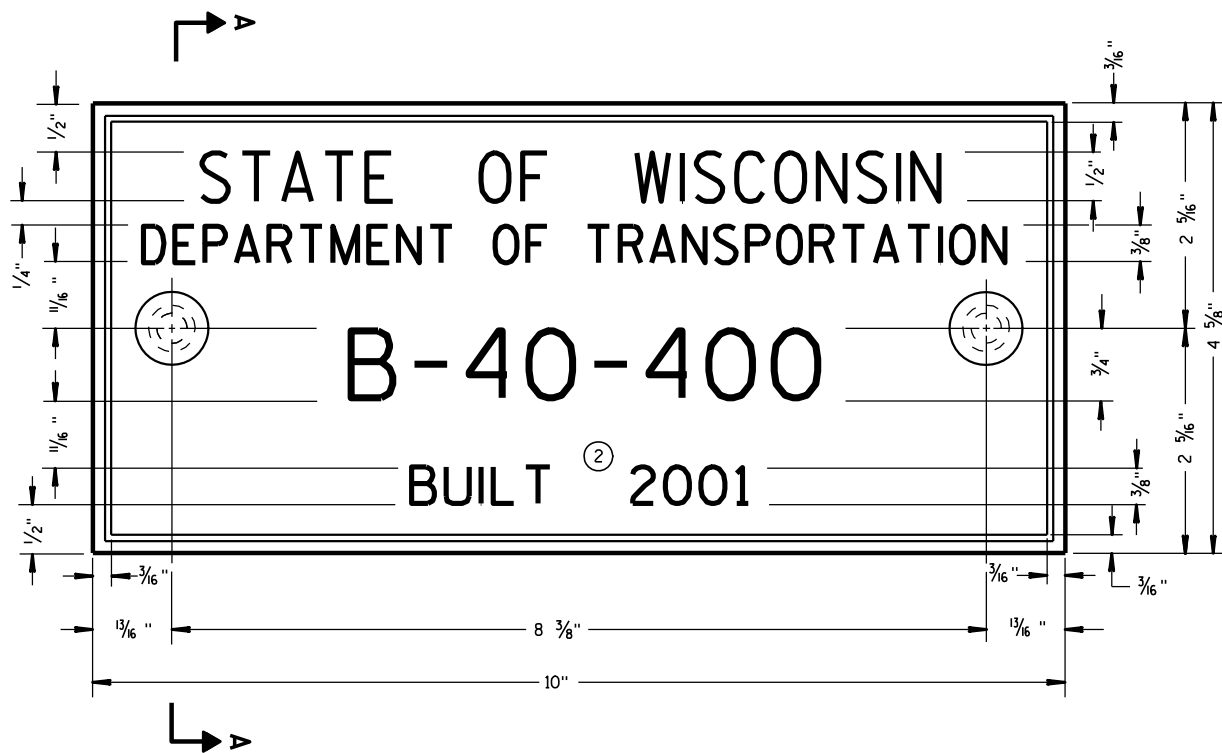
**TURBIDITY BARRIER DETAIL SHOWING
TYPICAL PLACEMENT AT STRUCTURES**

TURBIDITY BARRIER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA



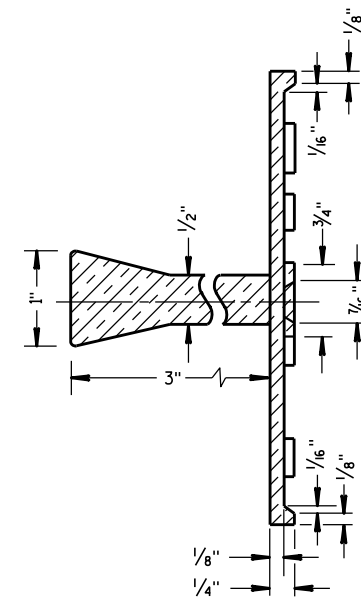
TYPICAL NAME PLATE
(BRIDGES, CULVERTS, AND RETAINING WALLS)

GENERAL NOTES

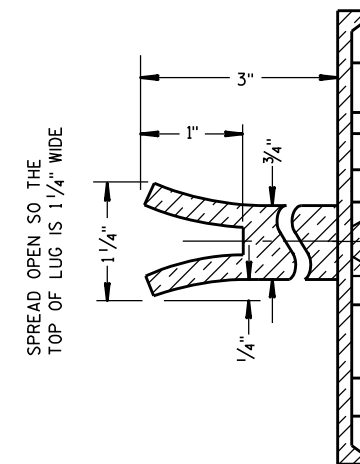
NAME PLATES TO BE INSTALLED ON BRIDGES, CULVERTS, AND RETAINING WALLS SHALL CONFORM TO THE REQUIREMENTS OF SECTION 502.3.11 OF THE STANDARD SPECIFICATIONS.

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

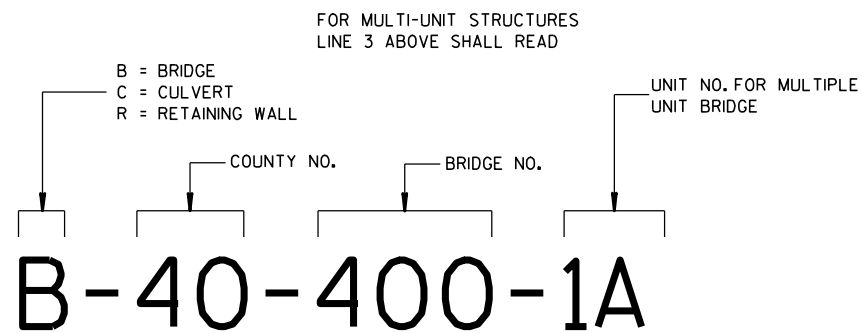
- ① EPOXY RESIN SHALL BE FROM AN APPROVED MANUFACTURER AND USED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- ② REHABILITATION OF AN EXISTING STRUCTURE SHOULD USE THE DATE OF ORIGINAL STRUCTURE CONSTRUCTION.



SECTION A-A

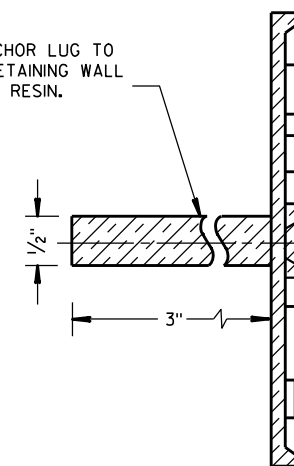


ALTERNATE LUG



**NUMBERING DESIGNATION
MULTI-UNIT STRUCTURES**

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

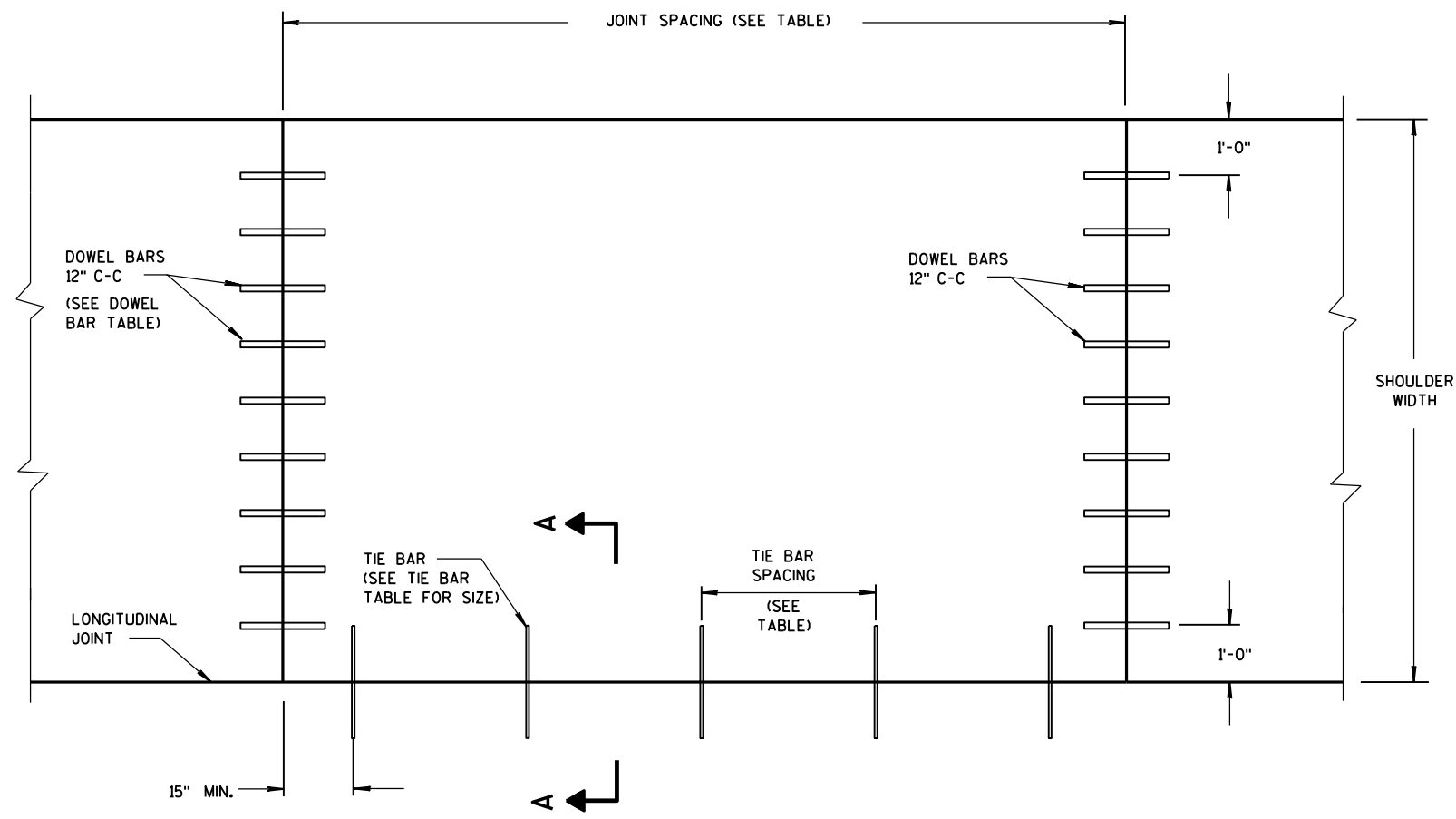


ALTERNATE LUG
(FOR ATTACHMENT TO PRECAST STRUCTURES)

**NAME PLATE
(STRUCTURES)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
CONCRETE PAVEMENT SHOULDER

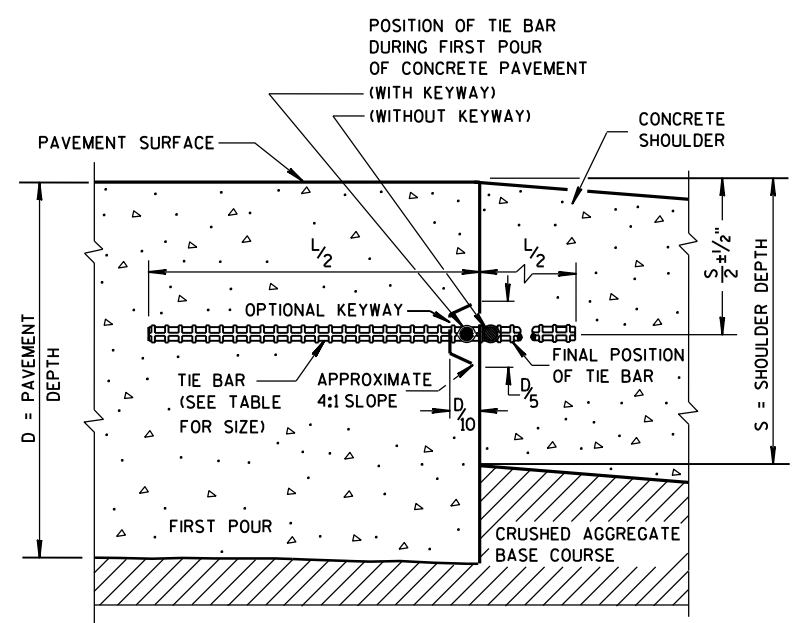
GENERAL NOTES

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.

TRANSVERSE JOINT DETAILS ARE SHOWN ELSEWHERE IN THE PLAN.

FINISH THE SHOULDER PAVEMENT CONFORMING TO SUBSECTION 415.3.8 OF THE STANDARD SPECIFICATIONS.

TIE BARS SHALL CONFORM TO SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.



SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

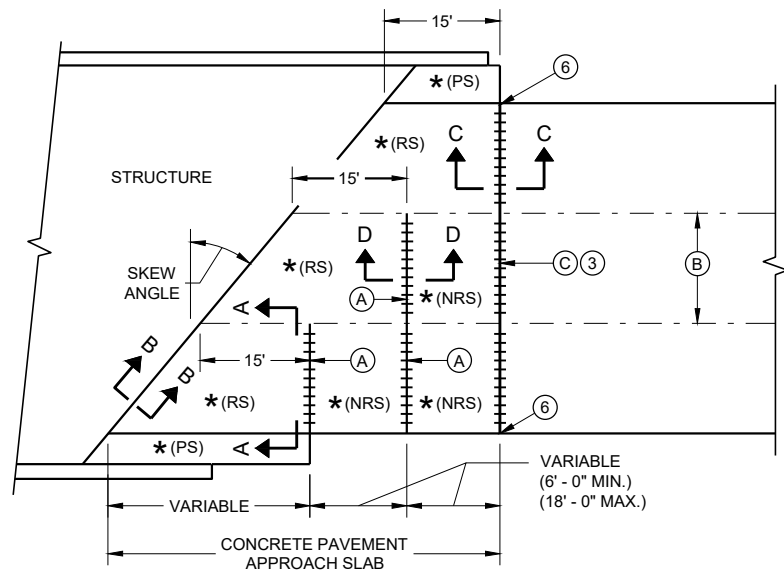
PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER***	CONTRACTION JOINT SPACING
5 1/2", 6", 6 1/2"	NONE	12'
7", 7 1/2"	1"	14'
8", 8 1/2"	1 1/4"	15'
9", 9 1/2"	1 1/4"	15'
10" & ABOVE	1 1/2"	15'

*** FOR DOWELED CONCRETE SHOULDERS WITH TRAPEZOIDAL CROSS SECTIONS, CHOSE THE APPROPRIATE DOWEL BAR DIAMETER BASED ON THE SMALLER PAVEMENT DEPTH (LIKELY THE OUTSIDE EDGE OF THE SHOULDER). IF USING BASKETS, USE BASKETS FOR THE AVERAGE THICKNESS OF THE CROSS SECTION.

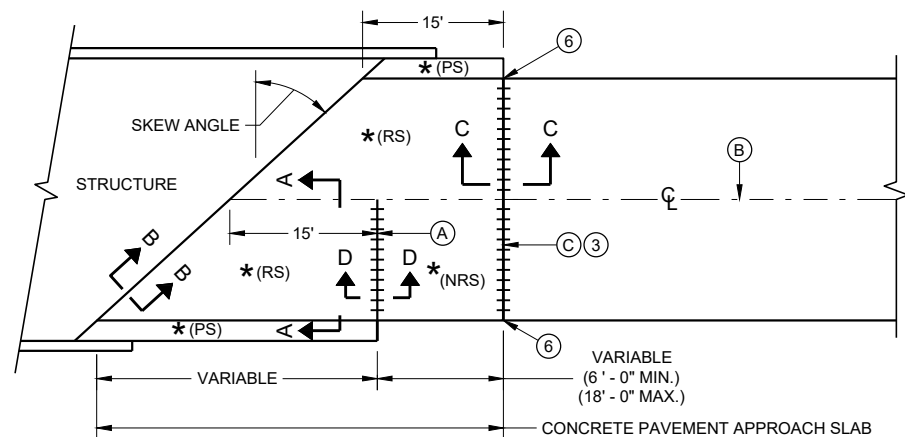
CONCRETE PAVEMENT SHOULDERS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

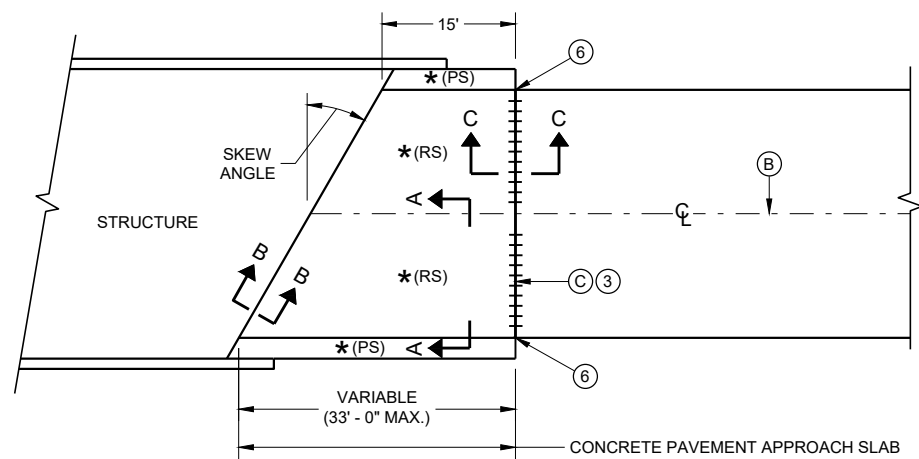
APPROVED
June, 2015 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA



**SKewed Approach
(Pavement more than two lanes)**

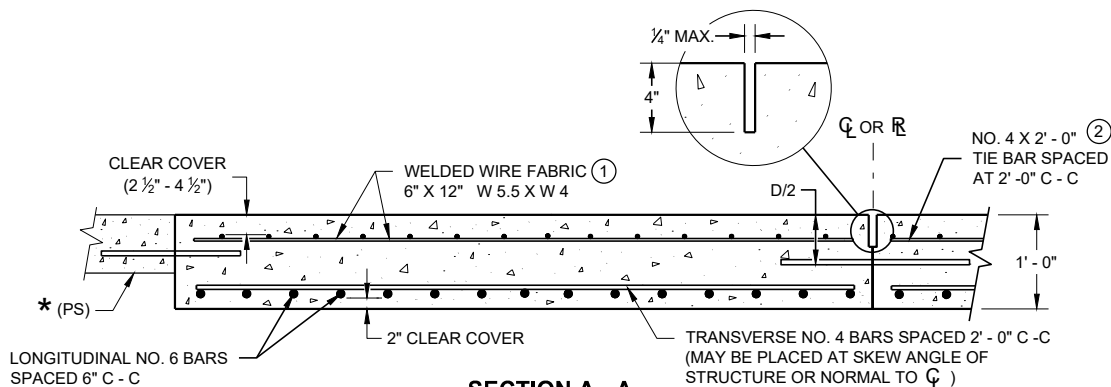


**SKews > 20°
(Pavement width ≤ 30')**

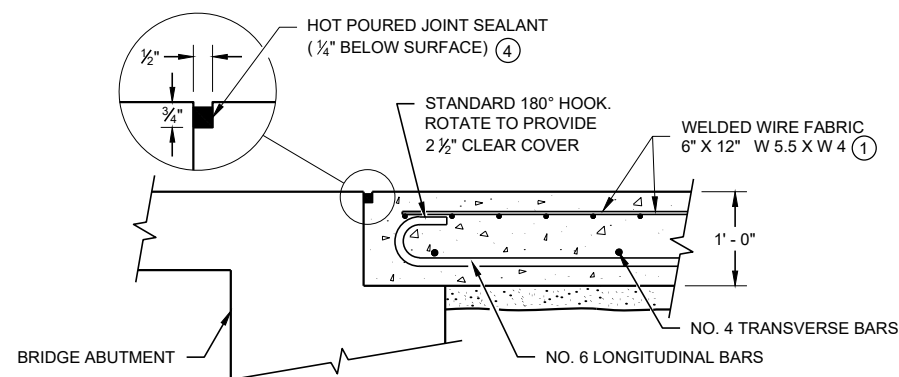


**SKews ≤ 20°
(Pavement width ≤ 30')**
Approach Slab and Adjacent Pavement

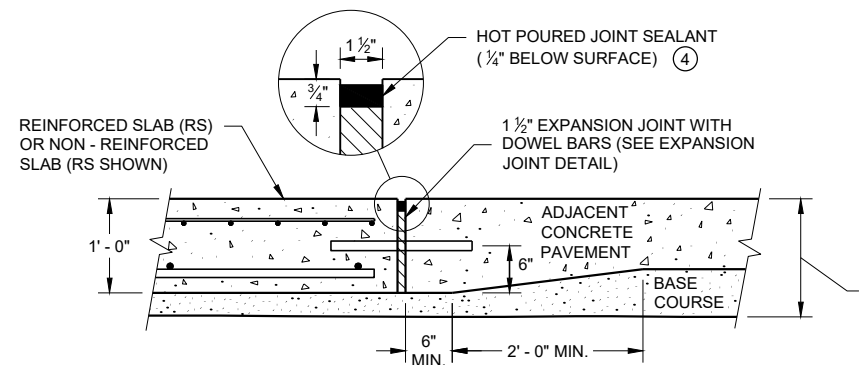
- * (RS) = REINFORCED CONCRETE SLAB
- * (PS) = PAVED CONCRETE SHOULDER OR CONCRETE DRAINAGE SLAB
- * (NRS) = NON - REINFORCED CONCRETE SLAB
- *** STANDARD DOWEL BAR DIAMETER (SEE SDD 13C11 AND SDD 13C13)



**SECTION A - A
REINFORCEMENT POSITIONING DETAIL**



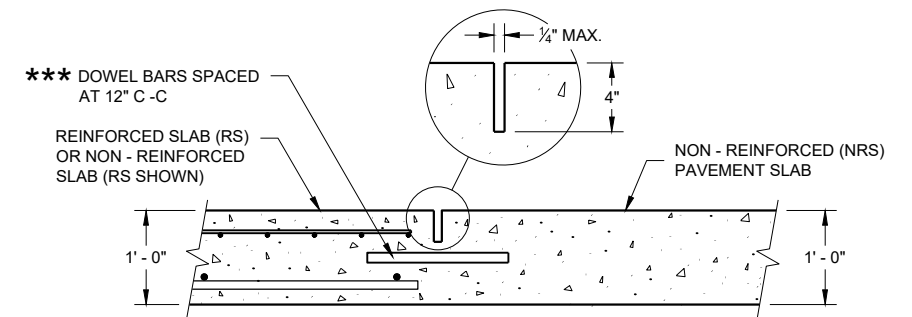
**SECTION B - B
BEND DETAIL
BOTTOM REINFORCEMENT**



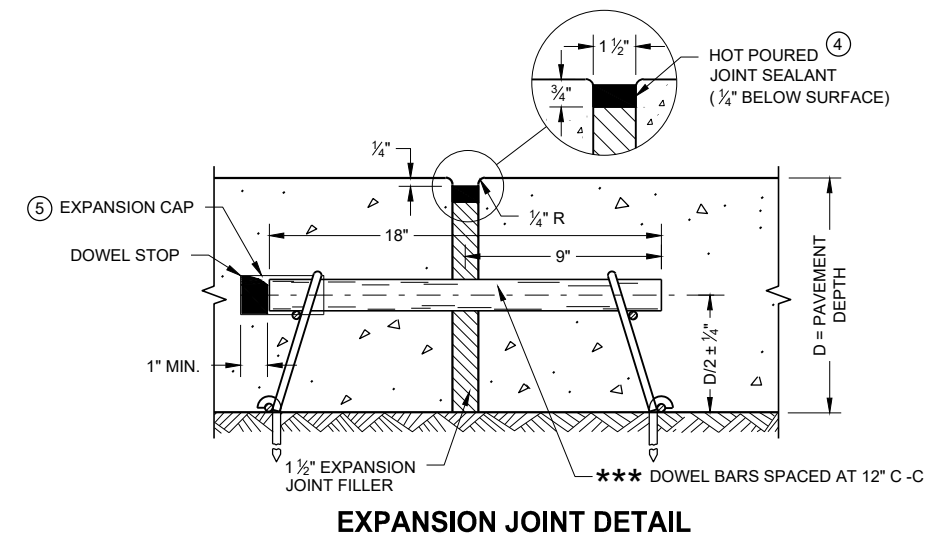
**SECTION C - C
TRANSITION DETAIL
Approach Slab to Adjacent Pavement**

GENERAL NOTES

- THE CONTRACTOR MAY SPLICE NO. 6 BARS IN THE APPROACH SLAB FOR SKEWED STRUCTURES ONLY. STAGGER SPLICES WITH A MAXIMUM OF ONE SPLICE PER BAR. THE LENGTH OF LAP IS 20 INCHES.
- TACK WELD DOWEL BARS TO THE BASKETS ON ALTERNATE ENDS.
- ① THE CONTRACTOR MAY USE NO. 4 BARS SPACED AT 2' - 0" C - C IN BOTH THE LONGITUDINAL AND TRANSVERSE DIRECTIONS FOR TOP REINFORCEMENT AS AN ALTERNATIVE TO THE WELDED WIRE FABRIC.
 - ② THE CONTRACTOR MAY OMIT THE BARS BETWEEN REINFORCED SLABS WHERE SLAB REINFORCEMENT BARS EXTEND ACROSS THE CENTERLINE OR REFERENCE LINE.
 - ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
 - ④ USE A JOINT SEALANT CONFORMING TO STANDARD SPECIFICATION 415.2.6.
 - ⑤ PLACE EXPANSION CAP ON THE END OF THE DOWEL THAT IS NOT TACK WELDED TO THE BASKET. DO NOT FORCE DOWEL BAR PAST THE DOWEL STOP.
 - ⑥ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
 - (A) STANDARD CONTRACTION JOINT NORMAL TO \bar{C} OR \bar{R} .
 - (B) STANDARD LONGITUDINAL JOINT WITH TIE BARS.
 - (C) 1 1/2" EXPANSION JOINT WITH DOWEL BARS NORMAL TO \bar{C} OR \bar{R} .



**SECTION D - D
CONTRACTION JOINT**



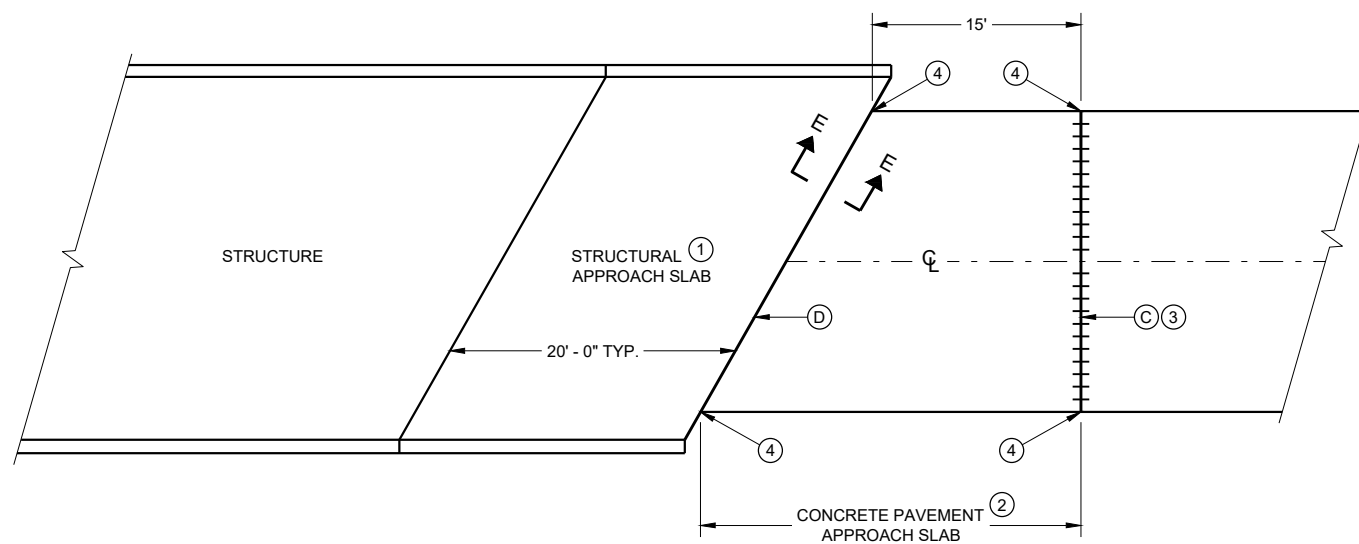
EXPANSION JOINT DETAIL

**CONCRETE PAVEMENT
APPROACH SLAB**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Peter Kemp, P.E.
DATE DATE PAVEMENT SUPERVISOR

FHWA

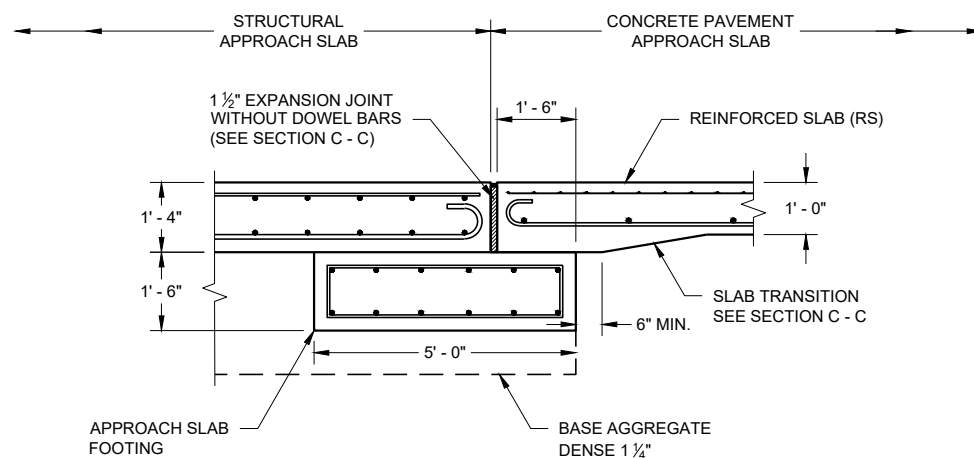


GENERAL NOTES

ALL PROJECTS THAT INVOLVE A STRUCTURAL APPROACH SLAB WILL ALSO HAVE A CONCRETE PAVEMENT APPROACH SLAB.

- ① SEE BRIDGE PLAN.
- ② CONFORM TO SDD 13B02 SHEET A FOR CONCRETE PAVEMENT APPROACH SLAB DETAILS
- ③ DO NOT CONSTRUCT AN EXPANSION JOINT OR INSTALL DOWEL BARS WHEN ABUTTING AN HMA PAVEMENT.
- ④ EXTEND EXPANSION JOINT THROUGH ANY ADJACENT TIED CONCRETE.
- Ⓒ 1½" EXPANSION JOINT WITH DOWEL BARS NORMAL TO CL OR RL .
- Ⓓ 1½" EXPANSION JOINT (NO DOWELS)

BRIDGE APPROACHES



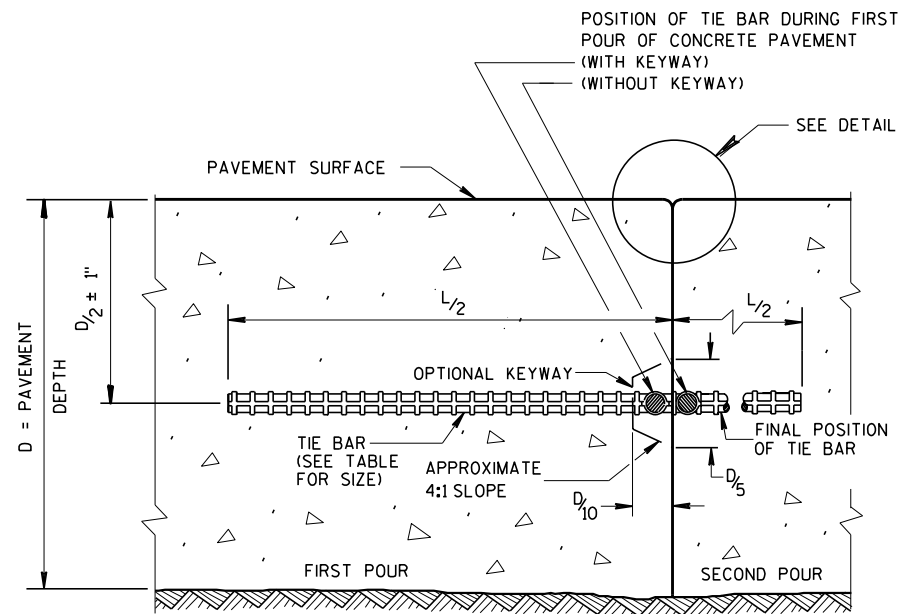
**SECTION E - E
FOOTING DETAIL
STRUCTURAL APPROACH SLAB TO CONCRETE BRIDGE APPROACH**

**STRUCTURAL APPROACH SLAB
AND CONCRETE PAVEMENT
APPROACH SLAB**

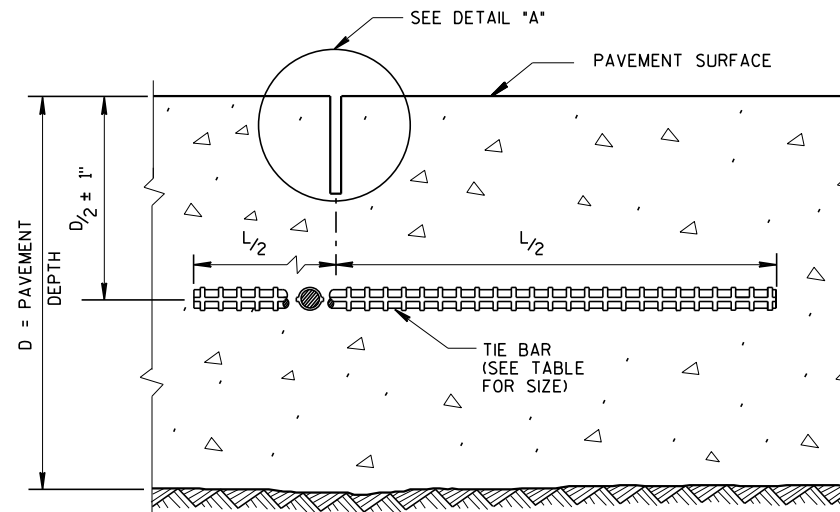
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Peter Kemp P.E.
DATE PAVEMENT SUPERVISOR

FHWA



CONSTRUCTION JOINT



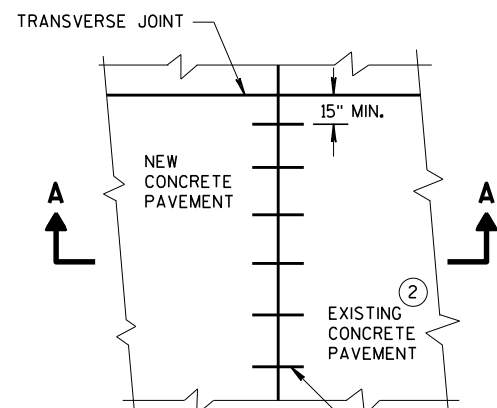
SAWED JOINT

GENERAL NOTES

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

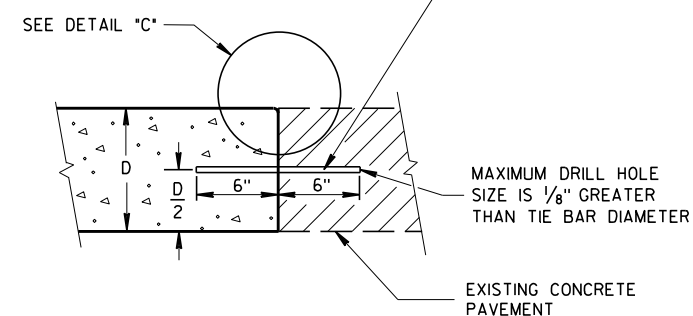
CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

- ① ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.
- ② PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

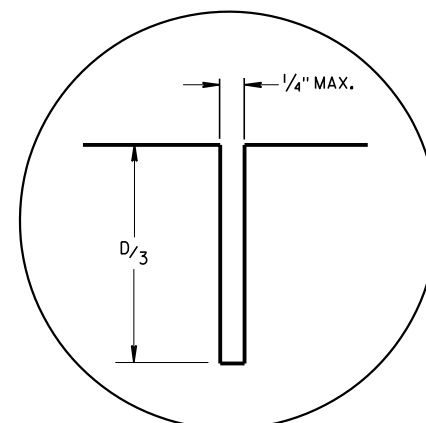


PLAN VIEW

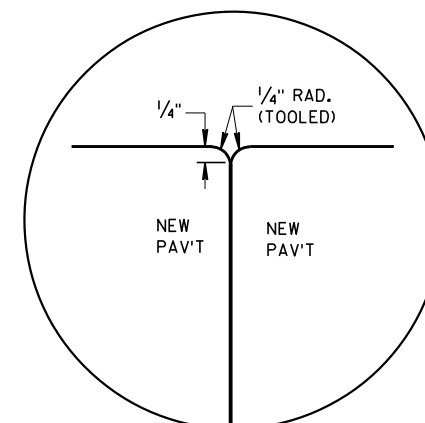
NO. 6 TIE BARS SPACED 30" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT. ①



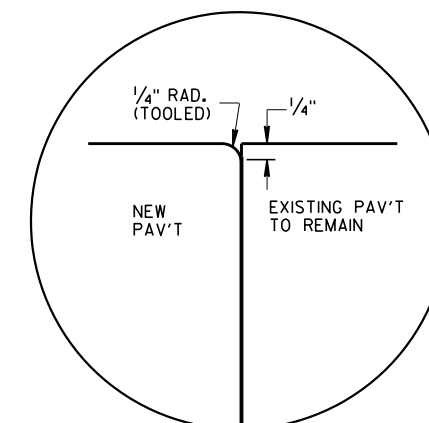
**SECTION A-A
LONGITUDINAL CONSTRUCTION JOINT
TIE BARS ANCHORED
INTO EXISTING PAVEMENT**



DETAIL "A"



DETAIL "B"



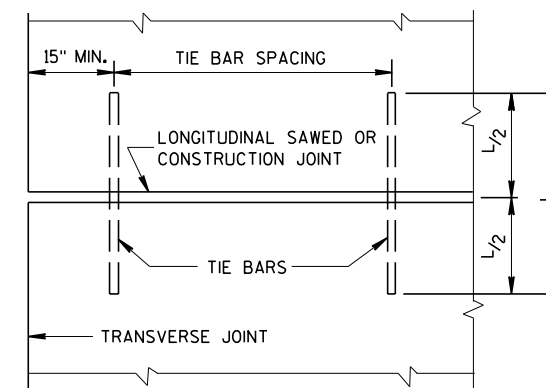
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24" **

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINIMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



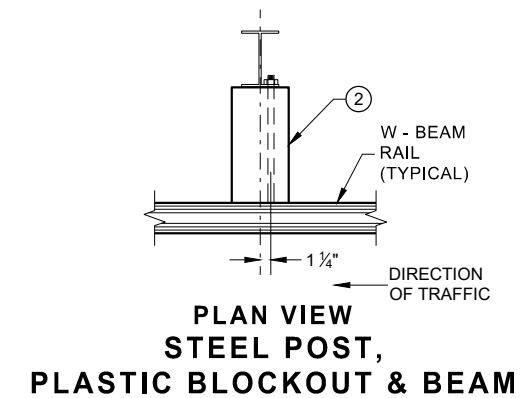
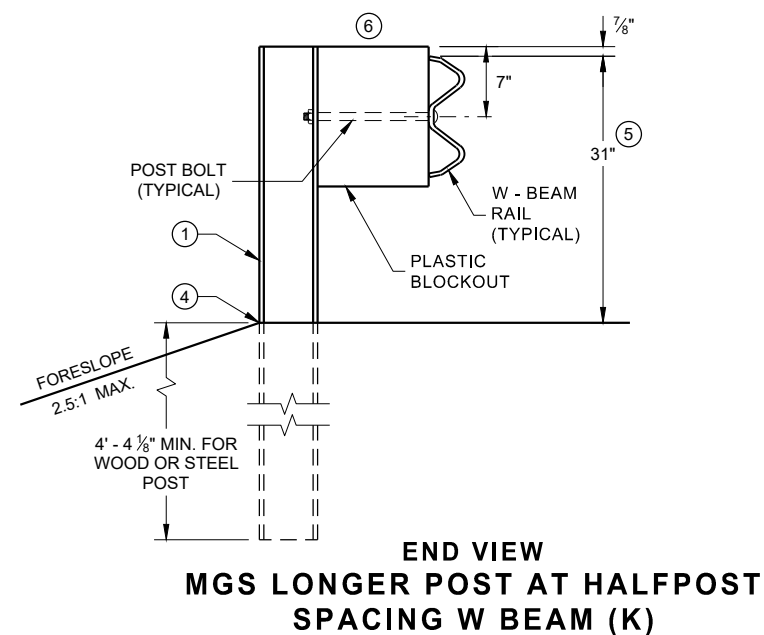
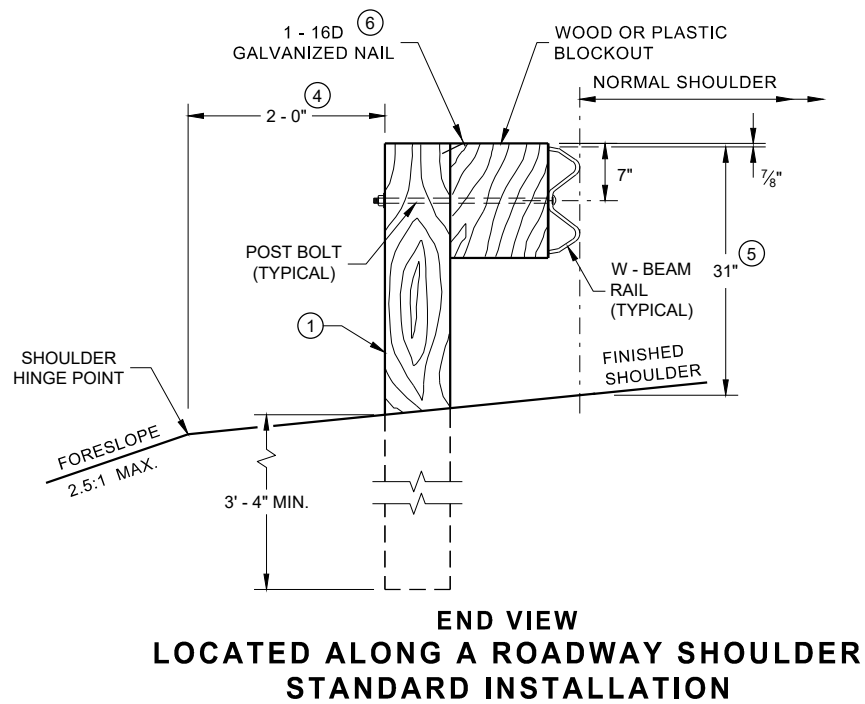
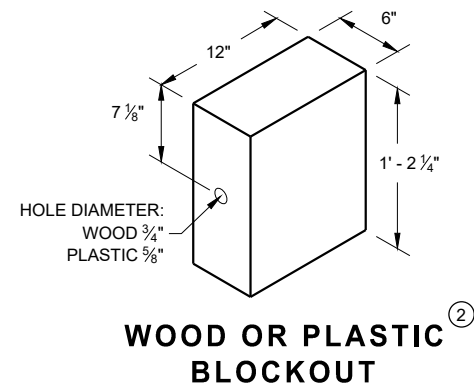
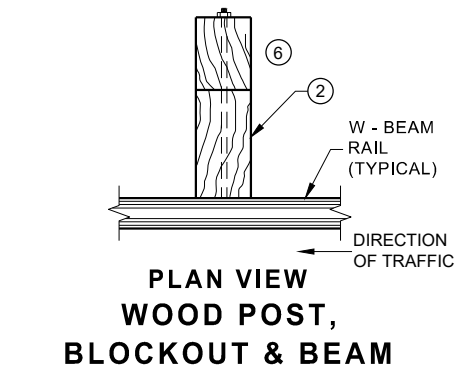
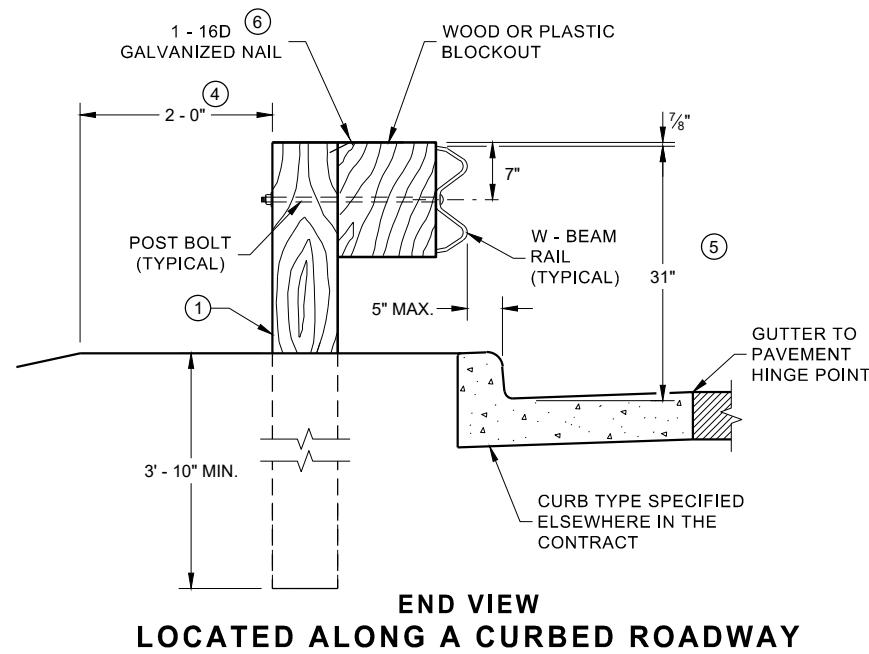
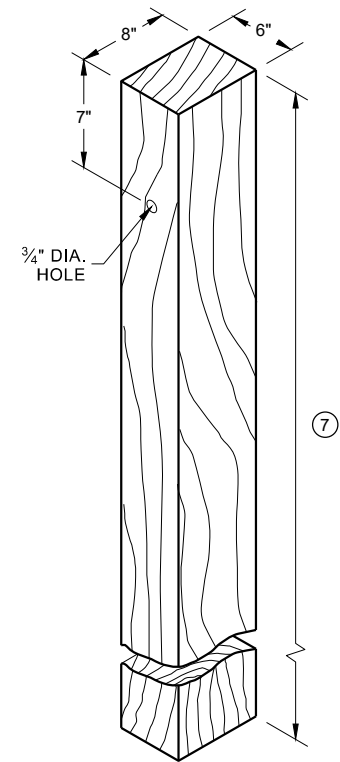
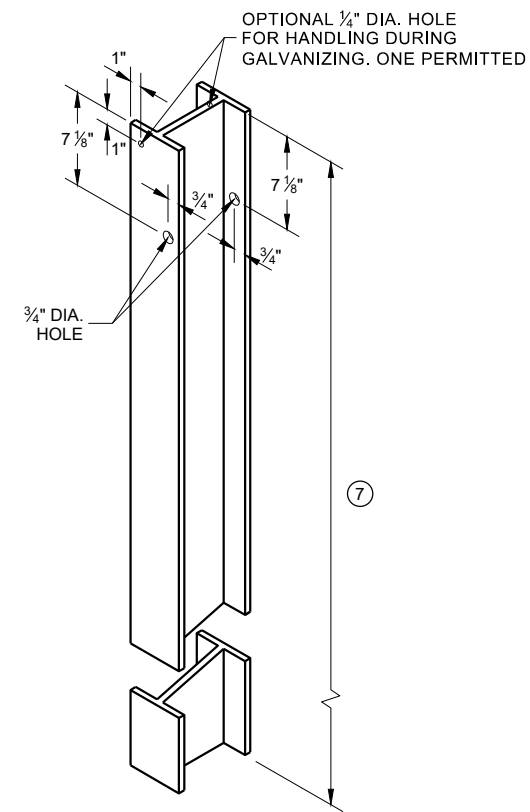
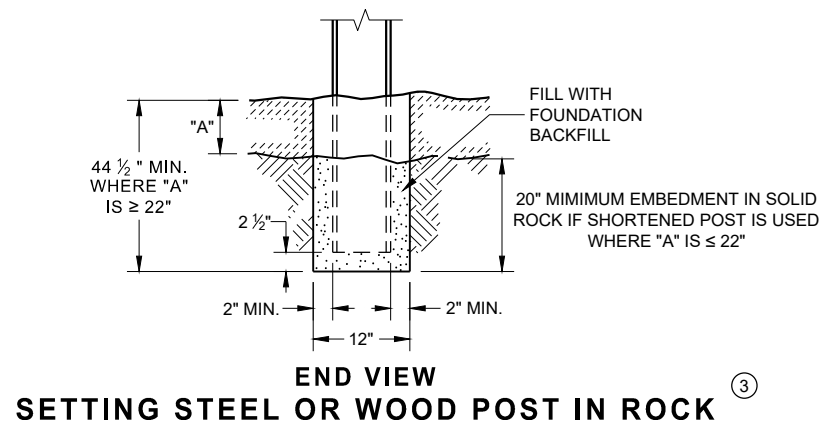
**PLAN VIEW
SHOWING LOCATION OF TIE BARS**

**CONCRETE PAVEMENT
LONGITUDINAL JOINTS AND TIES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

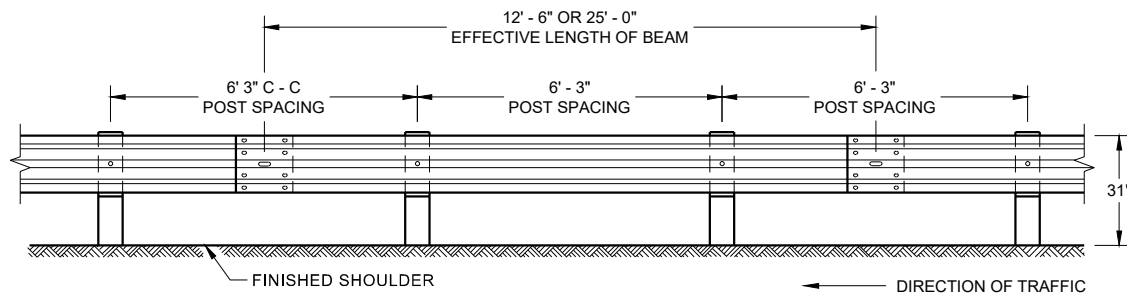
APPROVED
March 2018 /S/ Peter Kemp, P.E.
DATE PAVEMENT SUPERVISOR
FHWA

- 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".

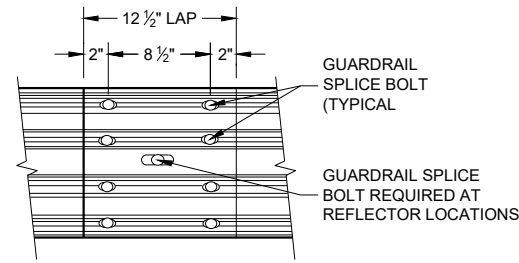


**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



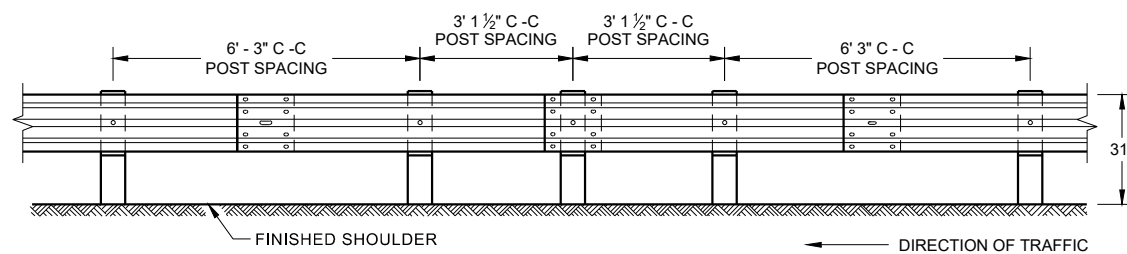
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



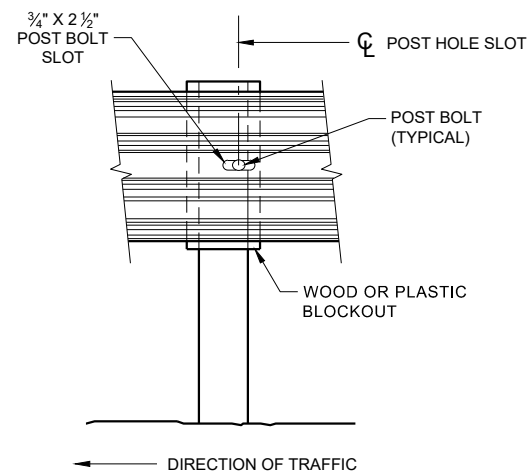
**FRONT VIEW
MID-SPAN BEAM SPLICE**

GENERAL NOTES

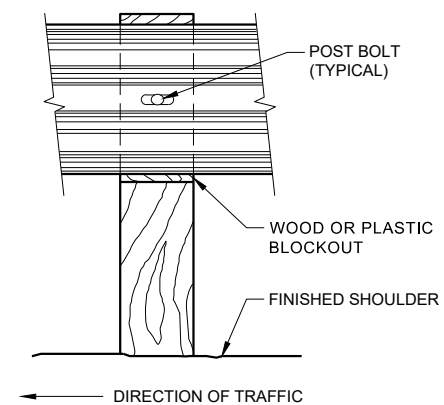
- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.
 - ⑨ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.
- POST BOLTS ARE A 3/8" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES 3/4" DIAMETER 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.



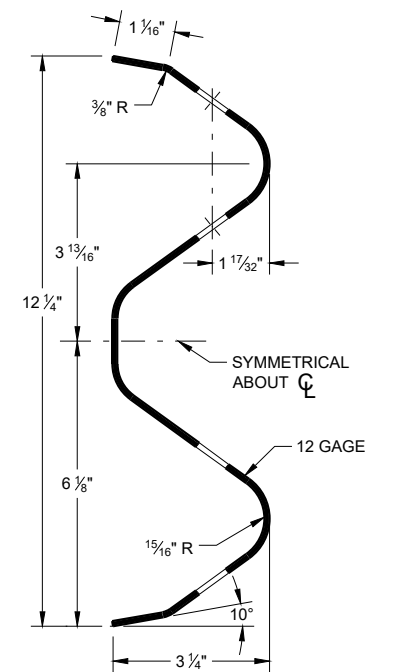
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



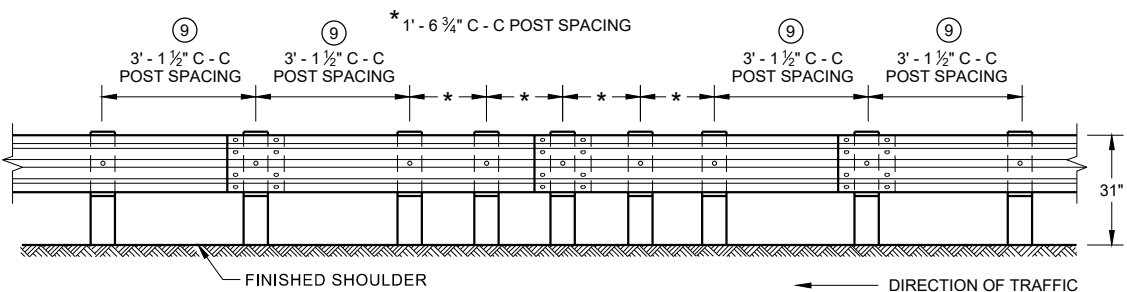
FRONT VIEW AT STEEL POST



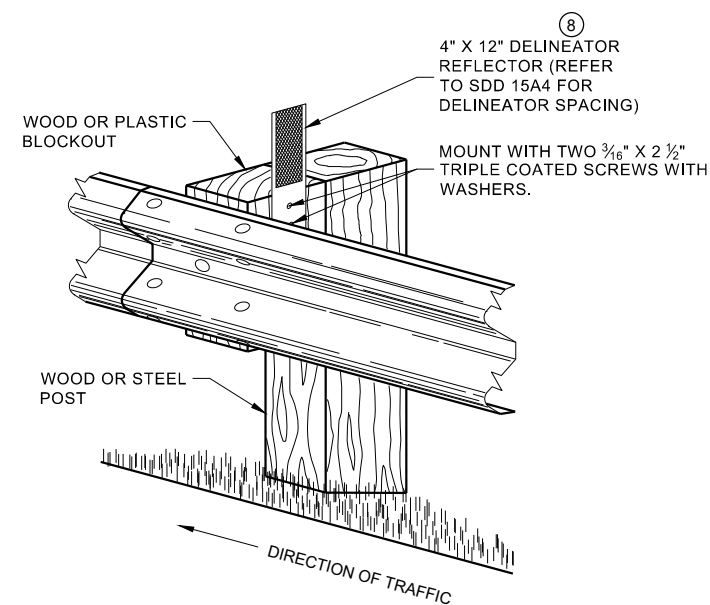
FRONT VIEW AT WOOD POST



SECTION THRU W-BEAM RAIL



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



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

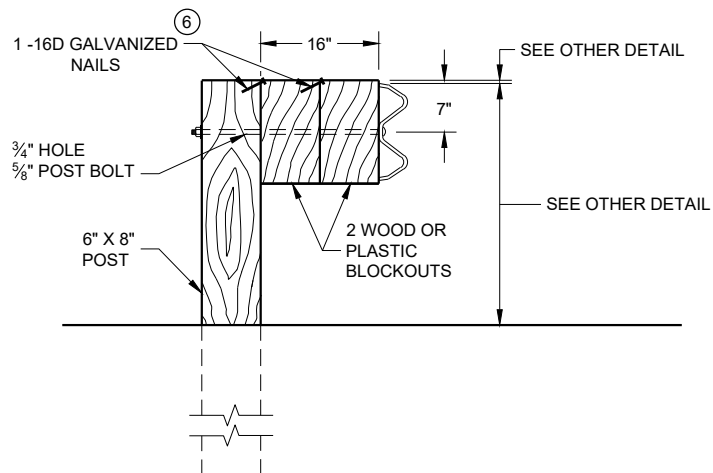
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

SDD 14B42 - 07b

SDD 14B42 - 07b

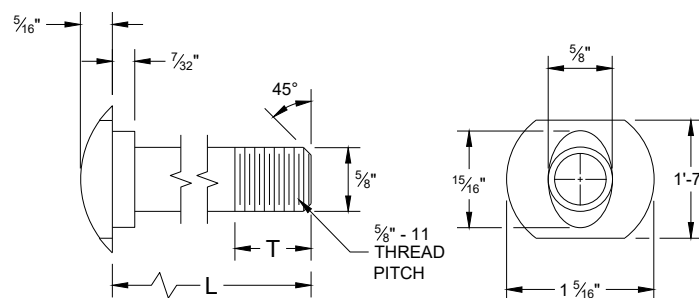


DETAIL FOR 16" BLOCKOUT DEPTH

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.

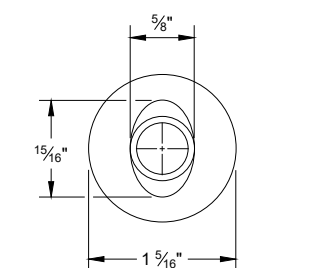
NOTE:

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.

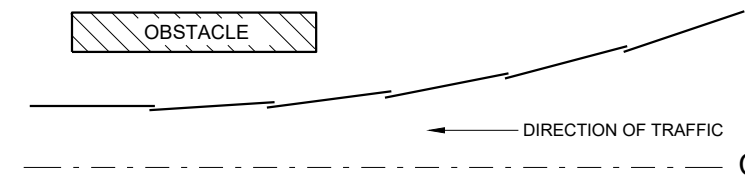


POST BOLT TABLE

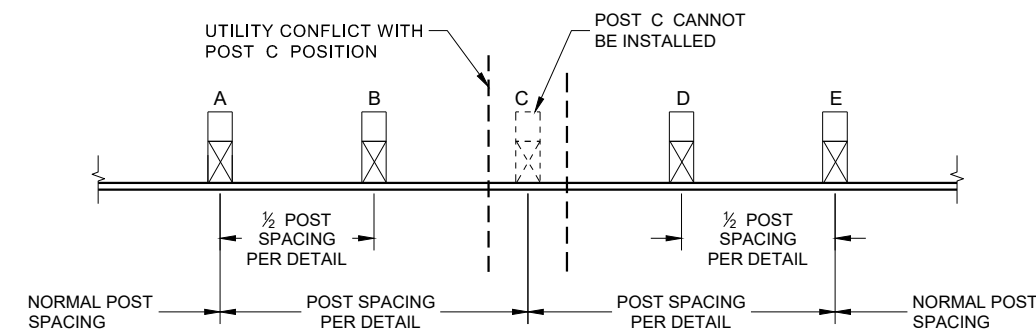
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



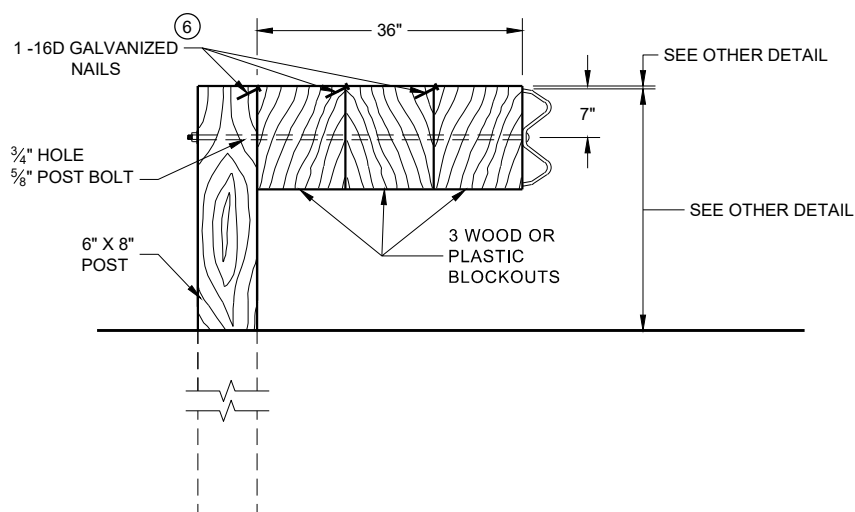
ALTERNATE BOLT HEAD



**PLAN VIEW
BEAM LAPPING DETAIL**

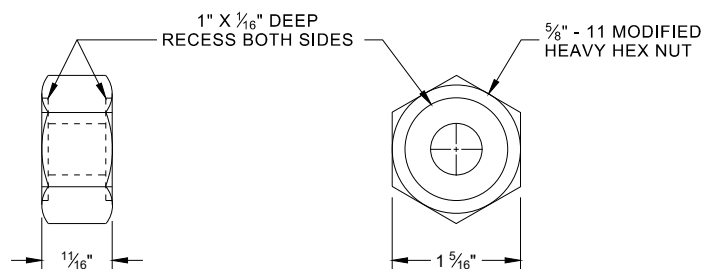


**POST DRIVING FOR CONTINUOUS
UNDERGROUND OBSTRUCTION**

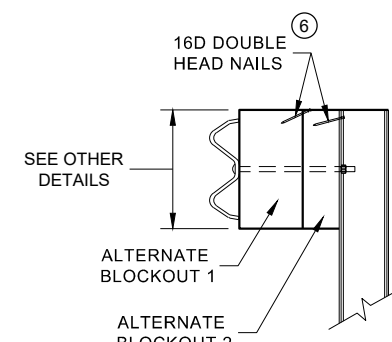


DETAIL FOR 36" BLOCKOUT DEPTH

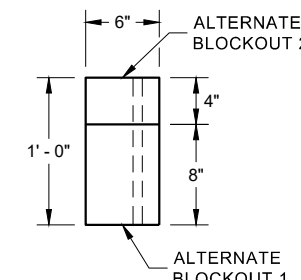
NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT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



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



SIDE VIEW



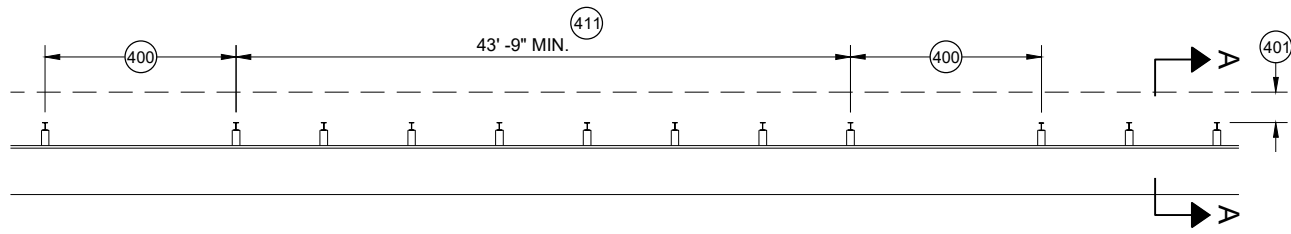
PLAN VIEW

**ALTERNATE WOOD
BLOCKOUT DETAIL**

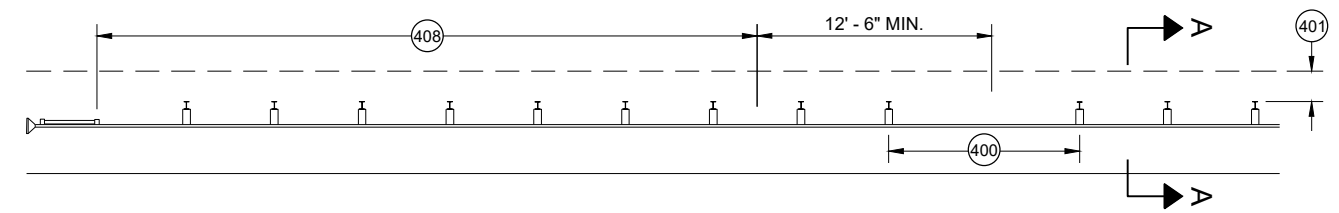
6 WHEN USING STEEL POST AND WOOD BLOCKOUTS, INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

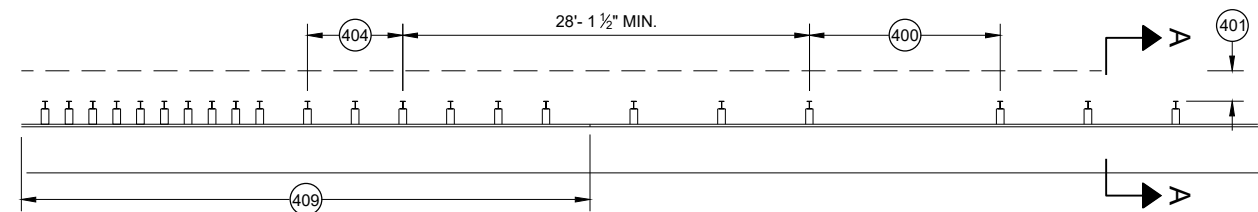
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



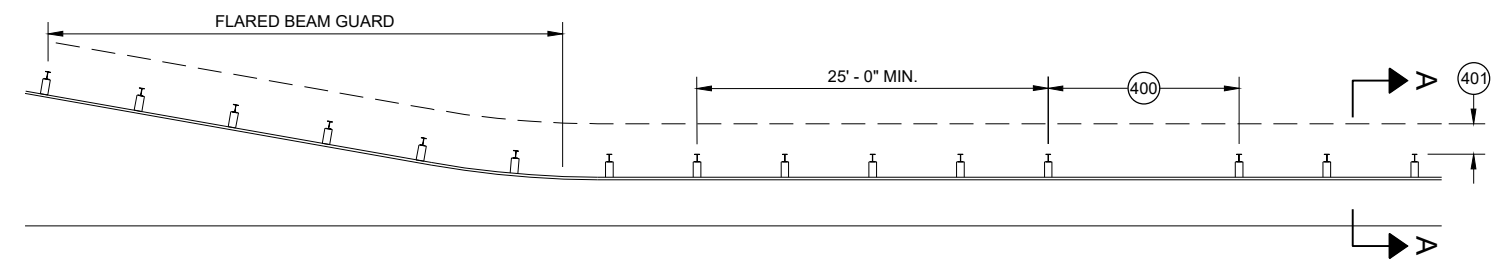
MISSING POST IN MGS GUARDRAIL



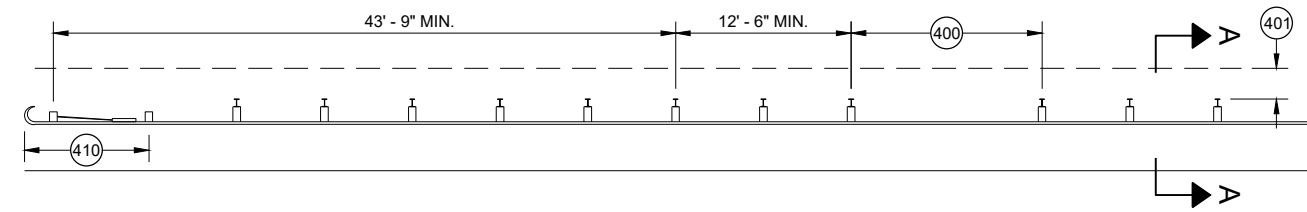
MISSING POST IN MGS GUARDRAIL NEAR EAT



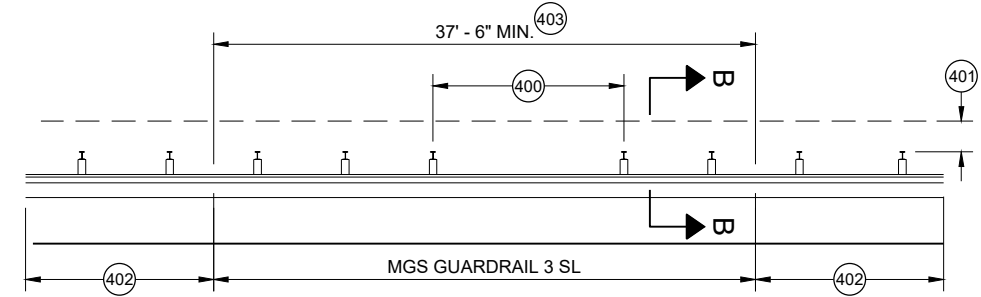
MISSING POST IN MGS GUARDRAIL NEAR AN APPROACH TRANSITION



MISSING POST IN MGS GUARDRAIL NEAR FLARED BEAM GUARD

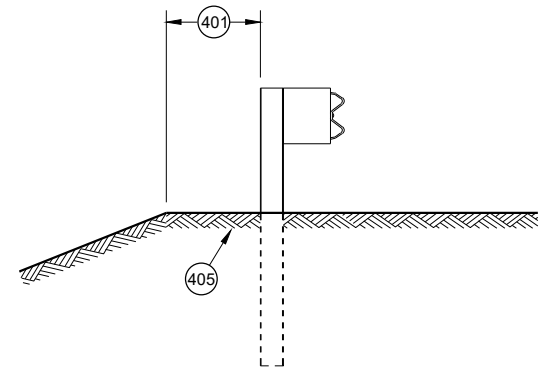


MISSING POST IN MGS GUARDRAIL NEAR A TYPE 2 END TERMINAL

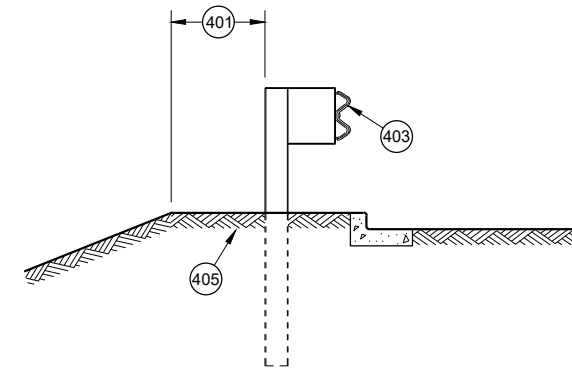


MISSING POST IN SHORT SPAN MGS GUARDRAIL NEAR CURB (SL)

- 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.

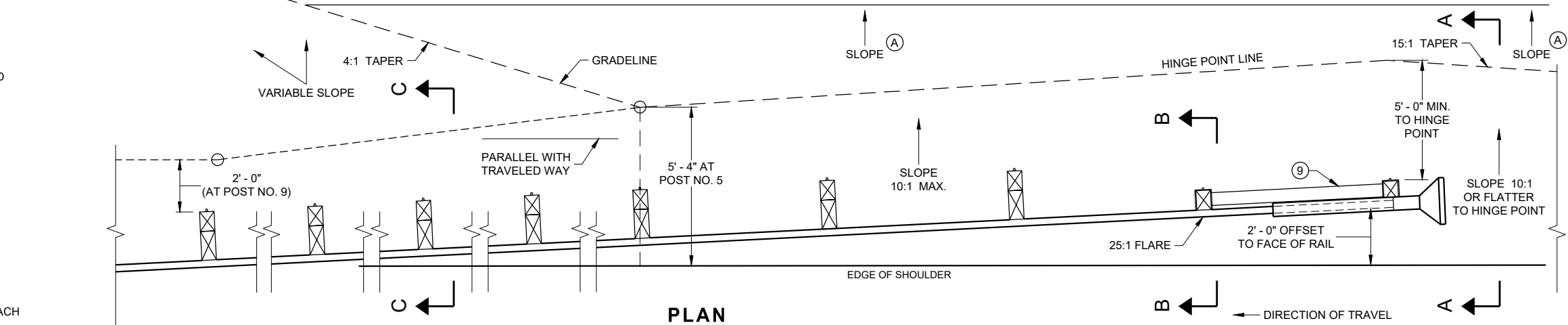
* DO NOT ATTACH BLOCKOUTS TO POST 1 AND 2.

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

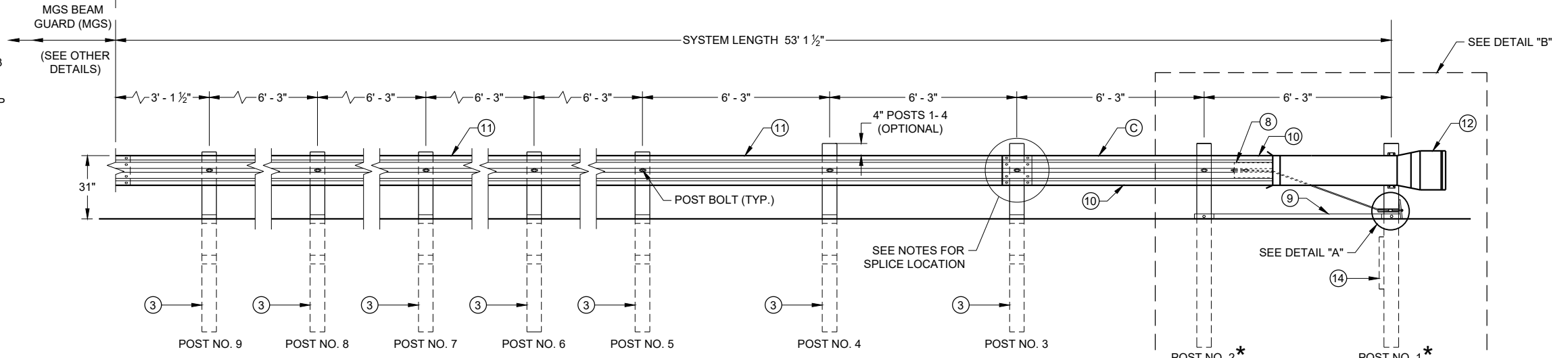
SEE MANUFACTURER'S DRAWING FOR SPLICE LOCATION, HARDWARE DIMENSIONS AND INSTALLATION INSTRUCTIONS.

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.

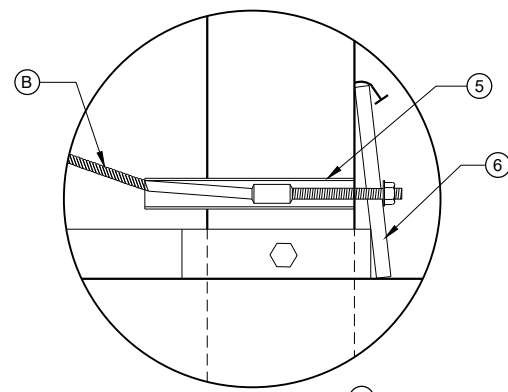
CLEAR ZONE LIMITS, EITHER AS SHOWN ELSEWHERE IN THE PLANS OR, IF NOT SHOWN ELSEWHERE IN THE PLANS, 15 FEET BEYOND THE HINGE POINT LINE



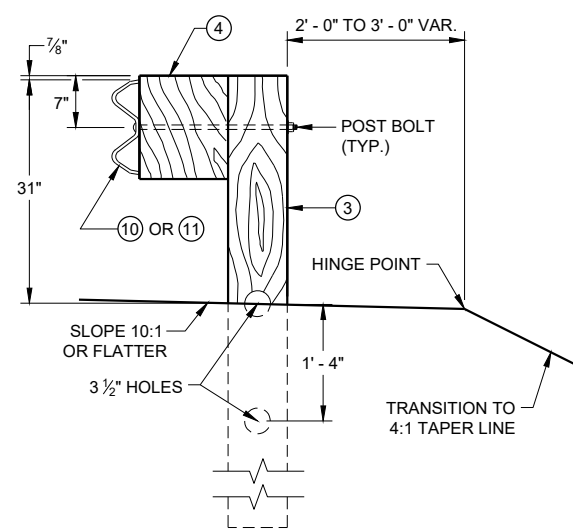
PLAN



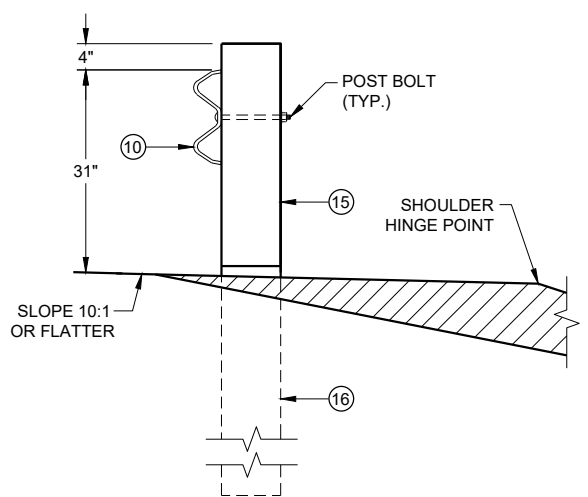
ELEVATION



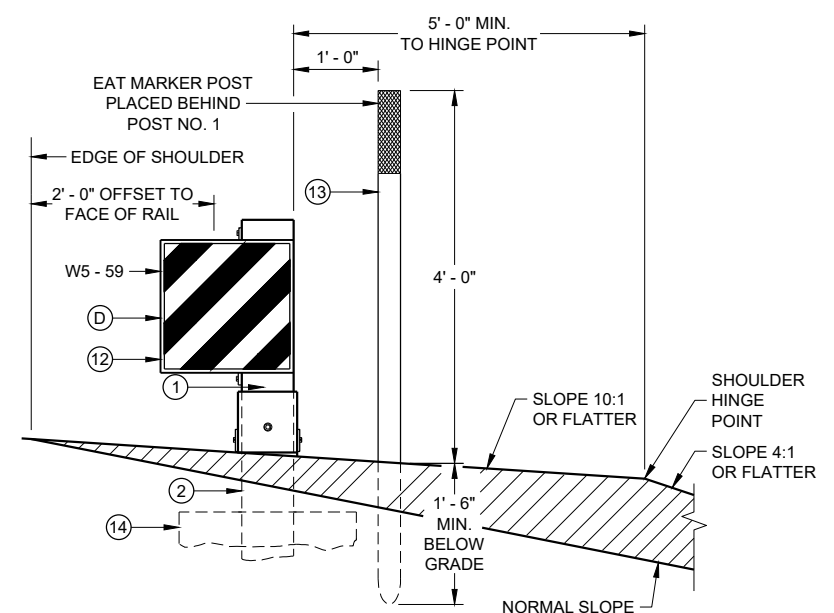
DETAIL "A"



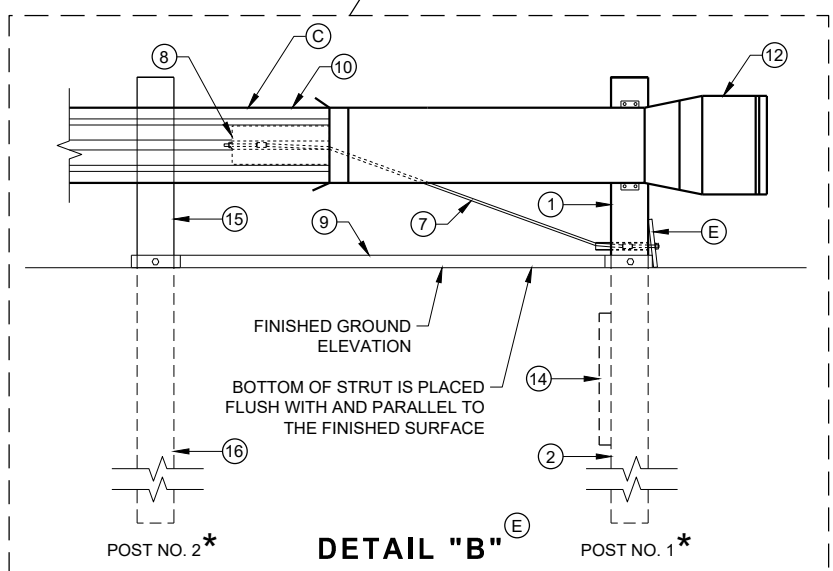
**SECTION C - C
TYPICAL AT POST NOS. 3 - 9**



**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

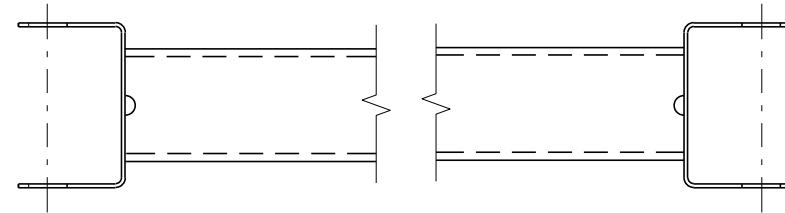
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SDD 14B44 - 04a

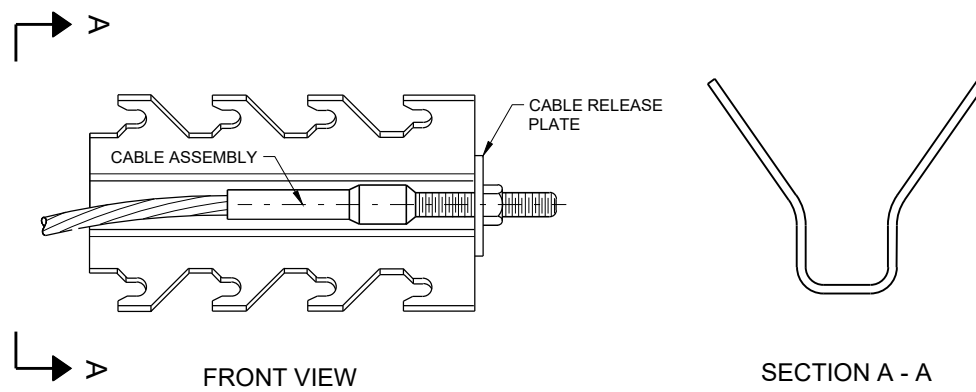
SDD 14B44 - 04a

BILL OF MATERIALS

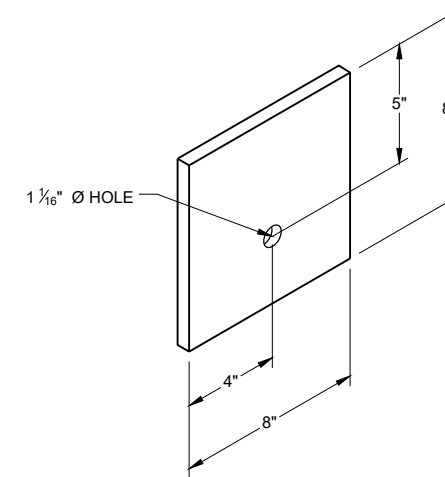
PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
①	UPPER POST NO. 1 6" X 6" TUBE
②	LOWER POST NO. 1
③	WOOD CRT
④	WOOD BLOCKOUT
⑤	PIPE SLEEVE
⑥	BEARING PLATE
⑦	BCT CABLE ASSEMBLY
⑧	ANCHOR CABLE BOX
⑨	GROUND STRUT
⑩	PERFORATED W-BEAM RAIL 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



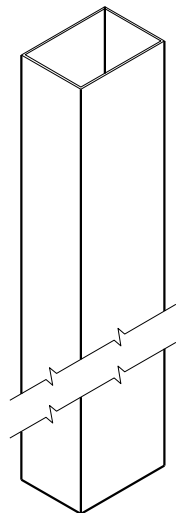
GENERIC GROUND STRUT ⑨ ⑤



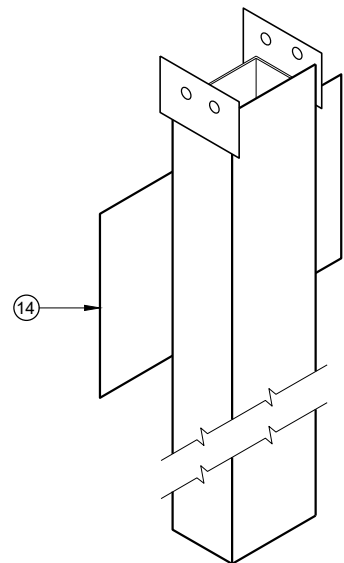
GENERIC ANCHOR CABLE BOX ⑨ ⑤



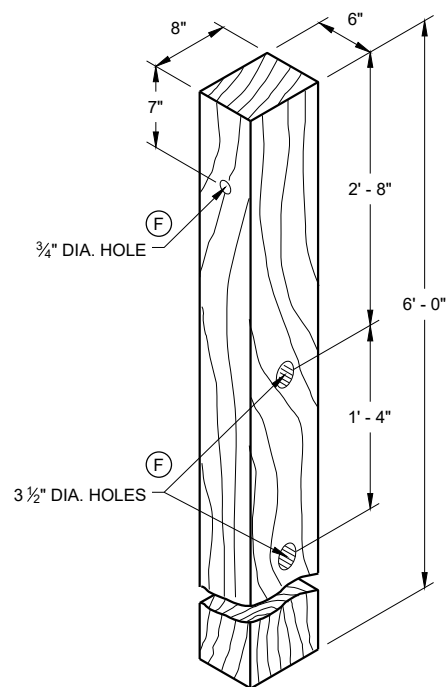
BEARING PLATE ⑥ ⑤



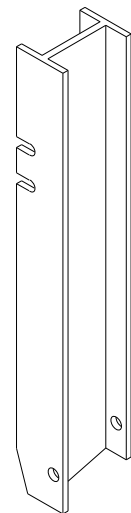
UPPER POST NO. 1 ⁽¹⁾ (E)



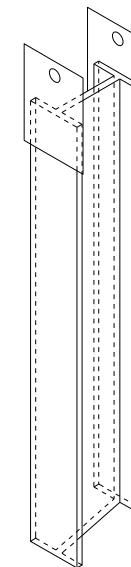
LOWER POST NO. 1 ⁽²⁾ (E)



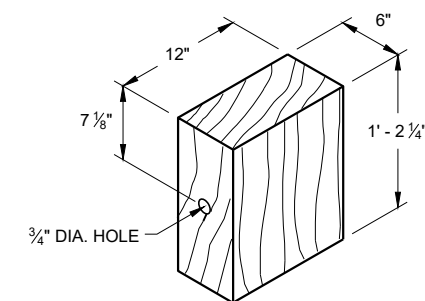
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



UPPER POST NO. 2 ⁽¹⁵⁾ (E)

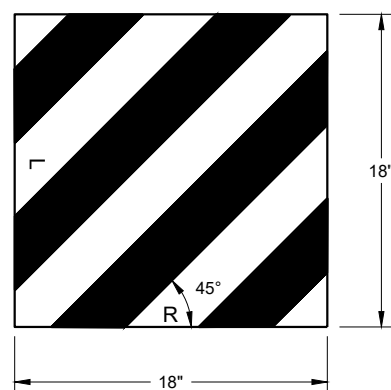


LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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

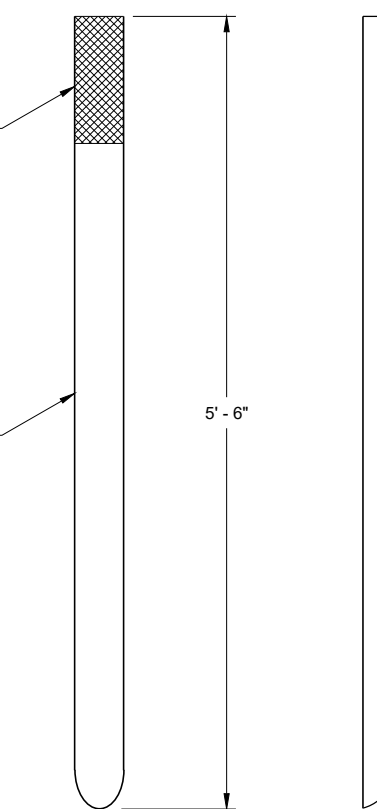
6



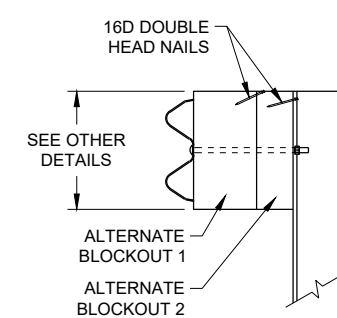
REFLECTIVE SHEETING DETAIL ^(E)

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

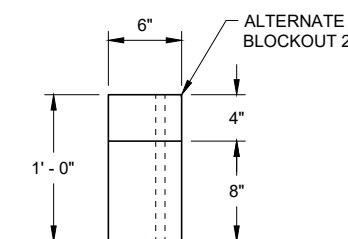
E.A.T. MARKER
POST (YELLOW)



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



SIDE VIEW



TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

6

SDD 14B44 - 04c

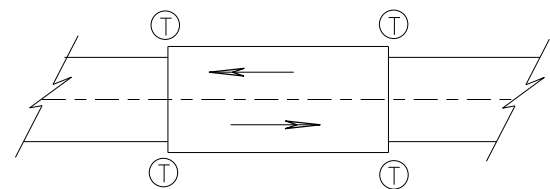
SDD 14B44 - 04c

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

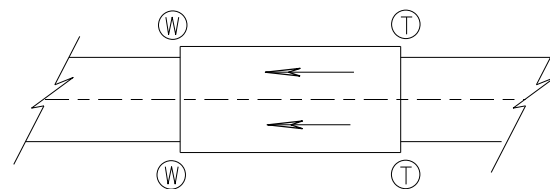
STATE OF WISCONSIN
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APPROVED
7/2018 DATE /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

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.

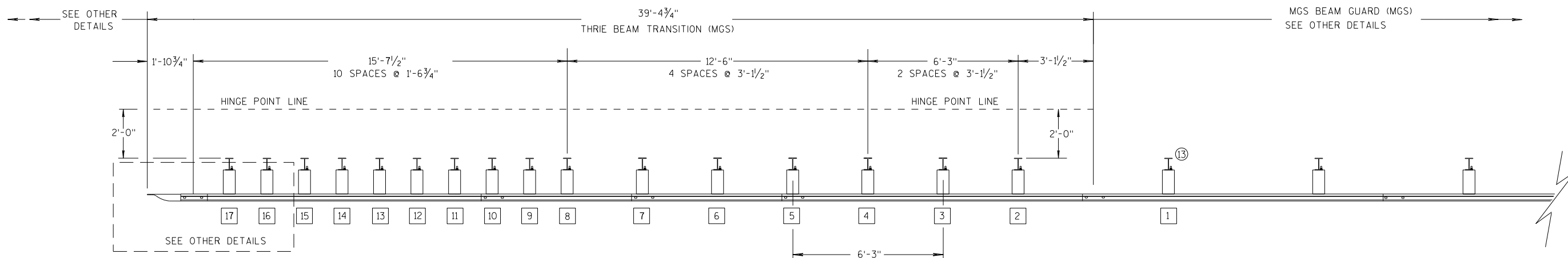
SEE STANDARD DETAIL DRAWING 14 B 42 FOR MORE INFORMATION.

POST 2 THROUGH 17 USES STEEL POST ONLY

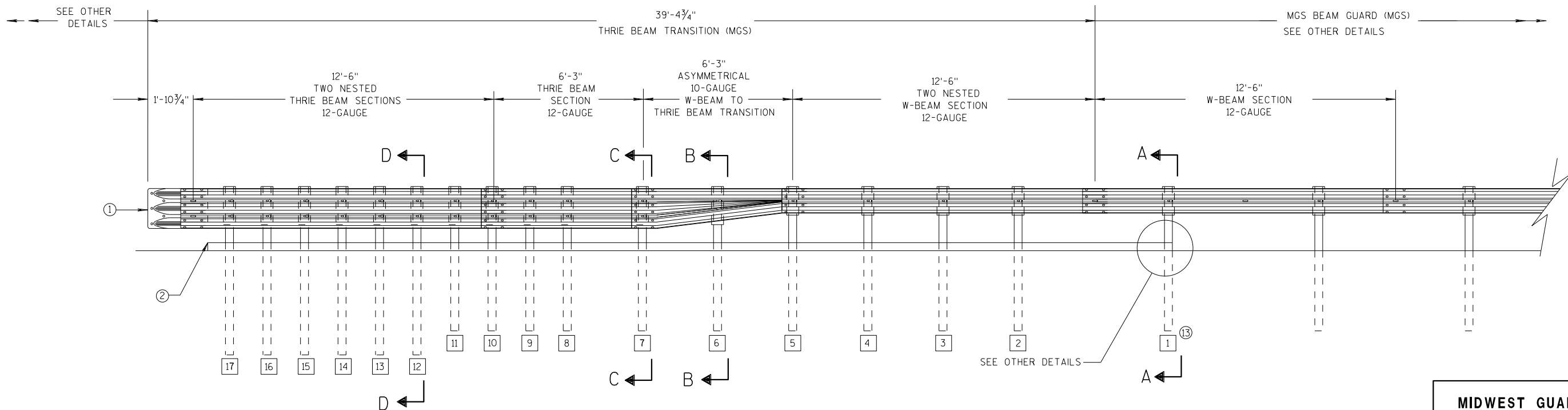
① BRIDGE RAILING TYPE "W" DOES NOT REQUIRE A TERMINAL CONNECTOR.

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)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

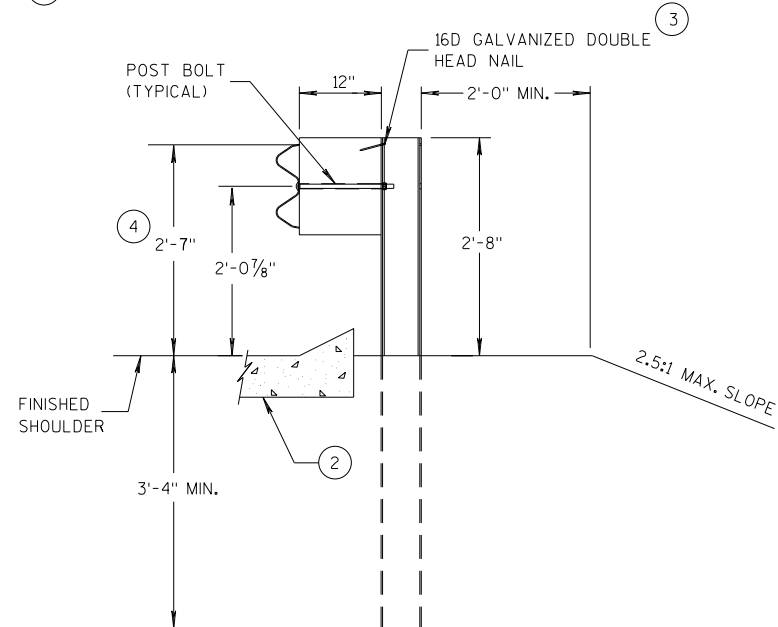
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S.D.D. 14 B 45-5a

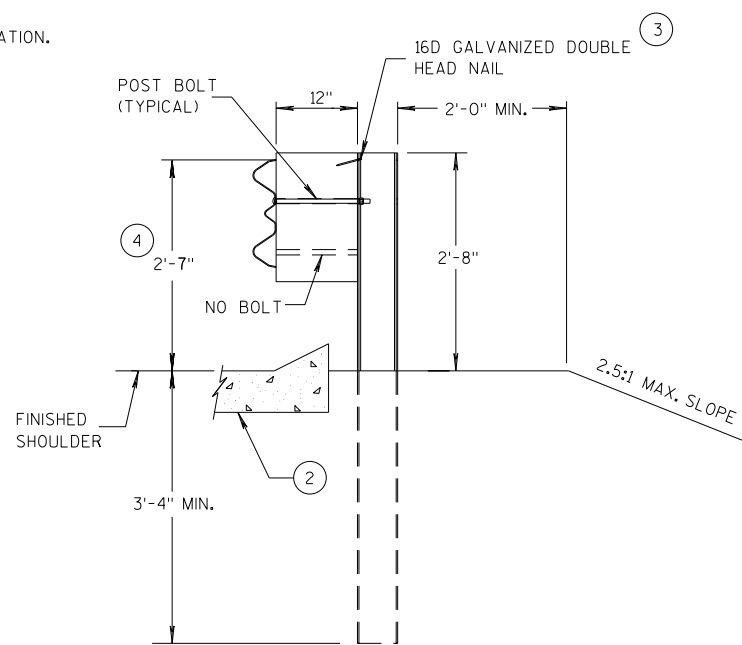
S.D.D. 14 B 45-5a

GENERAL NOTES

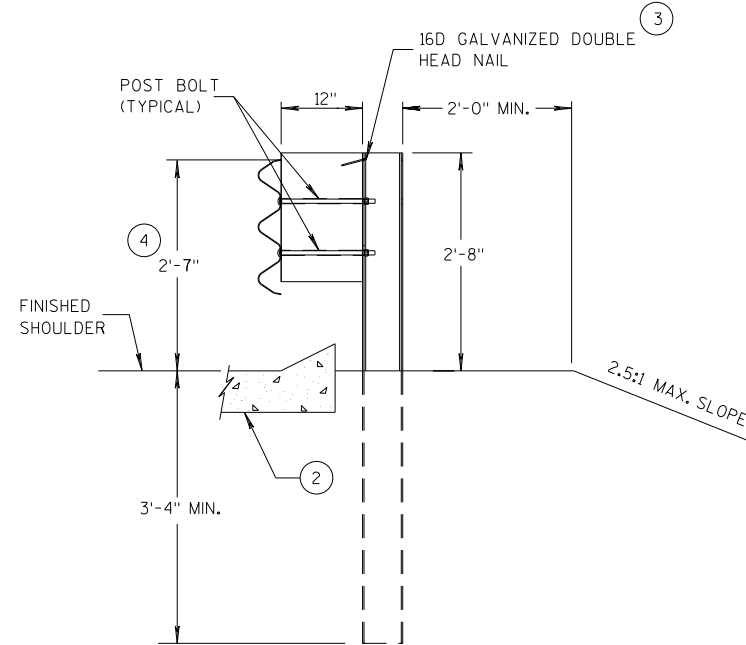
- ② OPTIONAL CURB AND GUTTER OR DRAINAGE FEATURE SEE PLAN FOR INFORMATION.
- ③ WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 10D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.
- ④ TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".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

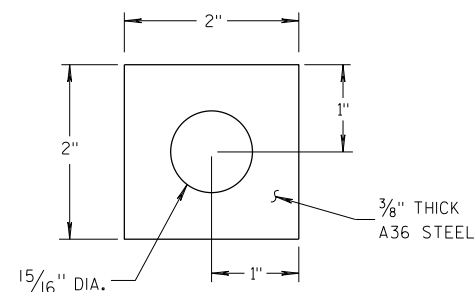
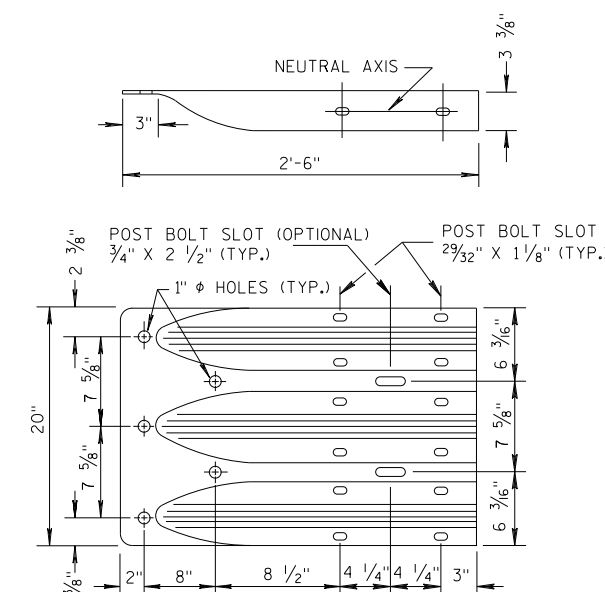
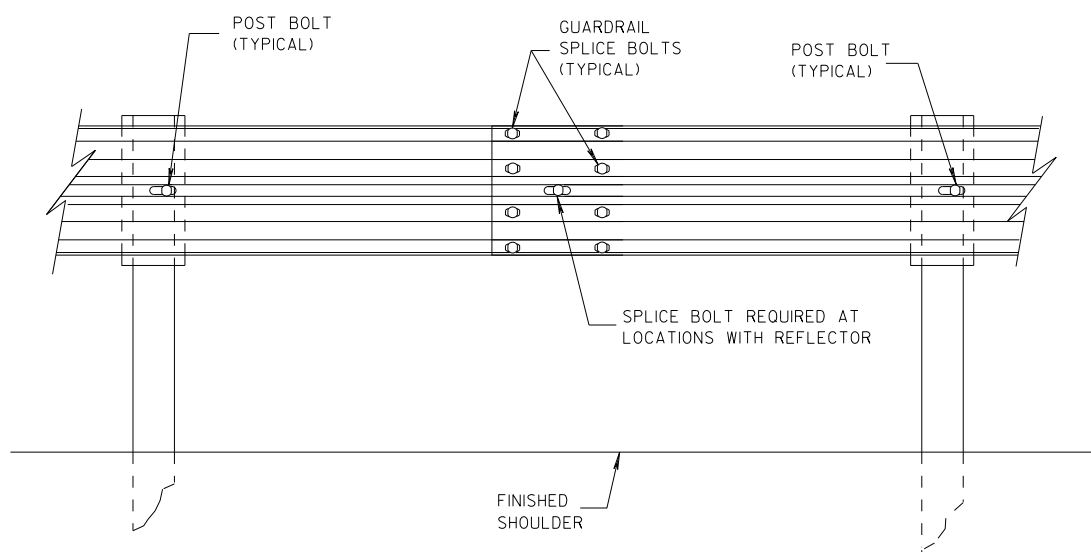


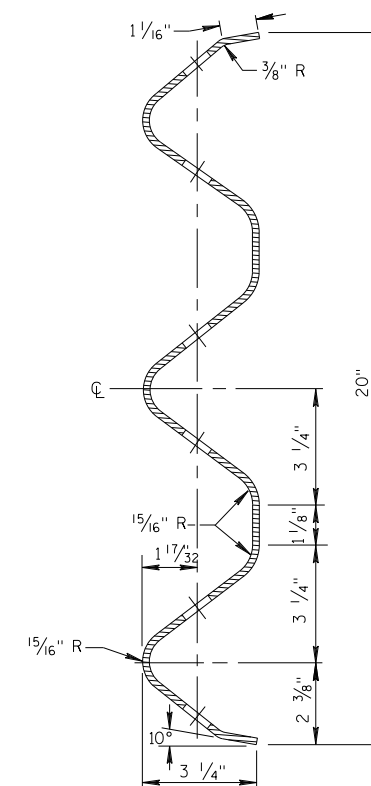
PLATE WASHER DETAIL



**THRIE BEAM
TERMINAL CONNECTOR**



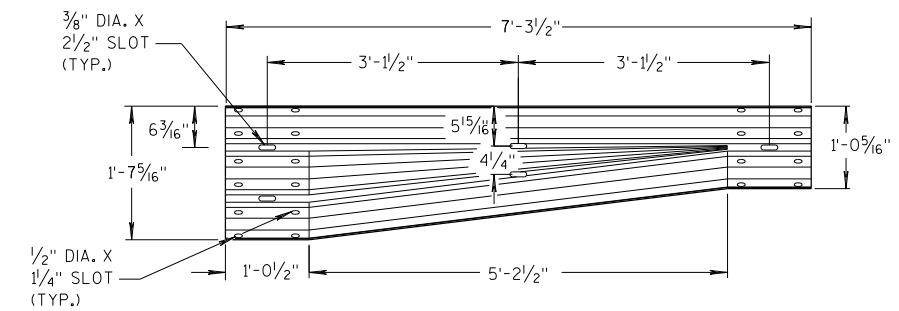
SPLICE DETAIL



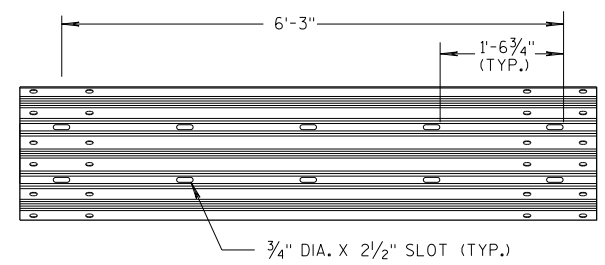
**SECTION THRU THRIE
BEAM RAIL ELEMENT**

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

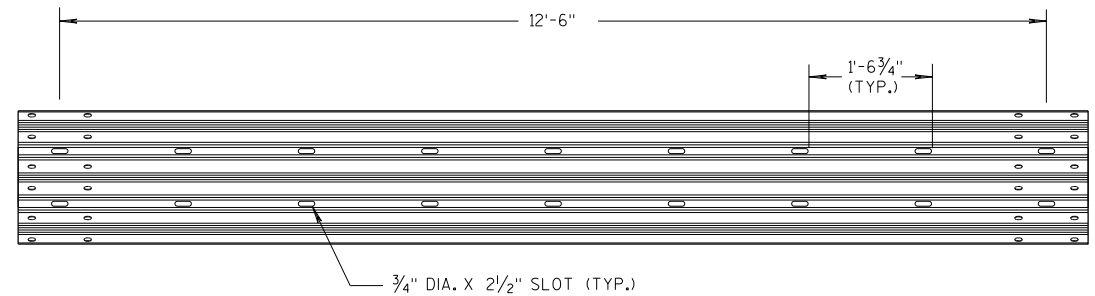
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



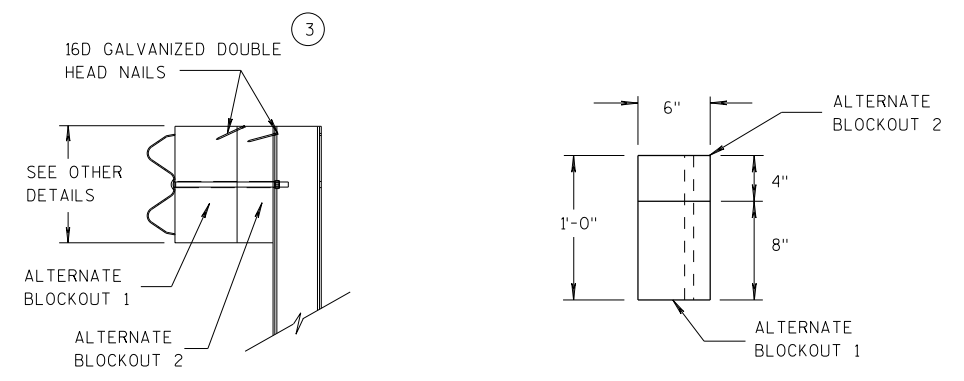
W-BEAM TO THRIE BEAM TRANSITION SECTION



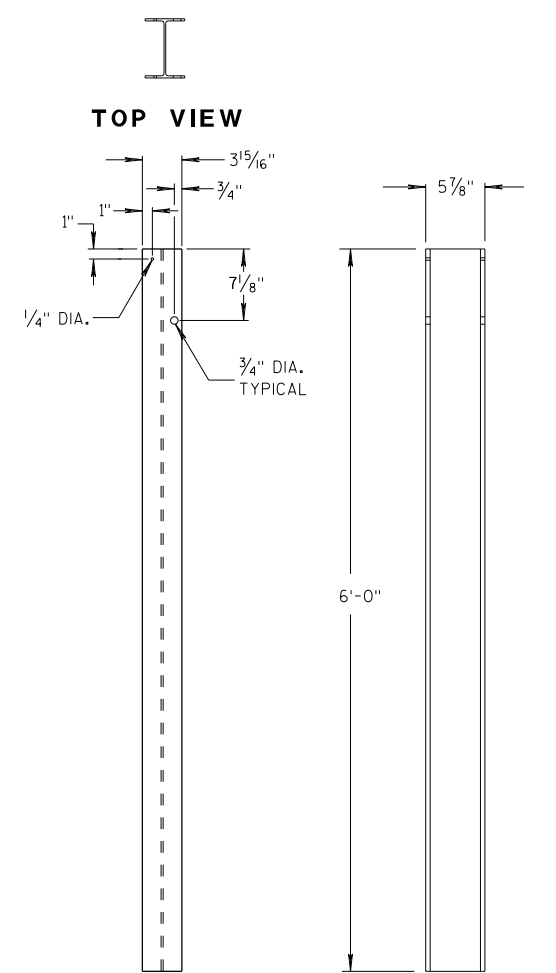
6'-3\"/>



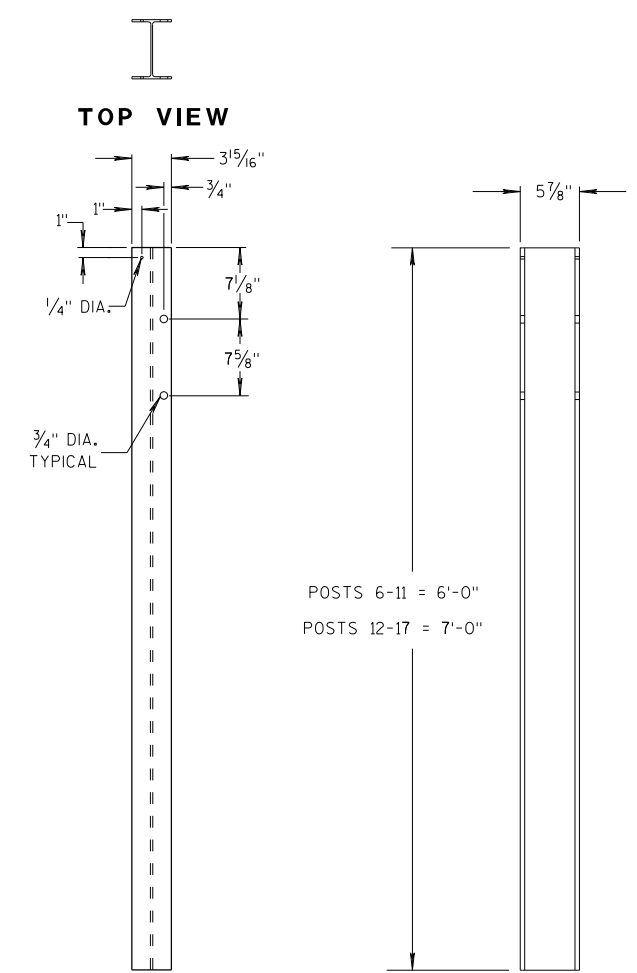
12'-6\"/>



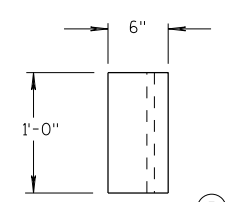
ALTERNATE WOOD BLOCKOUT DETAIL



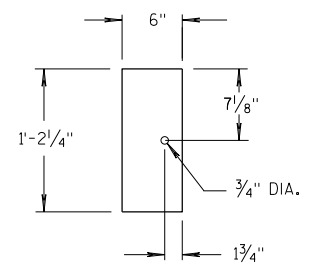
STEEL POSTS 1-5



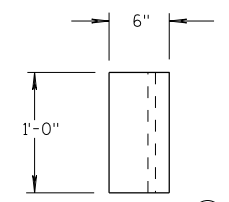
STEEL POSTS 6-17



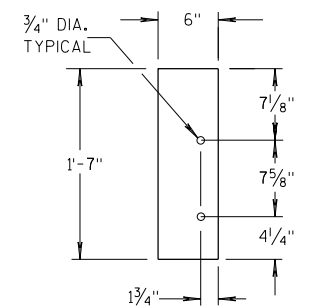
TOP VIEW



BLOCKOUT POSTS 1-5



TOP 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)**

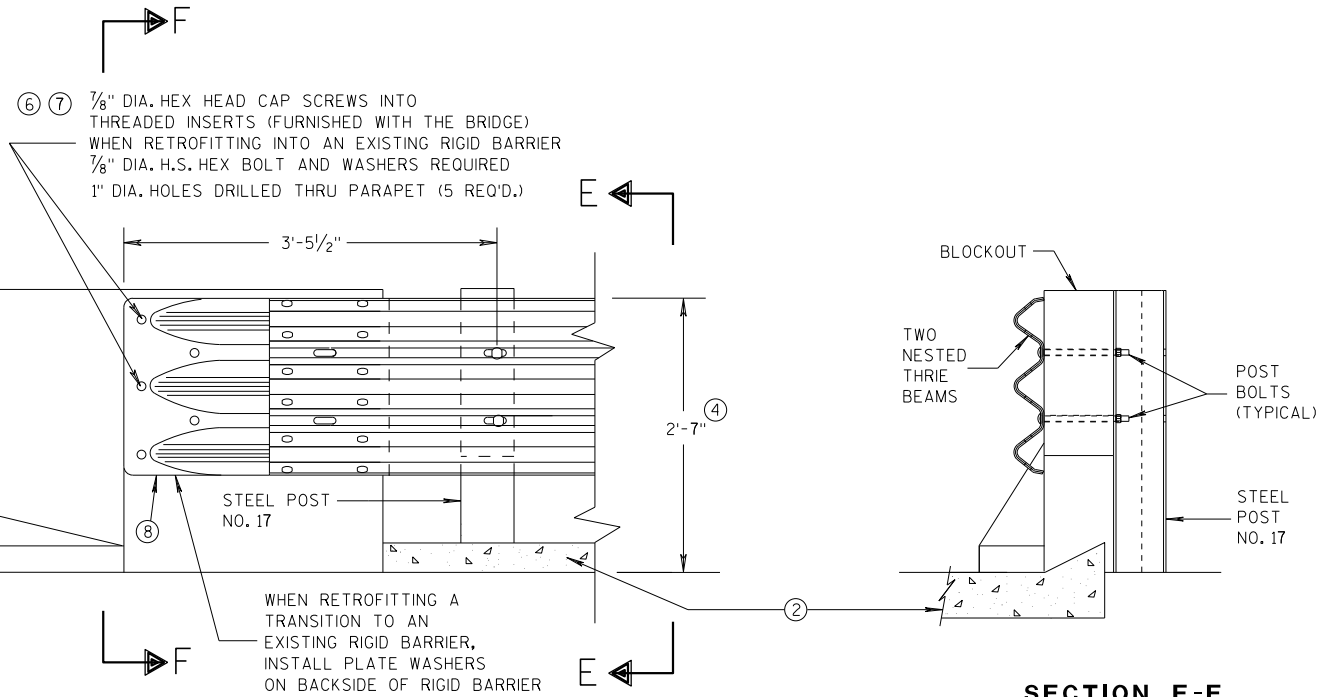
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

6

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

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



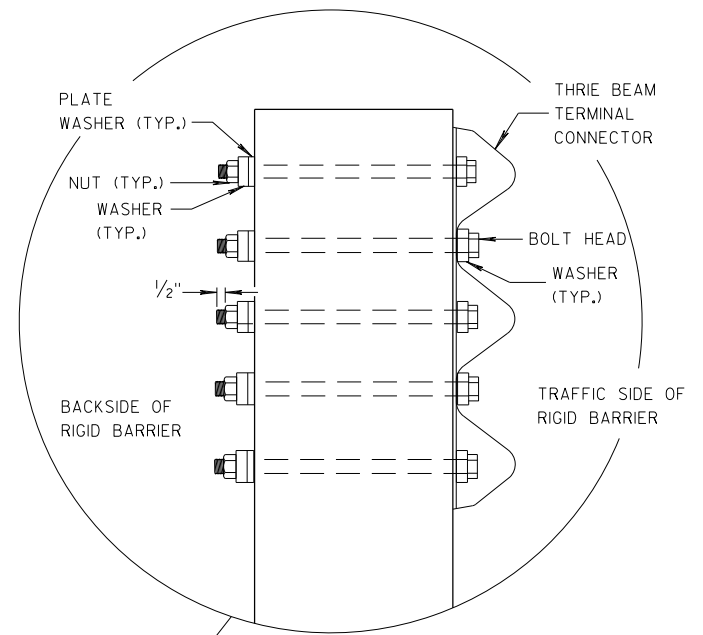
FRONT VIEW

THRIE BEAM CONNECTION TO BRIDGE PARAPET WITH SQUARE ENDS

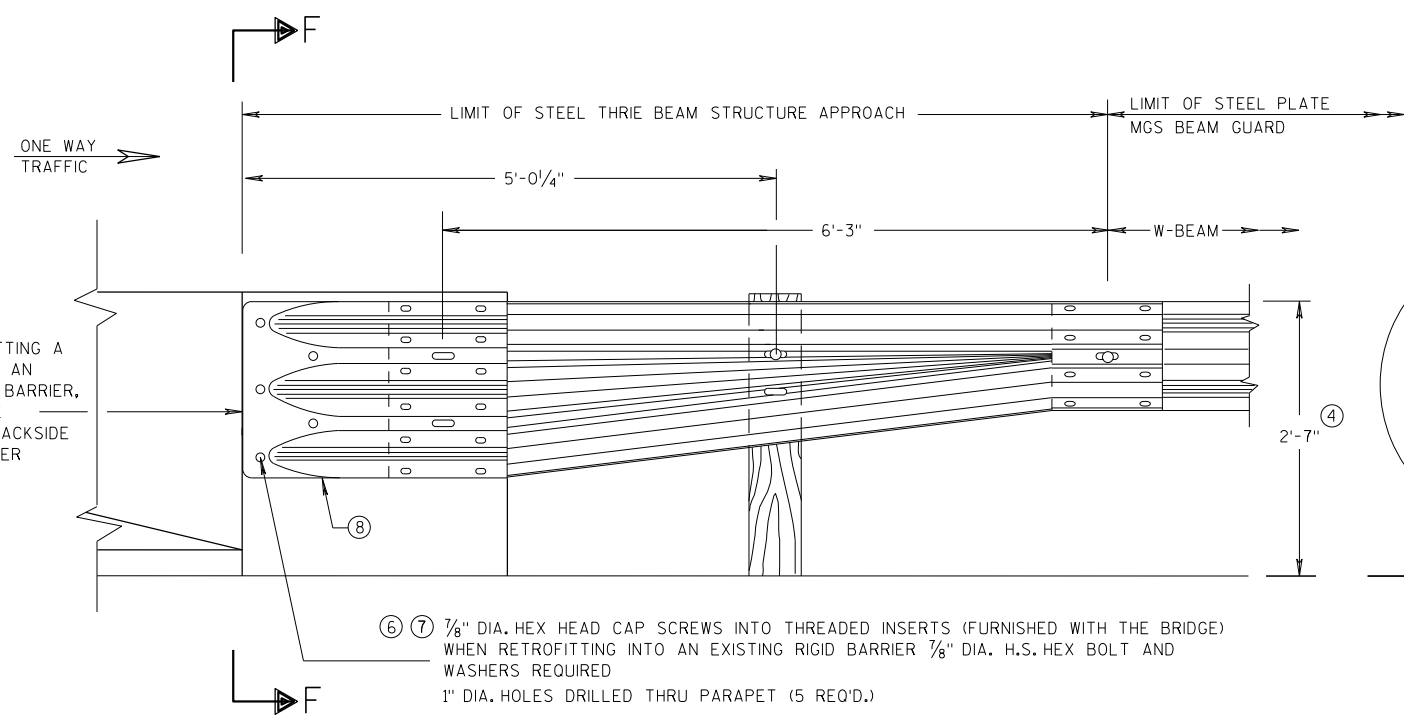
SECTION E-E

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".

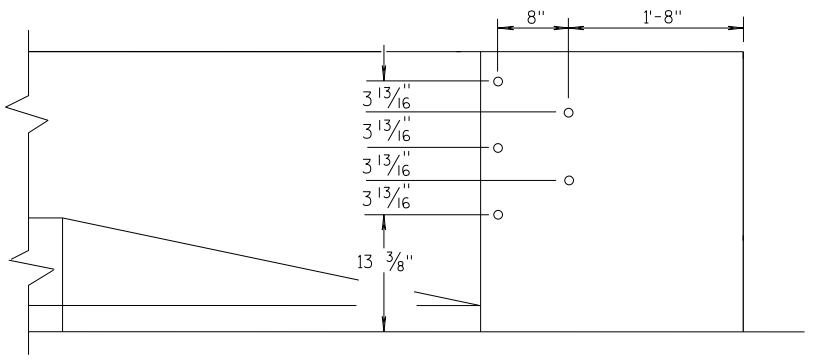


SECTION F-F



FRONT VIEW

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



DRILL HOLE LOCATION

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

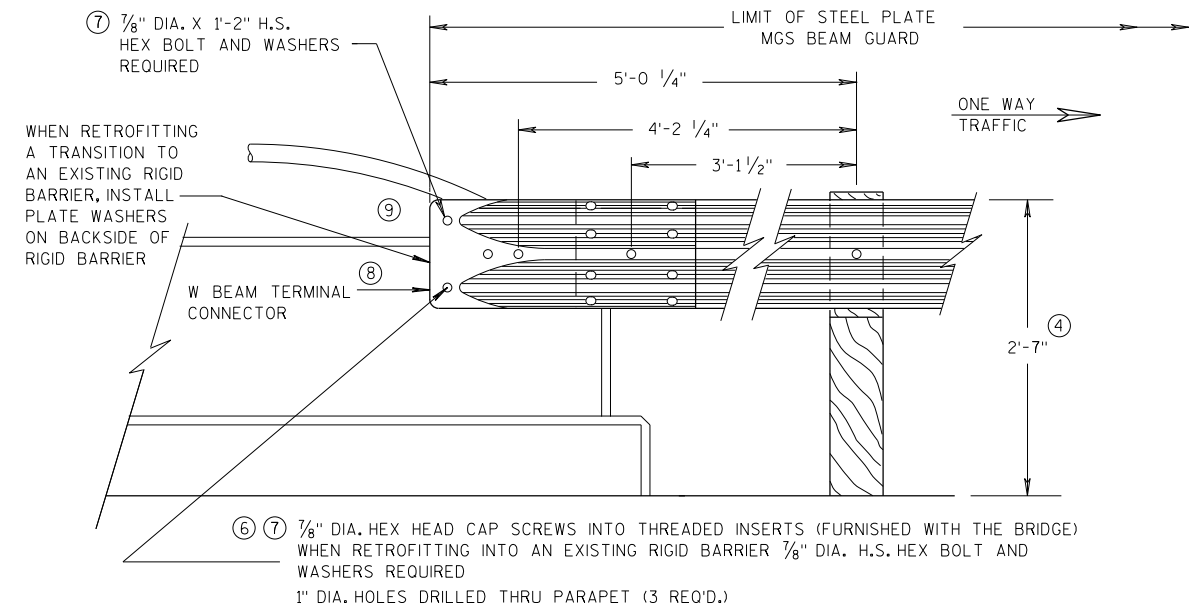
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

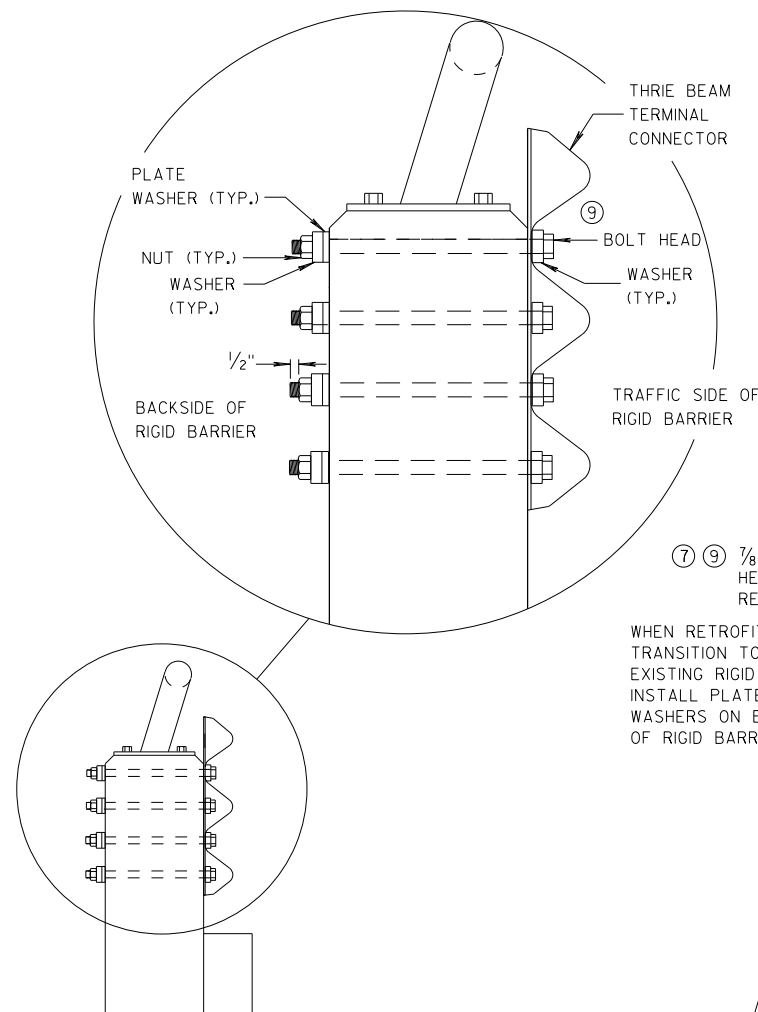
THESE ARE TYPICAL CONNECTION DETAILS. ADJUST THE POSITION OF CONNECTIONS TO EXISTING BRIDGES TO FIT THE ACTUAL BRIDGE AND SITE DIMENSIONS.

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

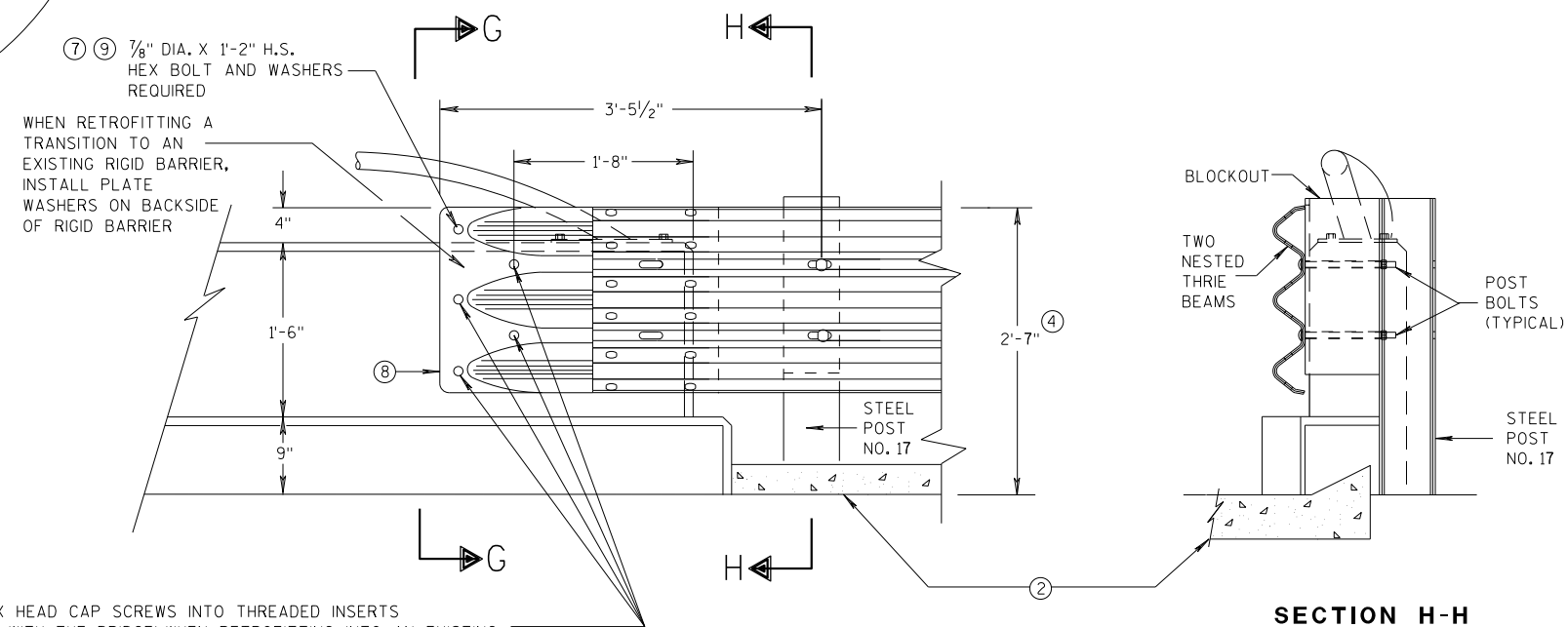


FRONT VIEW

W BEAM CONNECTION TO VERTICAL FACE PARAPET (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)



SECTION G-G



FRONT VIEW

THRIE BEAM CONNECTION TO VERTICAL FACED PARAPETS

SECTION H-H

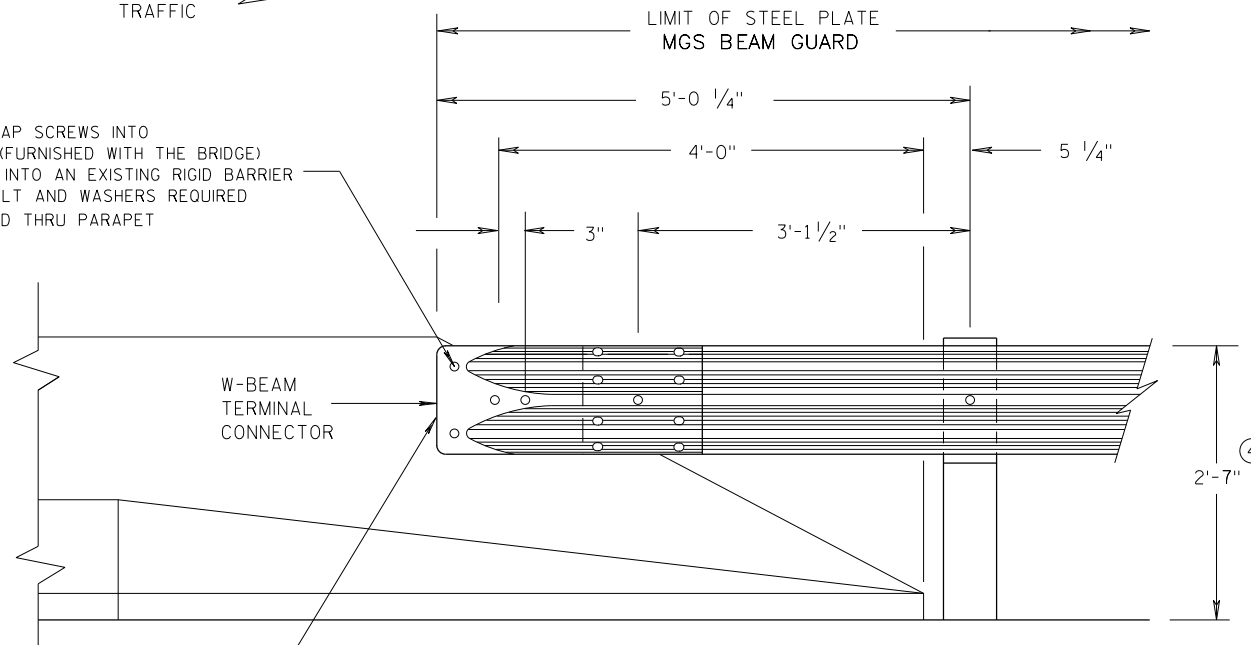
MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

ONE WAY
TRAFFIC

⑥ ⑦ 7/8" DIA. HEX HEAD CAP SCREWS INTO
THREADED INSERTS (FURNISHED WITH THE BRIDGE)
WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET
(4 REQ'D.)



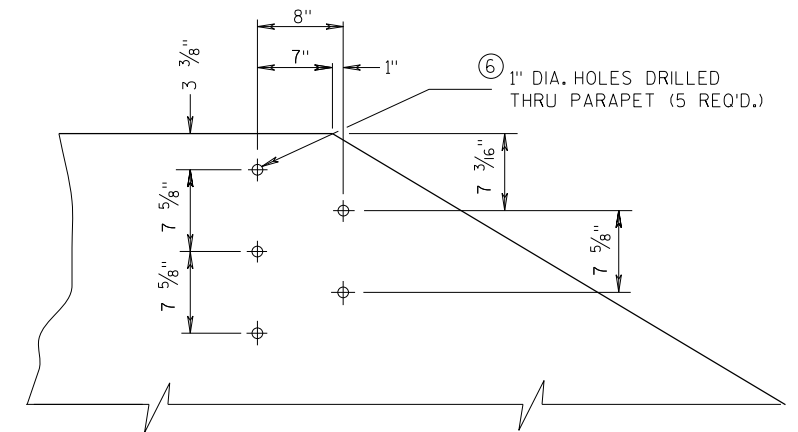
FRONT VIEW

**W BEAM CONNECTION TO
PARAPETS WITH SLOPED ENDS**

(USE ONLY AT TRAFFIC EXIT END OF ONE WAY BRIDGE)

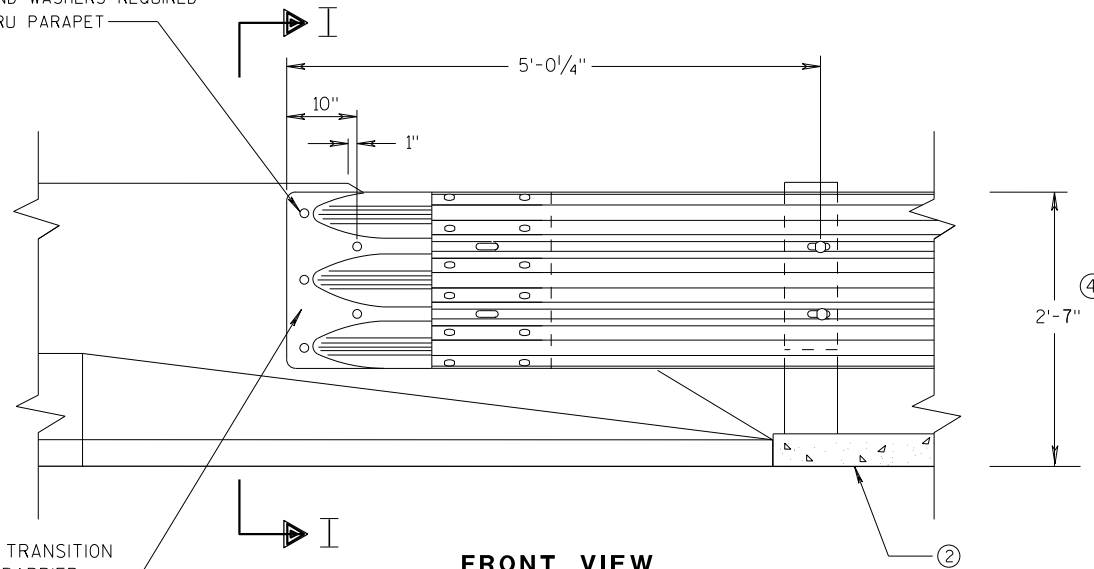
GENERAL NOTES

- 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.



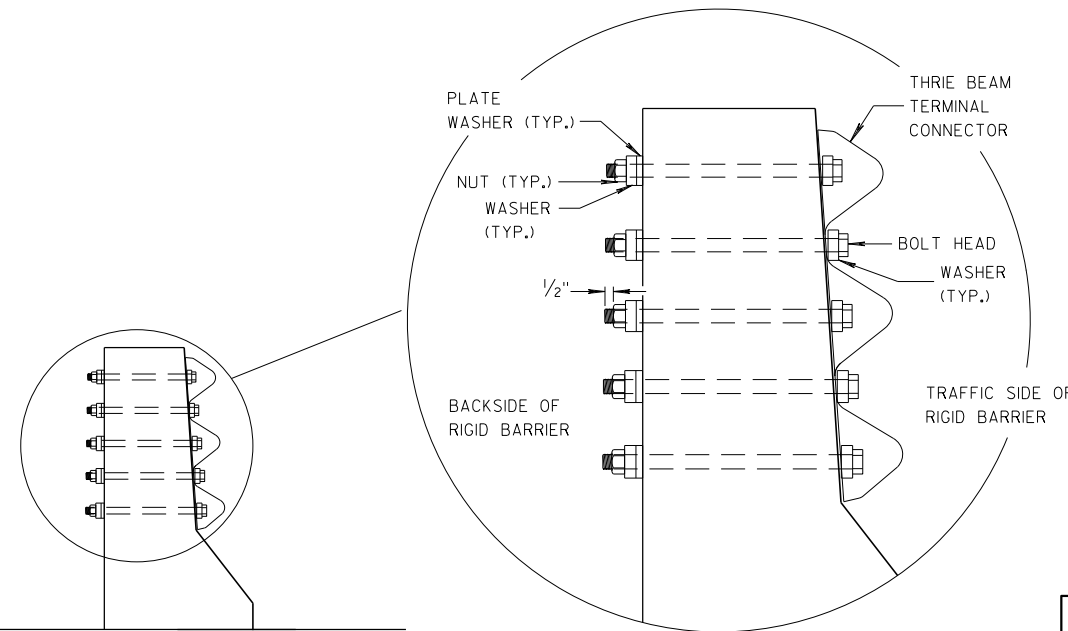
**DRILL HOLE LOCATION AND PATTERN
FOR THRIE BEAM CONNECTION**

⑥ ⑦ 7/8" DIA. HEX HEAD CAP SCREWS INTO
THREADED INSERTS (FURNISHED WITH THE BRIDGE)
WHEN RETROFITTING INTO AN EXISTING RIGID BARRIER
7/8" DIA. H.S. HEX BOLT AND WASHERS REQUIRED
1" DIA. HOLES DRILLED THRU PARAPET
(5 REQ'D.)



FRONT VIEW

**THRIE BEAM CONNECTION TO BRIDGE
PARAPETS WITH SLOPED ENDS**



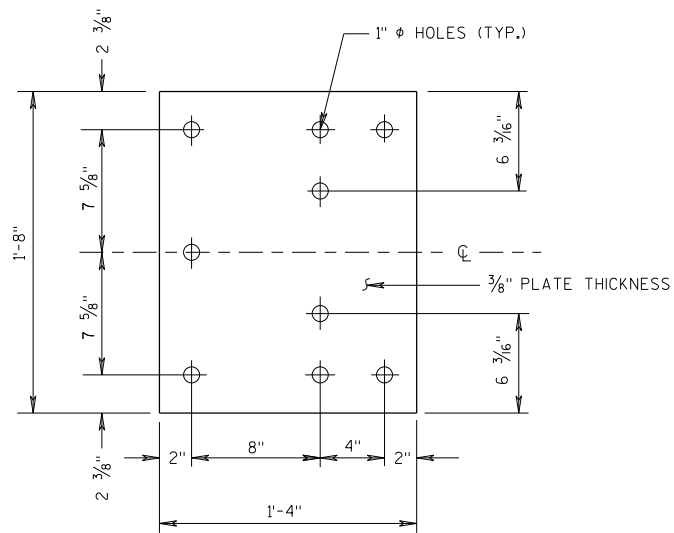
SECTION I-I

WHEN RETROFITTING A TRANSITION
TO AN EXISTING RIGID BARRIER,
INSTALL PLATE WASHERS ON
BACKSIDE OF RIGID BARRIER.

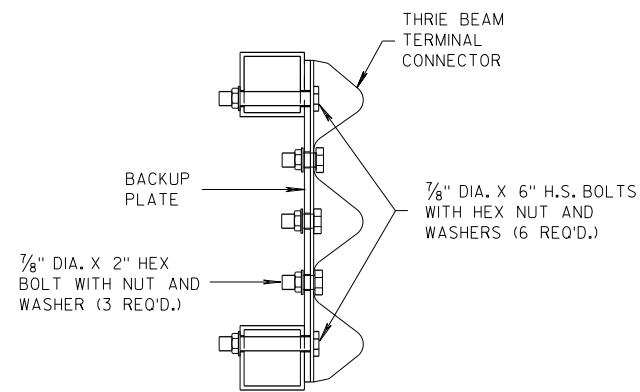
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

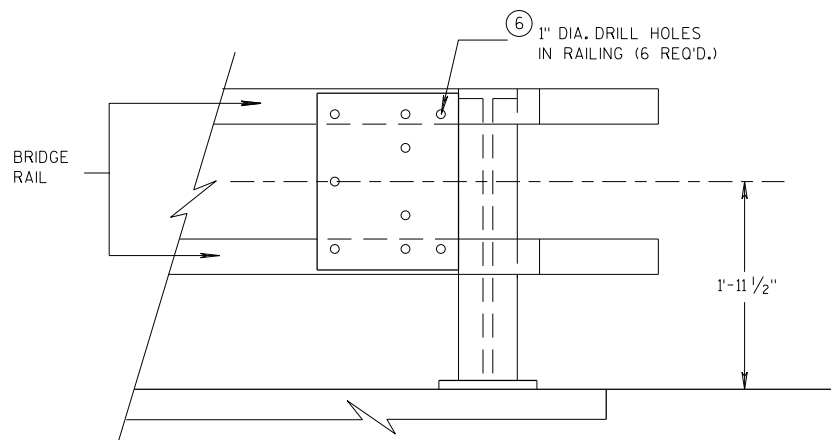
APPROVED
DATE 07/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



BACK-UP PLATE DETAIL



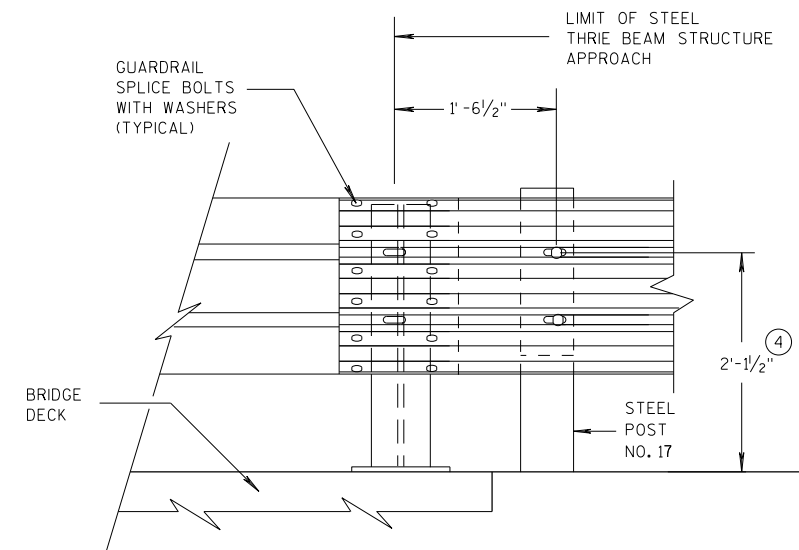
SECTION J-J



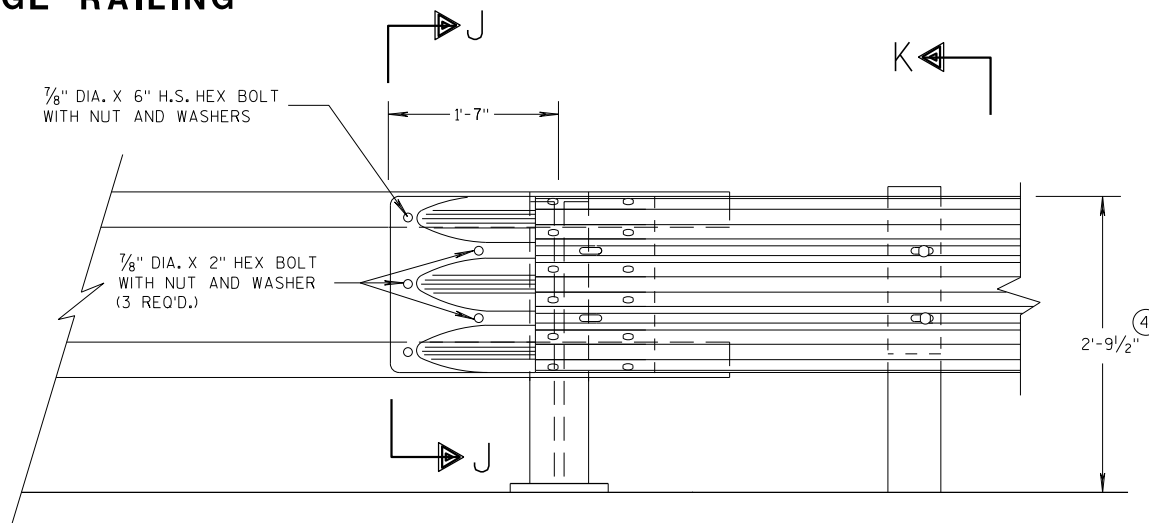
BACK-UP PLATE MOUNTING ONTO BRIDGE RAILING

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS $\pm 1'$.
- ⑥ DRILLING HOLES THROUGH THE PAPER, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

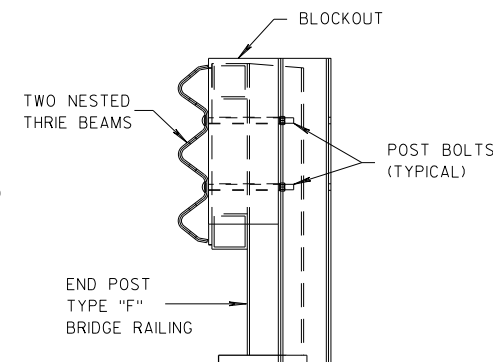


**FRONT VIEW
THRIE BEAM CONNECTION TO
STEEL RAILING TYPE "W"**



FRONT VIEW

**THRIE BEAM CONNECTION TO
TUBULAR RAILING TYPE "F"**



SECTION K-K

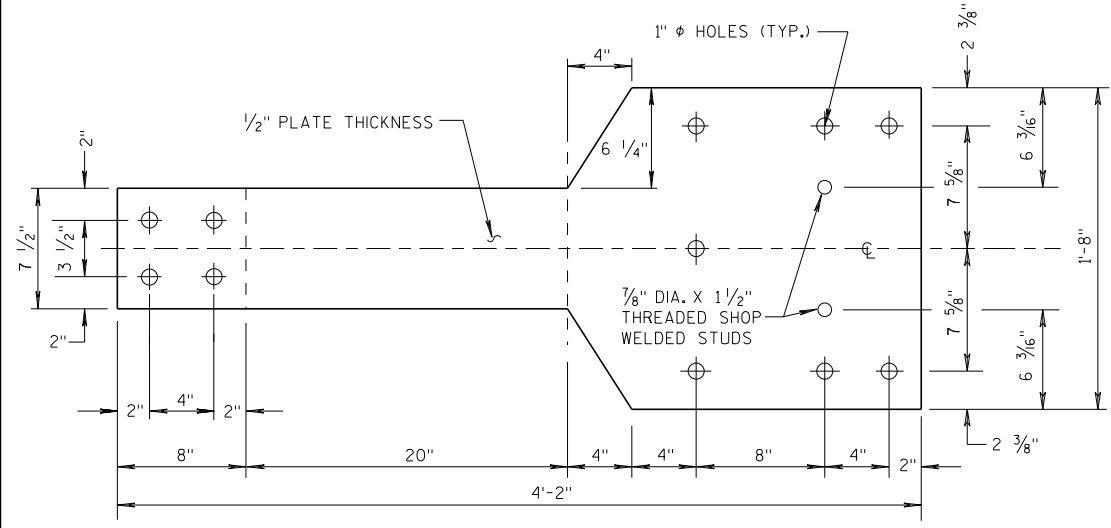
MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 07/2018 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

6

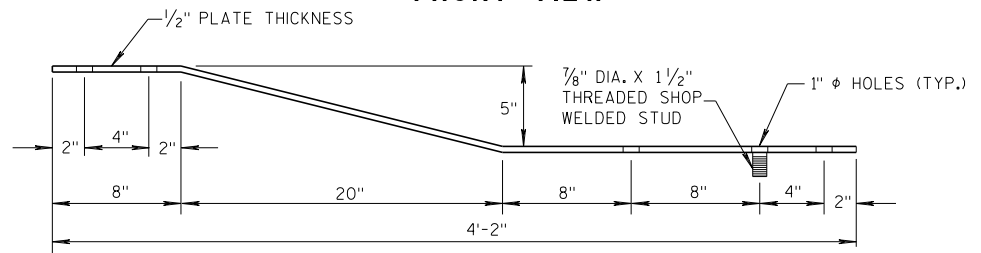
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GENERAL NOTES

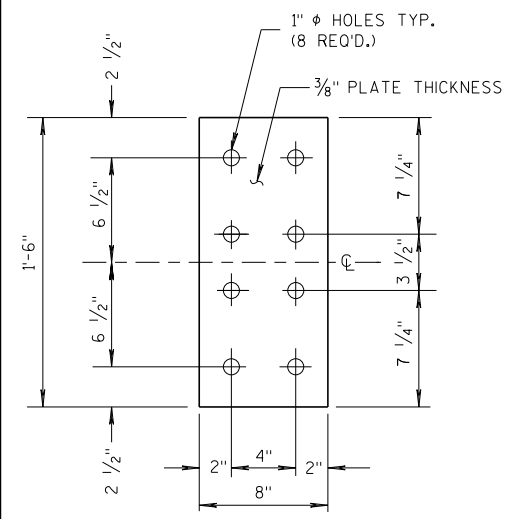
(4) TOLERANCE FOR TOP OF W-BEAM RAIL IS ± 1".



FRONT VIEW

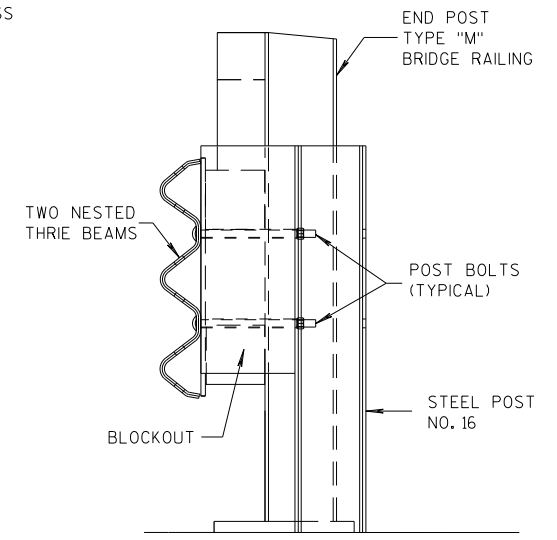


**PLAN VIEW
BACK-UP PLATE DETAIL, TYPE "M"**

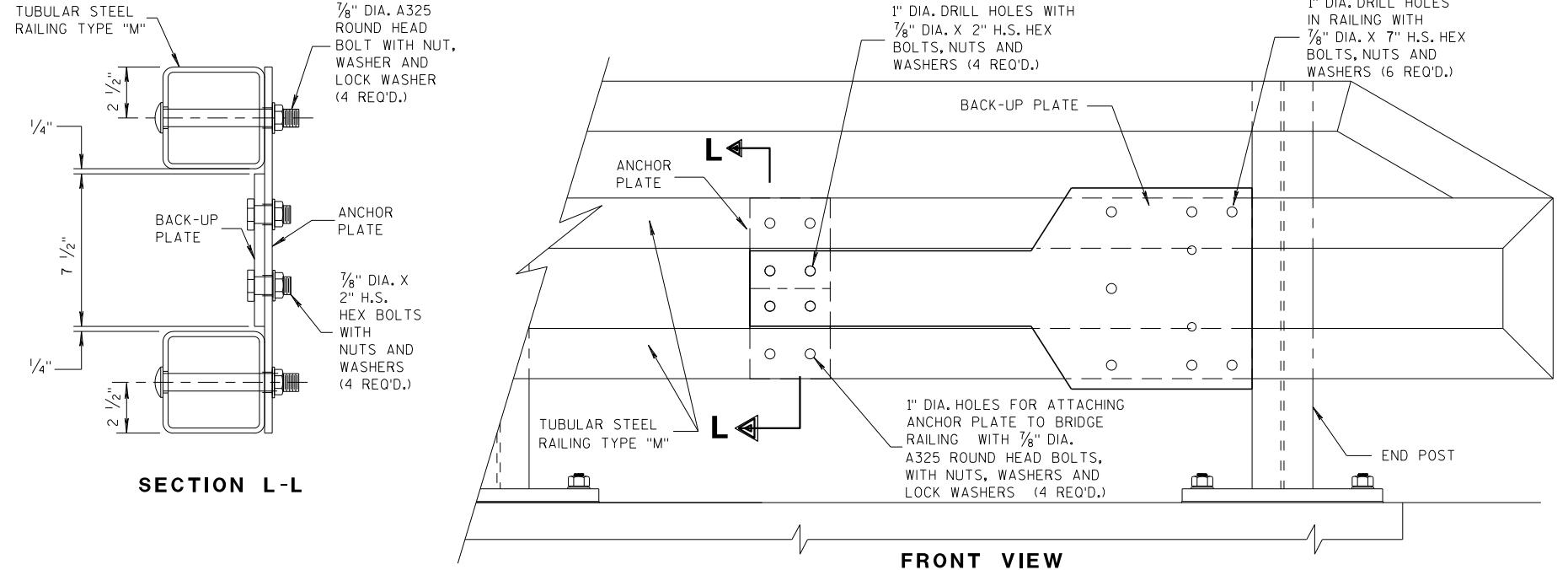


FRONT VIEW

**ANCHOR
PLATE DETAIL,
TYPE "M"**



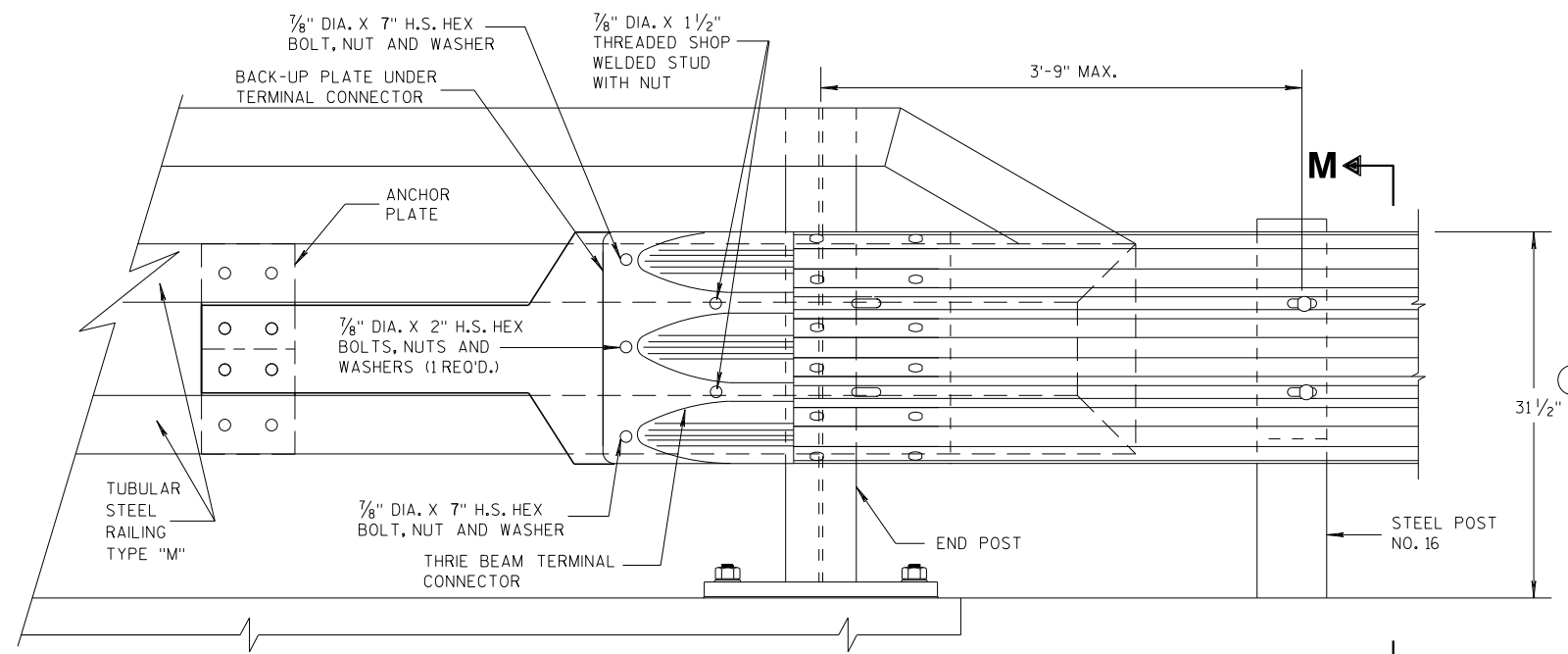
SECTION M-M



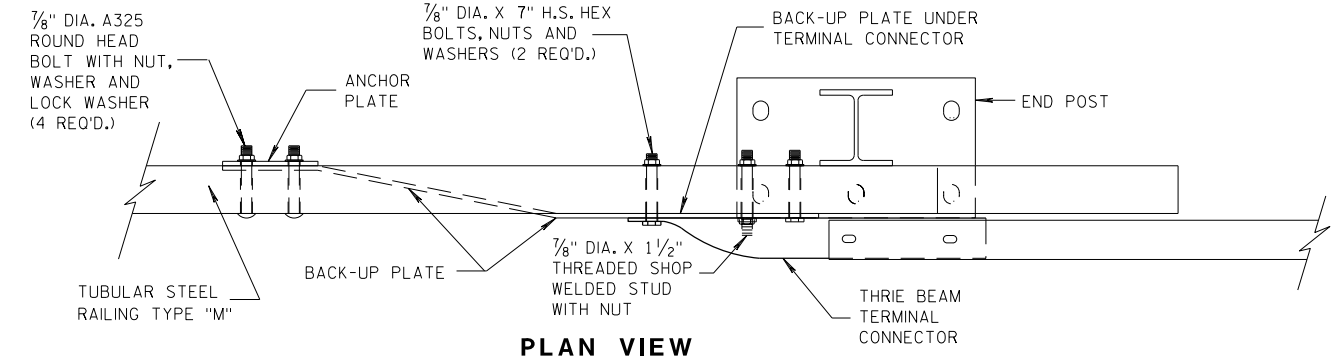
SECTION L-L

FRONT VIEW

ANCHOR AND BACK-UP PLATE MOUNTING TO BRIDGE RAILING, TYPE "M"



FRONT VIEW



PLAN VIEW

THRIE BEAM CONNECTION TO TUBULAR RAILING, TYPE "M"

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

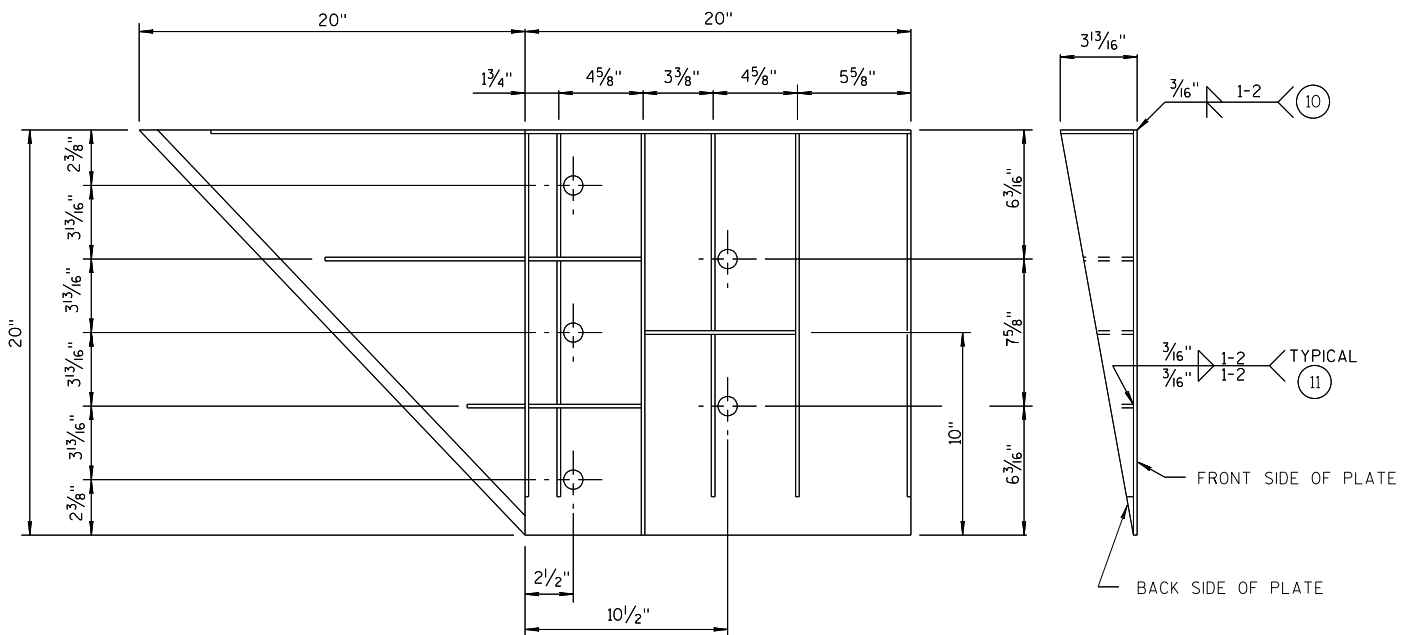
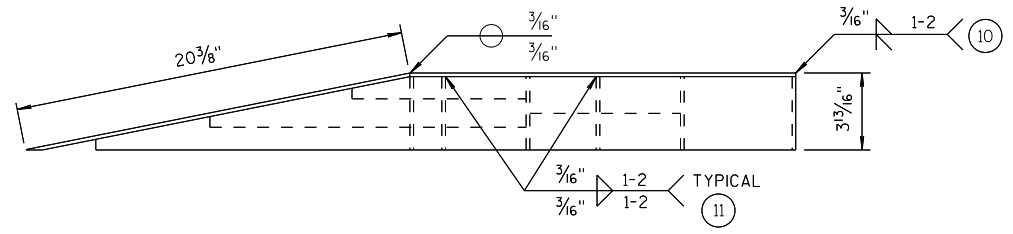
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

- COVER PLATE PANELS ARE 3/16" THICK.
- ALL STIFFENERS ARE 1/4" THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SECTION 614 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".
- FOR OPPOSITE SIDE INSTALLATION MIRROR DRAWINGS.

- (10) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND 3/16" FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- (11) STIFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:
3/16" FILLET WELD BY 1" LONG SPACED AT 2".



WELDING INSTRUCTION
(VIEWED FROM BACK SIDE OF PLATE)

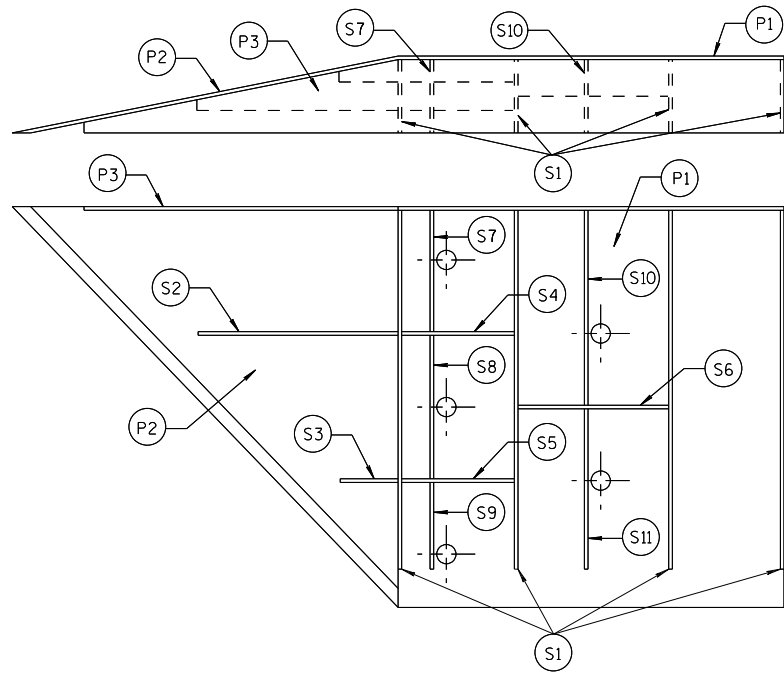


PLATE AND STIFFENER IDENTIFICATION
(VIEWED FROM BACK SIDE OF PLATE)

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	3/16"
P2	1		20" x 20" x 28 3/16"	3/16"
P3	1		39" x 3 5/8" x 20" x 19 5/16"	3/16"
S1	4		18 7/16" x 3 5/8" x 18 3/4"	1/4"
S2	1		10 1/4" x 2 1/16" x 10 3/8" x 1/2"	1/4"
S3	1		3" x 1 1/16" x 3 3/8" x 1/2"	1/4"
S4	1		6 1/8" x 2 1/16"	1/4"
S5	1		6 1/8" x 1 1/16"	1/4"
S6	1		7 3/4" x 1 3/4"	1/4"
S7	1		2 3/16" x 6" x 3 5/8" x 5 1/8"	1/4"
S8	1		1 5/32" x 7 1/2" x 2 1/2" x 7 3/8"	1/4"
S9	1		6 1/16" x 6 3/16" x 1 3/32"	1/4"
S10	1		1 7/8" x 9 7/8" x 3 3/8" x 9 11/16"	1/4"
S11	1		8 1/2" x 8 3/4" x 1 3/16"	1/4"

SINGLE SLOPE CONNECTION PLATE

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

FHWA

6

6

S.D.D. 14 B 45-51

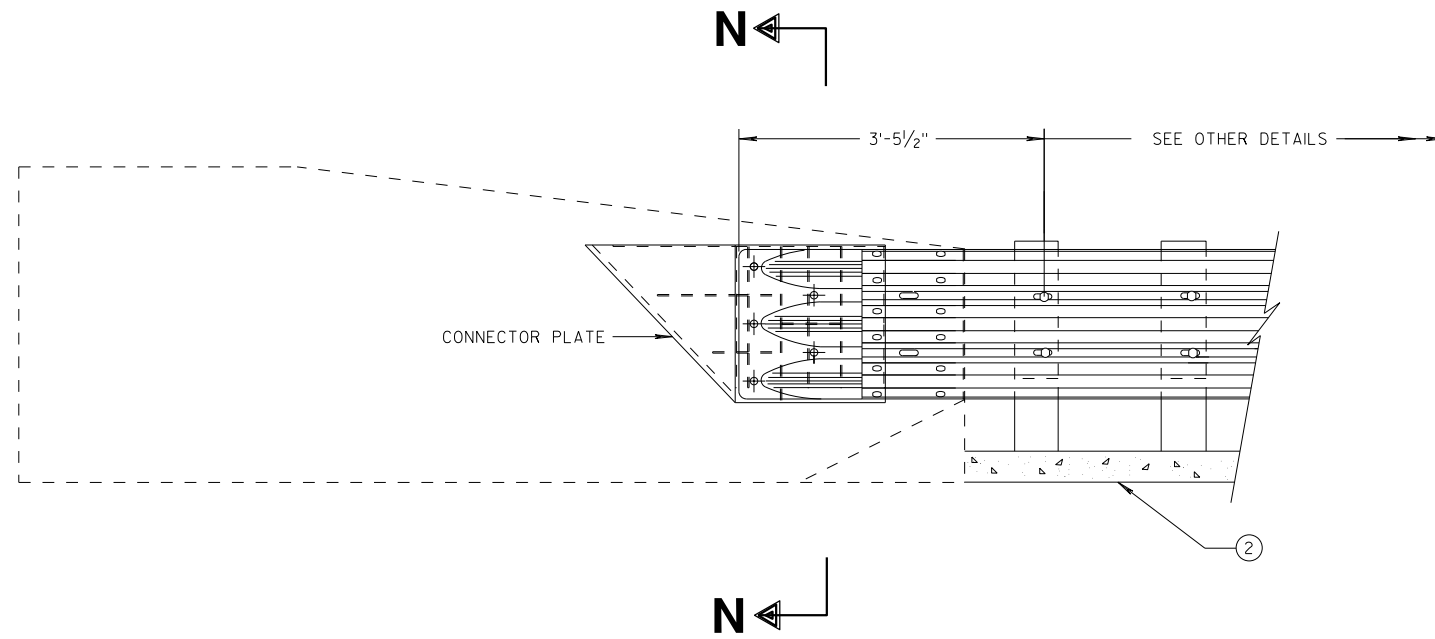
S.D.D. 14 B 45-51

GENERAL NOTES

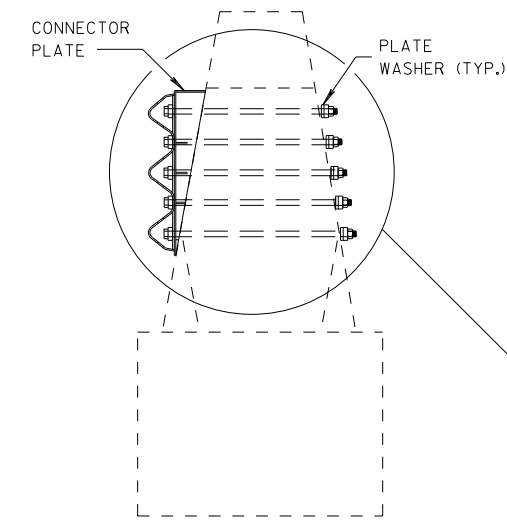
CONNECTOR PLATE, DRILLING BOLT HOLES THROUGH THE PARAPET, BOLTS, NUTS, WASHERS AND REPAIRING DAMAGED CONCRETE ARE INCIDENTAL TO THE CONTRACT.

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

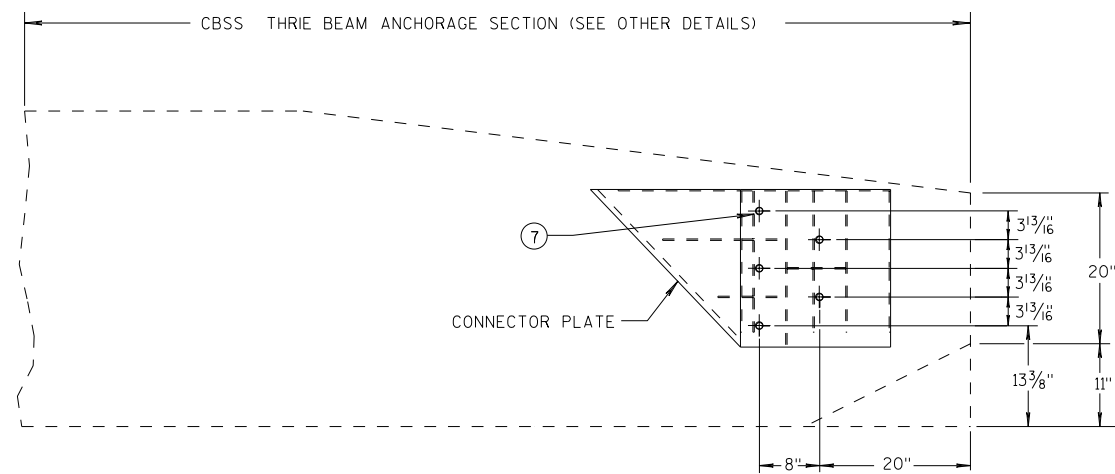
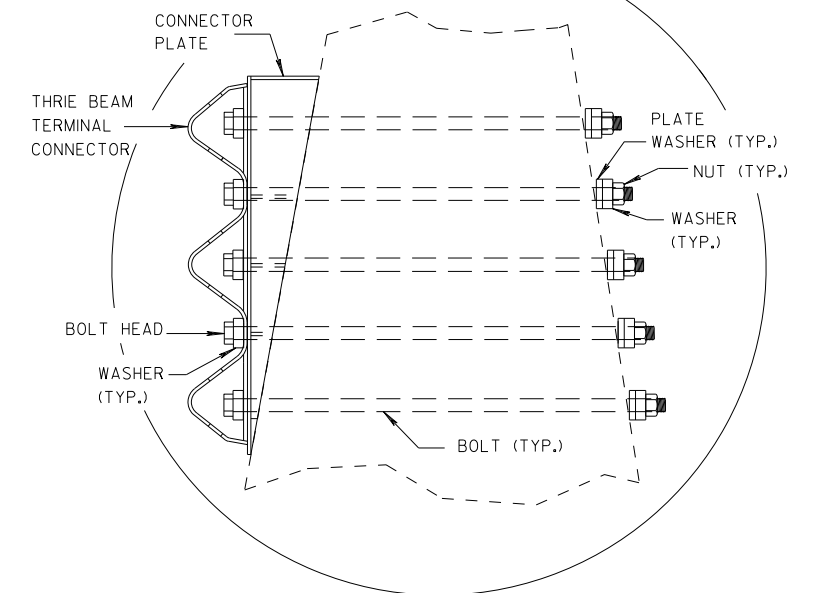
⑦ BOLTS MAY BE A325 BOLTS OR A449 BOLTS. BOLT LENGTH AND THREADING LENGTH ARE TO ALLOW FOR A TIGHT CONNECTION BETWEEN RIGID BARRIER AND THRIE BEAM CONNECTION PLATE. CONTRACTOR IS TO FIELD VERIFY BOLT LENGTH AND THREAD LENGTH. ONE ROUND WASHER REQUIRED BETWEEN BOLT HEAD AND THRIE BEAM CONNECTION PLATE. 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.



THRIE BEAM CONNECTION TO SINGLE SLOPE BARRIER



SECTION N-N

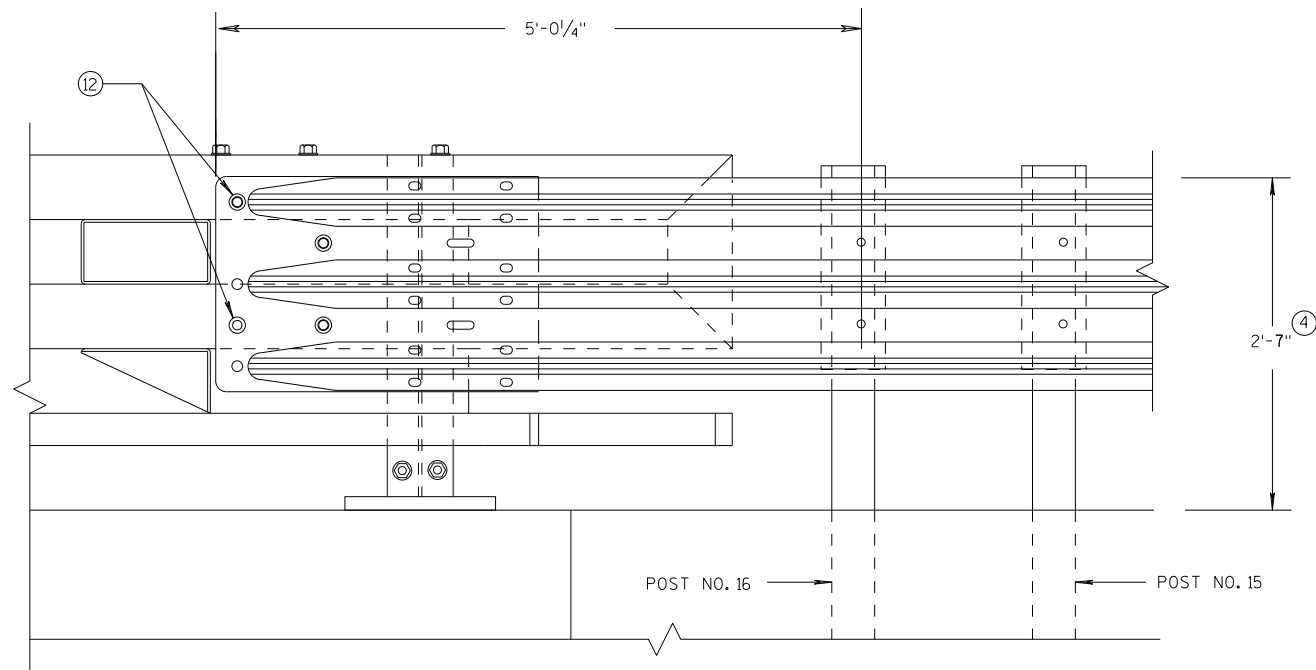


SINGLE SLOPE CONNECTION PLATE PLACEMENT

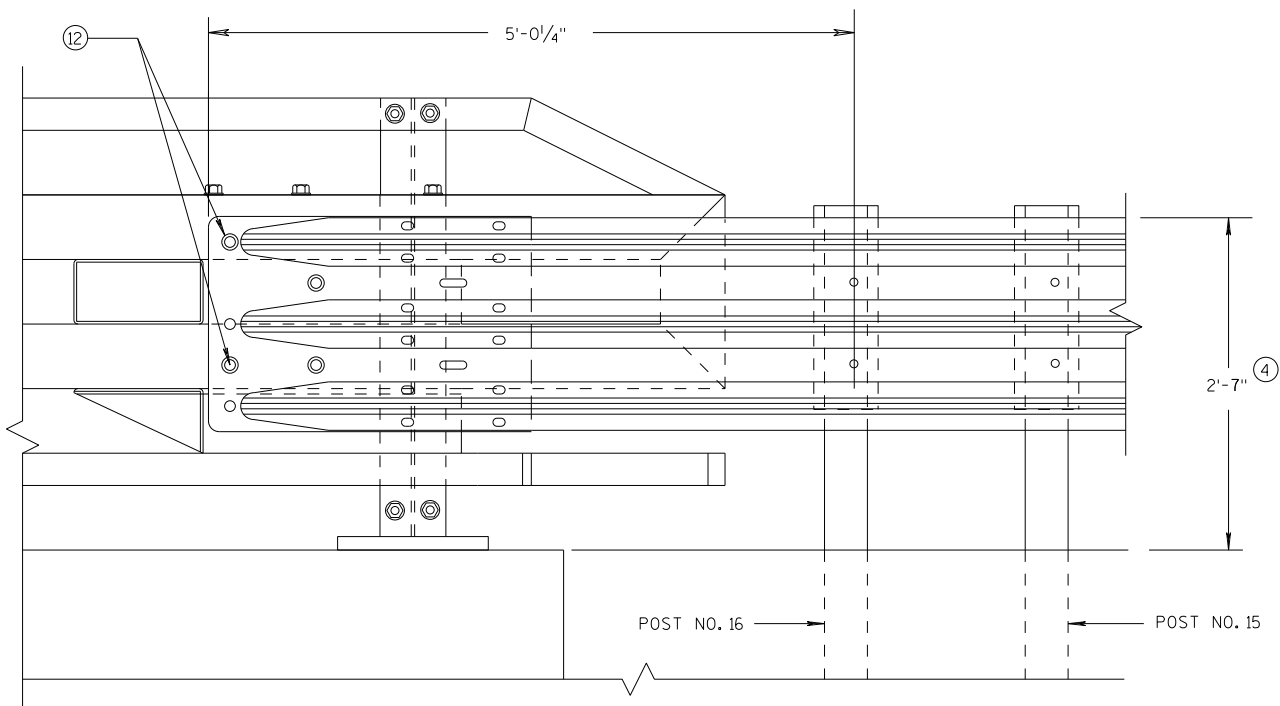
**MIDWEST GUARDRAIL SYSTEM
THRIE BEAM TRANSITION (MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



**ELEVATION OF DETAIL AT NY3 END POST
THRIE BEAM RAIL ATTACHMENT**



**ELEVATION OF DETAIL AT NY4 END POST
THRIE BEAM RAIL ATTACHMENT**

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS ± 1".
- ⑫ 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.

6

6

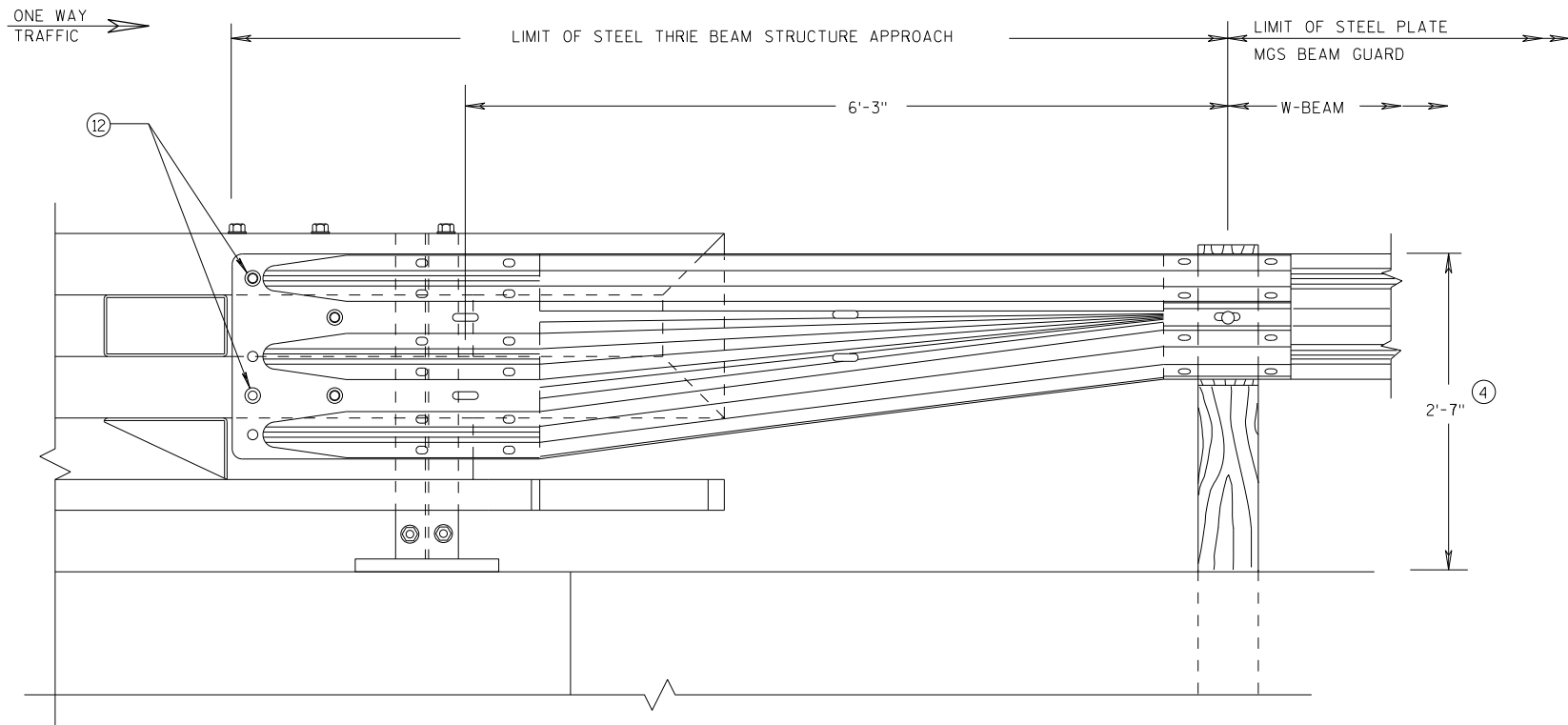
S.D.D. 14 B 45-5k

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

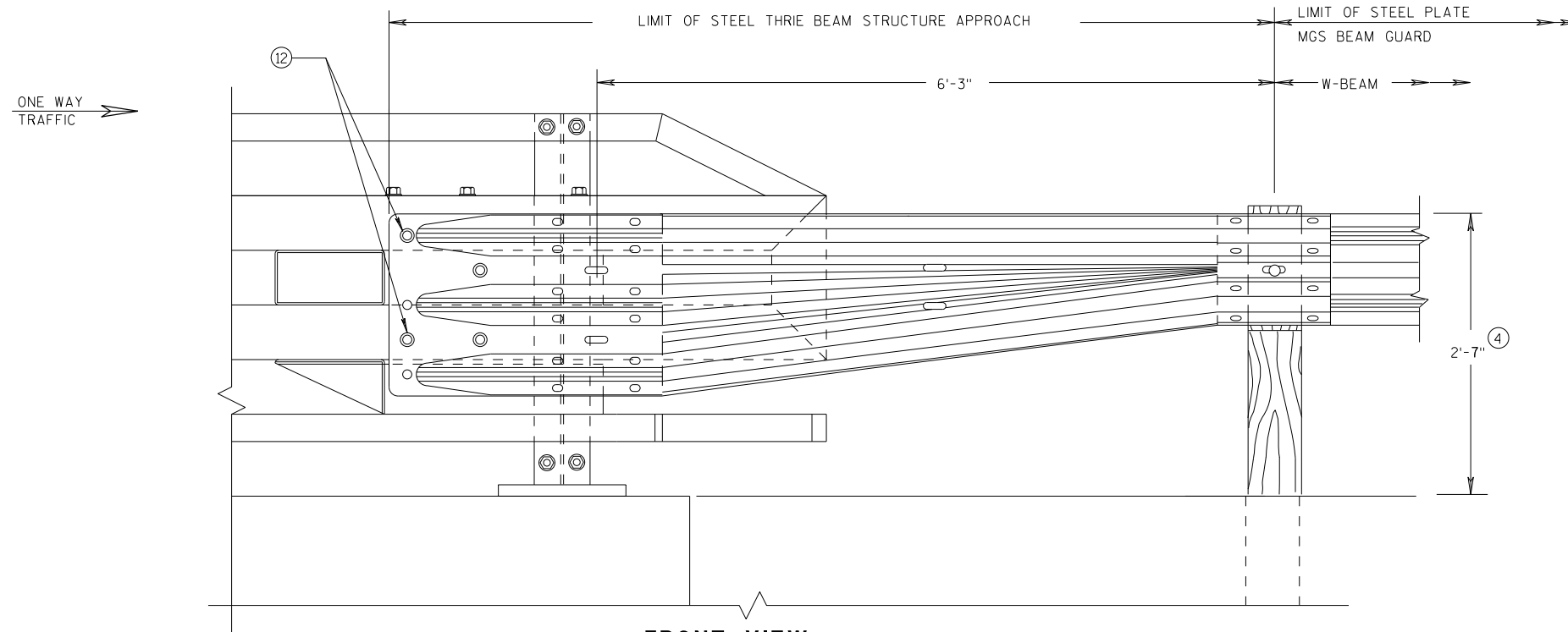
APPROVED
DATE 7/2018 /S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY3"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

GENERAL NOTES

- ④ TOLERANCE FOR TOP OF BEAM IS ± 1".
- ⑫ 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. ON BACKSIDE OF PARAPET ONE ROUND WASHER, AND NUT REQUIRED. BOLT THREAD IS TO EXTEND 1/2-INCH BEYOND NUT.



FRONT VIEW
W BEAM TRANSITION AND
CONNECTION TO BRIDGE RAILING TYPE "NY4"
 (USE ONLY ON THE TRAFFIC EXIT END OF ONE WAY BRIDGES)

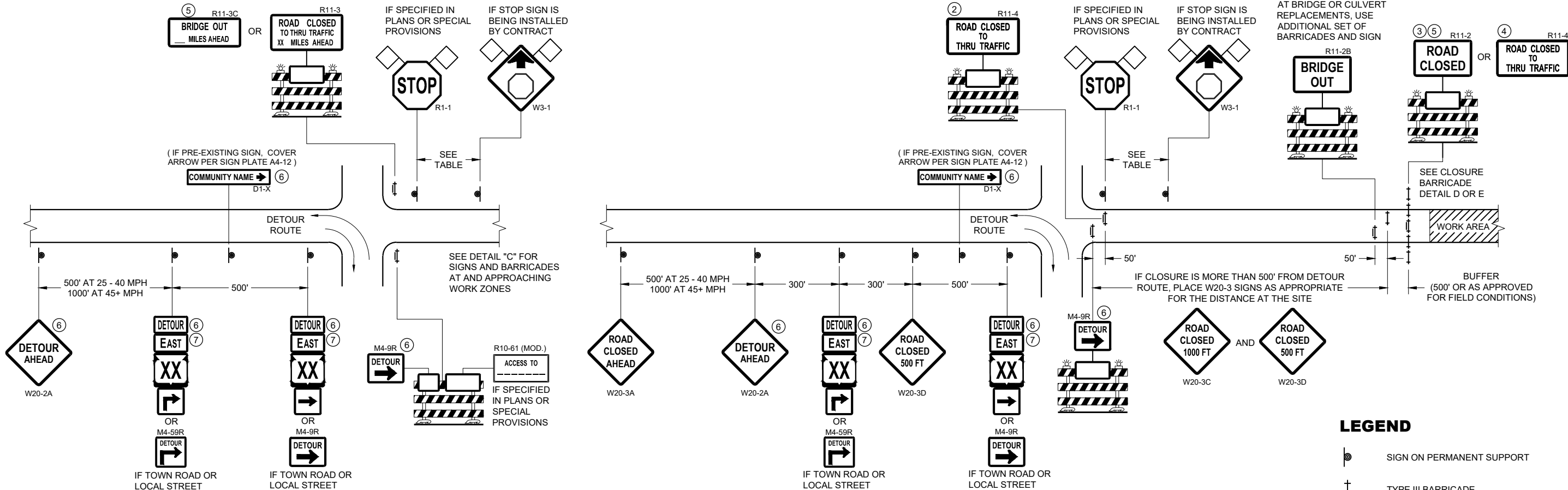
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6

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

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

MIDWEST GUARDRAIL SYSTEM THRIE BEAM TRANSITION (MGS)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE FHWA	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR



**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**

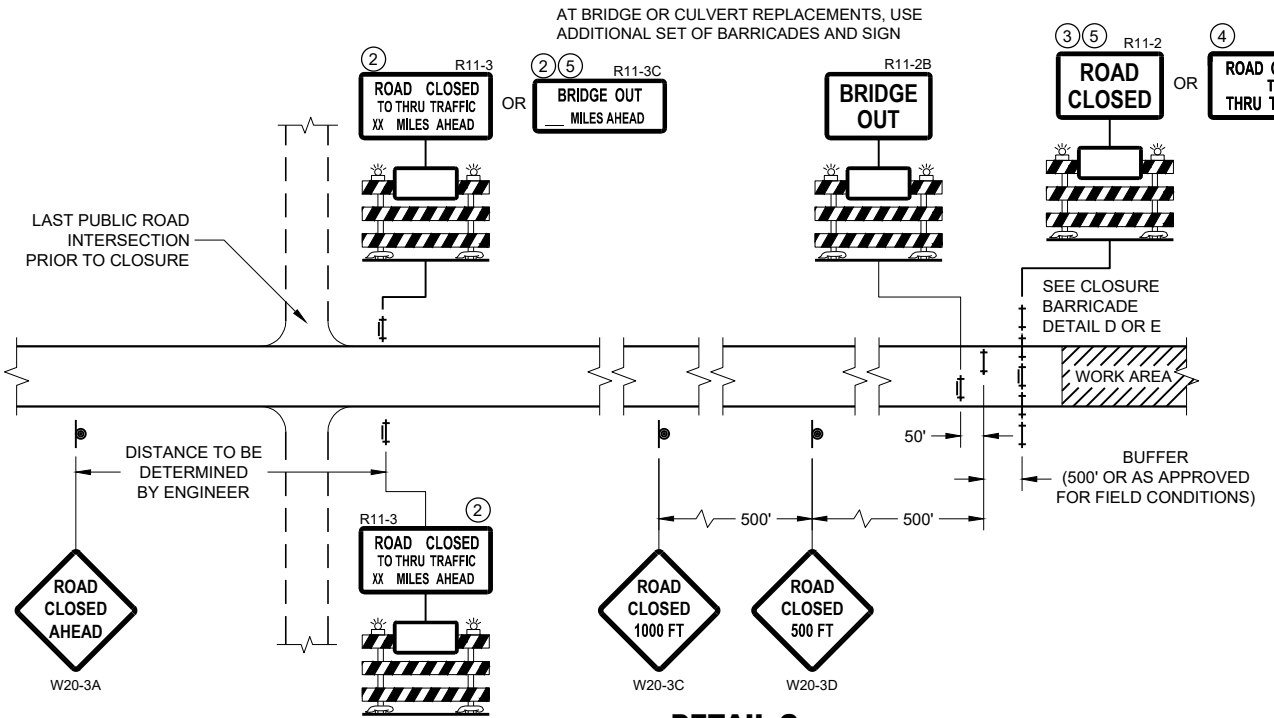
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

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)

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

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



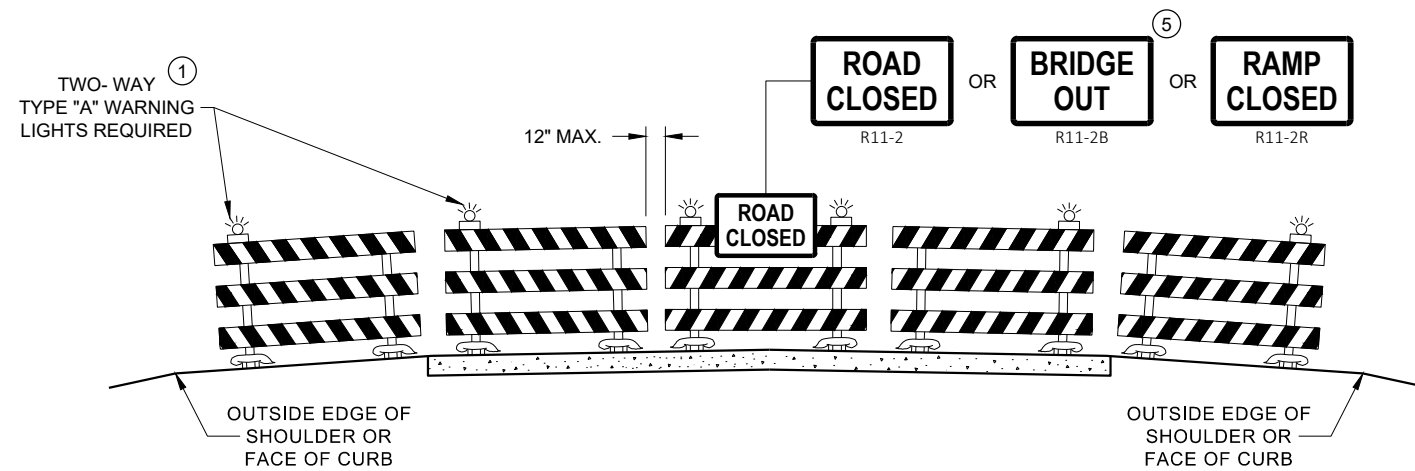
**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

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

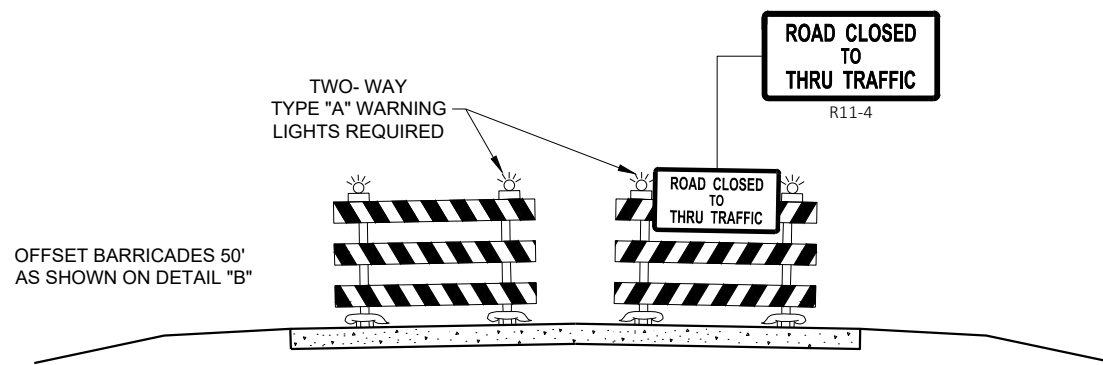
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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:

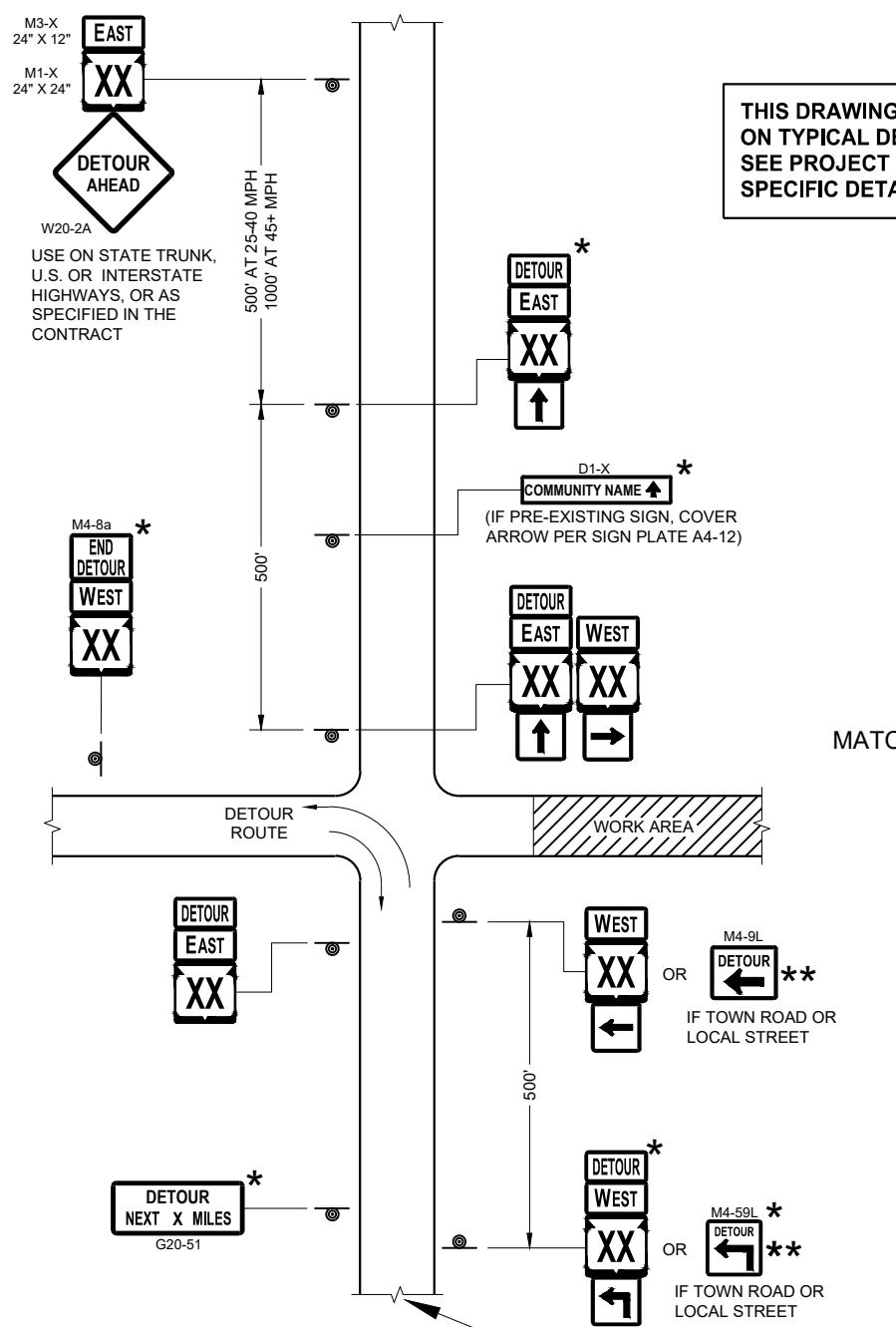
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" 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**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



THIS DRAWING PROVIDES GENERAL GUIDANCE ON TYPICAL DETOUR SIGN LAYOUT AND SPACING. SEE PROJECT DETOUR SIGNING SHEETS FOR SPECIFIC DETAILS FOR EACH PROJECT.

LEGEND

- SIGN ON PERMANENT SUPPORT
- WORK AREA
- M4 - 8
- M3 - X
- M1 - 4
- M1 - 6
- M1 - 5A
- M05 - 1
- M06 - 1
- M06 - 1

GENERAL NOTES

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

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. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. MODIFY EXISTING SIGNS WHERE POSSIBLE.

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

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.

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

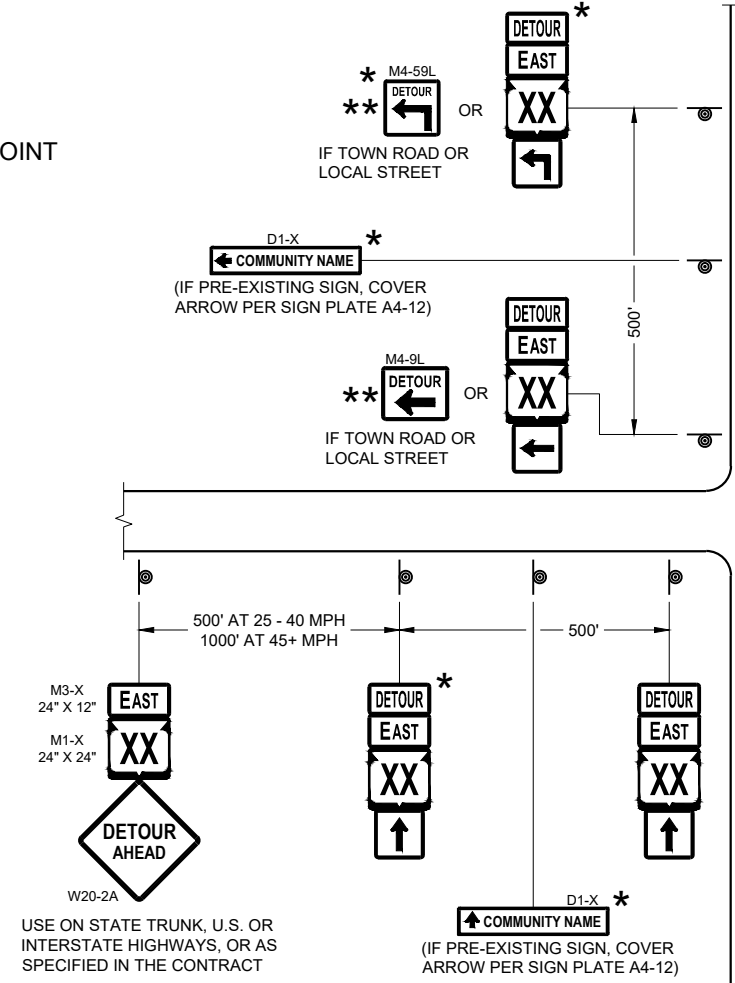
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

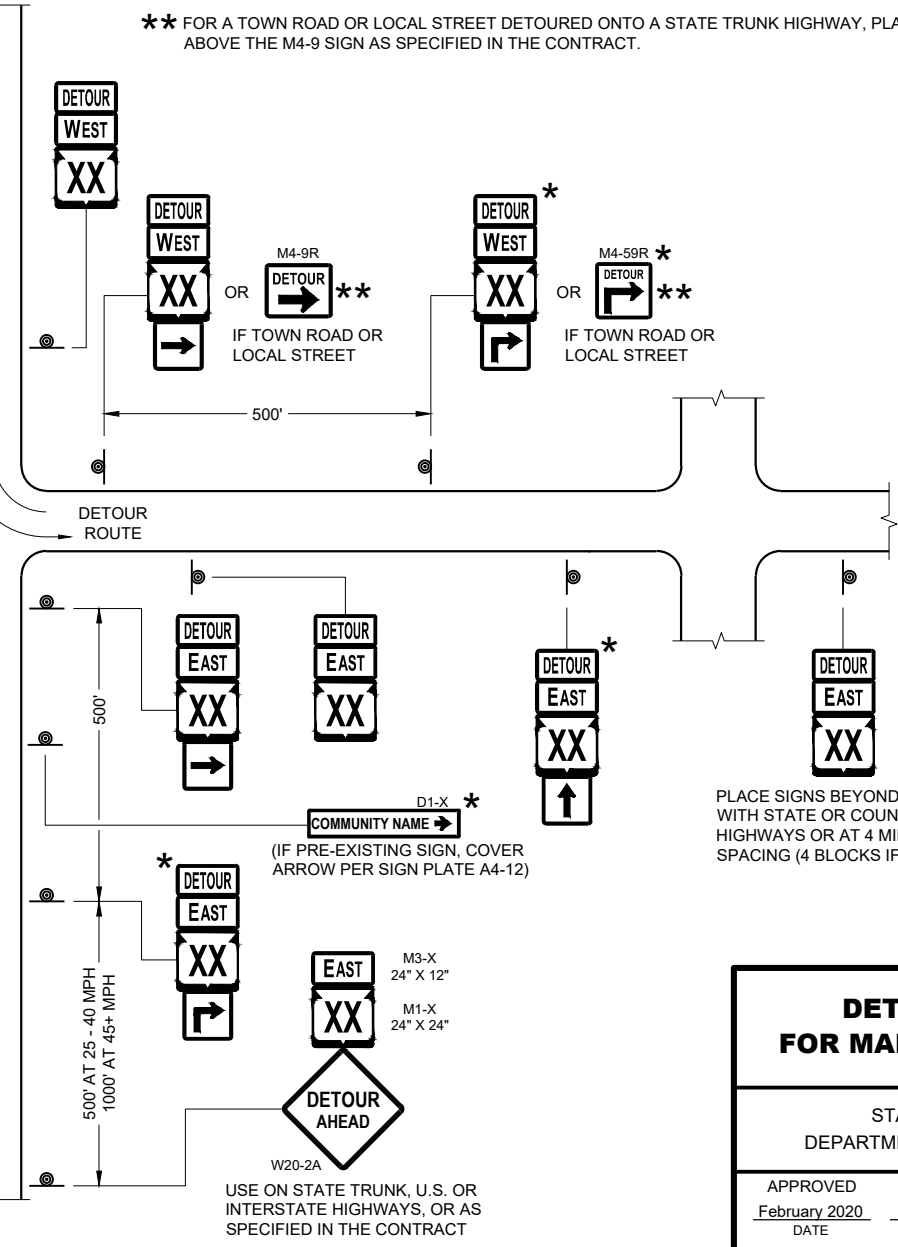
- M3-X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1-4, M1-5A AND M1-6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- M05-1 AND M06-1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- M4-9 AND M4-59 SHALL BE 30" X 24"
- M4-8a SHALL BE 24" X 18"
- G20-51 SHALL BE 60" X 24"
- W20-2A SHALL BE 48" X 48"
- D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

- * OPTIONAL SIGNS. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS.
- ** FOR A TOWN ROAD OR LOCAL STREET DETOURED ONTO A STATE TRUNK HIGHWAY, PLACE A ROAD NAME PLAQUE ABOVE THE M4-9 SIGN AS SPECIFIED IN THE CONTRACT.

MATCH POINT



**DETAIL F
DETOUR SIGNING**



PLACE SIGNS BEYOND INTERSECTIONS WITH STATE OR COUNTY TRUNK HIGHWAYS OR AT 4 MILE MAXIMUM SPACING (4 BLOCKS IF URBAN AREA)

SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS AND DETAIL A OR B ON SDD SHEET 15C02 - SHEET "a"




DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2020 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

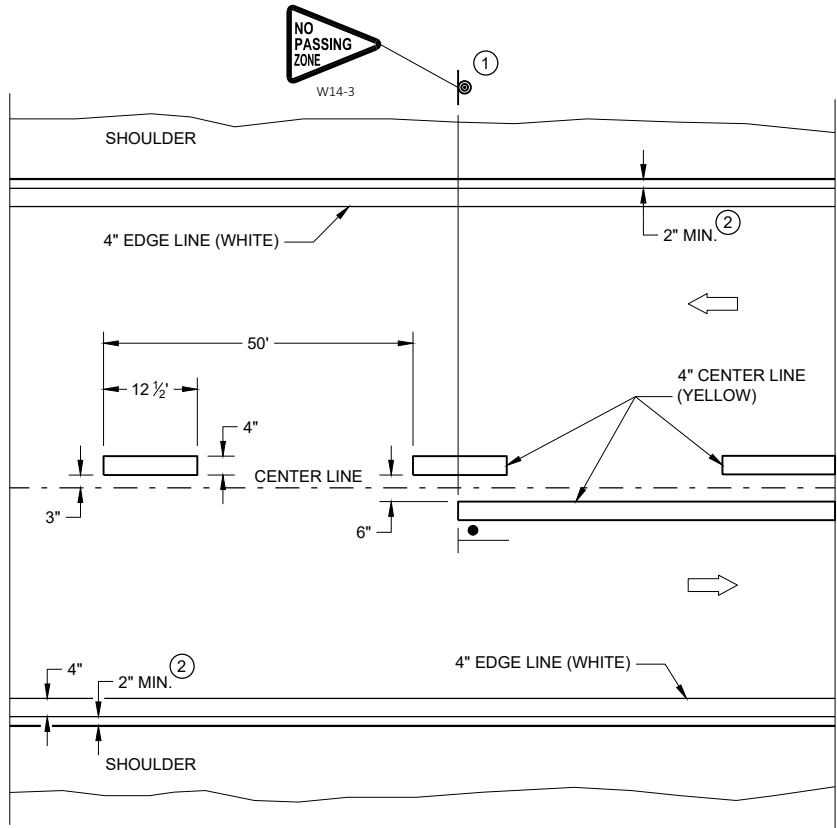
GENERAL NOTES

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

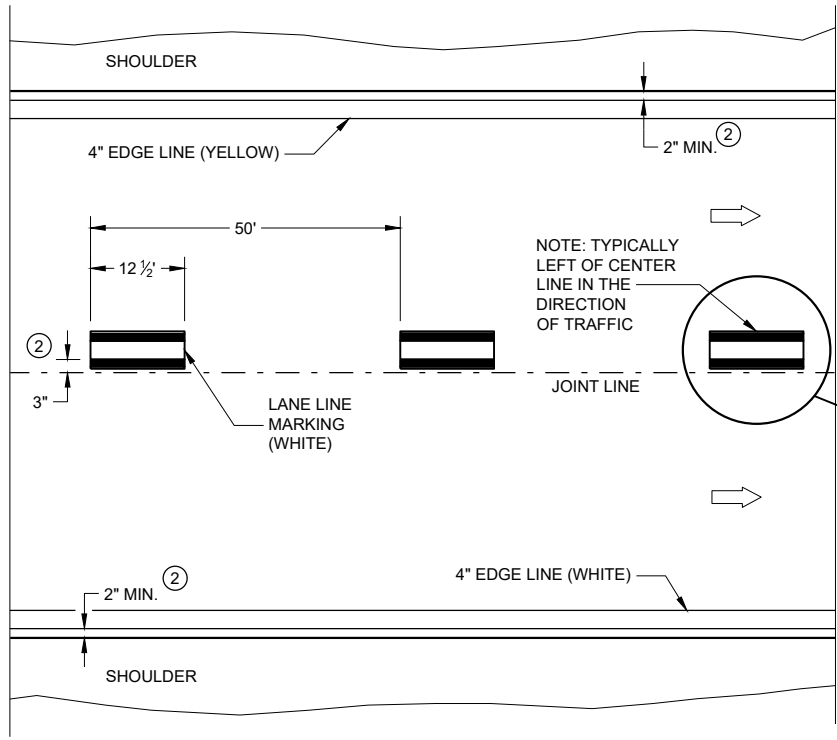
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

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

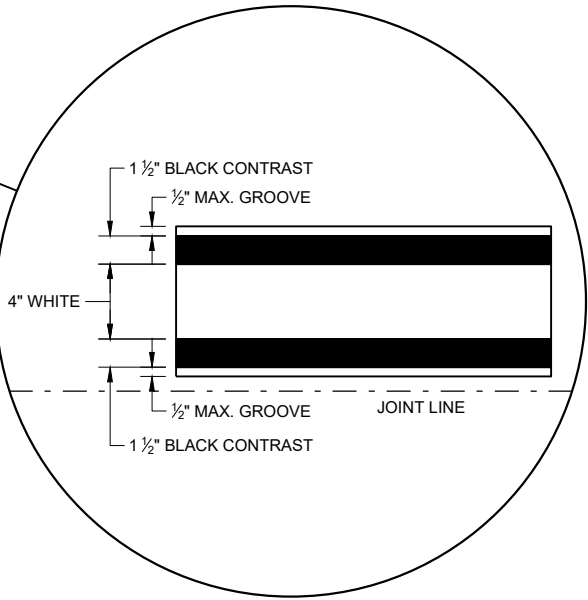


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



PERMANENT LONGITUDINAL PAVEMENT MARKINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

* PROVIDE FOR THREE BEAM GUARD RAIL ATTACHMENT, AT UNUSED ANCHOR ASSEMBLIES CAULK HOLES SHUT WITH "100% SILICONE CAULK".

○ INDICATES WING NUMBER

DESIGN DATA

LIVE LOAD:

DESIGN LOADING: HL-93
 INVENTORY RATING FACTOR: RF = 1.01
 OPERATING RATING FACTOR: RF = 1.31
 WISCONSIN STANDARD PERMIT VEHICLE (WIS.-SPV): 250(KIPS)

STRUCTURE IS DESIGNED FOR A FUTURE WEARING SURFACE OF 20 POUNDS PER SQUARE FOOT.

MATERIAL PROPERTIES:

CONCRETE MASONRY:
 SUPERSTRUCTURE $f'c = 4,000$ P.S.I.
 ALL OTHER $f'c = 3,500$ P.S.I.

BAR STEEL REINFORCEMENT:
 GRADE 60 $f_y = 60,000$ P.S.I.

FOUNDATION DATA

ABUTMENTS TO BE SUPPORTED ON HP 10X42 PILING SEATED IN HOLES PRE-BORED TO EL. 918.0 (WEST ABUT.) AND EL. 917.5 (EAST ABUT.). PILE DRIVING IS NOT REQUIRED. ESTIMATED PILE LENGTH 20 FEET LONG AT BOTH ABUTMENTS.

THE FACTORED AXIAL RESISTANCE OF THE PILES IN COMPRESSION USED FOR DESIGN IS 180 TONS MULTIPLIED BY A RESISTANCE FACTOR OF 0.5.

HYDRAULIC DATA

100 YEAR FREQUENCY

$Q_{100} = 700$ C.F.S.
 $VEL_{100} = 3.46$ F.P.S.
 $HW_{100} = EL. 937.30$
 WATERWAY AREA = 202.31 SQ. FT.
 DRAINAGE AREA = 5.4 SQ. MI.
 ROADWAY OVERTOPPING = N/A
 SCOUR CRITICAL CODE = 5

2 YEAR FREQUENCY

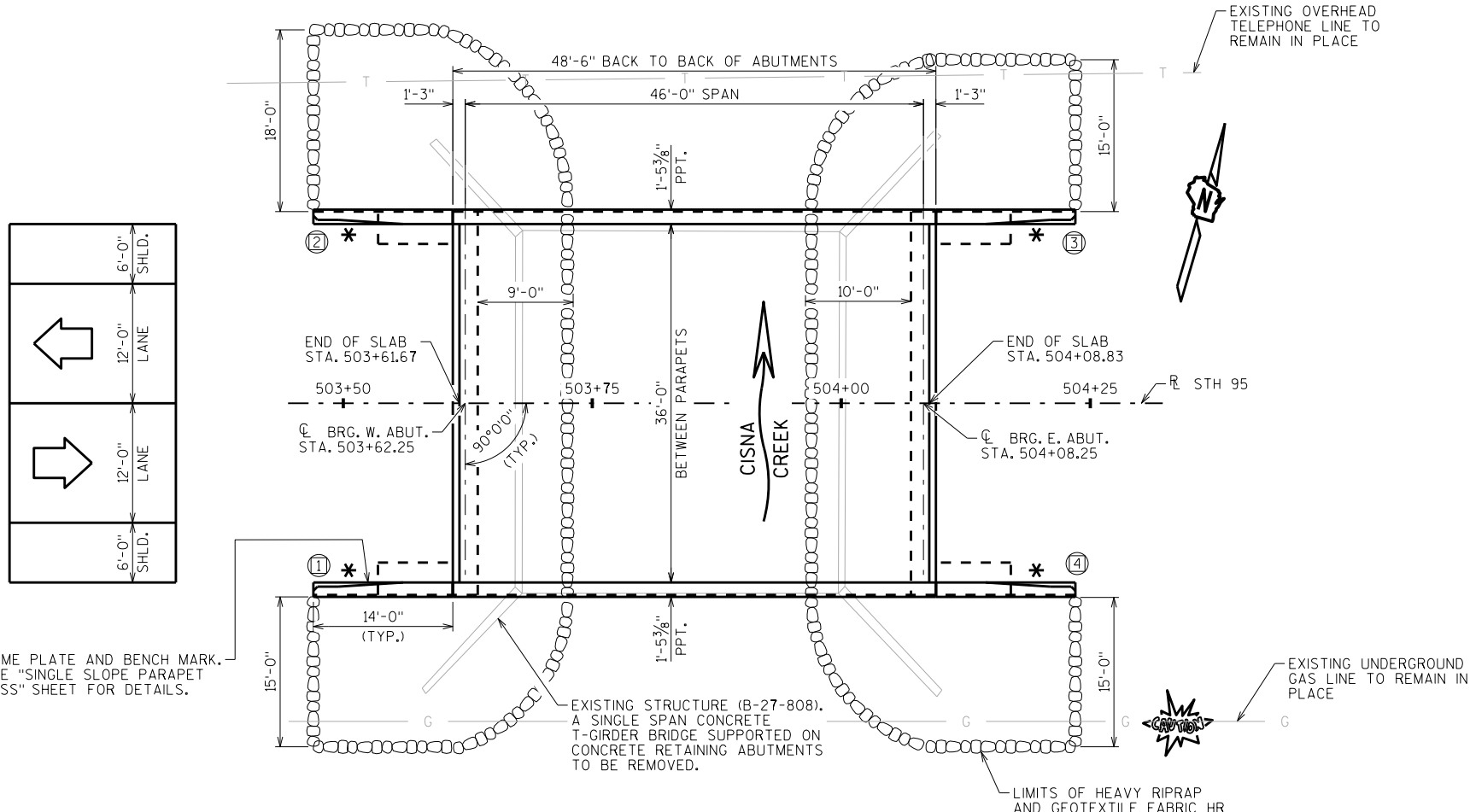
$Q_2 = 125$ C.F.S.
 $VEL_2 = 2.59$ F.P.S.
 $HW_2 = EL. 933.16$

TRAFFIC VOLUME

STH 95
 ADT = 2100 (2042)
 R.D.S. = 60 M.P.H.

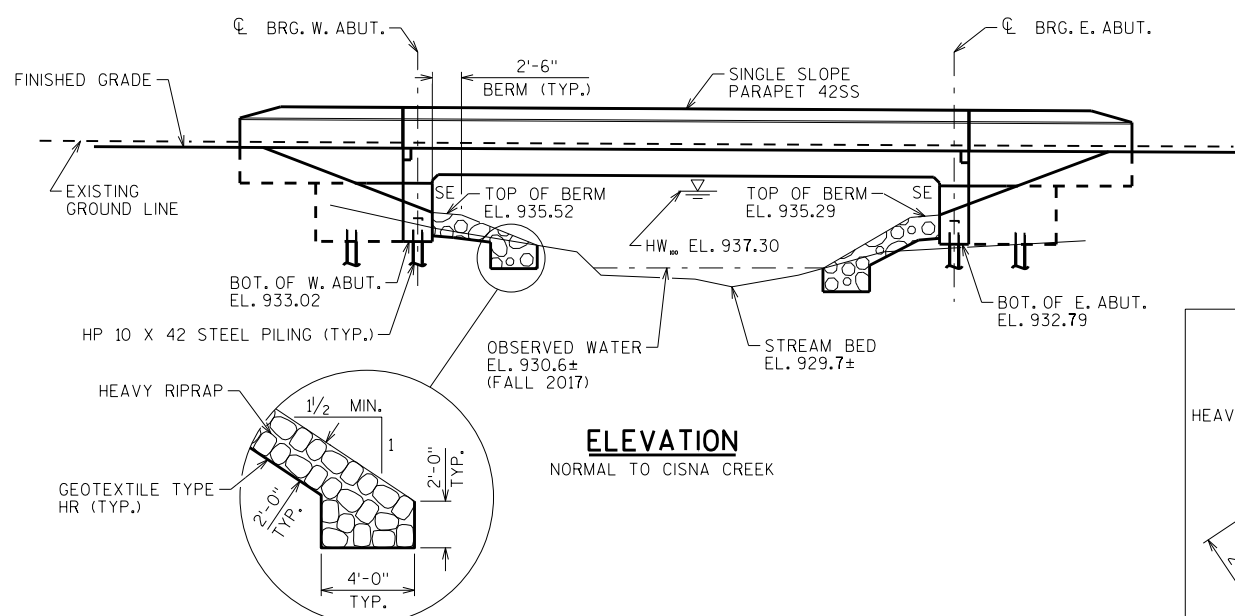
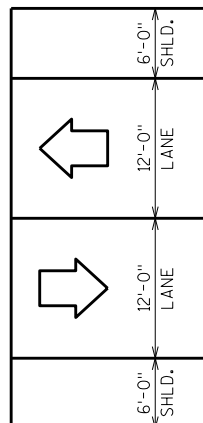
LIST OF DRAWINGS

1. GENERAL PLAN
2. CROSS SECTION & QUANTITIES
3. SUBSURFACE EXPLORATION
4. WEST ABUTMENT
5. WEST ABUTMENT DETAILS
6. EAST ABUTMENT
7. EAST ABUTMENT DETAILS
8. SUPERSTRUCTURE
9. SUPERSTRUCTURE DETAILS
10. SINGLE SLOPE PARAPET 42SS

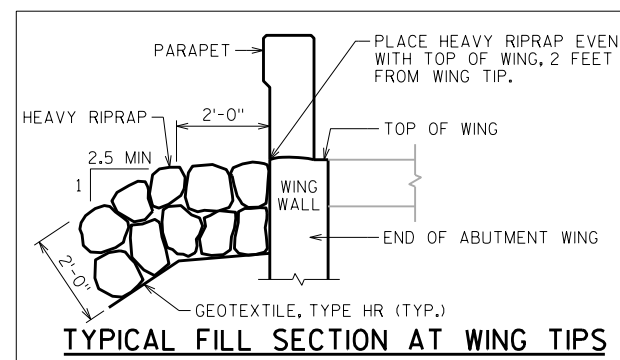


PLAN
 SINGLE SPAN FLAT CONCRETE SLAB

NAME PLATE AND BENCH MARK. SEE "SINGLE SLOPE PARAPET 42SS" SHEET FOR DETAILS.



ELEVATION
 NORMAL TO CISNA CREEK



TYPICAL FILL SECTION AT WING TIPS

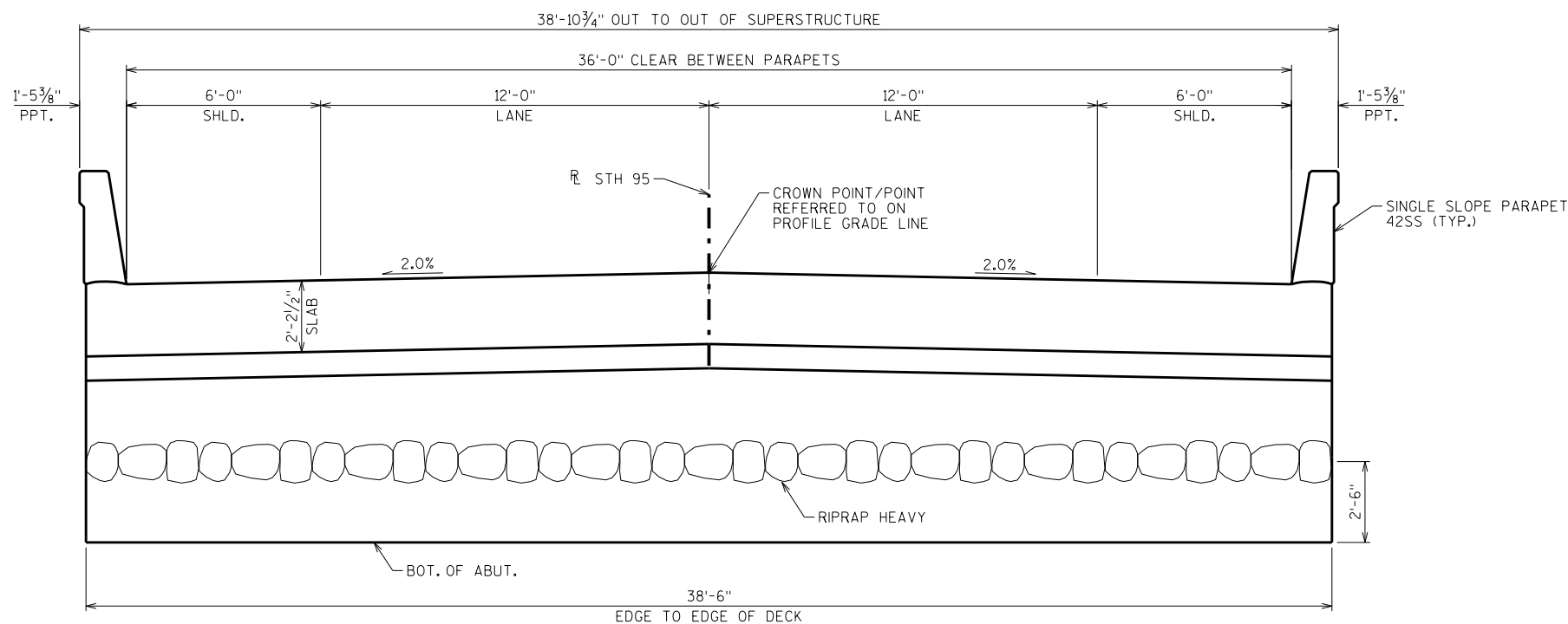
STRUCTURE DESIGN CONTACTS:

ISATOU CEESAY (608) 266-9557
 LAURA SHADEWALD (608) 267-9592

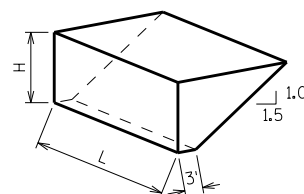
NO.	DATE	REVISION	BY
ACCEPTED		DATE	
CHIEF STRUCTURES DESIGN ENGINEER		11/17/22	
STRUCTURE B-27-169			
STH 95 OVER CISNA CREEK			
COUNTY	JACKSON	TOWN	ALMA
DESIGN SPEC. AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS			
DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
IFC	MWB	MJH	MWB
GENERAL PLAN			SHEET 1 OF 10

GENERAL NOTES

- DRAWINGS SHALL NOT BE SCALED.
- BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2" CLEAR UNLESS OTHERWISE SHOWN OR NOTED.
- THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.
- BEVEL EXPOSED EDGES OF CONCRETE 3/4" UNLESS OTHERWISE NOTED.
- THE UPPER LIMITS OF "EXCAVATION FOR STRUCTURES BRIDGES B-27-169" SHALL BE THE EXISTING GROUNDLINE.
- AT THE BACK FACE OF ABUTMENT ALL VOLUME WHICH CANNOT BE PLACED BEFORE ABUTMENT CONSTRUCTION AND IS NOT OCCUPIED BY THE NEW STRUCTURE SHALL BE BACKFILLED WITH STRUCTURE BACKFILL TYPE A.
- 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 QUANTITY FOR BACKFILL STRUCTURE IS CALCULATED BASED ON THE DETAIL SHOWN IN THE PLANS.
- PROTECTIVE SURFACE TREATMENT TO BE APPLIED TO THE ENTIRE EXPOSED TOP OF SLAB SURFACE AND TO THE VERTICAL AND HORIZONTAL SURFACES OF THE PAVING NOTCHES AT ABUTMENT DIAPHRAGMS.
- PIGMENTED SURFACE SEALER TO BE APPLIED TO THE FRONT FACE AND THE TOP OF THE PARAPETS, INCLUDING PARAPETS ON WINGS.
- THE SLOPE OF THE FILL IN FRONT OF THE ABUTMENTS SHALL BE COVERED WITH HEAVY RIPRAP AND GEOTEXTILE TYPE "HR" TO THE EXTENT SHOWN ON SHEET 1 AND THE ABUTMENT DETAILS.
- SLAB FALSEWORK SHALL BE SUPPORTED ON PILES OR THE SUBSTRUCTURE, UNLESS AN ALTERNATE METHOD IS APPROVED BY THE ENGINEER.

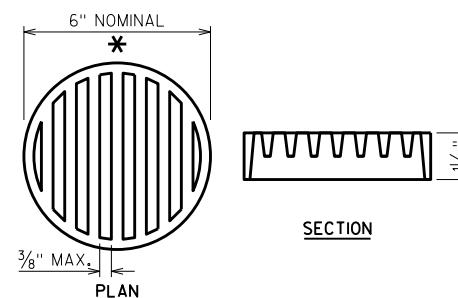


CROSS SECTION THRU ROADWAY LOOKING EAST



ABUTMENT BACKFILL DIAGRAM FOR WINGS PARALLEL TO ROADWAY

- L = OUT TO OUT OF ABUTMENT, INCLUDING WINGS (FT)
- H = AVERAGE ABUTMENT FILL HEIGHT (FT)
- EF = EXPANSION FACTOR (1.20 FOR CY BID ITEMS AND 1.00 FOR TON BID ITEMS)
- $V_{CF} = (L)(3.0')(H) + (L)(0.5')(1.5H)(H)$
- $V_{CY} = V_{CF} (EF) / 27$
- $V_{TON} = V_{CY} (2.0)$

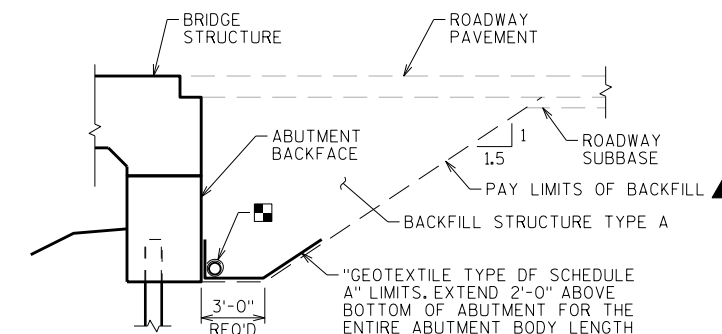


RODENT SHIELD DETAIL

* 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.



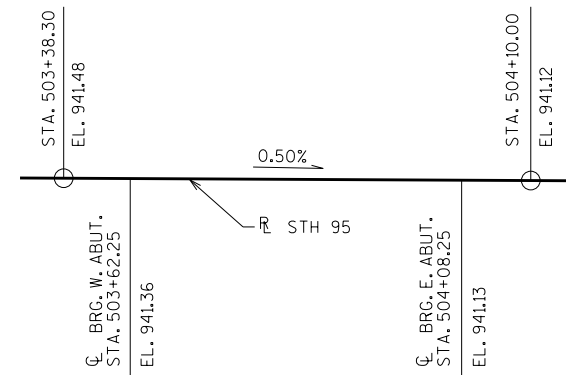
TYPICAL SECTION THRU ABUTMENT

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

■ PIPE UNDERDRAIN WRAPPED (6 INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. ATTACH RODENT SHIELD AT ENDS OF PIPE UNDERDRAIN.

TOTAL ESTIMATED QUANTITIES

BID ITEM NUMBER	BID ITEMS	UNIT	SUPER	WEST ABUT.	EAST ABUT.	TOTALS
203.0260	REMOVING STRUCTURE OVER WATERWAY MINIMAL DEBRIS B-27-808	EACH	---	---	---	1
206.1001	EXCAVATION FOR STRUCTURES BRIDGES B-27-169	EACH	---	---	---	1
210.1500	BACKFILL STRUCTURE TYPE A	TON	---	162	162	324
502.0100	CONCRETE MASONRY BRIDGES	CY	186.1	34.7	34.7	256
502.3200	PROTECTIVE SURFACE TREATMENT	SY	208	---	---	208
502.3210	PIGMENTED SURFACE SEALER	SY	75	---	---	75
505.0400	BAR STEEL REINFORCEMENT HS STRUCTURES	LB	---	2,090	2,090	4,180
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	27,550	1,330	1,330	30,210
516.0500	RUBBERIZED MEMBRANE WATERPROOFING	SY	---	12	12	24
550.0020	PRE-BORING ROCK OR CONSOLIDATED MATERIALS	LF	---	120	120	240
550.1100	PILING STEEL HP 10-INCH X 42 LB	LF	---	160	160	320
606.0300	RIPRAP HEAVY	CY	---	186	186	372
612.0406	PIPE UNDERDRAIN WRAPPED 6-INCH	LF	---	74	74	148
614.0150	ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	EACH	4	---	---	4
645.0111	GEOTEXTILE TYPE DF SCHEDULE A	SY	---	37	37	74
645.0120	GEOTEXTILE TYPE HR	SY	---	309	310	619
	NON-BID ITEMS					
	FILLER	SIZE	---	---	---	1/2", 3/4"

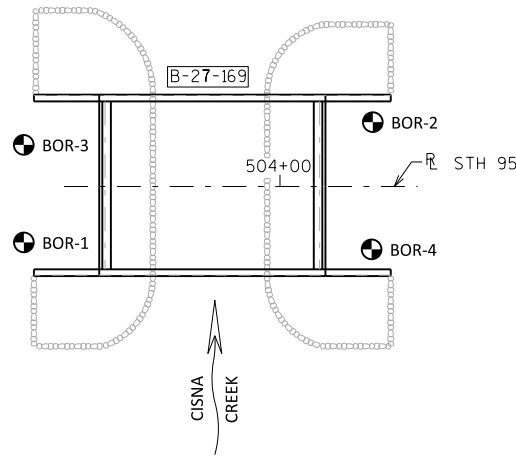


PROFILE GRADE LINE - R STH 95

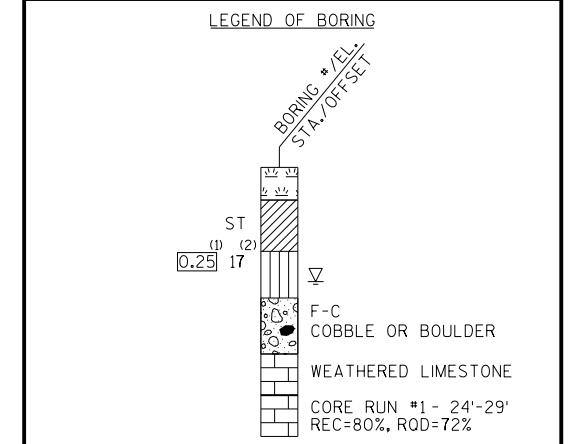
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-169			
DRAWN BY		MJH	PLANS CKD. MWB
CROSS SECTION & QUANTITIES			SHEET 2

BORING #	DATE COMPLETED	NORTHING (Y)	EASTING (X)
1	9/07/2021	153466	84124
2	9/07/2021	153504	84189
3	9/07/2021	153483	84119
4	9/07/2021	153486	84194

BORINGS COMPLETED BY: AET
 REPORT COMPLETED BY: WISDOT
 ALL COORDINATES REFERENCED TO WCCS NAD 83(91) JACKSON COUNTY
 COORDINATES COLLECTED USING NON-SURVEY GRADE EQUIPMENT



STATE PROJECT NUMBER		
7520-00-79		
MATERIAL SYMBOLS		
	ASPHALT	
	CONCRETE	
	SAND	
	BOULDERS OR COBBLES	
	SHALE	
	SANDSTONE	
	LIMESTONE	
	IGNEOUS/META	



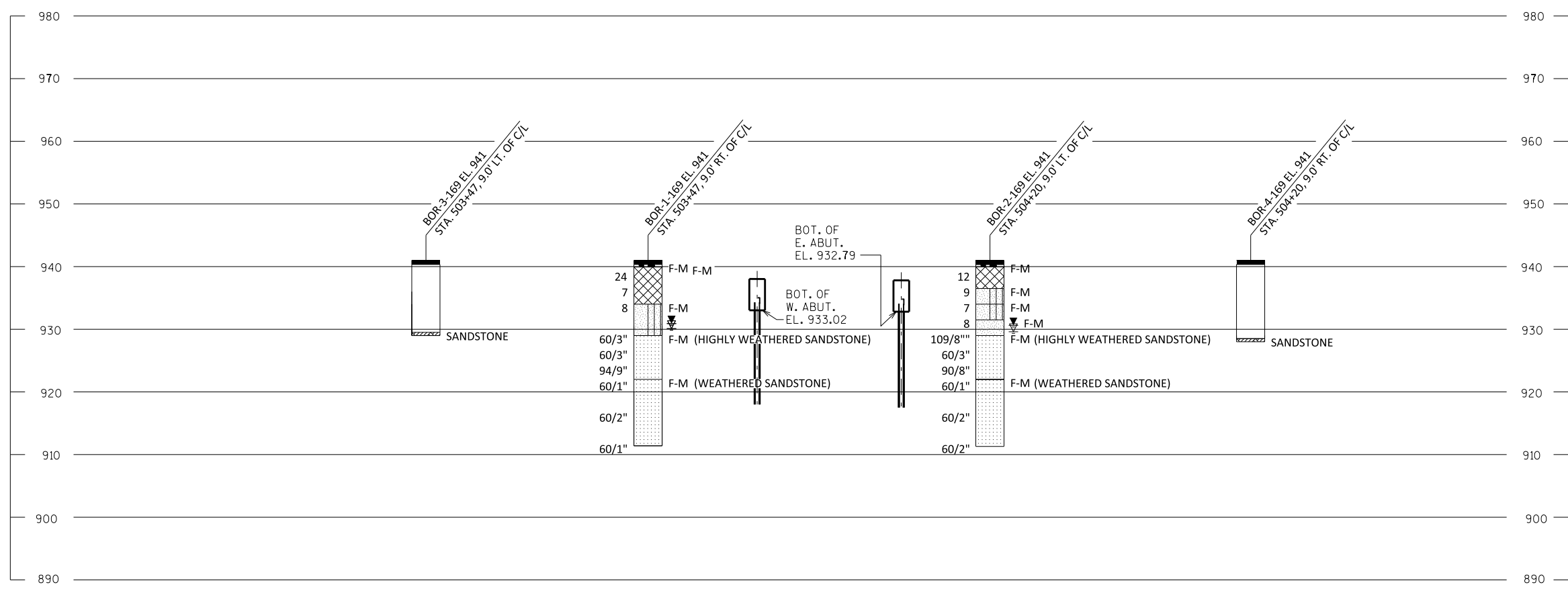
(1) UNCONFINED STRENGTH, AS DETERMINED BY A POCKET PENETROMETER (TSF)
 (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'N' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'N' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

GROUND WATER ELEVATION
 ▽ AT TIME OF DRILLING
 ▽ END OF DRILLING
 ▽ AFTER DRILLING

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

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

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

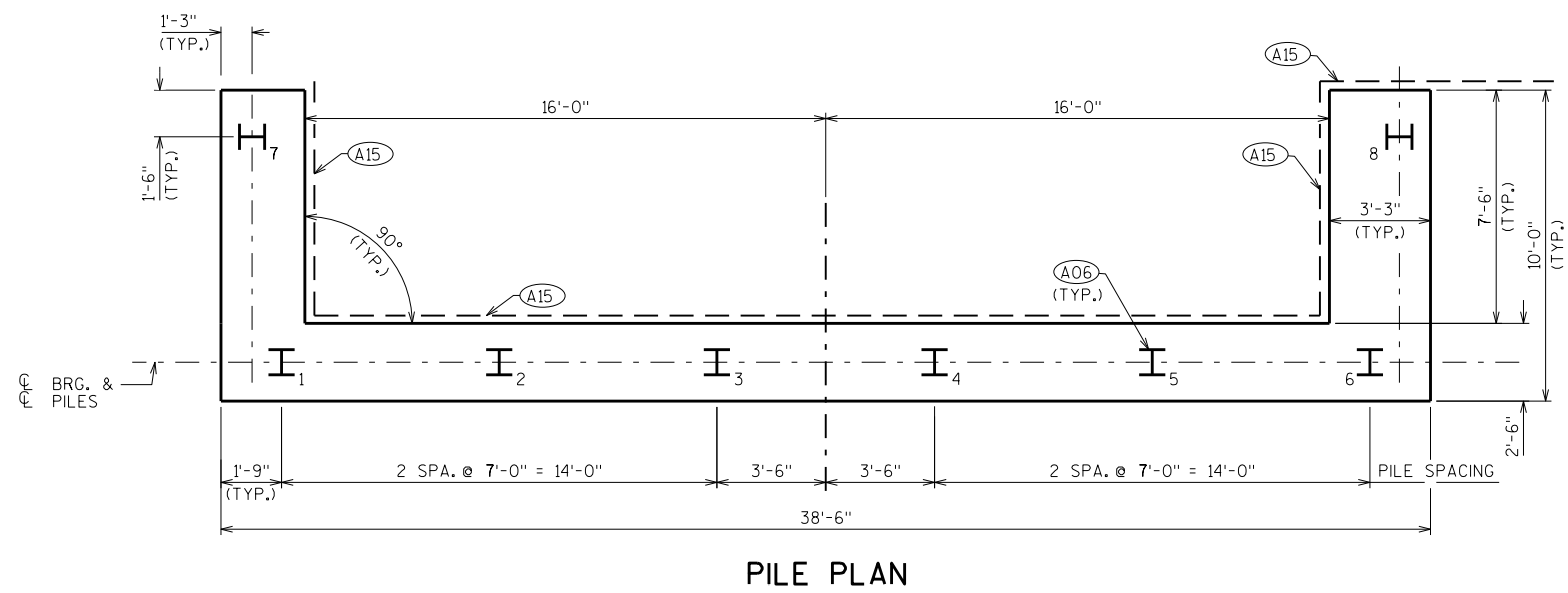
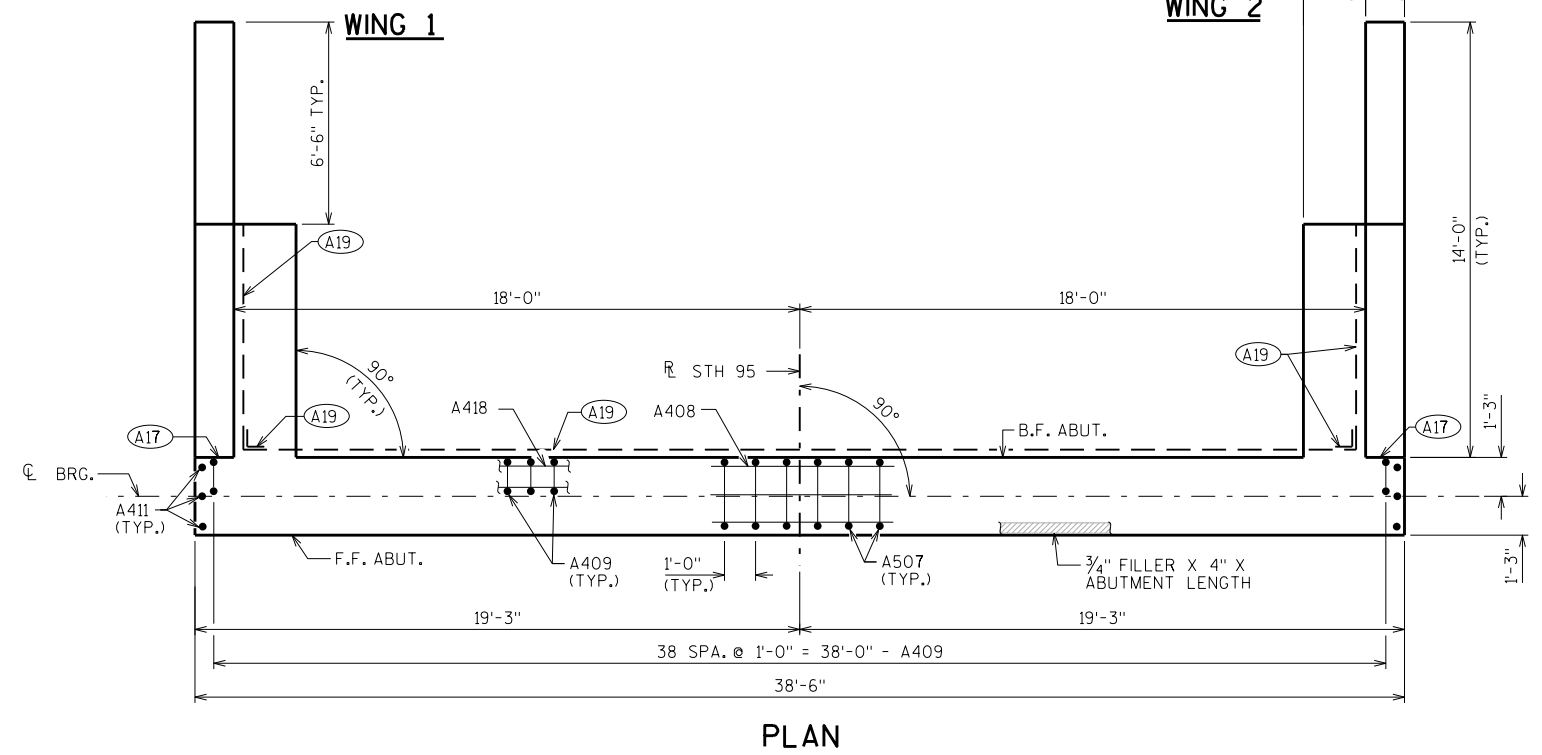
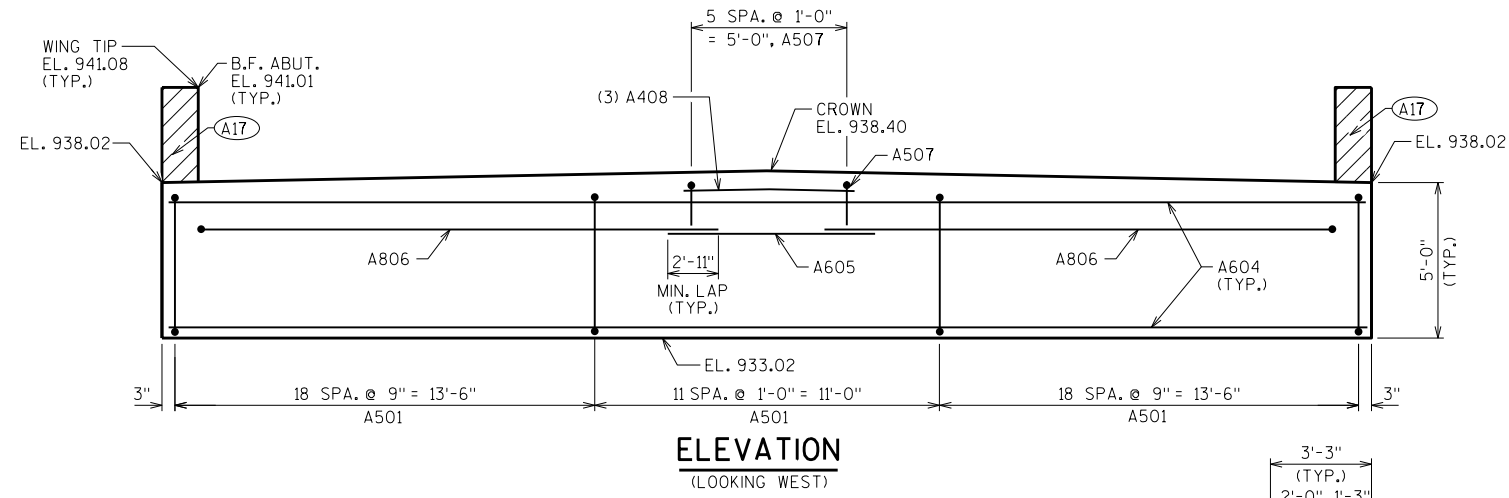


8

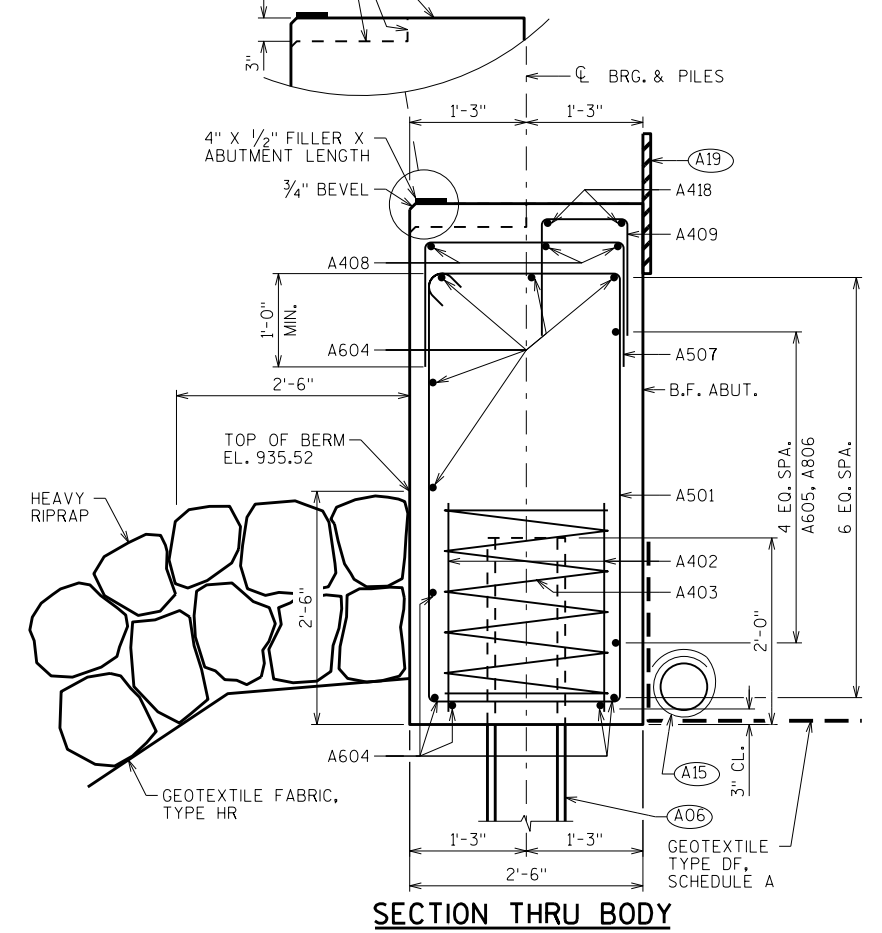
8

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-169			
DRAWN BY TLP/MJH		PLANS CKD. MWB	
SUBSURFACE EXPLORATION			SHEET 3

SCALE = 20:00

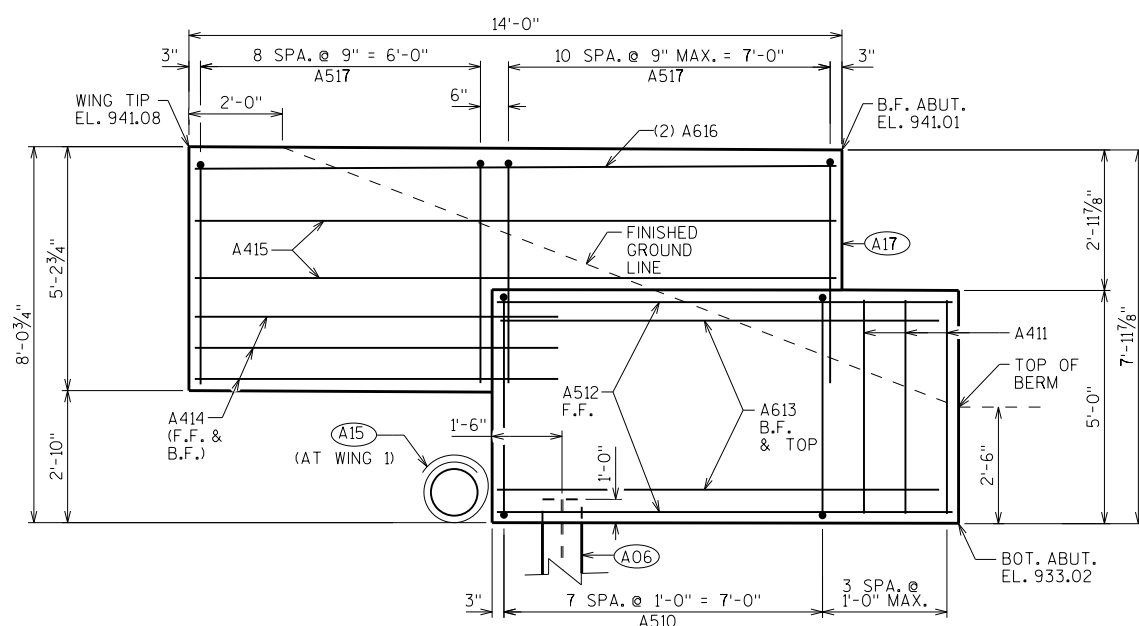


STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".

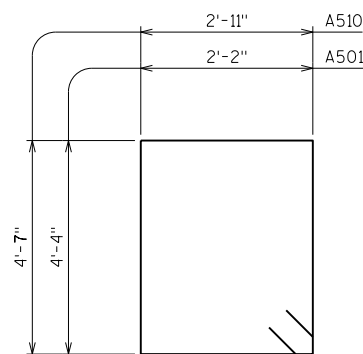


- (A06) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, FIRMLY SEATED IN HOLE PREBORED TO EL. 918.0 ESTIMATED 20'-0" LONG PILE DRIVING IS NOT REQUIRED.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE RODENT SHIELD DETAIL ON ABUT. DETAIL SHEET.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH): SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

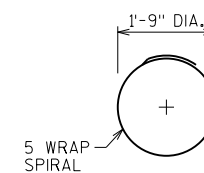
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-169			
DRAWN BY		MJH	PLANS CK'D. MWB
WEST ABUTMENT		SHEET 4	



WING 1 ELEVATION
LOOKING AT FRONT FACE,
WING 2 SIMILAR



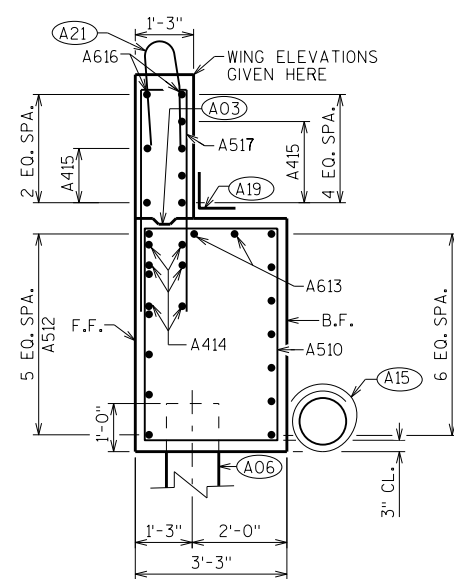
A501, A510



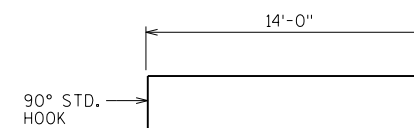
A403

BILL OF BARS NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

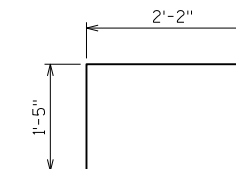
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A501		48	13'-8"	X		BODY-STIRRUPS
A402		12	2'-3"			PILES - 2 PER BODY PILE
A403		6	28'-0"	X		PILES - 1 PER BODY PILE
A604		10	38'-2"			BODY - HORIZ. - F.F., TOP. & BOT.
A605		5	13'-4"			BODY - HORIZ. - B.F. - MIDDLE
A806		10	15'-2"	X		BODY - HORIZ. - B.F. - ENDS
A507		6	4'-9"	X		BODY - VERT. - TOP - SUPPLEMENTAL
A408		3	5'-3"			BODY - HORIZ. - TOP - SUPPLEMENTAL
A409		38	3'-4"	X		BODY - VERT. - TOP
A510	X	16	15'-8"	X		WINGS 1 & 2 - STIRRUPS
A411		6	4'-7"			WINGS 1 & 2 - VERT. - ABUT. ENDS
A512	X	12	9'-8"			WINGS 1 & 2 - HORIZ. - F.F. - LOWER WINGS
A613	X	18	9'-5"			WINGS 1 & 2 - HORIZ. - B.F. - LOWER WINGS
A414	X	12	7'-9"			WINGS 1 & 2 - HORIZ. - UPPER WINGS
A415	X	12	13'-8"			WINGS 1 & 2 - HORIZ. - UPPER WINGS
A616	X	4	13'-8"			WINGS 1 & 2 - HORIZ. - UPPER WINGS - TOP
A517	X	40	10'-4"	X		WINGS 1 & 2 - VERT. - UPPER WINGS
A418		2	38'-2"			BODY - HORIZ. - TOP



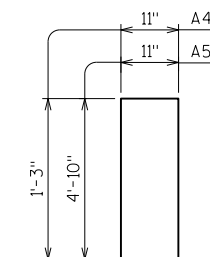
WING 1 SECTION
WING 2 SIMILAR



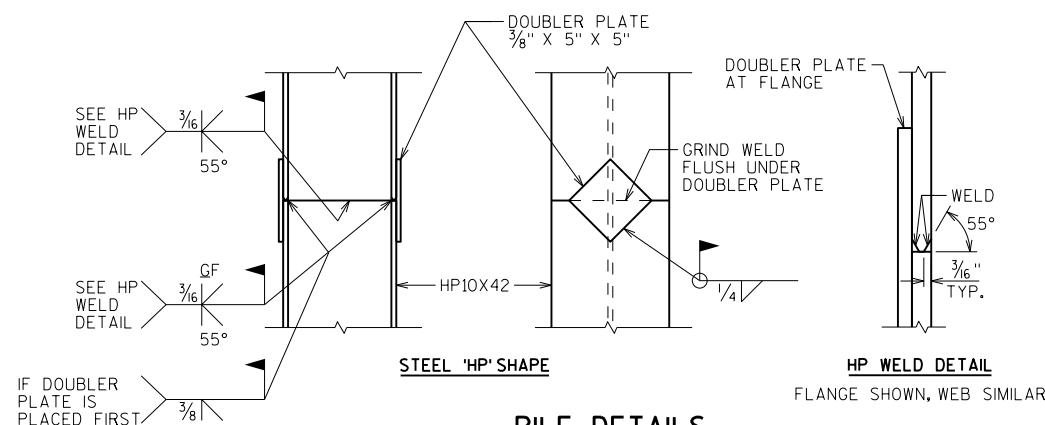
A806



A507



A409, A517

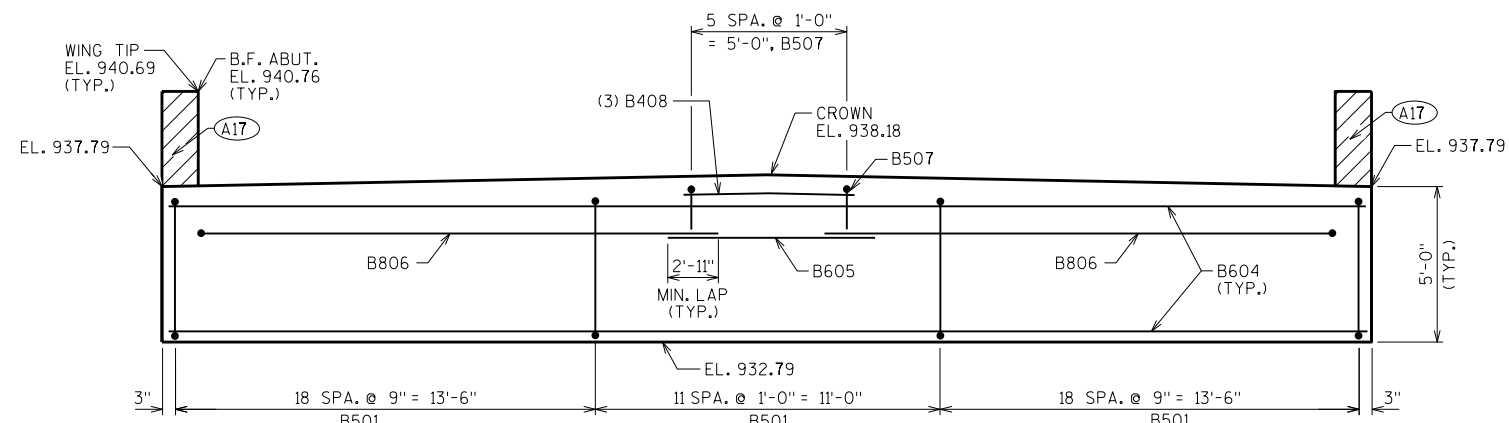


PILE DETAILS

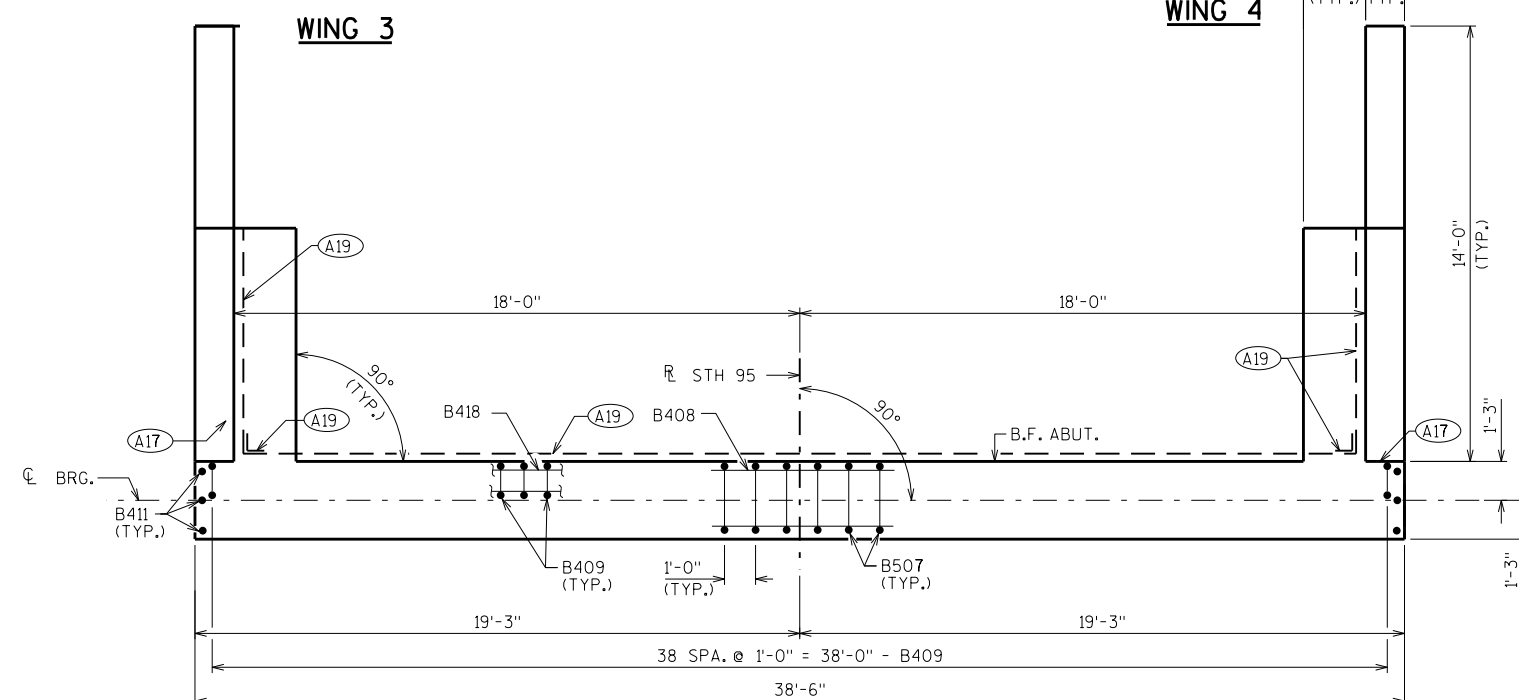
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6, (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A06) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, FIRMLY SEATED IN HOLE PREBORED TO EL. 918.0 ESTIMATED 20'-0" LONG PILE DRIVING IS NOT REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A21) FOR PPT. BARS & DIMENSIONS SEE PARAPET SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-169			
		DRAWN BY MJH	PLANS CK'D. MWB
WEST ABUTMENT DETAILS			SHEET 5

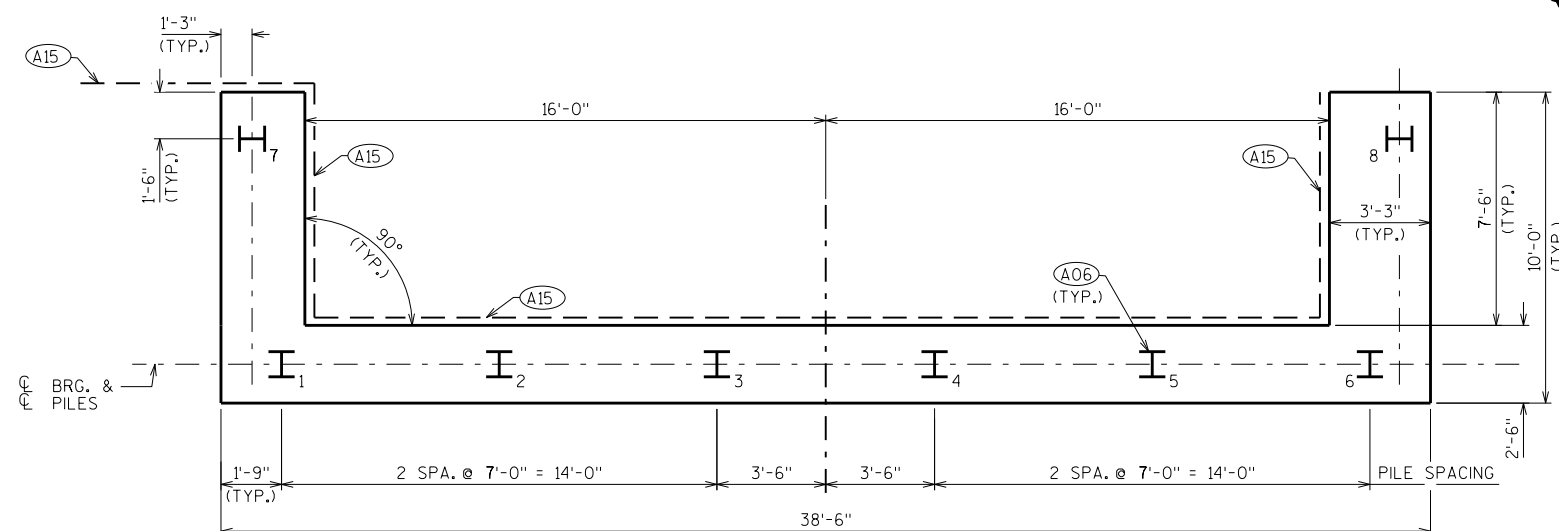
STEEL TROWEL TOP SURFACE OF ABUTMENT. PLACE MULTIPLE LAYERS OF POLYETHYLENE SHEETS OVER ENTIRE ABUTMENT TOP BEFORE PLACING BEARING PADS. TOTAL THICKNESS OF SHEETS SHALL BE AT LEAST 0.03".



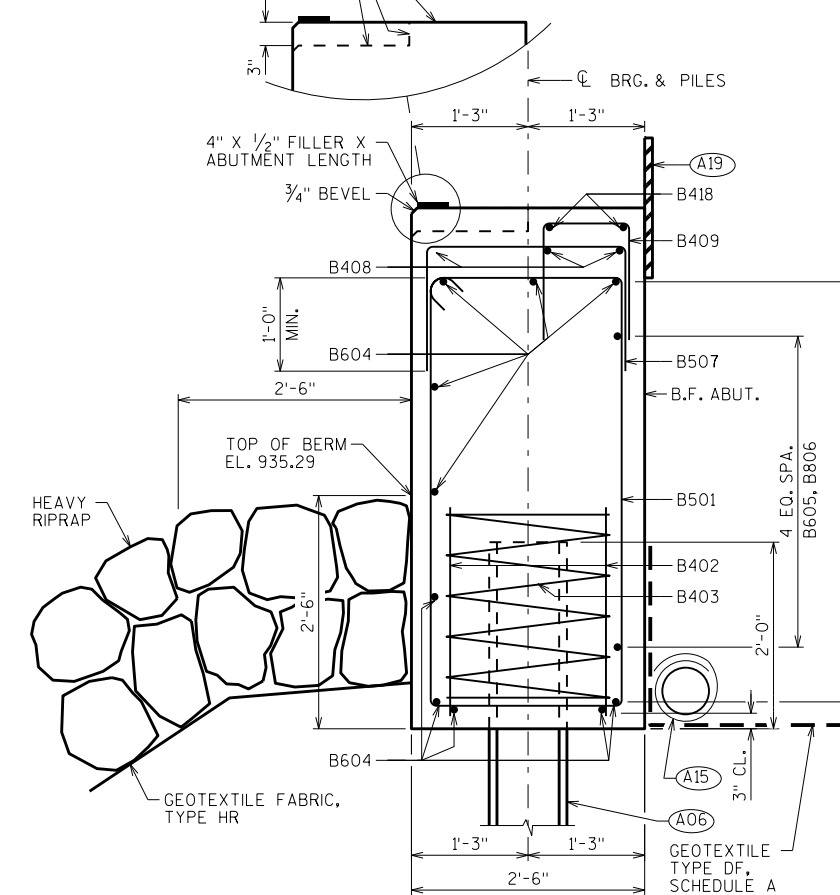
ELEVATION
(LOOKING EAST)



PLAN



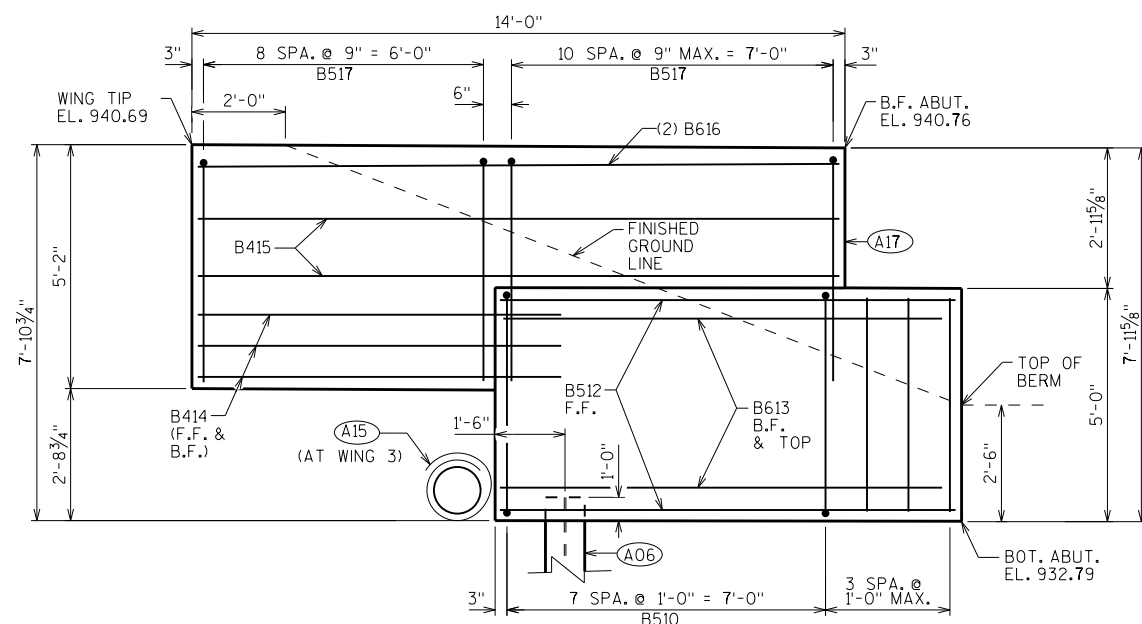
PILE PLAN



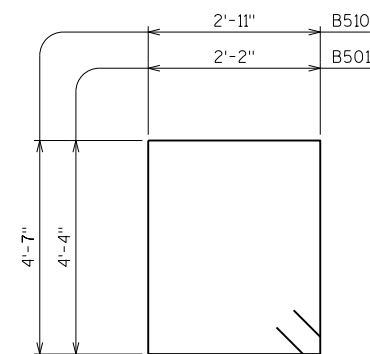
SECTION THRU BODY

- (A06) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, FIRMLY SEATED IN HOLE PREBORED TO EL. 917.5 ESTIMATED 20'-0" LONG PILE DRIVING IS NOT REQUIRED.
- (A15) PIPE UNDERDRAIN WRAPPED (6-INCH). SLOPE 0.5% MIN. TO SUITABLE DRAINAGE. RODENT SHIELD REQUIRED. SEE RODENT SHIELD DETAIL ON ABUT. DETAIL SHEET.
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- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

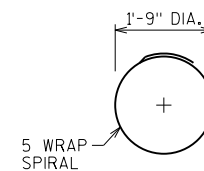
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-169			
DRAWN BY MJH		PLANS CK'D. MWB	
EAST ABUTMENT			SHEET 6



WING 3 ELEVATION
LOOKING AT FRONT FACE,
WING 4 SIMILAR



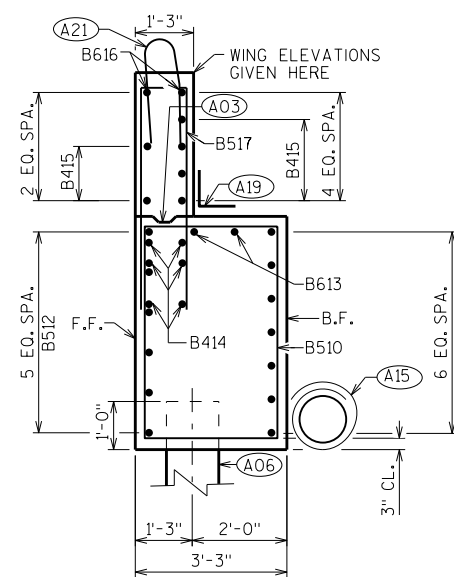
B501, B510



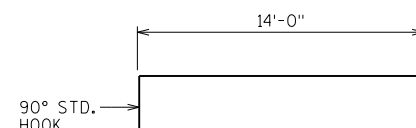
B403

BILL OF BARS NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

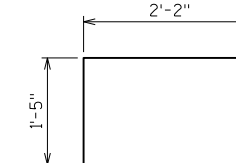
BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
B501		48	13'-8"	X		BODY-STIRRUPS
B402		12	2'-3"			PILES - 2 PER BODY PILE
B403		6	28'-0"	X		PILES - 1 PER BODY PILE
B604		10	38'-2"			BODY - HORIZ. - F.F., TOP, & BOT.
B605		5	13'-4"			BODY - HORIZ. - B.F. - MIDDLE
B806		10	15'-2"	X		BODY - HORIZ. - B.F. - ENDS
B507		6	4'-9"	X		BODY - VERT. - TOP - SUPPLEMENTAL
B408		3	5'-3"			BODY - HORIZ. - TOP - SUPPLEMENTAL
B409		38	3'-4"	X		BODY - VERT. - TOP
B510	X	16	15'-8"	X		WINGS 3 & 4 - STIRRUPS
B411		6	4'-7"			WINGS 3 & 4 - VERT. - ABUT. ENDS
B512	X	12	9'-8"			WINGS 3 & 4 - HORIZ. - F.F. - LOWER WINGS
B613	X	18	9'-5"			WINGS 3 & 4 - HORIZ. - B.F. - LOWER WINGS
B414	X	12	7'-9"			WINGS 3 & 4 - HORIZ. - UPPER WINGS
B415	X	12	13'-8"			WINGS 3 & 4 - HORIZ. - UPPER WINGS
B616	X	4	13'-8"			WINGS 3 & 4 - HORIZ. - UPPER WINGS - TOP
B517	X	40	10'-4"	X		WINGS 3 & 4 - VERT. - UPPER WINGS
B418		2	38'-2"			BODY - HORIZ. - TOP



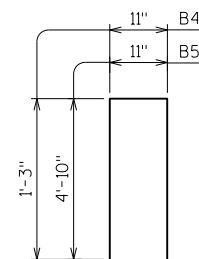
WING 3 SECTION
WING 4 SIMILAR



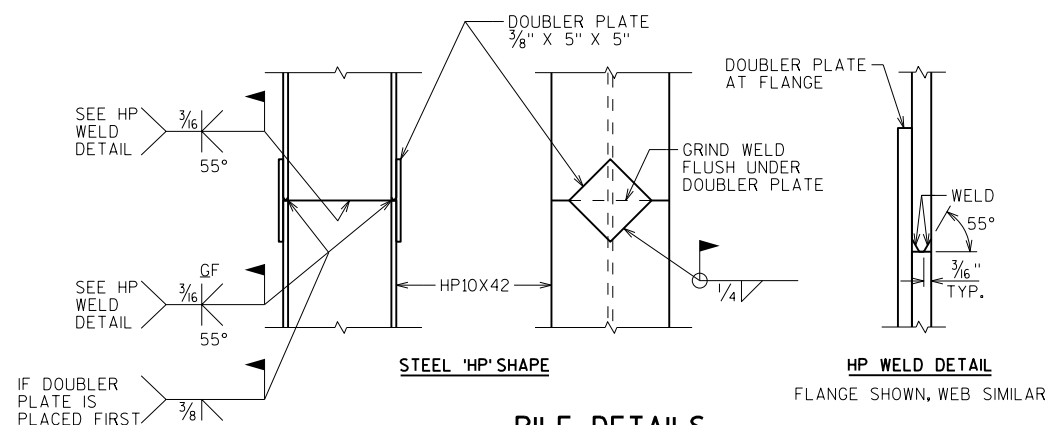
B806



B507



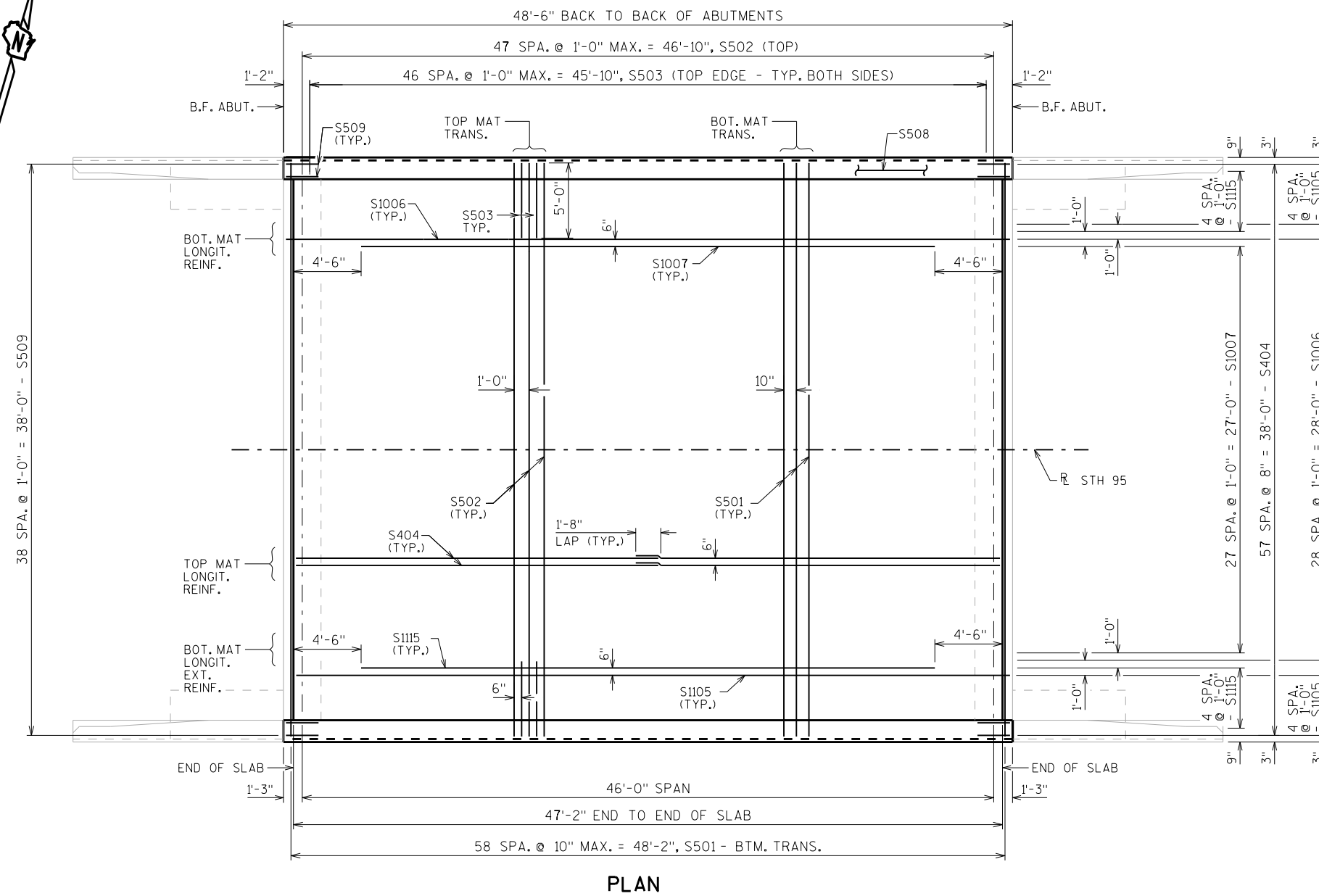
B409, B517



PILE DETAILS

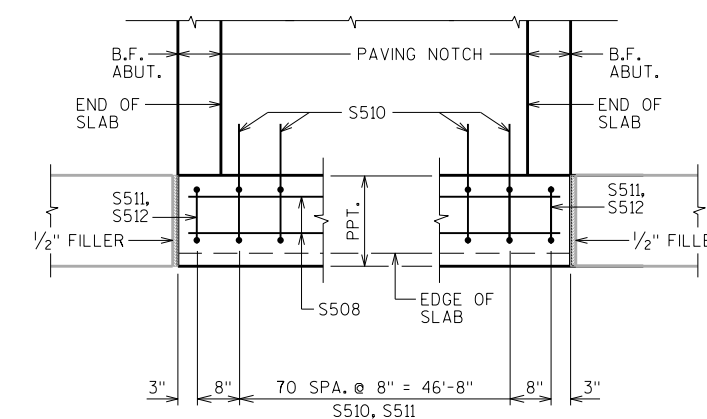
- (A03) OPTIONAL CONST. JOINT: KEYWAY FORMED BY BEVELED 2 x 6, (18" RMW @ B.F. & 3/4" "V" GROOVE @ F.F. IF JOINT IS USED).
- (A06) SUPPORT ABUTMENT ON HP 10 X 42 STEEL PILING, FIRMLY SEATED IN HOLE PREBORED TO EL. 917.5 ESTIMATED 20'-0" LONG PILE DRIVING IS NOT REQUIRED.
- (A17) 1/2" FILLER (INCLUDED IN WING LENGTH); SEAL ALL EXPOSED HORIZ. & VERT. SURFACES OF 1/2" FILLER WITH NON-STAINING GRAY NON-BITUMINOUS JOINT SEALER. (1" DEEP AND HOLD 1/8" BELOW SURFACE OF CONCRETE). EXTEND SEALER 3" BELOW GUTTER LINE AT INSIDE FACE.
- (A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.
- (A21) FOR PPT. BARS & DIMENSIONS SEE PARAPET SHEET.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-169			
DRAWN BY MJH		PLANS CKD. MWB	
EAST ABUTMENT DETAILS			SHEET 7



SECTION THRU PARAPET ON BRIDGE

● CONSTRUCTION JOINT - STRIKE OFF AS SHOWN



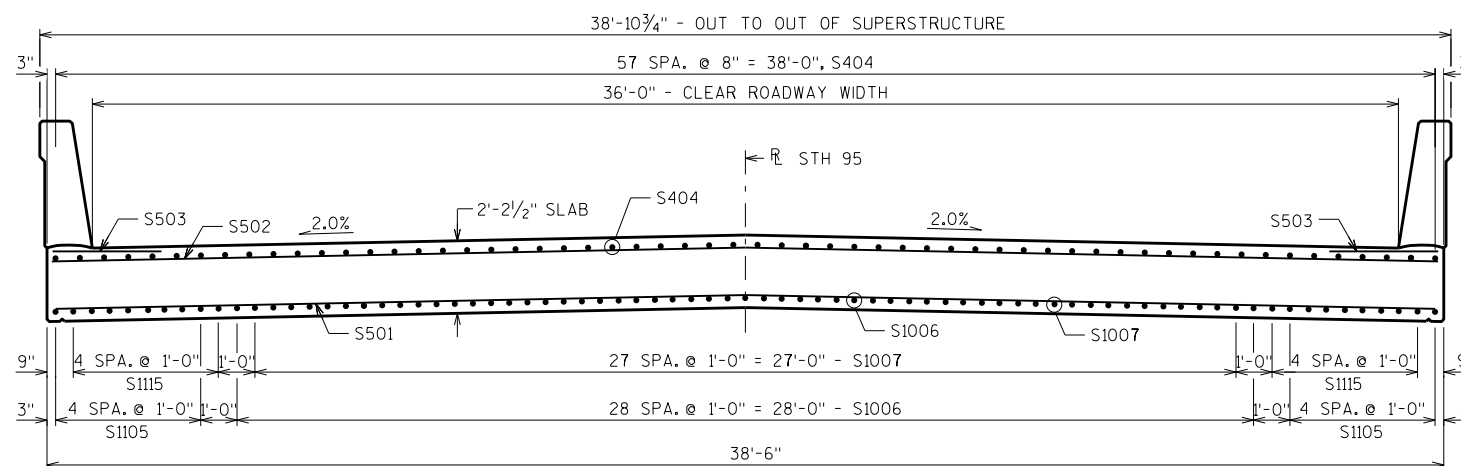
PARTIAL PLAN DETAIL OF PARAPET REINF.

(SHOWING SOUTH CORNERS OF WEST & EAST ABUTMENTS. DETAIL TYP. OF BOTH EDGES OF SUPERSTRUCTURE)

TOP OF SLAB ELEVATIONS

	W. ABUT.	1/10 PT.	2/10 PT.	3/10 PT.	4/10 PT.	5/10 PT.	6/10 PT.	7/10 PT.	8/10 PT.	9/10 PT.	E. ABUT.
N EDGE OF SLAB	941.00	940.98	940.95	940.93	940.91	940.88	940.86	940.84	940.81	940.79	940.77
N FLOWLINE	941.00	940.98	940.95	940.93	940.91	940.88	940.86	940.84	940.81	940.79	940.77
CROWN/R STH 95	941.36	941.34	941.31	941.29	941.27	941.24	941.22	941.20	941.17	941.15	941.13
S FLOWLINE	941.00	940.98	940.95	940.93	940.91	940.88	940.86	940.84	940.81	940.79	940.77
S EDGE OF SLAB	941.00	940.98	940.95	940.93	940.91	940.88	940.86	940.84	940.81	940.79	940.77

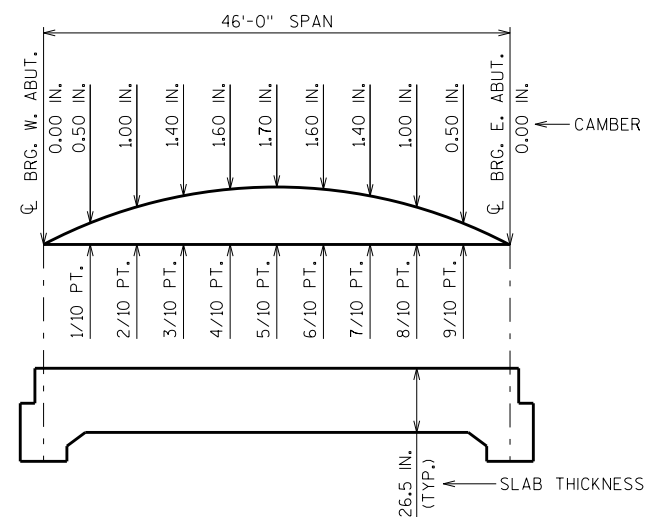
NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-169			
DRAWN BY		MJH	PLANS CK'D. MWB
SUPERSTRUCTURE			SHEET 8



CROSS SECTION THRU ROADWAY

BILL OF BARS NOTE: THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
S501	X	59	38'-2"			BOT. TRANSVERSE
S502	X	48	38'-2"			TOP TRANSVERSE
S503	X	94	5'-0"			TOP TRANSVERSE - EDGE OF SLAB
S404	X	116	24'-3"			TOP LONGIT.
S1105	X	10	48'-2"			BOT. LONGIT. - EXT. STRIP
S1006	X	29	48'-2"			BOT. LONGIT.
S1007	X	28	39'-2"			BOT. LONGIT.
S508	X	16	48'-2"			PARAPET - LONGITUDINAL
S509	X	78	8'-1"	X		DIAPH. - VERT.
S510	X	142	4'-5"	X		PARAPET & SLAB - VERT.
S511	X	146	6'-8"	X		PARAPET - VERT.
S512	X	4	5'-10"	X		PARAPET & SLAB - VERT. - PAVING NOTCH
S513	X	78	3'-10"	X		DIAPH. - VERT.
S514	X	6	38'-2"			DIAPH. - HORIZ.
S1115	X	10	39'-2"			BOT. LONGIT. - EXT. STRIP



CAMBER AND SLAB THICKNESS DIAGRAM

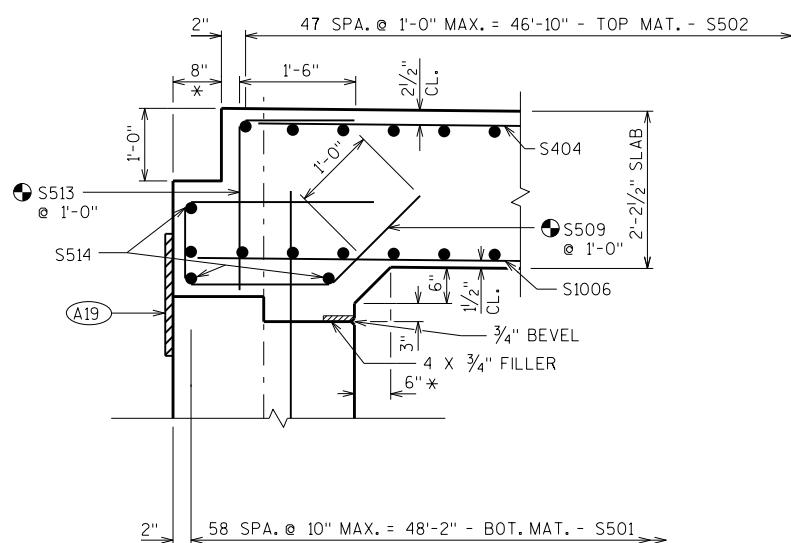
CAMBER IS BASED ON 3 TIMES DEAD LOAD DEFLECTION.

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 THE FALSEWORK HAS BEEN RELEASED.

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

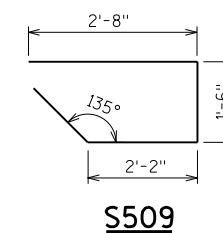
TOP OF DECK ELEVATION AT FINAL GRADE
 MINUS..... SLAB THICKNESS
 PLUS..... CAMBER
 PLUS..... FORM SETTLEMENT/DEFLECTION DUE TO PLACEMENT OF SLAB CONCRETE (TO BE COMPUTED BY THE CONTRACTOR)
 EQUALS = TOP OF SLAB FALSEWORK ELEVATION.



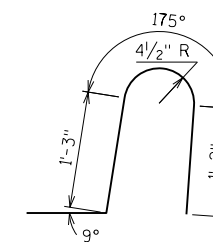
DIAPHRAGM CROSS SECTION

* DIMENSION IS TAKEN NORMAL TO SUBSTRUCTURE UNIT.

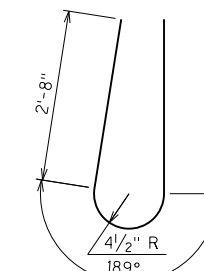
⊕ BARS PLACES PARALLEL TO ROADWAY, AND SPACED NORMAL TO EDGE OF SLAB



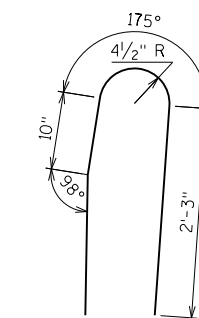
S509



S510



S511



S512



S513

SURVEY TOP OF SLAB ELEVATIONS

	CL BRG. W. ABUT	5/10 PT.	CL BRG. E. ABUT
NORTH GUTTER			
CROWN/ R STH 95			
SOUTH GUTTER			

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

NOTES

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

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

(A19) 18" (RMW) RUBBERIZED MEMBRANE WATERPROOFING SEAL ALL HORIZ. & VERT. JOINTS AT BACKFACE.

NO.	DATE	REVISION	BY
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION STRUCTURES DESIGN SECTION			
STRUCTURE B-27-169			
		DRAWN BY MJH	PLANS CHECKED MWB
SUPERSTRUCTURE DETAILS		SHEET 9	

BILL OF BARS

FOR ABUTMENT PARAPETS

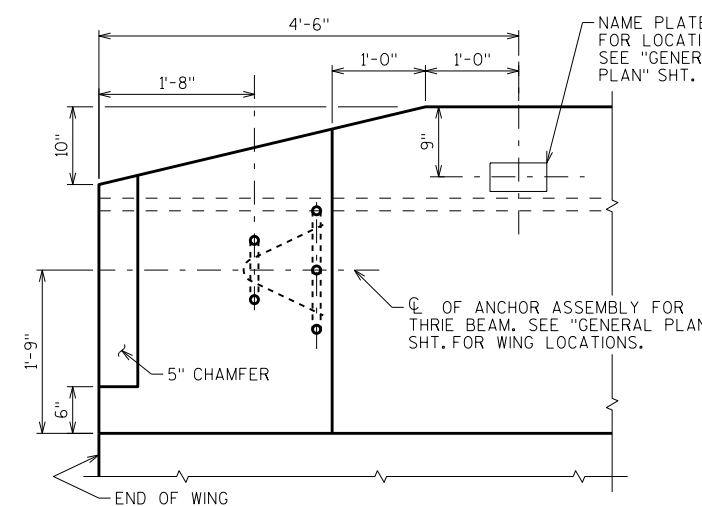
BAR MARK	COAT	WEST ABUT.	EAST ABUT.	LENGTH	BENT	BAR SERIES	LOCATION
R501	X	16	16	5'-10"	X		PARAPET VERT.
R502	X	16	16	6'-8"	X		PARAPET VERT.
R503	X	22	22	3'-0"	X		PARAPET VERT.
R504	X	34	34	5'-7"	X		PARAPET VERT.
R505	X	10	10	6'-5"	X		PARAPET VERT.
R506	X	12	12	6'-6"	X		PARAPET VERT.
R507	X	2	2	13'-7"	X		PARAPET HORIZ.
R508	X	10	10	13'-7"			PARAPET HORIZ.
R509	X	12	12	5'-5"	X	▲	PARAPET VERT.
R510	X	4	4	13'-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.

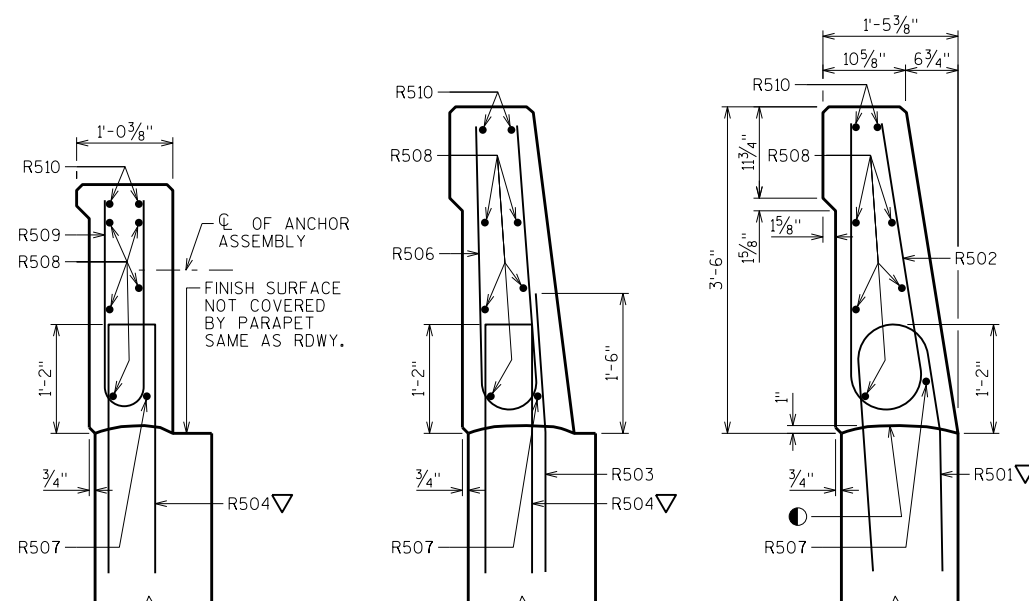
BAR SERIES TABLE

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

BUNDLE AND TAG EACH SERIES SEPARATELY.



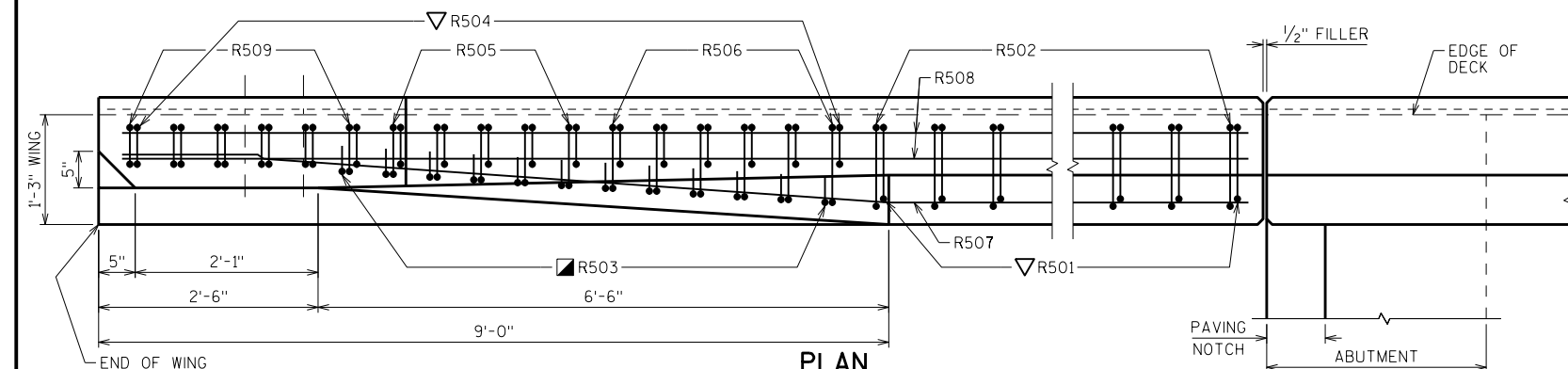
PARAPET END TREATMENT DETAIL
LOOKING AT INSIDE FACE OF PARAPET



SECTION A-A

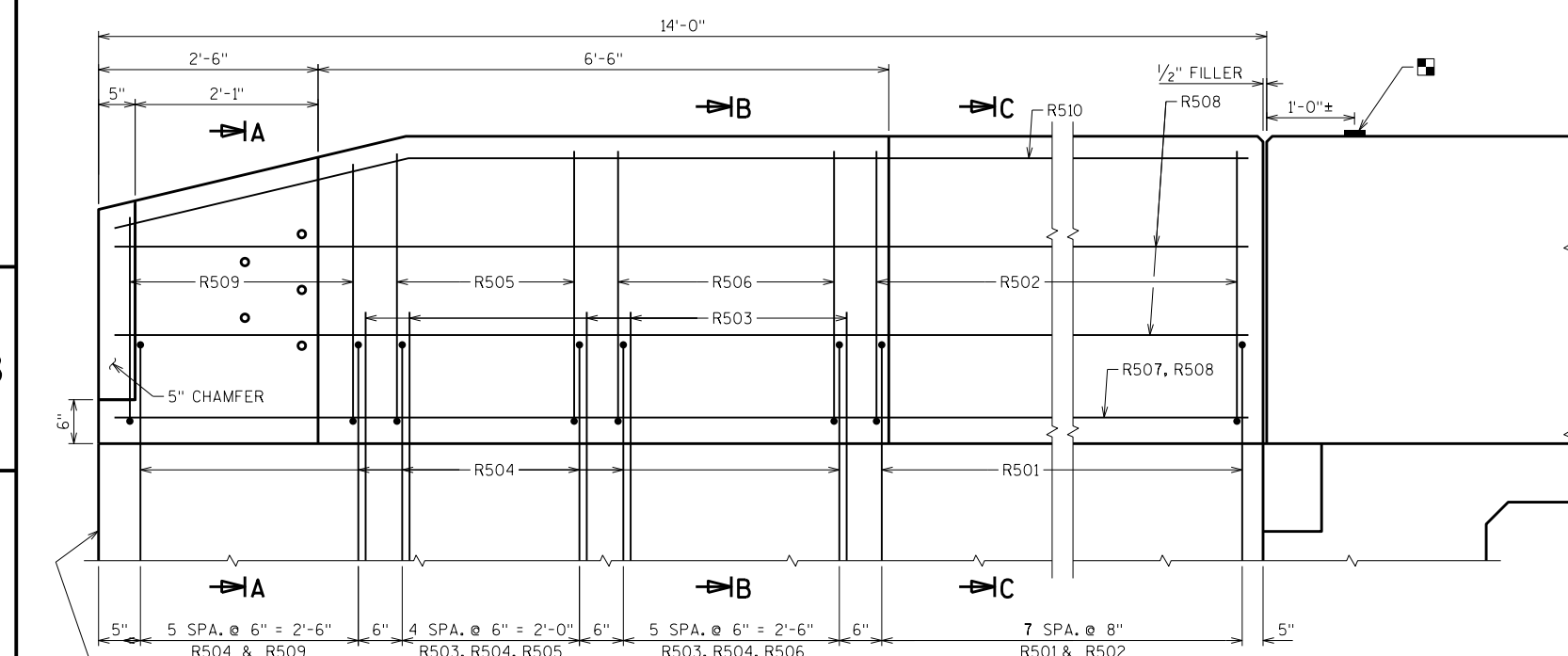
SECTION B-B

SECTION C-C



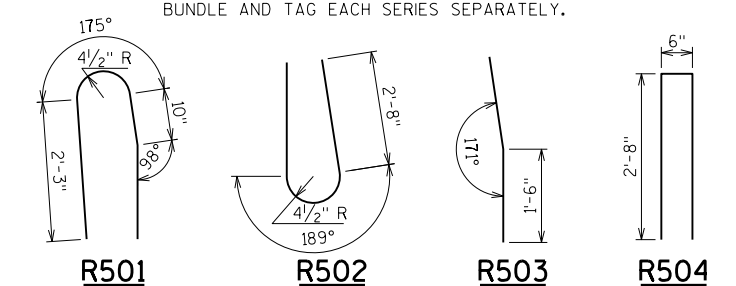
PLAN

SW CORNER SHOWN, OTHERS SIMILAR



INSIDE ELEVATION

SW CORNER SHOWN, OTHERS SIMILAR

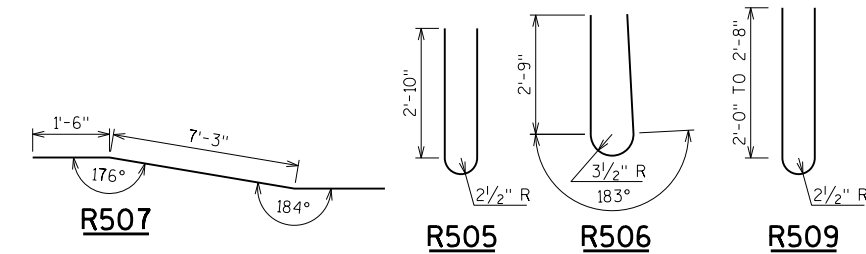


R501

R502

R503

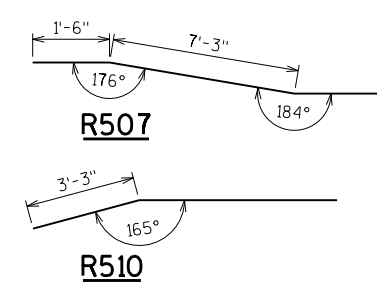
R504



R505

R506

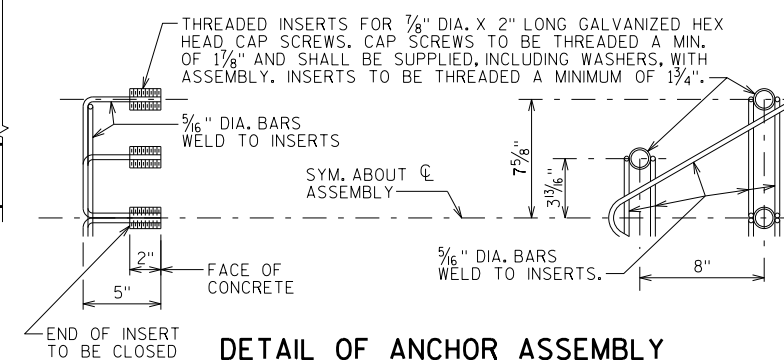
R509



R507

R510

■ BENCH MARK CAP



DETAIL OF ANCHOR ASSEMBLY

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

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

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

STRUCTURE B-27-169

DRAWN BY: MJH PLANS CK'D: MWB

SINGLE SLOPE PARAPET 42SS

SHEET 10

WEST SIDE STA 500+60.00 - STA 503+61.67

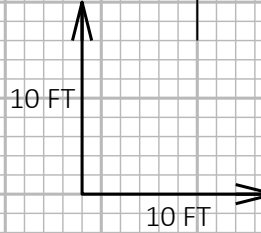
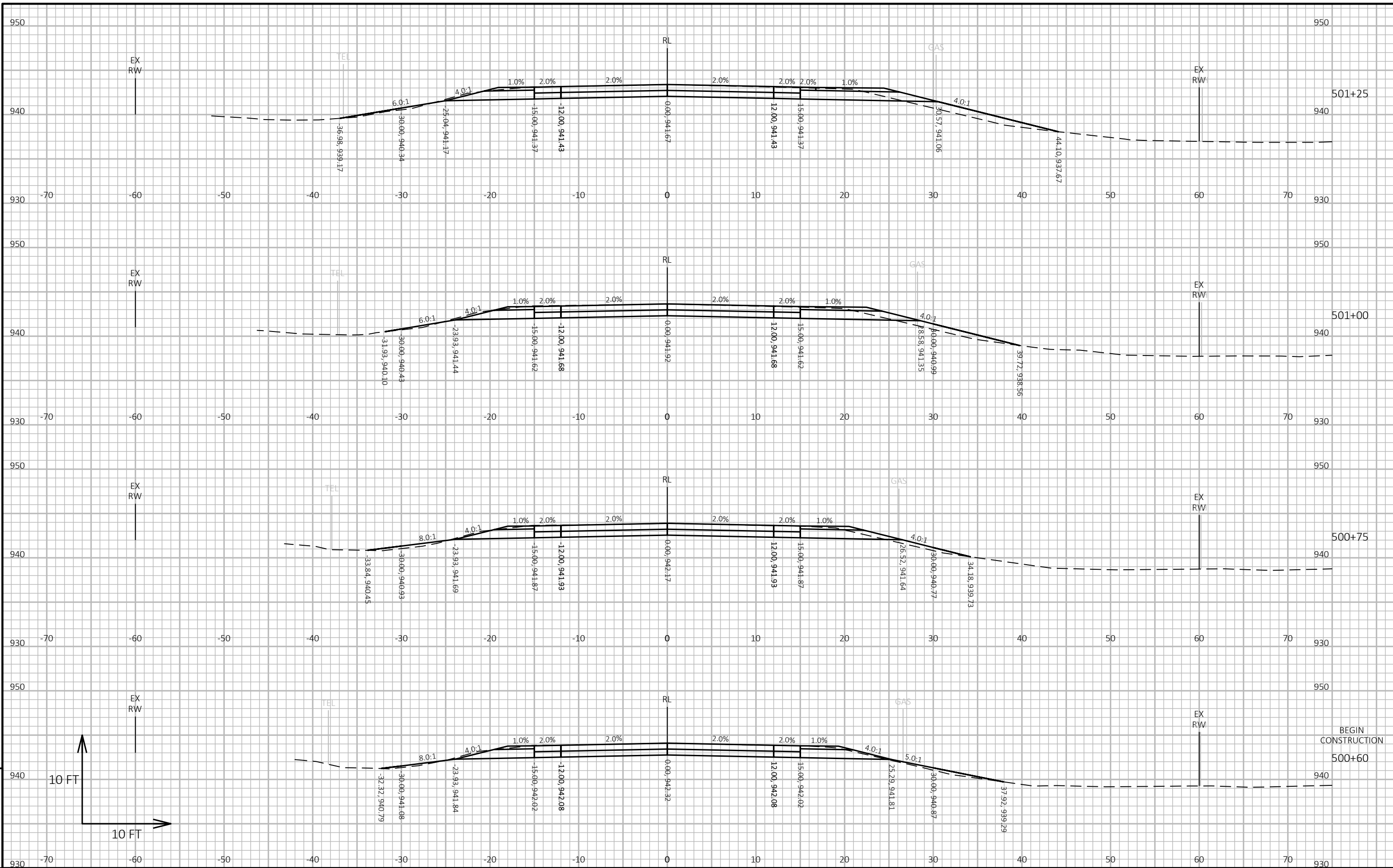
EAST SIDE STA 504+08.83 - STA 506+63

Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)
500+60.000	57	0	0	3.56	0	0
500+75.000	56.48	31.52	31.52	4.67	2.86	2.86
501+00.000	58.15	53.07	84.59	6.74	6.6	9.46
501+25.000	59.87	54.64	139.23	11.61	10.62	20.08
501+50.000	61.65	56.26	195.49	15.77	15.84	35.92
501+57.500	62.2	17.2	212.69	18.63	5.97	41.89
501+75.000	60.49	39.76	252.46	18.03	14.85	56.74
501+82.500	59.3	16.64	269.09	18.18	6.29	63.03
502+00.000	56.58	37.55	306.65	18.48	14.85	77.88
502+07.500	57.07	15.78	322.43	17.2	6.19	84.07
502+20.000	61.6	27.47	349.9	19.03	10.48	94.56
502+25.000	61.56	11.4	361.3	17.91	4.28	98.83
502+45.000	55.38	43.31	404.62	17.26	16.28	115.12
502+50.000	53.46	10.08	414.69	19.33	4.23	119.35
502+70.000	49.37	38.08	452.78	17.61	17.1	136.45
502+75.000	49.32	9.14	461.92	15.87	3.88	140.33
503+00.000	49.54	45.77	507.68	12.62	16.49	156.82
503+25.000	49.24	45.73	553.41	16.18	16.67	173.49
503+50.000	46.36	44.26	597.68	31.31	27.48	200.97
503+61.670	43.79	19.48	617.16	120.88	41.11	242.09

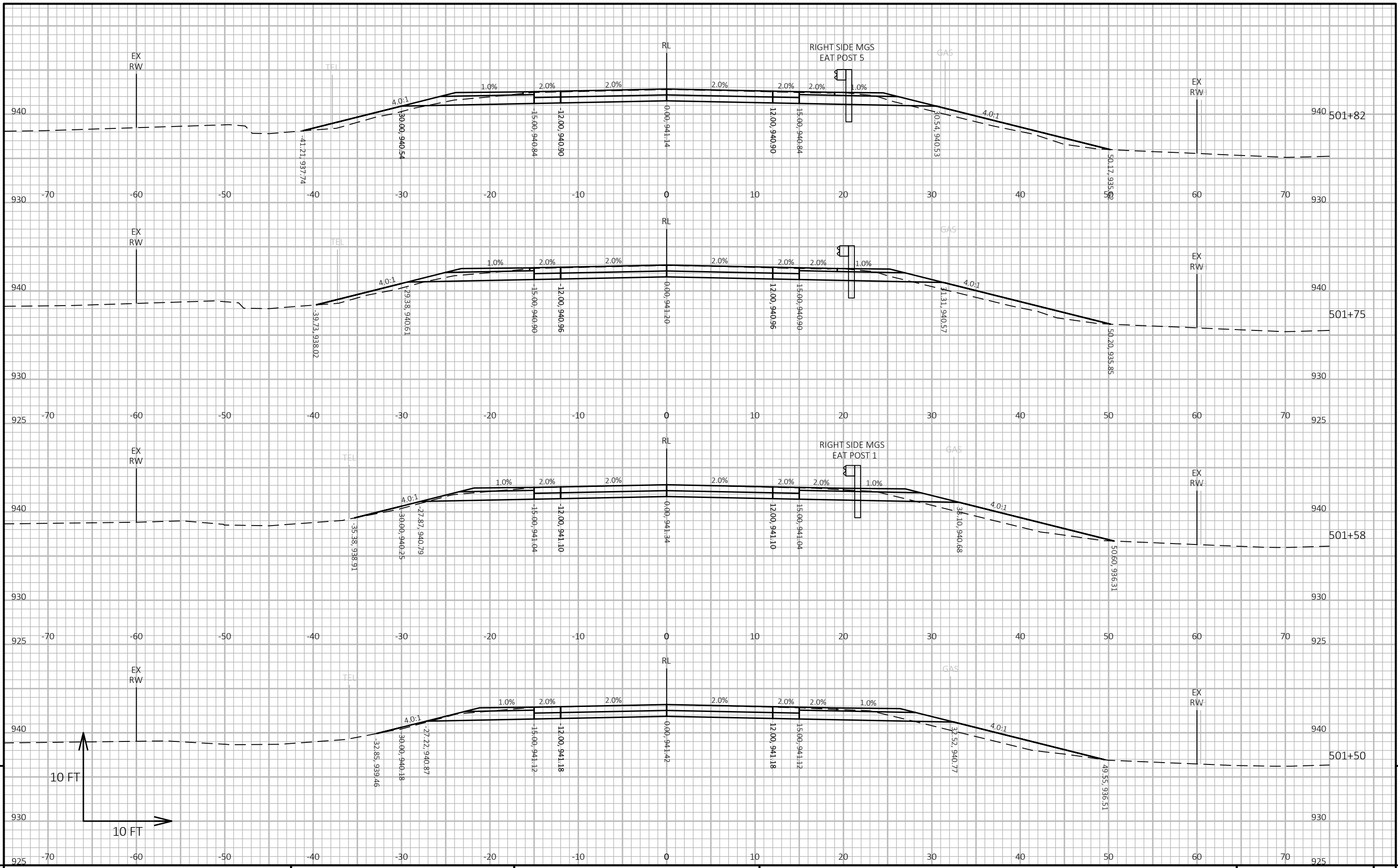
Station	Cut Area (Sq.ft.)	Cut Volume (Cu.yd.)	Cum. Cut Vol. (Cu.yd.)	Fill Area (Sq.ft.)	Fill Volume (Cu.yd.)	Cum. Fill Vol. (Cu.yd.)
504+08.830	57.25	0.00	0.00	95.61	0.00	0.00
504+25.000	60.43	35.24	35.24	33.46	38.65	38.65
504+50.000	66.44	58.73	93.97	14.34	22.13	60.78
504+75.000	72.97	64.54	158.51	3.13	8.09	68.87
504+88.000	74.45	35.49	194.00	1.82	1.19	70.06
505+00.000	71.70	32.48	226.48	6.66	1.88	71.95
505+13.000	70.21	34.16	260.64	8.24	3.59	75.54
505+25.000	69.55	31.06	291.70	10.59	4.18	79.72
505+38.000	71.02	33.84	325.54	10.01	4.96	84.68
505+50.000	70.55	31.46	357.01	6.64	3.70	88.38
505+63.000	69.35	33.68	390.69	5.35	2.89	91.27
505+75.000	104.26	38.58	429.27	3.89	2.05	93.32
505+88.000	76.22	43.45	472.72	3.97	1.89	95.21
506+00.000	99.26	38.99	511.71	3.49	1.66	96.87
506+13.000	67.28	40.09	551.80	7.45	2.63	99.51
506+25.000	64.13	29.20	581.00	8.28	3.50	103.00
506+50.000	65.33	59.93	640.94	1.85	4.69	107.69
506+63.000	65.81	31.57	672.51	0.43	0.55	108.24

Unusable Material	Area (SF)	Depth (LF)	Volume (CF)	Volume (CY)
Concrete Pavement	8612.54	0.667	5741.69	212.66

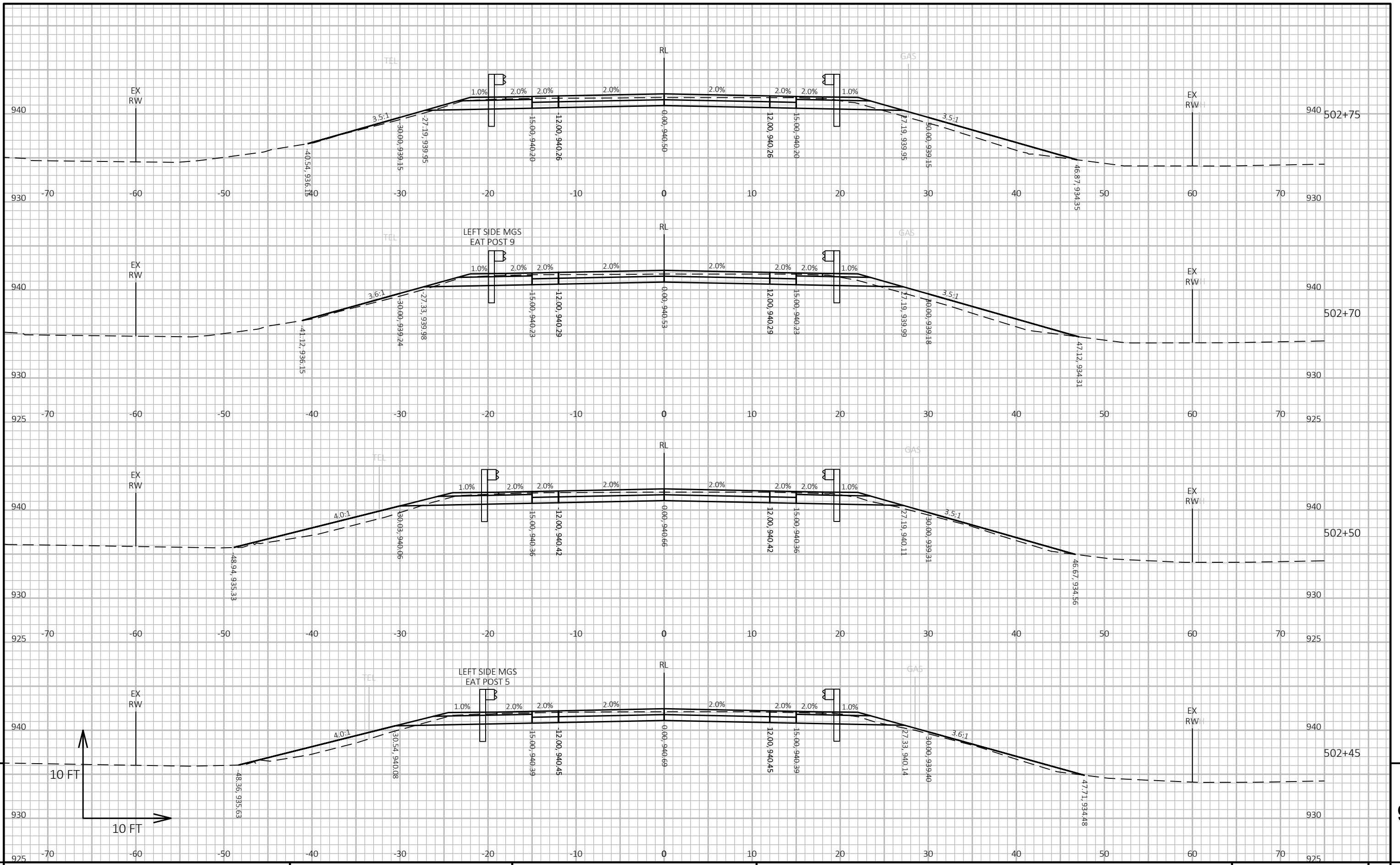
Unusable Material	Area (SF)	Depth (LF)	Volume (CF)	Volume (CY)
Concrete Pavement	7313.95	0.667	4875.97	180.59



PROJECT NO: 7520-00-79 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E



PROJECT NO: 7520-00-79 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET **9**



PROJECT NO: 7520-00-79

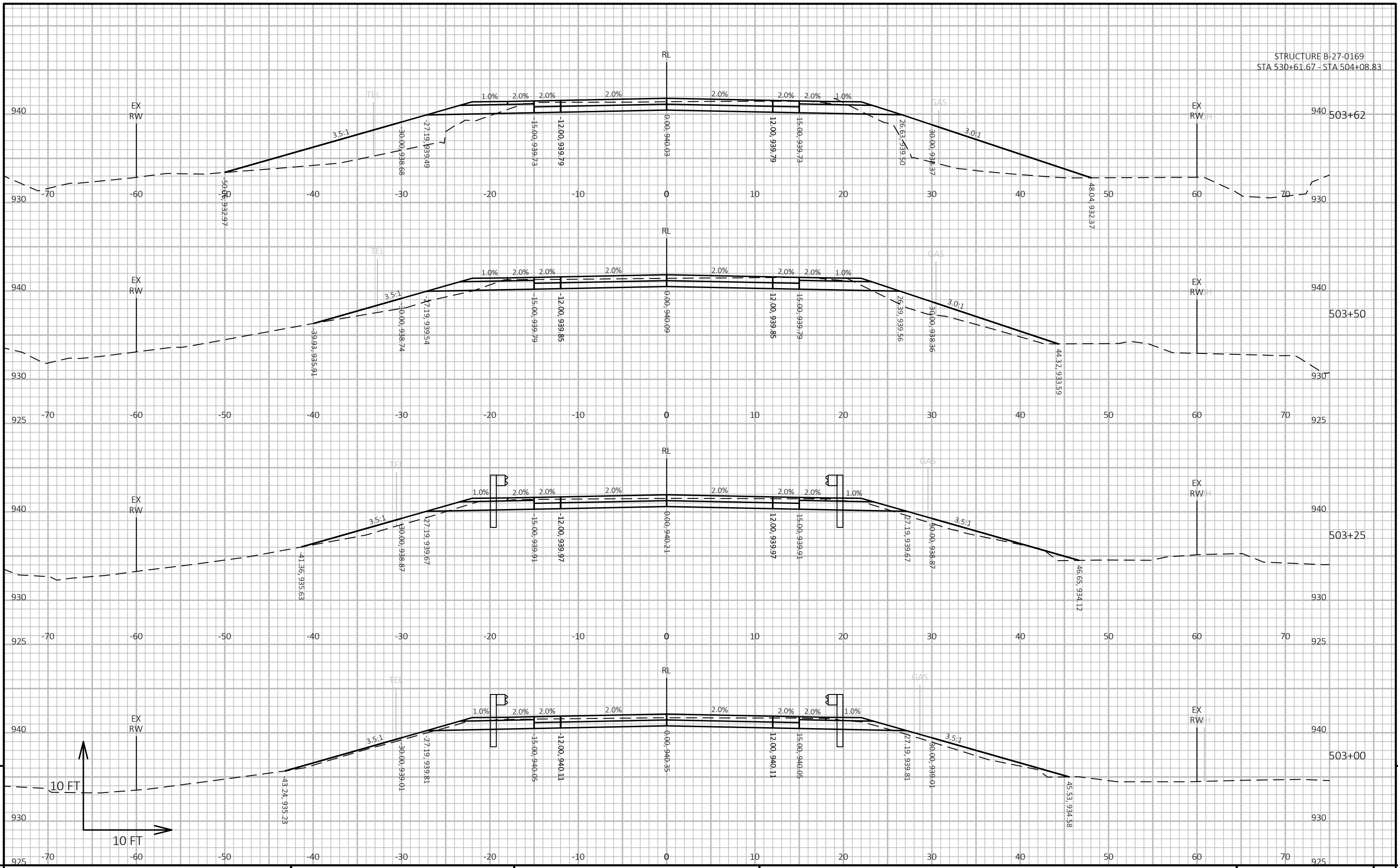
HWY: STH 95

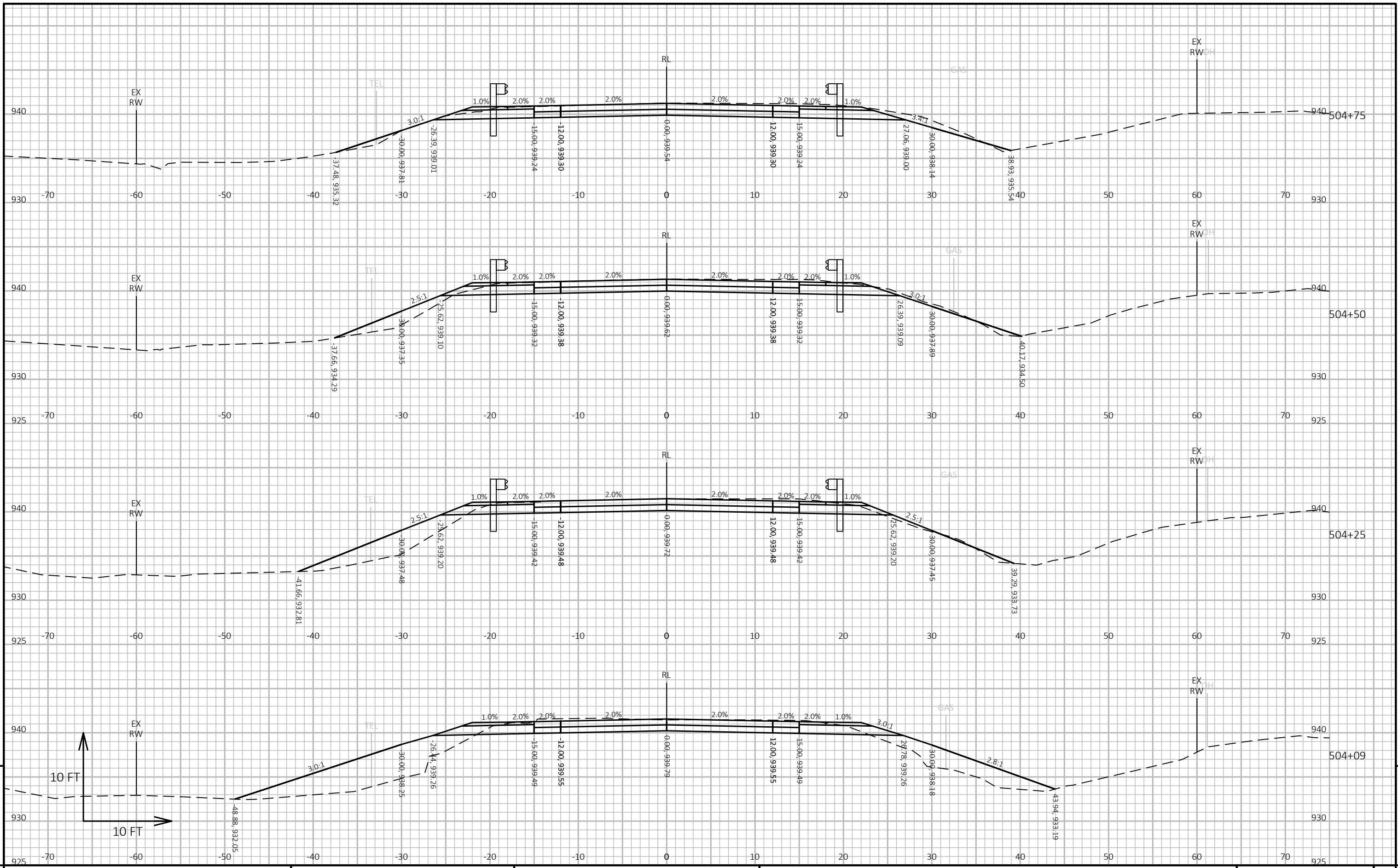
COUNTY: JACKSON

CROSS SECTIONS:

SHEET

E





PROJECT NO: 7520-00-79

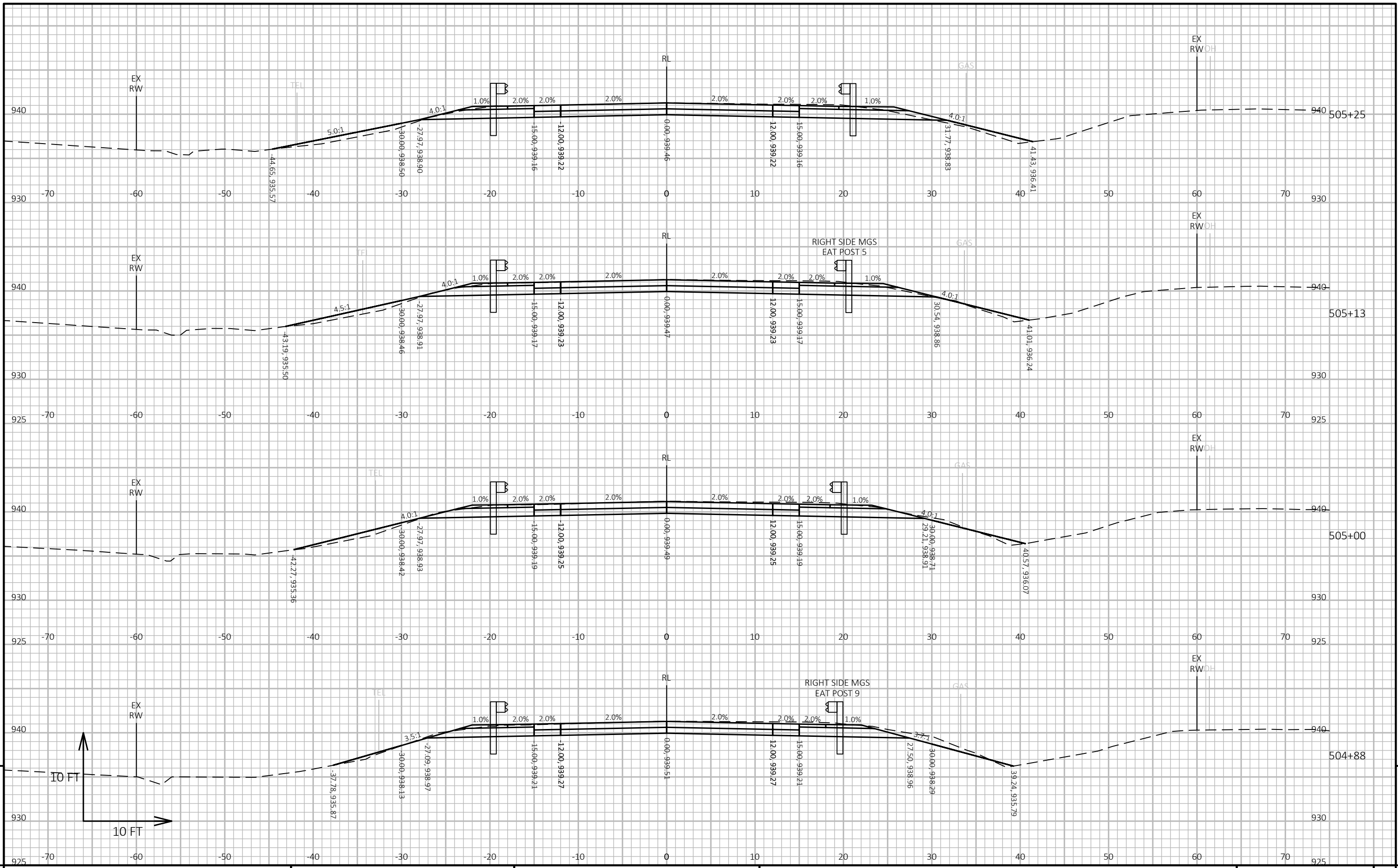
HWY: STH 95

COUNTY: JACKSON

CROSS SECTIONS:

SHEET

E



PROJECT NO: 7520-00-79

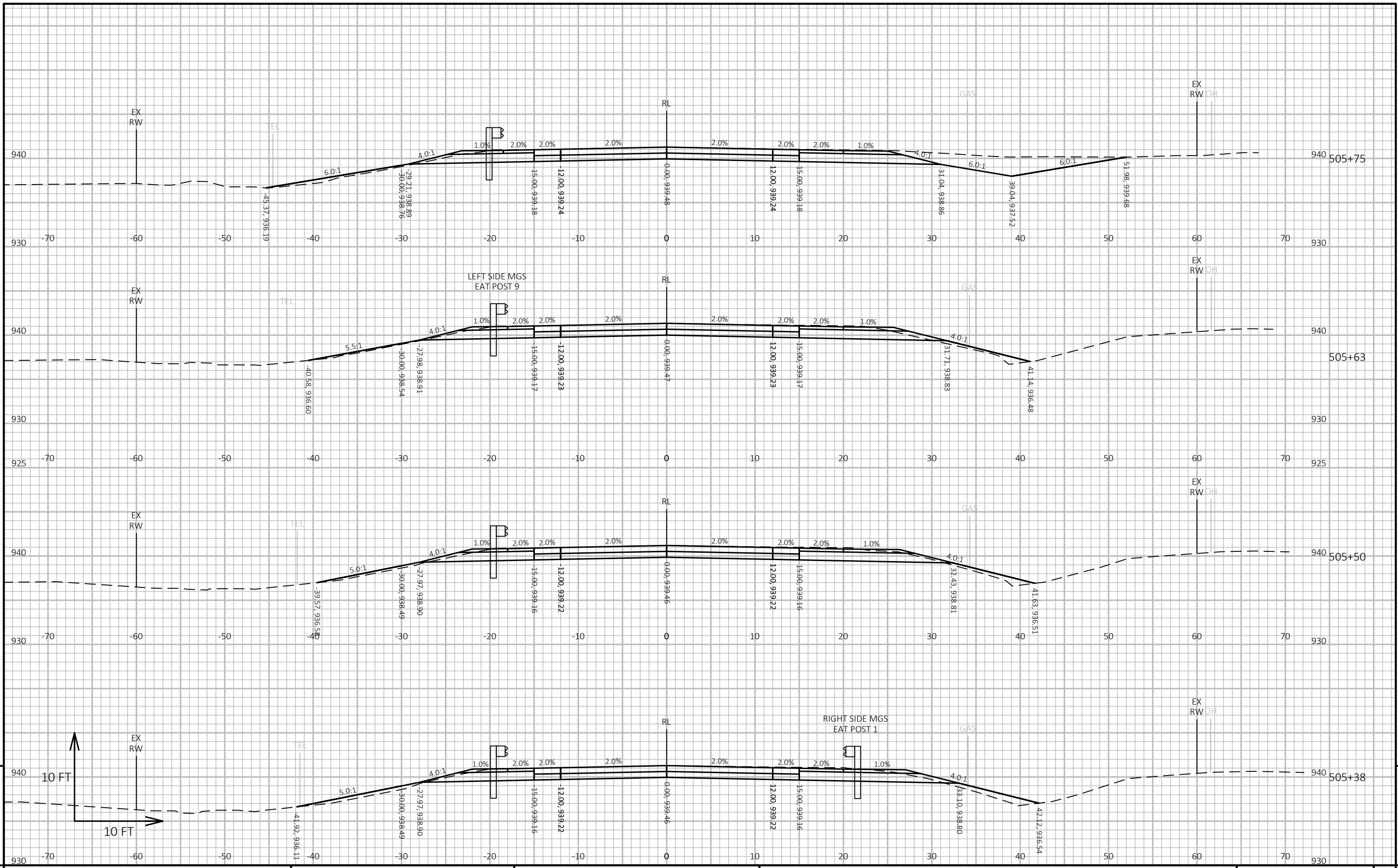
HWY: STH 95

COUNTY: JACKSON

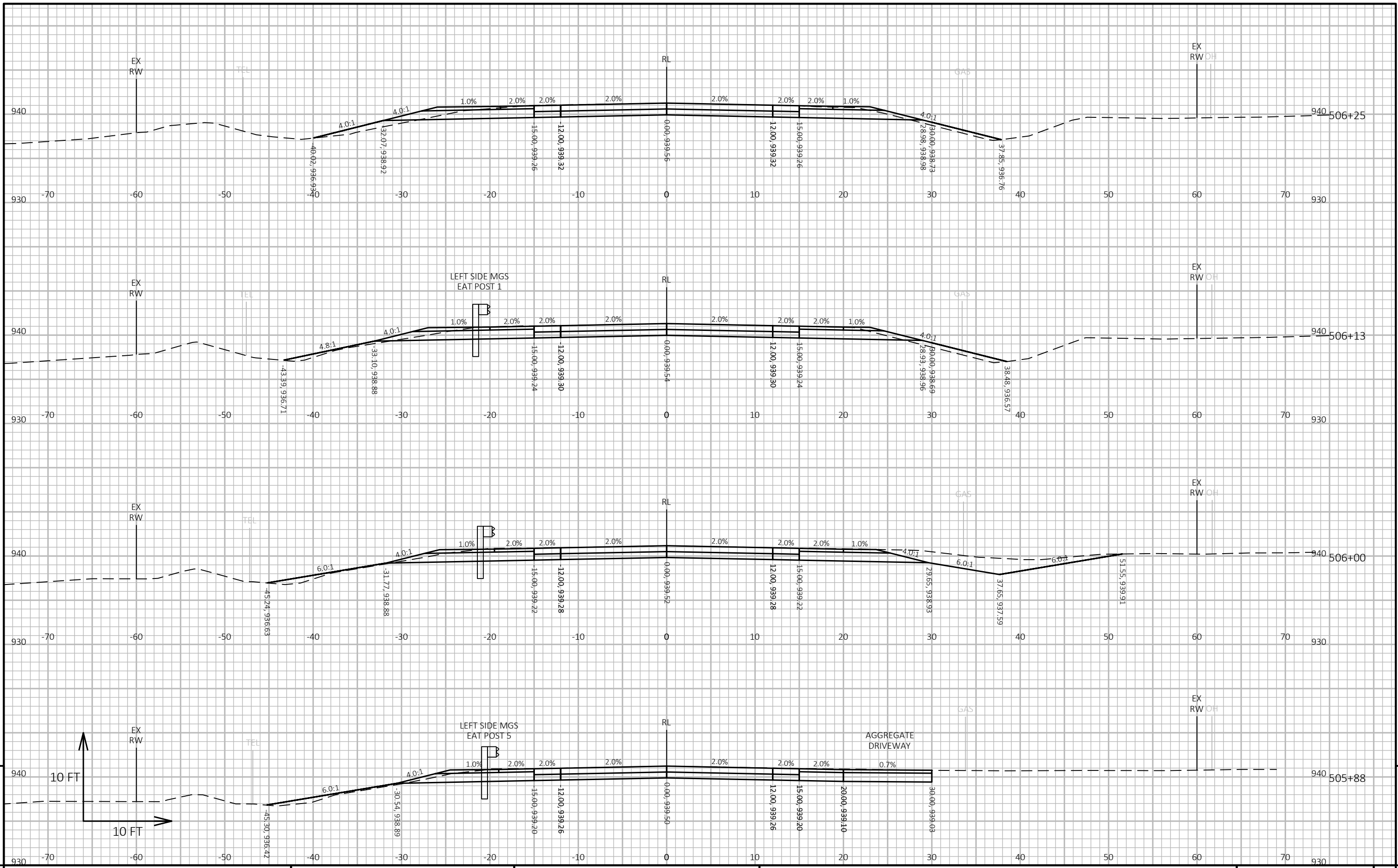
CROSS SECTIONS:

SHEET

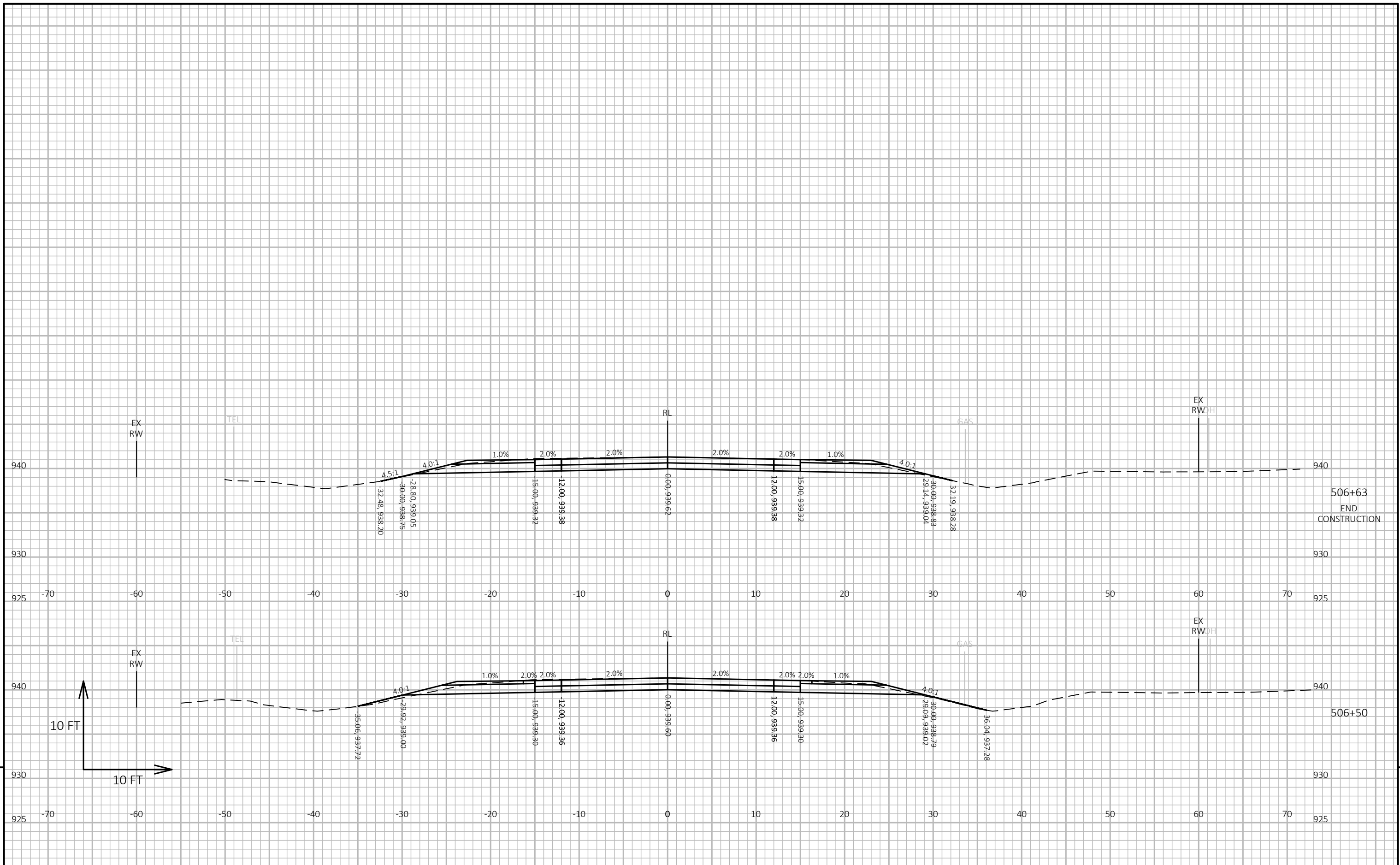
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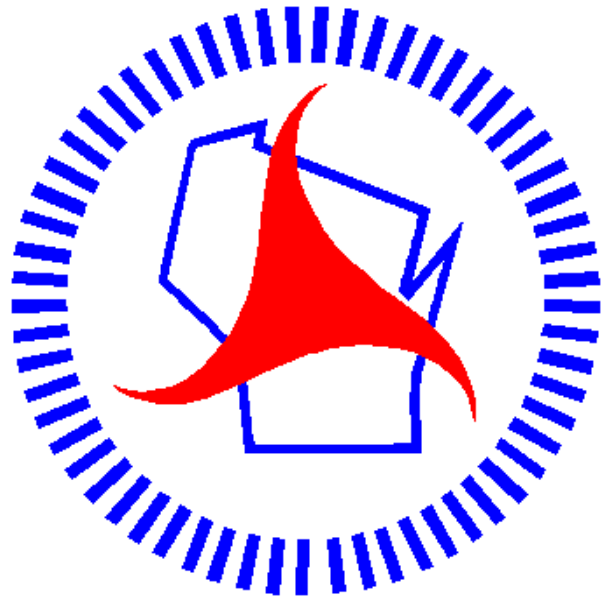


PROJECT NO: 7520-00-79 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E



PROJECT NO: 7520-00-79 HWY: STH 95 COUNTY: JACKSON CROSS SECTIONS: SHEET E





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