

EAU

APRIL 2020

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. 4	Right of Way Plat
Section No. 5	Plan and Profile
Section No. 6	Standard Detail Drawings
Section No. 7	Sign Plates
Section No. 8	Structure Plans
Section No. 9	Computer Earthwork Data
Section No. 9	Cross Sections

TOTAL SHEETS = 144



DESIGN DESIGNATION

A.A.D.T. (2018)	= 1625
A.A.D.T. (2038)	= 2076
D.H.V.	= ---
D.D.	= 59/41
T.	= 6.3%
DESIGN SPEED	= 45/55 MPH
ESALS	= 146,000

CONVENTIONAL SYMBOLS

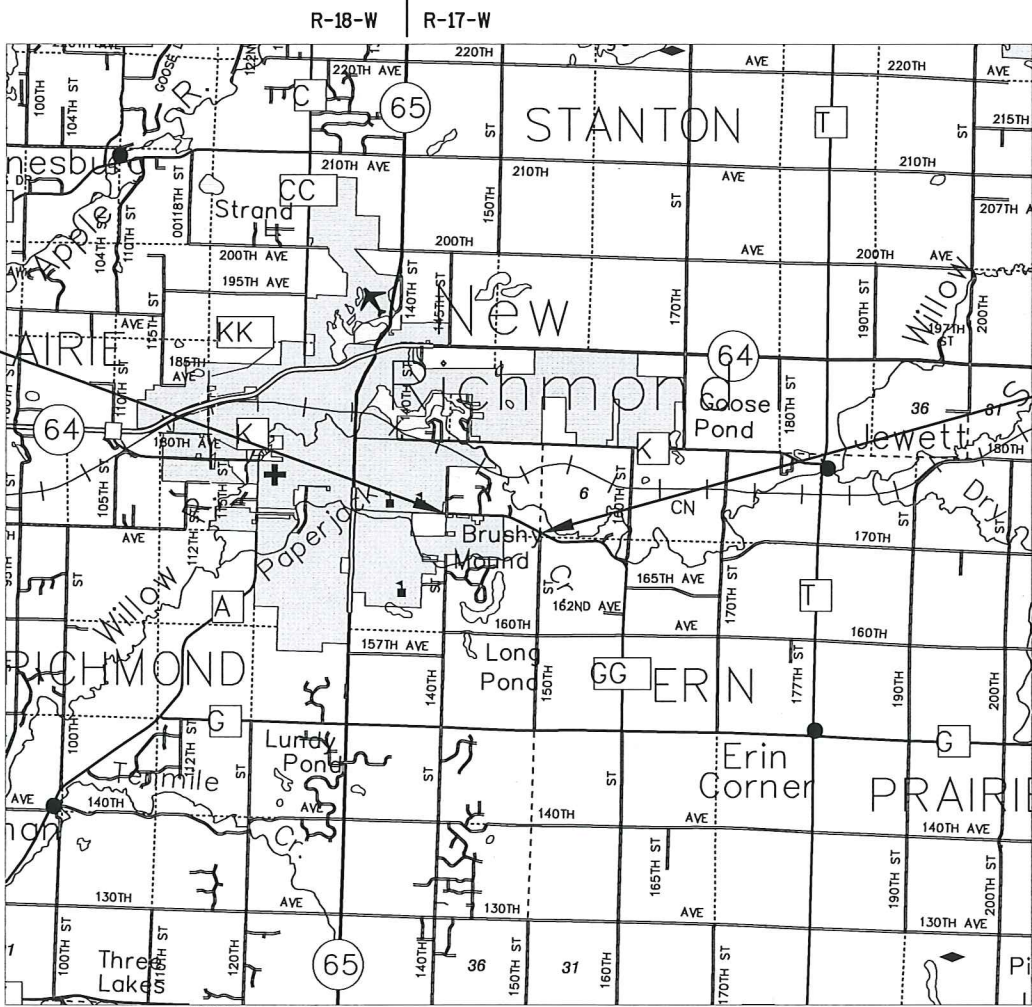
PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
CITY NEW RICHMOND, CTH GG
140TH STREET TO 150TH STREET
CTH GG
ST CROIX COUNTY

STATE PROJECT NUMBER
8940-00-15

BEGIN PROJECT
STA 9+15.00
Y 392122.85
X 572864.81



TOTAL NET LENGTH OF CENTERLINE = 1.077 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, ST CROIX COUNTY, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE PROJECT

8940-00-15

FEDERAL PROJECT

PROJECT

WISC 2020159

CONTRACT

1

ACCEPTED FOR
ST CROIX COUNTY

10/29/17 *Robert Kye*
(Date) (Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

AYRES ASSOCIATES
JEFFREY A. ABRAMSON
32337
Eau Claire
WI
10-24-19
(Date) (Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor AYRES ASSOCIATES INC
Designer AYRES ASSOCIATES INC
Project Manager MATTHEW THORSEN
Regional Examiner NORTHWEST REGION

APPROVED FOR THE DEPARTMENT
DATE: 10/31/17 *Thorsen*
(Signature)

E

GENERAL NOTES

THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREA.

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

SHRINKAGE OF EARTHWORK IS VARIABLE. AN AVERAGE FACTOR FOR EXCAVATION COMMON IS 30%.

FILL, AS SHOWN ON THE PLAN SHEETS, PERTAINS TO EMBANKMENT CONSTRUCTED FROM EXCAVATION COMMON. THE FACTOR USED FOR EXPANDING THE FILLS TO COMPUTE THE VOLUME OF MATERIAL REQUIRED IS 15.

EXCAVATION BELOW SUBGRADE (EBS) WILL BE MEASURED AND PAID FOR AS EXCAVATION COMMON. THE LOCATION FOR EBS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

WHEN THE QUANTITY OF BASE AGGREGATE DENSE OR HMA PAVEMENT IS MEASURED FOR PAYMENT BY THE TON OR CUBIC YARD THE DEPTH OF THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

THE EXACT LOCATION AND WIDTH OF DRIVEWAY ENTRANCES WILL BE DETERMINED IN THE FIELD BY THE ENGINEER. ALL DRIVEWAYS ARE TO BE REPLACED IN KIND UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR AS SHOWN ON THE PLANS.

SAWCUT LOCATIONS SHOWN ON THE PLAN ARE SUBJECT TO ADJUSTMENT BY THE ENGINEER IN THE FIELD. THE LINE OF SUCH SAWCUTS WILL BE NEATLY DELINEATED THROUGH THE ASPHALT AND/OR CONCRETE STREETS, DRIVEWAYS AND/OR PARKING LOTS AT THE MATCH LINE AS SHOWN ON THE PLAN DETAILS OR AS DIRECTED BY THE ENGINEER WITHOUT ANY DAMAGE TO THE REMAINING PORTION OF THE EXISTING PAVEMENT.

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

INLET AND DISCHARGE ELEVATIONS FOR DRAINAGE STRUCTURES SHOWN ON THE PLAN MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

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

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

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

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

EROSION CONTROL MEASURES WILL BE PLACED AS SHOWN ON THE EROSION CONTROL PLAN. THE EXACT LOCATIONS TO BE DETERMINED BY THE ENGINEER. ANY REMOVAL OF ITEMS ARE INCIDENTAL TO THE RESPECTIVE EROSION CONTROL BID ITEM COSTS.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE SALVAGED TOPSOIL, FERTILIZED, SEEDED, TEMPORARY SEEDED AND MULCHED AS DIRECTED BY THE ENGINEER.

RESHAPE AND SEEDING OF ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS OUTSIDE OF THE ENGINEER DETERMINED CONSTRUCTION LIMITS ARE INCIDENTAL TO THE CONTRACT.

NO TREES OR SHRUBS SHALL BE REMOVED WITHOUT APPROVAL BY THE ENGINEER. FINAL LIMITS OF FENCE REMOVAL TO BE DETERMINED BY THE ENGINEER.

HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 110 LB/SY/IN.

STATIONING FOR SIGNS SHOWN IN THE PLANS ARE APPROXIMATE AND THE FINAL LOCATION OF SIGNS ARE TO BE DETERMINED BY THE ENGINEER.

THE CONTRACTOR IS RESPONSIBLE FOR PROTECTING MOTORISTS AND PEDESTRIANS THAT MAY ENTER THE WORK ZONE FROM POSSIBLE HAZARD.

CURB AND GUTTER ELEVATIONS ARE ALONG THE FLAG LINE UNLESS OTHERWISE NOTED.

RADIUS POINTS, UNLESS OTHERWISE NOTED, ARE TO FLAG OF CURB.

EXISTING ELEVATIONS SHALL BE VERIFIED IN THE FIELD.

ELEVATIONS SHOWN ON THE PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88(2012)).

UTILITY CONTACTS

FRONTIER COMMUNICATIONS
521 NORTH 4TH STREET
WAUSAU, WI 54403
ATTN: CHRIS POLLACK
715-297-4773
christopher.pollack@ftr.com

XCEL ENERGY
1201 LIVINGSTON ROAD
HUDSON, WI 54016
ATTN: DARREN NORDSKOG
715-386-4798
darren.m.nordskog@xcelenergy.com

NORTHWEST COMMUNICATIONS
116 HARRIMAN AVENUE
AMERY, WI 54001
ATTN: GREG CARDINAL
715-268-7101
gregcardinal@amerytel.net

CITY OF NEW RICHMOND UTILITIES
156 EAST FIRST STREET
NEW RICHMOND, WI 54017
ATTN: JEREMIAH WENDT, CITY ENGINEER
715-246-4167
jwendt@newrichmondwi.gov

ST CROIX ELECTRIC COOPERATIVE
1925 RIDGEWAY STREET
HAMMOND, WI 54015
ATTN: ROB DOOLEY
715-796-7000
robd@scecn.net

* DENOTES NOT A MEMBER OF DIGGERS HOTLINE



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

ORDER OF SECTION 2 SHEETS

- Typical Sections
- Construction Details
- Intersections
- Erosion Control & Drainage
- Signing & Pavement Marking
- Detour Plan

ST CROIX COUNTY CONTACT

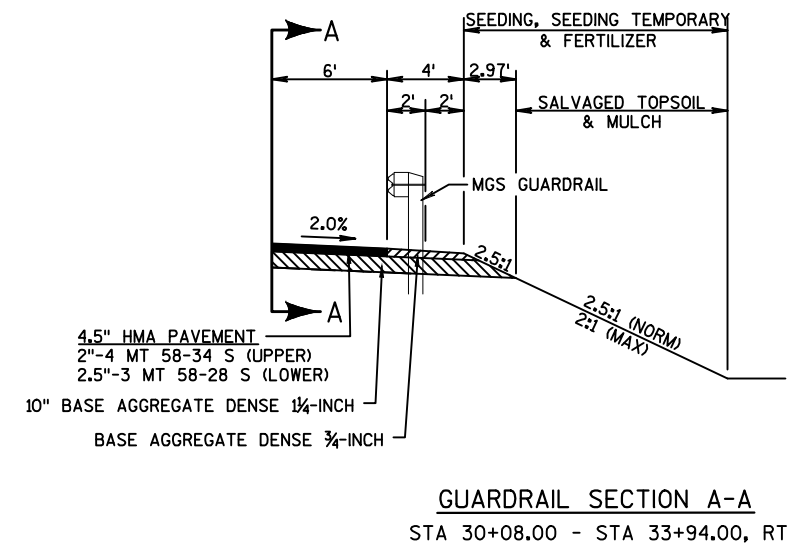
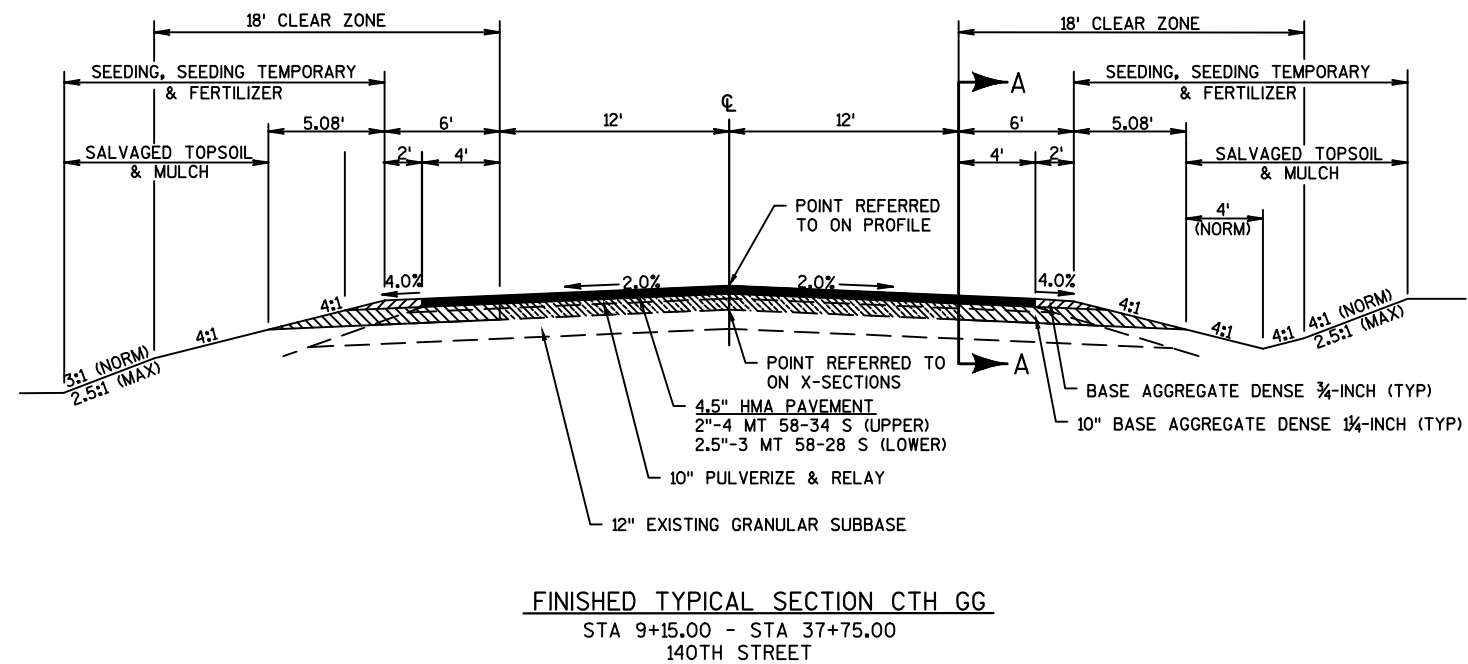
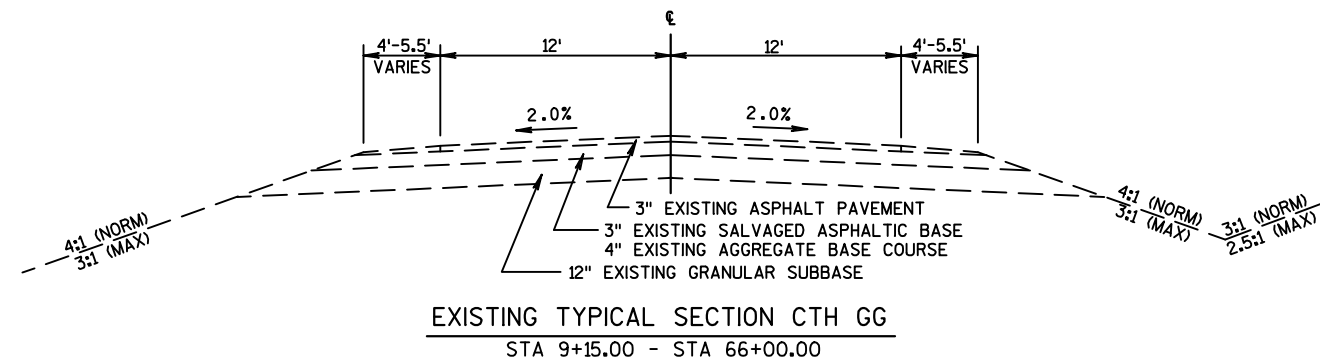
ST CROIX COUNTY HIGHWAY DEPARTMENT
P.O. BOX 108
920 THIRD STREET
HAMMOND, WI 54015
ATTN: JEFF DURKEE
715-245-4205
jeffery.durkee@sccwi.gov

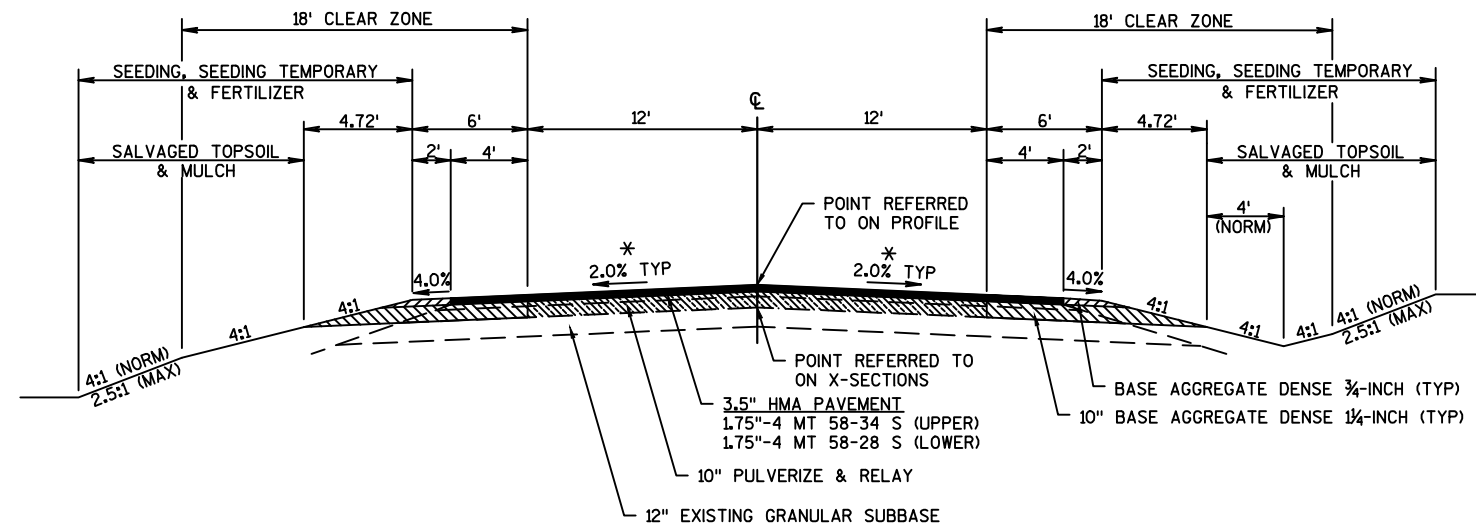
DESIGN CONTACT

AYRES ASSOCIATES
3433 OAKWOOD HILLS PARKWAY
EAU CLAIRE, WI 54701
ATTN: JEFF ABRAMSON, PE
715-834-3161
abramsonj@ayresgassociates.com

DNR CONTACT

DNR WEST CENTRAL REGION
1300 WEST CLAIREMONT AVENUE
EAU CLAIRE, WI 54701
ATTN: AMY LESIK
715-836-6571
amy.l.lesik@wisconsin.gov

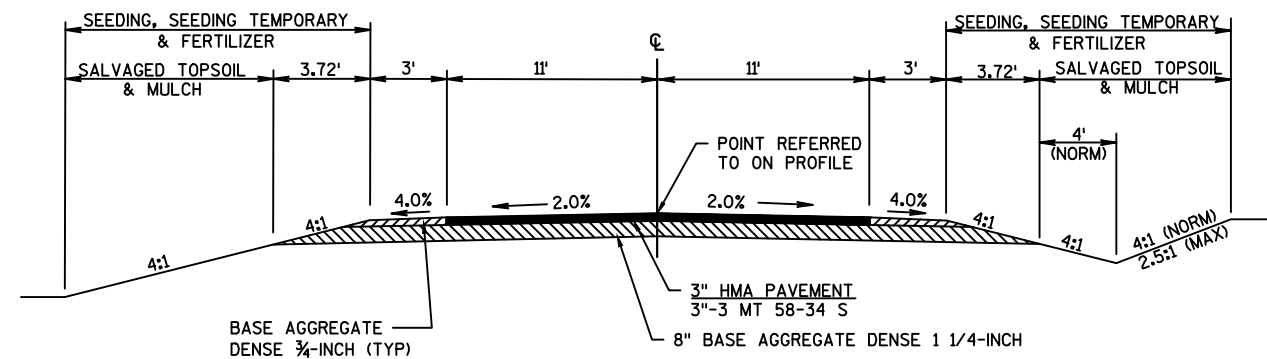




FINISHED TYPICAL SECTION CTH GG

STA 37+75.00 - STA 66+00.00

* SEE CROSS SECTIONS FOR SUPERELEVATION



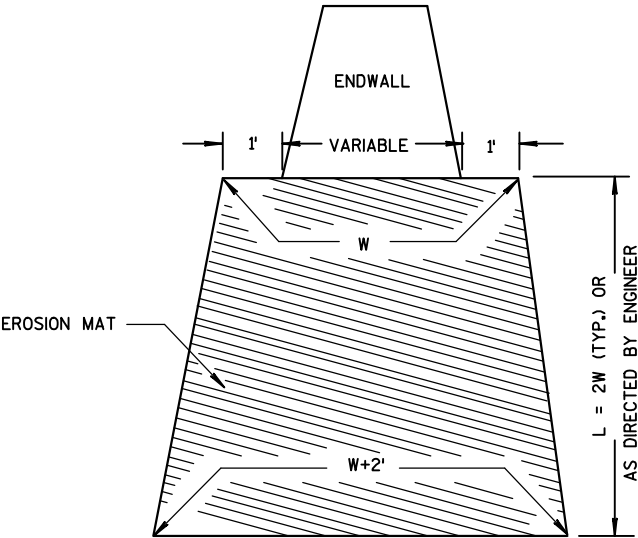
FINISHED TYPICAL SECTION TOWN ROADS

144TH STREET
PENINSULA ROAD
SHAMROCK LANE
150TH STREET

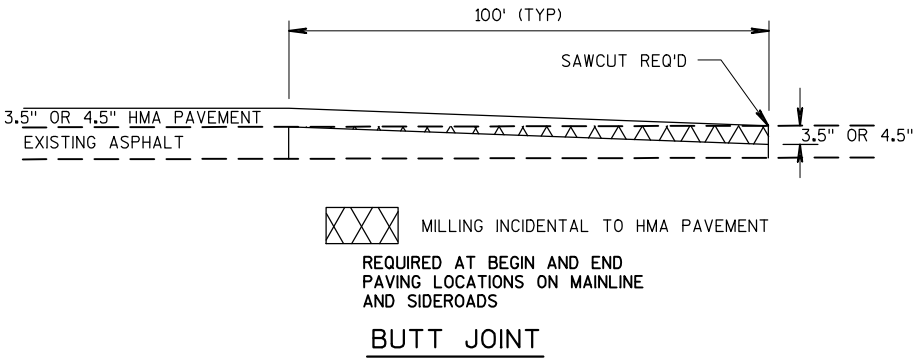
RUNOFF COEFFICIENT TABLE

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

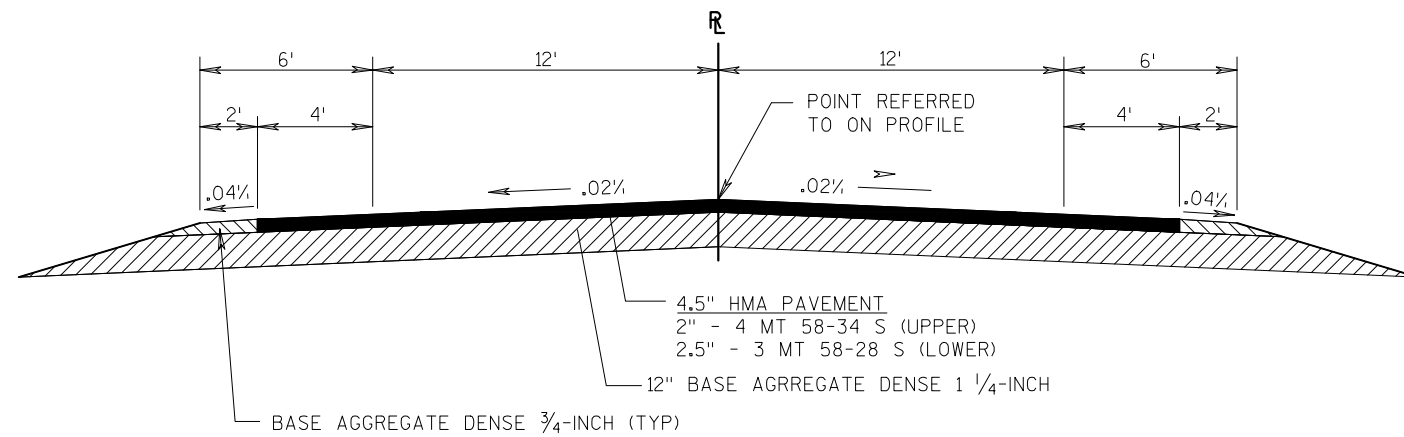
TOTAL PROJECT AREA = 13.031 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 9.309 ACRES



EROSION MAT TREATMENT AT CULVERTS

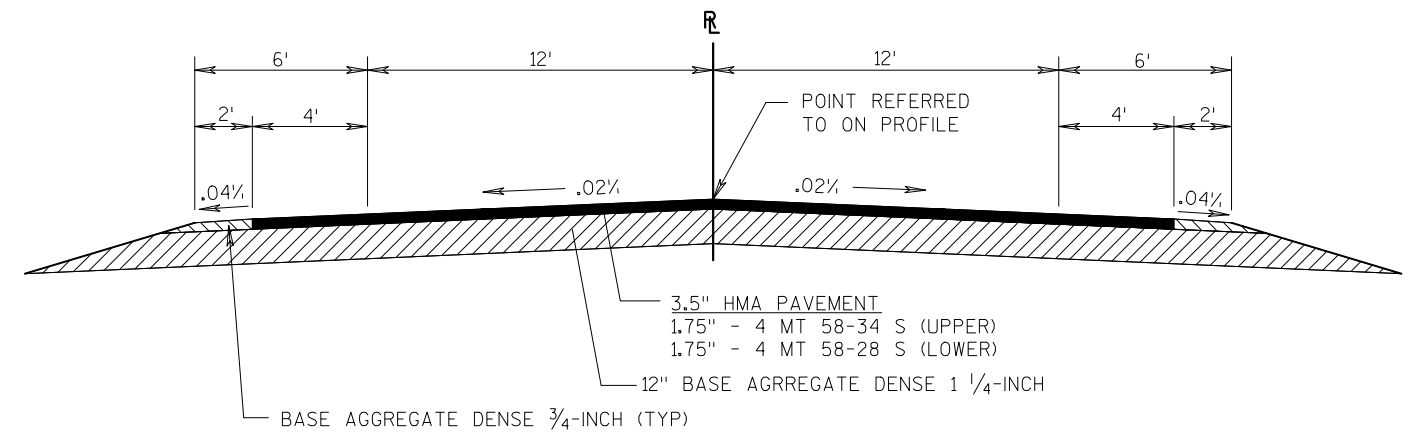


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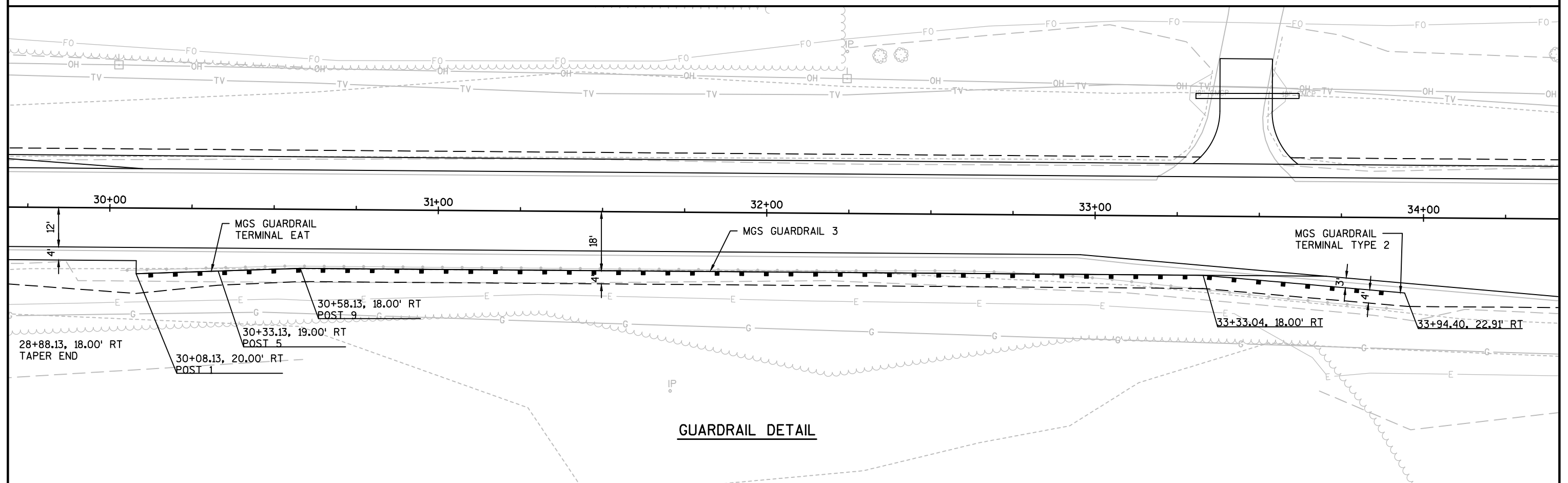
FINISHED TYPICAL SECTION FOR PIPE INSTALLATION AREAS

STA 16+88



FINISHED TYPICAL SECTION FOR PIPE INSTALLATION AREAS

STA 60+31
STA 60+44



PROJECT NO: 8940-00-15

HWY: CTH GG

COUNTY:ST CROIX

CONSTRUCTION DETAILS

SHEET

E

2

PI DATA (140TH ST)
PI STA 9+22.43
Y = 392544.74
X = 572954.48

STA 5+37, LT
ADJUSTING INLET COVER

STA 9+73
STA 9+99
ADJUSTING WATER VALVE

CONCRETE CURB AND GUTTER
30-INCH TYPE D

CURB RAMP
TYPE 1-A

STA 9+50.69, 56.9 LT=
STA 5+57.63, 56.5 LT
Y = 392179.51
X = 572900.82

STA 10+07.98, CTH GG =
STA 5+00.00, 140TH ST
CONSTRUCT MODIFIED
TYPE D INTERSECTION

CONSTRUCTION LIMITS
STA 6+07.60
MATCH EXISTING
SAWCUT REQ'D

STA 5+41, RT
ADJUSTING INLET COVER
REPLACE EXISTING COVER
W/INLET COVER TYPE F

STA 10+62.09, 58.0 LT=
STA 5+57.16, 55.0 RT
Y = 392179.91
X = 573012.34

CONCRETE CURB AND GUTTER
6-INCH SLOPED 36-INCH TYPE D

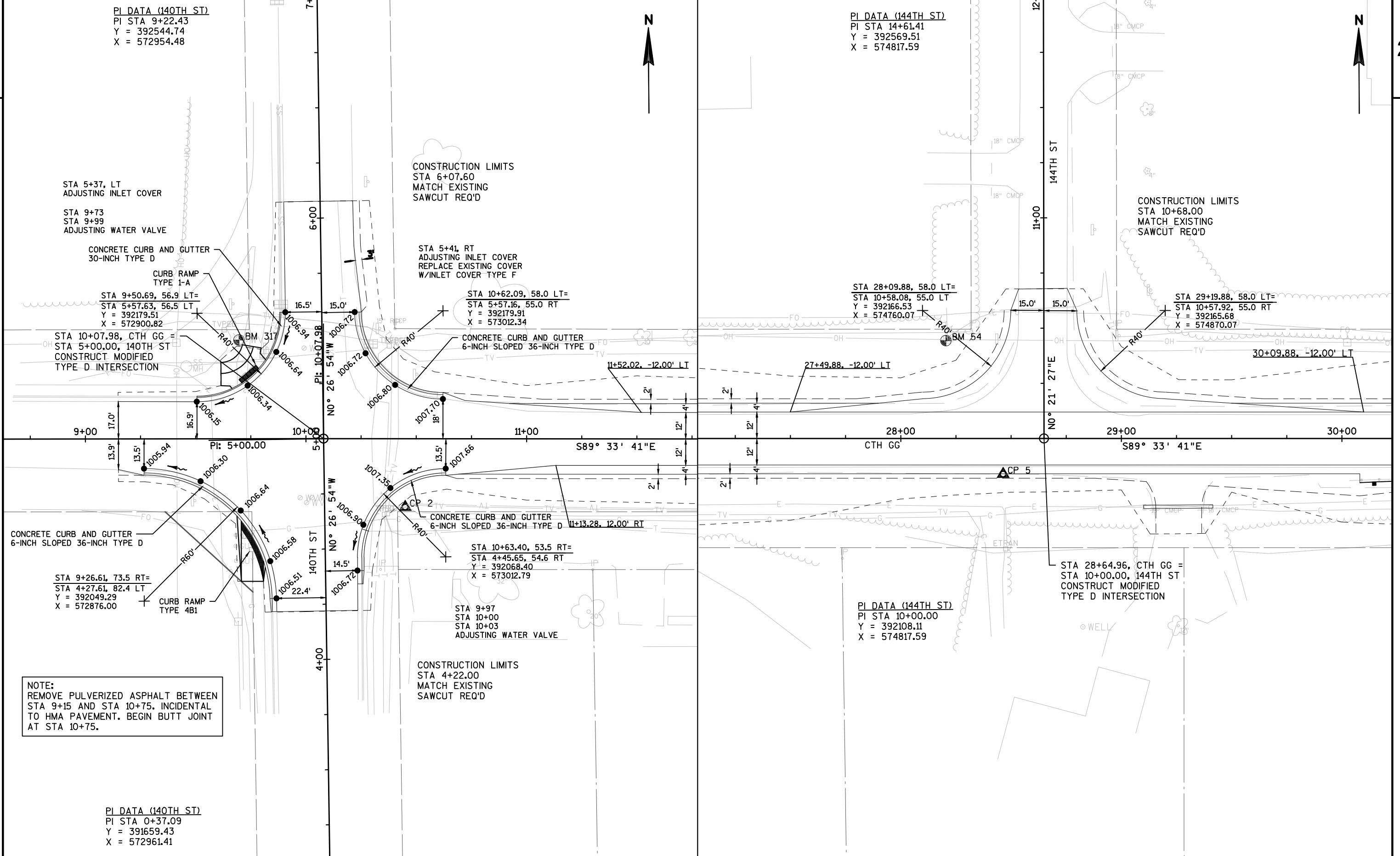
PI DATA (144TH ST)
PI STA 14+61.41
Y = 392569.51
X = 574817.59

STA 28+09.88, 58.0 LT=
STA 10+58.08, 55.0 LT
Y = 392166.53
X = 574760.07

CONSTRUCTION LIMITS
STA 10+68.00
MATCH EXISTING
SAWCUT REQ'D

STA 29+19.88, 58.0 LT=
STA 10+57.92, 55.0 RT
Y = 392165.68
X = 574870.07

30+09.88, -12.00' LT



2

PROJECT NO: 8940-00-15

HWY: CTH GG

COUNTY: ST CROIX

INTERSECTION DETAIL

SHEET

E

FILE NAME : V:\TRANS-EC\410707 ST CROIX GG\ROADWAY\C3D\SHEETSP\PLAN\021101_ID.DWG
LAYOUT NAME - 021101_ID

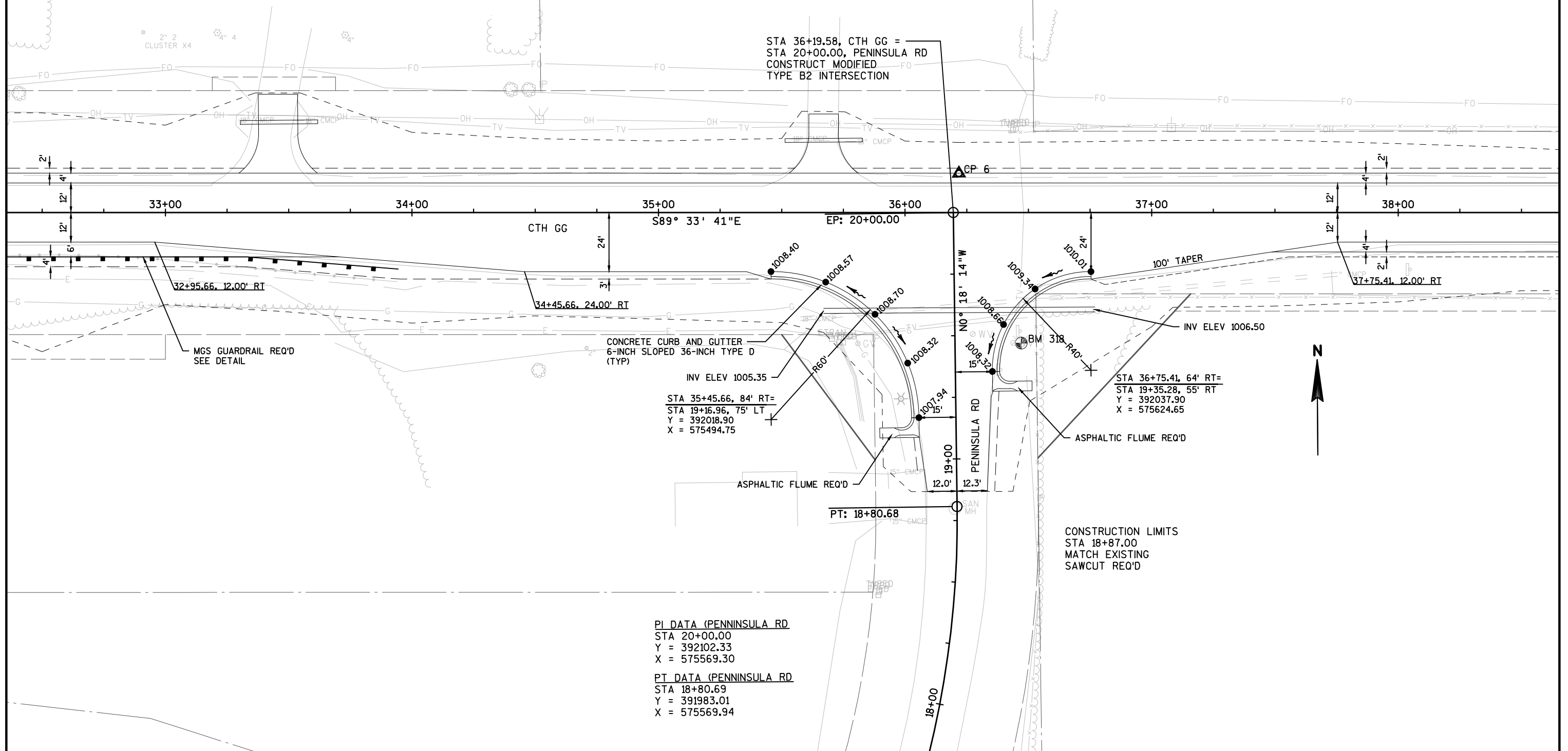
PLOT DATE : 10/30/2019 10:11 AM

PLOT BY : RESHESKE, CARRIE

PLOT NAME :

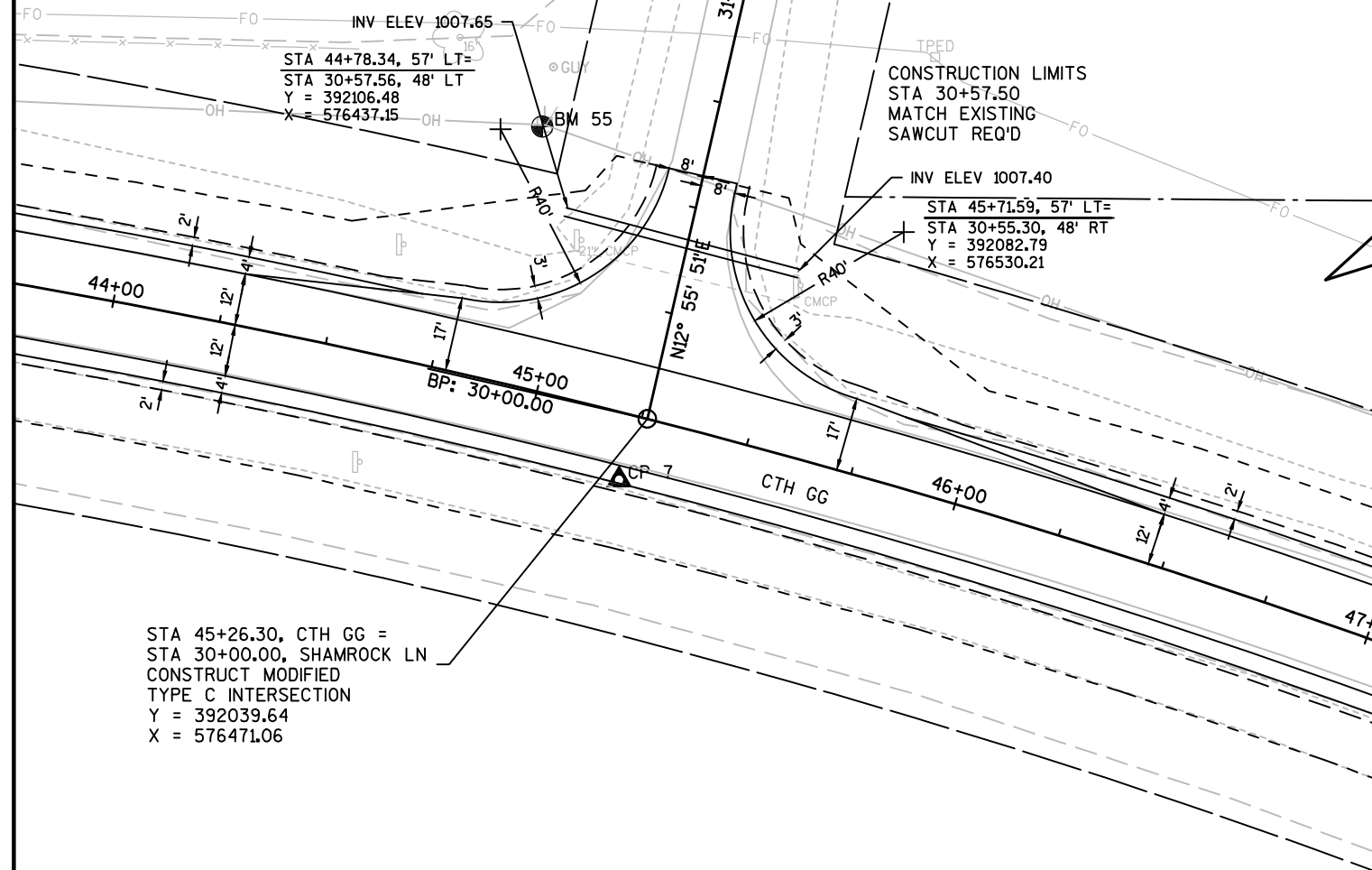
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDs SHEET 44





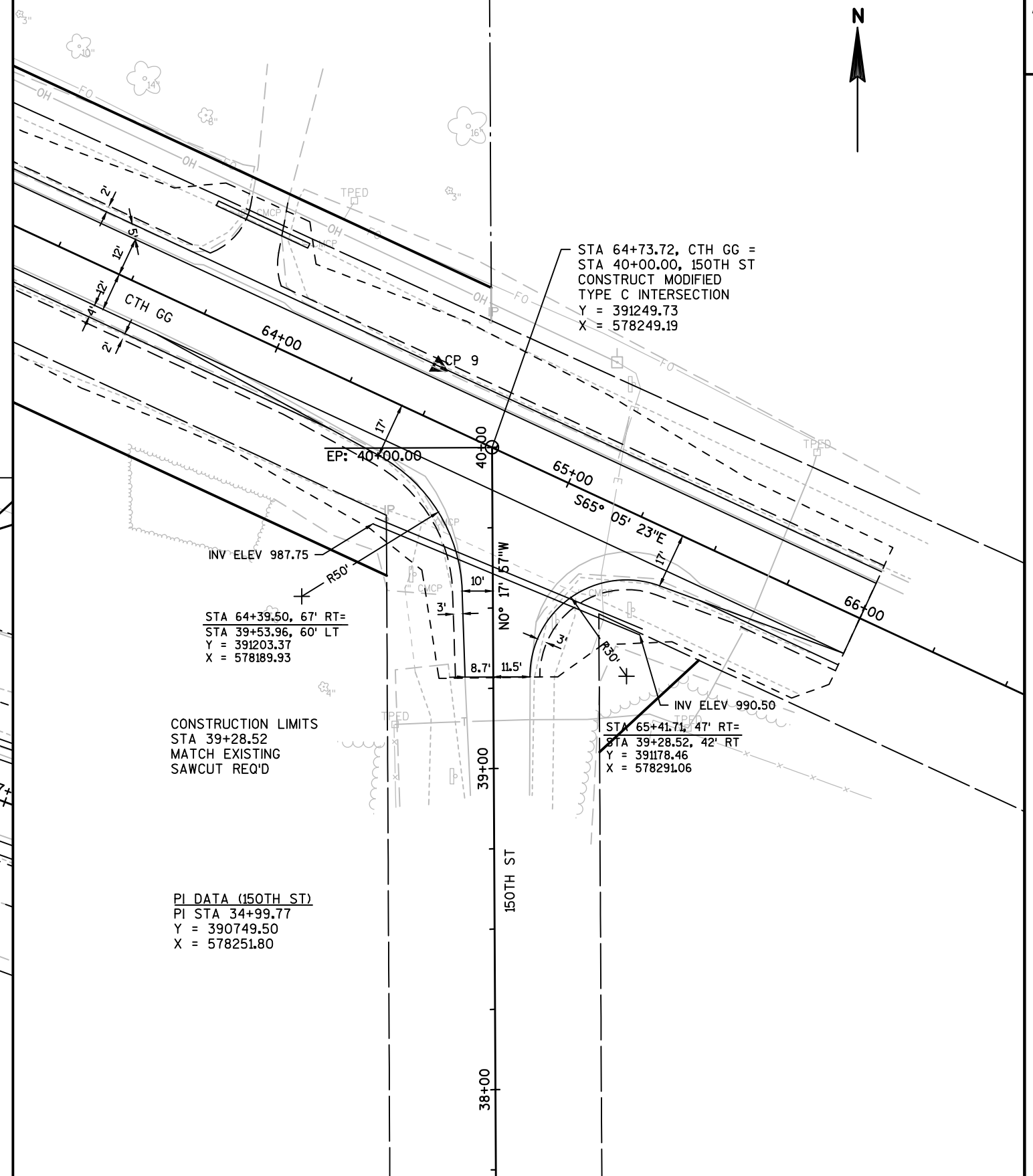
PI DATA (SHAMROCK LN)
PI STA 33+16.26
Y = 392347.87
X = 576541.83



STA 45+26.30, CTH GG =
STA 30+00.00, SHAMROCK LN
CONSTRUCT MODIFIED
TYPE C INTERSECTION
Y = 392039.64
X = 576471.06

CONSTRUCTION LIMITS
STA 30+57.50
MATCH EXISTING
SAWCUT REQ'D

INV ELEV 1007.40
STA 45+71.59, 57' LT=
STA 30+55.30, 48' RT
Y = 392082.79
X = 576530.21



STA 64+73.72, CTH GG =
STA 40+00.00, 150TH ST
CONSTRUCT MODIFIED
TYPE C INTERSECTION
Y = 391249.73
X = 578249.19

STA 64+39.50, 67' RT=
STA 39+53.96, 60' LT
Y = 391203.37
X = 578189.93

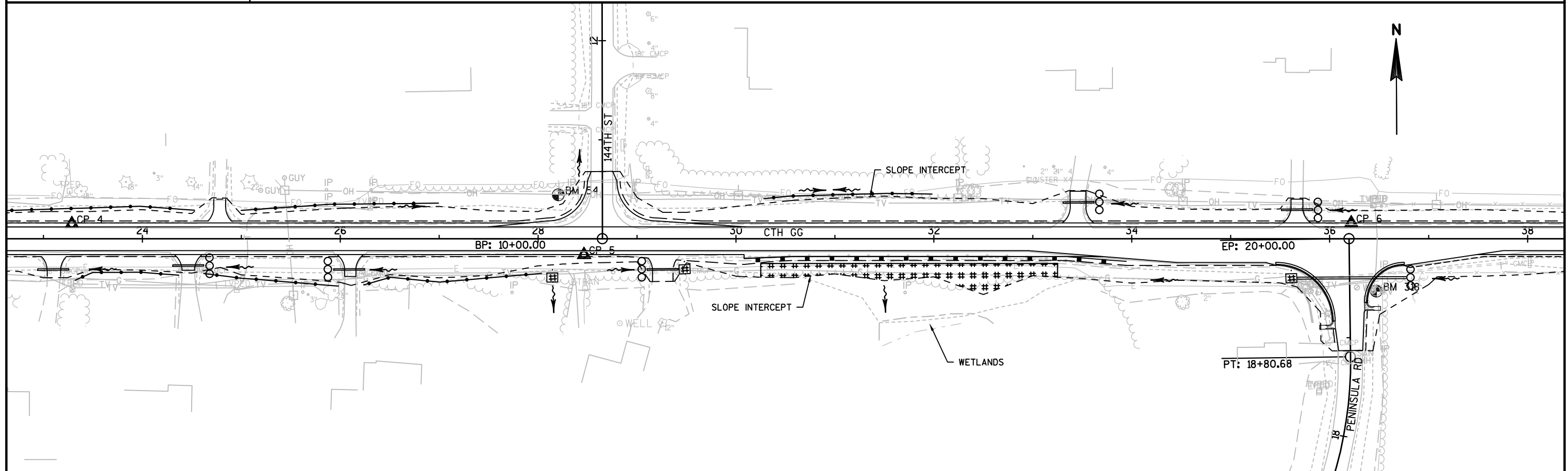
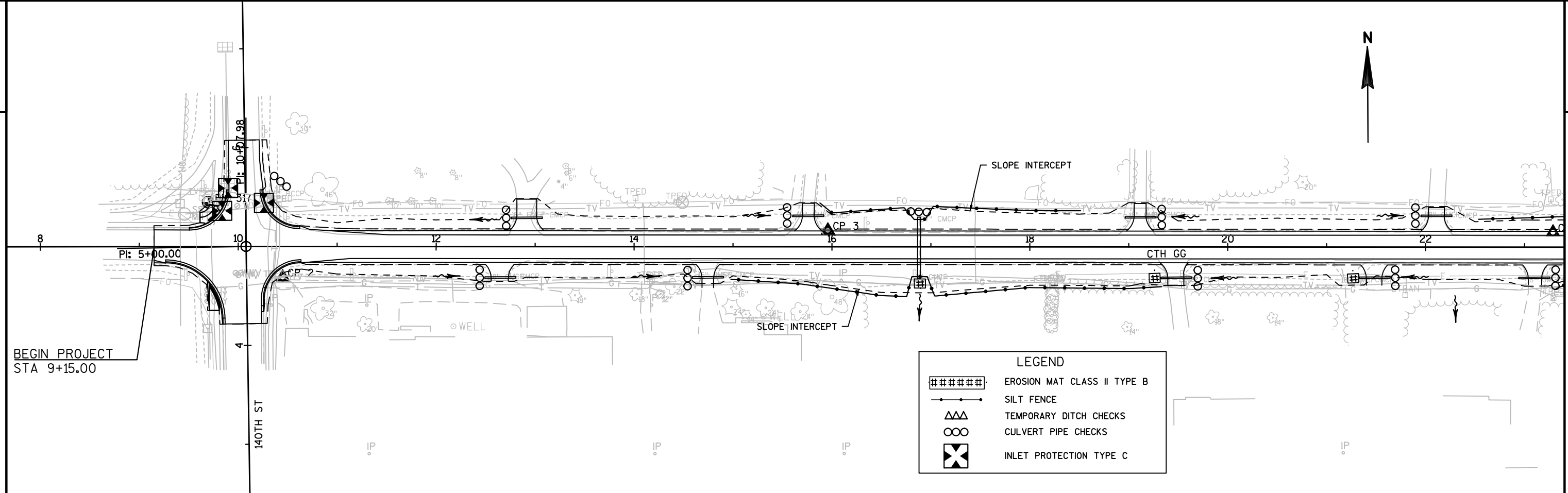
CONSTRUCTION LIMITS
STA 39+28.52
MATCH EXISTING
SAWCUT REQ'D

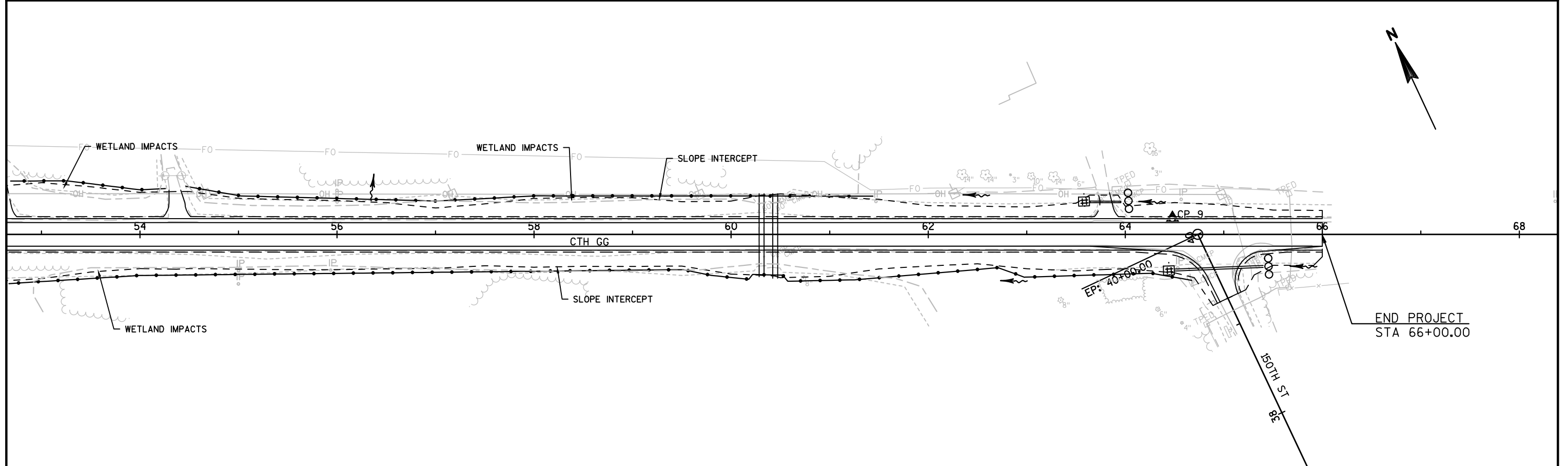
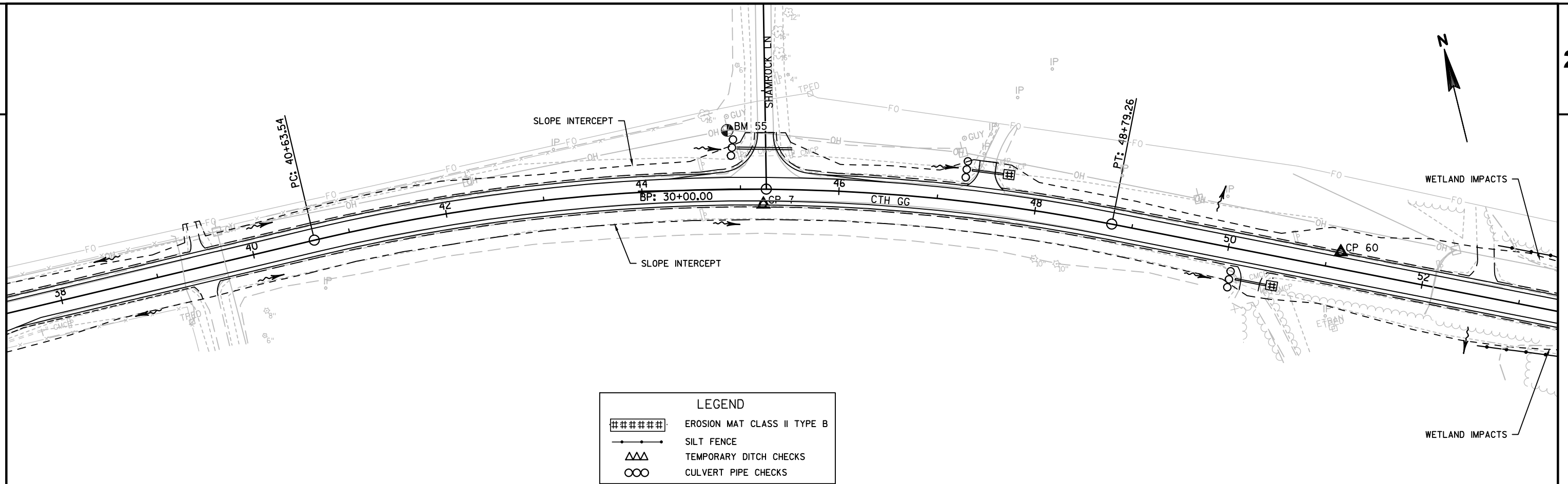
PI DATA (150TH ST)
PI STA 34+99.77
Y = 390749.50
X = 578251.80

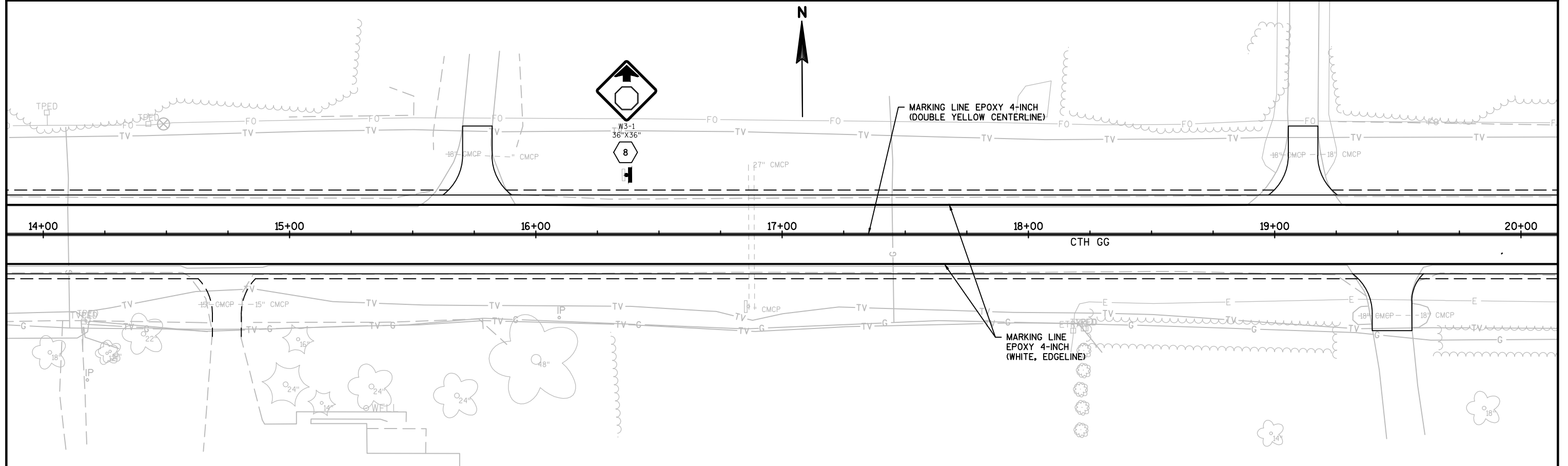
INV ELEV 990.50
STA 65+41.71, 47' RT=
STA 39+28.52, 42' RT
Y = 391178.46
X = 578291.06

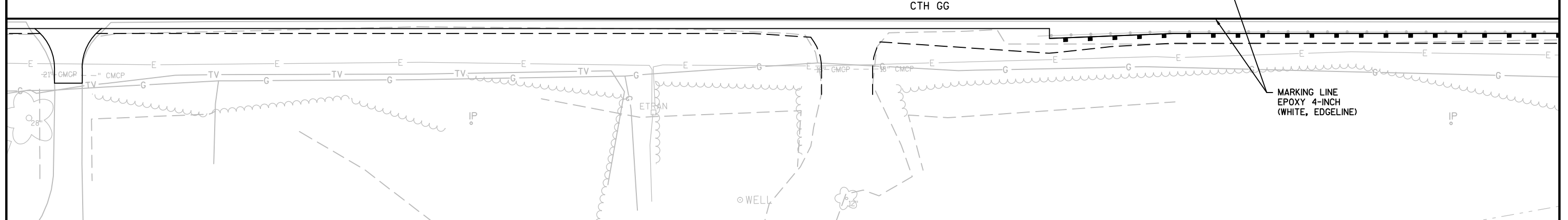
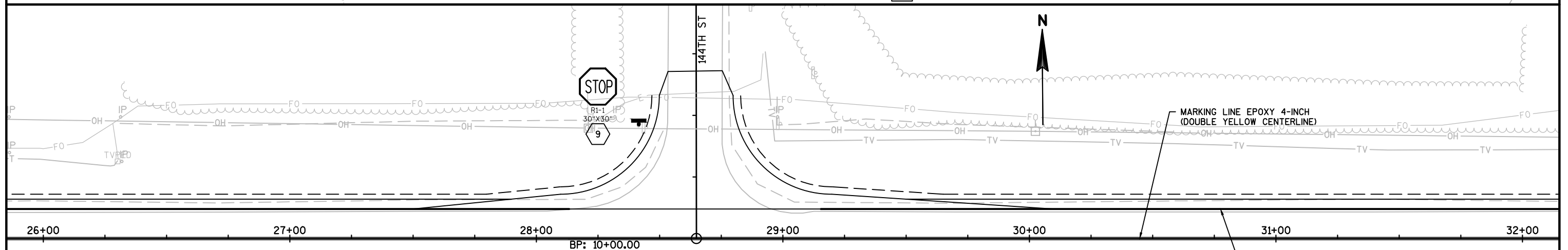
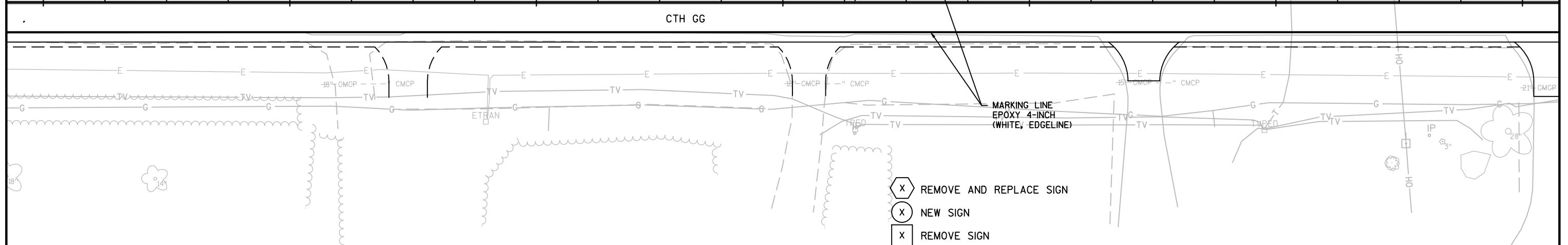
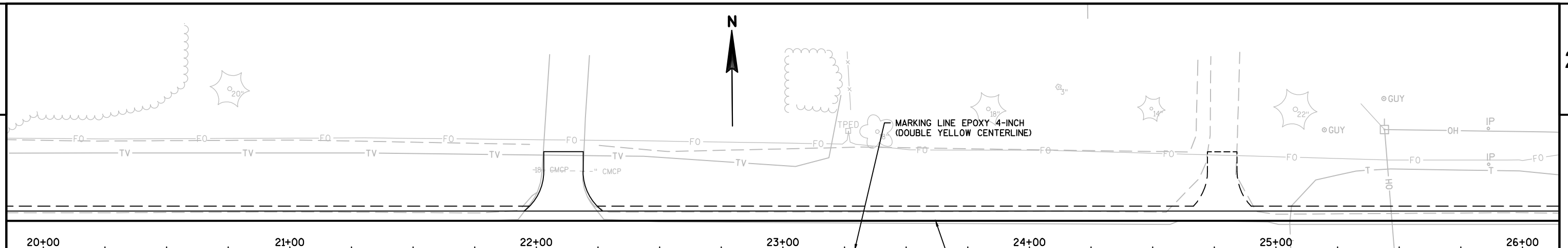
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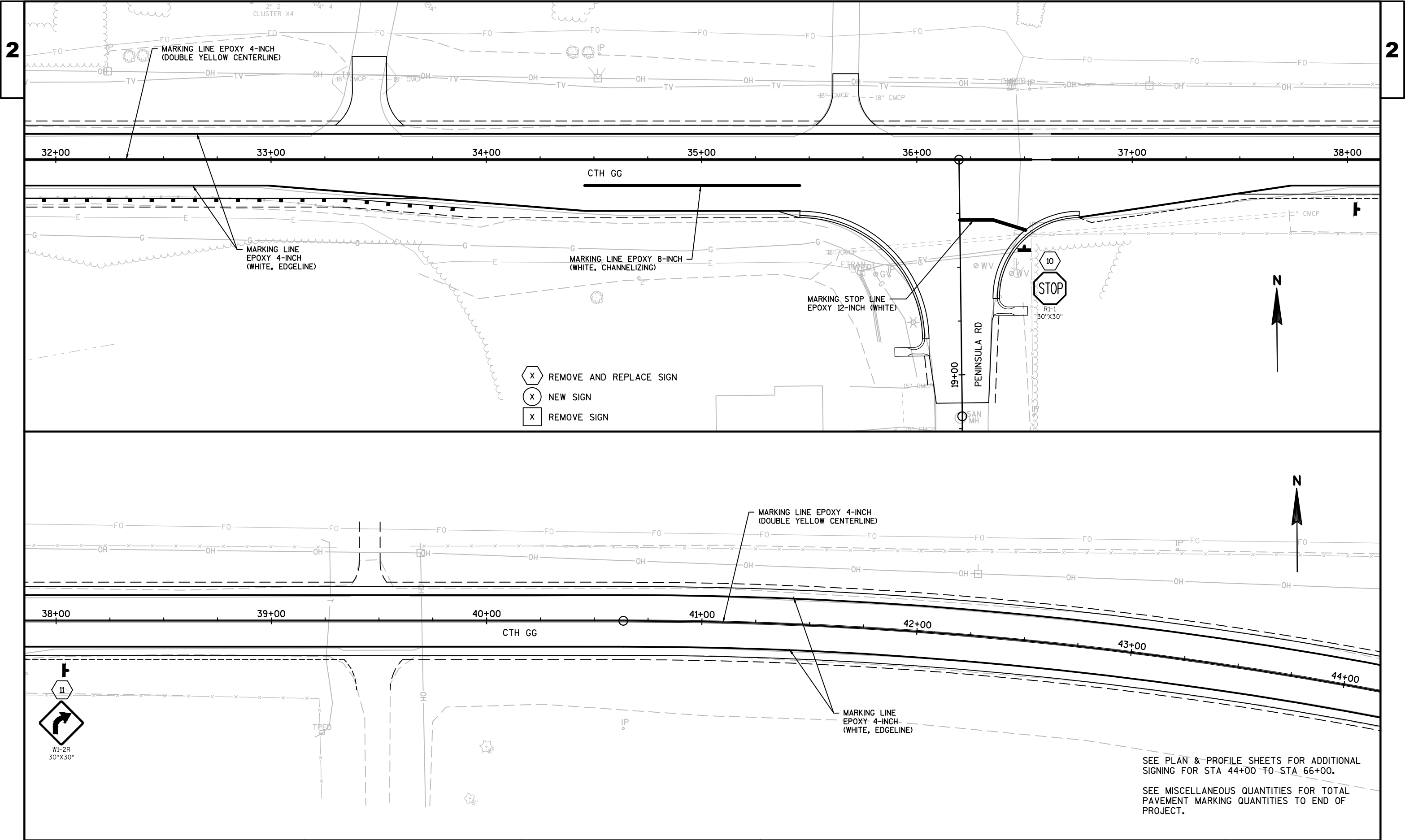


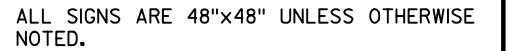






PROJECT NO:8940-00-15	HWY:CTH GG	COUNTY:ST CROIX	PERMANENT SIGNING/PAVEMENT MARKING	SHEET	E
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Estimate Of Quantities

8940-00-15

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	9.000	9.000
0004	201.0205	Grubbing	STA	9.000	9.000
0006	203.0100	Removing Small Pipe Culverts	EACH	23.000	23.000
0008	204.0150	Removing Curb & Gutter	LF	285.000	285.000
0010	204.0155	Removing Concrete Sidewalk	SY	51.000	51.000
0012	204.0165	Removing Guardrail	LF	391.000	391.000
0014	204.0170	Removing Fence	LF	275.000	275.000
0016	205.0100	Excavation Common	CY	3,247.000	3,247.000
0018	208.0100	Borrow	CY	490.000	490.000
0020	213.0100	Finishing Roadway (project) 01. 8940-00-15	EACH	1.000	1.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	1,105.000	1,105.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	7,800.000	7,800.000
0026	325.0100	Pulverize and Relay	SY	16,003.000	16,003.000
0028	455.0605	Tack Coat	GAL	1,068.000	1,068.000
0030	460.2000	Incentive Density HMA Pavement	DOL	1.000	1.000
0032	460.6223	HMA Pavement 3 MT 58-28 S	TON	1,584.000	1,584.000
0034	460.6224	HMA Pavement 4 MT 58-28 S	TON	984.000	984.000
0036	460.6243	HMA Pavement 3 MT 58-34 S	TON	176.000	176.000
0038	460.6244	HMA Pavement 4 MT 58-34 S	TON	2,252.000	2,252.000
0040	465.0120	Asphaltic Surface Driveways and Field Entrances	TON	85.000	85.000
0042	465.0315	Asphaltic Flumes	SY	24.000	24.000
0044	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	34.000	34.000
0046	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	6.000	6.000
0048	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	2.000	2.000
0050	520.1060	Apron Endwalls for Culvert Pipe 60-Inch	EACH	4.000	4.000
0052	521.6118	Culvert Pipe Corrugated Steel Aluminum Coated 18-Inch	LF	490.000	490.000
0054	521.6124	Culvert Pipe Corrugated Steel Aluminum Coated 24-Inch	LF	256.000	256.000
0056	521.6130	Culvert Pipe Corrugated Steel Aluminum Coated 30-Inch	LF	62.000	62.000
0058	521.6160	Culvert Pipe Corrugated Steel Aluminum Coated 60-Inch	LF	136.000	136.000
0060	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	61.000	61.000
0062	601.0557	Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	LF	380.000	380.000
0064	602.0405	Concrete Sidewalk 4-Inch	SF	463.000	463.000
0066	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	20.000	20.000
0068	602.0605	Curb Ramp Detectable Warning Field Radial Yellow	SF	50.000	50.000
0070	611.0615	Inlet Covers Type F	EACH	1.000	1.000
0072	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000
0074	614.2300	MGS Guardrail 3	LF	337.500	337.500

Estimate Of Quantities

8940-00-15

Line	Item	Item Description	Unit	Total	Qty
0076	614.2610	MGS Guardrail Terminal EAT	EACH	1.000	1.000
0078	614.2620	MGS Guardrail Terminal Type 2	EACH	1.000	1.000
0080	618.0100	Maintenance And Repair of Haul Roads (project) 01. 8940-00-15	EACH	1.000	1.000
0082	619.1000	Mobilization	EACH	1.000	1.000
0084	624.0100	Water	MGAL	160.000	160.000
0086	625.0500	Salvaged Topsoil	SY	18,750.000	18,750.000
0088	627.0200	Mulching	SY	23,350.000	23,350.000
0090	628.1504	Silt Fence	LF	4,530.000	4,530.000
0092	628.1520	Silt Fence Maintenance	LF	4,530.000	4,530.000
0094	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0096	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0098	628.2023	Erosion Mat Class II Type B	SY	800.000	800.000
0100	628.7015	Inlet Protection Type C	EACH	3.000	3.000
0102	628.7504	Temporary Ditch Checks	LF	20.000	20.000
0104	628.7555	Culvert Pipe Checks	EACH	60.000	60.000
0106	629.0210	Fertilizer Type B	CWT	20.000	20.000
0108	630.0120	Seeding Mixture No. 20	LB	510.000	510.000
0110	630.0140	Seeding Mixture No. 40	LB	230.000	230.000
0112	630.0200	Seeding Temporary	LB	850.000	850.000
0114	630.0500	Seed Water	MGAL	530.000	530.000
0116	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	14.000	14.000
0118	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	3.000	3.000
0120	637.2210	Signs Type II Reflective H	SF	68.940	68.940
0122	637.2230	Signs Type II Reflective F	SF	30.500	30.500
0124	638.2602	Removing Signs Type II	EACH	16.000	16.000
0126	638.3000	Removing Small Sign Supports	EACH	16.000	16.000
0128	642.5001	Field Office Type B	EACH	1.000	1.000
0130	643.0420	Traffic Control Barricades Type III	DAY	720.000	720.000
0132	643.0705	Traffic Control Warning Lights Type A	DAY	1,440.000	1,440.000
0134	643.0900	Traffic Control Signs	DAY	5,520.000	5,520.000
0136	643.5000	Traffic Control	EACH	1.000	1.000
0138	646.1020	Marking Line Epoxy 4-Inch	LF	21,976.000	21,976.000
0140	646.3020	Marking Line Epoxy 8-Inch	LF	148.000	148.000
0142	646.6020	Marking Stop Line Epoxy 12-Inch	LF	138.000	138.000
0144	646.7420	Marking Crosswalk Epoxy Transverse Line 6-Inch	LF	132.000	132.000
0146	648.0100	Locating No-Passing Zones	MI	1.100	1.100
0148	650.4500	Construction Staking Subgrade	LF	5,688.000	5,688.000
0150	650.5000	Construction Staking Base	LF	5,688.000	5,688.000
0152	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	441.000	441.000

Estimate Of Quantities

8940-00-15					
Line	Item	Item Description	Unit	Total	Qty
0154	650.6000	Construction Staking Pipe Culverts	EACH	6.000	6.000
0156	650.9910	Construction Staking Supplemental Control (project) 01. 8940-00-15	LS	1.000	1.000
0158	650.9920	Construction Staking Slope Stakes	LF	5,688.000	5,688.000
0160	690.0150	Sawing Asphalt	LF	376.000	376.000
0162	740.0440	Incentive IRI Ride	DOL	4,308.000	4,308.000
0164	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0166	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0168	SPV.0060	Special 01. Adjusting Water Valves	EACH	7.000	7.000

CLEARING & GRUBBING

STATION TO STATION	201.0105	201.0205
	CLEARING STA	GRUBBING STA
18+00 - 19+00	1	1
30+00 - 33+00	3	3
36+00 - 37+00	1	1
50+00 - 54+00	4	4
PROJECT TOTALS	9	9

REMOVING SMALL PIPE CULVERTS

STATION	LOCATION	SIZE INCHES	MATERIAL	203.0100 EACH
12+64	RT	18	CMCP	1
12+91	LT	18	CMCP	1
14+74	RT	15	CMCP	1
15+76	LT	18	CMCP	1
16+88	CTH GG	27	CMCP	1
19+12	LT	18	CMCP	1
19+48	RT	18	CMCP	1
21+26	RT	18	CMCP	1
22+11	LT	18	CMCP	1
23+11	RT	18	CMCP	1
24+46	RT	15	CMCP	1
26+10	RT	21	CMCP	1
29+26	RT	18	CMCP	1
33+46	LT	18	CMCP	1
35+67	LT	18	CMCP	1
19+60	PENINSULA RD	18	CMCP	1
30+34	SHAMROCK LN	21	CMCP	1
47+47	LT	15	CMCP	1
50+28	RT	18	CMCP	1
60+31	CTH GG	60	CMCP	1
60+44	CTH GG	60	CMCP	1
63+78	LT	18	CMCP	1
39+67	150TH ST	24	CMCP	1
PROJECT TOTAL				23

REMOVING CURB & GUTTER

LOCATION	204.0150 LF
NW QUAD CTH GG/140TH ST	61
NE QUAD CTH GG/140TH ST	58
SW QUAD CTH GG/140TH ST	96
SE QUAD CTH GG/140TH ST	70
PROJECT TOTAL	285

EARTHWORK SUMMARY

DIVISION	STATION TO STATION	LOCATION	205.0100 EXCAVATION COMMON CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	(6) AVAILABLE MATERIAL CY	UNEXPANDED FILL CY	(2) EXPANDED FILL CY	(4) MASS ORDINATE +/- CY	(1) WASTE CY	(3) 208.0100 BORROW CY
	9+15 - 66+03	CTH GG	3247	---	3247	2875	3737	490	---	490
	UNDISTRIBUTED		---	---	---	---	---	---	---	---
PROJECT TOTALS			3247							490

- (1) WASTE = EXPANDED FILL - EXCAVATION COMMON (FOR INFORMATION ONLY - NOT A BID ITEM)
- (2) EXPANSION FACTOR = 1.30
- (3) BORROW = EXPANDED FILL - EXCAVATION COMMON
- (4) EXPANDED FILL = UNEXPANDED FILL * EXPANSION FACTOR
- (5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. MINUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. PLUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.
- (6) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL

REMOVING CONCRETE SIDEWALK

LOCATION	204.0155 SY
NW QUAD CTH GG/140TH ST	27
SW QUAD CTH GG/140TH ST	24
PROJECT TOTAL	51

REMOVING GUARDRAIL

STATION TO STATION	LOCATION	204.0165 LF
30+03 - 33+94	RT	391
PROJECT TOTAL		391

REMOVING FENCE

STATION TO STATION	LOCATION	204.0170 LF
36+53 - 38+20	RT	200
40+75 - 41+50	LT	75
PROJECT TOTAL		275

BASE AGGREGATE DENSE

STATION TO STATION	LOCATION	305.0110 3/4-INCH TON	305.0120 1 1/4-INCH TON
10+82- 37+75	CTH GG	464	3845
37+75 - 66+03	CTH GG	337	3407
PIPE REPLACEMENTS	2 LOCATIONS	---	225
DRIVEWAYS		225	50
UNDISTRIBUTED		79	273
PROJECT TOTALS		1105	7800

PULVERIZE AND RELAY

STATION TO STATION	LOCATION	325.0100 SY
9+15 - 66+03	CTH GG	16003
PROJECT TOTAL		16003

HMA PAVEMENT ITEMS

STATION TO STATION	LOCATION	460.6223	460.6243	460.6224	460.6244	465.0120	455.0605
		3 MT 58-28 S TON	3 MT 58-34 S TON	4 MT 58-28 S TON	4 MT 58-34 S TON	ASPHALTIC SURFACE DRIVEWAYS TON	TACK COAT GAL
9+15 - 37+75	CTH GG	1584	---	---	1268	---	566
37+75 - 66+00	CTH GG	---	---	984	984	---	502
144TH ST		---	45	---	---	---	---
PENINSULA RD		---	69	---	---	---	---
SHAMROCK LN		---	27	---	---	---	---
150TH ST		---	35	---	---	---	---
DRIVEWAYS (10)		---	---	---	---	85	---
PROJECT TOTALS		1584	176	984	2252	85	1068

ASPHALTIC FLUMES

STATION	LOCATION	465.0315 SY
19+30	LT, PENINSULA RD	12
19+35	RT, PENINSULA RD	12
PROJECT TOTAL		24

CULVERT PIPE

STATION	LOCATION	521.6118	521.6124	521.6130	521.6160	520.1018	520.1024	520.1030	520.1060	THICKNESS		INVERT EL	DISCH EL	% SLOPE
		18-INCH LF	24-INCH LF	30-INCH LF	60-INCH LF	18-INCH EACH	24-INCH EACH	30-INCH EACH	60-INCH EACH	STEEL INCHES	ALUM INCHES			
12+64	RT	24	---	---	---	2	---	---	---	.064	.060			
12+91	LT	32	---	---	---	2	---	---	---	.064	.060			
14+74	RT	18	---	---	---	2	---	---	---	.064	.060			
15+76	LT	22	---	---	---	2	---	---	---	.064	.060			
16+88	CTH GG	---	---	62	---	---	---	2	---	.079	.075	997.53	996.68	1.37
19+12	LT	18	---	---	---	2	---	---	---	.064	.060			
19+48	RT	26	---	---	---	2	---	---	---	.064	.060			
21+48	RT	28	---	---	---	2	---	---	---	.064	.060			
22+11	LT	28	---	---	---	2	---	---	---	.064	.060			
23+11	RT	26	---	---	---	2	---	---	---	.064	.060			
24+46	RT	20	---	---	---	2	---	---	---	.064	.060			
26+10	RT	32	---	---	---	2	---	---	---	.064	.060			
29+26	RT	42	---	---	---	2	---	---	---	.064	.060			
33+46	LT	44	---	---	---	2	---	---	---	.064	.060			
35+67	LT	24	---	---	---	2	---	---	---	.064	.060			
19+60	PENINSULA RD	---	110	---	---	---	2	---	---	.064	.060	1006.50	1005.35	1.05
30+34	SHAMROCK LN	---	56	---	---	---	2	---	---	.064	.060	1007.65	1007.40	0.45
47+47	LT	32	---	---	---	2	---	---	---	.064	.060			
50+28	RT	44	---	---	---	2	---	---	---	.064	.060			
60+31	CTH GG	---	---	---	68	---	---	---	2	.109	.105	975.32	974.47	1.25
60+44	CTH GG	---	---	---	68	---	---	---	2	.109	.105	975.13	974.30	1.22
63+78	LT	30	---	---	---	2	---	---	---	.064	.060			
39+67	150TH ST	---	90	---	---	---	2	---	---	.064	.060	990.50	987.75	3.06
PROJECT TOTALS		490	256	62	136	34	6	2	4					

NOTES

- FINAL LOCATION TO BE DETERMINED BY ENGINEER IN THE FIELD

CONCRETE CURB & GUTTER
30-INCH TYPE D

STATION TO STATION		601.0411 LF
NW QUAD CTH GG/140TH ST		61
PROJECT TOTAL		61

CONCRETE CURB AND GUTTER
6-INCH SLOPED 36-INCH TYPE D

STATION TO STATION		601.0557 LF
NE QUAD CTH GG/140TH ST		60
SW QUAD CTH GG/140TH ST		96
SE QUAD CTH GG/140TH ST		72
SW QUAD CTH GG/PENINSULA RD		91
SE QUAD CTH GG/PENINSULA RD		61
PROJECT TOTAL		380

CONCRETE SIDEWALK 4-INCH

STATION	LOCATION	602.0405 SF
9+75	RT	216
9+75	LT	247
PROJECT TOTALS		463

CURB RAMP DETECTABLE
WARNING FIELD YELLOW

STATION	LOCATION	602.0505 SF
9+75	LT	20
PROJECT TOTAL		20

CURB RAMP DETECTABLE
WARNING FIELD RADIAL YELLOW

STATION	LOCATION	602.0605 SF
9+75	RT	50
PROJECT TOTAL		50

MGS GUARDRAIL

STATION TO STATION	LOCATION	614.2300 GUARDRAIL 3 LF	614.2610 TERMINAL EAT EACH	614.2620 TERMINAL TYPE 2 EACH
		LF	EACH	EACH
30+08.1 - 33+94.4	RT	337.5	1	1
PROJECT TOTALS		337.5	1	1

INLET COVERS TYPE F

STATION	LOCATION	611.0615 EACH
5+41	RT	1
PROJECT TOTAL		1

ADJUSTING INLET COVERS

STATION	LOCATION	611.8115 EACH
5+37	LT	1
5+41	RT	1
PROJECT TOTAL		2

WATER

LOCATION	624.0100 MGAL
BASE COMPACTION	130
DUST CONTROL	30
PROJECT TOTAL	160

SILT FENCE

STATION TO STATION	LOCATION	628.1504 LF	628.1520 MAINTENANCE LF
		LF	LF
16+00 - 18+50	LT	250	250
15+00 - 19+25	RT	452	452
22+50 - 24+50	LT	200	200
23+25 - 28+00	RT	426	426
25+00 - 27+00	LT	200	200
30+25 - 32+00	LT	175	175
52+75 - 61+50	LT	857	857
52+75 - 64+50	RT	1210	1210
UNDISTRIBUTED		760	760
PROJECT TOTALS		4530	4530

MOBILIZATIONS EROSION CONTROL
AND EMERGENCY EROSION CONTROL

PROJECT	628.1905 EACH	628.1910 EMERGENCY EACH
8940-00-15	2	2
PROJECT TOTALS		2

EROSION MAT CLASS II TYPE B

STATION TO STATION	LOCATION	628.2023 SY
16+88	RT	20
19+48	RT	10
21+26	RT	10
29+48	RT	10
30+25 - 33+25	RT	557
19+55	PENINSULA RD, LT	15
47+47	LT	10
50+27	RT	10
63+80	LT	10
39+64	150TH ST, LT	15
UNDISTRIBUTED		133
PROJECT TOTAL		800

INLET PROTECTION TYPE C

STATION	LOCATION	628.7015 EACH
5+36	LT, 140TH ST	1
5+59	LT, 140TH ST	1
10+28	LT	1
PROJECT TOTAL		3

TEMPORARY DITCH CHECKS

STATION	628.7504 LF
UNDISTRIBUTED	20
PROJECT TOTAL	20

SALVAGED TOPSOIL, MULCHING, FERTILIZER, & SEEDING

STATION TO STATION	LOCATION	625.0500			630.0120	630.0140		
		SALVAGED TOPSOIL SY	627.0200 MULCHING SY	629.0210 FERTILIZER TYPE B CWT	SEEDING MIXTURE NO. 20 LB	SEEDING MIXTURE NO. 40 LB	630.0200 SEEDING TEMPORARY LB	630.0500 SEED WATER MGAL
8+51 - 66+03	PROJECT	18750	18750	16	410	185	680	425
UNDISTRIBUTED		----	4600	4	100	45	170	105
PROJECT TOTALS		18750	23350	20	510	230	850	530

CULVERT PIPE CHECKS

STATION	LOCATION	628.7555 EACH
10+36	LT	2
12+64	RT	2
12+90	LT	2
14+74	RT	2
15+77	LT	2
16+88	CTH GG	5
19+12	LT	2
19+48	RT	2
21+48	RT	2
22+11	LT	2
23+11	RT	2
24+46	RT	2
26+10	RT	2
29+26	RT	2
19+55	PENINSULA RD	3
30+34	SHAMROCK LN	3
33+46	LT	2
35+67	LT	2
47+47	LT	2
50+27	RT	2
63+80	LT	2
39+64	150TH ST	3
UNDISTRIBUTED		10
PROJECT TOTAL		60

PERMANENT SIGNING

SIGN NO	APPROX STATION LOCATION	SIGN CODE	SIGN SIZE WxH (INCHES)	634.0614 POSTS WOOD 4X6-INCH EACH	634.0616 POSTS WOOD 4x6-INCH EACH	637.2210 SIGNS TYPE II REFLECTIVE H SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	COMMENT
				14-FT	16-FT					
1	9+25 LT	R2-1	24 X 30	1	---	5.00	---	---	---	"35 MPH"
2	9+50 RT	R1-1	30 X 30	1	---	5.18	---	1	1	
3	4+64, 140TH ST	R1-1	30 X 30	1	---	5.18	---	1	1	
4	5+41, 140TH ST	R1-1	30 X 30	1	---	5.18	---	1	1	
5	10+50 LT	R1-1	30 X 30	1	---	5.18	---	1	1	
6	11+18 RT	I55-56	30 X 36	1	---	7.50	---	1	1	NEW RICHMOND KEY CLUB
7	13+78 RT	R2-1	24 X 30	1	---	5.00	---	1	1	"45 MPH"
8	16+37 LT	W3-1	36 X 36	1	---	---	9.00	1	1	
9	10+45, 144TH ST	R1-1	30 X 30	1	---	5.18	---	1	1	
10	19+58, PENINSULA RD	R1-1	30 X 30	1	---	5.18	---	1	1	
11	38+05 RT	W1-2R	30 X 30	---	1	---	6.25	1	1	
12	44+25 RT	R2-1	24 X 30	1	---	5.00	---	1	1	"55 MPH"
13	44+25 LT	R2-1	24 X 30	1	---	5.00	---	1	1	"45 MPH"
14	30+36 SHAMROCK LN	R1-1	30 X 30	1	---	5.18	---	1	1	
15	49+25 LT	W3-5	36 X 36	---	1	---	9.00	1	1	"45 MPH"
16	52+15 LT	W1-2L	30 X 30	---	1	---	6.25	1	1	
17	39+45 150TH ST	R1-1	30 X 30	1	---	5.18	---	1	1	
PROJECT TOTALS				14	3	68.94	30.50	16	16	

TRAFFIC CONTROL ITEMS

STAGE	DAYS	643.0420 BARRICADES TYPE III EACH	643.0705 WARNING LIGHTS TYPE A EACH	643.0900 SIGNS EACH
		DAY	DAY	DAY
ENTIRE PROJECT	80	9	720	18
PROJECT TOTALS			720	1440

MARKING LINE EPOXY

STATION TO STATION	DESCRIPTION	646.1020		646.3020
		4-INCH	8-INCH	
		WHITE	YELLOW	WHITE
		LF	LF	LF
9+15 - 66+03	CENTERLINE, CTH GG	---	11200	---
9+15 - 66+03	EDGE LINE, CTH GG	10540	---	---
4+22 - 4+70	CHANNELIZING, 140TH ST	---	---	48
4+22 - 4+70	CENTERLINE, 140TH ST	---	96	---
5+38 - 6+08	CENTERLINE, 140TH ST	---	140	---
34+45 - 35+45	CHANNELIZING, CTH GG	---	---	100
SUBTOTALS		10540	11436	148
PROJECT TOTALS		21976	148	

MARKING STOP LINE EPOXY 12-INCH

STATION	LOCATION	646.6020
		LF
4+70	140TH ST	32
5+38	140TH ST	22
9+67	CTH GG	30
10+60	CTH GG	22
19+72	PENINSULA RD	32
PROJECT TOTAL		138

MARKING CROSSWALK EPOXY
TRANSVERSE LINE 6-INCH

STATION	LOCATION	646.7420
		LF
9+75	CTH GG	132
PROJECT TOTAL		132

LOCATING NO-PASSING ZONE

STATION TO STATION	LOCATION	648.0100
		MI
9+15 - 66+00	CTH GG	1.1
PROJECT TOTAL		1.1

CONSTRUCTION STAKING

STATION TO STATION	650.4500	650.5000	650.9920
	SUBGRADE	BASE	SLOPE STAKES
	LF	LF	LF
9+15 - 66+03	5688	5688	5688
PROJECT TOTALS		5688	5688

CONSTRUCTION STAKING
CURB GUTTER AND CURB & GUTTER

					650.5500
LOCATION					LF
NW	QUAD	CTH	GG/140TH	ST	61
NE	QUAD	CTH	GG/140TH	ST	60
SW	QUAD	CTH	GG/140TH	ST	96
SE	QUAD	CTH	GG/140TH	ST	72
SW	QUAD	CTH	GG/PENINSULA	RD	91
SE	QUAD	CTH	GG/PENINSULA	RD	61
PROJECT TOTAL					441

CONSTRUCTION STAKING PIPE CULVERTS

STATION	LOCATION	650.6000
		EACH
16+88	CTH GG	1
19+60	PENINSULA RD	1
30+34	SHAMROCK LN	1
60+31	CTH GG	1
60+44	CTH GG	1
39+61	150TH ST	1
PROJECT TOTAL		6

SAWING ASPHALT

STATION	LOCATION	690.0150
		LF
9+15	CTH GG	31
4+22	140TH ST	37
5+40.50	140TH ST PATH	9
6+07.60	140TH ST	32
9+61.50	PATH	10
12+90	LT	24
15+77	LT	12
19+12	LT	12
19+48	RT	16
22+11	LT	16
24+46	RT	15
26+10	RT	12
10+68	144TH ST	22
33+46	LT	17
35+67	LT	12
18+87	PENINSULA RD	25
30+57.50	SHAMROCK LN	16
47+47	LT	13
38+83.86	150TH ST	20
66+03.46	CTH GG	25
PROJECT TOTAL		376

ADJUSTING WATER VALVES

STATION	LOCATION	SPV.0060.01
		EACH
9+73	45' LT	1
9+97	27' RT	1
9+99	41' LT	1
10+00	29' RT	1
10+03	27' RT	1
36+28	30' RT	1
36+44	53' RT	1
PROJECT TOTAL		7

RIGHT-OF-WAY PLAT COUNTY TRUNK HIGHWAY "GG"
(140TH STREET TO 150TH STREET)

CONVENTIONAL SYMBOLS

PUBLIC LAND SURVEY SYSTEM CORNER FOUND AND MONUMENTED AS LABELED	
1-5/16" DIAMETER X 18" IRON PIPE SET, WEIGHING 1.68 LBS. PER LINEAR FOOT	
1" DIAMETER STEEL "SURVEY MARK" NAIL SET IN ASPHALT	
1-5/16" DIAMETER IRON PIPE FOUND, UNLESS OTHERWISE NOTED	
2-3/8" DIAMETER IRON PIPE FOUND	
RIGHT-OF-WAY POINT NUMBER	
PREVIOUS HIGHWAY RIGHT-OF-WAY RECORD	
QUARTER SECTION OR QUARTER-QUARTER SECTION LINE AS LABELED	
HIGHWAY CENTERLINE ALIGNMENT WITH STATION VALUE	
MUNICIPAL OR JURISDICTIONAL BOUNDARY	
EXISTING PROPERTY LINE	
EXISTING HIGHWAY/ROAD RIGHT-OF-WAY	
PROPOSED HIGHWAY/ROAD RIGHT-OF-WAY	
PROPOSED/DESIGNED SLOPE INTERCEPT	
PROPOSED FEE RIGHT-OF-WAY (HATCHING VARIES BY LANDOWNER)	
TEMPORARY LIMITED EASEMENT	
PROPOSED TEMPORARY LIMITED EASEMENT (AREA AND PURPOSE AS LABELED)	
INDEXED LANDOWNER INTEREST	
INDEXED UTILITY OWNER INTEREST	
CERTIFIED SURVEY MAP	C.S.M.
DENOTES ST. CROIX COUNTY COORDINATE VALUE (Y: NORTHING AND X: EASTING)	Y 392000.0000 X 573000.0000
DENOTES CENTERLINE	CL
DENOTES POINT OF INTERSECTION	PI
DENOTES POINT OF CURVATURE	PC
DENOTES POINT OF TANGENCY	PT
DENOTES POINT ON CURVE	POC
DENOTES POINT ON TANGENT	POT
DENOTES DEGREE OF CURVE (ARC DEFINITION)	D
DENOTES RADIUS LENGTH	R
DENOTES CENTRAL ANGLE	A
DENOTES CHORD BEARING	CB
DENOTES CHORD LENGTH	C
DENOTES ARC LENGTH	A
TANGENT BEARING INTO CURVE	TAN IN
TANGENT BEARING OUT OF CURVE	TAN OUT
EXISTING LIGHT POLE	
EXISTING ELECTRICAL POWER POLE	
EXISTING GUY ANCHOR	
EXISTING OVERHEAD ELECTRIC LINE	
EXISTING UNDERGROUND ELECTRIC LINE	
EXISTING UTILITY JUNCTION BOX	
EXISTING UNDERGROUND TELEPHONE LINE	
EXISTING UNDERGROUND FIBER-OPTIC LINE	
EXISTING UNDERGROUND TELEVISION LINE	
EXISTING UNDERGROUND GAS LINE	
EXISTING MANHOLE	
EXISTING SANITARY SEWER	
EXISTING STORM WATER SEWER	
EXISTING STORM WATER CATCH BASIN	
EXISTING WATER MAIN	
EXISTING WATER HYDRANT	
EXISTING PUBLIC ROAD OR STREET SIGN	
COMPENSABLE UTILITY JUNCTION BOX	
COMPENSABLE ELECTRICAL POWER POLE	

PLAT NOTES

HORIZONTAL POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN, ST. CROIX COUNTY COORDINATES, NAD83 (1991), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS FOUND OR PLACED ARE DENOTED IN THE CONVENTIONAL SYMBOLS AND MAPPED OR SHOWN ON THE DETAIL SHEETS OF THIS PLAT. RIGHT-OF-WAY MONUMENTS PLACED SHALL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS, REFERENCED TO THE U.S. PUBLIC LAND SURVEY SYSTEM, AS MAPPED OR SHOWN ON THE DETAIL SHEETS OF THIS PLAT.

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM PLATS, MAPS AND DOCUMENTS OF PUBLIC RECORD.

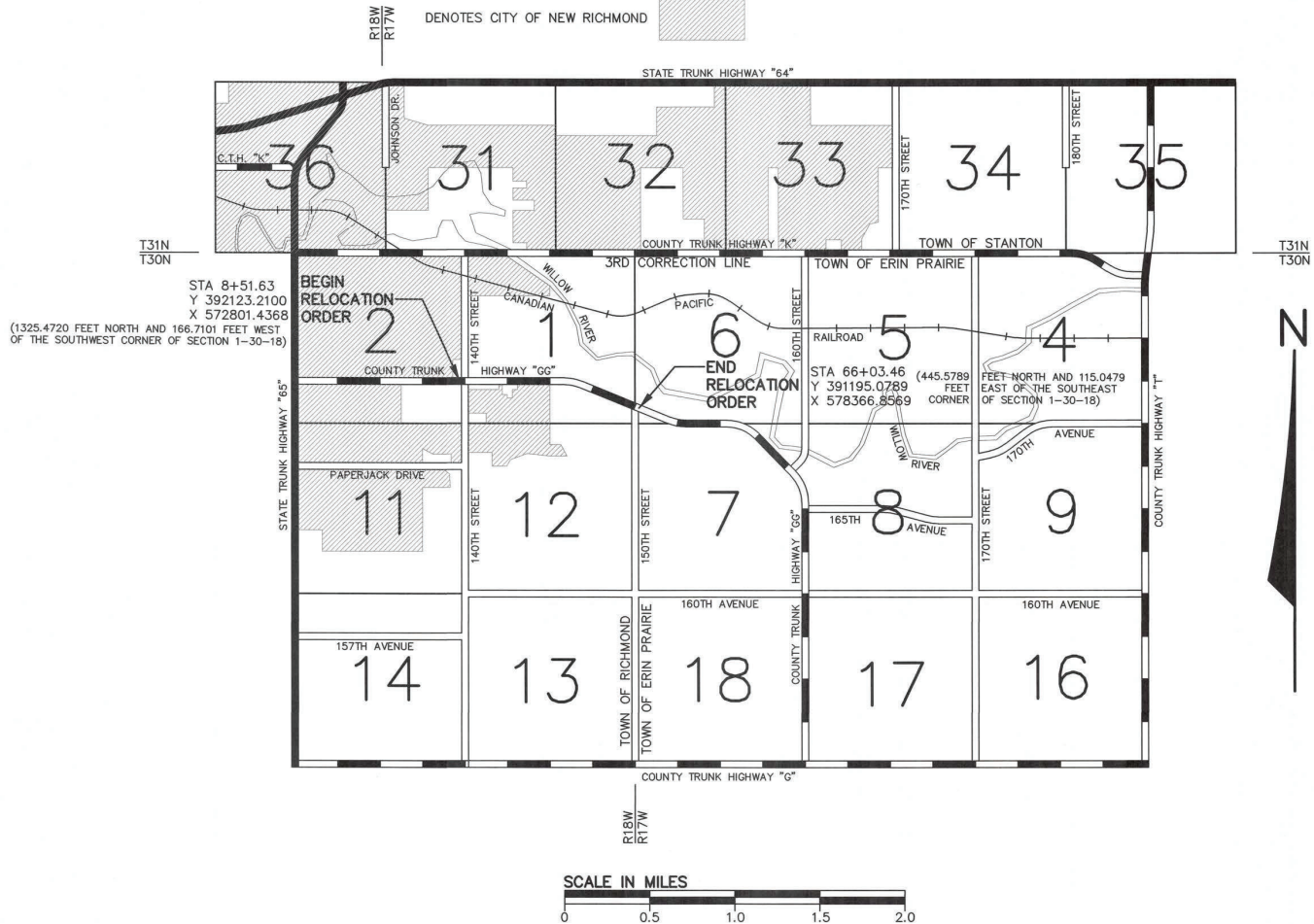
EXISTING HIGHWAY RIGHT-OF-WAY AND ALIGNMENT AS SHOWN ON THIS PLAT IS BASED ON THE FOLLOWING:

- ~ 1957' HIGHWAY CONVEYANCES FROM ST. CROIX COUNTY HIGHWAY PROJECT 57-GG
- ~ 1960' HIGHWAY CONVEYANCE FROM ST. CROIX COUNTY HIGHWAY PROJECT 60-GG-1
- ~ 1989' HIGHWAY CONVEYANCES, DIMENSIONED RIGHT-OF-WAY PLANS AND FOUND MONUMENTS, FROM ST. CROIX COUNTY HIGHWAY PROJECT 85-GG-1
- ~ THE COMPILATION OF RECORDED PLATS, RECORDED CERTIFIED SURVEY MAPS AND FILED MAPS OF SURVEY IN ST. CROIX COUNTY
- ~ VERIFIED WITH THE EXISTING AND TRAVELED CENTERLINE OF COUNTY TRUNK HIGHWAY "GG"

A TEMPORARY LIMITED EASEMENT (TLE) IS A RIGHT FOR CONSTRUCTION PURPOSES, AS DEFINED HEREON, INCLUDING THE RIGHT TO OPERATE NECESSARY EQUIPMENT THEREON AND THE RIGHT OF INGRESS AND EGRESS, AS LONG AS REQUIRED FOR SUCH PUBLIC PURPOSE, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM NECESSARY OR DESIRABLE. ALL TEMPORARY LIMITED EASEMENTS EXPIRE AT THE COMPLETION OF THE CONSTRUCTION PROJECT FOR WHICH THIS INSTRUMENT IS GIVEN.

DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO THE EXISTING CENTERLINE ALIGNMENT, AS SHOWN ON THIS PLAT.

LOCATION SKETCH



REVISIONS

07/17/19:
ADDED CITY OF NEW RICHMOND AS LAND AND UTILITY INTEREST ON SHEET 4.02.
UNDERGROUND ELECTRIC ON SHEETS 4.03 AND 4.04 LABELED "CITY OF NEW RICHMOND UTILITIES".

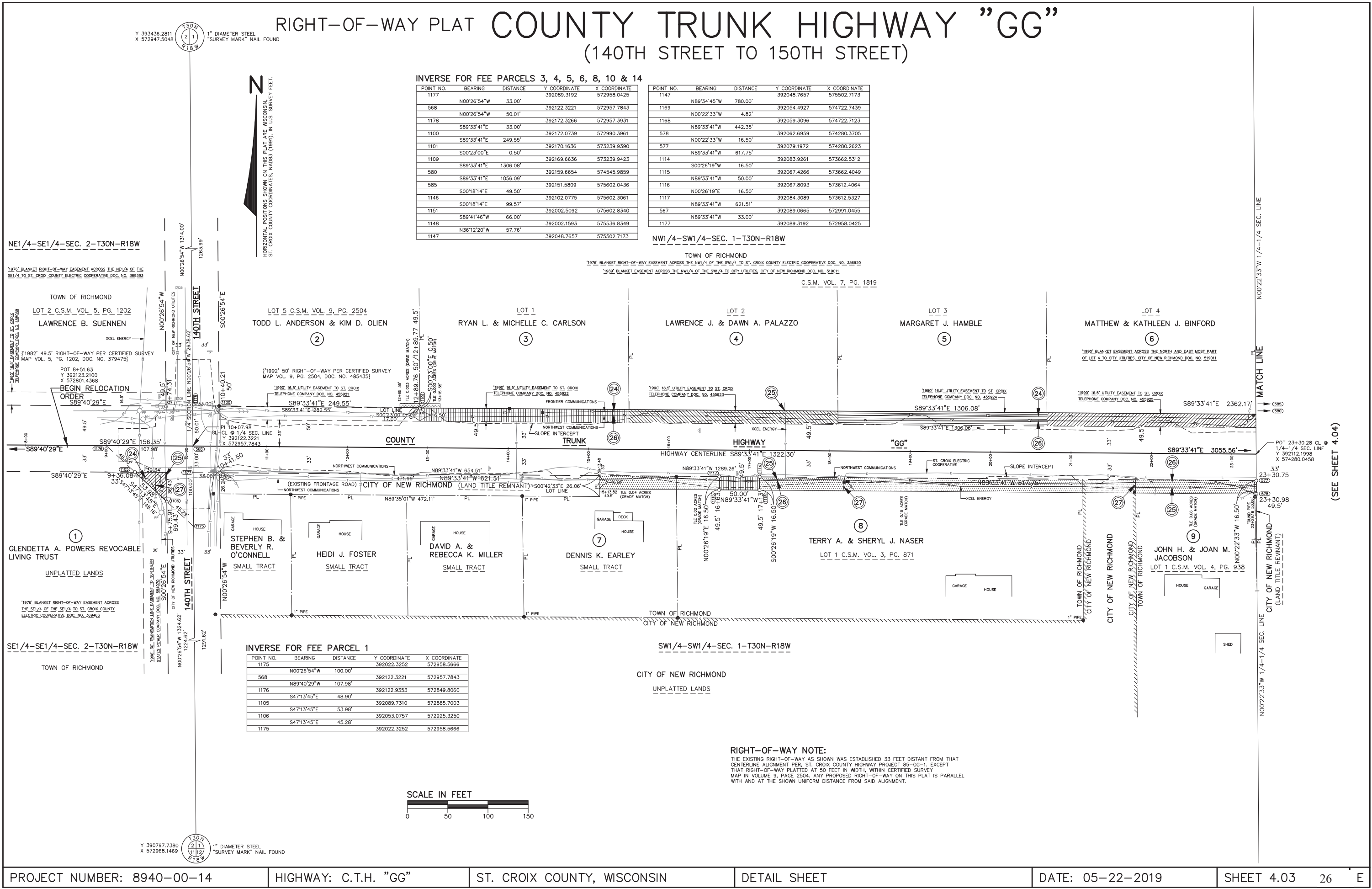
12/26/19:
CHANGED LAND INTEREST FOR PARCEL 10 ON SHEETS 4.02 AND 4.04, FROM FEE TO TEMPORARY LIMITED EASEMENT. CHANGED RIGHT-OF-WAY BOUNDARY AND INVERSE TABLES ON SHEETS 4.03 AND 4.04, TO EXCLUDE THE ABOVE PARCEL 10 FEE INTEREST.
REMOVED (SHEET 4.04) "RELEASE OF RIGHTS" FROM FROM UTILITY INTERESTS 24 AND 27, WITHIN SCHEDULE OF LAND INTERESTS.

ACCEPTED FOR ST. CROIX COUNTY	
DATE	12/26/19
ROBBIE KREJCI, PE COUNTY HIGHWAY COMMISSIONER	
PLAT PREPARED BY:	
DATE	12-26-19
FRANCIS W. BLESKACEK, PLS	
PREPARED BY:	
SURVEYOR ST. CROIX COUNTY HIGHWAY DEPARTMENT	
DESIGNER AYRES ASSOCIATES INC.	
REVIEW WISCONSIN DEPARTMENT OF TRANSPORTATION	
AUTHORITY NORTHWEST REGION	
REAL ESTATE CONSULTANT CORRE, INC.	
E	

RIGHT-OF-WAY PLAT COUNTY TRUNK HIGHWAY "GG"
(140TH STREET TO 150TH STREET)

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

SCHEDULE OF LAND INTERESTS							
PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	RIGHT-OF-WAY REQUIRED			TEMPORARY LIMITED EASEMENT
				NEW R/W	EXISTING R/W	TOTAL R/W	
1	4.03	GLENDETTA A. POWERS REVOCABLE LIVING TRUST	FEE	0.02 ACRES	0.09 ACRES	0.11 ACRES	
2	4.03	TODD L. ANDERSON AND KIM D. OLIEN	TLE				0.003 ACRES
3	4.03	RYAN L. AND MICHELLE C. CARLSON	FEE & TLE	0.10 ACRES	0.23 ACRES	0.33 ACRES	0.003 ACRES
4	4.03	LAWRENCE J. AND DAWN A. PALAZZO	FEE	0.10 ACRES	0.23 ACRES	0.33 ACRES	
5	4.03	MARGARET J. HAMBLE	FEE	0.10 ACRES	0.23 ACRES	0.33 ACRES	
6	4.03	MATTHEW AND KATHLEEN J. BINFORD	FEE	0.10 ACRES	0.23 ACRES	0.33 ACRES	
7	4.03	DENNIS K. EARLEY	TLE				0.04 ACRES
8	4.03	TERRY A. AND SHERYL J. NASER	FEE & TLE	0.02 ACRES	0.32 ACRES	0.34 ACRES	0.17 ACRES
9	4.03	JOHN H. AND JOAN M. JACOBSON	TLE				0.06 ACRES
10	4.04	AMANDA ENGLUND	TLE				0.07 ACRES
12	4.04	SCOTT E. AND MARY J. HANSEN	TLE				0.01 ACRES
14	4.04	BILLIE JO BRIESE	FEE & TLE	0.02 ACRES			0.01 ACRES
15	4.05	PATRICK J. AND LISA A. EARLEY	FEE & TLE	0.05 ACRES	0.26 ACRES	0.31 ACRES	0.05 ACRES
16	4.05	ELMER AND MABEL EARLEY ESTATE	TLE				0.06 ACRES
17	4.06	JOHN A. AND LORI A. SCHMELTER	TLE				0.01 ACRES
18	4.06	CHARLES R. AND SUSAN K. SERSEN	TLE				0.02 ACRES
19	4.06	LYNN T., JR. AND NILA M. FORREST	FEE	0.15 ACRES	2.63 ACRES	2.78 ACRES	
20	4.06	SHANNON M. MATTISON	FEE	0.07 ACRES			
21	4.06	ELLEN GUILD	FEE	0.03 ACRES			
22	4.06	ADAM R. AND STEPHANIE M. KAHLER	FEE	0.32 ACRES	0.01 ACRES	0.33 ACRES	
23	4.06	DAVID STEEL	FEE	0.02 ACRES	0.11 ACRES	0.13 ACRES	
24	4.03 & 4.06	FRONTIER NORTH, INC. D/B/A FRONTIER COMMUNICATIONS	RELEASE OF RIGHTS				
25	4.03 & 4.04	NORTHERN STATES POWER COMPANY D/B/A/ XCEL ENERGY	RELEASE OF RIGHTS				
26	4.03 & 4.04	NORTHWEST COMMUNITY COMMUNICATIONS, INC. D/B/A NORTHWEST COMMUNICATIONS	RELEASE OF RIGHTS				
27	4.06	ST. CROIX ELECTRIC COOPERATIVE	RELEASE OF RIGHTS				
28	4.03	CITY OF NEW RICHMOND	TLE				0.31 ACRES
29	4.03 & 4.04	CITY OF NEW RICHMOND UTILITIES	RELEASE OF RIGHTS				



RIGHT-OF-WAY PLAT COUNTY TRUNK HIGHWAY "GG"
(140TH STREET TO 150TH STREET)

INVERSE FOR FEE PARCELS 3, 4, 5, 6, 8, 10 & 14

POINT NO.	BEARING	DISTANCE	Y COORDINATE	X COORDINATE
1177	N00°26'54"W	33.00'	392089.3192	572958.0425
568	N00°26'54"W	50.01'	392122.3221	572957.7843
1178	S89°33'41"E	33.00'	392172.3266	572957.3931
1100	S89°33'41"E	249.55'	392172.0739	572990.3961
1101	S00°23'00"E	0.50'	392170.1636	573239.9390
1109	S89°33'41"E	1306.08'	392169.6636	573239.9423
580	S89°33'41"E	1056.09'	392159.6654	574545.9859
585	S00°18'14"E	49.50'	392151.5809	575602.0436
1146	S00°18'14"E	99.57'	392102.0775	575602.3061
1151	S89°41'46"W	66.00'	392002.5092	575602.8340
1148	N36°12'20"W	57.76'	392002.1593	575536.8349
1147	N36°12'20"W	57.76'	392048.7657	575502.7173

POINT NO.	BEARING	DISTANCE	Y COORDINATE	X COORDINATE
1147	N89°34'45"W	780.00'	392048.7657	575502.7173
1169	N00°22'33"W	4.82'	392054.4927	574722.7439
1168	N89°33'41"W	442.35'	392059.3096	574722.7123
578	N00°22'33"W	16.50'	392062.6959	574280.3705
577	N89°33'41"W	617.75'	392079.1972	574280.2623
1114	S00°26'19"W	16.50'	392083.9261	573662.5312
1115	N89°33'41"W	50.00'	392067.4266	573662.4049
1116	N00°26'19"E	16.50'	392067.8093	573612.4064
1117	N89°33'41"W	621.51'	392084.3089	573612.5327
567	N89°33'41"W	33.00'	392089.0665	572991.0455
1177	N89°33'41"W	33.00'	392089.3192	572958.0425

NW1/4-SW1/4-SEC. 1-T30N-R18W

TOWN OF RICHMOND

'1976' BLANKET RIGHT-OF-WAY EASEMENT ACROSS THE NW1/4 OF THE SW1/4 TO ST. CROIX COUNTY ELECTRIC COOPERATIVE DOC. NO. 369920

'1989' BLANKET EASEMENT ACROSS THE NW1/4 OF THE SW1/4 TO CITY UTILITIES, CITY OF NEW RICHMOND DOC. NO. 519011

C.S.M. VOL. 7, PG. 1819

NE1/4-SE1/4-SEC. 2-T30N-R18W

'1976' BLANKET RIGHT-OF-WAY EASEMENT ACROSS THE NE1/4 OF THE SE1/4 TO ST. CROIX COUNTY ELECTRIC COOPERATIVE DOC. NO. 369383

TOWN OF RICHMOND
LOT 2 C.S.M. VOL. 5, PG. 1202
LAWRENCE B. SUENEN

LOT 5 C.S.M. VOL. 9, PG. 2504
TODD L. ANDERSON & KIM D. OLIN

LOT 1
RYAN L. & MICHELLE C. CARLSON

LOT 2
LAWRENCE J. & DAWN A. PALAZZO

LOT 3
MARGARET J. HAMBLE

LOT 4
MATTHEW & KATHLEEN J. BINFORD

BEGIN RELOCATION
ORDER
S89°40'29"E

S89°40'29"E

S89°40'29"E

S89°40'29"E

S89°40'29"E

S89°40'29"E

S89°40'29"E

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S89°40'29"E

INVERSE FOR FEE PARCEL 1

POINT NO.	BEARING	DISTANCE	Y COORDINATE	X COORDINATE
1175	N00°26'54"W	100.00'	392022.3252	572958.5666
568	N89°40'29"W	107.98'	392122.3221	572957.7843
1176	S47°13'45"E	48.90'	392122.9353	572849.8060
1105	S47°13'45"E	53.98'	392089.7310	572885.7003
1106	S47°13'45"E	45.28'	392053.0757	572925.3250
1175	S47°13'45"E	45.28'	392022.3252	572958.5666

SW1/4-SW1/4-SEC. 1-T30N-R18W

CITY OF NEW RICHMOND

UNPLATTED LANDS

RIGHT-OF-WAY NOTE:

THE EXISTING RIGHT-OF-WAY AS SHOWN WAS ESTABLISHED 33 FEET DISTANT FROM THAT CENTERLINE ALIGNMENT PER ST. CROIX COUNTY HIGHWAY PROJECT 85-GG-1. EXCEPT THAT RIGHT-OF-WAY PLATTED AT 50 FEET IN WIDTH, WITHIN CERTIFIED SURVEY MAP IN VOLUME 9, PAGE 2504. ANY PROPOSED RIGHT-OF-WAY ON THIS PLAT IS PARALLEL WITH AND AT THE SHOWN UNIFORM DISTANCE FROM SAID ALIGNMENT.

SCALE IN FEET



RIGHT-OF-WAY PLAT COUNTY TRUNK HIGHWAY "GG"
(140TH STREET TO 150TH STREET)

Y 396169.7980
X 575580.7390
1" DIAMETER STEEL
"SURVEY MARK" NAIL FOUND

N
HORIZONTAL POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN,
ST. CROIX COUNTY COORDINATES, NAD83 (1991), IN U.S. SURVEY FEET.

RIGHT-OF-WAY NOTE:
THE EXISTING RIGHT-OF-WAY AS SHOWN WAS ESTABLISHED FROM THOSE "1957" HIGHWAY
CONVEYANCES, PARALLELING THE CENTERLINE ALIGNMENT PER, ST. CROIX COUNTY HIGHWAY
PROJECT 85-GG-1, EXCEPT THAT RIGHT-OF-WAY AS DEDICATED WITHIN THE PLAT OF
PENINSULA HEIGHTS. ANY PROPOSED RIGHT-OF-WAY ON THIS PLAT IS PARALLEL WITH AND
AT THE SHOWN UNIFORM DISTANCE FROM SAID ALIGNMENT.

NE1/4-SW1/4-SEC. 1-T30N-R18W

TOWN OF RICHMOND

SE1/4-SW1/4-SEC. 1-T30N-R18W

(SEE SHEET 4.03)

(SEE SHEET 4.05)



INVERSE FOR FEE PARCELS 3, 4, 5, 6, 8 & 14

POINT NO.	BEARING	DISTANCE	Y COORDINATE	X COORDINATE
1177	N00°26'54"W	33.00'	392089.3192	572958.0425
568	N00°26'54"W	50.01'	392122.3221	572957.7843
1178	S89°33'41"E	33.00'	392172.3266	572957.3931
1100	S89°33'41"E	249.55'	392172.0739	572990.3961
1101	S00°23'00"E	0.50'	392170.1636	573239.9390
1109	S89°33'41"E	1039.81'	392169.6636	573239.9423
1188	S00°22'33"E	16.50'	392161.7037	574279.7210
1189	S89°33'41"E	266.25'	392145.2024	574279.8292
579	N00°18'14"W	16.50'	392143.1642	574546.0734
580	S89°33'41"E	1056.09'	392159.6654	574545.9859
585	S00°18'14"E	49.50'	392151.5809	575602.0436
1146	S00°18'14"E	99.57'	392102.0775	575602.3061
1151			392002.5092	575602.8340

POINT NO.	BEARING	DISTANCE	Y COORDINATE	X COORDINATE
1151	S89°41'46"W	66.00'	392002.5092	575602.8340
1148	N36°12'20"W	57.76'	392002.1593	575536.8349
1147	N89°34'45"W	780.00'	392048.7657	575502.7173
1169	N00°22'33"W	4.82'	392054.4927	574722.7439
1168	N89°33'41"W	442.35'	392059.3096	574722.7123
578	N00°22'33"W	16.50'	392062.6959	574280.3705
577	N89°33'41"W	617.75'	392079.1972	574280.2623
1114	S00°26'19"W	16.50'	392083.9261	573662.5312
1115	N89°33'41"W	50.00'	392067.4266	573662.4049
1116	N00°26'19"E	16.50'	392067.8093	573612.4064
1117	N89°33'41"W	621.51'	392084.3089	573612.5327
567			392089.0665	572991.0455
1177			392089.3192	572958.0425

Y 396169.7980
X 575580.7390



1" DIAMETER STEEL
"SURVEY MARK" NAIL FOUND

RIGHT-OF-WAY PLAT COUNTY TRUNK HIGHWAY "GG" (140TH STREET TO 150TH STREET)

INVERSE FOR FEE PARCELS 15, 19, 20, 21 & 22

POINT NO.	BEARING	DISTANCE	Y COORDINATE	X COORDINATE
1179			391194.4624	578249.4758
	N65°05'23"W	36.47'		
1165			391209.8254	578216.3948
	N65°05'23"W	960.79'		
596			391614.5069	577344.9937
	N65°05'23"W	620.74'		
593			391875.9615	576782.0035
	N77°19'32"W	788.34'		
588			392048.9330	576012.8700
	N00°26'19"E	17.00'		
587			392065.9325	576013.0001
	N89°33'41"W	347.71'		
1152			392068.5943	575665.2958
	S43°23'08"W	90.93'		
1151			392002.5092	575602.8340
	N00°18'14"W	99.57'		
1146			392102.0775	575602.3061
	N00°18'14"W	33.00'		
586			392135.0798	575602.1311

POINT NO.	BEARING	DISTANCE	Y COORDINATE	X COORDINATE
586			392135.0798	575602.1311
	S89°33'41"E	668.96'		
589			392129.9588	576271.0754
	S73°32'58"E	576.65'		
592			391966.6583	576824.1234
	S65°05'23"E	380.74'		
594			391806.2915	577169.4412
	S24°54'37"W	5.00'		
595			391801.7567	577167.3352
	S65°05'23"E	340.00'		
598			391658.5490	577475.7044
	S65°05'23"E	852.53'		
1164			391299.4627	578248.9252
	S00°18'02"E	49.74'		
575			391249.7257	578249.1860
	S00°18'02"E	55.26'		
1179			391194.4624	578249.4758

NW1/4-SE1/4-SEC. 1-T30N-R18W

TOWN OF RICHMOND

UNPLATTED LANDS

ELMER & MABEL EARLEY ESTATE

(16)

SHAMROCK LANE CURVE
R= 1959.859'
Δ= 1°55'48"
CB= S75°42'50"E
C= 66.02'
A= 66.02'
TAN IN= S76°40'44"E
TAN OUT= S74°44'56"E

R/W CURVE WESTERLY
R= 1959.859'
Δ= 5°19'50"
CB= S79°20'38.5"E
C= 182.26'
A= 182.33'
TAN IN= S82°00'33"E
TAN OUT= S76°40'44"E

TOTAL R/W CURVE
R= 1959.859'
Δ= 16°55'10"
CB= S73°32'58"E
C= 576.65'
A= 578.75'
TAN IN= S82°00'33"E
TAN OUT= S65°05'23"E

MATTHEW L. AND MONICA M.
ROMINSKI LIVING TRUST

R/W CURVE EASTERLY
R= 1959.859'
Δ= 9°39'33"
CB= S69°55'09.5"E
C= 330.01'
A= 330.40'
TAN IN= S74°44'56"E
TAN OUT= S65°05'23"E

1957 (FORMER) HIGHWAY
CONVEYANCE FROM EARLEY TO
ST. CROIX COUNTY DOC. NO. 253255

1999 QUIT CLAIM DEED
FROM ST. CROIX COUNTY TO
ANDERSON DOC. NO. 606006

SMALL TRACT
FORMER
JOHN A. & LORI A. SCHMELTER

CL CURVE
D= 3'00'00"
R= 1909.859'
Δ= 24°28'18"
CB= S77°19'32"E
C= 809.54'
A= 815.72'
TAN IN= S89°33'41"E
TAN OUT= S65°05'23"E
RAD PT: N 390189.1285
E 575998.6326

R/W CURVE
R= 1859.859'
Δ= 24°28'18"
CB= N77°19'32"W
C= 788.34'
A= 794.37'
TAN IN= N65°05'23"W
TAN OUT= N89°33'41"W

ELMER & MABEL EARLY ESTATE

(16)

UNPLATTED LANDS

SW1/4-SE1/4-SEC. 1-T30N-R18W

TOWN OF RICHMOND

RIGHT-OF-WAY NOTE:

THE EXISTING RIGHT-OF-WAY AND CENTERLINE ALIGNMENT WAS ESTABLISHED FROM FOUND
MONUMENTATION AND STATIONING PER, ST. CROIX COUNTY HIGHWAY PROJECT RS-GG-1.
ANY PROPOSED RIGHT-OF-WAY ON THIS PLAT IS PARALLEL WITH AND AT THE SHOWN
UNIFORM DISTANCE FROM SAID ALIGNMENT.

SCALE IN FEET



Y 390773.5941
X 575609.3497



3-1/4" DIAMETER
ALUMINUM CAP FOUND

RIGHT-OF-WAY PLAT COUNTY TRUNK HIGHWAY "GG"
(140TH STREET TO 150TH STREET)

Y 393407.1821
X 578237.8730
3-1/4" DIAMETER
ALUMINUM CAP FOUND

N
HORIZONTAL POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN,
ST. CROIX COUNTY COORDINATES, NAD83 (1991), IN U.S. SURVEY FEET.

(SEE SHEET 4.05)

RIGHT-OF-WAY NOTE:
THE EXISTING RIGHT-OF-WAY AND CENTERLINE ALIGNMENT WAS ESTABLISHED FROM FOUND
MONUMENTATION AND STATIONING PER, ST. CROIX COUNTY HIGHWAY PROJECT 85-GG-1.
ANY PROPOSED RIGHT-OF-WAY ON THIS PLAT IS PARALLEL WITH AND AT THE SHOWN
UNIFORM DISTANCE FROM SAID ALIGNMENT.

INVERSE FOR FEE PARCELS 15, 19, 20, 21 & 22

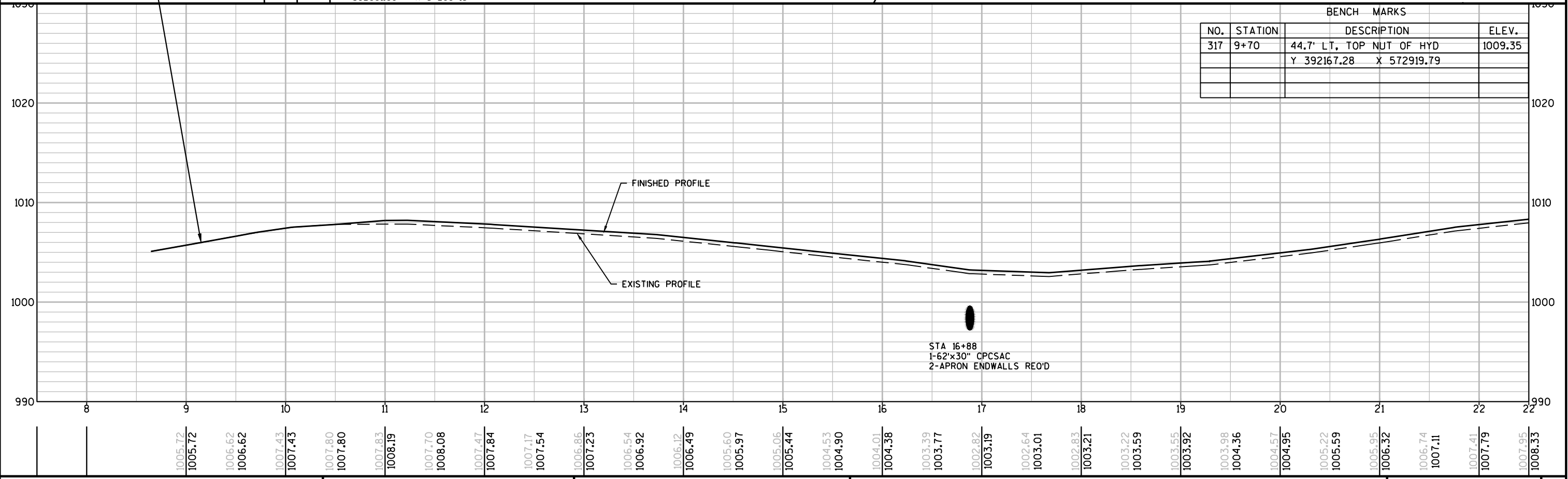
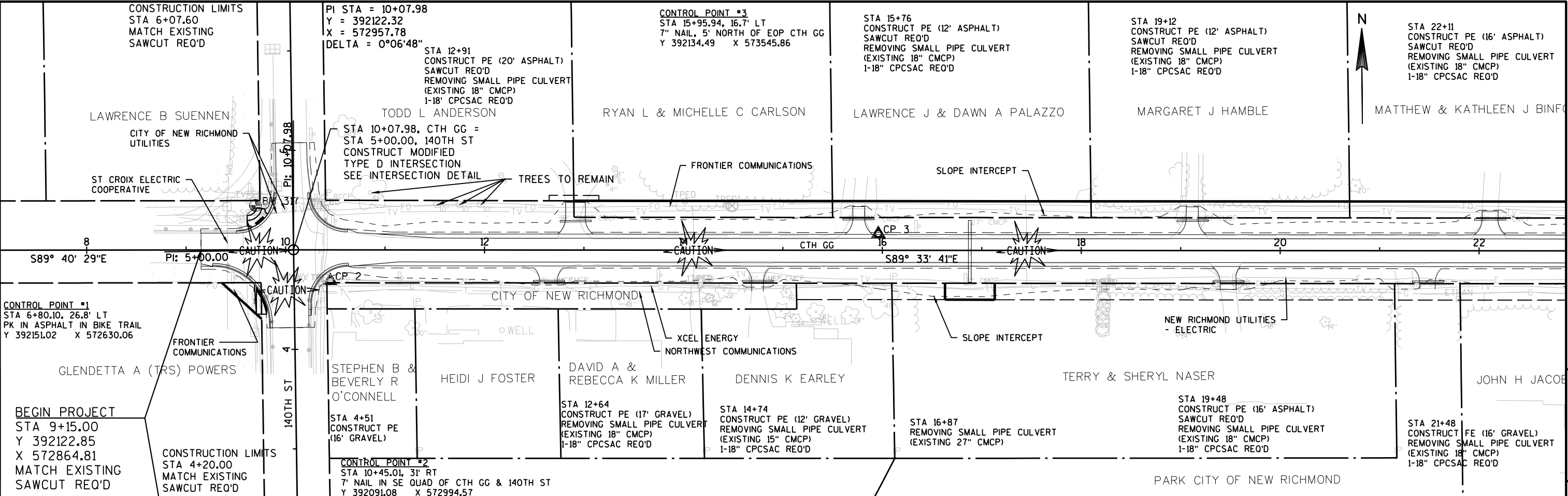
POINT NO.	BEARING	DISTANCE	Y COORDINATE	X COORDINATE
1179	N65°05'23"W	36.47'	391194.4624	578249.4758
1165	N65°05'23"W	960.79'	391209.8254	578216.3948
596	N65°05'23"W	620.74'	391614.5069	577344.9937
593	N65°05'23"W	788.34'	391875.9615	576782.0035
588	N77°19'32"W	17.00'	392048.9330	576012.8700
587	N00°26'19"E	347.71'	392065.9325	576013.0001
1152	N89°33'41"W	90.93'	392068.5943	575665.2958
1151	S43°23'08"W	99.57'	392002.5092	575602.8340
1146	N00°18'14"W	33.00'	392102.0775	575602.3061
586	N00°18'14"W	36.47'	392135.0798	575602.1311

POINT NO.	BEARING	DISTANCE	Y COORDINATE	X COORDINATE
586	S89°33'41"E	668.96'	392135.0798	575602.1311
589	S73°32'58"E	576.65'	392129.9588	576271.0754
592	S65°05'23"E	380.74'	391966.6583	576824.1234
594	S24°54'37"W	5.00'	391806.2915	577169.4412
595	S65°05'23"E	340.00'	391801.7567	577167.3352
598	S65°05'23"E	852.53'	391658.5490	577475.7044
1164	S00°18'02"E	49.74'	391299.4627	578248.9252
575	S00°18'02"E	55.26'	391249.7257	578249.1860
1179	N00°18'02"E	125.22'	391194.4624	578249.4758

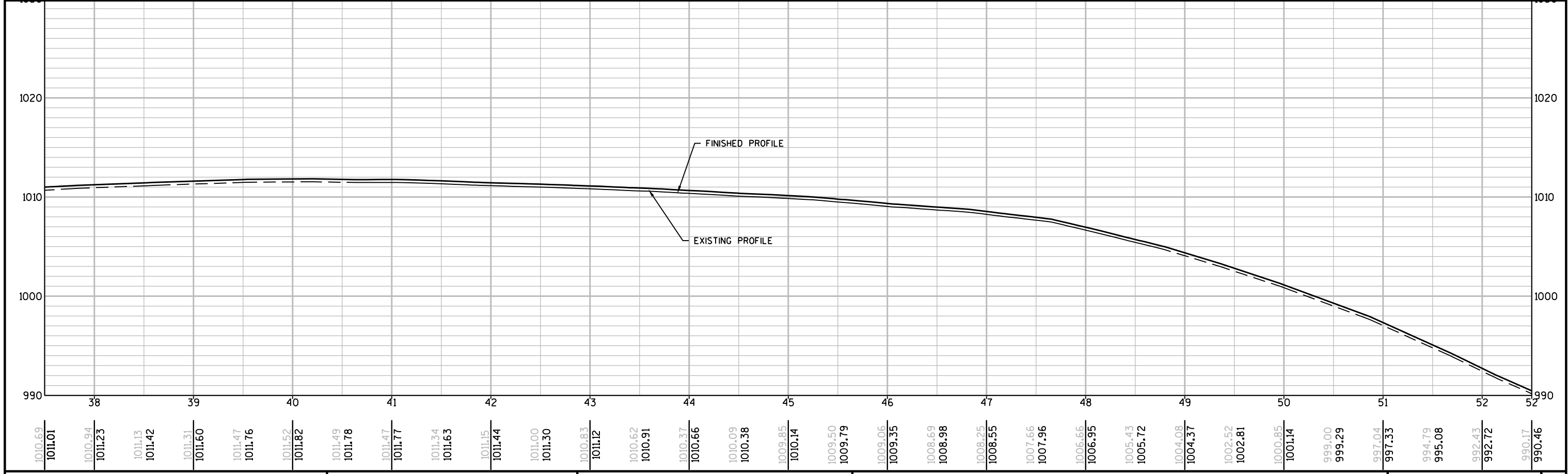
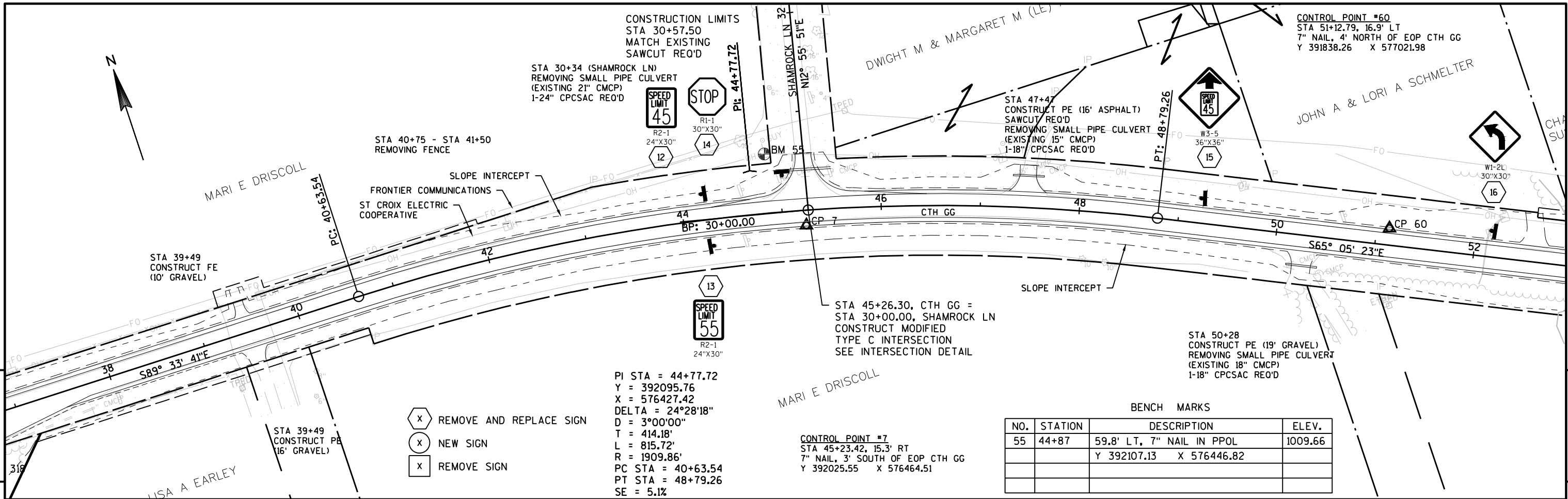
INVERSE FOR FEE PARCEL 23

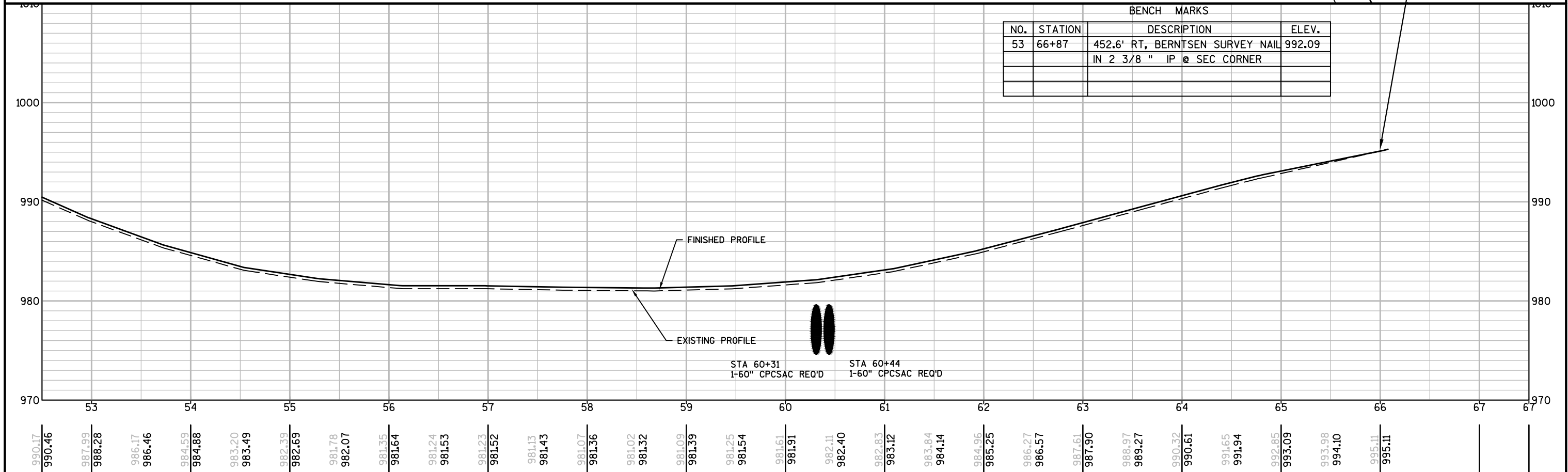
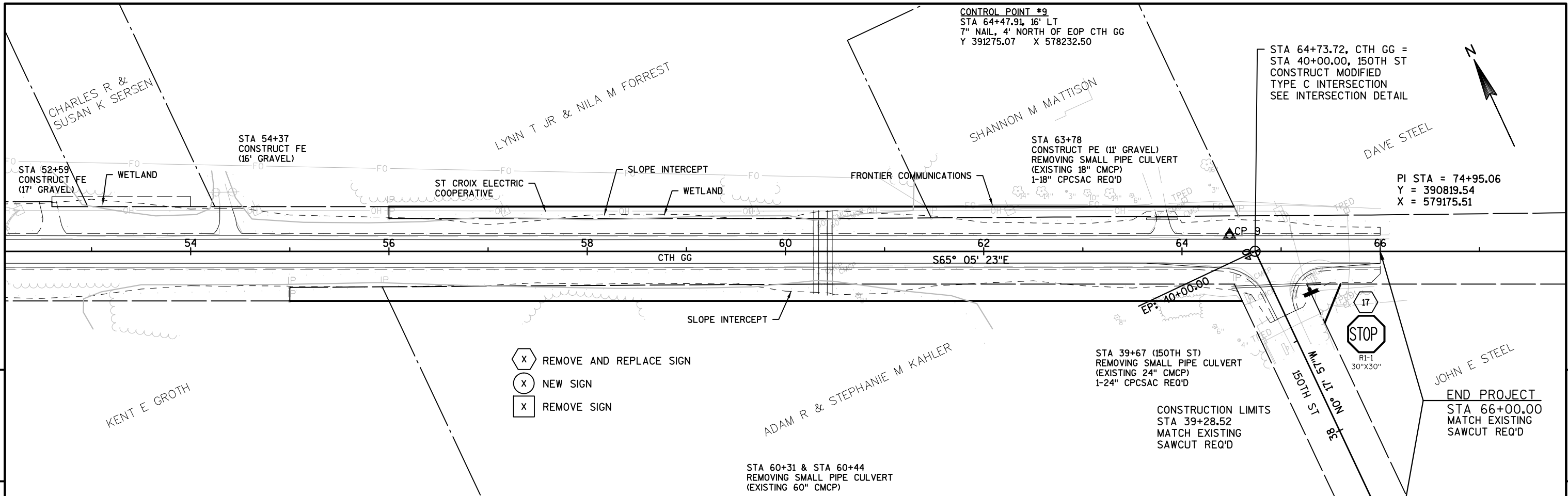
POINT NO.	BEARING	DISTANCE	Y COORDINATE	X COORDINATE
1180	N00°18'02"W	125.22'	391124.5037	578249.8426
575	S65°05'23"E	99.82'	391249.7257	578249.1860
1181	S47°13'00"W	35.67'	391207.6818	578339.7191
1167	S47°13'00"W	42.04'	391183.4543	578313.5405
1166	S47°13'00"W	44.75'	391154.8972	578282.6837
1180	N00°18'02"W	125.22'	391124.5037	578249.8426





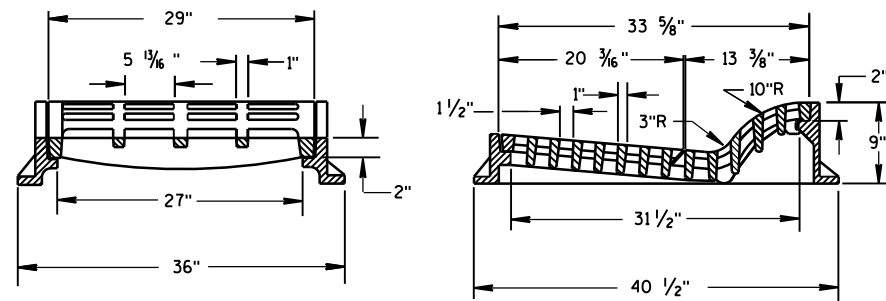
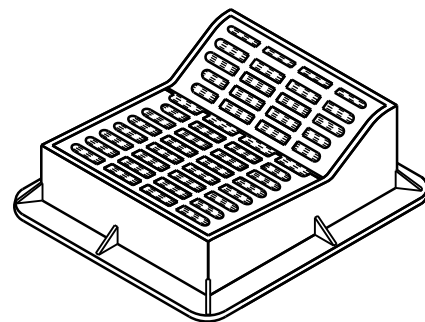
PROJECT NO:8940-00-15	HWY:CTH GG	COUNTY:ST CROIX	PLAN AND PROFILE:	SHEET	5
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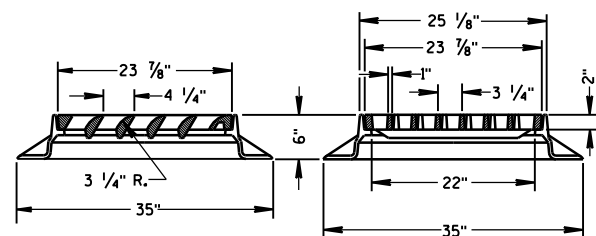
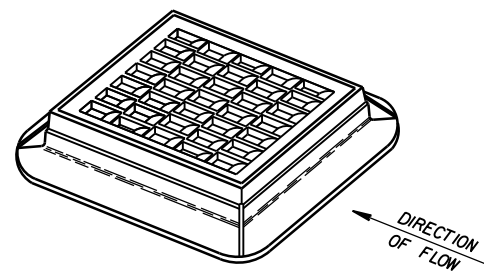
Standard Detail Drawing List

08A05-19C	INLET COVERS TYPE F, HM, HM-S, S, T, V, HM-GJ, & HM-GJ-S
08D01-20A	CONCRETE CURB & GUTTER
08D01-20B	CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-20A	CURB RAMPS TYPES 1 AND 1-A
08D05-20B	CURB RAMPS TYPES 2 AND 3
08D05-20C	CURB RAMPS TYPES 4A AND 4A1
08D05-20D	CURB RAMPS TYPE 4B AND 4B1
08D05-20E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08D05-20F	CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS
08D05-20G	CURB RAMPS RECTANGULAR AND RADIAL DETECTABLE WARNING PLATES
08D21-01	DRIVEWAYS WITHOUT CURB & GUTTER
08D22-01	DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F07-05	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS
08F08-02	STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
14B42-06A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-06D	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)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A01-13A	MARKER POST FOR RIGHT-OF-WAY
15A01-13B	FLEXIBLE MARKER POST FOR RIGHT-OF-WAY
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-07A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-07B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C02-07C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C05-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C08-19C	PAVEMENT MARKING (TURN LANES)
15C33-03	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS

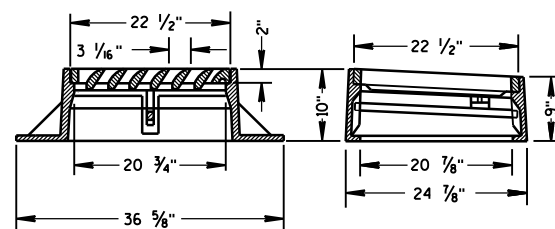
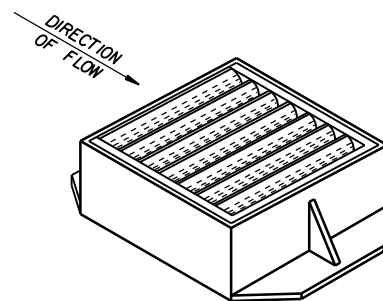


TYPE "F"

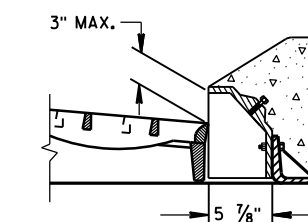
USE WITH TYPES A & D CONCRETE CURB & GUTTER, 36 INCH.



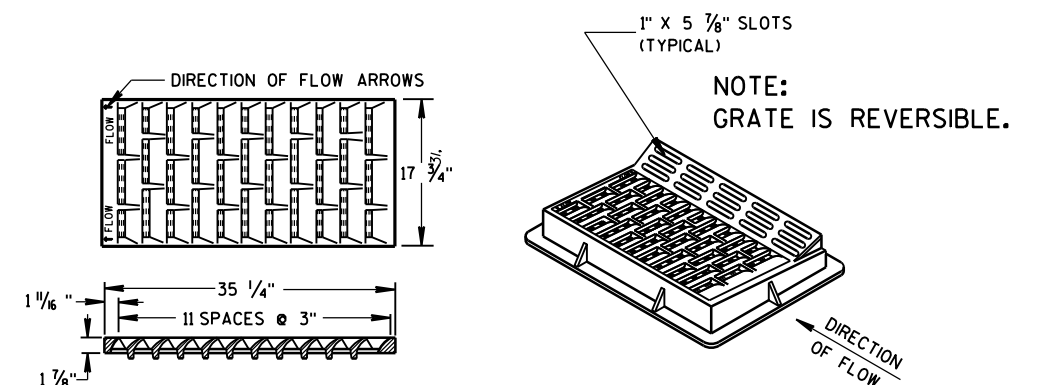
TYPE "S"



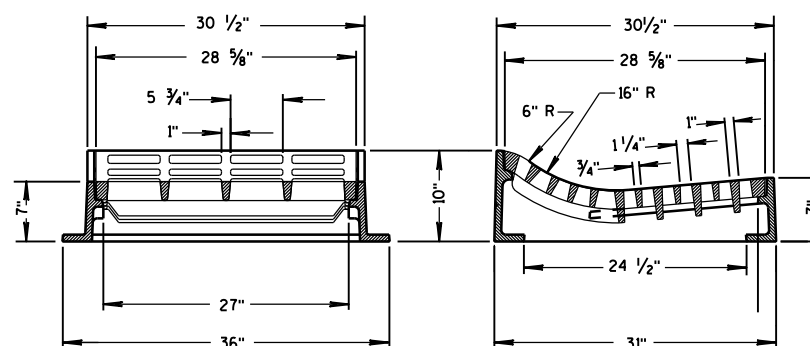
TYPE "V"

ALTERNATIVE CURB BOX
FOR TYPE "HM" COVERUSE WITH TYPES G & J CONCRETE CURB & GUTTER, 30 INCH
NOTED AS TYPE HM-GJ ON DRAINAGE TABLENOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM-GJ" COVER
NOTED AS TYPE HM-GJ-S ON DRAINAGE TABLE

GENERAL NOTES

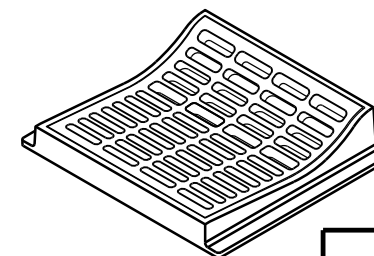
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING
SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND
THE APPLICABLE SPECIAL PROVISIONS.DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLET COVERS SHALL BE SUBMITTED
TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION
FOR EQUIVALENT CAPACITY AND STRENGTH.

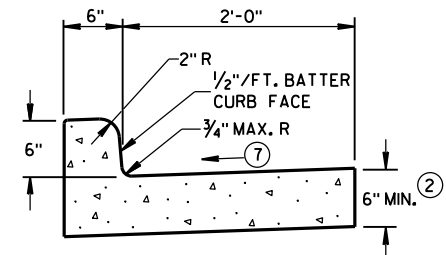
TYPE "HM"

USE WITH TYPES A & D CONCRETE
CURB & GUTTER, 36 INCH.NOTE:
SPECIAL GRATE FOR THE
TYPE "H" COVER MAY ALSO BE
USED FOR THE TYPE "HM" COVER
NOTED AS TYPE HM-S ON DRAINAGE TABLE

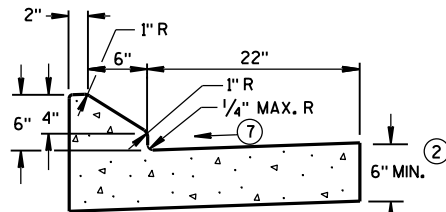
TYPE "T"

USE WITH TYPES R & T CONCRETE CURB & GUTTER, 36 INCH.

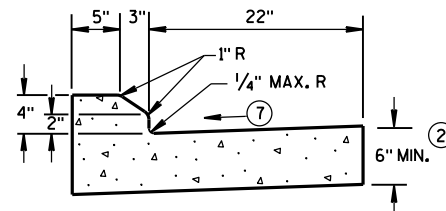
INLET COVERS
TYPE F, HM, HM-S, S, T, V,
HM-GJ, & HM-GJ-SSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
11/27/2013
DATE /S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



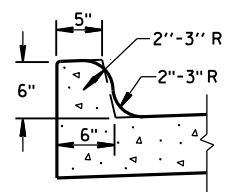
TYPES A^① & D



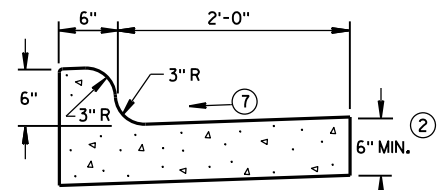
6" SLOPED CURB TYPES G^① & J



4" SLOPED CURB TYPES G^① & J

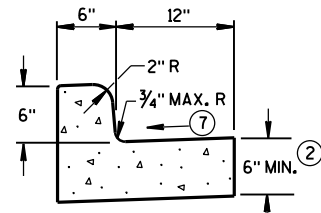


TYPES K^① & L
(OPTIONAL CURB SHAPE)



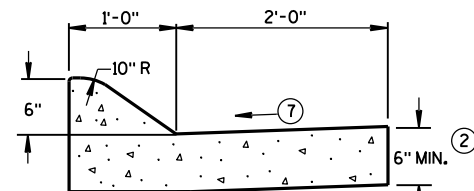
TYPES K^① & L

CONCRETE CURB & GUTTER 30"

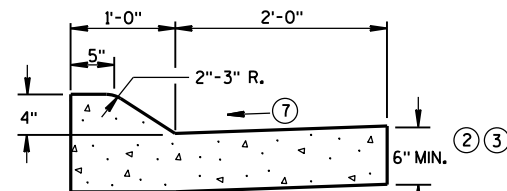


TYPES A^① & D

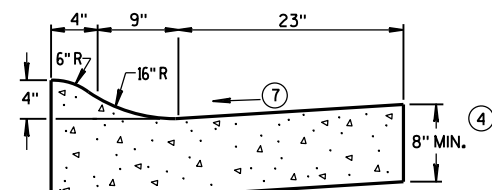
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A^① & D

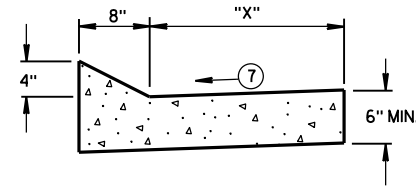


4" SLOPED CURB TYPES A^① & D



4" SLOPED CURB TYPES R^① & T^⑤

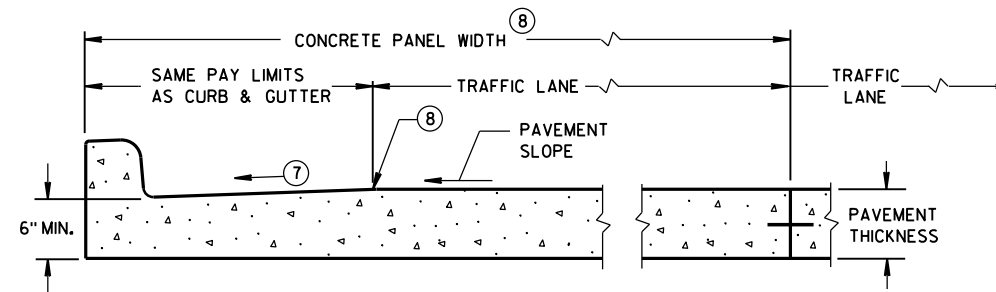
CONCRETE CURB & GUTTER 36"



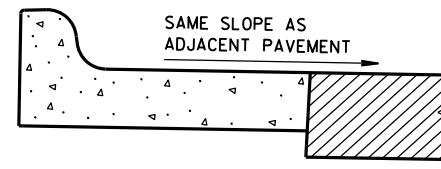
TYPES TBT & TBTT^①

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"



PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



REVERSE SLOPE GUTTER^⑥
(TYPICAL FOR ALL CURB & GUTTER TYPES)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ③ USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- ④ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑤ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- ⑥ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.
- ⑦ USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.
- ⑧ INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

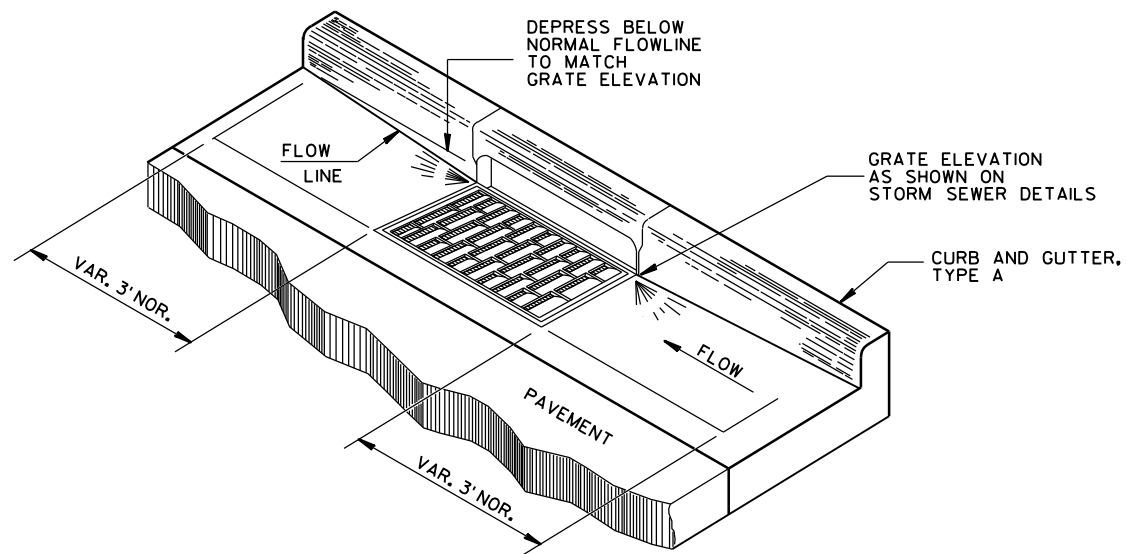
PAVEMENT THICKNESS
AND MAXIMUM CONCRETE
PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'

* BIKE LANE IS NOT SHOWN.

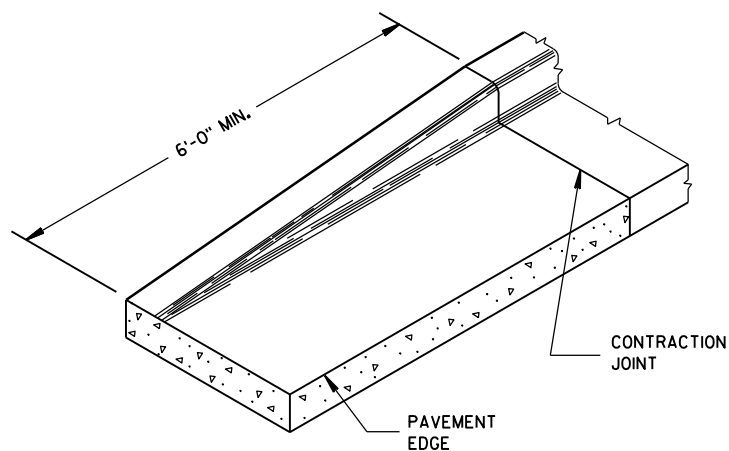
CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

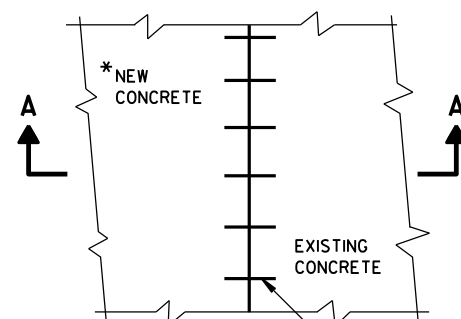


DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

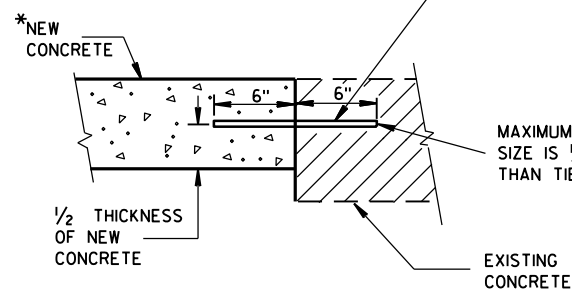


END SECTION CURB & GUTTER



PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.



**SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT**

NO. 6 TIE BARS SPACED 2'-6" C-C, INSTALLED PERPENDICULAR TO THE LONGITUDINAL JOINT.

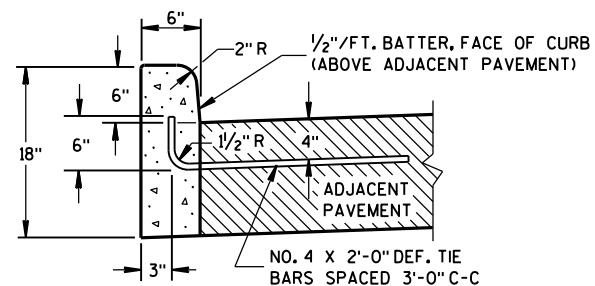
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

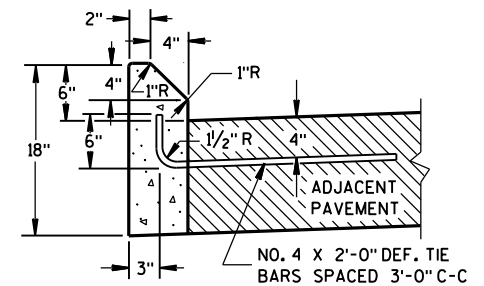
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

- ① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- ② THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- ⑨ REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

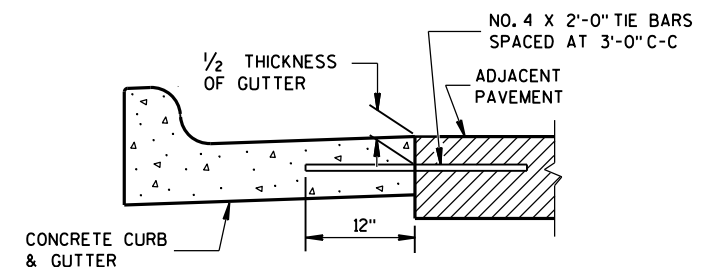


TYPES A^① & D

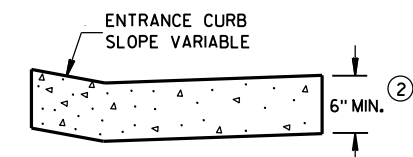


TYPES G^① & J

CONCRETE CURB



TYPICAL TIE BAR LOCATION^①



DRIVEWAY ENTRANCE CURB^⑨
(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

June, 2017

DATE

FHWA

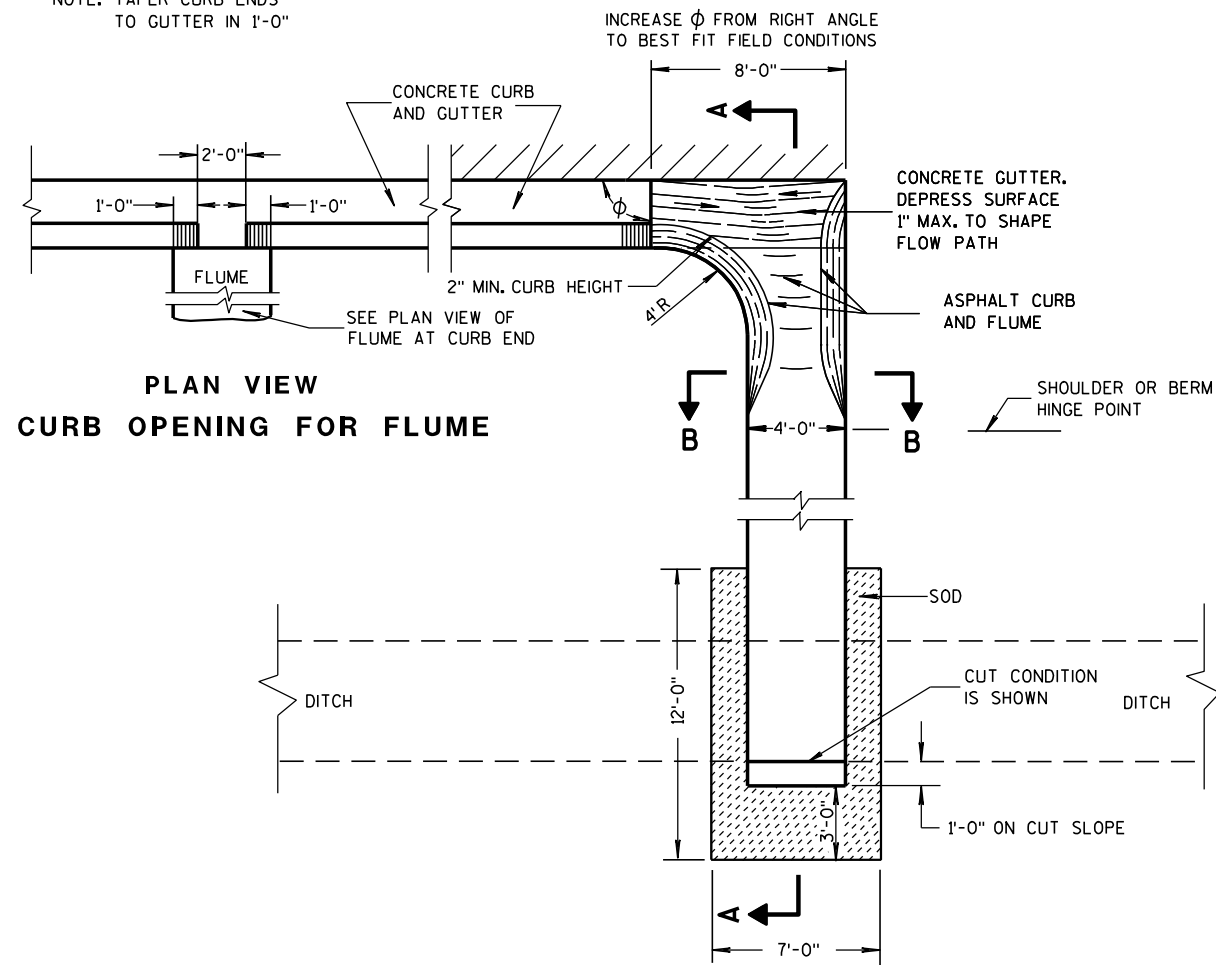
/S/ Rodney Taylor

ROADWAY STANDARDS DEVELOPMENT

UNIT SUPERVISOR

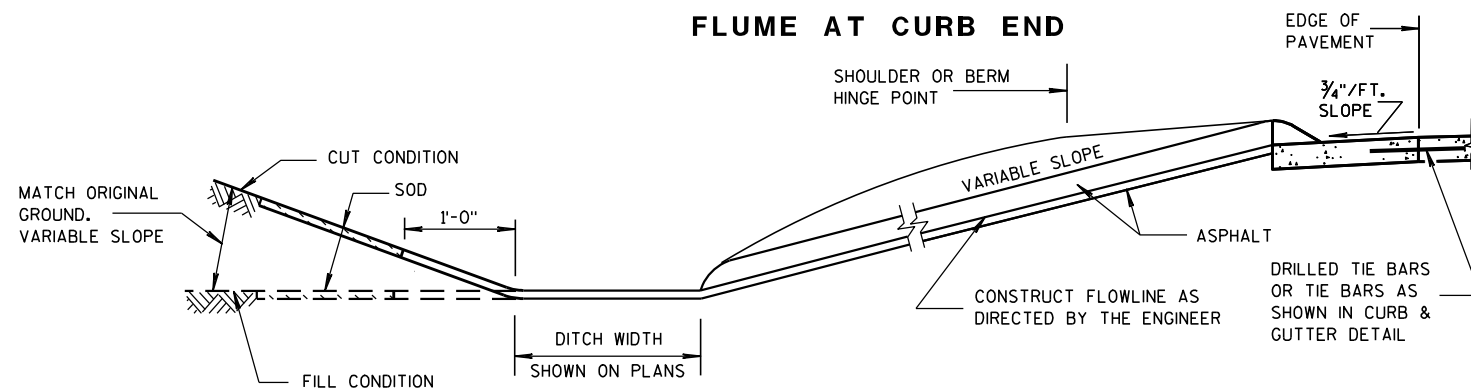
ASPHALTIC FLUME

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

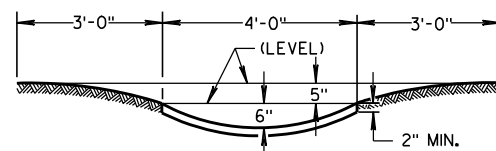


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

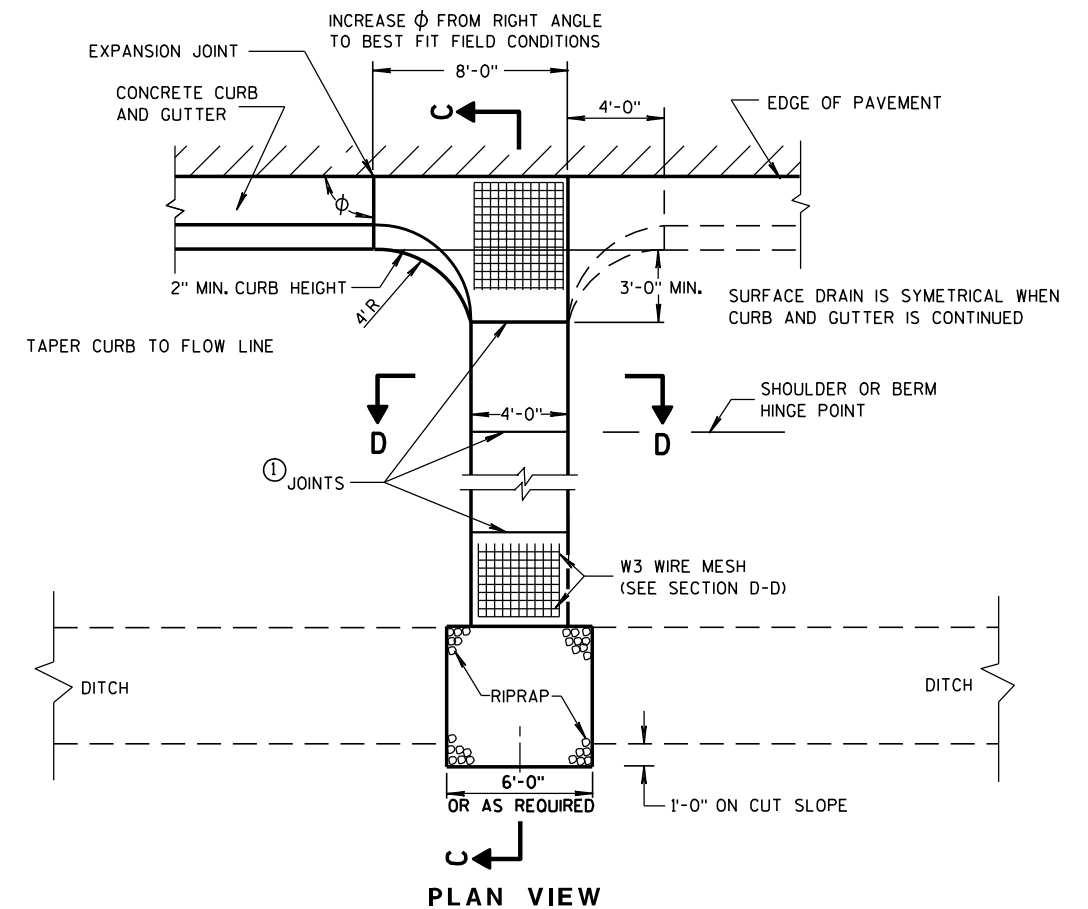
GENERAL NOTES

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

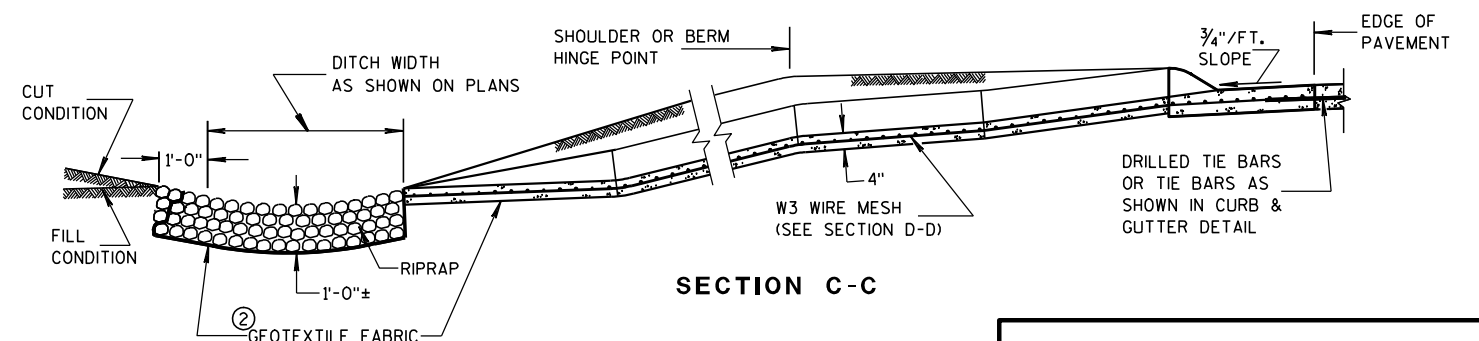
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

- ① JOINTS SHALL BE 1/8" TO 1/4" INCH WIDE BY 1 1/2" INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.
- ② GEOTEXTILE FABRIC 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

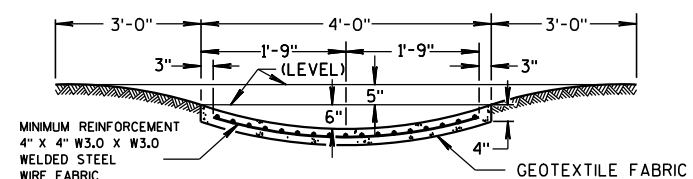
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

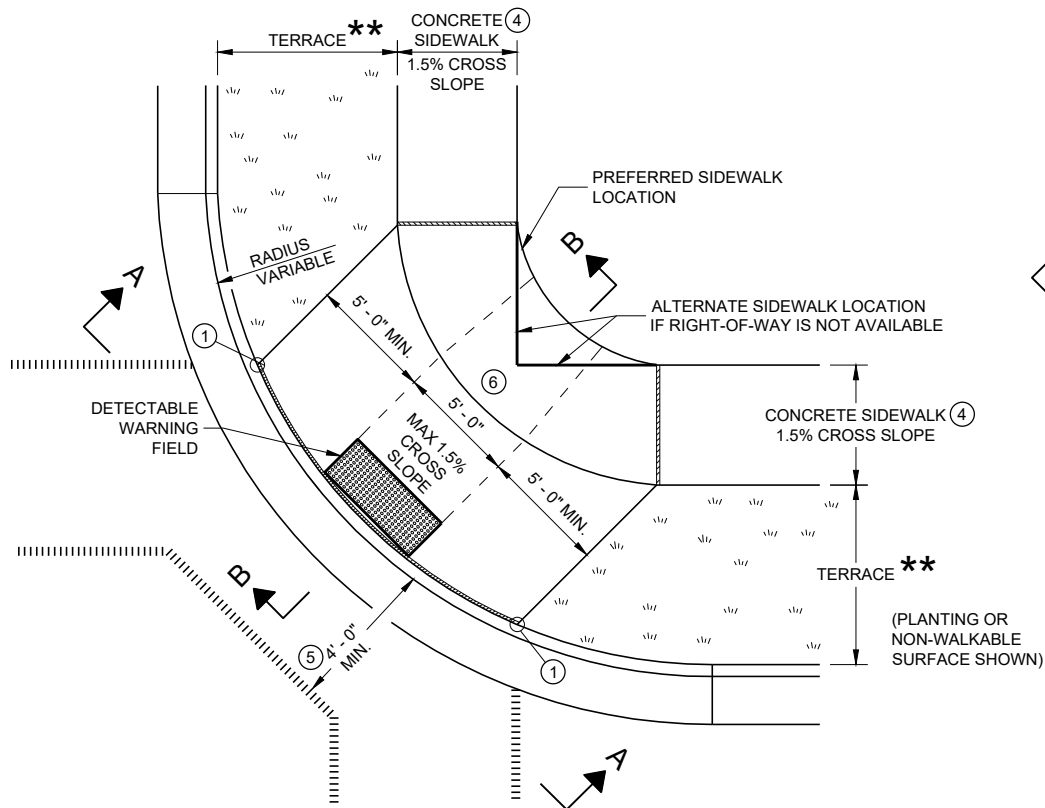
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

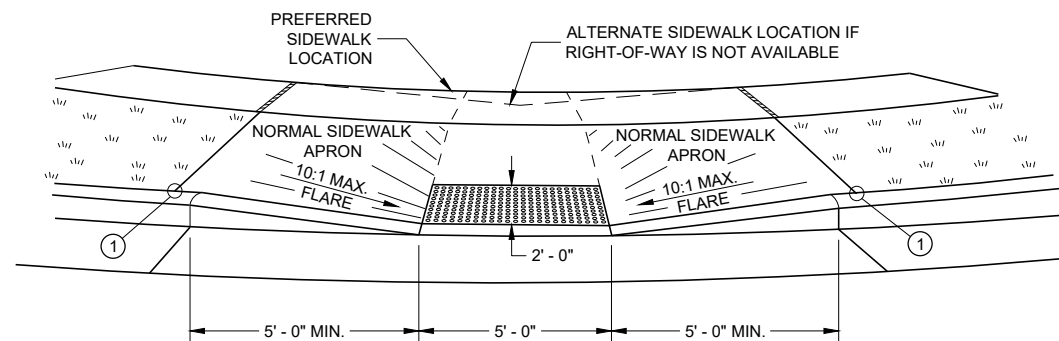
9-4-08
DATE

FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

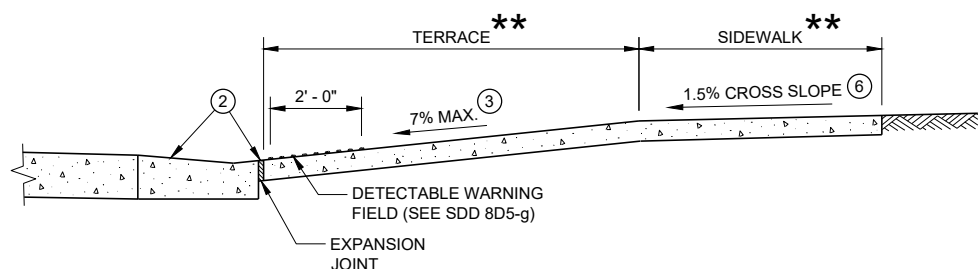


PLAN VIEW
CURB RAMP TYPE 1
(CENTER OF CORNER RADIUS)

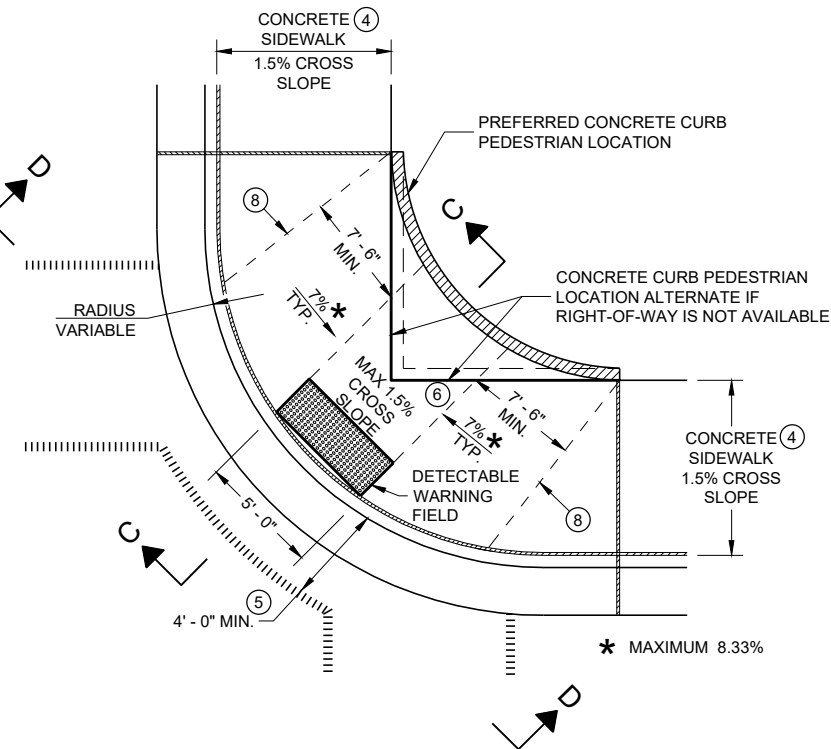


VIEW A - A FOR TYPE 1

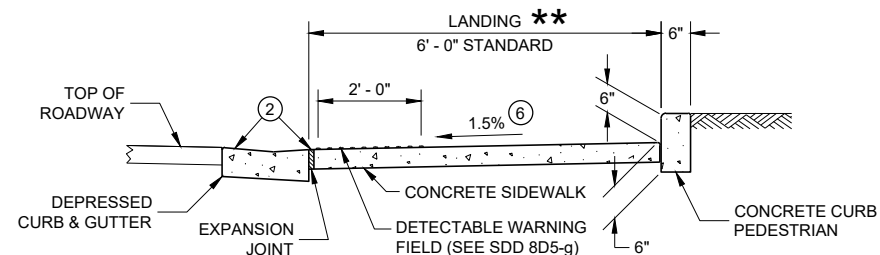
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



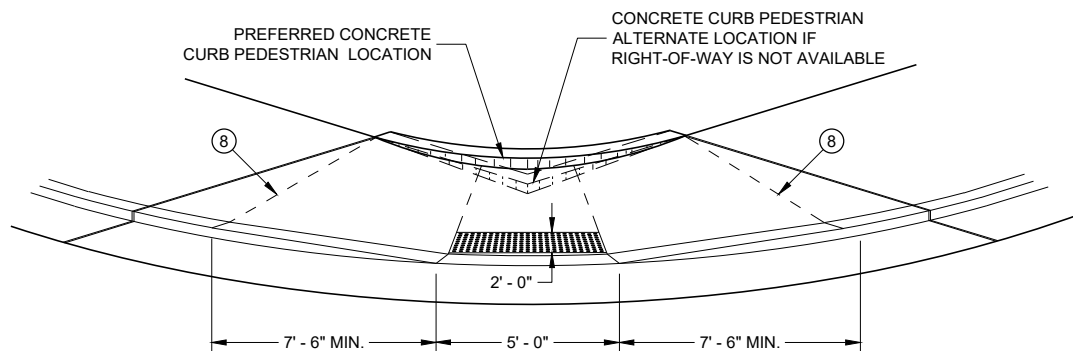
SECTION B - B FOR TYPE 1



PLAN VIEW
CURB RAMP TYPE 1 - A
(NO TERRACE)



SECTION C - C FOR TYPE 1 - A



VIEW D - D FOR TYPE 1 - A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 CURB RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAR FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD"

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

- THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- MAXIMUM 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

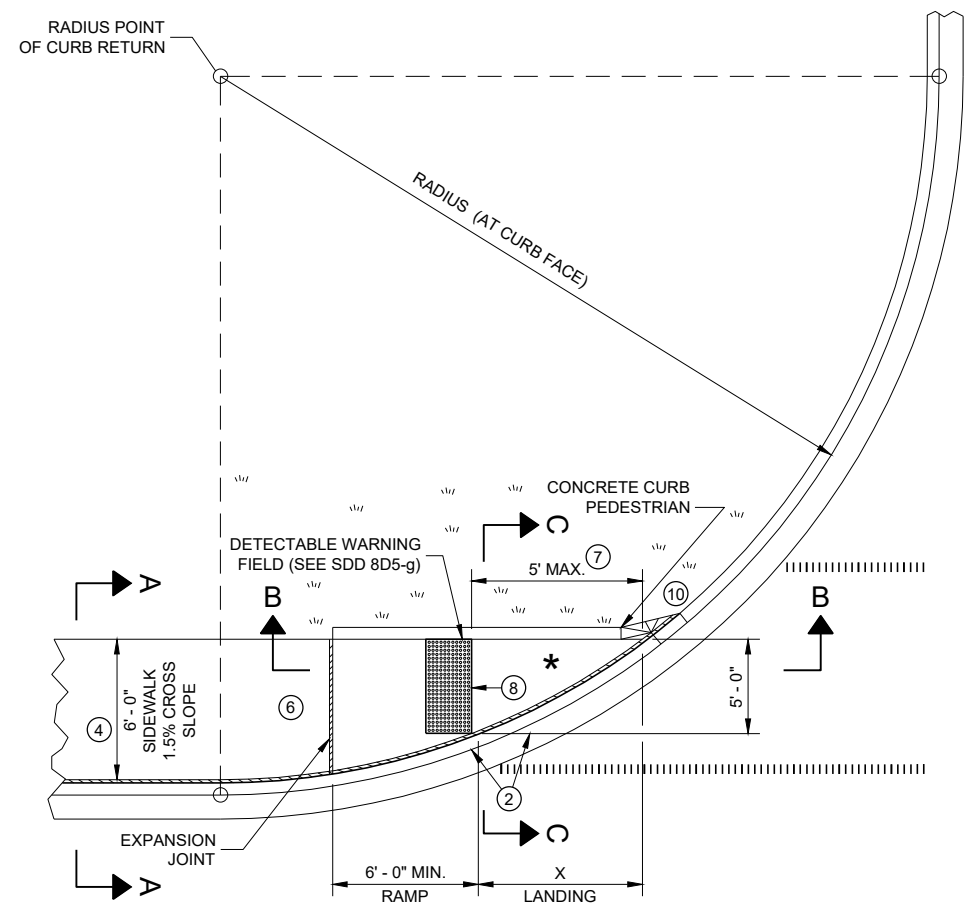
LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPE 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

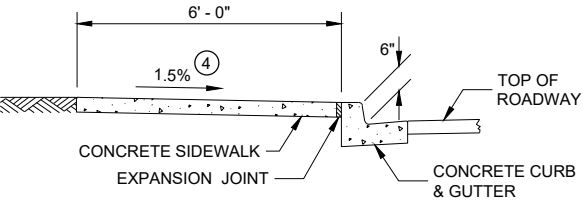




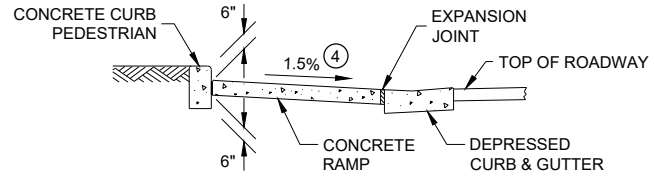
PLAN VIEW
CURB RAMP TYPE 4A

RADIUS (AT CURB FACE)	X
10 FEET	4' - 7"
15 FEET	6' - 5 1/2"

INTERMEDIATE RADII CAN BE INTERPOLATED

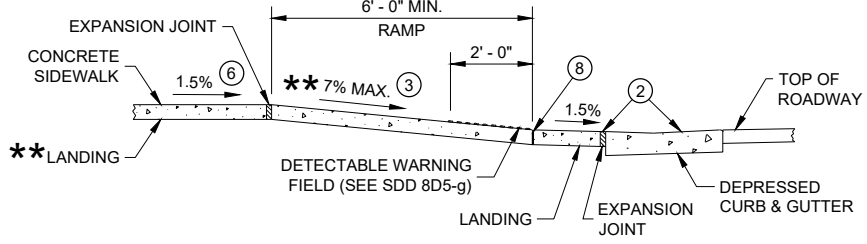


SECTION A - A FOR TYPE 4A



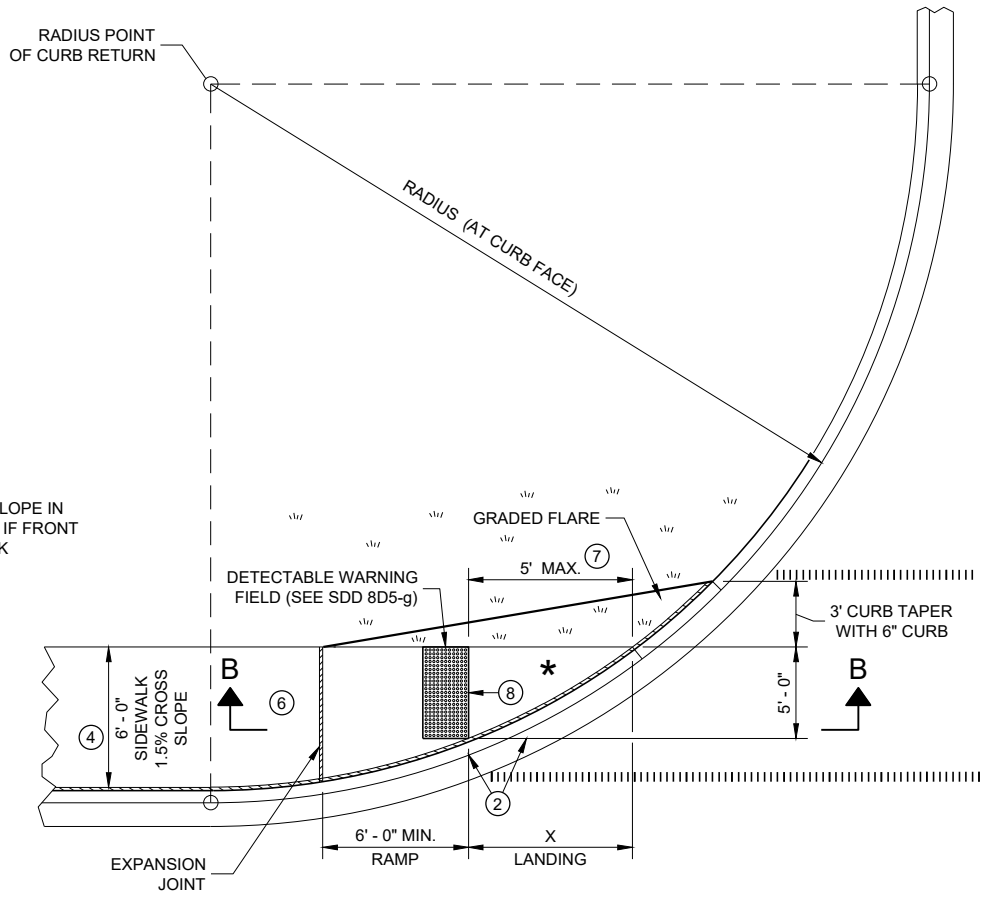
SECTION C - C FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK



SECTION B - B FOR
TYPE 4A AND TYPE 4A1

** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED



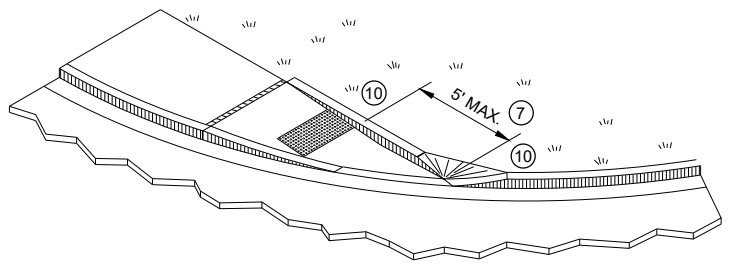
PLAN VIEW
CURB RAMP TYPE 4A1

GENERAL NOTES

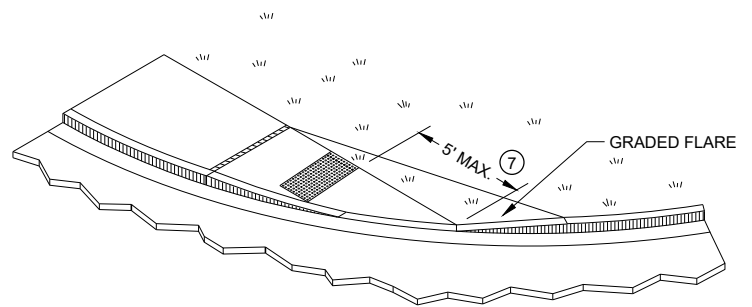
- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)



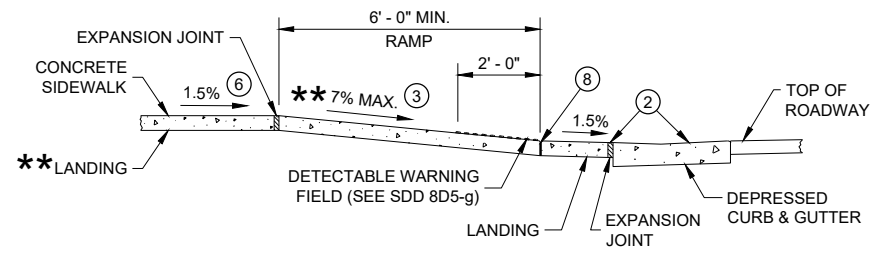
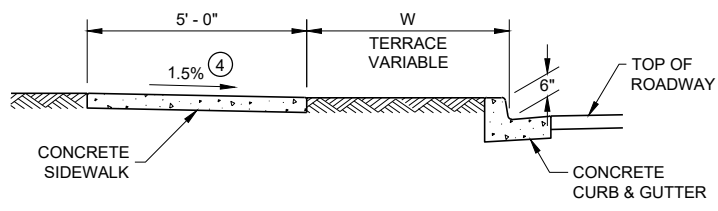
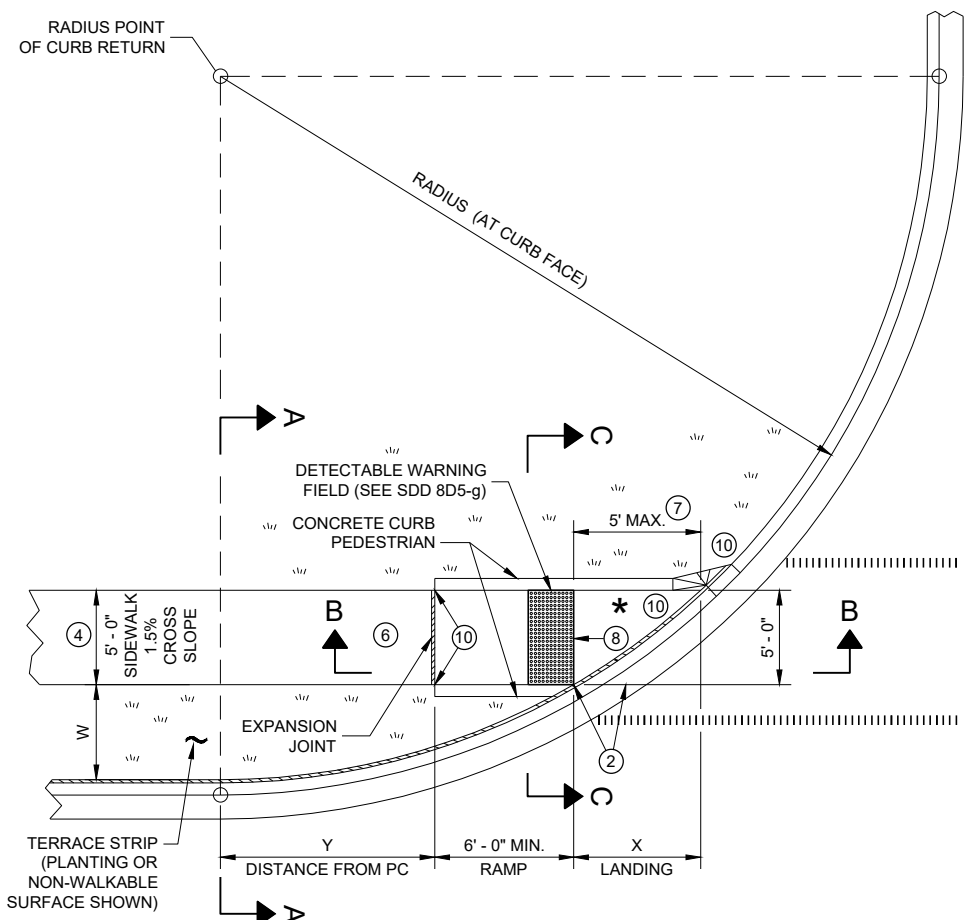
ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

CURB RAMPS
TYPE 4A AND 4A1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

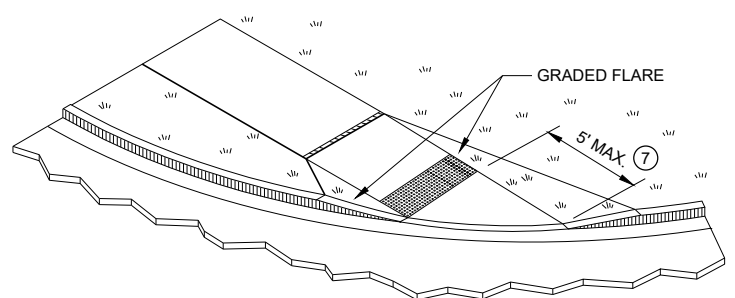
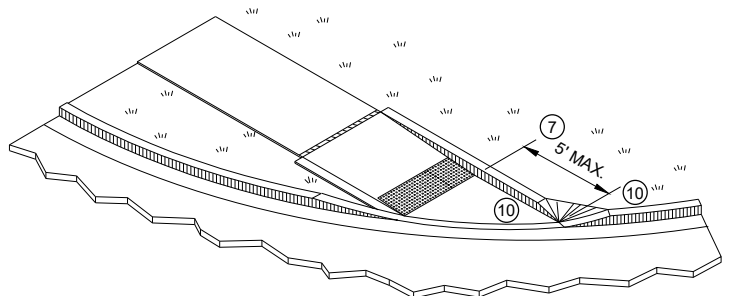
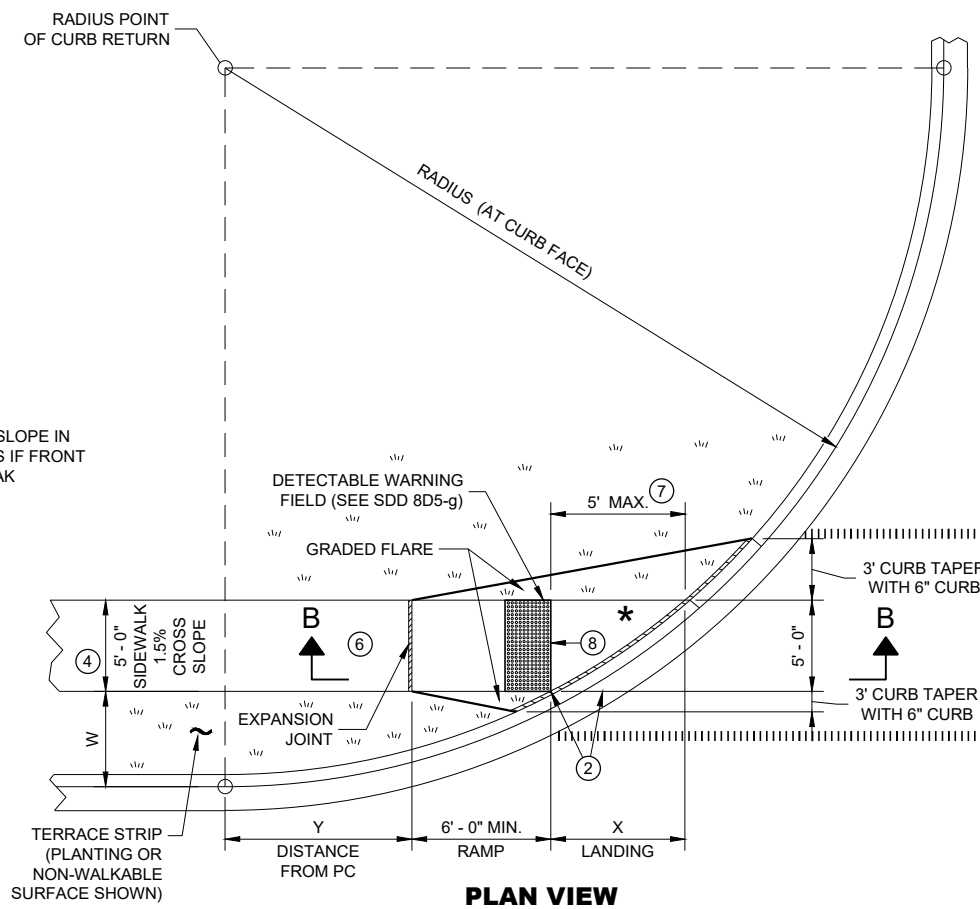
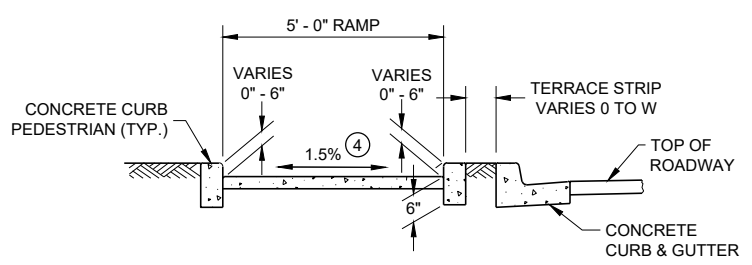


** IF RAMP SLOPE IS LESS THAN 5.0%, THEN NO ADJACENT UPHILL LANDING IS REQUIRED

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IF FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"		W = 8' - 0"		W = 9' - 0"		W = 10' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
10 FEET	2' - 10 1/4"	0' - 5"	2' - 1"	1' - 4 1/2"	1' - 5"	2' - 1"	0' - 10"	2' - 7 1/2"	0' - 3 3/4"	3' - 0 1/4"						
15 FEET	4' - 6 3/4"	2' - 1 3/4"	3' - 9"	3' - 5 3/4"	3' - 1 1/4"	4' - 6"	2' - 6 3/4"	5' - 4 1/2"	2' - 1"	6' - 1"	1' - 8"	6' - 8 1/2"	1' - 3 1/4"	7' - 2 1/2"	0' - 10 3/4"	7' - 7 1/4"
20 FEET	5' - 9 3/4"	3' - 6 1/2"	4' - 11 1/2"	5' - 1 3/4"	4' - 3 1/4"	6' - 5 1/2"	3' - 8 3/4"	7' - 7"	3' - 3"	8' - 6 1/2"	2' - 10"	9' - 4 1/2"	2' - 5 1/2"	10' - 1 1/4"	2' - 1 1/4"	10' - 9"
30 FEET			6' - 9 1/4"	7' - 11 1/4"	6' - 0 1/4"	9' - 8"	5' - 5"	11' - 1 3/4"	4' - 10 3/4"	12' - 5 3/4"	4' - 5 1/2"	13' - 7 3/4"	4' - 0 3/4"	14' - 8 1/2"	3' - 8 1/2"	15' - 8 1/4"
40 FEET									6' - 1 3/4"	15' - 8 1/2"	5' - 8"	17' - 2"	5' - 3"	18' - 5 3/4"	4' - 10 3/4"	19' - 8 1/4"
50 FEET															5' - 10 1/4"	23' - 2"

INTERMEDIATE RADII CAN BE INTERPOLATED
DIMENSION "Y" IS CALCULATED BASED ON 6'-0" RAMP LENGTH
DIMENSION "X" IS CALCULATED BASED ON 5'-0" SIDEWALK WIDTH



LEGEND

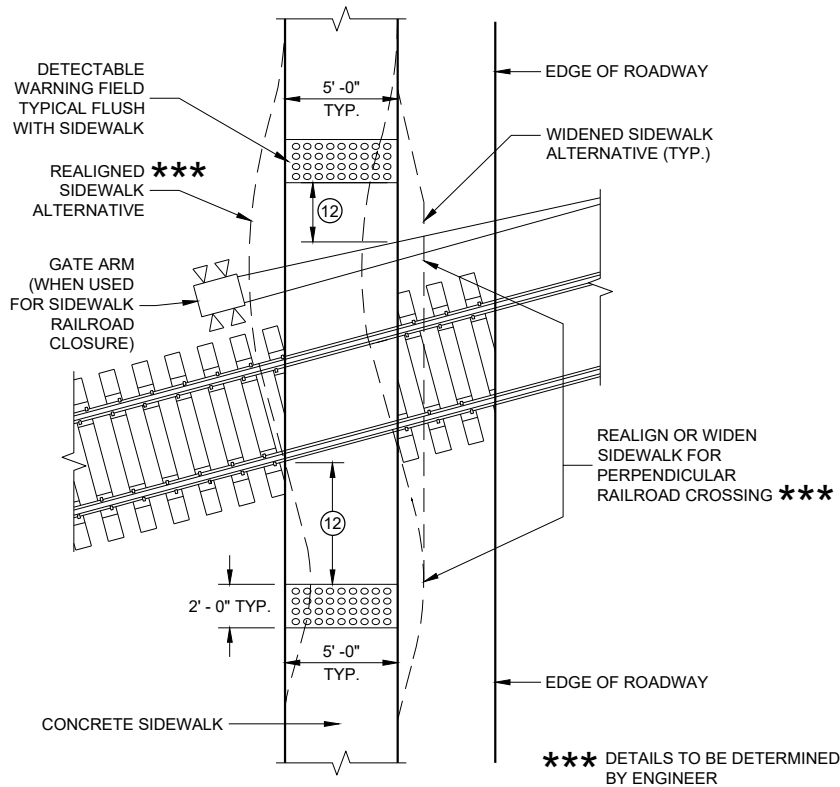
- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT SIDEWALK
- PAVEMENT MARKING CROSSWALK (WHITE)

GENERAL NOTES

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.
- 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.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4" INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- WHEN THIS GRADE BREAK DISTANCE EXCEEDS 5 FEET, USE RADIAL DETECTABLE WARNING FIELD PER SDD 8D5-f.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

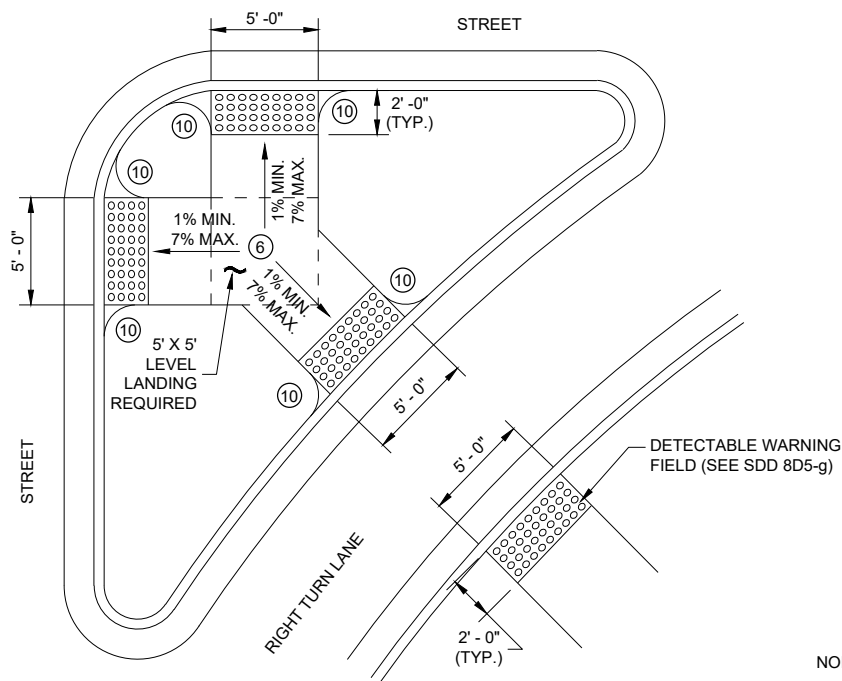
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 8

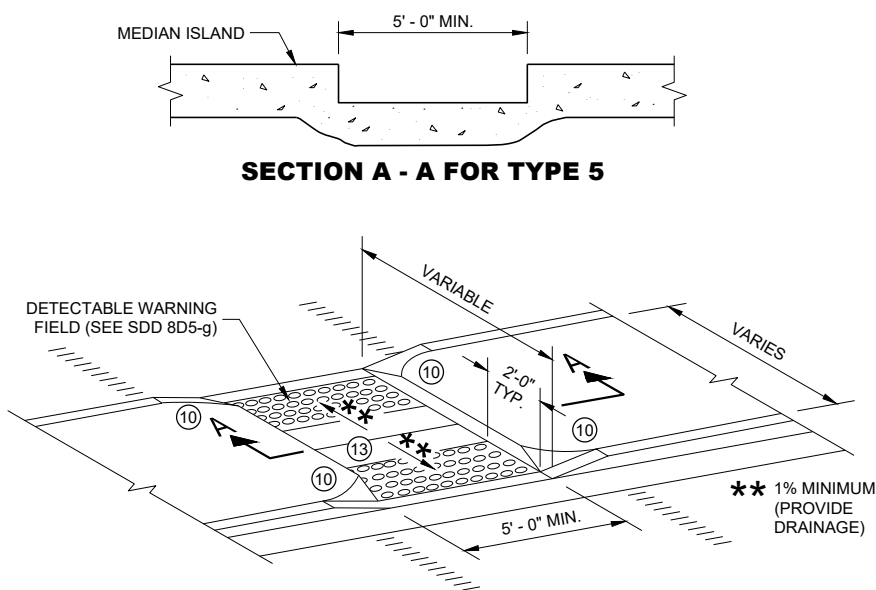
DETECTABLE WARNINGS AT RAILROAD CROSSING



CURB RAMP TYPE 6

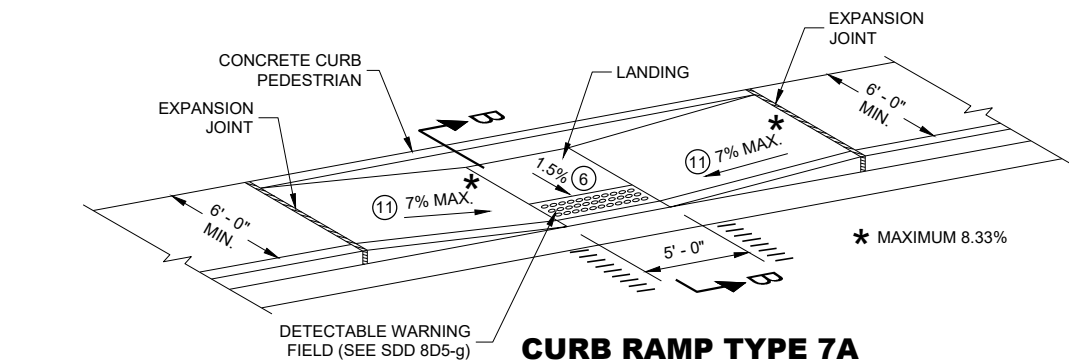
DETECTABLE WARNING AT ISLANDS

REFER TO GENERAL NOTES (2) AND (3)
FOR ALL ISLAND CURB RAMPS

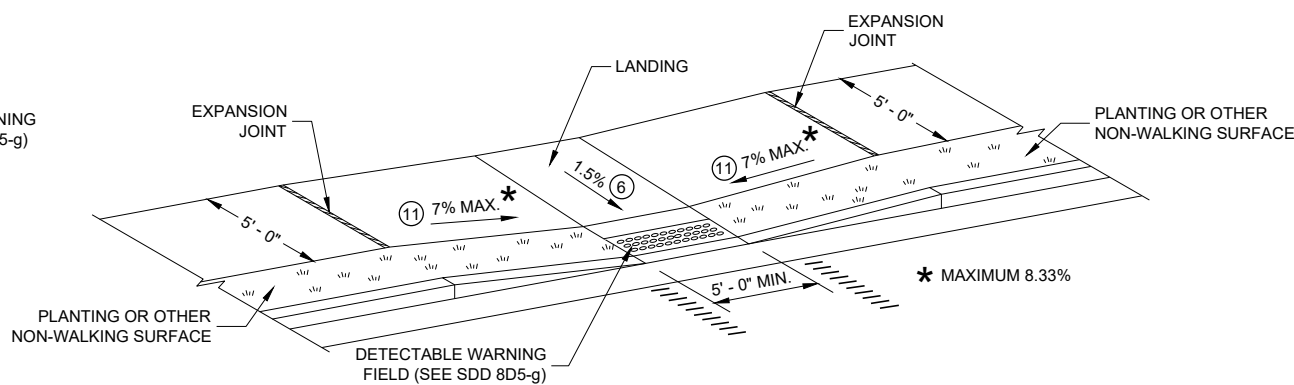


CURB RAMP TYPE 5

**MEDIAN ISLAND
NON-ELEVATED PEDESTRIAN CROSSING**



**CURB RAMP TYPE 7A
MID BLOCK CROSSING**



**CURB RAMP TYPE 7B
MID BLOCK CROSSING**

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS
MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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.

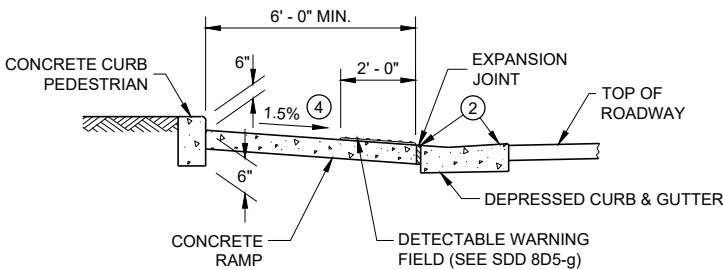
SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

- (2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4 - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- (3) AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- (4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- (6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LEVEL LANDING SIZE IS 5 FEET BY 5 FEET.
- (10) INSTALL TRANSITION NOSE (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- (11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- (12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ±0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- (13) DO NOT INSTALL DETECTABLE WARNING FIELDS AT THE EDGES OF STEET-LEVEL PEDESTRIAN REFUGE ISLANDS IF A MINIMUM 2 FOOT CONCRETE SURFACE WITHOUT DETECTABLE WARNINGS (MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL) CANNOT BE ACHIEVED.

LEGEND

- 1/2" EXPANSION JOINT SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)



SECTION B - B FOR TYPE 7A

**CURB RAMPS
TYPE 5, 6, 7A, 7B & 8**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

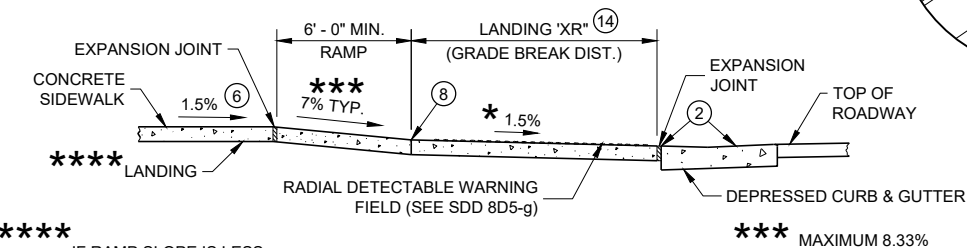
RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-c IS EXCEEDED

The diagram illustrates the placement of a detectable warning field on a ramp and landing. Key features include:

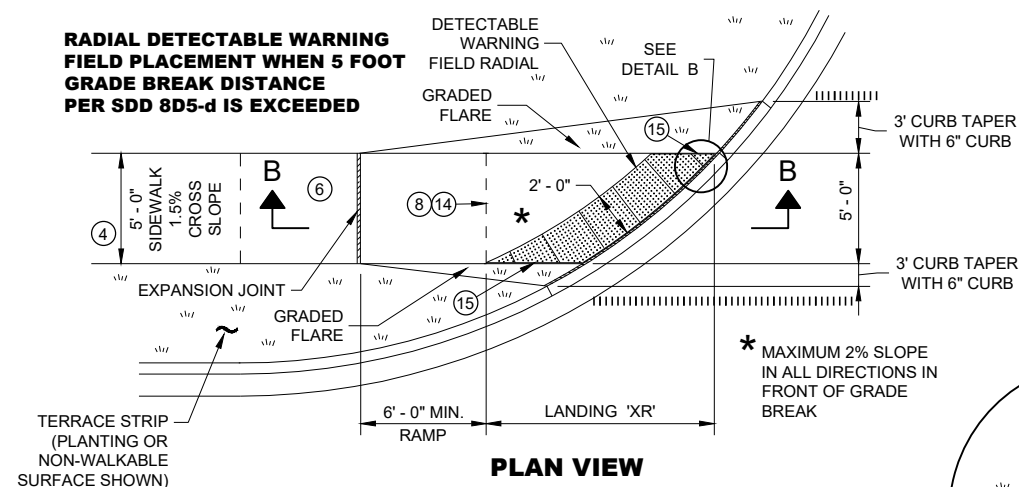
- EXPANSION JOINT**: Located at the start of the ramp.
- DETECTABLE WARNING FIELD RADIAL**: A shaded rectangular area on the ramp.
- GRADED FLARE**: A curved transition area between the ramp and the landing.
- SEE DETAIL A**: Points to the top of the ramp.
- MIN. 2'-0" DWF (16) COVERAGE**: A dimension line indicating the minimum width of the detectable warning field.
- MIN. 6'-0" RAMP**: A dimension line indicating the minimum length of the ramp.
- LANDING 'XR'**: The horizontal distance from the end of the ramp to the start of the landing.
- 3' CURB WITH 6" SIDEWALK**: A dimension line indicating the width of the curb and sidewalk.
- 5'-0" (17)**: A dimension line indicating the width of the landing.
- 2'-0"**: A dimension line indicating the width of the detectable warning field.
- 8 (14)** and **16**: Callouts for specific details or materials.
- 15**: A callout for the graded flare.
- 17**: A callout for the landing width.
- 16**: A callout for the minimum 2'-0" DWF coverage.
- 17**: A callout for the landing width.

*** MAXIMUM 2% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK**

PLAN VIEW
CURB RAMP TYPE 4A1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)

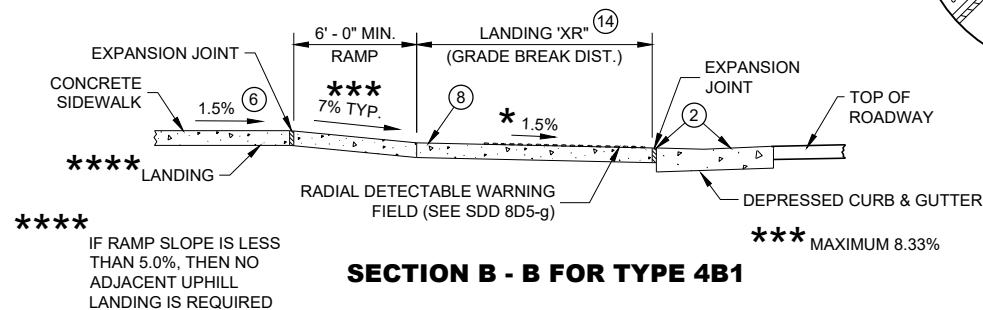


SECTION A - A FOR TYPE 4A1



NON-WALKABLE
SURFACE SHOWN)

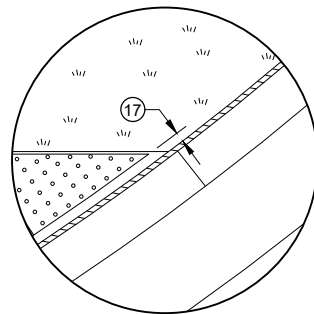
PLAN VIEW
CURB RAMP TYPE 4B1
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)



SECTION B - B FOR TYPE 4B1

LEGEND

-  1/2" EXPANSION JOINT SIDEWALK
 CONTRACTION JOINT SIDEWALK
 PAVEMENT MARKING
 CROSSWALK (WHITE)



DETAIL A

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIO

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.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

APPLY RADIAL DETECTABLE WARNING PLACEMENT SIMILARLY FOR TYPE 4A AND 4A1 CURB RAMPS AND SIMILARLY FOR TYPE 4B AND 4B1 CURB RAMPS. TYPE 4A AND 4B CURB RAMPS ARE NOT SHOWN.

REFER TO SDD 8D5-g FOR ADDITIONAL RADIAL PLATE REQUIREMENTS.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN $\frac{1}{4}$ - INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL MATCH THE RAMP SLOPE, MINIMALLY 1.5% AND NOT TO EXCEED 7%. WHEN ADJACENT TO 1.5% LANDING, CONSTRUCT CURB HEAD OPENING AT 1.5% IN THE DIRECTION OF PEDESTRIAN TRAVEL.
- ③ AN 8.33% CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET BY 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑭ CONSULT ENGINEER IF GRADE BREAK LOCATION (END OF LANDING DIMENSION "XR") REQUIRES FIELD ADJUSTMENT WHEN ESTABLISHING FINAL RADIAL DETECTABLE WARNING FIELD LOCATION.
- ⑮ FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN $\frac{1}{8}$ " DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.
- ⑯ USE 1' X 2" RECTANGULAR END PLATE AT END OF TYPE 4A1 RAMP AND PROVIDE MINIMUM 2' - 0" DETECTABLE WARNING FIELD COVERAGE (IN DIRECTION OF PEDESTRIAN TRAVEL) ALONG THE ENTIRE CURB RAMP WIDTH.
- ⑰ A MAXIMUM 3 INCH CONCRETE BORDER WITH IS ALLOWABLE IN FROM OF RADIAL DETECTABLE WARNING FIELD FOR CONSTRUCTABILITY PURPOSES. CONCRETE BORDER WIDTH MAY VARY UP TO 1 INCH.

RADIAL DETECTABLE WARNING FIELD PLACEMENT WHEN 5 FOOT GRADE BREAK DISTANCE PER SDD 8D5-b IS EXCEEDED

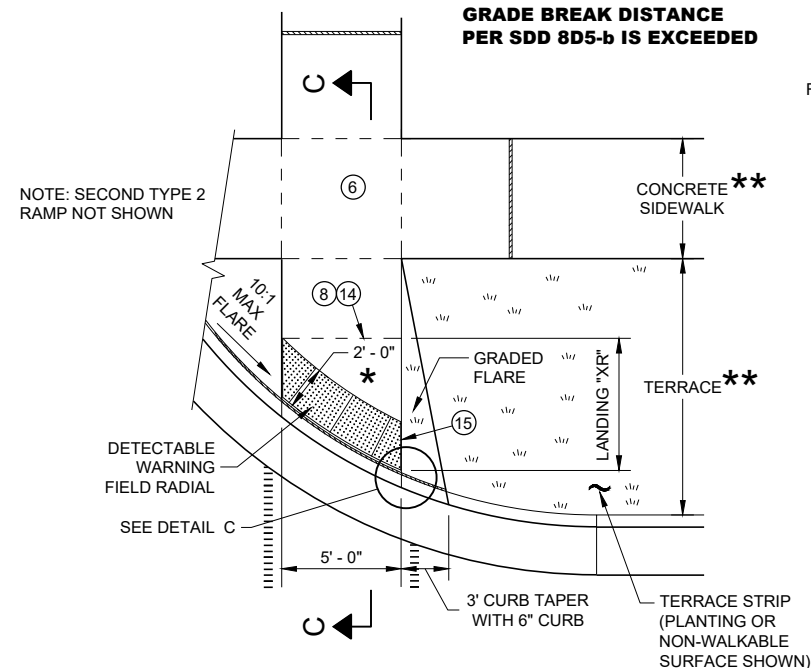
EXPANSION

TERRACE

SIDEWALK

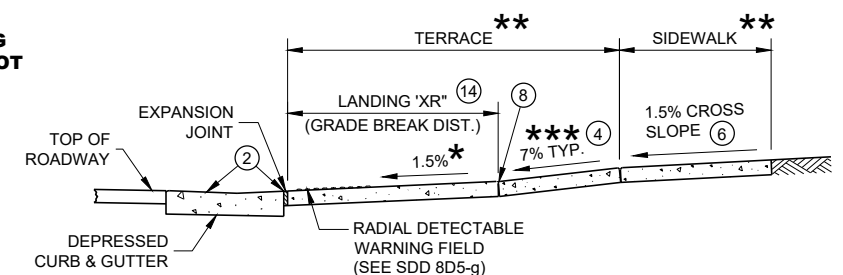
LANDING 'XR' (14) (8)

1.5% CROSS

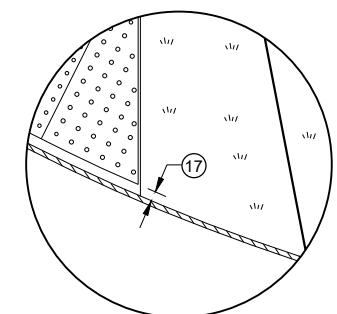


SURFACE SHOWN)

PLAN VIEW
CURB RAMP TYPE 2
(GRADE BREAK DISTANCE GREATER THAN 5 FEET)
(ON LINE WITH SIDEWALK)



SECTION C - C FOR TYPE 2



DETAIL C

* MAXIMUM 2% SLOPE
IN ALL DIRECTIONS IN
FRONT OF GRADE
BREAK

**** WIDTH SHOWN ELSEWHERE
IN THE PLANS**

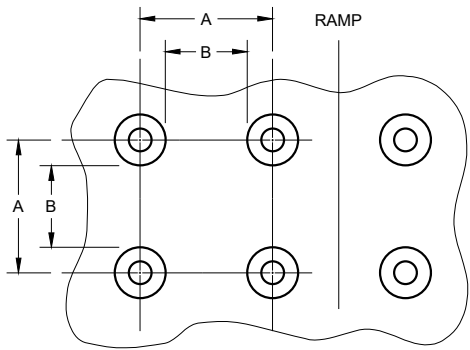
*** MAXIMUM 8.33%

CURB RAMPS RADIAL DETECTABLE WARNING FIELD APPLICATIONS

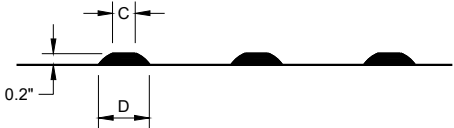
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

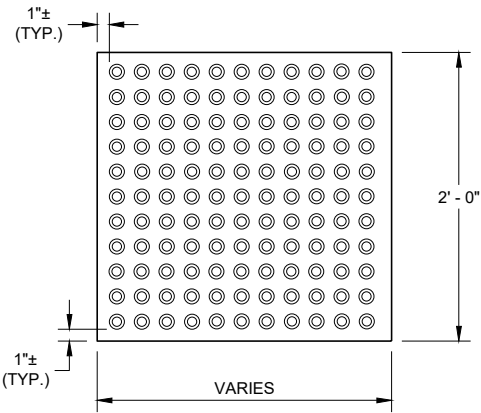


PLAN VIEW

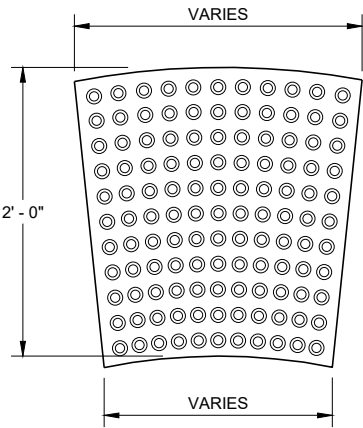


ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL

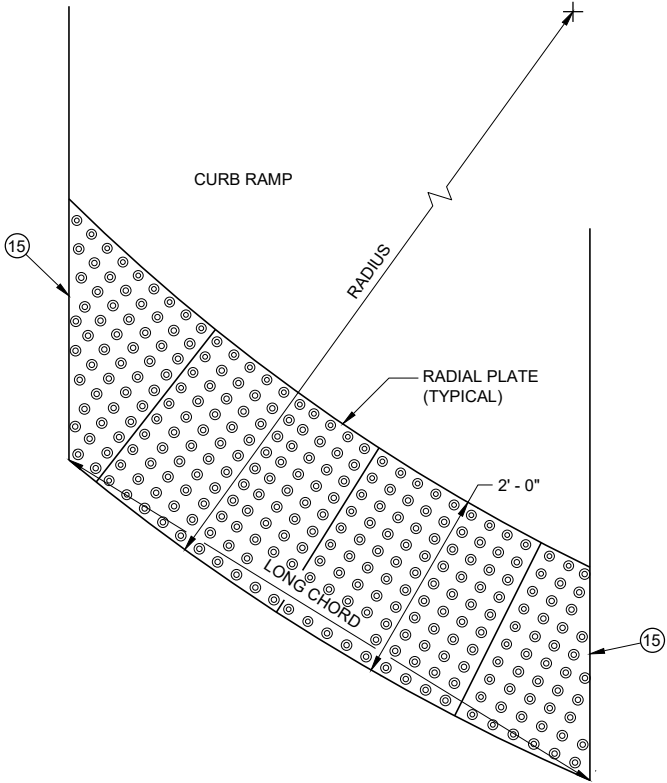


RECTANGULAR
PLATES



RADIAL
PLATES

PLAN VIEW
DETECTABLE WARNING FIELDS (TYPICAL)



PLAN VIEW
RADIAL DETECTABLE
WARNING FIELD ATTRIBUTES

GENERAL NOTES

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AT A CURB RAMP SHALL BE FROM THE SAME MANUFACTURER.

PLACE ALL DETECTABLE WARNING FIELD SYSTEMS IN ACCORDANCE TO THE MANUFACTURER'S RECOMMENDATION.

FIELD CUTS AT INTERMEDIATE JOINTS WITHIN THE RADIAL DETECTABLE WARNING FILED ARE PROHIBITED.

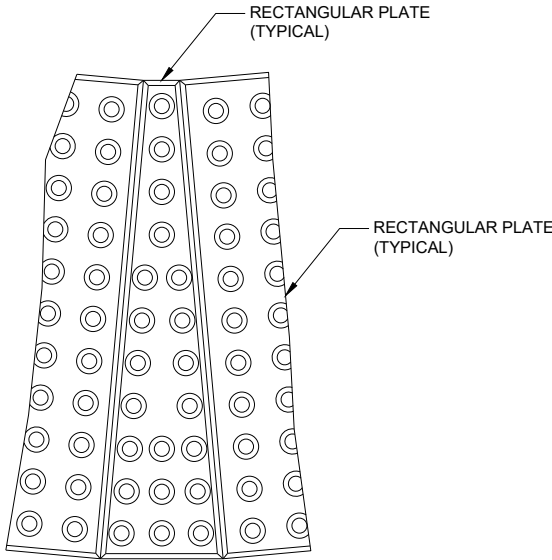
DETERMINE FINAL RADIAL WARNING FIELD CONFIGURATION AND ITS INDIVIDUAL PLATE LOCATIONS. PERFORM PRE-LAYOUT PRIOR TO PLACEMENT IN PLASTIC CONCRETE. FOLLOW MANUFACTURER'S PRODUCT LIST AND INSTALLATION RECOMMENDATIONS.

FOR RADIAL DETECTABLE WARNING FIELD APPLICATIONS WHERE STANDARD RADIAL PLATES ARE NOT AVAILABLE AT AN INTERSECTION CURB RADIUS, A COMBINATION OF SQUARE OR RECTANGULAR PLATES AND RADIAL PLATES MAY BE USED TO FORM RADIAL CONFIGURATION. RADIAL WEDGE PLATES IN COMBINATION WITH SQUARE PLATES ARE ALSO ACCEPTABLE. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

REFER TO CONTRACT AND STANDARD SPECIFICATIONS FOR FIELD CUTTING REQUIREMENTS.

DO NOT EMBED IN CONCRETE ANY FIELD-CUT PLATES WITH CUT EDGES SHORTER THAN 6 INCHES. CONSULT WITH MANUFACTURER FOR RE-DRILLING AND ANCHORING REQUIREMENTS OF FIELD-CUT PLATES.

(15) FIELD SAW CUTS ALONG RADIAL DETECTABLE WARNING PLATES WILL BE NECESSARY TO MATCH EACH CURB RAMP EDGE. AVOID CUTTING THROUGH DOMES WHENEVER POSSIBLE. MAKE FIELD CUTS TRUE TO LINE AND WITHIN 1/8" DEVIATION. SMOOTH EDGES OF FIELD CUT PLATES.

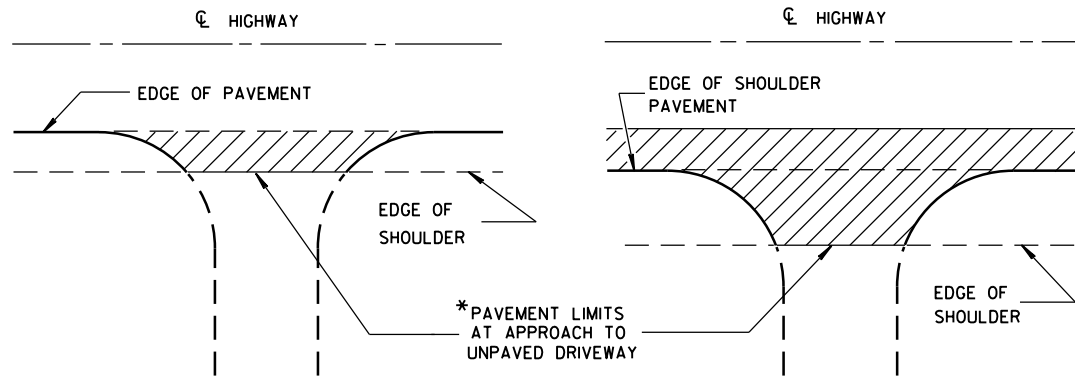


PLAN VIEW
RADIAL WEDGE PLATE
CONNECTION DETAIL

CURB RAMPS
RECTANGULAR AND RADIAL
DETECTABLE WARNING PLATES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

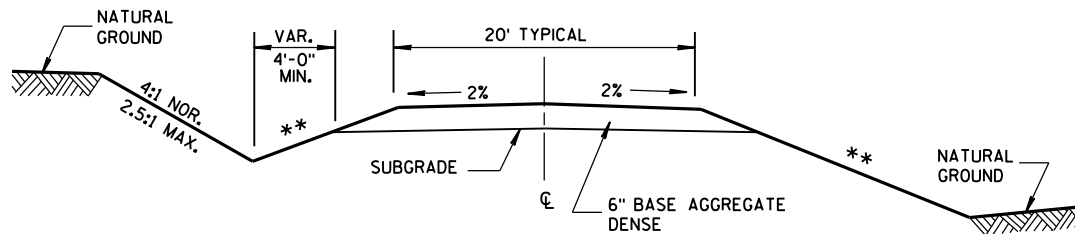


*WHERE DRIVEWAY IS PAVED, APPROACH PAVEMENT SHOULD BE EXTENDED TO MATCH DRIVEWAY PAVEMENT.

PLAN VIEW
(UNPAVED SHOULDER ON HIGHWAY)

PLAN VIEW
(PAVED SHOULDER ON HIGHWAY)

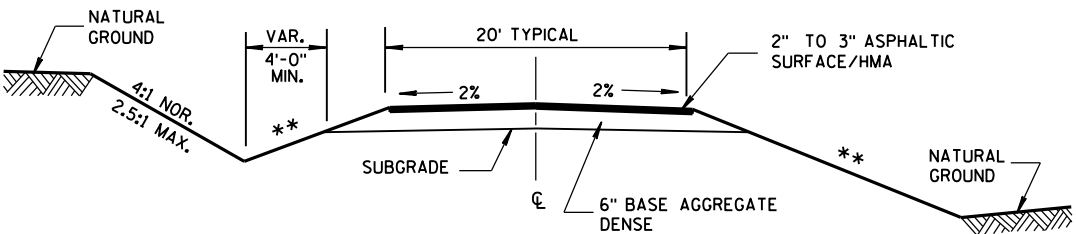
RURAL DRIVEWAY INTERSECTION DETAIL
(NO CURB & GUTTER OR SIDEWALK)



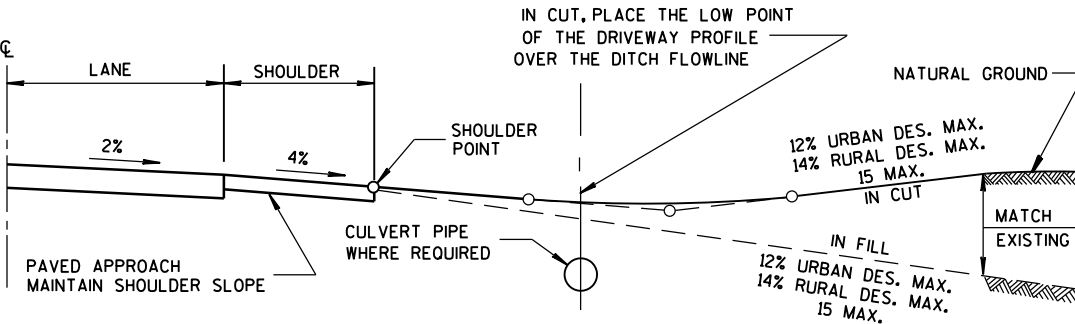
TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE AGGREGATE SURFACE

** SLOPE CAN VARY WITH SPEED. SEE 11-45-2.6.2.

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

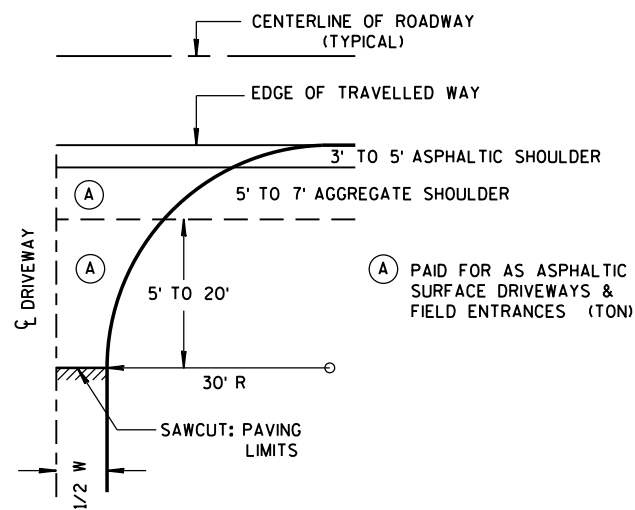


TYPICAL CROSS SECTION FOR PRIVATE DRIVE OR FIELD ENTRANCE ASPHALTIC SURFACE



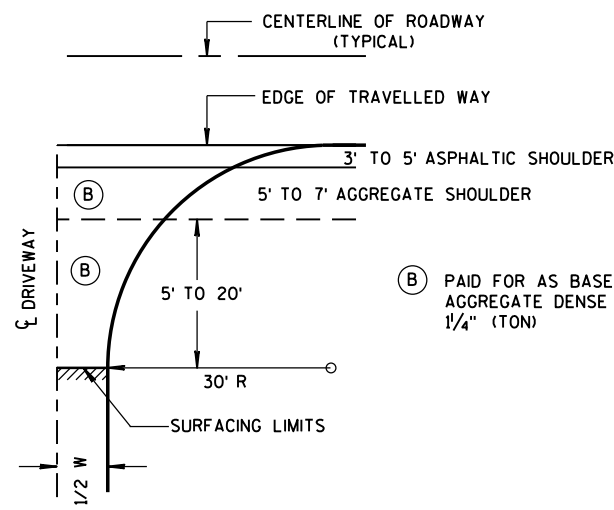
TYPICAL DRIVEWAY PROFILES

DRIVEWAYS WITHOUT CURB & GUTTER	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December, 2016 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	



PLAN VIEW
HALF SECTION

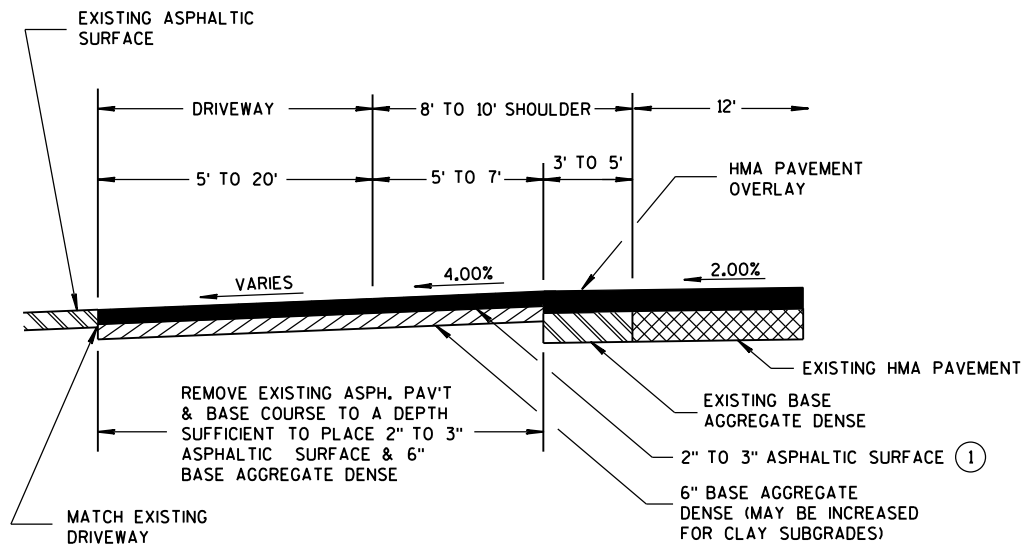
W MIN. = 16'
W MAX. = 24'



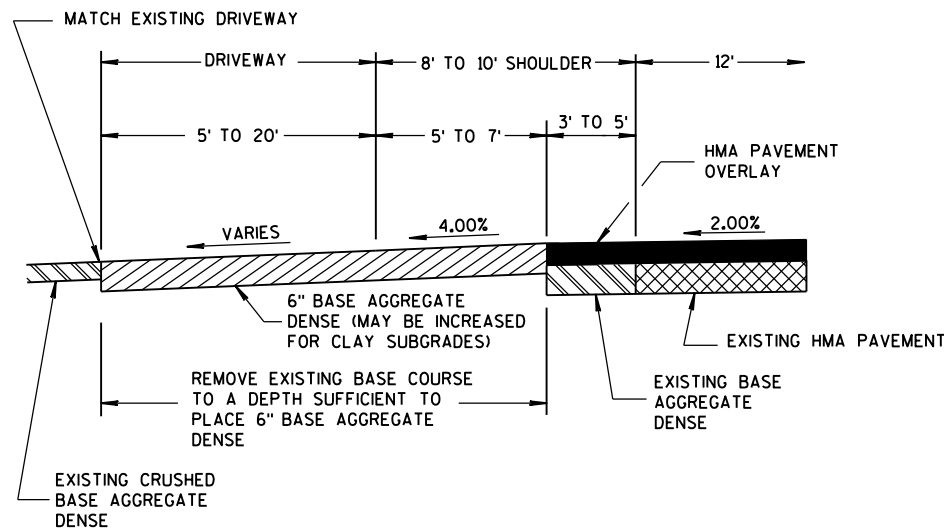
PLAN VIEW
HALF SECTION

GENERAL NOTES

① DESIGN WILL DETERMINE FINAL DRIVEWAY ASPHALTIC THICKNESS BASED ON TYPE OF USAGE AND LOADINGS.



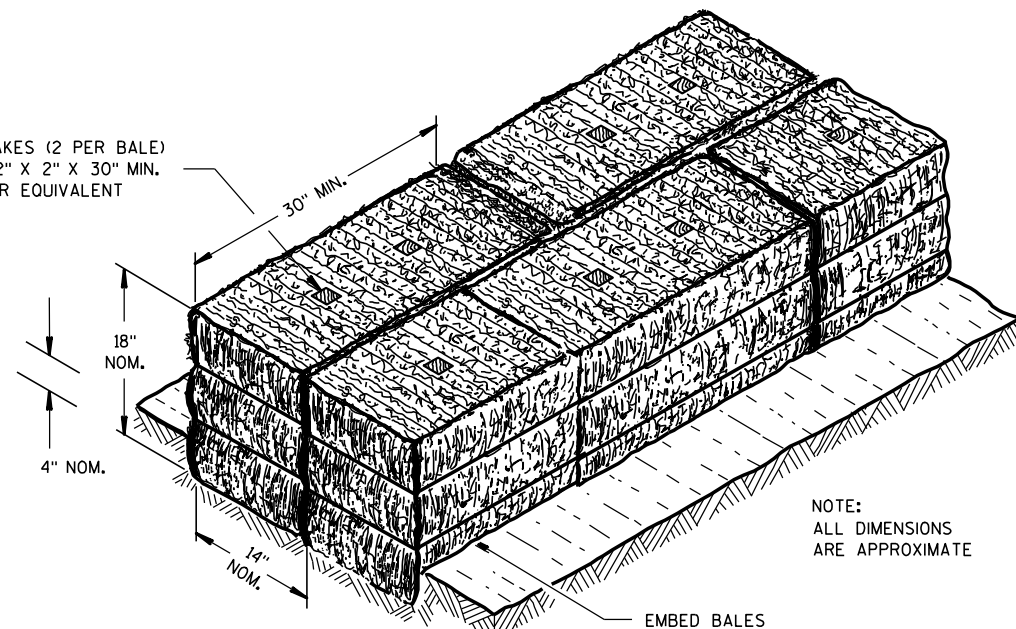
PROFILE VIEW
RURAL ENTRANCE
WITH ASPHALTIC SURFACE
RESURFACING PROJECTS



PROFILE VIEW
RURAL ENTRANCE
WITH AGGREGATE SURFACE
6" BASE AGGREGATE DENSE
RESURFACING PROJECTS

DRIVEWAYS WITHOUT CURB & GUTTER RESURFACING PROJECTS RURAL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED December, 2016 DATE	/S/ Rodney Taylor ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
FHWA	

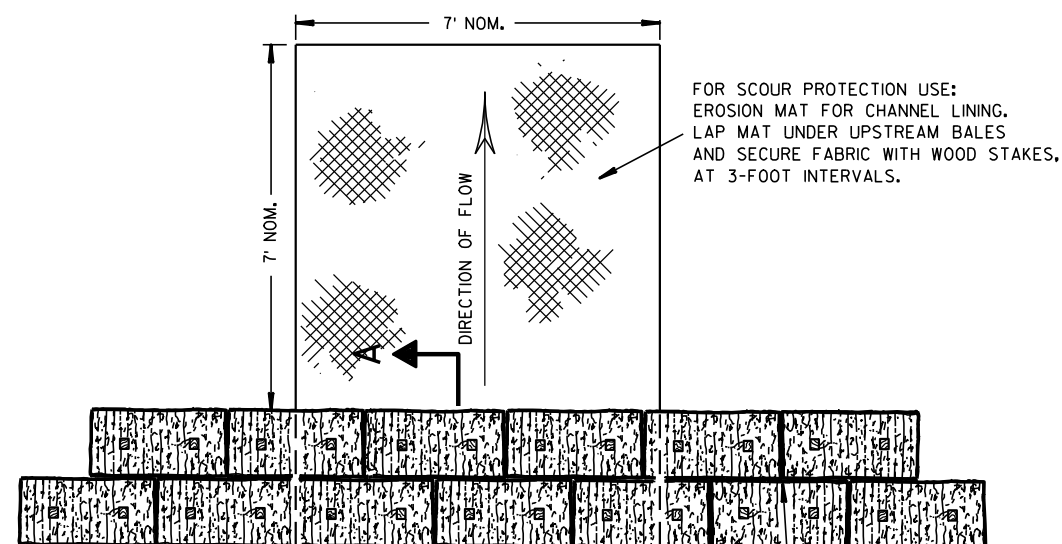
WOOD STAKES (2 PER BALE)
NOMINAL 2" X 2" X 30" MIN.
LENGTH OR EQUIVALENT



NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

EMBED BALES

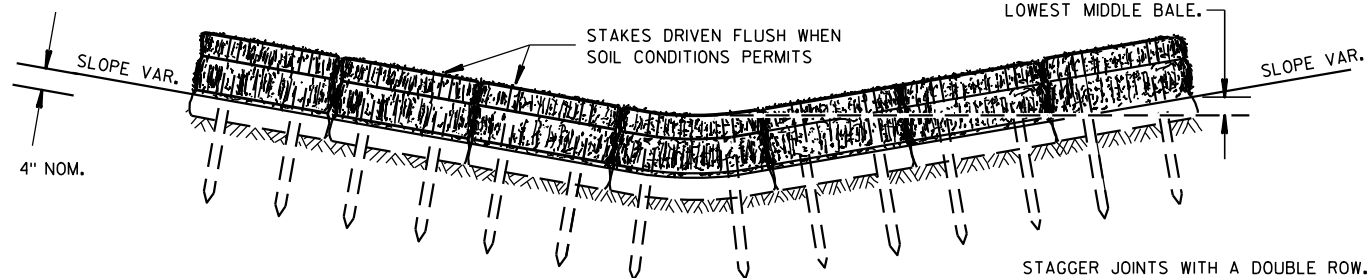
SECTION A-A



PLAN VIEW

STAGGER JOINTS BETWEEN ADJACENT
ROWS OF BALES.

BOTTOM ELEVATION OF END BALE SHALL
BE EQUAL TO OR GREATER THAN TOP OF
LOWEST MIDDLE BALE.



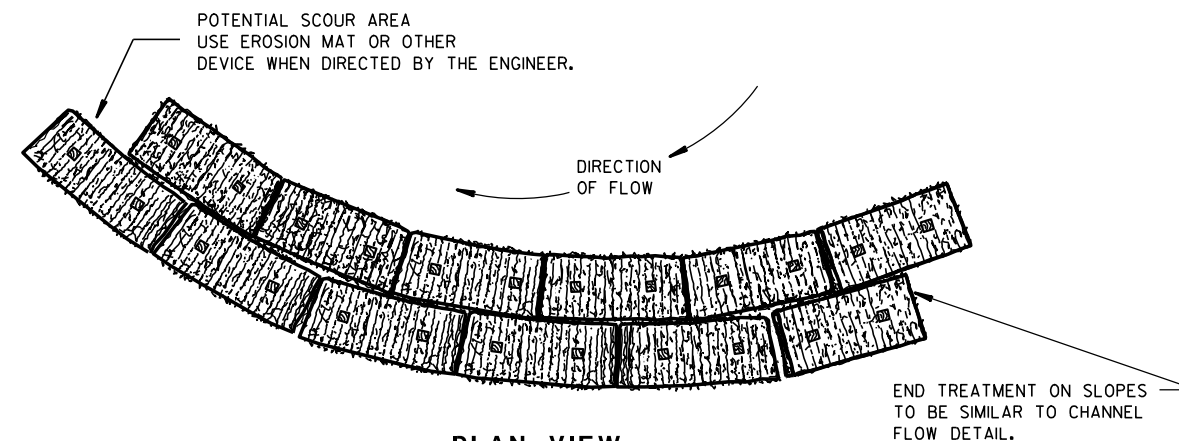
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

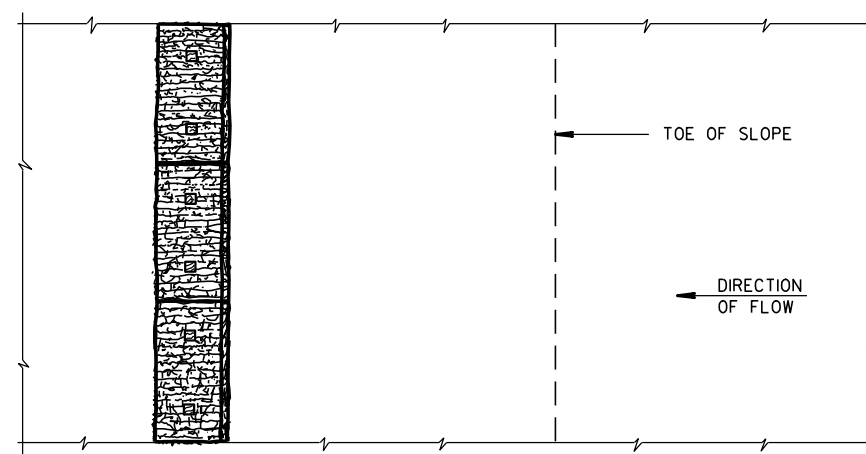
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

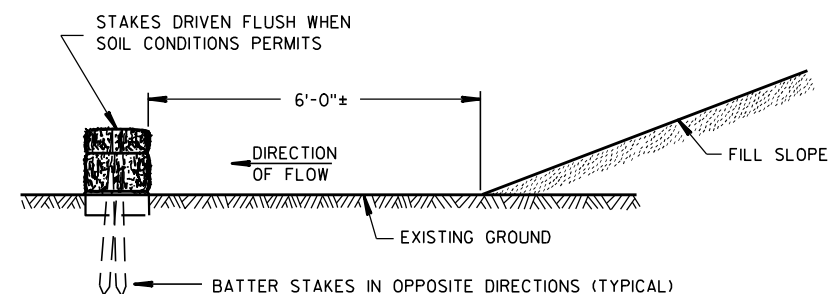


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

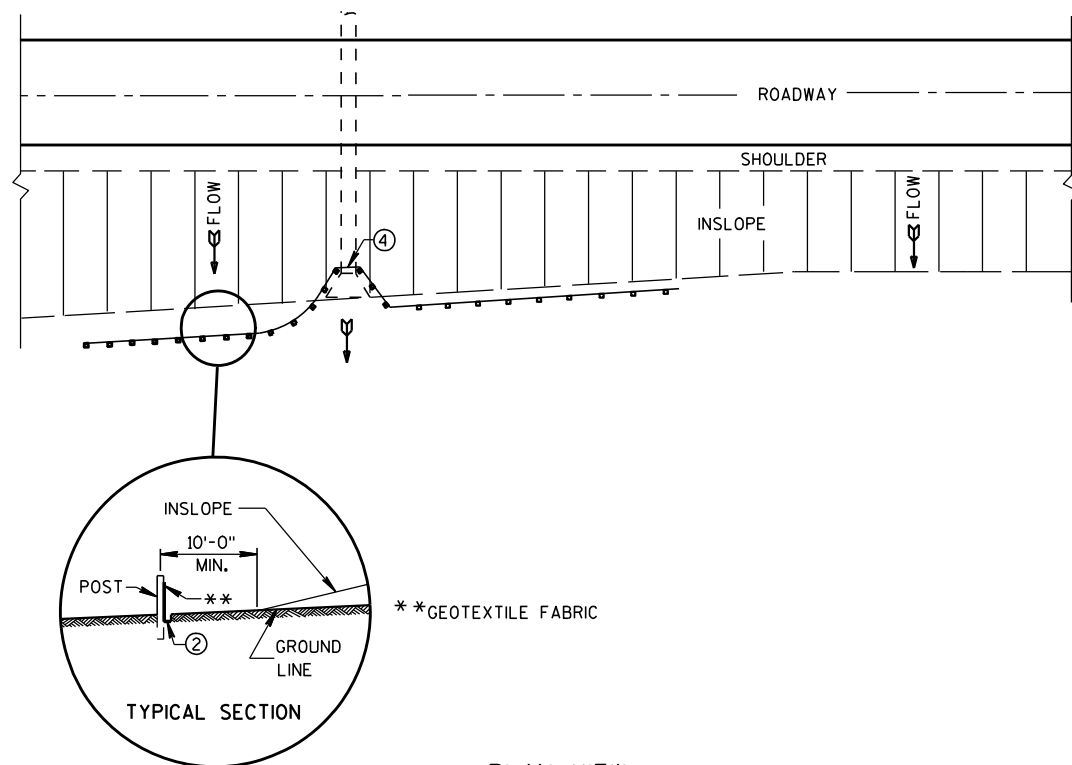
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

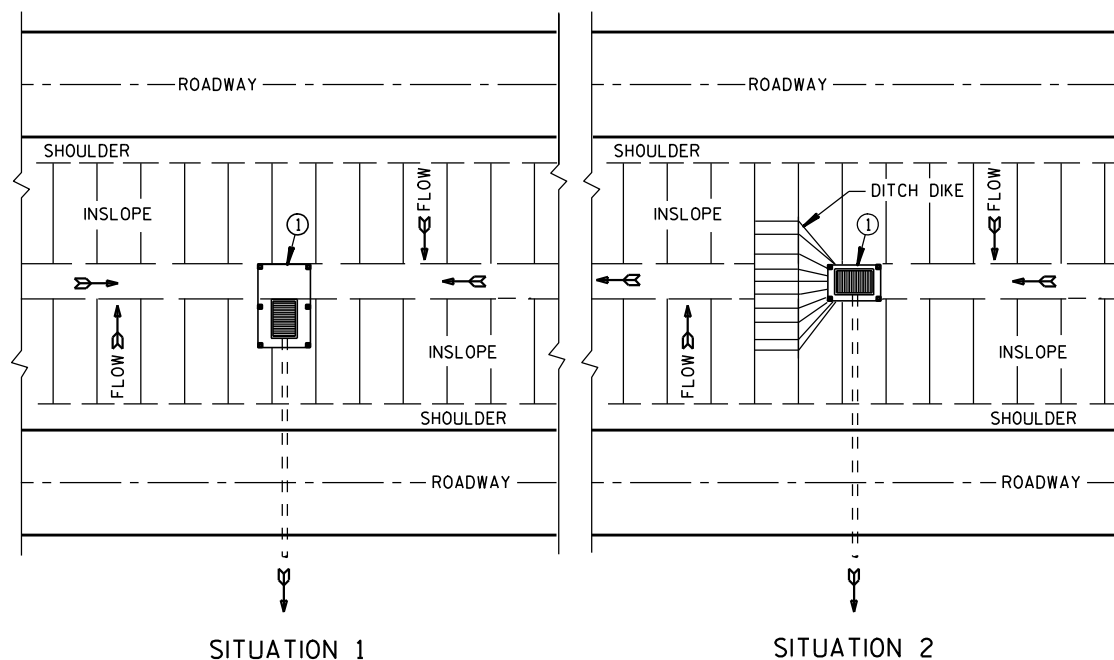
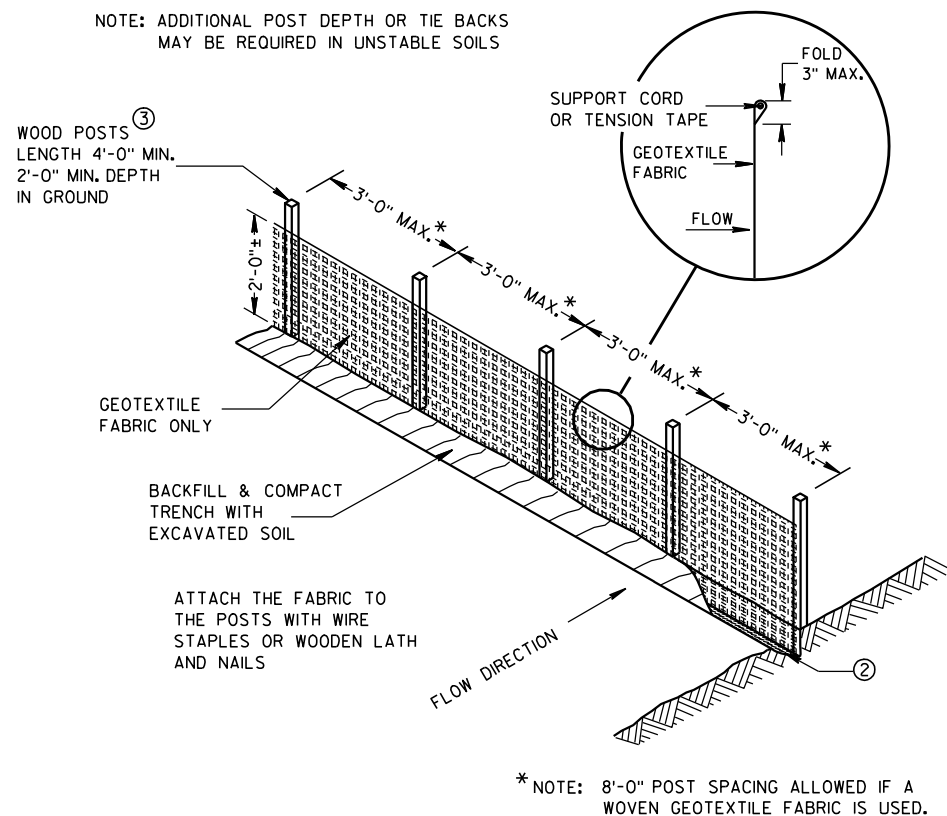
/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA



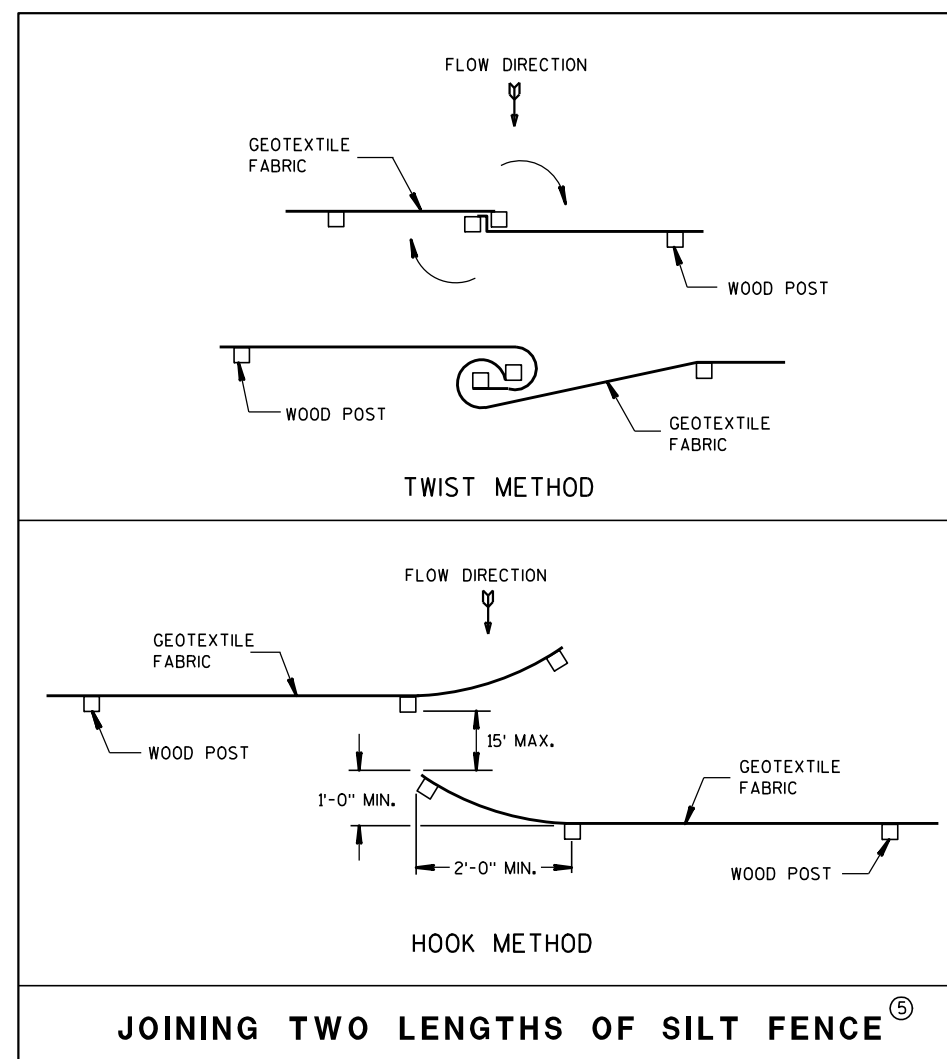
TYPICAL APPLICATION OF SILT FENCE

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



PLAN VIEW

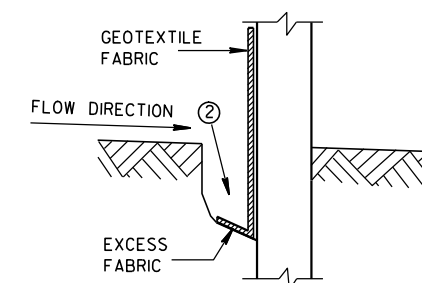
SILT FENCE AT MEDIAN SURFACE DRAINS



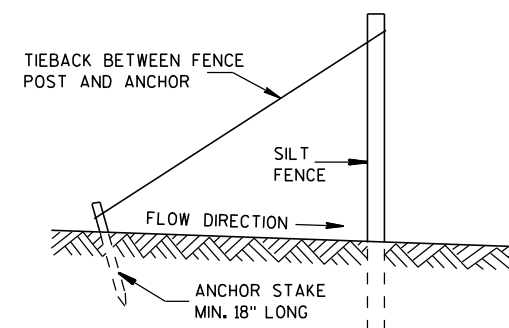
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK (WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

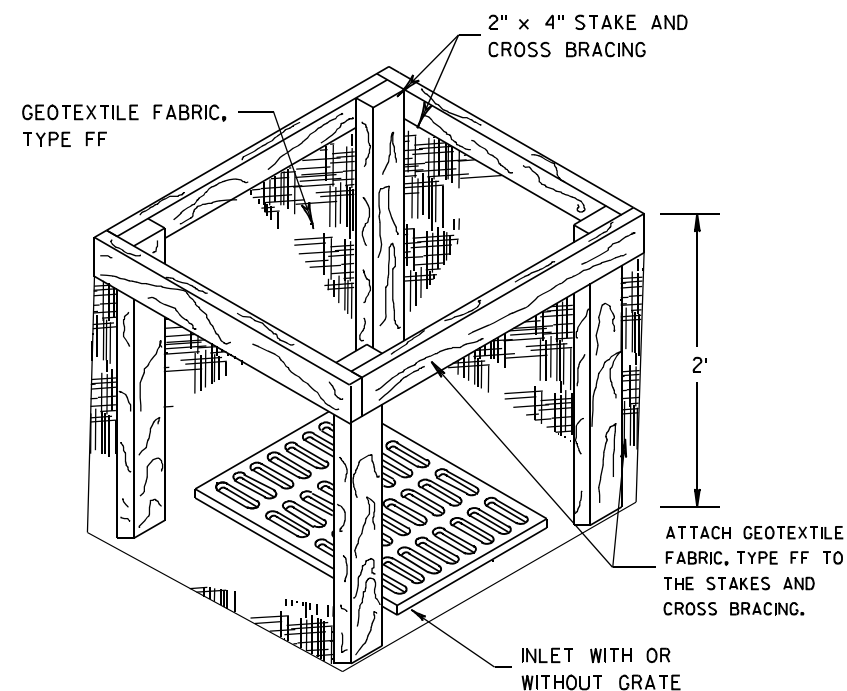
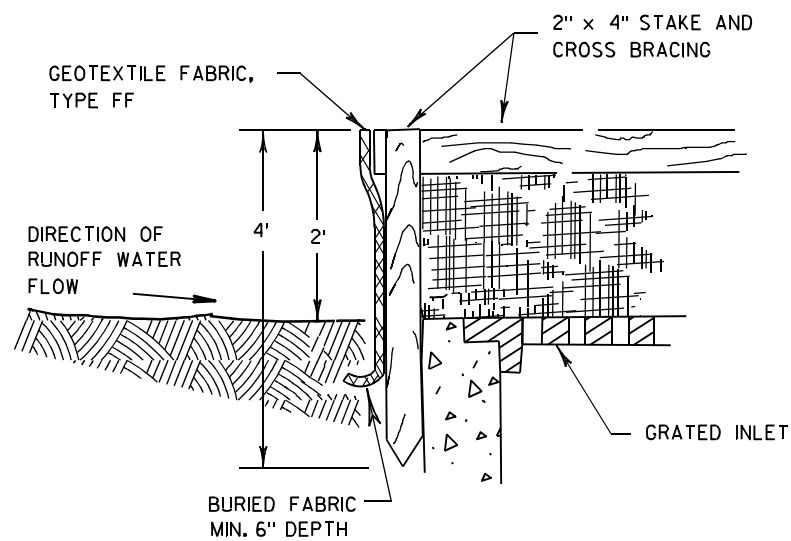
APPROVED

4-29-05

DATE

FHWA

/S/ Beth Canestra
CHIEF ROADWAY DEVELOPMENT ENGINEER



INLET PROTECTION, TYPE A

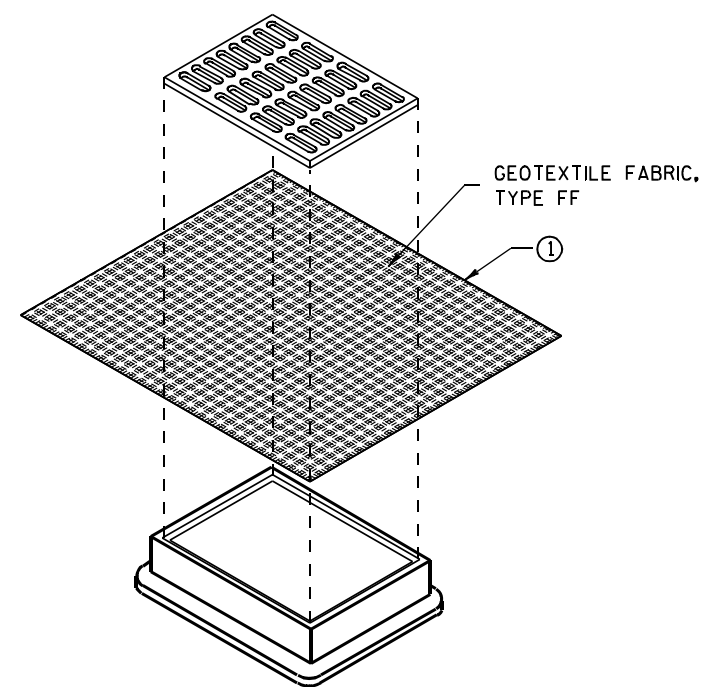
GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

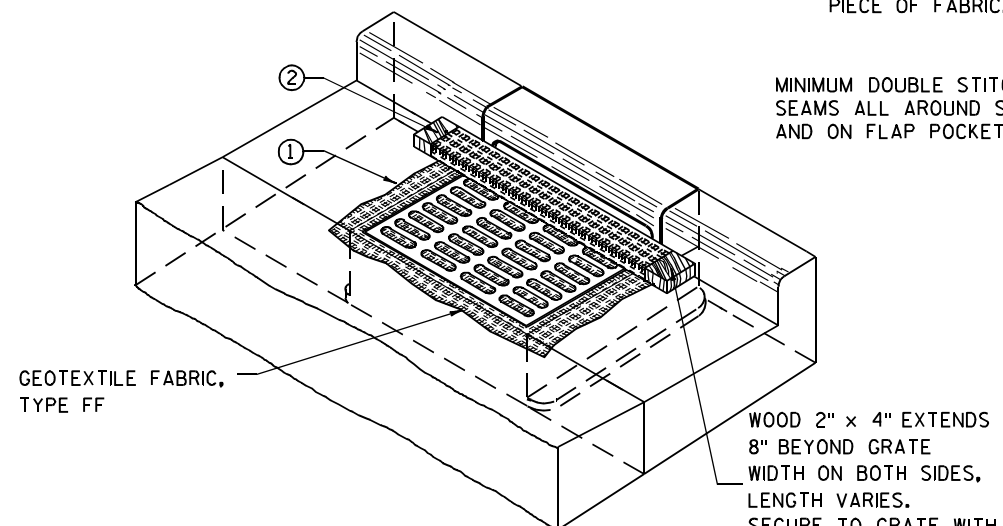
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

- ① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.
- ② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.
- ③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.



**INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)**

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

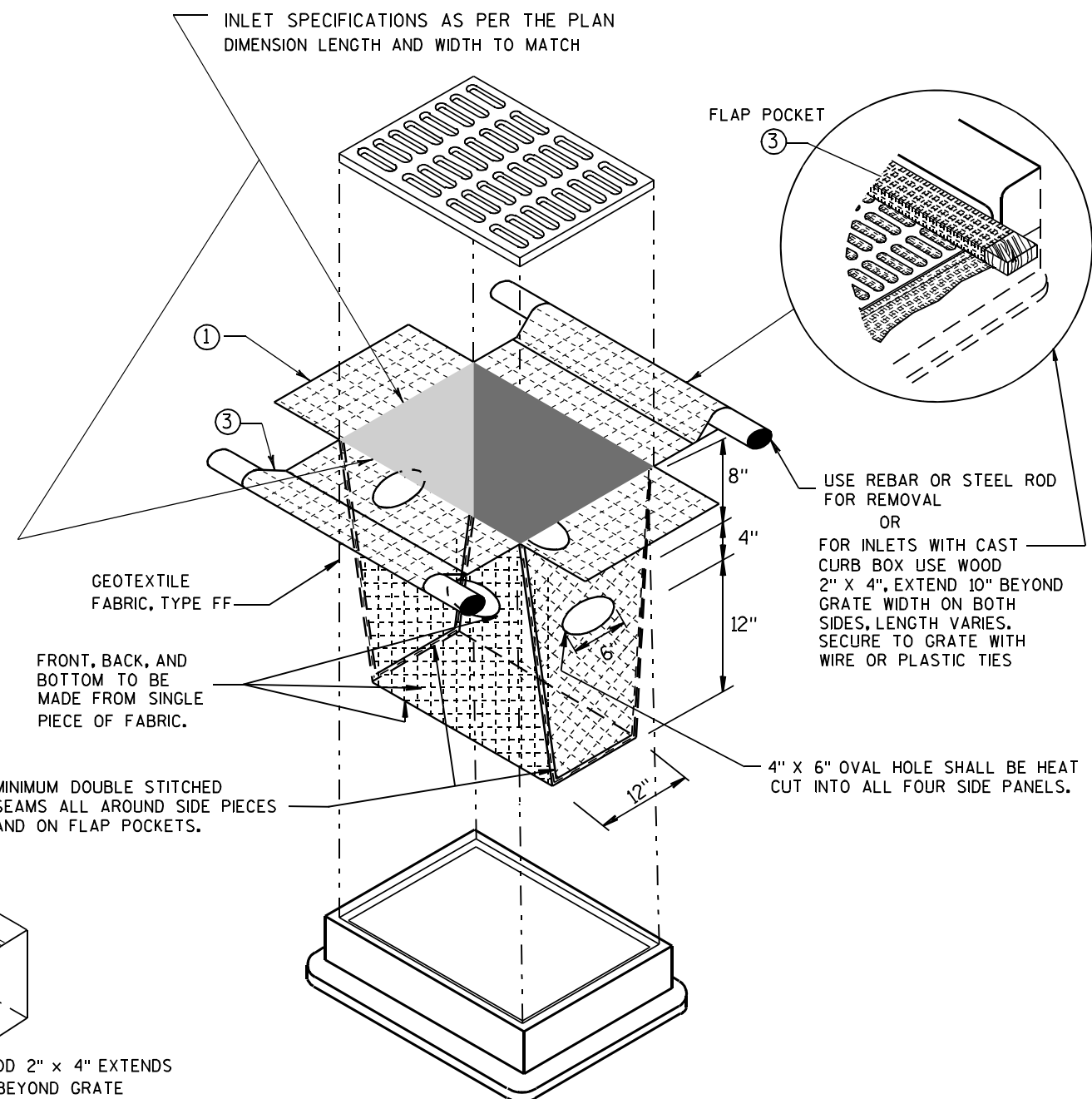
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLower THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.



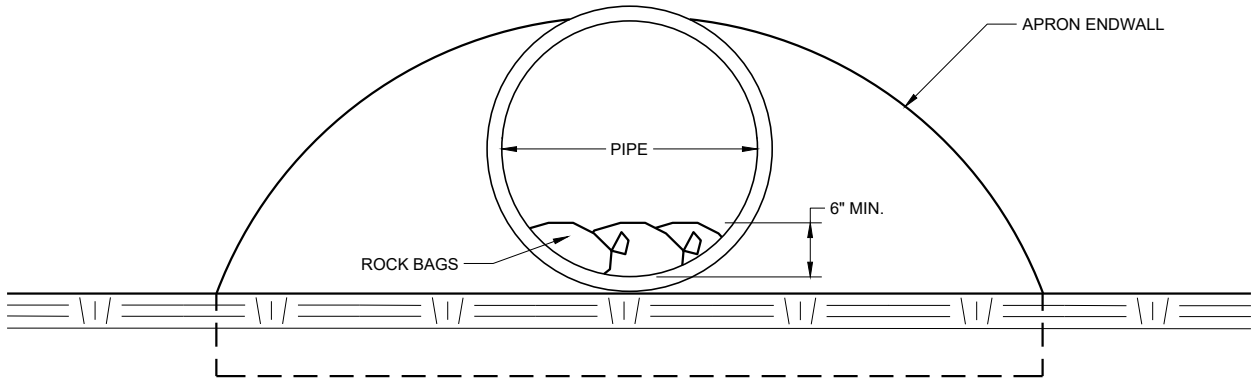
INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH OR WITHOUT A CURB BOX AS PER NOTE ②)

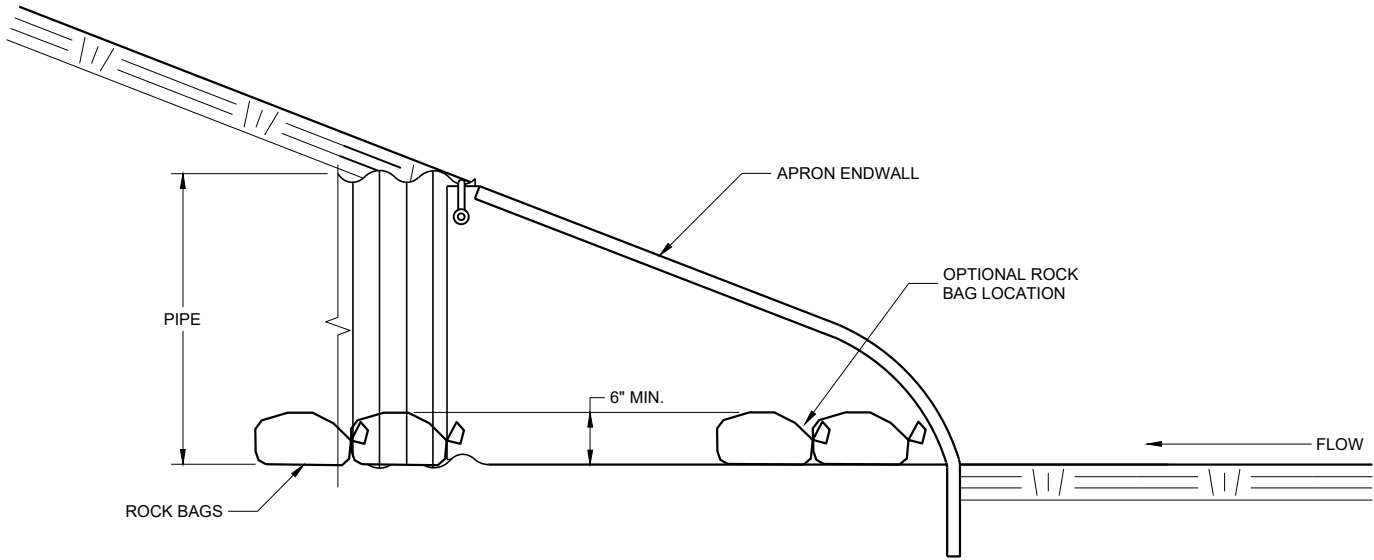
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/16/02 /S/ Beth Cannestra
DATE
FHWA CHIEF ROADWAY DEVELOPMENT ENGINEER



END VIEW



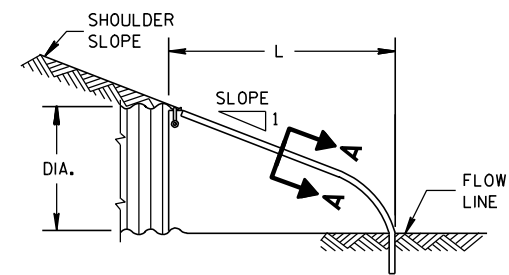
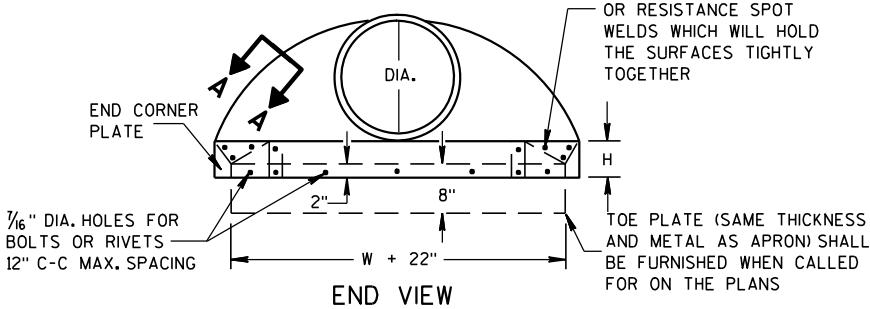
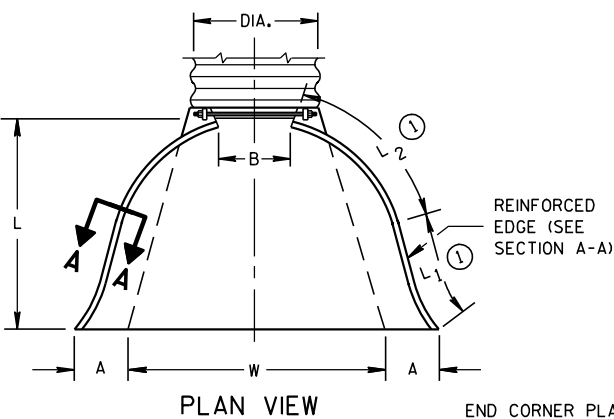
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGINEER
FHWA	

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

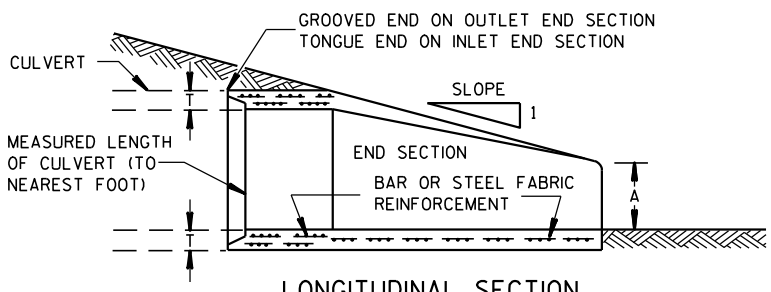
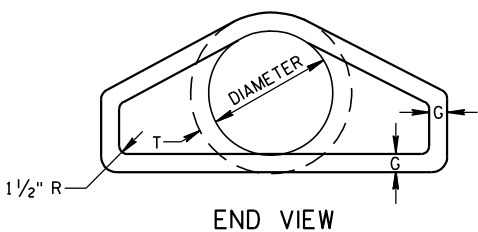
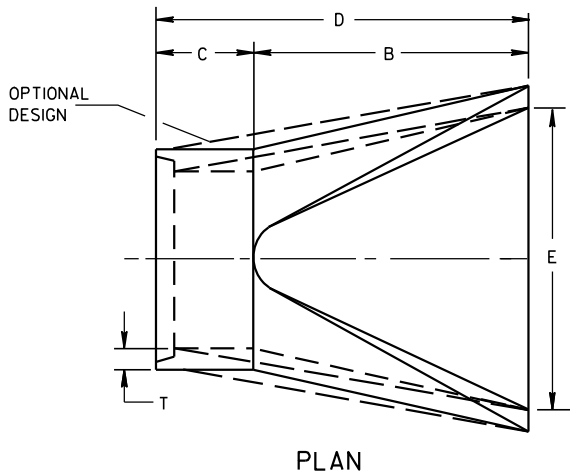
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



METAL ENDWALLS

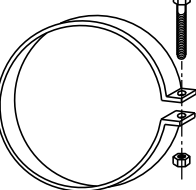
REINFORCED CONCRETE APRON ENDWALLS								
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE
	T	A	B	C	D	E	G	
12	2	4	24	48 ⁷ / ₈	72 ⁷ / ₈	24	2	3 to 1
15	2 ¹ / ₄	6	27	46	73	30	2 ¹ / ₄	3 to 1
18	2 ² / ₂	9	27	46	73	36	2 ² / ₂	3 to 1
21	2 ³ / ₄	9	36	37 ¹ / ₂	73 ¹ / ₂	42	2 ³ / ₄	3 to 1
24	3	9 ¹ / ₂	43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

* MINIMUM
** MAXIMUM

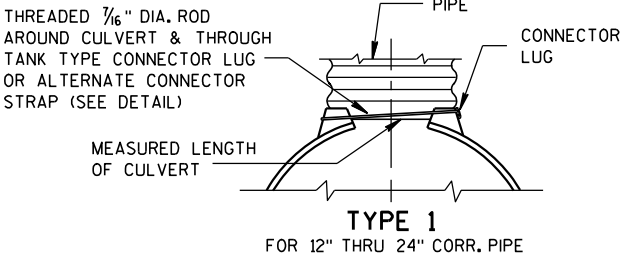


CONCRETE ENDWALLS

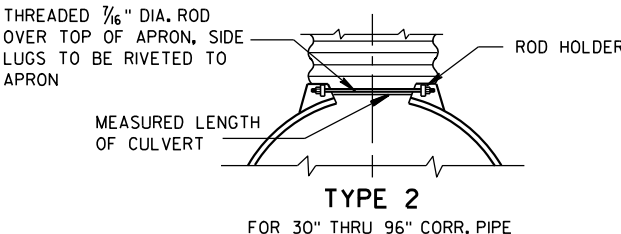
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



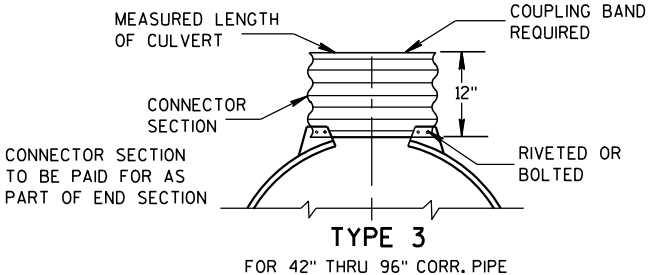
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



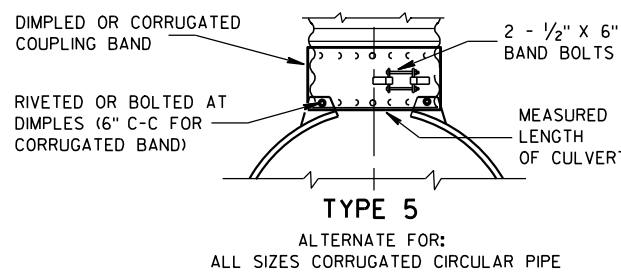
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

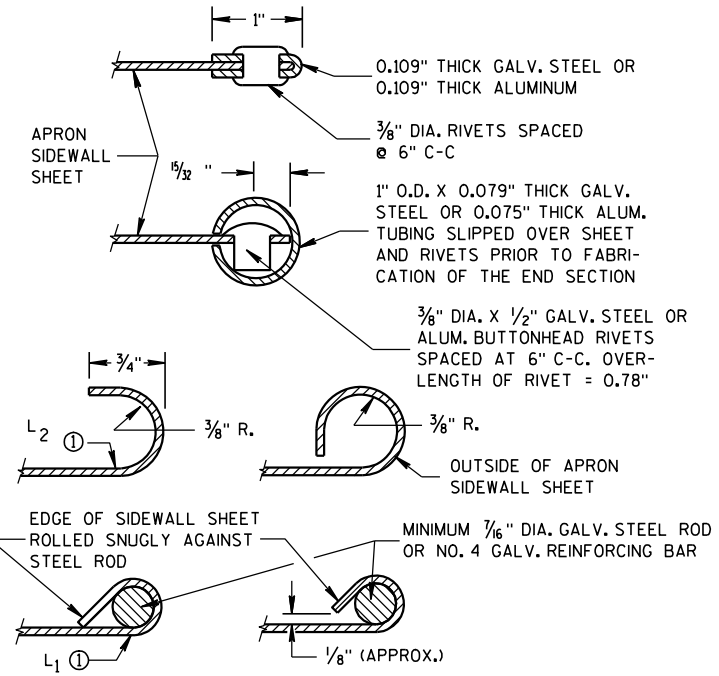
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

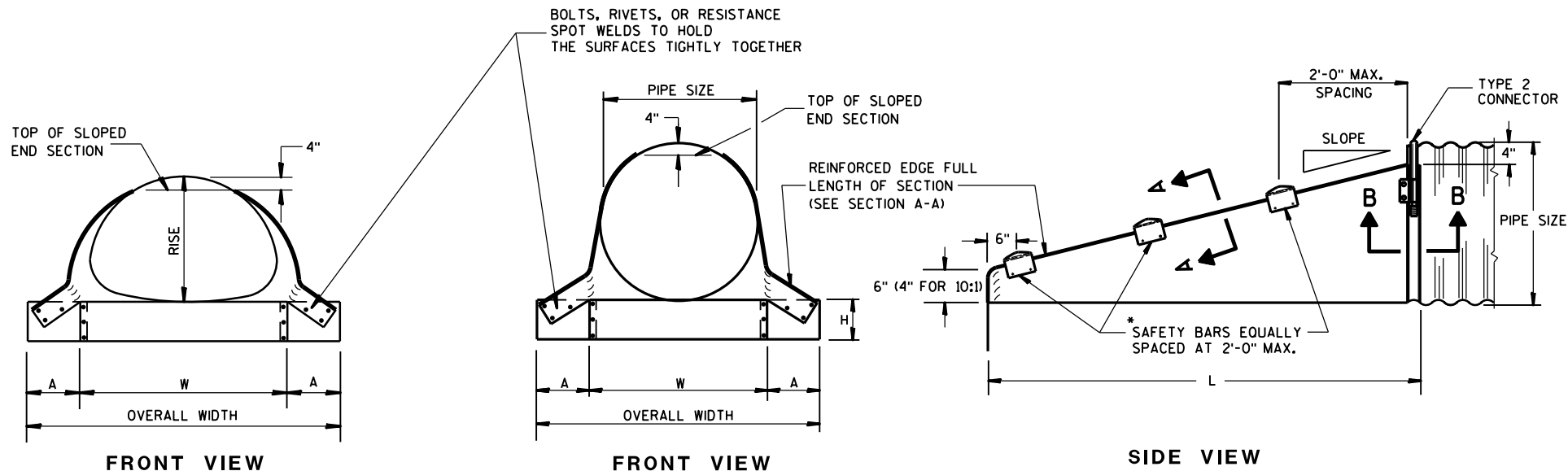
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94
DATE
/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA



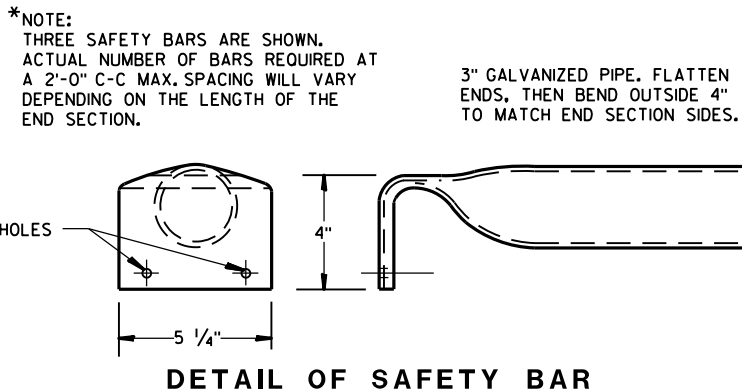
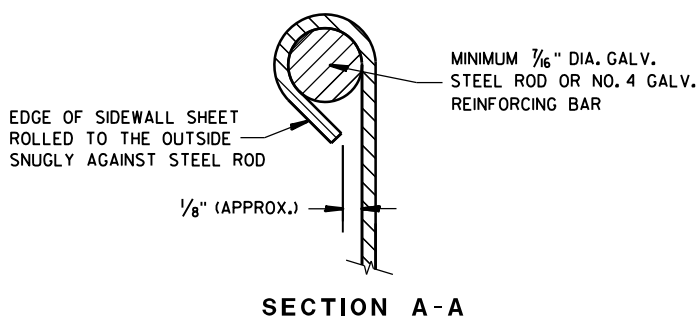
GENERAL NOTES

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.

SLOPED END SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS, SECTION 521 FOR STEEL APRON ENDWALLS.

SAFETY BARS SHALL BE FABRICATED FROM GALVANIZED STEEL PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL.

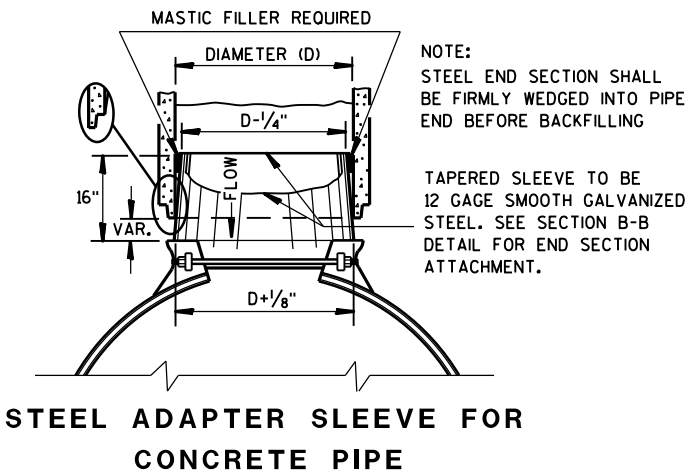
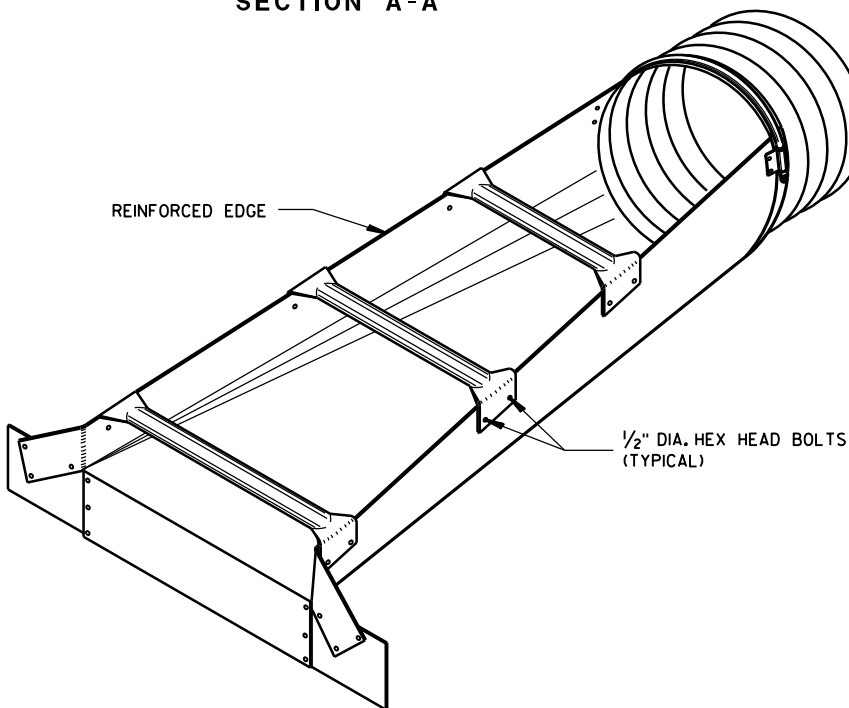
STEEL APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS											
PIPE DIA. (IN.)	MIN. THICK. (Inches)	DIMENSIONS (Inches)				L DIMENSIONS					
		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	.064	8	6	21	37	4:1	20	6:1	30	10:1	70
18	.064	8	6	24	40	4:1	32	6:1	48	10:1	100
21	.064	8	6	27	43	4:1	44	6:1	66	10:1	130
24	.064	8	6	30	46	4:1	56	6:1	84	10:1	160
30	.109	12	9	36	60	4:1	80	6:1	120	10:1	220
36	.109	12	9	42	66	4:1	104	6:1	156	10:1	280
42	.109	16	12	48	80	4:1	128	6:1	192	—	—
48	.109	16	12	54	86	4:1	152	6:1	228	—	—
54	.109	16	12	60	92	4:1	176	6:1	264	—	—
60	.109	16	12	66	98	4:1	200	6:1	300	—	—



STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED SIDE DRAINS													
EQUIV. DIA. (Inches)	(Inches)		MIN. THICK. (Inches) ①	DIMENSIONS (Inches)				L DIMENSIONS					
	SPAN	RISE		A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
15	17	13	.064 *	7	6	30	44	4:1	19	6:1	30	10:1 ②	70
18	21	15	.064 *	8	6	27	43	4:1	20	6:1	30	10:1	70
21	24	18	.064 *	8	6	30	46	4:1	32	6:1	48	10:1	100
24	28	20	.064 *	8	6	34	50	4:1	40	6:1	60	10:1	120
30	35	24	.079 *	12	9	41	65	4:1	56	6:1	84	10:1	160
36	42	29	.109 *	12	9	48	72	4:1	76	6:1	114	10:1	210
42	49	33	.109	16	12	55	87	4:1	92	6:1	138	—	—
48	57	38	.109	16	12	63	95	4:1	112	6:1	168	—	—
54	64	43	.109	16	12	70	102	4:1	132	6:1	198	—	—

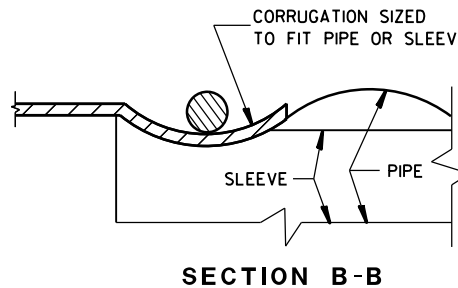
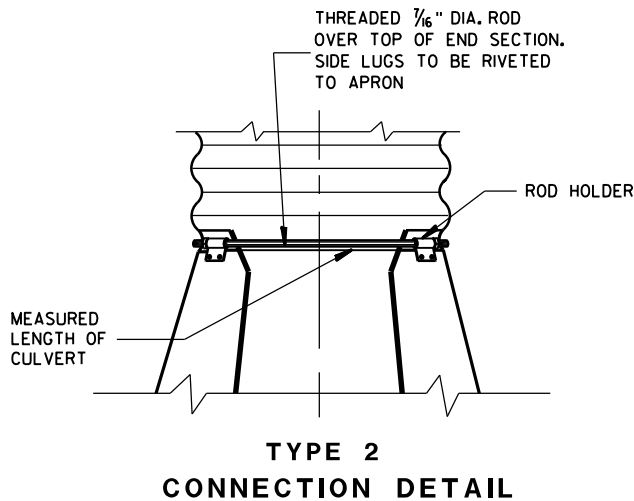
① * MINIMUM THICKNESS OF ALL 10:1 SLOPED SIDE DRAINS IS 0.109".

② ACTUAL SLOPE GREATER THAN 10:1.



NOTE: STEEL END SECTION SHALL BE FIRMLY WEDGED INTO PIPE END BEFORE BACKFILLING

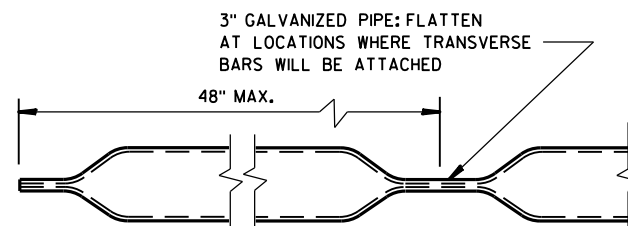
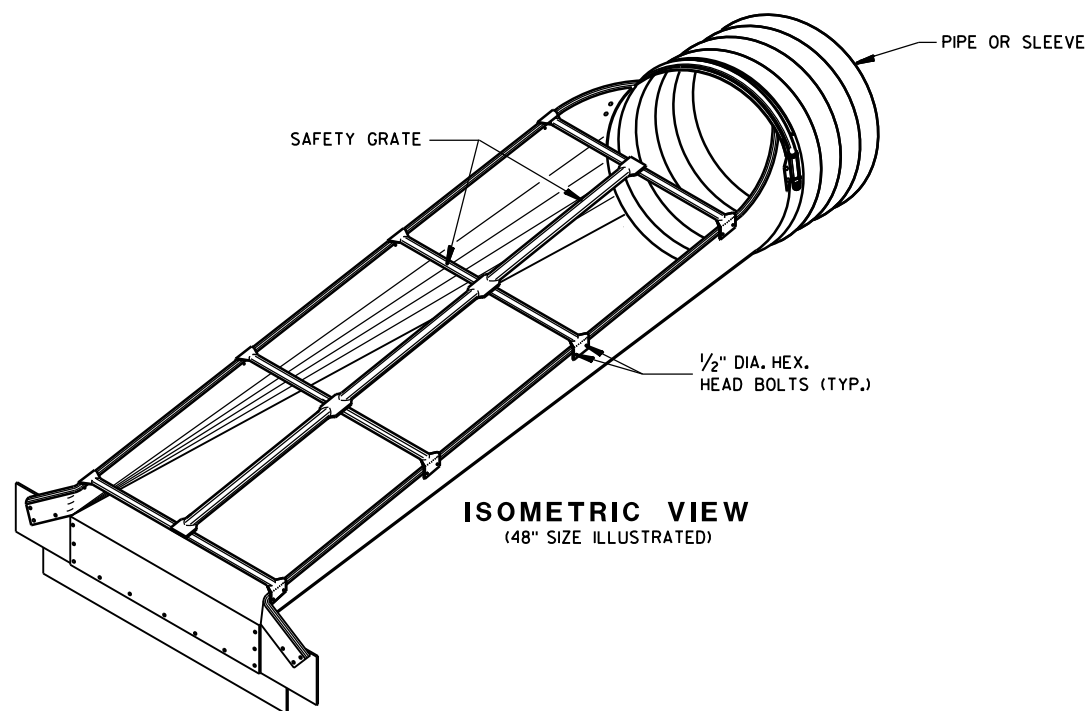
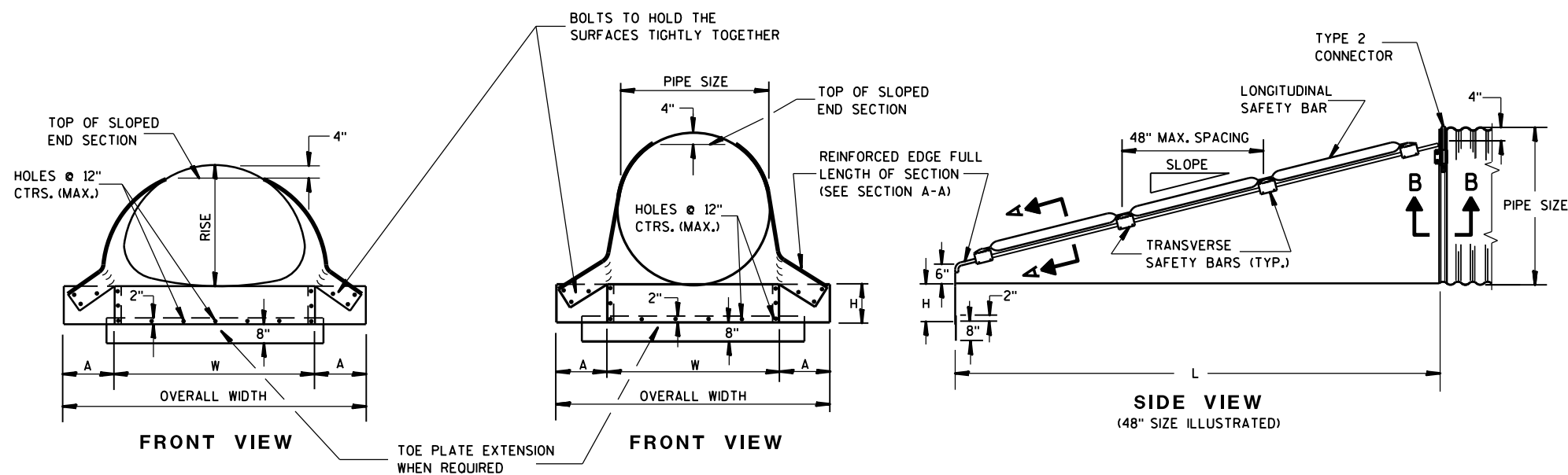
TAPERED SLEEVE TO BE 12 GAGE SMOOTH GALVANIZED STEEL. SEE SECTION B-B DETAIL FOR END SECTION ATTACHMENT.



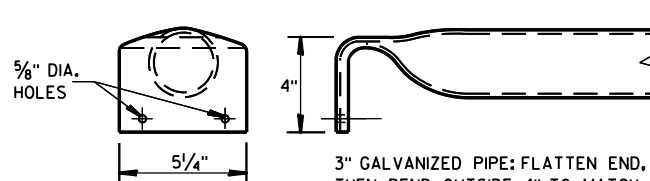
STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED SIDE DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9/14/2012
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



LONGITUDINAL SAFETY BAR



TRANSVERSE SAFETY BAR

GENERAL NOTES

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

SAFETY GRATES SHALL BE FABRICATED FROM 3-INCH DIAMETER GALVANIZED PIPE MEETING THE REQUIREMENTS OF ASTM A-53, GRADE B, SCHEDULE 40 OR APPROVED EQUAL. THE LONGITUDINAL BAR SHALL BE WELDED TO THE TRANSVERSE BARS WHERE THE BARS CROSS. THE NUMBER OF TRANSVERSE BARS REQUIRED WILL VARY DEPENDING ON THE LENGTH OF THE END SECTION.

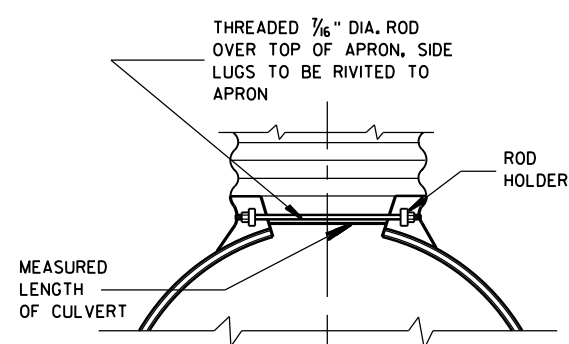
SLOPED STEEL ENDWALLS LOCATED AT THE ENDS OF CONCRETE CULVERT PIPE SHALL BE FURNISHED WITH STEEL ADAPTER SLEEVES.

STEEL APRON ENDWALLS FOR CULVERT PIPE CROSS DRAINS

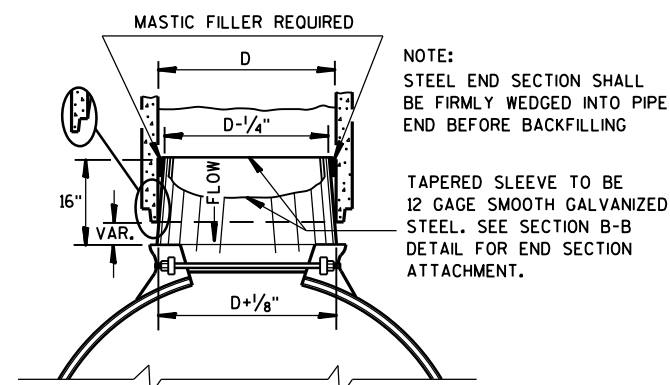
PIPE DIA. (IN.)	MIN. THICK. IN.	GAGE	DIMENSIONS (inches)				L DIMENSIONS			
			A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
36	.109	12	12	9	42	66	4:1	104	6:1	156
42	.109	12	16	12	48	80	4:1	128	6:1	192
48	.109	12	16	12	54	86	4:1	152	6:1	228
54	.109	12	16	12	60	92	4:1	176	6:1	264
60	.109	12	16	12	66	98	4:1	200	6:1	300

STEEL APRON ENDWALLS FOR PIPE ARCH SLOPED CROSS DRAINS

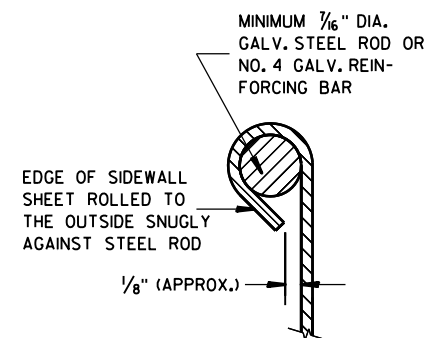
EQUIV. DIA. (IN.)	INCHES		MIN. THICK. IN.	GAGE	DIMENSIONS (inches)				L DIMENSIONS			
	SPAN	RISE			A	H	W	OVERALL WIDTH	SLOPE	LENGTH INCHES	SLOPE	LENGTH INCHES
30	35	24	.079	14	12	9	41	65	4:1	56	6:1	84
36	42	29	.109	12	12	9	48	72	4:1	76	6:1	114
42	49	33	.109	12	16	12	55	87	4:1	92	6:1	138
48	57	38	.109	12	16	12	63	95	4:1	112	6:1	168
54	64	43	.109	12	16	12	70	102	4:1	132	6:1	198
60	71	47	.109	12	16	12	77	109	4:1	148	6:1	222



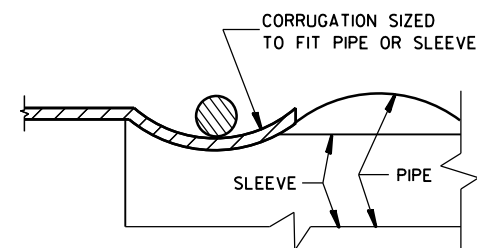
TYPE 2 CONNECTOR DETAIL



STEEL ADAPTER SLEEVE FOR CONCRETE PIPE



SECTION A-A



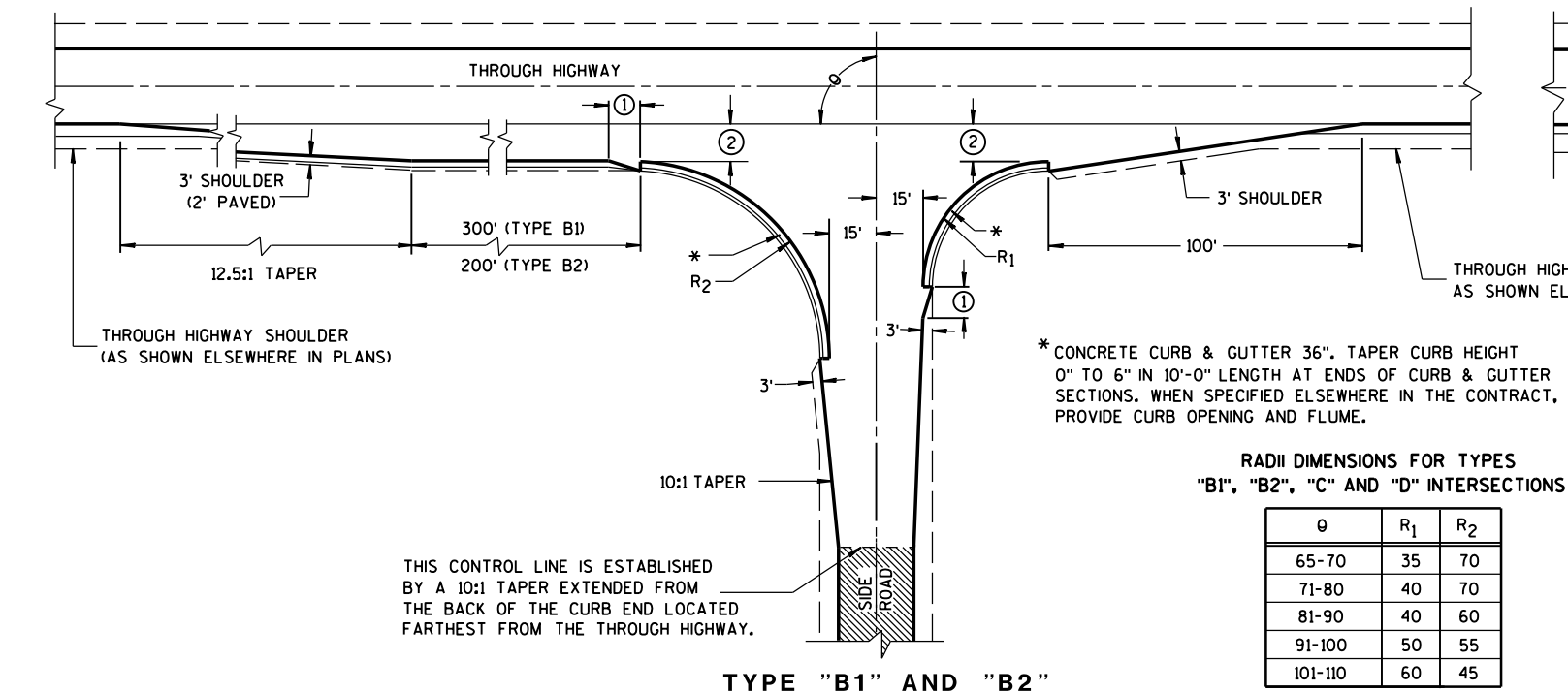
SECTION B-B

STEEL APRON ENDWALLS FOR CULVERT PIPE AND PIPE ARCH SLOPED CROSS DRAINS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



RADII DIMENSIONS FOR TYPES "B1", "B2", "C" AND "D" INTERSECTIONS

θ	R ₁	R ₂
65-70	35	70
71-80	40	70
81-90	40	60
91-100	50	55
101-110	60	45

GENERAL NOTES

DESIGNS MAY BE USED INTERCHANGEABLY IN COMBINATION OR SEPARATELY FOR ANY ONE COMPLETE INTERSECTION DEPENDING UPON INTERSECTION ANGLE AND SURFACING OF EACH APPROACH ROADWAY.

SIDE ROAD SURFACING NOTE

WHEN THE SIDE ROAD IS NOT PRESENTLY PAVED, PAVEMENT SHALL BE PLACED TO THE LIMITS SHOWN UNLESS OTHERWISE PROVIDED IN THE CONTRACT. WHERE THE CONSTRUCTION LIMITS ARE BEYOND THE PAVING LIMITS, CRUSHED AGGREGATE SURFACING SHALL BE PLACED BETWEEN THE PAVING LIMITS AND CONSTRUCTION LIMITS.

WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

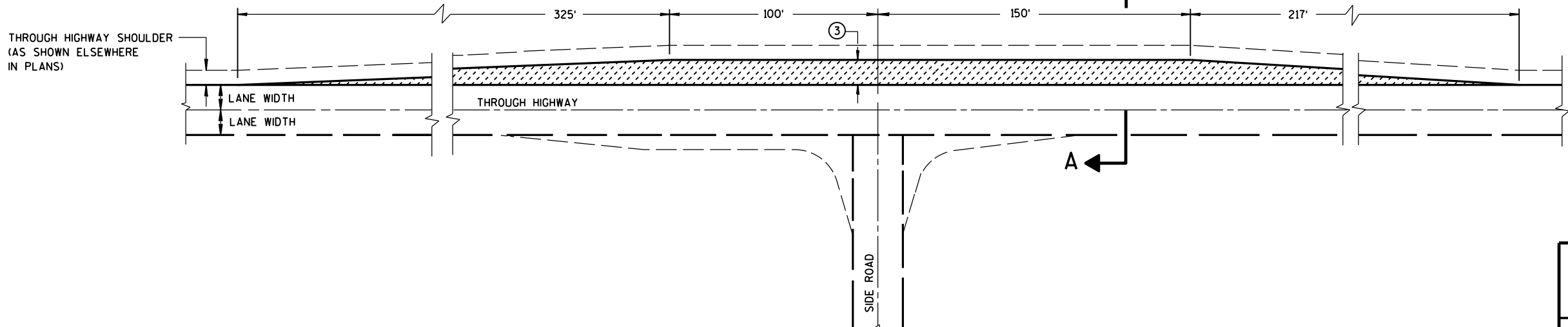
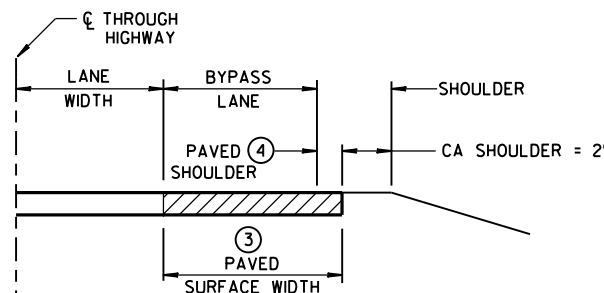
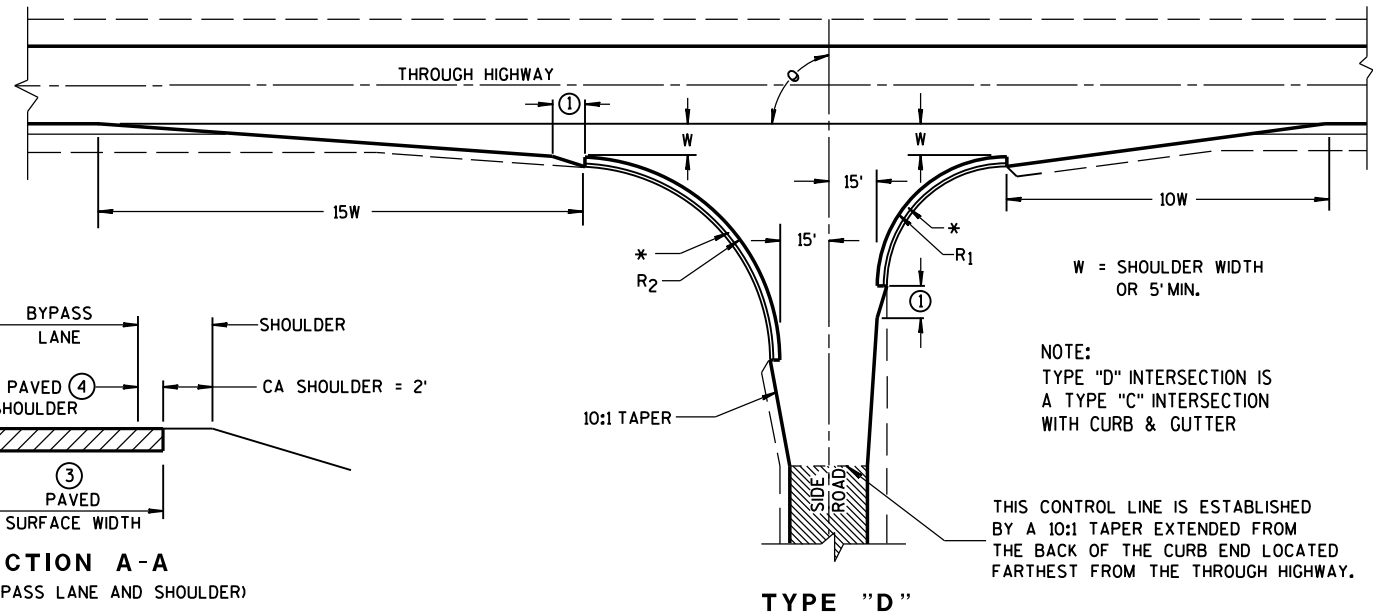
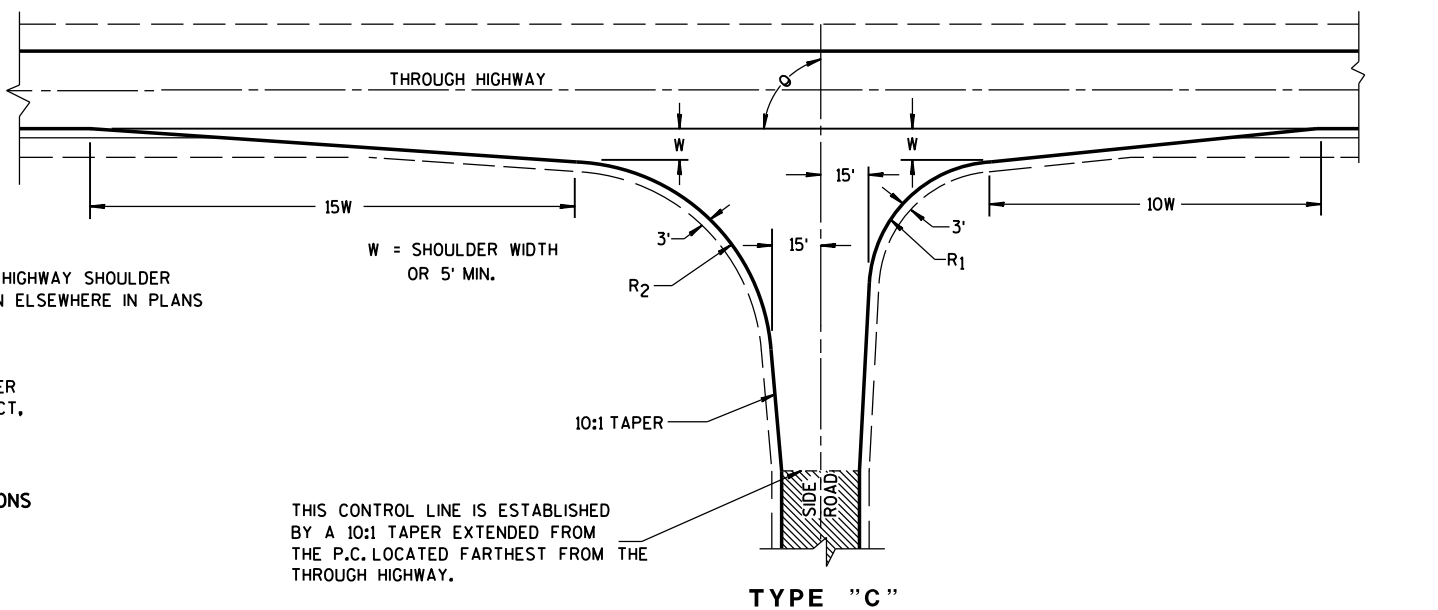
WHEN THE SIDE ROAD IS THE CONSTRUCTION PROJECT, THE INTERSECTION SURFACING SHALL BE THE SAME AS FOR THE PROJECT.

EXISTING PAVED SURFACE

BYPASS LANE

- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

**10-FT MAY BE USED ON TYPE B2 ON RESURFACING PROJECTS IF SPECIFIED IN THE CONTRACT.
- ③ BYPASS LANE PAVED SURFACE WIDTH OUTSIDE OF TRAVEL LANE
-ASPHALT = 12-FT PLUS PAVED SHOULDER WIDTH.
-PC CPNCRETE = 13-FT PLUS PAVED SHOULDER WIDTH.
- ④ BYPASS LANE PAVED SHOULDER WIDTH = THE GREATER OF 1-FT OR THE PAVED SHOULDER WIDTH OF THE THROUGH HIGHWAY.

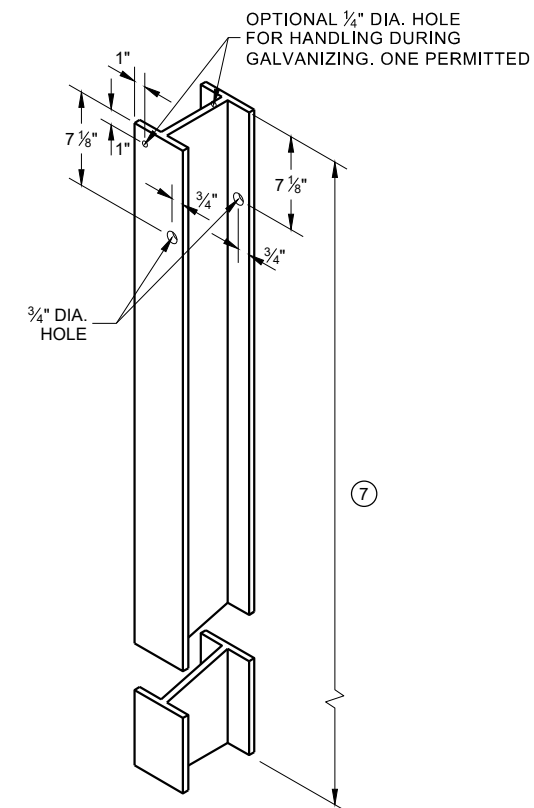
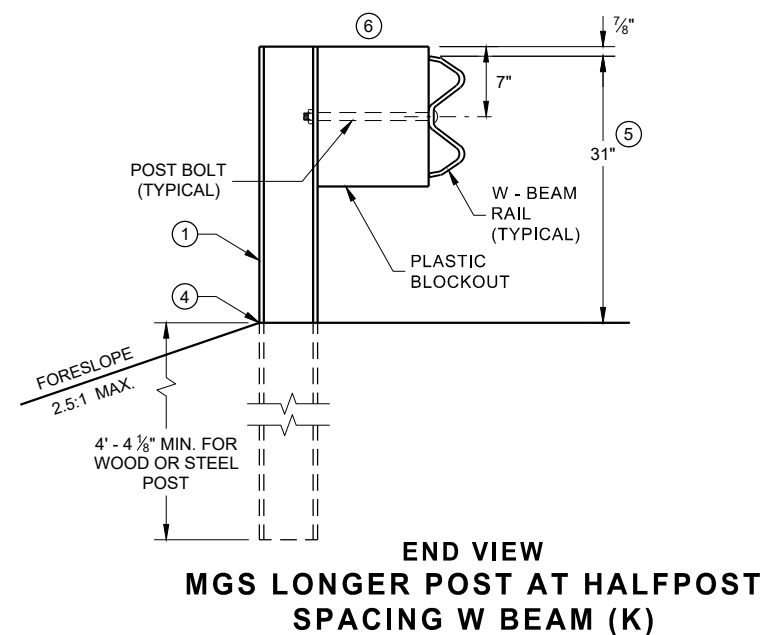
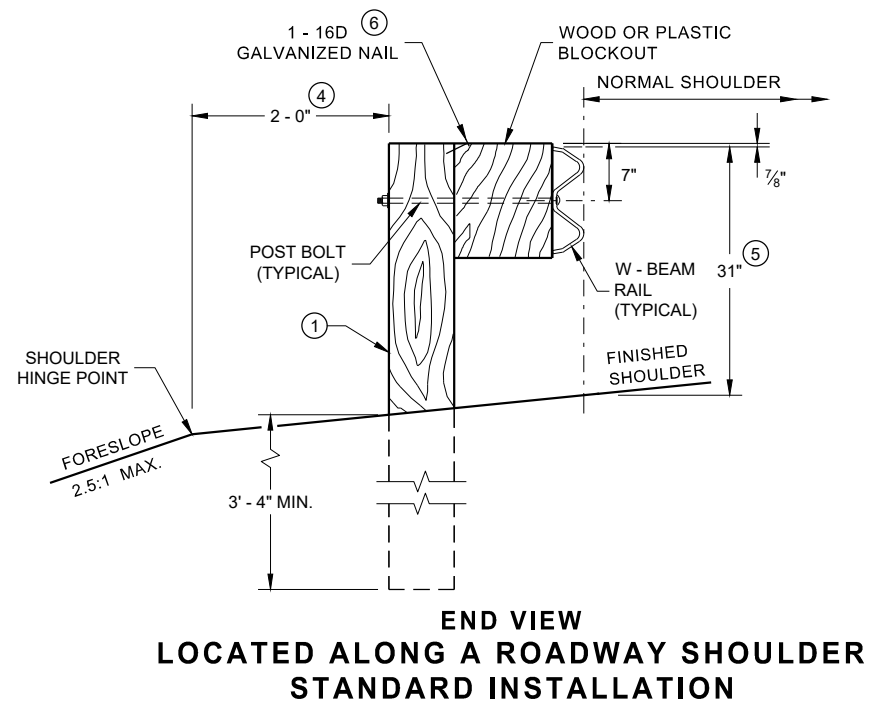
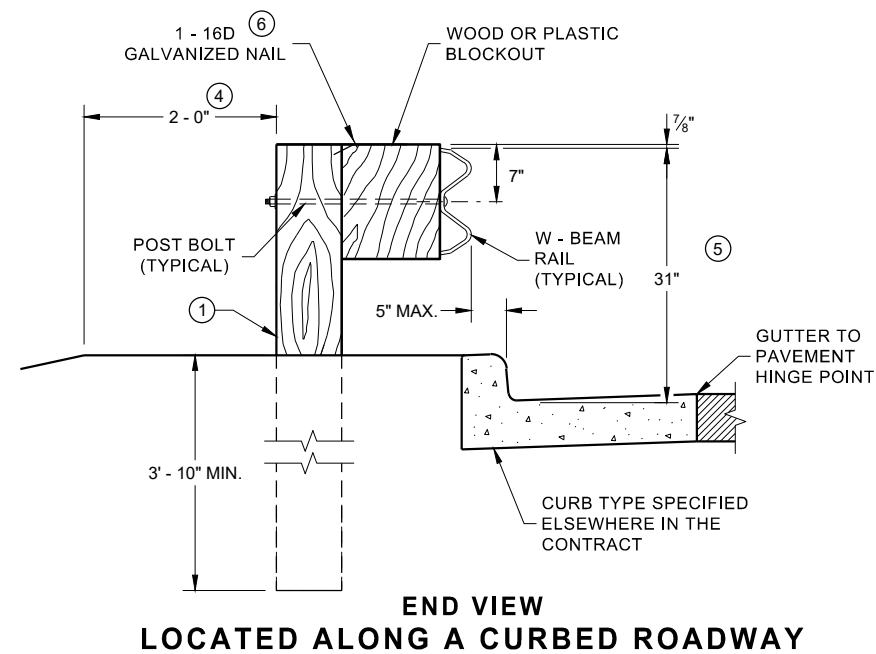
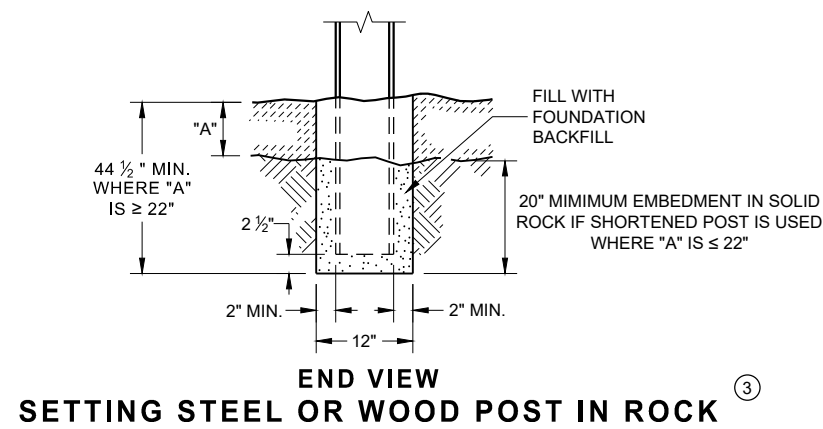


TEE INTERSECTION BYPASS LANE DETAIL

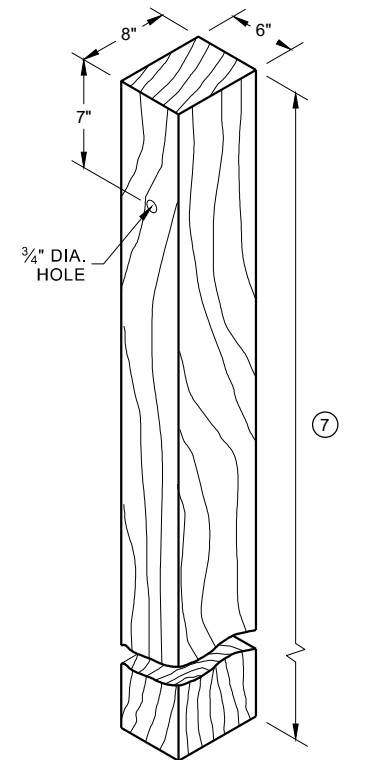
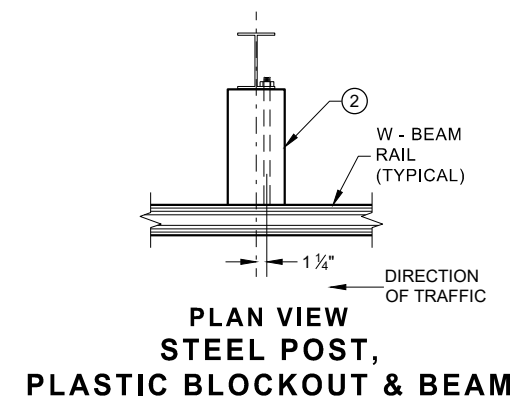
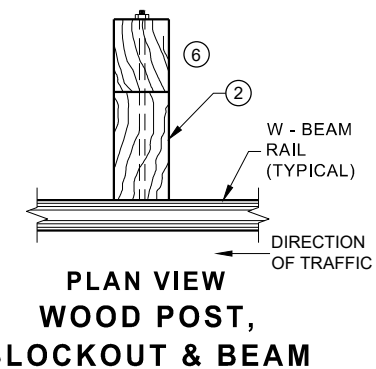
AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

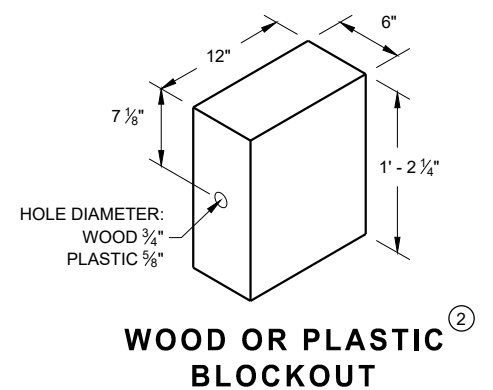
- ① WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
- ② USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. 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 +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".

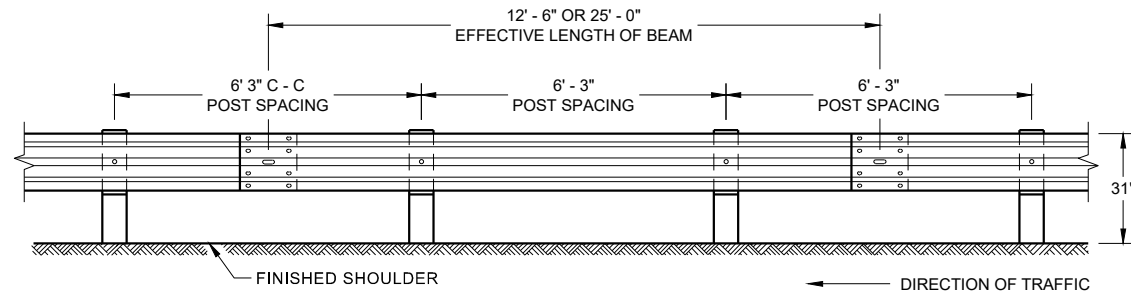


**STEEL POST & HOLE
PUNCHING DETAIL
(W 6 X 9) ①**

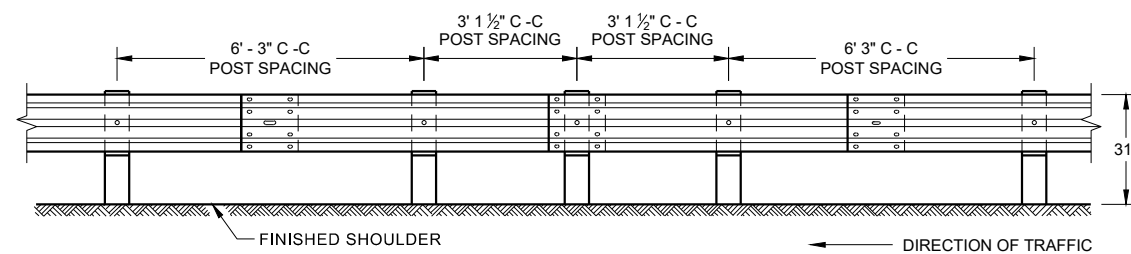


WOOD POST (6" X 8") NOMINAL ⁽¹⁾

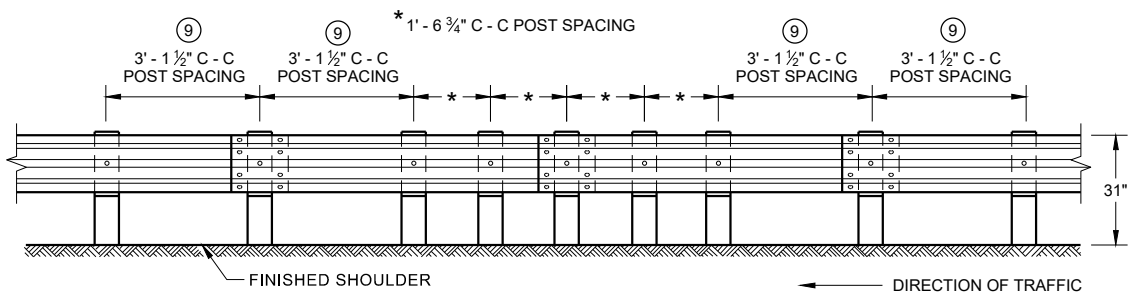




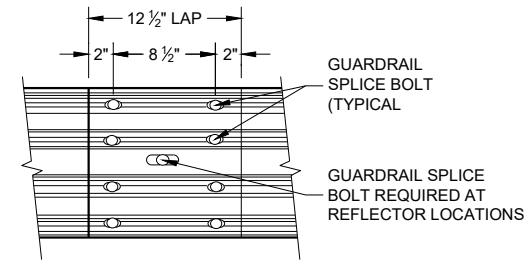
**FRONT VIEW
POST SPACING STANDARD INSTALLATION**



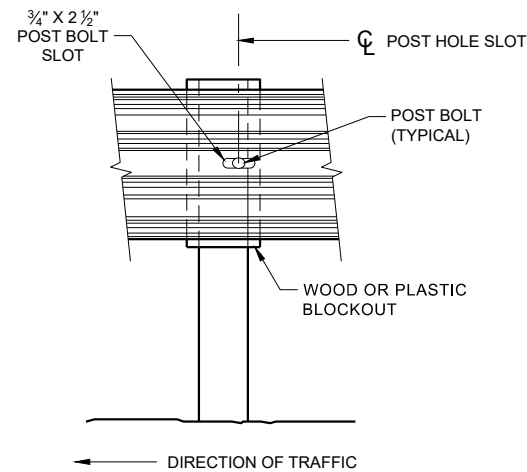
**FRONT VIEW
HALF POST SPACING (HS) AND
HALF POST SPACING WITH LONGER POSTS (K)**



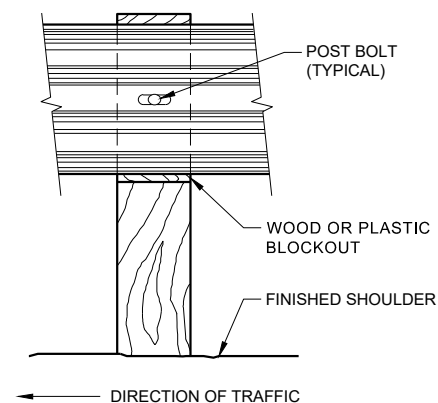
**FRONT VIEW
QUARTER POST SPACING (QS)**



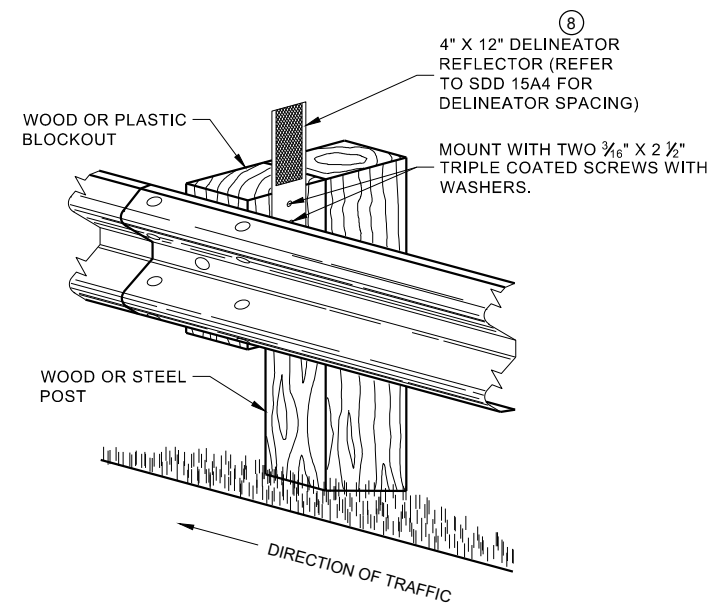
**FRONT VIEW
MID-SPAN BEAM SPLICE**



FRONT VIEW AT STEEL POST



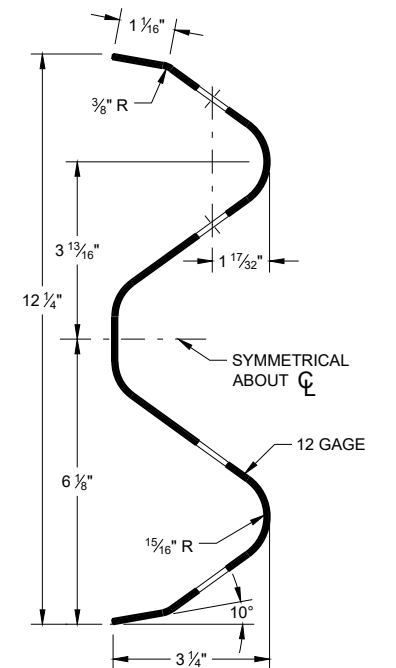
FRONT VIEW AT WOOD POST



**ONE SIDED REFLECTOR DETAIL
AND TYPICAL INSTALLATION**

GENERAL NOTES

- ⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.
 - ⑨ 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 3/4" 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 3/4" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.



SECTION THRU W-BEAM RAIL

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NOTE:

-

POST BOLT TABLE

Technical drawing of a circular part with concentric circles. The outermost circle has a diameter dimension of $1 \frac{5}{16}''$. Inside it is a smaller circle with a diameter dimension of $\frac{5}{8}''$. The distance between the center of the outer circle and the center of the inner circle is dimensioned as $\frac{15}{16}''$. The inner circle contains a crosshair indicating its center.

ALTERNATE BOLT HEAD



1" X $\frac{1}{16}$ " DEEP
RECESS BOTH SIDES

$\frac{5}{8}$ " - 11 MODIFIED
HEAVY HEX NUT

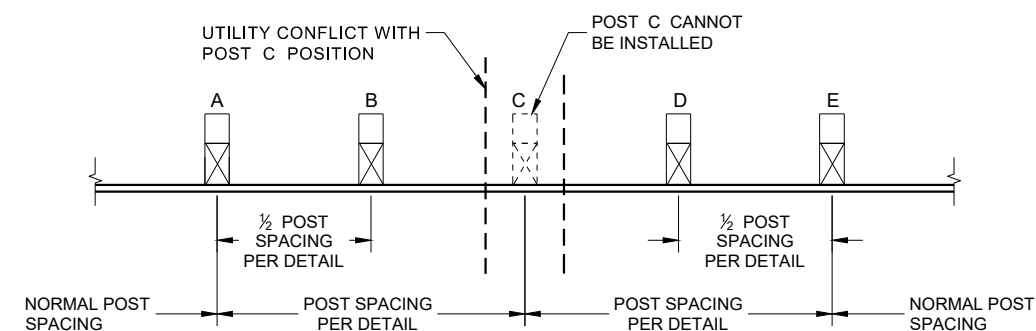
$\frac{1}{16}$ "

1 $\frac{5}{16}$ "

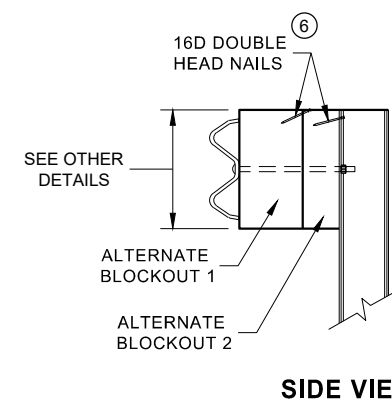
POST BOLT, SPLICE BOLT AND RECESS NUT

A diagram showing a vehicle (represented by a rectangle) approaching an obstacle (represented by a rectangle with diagonal lines) on a road. The road has a dashed center line. An arrow points to the right, labeled "DIRECTION OF TRAFFIC".

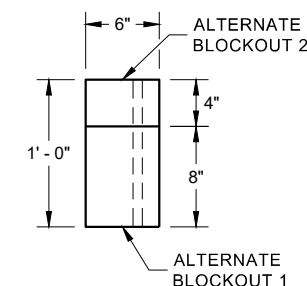
PLAN VIEW
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW

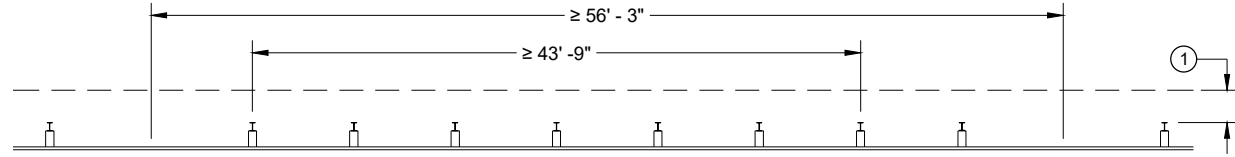


PLAN VIEW

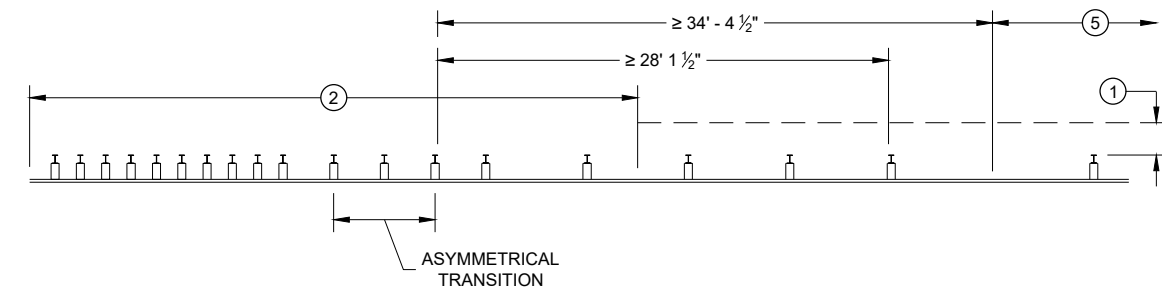
ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

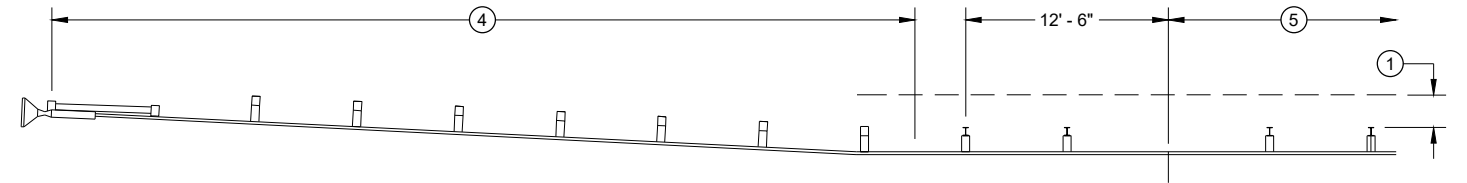
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



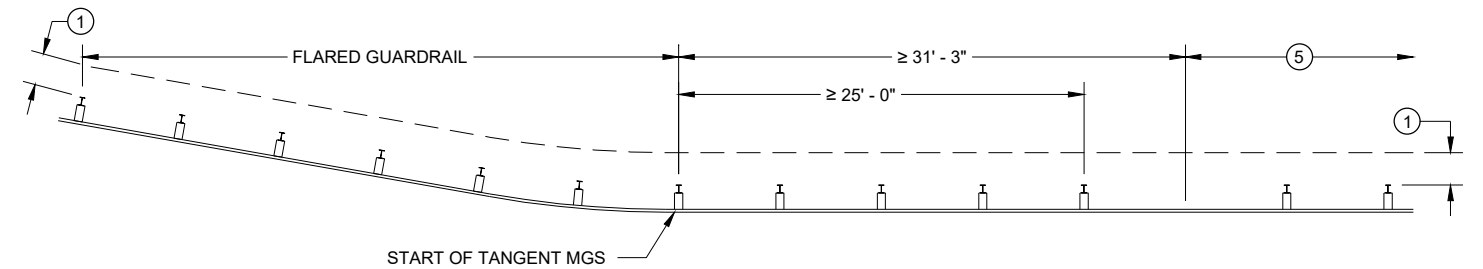
MISSING POST IN NORMAL BEAM GUARD RUN



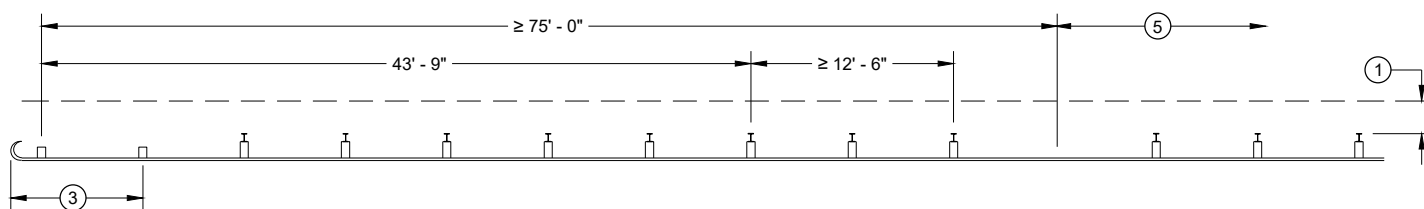
MISSING POST NEAR APPROACH THRIE BEAM TRANSITION



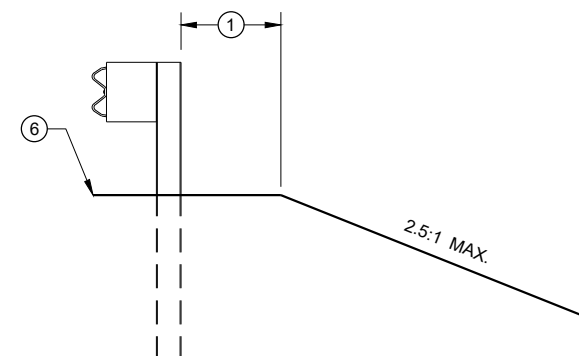
MISSING POST IN NORMAL BEAM GUARD RUN NEAR EAT



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR FLARED BEAM GUARD



MISSING POST IN NORMAL BEAM GUARD RUN
NEAR TYPE 2 TERMINAL



CROSS SECTION VIEW

- (1) MINIMUM OF 2 FEET OF GRADING BEHIND POST.
- (2) SEE SDD 14B45 FOR MORE DETAILS.
- (3) SEE SDD 14B47 FOR MORE DETAILS.
- (4) SEE SDD 14B44 FOR MORE DETAILS.
- (5) SEE MISSING POST IN NORMAL BEAM GUARD RUN FOR DISTANCE TO NEXT MISSING POST AND AREA FOR WELL DRAINED, COMPACTED SOILS.
- (6) SEE PLAN FOR SHOULDER DESIGN.

**MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

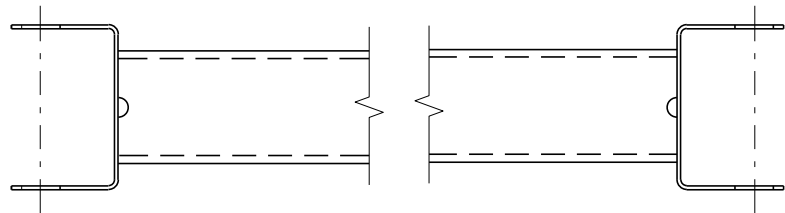
- (A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL) AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.
- (B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED
- (C) DIFFERENT MANUFACTURERS REQUIRE DIFFERENT PERFORATED W - BEAM RAIL END PANELS. 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.

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.

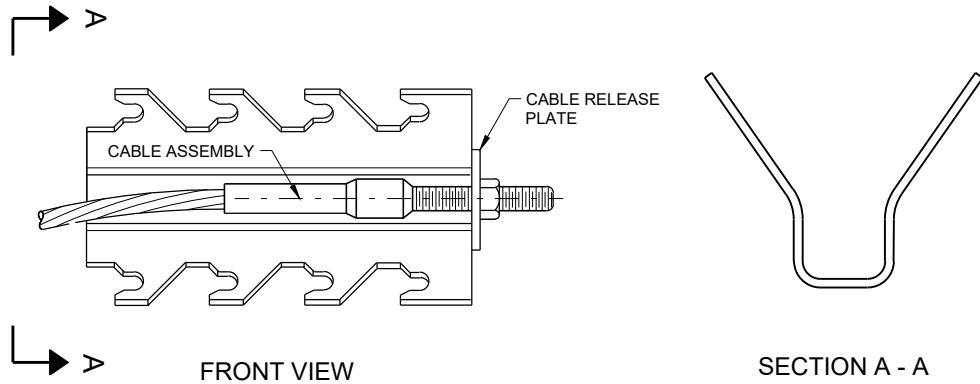


STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

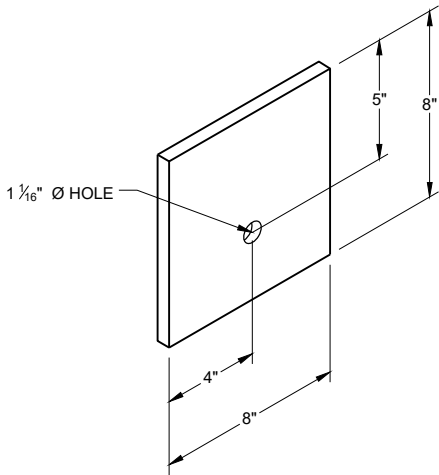


GENERIC GROUND STRUT⁹ ^E

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



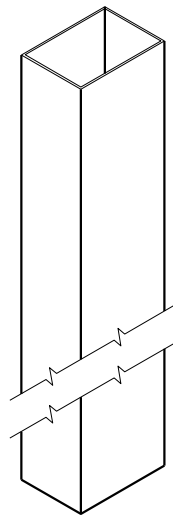
GENERIC ANCHOR CABLE BOX⁹ ^E



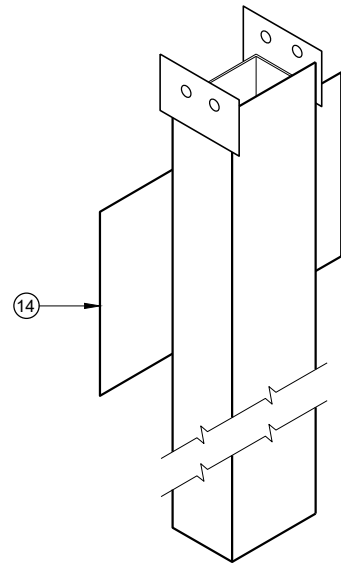
BEARING PLATE⁶ ^E

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

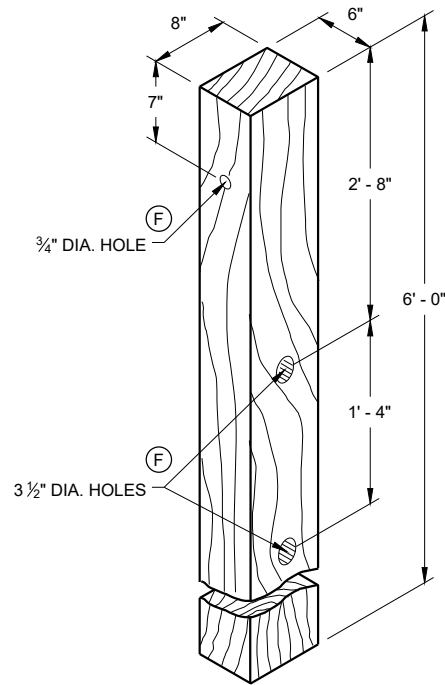
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



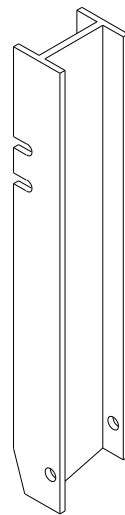
UPPER POST NO. 1 ⁽¹⁾ (E)



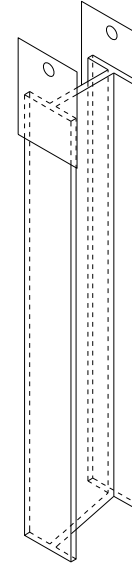
LOWER POST NO. 1 ⁽²⁾ (E)



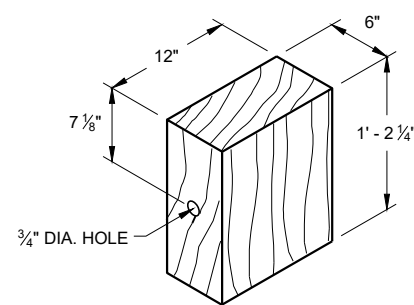
WOOD CRT POST ⁽³⁾ (E)
POSTS NUMBER 3-9



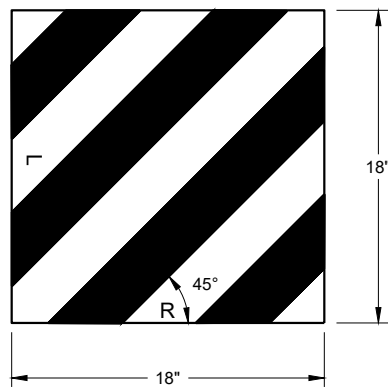
UPPER POST NO. 2 ⁽¹⁵⁾ (E)



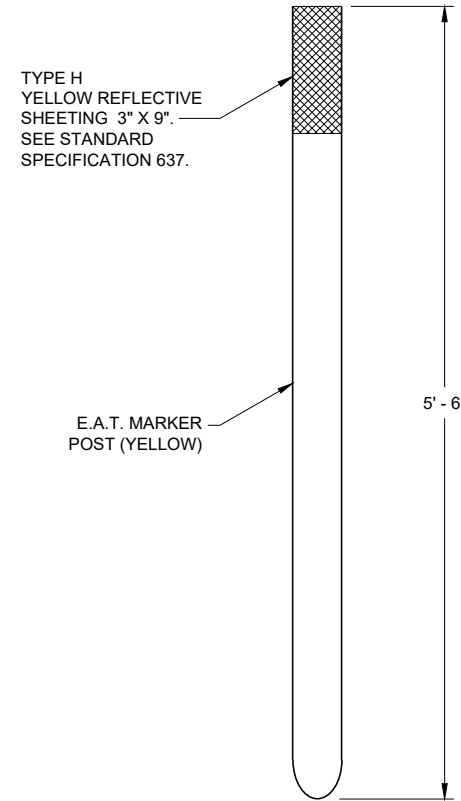
LOWER POST NO. 2 ⁽¹⁶⁾ (E)



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



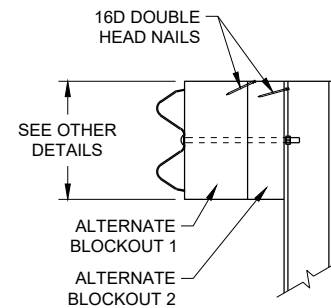
REFLECTIVE SHEETING DETAIL ^(E)



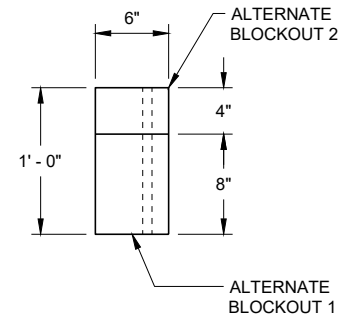
FRONT VIEW

SIDE VIEW

E.A.T. MARKER POST ⁽¹³⁾



SIDE VIEW



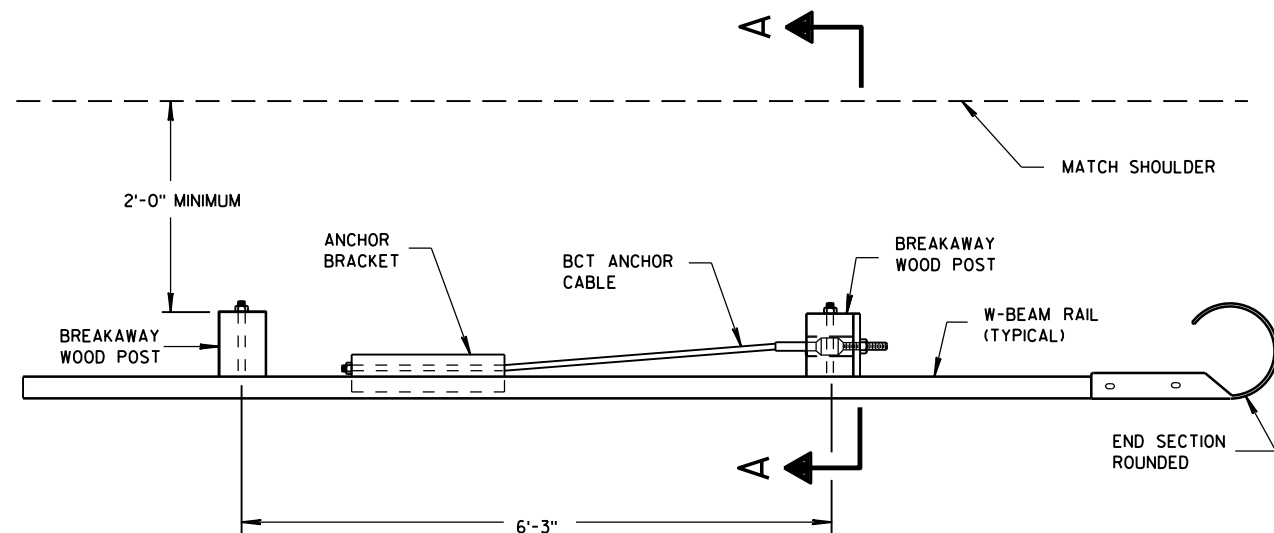
TOP VIEW

ALTERNATE WOOD
BLOCKOUT DETAIL

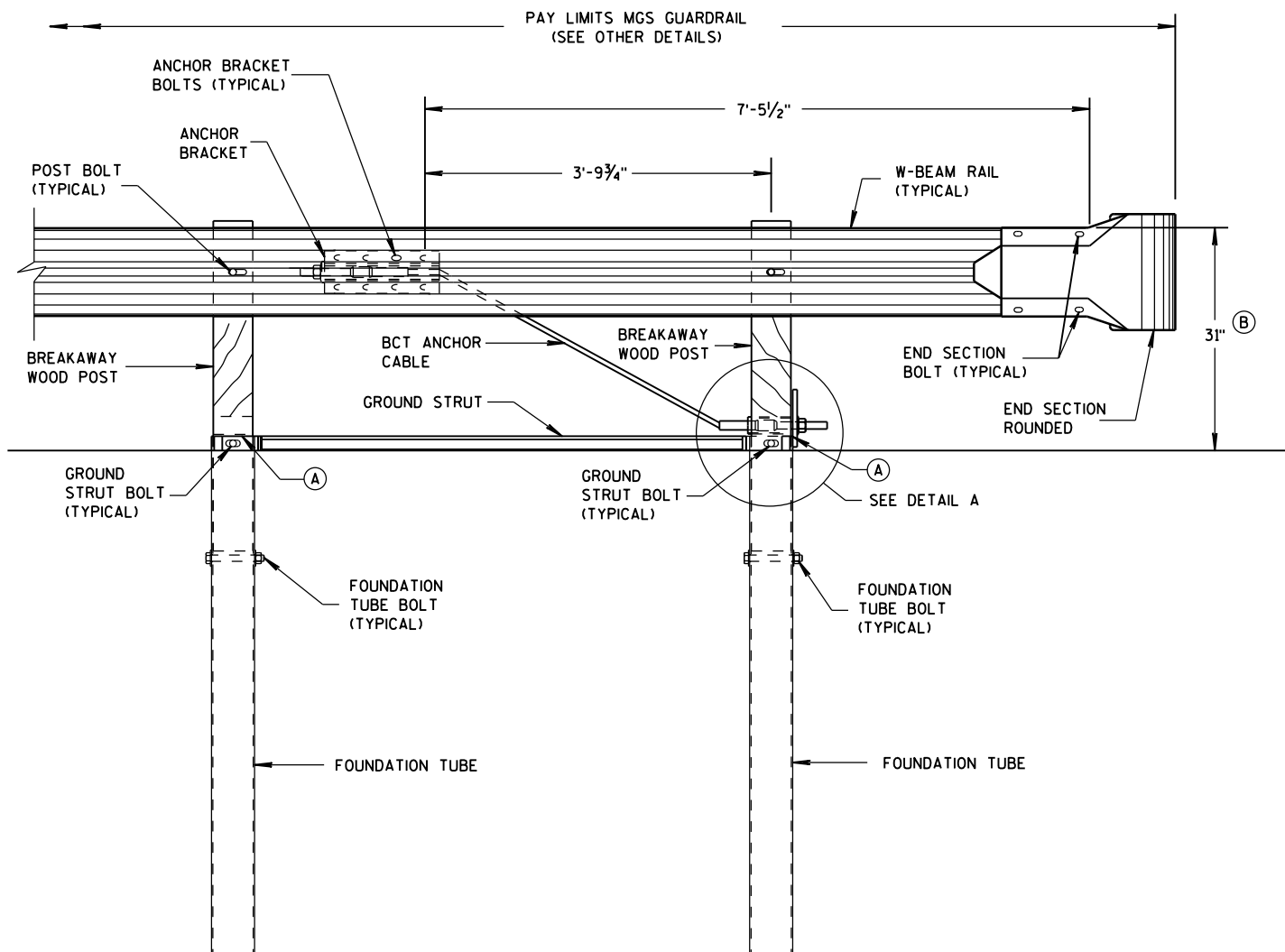
**MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

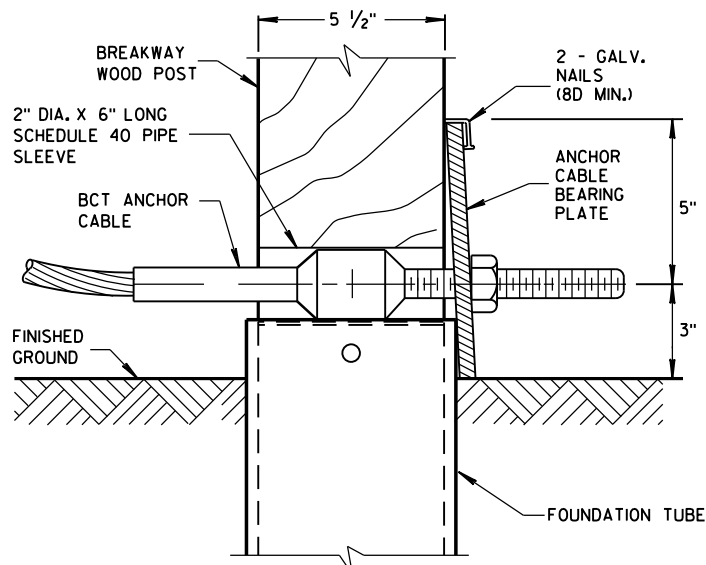


PLAN VIEW



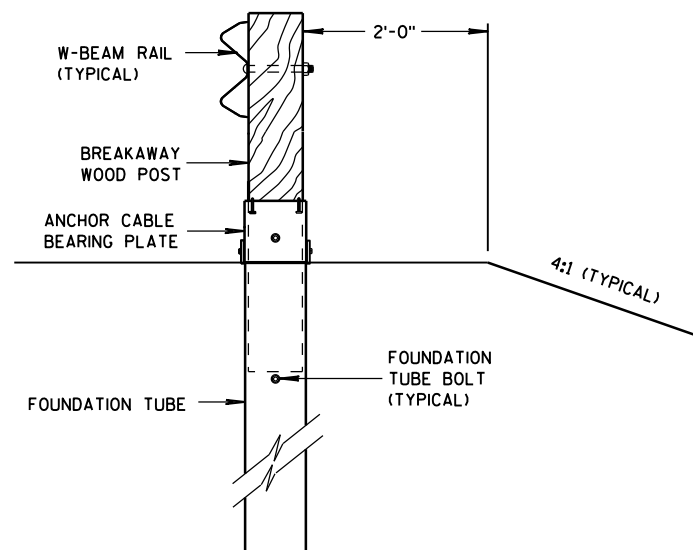
FRONT VIEW

END RAIL DETAIL



DETAIL A

POST NO. 1
GROUND STRUT NOT SHOWN FOR CLARITY.



SECTION A-A

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

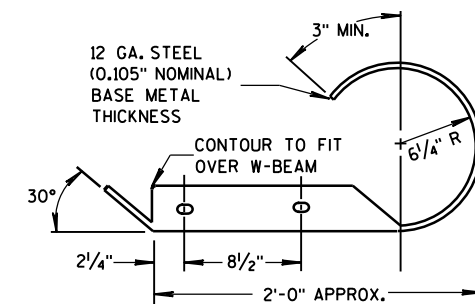
END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

FOUNDATION TUBE BOLTS ARE $\frac{7}{8}$ " DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 $\frac{7}{8}$ " DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

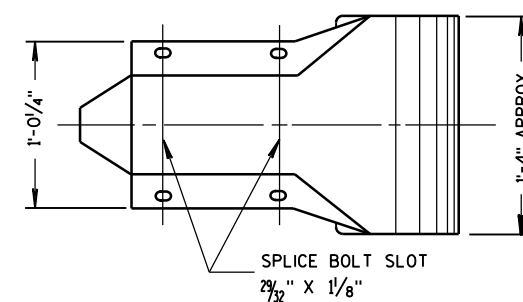
ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A $\frac{5}{8}$ " DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 $\frac{5}{8}$ " DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

- (A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.
- (B) FOR NEW CONSTRUCTION TOP OF RAIL IS $31" \pm 1"$.
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN $27\frac{3}{4}"$ TO $32" \pm 1"$.



PLAN VIEW

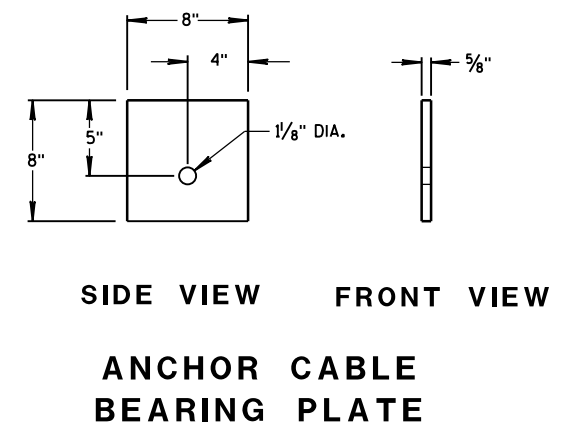
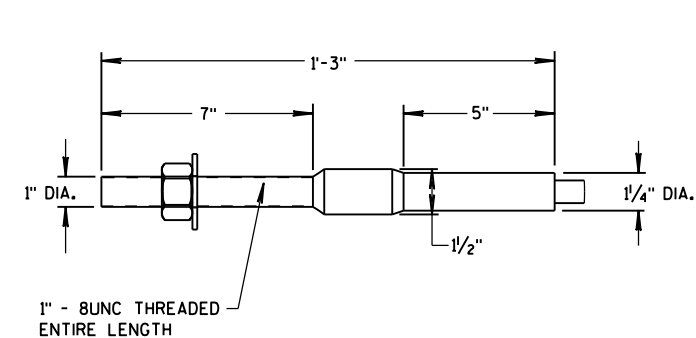
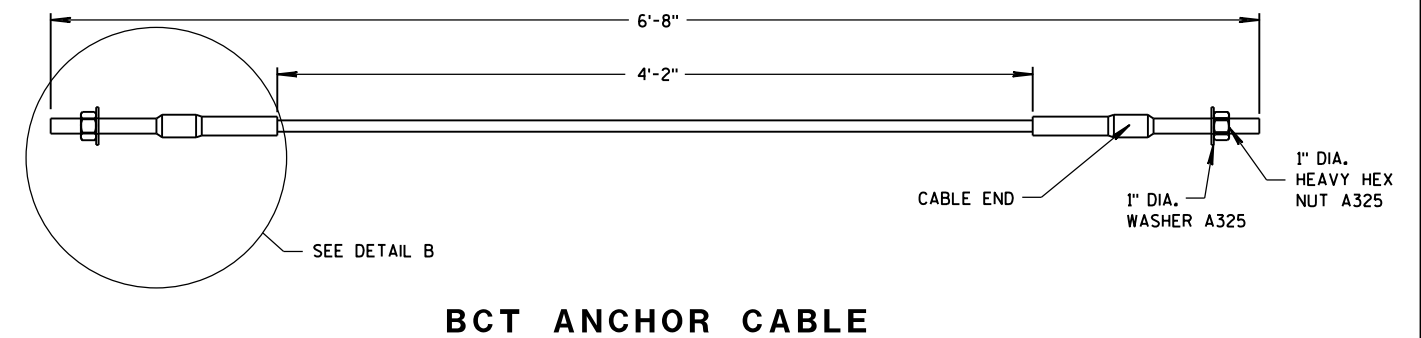
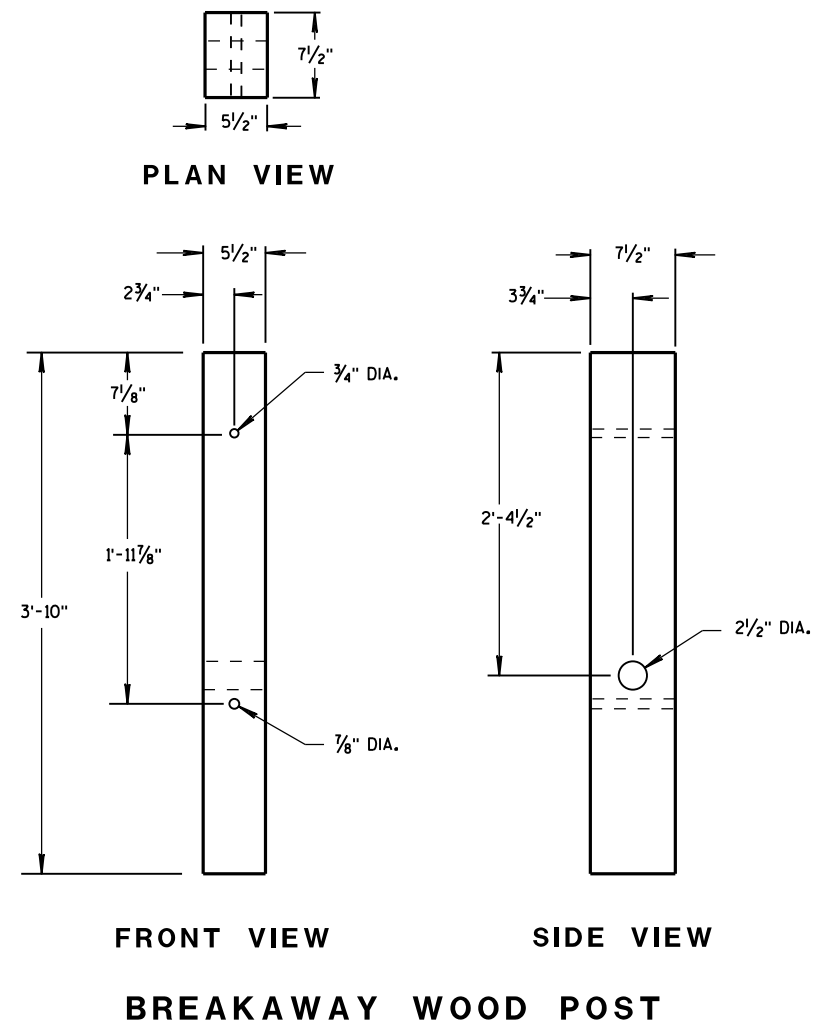
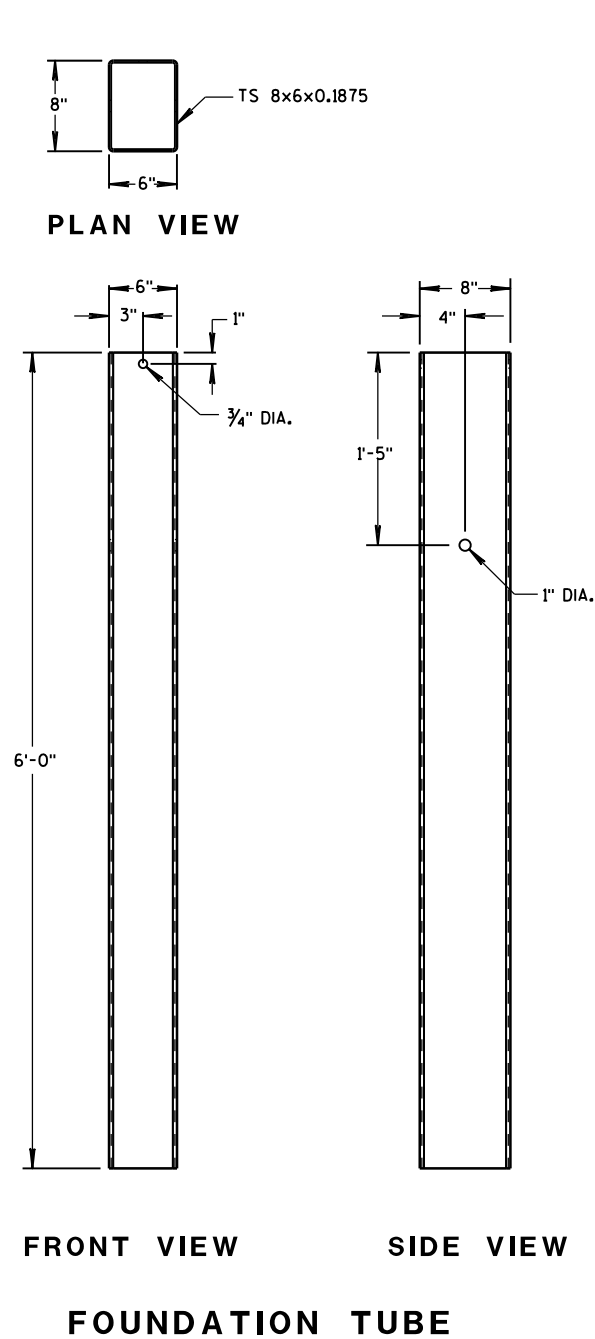


FRONT VIEW

W BEAM END
SECTION ROUNDED

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

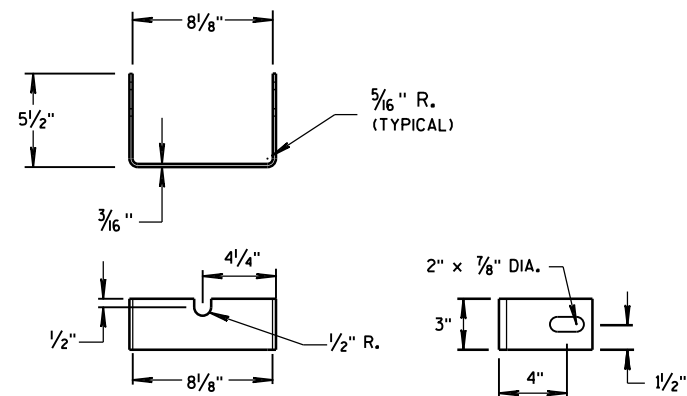


GENERAL NOTES

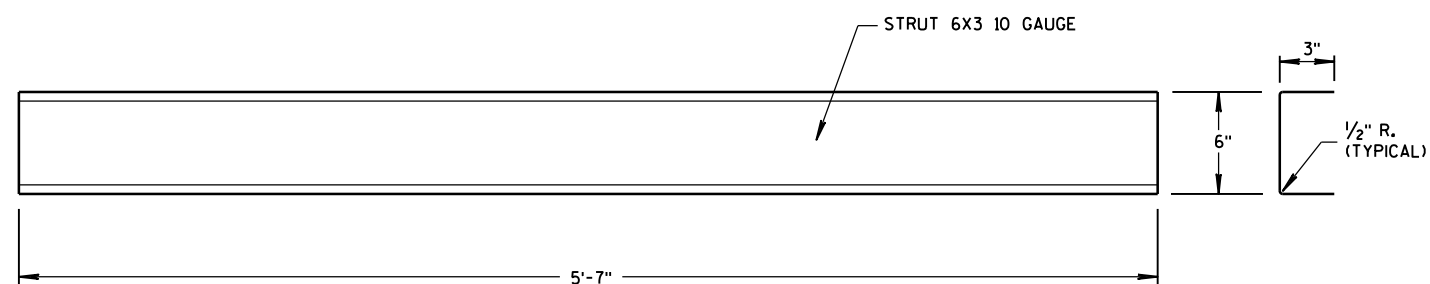
BCT ANCHOR CABLE IS A 3/4" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

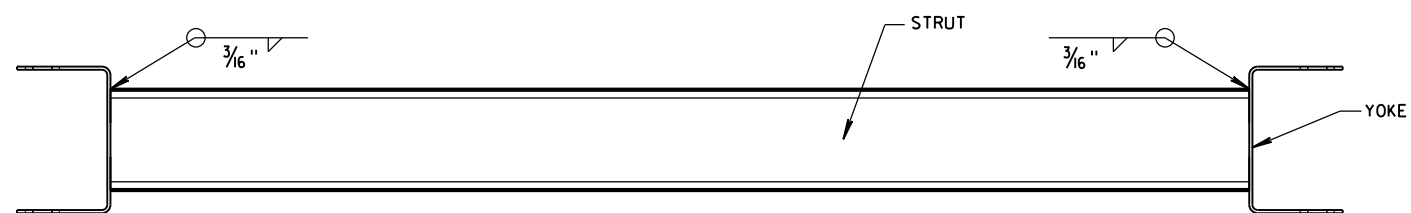
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



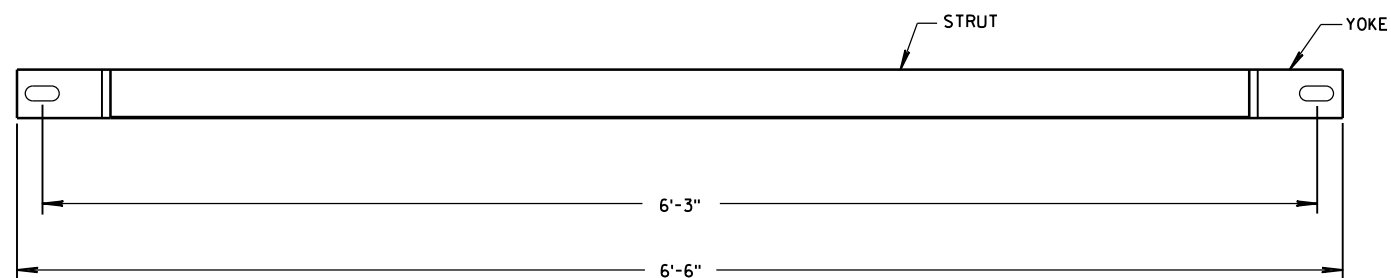
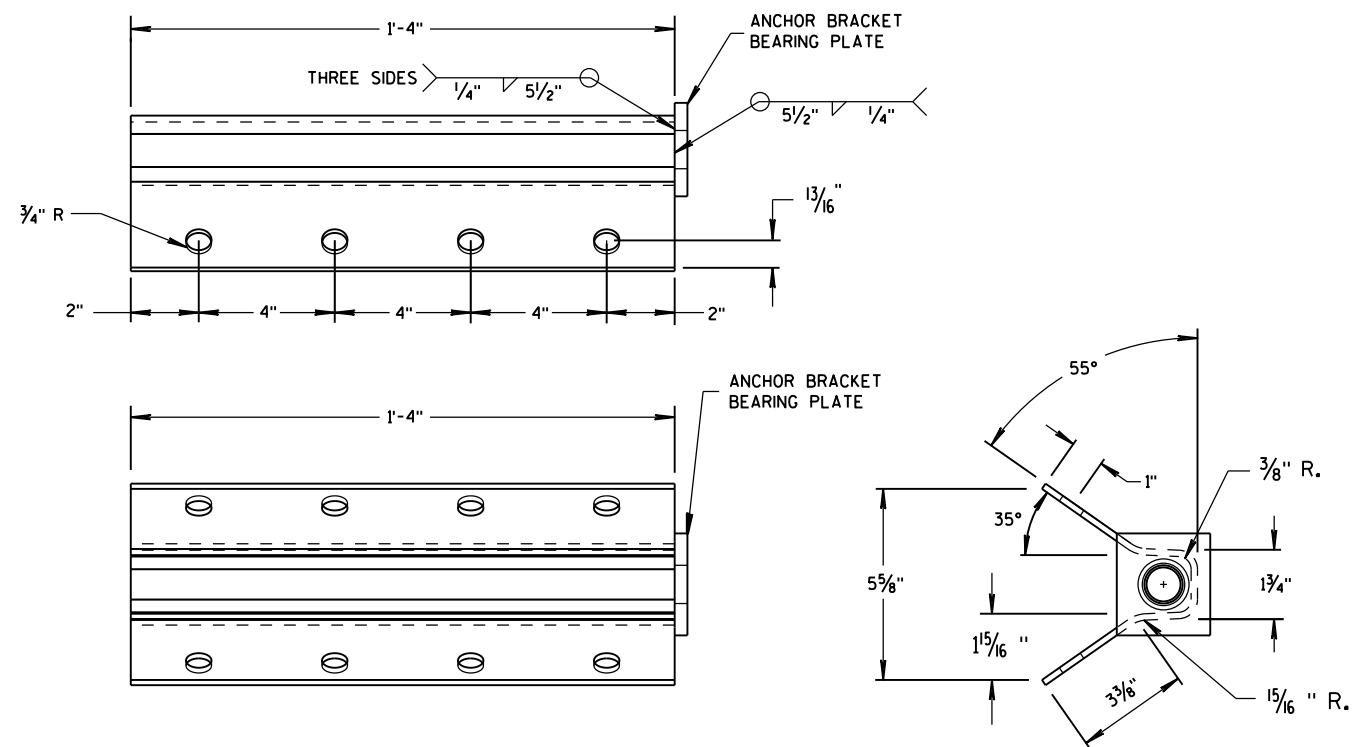
YOKE DETAIL



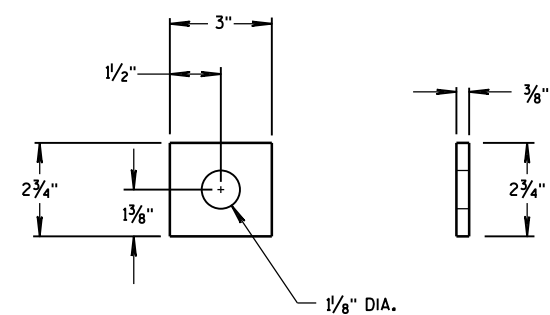
STRUT DETAIL



PLAN VIEW

FRONT VIEW
GROUND STRUT DETAIL

ANCHOR BRACKET

ANCHOR BRACKET
BEARING PLATEMIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINALSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

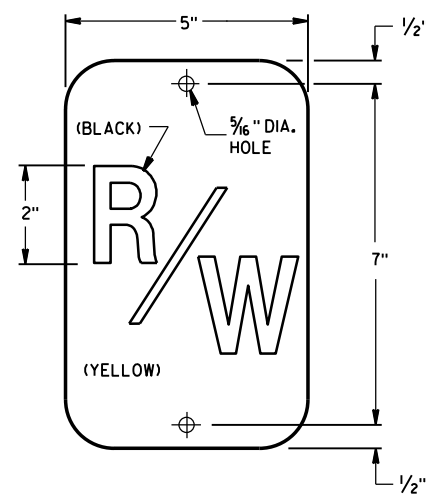
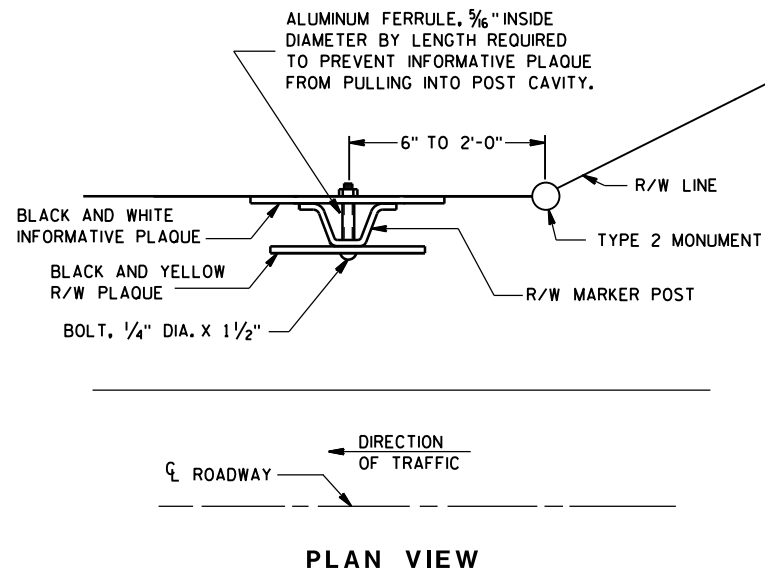
APPROVED

June 2014
DATE

FHWA

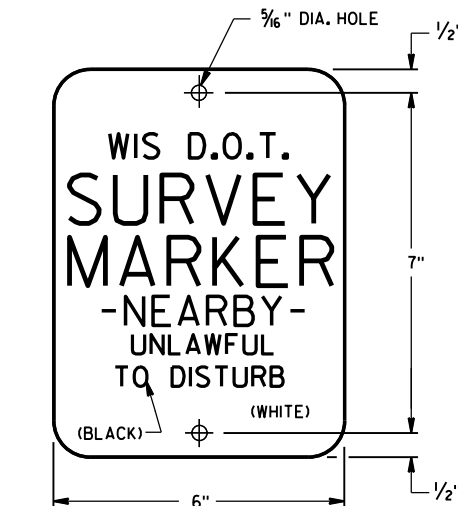
/S/ Jerry H. Zogg

ROADWAY STANDARDS DEVELOPMENT
ENGINEER



R/W PLAQUE

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



INFORMATIVE PLAQUE

GENERAL NOTES

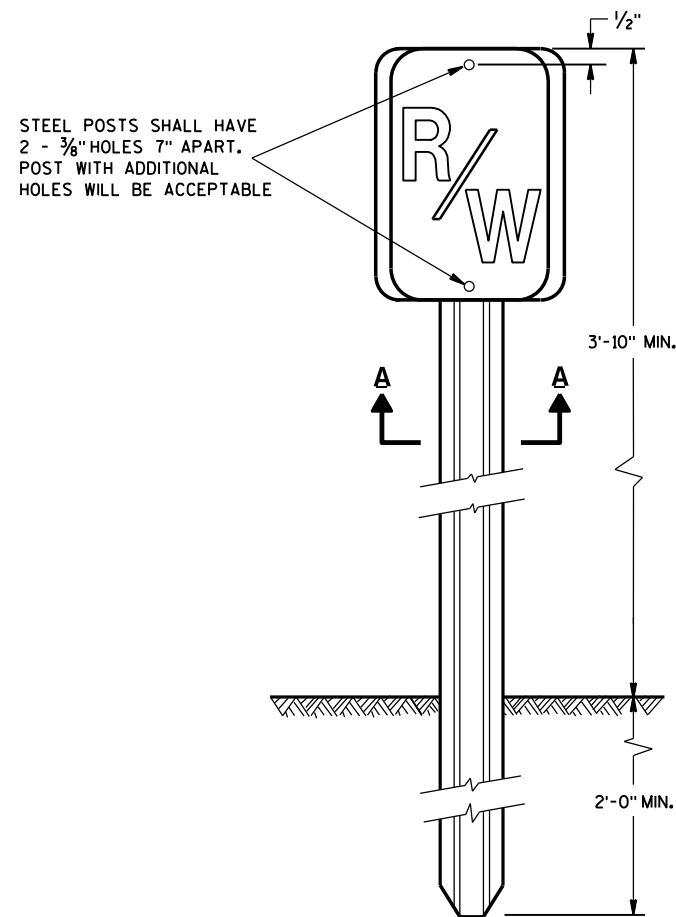
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

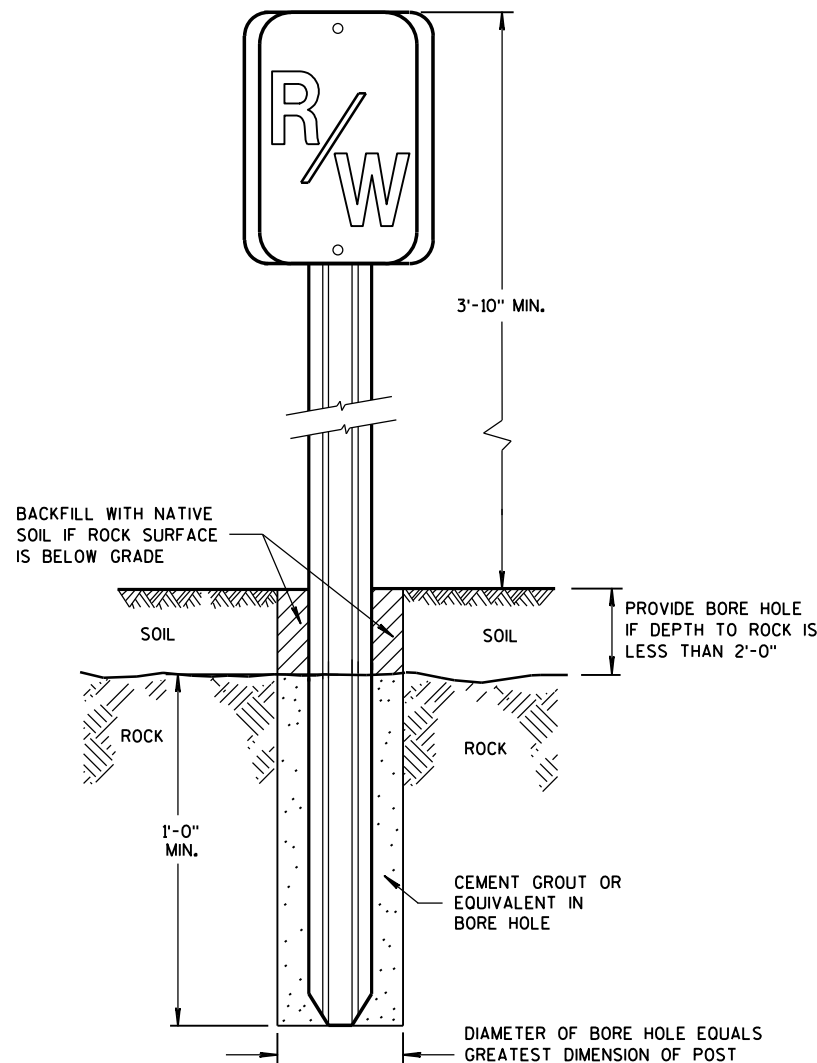
THE 'R/W' PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

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

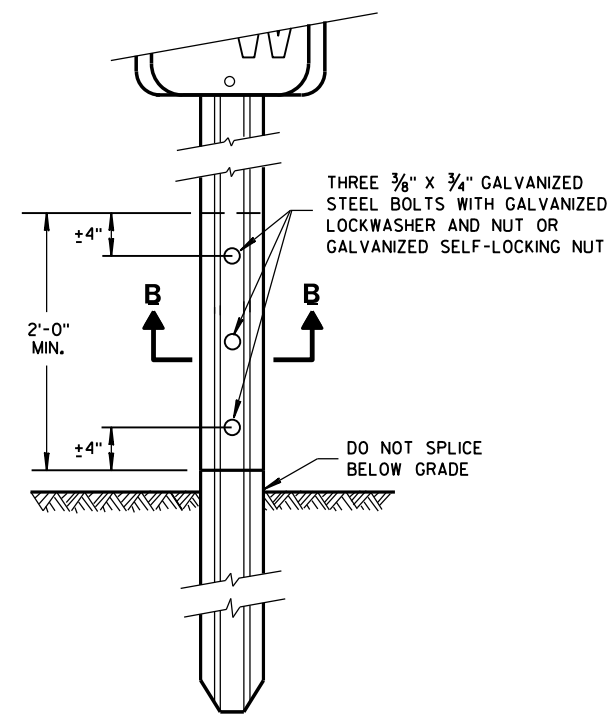
- ① IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3' 10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL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



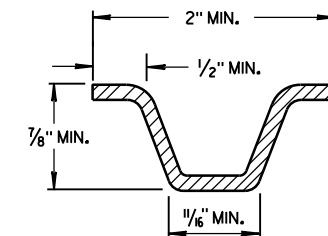
**FRONT VIEW
STEEL MARKER POST**



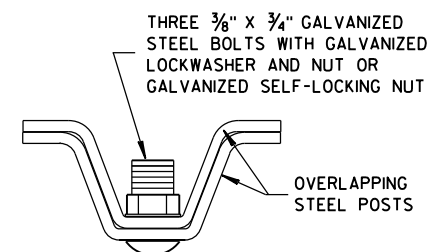
**FRONT VIEW
ROCK INSTALLATION** ①



**FRONT VIEW
SPLICE DETAIL**



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

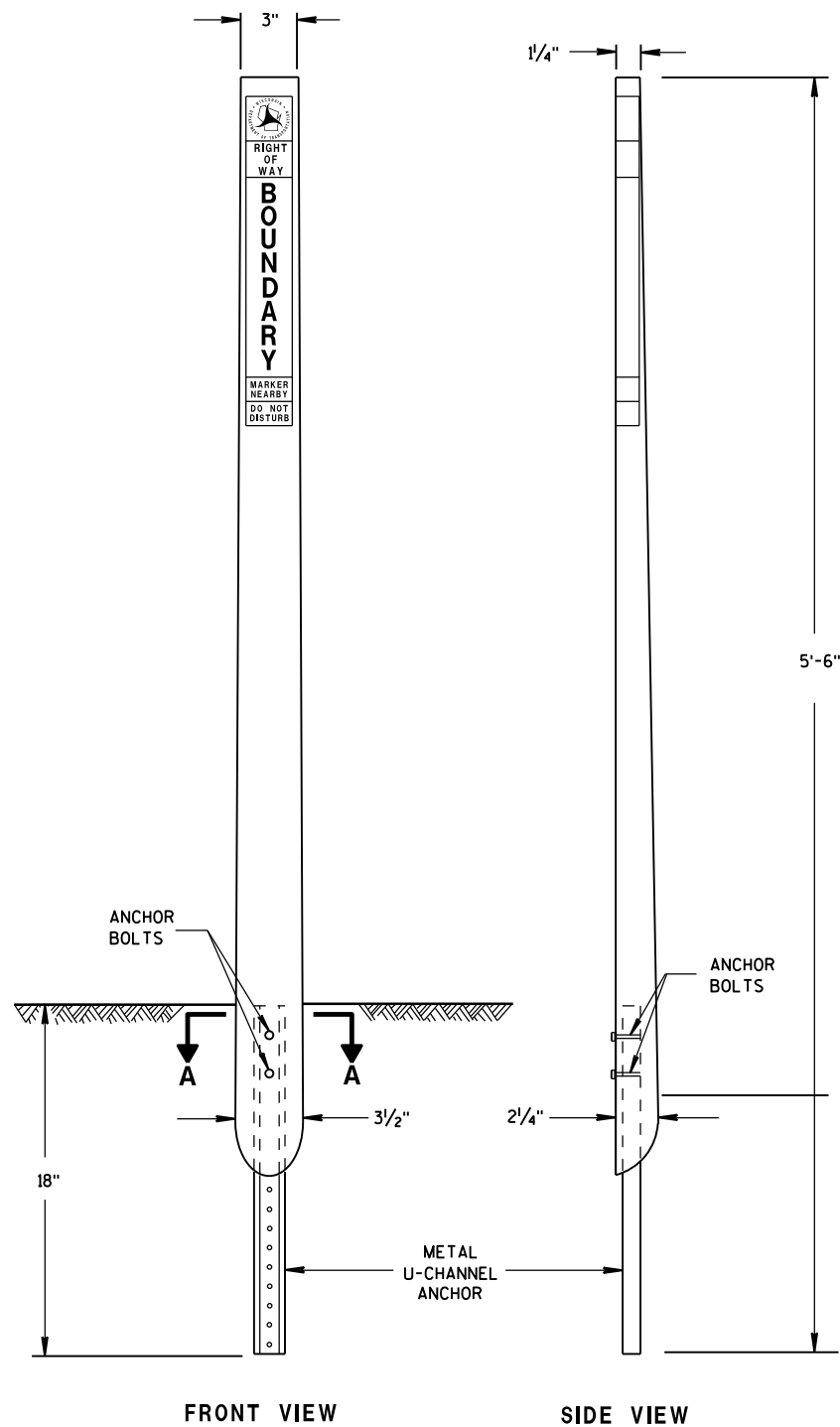


SECTION B-B

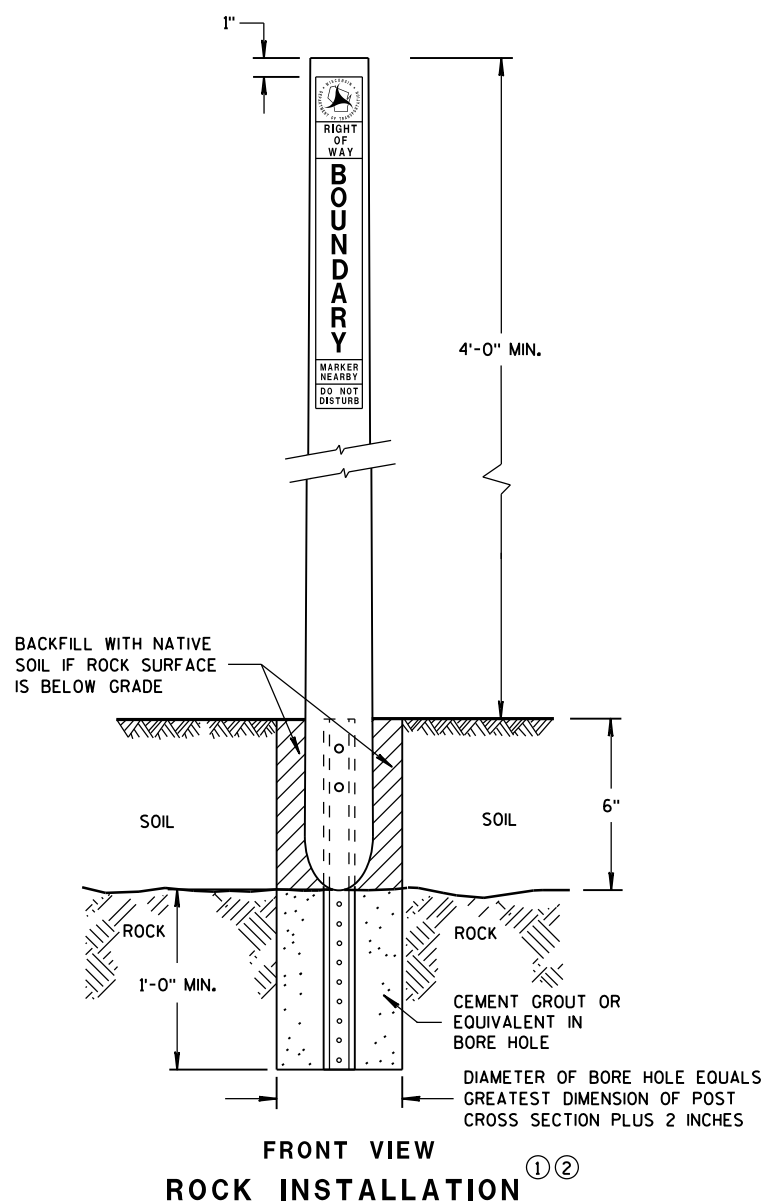
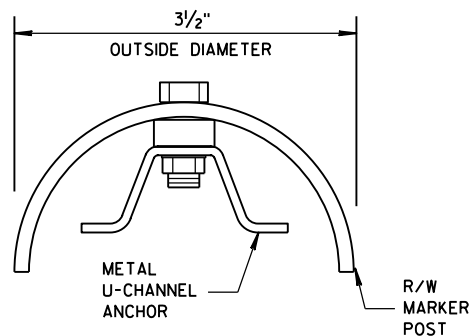
**MARKER POST
FOR RIGHT-OF-WAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016 /S/ Ray Kumapayi
DATE CHIEF SURVEYING AND MAPPING ENGINEER
FHWA



**FLEXIBLE MARKER POST^①
FOR RIGHT-OF-WAY**



GENERAL NOTES

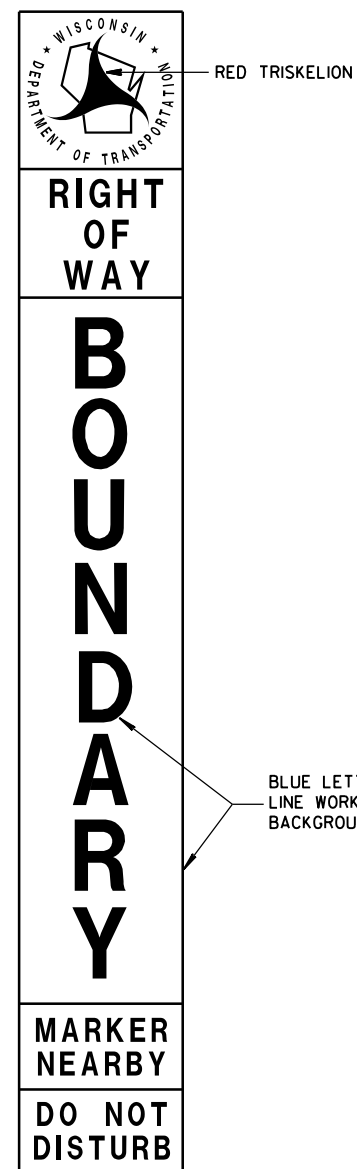
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

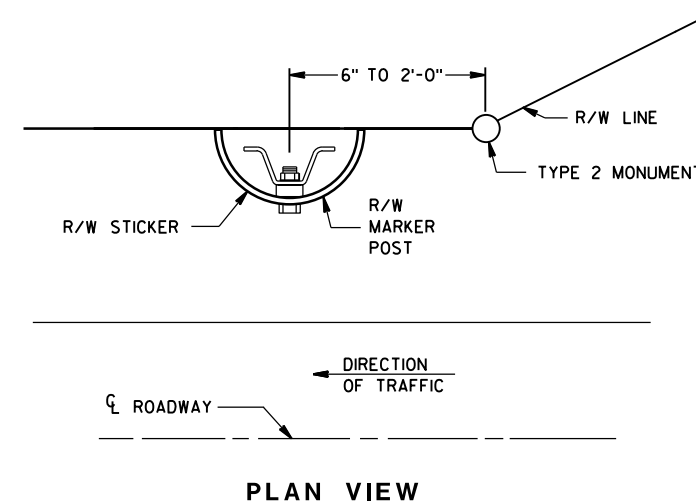
THE RIGHT-OF-WAY STICKER DIMENSIONS SHALL BE 2 1/4" X 17" AND THE STICKER SHALL BE MADE OF A NON-REFLECTIVE VINYL MATERIAL. THE RIGHT-OF-WAY STICKER SHALL FACE THE ROADWAY.

INSTALL PER DEPTH OF MANUFACTURER'S RECOMMENDATIONS BUT NOT LESS THAN 18 INCHES BELOW GRADE FROM THE BOTTOM OF THE METAL U-CHANNEL ANCHOR.

- ① FLEXIBLE MARKER POSTS SHALL BE INCLUDED IN THE APPROVED PRODUCTS LIST FOR MARKER POSTS AND SHALL BE FEDERAL YELLOW IN COLOR.
- ② IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 4'-0" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR. FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



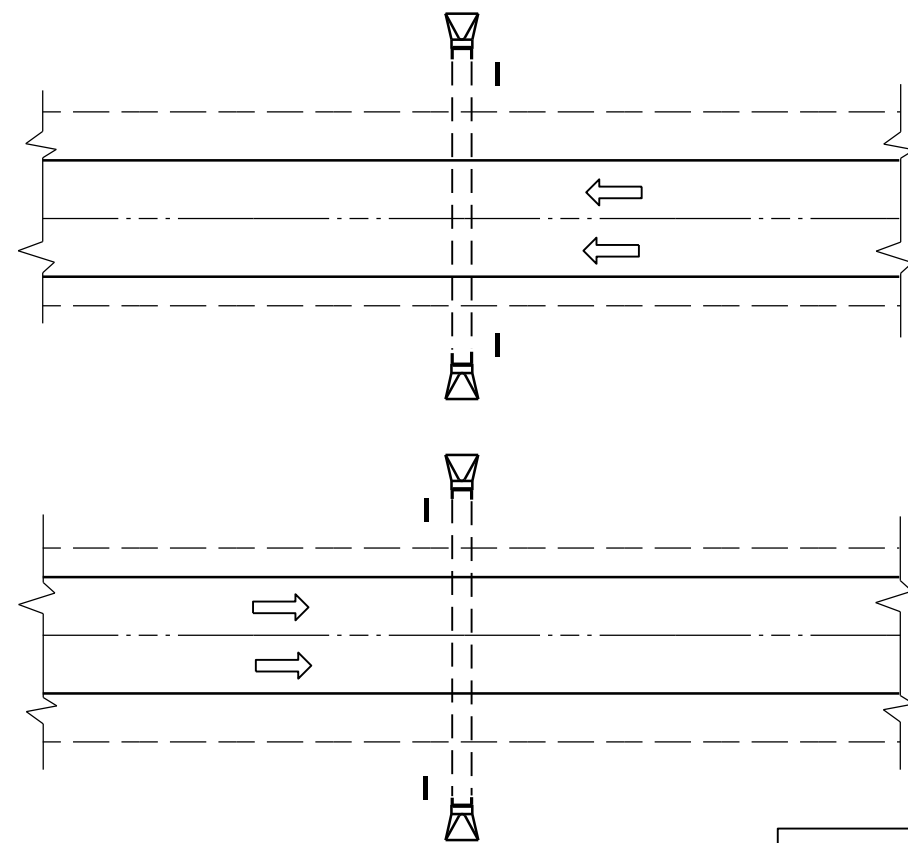
THE RIGHT-OF-WAY STICKER SHALL BE ATTACHED
1" FROM THE TOP OF THE RIGHT-OF-WAY POST PRIOR TO DELIVERY.



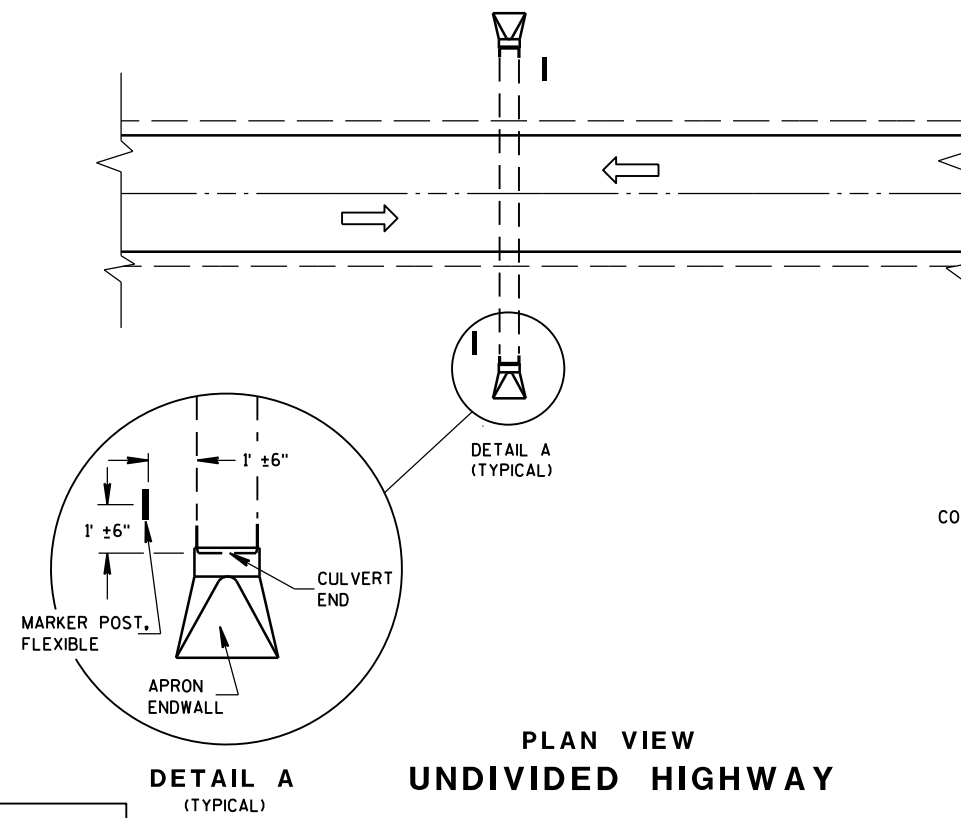
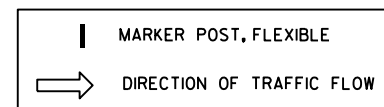
**FLEXIBLE MARKER POST
FOR RIGHT-OF-WAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/18/2016 /S/ Ray Kumapayi
DATE CHIEF SURVEYING AND MAPPING ENGINEER
FHWA



PLAN VIEW
DIVIDED HIGHWAY

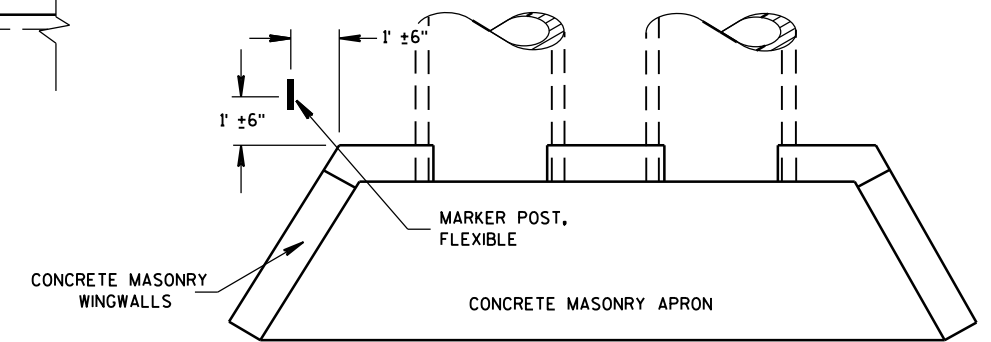


PLAN VIEW
UNDIVIDED HIGHWAY

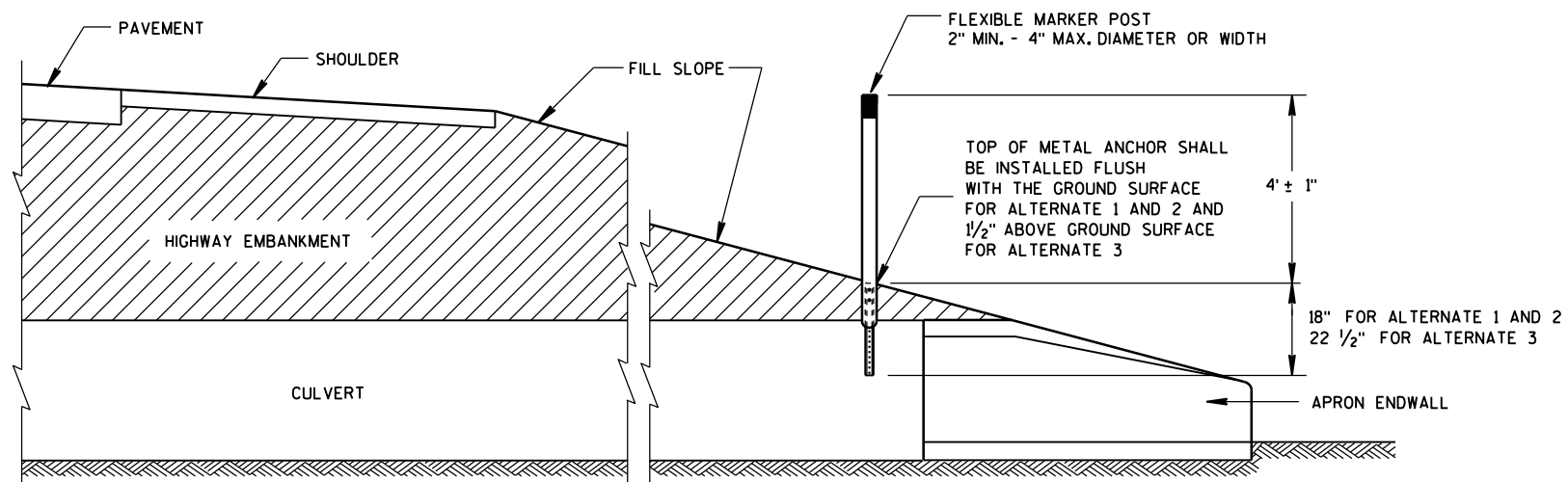
FLEXIBLE MARKER POST LOCATION

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.



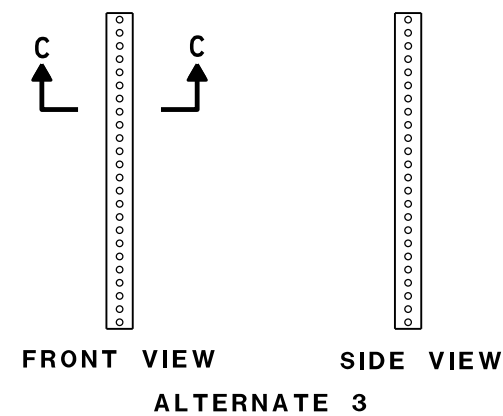
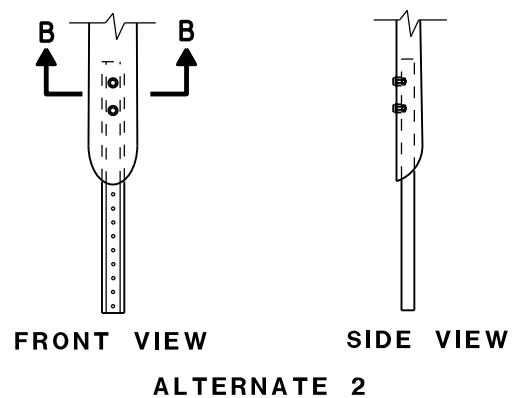
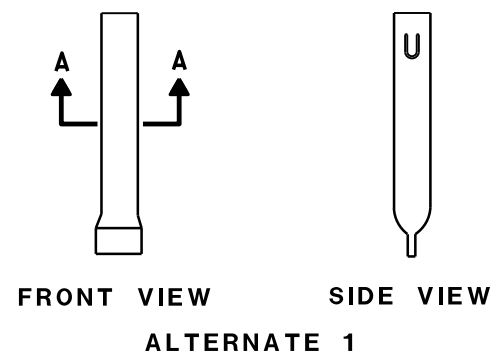
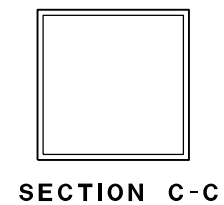
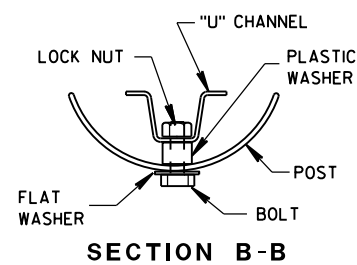
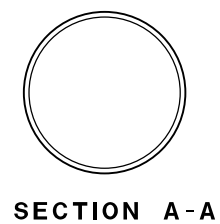
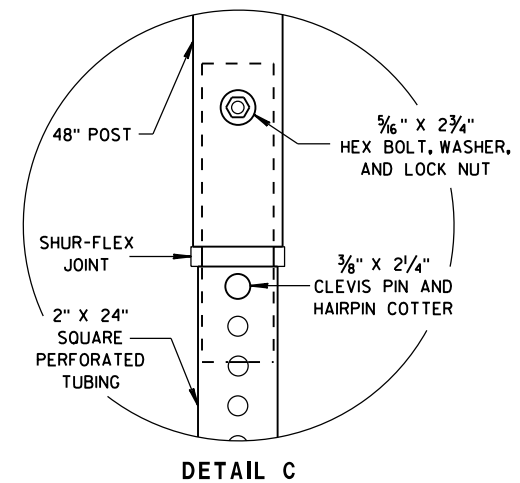
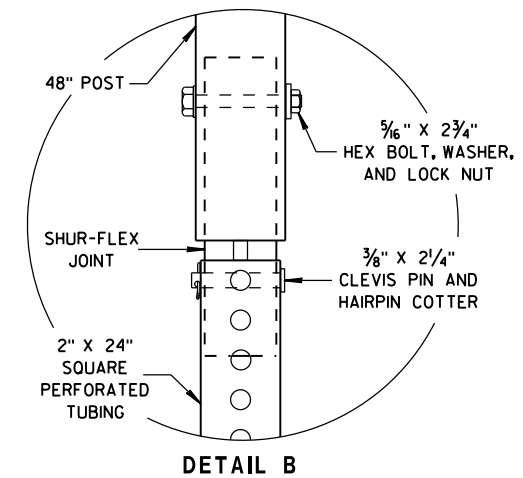
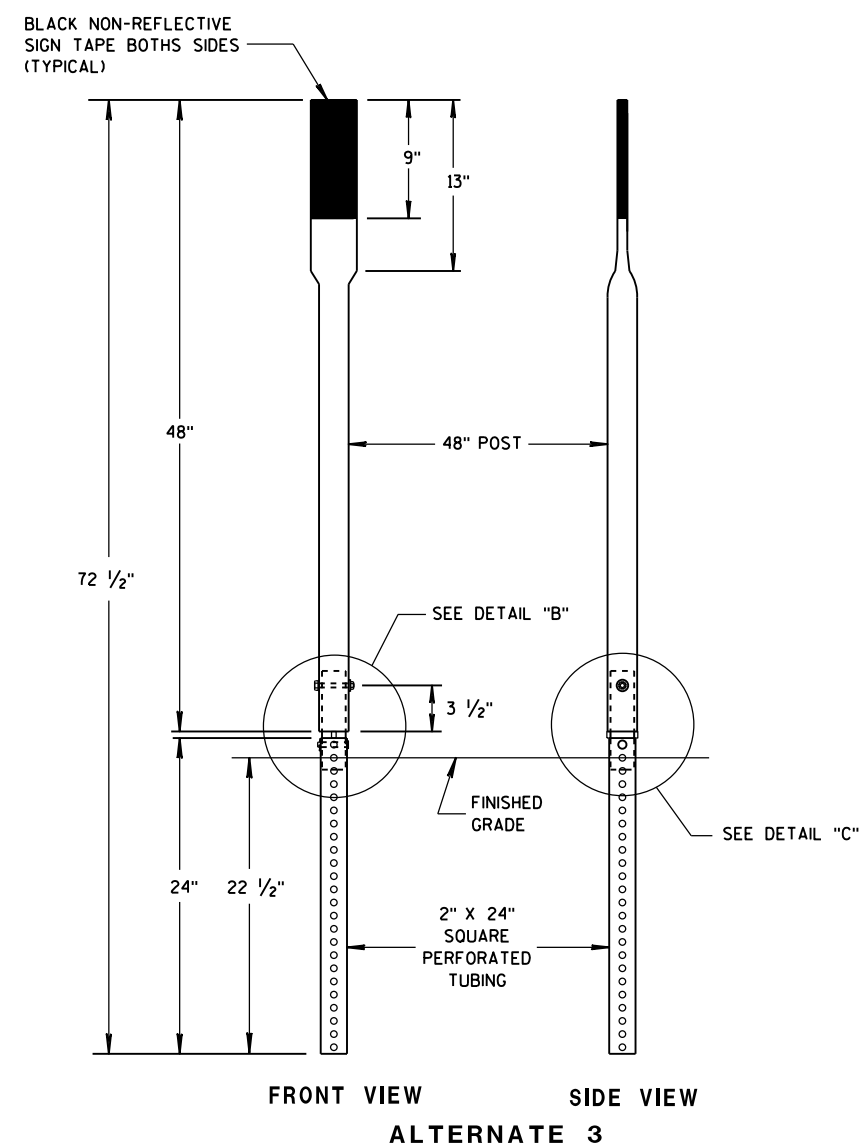
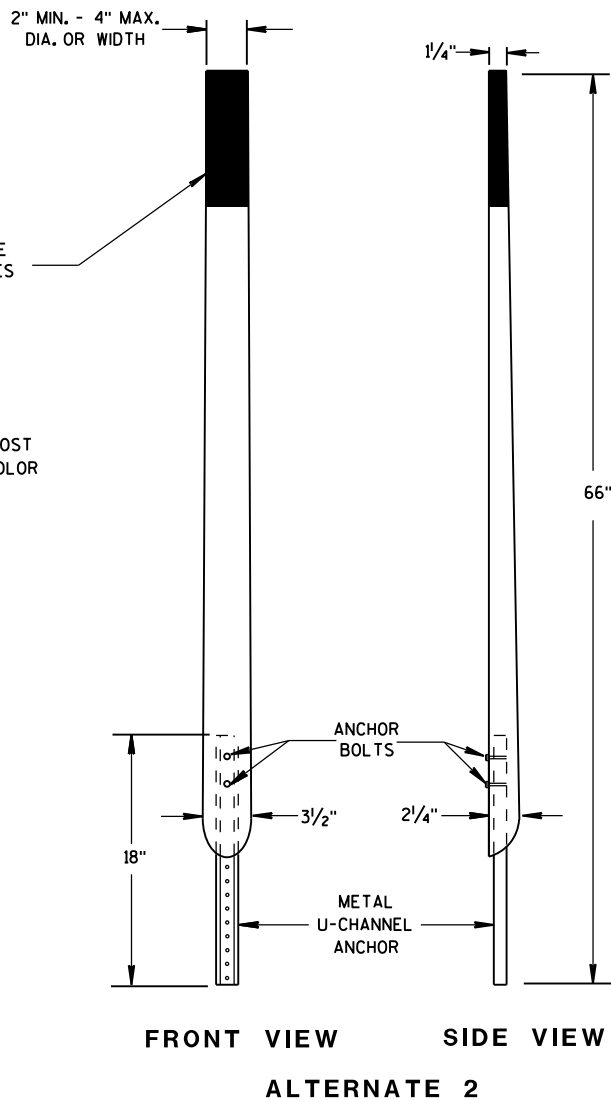
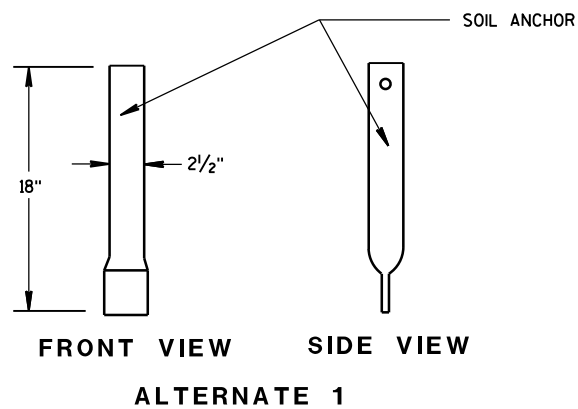
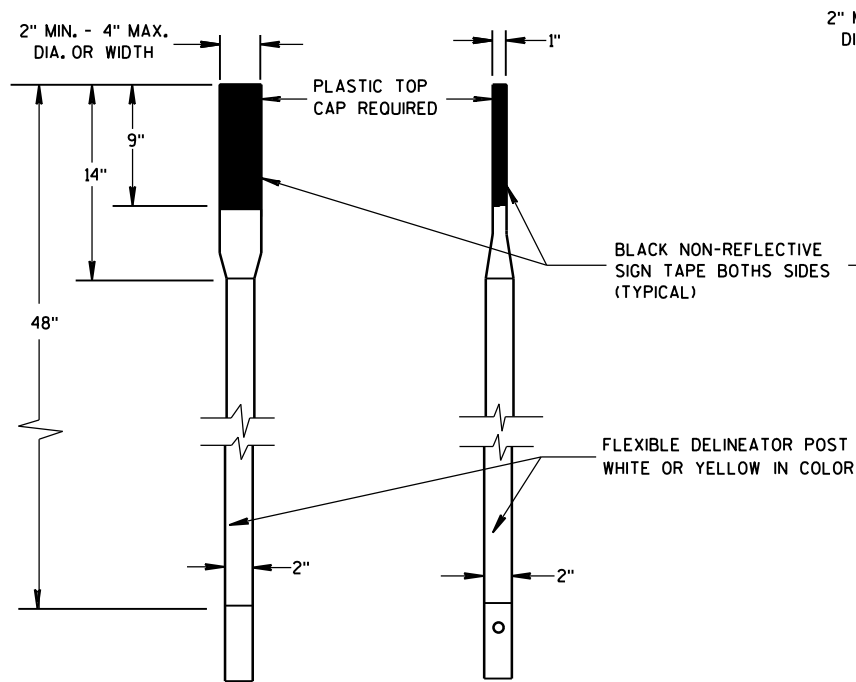
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



CROSS SECTION
FLEXIBLE MARKER POST

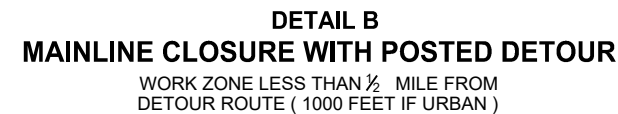
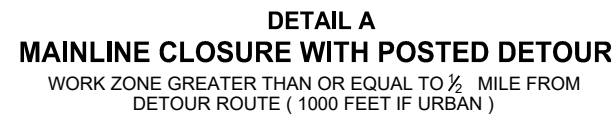
FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST
FOR CULVERT ENDSTATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATIONAPPROVED
10/1/2012
DATE
FHWA/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN

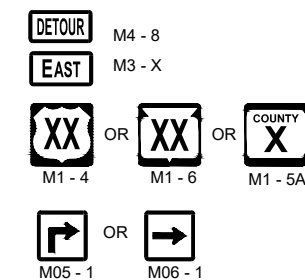


SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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



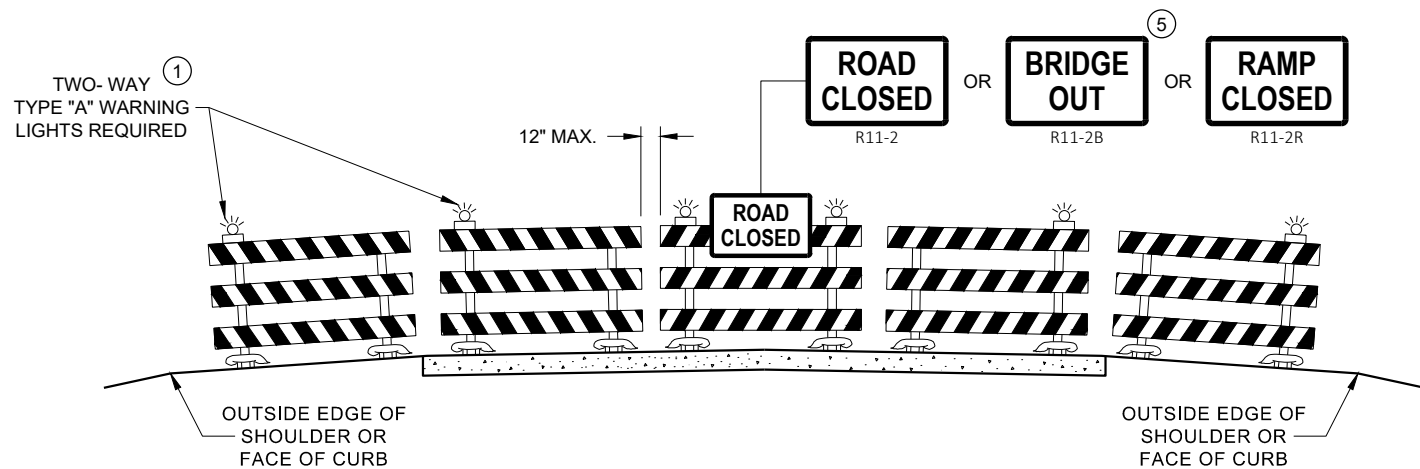
	SIGN ON PERMANENT SUPPORT
	TYPE III BARRICADE
	TYPE III BARRICADE WITH ATTACHED SIGN
	TYPE "A" WARNING LIGHT (FLASHING)
	WORK AREA
	FLAGS, 16" X 16" MIN. (ORANGE)



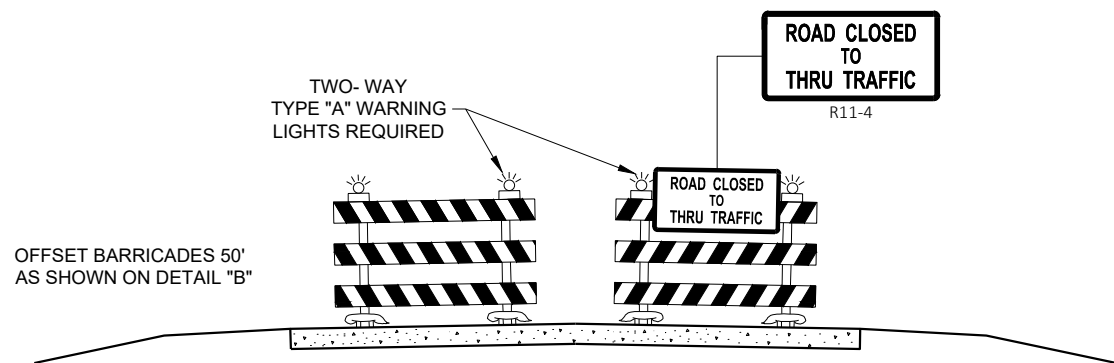
BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER



DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW



DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON 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:

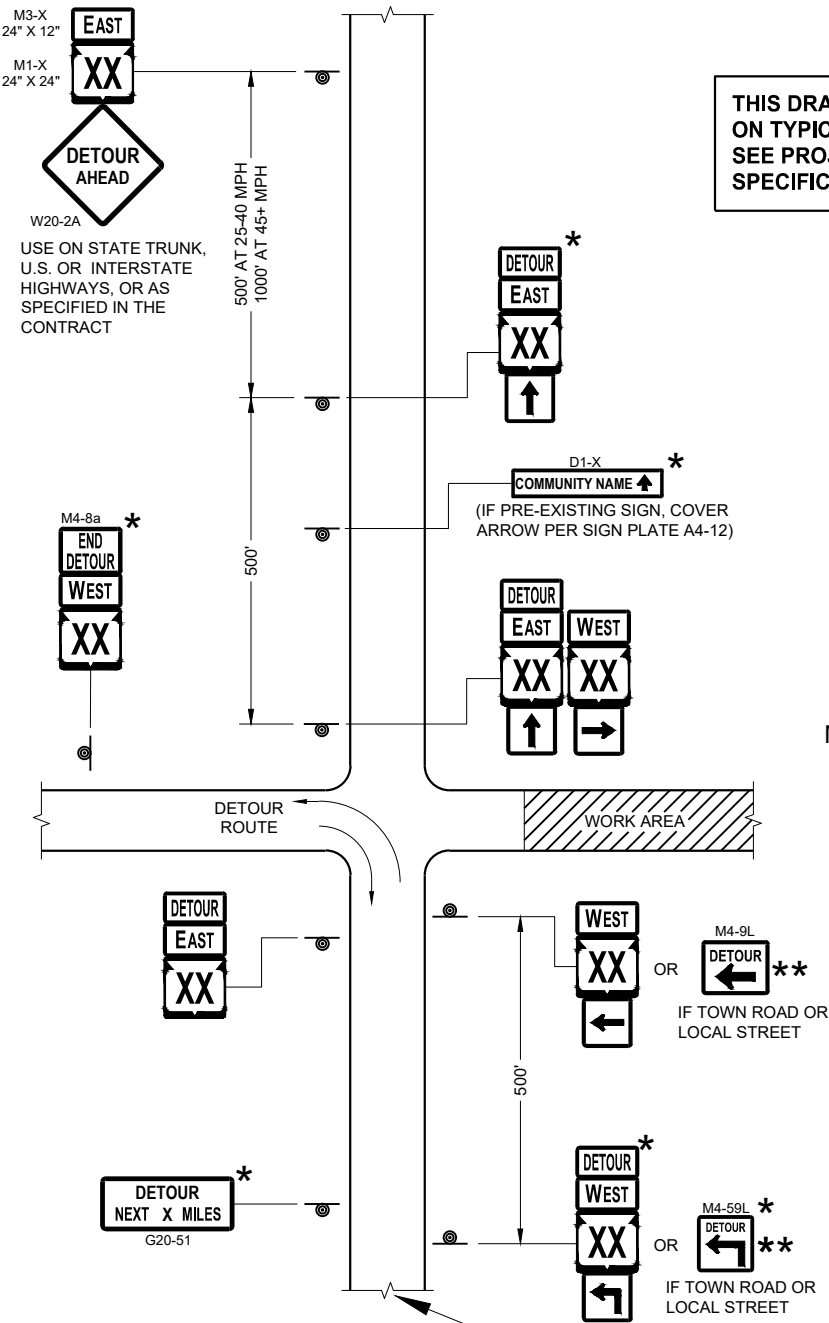
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60 " X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE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

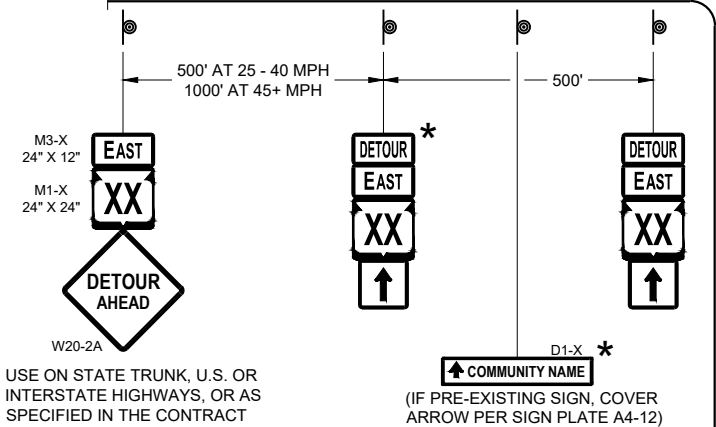
APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



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

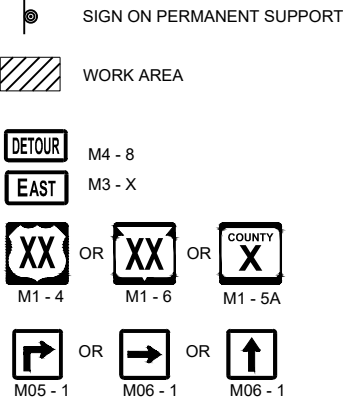
THIS DRAWING PROVIDES GENERAL GUIDANCE
ON TYPICAL DETOUR SIGN LAYOUT AND SPACING.
SEE PROJECT DETOUR SIGNING SHEETS FOR
SPECIFIC DETAILS FOR EACH PROJECT.

MATCH POINT



DETAIL F
DETOUR SIGNING

LEGEND



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.

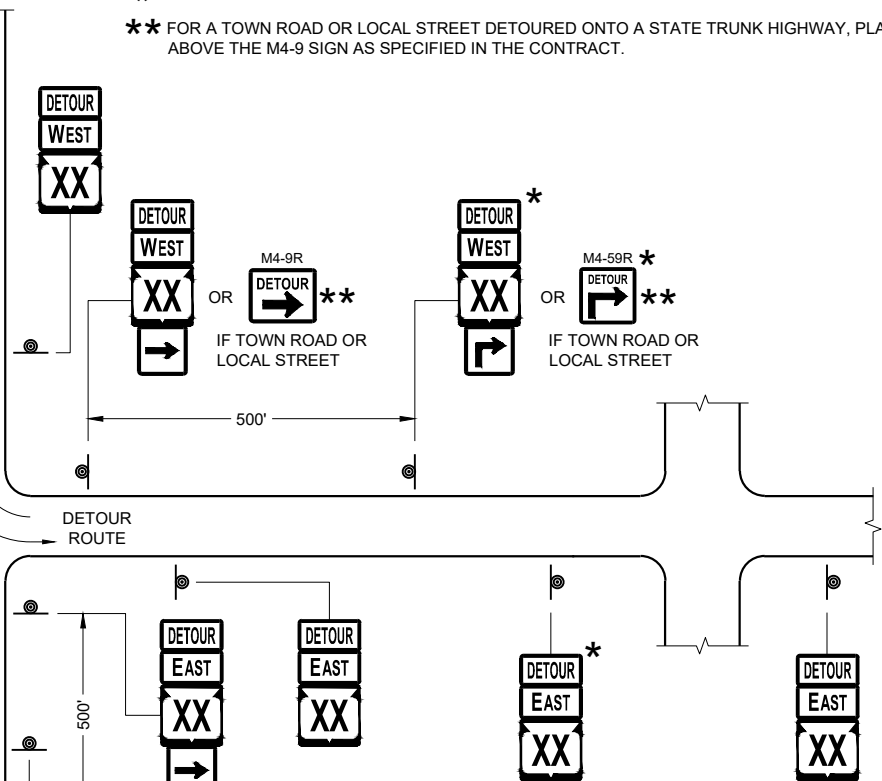
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

"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" (30" X 30" 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.

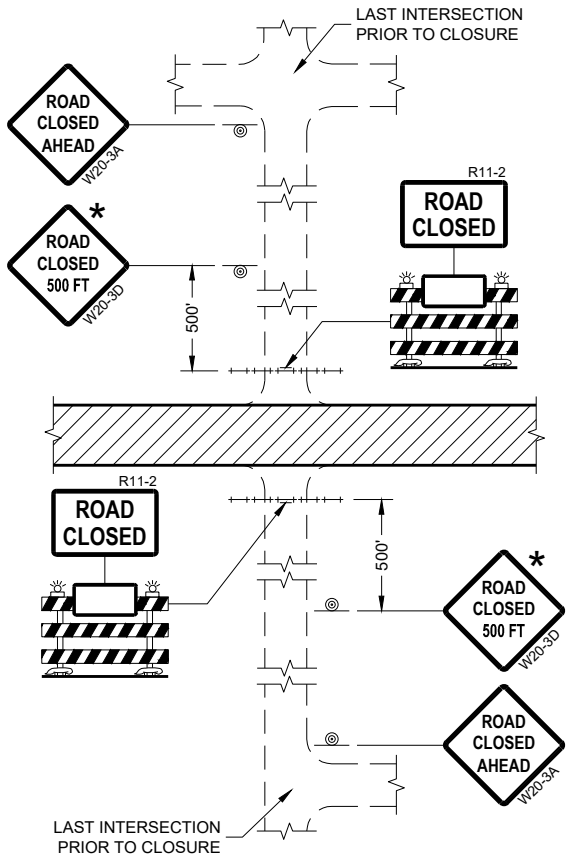


PLACE SIGNS BEYOND INTERSECTIONS
WITH STATE OR COUNTY TRUNK
HIGHWAYS OR AT 4 MILE MAXIMUM
SPACING (4 BLOCKS IF URBAN AREA)

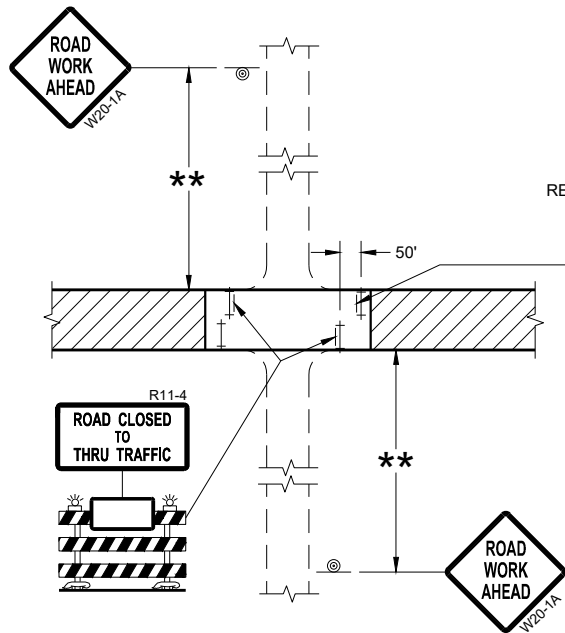
DETOUR SIGNING
FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

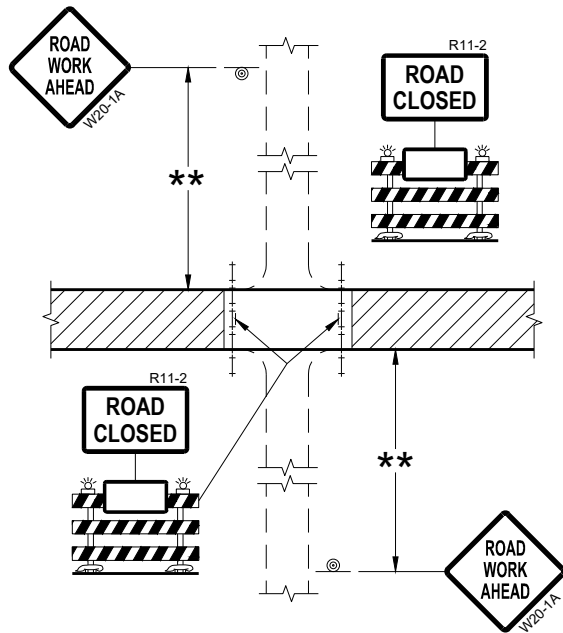
APPROVED
November 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA



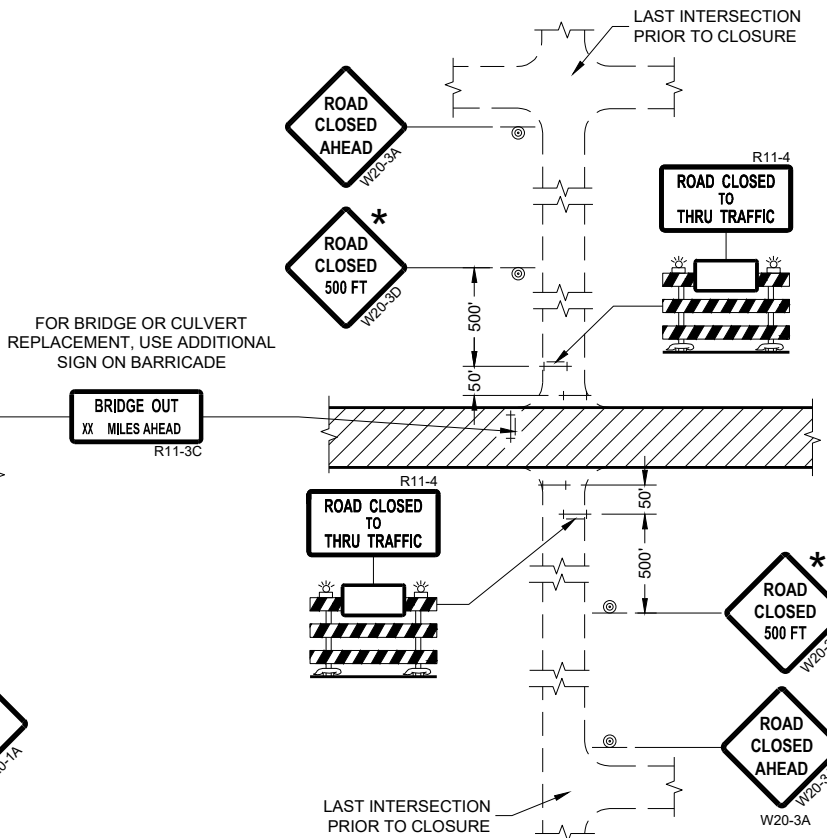
DETAIL 1
(NO ACCESS TO PROJECT)



DETAIL 3
(PUBLIC CROSS-TRAFFIC MAINTAINED.
CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)



DETAIL 2
(PUBLIC CROSS-TRAFFIC MAINTAINED.
NO ACCESS TO PROJECT)



DETAIL 4
(CONTRACTOR, LOCAL BUSINESS AND
RESIDENT ACCESS TO PROJECT)

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 (500 FEET DESIRABLE) TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

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

SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN 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, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:
R11-2 SHALL BE 48" X 30".
R11-4 AND R11-3 SHALL BE 60" X 30".

- * OMIT THE "ROAD CLOSED 500 FT." SIGN IF THE LAST INTERSECTION IS 500 FEET OR LESS FROM THE WORK ZONE.
- ** 500' MAX. OR AT LAST INTERSECTION, WHICHEVER IS CLOSEST.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER

FHWA

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

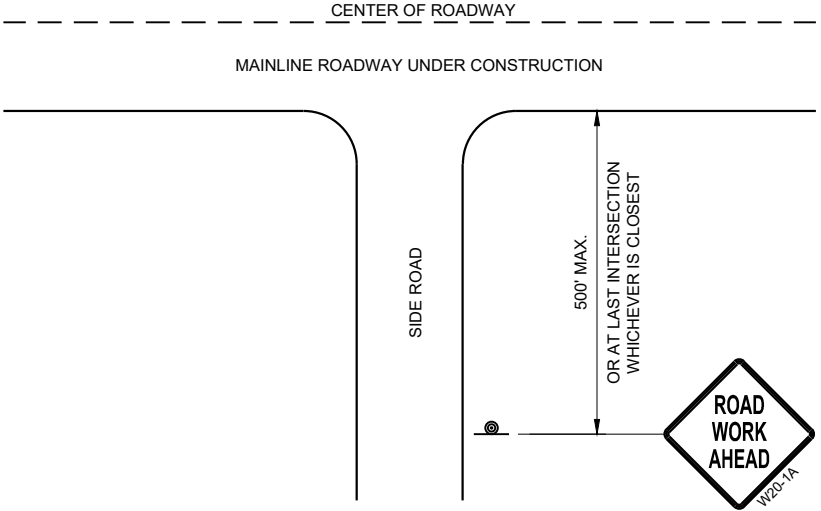
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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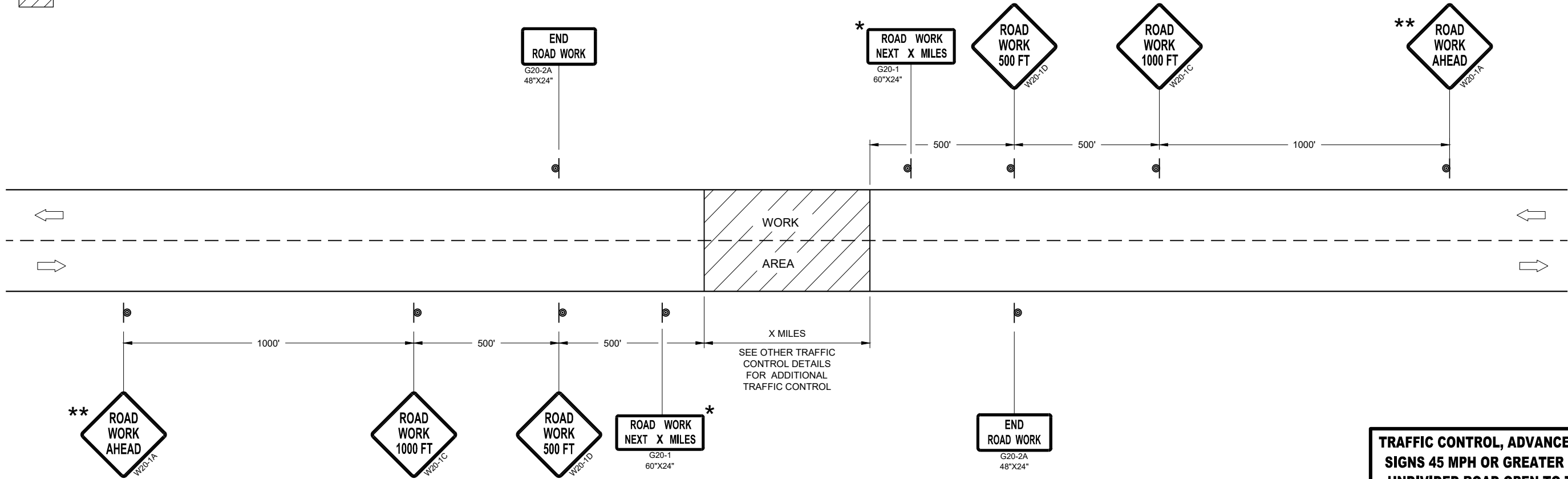
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 45 MPH OR GREATER TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER
FHWA

GENERAL NOTES

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

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"X36" SIGNS MAY BE USED INSTEAD OF 48" X 48" SIGNS.

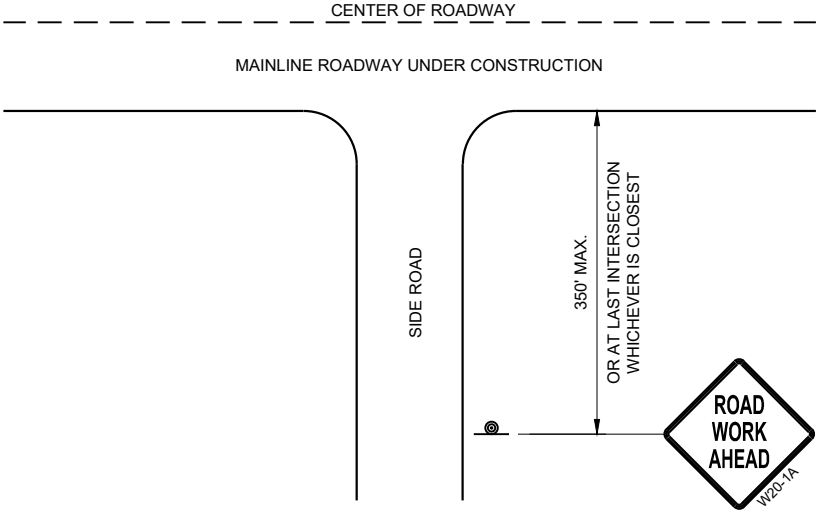
SIGNS THAT WILL BE IN PLACE LESS THAN SEVEN CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS REESTABLISHED.

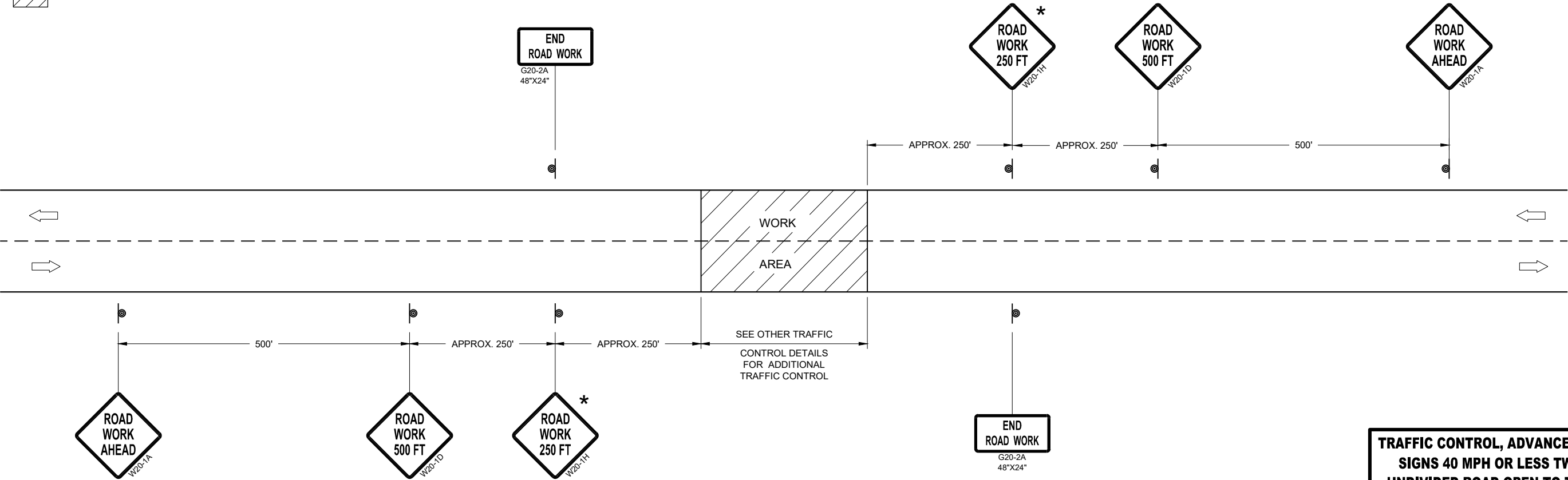
* THE THIRD W20-1 SIGN IS REQUIRED ONLY IF THERE IS AN INTERSECTION BETWEEN THE "ROAD WORK 500 FEET" SIGN AND THE WORK ZONE. ADJUST THE PLACEMENT OF THIS SIGN BASED ON INTERSECTION LOCATION AND OTHER FIELD CONDITIONS.

LEGEND

-  SIGN ON PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA



TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL

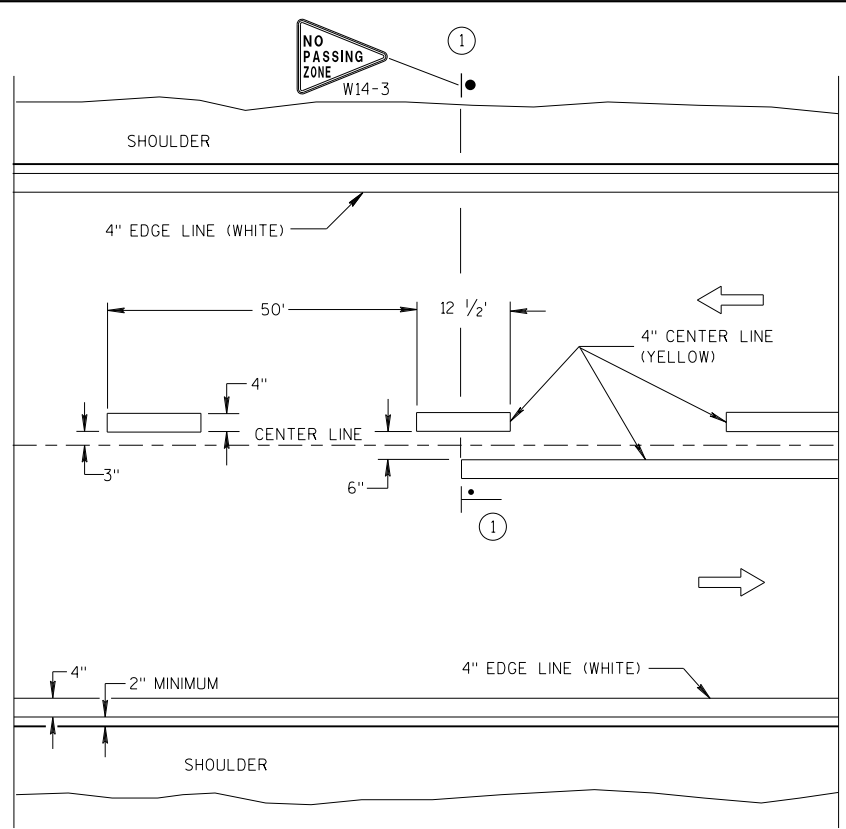


TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40MPH OR LESS

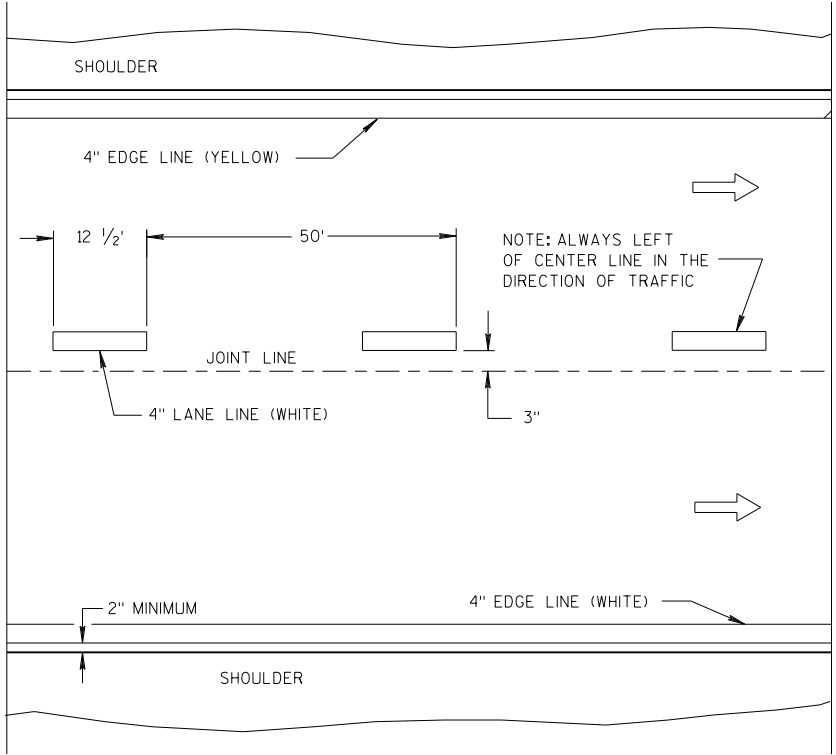
TRAFFIC CONTROL, ADVANCE WARNING
SIGNS 40 MPH OR LESS TWO-WAY
UNDIVIDED ROAD OPEN TO TRAFFICE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
July 2018
DATE
/S/ Andrew Heidtke
WORK ZONE ENGINEER
FHWA

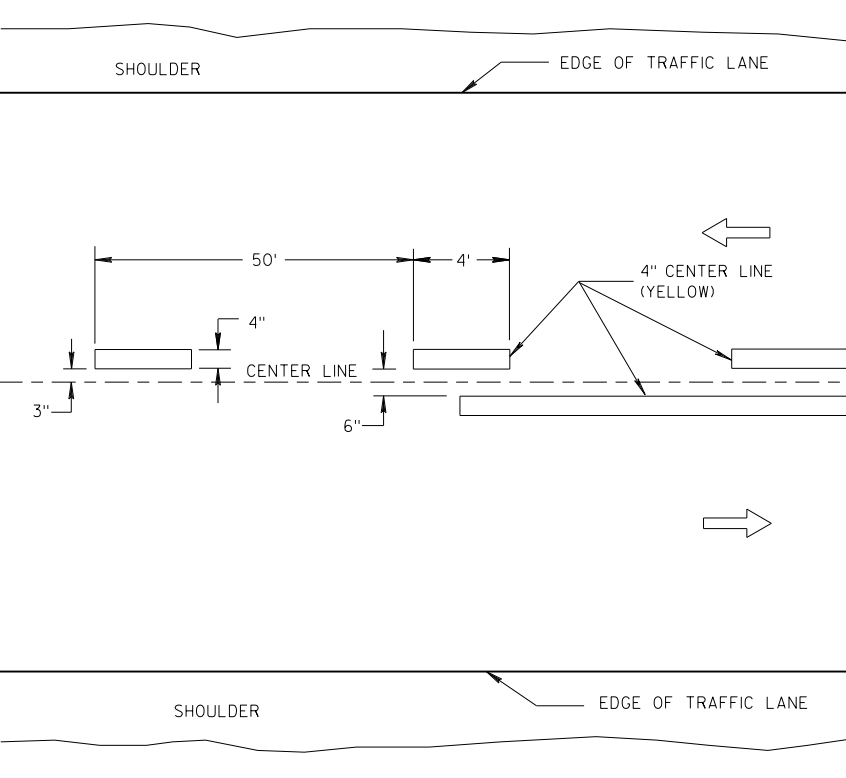


TWO WAY TRAFFIC

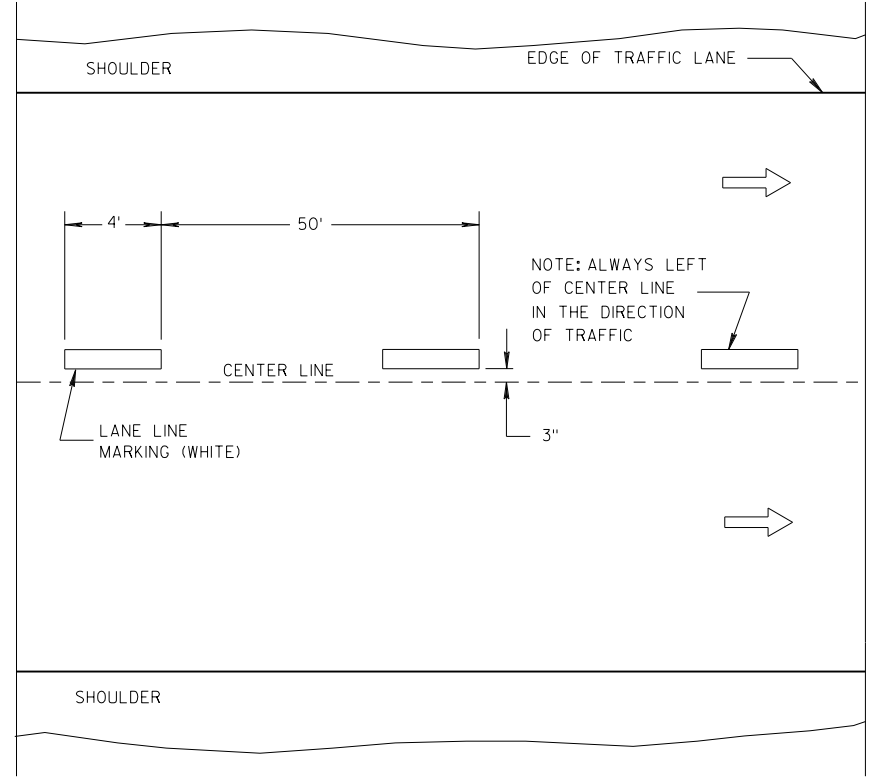


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

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.

NOTE

ARROW SYMBOL (➡) SHOWS DIRECTION OF TRAVEL

LEGEND

- "T" MARKING
- POST MOUNTED SIGN

LONGITUDINAL MARKING
(MAINLINE)

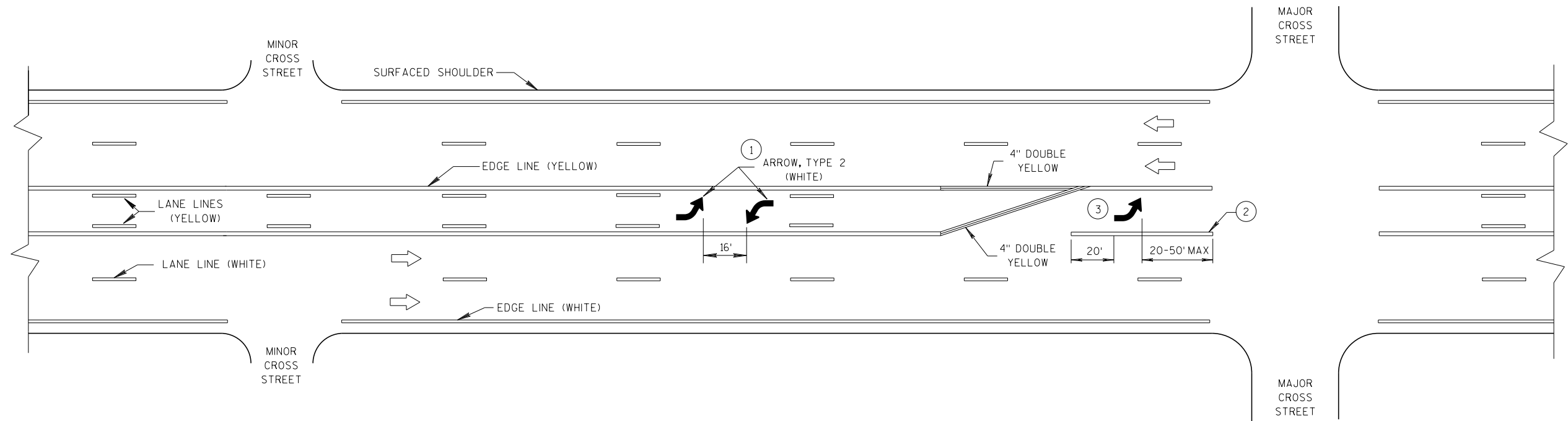
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2018 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

GENERAL NOTES

- 1 A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- 2 8" WHITE
- 3 TURN BAY LENGTH OF LESS THAN 48'DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT

DIRECTION OF TRAFFIC



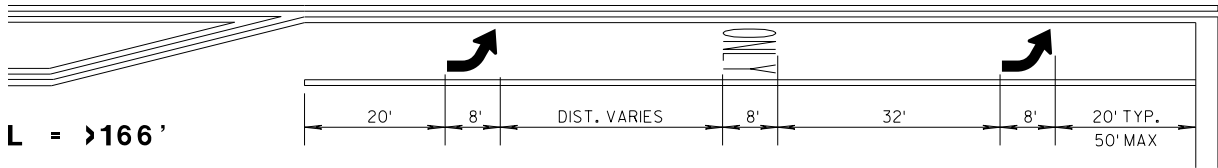
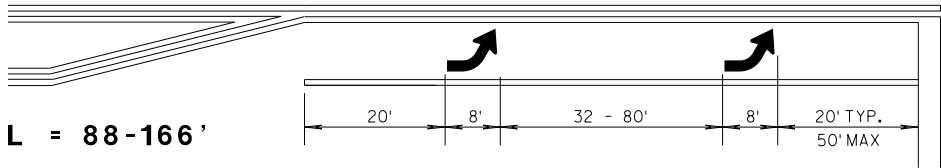
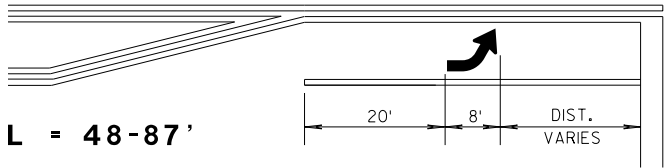
TWO WAY LEFT TURN LANE

PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

TURN LANE OPTIONS

LENGTH OF TURN BAY (L) OF 0-47' DOES NOT REQUIRE PAVEMENT MARKING ARROWS OR WORDS



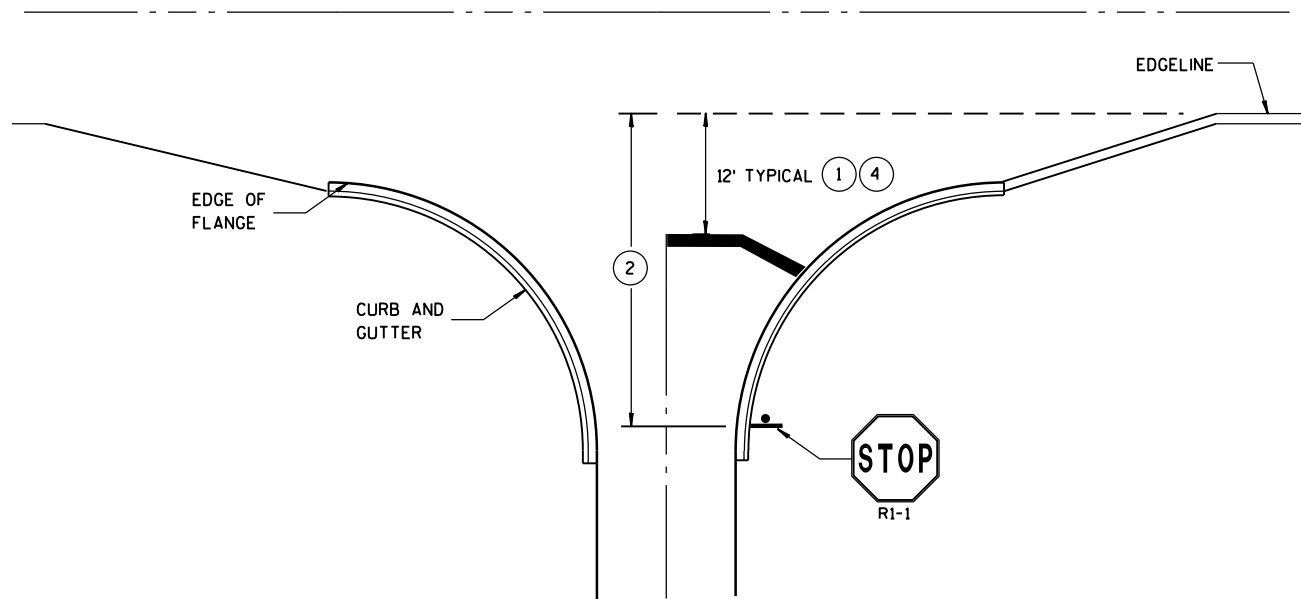
*(SEE TURN LANE OPTIONS FOR PLACEMENT OF PAVEMENT MARKING ARROWS AND WORDS)

GENERAL NOTES

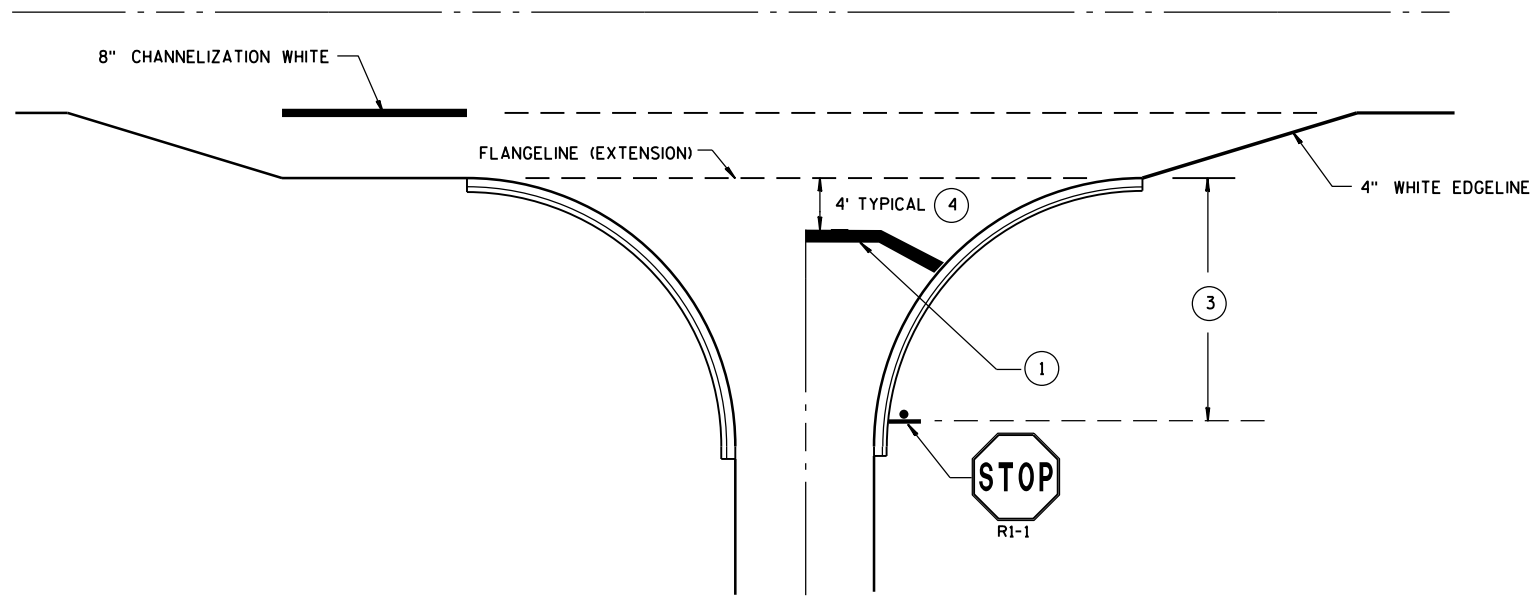
- ① 8" WHITE
- ② QUANTITY AND LOCATION OF TYPE 3 ARROW ARE THE SAME AS THE TYPE II ARROWS IN THE ADJACENT TURN LANE. FOR TURN LANES WITH A PHYSICAL SEPARATION, THE ARROWS AND ONLY MARKING ARE ELIMINATED.

➡ DIRECTION OF TRAFFIC
L = LENGTH OF TURN BAY

PAVEMENT MARKING (TURN LANES)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER

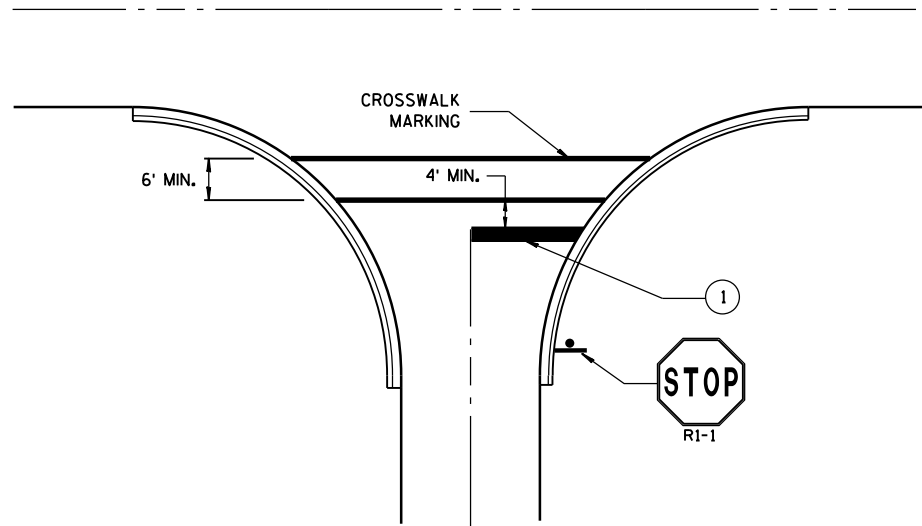


TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE

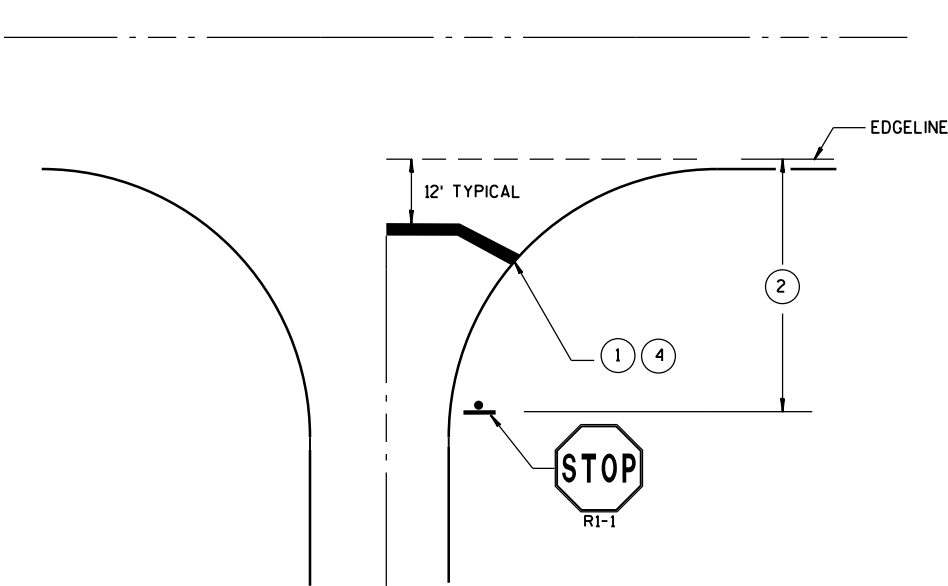
GENERAL NOTES

STOP SIGN SHALL BE PLACED A MINIMUM OF 6 FEET TO A MAXIMUM OF 50 FEET FROM THE EDGE LINE LOCATION.

- 1 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- 2 IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGE LINE THAN NO STOP LINE IS REQUIRED.
- 3 IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
- 4 MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES. (NO CLOSER THAN 4 FEET).

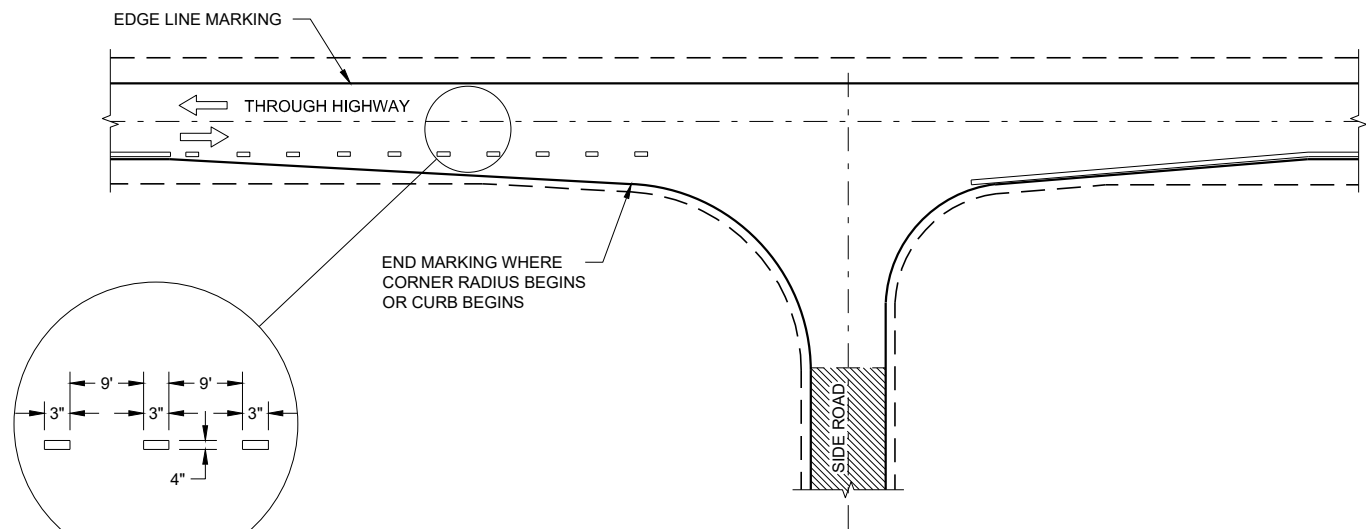


TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING

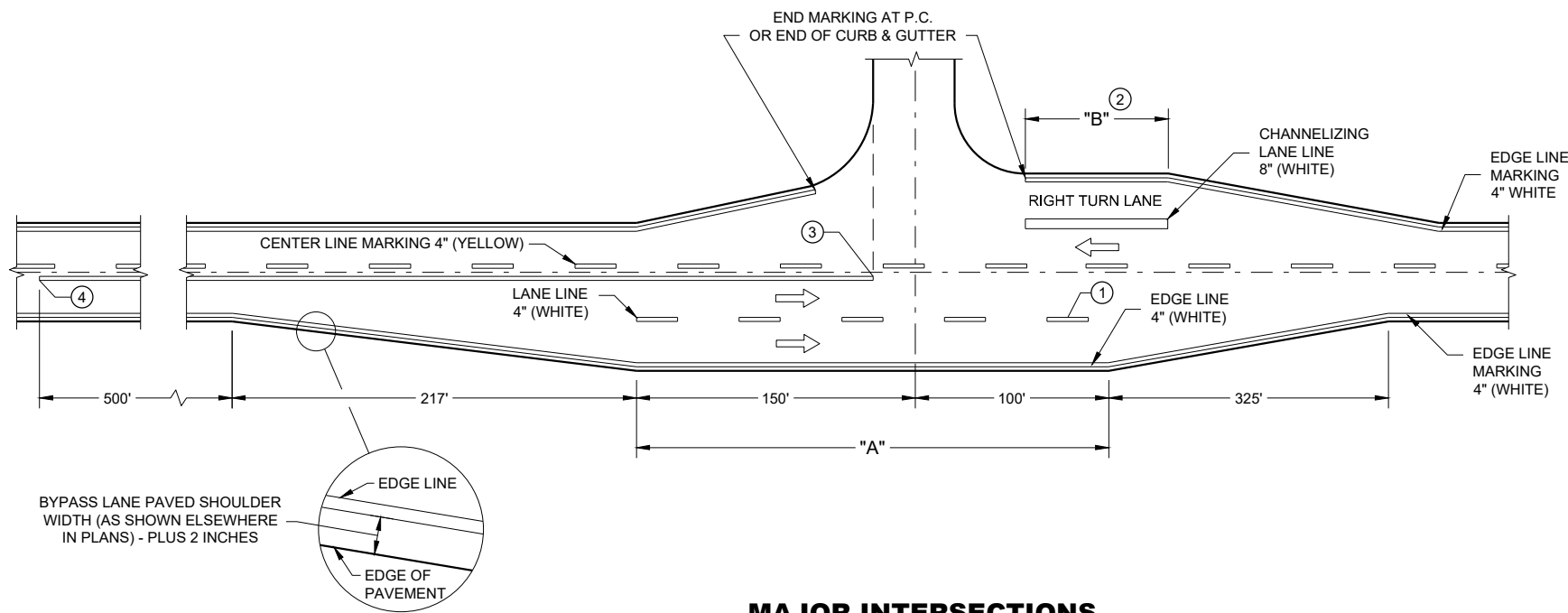


TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER

STOP LINE AND CROSSWALK PAVEMENT MARKING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE Sept., 2017	/S/ Matthew R. Rauch STATE SIGNING AND MARKING ENGINEER
FHWA	



MINOR INTERSECTION



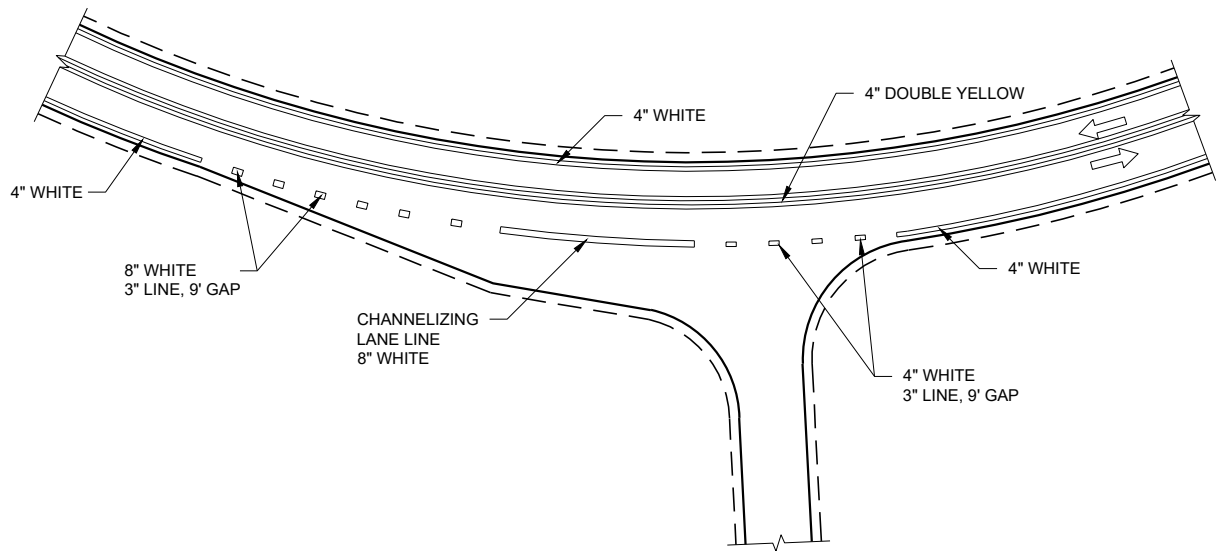
MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)

GENERAL NOTES

OMIT EDGE LINES THROUGH INTERSECTIONS. CONTINUE EDGE LINES THROUGH DRIVEWAYS.

- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER

ARROW SYMBOL (➞) SHOWS DIRECTION OF TRAVEL



INTERSECTION ON OUTSIDE OF CURVE

PAVEMENT MARKING
(INTERSECTIONS)

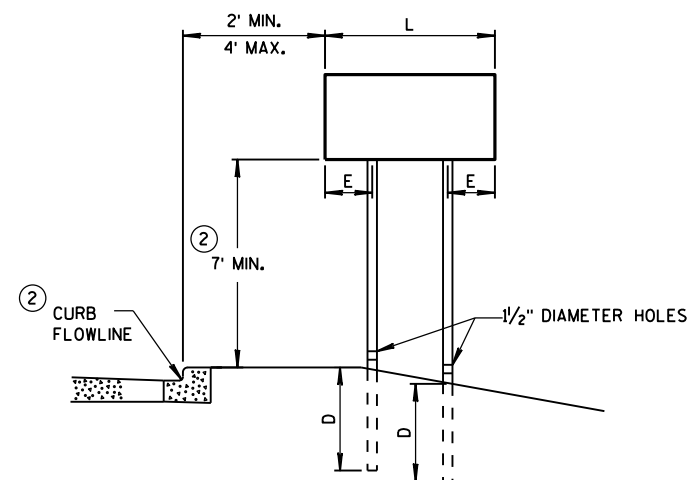
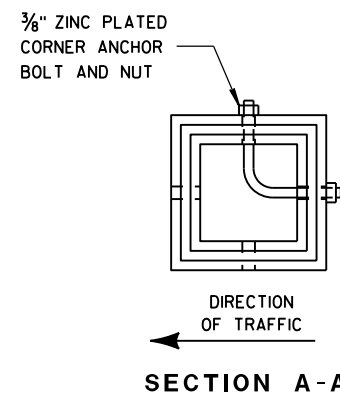
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



TUBULAR STEEL POSTS

AREA OF SIGN INSTALLATION (SQ. FT.)	NUMBER OF REQUIRED TUBULAR STEEL POSTS
9 OR LESS	1
GREATER THAN 9 LESS THAN OR EQUAL TO 18	2
GREATER THAN 18 LESS THAN OR EQUAL TO 27	3

SIGNS LARGER THAN 27 SQ.FT. SHALL NOT BE MOUNTED ON TUBULAR STEEL POSTS.

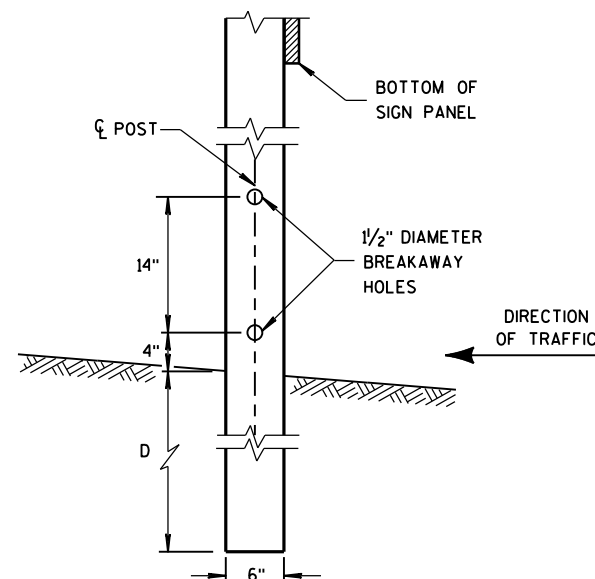


URBAN AREA

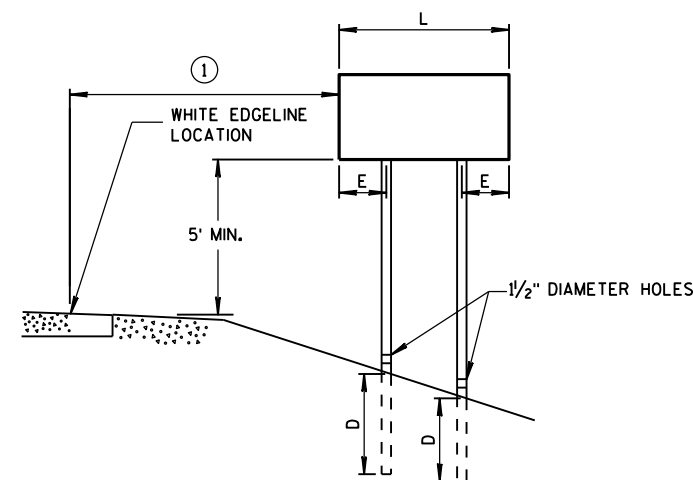
POST MOUNTING DETAIL FOR TEMPORARY TRAFFIC CONTROL FIXED MESSAGE SIGNS

WOOD POST
EMBEDMENT DEPTH

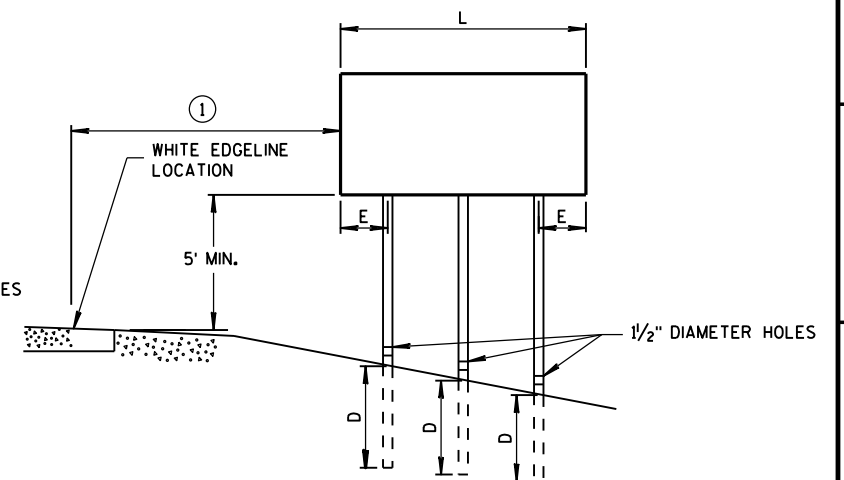
AREA OF SIGN INSTALLATION (SQ. FT.)	D (MIN)
20 OR LESS	4'
GREATER THAN 20	5'



4"x6" WOOD POST MODIFICATION



RURAL AREA



GENERAL NOTES

- ① 6 FEET FROM THE EDGE OF PAVEMENT (EDGE LINE LOCATION) UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER. LATERAL OFFSET SHOULD BE ADJUSTED TO AVOID THE DITCH FLOWLINE.
- ② THE EXISTENCE OF CURB AND GUTTER DOES NOT IN ITSELF MANDATE THE VERTICAL CLEARANCE ILLUSTRATED. THAT HEIGHT IS TYPICALLY MEASURED WHERE THERE IS SIDEWALK ADJACENT TO THE ROADWAY OR PARKING IS PERMITTED. IN THE ABSENCE OF SIDEWALK, VERTICAL CLEARANCE IS MEASURED FROM THE TOP OF THE CURB. IF NO SIDEWALK AND NO PARKING, VERTICAL CLEARANCE MAY BE REDUCED TO 5 FOOT MINIMUM. OFFSET OF SIGNS IS MEASURED FROM THE CURB FLOWLINE.
- ③ FOR SIGNS REQUIRING 4 POSTS, SPACE INTERMEDIATE POSTS EVENLY.

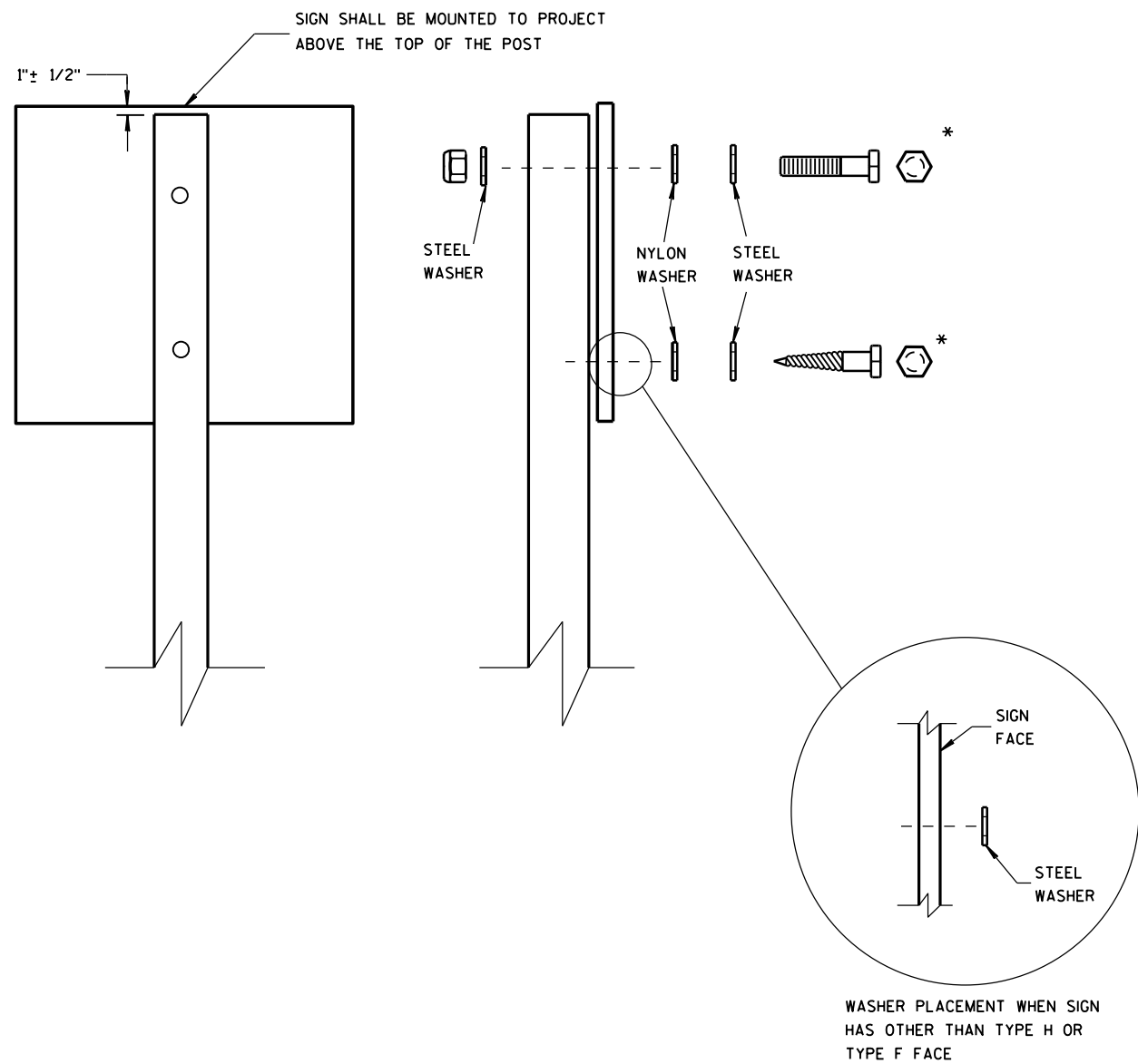
4" X 6" WOOD POST

POST SPACING REQUIREMENTS		NUMBER OF WOOD POSTS REQUIRED
L	E	
48" OR LESS AND LESS THAN 20 SQ. FT.	-	1
LESS THAN 60"	12"	2
60" TO 120"	L/5	2
GREATER THAN 120" LESS THAN 168"	12"	3
168" AND GREATER	12"	4

SEE NOTE (3)

TEMPORARY TRAFFIC CONTROL SIGN MOUNTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



NUTS, BOLTS AND LAGS USED FOR MOUNTING SIGNS SHALL HAVE HEXAGONAL HEADS AND SHALL BE EITHER:

- A. HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: A 153, CLASS D, OR SC 3
- B. ELECTRO-GALVANIZED IN ACCORDANCE WITH ASTM DESIGNATION: B 633, TYPE III, SC 3

THREADS ON BOLTS AND NUTS SHALL BE MANUFACTURED WITH SUFFICIENT ALLOWANCE FOR THE CADMIUM PLATE OR GALVANIZED COATING TO PERMIT THE NUTS TO RUN FREELY ON THE BOLTS.

- WOOD POSTS (4" x 4" or 4" x 6")
- LAG SCREWS - 3/8" X 3"
 - MACHINE BOLTS - 5/16" X 6-1/2" OR 7" LENGTH W/ NUTS

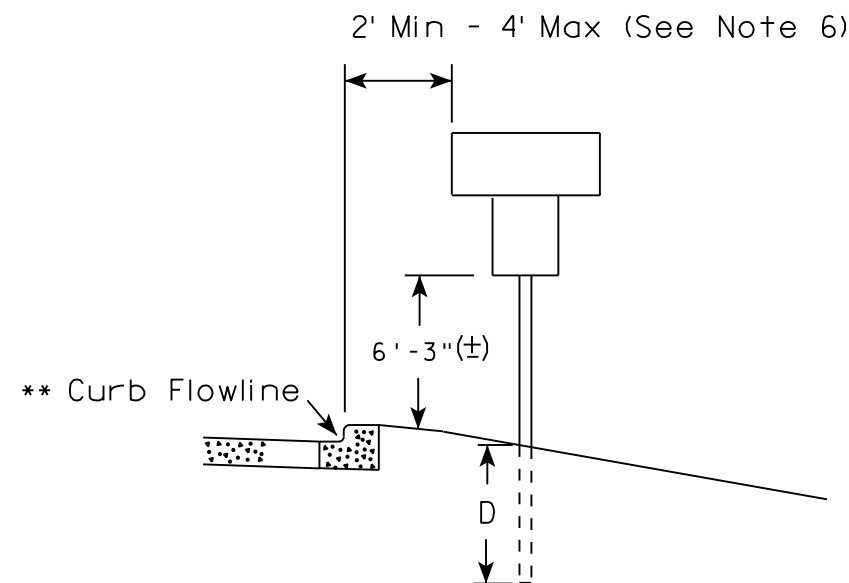
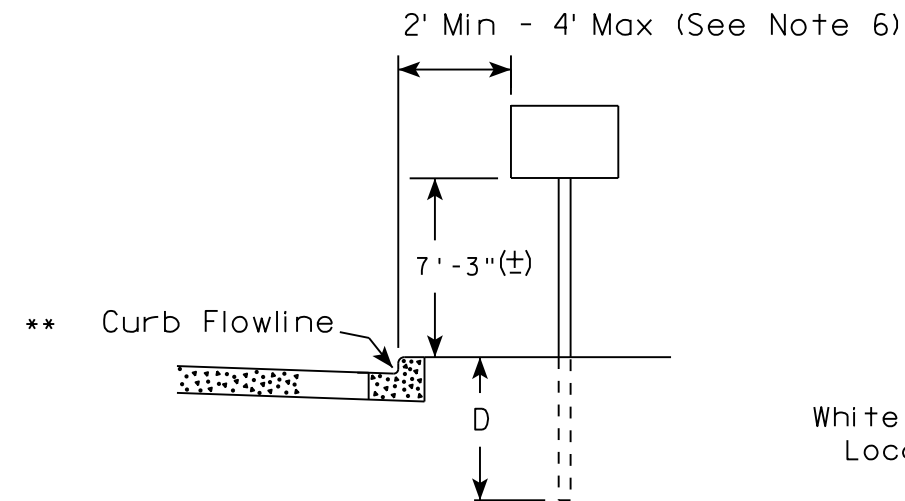
- SQUARE STEEL POSTS (2" x 2")
- MACHINE BOLTS - 3/8" X 3-1/4" LENGTH W/ NUTS
 - RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

- WASHERS (ALL POSTS) -
- 1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
 - 1-1/4" O.D. X 3/8" I.D. X .080 NYLON FOR ALL TYPE H SIGNS

* TWO DIFFERENT FASTENING SYSTEMS ARE SHOWN FOR ILLUSTRATION PURPOSES. ON ANY INDIVIDUAL SIGN, EITHER ONE OR THE OTHER SYSTEM SHALL BE USED. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA. FOR A SINGLE POST INSTALLATION, ALL SIGNS GREATER THAN 9 SQ. FT. REQUIRE THE USE OF 3 FASTENERS.

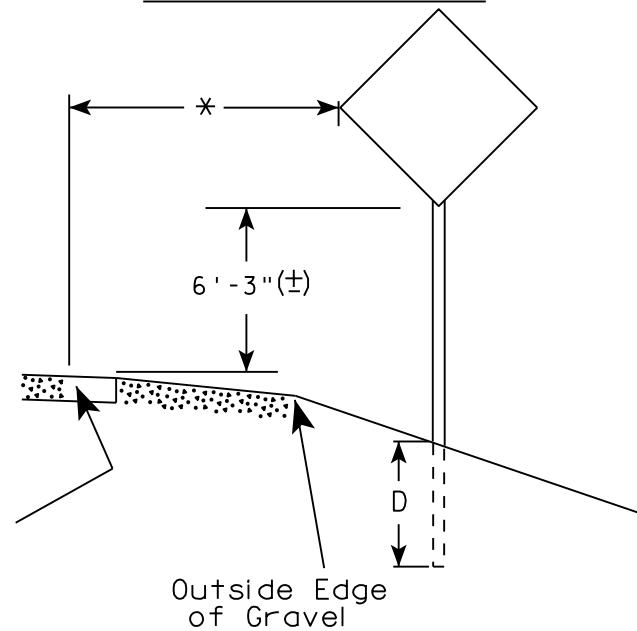
ATTACHMENT OF SIGNS TO POSTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June 2017 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

URBAN AREA

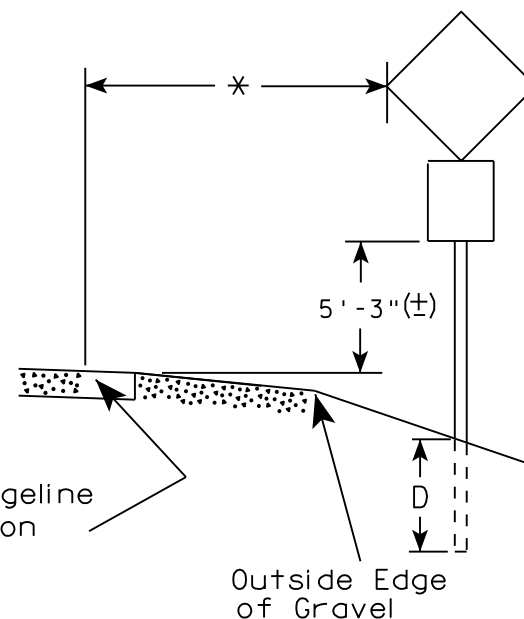


White Edgeline
Location

RURAL AREA (See Note 2)



White Edgeline
Location



Outside Edge
of Gravel

POST EMBEDMENT DEPTH

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

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

GENERAL NOTES

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

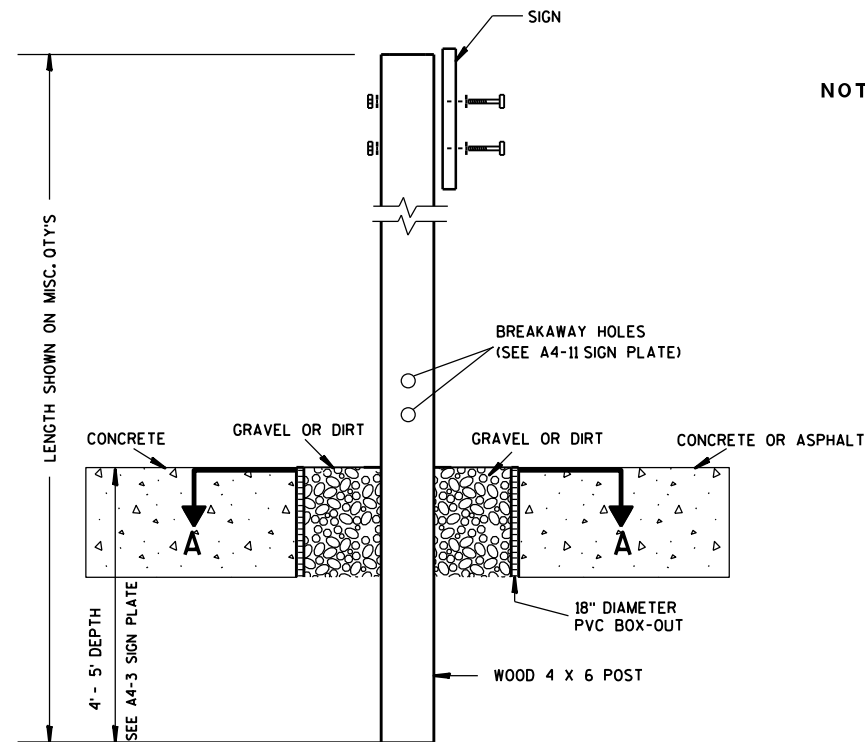
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

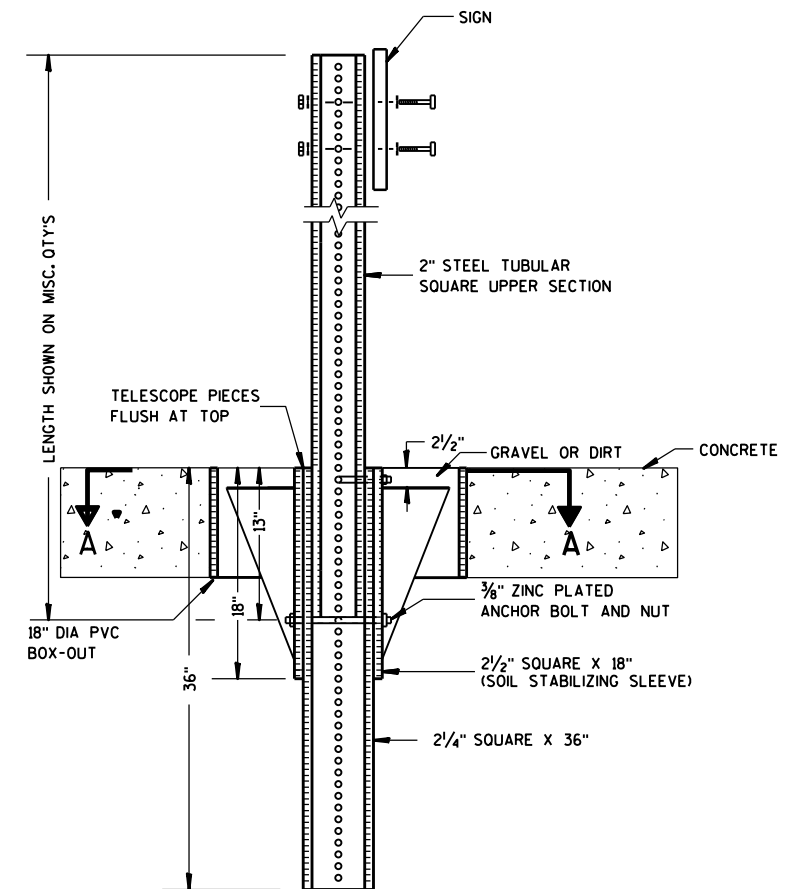
DATE 8/21/17 PLATE NO. A4-3.21



ELEVATION VIEW

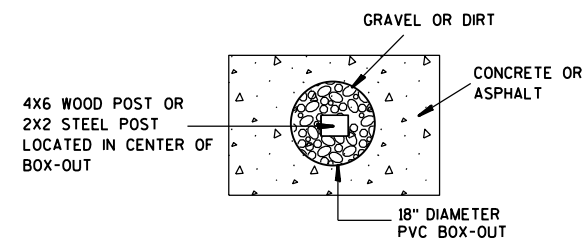
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

- NOTES: 1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

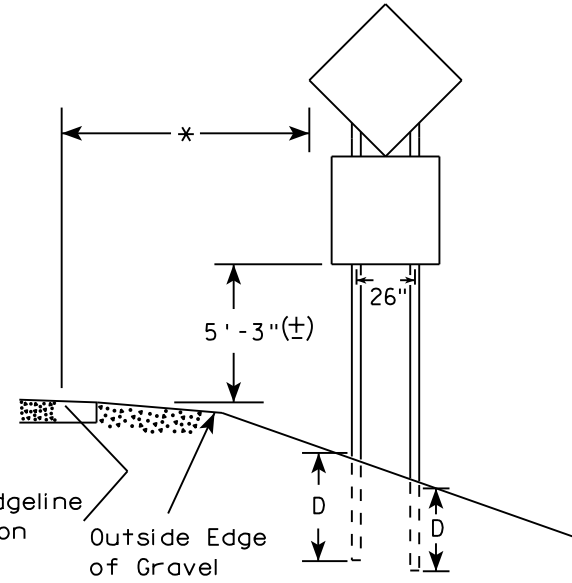
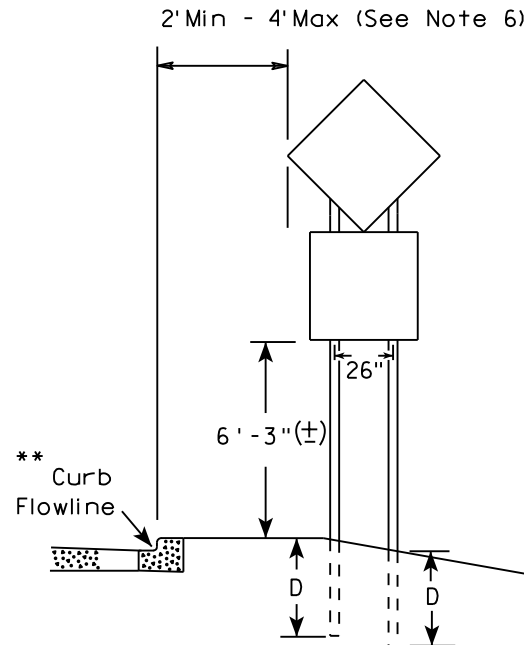
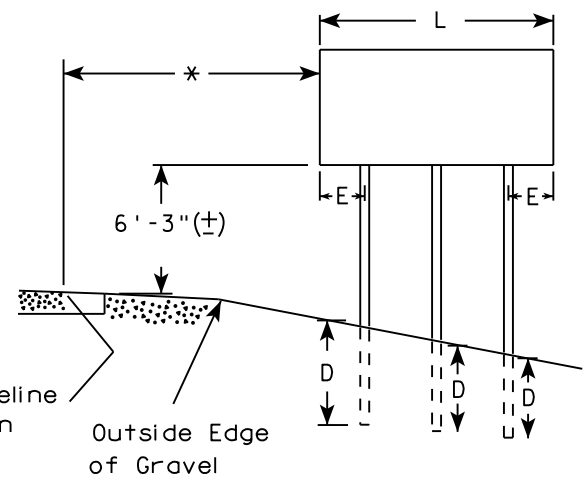
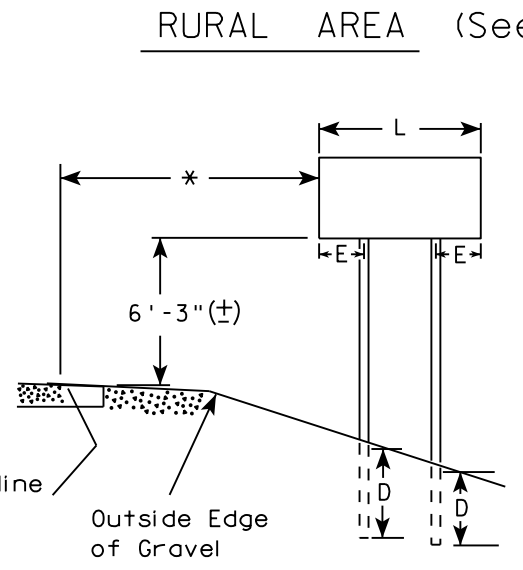
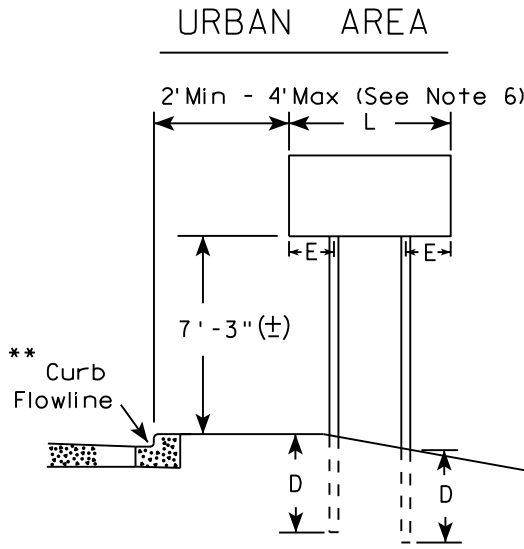
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 108"	L/5

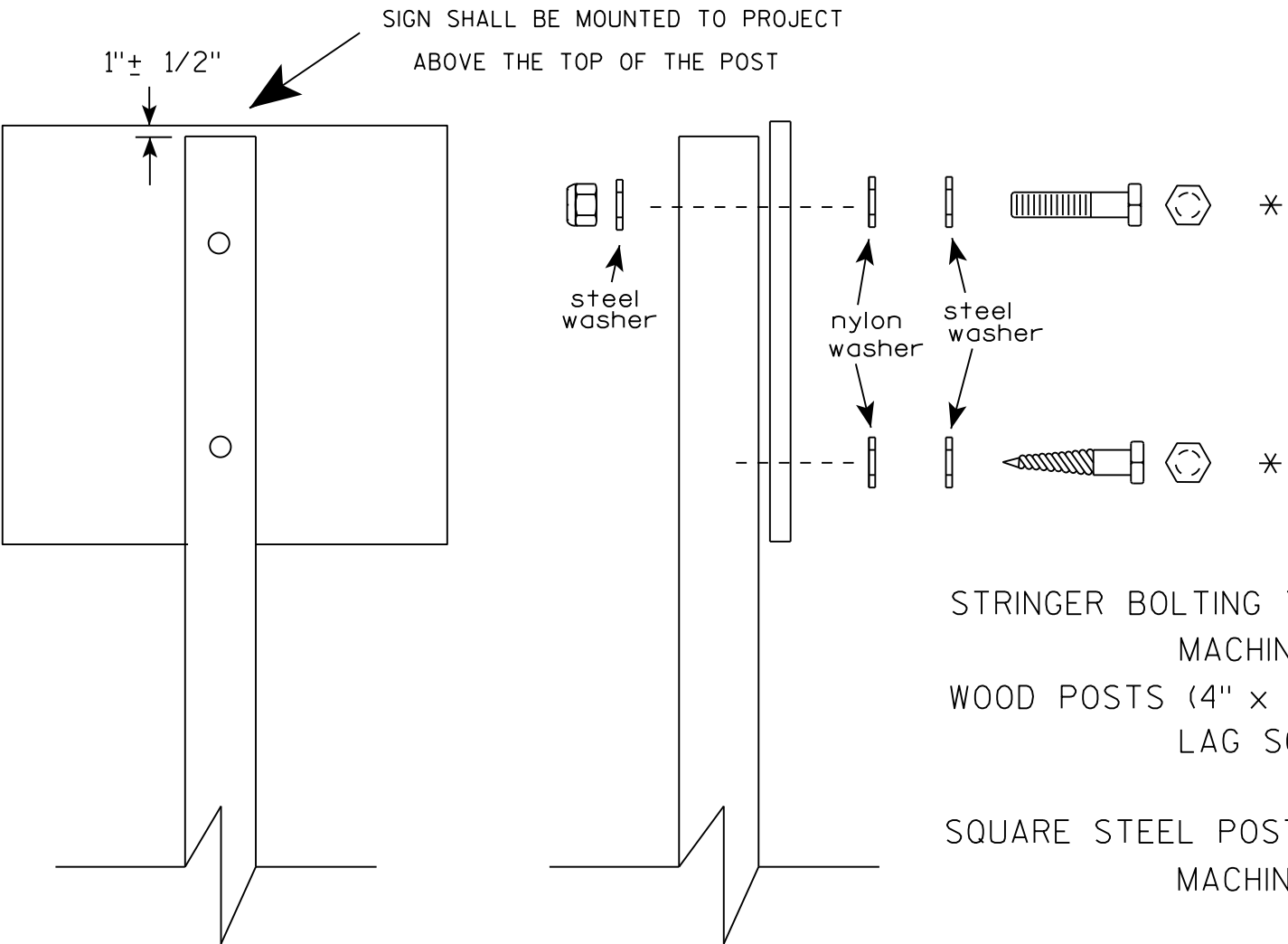
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 8/21/17	PLATE NO. A4-4.15

- GENERAL NOTES
- For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
 - See tables below for required number of posts.
 - For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
 - The (±) tolerance for mounting height is 3 inches.
 - J-Assemblies are considered to be one sign for mounting height.
 - Offset distance shall be consistent with existing signs or consistent throughout length of project.
 - Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 - The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

- * 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.
- ** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.
- *** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.



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

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

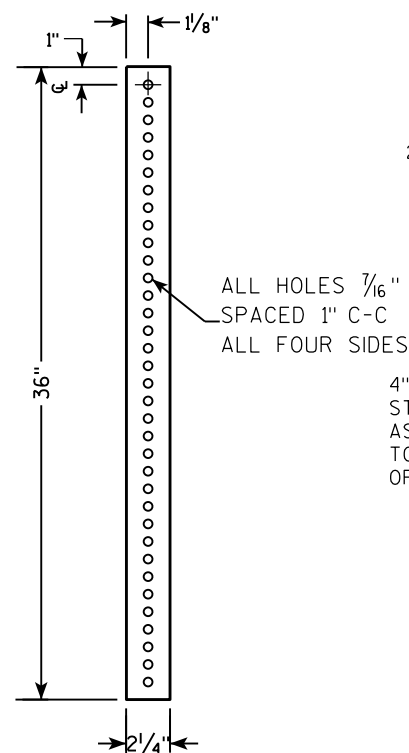
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

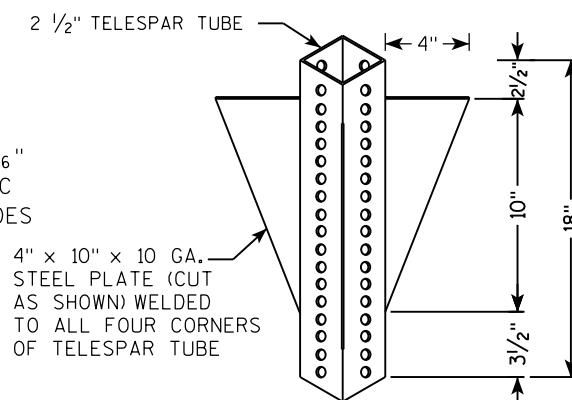
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

ATTACHMENT OF SIGNS TO POSTS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 8/11/16	PLATE NO. A4-8.8

**2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH**



**2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH**



TELESCOPE PIECES
FLUSH AT TOP

18" DIA SCHEDULE
40 PVC
BOX-OUT

36"

13"

18"

2 1/2" GRAVEL OR DIRT

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT

2 1/2" SQUARE X 18"
(SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

2" STEEL TUBULAR
SQUARE UPPER SECTION

ALL HOLES 7/16"
SPACED 1" C-C
ALL FOUR SIDES

SEE SIGN PLATE
A4-8 FOR BOLT
WASHER, & NUT
MATERIAL

SIGN

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

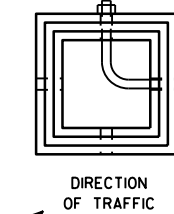
Side View Dimensions:

- Overall height: LENGTH SHOWN ON MISC. QTYS
- Top section: 2" STEEL TUBULAR SQUARE UPPER SECTION
- Telescope pieces: TELESCOPE PIECES FLUSH AT TOP
- Vertical dimensions from ground line: 36", 18", 12"
- Ground level: Indicated by a hatched line with downward arrows labeled 'A'.

End View Details:

- Top: SIGN
- Fasteners: SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
- Upper section: 2" STEEL TUBULAR SQUARE UPPER SECTION
- Holes: ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C
- Material: ALL FOUR SIDES $\frac{3}{8}$ " ZINC PLATED CORNER
- Fasteners: $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
- Anchor spacing: 1"
- Fasteners: $\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT
- Soil stabilizing sleeve: 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
- Post section: 2 1/4" SQUARE X 36"

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthaeus R. Rauch

for State Traffic Engineer

DATE 2/05/15 PLATE NO. A4-9.9

PROJECT NO:

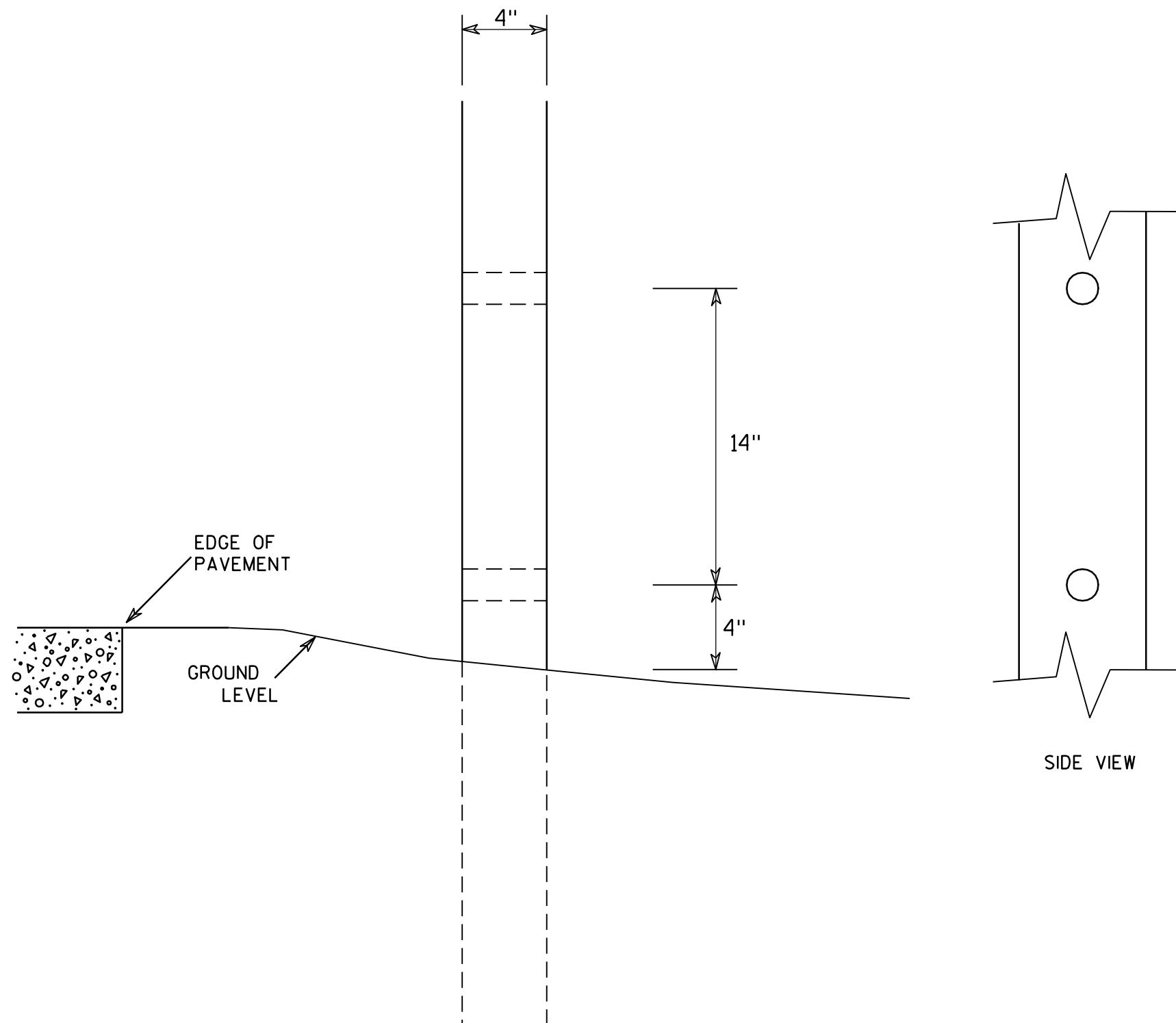
HWY:

COUNTY:

SHEET NO:

E

7



GENERAL NOTES

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

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

PROJECT NO:

HWY:

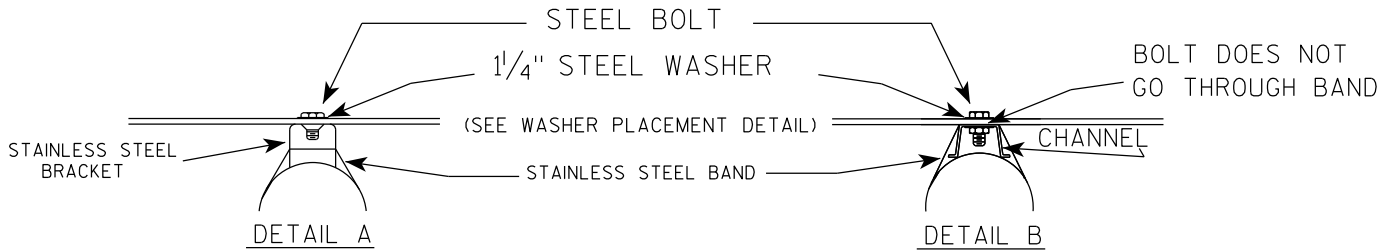
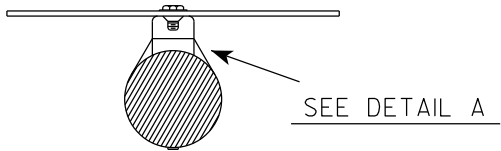
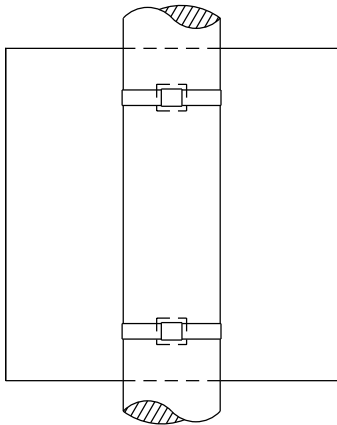
COUNTY:

SHEET NO:

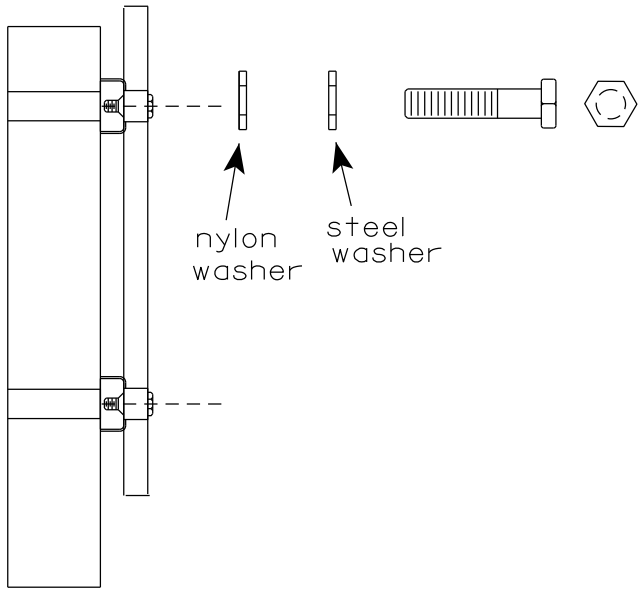
E

BANDING

SINGLE SIGN



WASHER PLACEMENT

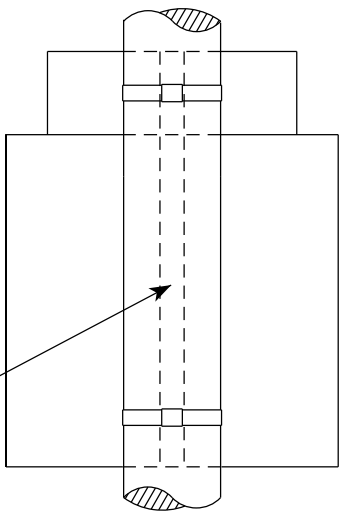


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

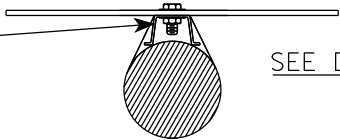
GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.
4. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM designation: B 633, Type III, SC 3

"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

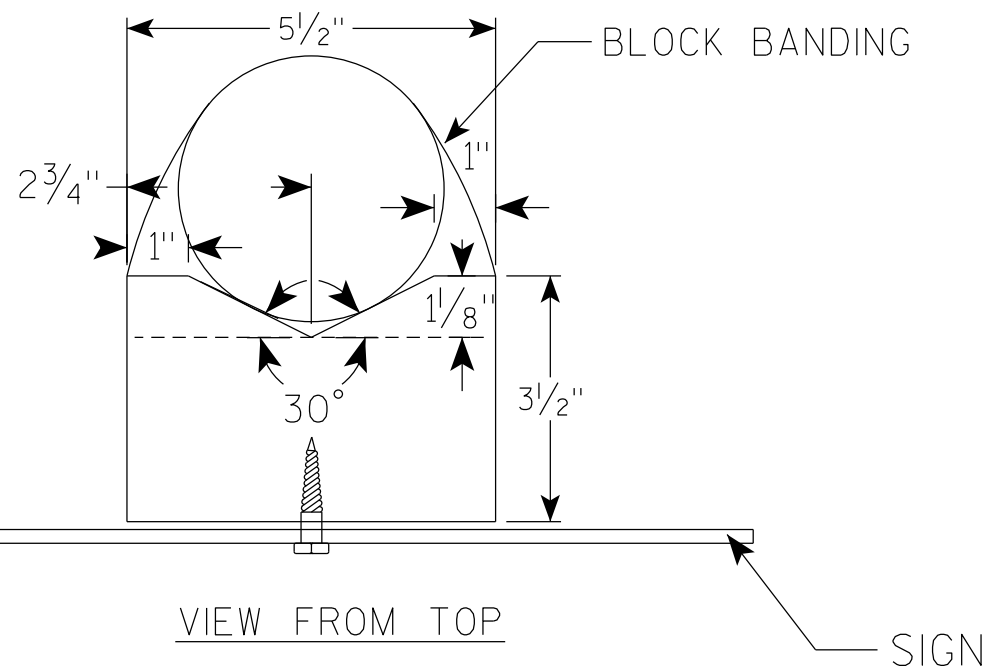
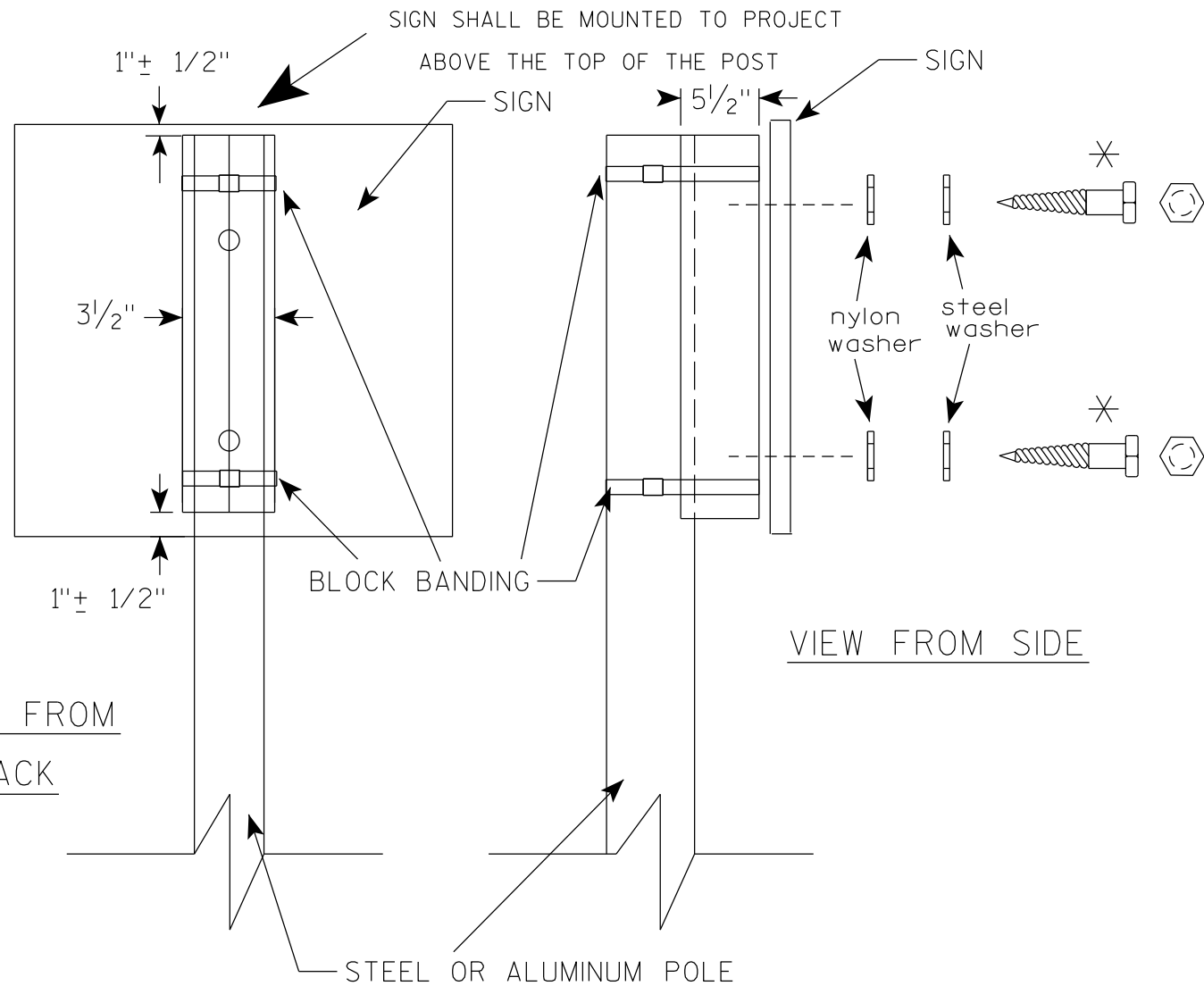


STANDARD SIGN
SIGN BANDING DETAILS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/10/19 PLATE NO. A5-9.4

VIEW FROM
BACK



GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, $\frac{3}{4}$ " WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORMALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
 - a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D
 - b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ "
8. NYLON WASHERS SHALL BE $1\frac{1}{4}$ " O.D. X $\frac{3}{8}$ " I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE $\frac{3}{8}$ " X $2\frac{1}{2}$ "

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

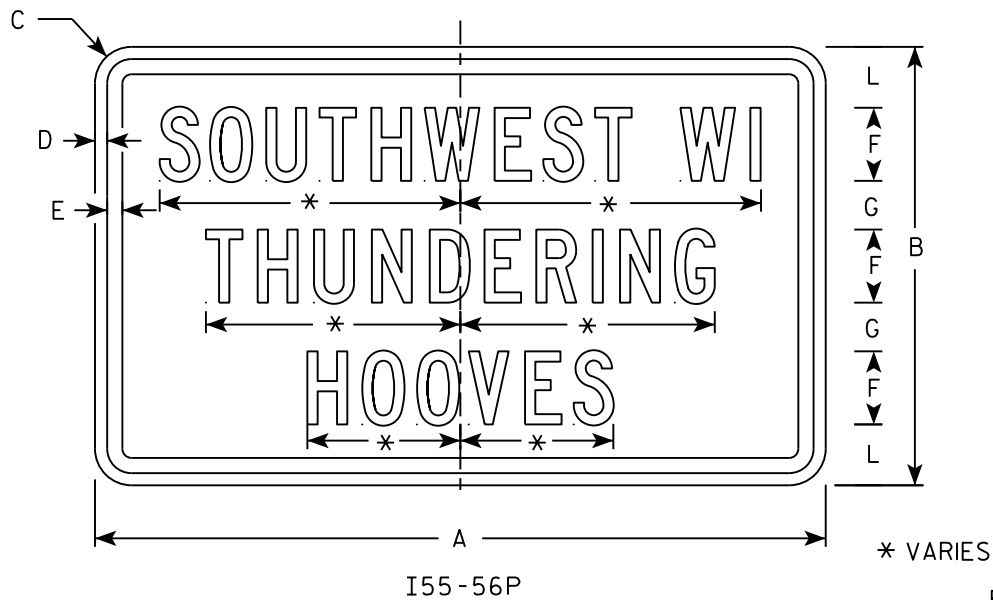
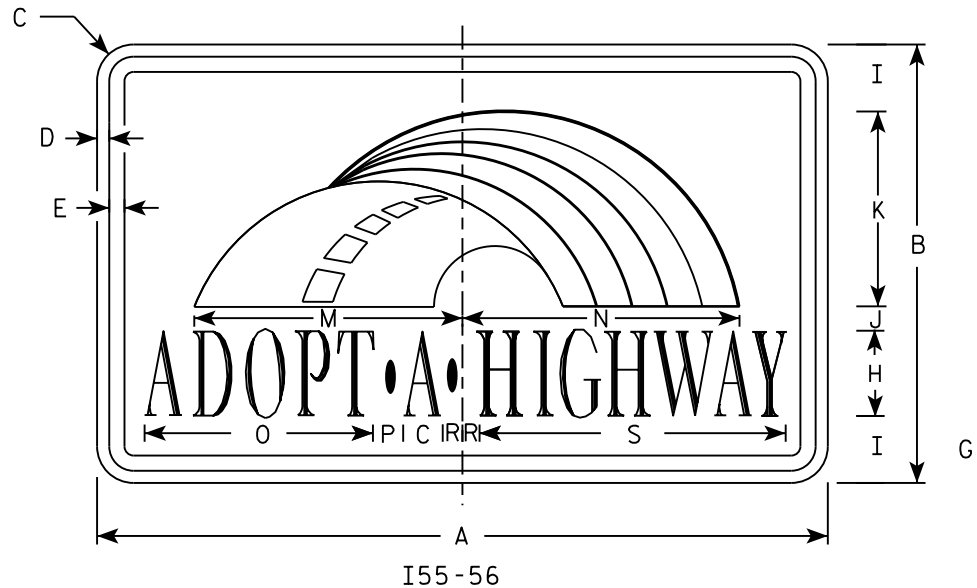
APPROVED Matthew R. Rauch
for State Traffic Engineer

DATE 6/10/19 PLATE NO. A5-10.2

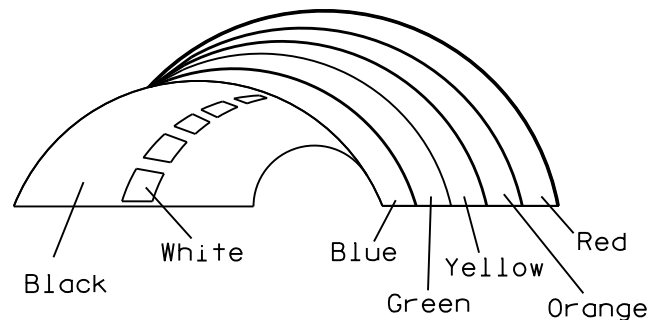
PROJECT NO:

SHEET NO:

E



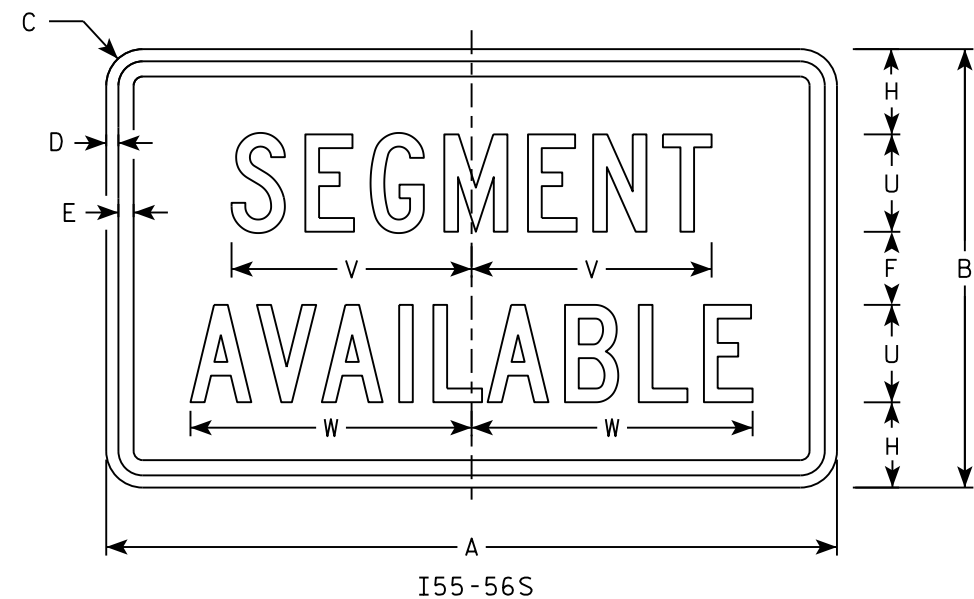
Background Colors of Symbol*



*1/4" Black Border between each color of rainbow and border of rainbow

NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - (See Note 4)
3. Message Series - (See Note 5)
4. Border - Blue
Adopt a Highway - Red
All other Text - Blue
5. Adopt a Highway - Dutch 8011L
All other Text - Series C
6. Contractor shall provide and install a new post bracket in accordance with the I55-56B sign detail.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	18	1 1/2	1/2	5/8	3	2	3 1/2	2 3/4	1	8	2 1/2	11 1/4	11 1/8	9 3/8	1 1/4		3/4	12 5/8	7 1/2	4	9 7/8	11 1/2				3.75
3																											
4																											
5																											

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

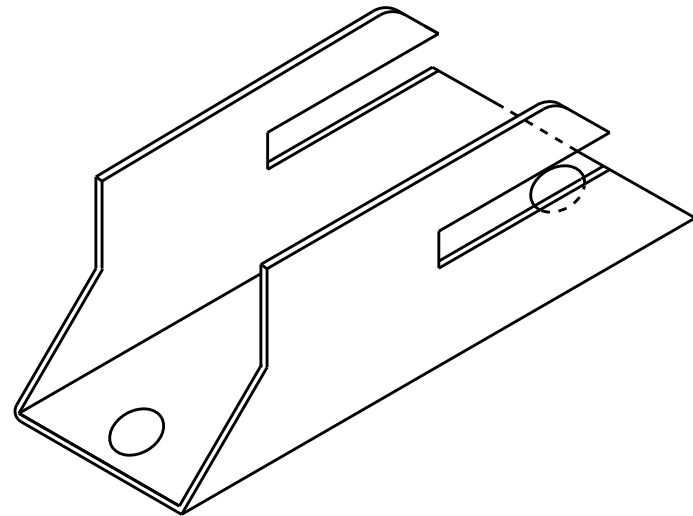
STANDARD SIGN
I55-56

WISCONSIN DEPT OF TRANSPORTATION

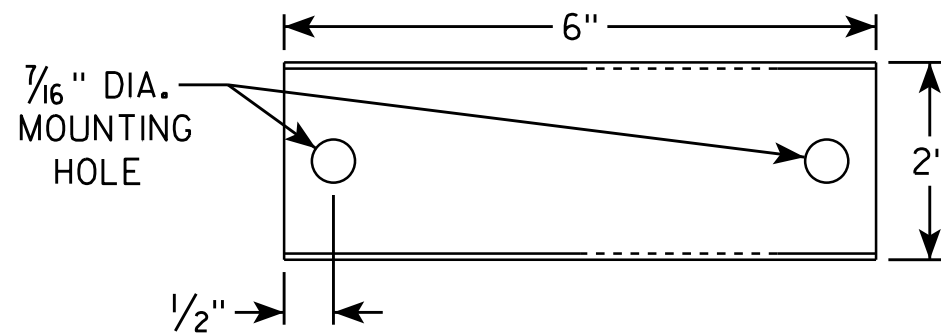
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/20/18 PLATE NO. I55-56.4

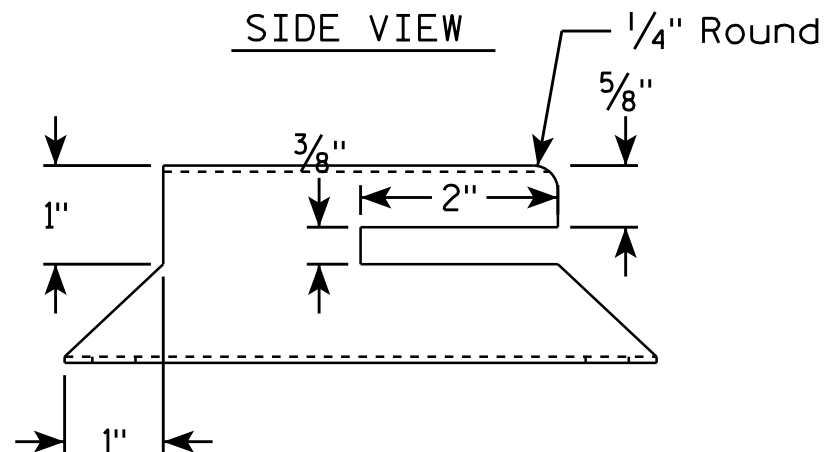
ISOMETRIC VIEW



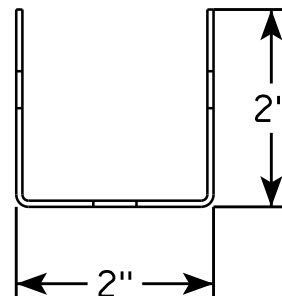
TOP VIEW



SIDE VIEW



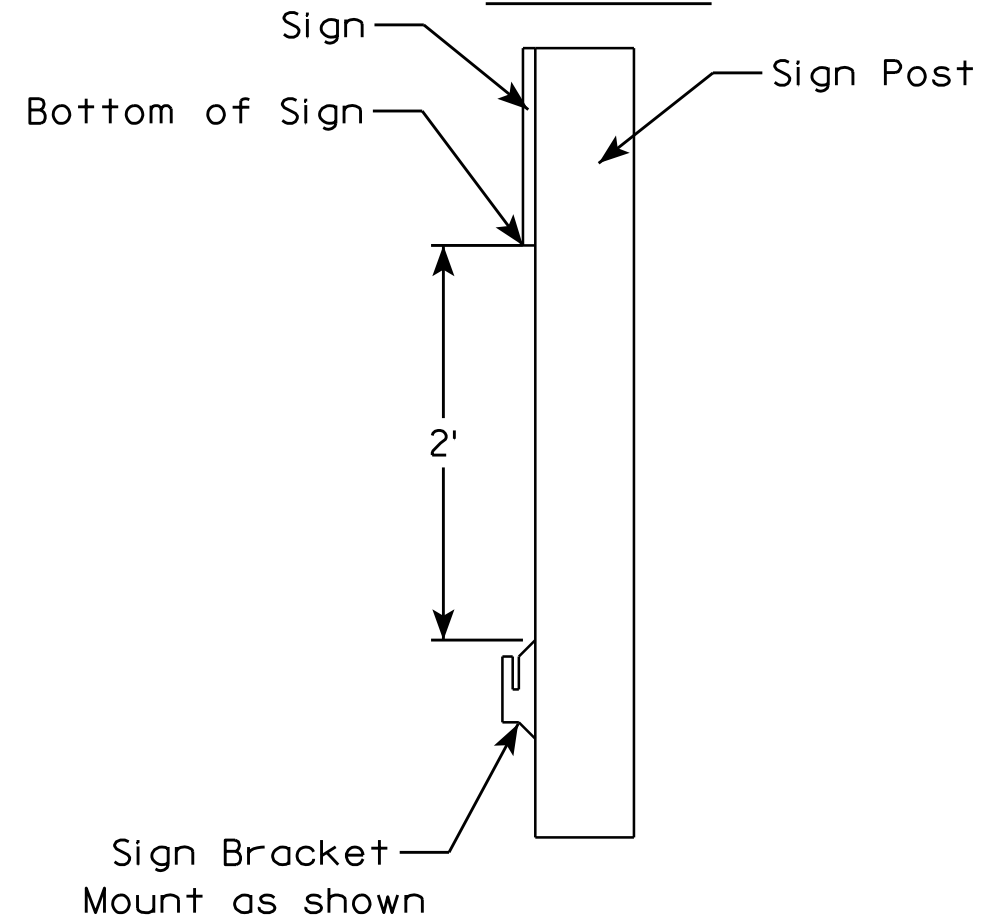
END VIEW



NOTES

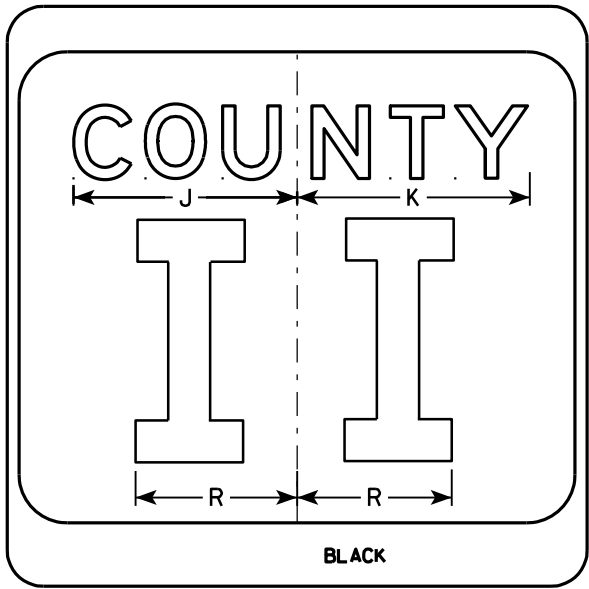
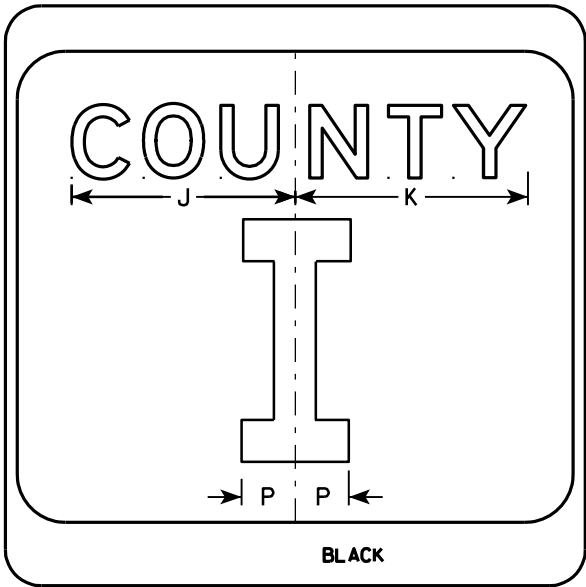
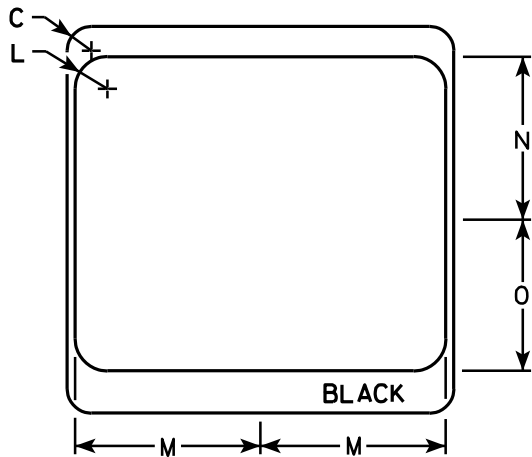
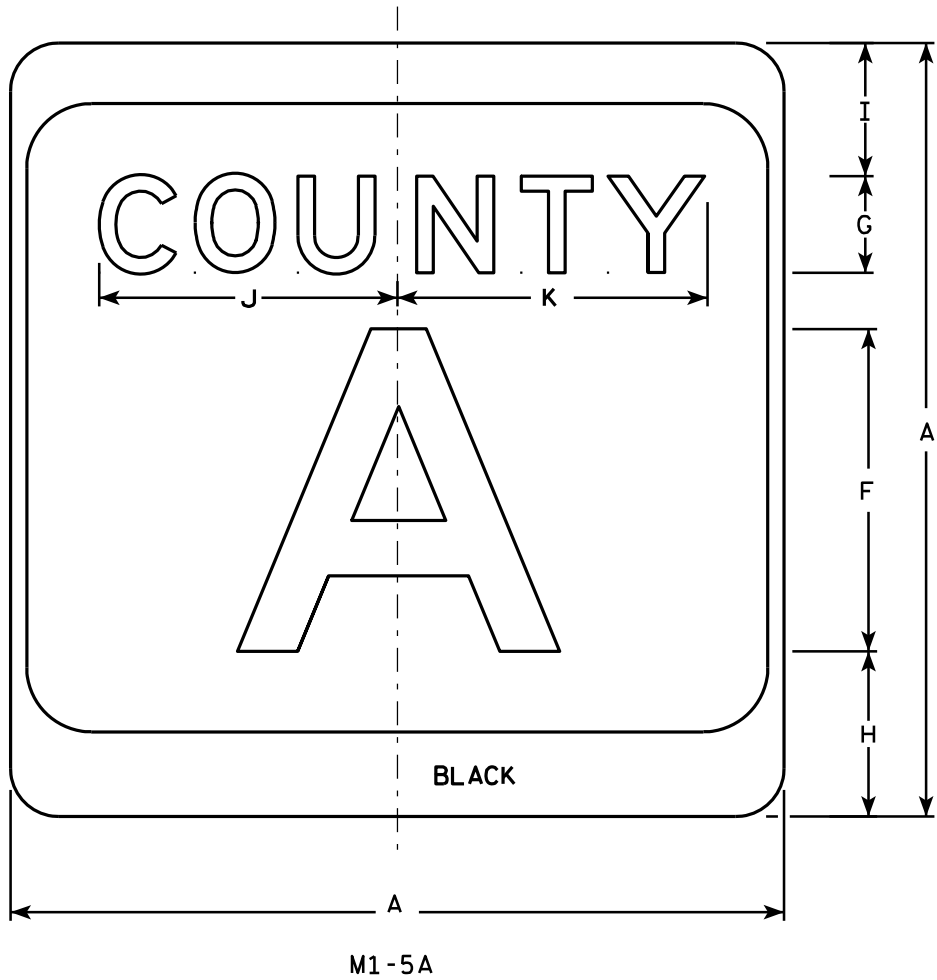
1. Must be capable of permanent attachment to a wood or steel channel sign post utilizing the fastening hardware specified on the A4-8 sign plate.
2. Shall be entirely primed and painted with two coats of a black powder coated enamel paint.
3. Shall be made with 12 gauge steel, and incorporate no welds, no hinged components, no threaded lock-type components, and no parts which are loose or can be separated from the main body.
4. Shall have rounded edges with at least 1/8" radii.
5. Shall not have unrounded and uncoated metal edges which can contact the back surface of the roll-up sign.
6. Top of bracket shall be mounted 2' below the bottom of the I55-56 sign.
7. Cost of bracket and fastening hardware shall be incidental to the I55-56 sign.

SIDE VIEW



ROLLUP SIGN BRACKET I55-56B	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 4/26/16	PLATE NO. I55-56B.2

7



NOTES

1. Sign is Type II - see Note 7 - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 7
Message - Black
3. Message Series - see Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Message Series E for 1 letter.
Message Series D for 2 letters unless message is too big then Series C.
Message Series C for 3 letters unless message is too big then Series B.
6. Substitute appropriate letters & optically center to achieve proper balance.
7. Permanent Signs
Background - Type H Reflective
Detour or temporary Signs
Background - Reflective

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24		1 1/2			10	3	5 1/8	4 1/8	9 1/4	9 5/8	2	11 1/2	10 1/8	9 3/8	2 1/4		6 5/8									4.0
3	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
4	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0
5	36		2 1/4			16	4	7 5/8	5 5/8	12 1/4	12 7/8	3	17 1/8	15 1/4	14	3 3/8		10									9.0

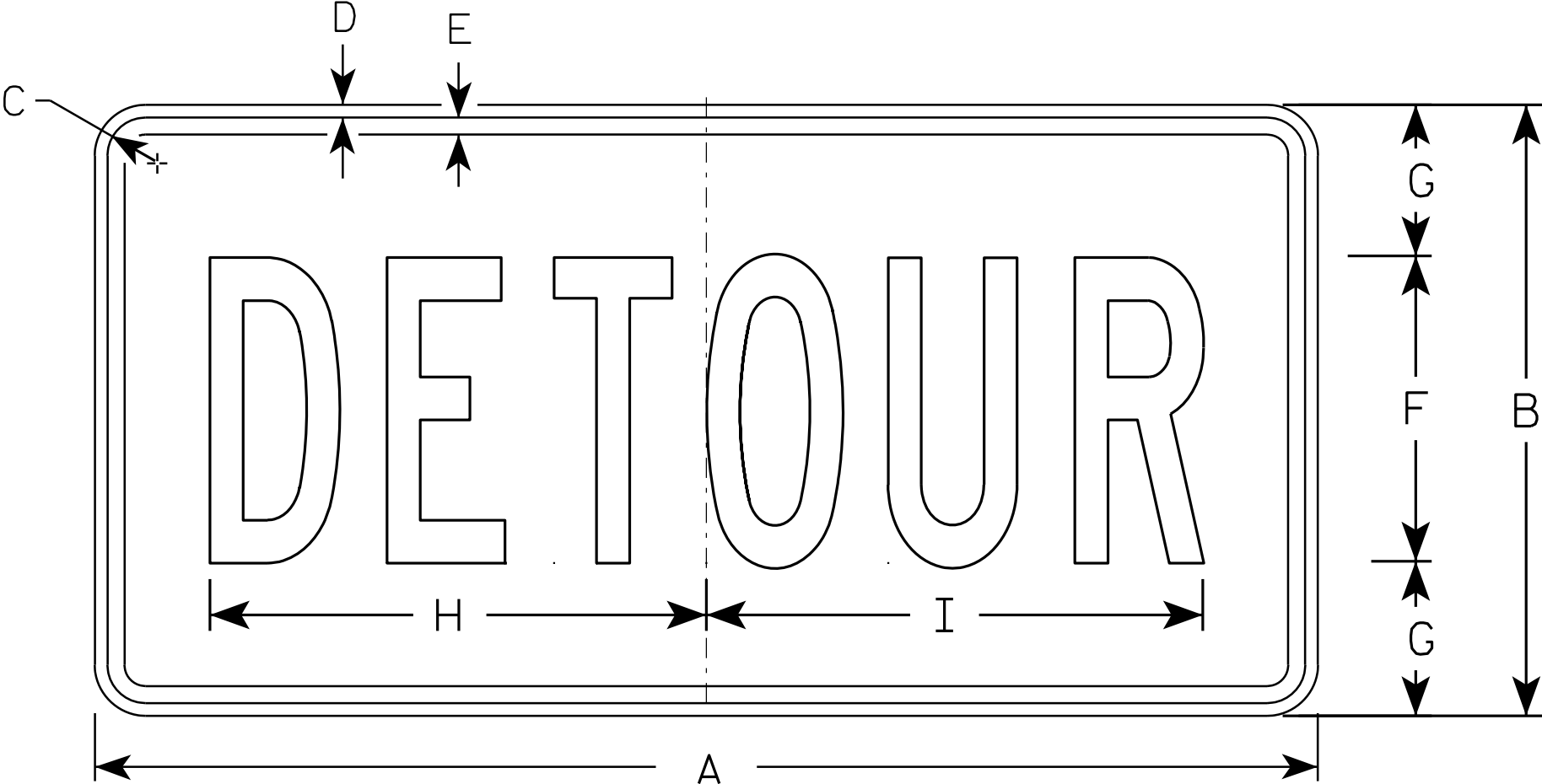
CTH MARKER	
M1-5A FOR ASSEMBLIES	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> For State Traffic Engineer
DATE 9/27/11	PLATE NO. M1-5A.8

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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7

NOTES

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



M4 - 8

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	3	10	10 1/4																		2.0
3	36	18	1 1/8	3/8	1/2	9	4 1/2	14 5/8	14 1/2																		4.5
4																											
5																											

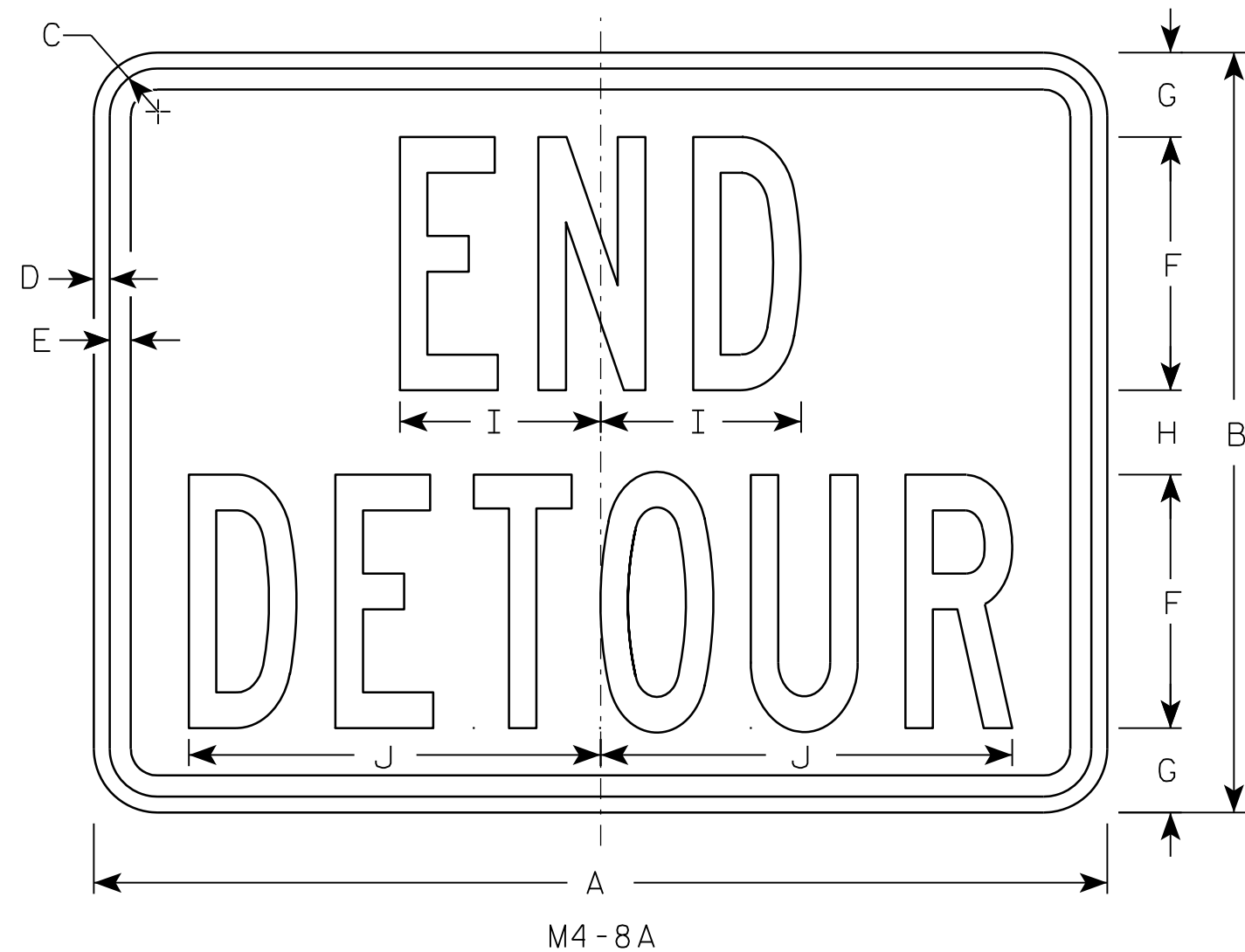
STANDARD SIGN
M4 - 8

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 11/10/10 PLATE NO. M4-8.2

7



NOTES

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

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	18	1 1/8	3/8	1/2	6	2	2	4 3/4	9 3/4																	3.0
3	30	24	1 1/8	3/8	1/2	8	2 1/2	3	6 3/4	13																	5.0
4																											
5																											

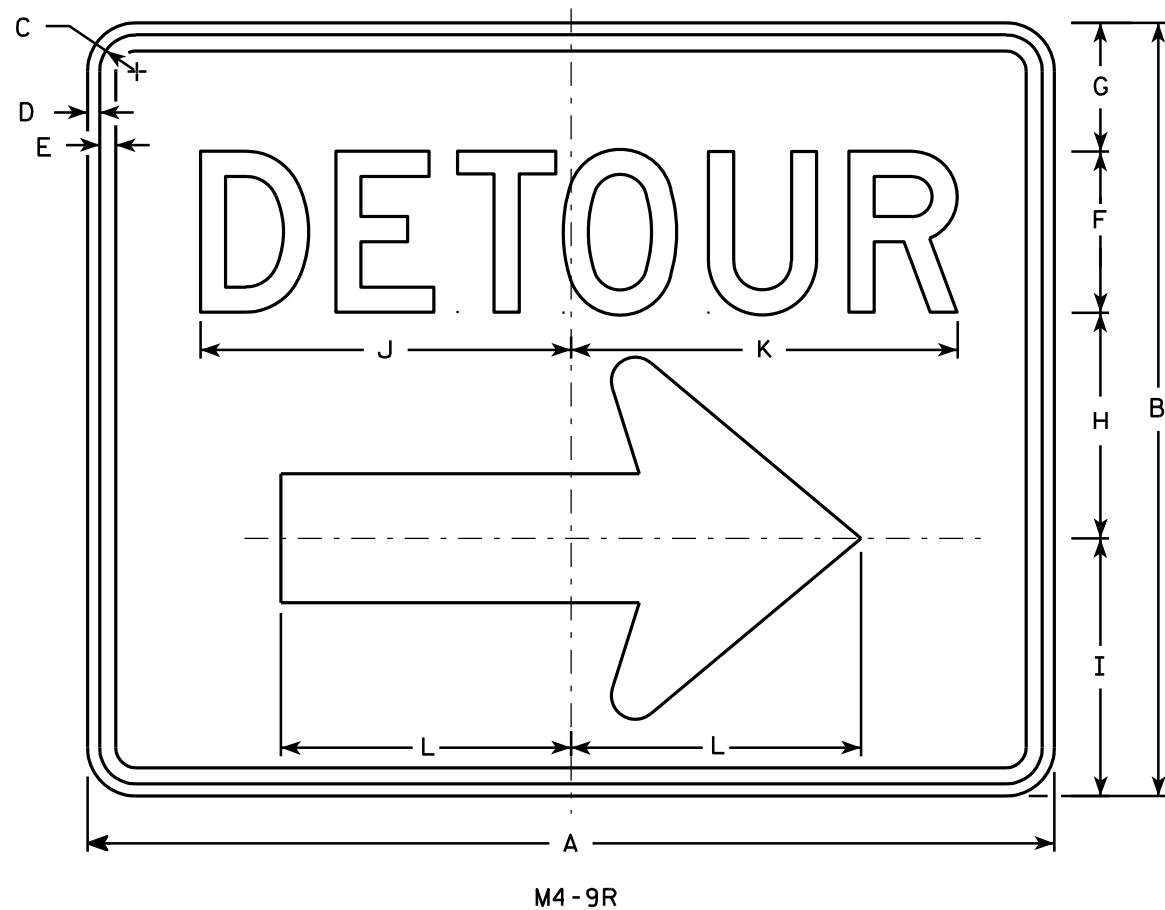
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M4-8A

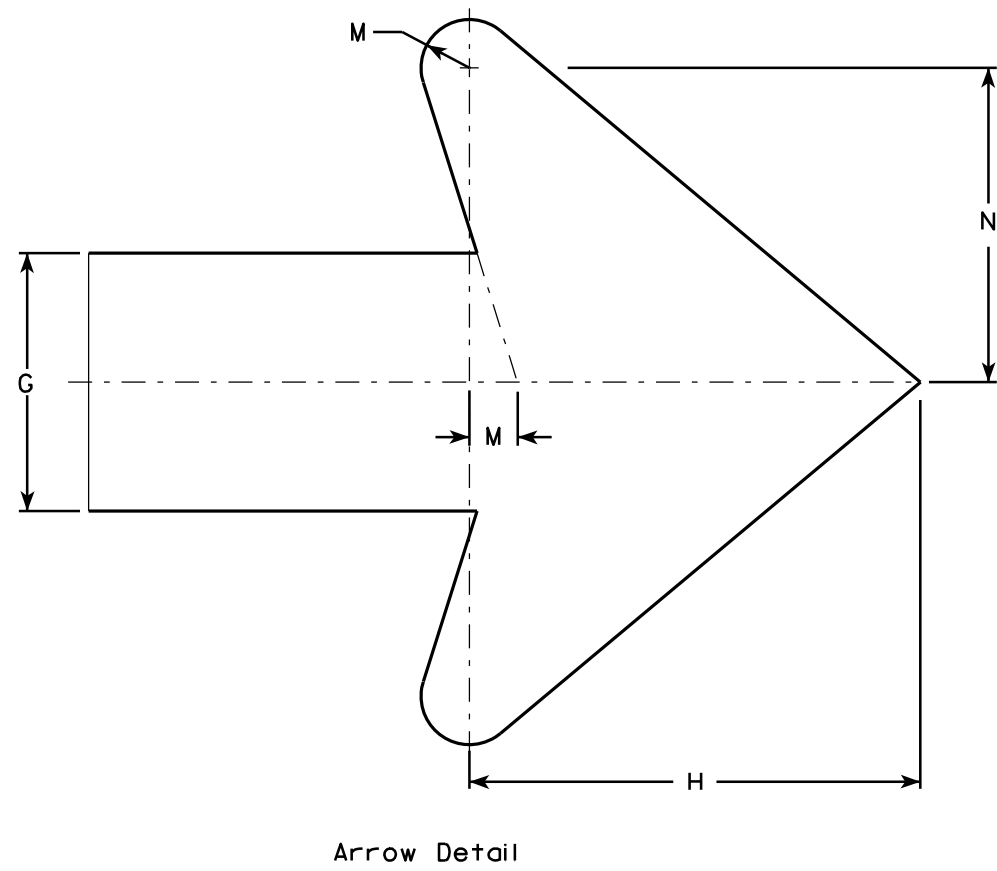
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-8A.2



- NOTES**
1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
 2. Color:
Background - Orange
Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. M4-9L is the same as M4-9R except the arrow is reversed.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
3	30	24	1 1/8	3/8	1/2	5	4	7	8	11 1/2	12	9	3/4	4 7/8													5.00
4	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0
5	48	36	1 3/8	1/2	5/8	8	6	10 1/2	11 5/8	20 5/8	20 1/2	13 1/4	1 1/8	6 7/8													12.0

STANDARD SIGN
M4-9 R & L

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/9/11 PLATE NO. M4-9R.4

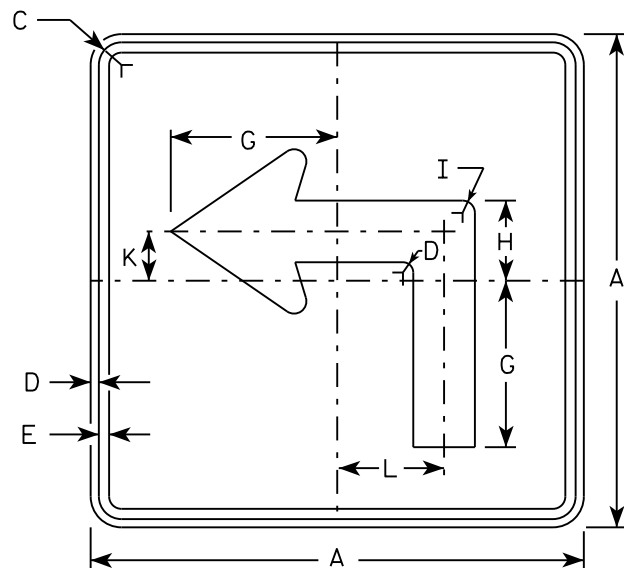
PROJECT NO:

HWY:

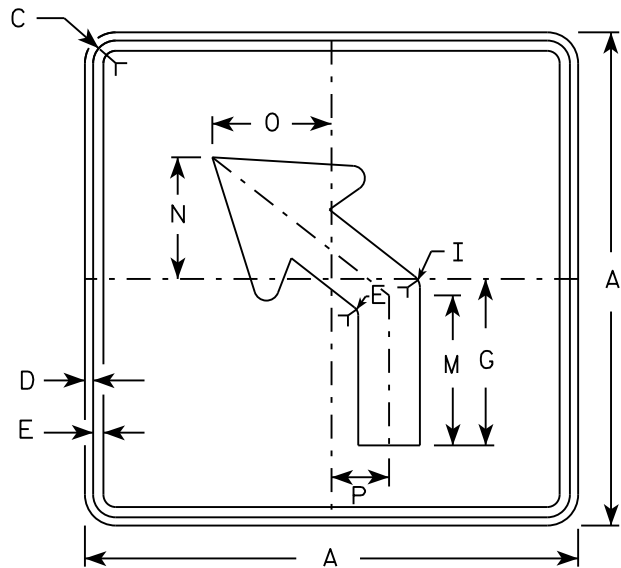
COUNTY:

SHEET NO:

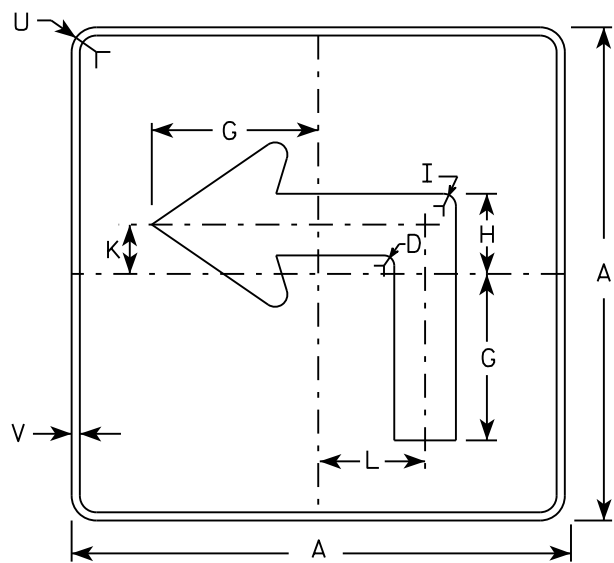
E



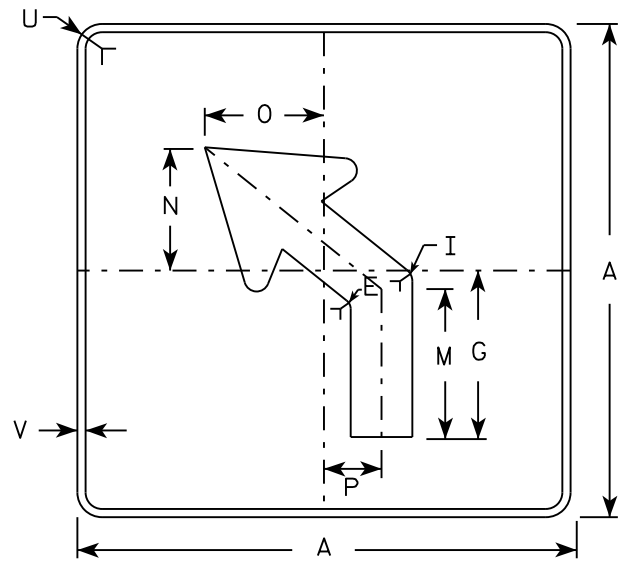
M5-1L
MM5-1L
M05-1L
MP5-1L



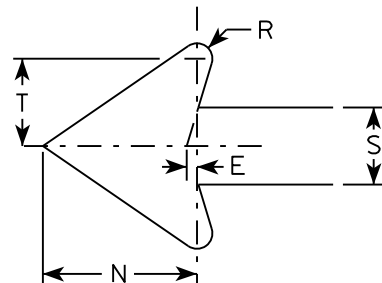
M5-2L
MM5-2L
M05-2L
MP5-2L



MB5-1L
MK5-1L
MN5-1L
MR5-1L



MB5-2L
MK5-2L
MN5-2L
MR5-2L



NOTES

- Signs are Type II - Type H reflective except as shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M5-1 and M5-2 Background - White
Message - Black
MB5-1 and MB5-2 Background - Blue
Message - White
MK5-1 and MK5-2 Background - Green
Message - White
MM5-1 and MM5-2 Background - White
Message - Green
MN5-1 and MN5-2 Background - Brown
Message - White
M05-1 and M05-2 Background - Orange - Type F Reflective
Message - Black
MP5-1 and MP5-2 Background - White - Type H Reflective
Message - Blue
MR5-1 and MR5-2 Background - Brown
Message - Yellow
- M5-1R same as M5-1L except arrow points right.
- M5-2R same as M5-2L except arrow tilts right.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7	3 3/8	5/8		2 1/8	4 1/2	6 3/8	5 1/4	5	2 1/2		1/2	2 5/8	3	1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 1/8	4 7/8	7/8		3	6 1/2	9 1/8	7 1/2	7 1/4	3 1/2		3/4	3 3/4	4 1/4	1 7/8	1/2					6.25

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

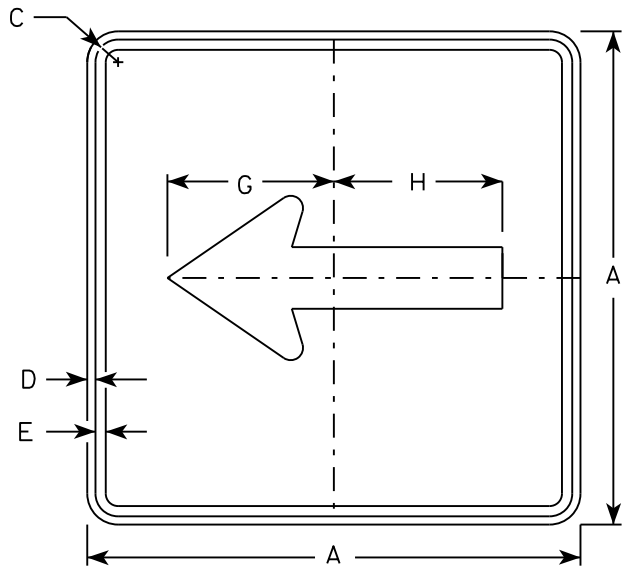
E

STANDARD SIGN
M5-1 & M5-2

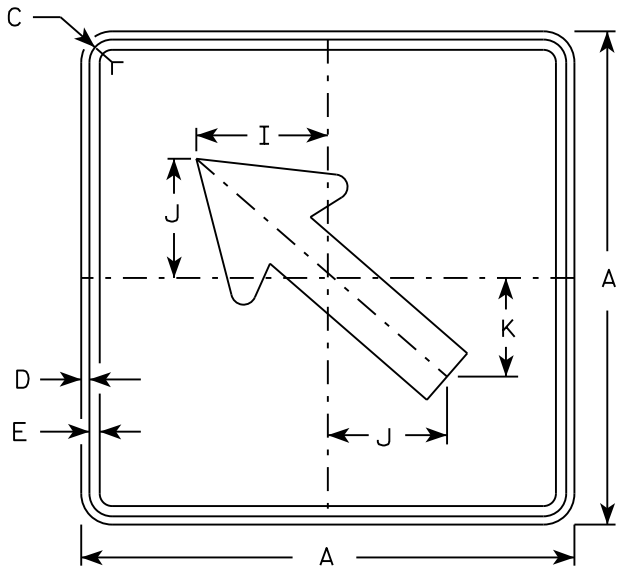
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

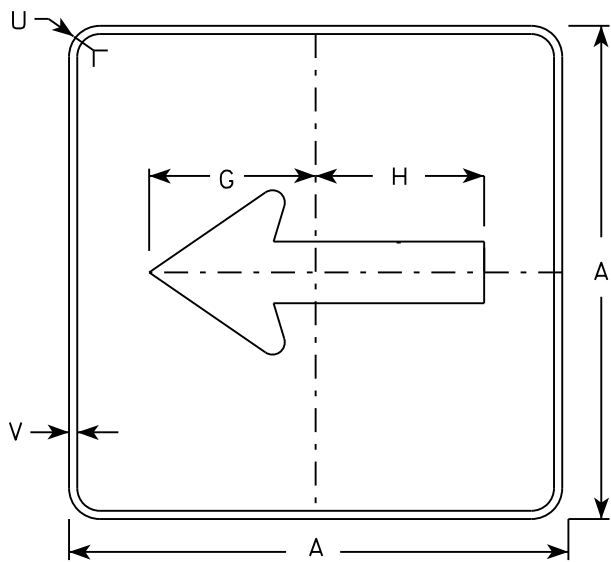
DATE 10/15/15 PLATE NO. M5-1.13



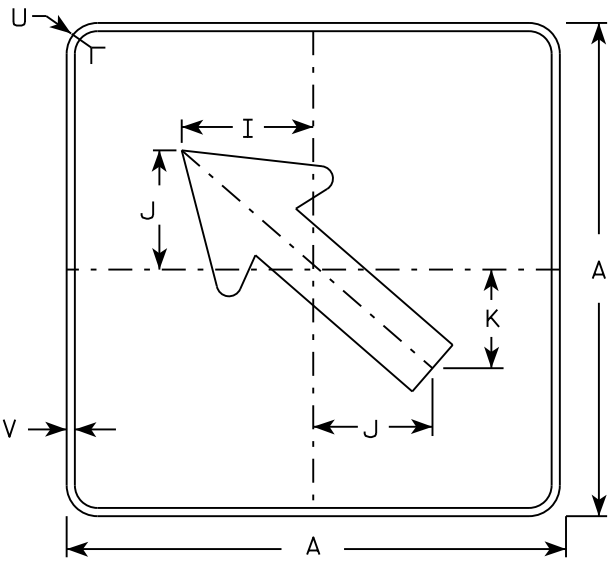
M6 - 1
MM6 - 1
M06 - 1
MP6 - 1



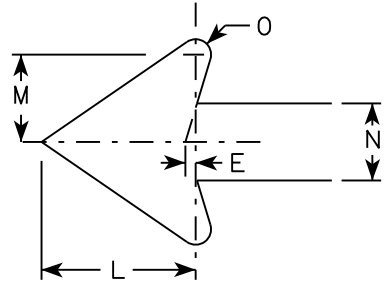
M6 - 2
MM6 - 2
M06 - 2
MP6 - 2



MB6 - 1
MK6 - 1
MN6 - 1
MR6 - 1



MB6 - 2
MK6 - 2
MN6 - 2
MR6 - 2



NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See note 4
Message - See note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-1 and M6-2 Background - White
Message - Black
MB6-1 and MB6-2 Background - Blue
Message - White
MK6-1 and MK6-2 Background - Green
Message - White
MM6-1 and MM6-2 Background - White
Message - Green
MN6-1 and MN6-2 Background - Brown
Message - White
M06-1 and M06-2 Background - Orange - Type F Reflective
Message - Black
MP6-1 and MP6-2 Background - White
Message - Blue
MR6-1 and MR6-2 Background - Brown
Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	7 1/8	5 5/8	5	4 1/4	5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	10 1/4	8	7 1/4	6	7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

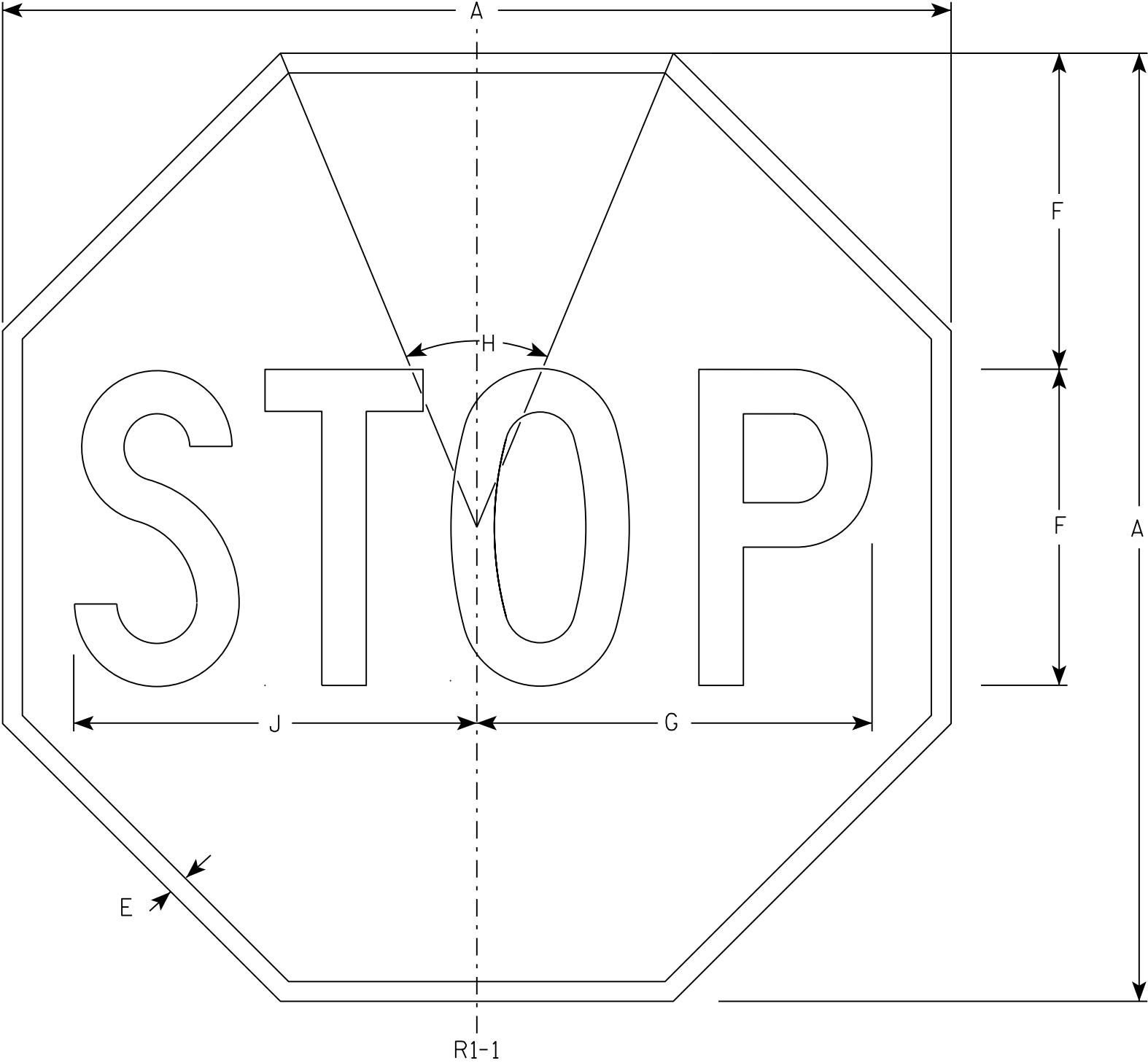
STANDARD SIGN
M6 - 1 & M6 - 2
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-1.15

7



NOTES

- 1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
Background - Red
Message - White
- 3. Message Series - C

7

R1-1

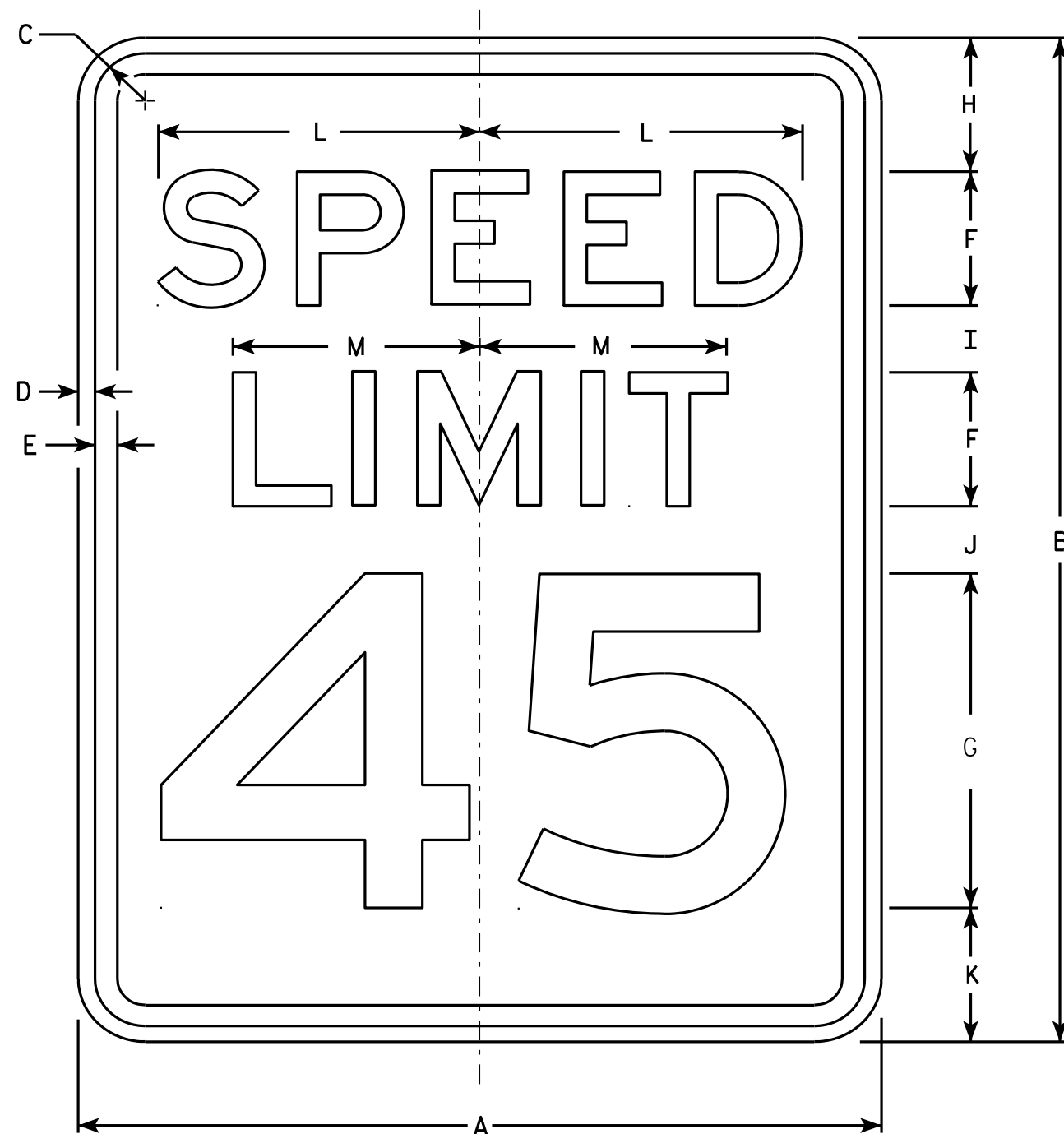
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2S	30				5/8	10	12 1/2	45°		12 3/4																	5.18
2M	36				3/4	12	15	45°		15 3/8																	7.46
3	36				3/4	12	15	45°		15 3/8																	7.46
4	48				1	16	20	45°		20 1/2																	13.25
5	48				1	16	20	45°		20 1/2																	13.25
6	18				3/8	6	7 3/4	45°		7 3/4																	1.86
7	12				1/4	4	5	45°		5 1/8																	0.78

STANDARD SIGN
R1 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.13



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

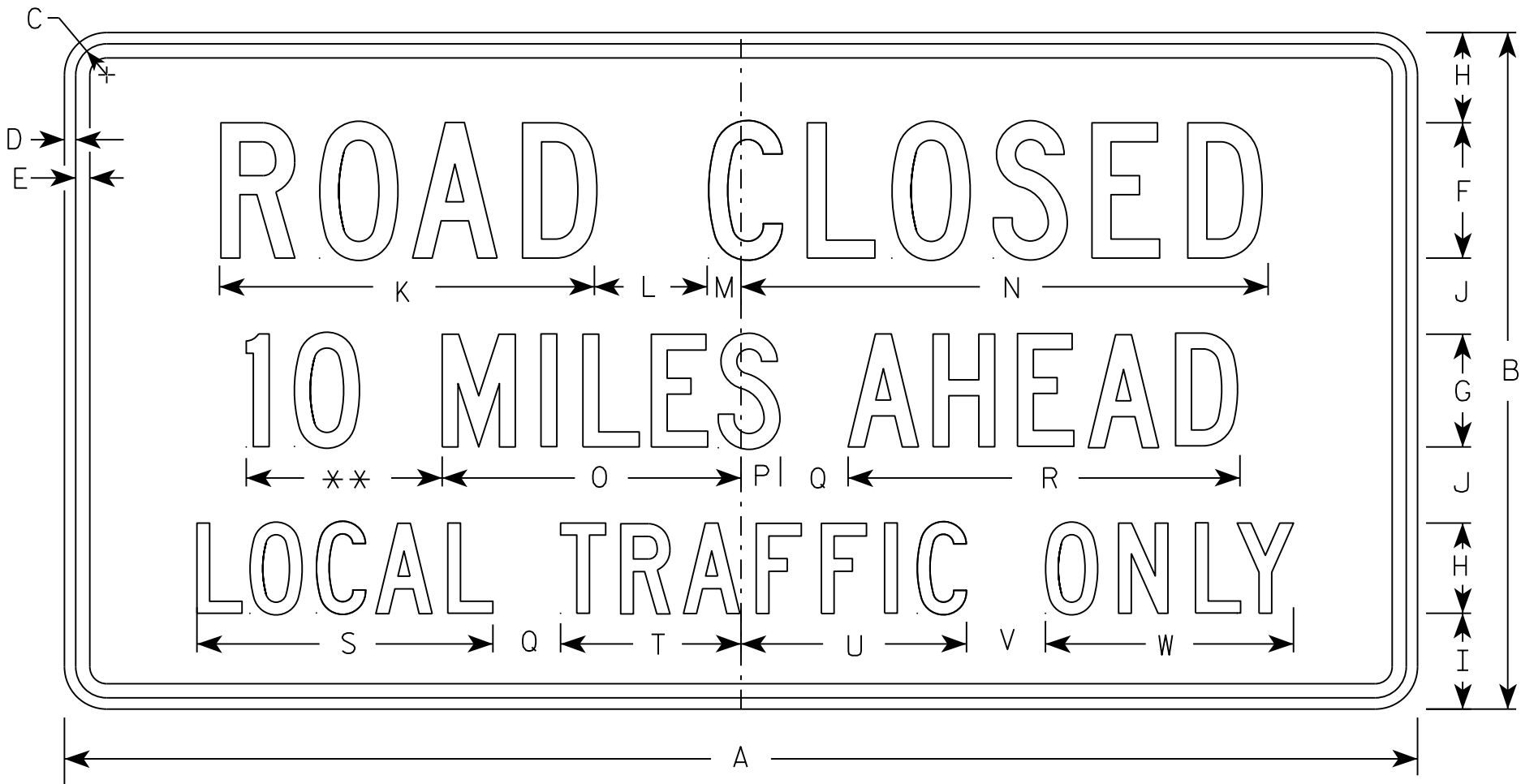
STANDARD SIGN R2-1

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E

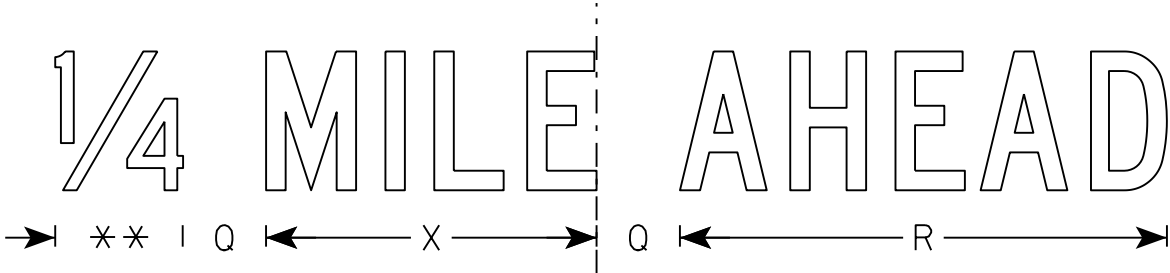
NOTES

- 1. Sign is Type II - Type H Reflective
- 2. Color:
 - Background - White
 - Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Substitute appropriate numerals to nearest quarter mile and optically adjust spacing to achieve proper balance.



R11-3

** See Note 5

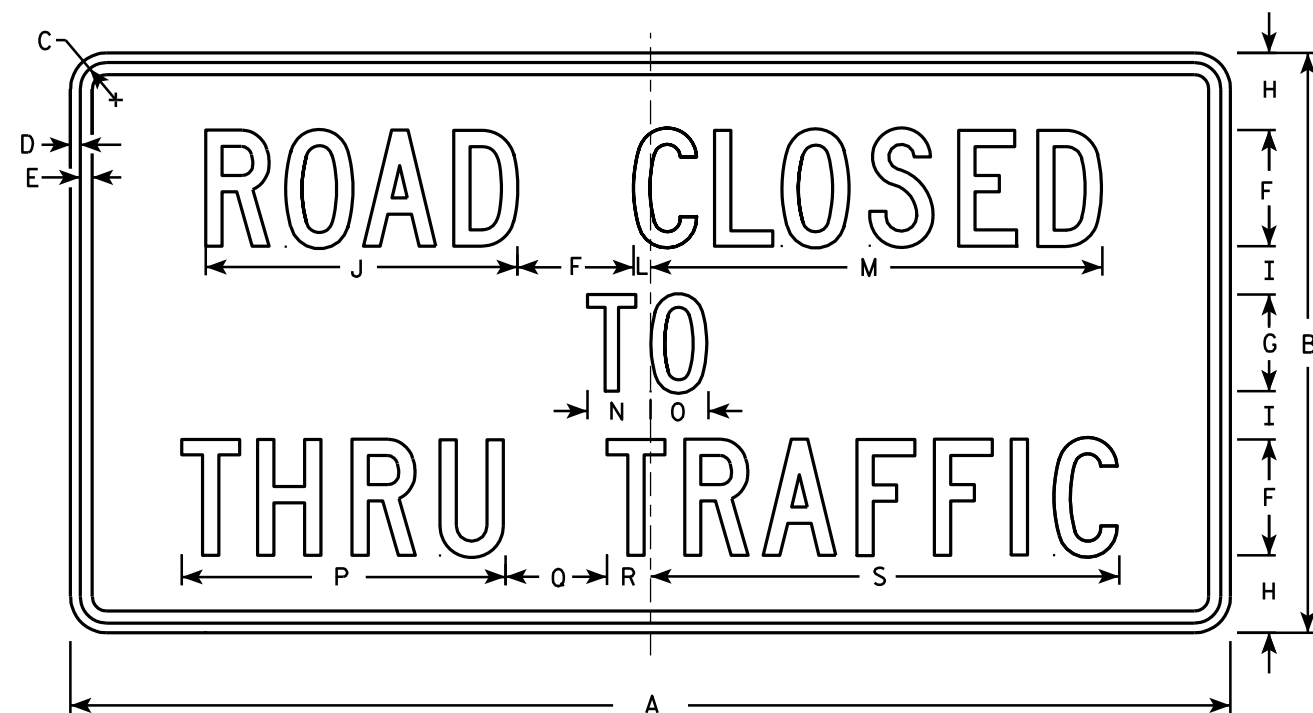


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 3/8	1/2	5/8	4	3	2 1/2	2	2	11 1/8	3	1 1/8	15 1/4	8	1 1/2	2	10 3/4	8 3/8	4 3/4	6 1/2	2	6 3/4	7 1/8			4.5
2S	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
2M	60	30	1 3/8	1/2	5/8	6	5	4	4 1/4	3 3/8	16 5/8	5	1 1/2	23	13 1/4	1 3/4	3	17 3/8	13 1/8	8	10	3 1/2	11	11 7/8			12.5
3																											
4																											
5																											

STANDARD SIGN
R11-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 3/15/17 PLATE NO. R11-3.8



R11-4

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	60	30	1 3⁄8	1⁄2	5⁄8	6	5	4	2 1⁄2	16 1⁄8		7⁄8	23 3⁄8	3 1⁄4	3	16 3⁄4	5 1⁄4	2 1⁄4	24 1⁄4								12.5
2M	60	30	1 3⁄8	1⁄2	5⁄8	6	5	4	2 1⁄2	16 1⁄8		7⁄8	23 3⁄8	3 1⁄4	3	16 3⁄4	5 1⁄4	2 1⁄4	24 1⁄4								12.5
3																											
4																											
5																											

STANDARD SIGN
R11 - 4

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-4.3

PROJECT NO:

HWY:

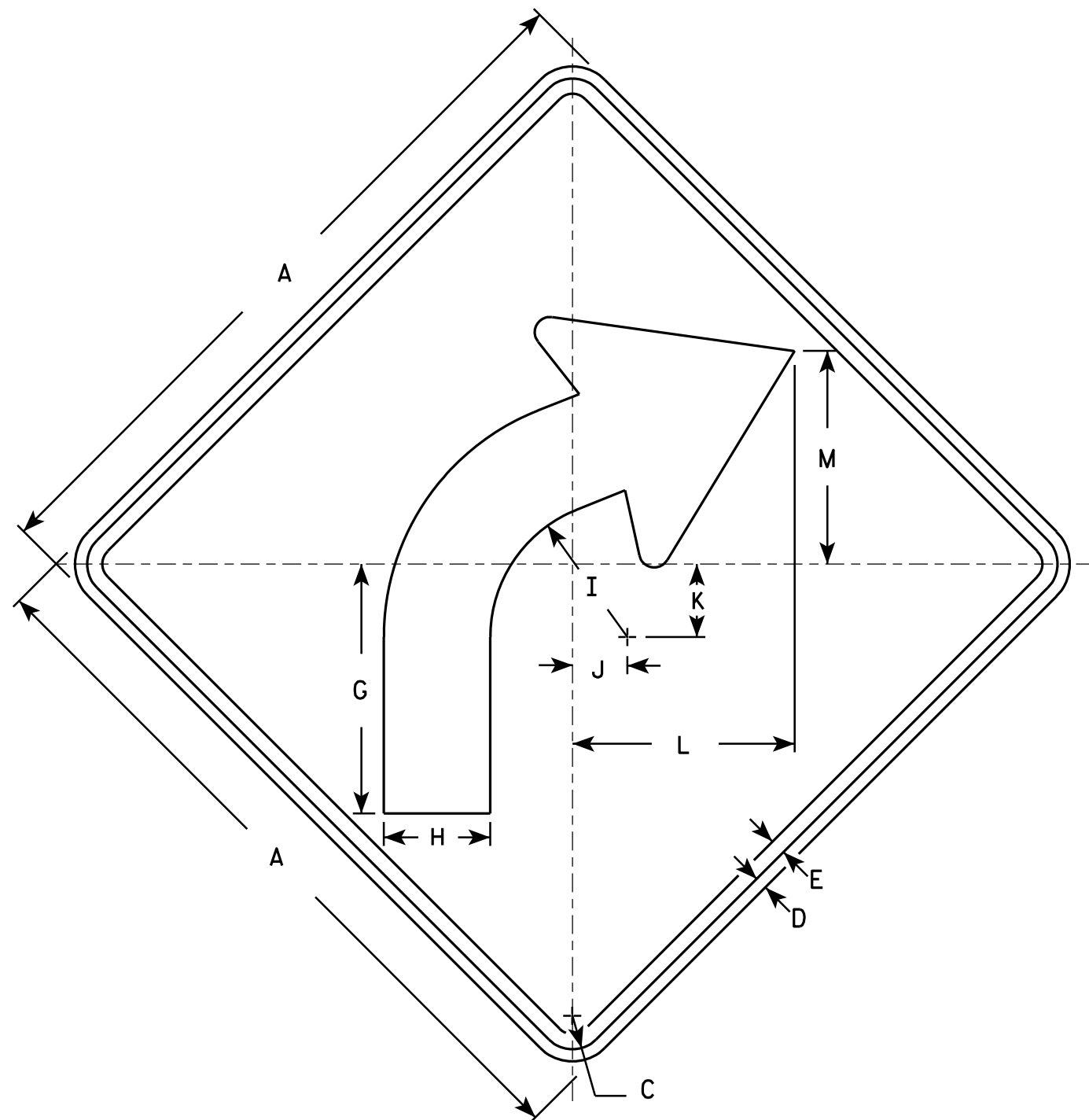
COUNTY:

SHEET NO:

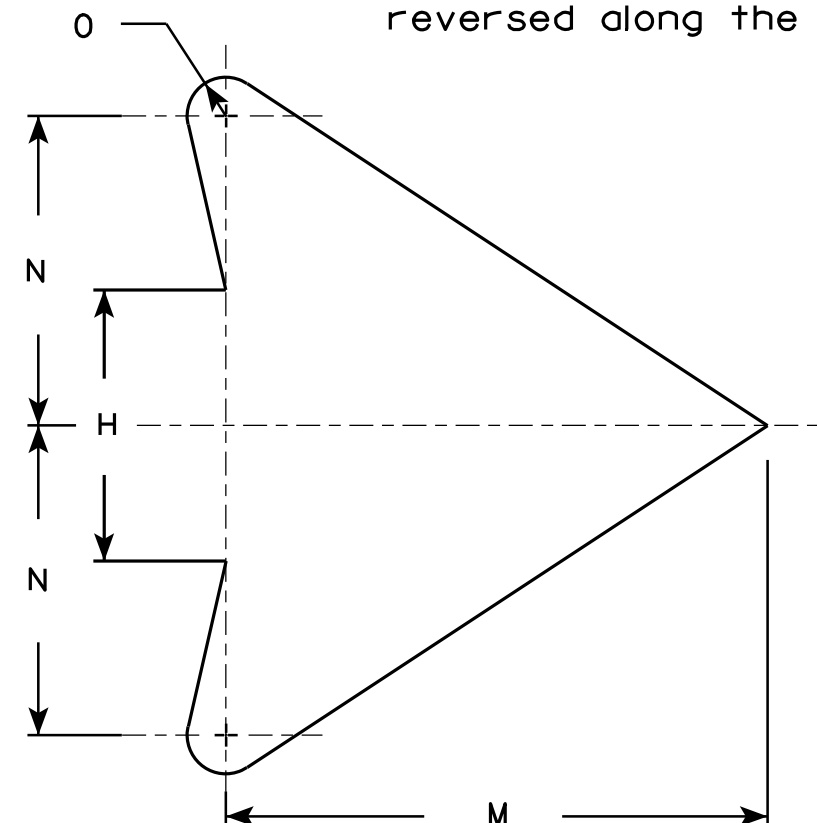
E

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W1-2L is the same as W1-2R except the arrow is reversed along the vertical centerline.



W1-2R



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2		8 1/4	3 1/2	4 1/2	1 3/4	2 3/8	7 1/4	7	4	1/2												4.0
2S	30		1 3/8	1/2	5/8		10 1/4	4 3/8	5 5/8	2 1/4	3	9 1/8	8 3/4	5	5/8												6.25
2M	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
3	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
4	36		1 5/8	5/8	3/4		12 3/8	5 1/4	6 3/4	2 5/8	3 1/2	10 7/8	10 1/2	6	3/4												9.0
5	48		2 1/4	3/4	1		16 1/2	7	9	3 1/2	4 5/8	14 1/2	14	8	1												16.0

STANDARD SIGN

W1-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/15/12 PLATE NO. W1-2.10

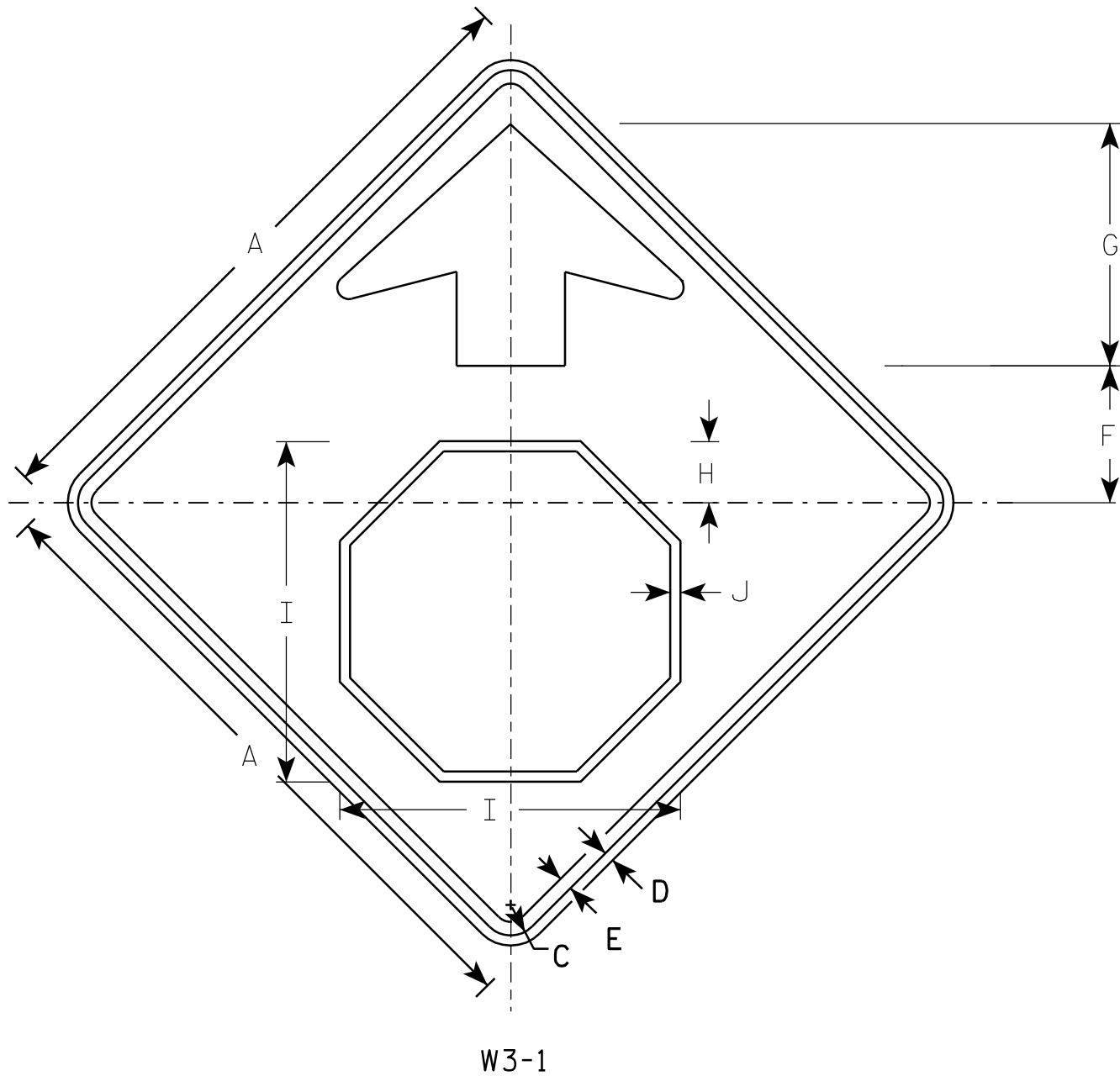
PROJECT NO:

HWY:

COUNTY:

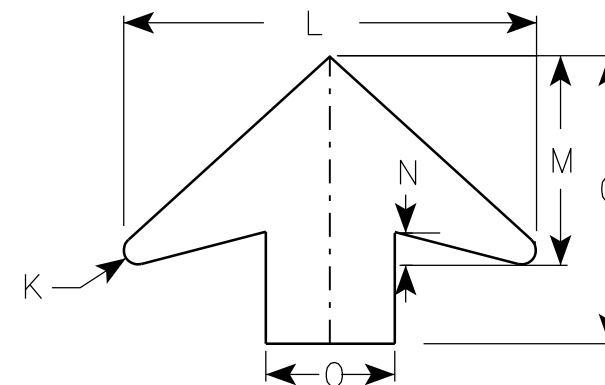
SHEET NO:

E



NOTES

1. All Signs Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - YELLOW
Arrow & Border - BLACK
Stop Symbol - WHITE BORDER ON RED BACKGROUND



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	6 1/4	11 1/4	2 7/8	15 3/4	1/2	1/2	16	8	1 1/4	5												6.25
2S	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
2M	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
3	36		1 5/8	5/8	3/4	7 1/2	13 1/2	3 1/2	19	5/8	5/8	19 1/4	9 3/4	1 5/8	6												9.0
4	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0
5	48		2 1/4	3/4	1	10	17 7/8	4 1/2	25 1/8	3/4	7/8	25 5/8	13	2	8												16.0

PROJECT NO:

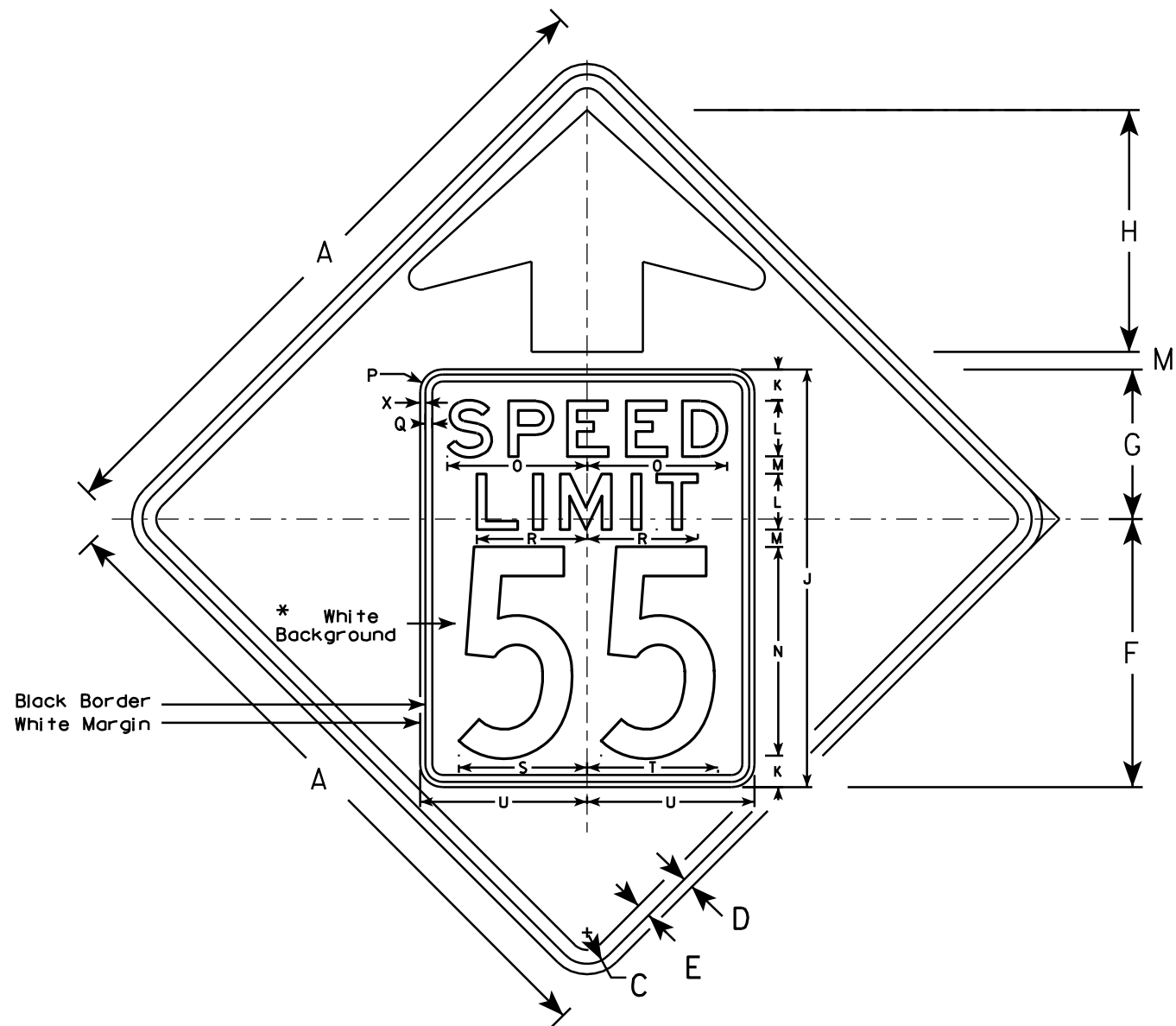
STANDARD SIGN
W3-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W3-1.12

SHEET NO:

E

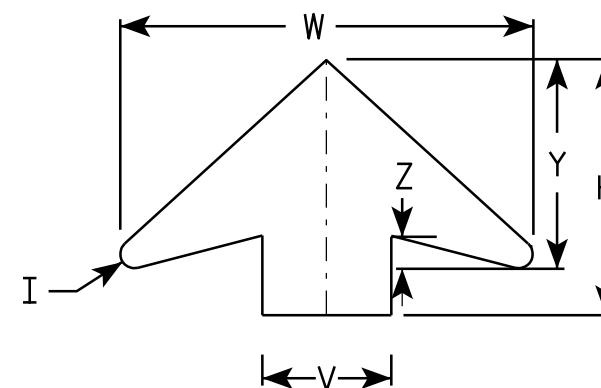


W3-5

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color: *
Background - YELLOW*
Message - BLACK
3. Message Series - C for numbers Series E for wording
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance

*Speed Limit Sign shall have a White Background



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
2M	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
3	36		1 5/8	5/8	3/4	14 1/2	9 1/2	11 1/2	5/8	24	2	3	1	12	7 1/8	1 1/2	3/8	5 3/4	7 1/4	7 1/8	9	6	19 1/4	3/8	9 3/4	1 5/8	9.0
4	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0
5	48		2 1/4	3/4	1	19 1/4	10 3/4	17 3/8	7/8	30	2 1/4	4	1 1/4	15	10	1 5/8	1/2	8	9 1/4	9 3/8	12	8	25 5/8	3/8	13	2	16.0

STANDARD SIGN W3-5

WISCONSIN DEPT OF TRANSPORTATION

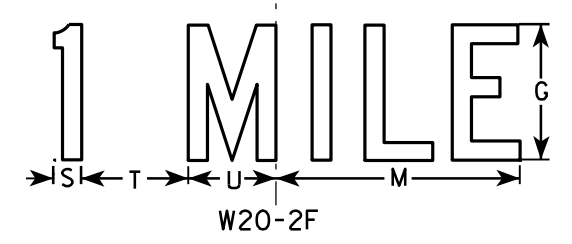
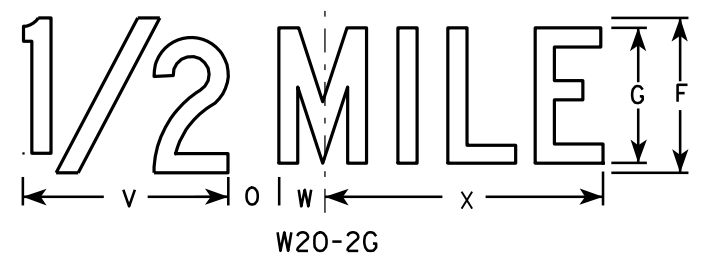
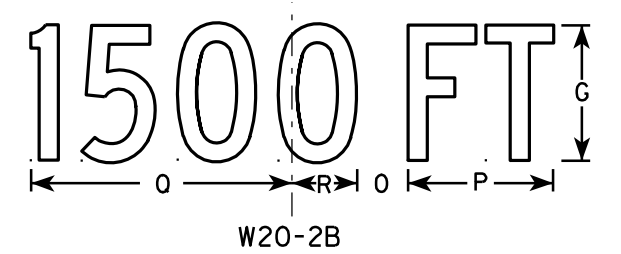
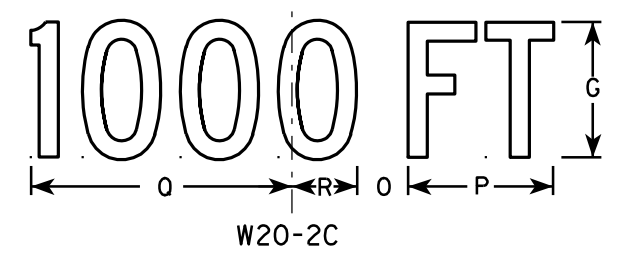
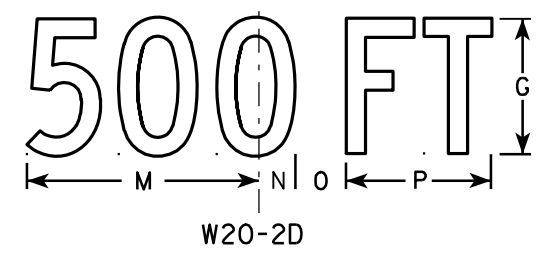
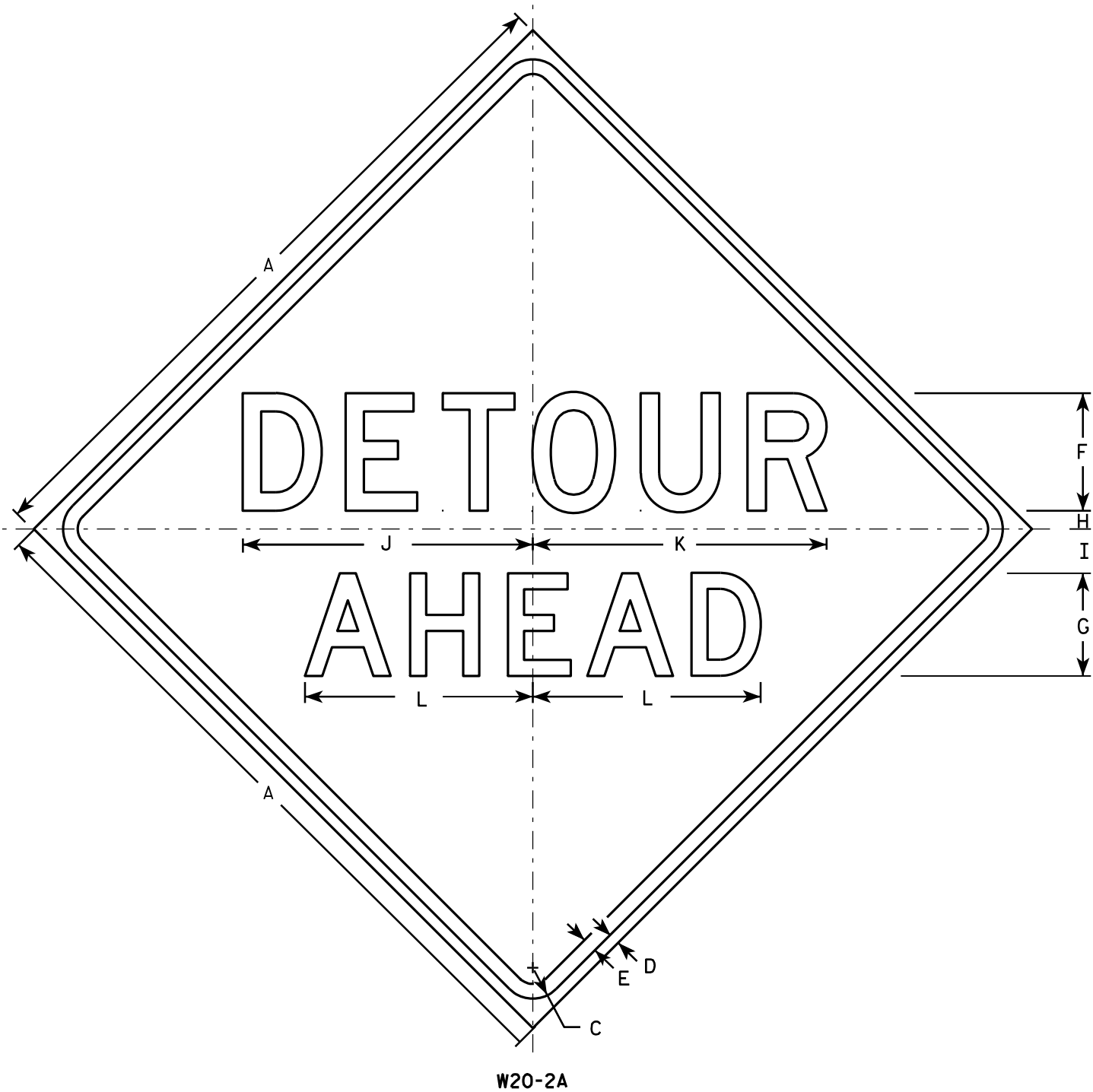
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 5/29/12 PLATE NO. W3-5.5

PROJECT NO:

SHEET NO:

E



NOTES

- 1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - See note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. Line 1 is Series D.
Line 2 is Series D for AHEAD and Series C for all other distances.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	6	5	1	2 1/4	14 3/4	15	11 5/8	9	1 3/8	1 7/8	5 5/8	10 1/8	2 1/2	1 1/8	4 1/2	3 1/2	8	1 3/4	10 3/4			9.0
2S	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
2M	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
3	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
4	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0
5	48		2 1/4	3/4	1	8	7	1 1/4	3	19 3/4	20	15 1/2	12	1 7/8	2 5/8	7 1/2	13 1/2	3 3/8	1 1/2	6	4 5/8	10 5/8	2 3/8	14 3/8			16.0

STANDARD SIGN
W20-2A,B,C,D,F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-2.6

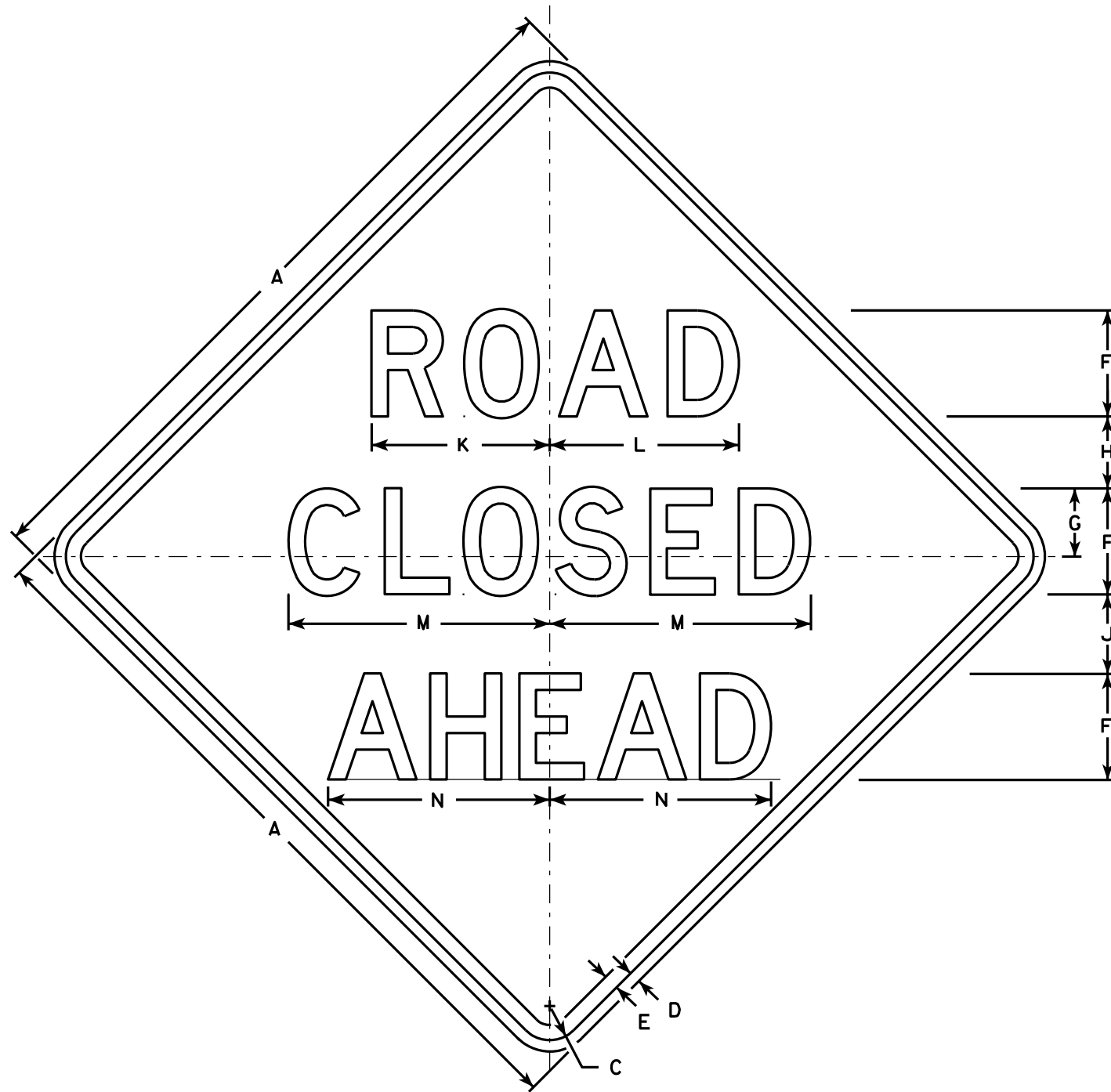
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



W20-3A

500 FT

W20-3D

1000 FT

W20-3C

1500 FT

W20-3B

1/2 MILE

W20-3G

1 MILE

W20-3F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Orange
Message - Black
3. Message Series - see note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1 and 2 are Series D.
Line 3 is Series D for AHEAD and Series C for all other distances.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	5	3 3/8	3 1/2	1 1/8	4	8 3/8	8 7/8	12 1/2	11	9	6	10 1/8	2 1/2	1 7/8	5 5/8	8	1 3/8	4 1/2	3 1/2	10 3/4	1 3/4	9.0
2S	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
2M	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
3	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
4	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0
5	48		2 1/4	3/4	1	7	4 1/2	4 3/4	1 1/2	5 1/4	11 3/4	12 1/2	17 1/4	14 5/8	12	8	13 1/2	3 3/8	2 5/8	7 1/2	10 5/8	1 7/8	6	4 5/8	14 3/8	2 3/8	16.0

STANDARD SIGN
W20-3A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-3.7

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

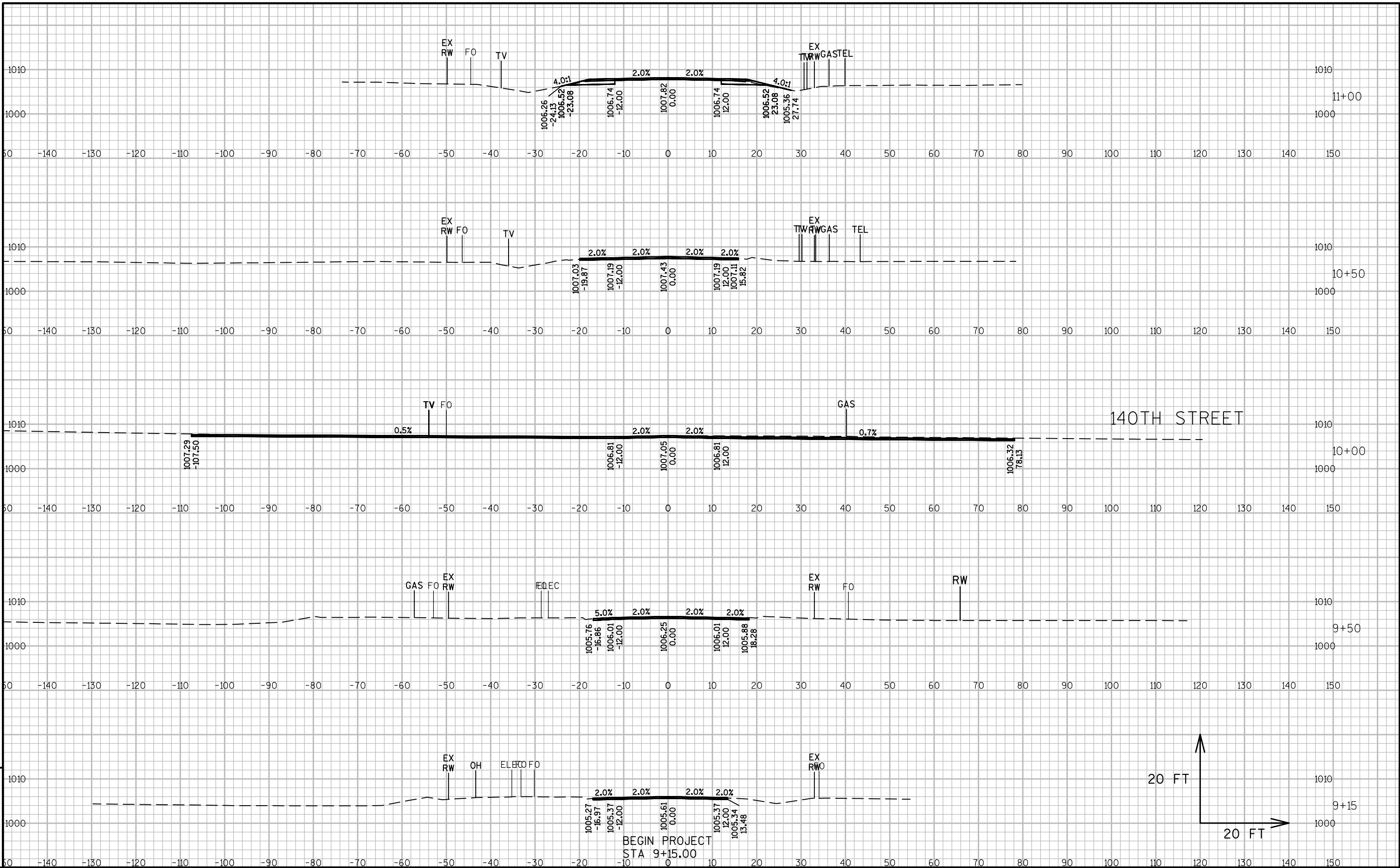
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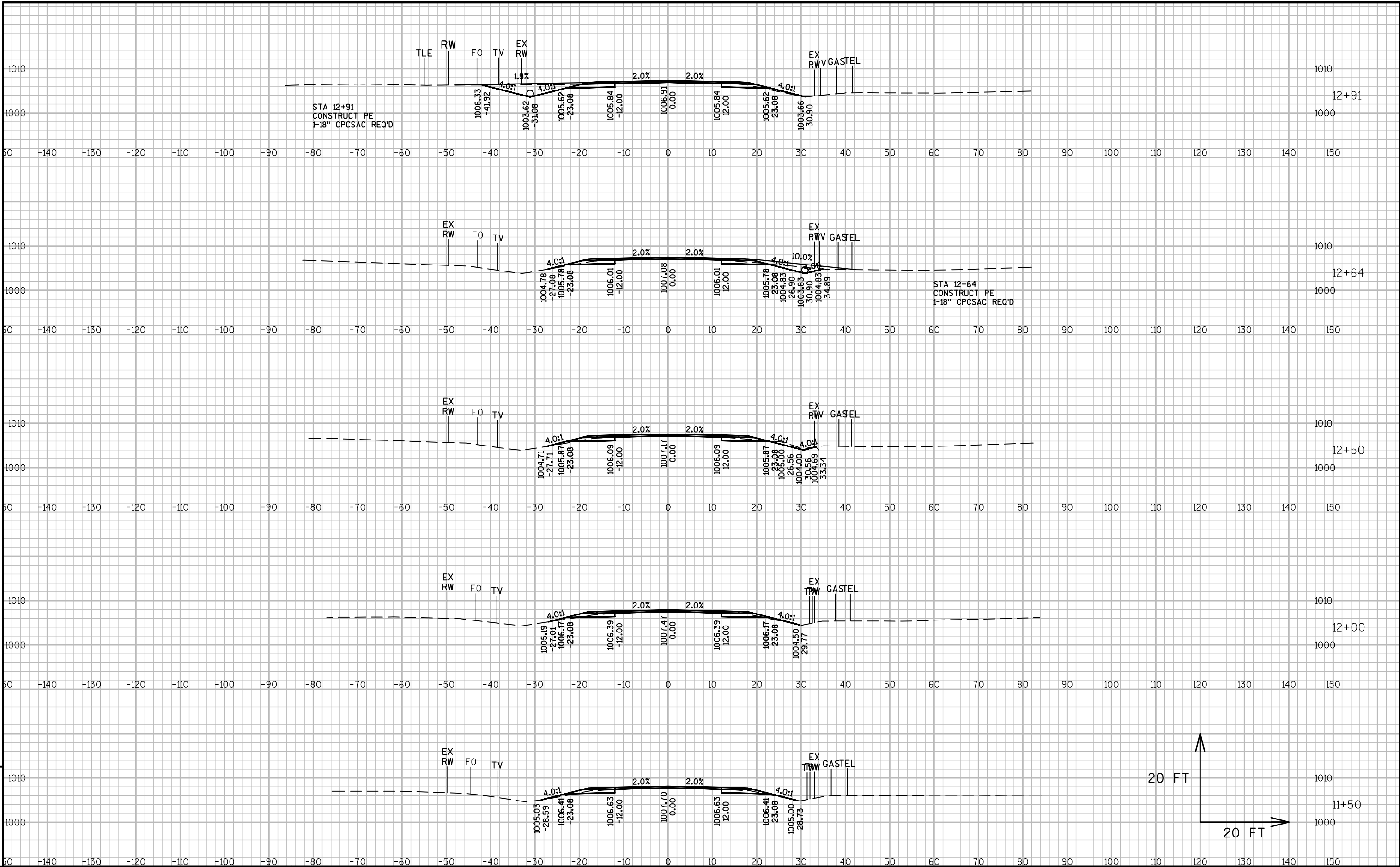
EARTHWORK DATA - CTH GG						
STATION	AREA (SF)		INCR. VOL (CY)		CUMULATIVE VOL (CY)	
	CUT	FILL	CUT	FILL	CUT 1.00	EXP. FILL 1.30
9+15.000	10.43	0.00	0.00	0.00	0.00	0.00
9+50.000	13.15	0.00	15.28	0.00	15.28	0.00
10+00.000	195.18	0.00	192.89	0.00	208.18	0.00
10+50.000	10.90	0.00	190.82	0.00	398.99	0.00
11+00.000	12.47	1.15	21.64	1.06	420.64	1.38
11+50.000	10.20	3.08	20.99	3.92	441.63	6.47
12+00.000	9.44	2.95	18.18	5.58	459.81	13.73
12+50.000	12.99	1.55	20.76	4.16	480.57	19.14
12+64.000	19.08	1.14	8.31	0.70	488.89	20.05
12+91.000	44.47	2.22	31.78	1.68	520.67	22.23
13+00.000	32.29	2.72	12.79	0.82	533.46	23.30
13+50.000	7.31	9.52	36.67	11.34	570.13	38.04
14+00.000	6.21	14.39	12.52	22.14	582.65	66.82
14+50.000	7.22	9.07	12.44	21.72	595.09	95.06
14+75.000	28.52	7.27	16.55	7.56	611.64	104.88
15+00.000	8.12	7.49	16.97	6.83	628.61	113.76
15+50.000	13.76	6.66	20.26	13.10	648.87	130.79
15+76.000	38.36	9.78	25.09	7.92	673.96	141.09
16+00.000	6.83	18.98	20.09	12.78	694.05	157.70
16+50.000	5.77	34.38	11.67	49.41	705.72	221.94
16+87.500	6.94	68.56	8.83	71.48	714.54	314.86
17+00.000	7.31	49.28	3.30	27.28	717.84	350.32
17+50.000	7.31	24.09	13.53	67.93	731.37	438.63
18+00.000	8.94	10.63	15.05	32.15	746.42	480.43
18+50.000	11.62	7.58	19.04	16.86	765.46	502.35
19+00.000	25.73	1.23	34.59	8.16	800.06	512.95
19+12.000	30.53	0.85	12.50	0.46	812.56	513.55
19+50.000	31.39	1.80	43.57	1.87	856.13	515.98
20+00.000	7.11	7.60	35.65	8.71	891.78	527.31
20+50.000	6.15	10.87	12.28	17.10	904.07	549.54
21+00.000	6.70	5.02	11.90	14.71	915.97	568.66
21+25.000	29.67	3.17	16.84	3.79	932.81	573.59
21+50.000	8.51	3.55	17.67	3.11	950.48	577.63
22+00.000	34.83	8.62	40.13	11.27	990.61	592.28
22+11.000	33.74	8.72	13.97	3.53	1004.58	596.87
22+50.000	8.94	7.37	30.83	11.62	1035.41	611.98
23+00.000	12.76	1.88	20.10	8.57	1055.50	623.12

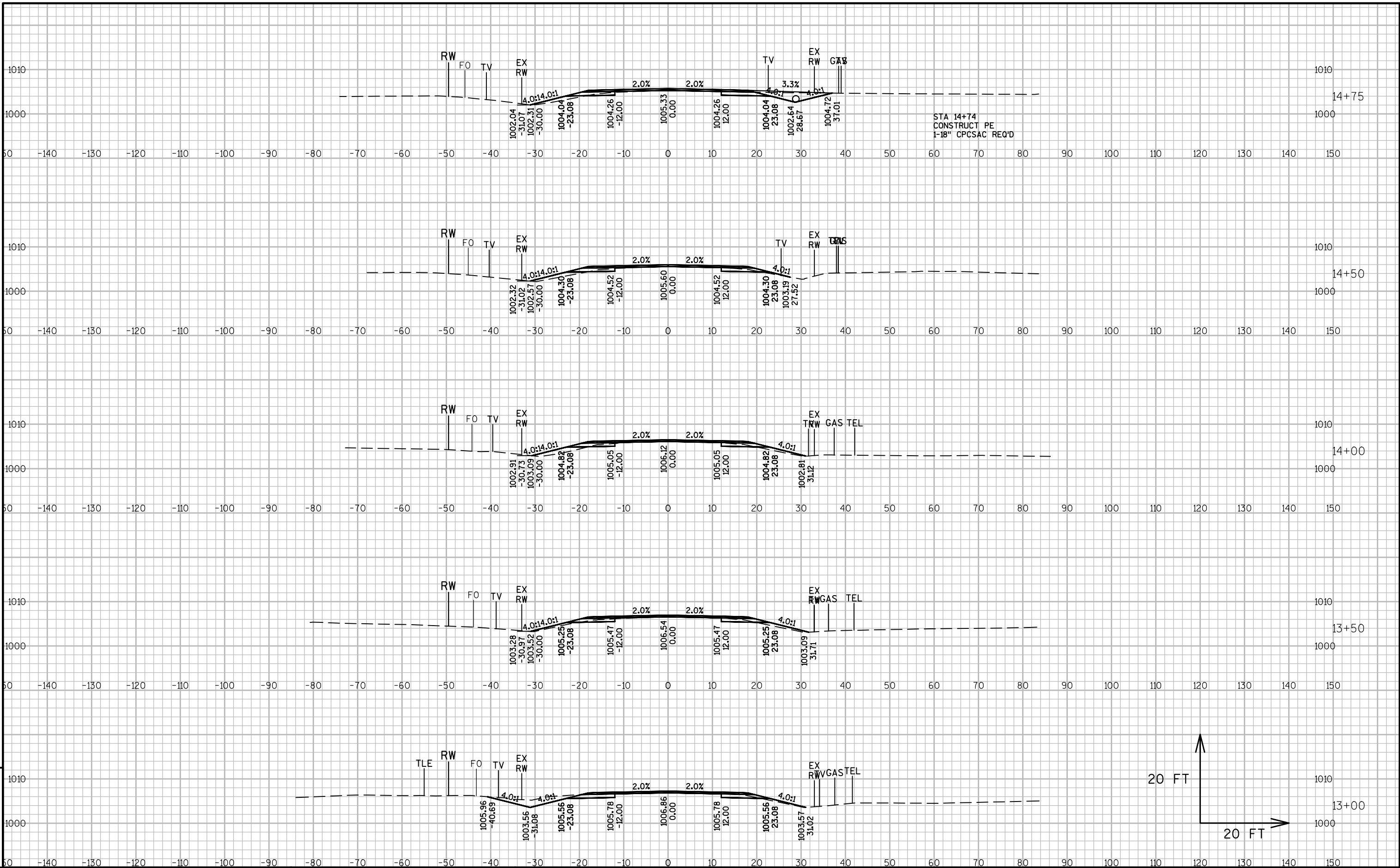
EARTHWORK DATA - CTH GG						
STATION	AREA (SF)		INCR. VOL (CY)		CUMULATIVE VOL (CY)	
	CUT	FILL	CUT	FILL	CUT 1.00	EXP. FILL 1.30
23+11.000	29.14	2.02	8.54	0.80	1064.04	624.16
23+50.000	7.31	6.08	26.33	5.85	1090.37	631.76
24+00.000	6.25	11.12	12.56	15.92	1102.93	652.46
24+50.000	23.41	1.18	27.46	11.39	1130.39	667.26
24+79.000	22.21	2.36	24.50	1.90	1154.89	669.73
25+00.000	8.88	3.59	12.09	2.31	1166.98	672.74
25+50.000	10.07	4.16	17.55	7.18	1184.52	682.07
26+00.000	29.37	4.11	36.52	7.66	1221.04	692.03
26+11.000	53.42	4.01	16.87	1.65	1237.91	694.17
26+50.000	9.20	13.68	45.23	12.77	1283.13	710.78
27+00.000	7.39	10.48	15.36	22.37	1298.49	739.86
27+50.000	7.11	12.08	13.43	20.89	1311.92	767.01
28+00.000	9.35	2.36	15.25	13.37	1327.16	784.39
28+25.000	10.50	0.88	9.19	1.50	1336.35	786.34
28+65.000	66.54	0.15	57.07	0.76	1393.42	787.33
29+00.000	13.17	0.77	51.66	0.60	1445.09	788.11
29+26.000	42.55	0.81	26.83	0.76	1471.91	789.10
29+50.000	13.08	0.95	24.72	0.78	1496.64	790.11
30+00.000	10.21	10.35	21.57	10.46	1518.20	803.71
30+08.000	10.42	22.91	3.06	4.93	1521.26	810.12
30+33.000	11.20	26.72	10.01	22.98	1531.27	840.00
30+58.000	11.61	33.14	10.56	27.71	1541.83	876.02
31+00.000	10.12	25.27	16.90	45.43	1558.73	935.08
31+50.000	9.04	43.41	17.74	63.60	1576.46	1017.76
32+00.000	8.92	31.63	16.63	69.49	1593.10	1108.09
32+50.000	8.51	44.94	16.14	70.90	1609.24	1200.26
33+00.000	9.74	14.38	16.89	54.93	1626.13	1271.67
33+50.000	52.49	4.77	57.62	17.74	1683.74	1294.74
34+00.000	21.98	4.55	68.95	8.63	1752.69	1305.95
34+50.000	20.10	3.09	38.96	7.07	1791.66	1315.15
35+00.000	21.14	1.60	38.19	4.34	1829.84	1320.79
35+50.000	25.57	0.64	43.25	2.07	1873.09	1323.48
35+67.000	67.55	0.30	29.32	0.30	1902.41	1323.87
36+00.000	41.93	2.58	66.91	1.76	1969.31	1326.16
36+21.000	99.92	2.08	55.16	1.81	2024.48	1328.51
36+50.000	19.61	2.58	64.19	2.50	2088.67	1331.76
37+00.000	31.80	5.64	47.60	7.62	2136.27	1341.67

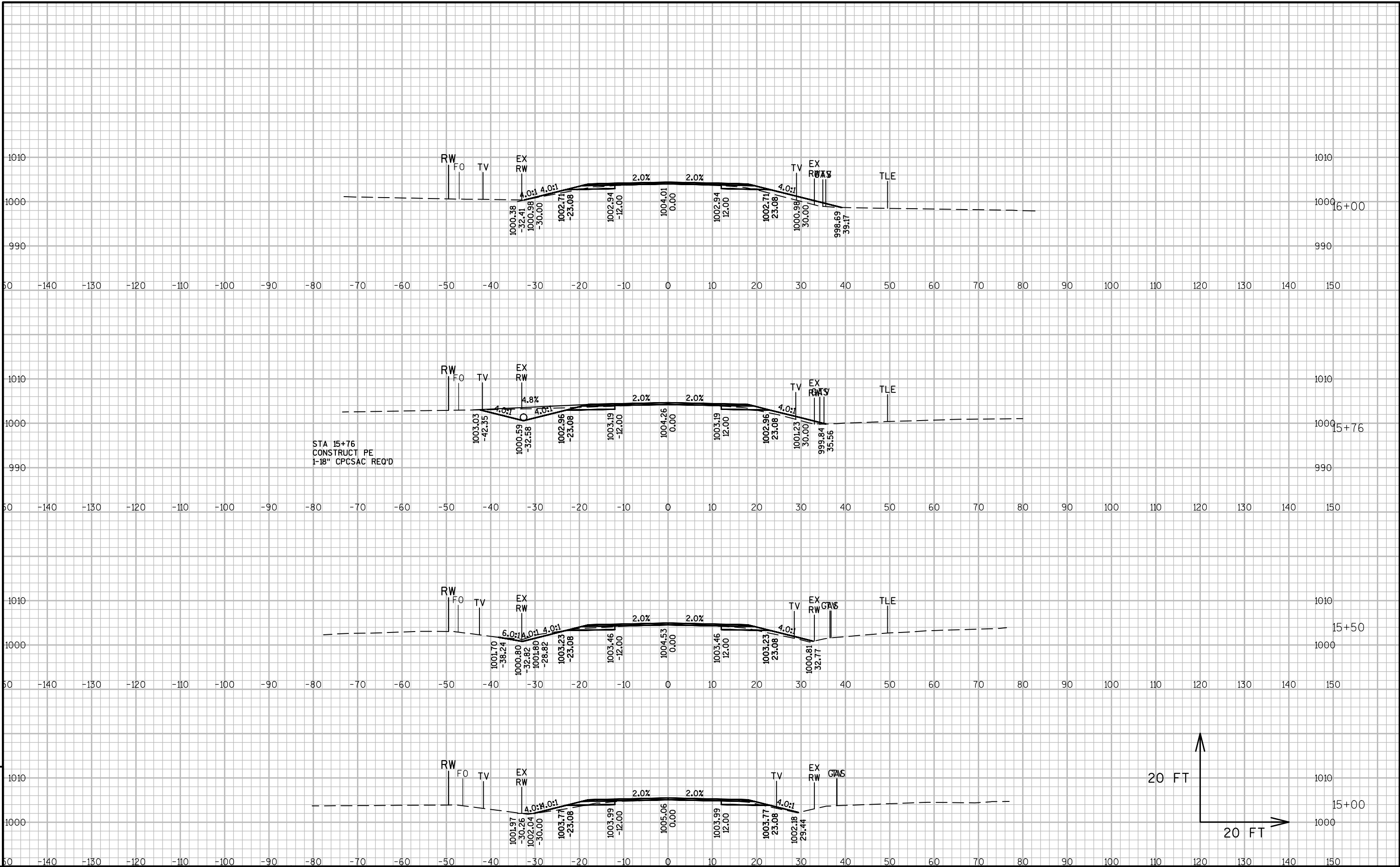
EARTHWORK DATA - CTH GG							
STATION	AREA (SF)		INCR. VOL (CY)		CUMULATIVE VOL (CY)		MASS ORDINATE
	CUT	FILL	CUT	FILL	CUT 1.00	EXP. FILL 1.30	
37+50.000	23.43	3.45	51.14	8.41	2187.42	1352.60	834.82
38+00.000	10.53	10.71	31.45	13.11	2218.87	1369.64	849.23
38+50.000	9.18	6.18	18.25	15.64	2237.12	1389.97	847.15
39+00.000	11.85	2.75	19.47	8.27	2256.59	1400.72	855.87
39+50.000	27.78	0.77	36.70	3.26	2293.29	1404.96	888.33
40+00.000	8.22	12.06	33.33	11.88	2326.62	1420.41	906.21
40+50.000	5.30	16.85	12.51	26.77	2339.13	1455.21	883.92
41+00.000	4.00	19.57	8.63	33.80	2347.76	1499.15	848.61
41+50.000	4.76	18.24	8.11	35.23	2355.88	1544.95	810.93
42+00.000	6.11	13.53	10.06	29.60	2365.94	1583.43	782.51
42+50.000	6.46	10.78	11.65	22.59	2377.59	1612.79	764.80
43+00.000	6.89	8.15	12.38	17.50	2389.97	1635.54	754.43
43+50.000	6.54	7.73	12.47	14.64	2402.44	1654.58	747.87
44+00.000	5.61	9.53	11.27	15.94	2413.71	1675.30	738.41
44+50.000	4.58	12.80	9.44	20.61	2423.15	1702.09	721.06
45+00.000	11.20	27.29	14.74	37.29	2437.90	1750.57	687.33
45+25.000	53.30	9.64	29.86	17.10	2467.76	1772.80	694.96
45+50.000	14.58	23.32	31.43	15.26	2499.18	1792.64	706.54
46+00.000	5.12	9.31	18.42	30.34	2517.61	1832.08	685.53
46+50.000	5.29	9.08	9.65	17.01	2527.25	1854.19	673.06
47+00.000	6.11	7.73	10.54	15.61	2537.80	1874.48	663.32
47+50.000	28.61	5.09	32.48	11.86	2570.28	1889.90	680.38
48+00.000	5.74	8.55	32.15	12.59	2602.43	1906.27	696.16
48+50.000	4.47	9.07	9.46	16.30	2611.89	1927.46	684.43
49+00.000	3.40	12.39	7.29	19.86	2619.18	1953.28	665.90
49+50.000	4.64	9.56	7.45	20.32	2626.63	1979.69	646.94
50+00.000	6.65	5.27	10.46	13.74	2637.08	1997.55	639.53
50+28.000	49.35	1.20	29.04	3.35	2666.12	2001.91	664.21
50+50.000	14.01	0.93	25.81	0.87	2691.93	2003.04	688.89
51+00.000	7.18	21.66	19.63	20.91	2711.56	2030.22	681.34
51+50.000	6.45	30.48	12.62	48.28	2724.18	2092.99	631.19
52+00.000	5.03	55.78	10.63	79.87	2734.81	2196.82	537.99
52+50.000	7.97	31.77	12.04	81.07	2746.85	2302.21	444.64
53+00.000	8.02	65.59	14.80	90.15	2761.65	2419.40	342.25
53+50.000	6.10	56.88	13.07	113.40	2774.72	2566.82	207.90
54+00.000	6.11	32.68	11.30	82.93	2786.02	2674.63	111.39

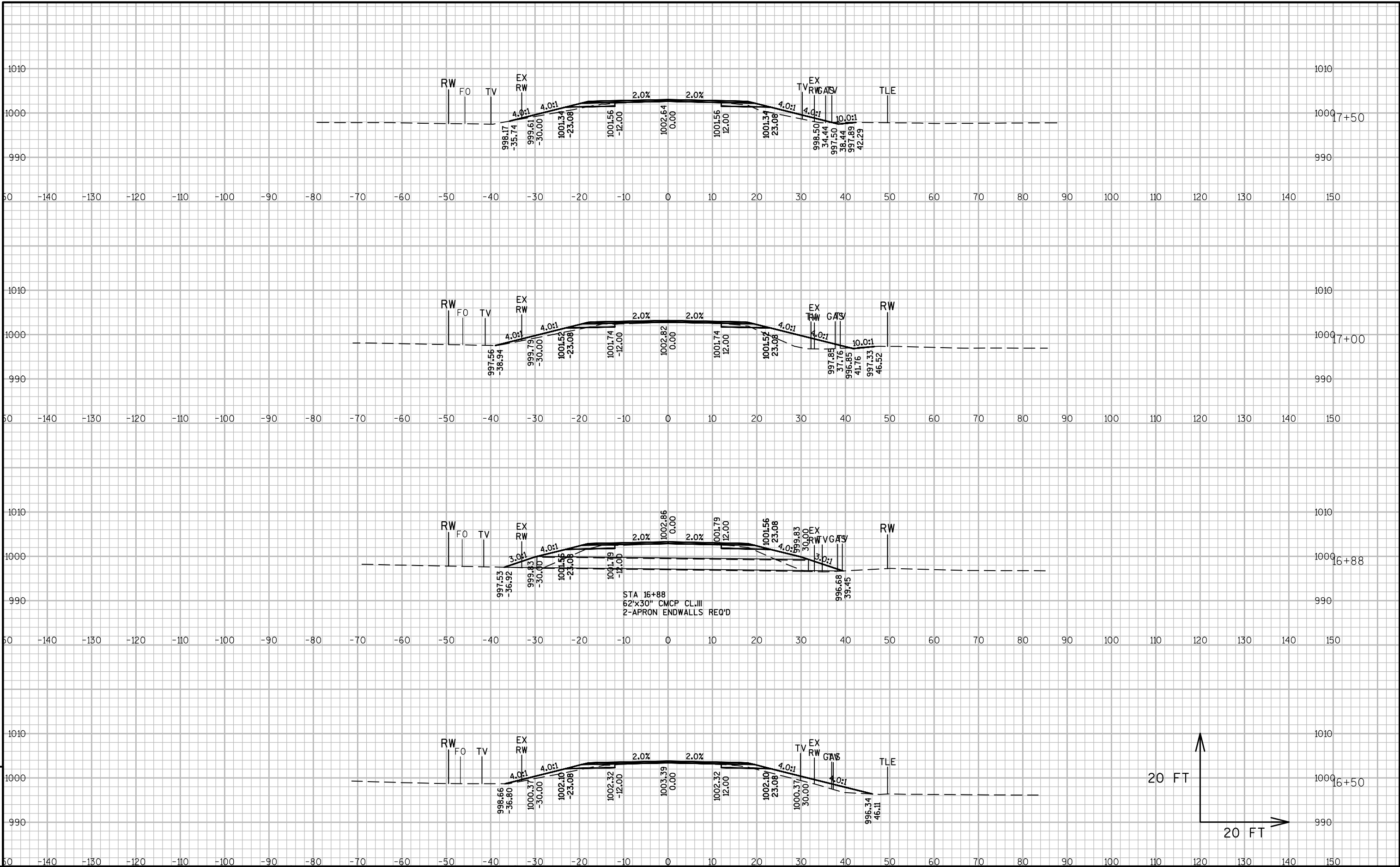
EARTHWORK DATA - CTH GG							
STATION	AREA (SF)		INCR. VOL (CY)		CUMULATIVE VOL (CY)		MASS ORDINATE
	CUT	FILL	CUT	FILL	CUT 1.00	EXP. FILL 1.30	
54+37.000	10.67	6.32	11.50	26.73	2797.52	2709.38	88.14
54+50.000	12.46	4.68	5.57	2.65	2803.09	2712.83	90.26
55+00.000	8.17	16.46	19.10	19.57	2822.19	2738.27	83.92
55+50.000	6.72	17.10	13.78	31.07	2835.98	2778.66	57.32
56+00.000	6.95	17.76	12.66	32.27	2848.64	2820.61	28.03
56+50.000	7.43	16.15	13.32	31.40	2861.95	2861.43	0.52
57+00.000	8.82	8.63	15.04	22.95	2877.00	2891.27	-14.27
57+50.000	8.30	5.26	15.85	12.86	2892.85	2907.98	-15.13
58+00.000	7.53	17.30	14.66	20.89	2907.51	2935.14	-27.63
58+50.000	6.89	20.74	13.35	35.23	2920.87	2980.94	-60.07
59+00.000	6.93	15.35	12.79	33.42	2933.66	3024.39	-90.73
59+50.000	7.10	12.33	12.99	25.63	2946.65	3057.70	-111.05
60+00.000	6.64	29.62	12.72	38.84	2959.37	3108.20	-148.83
60+31.000	6.52	104.35	7.55	76.91	2966.92	3208.18	-241.26
60+44.000	6.38	108.72	3.11	51.30	2970.03	3274.87	-304.84
60+50.000	6.34	88.98	1.41	21.97	2971.44	3303.43	-331.99
61+00.000	5.85	35.23	11.29	115.02	2982.73	3452.96	-470.23
61+50.000	6.45	21.41	11.38	52.44	2994.11	3521.13	-527.02
62+00.000	7.27	5.81	12.70	25.19	3006.81	3553.88	-547.07
62+50.000	6.54	5.97	12.79	10.90	3019.59	3568.05	-548.46
63+00.000	6.89	13.69	12.43	18.21	3032.02	3591.72	-559.70
63+50.000	7.72	18.20	13.52	29.53	3045.54	3630.11	-584.57
63+78.000	28.62	14.01	18.84	16.70	3064.39	3651.82	-587.43
64+00.000	9.44	12.37	15.51	10.75	3079.89	3665.79	-585.90
64+50.000	10.88	13.00	18.81	23.49	3098.70	3696.33	-597.63
65+00.000	55.21	4.79	61.19	16.47	3159.90	3717.74	-557.84
65+50.000	14.11	5.70	64.19	9.71	3224.09	3730.36	-506.27
66+00.000	11.13	0.18	23.37	5.45	3247.46	3737.45	-489.99

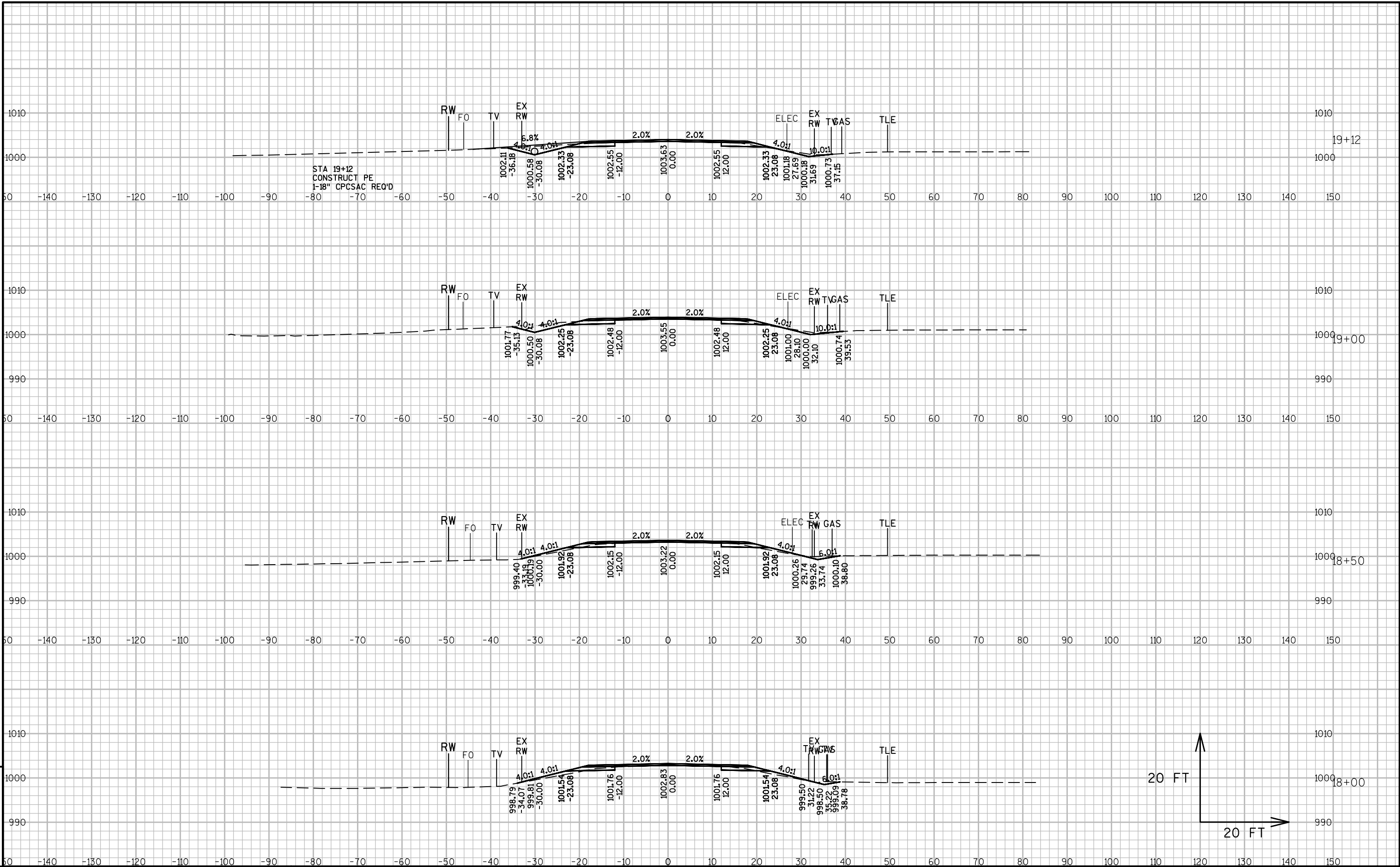


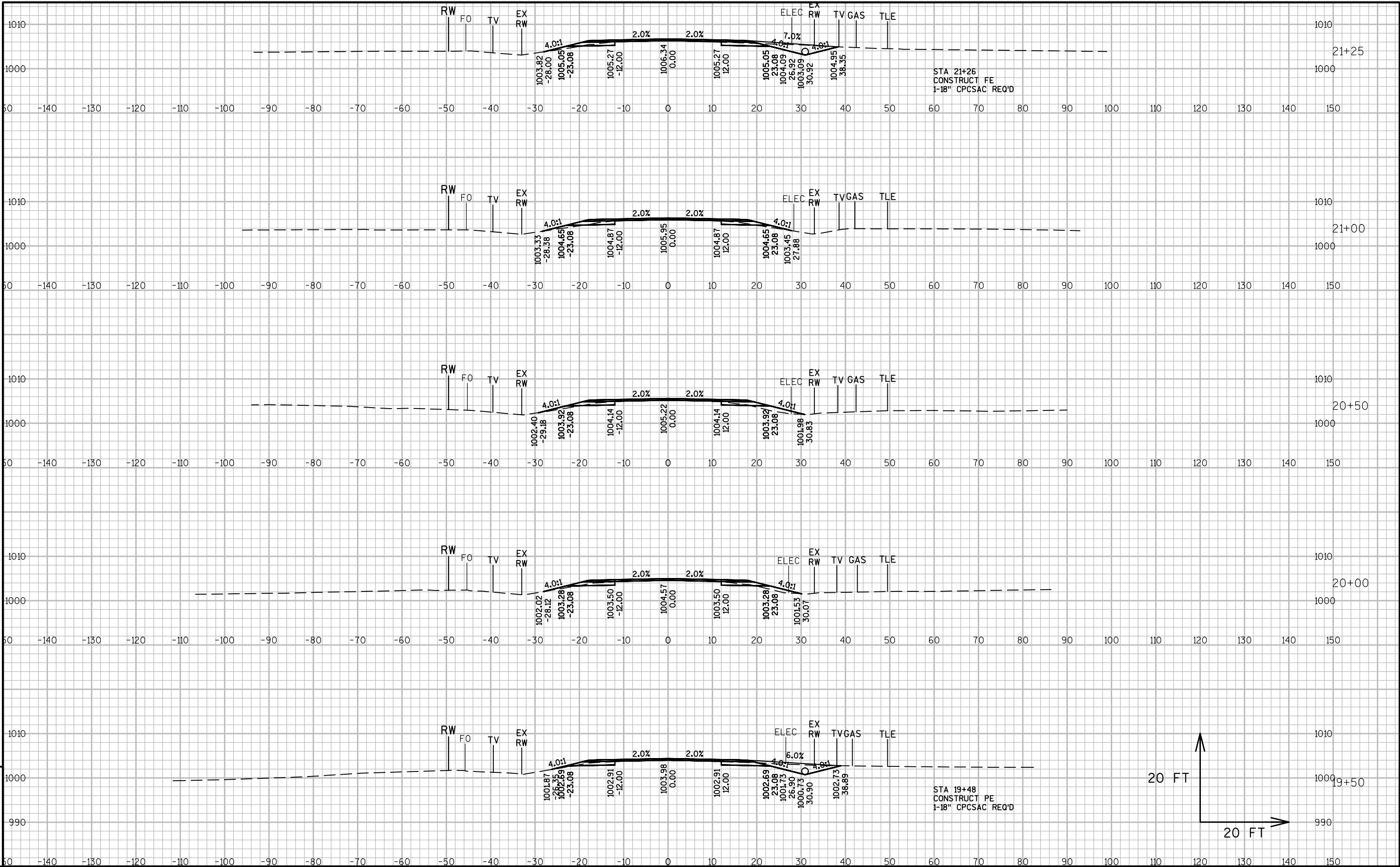


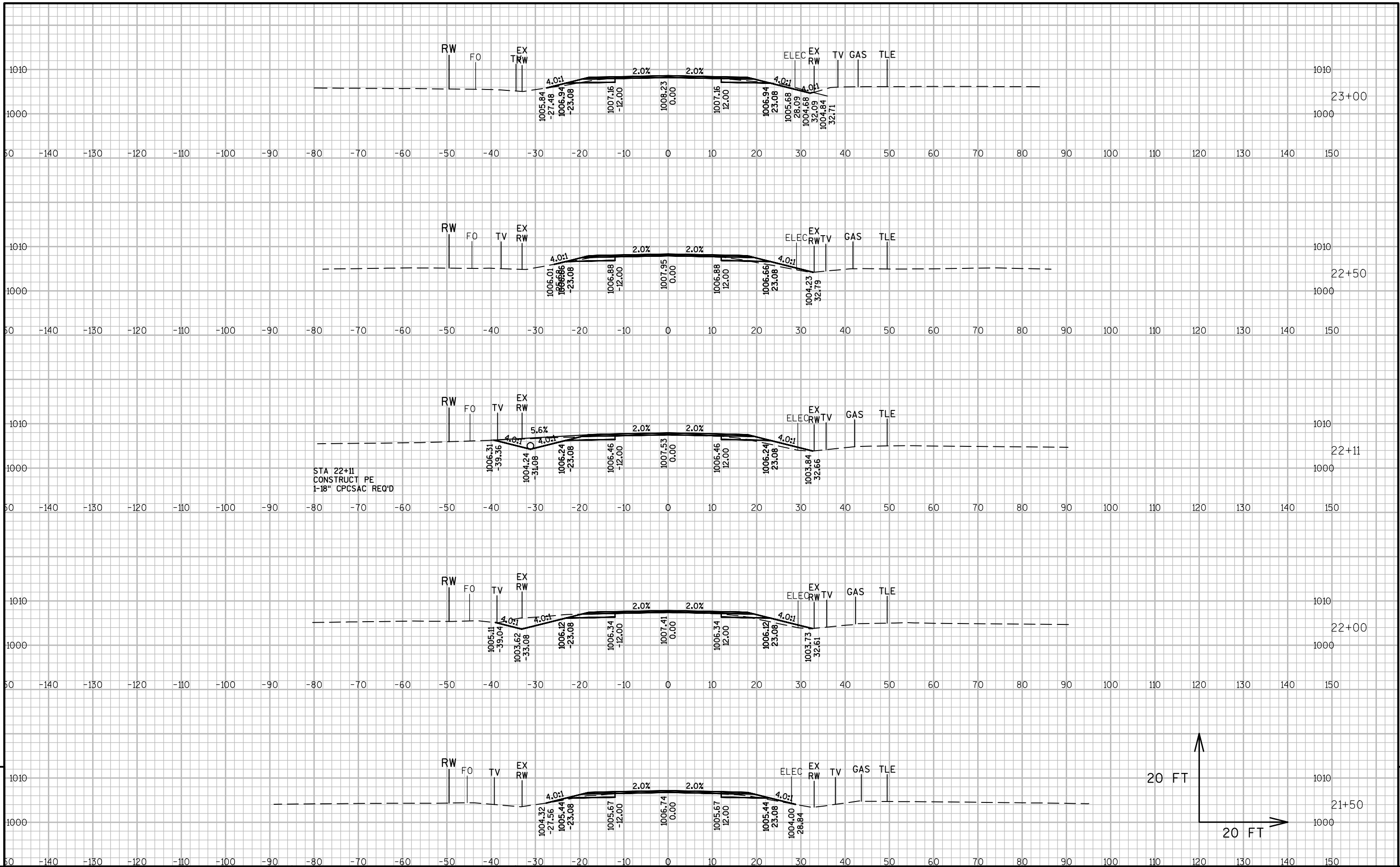


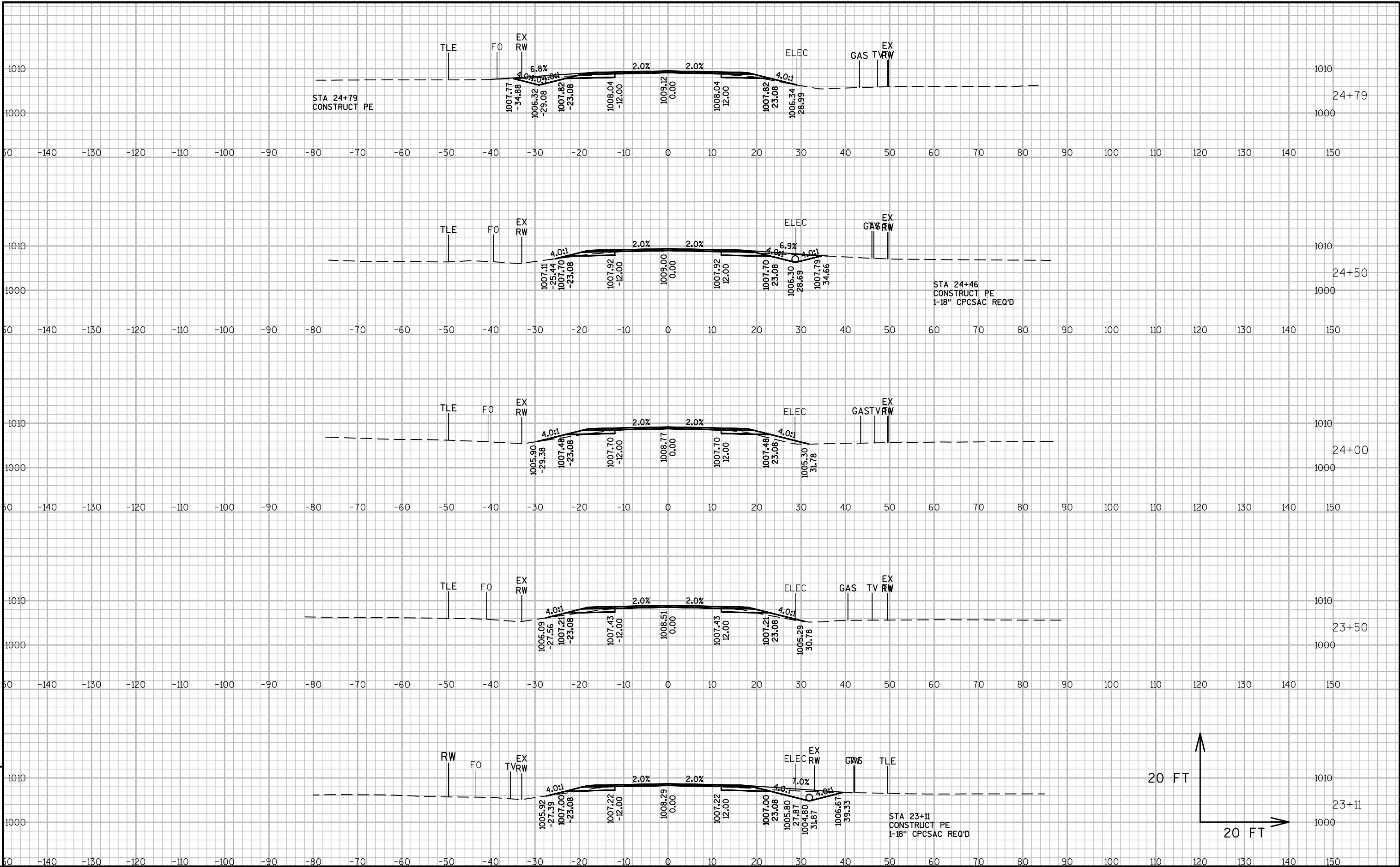


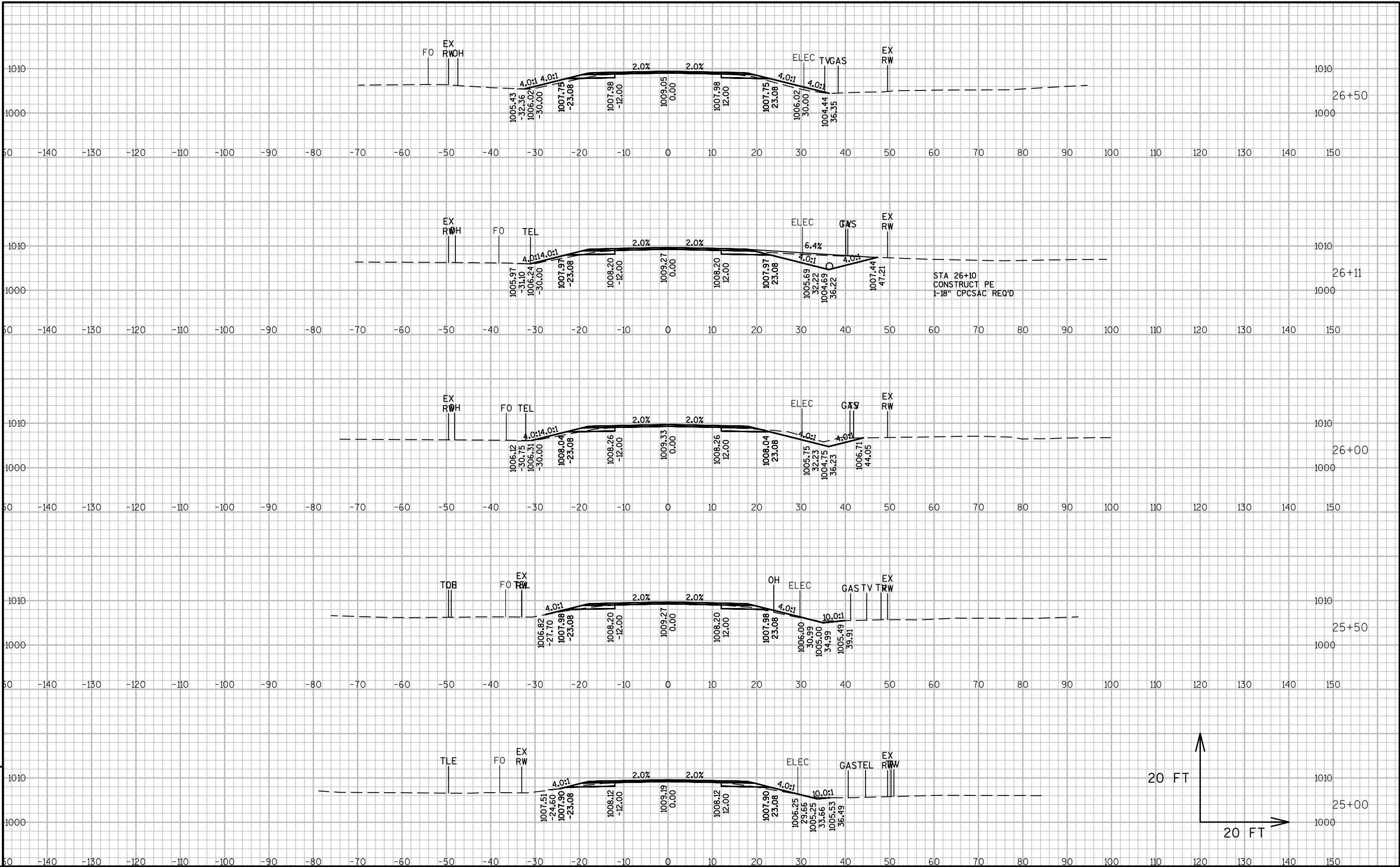


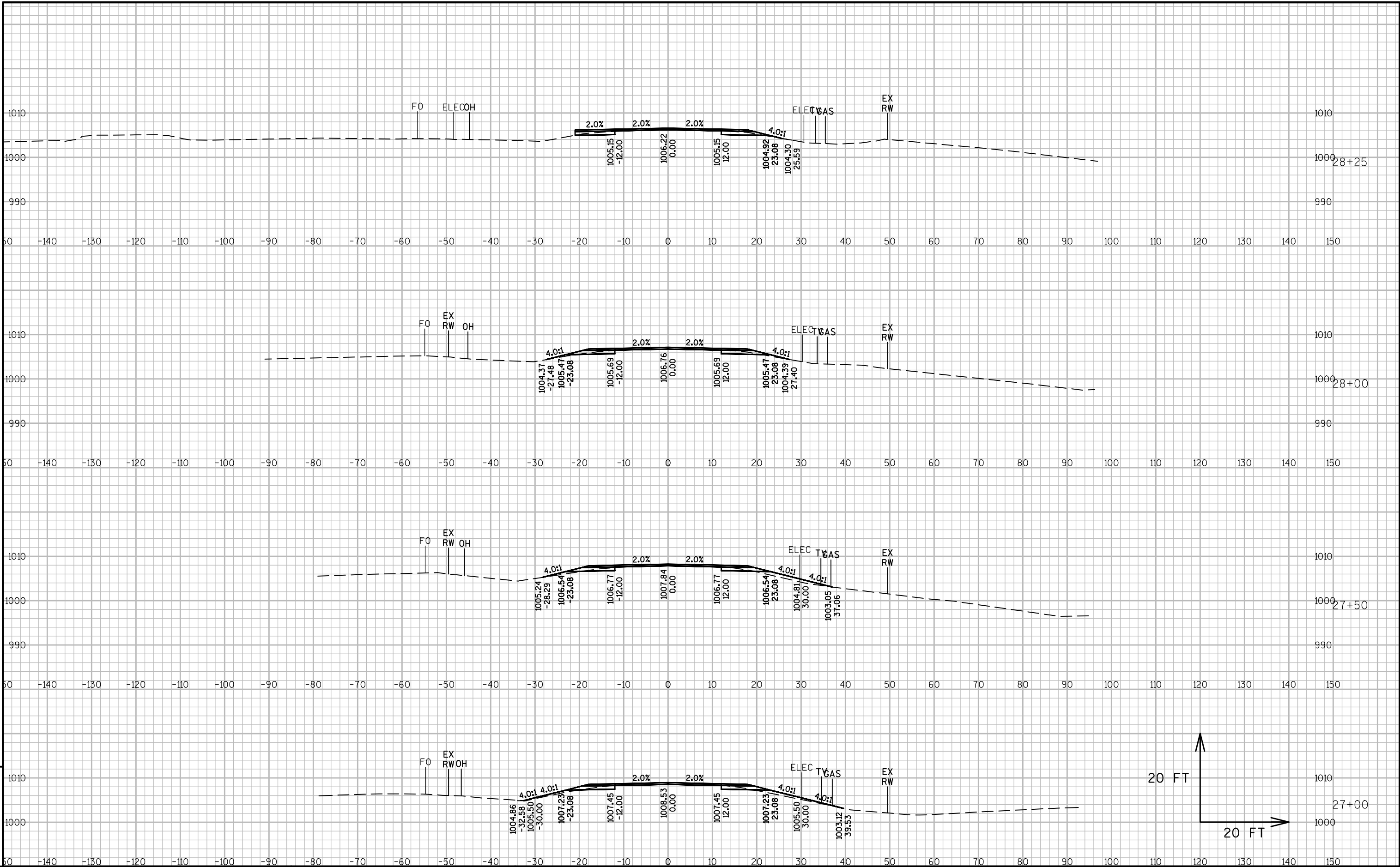


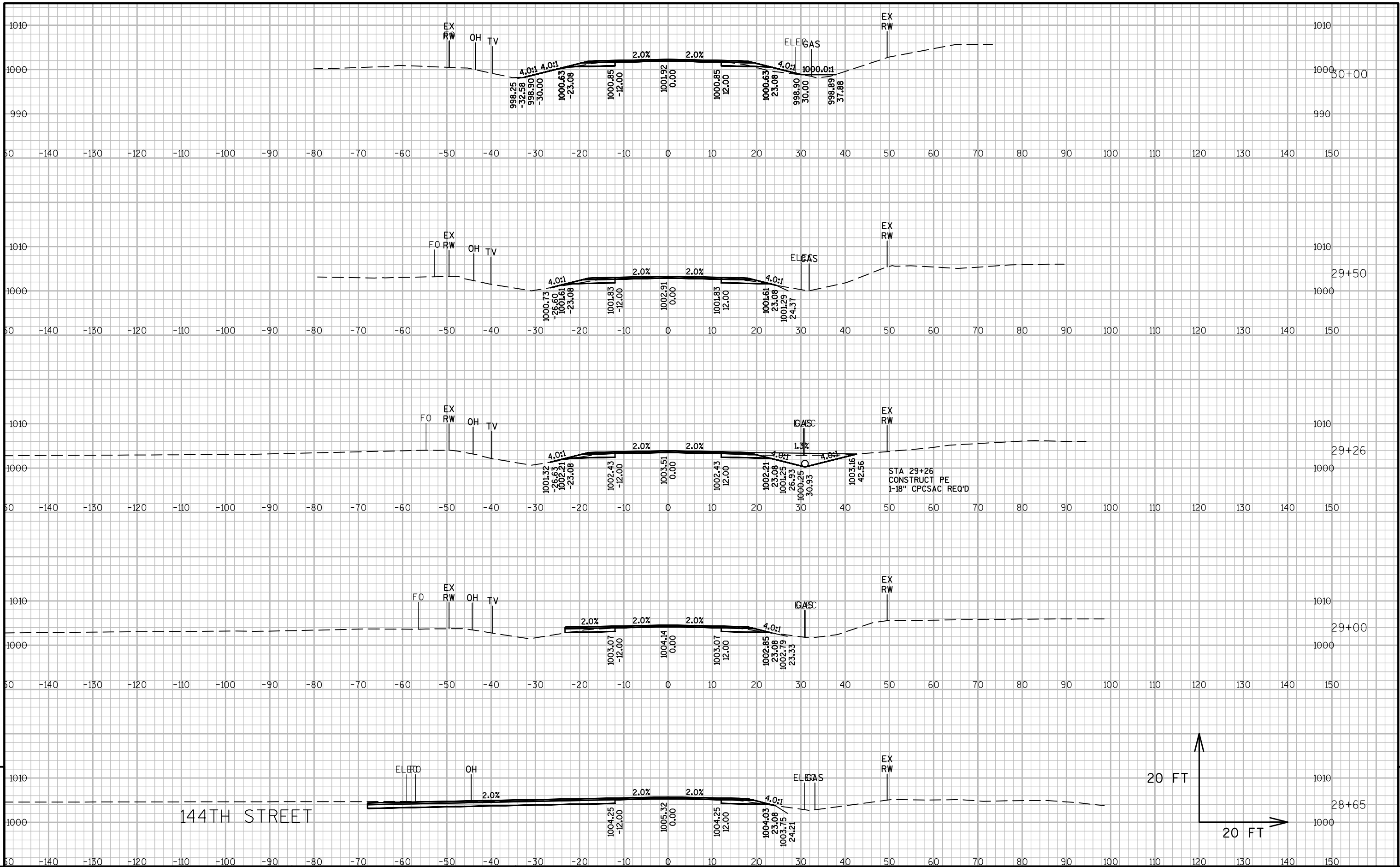


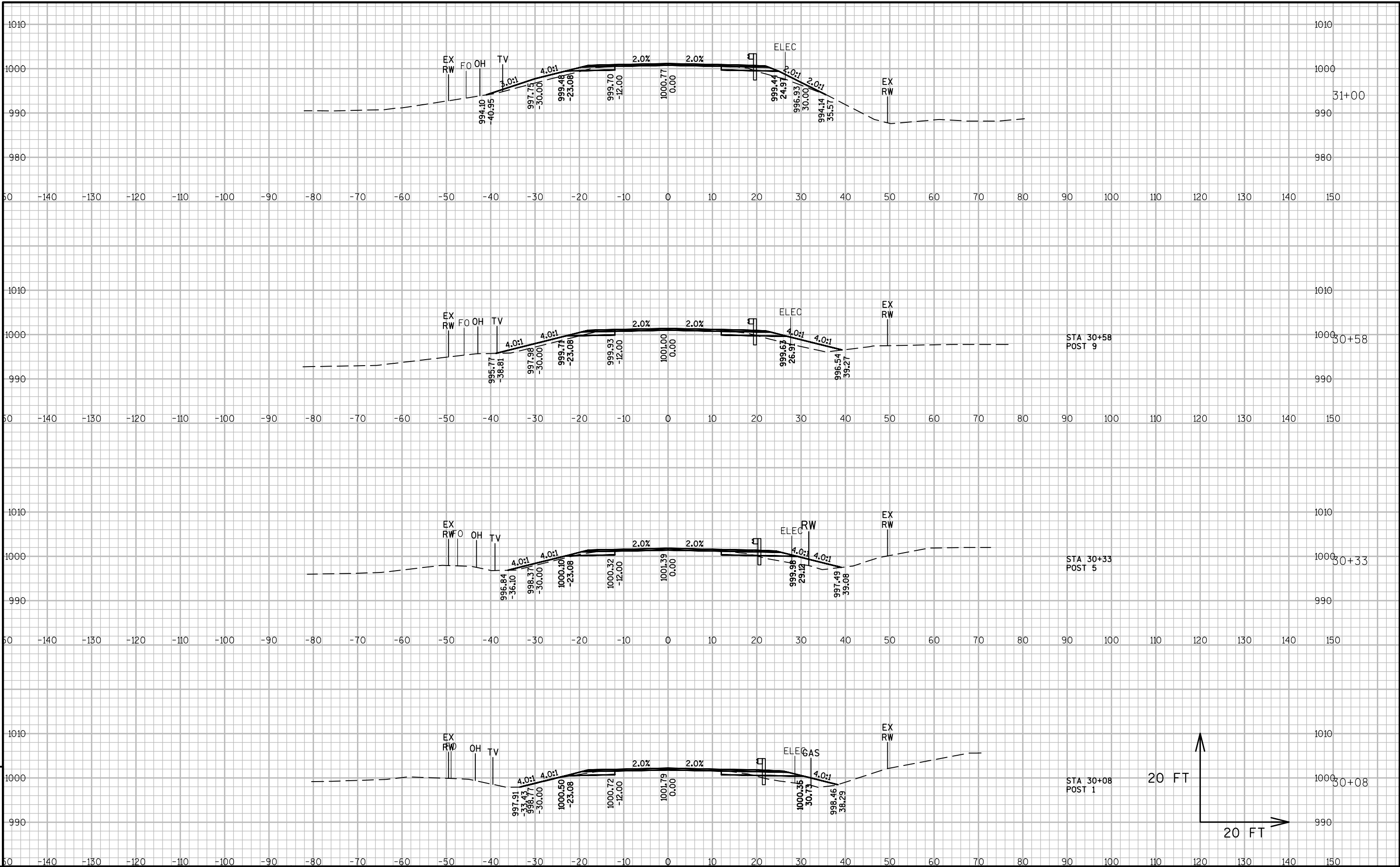


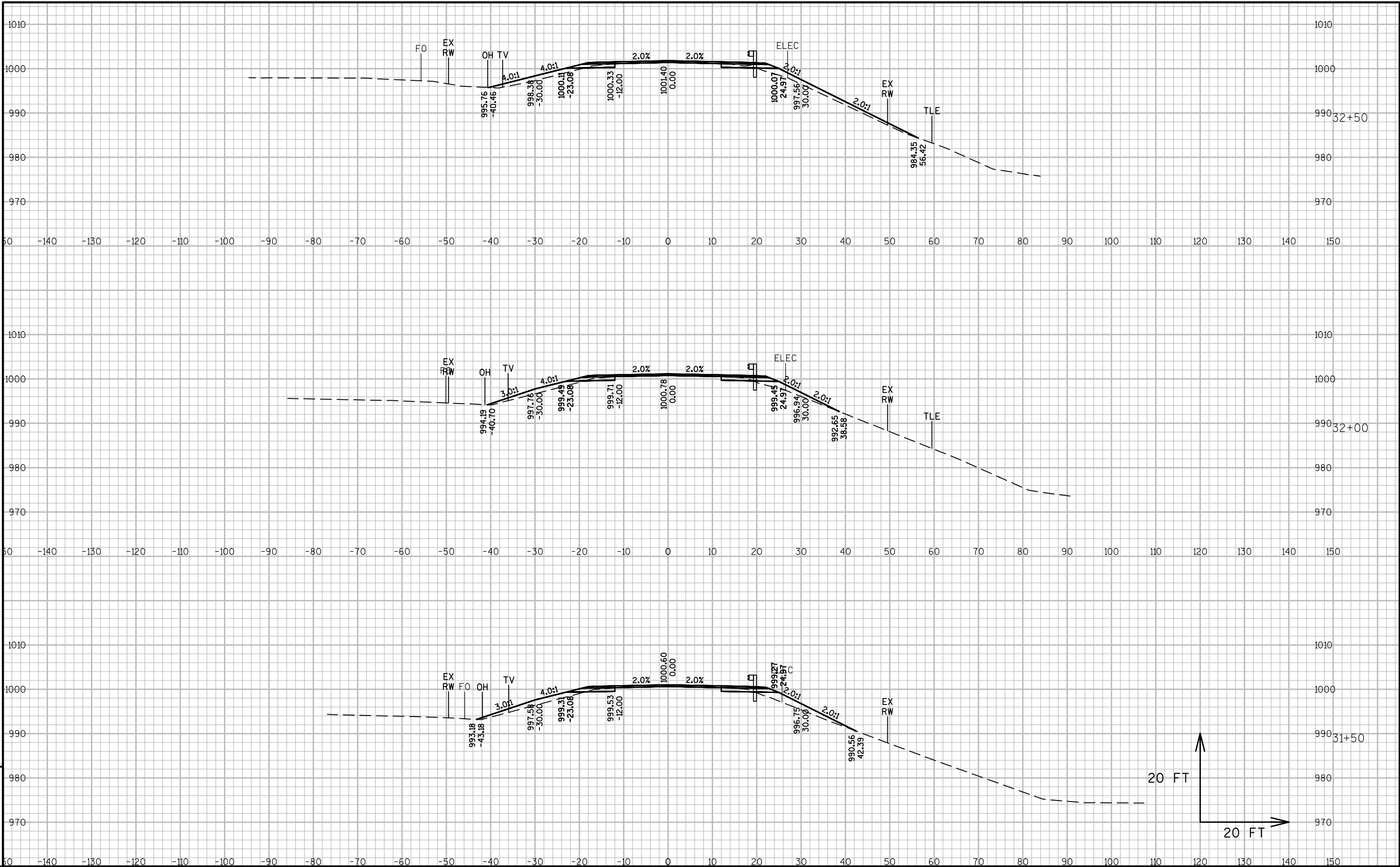


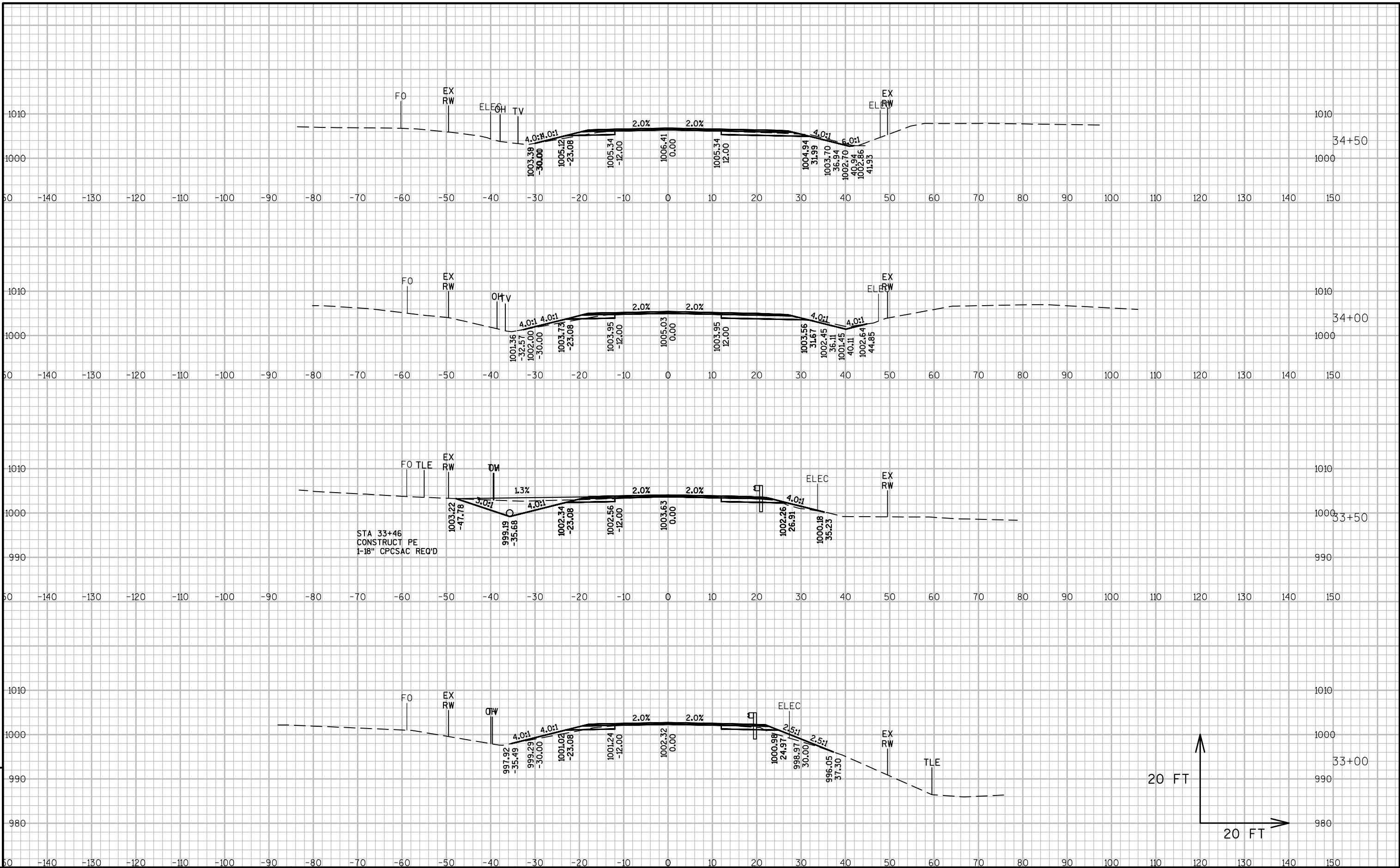


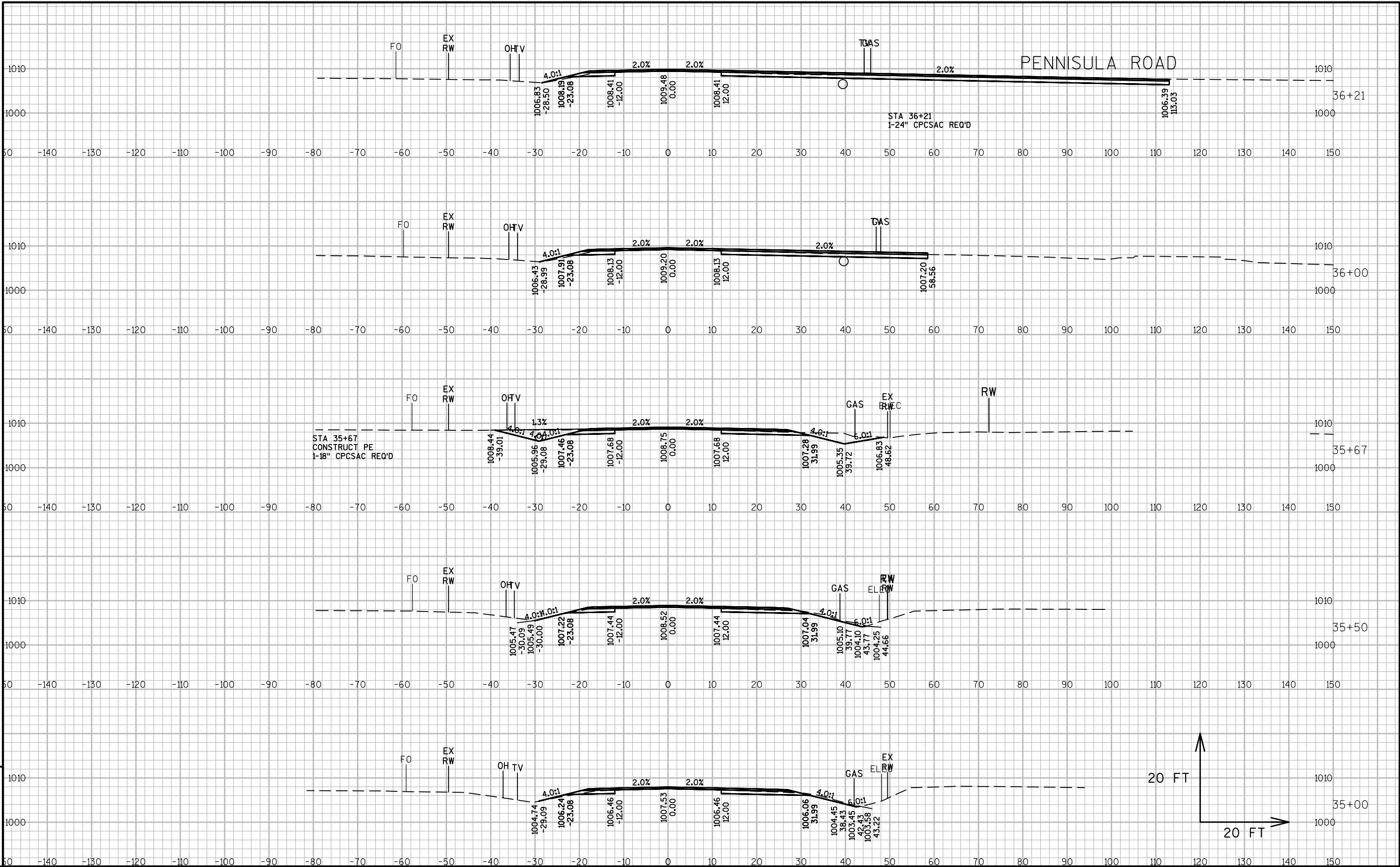


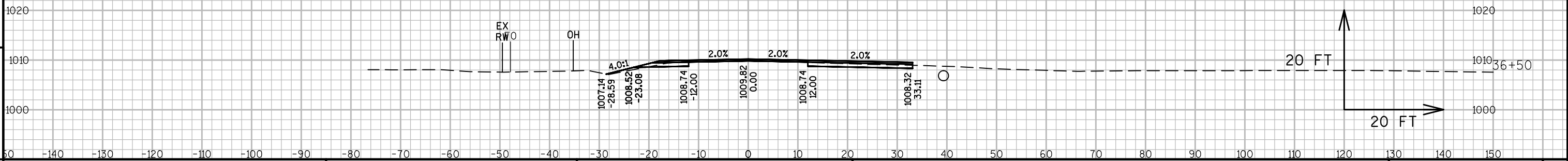
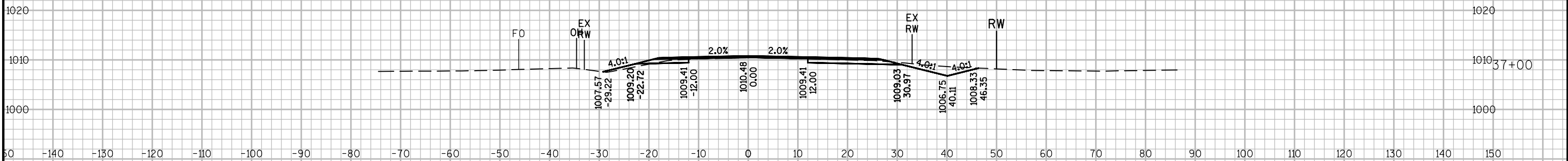
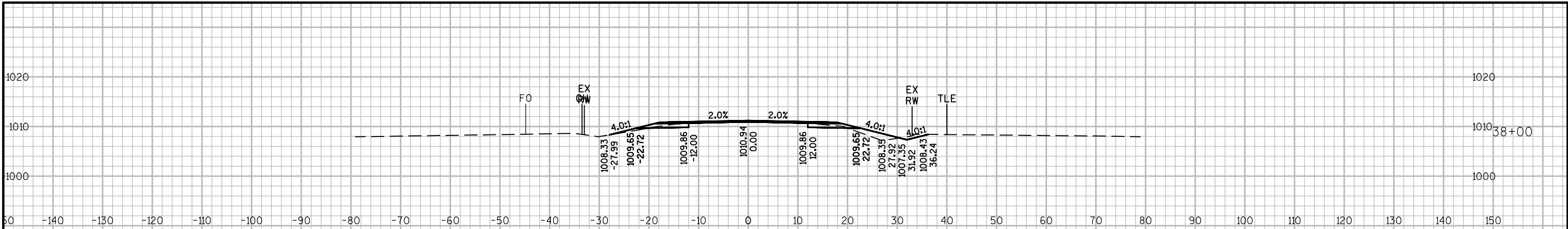


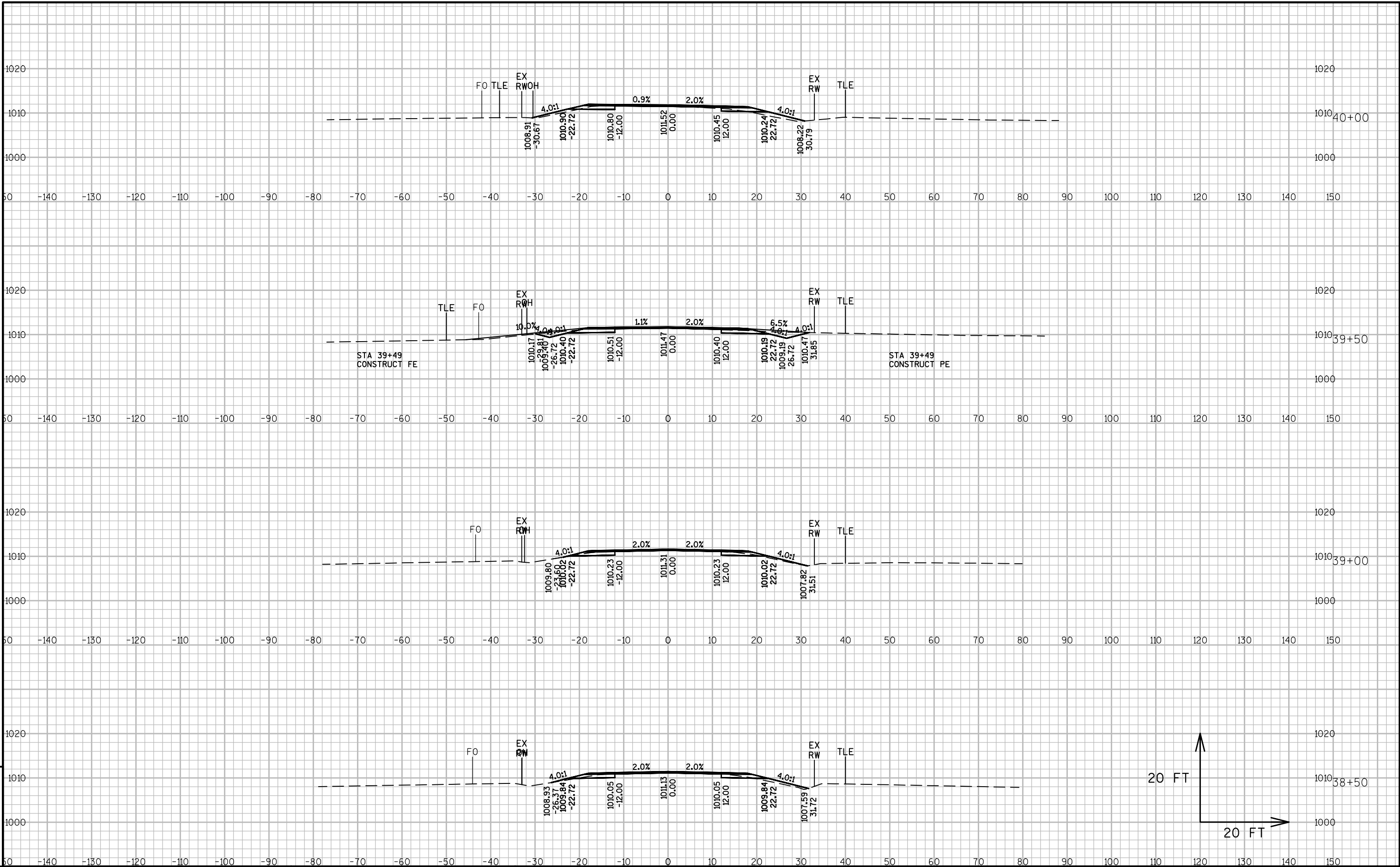


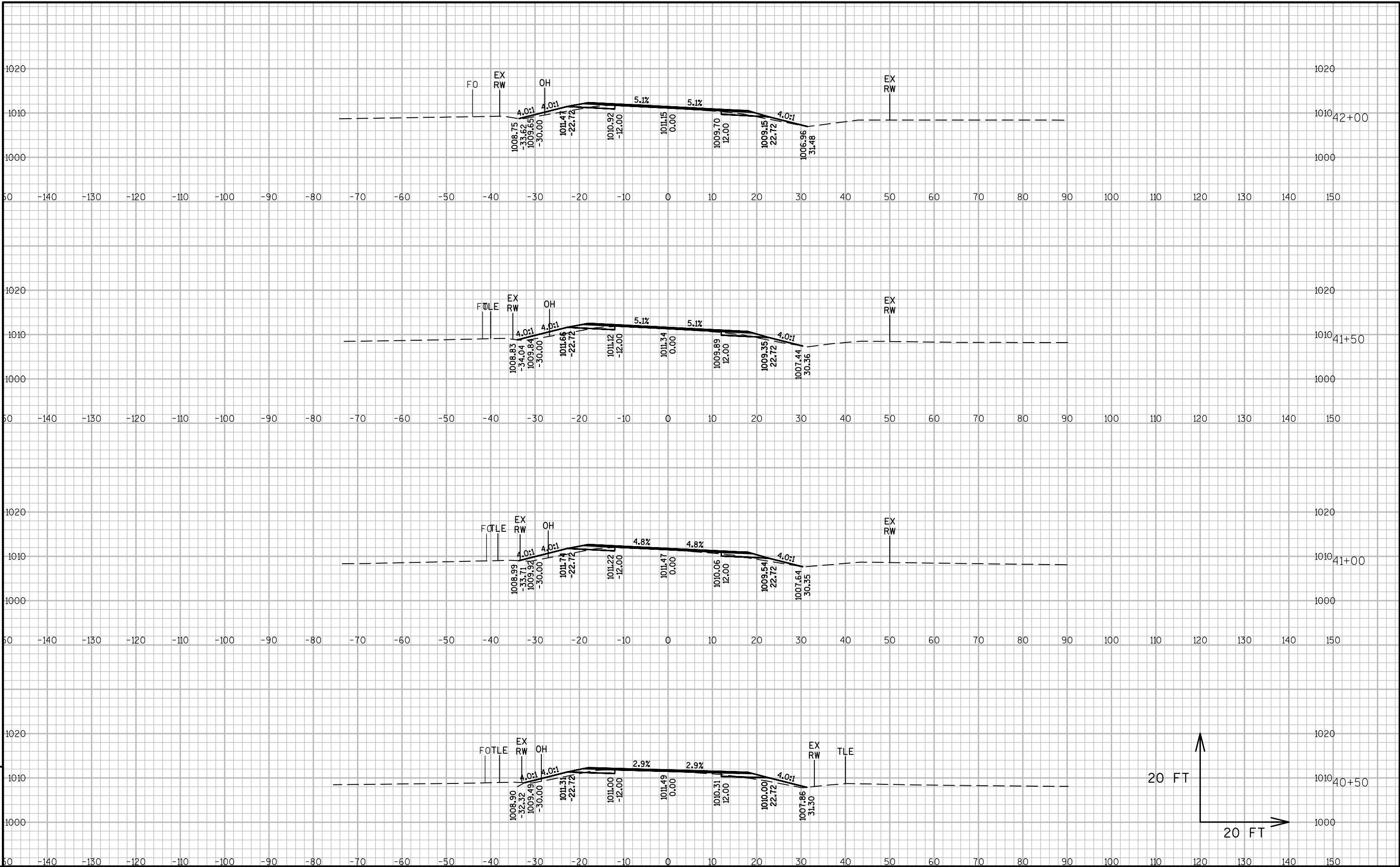












PROJECT NO: 8940-00-15

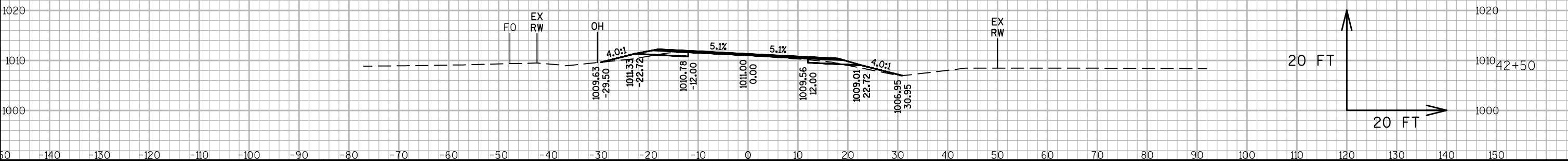
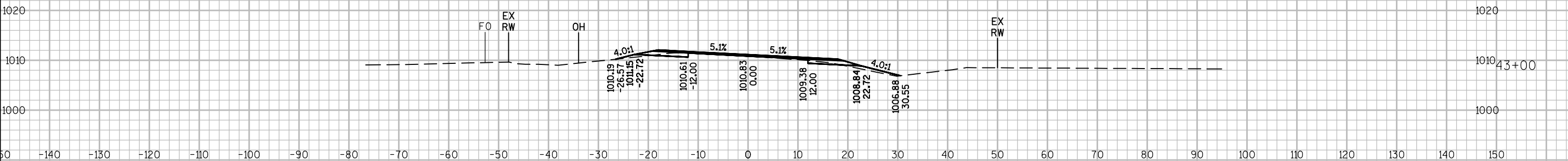
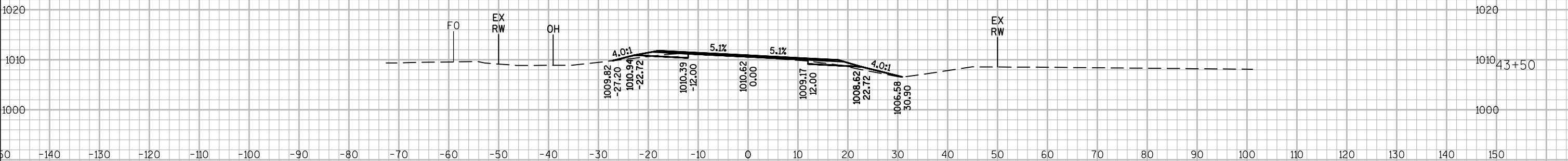
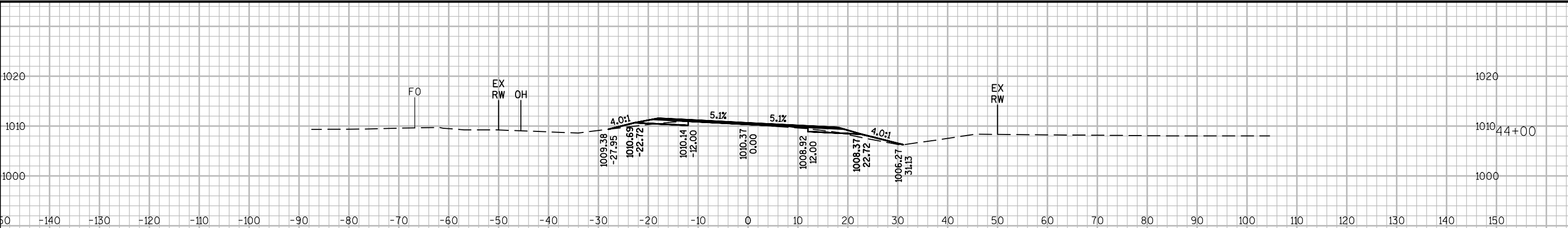
HWY: CTH GG

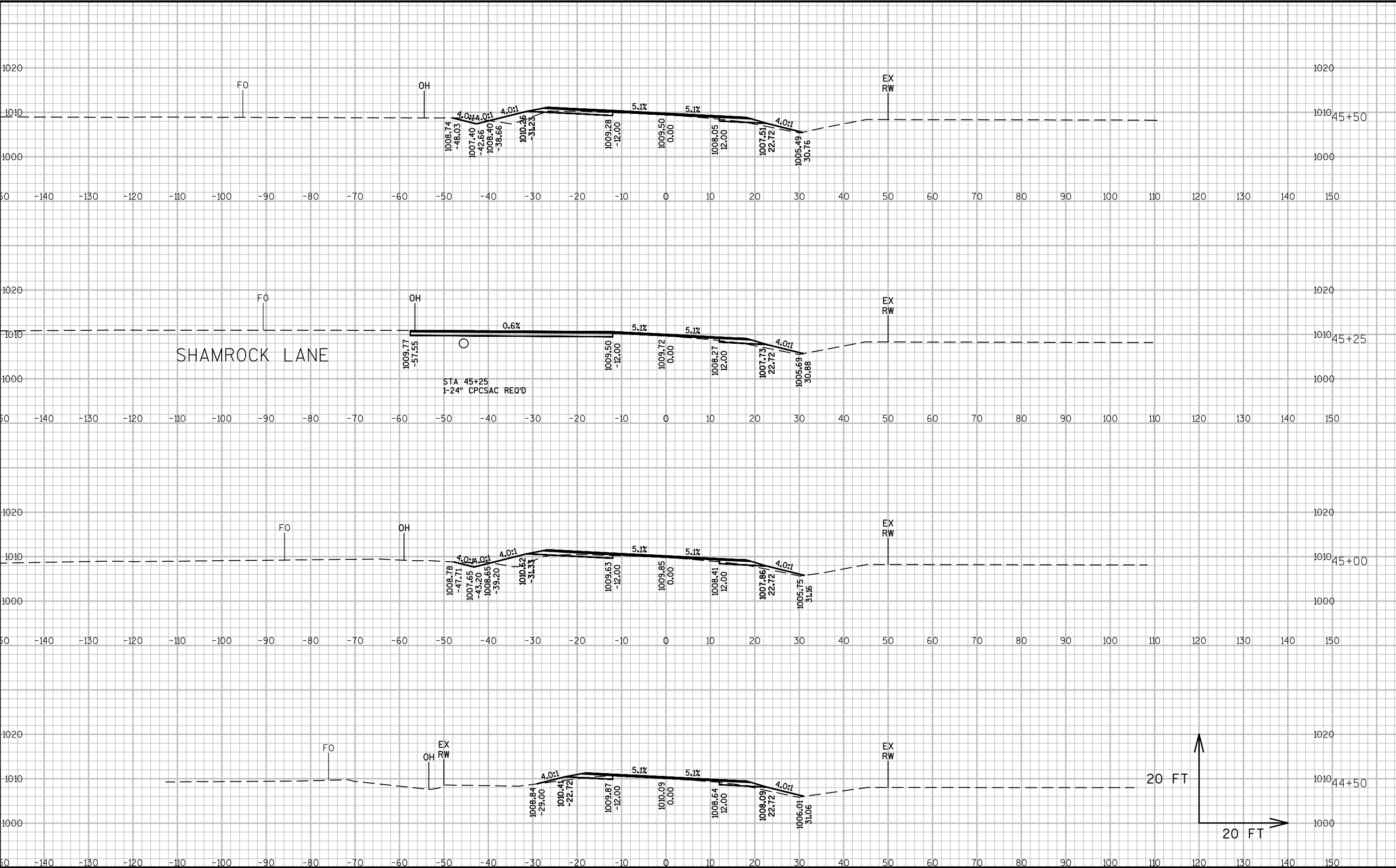
COUNTY: ST CROIX

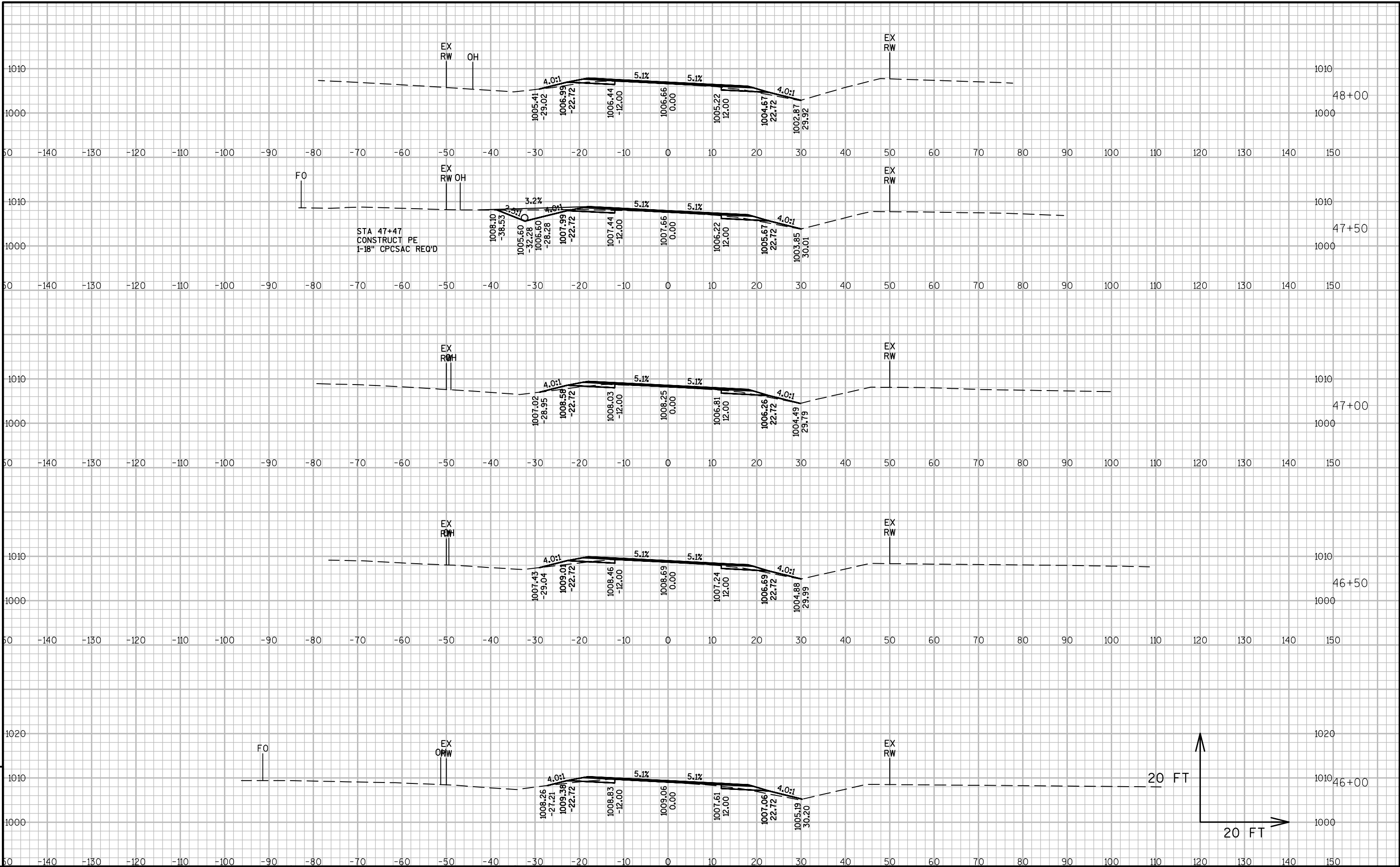
CROSS SECTIONS:

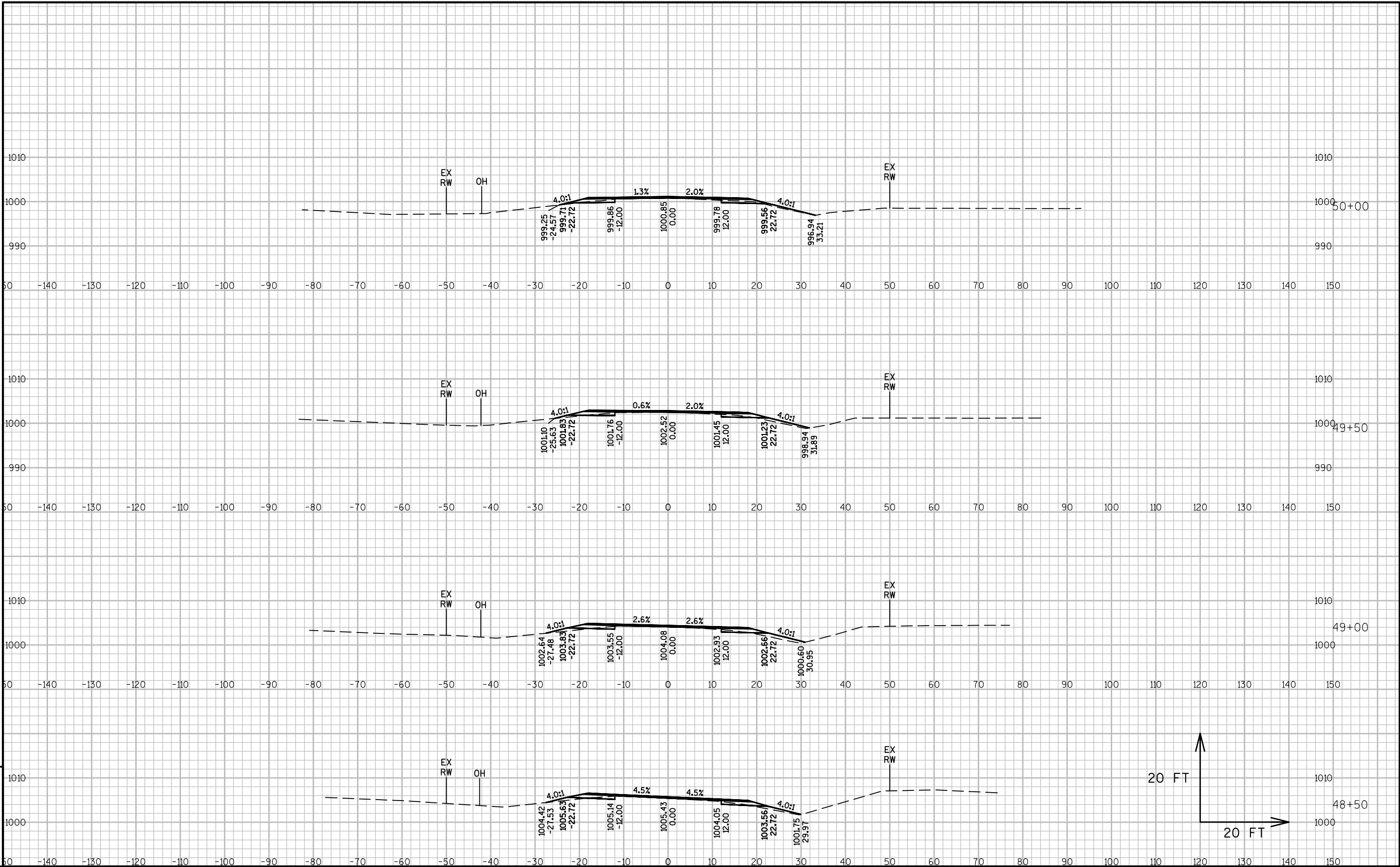
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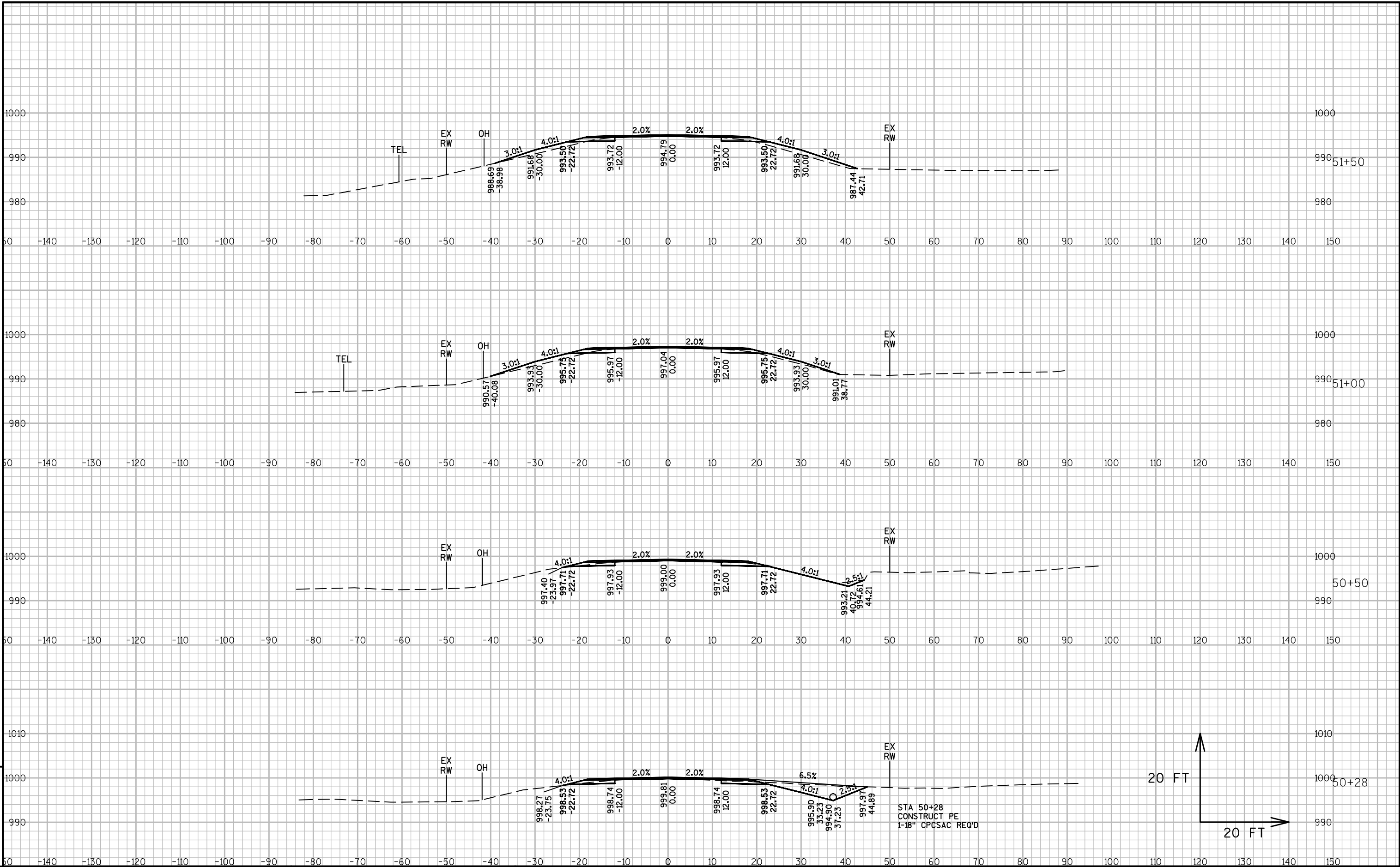
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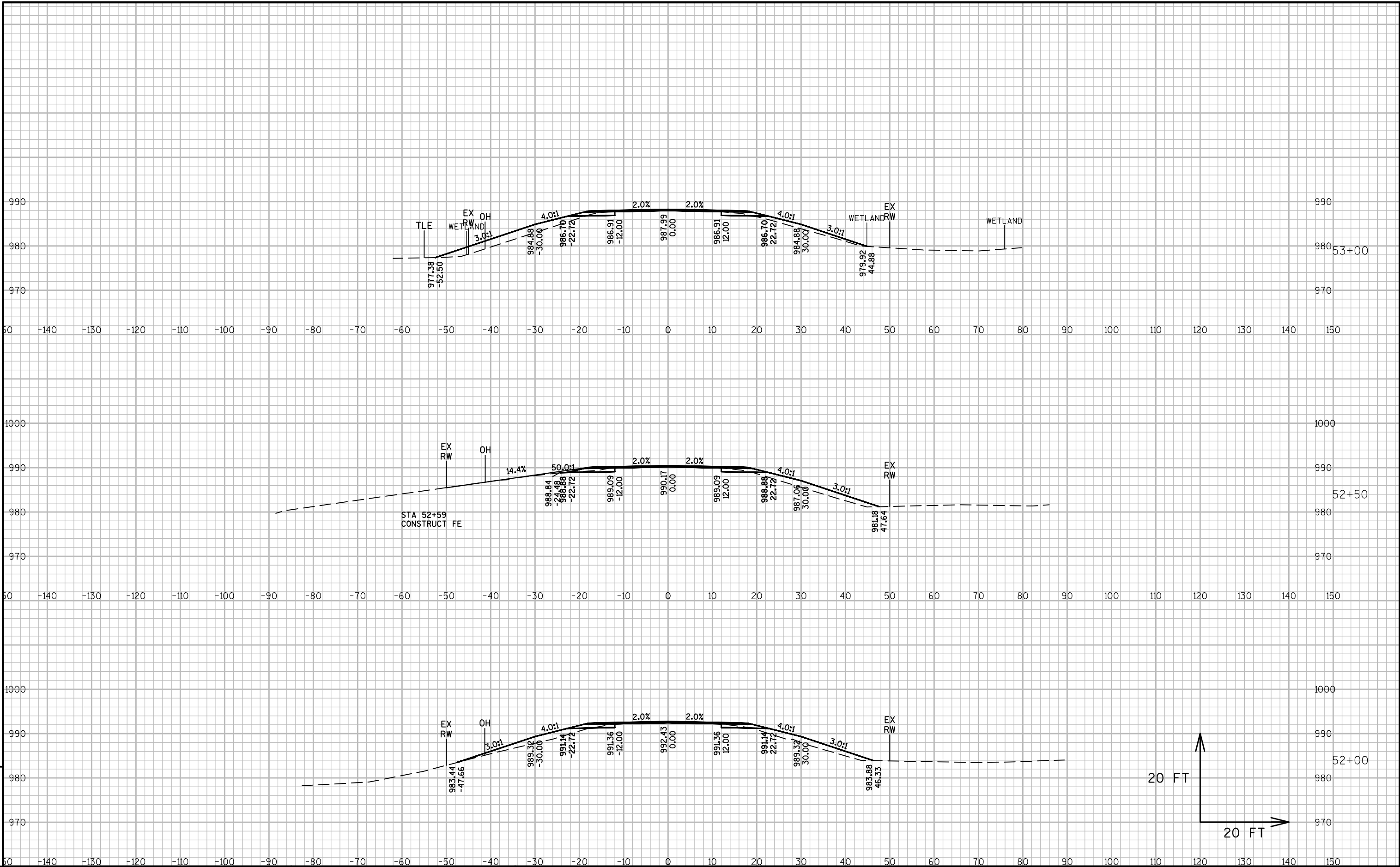


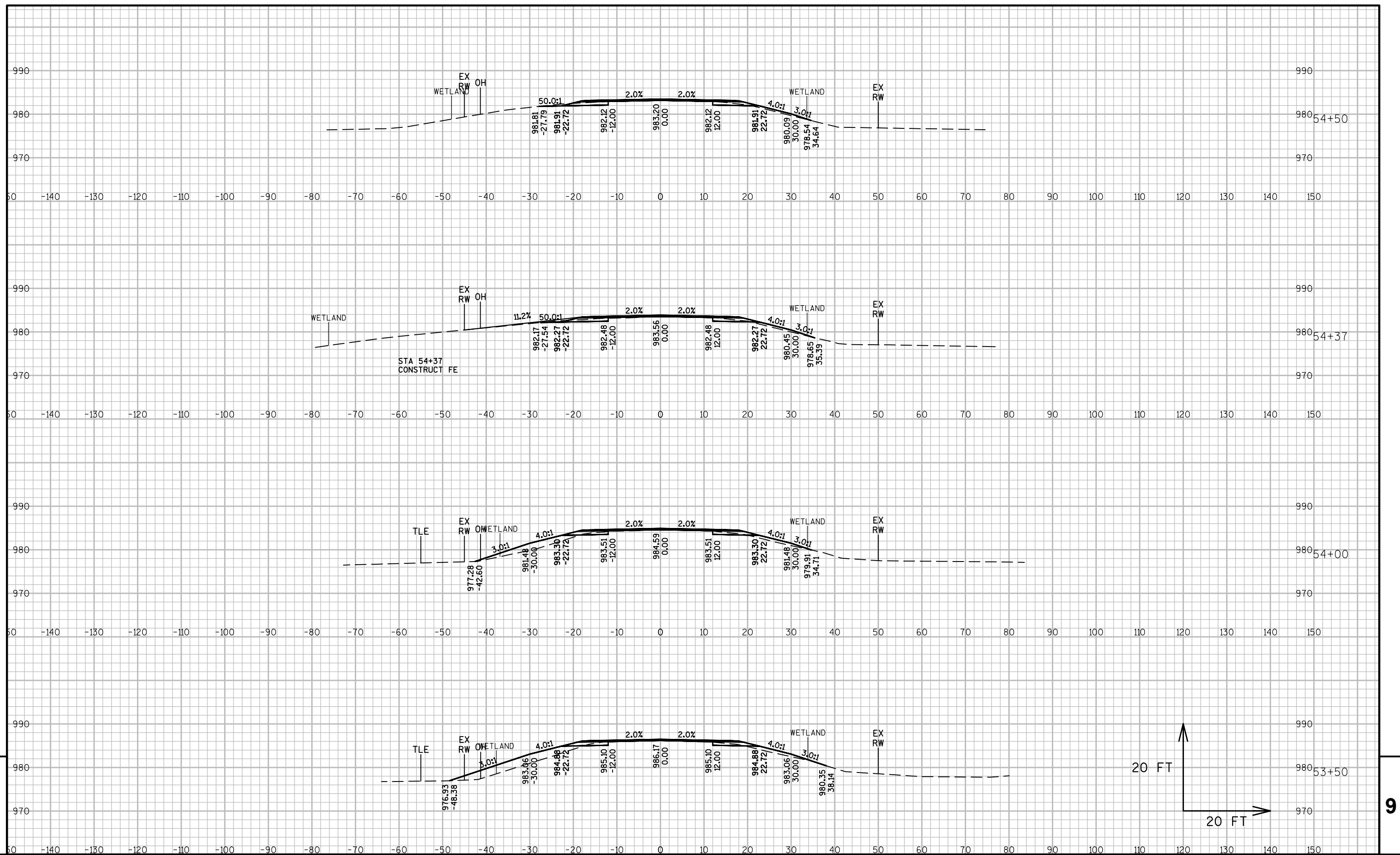


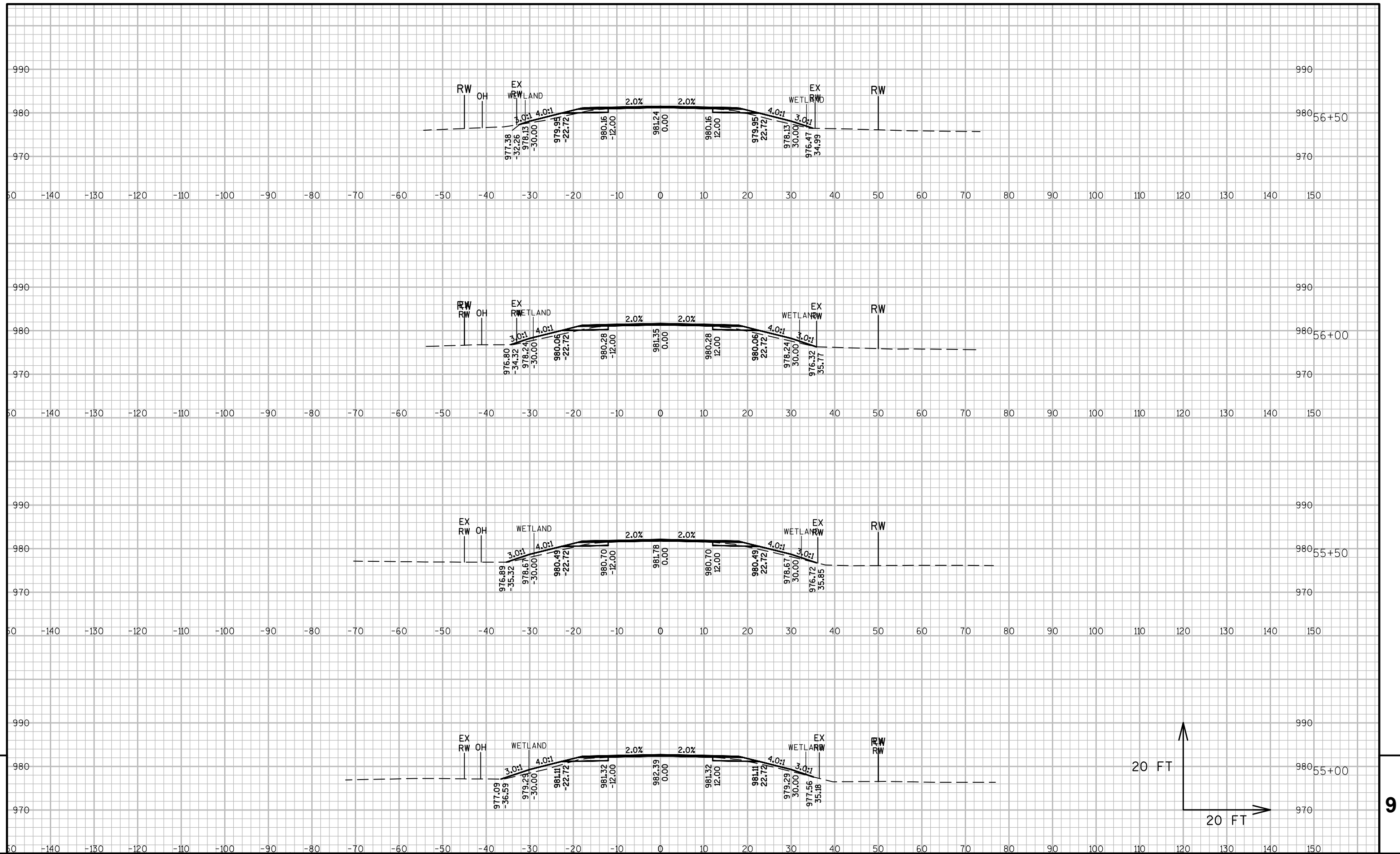


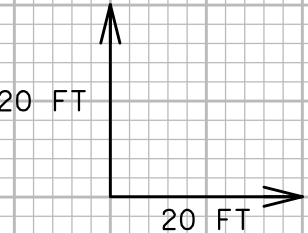
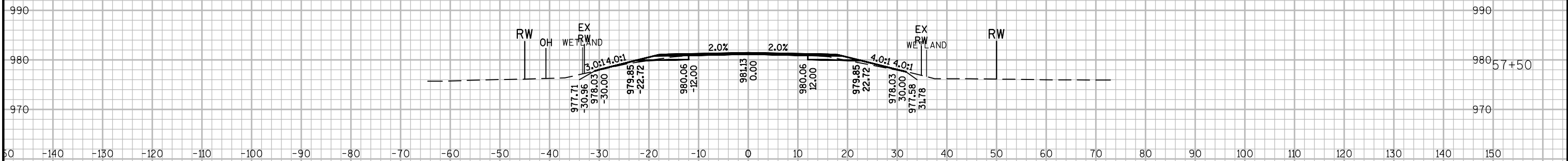
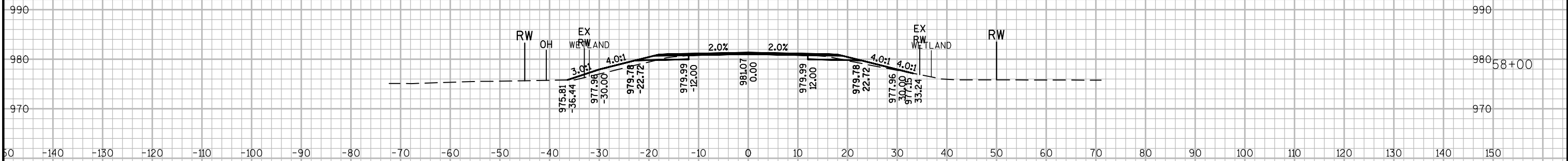


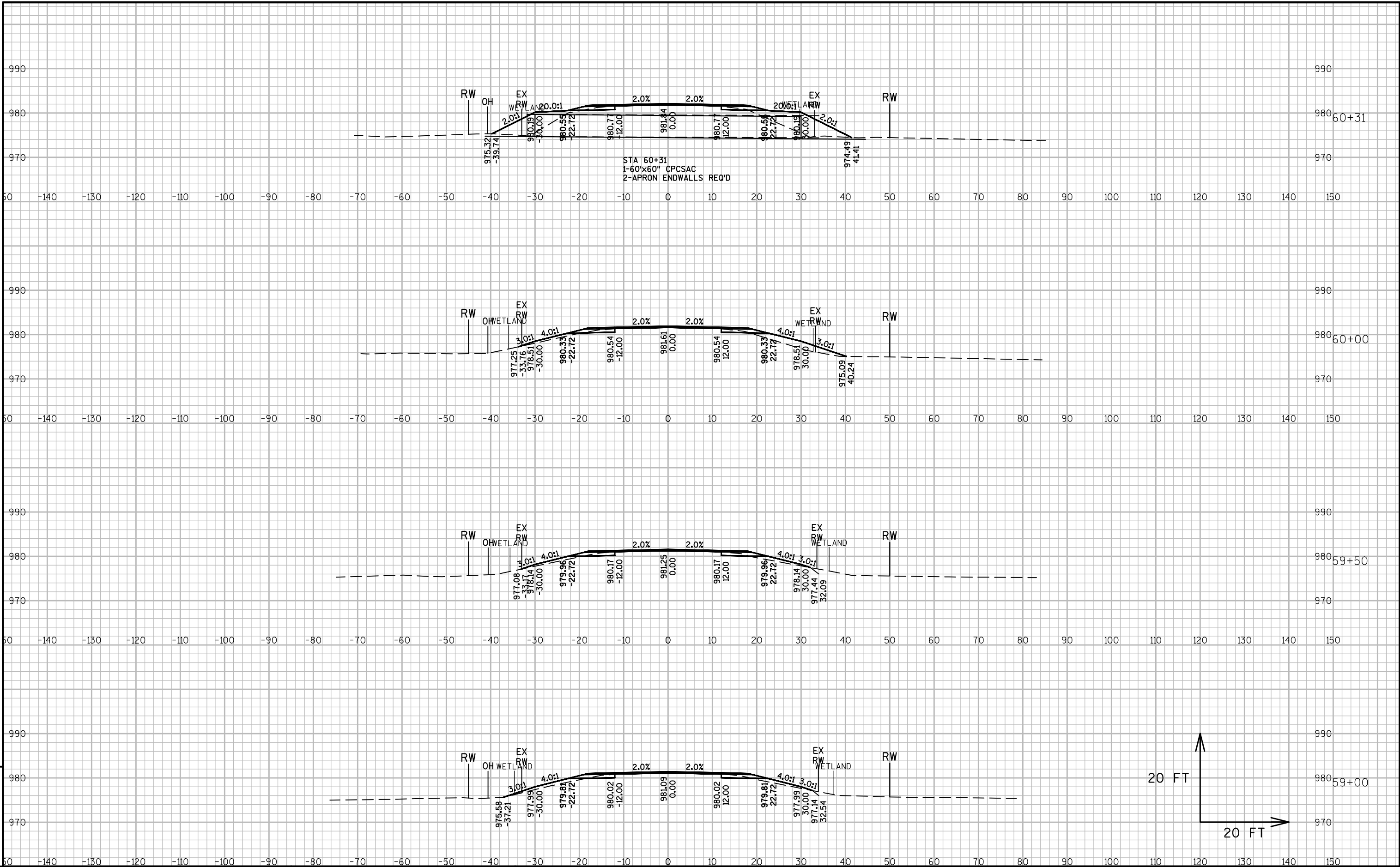


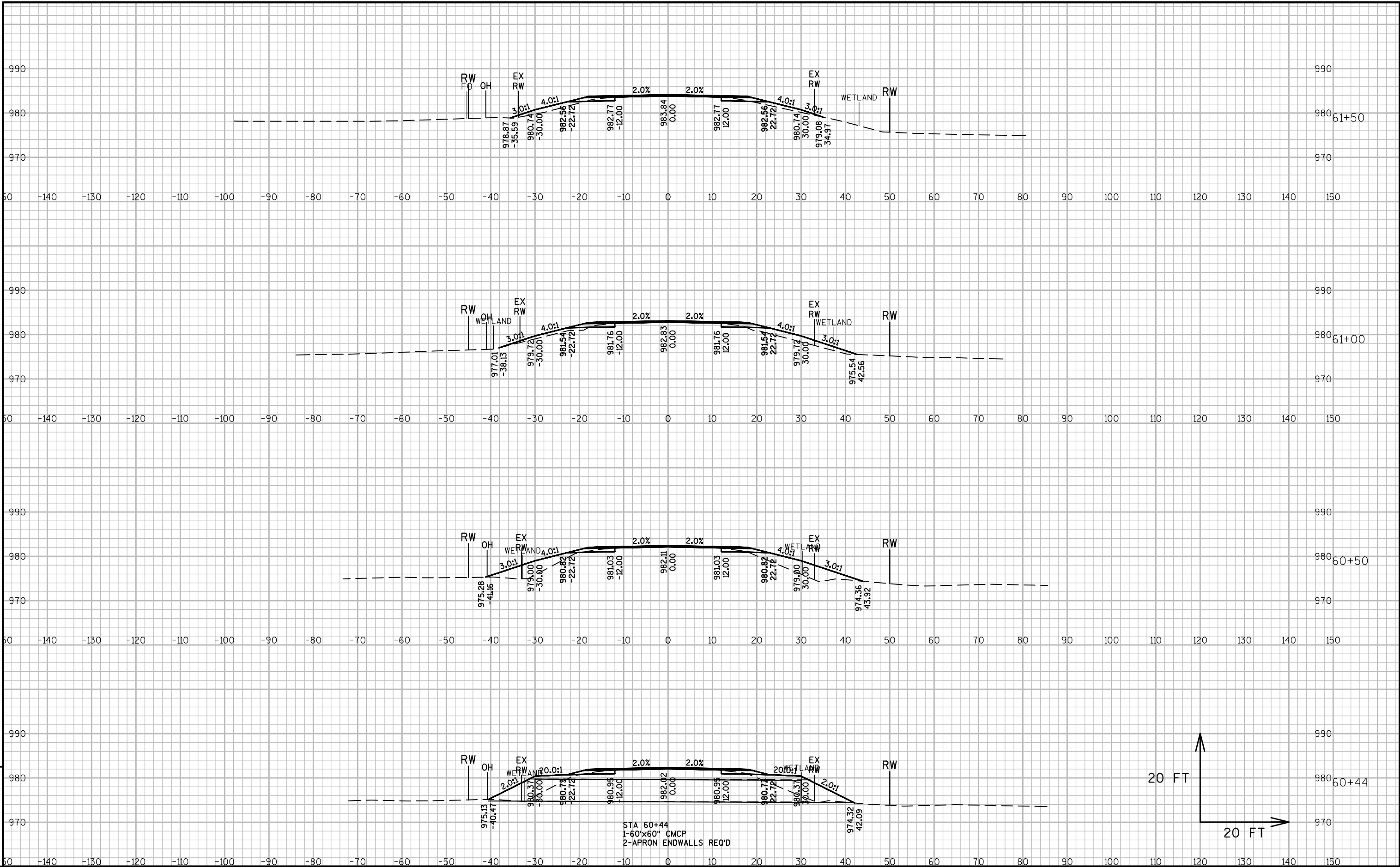


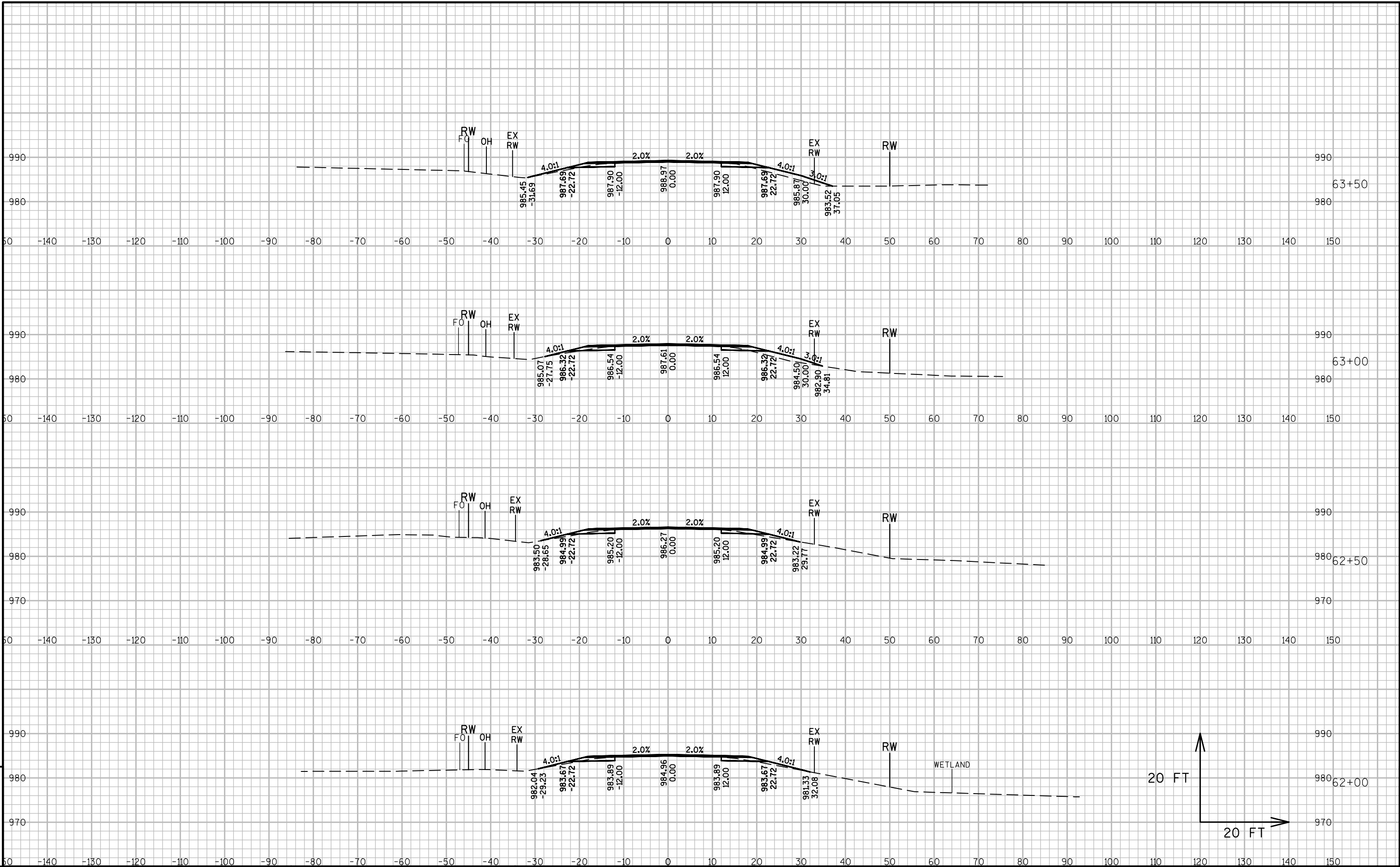


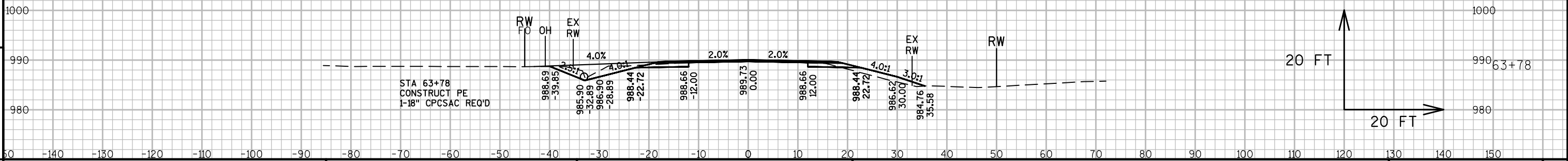
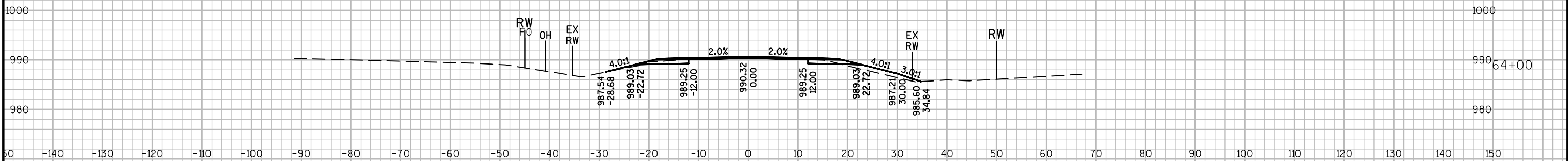
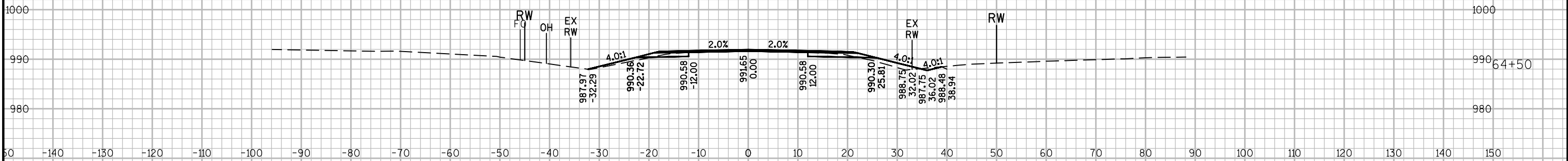


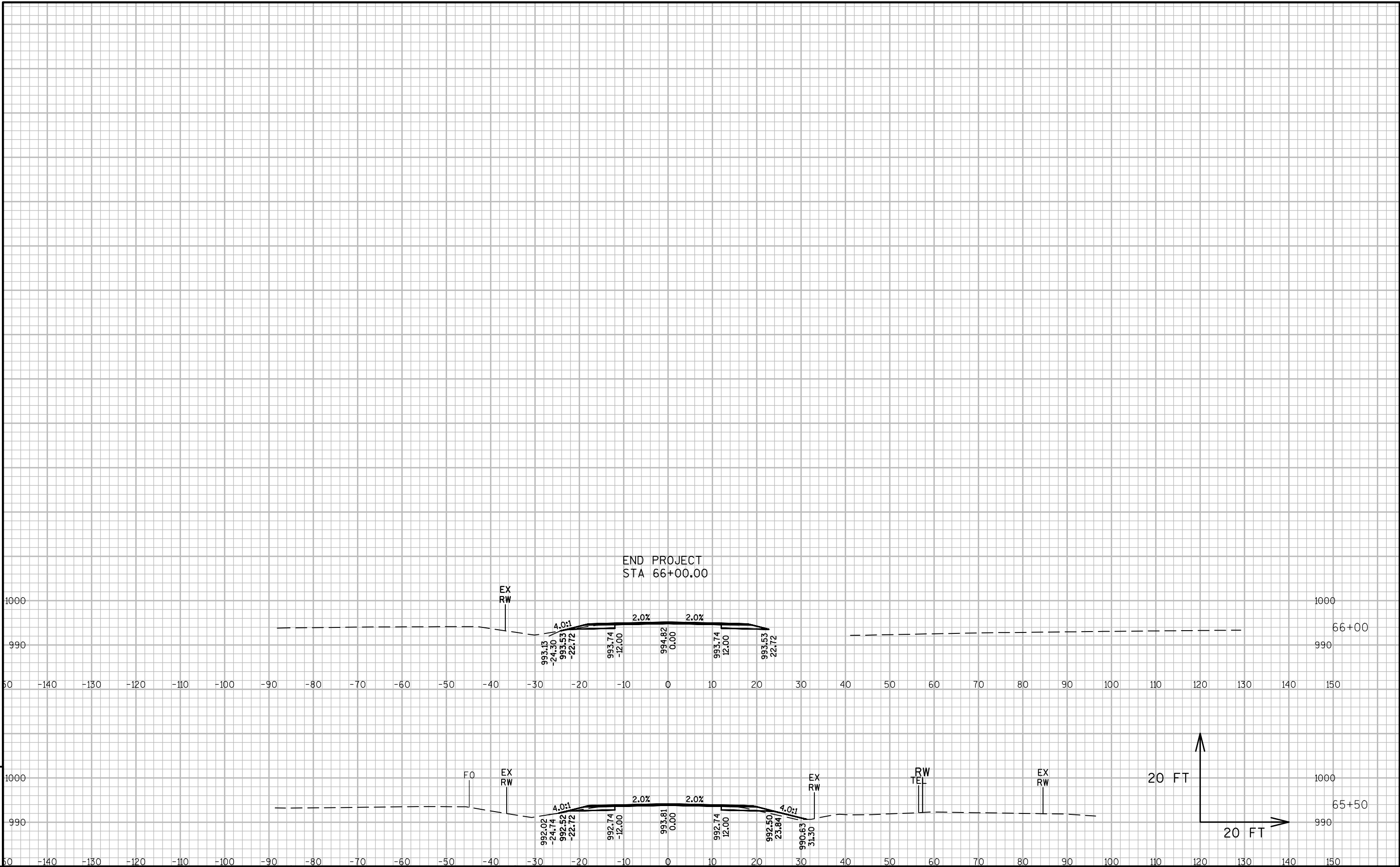




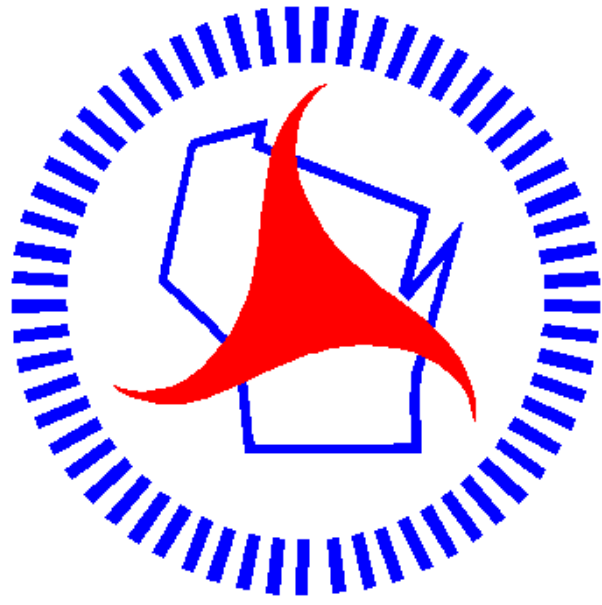








Notes



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