

ORDER OF SHEETS

Section No. 1	Title
Section No. 2	Typical Sections & Details (Includes Erosion Control Plan)
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 = 114

PROJECT LOCATION



DESIGN DESIGNATION

A.A.D.T. (2017)	=	2,800
A.A.D.T. (2037)	=	3,200
D.H.V. (K100)	=	397
D.D.	=	61/39
T. (DHV)	=	5.4%
DESIGN SPEED	=	60 mph
ESALS	=	390,000

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)

HIGH VOLTAGE CAUTION

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

USH 51 - CTH N

TOWN OF ARBOR VITAE

CTH M

VILAS COUNTY

STATE PROJECT NUMBER

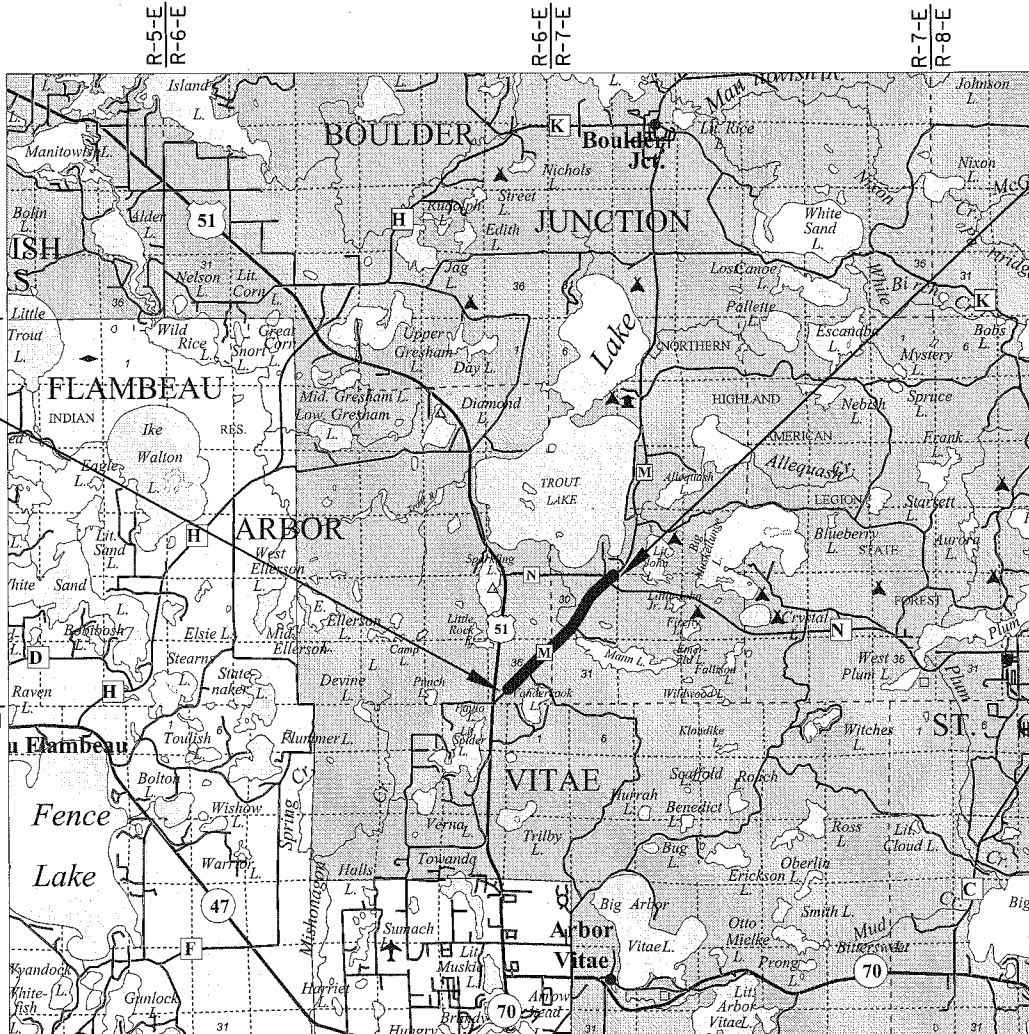
9508-01-70

BEGIN PROJECT

STA 21+93.32
Y=130498.219
X=387788.337

T-42-N
T-41-N

T-41-N
T-40-N



LAYOUT

SCALE 0 3 MILE

TOTAL NET LENGTH OF CENTERLINE = 2.716 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, VILAS COUNTY, NAD83 (1997), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE PROJECT

9508-01-70

FEDERAL PROJECT

PROJECT

WISC 2017114

CONTRACT

1

ACCEPTED FOR
COUNTY OF VILAS

Nick Scholtes
(Signature)

10/13/16
(Date)

Huy Commissioner
(Title of Official)

END PROJECT

STA 165+35.71

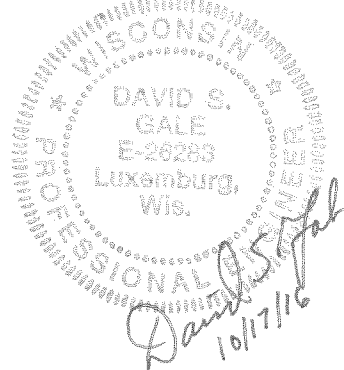
Y=140786.866

X=397645.210

T-42-N
T-41-N

T-41-N
T-40-N

ORIGINAL PLANS PREPARED BY
OMNI
ASSOCIATES



STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor

OMNI ASSOCIATES

Designer

OMNI ASSOCIATES

Management Consultant

CEDAR CORP.

APPROVED FOR THE DEPARTMENT

DATE: 10-25-2016

A. N. D. O. F.
(MANAGEMENT CONSULTANT SIGNATURE)

E

2

GENERAL NOTES

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

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

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL INSTALL THE EROSION CONTROL PROTECTION IN ACCORDANCE WITH THE DETAILS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER.

A BUTT JOINT SHALL BE PLACED AT ALL LOCATIONS WHERE NEW PAVEMENT IS TO MATCH EXISTING PAVEMENT. ALL BUTT JOINTS SHALL BE SAWCUT OR REMOVED AS APPROVED BY THE ENGINEER TO PROVIDE A VERTICAL FACE.

TACK COAT HAS BEEN ESTIMATED AT A RATE OF 0.07 GAL/SY, AND SHALL BE USED IF DEEMED NECESSARY BY THE ENGINEER.

ALL SIDE ROAD INTERSECTIONS SHALL BE PULVERIZED AND RELAID TO THE LIMITS SHOWN ON THE PLAN OR AS DIRECTED BY THE ENGINEER.

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

THE EXACT LOCATIONS AND LIMITS OF PRIVATE ENTRANCES, FIELD ENTRANCES AND COMMERCIAL ENTRANCES SHALL BE DETERMINED BY THE ENGINEER.

DRIVEWAYS SHALL BE REPLACED IN KIND AND IN ACCORDANCE WITH THE CONSTRUCTION DETAILS.

LIST OF STANDARD ABBREVIATIONS

ABUT	ABUTMENT	MIN	MINIMUM
BF	BACK FACE	NOR	NORMAL
BRG	BEARING	MAX	MAXIMUM
BM	BENCH MARK	R/L	REFERENCE LINE
C/L	CENTERLINE	RT	RIGHT
CY or CUYD	CUBIC YARD	R/W	RIGHT-OF-WAY
DIA	DIAMETER	RD	ROAD
EA	EACH	SF or SQ FT	SQUARE FEET
EAT	ENERGY ABSORBING TERMINAL	SY or SQ YD	SQUARE YARD
EL OR ELEV	ELEVATION	STA	STATION
FF	FRONT FACE	TEL	TELEPHONE
CWT	HUNDREDWEIGHT	TLE	TEMPORARY LIMITED EASEMENT
IN	INCH	MGAL	THOUSAND GALLONS
LT	LEFT	TYP	TYPICAL
LF OR LIN FT	LINEAR FOOT	VPC	VERTICAL POINT OF CURVE
LS	LUMP SUM	VPI	VERTICAL POINT OF INTERSECTION
MGS	MIDWEST GUARDRAIL SYSTEM	VPT	VERTICAL POINT OF TANGENCY

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	0.08	0.16	0.22	0.12	0.20	0.27	0.15	0.24	0.33	0.19	0.28	0.38			
	0.22	0.30	0.38	0.26	0.34	0.44	0.30	0.37	0.50	0.34	0.41	0.56			
MEDIAN STRIP - TURF	0.19	0.20	0.24	0.19	0.22	0.26	0.20	0.23	0.30	0.20	0.25	0.30			
	0.24	0.26	0.30	0.25	0.28	0.33	0.26	0.30	0.37	0.27	0.32	0.40			
SIDE SLOPE - TURF			0.25			0.27			0.28			0.30			
			0.32			0.34			0.36			0.38			
PAVEMENT:															
ASPHALT .70 - .95															
CONCRETE .80 - .95															
BRICK .70 - .80															
DRIVES, WALKS .75 - .85															
ROOFS .75 - .95															
GRAVEL ROADS, SHOULDERS .40 - .60															
TOTAL PROJECT ARE 60.0 ACRES															
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES 18.0 ACRES															
OTHER CONTACTS															
DNR LIAISON				JON SIMONSEN DEPARTMENT OF NATURAL RESOURCES NORTHERN REGION HEADQUARTERS 107 SUTLIFF AVENUE RHINELANDER, WI 54501 TELEPHONE: 715-365-8916 E-MAIL: JONATHAN.SIMONSEN@WISCONSIN.GOV				UTILITIES		COMMUNICATIONS			FRONTIER COMMUNICATIONS 521 4TH STREET WAUSAU, WI 54403 ATTN: BRIAN DOMPKE TELEPHONE: (715) 203-9257 CELL: (715)-203-9257 EMAIL: BRIAN.DOMPKE@FTR.COM		
HIGHWAY COMMISSIONER				NICK SCHOLTES VILAS COUNTY HIGHWAY DEPARTMENT P.O. BOX 1568 2104 N. RAILROAD ST. EAGLE RIVER, WI 54521 TELEPHONE: 715-479-4641				ELECTRIC		WISCONSIN PUBLIC SERVICE 1700 SHERMAN STREET P.O. BOX 1166 WAUSAU, WI 54402 ATTN: CLAYTON VIRCKS TELEPHONE: (715) 848-7317 CELL: (715) 573-7806 EMAIL: CHVIRCKS@WISCONSINPUBLICSERVICE.COM					
DESIGN CONSULTANT				OMNI ASSOCIATES, INC. ONE SYSTEMS DRIVE APPLETON, WI 54914-1654 ATTN: DAVID GALE, P.E. TELEPHONE: 920-830-6327 E-MAIL: DAVE.GALE@OMNI.COM				ELECTRIC		WISCONSIN PUBLIC SERVICE 700 N. ADAMS STREET P.O. BOX 19001 GREEN BAY, WI 54307-9001 ATTN: LORI BUTRY TELEPHONE: (920) 433-1703 EMAIL: LABUTRY@INTEGRYSGROUP.COM					
								GAS		WE ENERGIES 4352 COUNTY ROAD B LAND O' LAKES, WI 54540 ATTN: BILL HOWARD TELEPHONE: (906) 779-2472 CELL: (906) 282-3160 EMAIL: WILLIAM.HOWARD@WE-ENERGIES.COM					

ORDER OF "SECTION 2" SHEETS

SHEET TITLE

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
EROSION CONTROL PLAN
SIGNING AND MARKING PLAN
TRAFFIC CONTROL/DETOUR PLAN
CONTROL POINT DATA PLAN

DIGGERSHOTLINE

Dial 811 or (800) 242-8511

www.DiggersHotline.com

PROJECT NO: 9508-01-70

HWY: CTH M

COUNTY: VILAS

GENERAL NOTES

SHEET:

E

2

2.1

FILE NAME: F:\TR\JOBS\E2177A15\CIVIL 3D 2014\SheetsPlan\95080170-020101-gn.PPT

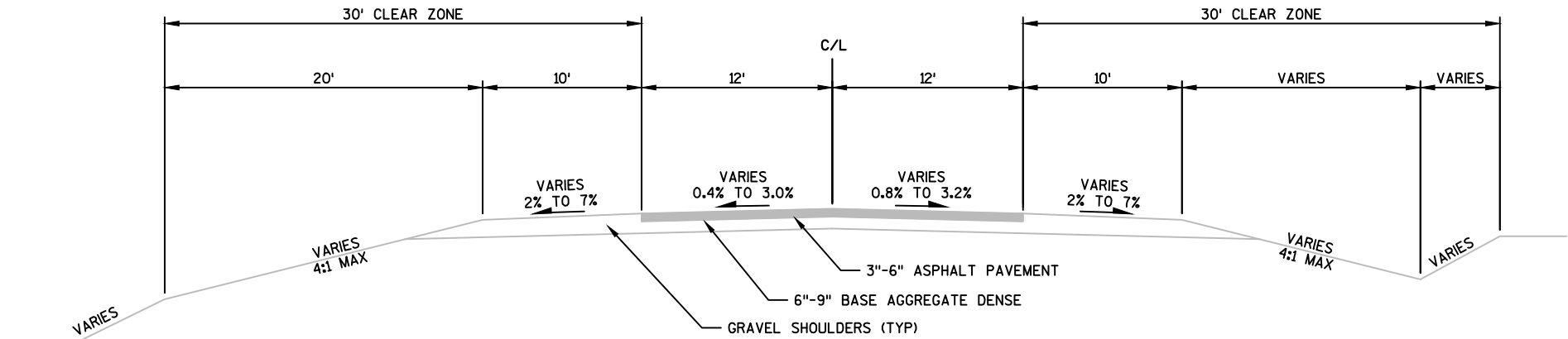
ORIGINATOR: OMNNI ASSOCIATES

ORIG. DATE:

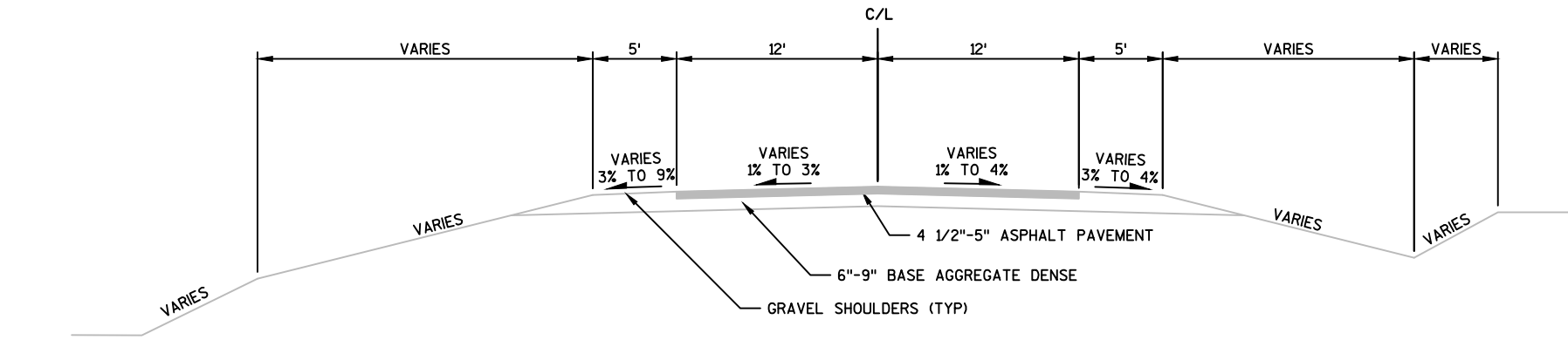
REV. DATE:

PRINT DATE: October 18, 2016

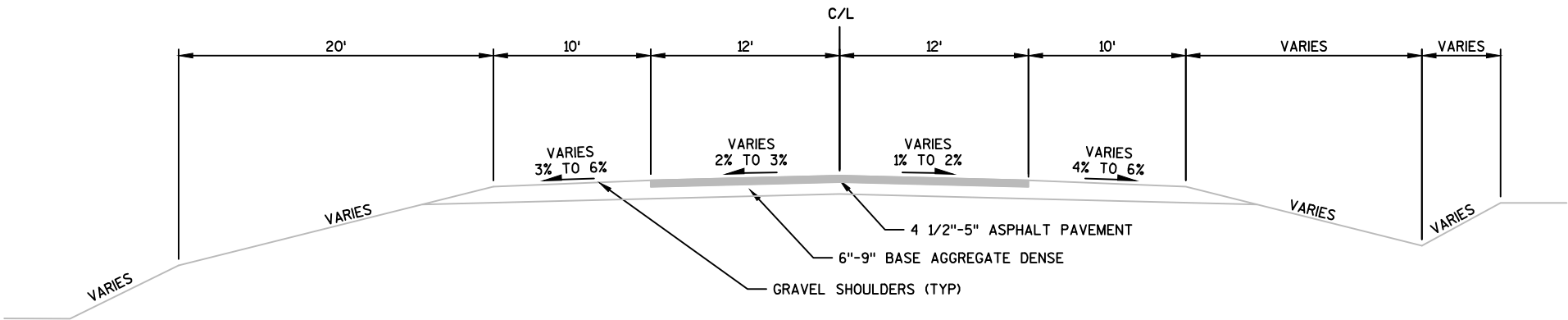
PAVEMENT CORE LOG				
BORING #	STA	OFFSET	ASPHALT DEPTH (in)	BASE DEPTH (in)
1	22+05	13' RT	4.5	9
2	37+00	7' LT	4.375	8
3	52+90	7' RT	4.25	7
4	68+90	7' LT	6	8
5	84+05	6' RT	3	6
6	99+00	8' LT	5	8
7	114+90	7' RT	4.375	8
8	131+95	9' LT	4.625	8
9	146+05	7' RT	4.25	8
10	158+72	6' LT	4.625	6
11	159+90	5' LT	5.25	9



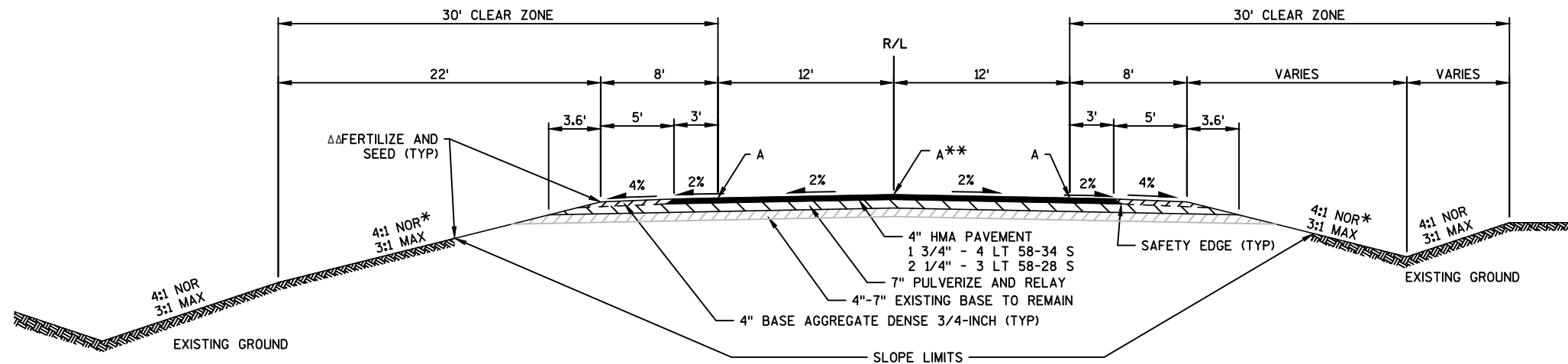
TYPICAL EXISTING SECTION - CTH M
STA 21+93.32 TO STA 165+35.71



TYPICAL EXISTING SECTION - CTH N
STA 198+65.27 TO STA 200+00



TYPICAL EXISTING SECTION - CTH N
STA 200+00 TO STA 201+67.96



TYPICAL FINISHED SECTION - CTH M

STA 21+93.32 TO STA 80+00
STA 90+00 TO STA 154+53.20

NOTES:

NOTE A: RUMBLE STRIP REQUIRED (USE TYPE 2 IN SHOULDER AREA).

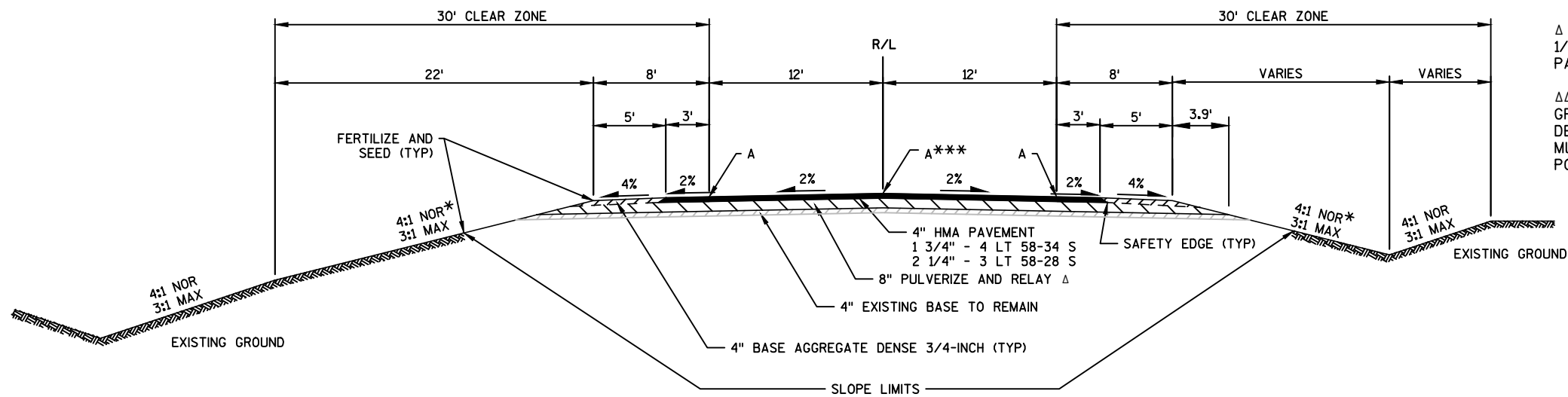
* IF EXISTING SIDE SLOPES ARE 4:1 OR FLATTER, PROPOSED SIDE SLOPES MUST BE 4:1 OR FLATTER. IF EXISTING SIDE SLOPES ARE STEEPER THAN 4:1, PROPOSED SIDE SLOPES CAN BE UP TO 3:1.

** PROPOSED ELEVATION 4-1/2" HIGHER THAN EXISTING.

*** PROPOSED ELEVATION 7" HIGHER THAN EXISTING.

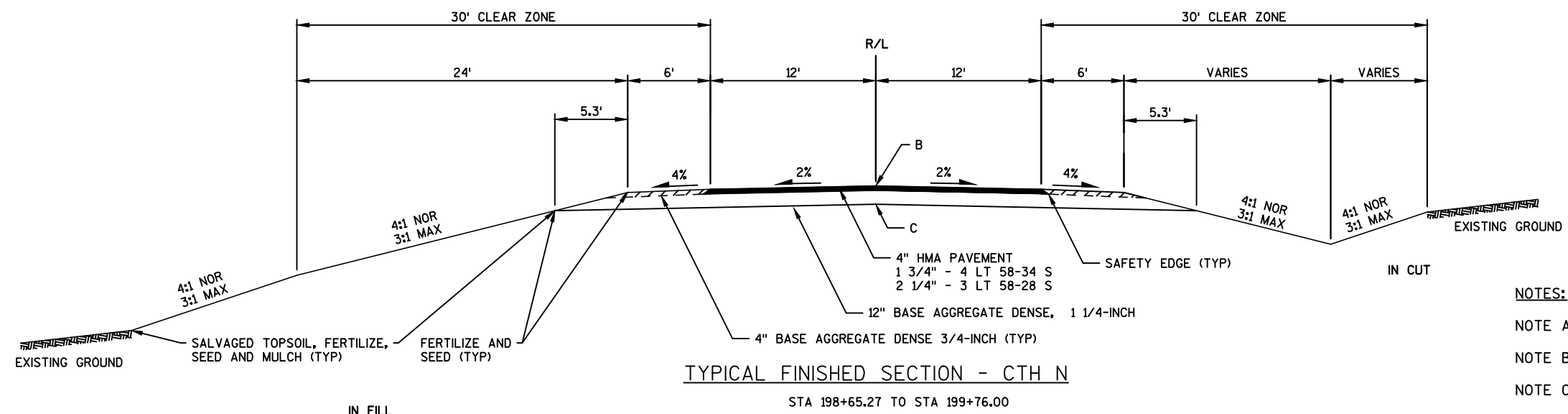
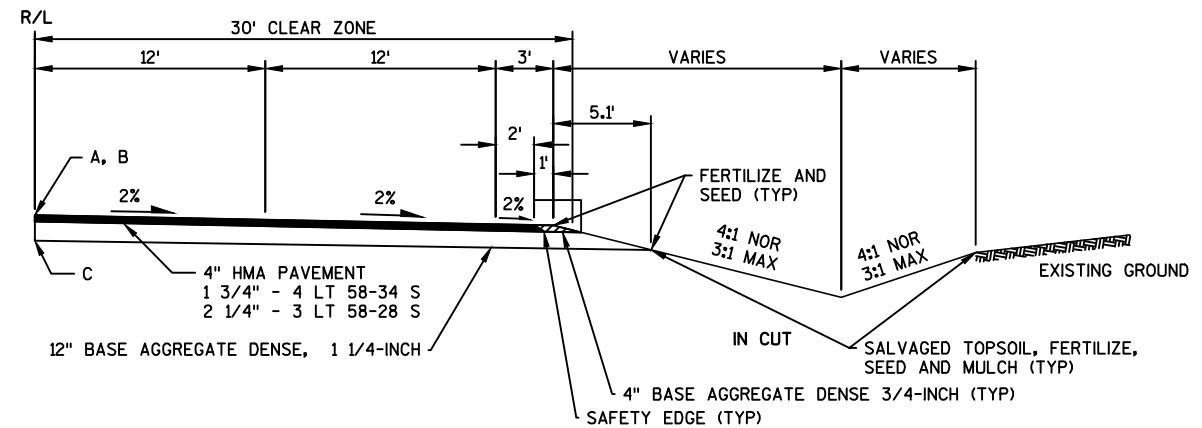
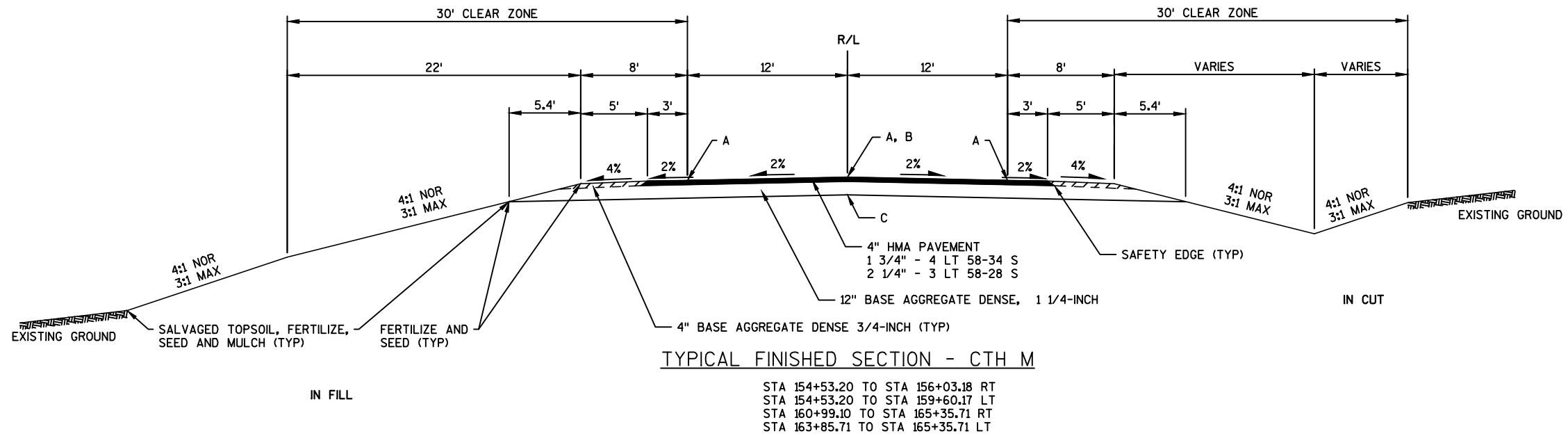
Δ ADD 2 1/2" DEPTH OF BASE AGGREGATE DENSE 1 1/4-INCH PRIOR TO PULVERIZING TO PROVIDE REQUIRED PAVEMENT STRENGTH.

ΔΔ STA 134+00 TO STA 137+00 LT & RT ADDITIONAL GRADING REQUIRED, SEE CROSS SECTIONS FOR DETAILS. SALVAGE TOPSOIL, FERTILIZE, SEED AND MULCH ALL AREAS BEYOND SUBGRADE SHOULDER POINT.



TYPICAL FINISHED SECTION - CTH M

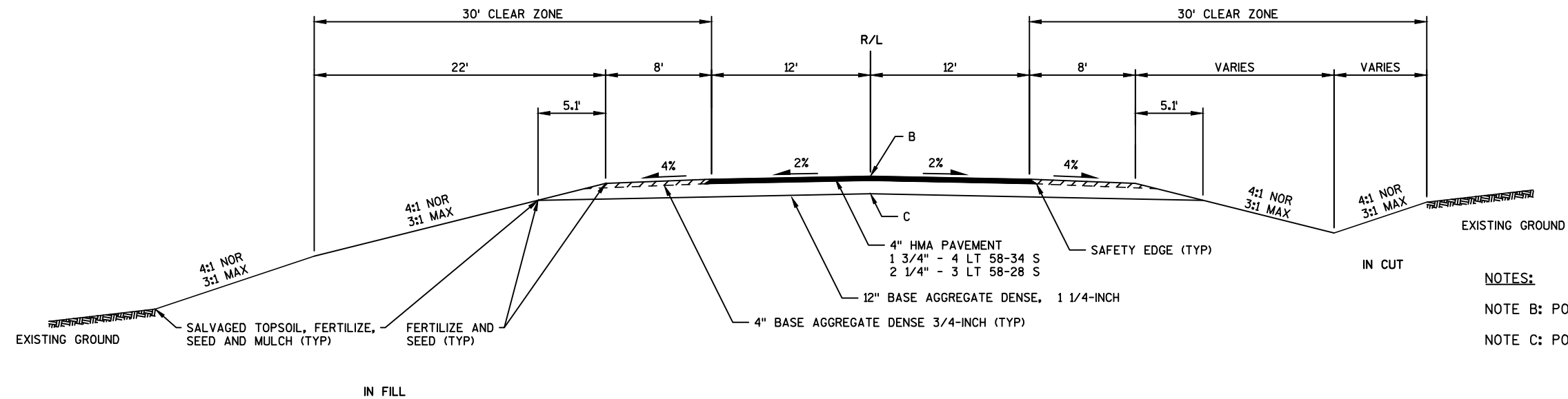
STA 80+00 TO STA 90+00

**NOTES:**

NOTE A: RUMBLE STRIP REQUIRED.

NOTE B: POINT REFERRED TO ON PROFILE

NOTE C: POINT REFERRED TO ON CROSS-SECTIONS



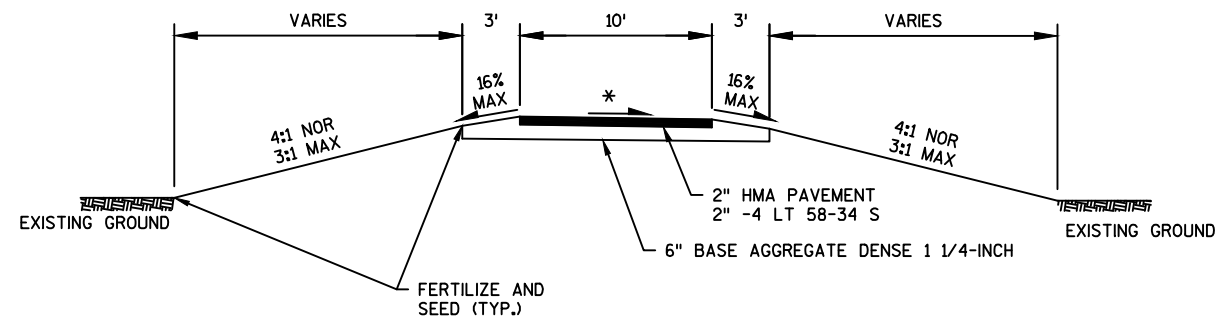
NOTES:

NOTE B: POINT REFERRRED TO ON PROFILE

NOTE C: POINT REFERRED TO ON CROSS-SECTIONS

TYPICAL FINISHED SECTION - CTH N

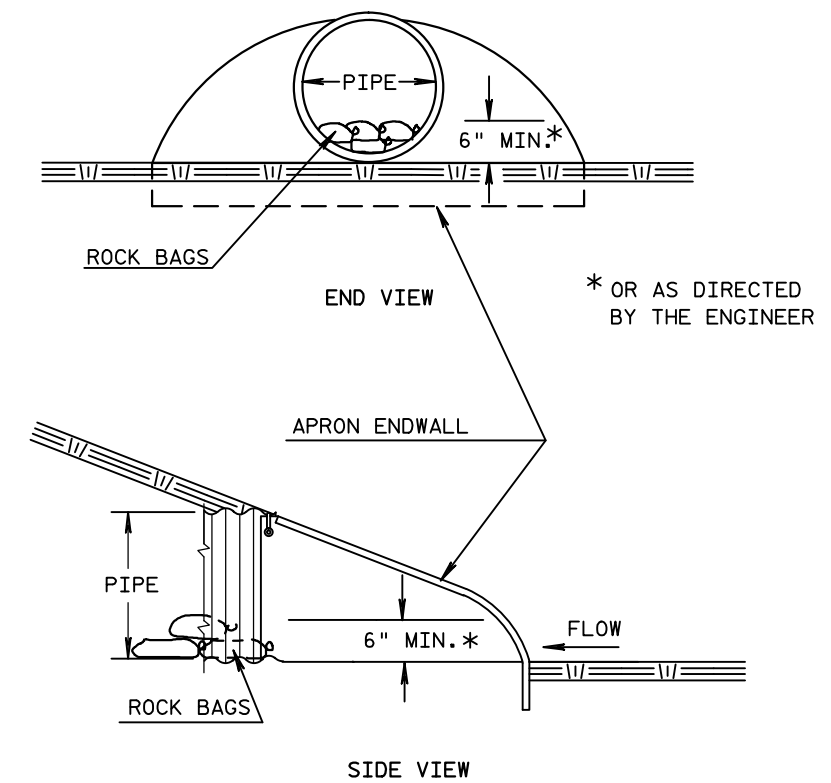
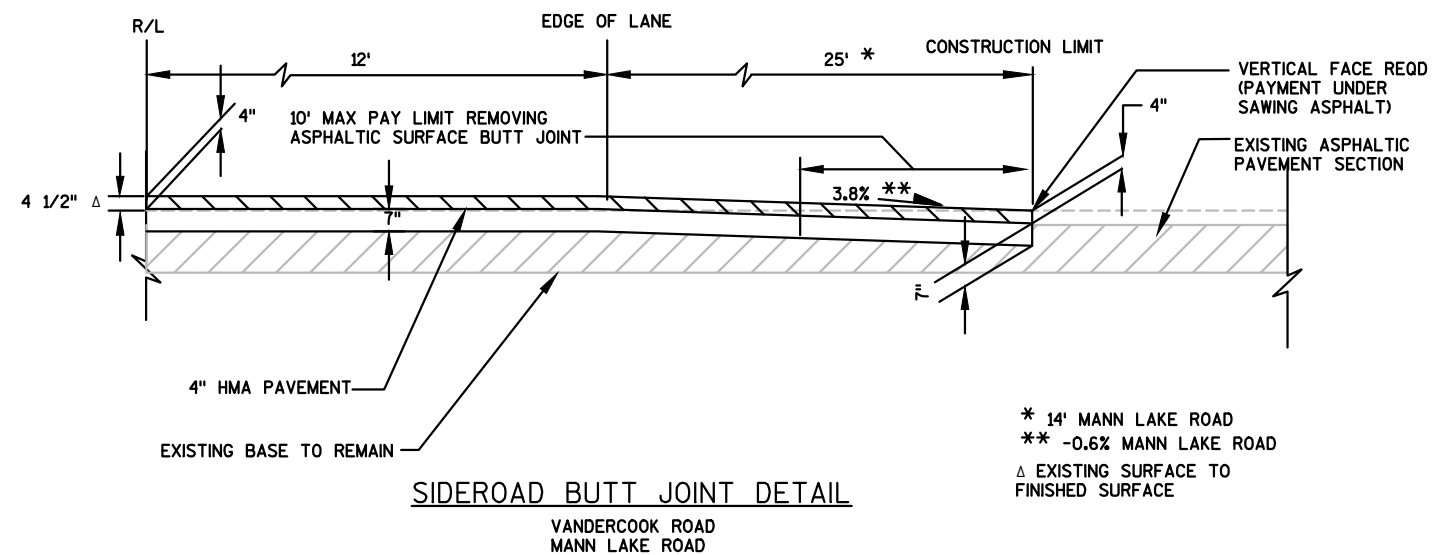
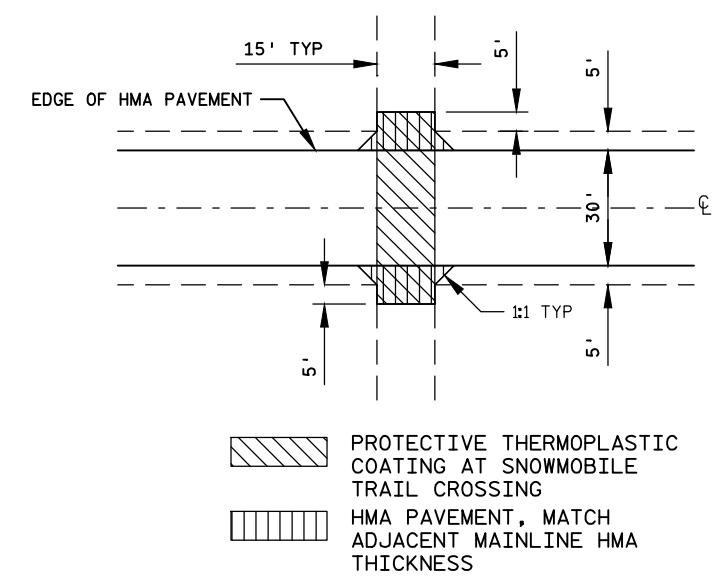
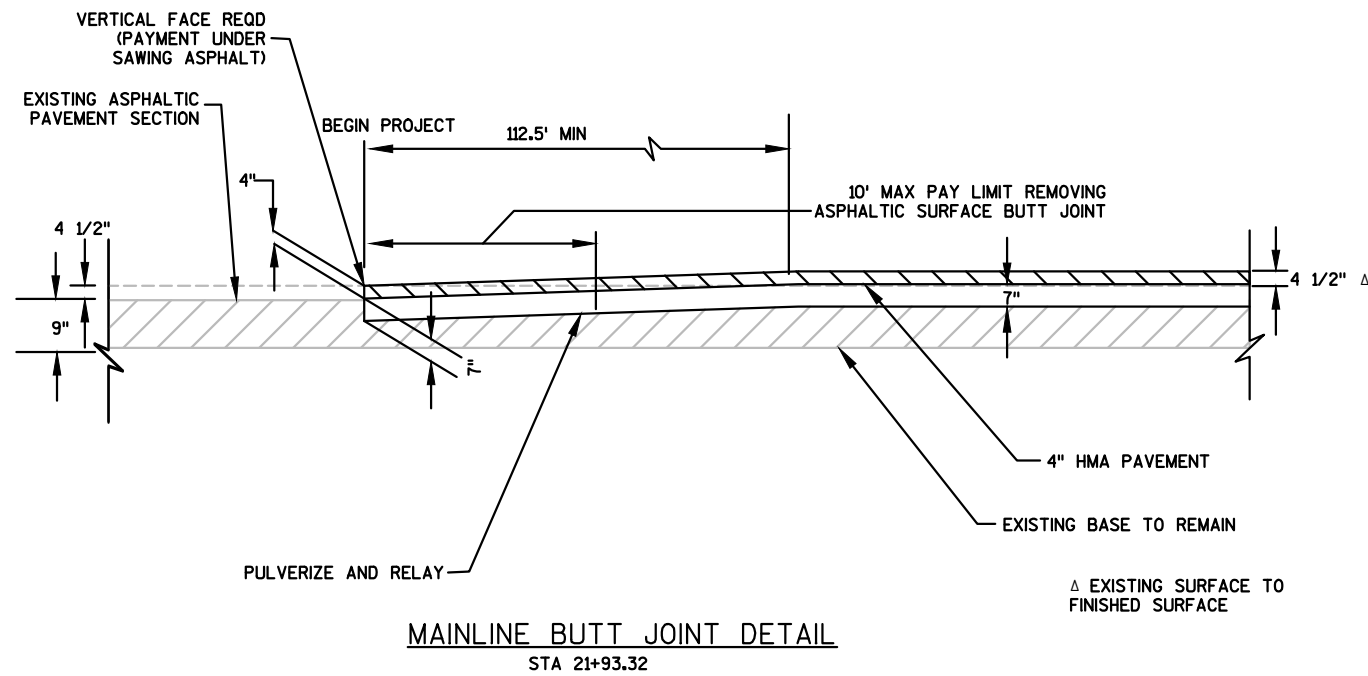
STA 200+24.00 TO STA 201+67.96



TYPICAL FINISHED SECTION - HEART OF VILAS COUNTY BIKE TRAIL

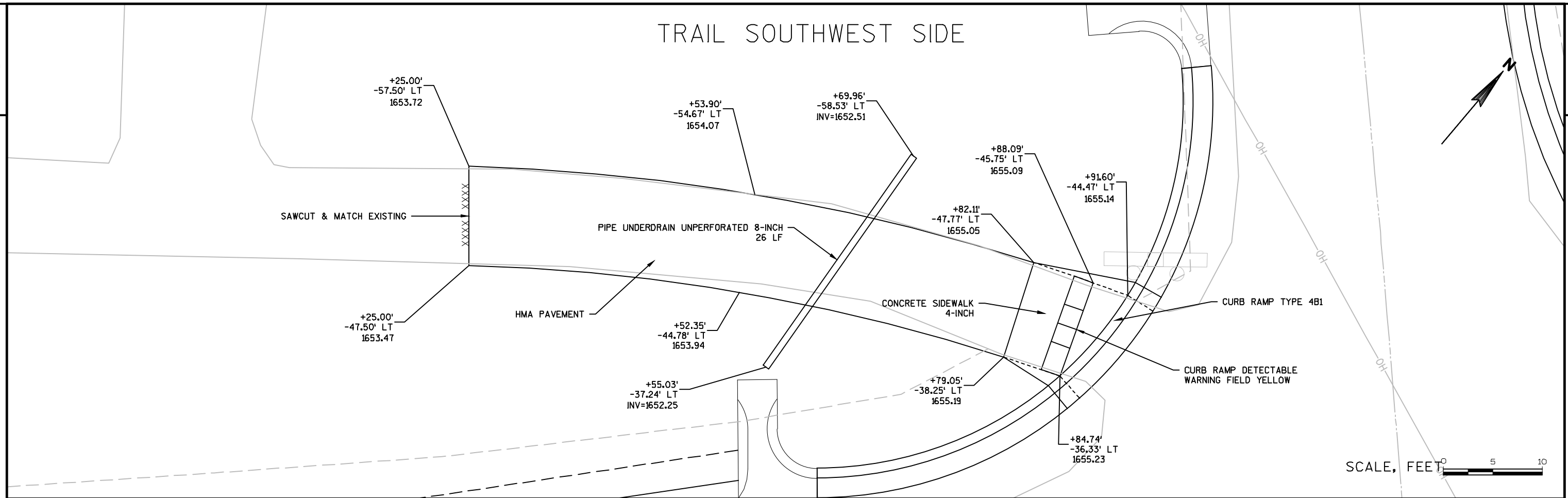
STA 157+70 LT & RT
STA 159+42 TO STA 159+92 LT
STA 160+40 TO STA 160+70 LT

* MATCH EXISTING
1.5% NORMAL



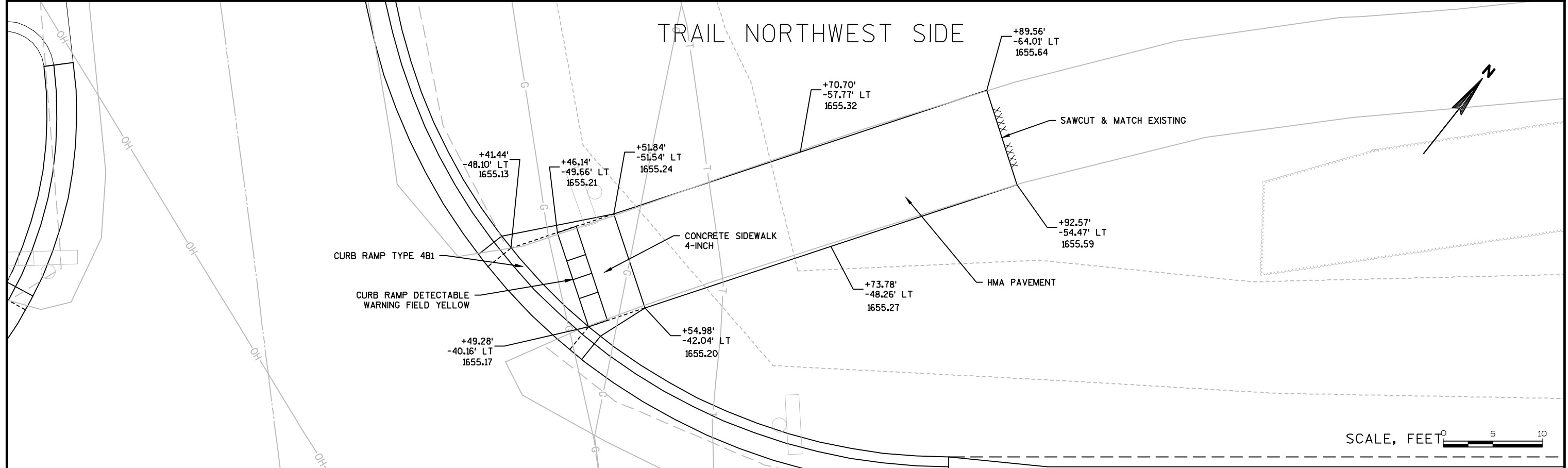
2

TRAIL SOUTHWEST SIDE



2

TRAIL NORTHWEST SIDE



PROJECT NO: 9508-01-70

HWY: CTH M

COUNTY: VILAS

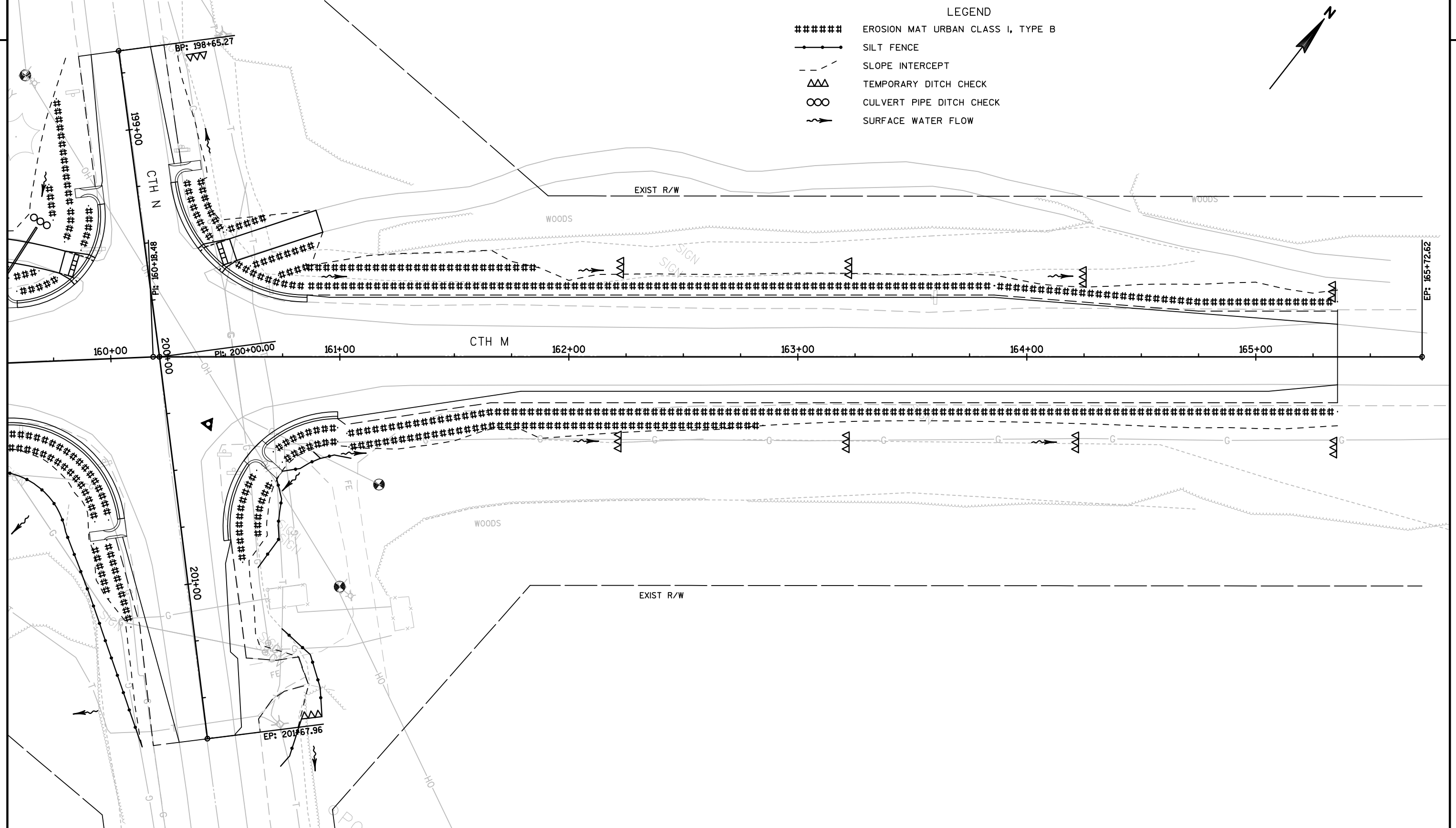
CONSTRUCTION DETAILS

SHEET

E

2

2



PROJECT NO: 9508-01-70

HWY: CTH M

COUNTY: VILAS

DETAILS: EROSION CONTROL

SHEET

E

FILE NAME : F:\TR\JOBS\E2177A15\CIVIL 3D 2014\SHEETS\PLAN\95080170-022001-EC.DWG
LAYOUT NAME - 95080170-022002-EC

PLOT DATE : 8/31/2016 3:19 PM

PLOT BY : BEN BACKUS

PLOT NAME :

PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

LEGEND

EXISTING SIGN MOUNTED ON POST(S)

PROPOSED SIGN MOUNTED ON POST(S)

PROPOSED SIGN

MOVE EXISTING SIGN

REMOVE EXISTING SIGN

EXISTING SIGN TO REMAIN

PAVEMENT MARKING PAINT 4-INCH (WHITE)

PAVEMENT MARKING PAINT 4-INCH (WHITE) - 3' DASH, 9' SKIP

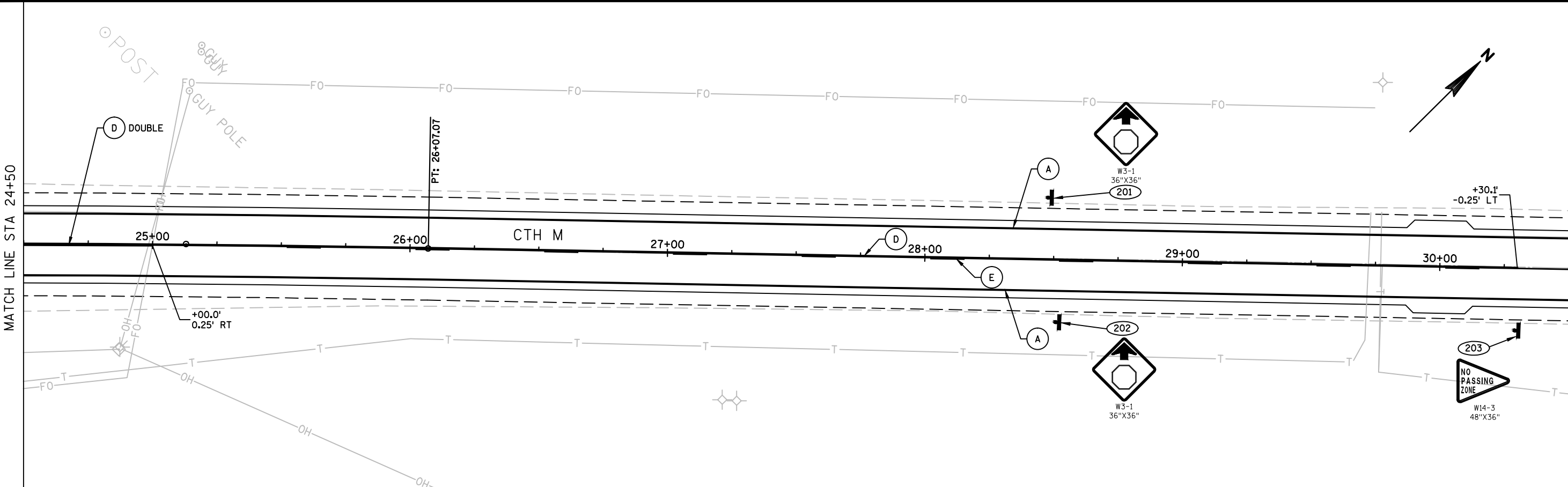
PAVEMENT MARKING PAINT 8-INCH (WHITE)

PAVEMENT MARKING PAINT 4-INCH (YELLOW)

PAVEMENT MARKING PAINT 4-INCH (YELLOW) - 12.5 DASH, 37.5 SKIP

PAVEMENT MARKING STOP LINE PAINT 18-INCH (WHITE)

2



PROJECT NO: 9508-01-70

HWY: CTH M

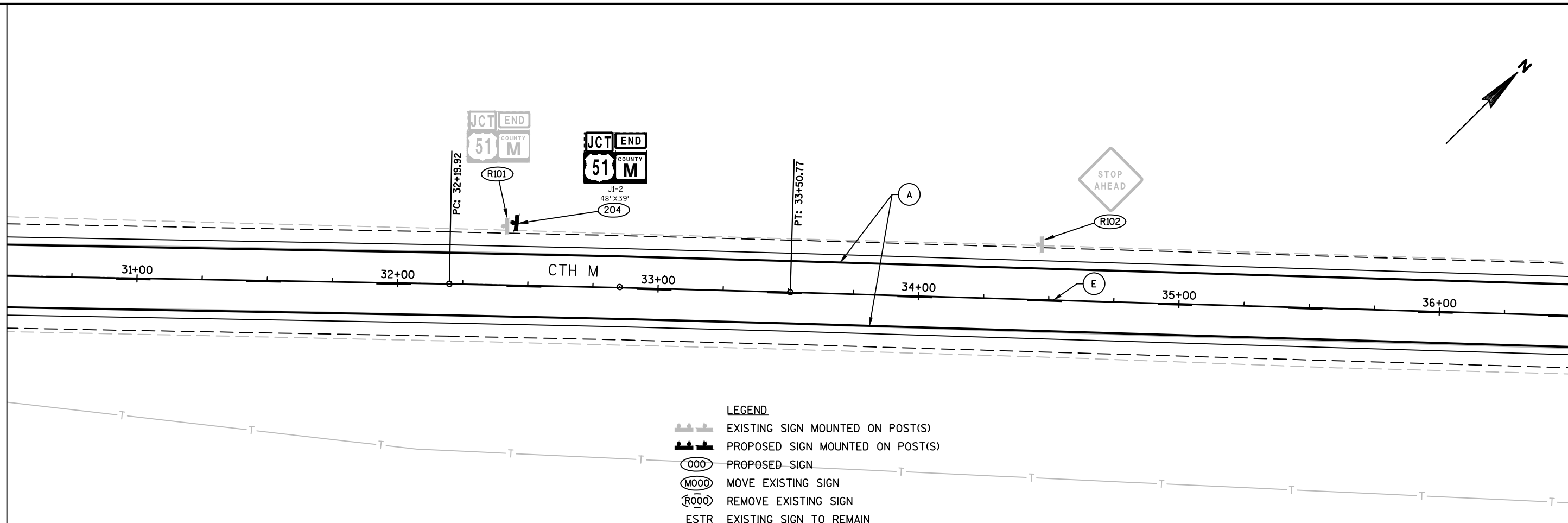
COUNTY: VILAS

PAVEMENT MARKING AND PERMANENT SIGNING

SHEET

E

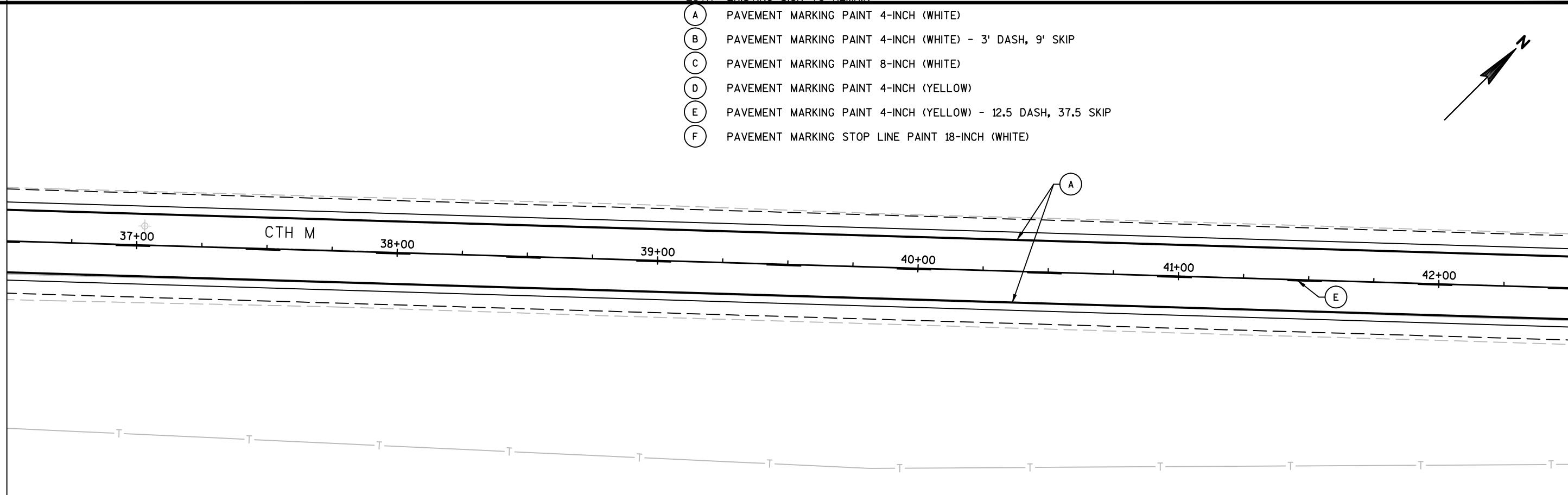
MATCH LINE STA 30+50



- LEGEND**
- EXISTING SIGN MOUNTED ON POST(S)
 - PROPOSED SIGN MOUNTED ON POST(S)
 - PROPOSED SIGN
 - MOVE EXISTING SIGN
 - REMOVE EXISTING SIGN
 - EXISTING SIGN TO REMAIN
 - PAVEMENT MARKING POINT 4-INCH (WHITE)
 - PAVEMENT MARKING POINT 4-INCH (WHITE) - 3' DASH, 9' SKIP
 - PAVEMENT MARKING POINT 8-INCH (WHITE)
 - PAVEMENT MARKING POINT 4-INCH (YELLOW)
 - PAVEMENT MARKING POINT 4-INCH (YELLOW) - 12.5 DASH, 37.5 SKIP
 - PAVEMENT MARKING STOP LINE PAINT 18-INCH (WHITE)

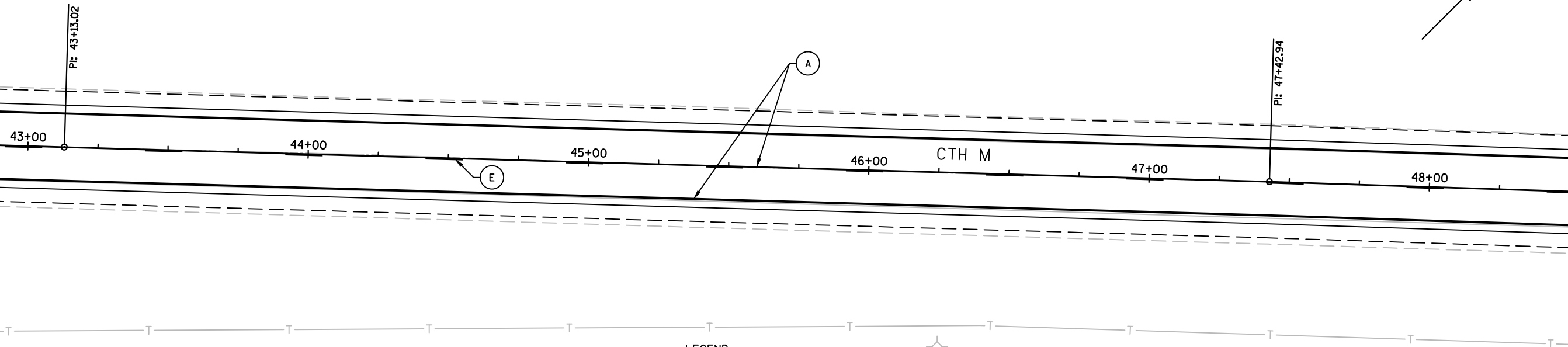
MATCH LINE STA 36+50

MATCH LINE STA 36+50



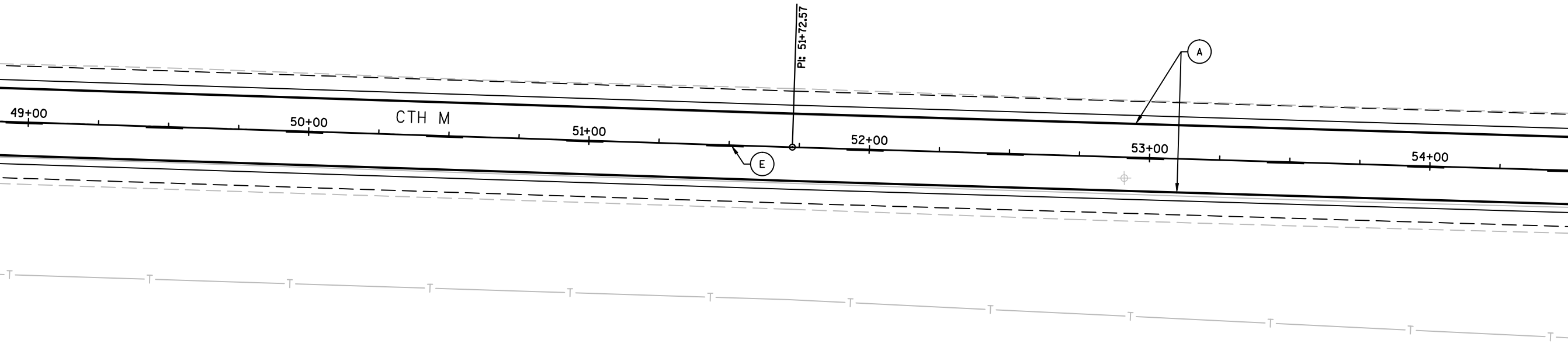
MATCH LINE STA 42+50

MATCH LINE STA 42+50



MATCH LINE STA 48+50

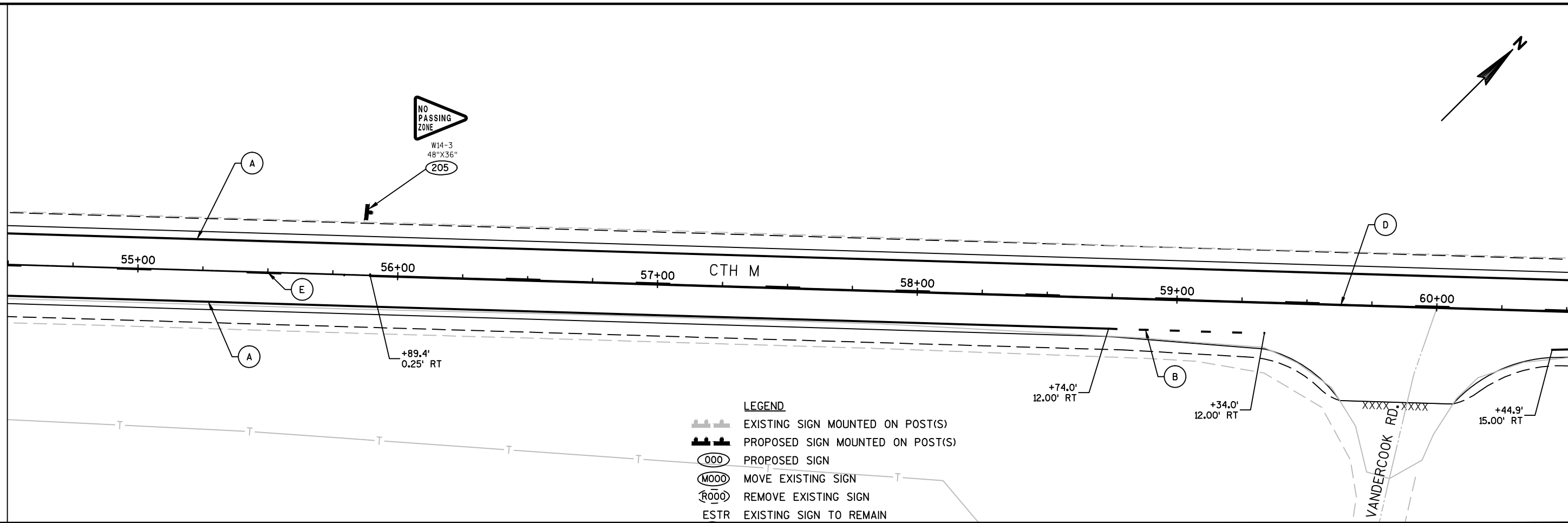
MATCH LINE STA 48+50



MATCH LINE STA 54+50

2

MATCH LINE STA 54+50

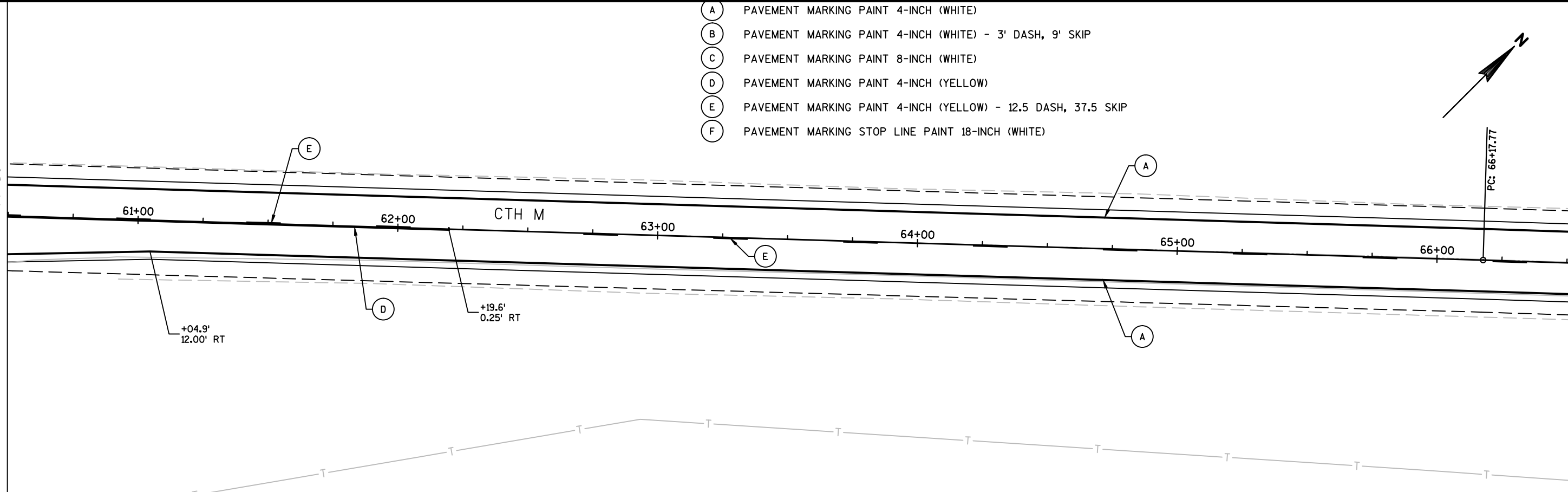


- LEGEND**
- EXISTING SIGN MOUNTED ON POST(S)
 - PROPOSED SIGN MOUNTED ON POST(S)
 - PROPOSED SIGN
 - MOVE EXISTING SIGN
 - REMOVE EXISTING SIGN
 - EXISTING SIGN TO REMAIN
 - PAVEMENT MARKING PAINT 4-INCH (WHITE)
 - PAVEMENT MARKING PAINT 4-INCH (WHITE) - 3' DASH, 9' SKIP
 - PAVEMENT MARKING PAINT 8-INCH (WHITE)
 - PAVEMENT MARKING PAINT 4-INCH (YELLOW)
 - PAVEMENT MARKING PAINT 4-INCH (YELLOW) - 12.5 DASH, 37.5 SKIP
 - PAVEMENT MARKING STOP LINE PAINT 18-INCH (WHITE)

2

MATCH LINE STA 60+50

MATCH LINE STA 60+50



MATCH LINE STA 66+50

PROJECT NO: 9508-01-70

HWY: CTH M

COUNTY: VILAS

PAVEMENT MARKING AND PERMANENT SIGNING

SHEET

E

MATCH LINE STA 66+50

+99.0'
-0.25' LT

67+00

68+00

69+00

CTH M

70+00

71+00

72+00

MATCH LINE STA 72+50

LEGEND



EXISTING SIGN MOUNTED ON POST(S)



PROPOSED SIGN MOUNTED ON POST(S)



PROPOSED SIGN



MOVE EXISTING SIGN



REMOVE EXISTING SIGN



EXISTING SIGN TO REMAIN



PAVEMENT MARKING PAINT 4-INCH (WHITE)



PAVEMENT MARKING PAINT 4-INCH (WHITE) - 3' DASH, 9' SKIP



PAVEMENT MARKING PAINT 8-INCH (WHITE)



PAVEMENT MARKING PAINT 4-INCH (YELLOW)



PAVEMENT MARKING PAINT 4-INCH (YELLOW) - 12.5' DASH, 37.5' SKIP



PAVEMENT MARKING STOP LINE PAINT 18-INCH (WHITE)

MATCH LINE STA 72+50

73+00

74+00

75+00

CTH M

76+00

77+00

78+00

MATCH LINE STA 78+50

PT: 74+24.23

+28.8'
-0.25' LT

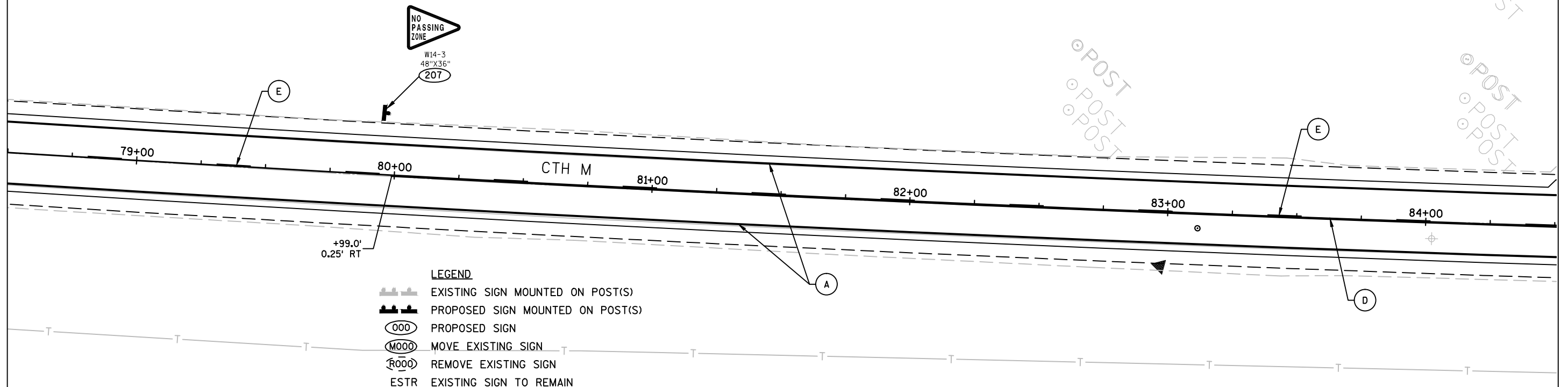
PC: 78+30.25

206



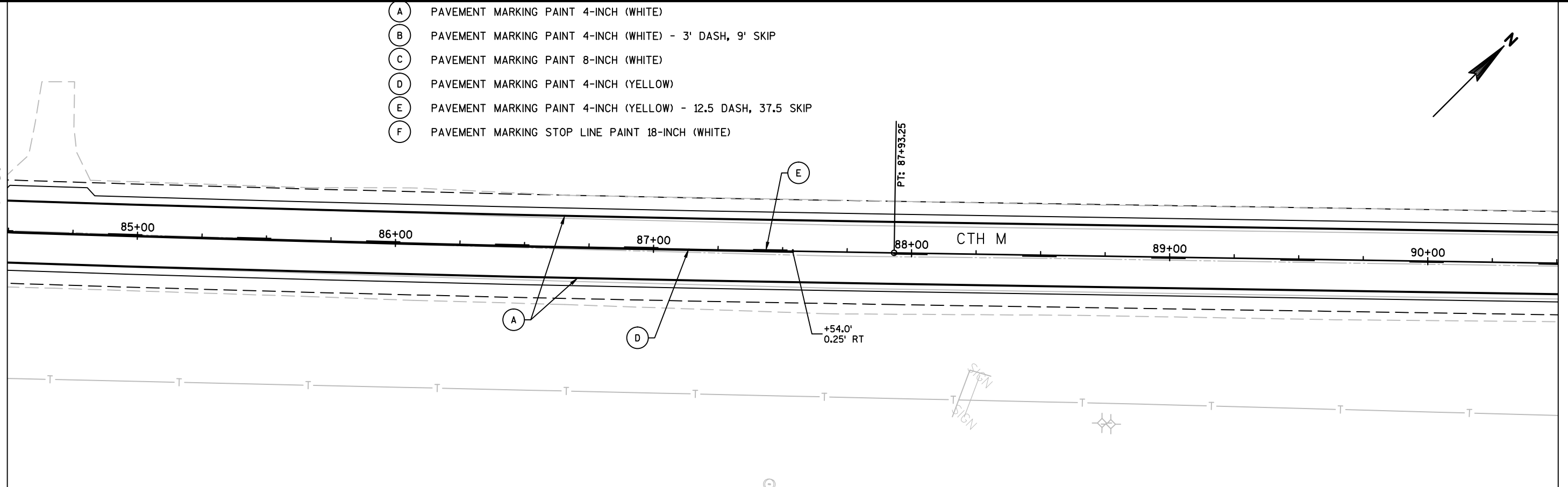
W14-3
48"X36"

MATCH LINE STA 78+50



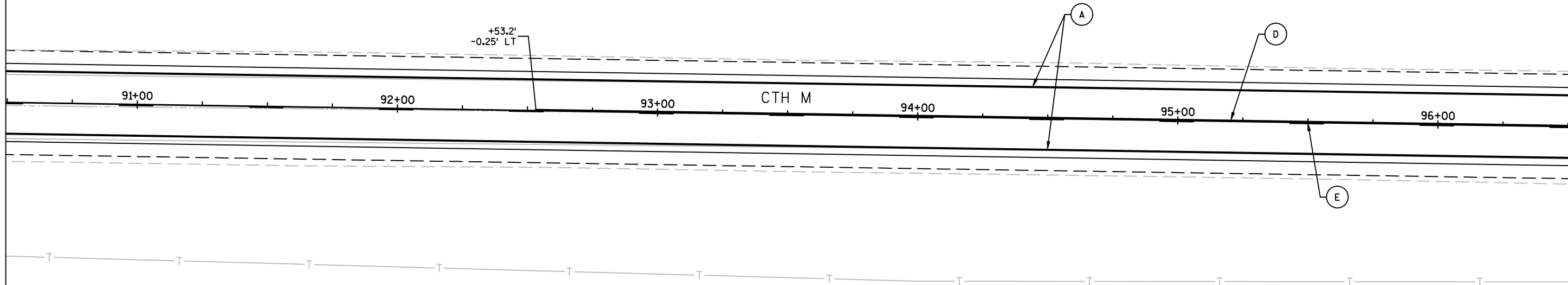
MATCH LINE STA 84+50

MATCH LINE STA 84+50



MATCH LINE STA 90+50

MATCH LINE STA 90+50

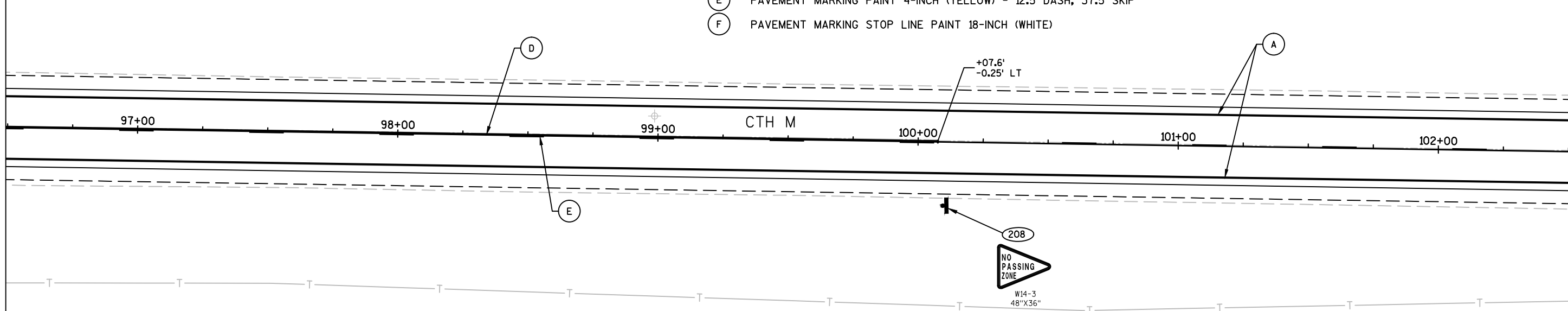


MATCH LINE STA 96+50

LEGEND

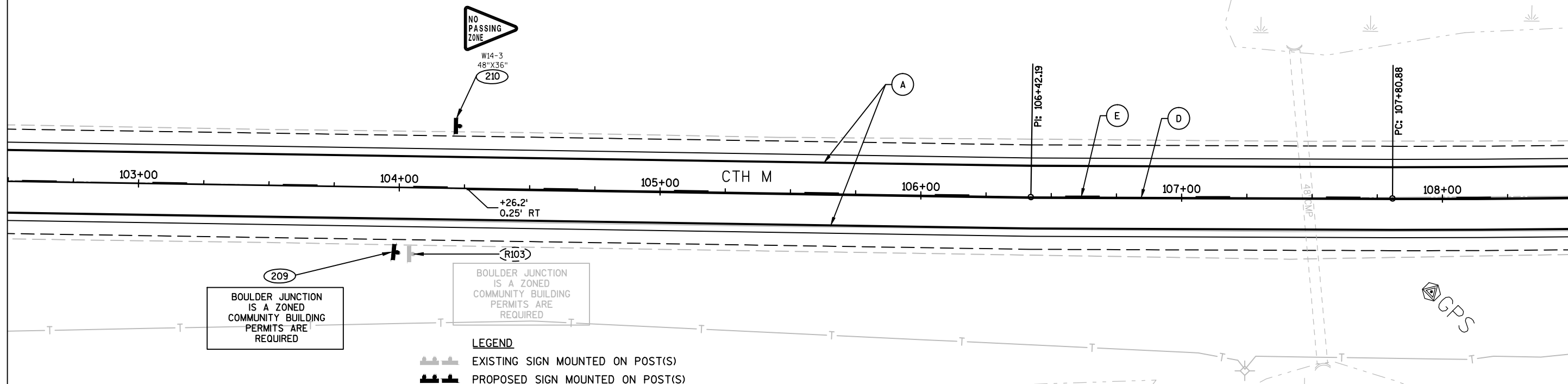
- EXISTING SIGN MOUNTED ON POST(S)
- PROPOSED SIGN MOUNTED ON POST(S)
- PROPOSED SIGN
- MOVE EXISTING SIGN
- REMOVE EXISTING SIGN
- EXISTING SIGN TO REMAIN
- PAVEMENT MARKING PAINT 4-INCH (WHITE)
- PAVEMENT MARKING PAINT 4-INCH (WHITE) - 3' DASH, 9' SKIP
- PAVEMENT MARKING PAINT 8-INCH (WHITE)
- PAVEMENT MARKING PAINT 4-INCH (YELLOW)
- PAVEMENT MARKING PAINT 4-INCH (YELLOW) - 12.5 DASH, 37.5 SKIP
- PAVEMENT MARKING STOP LINE PAINT 18-INCH (WHITE)

MATCH LINE STA 96+50



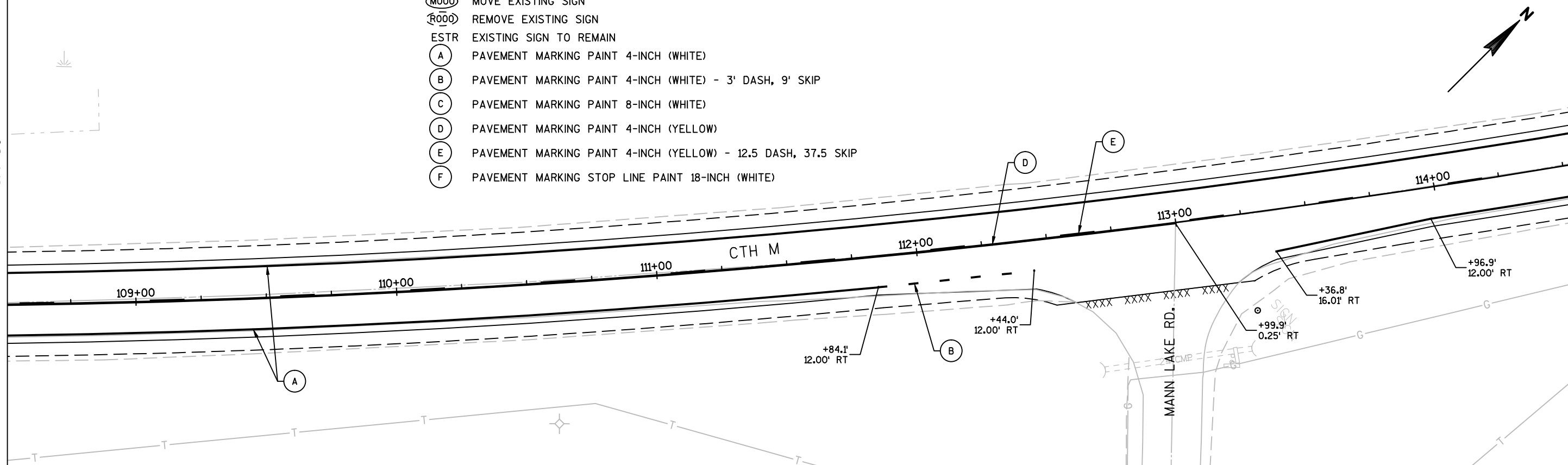
MATCH LINE STA 102+50

MATCH LINE STA 102+50



MATCH LINE STA 108+50

MATCH LINE STA 108+50



MATCH LINE STA 114+50

PROJECT NO: 9508-01-70

HWY: CTH M

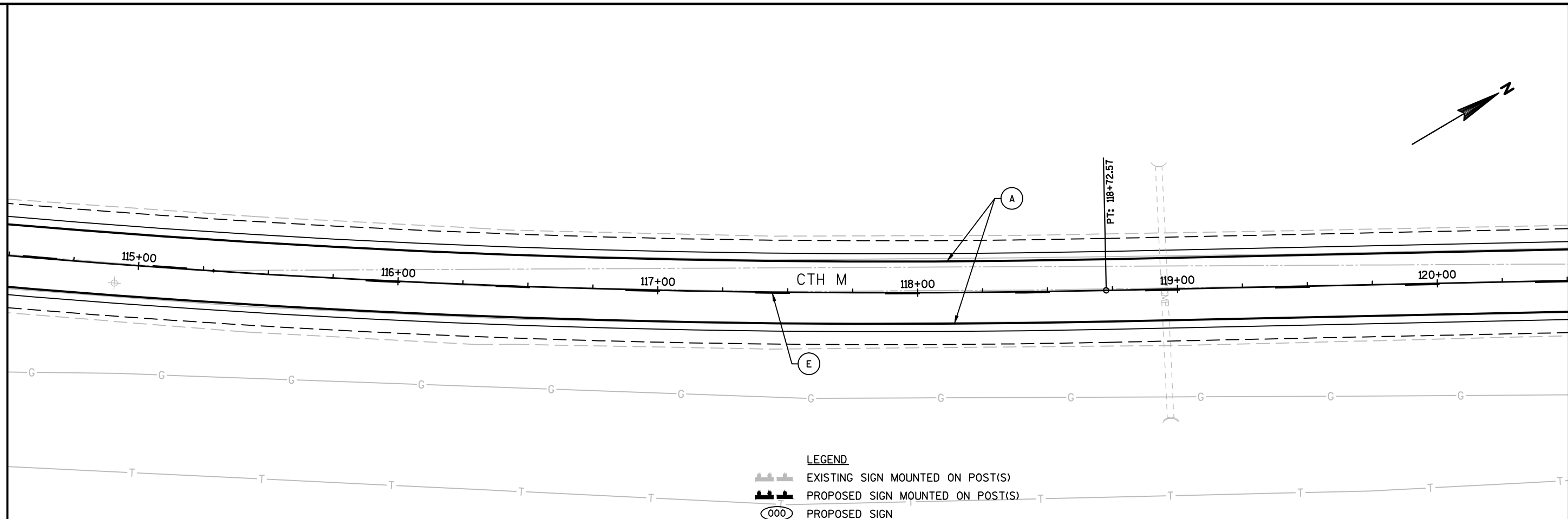
COUNTY: VILAS

PAVEMENT MARKING AND PERMANENT SIGNING

SHEET

E

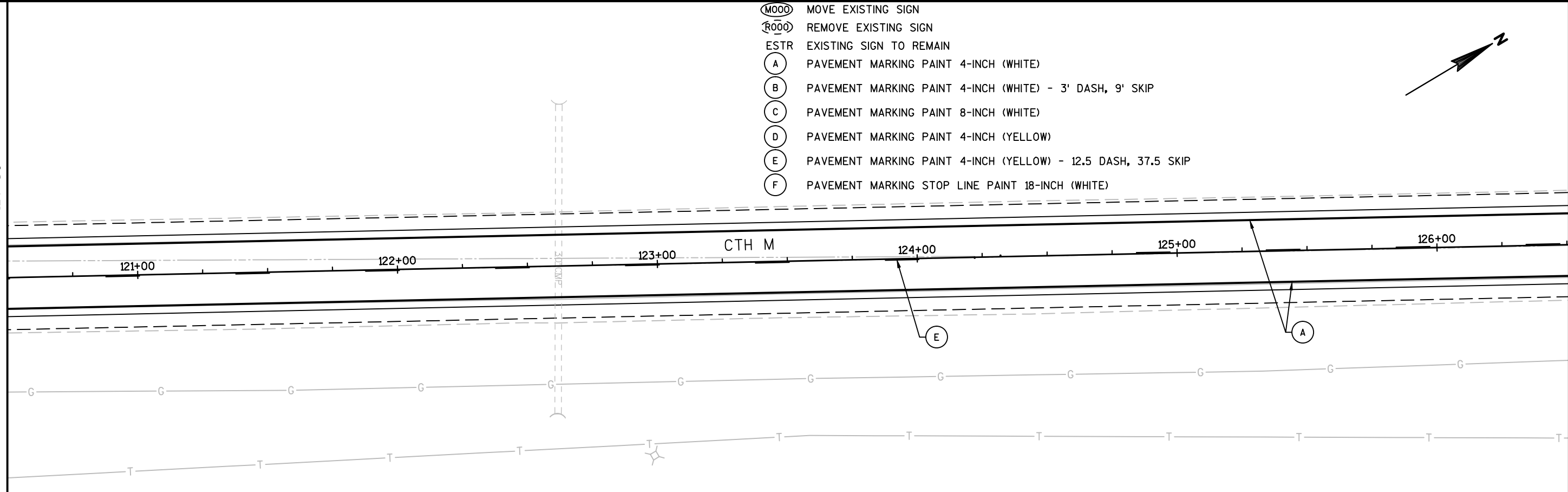
MATCH LINE STA 114+50



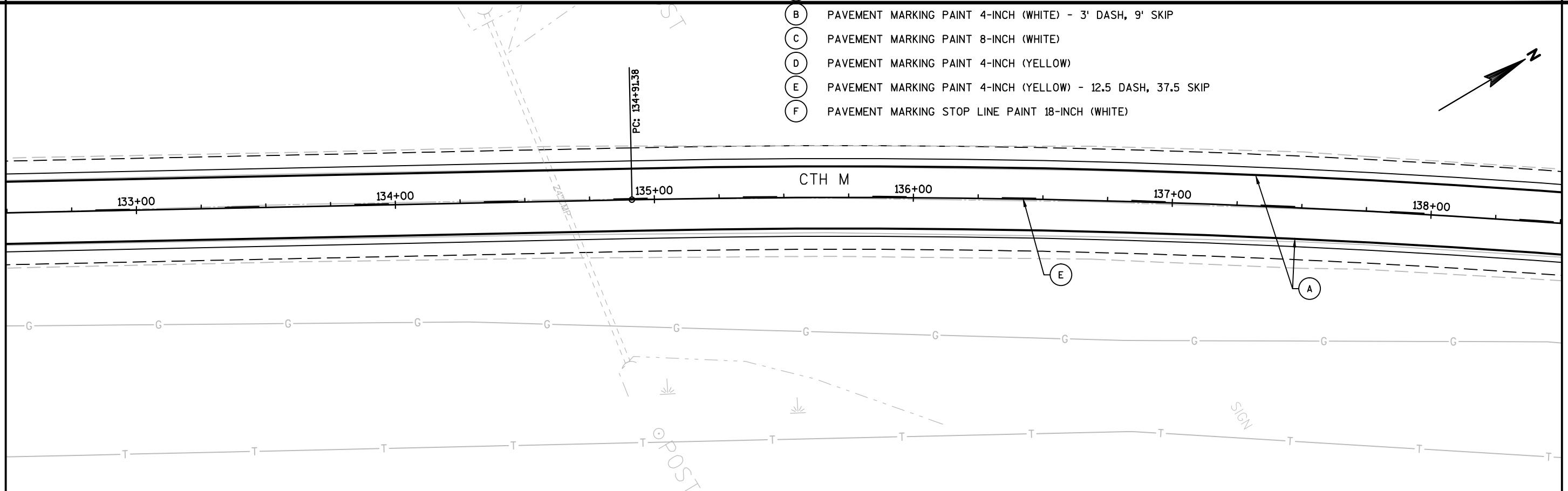
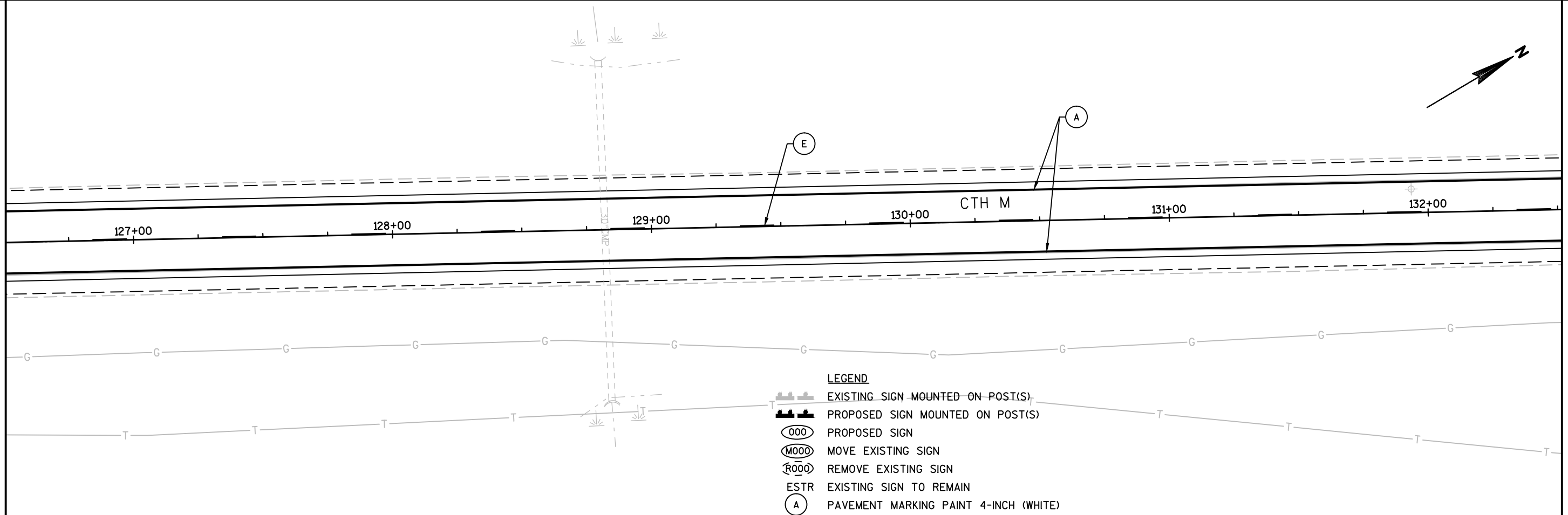
MATCH LINE STA 120+50

- LEGEND**
- EXISTING SIGN MOUNTED ON POST(S)
 - PROPOSED SIGN MOUNTED ON POST(S)
 - PROPOSED SIGN
 - MOVE EXISTING SIGN
 - REMOVE EXISTING SIGN
 - ESTR EXISTING SIGN TO REMAIN
 - PAVEMENT MARKING PAINT 4-INCH (WHITE)
 - PAVEMENT MARKING PAINT 4-INCH (WHITE) - 3' DASH, 9' SKIP
 - PAVEMENT MARKING PAINT 8-INCH (WHITE)
 - PAVEMENT MARKING PAINT 4-INCH (YELLOW)
 - PAVEMENT MARKING PAINT 4-INCH (YELLOW) - 12.5 DASH, 37.5 SKIP
 - PAVEMENT MARKING STOP LINE PAINT 18-INCH (WHITE)

MATCH LINE STA 120+50



MATCH LINE STA 126+50

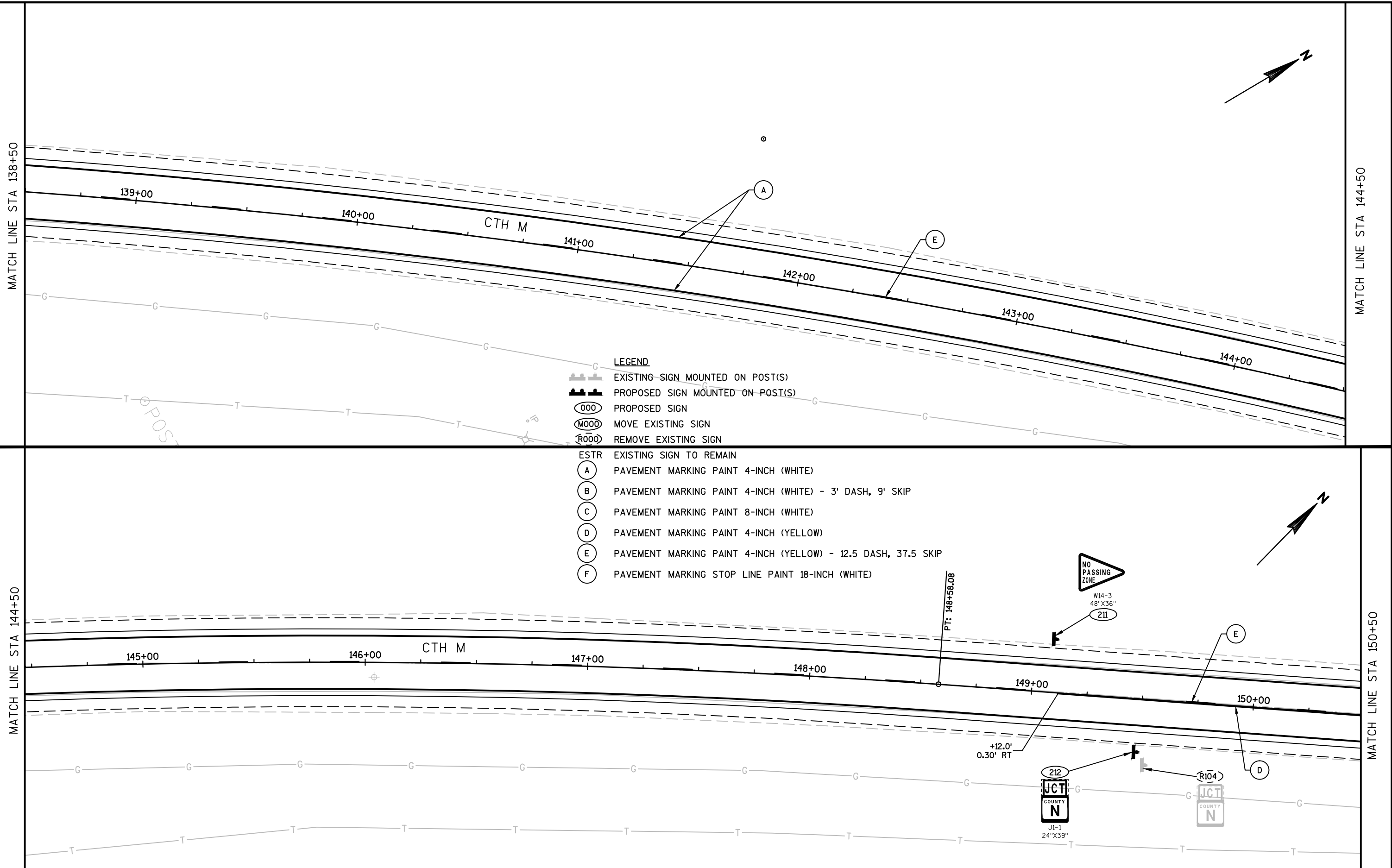


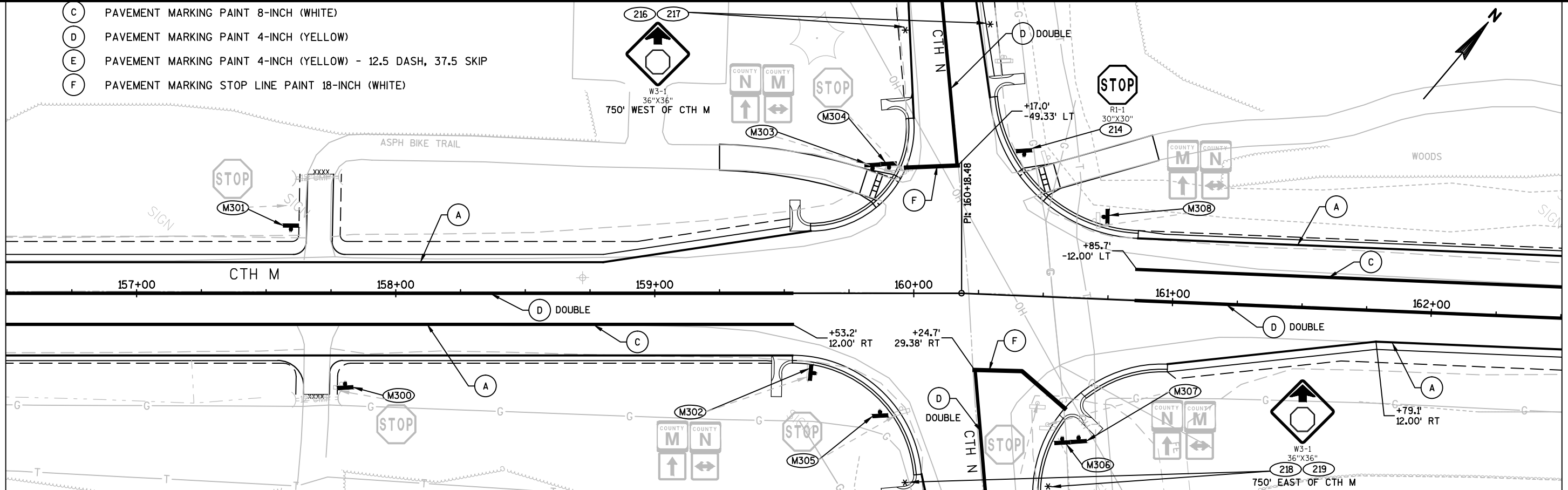
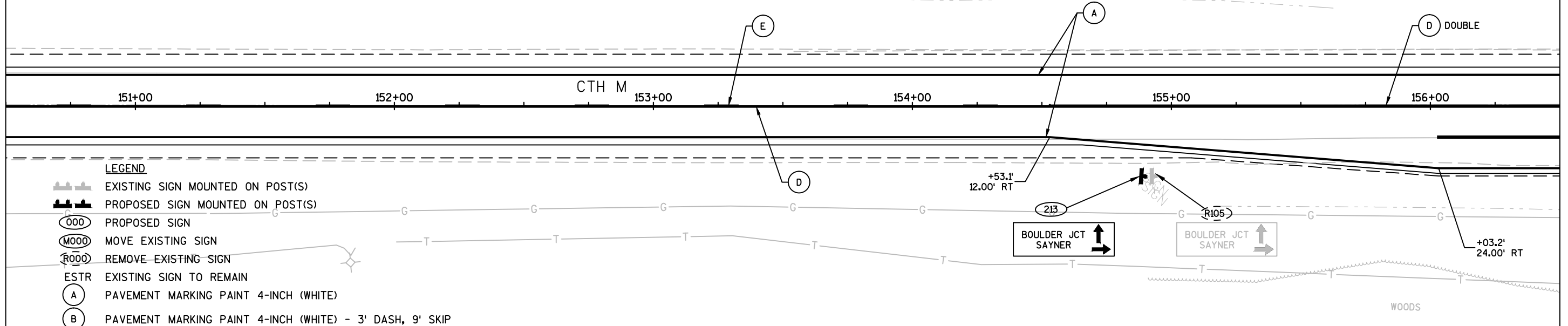
MATCH LINE STA 138+50

MATCH LINE STA 144+50

MATCH LINE STA 144+50

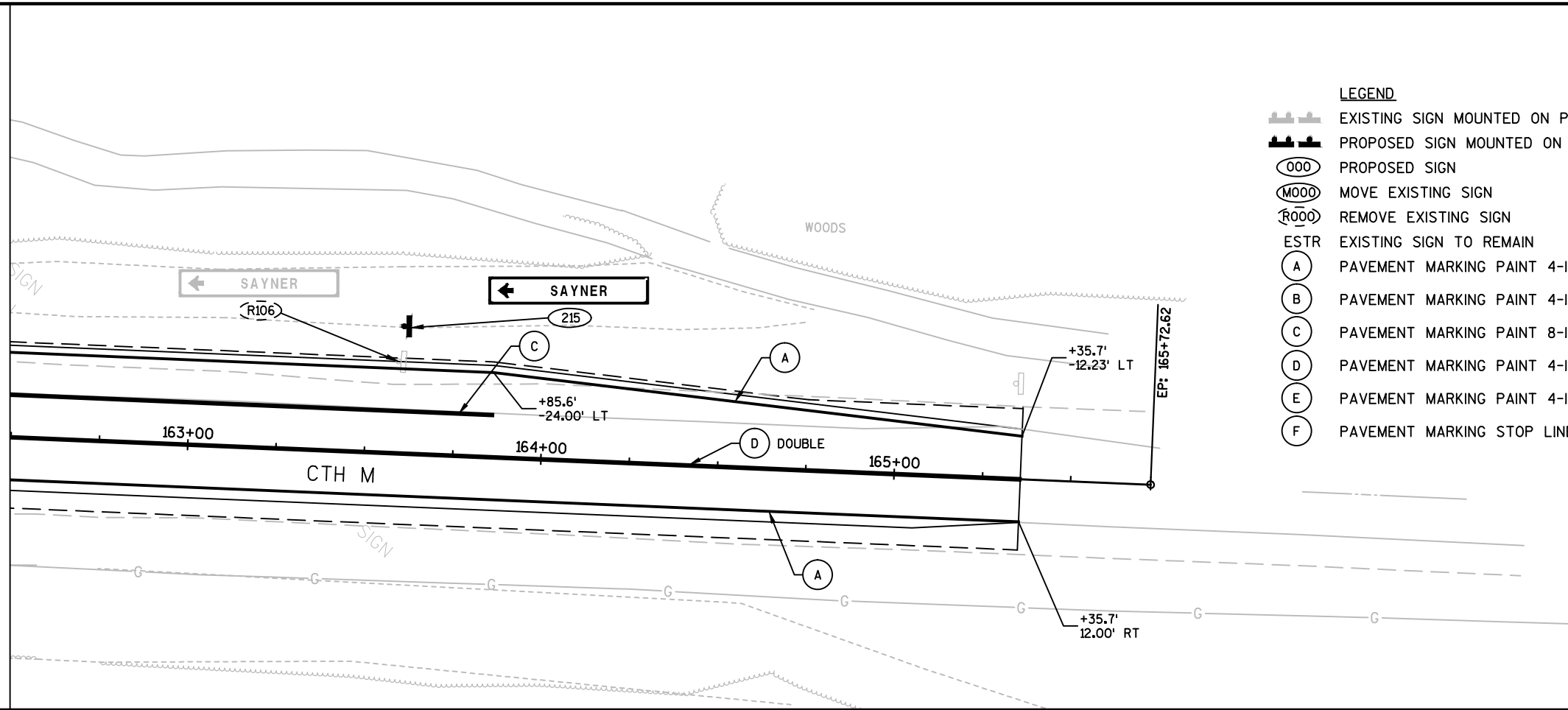
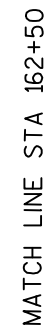
MATCH LINE STA 150+50














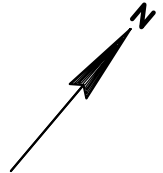


2

2 |



- LEGEND
- | | |
|---|---|
|  | EXISTING SIGN MOUNTED ON POST(S) |
|  | PROPOSED SIGN MOUNTED ON POST(S) |
|  | PROPOSED SIGN |
|  | MOVE EXISTING SIGN |
|  | REMOVE EXISTING SIGN |
| ESTR | EXISTING SIGN TO REMAIN |
|  | PAVEMENT MARKING PAINT 4-INCH (WHITE) |
|  | PAVEMENT MARKING PAINT 4-INCH (WHITE) - 3' DASH, 9' SKIP |
|  | PAVEMENT MARKING PAINT 8-INCH (WHITE) |
|  | PAVEMENT MARKING PAINT 4-INCH (YELLOW) |
|  | PAVEMENT MARKING PAINT 4-INCH (YELLOW) - 12.5' DASH, 37.5' SKIP |
|  | PAVEMENT MARKING STOP LINE PAINT 18-INCH (WHITE) |



PROJECT NO: 9508-01-70

HWY: CTH M

COUNTY: VILAS

PAVEMENT MARKING AND PERMANENT SIGNING

SHEET

E

FILE NAME : F:\TR\JOBS\E2177A15\CIVIL 3D 2014\SHEETSPLAN\95080170-024501-PM.DWG
LAYOUT NAME - 95080170-024513-PM

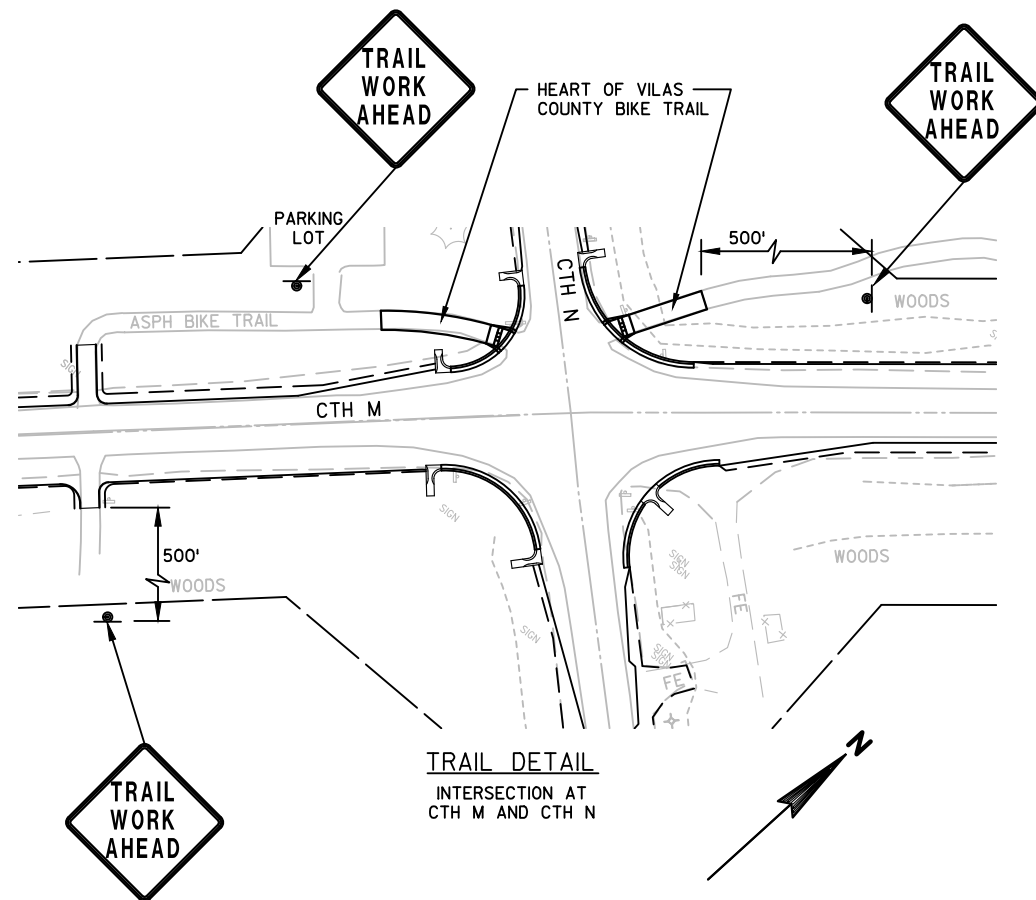
PLOT DATE : 10/18/2016 12:42 PM

PLOT BY : JAIRO MAZARIEGOS

PLOT NAME :

PLOT SCALE : #####

WISDOT/CADDS SHEET 42



NOTE A: USE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL A AND DETAIL E.

NOTE B: USE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL D.

NOTE C: USE SDD "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)".

NOTE D: USE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC - SIDEROAD DETAIL".

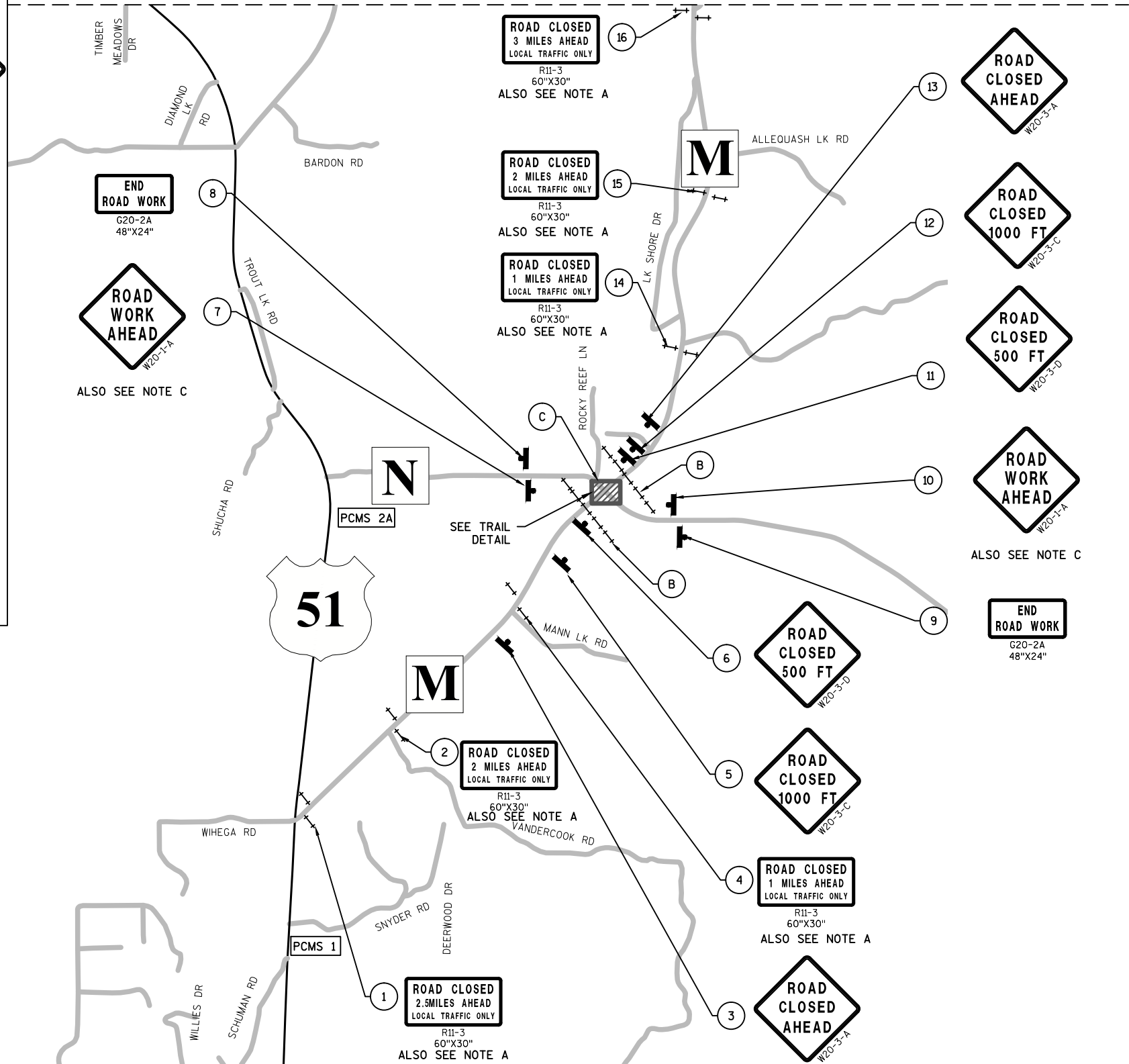
SEE DETOUR PLAN FOR ADDITIONAL SIGNING AND INFORMATION.

LEGEND

- ⊙ SIGN NUMBER
- ⊗ NOTE LETTER
- ⊣ POST MOUNTED SIGN
- ↑ TYPE III BARRICADE
- ▨ WORK AREA

MATCH LINE

SHEET 2 OF 2



SHEET 1 OF 2

PROJECT NO: 9508-01-70

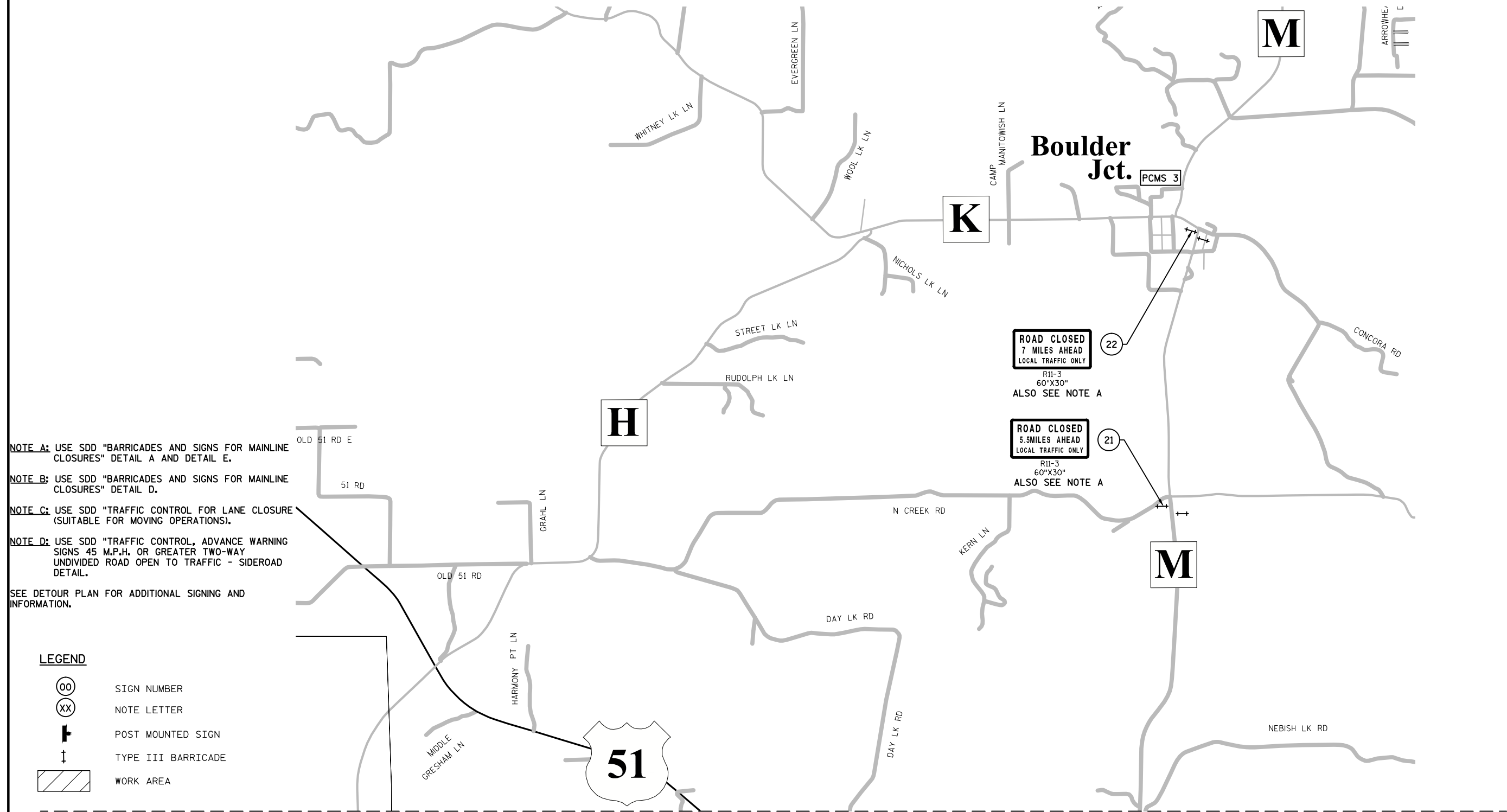
HWY: CTH M

COUNTY: VILAS

TRAFFIC CONTROL PLAN PHASE 1

SHEET

E



NOTE A: USE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL A AND DETAIL E.

NOTE B: USE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL D.

NOTE C: USE SDD "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS).

NOTE D: USE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC - SIDEROAD DETAIL.

SEE DETOUR PLAN FOR ADDITIONAL SIGNING AND INFORMATION.

LEGEND

- 00 SIGN NUMBER
- XX NOTE LETTER
- POST MOUNTED SIGN
- ↑ TYPE III BARRICADE
- WORK AREA

MATCH LINE

SHEET 1 OF 2

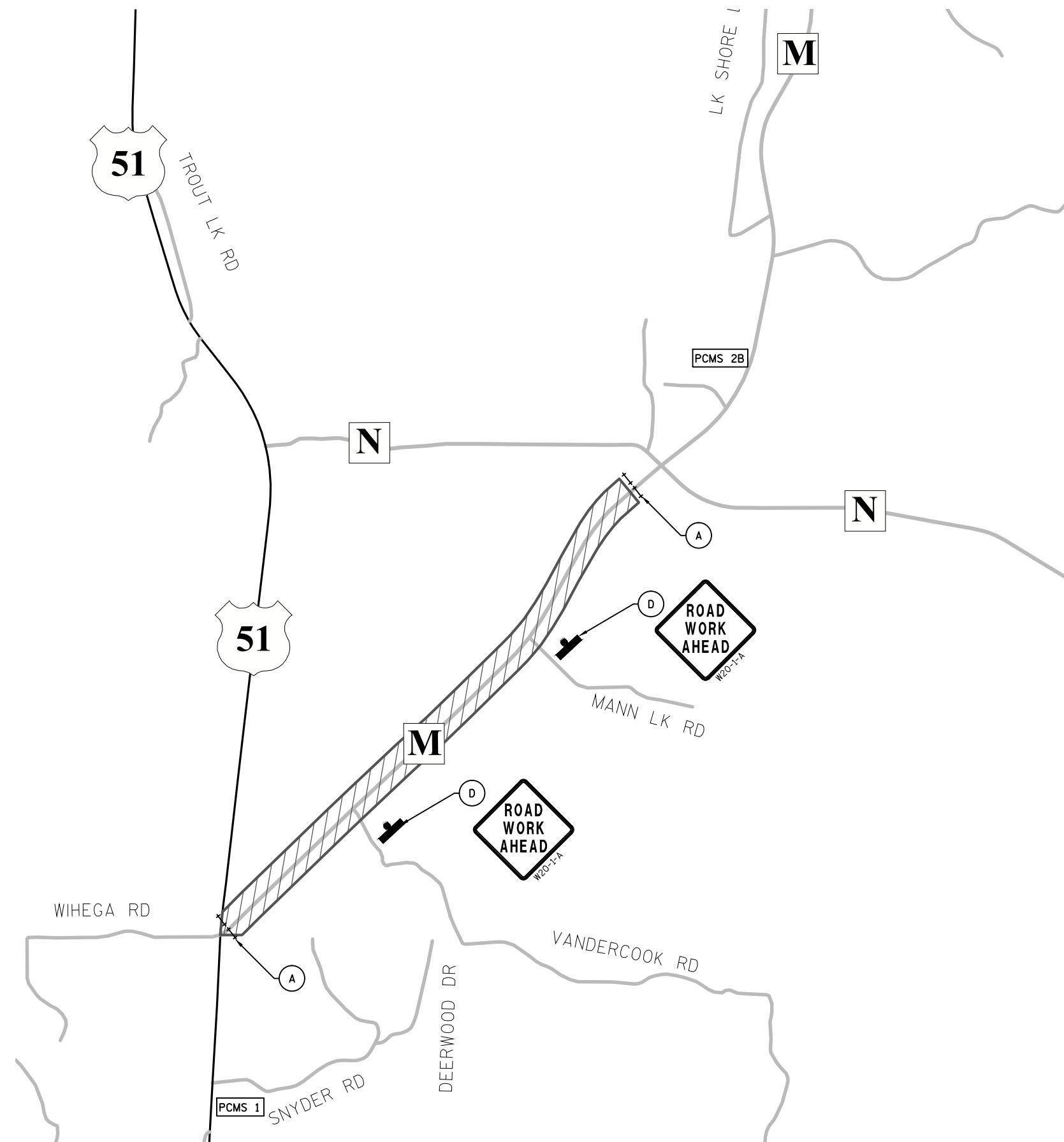
SHEET 2 OF 2



NOTE A: USE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL A AND DETAIL E.
NOTE B: USE SDD "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" DETAIL D.
NOTE C: USE SDD "TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS).
NOTE D: USE SDD "TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC - SIDEROAD DETAIL.
SEE DETOUR PLAN FOR ADDITIONAL SIGNING AND INFORMATION.

LEGEND

	SIGN NUMBER
	NOTE LETTER
	POST MOUNTED SIGN
	TYPE III BARRICADE
	WORK AREA



SHEET 1 OF 1

PROJECT NO:9508-01-70

HWY:CTH M

COUNTY:VILAS

TRAFFIC CONTROL PLAN - PHASE 2

SHEET

E

2

2

PORTABLE CHANGEABLE MESSAGE SIGNS

			PRIOR TO CONSTRUCTION		PHASE 1		PHASE 2	
SITE NO	LOCATION	ROADWAY CONDITION/ CONSTRUCTION	PHASE I (2 SEC)	PHASE II (2 SEC)	PHASE I (2 SEC)	PHASE II (2 SEC)	PHASE I (2 SEC)	PHASE II (2 SEC)
PCMS 1	ON NB USH 51 SOUTH OF CTH M	GENERAL	CTH M ROAD WORK	BEGINS XX/XX/XX	CTH M CLOSED AT CTH N	FOLLOW DETOUR	CTH M CLOSED	FOLLOW DETOUR
PCMS 2A	ON NB USH 51 SOUTH OF CTH N	GENERAL	CTH M ROAD WORK	BEGINS XX/XX/XX	CTH M CLOSED AT CTH N	FOLLOW DETOUR	(NO MESSAGE)	
PCMS 2B	ON SB CTH M NORTH OF CTH N (RELOCATE FROM PCMS 2A)	(NO MESSAGE)	(NO MESSAGE)		(NO MESSAGE)		CTH M CLOSED AT CTH N	FOLLOW DETOUR
PCMS 3	ON SB CTH M NORTH OF CTH K	GENERAL	CTH M ROAD WORK	BEGINS XX/XX/XX	CTH M CLOSED AT CTH N	FOLLOW DETOUR	(NO MESSAGE)	

PROJECT NO: 9508-01-70

HWY: CTH M

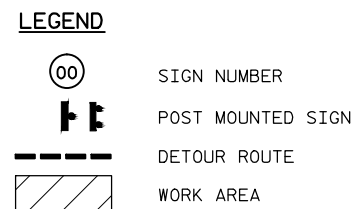
COUNTY: VILAS

TRAFFIC CONTROL – PCMS MESSAGES

SHEET:

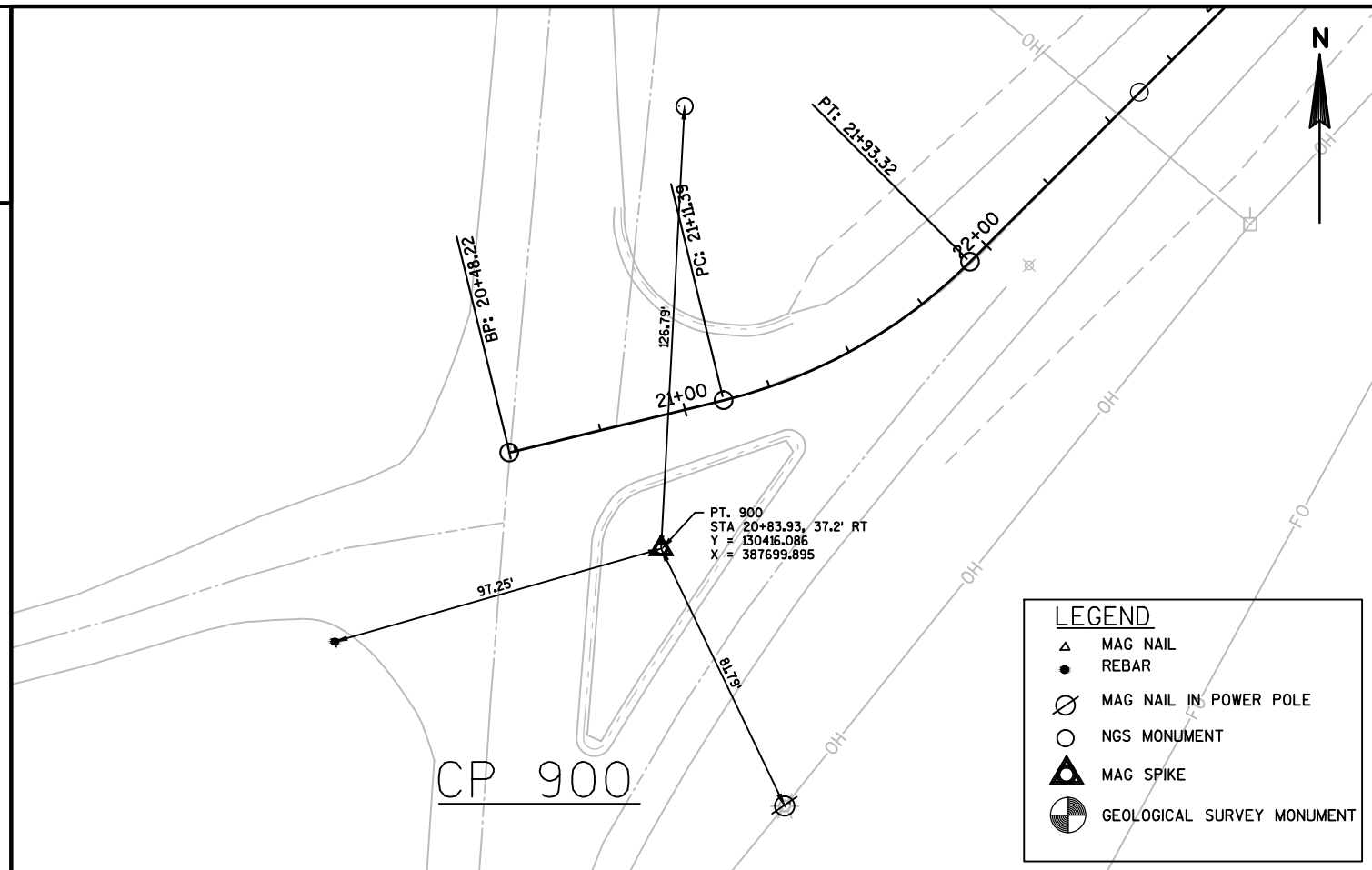
E



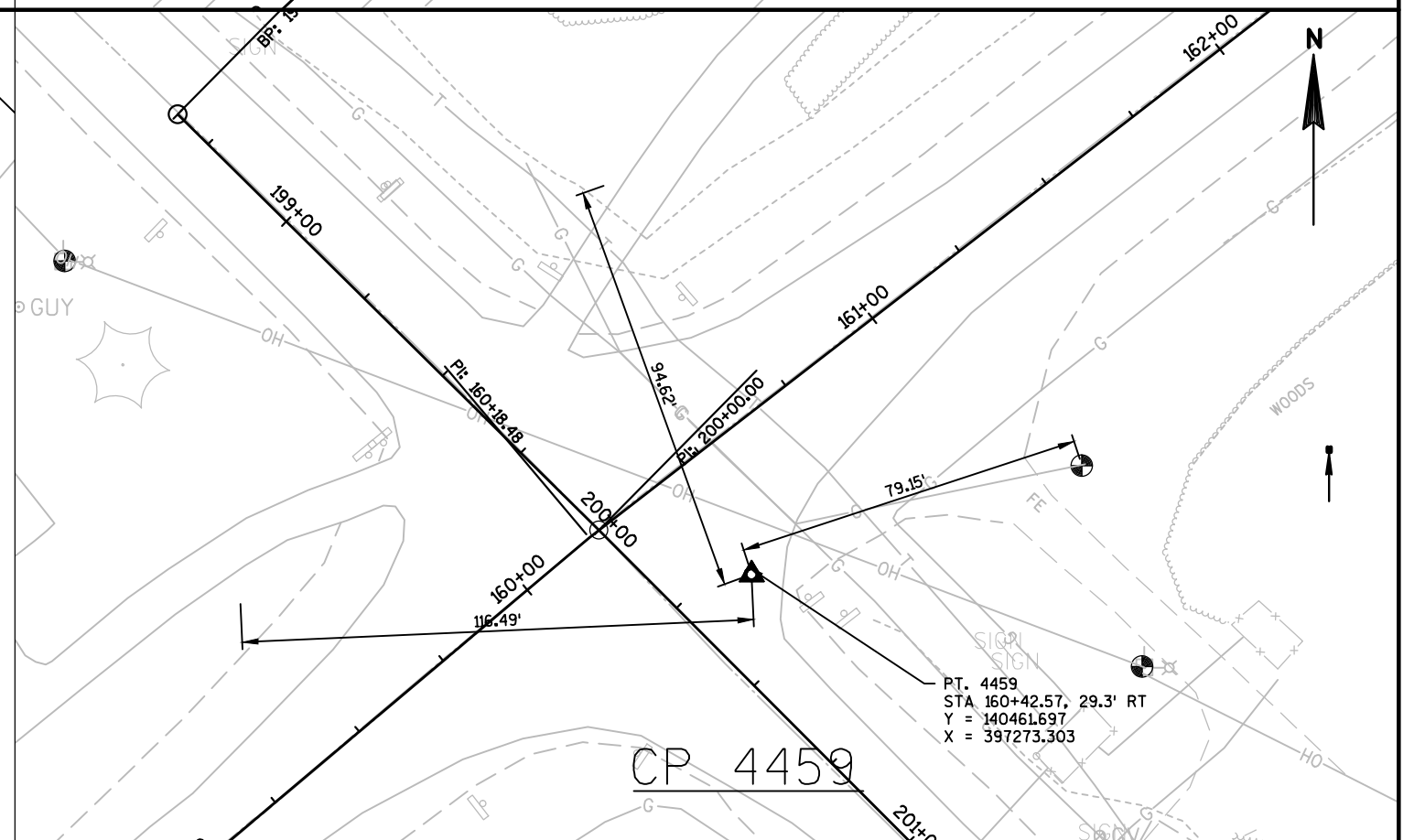
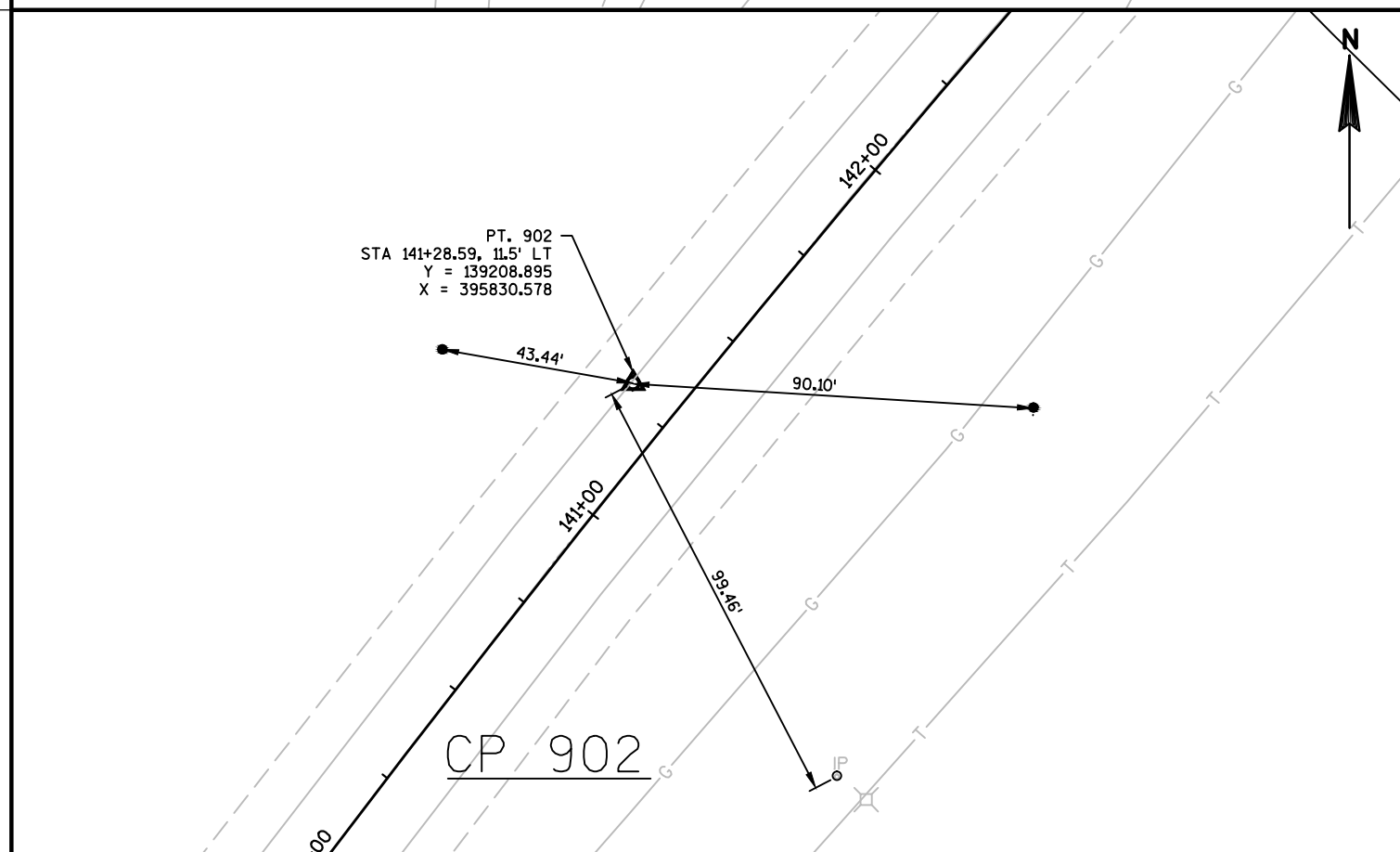
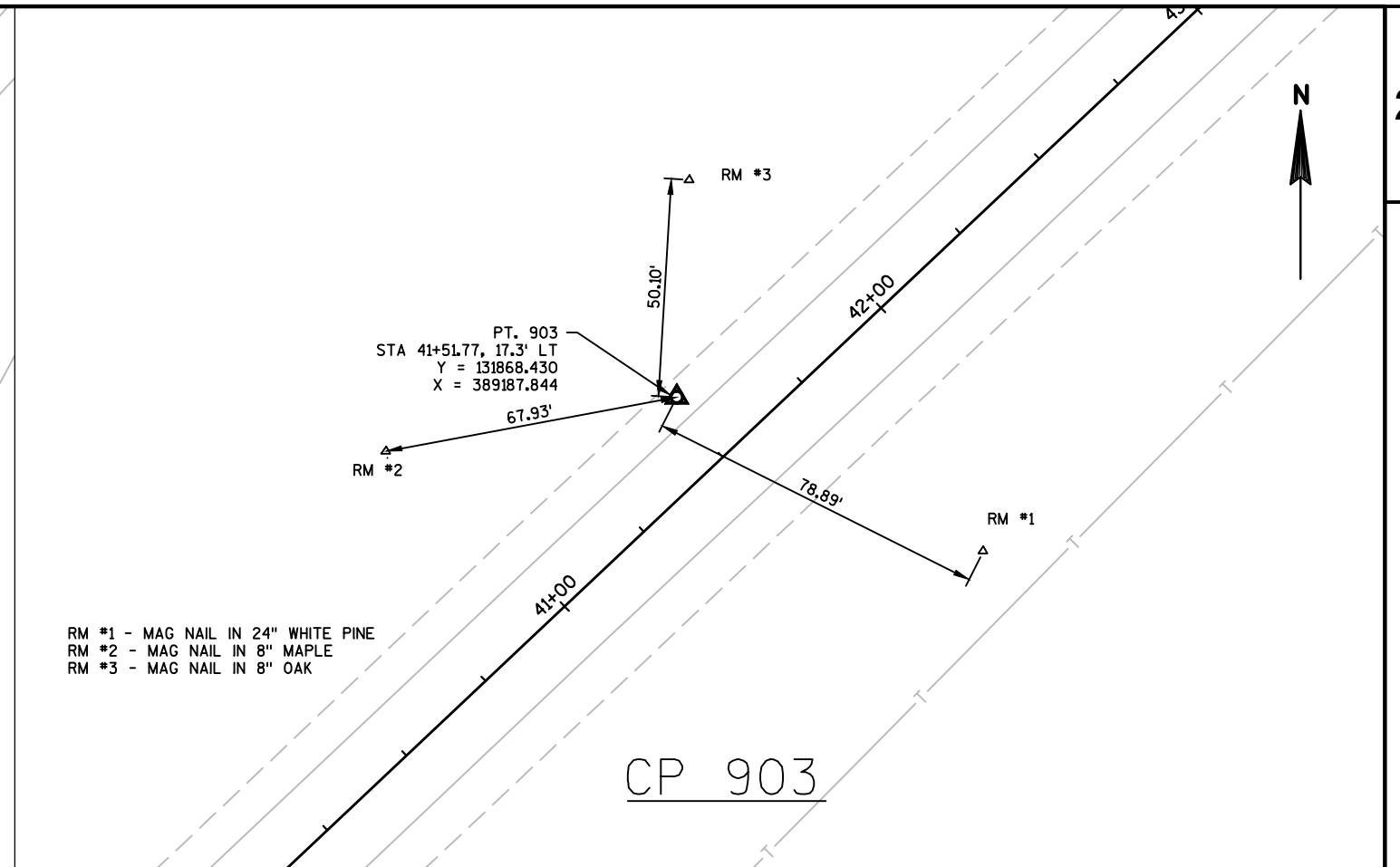




2



2



PROJECT NO:9508-01-70	HWY:CTH M	COUNTY:VILAS	CONTROL POINT DATA	SHEET	E
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Estimate Of Quantities

9508-01-70					
Line	Item	Item Description	Unit	Total	Qty
0010	203.0100	Removing Small Pipe Culverts	EACH	5.000	5.000
0020	204.0115	Removing Asphaltic Surface Butt Joints	SY	214.000	214.000
0030	205.0100	Excavation Common **P**	CY	3,050.000	3,050.000
0040	211.0100	Prepare Foundation for Asphaltic Paving (project) 01. 9508-01-70	LS	1.000	1.000
0050	213.0100	Finishing Roadway (project) 01. 9508-01-70	EACH	1.000	1.000
0060	305.0110	Base Aggregate Dense 3/4-Inch	TON	4,290.000	4,290.000
0070	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	6,150.000	6,150.000
0080	325.0100	Pulverize and Relay **P**	SY	69,770.000	69,770.000
0090	374.1020.S	QMP Pulverize and Relay Compaction **P**	SY	69,770.000	69,770.000
0100	440.4410	Incentive IRI Ride	DOL	10,870.000	10,870.000
0110	455.0605	Tack Coat	GAL	7,130.000	7,130.000
0120	460.2000	Incentive Density HMA Pavement	DOL	7,610.000	7,610.000
0130	460.5223	HMA Pavement 3 LT 58-28 S	TON	6,730.000	6,730.000
0140	460.5244	HMA Pavement 4 LT 58-34 S	TON	5,180.000	5,180.000
0150	465.0315	Asphaltic Flumes	SY	46.000	46.000
0160	465.0425	Asphaltic Shoulder Rumble Strips 2-Lane Rural **P**	LF	26,360.000	26,360.000
0170	465.0475	Asphalt Center Line Rumble Strips 2-Lane Rural **P**	LF	13,150.000	13,150.000
0180	520.1024	Apron Endwalls for Culvert Pipe 24-Inch	EACH	2.000	2.000
0190	520.1030	Apron Endwalls for Culvert Pipe 30-Inch	EACH	6.000	6.000
0200	520.3424	Culvert Pipe Class III-A Non-metal 24-Inch	LF	146.000	146.000
0210	520.3430	Culvert Pipe Class III-A Non-metal 30-Inch	LF	352.000	352.000
0220	522.0154	Culvert Pipe Reinforced Concrete Class III 54-Inch	LF	120.000	120.000
0230	522.1054	Apron Endwalls for Culvert Pipe Reinforced Concrete 54-Inch	EACH	2.000	2.000
0240	602.0405	Concrete Sidewalk 4-Inch	SF	193.000	193.000
0250	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	40.000	40.000
0260	612.0208	Pipe Underdrain Unperforated 8-Inch	LF	26.000	26.000
0270	619.1000	Mobilization	EACH	1.000	1.000
0280	624.0100	Water	MGAL	415.000	415.000
0290	625.0500	Salvaged Topsoil	SY	4,050.000	4,050.000
0300	627.0200	Mulching	SY	1,200.000	1,200.000
0310	628.1504	Silt Fence	LF	2,000.000	2,000.000
0320	628.1520	Silt Fence Maintenance	LF	2,000.000	2,000.000
0330	628.1905	Mobilizations Erosion Control	EACH	4.000	4.000
0340	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0350	628.2008	Erosion Mat Urban Class I Type B	SY	2,850.000	2,850.000
0360	628.7504	Temporary Ditch Checks	LF	120.000	120.000
0370	628.7555	Culvert Pipe Checks	EACH	30.000	30.000
0380	629.0210	Fertilizer Type B	CWT	16.000	16.000

Estimate Of Quantities

9508-01-70

Line	Item	Item Description	Unit	Total	Qty
0390	630.0130	Seeding Mixture No. 30	LB	460.000	460.000
0400	630.0200	Seeding Temporary	LB	345.000	345.000
0410	631.0300	Sod Water	MGAL	5.000	5.000
0420	633.5200	Markers Culvert End	EACH	10.000	10.000
0430	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	2.000	2.000
0440	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	19.000	19.000
0450	637.2210	Signs Type II Reflective H	SF	56.430	56.430
0460	637.2230	Signs Type II Reflective F	SF	96.000	96.000
0470	638.2102	Moving Signs Type II	EACH	13.000	13.000
0480	638.2602	Removing Signs Type II	EACH	10.000	10.000
0490	638.3000	Removing Small Sign Supports	EACH	9.000	9.000
0500	638.4000	Moving Small Sign Supports	EACH	13.000	13.000
0510	642.5001	Field Office Type B	EACH	1.000	1.000
0520	643.0100	Traffic Control (project) 01. 9508-01-70	EACH	1.000	1.000
0530	643.0300	Traffic Control Drums	DAY	513.000	513.000
0540	643.0420	Traffic Control Barricades Type III	DAY	614.000	614.000
0550	643.0705	Traffic Control Warning Lights Type A	DAY	1,076.000	1,076.000
0560	643.0900	Traffic Control Signs	DAY	614.000	614.000
0570	643.0920	Traffic Control Covering Signs Type II	EACH	6.000	6.000
0580	643.1050	Traffic Control Signs PCMS	DAY	138.000	138.000
0590	643.2000	Traffic Control Detour (project) 01. 9508-01-70	EACH	1.000	1.000
0600	643.3000	Traffic Control Detour Signs	DAY	4,570.000	4,570.000
0610	646.0103	Pavement Marking Paint 4-Inch	LF	40,451.000	40,451.000
0620	646.0123	Pavement Marking Paint 8-Inch	LF	650.000	650.000
0630	647.0563	Pavement Marking Stop Line Paint 18-Inch	LF	60.000	60.000
0640	648.0100	Locating No-Passing Zones	MI	2.800	2.800
0650	650.4500	Construction Staking Subgrade	LF	1,337.000	1,337.000
0660	650.5000	Construction Staking Base	LF	1,337.000	1,337.000
0670	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	302.000	302.000
0680	650.6000	Construction Staking Pipe Culverts	EACH	6.000	6.000
0690	650.8000	Construction Staking Resurfacing Reference	LF	13,260.000	13,260.000
0700	650.9910	Construction Staking Supplemental Control (project) 01. 9508-01-70	LS	1.000	1.000
0710	650.9920	Construction Staking Slope Stakes	LF	1,337.000	1,337.000
0720	690.0150	Sawing Asphalt	LF	270.000	270.000
0730	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0740	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0750	SPV.0090	Special 01. Concrete Curb & Gutter HES 6-Inch Sloped 36-Inch Type D	LF	302.000	302.000
0760	SPV.0180	Special 01. Protective Thermoplastic Coating at	SY	84.000	84.000

Estimate Of Quantities

9508-01-70

Snowmobile Trail Crossing

EARTHWORK SUMMARY

Location	From/To Station	Common Excavation (1)	Avai l a b l e Material (5)	Unexpanded Fill	Expanded Fill (13)	Mass Ordinate +/- (14)	Waste	Comment:
		Cut (2)			Factor 1. 25			
CTH M	154+53. 2/165+35. 71	2, 607	2, 607	103	129	2, 478	2, 478	
CTH N	198+65. 27/201+67. 96	443	443	52	65	378	378	
	Total	3, 050	3, 050	155	194		2, 856	

- 1) Common Excavation is the sum of the Cut and EBS Excavation columns. Item number 205.0100
- 2) Salvaged/Unsuable Pavement Material is included in Cut.
- 4) Salvaged/Unusable Pavement Material
- 5) Avai l a b l e Material = Cut - Salvaged/Unusuable Pavement Material
- 13) Expanded Fill. Factor = 1.25
- 14) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division.
Minus indicates a shortage of material within the Division.

REMOVING ASPHALTIC SURFACE BUTT JOINTS

				204.0115
STATION TO STATION			LOCATION	SY
CATEGORY 0010				
21+93	-	22+03	CTH M	46
154+43	-	154+53	CTH M	34
			VANDERCOOK RD	56
			MANN LAKE RD	78
PROJECT TOTAL				214

PREPARE FOUNDATION FOR ASPHALTC PAVING
PROJECT 9508-01-70

				211.0100
STATION TO STATION			LOCATION	LS
CATEGORY 0010				
21+93	-	154+53	CTH M	1
PROJECT TOTAL				1

PULVERIZE AND RELAY AND WATER

				325.0100	624.1000	374.1020.S
				PULVERIZE	WATER*	OMP PULVERIZE
				AND RELAY		AND RELAY
STATION TO STATION		DIR	LOCATION	SY	MGAL	COMPACTION
CATEGORY 0010						
21+93	-	80+00	R/L CTH M	30,612	153	30,612
80+00	-	90+00	R/L CTH M	5,312	27	5,312
90+00	-	154+53	R/L CTH M	33,843	169	33,843
PROJECT TOTALS				69,767	349	69,767
ROUNDED TOTAL				69,770	350	69,770

* ADDITIONAL QUANTITIES LISTED IN THE "BASE AGGREGATE DENSE AND WATER" TABLE.

PIPE UNDERDRAIN

				612.0208
				PIPE
				UNDERDRAIN
				UNPERFORATED
				8-INCH
STATION TO STATION		DIR	LOCATION	LF
CATEGORY 0010				
159+55	-	159+70	LT CTH M	26
PROJECT TOTAL				26

BASE AGGREGATE DENSE AND WATER

				305.0110	305.0120	624.0100
				BASE	BASE	
				AGGREGATE	AGGREGATE	
				DENSE 3/4-INCH	DENSE 1 1/4-INCH	WATER*
STATION TO STATION		TO	LOCATION	TON	TON	MGAL
CATEGORY 0010						
21+93	-	80+00	CTH M	1,747	0	11
80+00	-	90+00	CTH M	301	681	6
90+00	-	154+53	CTH M	1,941	0	12
154+53	-	165+36	CTH M	195	4,207	27
198+65	-	199+76	CTH N	20	434	3
200+24	-	201+68	CTH N	41	671	5
---	-	---	BIKE TRAIL	0	99	1
UNDISTRIBUTED				45	58	0
PROJECT TOTALS				4,290	6,150	65

* ADDITIONAL QUANTITIES LISTED IN THE "PULVERIZE AND RELAY AND WATER" TABLE.

ASPHALTIC ITEMS

		455.0605	460.5223	460.5244	465.0315
		TACK COAT GAL	HMA PAVEMENT 3 LT 58-28 S	HMA PAVEMENT 4 LT 58-34 S	ASPHALTIC FLUMES
STATION TO STATION	LOCATION		TON	TON	SY
CATEGORY 0010					
21+93 - 80+00	CTH M	2,763	2,612	2,001	---
80+00 - 90+00	CTH M	468	443	339	---
90+00 - 154+53	CTH M	3,029	2,865	2,194	---
154+53 - 165+36	CTH M	692	651	500	22
198+65 - 199+76	CTH N	67	63	49	15
200+24 - 201+68	CTH N	101	95	73	9
-	BIKE TRAIL	---	0	18	---
PROJECT TOTALS		7,121	6,729	5,174	46
ROUNDED TOTAL		7,130	6,730	5,180	46

ASPHALTIC RUMBLE STRIPS

				465.0425	465.0475
				ASPHALTIC	ASPHALTIC
				SHOULDER	CENTERLINE
				RUMBLE STRIPS	RUMBLE STRIPS
				2-LANE RURAL*	2-LANE RURAL
STATION TO STATION		TO	LOCATION	LF	LF
CATEGORY 0010					
21+93	-	154+53	CTH M	25,976	12,461
154+53	-	165+36	CTH M	377	683
PROJECT TOTALS				26,353	13,144
ROUNDED TOTAL				26,360	13,150

* TYPE 2

CONCRETE CURB AND GUTTER

					SPV. 0090. 01 HES 6-INCH SLOPED 36-INCH TYPE D LF
STATION TO STATION			DIR	LOCATION	
CATEGORY 0010					
159+53	-	160+01	RT	CTH M	72
159+60	-	159+98	LT	CTH M	64
160+28	-	160+86	LT	CTH M	84
160+51	-	160+99	RT	CTH M	82

PROJECT TOTAL 302

PAVEMENT MARKING

				646. 0103		646. 0123	647. 0563
				PAINT 4-INCH (YELLOW)		PAINT 8-INCH (WHITE)	STOPLINE PAINT 18-INCH (WHITE)
STATION - STATION			LOCATION	LF	LF	LF	LF
CATEGORY 0010							
21+93	-	165+35	CTH M	11, 568	28, 124	650	--
198+65	-	201+68	CTH N	448	311	--	60

SUBTOTALS 12, 016 28, 435
PROJECT TOTALS 40, 451 650 60

PROTECTIVE THERMOPLASTIC COATING
AT SNOWMOBILE TRAIL CROSSING

		SPV. 0180. 01
STATION	LOCATION	SY
CATEGORY 0010		
30+00	CTH M	84

PROJECT TOTAL 84

CONCRETE SIDEWALK AND RAMPS

					602. 0405	602. 0505
					CONCRETE SIDEWALK 4-INCH	CURB RAMP DETECTABLE WARNING FIELD YELLOW
STATION TO STATION			DIR	LOCATION	SF	SF
CATEGORY 0010						
159+79	-	159+92	LT	CTH M	94	20
160+41	-	160+55	LT	CTH M	99	20

PROJECT TOTALS 193 40

SAWING

					690. 0150	
					SAWING ASPHALT LF	REMARKS
STATION	TO	STATION	DIR	LOCATION		
CATEGORY 0010						
21+93. 32			---	CTH M	42	
59+64	-	60+07	RT	CTH M	44	VANDERCOOK RD
112+59	-	113+21	RT	CTH M	63	MANN LAKE RD
157+64	-	157+74	RT	CTH M	10	BIKE TRAIL
157+66	-	157+76	LT	CTH M	10	BIKE TRAIL
159+25	-	159+25	LT	CTH M	10	BIKE TRAIL
160+89. 56	-	160+92. 57	LT	CTH M	10	BIKE TRAIL
165+35. 71			---	CTH M	27	
198+65. 27			---	CTH N	27	
201+67. 96			---	CTH N	25	

PROJECT TOTAL 268
ROUNDED TOTAL 270

CULVERT PIPES

STA	LOCATI ON		203. 0100	520. 3424	520. 3430	522. 0154	520. 1024	520. 1030	522. 1054 APRON	633. 5200	I NLET	OUTLET	I NFO ONLY
			REMOVI NG SMALL PIPE CULVERTS	CULVERT PIPE CLASS III -A NON-METAL 24-INCH	CULVERT PIPE CLASS III -A NON-METAL 30-INCH	CULVERT PIPE REINF. CONC. CLASS III 54-INCH	APRON ENDWALLS FOR CULVERT PIPE 24-INCH	APRON ENDWALLS FOR CULVERT PIPE 30-INCH	ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 54-INCH	MARKERS CULVERT END			
			EACH	LF	LF	LF	EACH	EACH	EACH	EACH			
CATEGORY 0010													
107+48	CTH M	R/L	1	---	---	120	---	---	2	2	1628. 60	1627. 93	SKEW 5 DEG RHF
118+95	CTH M	R/L	1	---	100	---	---	2	---	2	1633. 37	1632. 88	SKEW 1 DEG RHF
122+62	CTH M	R/L	1	---	120	---	---	2	---	2	1632. 15	1630. 47	SKEW 1 DEG LHF
128+82	CTH M	R/L	1	---	132	---	---	2	---	2	1630. 80	1629. 94	SKEW 1 DEG RHF
134+65	CTH M	R/L	1	146	---	---	2	---	---	2	1631. 39	1630. 37	SKEW 21 DEG RHF

PROJECT TOTALS 5 146 352 120 2 6 2 10

LANDSCAPING

STATION	TO	STATION	LOCATION	625. 0500 SALVAGED TOPSOIL SY	627. 0200 MULCHING SY	628. 2008 E-MAT URBAN CLASS I TYPE B SY	629. 0210 FERTILIZER TYPE B CWT	630. 0130 SEEDING MIX NO. 30 LB	630. 0200 SEEDING TEMPORARY LB	631. 0300 SOD WATER MGAL	REMARKS
CATEGORY 0010											
21+93	-	154+53	CTH M	---	---	---	10. 4	300	225	0	
154+53	-	165+36	CTH M & CTH N	3, 250	950	2, 300	2. 8	80	60	*5	*STA. 157+75 TO 160+00 LT. ONLY
UNDISTRIBUTED				800	250	550	2. 7	80	60	0	
PROJECT TOTALS				4, 050	1, 200	2, 850	16	460	345	5	

EROSION CONTROL

STATION	TO	STATION	LOCATION	628. 1504 SILT FENCE LF	628. 1520 SILT FENCE MAINT. LF	628. 7504 TEMPORARY DITCH CHECKS LF	628. 7555 CULVERT PIPE CHECKS EACH
CATEGORY 0010							
21+93	-	154+53	CTH M	500	500	---	20
154+53	-	165+36	CTH M & CTH N	1, 100	1, 100	100	5
UNDISTRIBUTED				400	400	20	5
PROJECT TOTALS				2, 000	2, 000	120	30

LOCATING NO PASSING ZONES

STATION TO STATION			LOCATION	648. 0100 MI
CATEGORY 0010				
21+93	-	154+53	CTH M	2. 51
154+53	-	165+36	CTH M	0. 21
PROJECT TOTAL				2. 72
ROUNDED TOTAL				2. 8

CONSTRUCTION STAKING

STATION	TO	STATION	REFERENCE LINE	650. 4500 SUBGRADE LF	650. 5000 BASE LF	650. 5500 CURB, GUTTER & CURB AND GUTTER LF	650. 6000 PIPE CULVERTS EACH	650. 8000 RESURFACING REFERENCE LF	650. 9910 SUPPLEMENTAL CONTROL LS	650. 9920 SLOPE STAKES LF
CATEGORY 0010										
21+93	-	154+53	CTH M	---	---	---	5	13, 260	---	---
154+53	-	165+36	CTH M	1, 083	1, 083	302	1	---	---	1, 083
198+65	-	199+76	CTH N	111	111	---	---	---	---	111
200+24	-	201+68	CTH N	144	144	---	---	---	---	144
---	-	---	PROJECT	---	---	---	---	---	1	---
PROJECT TOTALS				1, 337	1, 337	302	6	13, 260	1	1, 337

PERMANENT SIGNS TYPE II AND SIGN SUPPORTS

											634. 0614 POSTS WOOD 4 X 6-INCH		634. 0616 SIGNS TYPE II		637. 2210 SIGNS TYPE II		637. 2230 SIGNS TYPE II		
SIGN NO.	STATION	REFERENCE LINE	FACE DIR.	SIGN CODE	SIGN SIZE	DESCRIPTION	SIGN W X H IN X IN	ASSEMBLY			14 FT EACH	16 FT EACH	REFLECTIVE H SF	REFLECTIVE F SF	REMARKS				
								NO.	WIDTH IN	HEIGHT IN									
CATEGORY 0010																			
200	24+00	RT	CTH M	NB	M3-1 2	NORTH	24 X 24	J4-1	24.00	48.00	---	1	8.00	---					
					M1-5A 2	COUNTY ROUTE MARKER	24 X 24				---	---	---	---					
201	28+50	LT	CTH M	SB	W3-1 2S	STOP AHEAD	36 X 36				---	1	---	9.00					
202	28+50	RT	CTH M	SB	W3-1 2S	STOP AHEAD	36 X 36				---	1	---	9.00					
203	30+25	RT	CTH M	SB	W14-3 2S	NO PASSING ZONE	48 X 36				---	1	---	6.00					
204	32+50	LT	CTH M	SB	M2-1 2	JCT	21 X 15	J1-2	48.00	39.00	---	1	13.00	---					
			CTH M		M1-4 2	USH ROUTE MARKER	24 X 24				---	---	---	---	USH 51				
			CTH M		M4-6 2	END	24 X 12				---	---	---	---					
			CTH M		M1-5A 2	COUNTY ROUTE MARKER	24 X 24				---	---	---	---					
205	55+90	LT	CTH M	NB	W14-3 2S	NO PASSING ZONE	48 X 36				---	1	---	6.00					
206	74+30	RT	CTH M	SB	W14-3 2S	NO PASSING ZONE	48 X 36				---	1	---	6.00					
207	80+00	LT	CTH M	NB	W14-3 2S	NO PASSING ZONE	48 X 36				---	1	---	6.00					
208	100+00	RT	CTH M	SB	W14-3 2S	NO PASSING ZONE	48 X 36				---	1	---	6.00					
210	104+25	LT	CTH M	NB	W14-3 2S	NO PASSING ZONE	48 X 36				---	1	---	6.00					
211	149+10	LT	CTH M	NB	W14-3 2S	NO PASSING ZONE	48 X 36				---	1	---	6.00					
212	149+50	RT	CTH M	NB	M2-1 2	JCT	21 X 15	J1-1	24	39	---	1	6.50	---					
					M1-5A 2	COUNTY ROUTE MARKER	24 X 24				---	---	---	---					
213	154+90	RT	CTH M	NB		DI RECTI ONAL	84 X 30				---	2	17.50	---	BOULDER JCT / SAYNER				
214	160+40	LT	CTH M	EB	R1-1 2S	STOP	30 X 30				---	1	5.18	---					
215	163+60	LT	CTH M	SB		DI RECTI ONAL	60 X 15				2	---	6.25	---	SAYNER				
216		RT	CTH N	EB	W3-1 2S	STOP AHEAD	36 X 36				---	1	---	9.00					
217		LT	CTH N	EB	W3-1 2S	STOP AHEAD	36 X 36				---	1	---	9.00					
218		RT	CTH N	WB	W3-1 2S	STOP AHEAD	36 X 36				---	1	---	9.00					
219		LT	CTH N	WB	W3-1 2S	STOP AHEAD	36 X 36				---	1	---	9.00					
PROJECT TOTALS											2	19	56.43	96.00					

REMOVING SIGNS TYPE II AND REMOVING SMALL SIGN SUPPORTS

SIGN NO.	STATION		LOCATION	DESCRIPTION	638. 2602 REMOVING SIGNS TYPE II EACH	638. 3000 REMOVING SMALL SIGN SUPPORTS EACH	REMARKS
CATEGORY 0010							
R100	24+00	RT	CTH M	NORTH	1	1	
				CTH M		--	
R101	32+44	LT	CTH M	JCT	1	1	
				USH 51		--	
				END	1	--	
				CTH M		--	
R102	34+00	LT	CTH M	STOP AHEAD	1	1	
R103	104+00	RT	CTH M	BOULDER JUNCTION ZONED COMMUNITY	1	1	
R104	149+50	RT	CTH M	JCT	1	1	
				CTH N		--	
R105	154+90	RT	CTH M	BOULDER JUNCTION/SAYNER	1	1	
R106	163+58	LT	CTH M	SAYNER	1	1	
R107			CTH N OF EAST CTH M	STOP AHEAD	1	1	APPROXIMATELY 700' EAST OF CTH M
R108			CTH N WEST OF CTH M	STOP AHEAD	1	1	APPROXIMATELY 800' WEST OF CTH M
PROJECT TOTALS					10	9	

MOVING SIGNS TYPE II AND MOVING SMALL SIGN SUPPORTS

SIGN NO.	FROM STATION	TO STATION	LOCATION	DESCRIPTION	638. 2102 MOVING SIGNS TYPE II EACH	638. 4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
CATEGORY 0010							
M300	157+79 RT	157+81 RT	CTH M	STOP	1	1	BIKE TRAIL
M301	157+62 LT	157+60 LT	CTH M	STOP	1	1	BIKE TRAIL
M302	159+62 RT	159+62 RT	CTH M	COUNTY M/COUNTY N/ARROWS	1	1	
M303	159+92 LT	159+84 LT	CTH M	COUNTY M/COUNTY N/ARROWS	1	1	
M304	159+97 LT	159+90 LT	CTH M	STOP	1	1	
M305	159+95 RT	159+87 RT	CTH M	STOP	1	1	
M306	160+50 RT	160+59 RT	CTH M	STOP	1	1	
M307	160+53 RT	160+66 RT	CTH M	COUNTY M/COUNTY N/ARROWS	1	1	
M308	160+69 LT	160+72 LT	CTH M	COUNTY M/COUNTY N/ARROWS	1	1	
	CTH M	USH 51	CTH M/USH 51	STATE FOREST CAMPGROUND SIGN - CTH M S. OF CTH N	1	1	MOVE ACCORDING TO DETOUR STAGING PLANS
	CTH M	USH 51	CTH M/USH 51	STATE FOREST CAMPGROUND SIGN - CTH M N. OF CTH N	1	1	MOVE ACCORDING TO DETOUR STAGING PLANS
	USH 51	CTH M	CTH M/USH 51	STATE FOREST CAMPGROUND SIGN - CTH M S. OF CTH N	1	1	MOVE ACCORDING TO DETOUR STAGING PLANS
	USH 51	CTH M	CTH M/USH 51	STATE FOREST CAMPGROUND SIGN - CTH M N. OF CTH N	1	1	MOVE ACCORDING TO DETOUR STAGING PLANS
PROJECT TOTALS					13	13	

TRAFFIC CONTROL

PHASE	LOCATION ON	APPROX. SERVI CE PERI OD 60 DAYS	643. 0300		643. 0420		643. 0705 WARNI NG LI GHTS TYPE A		643. 0900		643. 1050 SI GNS PORTABLE CHANGEABLE MESSAGE**											
			TRAFFI C CONTROL DRUMS		BARRI CADES TYPE I I I				SI GNS													
			NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS	NO.	DAYS										
CATEGORY 0010																						
1	USH 51	19	--	--	--	--	--	--	--	--	2	52										
	CTH M AT USH 51	19	--	--	2	38	4	76	1	19	--	--										
	CTH M AT VANDERCOOK RD	19	--	--	2	38	4	76	1	19	--	--										
	CTH M AT MANN LK RD	19	--	--	2	38	4	76	2	38	--	--										
	CTH M AT CTH N	19	--	--	10	190	12	228	7	133	--	--										
	CTH M AT BIG MUSKELLUNGE LAKE RD	19	--	--	2	38	4	76	1	19	--	--										
	CTH M AT ALLEQUASH LAKE RD	19	--	--	2	38	4	76	1	19	--	--										
	CTH M AT NEBISH LAKE RD	19	--	--	2	38	4	76	1	19	--	--										
	CTH M AT N CREEK RD	19	--	--	2	38	4	76	1	19	--	--										
	CTH M I N BOULDER JCT	19	--	--	2	38	4	76	1	19	1	26										
	CTH N AT CTH M	19	--	--	--	--	--	--	4	76	--	--										
	HEART OF VILAS COUNTY BIKE TRAIL	19	--	--	--	--	--	--	3	57	--	--										
UNDI STRI BUTED												19	27	513	--	--	--	--	3	57	--	--
2	USH 51	30	--	--	--	--	--	--	--	--	1	30										
	CTH M AT USH 51	30	--	--	2	60	4	120	1	30	--	--										
	CTH M AT CTH N	30	--	--	2	60	4	120	1	30	1	30										
	VANDERCOOK RD	30	--	--	--	--	--	--	1	30	--	--										
	MANN LAKE RD	30	--	--	--	--	--	--	1	30	--	--										
TOTALS			513		614		1, 076		614		138											

** PORTABLE CHANGEABLE MESSAGE SIGNS TO BE PLACED 1 WEEK PRIOR TO PHASE 1.

TRAFFIC CONTROL COVERING SIGNS

SIGN NO.	LOCATION	643. 0920			REMARKS
		COVERI NG EACH	SIGNS NO. OF CYCLES	TYPE I I NO. OF SIGNS	
6	J1-1; USH 51 N. OF CTH M	2	2	1	CTH M; LT ARROW
8	DIRECTIONSAL SIGN; USH 51 N. OF CTH M	2	2	1	BOULDER JUNCTION ARROW
48	JV; CTH M I N BOULDER JUNCTION	1	1	1	CTH M
49	J1-1; CTH M I N BOULDER JUNCTION	1	1	1	SOUTH CTH M ARROW
PROJECT TOTALS		6			

TRAFFIC CONTROL DETOUR SIGN SUMMARY

PHASE	SI GN NO.	LOCATION	SI GN CODE	SI ZE W X H	NUMBER I N SERVI CE	APPROX. SERVI CE PERI OD 60 DAYS	643. 3000 DETOUR SI GNS DAYS	REMARKS
1	1	USH 51 S. OF CTH M	W20-2-A	48 X 48	1	19	19	
			M1-5A	24 X 24	1	19	19	CTH M
	2	USH 51 S. OF CTH M	M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M06-1	21 X 21	1	19	19	
	4	USH 51 S. OF CTH M	ARROW	9.5 X 9.5	1	19	19	PLACE ON EXISTING SIGN
	5	USH 51 N. OF CTH M	M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M06-1	21 X 21	1	19	19	
	7	USH 51 N. OF CTH M	M04-8A	24 X 18	1	19	19	PLACE ON EXISTING SIGN
	9	USH 51 N. OF CTH M	M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
	10	USH 51 N. OF CTH M	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
	12	USH 51 AT CTH N	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
			M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
	14	USH 51 N OF CTH N	M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
	15	CTH N E. OF USH 51	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
			M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
	16	CTH N E. OF USH 51	D1-1	72 x 15	1	19	19	BOULDER JUNCTI ON

PAGE SUBTOTAL 684

TRAFFIC CONTROL DETOUR SIGN SUMMARY CONTINUED

PHASE	SI GN NO.	LOCATION	SI GN CODE	SI ZE W X H	NUMBER I N SERVI CE	APPROX. SERVI CE PERI OD 60 DAYS	643. 3000 DETOUR SI GNS DAYS	REMARKS
1	17	CTH N E. OF USH 51	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M05-1L	21 X 21	1	19	19	
			M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M05-1R	21 X 21	1	19	19	
	18	CTH N E. OF USH 51	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
	19	CTH N E. OF CTH M	M06-1	21 X 21	1	19	19	PLACE ON EXISTING SIGN
	20	CTH N E. OF CTH M	ARROW	9.5 X 9.5	1	19	19	PLACE ON EXISTING SIGN
			ARROW	9.5 X 9.5	1	19	19	PLACE ON EXISTING SIGN
	21	CTH N E. OF CTH M	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
			M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
	22	CTH N E. OF CTH M	W20-2-A	48 X 48	1	19	19	
	30	USH 51 S. OF CTH H	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
	31	USH 51 S. OF CTH H	D1-1	72 x 15	1	19	19	BOULDER JUNCTION
	32	USH 51 S. OF CTH H	M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M05-1R	21 X 21	1	19	19	
	33	USH 51 S. OF CTH H	M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
	34	USH 51 N. OF CTH H	D1-1	72 x 15	1	19	19	BOULDER JUNCTION

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TRAFFIC CONTROL DETOUR SIGN SUMMARY CONTINUED

PHASE	SI GN NO.	LOCATION	SI GN CODE	SI ZE W X H	NUMBER I N SERVI CE	APPROX. SERVI CE PERI OD 60 DAYS	643. 3000 DETOUR SI GNS DAYS	REMARKS
1	35	CTH H E. OF USH 51	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
	36	CTH H E. OF USH 51	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M05-1L	21 X 21	1	19	19	
	37	CTH H E. OF USH 51	M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
	38	CTH H W. OF CTH K	D1-1	72 x 15	1	19	19	BOULDER JUNCTION
	39	CTH H W. OF CTH K	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
	40	CTH H W. OF CTH K	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
	41	CTH H AT CTH K	M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M05-1R	21 X 21	1	19	19	
	42	CTH H AT CTH K	M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
	43	CTH K E. OF CTH H	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
	44	CTH K E. OF CTH H	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M05-1L	21 X 21	1	19	19	
	45	CTH K E. OF CTH H	M04-8	24 X 12	1	19	19	
			M03-1	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	

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TRAFFIC CONTROL DETOUR SIGN SUMMARY CONTINUED

PHASE	SI GN NO.	LOCATION	SI GN CODE	SI ZE W X H	NUMBER I N SERVI CE	APPROX. SERVI CE PERI OD 60 DAYS	643. 3000 DETOUR SI GNS DAYS	REMARKS
1	46	CTH K W. OF BOULDER JUNCTION	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
	47	CTH K W. OF BOULDER JUNCTION	M04-8A	24 X 18	1	19	19	
			M1-5A	24 X 24	1	19	19	
	50	OLD K RD E. OF CTH M	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
	51	OLD K RD E. OF CTH M	W20-2-A	48 X 48	1	19	19	
			M1-5A	24 X 24	1	19	19	CTH M
	52	CTH M N. OF CTH K	W20-2-A	48 X 48	1	19	19	
	53	CTH M N. OF CTH K	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M05-1R	21 X 21	1	19	19	
	54	CTH M N. OF CTH K	M04-8	24 X 12	1	19	19	
			M03-3	24 X 12	1	19	19	
			M1-5A	24 X 24	1	19	19	
			M06-1	21 X 21	1	19	19	
2	1	USH 51 S. OF CTH M	W20-2-A	48 X 48	1	30	30	
			M1-5A	24 X 24	1	30	30	CTH M
	2	USH 51 S. OF CTH M	M04-8	24 X 12	1	30	30	
			M03-1	24 X 12	1	30	30	
			M06-1	21 X 21	1	30	30	
	4	USH 51 S. OF CTH M	ARROW	9.5 X 9.5	1	30	30	PLACE ON EXISTING SIGN
	5	USH 51 N. OF CTH M	M04-8	24 X 12	1	30	30	
			M03-1	24 X 12	1	30	30	
			M06-1	21 X 21	1	30	30	
	7	USH 51 N. OF CTH M	M04-8A	24 X 18	1	30	30	PLACE ON EXISTING SIGN
	9	USH 51 N. OF CTH M	M04-8	24 X 12	1	30	30	
			M03-1	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
	10	USH 51 S OF CTH N	M04-8	24 X 12	1	30	30	
			M03-3	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
	12	USH 51 S OF CTH N	D1-1	72 x 15	1	30	30	BOULDER JUNCTION

PAGE SUBTOTAL 890

TRAFFIC CONTROL DETOUR SIGN SUMMARY CONTINUED

PHASE	SI GN NO.	LOCATION	SI GN CODE	SI ZE W X H	NUMBER I N SERVI CE	APPROX. SERVI CE PERI OD 60 DAYS	643. 3000 DETOUR SI GNS DAYS	REMARKS
2	13	USH 51 S OF CTH N	M04-8	24 X 12	1	30	30	
			M03-1	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
			M05-1R	21 X 21	1	30	30	
	14	USH 51 S OF CTH N	M04-8	24 X 12	1	30	30	
			M03-1	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
			M06-1	21 X 21	1	30	30	
	15	USH 51 AT CTH N	M04-8	24 X 12	1	30	30	
			M03-3	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
			M06-1	21 X 21	1	30	30	
	16	CTH N E. OF USH 51	M04-8	24 X 12	1	30	30	
			M03-3	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
			M06-1	21 X 21	1	30	30	
	17	CTH N E. OF USH 51	M04-8	24 X 12	1	30	30	
			M03-3	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
			M05-1L	21 X 21	1	30	30	
	18	CTH N E. OF USH 51	M04-8	24 X 12	1	30	30	
			M03-1	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
	19	CTH N E. OF USH 51	M04-8	24 X 12	1	30	30	
			M03-3	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
	20	CTH N E. OF USH 51	D1-1	72 x 15	1	30	30	BOULDER JUNCTION
	21	CTH N E. OF USH 51	M04-8A	24 X 18	1	30	30	
			M1-5A	24 X 24	1	30	30	
	22	CTH N W. OF CTH M	M06-1	21 X 21	1	30	30	PLACE ON EXISTING SIGN
	23	CTH M N. OF CTH N	W20-2-A	48 X 48	1	30	30	
	24	CTH M N. OF CTH N	M04-8	24 X 12	1	30	30	
			M03-3	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
			M05-1R	21 X 21	1	30	30	
	25	CTH M N. OF CTH N	M04-8	24 X 12	1	30	30	PLACE ON EXISTING SIGN
			M03-3	24 X 12	1	30	30	
			M06-1	21 X 21	1	30	30	

PAGE SUBTOTAL 1, 140

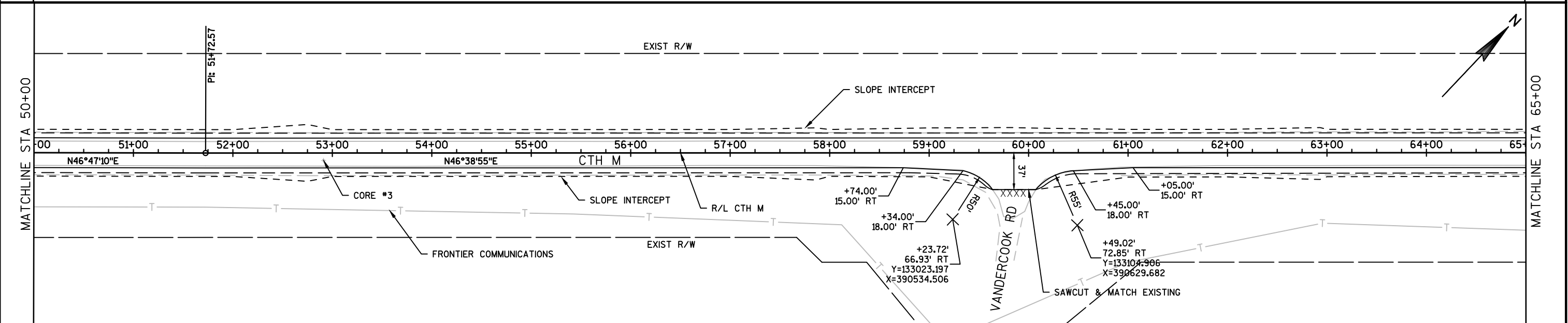
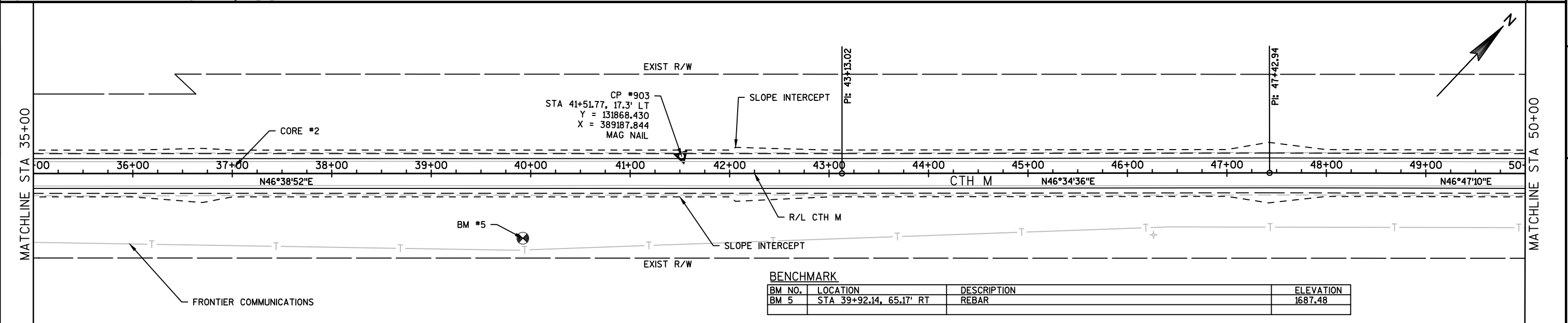
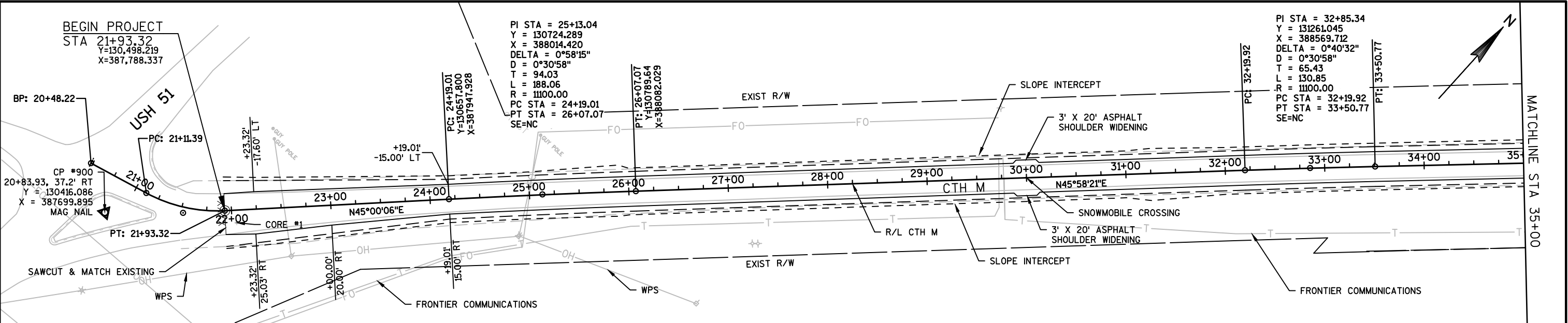
TRAFFIC CONTROL DETOUR SIGN SUMMARY CONTINUED

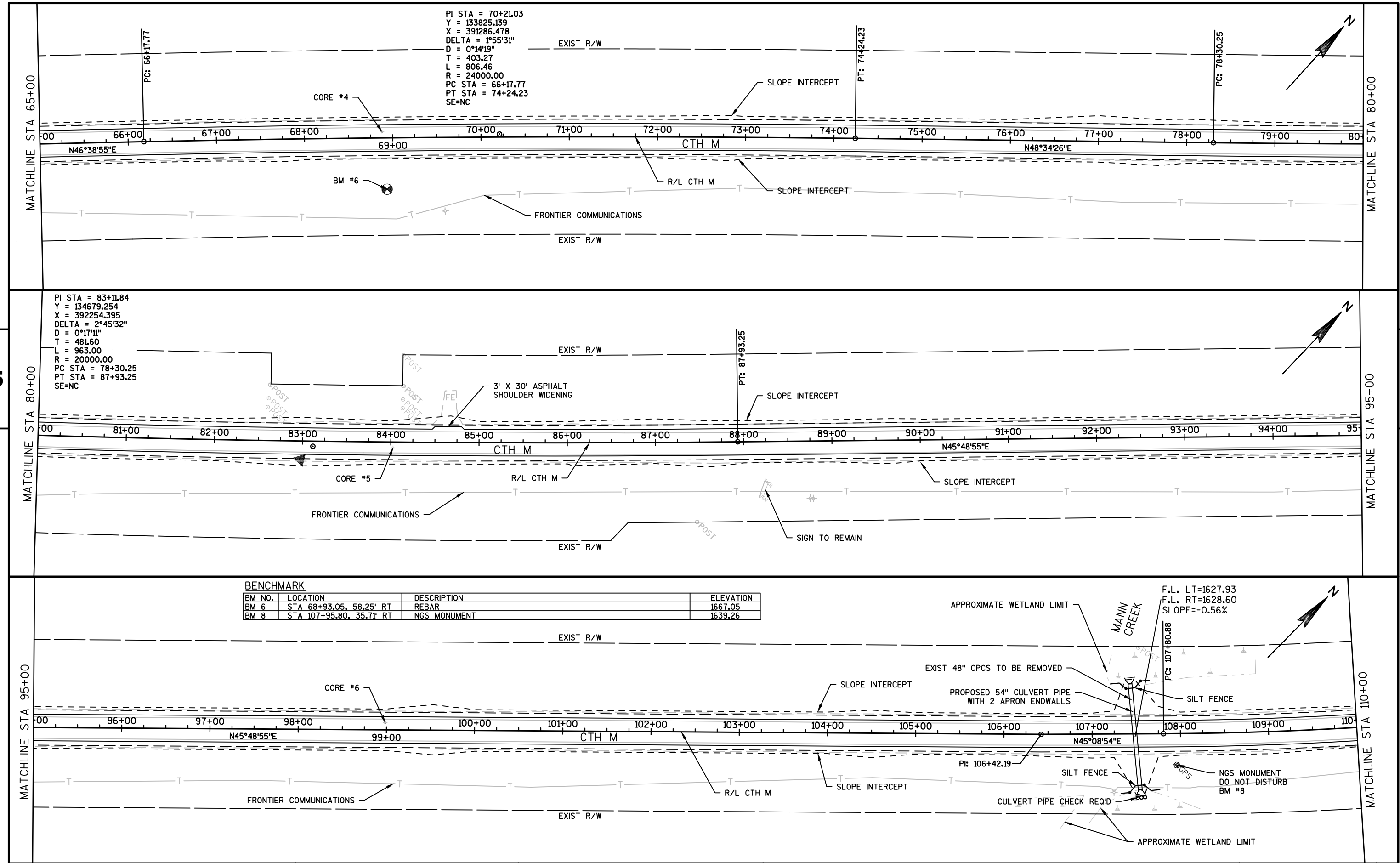
PHASE	SI GN NO.	LOCATION	SI GN CODE	SI ZE W X H	NUMBER I N SERVI CE	APPROX. SERVI CE PERI OD 60 DAYS	643. 3000 DETOUR SI GNS DAYS	REMARKS
2	26	CTH N E. OF CTH M	M03-1	24 X 12	1	30	30	PLACE ON EXI STI NG SI GN
			M06-1	21 X 21	1	30	30	
			M04-8	24 X 12	1	30	30	
			M03-3	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
			M06-1	21 X 21	1	30	30	
	27	CTH N E. OF CTH M	ARROW	9. 5 X 9. 5	1	30	30	PLACE ON EXI STI NG SI GN
	28	CTH N E. OF CTH M	M04-8	24 X 12	1	30	30	
			M03-3	24 X 12	1	30	30	
			M1-5A	24 X 24	1	30	30	
			M06-1	21 X 21	1	30	30	
	29	CTH N E. OF CTH M	W20-2-A	48 X 48	1	30	30	
			M1-5A	24 X 24	1	30	30	

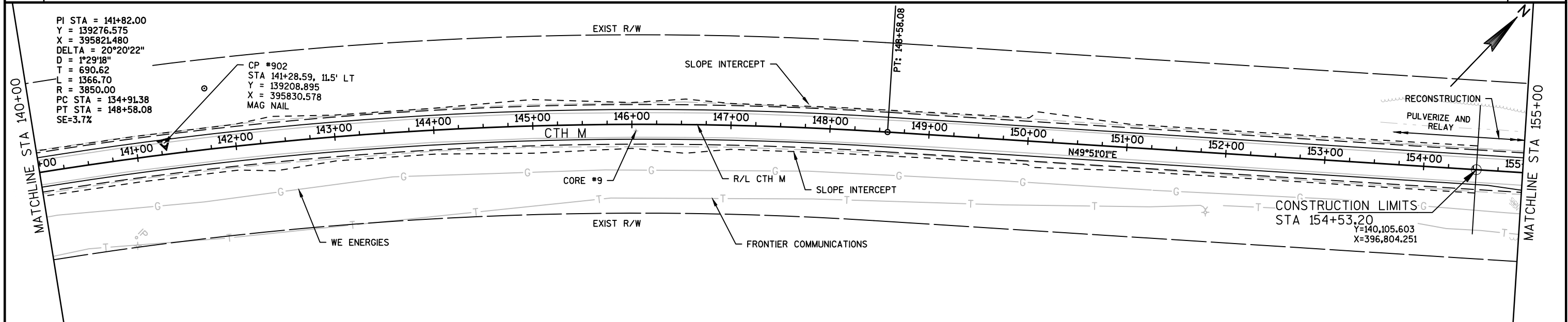
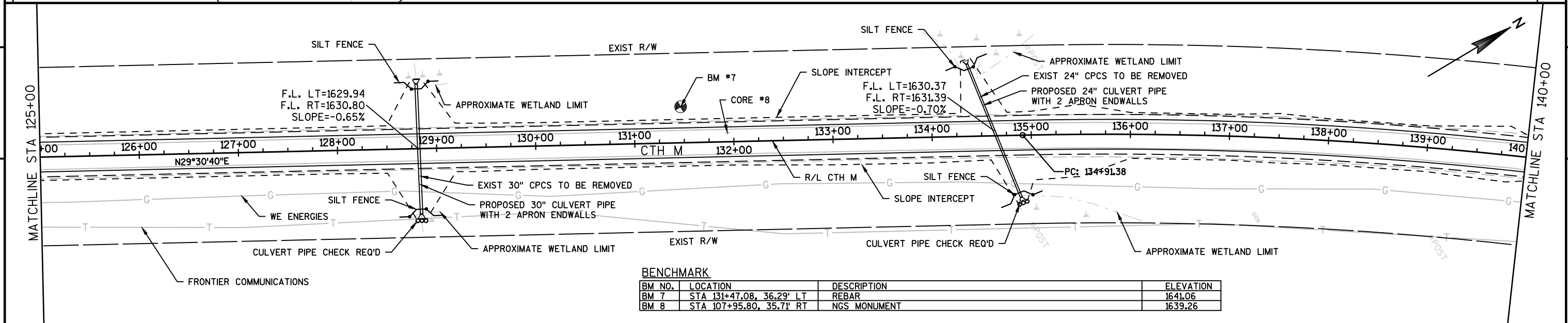
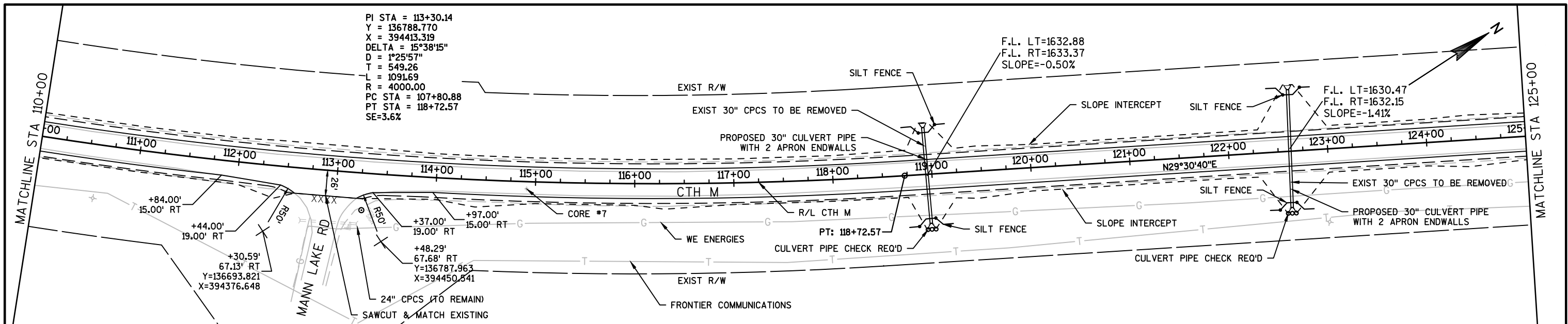
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PROJECT TOTAL 4, 567

ROUNDED TOTAL 4, 570



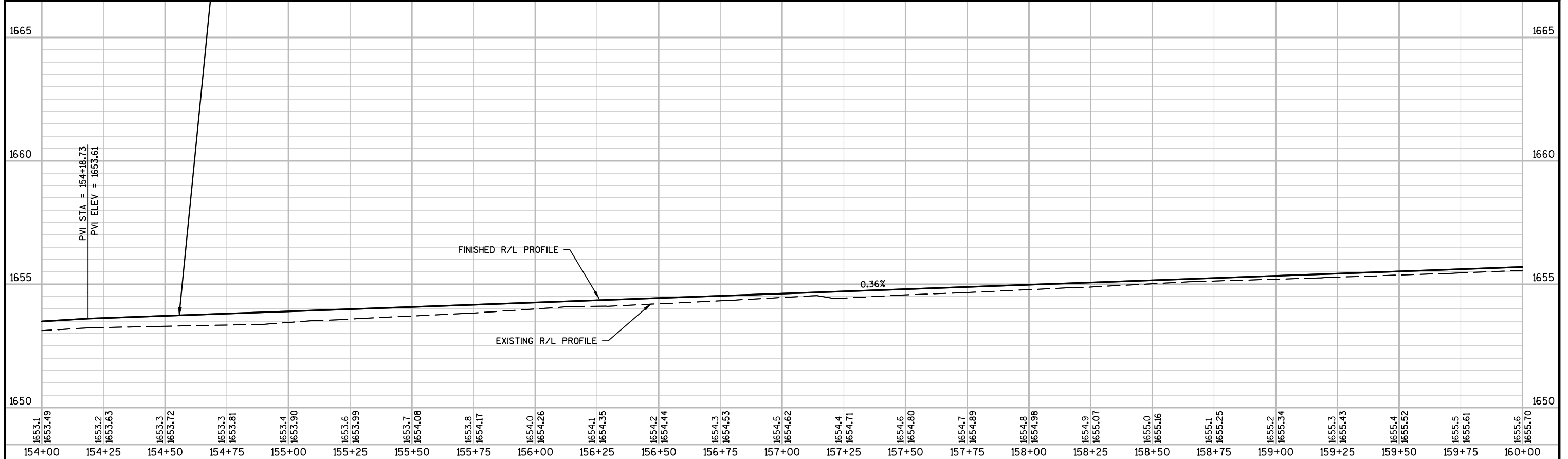
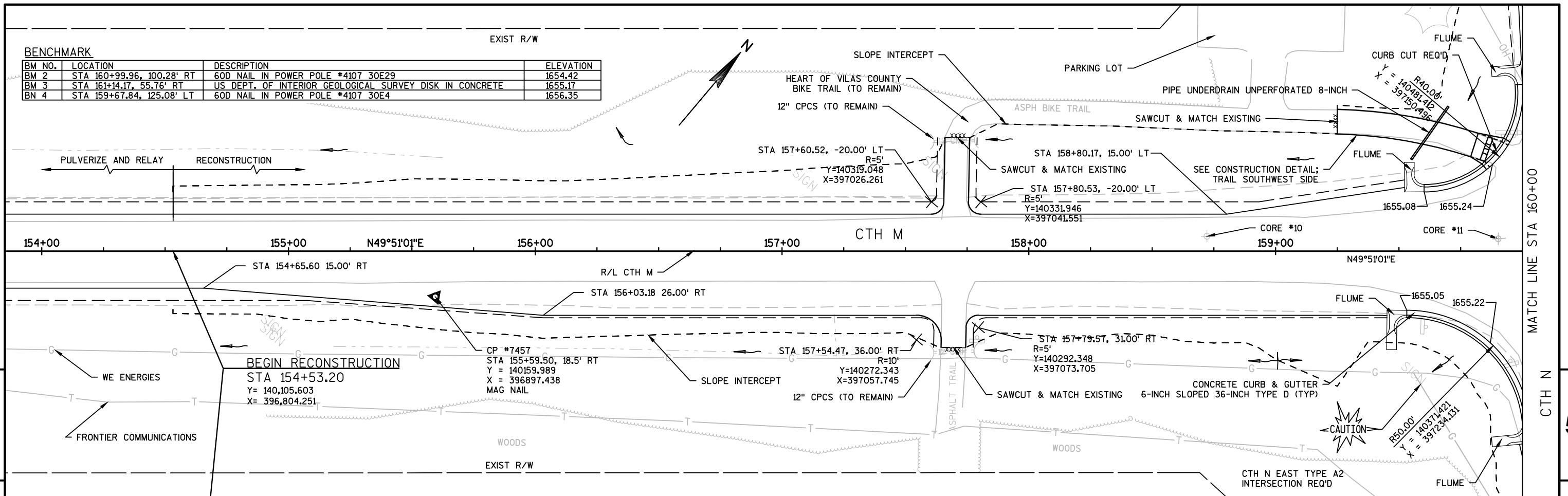




BENCHMARK

BM NO.	LOCATION	DESCRIPTION	ELEVATION
BM 2	STA 160+99.96, 100.28' RT	60D NAIL IN POWER POLE #4107 30E29	1654.42
BM 3	STA 161+14.17, 55.76' RT	US DEPT. OF INTERIOR GEOLOGICAL SURVEY DISK IN CONCRETE	1655.17
BM 4	STA 159+67.84, 125.08' LT	60D NAIL IN POWER POLE #4107 30E4	1656.35

EXIST R/W



PROJECT NO: 9508-01-70

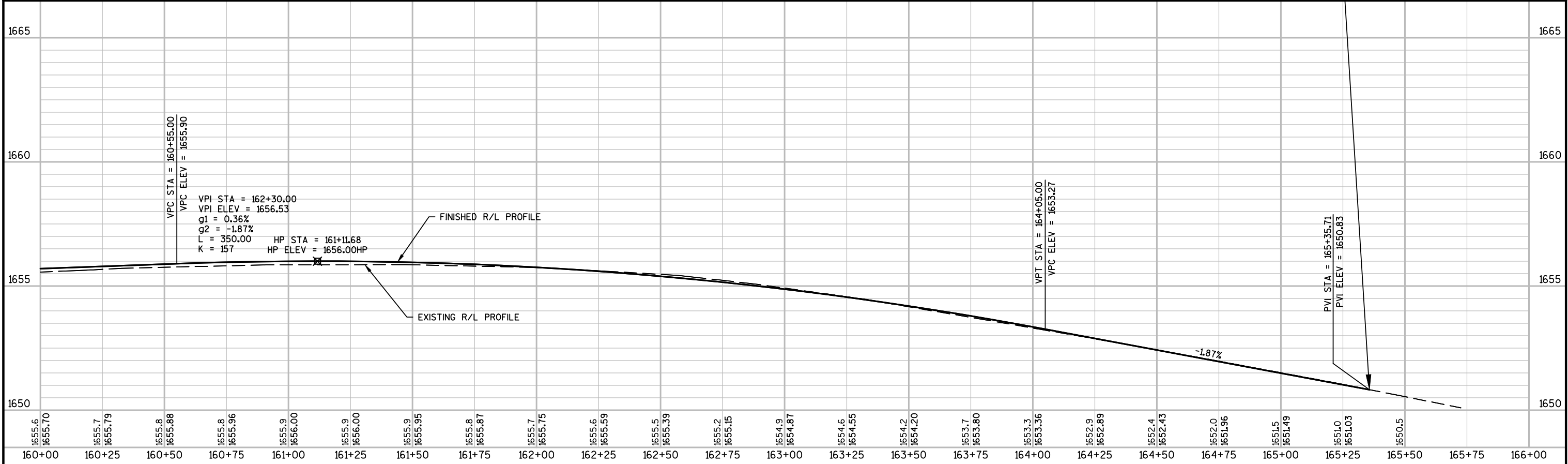
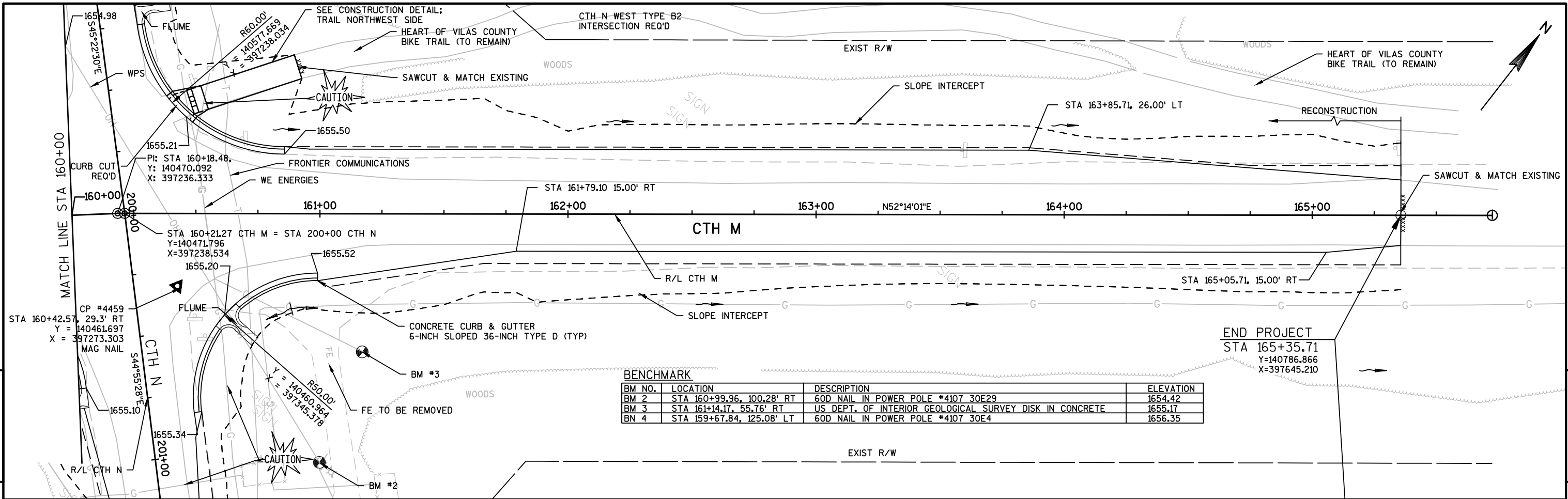
HWY: CTH M

COUNTY: VILAS

PLAN AND PROFILE: CTH M RECONSTRUCTION

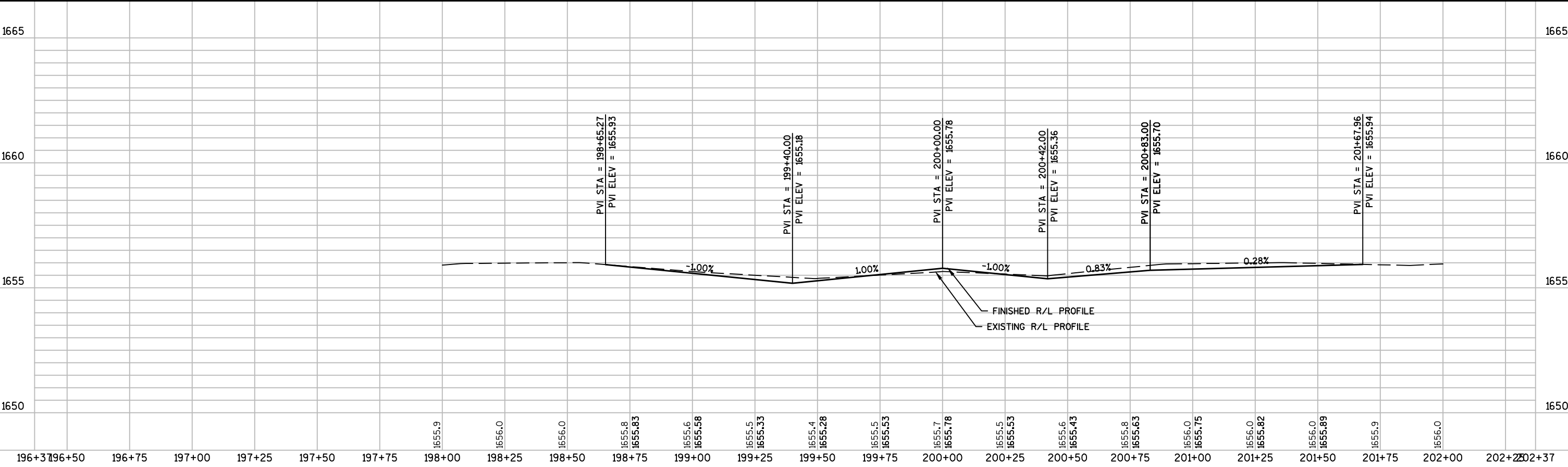
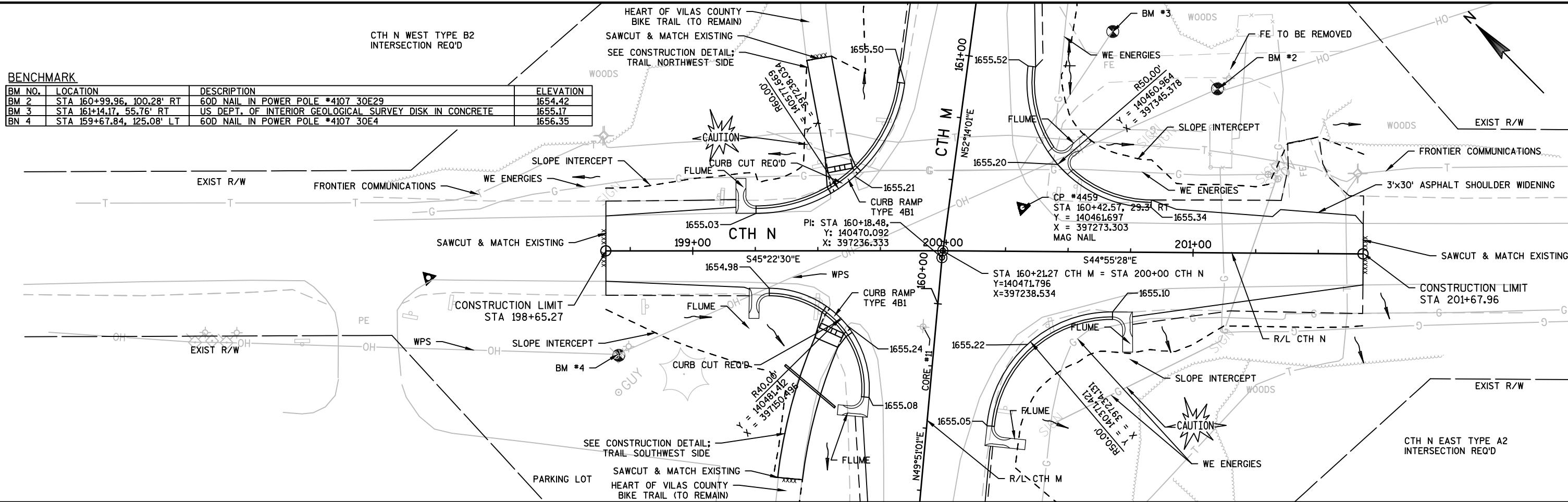
SHEET

E



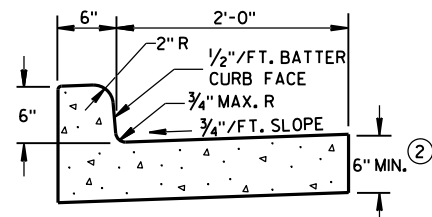
PROJECT NO: 9508-01-70	HWY: CTH M	COUNTY: VILAS	PLAN AND PROFILE: CTH M RECONSTRUCTION	SHEET	E
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BENCHMARK			
BM NO.	LOCATION	DESCRIPTION	ELEVATION
BM 2	STA 160+99.96, 100.28' RT	60D NAIL IN POWER POLE *4107 30E29	1654.42
BM 3	STA 161+14.17, 55.76' RT	US DEPT. OF INTERIOR GEOLOGICAL SURVEY DISK IN CONCRETE	1655.17
BM 4	STA 159+67.84, 125.08' LT	60D NAIL IN POWER POLE *4107 30E4	1656.35

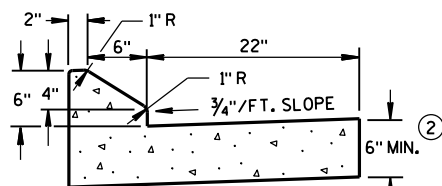


Standard Detail Drawing List

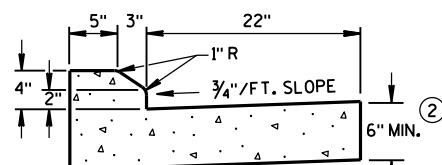
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
09A01-13B	AT-GRADE SIDE ROAD INTERSECTION, TYPE "A1" & "A2"
13A10-01B	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A10-01C	2-LANE RURAL SHOULDER RUMBLE STRIP, MILLING
13A11-02A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-02B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-06A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06B	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-06C	DETOUR SIGNING FOR MAINLINE CLOSURES
15C04-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C08-16B	PAVEMENT MARKING (INTERSECTIONS)
15C12-04	TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY



TYPES A & D ①

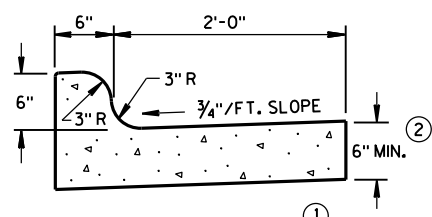


6" SLOPED CURB TYPES G & J ①



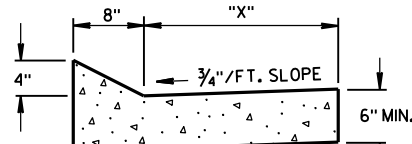
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



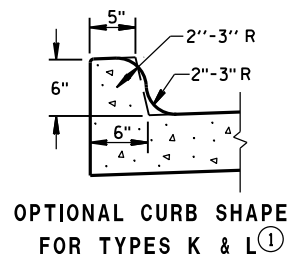
TYPES K & L ①

CONCRETE CURB & GUTTER 30"

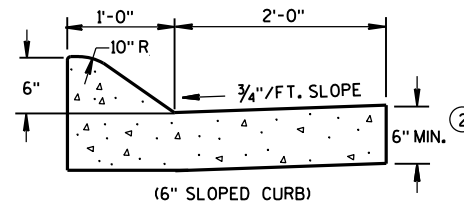


TYPES TBT & TBTT ①
CONCRETE CURB & GUTTER

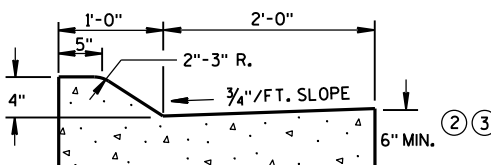
TBT & TBTT	"X"
30"	22"
36"	28"



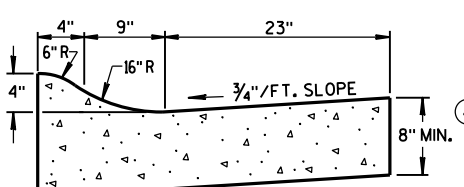
OPTIONAL CURB SHAPE
FOR TYPES K & L ①



(6" SLOPED CURB)



TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ⑤
CONCRETE CURB & GUTTER 36"

GENERAL NOTES

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

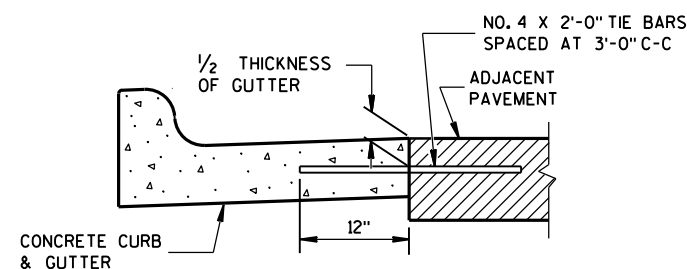
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

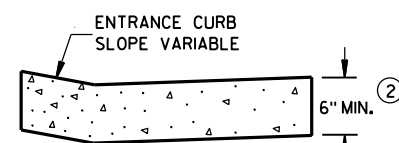
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

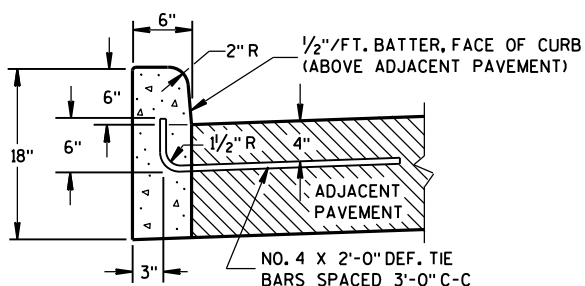
- TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.
- THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.
- 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.
- THE FACE OF CURB IS 6" FROM THE BACK OF CURB.
- WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



TYPICAL TIE BAR LOCATION ①

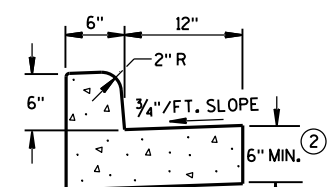


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

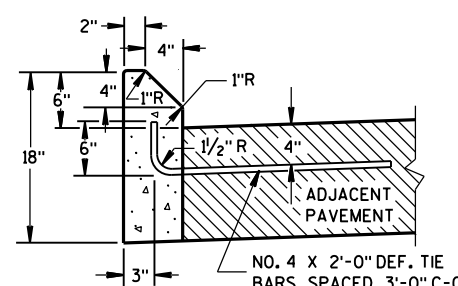


TYPES A & D ①

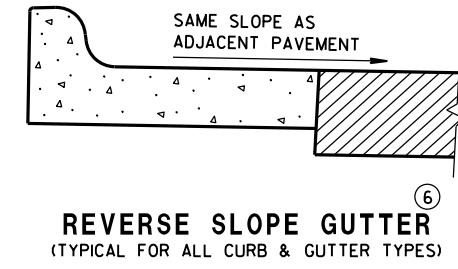
CONCRETE CURB



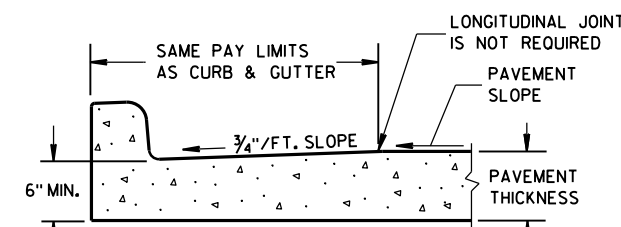
TYPES A & D
CONCRETE CURB & GUTTER 18"



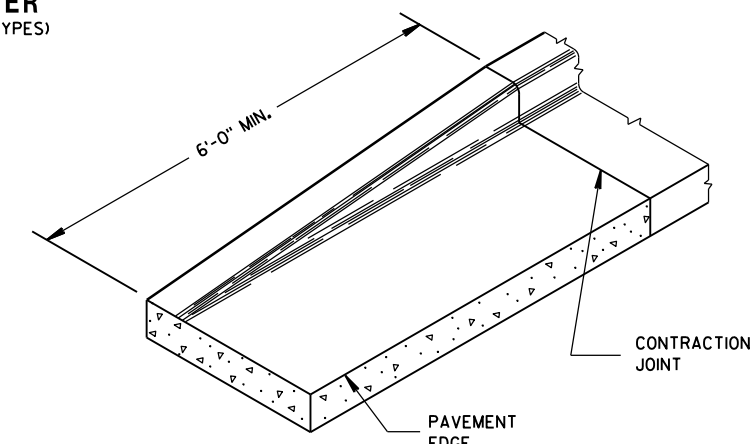
TYPES G & J ①



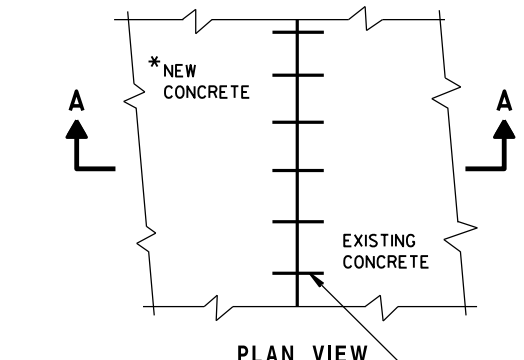
REVERSE SLOPE GUTTER
(TYPICAL FOR ALL CURB & GUTTER TYPES)



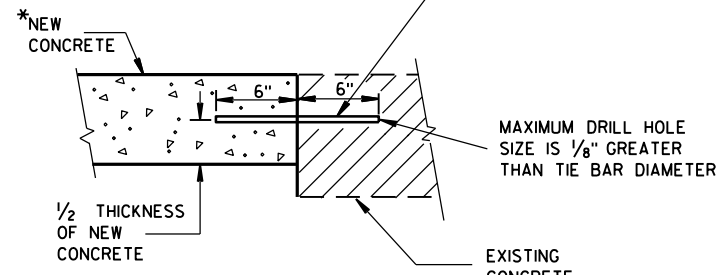
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



END SECTION CURB & GUTTER



PLAN VIEW



SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

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

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

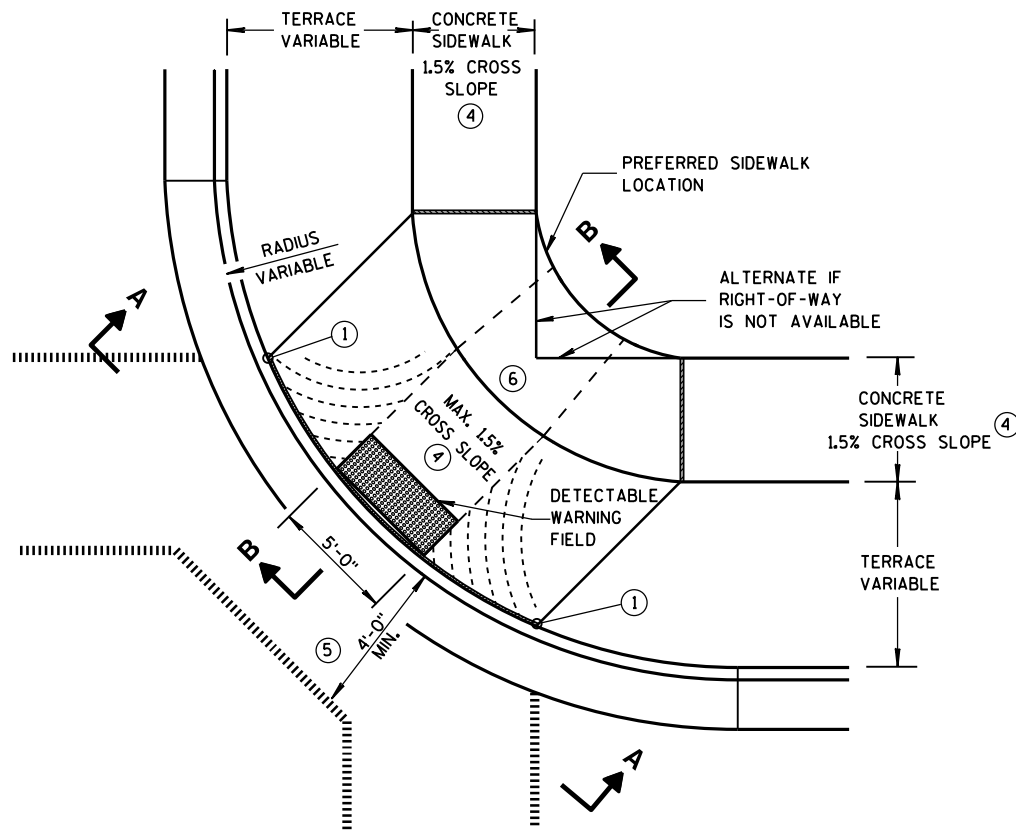
MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

EXISTING CONCRETE

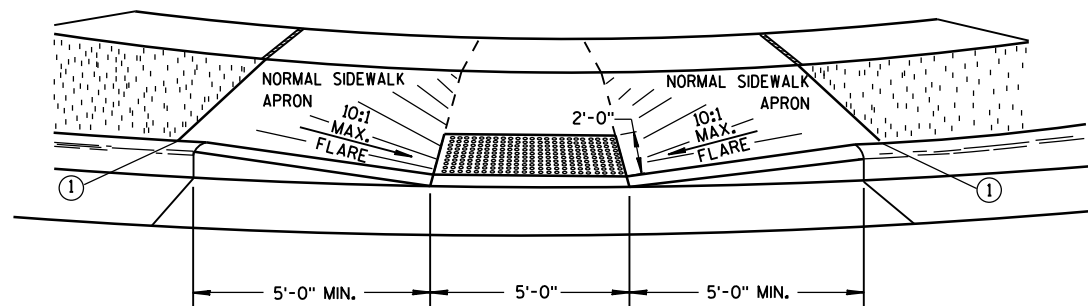
CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

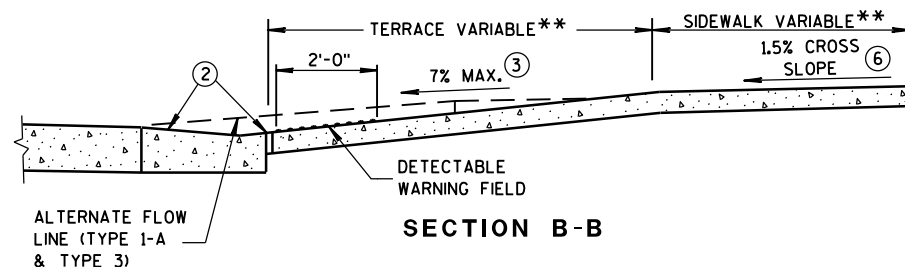


**PLAN VIEW
TYPE 1 RAMP**
(CENTER OF CORNER RADIUS)

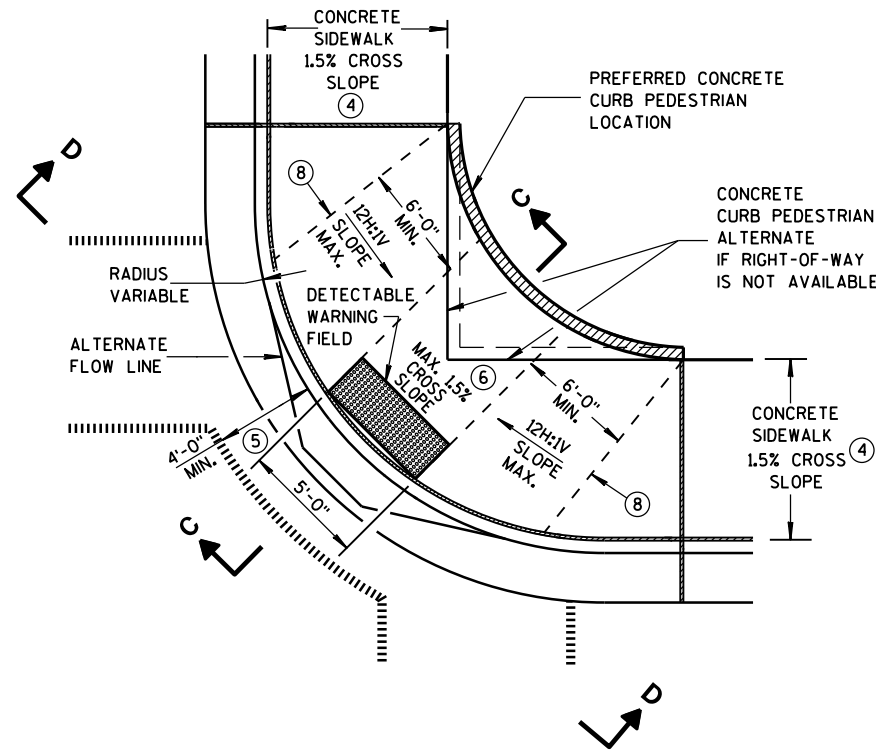


VIEW A-A

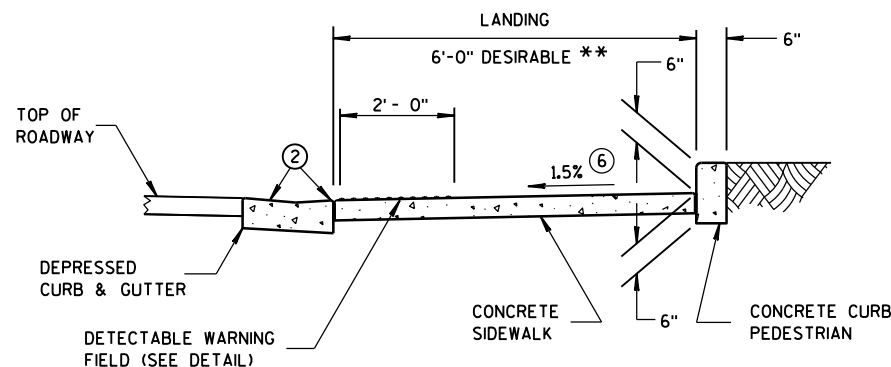
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



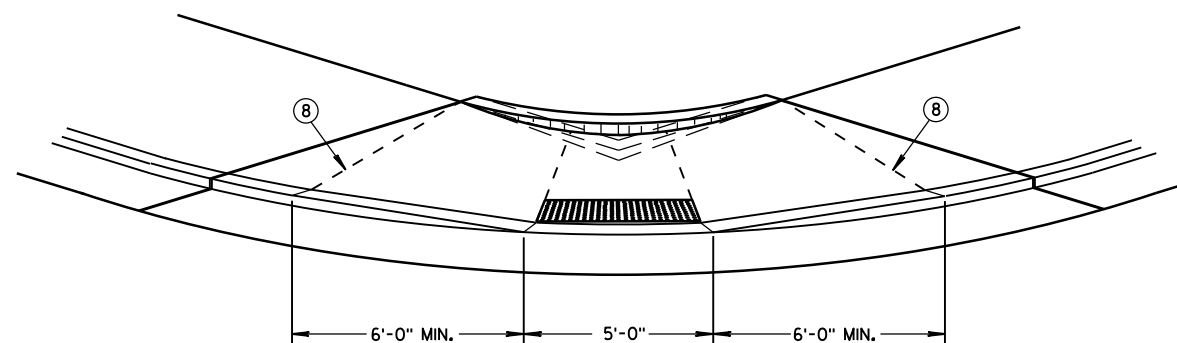
SECTION B-B



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



SECTION C-C



VIEW D-D

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.

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

TYPE 1 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 LINEAL 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.

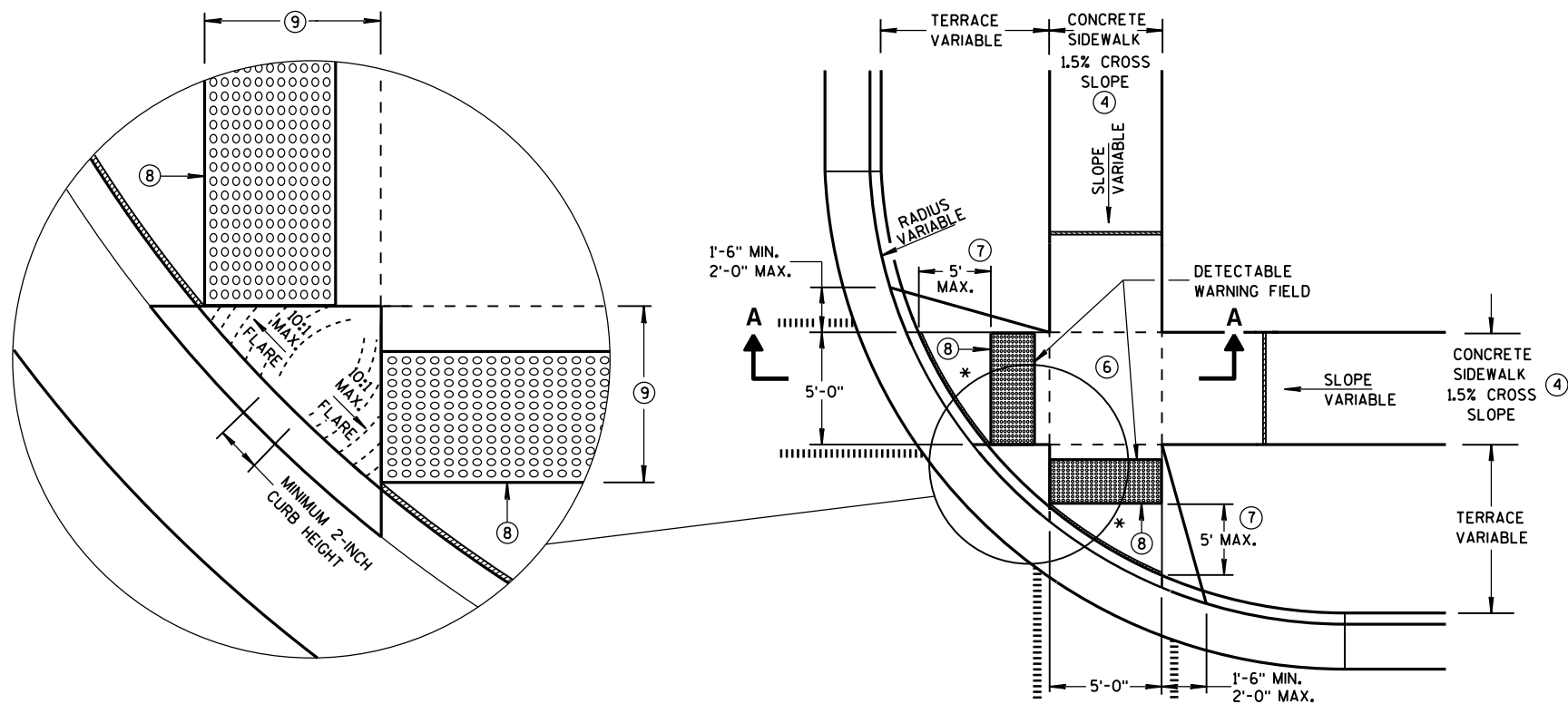
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. 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 NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (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.
- ⑤ 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.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

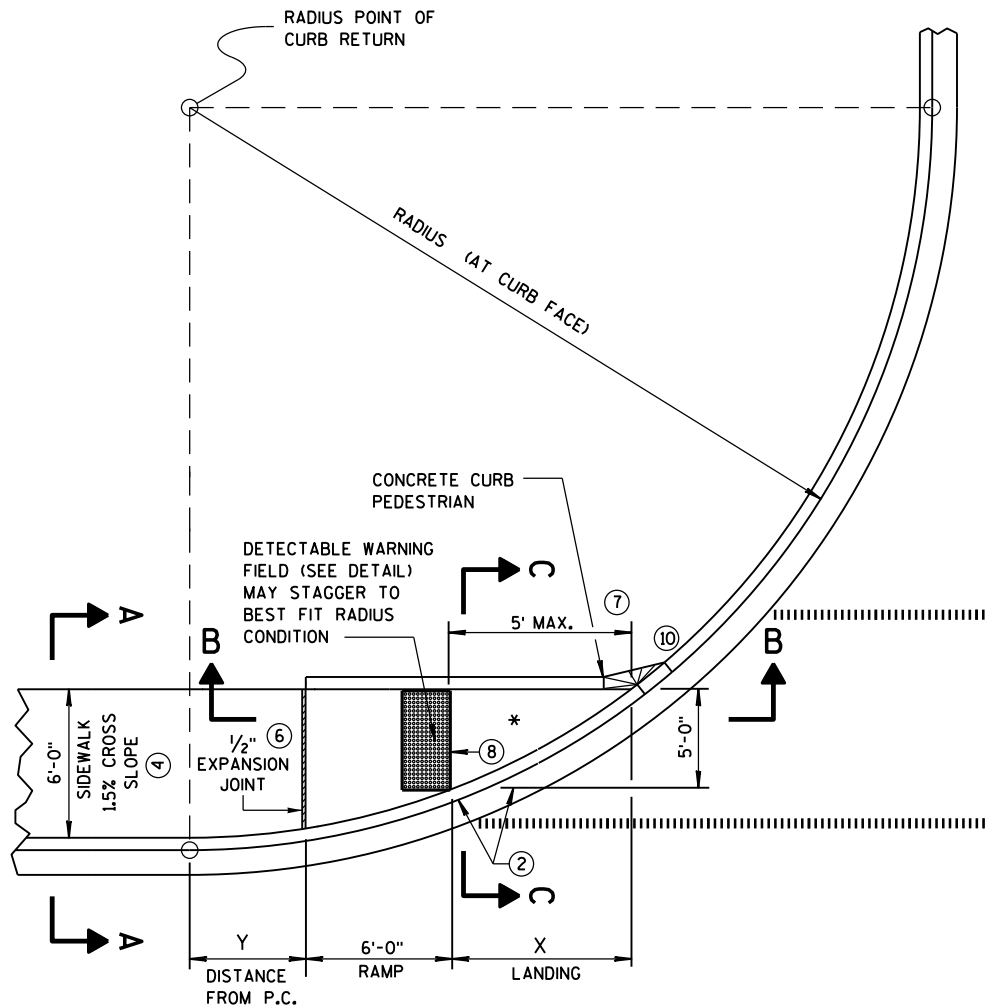
- 1/2" EXPANSION JOINT-SIDEWALK
- - - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT

**CURB RAMPS
TYPES 1 AND 1-A**

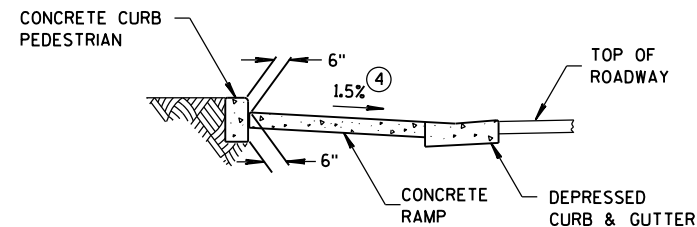
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



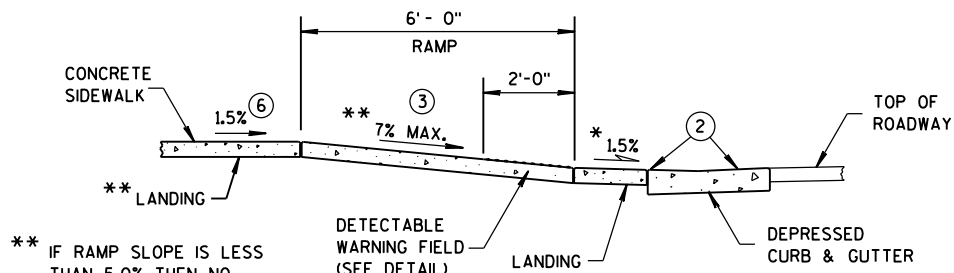
PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)



CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A



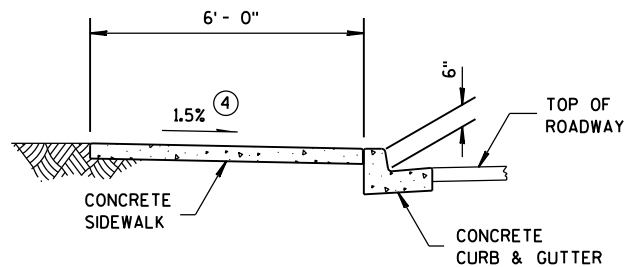
SECTION B-B FOR TYPE 4A

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

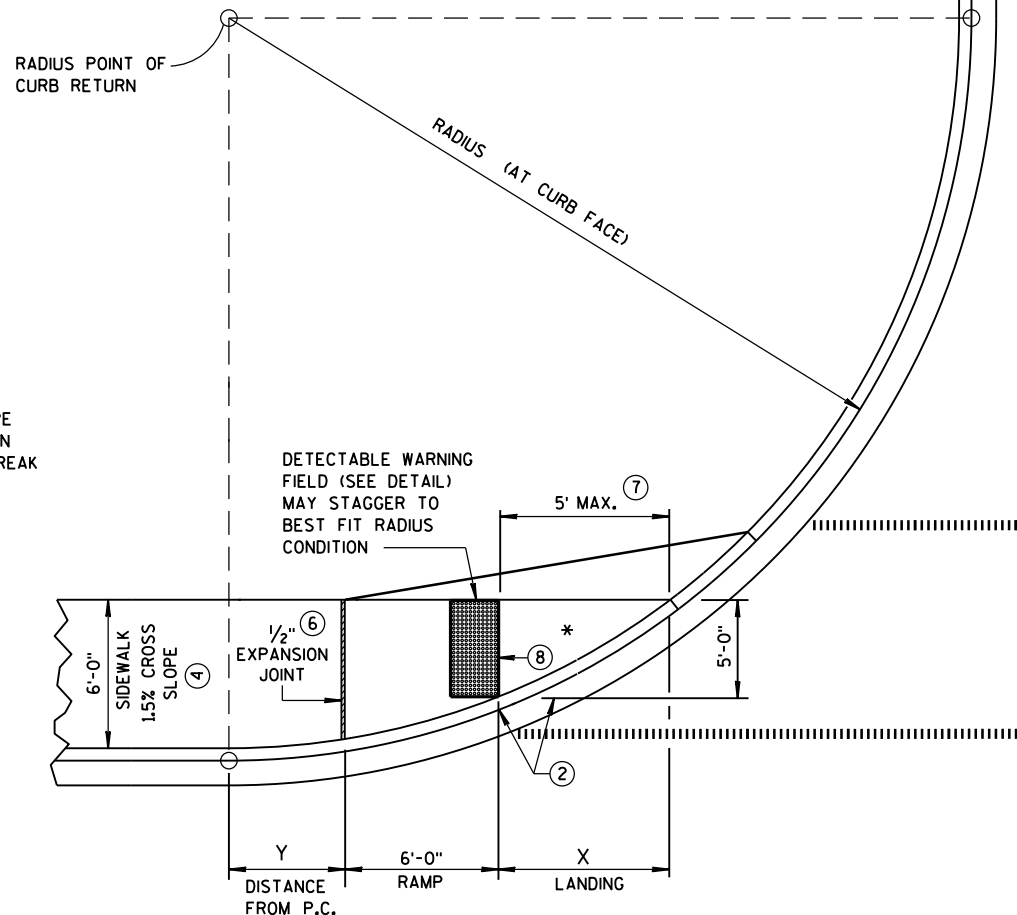
* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

RADIUS (AT CURB FACE)	X	Y
20 FEET	7'-11"	0'-2"
30 FEET	10'-2 3/4"	1'-7 1/2"
40 FEET	12'-1 1/4"	2'-10"
50 FEET	13'-8 3/4"	3'-10 3/4"
60 FEET	15'-2"	4'-10 1/4"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



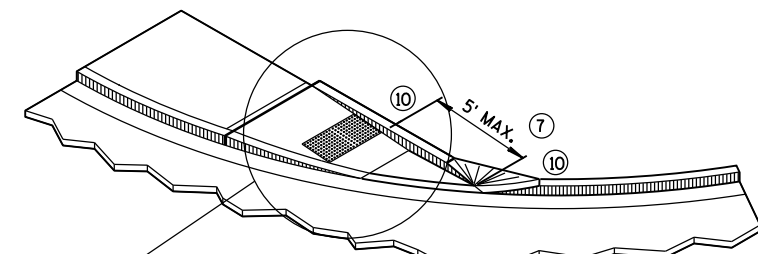
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

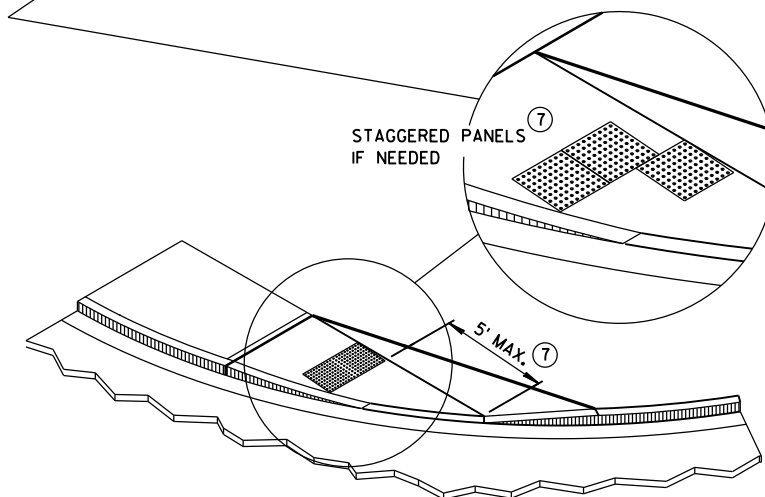
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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 NOT EXCEED 7%.
- ABSOLUTE MAXIMUM 12H:1V (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 LANDING SIZE IS 5 FEET X 5 FEET.
- WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



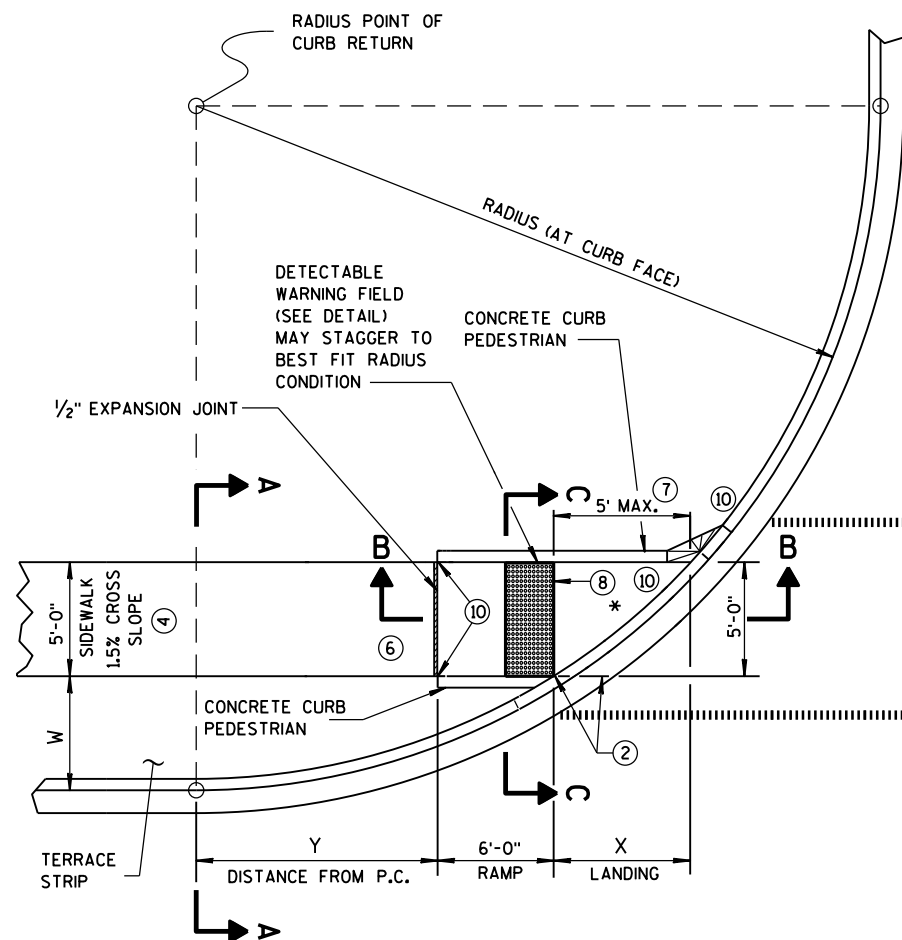
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

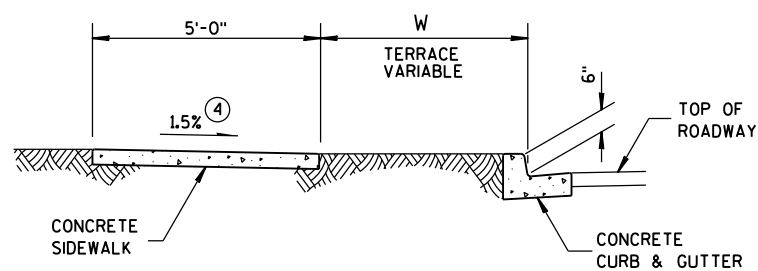
- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

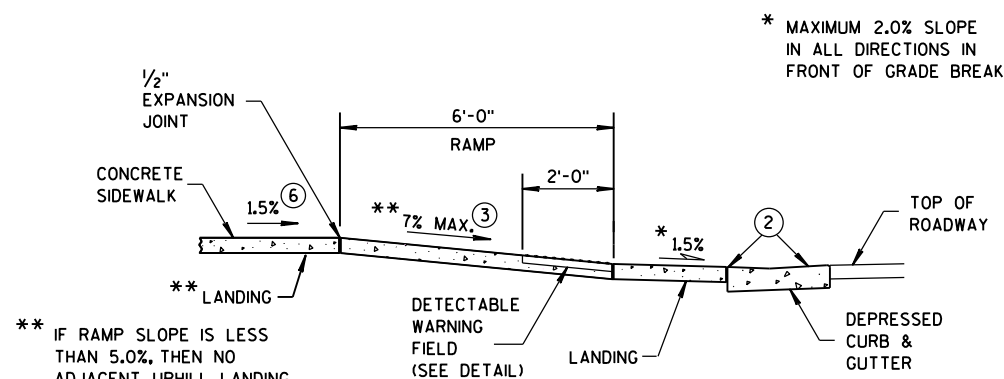
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CURB RAMP TYPE 4B
PLAN VIEW

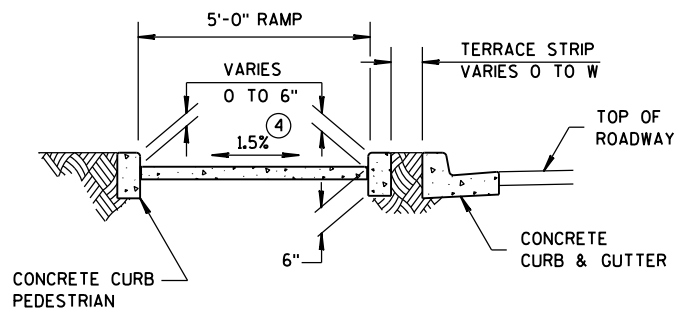


SECTION A-A FOR TYPE 4B

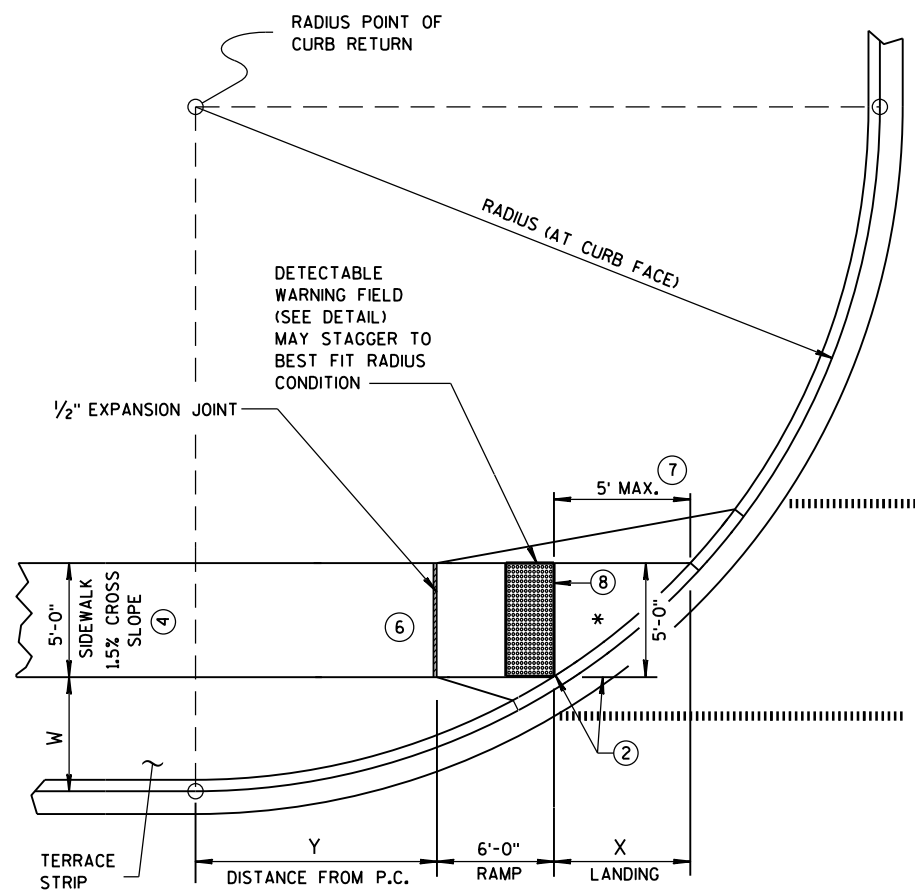


SECTION B-B FOR TYPE 4B

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



SECTION C-C FOR TYPE 4B



CURB RAMP TYPE 4B1
PLAN VIEW

RADIUS (AT CURB FACE)	W = 3' - 0"		W = 4' - 0"		W = 5' - 0"		W = 6' - 0"		W = 7' - 0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-9 3/4"	3'-6 1/2"	4'-11 1/2"	5'-1 3/4"	4'-3 3/4"	6'-5 1/2"	3'-8 3/4"	7'-6 3/4"	3'-3"	8'-6 1/4"
30 FEET	7'-9 1/4"	5'-10 1/2"	6'-9 1/2"	7'-11 1/4"	6'-0 1/4"	9'-8"	5'-5"	11'-1 3/4"	4'-10 3/4"	12'-5 3/4"
40 FEET	9'-4"	7'-10"	8'-2 3/4"	10'-3"	7'-4 3/4"	12'-3 3/4"	6'-8 1/2"	14'-1 1/4"	6'-1 3/4"	15'-8 1/2"
50 FEET	10'-8"	9'-6 1/2"	9'-5 1/2"	12'-3 1/4"	8'-6 1/2"	14'-7 1/2"	7'-9 3/4"	16'-8 1/4"	7'-2 1/2"	18'-6 1/4"
60 FEET	11'-10 1/4"	11'-0 3/4"	10'-6 1/2"	14'-1 1/4"	9'-6 1/2"	16'-8 1/2"	8'-9 1/4"	18'-11 3/4"	8'-1 1/2"	21'-0 1/2"

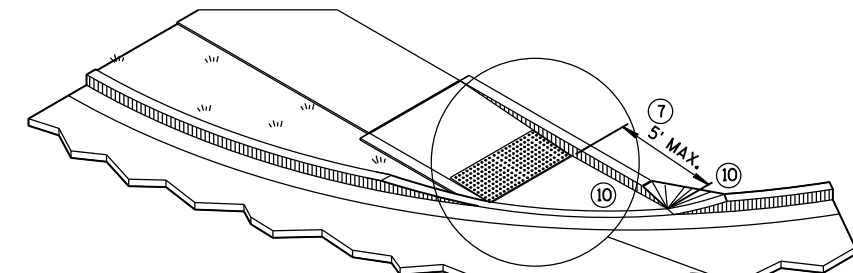
GENERAL NOTES

INTERMEDIATE RADII CAN BE INTERPOLATED

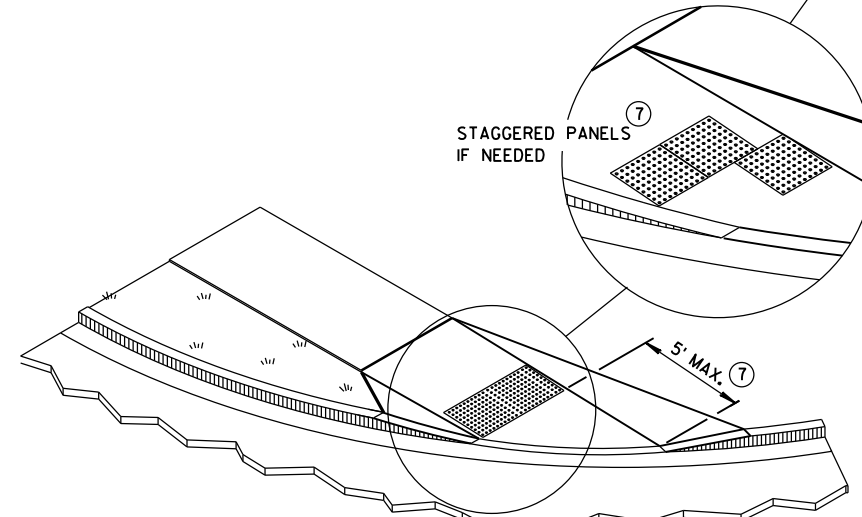
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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 NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (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 LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



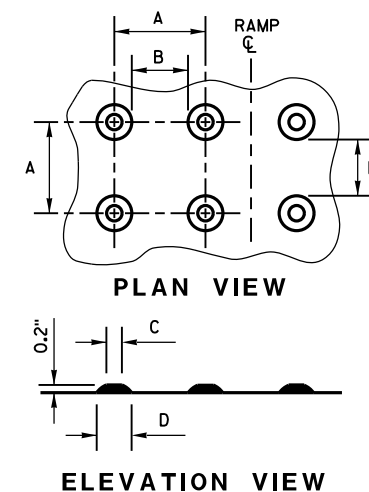
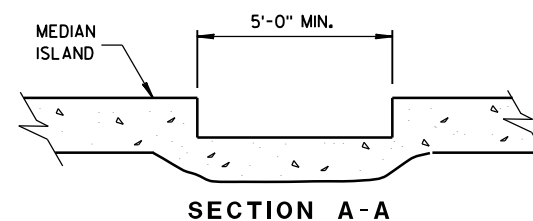
ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1

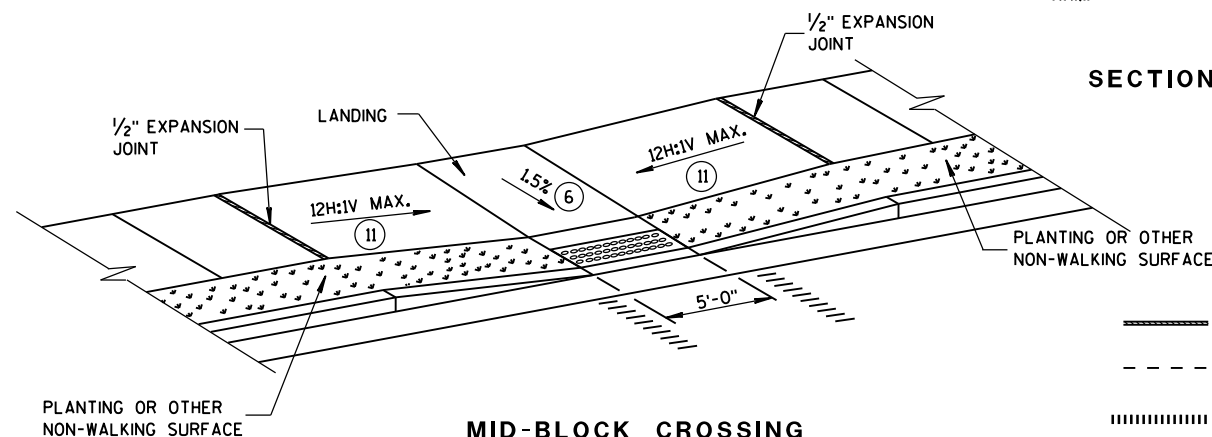
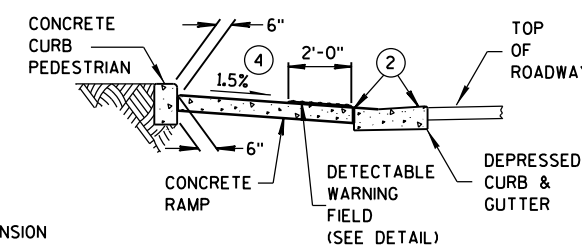
CURB RAMPS
TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION





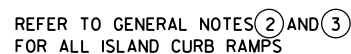
	MIN.	MAX.
A	1.6"	2.4
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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



LEGEND

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



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

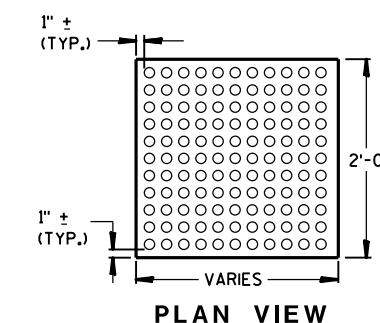
GENERAL NOTES

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 NOT EXCEED 7%.
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- 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 LANDING SIZE IS 5 FEET X 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 IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.

TRUNCATED DOME DETECTABLE WARNING PATTERN DETAIL

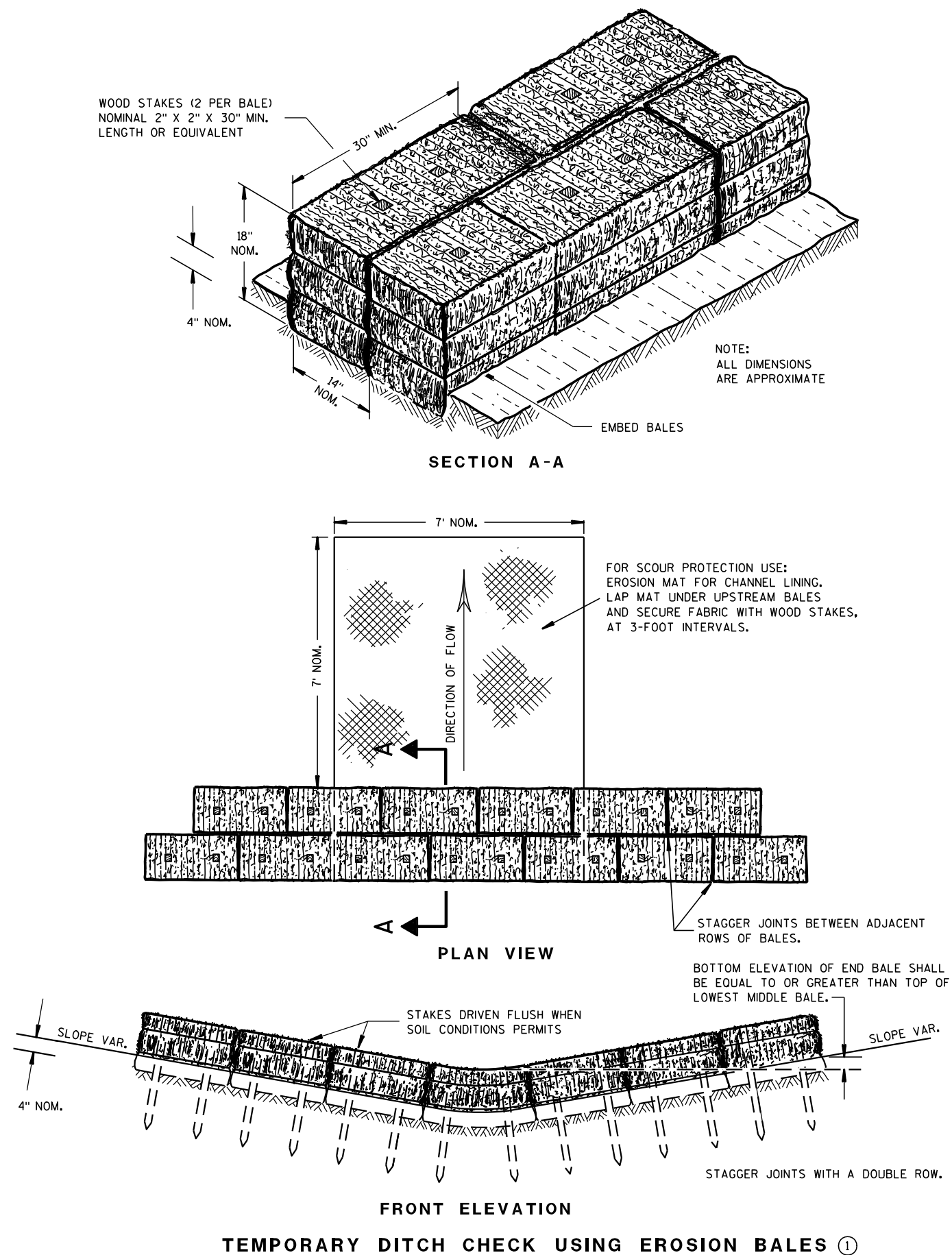


DETECTABLE WARNING FIELD (TYPICAL)

CURB RAMPS TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

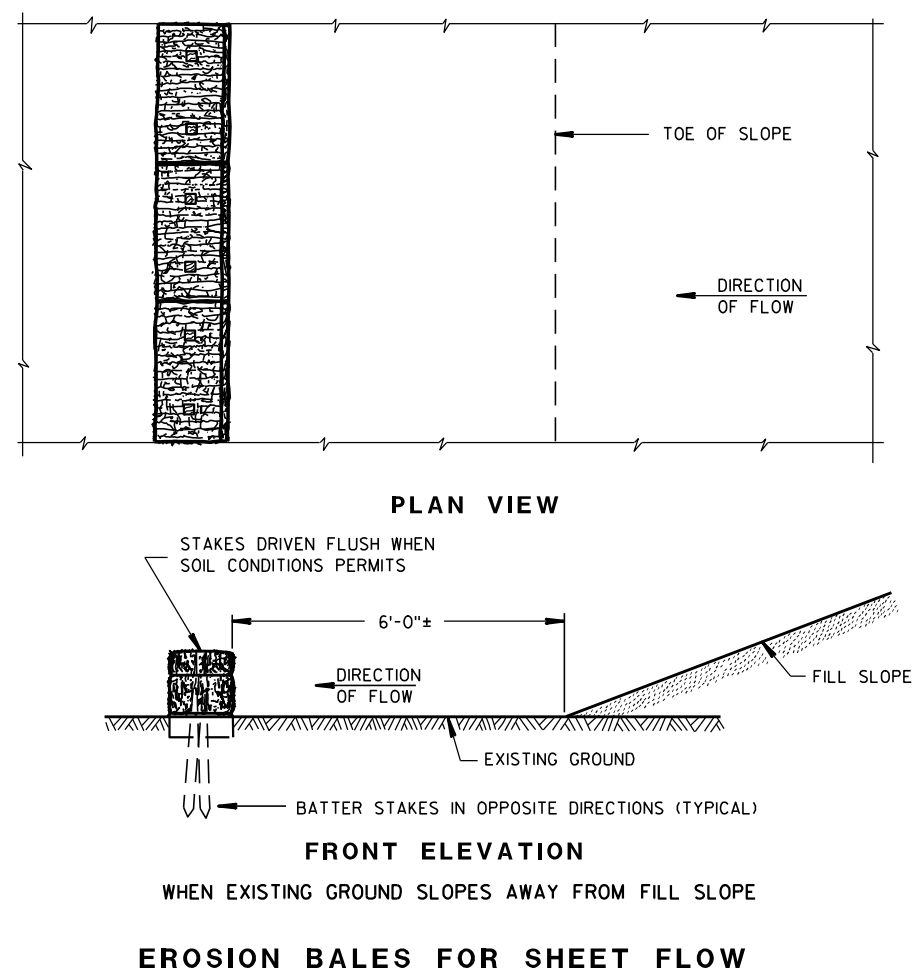
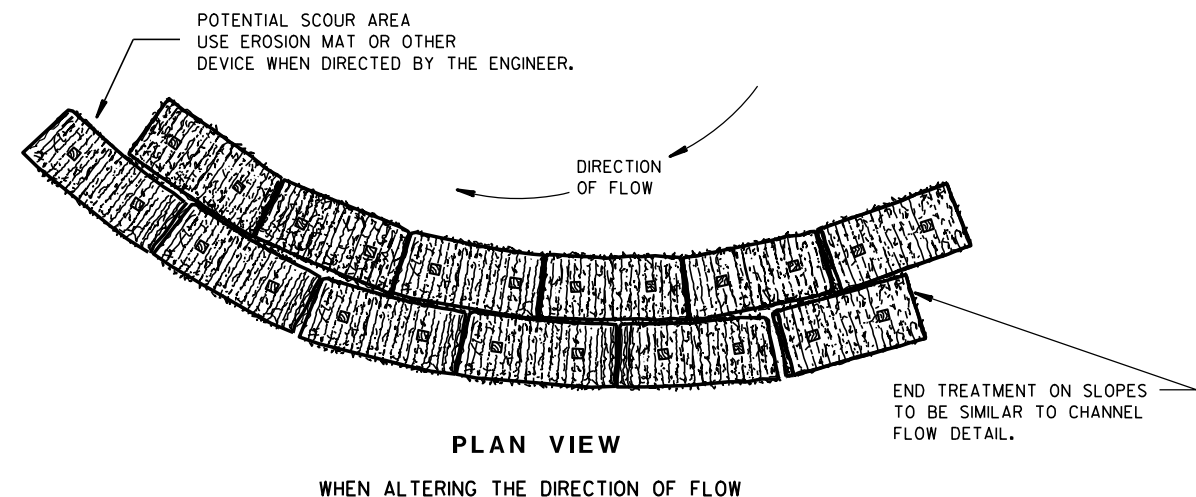
APPROVED Sept., 2016 <hr/> DATE FHWA	/S/ Rodney Taylor <hr/> ROADWAY STANDARDS DEVELOPMENT UNIT SUPERVISOR
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GENERAL NOTES

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.

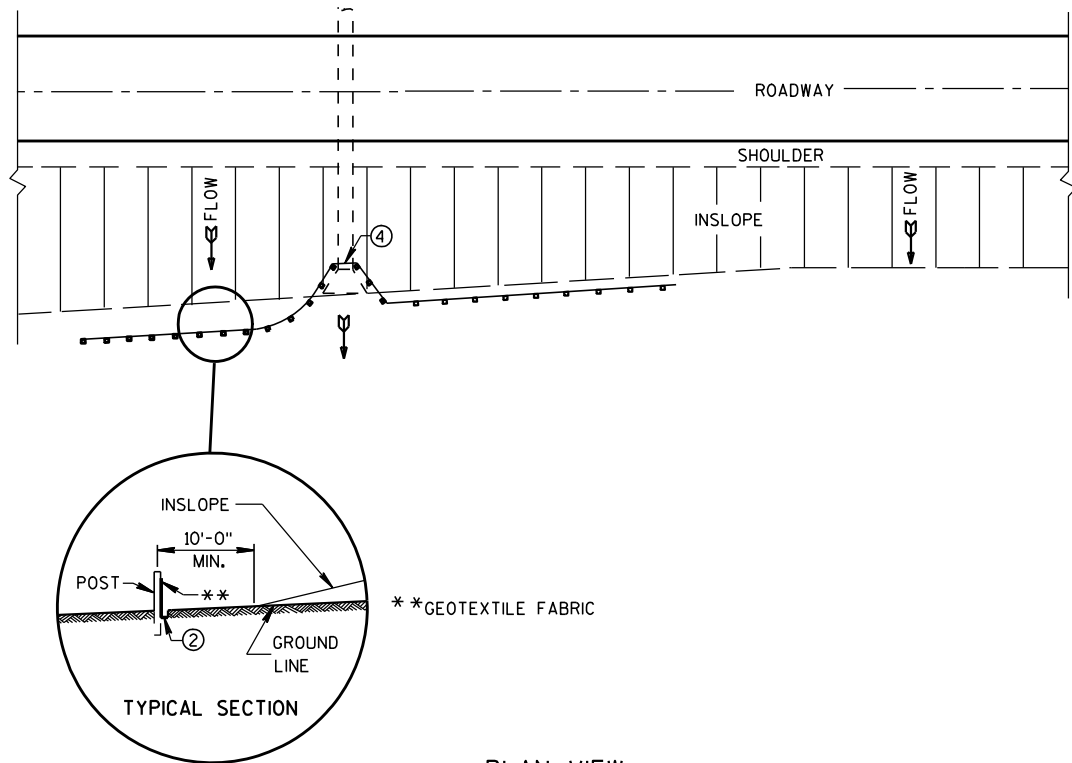
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

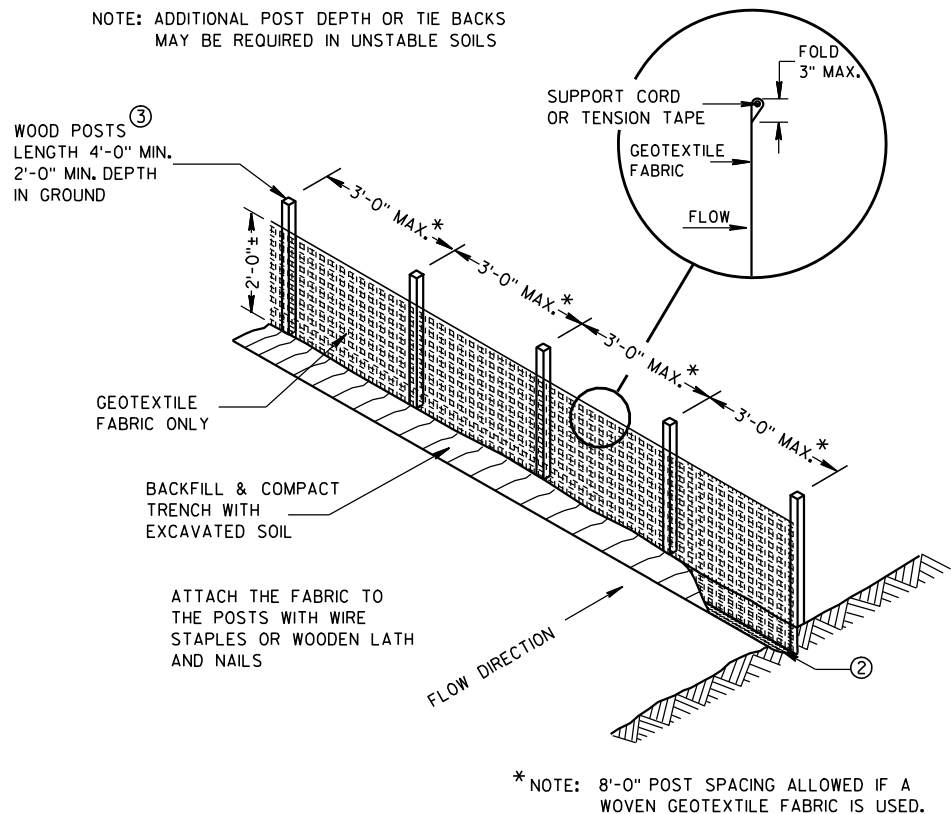
APPROVED

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

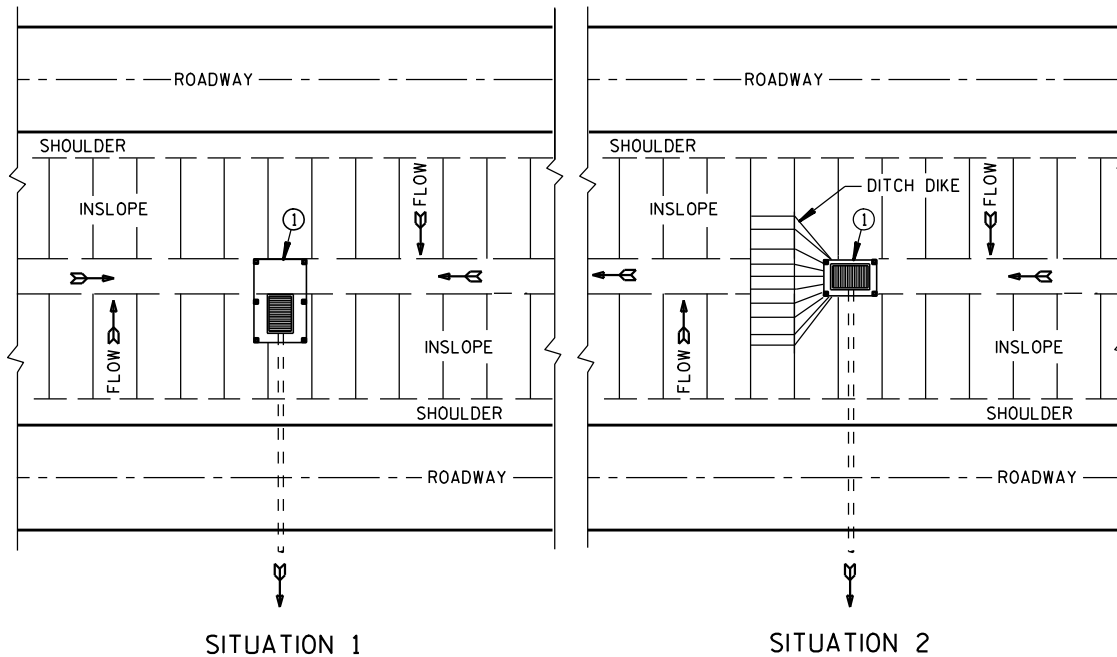
FHWA



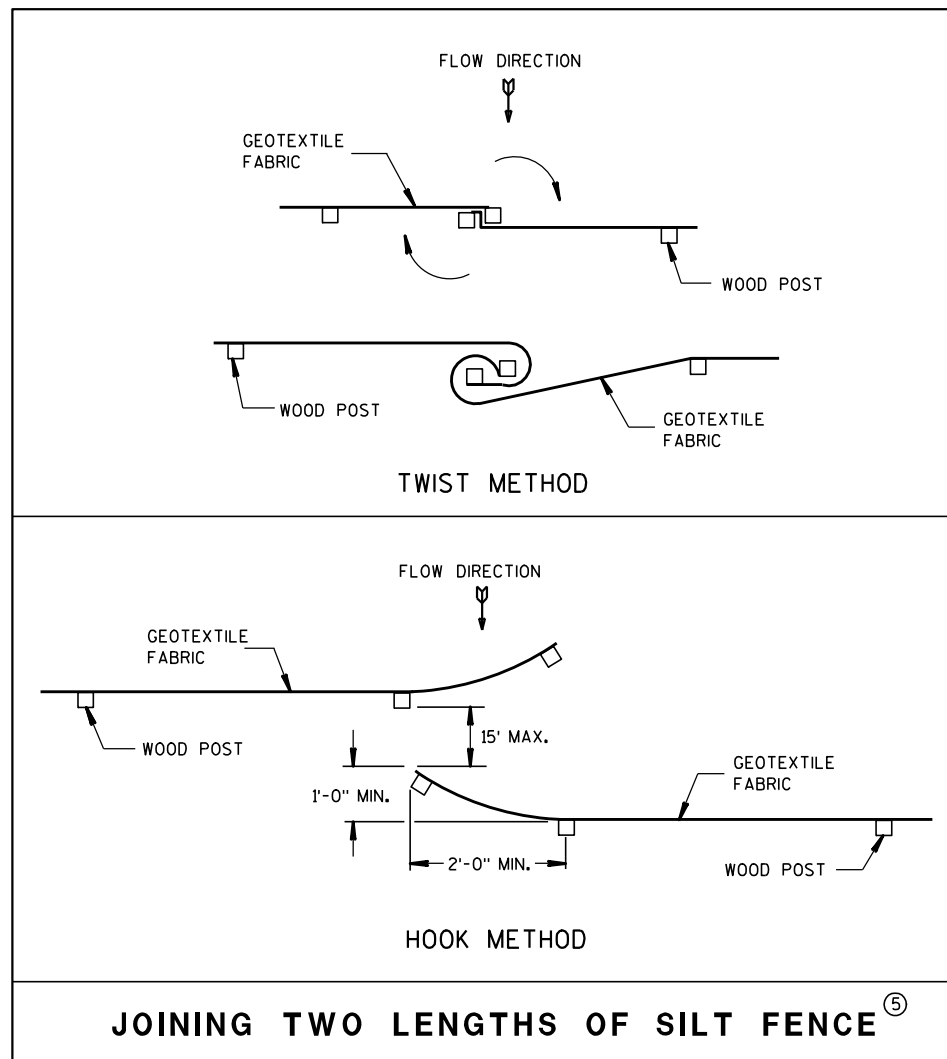
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

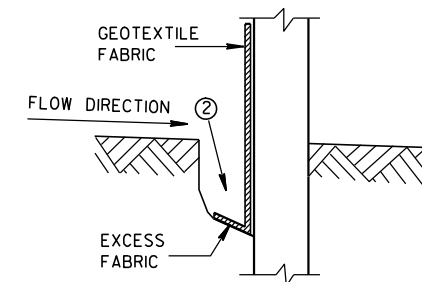


JOINING TWO LENGTHS OF SILT FENCE ⑤

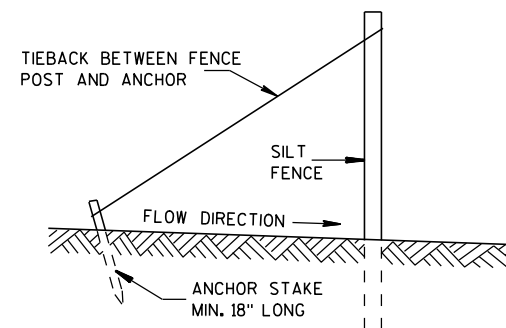
GENERAL NOTES

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

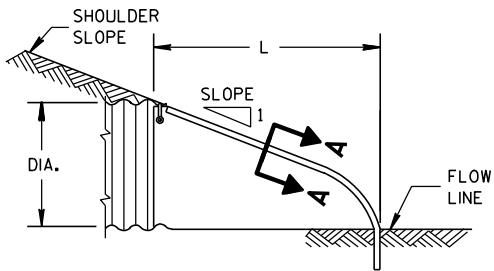
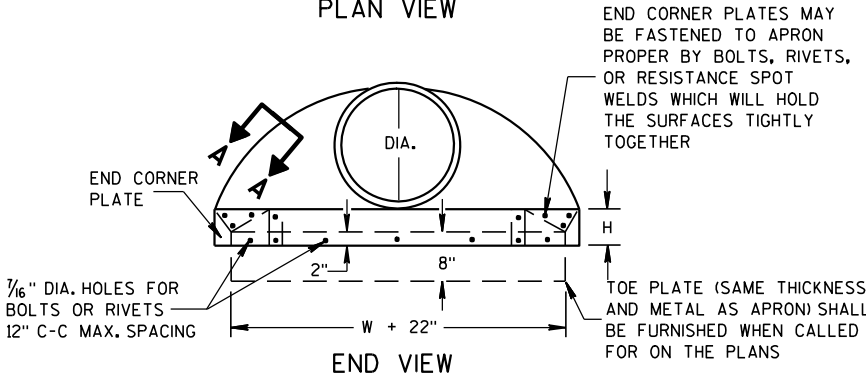
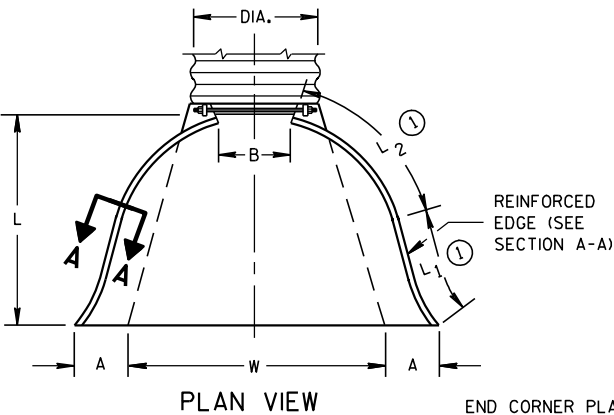


SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 4-29-05 DATE	/S/ Beth Canestra CHIEF ROADWAY DEVELOPMENT 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")	L1 ①	L2 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.

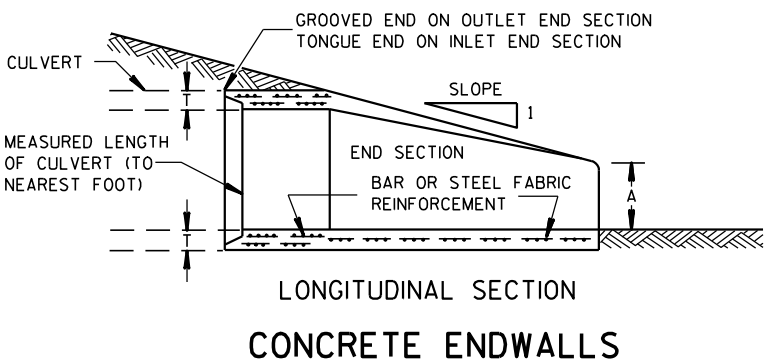
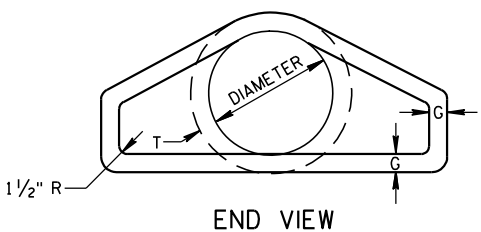
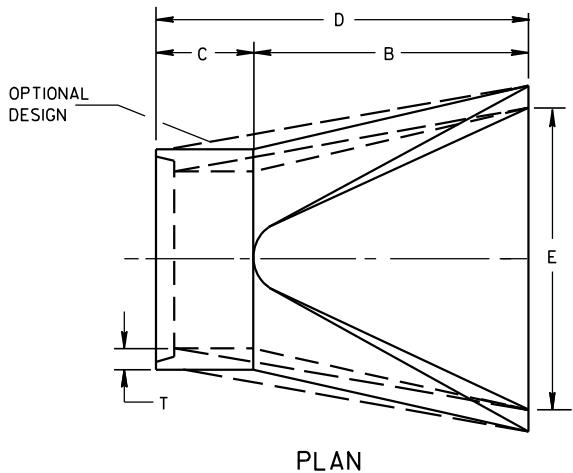
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



METAL ENDWALLS

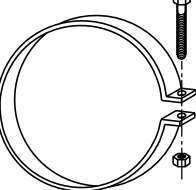
REINFORCED CONCRETE APRON ENDWALLS												
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE				
	T	A	B	C	D	E	G					
12	2	4	24	48 1/8	72 1/8	24	2	3 to 1				
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1				
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1				
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1				
24	3	9 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 1/2 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

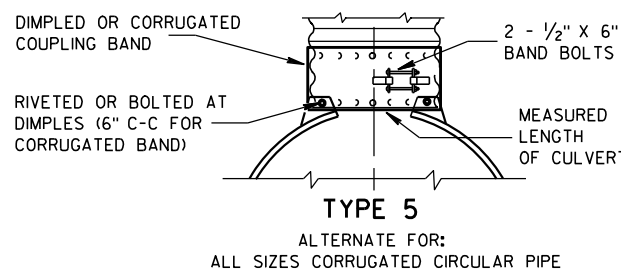
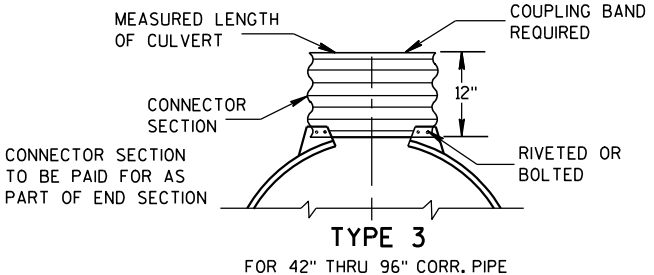
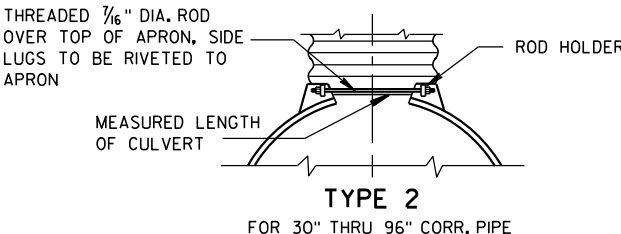
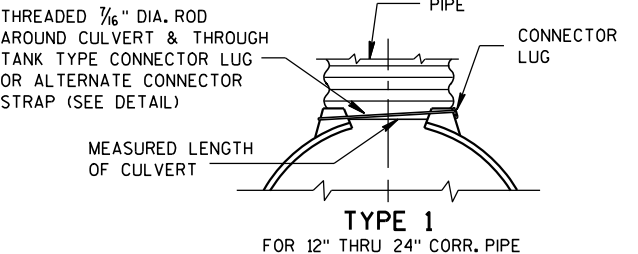


CONCRETE ENDWALLS

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



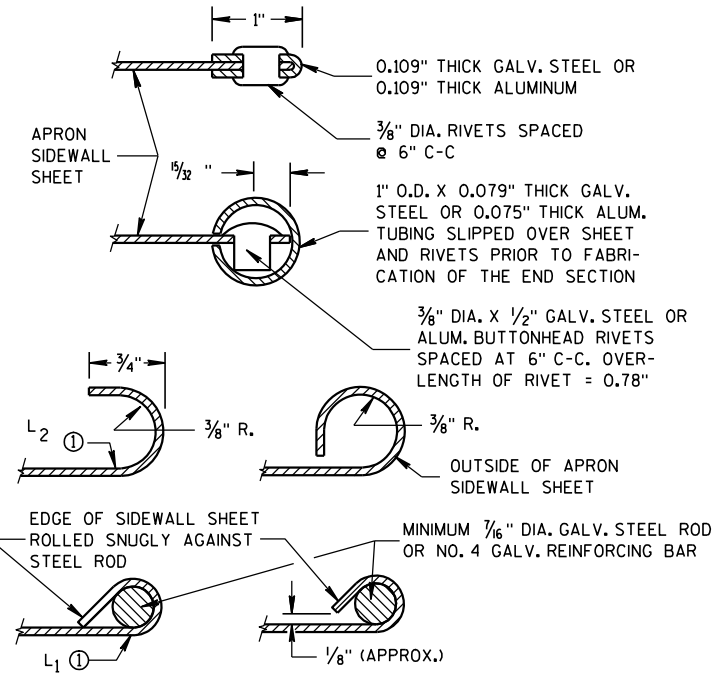
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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 VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

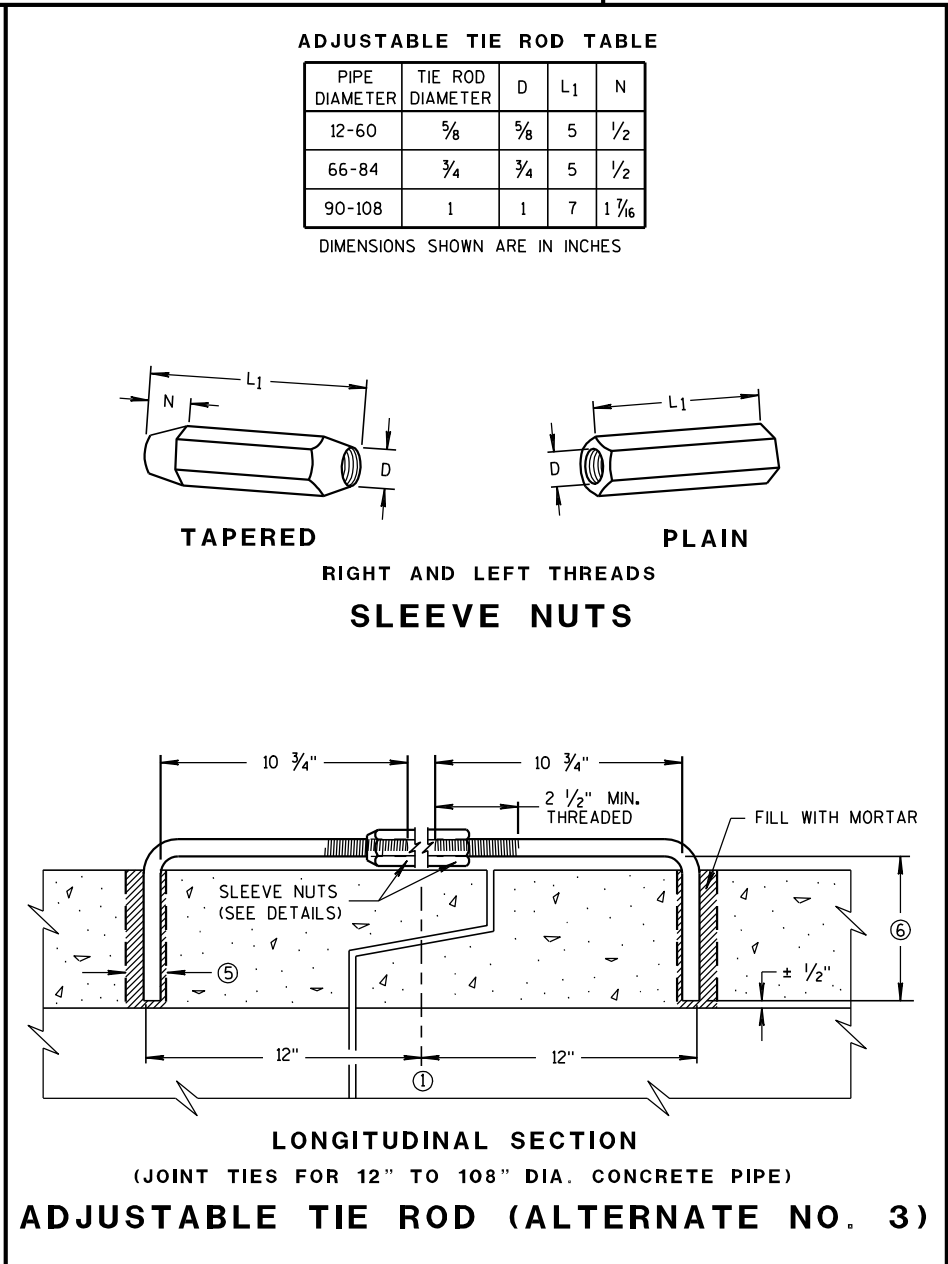
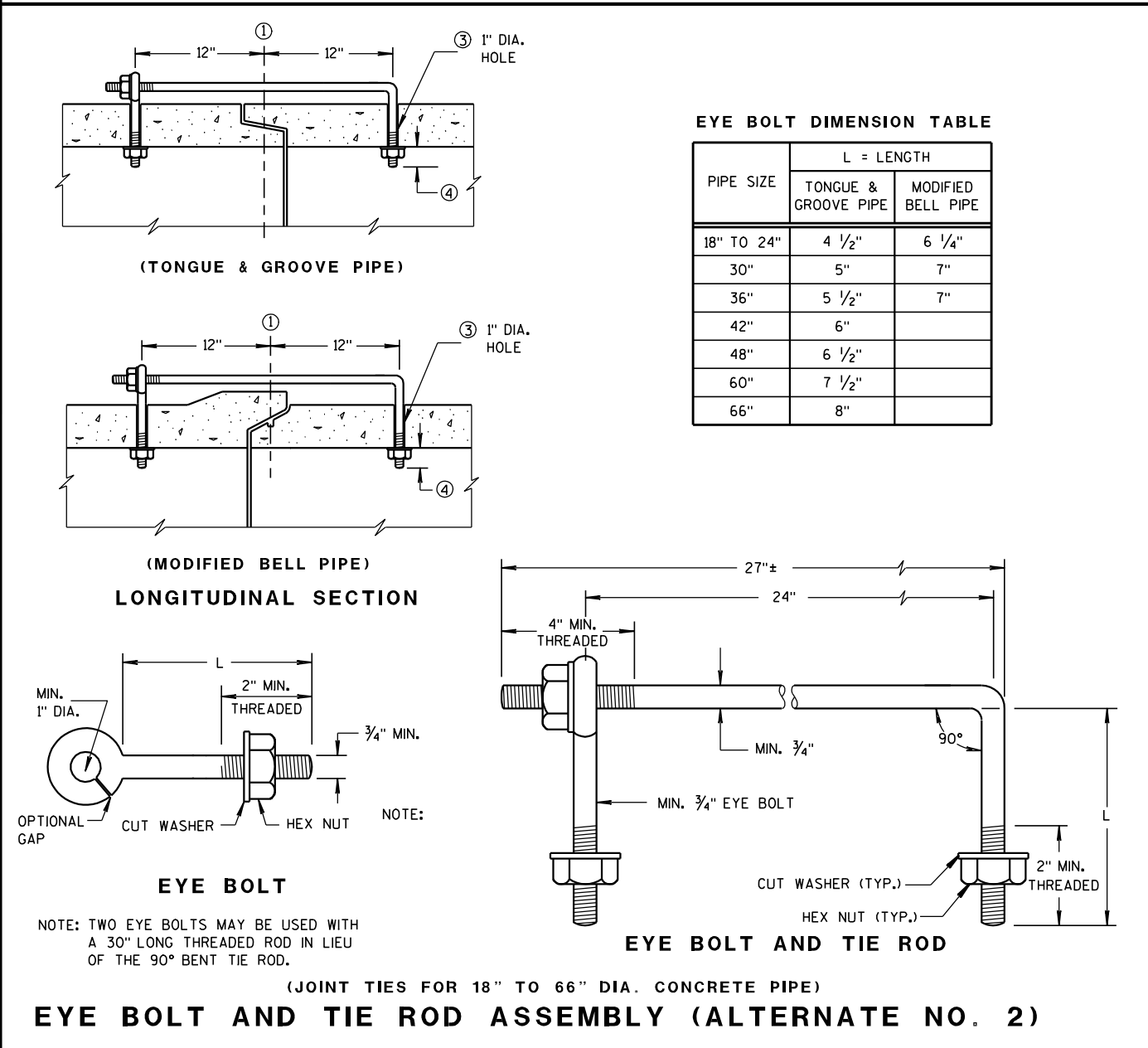
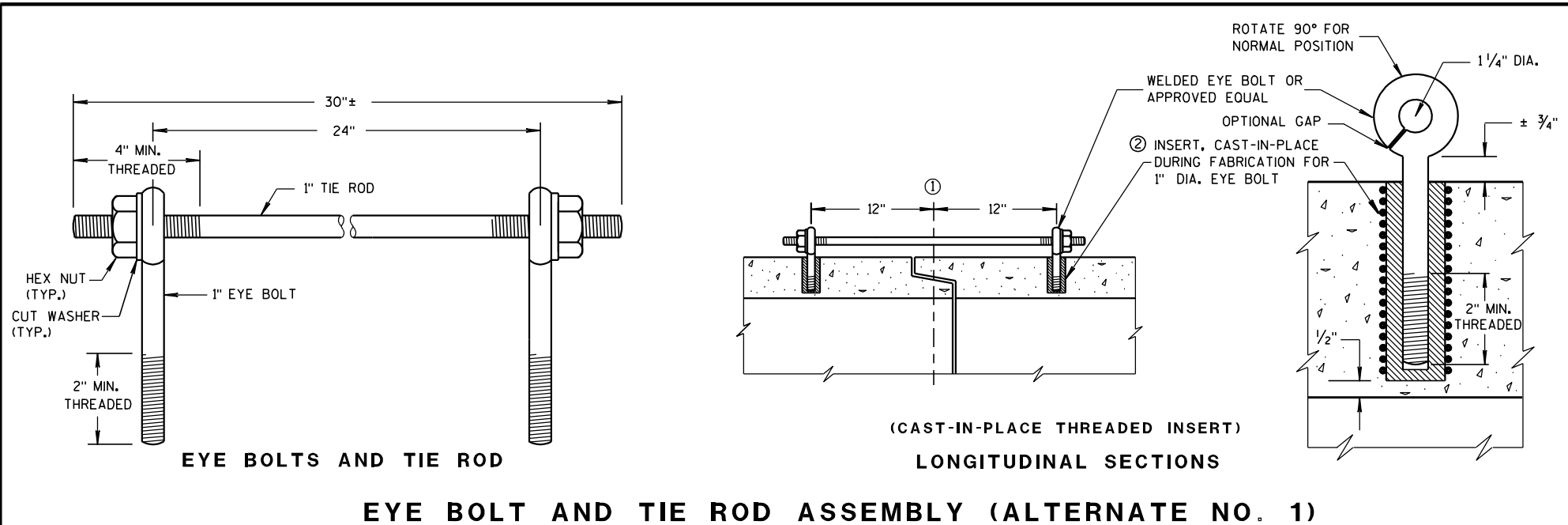
ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT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

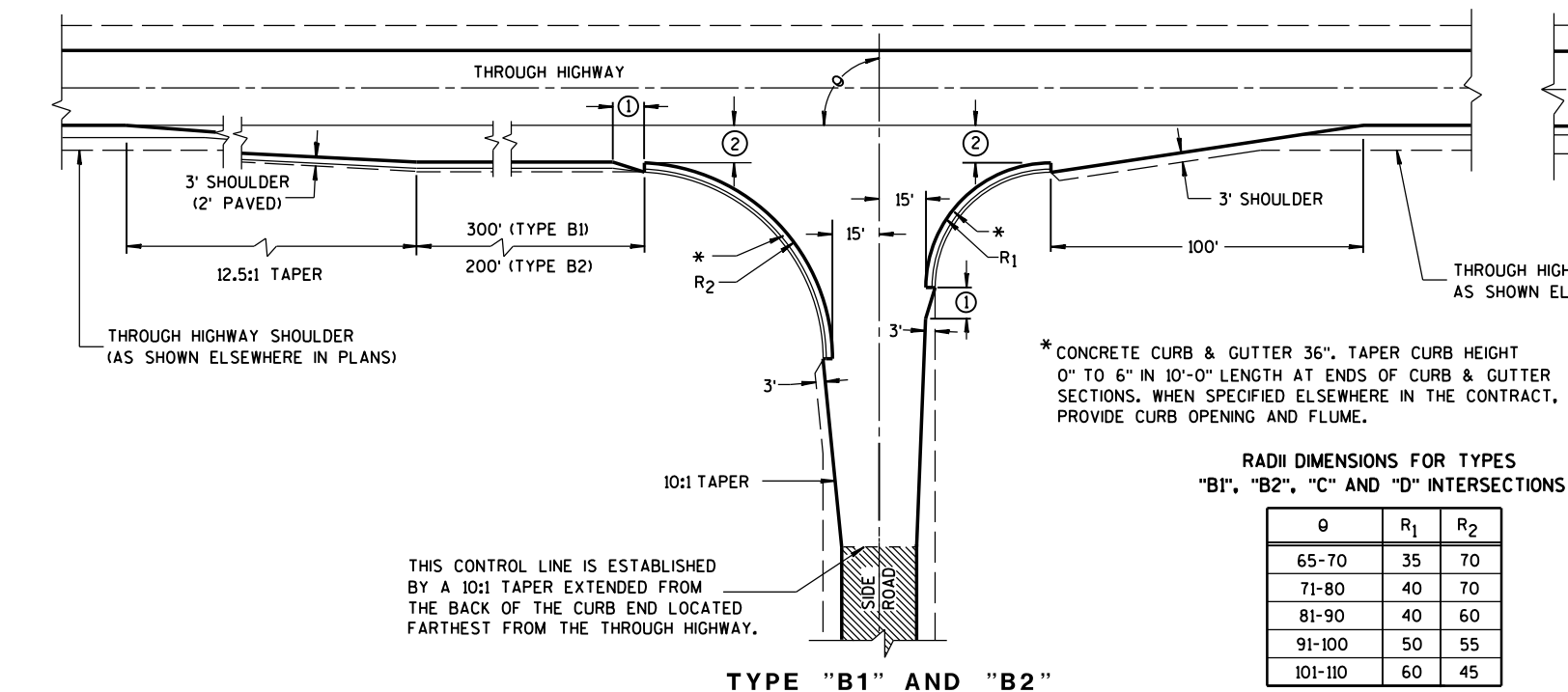
LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES.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

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.

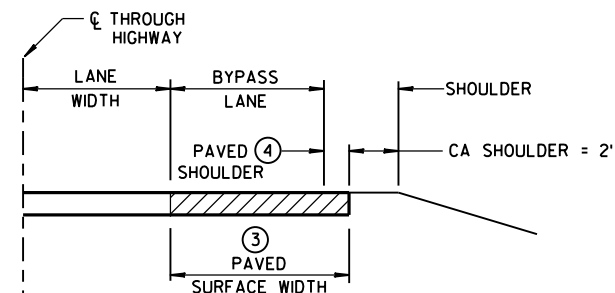
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

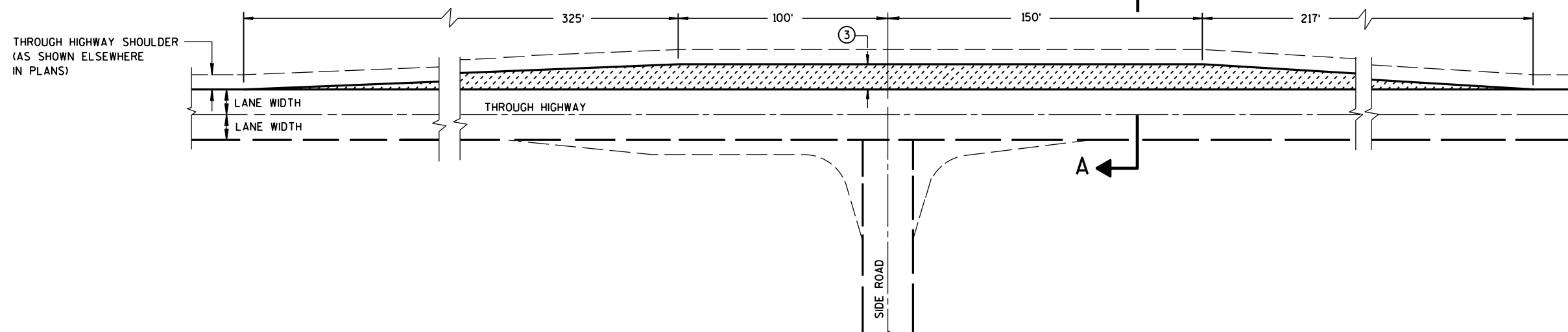
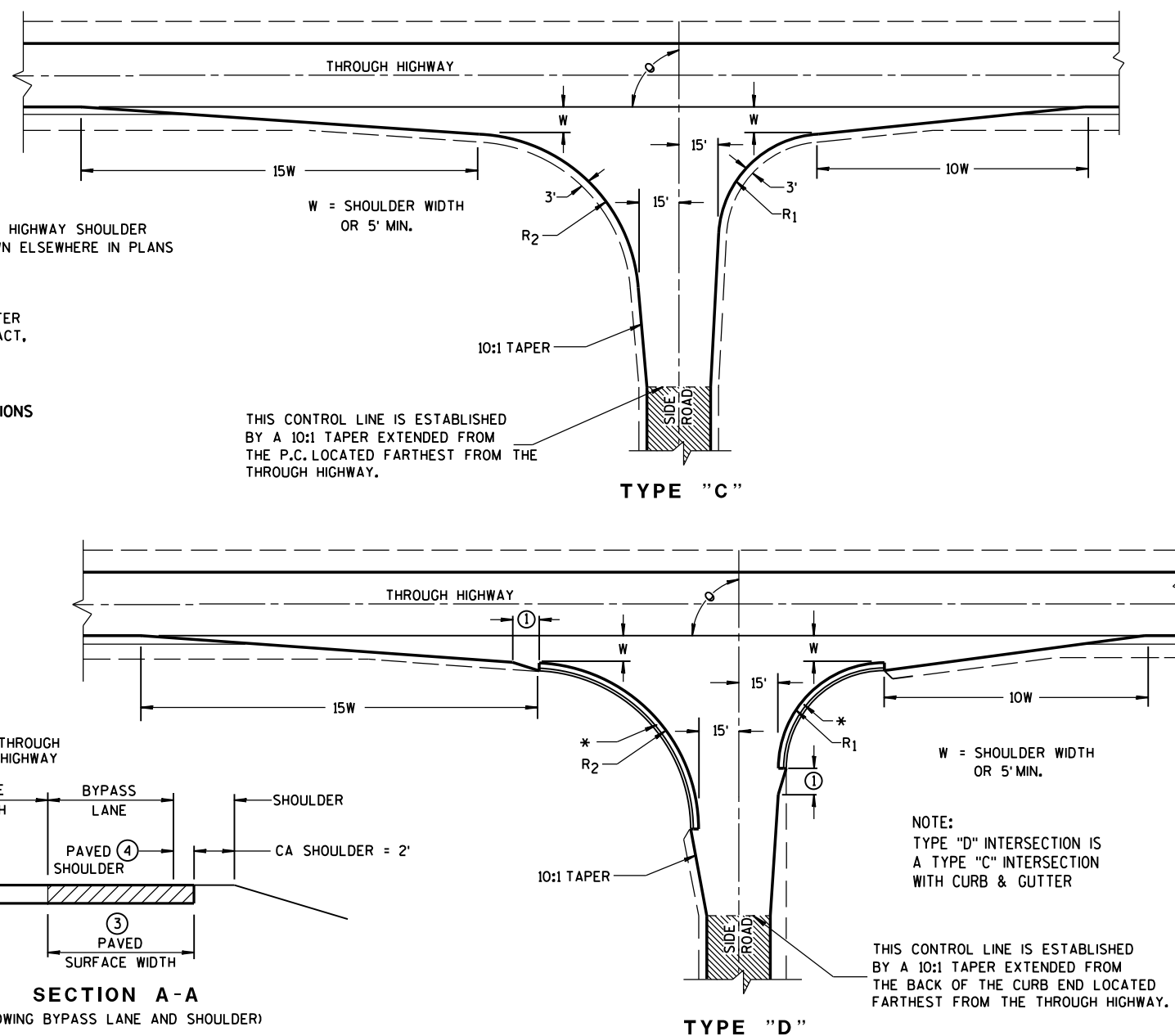
EXISTING PAVED SURFACE

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.



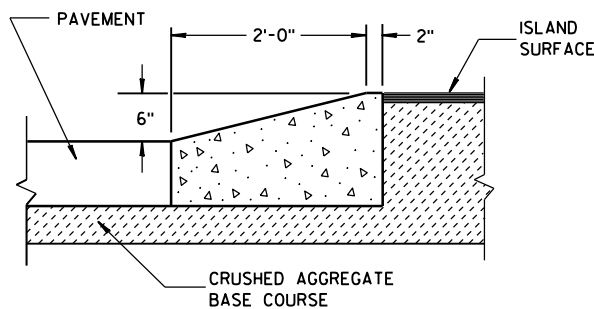
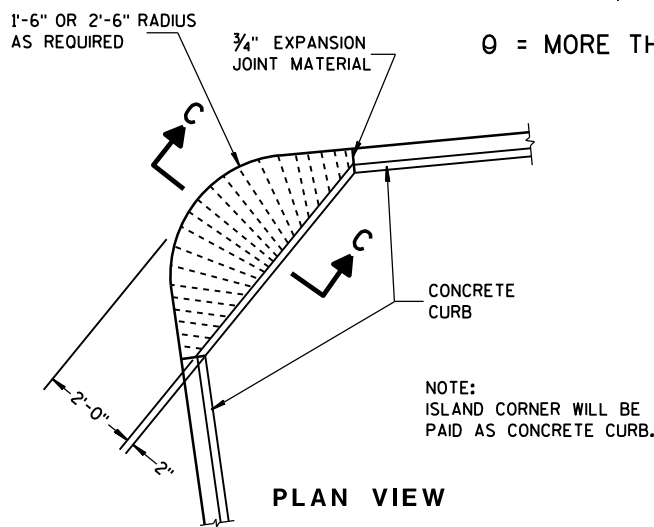
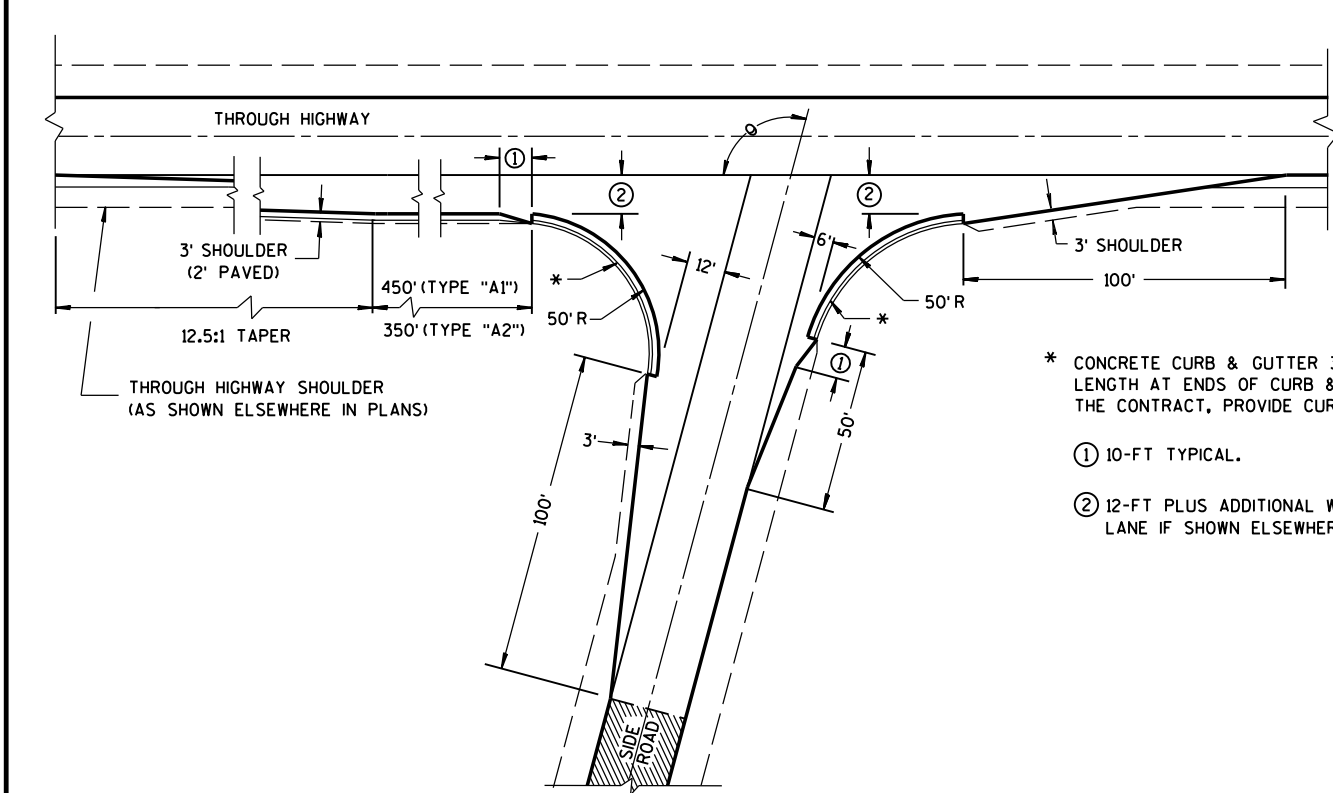
SECTION A-A
(SHOWING BYPASS LANE AND SHOULDER)



TEE INTERSECTION BYPASS LANE DETAIL

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

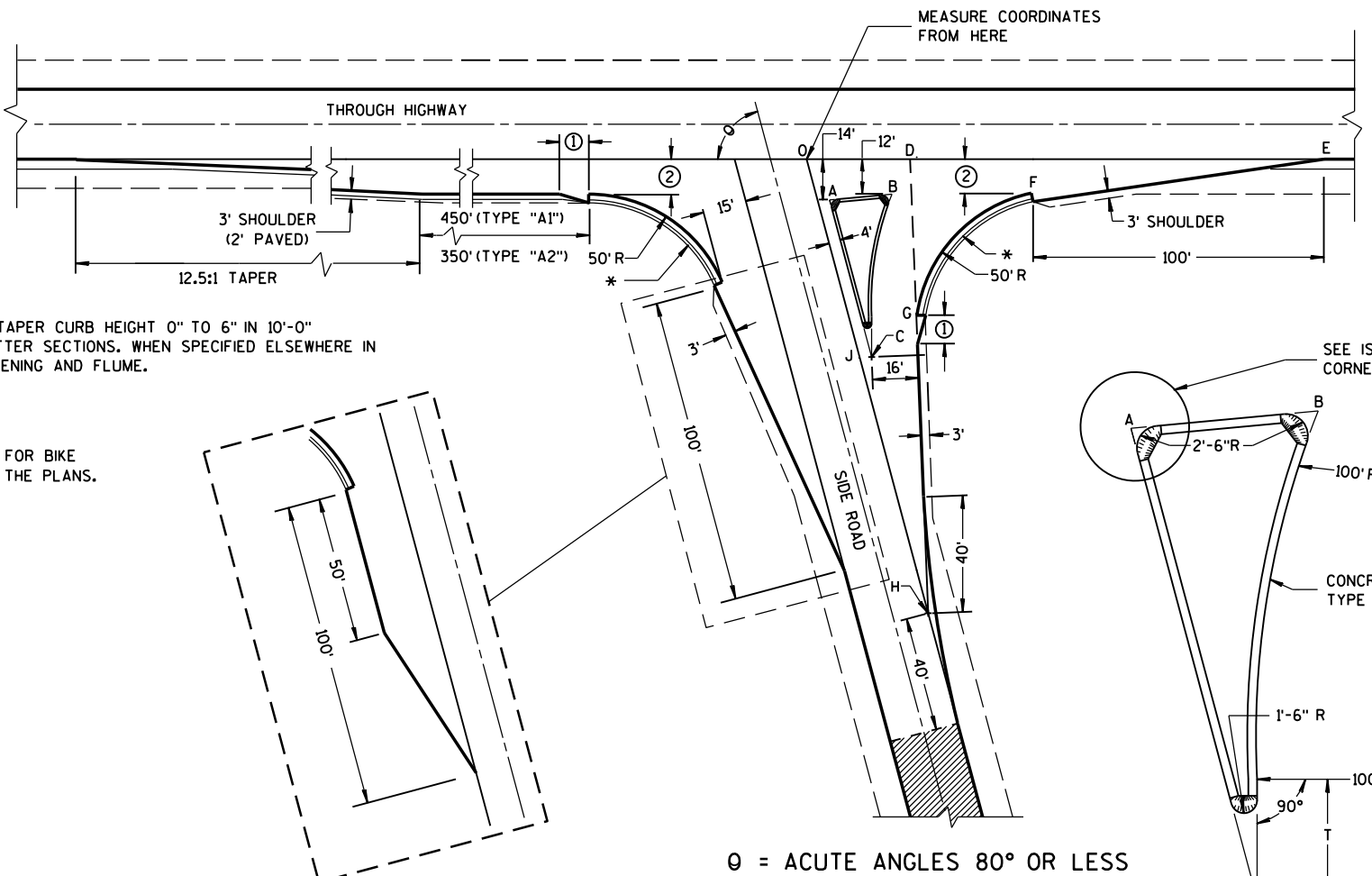
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



SECTION C-C

ISLAND CORNER DETAIL
(TO BE CONSTRUCTED AT ALL ISLAND CORNERS)

- * CONCRETE CURB & GUTTER 36". TAPER CURB HEIGHT 0" TO 6" IN 10'-0" LENGTH AT ENDS OF CURB & GUTTER SECTIONS. WHEN SPECIFIED ELSEWHERE IN THE CONTRACT, PROVIDE CURB OPENING AND FLUME.
- ① 10-FT TYPICAL.
- ② 12-FT PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLANS.



SIDE ROAD WIDENING AND TAPER REQUIRED WHERE THE THROUGH HIGHWAY CARRIES TWO-WAY TRAFFIC
 θ = ACUTE ANGLES 70° OR LESS

TABLE OF DIMENSIONS FOR
VARIABLE SIDE ROAD INTERSECTION ANGLES
(INTERPOLATE VALUES FOR ANGLES NOT SHOWN)

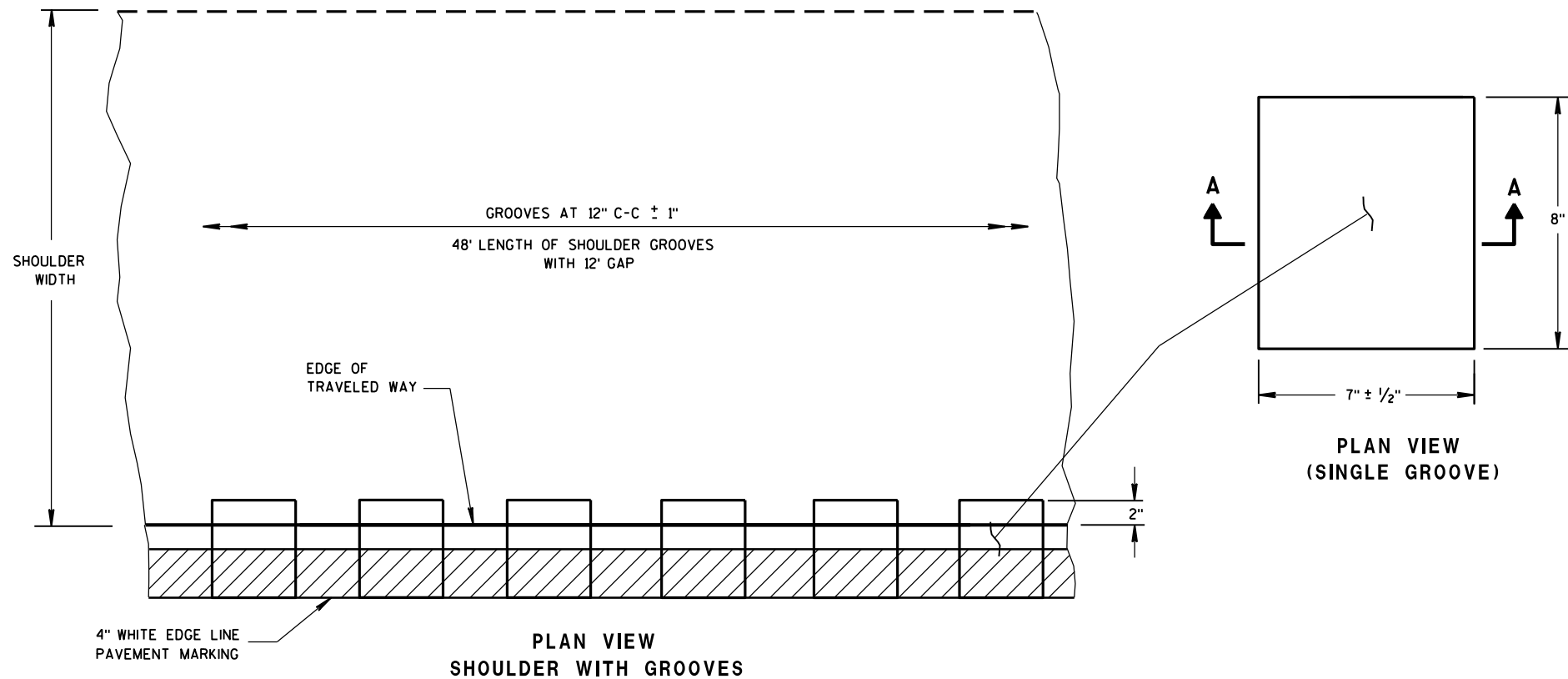
ANGLE θ DEGREES	COORDINATES IN FEET (MEASURED FROM POINT "O")								LENGTH IN FEET				
	A	B	C	D	E	F	G	H	AB	AC	T	OJ	OH
60	12.7 -14.0	44.9 -12.0	46.4 -72.4	41.9 0.0	205.0 0.0	104.6 -12.0	64.0 -75.5	85.0 -147.1	32.3	67.4	4.9	85.9	169.9
65	10.9 -14.0	39.0 -12.0	37.8 -71.6	39.4 0.0	196.1 0.0	95.7 -12.0	54.1 -71.5	70.5 -151.3	28.2	63.6	8.5	80.9	166.9
70	9.4 -14.0	33.9 -12.0	29.8 -70.1	37.4 0.0	188.3 0.0	87.8 -12.0	45.6 -67.5	56.1 -154.2	24.6	59.7	11.5	76.1	164.1
75	7.9 -14.0	29.3 -12.0	22.3 -67.9	35.7 0.0	181.2 0.0	80.7 -12.0	38.2 -63.4	41.8 -155.9	21.5	55.8	13.8	71.4	161.4
80	6.5 -14.0	25.4 -12.0	15.6 -65.2	34.4 0.0	174.8 0.0	74.4 -12.0	31.8 -59.3	27.6 -156.5	18.9	52.0	15.6	66.9	158.9

TYPE "A1" & "A2" SIDE ROAD INTERSECTION DETAILS

AT-GRADE SIDE ROAD
INTERSECTION, TYPE "A1" & "A2"

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

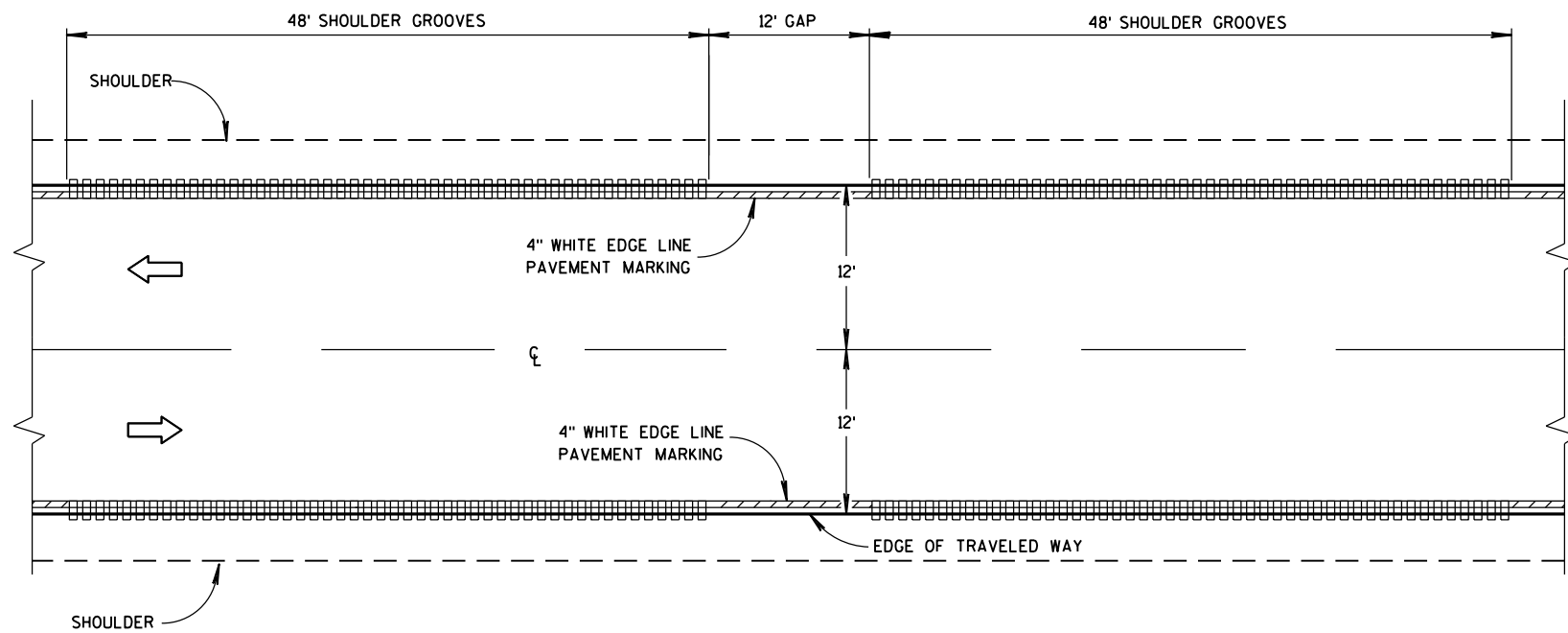
APPROVED
12/18/12 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT
ENGINEER
FHWA



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

6
PLACEMENT DETAIL FOR TYPE 2 MILLED RUMBLE STRIP

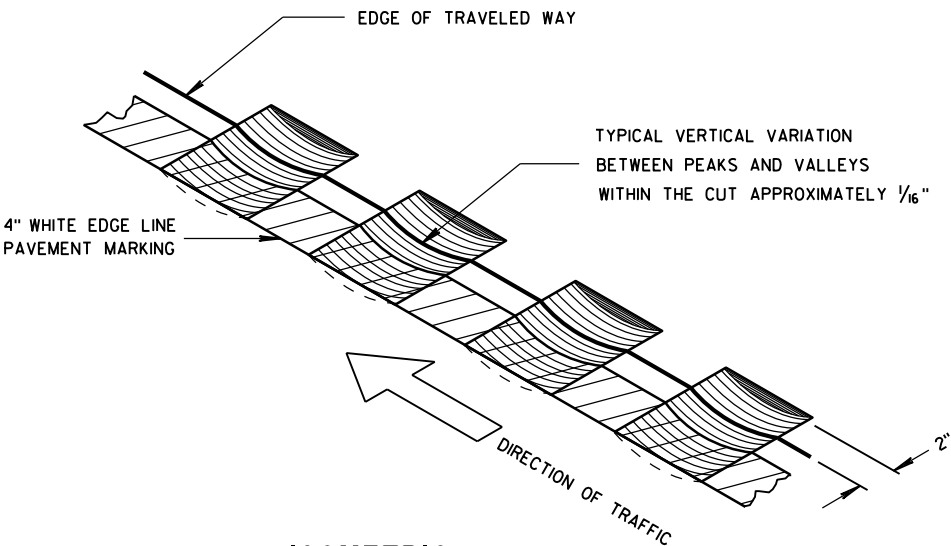


TYPE 2
2-LANE SHOULDER RUMBLE STRIP

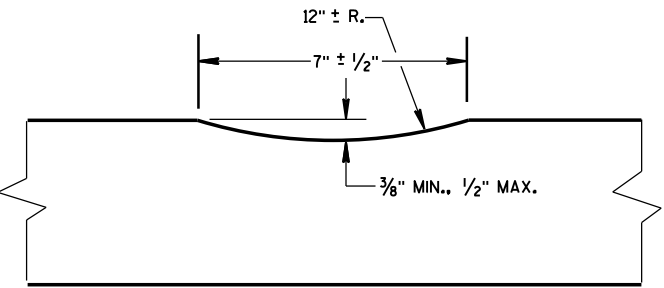
GENERAL NOTES

DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.
DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

- ① SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



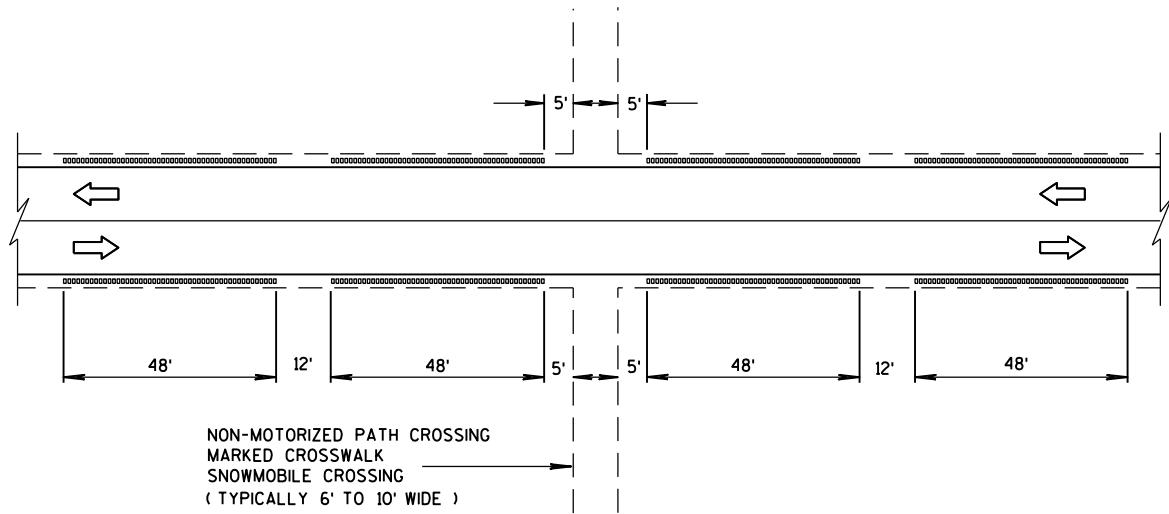
ISOMETRIC



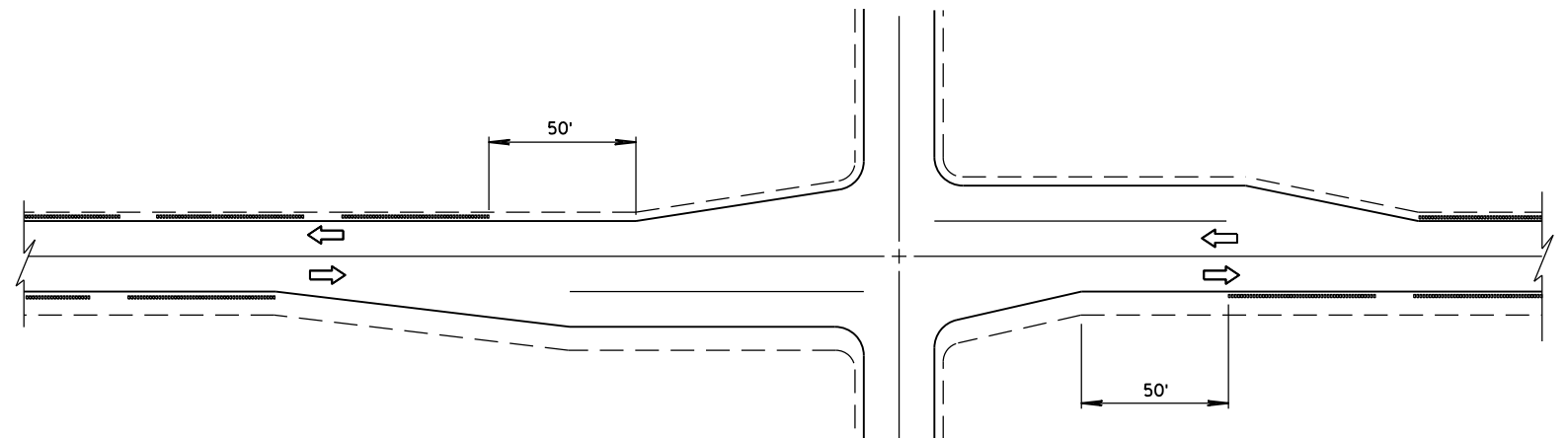
SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

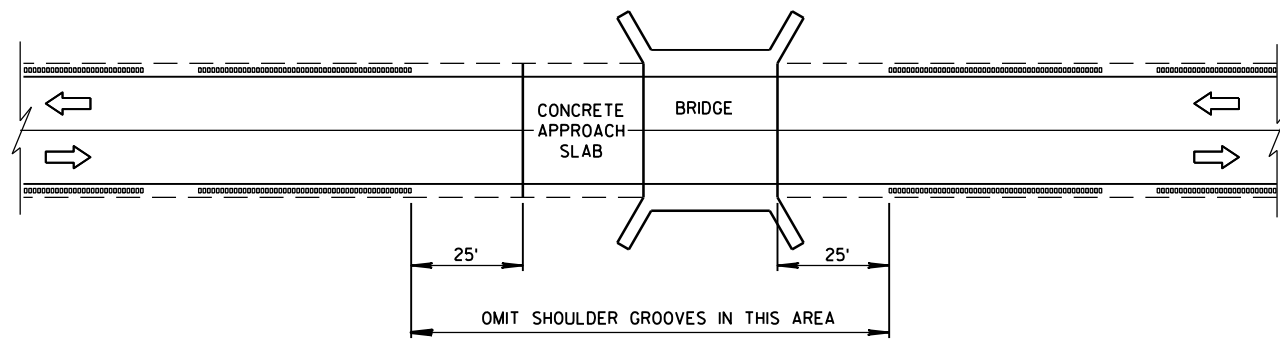
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



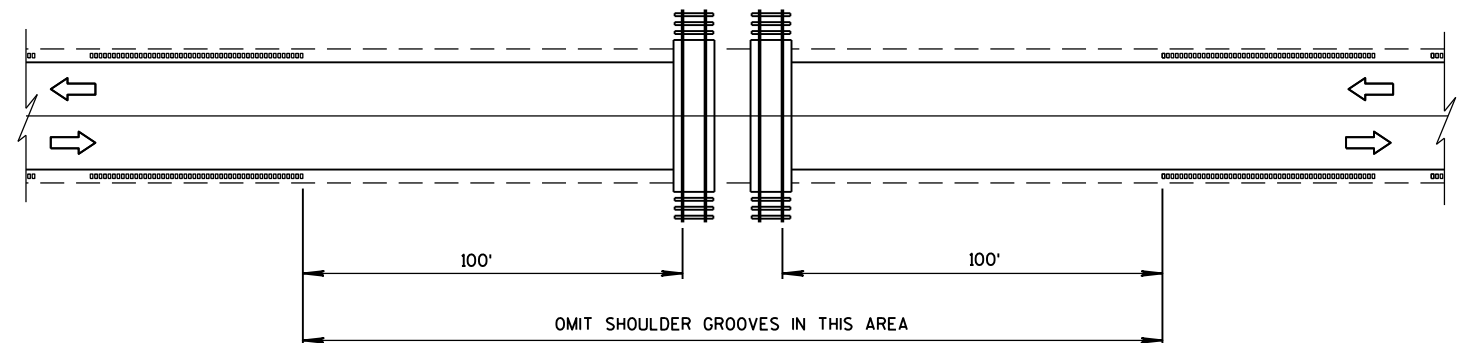
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



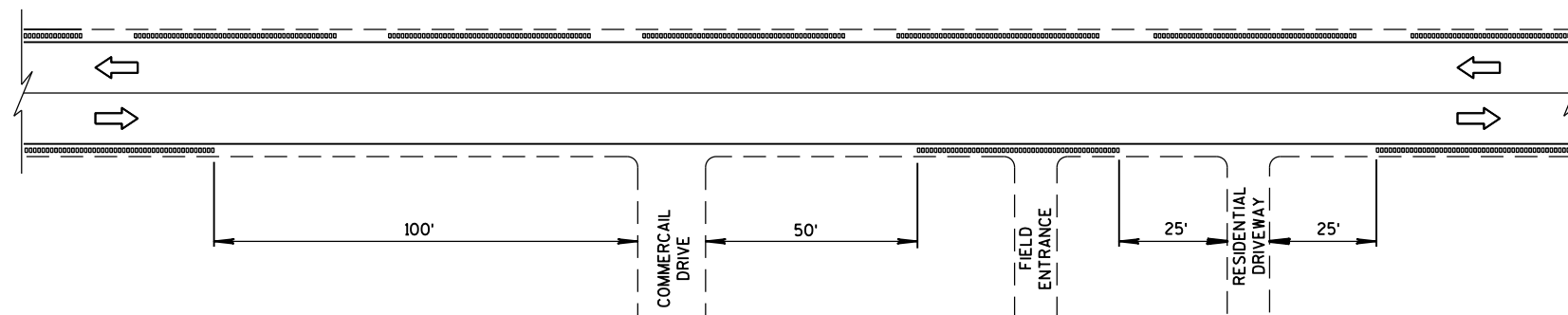
SHOULDER GROOVES AT INTERSECTIONS



SHOULDER GROOVES AT BRIDGES



SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT DRIVEWAYS^①

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

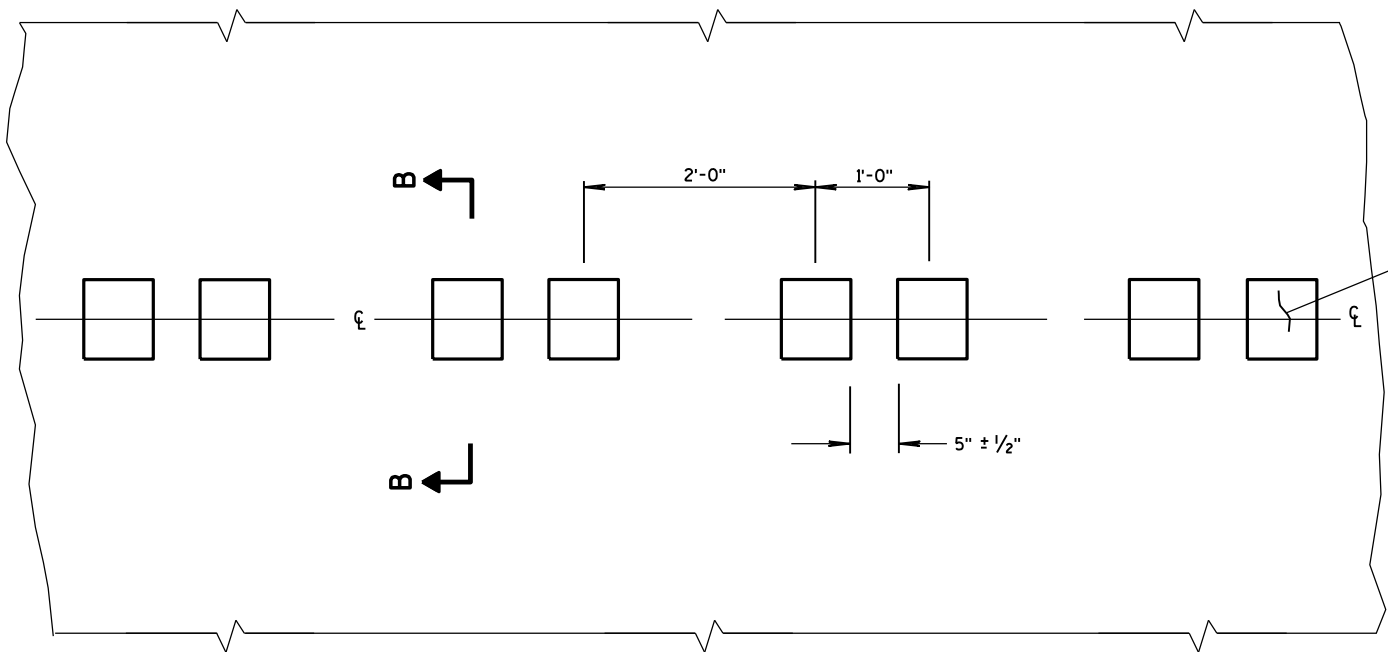
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

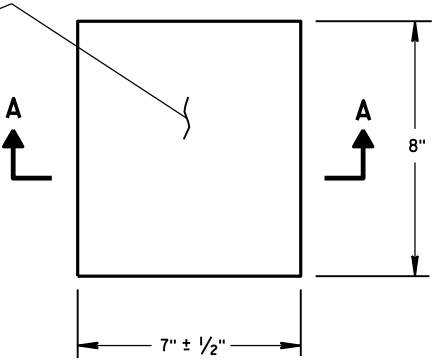
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

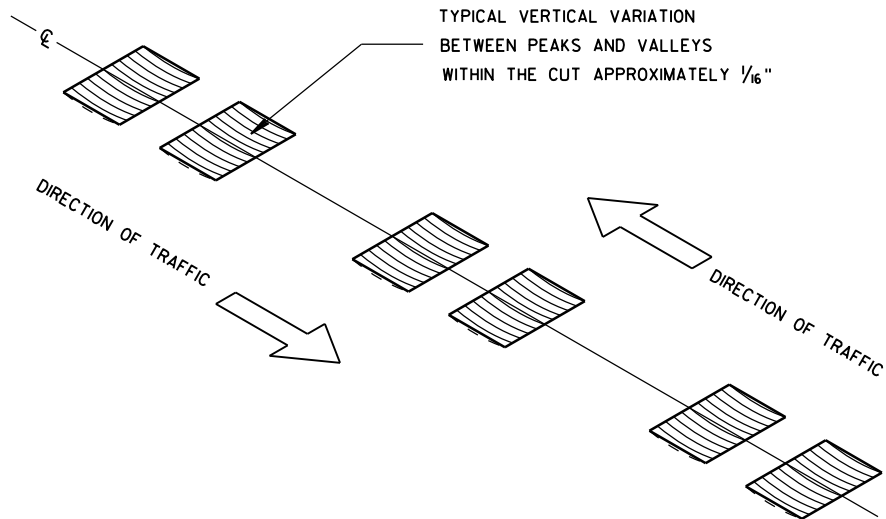
- ① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



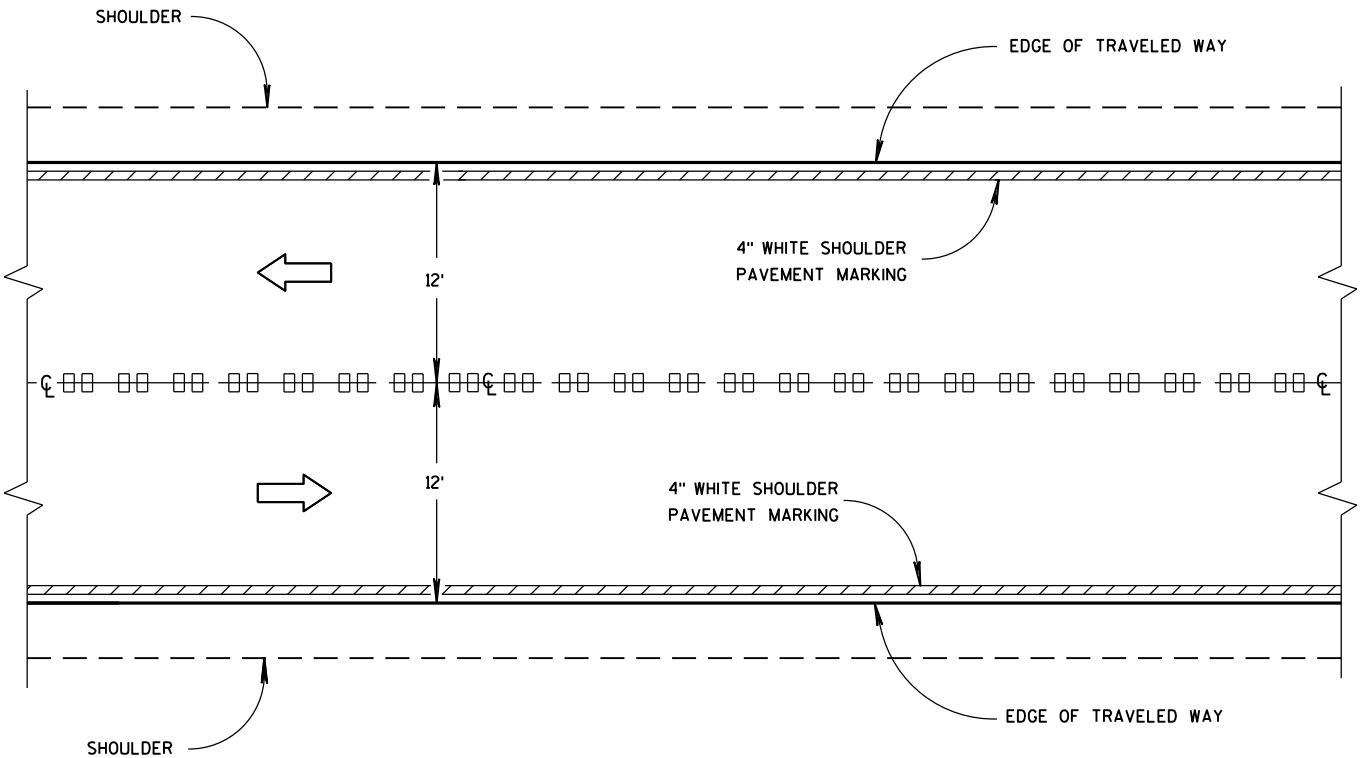
PLAN VIEW
CENTER LINE WITH GROOVES



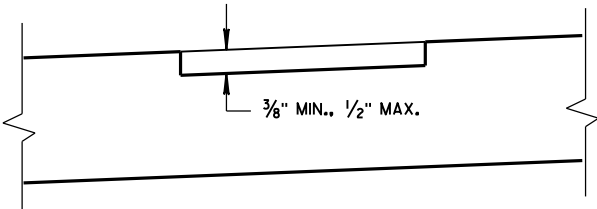
PLAN VIEW
(SINGLE GROOVE)



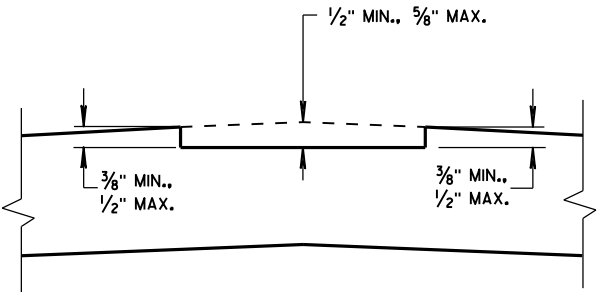
ISOMETRIC



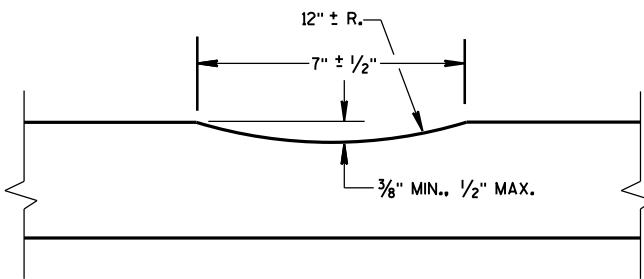
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



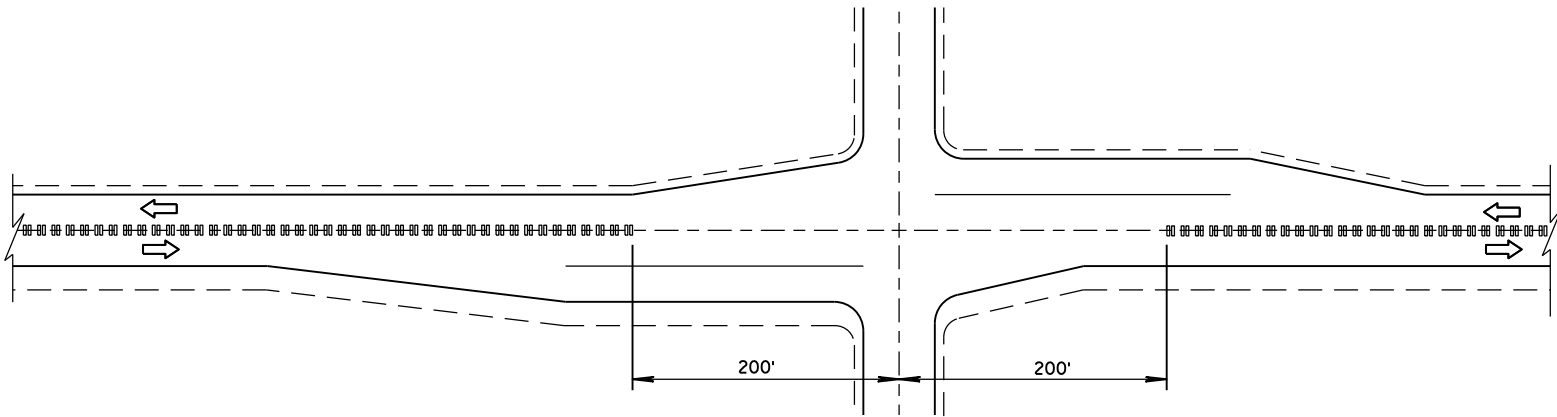
SECTION B-B
CROWNED ROADWAY



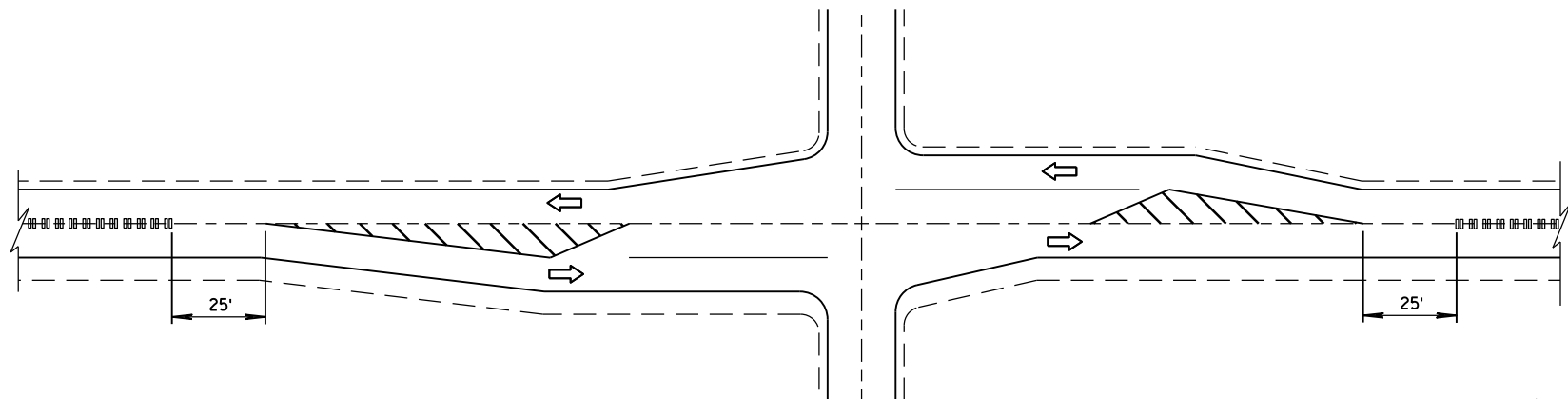
SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP,
MILLING

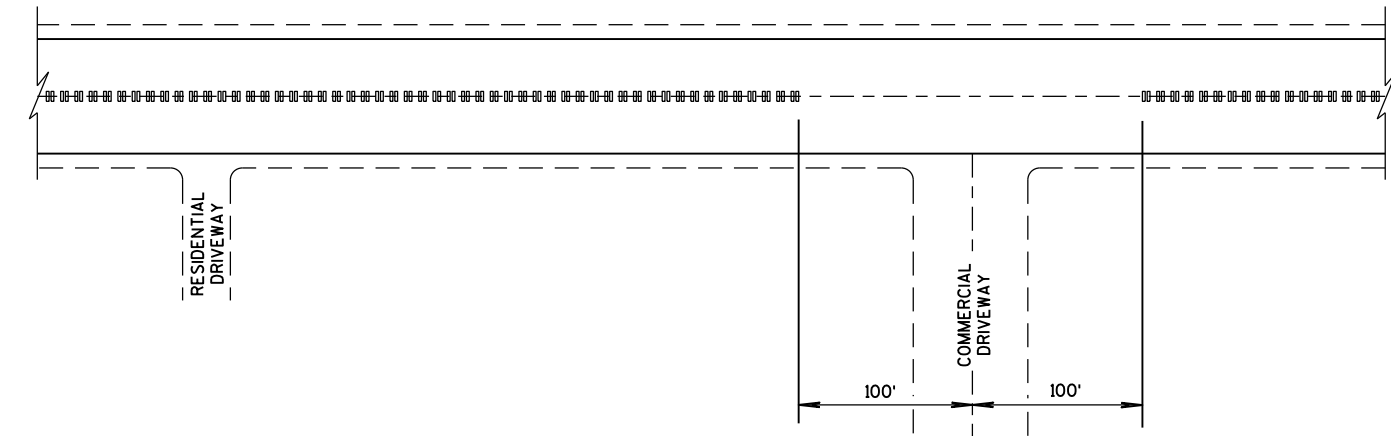
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



CENTER LINE GROOVES AT INTERSECTIONS

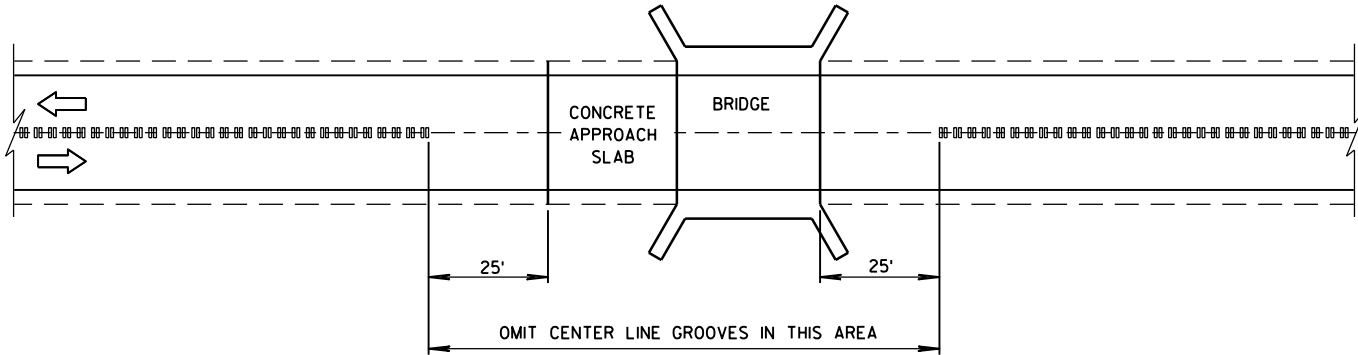


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

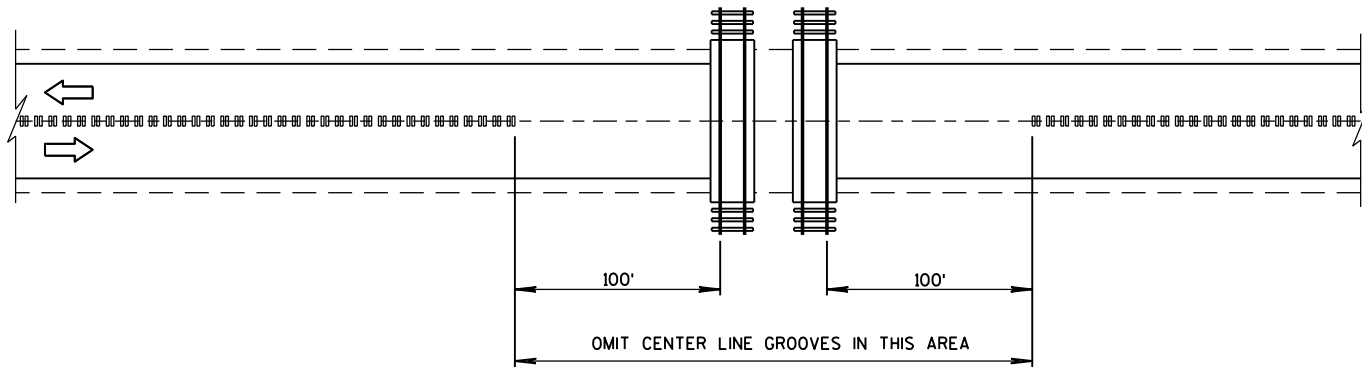


CENTER LINE GROOVES AT DRIVEWAYS^①

① CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.

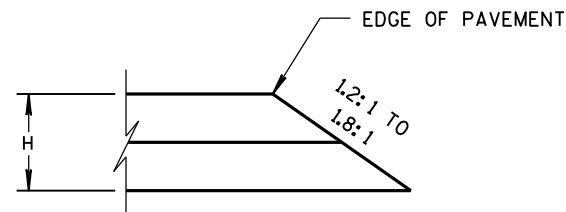


CENTER LINE GROOVES AT BRIDGES

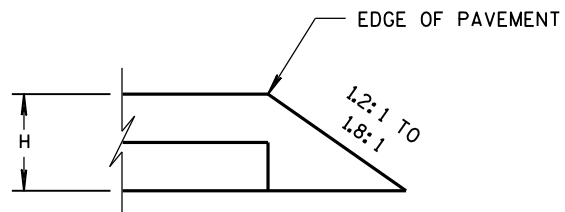


CENTER LINE GROOVES AT RAILROADS

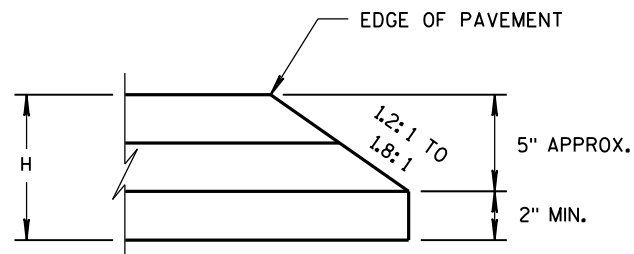
2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 5/15/2013 DATE	/S/ Jerry H. Zogg ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA	



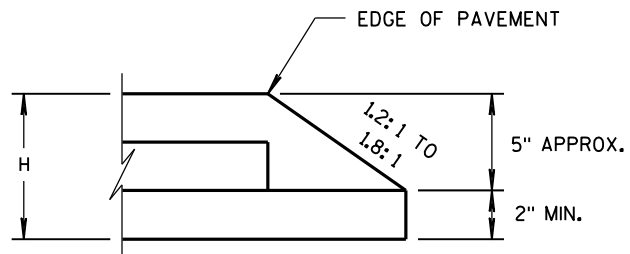
CONSTRUCTED WITH FINAL TWO LAYERS
FOR H 5" OR LESS



CONSTRUCTED WITH FINAL LAYER
FOR H 5" OR LESS

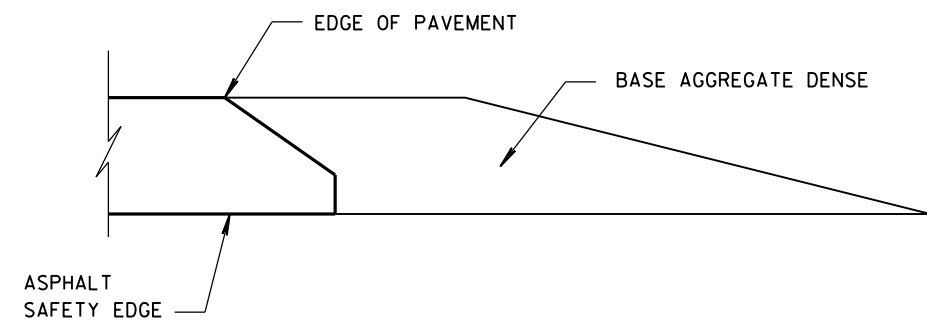


CONSTRUCTED WITH FINAL TWO LAYERS
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER
FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



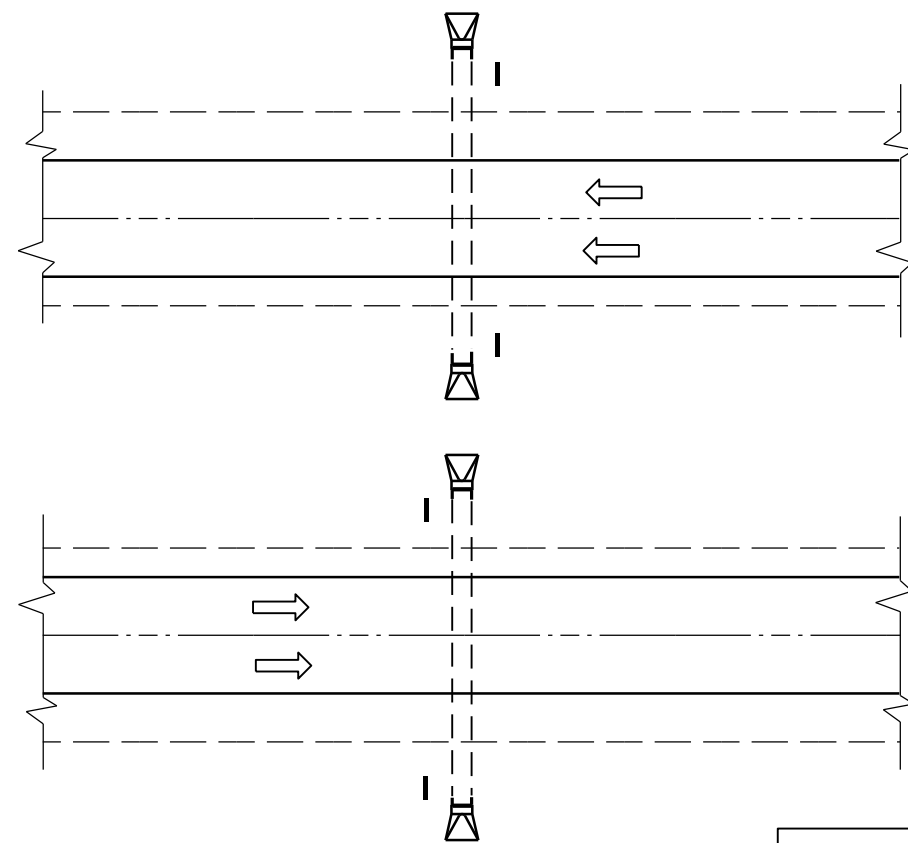
FINISHED SHOULDER AGGREGATE PLACEMENT

SAFETY EDGE_{SM}

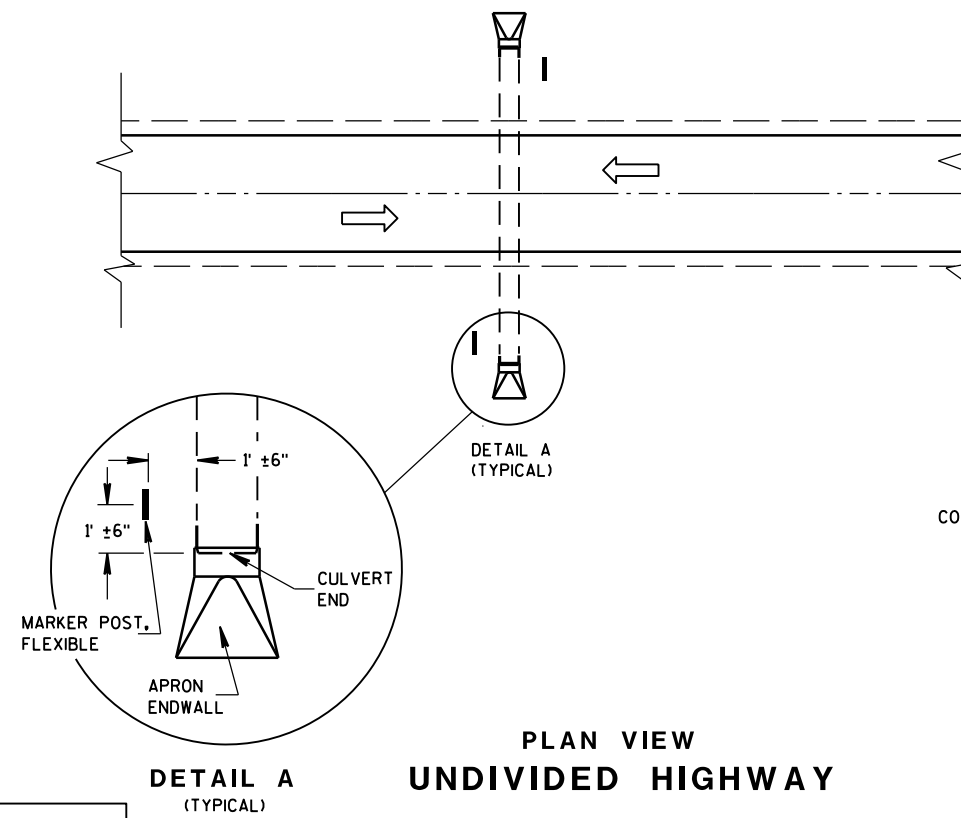
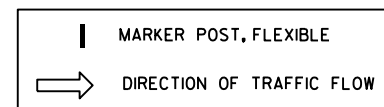
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/2012
DATE
FHWA

/s/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT
ENGINEER



PLAN VIEW
DIVIDED HIGHWAY

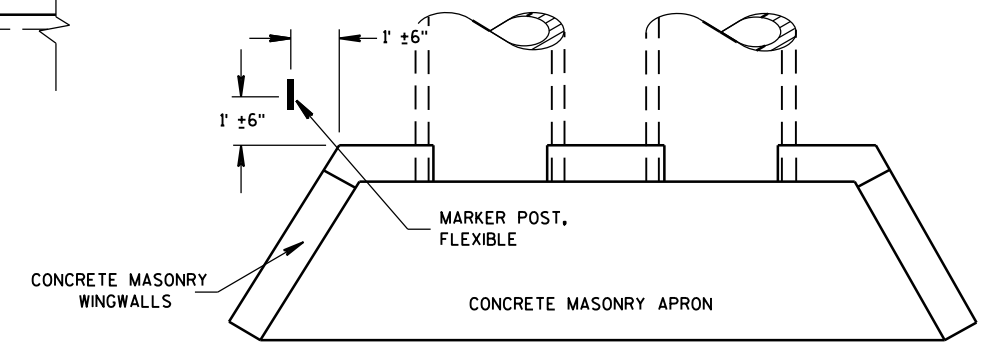


PLAN VIEW
UNDIVIDED HIGHWAY

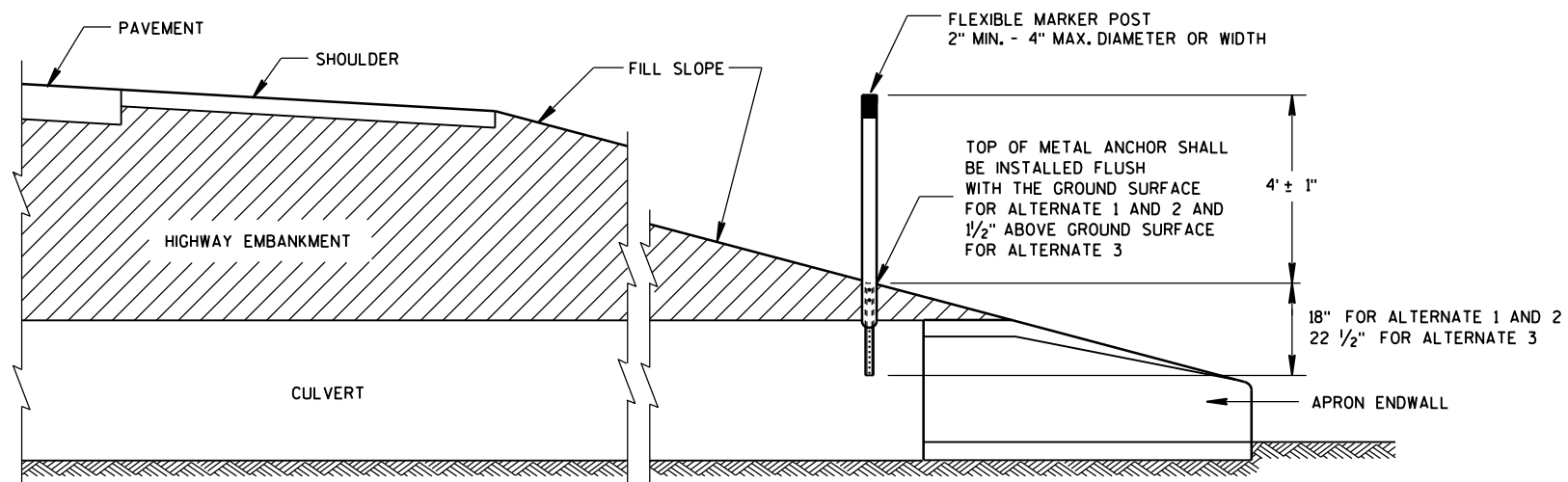
FLEXIBLE MARKER POST LOCATION

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.



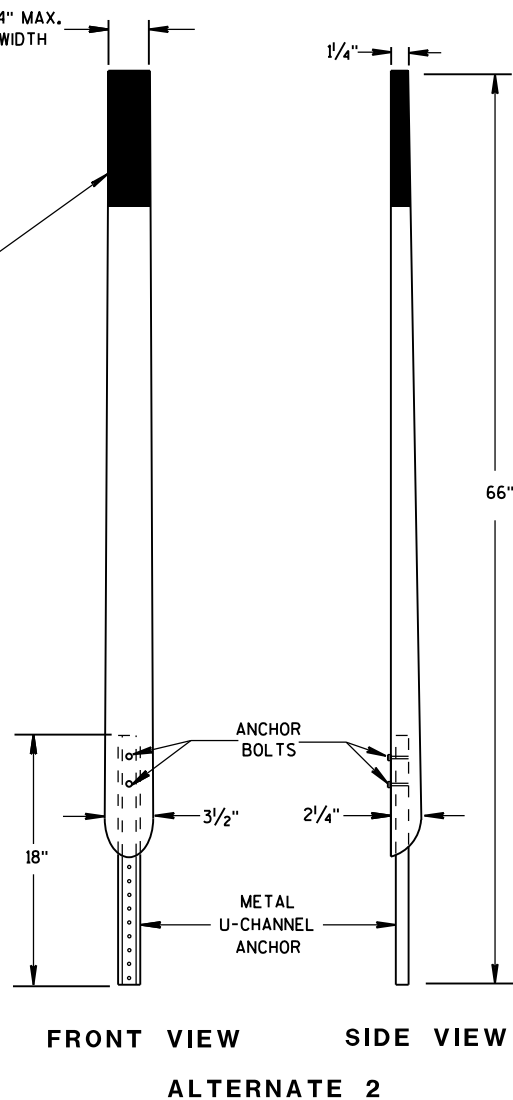
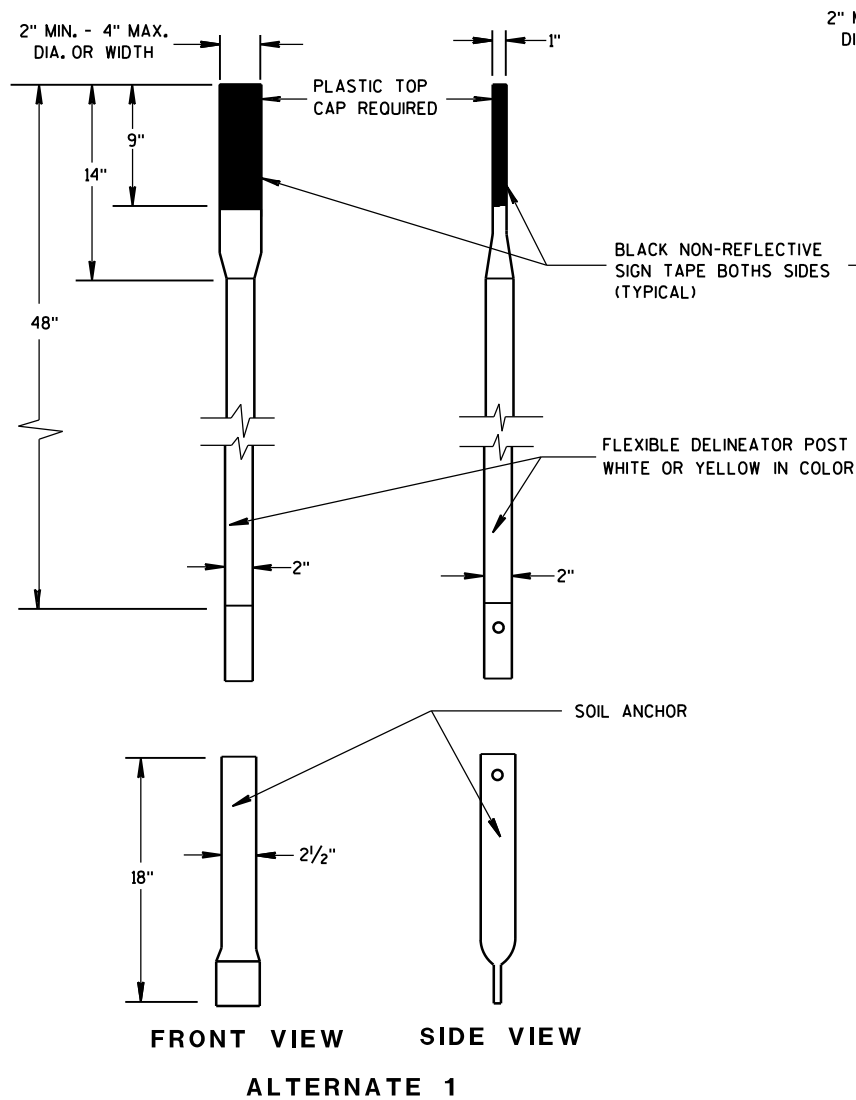
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



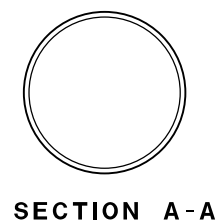
CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

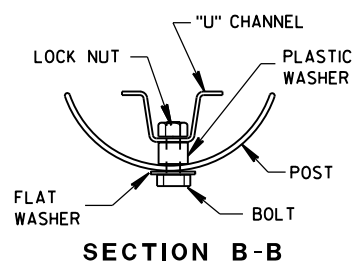
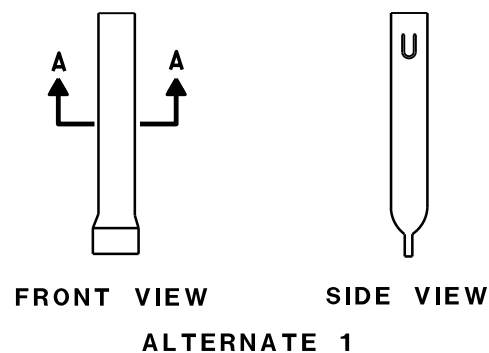
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



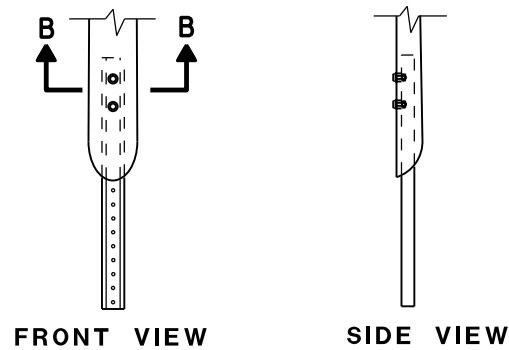
FLEXIBLE MARKER POSTS



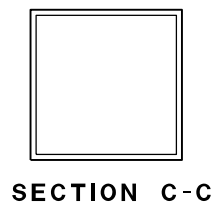
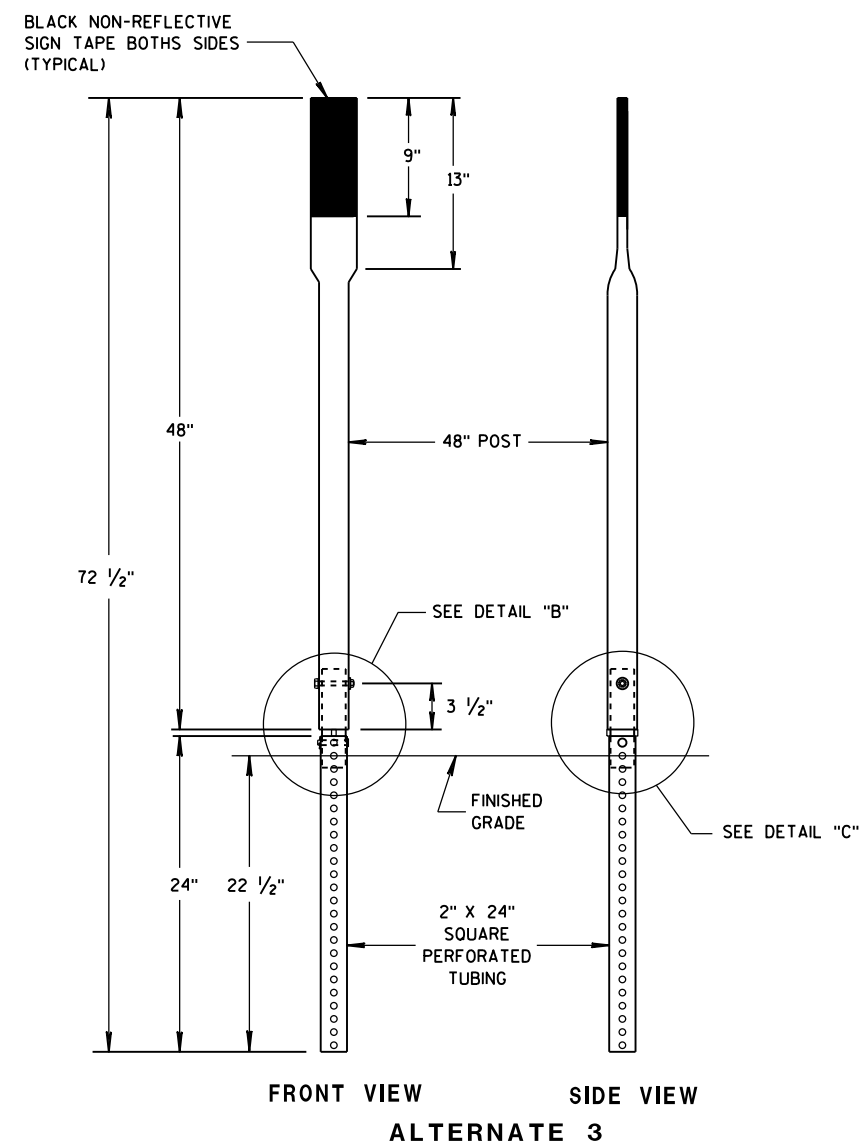
SECTION A-A



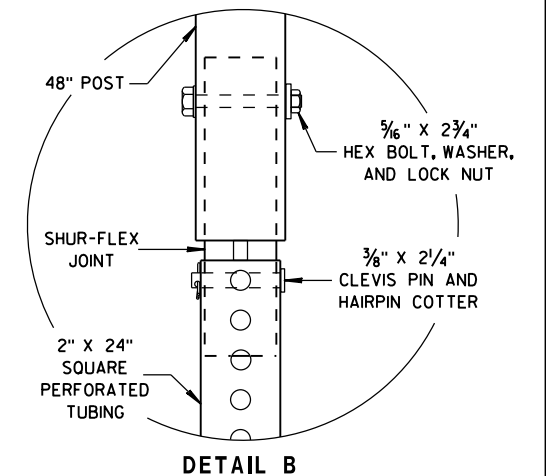
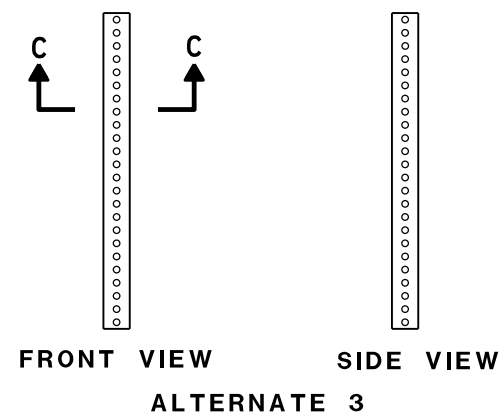
SECTION B-B



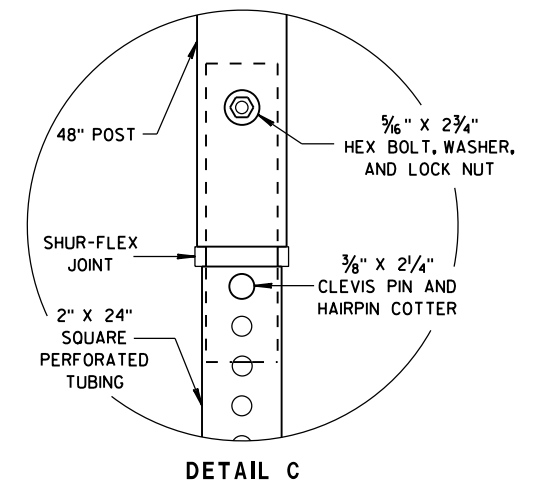
FLEXIBLE MARKER POST ANCHORS



SECTION C-C



DETAIL B

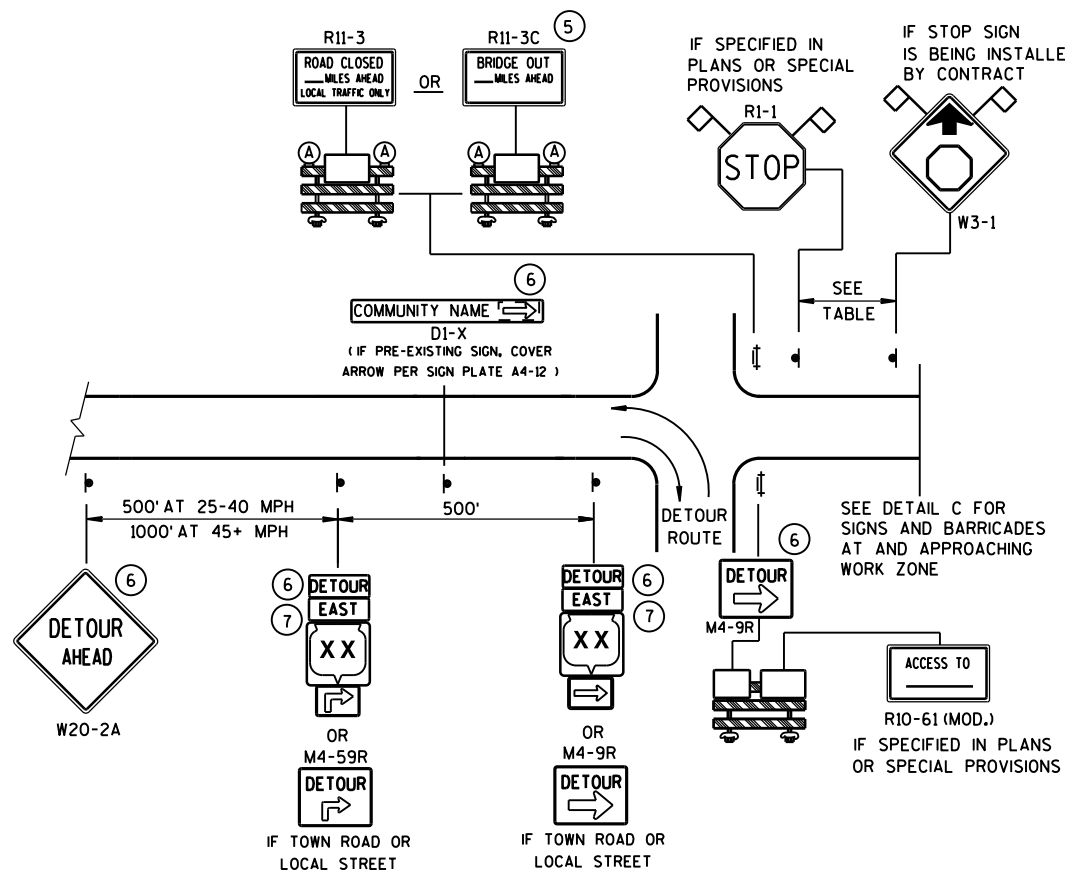


DETAIL C

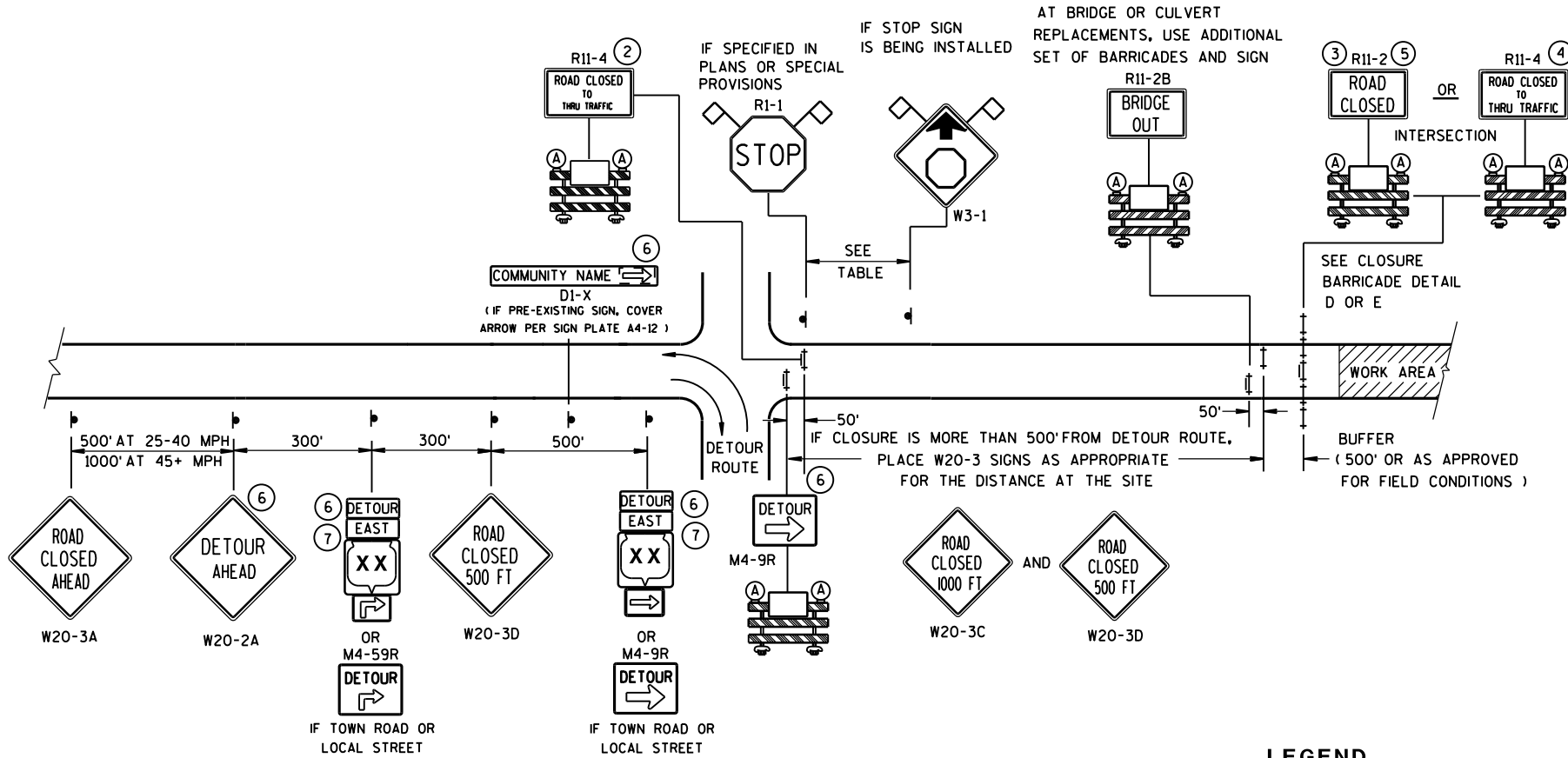
FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

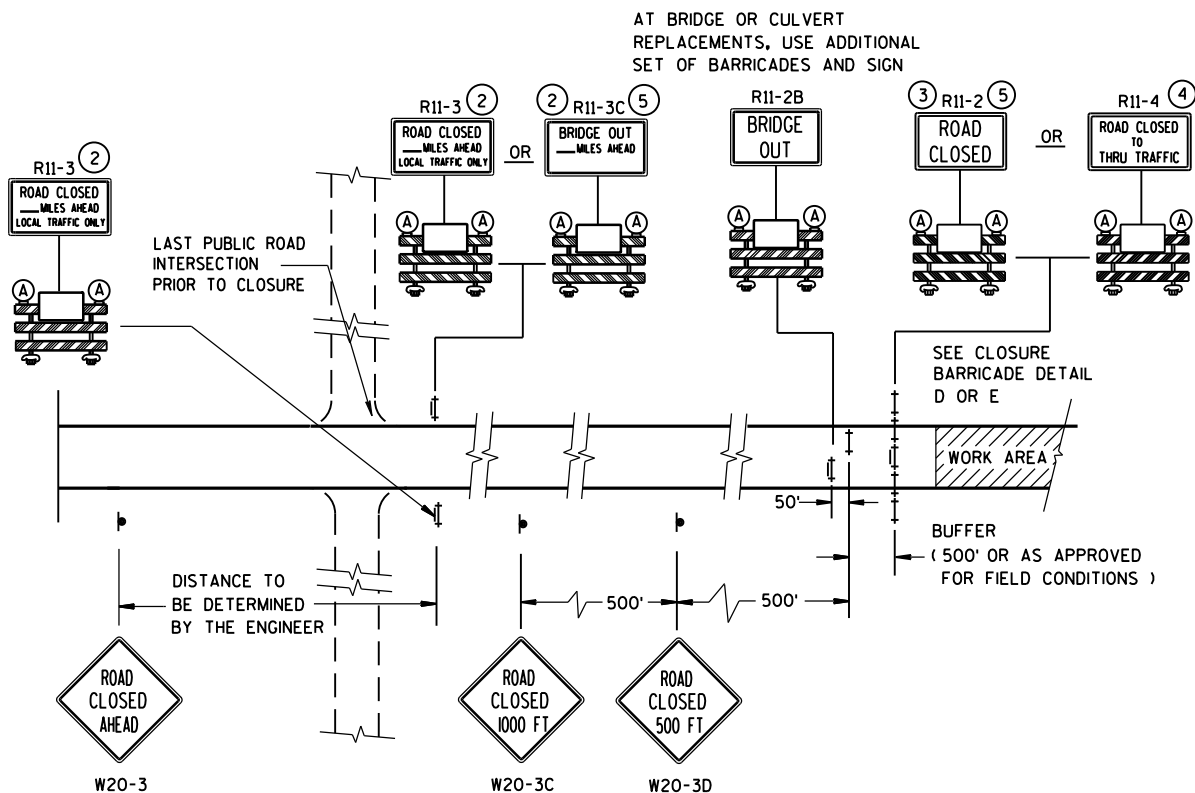
APPROVED
10/1/2012 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE GREATER THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR
WORK ZONE LESS THAN 1/2 MILE FROM DETOUR ROUTE (1000 FEET IF URBAN)



DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR

LEGEND

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

WORK AREA

DETOUR EAST
M4-8
M3-X
XX OR XX OR XX
M1-4 M1-5A M1-6

M05-1 OR M06-1

FLAGS, 16" X 16" MIN., (ORANGE)

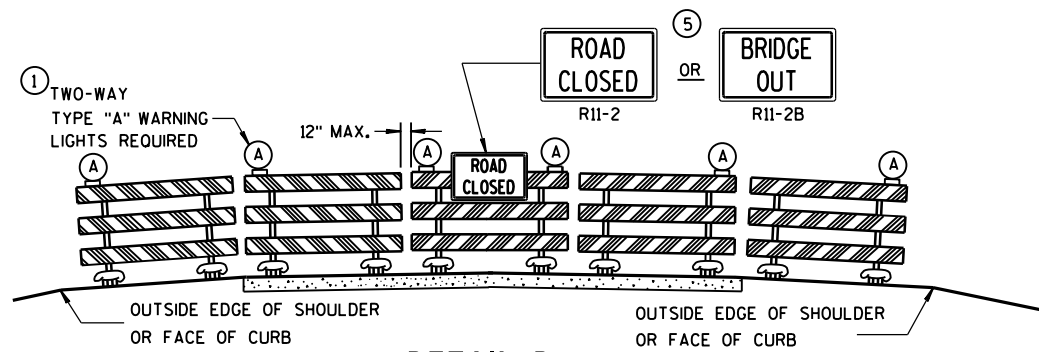
SPEED LIMIT (MPH)	"STOP AHEAD" ADVANCE WARNING DISTANCE (FT)
25	200
30	200
35	350
40	350
45	500
50	550
55	750

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

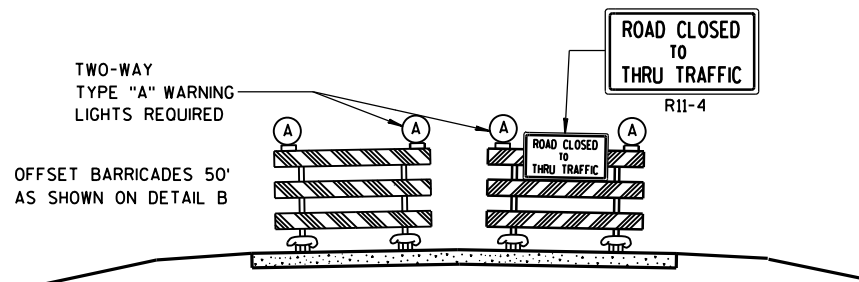
BARRICADES AND SIGNS
FOR
MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Sept. 2015 /S/ Peter Amokobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY 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 BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

ALL SIGNS SHALL BE 48" X 48" UNLESS OTHERWISE NOTED BELOW:

R11-2 SHALL BE 48" X 30".

R11-3, R11-4 AND R10-61 SHALL BE 60" X 30".

M4-9 SHALL BE 30" X 24".

M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)

M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)

M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)

M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)

D1-X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.

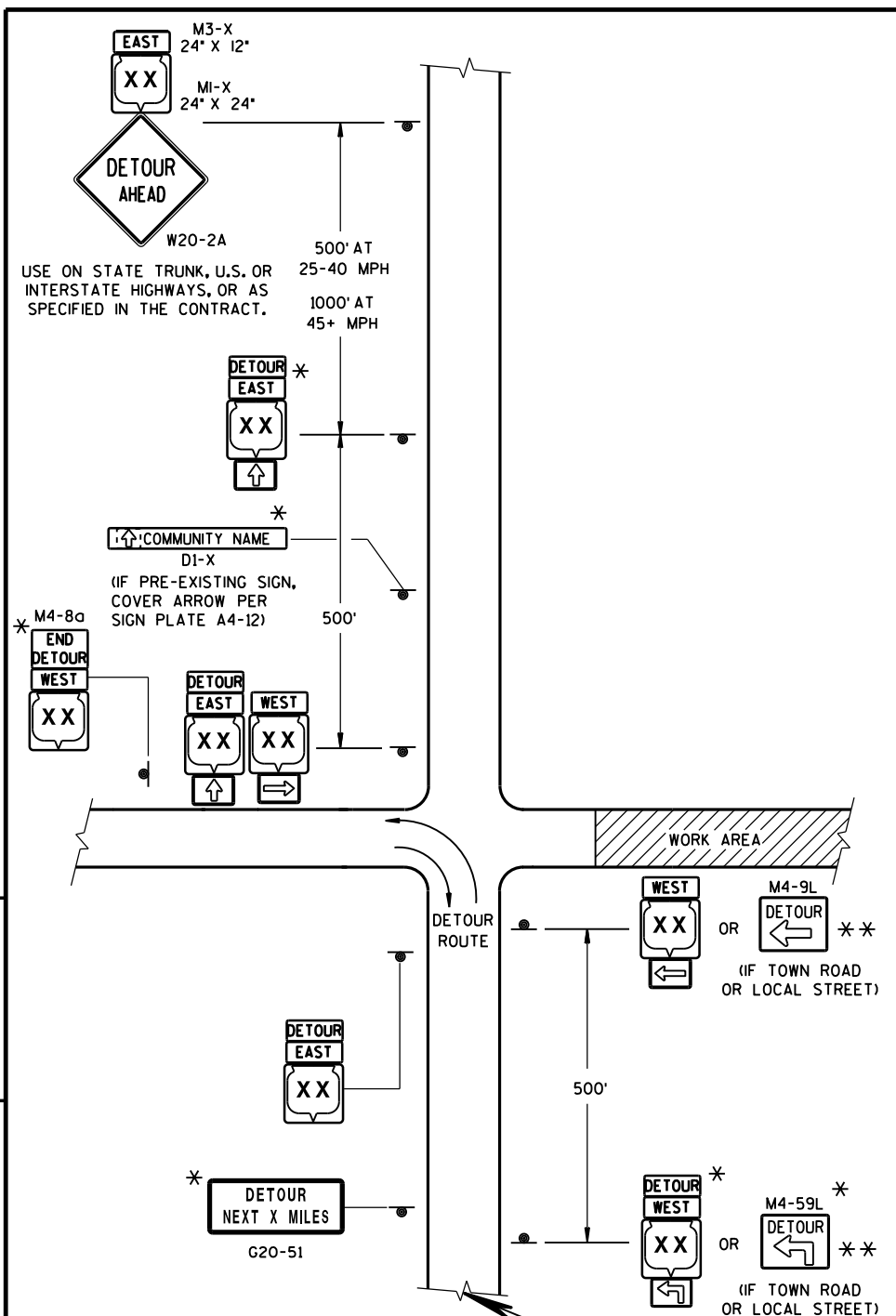
R1-1 SHALL BE 36" X 36".

- 1 TWO WARNING LIGHTS SHALL BE PROVIDED ON THE CENTER BARRICADE AND A MINIMUM OF ONE WARNING LIGHT SHALL BE PROVIDED ON EACH OF THE OTHER BARRICADES WITHIN THE ROADWAY LIMITS. SPACING OF THE WARNING LIGHTS SHALL BE UNIFORM TO THE EDGE OF ROADWAY AS SHOWN (APPROX. 8-FOOT LIGHT SPACING).
- 2 THESE SIGNS AND BARRICADES ARE NOT REQUIRED IF ROAD CLOSURE BEGINS AT INTERSECTION.
- 3 FOR ROAD CLOSURE WITHOUT LOCAL ACCESS TO PROJECT, SEE ROAD CLOSURE BARRICADE DETAIL D.
- 4 FOR ROAD CLOSURE WITH LOCAL ACCESS TO PROJECT, SEE LANE CLOSURE BARRICADE DETAIL E.
- 5 FOR BRIDGE OR CULVERT REPLACEMENTS, SUBSTITUTE "BRIDGE OUT" INSTEAD OF "ROAD CLOSED" ON R11-2 AND R11-3 SIGNS.
- 6 INSTALL DETOUR AND COMMUNITY GUIDE SIGNS AND ARROWS ONLY IF SPECIFIED IN THE CONTRACT. IF THERE ARE EXISTING ROUTE MARKER ASSEMBLIES THAT WILL REMAIN IN PLACE, ADJUST THE LOCATION OF THE DETOUR ROUTE SIGNS TO CORRESPOND WITH THE EXISTING ASSEMBLIES. MODIFY EXISTING SIGNS WHERE POSSIBLE. SEE SPECIFIC PROJECT DETOUR SIGNING DETAIL SHEETS. IF DETOUR SIGNS ARE BEING INSTALLED BY OTHERS, PLACE THE CONTRACTED TRAFFIC CONTROL SIGNS TO ALLOW FOR PLACEMENT OF ALL WARNING, DETOUR AND GUIDE SIGNS AS SHOWN.
- 7 "EAST" CARDINAL DIRECTION MARKERS AND RIGHT TURN ARROWS ARE SHOWN. USE OTHER CARDINAL DIRECTIONS AND ARROWS AS APPROPRIATE.

BARRICADES AND SIGNS FOR MAINLINE CLOSURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

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.

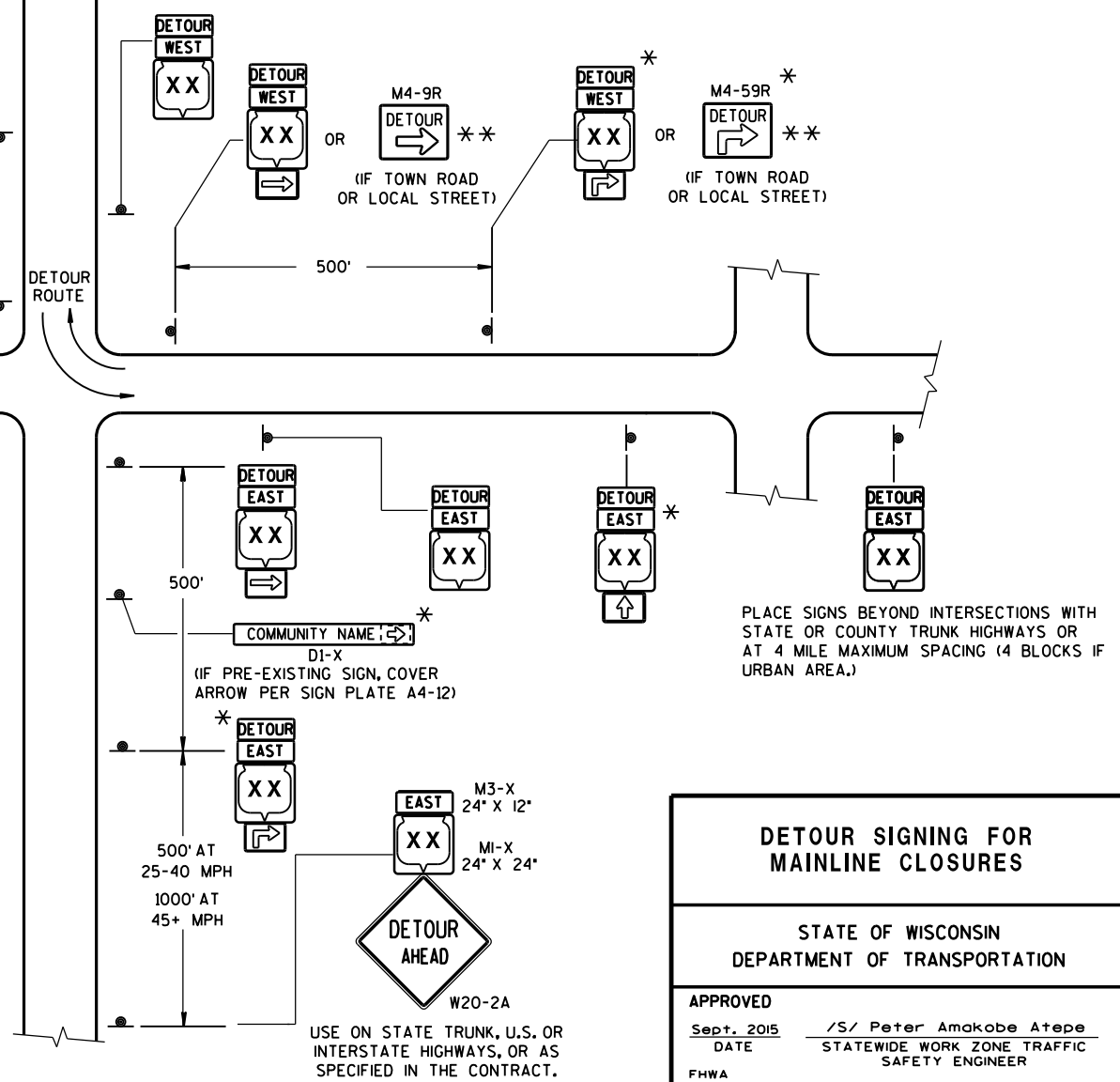
"MO" SIGNS ARE THE SAME AS "M" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

SIGN SIZES SHALL BE AS FOLLOWS:

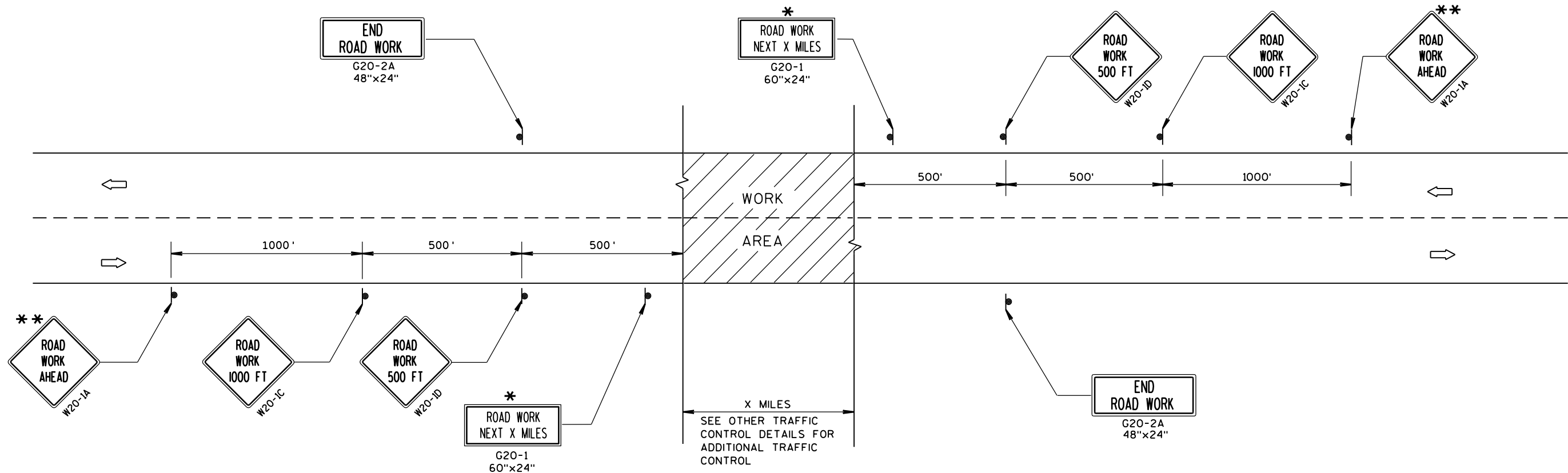
- M3-X SHALL BE 24" X 12". (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-8 SHALL BE 24" X 12". (30" X 15" IF NEEDED TO MATCH EXISTING SIGNS.)
- M1-4, M1-5A, AND M1-6 SHALL BE 24" X 24". (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS.)
- M05-1 AND M06-1 SHALL BE 21" X 21". (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS.)
- M4-9 SHALL BE 30" X 24".
- M4-8a SHALL BE 24" X 18".
- G20-51 SHALL BE 60" X 24".
- W20-2 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.



DETOUR SIGNING FOR MAINLINE CLOSURES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER



TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

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.

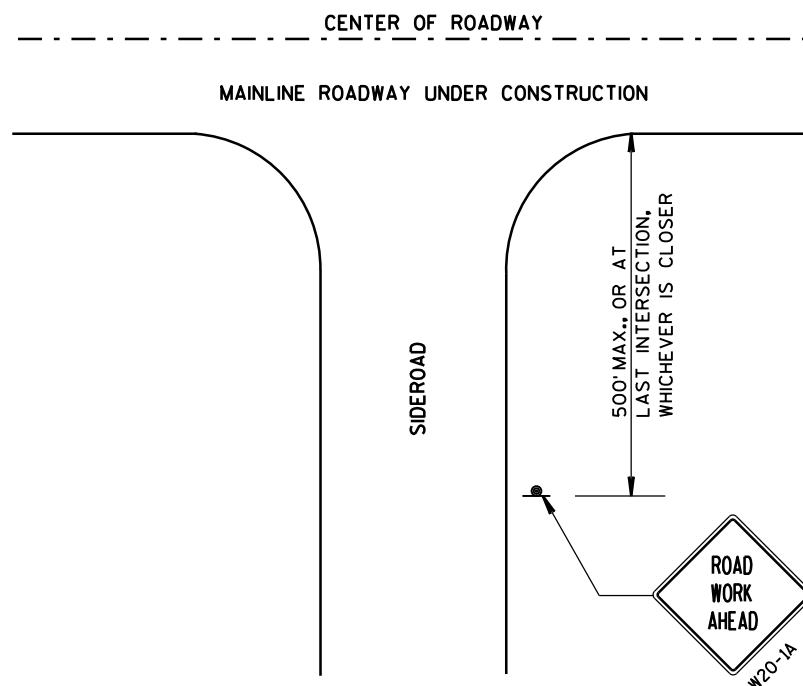
ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

SIGNS THAT WILL BE IN PLACE LESS THAN 7 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 RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

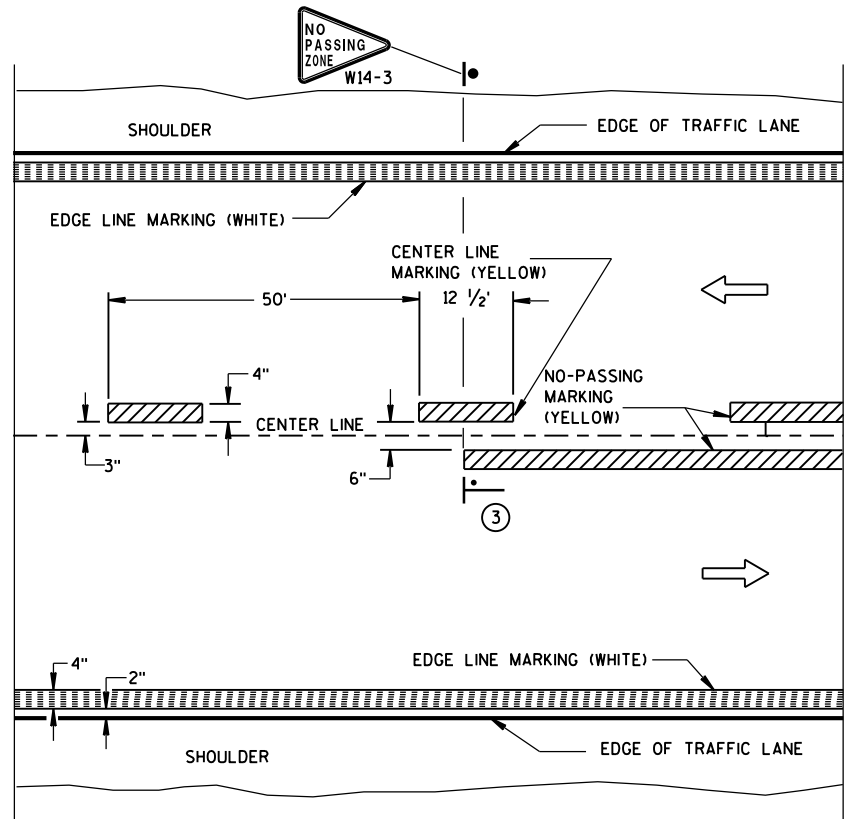
** PLACE ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



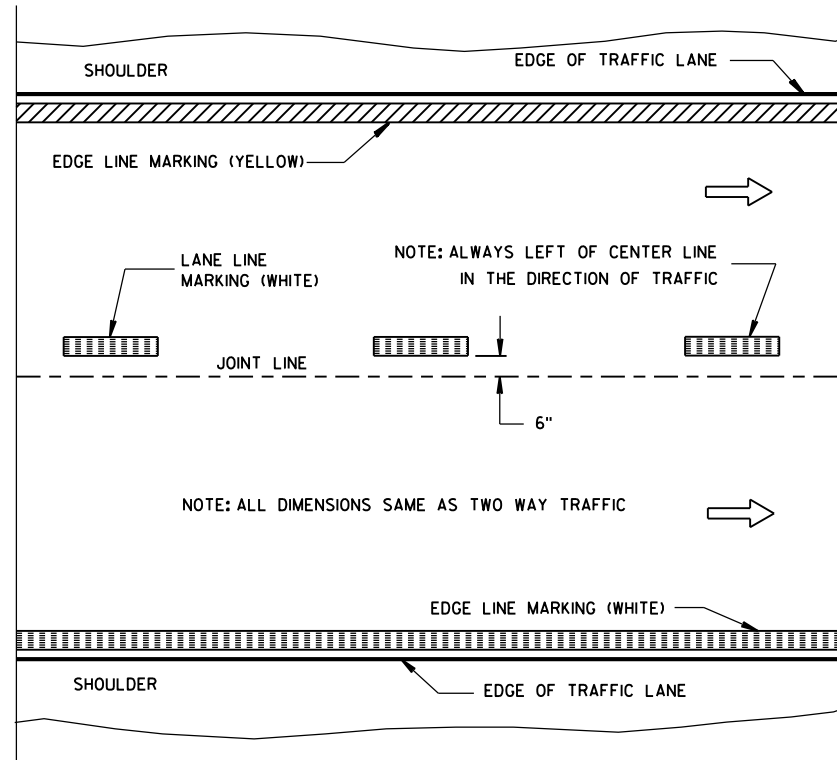
LEGEND

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

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED DATE	/S/ Peter Amokobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

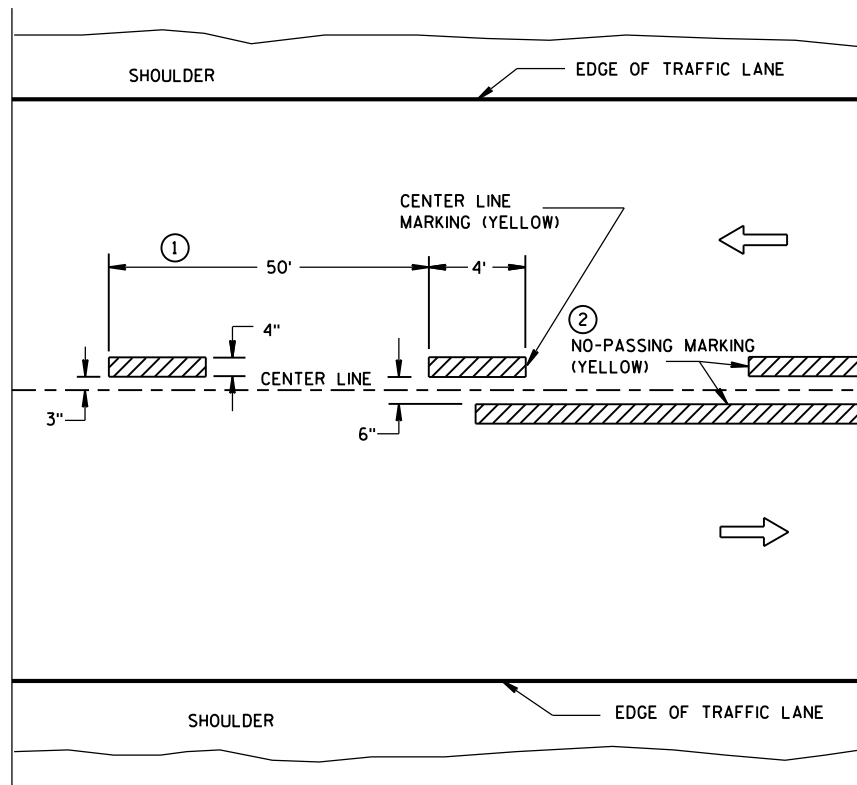


TWO WAY TRAFFIC

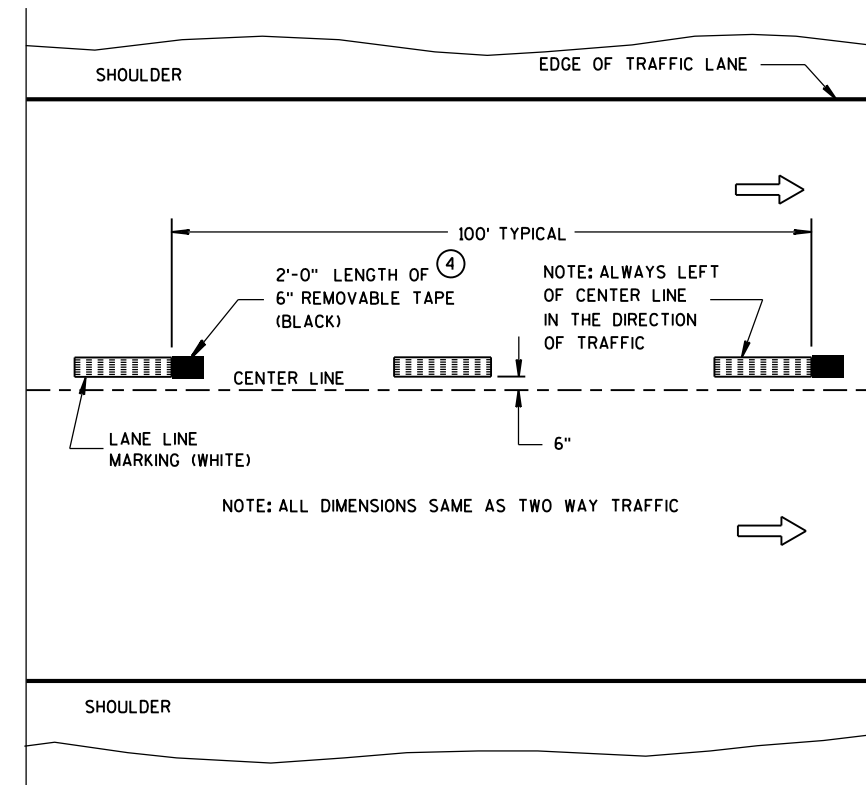


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING
(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

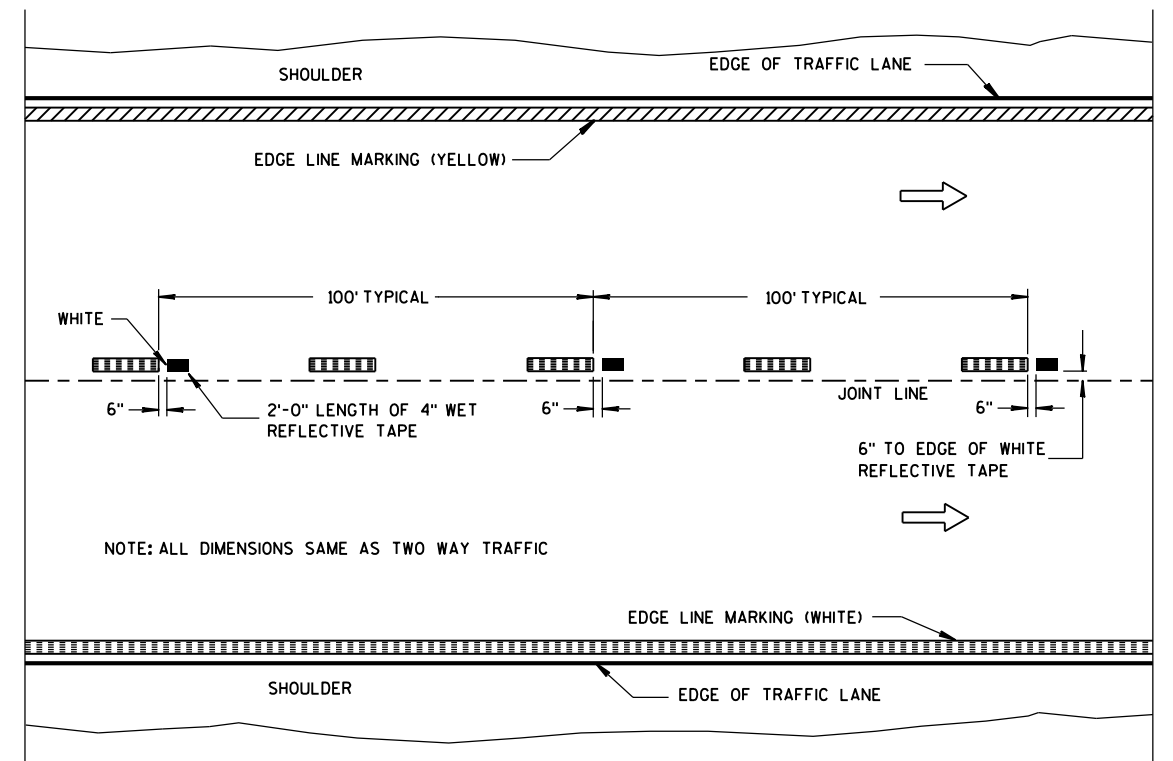
GENERAL NOTES

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

- 1 HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
- 2 NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
- 3 NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
- 4 CONCRETE ONLY.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

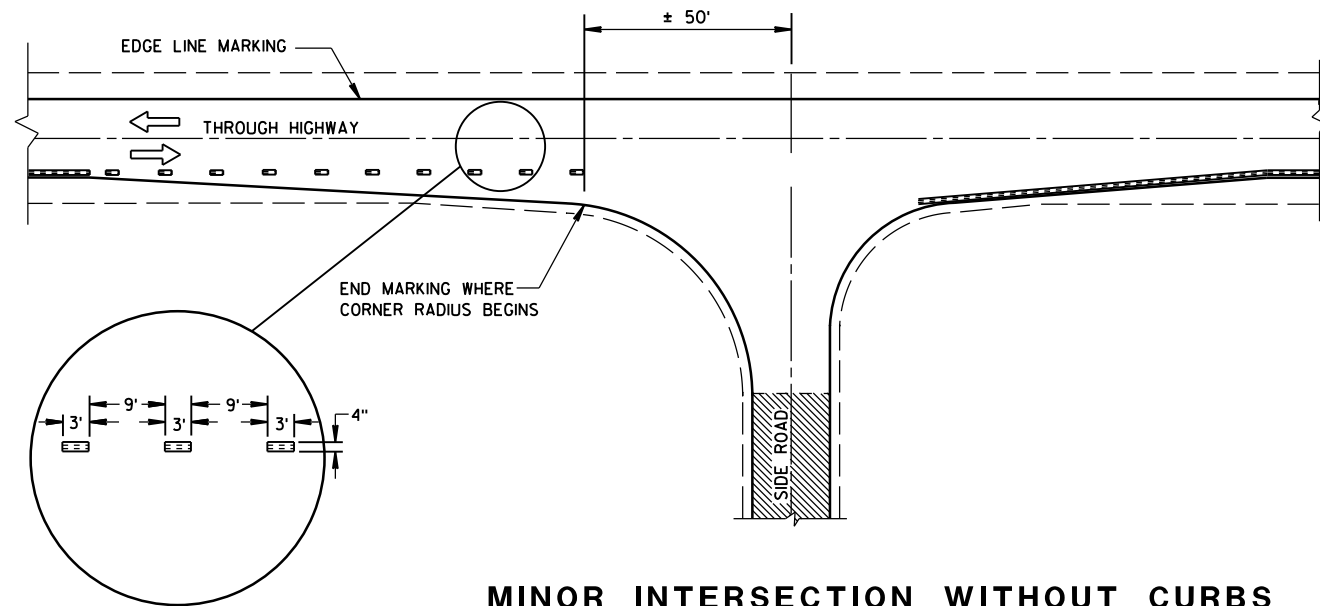
LEGEND

- "T" MARKING
- POST MOUNTED SIGN

PAVEMENT MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

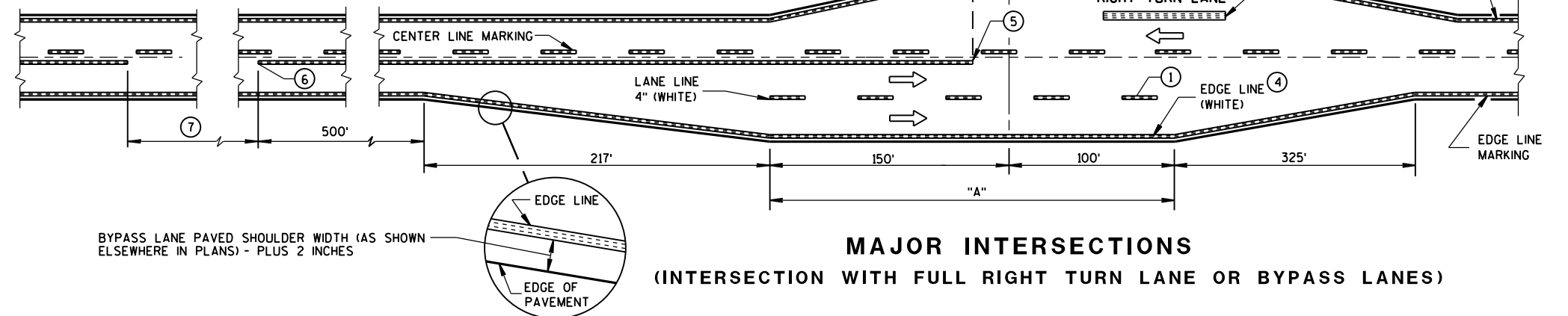
APPROVED
5-13-2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER
FHWA



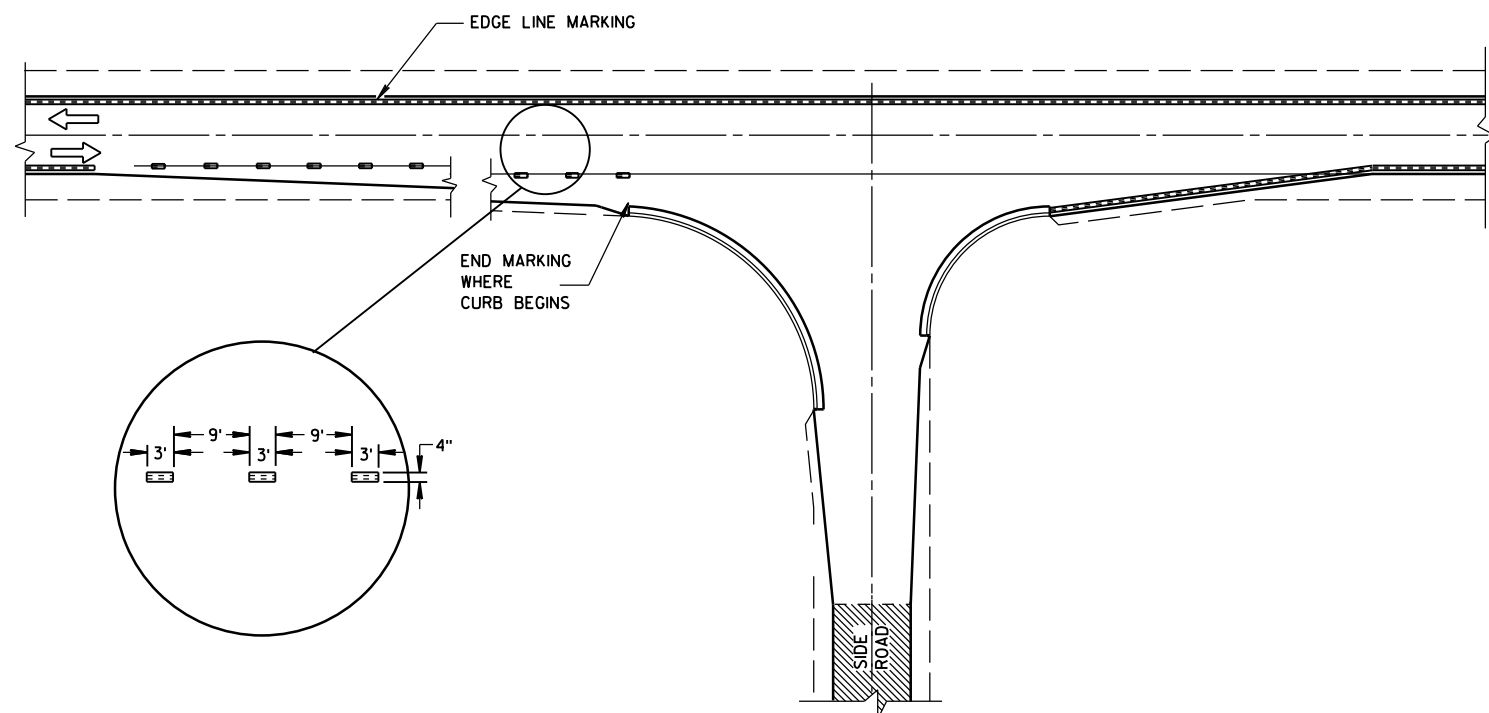
MINOR INTERSECTION WITHOUT CURBS

⑦

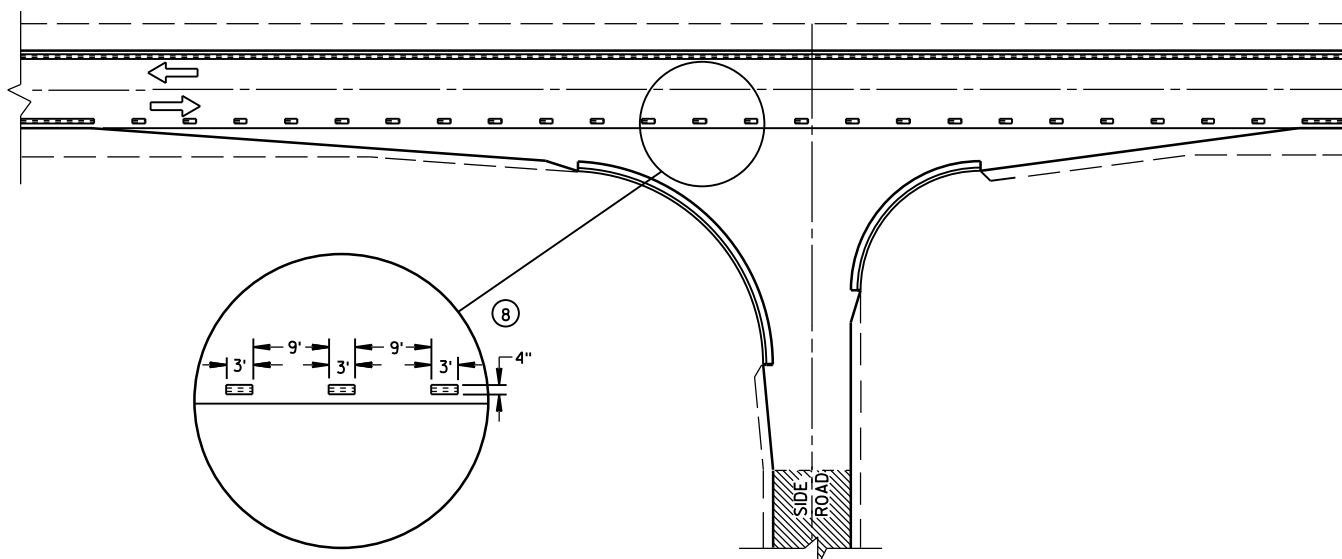
POSTED SPEED (MPH)	MINIMUM DISTANCE BETWEEN ZONES (FEET)
25 - 30	528
35 - 40	528
45 - 50	686
55	792



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



MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)



MINOR INTERSECTION WITH CURBS
③ (FOR SPECIAL CONDITIONS AS SPECIFIED)





GENERAL NOTES

- EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED 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 ALTERNATIVE MARKING SHALL BE PROVIDED WHEN SPECIFIED IN THE CONTRACT. TYPICAL SITUATIONS WHERE THIS MARKING MAY BE REQUIRED ARE WHERE THE INTERSECTION IS ON A SHARP HORIZONTAL CURVE OR CREST VERTICAL CURVE IN AN UNLIGHTED AREA SUCH THAT THE EDGE LINE MAY BE MISLEADING TO THE MOTORIST OR DISAPPEAR FROM SIGHT.
 - ④ THE EDGE LINE IN THE TAPER AREAS OF THE BYPASS LANE AND THE BYPASS LANE SHALL BE LOCATED 1-FOOT FROM EDGE OF PAVEMENT TO THE OUTSIDE EDGE OF EDGE LINE.
 - ⑤ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT/SURFACE EDGE EXTENSION.
 - ⑥ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
 - ⑦ IF THE DISTANCE BETWEEN 2 SUCCESSIVE NO-PASSING ZONES IS LESS THAN THE MINIMUM DISTANCE BETWEEN ZONES, CONNECT THE 2 ZONES.
 - ⑧ 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE - GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.
- ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

PAVEMENT MARKING
(INTERSECTIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

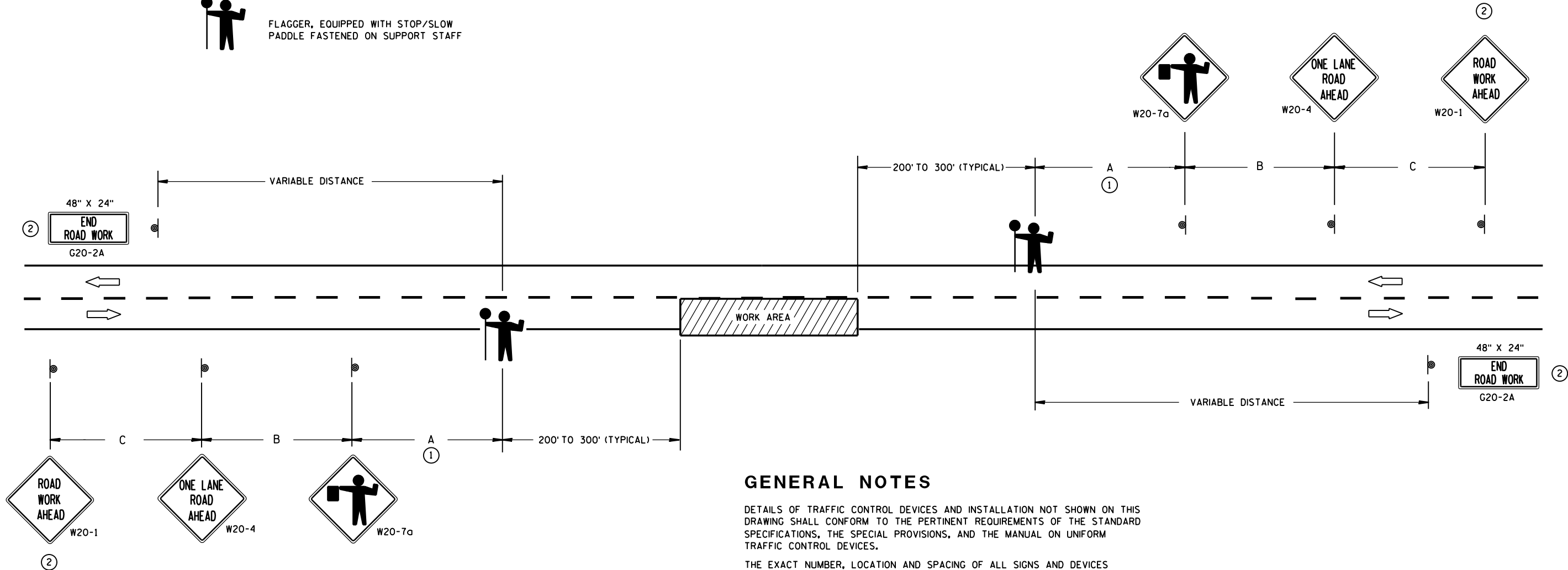
-  SIGN ON PORTABLE OR PERMANENT SUPPORT
-  DIRECTION OF TRAFFIC
-  WORK AREA
-  FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN SPACING TABLE

SPEED LIMIT	SIGN SPACING A,B,C
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7a AND W20-4 SIGNS. A 500' TYPICAL SPACING SHALL BE PROVIDED BETWEEN THE SIGNS.



GENERAL NOTES

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

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

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, COVER OR REMOVE ALL TEMPORARY TRAFFIC CONTROL SIGNS.

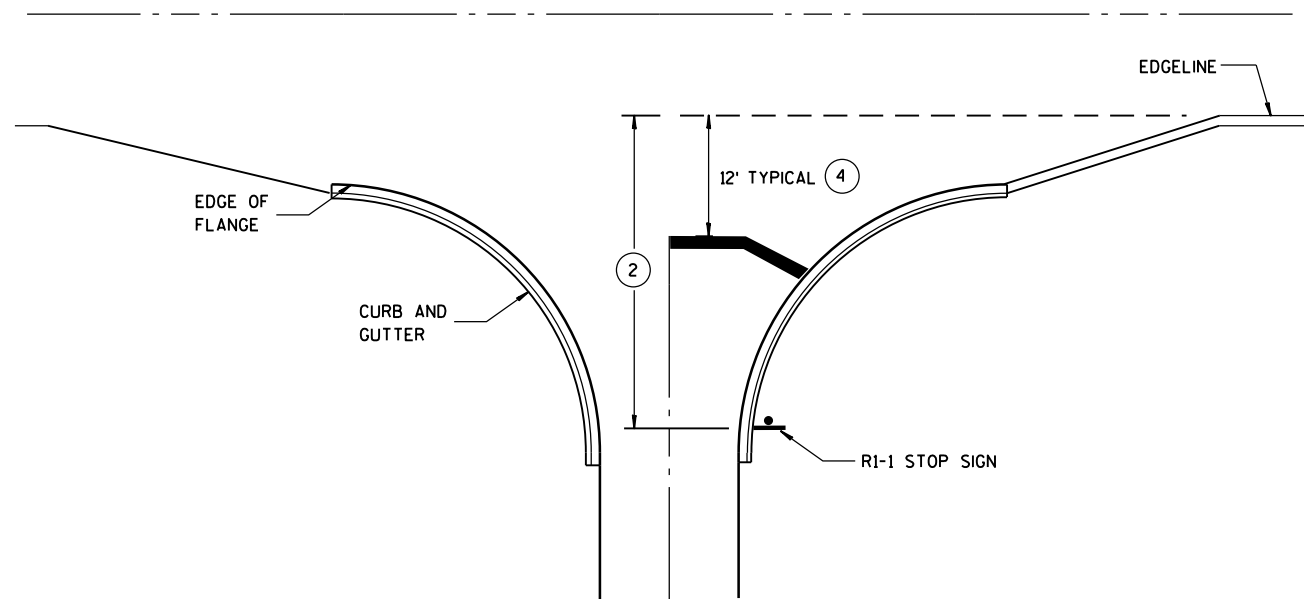
ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

- ① FOR A MOVING WORK OPERATION, SIGNING FOR BOTH DIRECTIONS SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

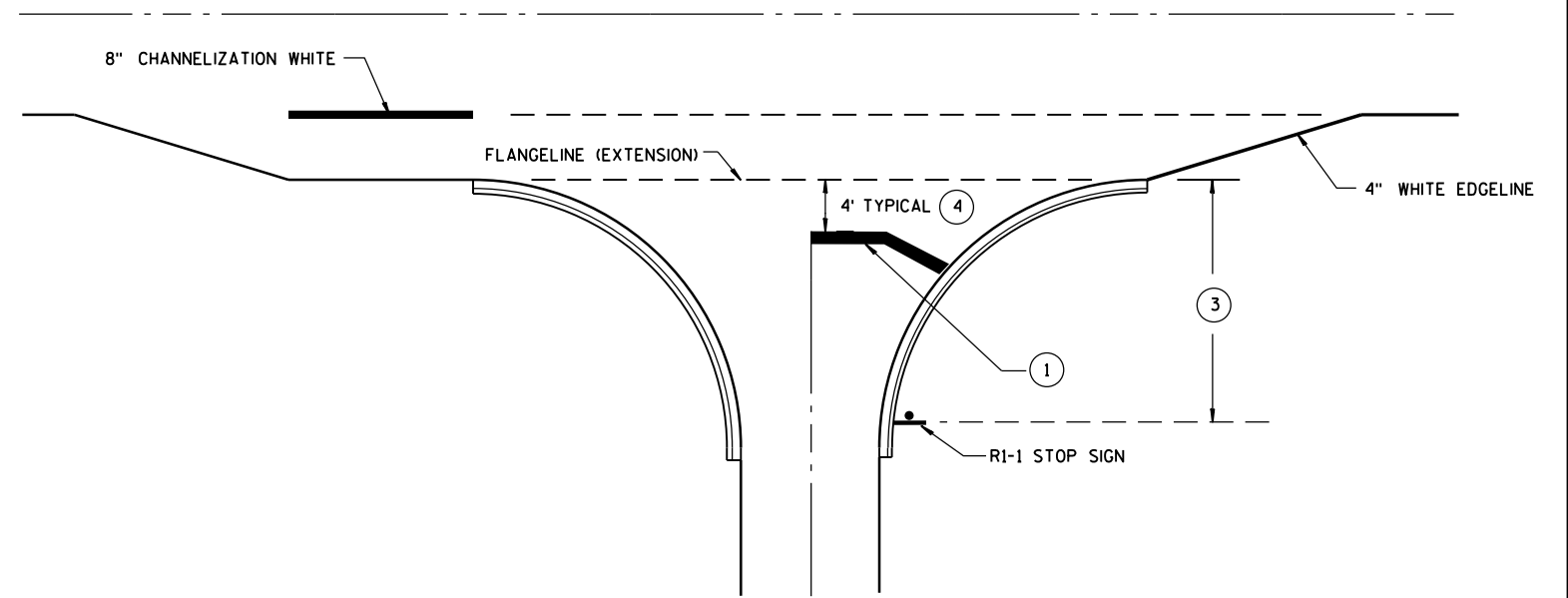
TRAFFIC CONTROL FOR LANE CLOSURE (SUITABLE FOR MOVING OPERATIONS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

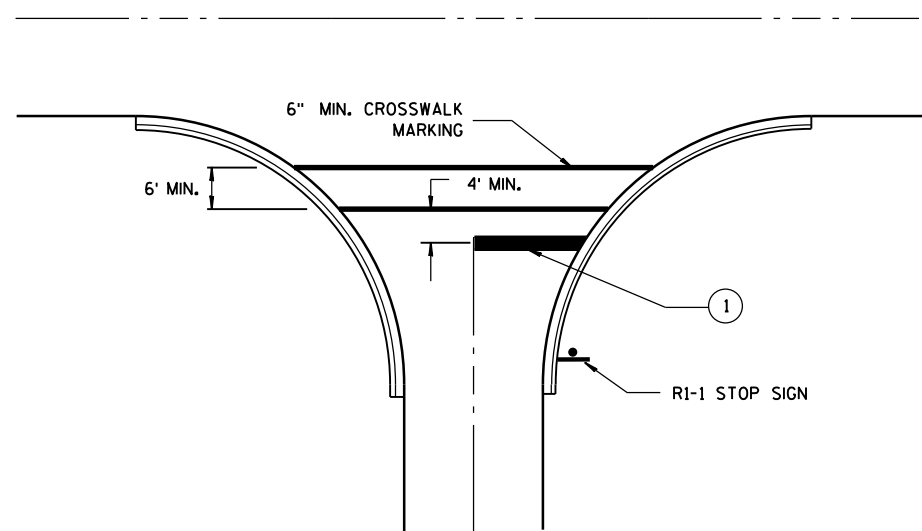
APPROVED
8/2013 /S/ Travis Feltes
DATE STATE TRAFFIC ENGINEER OF DESIGN
FHWA



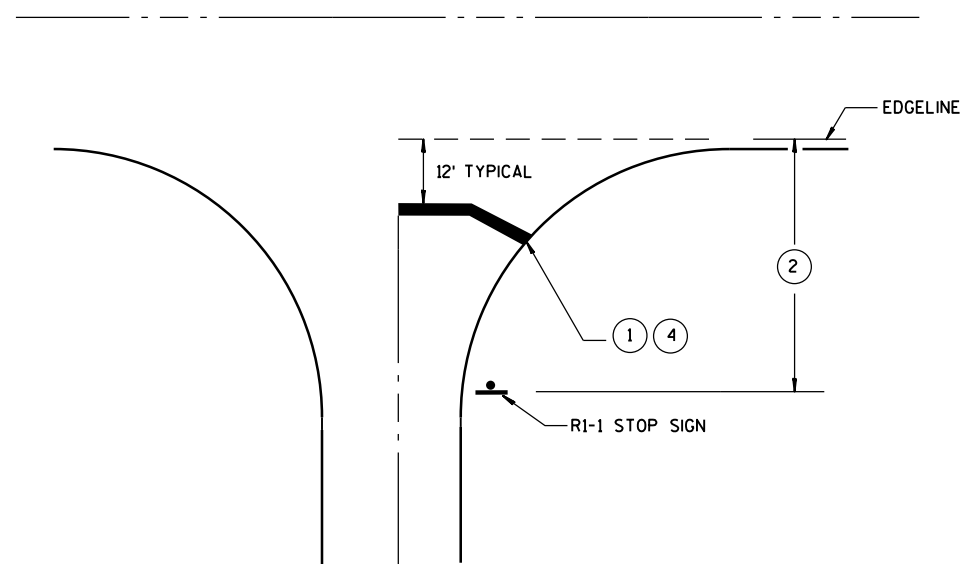
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH RIGHT TURN LANE**



**TYPICAL STOP LINE PAVEMENT MARKING
FOR SIDEROADS WITH CROSSWALK MARKING**



**TYPICAL STOP LINE PAVEMENT MARKING
WITHOUT CURB AND GUTTER**

GENERAL NOTES

- 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).

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

FHWA

/S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER

GENERAL NOTES

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

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS IN URBAN AREAS, 36" X 36" SIGNS MAY BE USED IF APPROVED BY DISTRICT TRAFFIC UNIT.

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

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

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.

W20-1A AND G20-2A SIGNS ARE NOT REQUIRED IF THE WORK AREA IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT. G20-2A SIGNS MAY ALSO BE OMITTED IF DURATION OF WORK IS LESS THAN 7 CONTINUOUS DAYS AND NIGHTS.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

TABLE A

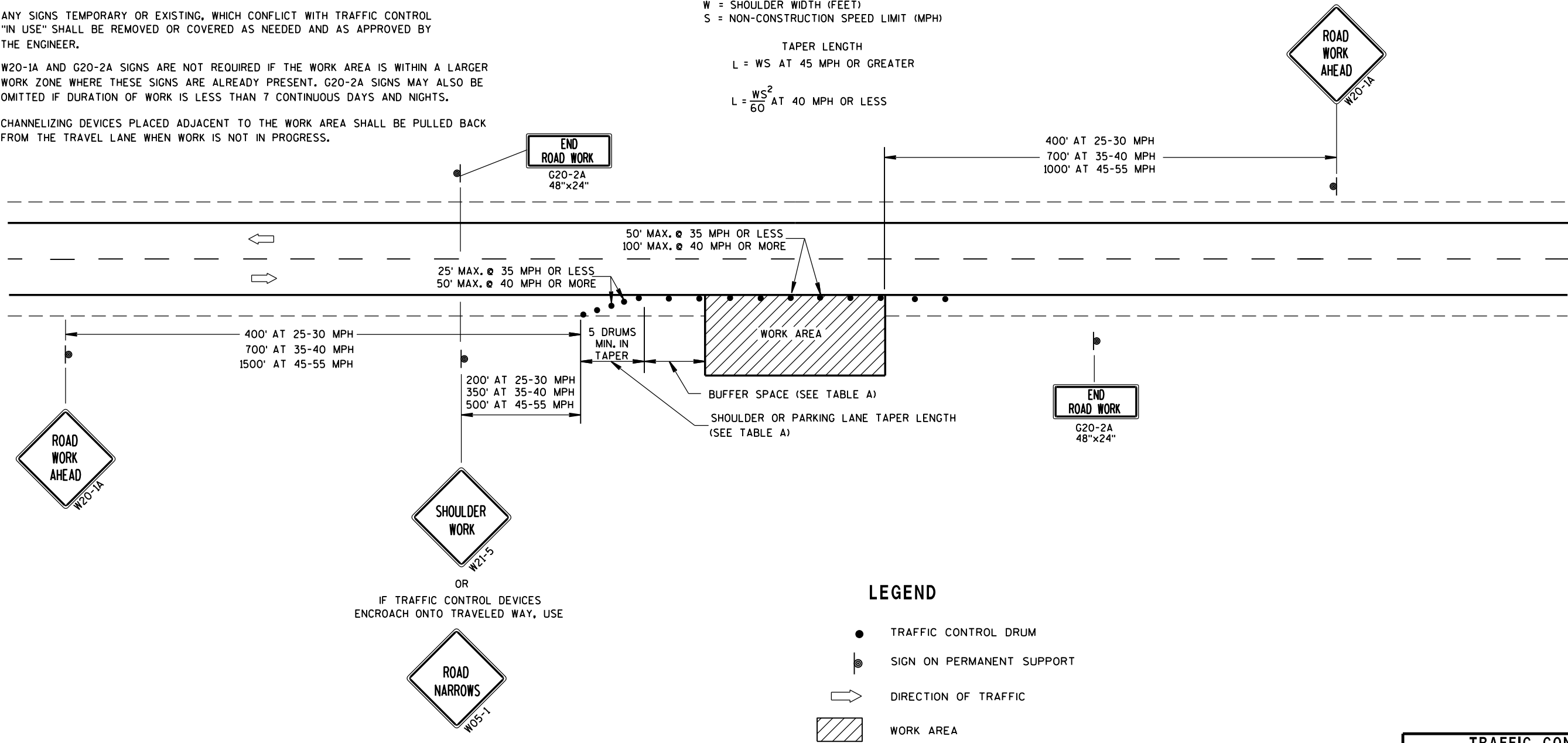
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

W = SHOULDER WIDTH (FEET)
S = NON-CONSTRUCTION SPEED LIMIT (MPH)

TAPER LENGTH
L = WS AT 45 MPH OR GREATER

$L = \frac{WS^2}{60}$ AT 40 MPH OR LESS

SHOULDER TAPER LENGTH = $\frac{1}{3}L$



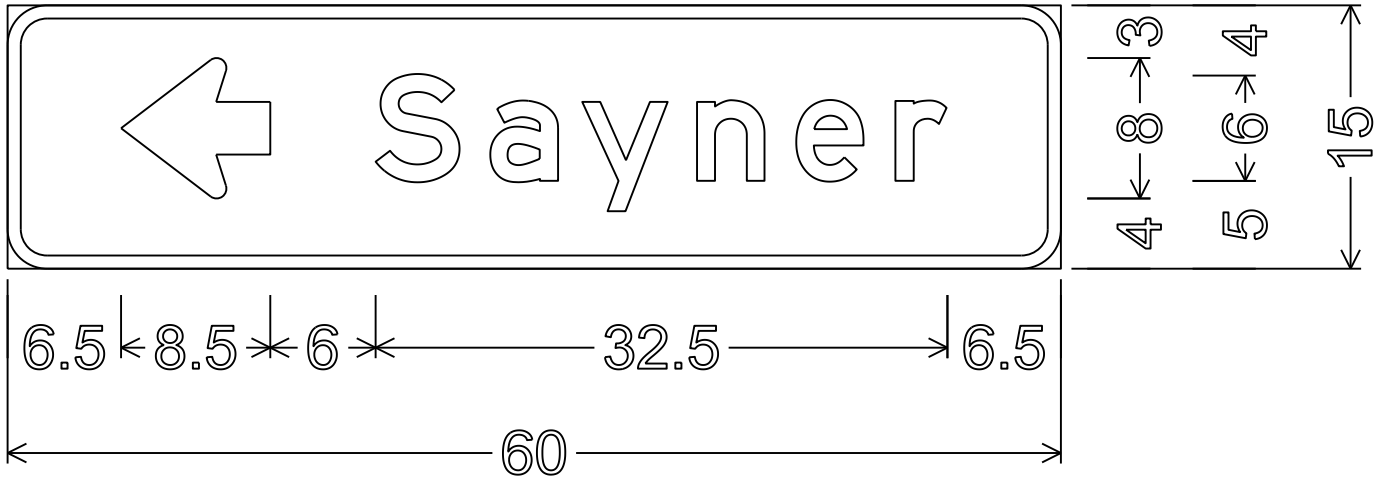
LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ▨ WORK AREA

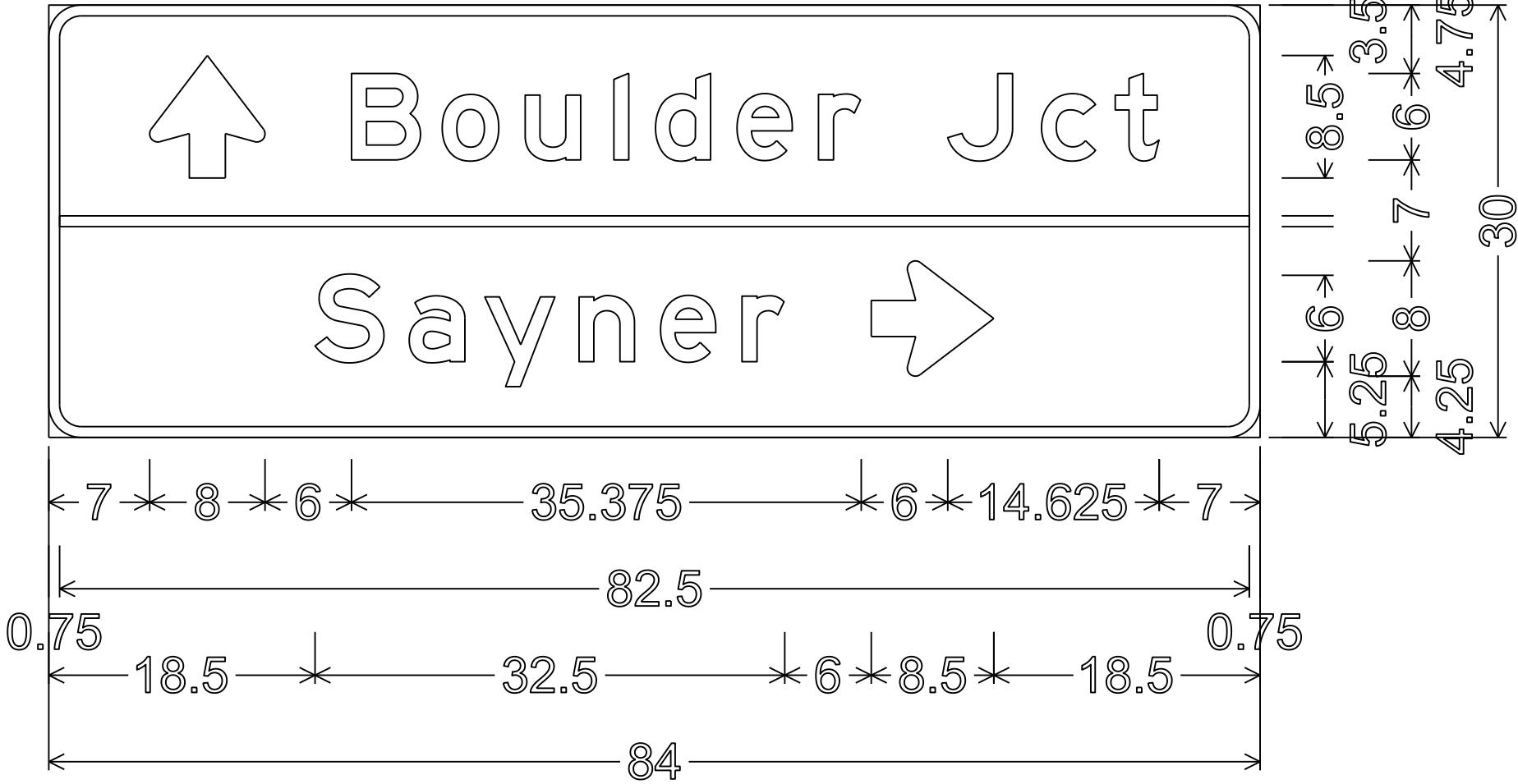
TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 14, 2015 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	

NOTES

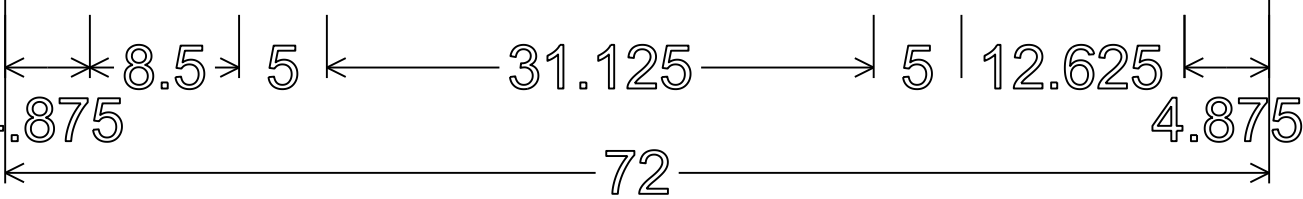
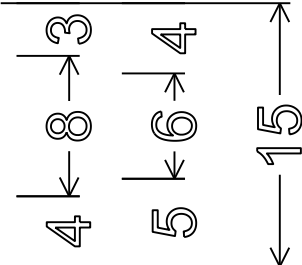
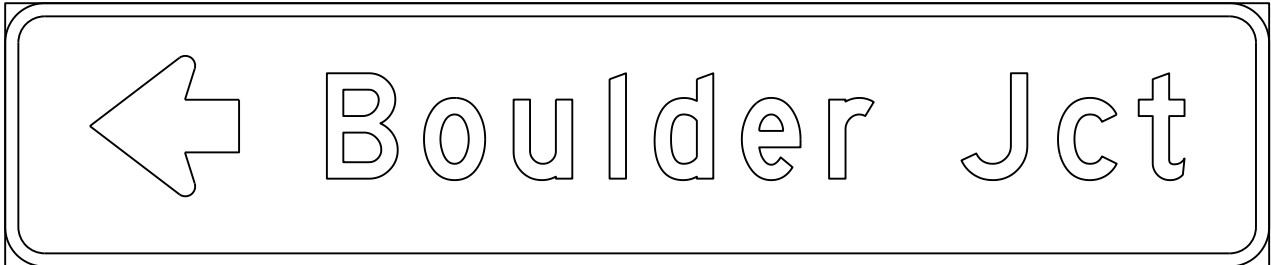
- 1. All Signs Type II - Type H Reflective
- 2. Color:
Background - Green
Message - White
- 3. Message Series - E



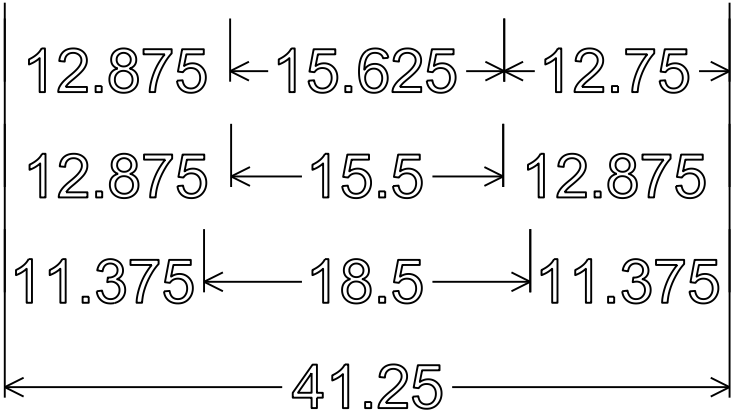
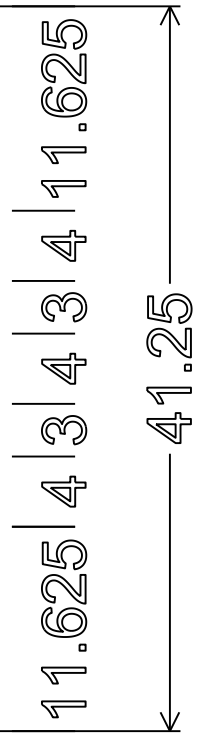
D1-1;
2.250" Radius, 0.750" Border,



D1-2;
2.250" Radius, 0.750" Border



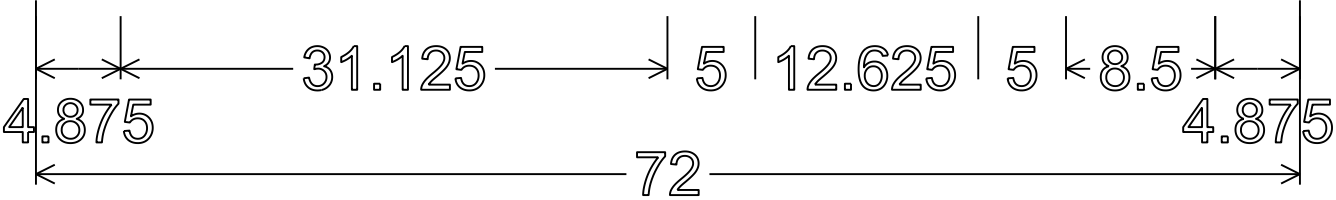
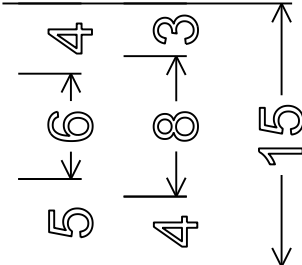
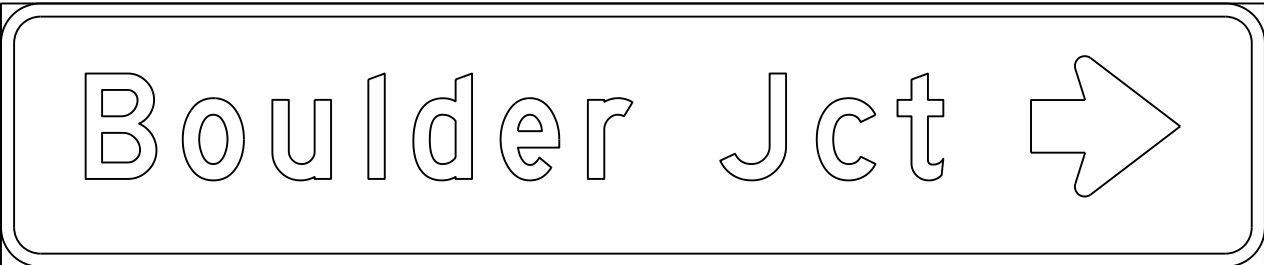
D1-1;
2.250" Radius, 0.750" Border



30.000" across sides 1.375" Radius, 0.625" Border, 0.500" Indent

NOTES

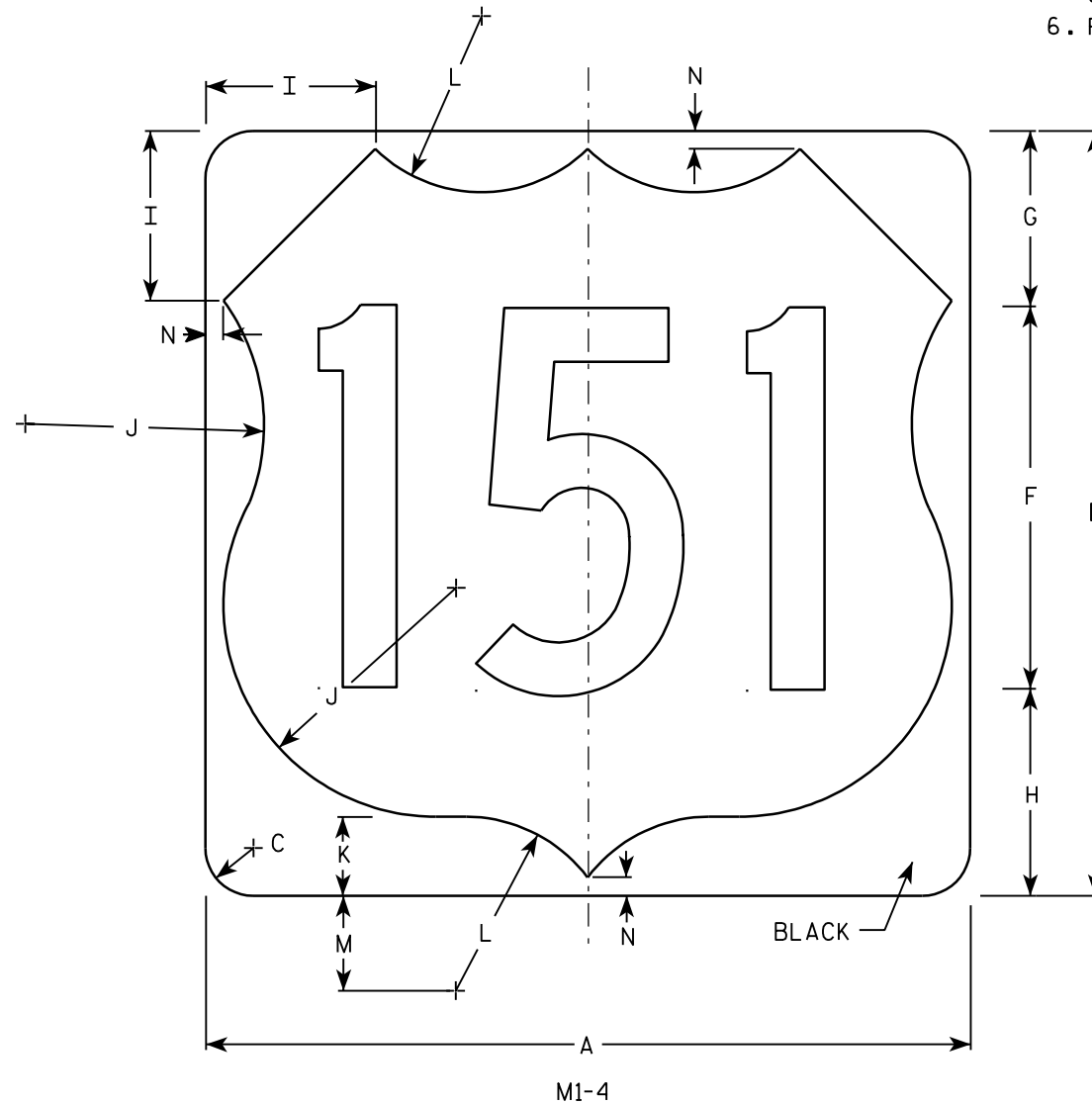
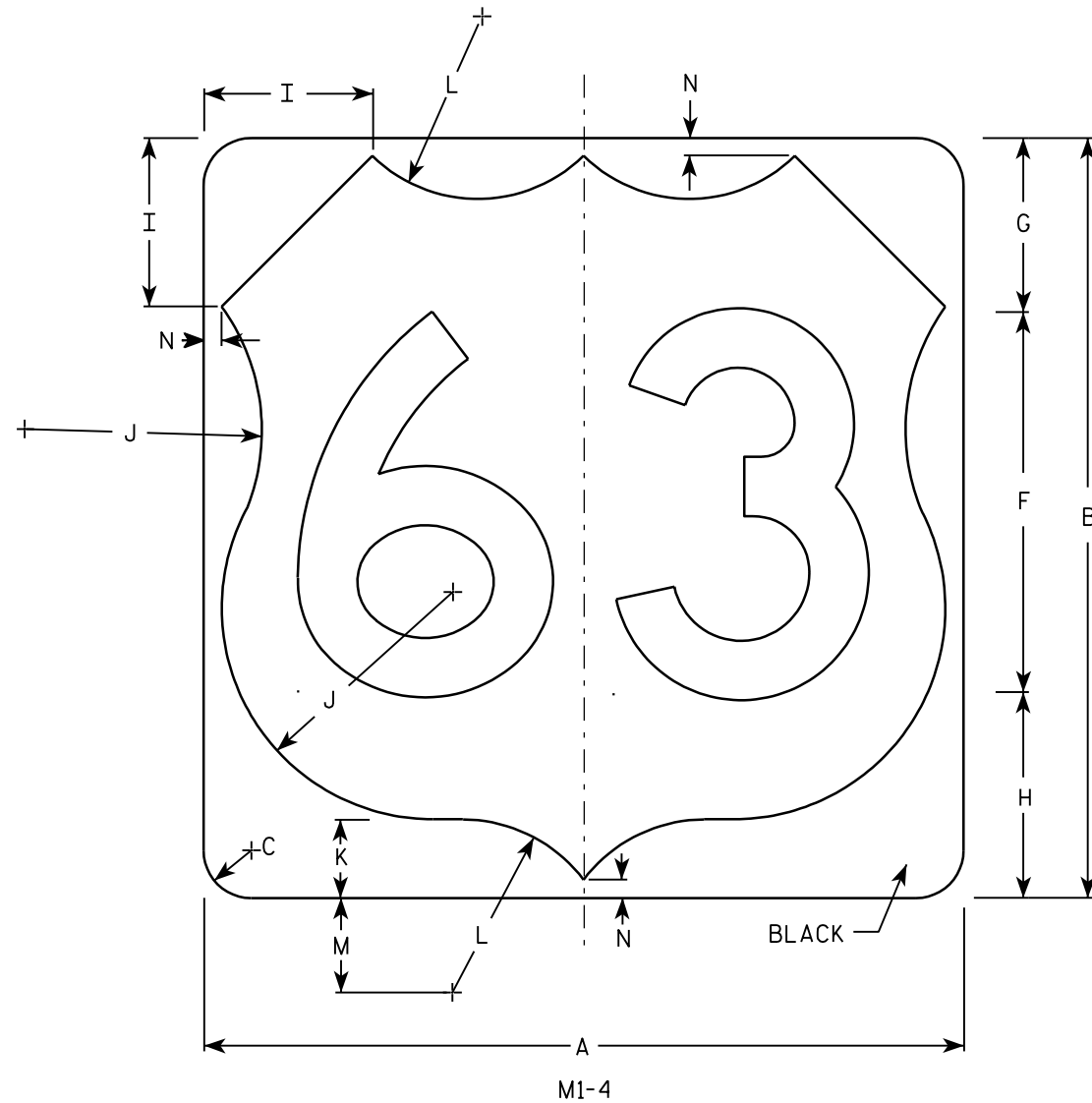
- 1. All Signs Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - D



D1-1;
2.250" Radius, 0.750" Border

NOTES

1. Sign is Type II - See Note 6 - reference
WIS DOT Standard Specification for HIGHWAY
and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White & Black - See Note 6
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. Substitute appropriate numerals and adjust
spacing as per Plate A10-1.
6. Permanent Signs
Background - Type H Reflective
Detour or other temporary signs
Background - Reflective



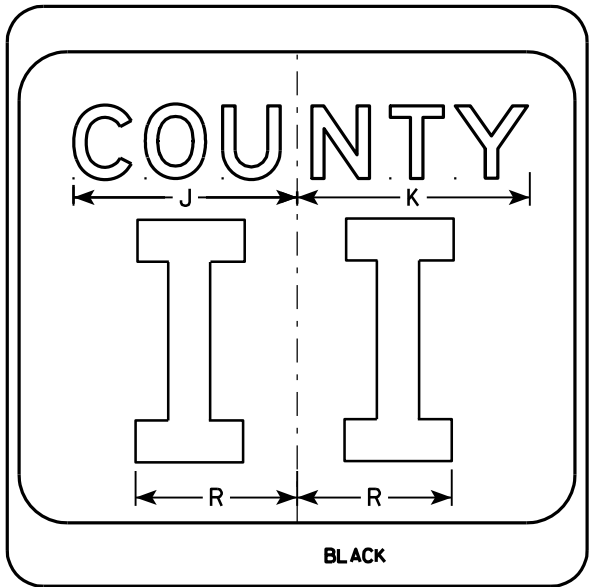
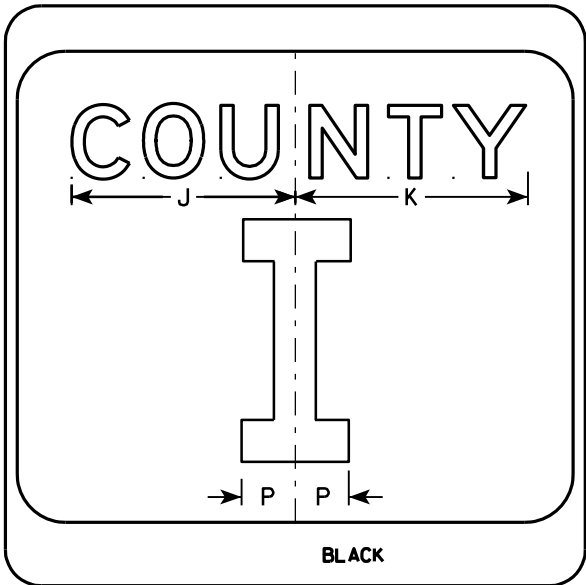
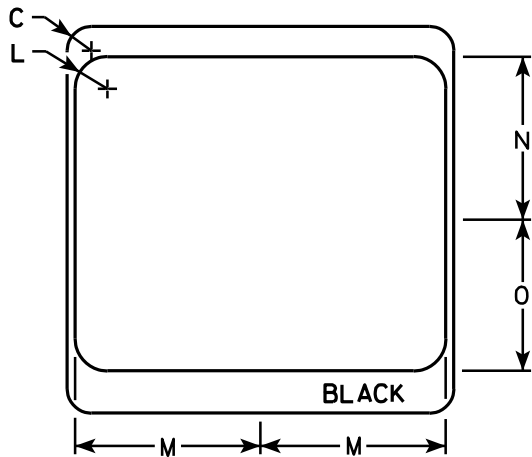
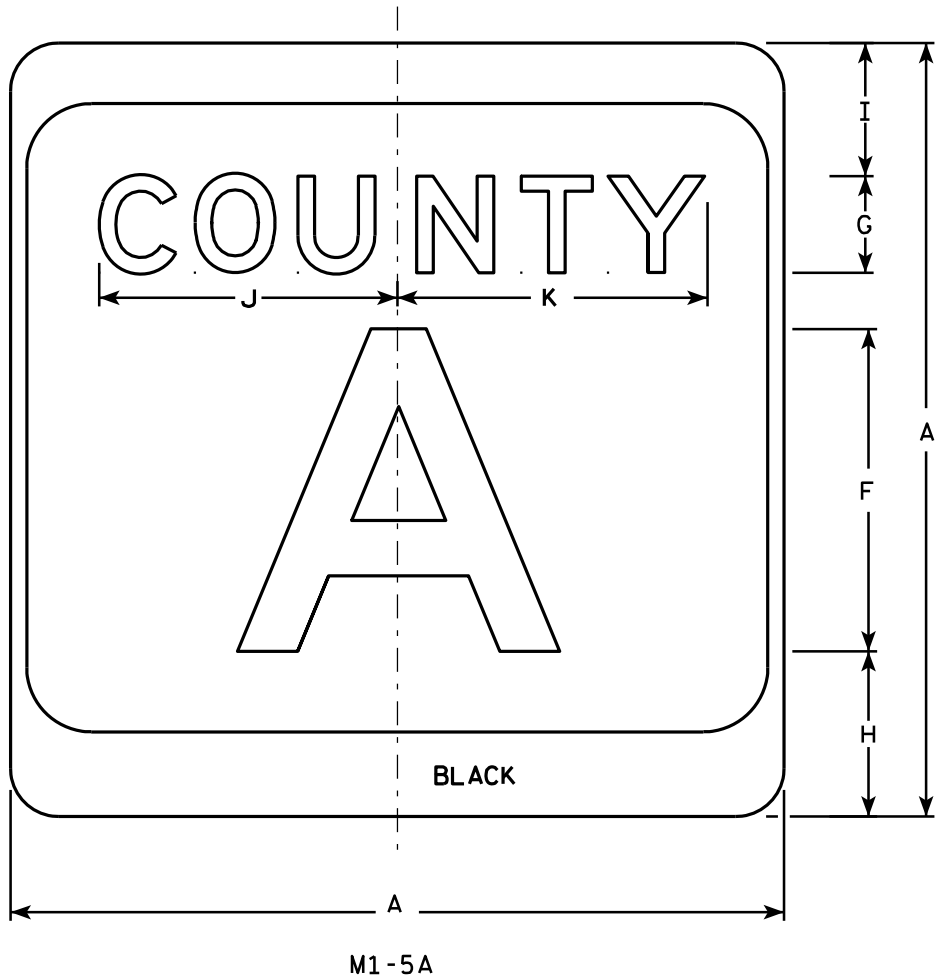
Metric equivalent
for this sign is:

SIZE	
1	
2	600 mm X 600 mm
3	900 mm X 900 mm
4	900 mm X 900 mm
5	900 mm X 900 mm

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	Areq sq. ft.	Areq m ²
1																												
2	24	24	1 1/2			12	5 1/2	6 1/2	5	7 1/2	2 1/2	5 1/2	3	1/2													4.0	.36
3	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
4	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81
5	36	36	2 1/4			18	8 1/4	9 1/4	7 1/4	11 1/4	3 3/4	8 1/4	4 1/2	3/4													9.0	.81

PROJECT NO: HWY: COUNTY: SHEET NO: E

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

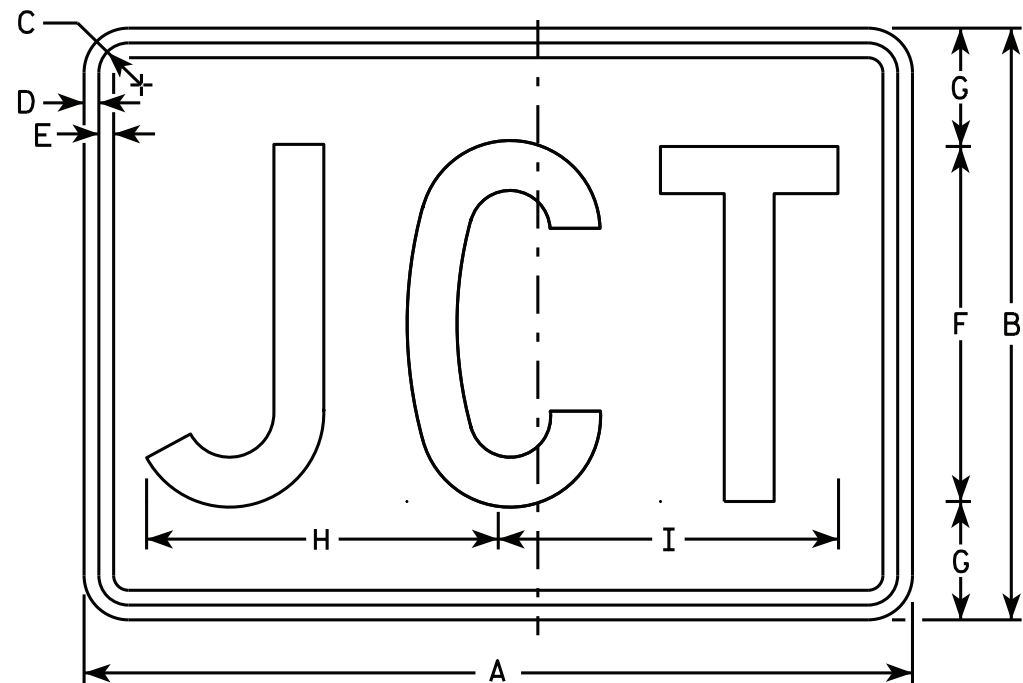
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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CTH MARKER
M1-5A FOR ASSEMBLIES

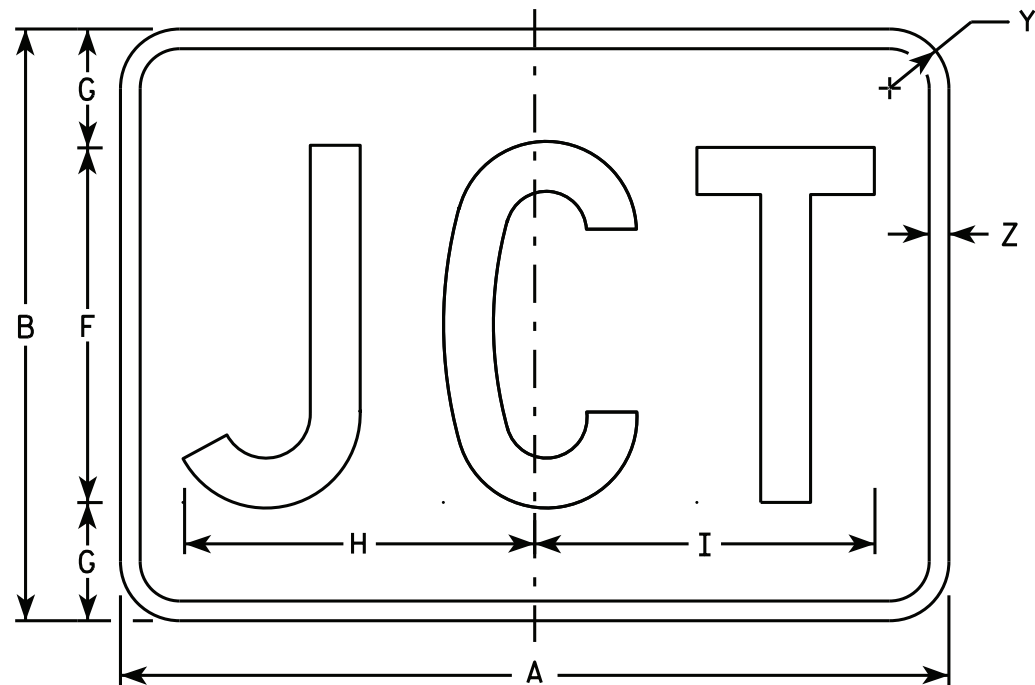
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 9/27/11 PLATE NO. M1-5A.8



M2-1
MM2-1
MP2-1



MB2-1
MK2-1
MN2-1
MR2-1

NOTES

1. Sign is Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
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. M2-1 Background - White
Message - Black
MB2-1 Background - Blue
Message - White
MK2-1 Background - Green
Message - White
MM2-1 Background - White
Message - Green
MN2-1 Background - Brown
Message - White
MP2-1 Background - White
Message - Blue
MR2-1 Background - Brown
Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21	15	1 1/8	3/8	3/8	9	3	8 7/8	8 5/8																1 1/2	1/2	2.20
3	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
4	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40
5	30	21	1 1/8	3/8	3/8	13	4	12 7/8	12 3/8																1 1/2	1/2	4.40

PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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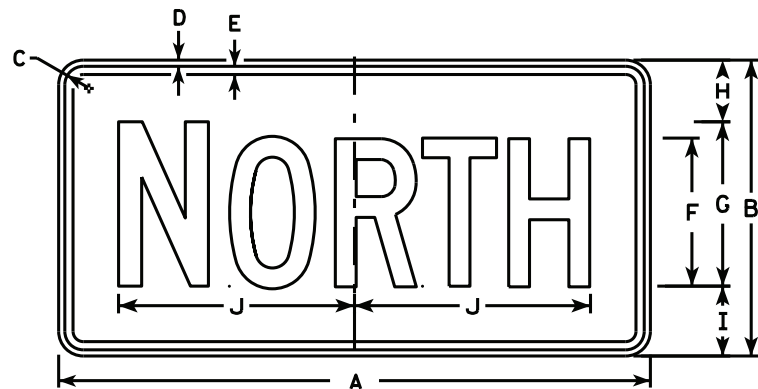
STANDARD SIGN

M2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Raush*
for State Traffic Engineer

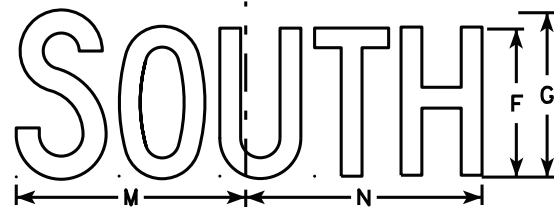
DATE 10/15/15 PLATE NO. M2-1.12



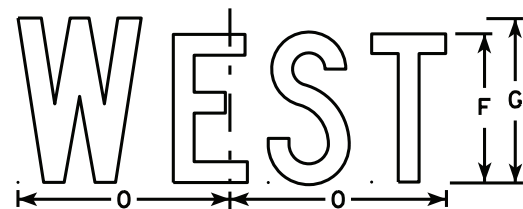
M3-1
MM3-1
MP3-1



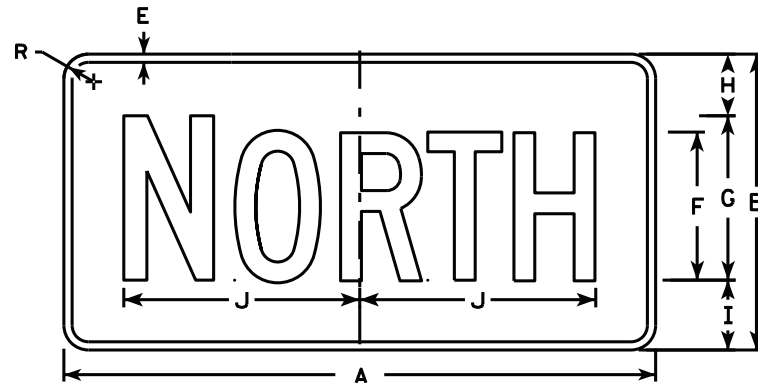
M3-2
MM3-2
MP3-2



M3-3
MM3-3
MP3-3



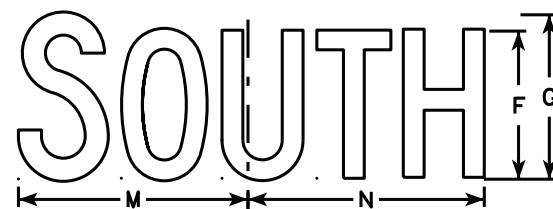
M3-4
MM3-4
MP3-4



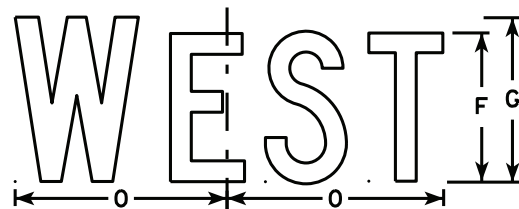
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
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. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

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	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

PROJECT NO: HWY: COUNTY: SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\M31.DGN

PLOT DATE : 15-OCT-2015 12:16

PLOT BY : **...plotuser...** PLOT NAME :

PLOT SCALE : 18.607113:1.000000

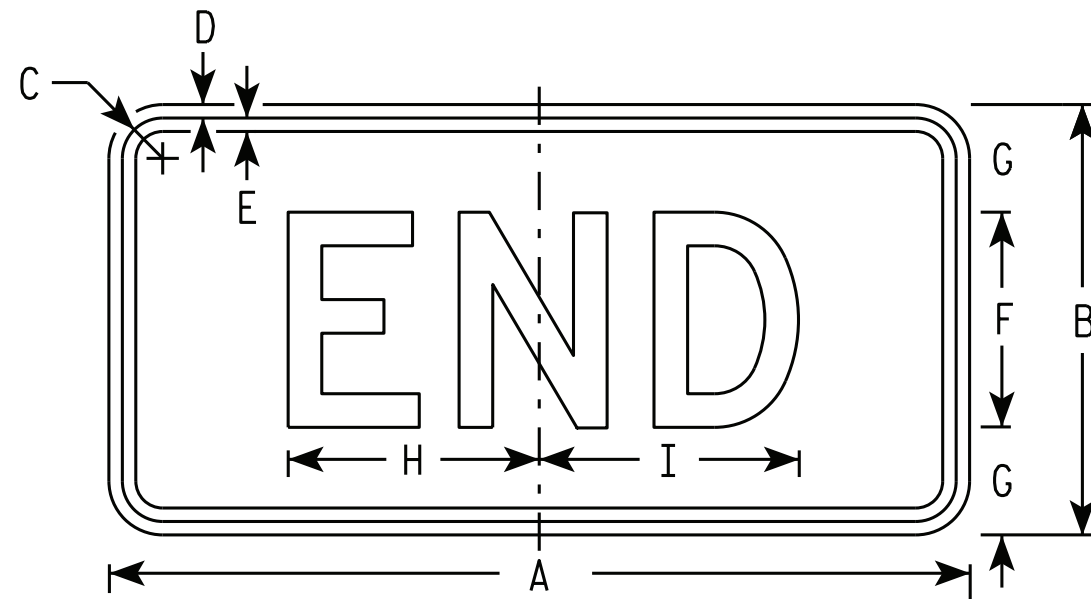
WISDOT/CADDs SHEET 42

STANDARD SIGNS
M3-1 thru M3-4
SERIES

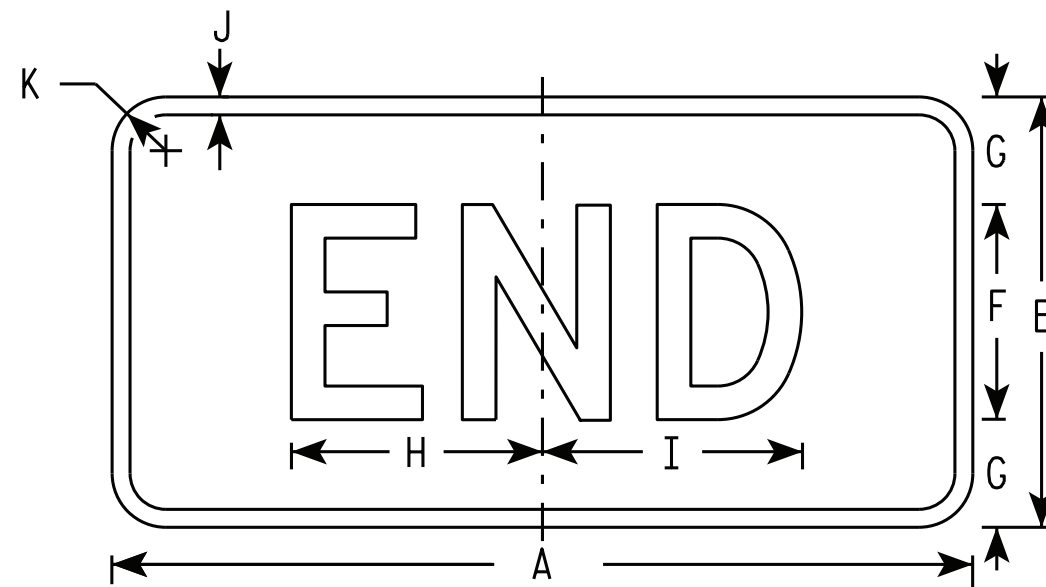
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M3-1.14



M4-6
MM4-6
MP4-6



MB4-6
MK4-6
MN4-6
MR4-6

NOTES

- Sign is Type II - Type H
- Color:
Background - See note 5
Message - See note 5
- Message Series - D
- 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.
- M4-6 Background - White
Message - Black
MB4-6 Background - Blue
Message - White
MK4-6 Background - Green
Message - White
MM4-6 Background - White
Message - Green
MN4-6 Background - Brown
Message - White
MP4-6 Background - White
Message - Blue
MR4-6 Background - Brown
Message - Yellow

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	O	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	7	7 1/4	1/2	1 1/2																2.00
3	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
4	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5
5	36	18	1 1/8	3/8	1/2	9	4 1/2	12	11 7/8	1/2	1 1/2																4.5

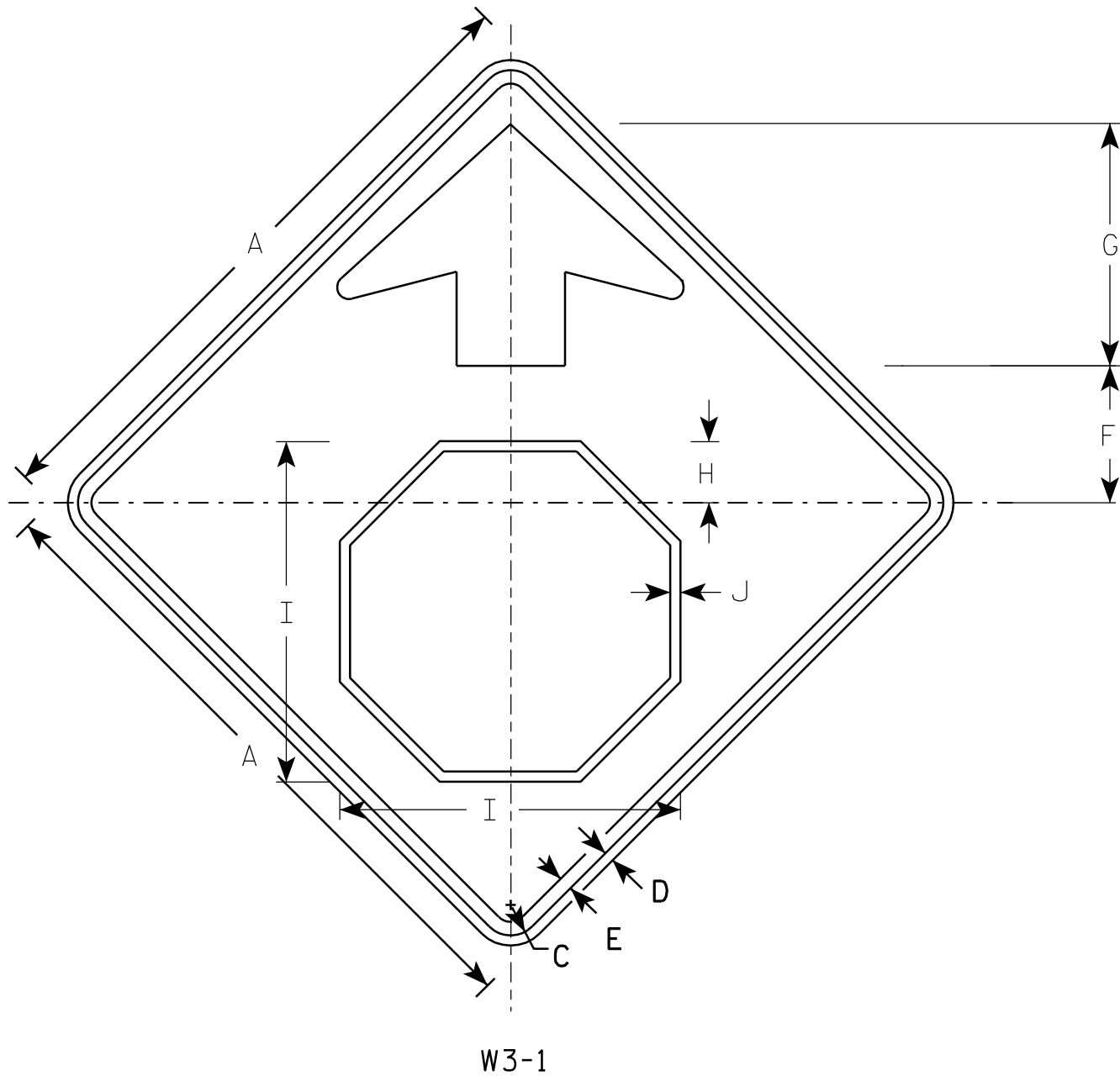
PROJECT NO: HWY: COUNTY: SHEET NO: E

STANDARD SIGN M4-6

WISCONSIN DEPT OF TRANSPORTATION

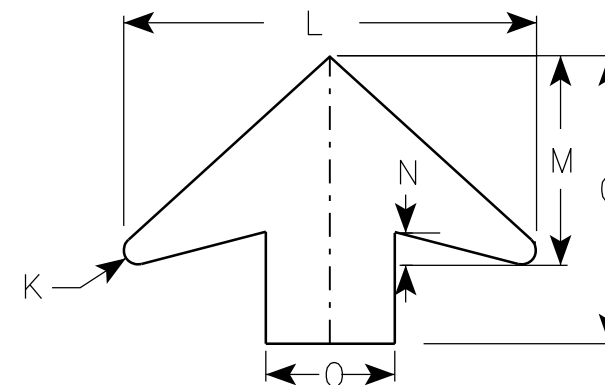
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M4-7.9



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

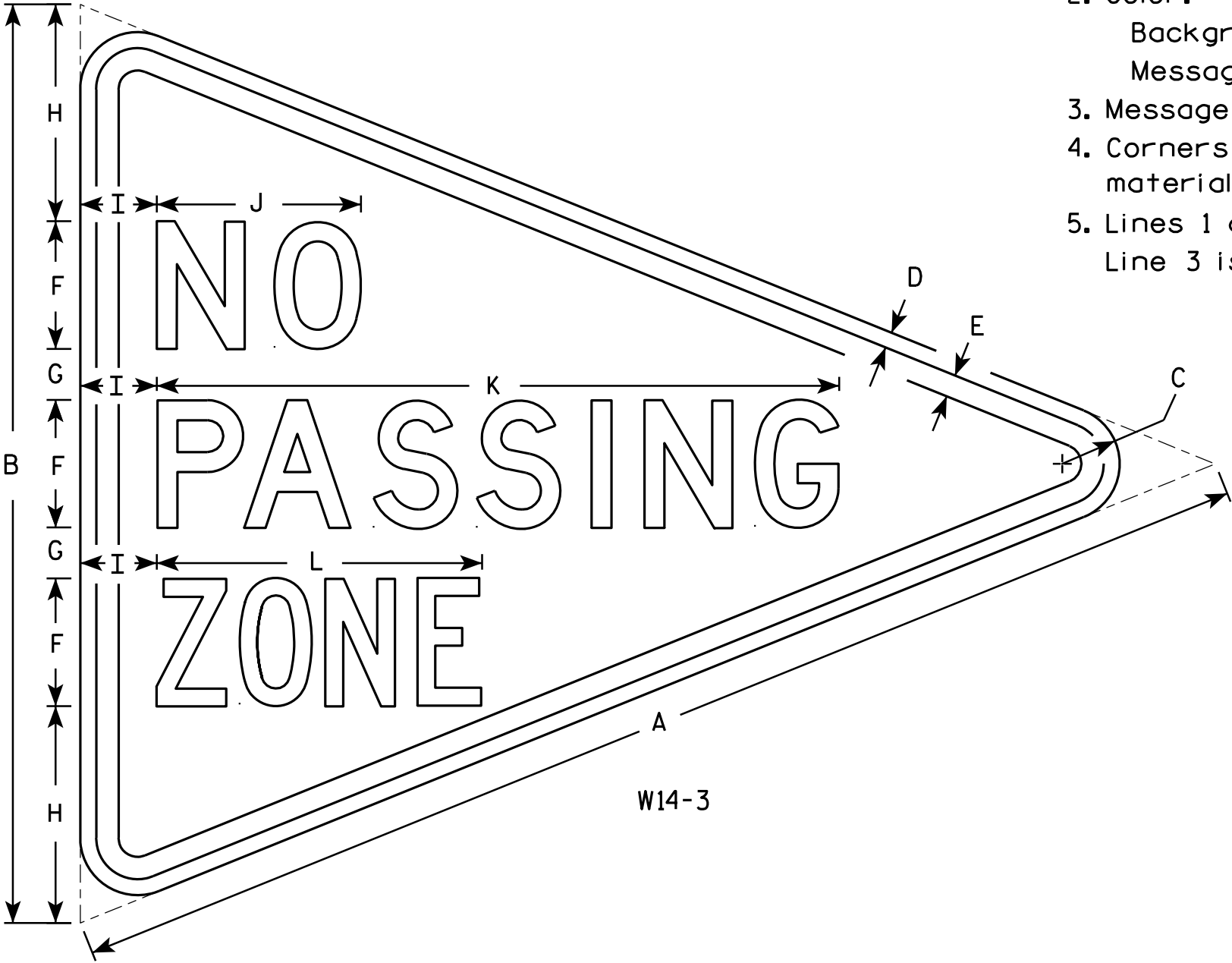
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 6/7/10 PLATE NO. W3-1.12

SHEET NO:

E

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 - See note 5
- 4. Corners and borders shall be rounded on all base materials for this sign.
- 5. Lines 1 and 2 are Series D.
Line 3 is series C.



W14-3

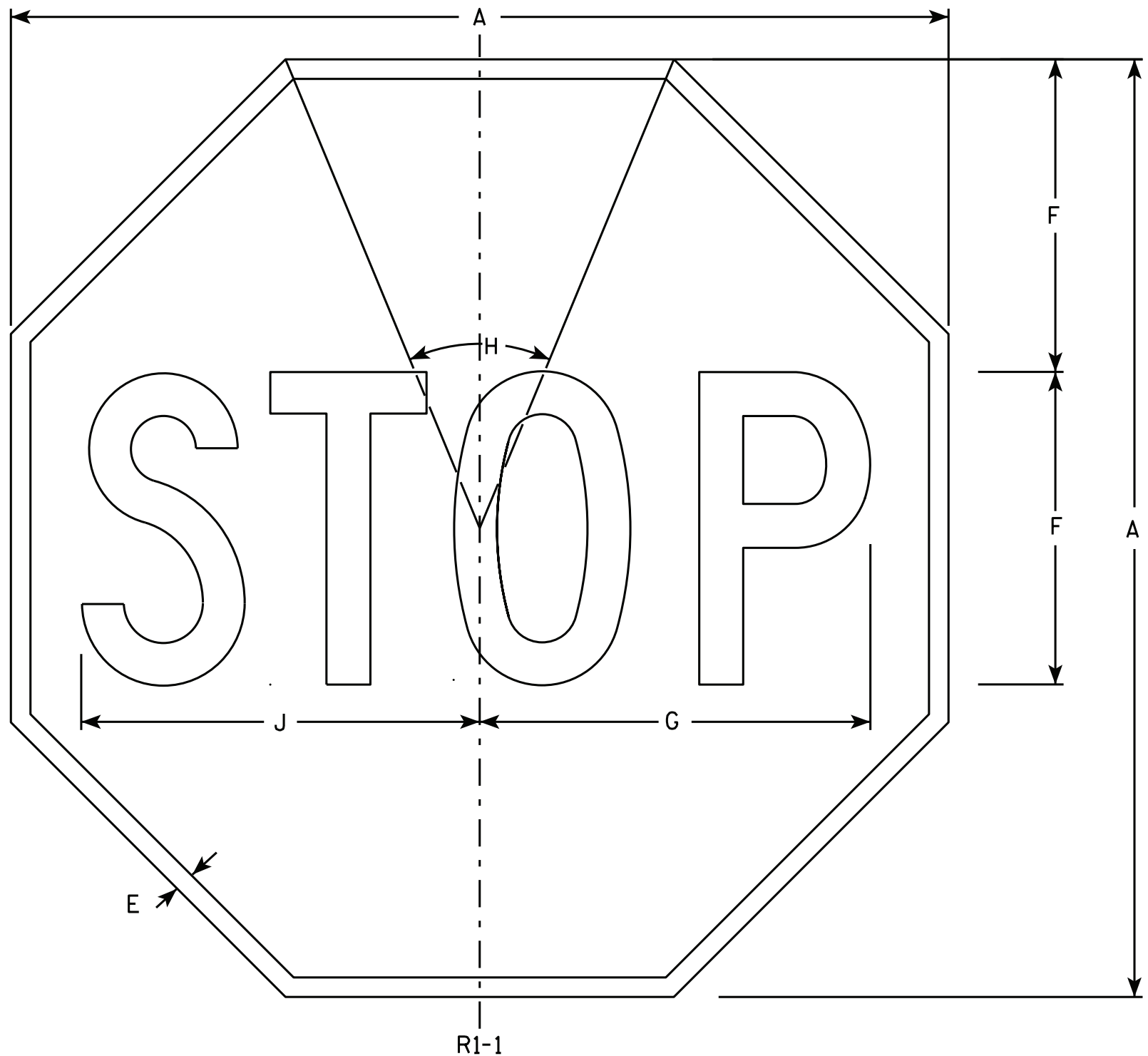
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
2M	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															6.0
3	64	48	3	3/4	1 1/4	6	3	12	4	10 3/4	33 5/8	16 1/2															10.7
4																											
5																											

STANDARD SIGN
W14-3

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 6/7/10 PLATE NO. W14-3.9



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

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				$\frac{5}{8}$	10	12 $\frac{1}{2}$	45°		12 $\frac{3}{4}$																	5.18
2S	30				$\frac{5}{8}$	10	12 $\frac{1}{2}$	45°		12 $\frac{3}{4}$																	5.18
2M	36				$\frac{3}{4}$	12	15	45°		15 $\frac{3}{8}$																	7.46
3	36				$\frac{3}{4}$	12	15	45°		15 $\frac{3}{8}$																	7.46
4	48				1	16	20	45°		20 $\frac{1}{2}$																	13.25
5	48				1	16	20	45°		20 $\frac{1}{2}$																	13.25
6	18				$\frac{3}{8}$	6	7 $\frac{3}{4}$	45°		7 $\frac{3}{4}$																	1.86
7	12				$\frac{1}{4}$	4	5	45°		5 $\frac{1}{8}$																	0.78

STANDARD SIGN
R1-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 11/12/15 PLATE NO. R1-1.12

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

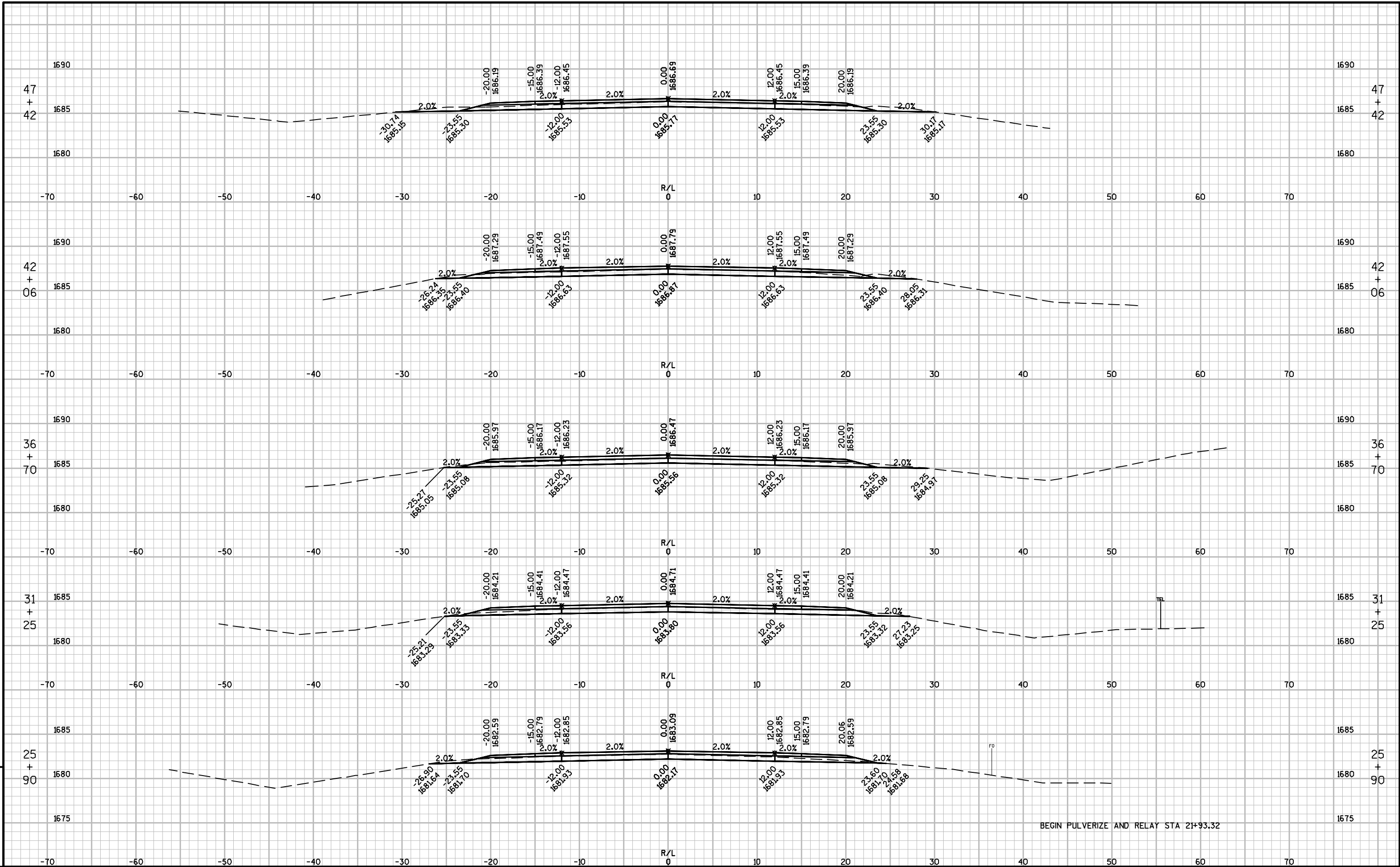
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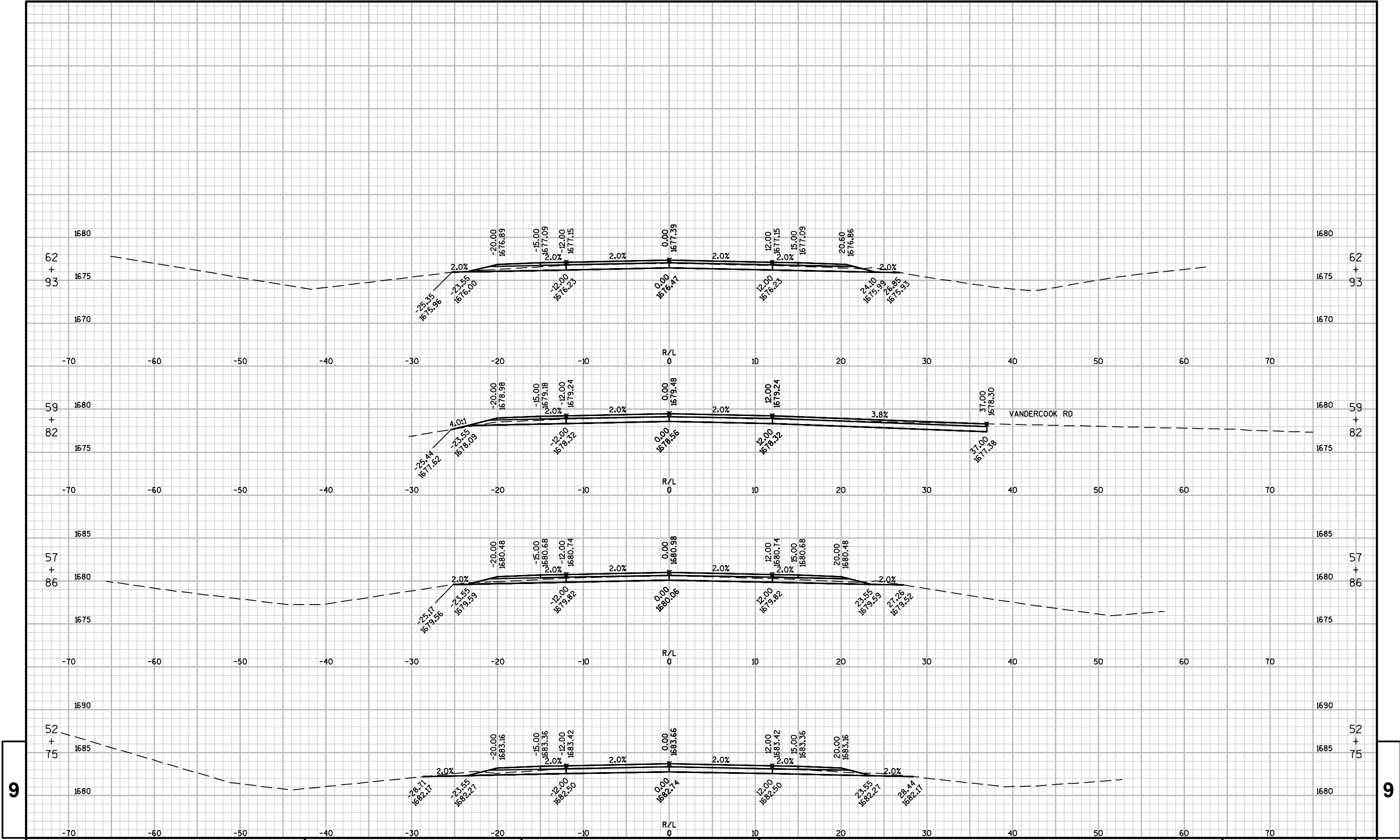
STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	
154+53.2	0.00	35.14	0.00	0	0	0	0	0
155+00	46.80	38.85	0.00	64	0	64	0	64
156+00	100.00	49.99	1.75	165	3	229	4	225
157+00	100.00	60.96	0.00	205	3	434	8	426
157+69	69.00	50.58	7.09	143	9	577	19	557
158+00	31.00	59.32	0.38	63	4	640	25	615
159+00	100.00	82.30	0.00	262	1	902	26	876
159+60	60.00	73.26	11.07	173	12	1,075	41	1,034
160+00	40.00	125.91	0.00	148	8	1,222	51	1,171
160+50	50.00	98.51	10.67	208	10	1,430	64	1,366
160+85	35.00	62.43	18.96	104	19	1,534	88	1,447
161+00	15.00	69.28	0.00	37	5	1,571	94	1,477
161+79.1	79.10	72.92	0.89	208	1	1,779	96	1,683
162+00	20.90	70.54	1.17	56	1	1,835	97	1,738
163+00	100.00	59.86	5.54	241	12	2,076	112	1,964
163+85.71	85.71	58.31	2.02	188	12	2,264	127	2,137
164+00	14.29	60.00	0.39	31	1	2,295	128	2,167
165+00	100.00	63.97	0.00	230	1	2,525	129	2,396
165+35.71	35.71	59.91	0.00	82	0	2,607	129	2,478

CTH M SUBTOTALS: 2,607 103

STATION	Distance	AREA (SF)		Incremental Vol (CY) (Unadjusted)		Cumulative Vol (CY)		Mass Ordinate
		Cut	Fill	Cut	Fill	Cut 1.00	Expanded Fill 1.25	
198+65.27	0.00	52.99	0.20	0	0	0	0	0
199+00	34.73	73.10	0.00	81	0	81	0	81
199+40	40.00	57.04	10.78	96	8	177	10	167
200+65	0.00	74.74	33.92	0	0	177	10	167
201+00	35.00	76.78	7.56	98	27	276	44	232
201+42	42.00	62.29	7.24	108	12	384	58	326
201+50	8.00	60.25	8.94	18	2	402	61	341
201+67.96	17.96	63.46	0.17	41	3	443	65	378

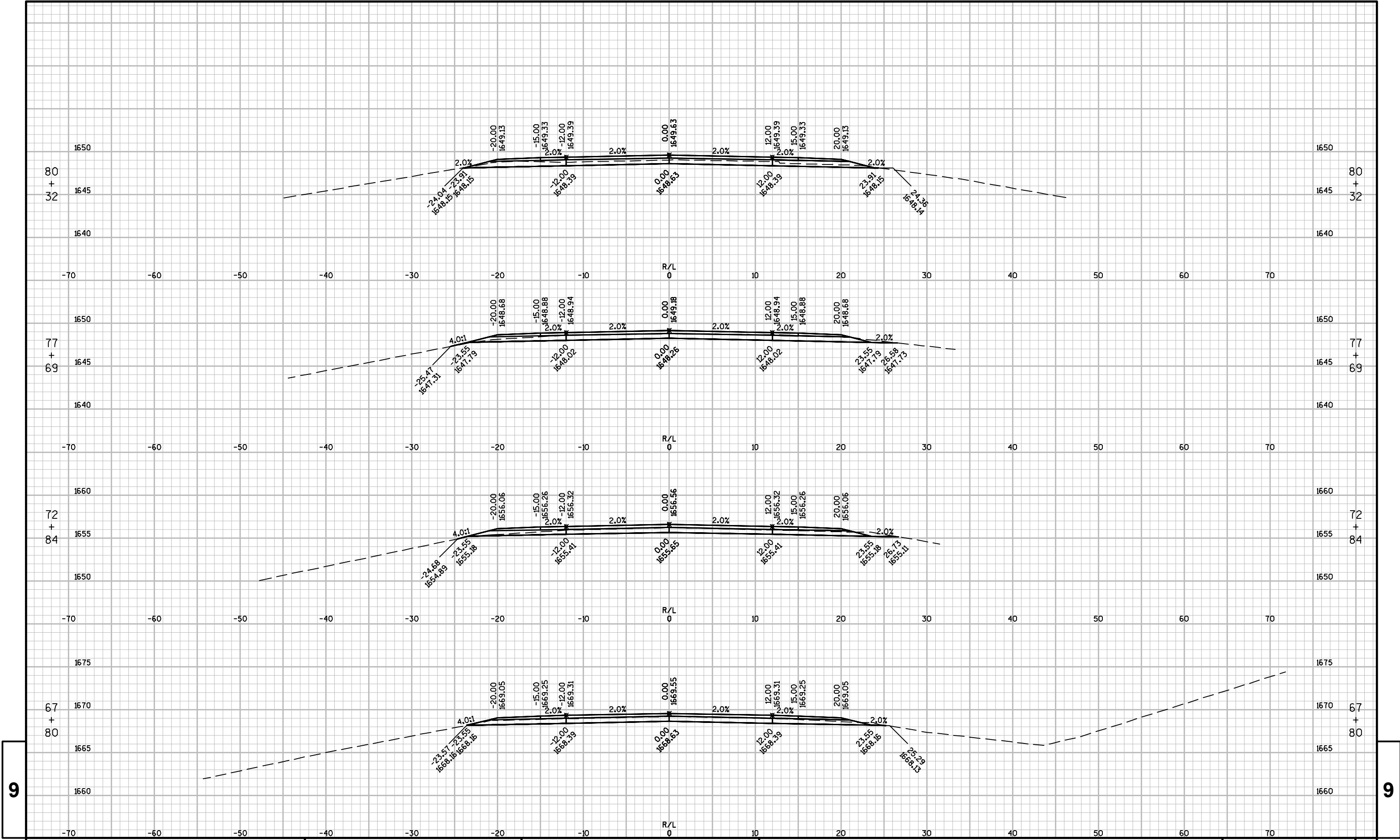
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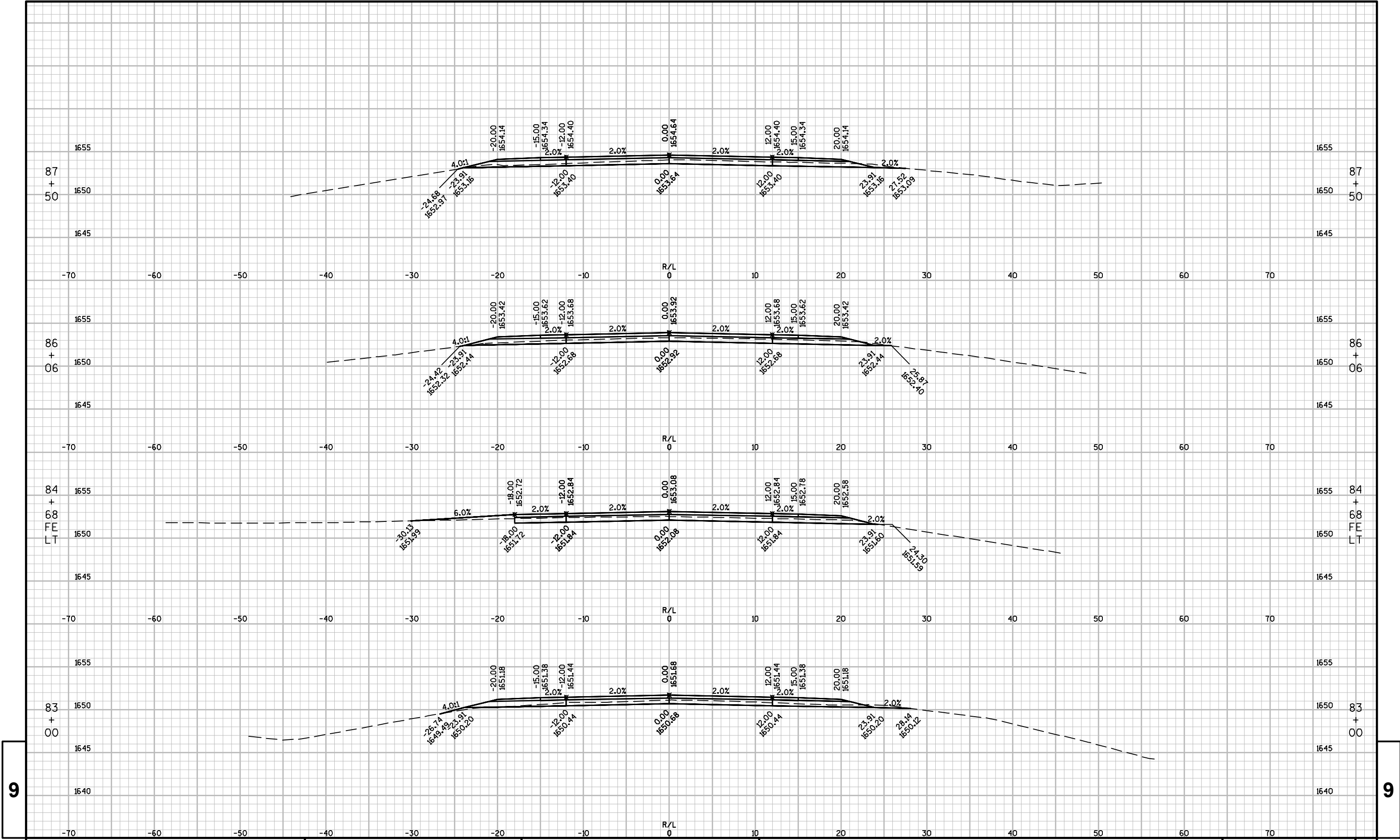
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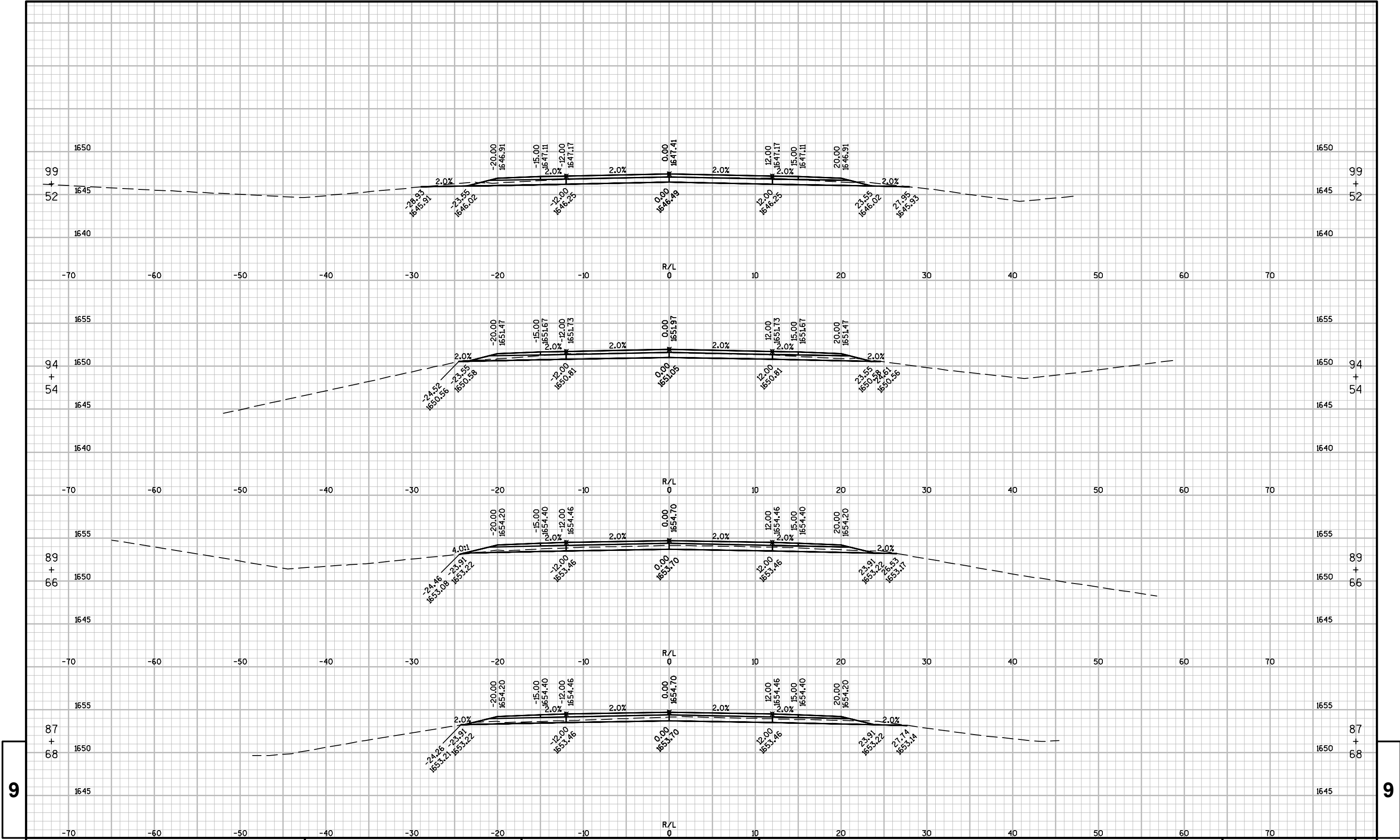
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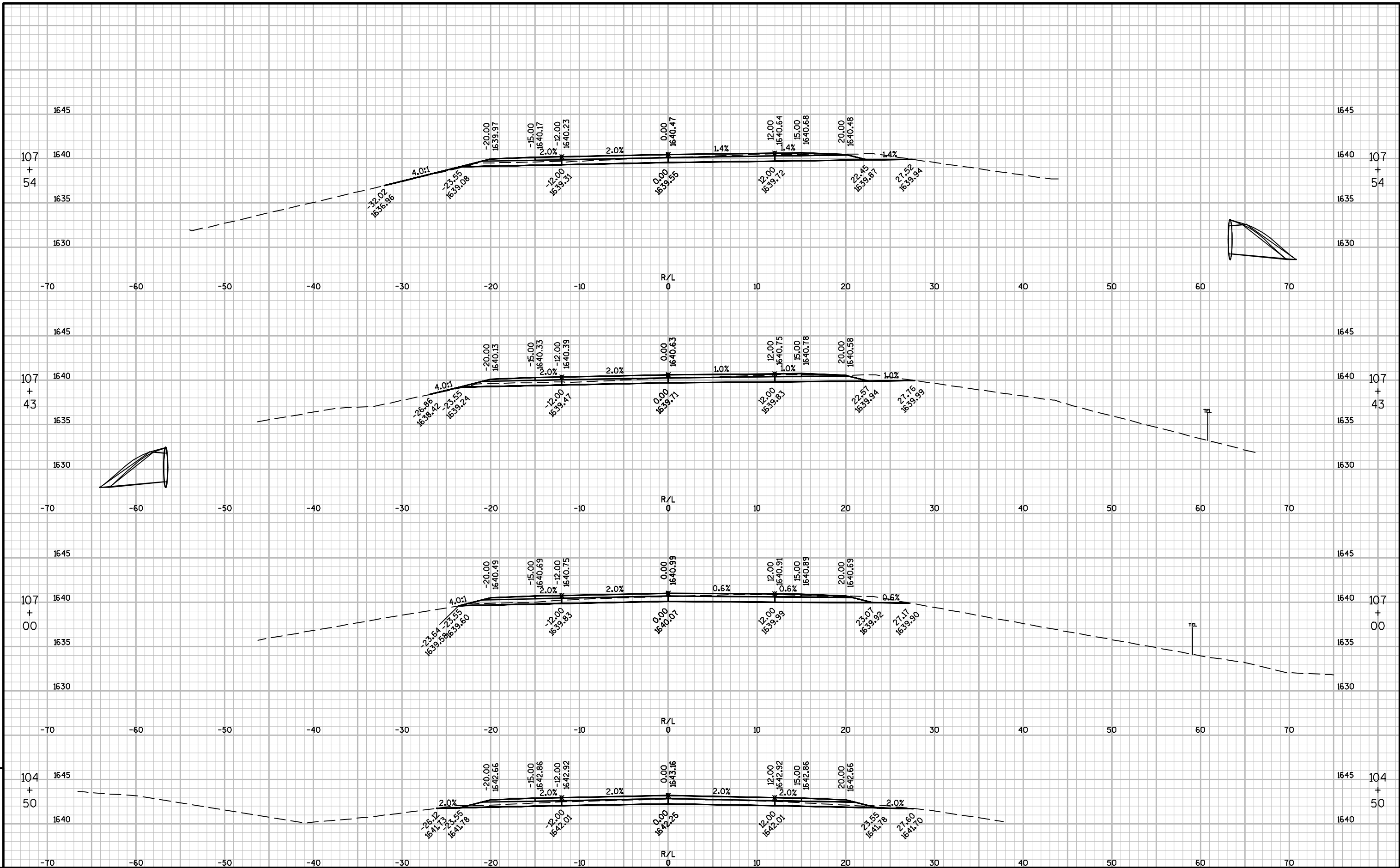
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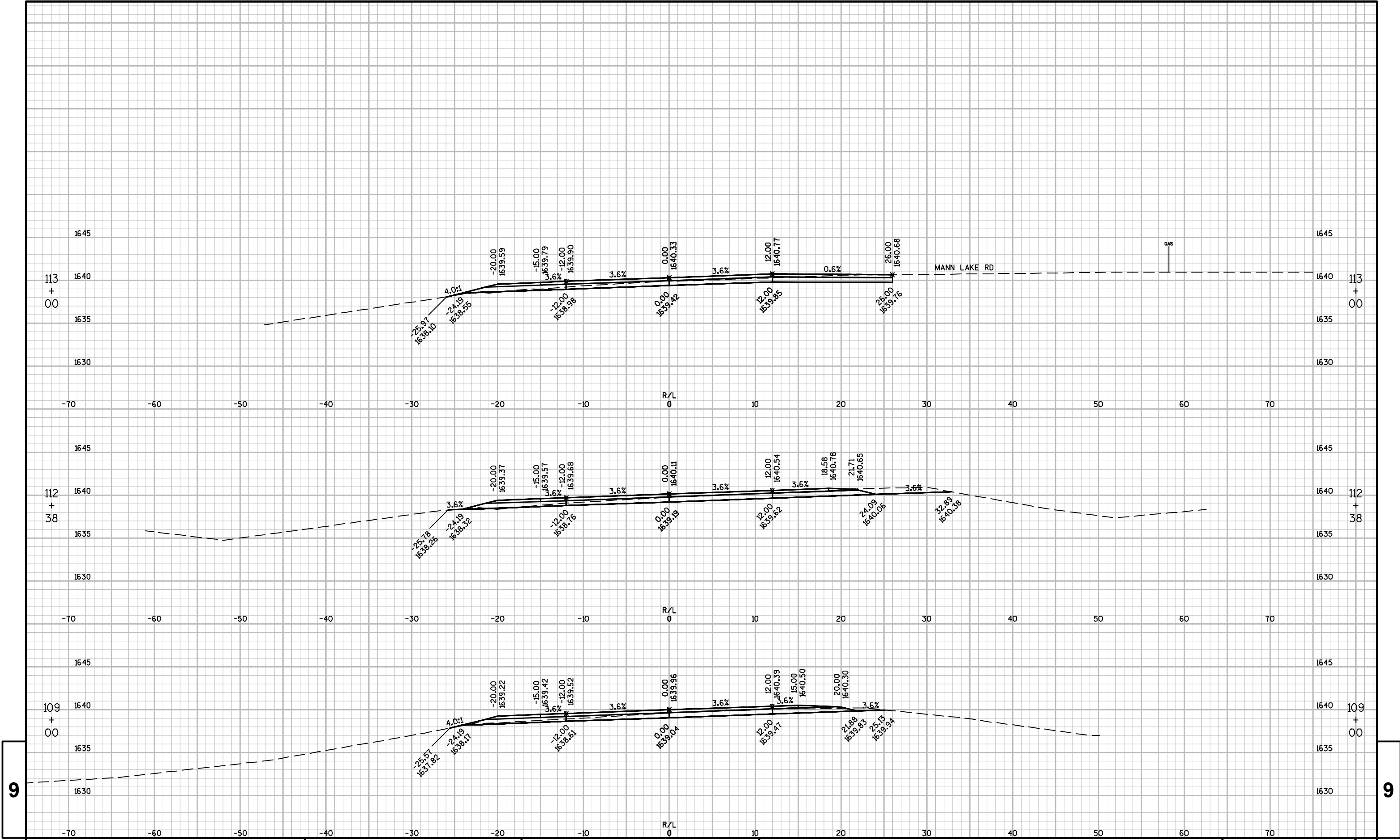


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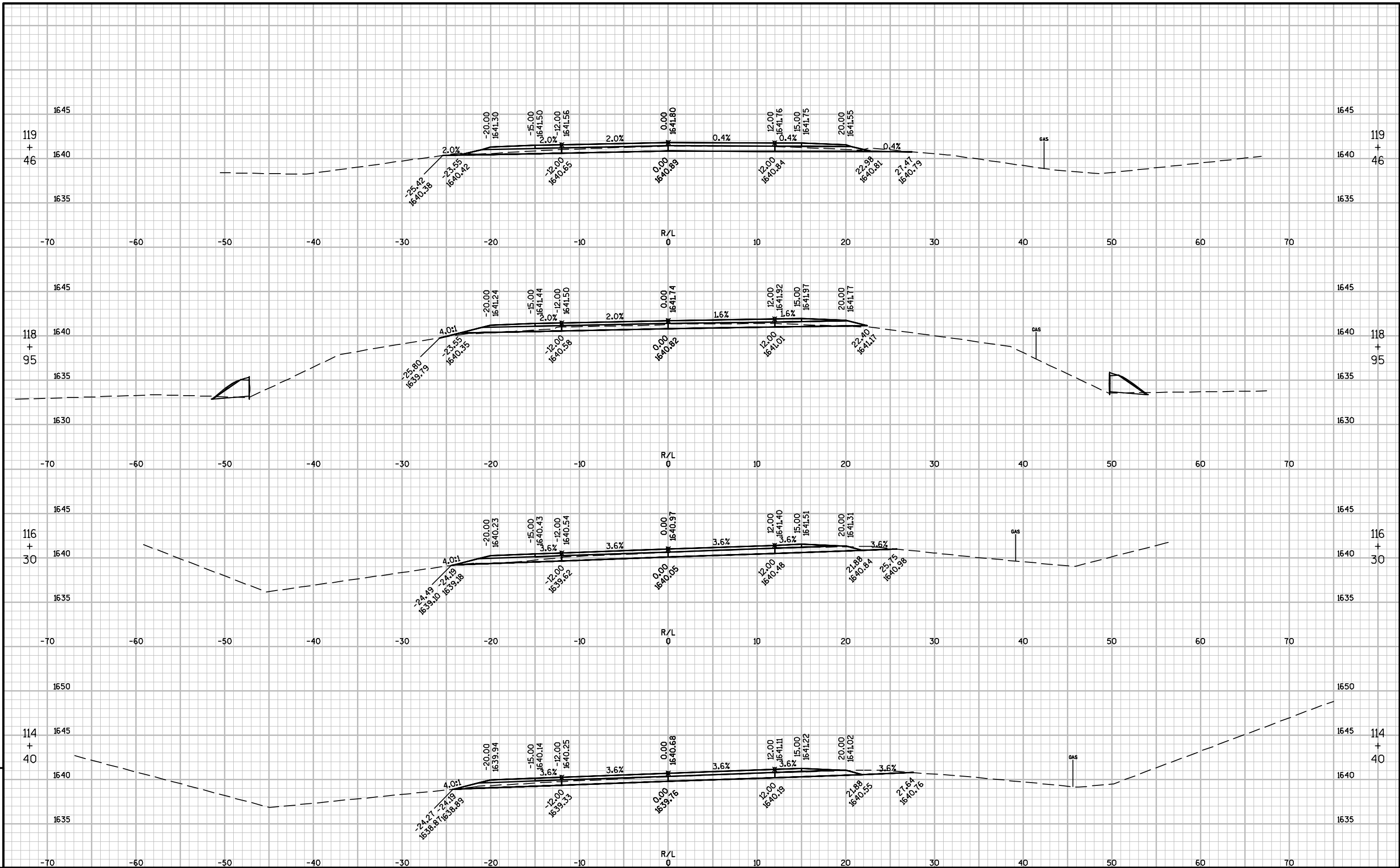


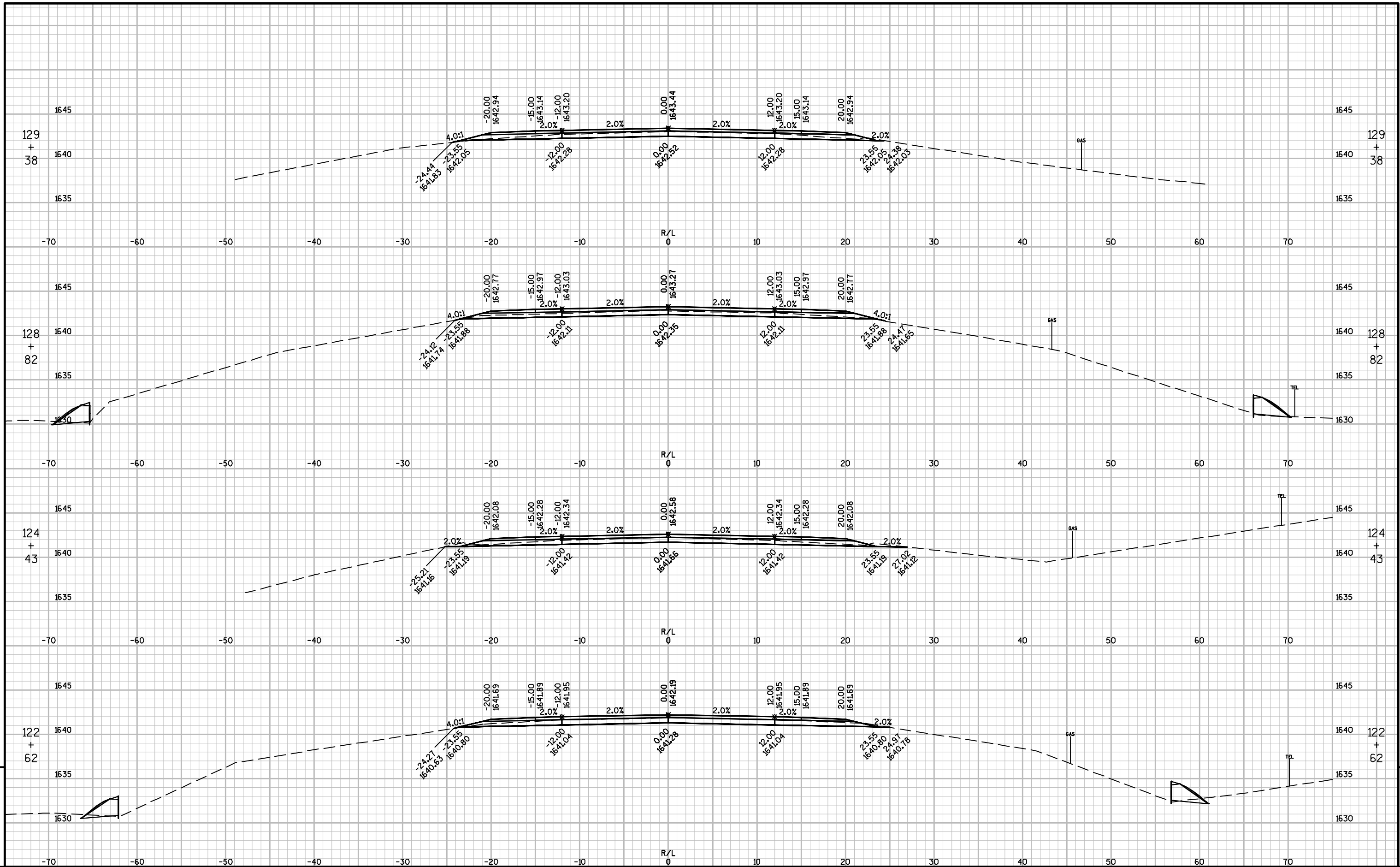


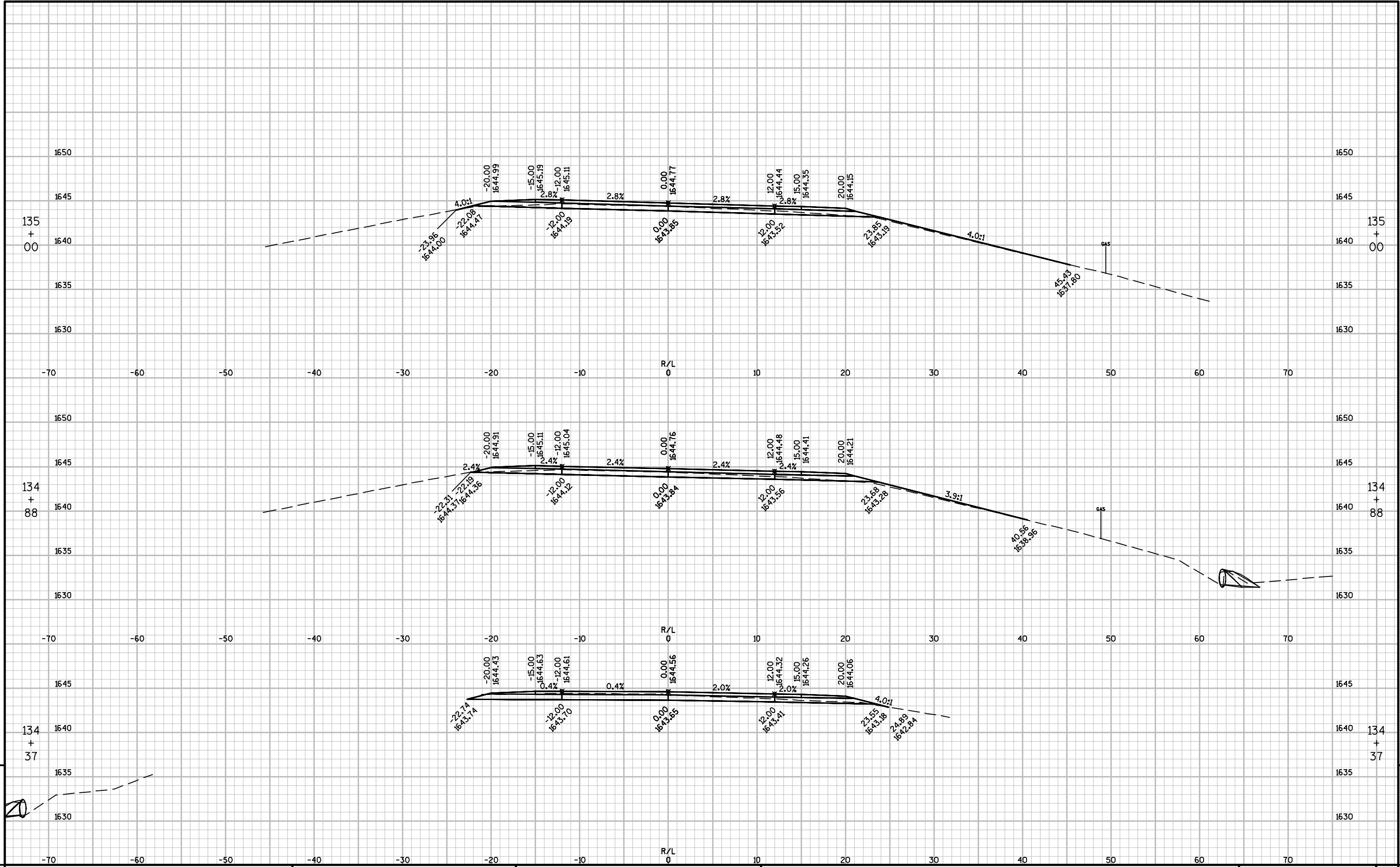


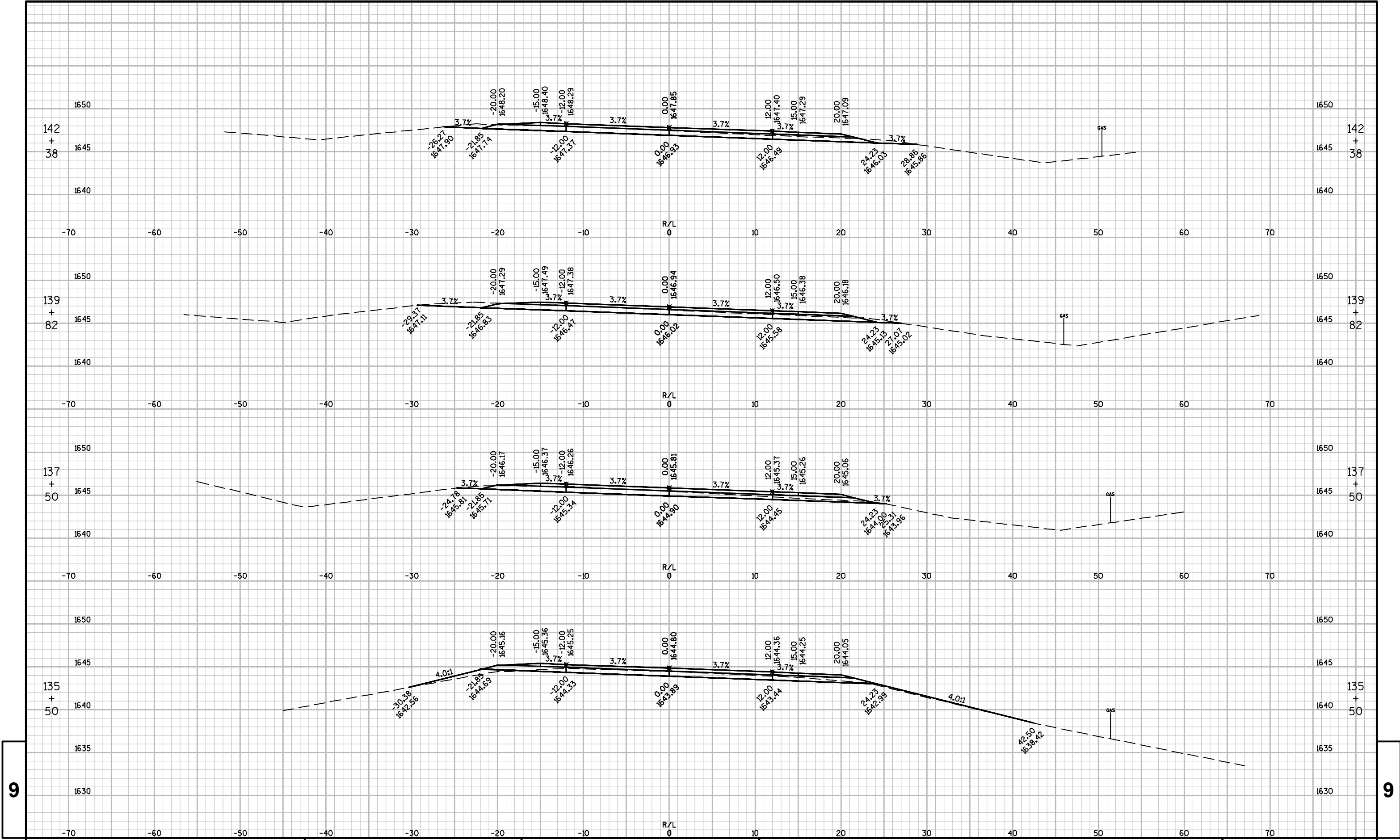
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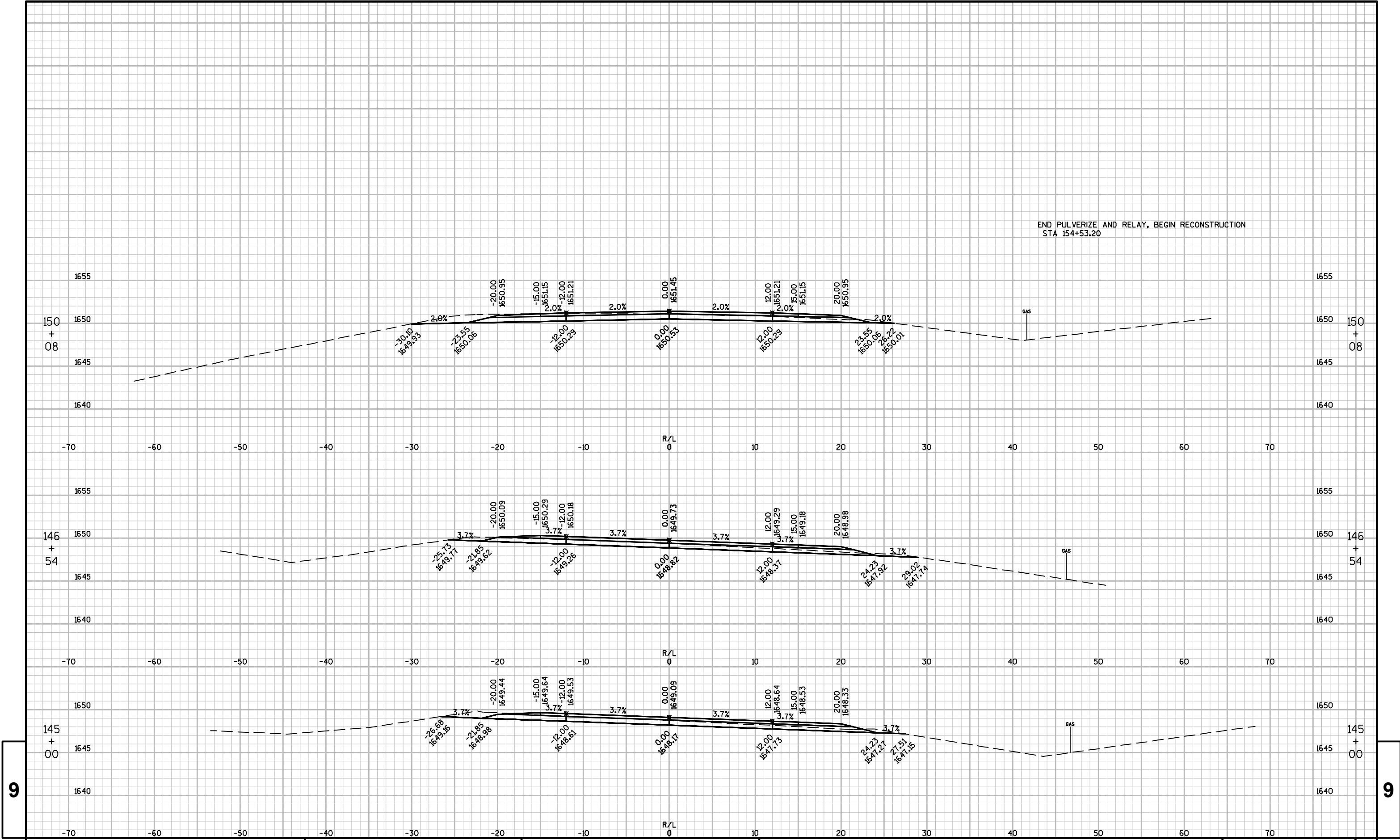
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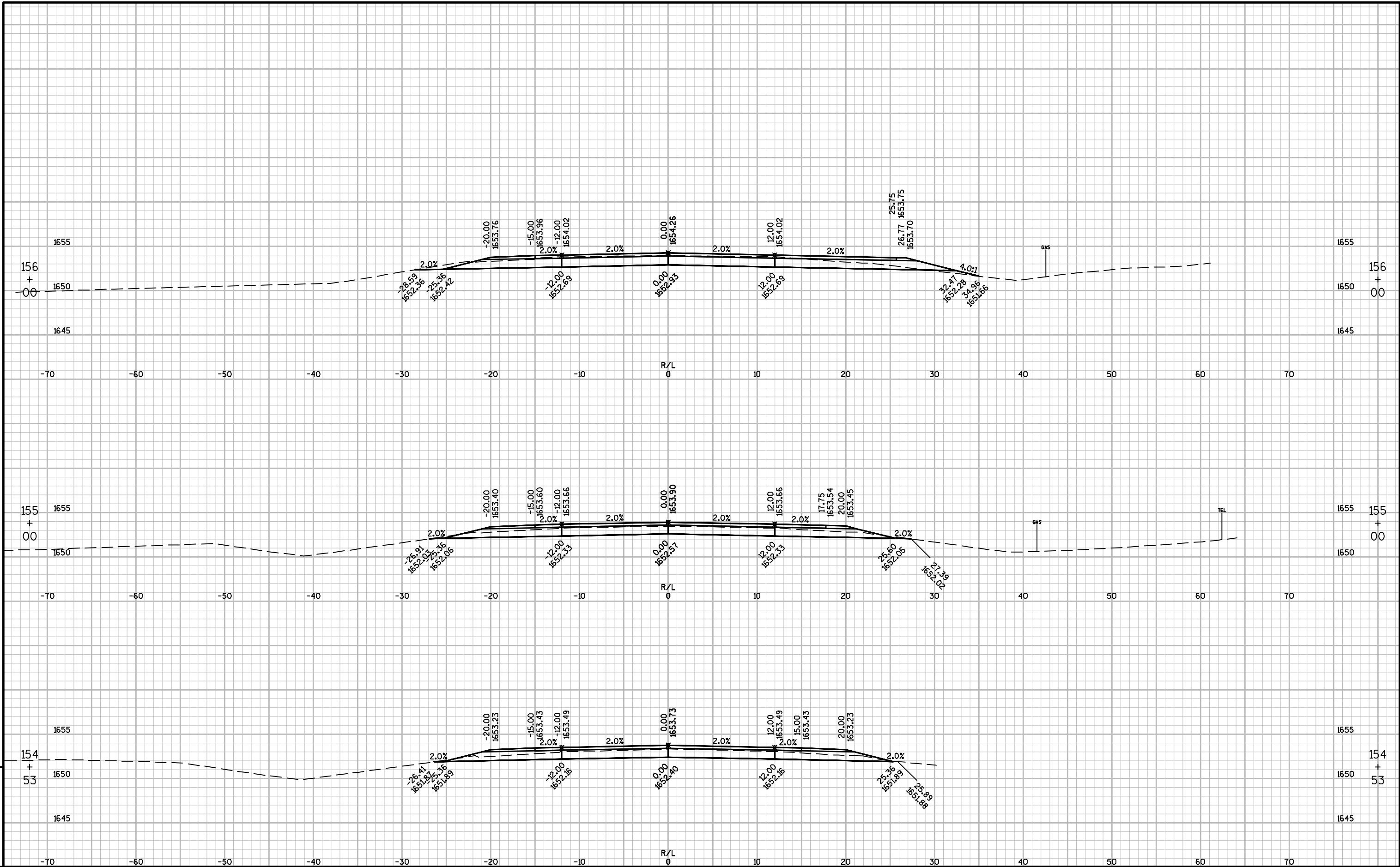


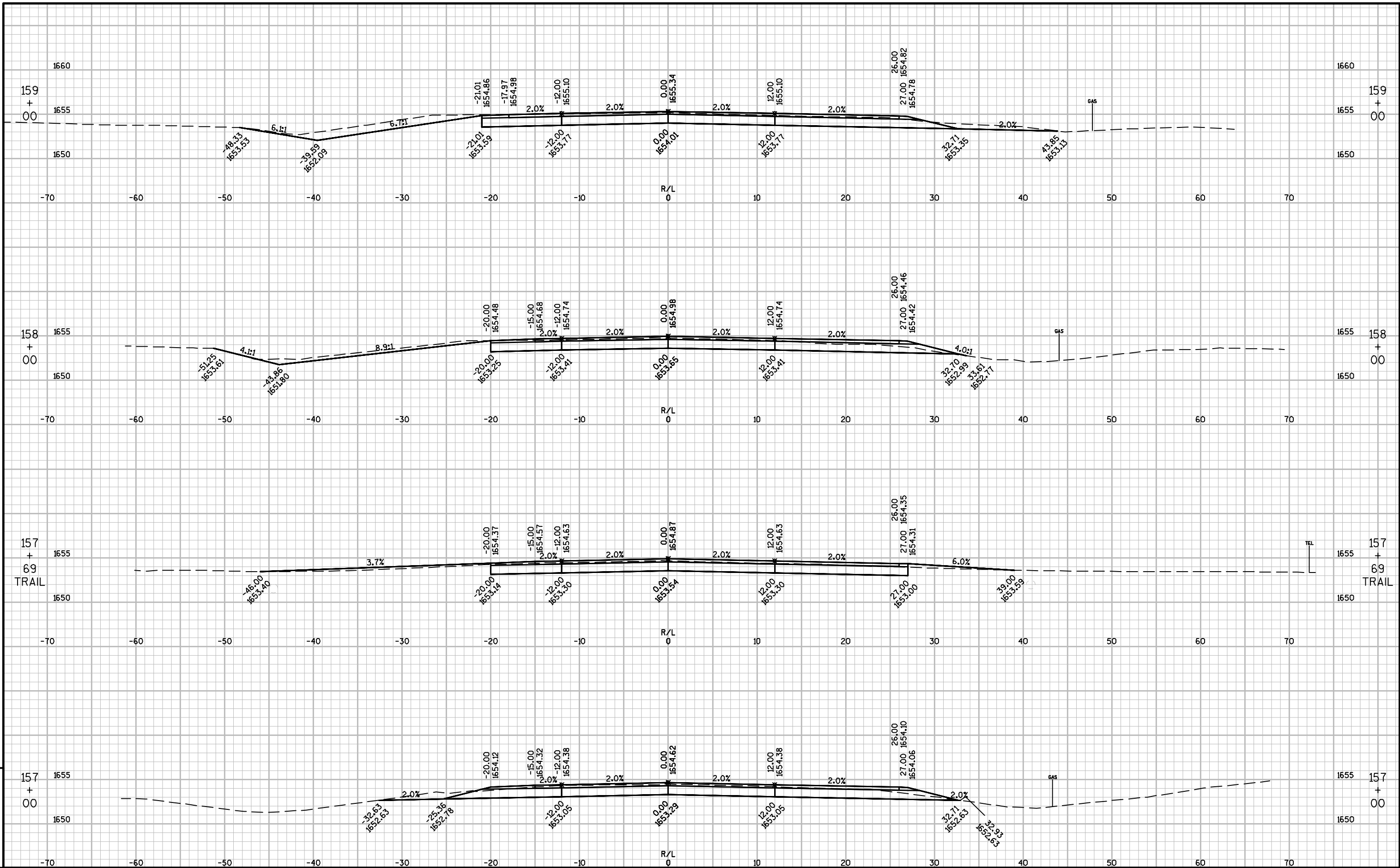


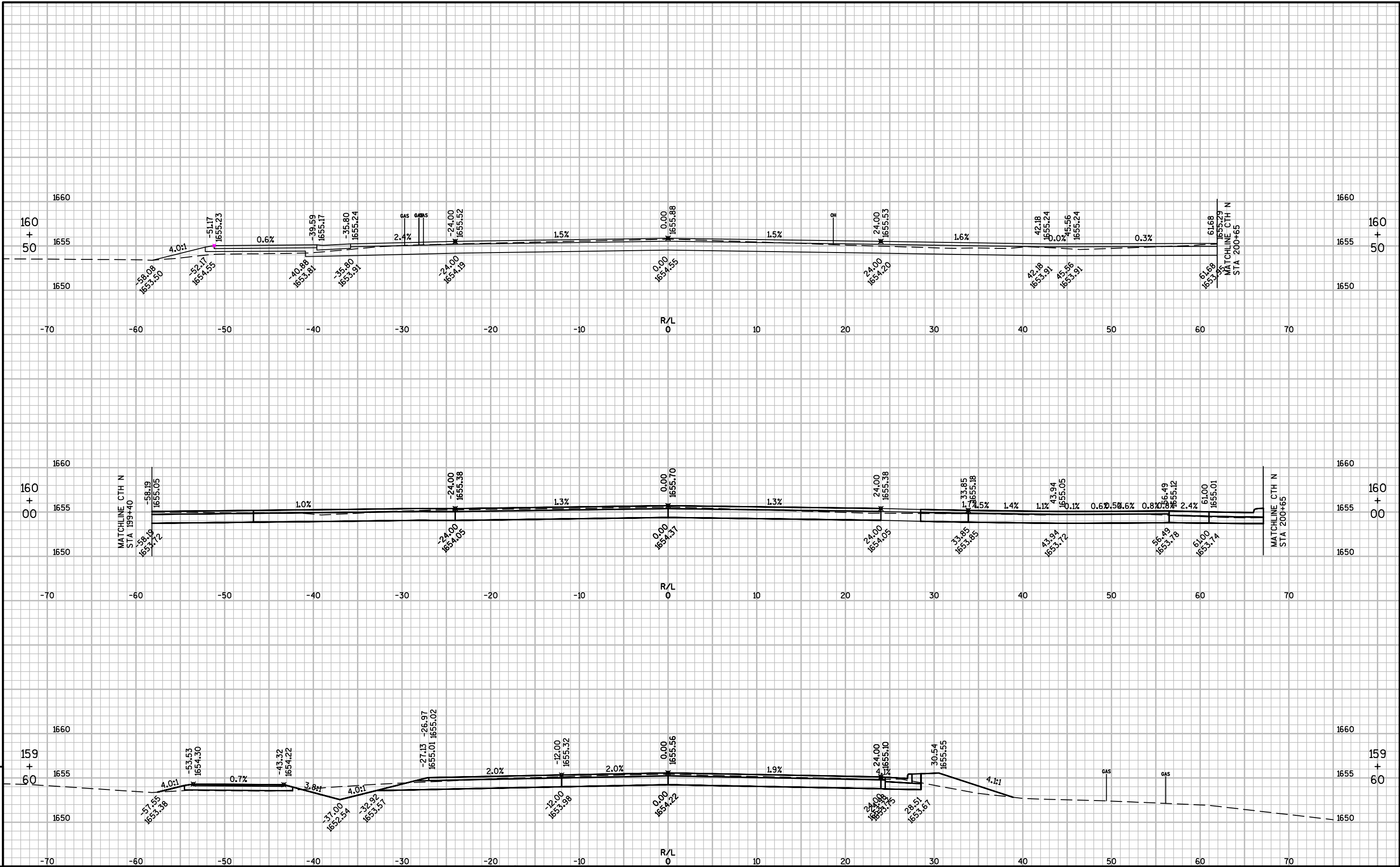


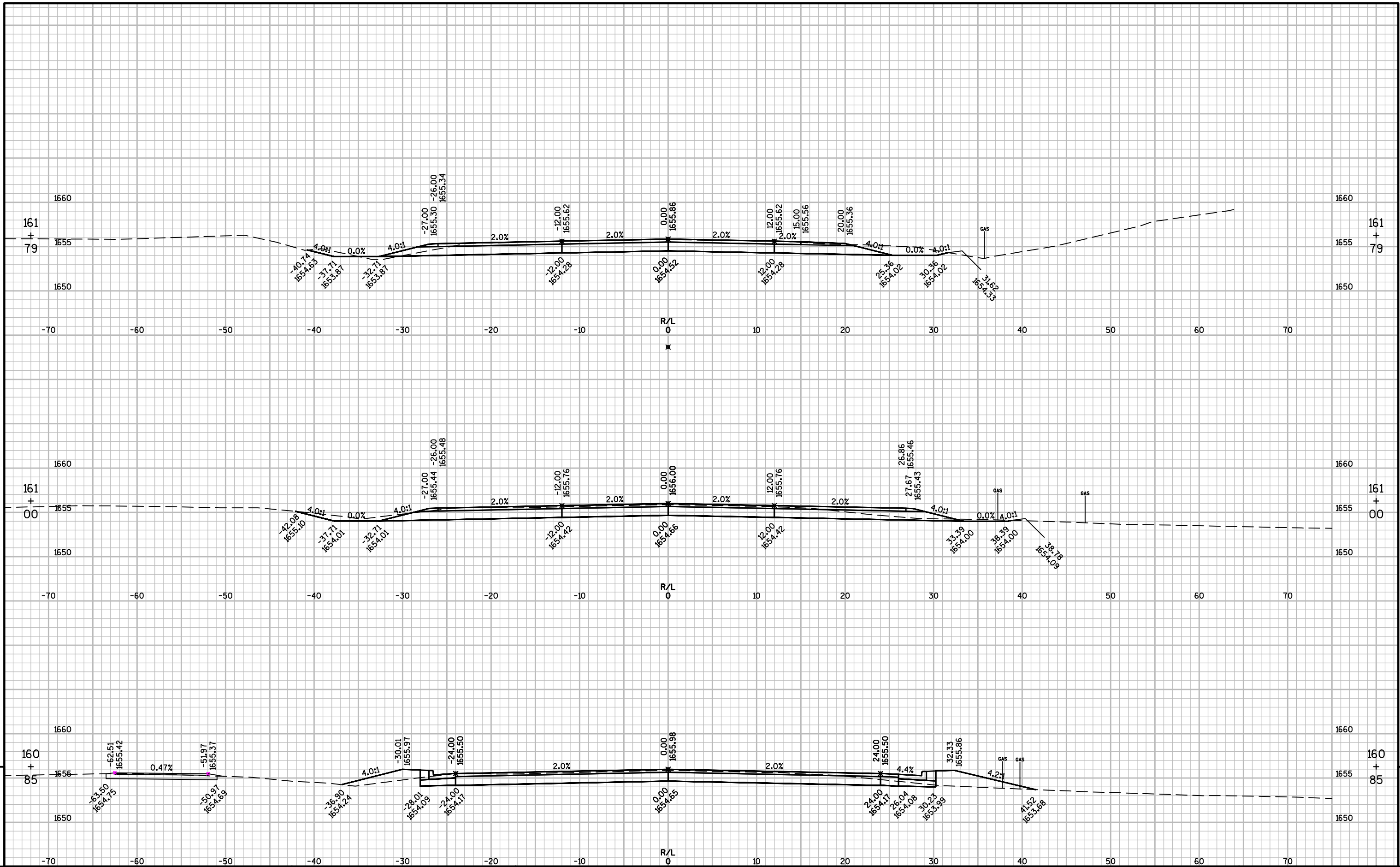
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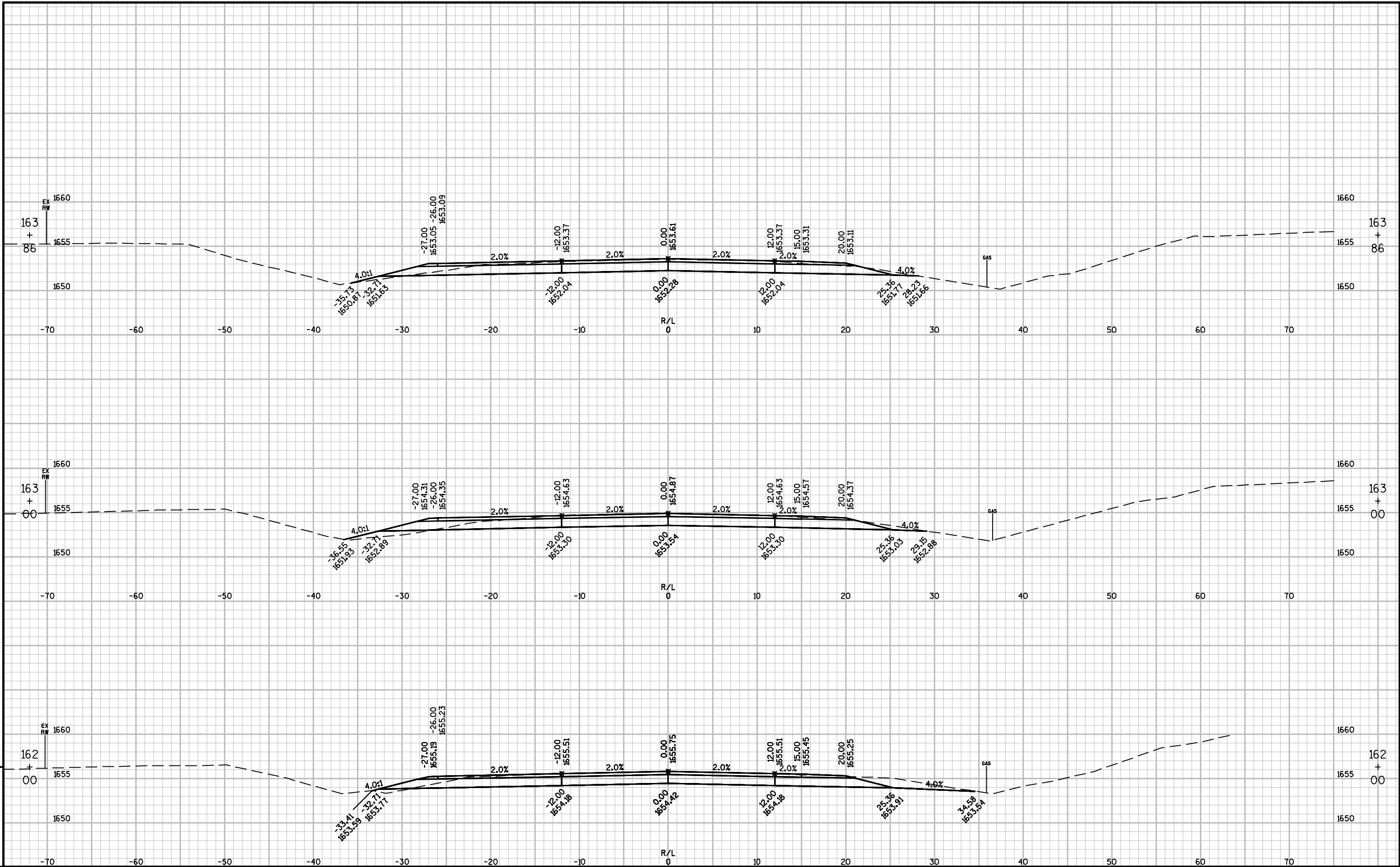
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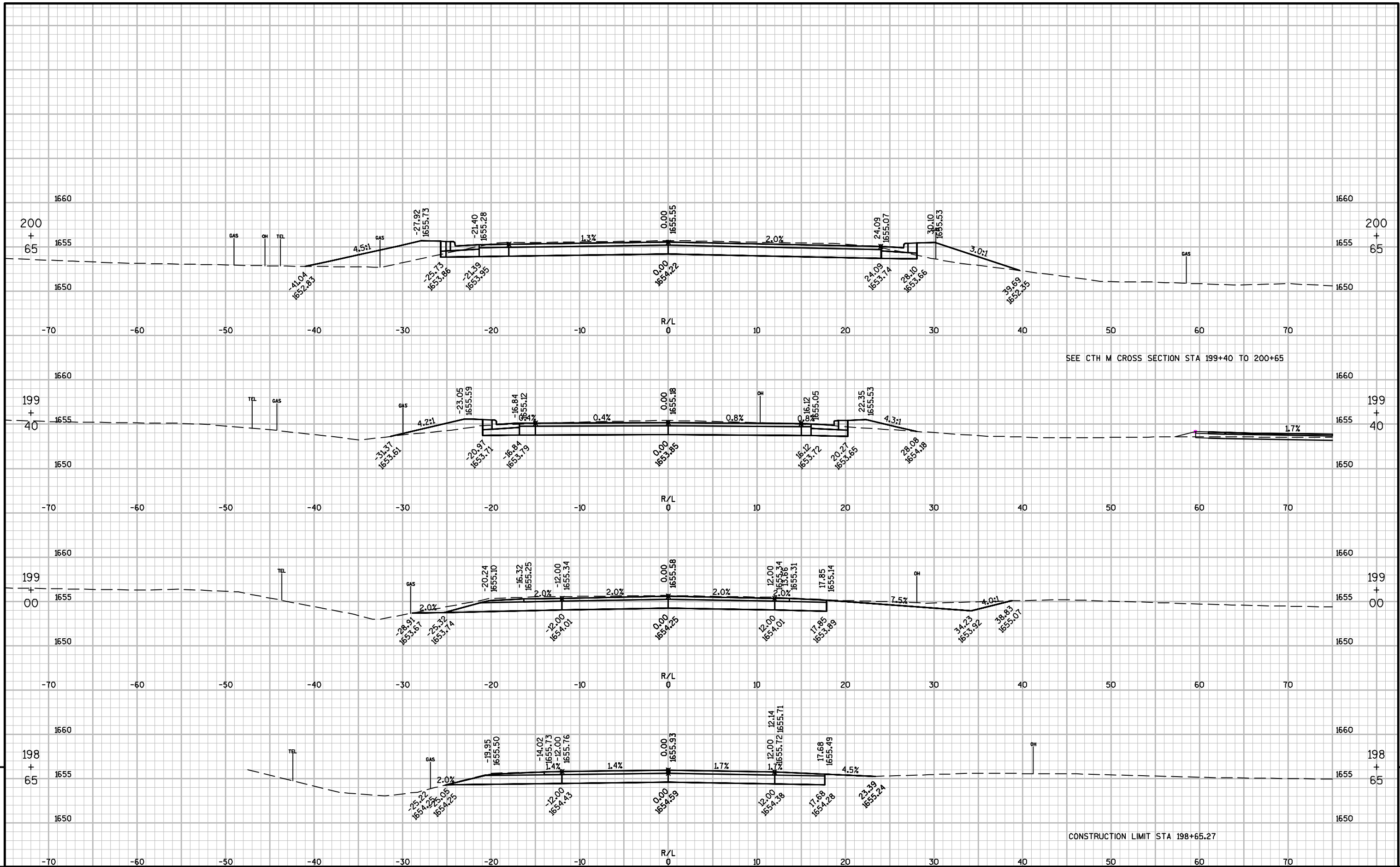


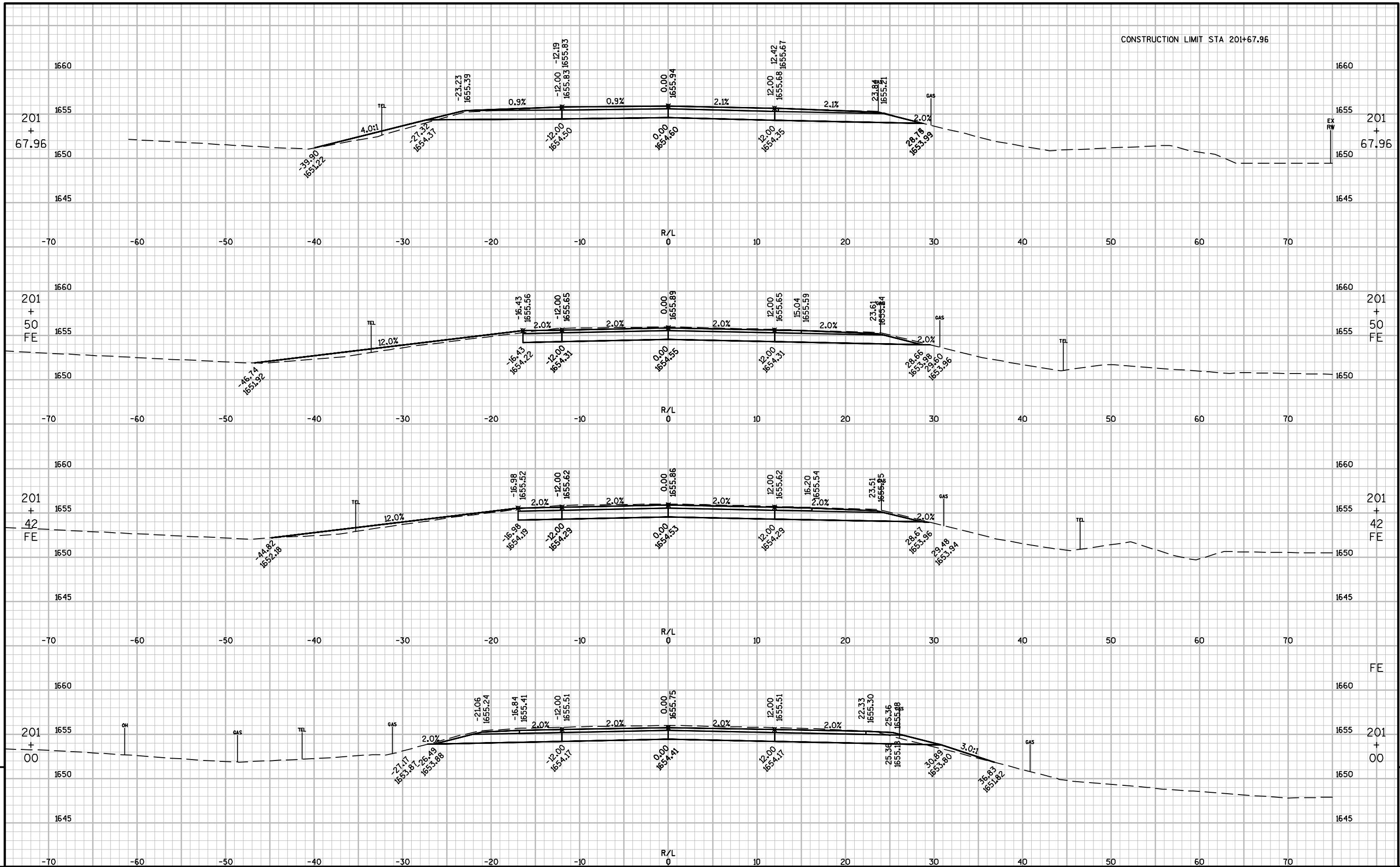














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