

RHI
PROJECT ID: 9513-00-70
WITH: N/A

COUNTY: VILAS

NOVEMBER 2022

ORDER OF SHEETS

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

TOTAL SHEETS = 112



DESIGN DESIGNATION

A.A.D.T. (2023)	=	415
A.A.D.T. (2043)	=	510
D.H.V.	=	115
D.D.	=	50/50
T.	=	6%
DESIGN SPEED	=	60 MPH
ESALS	=	52,000

CONVENTIONAL SYMBOLS

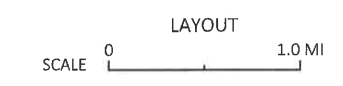
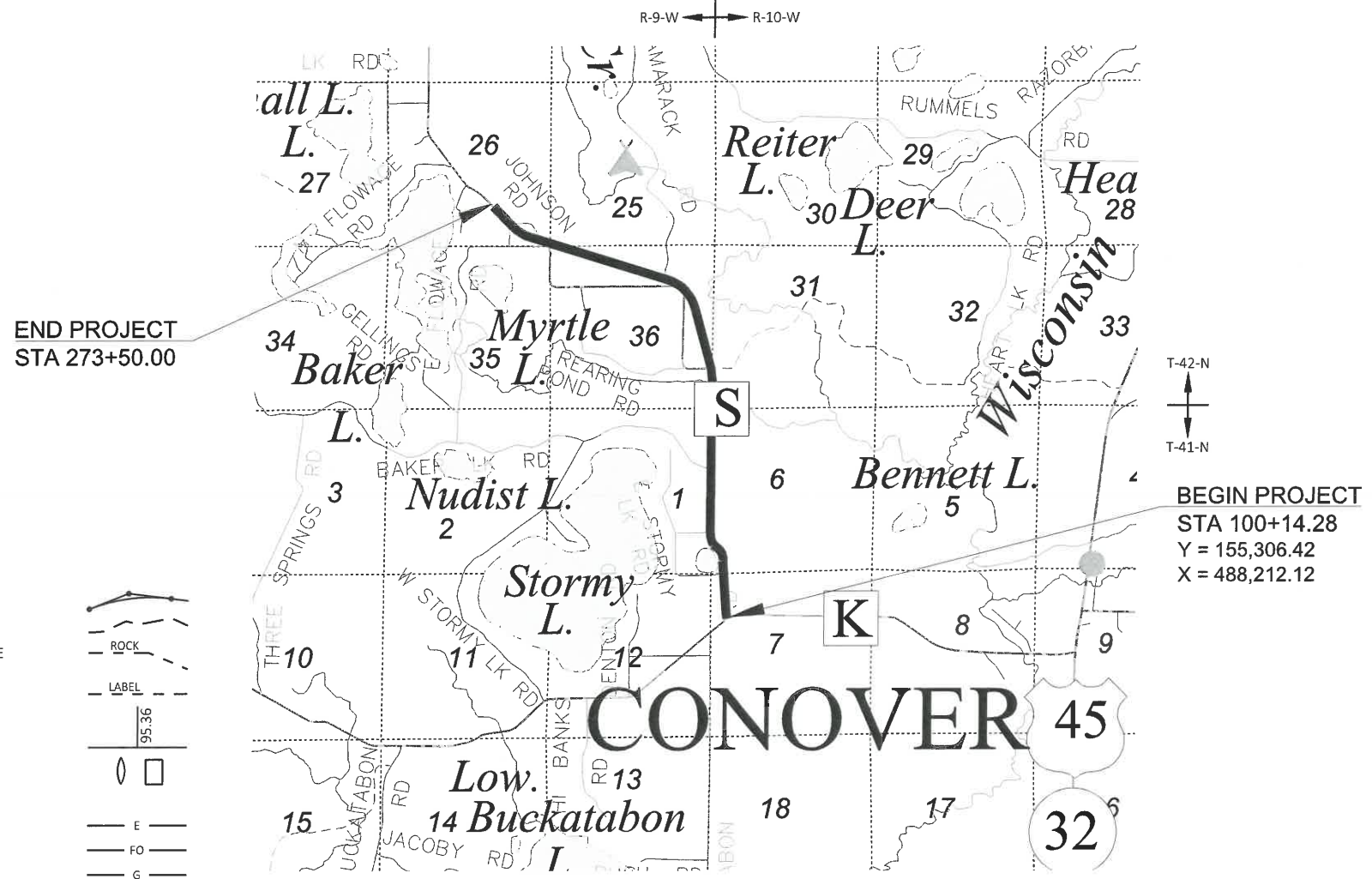
PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING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

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

CTH K - CTH B CTH K TO N FLOWAGE LAKE ROAD CTH S VILAS COUNTY

STATE PROJECT NUMBER
9513-00-70



TOTAL NET LENGTH OF CENTERLINE = 3.283 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WCCS), VILAS COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
9513-00-70	WISC 2023052	1

ACCEPTED FOR
VILAS COUNTY
Date 7/21/22 *Troy Schalmke-Commissioner*
(Signature and Title of Official)

ORIGINAL PLANS PREPARED BY
CORRE
ENGINEERING
MADISON | WAUKESHA | EAU CLAIRE | APPLETON | TOMAH | WITTENBERG



DATE: 7/21/22 *[Signature]*
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY	
Surveyor	CORRE, INC.
Designer	CORRE, INC.
Project Manager	MICHAEL GRAGE, PE
Regional Examiner	N/A
Regional Supervisor	DAN ERVA, PE

APPROVED FOR THE DEPARTMENT
DATE: 7/21/2022 *[Signature]*
(Signature)

E

GENERAL NOTES

- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLANS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.
- HMA PAVEMENT WEIGHT CALCULATIONS ARE BASED ON 112 LB/SY/IN.
- CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY OPERATIONS OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS.
- DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED, FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER.

UTILITY CONTACTS

COMMUNICATIONS

CHOICE TEL
 TED BOGEMAN
 118 SPRUCE ST
 EAGLE RIVER, WI 54521
 PHONE: (715) 480-4800
 EMAIL: TED@CHOICETEL.NET

FRONTIER
 DAVID KAMKE
 2907 MALAK CIR
 WAUSAU, WI
 PHONE: (715) 393-7028
 EMAIL: DAVID.KAMKE@JSITEL.COM

ELECTRIC

WE ENERGIES
 PAUL MEEUSEN
 119 E UNION AVE
 CEDAR GROVE, WI 53013
 PHONE: (920) 980-5053
 EMAIL: PAUL.MEEUSEN@WE-ENERGIES.COM



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

CONSULTANT CONTACT

CORRE, INC.
 KEVIN MEYER, P.E.
 1802 WARDEN STREET
 EAU CLAIRE, WI 54703
 PHONE: (715) 299-1894
 EMAIL: KMEYER@CORREINC.COM

DNR CONTACT

DNR SERVICE CENTER
 JON SIMONSEN
 107 SUTLIFF
 RHINELANDER, WI 54501
 PHONE: (715) 367-1936
 EMAIL: JONATHAN.SIMONSEN @WISCONSIN.GOV

VILAS COUNTY SURVEYORS OFFICE

THOMAS BOETTCHER
 330 COURT STREET
 EAGLE RIVER, WI 54521
 PHONE: (715) 479-3684
 EMAIL: TOBOET@VILASCOUNTYWI.GOV

VILAS COUNTY HIGHWAY DEPARTMENT

TROY SCHALINSKE
 2104 NORTH RAILROAD ST
 EAGLE RIVER, WI 54521
 PHONE: (715) 479-4641
 EMAIL: TRSCHA@VILASCOUNTYWI.GOV

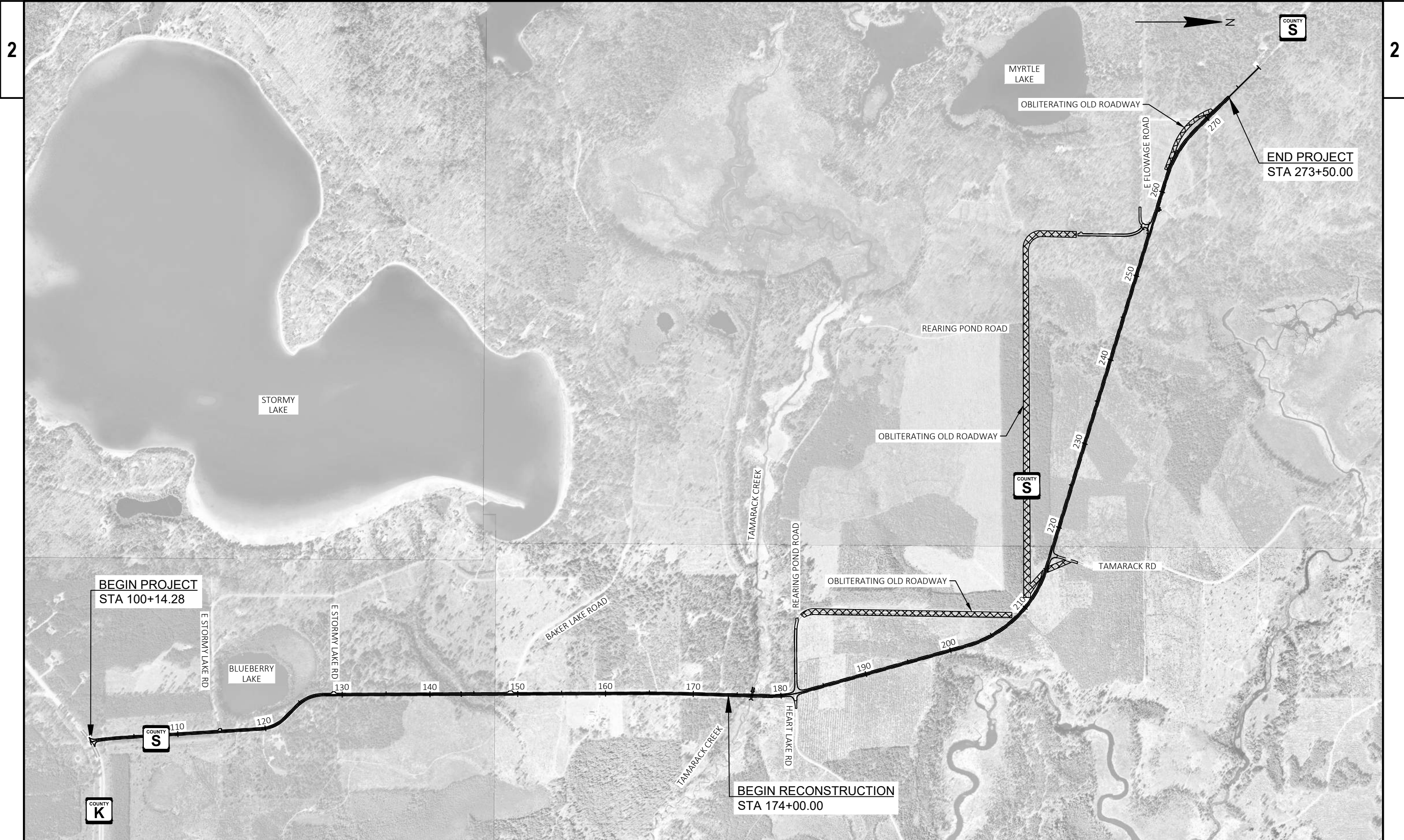
RUNOFF COEFFICIENT TABLE

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

TOTAL PROJECT AREA = 21.6 ACRES
 TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 15.9 ACRES

ORDER OF SECTION 2 SHEETS

- GENERAL NOTES
- PROJECT OVERVIEW
- TYPICAL SECTIONS
- CONSTRUCTION DETAILS



**BEGIN PROJECT
STA 100+14.28**

**BEGIN RECONSTRUCTION
STA 174+00.00**

**END PROJECT
STA 273+50.00**

PROJECT NO: 9513-00-70

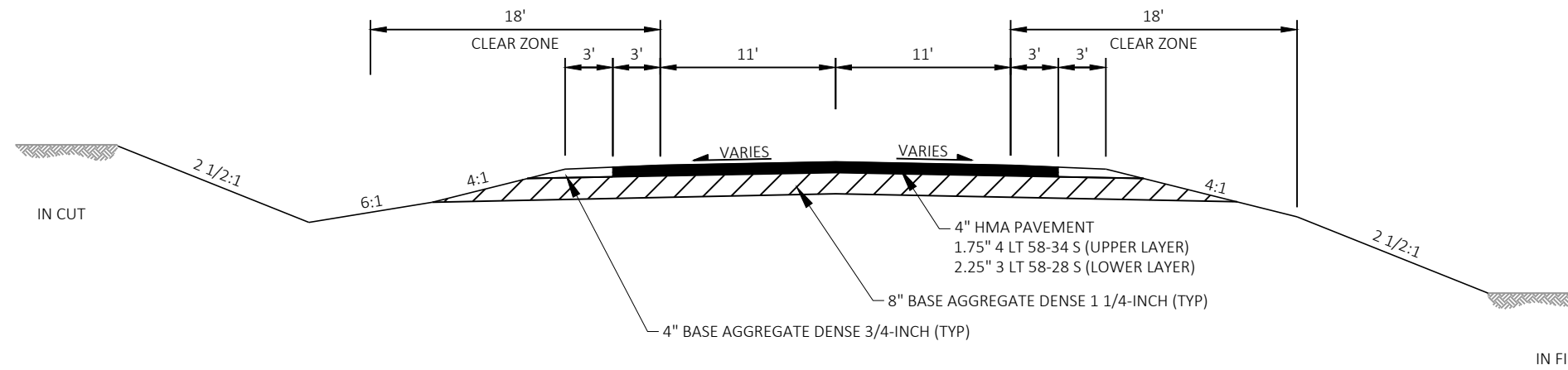
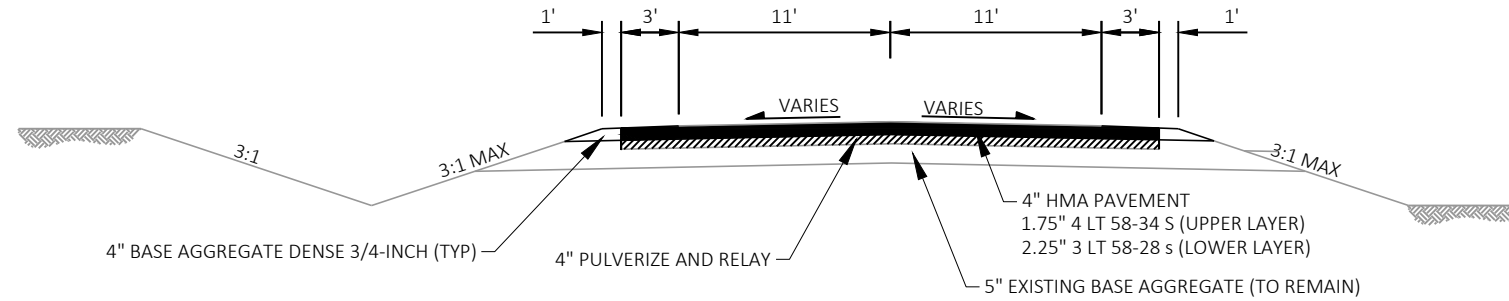
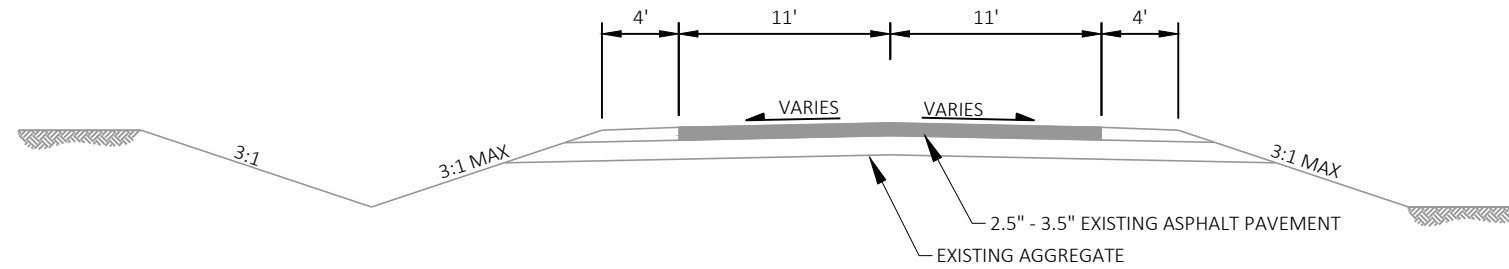
HWY: CTH S

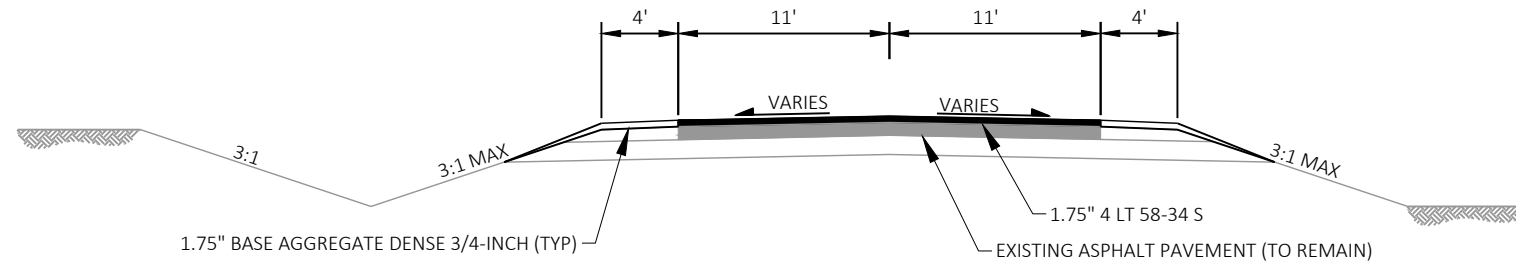
COUNTY: VILAS

PROJECT OVERVIEW

SHEET

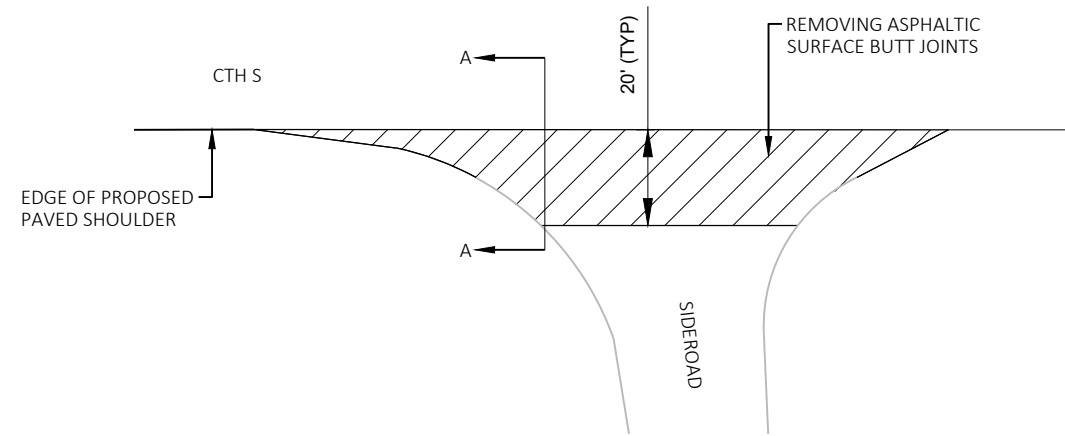
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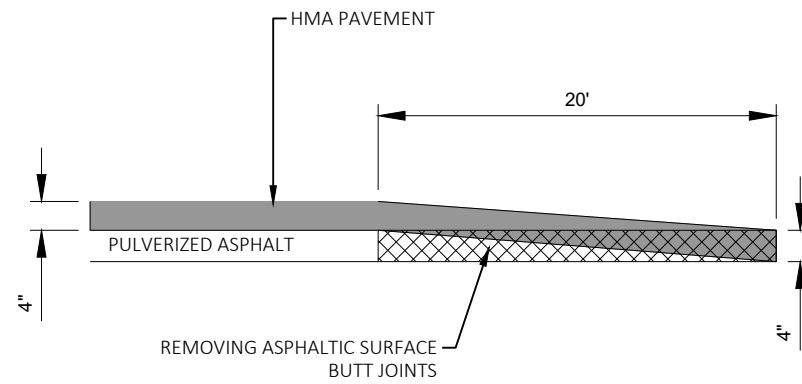


FINISHED TYPICAL SECTION - HMA OVERLAY - OLD CTH S

STA 15+41.94 - 20+50.00
STA 51+75.00 - 57+90.95

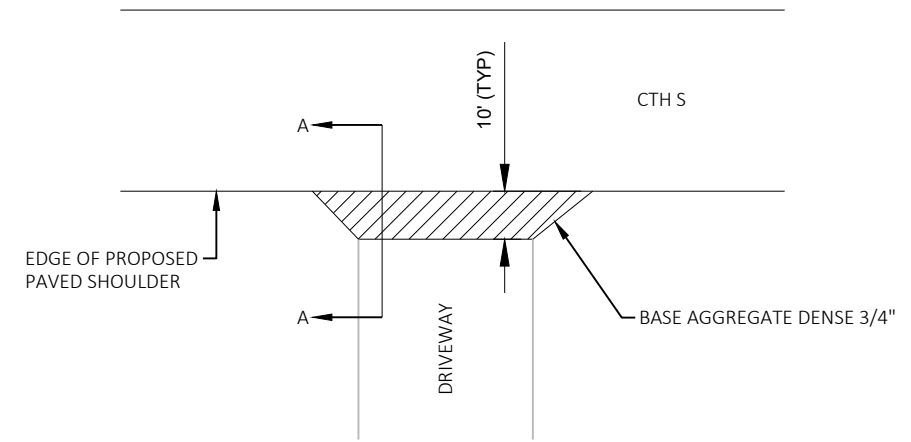


PLAN VIEW

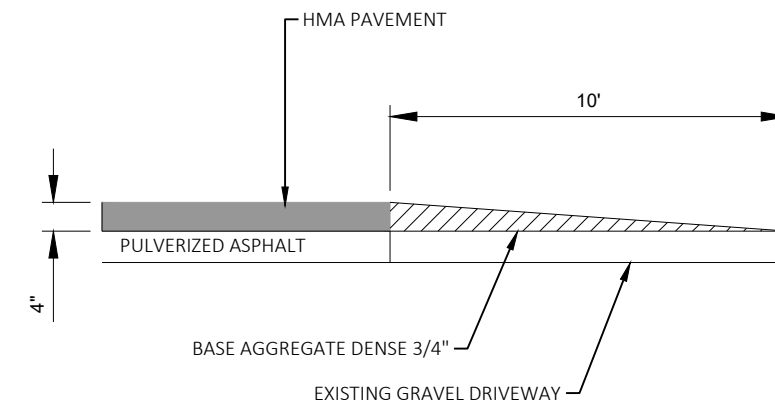


SECTION A-A

SIDE ROAD REMOVAL LIMITS
REHABILITATION AREA

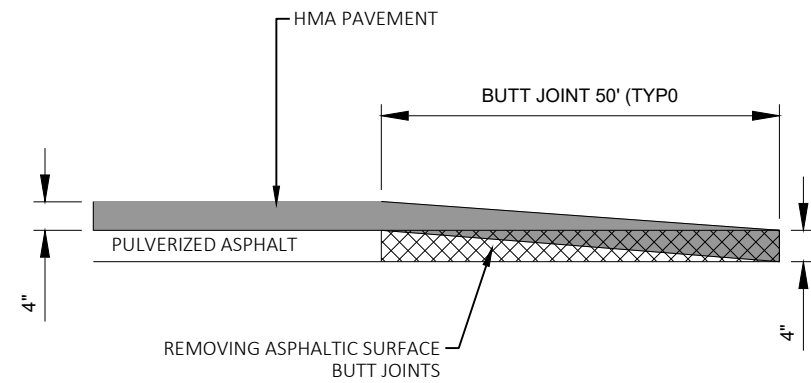


PLAN VIEW

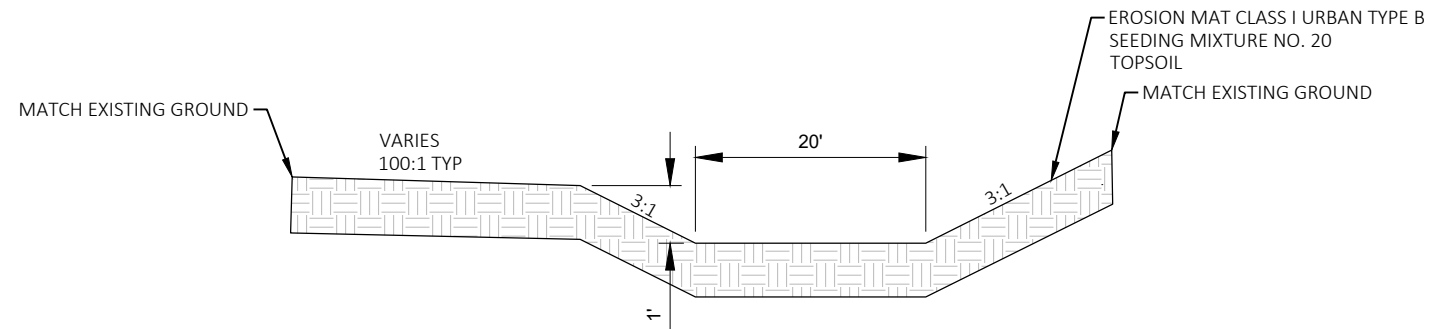


SECTION A-A

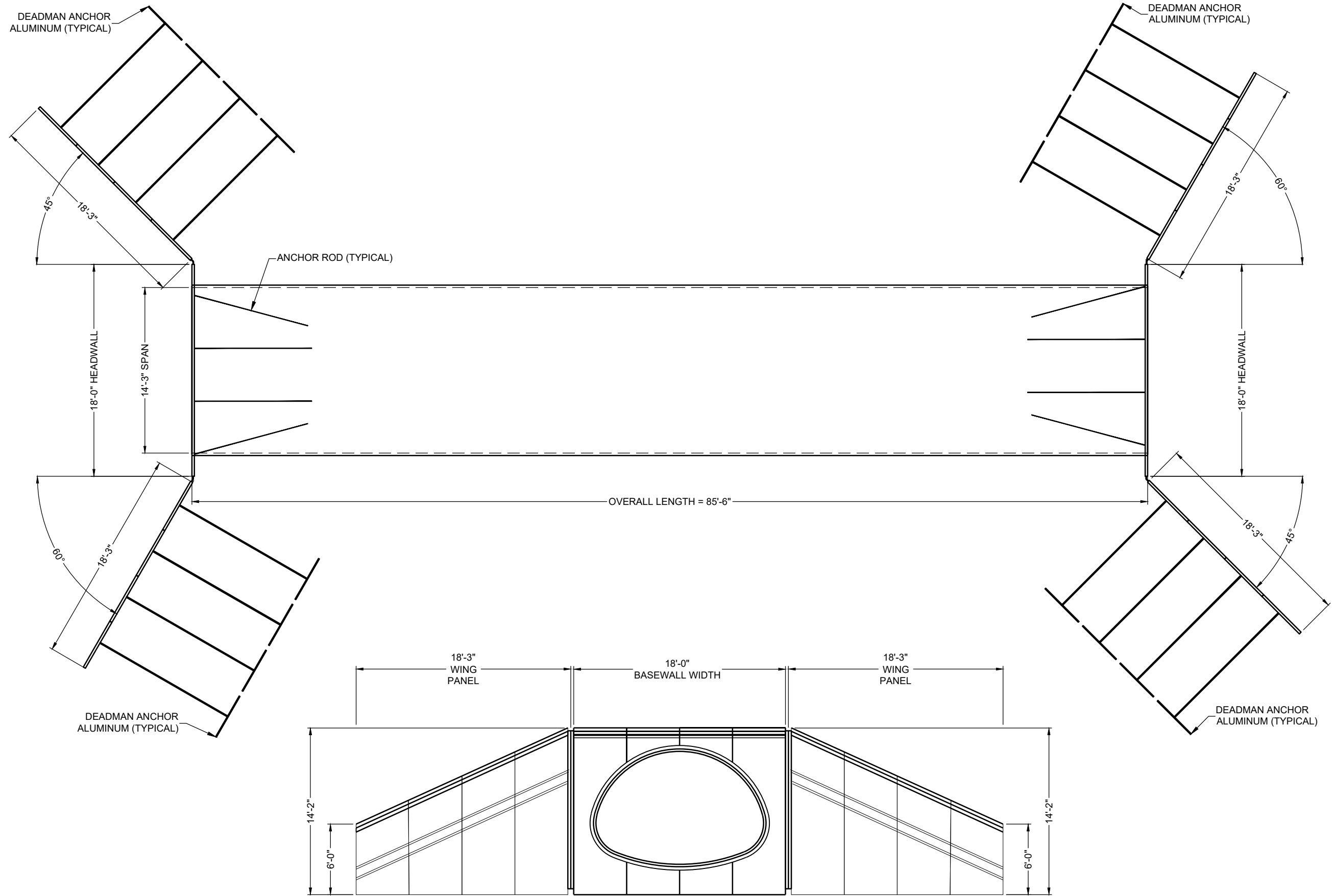
DRIVEWAY LIMITS



MAINLINE BUTT JOINT AT BEGINNING OF PROJECT



GRADING AT TAMARACK CREEK CROSSING



ALUMINUM HEADWALL AND WINGWALLS DETAIL

Estimate Of Quantities

9513-00-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0205	Grubbing	STA	75.000	75.000
0004	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0006	204.0115	Removing Asphaltic Surface Butt Joints	SY	670.000	670.000
0008	204.9060.S	Removing (item description) 01. Removing Survey Monument Conover NW GPS	EACH	1.000	1.000
0010	205.0100	Excavation Common	CY	45,013.000	45,013.000
0012	206.4001	Excavation for Structures Structural Plate Pipe or Pipe Arches (structure) 01. Pipe Arch 14-FT Span, STA 176+68	EACH	1.000	1.000
0014	208.0100	Borrow	CY	1,067.000	1,067.000
0016	210.2500	Backfill Structure Type B	TON	1,800.000	1,800.000
0018	213.0100	Finishing Roadway (project) 01. 9513-00-70	EACH	1.000	1.000
0020	214.0100	Obliterating Old Road	STA	80.000	80.000
0022	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,120.000	2,120.000
0024	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	21,900.000	21,900.000
0026	325.0100	Pulverize and Relay	SY	23,400.000	23,400.000
0028	455.0605	Tack Coat	GAL	4,190.000	4,190.000
0030	460.2000	Incentive Density HMA Pavement	DOL	8,350.000	8,350.000
0032	460.5223	HMA Pavement 3 LT 58-28 S	TON	7,170.000	7,170.000
0034	460.5244	HMA Pavement 4 LT 58-34 S	TON	5,870.000	5,870.000
0036	525.0112	Culvert Pipe Corrugated Aluminum 12-Inch	LF	44.000	44.000
0038	525.0118	Culvert Pipe Corrugated Aluminum 18-Inch	LF	42.000	42.000
0040	525.0124	Culvert Pipe Corrugated Aluminum 24-Inch	LF	161.000	161.000
0042	525.0312	Apron Endwalls for Culvert Pipe Aluminum 12-Inch	EACH	2.000	2.000
0044	525.0318	Apron Endwalls for Culvert Pipe Aluminum 18-Inch	EACH	2.000	2.000
0046	525.0324	Apron Endwalls for Culvert Pipe Aluminum 24-Inch	EACH	6.000	6.000
0048	527.0345	Pipe Arch Structural Plate 14-FT Span	LF	85.500	85.500
0050	619.1000	Mobilization	EACH	1.000	1.000
0052	624.0100	Water	MGAL	594.000	594.000
0054	625.0100	Topsoil	SY	70,110.000	70,110.000
0056	627.0200	Mulching	SY	40,130.000	40,130.000
0058	628.1504	Silt Fence	LF	10,430.000	10,430.000
0060	628.1520	Silt Fence Maintenance	LF	10,430.000	10,430.000
0062	628.2008	Erosion Mat Urban Class I Type B	SY	29,880.000	29,880.000
0064	629.0210	Fertilizer Type B	CWT	44.160	44.160
0066	630.0120	Seeding Mixture No. 20	LB	1,910.000	1,910.000
0068	630.0500	Seed Water	MGAL	3,150.000	3,150.000
0070	633.5200	Markers Culvert End	EACH	10.000	10.000
0072	634.0612	Posts Wood 4x6-Inch X 12-FT	EACH	3.000	3.000
0074	637.2220	Signs Type II Reflective SH	SF	6.750	6.750
0076	638.2102	Moving Signs Type II	EACH	7.000	7.000
0078	638.2602	Removing Signs Type II	EACH	35.000	35.000
0080	638.3000	Removing Small Sign Supports	EACH	35.000	35.000
0082	638.4000	Moving Small Sign Supports	EACH	7.000	7.000
0084	642.5001	Field Office Type B	EACH	1.000	1.000
0086	643.0420	Traffic Control Barricades Type III	DAY	1,020.000	1,020.000
0088	643.0705	Traffic Control Warning Lights Type A	DAY	2,040.000	2,040.000
0090	643.0900	Traffic Control Signs	DAY	2,642.000	2,642.000
0092	643.0920	Traffic Control Covering Signs Type II	EACH	6.000	6.000
0094	643.1050	Traffic Control Signs PCMS	DAY	28.000	28.000
0096	643.5000	Traffic Control	EACH	1.000	1.000

Estimate Of Quantities

9513-00-70

Line	Item	Item Description	Unit	Total	Qty
0098	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	69,344.000	69,344.000
0100	648.0100	Locating No-Passing Zones	MI	3.280	3.280
0102	650.4500	Construction Staking Subgrade	LF	9,950.000	9,950.000
0104	650.5000	Construction Staking Base	LF	9,950.000	9,950.000
0106	650.6000	Construction Staking Pipe Culverts	EACH	6.000	6.000
0108	650.8000	Construction Staking Resurfacing Reference	LF	7,386.000	7,386.000
0110	650.9911	Construction Staking Supplemental Control (project) 01. 9513-00-70	EACH	1.000	1.000
0112	650.9920	Construction Staking Slope Stakes	LF	9,950.000	9,950.000
0114	690.0150	Sawing Asphalt	LF	42.000	42.000
0116	740.0440	Incentive IRI Ride	DOL	6,566.000	6,566.000
0118	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	2,000.000	2,000.000
0120	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	1,260.000	1,260.000
0122	SPV.0060	Special 01. Aluminum Headwall and Wingwalls	EACH	2.000	2.000

3

3

STATION TO STATION	LOCATION	455.0600 TACK COAT TON	460.5223 HMA PAVEMENT 3 LT 58-28 S TON	460.5244 HMA PAVEMENT 4 LT 58-34 S TON	STATION	LOCATION	210.2500 BACKFILL STRUCTURE TON	525.0112 CULVERT PIPE CORRUGATED ALUMINUM 12-INCH LF	525.0118 CULVERT PIPE CORRUGATED ALUMINUM 18-INCH LF	525.0124 CULVERT PIPE CORRUGATED ALUMINUM 24-INCH LF	525.0312 APRON ENDWALLS FOR CULVERT PIPE ALUMINUM 12-INCH EACH	525.0318 APRON ENDWALLS FOR CULVERT PIPE ALUMINUM 18-INCH EACH	525.0324 APRON ENDWALLS FOR CULVERT PIPE ALUMINUM EACH	527.0345 PIPE ARCH STRUCTURAL PLATE 14-FT SPAN LF	633.5200 MARKERS CULVERT END EACH	SPV.0060.01 SPECIAL (01. ALUMINUM HEADWALL AND WINGWALLS) EACH	PIPE THICKNESS INCHES
100+14 - 174+00	CTH S	1,640	2,950	2,300	143+54	CTH S	--	--	42	--	--	2	--	--	2	--	0.075
174+00 - 273+50	CTH S	2,170	3,910	3,040	176+68	CTH S	1,800	--	--	--	--	--	--	85.5	2	2	--
	INTERSECTIONS	170	310	240	258+00	RT	--	--	--	30	--	--	2	--	--	--	0.075
	OLD CTH S - HEART LAKE RD TO REARING POND RD	90	-	130	270+00	CTH S	--	--	--	46	--	--	2	--	2	--	0.075
	OLD CTH S - PRIVATE DRIVE TO E FLOWAGE RD	120	-	160	42+80	E FLOWAGE RD	--	--	--	85	--	--	2	--	2	--	0.075
	TOTAL 0010	4,190	7,170	5,870	50+33	OLD CTH S	--	44	--	-	2	--	--	--	2	--	0.060
					TOTAL 0010		1,800	44	42	161	2	2	6	85.5	10	2	

STATION TO STATION	LOCATION	625.0100 TOPSOIL SY	627.0200 MULCHING SY	628.2008 EROSION MAT URBAN CLASS I TYPE B SY	629.0210 FERTILIZER TYPE B CWT	630.0120 SEEDING MIXTURE NO. 20 LB	630.0500 SEED WATER MGAL	STATION TO STATION	LOCATION	628.1504 SILT FENCE LF	628.1520 SILT FENCE MAINTENANCE LF
174+00 - 182+00	BEGIN PROJECT TO REARING POND RD	5,310	--	5,310	3.35	150	240	174+00 - 182+00	BEGIN PROJECT TO REARING POND RD	700	700
182+00 - 216+80	REARING POND RD TO TAMARACK RD	11,770	6,040	5,730	7.42	320	530	182+00 - 216+80	REARING POND RD TO TAMARACK RD	3,650	3,650
216+80 - 255+75	TAMARACK RD TO E FLOWAGE RD	11,840	3,820	8,020	7.46	320	535	216+80 - 255+75	TAMARACK RD TO E FLOWAGE RD	4,130	4,130
255+75 - 273+50	E FLOWAGE RD TO END PROJECT	8,120	--	8,120	5.12	220	365	255+75 - 273+50	E FLOWAGE RD TO END PROJECT	950	950
- - -	OBLITERATED ROADWAY	26,670	26,670	--	16.81	730	1,200	- - -	UNDISTRIBUTED	1,000	1,000
- - -	UNDISTRIBUTED	6,400	3,600	2,700	4.00	170	280				
	TOTAL 0010	70,110	40,130	29,880	44.16	1,910	3,150		TOTAL 0010	10,430	10,430

CATEGORY	STATION TO STATION	LOCATION	624.0100 WATER MGAL	CATEGORY	STATION	LOCATION	634.0612 POSTS WOOD 4X6-INCH X 12-FT EACH	637.2220 SIGNS TYPE II REFLECTIVE SH SF	638.2102 MOVING SIGNS TYPE II EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.4000 MOVING SMALL SIGN SUPPORTS EACH	REMARKS
0010	100+14 - 174+00	SHOULDERS	8	0010	171+06	RT	--	--	--	1	1	--	
0010	100+14 - 174+00	PULVERIZED MATERIAL	234	0010		OLD CTH S	--	--	--	34	34	--	HEART LAKE RD TO 600 FT SOUTH OF E FLOWAGE RD
0010	174+00 - 273+50	SHOULDERS	22	0010	177+04	RT	--	--	1	--	--	2	MOVE TO NEW CULVERT LOCATION
0010	174+00 - 273+50	ROAD BASE	329	0010	177+30	LT	--	--	1	--	--	2	MOVE TO NEW CULVERT LOCATION
0010	14+71 - 20+50	SHOULDERS	1	0010		OLD CTH S	--	--	1	--	--	1	STOP SIGN, HEART LAKE RD, MOVE TO NEW INTERSECTION LOCATION
0010	51+75 - 57+90	SHOULDERS	1	0010		OLD CTH S	--	--	1	--	--	1	STOP SIGN, TAMARACK RD, MOVE TO NEW INTERSECTION LOCATION
	TOTAL 0010		594	0010		OLD CTH S	--	--	1	--	--	1	STOP SIGN, FLOWAGE RD, MOVE TO NEW INTERSECTION LOCATION
				0010		OLD CTH S	--	--	2	--	--	--	ADOPOT-A-HIGHWAY SIGNS
				0010	58'A+00	OLD CTH S	3	6.75	--	--	--	--	END-OF-ROADWAY SIGNING
					TOTAL 0010		3	6.75	7	35	35	7	

	643.0420	643.0705	643.0900	643.0920			
	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL COVERING SIGNS TYPE II	REMARKS		
LOCATION	DAYS	DAY	DAY	EACH	NUMBER OF CYCLES		
PROJECT	88	880	1,760	2,376	6	1	OPEN TO TRAFFIC W/ FLAGGING
PROJECT	14	140	280	266	-	--	2 WEEK CLOSURE
TOTAL 0010		1,020	2,040	2,642	6		

LOCATION	643.1050 TRAFFIC CONTROL SIGNS PCMS DAY	REMARKS
CTH K	14	ADVANCED WARNING ONE WEEK PRIOR TO CLOSURE
CTH B	14	ADVANCED WARNING ONE WEEK PRIOR TO CLOSURE
TOTAL 0010	28	

STATION	TO	STATION	LOCATION	646.1020 MARKING LINE EPOXY 4-INCH LF	REMARKS
100+14	-	273+50	CTH S	34,672	WHITE EDGELINE
100+14	-	273+50	CTH S	34,672	YELLOW CENTERLINE
TOTAL 0010				69,344	

STATION	TO	STATION	LOCATION	648.0100 LOCATING NO-PASSING ZONES MI
100+14	-	273+50	CTH S	3.28
TOTAL 0010				3.28

STATION	TO	STATION	LOCATION	650.4500 CONSTRUCTION STAKING SUBGRADE LF	650.5000 CONSTRUCTION STAKING BASE LF	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE LF	650.9920 CONSTRUCTION STAKING SLOPE STAKES LF
100+14	-	174+00	PULVERIZE AND RELAY	-	-	7,386	-
174+00	-	273+50	RECONSTRUCTION PROJECT	9,950	9,950	-	9,950
TOTAL 0010				9,950	9,950	7,386	9,950

CATEGORY	STATION	LOCATION	650.6000 CONSTRUCTION STAKING PIPE CULVERTS EACH
0010	143+54	CTH S	1
0010	176+68	CTH S	1
0010	258+00	RT	1
0010	270+00	CTH S	1
0010	42+80	E FLOWAGERD	1
0010	50+33	OLD CTH S	1
TOTAL 0010			6

STATION	LOCATION	690.0150 SAWING ASPHALT LF
20+49	REARING POND RD	22
273+50	END PROJECT	20
TOTAL 0010		42

CONVENTIONAL SYMBOLS

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

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

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

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), VILAS COUNTY, NAD 83 (2011) IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

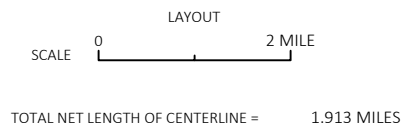
RIGHT OF WAY MONUMENTS ARE REBAR AND ARE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

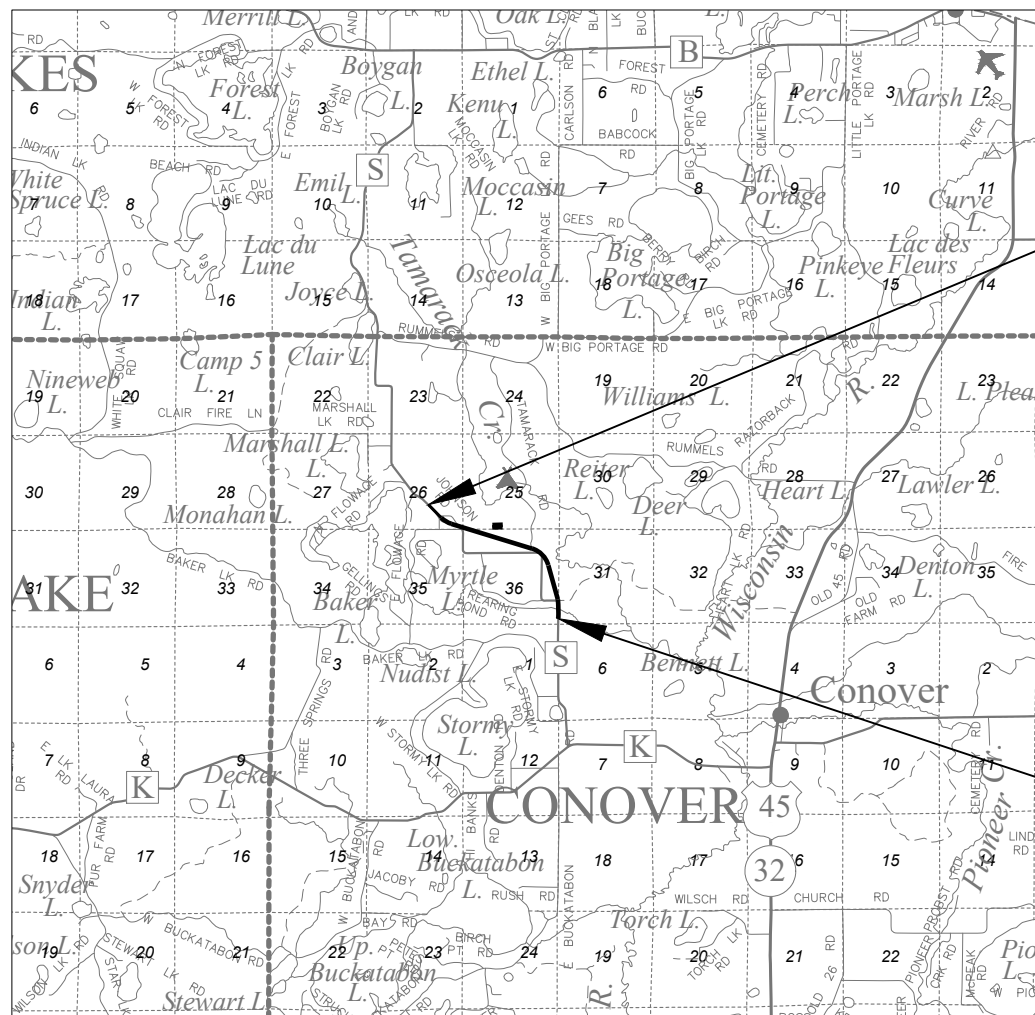
DIMENSIONING FOR THE NEW RIGHT-OF-WAY IS MEASURED ALONG AND PERPENDICULAR TO NEW REFERENCE LINES.

CONVENTIONAL UTILITY SYMBOLS

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



CAUTION
THIS PLAT IS FOR ILLUSTRATIVE PURPOSES ONLY. DEEDS MUST BE CHECKED TO DETERMINE PROPERTY BOUNDARIES.



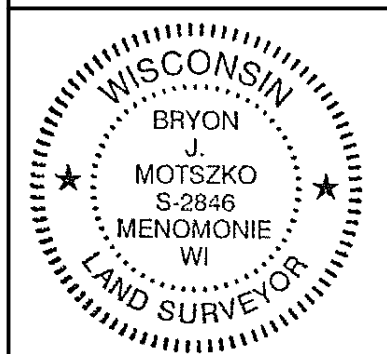
END RELOCATION ORDER
STA 274+00.00
1,064.46' NORTH AND 1,017.41' EAST OF THE SOUTH 1/4 CORNER OF SEC 26, T-42-N, R-09-E

BEGIN RELOCATION ORDER
STA 173+00.00
465.05' NORTH AND 1.53' WEST OF THE SOUTH WEST CORNER OF SEC 31, T-42-N, R-10-E

R/W PROJECT NUMBER 9513-00-00	SHEET NUMBER 4.01	TOTAL SHEETS 7
R/W PROJECT NUMBER 9513-00-00		
PLAT OF RIGHT OF WAY REQUIRED FOR CTH K - CTH B CTH K TO N FLOWAGE LAKE ROAD		
CTH S		VILAS COUNTY
CONSTRUCTION PROJECT NUMBER: 9513-00-70		



MADISON | EAU CLAIRE | WAUKESHA | APPLETON | TOMAH | WITTENBERG



I, BRYON J. MOTZKO, PROFESSIONAL LAND SURVEYOR, S-2846, HEREBY CERTIFY THAT I HAVE SURVEYED THE LAND DESCRIBED HEREON AND THAT THE MAP HEREON IS A CORRECT REPRESENTATION OF THAT SURVEY TO THE BEST OF MY KNOWLEDGE AND BELIEF.

DATE: 3/3/2022 *Bryon J. Motzko*
(Signature)

REVISION DATE
4/27/22 N.C.

VILAS COUNTY
APPROVED FOR COUNTY
DATE: 3/31/22 *Steph M. ...*
(Signature)

SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTERESTS TO THE COUNTY.

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED			HIGHWAY EASEMENT (H.E.)	TEMPORARY LIMITED EASEMENT (T.L.E.)
				NEW (AC)	EXISTING (AC)	TOTAL (AC)	(AC)	(AC)
1	4.04	KENNETH D. & ELLEN M. VAN ZEELAND	FEE / TLE	0.09	----	0.09	----	0.13
2	4.04	KELLY L. BENDER & RANDY W. BENDER	FEE / TLE	0.12	0.43	0.55	----	0.22
3	4.04 - 4.07	VILAS COUNTY	HE / TLE	---	---	---	19.74 *	2.03
80	4.05	CHOICETEL	RELEASE OF RIGHTS					
81	4.07	WISCONSIN MICHIGAN POWER COMPANY	RELEASE OF RIGHTS					

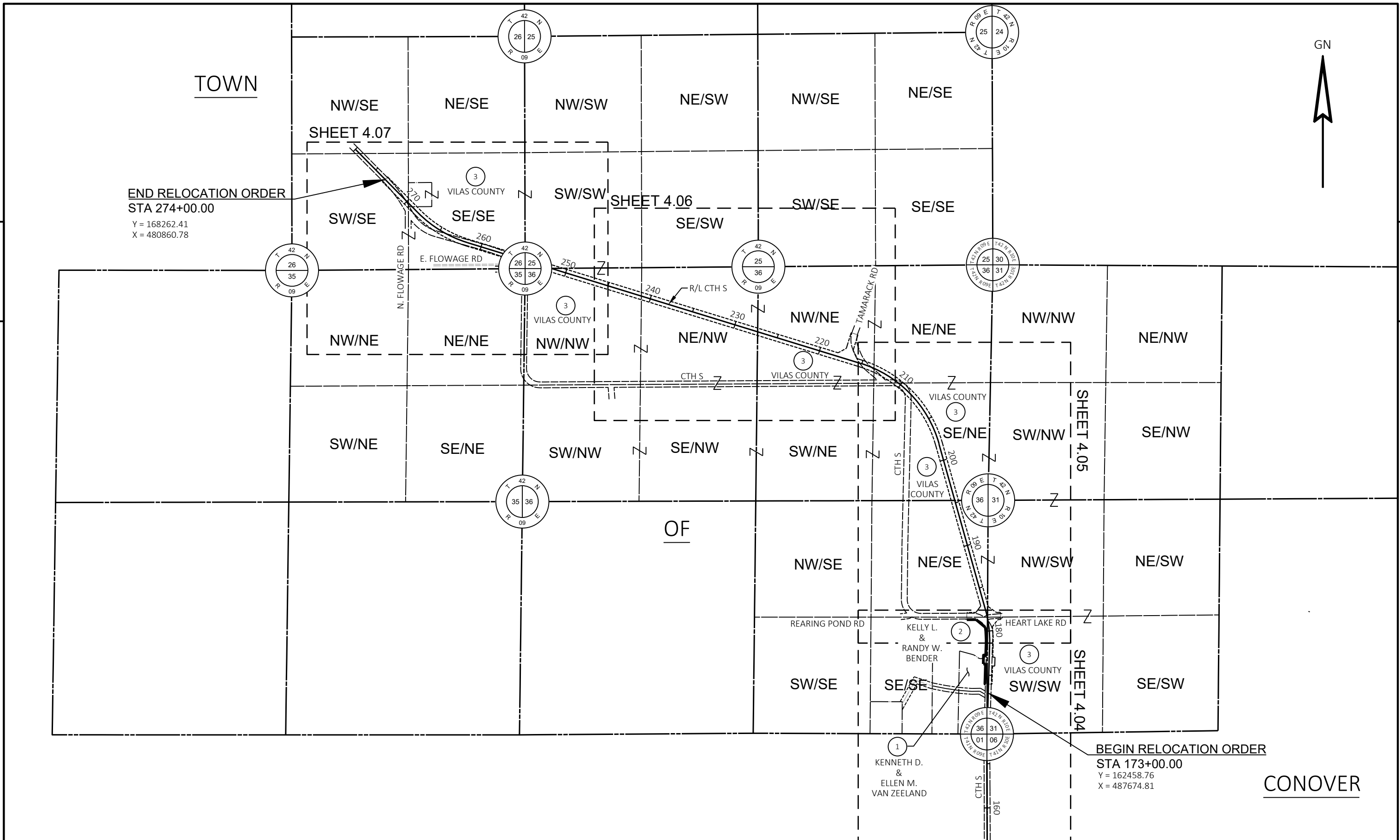
* 4.16 AC. OF THE 19.74 AC. HIGHWAY EASEMENT IS CURRENTLY BEING USED AS HIGHWAY RIGHT-OF-WAY EASEMENTS

4

4

REVISION DATE 4/27/22	DATE : 3/3/2022	SCALE, FEET 	HWY: CTH S	R/W PROJECT NUMBER: 9513-00-00	PLAT SHEET 4.02
	GRID FACTOR N/A		COUNTY: VILAS	CONSTRUCTION PROJECT NUMBER: 9513-00-70	PS&E SHEET _____

E



END RELOCATION ORDER
 STA 274+00.00
 Y = 168262.41
 X = 480860.78

BEGIN RELOCATION ORDER
 STA 173+00.00
 Y = 162458.76
 X = 487674.81



REVISION DATE 4/27/22 N.C.	DATE : 3/3/2022	SCALE, FEET 0 500 1000	HWY: CTH S	R/W PROJECT NUMBER: 9513-00-00	PLAT SHEET 4.03
	GRID FACTOR N/A		COUNTY: VILAS	CONSTRUCTION PROJECT NUMBER: 9513-00-70	PS&E SHEET

RIGHT OF WAY POINT TABLE				
POINT	STATION	OFFSET	Y	X
PRW 401	174+00.00	34.56', LT	162559.70	487643.10
PRW 402	174+00.00	40.00', LT	162559.86	487637.66
PRW 403	176+25.00	40.00', LT	162784.77	487644.02
PRW 404	176+25.00	65.00', LT	162785.47	487619.03
PRW 405	177+25.00	65.00', LT	162885.43	487621.86
PRW 406	177+25.00	40.00', LT	162884.73	487646.85
PRW 407	178+49.90	40.00', LT	163009.57	487650.39
PRW 408	180+46.18	40.00', LT	163199.58	487641.74
PRW 409	181+56.77	128.76', LT	163287.59	487537.61
PRW 410	181+81.38	231.56', LT	163286.79	487432.64
PRW 411	181+89.65	230.06', LT	163293.79	487432.59
PRW 412	182+13.87	225.39', LT	163314.40	487432.43

RIGHT OF WAY POINT TABLE				
POINT	STATION	OFFSET	Y	X
PRW 413	181+57.01	2.97', RT	163314.31	487666.61
PRW 442	181+21.71	148.64', RT	163305.07	487816.68
PRW 443	181+08.48	147.26', RT	163290.36	487817.83
PRW 444	181+11.13	114.68', RT	163287.81	487785.22
PRW 445	180+44.87	40.00', RT	163207.76	487721.33
PRW 446	178+49.90	40.00', RT	163007.31	487730.36
PRW 447	177+05.00	40.00', RT	162862.47	487726.26
PRW 448	177+05.00	65.00', RT	162861.76	487751.25
PRW 449	176+05.00	65.00', RT	162761.80	487748.42
PRW 450	176+05.00	40.00', RT	162762.51	487723.43
PRW 451	174+00.00	40.00', RT	162557.59	487717.62
PRW 452	174+00.00	31.44', RT	162557.83	487709.07

COURSE TABLE			
POINT - POINT	BEARING	DISTANCE	
400 - 401	N88° 22' 42"W	19.63'	
401 - 402	N88° 22' 42"W	5.44'	
402 - 403	N01° 37' 18"E	225.00'	
403 - 404	N88° 22' 42"W	25.00'	
404 - 405	N01° 37' 18"E	100.00'	
405 - 406	S88° 22' 42"E	25.00'	
406 - 407	N01° 37' 18"E	124.90'	
407 - 408	CURVE DATA		
408 - 409	N49° 47' 43"W	136.34'	
409 - 410	S89° 33' 55"W	104.97'	
410 - 411	N00° 26' 05"W	7.00'	
411 - 412	N00° 26' 05"W	20.61'	
412 - 413	S89° 58' 39"E	234.18'	
413 - 400	S00° 17' 42"W	755.17'	
445 - 446	CURVE DATA		
446 - 447	S01° 37' 18"W	144.90'	
447 - 448	S88° 22' 42"E	25.00'	
448 - 449	S01° 37' 18"W	100.00'	
449 - 450	N88° 22' 42"W	25.00'	
450 - 451	S01° 37' 18"W	205.00'	
451 - 452	N88° 22' 42"W	8.56'	
452 - 400	N88° 22' 42"W	46.37'	

PNT 407 - PNT 408 PNT 445 - PNT 446
 L = 190.38' L = 200.84'
 LCH = 190.21' LCH = 200.66'
 CB = N02° 36' 22"W CB = S02° 34' 41"E
 R = 1290.00' R = 1370.00'
 Δ = 008° 27' 20" Δ = 008° 23' 57"

EXISTING UTILITY EASEMENTS TO BE RELEASED

NONE

NE/NE

OF

CONOVER

NW/NW

PI STA = 167+05.05
 Y = 161863.999
 X = 487657.973
 DELTA = 1°51'41"
 D = 0°19'31"
 T = 286.15'
 L = 572.25'
 R = 17614.85'
 PC STA = 164+18.90
 PT STA = 169+91.14

PI STA = 180+51.89
 Y = 163210.351
 X = 487696.089
 DELTA = 17°16'18"
 D = 4°18'29"
 T = 201.99'
 L = 400.92'
 R = 1330.00'
 PC STA = 178+49.90
 PT STA = 182+50.82

BEGIN RELOCATION ORDER
 STA 173+00.00
 Y = 162458.76
 X = 487674.81

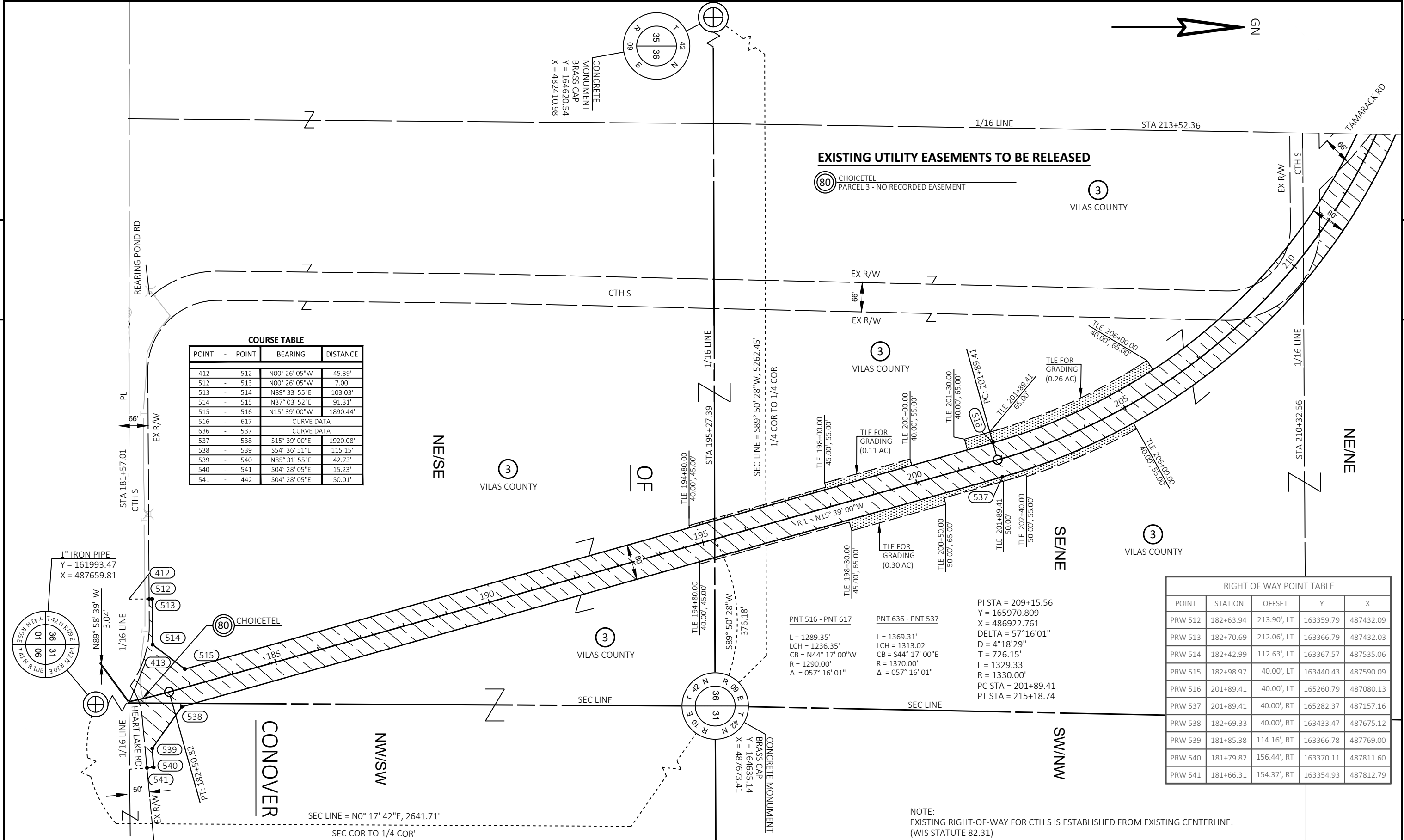
NOTE:
 EXISTING RIGHT-OF-WAY FOR CTH S IS ESTABLISHED FROM EXISTING CENTERLINE. (WIS STATUTE 82.31)
 AND FROM SHOWN MAP OF SURVEYS.

REVISION DATE	DATE : 3/3/2022
4/27/22	GRID FACTOR N/A

SCALE, FEET	HWY: CTH S
0 100 200	COUNTY: VILAS

R/W PROJECT NUMBER: 9513-00-00	PLAT SHEET 4.04
CONSTRUCTION PROJECT NUMBER: 9513-00-70	PS&E SHEET

E



COURSE TABLE

POINT	POINT	BEARING	DISTANCE
412	512	N00° 26' 05" W	45.39'
512	513	N00° 26' 05" W	7.00'
513	514	N89° 33' 55" E	103.03'
514	515	N37° 03' 52" E	91.31'
515	516	N15° 39' 00" W	1890.44'
516	617	CURVE DATA	
636	537	CURVE DATA	
537	538	S15° 39' 00" E	1920.08'
538	539	S54° 36' 51" E	115.15'
539	540	N85° 31' 55" E	42.73'
540	541	S04° 28' 05" E	15.23'
541	442	S04° 28' 05" E	50.01'

RIGHT OF WAY POINT TABLE

POINT	STATION	OFFSET	Y	X
PRW 512	182+63.94	213.90', LT	163359.79	487432.09
PRW 513	182+70.69	212.06', LT	163366.79	487432.03
PRW 514	182+42.99	112.63', LT	163367.57	487535.06
PRW 515	182+98.97	40.00', LT	163440.43	487590.09
PRW 516	201+89.41	40.00', LT	165260.79	487080.13
PRW 537	201+89.41	40.00', RT	165282.37	487157.16
PRW 538	182+69.33	40.00', RT	163433.47	487675.12
PRW 539	181+85.38	114.16', RT	163366.78	487769.00
PRW 540	181+79.82	156.44', RT	163370.11	487811.60
PRW 541	181+66.31	154.37', RT	163354.93	487812.79

PNT 516 - PNT 617
 L = 1289.35'
 LCH = 1236.35'
 CB = N44° 17' 00" W
 R = 1290.00'
 Δ = 057° 16' 01"

PNT 636 - PNT 537
 L = 1369.31'
 LCH = 1313.02'
 CB = S44° 17' 00" E
 R = 1370.00'
 Δ = 057° 16' 01"

PI STA = 209+15.56
 Y = 165970.809
 X = 486922.761
 DELTA = 57° 16' 01"
 D = 4° 18' 29"
 T = 726.15'
 L = 1329.33'
 R = 1330.00'
 PC STA = 201+89.41
 PT STA = 215+18.74

NOTE:
 EXISTING RIGHT-OF-WAY FOR CTH S IS ESTABLISHED FROM EXISTING CENTERLINE.
 (WIS STATUTE 82.31)

REVISION DATE	DATE : 3/3/2022
4/27/22 N.C.	GRID FACTOR N/A



HWY: CTH S
 COUNTY: VILAS

R/W PROJECT NUMBER: 9513-00-00
 CONSTRUCTION PROJECT NUMBER: 9513-00-70

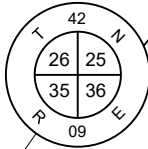
PLAT SHEET 4.05
 PS&E SHEET _____

TOWN

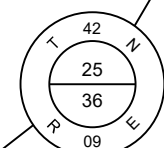
GN



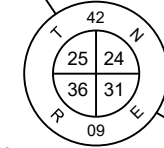
CONCRETE MONUMENT
BRASS CAP
Y = 167254.31
X = 482442.69



CONCRETE MONUMENT
BRASS CAP
Y = 167275.40
X = 485077.81



CONCRETE MONUMENT
BRASS CAP
Y = 167297.32
X = 487726.87



SEC LINE = N89° 32' 29"E, 2635.20'
SEC COR TO 1/4 COR

SEC LINE = S89° 31' 34"W, 2649.15'
SEC COR. TO 1/4 COR.

1317.60'

1324.57'

NE/NW

NW/NE

3
VILAS COUNTY

3
VILAS COUNTY

OF

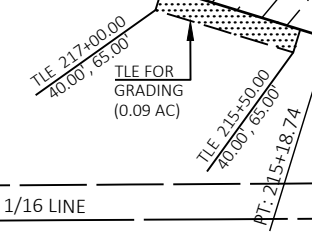
EXISTING UTILITY EASEMENTS TO BE RELEASED

NONE

RIGHT OF WAY POINT TABLE				
POINT	STATION	OFFSET	Y	X
PRW 617	215+18.74	40.00', LT	166145.89	486216.90
PRW 628	217+93.29	40.00', RT	166303.01	485977.97
PRW 629	217+18.29	115.00', RT	166352.66	486071.69
PRW 630	217+18.29	300.00', RT	166529.50	486126.03
PRW 631	217+10.16	300.00', RT	166527.12	486133.80
PRW 632	216+44.14	300.00', RT	166507.72	486196.91
PRW 633	216+38.29	300.00', RT	166506.00	486202.50
PRW 634	216+38.29	115.00', RT	166329.16	486148.16
PRW 635	215+63.29	40.00', RT	166235.44	486197.82
PRW 636	215+18.74	40.00', RT	166222.36	486240.40

POINT	POINT	BEARING	DISTANCE
CURVE DATA			
516	-	617	
617	-	718	N72° 55' 01"W 3777.72'
729	-	628	S72° 55' 01"E 4371.51'
628	-	629	N62° 04' 59"E 106.07'
629	-	630	N17° 04' 59"E 185.00'
630	-	631	S72° 55' 01"E 8.13'
631	-	632	S72° 55' 01"E 66.02'
632	-	633	S72° 55' 01"E 5.85'
633	-	634	S17° 04' 59"W 185.00'
634	-	635	S27° 55' 01"E 106.07'
635	-	636	S72° 55' 01"E 44.55'
636	-	537	CURVE DATA

PNT 516 TO PNT 617 PNT 636 TO PNT 537 PI STA = 209+15.56
 L = 1289.35' L = 1369.31' Y = 165970.809
 LCH = 1236.35' LCH = 1313.02' X = 486922.761
 CB = N44° 17' 00"W CB = S44° 17' 00"E DELTA = 57° 16' 01"
 R = 1290.00' R = 1370.00' D = 4° 18' 29"
 Δ = 057° 16' 01" Δ = 057° 16' 01" T = 726.15'
 L = 1329.33' L = 1330.00'
 R = 1330.00' PC STA = 201+89.41
 PT STA = 215+18.74



NOTE:
EXISTING RIGHT-OF-WAY FOR CTH S IS ESTABLISHED FROM EXISTING CENTERLINE.
(WIS STATUTE 82.31)

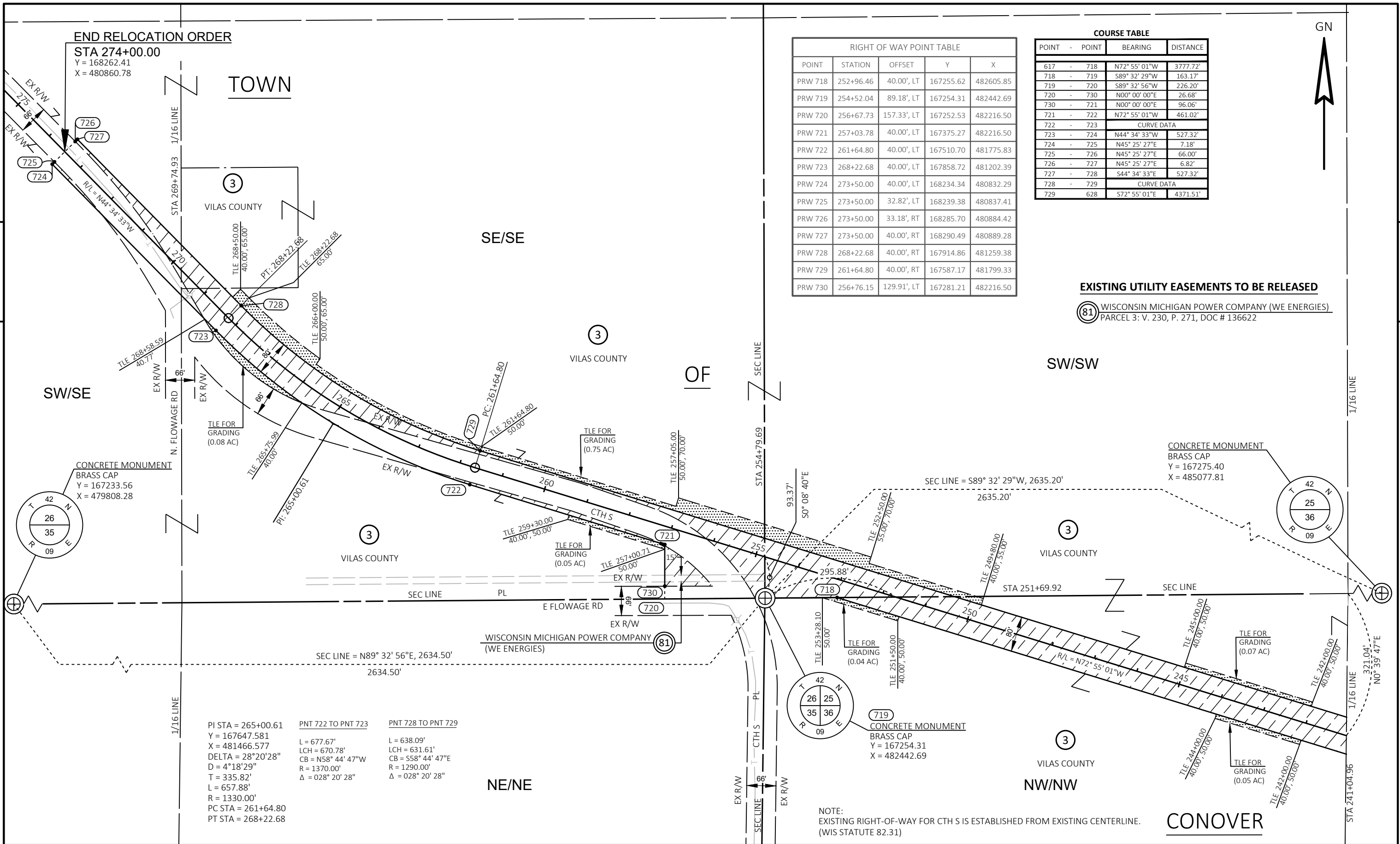
CONOVER

REVISION DATE 4/27/22 N.C.	DATE : 3/3/2022
GRID FACTOR N/A	SCALE, FEET 0 100 200

HWY: CTH S	R/W PROJECT NUMBER: 9513-00-00
COUNTY: VILAS	CONSTRUCTION PROJECT NUMBER: 9513-00-70

PLAT SHEET 4.06	PS&E SHEET
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FILE NAME : 040102-RP.DWG	PLOT DATE : 4/26/2022 2:02 PM	PLOT BY : BOBBY JONES	PLOT NAME :	PLOT SCALE : 1 IN:200 FT	WISDOT/CADD SHEET 75
---------------------------	-------------------------------	-----------------------	-------------	--------------------------	----------------------



END RELOCATION ORDER
 STA 274+00.00
 Y = 168262.41
 X = 480860.78

RIGHT OF WAY POINT TABLE				
POINT	STATION	OFFSET	Y	X
PRW 718	252+96.46	40.00', LT	167255.62	482605.85
PRW 719	254+52.04	89.18', LT	167254.31	482442.69
PRW 720	256+67.73	157.33', LT	167252.53	482216.50
PRW 721	257+03.78	40.00', LT	167375.27	482216.50
PRW 722	261+64.80	40.00', LT	167510.70	481775.83
PRW 723	268+22.68	40.00', LT	167858.72	481202.39
PRW 724	273+50.00	40.00', LT	168234.34	480832.29
PRW 725	273+50.00	32.82', LT	168239.38	480837.41
PRW 726	273+50.00	33.18', RT	168285.70	480884.42
PRW 727	273+50.00	40.00', RT	168290.49	480889.28
PRW 728	268+22.68	40.00', RT	167914.86	481259.38
PRW 729	261+64.80	40.00', RT	167587.17	481799.33
PRW 730	256+76.15	129.91', LT	167281.21	482216.50

COURSE TABLE				
POINT	POINT	BEARING	DISTANCE	
617	-	718	N72° 55' 01" W 3777.72'	
718	-	719	S89° 32' 29" W 163.17'	
719	-	720	S89° 32' 56" W 226.20'	
720	-	730	N00° 00' 00" E 26.68'	
730	-	721	N00° 00' 00" E 96.06'	
721	-	722	N72° 55' 01" W 461.02'	
722	-	723	CURVE DATA	
723	-	724	N44° 34' 33" W 527.32'	
724	-	725	N45° 25' 27" E 7.18'	
725	-	726	N45° 25' 27" E 66.00'	
726	-	727	N45° 25' 27" E 6.82'	
727	-	728	S44° 34' 33" E 527.32'	
728	-	729	CURVE DATA	
729	-	628	S72° 55' 01" E 4371.51'	

EXISTING UTILITY EASEMENTS TO BE RELEASED
 (81) WISCONSIN MICHIGAN POWER COMPANY (WE ENERGIES)
 PARCEL 3: V. 230, P. 271, DOC # 136622

PI STA = 265+00.61
 Y = 167647.581
 X = 481466.577
 DELTA = 28° 20' 28"
 D = 4° 18' 29"
 T = 335.82'
 L = 657.88'
 R = 1330.00'
 PC STA = 261+64.80
 PT STA = 268+22.68

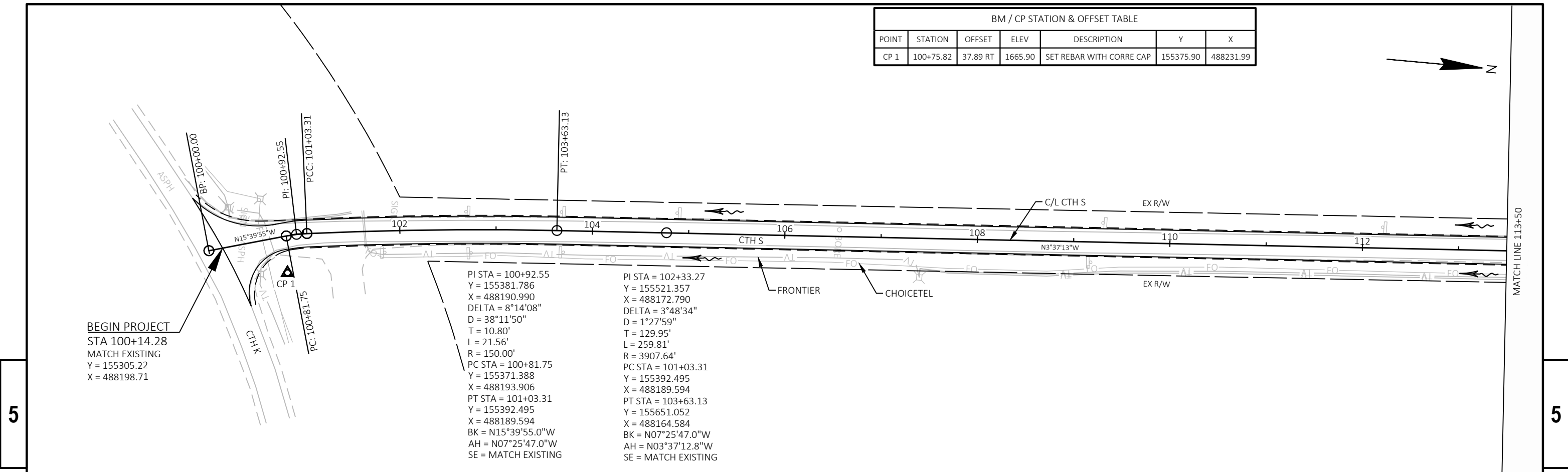
PNT 722 TO PNT 723
 L = 677.67'
 LCH = 670.78'
 CB = N58° 44' 47" W
 R = 1370.00'
 Δ = 028° 20' 28"

PNT 728 TO PNT 729
 L = 638.09'
 LCH = 631.61'
 CB = S58° 44' 47" E
 R = 1290.00'
 Δ = 028° 20' 28"

NOTE:
 EXISTING RIGHT-OF-WAY FOR CTH S IS ESTABLISHED FROM EXISTING CENTERLINE.
 (WIS STATUTE 82.31)

REVISION DATE 4/27/22 N.C.	DATE : 3/3/2022	SCALE, FEET 0 100 200	HWY: CTH S	R/W PROJECT NUMBER: 9513-00-00	PLAT SHEET 4.07
	GRID FACTOR N/A		COUNTY: VILAS	CONSTRUCTION PROJECT NUMBER: 9513-00-70	PS&E SHEET

BM / CP STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV	DESCRIPTION	Y	X
CP 1	100+75.82	37.89 RT	1665.90	SET REBAR WITH CORRE CAP	155375.90	488231.99

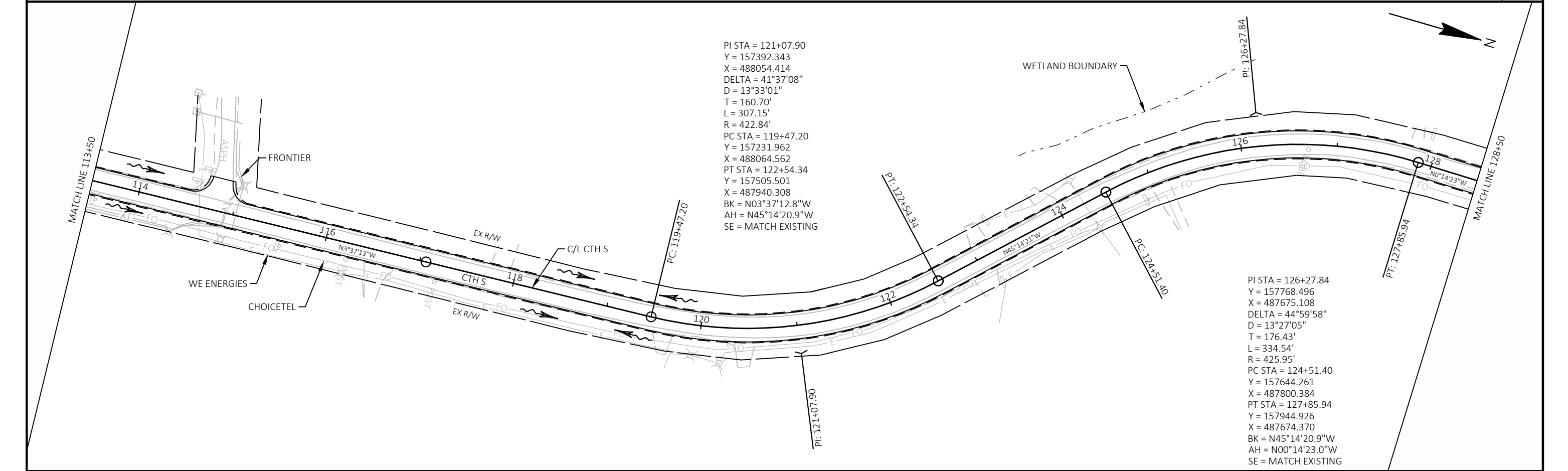


5

5

PI STA = 100+92.55
 Y = 155381.786
 X = 488190.990
 DELTA = 8°14'08"
 D = 38°11'50"
 T = 10.80'
 L = 21.56'
 R = 150.00'
 PC STA = 100+81.75
 Y = 155371.388
 X = 488193.906
 PT STA = 101+03.31
 Y = 155392.495
 X = 488189.594
 BK = N15°39'55.0"W
 AH = N07°25'47.0"W
 SE = MATCH EXISTING

PI STA = 102+33.27
 Y = 155521.357
 X = 488172.790
 DELTA = 3°48'34"
 D = 1°27'59"
 T = 129.95'
 L = 259.81'
 R = 3907.64'
 PC STA = 101+03.31
 Y = 155392.495
 X = 488189.594
 PT STA = 103+63.13
 Y = 155651.052
 X = 488164.584
 BK = N07°25'47.0"W
 AH = N03°37'12.8"W
 SE = MATCH EXISTING



PI STA = 121+07.90
 Y = 157392.343
 X = 488054.414
 DELTA = 41°37'08"
 D = 13°33'01"
 T = 160.70'
 L = 307.15'
 R = 422.84'
 PC STA = 119+47.20
 Y = 157231.962
 X = 488064.562
 PT STA = 122+54.34
 Y = 157505.501
 X = 487940.308
 BK = N03°37'12.8"W
 AH = N45°14'20.9"W
 SE = MATCH EXISTING

PI STA = 126+27.84
 Y = 157768.496
 X = 487675.108
 DELTA = 44°59'58"
 D = 13°27'05"
 T = 176.43'
 L = 334.54'
 R = 425.95'
 PC STA = 124+51.40
 Y = 157644.261
 X = 487800.384
 PT STA = 127+85.94
 Y = 157944.926
 X = 487674.370
 BK = N45°14'20.9"W
 AH = N00°14'23.0"W
 SE = MATCH EXISTING

PROJECT NO: 9513-00-70

HWY: CTH S

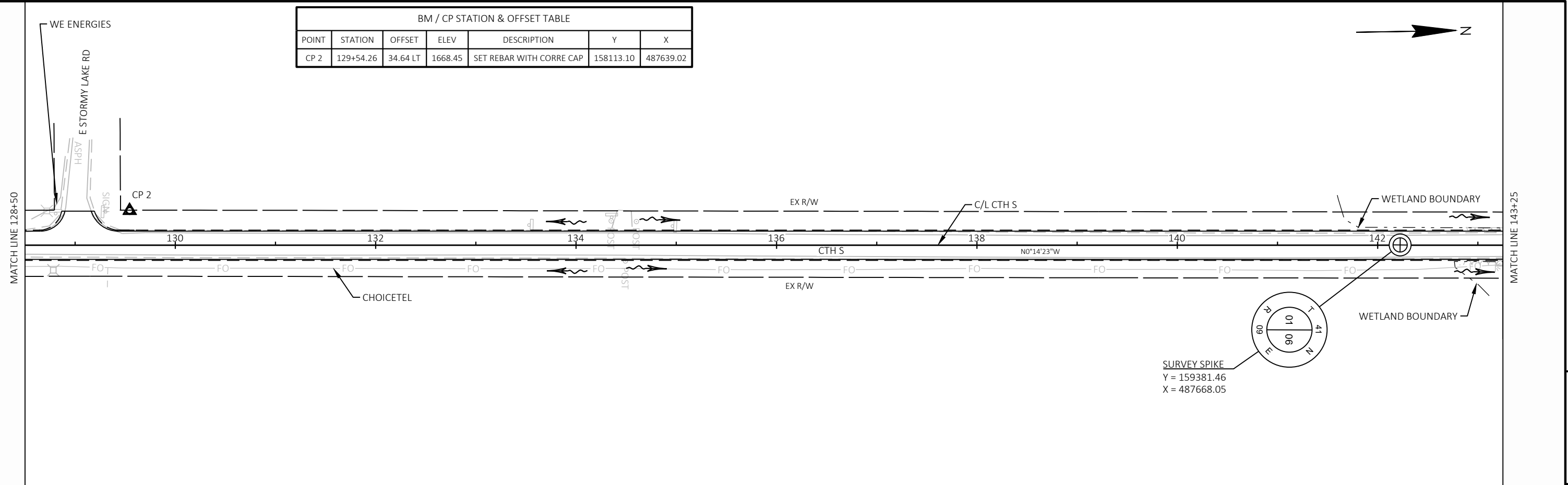
COUNTY: VILAS

PLAN: CTH S

SHEET

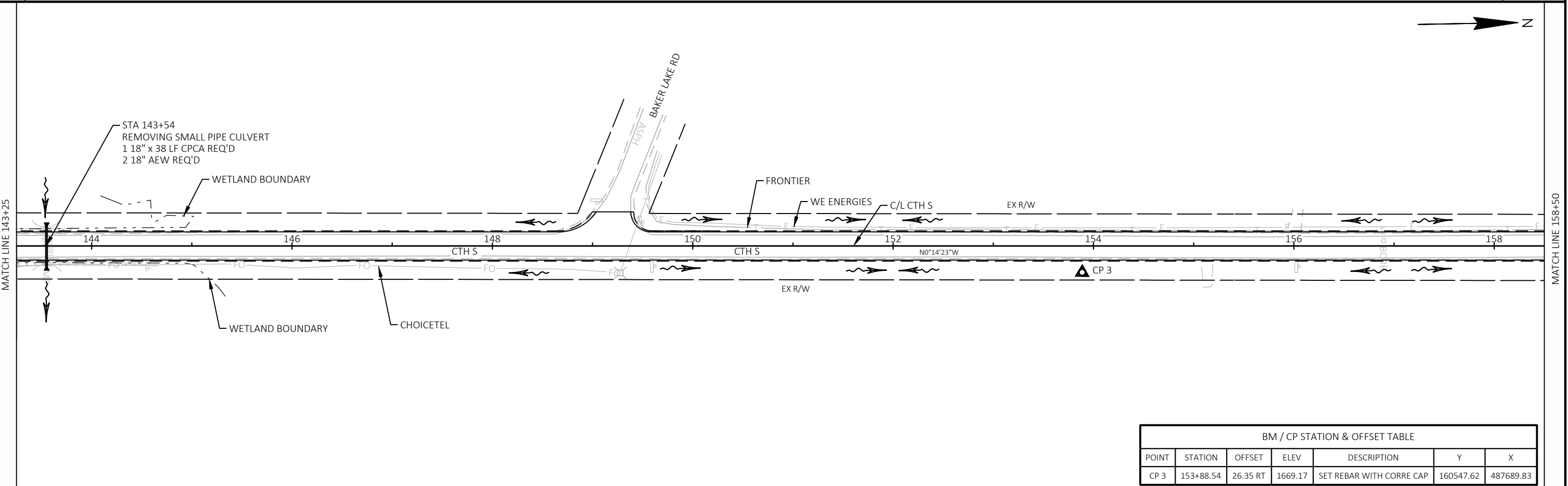
E

BM / CP STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV	DESCRIPTION	Y	X
CP 2	129+54.26	34.64 LT	1668.45	SET REBAR WITH CORRE CAP	158113.10	487639.02



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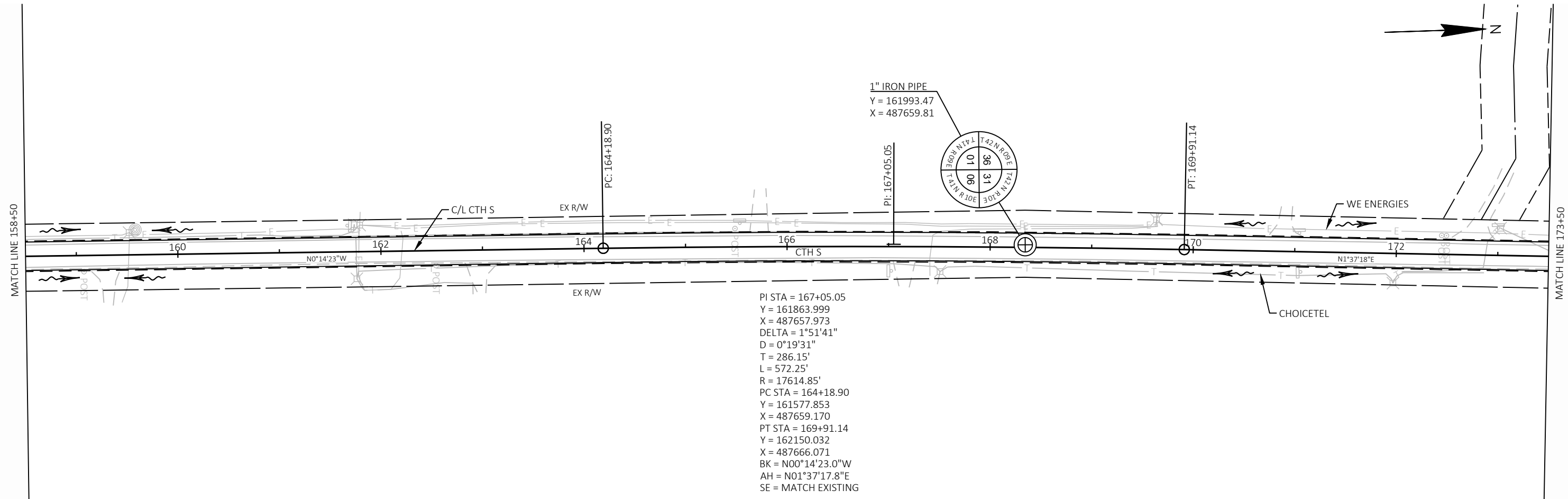
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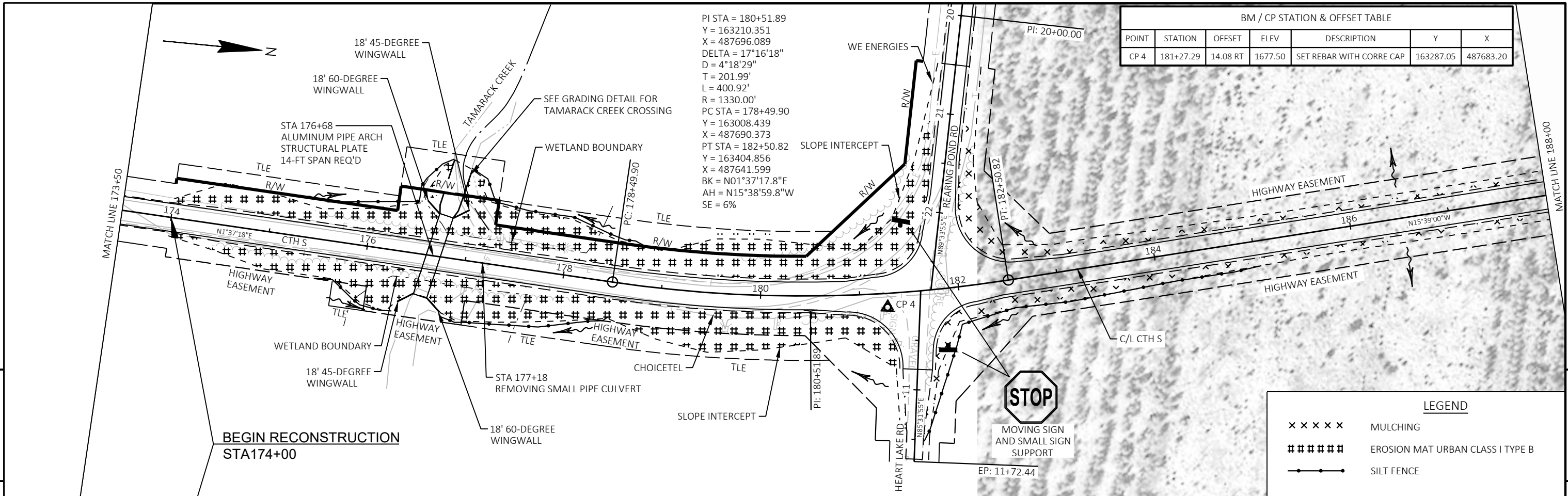
BM / CP STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV	DESCRIPTION	Y	X
CP 3	153+88.54	26.35 RT	1669.17	SET REBAR WITH CORRE CAP	160547.62	487689.83

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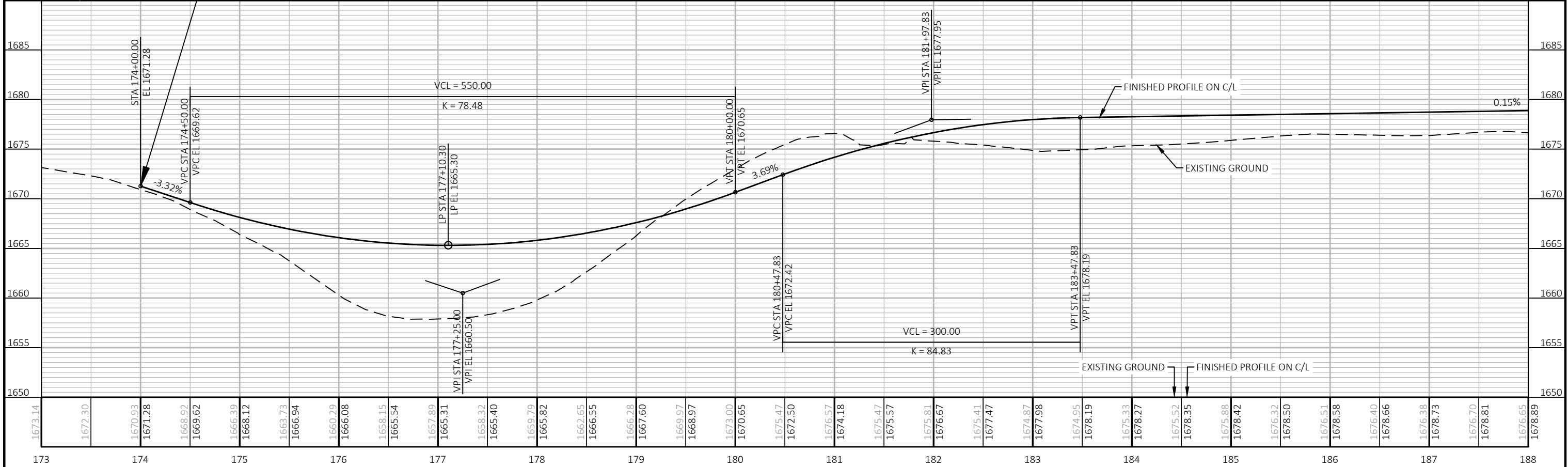
PI STA = 167+05.05
 Y = 161863.999
 X = 487657.973
 DELTA = 1°51'41"
 D = 0°19'31"
 T = 286.15'
 L = 572.25'
 R = 17614.85'
 PC STA = 164+18.90
 Y = 161577.853
 X = 487659.170
 PT STA = 169+91.14
 Y = 162150.032
 X = 487666.071
 BK = N00°14'23.0"W
 AH = N01°37'17.8"E
 SE = MATCH EXISTING



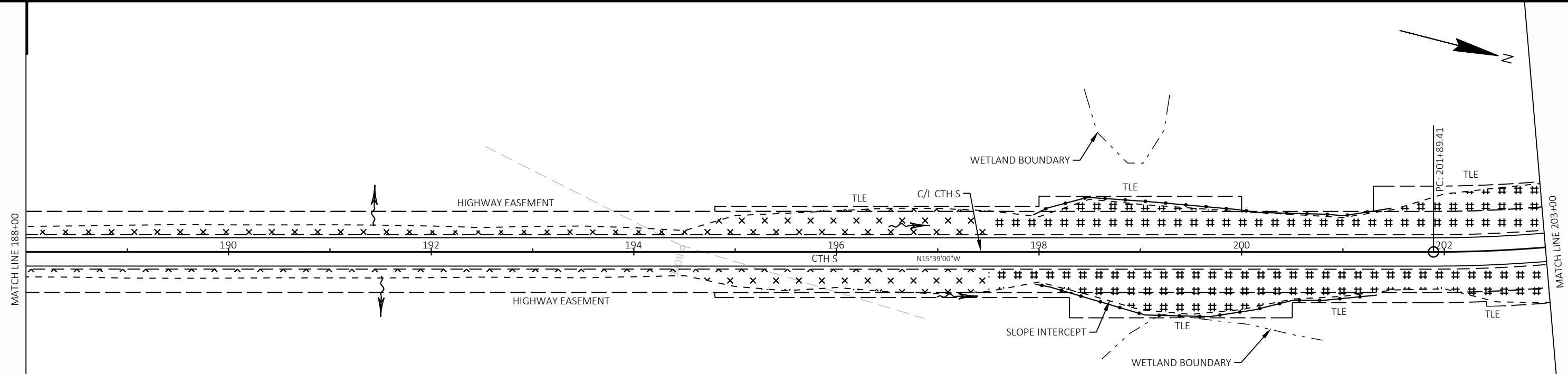
BM / CP STATION & OFFSET TABLE					
POINT	STATION	OFFSET	ELEV	DESCRIPTION	
CP 4	181+27.29	14.08 RT	1677.50	SET REBAR WITH CORRE CAP	163287.05 487683.20

PI STA = 180+51.89
 Y = 163210.351
 X = 487696.089
 DELTA = 17°16'18"
 D = 4°18'29"
 T = 201.99'
 L = 400.92'
 R = 1330.00'
 PC STA = 178+49.90
 Y = 163008.439
 X = 487690.373
 PT STA = 182+50.82
 Y = 163404.856
 X = 487641.599
 BK = N01°37'17.8"E
 AH = N15°38'59.8"W
 SE = 6%

LEGEND	
XXXXXX	MULCHING
#####	EROSION MAT URBAN CLASS I TYPE B
—●—●—●—	SILT FENCE

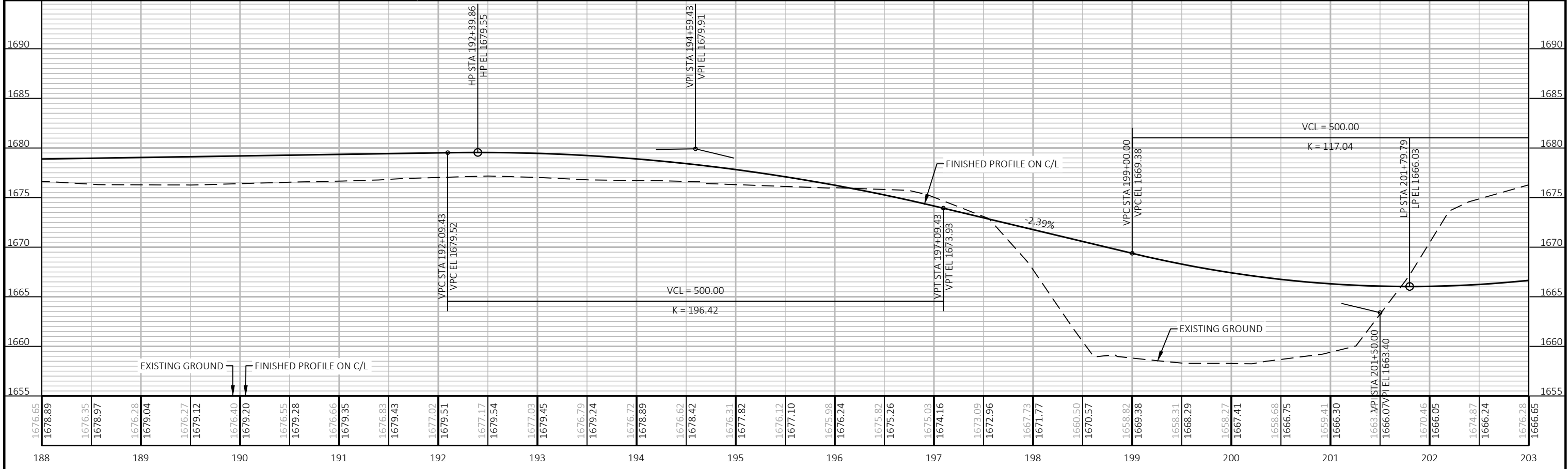


PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	PLAN AND PROFILE: CTH S	SHEET	E
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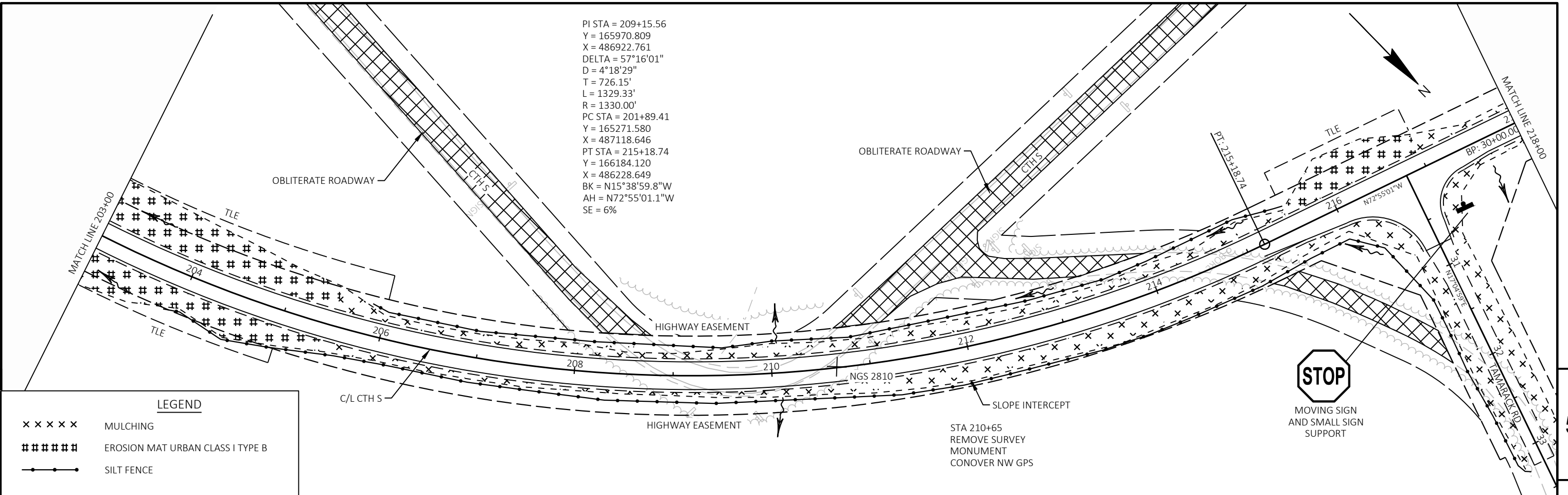


LEGEND

- × × × × × MULCHING
- ##### EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE



PROJECT NO: 9513-00-70 HWY: CTH S COUNTY: VILAS PLAN AND PROFILE: CTH S SHEET **E**

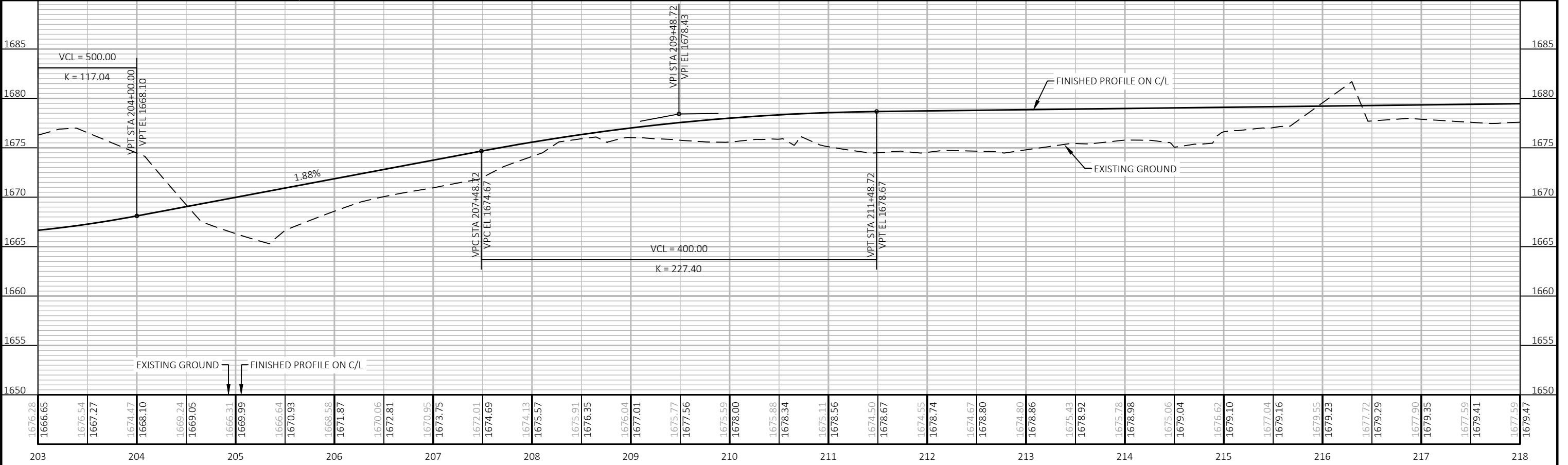


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LEGEND

- × × × × × MULCHING
- ##### EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE

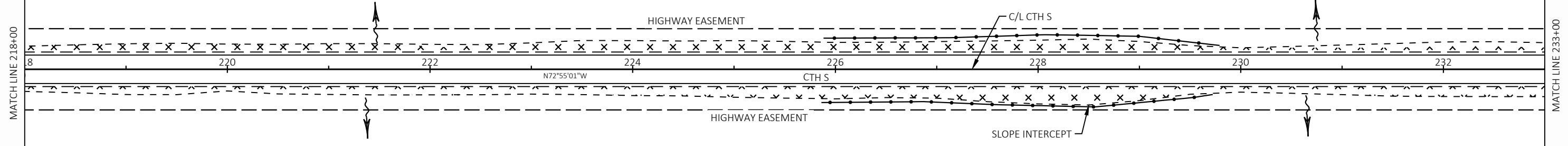


PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	PLAN AND PROFILE: CTH S	SHEET
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MATCH LINE 218+00

MATCH LINE 233+00

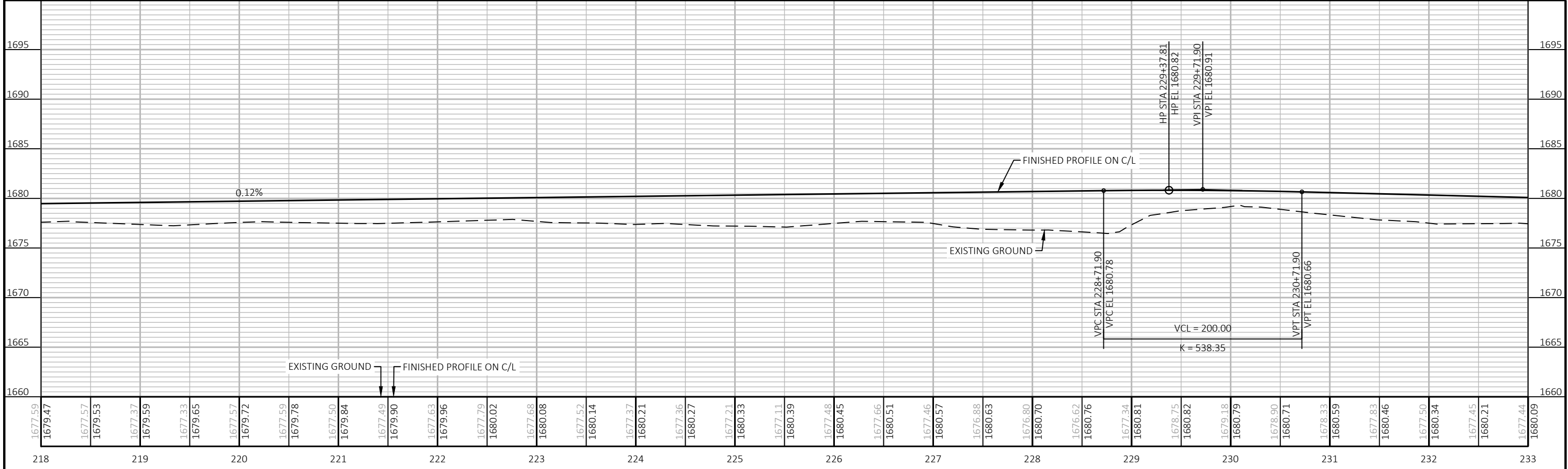


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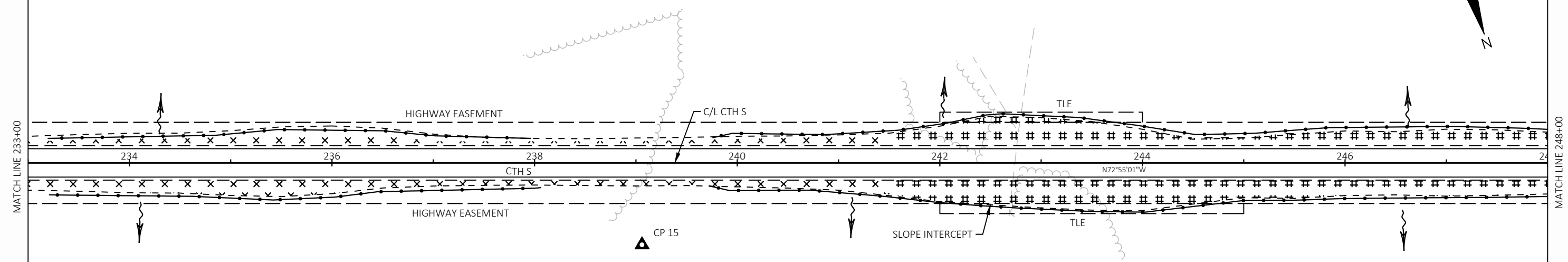
LEGEND

- x x x x x MULCHING
- ##### EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE

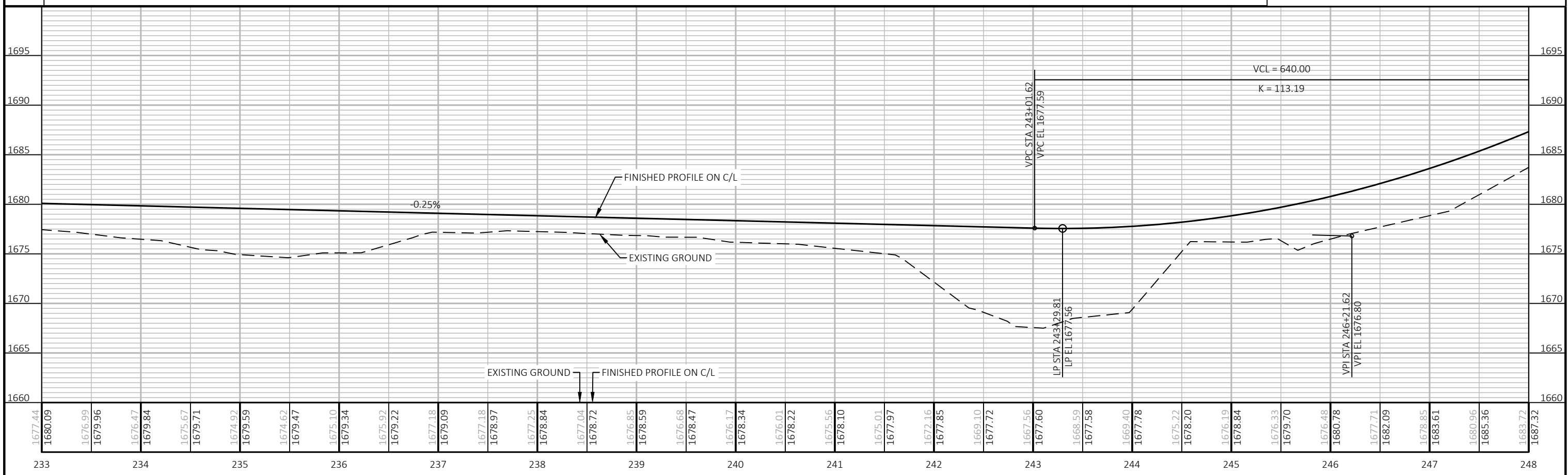


PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	PLAN AND PROFILE: CTH S	SHEET	E
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BM / CP STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV	DESCRIPTION	Y	X
CP 15	239+05.99	80.74 RT	1677.03	SET REBAR WITH CORRE CAP	166962.58	483970.44



LEGEND	
x x x x x	MULCHING
#####	EROSION MAT URBAN CLASS I TYPE B
—●—●—●—	SILT FENCE

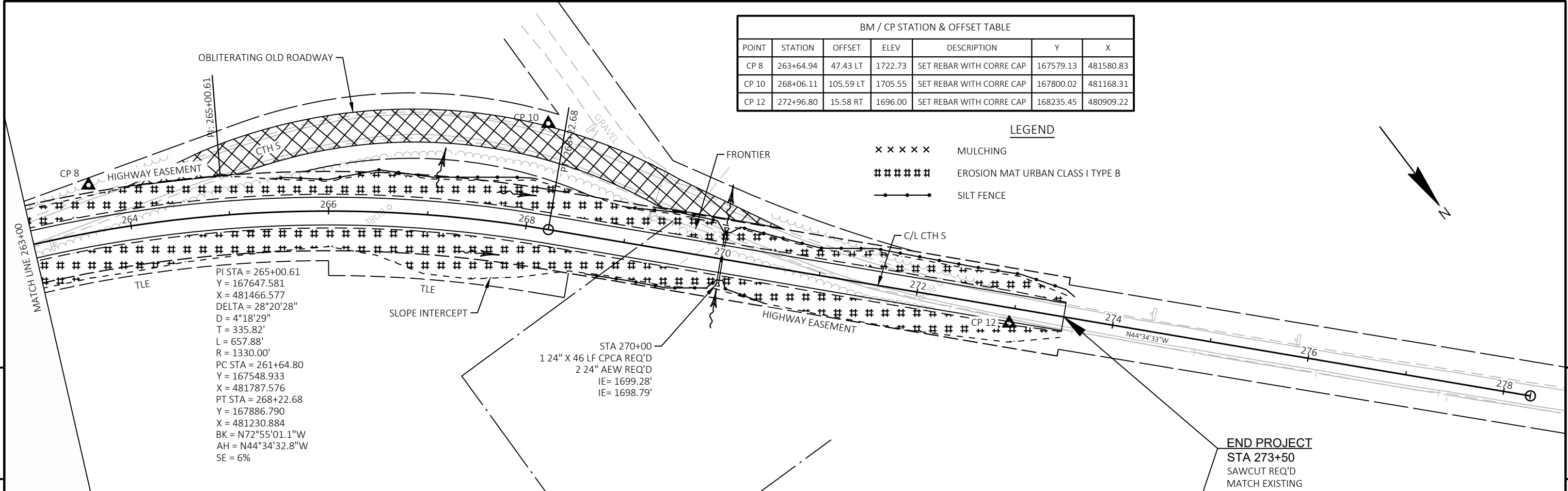


PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	PLAN AND PROFILE: CTH S	SHEET	E
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BM / CP STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV	DESCRIPTION	Y	X
CP 8	263+64.94	47.43 LT	1722.73	SET REBAR WITH CORRE CAP	167579.13	481580.83
CP 10	268+06.11	105.59 LT	1705.55	SET REBAR WITH CORRE CAP	167800.02	481168.31
CP 12	272+96.80	15.58 RT	1696.00	SET REBAR WITH CORRE CAP	168235.45	480909.22

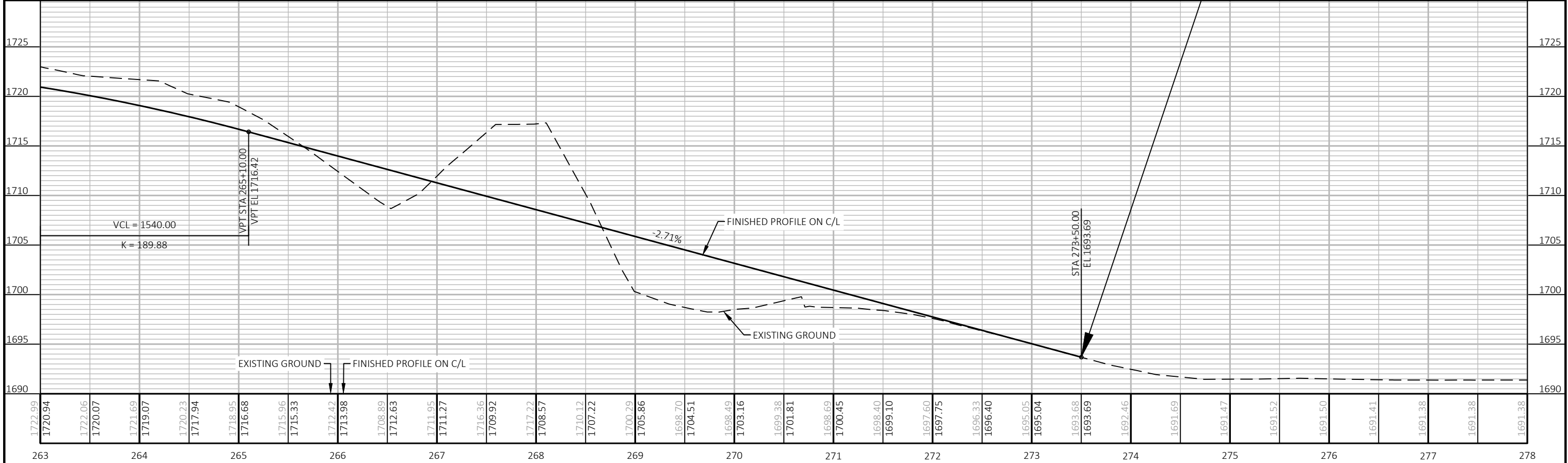
LEGEND

- × × × × × MULCHING
- ##### EROSION MAT URBAN CLASS I TYPE B
- SILT FENCE

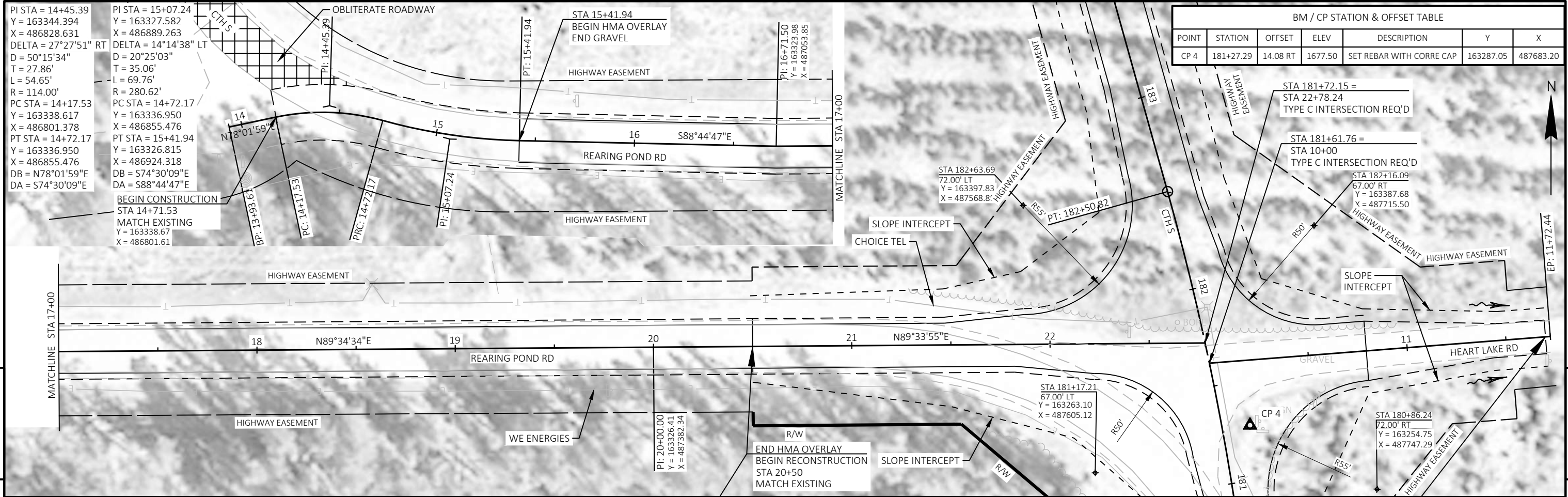


PI STA = 265+00.61
 Y = 167647.581
 X = 481466.577
 DELTA = 28°20'28"
 D = 4°18'29"
 T = 335.82'
 L = 657.88'
 R = 1330.00'
 PC STA = 261+64.80
 Y = 167548.933
 X = 481787.576
 PT STA = 268+22.68
 Y = 167886.790
 X = 481230.884
 BK = N72°55'01.1"W
 AH = N44°34'32.8"W
 SE = 6%

STA 270+00
 1 24" X 46 LF CPCA REQ'D
 2 24" AEW REQ'D
 IE = 1699.28'
 IE = 1698.79'



PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	PLAN AND PROFILE: CTH S	SHEET	E
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BM / CP STATION & OFFSET TABLE					
POINT	STATION	OFFSET	ELEV	DESCRIPTION	
CP 4	181+27.29	14.08 RT	1677.50	SET REBAR WITH CORRE CAP	163287.05 487683.20

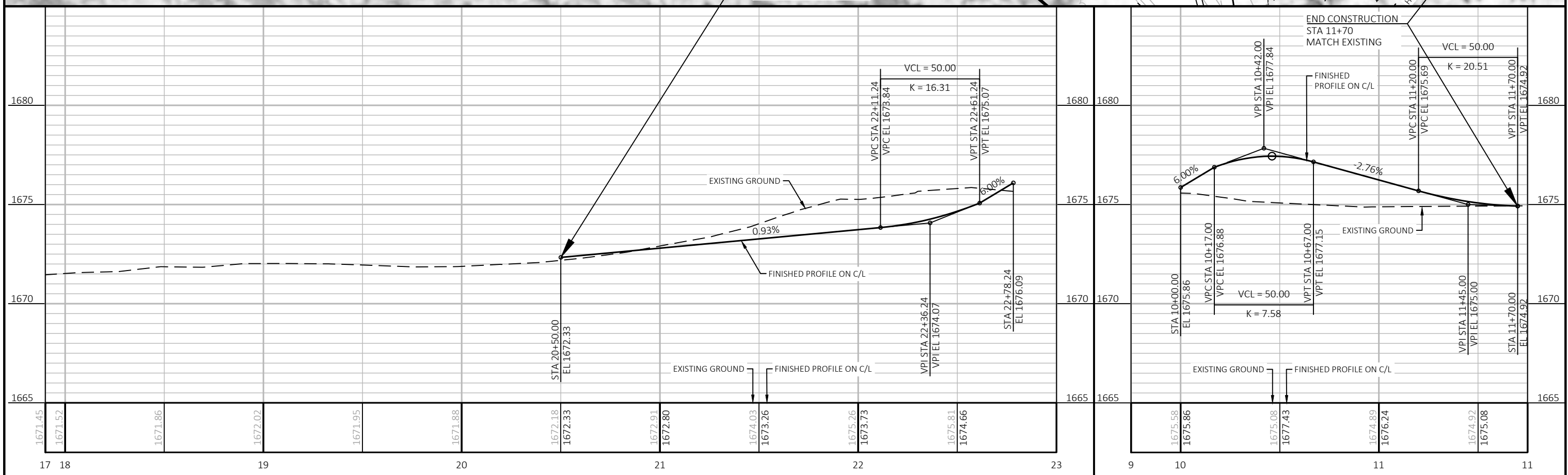
PI STA = 14+45.39
 Y = 163344.394
 X = 486828.631
 DELTA = 27°27'51" RT
 D = 50°15'34"
 T = 27.86'
 L = 54.65'
 R = 114.00'
 PC STA = 14+17.53
 Y = 163338.617
 X = 486801.378
 PT STA = 14+72.17
 Y = 163336.950
 X = 486855.476
 DB = N78°01'59"E
 DA = S74°30'09"E

PI STA = 15+07.24
 Y = 163327.582
 X = 486889.263
 DELTA = 14°14'38" LT
 D = 20°25'03"
 T = 35.06'
 L = 69.76'
 R = 280.62'
 PC STA = 14+72.17
 Y = 163336.950
 X = 486855.476
 PT STA = 15+41.94
 Y = 163326.815
 X = 486924.318
 DB = S74°30'09"E
 DA = S88°44'47"E

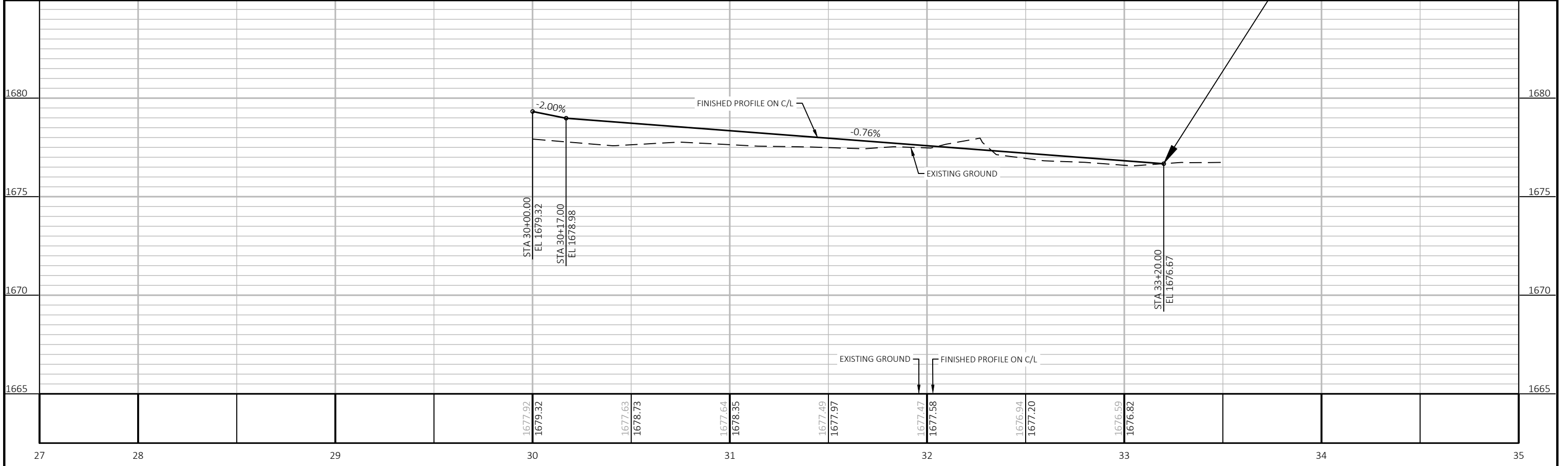
BEGIN CONSTRUCTION
 STA 14+71.53
 MATCH EXISTING
 Y = 163338.67
 X = 486801.61

MATCHLINE STA 17+00
 STA 18
 N89°34'34"E
 STA 19
 N89°33'55"E
 STA 20
 N89°33'55"E
 STA 21
 N89°33'55"E
 STA 22
 N89°33'55"E

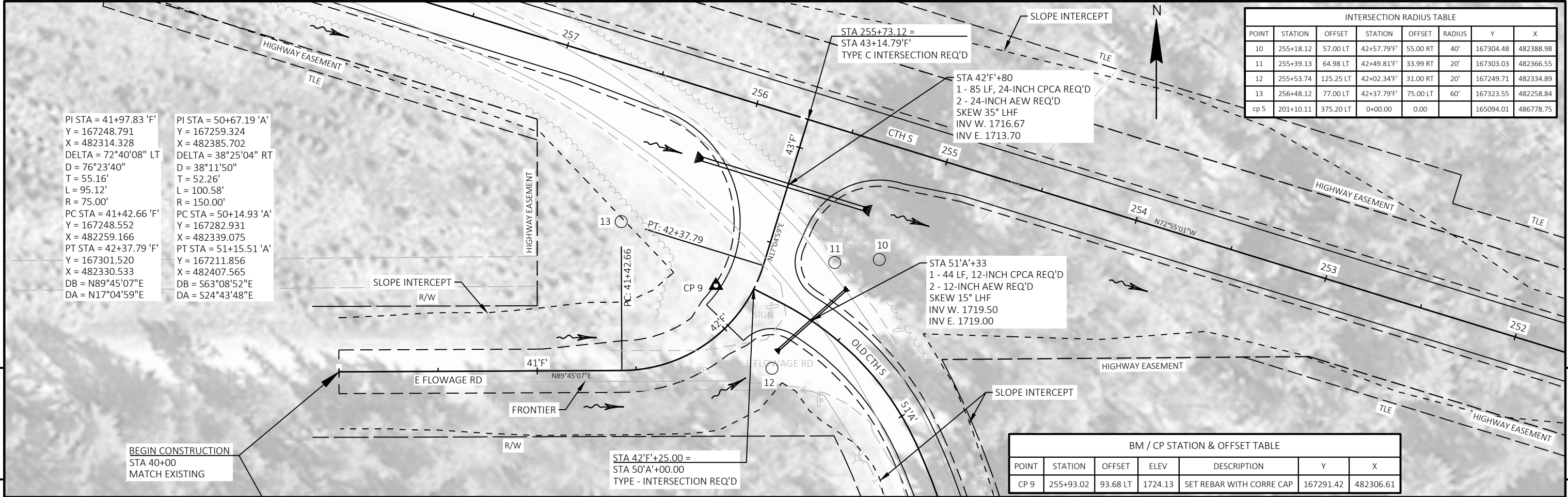
MATCHLINE STA 17+00
 STA 18
 N89°34'34"E
 STA 19
 N89°33'55"E
 STA 20
 N89°33'55"E
 STA 21
 N89°33'55"E
 STA 22
 N89°33'55"E



PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	PLAN AND PROFILE: REARING POND ROAD - HEART LAKE ROAD	SHEET	E
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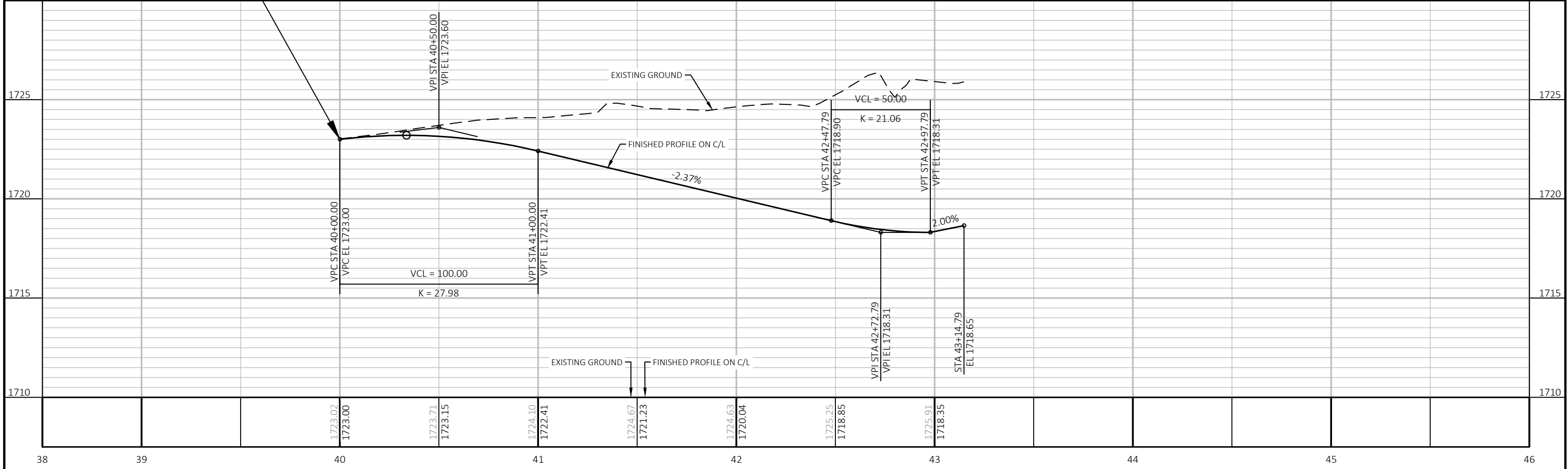
PROJECT NO: 9513-00-70 HWY: CTH S COUNTY: VILAS PLAN AND PROFILE: TAMARACK ROAD SHEET E



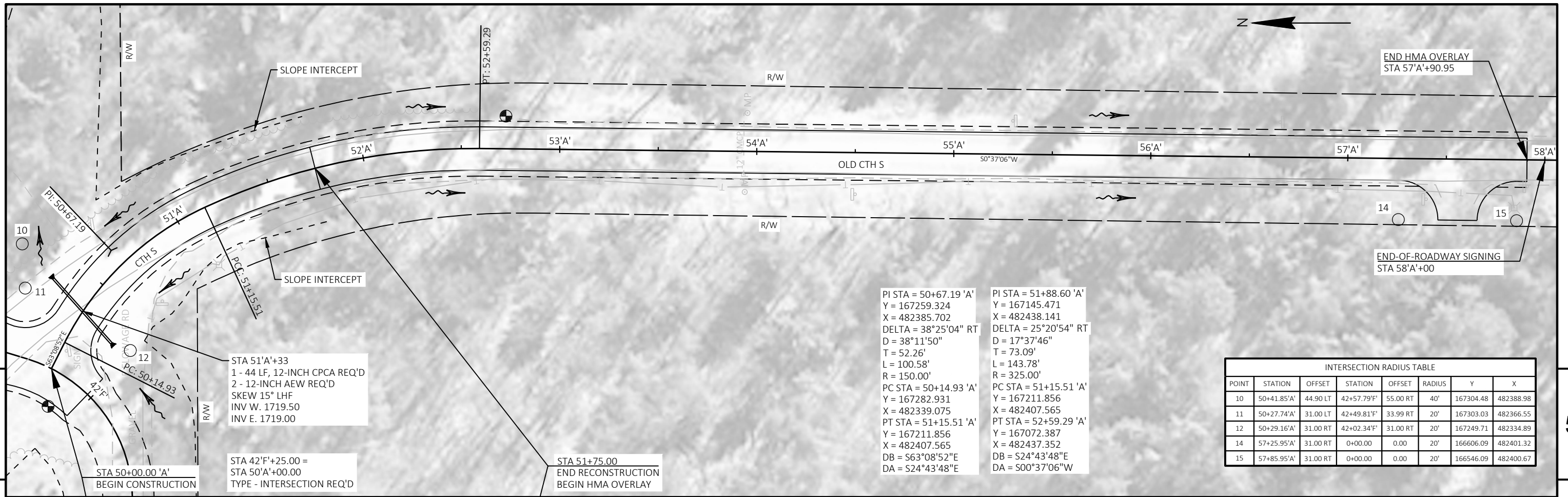
PI STA = 41+97.83 'F'	PI STA = 50+67.19 'A'
Y = 167248.791	Y = 167259.324
X = 482314.328	X = 482385.702
DELTA = 72°40'08" LT	DELTA = 38°25'04" RT
D = 76°23'40"	D = 38°11'50"
T = 55.16'	T = 52.26'
L = 95.12'	L = 100.58'
R = 75.00'	R = 150.00'
PC STA = 41+42.66 'F'	PC STA = 50+14.93 'A'
Y = 167248.552	Y = 167282.931
X = 482259.166	X = 482339.075
PT STA = 42+37.79 'F'	PT STA = 51+15.51 'A'
Y = 167301.520	Y = 167211.856
X = 482330.533	X = 482407.565
DB = N89°45'07"E	DB = S63°08'52"E
DA = N17°04'59"E	DA = S24°43'48"E

INTERSECTION RADIUS TABLE							
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS	Y	X
10	255+18.12	57.00 LT	42+57.79'F'	55.00 RT	40'	167304.48	482388.98
11	255+39.13	64.98 LT	42+49.81'F'	33.99 RT	20'	167303.03	482366.55
12	255+53.74	125.25 LT	42+02.34'F'	31.00 RT	20'	167249.71	482334.89
13	256+48.12	77.00 LT	42+37.79'F'	75.00 LT	60'	167323.55	482258.84
cp 5	201+10.11	375.20 LT	0+00.00	0.00		165094.01	486778.75

BM / CP STATION & OFFSET TABLE						
POINT	STATION	OFFSET	ELEV	DESCRIPTION	Y	X
CP 9	255+93.02	93.68 LT	1724.13	SET REBAR WITH CORRE CAP	167291.42	482306.61



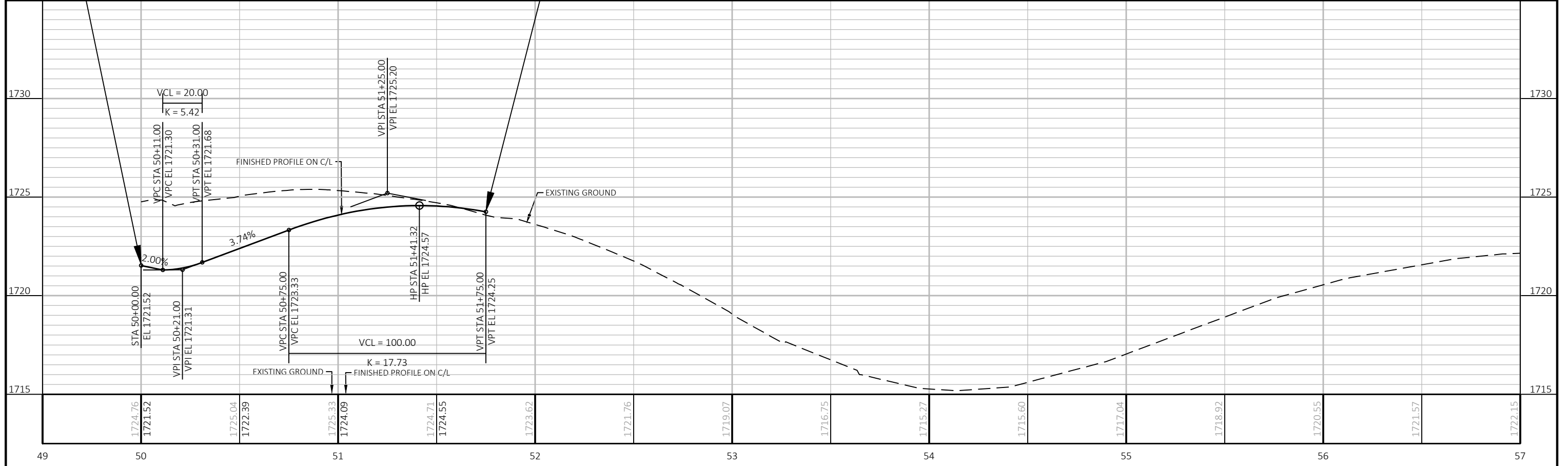
PROJECT NO: 9513-00-70 HWY: CTH S COUNTY: VILAS PLAN AND PROFILE: E FLOWAGE ROAD SHEET: E



PI STA = 50+67.19 'A'
 Y = 167259.324
 X = 482385.702
 DELTA = 38°25'04" RT
 D = 38°11'50"
 T = 52.26'
 L = 100.58'
 R = 150.00'
 PC STA = 50+14.93 'A'
 Y = 167282.931
 X = 482339.075
 PT STA = 51+15.51 'A'
 Y = 167211.856
 X = 482407.565
 DB = S63°08'52"E
 DA = S24°43'48"E

PI STA = 51+88.60 'A'
 Y = 167145.471
 X = 482438.141
 DELTA = 25°20'54" RT
 D = 17°37'46"
 T = 73.09'
 L = 143.78'
 R = 325.00'
 PC STA = 51+15.51 'A'
 Y = 167211.856
 X = 482407.565
 PT STA = 52+59.29 'A'
 Y = 167072.387
 X = 482437.352
 DB = S24°43'48"E
 DA = S00°37'06"W

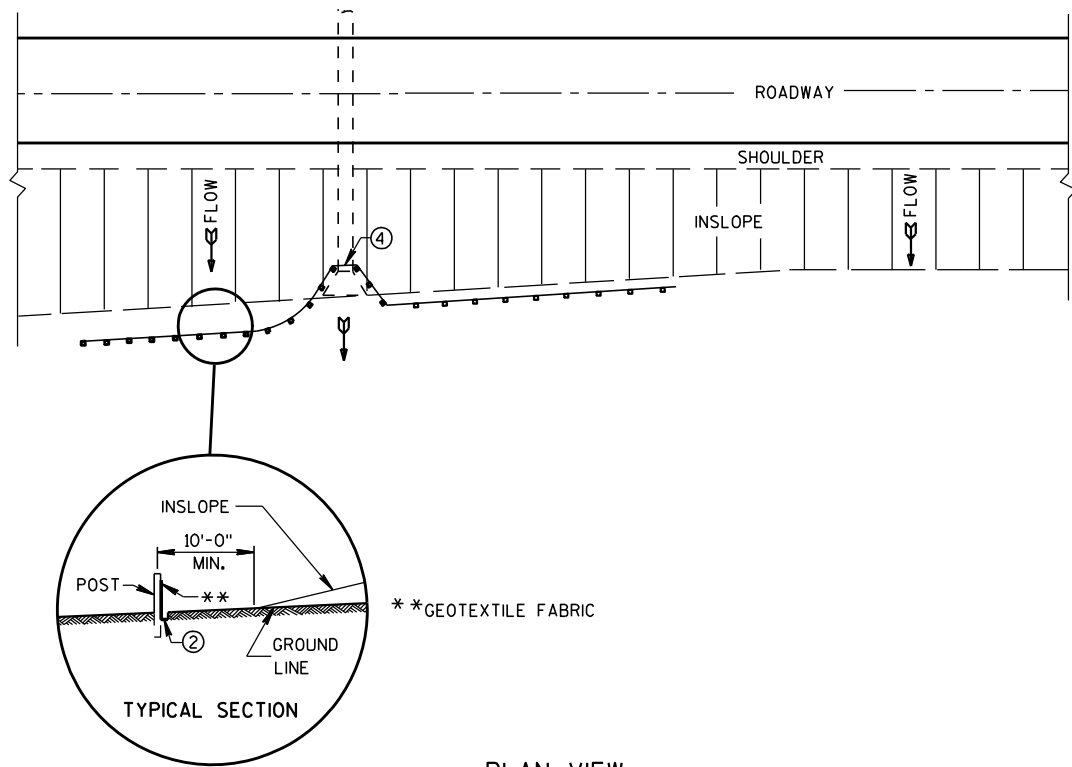
INTERSECTION RADIUS TABLE						
POINT	STATION	OFFSET	STATION	OFFSET	RADIUS	
10	50+41.85'A'	44.90 LT	42+57.79'F'	55.00 RT	40'	167304.48 482388.98
11	50+27.74'A'	31.00 LT	42+49.81'F'	33.99 RT	20'	167303.03 482366.55
12	50+29.16'A'	31.00 RT	42+02.34'F'	31.00 RT	20'	167249.71 482334.89
14	57+25.95'A'	31.00 RT	0+00.00	0.00	20'	166606.09 482401.32
15	57+85.95'A'	31.00 RT	0+00.00	0.00	20'	166546.09 482400.67



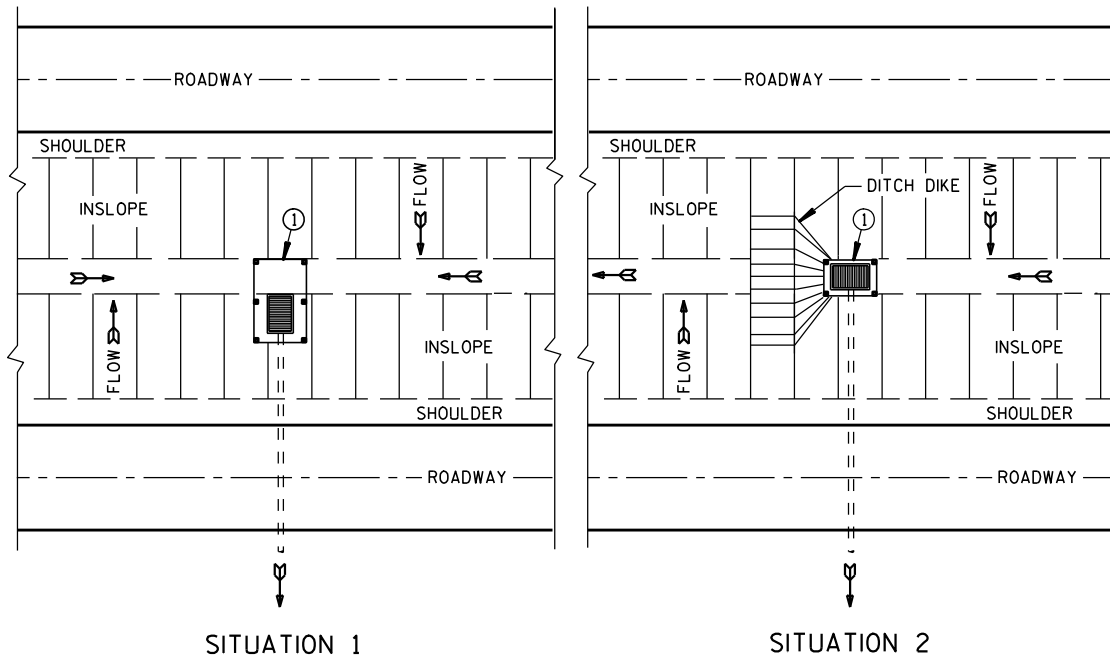
PROJECT NO: 9513-00-70 HWY: CTH S COUNTY: VILAS PLAN AND PROFILE: OLD CTH S SHEET: **E**

Standard Detail Drawing List

08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
09A01-13A	AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND D AND TEE INTERSECTION BYPASS LANE
13C19-03	HMA LONGITUDINAL JOINTS
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C02-08A	BARRICADES AND SIGNS FOR MAINLINE CLOSURES
15C02-08B	BARRICADES AND SIGNS FOR VARIOUS CLOSURES
15C03-05	BARRICADES AND SIGNS FOR SIDEROAD CLOSURES
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-21A	LONGITUDINAL MARKING (MAINLINE)
15C11-09B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-09A	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-07A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C26-04	END-OF-ROADWAY SIGNING
15C33-04	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-05A	PAVEMENT MARKING (INTERSECTIONS)
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING
15D45-03	TRAFFIC CONTROL, SIGNING ON ROADWAYS WITH LOOSE GRAVEL
15D51-01	TRAFFIC CONTROL, MOBILE OPERATIONS ON AN UNDIVIDED ROADWAY



PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE

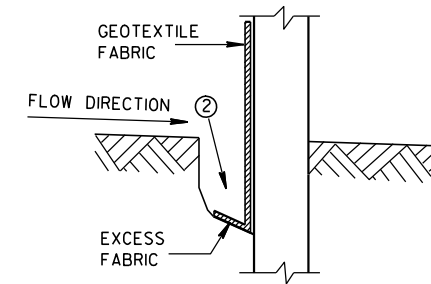


SITUATION 1 SITUATION 2
PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

GENERAL NOTES

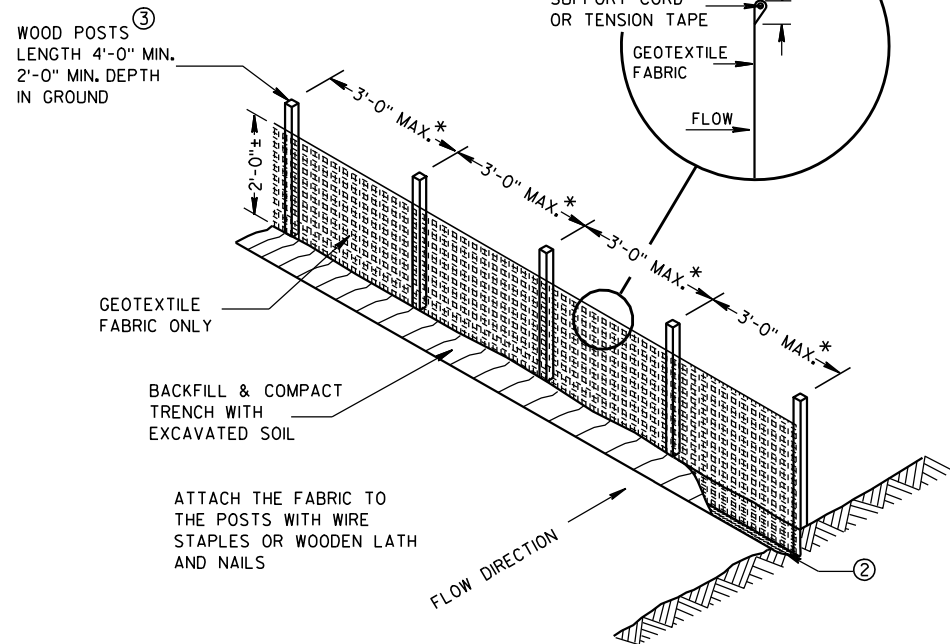
DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

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



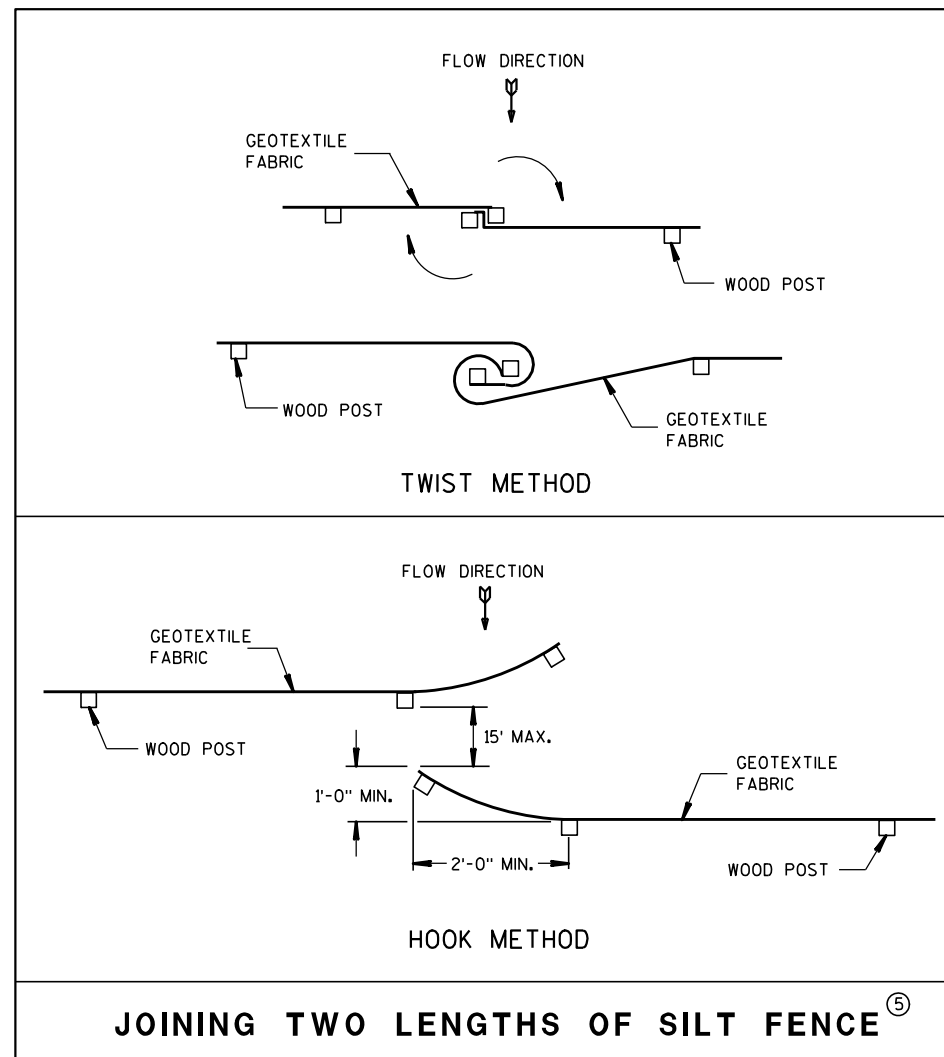
TRENCH DETAIL

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

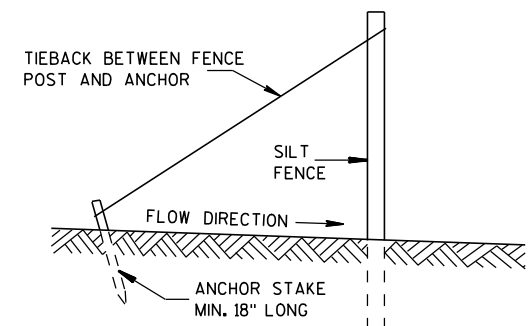


SILT FENCE

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



JOINING TWO LENGTHS OF SILT FENCE ⑤



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

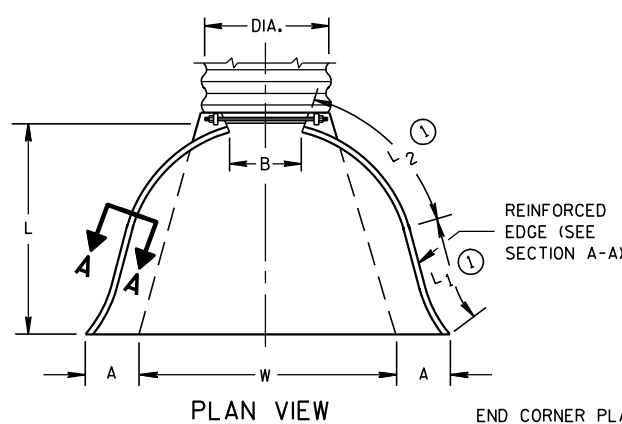
APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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	L2	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.

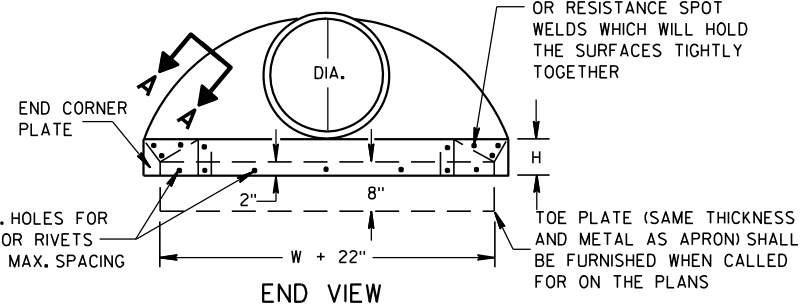
* EXCEPT CENTER PANEL SEE GENERAL NOTES

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	

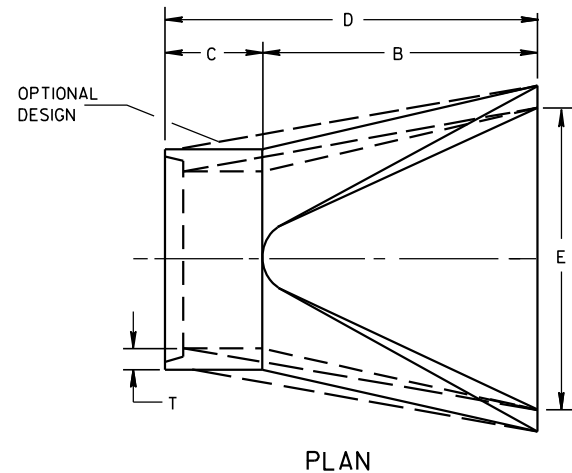
* MINIMUM
** MAXIMUM



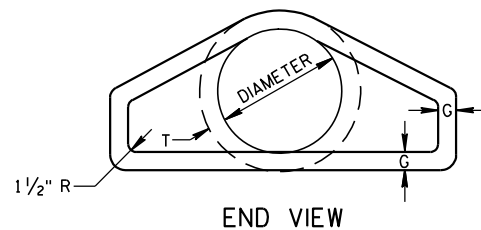
END CORNER PLATES MAY BE FASTENED TO APRON PROPER BY BOLTS, RIVETS, OR RESISTANCE SPOT WELDS WHICH WILL HOLD THE SURFACES TIGHTLY TOGETHER



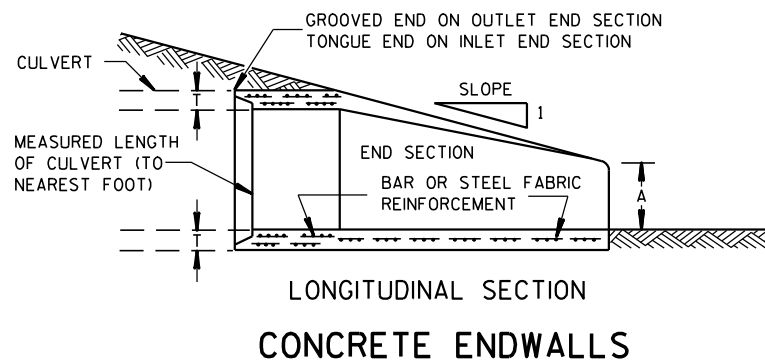
SIDE ELEVATION
METAL ENDWALLS



PLAN

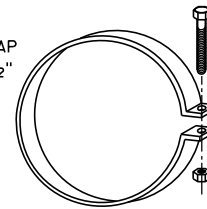


END VIEW

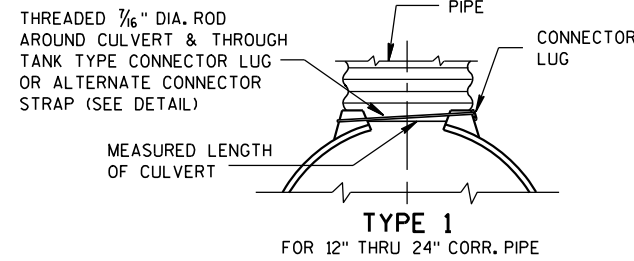


LONGITUDINAL SECTION
CONCRETE ENDWALLS

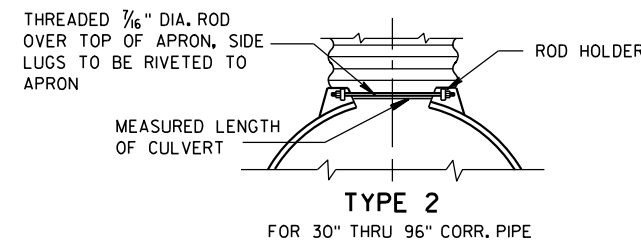
1" WIDE, 12 GA. (0.109" THICK) GALVANIZED STRAP WITH STANDARD 6" X 1/2" BAND BOLT AND NUT



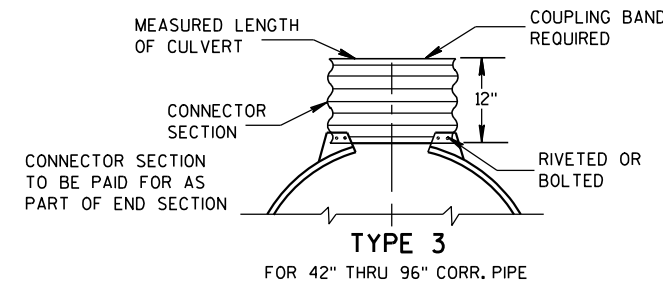
ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



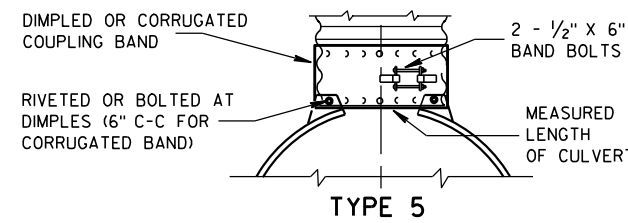
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

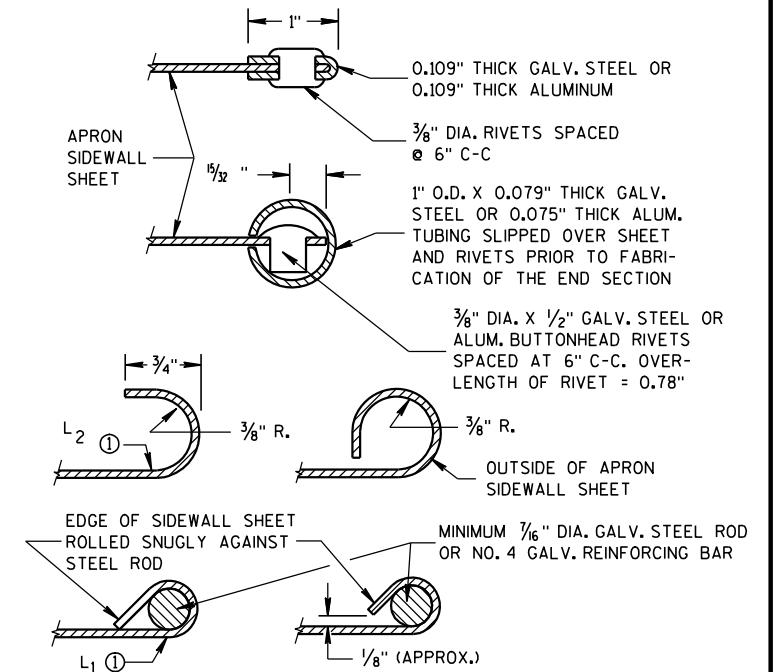
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

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

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

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

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

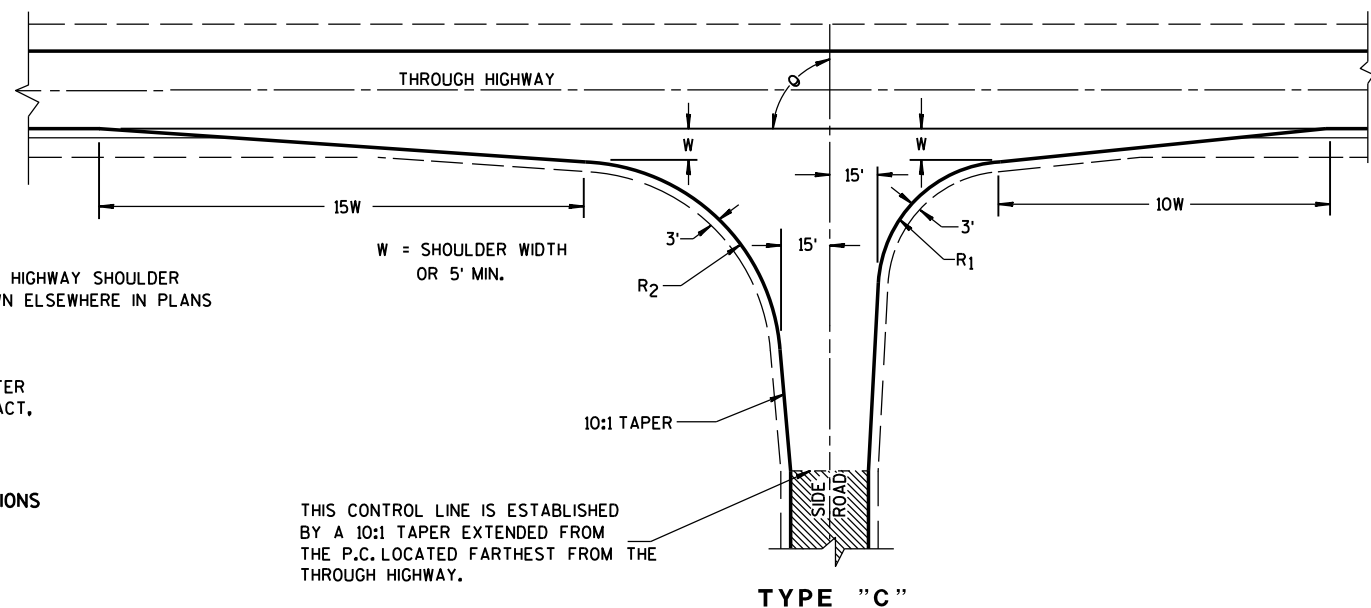
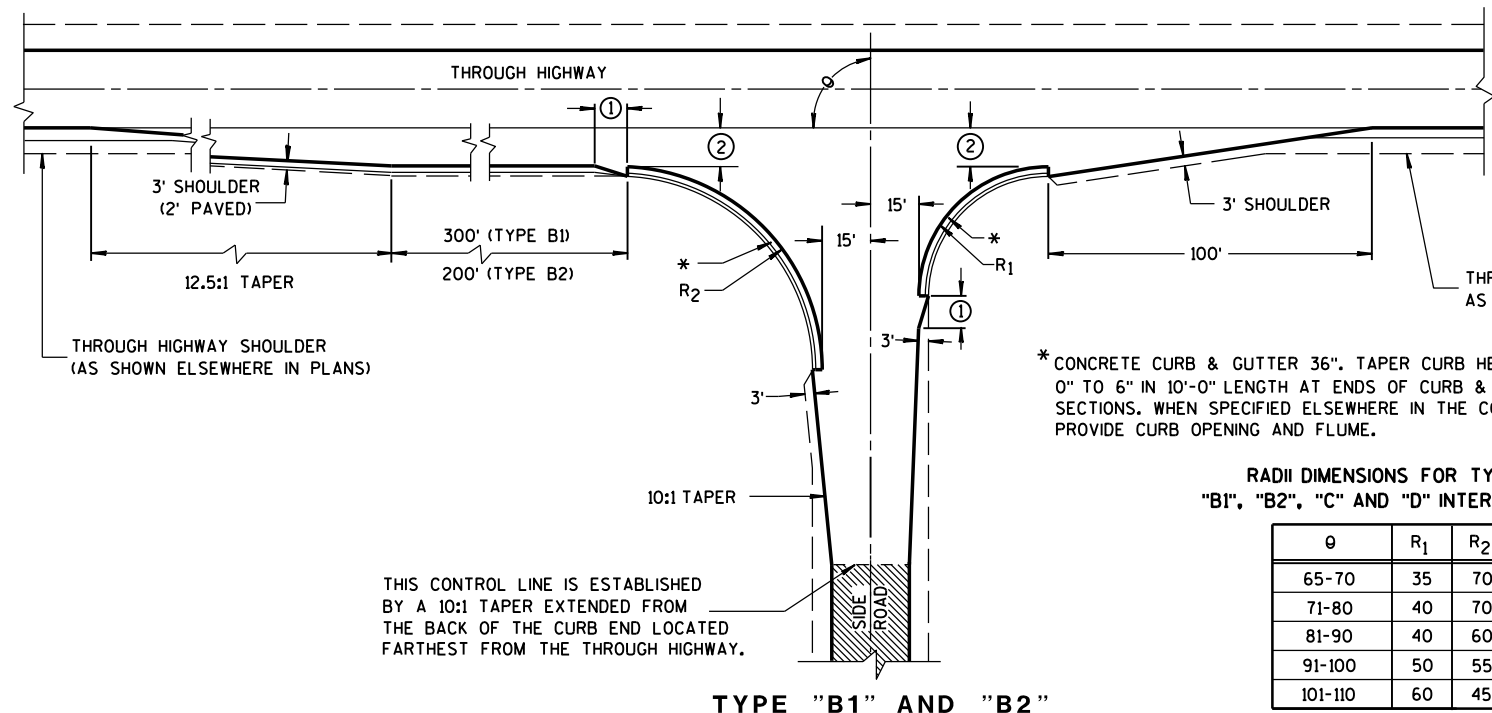
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



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

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

GENERAL NOTES

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

SIDE ROAD SURFACING NOTE

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

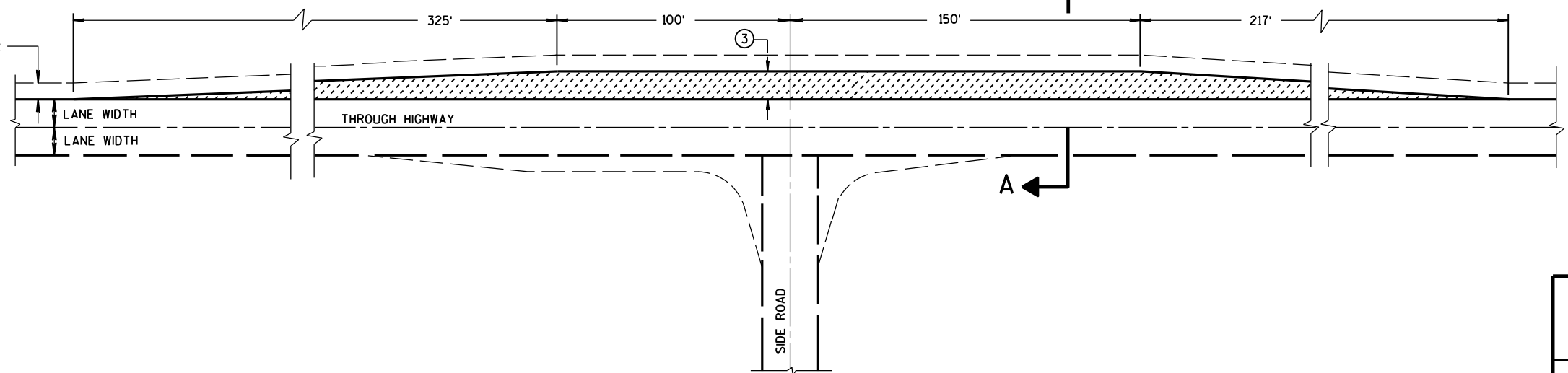
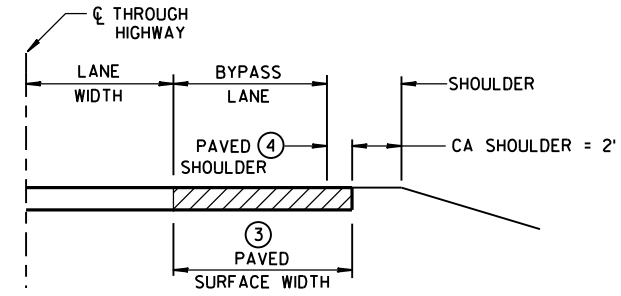
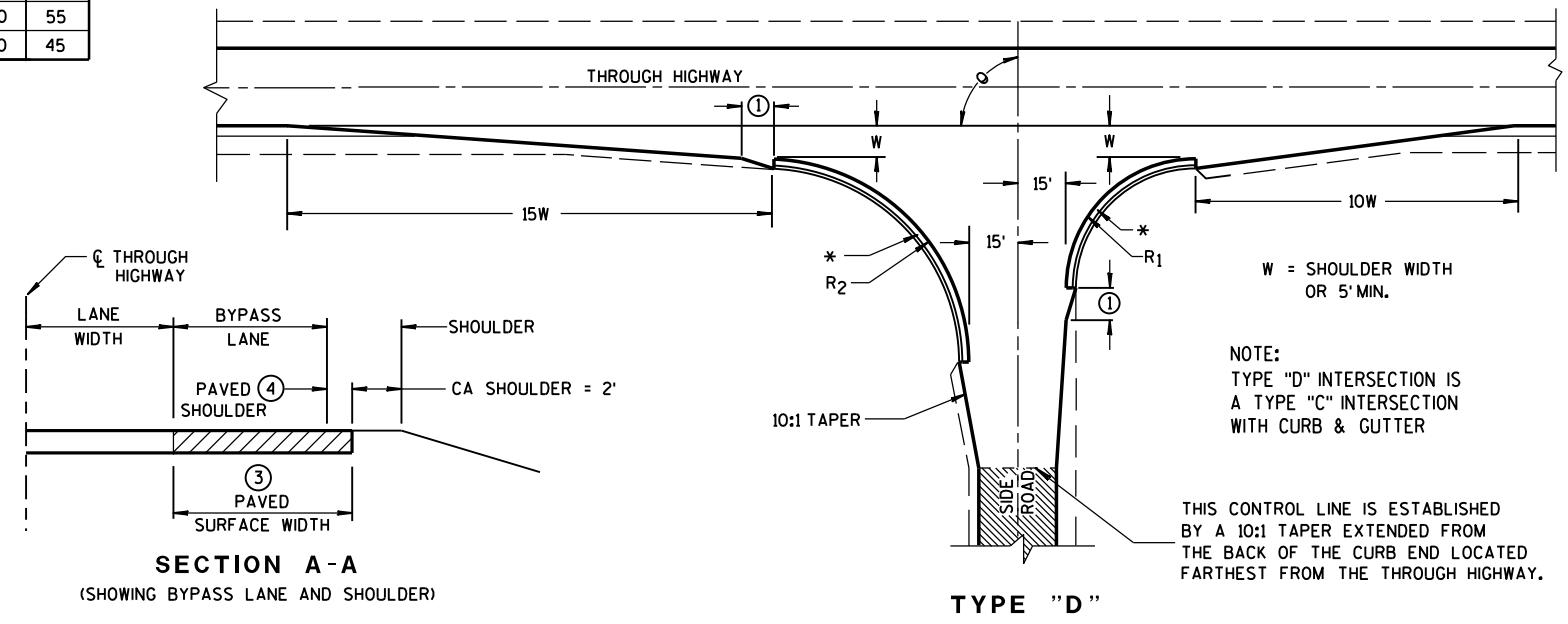
WHEN THE SIDE ROAD IS PRESENTLY PAVED, NEW PAVEMENT SHALL BE PLACED TO THE LIMITS OF DESIGN AS SHOWN AND BEYOND, IF NECESSARY, TO MEET EXISTING PAVEMENT.

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

- EXISTING PAVED SURFACE
- BYPASS LANE

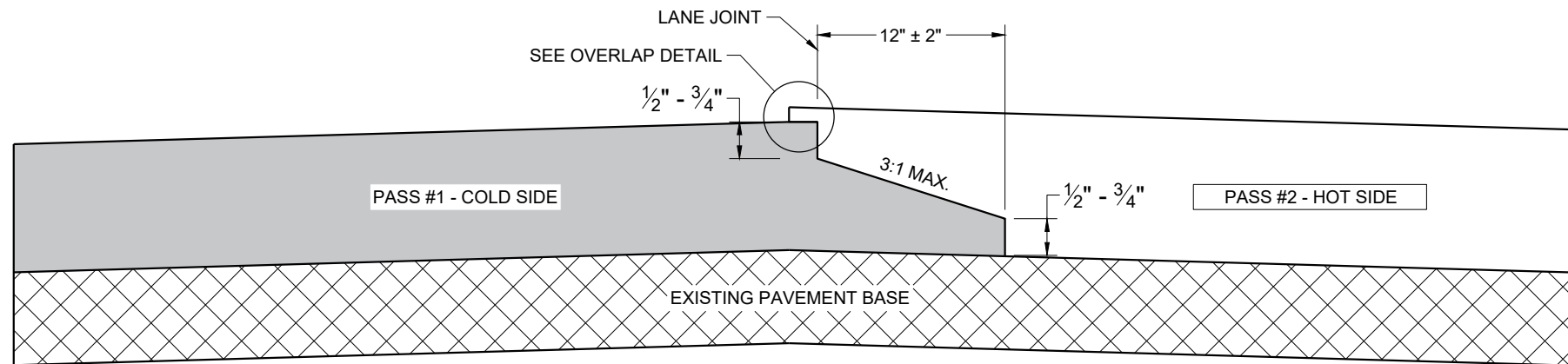
- ① 10-FT TYPICAL.
- ② 12-FT** PLUS ADDITIONAL WIDTH FOR BIKE LANE IF SHOWN ELSEWHERE IN THE PLAN.

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

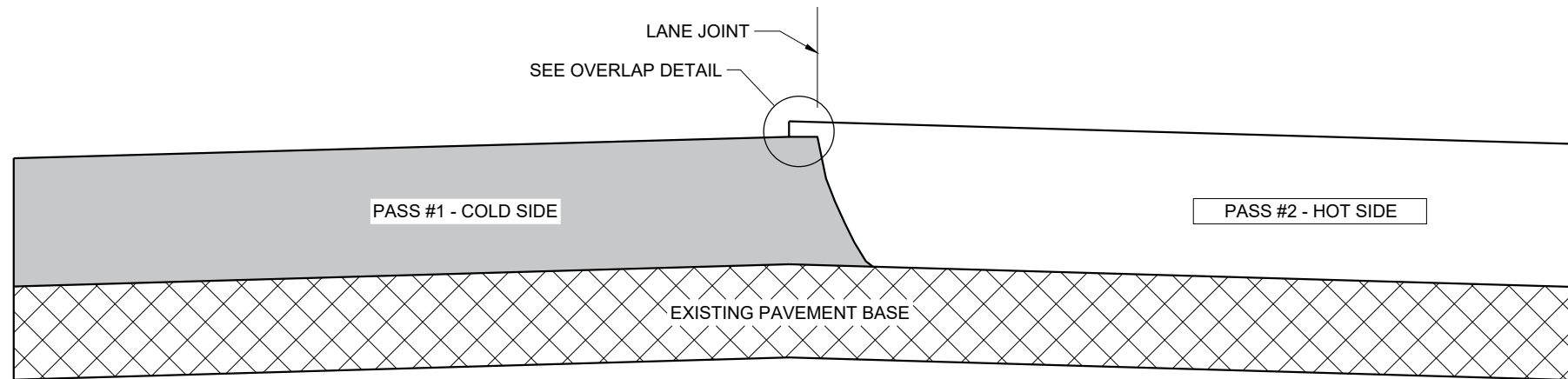


TEE INTERSECTION BYPASS LANE DETAIL

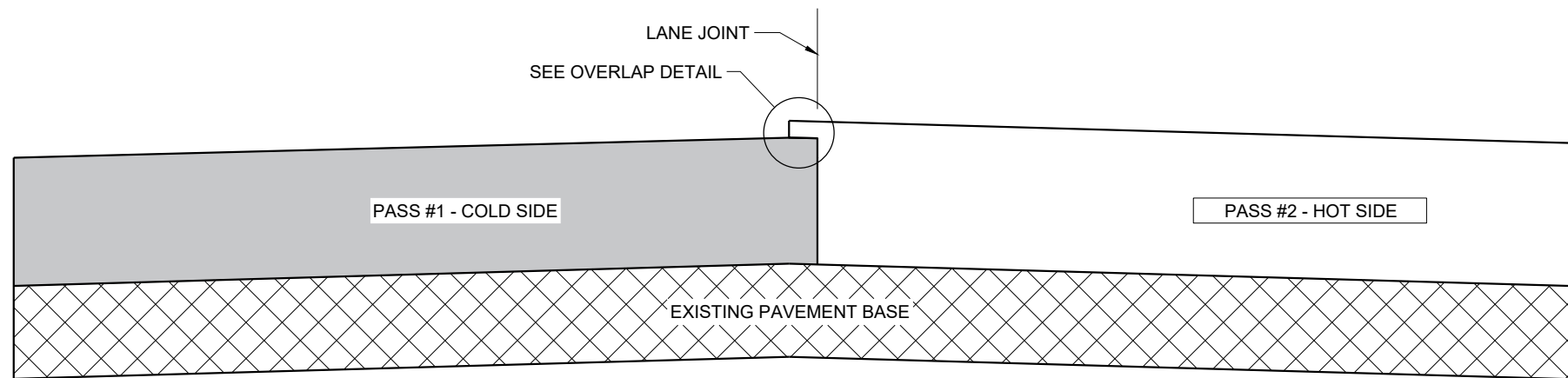
AT-GRADE SIDE ROAD INTERSECTION, TYPES "B1", "B2", "C" AND "D" AND TEE INTERSECTION BYPASS LANE
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION



**TYPICAL PAVEMENT CROSS SECTION
NOTCHED WEDGE JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT**



**TYPICAL PAVEMENT CROSS SECTION
VERTICAL JOINT (MILLED)**

GENERAL NOTES

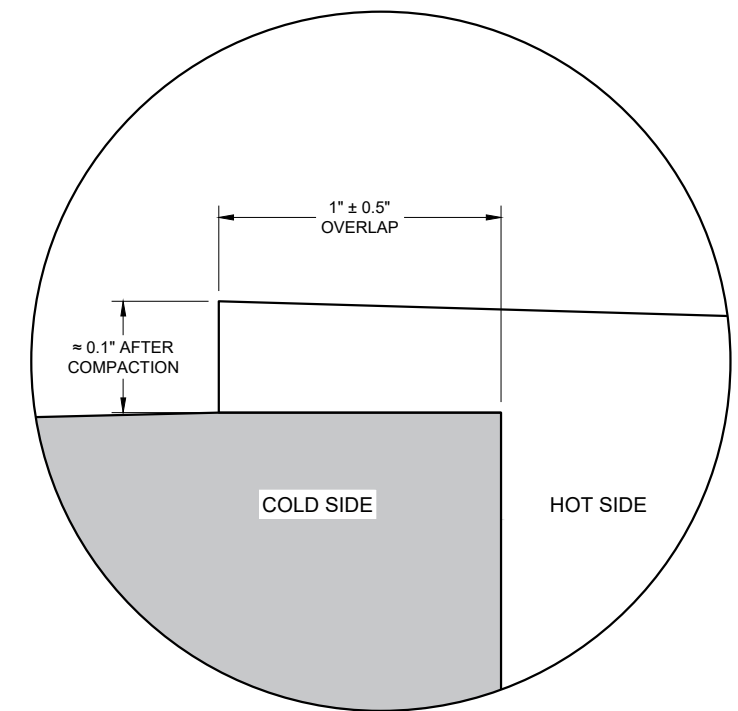
IN ADDITION TO THE DETAILS PROVIDED IN THIS DRAWING, CONFORM TO STANDARD SPECIFICATION 450.3.2.8 FOR WHEN A NOTCHED WEDGE JOINT IS REQUIRED AND FOR GENERAL JOINT CONSTRUCTION REQUIREMENTS.

FOR ALL LONGITUDINAL JOINTS, ENSURE THE PAVER SCREED OVERLAPS THE PREVIOUSLY PLACED PAVEMENT BY $1" \pm 0.5"$ AND THE HOT SIDE OF THE JOINT REMAINS HIGHER THAN THE COLD SIDE BY APPROXIMATELY 0.1" AFTER FINAL COMPACTION. (IT WILL BE FLUSH WHEN PAVING IN ECHELON.)

ONLY REMOVE THE LONGITUDINAL NOTCHED WEDGE JOINT FOR SMA PAVEMENT OR AS DIRECTED BY THE ENGINEER TO ADDRESS SPECIFIC LENGTHS OF JOINT DAMAGED BY TRAFFIC.

WHEN MILLING BACK OR REMOVING ANY LONGITUDINAL JOINT, LIMIT THE MATERIAL REMOVED TO 2" FROM THE TOP NOTCH OR FROM THE VERTICAL JOINT EDGE ON THE COLD SIDE OF THE JOINT.

USE LONGITUDINAL MILLED JOINT AS PLANS SHOW OR THE AS THE ENGINEER DIRECTS.



OVERLAP DETAIL (TYPICAL)

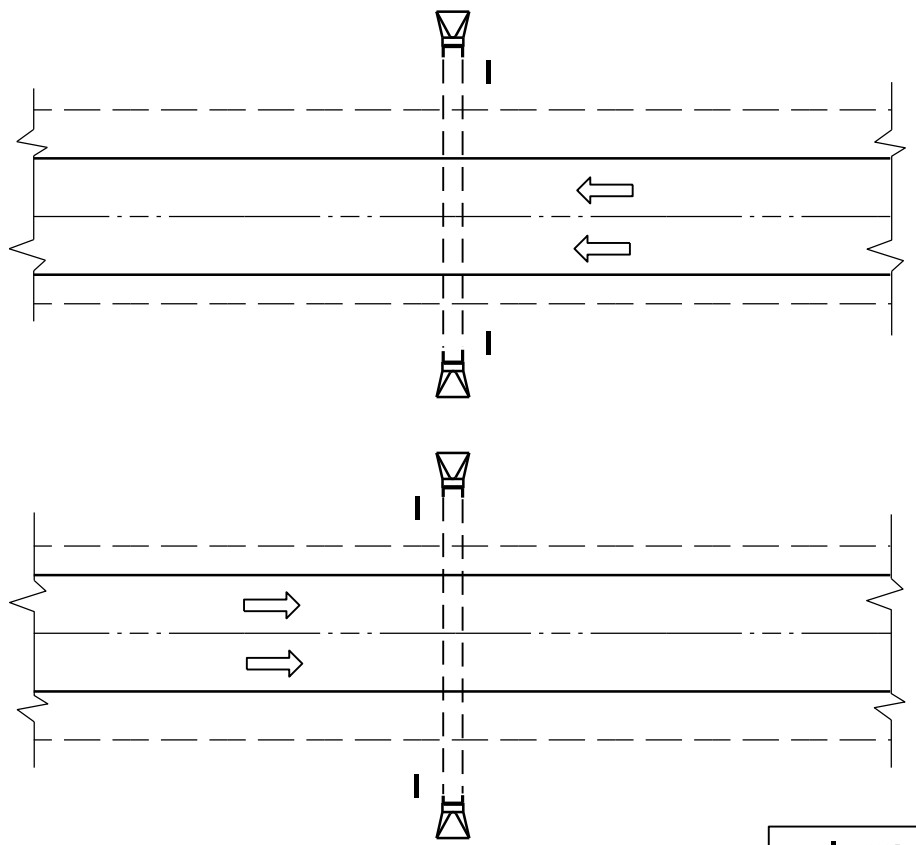
6

6

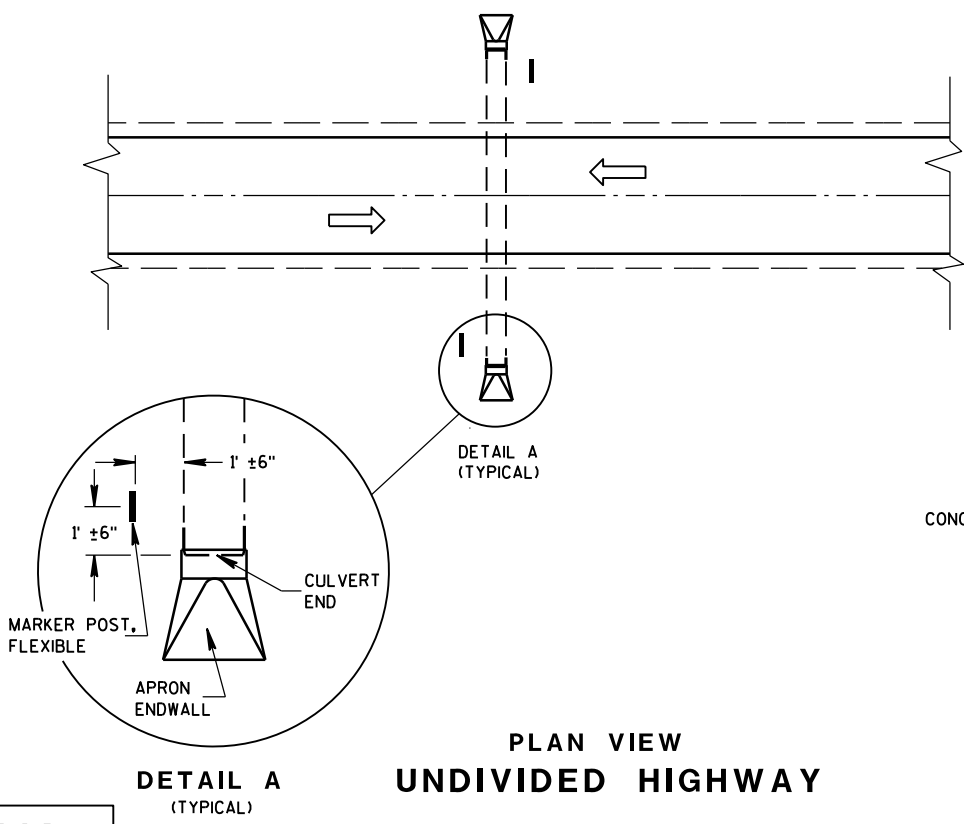
SDD 13C19 - 03

SDD 13C19 - 03

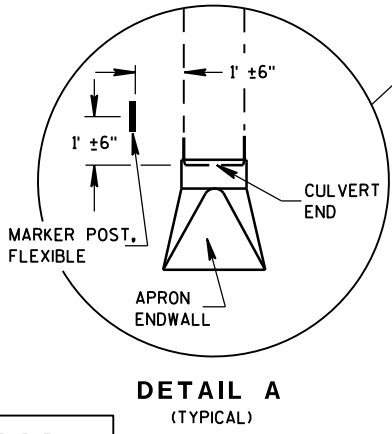
HMA LONGITUDINAL JOINTS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2020 DATE	/S/ Steven Hefel HMA PAVEMENT ENGINEER
FHWA	



PLAN VIEW
DIVIDED HIGHWAY



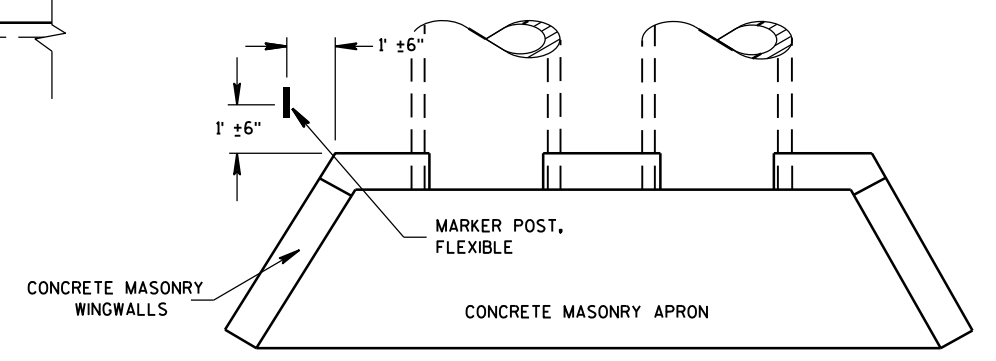
PLAN VIEW
UNDIVIDED HIGHWAY



MARKER POST, FLEXIBLE
DIRECTION OF TRAFFIC FLOW

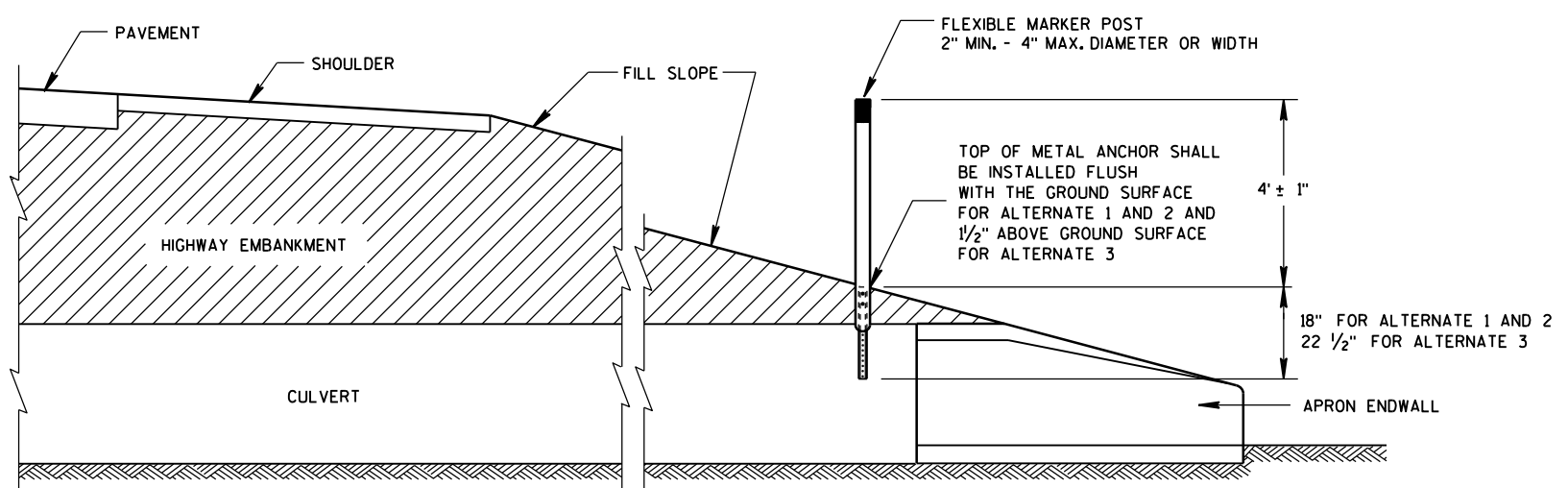
GENERAL NOTES

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

FLEXIBLE MARKER POST LOCATION



CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

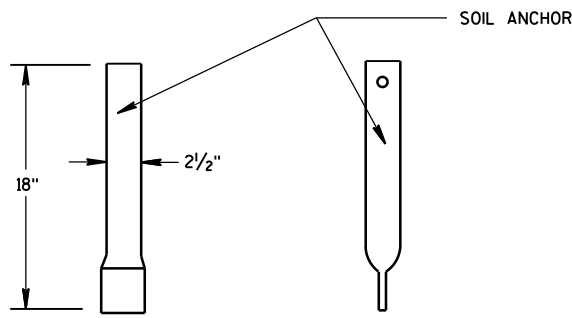
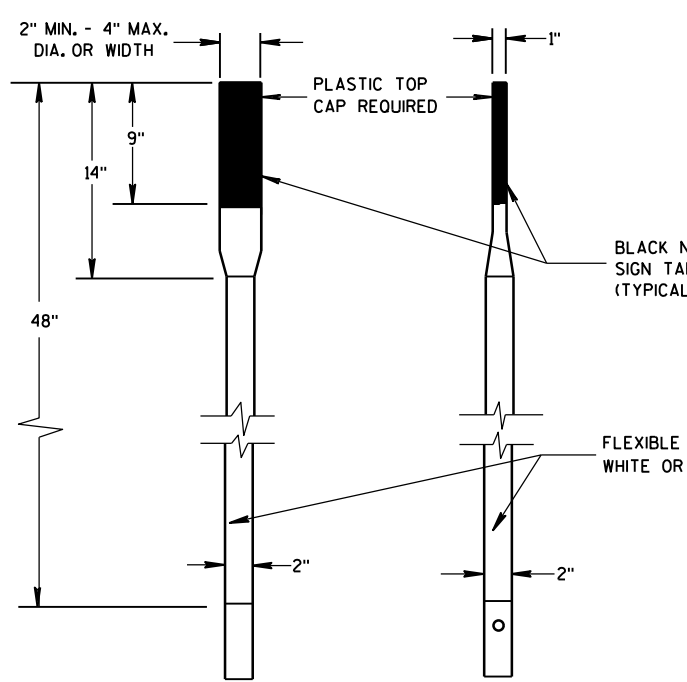
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

6

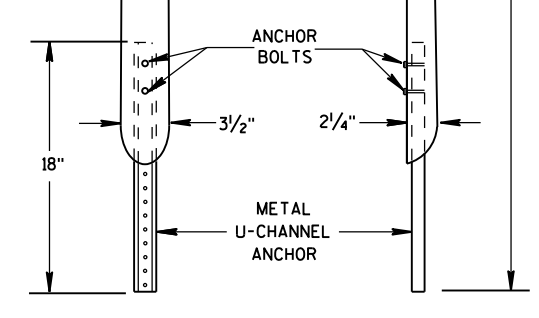
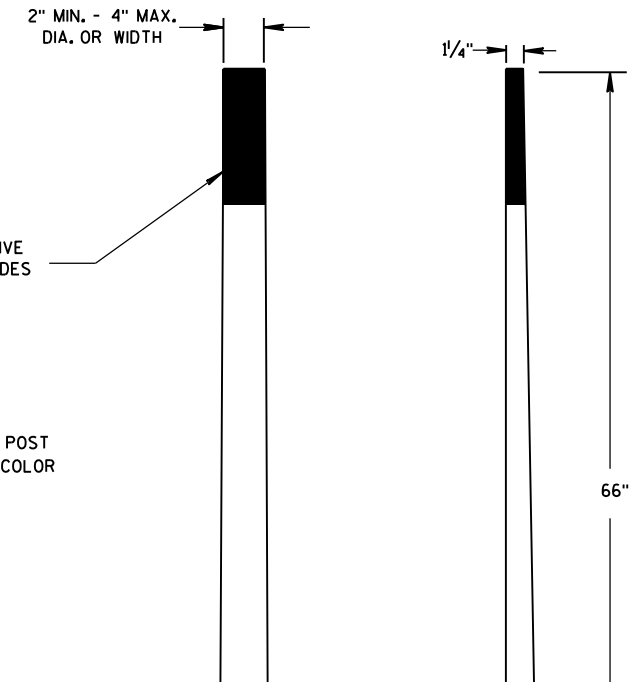
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S.D.D. 15 A 3-2a

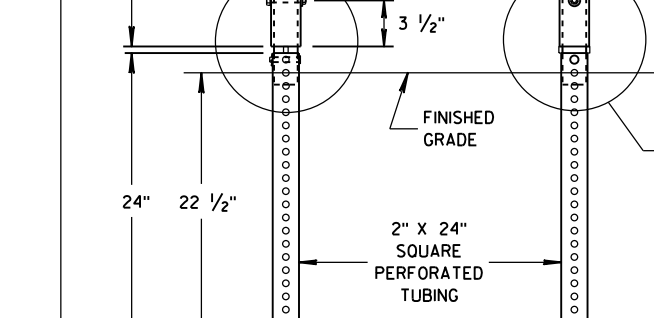
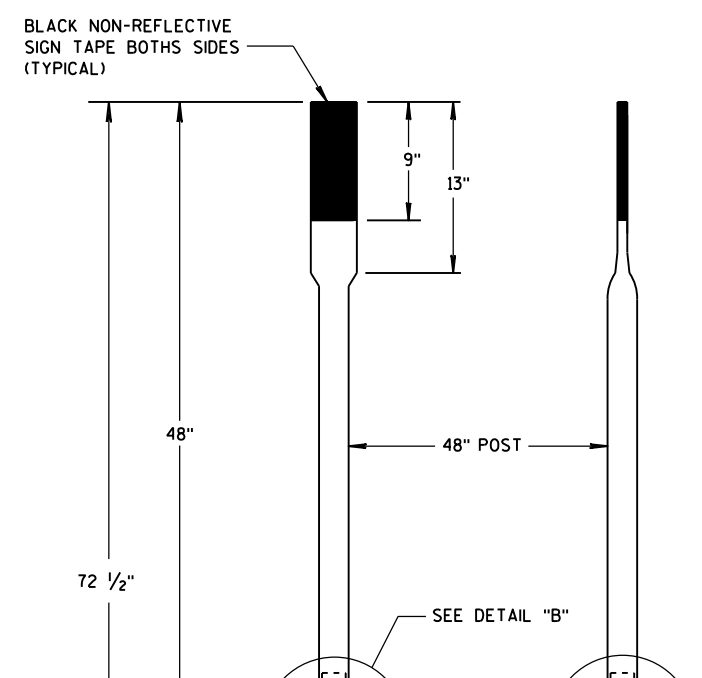
S.D.D. 15 A 3-2a



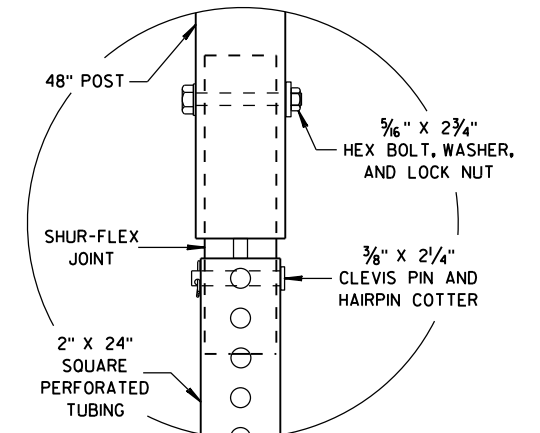
FRONT VIEW SIDE VIEW
ALTERNATE 1



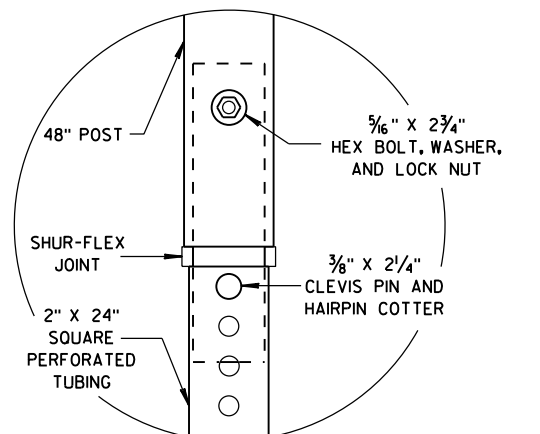
FRONT VIEW SIDE VIEW
ALTERNATE 2



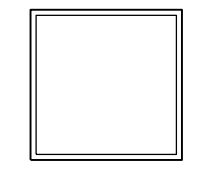
FRONT VIEW SIDE VIEW
ALTERNATE 3



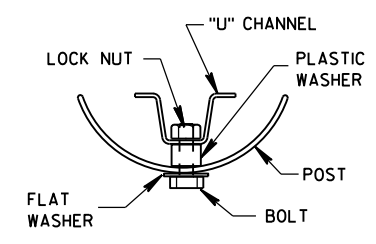
DETAIL B



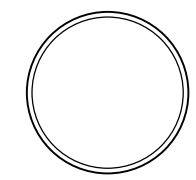
DETAIL C



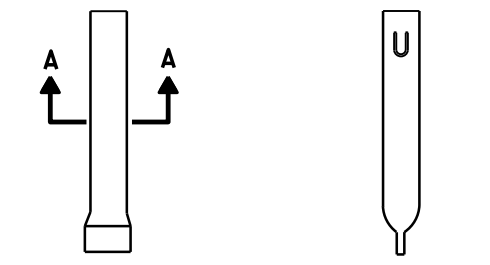
SECTION C-C



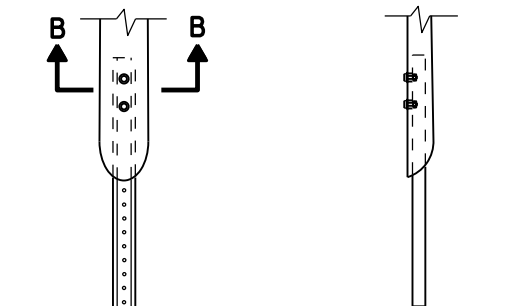
SECTION B-B



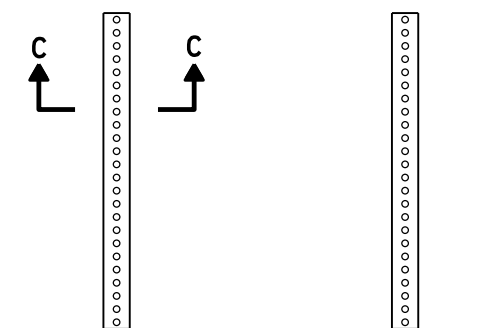
SECTION A-A



FRONT VIEW SIDE VIEW
ALTERNATE 1



FRONT VIEW SIDE VIEW
ALTERNATE 2



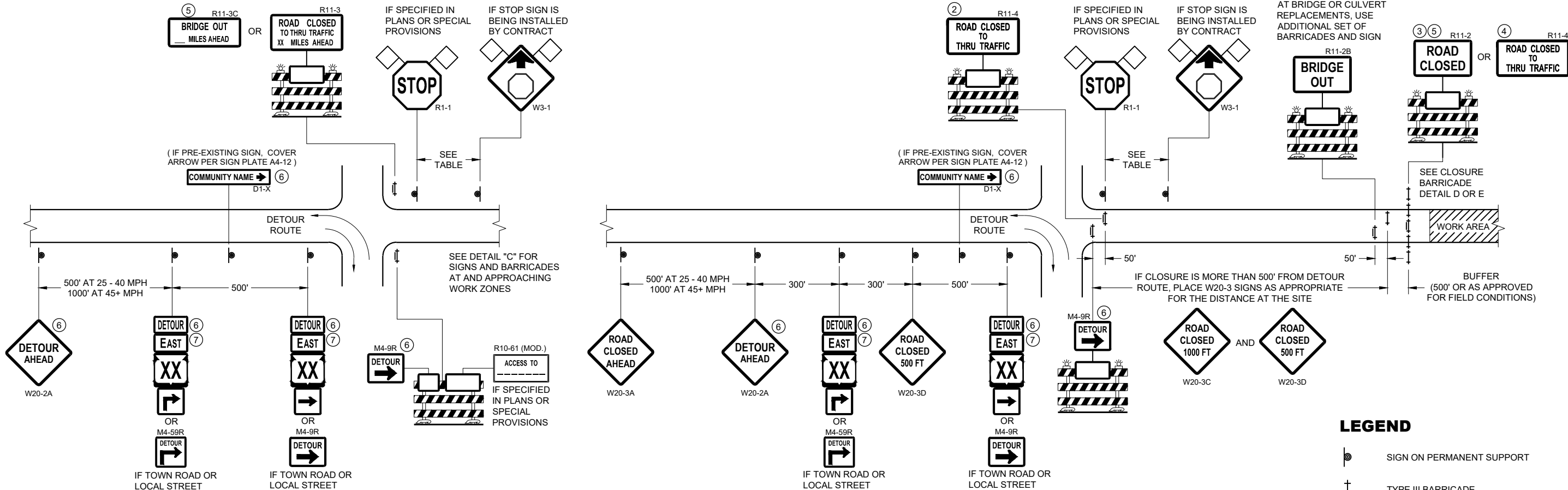
FRONT VIEW SIDE VIEW
ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



**DETAIL A
MAINLINE CLOSURE WITH POSTED DETOUR**

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

**DETAIL B
MAINLINE CLOSURE WITH POSTED DETOUR**

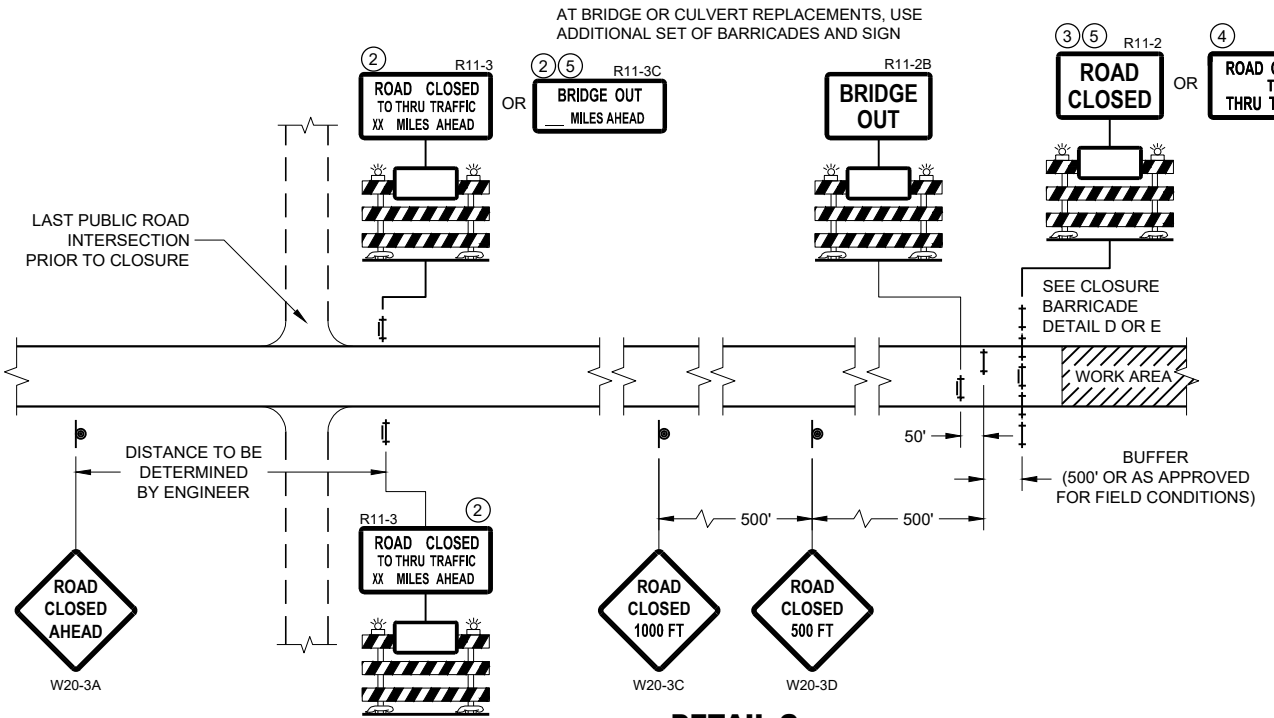
WORK ZONE LESS THAN 1/2 MILE FROM
DETOUR ROUTE (1000 FEET IF URBAN)

LEGEND

- SIGN ON PERMANENT SUPPORT
- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- WORK AREA
- FLAGS, 16" X 16" MIN. (ORANGE)
- M4 - 8
- M3 - X
- M1 - 4 OR M1 - 6 OR M1 - 5A
- M05 - 1 OR M06 - 1

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

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

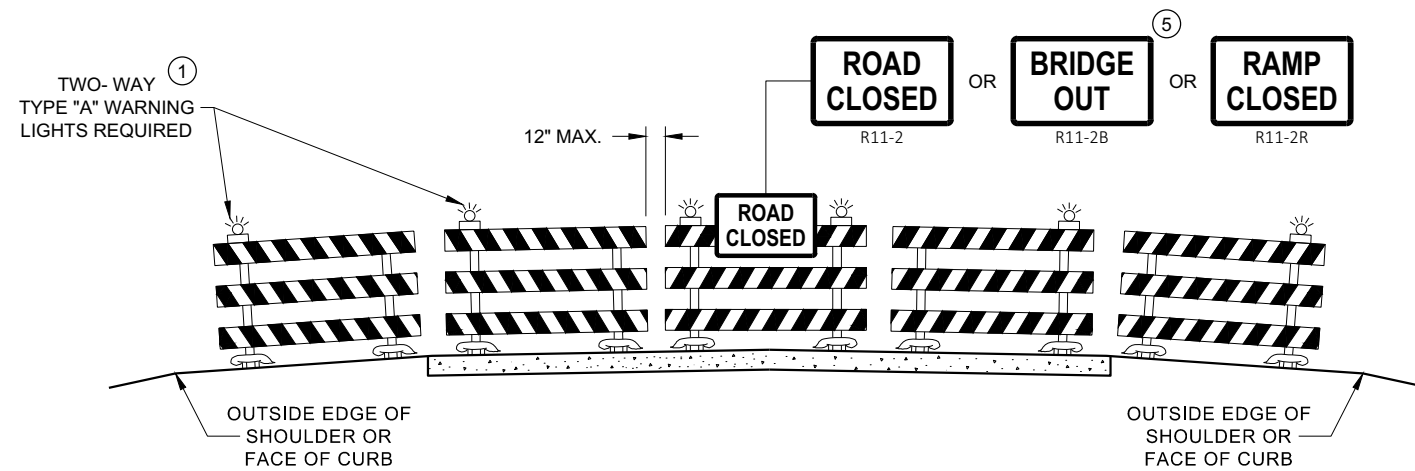


**DETAIL C
MAINLINE CLOSURE, NO POSTED DETOUR**

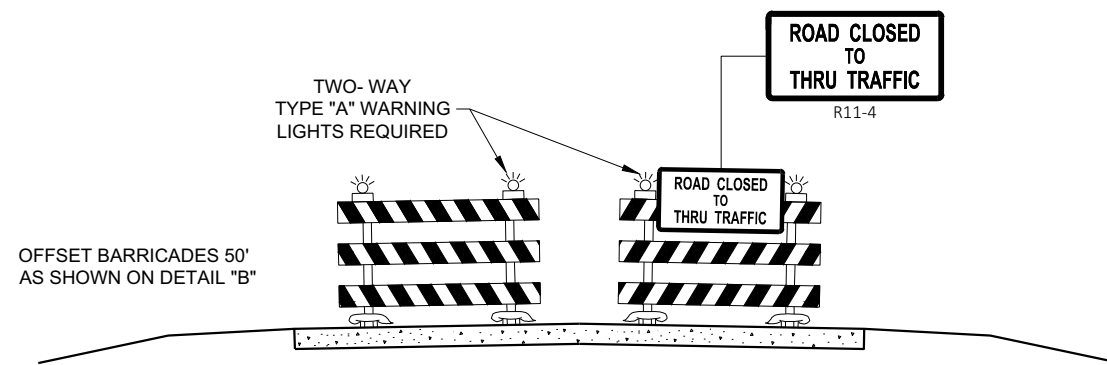
**BARRICADES AND SIGNS
FOR MAINLINE CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



**DETAIL D
ROAD CLOSURE BARRICADE DETAIL
APPROACH VIEW**



**DETAIL E
LANE CLOSURE BARRICADE DETAIL
APPROACH VIEW**

SEE SDD 15C2 - SHEET "a" FOR LEGEND

GENERAL NOTES

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

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

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

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

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

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

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

THE R11 - 2, R11 - 3, M4 - 9, R11 - 4, AND R10 - 61 SIGNS PLACED ON THE BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE RAIL OR BOTTOM RAILS.

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

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

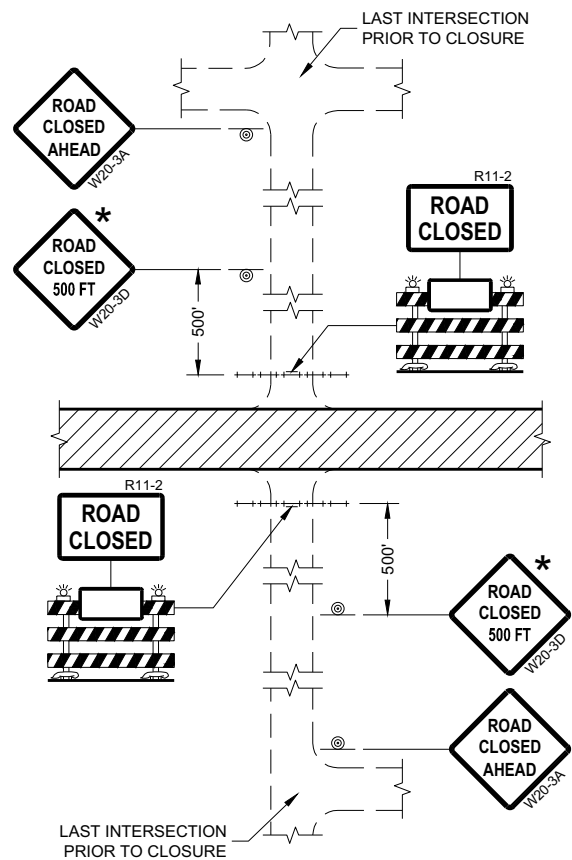
- R11 - 2 SHALL BE 48" X 30"
- R11 - 3 SHALL, R11 - 4 AND R10 - 61 SHALL BE 60" X 30"
- M4 - 9 SHALL BE 30" X 24"
- M3 - X SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M4 - 8 SHALL BE 24" X 12" (36" X 18" IF NEEDED TO MATCH EXISTING SIGNS)
- M1 - 4, M1 - 5A AND M1 - 6 SHALL BE 24" X 24" (36" X 36" IF NEEDED TO MATCH EXISTING SIGNS)
- MO5 - 1 AND MO6 - 1 SHALL BE 21" X 21" (30" X 30" IF NEEDED TO MATCH EXISTING SIGNS)
- D1 - X SHALL BE AS SHOWN ON SPECIFIC PROJECT SIGNING DETAIL SHEETS.
- R1 - 1 SHALL BE 36" X 36"

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

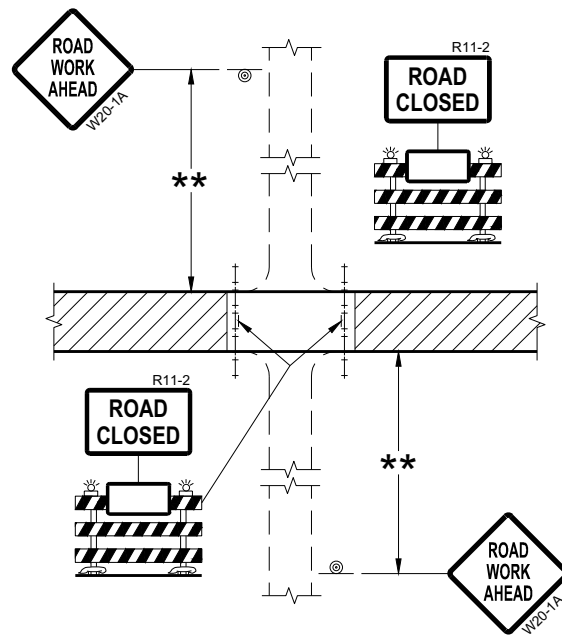
**BARRICADES AND SIGNS
FOR
VARIOUS CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

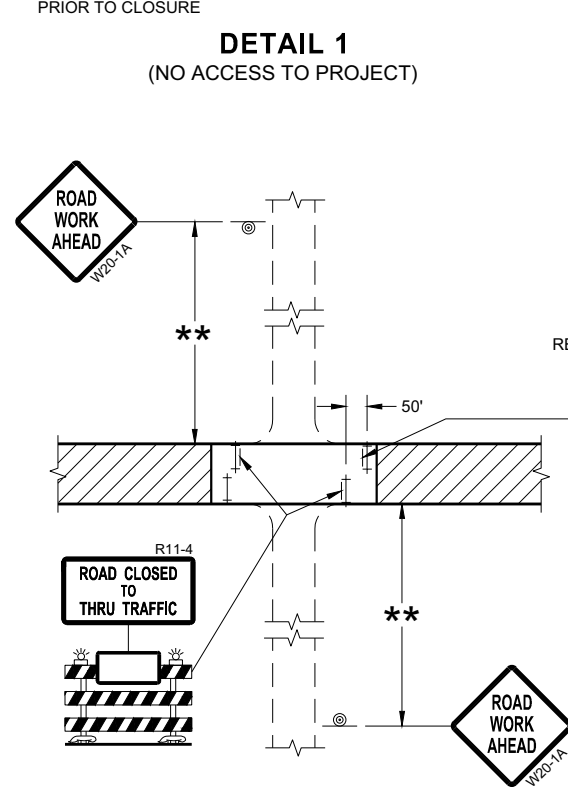
APPROVED
February 2020 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER



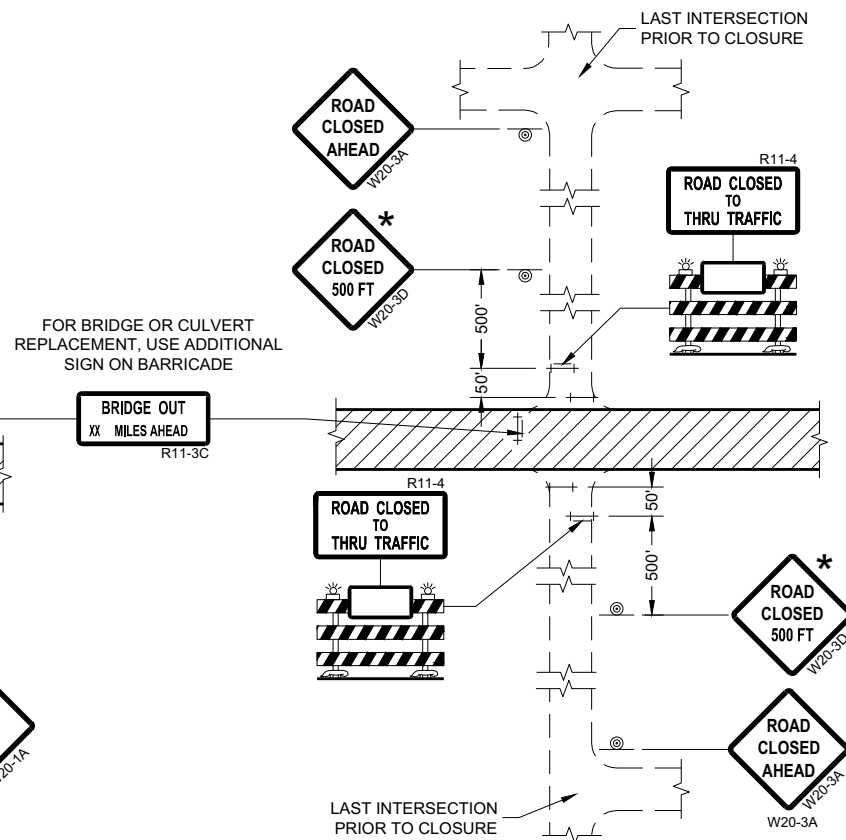
DETAIL 1
(NO ACCESS TO PROJECT)



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



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



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

GENERAL NOTES

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

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

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

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

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

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

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

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

THE R11-2, R11-3, AND R11-4 SIGNS PLACED ON BARRICADES SHALL COVER NO MORE THAN THE TOP RAIL. THE SIGNS SHALL NOT COVER ANY PORTION OF THE MIDDLE OR BOTTOM RAILS.

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

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

LEGEND

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

**BARRICADES AND SIGNS
FOR
SIDEROAD CLOSURES**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

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

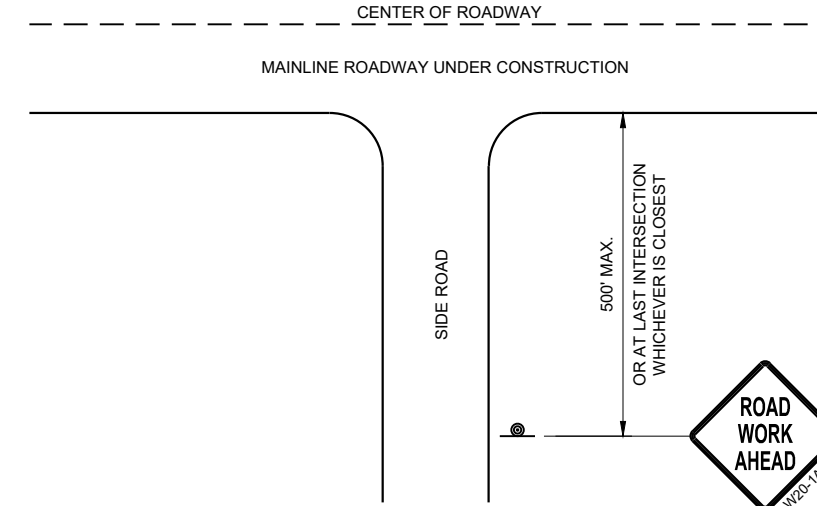
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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

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

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

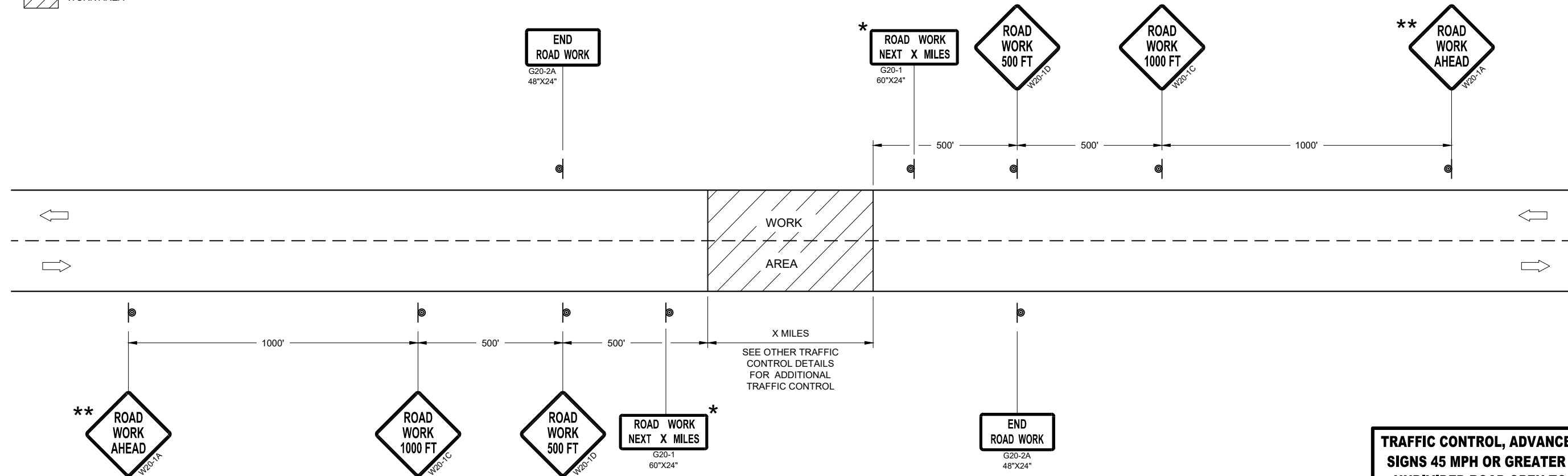
- * OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS
- ** PLACE AN ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.



**TYPICAL SIDE ROAD APPROACH
WARNING SIGN DETAIL**

LEGEND

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



TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45MPH OR GREATER

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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




FHWA

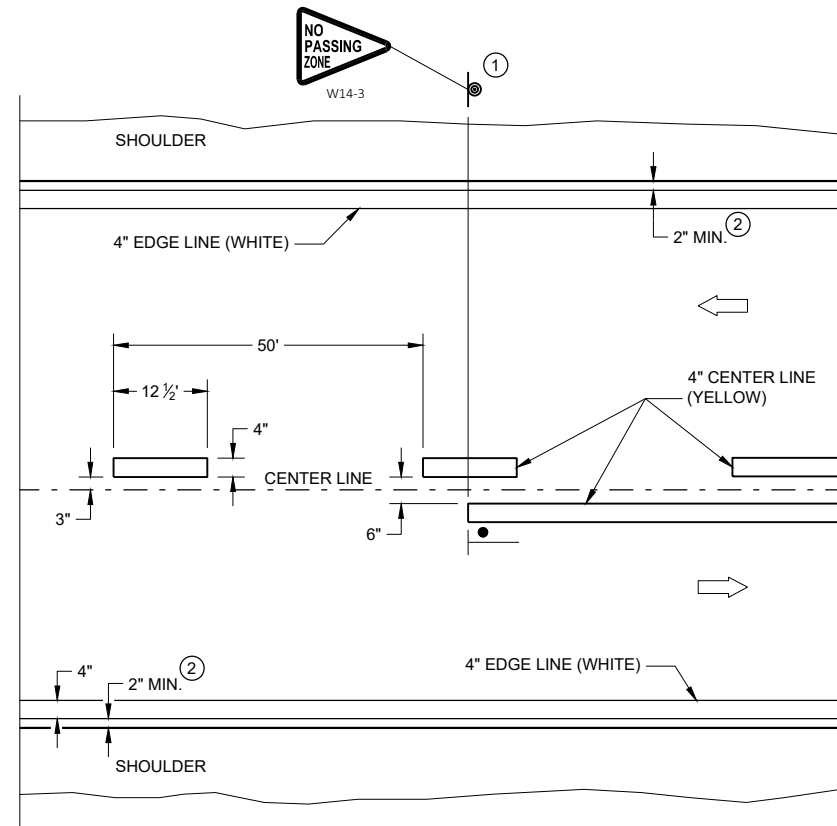
GENERAL NOTES

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

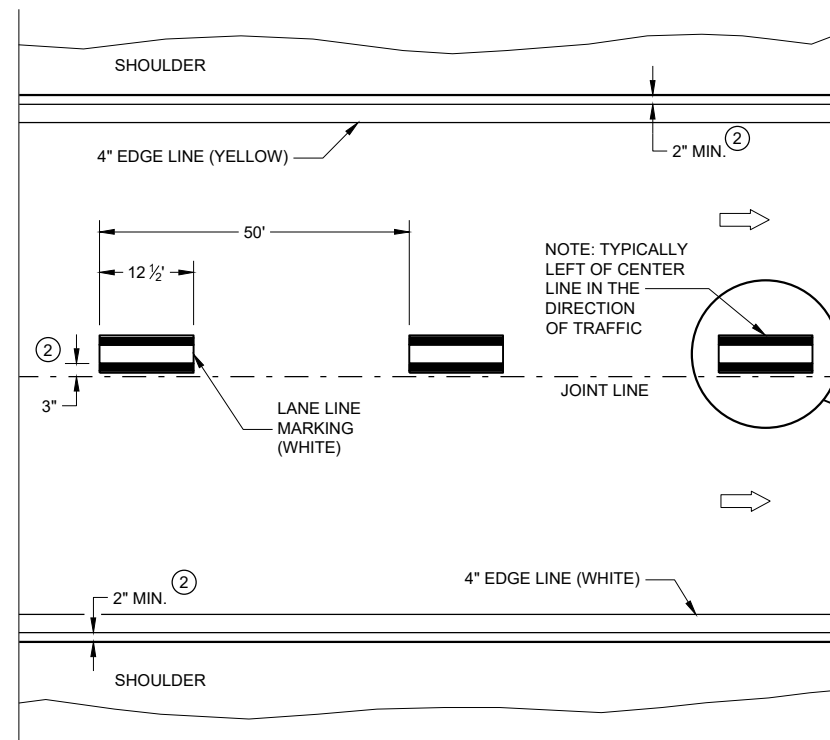
- ① LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING
- ② MEASURE FROM EDGE OF MARKING TO JOINT LINE. THIS DOES NOT INCLUDE SPACE NEEDED FOR GROOVING OPERATIONS.

LEGEND

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

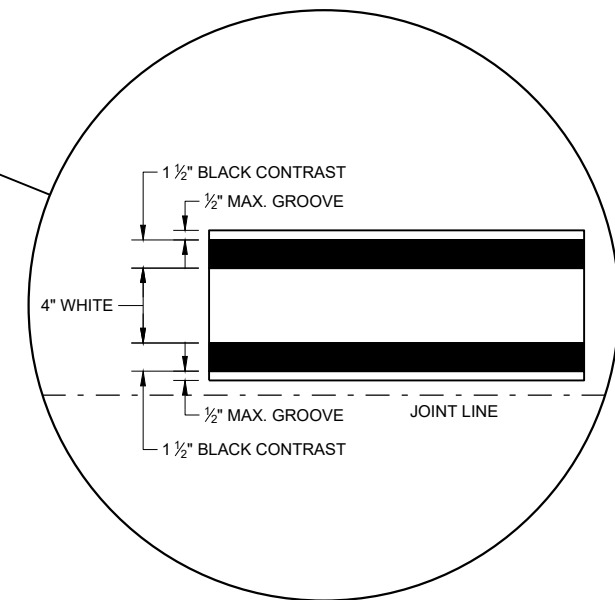


TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



6

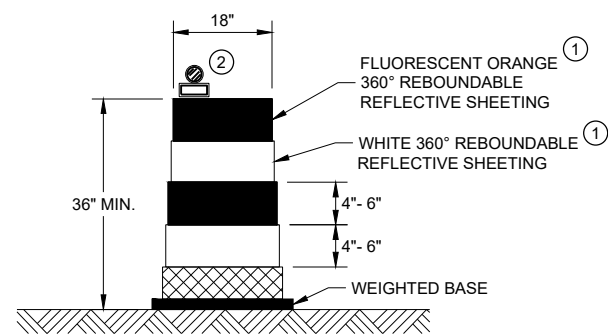
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PERMANENT LONGITUDINAL PAVEMENT MARKINGS

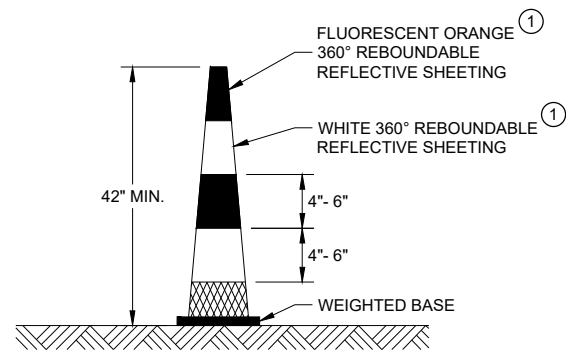
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

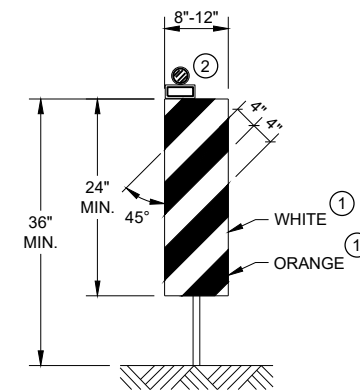


DRUM



42" CONE

DO NOT USE IN TAPERS
1/2 SPACING OF DRUMS

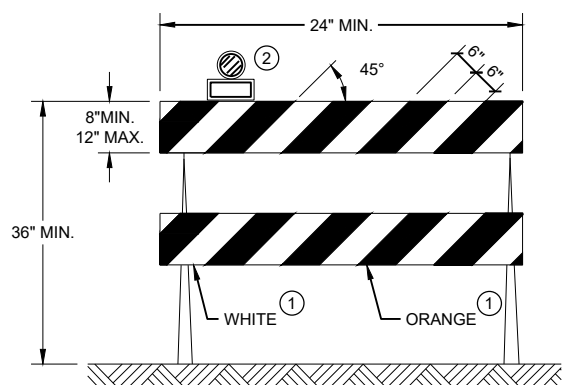


VERTICAL PANEL

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

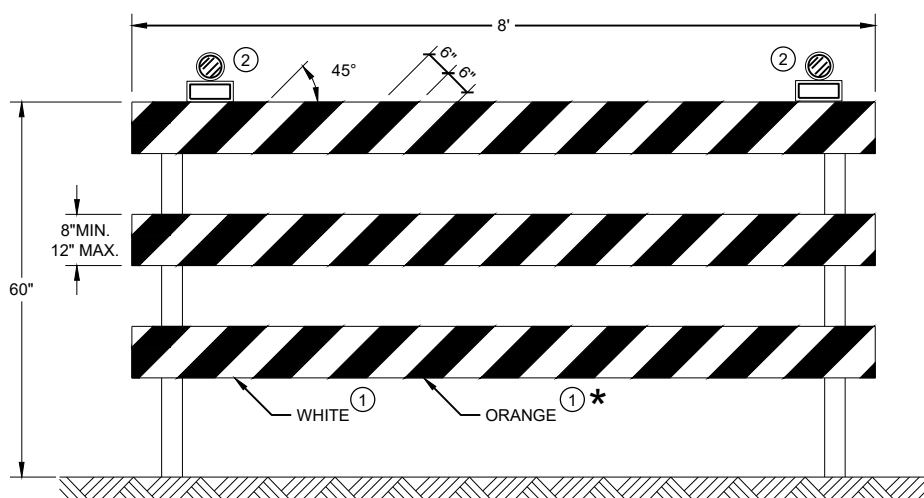
GENERAL NOTES

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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






* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

**CHANNELIZING DEVICES
DRUMS, CONES, BARRICADES
AND VERTICAL PANELS**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

LEGEND

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

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.

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

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

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS, DEVICES, AND 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.

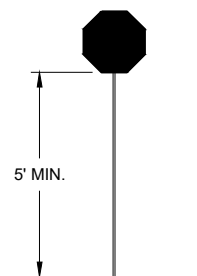
WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

FLAGGING

- 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 REMOVE TEMPORARY PORTABLE RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.
- ① FOR MOVING WORK OPERATIONS, POST ADDITIONAL W20-7A FLAGGER SIGNS AT APPROXIMATELY 3,500' 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.
- WHEN THE DISTANCE BETWEEN FLAGGERS EXCEEDS 2 MILES, A PILOT CAR IS REQUIRED. WHEN CURVES REDUCE SIGHT DISTANCE BELOW 400', A PILOT CAR IS REQUIRED.

TEMPORARY PORTABLE RUMBLE STRIPS

- UTILIZE TEMPORARY PORTABLE RUMBLE STRIPS ON ALL FLAGGING OPERATIONS.
- ③ EACH TEMPORARY PORTABLE RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS PLACED TRANSVERSE ACROSS THE LANE AT THE LOCATIONS SHOWN. WITHIN EACH ARRAY, SPACING BETWEEN RUMBLE STRIPS SHALL BE 15 FEET ON CENTER
- ONLY USE TEMPORARY PORTABLE RUMBLE STRIPS FROM THE APPROVED PRODUCTS LIST.
- INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.
- PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.
- DO NOT INSTALL TEMPORARY PORTABLE RUMBLE STRIPS ON GRAVEL, MILLED SURFACES, OR ASPHALT THAT HAS BEEN PAVED LESS THAN 12 HOURS.



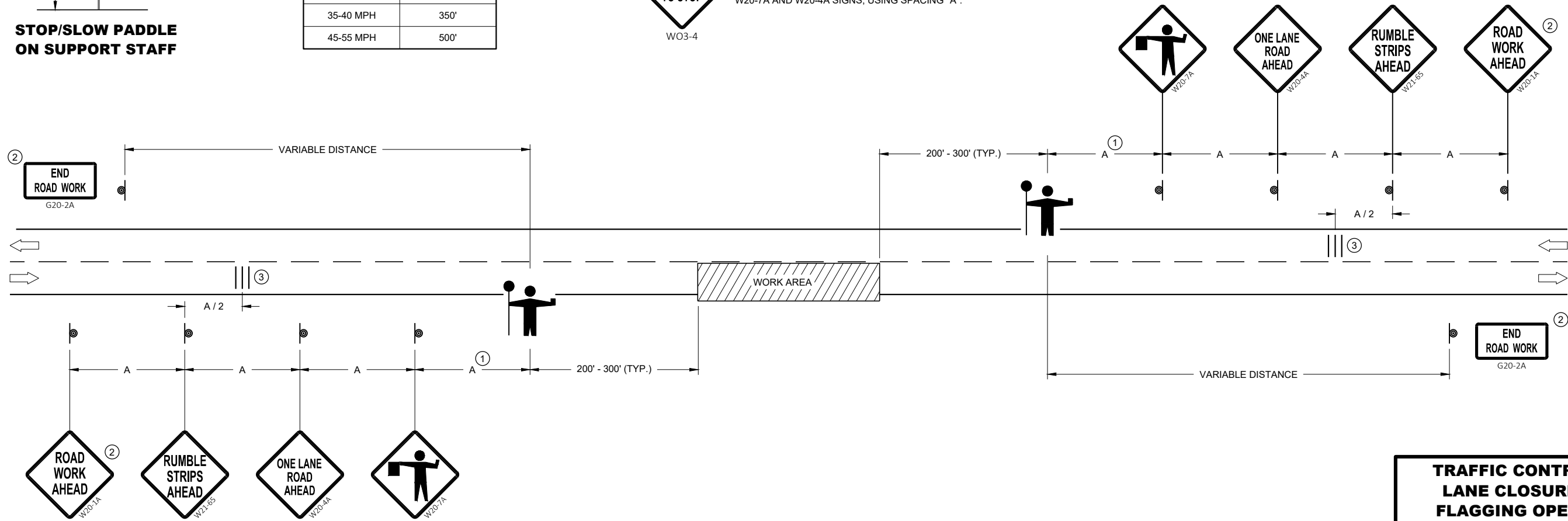
STOP/SLOW PADDLE ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING "A"
25-30 MPH	200'
35-40 MPH	350'
45-55 MPH	500'



USE OF WO3-4 SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING "A".







TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
DATE: May 2022 /S/ Andrew Heidtke
WORK ZONE ENGINEER

LEGEND

- V1 LEAD VEHICLE
- V2 MARKING VEHICLE
- V3 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  SIGN ON TEMPORARY SUPPORT
-  DIRECTION OF TRAFFIC
-  FLASHING ARROW PANEL (CAUTION)

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

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

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL AND HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR LAY STATIONARY SIGNS AND SUPPORTS FLAT ON THE GRADE WITH UPRIGHTS ORIENTED PARALLEL TO AND DOWNSTREAM FROM TRAFFIC.

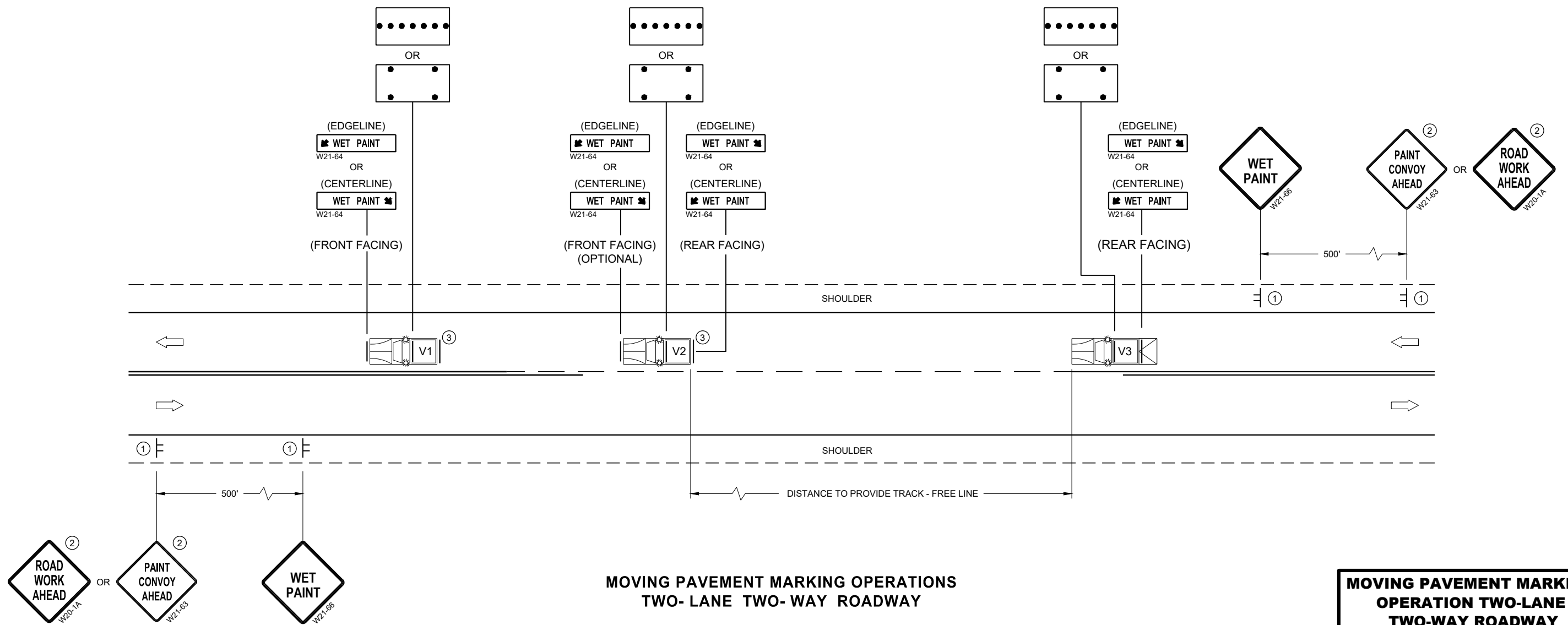
CONES SHOULD BE USED BETWEEN THE MARKING AND SHADOW VEHICLE AT 100 FOOT SPACING. CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

CONES SHALL BE A MINIMUM OF 28" FOR WET PAVEMENT MARKING .

- ① SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.
- ② IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1A OR W21-63 ARE NOT REQUIRED.
- ③ V1 AND V2 CAN BE SWITCHED SO THAT THE MARKER IS THE LEAD VEHICLE.

6

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**MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY**

SDD 15C19 - 07a

SDD 15C19 - 07a

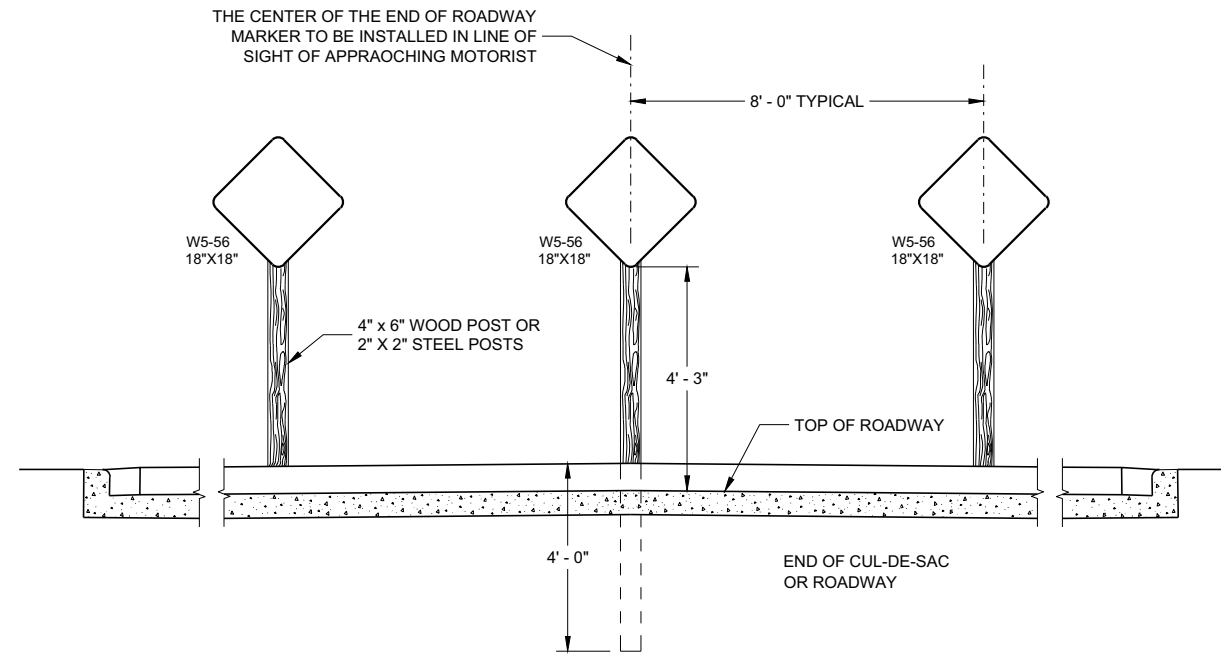
MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

GENERAL NOTES

SIGN LOCATIONS SHOWN ARE TYPICAL PLACEMENT AND MAY BE ADJUSTED BY THE ENGINEER AS FIELD CONDITIONS DICTATE.

THE MINIMUM NUMBER OF END-OF-ROADWAY SIGNS ARE THREE (AS SHOWN). ADDITIONAL END-OF-ROADWAY SIGNS MAY BE INSTALLED AS FIELD CONDITIONS DICTATE. (SEE SIGNING PLAN).

WHEN BEAMGUARD IS REQUIRED, PLACE END-OF-ROADWAY SIGNING BEHIND BEAMGUARD.



TYPICAL SIGN INSTALLATION

END-OF-ROADWAY SIGNING

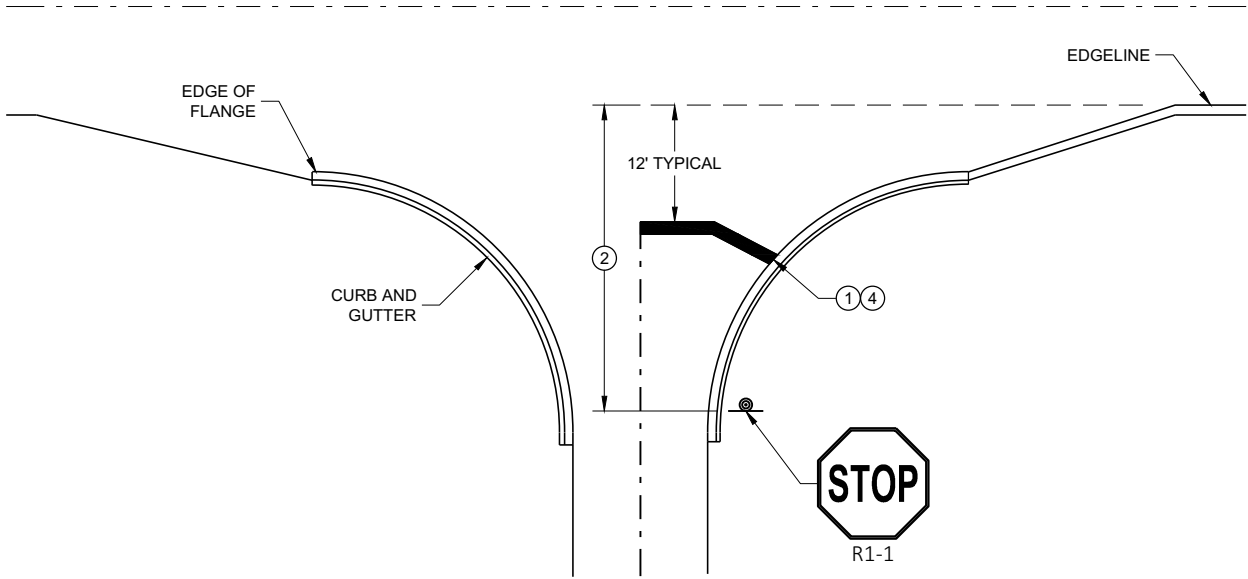
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING
ENGINEER

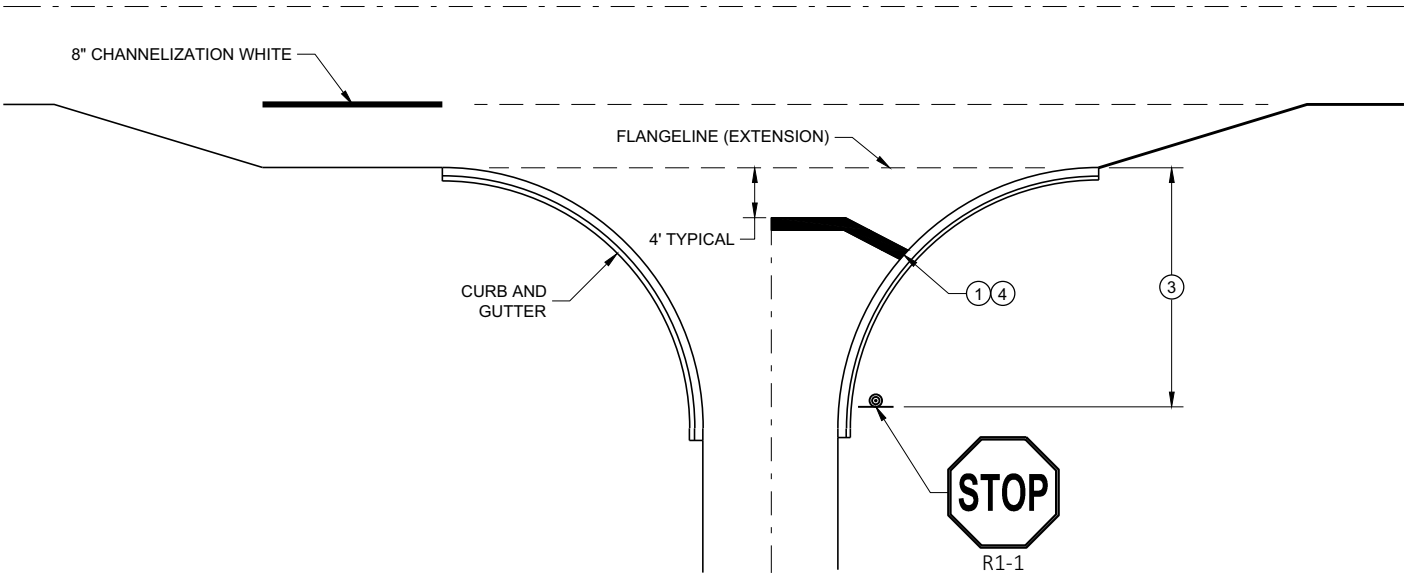
GENERAL NOTES

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

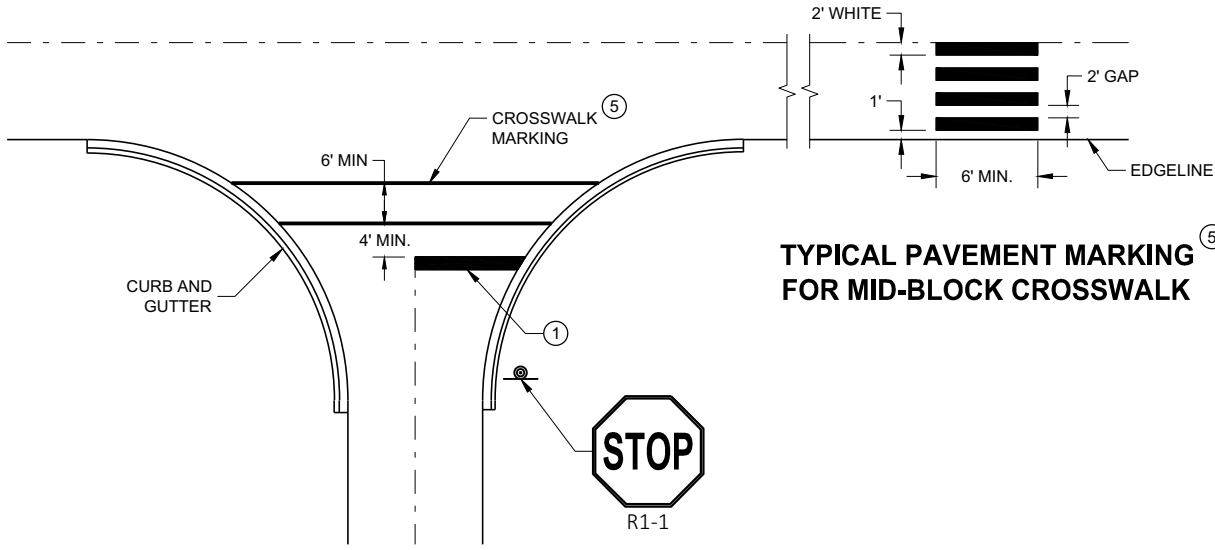
- ① 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE REGION MARKING ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
- ② NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE.
- ③ NO STOP LINE IS REQUIRED IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION.
- ④ MOVE CLOSER TO THE EDGE OF TRAVEL LINE AS NEEDED FOR VISIBILITY AND SIGHT LINES (NO CLOSER THAN 4 FEET).
- ⑤ LADDER BAR CROSSWALKS SHOULD ONLY BE USED FOR MID BLOCK CROSSINGS. USE 2 - 6" TRANSVERSE LINES INSTEAD.



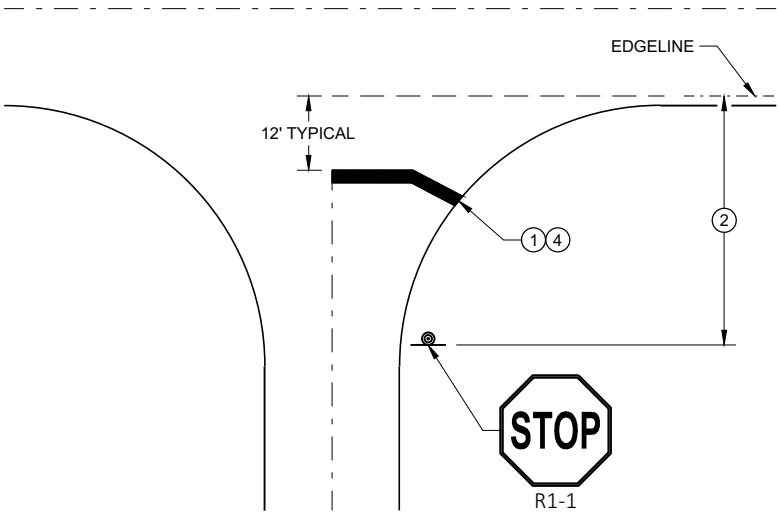
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



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

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2019 /S/ Matthew Rauch
DATE STATE SIGNING AND MARKING ENGINEER

FHWA

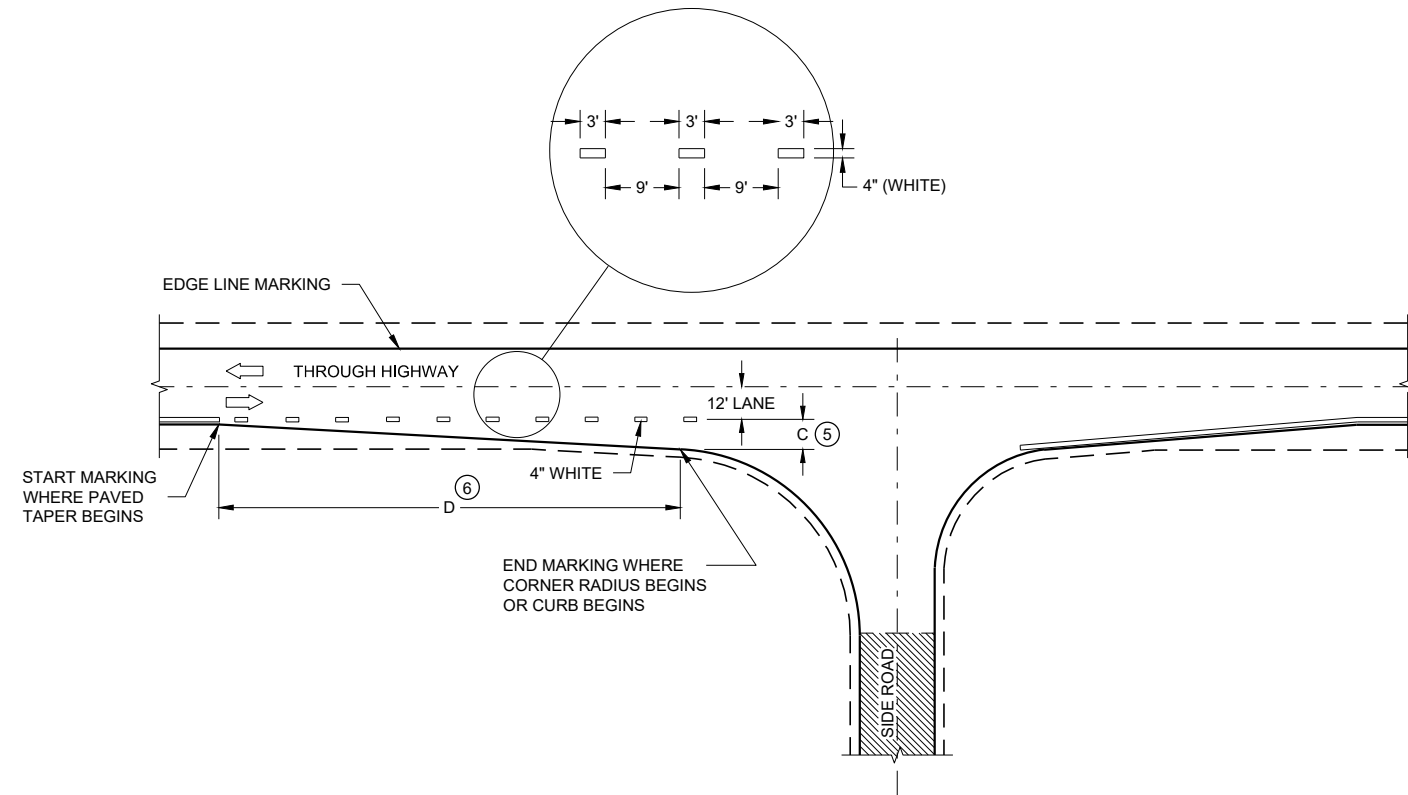
GENERAL NOTES

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

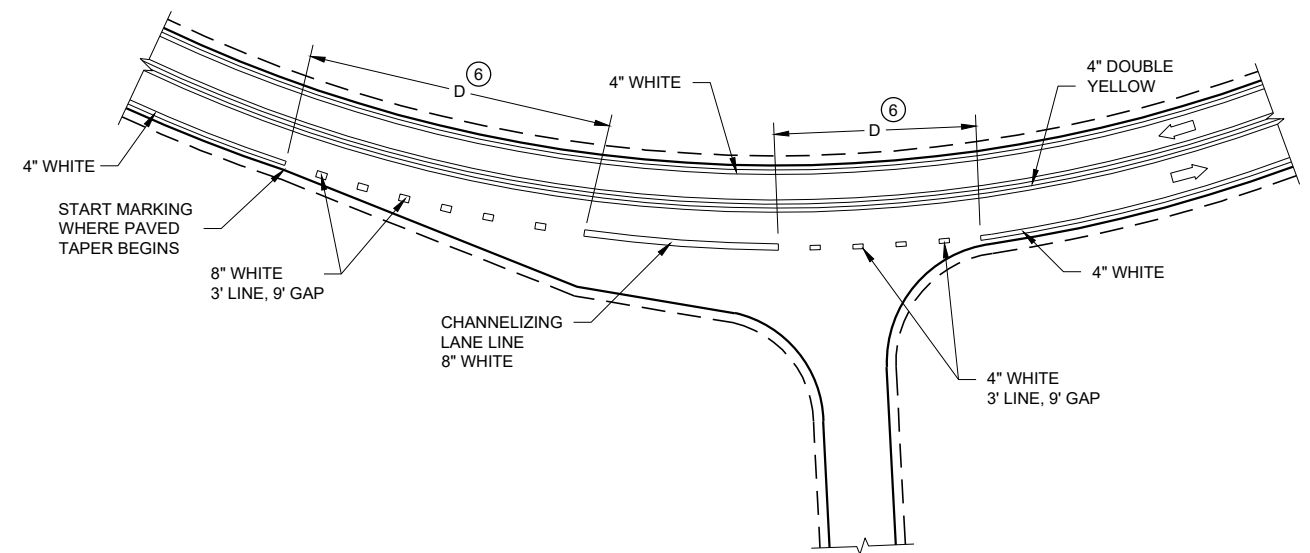
- ① WHEN DISTANCE "A" IS LESS THAN 250 FEET, OMIT LANE LINE.
- ② WHEN DISTANCE "B" IS LESS THAN 100 FEET, OMIT CHANNELIZING LANE LINE.
- ③ BARRIER LINE ENDS AT SIDE ROAD PAVEMENT / SURFACE EDGE EXTENSION.
- ④ BARRIER LINE STARTS 500 FEET PRIOR TO THE BYPASS TAPER.
- ⑤ WHEN DISTANCE "C" IS LESS THAN 4 FEET, OMIT DOTTED EXTENSION.
- ⑥ WHEN DISTANCE "D" IS LESS THAN 50 FEET, OMIT DOTTED EXTENSION.

LEGEND

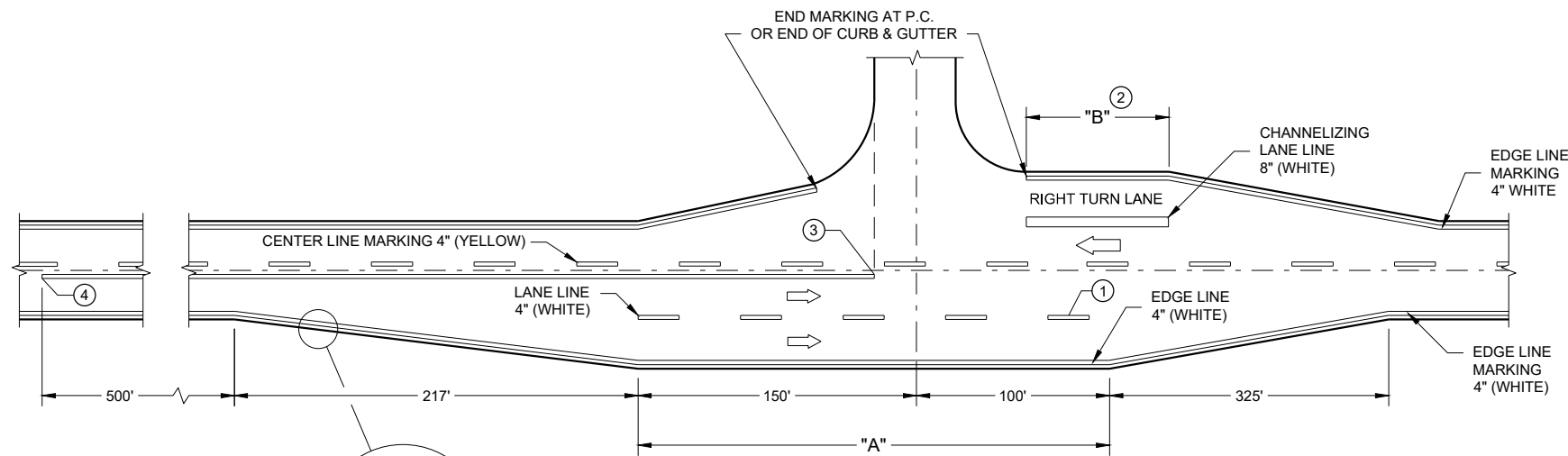
➡ DIRECTION OF TRAVEL



MINOR INTERSECTION

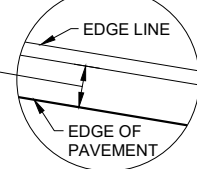


INTERSECTION ON OUTSIDE OF CURVE



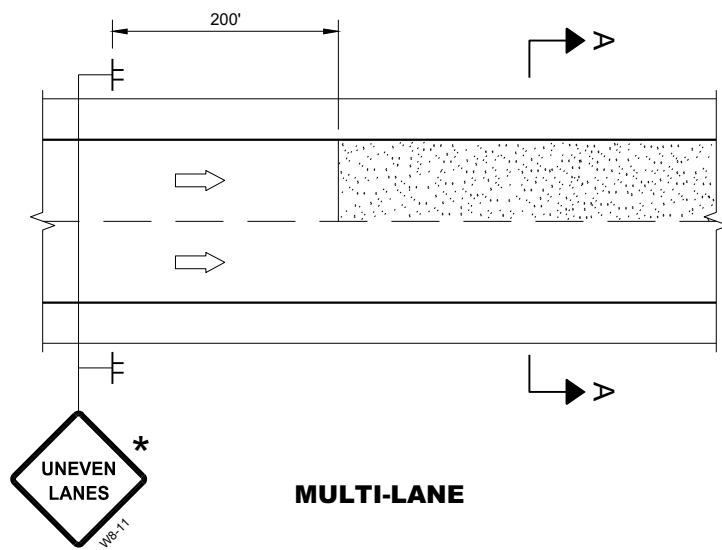
**MAJOR INTERSECTIONS
(INTERSECTION WITH FULL RIGHT TURN LANE OR BYPASS LANE)**

BYPASS LANE PAVED SHOULDER WIDTH (AS SHOWN ELSEWHERE IN PLANS) - PLUS 2 INCHES

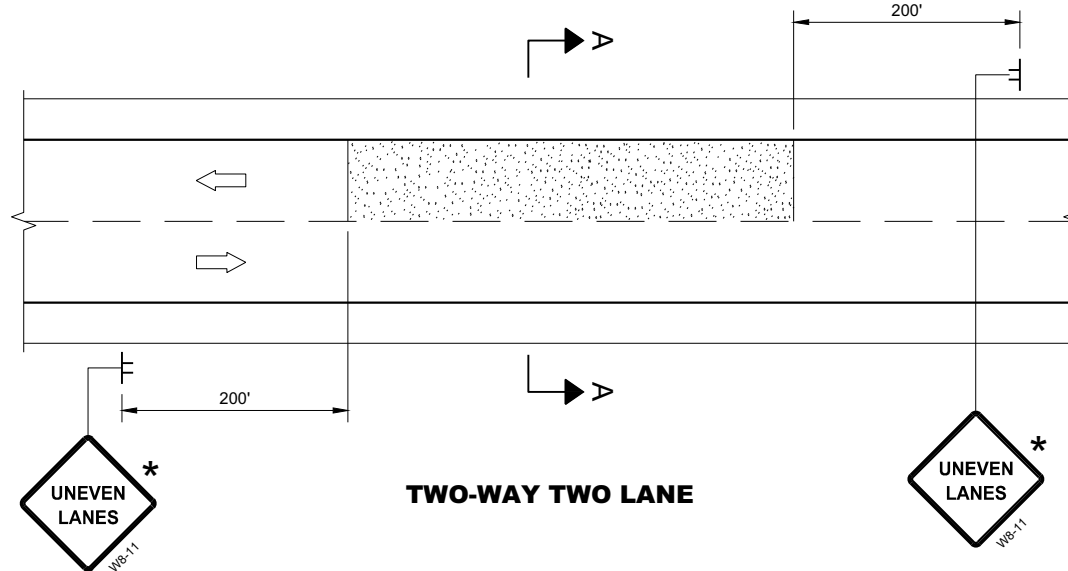


**PAVEMENT MARKING
(INTERSECTIONS)**

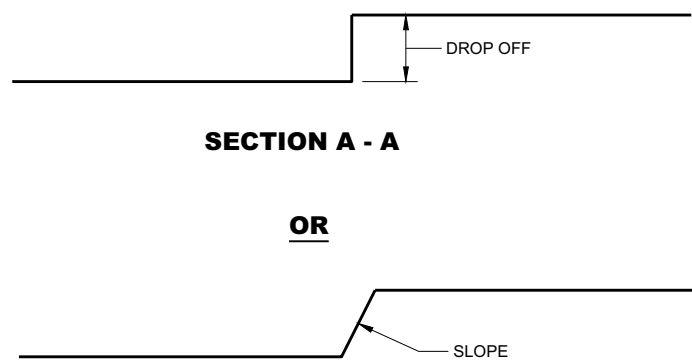
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



MULTI-LANE



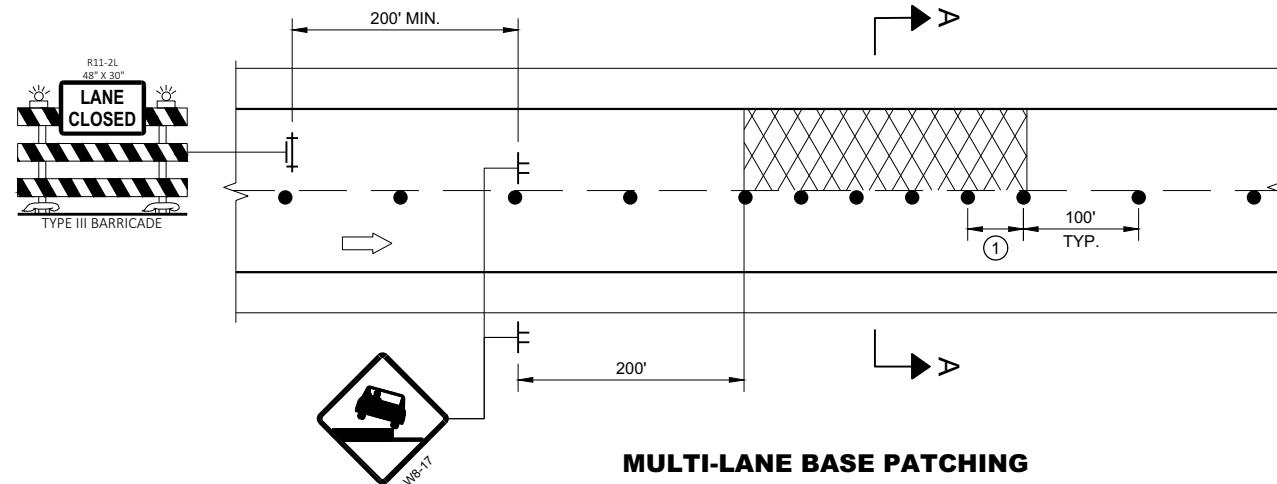
TWO-WAY TWO LANE



SECTION A - A

OR

SECTION A - A



MULTI-LANE BASE PATCHING

ADJACENT LANE DROP-OFFS

GENERAL NOTES

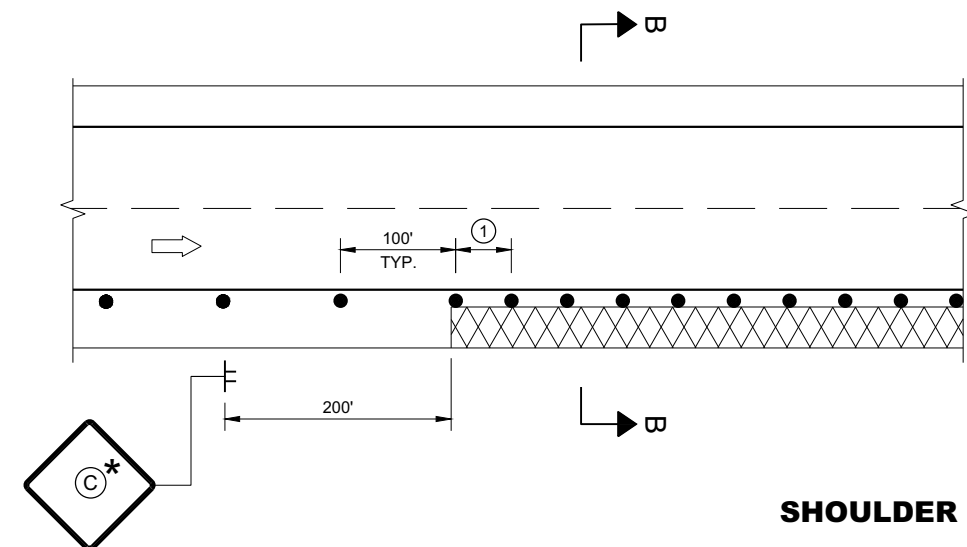
- FOR SPOT LOCATIONS USE ENGINEERING JUDGEMENT WHEN PLACING ADDITIONAL SIGNS.
- ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.
- "WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.
- WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.
- * IF THE DROP-OFF IS CONTINUOUS ALONG THE PROJECT, PLACE ADDITIONAL SIGNS EVERY 1 MILE AND AFTER EVERY ENTRANCE RAMP.
- ① USE CLOSER SPACING WHEN DELINEATING DROP-OFF.

LEGEND

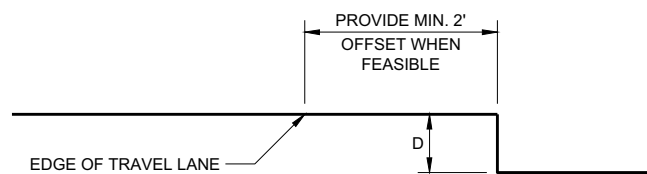
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC CONTROL DRUM
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC
- WORK AREA WITH DROP-OFF
- MILLED SURFACE

6

6



SHOULDER DROP-OFFS



SECTION B - B

D	SIGN (C)
< 2" WITH A SLOPE STEEPER THAN 3:1	LOW SHOULDER WO8-9
2" < 6" WITH A SLOPE STEEPER THAN 3:1	SHOULDER DROP-OFF W8-9A PROVIDE A 3:1 OR FLATTER SLOPE OF MATERIAL ADJACENT TO THE PAVEMENT

SDD 15D39 - 02

SDD 15D39 - 02

**TRAFFIC CONTROL,
DROP-OFF SIGNING**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

FHWA

GENERAL NOTES

DRAWING NOT TO SCALE. ALL SIGNS AND POSTS ON THIS SHEET SHALL BE PAID FOR WITH 'TRAFFIC CONTROL SIGNS' BID ITEM. ALL SIDE ROADS WHICH ARE UNDER CONSTRUCTION OF CURB AND GUTTER AND/OR GRADING SHALL BE ADEQUATELY SIGNED.

ALL SIGNS AND DEVICES SHALL BE IN CONFORMANCE WITH THE WISCONSIN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (WMUTCD). SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE WISDOT STANDARD SIGN PLATES.

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

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

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

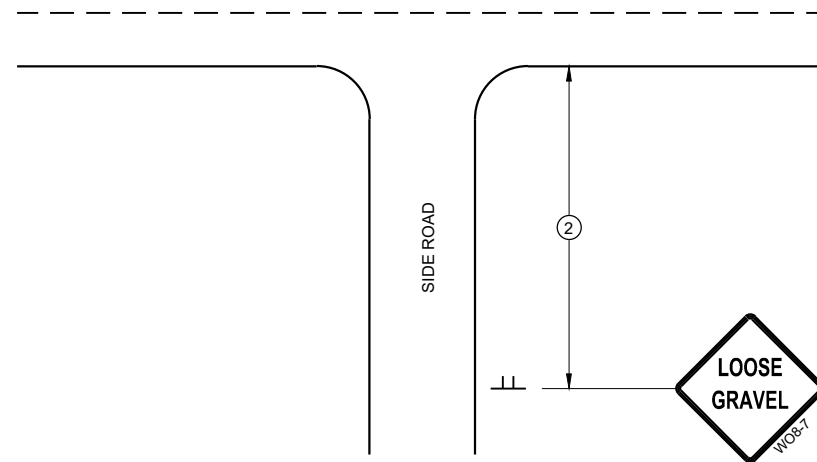
ALL SIGNS INAPPROPRIATE TO THE STATUS OF THE CONTROL ZONE, INCLUDING PRE-EXISTING SIGNS IN THE VICINITY, SHALL BE COVERED OR REMOVED AS DIRECTED BY THE ENGINEER.

SEE 15C34 FOR ADDITIONAL TRAFFIC CONTROL SIGNING WHEN CENTERLINE PAVEMENT MAKINGS ARE MISSING. 'DO NOT PASS' SIGNS MUST BE INSTALLED ON THE SAME DAY AS MILLING OPERATIONS.

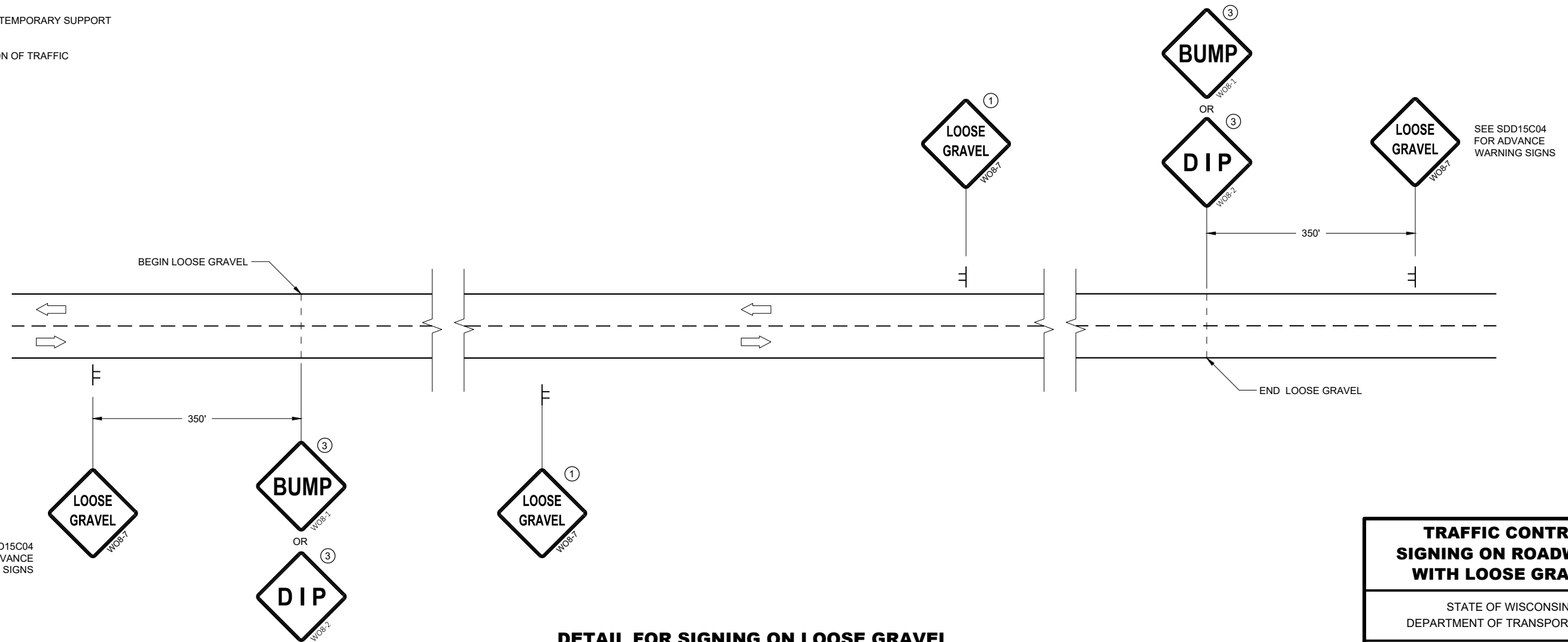
- ① PLACE SIGNS 350' IN ADVANCE OF CHIP SEALED OR LOOSE GRAVEL SURFACES AND AT 1 MILE INTERVALS, OR AS DIRECTED BY THE ENGINEER.
- ② PLACE SIGN 200' MIN. FROM INTERSECTION AND 200' MIN. AFTER ADVANCE WARNING SIGN SHOWN IN SDD 15C04.
- ③ ADD WO8-1 OR WO8-2 SIGN WHEN THE CONDITION IS PRESENT.

LEGEND

- ⊥ SIGN ON TEMPORARY SUPPORT
- ➡ DIRECTION OF TRAFFIC







TYPICAL SIDE ROAD APPROACH SIGN DETAIL



DETAIL FOR SIGNING ON LOOSE GRAVEL OR CHIP SEALED SURFACES

TRAFFIC CONTROL SIGNING ON ROADWAYS WITH LOOSE GRAVEL	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED February 2021 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER
FHWA	

LEGEND

- V1 WORK VEHICLE
- V2 SHADOW VEHICLE
-  TRUCK MOUNTED ATTENUATOR (TMA)
-  FLASHING ARROW PANEL (CAUTION)
-  WORK AREA
-  DIRECTION OF TRAFFIC

POSTED SPEED PRIOR TO WORK STARTING (MPH)	DECISION SIGHT DISTANCE (D)
0 - 25	550'
30	550'
35	700'
40	700'
45	900'
50	900'
55	1200'

GENERAL NOTES

ALL SIGNS ARE 48"X48" UNLESS OTHERWISE NOTED.

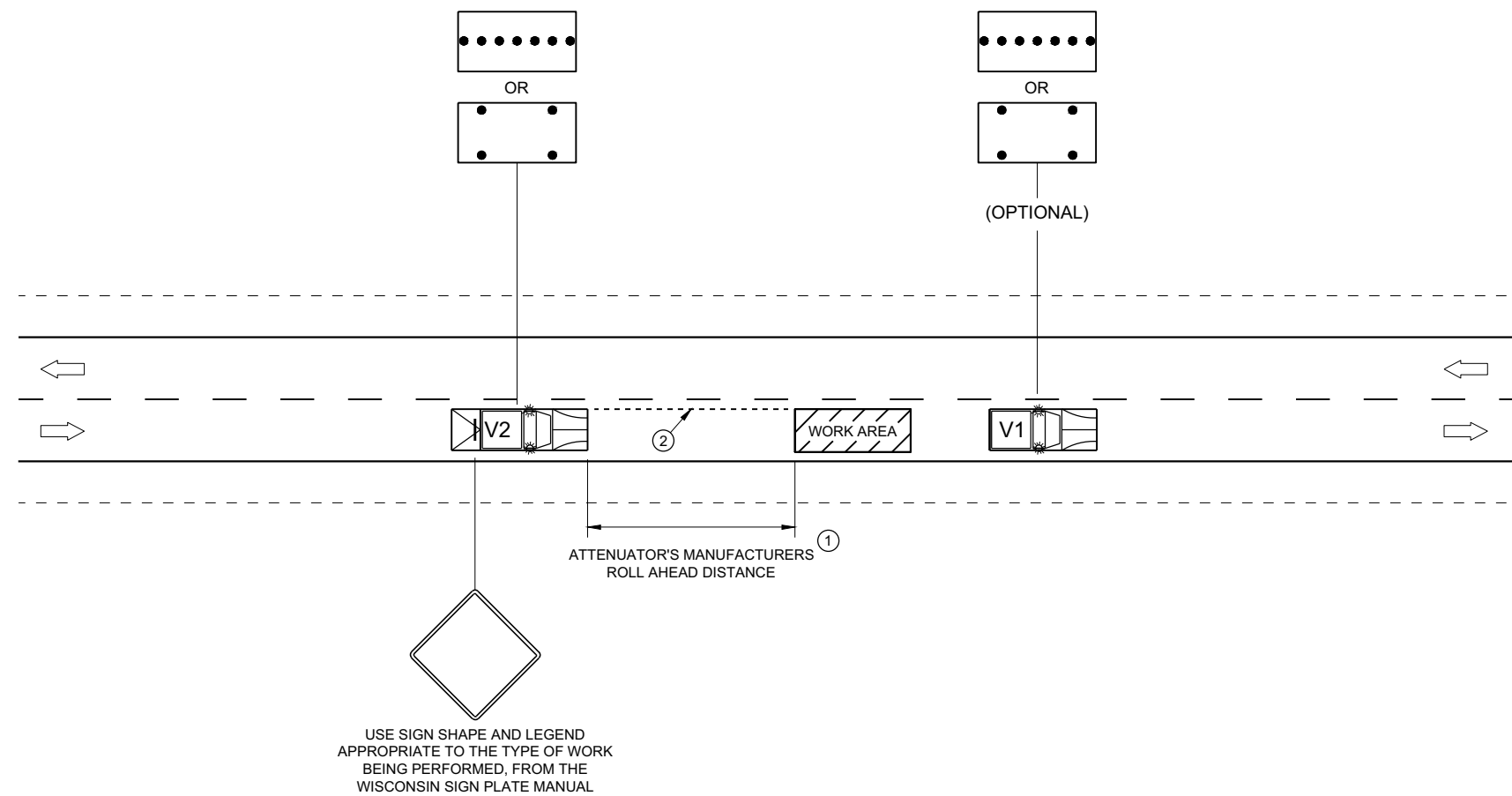
MOBILE IS WORK THAT MOVES CONTINUOUSLY OR MOVES AT LEAST THE DECISION SIGHT DISTANCE EVERY 15 MINUTES.

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

ALL ARROW PANELS SHALL BE REAR FACING, TYPE "B" OR "C", AND DISPLAYING THE FLASHING CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

- ① DISTANCE BETWEEN VEHICLES MAY INCREASE FROM THE ATTENUATOR'S ROLL AHEAD BASED ON TERRAIN, SIGHT DISTANCE, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.
- ② ALIGN LEFT SIDE OF SHADOW VEHICLE WITH EDGE OF WORK AREA.



6

6

SDD 15D51 - 01

SDD 15D51 - 01

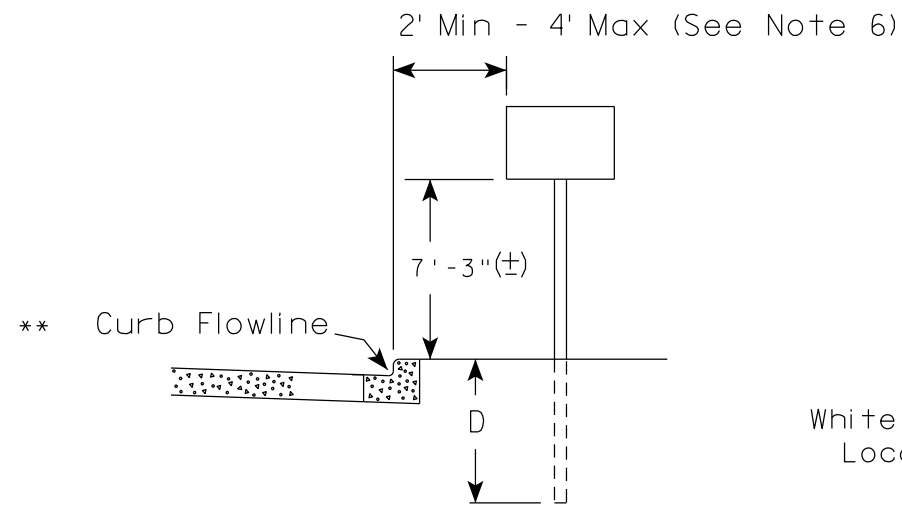
**TRAFFIC CONTROL,
MOBILE OPERATIONS ON
AN UNDIVIDED ROADWAY**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

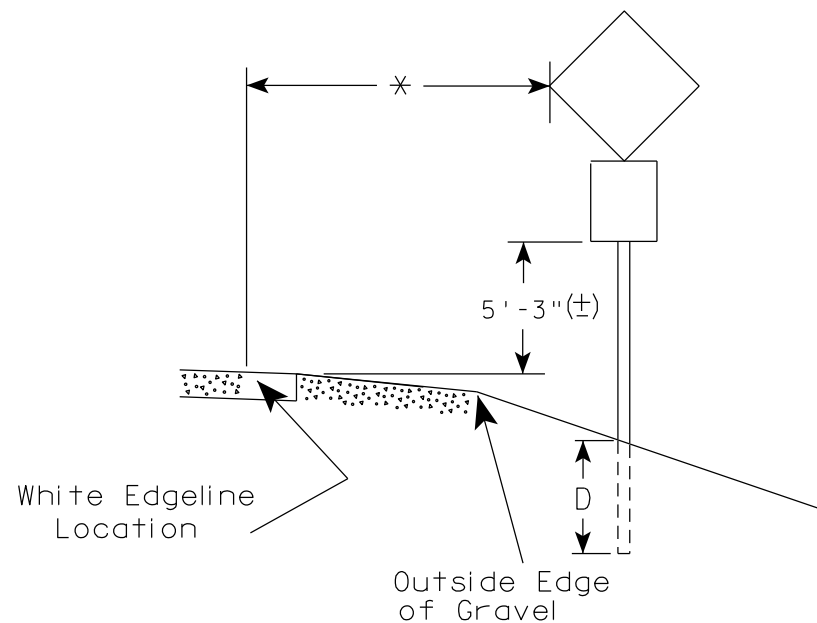
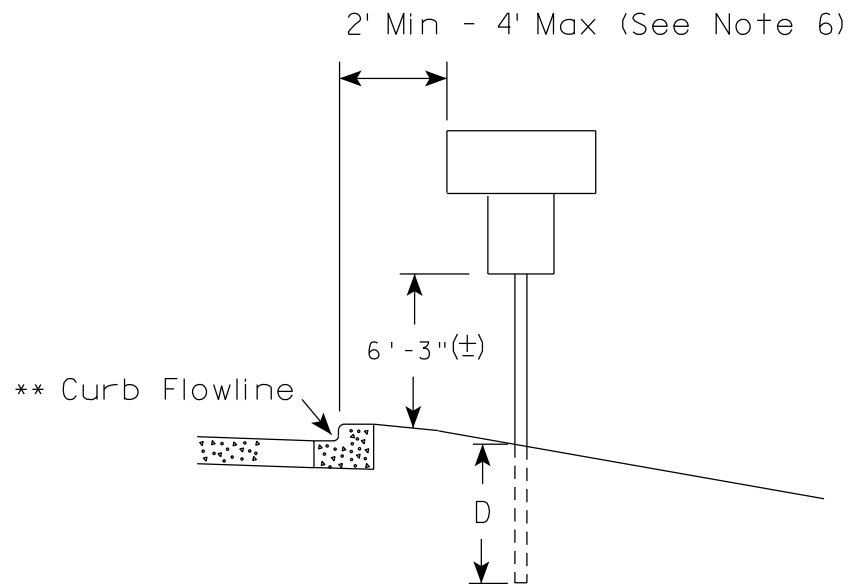
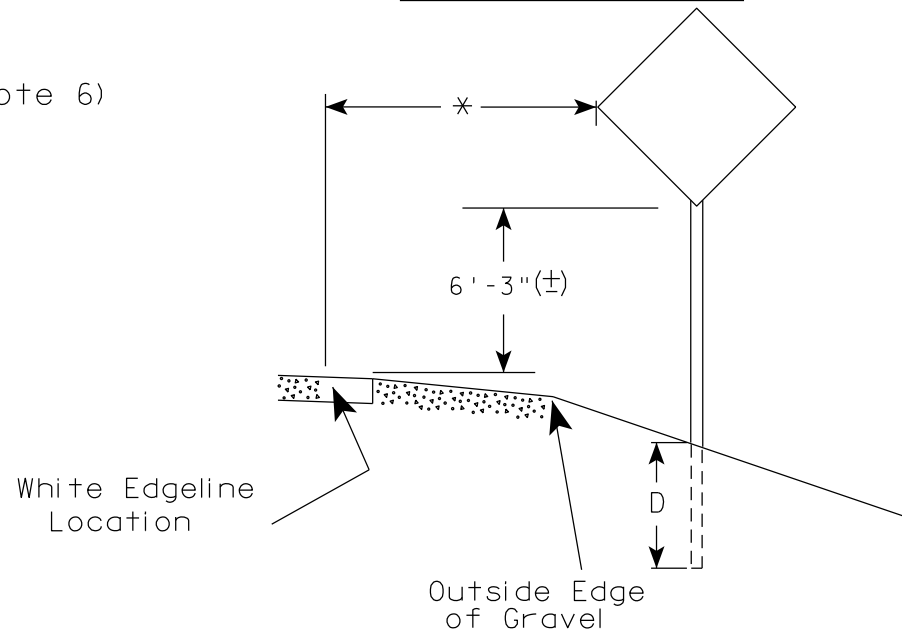
APPROVED
February 2021 DATE /S/ Andrew Heidtke
STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER

FHWA

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

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

POST EMBEDMENT DEPTH

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

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

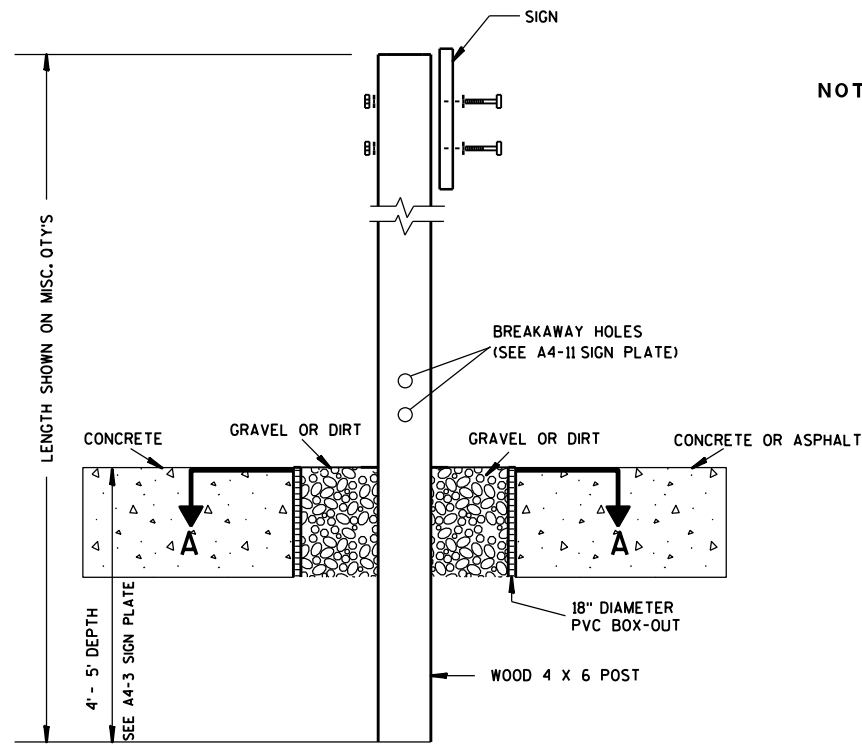
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

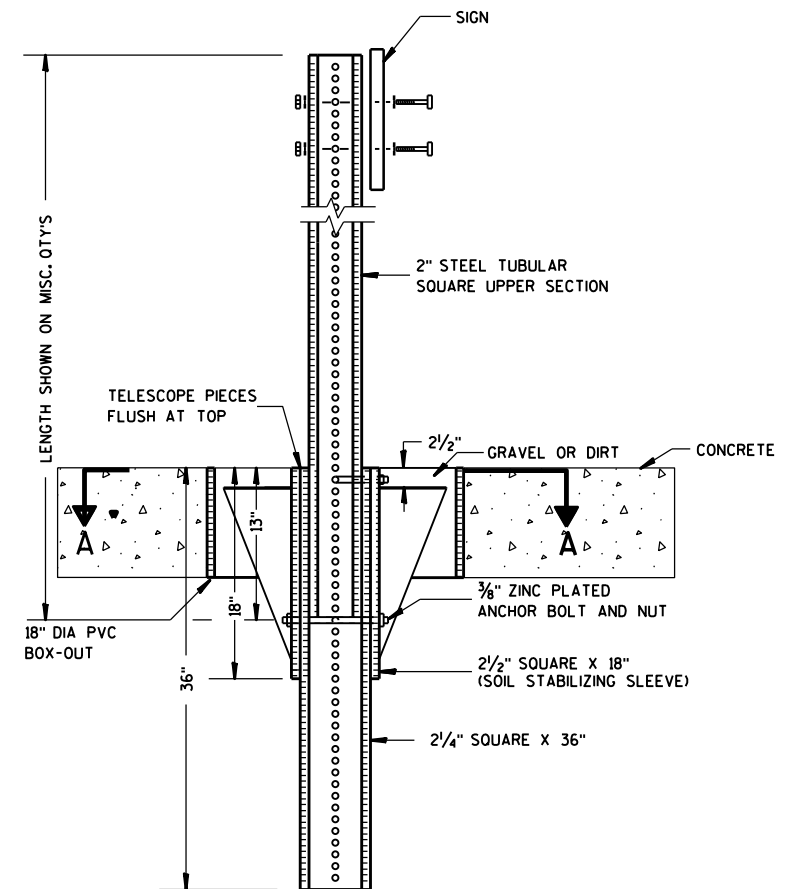
DATE 5/13/2020 PLATE NO. A4-3.22



ELEVATION VIEW

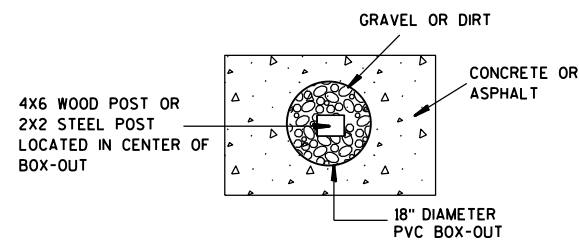
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

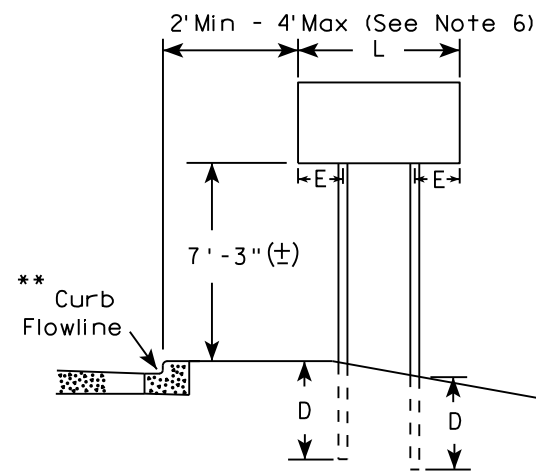
FOR NEW CONCRETE/ ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B	
<small>WISCONSIN DEPT OF TRANSPORTATION</small>	
APPROVED <i>Matthew R. Rauch</i> <small>for State Traffic Engineer</small>	
<small>DATE 1/27/14</small>	<small>PLATE NO. A4-3B.1</small>

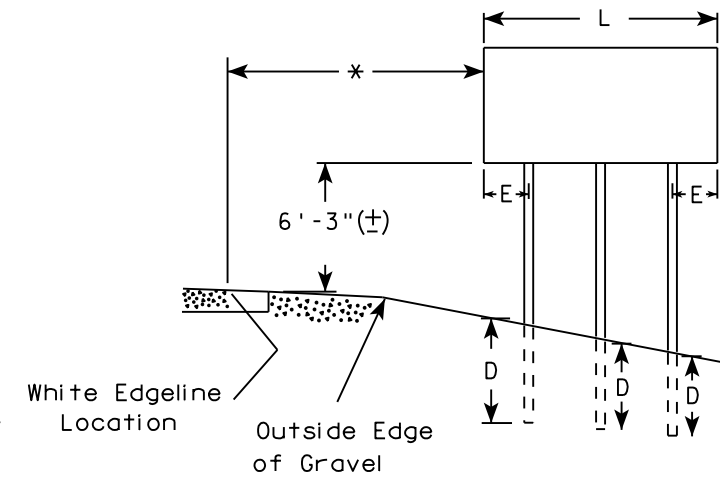
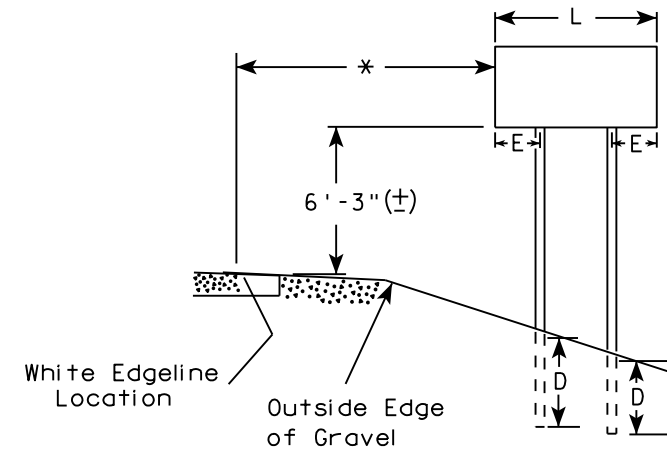
GENERAL NOTES

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

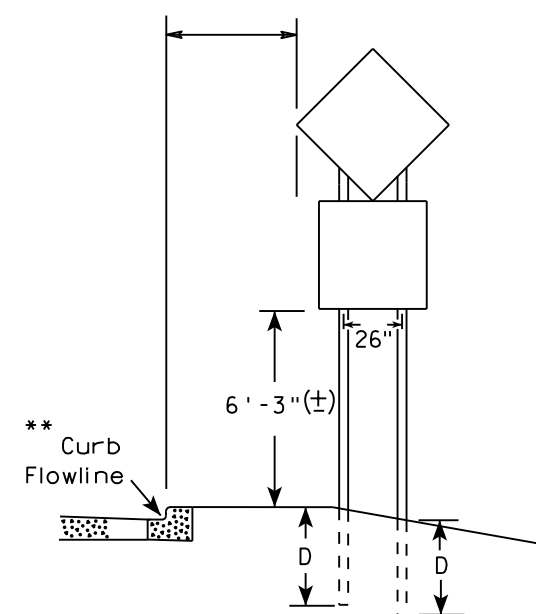
URBAN AREA



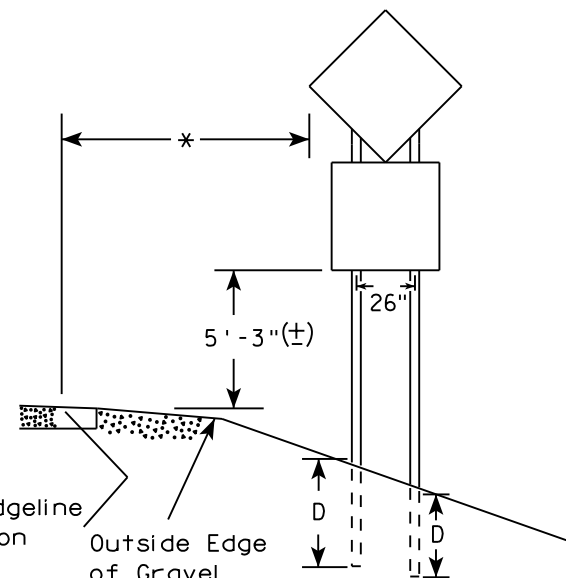
RURAL AREA (See Note 3)



2' Min - 4' Max (See Note 6)



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

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

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

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

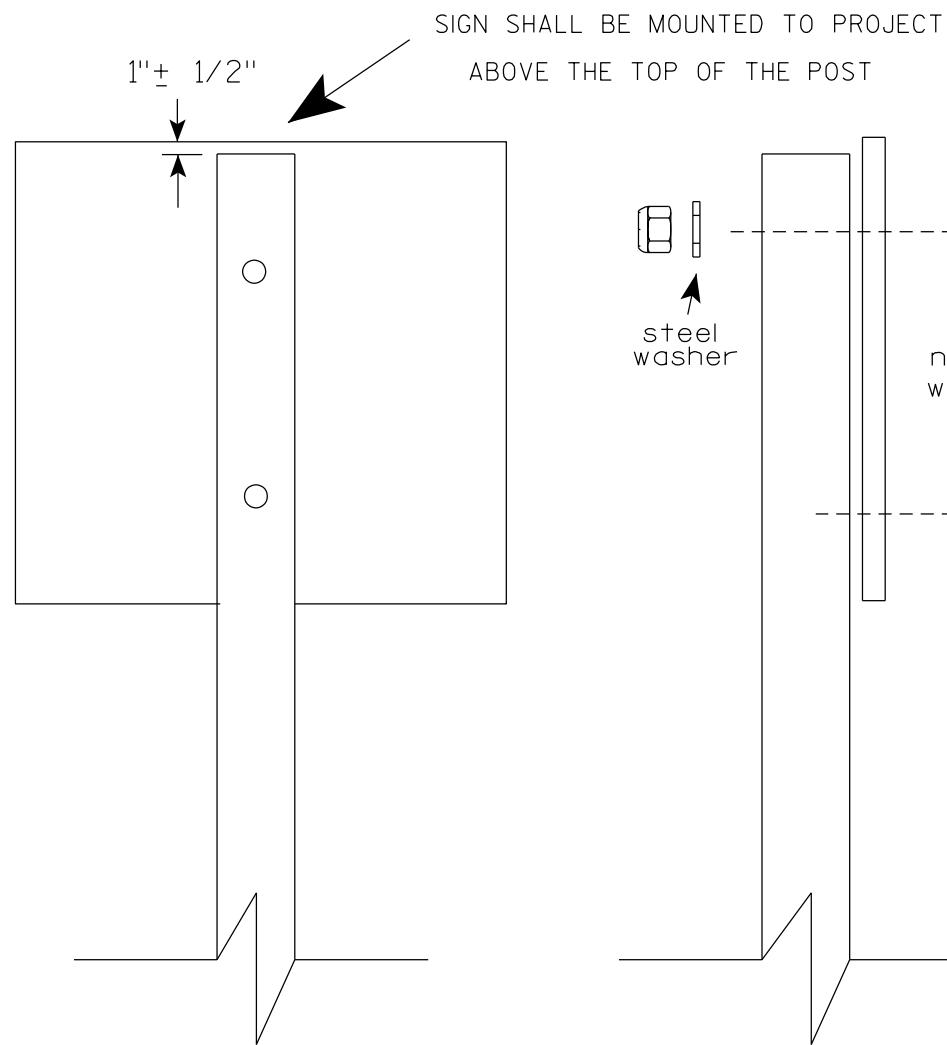
SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 108" to 144"	12"

POST EMBEDMENT DEPTH

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

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION
 APPROVED *Matthew R. Rauch*
 For State Traffic Engineer
 DATE 8/21/17 PLATE NO. A4-4.15



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

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

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

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/16" X 1-3/4" Length w/ lock nuts

WOOD POSTS (4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32" (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL

1-1/4" O.D. X 3/8" I.D. X .080 NYLON

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

ATTACHMENT OF SIGNS
TO POSTS

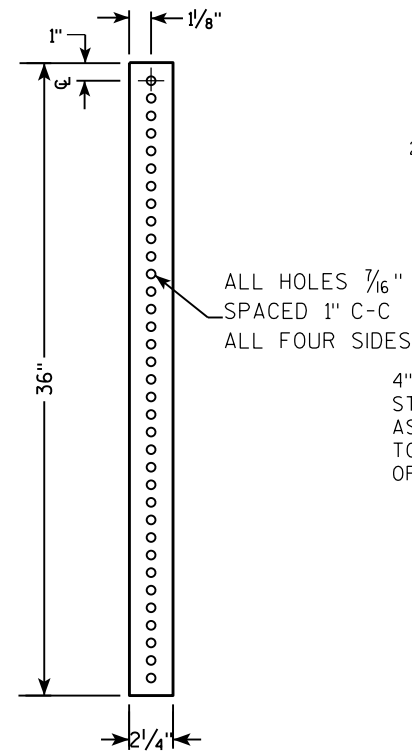
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R Rauch*
For State Traffic Engineer

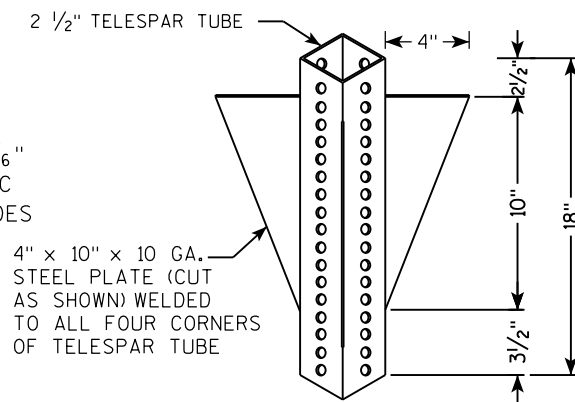
DATE 4/1/2020 PLATE NO. A4-8.9

**TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM**

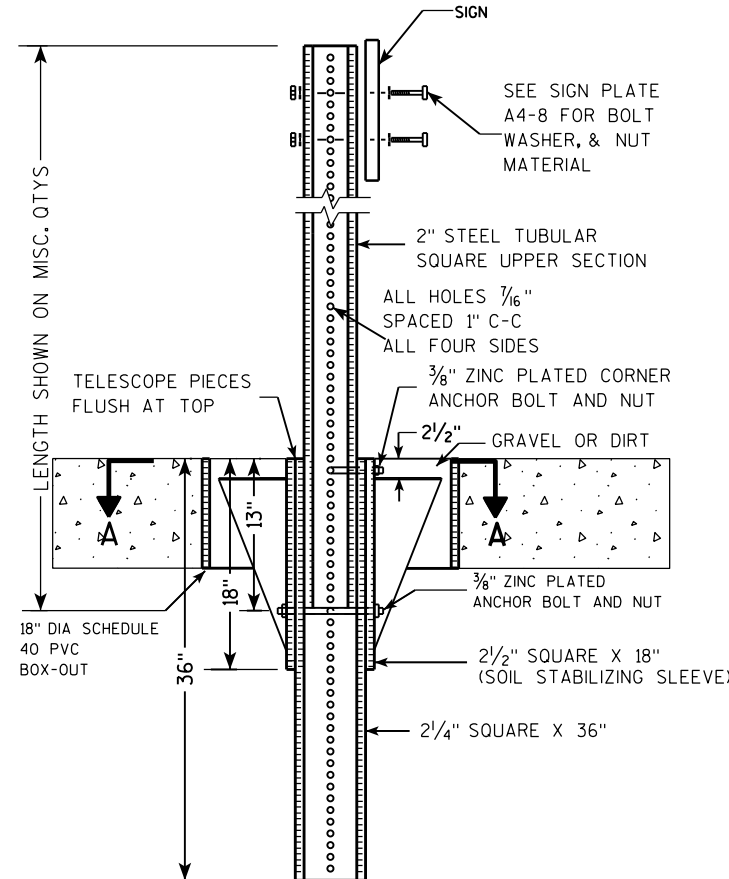
2 1/4" SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



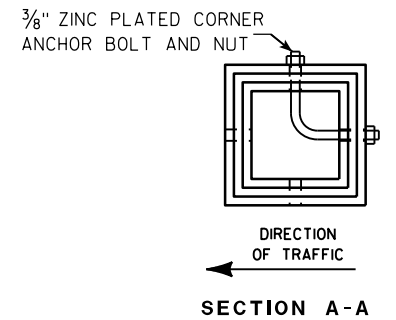
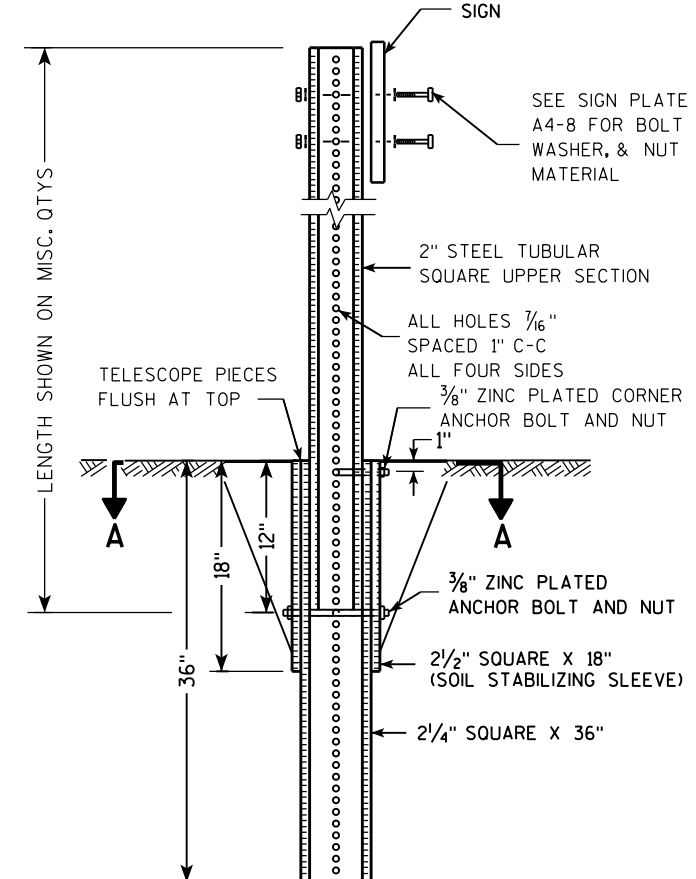
2 1/2" SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH



**DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)**



**DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)**



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

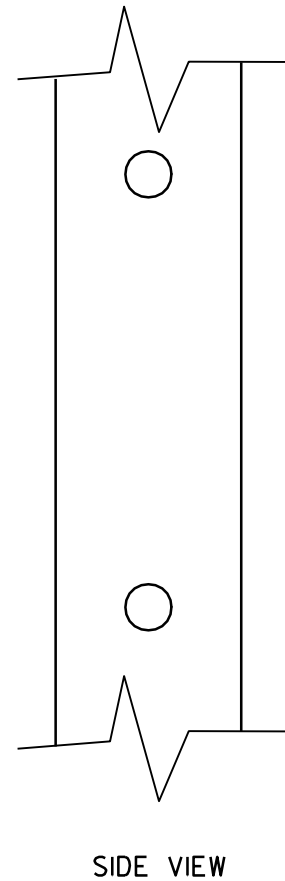
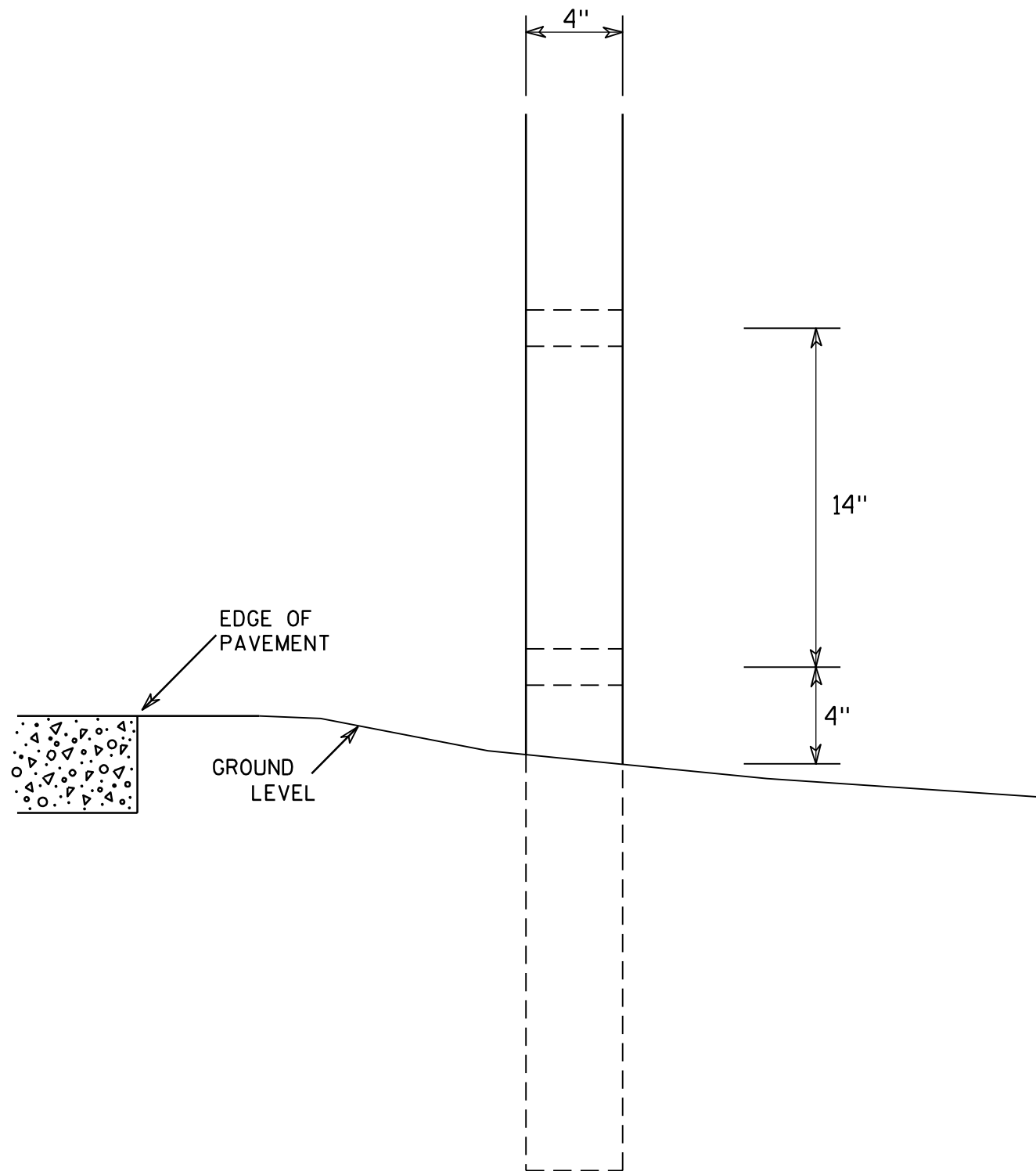
Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

**TUBULAR STEEL
SIGN POST
A4-9**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



GENERAL NOTES

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

7

7

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

DIVISION 1-CTH-S

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL		MASS ORDINATE
									1.00	1.25	
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4	
174+00	0.00	32.55	5.50	0.00	0	0	0	0	0	0	
174+50	50.00	50.88	5.50	1.94	77	10	2	77	3	65	
175+00	50.00	0.00	0.00	42.57	47	5	41	124	54	55	
175+50	50.00	0.00	0.00	110.08	0	0	141	124	230	-121	
176+00	50.00	0.00	0.00	442.67	0	0	512	124	870	-761	
176+50	50.00	0.00	0.00	782.98	0	0	1,135	124	2,289	-2,180	
177+00	50.00	0.00	0.00	903.03	0	0	1,561	124	4,240	-4,131	
177+50	50.00	0.00	0.00	760.71	0	0	1,540	124	6,165	-6,056	
178+00	50.00	0.00	0.00	606.27	0	0	1,266	124	7,748	-7,639	
178+50	50.00	0.00	0.00	255.92	0	0	798	124	8,745	-8,636	
179+00	50.00	101.51	5.50	17.02	94	5	253	218	9,061	-8,863	
179+50	50.00	424.39	5.50	0.00	487	10	16	705	9,081	-8,406	
180+00	50.00	466.14	5.50	0.00	825	10	0	1,530	9,081	-7,591	
180+50	50.00	386.22	5.50	0.00	789	10	0	2,319	9,081	-6,812	
181+00	50.00	266.82	5.50	0.00	605	10	0	2,924	9,081	-6,217	
181+50	50.00	105.60	5.50	3.00	345	10	3	3,269	9,085	-5,886	
182+00	50.00	46.23	0.00	12.00	141	5	14	3,410	9,103	-5,768	
182+50	50.00	0.00	0.00	56.42	43	0	63	3,453	9,181	-5,803	
183+00	50.00	0.00	0.00	107.38	0	0	152	3,453	9,371	-5,993	
183+50	50.00	0.00	0.00	105.94	0	0	198	3,453	9,619	-6,241	
184+00	50.00	0.00	0.00	82.84	0	0	175	3,453	9,838	-6,460	
184+50	50.00	0.00	0.00	73.31	0	0	145	3,453	10,019	-6,641	
185+00	50.00	0.00	0.00	60.10	0	0	124	3,453	10,174	-6,796	
185+50	50.00	0.00	0.00	44.44	0	0	97	3,453	10,295	-6,917	
186+00	50.00	0.00	0.00	40.24	0	0	78	3,453	10,393	-7,015	
186+50	50.00	0.00	0.00	48.04	0	0	82	3,453	10,495	-7,117	
187+00	50.00	0.00	0.00	50.88	0	0	92	3,453	10,610	-7,232	
187+50	50.00	0.00	0.00	42.79	0	0	87	3,453	10,719	-7,341	
188+00	50.00	0.00	0.00	48.56	0	0	85	3,453	10,825	-7,447	
188+50	50.00	0.00	0.00	62.14	0	0	102	3,453	10,953	-7,575	
189+00	50.00	0.00	0.00	69.69	0	0	122	3,453	11,105	-7,727	
189+50	50.00	0.00	0.00	74.94	0	0	134	3,453	11,273	-7,895	
190+00	50.00	0.00	0.00	72.22	0	0	136	3,453	11,443	-8,065	
190+50	50.00	0.00	0.00	69.43	0	0	131	3,453	11,606	-8,228	
191+00	50.00	0.00	0.00	68.06	0	0	127	3,453	11,765	-8,387	
191+50	50.00	0.00	0.00	65.52	0	0	124	3,453	11,920	-8,542	
192+00	50.00	0.00	0.00	58.06	0	0	114	3,453	12,063	-8,685	
192+50	50.00	0.00	0.00	51.41	0	0	101	3,453	12,189	-8,811	
193+00	50.00	0.00	0.00	56.24	0	0	100	3,453	12,314	-8,936	
193+50	50.00	0.00	0.00	56.42	0	0	104	3,453	12,444	-9,066	
194+00	50.00	0.00	0.00	43.60	0	0	93	3,453	12,560	-9,182	

Notes:

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 - 3 - FILL
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- CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
 THIS DOES NOT SHOW UP IN CROSS SECTIONS
 DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
 [CUT - SALVAGED PAVT - (FILL * FILL FACTOR)]

DIVISION 1--CTH-5

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL		MASS ORDINATE
									1.00	1.25	
					NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 4	
194+50	50.00	0.00	0.00	24.50	0	0	63	3,453	12,639	-9,261	
195+00	50.00	13.76	0.00	9.90	13	0	32	3,466	12,679	-9,288	
195+50	50.00	31.57	0.00	0.48	42	0	10	3,508	12,691	-9,258	
196+00	50.00	82.30	0.00	0.00	105	0	0	3,613	12,691	-9,153	
196+50	50.00	143.36	0.00	0.00	209	0	0	3,822	12,691	-8,944	
197+00	50.00	173.02	0.00	0.00	293	0	0	4,115	12,691	-8,651	
197+50	50.00	122.12	0.00	0.00	273	0	0	4,388	12,691	-8,378	
198+00	50.00	0.00	0.00	163.82	113	0	152	4,501	12,881	-8,455	
198+50	50.00	0.00	0.00	623.79	0	0	729	4,501	13,793	-9,367	
199+00	50.00	0.00	0.00	704.68	0	0	1,230	4,501	15,330	-10,904	
199+50	50.00	0.00	0.00	658.96	0	0	1,263	4,501	16,909	-12,483	
200+00	50.00	0.00	0.00	559.26	0	0	1,128	4,501	18,319	-13,893	
200+50	50.00	0.00	0.00	454.68	0	0	939	4,501	19,493	-15,067	
201+00	50.00	0.00	0.00	363.15	0	0	757	4,501	20,439	-16,013	
201+50	50.00	27.33	0.00	111.61	25	0	440	4,526	20,989	-16,538	
202+00	50.00	475.96	0.00	0.00	466	0	103	4,992	21,118	-16,201	
202+50	50.00	870.41	0.00	0.00	1,247	0	0	6,239	21,118	-14,954	
203+00	50.00	993.14	0.00	0.00	1,726	0	0	7,965	21,118	-13,228	
203+50	50.00	933.63	0.00	0.00	1,784	0	0	9,749	21,118	-11,444	
204+00	50.00	563.63	0.00	0.00	1,386	0	0	11,135	21,118	-10,058	
204+50	50.00	237.20	0.00	102.63	742	0	95	11,877	21,236	-9,434	
205+00	50.00	90.67	0.00	166.33	304	0	249	12,181	21,548	-9,442	
205+50	50.00	28.97	0.00	116.71	111	0	262	12,292	21,875	-9,658	
206+00	50.00	0.00	0.00	83.35	27	0	185	12,319	22,106	-9,862	
206+50	50.00	0.00	0.00	66.47	0	0	139	12,319	22,280	-10,036	
207+00	50.00	0.00	0.00	70.17	0	0	127	12,319	22,439	-10,195	
207+50	50.00	0.00	0.00	73.80	0	0	133	12,319	22,605	-10,361	
208+00	50.00	1.16	0.00	25.85	1	0	92	12,320	22,720	-10,475	
208+50	50.00	23.89	0.00	0.00	23	0	24	12,343	22,750	-10,482	
209+00	50.00	0.32	0.00	4.90	22	0	5	12,365	22,756	-10,466	
209+50	50.00	0.00	5.50	33.98	0	5	36	12,365	22,801	-10,516	
210+00	50.00	0.00	5.50	66.42	0	10	93	12,365	22,918	-10,643	
210+50	50.00	0.00	0.00	66.69	0	5	123	12,365	23,071	-10,801	
211+00	50.00	0.00	0.00	110.28	0	0	164	12,365	23,276	-11,006	
211+50	50.00	0.00	0.00	155.80	0	0	246	12,365	23,584	-11,314	
212+00	50.00	0.00	0.00	165.85	0	0	298	12,365	23,956	-11,686	
212+50	50.00	0.00	0.00	147.36	0	0	290	12,365	24,319	-12,049	
213+00	50.00	0.00	0.00	157.29	0	0	282	12,365	24,671	-12,401	
213+50	50.00	0.00	0.00	145.64	0	0	280	12,365	25,021	-12,751	
214+00	50.00	0.00	0.00	125.56	0	0	251	12,365	25,335	-13,065	
214+50	50.00	0.00	0.00	133.03	0	0	239	12,365	25,634	-13,364	

Notes:

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 [CUT - SALVAGED PAVT - (FILL * FILL FACTOR)]

DIVISION 1-CTH-5

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 4
215+00	50.00	0.00	0.00	105.12	0	0	221	12,365	25,910	-13,640
215+50	50.00	0.00	0.00	52.26	0	0	146	12,365	26,093	-13,823
216+00	50.00	283.11	0.00	15.40	262	0	63	12,627	26,171	-13,639
216+50	50.00	115.87	0.00	15.64	369	0	29	12,996	26,208	-13,307
217+00	50.00	0.63	0.00	11.02	108	0	25	13,104	26,239	-13,230
217+50	50.00	0.00	0.00	24.86	1	0	33	13,105	26,280	-13,270
218+00	50.00	0.00	0.00	24.17	0	0	45	13,105	26,336	-13,326
218+50	50.00	0.00	0.00	35.06	0	0	55	13,105	26,405	-13,395
219+00	50.00	0.00	0.00	49.49	0	0	78	13,105	26,503	-13,493
219+50	50.00	0.00	0.00	51.94	0	0	94	13,105	26,620	-13,610
220+00	50.00	0.00	0.00	42.05	0	0	87	13,105	26,729	-13,719
220+50	50.00	0.00	0.00	43.84	0	0	80	13,105	26,829	-13,819
221+00	50.00	0.00	0.00	51.67	0	0	88	13,105	26,939	-13,929
221+50	50.00	0.00	0.00	54.94	0	0	99	13,105	27,063	-14,053
222+00	50.00	0.00	0.00	51.43	0	0	98	13,105	27,185	-14,175
222+50	50.00	0.00	0.00	45.75	0	0	90	13,105	27,298	-14,288
223+00	50.00	0.00	0.00	54.61	0	0	93	13,105	27,414	-14,404
223+50	50.00	0.00	0.00	68.56	0	0	114	13,105	27,556	-14,546
224+00	50.00	0.00	0.00	75.31	0	0	133	13,105	27,723	-14,713
224+50	50.00	0.00	0.00	80.01	0	0	144	13,105	27,903	-14,893
225+00	50.00	0.00	0.00	91.61	0	0	159	13,105	28,101	-15,091
225+50	50.00	0.00	0.00	96.69	0	0	174	13,105	28,319	-15,309
226+00	50.00	0.00	0.00	85.67	0	0	169	13,105	28,530	-15,520
226+50	50.00	0.00	0.00	78.05	0	0	152	13,105	28,720	-15,710
227+00	50.00	0.00	0.00	92.05	0	0	158	13,105	28,918	-15,908
227+50	50.00	0.00	0.00	124.37	0	0	200	13,105	29,168	-16,158
228+00	50.00	0.00	0.00	140.38	0	0	245	13,105	29,474	-16,464
228+50	50.00	0.00	0.00	156.78	0	0	275	13,105	29,818	-16,808
229+00	50.00	0.00	0.00	116.25	0	0	253	13,105	30,134	-17,124
229+50	50.00	0.00	0.00	38.64	0	0	143	13,105	30,313	-17,303
230+00	50.00	0.00	0.00	15.40	0	0	50	13,105	30,375	-17,365
230+50	50.00	0.00	0.00	25.45	0	0	38	13,105	30,423	-17,413
231+00	50.00	0.00	0.00	44.41	0	0	65	13,105	30,504	-17,494
231+50	50.00	0.00	0.00	63.73	0	0	100	13,105	30,629	-17,619
232+00	50.00	0.00	0.00	75.65	0	0	129	13,105	30,790	-17,780
232+50	50.00	0.00	0.00	73.45	0	0	138	13,105	30,963	-17,953
233+00	50.00	0.00	0.00	67.61	0	0	131	13,105	31,126	-18,116
233+50	50.00	0.00	0.00	85.20	0	0	141	13,105	31,303	-18,293
234+00	50.00	0.00	0.00	106.28	0	0	177	13,105	31,524	-18,514
234+50	50.00	0.00	0.00	129.79	0	0	219	13,105	31,798	-18,788

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 [CUT - SALVAGED PAVT - (FILL * FILL FACTOR)]

DIVISION 1-CTH-S

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL		MASS ORDINATE
									1.00	1.25	
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2	NOTE 3	NOTE 4		
235+00	50.00	0.00	0.00	166.43	0	0	274	13,105	32,140	-19,130	
235+50	50.00	0.00	0.00	195.79	0	0	335	13,105	32,559	-19,549	
236+00	50.00	0.00	0.00	164.29	0	0	333	13,105	32,975	-19,965	
236+50	50.00	0.00	0.00	105.33	0	0	250	13,105	33,288	-20,278	
237+00	50.00	0.00	0.00	37.33	0	0	132	13,105	33,453	-20,443	
237+50	50.00	0.00	0.00	25.17	0	0	58	13,105	33,525	-20,515	
238+00	50.00	0.05	0.00	16.69	0	0	39	13,105	33,574	-20,564	
238+50	50.00	0.00	0.00	19.96	0	0	34	13,105	33,616	-20,606	
239+00	50.00	0.00	0.00	22.90	0	0	40	13,105	33,666	-20,656	
239+50	50.00	0.00	0.00	25.33	0	0	45	13,105	33,723	-20,713	
240+00	50.00	0.00	0.00	40.21	0	0	61	13,105	33,799	-20,789	
240+50	50.00	0.00	0.00	46.24	0	0	80	13,105	33,899	-20,889	
241+00	50.00	0.00	0.00	63.06	0	0	101	13,105	34,025	-21,015	
241+50	50.00	0.00	0.00	92.35	0	0	144	13,105	34,205	-21,195	
242+00	50.00	0.00	0.00	273.39	0	0	339	13,105	34,629	-21,619	
242+50	50.00	0.00	0.00	486.15	0	0	703	13,105	35,508	-22,498	
243+00	50.00	0.00	0.00	566.80	0	0	975	13,105	36,726	-23,716	
243+50	50.00	0.00	0.00	506.46	0	0	994	13,105	37,969	-24,959	
244+00	50.00	0.00	0.00	420.48	0	0	858	13,105	39,041	-26,031	
244+50	50.00	0.00	0.00	121.09	0	0	501	13,105	39,668	-26,658	
245+00	50.00	0.00	0.00	81.28	0	0	187	13,105	39,901	-26,891	
245+50	50.00	0.00	0.00	119.68	0	0	186	13,105	40,134	-27,124	
246+00	50.00	0.00	0.00	159.40	0	0	258	13,105	40,456	-27,446	
246+50	50.00	0.00	0.00	160.76	0	0	296	13,105	40,826	-27,816	
247+00	50.00	0.00	0.00	187.50	0	0	322	13,105	41,229	-28,219	
247+50	50.00	0.00	0.00	166.61	0	0	328	13,105	41,639	-28,629	
248+00	50.00	0.00	0.00	119.84	0	0	265	13,105	41,970	-28,960	
248+50	50.00	0.00	0.00	117.59	0	0	220	13,105	42,245	-29,235	
249+00	50.00	0.00	0.00	110.07	0	0	211	13,105	42,509	-29,499	
249+50	50.00	4.80	0.00	42.13	4	0	141	13,109	42,685	-29,671	
250+00	50.00	123.66	0.00	13.53	119	0	52	13,228	42,750	-29,617	
250+50	50.00	169.39	0.00	1.67	271	0	14	13,499	42,768	-29,364	
251+00	50.00	215.57	0.00	29.74	356	0	29	13,855	42,804	-29,044	
251+50	50.00	0.00	0.00	106.61	200	0	126	14,055	42,961	-29,001	
252+00	50.00	0.00	0.00	150.21	0	0	238	14,055	43,259	-29,299	
252+50	50.00	90.44	0.00	17.35	84	0	155	14,139	43,453	-29,409	
253+00	50.00	313.15	0.00	13.45	374	0	29	14,513	43,489	-29,071	
253+50	50.00	635.98	0.00	0.00	879	0	12	15,392	43,504	-28,207	
254+00	50.00	1309.76	0.00	0.00	1,802	0	0	17,194	43,504	-26,405	
254+50	50.00	1204.55	0.00	0.00	2,328	0	0	19,522	43,504	-24,077	
255+00	50.00	1260.00	0.00	0.00	2,282	0	0	21,804	43,504	-21,795	
255+50	50.00	954.65	0.00	0.00	2,051	0	0	23,855	43,504	-19,744	

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 [CUT - SALVAGED PAVT - (FILL * FILL FACTOR)]

DIVISION 1--CTH-S

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL		MASS ORDINATE
									1.00	1.25	
NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 4							
256+00	50.00	847.83	0.00	0.00	1,669	0	0	25,524	43,504	-18,075	
256+50	50.00	537.91	0.00	0.00	1,283	0	0	26,807	43,504	-16,792	
257+00	50.00	458.08	5.50	0.00	922	5	0	27,729	43,504	-15,875	
257+50	50.00	368.09	5.50	0.00	765	10	0	28,494	43,504	-15,120	
258+00	50.00	298.11	5.50	0.00	617	10	0	29,111	43,504	-14,513	
258+50	50.00	248.41	5.50	0.00	506	10	0	29,617	43,504	-14,017	
259+00	50.00	203.73	5.50	0.00	419	10	0	30,036	43,504	-13,608	
259+50	50.00	151.48	5.50	0.00	329	10	0	30,365	43,504	-13,289	
260+00	50.00	118.09	5.50	0.00	250	10	0	30,615	43,504	-13,049	
260+50	50.00	102.52	5.50	0.00	204	10	0	30,819	43,504	-12,855	
261+00	50.00	110.65	5.50	0.00	197	10	0	31,016	43,504	-12,668	
261+50	50.00	146.87	5.50	0.00	238	10	0	31,254	43,504	-12,440	
262+00	50.00	191.13	5.50	0.00	313	10	0	31,567	43,504	-12,137	
262+50	50.00	222.25	5.50	0.00	383	10	0	31,950	43,504	-11,764	
263+00	50.00	249.60	5.50	0.00	437	10	0	32,387	43,504	-11,337	
263+50	50.00	280.39	0.00	0.00	491	5	0	32,878	43,504	-10,851	
264+00	50.00	317.51	0.00	0.00	554	0	0	33,432	43,504	-10,297	
264+50	50.00	285.47	0.00	0.00	558	0	0	33,990	43,504	-9,739	
265+00	50.00	248.89	0.00	0.00	495	0	0	34,485	43,504	-9,244	
265+50	50.00	120.73	0.00	0.00	342	0	0	34,827	43,504	-8,902	
266+00	50.00	25.96	0.00	41.06	136	0	38	34,963	43,551	-8,813	
266+50	50.00	51.79	0.00	142.83	72	0	170	35,035	43,764	-8,954	
267+00	50.00	270.22	0.00	27.70	298	0	158	35,333	43,961	-8,853	
267+50	50.00	648.11	0.00	0.00	850	0	26	36,183	43,994	-8,036	
268+00	50.00	789.29	0.00	0.00	1,331	0	0	37,514	43,994	-6,705	
268+50	50.00	295.87	0.00	0.00	1,005	0	0	38,519	43,994	-5,700	
269+00	50.00	0.00	0.00	235.44	274	0	218	38,793	44,266	-5,698	
269+50	50.00	0.00	0.00	263.70	0	0	462	38,793	44,844	-6,276	
270+00	50.00	0.00	0.00	166.30	0	0	398	38,793	45,341	-6,773	
270+50	50.00	0.00	0.00	59.36	0	0	209	38,793	45,603	-7,035	
271+00	50.00	61.20	5.50	19.97	57	5	73	38,850	45,694	-7,074	
271+50	50.00	131.52	5.50	0.00	178	10	18	39,028	45,716	-6,928	
272+00	50.00	116.18	5.50	0.00	229	10	0	39,257	45,716	-6,709	
272+50	50.00	88.27	5.50	0.00	189	10	0	39,446	45,716	-6,530	
273+00	50.00	67.64	5.50	0.00	144	10	0	39,590	45,716	-6,396	
273+50	50.00	0.00	5.50	0.00	63	10	0	39,653	45,716	-6,343	

Notes:

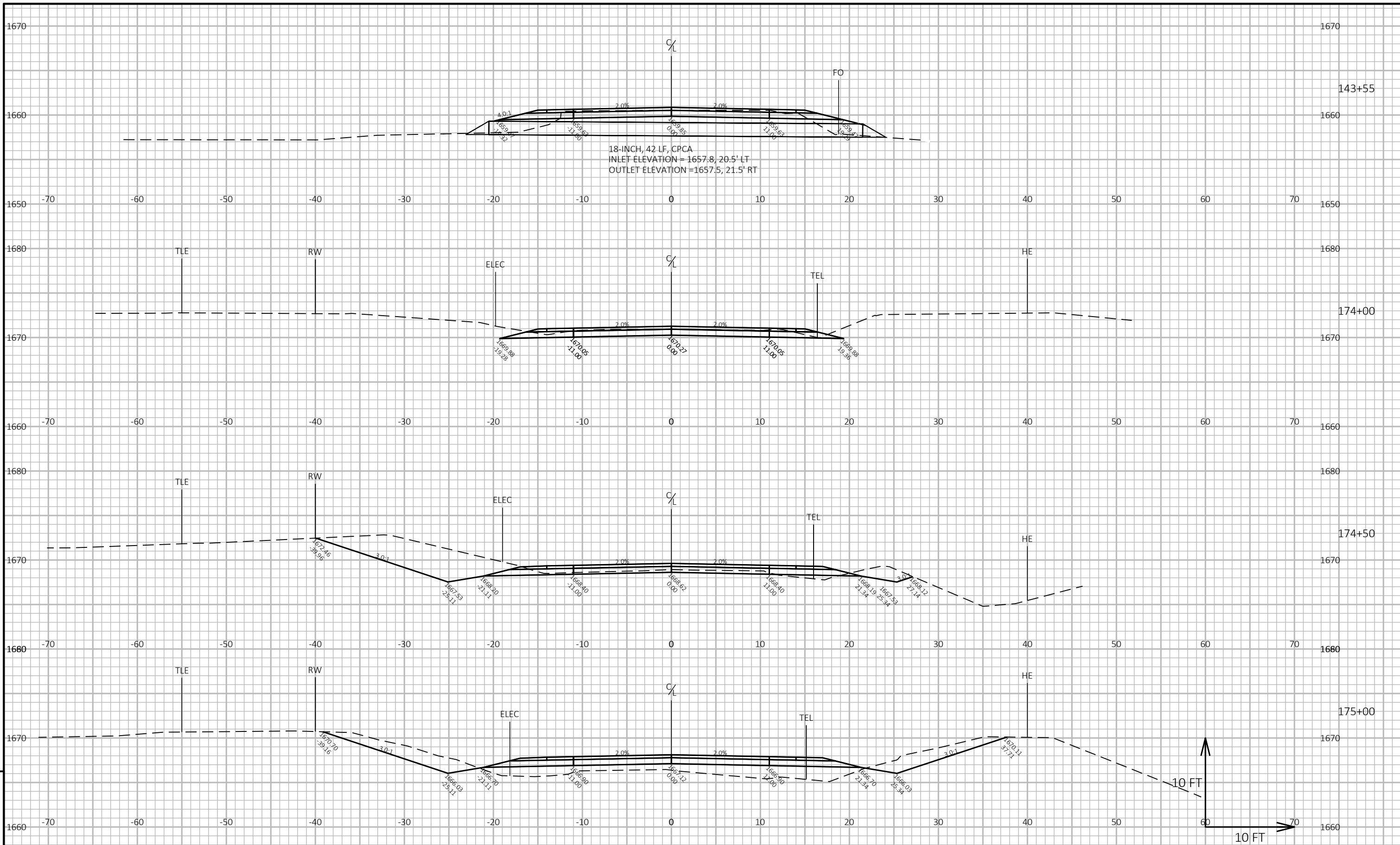
- 1 - CUT
 - 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL
 - 3 - FILL
 - 4 - MASS ORDINATE
- CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
 THIS DOES NOT SHOW UP IN CROSS SECTIONS
 DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
 [CUT - SALVAGED PAVT -(FILL * FILL FACTOR)]

DIVISION 2 -- CTH-S Intersections

STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
		CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT NOTE 1	SALVAGED/UNUSABLE PAVEMENT MATERIAL NOTE 2	FILL NOTE 3	CUT 1.00 NOTE 1	EXPANDED FILL 1.25	MASS ORDINATE NOTE 4
11+00	0.00	5.26	0.00	0.00	0	0	0	0	0	0
11+70	70.00	31.20	0.00	0.00	47	0	0	47	0	47
20+50	0.00	63.18	5.50	0.00	0	0	0	0	0	47
22+00	150.00	161.22	1.00	0.00	623	18	0	623	0	652
31+00	0.00	66.62	0.00	0.00	0	0	0	0	0	652
32+00	100.00	91.17	0.00	0.00	292	0	0	292	0	944
33+20	120.00	78.33	0.00	0.00	377	0	0	669	0	1,321
40+00	0.00	104.36	0.00	0.00	0	0	0	0	0	1,321
41+00	100.00	170.35	0.00	0.00	509	0	0	509	0	1,830
42+00	100.00	342.86	5.00	0.00	950	9	0	1,459	0	2,771
42+80	80.00	886.24	5.00	0.00	1,821	15	0	3,280	0	4,577
50+33	0.00	324.25	8.00	0.00	0	0	0	0	0	4,577
50+50	17.00	247.24	8.00	0.00	180	5	0	180	0	4,752
51+00	50.00	116.48	8.00	0.00	337	15	0	517	0	5,074
51+75	75.00	44.95	8.00	0.00	224	22	0	741	0	5,276

Notes:

- 1 - CUT
 - 2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL
 - 3 - FILL
 - 4 - MASS ORDINATE
- CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
 THIS DOES NOT SHOW UP IN CROSS SECTIONS
 DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
 [CUT - SALVAGED PAVT - (FILL * FILL FACTOR)]



PROJECT NO: 9513-00-70

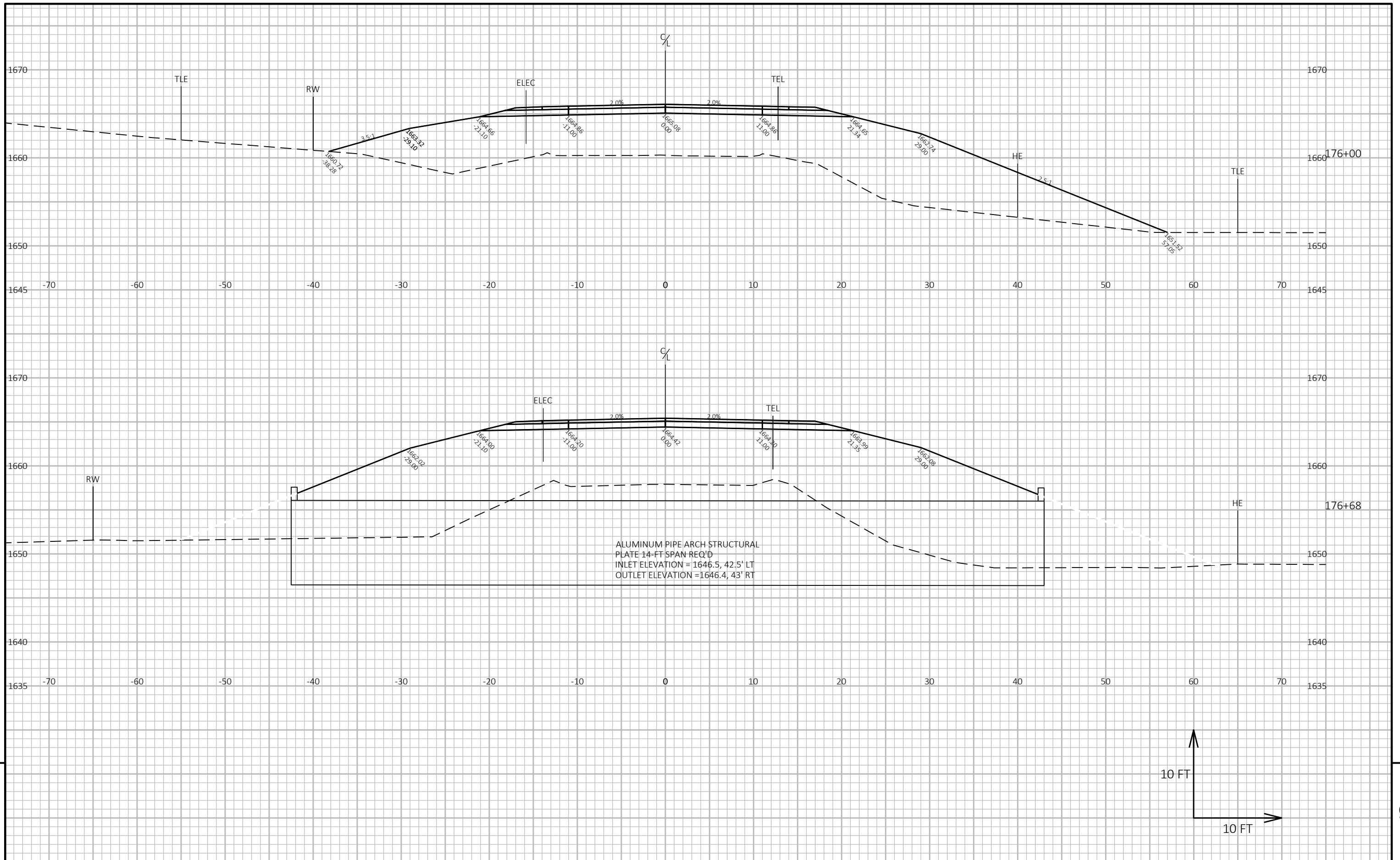
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COUNTY: VILAS

CROSS SECTIONS: CTH S

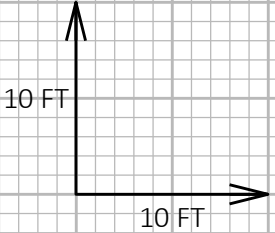
SHEET

E

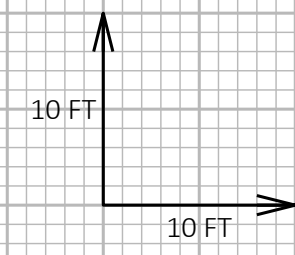
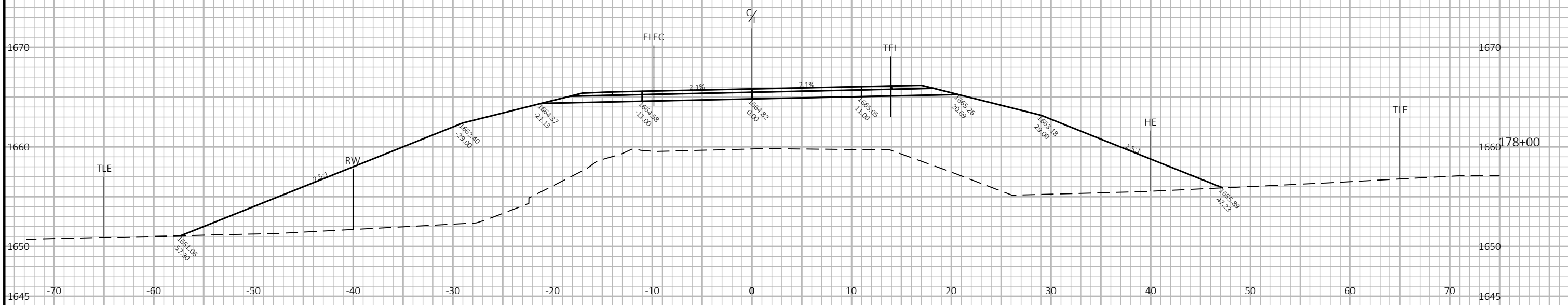
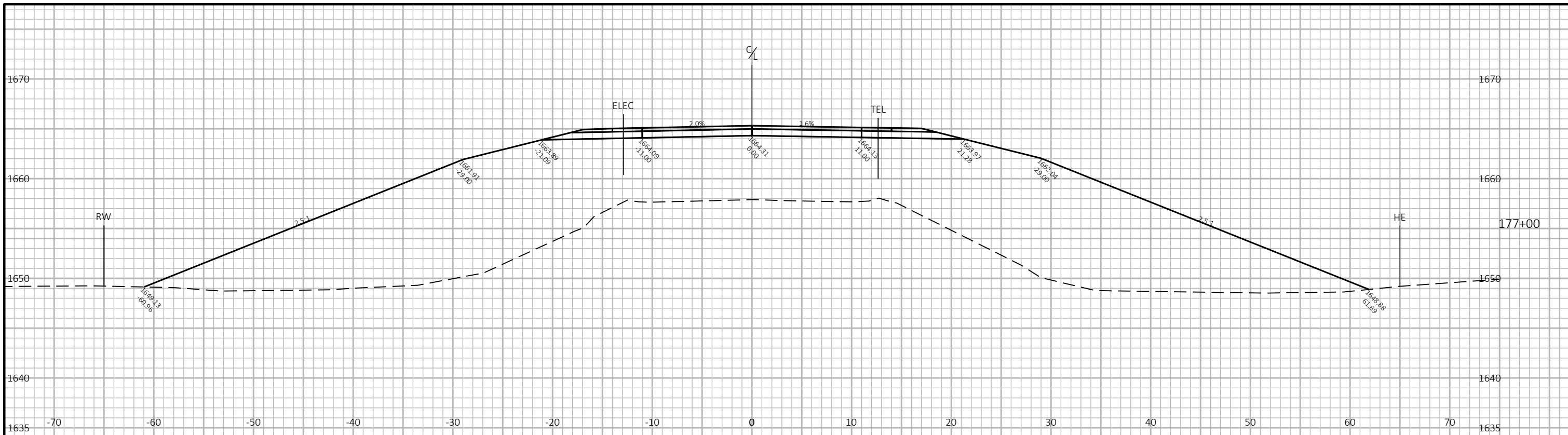


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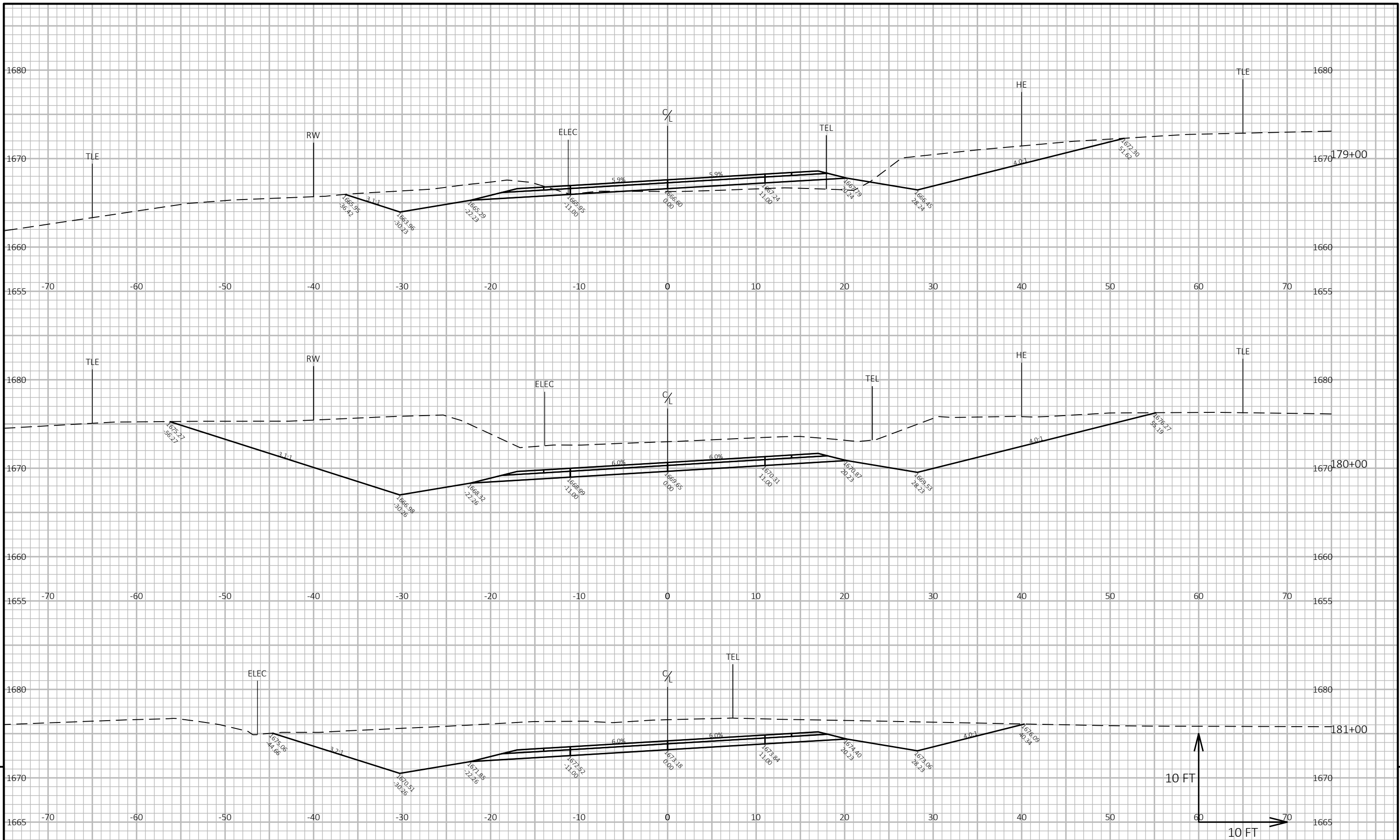
PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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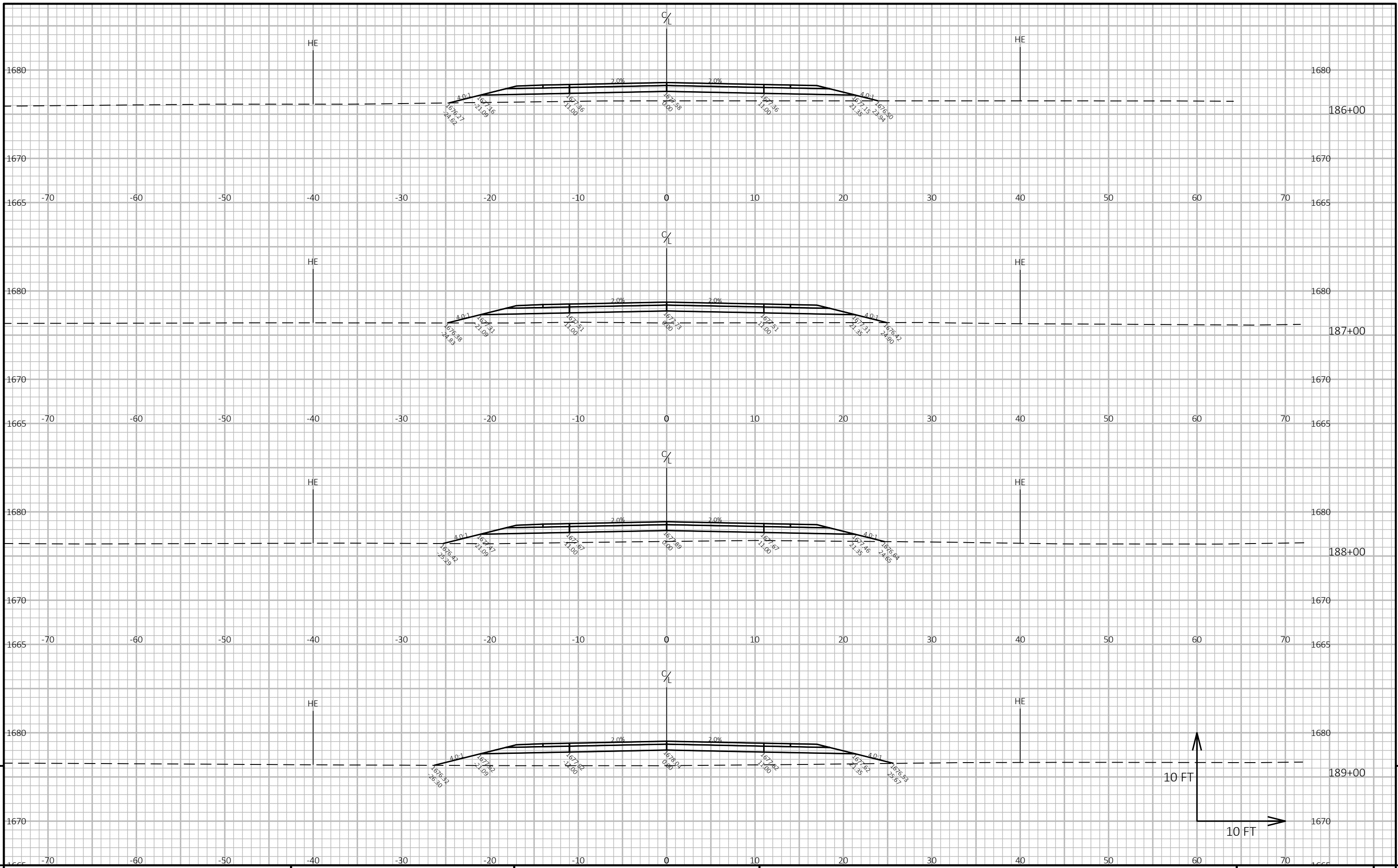
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PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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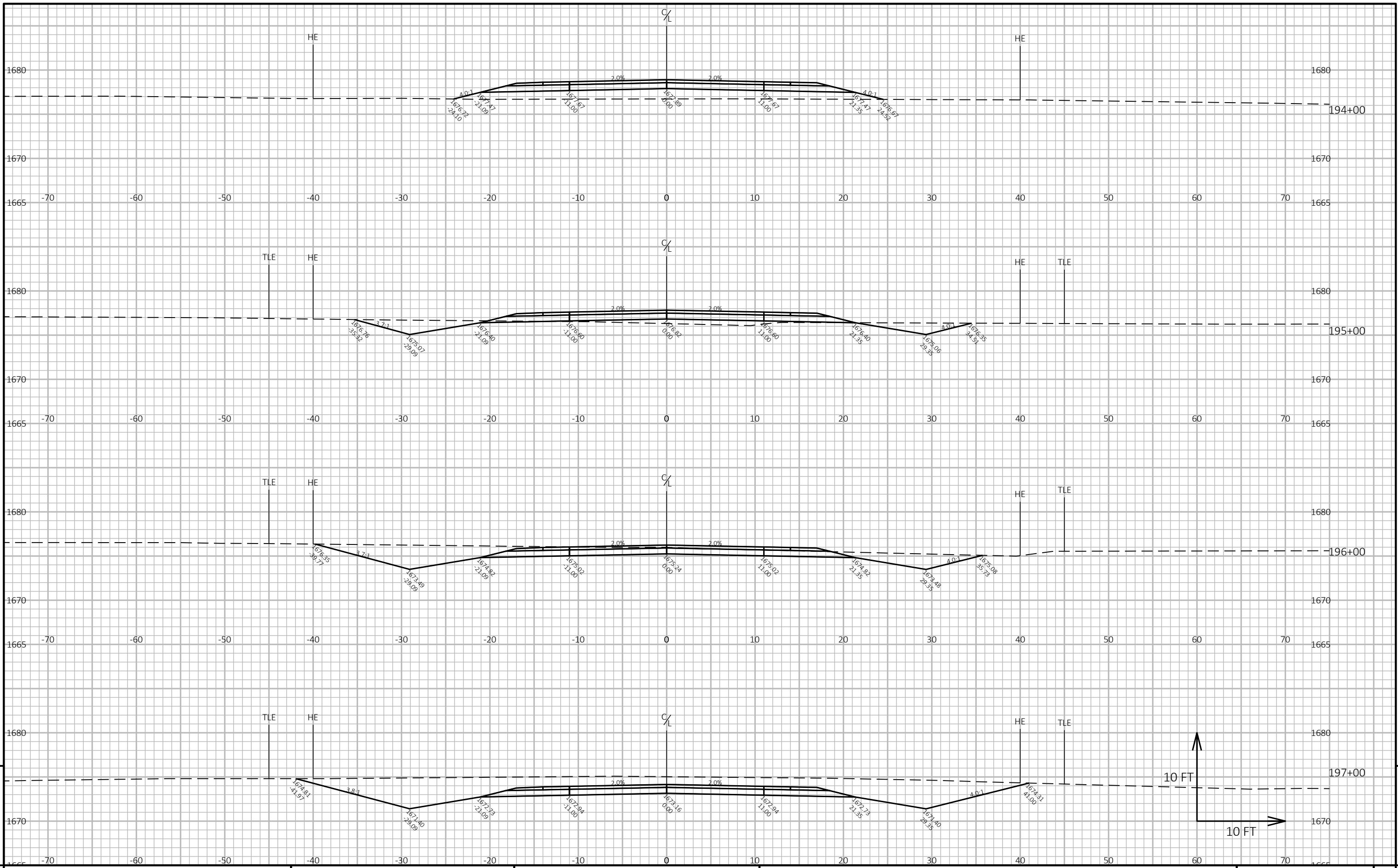
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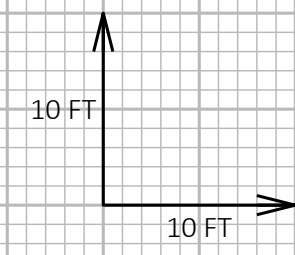
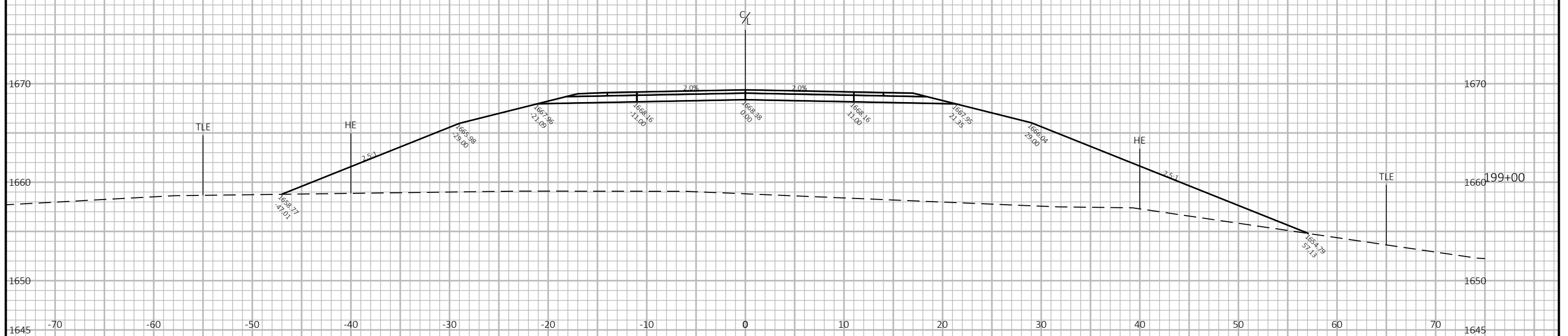
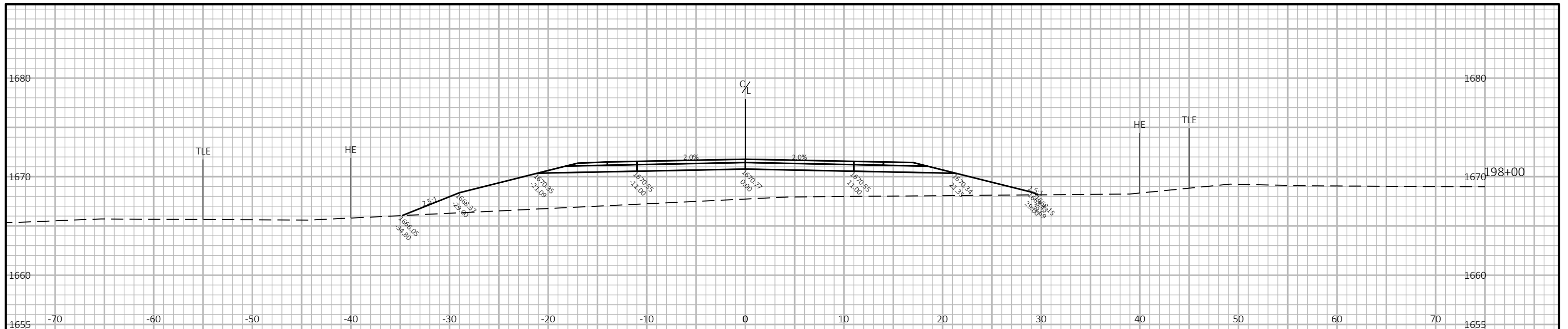
PROJECT NO: 9513-00-70 HWY: CTH S COUNTY: VILAS CROSS SECTIONS: CTH S SHEET E

FILE NAME: C:\OD\CORRE, INC\PROJECTS - WI-NC REGION\9513-00-00_CTH S_VILAS_COUNTY\500_CADD\501_C3D_2020\95130000\090201-XS.DWG PLOT DATE: 7/26/2022 5:23 PM PLOT BY: BOBBY JONES PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

LAYOUT NAME - 090106-xs



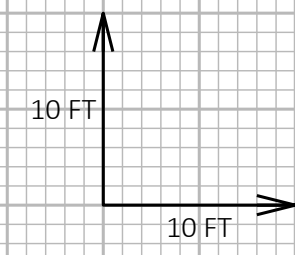
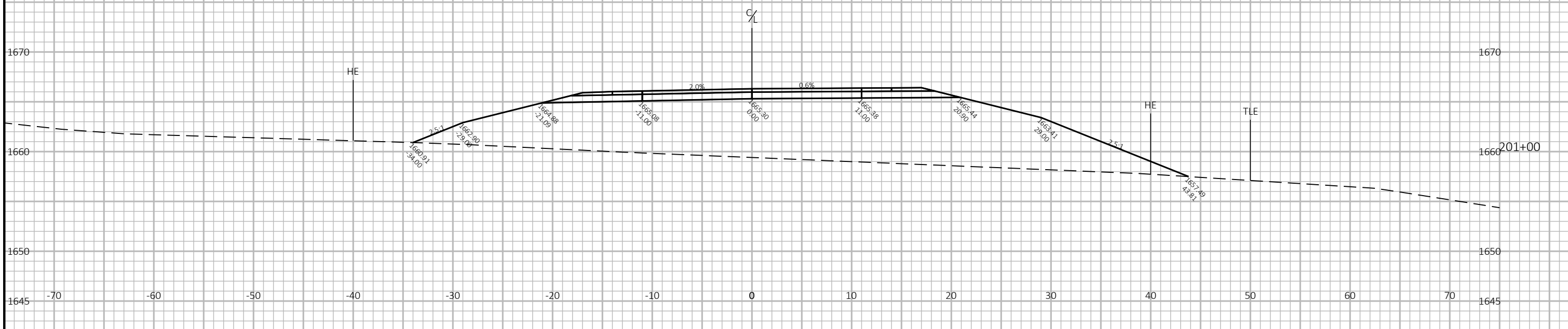
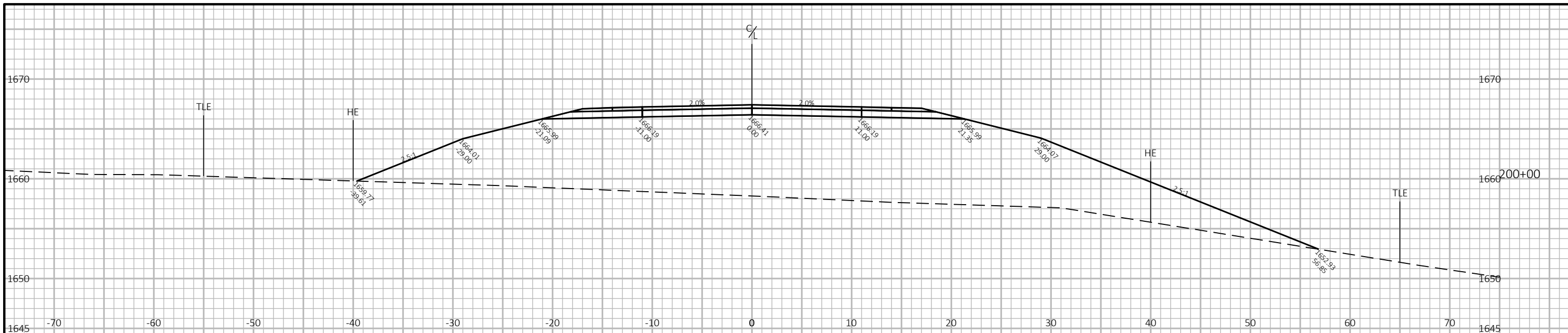
PROJECT NO: 9513-00-70 HWY: CTH S COUNTY: VILAS CROSS SECTIONS: CTH S SHEET E



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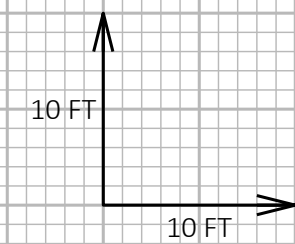
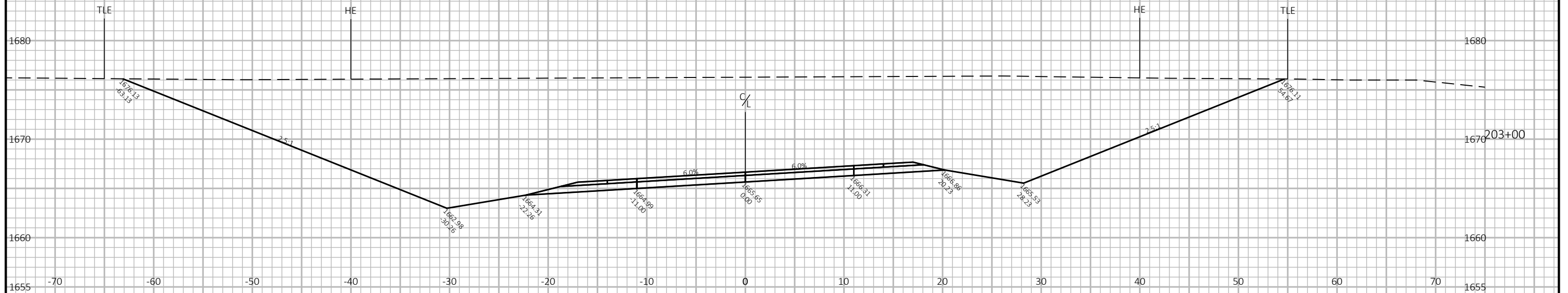
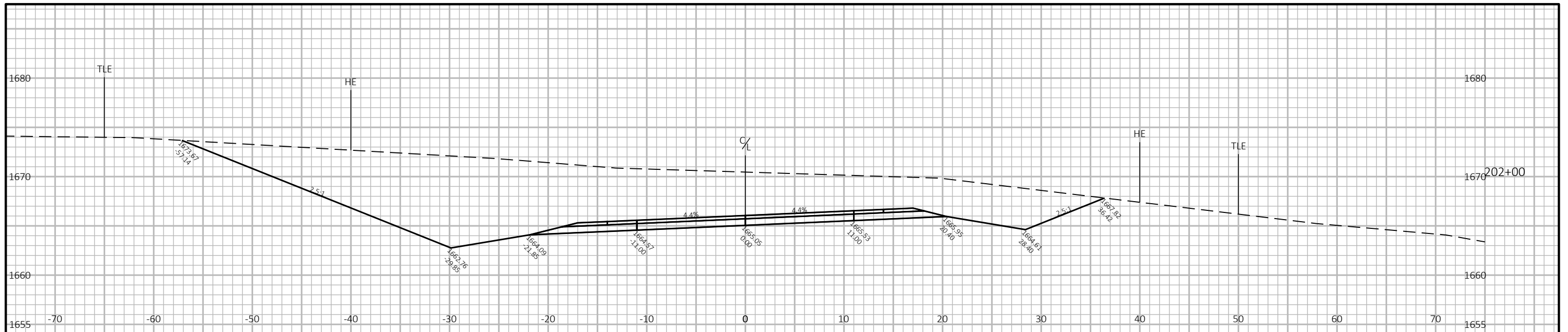
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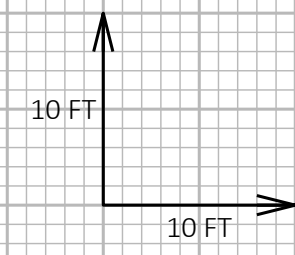
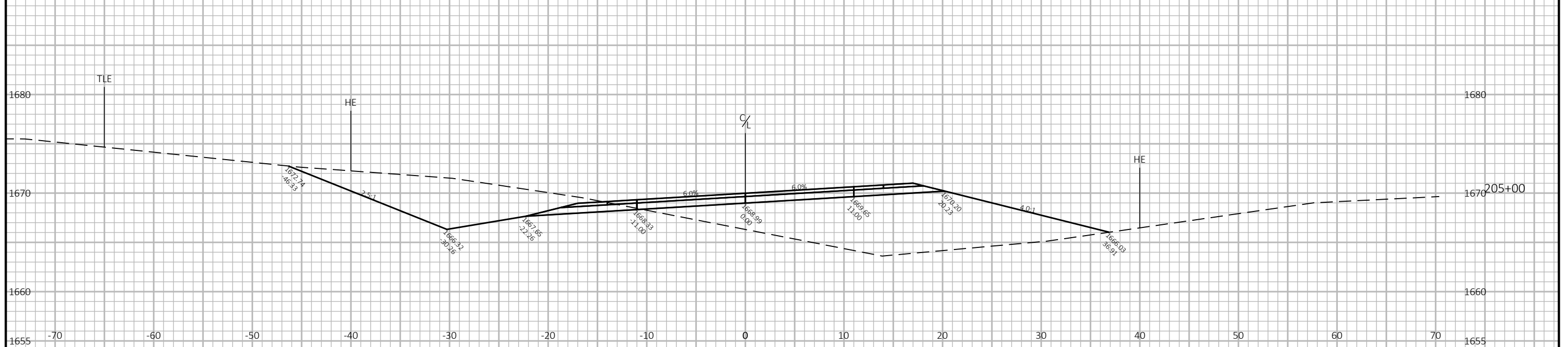
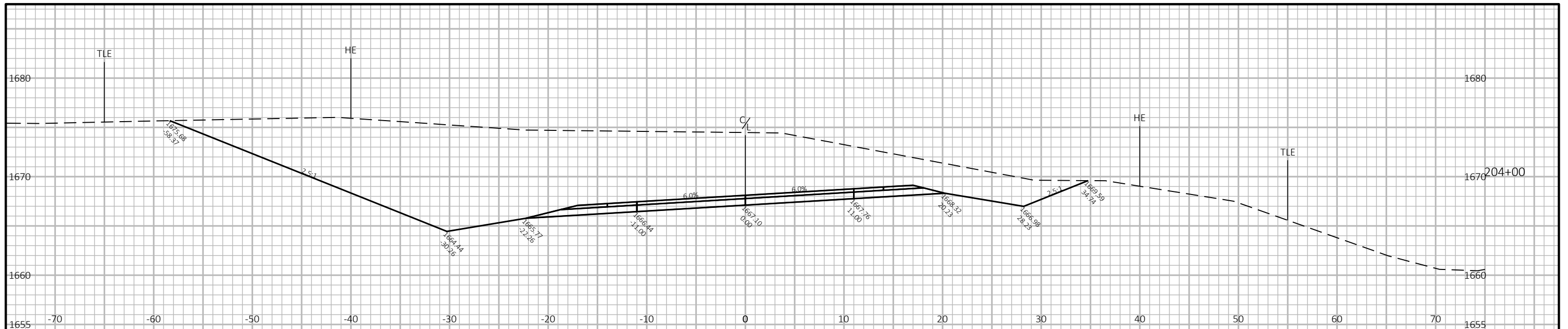
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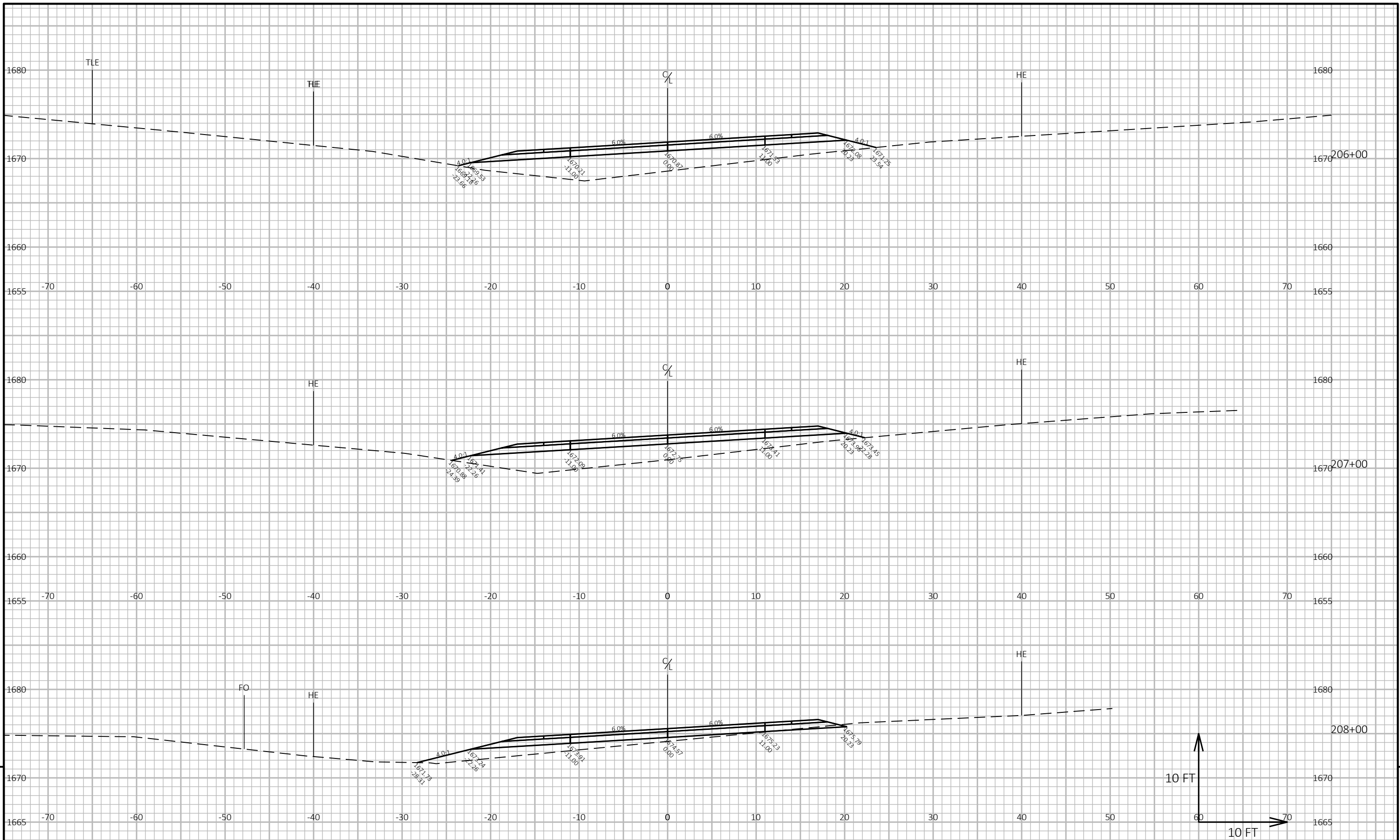
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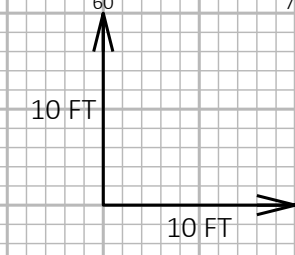
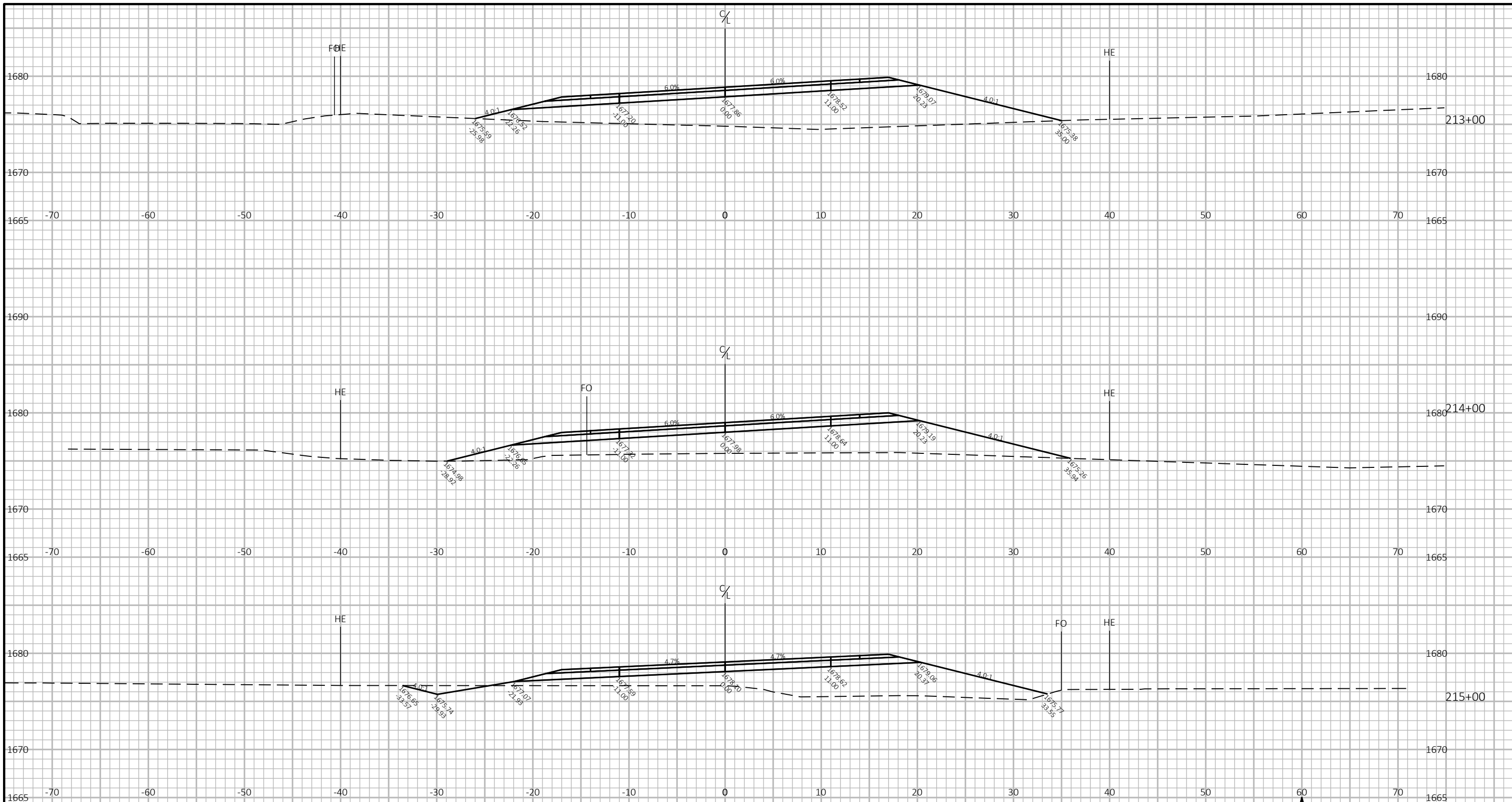
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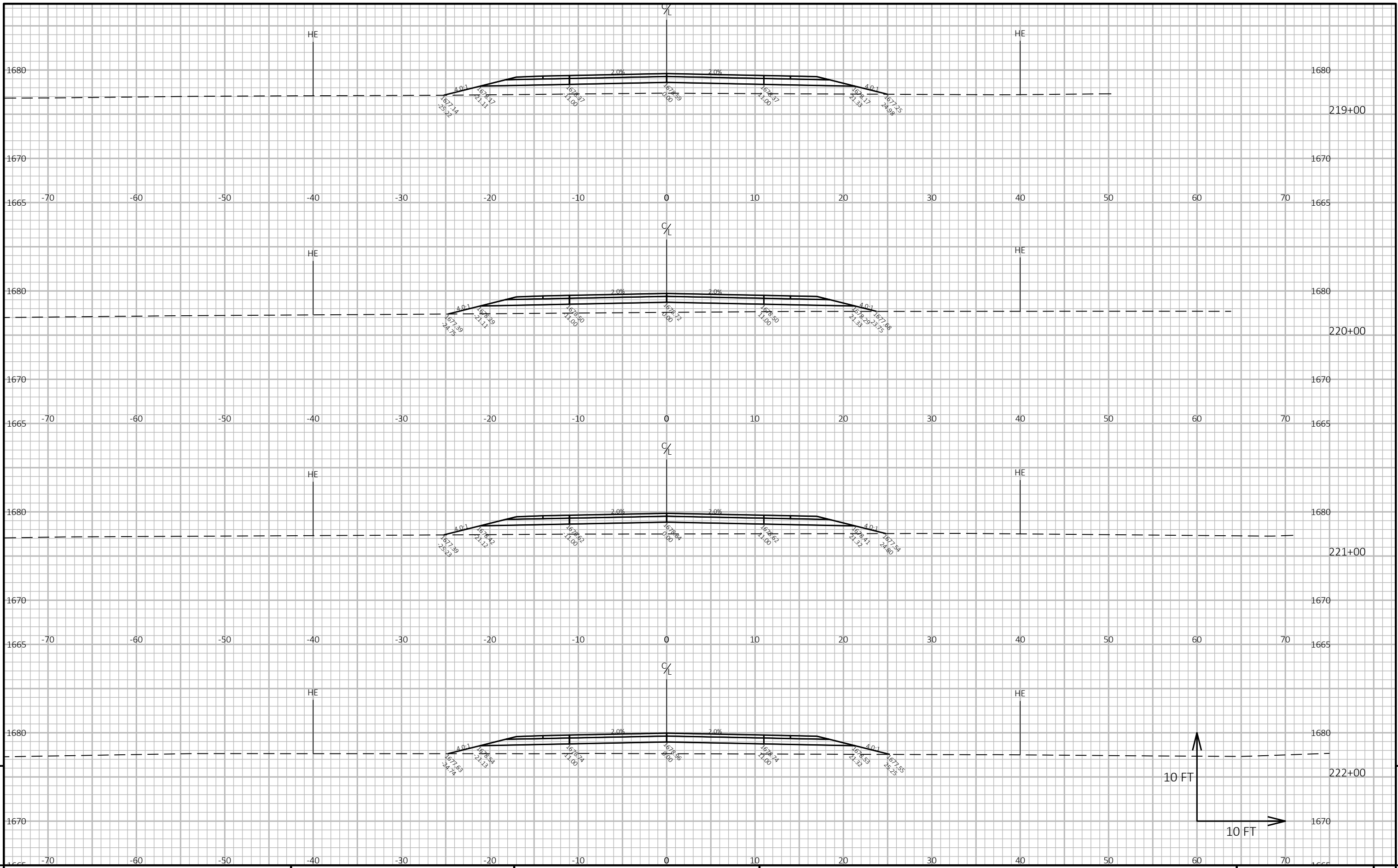
PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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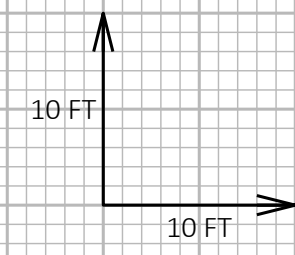
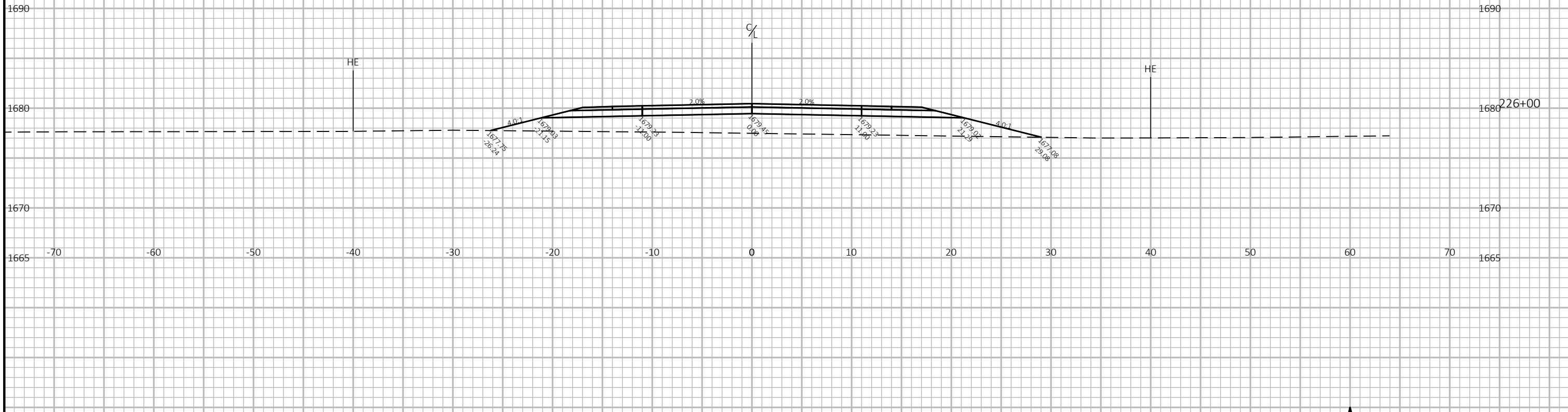
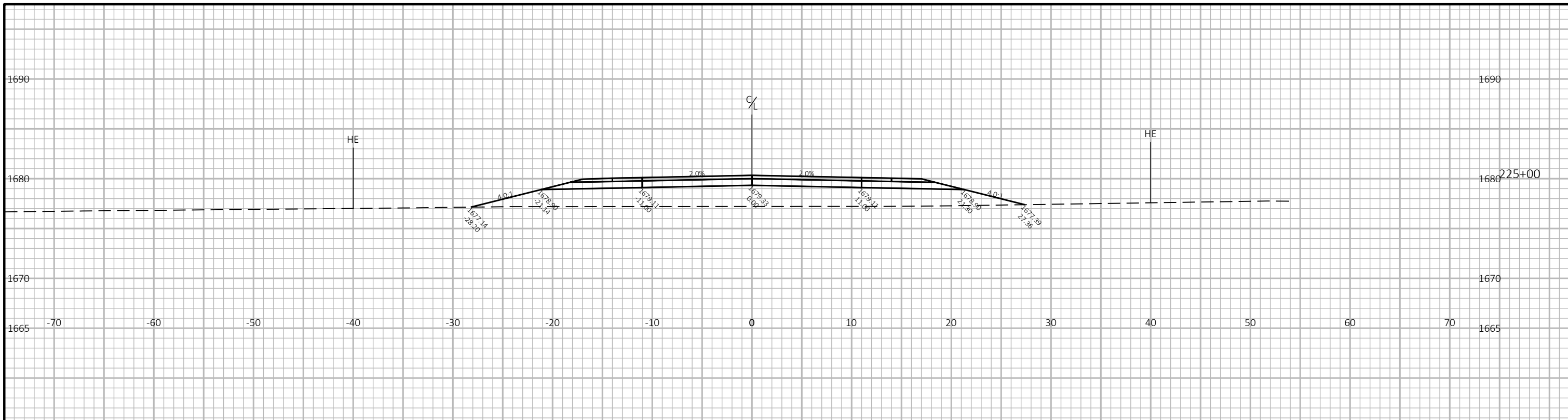
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PROJECT NO: 9513-00-70 HWY: CTH S COUNTY: VILAS CROSS SECTIONS: CTH S SHEET E

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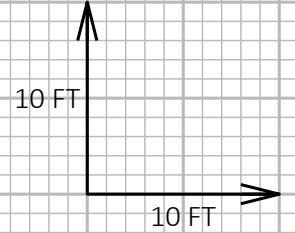
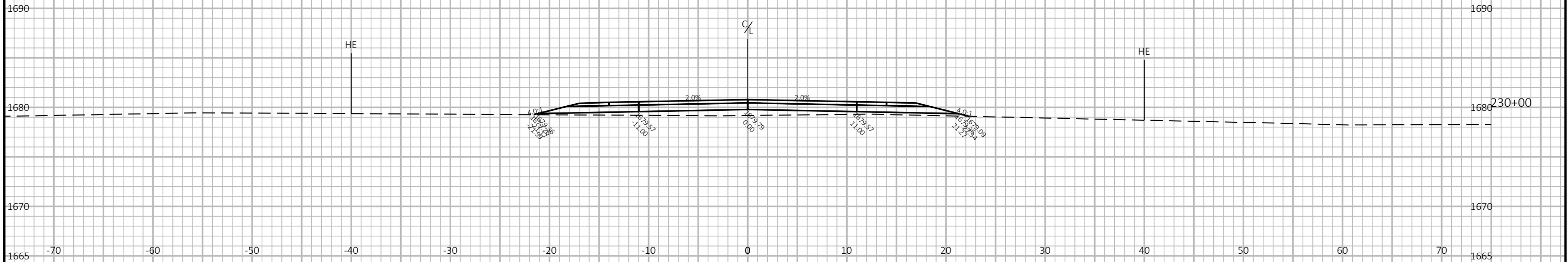
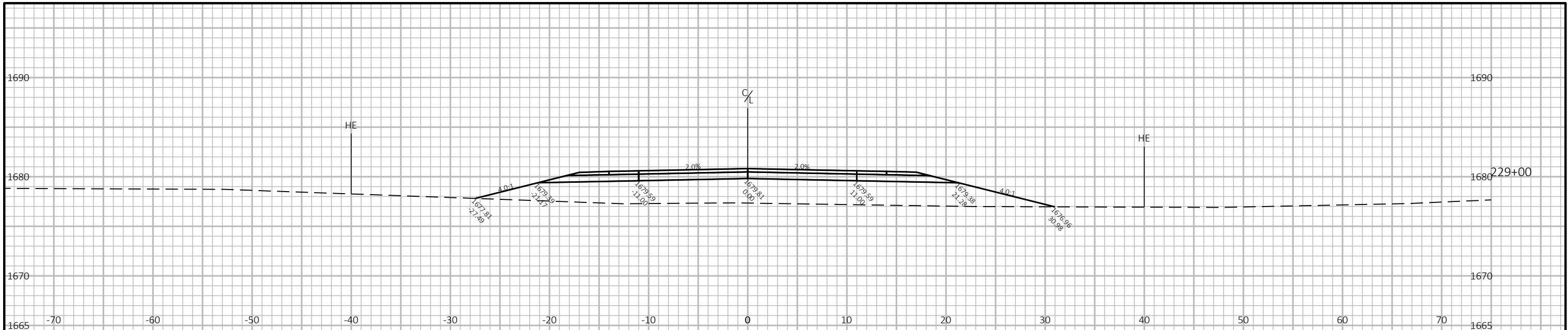
LAYOUT NAME - 090117-xs



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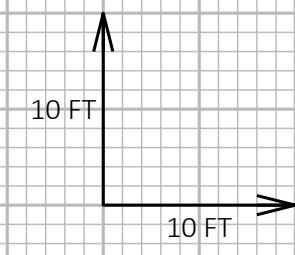
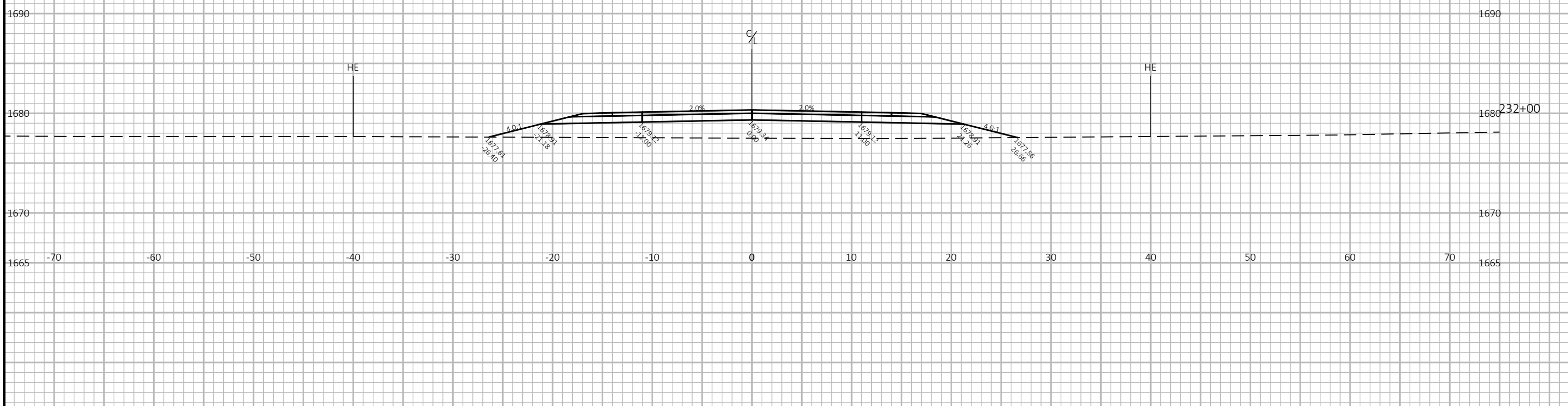
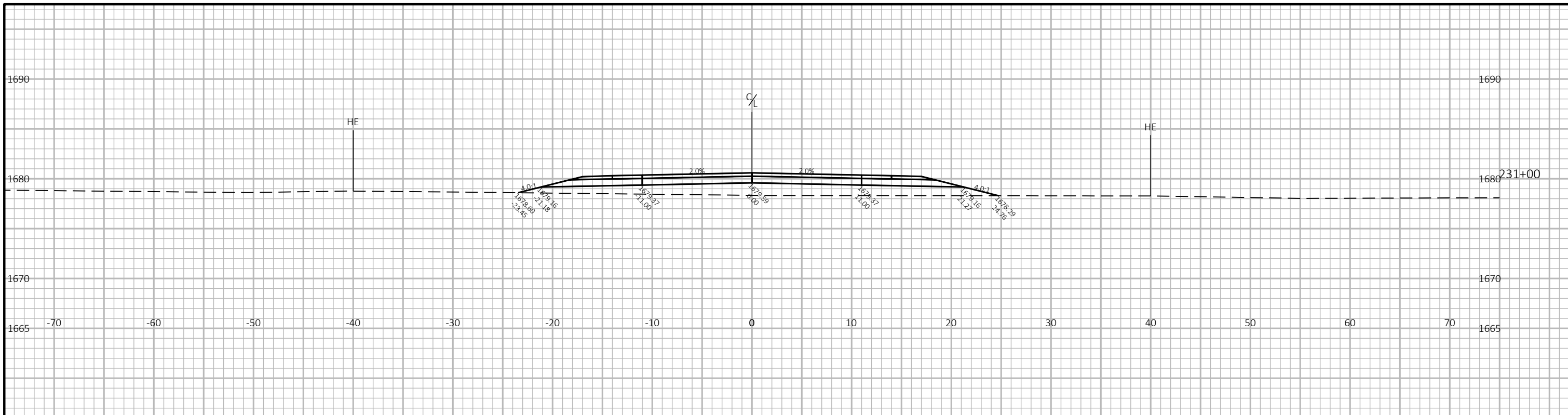
PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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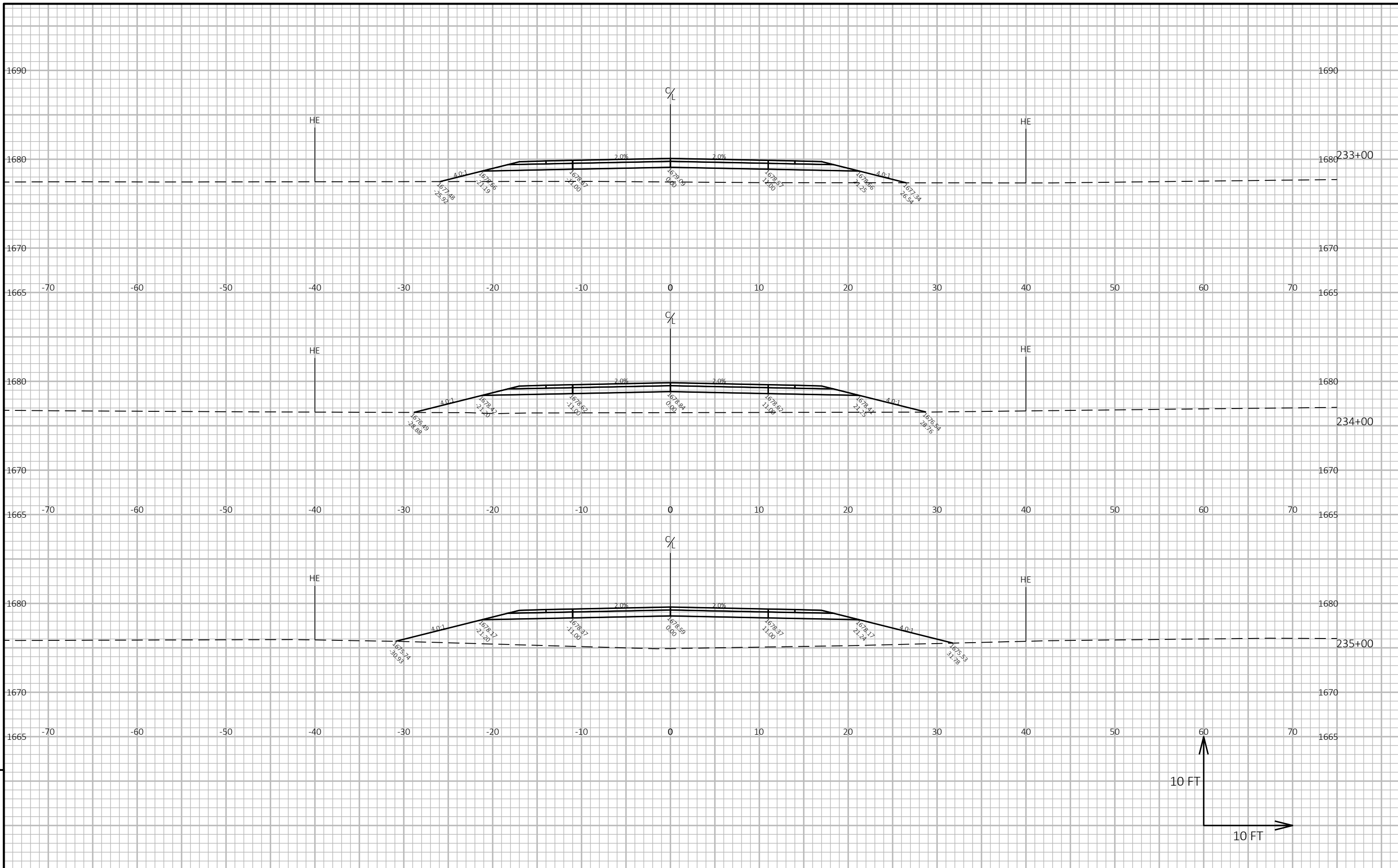
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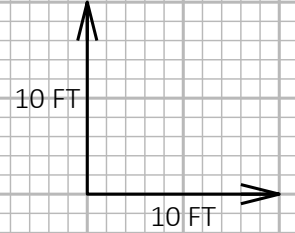
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PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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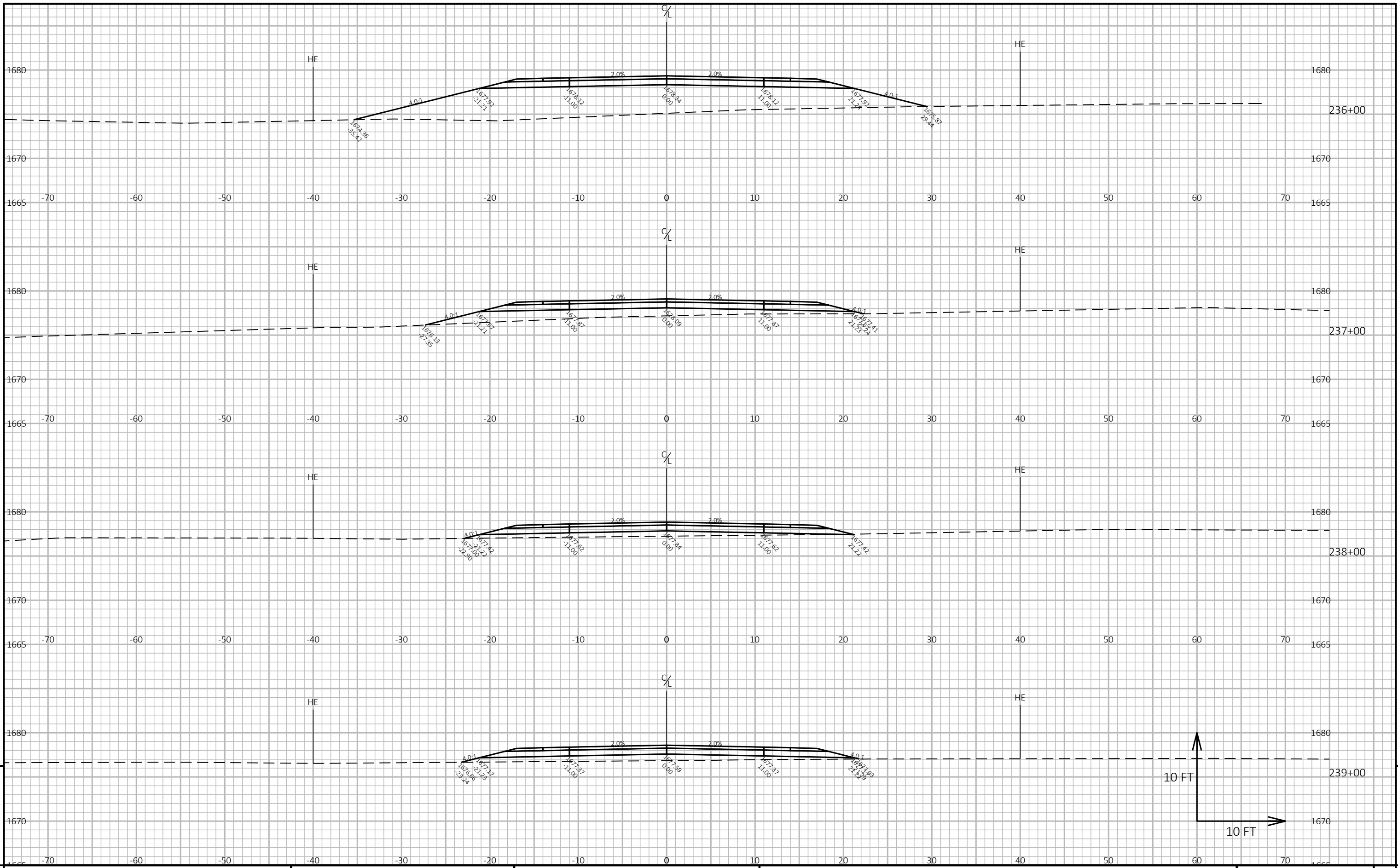


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PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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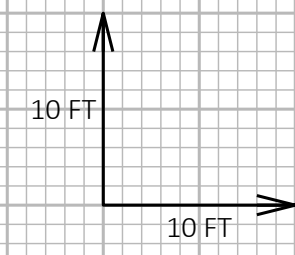
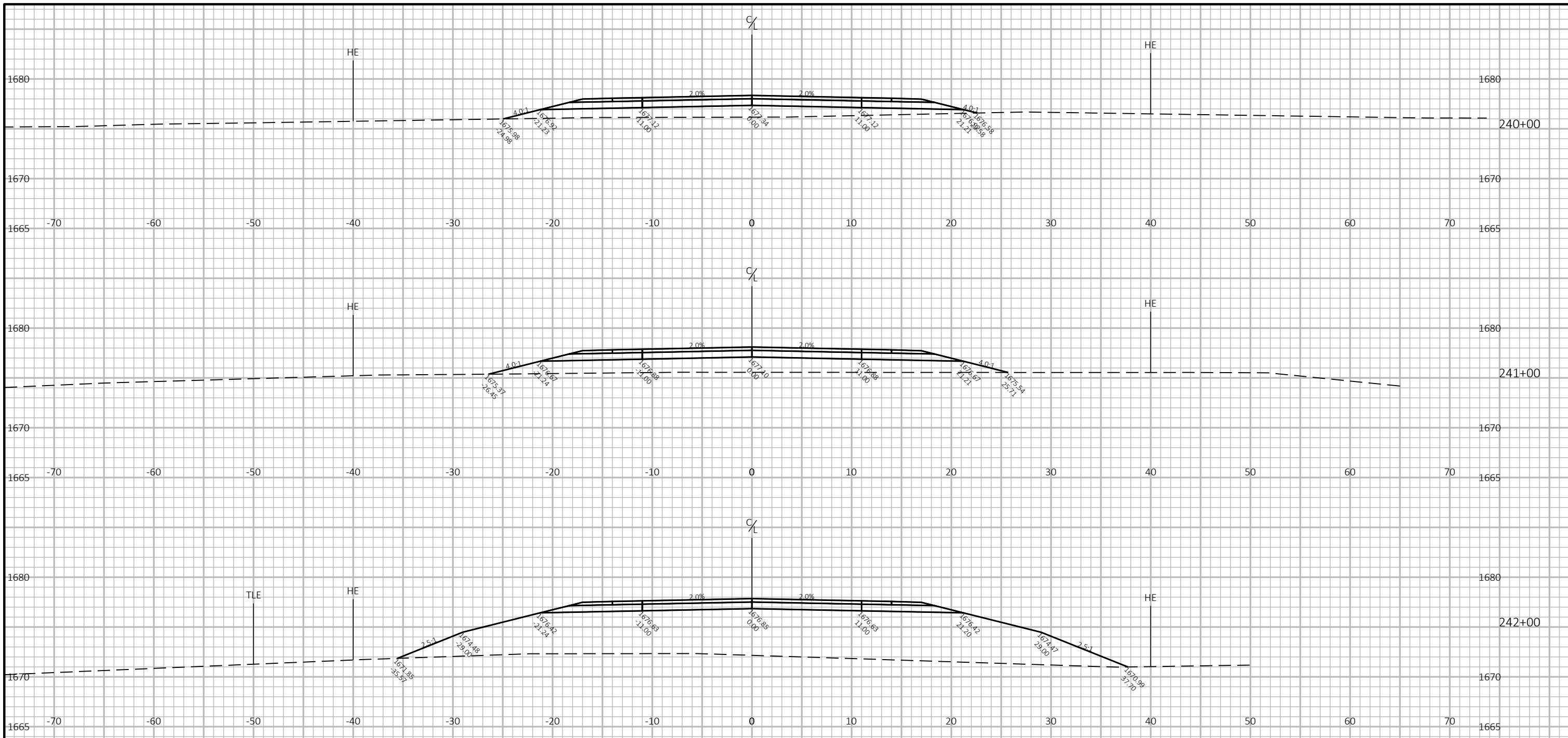
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PROJECT NO: 9513-00-70 HWY: CTH S COUNTY: VILAS CROSS SECTIONS: CTH S SHEET E

FILE NAME: C:\OD\CORRE, INC\PROJECTS - WI-NC REGION\9513-00-00_CTH S_VILAS_COUNTY\500_CADD\501_C3D_2020\95130000\090201-XS.DWG PLOT DATE: 7/26/2022 5:25 PM PLOT BY: BOBBY JONES PLOT NAME: PLOT SCALE: 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADD SHEET 49

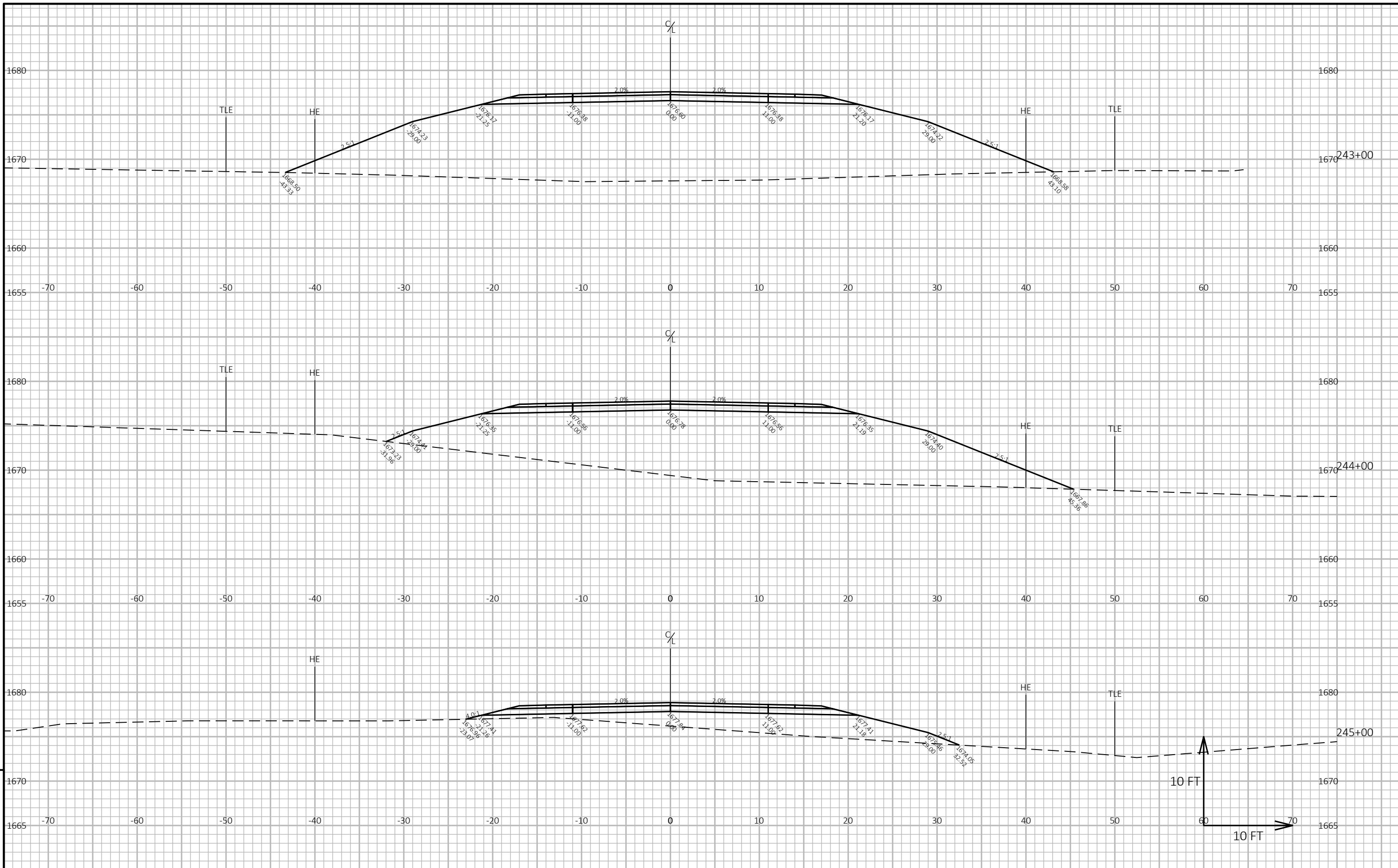
LAYOUT NAME - 090124-xs



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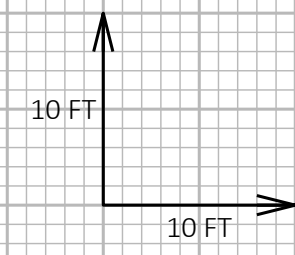
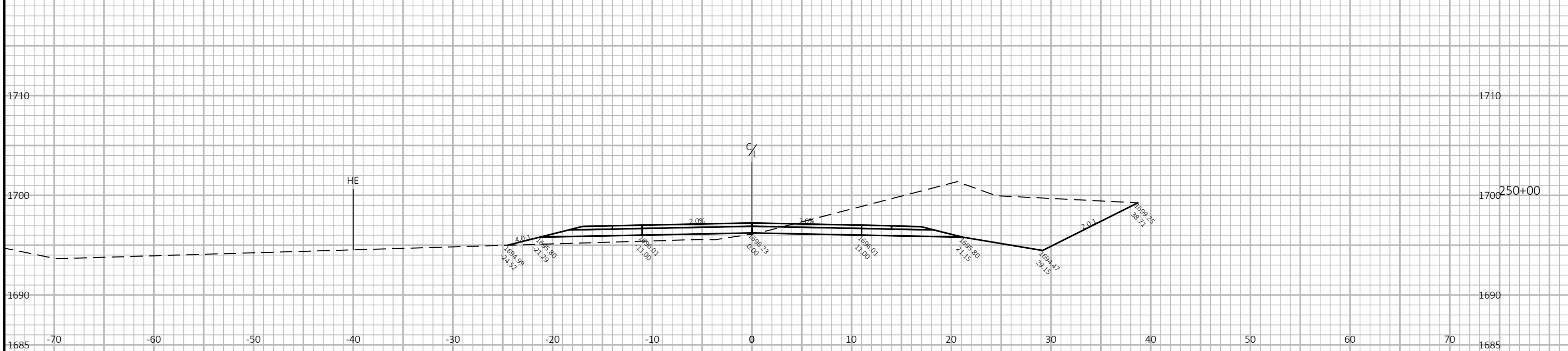
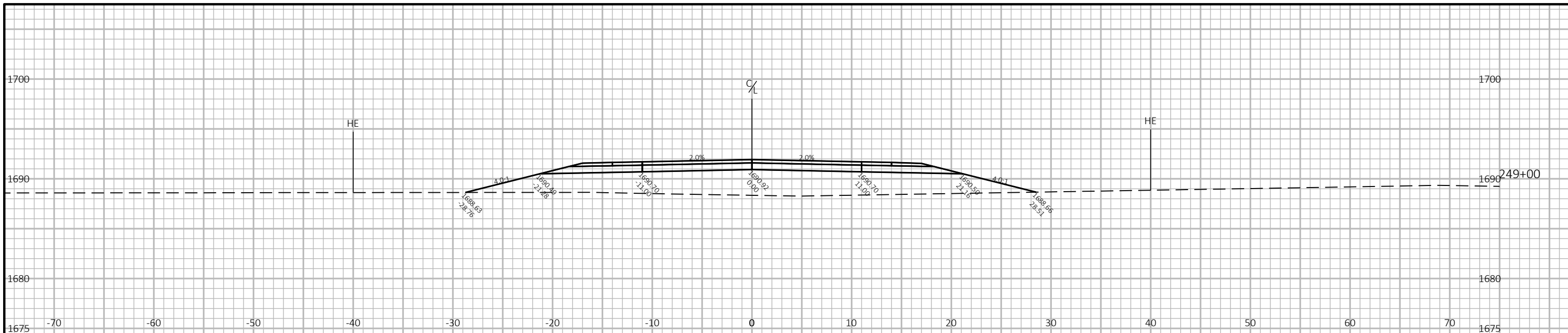
PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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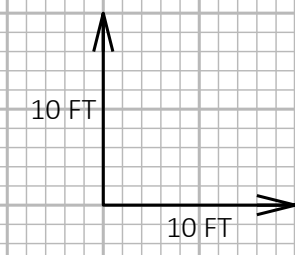
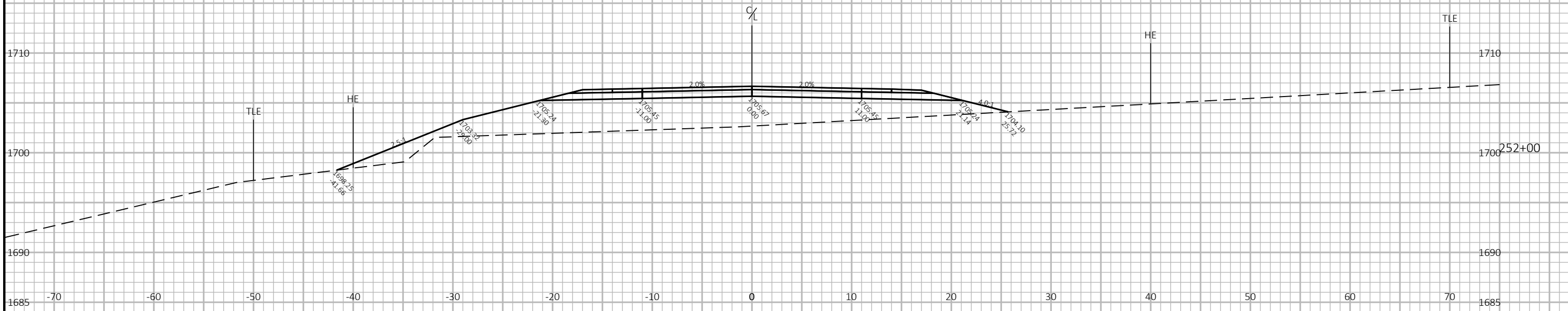
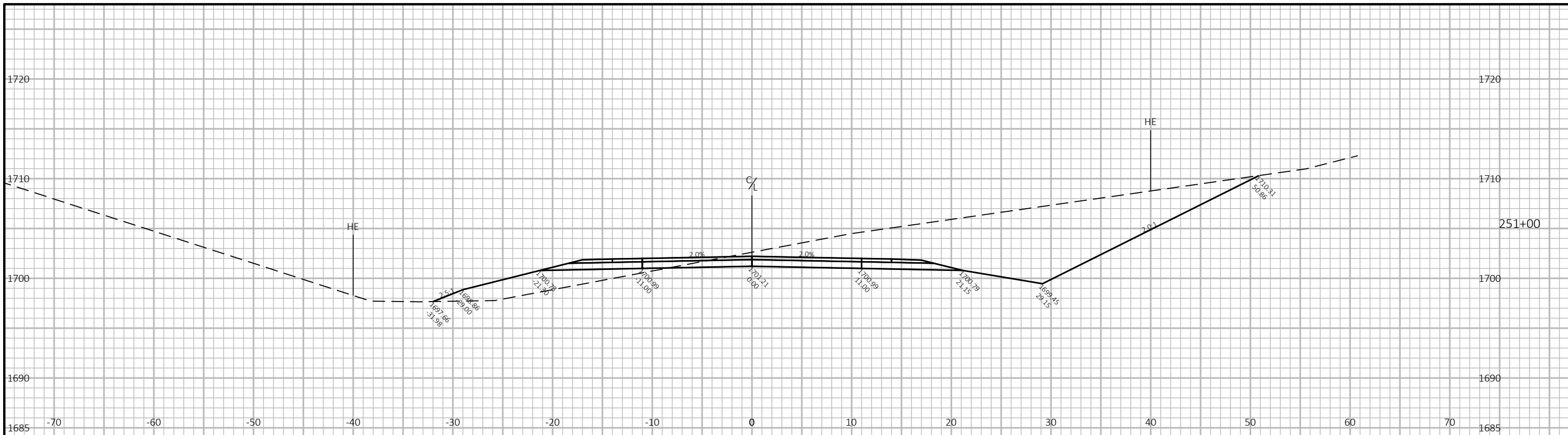
PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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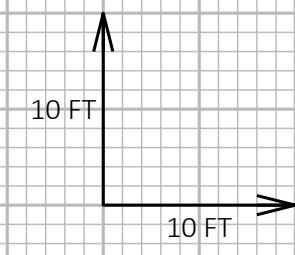
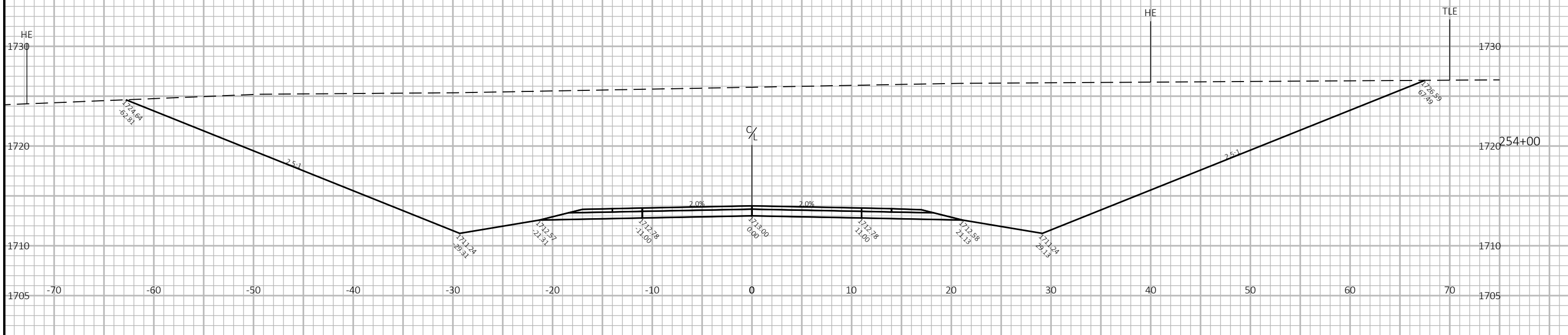
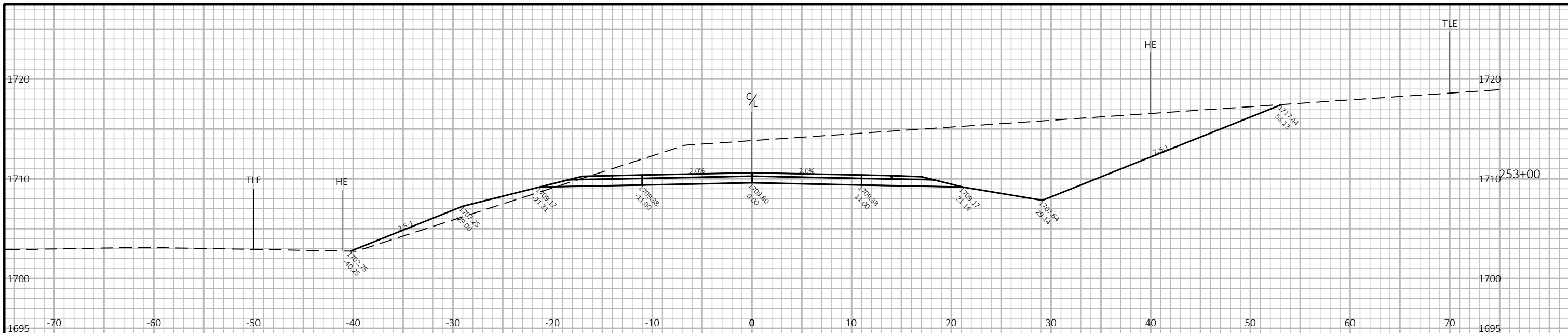
PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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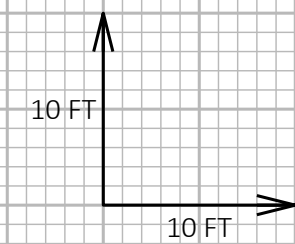
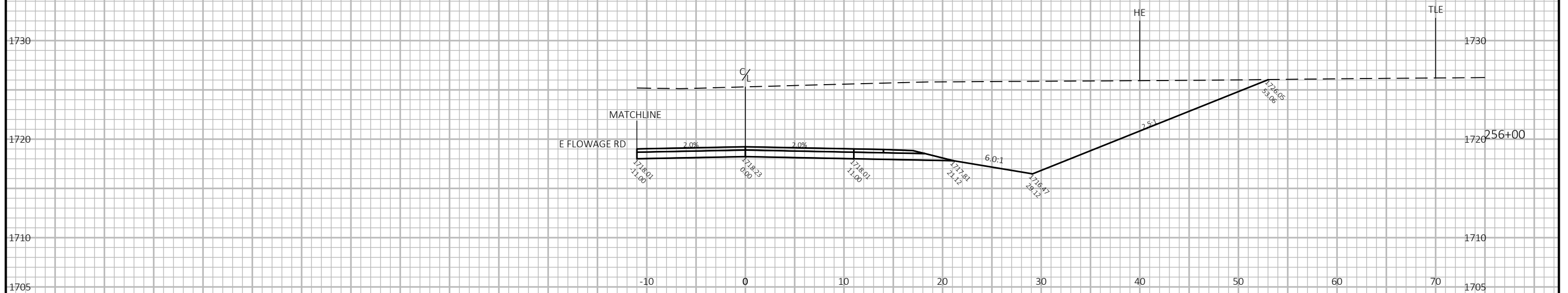
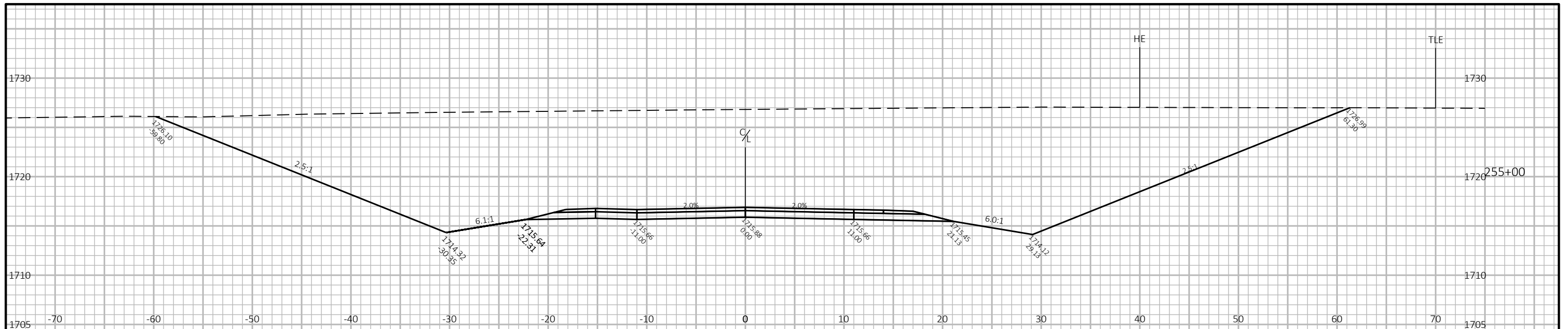
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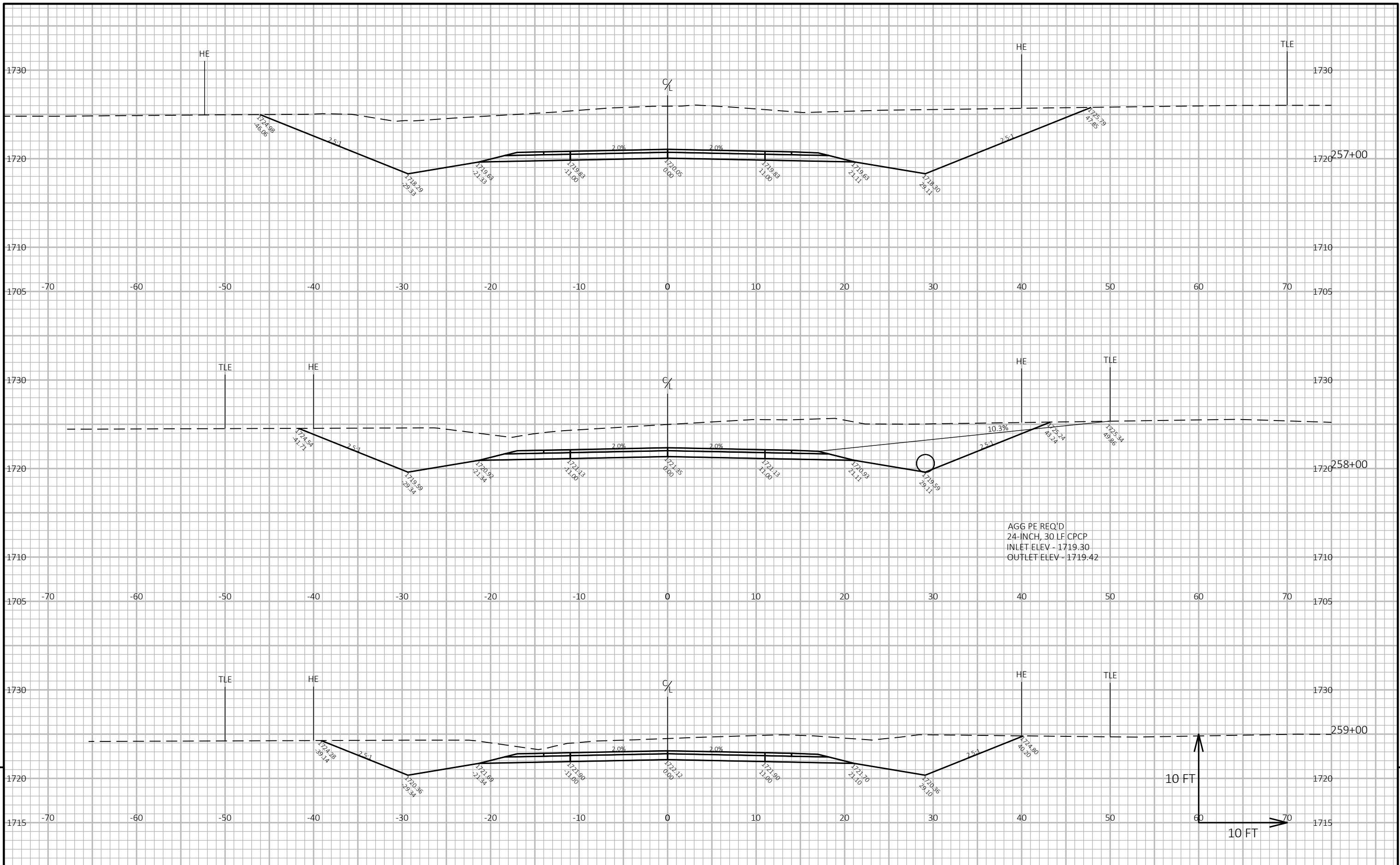
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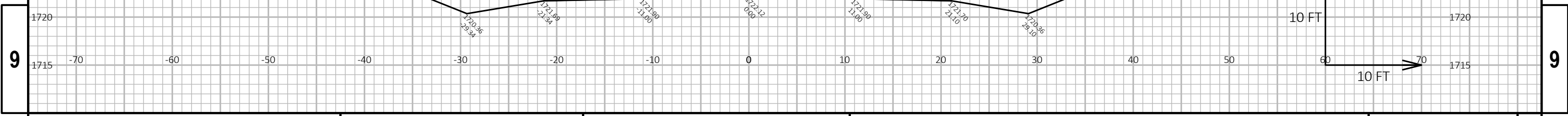
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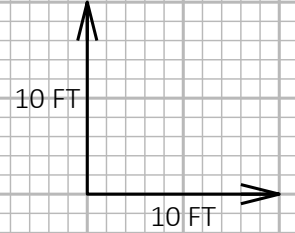
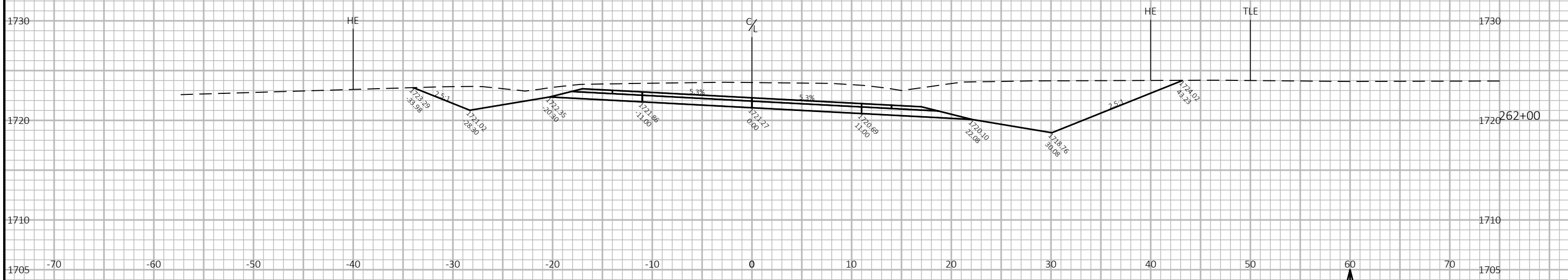
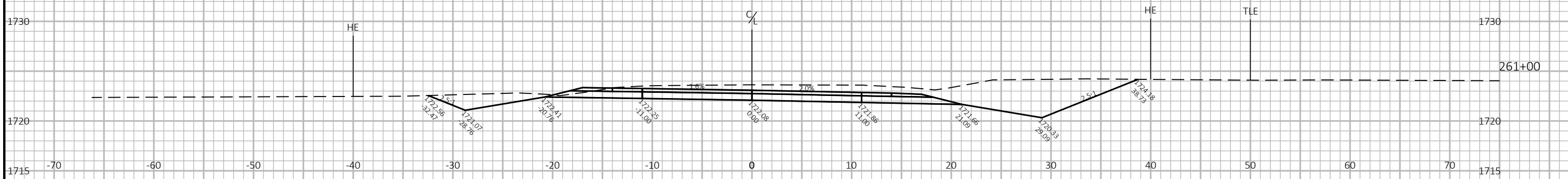
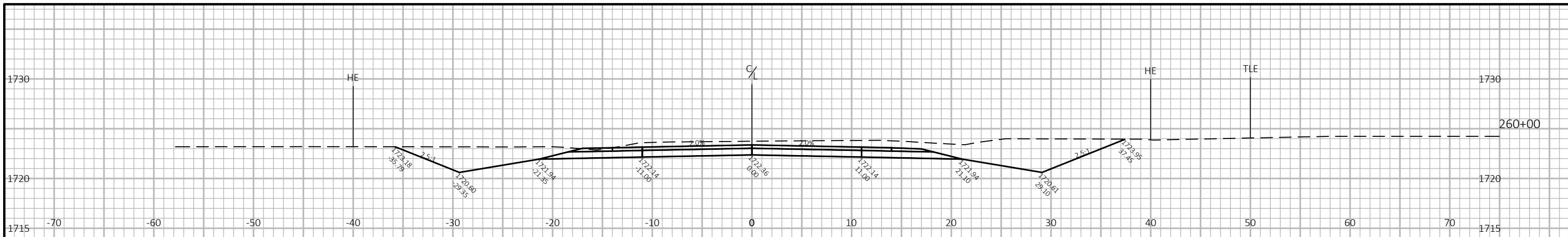
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PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET
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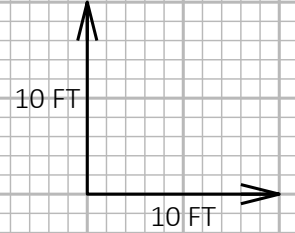
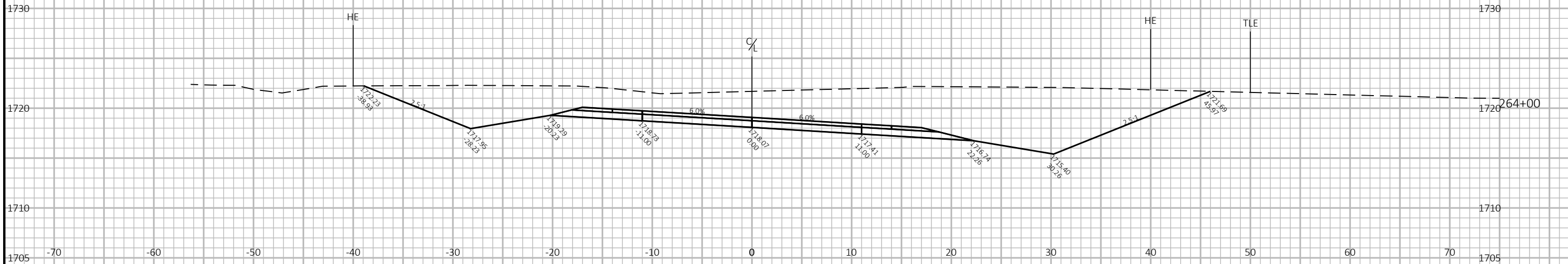
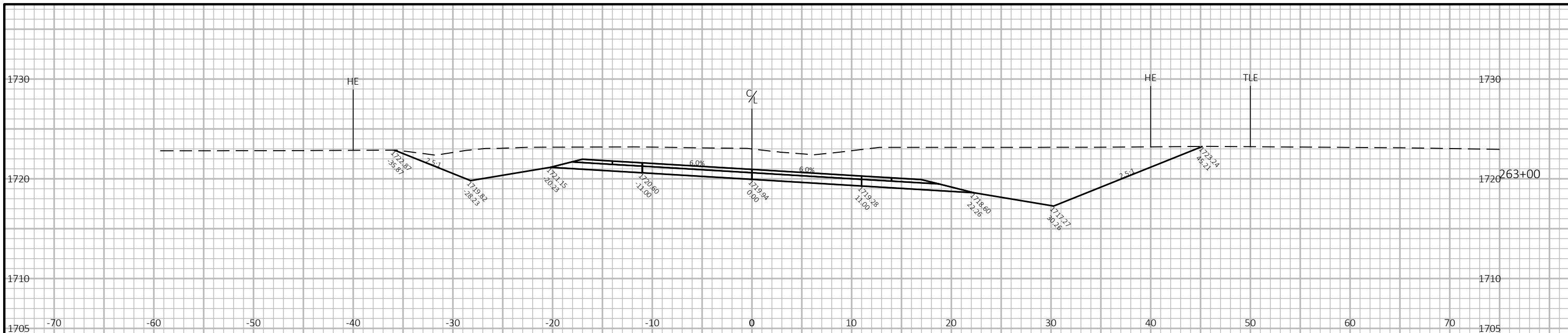
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PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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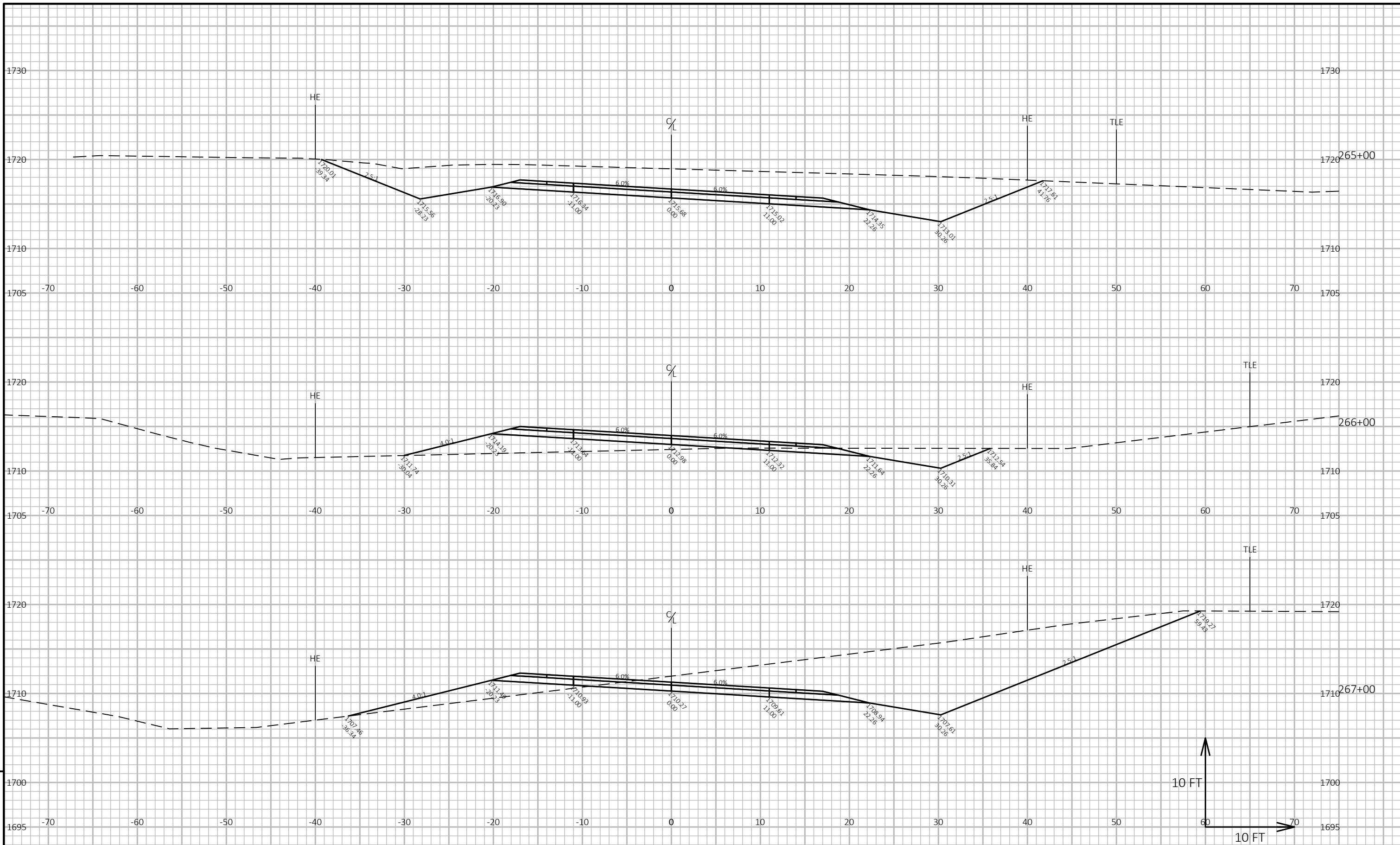
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LAYOUT NAME - 090133-xs



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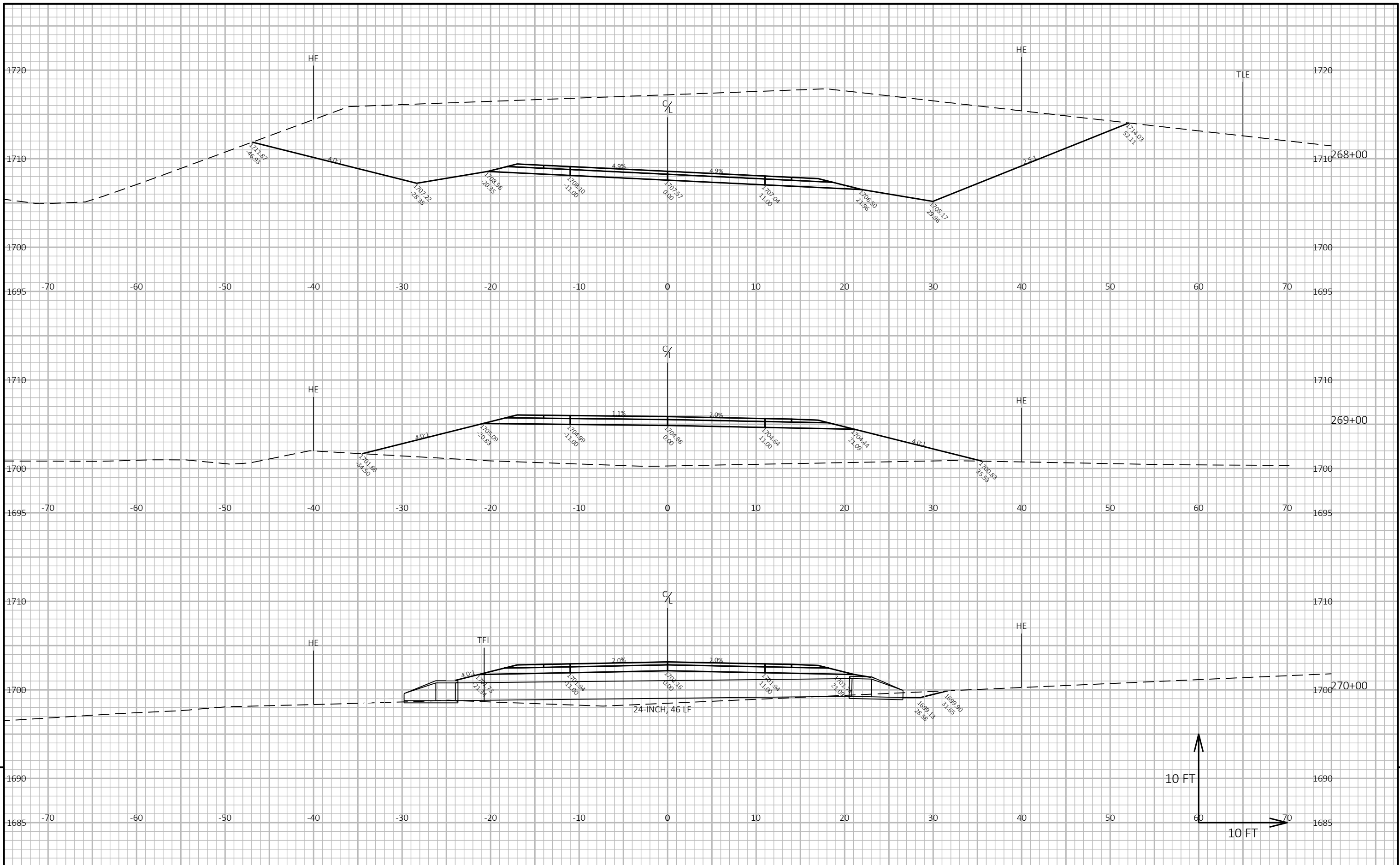


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PROJECT NO: 9513-00-70 HWY: CTH S COUNTY: VILAS CROSS SECTIONS: CTH S SHEET E

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PROJECT NO: 9513-00-70

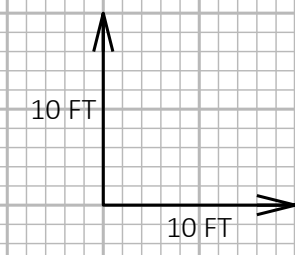
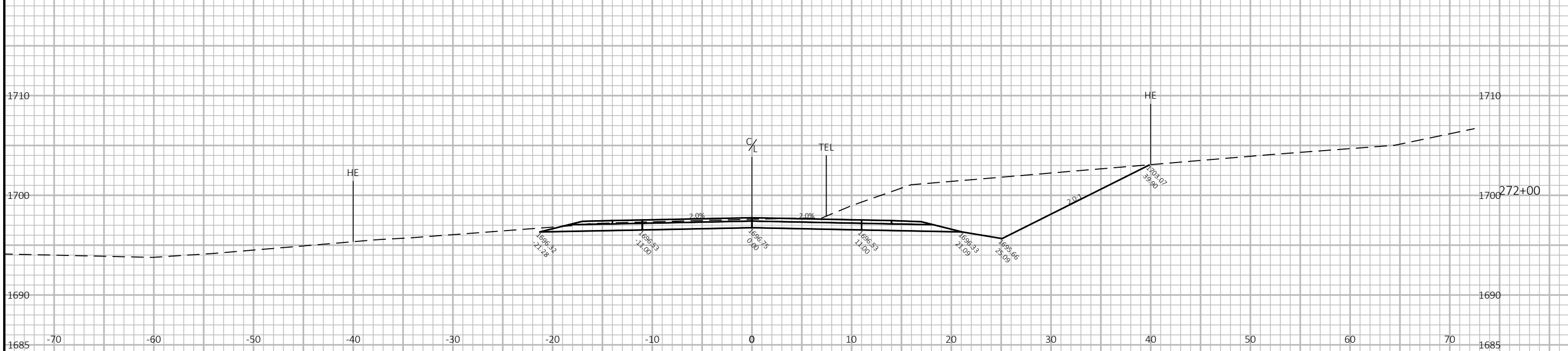
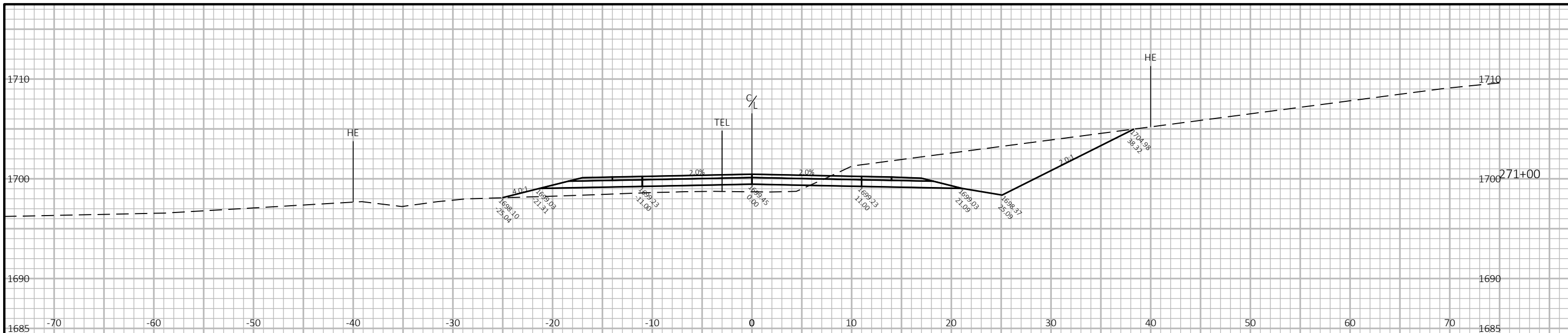
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COUNTY: VILAS

CROSS SECTIONS: CTH S

SHEET

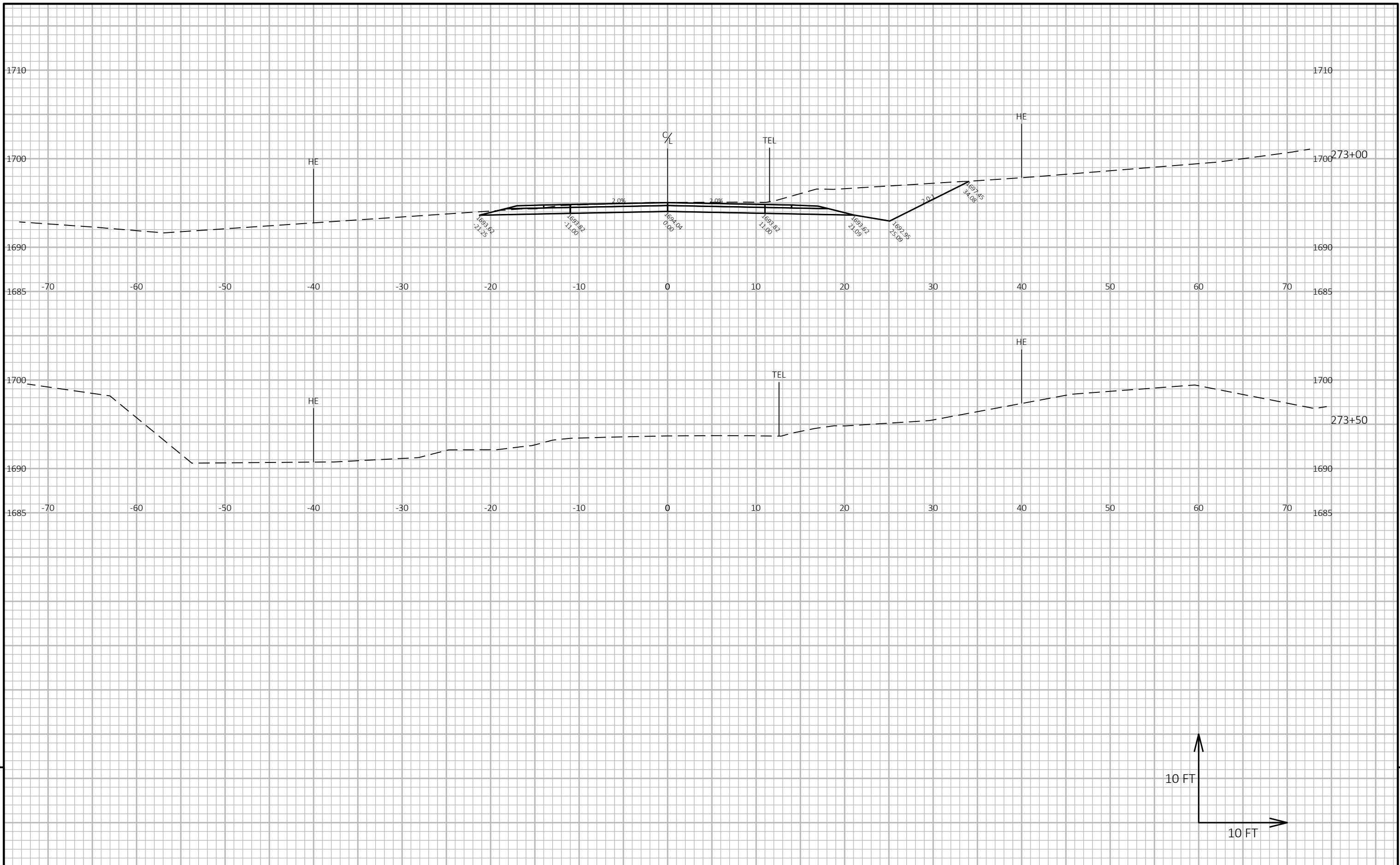
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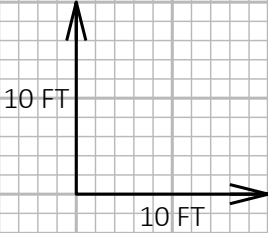
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PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: CTH S	SHEET	E
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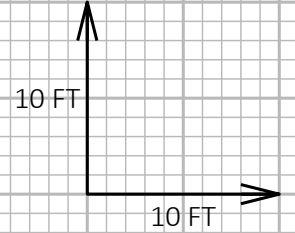
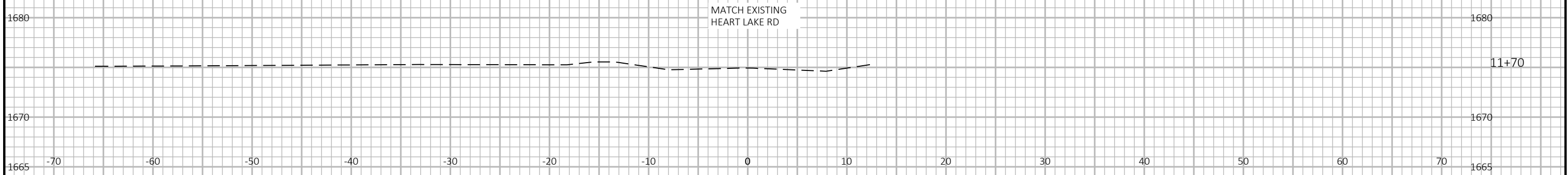
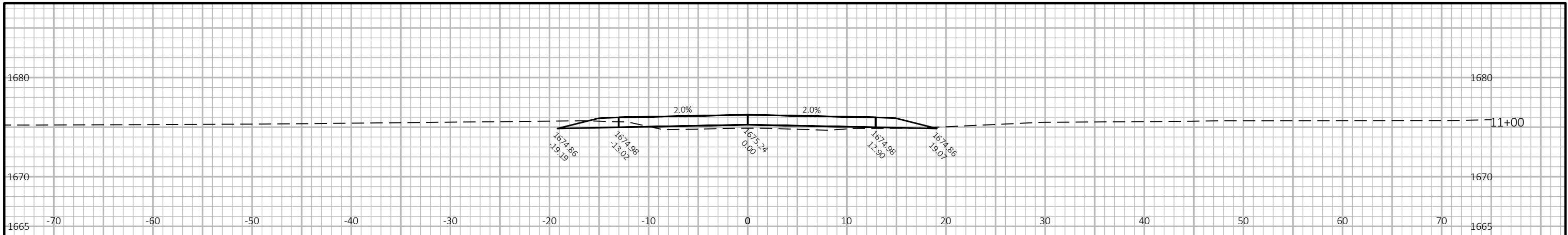


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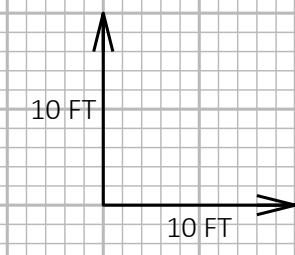
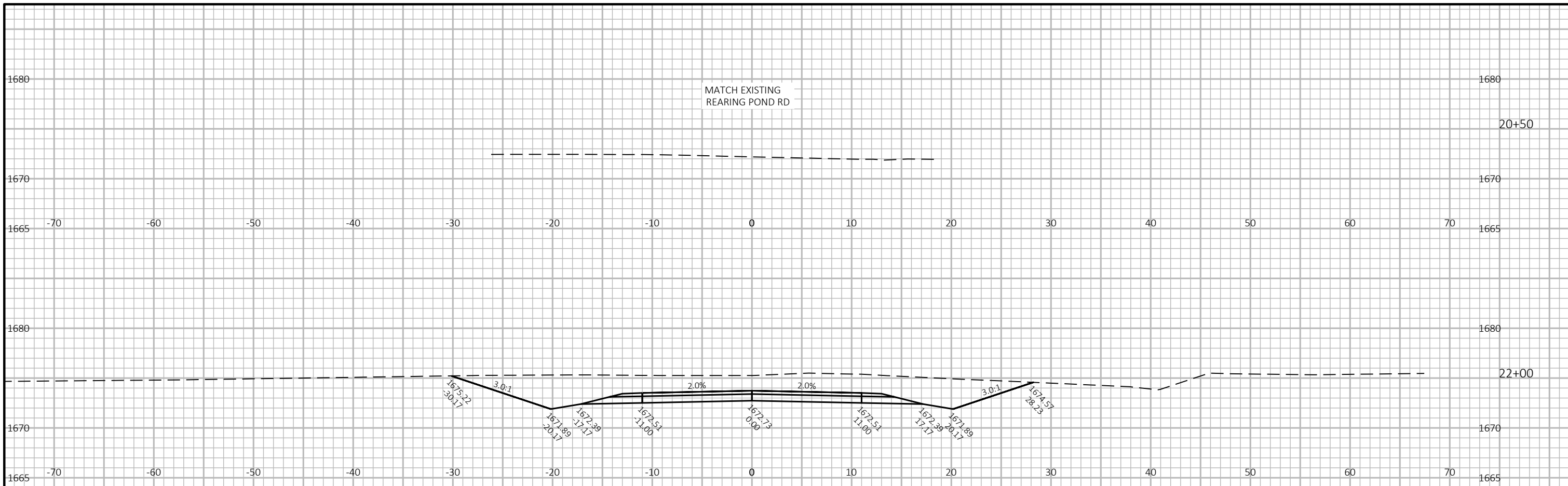
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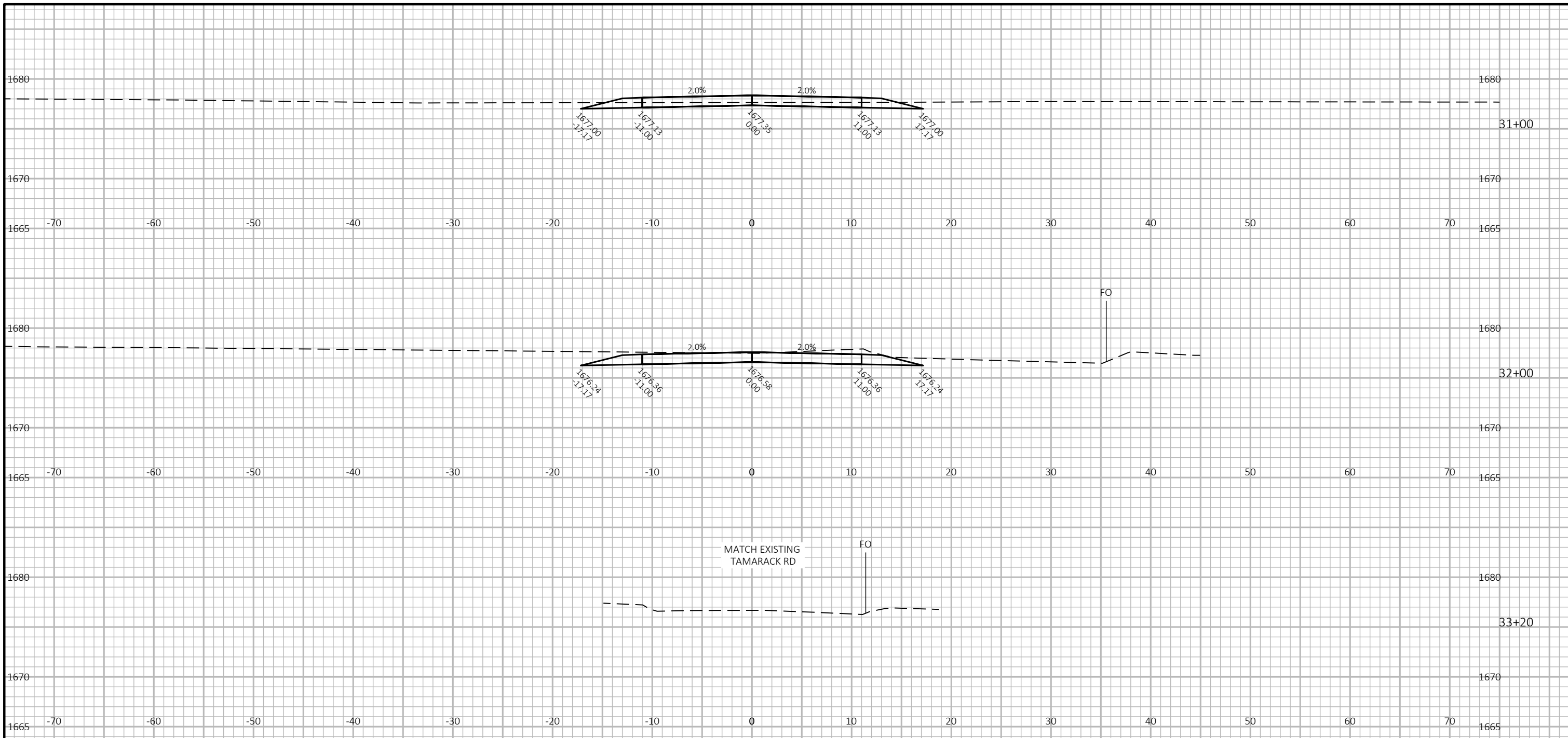
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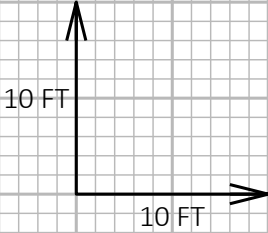
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PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: REARING POND RD	SHEET	E
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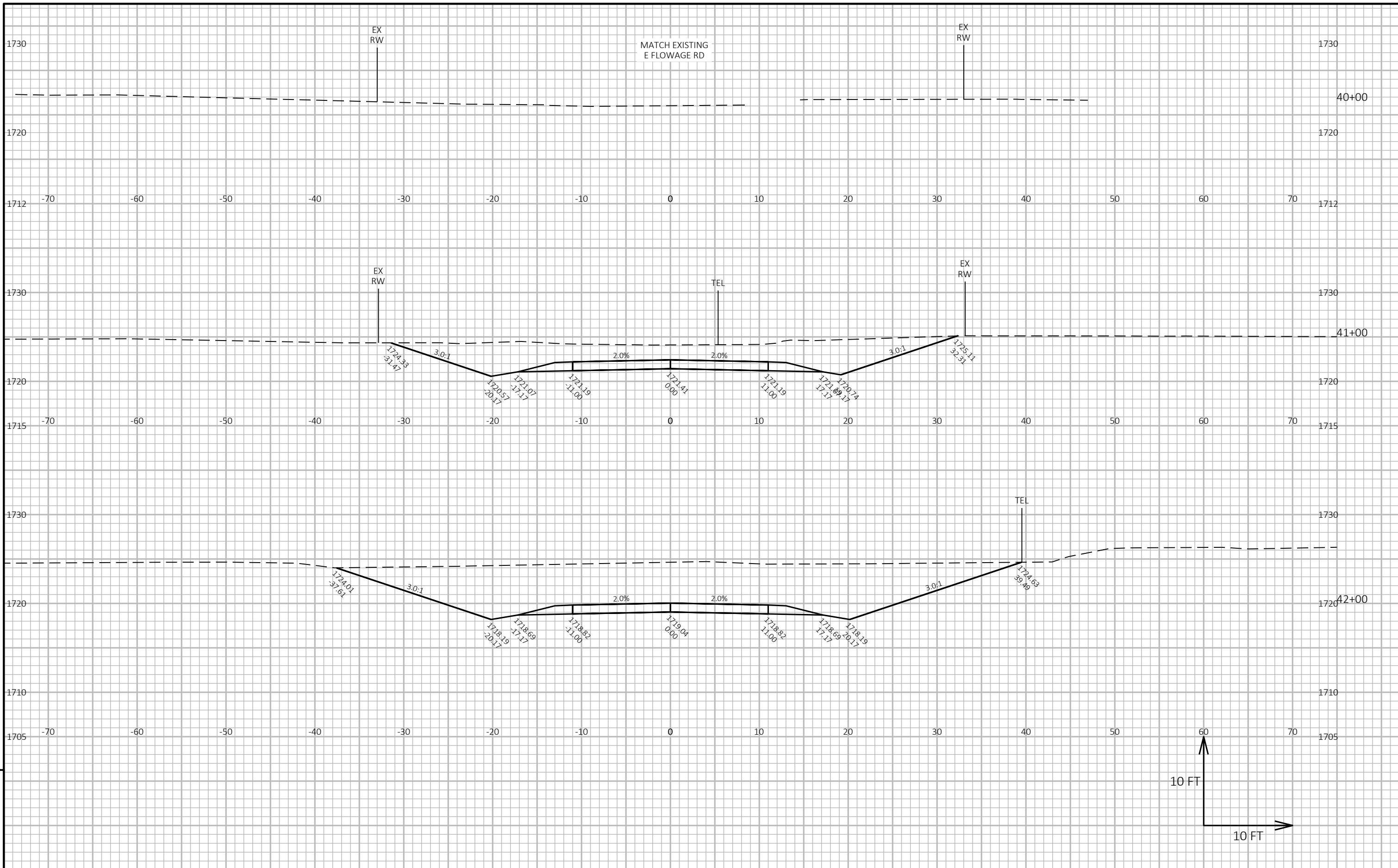


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PROJECT NO: 9513-00-70	HWY: CTH S	COUNTY: VILAS	CROSS SECTIONS: TAMARACK RD	SHEET	E
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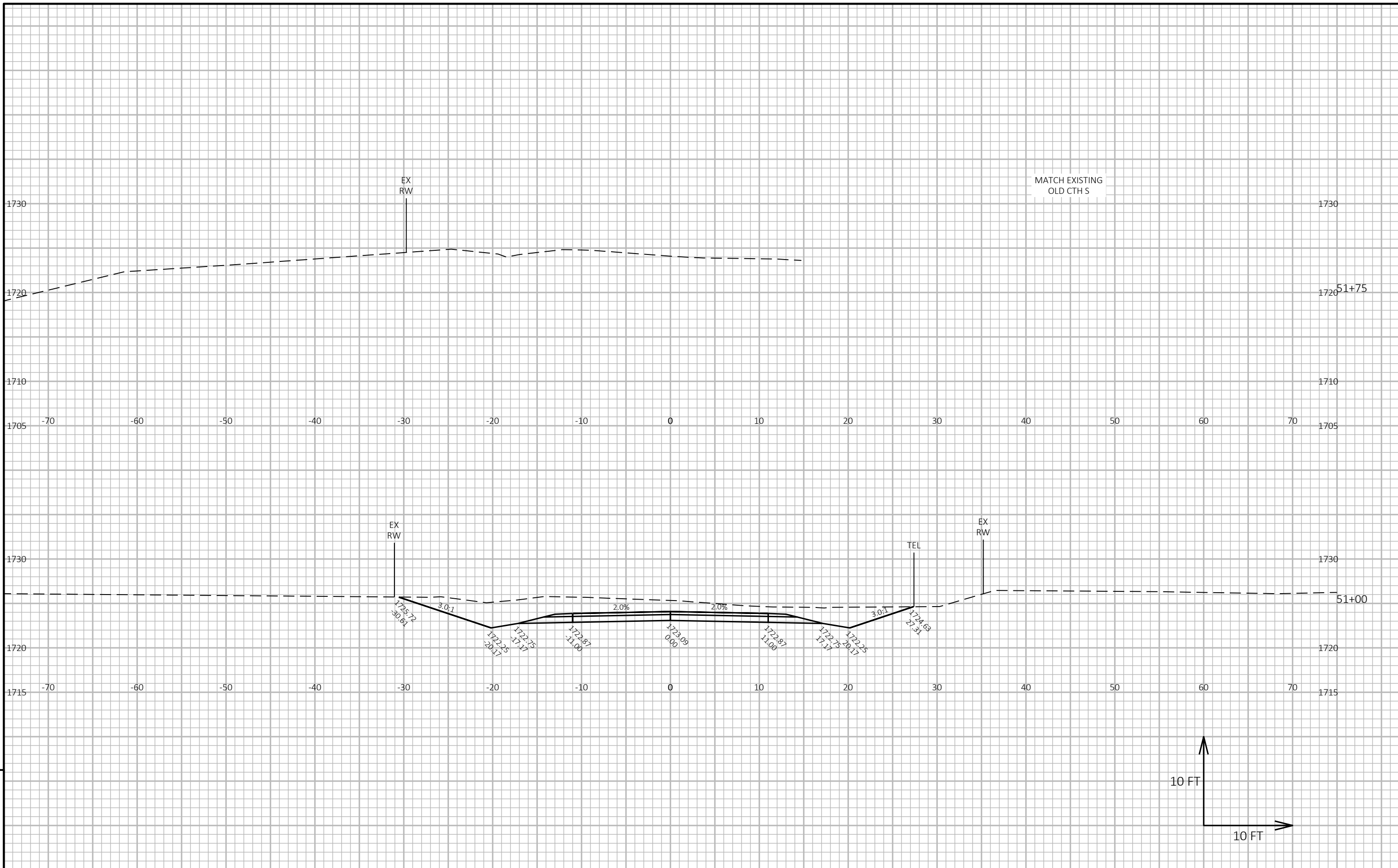
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PROJECT NO: 9513-00-70 HWY: CTH S COUNTY: VILAS CROSS SECTIONS: E FLOWAGE RD SHEET E

FILE NAME : C:\OD\CORRE, INC\PROJECTS - WI-NC REGION\9513-00-00_CTH S_VILAS_COUNTY\501_C3D_2020\95130000\SHEETS\PLAN\090204-XS.DWG PLOT DATE : 7/26/2022 5:27 PM PLOT BY : BOBBY JONES PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT. WISDOT/CADDs SHEET 49

LAYOUT NAME - E Flowage Rd-01



PROJECT NO: 9513-00-70

HWY: CTH S

COUNTY: VILAS

CROSS SECTIONS: OLD CTH S

SHEET

E

Notes



Wisconsin Department of Transportation

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