

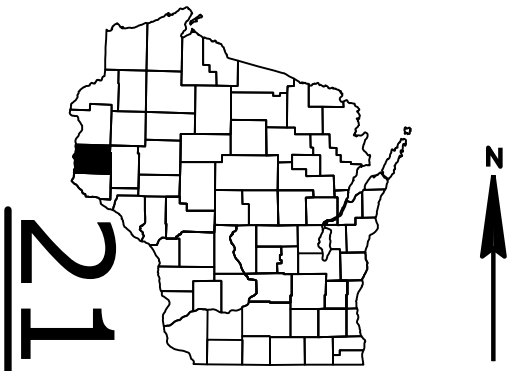
EAU PROJECT ID: 1020-00-84 WITH: 1050-00-80 & 1190-01-86 COUNTY: ST. CROIX

APRIL 2025

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 = 90



DESIGN DESIGNATION

A.A.D.T. SEG 1 (2022)	=	43,200
A.A.D.T. SEG 2 (2022)	=	39,200
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	29.2%
DESIGN SPEED	=	75 MPH
ESALS	=	N/A

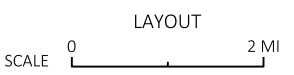
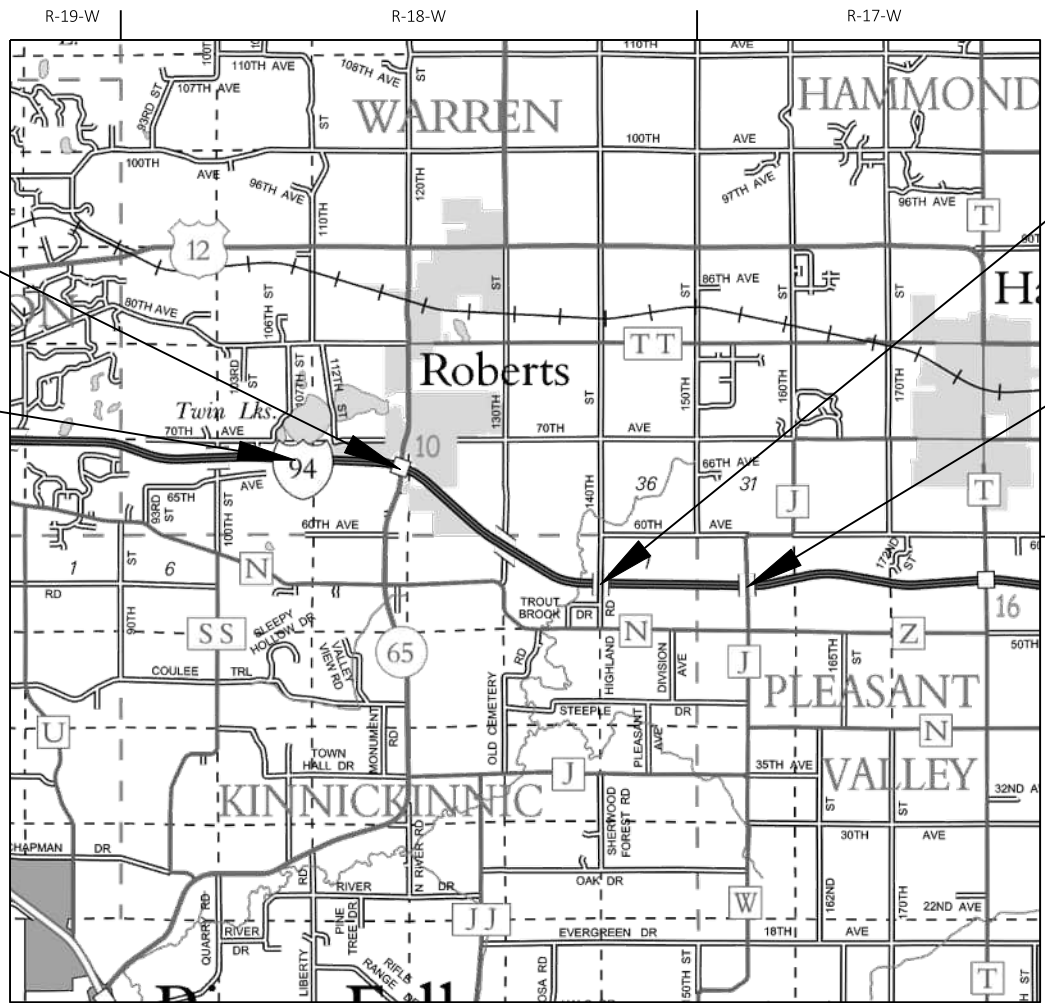
CONVENTIONAL SYMBOLS

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
HUDSON - BALDWIN
0.95 MI W OF STH 65 TO CTH J
IH 94
ST. CROIX COUNTY

STATE PROJECT NUMBER
1020-00-84



TOTAL NET LENGTH OF CENTERLINE = 2.410 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), ST. CROIX 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
1020-00-84	WISC 2025425	1

WSP USA

WISCONSIN
MAXWELL L. SEBESTA
E-48682
LA CROSSE
WIS.
PROFESSIONAL ENGINEER

Maxwell Sebesta
10/22/2024
DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor _____ WISDOT
Designer _____ WSP USA
Project Manager _____ TYSON PELKOFE, P.E.
Regional Examiner _____ WISDOT
Regional Supervisor _____ JAMES KOENIG, P.E.

APPROVED FOR THE DEPARTMENT
DATE: _____
Tyson Pelkofer
(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. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREAS. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

UTILITY LINES IN THE CROSS SECTIONS ARE FOR HORIZONTAL REFERENCE ONLY.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS. DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED (SALVAGED), FERTILIZED, SEEDED, AND EMATTED/MULCHED AS DIRECTED BY THE ENGINEER.

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

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. SLOPES AND DISTANCES MAY VARY WITHIN THE STATION LIMITS.

COUNTY SPECIFIC CABLE GUARD SYSTEMS:

- GIBALTAR TL-4, 4 CABLES
- NUCOR/MARION TL-4, LOW CABLE AT 15", 4 CABLES

SECTION 2 ORDER OF SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
ALIGNMENT DETAILS
BORINGS

ABBREVIATIONS CONT'D

PCC	PORTLAND CEMENT CONCRETE
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PL	PROPERTY LINE
R	RADIUS OR RANGE
R/L	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQ'D	REQUIRED
RT	RIGHT
R/W	RIGHT OF WAY
RD	ROAD
SHLD	SHOULDER(S)
S	SOUTH
SB	SOUTHBOUND
SF	SQUARE FOOT (FEET)
SDD	STANDARD DETAIL DRAWING(S)
STH	STATE TRUNK HIGHWAYS
SS	STORM SEWER
SSD	STOPPING SIGHT DISTANCE
STA	STATION
SE	SUPERELEVATION
S/L	SURVEY LINE
SYM	SYMMETRICAL
T	TRUCKS (PERCENT OF)
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
TOC	TOP OF CURB
TYP	TYPICAL
UNCL	UNCLASSIFIED
UG	UNDERGROUND
VAR	VARIABLE
VC	VERTICAL CURVE
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
WT	WEIGHT
W	WEST
WB	WEST BOUND

ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
AE, AEW	APRON ENDWALL
ASPH	ASPHALTIC
ADT	AVERAGE DAILY TRAFFIC
AADT	ANNUAL AVERAGE DAILY TRAFFIC
BAD	BASE AGGREGATE DENSE
BF	BACK FACE
BM	BENCHMARK
BTWN	BETWEEN
CTR	CENTER
C/L	CENTERLINE
Δ	CENTRAL ANGLE OR DELTA
CE	COMMERCIAL ENTRANCE
CONST	CONSTRUCTION
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAYS
CY	CUBIC YARD
CP	CONTROL POINT OR CULVERT PIPE
C&G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
DISCH	DISCHARGE
DMS	DYNAMIC MESSAGE SIGN
EA	EACH
E	EAST
EB	EASTBOUND
ELEC	ELECTRIC(AL), ELEC. CABLE
EL, ELEV	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EXIST	EXISTING
FF	FACE TO FACE
FERT	FERTILIZER
FE	FIELD ENTRANCE
F/L, FL	FLOW LINE
GALV	GALVANIZE
HS	HIGH STRENGTH
CWT	HUNDRED WEIGHT
INL	INLET
INTER	INTERSECTION
JT	JOINT
LT	LEFT
L	LENGTH OF CURVE
LF	LINEAR FOOT (FEET)
LC	LONG CHORD
LS	LUMP SUM
MP	MARKER POST
MGAL	1000 GALLONS
NC	NORMAL CROWN
N	NORTH
NB	NORTH BOUND
NOR	NORMAL
NO	NUMBER
PAV'T	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY

UTILITY CONTACTS

LEVEL 3 COMMUNICATIONS LLC
COMMUNICATIONS LINE
RYAN HEIKKILA
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BROOKLYN CENTER, MN 55430
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ELECTRICITY
SCOTT FREIER
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RICHH@MIDWESTNATURALGAS.COM

CENTURYLINK COMMUNICATIONS, LLC
COMMUNICATION LINE
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RYAN.HEIKKILA@LUMEN.COM

BRIGHTSPEED OF NORTHWEST WISCONSIN, LLC
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BEN.BAKER@BRIGHTSPEED.COM

WE ENERGIES
GAS/PETROLEUM
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RICE LAKE, WI 54868
(715) 234-9605
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MCI
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DESIGN CONTACTS

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MAXWELL.SEBESTA@WSP.COM

DNR LIAISON

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1300 W CLAIREMONT AVE.
EAU CLAIRE, WI 54701
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AMYL.LESIK@WISCONSIN.GOV

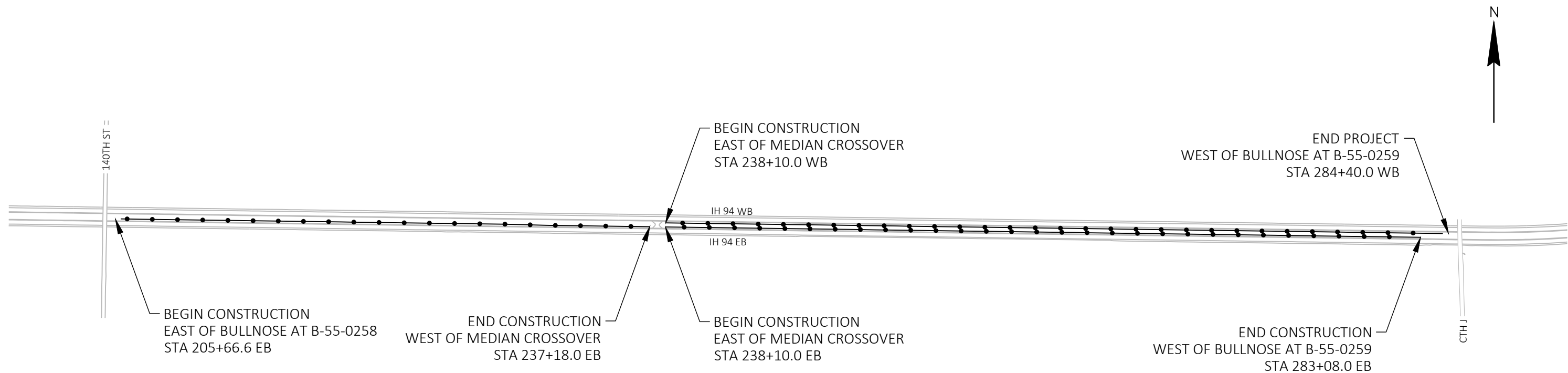
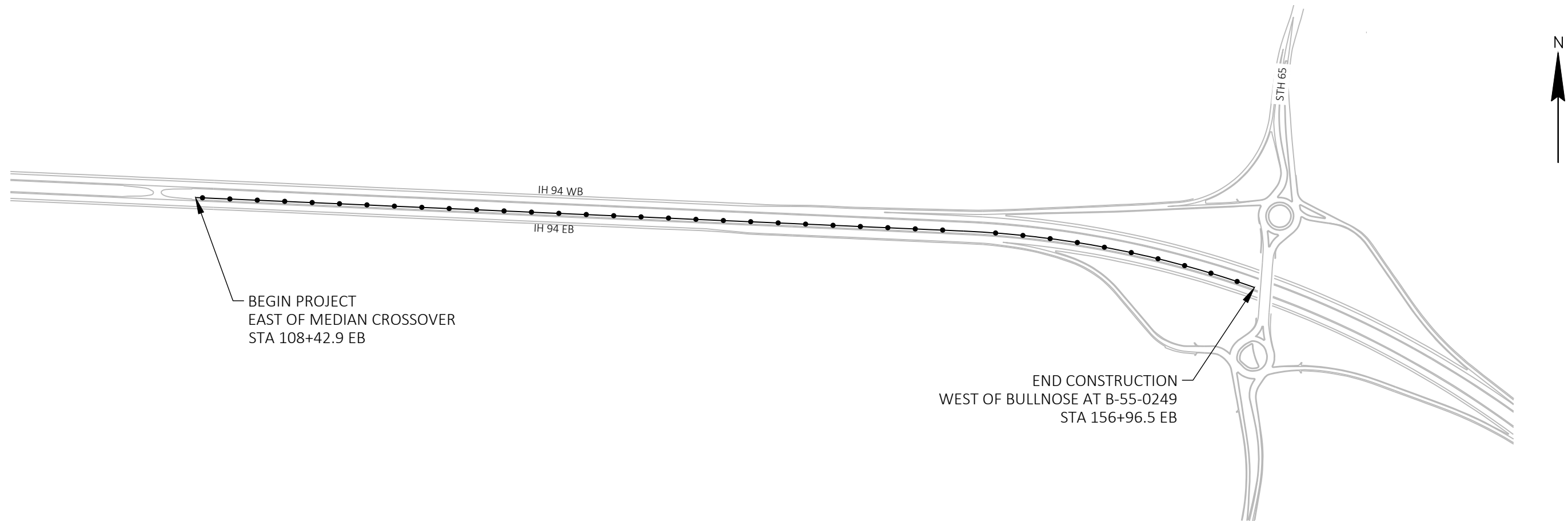
SURVEYOR CONTACT

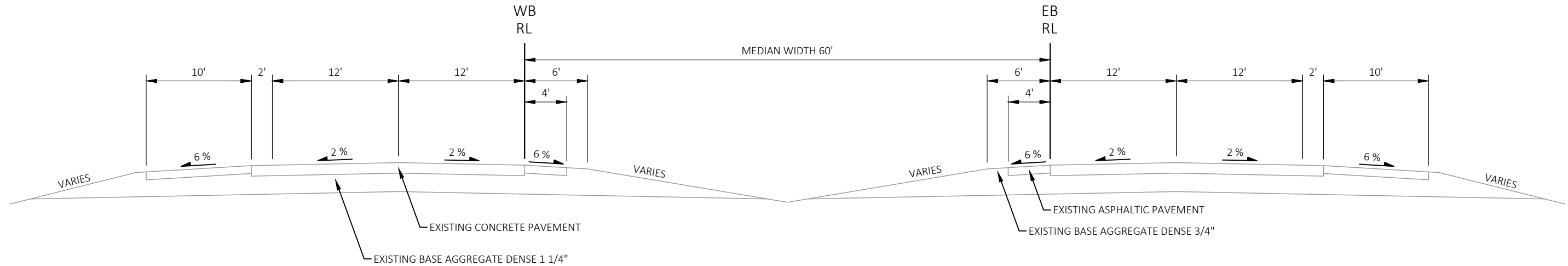
WISDOT SURVEY COORDINATOR
BILL HOLME, P.L.S.
WISDOT NORTHWEST REGION
EAU CLAIRE OFFICE
718 W CLAIREMONT AVE.
EAU CLAIRE, WI 53701
(715) 836-3913
WILLIAM.HOLME@DOT.WI.GOV

DIGGERSHOTLINE

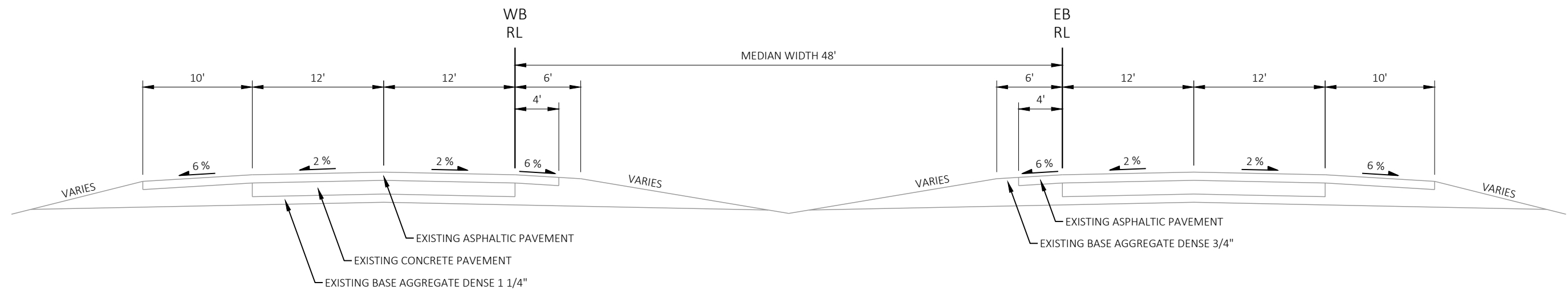
Dial 811 or (800)242-8511

www.DiggersHotline.com





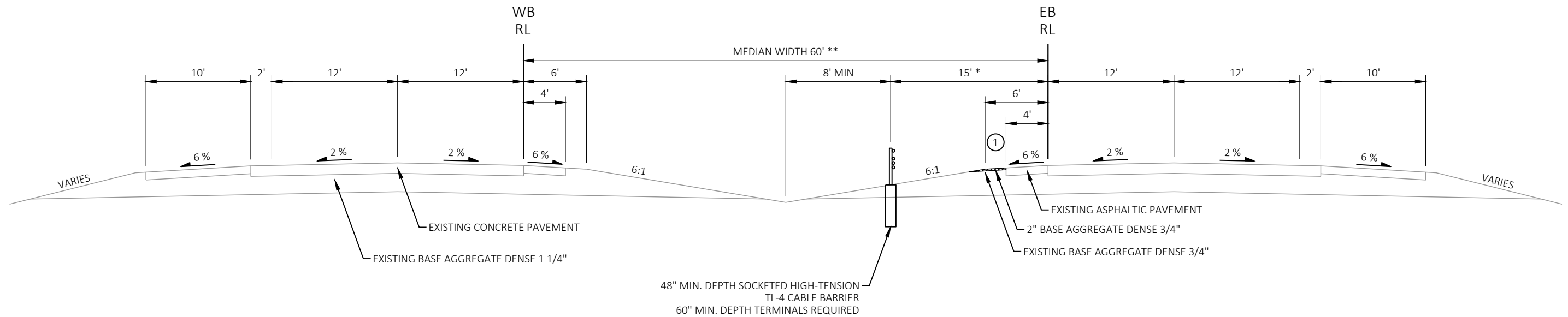
EXISTING TYPICAL SECTION
STA 108+43 - STA 156+96



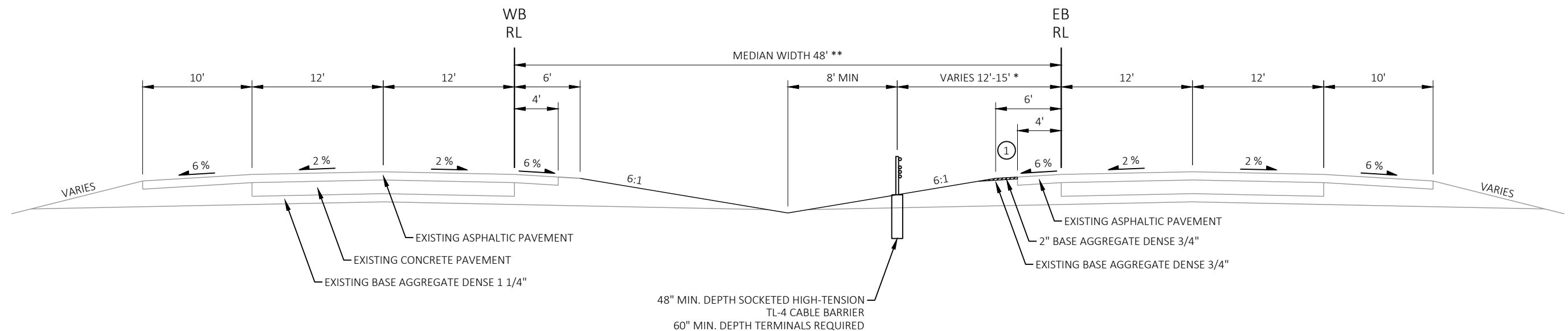
EXISTING TYPICAL SECTION
STA 205+67 - STA 284+40

2

2 |



FINISHED TYPICAL SECTION
STA 108+43 - STA 156+96



FINISHED TYPICAL SECTION
STA 205+67 - STA 237+18

* ASSUMES 15' POST SPACING
 ** SALVAGED TOPSOIL, MULCHING, SEEDING MIXTURE NO. 20,
 AND FERTILIZER TYPE B REQ'D WHERE GRADING OCCURS AND
 REQ'D BY ENGINEER. SEE CROSS SECTIONS FOR GRADING
 REQUIREMENTS. (STA 213+50 - STA 237+18)

NOTES:

DRAWING NOT TO SCALE

ADJUST BARRIER POST SPACING AS ALLOWED PER STANDARD DETAIL DRAWINGS, DETAIL DRAWINGS, AND BARRIER SYSTEM SPECIAL PROVISIONS TO AVOID ALL UNDERGROUND UTILITIES AS REQUIRED BY STATUTE. PROVIDE GAPS IN THE BARRIER SYSTEM WHEN POST SPACING VARIATION DOES NOT PROVIDE ENOUGH ADJUSTMENT. NO UNDERGROUND UTILITIES WILL BE REQUIRED TO BE RELOCATED TO AVOID BARRIER SYSTEM CONFLICTS. IN ADDITION, ALL OVERHEAD UTILITIES WILL REMAIN IN SERVICE THROUGHOUT CONSTRUCTION.

① ROUND SHOULDER TO MATCH EXISTING SLOPE

PROJECT NO:	1020-00-84
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HWY: IH 94

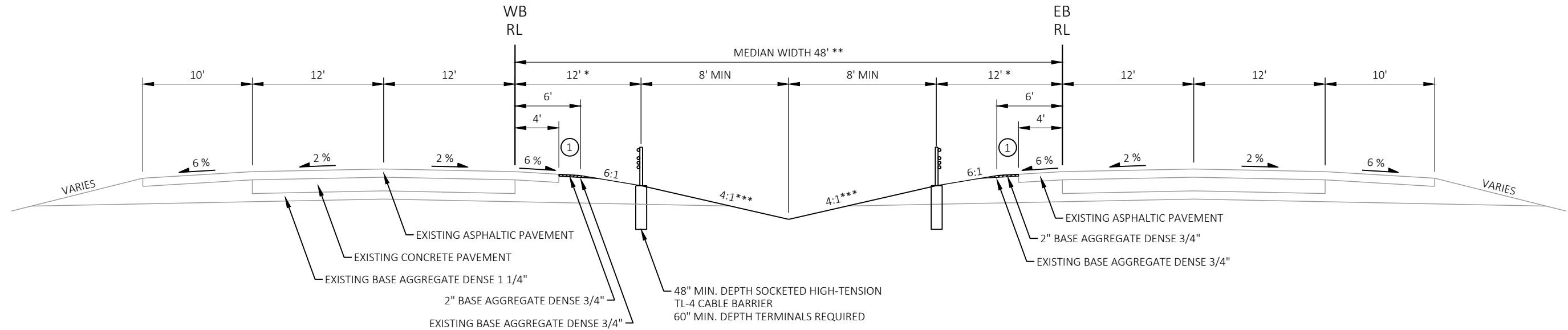
COUNTY: ST. CROIX

TYPICAL SECTIONS

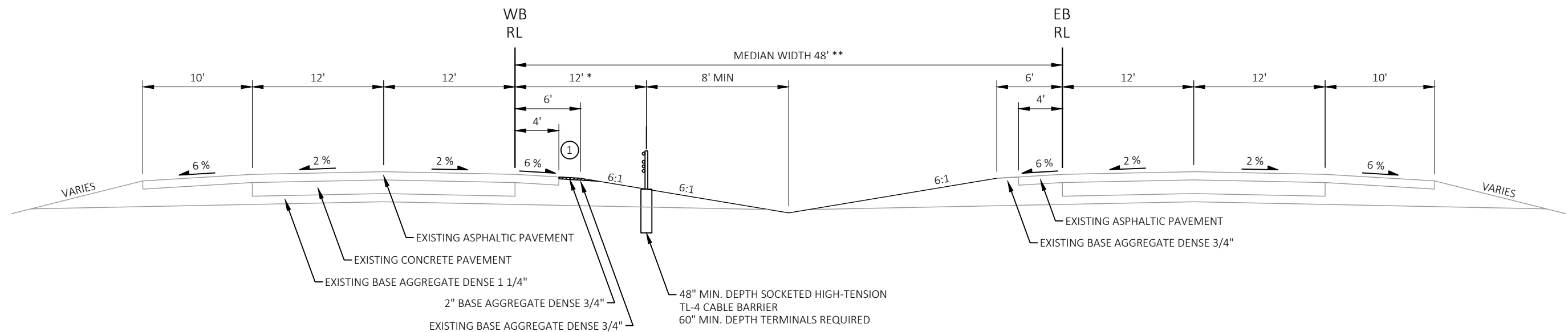
SHEET

5

11

**FINISHED TYPICAL SECTION**

STA 238+10 - STA 283+08

**FINISHED TYPICAL SECTION**

STA 283+08 - STA 284+40

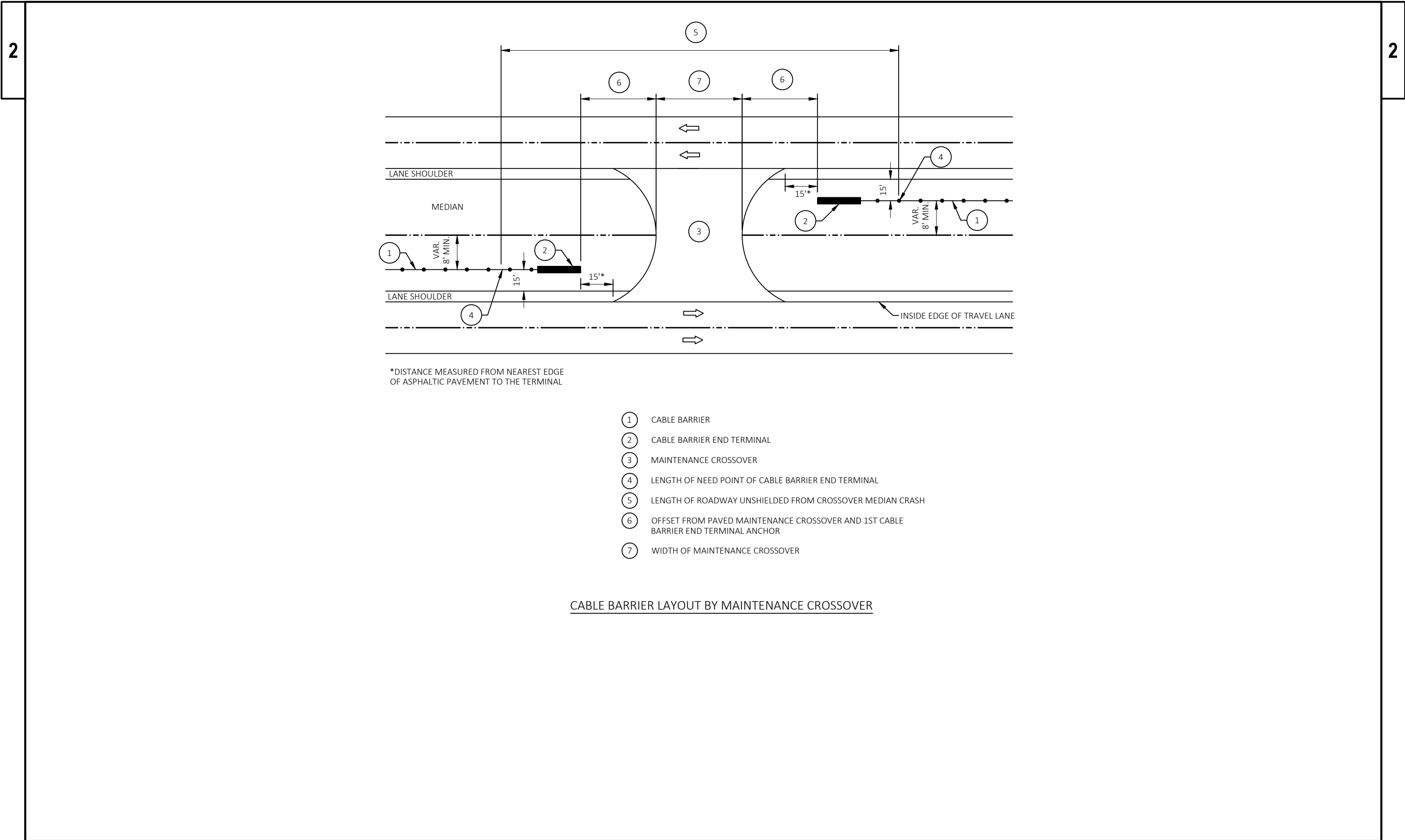
* ASSUMES 15' POST SPACING
** SALVAGED TOPSOIL, MULCHING, SEEDING MIXTURE NO. 20, AND FERTILIZER TYPE B REQ'D WHERE GRADING OCCURS AND REQ'D BY ENGINEER. SEE CROSS SECTIONS FOR GRADING REQUIREMENTS. (STA 238+10 - STA 283+00)
***IN SECTIONS WITH CABLE BARRIER IN BOTH DIRECTIONS, THE MAXIMUM ALLOWABLE SLOPE BEHIND THE CABLE BARRIER IS 4:1.

NOTES:

DRAWING NOT TO SCALE

ADJUST BARRIER POST SPACING AS ALLOWED PER STANDARD DETAIL DRAWINGS, DETAIL DRAWINGS, AND BARRIER SYSTEM SPECIAL PROVISIONS TO AVOID ALL UNDERGROUND UTILITIES AS REQUIRED BY STATUTE. PROVIDE GAPS IN THE BARRIER SYSTEM WHEN POST SPACING VARIATION DOES NOT PROVIDE ENOUGH ADJUSTMENT. NO UNDERGROUND UTILITIES WILL BE REQUIRED TO BE RELOCATED TO AVOID BARRIER SYSTEM CONFLICTS. IN ADDITION, ALL OVERHEAD UTILITIES WILL REMAIN IN SERVICE THROUGHOUT CONSTRUCTION.

① ROUND SHOULDER TO MATCH EXISTING SLOPE



GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

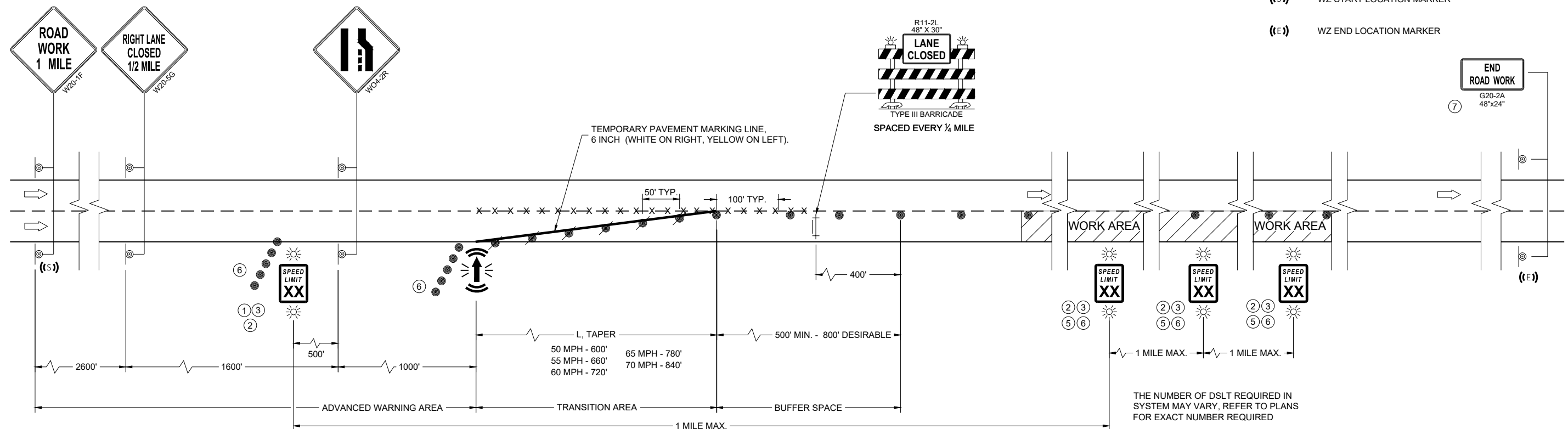
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

IF THE SPEED LIMIT WILL CHANGE BASED ON THE PRESENCE OF WORKERS, USE THE TAPER LENGTH THAT MATCHES THE HIGHER OF THE TWO SPEEDS FOR A CONTINUOUS LANE CLOSURE.

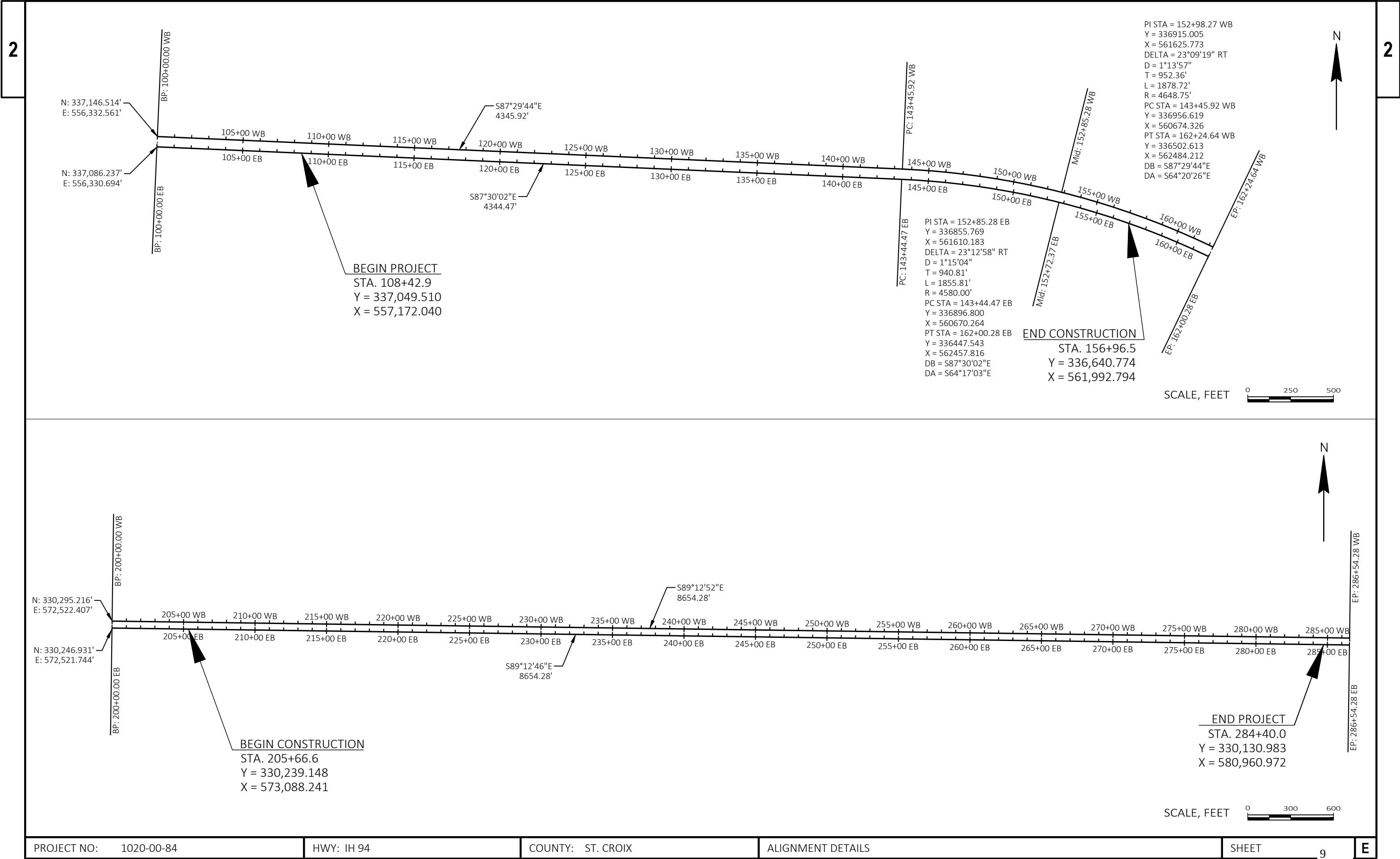
- EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.
- PLACE DSLT IN ADVANCE WARNING AREA AND THROUGHOUT PROJECT LIMITS. IF THE LANE CLOSURE MOVES DOWNSTREAM, LEAVE DSLT IN PLACE.
- AT EXISTING POST MOUNTED SPEED LIMIT SIGN AFTER THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. IF THERE IS NOT AN EXISTING SIGN, PLACE 1,500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP
- IF WORK AREA STARTS LESS THAN 1,000 FEET FROM END OF LANE CLOSURE TAPER, OMIT DIGITAL SPEED LIMIT TRAILER AT THAT LOCATION.
- PLACE A DIGITAL SPEED LIMIT TRAILER A MINIMUM OF EVERY ONE MILE. MODIFY PLACEMENT AS DIRECTED BY ENGINEER WHEN DIGITAL SPEED LIMIT TRAILER IS LOCATED IN CLOSE PROXIMITY TO AN ACCELERATION LANE OF AN ENTRANCE RAMP.
- 5 DRUMS SPACED @ 10' INTERVALS AS NEEDED.
- INCLUDE NON-DIGITAL R2-1 RESUME SPEED LIMIT SIGNS 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END ROAD WORK" SIGN.

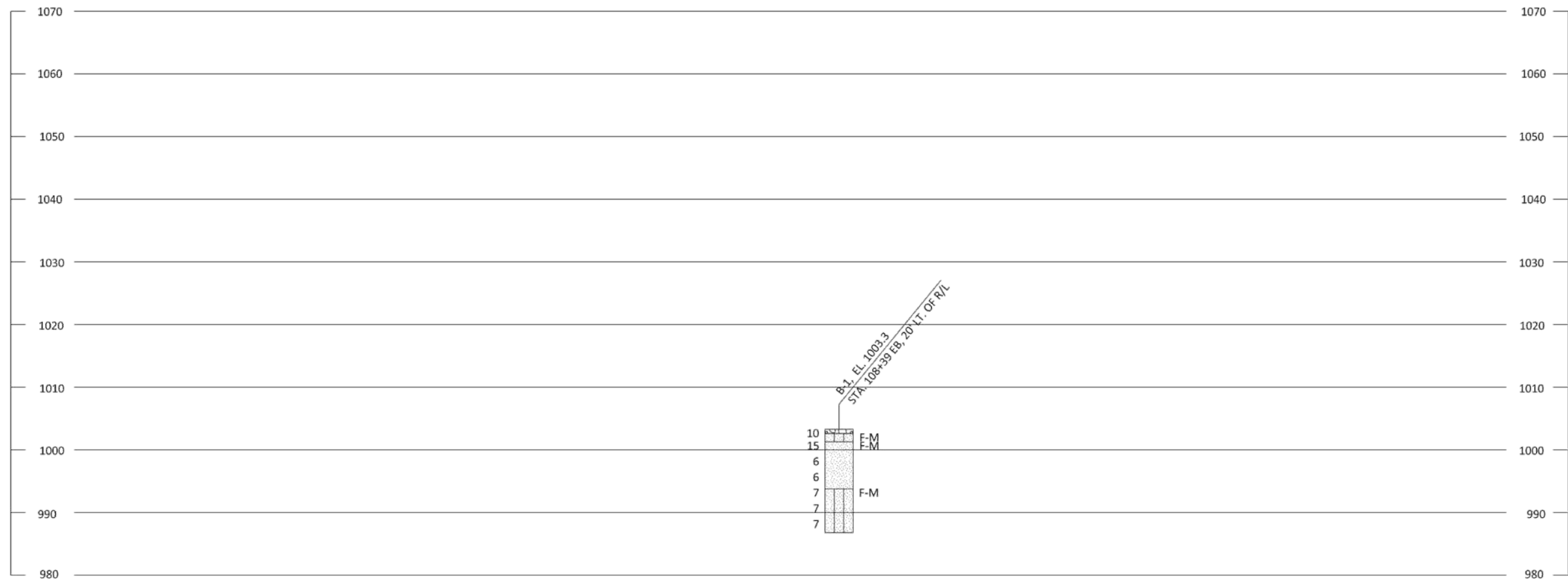
LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- DIGITAL SPEED LIMIT TRAILER (DSLT)
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

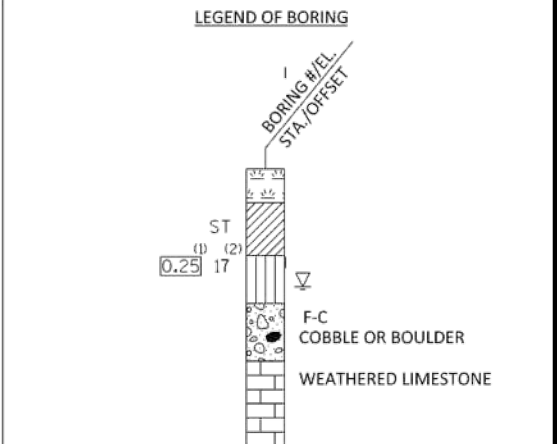


SPV.0045.01 DIGITAL SPEED REDUCTION SYSTEM (DSRS)





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



(1) Unconfined STRENGTH, as determined by a pocket penetrometer (tsf)

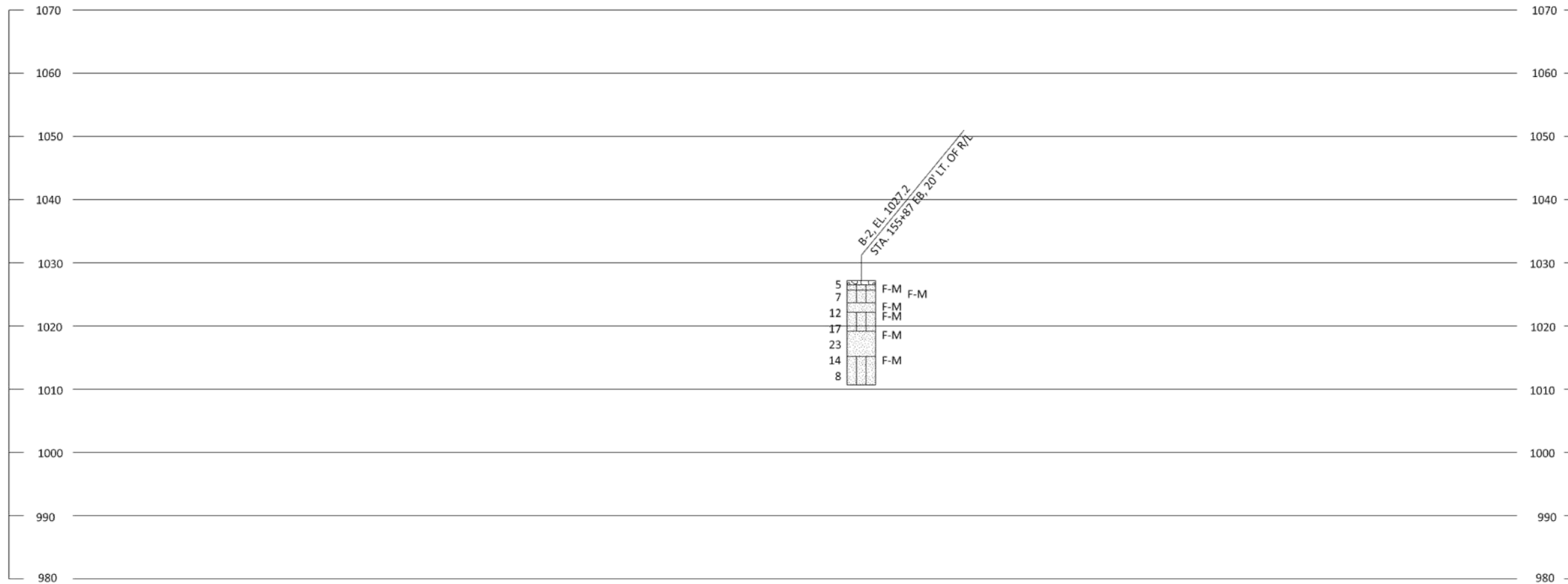
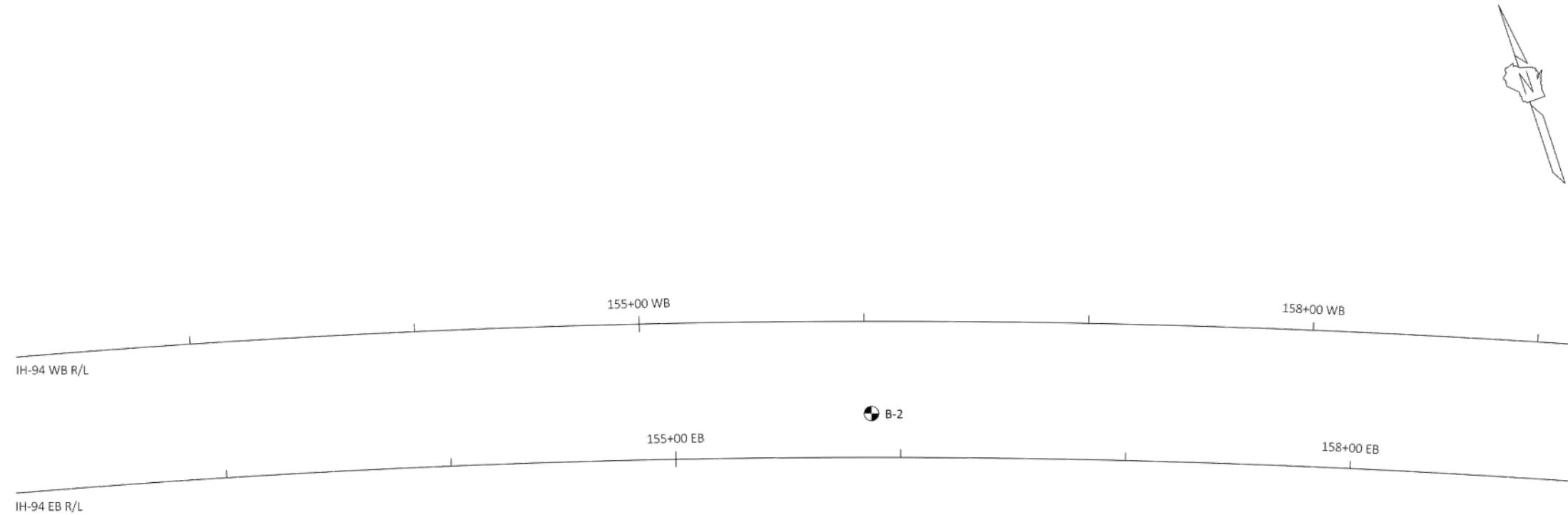
(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'n' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'n' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

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

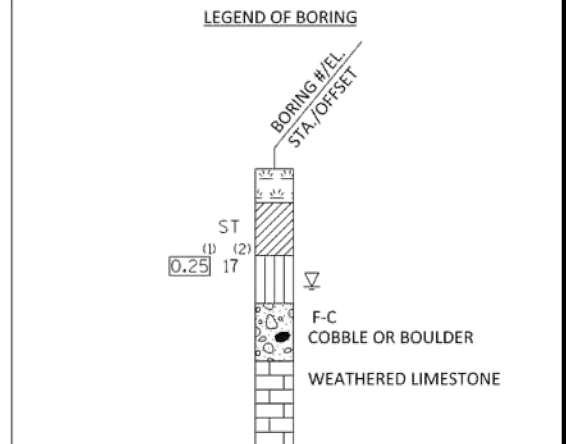
ABBREVIATIONS			
F-FINE	M-MEDIUM	C-COARSE	ST - SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

Borings were completed at points approximately as indicated on this drawing to obtain information concerning the character of subsurface materials found at the site. Because the investigated depths are limited and the area of the borings is very small in relation to the entire site, the Wisconsin Department of Transportation does not warrant similar subsurface conditions below, between, or beyond these borings. Variations in soil conditions should be expected and fluctuations in groundwater levels may occur.



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

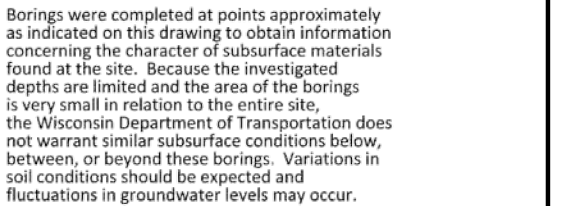


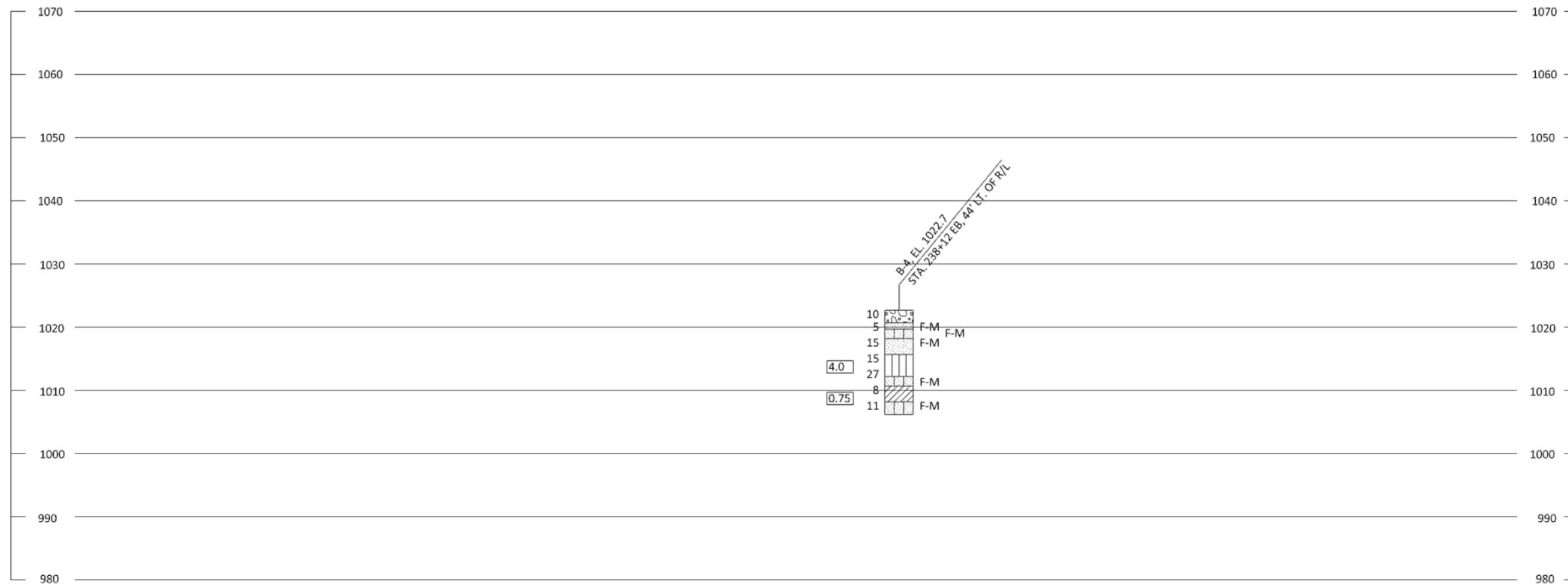
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(2) UNLESS OTHERWISE, SPECIFIED THE SPT 'n' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'n' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

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

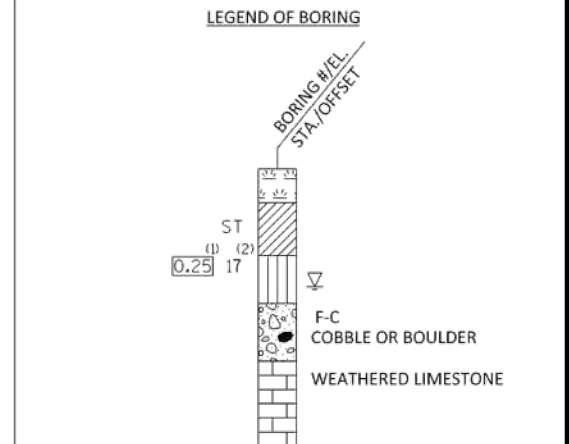
ABBREVIATIONS
F-FINE M-MEDIUM C-COARSE ST - SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION
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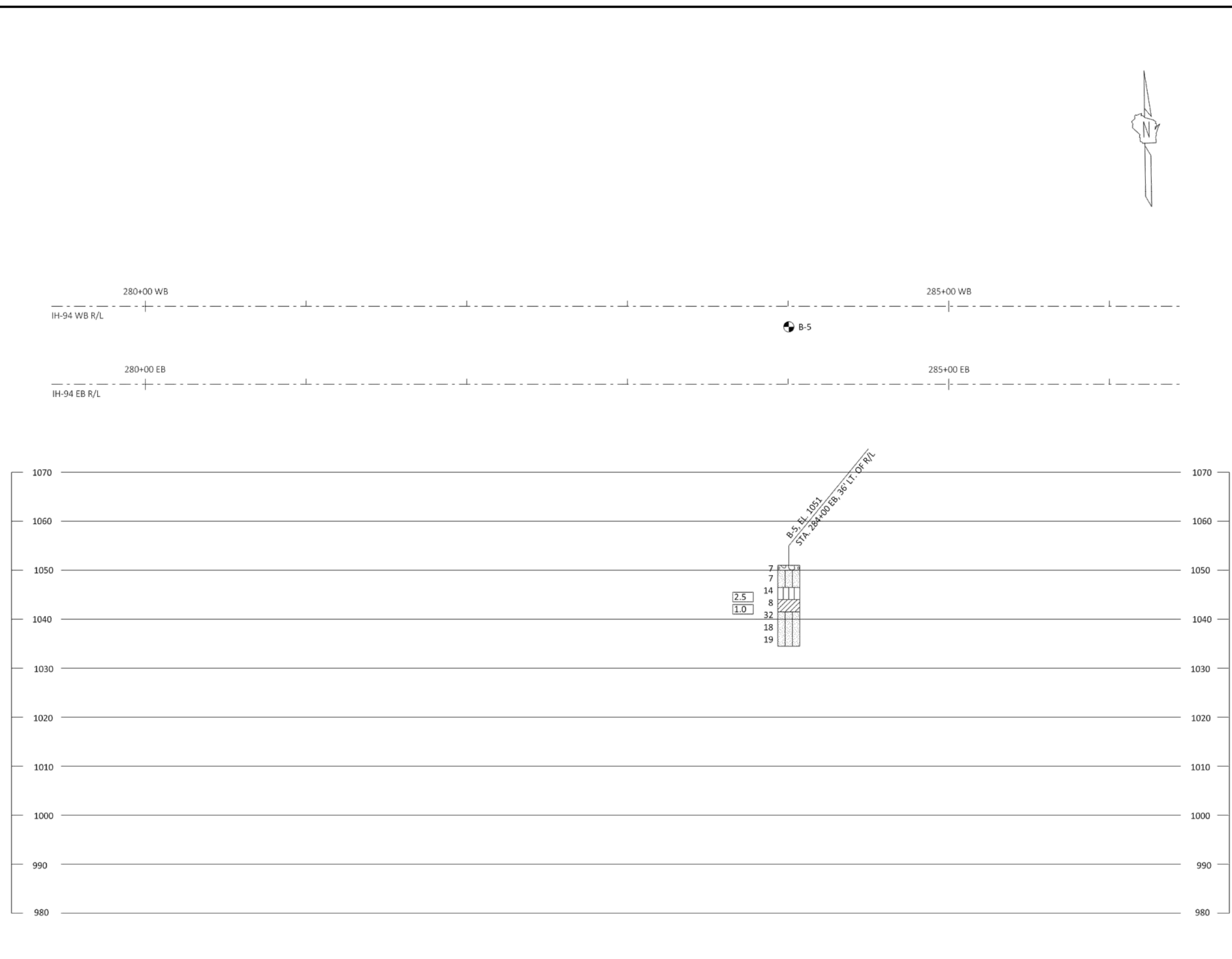
- (1) Unconfined STRENGTH, as determined by a pocket penetrometer (tsf)
- (2) UNLESS OTHERWISE, SPECIFIED THE SPT 'n' VALUE IS BASED ON AASHTO T-206, STANDARD PENETRATION TEST. THE SPT 'n' VALUE PRESENTED HAS NOT BEEN CORRECTED FOR OVERBURDEN PRESSURE OR HAMMER EFFICIENCY.

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

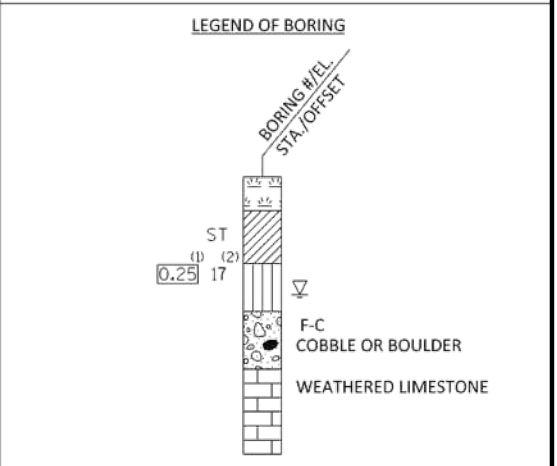
ABBREVIATIONS			
F-FINE	M-MEDIUM	C-COARSE	ST - SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

Borings were completed at points approximately as indicated on this drawing to obtain information concerning the character of subsurface materials found at the site. Because the investigated depths are limited and the area of the borings is very small in relation to the entire site, the Wisconsin Department of Transportation does not warrant similar subsurface conditions below, between, or beyond these borings. Variations in soil conditions should be expected and fluctuations in groundwater levels may occur.



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



(1) Unconfined STRENGTH, as determined by a pocket penetrometer (tsf)

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

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Estimate Of Quantities By Plan Sets

1020-00-84					
Line	Item	Item Description	Unit	Total	Qty
0002	204.0220	Removing Inlets	EACH	1.000	1.000
0006	205.0100	Excavation Common	CY	65.000	65.000
0008	208.0100	Borrow	CY	5,201.000	5,201.000
0010	213.0100	Finishing Roadway (project) 01. 1020-00-84	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	445.000	445.000
0018	611.0430	Reconstructing Inlets	EACH	2.000	2.000
0020	611.0642	Inlet Covers Type MS	EACH	2.000	2.000
0022	611.3902	Inlets Median 2 Grate	EACH	1.000	1.000
0024	611.8115	Adjusting Inlet Covers	EACH	2.000	2.000
0026	613.1100.S	Cable Barrier Type 1	LF	16,918.000	16,918.000
0028	613.1200.S	Cable Barrier End Terminal Type 1	EACH	8.000	8.000
0030	618.0100	Maintenance and Repair of Haul Roads (project) 01. 1020-00-84	EACH	1.000	1.000
0036	619.1000	Mobilization	EACH	0.370	0.370
0038	624.0100	Water	MGAL	7.000	7.000
0040	625.0500	Salvaged Topsoil	SY	22,830.000	22,830.000
0042	627.0200	Mulching	SY	16,040.000	16,040.000
0044	628.1504	Silt Fence	LF	50.000	50.000
0046	628.1520	Silt Fence Maintenance	LF	50.000	50.000
0048	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0050	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0052	628.2008	Erosion Mat Urban Class I Type B	SY	6,790.000	6,790.000
0054	628.7005	Inlet Protection Type A	EACH	8.000	8.000
0056	628.7504	Temporary Ditch Checks	LF	585.000	585.000
0060	629.0210	Fertilizer Type B	CWT	14.390	14.390
0064	630.0180	Seeding Mixture No. 80	LB	167.000	167.000
0066	630.0200	Seeding Temporary	LB	50.000	50.000
0068	630.0500	Seed Water	MGAL	129.000	129.000
0070	642.5001	Field Office Type B	EACH	0.370	0.370
0072	643.0300	Traffic Control Drums	DAY	2,405.000	2,405.000
0074	643.0420	Traffic Control Barricades Type III	DAY	130.000	130.000
0076	643.0705	Traffic Control Warning Lights Type A	DAY	260.000	260.000
0078	643.0715	Traffic Control Warning Lights Type C	DAY	425.000	425.000
0080	643.0800	Traffic Control Arrow Boards	DAY	25.000	25.000
0082	643.0900	Traffic Control Signs	DAY	330.000	330.000
0084	643.1051	Traffic Control Signs PCMS with TMC Communications	DAY	28.000	28.000
0086	643.1205.S	Basic Traffic Queue Warning System	DAY	40.000	40.000
0088	643.5000	Traffic Control	EACH	0.370	0.370
0090	650.9911	Construction Staking Supplemental Control (project) 01. 1020-00-84	EACH	1.000	1.000
0096	650.9920	Construction Staking Slope Stakes	LF	6,944.000	6,944.000
0098	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	800.000	800.000
0100	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0102	SPV.0045	Special 01. Digital Speed Reduction System (DSRS)	DAY	40.000	40.000
0108	SPV.0090	Special 01. Construction Staking Median Cable Barrier	LF	17,138.000	17,138.000

3

EXCAVATION COMMON

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 CY	REMARKS
0010	210+56	-	283+00	IH 94	65	
PROJECT TOTAL =					65	

BORROW

CATEGORY	STATION	TO	STATION	LOCATION	208.0100 CY	REMARKS
0010	210+56	-	283+00	IH 94	5,201	
PROJECT TOTAL =					5,201	

3

BASE MATERIAL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	BAD 3/4-INCH 305.0110 TON	REMARKS
0010	108+43	EB -	156+96	EB IH 94 - SEGMENT 1	126	CROSSOVER TO STH 65
0010	205+67	EB -	237+18	EB IH 94 - SEGMENT 2	82	140TH ST TO CROSSOVER
0010	238+10	EB -	283+08	EB IH 94 - SEGMENT 2	117	CROSSOVER TO CTH J
0010	238+10	WB -	284+40	WB IH 94 - SEGMENT 2	120	CROSSOVER TO CTH J
PROJECT TOTAL =					445	

WATER

CATEGORY	LOCATION	624.0100 MGAL	REMARKS
0010	IH 94 - SEGMENT 1	2	BAD 3/4-INCH
0010	IH 94 - SEGMENT 2	5	BAD 3/4-INCH
PROJECT TOTAL =		7	

INLET SUMMARY

CATEGORY	STATION	OFFSET	LOCATION	REMOVING INLETS 204.0220 EACH	RECONSTRUCTING INLETS 611.0430 EACH	INLETS MEDIAN 2 GRATE 611.3901 EACH	INLETS COVER TYPE MS 611.0642 EACH	ADJUSTING INLET COVERS 611.8115 EACH	REMARKS
0010	210+65	EB 24.6'	LT IH 94	-	1	-	-	-	
0010	228+64	EB 23.2'	LT IH 94	-	1	-	-	-	
0010	235+64	EB 20.5'	LT IH 94	1	-	1	2	-	SAW AND TIE IN TO EX. PIPE
0010	238+04	EB 23.9'	LT IH 94	-	-	-	-	1	
0010	246+66	EB 23.5'	LT IH 94	-	-	-	-	1	
PROJECT TOTALS =				1	2	1	2	2	

CABLE BARRIER SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	CABLE BARRIER TYPE 1 613.1100.S LF	CABLE BARRIER END TERMINAL TYPE 1 613.1200.S EACH	REMARKS
0010	108+43	EB -	156+96	EB IH 94 - SEGMENT 1	4,803	2	CROSSOVER TO STH 65
0010	205+67	EB -	237+18	EB IH 94 - SEGMENT 2	3,097	2	140TH ST TO CROSSOVER
0010	238+10	EB -	283+08	EB IH 94 - SEGMENT 2	4,443	2	CROSSOVER TO CTH J
0010	238+10	WB -	284+40	WB IH 94 - SEGMENT 2	4,575	2	CROSSOVER TO CTH J
PROJECT TOTALS =					16,918	8	

ALL ITEMS ARE CAT 0010 UNLESS NOTED OTHERWISE

EROSION CONTROL ITEMS

CATEGORY	STATION	TO	STATION	LOCATION	EROSION											REMARKS	
					SALVAGED TOPSOIL 625.0500	MULCHING 627.0200	SILT FENCE 628.1504	SILT FENCE MAINTENANCE 628.1520	MAT URBAN CLASS I TYPE B 628.2008	INLET PROTECTION TYPE A 628.7005	TEMPORARY DITCH CHECKS 628.7504	FERTILIZER TYPE B 629.0210	SEEDING MIXTURE NO. 80 630.0180	SEEDING TEMPORARY 630.0200	SEED WATER 630.0500		
0010	210+56	EB/WB -	211+20	EB/WB	IH 94 - SEGMENT 2	290	230	-	-	60	1	24	0.18	3	-	2	
0010	213+50	EB/WB -	237+18	EB/WB	IH 94 - SEGMENT 2	9,240	7,130	-	-	2,110	2	156	5.82	67	-	52	
0010	237+96	WB -	283+00	WB	IH 94 - SEGMENT 2	11,220	7,220	-	-	4,000	5	288	7.07	81	-	63	
0010	PROJECT LIMITS				UNDISTRIBUTED	2,080	1,460	50	50	620	-	117	1.31	16	50	12	
PROJECT TOTALS =						22,830	16,040	50	50	6,790	8	585	14.39	167.0	50.0	129	

MOBILIZATION EROSION CONTROL ITEMS

CATEGORY	LOCATION	MOBILIZATIONS	MOBILIZATIONS	REMARKS
		EROSION CONTROL 628.1905	EMERGENCY EROSION CONTROL 628.1910	
0010	IH 94 - SEGMENT 1	-	-	NO GRADING SEG 1
0010	IH 94 - SEGMENT 2	3	2	
PROJECT TOTALS =		3	2	

ALL ITEMS ARE CAT 0010 UNLESS NOTED OTHERWISE

TRAFFIC CONTROL SUMMARY

CATEGORY	LOCATION	LENGTH (DAYS)	TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES	TRAFFIC CONTROL WARNING LIGHTS	TRAFFIC CONTROL WARNING LIGHTS	TRAFFIC CONTROL ARROW BOARDS	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL PCMS BOARD W/ CELLULAR COMMUNICATIONS	DIGITAL SPEED REDUCTION SYSTEM (DSRS)	REMARKS
			643.0300 DAY	TYPE III 643.0420 DAY	TYPE A 643.0705 DAY	TYPE C 643.0715 DAY	643.0800 DAY	643.0900 DAY	643.1051 DAY	SPV.0045.01 DAY	
0010	IH 94 - SEGMENT 1	10	800	40	80	170	10	120	14	10	EB CLOSURE ONLY
0010	IH 94 - SEGMENT 2	15	1,605	90	180	255	15	210	14	30	EB/WB CLOSURES
PROJECT TOTALS =		25	2,405	130	260	425	25	330	28	40	

BASIC TRAFFIC QUEUE WARNING SYSTEM SUMMARY

CATEGORY	LOCATION	FLASHING BEACON SIGNS	PORTABLE TRAFFIC SENSORS	BASIC QUEUE WARNING SYSTEM
		(FBS) * DAY	(PTS) * DAY	643.1205.S DAY
0010	IH 94 EB - SEGMENT 1	6	3	10
0010	IH 94 EB - SEGMENT 2	6	3	15
0010	IH 94 WB - SEGMENT 2	6	3	15
PROJECT TOTALS =		18	9	40

*THESE ITEMS ARE PART OF THE QWS AND ARE PAID FOR AS ONE COMPLETE SYSTEM PER ROADWAY

CONSTRUCTION STAKING SUMMARY

CATEGORY	STATION TO	STATION	LOCATION	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT)	CONSTRUCTION STAKING SLOPE	CONSTRUCTION STAKING MEDIAN
				01. 1020-00-14 650.9911 EACH	STAKES 650.9920 LF	CABLE BARRIER SPV.0090.01 LF
0010	108+43 -	156+96	IH 94	0.5	-	4,858
0010	205+67 -	284+40	IH 94	0.5	6,944	12,280
PROJECT TOTALS =				1	6,944	17,138

ALL ITEMS ARE CAT 0010 UNLESS NOTED OTHERWISE

CONTRACTOR TO ENSURE POSITIVE DRAINAGE ALONG DITCH LINE.

BP: 100+00.00 WB

BP: 100+00.00 EB

105+00 WB

105+00 EB

110+00 WB

110+00 EB

IH 94 WB

IH 94 EB

EXISTING INLET
STA 107+71 EB

STA 108+43 EB - STA 156+96 EB, 15' LT
 *CABLE BARRIER TYPE I REQ'D
 *CABLE BARRIER END TERMINAL TYPE I REQ'D
 NET LENGTH = 4,858 LF

BEGIN PROJECT
STA. 108+43
Y = 337,049.510
X = 557,172.040

SCALE, FEET

A horizontal scale bar with markings at 0, 50, and 100 feet. The bar is divided into two equal segments by a vertical line at the 50-foot mark.

MATCH LINE 114+75

5

LEGEND



5 |

115+00 WB

115+00 EB

120+00 WB

_____ 120+00 EB _____

125+00 WB

_____ 125+00 EB _____

IH 94 WB

IH 94 EB

EXISTING INLET
STA 118+71 EB

EXISTING INLET
STA 126+71 EB

STA 108+43 EB - STA 156+96 EB, 15' LT
 *CABLE BARRIER TYPE I REQ'D
 *CABLE BARRIER END TERMINAL TYPE I REQ'D
 NET LENGTH = 4,858 LF

MATCH LINE 129+50

MATCH LINE 114+75

LEGEND



SCALE, FEET



PROJECT NO:	1020-00-84
-------------	------------

HWY: IH 94

COUNTY: ST. CROIX

PLAN

SHEET

9

-
-
-

FILE NAME : W:\30902851.000; 1020-00-14, IH 94 CABLE GUARD\CAD\1020-00-14\SHEETS\050201-PN.DWG
LAYOUT NAME - 01

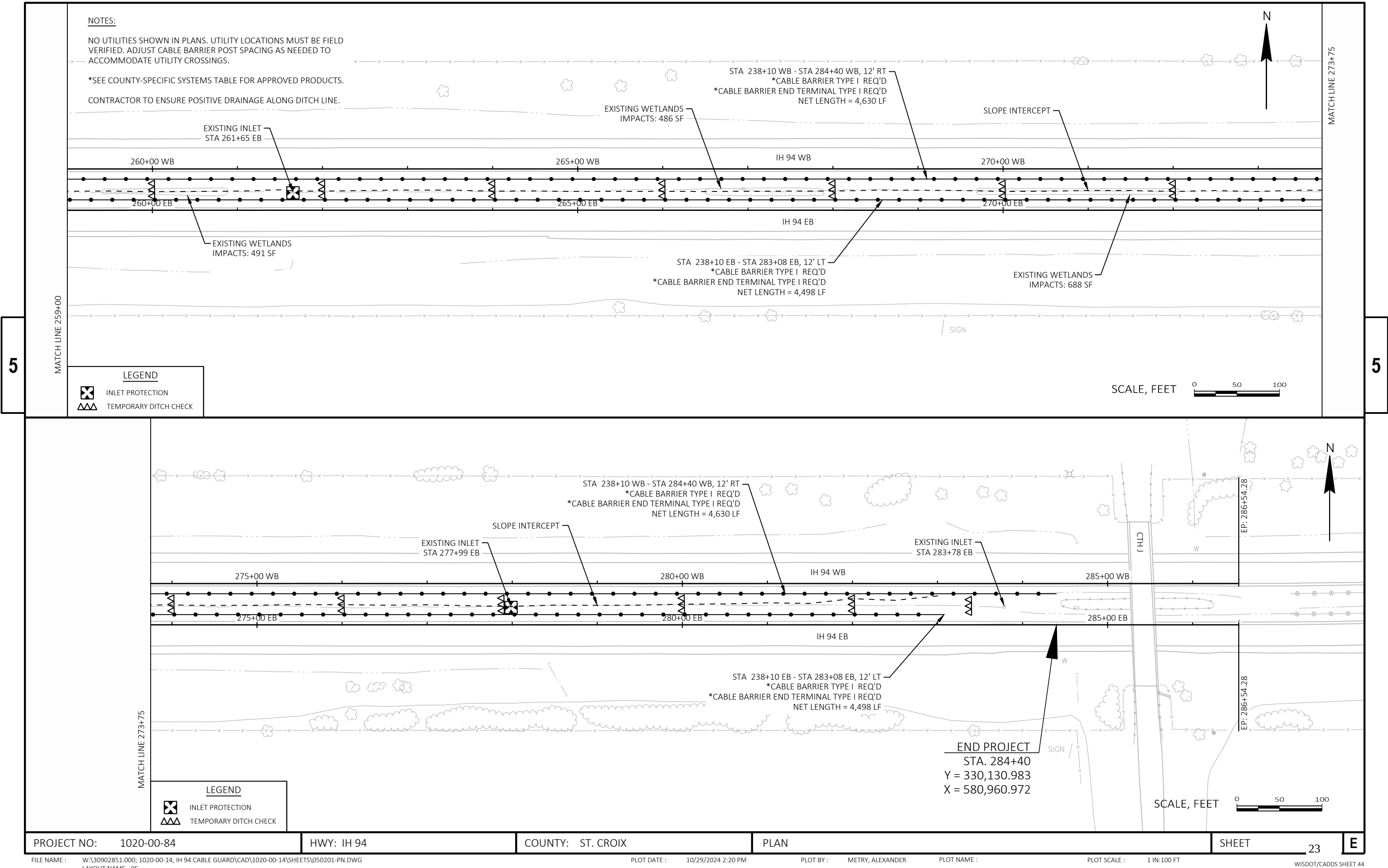
PLOT DATE : 10/29/2024 2:19 PM

PLOT BY : METRY, ALEXANDER

PLOT NAME :

PLOT SCALE : 1 IN:100 FT

WISDOT/CADDS SHEET 44



NOTES:

NO UTILITIES SHOWN IN PLANS. UTILITY LOCATIONS MUST BE FIELD VERIFIED. ADJUST CABLE BARRIER POST SPACING AS NEEDED TO ACCOMMODATE UTILITY CROSSINGS.

*SEE COUNTY-SPECIFIC SYSTEMS TABLE FOR APPROVED PRODUCTS.

CONTRACTOR TO ENSURE POSITIVE DRAINAGE ALONG DITCH LINE.

LEGEND

INLET PROTECTION

TEMPORARY DITCH CHECK

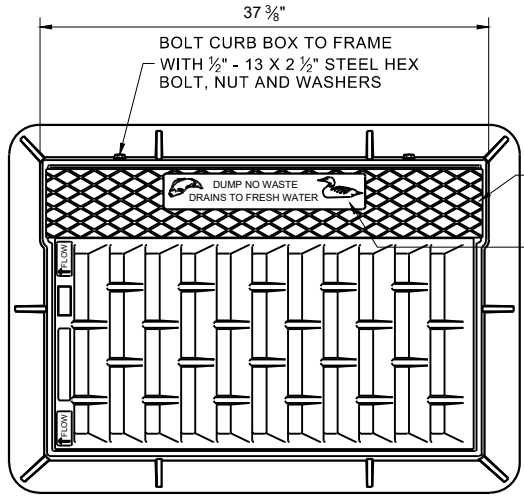
LEGEND

INLET PROTECTION

TEMPORARY DITCH CHECK

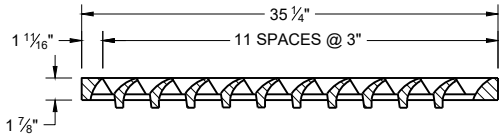
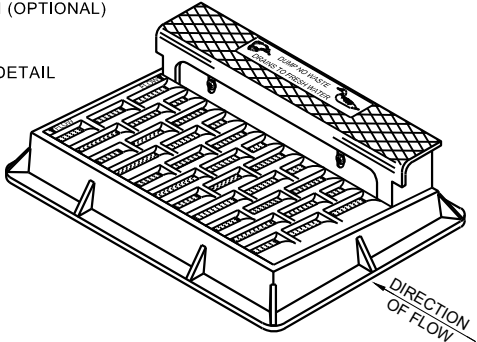
Standard Detail Drawing List

08A05-21A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C08-03	INLETS MEDIAN 1 AND 2 GRATE
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
14B52-03A	CABLE BARRIER TYPE 1 LAYOUT
14B52-03B	CABLE BARRIER TYPE 1 LAYOUT
14B52-03C	CABLE BARRIER TYPE 1 LAYOUT
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

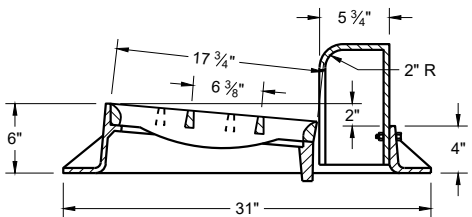
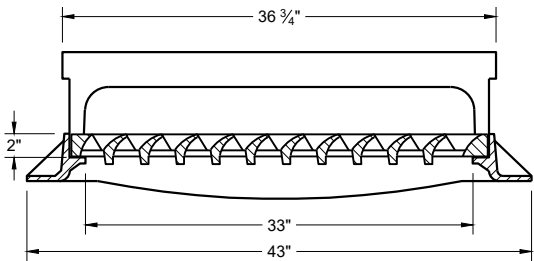
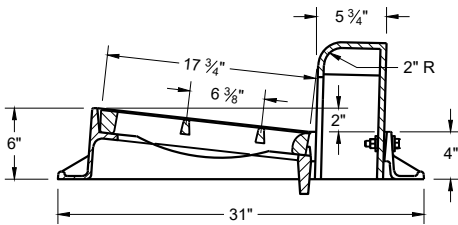
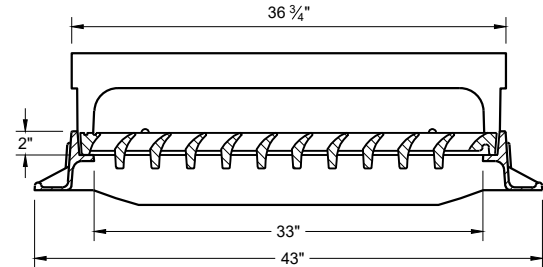


NOTE: EITHER CASTING IS ACCEPTABLE

TYPE "C" CHECKERED TOP DESIGN (OPTIONAL)
SEE LOGO DETAIL

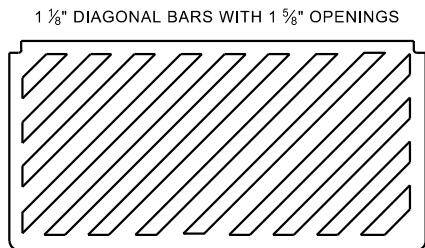


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

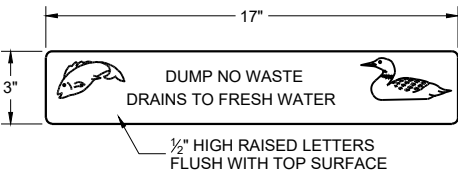


TYPE "H"

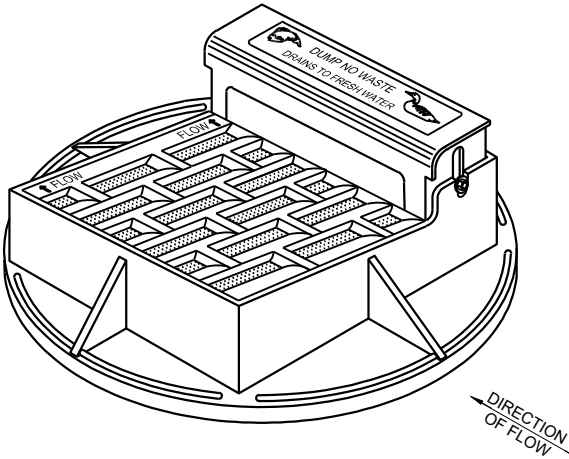
NOTE: EITHER CASTING IS ACCEPTABLE



SPECIAL GRATE FOR TYPE "H" COVER
(MEASURES 35" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)

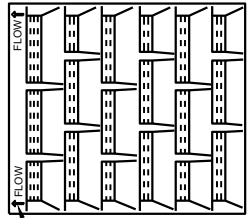


LOGO DETAIL

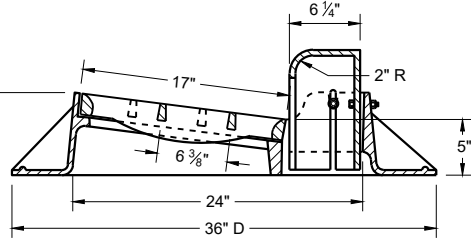
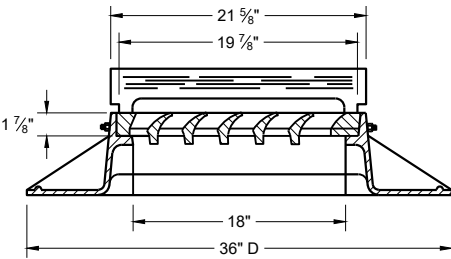
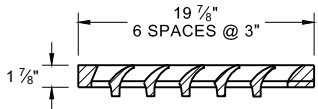


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

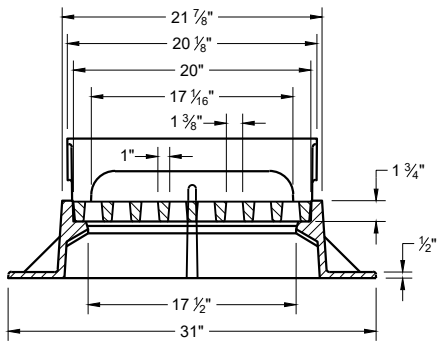
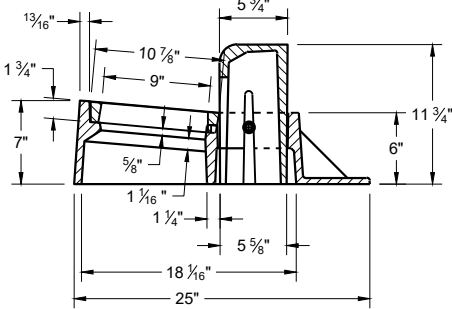
NOTE: EITHER CASTING IS ACCEPTABLE



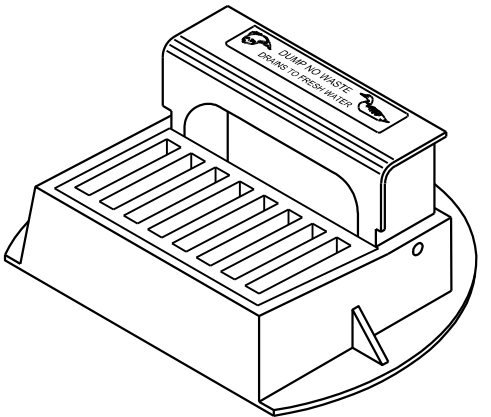
DIRECTION OF FLOW ARROWS



TYPE "A"



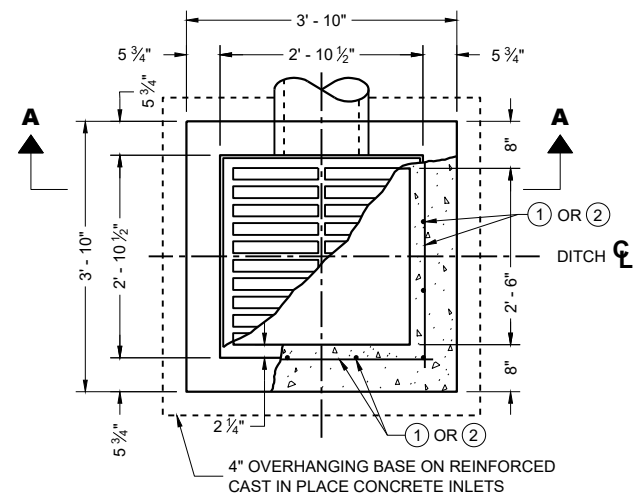
TYPE "Z"



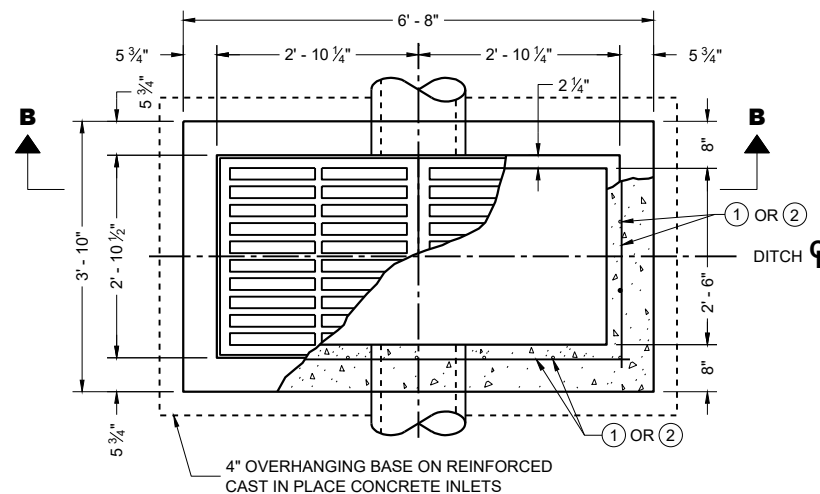
**INLET COVERS
TYPES A, H, A-S, H-S AND Z**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

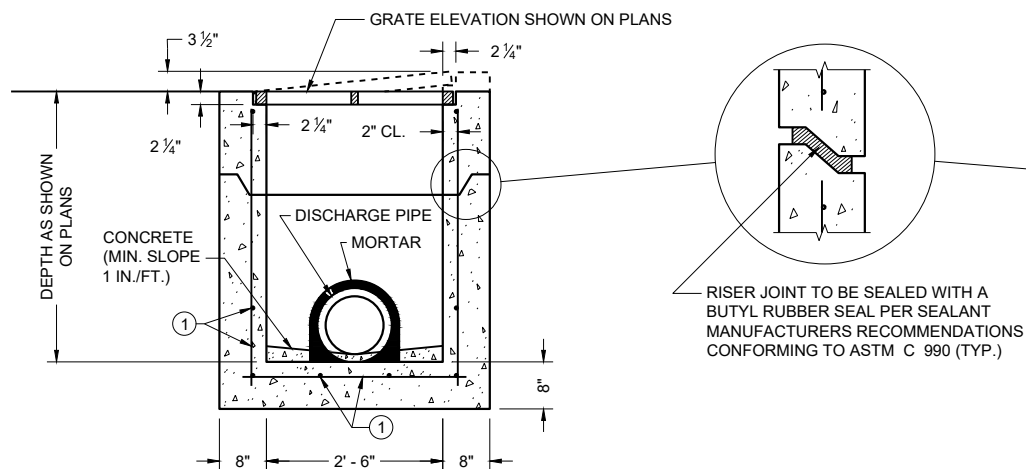
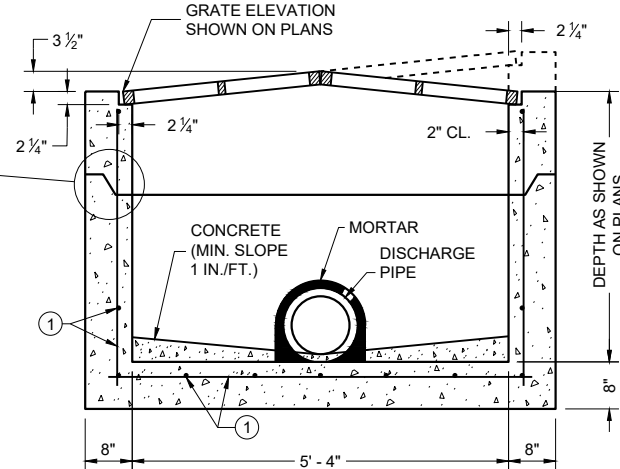
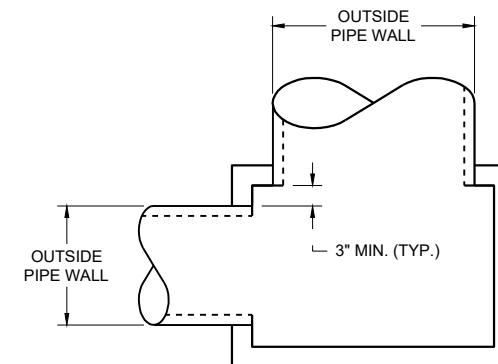
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



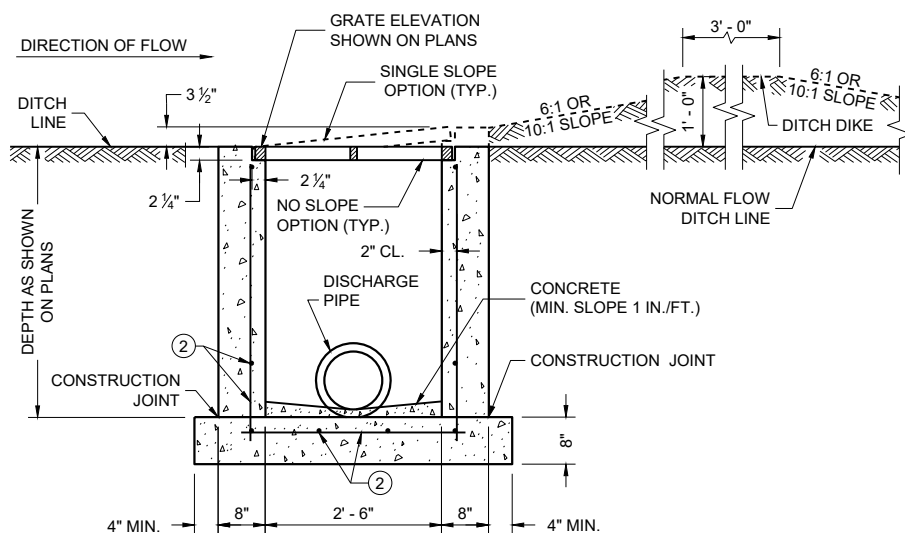
PLAN VIEW



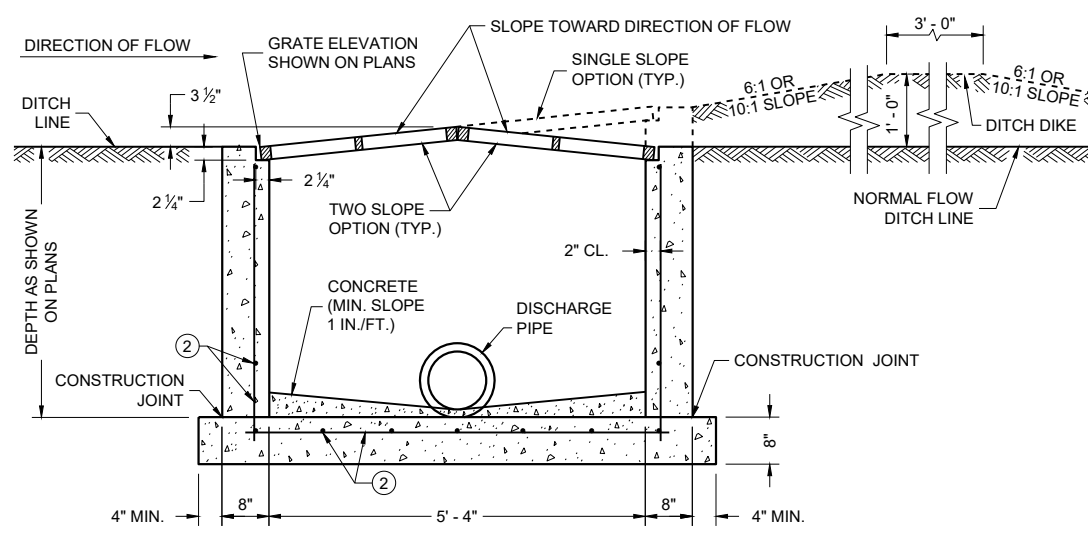
PLAN VIEW

PRECAST REINFORCED CONCRETE
SECTION A - APRECAST REINFORCED CONCRETE
SECTION B - B

DETAIL "A"

REINFORCED CAST IN PLACE CONCRETE
SECTION A - A

INLETS MEDIAN 1 GRATE

REINFORCED CAST IN PLACE CONCRETE
SECTION B - B

INLETS MEDIAN 2 GRATE

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42

INLETS
MEDIAN 1 AND 2 GRATE

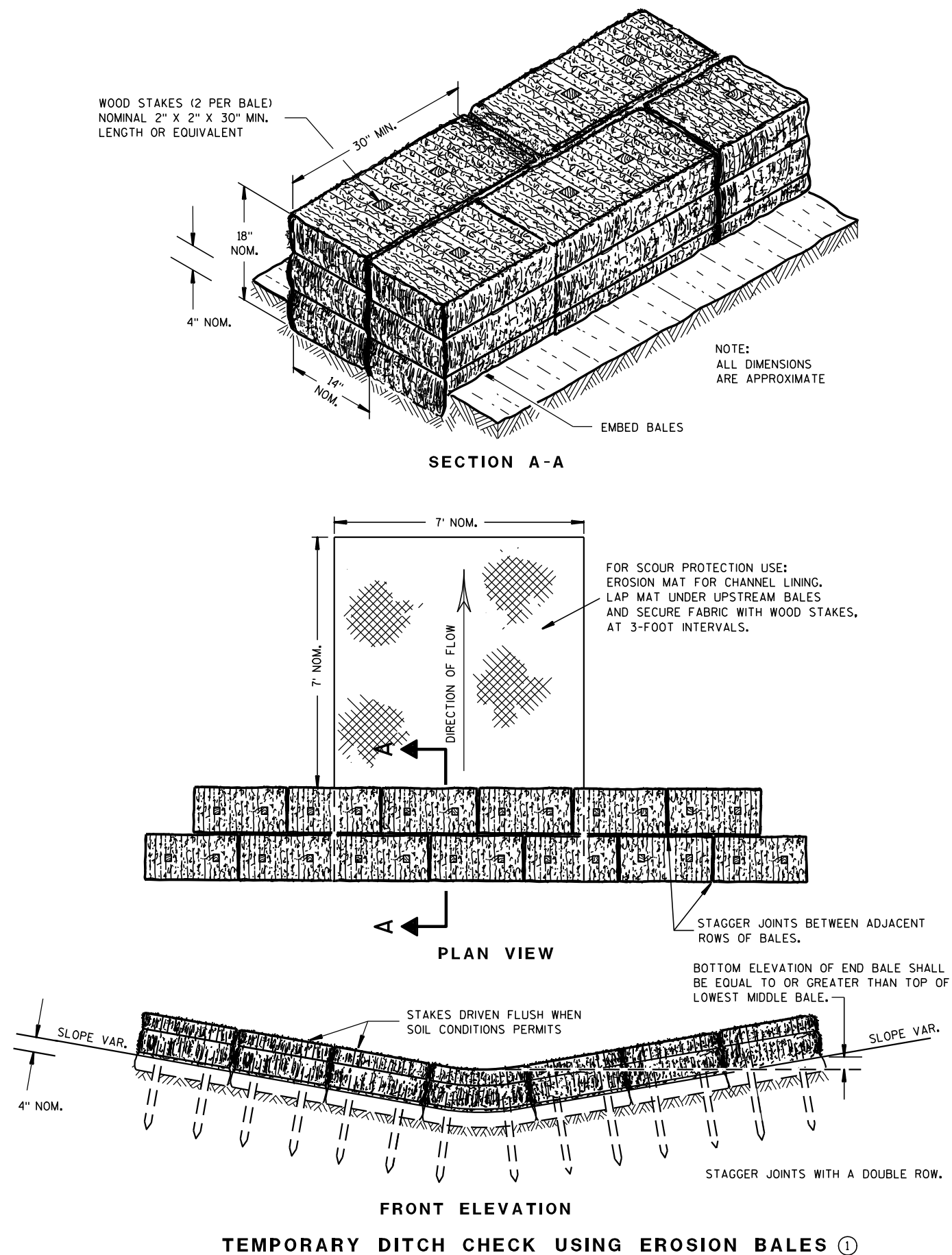
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

December 2023
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR

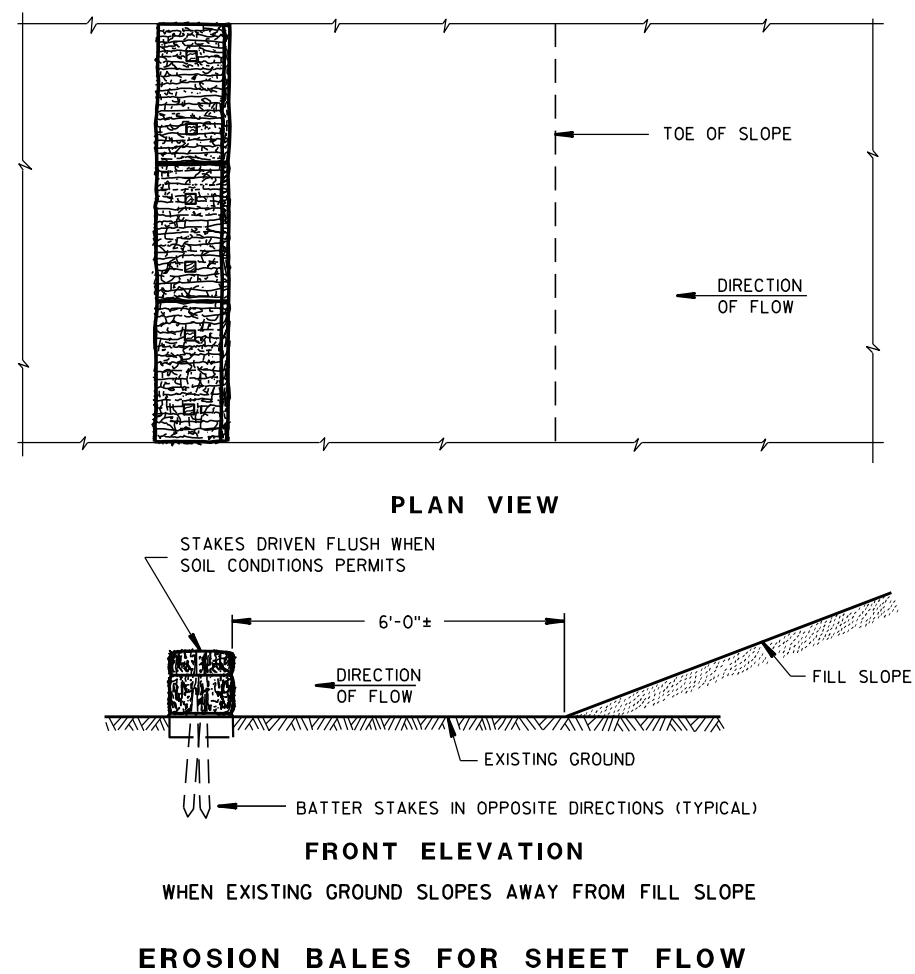
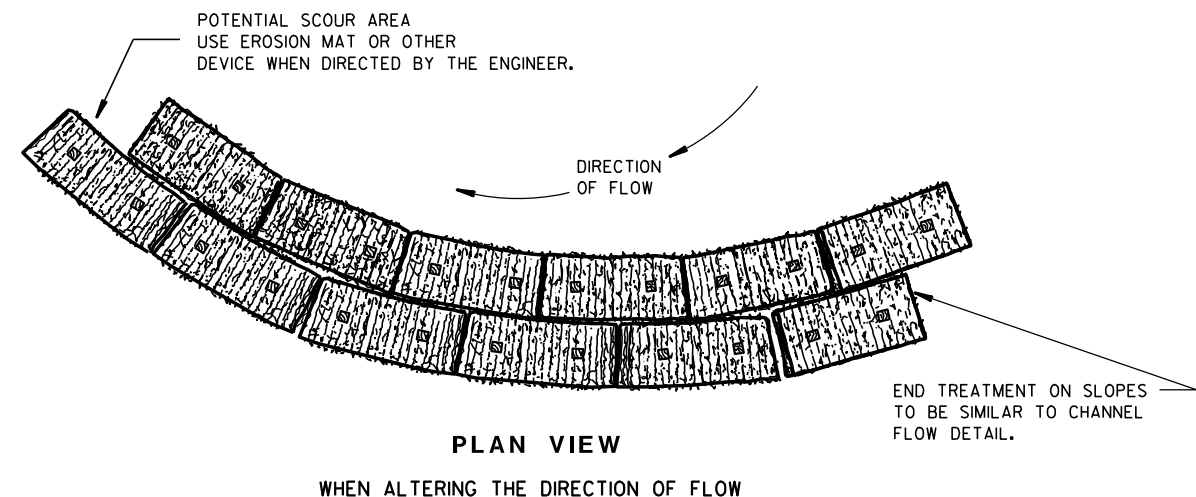
FHWA



GENERAL NOTES

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

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

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

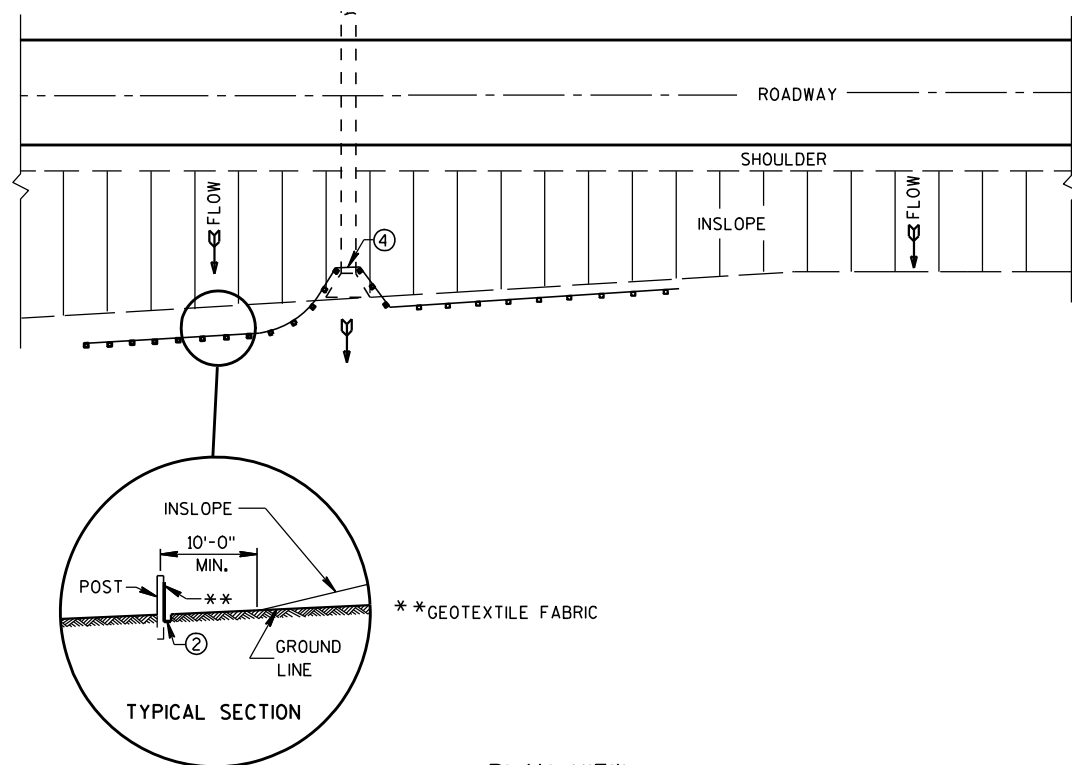
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE/S/ Beth Connors
CHIEF ROADWAY DEVELOPER

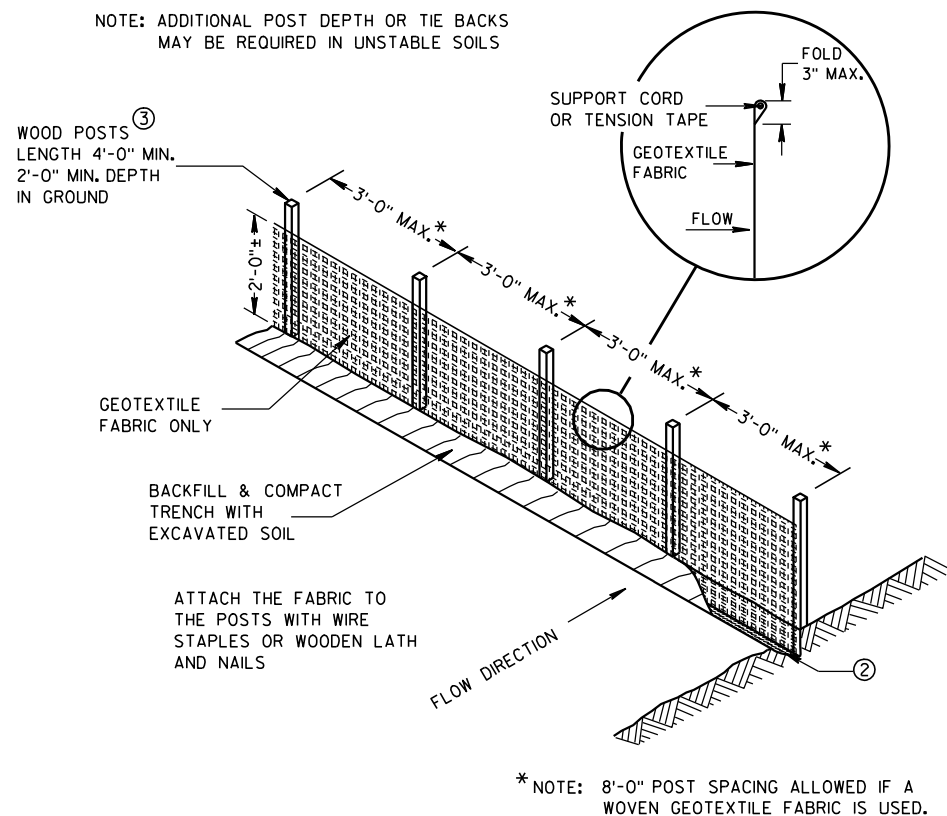
ENGINEER

FHWA

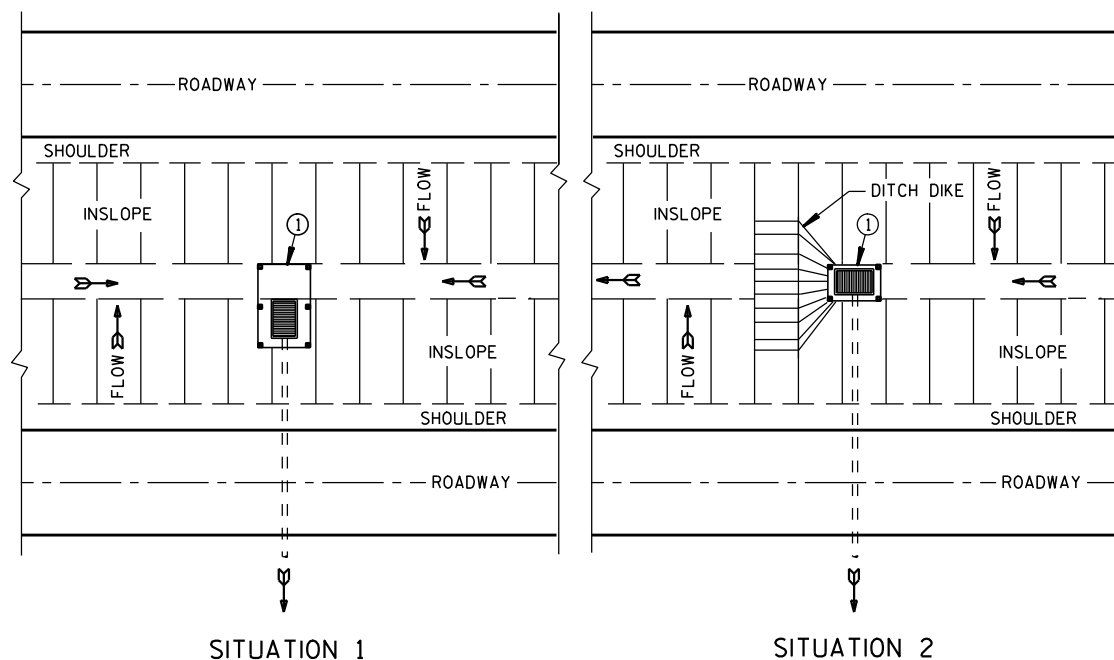


TYPICAL APPLICATION OF SILT FENCE

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

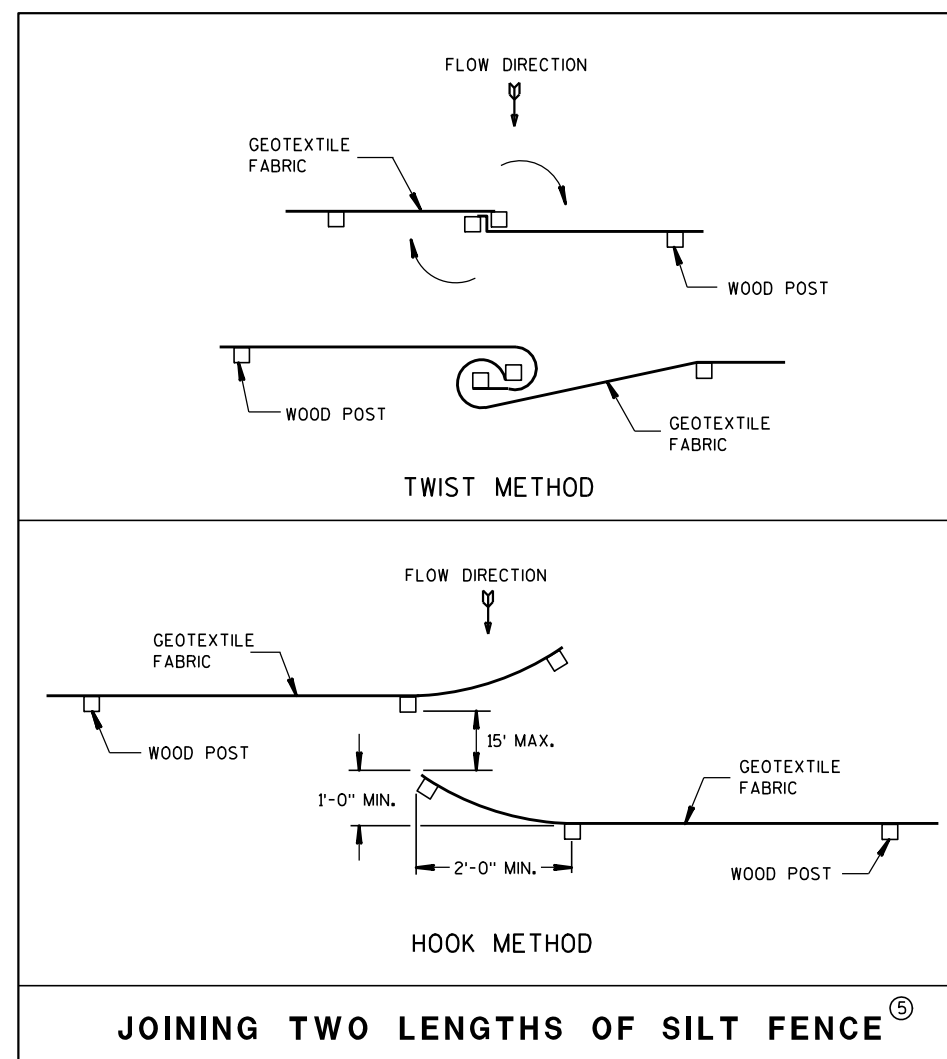


SILT FENCE



PLAN VIEW

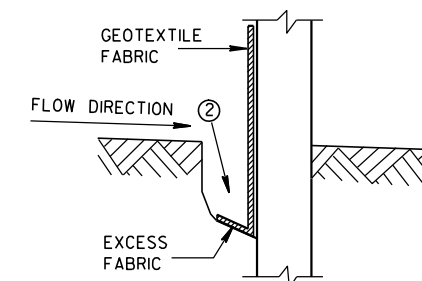
SILT FENCE AT MEDIAN SURFACE DRAINS



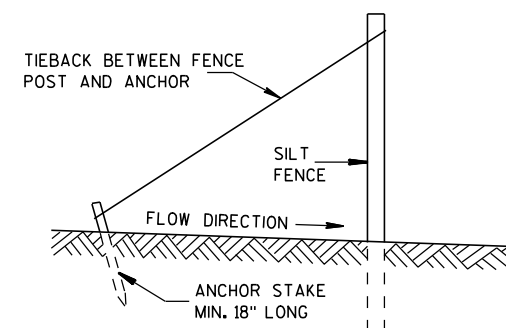
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK (WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05

DATE

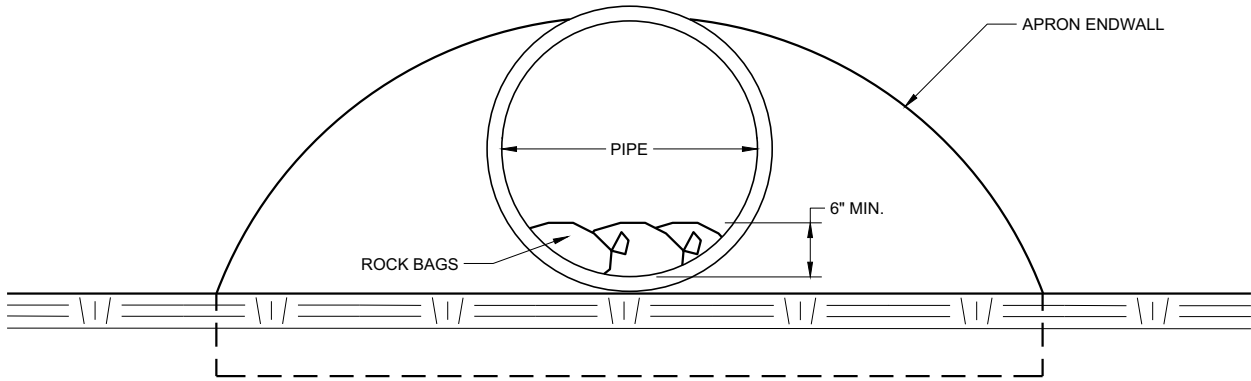
/S/ Beth Conn

CHIEF ROADWAY DEVELOPER

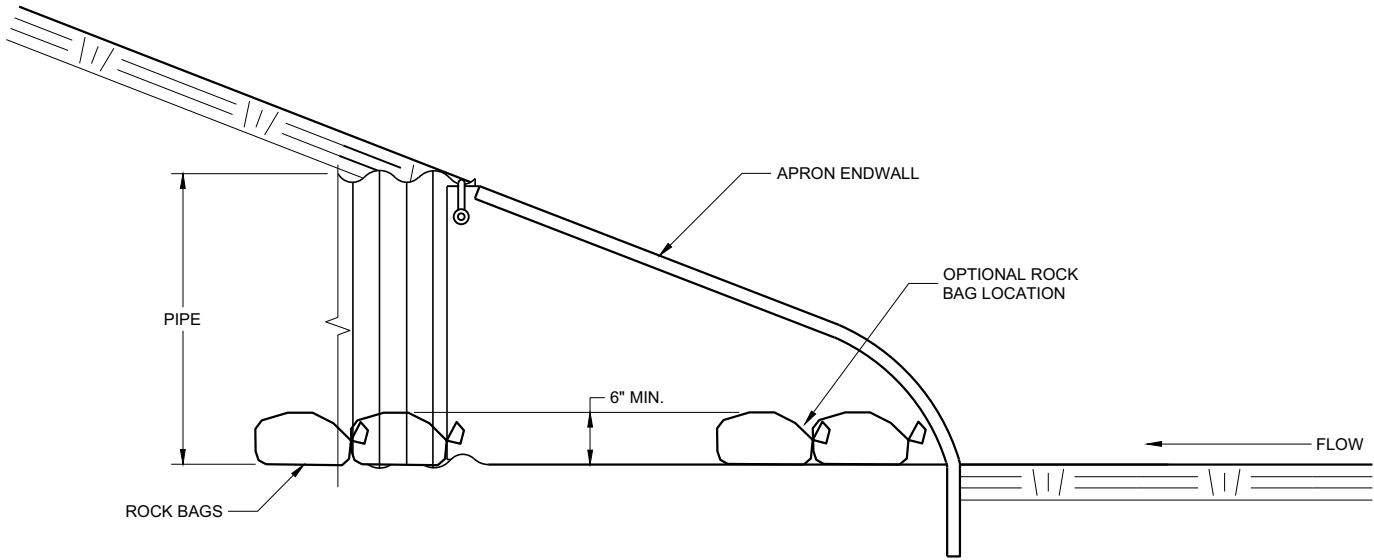
FHWA

ENGINEER

S.D.D. 8 E 10-2



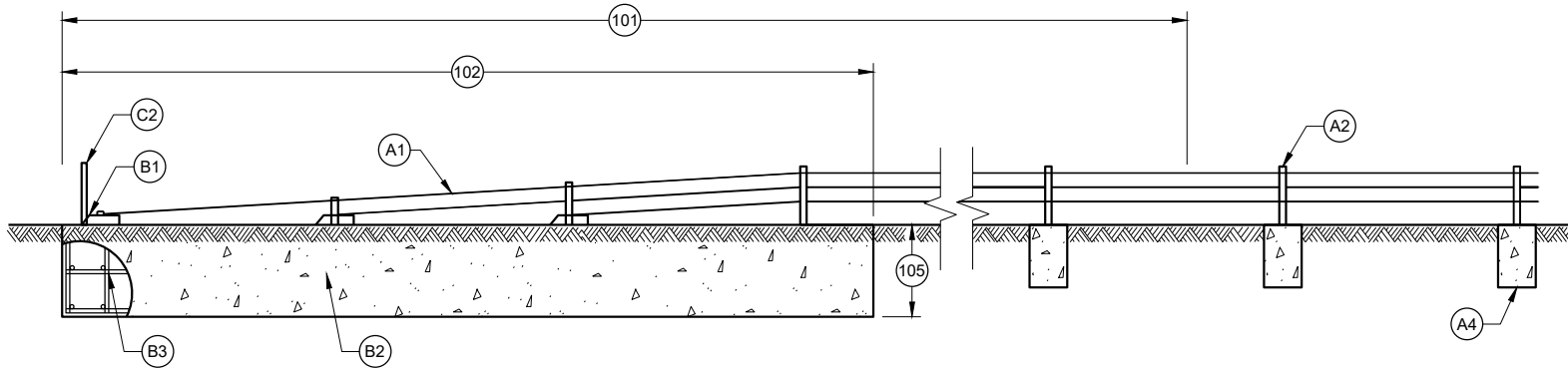
END VIEW



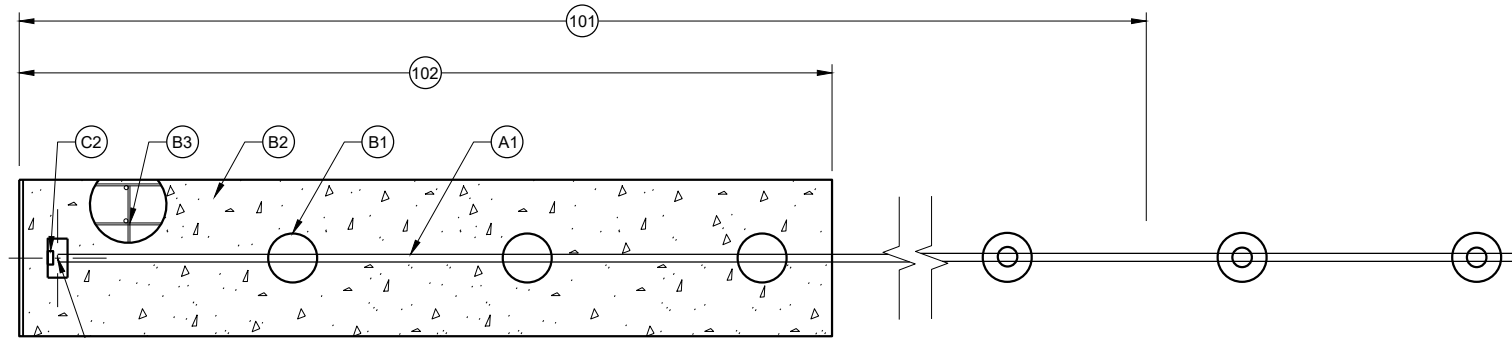
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI	30
FHWA		



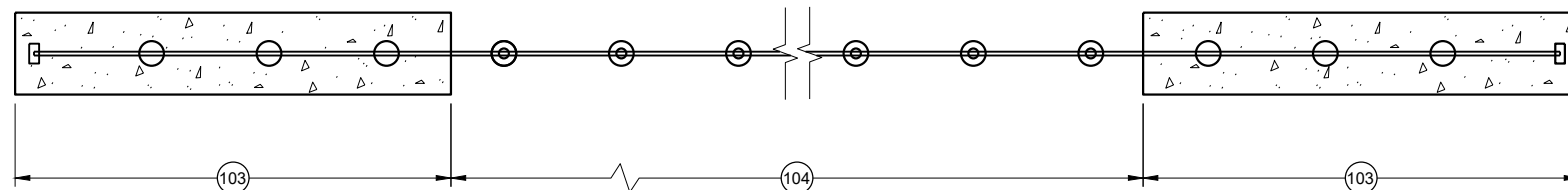
PROFILE VIEW



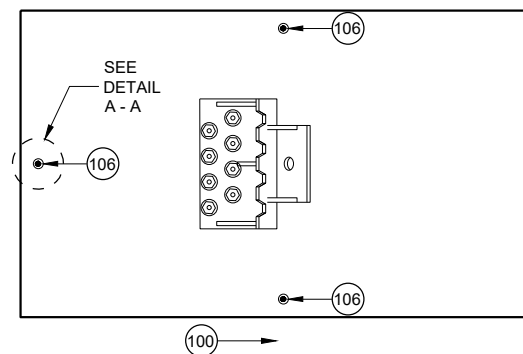
LOCATION OF STATION OFFSET FOR
CABLE BARRIER END TERMINAL

PLAN VIEW

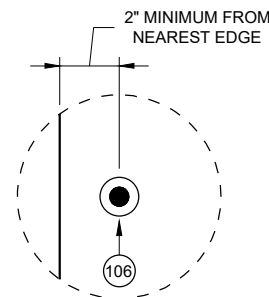
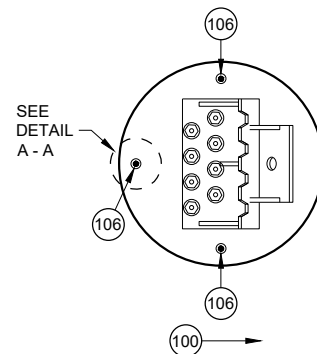
TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW



**ANCHOR MONITOR POINTS FOR
CABLE BARRIER END TERMINAL ANCHORS**



DETAIL A - A

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POSTS PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICATED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

CONSTRUCT SHAFTS VERTICALLY. VERTICAL TOLERANCE OF SHAFT IS $\frac{1}{8}$ " PER FOOT OF DEPTH. SHAFTS ARE TO MINIMIZE DISTURBANCE TO ADJACENT SOILS.

SECURE STEEL REINFORCEMENT AND STEEL SLEEVE PRIOR TO PLACEMENT OF CONCRETE. MAINTAIN CLEAR DISTANCE BETWEEN SOIL AND REINFORCEMENT CAGE.

PLACE CONCRETE IN ONE CONTINUOUS POUR FOR EACH FOOTING. USE VIBRATION TO CONSOLIDATE CONCRETE.

PROVIDE CASING AS NECESSARY TO PREVENT INTRUSION OF UNCONSOLIDATED MATERIALS OR WATER. USE CASINGS WHEN THERE IS 3 OR MORE INCHES OF WATER IN EXCAVATION.

PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN USING A CASING AND CONSTRUCTION SEQUENCE. PROJECT ENGINEER WILL REVIEW AND APPROVED CASING DESIGN AND CONSTRUCTION SEQUENCE. CASING IS TO HAVE INTIMATE CONTACT WITH SHAFT SIDEWALL. CASING IT TO WITHSTAND INSERTION STRESS, REMOVAL STRESS, CONCRETE PRESSURE AND SOIL PRESSURE. REMOVE CASING DURING CONCRETE PLACEMENT OR IMMEDIATELY AFTER CONCRETE PLACEMENT. NO TEMPORARY CASING MAY REMAIN IN-PLACE.

PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN AND CONSTRUCTION SEQUENCE WHEN OVER EXCAVATION IS REQUIRED NEAR A FOOTING. PROJECT ENGINEER WILL REVIEW AND APPROVED DESIGN AND CONSTRUCTION SEQUENCE.

FINISH TOP OF FOOTINGS TO THE DIMENSIONS INDICATED IN PLAN. REMOVE EXCESS CONCRETE.

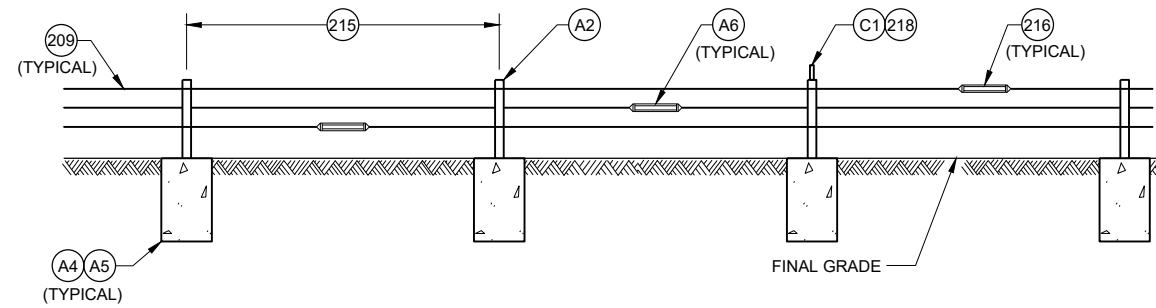
DESIGN POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A NCHRP 350 TL-3 SMALL CAR.

USE MARINE GRADE ANTI-SEIZE LUBRICANT FOR THREADING FITTINGS THAT IS ACCEPTABLE FOR USE ON GALVANIZED STEEL.

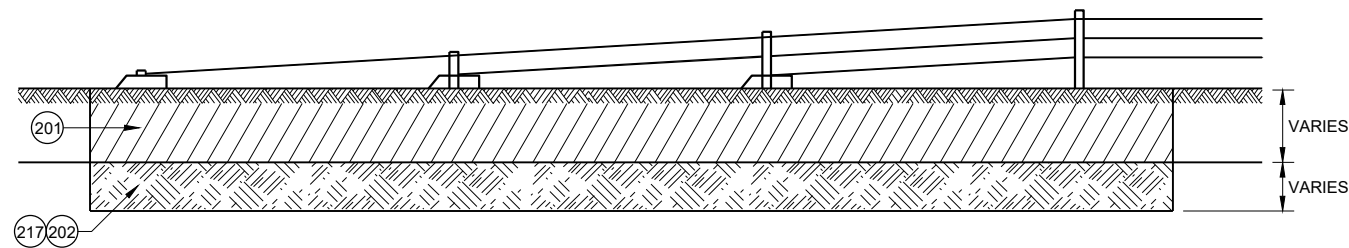
- 100 DIRECTION THAT THE CABLE PULLS THE END ANCHOR FOOTING
- 101 LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 102 PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 103 CABLE BARRIER END TERMINAL
- 104 CABLE BARRIER AND LINE POSTS
- 105 IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.
- 106 ANCHOR MONITOR POINTS ARE GALVANIZED SURVEY NAIL, OR MASONRY NAIL, PLACED INTO CONCRETE FOOTING BEFORE HARDENING. IF THERE ARE MULTIPLE ANCHOR POINTS WITHIN A PAY LIMIT FOR A CABLE BARRIER END TERMINAL, EACH ANCHOR POINT NEEDS THREE ANCHOR MONITOR POINTS.

CABLE BARRIER TYPE 1 LAYOUT

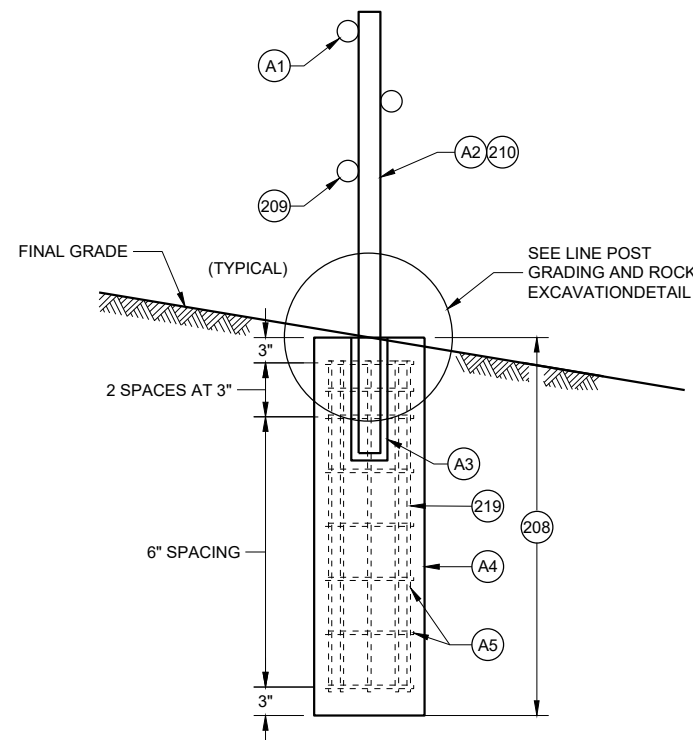
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



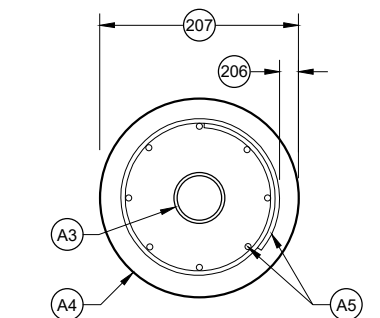
**PROFILE VIEW
LINE POST INSTALLATION**



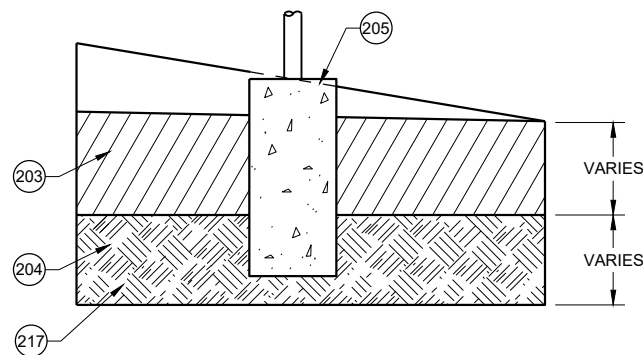
**CABLE BARRIER END TERMINAL
ROCK EXCAVATION DETAIL**



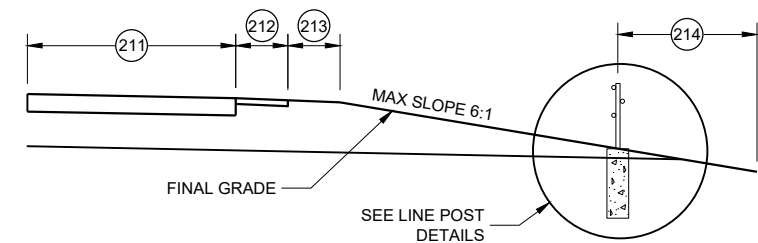
CROSS SECTION



**PROFILE VIEW
(LINE POSTS AND CABLES NOT SHOWN)**



**LINE POST GRADING
AND ROCK EXCAVATION DETAIL**



CABLE BARRIER OFFSET FROM DITCH LINE

GENERAL NOTES

- (201) SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES)
- (202) ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES)
- (203) SOIL TO BE EXCAVATED FOR LINE POST (VARIES)
- (204) ROCK TO BE EXCAVATED FOR LINE POST (VARIES)
- (205) EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.
- (206) 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.
- (207) DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURERS' INFORMATION.
- (208) MINIMUM DEPTH OF LINE POST FOOTING IS 4' - 0" IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.
- (209) NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURERS' INFORMATION.
- (210) LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURERS' INFORMATION.
- (211) LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.
- (212) PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- (213) GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- (214) CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.
- (215) MAXIMUM POST SPACING IS 15 FEET.
- (216) STAGGER TURNBUCKLES (TYPICAL).
- (217) SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.
- (218) LINE POST DELINEATOR SPACING IS 100 FEET.
- (219) MINIMUM LINE POST FOOTING REINFORCEMENT SHOWN. MANUFACTURER IS TO INDICATE REINFORCEMENT IS ADEQUATE FOR THEIR SYSTEM. IF REINFORCEMENT IS NOT ADEQUATE, PROVIDE FOOTING DESIGN WITH A ADEQUATE REINFORCEMENT.

**CABLE BARRIER
TYPE 1 LAYOUT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
(A1)	3 OR 4	¾" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	AASHTO M30 TYPE 1 CLASS A OR ASTM A741 TYPE 1 CLASS A WITH MINIMUM BREAKING STRENGTH = 39 KIPS (173.5 KN)
(A2)	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
(A3)	1 PER LINE POST	GALVANIZED STEEL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
(A4)	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES. STANDARD SPECIFICATION 716 QMP FOR CLASS II ANCILLARY CONCRETE SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
(A5)	MINIMUM REINFORCEMENT: 8 HORIZONTAL LOOP BARS 8 VERTICAL BARS	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505. ALL BARS ARE NO. 4 BARS
(A6)	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS. MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE. TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATION AND DETAILS. PROVIDE DOCUMENTATION THAT THE FITTINGS ARE STRONGER THAN THE CABLE BARRIER. DOCUMENTATION IS TO INCLUDE: MANUFACTURER NAME, TESTING RESULTS, AND DATE OF TESTING.
(B1)	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
(B2)	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2. STANDARD SPECIFICATION 716 QMP FOR CLASS II ANCILLARY CONCRETE
(B3)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(C1)	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVED PRODUCT LIST YELLOW.
(C2)	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVED PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN

CABLE BARRIER
TYPE 1 LAYOUT

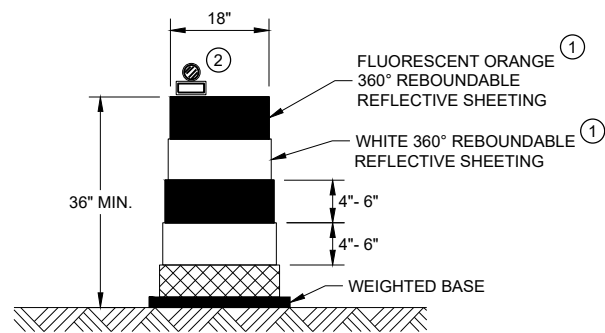
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

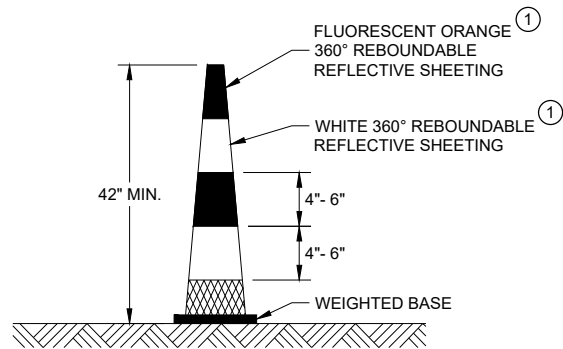
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

33

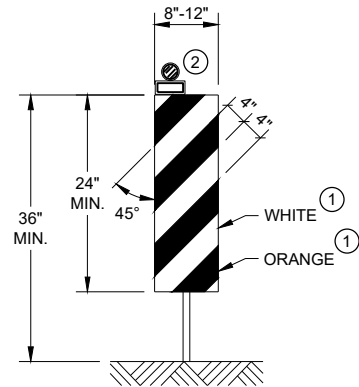
FHWA



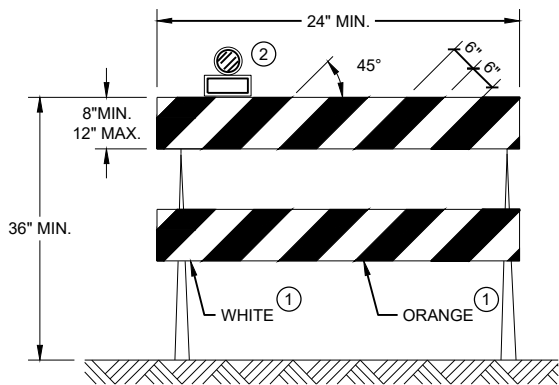
DRUM
BALLAST WIDTHS
RANGE FROM 24"-36"



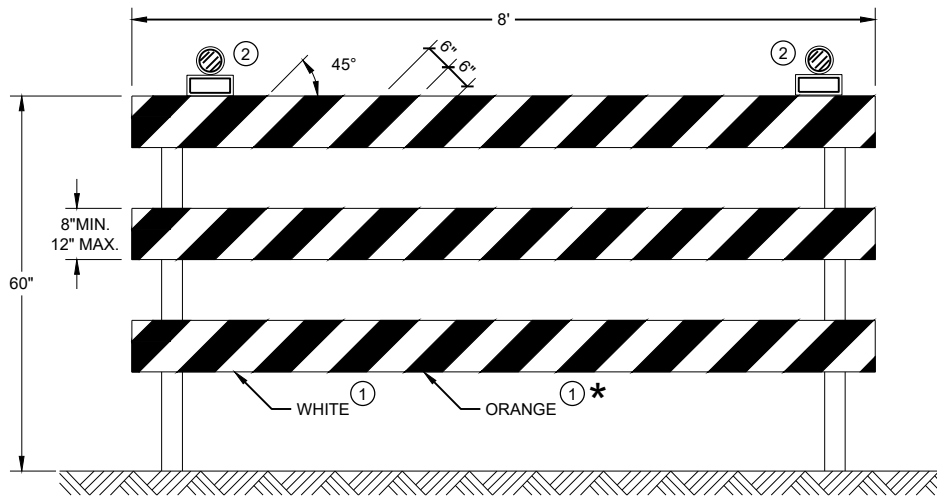
42" CONE
DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



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



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



TYPE III BARRICADE
IF SIGN MOUNTED, DO NOT COVER MORE THAN 50% OF THE TOP
TWO RAILS OR 33% OF THE TOTAL AREA OF THE THREE RAILS.
* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED November 2022 DATE	/S/ Andrew Heidtke WORK ZONE ENGINEER 34
FHWA	

LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

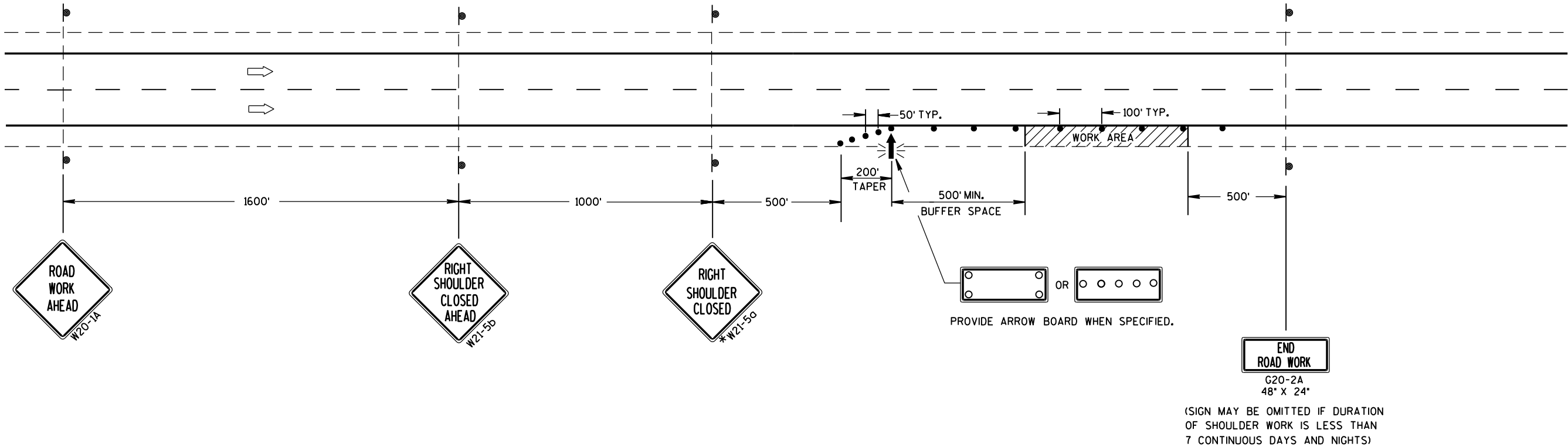
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.

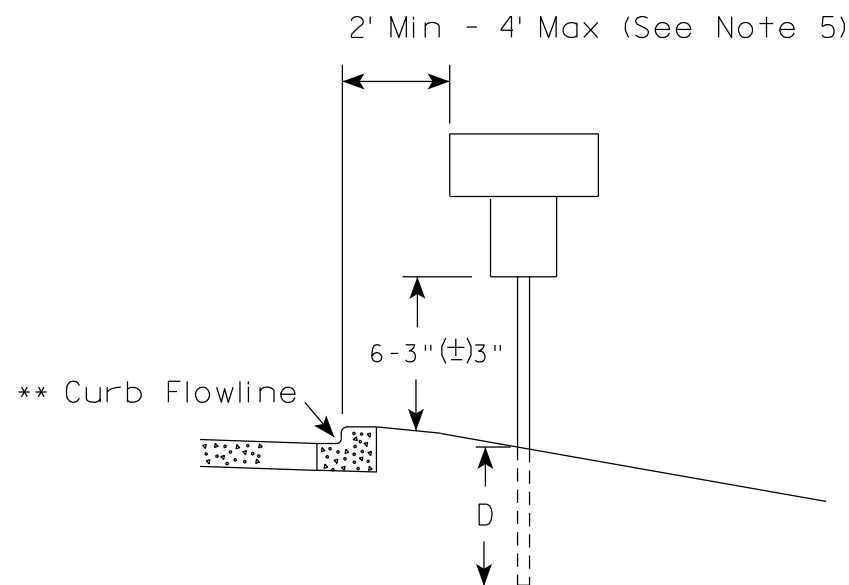
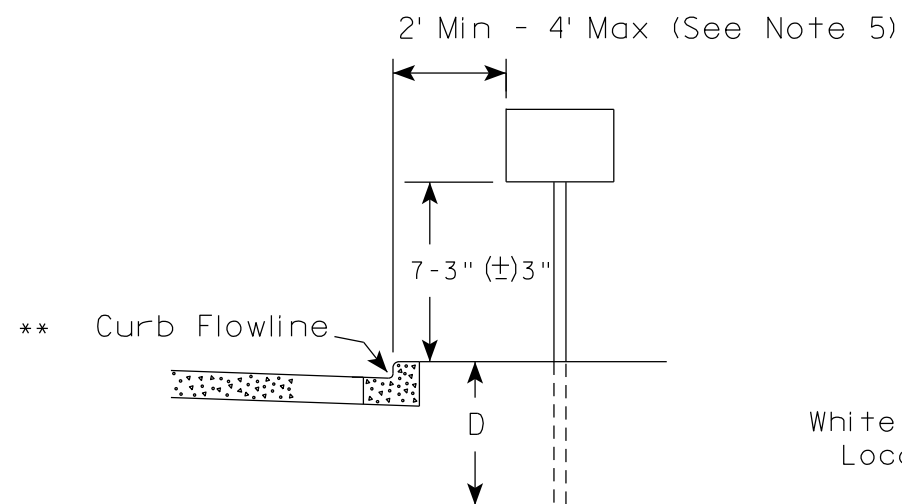


TRAFFIC CONTROL
SHOULDER CLOSURE ON DIVIDED
ROADWAY, SPEEDS GREATER
THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

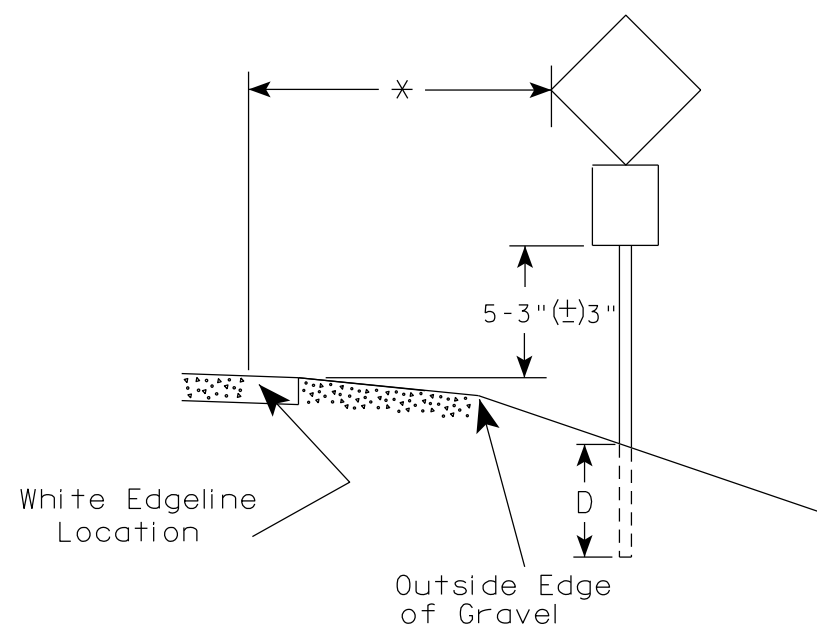
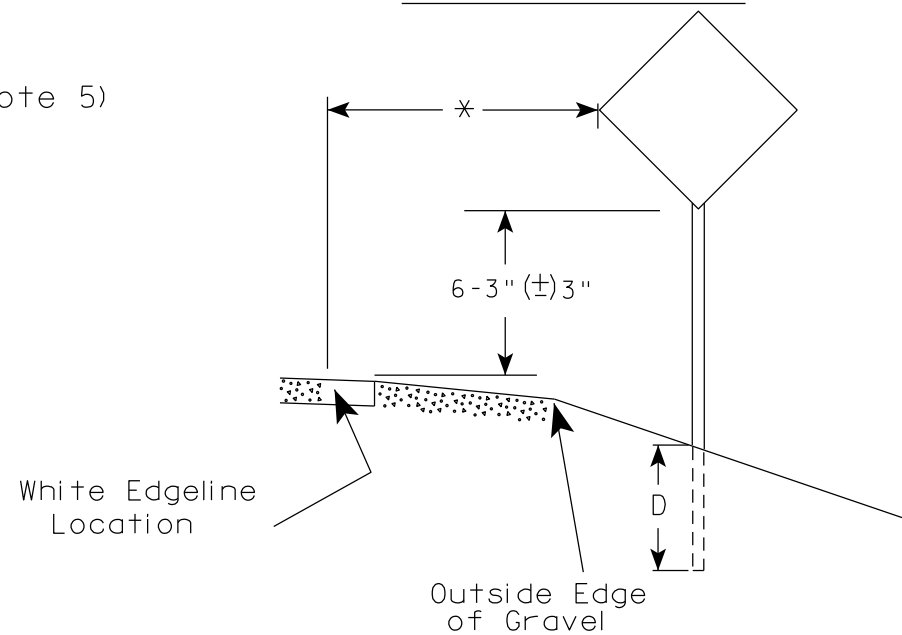
APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

URBAN AREA



* * 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.

RURAL AREA (See Note 2)



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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 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".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 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'

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Matthew R. Rauch
for State Traffic Engineer

DATE 12/6/23

PLATE NO. A4-3.23

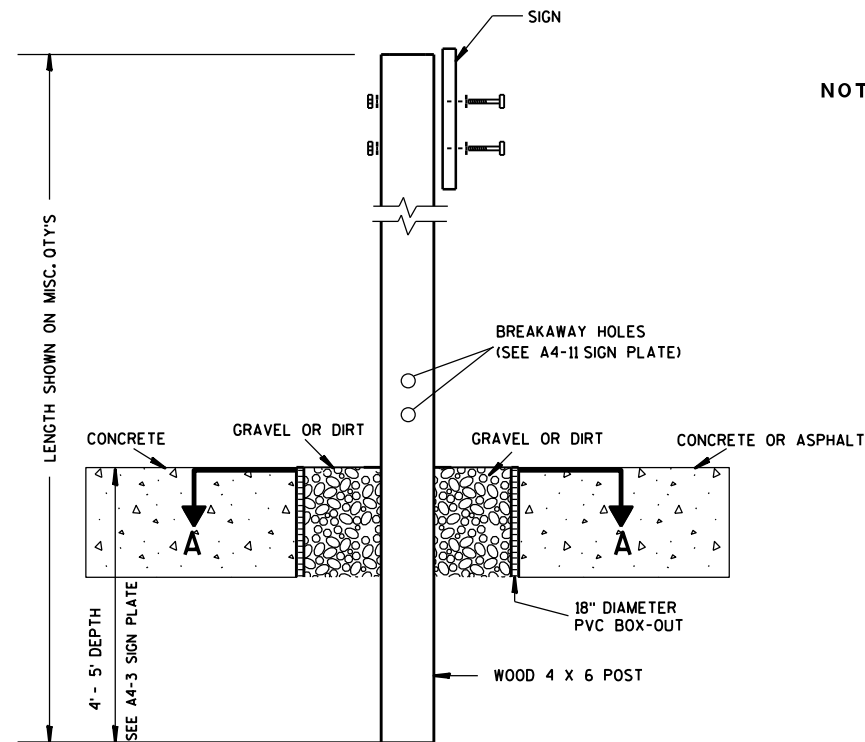
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 36

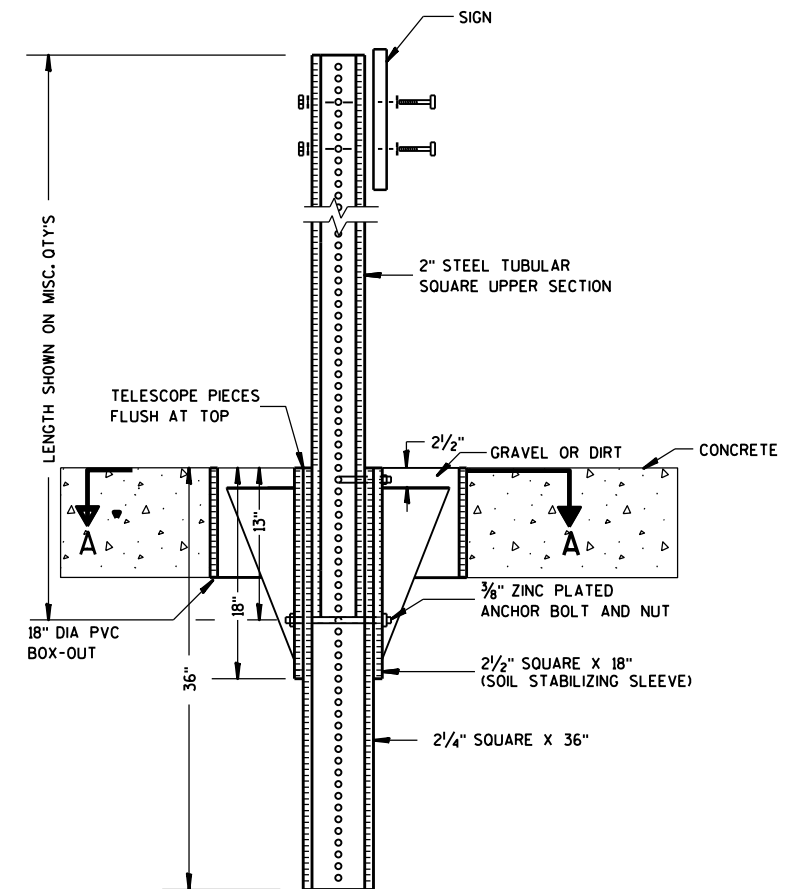
E



ELEVATION VIEW

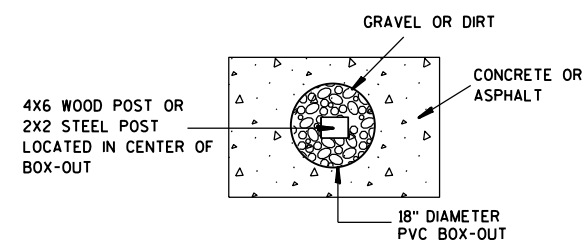
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 37 A4-3B.1

PROJECT NO:

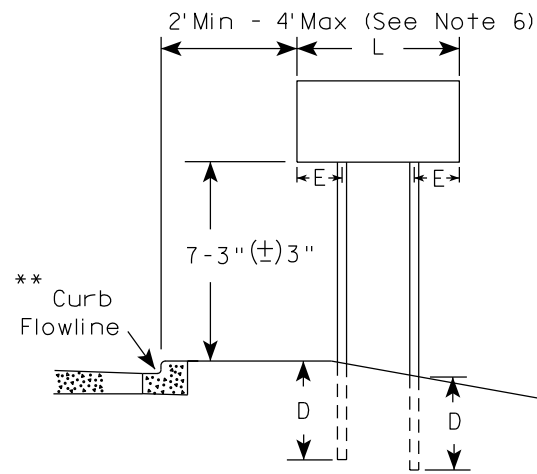
HWY:

COUNTY:

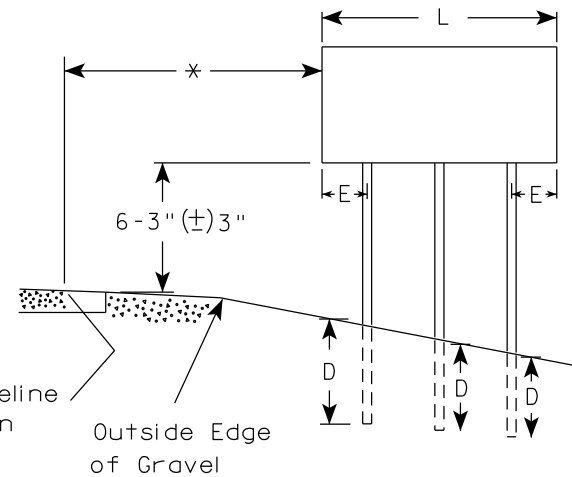
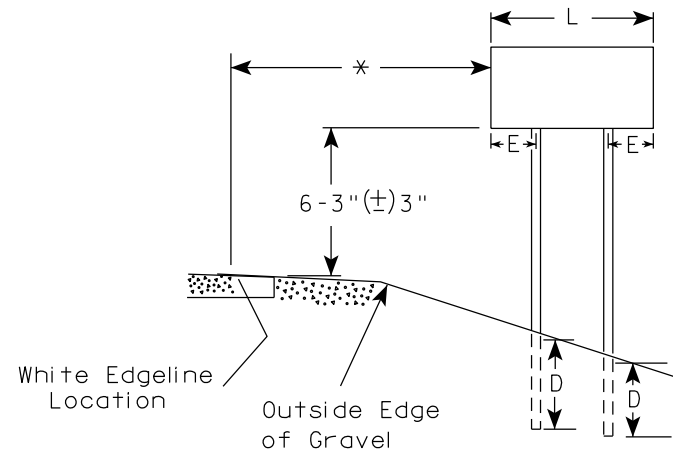
SHEET NO:

E

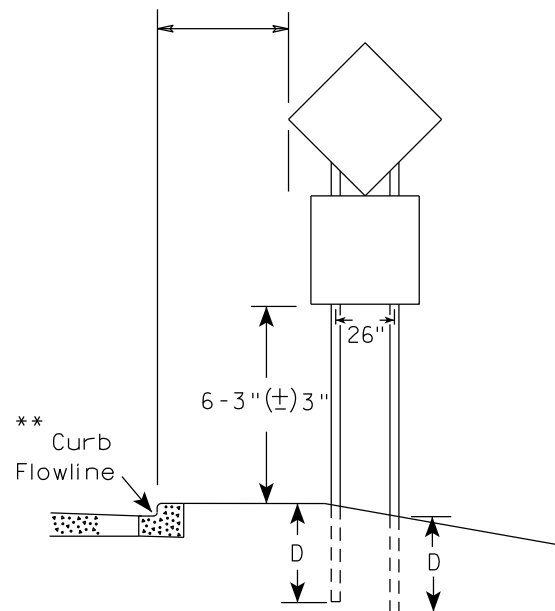
URBAN AREA



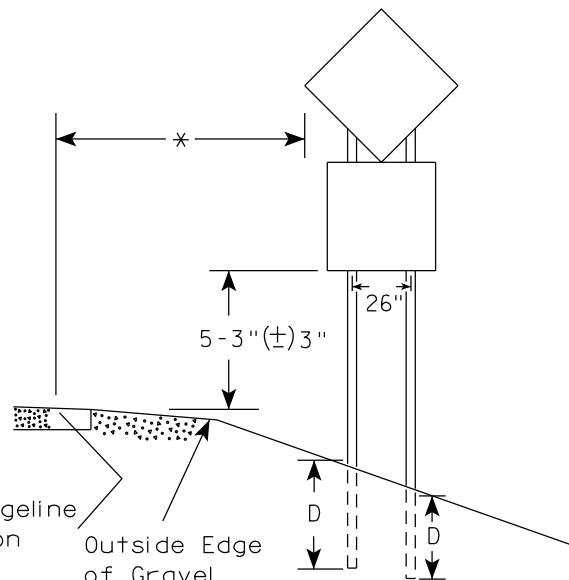
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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 12/6/23 PLATE NO. A4-4.16

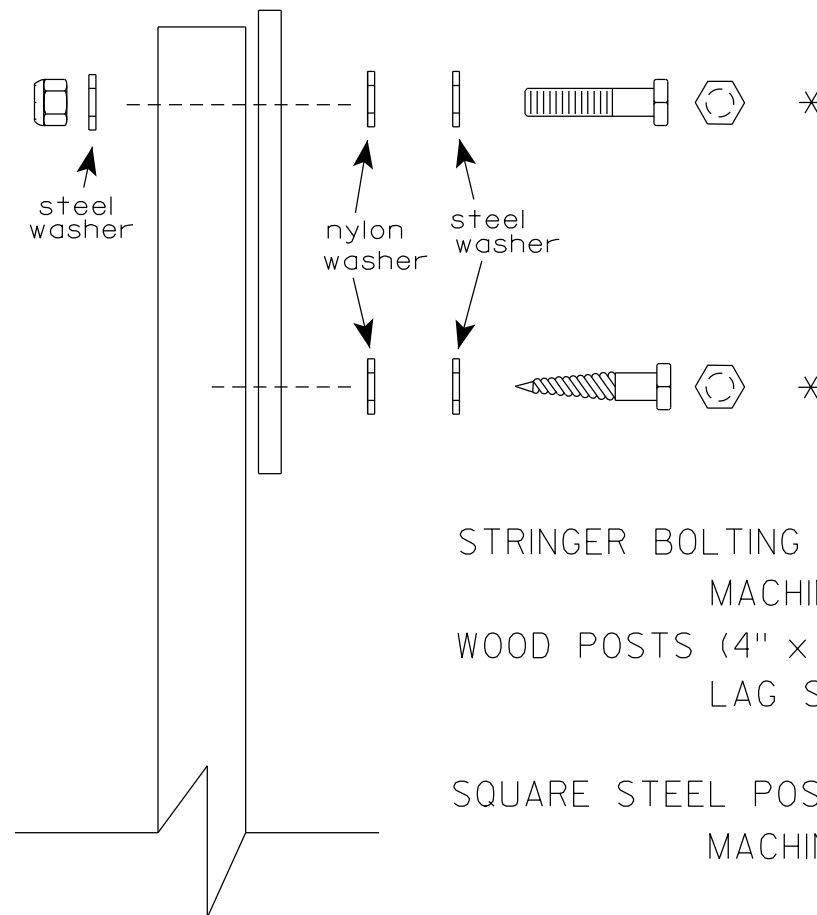
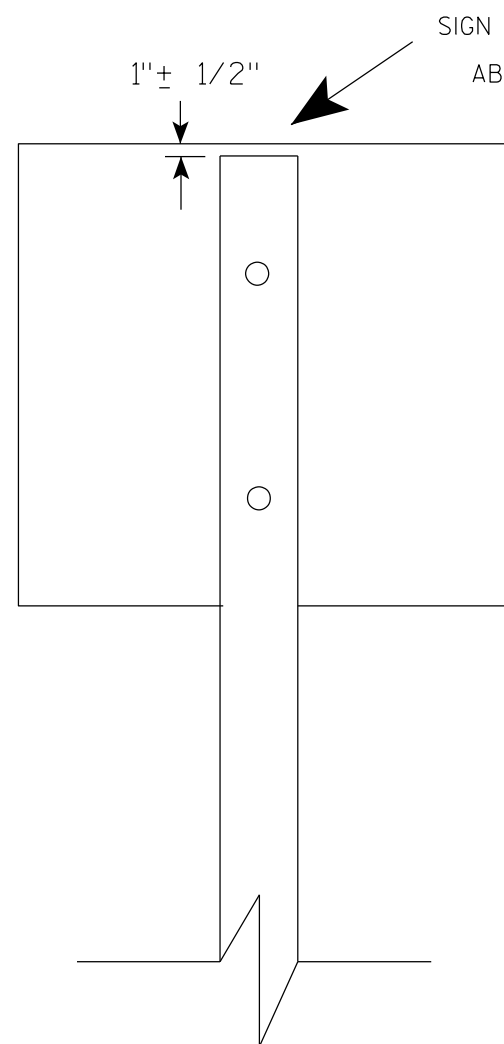
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 38

E



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.

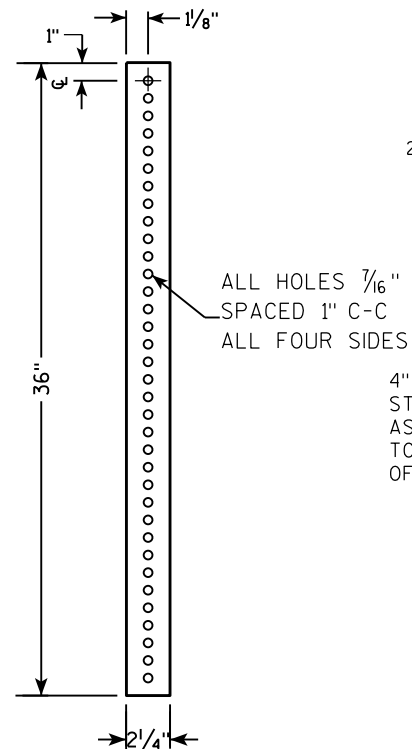
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

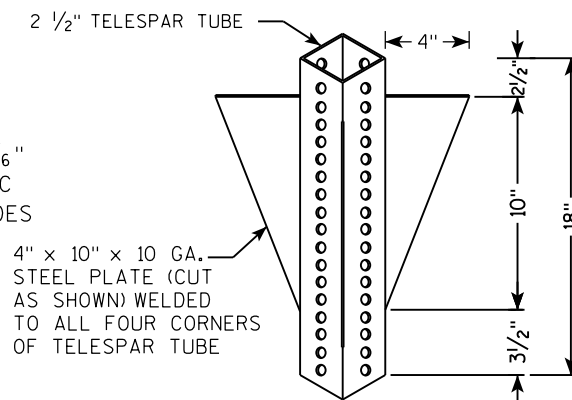
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

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

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



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



LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

18" DIA SCHEDULE 40 PVC BOX-OUT

36"

18"

13"

2"

2 1/2"

2 1/4" SQUARE X 36"

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

3/8" ZINC PLATED ANCHOR BOLT AND NUT

3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT

2" STEEL TUBULAR SQUARE UPPER SECTION

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

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

SIGN

GRAVEL OR DIRT

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

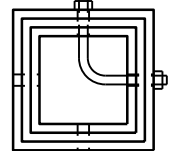
2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

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

SIGN

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

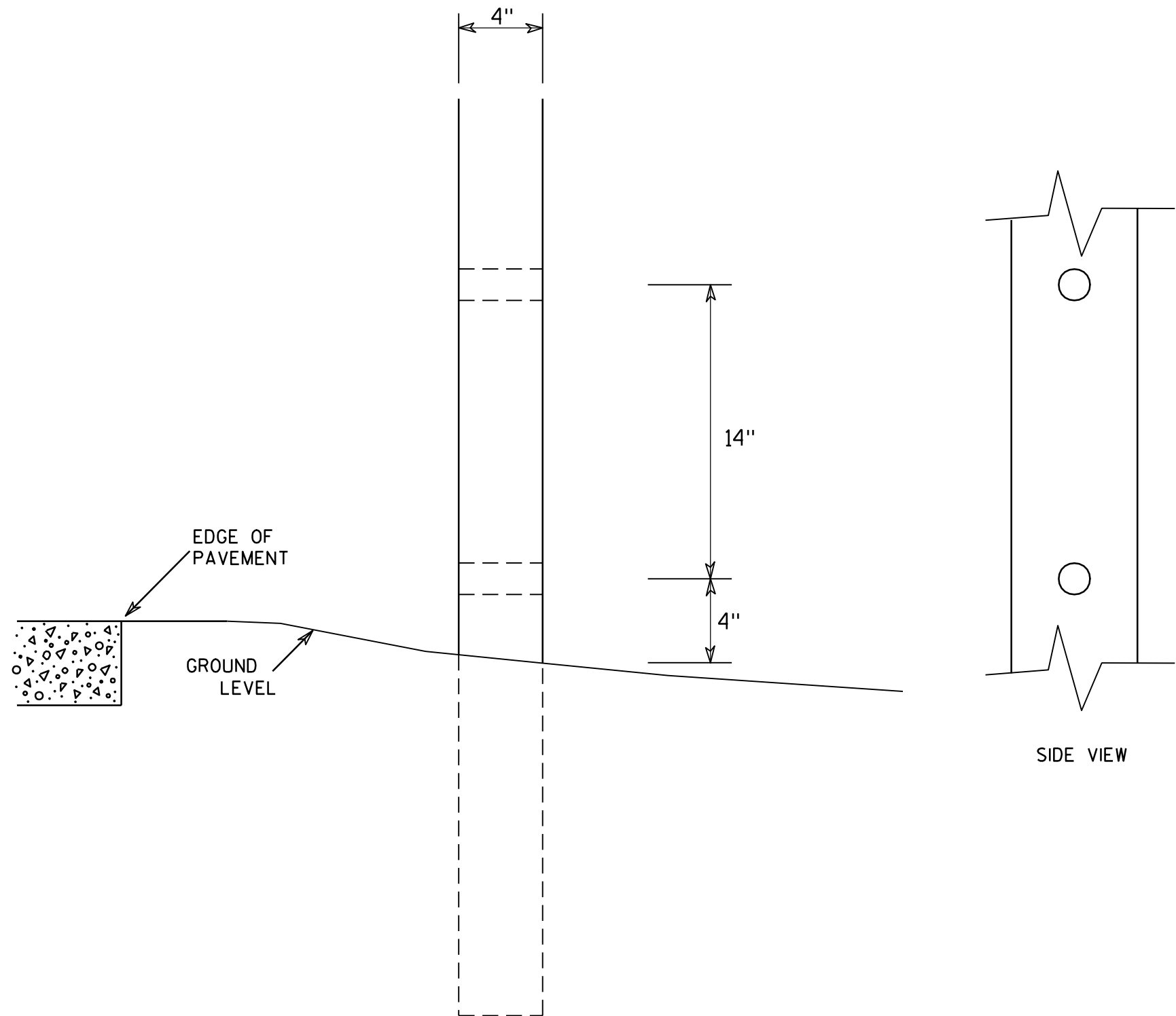
for State Traffic Engineer

DATE 2/05/15 PLAT 40 14-9.9

SHEET NO: 40

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



GENERAL NOTES

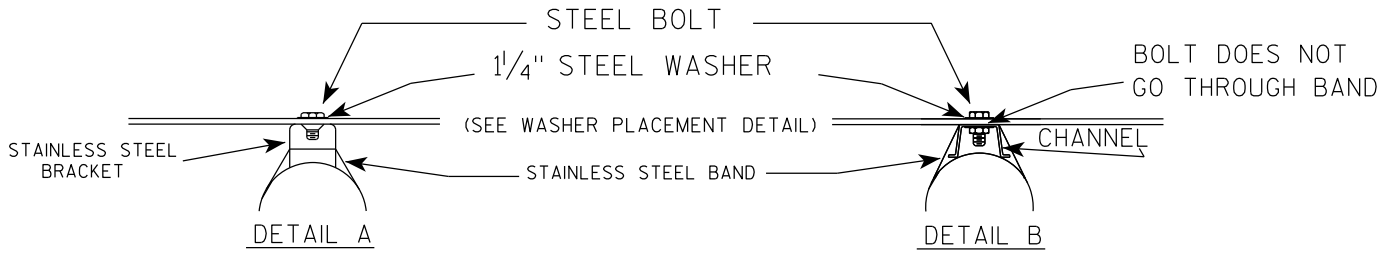
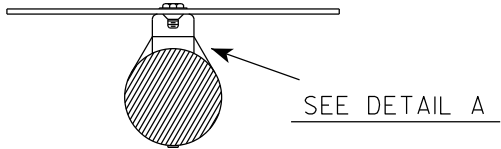
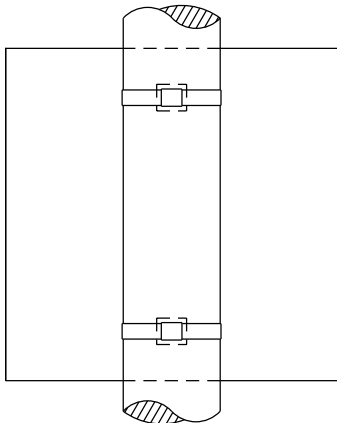
1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

7

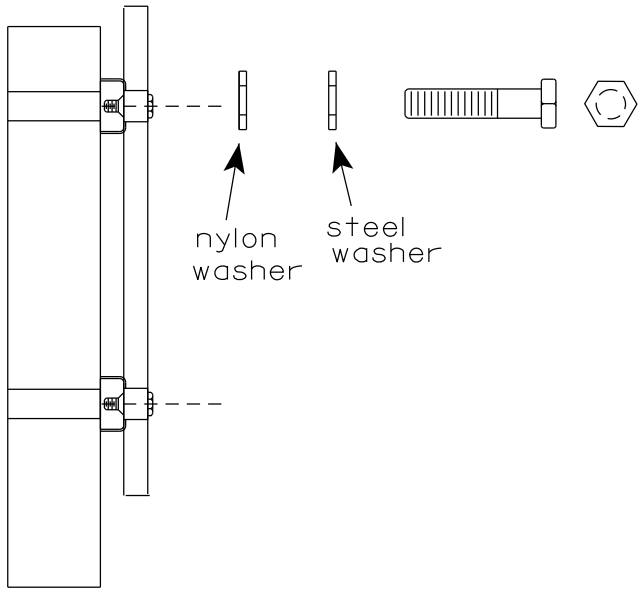
4 X 6 WOOD POST MODIFICATIONS	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Chester J. Spang</i> for State Traffic Engineer
DATE 3/27/97	PLATE NO. A4-11.2

BANDING

SINGLE SIGN



WASHER PLACEMENT

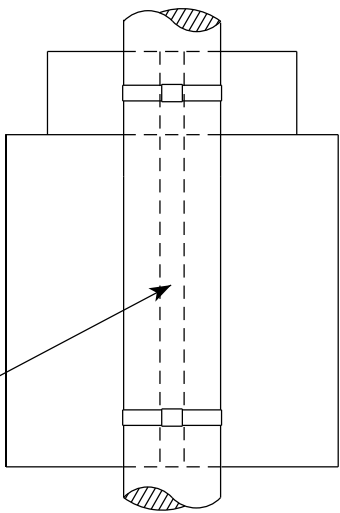


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

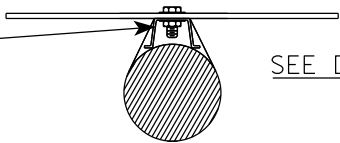
GENERAL NOTES

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

"J" ASSEMBLY



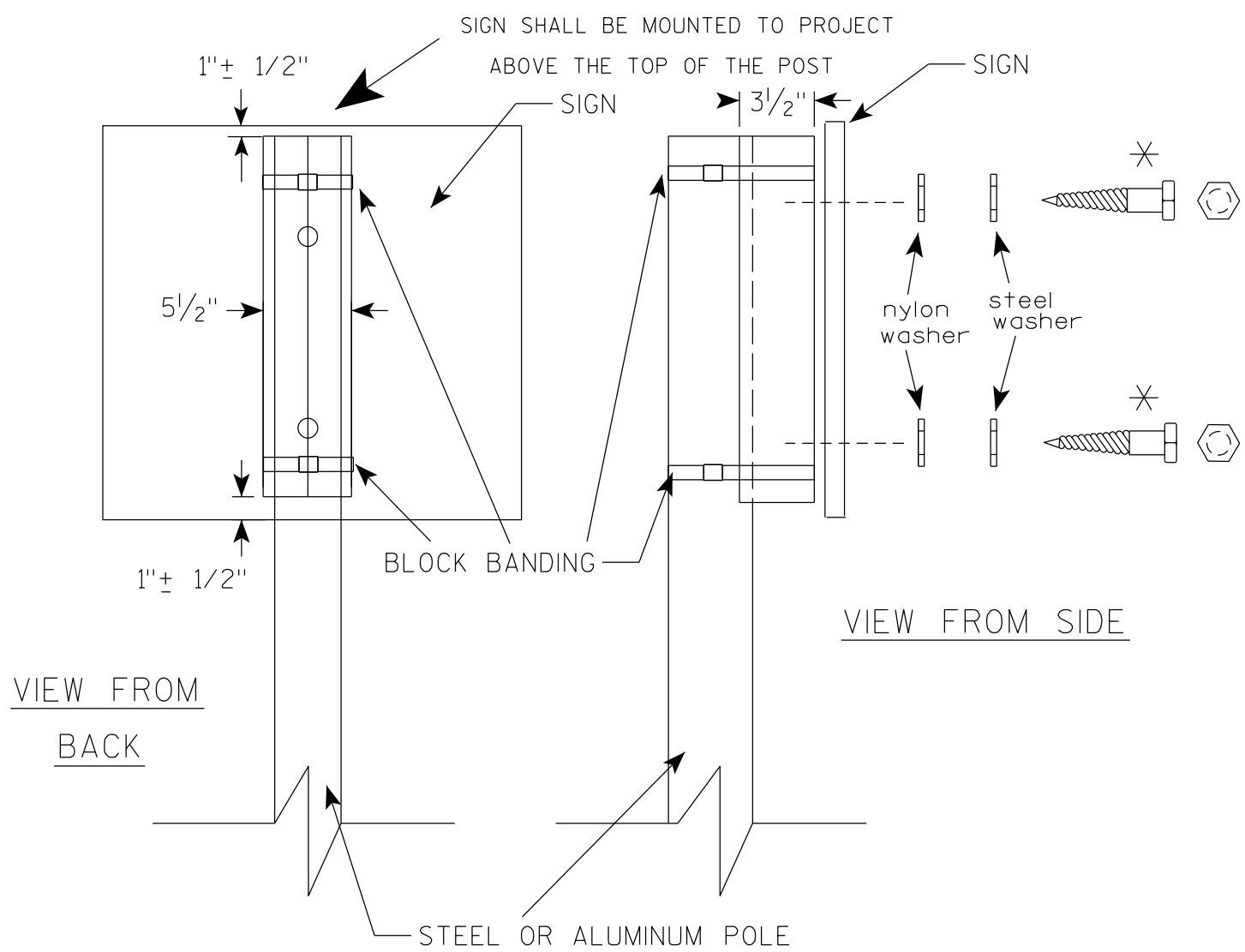
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

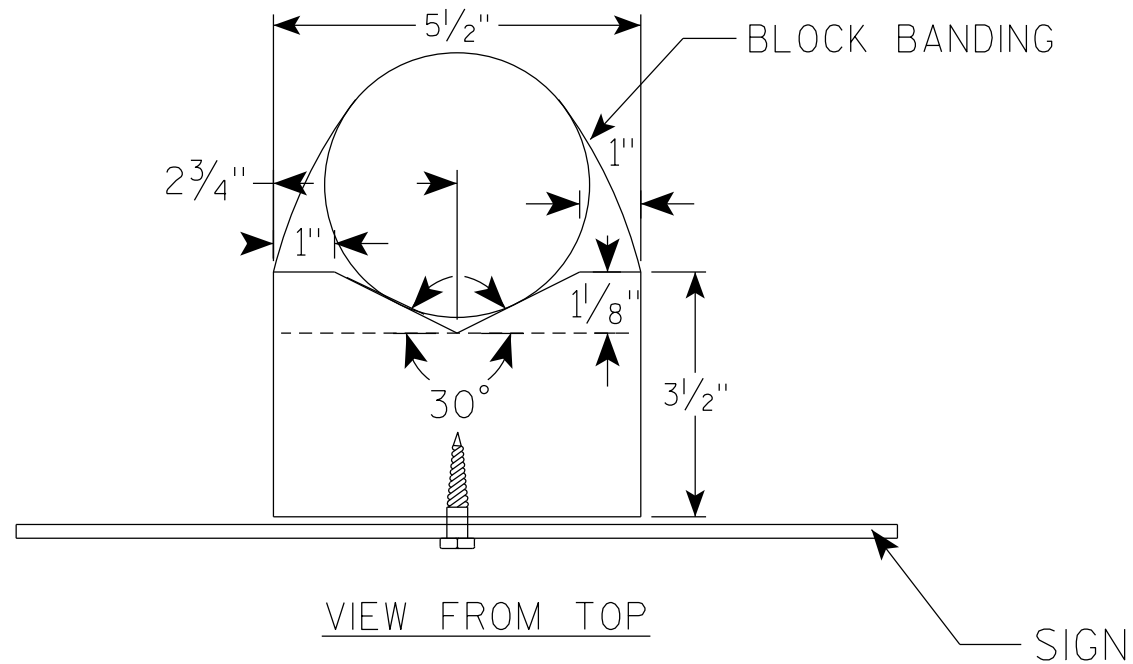
WISCONSIN DEPT OF TRANSPORTATION

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



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

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

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

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

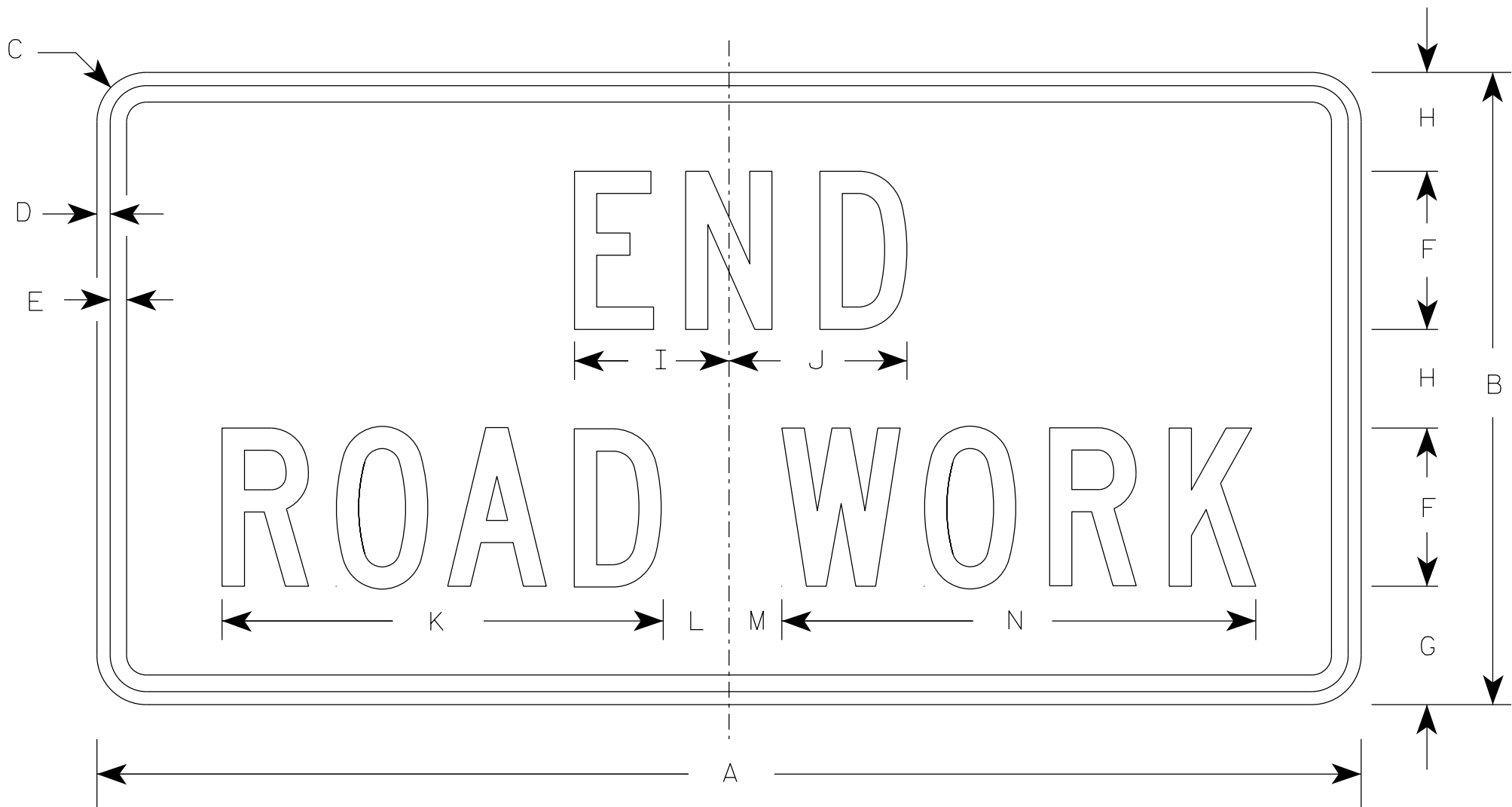
PROJECT NO:

SHEET NO: 43

E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



G20-2A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

PROJECT NO:

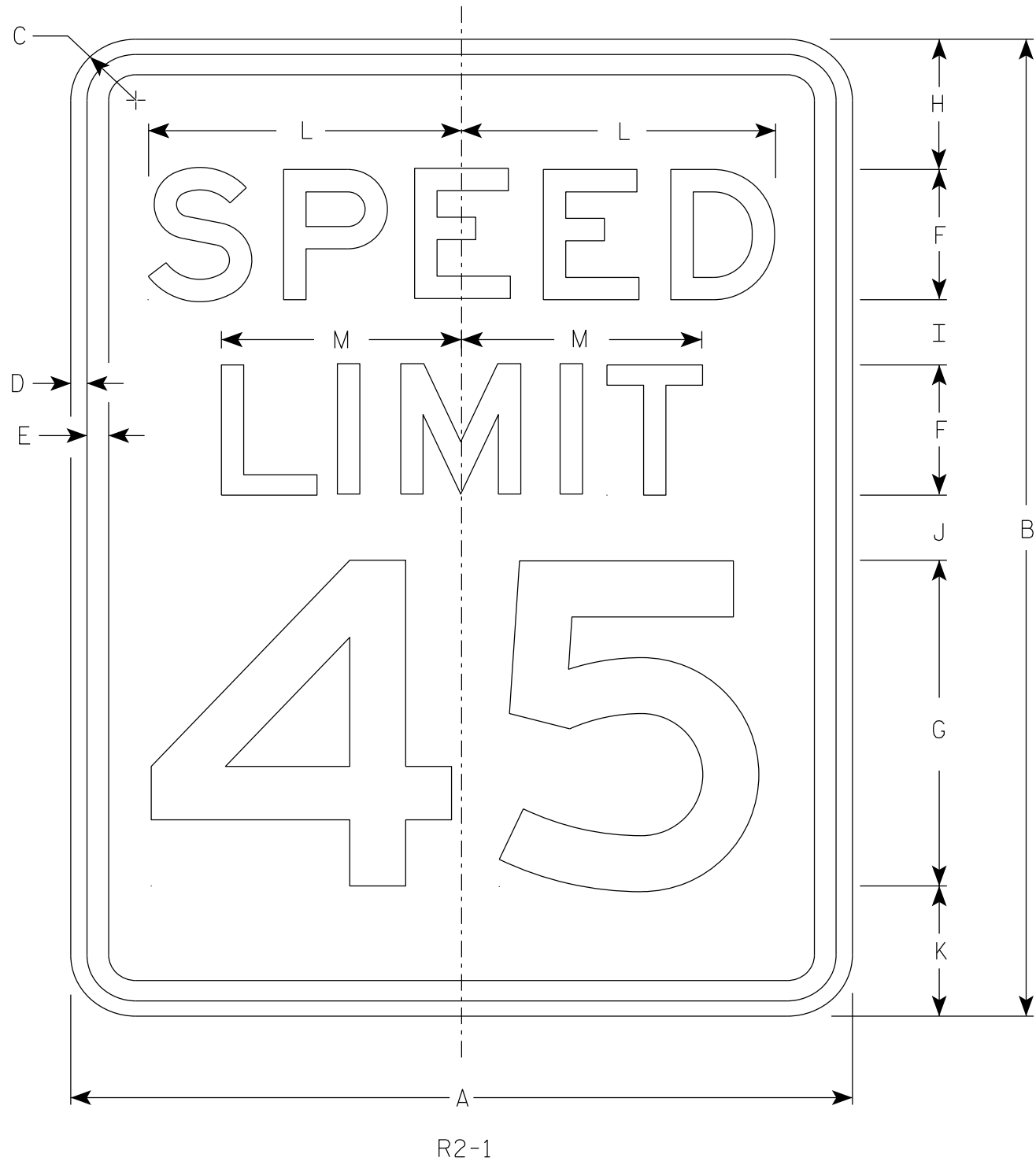
HWY:

COUNTY:

SHEET NO: 44

E

7



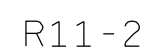
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

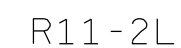
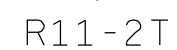
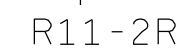
7

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

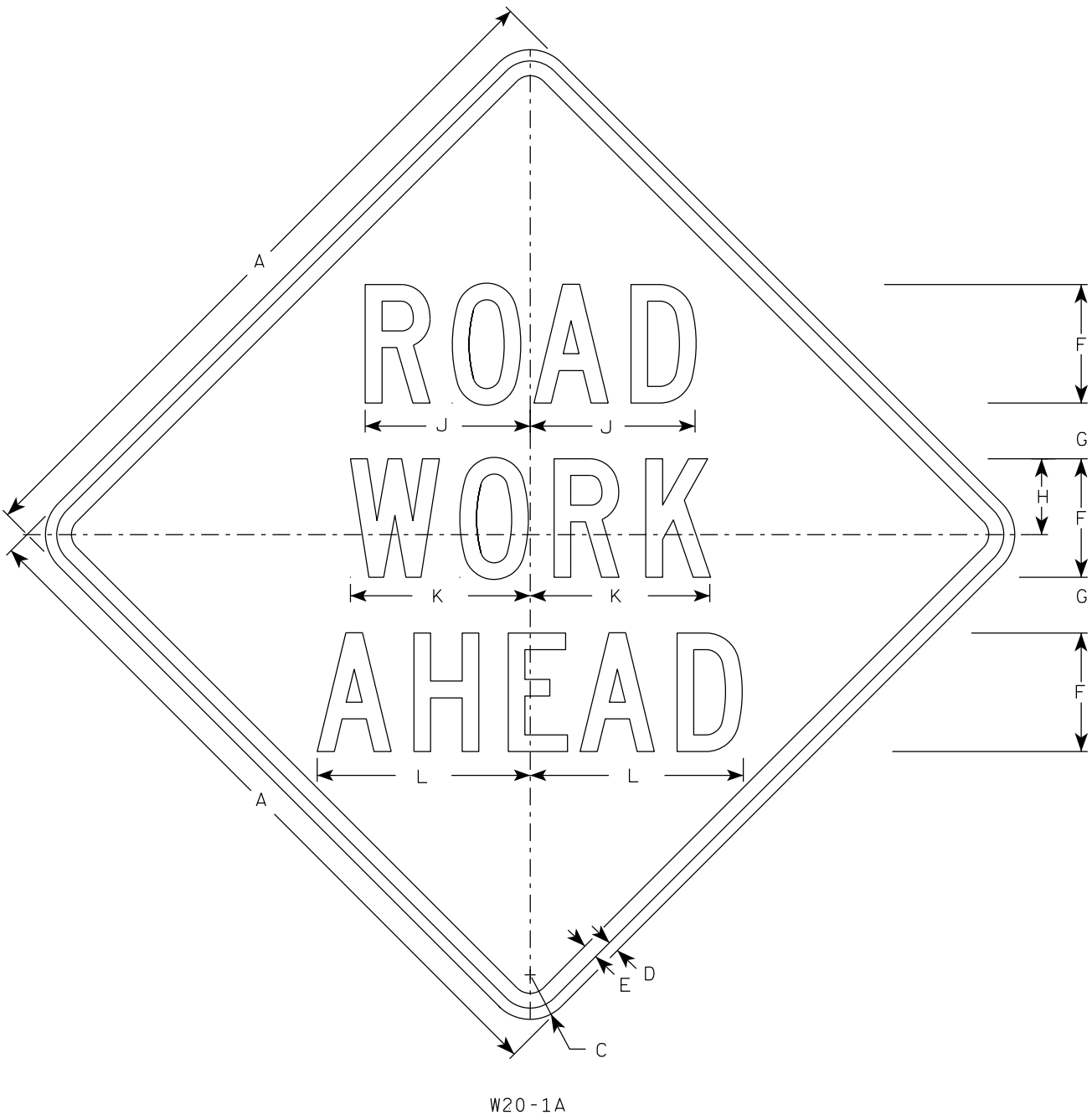
STANDARD SIGN R2 - 1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE <u>2/1/23</u>	PLATE NO. <u>R2-1.14</u>



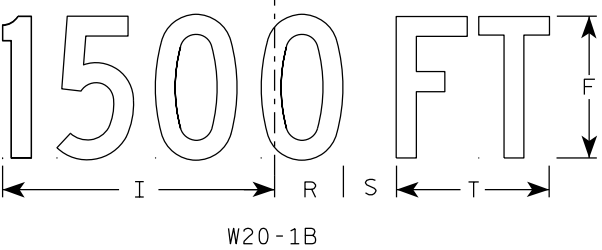
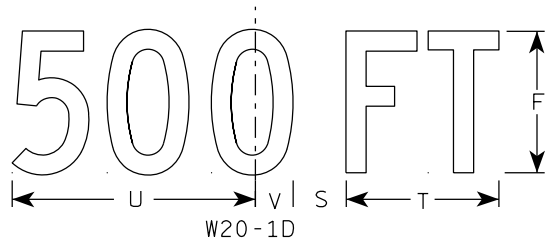
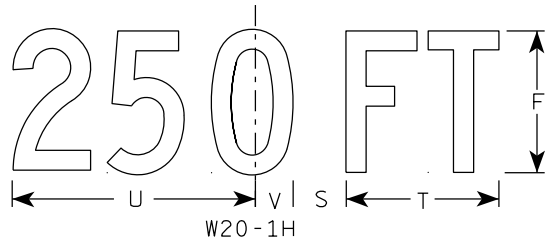
1. Sign is Type II - Type H Reflective
2. Color:
 - Background - White
 - Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



STANDARD SIGN	
R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R Rauch</u> for State Traffic Engineer
DATE <u>2/5/24</u>	PLATE NO. <u>R11-2.12</u>

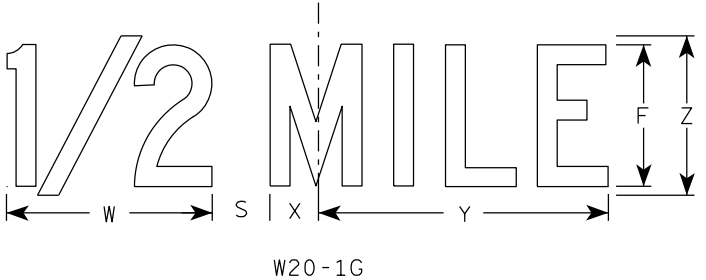


W20-1A

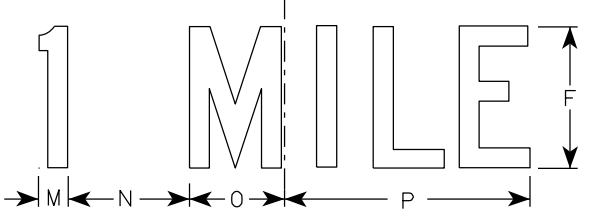


W20-1B

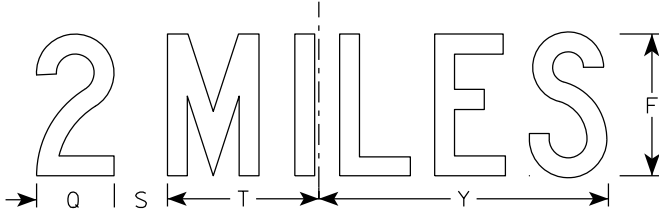
- NOTES
1. Sign is Type II - Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - C
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G

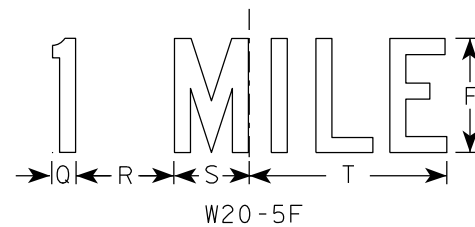
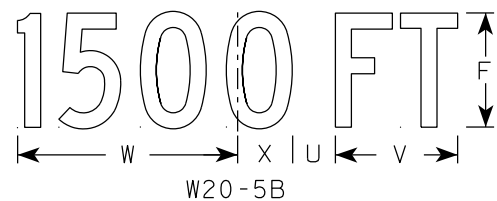
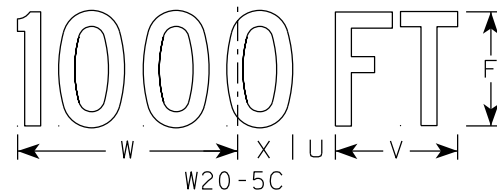
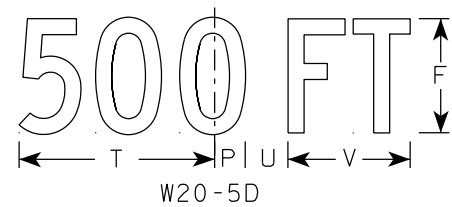
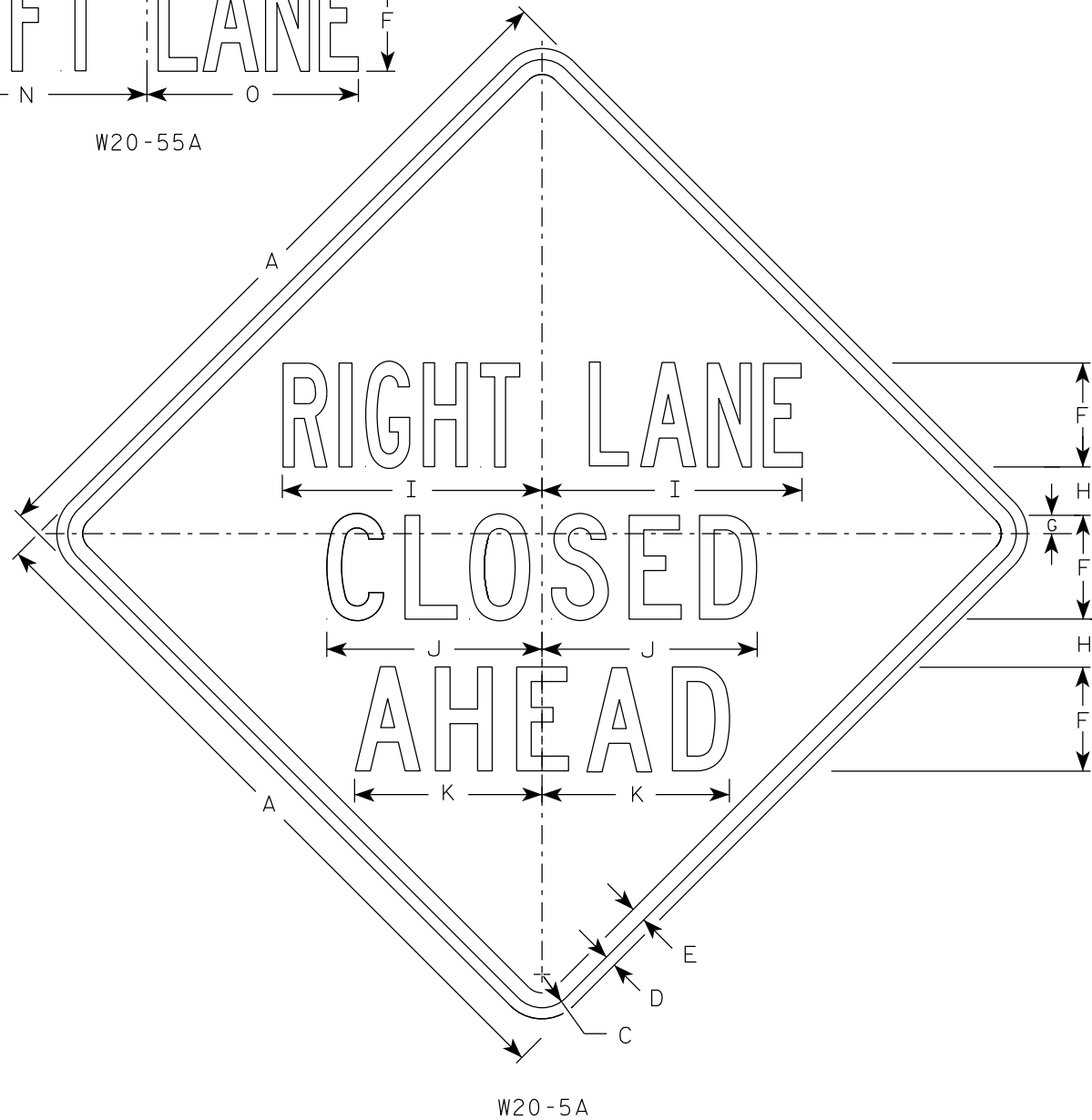
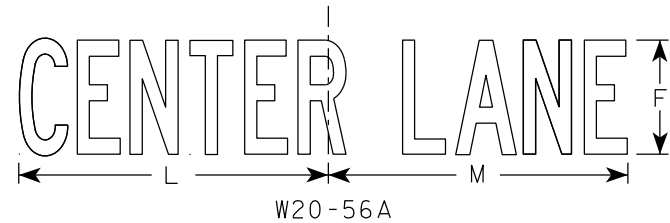


W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0



NOTES

1. Sign is Type II - Type F Reflective
2. Color:
Background - Orange
Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
All other copy is Series C.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	2 1/4	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

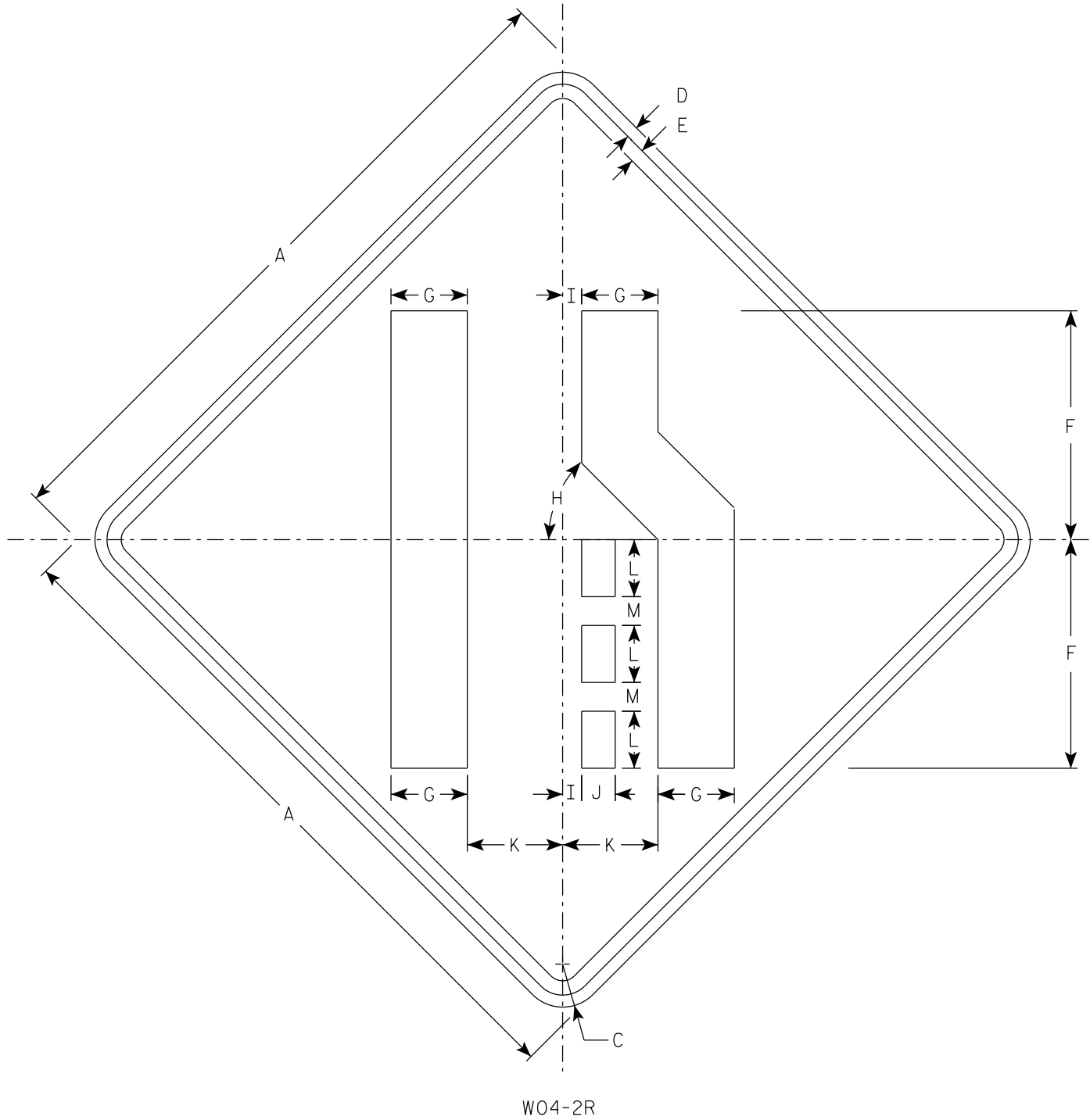
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/27/24 PLATE NO. W20-5.12

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

EARTHWORK ITEMS – SEGMENT 2

DIVISION 1 - 94EB-IN-ETW-SEGMENT2											
STATION	REAL 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
						NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 1	NOTE 8
210+56.00	21056.00	0.00	1.19	0.00	0.00	0	0	0	0	0	0
210+58.00	21058.00	2.00	1.51	0.00	0.26	0	0	0	0	0	0
210+76.00	21076.00	18.00	1.26	0.00	12.85	1	0	4	1	5	-4
210+94.00	21094.00	18.00	2.69	0.00	2.23	1	0	5	2	11	-9
211+00.00	21100.00	6.00	1.15	0.00	0.85	0	0	0	2	11	-9
211+20.00	21120.00	20.00	1.66	0.00	0.00	1	0	0	3	11	-8
213+50.00	21350.00	230.00	0.00	0.00	0.99	7	0	4	10	16	-6
214+00.00	21400.00	50.00	0.00	0.00	8.47	0	0	9	10	28	-18
215+00.00	21500.00	100.00	1.47	0.00	13.78	3	0	41	13	79	-66
216+00.00	21600.00	100.00	0.40	0.00	25.56	3	0	73	16	170	-154
217+00.00	21700.00	100.00	0.00	0.00	27.30	1	0	98	17	293	-276
218+00.00	21800.00	100.00	0.17	0.00	24.01	0	0	95	17	411	-394
219+00.00	21900.00	100.00	0.06	0.00	29.16	0	0	98	17	534	-517
220+00.00	22000.00	100.00	0.20	0.00	14.19	0	0	80	17	634	-617
221+00.00	22100.00	100.00	0.32	0.00	13.30	1	0	51	18	698	-680
222+00.00	22200.00	100.00	0.12	0.00	18.43	1	0	59	19	771	-752
223+00.00	22300.00	100.00	0.53	0.00	14.55	1	0	61	20	848	-828
224+00.00	22400.00	100.00	0.45	0.00	20.70	2	0	65	22	929	-907
225+00.00	22500.00	100.00	0.31	0.00	25.14	1	0	85	23	1,035	-1,012
226+00.00	22600.00	100.00	0.16	0.00	29.24	1	0	101	24	1,161	-1,137
227+00.00	22700.00	100.00	0.27	0.00	25.60	1	0	102	25	1,289	-1,264
228+00.00	22800.00	100.00	0.48	0.00	19.93	1	0	84	26	1,394	-1,368
229+00.00	22900.00	100.00	0.02	0.00	21.52	1	0	77	27	1,490	-1,463
230+00.00	23000.00	100.00	0.39	0.00	21.40	1	0	79	28	1,589	-1,561
231+00.00	23100.00	100.00	0.00	0.00	23.66	1	0	83	29	1,693	-1,664
232+00.00	23200.00	100.00	0.19	0.00	18.82	0	0	79	29	1,791	-1,762
233+00.00	23300.00	100.00	0.18	0.00	21.98	1	0	76	30	1,886	-1,856
234+00.00	23400.00	100.00	0.92	0.00	19.07	2	0	76	32	1,981	-1,949
235+00.00	23500.00	100.00	0.00	0.00	21.87	2	0	76	34	2,076	-2,042
236+00.00	23600.00	100.00	0.03	0.00	20.58	0	0	79	34	2,175	-2,141
237+00.00	23700.00	100.00	0.00	0.00	12.02	0	0	60	34	2,250	-2,216
237+18.04	23718.04	18.04	0.18	0.00	0.00	0	0	4	34	2,255	-2,221
237+96.00	23796.00	77.96	0.00	0.00	0.00	0	0	0	34	2,255	-2,221
238+00.00	23800.00	4.00	3.11	0.00	3.14	0	0	0	34	2,255	-2,221
238+04.00	23804.00	4.00	3.53	0.00	5.66	0	0	1	34	2,256	-2,222
238+10.00	23810.00	6.00	0.24	0.00	9.72	0	0	2	34	2,259	-2,225
239+00.00	23900.00	90.00	0.03	0.00	12.82	0	0	38	34	2,306	-2,272
240+00.00	24000.00	100.00	0.03	0.00	9.86	0	0	42	34	2,359	-2,325
241+00.00	24100.00	100.00	0.00	0.00	13.42	0	0	43	34	2,413	-2,379
242+00.00	24200.00	100.00	0.00	0.00	14.98	0	0	53	34	2,479	-2,445
243+00.00	24300.00	100.00	0.00	0.00	18.63	0	0	62	34	2,556	-2,522
244+00.00	24400.00	100.00	0.00	0.00	16.45	0	0	65	34	2,638	-2,604
245+00.00	24500.00	100.00	0.01	0.00	21.61	0	0	70	34	2,725	-2,691
246+00.00	24600.00	100.00	0.00	0.00	10.90	0	0	60	34	2,800	-2,766
247+00.00	24700.00	100.00	0.18	0.00	16.94	0	0	52	34	2,865	-2,831

PROJECT NO: 1020-00-84

HWY: IH 94

COUNTY: ST. CROIX

EARTHWORK SUMMARY

SHEET NO: 50

E

FILE NAME : _____

PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

ORIGINATOR : DIST _

PLOT SCALE : 1:1

EARTHWORK ITEMS – SEGMENT 2

STATION	REAL 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
						NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 1	NOTE 8
248+00.00	24800.00	100.00	0.08	0.00	13.65	0	0	57	34	2,936	-2,902
249+00.00	24900.00	100.00	0.02	0.00	16.18	0	0	55	34	3,005	-2,971
250+00.00	25000.00	100.00	0.37	0.00	8.36	1	0	45	35	3,061	-3,026
251+00.00	25100.00	100.00	0.16	0.00	14.42	1	0	42	36	3,114	-3,078
252+00.00	25200.00	100.00	0.29	0.00	9.02	1	0	43	37	3,168	-3,131
253+00.00	25300.00	100.00	0.04	0.00	18.23	1	0	50	38	3,230	-3,192
254+00.00	25400.00	100.00	0.27	0.00	14.72	1	0	61	39	3,306	-3,267
255+00.00	25500.00	100.00	0.11	0.00	17.98	1	0	61	40	3,383	-3,343
256+00.00	25600.00	100.00	0.63	0.00	8.67	1	0	49	41	3,444	-3,403
257+00.00	25700.00	100.00	0.32	0.00	9.31	2	0	33	43	3,485	-3,442
258+00.00	25800.00	100.00	0.52	0.00	11.22	2	0	38	45	3,533	-3,488
259+00.00	25900.00	100.00	0.04	0.00	14.24	1	0	47	46	3,591	-3,545
260+00.00	26000.00	100.00	0.03	0.00	17.94	0	0	60	46	3,666	-3,620
261+00.00	26100.00	100.00	0.03	0.00	17.05	0	0	65	46	3,748	-3,702
262+00.00	26200.00	100.00	0.01	0.00	20.58	0	0	70	46	3,835	-3,789
263+00.00	26300.00	100.00	0.16	0.00	16.77	0	0	69	46	3,921	-3,875
264+00.00	26400.00	100.00	0.10	0.00	22.76	0	0	73	46	4,013	-3,967
265+00.00	26500.00	100.00	0.02	0.00	23.45	0	0	86	46	4,120	-4,074
266+00.00	26600.00	100.00	0.17	0.00	21.77	0	0	84	46	4,225	-4,179
267+00.00	26700.00	100.00	0.03	0.00	23.98	0	0	85	46	4,331	-4,285
268+00.00	26800.00	100.00	0.06	0.00	19.34	0	0	80	46	4,431	-4,385
269+00.00	26900.00	100.00	0.12	0.00	16.62	0	0	67	46	4,515	-4,469
270+00.00	27000.00	100.00	0.00	0.00	23.81	0	0	75	46	4,609	-4,563
271+00.00	27100.00	100.00	0.31	0.00	19.08	1	0	79	47	4,708	-4,661
272+00.00	27200.00	100.00	0.00	0.00	17.92	1	0	69	48	4,794	-4,746
273+00.00	27300.00	100.00	0.15	0.00	14.95	0	0	61	48	4,870	-4,822
274+00.00	27400.00	100.00	0.49	0.00	7.31	1	0	41	49	4,921	-4,872
275+00.00	27500.00	100.00	0.47	0.00	10.47	2	0	33	51	4,963	-4,912
276+00.00	27600.00	100.00	0.83	0.00	10.05	2	0	38	53	5,010	-4,957
277+00.00	27700.00	100.00	0.00	0.00	14.26	2	0	45	55	5,066	-5,011
278+00.00	27800.00	100.00	0.12	0.00	11.07	0	0	47	55	5,125	-5,070
279+00.00	27900.00	100.00	0.00	0.00	14.45	0	0	47	55	5,184	-5,129
280+00.00	28000.00	100.00	0.00	0.00	7.40	0	0	40	55	5,234	-5,179
281+00.00	28100.00	100.00	0.67	0.00	3.07	1	0	19	56	5,258	-5,202
282+00.00	28200.00	100.00	2.23	0.00	0.00	5	0	6	61	5,265	-5,204
283+00.00	28300.00	100.00	0.00	0.00	0.72	4	0	1	65	5,266	-5,201

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. [CUT - SALVAGED PAVT - ((FILL) * FILL FACTOR)]

PROJECT NO: 1020-00-84

HWY: IH 94

COUNTY: ST. CROIX

EARTHWORK SUMMARY

SHEET NO: 51

E

FILE NAME : _____

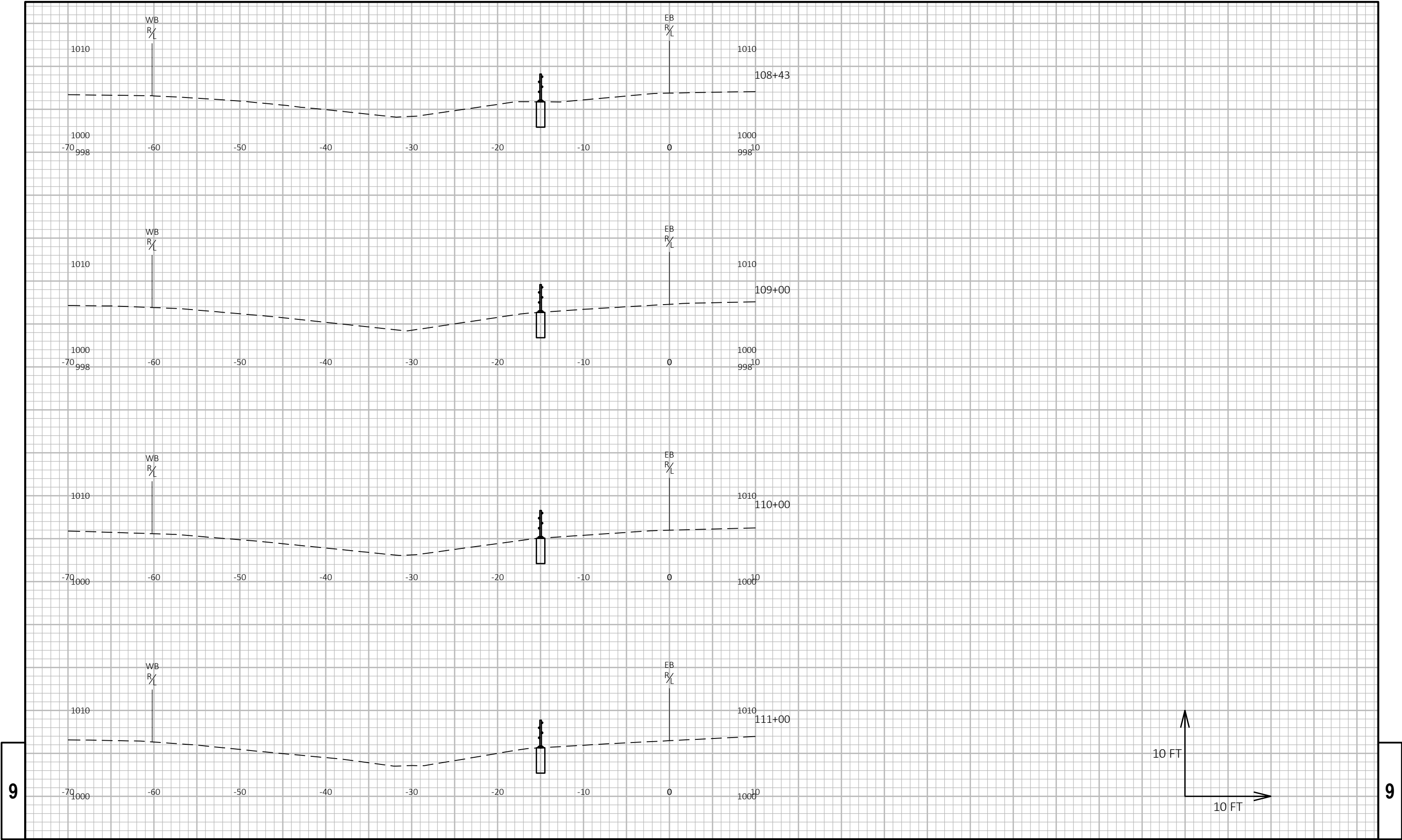
PLOT DATE : _____

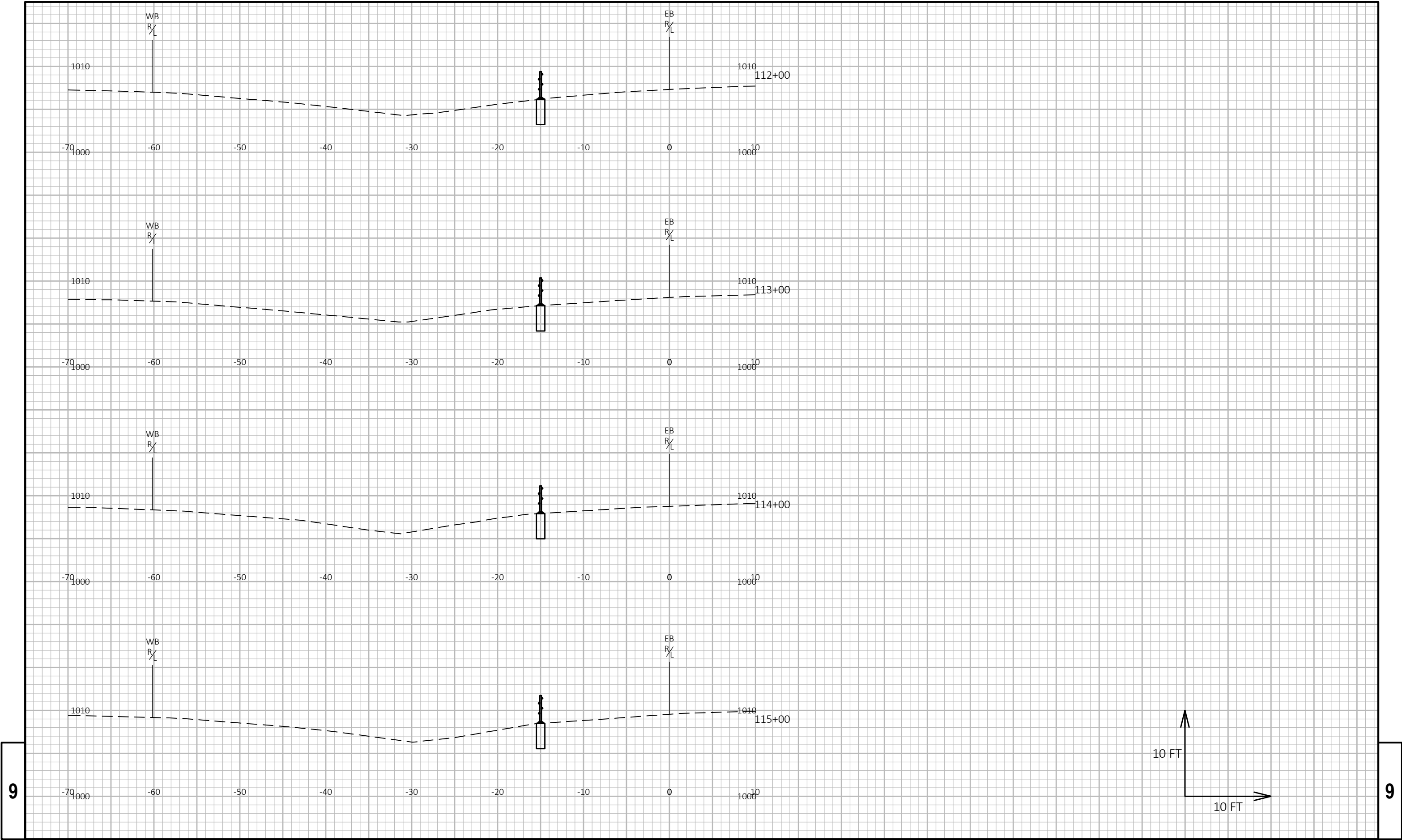
PLOT BY : _____

PLOT NAME : _____

ORIGINATOR : DIST _

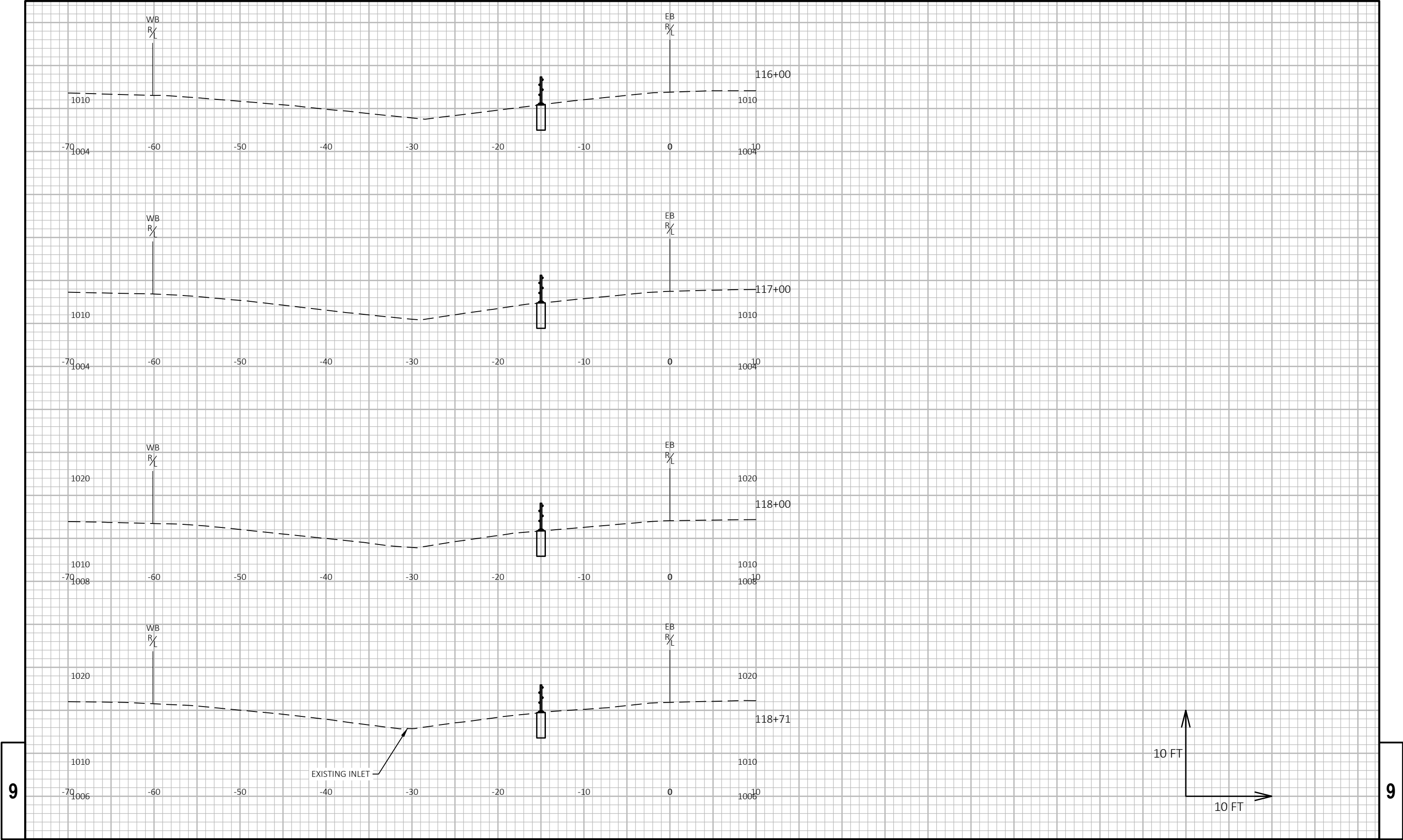
PLOT SCALE : 1:1





9

9



9

9

PROJECT NO: 1020-00-84

HWY: IH 94

COUNTY: ST. CROIX

CROSS SECTIONS: IH 94

SHEET

54

E

FILE NAME : W:\30902851.000; 1020-00-14, IH 94 CABLE GUARD\CAD\1020-00-14\090201-XS.DWG
LAYOUT NAME - Seg1-(03)

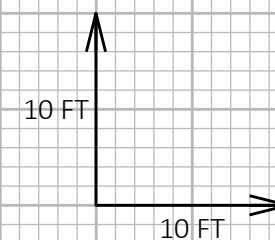
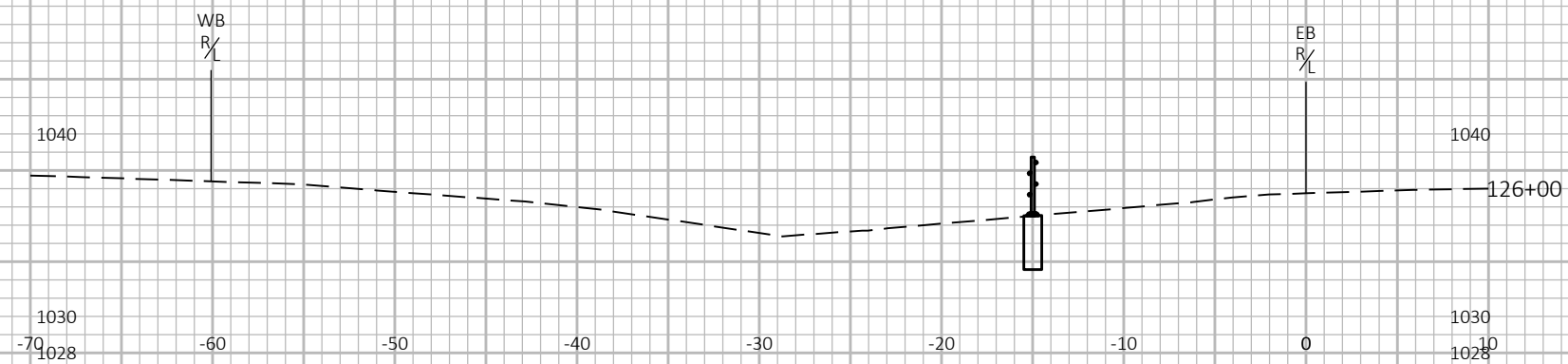
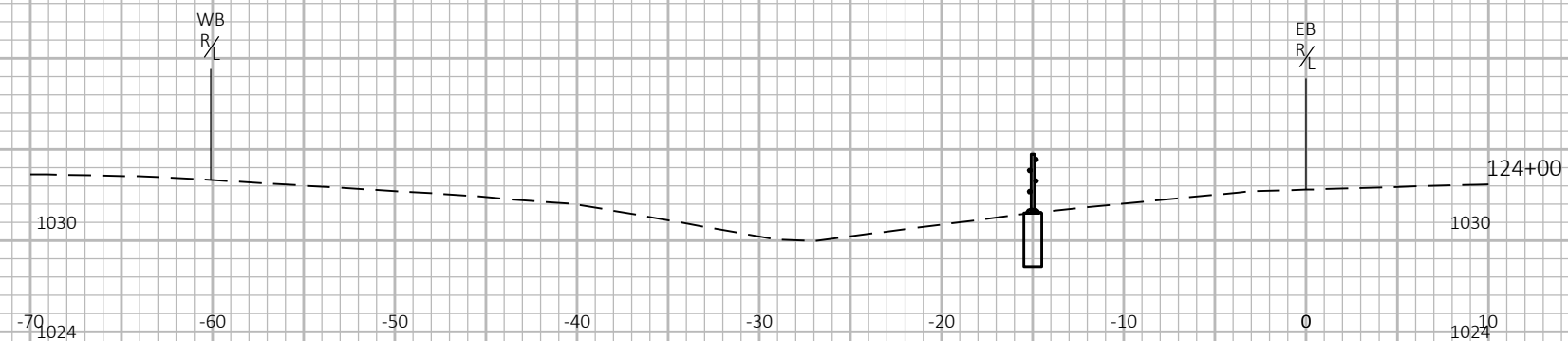
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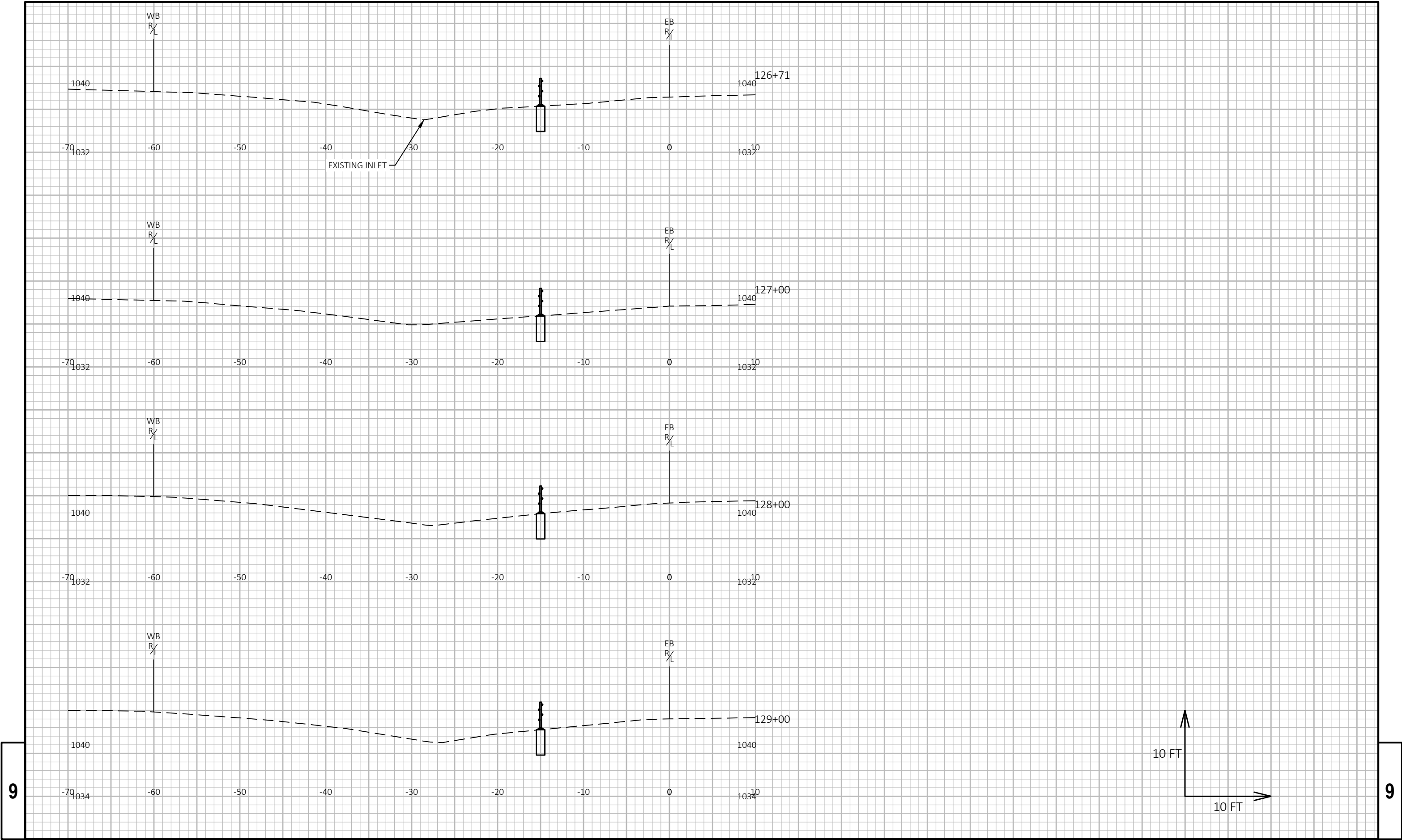
PLOT BY : METRY, ALEXANDER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

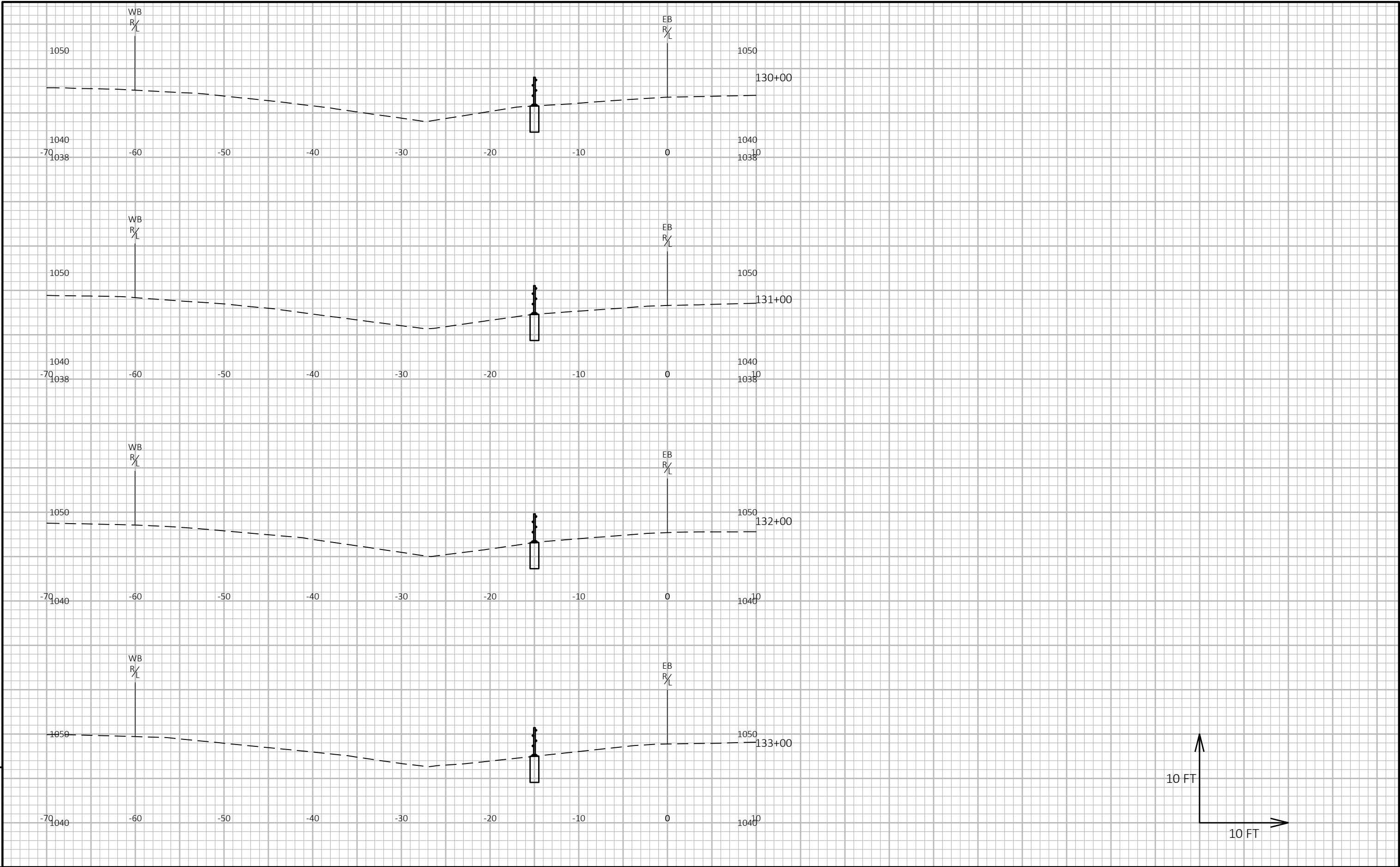
WISDOT/CADDs SHEET 49





9

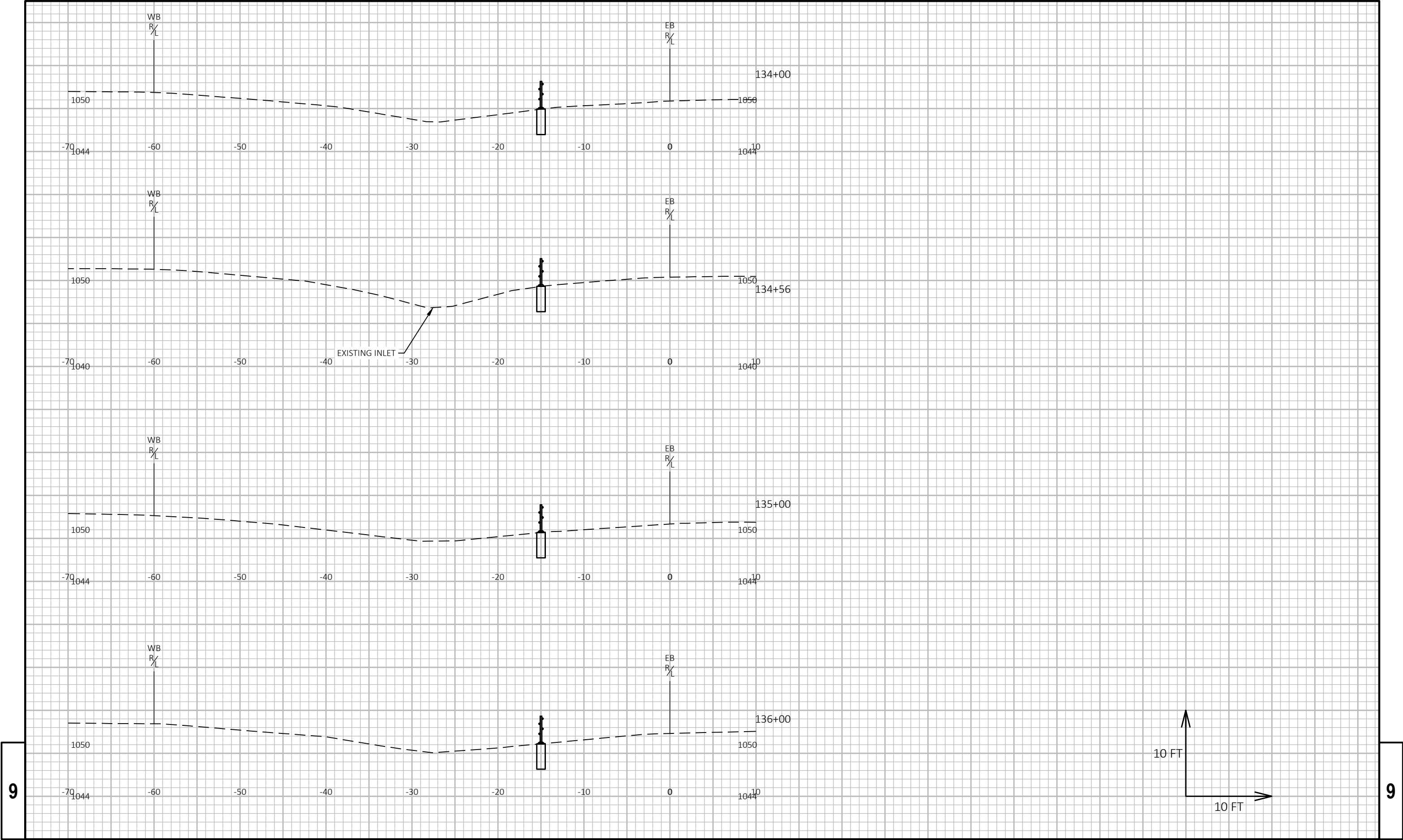
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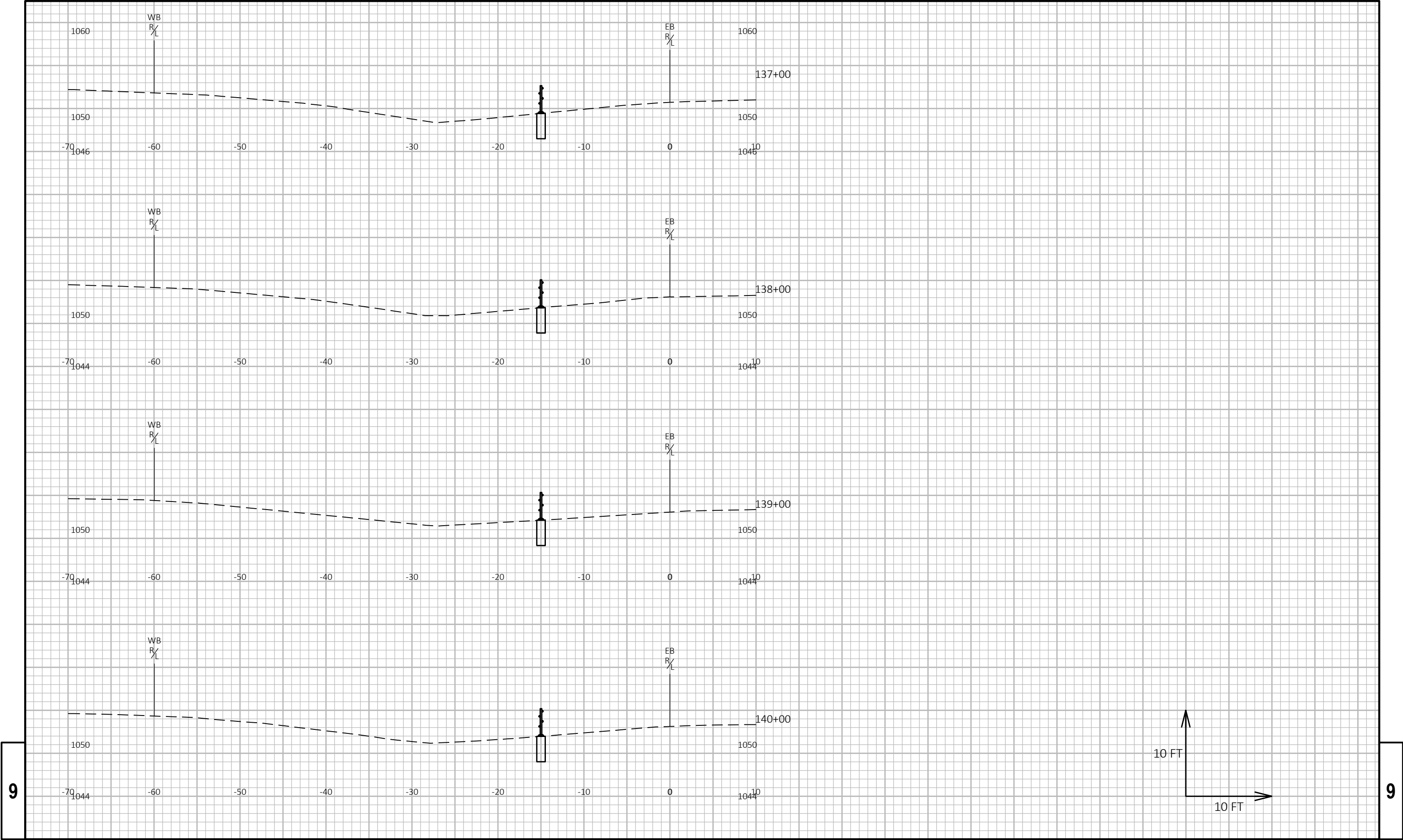
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PROJECT NO: 1020-00-84	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94	SHEET 58	E
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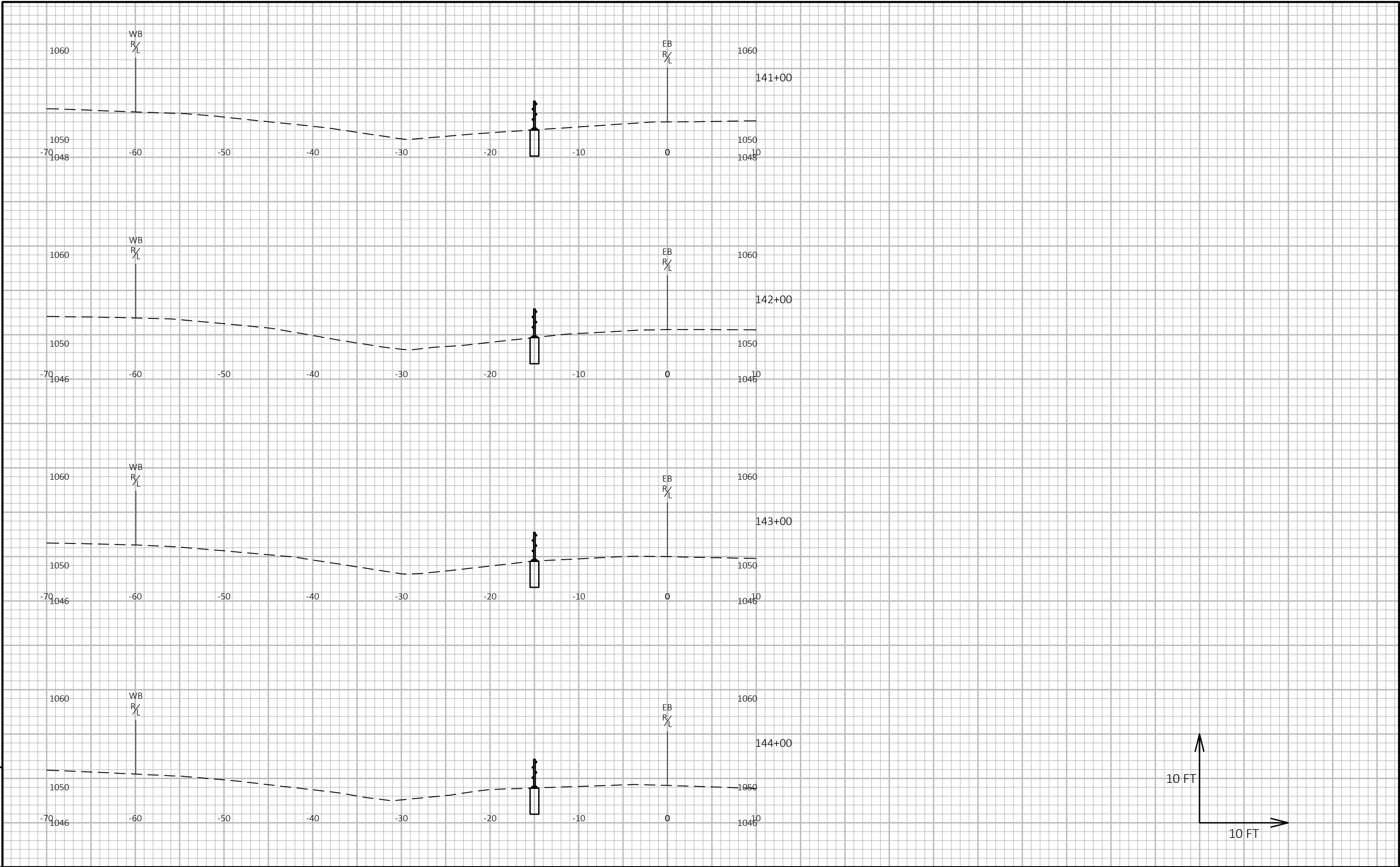
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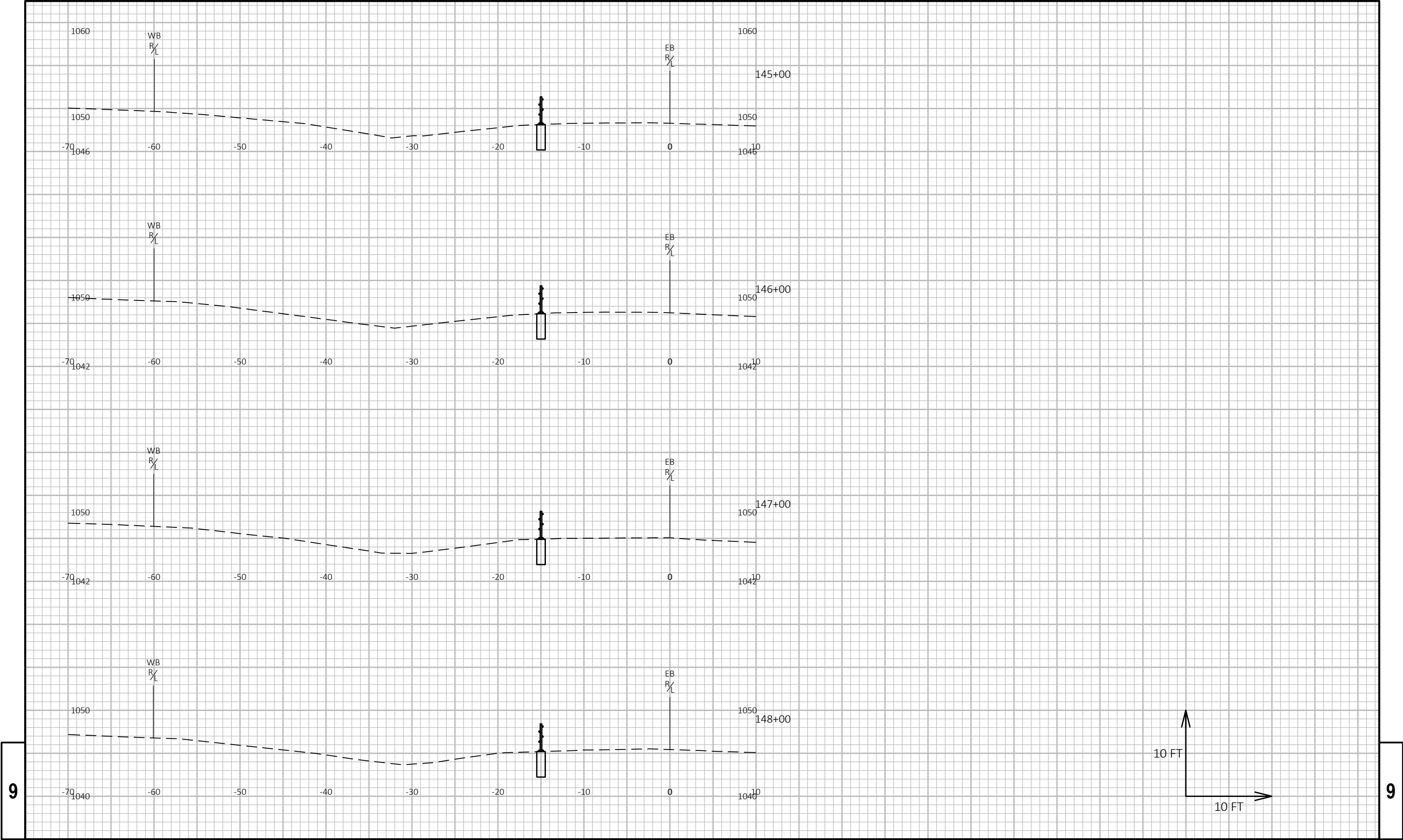
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9



9

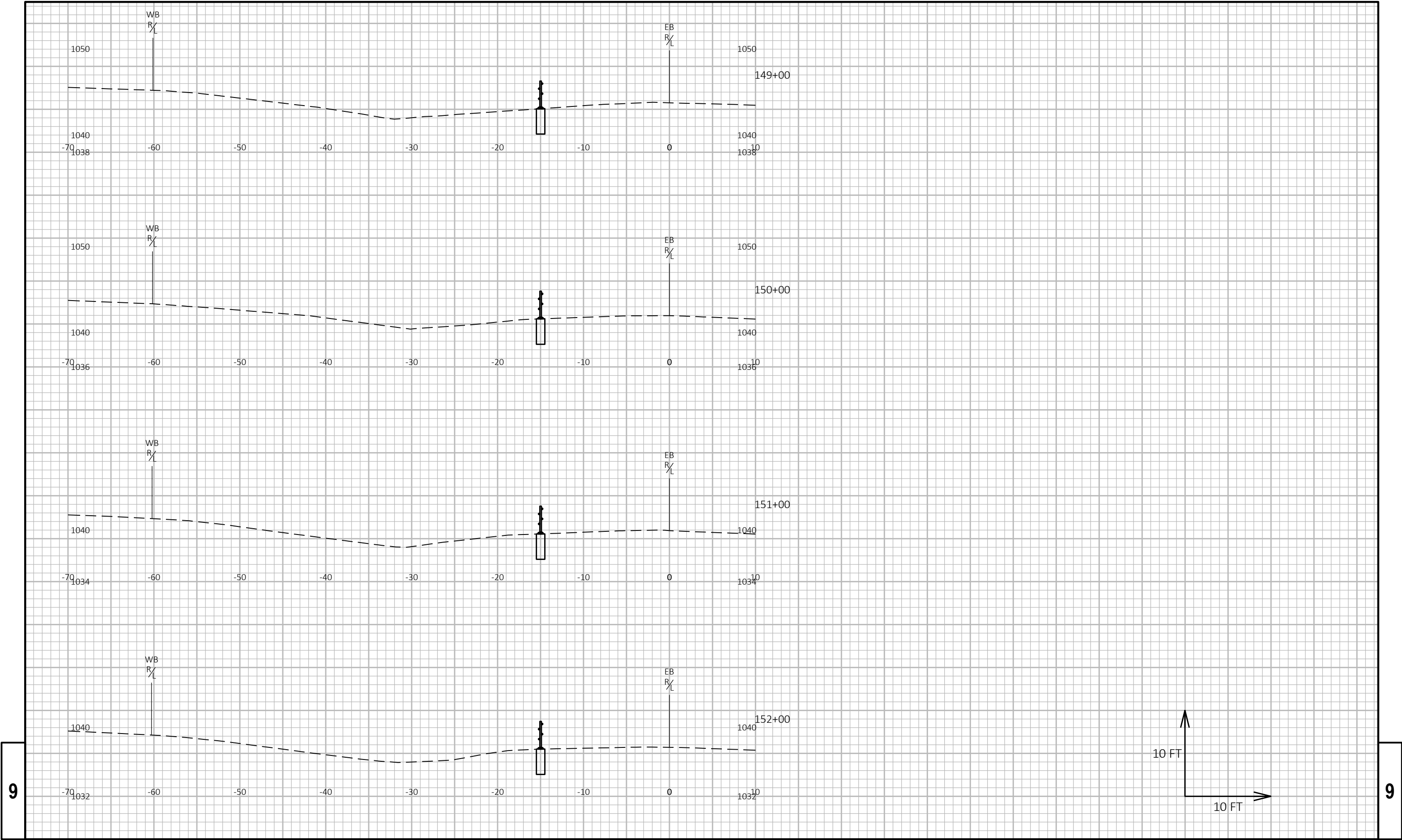
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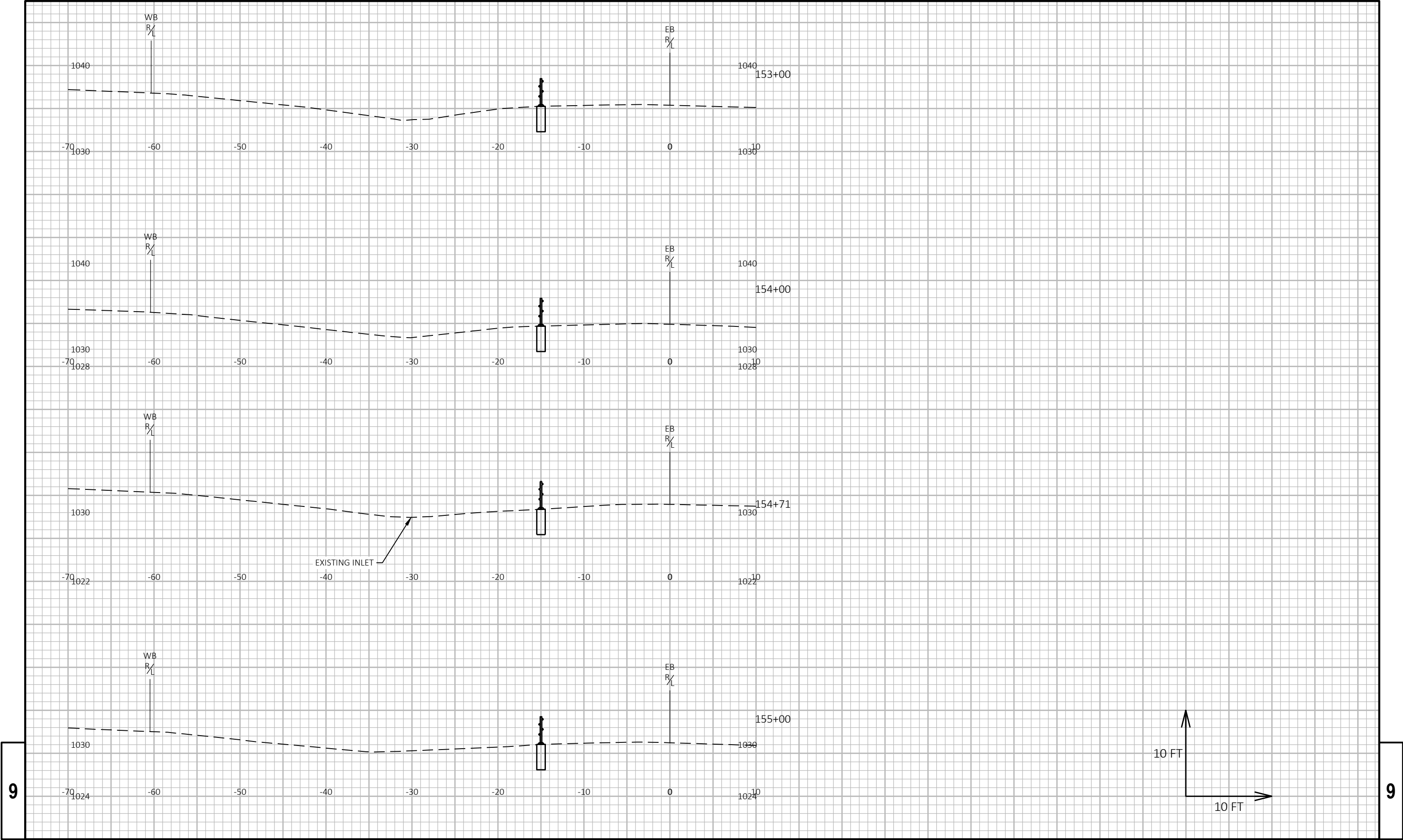
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PROJECT NO: 1020-00-84	HWY: IH 94	COUNTY: ST. CROIX	CROSS SECTIONS: IH 94	SHEET 62	E
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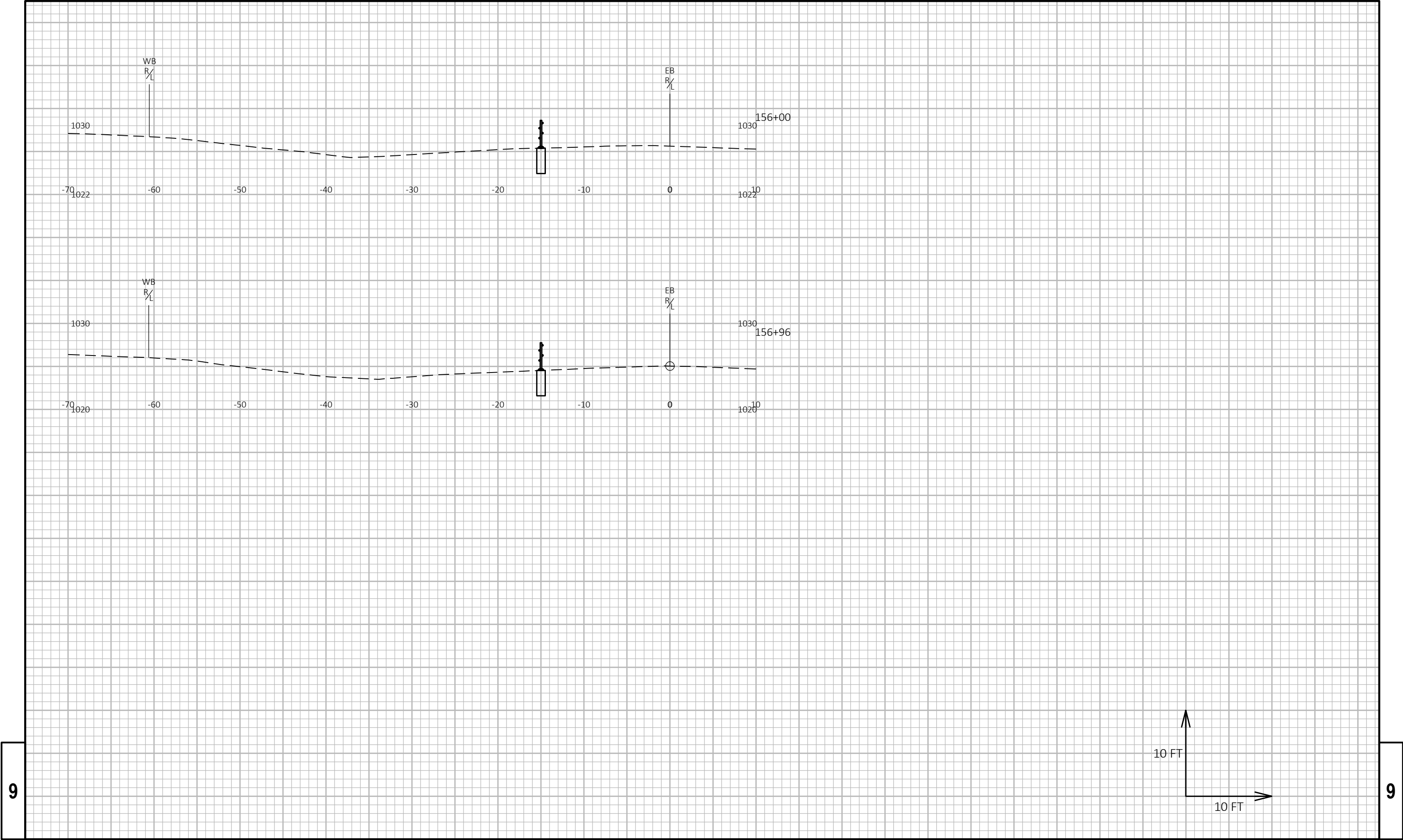
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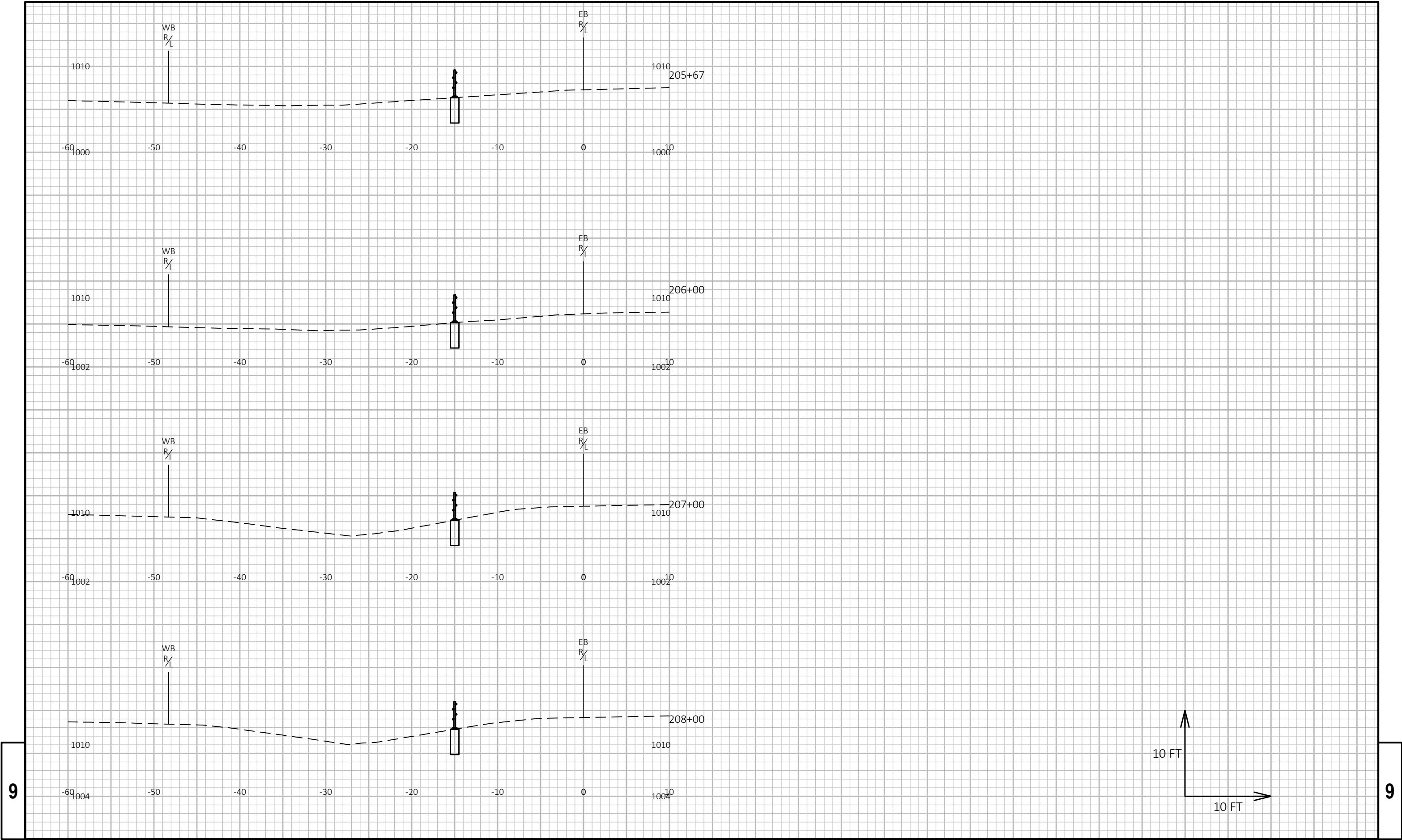
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9



9

9



9

9

PROJECT NO: 1020-00-84

HWY: IH 94

COUNTY: ST. CROIX

CROSS SECTIONS: IH 94

SHEET

66

E

FILE NAME : W:\30902851.000; 1020-00-14, IH 94 CABLE GUARD\CAD\1020-00-14\090201-XS.DWG
LAYOUT NAME - Seg2-(01)

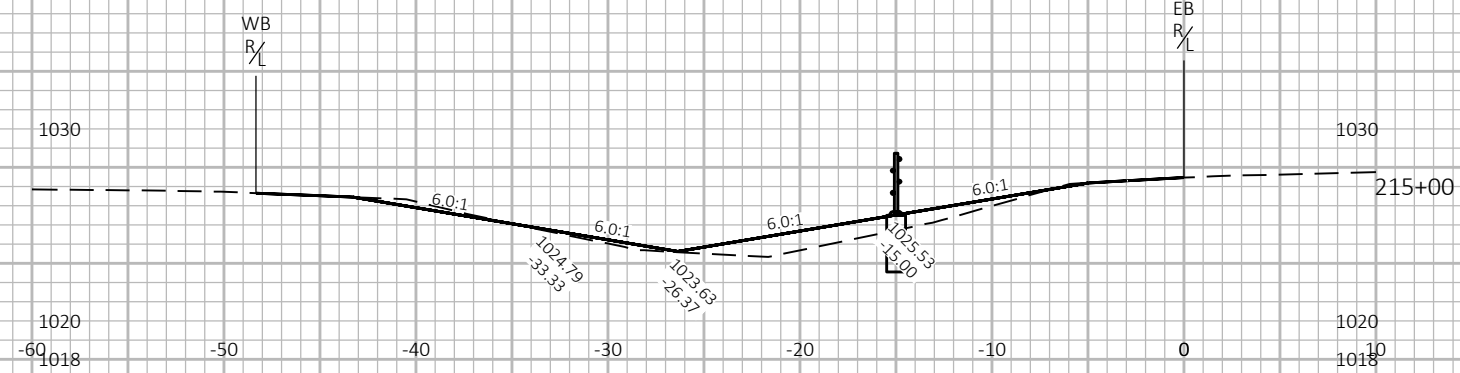
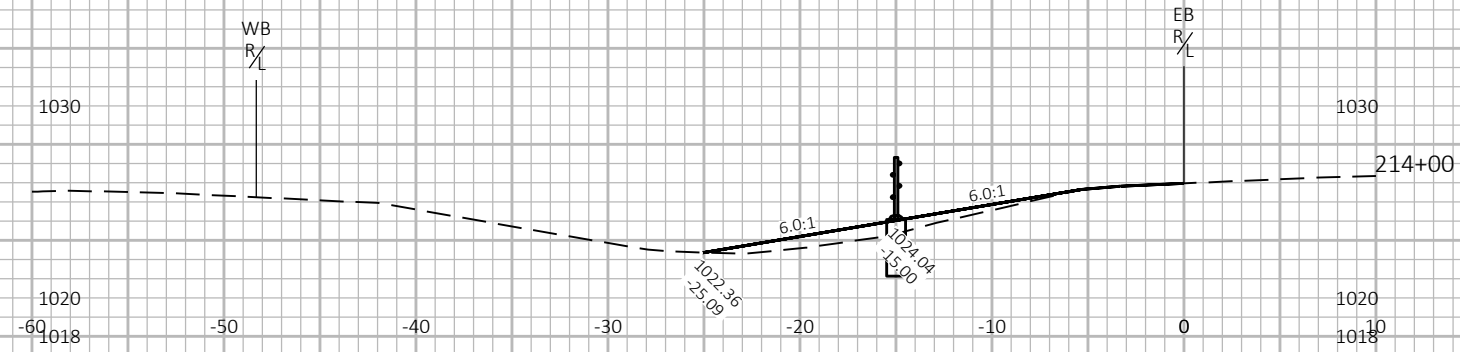
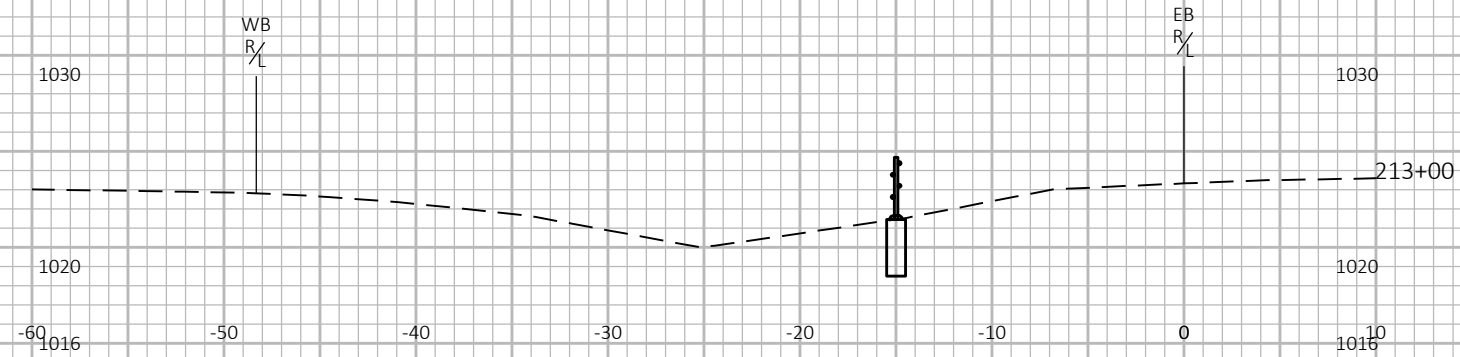
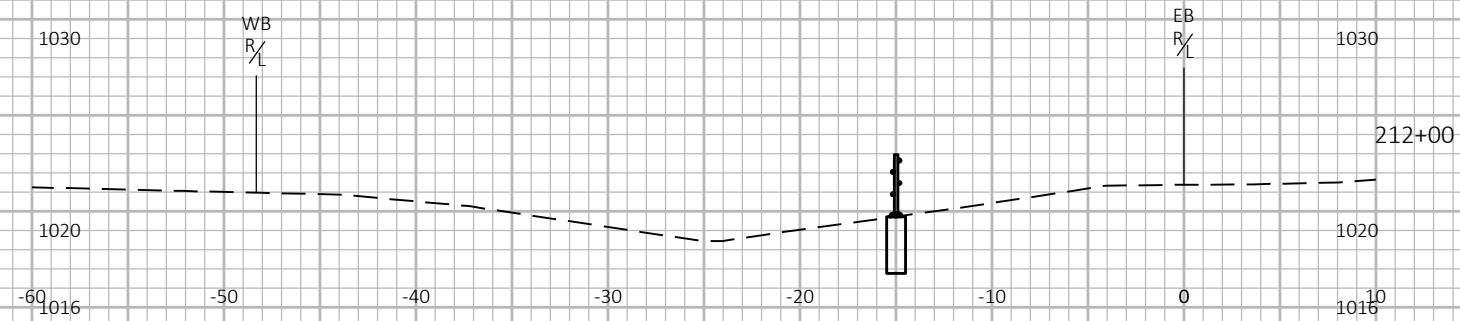
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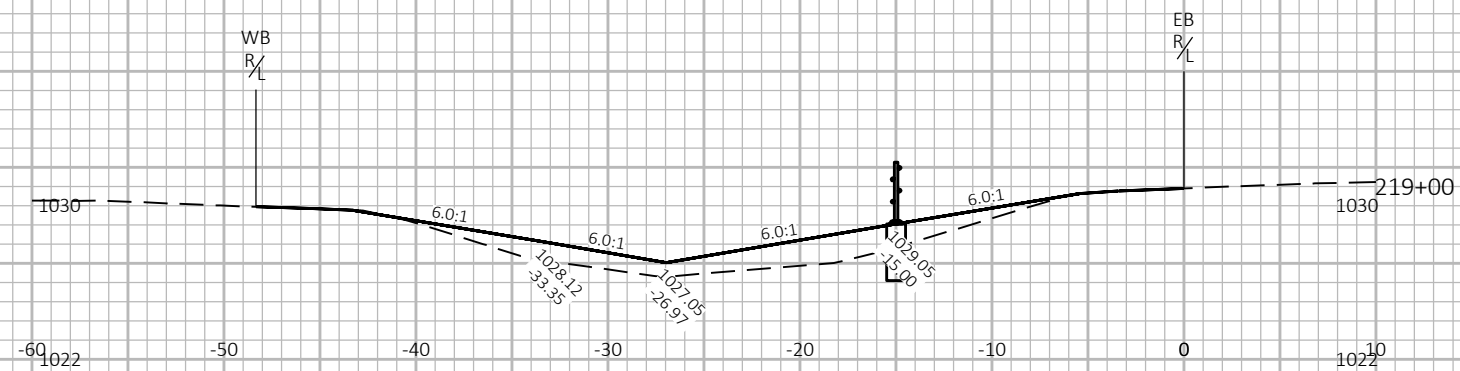
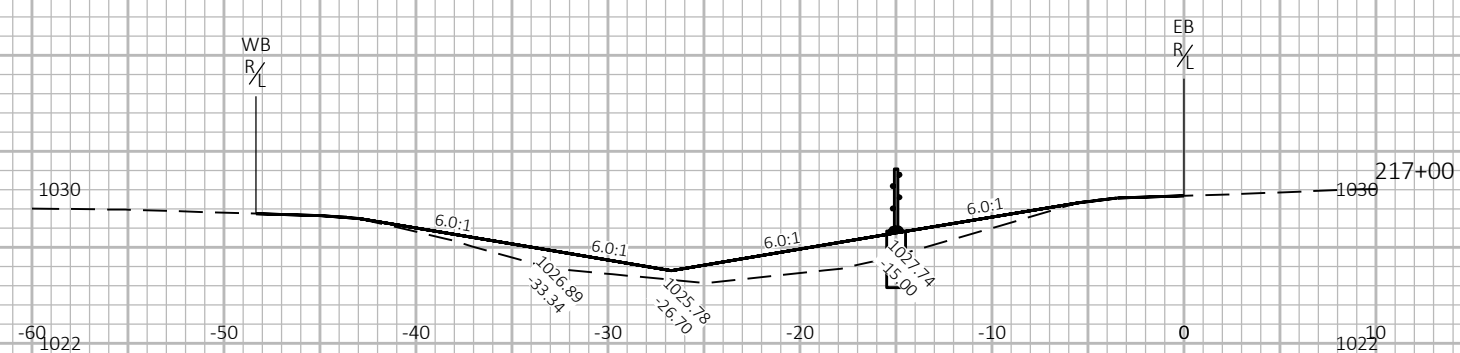
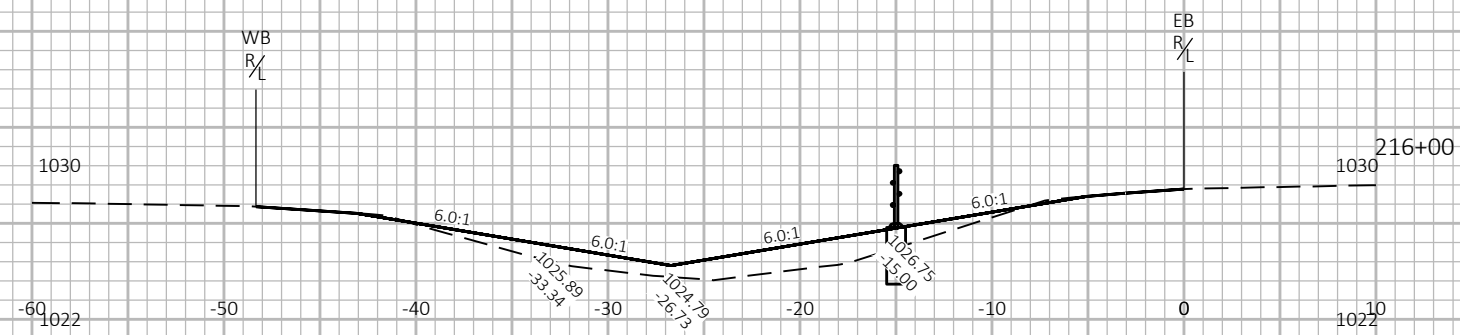
PLOT BY : METRY, ALEXANDER

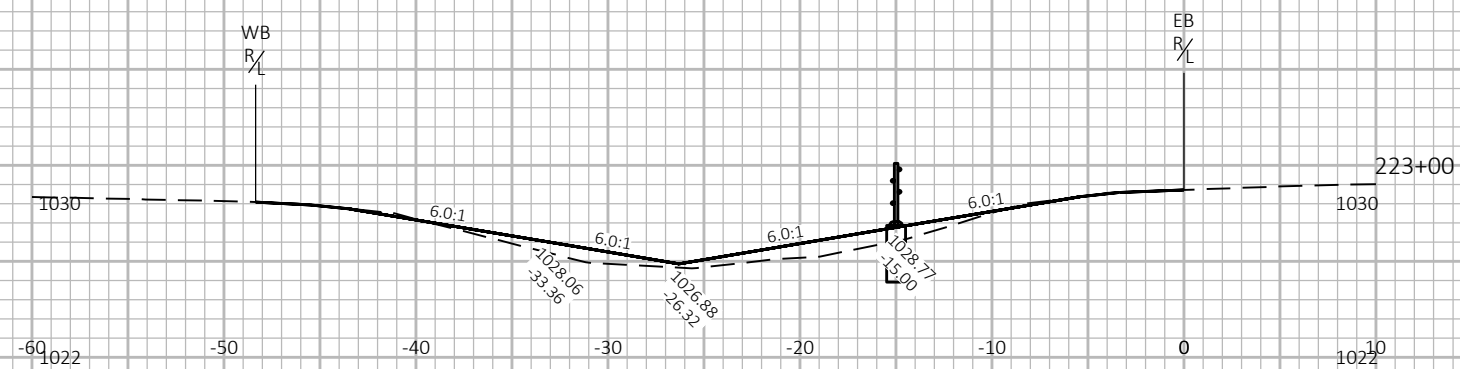
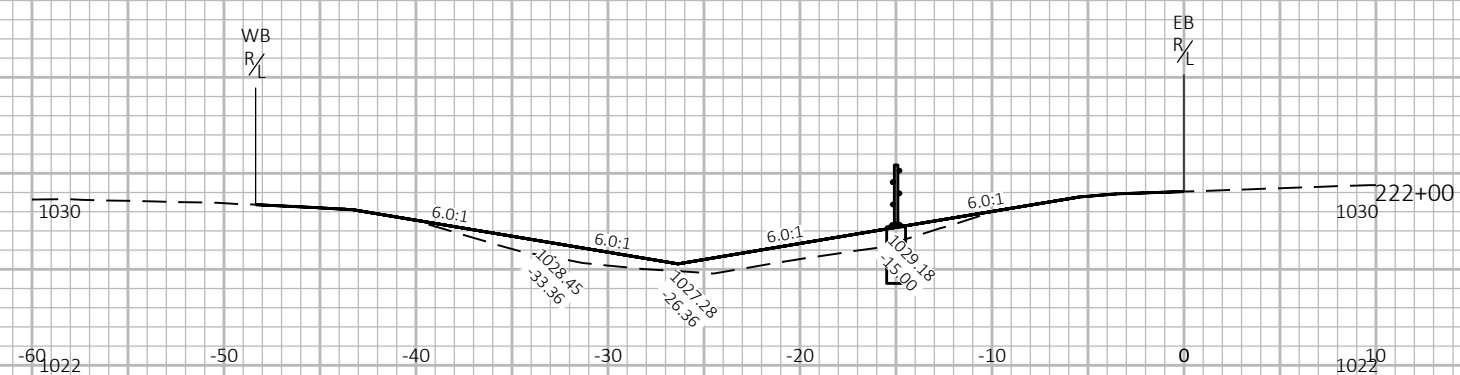
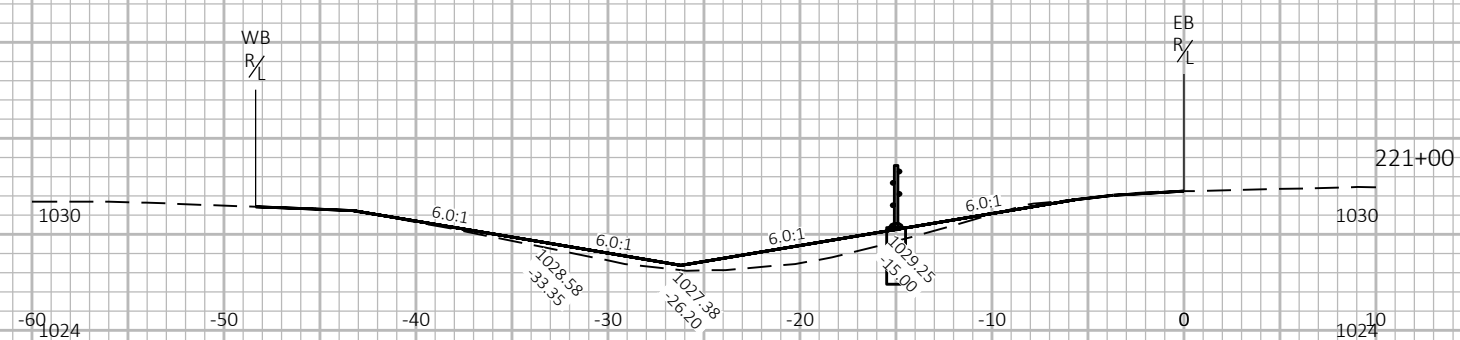
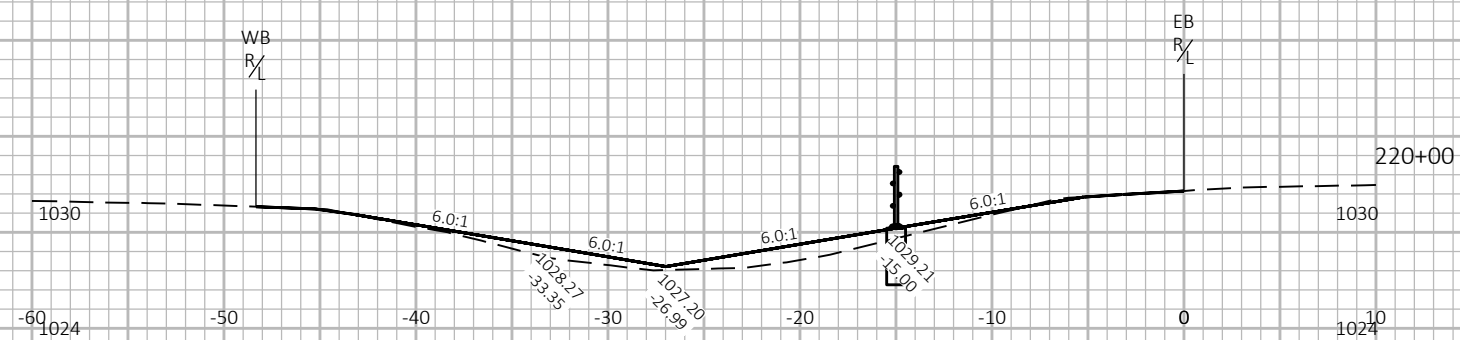
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PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDs SHEET 49







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PROJECT NO:	1020-00-84
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HWY: IH 94

COUNTY: ST. CROIX

CROSS SECTIONS: IH 94

SHEET	70
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FILE NAME : W:\30902851.000; 1020-00-14, IH 94 CABLE GUARD\CAD\1020-00-14\SHEETS\090201-XS.DWG
LAYOUT NAME - Seg2-(05)

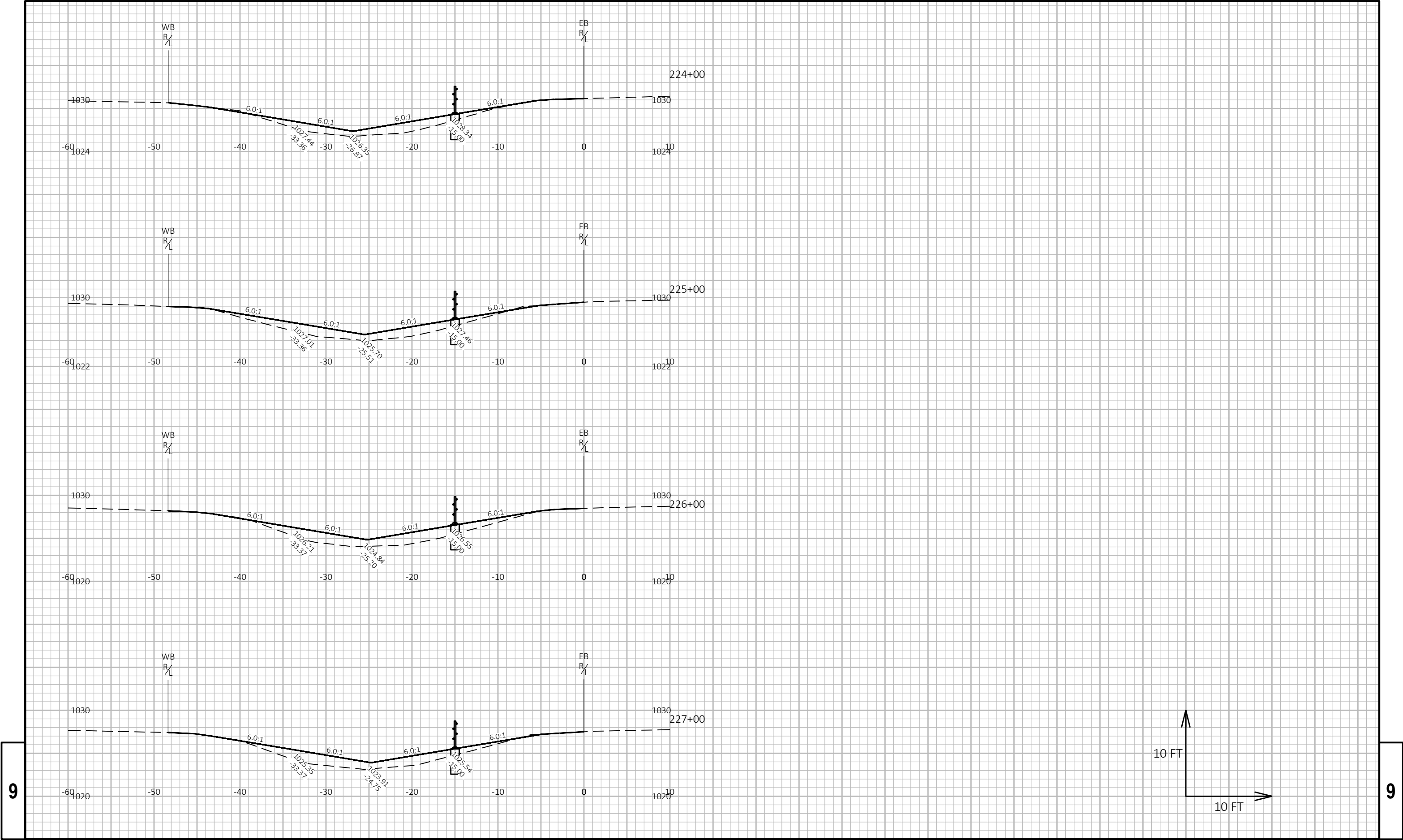
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PLOT NAME :

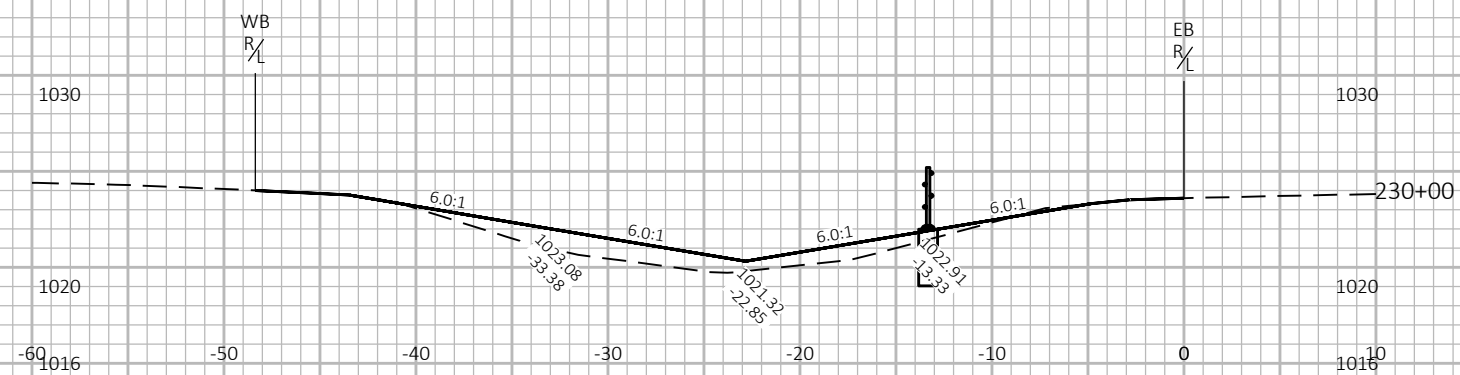
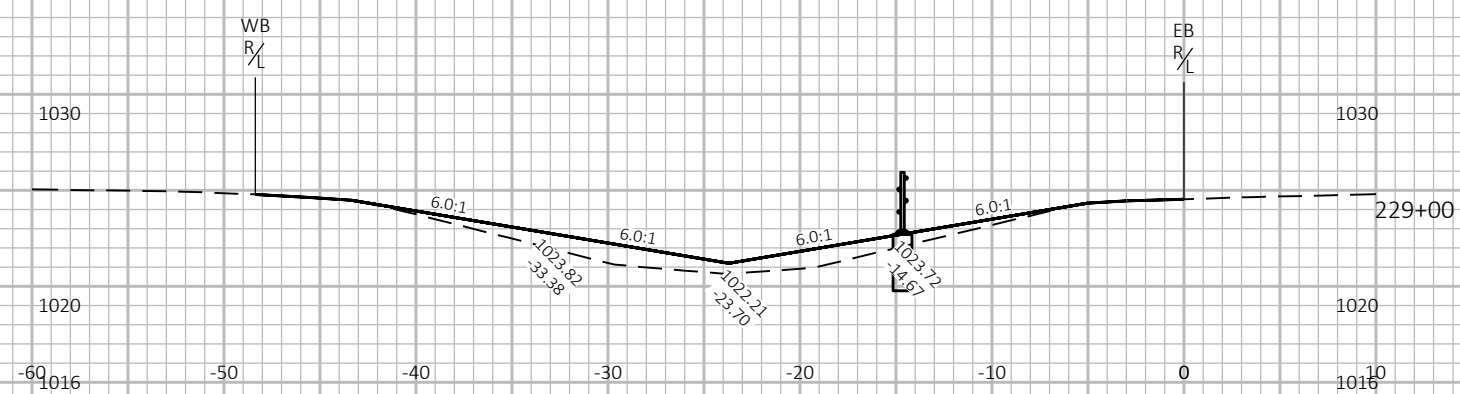
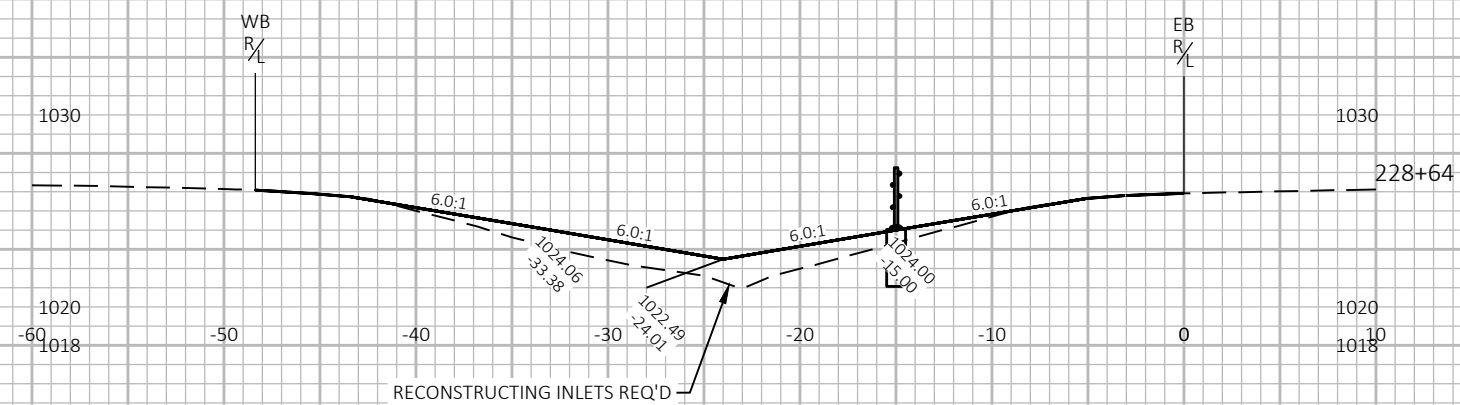
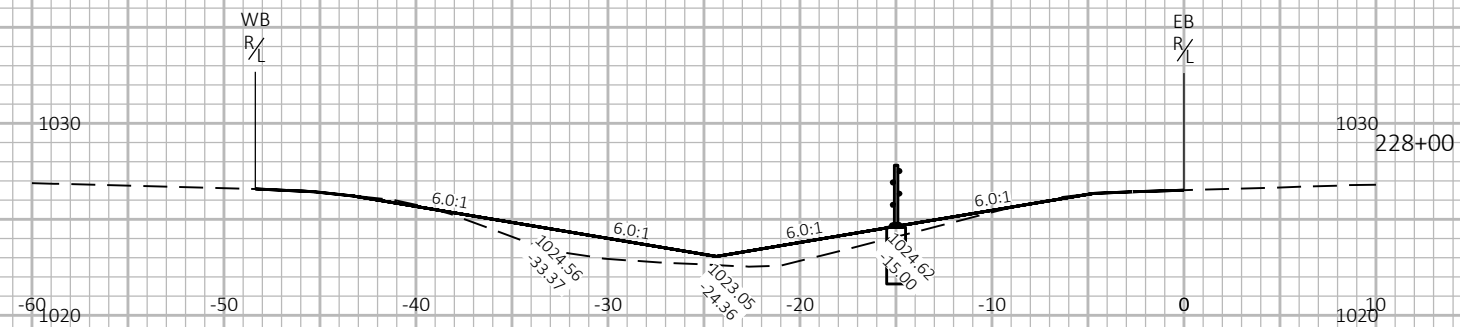
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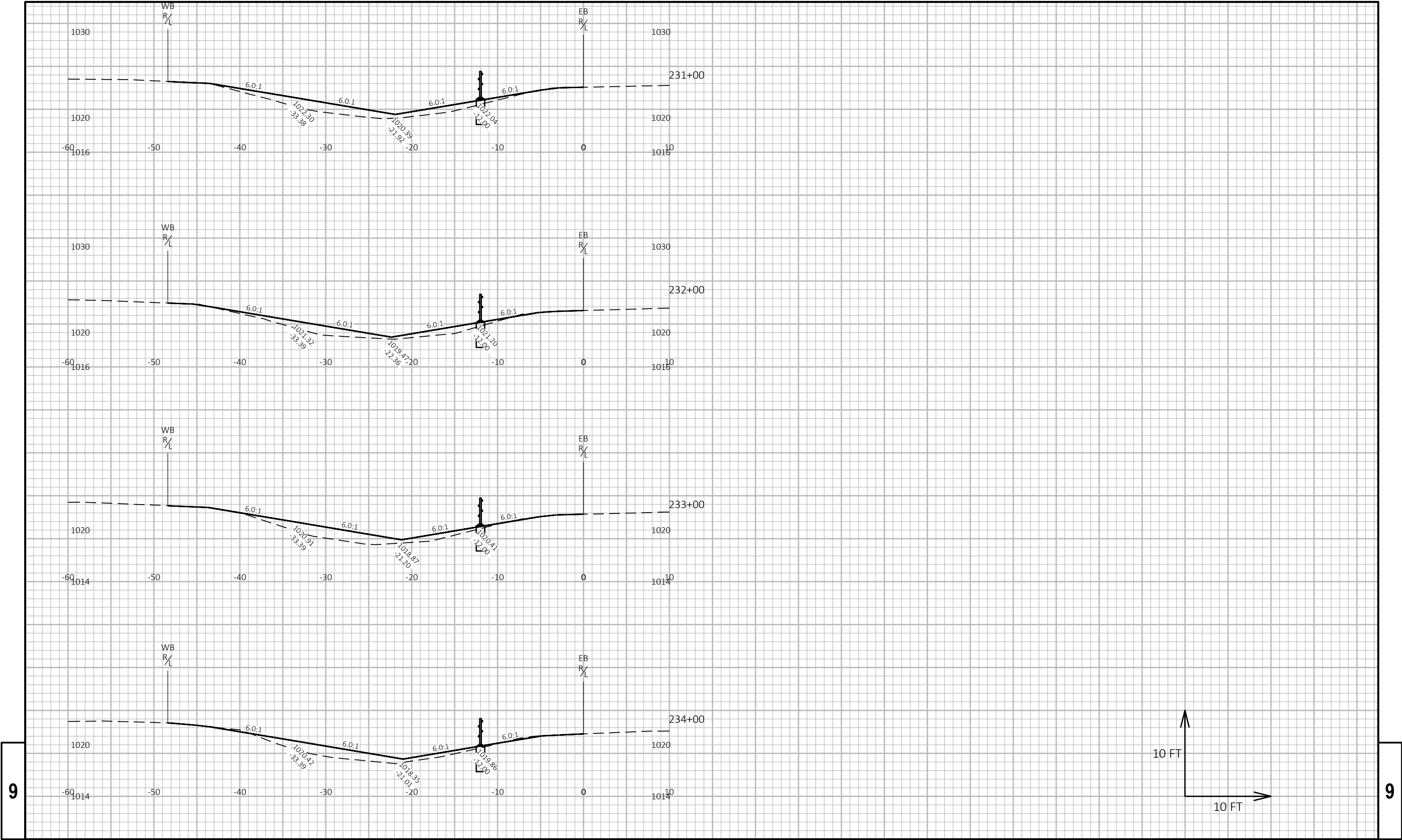
WISDOT/CADDS SHEET 49



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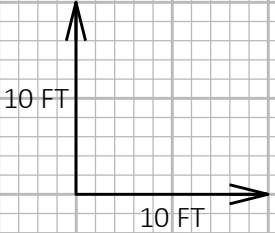
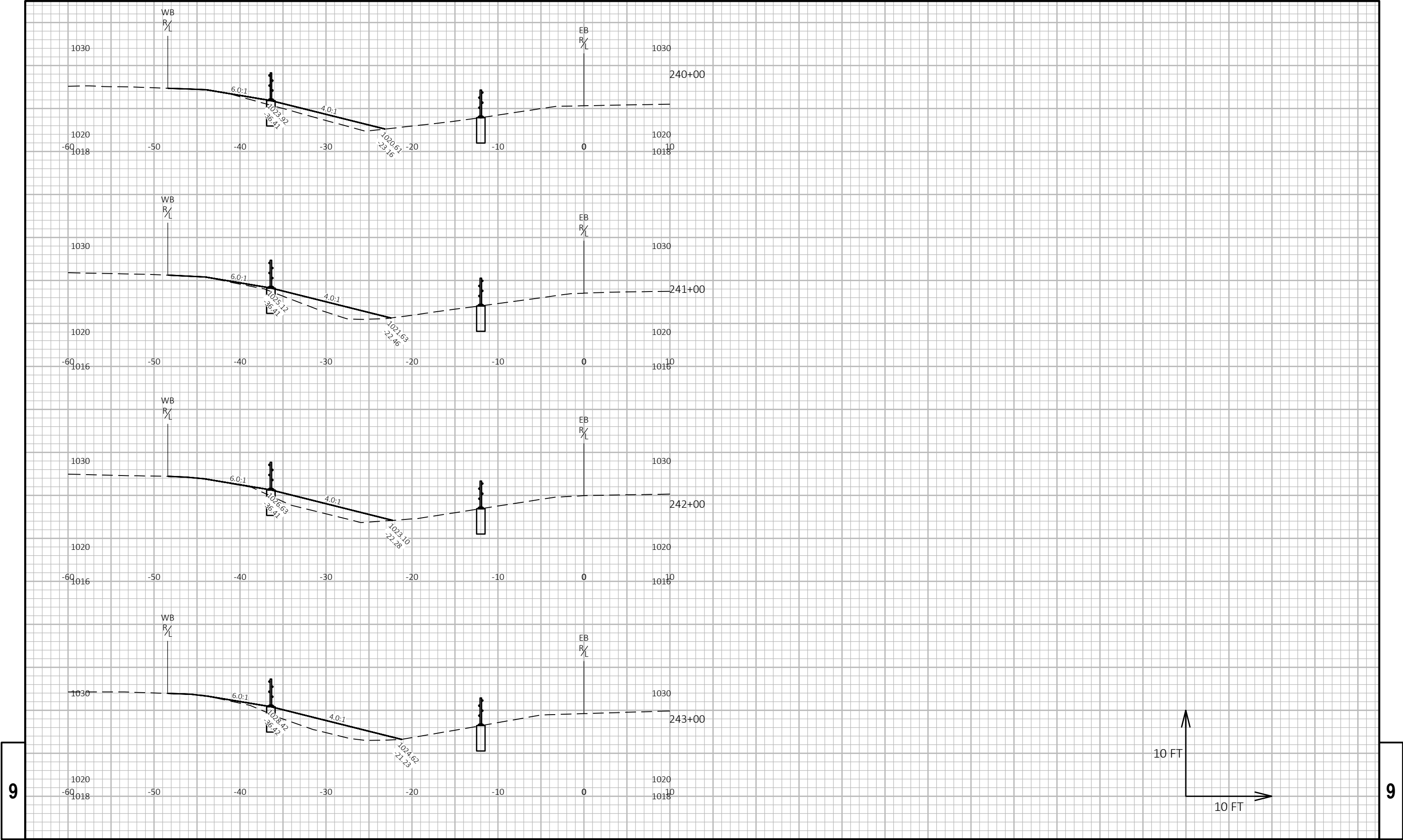
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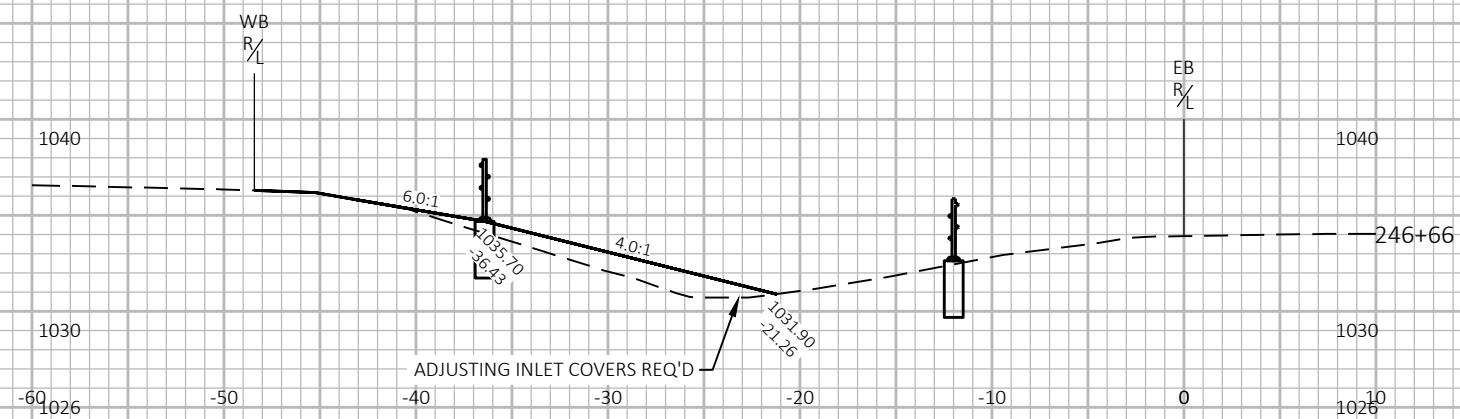
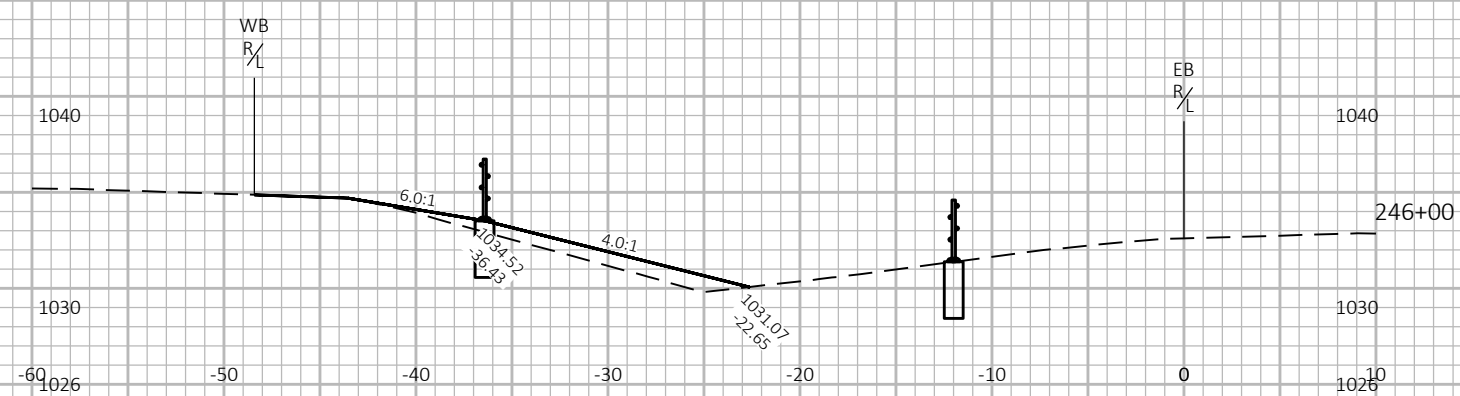
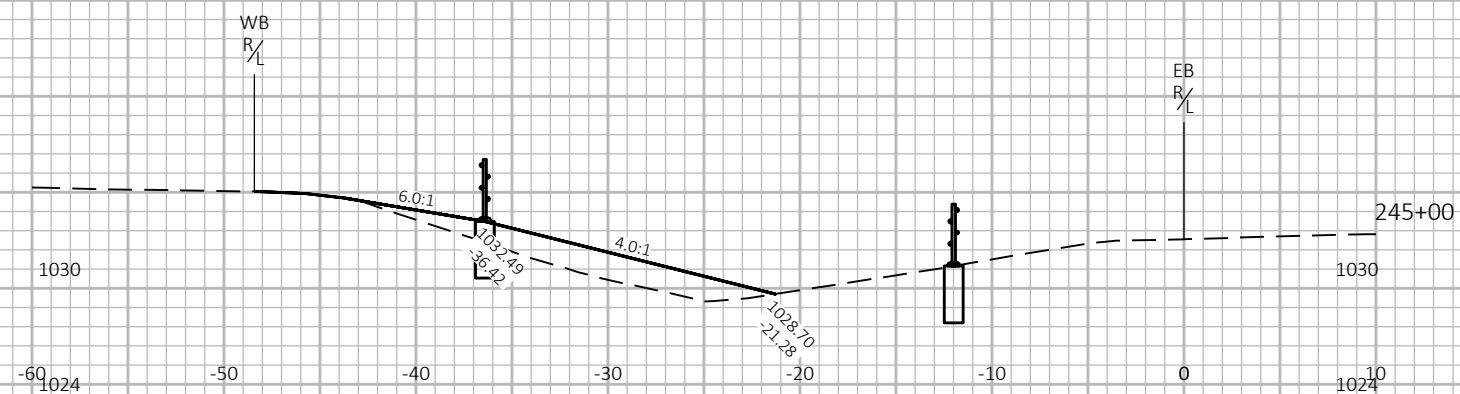
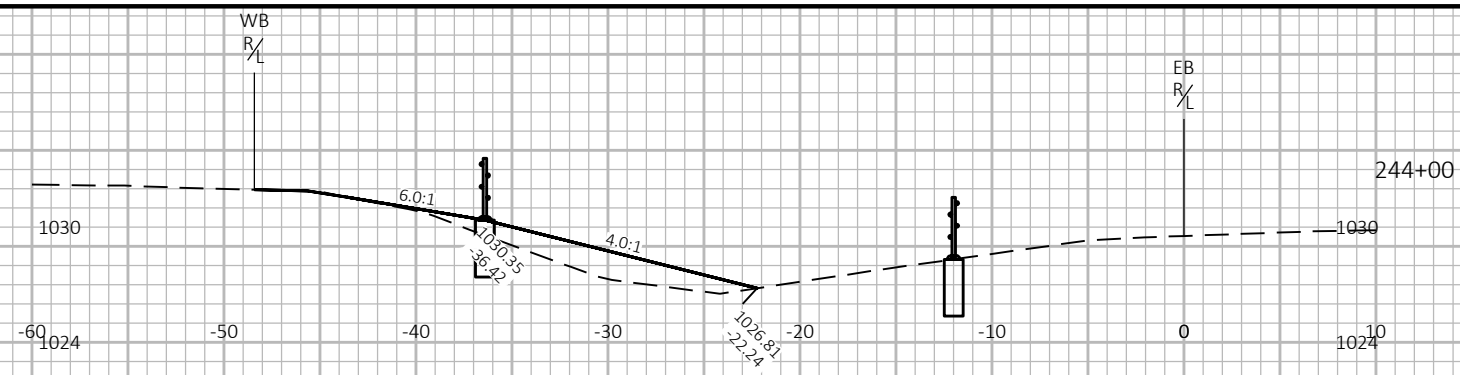


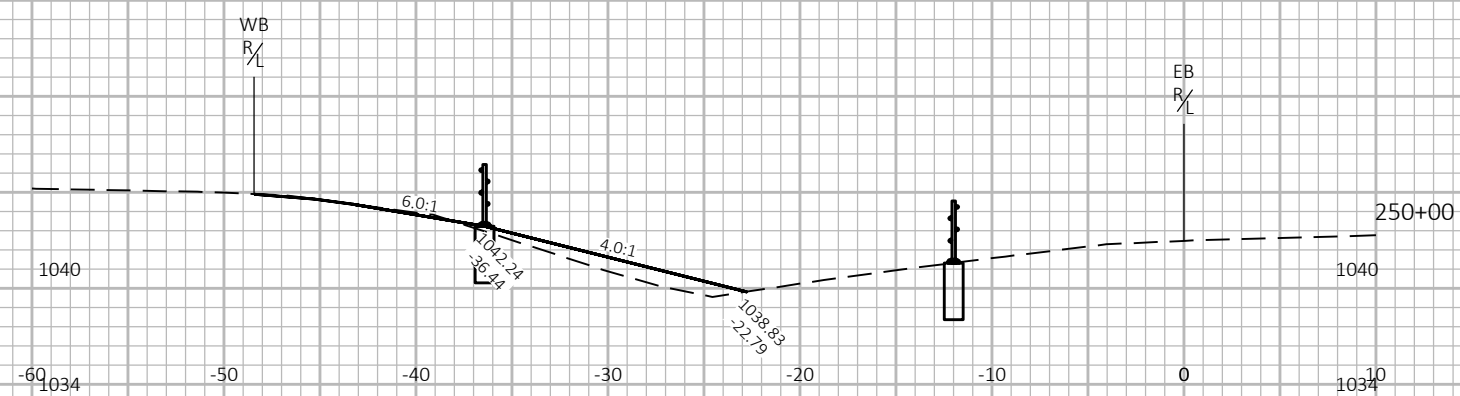
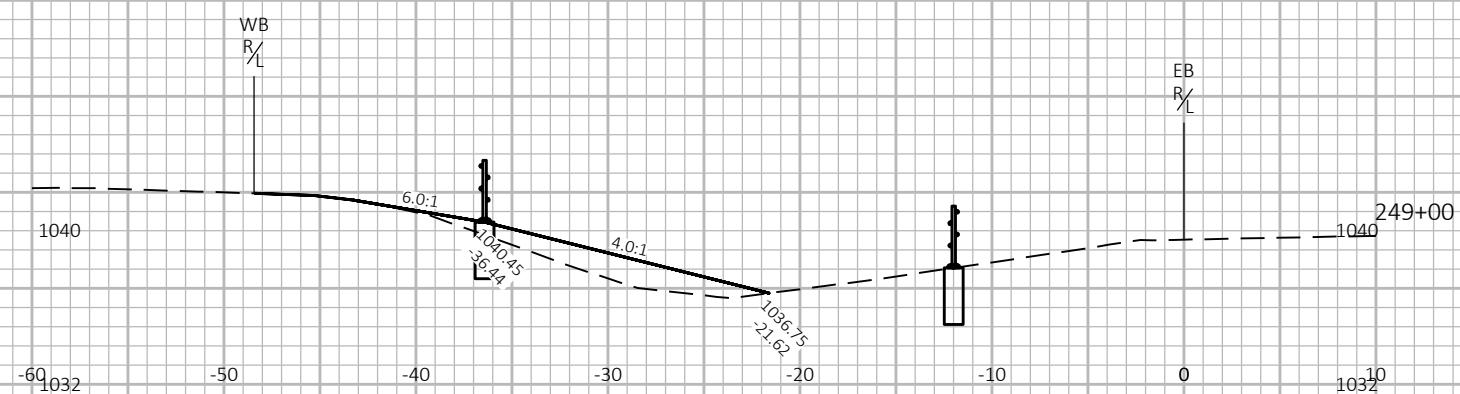
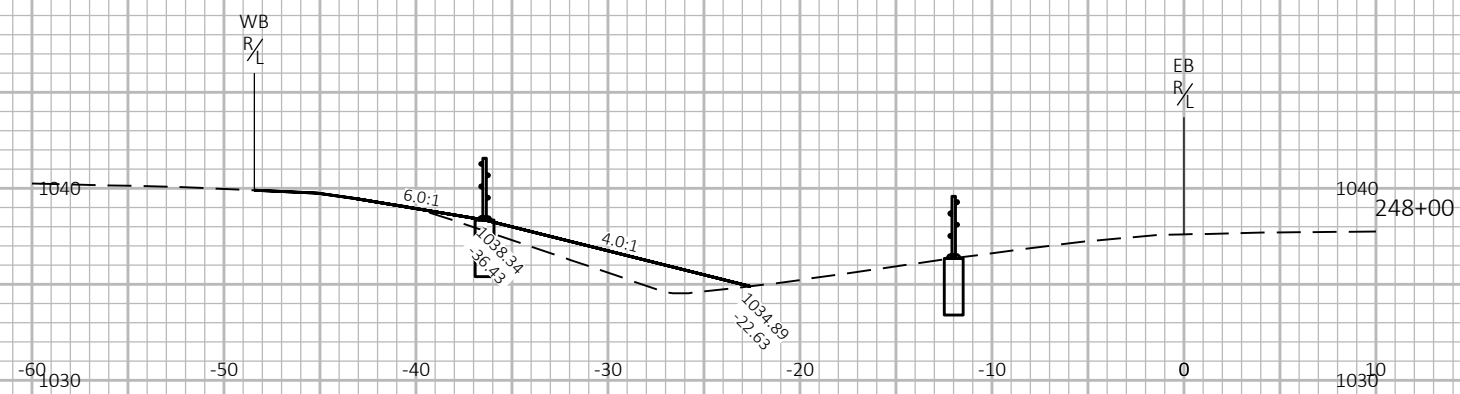
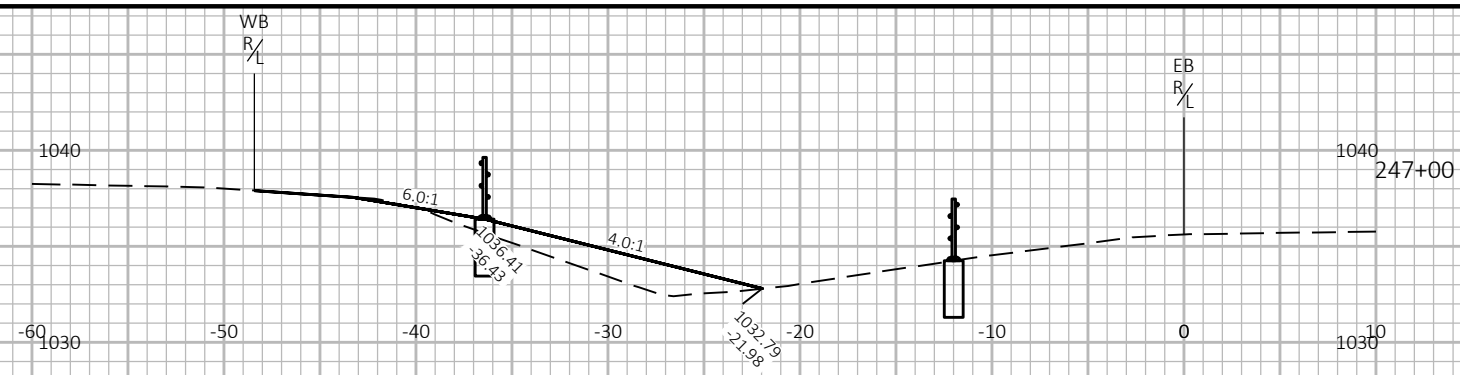


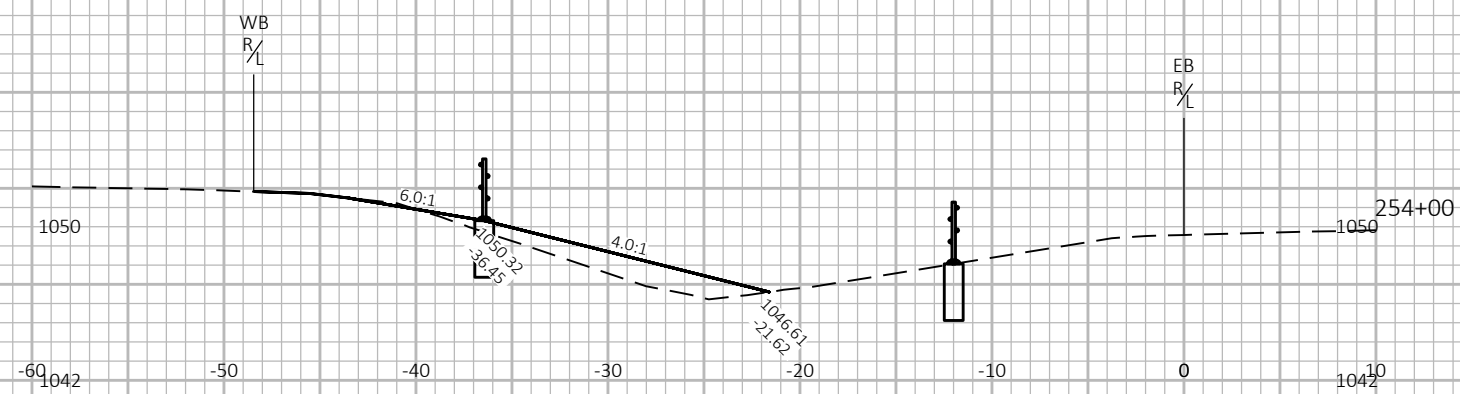
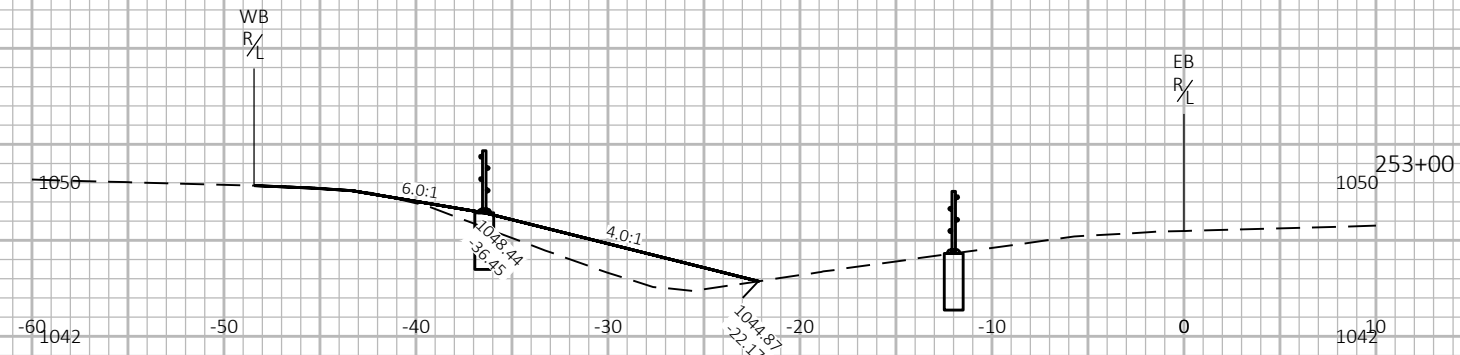
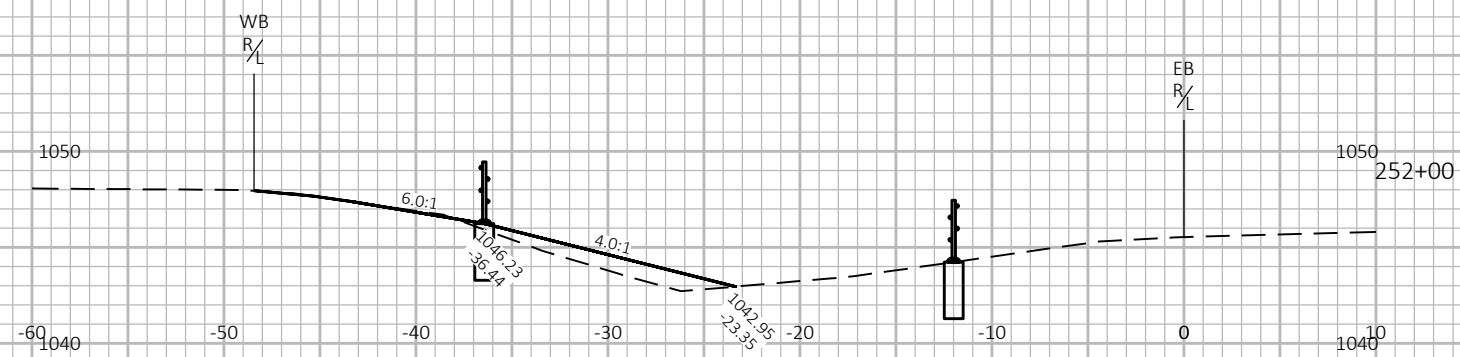
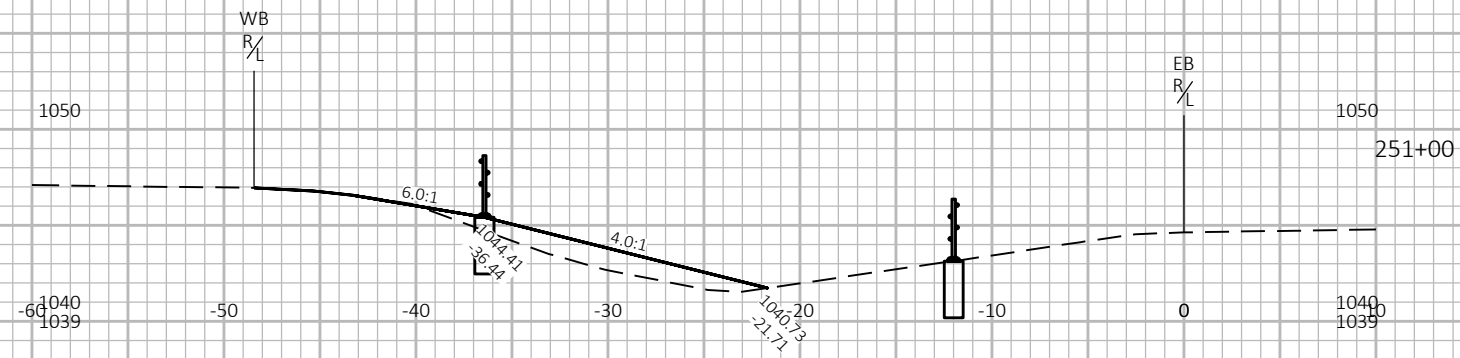
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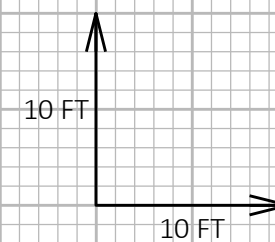
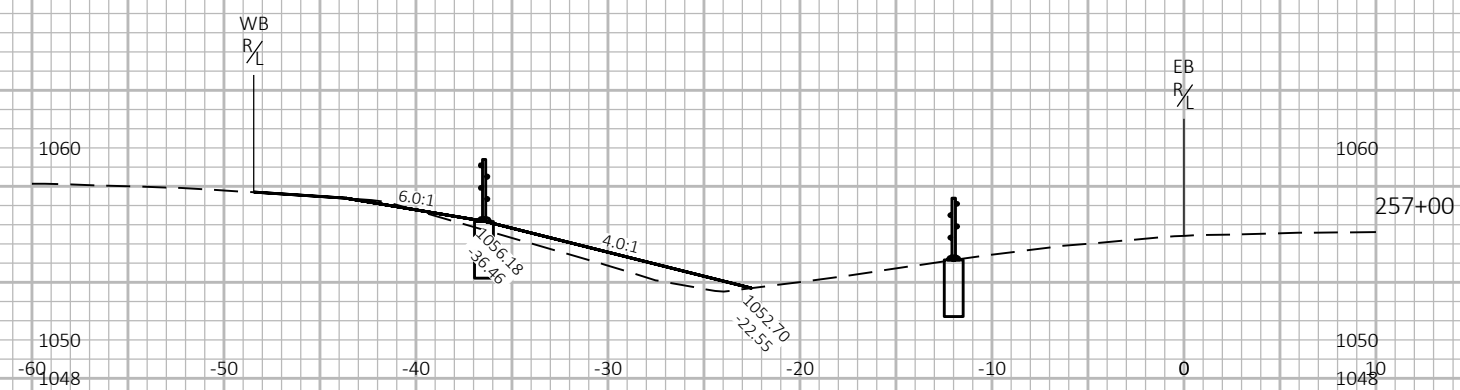
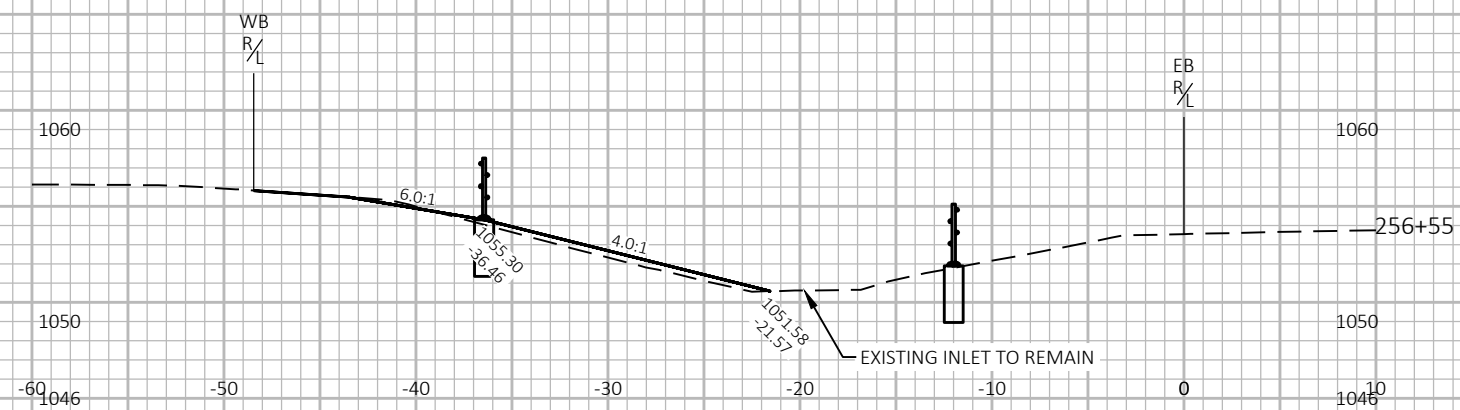
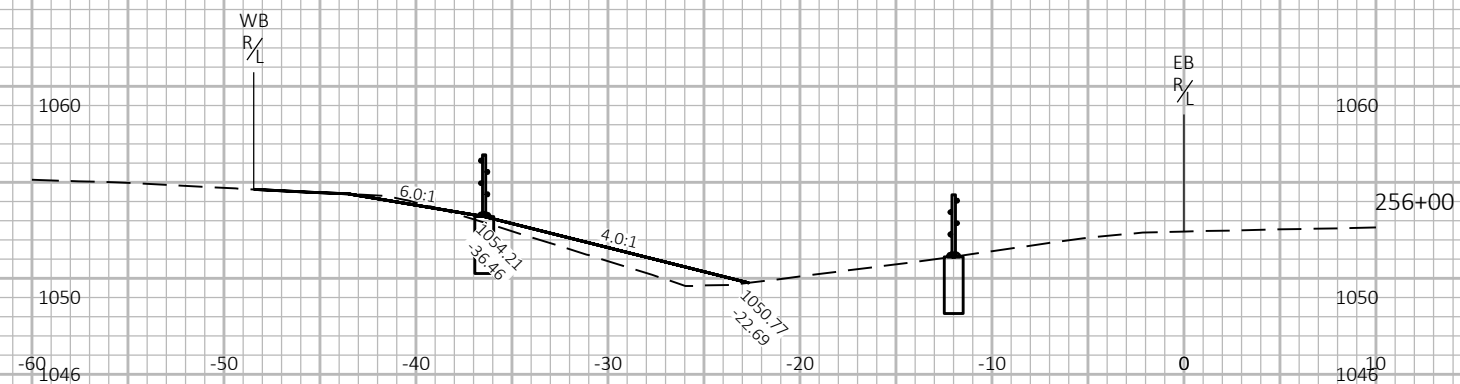
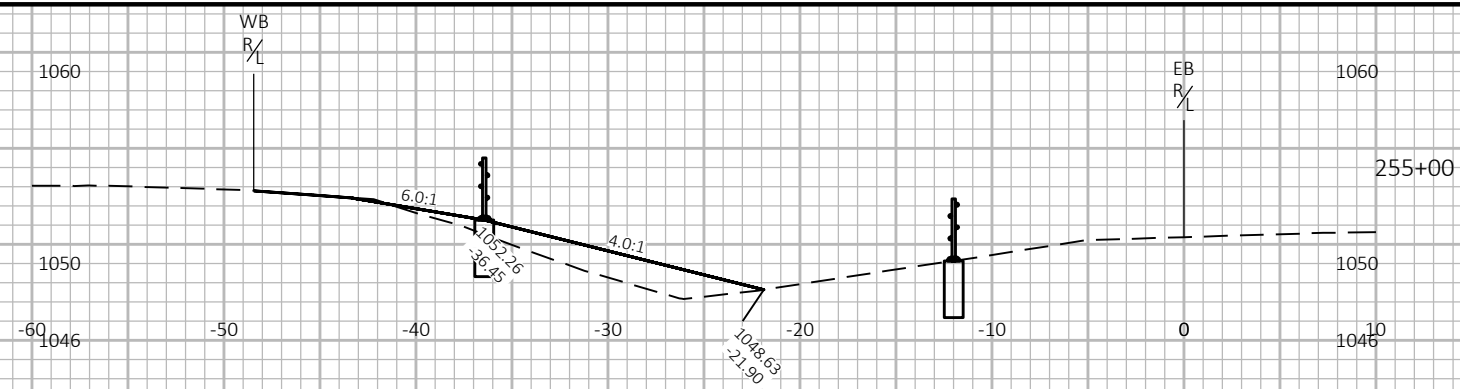
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PROJECT NO:	1020-00-84
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HWY: IH 94

COUNTY: ST. CROIX

CROSS SECTIONS: IH 94

SHEET	80
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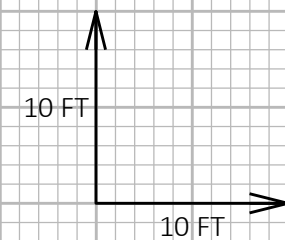
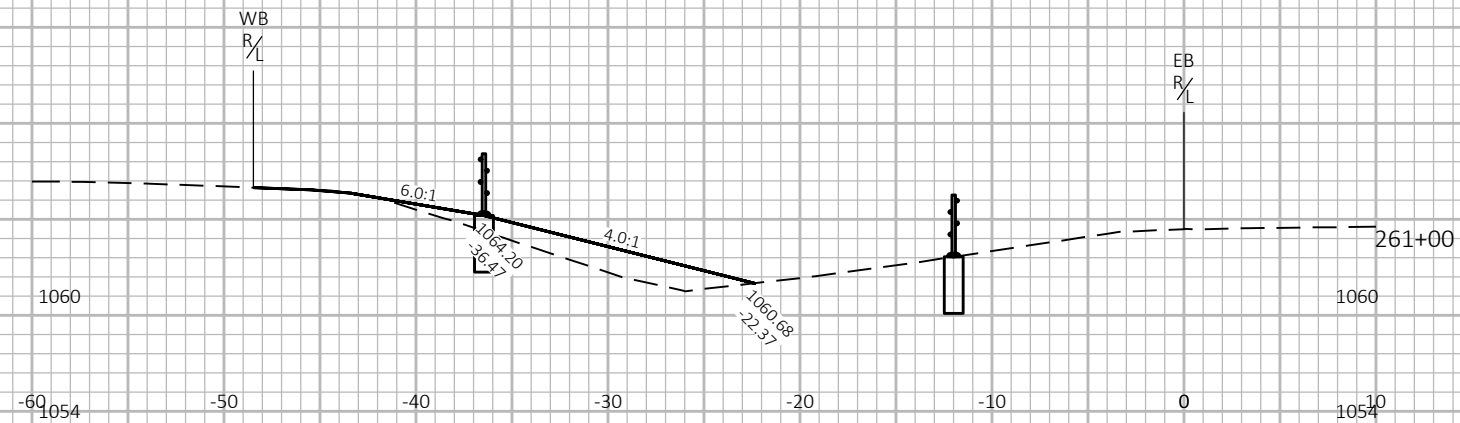
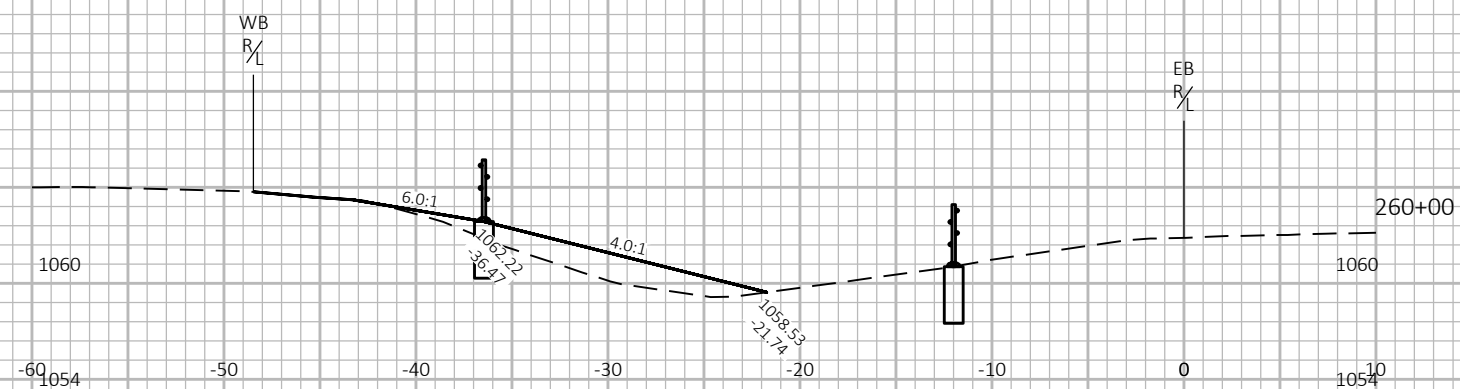
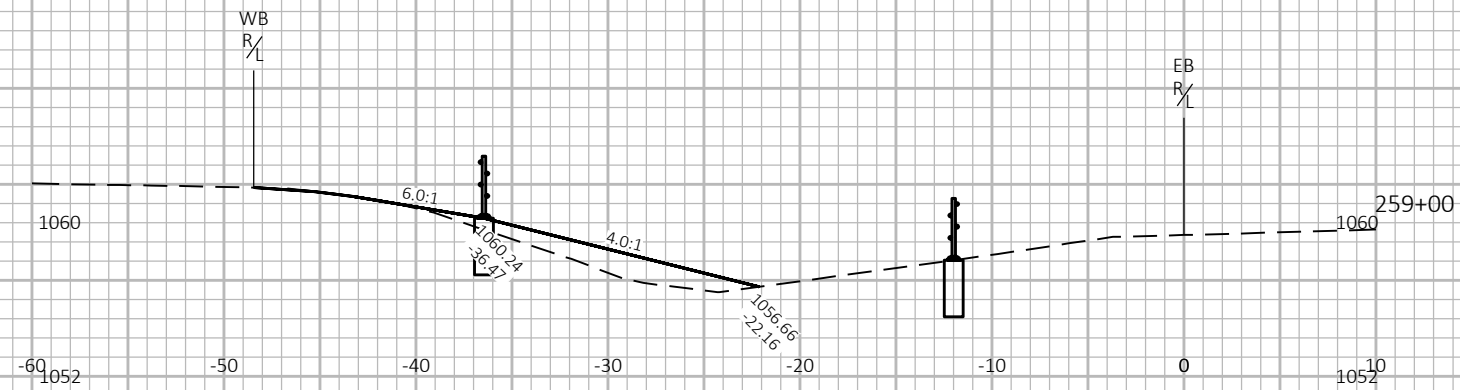
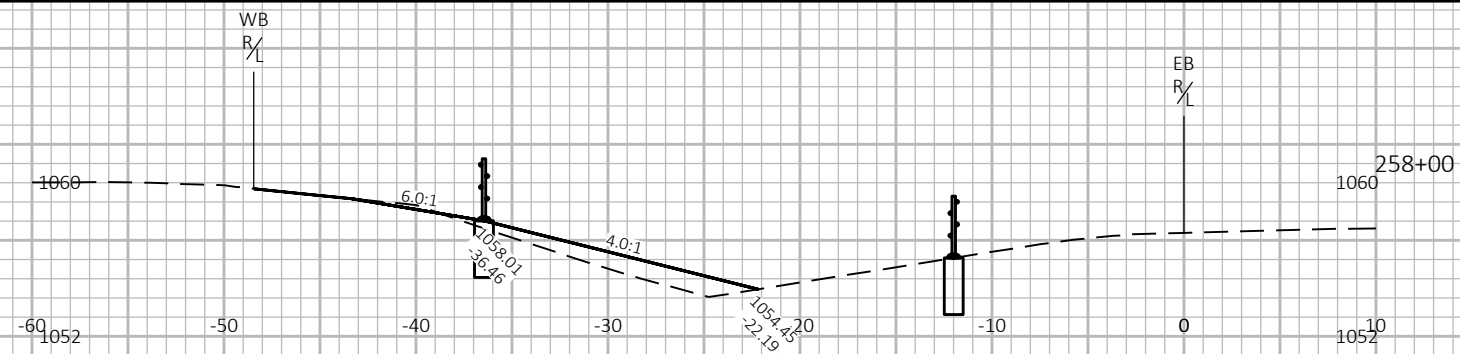
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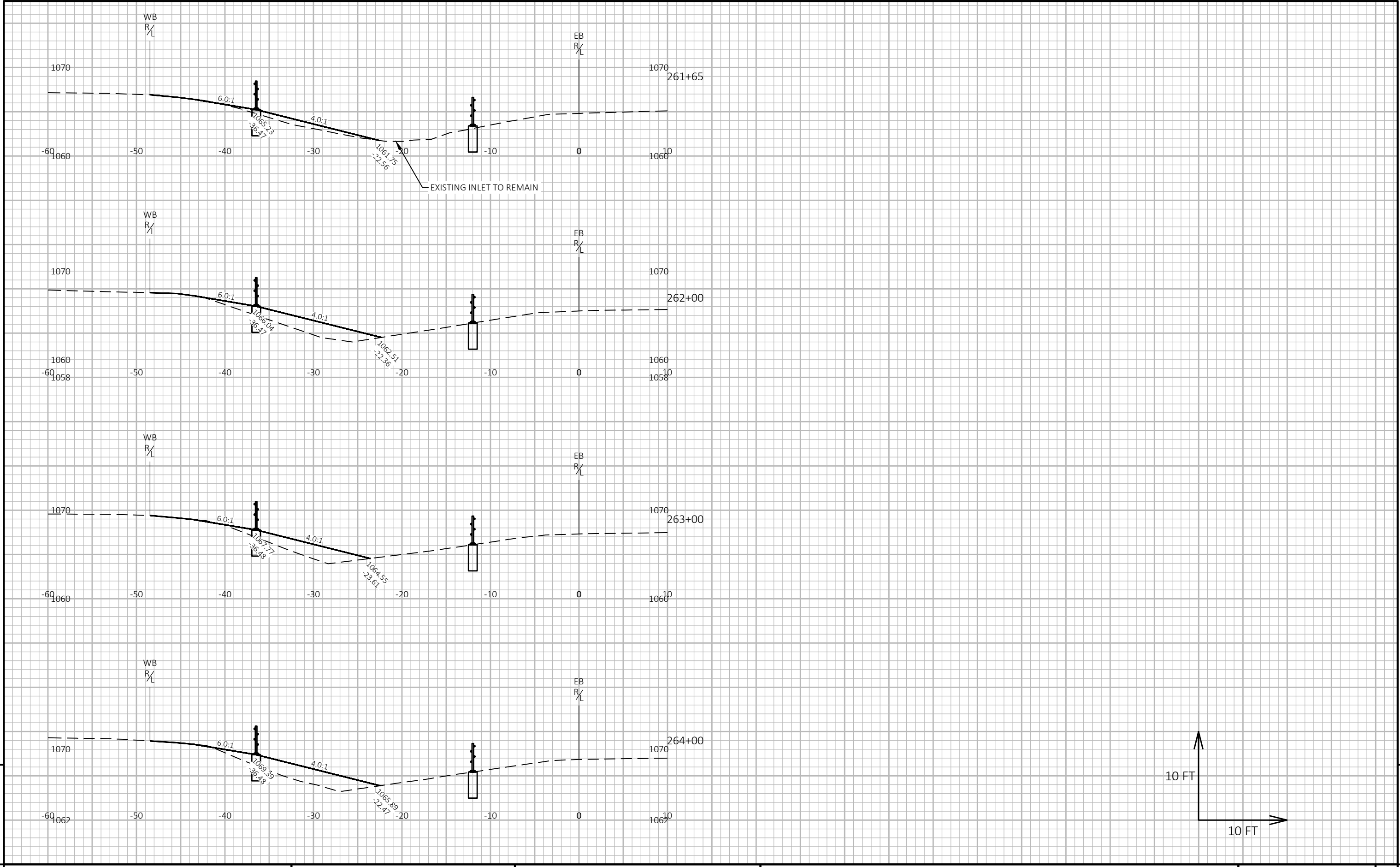
PLOT BY : METRY, ALEXANDER

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

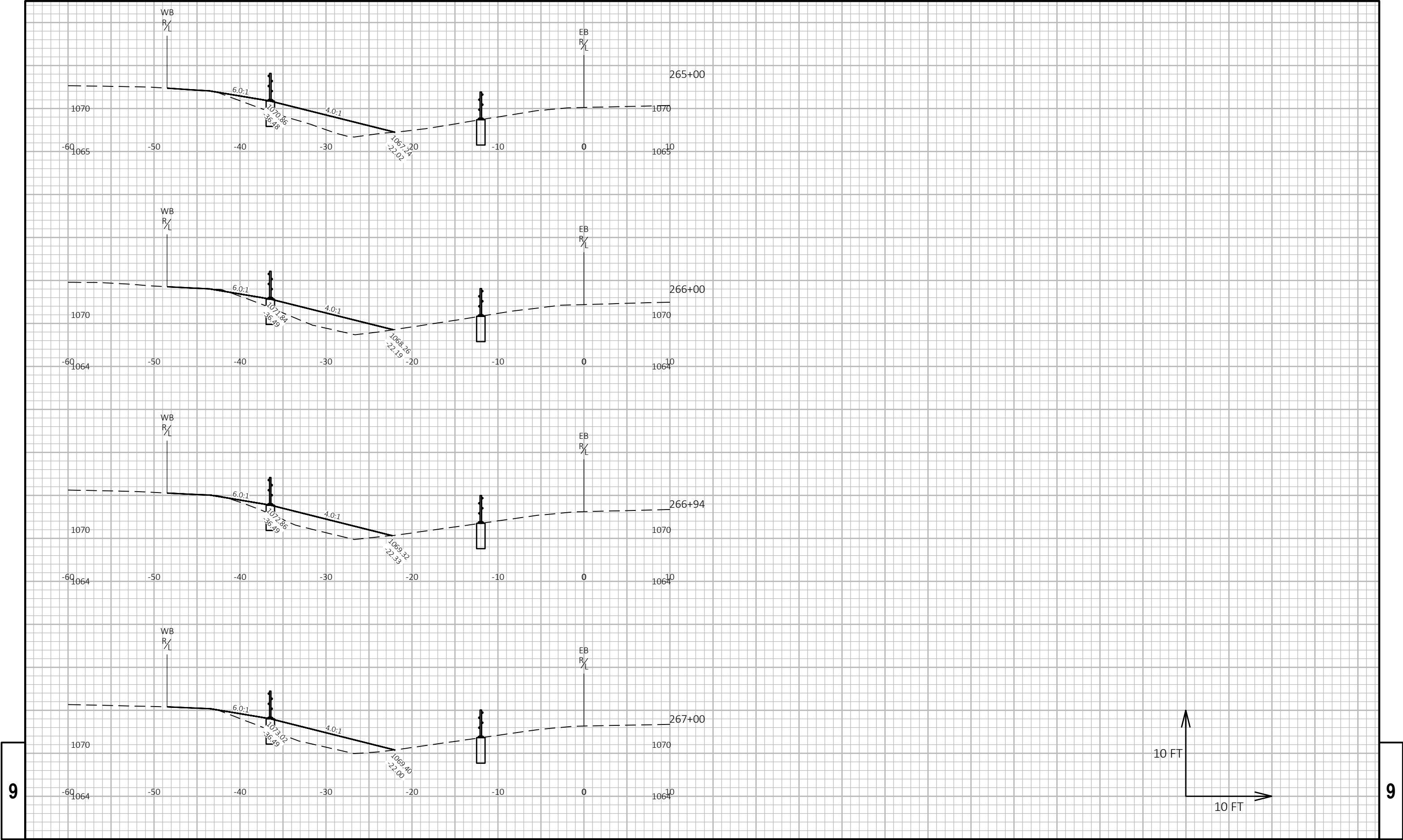
WISDOT/CADDS SHEET 49

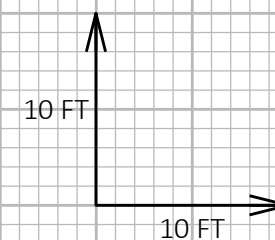
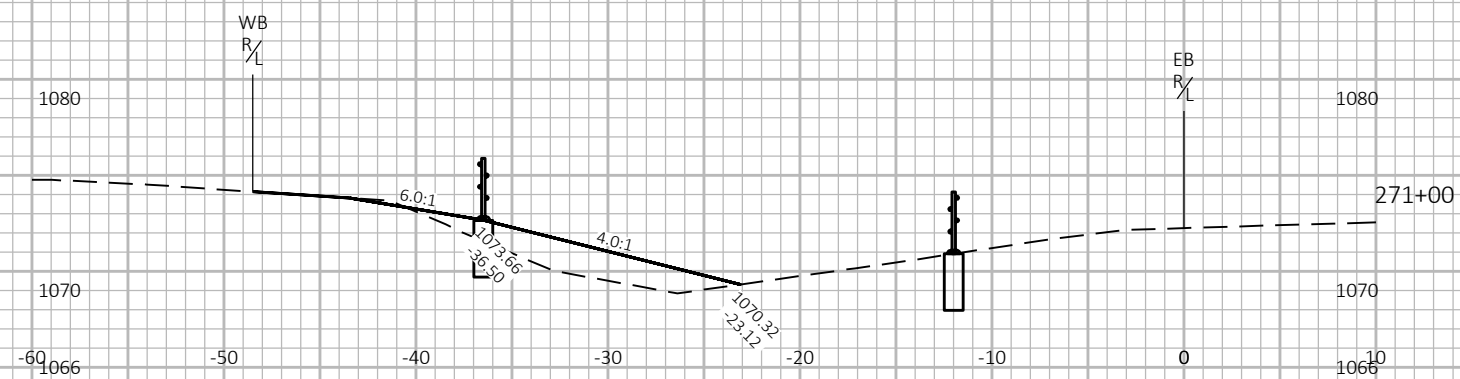
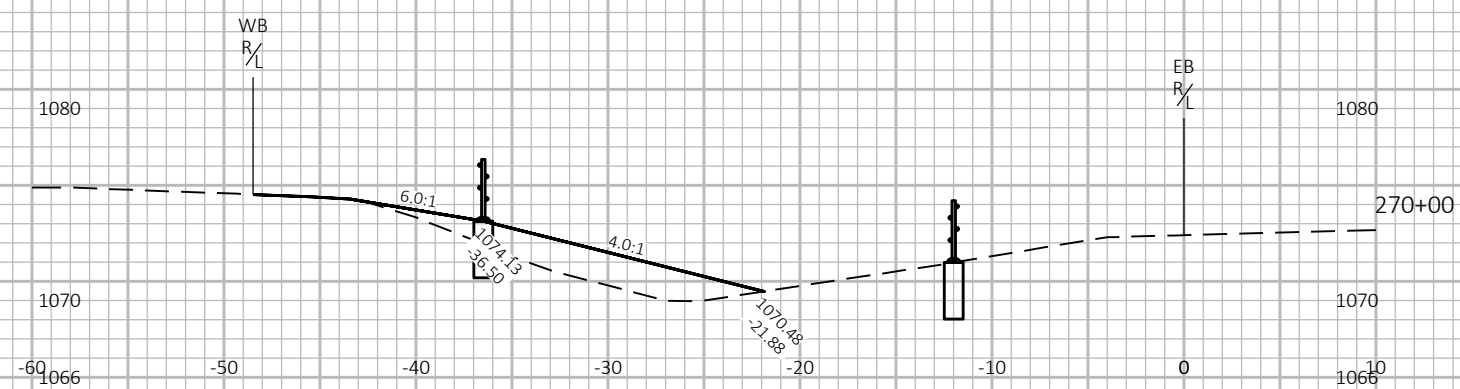
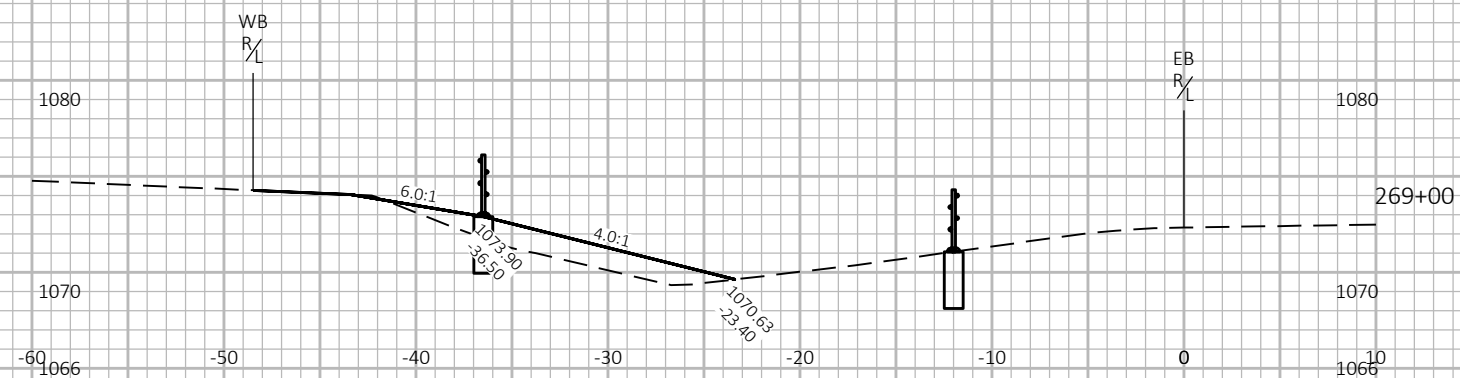
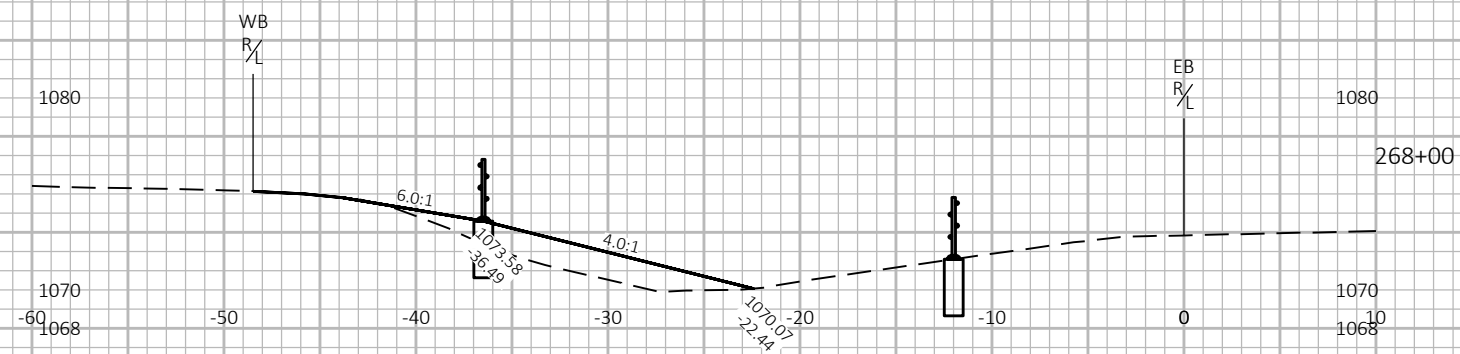


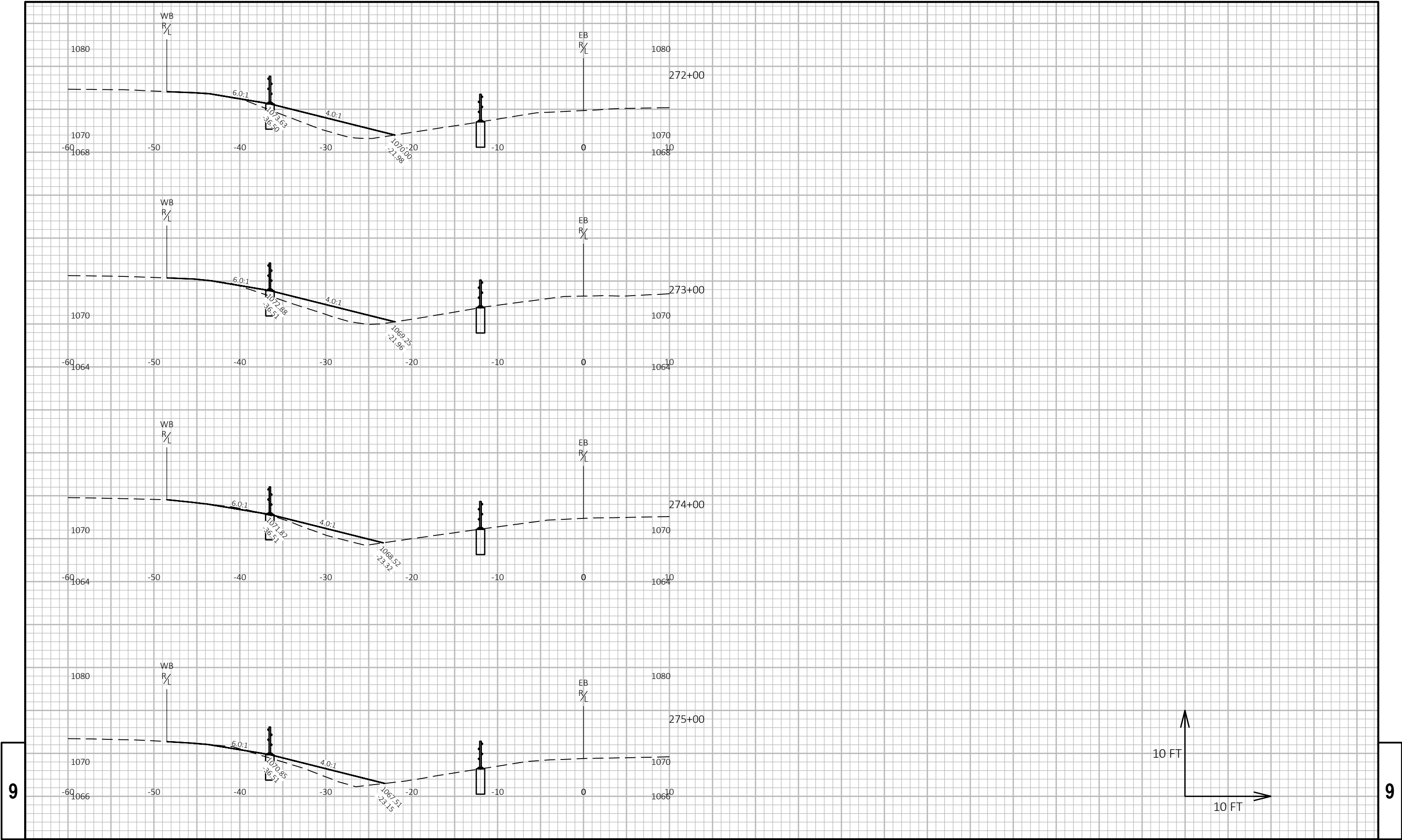


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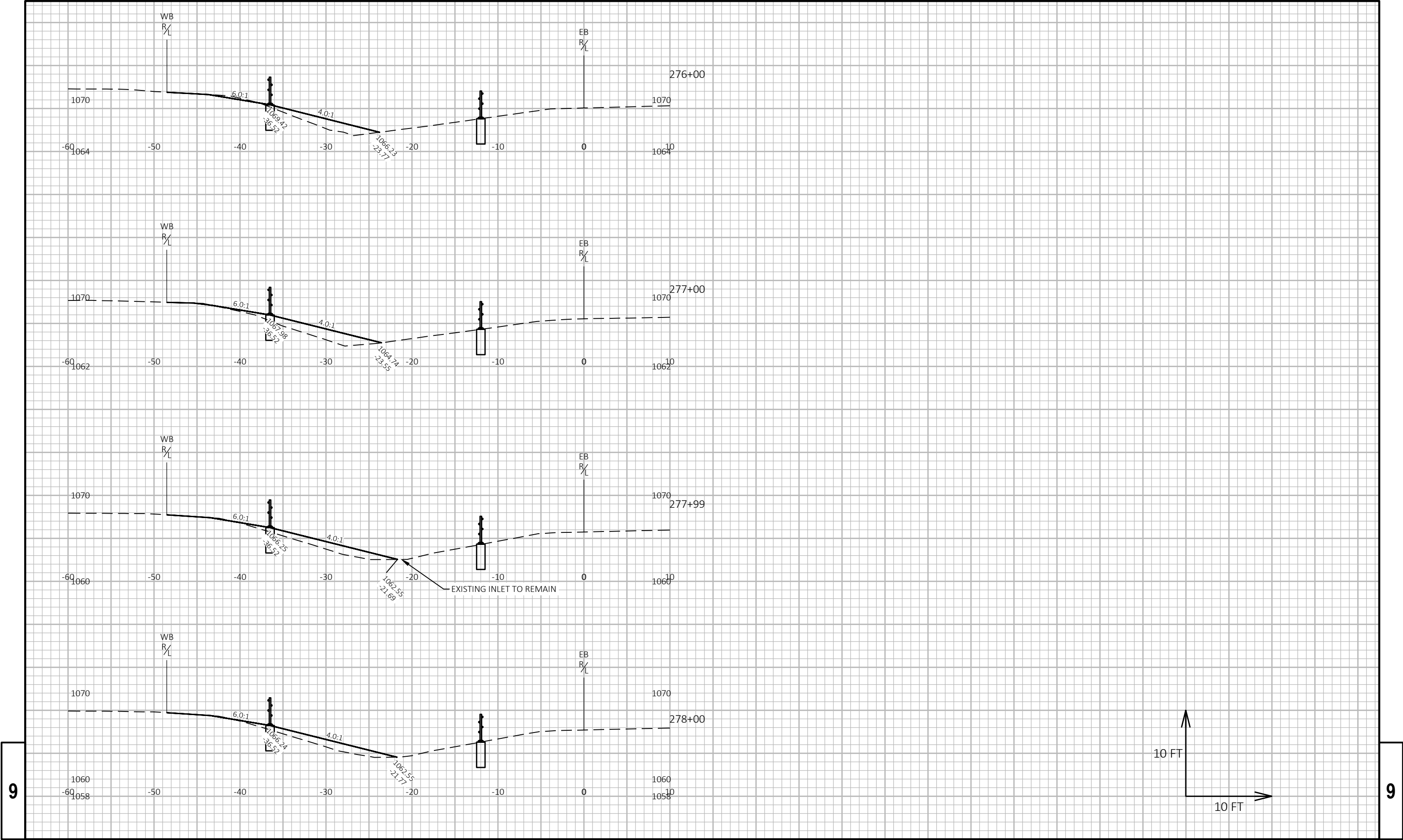






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PROJECT NO: 1020-00-84

HWY: IH 94

COUNTY: ST. CROIX

CROSS SECTIONS: IH 94

SHEET

86

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FILE NAME : W:\30902851.000; 1020-00-14, IH 94 CABLE GUARD\CAD\1020-00-14\1020-00-14\090201-XS.DWG
LAYOUT NAME - Seg2-(21)

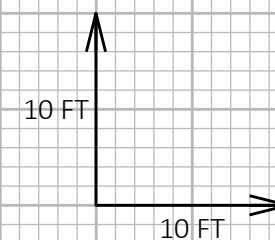
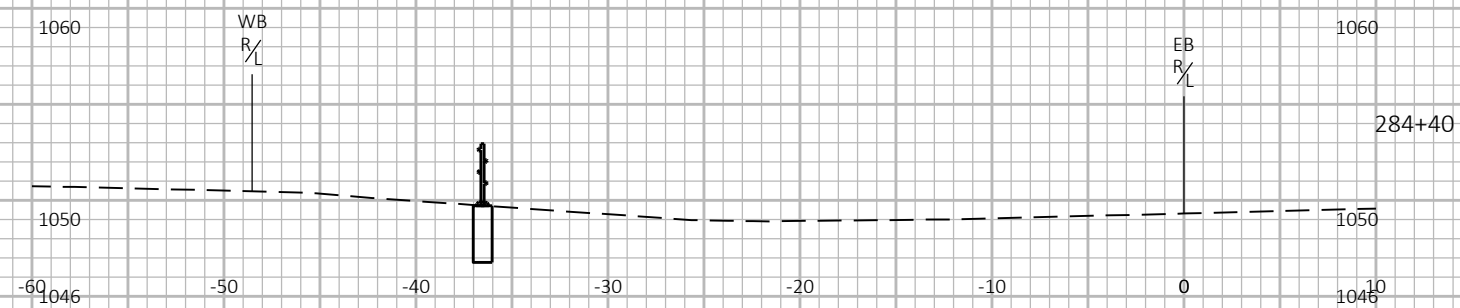
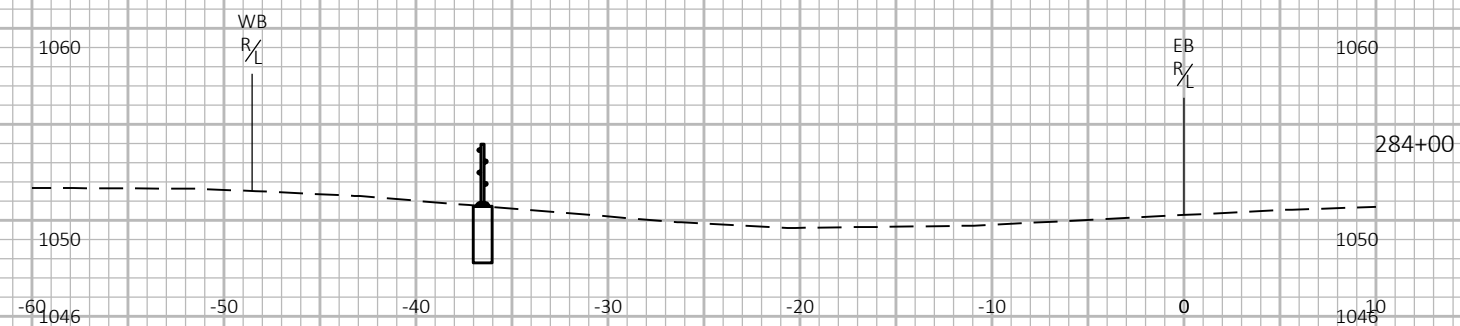
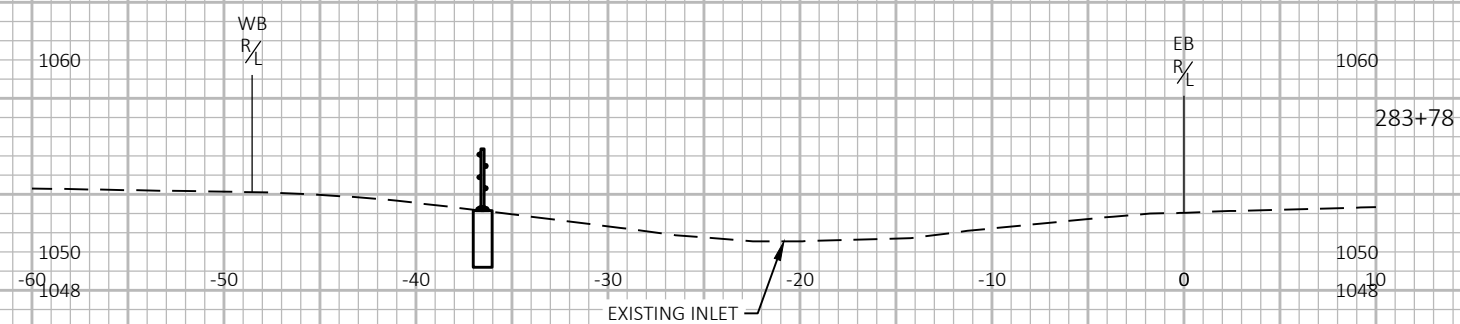
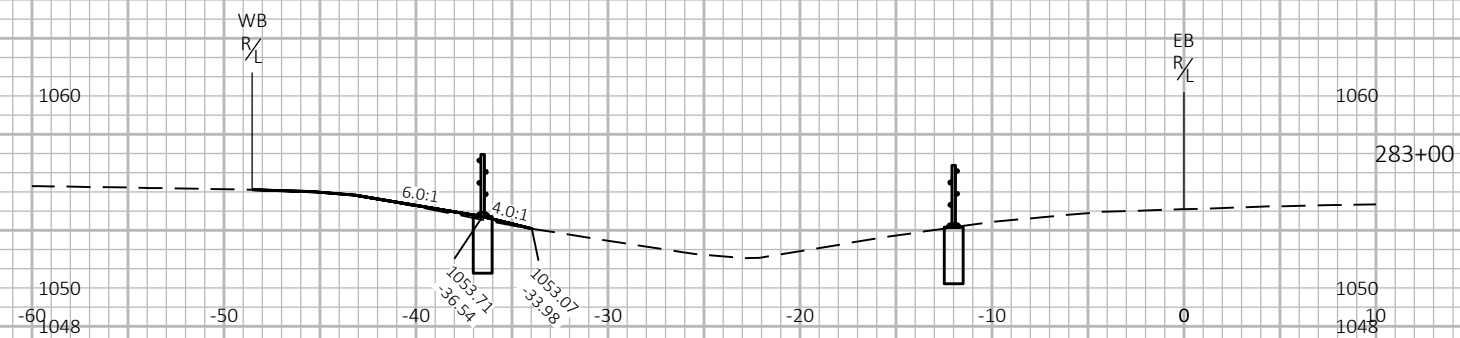
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PLOT BY : METRY, ALEXANDER

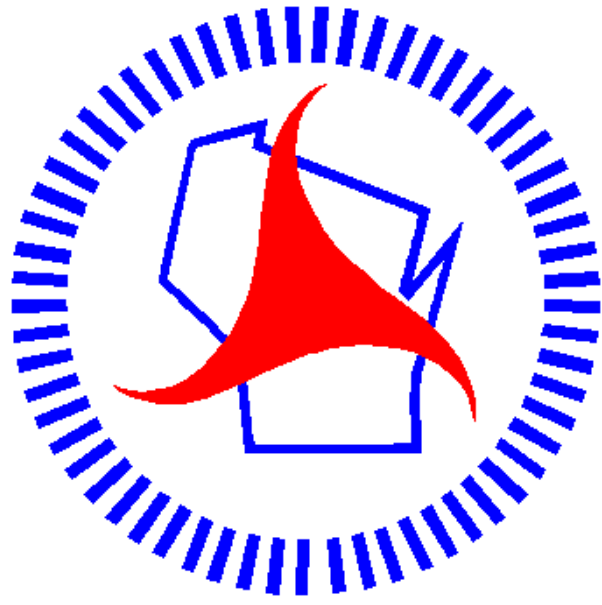
PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDs SHEET 49



Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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

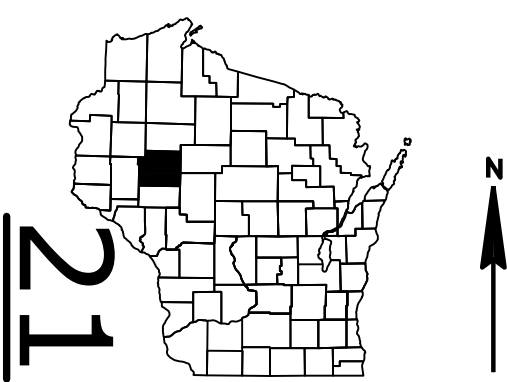
EAU PROJECT ID: 1050-00-80 WITH: 1020-00-84 & 1190-01-86 COUNTY: CHIPPEWA

APRIL 2025

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 = 160



DESIGN DESIGNATION

A.A.D.T. SEG 1 (2021)	=	28,300
A.A.D.T. SEG 2 (2021)	=	19,200
A.A.D.T. SEG 3 (2021)	=	15,300
D.H.V.	=	N/A
D.D.	=	N/A
T.	=	21.2%
DESIGN SPEED	=	75 MPH
ESALS	=	N/A

CONVENTIONAL SYMBOLS

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

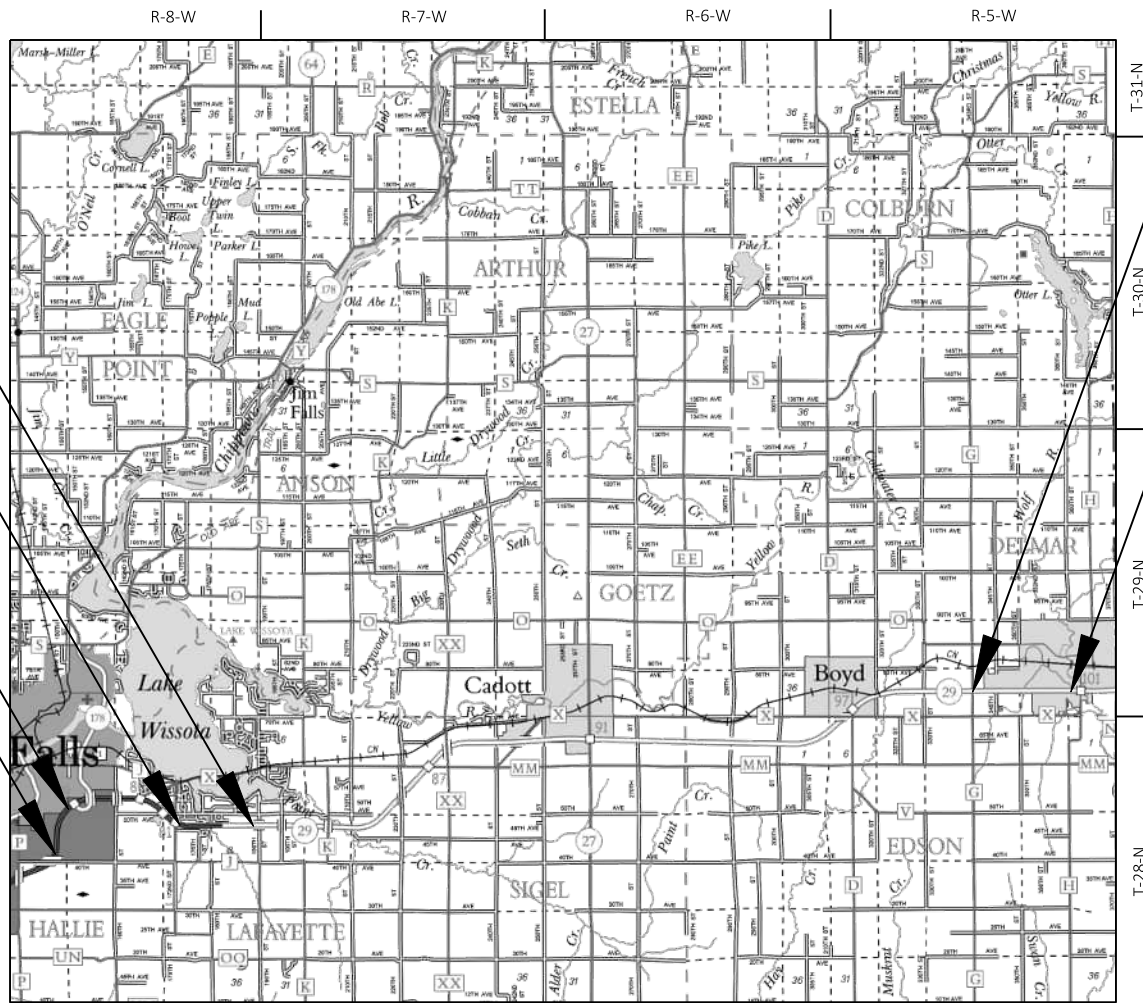
CHIPPEWA FALLS - THORP

40TH AVE TO 0.45 MI W OF CTH H

STH 29

CHIPPEWA COUNTY

STATE PROJECT NUMBER
1050-00-80



TOTAL NET LENGTH OF CENTERLINE = 4.691 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), CHIPPEWA 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
1050-00-80	WISC 2025426	1

WSP USA

MAXWELL L. SEBESTA
E-48682
LA CROSSE, WIS.

PROFESSIONAL ENGINEER

10/23/2024
DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: WISDOT
Designer: WSP USA
Project Manager: TYSON PELKOEFER, P.E.
Regional Examiner: WISDOT
Regional Supervisor: JAMES KOENIG, P.E.

APPROVED FOR THE DEPARTMENT
Tyson Pelkofer
DATE: (Signature)

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. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREAS. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

UTILITY LINES IN THE CROSS SECTIONS ARE FOR HORIZONTAL REFERENCE ONLY.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS. DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED (SALVAGED), FERTILIZED, SEEDED, AND EMATTED/MULCHED AS DIRECTED BY THE ENGINEER.

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

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. SLOPES AND DISTANCES MAY VARY WITHIN THE STATION LIMITS.

COUNTY SPECIFIC CABLE GUARD SYSTEMS:

- BRIFEN TL-4 AS TL-3, 4 CABLES
- NUCOR/MARION TL-4, LOW CABLE AT 15", 4 CABLES

SECTION 2 ORDER OF SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
ALIGNMENT DETAILS
BORINGS

ABBREVIATIONS CONT'D

PCC	PORTLAND CEMENT CONCRETE
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PL	PROPERTY LINE
R	RADIUS OR RANGE
R/L	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQ'D	REQUIRED
RT	RIGHT
R/W	RIGHT OF WAY
RD	ROAD
SHLD	SHOULDER(S)
S	SOUTH
SB	SOUTHBOUND
SF	SQUARE FOOT (FEET)
SDD	STANDARD DETAIL DRAWING(S)
STH	STATE TRUNK HIGHWAYS
SS	STORM SEWER
SSD	STOPPING SIGHT DISTANCE
STA	STATION
SE	SUPERELEVATION
S/L	SURVEY LINE
SYM	SYMMETRICAL
T	TRUCKS (PERCENT OF)
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
TOC	TOP OF CURB
TYP	TYPICAL
UNCL	UNCLASSIFIED
UG	UNDERGROUND
VAR	VARIABLE
VC	VERTICAL CURVE
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
WT	WEIGHT
W	WEST
WB	WEST BOUND

ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
AE, AEW	APRON ENDWALL
ASPH	ASPHALTIC
ADT	AVERAGE DAILY TRAFFIC
AADT	ANNUAL AVERAGE DAILY TRAFFIC
BAD	BASE AGGREGATE DENSE
BF	BACK FACE
BM	BENCHMARK
BTWN	BETWEEN
CTR	CENTER
C/L	CENTERLINE
Δ	CENTRAL ANGLE OR DELTA
CE	COMMERCIAL ENTRANCE
CONST	CONSTRUCTION
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAYS
CY	CUBIC YARD
CP	CONTROL POINT OR CULVERT PIPE
C&G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
DISCH	DISCHARGE
DMS	DYNAMIC MESSAGE SIGN
EA	EACH
E	EAST
EB	EASTBOUND
ELEC	ELECTRIC(AL), ELEC. CABLE
EL, ELEV	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EXIST	EXISTING
FF	FACE TO FACE
FERT	FERTILIZER
FE	FIELD ENTRANCE
F/L, FL	FLOW LINE
GALV	GALVANIZE
HS	HIGH STRENGTH
CWT	HUNDRED WEIGHT
INL	INLET
INTER	INTERSECTION
JT	JOINT
LT	LEFT
L	LENGTH OF CURVE
LF	LINEAR FOOT (FEET)
LC	LONG CHORD
LS	LUMP SUM
MP	MARKER POST
MGAL	1000 GALLONS
NC	NORMAL CROWN
N	NORTH
NB	NORTH BOUND
NOR	NORMAL
NO	NUMBER
PAV'T	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY

SYSTEM SPECIFIC INFORMATION								
SYSTEM	POST SPACING	DEFLECTION (WORKING WIDTH) FOR 15' SPACING	POST SPACING	DEFLECTION (WORKING WIDTH) FOR 10' SPACING	CURVE RADIUS	REQ'D CURVE POST SPACING	END TERMINAL LENGTH	TAPER RATE
BRIFEN	15'-0"	7'-3"	10'-0"	6'-9"	>660'	10'-6'	31'-6"	50:1
NUCOR/MARION	15'-0"	6'-0"	10'-0"	5'-0"	2100'	12'-6"	57'-9"	50:1
WISDOT/PROJECT REQUIREMENT	15'-0"	12'-0"	10'-0"	7'-0"	2622'	15'-0"	VARIES	75:1

DESIGN CONTACTS

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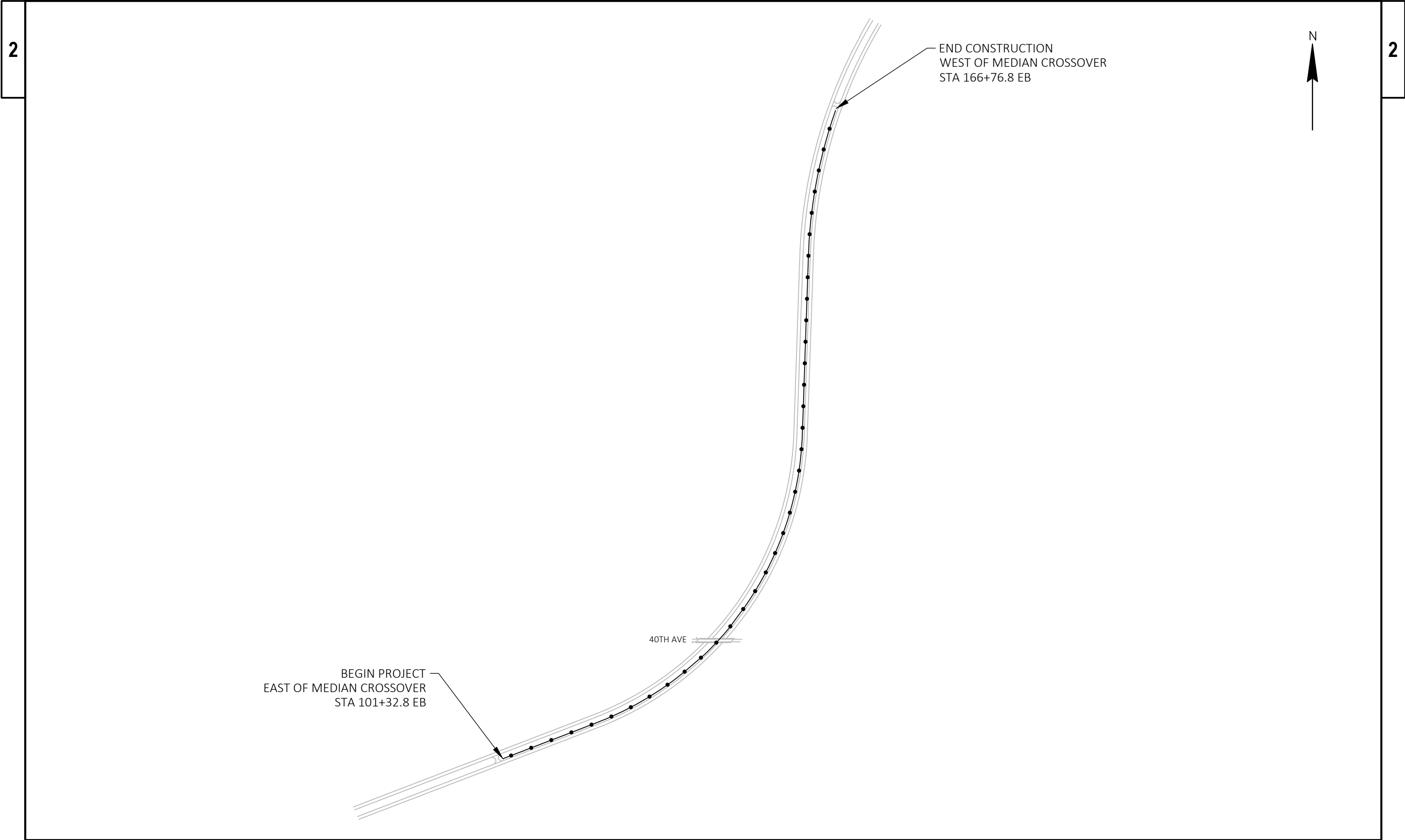
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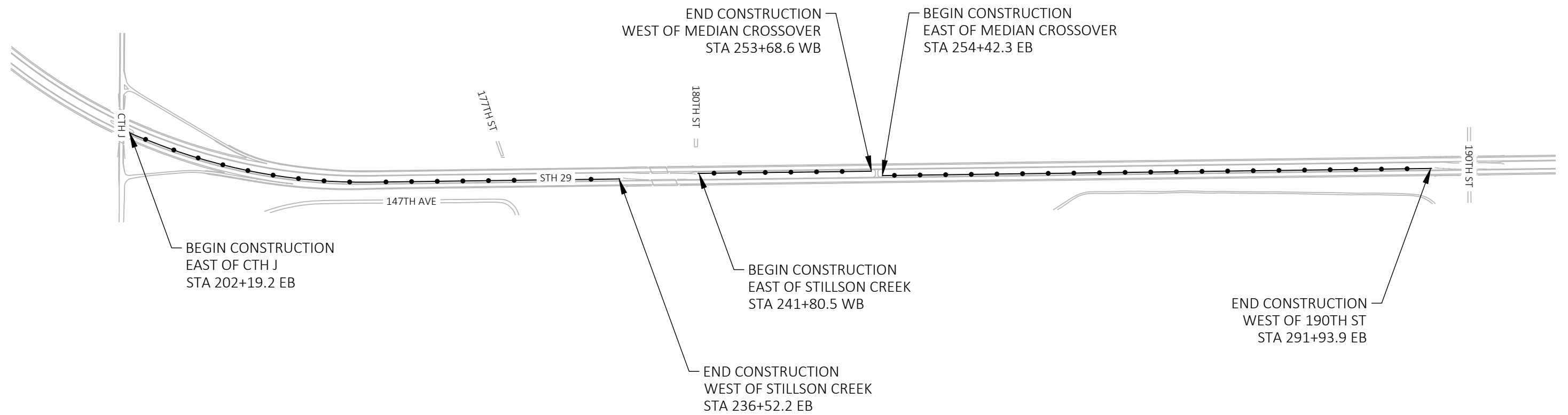
SPECTRUM
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(715) 896-6503
SUNNY.RICHARDSON@CHARTER.COM

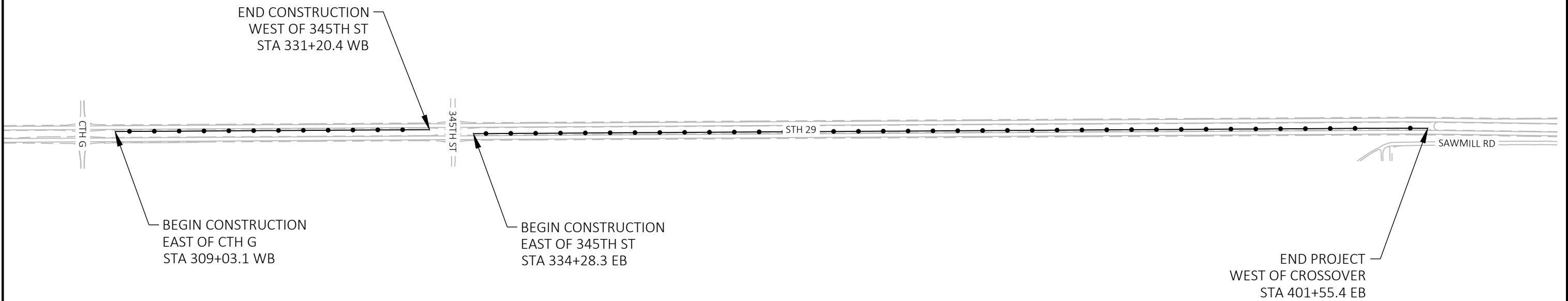
XCEL ENERGY
ELECTRICITY
JOHN KELSER
1400 WESTERN AVE.
EAU CLAIRE, WI 54701
(715) 737-6020
JOHN.KELSER@XCELENERGY.COM

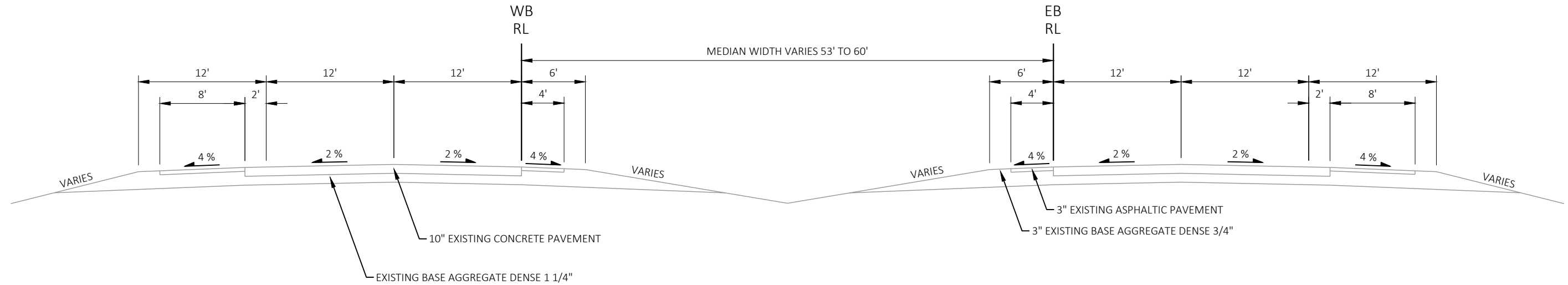


Dial  or (800)242-8511
www.DiggersHotline.com

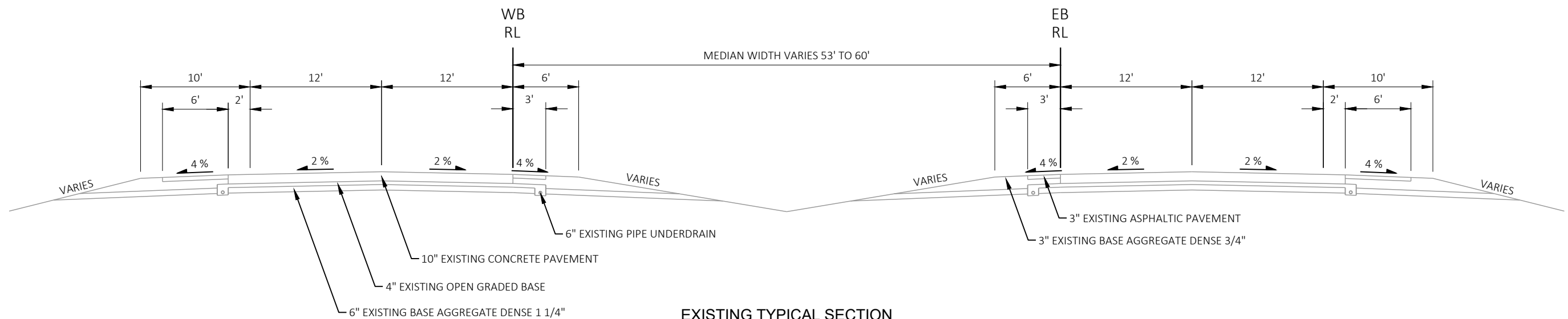




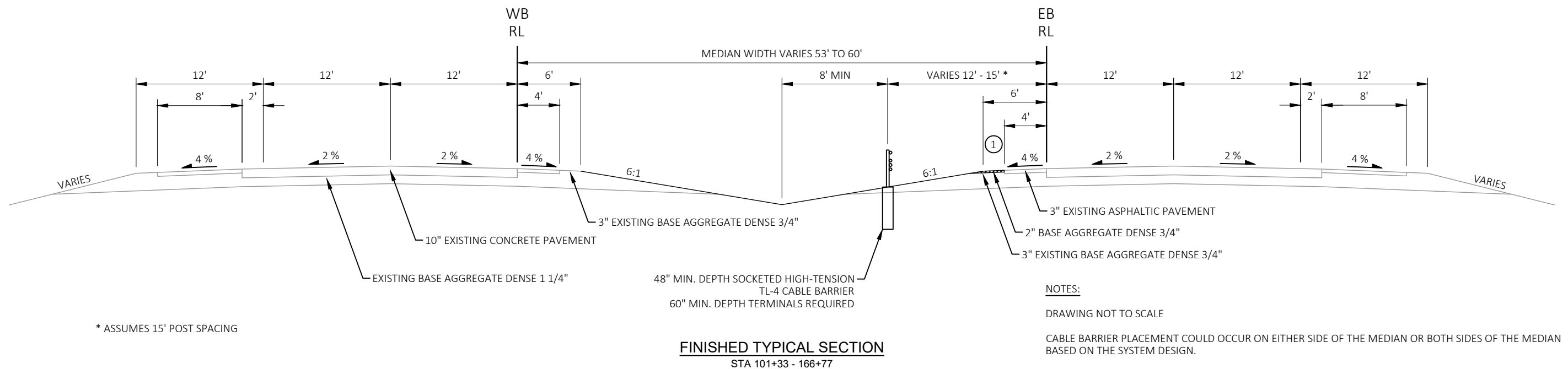
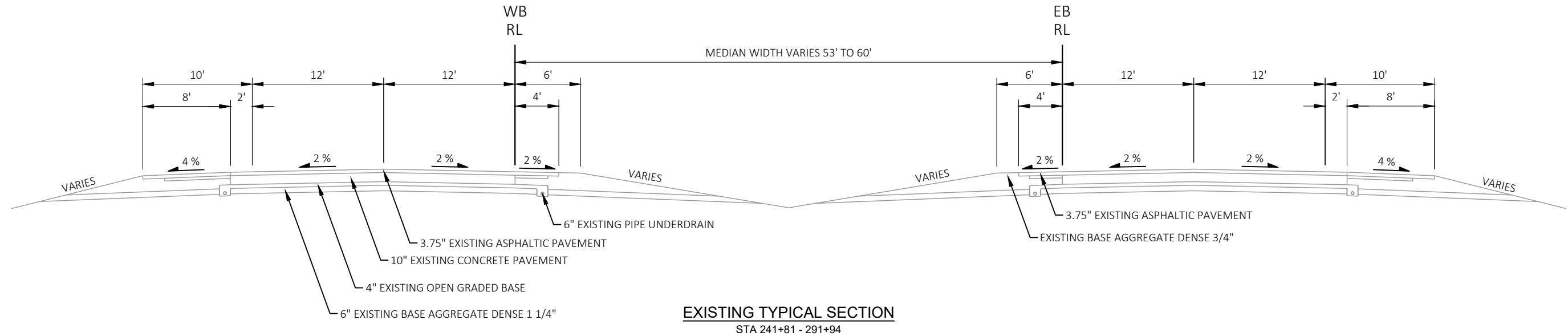




EXISTING TYPICAL SECTION
STA 101+33 - 166+77



EXISTING TYPICAL SECTION
STA 202+19 - 236+52
STA 309+03 - 401+55

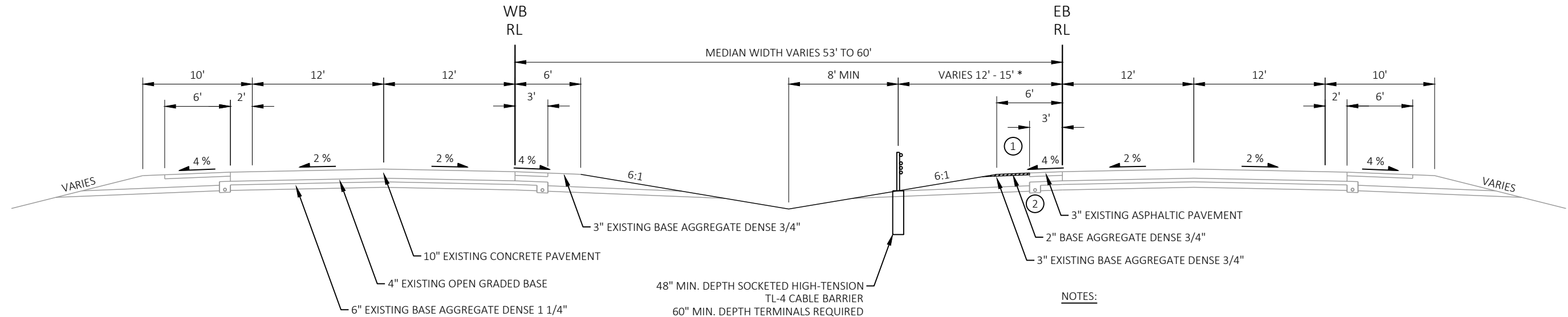
**NOTES:**

DRAWING NOT TO SCALE

CABLE BARRIER PLACEMENT COULD OCCUR ON EITHER SIDE OF THE MEDIAN OR BOTH SIDES OF THE MEDIAN BASED ON THE SYSTEM DESIGN.

ADJUST BARRIER POST SPACING AS ALLOWED PER STANDARD DETAIL DRAWINGS, DETAIL DRAWINGS, AND BARRIER SYSTEM SPECIAL PROVISIONS TO AVOID ALL UNDERGROUND UTILITIES AS REQUIRED BY STATUTE. PROVIDE GAPS IN THE BARRIER SYSTEM WHEN POST SPACING VARIATION DOES NOT PROVIDE ENOUGH ADJUSTMENT. NO UNDERGROUND UTILITIES WILL BE REQUIRED TO BE RELOCATED TO AVOID BARRIER SYSTEM CONFLICTS. IN ADDITION, ALL OVERHEAD UTILITIES WILL REMAIN IN SERVICE THROUGHOUT CONSTRUCTION.

① ROUND SHOULDER TO MATCH EXISTING SLOPE



* ASSUMES 15' POST SPACING

FINISHED TYPICAL SECTION

STA 202+19 - 236+52
STA 334+28 - 401+55

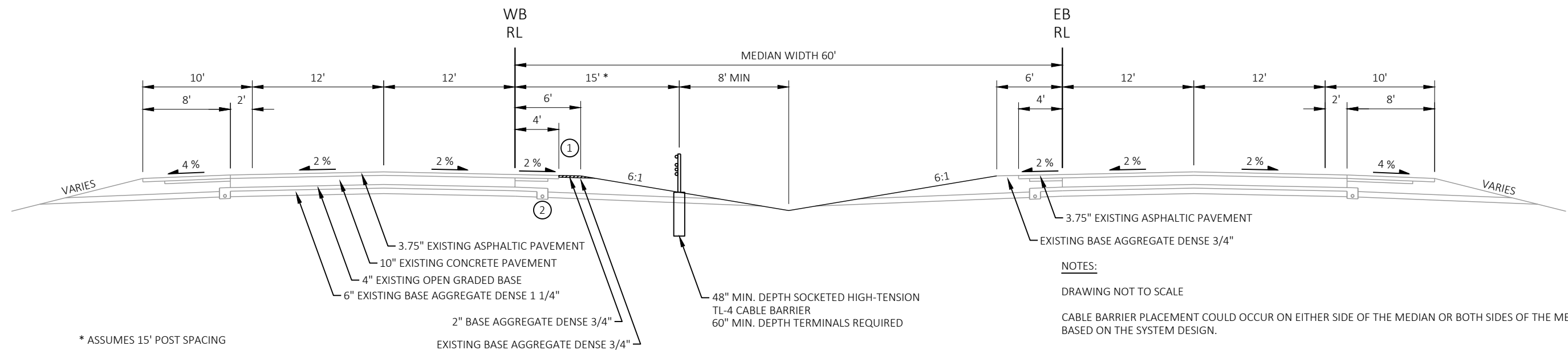
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- ① ROUND SHOULDER TO MATCH EXISTING SLOPE
- ② EXISTING PIPE UNDERDRAIN SYSTEM LOCATED IN SEGMENT 2 BASED ON AS-BUILTS. CONTRACTOR TO VERIFY EXACT LOCATIONS OF ENDWALLS IN THE FIELD.



* ASSUMES 15' POST SPACING

FINISHED TYPICAL SECTION

STA 241+81 - 253+69

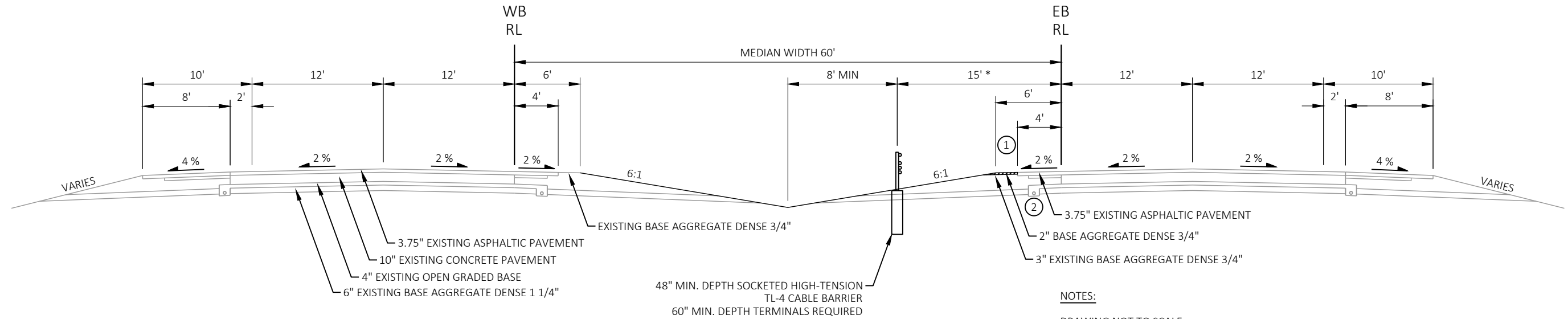
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* ASSUMES 15' POST SPACING

FINISHED TYPICAL SECTION

STA 254+42 - 291+94

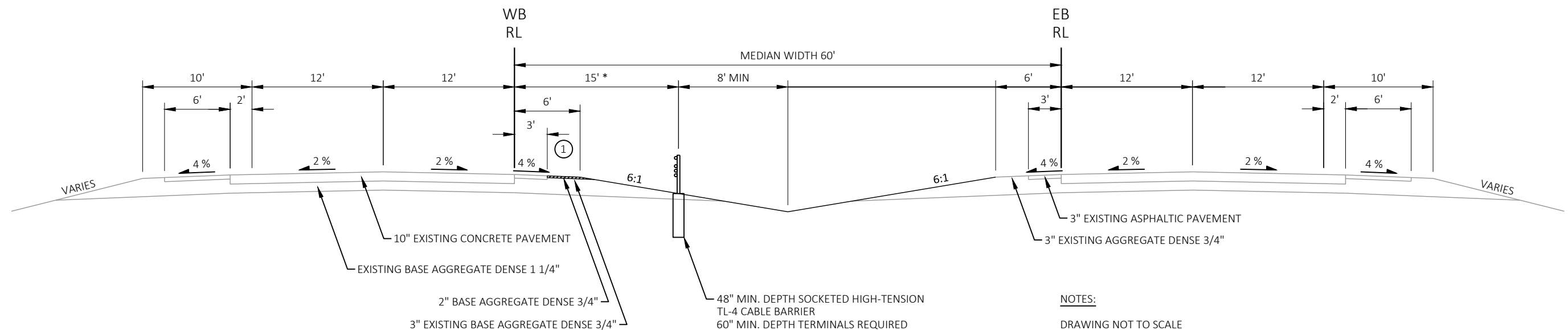
NOTES:

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* ASSUMES 15' POST SPACING

FINISHED TYPICAL SECTION

STA 309+03 - 331+20

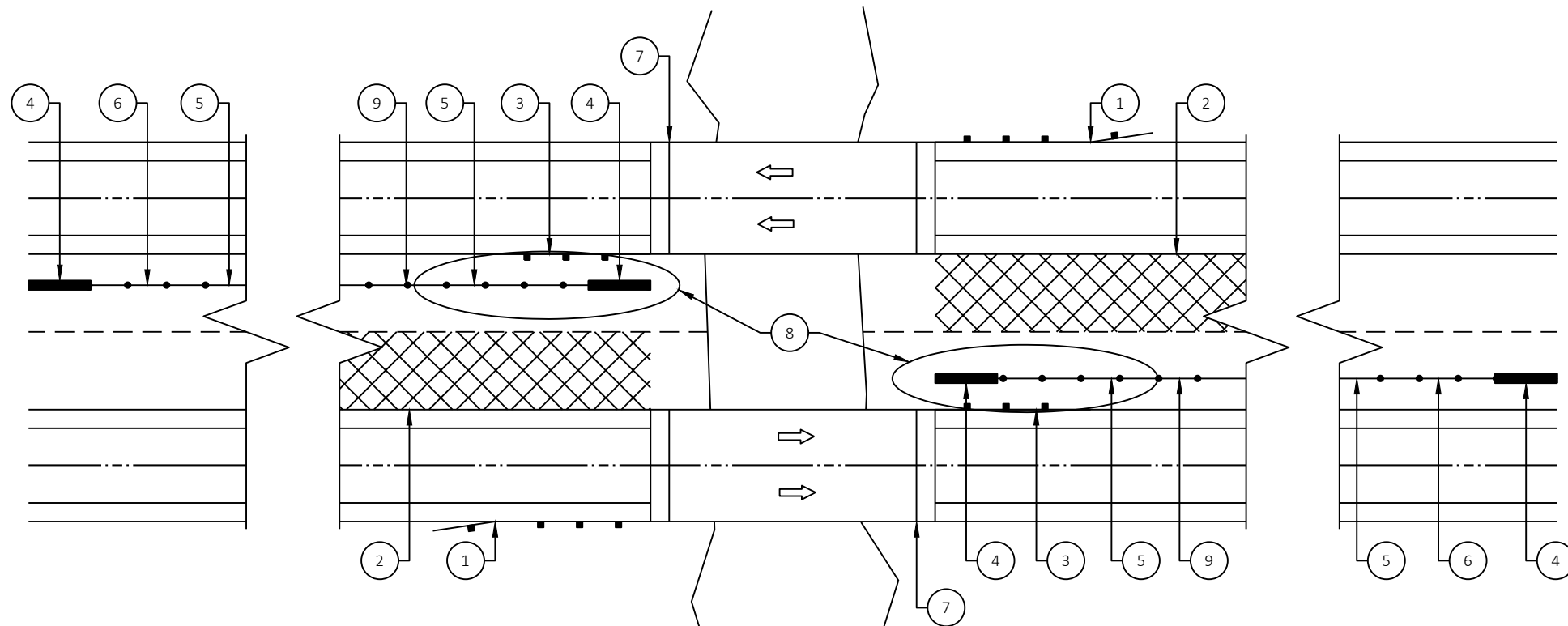
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DRAWING NOT TO SCALE

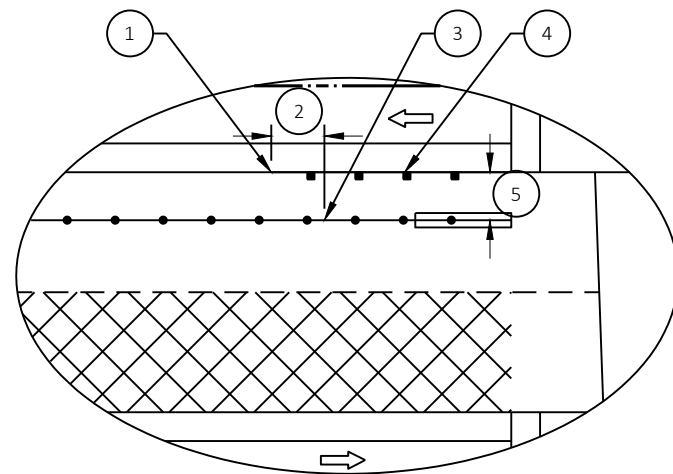
CABLE BARRIER PLACEMENT COULD OCCUR ON EITHER SIDE OF THE MEDIAN OR BOTH SIDES OF THE MEDIAN BASED ON THE SYSTEM DESIGN.

ADJUST BARRIER POST SPACING AS ALLOWED PER STANDARD DETAIL DRAWINGS, DETAIL DRAWINGS, AND BARRIER SYSTEM SPECIAL PROVISIONS TO AVOID ALL UNDERGROUND UTILITIES AS REQUIRED BY STATUTE. PROVIDE GAPS IN THE BARRIER SYSTEM WHEN POST SPACING VARIATION DOES NOT PROVIDE ENOUGH ADJUSTMENT. NO UNDERGROUND UTILITIES WILL BE REQUIRED TO BE RELOCATED TO AVOID BARRIER SYSTEM CONFLICTS. IN ADDITION, ALL OVERHEAD UTILITIES WILL REMAIN IN SERVICE THROUGHOUT CONSTRUCTION.

- ① ROUND SHOULDER TO MATCH EXISTING SLOPE

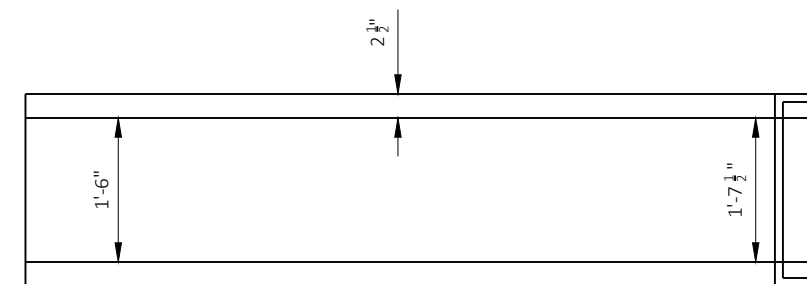


CABLE BARRIER INSTALLATION WHEN MAINLINE GOES OVER ROADWAY OR STREAM

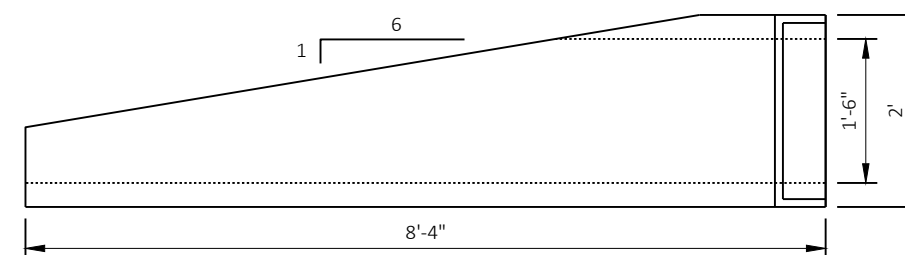


- ① TYPE 2 END TERMINAL
- ② 39.5 FEET BEYOND LENGTH OF NEED POINT
- ③ LENGTH OF NEED POINT OF CABLE BARRIER
- ④ THRIE BEAM DOWNSTREAM TRANSITION AND BEAM GUARD
- ⑤ WORKING WIDTH OF BEAM GUARD

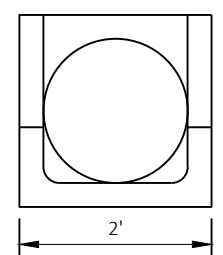
DETAIL A



PLAN VIEW

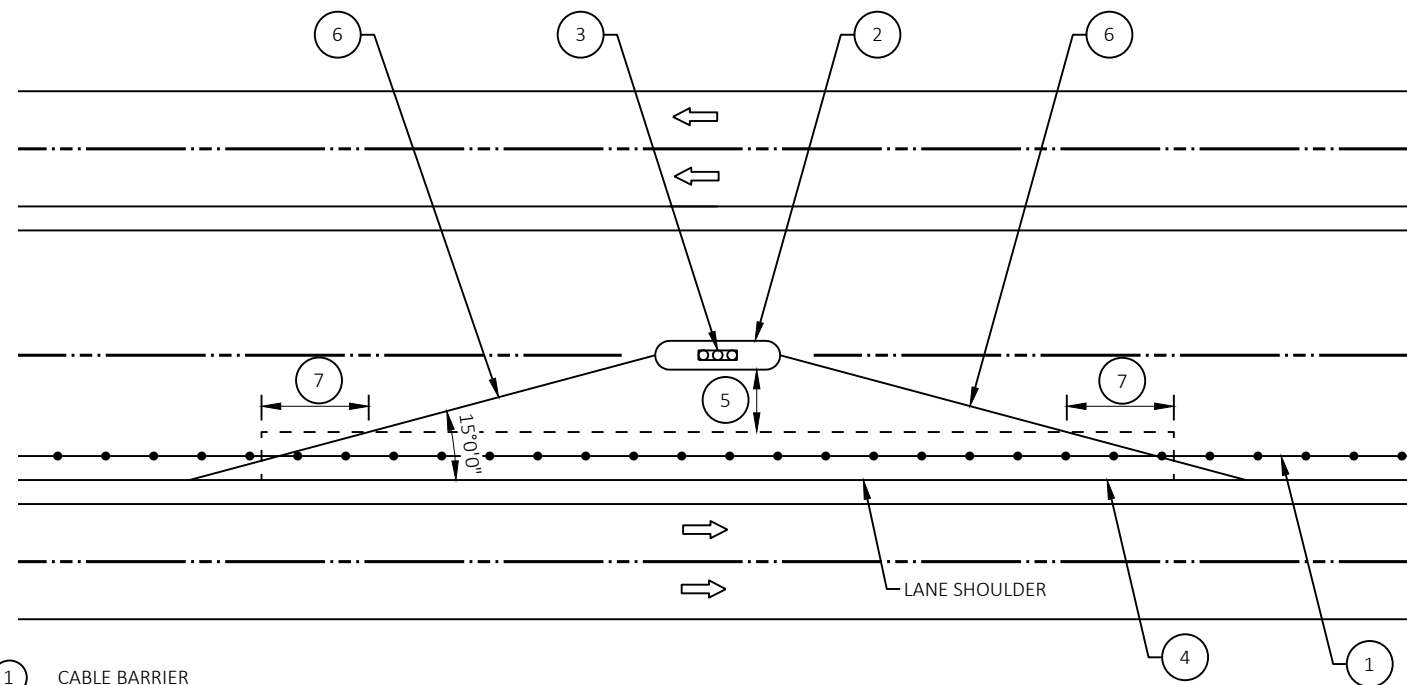


SECTION VIEW



END VIEW

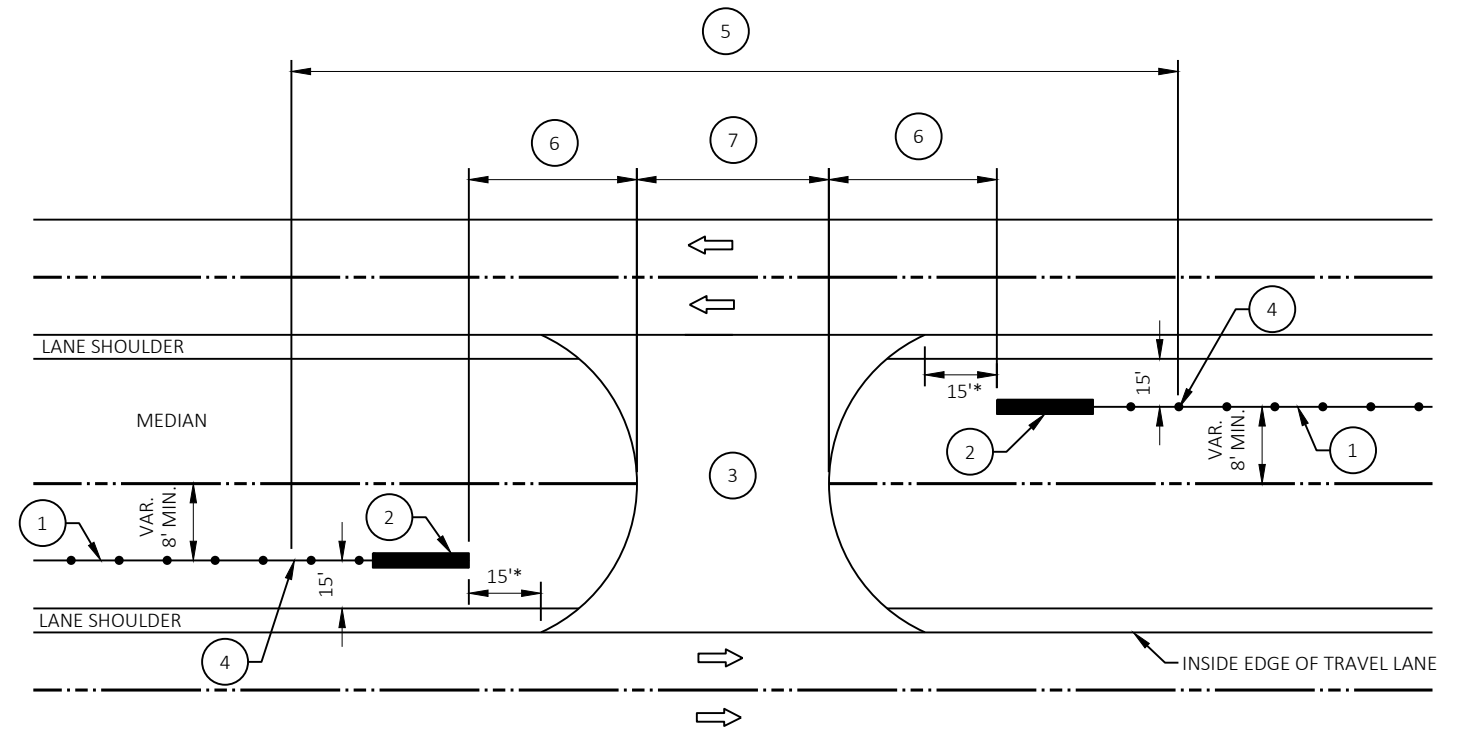
APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH, 6:1 SLOPE



- ① CABLE BARRIER
- ② THREE BEAM BULLNOSE
- ③ PIER OR OTHER FIXED OBJECT
- ④ AREA WITH CABLE BARRIER WITH REDUCED POST SPACING (SHOW WORKING WIDTH IN PLAN)
- ⑤ WORKING WIDTH OF CABLE IS REDUCED TO MINIMIZE CABLE BARRIER AND THREE BEAM BULLNOSE INTERACTION. SEE MANUFACTURER'S INFORMATION FOR MINIMUM WORKING WIDTH INFORMATION
- ⑥ REDUCED POST SPACING LAYOUT LINE
- ⑦ PROVIDE REDUCED POST SPACING AT LEAST 1 SPACE BEYOND LAYOUT LINE

REDUCED CABLE BARRIER POST SPACING BY PIERS

BULLNOSE IS PROVIDING VEHICLE PROTECTION
FOR PIER FOR ONE DIRECTION OF TRAVEL



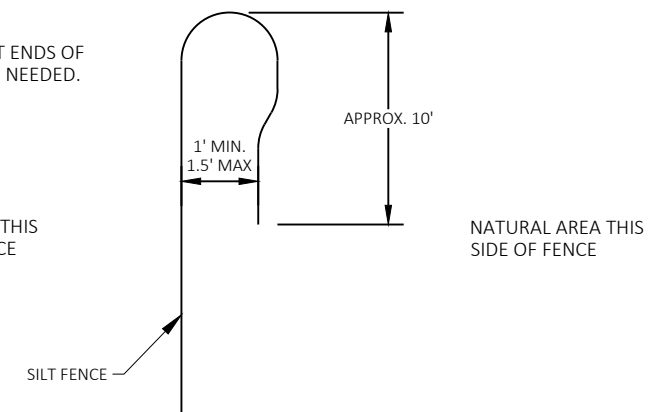
*DISTANCE MEASURED FROM NEAREST EDGE
OF ASPHALTIC PAVEMENT TO THE TERMINAL

- ① CABLE BARRIER
- ② CABLE BARRIER END TERMINAL
- ③ MAINTENANCE CROSSOVER
- ④ LENGTH OF NEED POINT OF CABLE BARRIER END TERMINAL
- ⑤ LENGTH OF ROADWAY UNSHIELDED FROM CROSSOVER MEDIAN CRASH
- ⑥ OFFSET FROM PAVED MAINTENANCE CROSSOVER AND 1ST CABLE BARRIER END TERMINAL ANCHOR
- ⑦ WIDTH OF MAINTENANCE CROSSOVER

CABLE BARRIER LAYOUT BY MAINTENANCE CROSSOVER

POSTS TO BE ON OUTSIDE OF J-HOOK AT ENDS OF
SILT FENCE AND ANY ACCESS OPENINGS NEEDED.

WORK AREA THIS
SIDE OF FENCE



SILT FENCE 'J-HOOKS' DETAIL

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

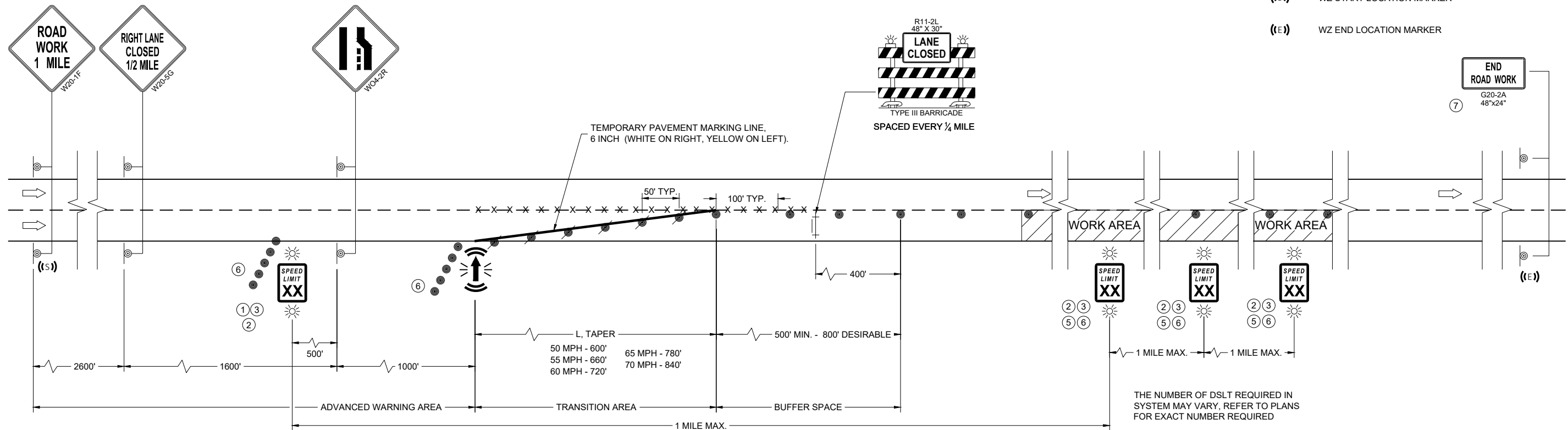
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

IF THE SPEED LIMIT WILL CHANGE BASED ON THE PRESENCE OF WORKERS, USE THE TAPER LENGTH THAT MATCHES THE HIGHER OF THE TWO SPEEDS FOR A CONTINUOUS LANE CLOSURE.

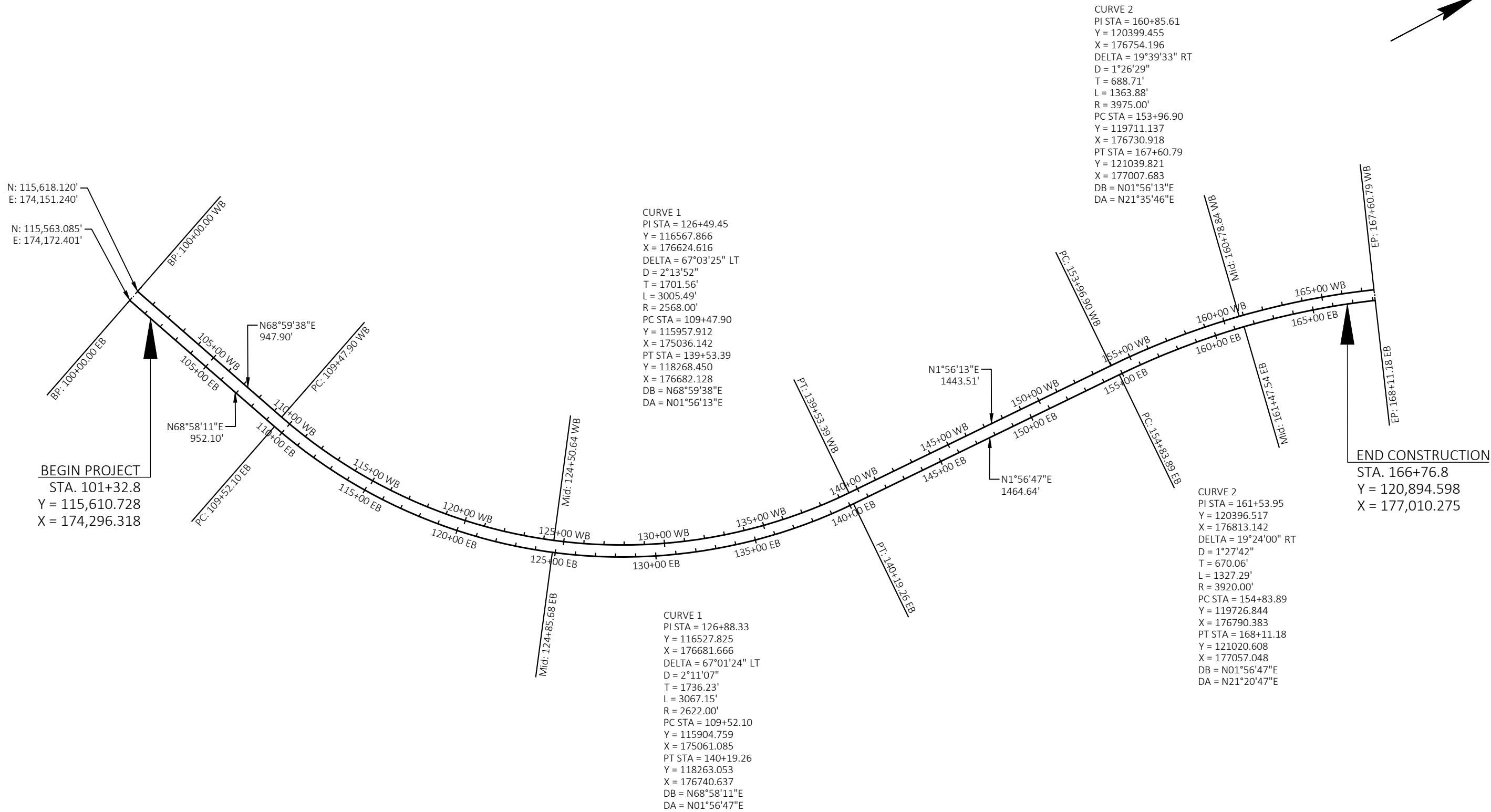
- EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.
- PLACE DSLT IN ADVANCE WARNING AREA AND THROUGHOUT PROJECT LIMITS. IF THE LANE CLOSURE MOVES DOWNSTREAM, LEAVE DSLT IN PLACE.
- AT EXISTING POST MOUNTED SPEED LIMIT SIGN AFTER THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. IF THERE IS NOT AN EXISTING SIGN, PLACE 1,500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP
- IF WORK AREA STARTS LESS THAN 1,000 FEET FROM END OF LANE CLOSURE TAPER, OMIT DIGITAL SPEED LIMIT TRAILER AT THAT LOCATION.
- PLACE A DIGITAL SPEED LIMIT TRAILER A MINIMUM OF EVERY ONE MILE. MODIFY PLACEMENT AS DIRECTED BY ENGINEER WHEN DIGITAL SPEED LIMIT TRAILER IS LOCATED IN CLOSE PROXIMITY TO AN ACCELERATION LANE OF AN ENTRANCE RAMP.
- 5 DRUMS SPACED @ 10' INTERVALS AS NEEDED.
- INCLUDE NON-DIGITAL R2-1 RESUME SPEED LIMIT SIGNS 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END ROAD WORK" SIGN.

LEGEND

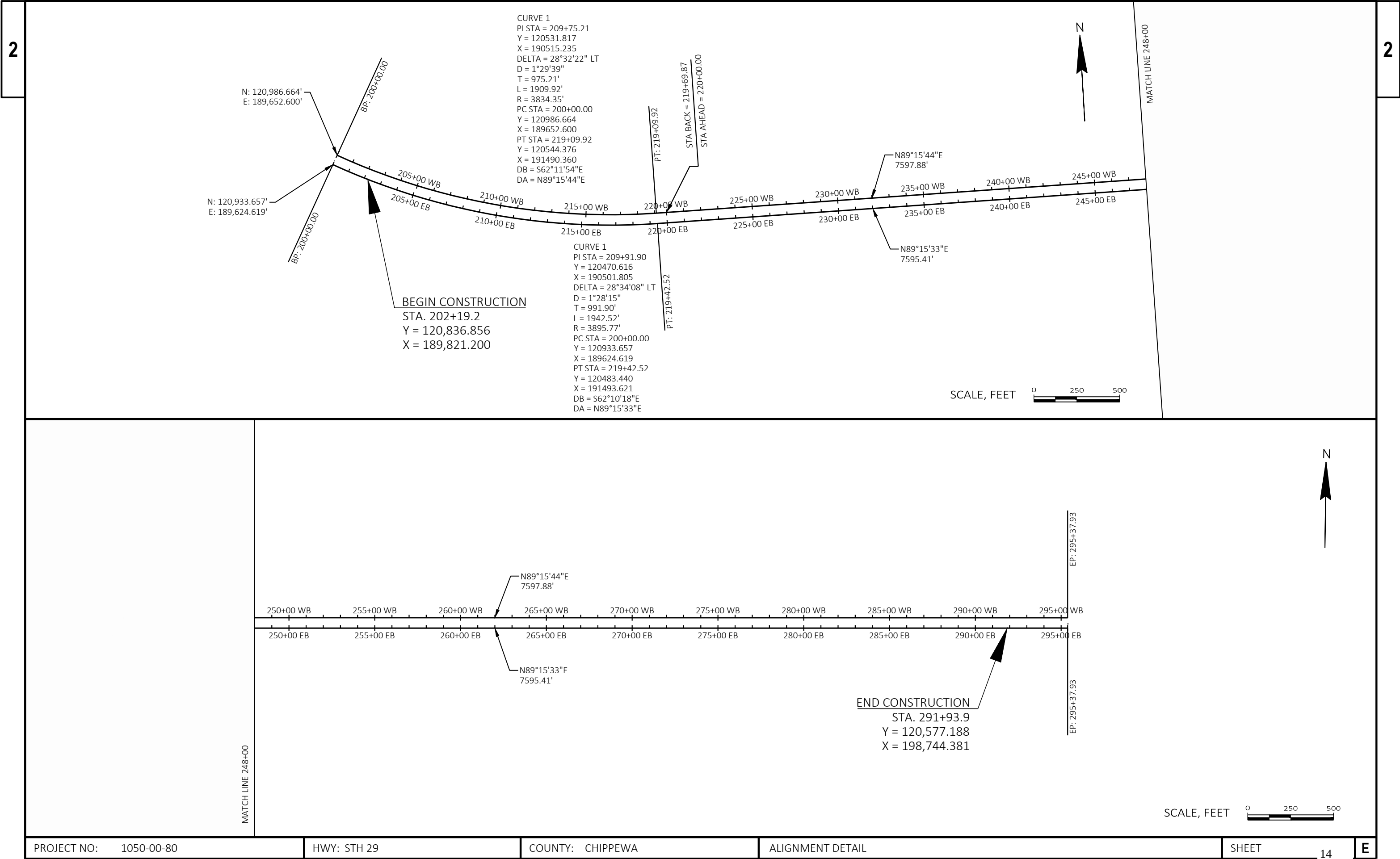
- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- DIGITAL SPEED LIMIT TRAILER (DSLTL)
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

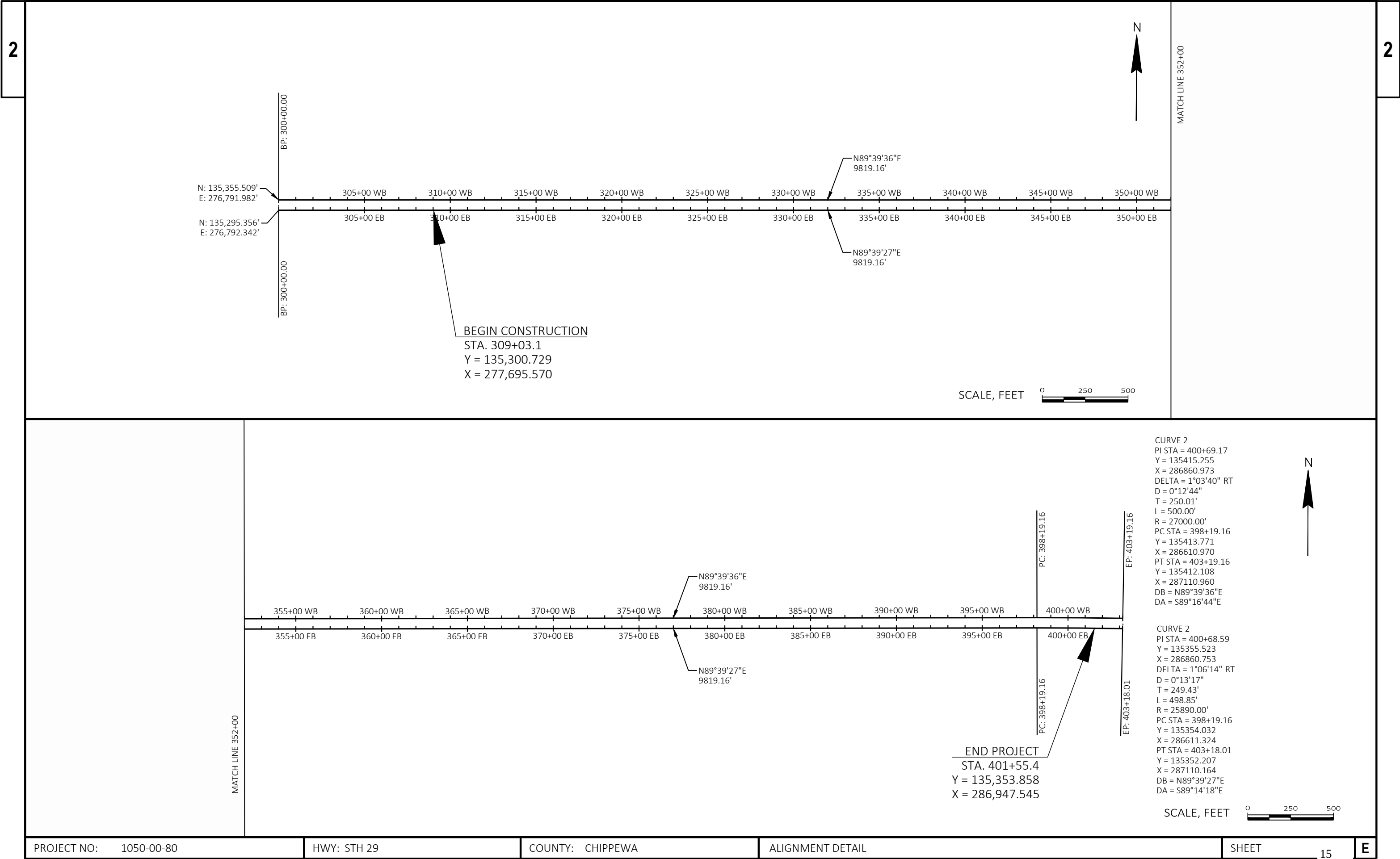


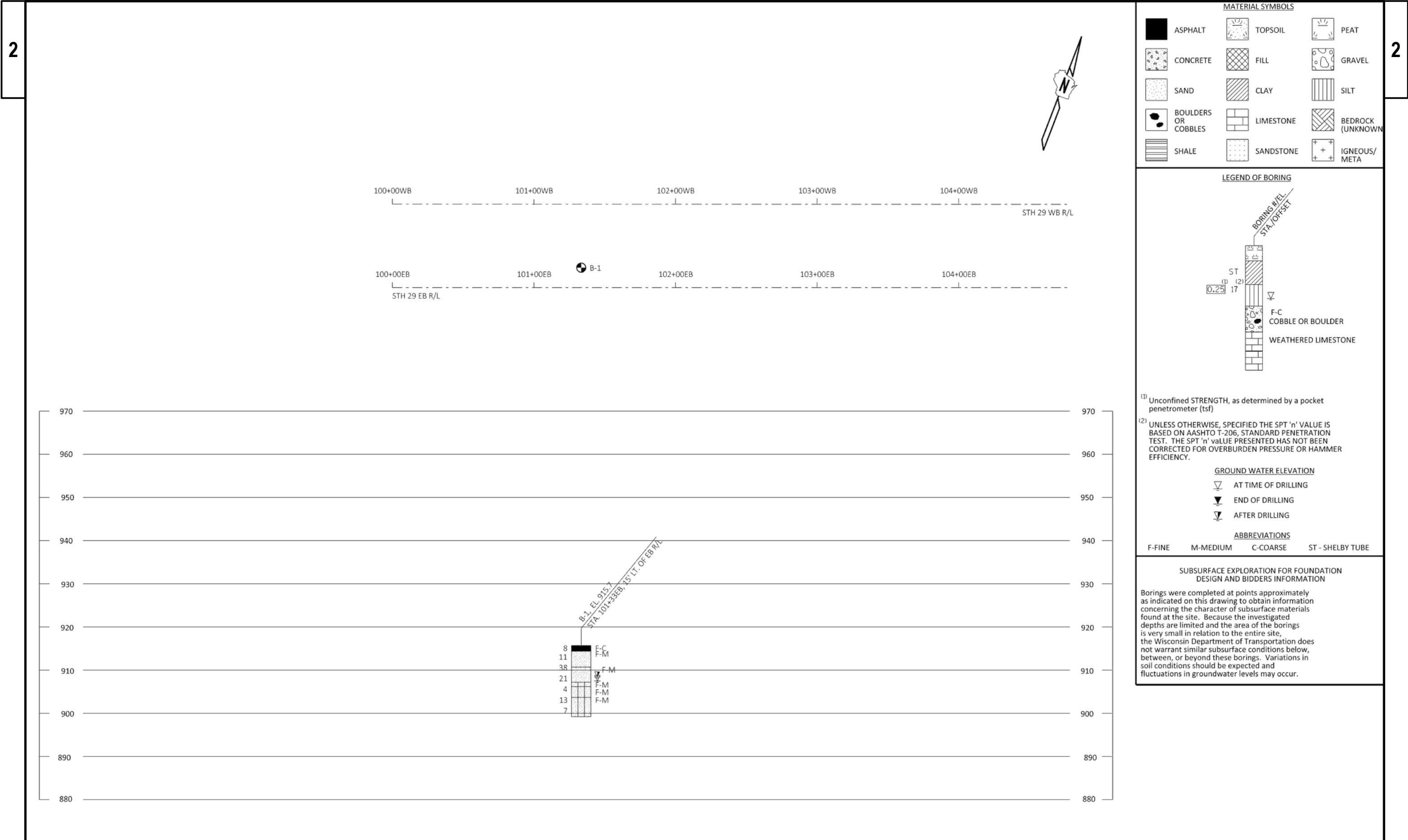
SPV.0045.01 DIGITAL SPEED REDUCTION SYSTEM (DSRS)

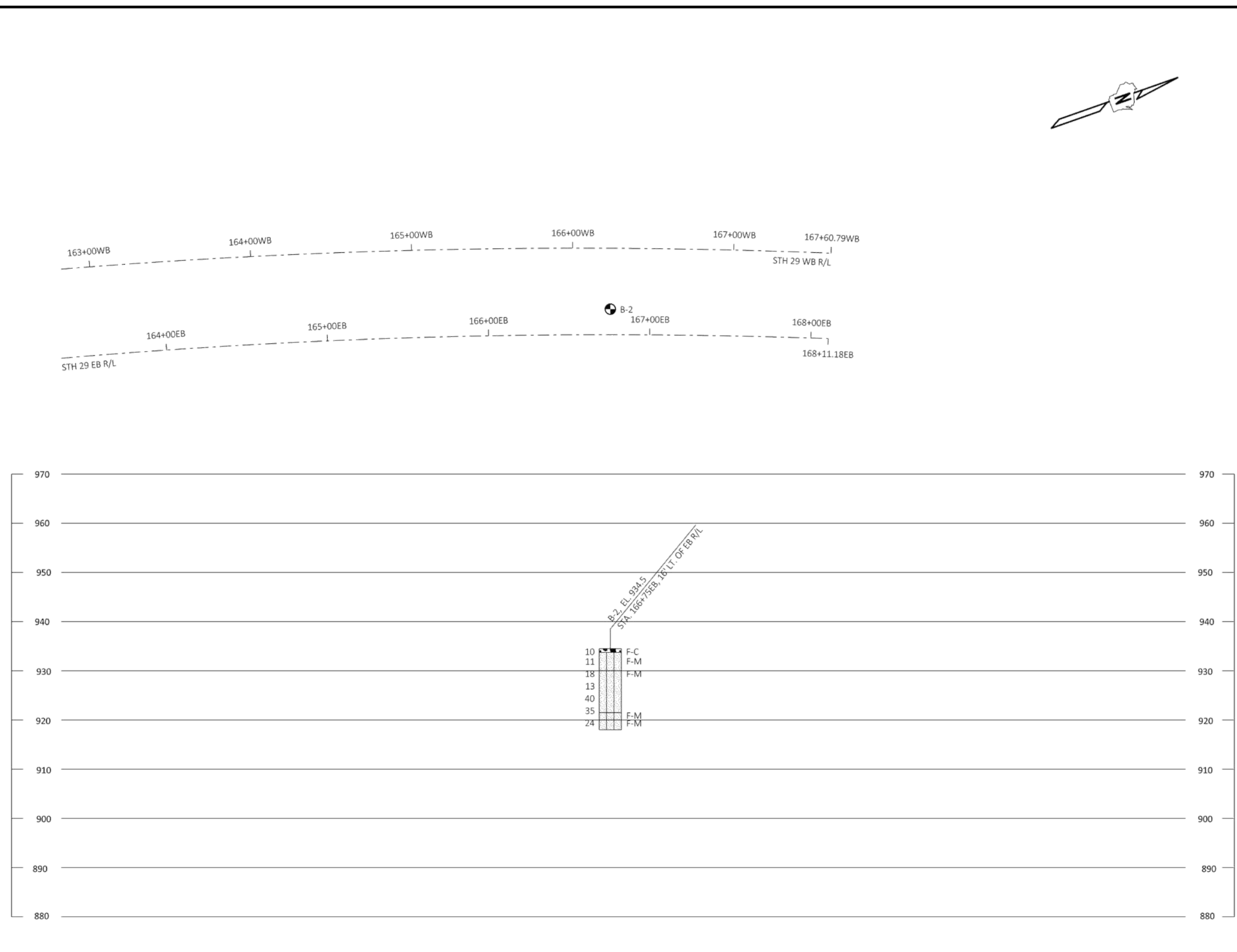


SCALE, FEET 0 250 500

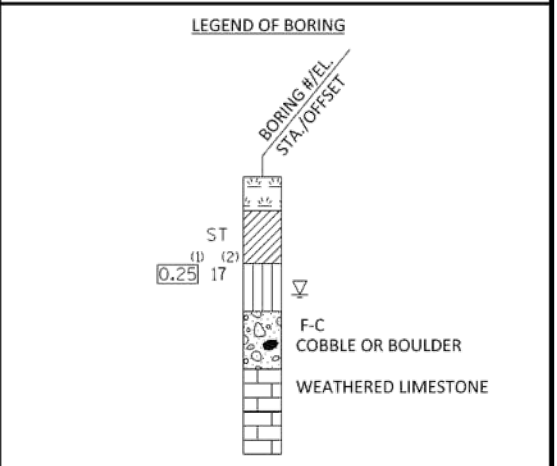








MATERIAL SYMBOLS					
	ASPHALT		TOPSOIL		PEAT
	CONCRETE		FILL		GRAVEL
	SAND		CLAY		SILT
	BOULDERS OR COBBLES		LIMESTONE		BEDROCK (UNKNOWN)
	SHALE		SANDSTONE		IGNEOUS/META



(1) Unconfined STRENGTH, as determined by a pocket penetrometer (tsf)

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

GROUND WATER ELEVATION

AT TIME OF DRILLING

END OF DRILLING

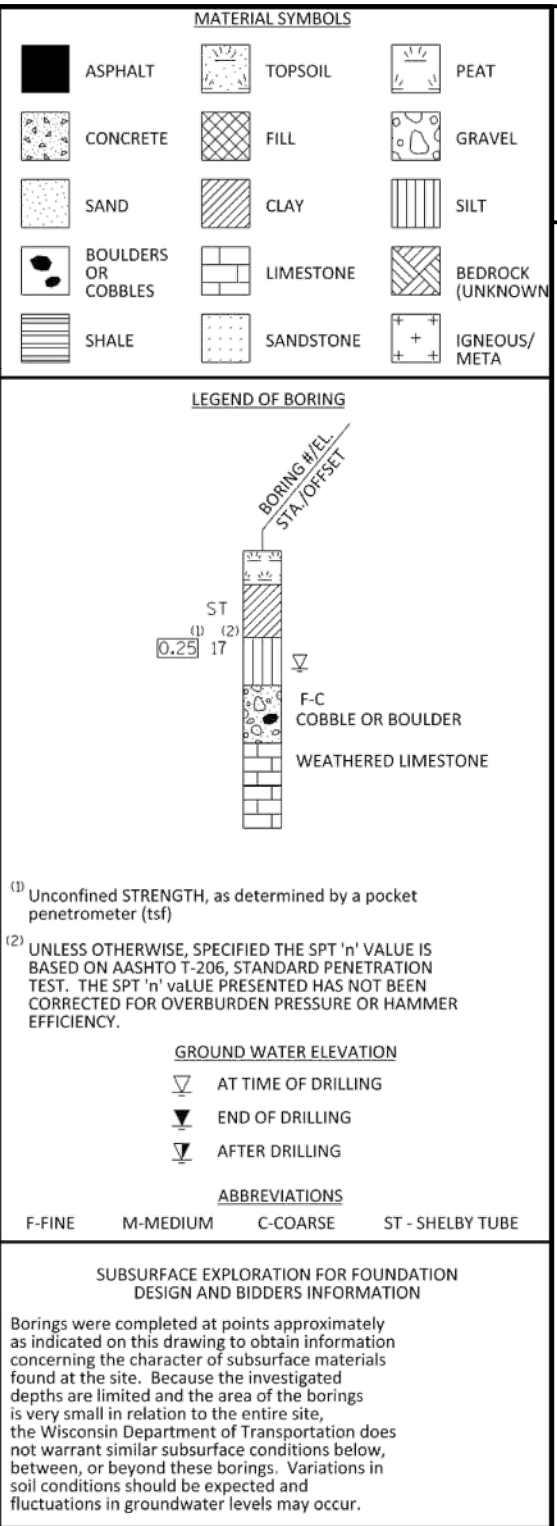
AFTER DRILLING

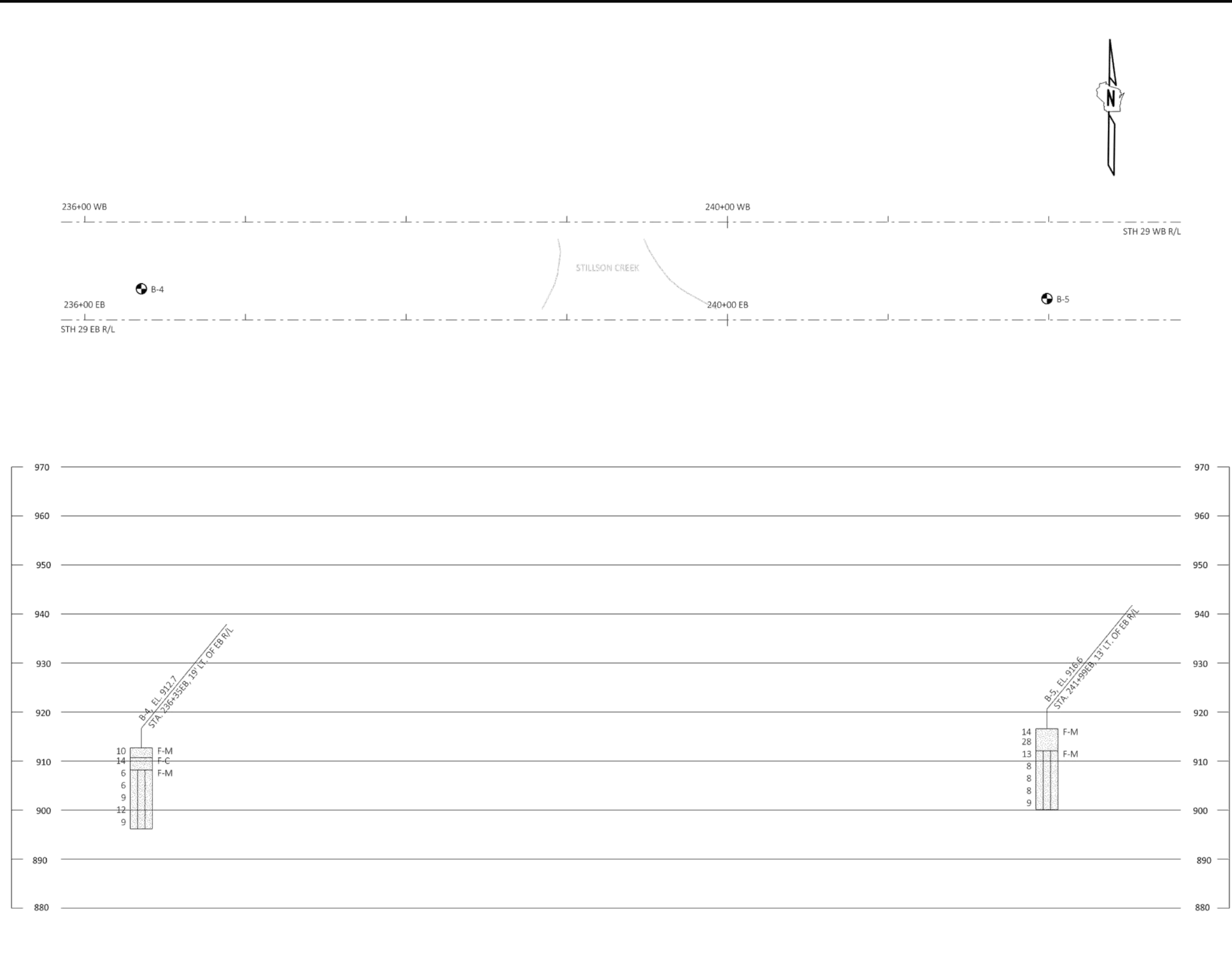
ABBREVIATIONS

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

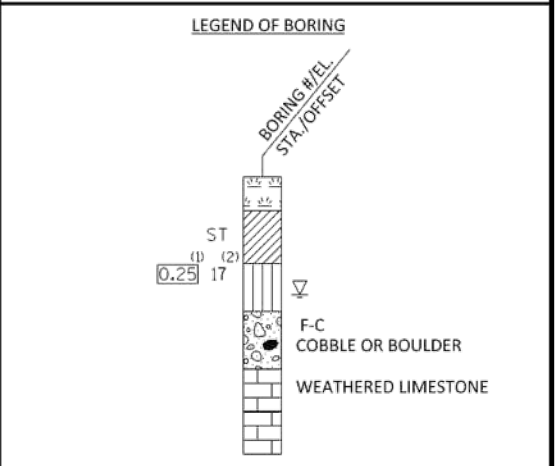
SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

Borings were completed at points approximately as indicated on this drawing to obtain information concerning the character of subsurface materials found at the site. Because the investigated depths are limited and the area of the borings is very small in relation to the entire site, the Wisconsin Department of Transportation does not warrant similar subsurface conditions below, between, or beyond these borings. Variations in soil conditions should be expected and fluctuations in groundwater levels may occur.





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	CONCRETE		FILL		GRAVEL
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	SHALE		SANDSTONE		IGNEOUS/META

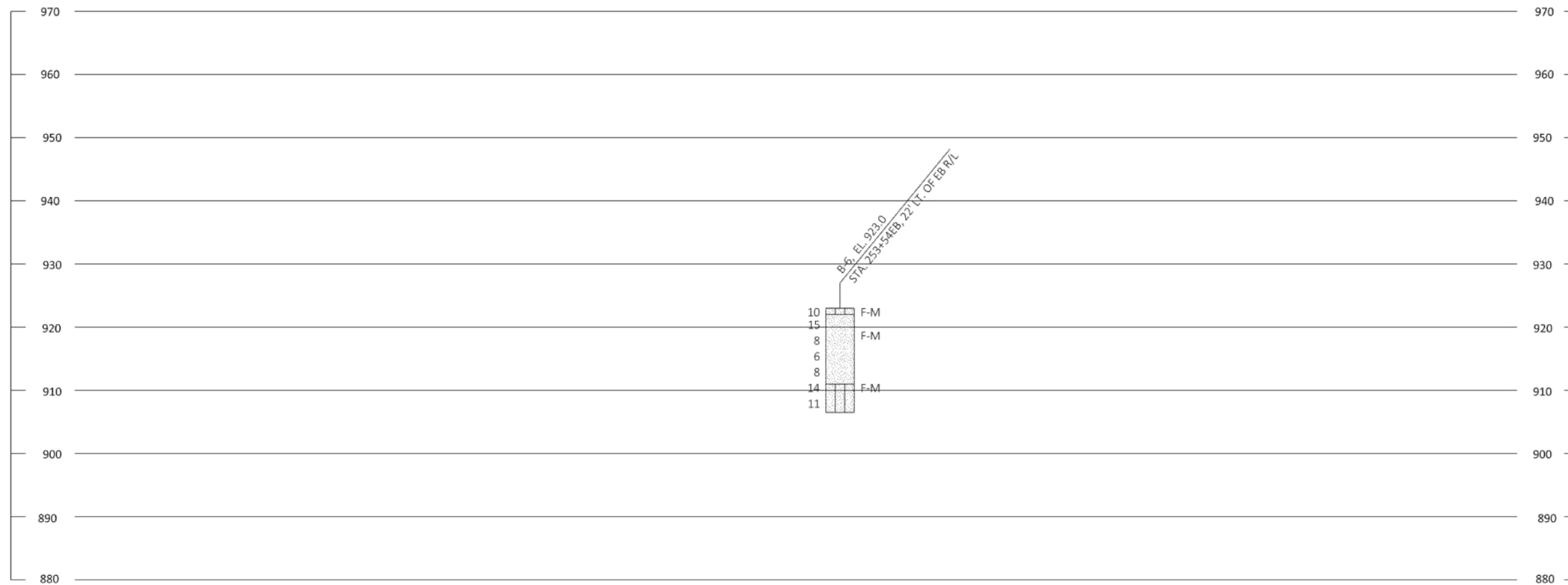


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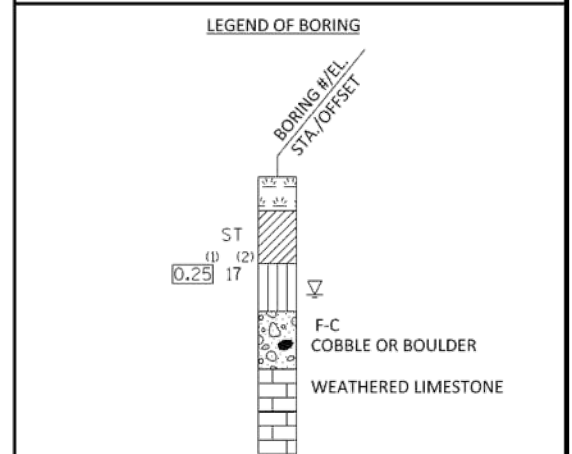
GROUND WATER ELEVATION			
	AT TIME OF DRILLING		
	END OF DRILLING		
	AFTER DRILLING		
ABBREVIATIONS			
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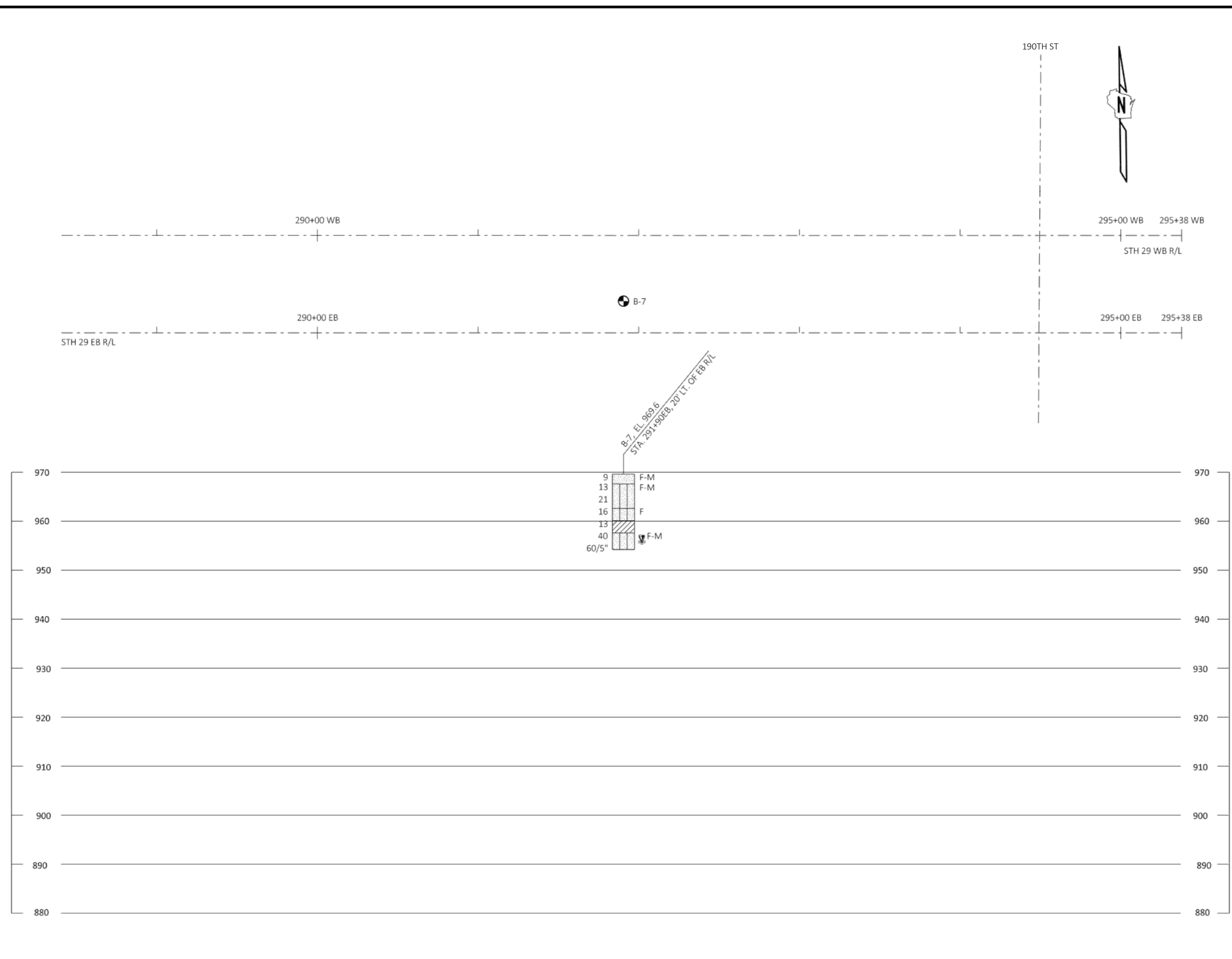
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- GROUND WATER ELEVATION**
- AT TIME OF DRILLING
 - END OF DRILLING
 - AFTER DRILLING
- ABBREVIATIONS**
- F-FINE M-MEDIUM C-COARSE ST - SHELBY TUBE

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CONCRETE	FILL	GRAVEL
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SHALE	SANDSTONE	IGNEOUS/META

LEGEND OF BORING

BORING #/EL.
STA./OFF-SET

ST

(1)

(2)

0.25

17

F-C

COBBLE OR BOULDER

WEATHERED LIMESTONE

(1) Unconfined STRENGTH, as determined by a pocket penetrometer (tsf)

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GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▽ END OF DRILLING

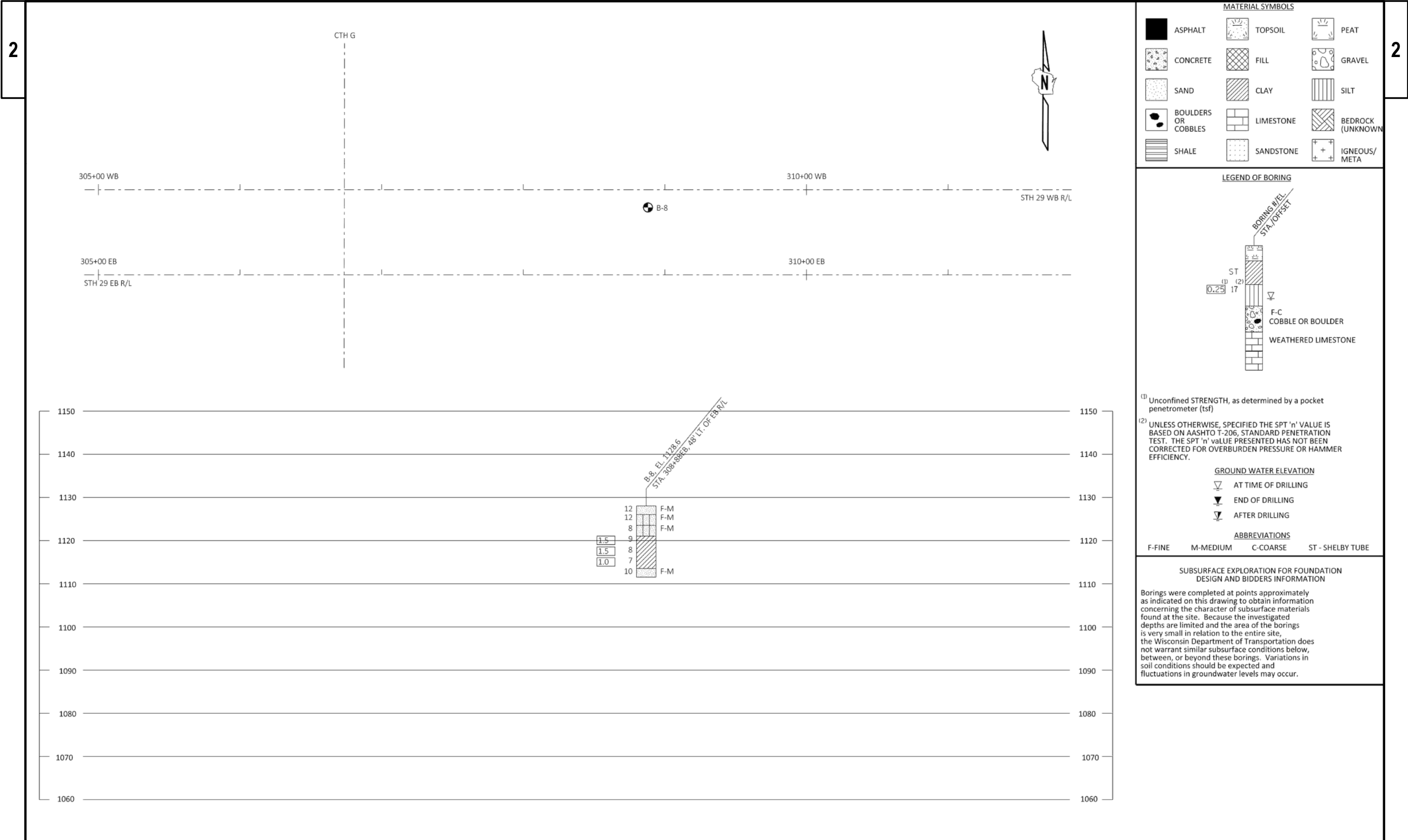
▽ AFTER DRILLING

ABBREVIATIONS

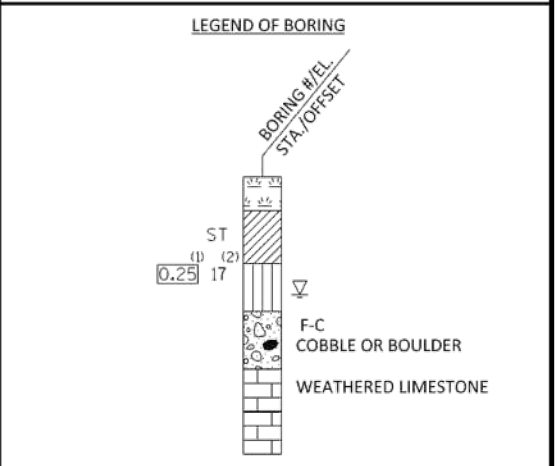
F-FINE M-MEDIUM C-COARSE ST - SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

Borings were completed at points approximately as indicated on this drawing to obtain information concerning the character of subsurface materials found at the site. Because the investigated depths are limited and the area of the borings is very small in relation to the entire site, the Wisconsin Department of Transportation does not warrant similar subsurface conditions below, between, or beyond these borings. Variations in soil conditions should be expected and fluctuations in groundwater levels may occur.



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



(1) Unconfined STRENGTH, as determined by a pocket penetrometer (tsf)

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

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▽ END OF DRILLING

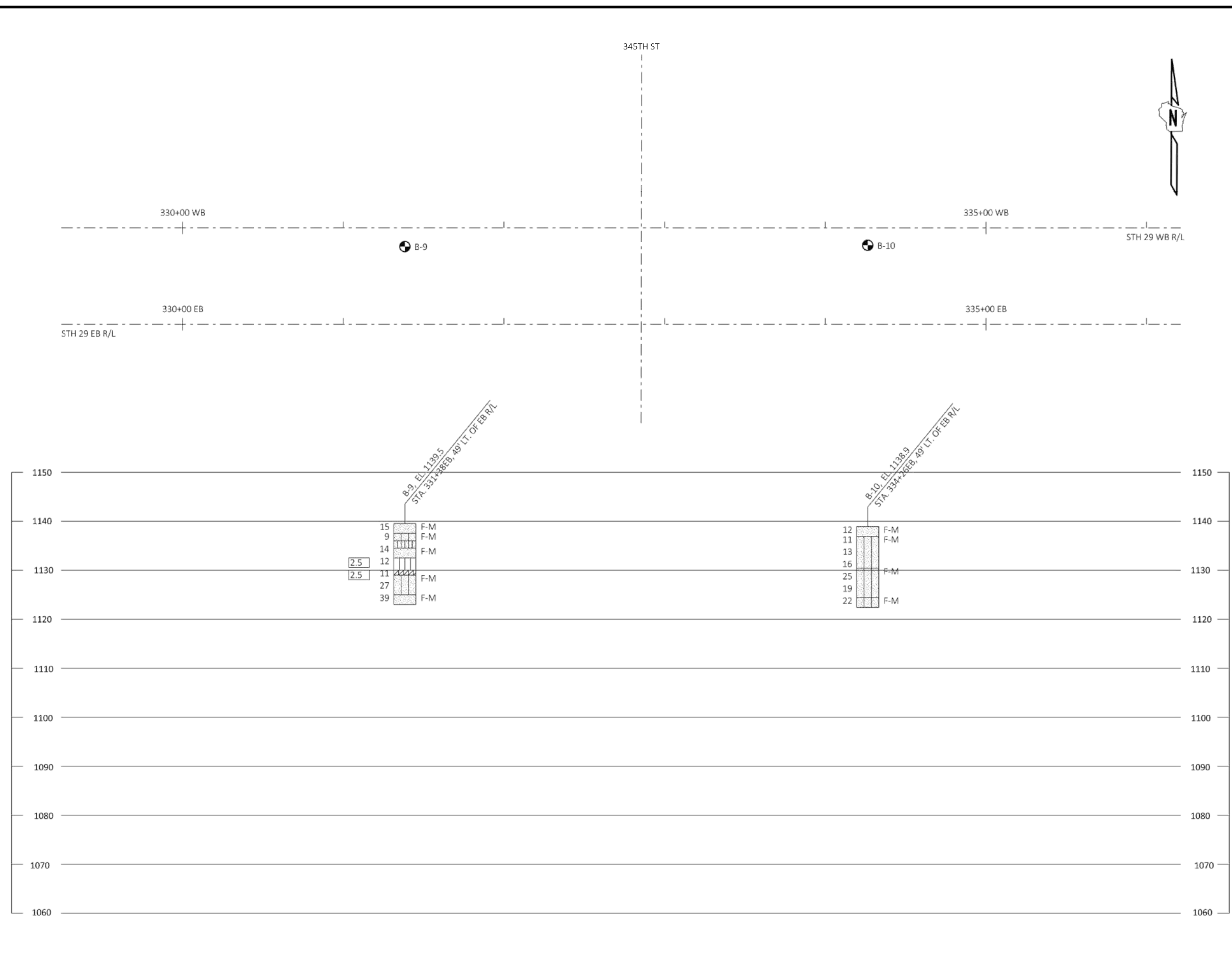
▽ AFTER DRILLING

ABBREVIATIONS

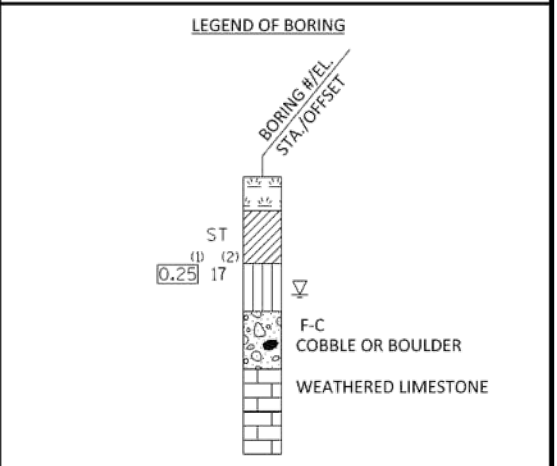
F-FINE M-MEDIUM C-COARSE ST - SHELBY TUBE

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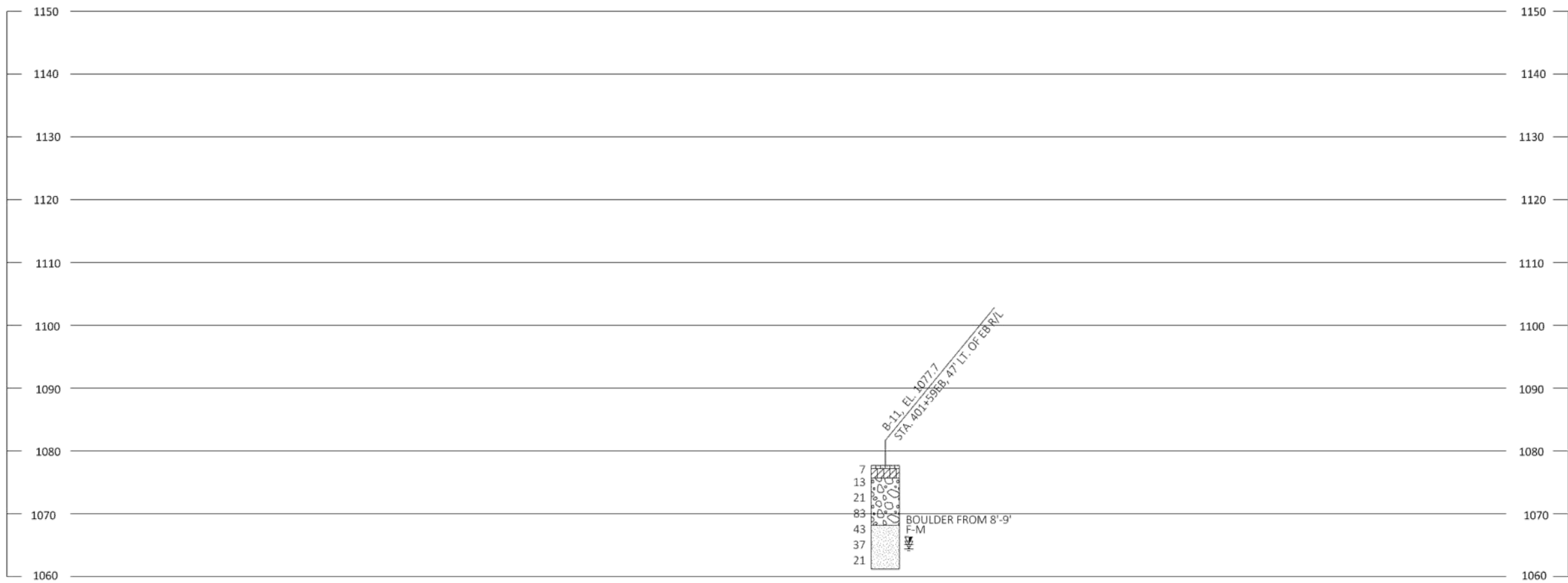
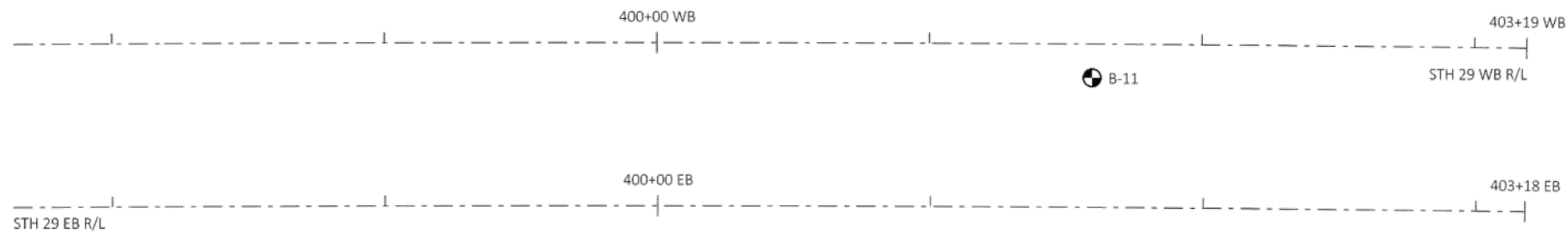
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	ASPHALT		TOPSOIL		PEAT
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	SAND		CLAY		SILT
	BOULDERS OR COBBLES		LIMESTONE		BEDROCK (UNKNOWN)
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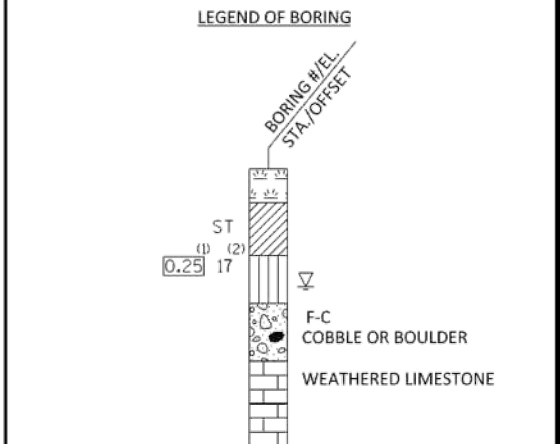
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- GROUND WATER ELEVATION**
- ▽ AT TIME OF DRILLING
 - ▼ END OF DRILLING
 - ▽ AFTER DRILLING
- ABBREVIATIONS**
- F-FINE M-MEDIUM C-COARSE ST - SHELBY TUBE

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GROUND WATER ELEVATION

AT TIME OF DRILLING

END OF DRILLING

AFTER DRILLING

ABBREVIATIONS

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

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Estimate Of Quantities By Plan Sets

1050-00-80					
Line	Item	Item Description	Unit	Total	Qty
0004	204.9060.S	Removing (item description) 01. Removing Apron Endwalls	EACH	13.000	13.000
0006	205.0100	Excavation Common	CY	1,724.000	1,724.000
0012	213.0100	Finishing Roadway (project) 02. 1050-00-80	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	778.000	778.000
0024	611.8115	Adjusting Inlet Covers	EACH	4.000	4.000
0026	613.1100.S	Cable Barrier Type 1	LF	23,528.000	23,528.000
0028	613.1200.S	Cable Barrier End Terminal Type 1	EACH	12.000	12.000
0032	618.0100	Maintenance and Repair of Haul Roads (project) 02. 1050-00-80	EACH	1.000	1.000
0036	619.1000	Mobilization	EACH	0.480	0.480
0038	624.0100	Water	MGAL	12.000	12.000
0040	625.0500	Salvaged Topsoil	SY	34,614.000	34,614.000
0042	627.0200	Mulching	SY	25,545.000	25,545.000
0044	628.1504	Silt Fence	LF	180.000	180.000
0046	628.1520	Silt Fence Maintenance	LF	180.000	180.000
0048	628.1905	Mobilizations Erosion Control	EACH	5.000	5.000
0050	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0052	628.2008	Erosion Mat Urban Class I Type B	SY	9,080.000	9,080.000
0054	628.7005	Inlet Protection Type A	EACH	7.000	7.000
0056	628.7504	Temporary Ditch Checks	LF	964.000	964.000
0058	628.7555	Culvert Pipe Checks	EACH	30.000	30.000
0060	629.0210	Fertilizer Type B	CWT	21.820	21.820
0062	630.0120	Seeding Mixture No. 20	LB	1,567.000	1,567.000
0066	630.0200	Seeding Temporary	LB	50.000	50.000
0068	630.0500	Seed Water	MGAL	202.000	202.000
0070	642.5001	Field Office Type B	EACH	0.480	0.480
0072	643.0300	Traffic Control Drums	DAY	2,981.000	2,981.000
0074	643.0420	Traffic Control Barricades Type III	DAY	173.000	173.000
0076	643.0705	Traffic Control Warning Lights Type A	DAY	346.000	346.000
0078	643.0715	Traffic Control Warning Lights Type C	DAY	448.000	448.000
0080	643.0800	Traffic Control Arrow Boards	DAY	27.000	27.000
0082	643.0900	Traffic Control Signs	DAY	519.000	519.000
0084	643.1051	Traffic Control Signs PCMS with TMC Communications	DAY	42.000	42.000
0088	643.5000	Traffic Control	EACH	0.480	0.480
0092	650.9911	Construction Staking Supplemental Control (project) 02. 1050-00-80	EACH	1.000	1.000
0096	650.9920	Construction Staking Slope Stakes	LF	11,750.000	11,750.000
0102	SPV.0045	Special 01. Digital Speed Reduction System (DSRS)	DAY	46.000	46.000
0104	SPV.0060	Special 01. Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch, 6:1 Slope	EACH	13.000	13.000
0108	SPV.0090	Special 01. Construction Staking Median Cable Barrier	LF	23,846.000	23,846.000

3

EXCAVATION COMMON

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 CY	REMARKS
0010	101+33	-	166+77	STH 29 - SEGMENT 1	442	
0010	202+19	-	291+94	STH 29 - SEGMENT 2	76	
0010	309+03	-	401+55	STH 29 - SEGMENT 3	1206	
PROJECT TOTAL =					1,724	

BASE MATERIAL SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	BAD 3/4-INCH 305.0110 TON	REMARKS
0010	101+33	EB -	166+77	EB STH 29	169	CROSSOVER S OF 40TH AVE TO CROSSOVER S OF 50TH AVE
0010	202+19	EB -	236+52	EB STH 29	133	CTH J TO BRIDGE OVER LAKE WISSOTA
0010	241+81	WB -	253+69	WB STH 29	31	BRIDGE TO CROSSOVER
0010	254+42	EB -	291+94	EB STH 29	97	CROSSOVER TO BRIDGE OVER 190TH ST
0010	309+03	WB -	331+20	WB STH 29	86	CTH G TO 345TH ST
0010	334+28	EB -	401+55	EB STH 29	262	345TH ST TO CROSSOVER
PROJECT TOTAL =					778	

CULVERT AND INLET SUMMARY

				APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH, 6:1 SLOPE SPV.0060.01			REMARKS
				REMOVING APRON ENDWALLS 204.9060.S.01	ADJUSTING INLET COVERS 611.8115		
CATEGORY	STATION	OFFSET	LOCATION	EACH	EACH	EACH	
0010	123+73	EB 16.0'	LT STH 29	1	-	1	
0010	128+92	EB 16.1'	LT STH 29	1	-	1	
0010	135+48	EB 15.8'	LT STH 29	1	-	1	
0010	142+04	EB 20.6'	LT STH 29	1	-	1	
0010	159+10	EB 19.5'	LT STH 29	1	-	1	
0010	208+90	WB 24.0'	RT STH 29	1	-	1	
0010	215+86	WB 26.6'	RT STH 29	1	-	1	
0010	225+67	WB 20.4'	RT STH 29	1	-	1	
0010	234+16	EB 20.8'	LT STH 29	1	-	1	
0010	255+17	EB 21.2'	LT STH 29	1	-	1	
0010	273+64	EB 29.8'	LT STH 29	-	1	-	
0010	280+16	EB 20.0'	LT STH 29	1	-	1	
0010	311+40	EB 29.4'	LT STH 29	-	1	-	
0010	319+42	WB 19.4'	RT STH 29	1	-	1	
0010	354+42	EB 31.6'	LT STH 29	-	1	-	
0010	364+41	EB 28.8'	LT STH 29	-	1	-	
0010	401+44	WB 17.4'	RT STH 29	1	-	1	
PROJECT TOTALS =				13	4	13	

WATER

CATEGORY	LOCATION	624.0100 MGAL	REMARKS
0010	STH 29 - SEGMENT 1	3	BAD 3/4-INCH
0010	STH 29 - SEGMENT 2	4	BAD 3/4-INCH
0010	STH 29 - SEGMENT 3	5	BAD 3/4-INCH
PROJECT TOTAL =		12	

CABLE BARRIER SUMMARY

						CABLE BARRIER TYPE 1 613.1100.S LF	CABLE BARRIER END TERMINAL TYPE 1 613.1200.S EACH	REMARKS
CATEGORY	STATION	TO	STATION	LOCATION				
0010	101+33	EB -	166+77	EB STH 29		6,479	2	CROSSOVER S OF 40TH AVE TO CROSSOVER S OF 50TH AVE
0010	202+19	EB -	236+52	EB STH 29		3,374	2	CTH J TO BRIDGE OVER LAKE WISSOTA
0010	241+81	WB -	253+69	WB STH 29		1,136	2	BRIDGE TO CROSSOVER
0010	254+42	EB -	291+94	EB STH 29		3,699	2	CROSSOVER TO BRIDGE OVER 190TH ST
0010	309+03	WB -	331+20	WB STH 29		2,165	2	CTH G TO 345TH ST
0010	334+28	EB -	401+55	EB STH 29		6,675	2	345TH ST TO CROSSOVER
PROJECT TOTALS =						23,528	12	

ALL ITEMS ARE CAT 0010 UNLESS NOTED OTHERWISE

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3

EROSION CONTROL ITEMS

					SALVAGED		SILT		EROSION MAT	INLET	TEMPORARY	CULVERT	SEEDING			SEED	
					TOPSOIL	MULCHING	FENCE	FENCE	URBAN CLASS	PROTECTION	DITCH	PIPE	FERTILIZER	MIXTURE	SEEDING	WATER	
					625.0500	627.0200	628.1504	628.1520	I TYPE B	TYPE A	CHECKS	CHECKS	TYPE B	NO. 20	TEMPORARY		
									628.2008	628.7005	628.7504	628.7555	629.0210	630.0120	630.0200	630.0500	
CATEGORY	STATION	TO	STATION	LOCATION	SY	SY	LF	LF	SY	EACH	LF	EACH	CWT	LB	LB	MGAL	REMARKS
0010	112+00	-	119+00	STH 29 - SEGMENT 1	1,785	1,192	-	-	594	1	60	-	1.12	81	-	10	
0010	123+50	-	124+10	STH 29 - SEGMENT 1	162	109	-	-	54	-	24	2	0.10	8	-	1	
0010	128+89	-	128+94	STH 29 - SEGMENT 1	13	9	-	-	5	-	12	2	0.01	1	-	1	
0010	135+44	-	135+96	STH 29 - SEGMENT 1	131	86	-	-	46	-	24	2	0.08	6	-	1	
0010	140+95	-	145+20	STH 29 - SEGMENT 1	1,929	1,552	-	-	378	-	48	2	1.22	87	-	11	
0010	151+26	-	164+96	STH 29 - SEGMENT 1	5,801	4,577	-	-	1,224	-	96	2	3.65	262	-	33	
0010	166+60	-	166+80	STH 29 - SEGMENT 1	41	23	-	-	18	-	12	-	0.03	2	-	1	
0010	206+12	-	209+50	STH 29 - SEGMENT 2	1,030	732	-	-	299	-	36	2	0.65	47	-	6	
0010	215+90	-	216+25	STH 29 - SEGMENT 2	105	74	-	-	31	-	24	2	0.07	5	-	1	
0010	225+50	-	225+90	STH 29 - SEGMENT 2	126	90	-	-	36	-	24	2	0.08	6	-	1	
0010	234+00	-	234+24	STH 29 - SEGMENT 2	72	50	-	-	22	-	24	4	0.05	4	-	1	
0010	238+00	-	240+50	STH 29 - SEGMENT 2	-	-	80	80	-	-	-	-	-	-	-	-	STILLSON CRK PROTECTION
0010	255+00	-	255+30	STH 29 - SEGMENT 2	85	58	-	-	27	-	24	2	0.05	4	-	1	
0010	273+60	-	273+82	STH 29 - SEGMENT 2	74	54	-	-	20	1	24	2	0.05	4	-	1	
0010	280+14	-	281+00	STH 29 - SEGMENT 2	238	161	-	-	77	-	24	2	0.15	11	-	2	
0010	309+00	-	328+50	STH 29 - SEGMENT 3	6,612	4,882	-	-	1,731	2	132	2	4.17	298	-	37	
0010	334+28	-	336+00	STH 29 - SEGMENT 3	505	353	-	-	153	-	24	-	0.32	23	-	3	
0010	344+00	-	371+50	STH 29 - SEGMENT 3	9,085	6,641	-	-	2,445	2	180	-	5.72	409	-	51	
0010	389+20	-	401+50	STH 29 - SEGMENT 3	3,673	2,579	-	-	1,094	1	84	2	2.31	166	-	21	
0010	PROJECT LIMITS		UNDISTRIBUTED		3,147	2,323	100	100	826	-	88	-	1.99	143	50	19	EXCLUSIONARY FENCING
PROJECT TOTALS =					34,614	25,545	180	180	9,080	7	964	30	21.82	1567	50	202	

MOBILIZATION EROSION CONTROL ITEMS

CATEGORY	LOCATION	MOBILIZATIONS		REMARKS
		EROSION CONTROL 628.1905	EMERGENCY EROSION CONTROL 628.1910	
0010	STH 29	5	3	
PROJECT TOTALS =		5	3	

ALL ITEMS ARE CAT 0010 UNLESS NOTED OTHERWISE

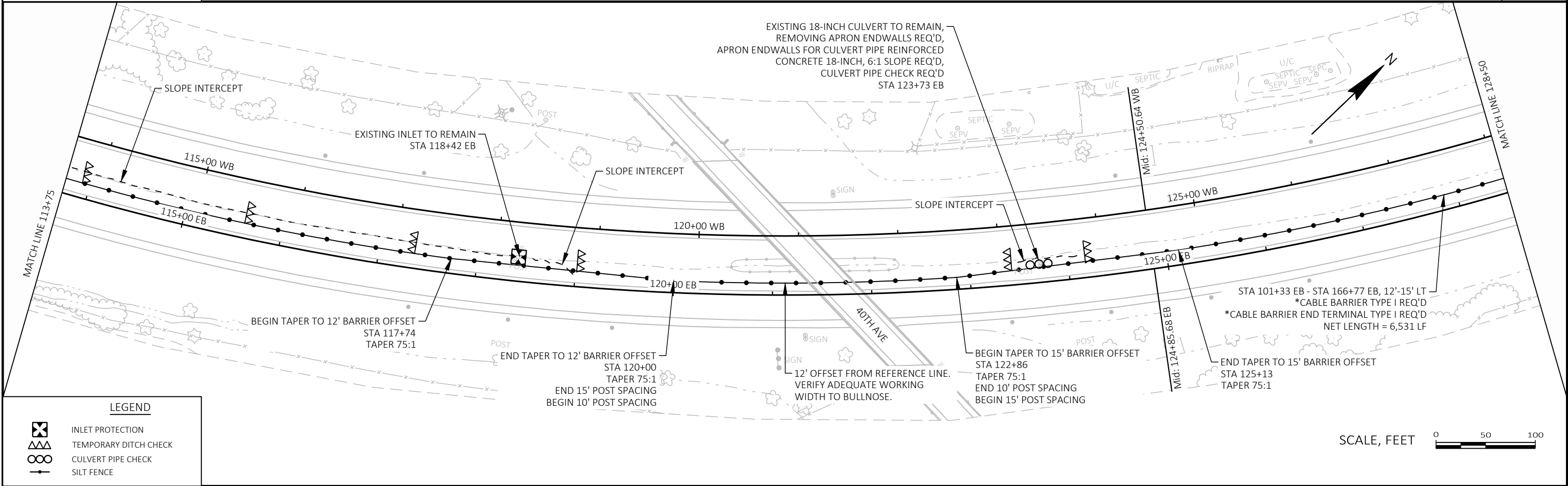
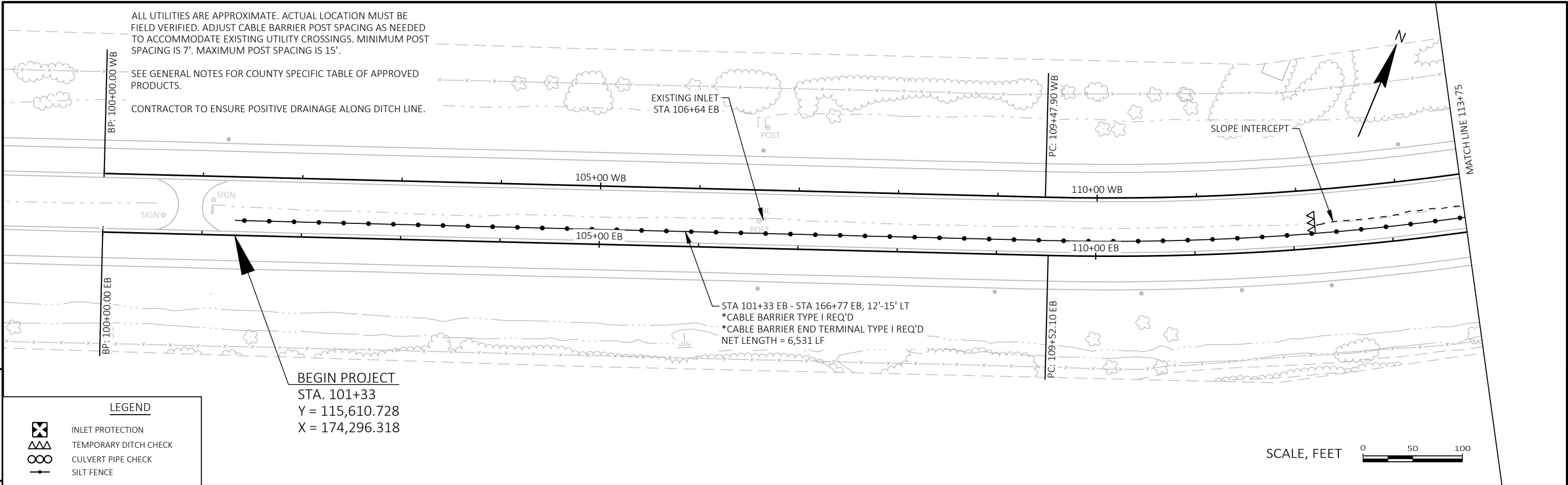
TRAFFIC CONTROL SUMMARY

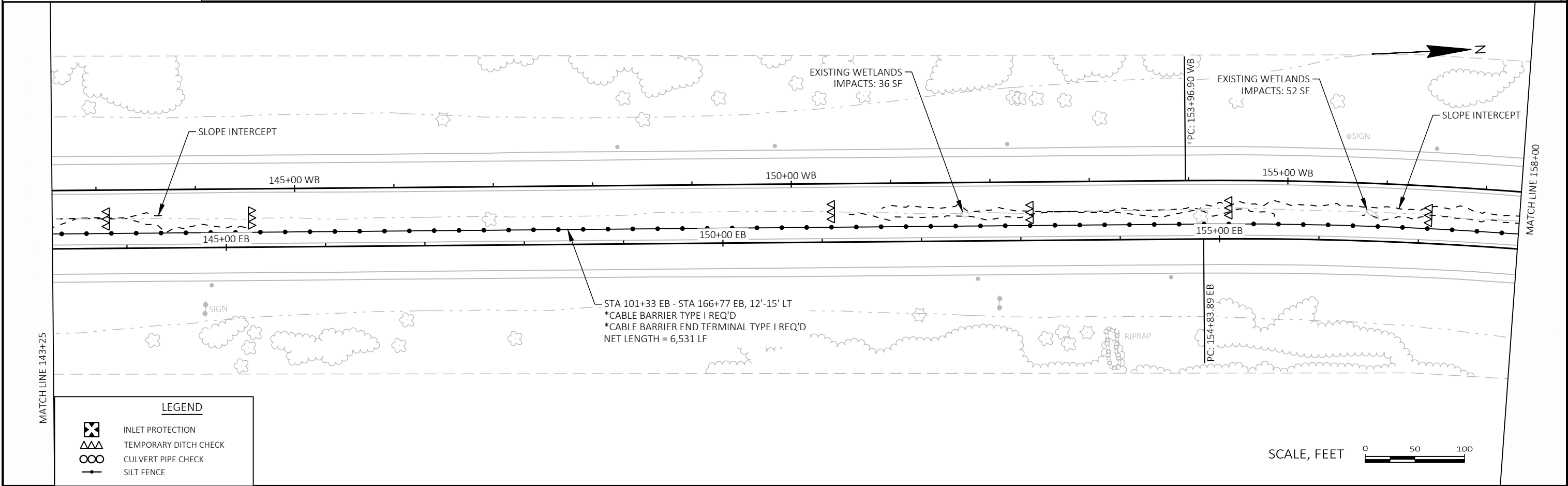
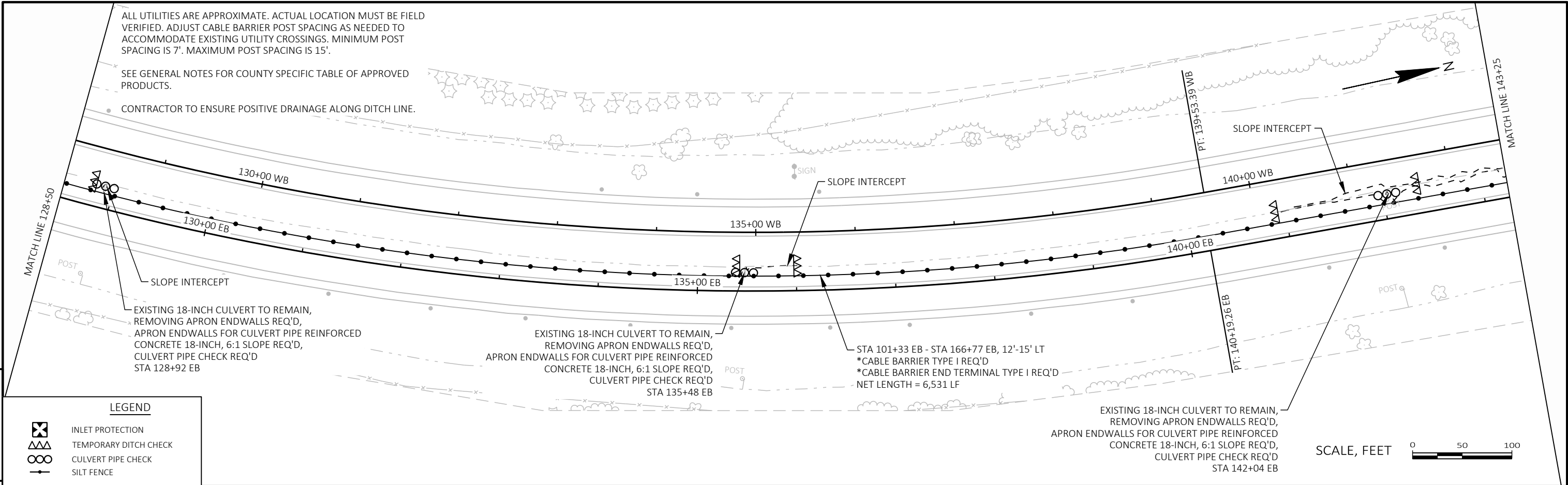
CATEGORY	LOCATION	LENGTH (DAYS)	TRAFFIC CONTROL DRUMS	TRAFFIC CONTROL BARRICADES TYPE III	TRAFFIC CONTROL WARNING LIGHTS TYPE A	TRAFFIC CONTROL WARNING LIGHTS TYPE C	TRAFFIC CONTROL ARROW BOARDS	TRAFFIC CONTROL SIGNS	TRAFFIC CONTROL PCMS BOARD W/ CELLULAR COMMUNICATIONS	DIGITAL SPEED REDUCTION SYSTEM (DSRS) SPV.0045.01	REMARKS
			643.0300	643.0420	643.0705	643.0715	643.0800	643.0900	643.1051		
			DAY	DAY	DAY	DAY	DAY	DAY	DAY	DAY	
0010	STH 29 - SEGMENT 1	8	768	40	80	136	8	136	14	8	EB CLOSURE ONLY
0010	STH 29 - SEGMENT 2	8	904	56	112	136	8	152	14	16	EB/WB CLOSURES
0010	STH 29 - SEGMENT 3	11	1,309	77	154	176	11	231	14	22	EB/WB CLOSURES
PROJECT TOTALS =		27	2,981	173	346	448	27	519	42	46	

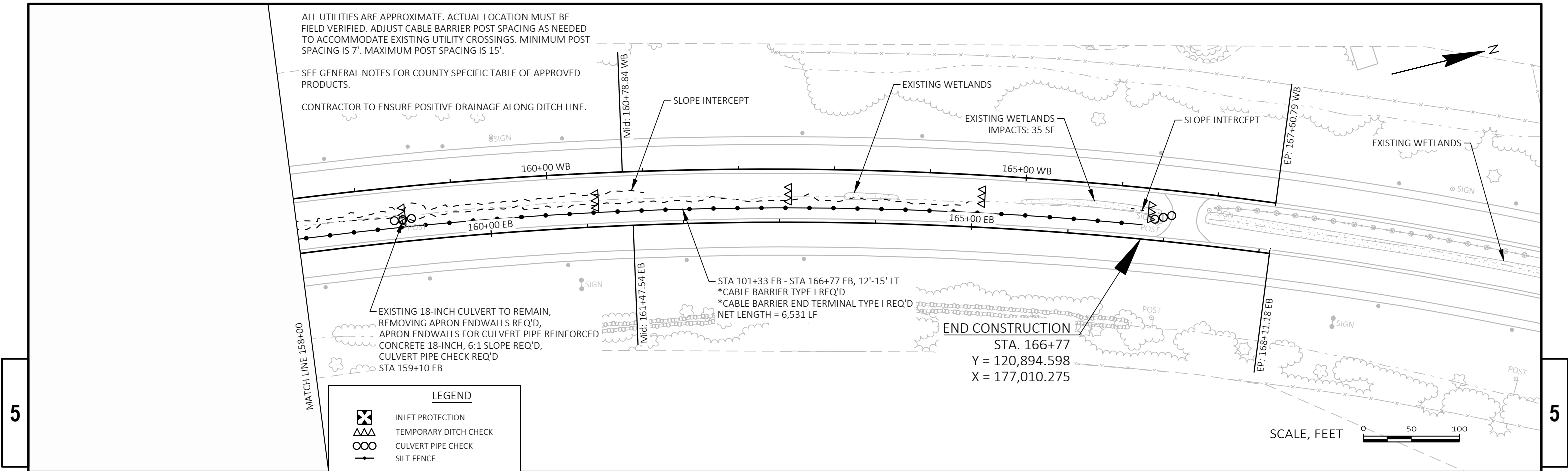
CONSTRUCTION STAKING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT)	CONSTRUCTION STAKING SLOPE	CONSTRUCTION STAKING MEDIAN
					01.1050-00-10	STAKES	CABLE BARRIER
					650.9911	650.9920	SPV.0090.01
					EACH	LF	LF
0010	101+33	-	166+77	STH 29 - SEGMENT 1	0.25	3,842	6,532
0010	202+19	-	291+94	STH 29 - SEGMENT 2	0.375	574	8,368
0010	309+03	-	401+55	STH 29 - SEGMENT 2	0.375	7,334	8,946
PROJECT TOTALS =					1	11,750	23,846

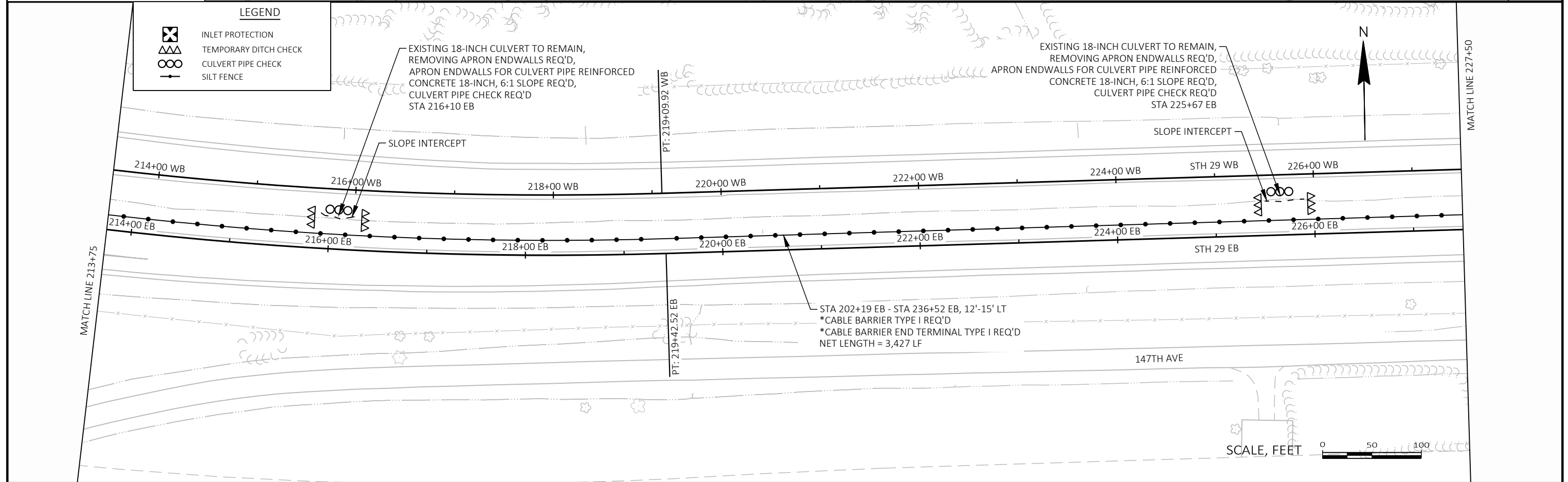
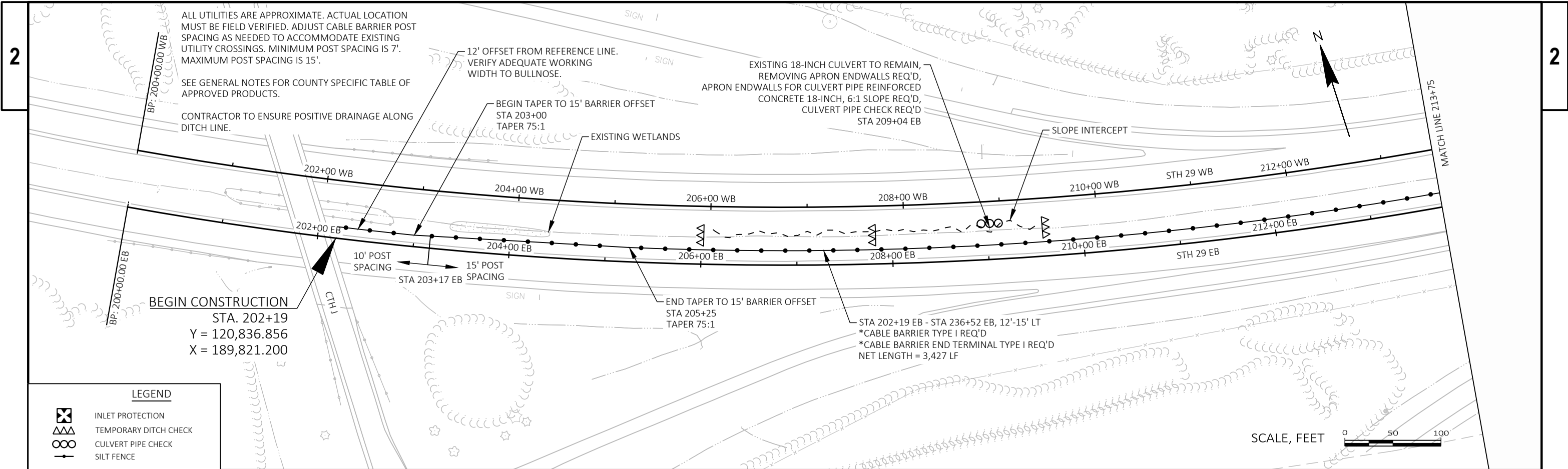
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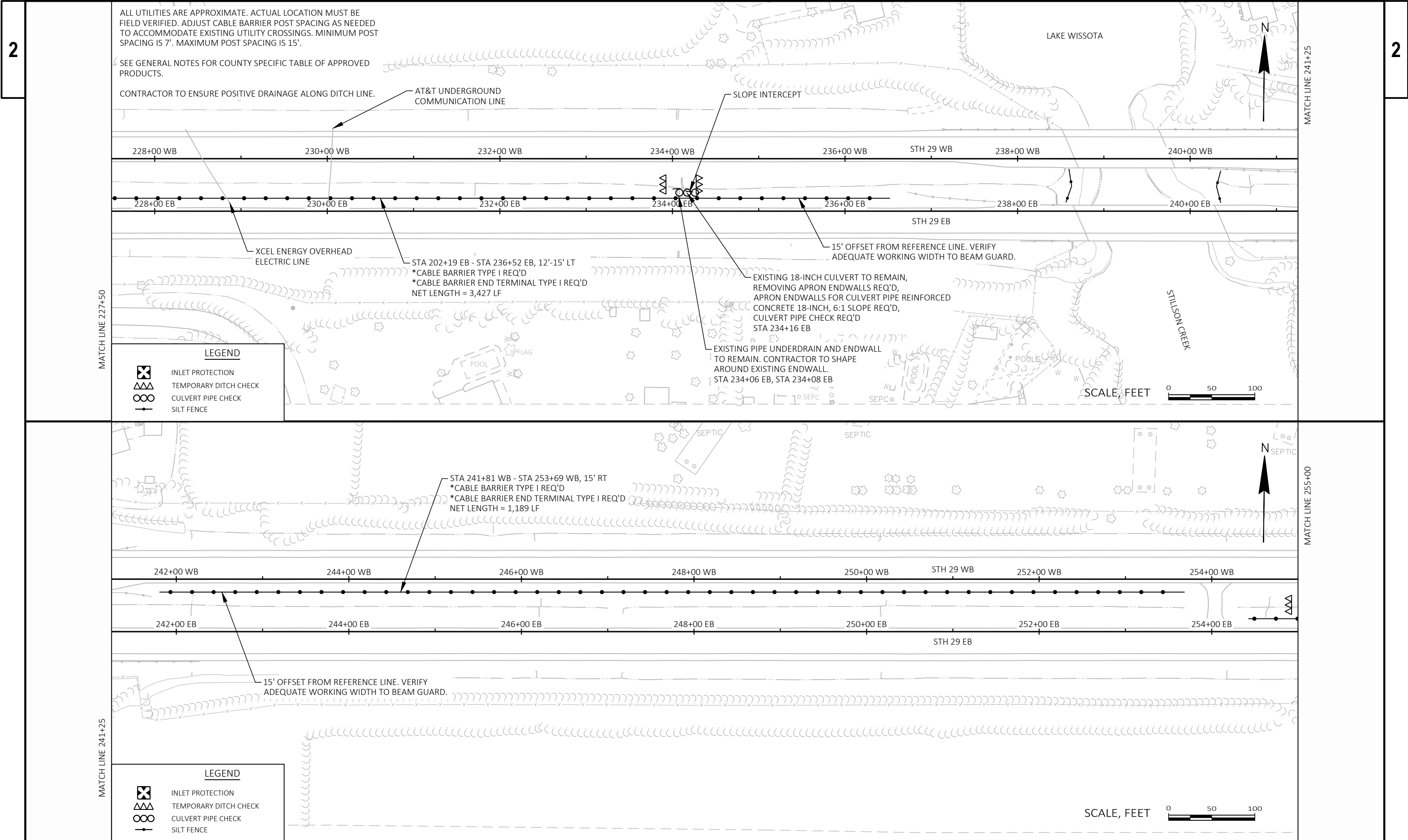






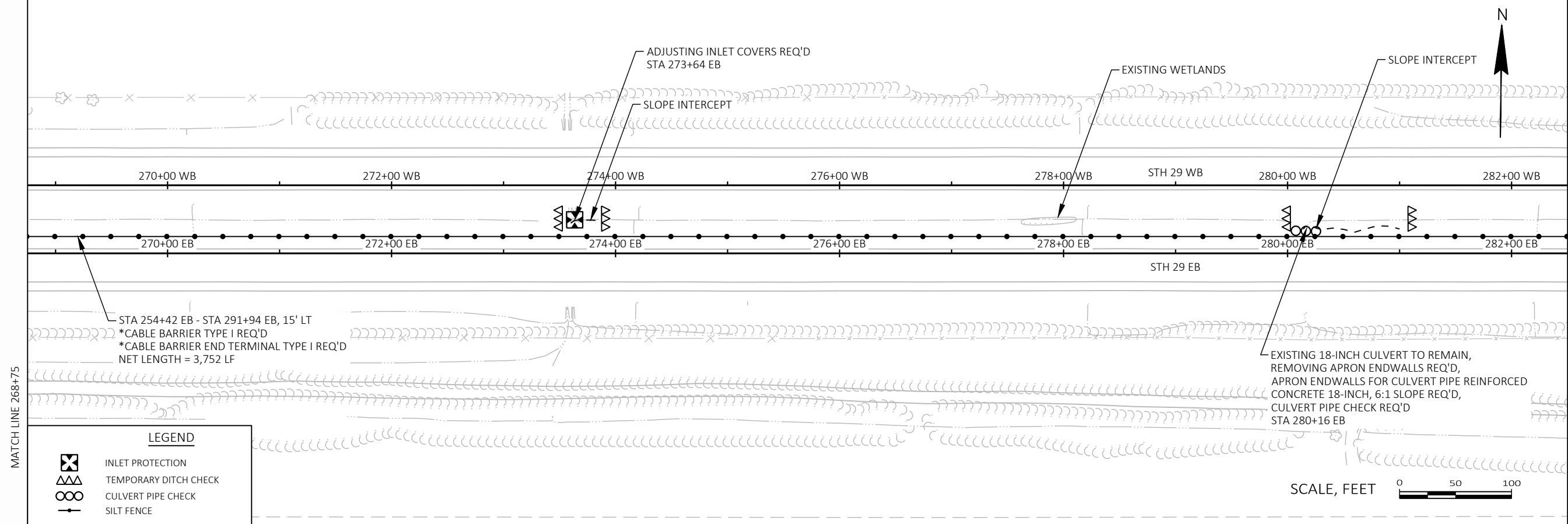
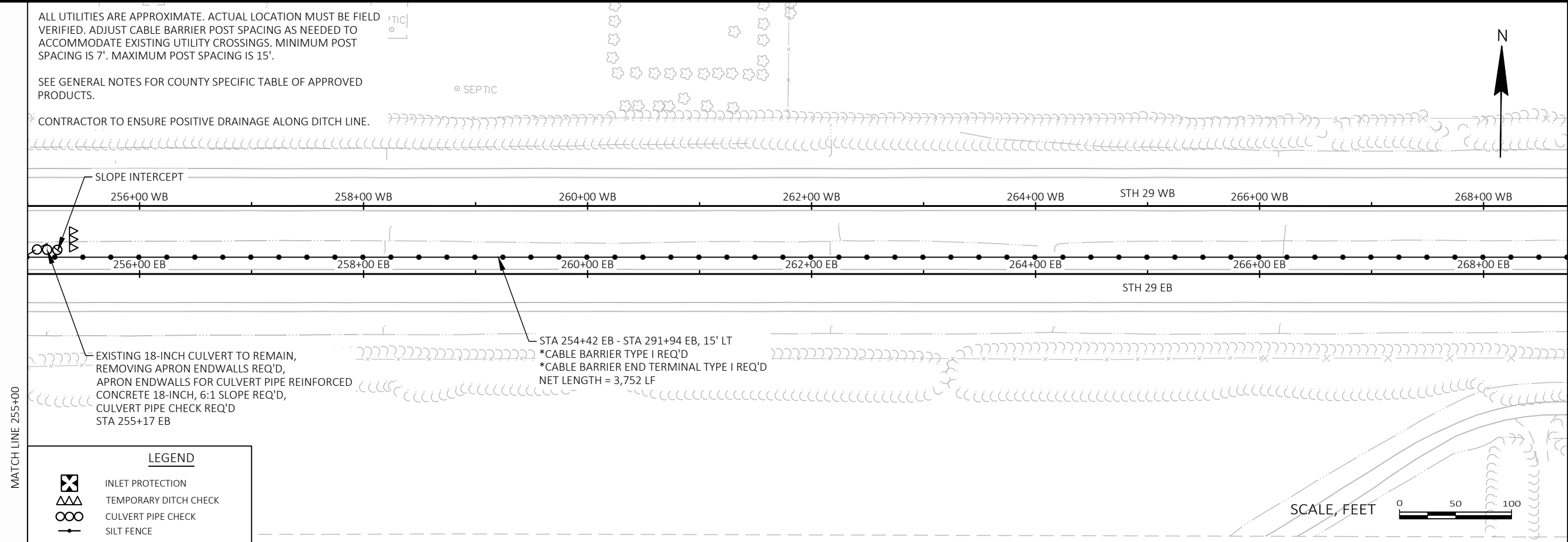
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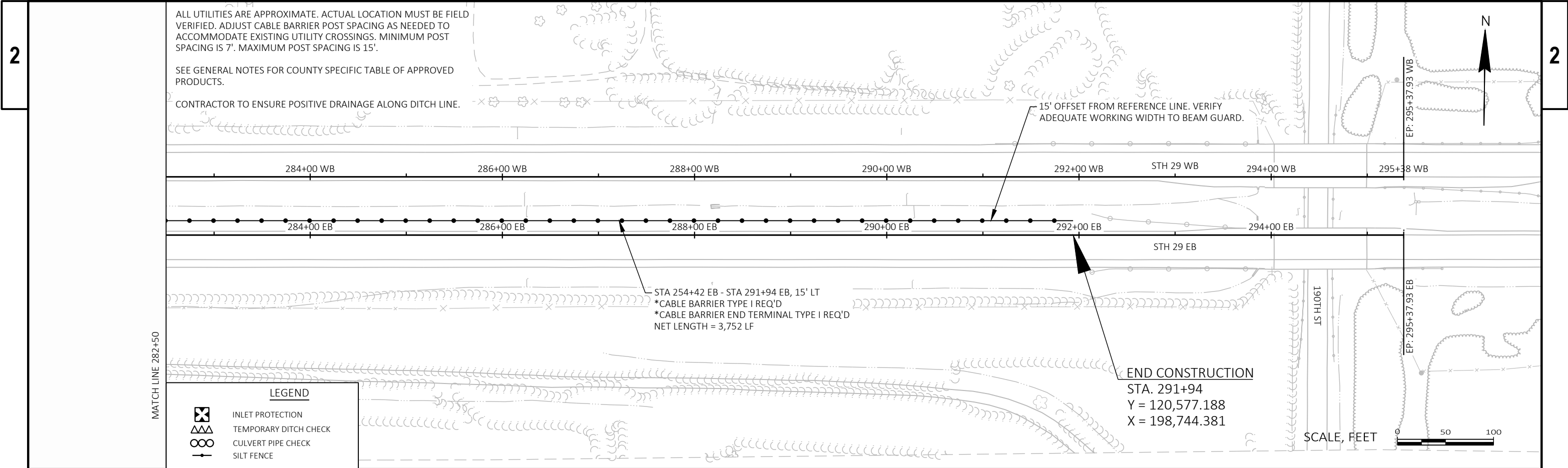


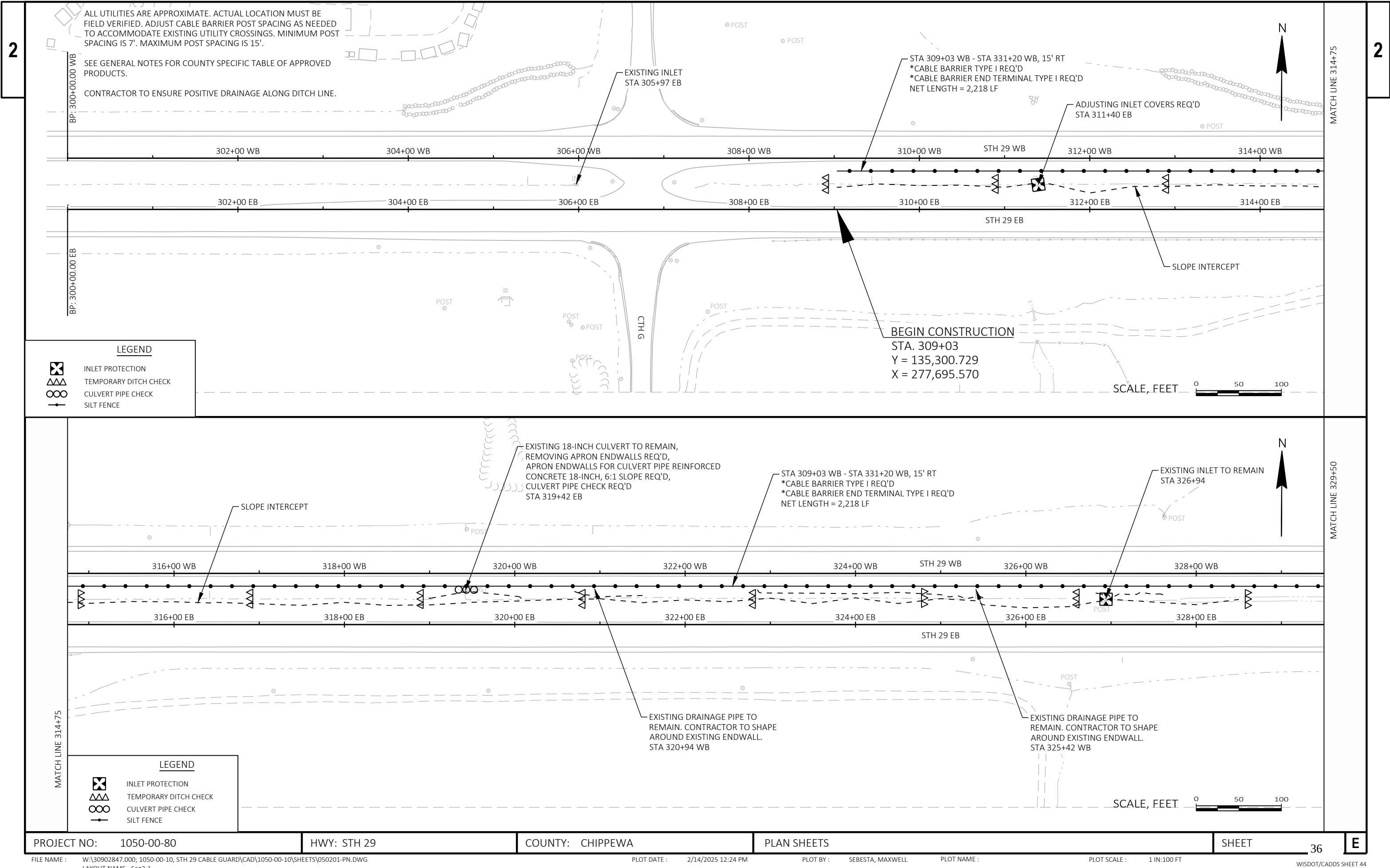


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ALL UTILITIES ARE APPROXIMATE. ACTUAL LOCATION MUST BE FIELD VERIFIED. ADJUST CABLE BARRIER POST SPACING AS NEEDED TO ACCOMMODATE EXISTING UTILITY CROSSINGS. MINIMUM POST SPACING IS 7'. MAXIMUM POST SPACING IS 15'.

SEE GENERAL NOTES FOR COUNTY SPECIFIC TABLE OF APPROVED PRODUCTS.

CONTRACTOR TO ENSURE POSITIVE DRAINAGE ALONG DITCH LINE.

MATCH LINE 314+75

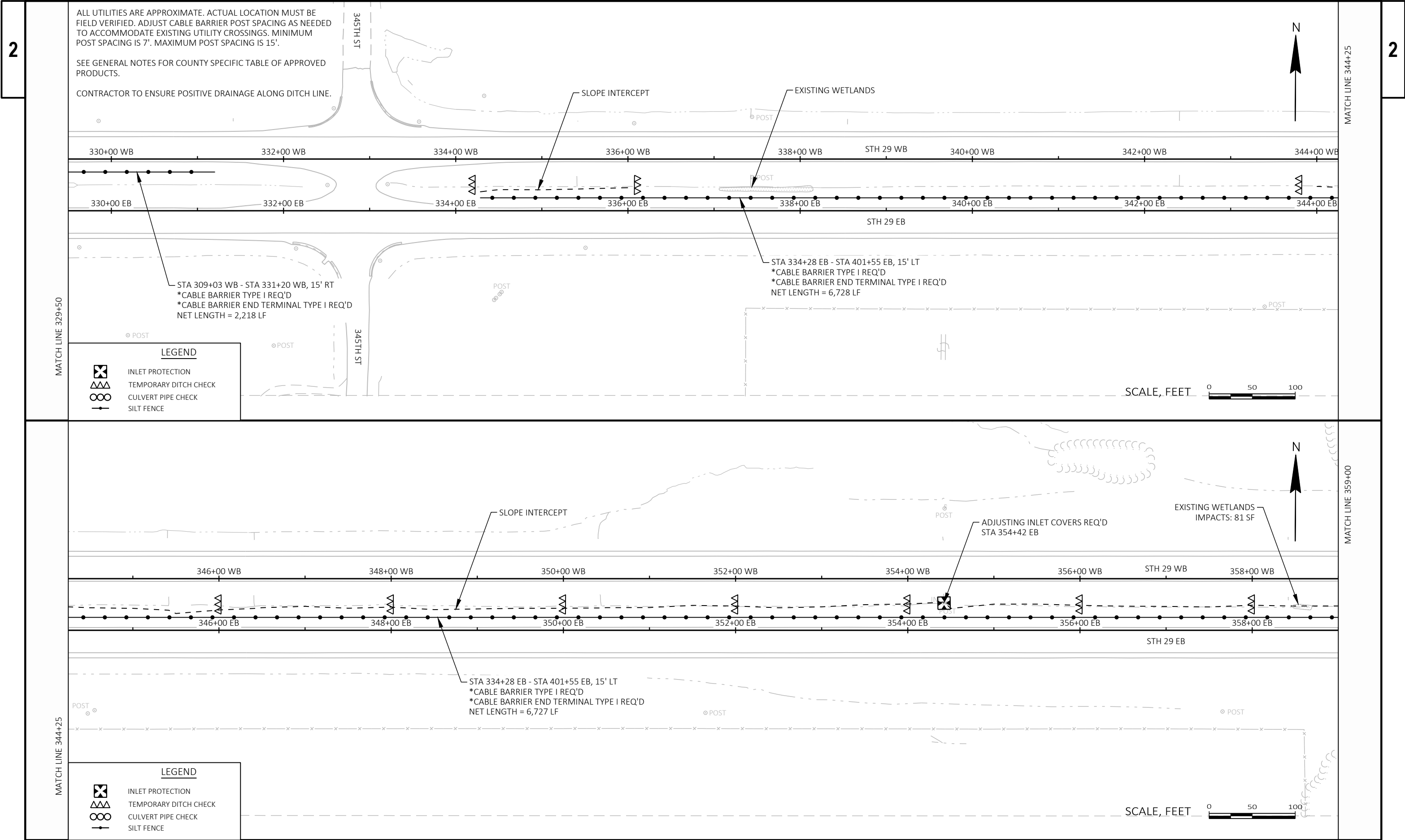
LEGEND

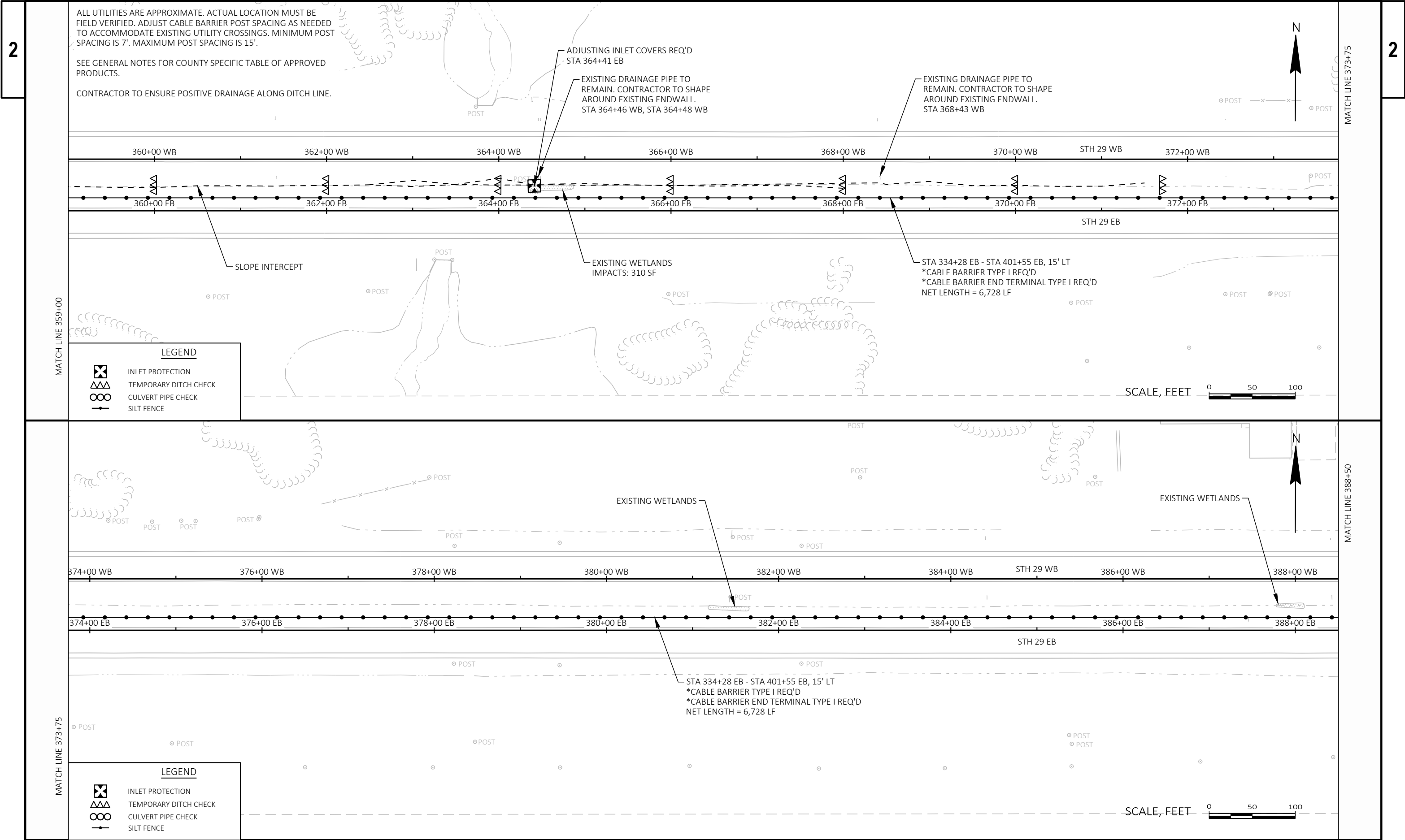
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SILT FENCE

MATCH LINE 329+50

LEGEND

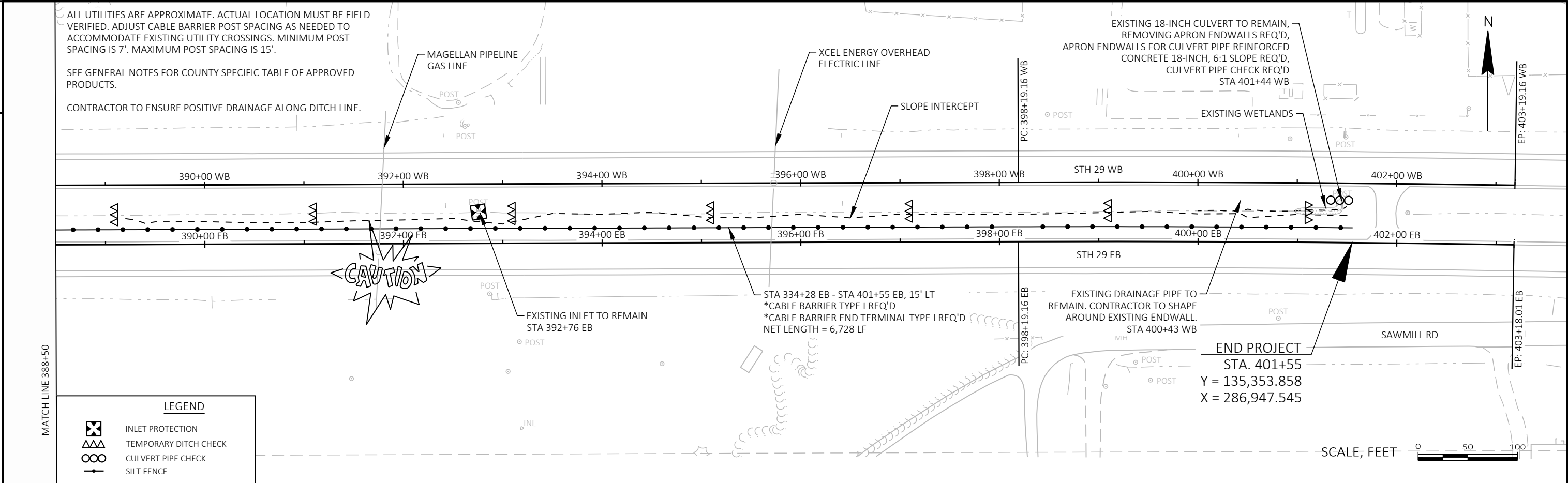
- INLET PROTECTION
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- SILT FENCE





2

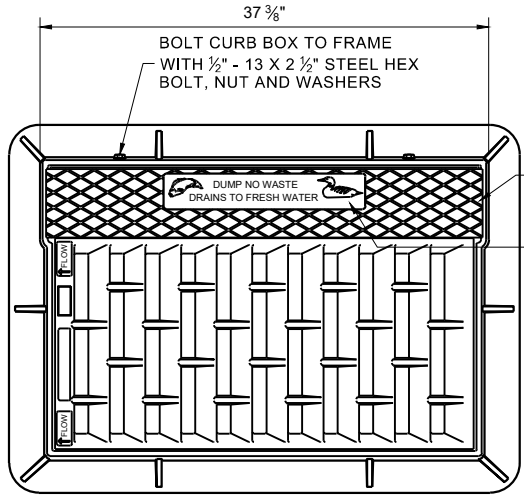
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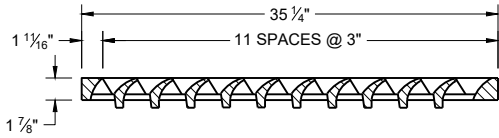
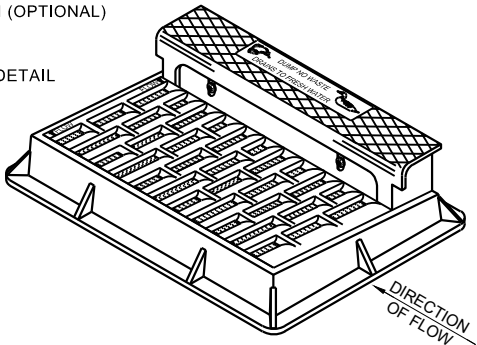
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Standard Detail Drawing List

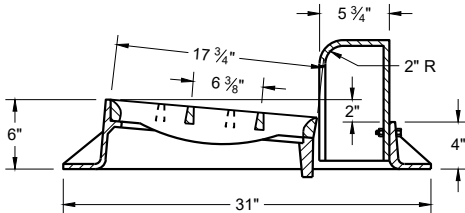
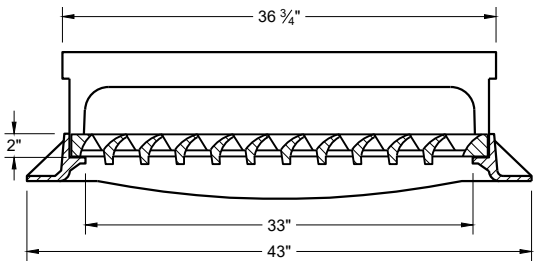
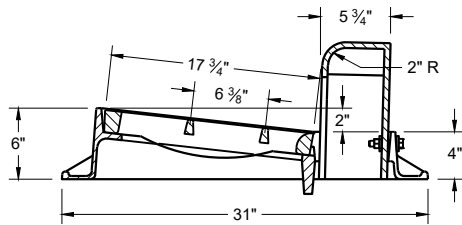
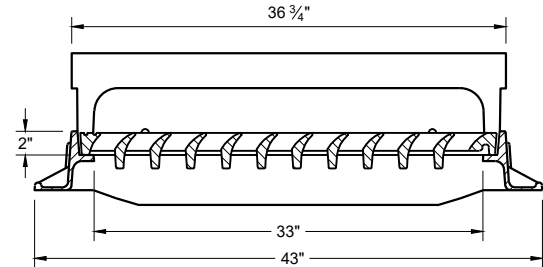
08A05-21A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C08-03	INLETS MEDIAN 1 AND 2 GRATE
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
14B52-03A	CABLE BARRIER TYPE 1 LAYOUT
14B52-03B	CABLE BARRIER TYPE 1 LAYOUT
14B52-03C	CABLE BARRIER TYPE 1 LAYOUT
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH



NOTE: EITHER CASTING IS ACCEPTABLE

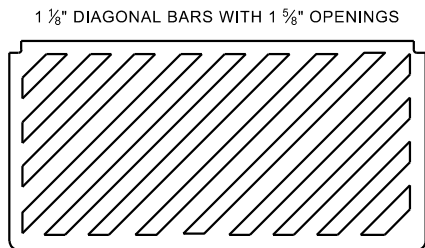


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

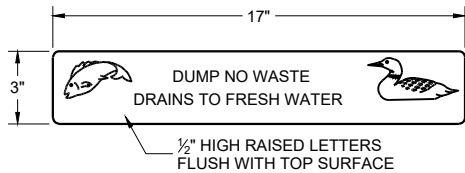


TYPE "H"

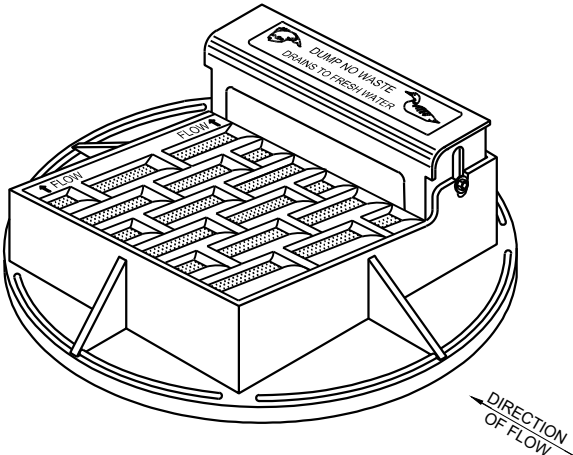
NOTE: EITHER CASTING IS ACCEPTABLE



SPECIAL GRATE FOR TYPE "H" COVER
(MEASURES 35" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)

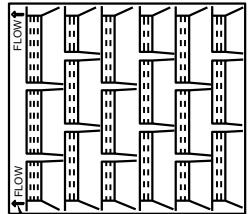


LOGO DETAIL

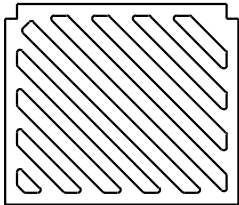


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

NOTE: EITHER CASTING IS ACCEPTABLE

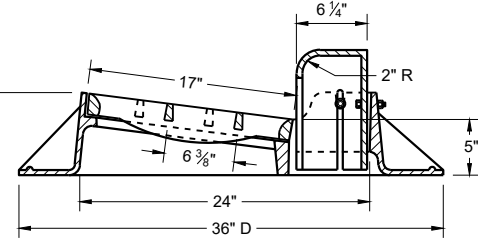
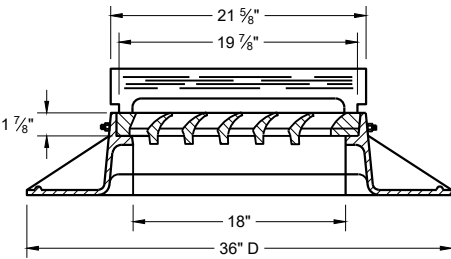


1" DIAGONAL BARS WITH 1 1/2" OPENINGS

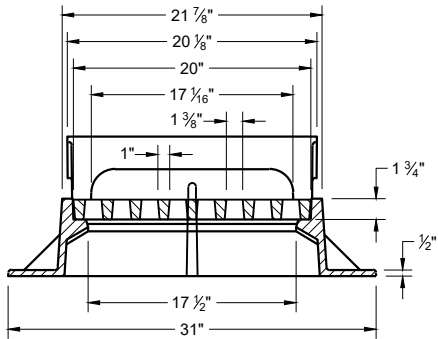
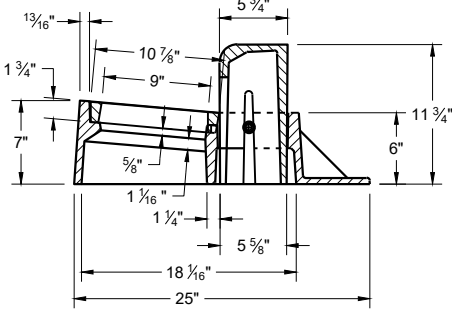


SPECIAL GRATE FOR TYPE "A" COVER

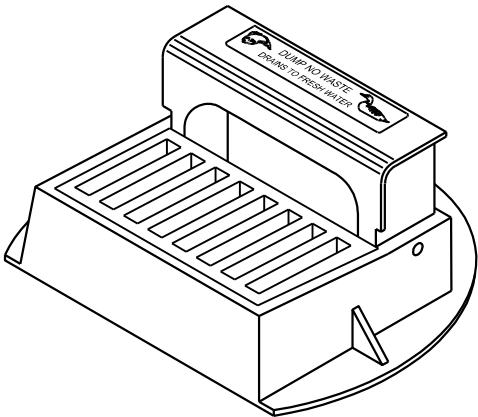
(MEASURES 19 3/4" X 17" X 1 7/8")
(NOTED AS TYPE A-S ON DRAINAGE TABLE)



TYPE "A"



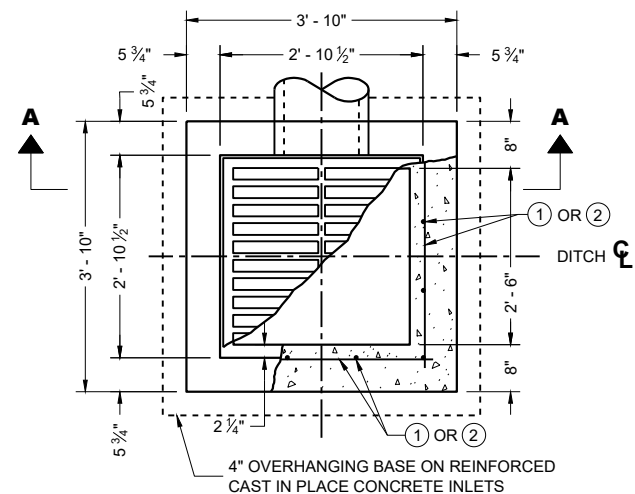
TYPE "Z"



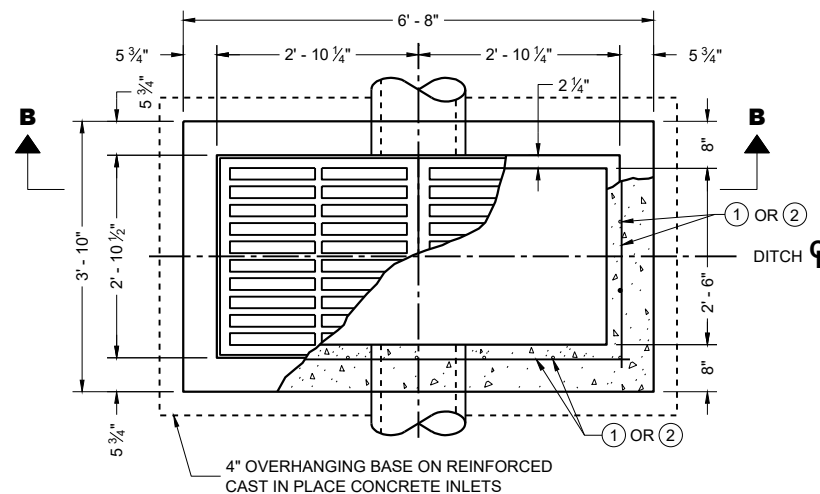
INLET COVERS TYPES A, H, A-S, H-S AND Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

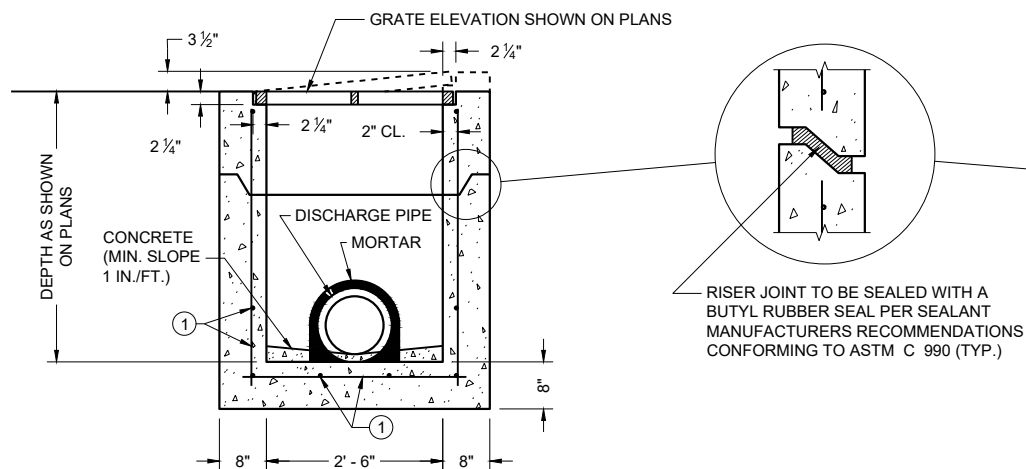
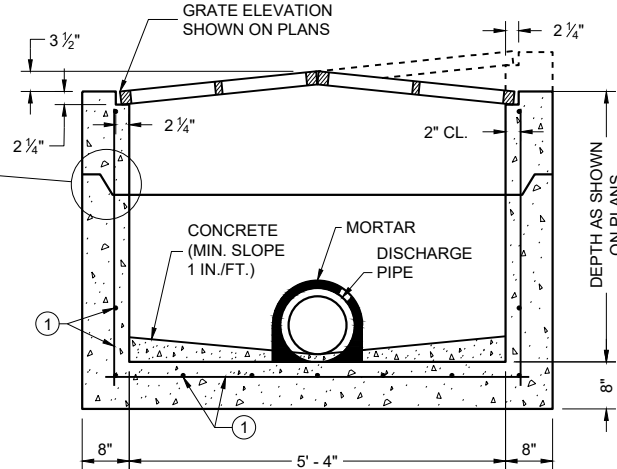
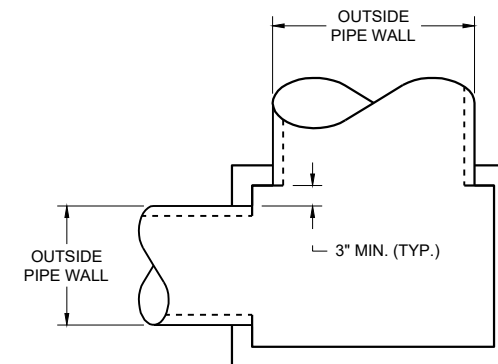
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



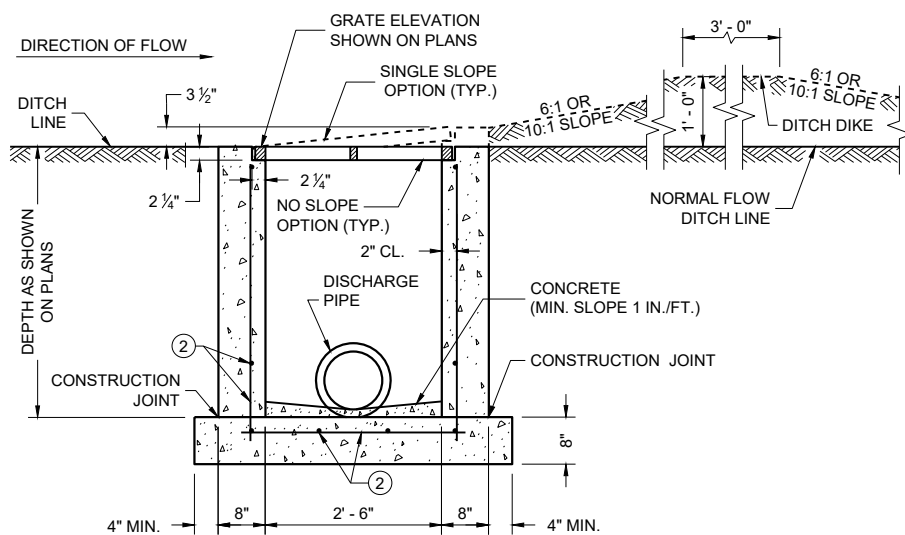
PLAN VIEW



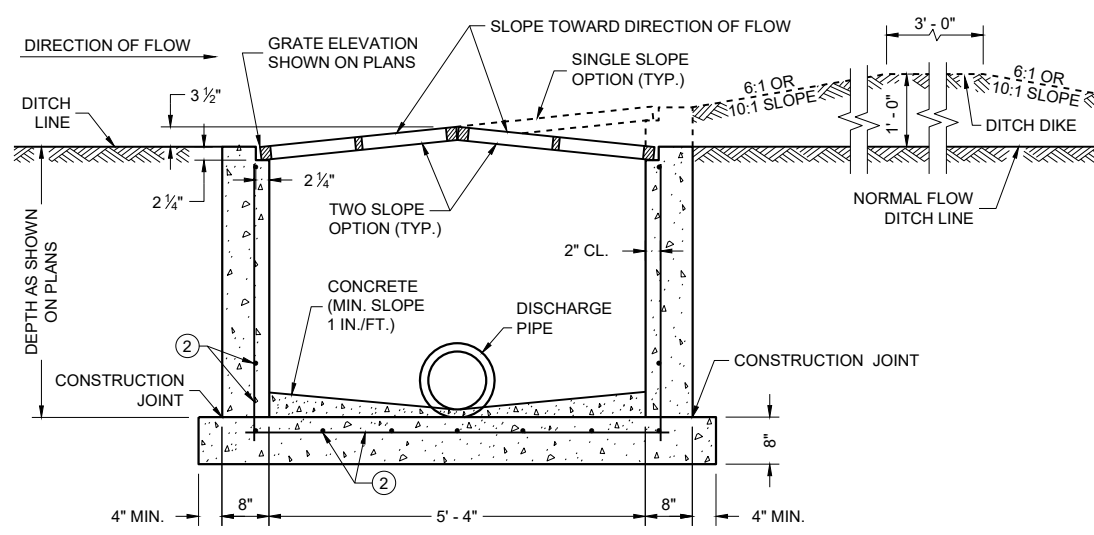
PLAN VIEW

PRECAST REINFORCED CONCRETE
SECTION A - APRECAST REINFORCED CONCRETE
SECTION B - B

DETAIL "A"

REINFORCED CAST IN PLACE CONCRETE
SECTION A - A

INLETS MEDIAN 1 GRATE

REINFORCED CAST IN PLACE CONCRETE
SECTION B - B

INLETS MEDIAN 2 GRATE

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

PIPE MATRIX

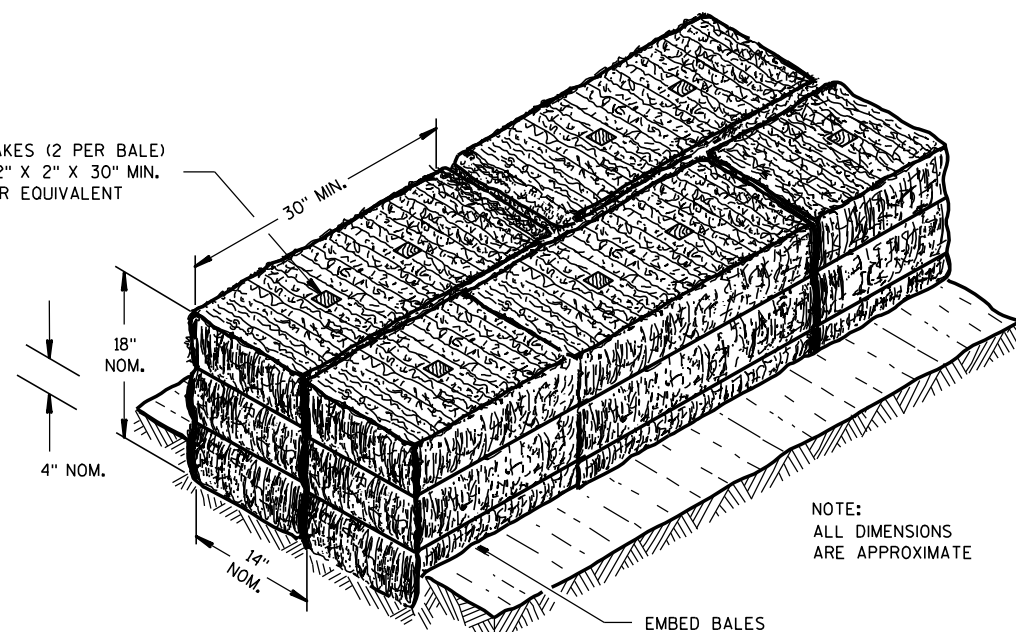
INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42

INLETS
MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

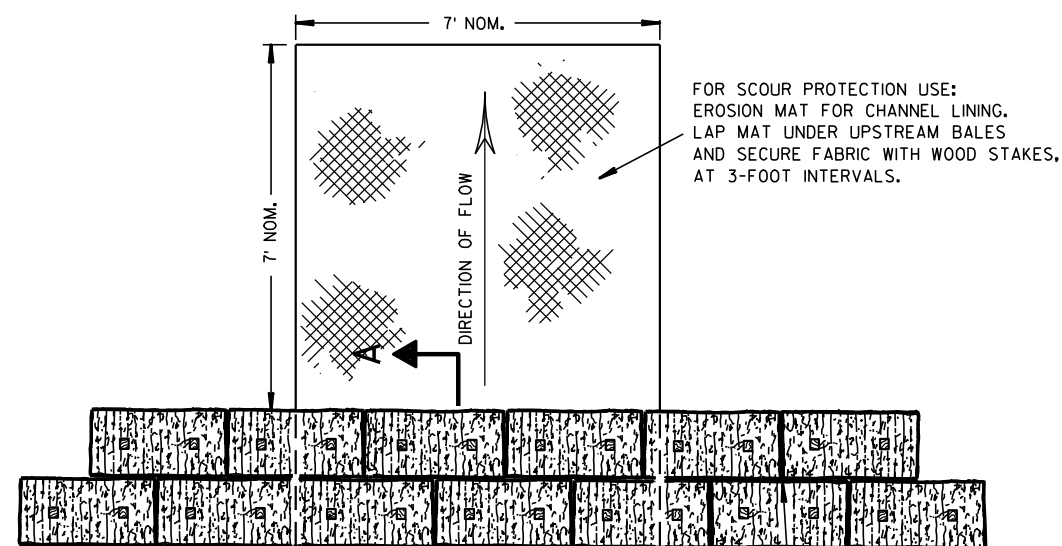
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR

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

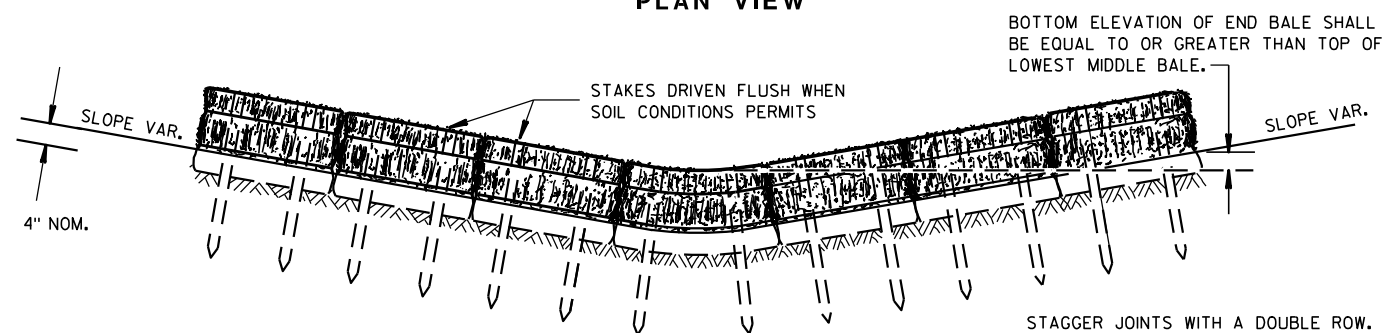


NOTE:
ALL DIMENSIONS
ARE APPROXIMATE

SECTION A-A



PLAN VIEW



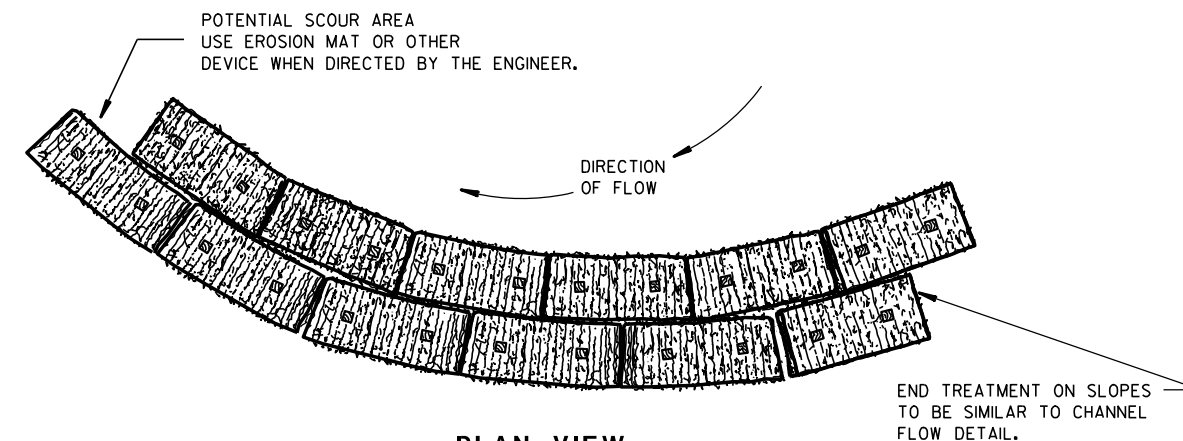
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

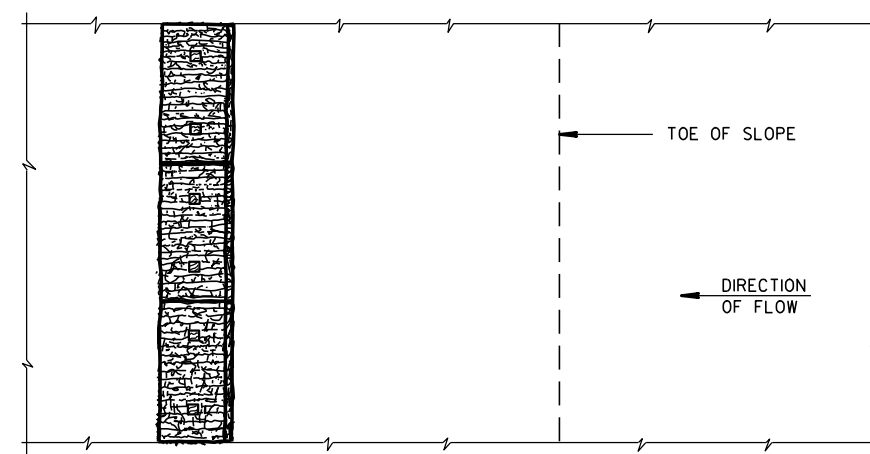
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

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

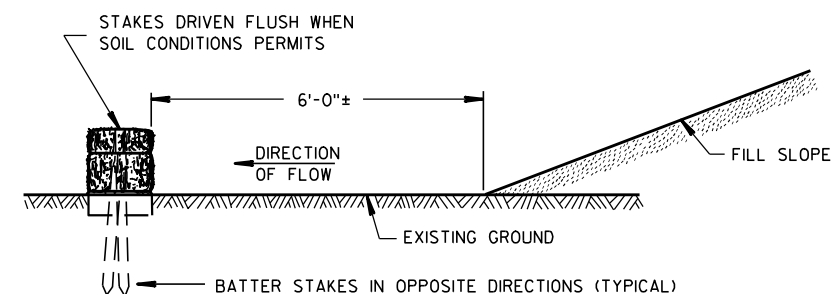


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

/S/ Beth Conn-----
CHIEF ROADWAY DEVELOPER 43 ENGINEER

FHWA



- 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 1½" X 1½" 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.



SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

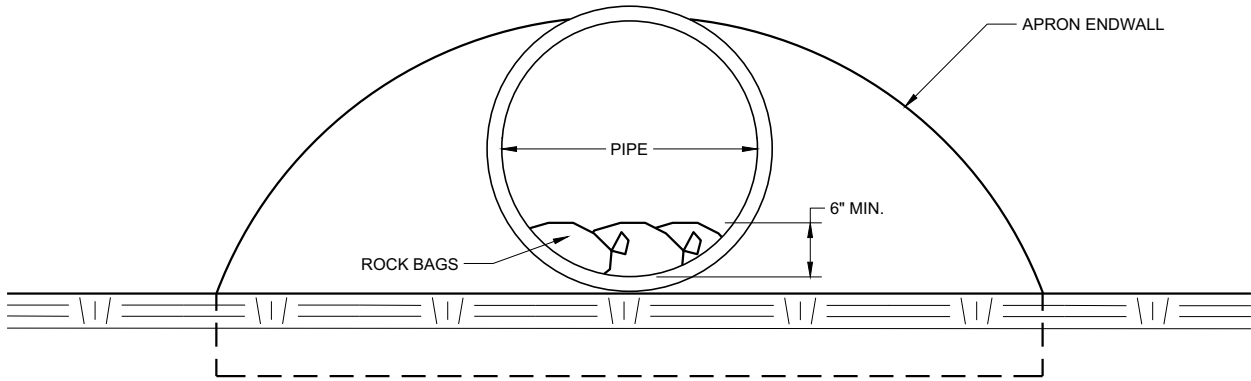
APPROVED
4-29-05
DATE

/S/ Beth Connolly
CHIEF ROADWAY DEVELOPMENT

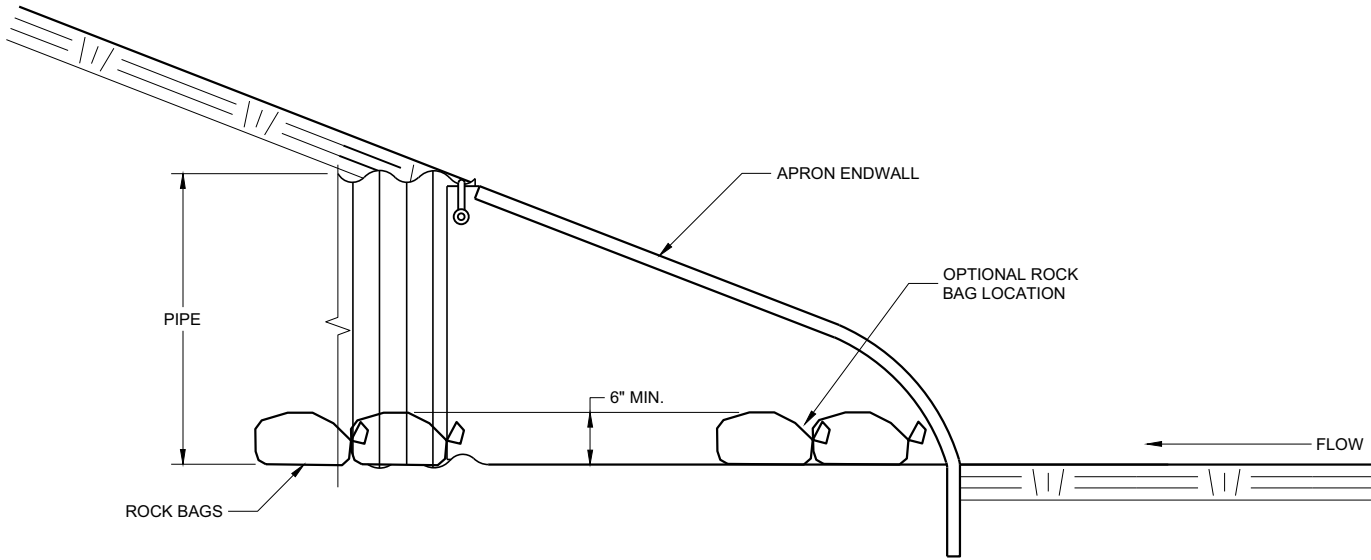
44

ENGINEER

FHWA



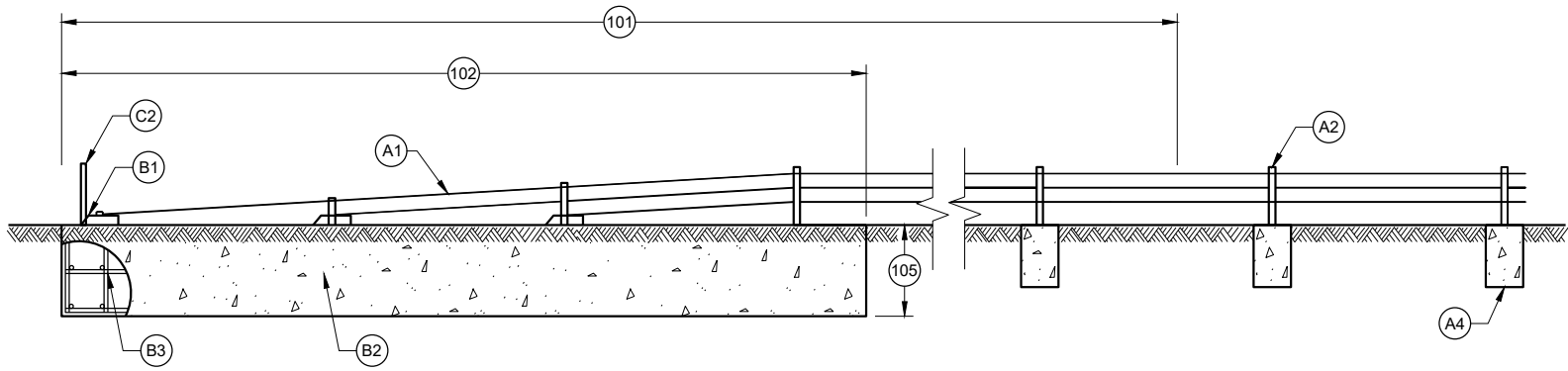
END VIEW



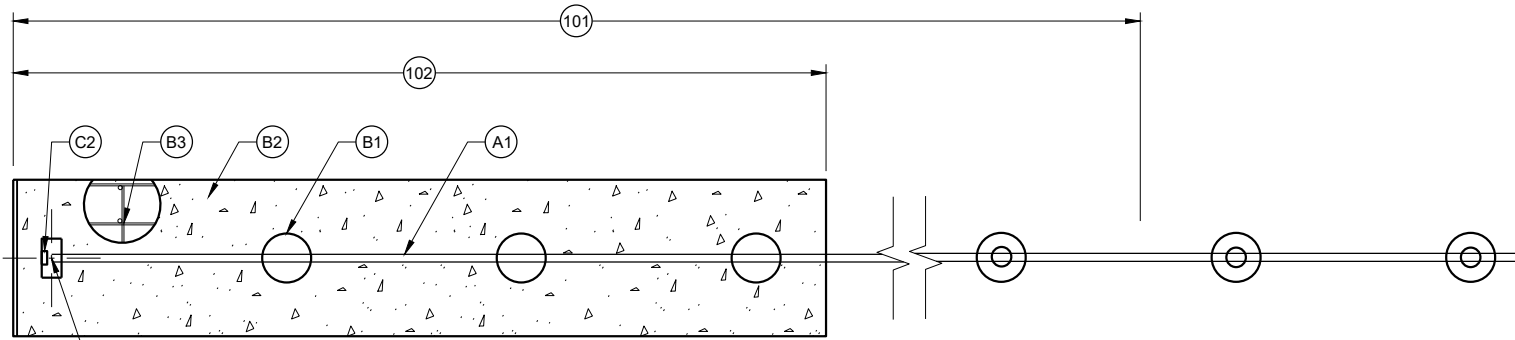
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI 46
FHWA	



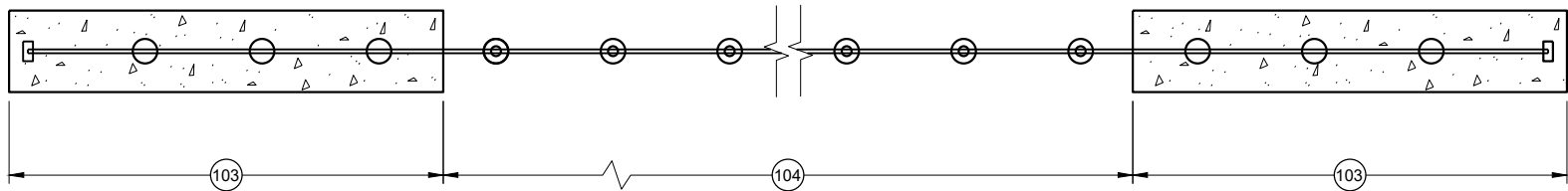
PROFILE VIEW



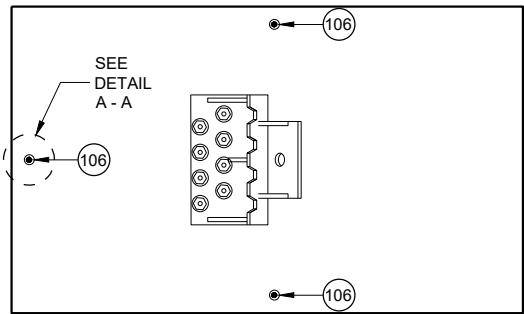
LOCATION OF STATION OFFSET FOR
CABLE BARRIER END TERMINAL

PLAN VIEW

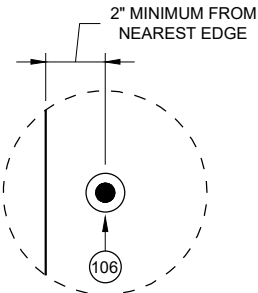
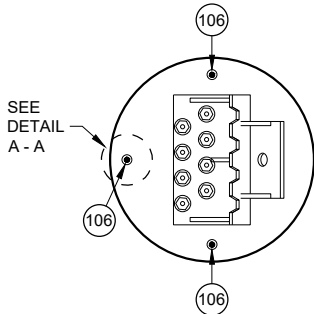
**TRANSITION FROM CABLE BARRIER
TERMINAL TO CABLE BARRIER LINE POSTS**



TYPICAL PLAN VIEW



**ANCHOR MONITOR POINTS FOR
CABLE BARRIER END TERMINAL ANCHORS**



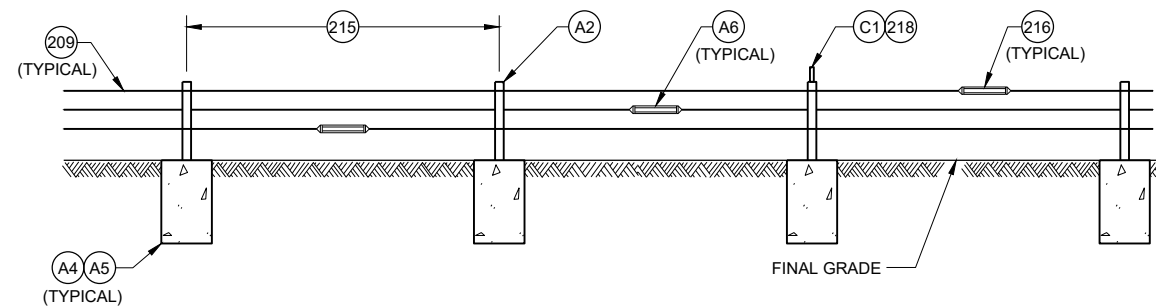
DETAIL A - A

GENERAL NOTES

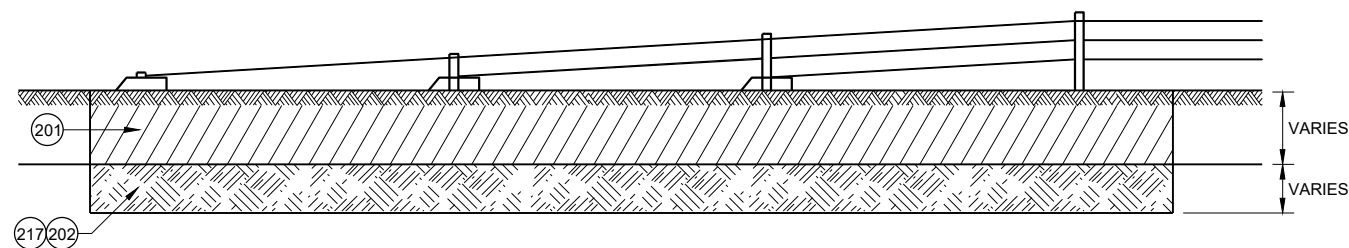
- DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.
- PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.
- INSTALL LINE POSTS PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.
- PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.
- PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICATED IN PLAN.
- PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.
- CONSTRUCT SHAFTS VERTICALLY. VERTICAL TOLERANCE OF SHAFT IS $\frac{1}{8}$ " PER FOOT OF DEPTH. SHAFTS ARE TO MINIMIZE DISTURBANCE TO ADJACENT SOILS.
- SECURE STEEL REINFORCEMENT AND STEEL SLEEVE PRIOR TO PLACEMENT OF CONCRETE. MAINTAIN CLEAR DISTANCE BETWEEN SOIL AND REINFORCEMENT CAGE.
- PLACE CONCRETE IN ONE CONTINUOUS POUR FOR EACH FOOTING. USE VIBRATION TO CONSOLIDATE CONCRETE.
- PROVIDE CASING AS NECESSARY TO PREVENT INTRUSION OF UNCONSOLIDATED MATERIALS OR WATER. USE CASINGS WHEN THERE IS 3 OR MORE INCHES OF WATER IN EXCAVATION.
- PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN USING A CASING AND CONSTRUCTION SEQUENCE. PROJECT ENGINEER WILL REVIEW AND APPROVED CASING DESIGN AND CONSTRUCTION SEQUENCE. CASING IS TO HAVE INTIMATE CONTACT WITH SHAFT SIDEWALL. CASING IT TO WITHSTAND INSERTION STRESS, REMOVAL STRESS, CONCRETE PRESSURE AND SOIL PRESSURE. REMOVE CASING DURING CONCRETE PLACEMENT OR IMMEDIATELY AFTER CONCRETE PLACEMENT. NO TEMPORARY CASING MAY REMAIN IN-PLACE.
- PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN AND CONSTRUCTION SEQUENCE WHEN OVER EXCAVATION IS REQUIRED NEAR A FOOTING. PROJECT ENGINEER WILL REVIEW AND APPROVED DESIGN AND CONSTRUCTION SEQUENCE.
- FINISH TOP OF FOOTINGS TO THE DIMENSIONS INDICATED IN PLAN. REMOVE EXCESS CONCRETE.
- DESIGN POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A NCHRP 350 TL-3 SMALL CAR.
- USE MARINE GRADE ANTI-SEIZE LUBRICANT FOR THREADING FITTINGS THAT IS ACCEPTABLE FOR USE ON GALVANIZED STEEL.
- 100 DIRECTION THAT THE CABLE PULLS THE END ANCHOR FOOTING
- 101 LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 102 PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 103 CABLE BARRIER END TERMINAL
- 104 CABLE BARRIER AND LINE POSTS
- 105 IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.
- 106 ANCHOR MONITOR POINTS ARE GALVANIZED SURVEY NAIL, OR MASONRY NAIL, PLACED INTO CONCRETE FOOTING BEFORE HARDENING. IF THERE ARE MULTIPLE ANCHOR POINTS WITHIN A PAY LIMIT FOR A CABLE BARRIER END TERMINAL, EACH ANCHOR POINT NEEDS THREE ANCHOR MONITOR POINTS.

**CABLE BARRIER
TYPE 1 LAYOUT**

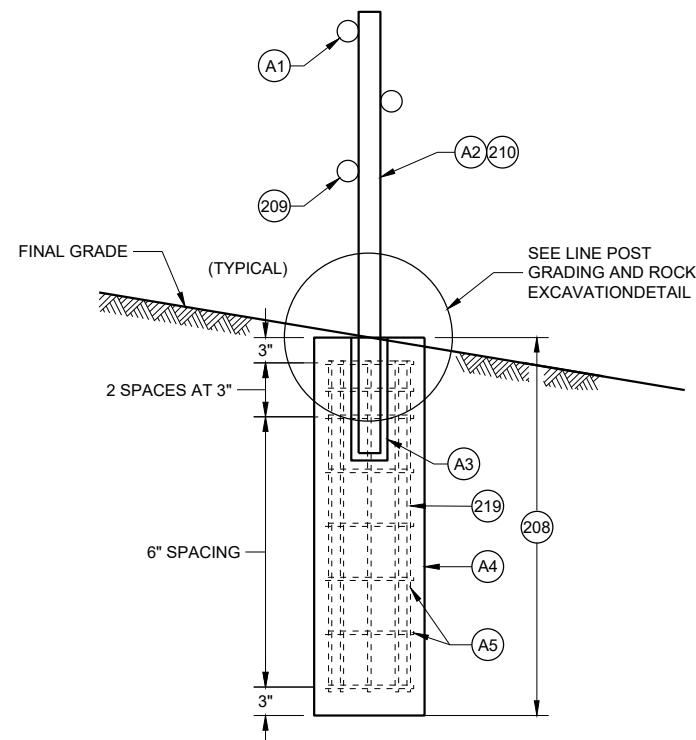
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



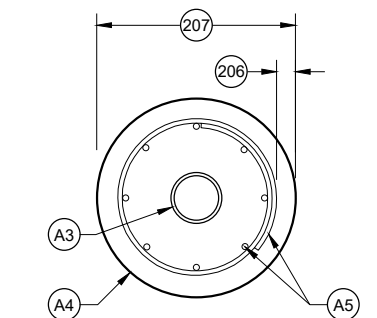
**PROFILE VIEW
LINE POST INSTALLATION**



**CABLE BARRIER END TERMINAL
ROCK EXCAVATION DETAIL**

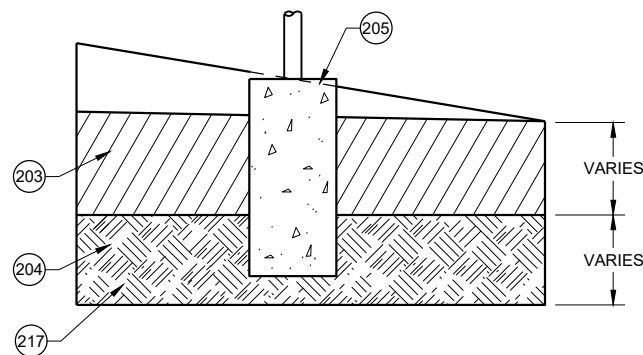


CROSS SECTION



**PROFILE VIEW
(LINE POSTS AND CABLES NOT SHOWN)**

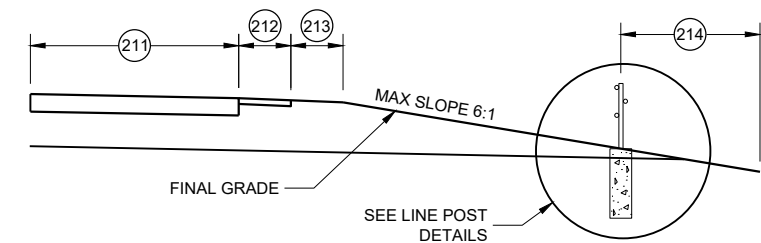
LINE POST DETAILS



**LINE POST GRADING
AND ROCK EXCAVATION DETAIL**

GENERAL NOTES

- (201) SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES)
- (202) ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES)
- (203) SOIL TO BE EXCAVATED FOR LINE POST (VARIES)
- (204) ROCK TO BE EXCAVATED FOR LINE POST (VARIES)
- (205) EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.
- (206) 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.
- (207) DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURERS' INFORMATION.
- (208) MINIMUM DEPTH OF LINE POST FOOTING IS 4' - 0" IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.
- (209) NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURERS' INFORMATION.
- (210) LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURERS' INFORMATION.
- (211) LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.
- (212) PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- (213) GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- (214) CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.
- (215) MAXIMUM POST SPACING IS 15 FEET.
- (216) STAGGER TURNBUCKLES (TYPICAL).
- (217) SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.
- (218) LINE POST DELINEATOR SPACING IS 100 FEET.
- (219) MINIMUM LINE POST FOOTING REINFORCEMENT SHOWN. MANUFACTURER IS TO INDICATE REINFORCEMENT IS ADEQUATE FOR THEIR SYSTEM. IF REINFORCEMENT IS NOT ADEQUATE, PROVIDE FOOTING DESIGN WITH A ADEQUATE REINFORCEMENT.



CABLE BARRIER OFFSET FROM DITCH LINE

**CABLE BARRIER
TYPE 1 LAYOUT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
(A1)	3 OR 4	¾" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	AASHTO M30 TYPE 1 CLASS A OR ASTM A741 TYPE 1 CLASS A WITH MINIMUM BREAKING STRENGTH = 39 KIPS (173.5 KN)
(A2)	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
(A3)	1 PER LINE POST	GALVANIZED STEEL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
(A4)	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES. STANDARD SPECIFICATION 716 QMP FOR CLASS II ANCILLARY CONCRETE SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
(A5)	MINIMUM REINFORCEMENT: 8 HORIZONTAL LOOP BARS 8 VERTICAL BARS	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505. ALL BARS ARE NO. 4 BARS
(A6)	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS. MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE. TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATION AND DETAILS. PROVIDE DOCUMENTATION THAT THE FITTINGS ARE STRONGER THAN THE CABLE BARRIER. DOCUMENTATION IS TO INCLUDE: MANUFACTURER NAME, TESTING RESULTS, AND DATE OF TESTING.
(B1)	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
(B2)	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2. STANDARD SPECIFICATION 716 QMP FOR CLASS II ANCILLARY CONCRETE
(B3)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(C1)	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVED PRODUCT LIST YELLOW.
(C2)	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVED PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN

CABLE BARRIER
TYPE 1 LAYOUT

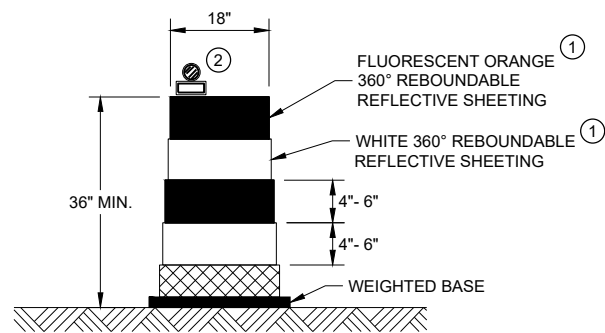
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

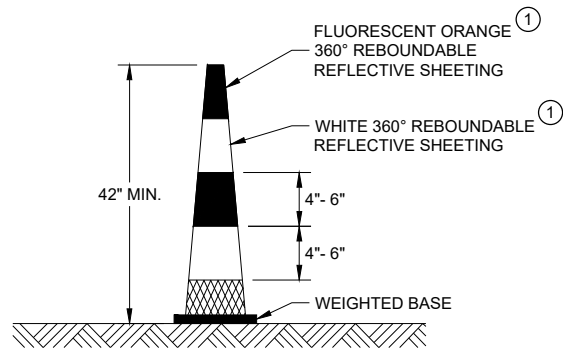
49

FHWA



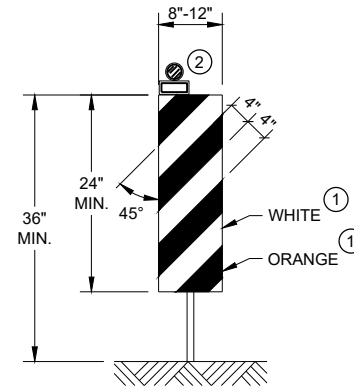
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



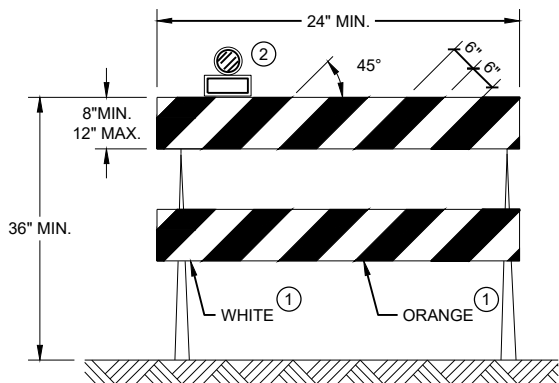
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



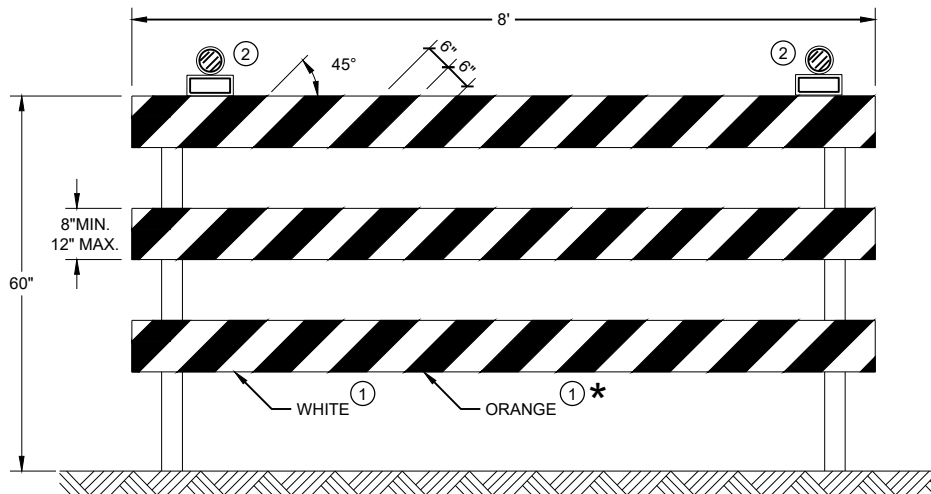
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 50
FHWA

LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

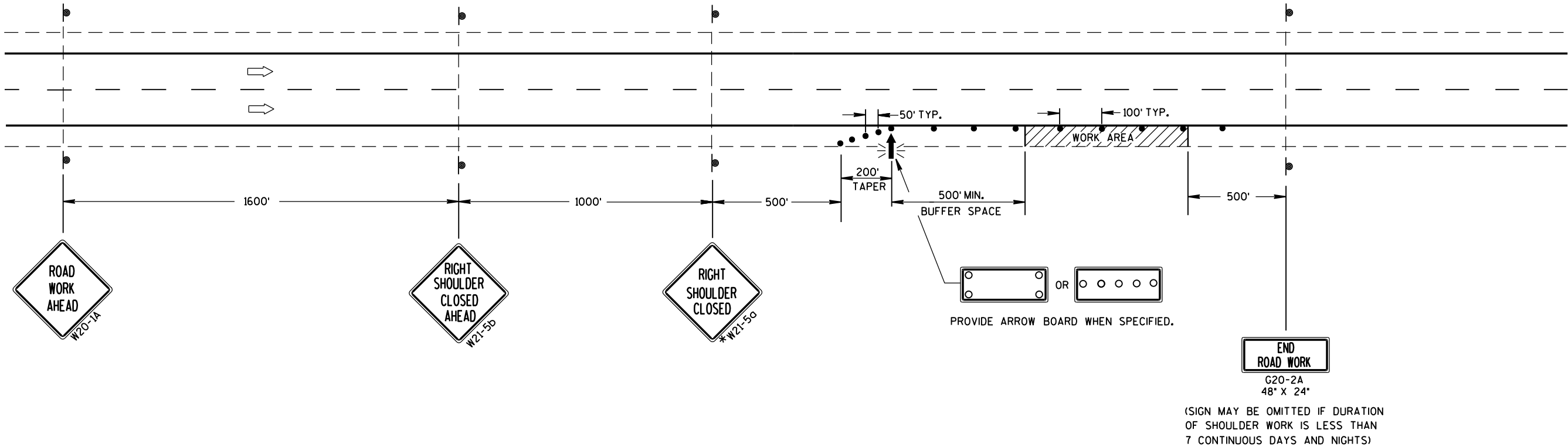
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

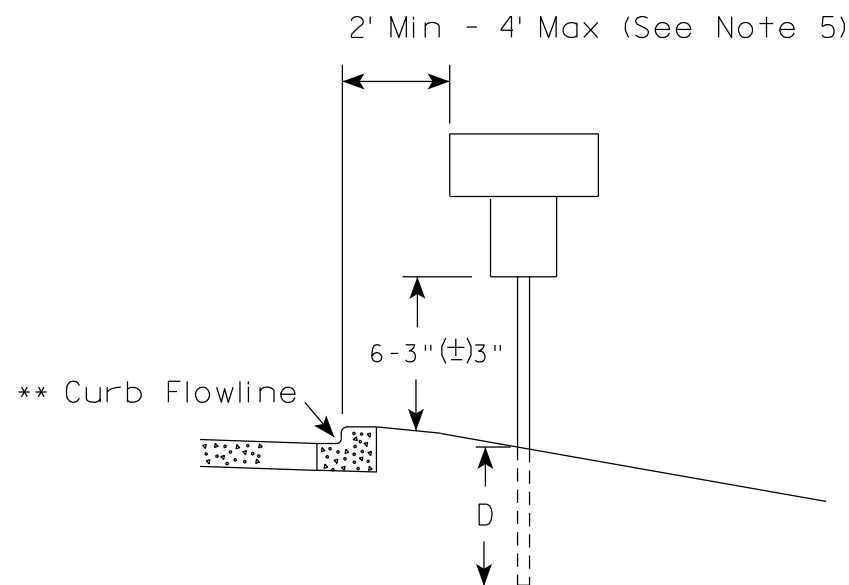
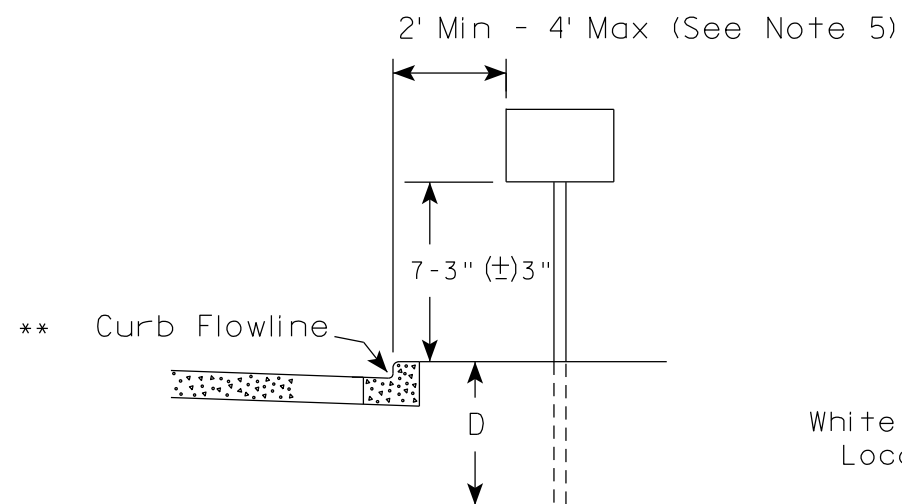
WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



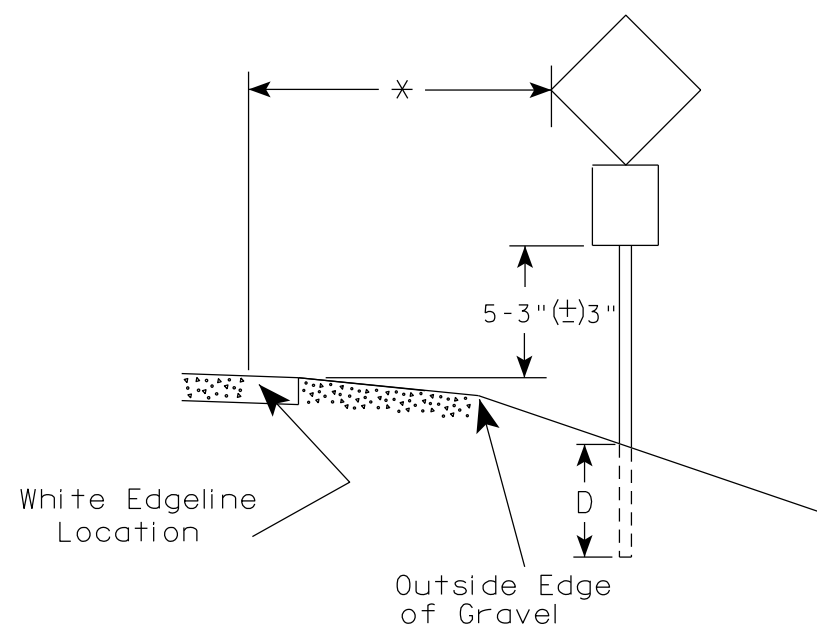
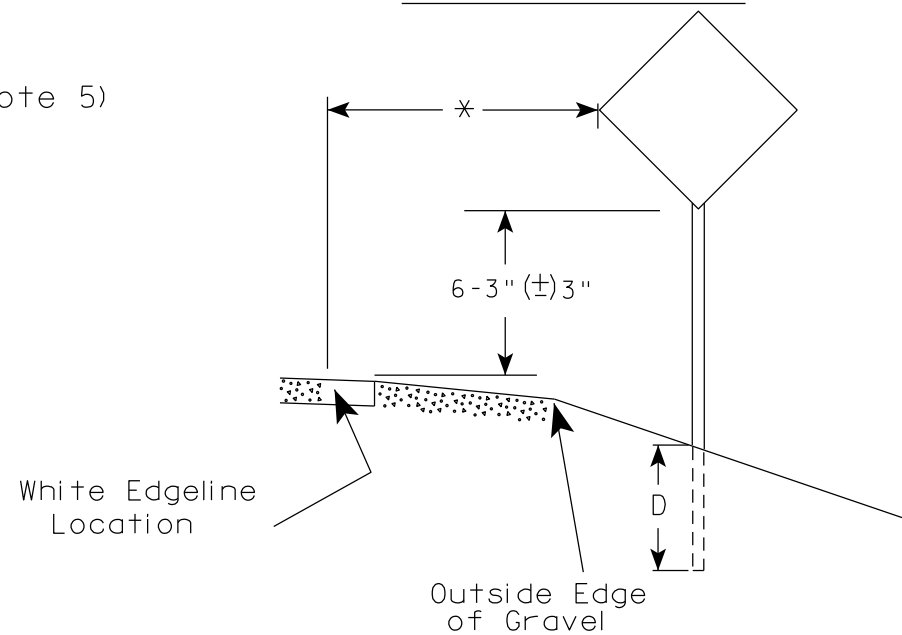
TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH		
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION		
APPROVED		
June 2016	/S/ Peter Amakobe Atepe	
DATE	STATEWIDE WORK ZONE	IC
FHWA	SAFETY ENGINEER	

URBAN AREA



* * 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.

RURAL AREA (See Note 2)



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

GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on or behind barrier wall, see A4-10 sign plate.
The Double Arrow sign (W12-1D) shall be mounted at a height of 2'-3" (±) 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".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the Engineer.

POST EMBEDMENT DEPTH

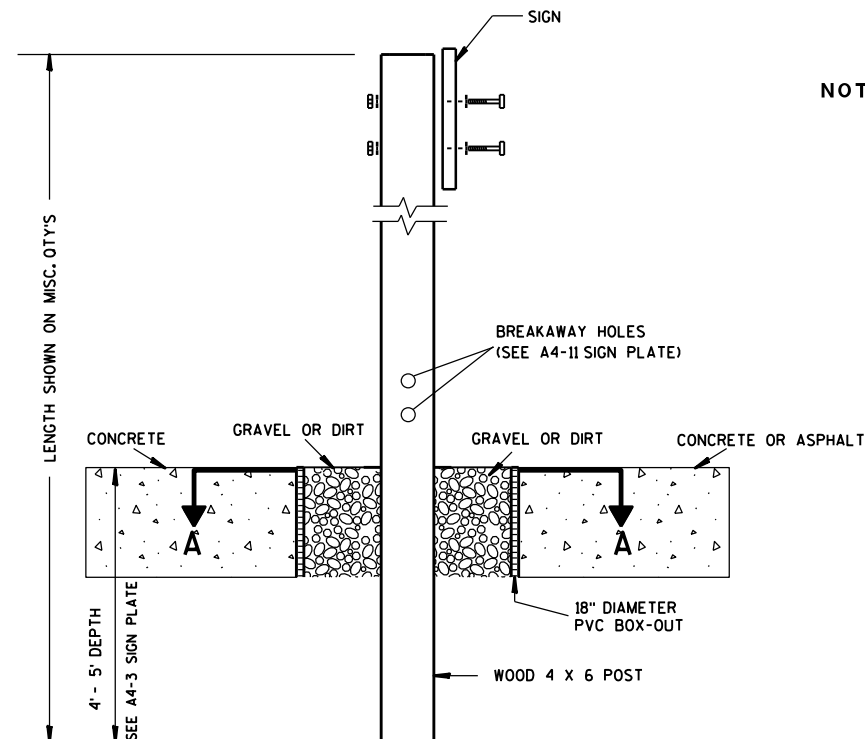
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

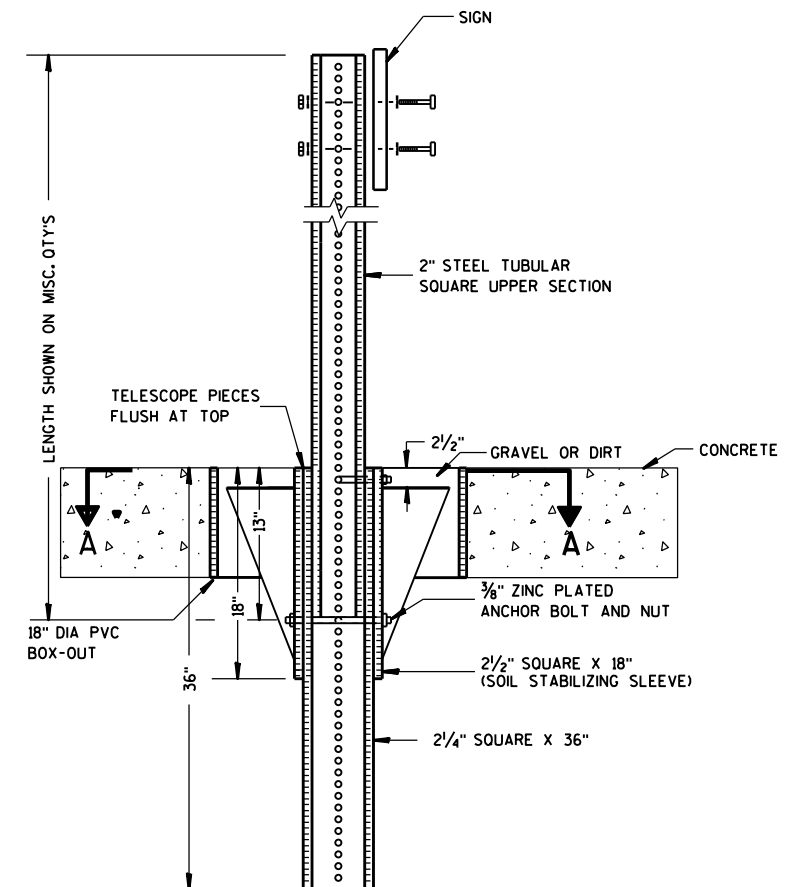
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

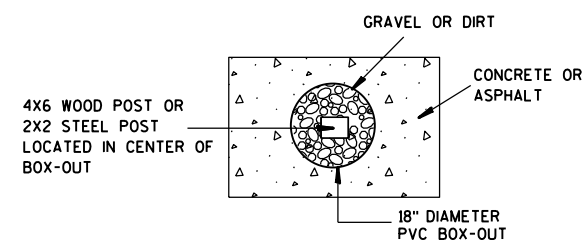
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

**SIGN POST
BOX-OUTS
A4-3B**

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 53 A4-3B.1

PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E

GENERAL NOTES

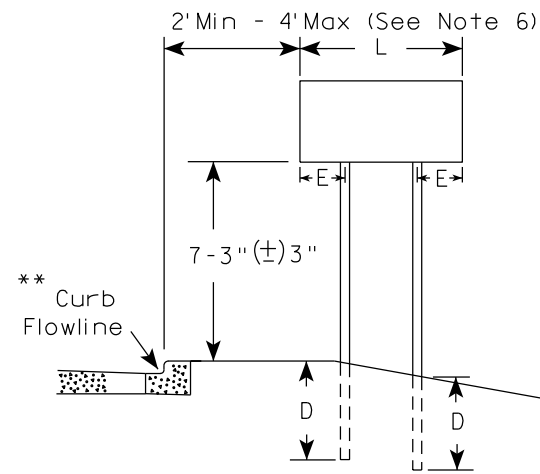
1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) 3" or 6'-3" (±) 3" depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 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" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 3".

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

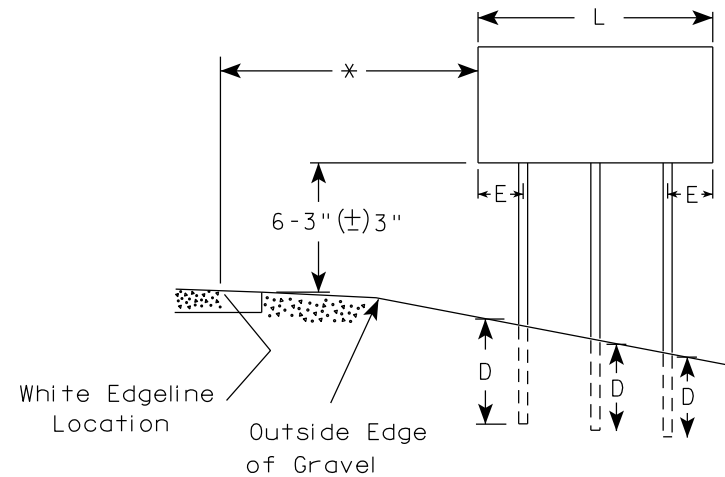
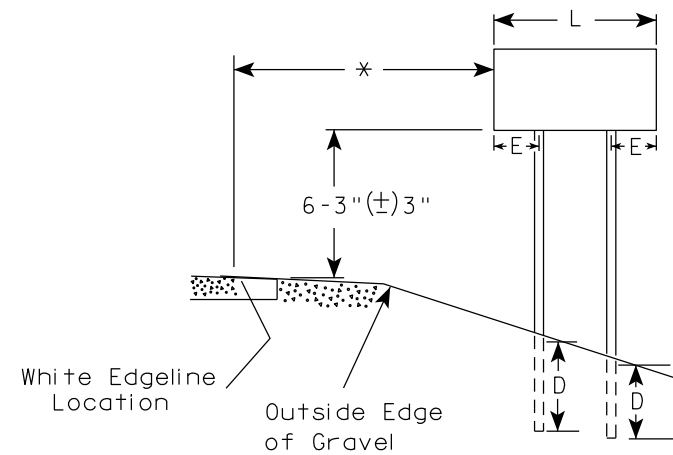
** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs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

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

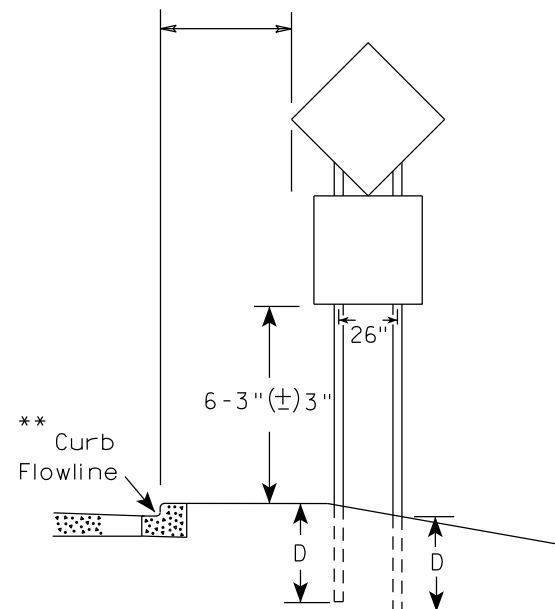
URBAN AREA



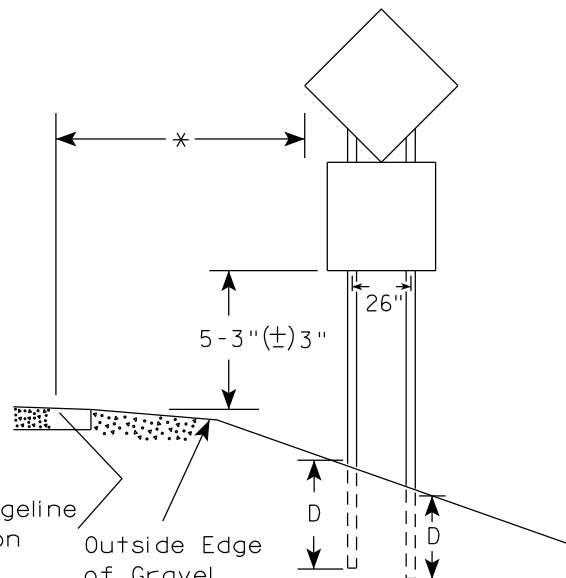
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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

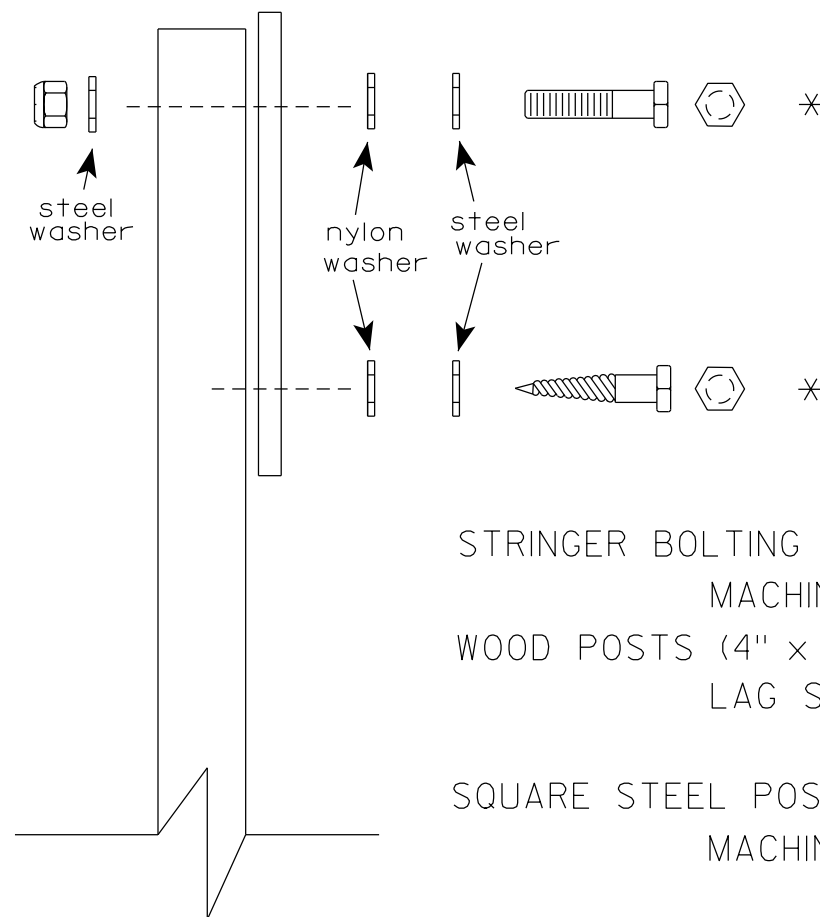
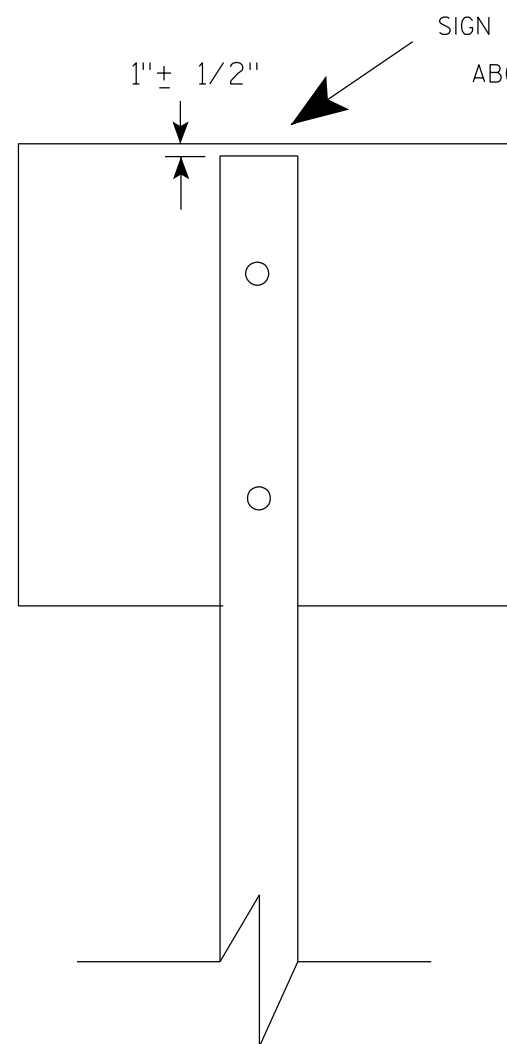
Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/6/23 PLATE NO. A4-4.16



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.

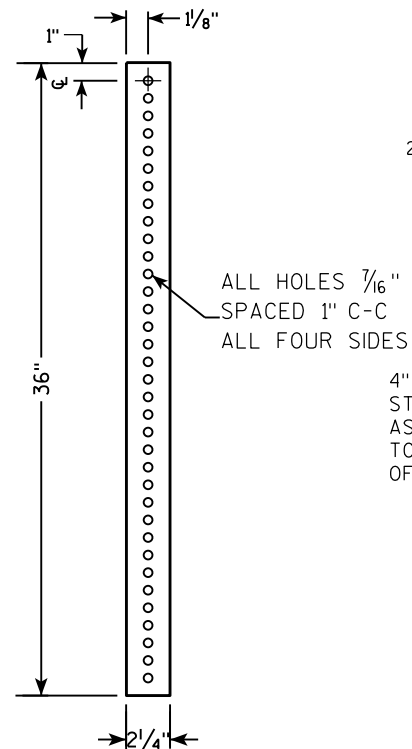
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

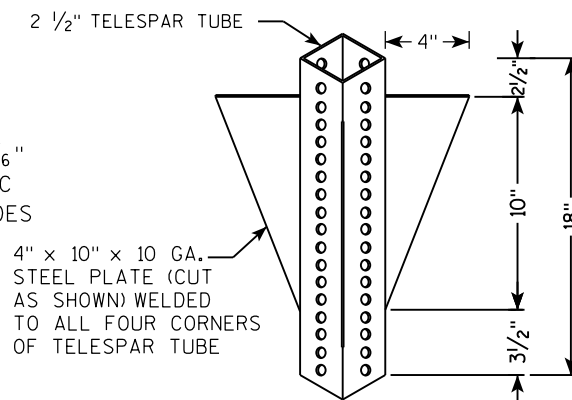
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

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

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



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



LENGTH SHOWN ON MISC. QTY'S
 18" DIA SCHEDULE 40 PVC BOX-OUT
 TELESCOPE PIECES FLUSH AT TOP
 36"
 18"
 13"
 2 1/2"
 2 1/4" SQUARE X 36"
 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)
 3/8" ZINC PLATED ANCHOR BOLT AND NUT
 2 1/2" GRAVEL OR DIRT
 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT
 ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES
 2" STEEL TUBULAR SQUARE UPPER SECTION
 SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL
 SIGN

LENGTH SHOWN ON MISC. QTY'S

TELESCOPE PIECES FLUSH AT TOP

2" STEEL TUBULAR SQUARE UPPER SECTION

ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES

$\frac{3}{8}$ " ZINC PLATED CORNER ANCHOR BOLT AND NUT

1"

$\frac{3}{8}$ " ZINC PLATED ANCHOR BOLT AND NUT

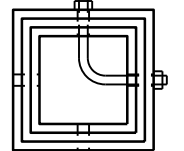
2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)

2 1/4" SQUARE X 36"

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

SIGN

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



DIRECTION
OF TRAFFIC

SECTION A-A

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch

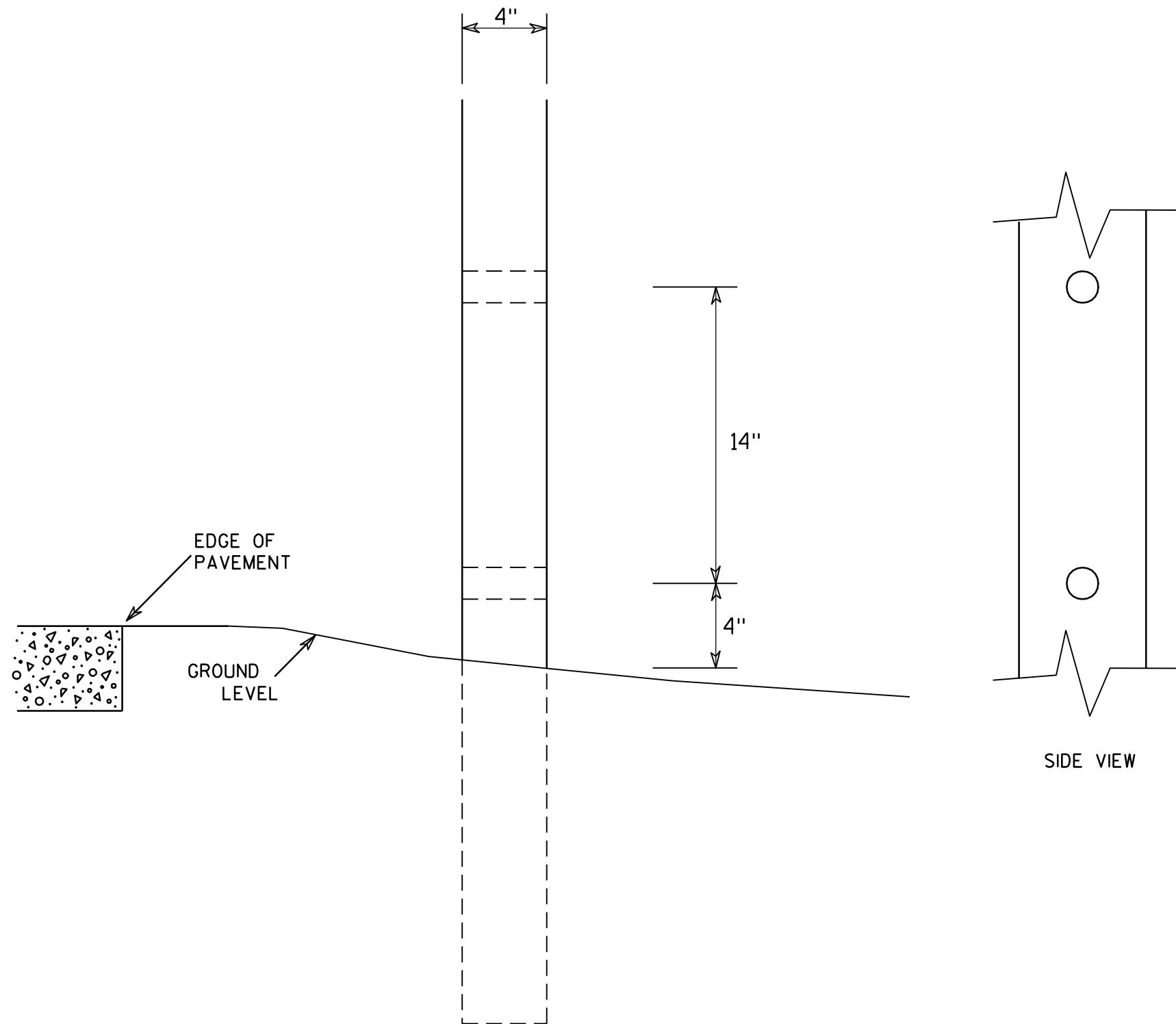
for State Traffic Engineer

DATE 2/05/15 PLATI 56 14-9.9

SHEET NO: E

PROJECT NO:	HWY:	COUNTY:	SHEET NO:
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7



GENERAL NOTES

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

7

4 X 6 WOOD POST
MODIFICATIONS

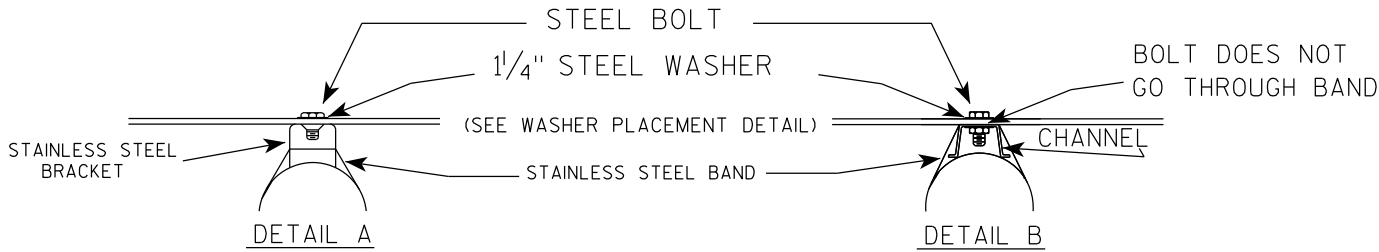
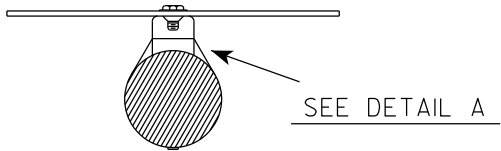
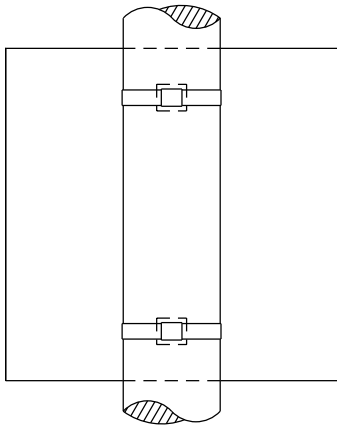
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Chester J. Spang*
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

BANDING

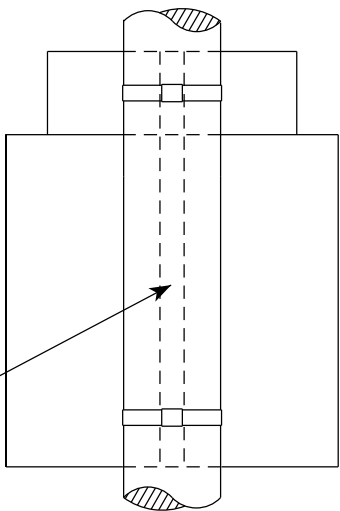
SINGLE SIGN



GENERAL NOTES

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

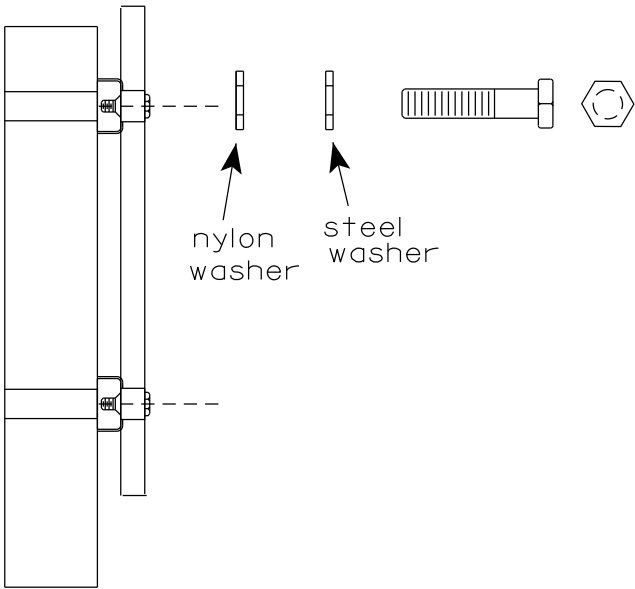
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET

SEE DETAIL B

WASHER PLACEMENT

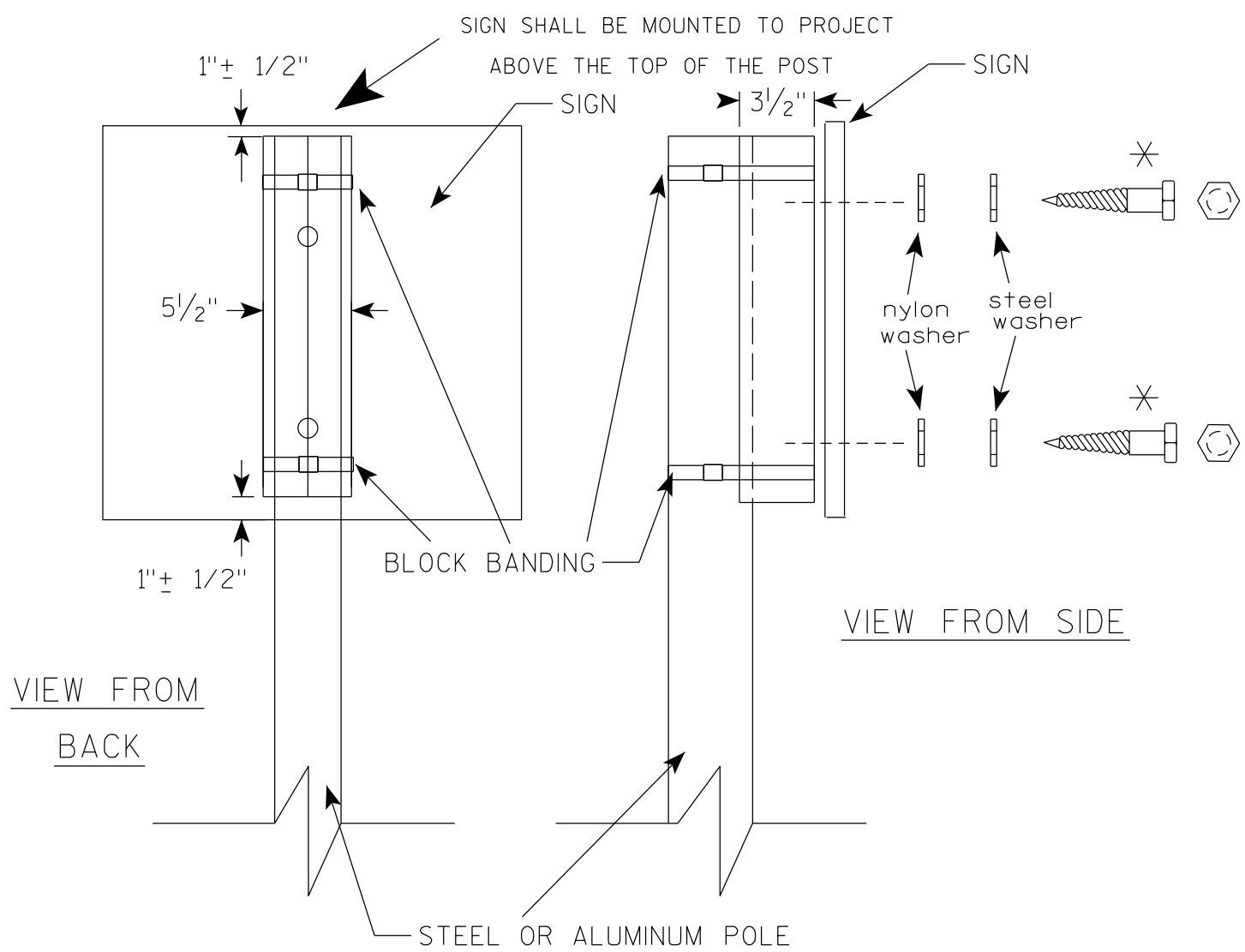


WASHERS (ALL POSTS) -
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X $\frac{1}{16}$ " STEEL
1-1/4" O.D. X $\frac{3}{8}$ " I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

STANDARD SIGN
SIGN BANDING DETAILS

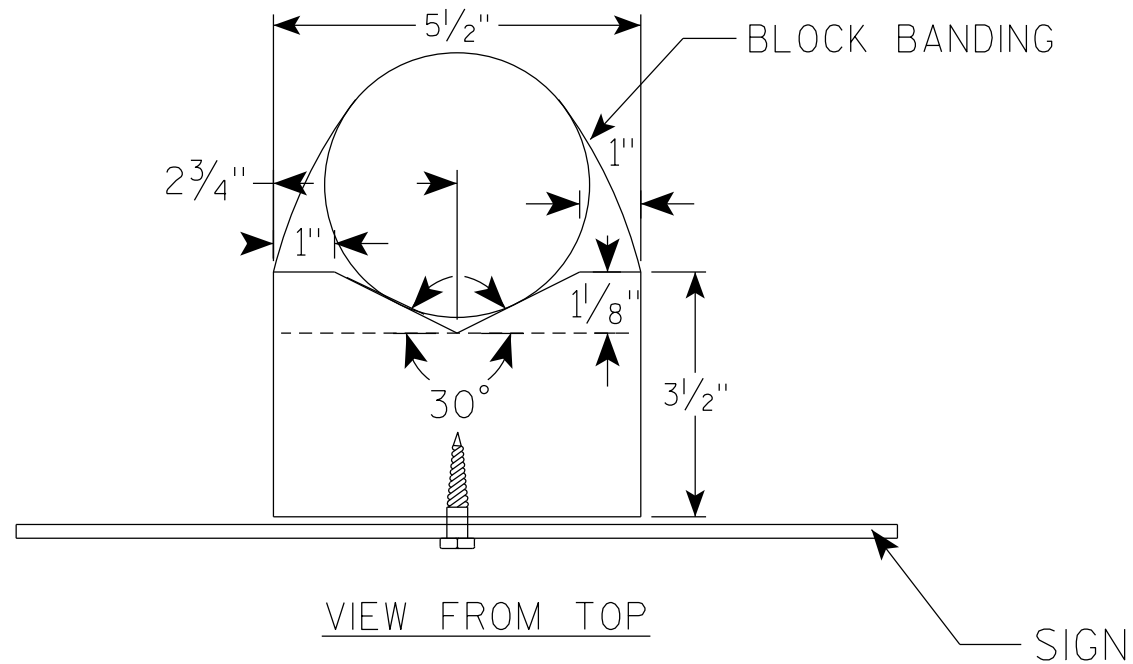
WISCONSIN DEPT OF TRANSPORTATION

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



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

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

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

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

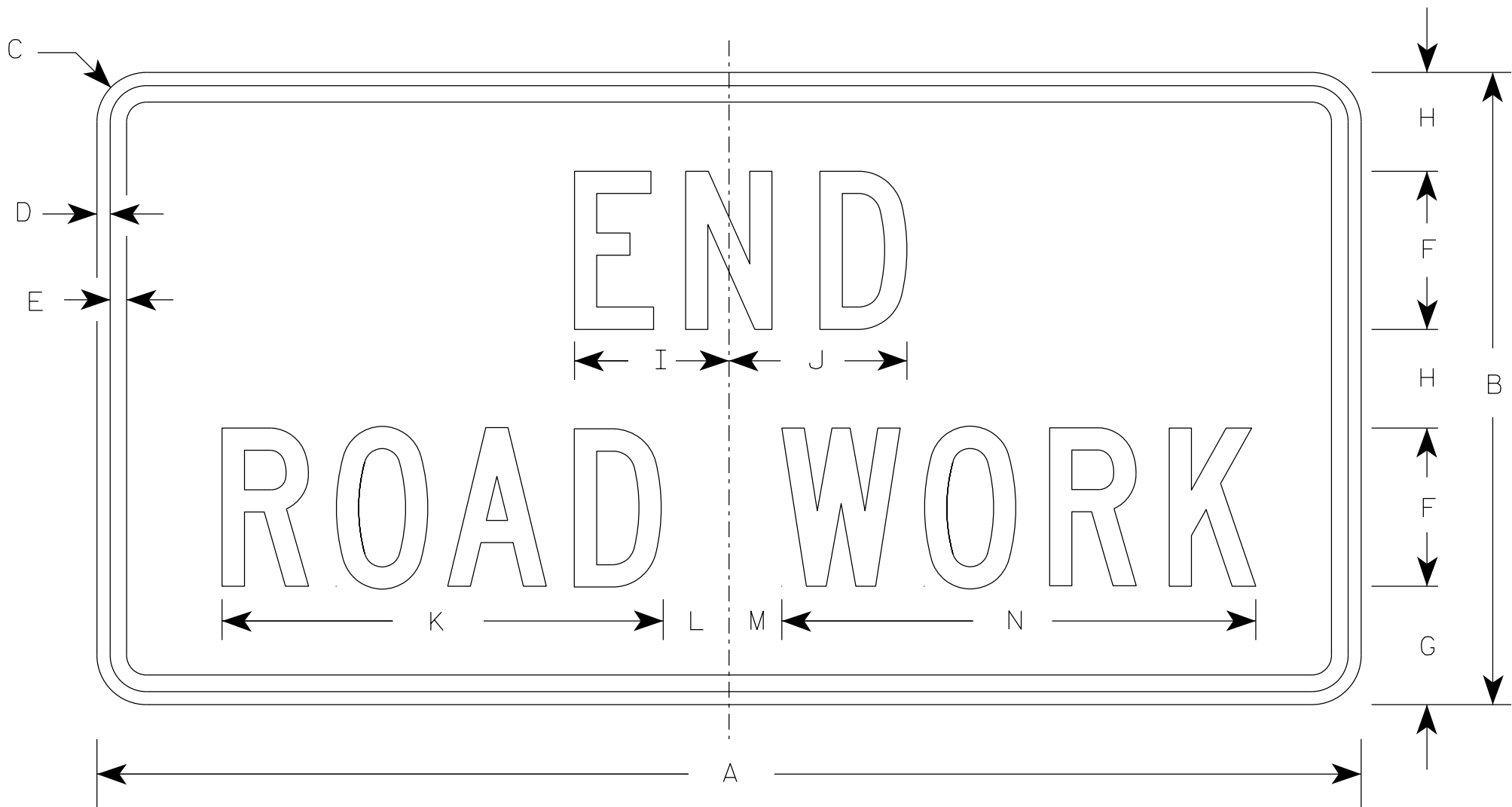
PROJECT NO:

SHEET NO: 59

E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



G20-2A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

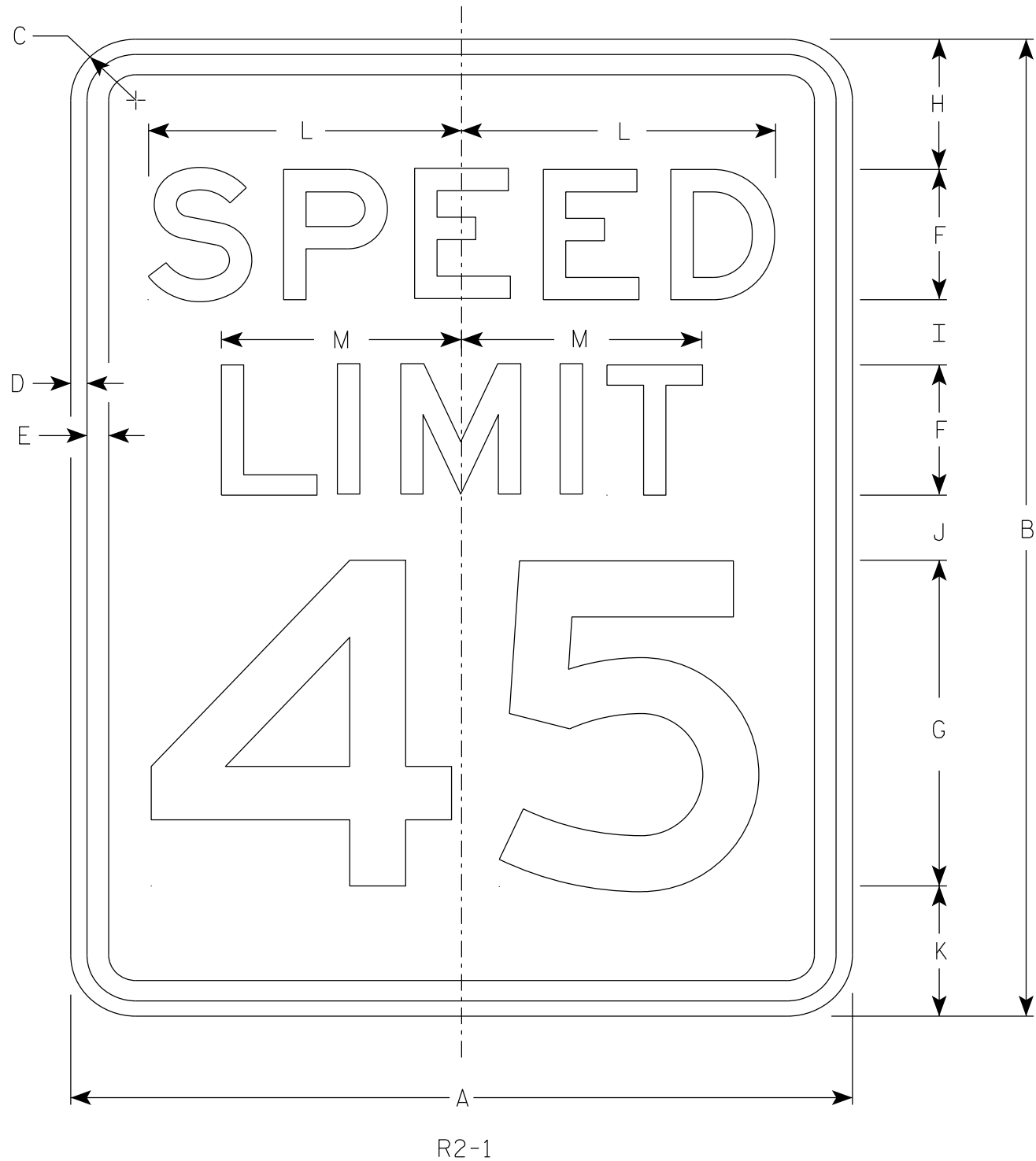
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

7



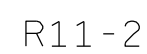
NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

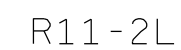
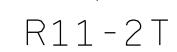
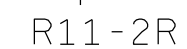
7

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

STANDARD SIGN R2 - 1	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R Rauch</i> for State Traffic Engineer
DATE <u>2/1/23</u>	PLATE NO. <u>R2-1.14</u>

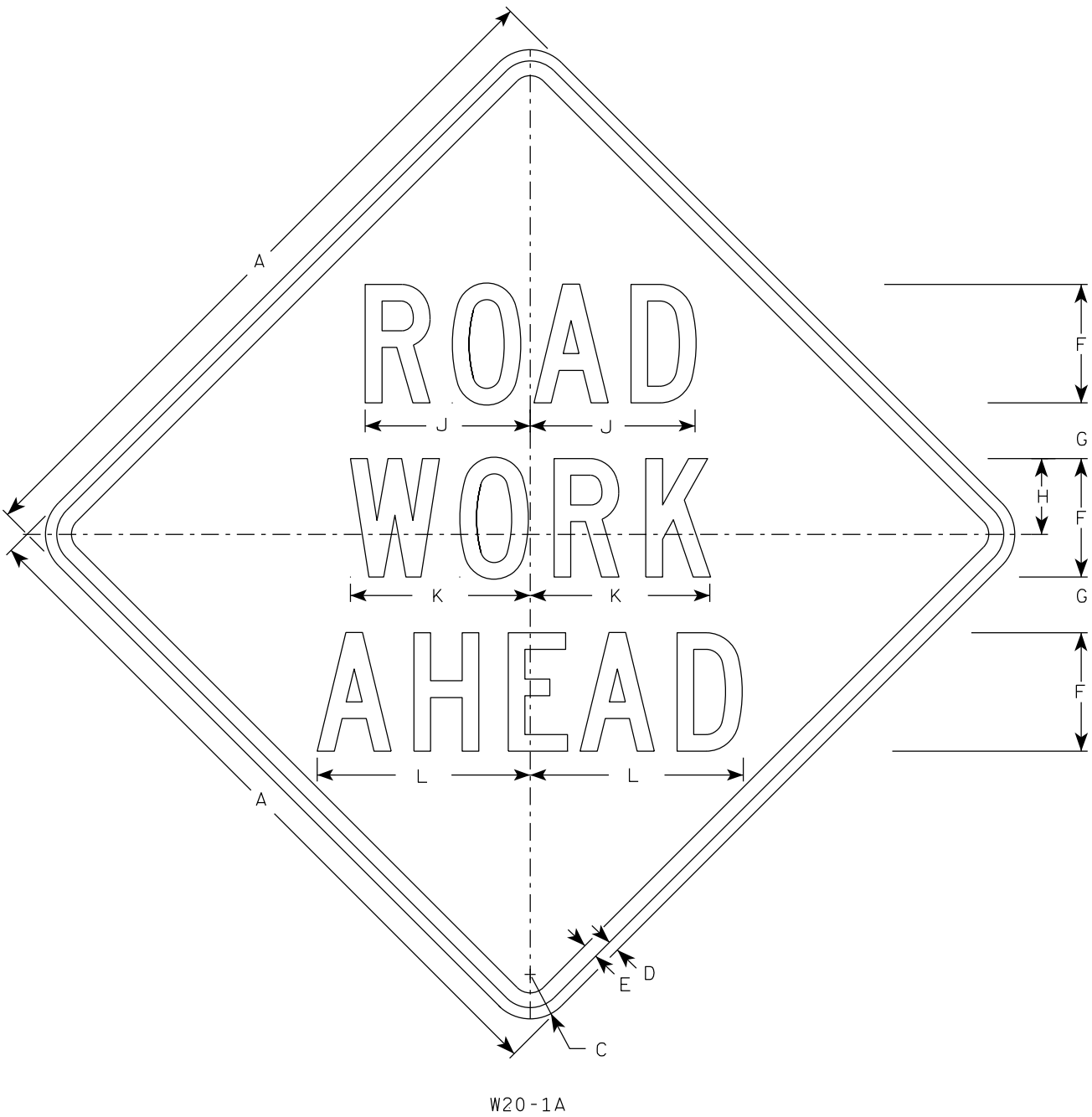


1. Sign is Type II - Type H Reflective
2. Color:
 - Background - White
 - Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.

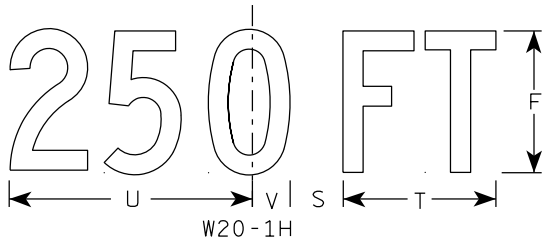


STANDARD SIGN	
R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew R Rauch</u> for State Traffic Engineer
DATE <u>2/5/24</u>	PLATE NO. <u>R11-2.12</u>

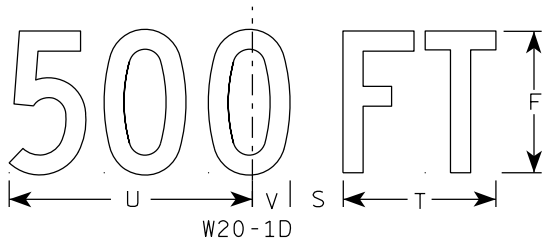
7



W20-1A



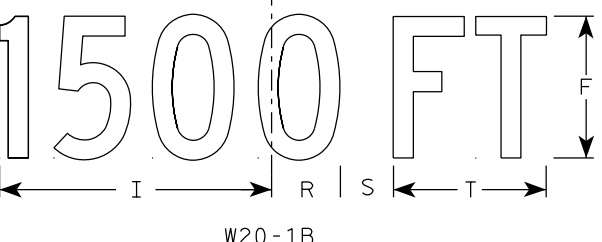
W20-1H



W20-1D

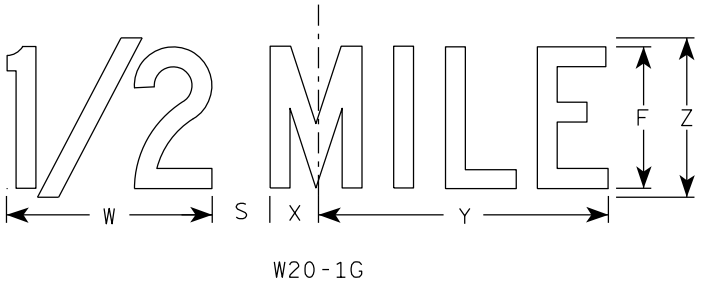


W20-1C

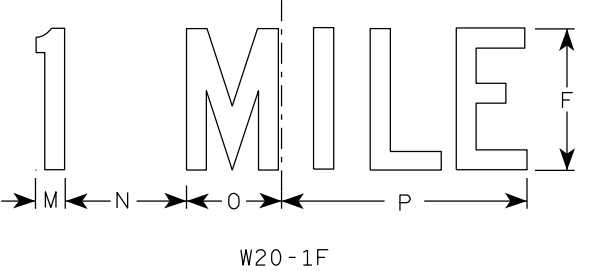


W20-1B

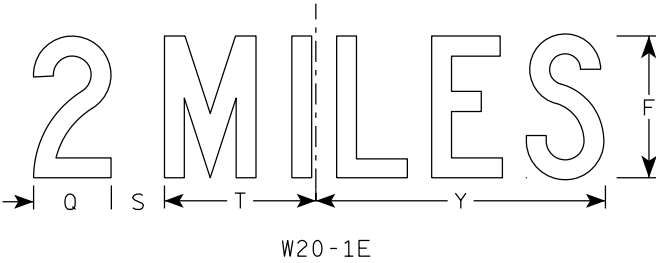
- NOTES
1. Sign is Type II - Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - C
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G



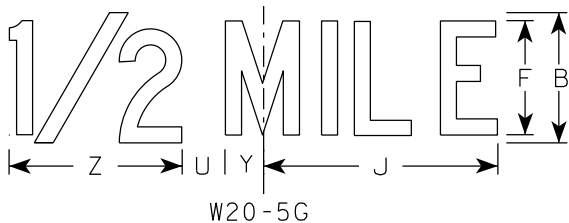
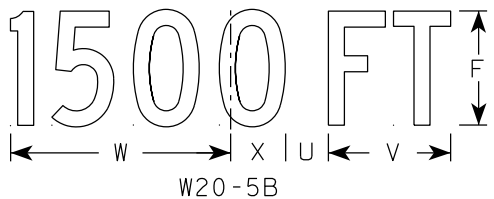
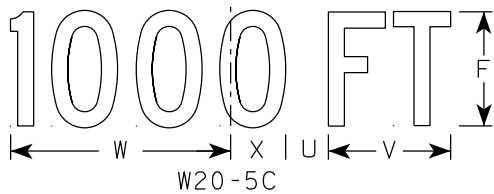
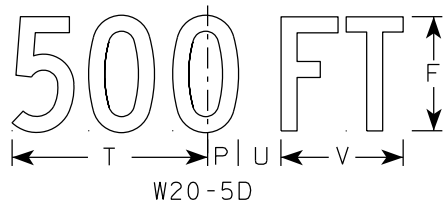
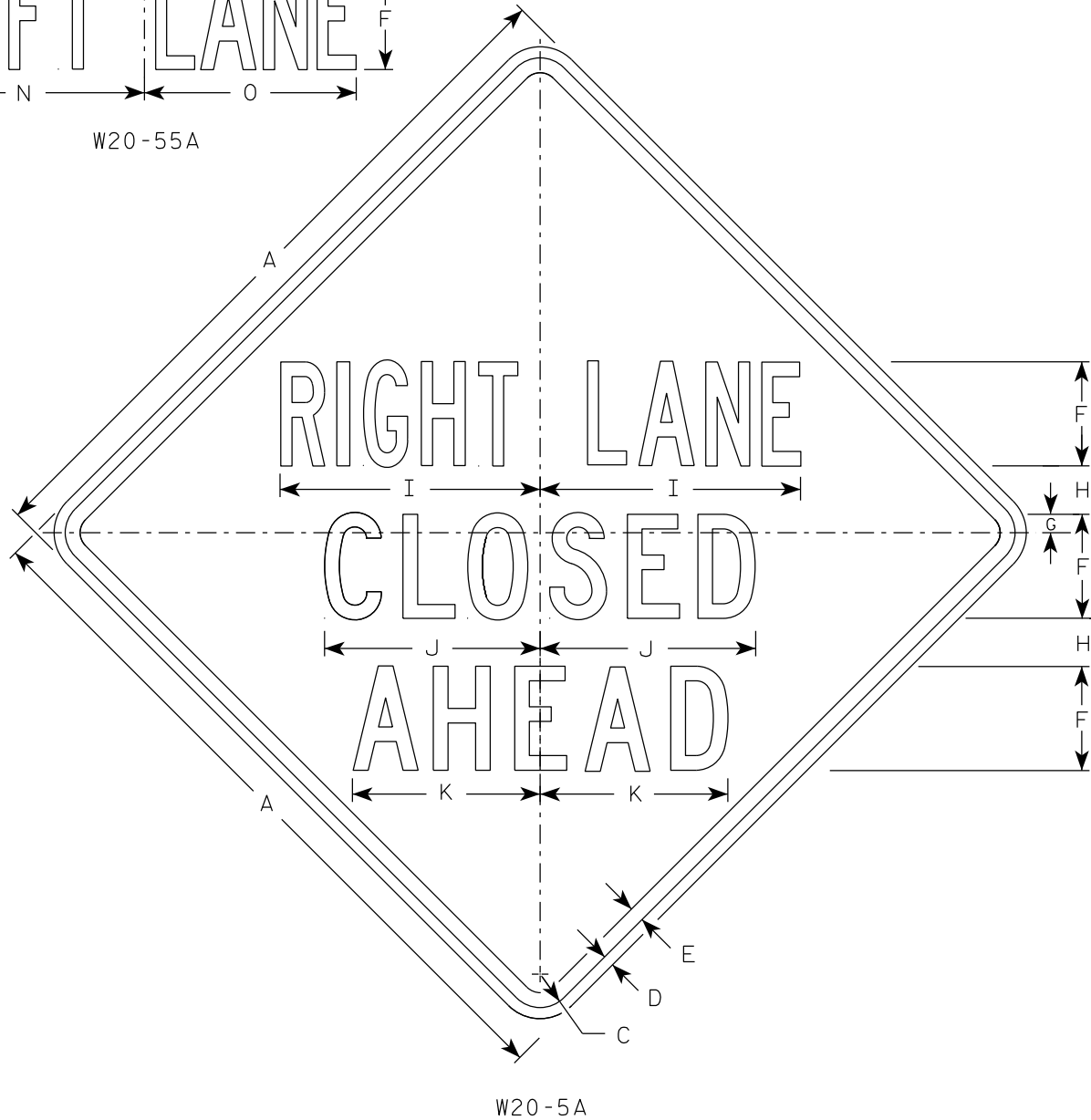
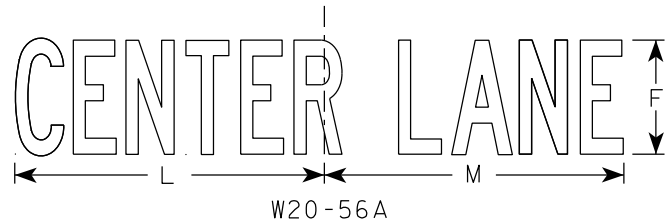
W20-1F



W20-1E

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Message Series - See Note 5
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 5. " _____ LANE" is Series B.
All other copy is Series C.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36	6	2 1/4	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN

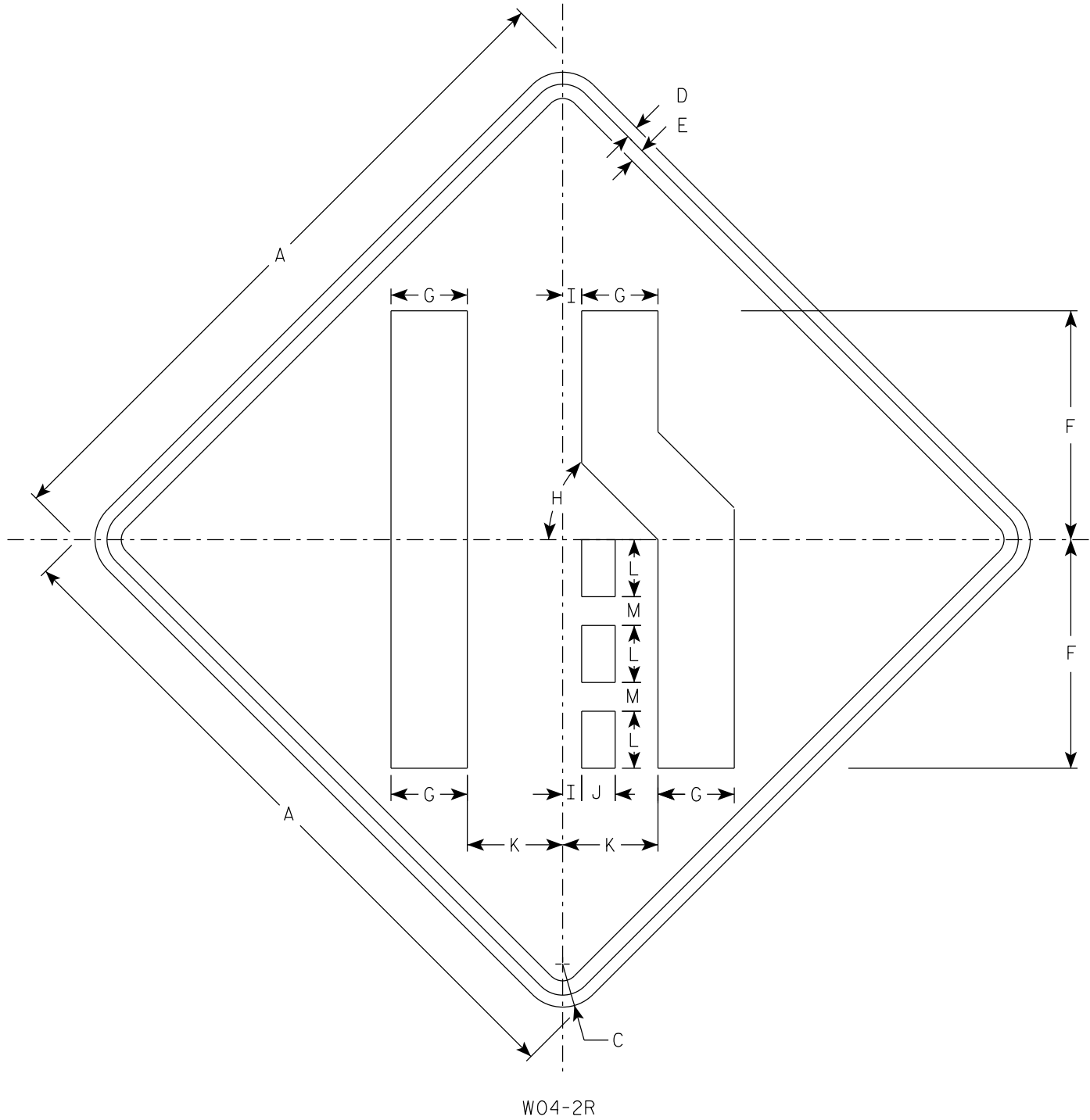
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 3/27/24 PLATE NO. W20-5.12

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

9

9

EARTHWORK ITEMS – SEGMENT 1

DIVISION 1 - 29EB-IN-ETW-SEGMENT1											
STATION	REAL 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
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
101+32.76	10132.76	0.00	0.00	0.00	0.00	0	0	0	0	0	0
102+00.00	10200.00	67.24	0.00	0.00	0.00	0	0	0	0	0	0
103+00.00	10300.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
104+00.00	10400.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
105+00.00	10500.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
106+00.00	10600.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
107+00.00	10700.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
108+00.00	10800.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
109+00.00	10900.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
109+52.10	10952.10	52.10	0.00	0.00	0.00	0	0	0	0	0	0
110+00.00	11000.00	47.90	0.00	0.00	0.00	0	0	0	0	0	0
111+00.00	11100.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
112+00.00	11200.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
112+24.00	11224.00	24.00	1.16	0.00	0.53	1	0	0	1	0	1
113+00.00	11300.00	76.00	0.16	0.00	4.21	2	0	7	3	9	-6
114+00.00	11400.00	100.00	0.53	0.00	4.95	1	0	17	4	30	-26
115+00.00	11500.00	100.00	0.60	0.00	1.00	2	0	11	6	44	-38
115+60.00	11560.00	60.00	0.43	0.00	1.17	1	0	2	7	46	-39
116+00.00	11600.00	40.00	2.84	0.00	0.43	2	0	1	9	48	-39
116+61.02	11661.02	61.02	1.24	0.00	0.56	5	0	1	14	49	-35
117+00.00	11700.00	38.98	2.64	0.00	0.16	3	0	1	17	50	-33
117+50.00	11750.00	50.00	3.47	0.00	0.34	6	0	0	23	50	-27
118+00.00	11800.00	50.00	3.90	0.00	0.17	7	0	0	30	50	-20
118+23.70	11823.70	23.70	3.50	0.00	0.34	3	0	0	33	50	-17
118+60.00	11860.00	36.30	1.60	0.00	0.31	3	0	0	36	50	-14
118+98.00	11898.00	38.00	0.16	0.00	0.02	1	0	0	37	50	-13
119+00.00	11900.00	2.00	0.00	0.00	0.00	0	0	0	37	50	-13
120+00.00	12000.00	100.00	0.00	0.00	0.00	0	0	0	37	50	-13
121+00.00	12100.00	100.00	0.00	0.00	0.00	0	0	0	37	50	-13
122+00.00	12200.00	100.00	0.00	0.00	0.00	0	0	0	37	50	-13
123+00.00	12300.00	100.00	0.00	0.00	0.00	0	0	0	37	50	-13
123+49.00	12349.00	49.00	1.49	0.00	0.00	1	0	0	38	50	-12
123+75.00	12375.00	26.00	1.74	0.00	0.29	2	0	0	40	50	-10
124+00.00	12400.00	25.00	2.82	0.00	0.01	2	0	0	42	50	-8
124+10.00	12410.00	10.00	1.80	0.00	0.03	1	0	0	43	50	-7
124+85.68	12485.68	75.68	0.00	0.00	0.00	3	0	0	46	50	-4
125+00.00	12500.00	14.32	0.00	0.00	0.00	0	0	0	46	50	-4
126+00.00	12600.00	100.00	0.00	0.00	0.00	0	0	0	46	50	-4
127+00.00	12700.00	100.00	0.00	0.00	0.00	0	0	0	46	50	-4
128+00.00	12800.00	100.00	0.00	0.00	0.00	0	0	0	46	50	-4
128+89.00	12889.00	89.00	3.46	0.00	0.01	6	0	0	52	50	2
128+91.50	12891.50	2.50	2.82	0.00	8.46	0	0	0	52	50	2
128+94.00	12894.00	2.50	3.79	0.00	0.00	0	0	0	52	50	2
129+00.00	12900.00	6.00	0.00	0.00	0.00	0	0	0	52	50	2
130+00.00	13000.00	100.00	0.00	0.00	0.00	0	0	0	52	50	2

PROJECT NO: 1050-00-80

HWY: STH 29

COUNTY: CHIPPEWA

EARTHWORK SUMMARY

SHEET NO: 66

E

FILE NAME : _____

PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

ORIGINATOR : DIST _

PLOT SCALE : 1:1

EARTHWORK ITEMS – SEGMENT 1

STATION	REAL 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 ORDNATE
						NOTE 1	NOTE 2	NOTE 3	NOTE 1	1.25	NOTE 8
131+00.00	13100.00	100.00	0.00	0.00	0.00	0	0	0	52	50	2
132+00.00	13200.00	100.00	0.00	0.00	0.00	0	0	0	52	50	2
133+00.00	13300.00	100.00	0.00	0.00	0.00	0	0	0	52	50	2
134+00.00	13400.00	100.00	0.00	0.00	0.00	0	0	0	52	50	2
135+00.00	13500.00	100.00	0.00	0.00	0.00	0	0	0	52	50	2
135+44.00	13544.00	44.00	0.31	0.00	0.03	0	0	0	52	50	2
135+70.00	13570.00	26.00	0.29	0.00	1.80	0	0	1	52	51	1
135+95.00	13595.00	25.00	1.66	0.00	0.17	1	0	1	53	53	1
136+00.00	13600.00	5.00	1.95	0.00	0.11	0	0	0	53	53	1
137+00.00	13700.00	100.00	0.00	0.00	0.00	4	0	0	57	53	5
138+00.00	13800.00	100.00	0.00	0.00	0.00	0	0	0	57	53	5
139+00.00	13900.00	100.00	0.00	0.00	0.00	0	0	0	57	53	5
140+00.00	14000.00	100.00	0.00	0.00	0.00	0	0	0	57	53	5
140+19.26	14019.26	19.26	0.00	0.00	0.00	0	0	0	57	53	5
140+60.33	14060.33	41.07	0.00	0.00	0.00	0	0	0	57	53	5
140+95.41	14095.41	35.08	5.73	0.00	0.00	4	0	0	61	53	9
141+00.00	14100.00	4.59	4.24	0.00	0.00	1	0	0	62	53	10
141+09.28	14109.28	9.28	9.64	0.00	0.02	2	0	0	64	53	12
142+00.00	14200.00	90.72	3.35	0.00	0.36	22	0	1	86	54	32
143+00.00	14300.00	100.00	8.07	0.00	0.65	21	0	2	107	56	51
144+00.00	14400.00	100.00	8.75	0.00	2.01	31	0	5	138	63	76
144+35.27	14435.27	35.27	5.01	0.00	0.05	9	0	1	147	64	83
144+69.28	14469.28	34.01	1.83	0.00	0.35	4	0	0	151	64	87
145+00.00	14500.00	30.72	2.34	0.00	0.18	2	0	0	153	64	89
145+20.00	14520.00	20.00	2.29	0.00	0.02	2	0	0	155	64	91
146+00.00	14600.00	80.00	0.00	0.00	0.00	3	0	0	158	64	94
147+00.00	14700.00	100.00	0.00	0.00	0.00	0	0	0	158	64	94
148+00.00	14800.00	100.00	0.00	0.00	0.00	0	0	0	158	64	94
149+00.00	14900.00	100.00	0.00	0.00	0.00	0	0	0	158	64	94
150+00.00	15000.00	100.00	0.00	0.00	0.00	0	0	0	158	64	94
151+00.00	15100.00	100.00	0.00	0.00	0.00	0	0	0	158	64	94
151+27.00	15127.00	27.00	4.92	0.00	0.00	2	0	0	160	64	96
151+60.00	15160.00	33.00	7.74	0.00	1.21	8	0	1	168	65	103
152+00.00	15200.00	40.00	6.28	0.00	0.85	10	0	2	178	68	111
153+00.00	15300.00	100.00	3.99	0.00	3.79	19	0	9	197	79	118
154+00.00	15400.00	100.00	7.96	0.00	1.49	22	0	10	219	91	128
154+83.89	15483.89	83.89	5.06	0.00	3.91	20	0	8	239	101	138
155+00.00	15500.00	16.11	5.35	0.00	2.01	3	0	2	242	104	138
155+55.00	15555.00	55.00	3.87	0.00	0.47	9	0	3	251	108	144
156+00.00	15600.00	45.00	1.15	0.00	2.50	4	0	2	255	110	145
156+43.00	15643.00	43.00	4.04	0.00	2.03	4	0	4	259	115	144
157+00.00	15700.00	57.00	4.73	0.00	4.18	9	0	7	268	124	144
158+00.00	15800.00	100.00	8.05	0.00	0.89	24	0	9	292	135	157
159+00.00	15900.00	100.00	4.03	0.00	1.50	22	0	4	314	140	174
160+00.00	16000.00	100.00	6.88	0.00	3.96	20	0	10	334	153	182

EARTHWORK ITEMS – SEGMENT 1

STATION	REAL 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
						NOTE 1	NOTE 2	NOTE 3	1.00	1.25	
									NOTE 1		
161+00.00	16100.00	100.00	6.46	0.00	1.87	25	0	11	359	166	193
161+47.54	16147.54	47.54	6.30	0.00	1.05	11	0	3	370	170	200
161+60.00	16160.00	12.46	7.26	0.00	2.71	3	0	1	373	171	202
162+00.00	16200.00	40.00	5.42	0.00	0.04	9	0	2	382	174	208
163+00.00	16300.00	100.00	4.39	0.00	0.01	18	0	0	400	174	226
164+00.00	16400.00	100.00	4.70	0.00	0.00	17	0	0	417	174	243
164+96.00	16496.00	96.00	6.12	0.00	0.01	19	0	0	436	174	262
165+00.00	16500.00	4.00	0.00	0.00	0.00	0	0	0	436	174	262
166+00.00	16600.00	100.00	0.00	0.00	0.00	0	0	0	436	174	262
166+63.32	16663.32	63.32	3.19	0.00	0.50	4	0	1	440	175	265
166+76.85	16676.85	13.53	3.93	0.00	0.67	2	0	0	442	175	267

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. [CUT - SALVAGED PAVT - ((FILL) * FILL FACTOR)]

PROJECT NO: 1050-00-80

HWY: STH 29

COUNTY: CHIPPEWA

EARTHWORK SUMMARY

SHEET NO: 68

E

FILE NAME : _____

PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

ORIGINATOR : DIST _

PLOT SCALE : 1:1

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EARTHWORK ITEMS – SEGMENT 2

DIVISION 2 - 29EB-IN-ETW-SEGMENT2											
STATION	REAL 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 8
202+19.15	20219.15	0.00	0.00	0.00	0.00	0	0	0	0	0	0
203+00.00	20300.00	80.85	0.00	0.00	0.00	0	0	0	0	0	0
204+00.00	20400.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
205+00.00	20500.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
206+00.00	20600.00	100.00	0.00	0.00	0.00	0	0	0	0	0	0
206+12.00	20612.00	12.00	2.08	0.00	0.00	0	0	0	0	0	0
207+00.00	20700.00	88.00	3.01	0.00	0.11	8	0	0	8	0	8
208+00.00	20800.00	100.00	2.19	0.00	1.15	10	0	2	18	3	16
209+00.00	20900.00	100.00	5.97	0.00	1.13	15	0	4	33	8	26
209+50.00	20950.00	50.00	2.80	0.00	0.00	8	0	1	41	9	32
209+71.26	20971.26	21.26	0.00	0.00	0.00	1	0	0	42	9	33
210+00.00	21000.00	28.74	0.00	0.00	0.00	0	0	0	42	9	33
211+00.00	21100.00	100.00	0.00	0.00	0.00	0	0	0	42	9	33
212+00.00	21200.00	100.00	0.00	0.00	0.00	0	0	0	42	9	33
213+00.00	21300.00	100.00	0.00	0.00	0.00	0	0	0	42	9	33
214+00.00	21400.00	100.00	0.00	0.00	0.00	0	0	0	42	9	33
215+00.00	21500.00	100.00	0.00	0.00	0.00	0	0	0	42	9	33
215+90.64	21590.64	90.64	0.00	0.00	0.00	0	0	0	42	9	33
216+00.00	21600.00	9.36	8.42	0.00	0.00	1	0	0	43	9	34
216+25.18	21625.18	25.18	3.95	0.00	0.00	6	0	0	49	9	40
217+00.00	21700.00	74.82	0.00	0.00	0.00	5	0	0	54	9	45
218+00.00	21800.00	100.00	0.00	0.00	0.00	0	0	0	54	9	45
219+00.00	21900.00	100.00	0.00	0.00	0.00	0	0	0	54	9	45
219+42.52	21942.52	42.52	0.00	0.00	0.00	0	0	0	54	9	45
220+00.00	22000.00	57.48	0.00	0.00	0.00	0	0	0	54	9	45
221+00.00	22100.00	100.00	0.00	0.00	0.00	0	0	0	54	9	45
222+00.00	22200.00	100.00	0.00	0.00	0.00	0	0	0	54	9	45
223+00.00	22300.00	100.00	0.00	0.00	0.00	0	0	0	54	9	45
224+00.00	22400.00	100.00	0.00	0.00	0.00	0	0	0	54	9	45
225+00.00	22500.00	100.00	0.00	0.00	0.00	0	0	0	54	9	45
225+50.00	22550.00	50.00	1.45	0.00	1.95	1	0	2	55	11	44
225+67.00	22567.00	17.00	0.67	0.00	9.61	1	0	4	56	16	40
225+90.00	22590.00	23.00	0.00	0.00	0.00	0	0	4	56	21	35
226+00.00	22600.00	10.00	0.00	0.00	0.00	0	0	0	56	21	35
227+00.00	22700.00	100.00	0.00	0.00	0.00	0	0	0	56	21	35
228+00.00	22800.00	100.00	0.00	0.00	0.00	0	0	0	56	21	35
229+00.00	22900.00	100.00	0.00	0.00	0.00	0	0	0	56	21	35
230+00.00	23000.00	100.00	0.00	0.00	0.00	0	0	0	56	21	35
231+00.00	23100.00	100.00	0.00	0.00	0.00	0	0	0	56	21	35
232+00.00	23200.00	100.00	0.00	0.00	0.00	0	0	0	56	21	35
233+00.00	23300.00	100.00	0.00	0.00	0.00	0	0	0	56	21	35
234+00.00	23400.00	100.00	4.16	0.00	0.00	8	0	0	64	21	43
234+24.00	23424.00	24.00	2.79	0.00	0.00	3	0	0	67	21	46
235+00.00	23500.00	76.00	0.00	0.00	0.00	4	0	0	71	21	50
236+00.00	23600.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50

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PROJECT NO: 1050-00-80

HWY: STH 29

COUNTY: CHIPPEWA

EARTHWORK SUMMARY

SHEET NO: 69

E

FILE NAME : _____

PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

ORIGINATOR : DIST _

PLOT SCALE : 1:1

EARTHWORK ITEMS – SEGMENT 2

STATION	REAL 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 8
237+00.00	23700.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
238+00.00	23800.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
239+00.00	23900.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
240+00.00	24000.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
241+00.00	24100.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
242+00.00	24200.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
243+00.00	24300.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
244+00.00	24400.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
245+00.00	24500.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
246+00.00	24600.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
247+00.00	24700.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
248+00.00	24800.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
249+00.00	24900.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
250+00.00	25000.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
251+00.00	25100.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
252+00.00	25200.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
253+00.00	25300.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
254+00.00	25400.00	100.00	0.00	0.00	0.00	0	0	0	71	21	50
255+00.00	25500.00	100.00	0.09	0.00	0.09	0	0	0	71	21	50
255+17.00	25517.00	17.00	0.58	0.00	1.82	0	0	1	71	23	49
255+30.00	25530.00	13.00	0.16	0.00	0.01	0	0	0	71	23	49
256+00.00	25600.00	70.00	0.00	0.00	0.00	0	0	0	71	23	49
257+00.00	25700.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
258+00.00	25800.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
259+00.00	25900.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
260+00.00	26000.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
261+00.00	26100.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
262+00.00	26200.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
263+00.00	26300.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
264+00.00	26400.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
265+00.00	26500.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
266+00.00	26600.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
267+00.00	26700.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
268+00.00	26800.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
269+00.00	26900.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
270+00.00	27000.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
271+00.00	27100.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
272+00.00	27200.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
273+00.00	27300.00	100.00	0.00	0.00	0.00	0	0	0	71	23	49
273+60.00	27360.00	60.00	0.21	0.00	1.88	0	0	2	71	25	46
273+63.50	27363.50	3.50	4.76	0.00	0.02	0	0	0	71	25	46
273+75.00	27375.00	11.50	2.50	0.00	0.00	2	0	0	73	25	48
273+82.00	27382.00	7.00	0.96	0.00	0.00	0	0	0	73	25	48
274+00.00	27400.00	18.00	0.00	0.00	0.00	0	0	0	73	25	48
275+00.00	27500.00	100.00	0.00	0.00	0.00	0	0	0	73	25	48

EARTHWORK ITEMS – SEGMENT 2

STATION	REAL 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
						NOTE 1	NOTE 2	NOTE 3	1.00 NOTE 1	1.25	NOTE 8
276+00.00	27600.00	100.00	0.00	0.00	0.00	0	0	0	73	25	48
277+00.00	27700.00	100.00	0.00	0.00	0.00	0	0	0	73	25	48
278+00.00	27800.00	100.00	0.00	0.00	0.00	0	0	0	73	25	48
279+00.00	27900.00	100.00	0.00	0.00	0.00	0	0	0	73	25	48
280+00.00	28000.00	100.00	0.00	0.00	0.00	0	0	0	73	25	48
280+14.00	28014.00	14.00	1.79	0.00	0.03	0	0	0	73	25	48
280+50.00	28050.00	36.00	1.14	0.00	0.03	2	0	0	75	25	50
281+00.00	28100.00	50.00	0.06	0.00	0.37	1	0	0	76	25	51
282+00.00	28200.00	100.00	0.00	0.00	0.00	0	0	1	76	26	50
283+00.00	28300.00	100.00	0.00	0.00	0.00	0	0	0	76	26	50
284+00.00	28400.00	100.00	0.00	0.00	0.00	0	0	0	76	26	50
285+00.00	28500.00	100.00	0.00	0.00	0.00	0	0	0	76	26	50
286+00.00	28600.00	100.00	0.00	0.00	0.00	0	0	0	76	26	50
287+00.00	28700.00	100.00	0.00	0.00	0.00	0	0	0	76	26	50
288+00.00	28800.00	100.00	0.00	0.00	0.00	0	0	0	76	26	50
289+00.00	28900.00	100.00	0.00	0.00	0.00	0	0	0	76	26	50
290+00.00	29000.00	100.00	0.00	0.00	0.00	0	0	0	76	26	50
291+00.00	29100.00	100.00	0.00	0.00	0.00	0	0	0	76	26	50
291+93.89	29193.89	93.89	0.00	0.00	0.00	0	0	0	76	26	50

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. [CUT - SALVAGED PAVT - ((FILL) * FILL FACTOR)]

PROJECT NO: 1050-00-80

HWY: STH 29

COUNTY: CHIPPEWA

EARTHWORK SUMMARY

SHEET NO: 71

E

FILE NAME : _____

PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

ORIGINATOR : DIST _

PLOT SCALE : 1:1

9

EARTHWORK ITEMS – SEGMENT 3

DIVISION 3 - 29EB-IN-ETW-SEGMENT3											
STATION	REAL 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
						NOTE 1		NOTE 3	1.00 NOTE 1	1.25	
309+03.00	30903.00	0.00	6.49	0.00	0.01	0	0	0	0	0	0
310+00.00	31000.00	97.00	5.83	0.00	0.00	22	0	0	22	0	22
311+00.00	31100.00	100.00	3.56	0.00	1.06	17	0	2	39	3	37
312+00.00	31200.00	100.00	3.80	0.00	0.00	14	0	2	53	5	48
313+00.00	31300.00	100.00	5.70	0.00	0.00	18	0	0	71	5	66
314+00.00	31400.00	100.00	3.88	0.00	0.03	18	0	0	89	5	84
315+00.00	31500.00	100.00	4.13	0.00	0.00	15	0	0	104	5	99
316+00.00	31600.00	100.00	4.07	0.00	0.00	15	0	0	119	5	114
316+41.75	31641.75	41.75	4.47	0.00	0.00	7	0	0	126	5	121
317+00.00	31700.00	58.25	6.06	0.00	0.00	11	0	0	137	5	132
318+00.00	31800.00	100.00	5.33	0.00	0.00	21	0	0	158	5	153
319+00.00	31900.00	100.00	8.53	0.00	0.00	26	0	0	184	5	179
320+00.00	32000.00	100.00	11.46	0.00	0.01	37	0	0	221	5	216
320+08.00	32008.00	8.00	13.47	0.00	0.01	4	0	0	225	5	220
320+70.00	32070.00	62.00	6.52	0.00	0.33	23	0	0	248	5	243
321+00.00	32100.00	30.00	13.49	0.00	0.00	11	0	0	259	5	254
321+50.00	32150.00	50.00	11.03	0.00	0.00	23	0	0	282	5	277
322+00.00	32200.00	50.00	5.41	0.00	0.00	15	0	0	297	5	292
322+85.00	32285.00	85.00	5.85	0.00	0.54	18	0	1	315	6	309
323+00.00	32300.00	15.00	9.15	0.00	0.00	4	0	0	319	6	313
323+50.00	32350.00	50.00	8.35	0.00	0.00	16	0	0	335	6	329
324+00.00	32400.00	50.00	8.29	0.00	0.06	15	0	0	350	6	344
325+00.00	32500.00	100.00	9.22	0.00	0.01	32	0	0	382	6	376
325+50.00	32550.00	50.00	8.73	0.00	0.05	17	0	0	399	6	393
326+00.00	32600.00	50.00	1.13	0.00	0.00	9	0	0	408	6	402
326+82.00	32682.00	82.00	4.07	0.00	0.00	8	0	0	416	6	410
327+00.00	32700.00	18.00	3.51	0.00	4.48	3	0	1	419	8	412
327+61.00	32761.00	61.00	5.61	0.00	0.01	10	0	5	429	14	415
328+00.00	32800.00	39.00	4.55	0.00	0.00	7	0	0	436	14	422
328+50.00	32850.00	50.00	3.96	0.00	0.08	8	0	0	444	14	430
329+00.00	32900.00	50.00	0.00	0.00	0.00	4	0	0	448	14	434
330+00.00	33000.00	100.00	0.00	0.00	0.00	0	0	0	448	14	434
331+00.00	33100.00	100.00	0.00	0.00	0.00	0	0	0	448	14	434
332+00.00	33200.00	100.00	0.00	0.00	0.00	0	0	0	448	14	434
333+00.00	33300.00	100.00	0.00	0.00	0.00	0	0	0	448	14	434
334+00.00	33400.00	100.00	0.00	0.00	0.00	0	0	0	448	14	434
334+28.00	33428.00	28.00	6.31	0.00	0.00	3	0	0	451	14	437
335+00.00	33500.00	72.00	6.61	0.00	0.00	17	0	0	468	14	454
335+50.00	33550.00	50.00	6.99	0.00	0.00	13	0	0	481	14	467
336+00.00	33600.00	50.00	6.52	0.00	0.00	13	0	0	494	14	480
337+00.00	33700.00	100.00	0.00	0.00	0.00	12	0	0	506	14	492
338+00.00	33800.00	100.00	0.00	0.00	0.00	0	0	0	506	14	492
339+00.00	33900.00	100.00	0.00	0.00	0.00	0	0	0	506	14	492
340+00.00	34000.00	100.00	0.00	0.00	0.00	0	0	0	506	14	492
341+00.00	34100.00	100.00	0.00	0.00	0.00	0	0	0	506	14	492

9

PROJECT NO: 1050-00-80

HWY: STH 29

COUNTY: CHIPPEWA

EARTHWORK SUMMARY

SHEET NO: 72

E

FILE NAME : _____

PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

ORIGINATOR : DIST _

PLOT SCALE : 1:1

EARTHWORK ITEMS – SEGMENT 3

STATION	REAL 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
						NOTE 1	NOTE 2	NOTE 3	NOTE 1	1.25	NOTE 8
342+00.00	34200.00	100.00	0.00	0.00	0.00	0	0	0	506	14	492
343+00.00	34300.00	100.00	0.00	0.00	0.00	0	0	0	506	14	492
344+00.00	34400.00	100.00	6.59	0.00	0.07	12	0	0	518	14	504
345+00.00	34500.00	100.00	2.19	0.00	0.01	16	0	0	534	14	520
346+00.00	34600.00	100.00	3.96	0.00	0.13	11	0	0	545	14	531
347+00.00	34700.00	100.00	4.43	0.00	0.81	16	0	2	561	16	545
347+50.00	34750.00	50.00	4.83	0.00	0.10	9	0	1	570	18	553
348+00.00	34800.00	50.00	3.07	0.00	0.07	7	0	0	577	18	560
348+50.00	34850.00	50.00	3.90	0.00	0.02	6	0	0	583	18	566
349+00.00	34900.00	50.00	5.47	0.00	0.02	9	0	0	592	18	575
350+00.00	35000.00	100.00	2.20	0.00	0.05	14	0	0	606	18	589
351+00.00	35100.00	100.00	2.31	0.00	0.22	8	0	1	614	19	595
352+00.00	35200.00	100.00	3.18	0.00	1.06	10	0	2	624	21	603
353+00.00	35300.00	100.00	3.25	0.00	2.08	12	0	6	636	29	607
354+00.00	35400.00	100.00	4.21	0.00	5.72	14	0	14	650	46	604
355+00.00	35500.00	100.00	1.59	0.00	6.53	11	0	23	661	75	586
356+00.00	35600.00	100.00	1.12	0.00	5.98	5	0	23	666	104	562
357+00.00	35700.00	100.00	0.73	0.00	5.42	3	0	21	669	130	539
358+00.00	35800.00	100.00	2.76	0.00	4.60	6	0	19	675	154	521
359+00.00	35900.00	100.00	3.88	0.00	3.53	12	0	15	687	173	515
360+00.00	36000.00	100.00	3.21	0.00	0.94	13	0	8	700	183	518
361+00.00	36100.00	100.00	7.39	0.00	0.10	20	0	2	720	185	535
362+00.00	36200.00	100.00	3.43	0.00	2.46	20	0	5	740	191	549
362+50.00	36250.00	50.00	10.45	0.00	2.19	13	0	4	753	196	557
363+00.00	36300.00	50.00	5.66	0.00	1.23	15	0	3	768	200	568
364+00.00	36400.00	100.00	4.74	0.00	3.12	19	0	8	787	210	577
365+00.00	36500.00	100.00	3.19	0.00	5.93	15	0	17	802	231	571
365+50.00	36550.00	50.00	3.27	0.00	7.14	6	0	12	808	246	562
366+00.00	36600.00	50.00	5.34	0.00	0.00	8	0	7	816	255	561
367+00.00	36700.00	100.00	7.88	0.00	1.21	24	0	2	840	258	583
368+00.00	36800.00	100.00	7.72	0.00	0.55	29	0	3	869	261	608
369+00.00	36900.00	100.00	4.82	0.00	0.05	23	0	1	892	263	630
370+00.00	37000.00	100.00	7.05	0.00	0.00	22	0	0	914	263	652
371+00.00	37100.00	100.00	4.14	0.00	0.07	21	0	0	935	263	673
371+50.00	37150.00	50.00	0.00	0.00	0.00	4	0	0	939	263	677
372+00.00	37200.00	50.00	0.00	0.00	0.00	0	0	0	939	263	677
373+00.00	37300.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
374+00.00	37400.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
375+00.00	37500.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
376+00.00	37600.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
377+00.00	37700.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
378+00.00	37800.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
379+00.00	37900.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
380+00.00	38000.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
381+00.00	38100.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677

EARTHWORK ITEMS – SEGMENT 3

STATION	REAL 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		1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
382+00.00	38200.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
383+00.00	38300.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
384+00.00	38400.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
385+00.00	38500.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
386+00.00	38600.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
387+00.00	38700.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
388+00.00	38800.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
389+00.00	38900.00	100.00	0.00	0.00	0.00	0	0	0	939	263	677
389+20.00	38920.00	20.00	1.89	0.00	0.00	1	0	0	940	263	678
390+00.00	39000.00	80.00	2.91	0.00	0.00	7	0	0	947	263	685
391+00.00	39100.00	100.00	3.10	0.00	0.01	11	0	0	958	263	696
392+00.00	39200.00	100.00	2.97	0.00	0.33	11	0	1	969	264	705
392+50.00	39250.00	50.00	3.48	0.00	0.45	6	0	1	975	265	710
393+00.00	39300.00	50.00	0.93	0.00	0.01	4	0	0	979	265	714
394+00.00	39400.00	100.00	4.65	0.00	0.24	10	0	0	989	265	724
395+00.00	39500.00	100.00	3.97	0.00	0.00	16	0	0	1,005	265	740
396+00.00	39600.00	100.00	5.40	0.00	0.01	17	0	0	1,022	265	757
397+00.00	39700.00	100.00	6.38	0.00	0.01	22	0	0	1,044	265	779
398+00.00	39800.00	100.00	9.08	0.00	0.00	29	0	0	1,073	265	808
398+19.16	39819.16	19.16	6.61	0.00	0.69	6	0	0	1,079	265	814
399+00.00	39900.00	80.84	9.04	0.00	0.25	23	0	1	1,102	266	836
400+00.00	40000.00	100.00	12.01	0.00	1.10	39	0	2	1,141	269	872
400+68.58	40068.58	68.58	12.58	0.00	1.96	31	0	4	1,172	274	898
401+00.00	40100.00	31.42	13.89	0.00	4.74	15	0	4	1,187	279	908
401+49.25	40149.25	49.25	6.25	0.00	0.03	18	0	4	1,205	284	921
401+50.00	40150.00	0.75	6.67	0.00	0.01	0	0	0	1,205	284	921
401+55.38	40155.38	5.38	0.00	0.00	0.00	1	0	0	1,206	284	922

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. [CUT - SALVAGED PAVT - ((FILL) * FILL FACTOR)]

PROJECT NO: 1050-00-80

HWY: STH 29

COUNTY: CHIPPEWA

EARTHWORK SUMMARY

SHEET NO: 74

E

FILE NAME : _____

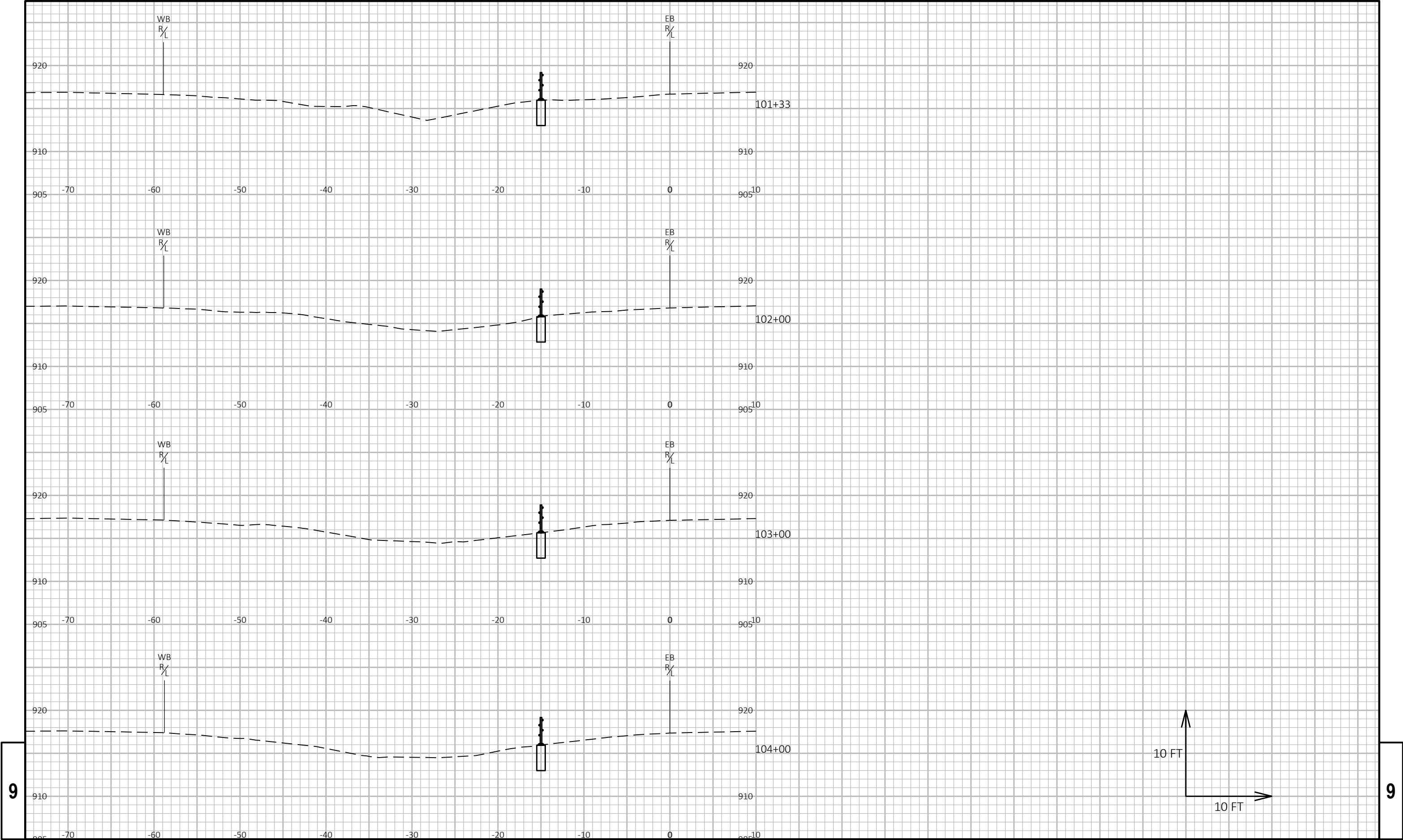
PLOT DATE : _____

PLOT BY : _____

PLOT NAME : _____

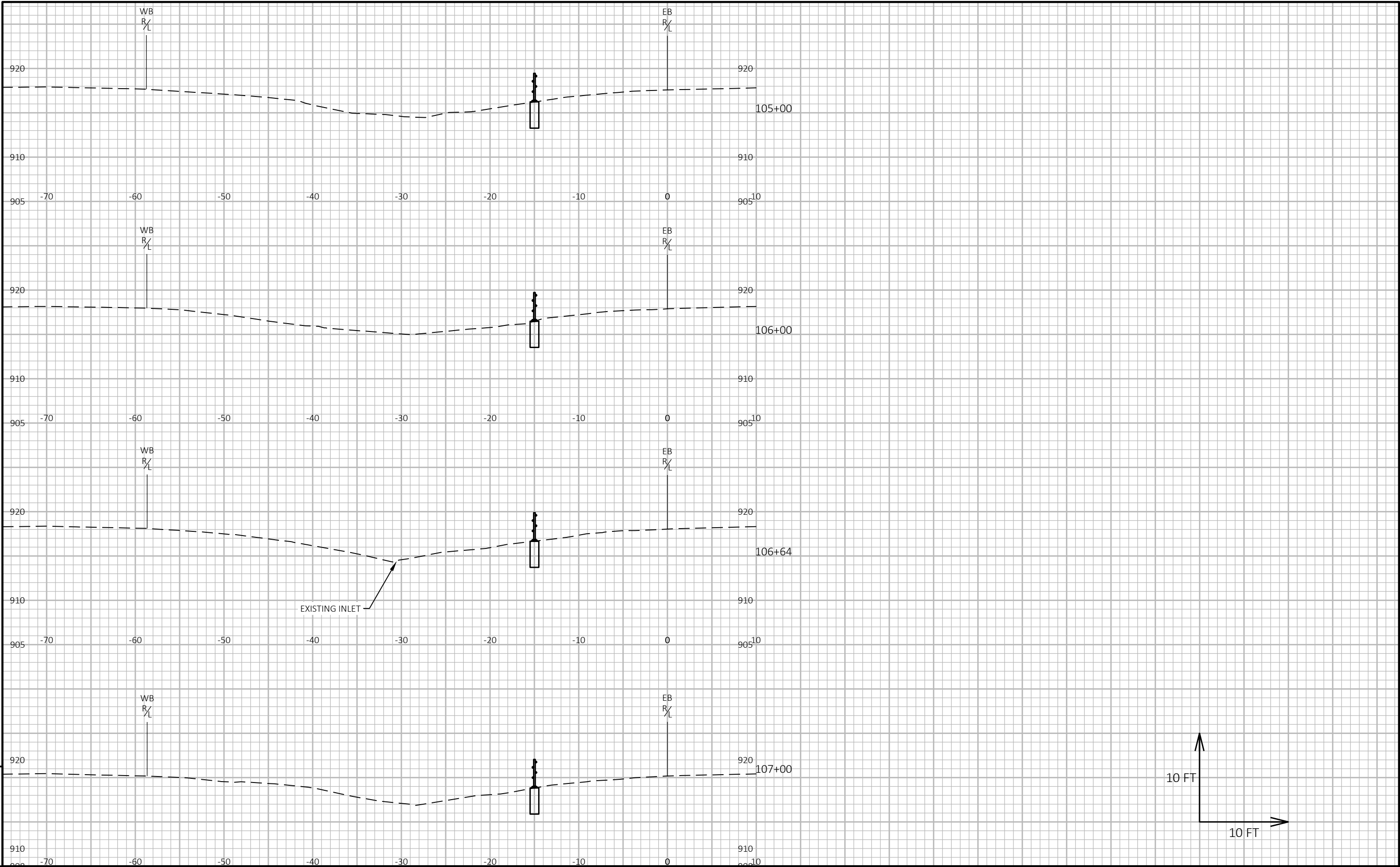
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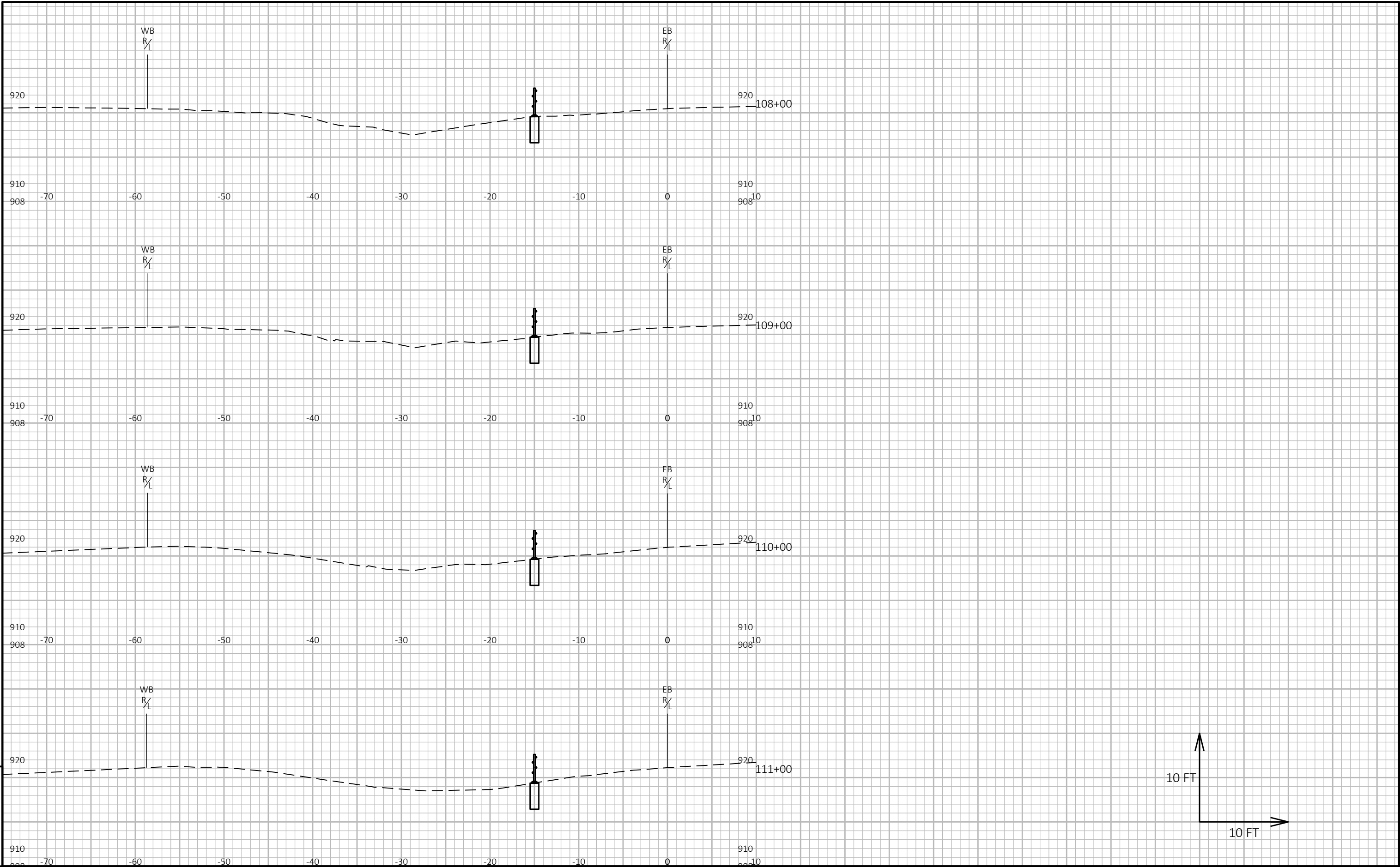
PLOT SCALE : 1:1



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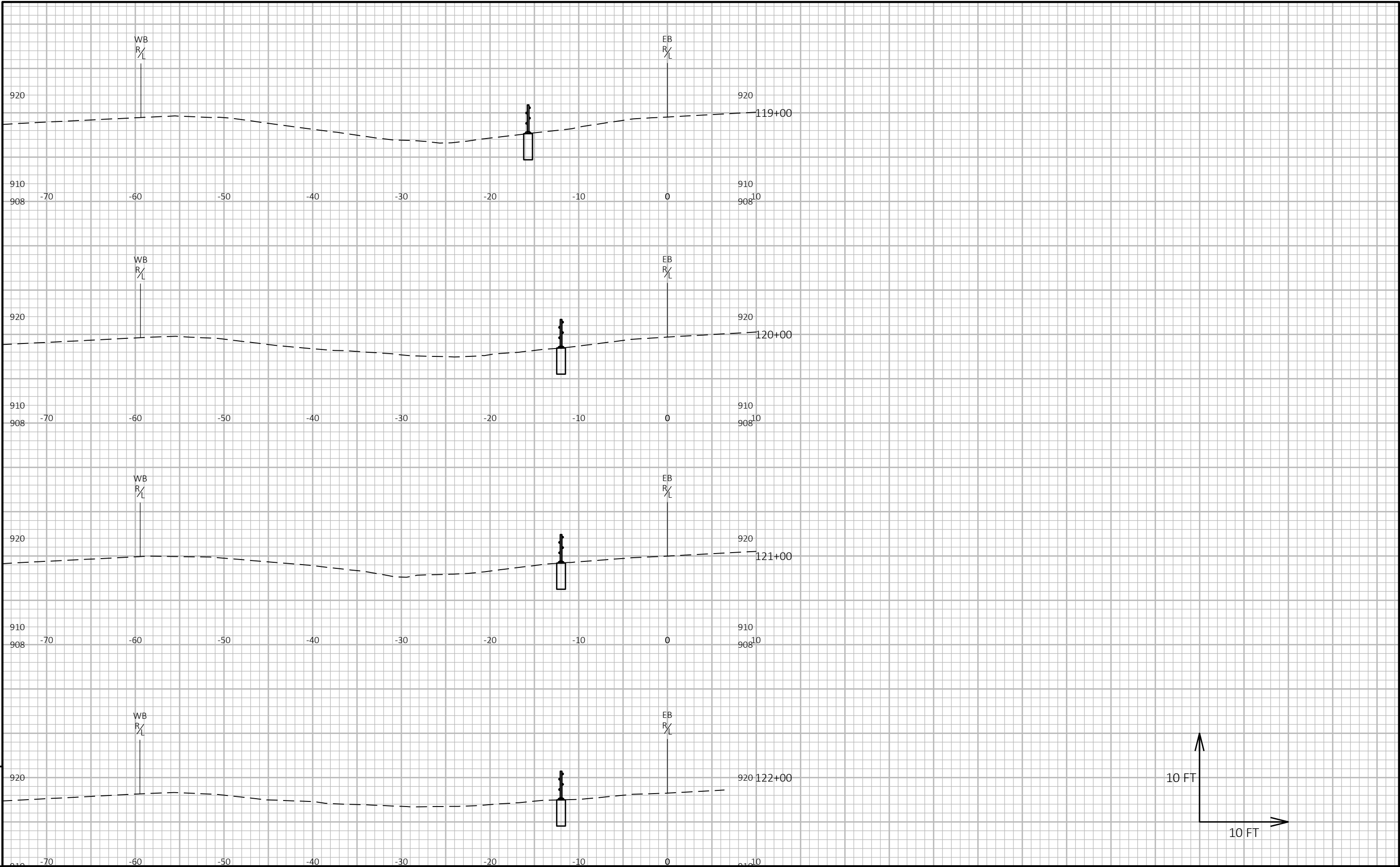
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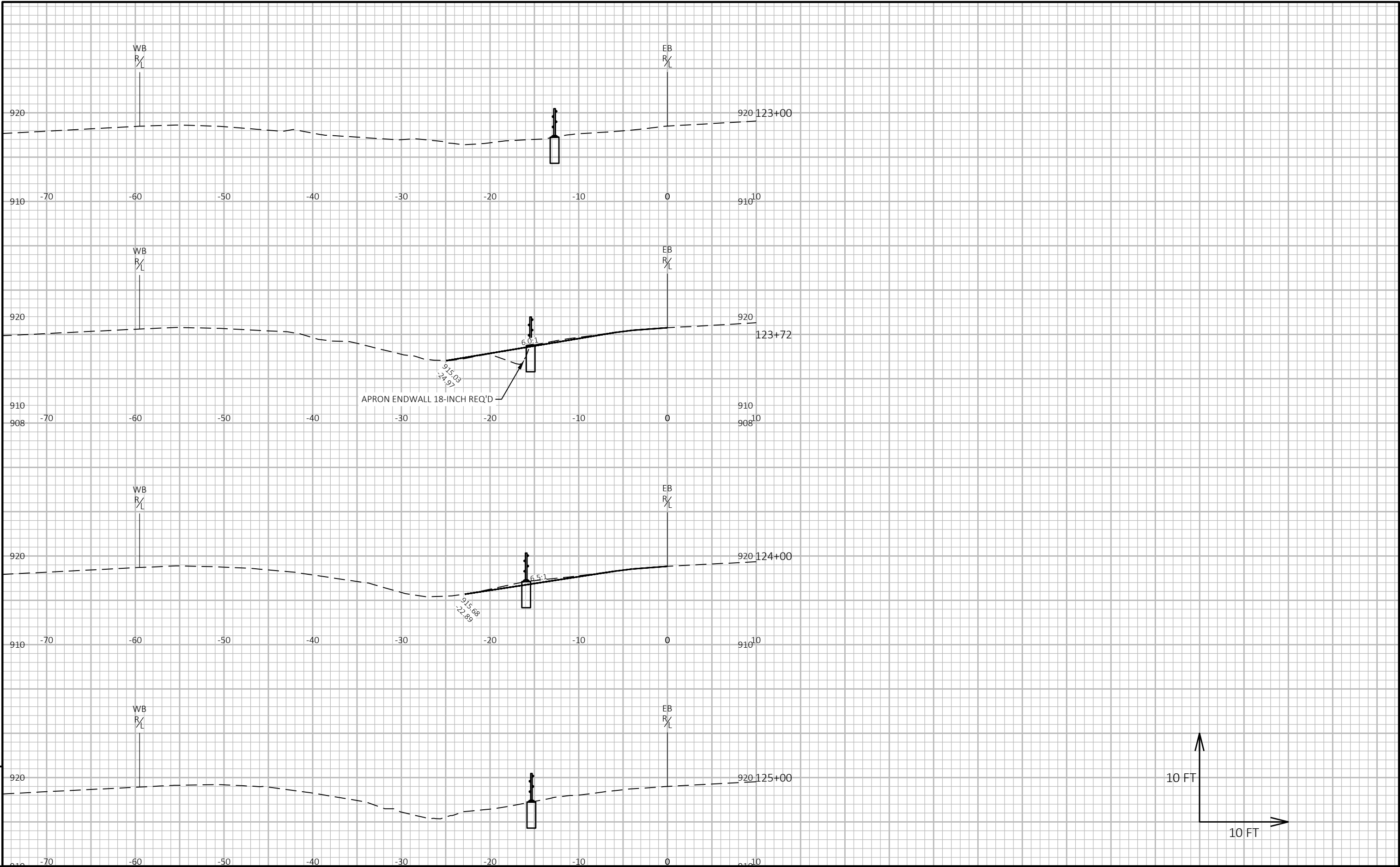
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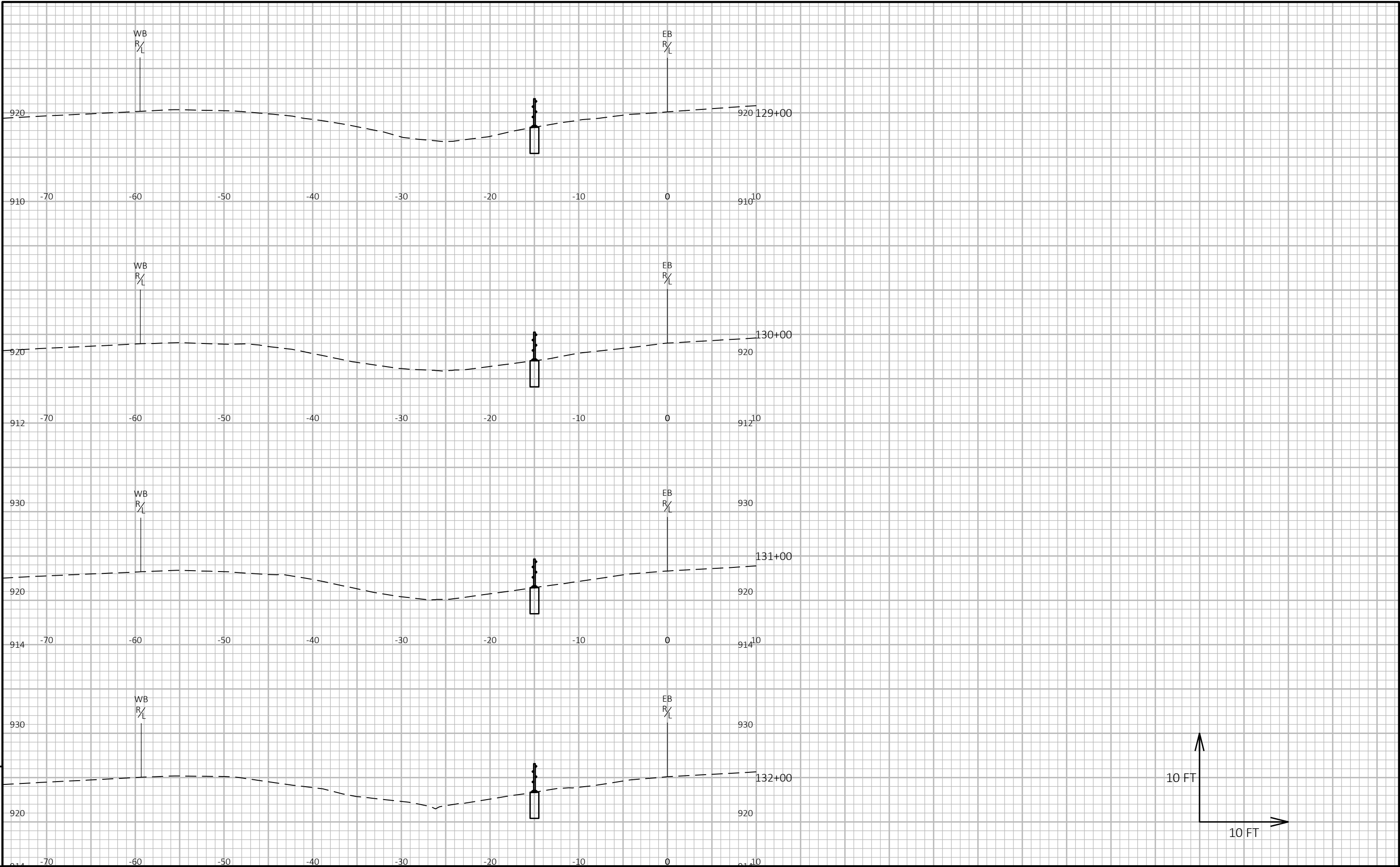
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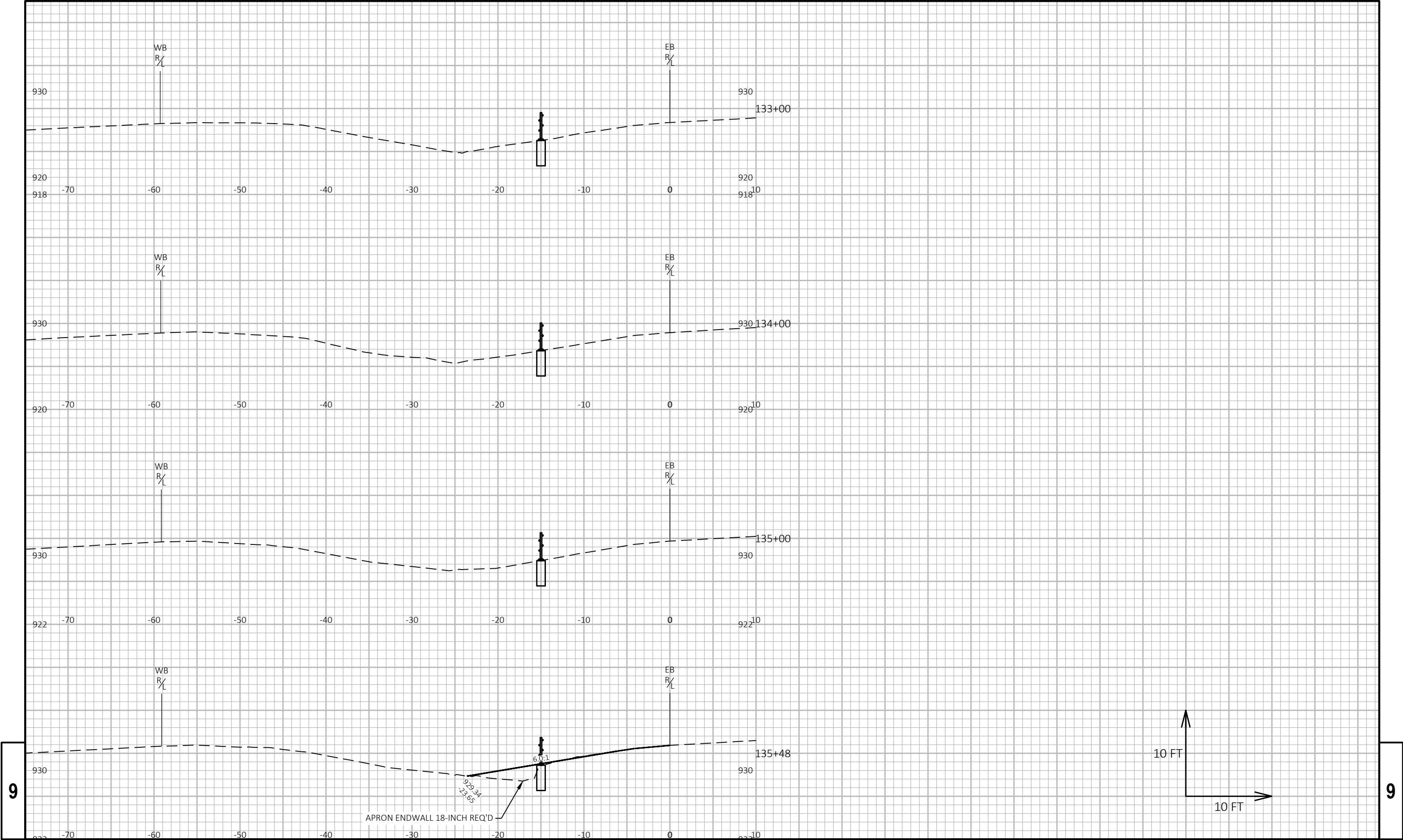
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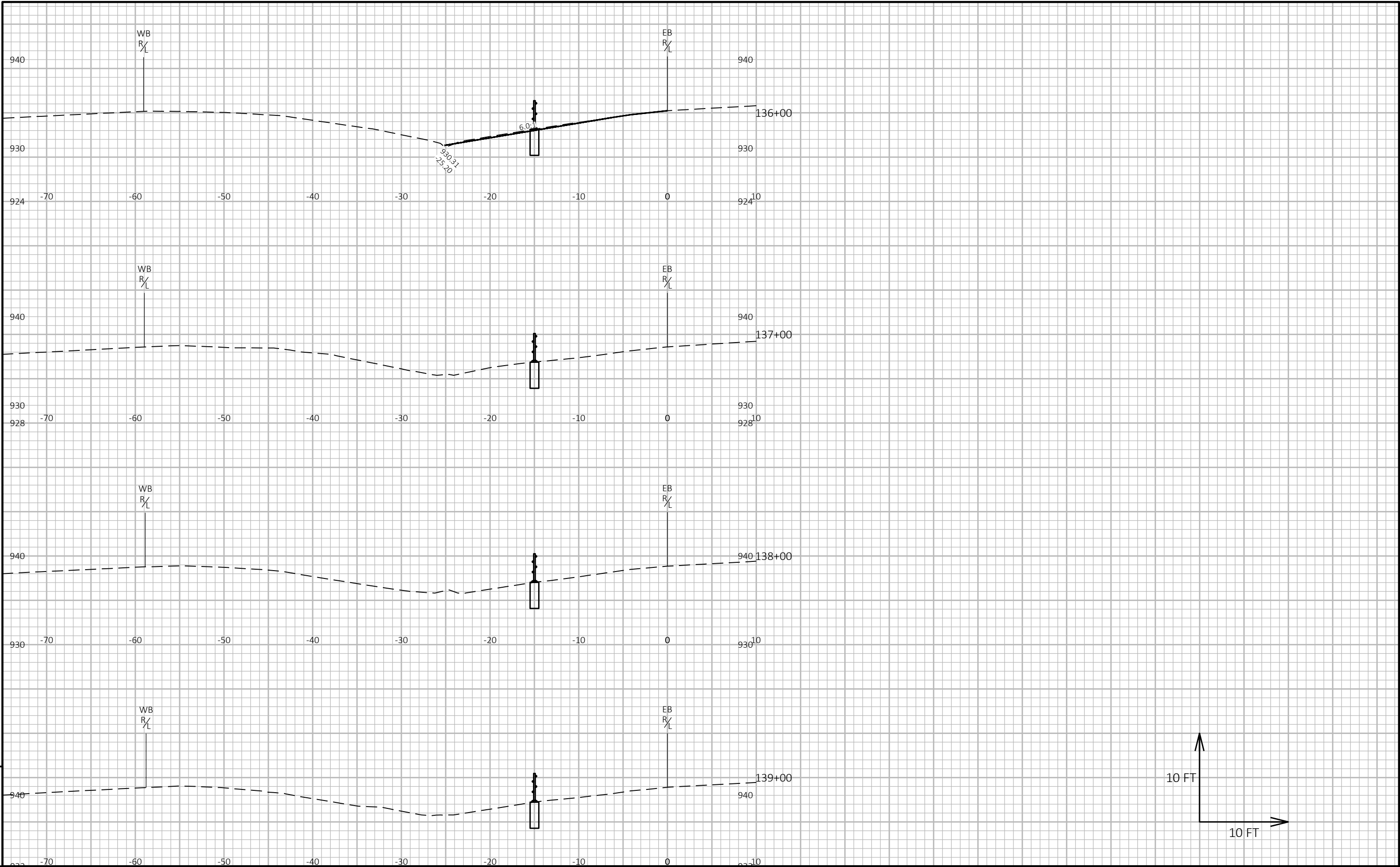
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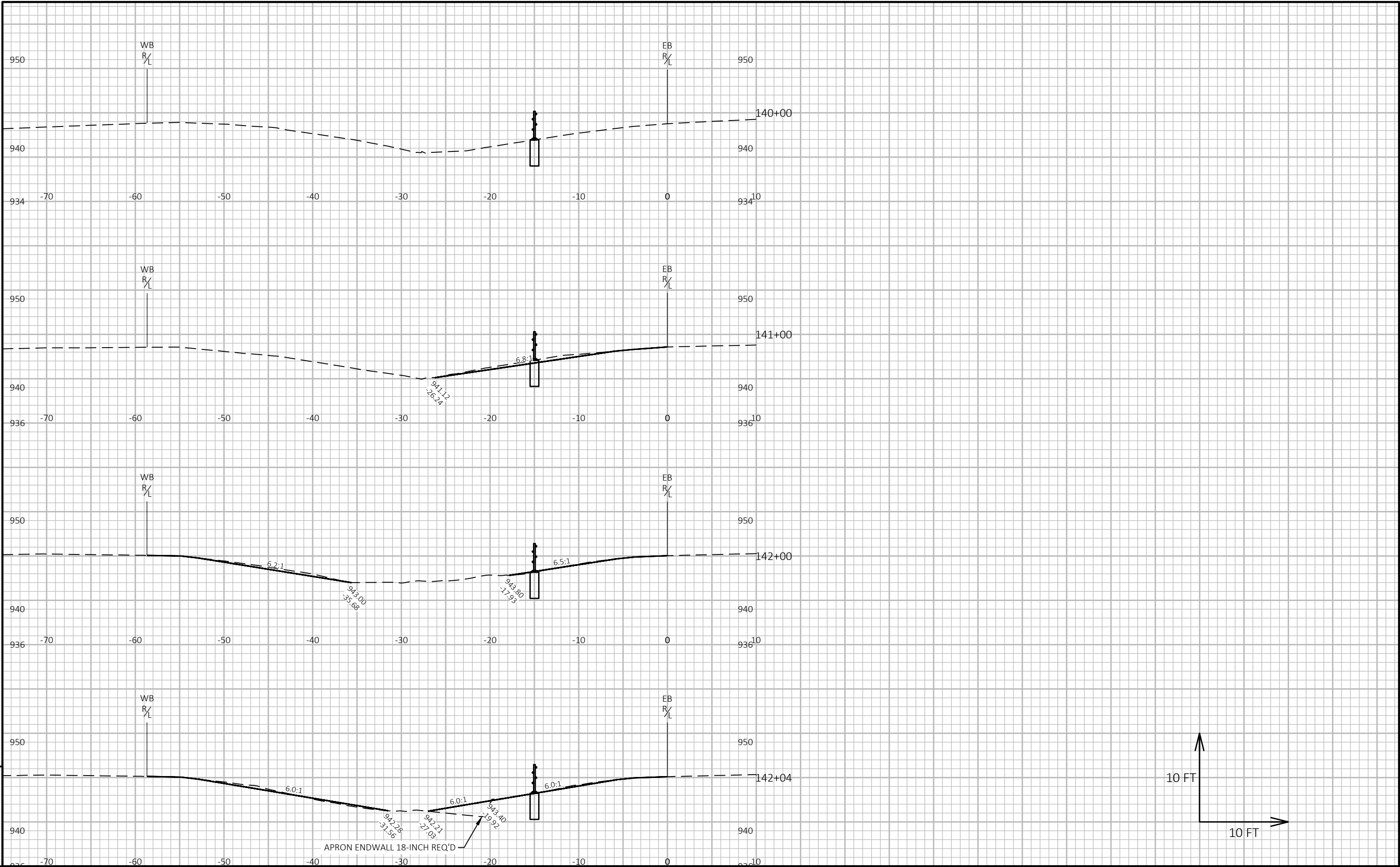
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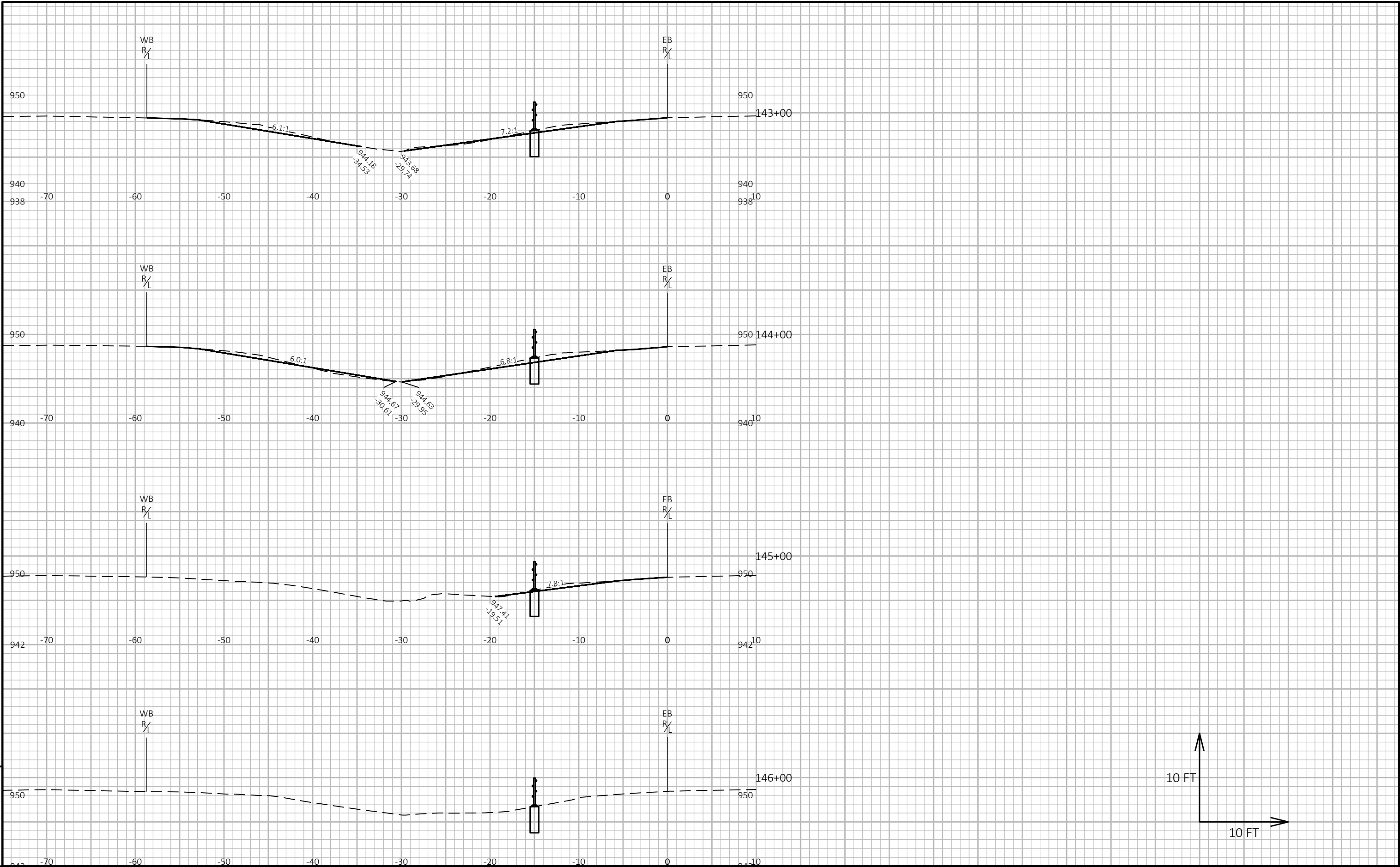


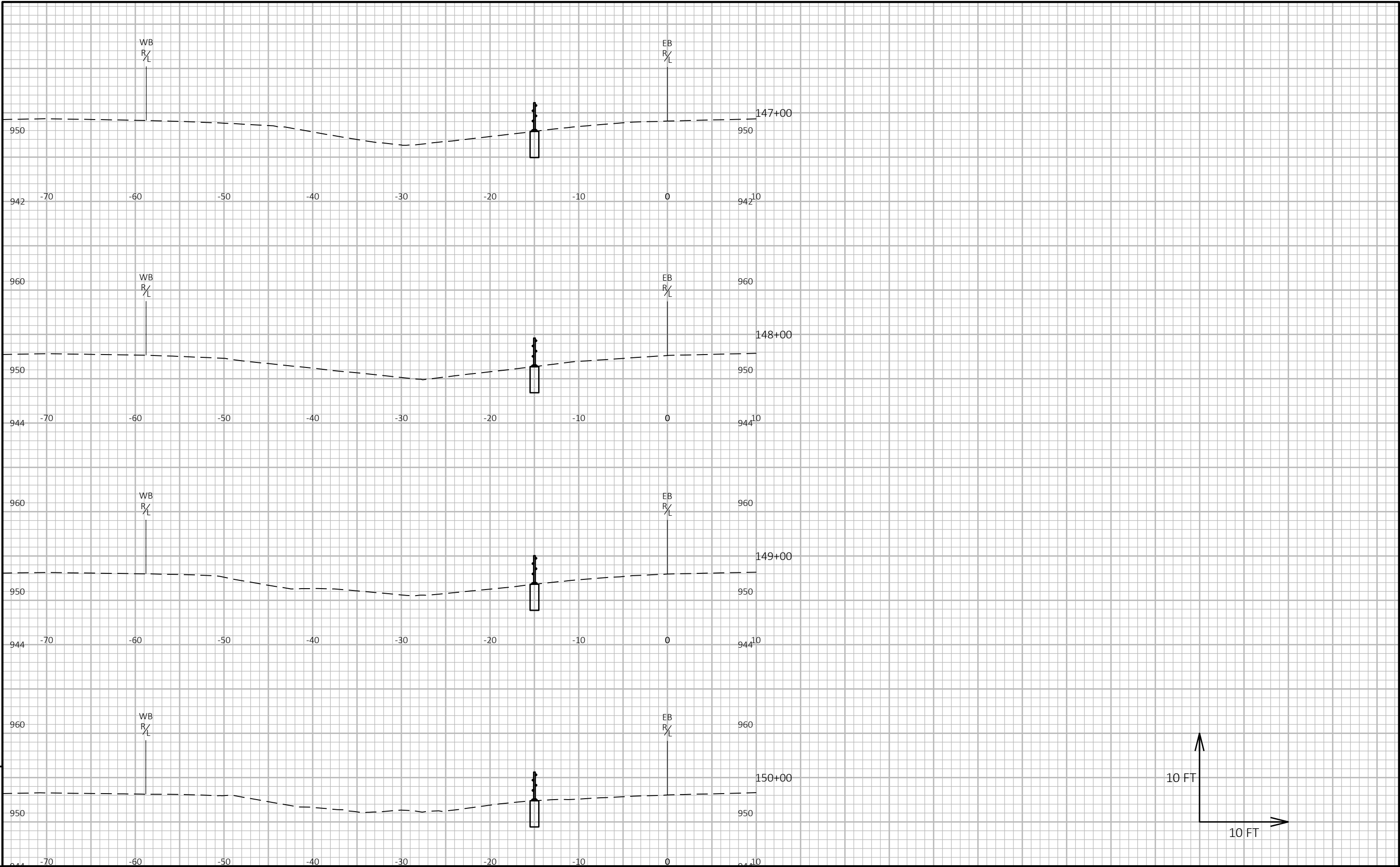
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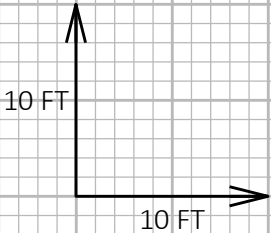
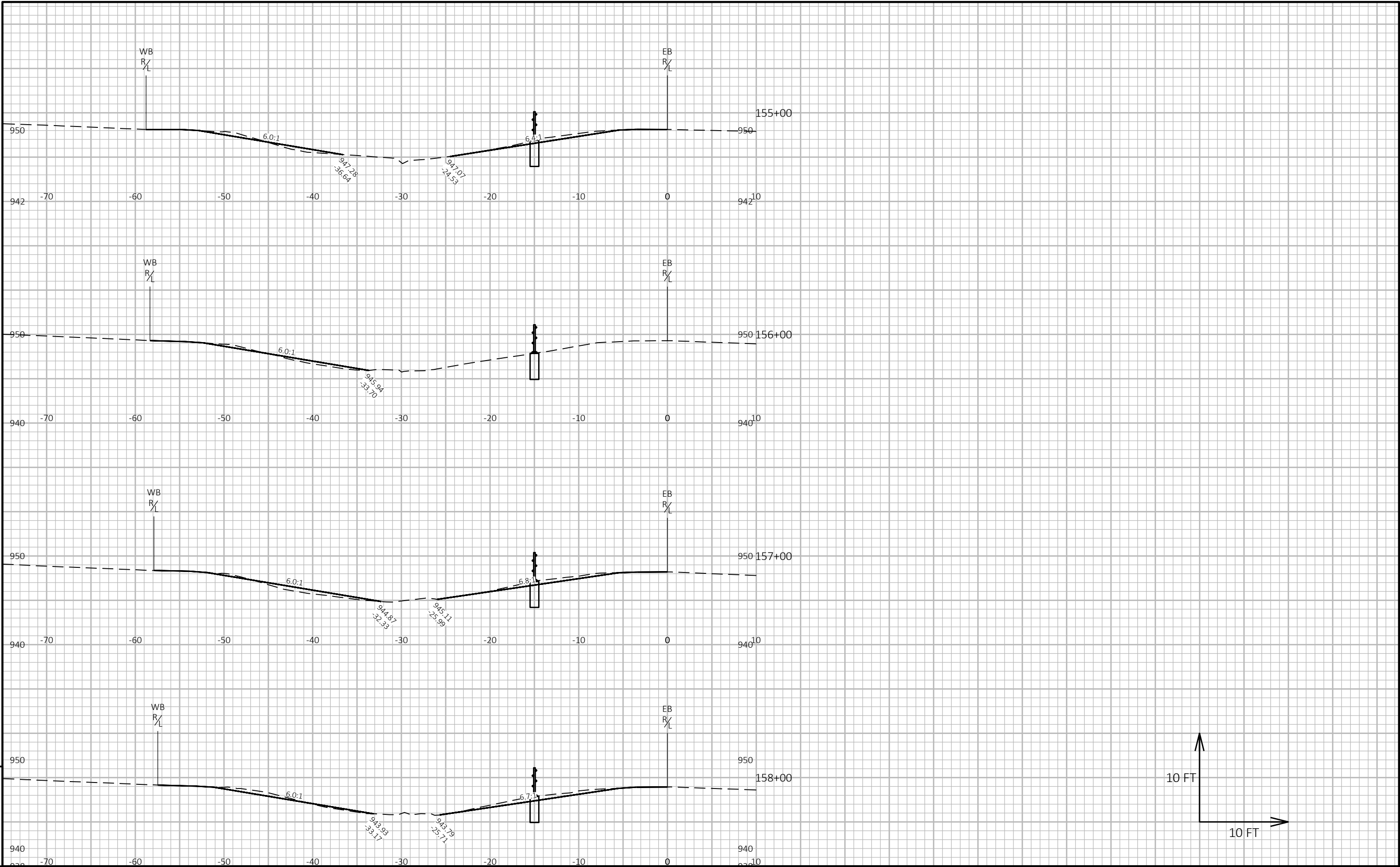


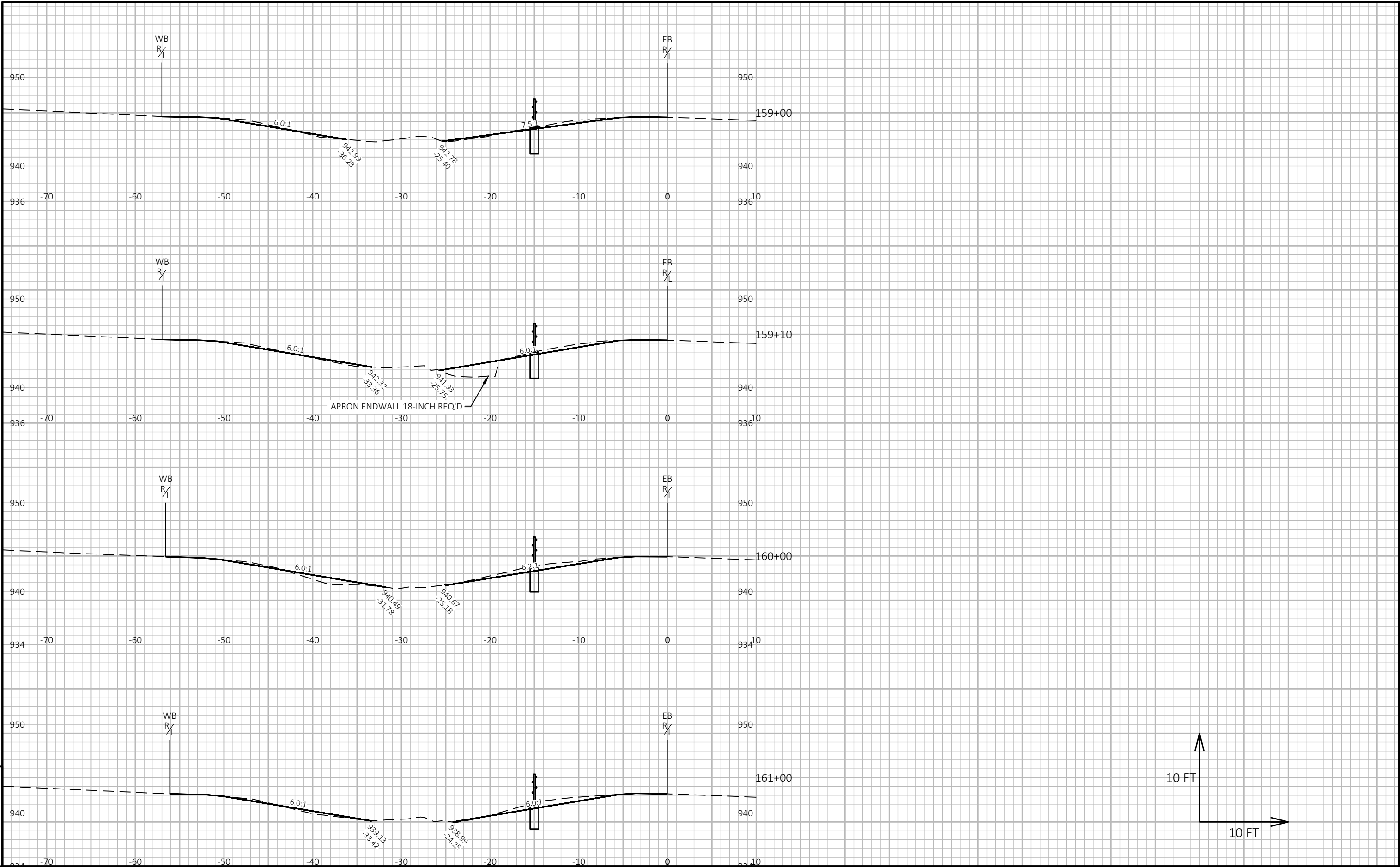


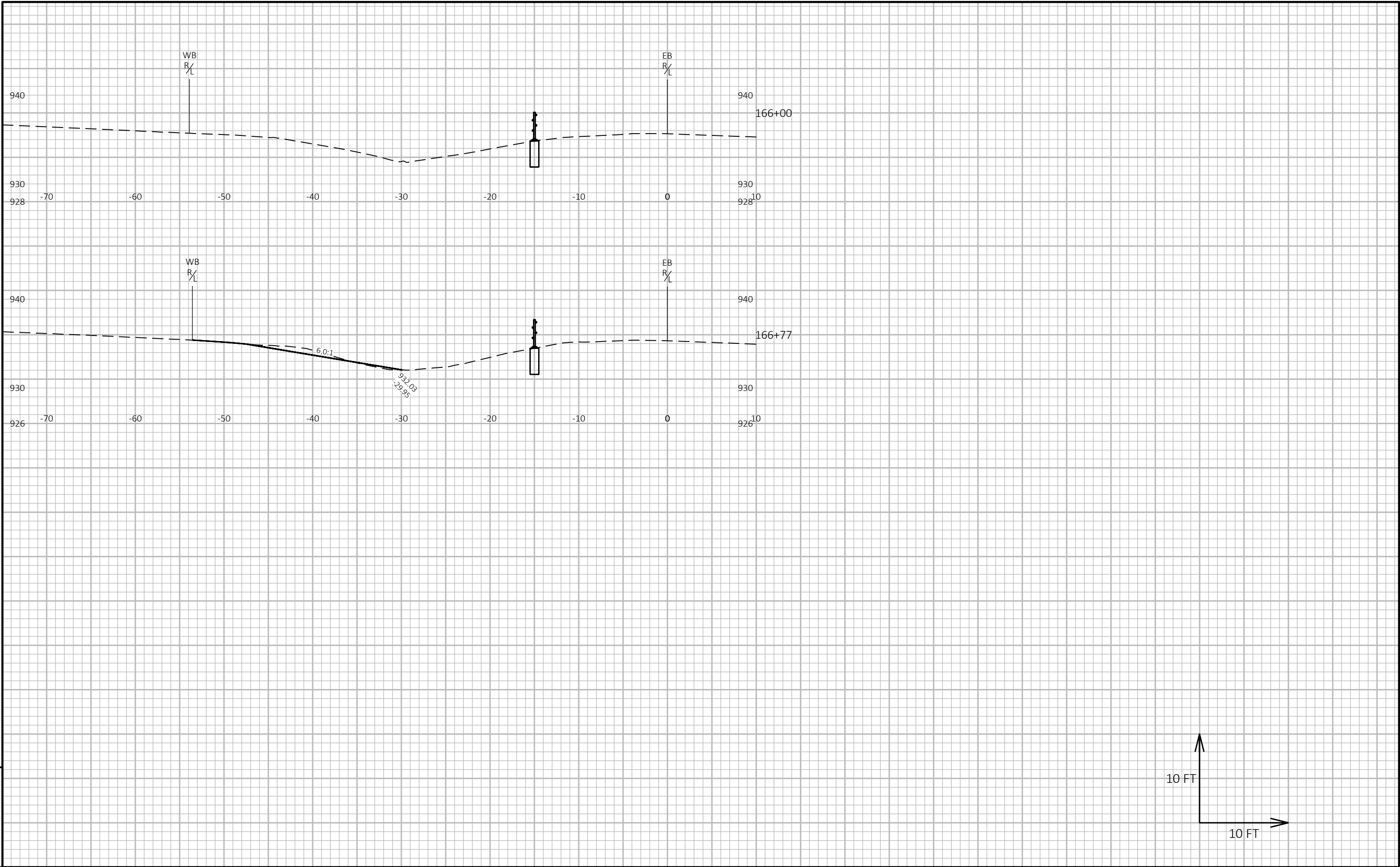


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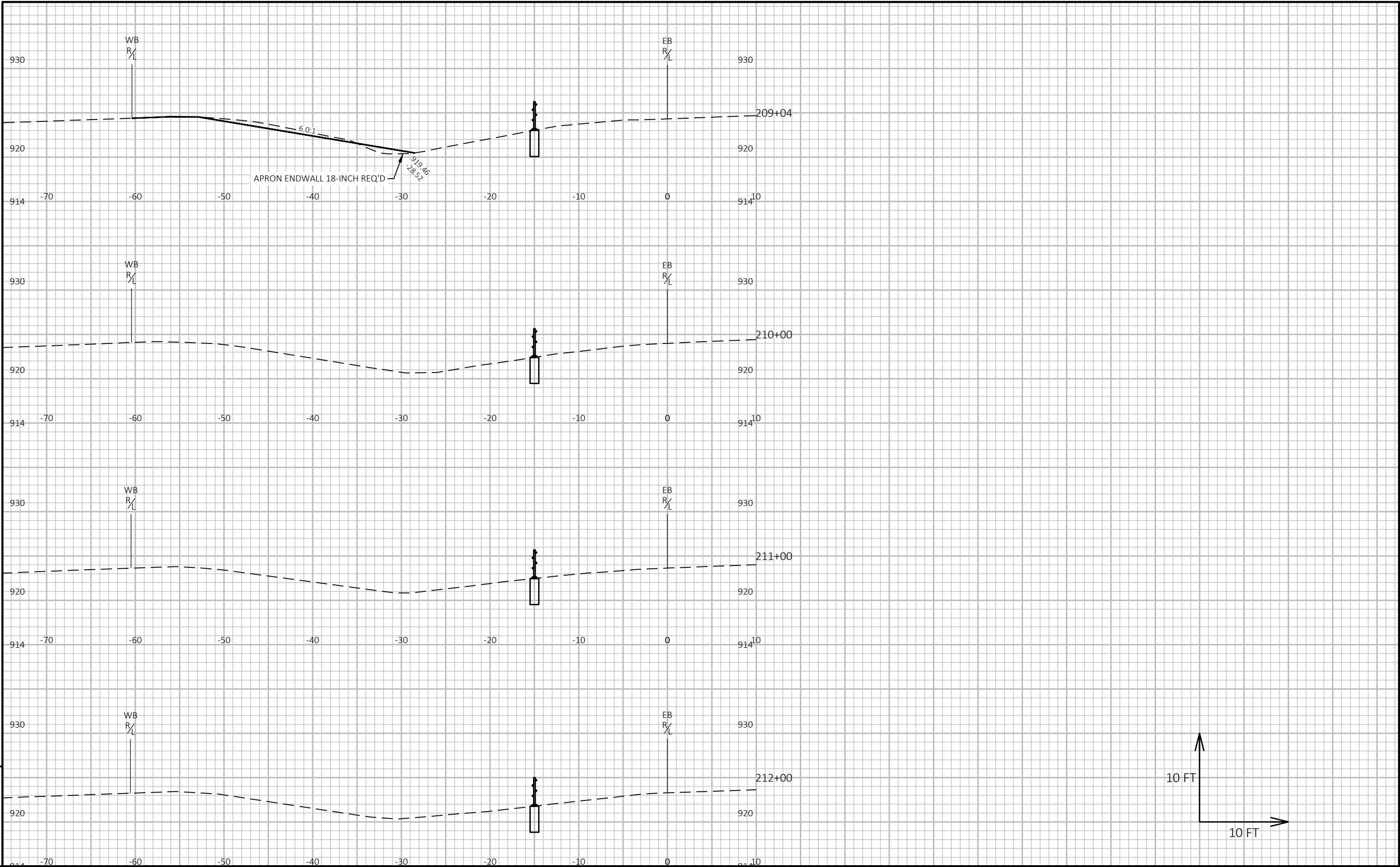


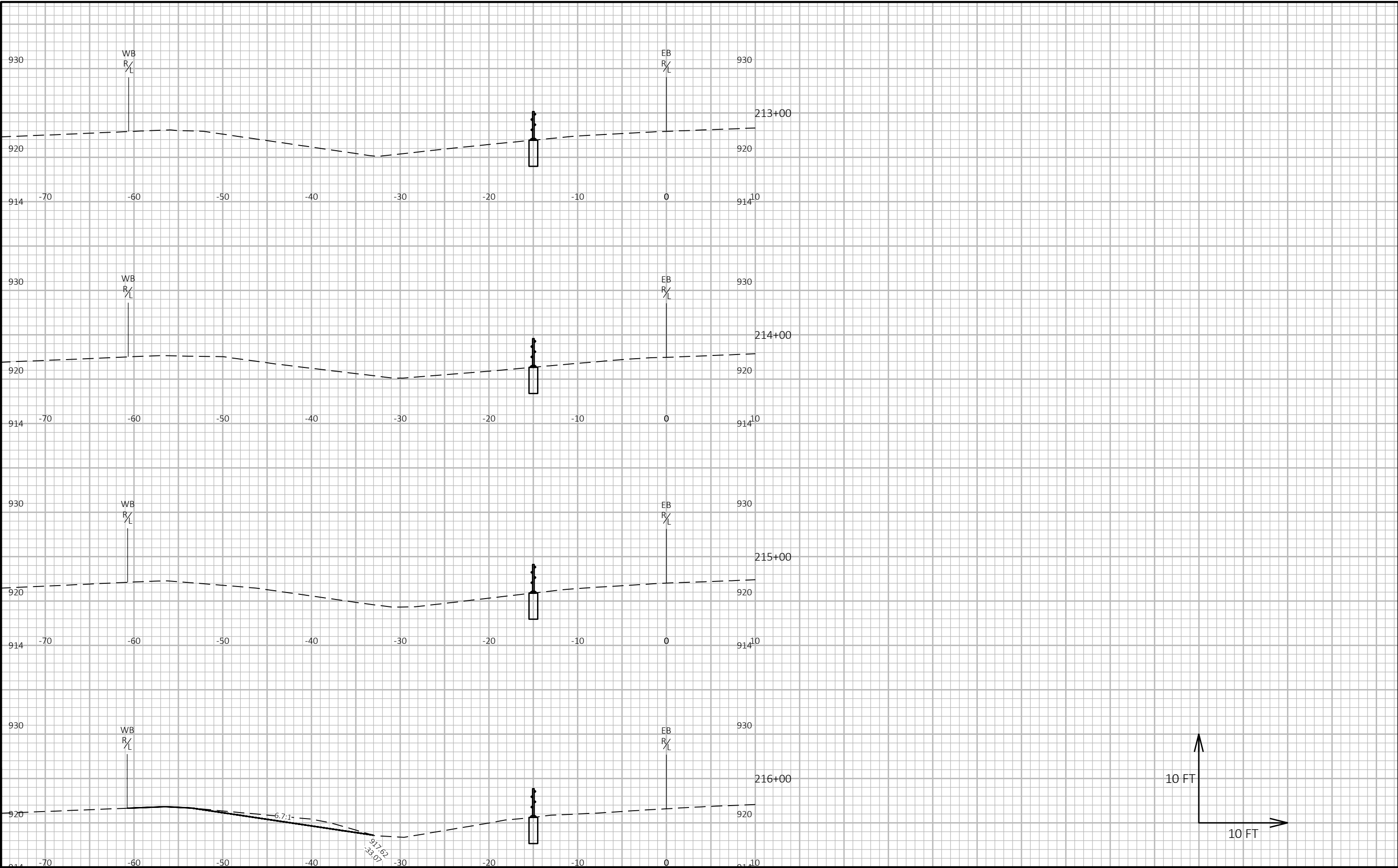




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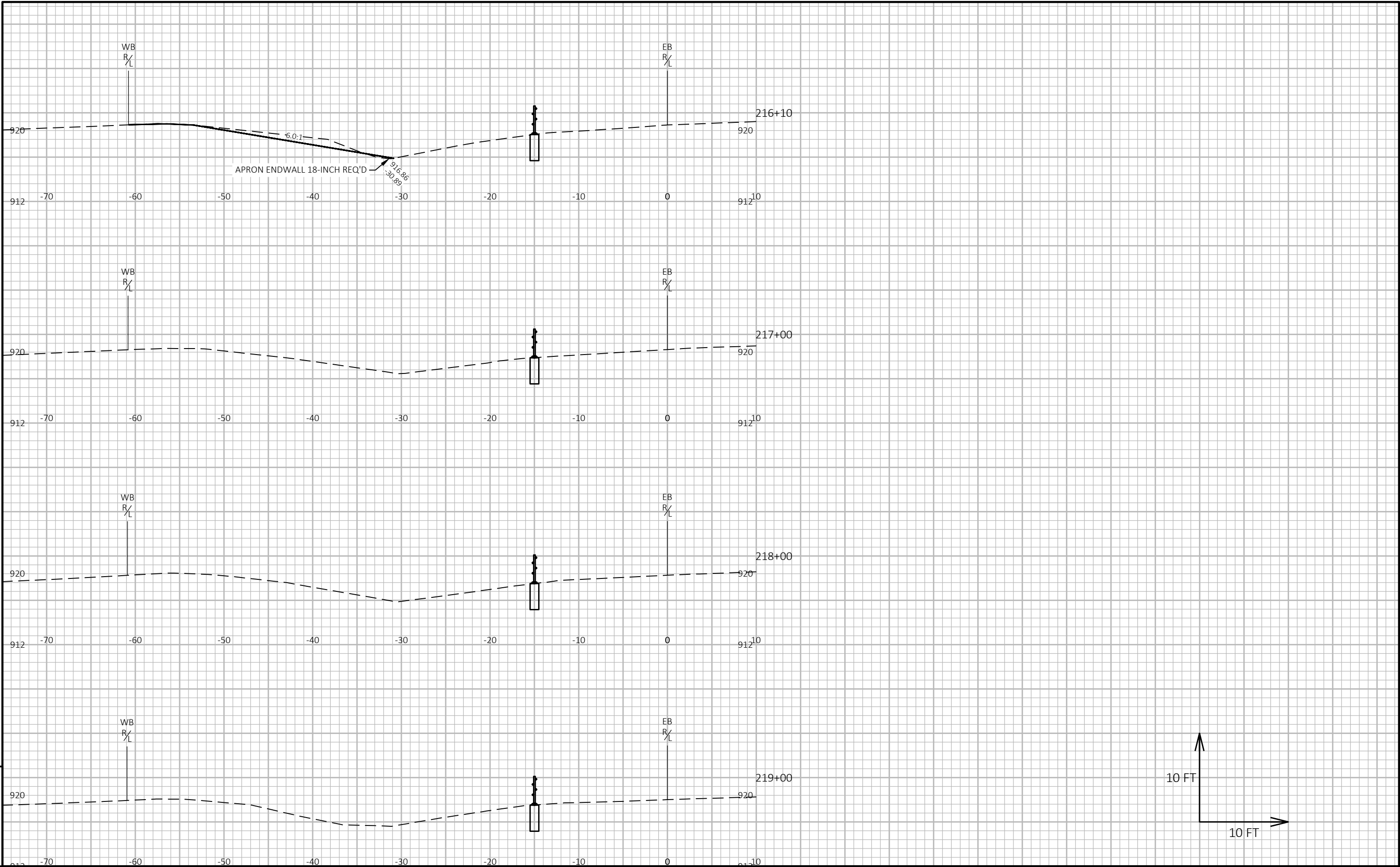
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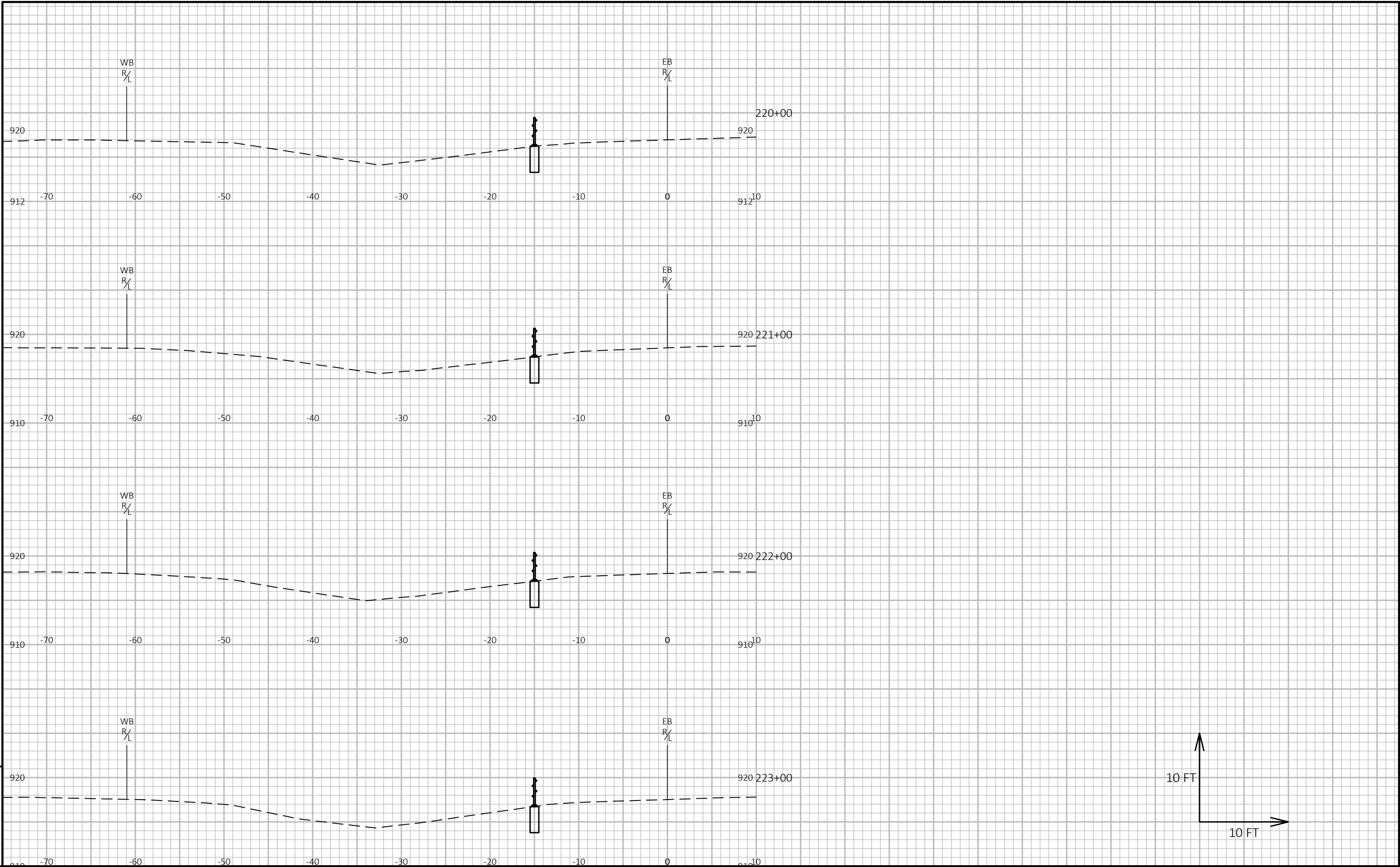
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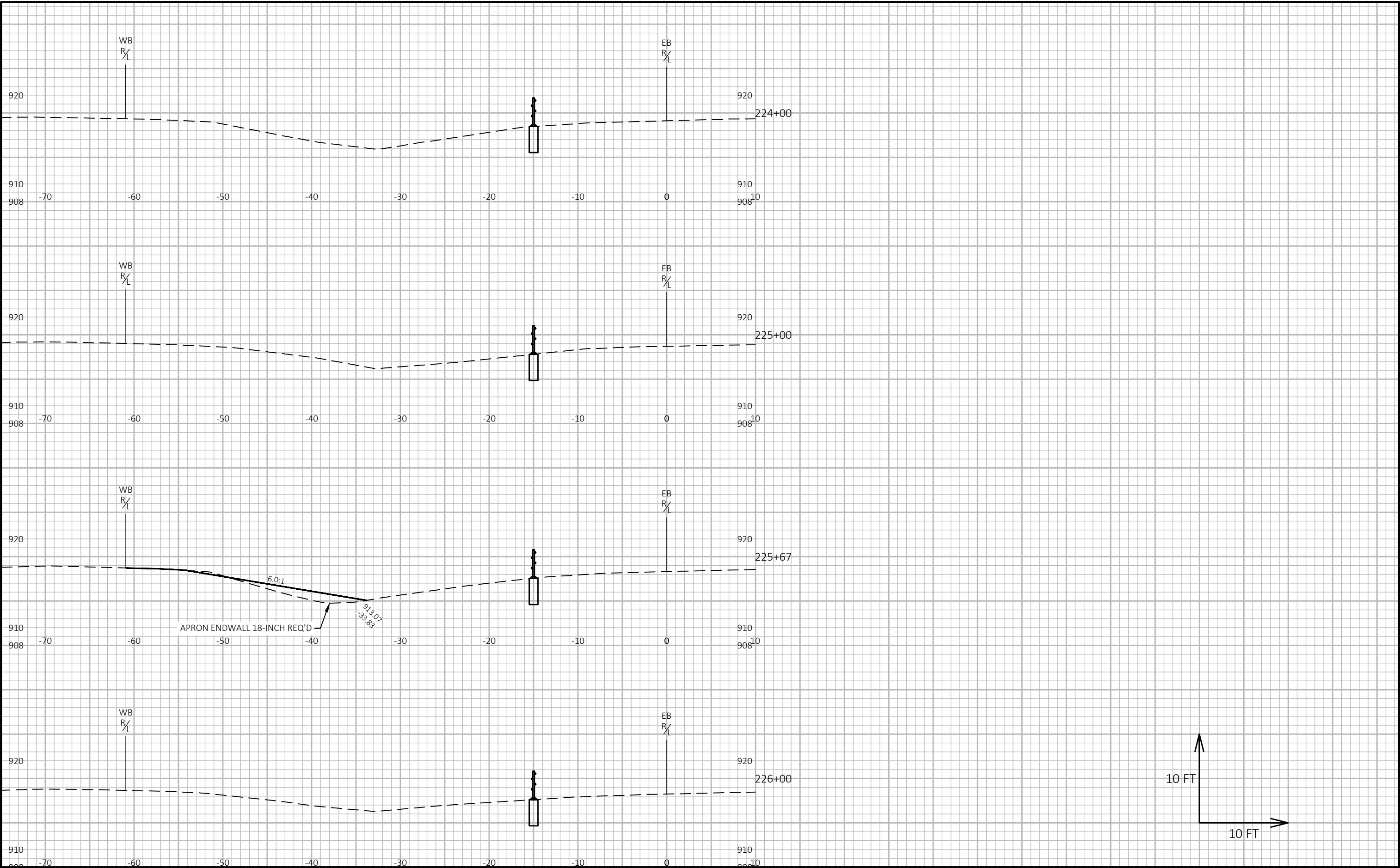
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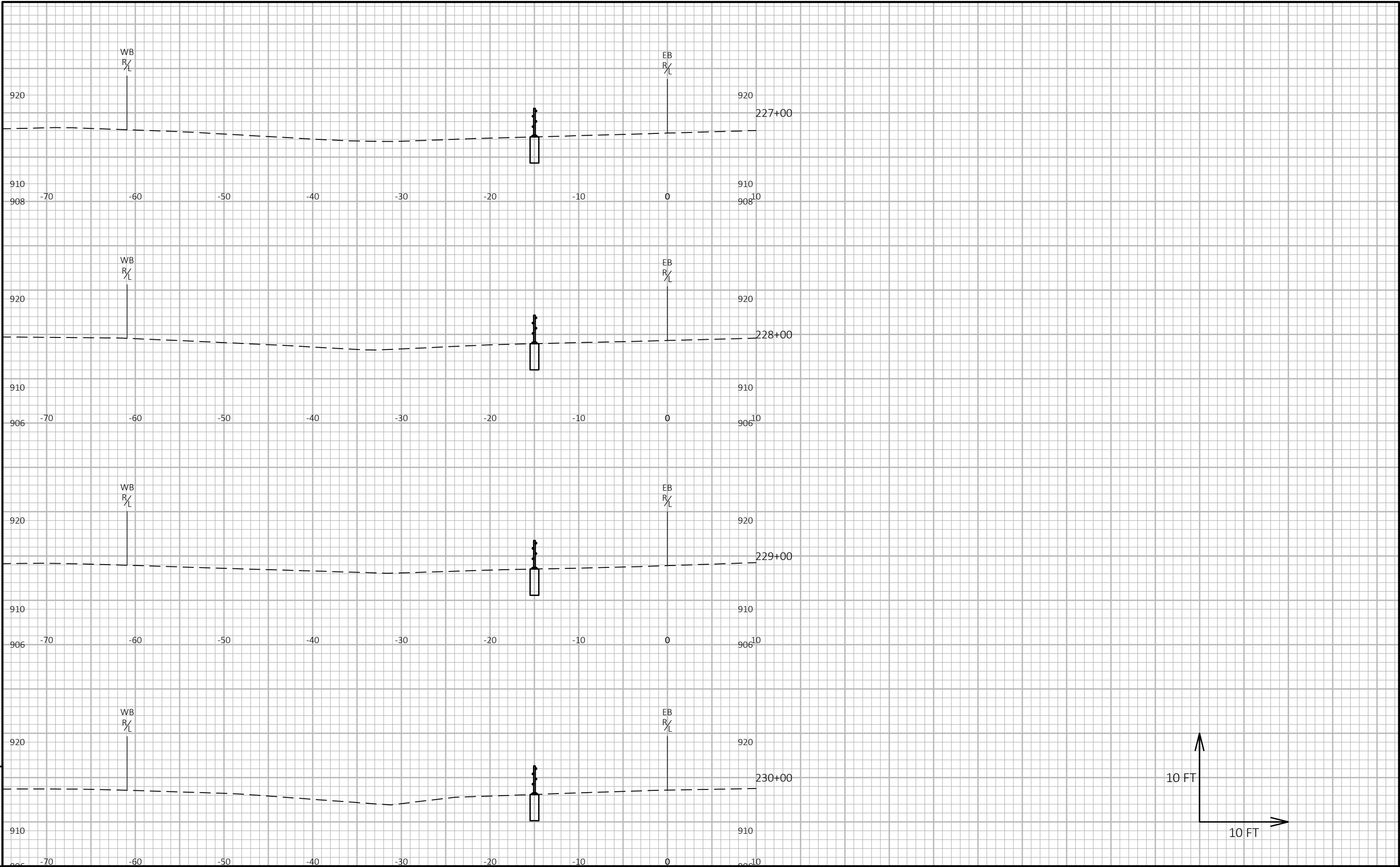
PROJECT NO: 1050-00-80	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - SEGMENT 2	SHEET 99	E
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9

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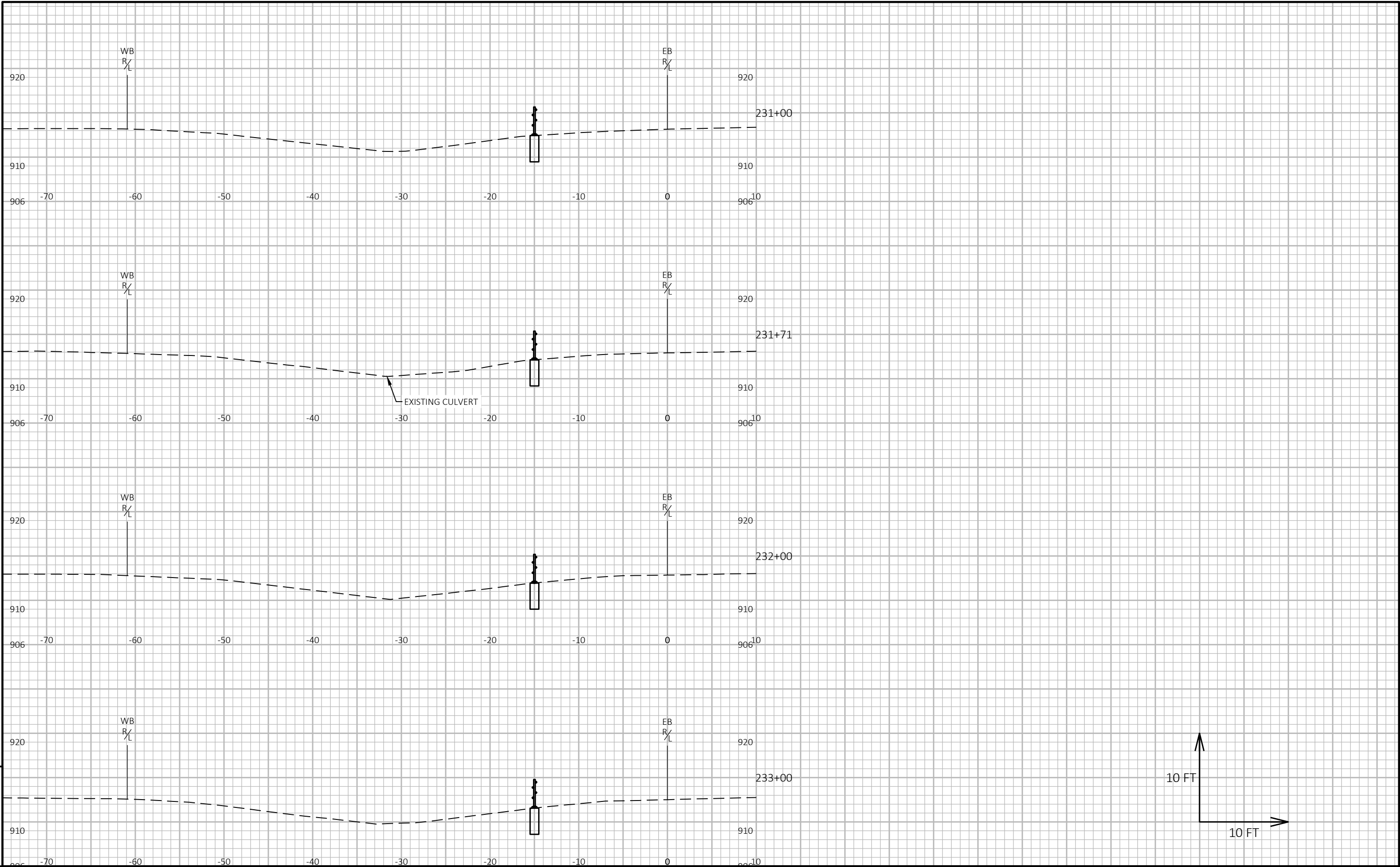
PROJECT NO: 1050-00-80	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - SEGMENT 2	SHEET 100	E
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9

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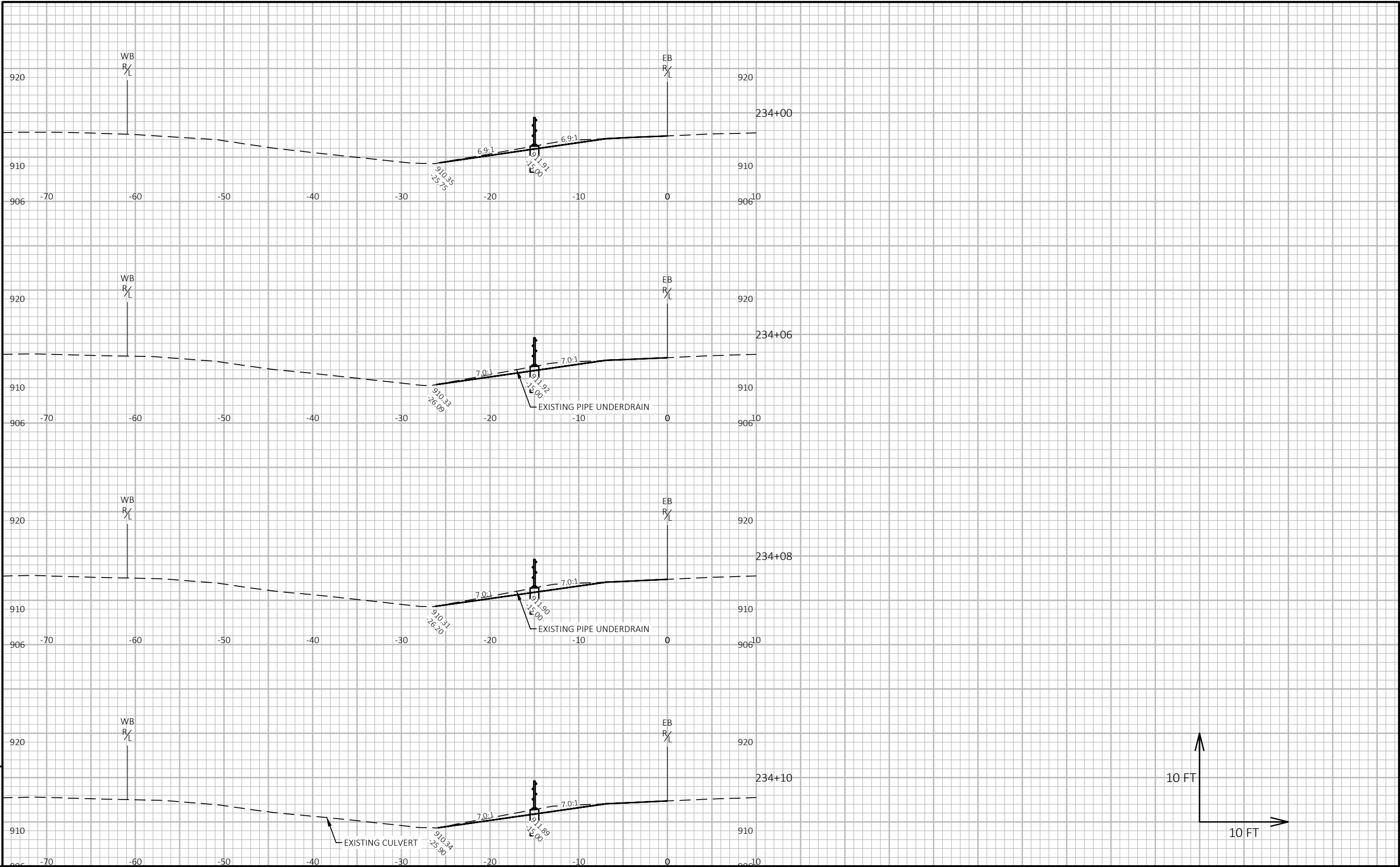
PROJECT NO: 1050-00-80	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - SEGMENT 2	SHEET 101	E
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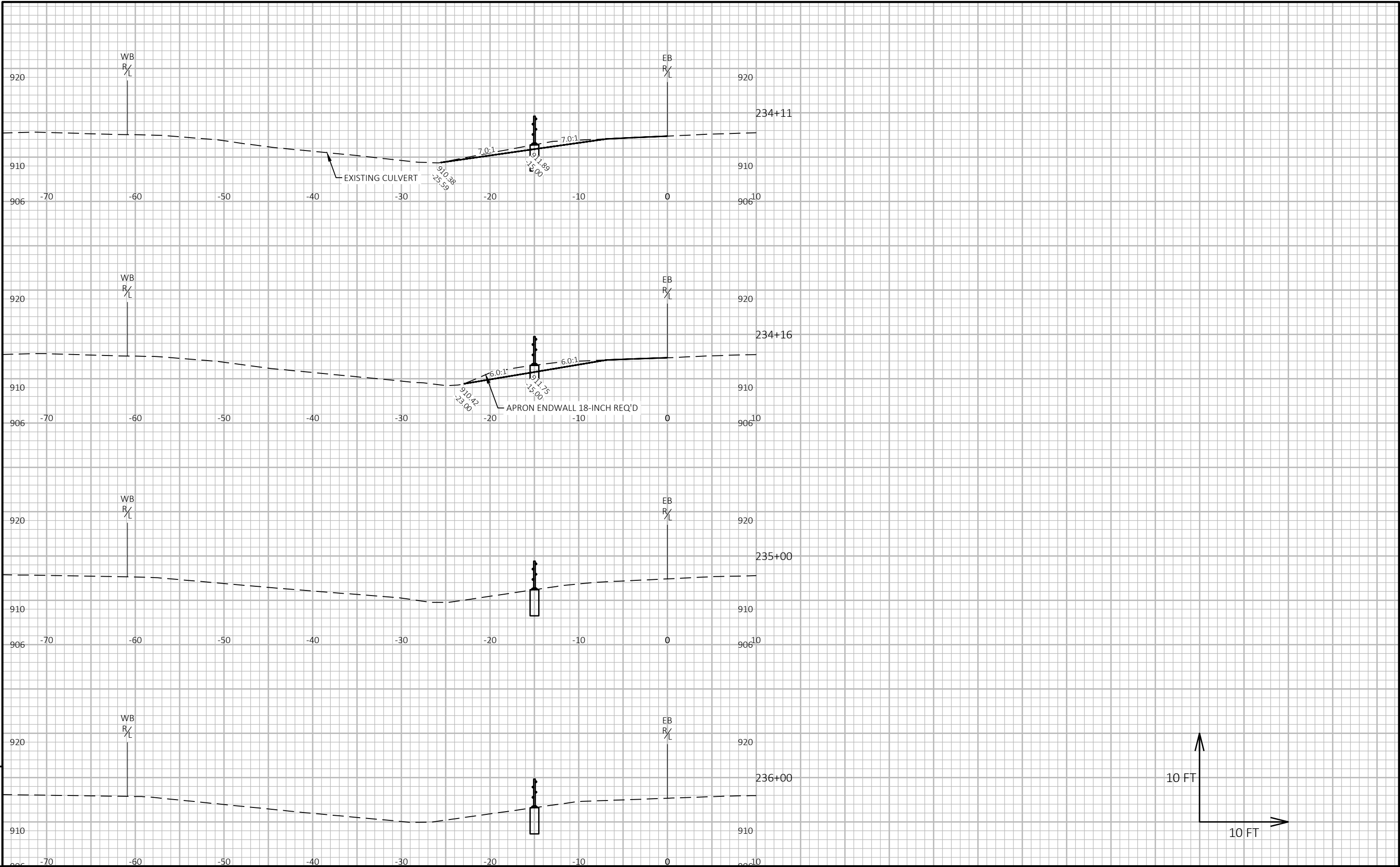


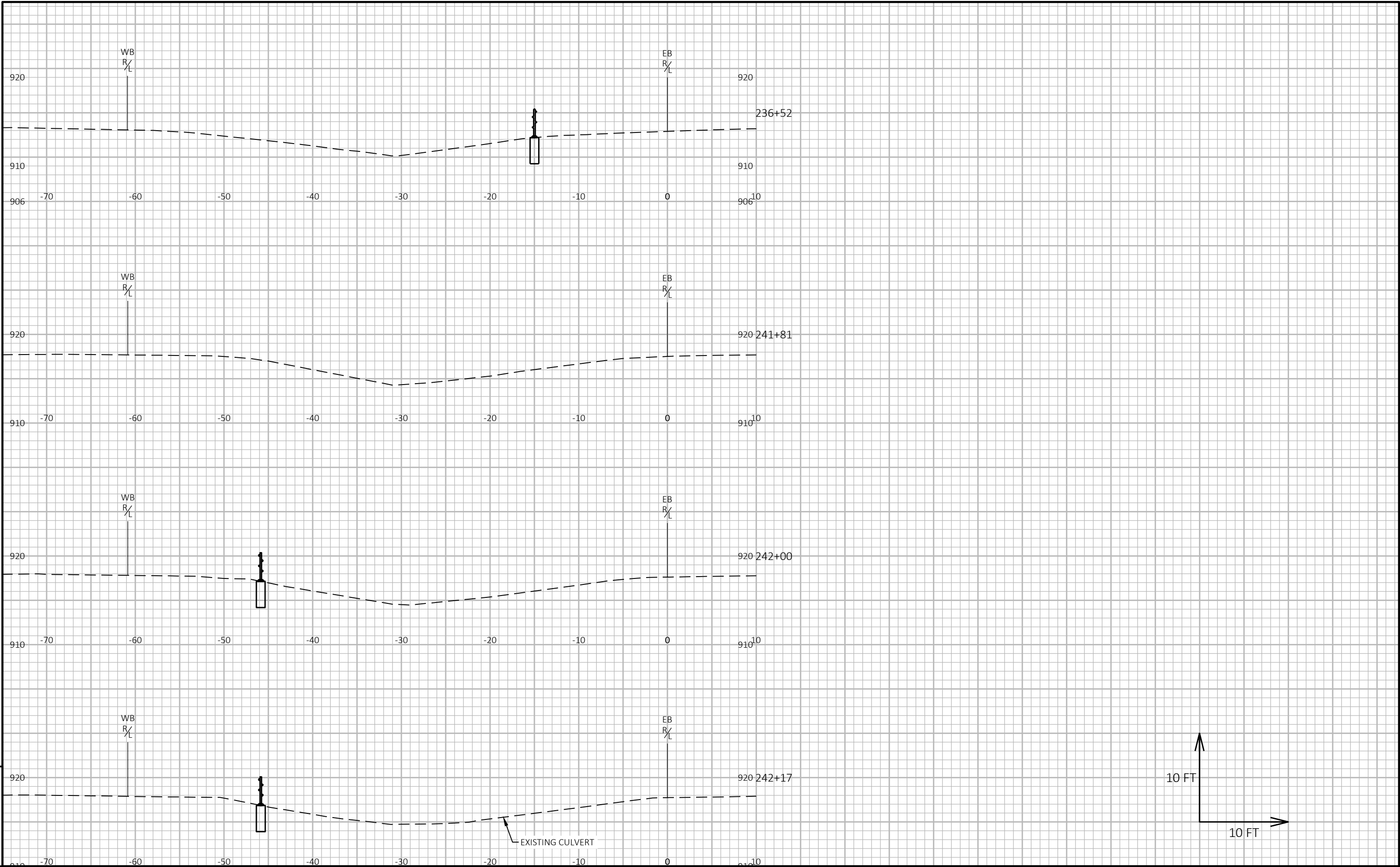
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PROJECT NO: 1050-00-80	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - SEGMENT 2	SHEET 102	E
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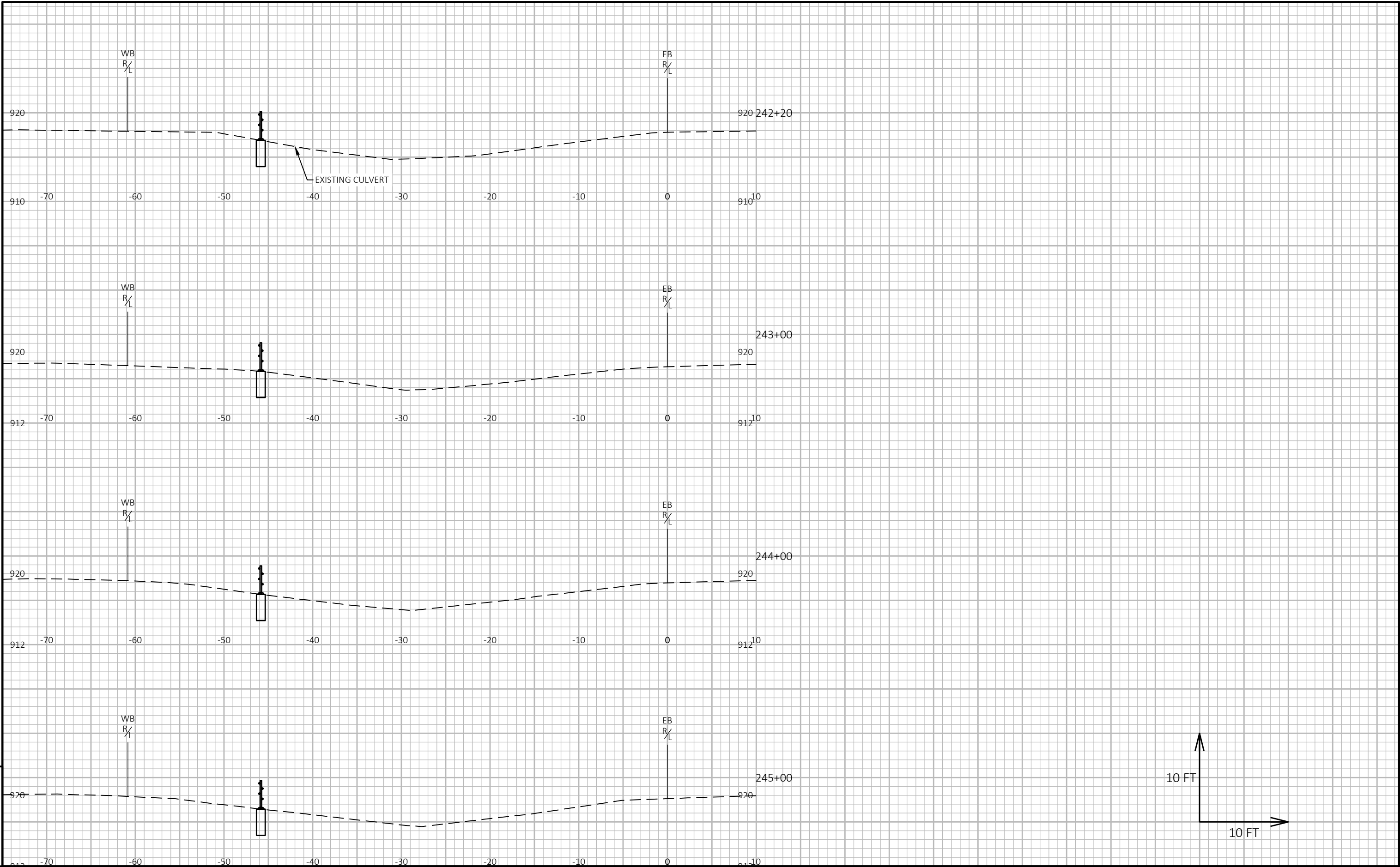




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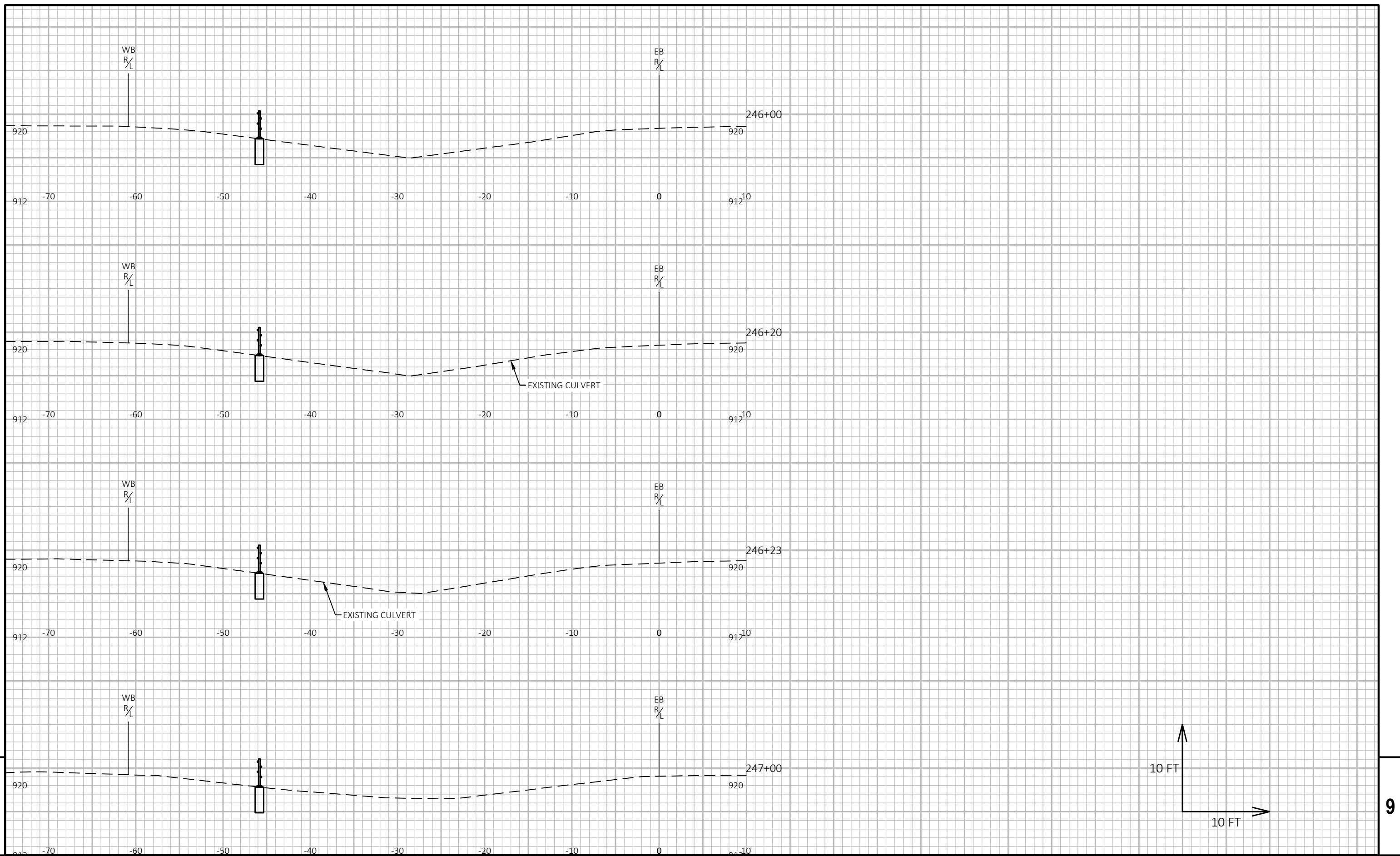
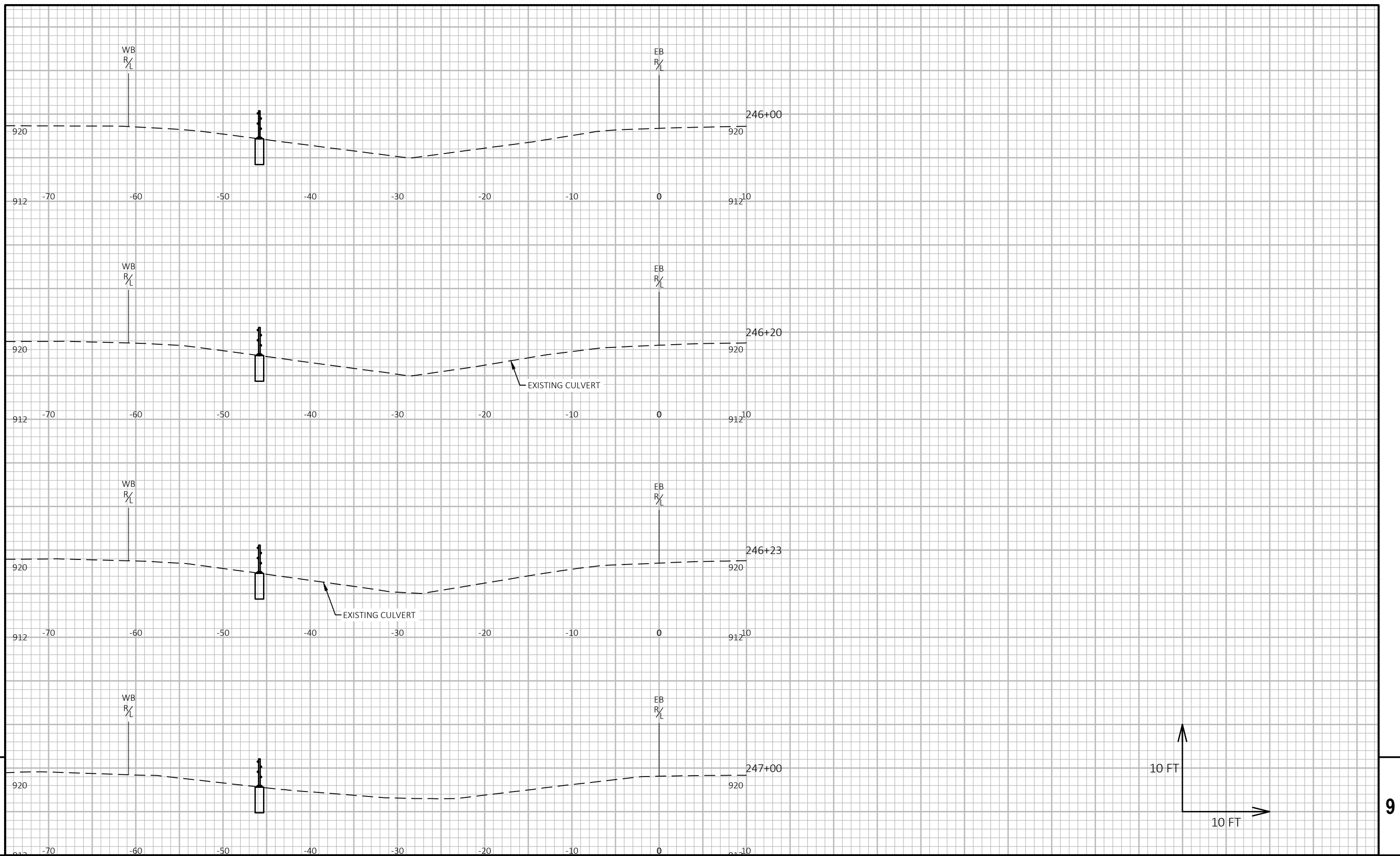
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PROJECT NO: 1050-00-80	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - SEGMENT 2	SHEET 105	E
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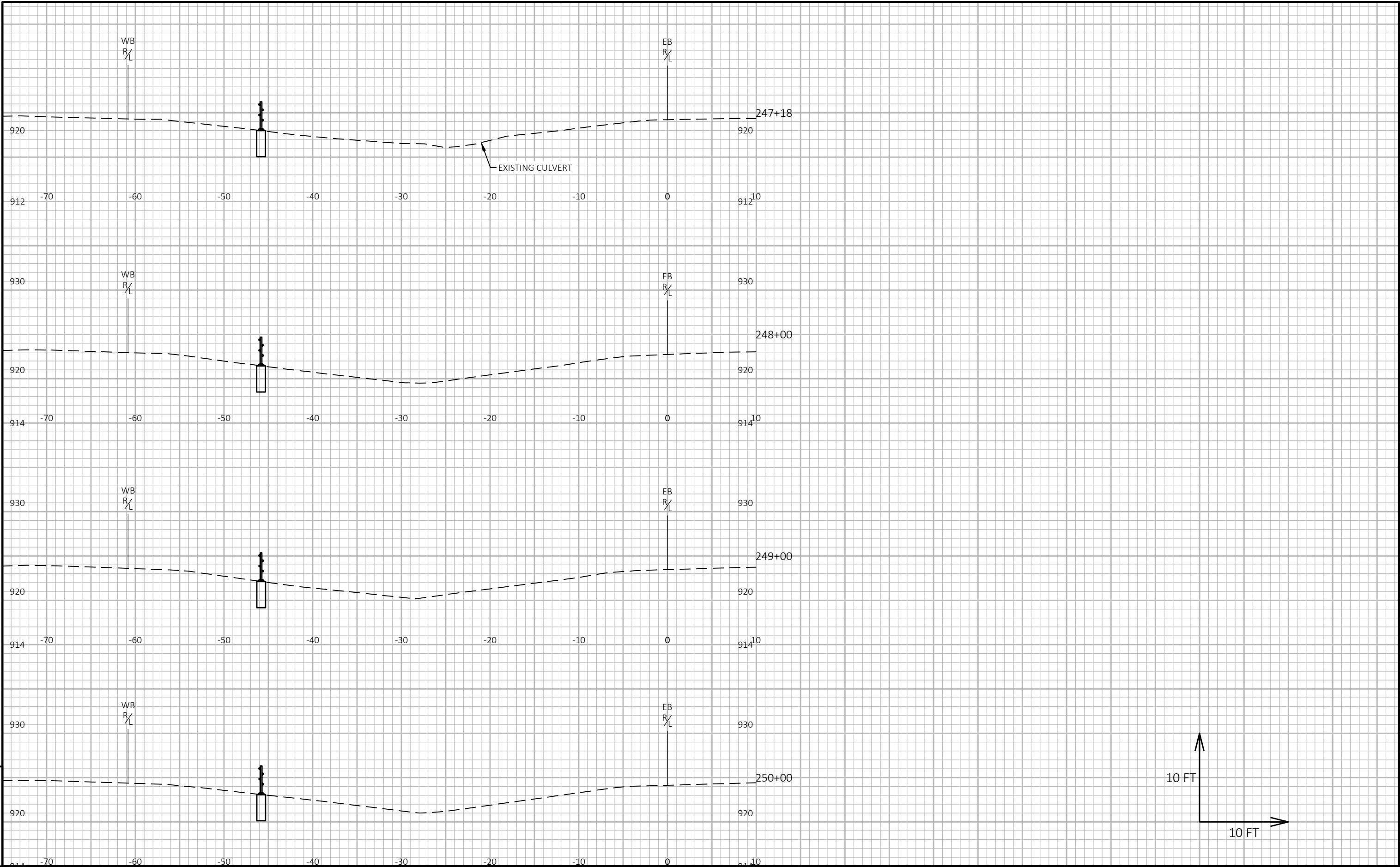
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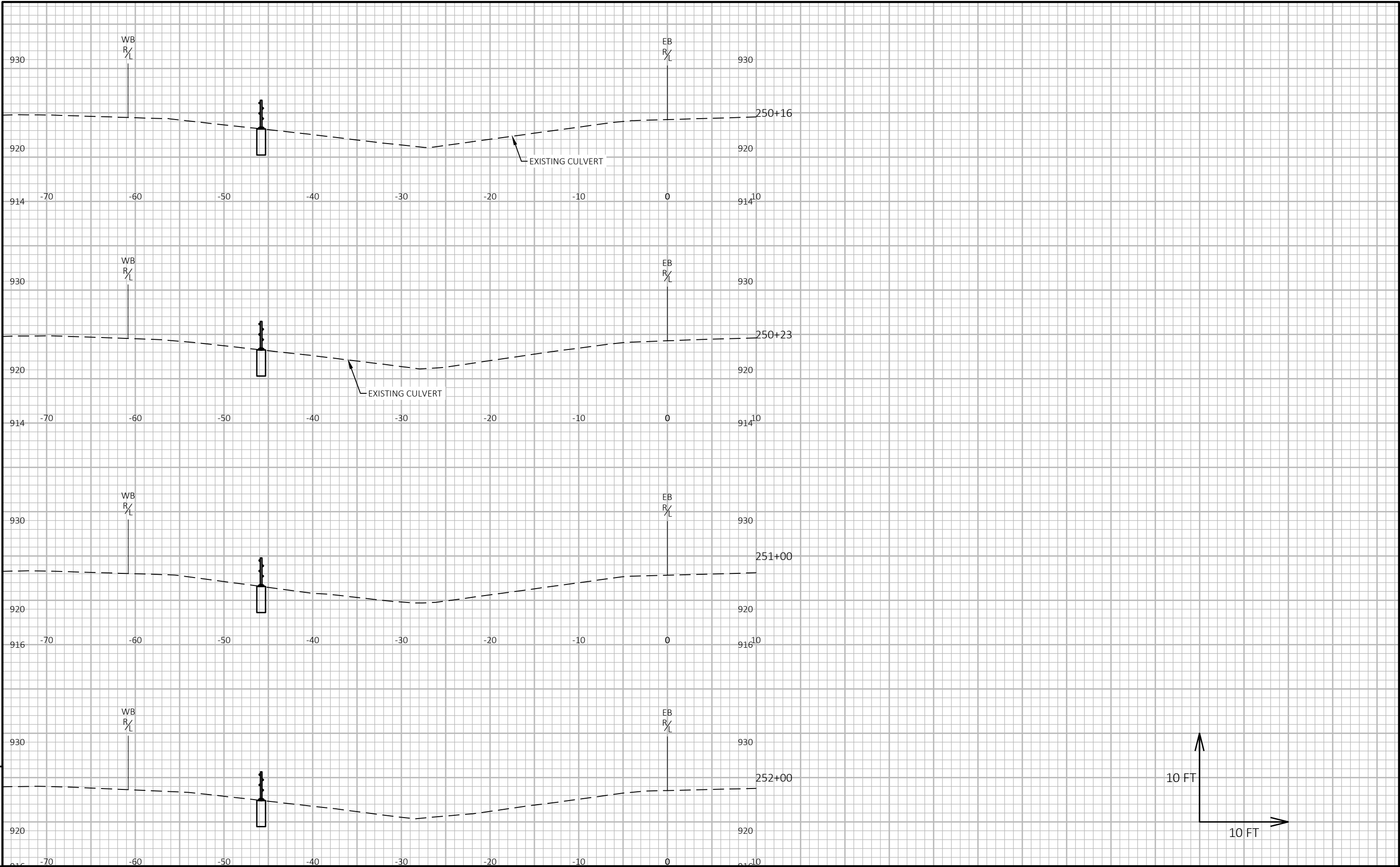
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PROJECT NO: 1050-00-80	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - SEGMENT 2	SHEET 107	E
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[illegible]

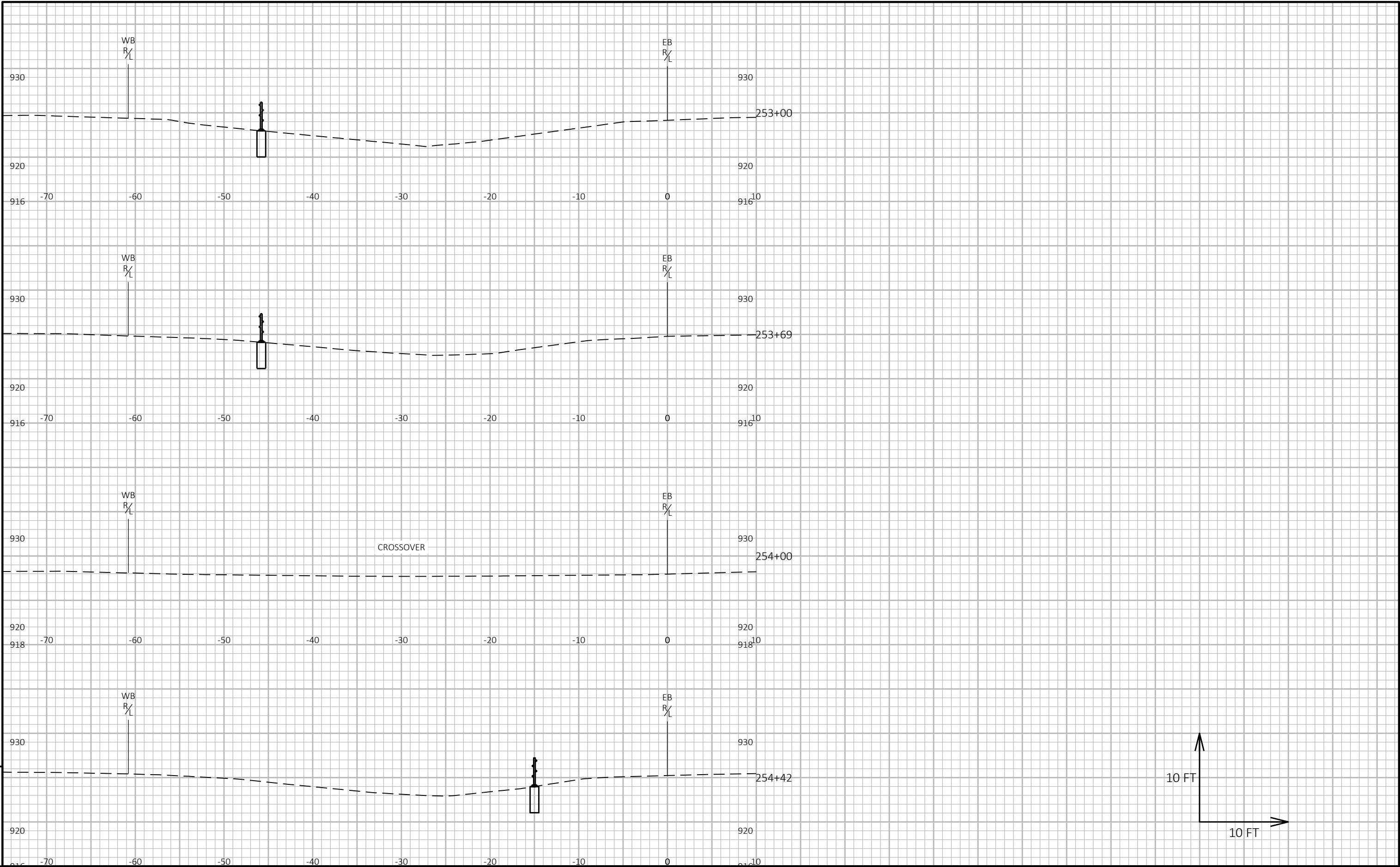




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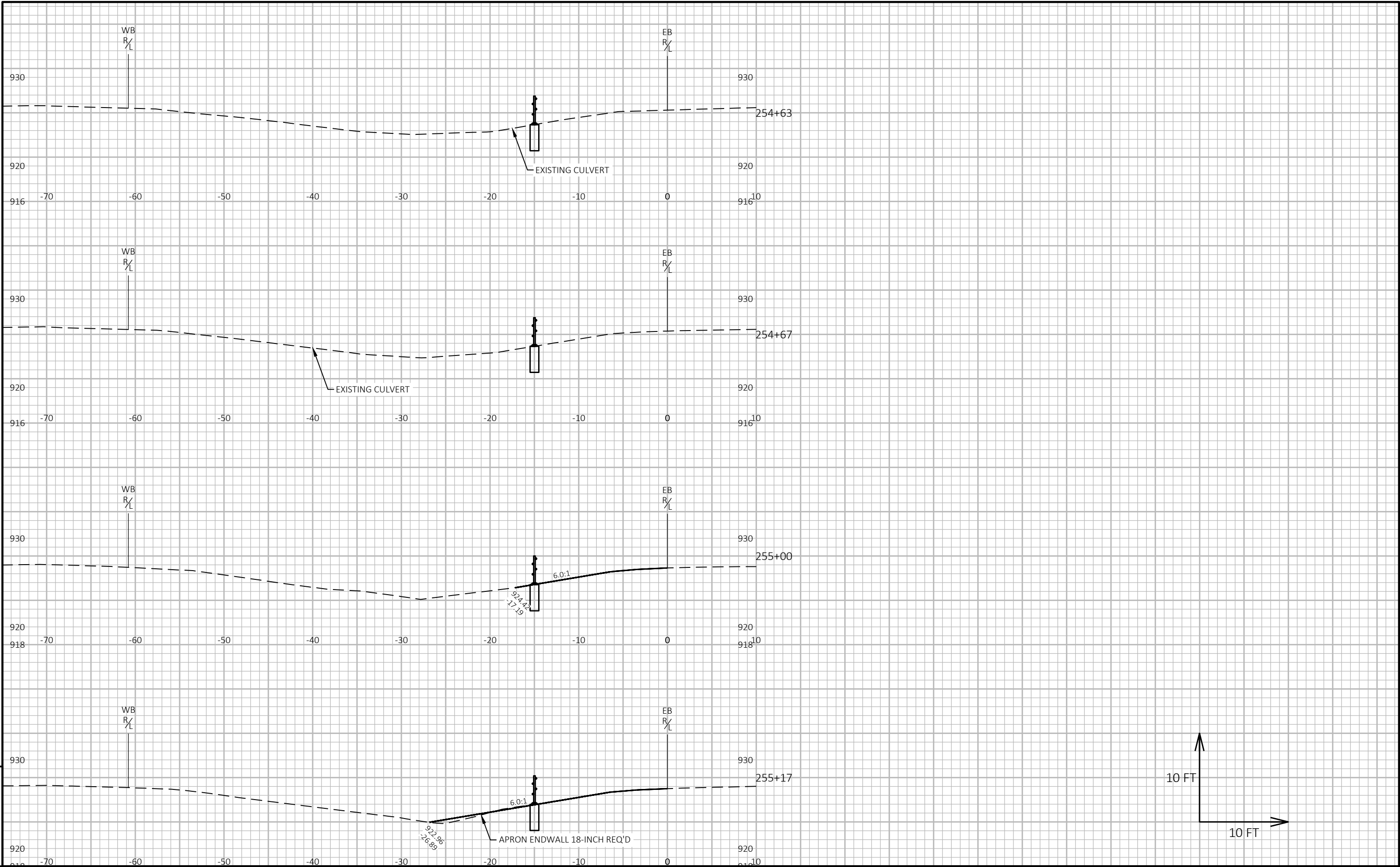
PROJECT NO: 1050-00-80	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - SEGMENT 2	SHEET 109	E
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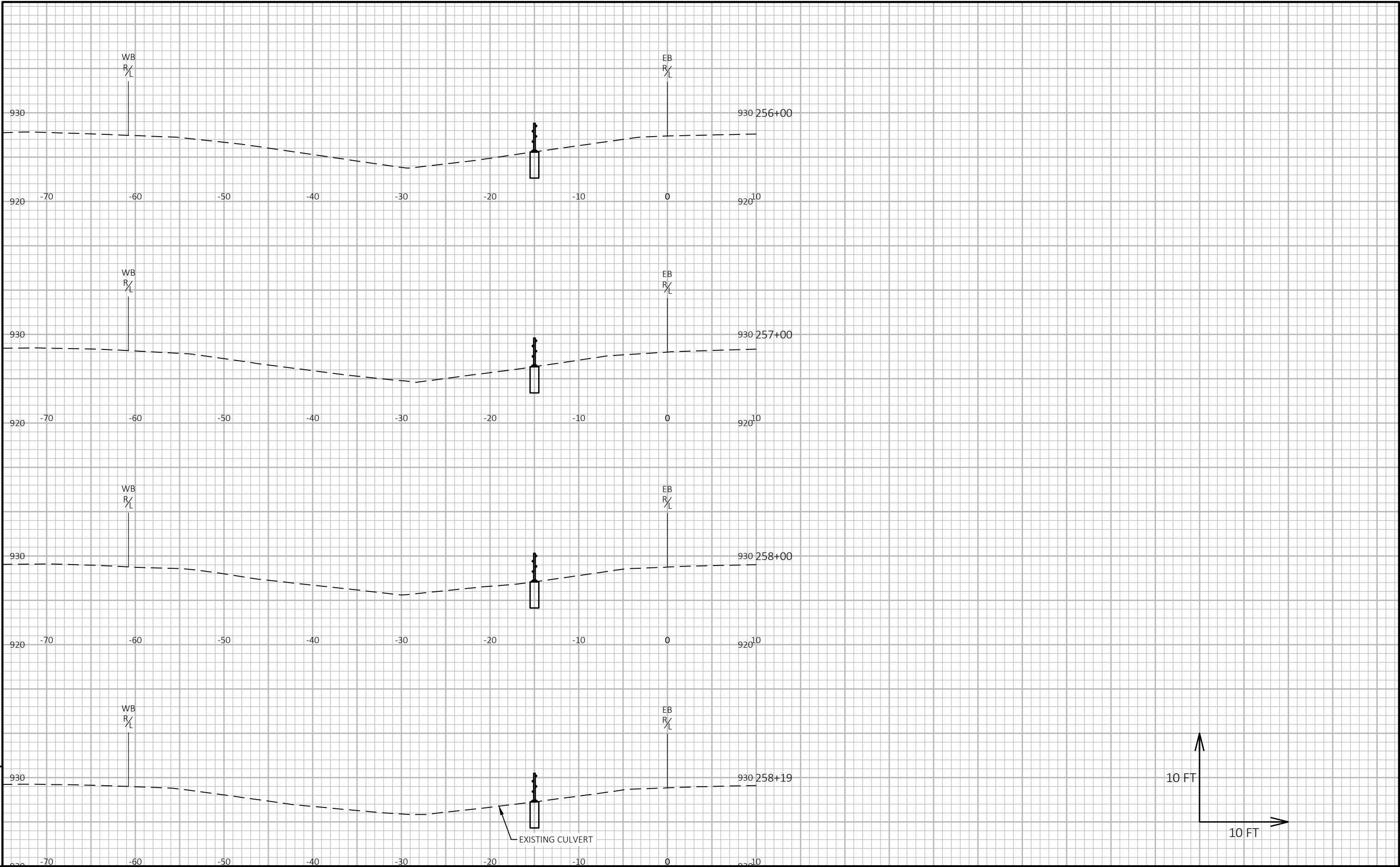


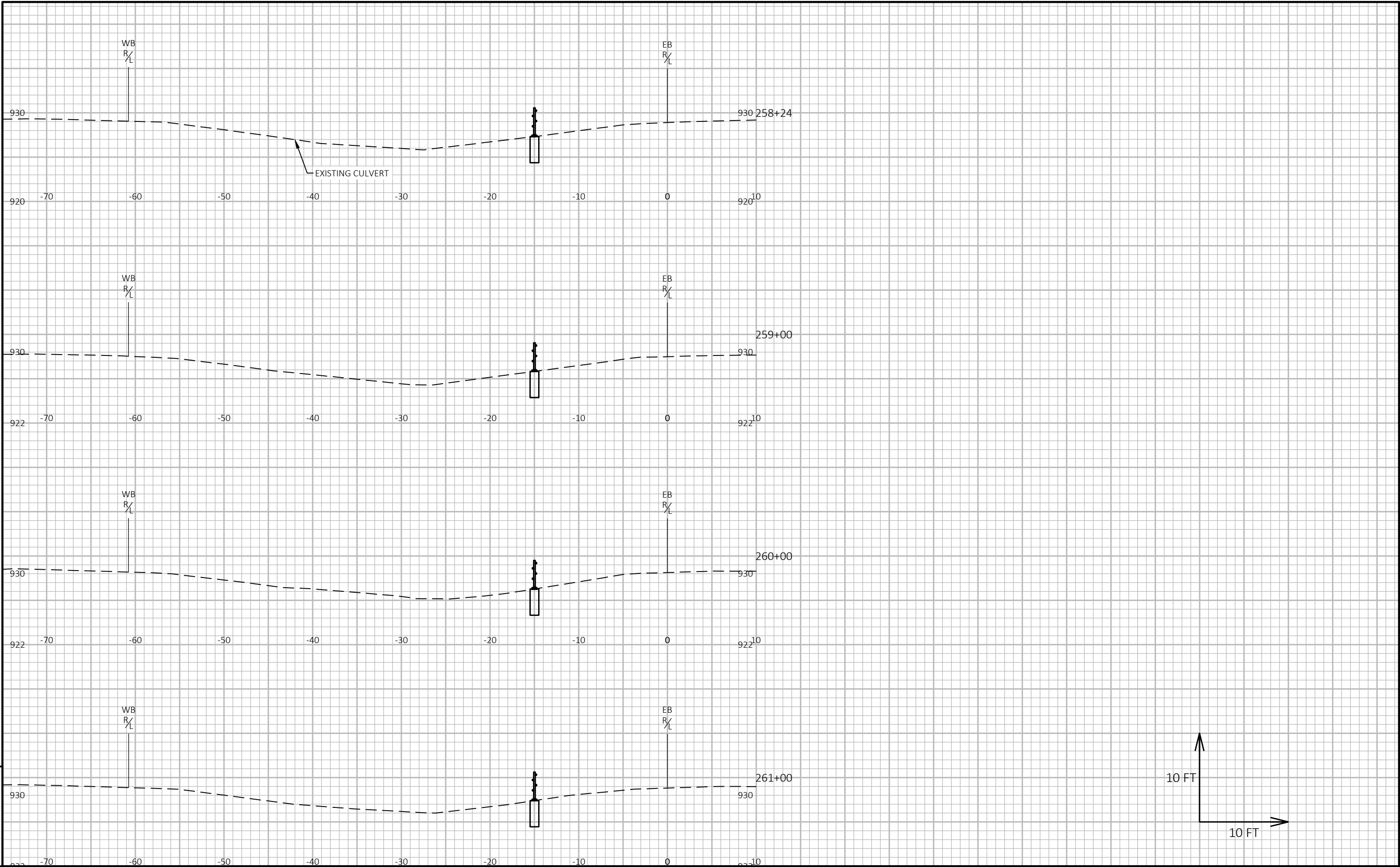
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PROJECT NO: 1050-00-80	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - SEGMENT 2	SHEET 110	E
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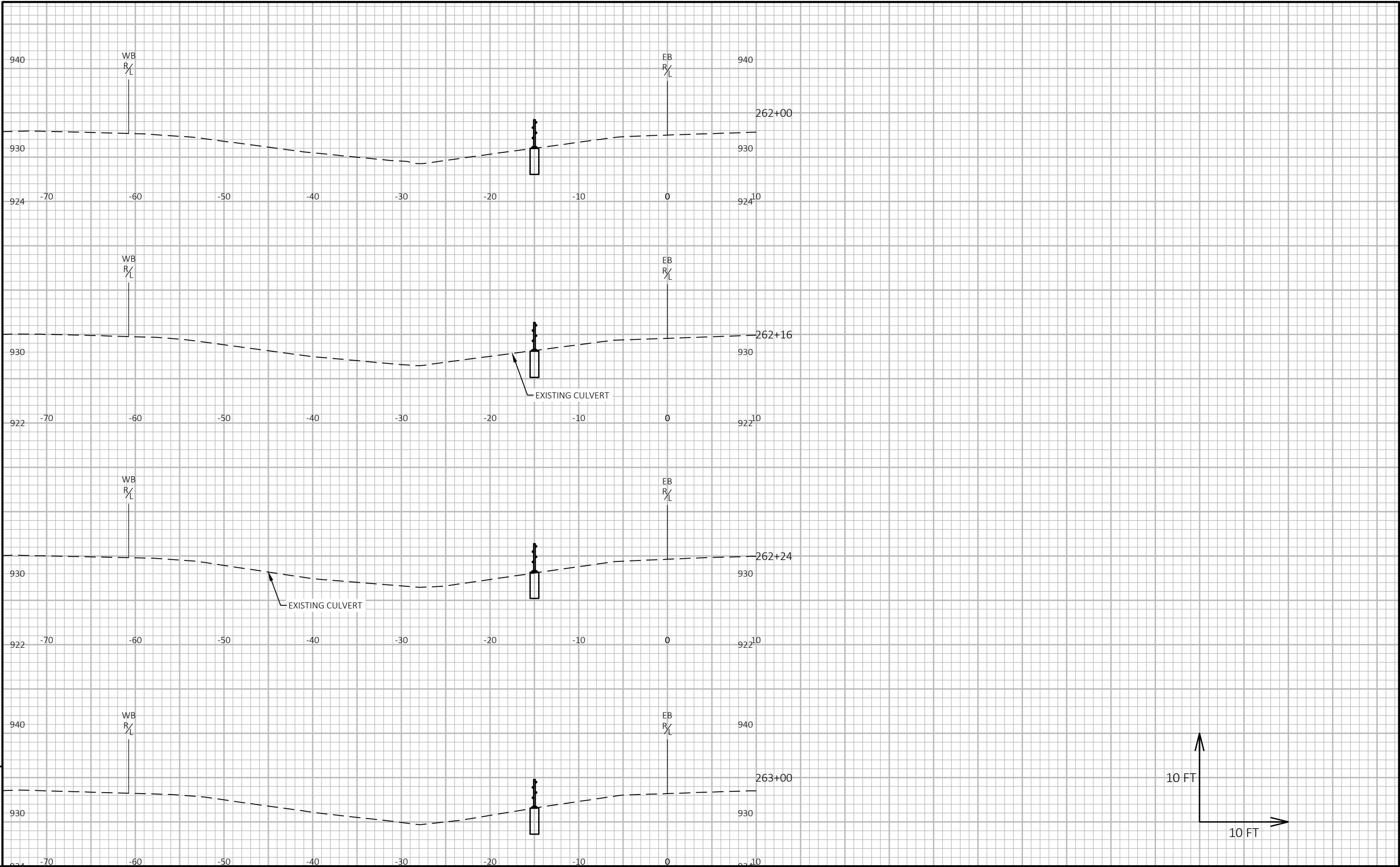






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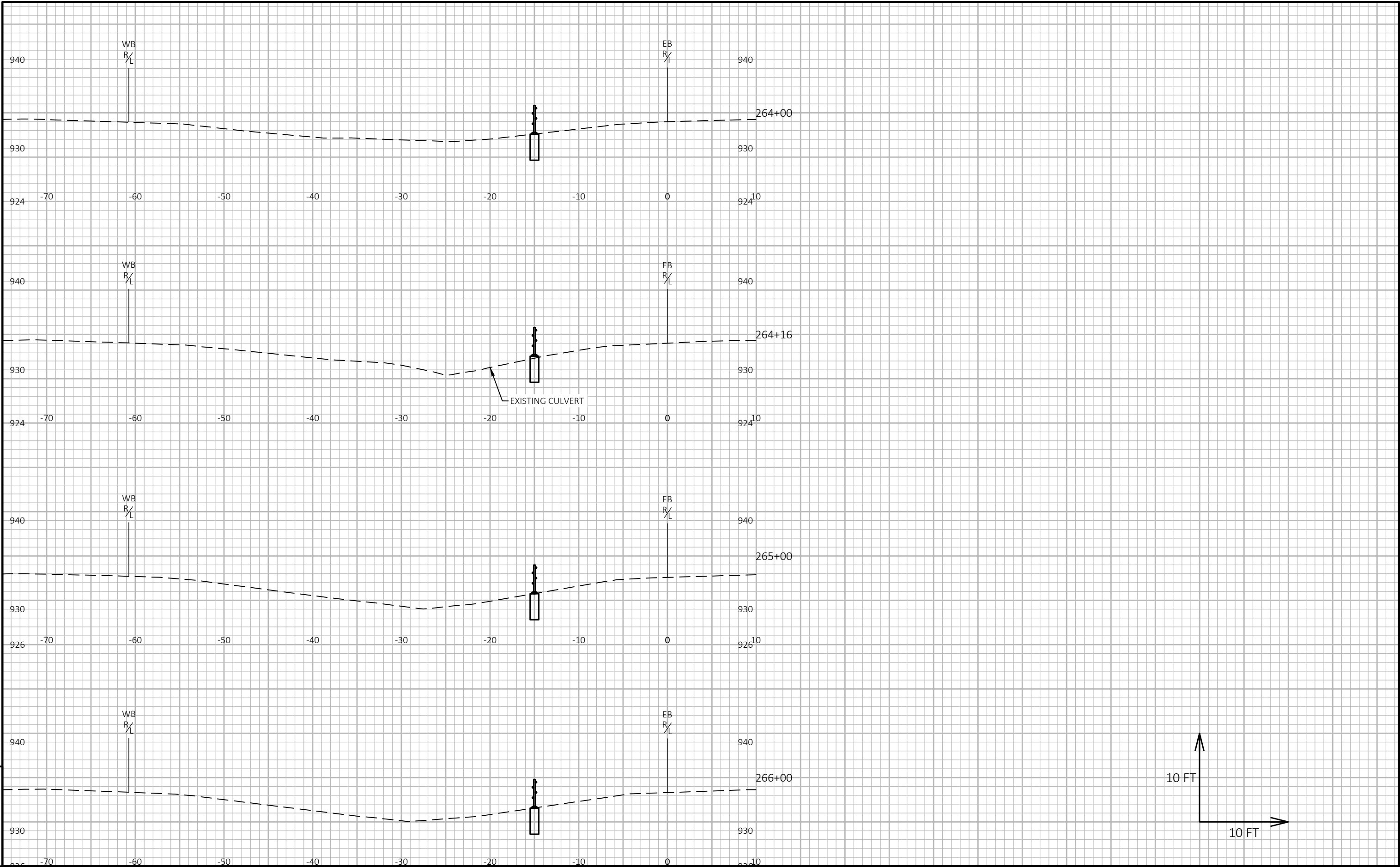
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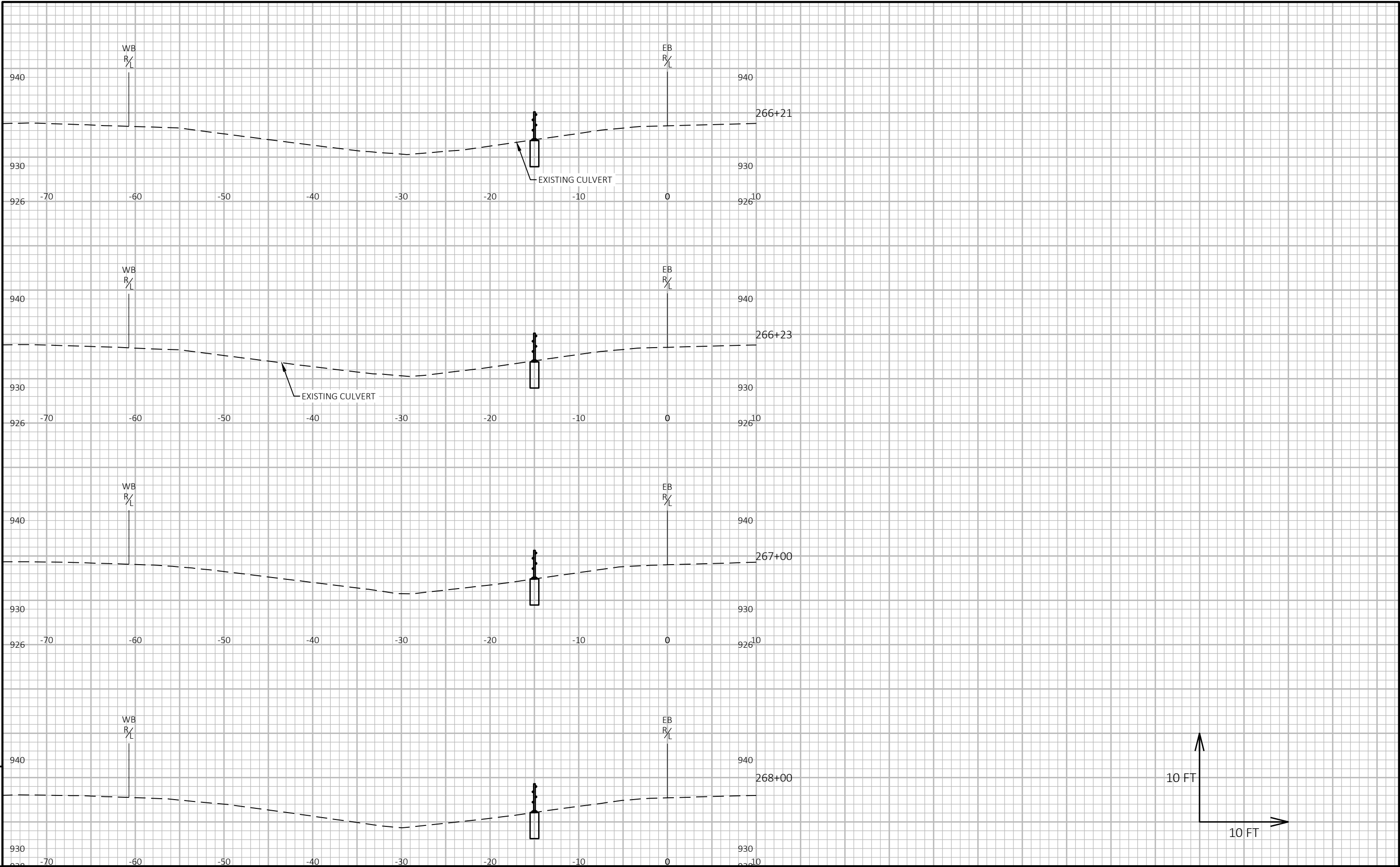
PROJECT NO: 1050-00-80	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - SEGMENT 2	SHEET 114	E
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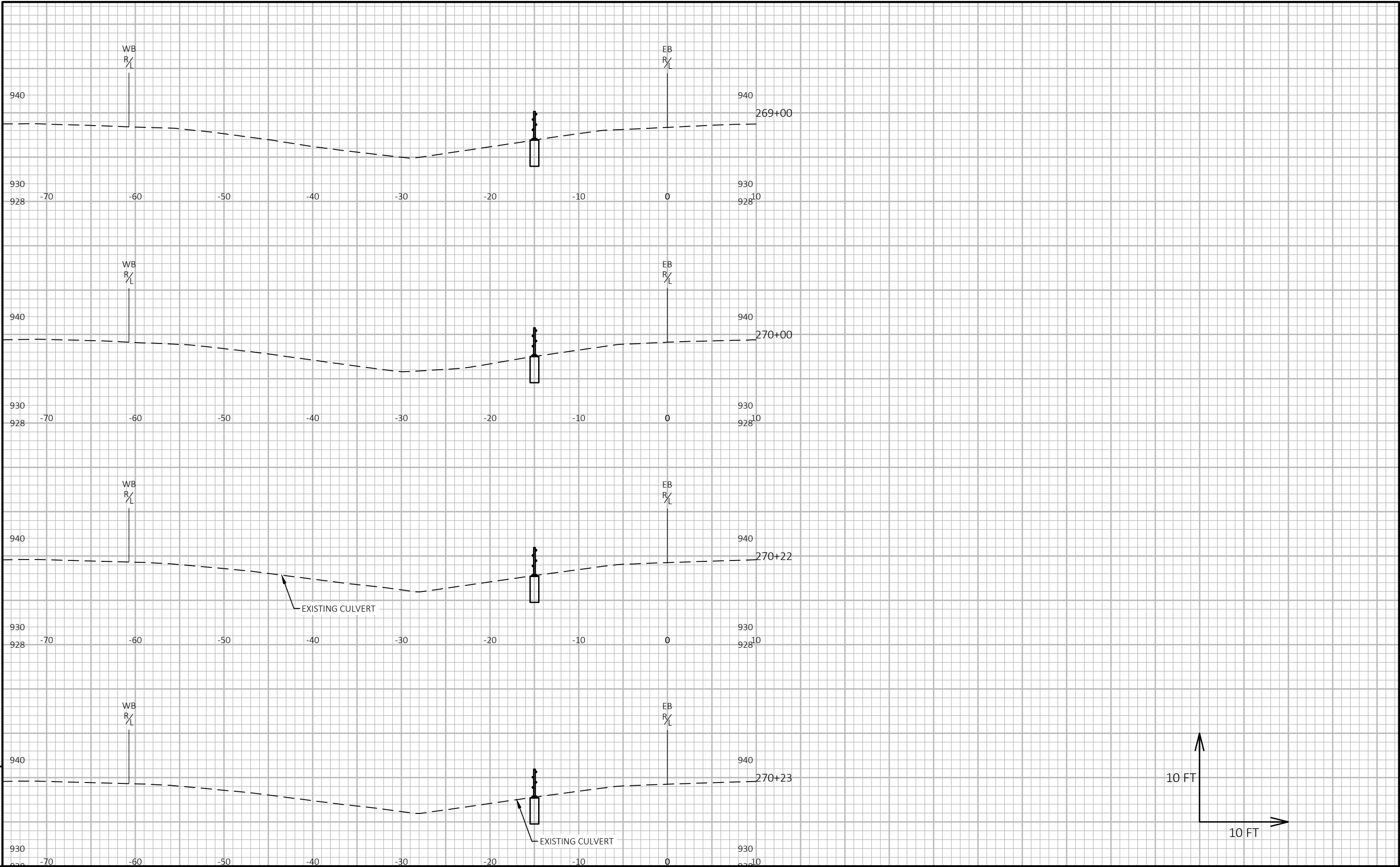
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PROJECT NO: 1050-00-80	HWY: STH 29	COUNTY: CHIPPEWA	CROSS SECTIONS: STH 29 - SEGMENT 2	SHEET 115	E
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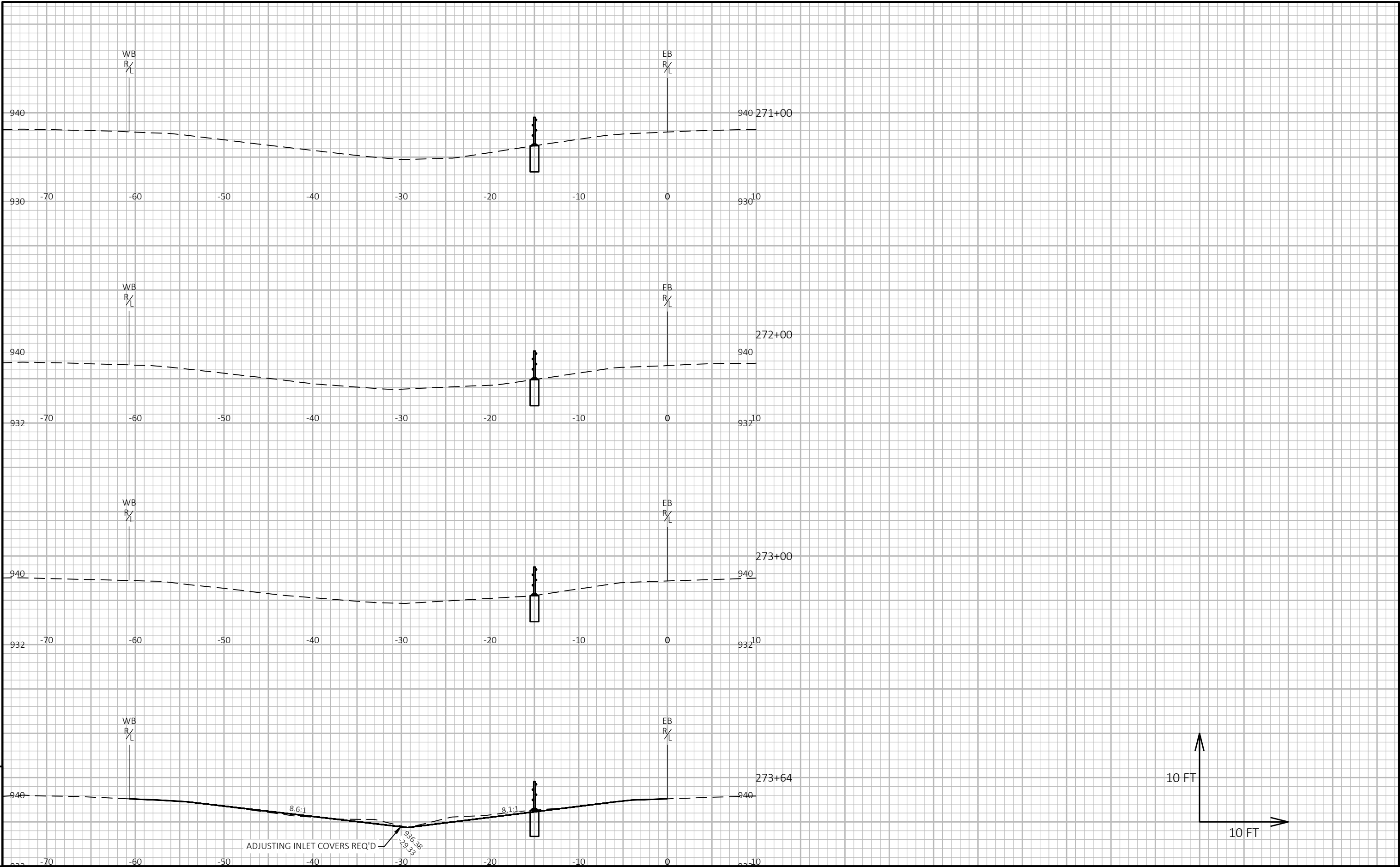
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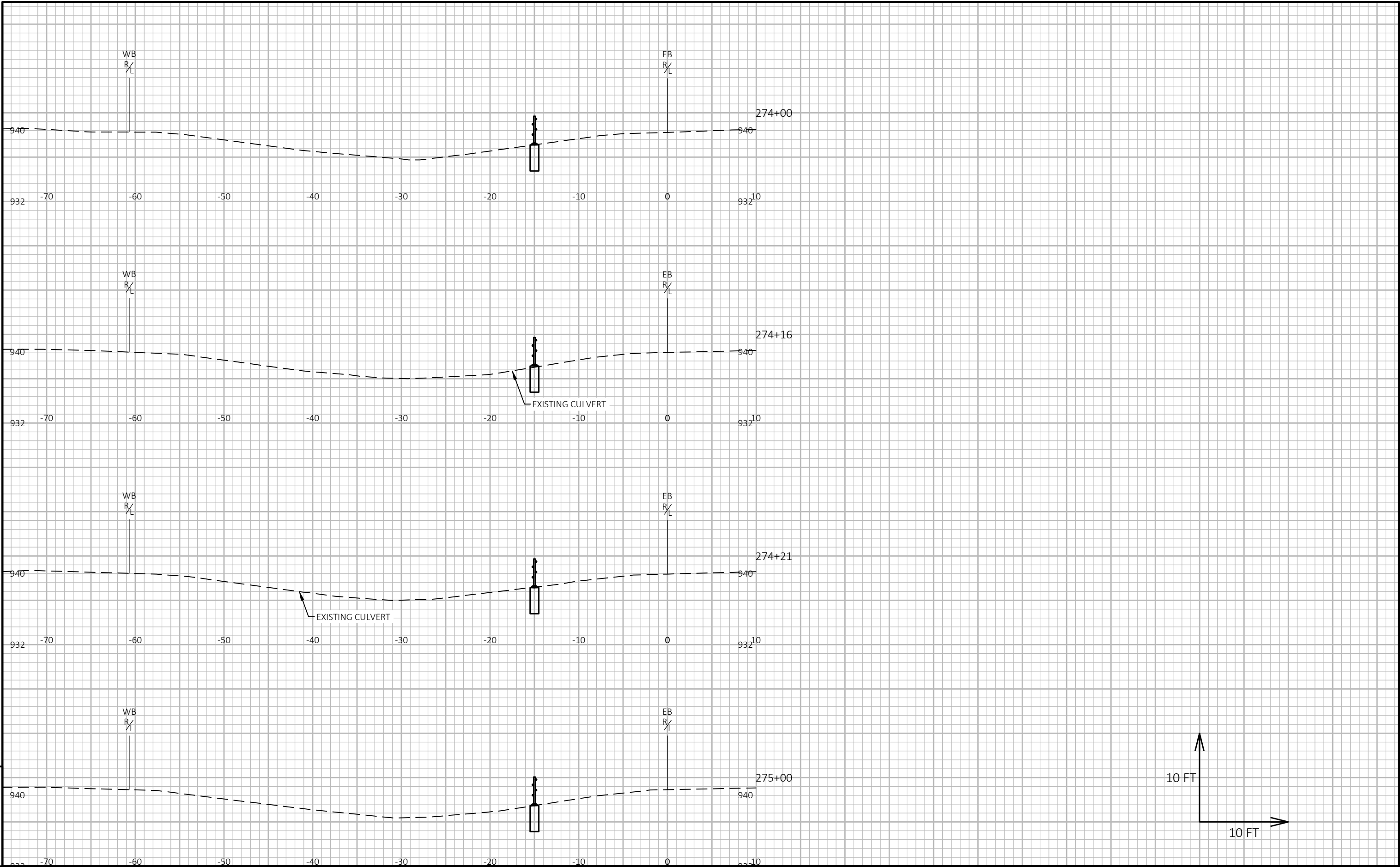
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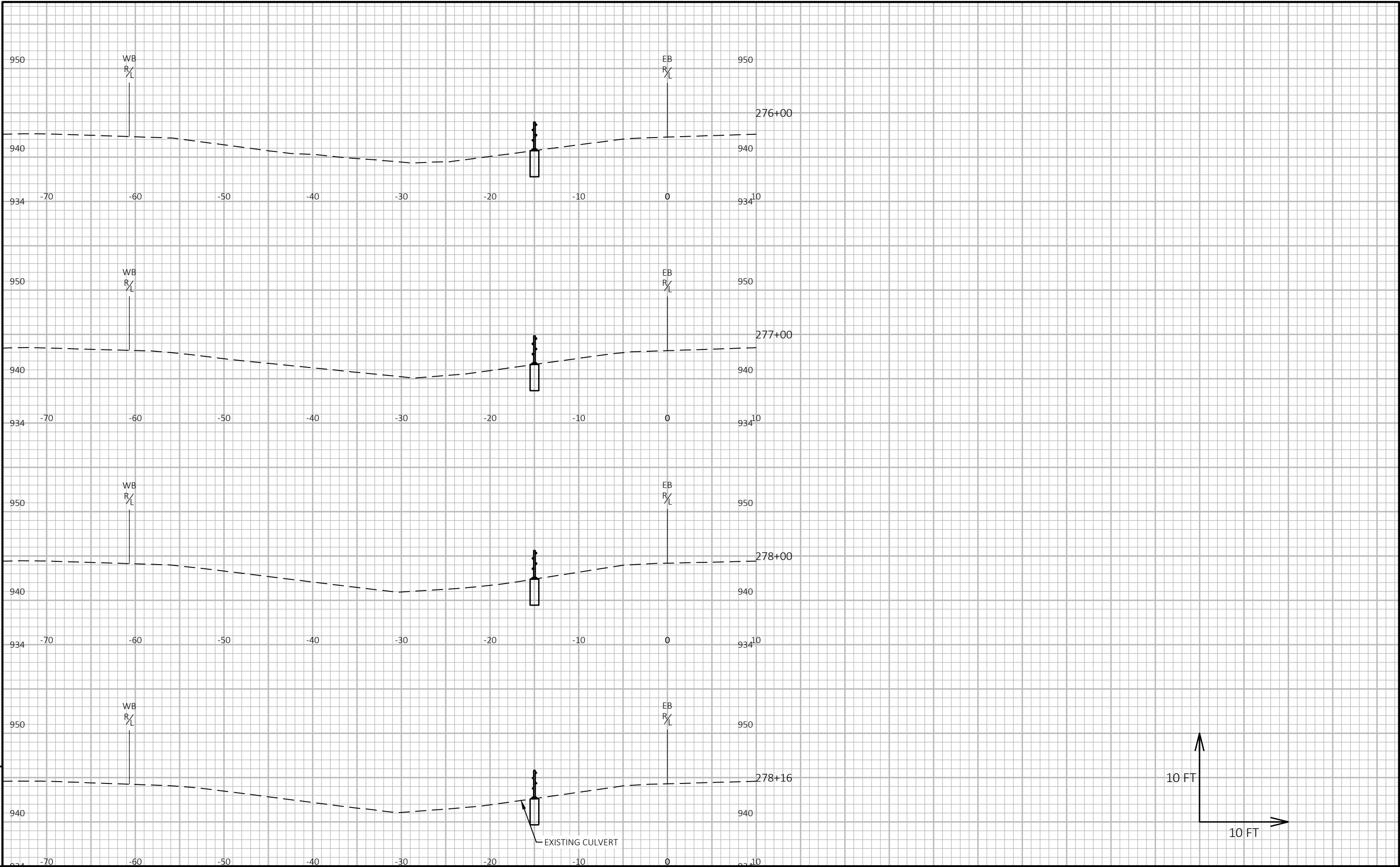
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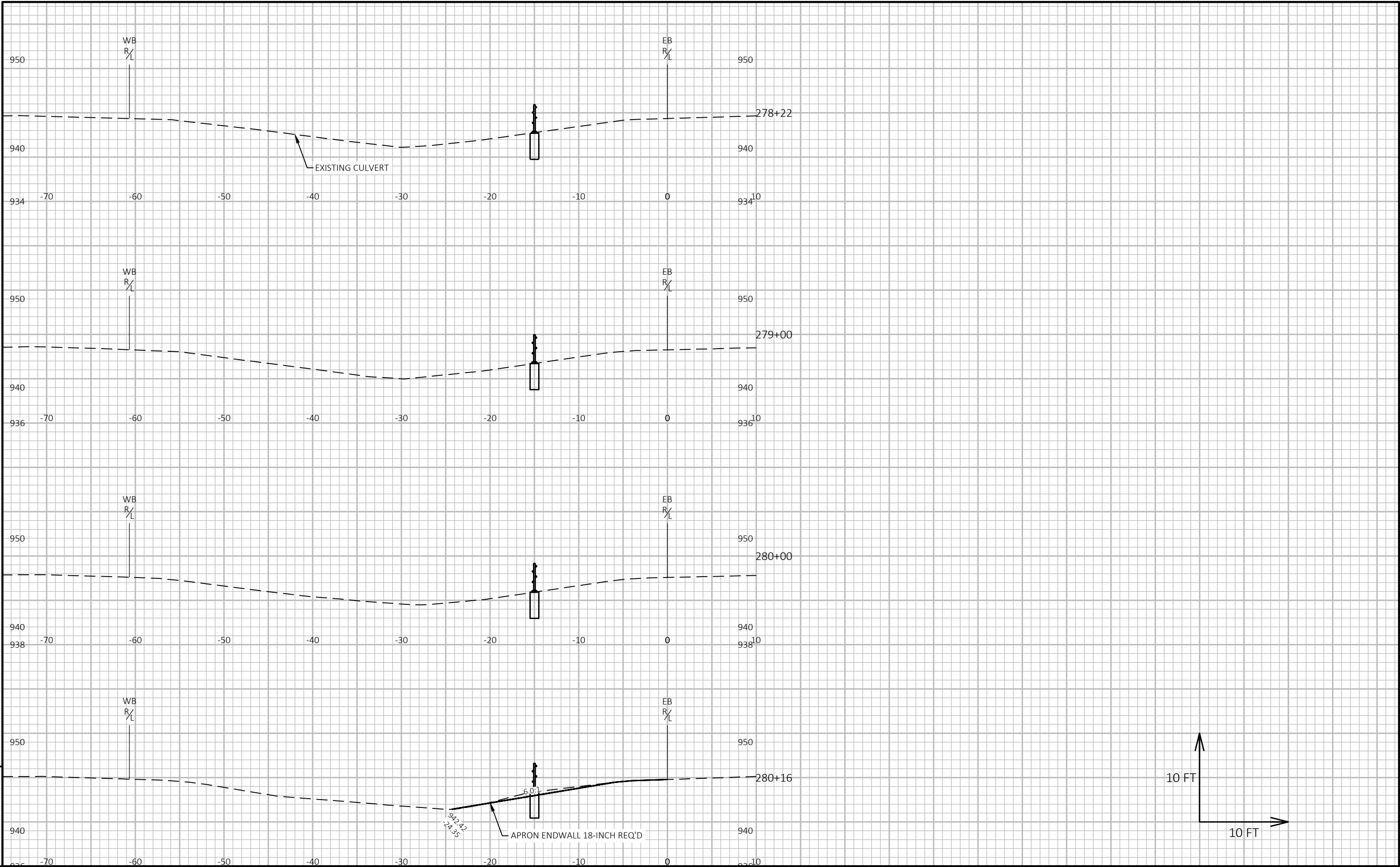
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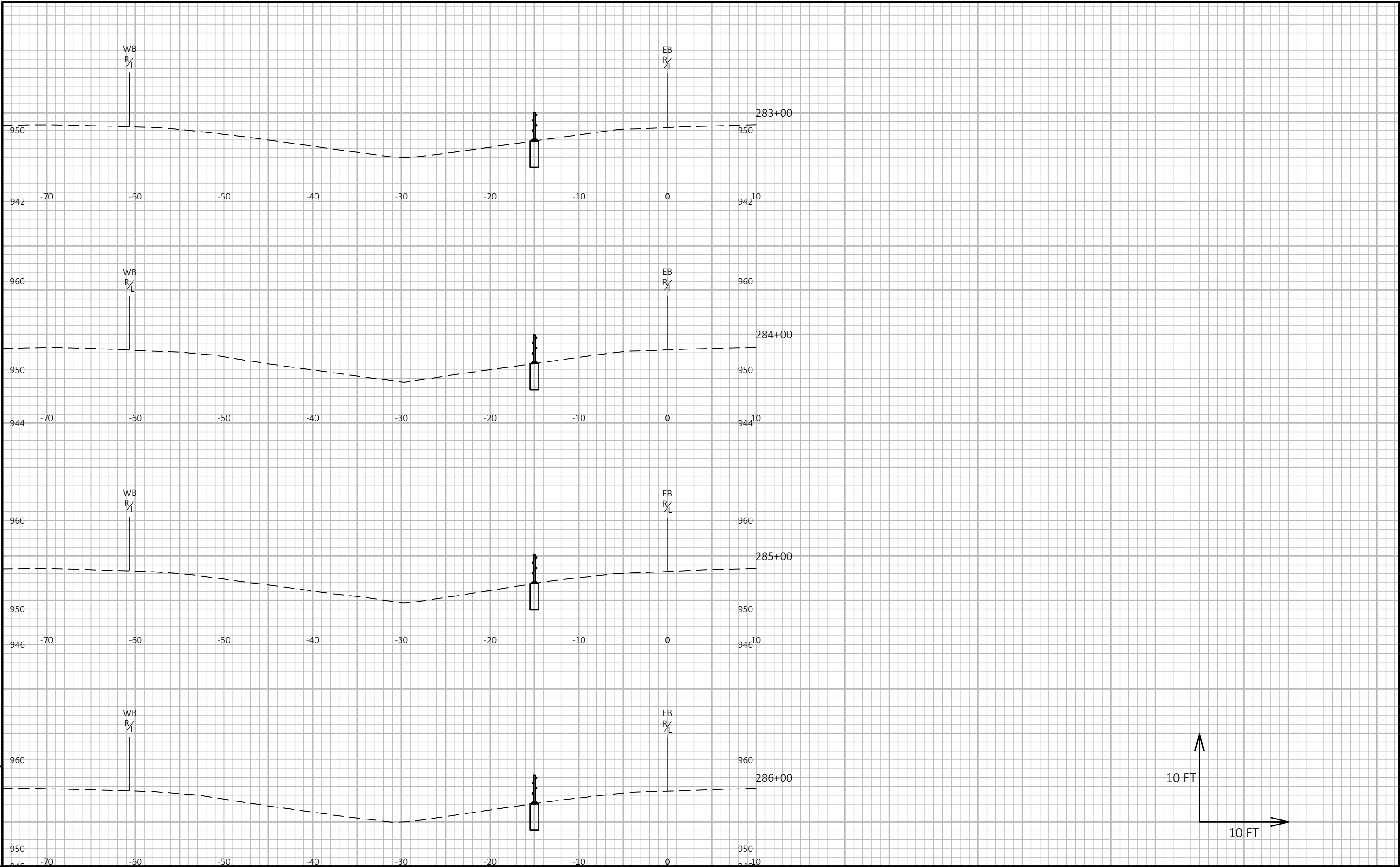
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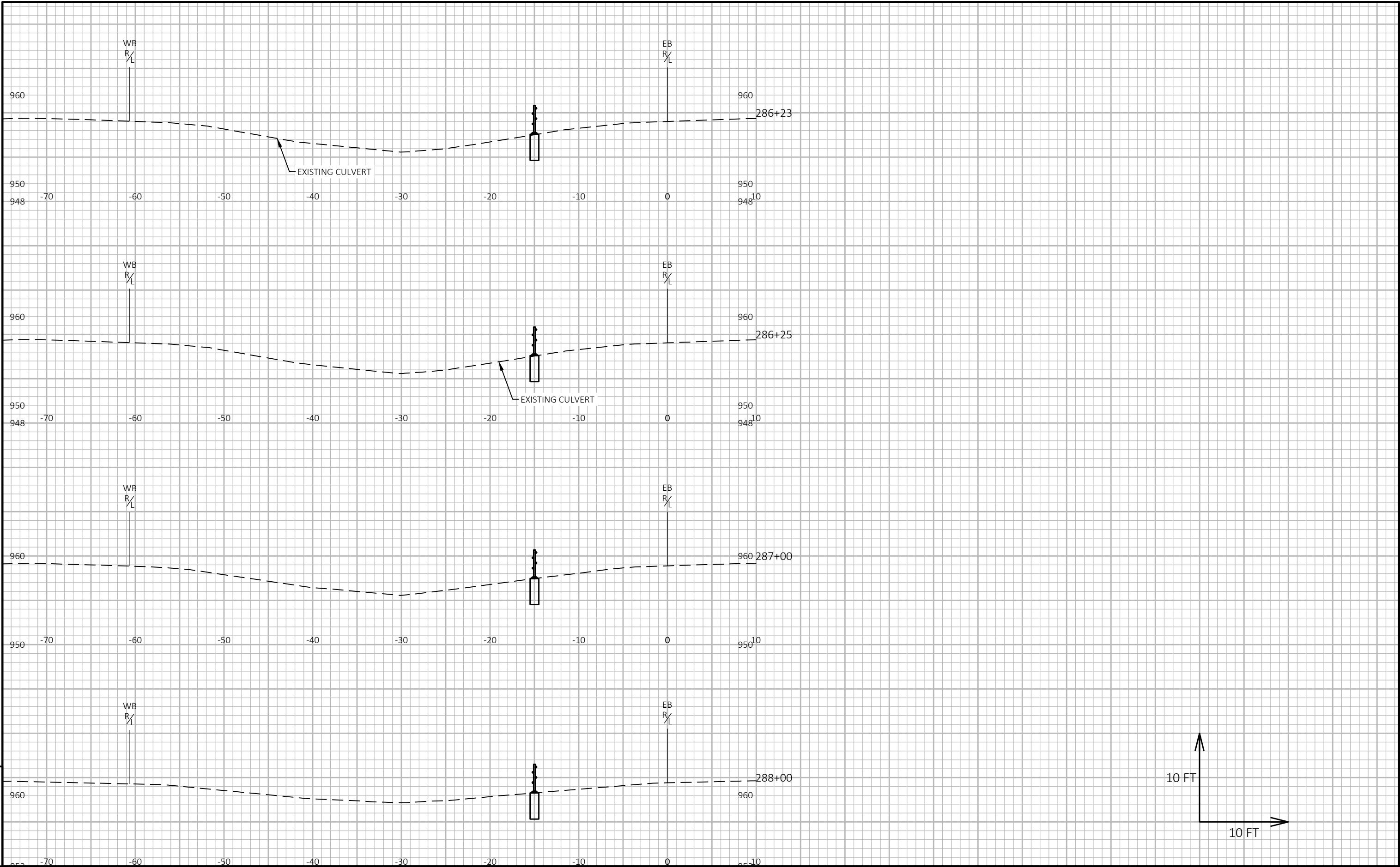


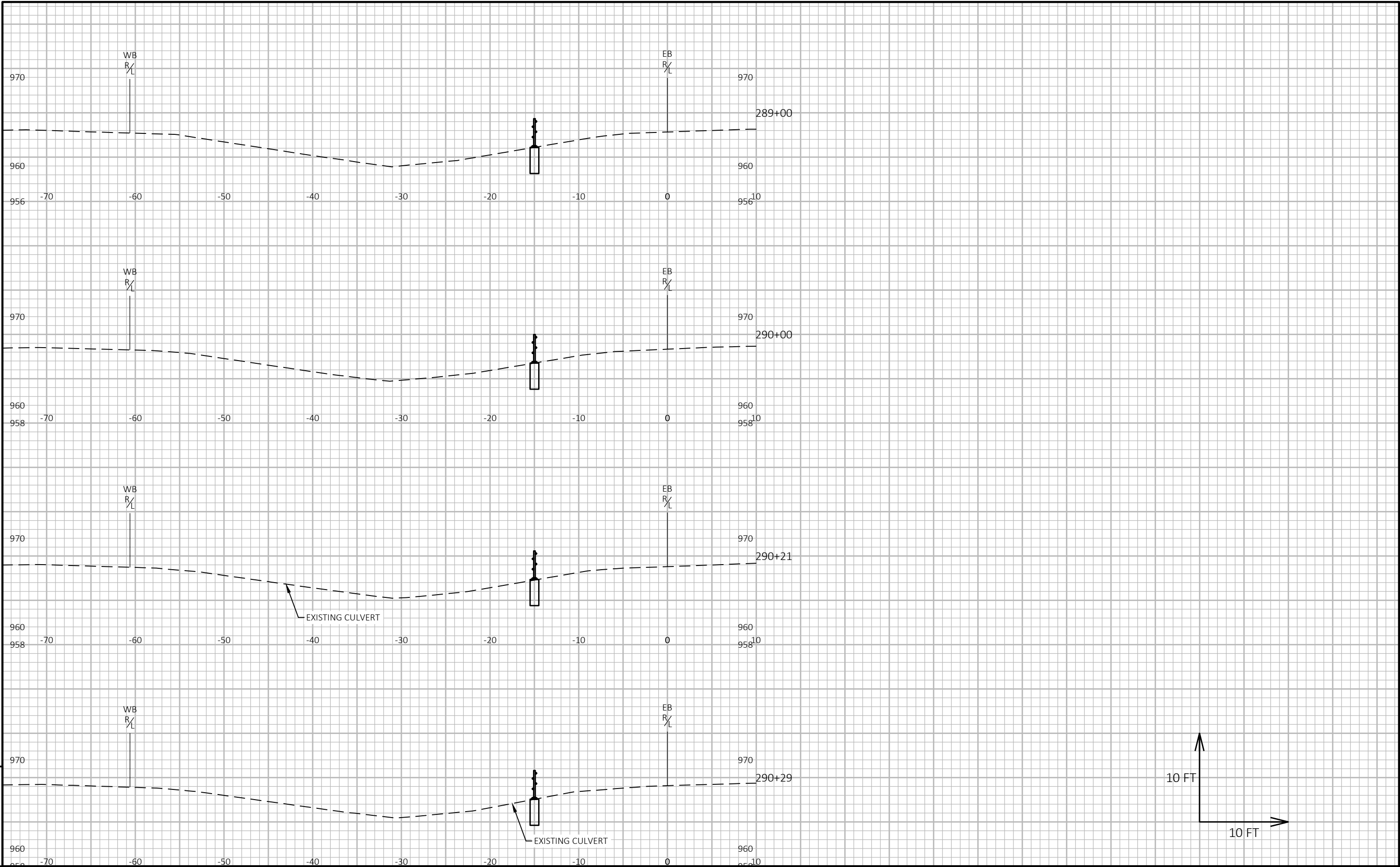


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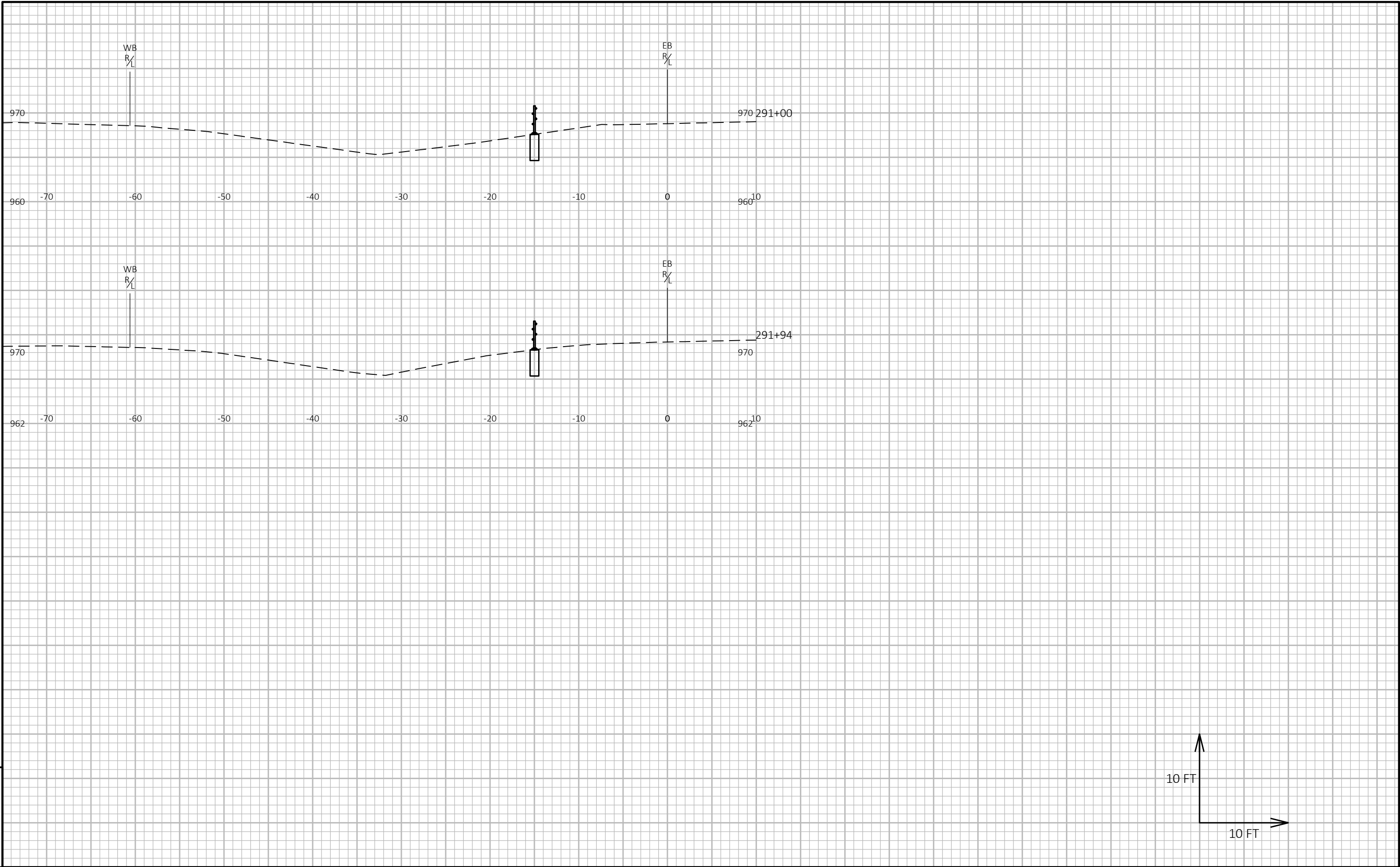
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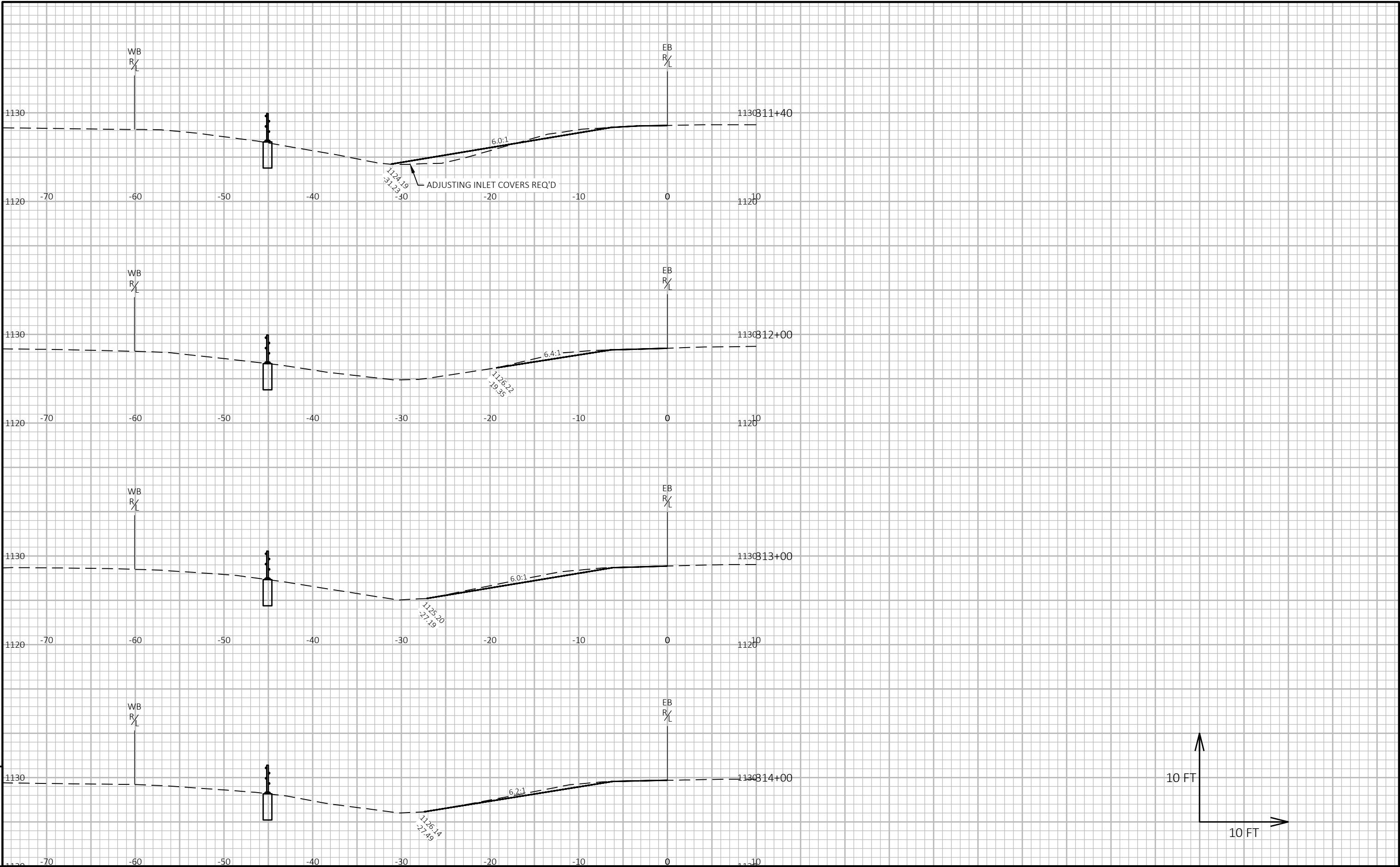
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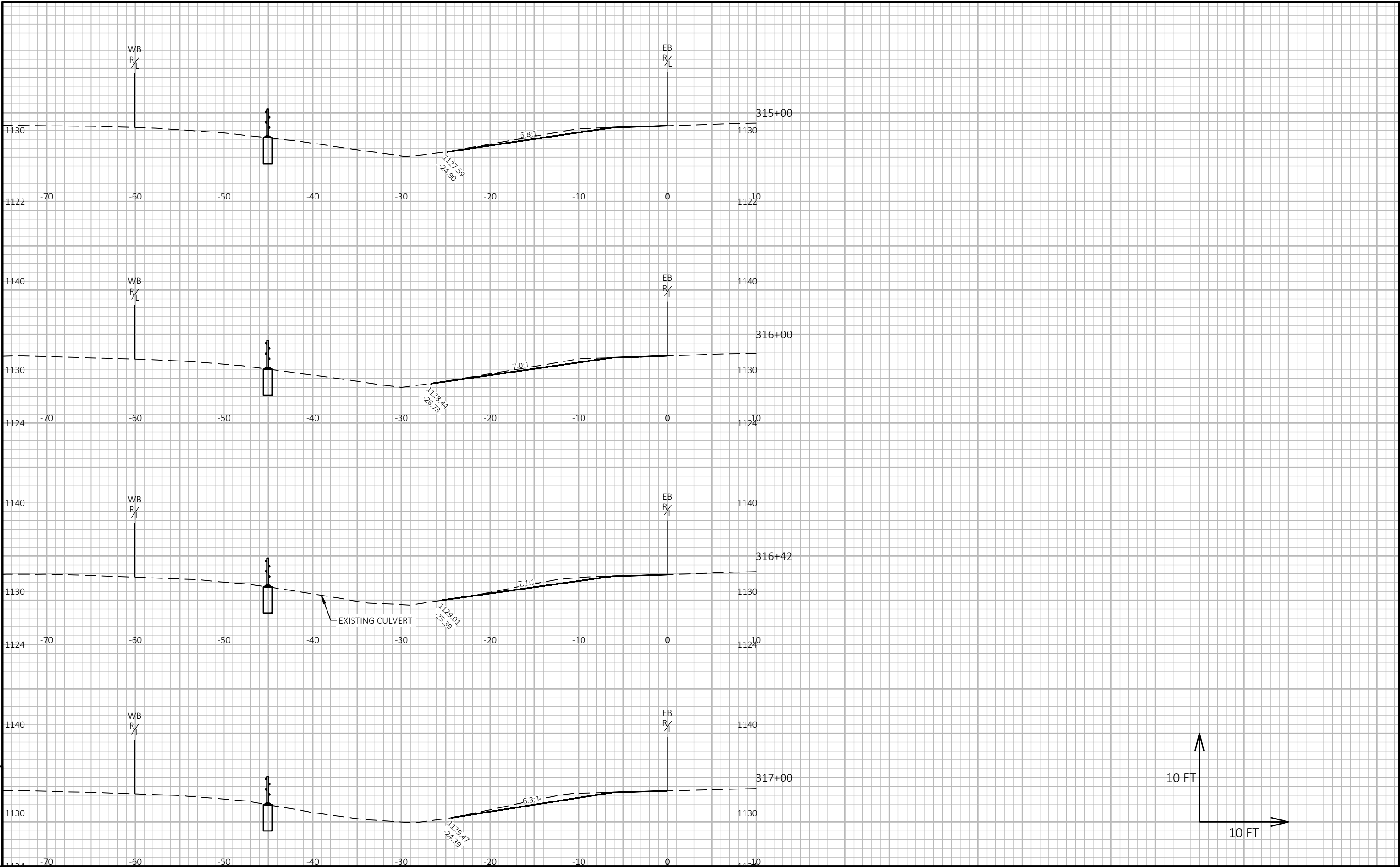
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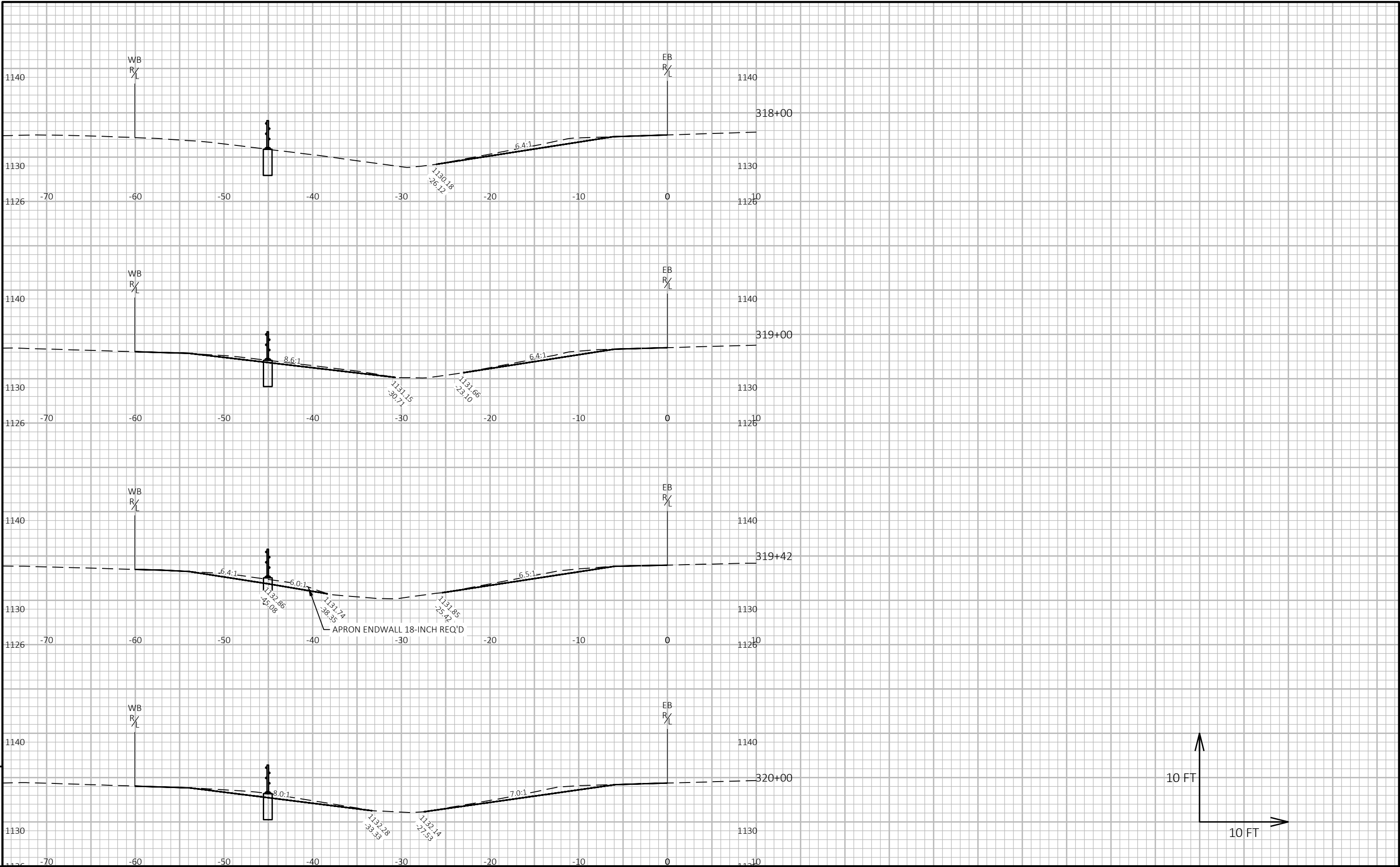
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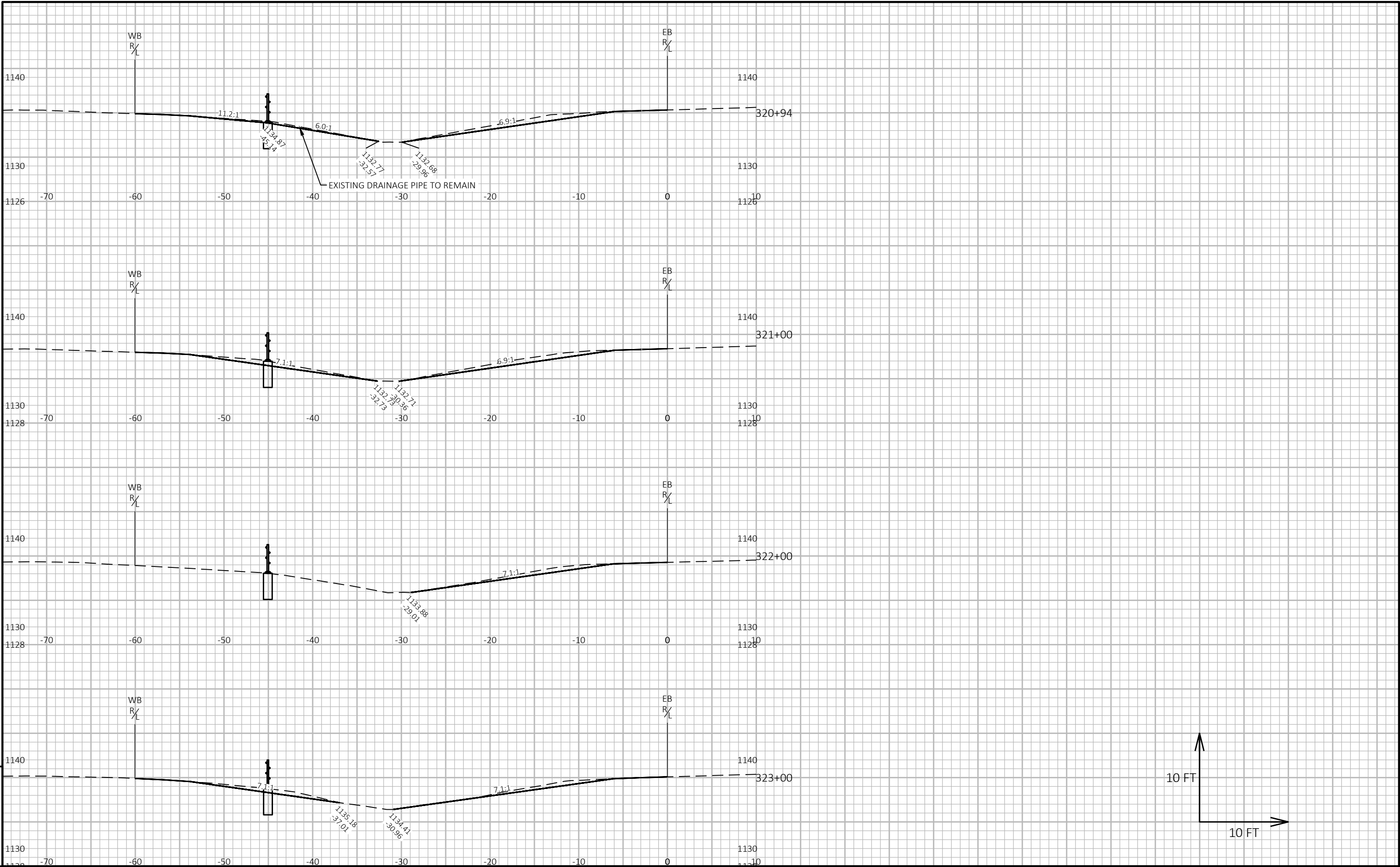


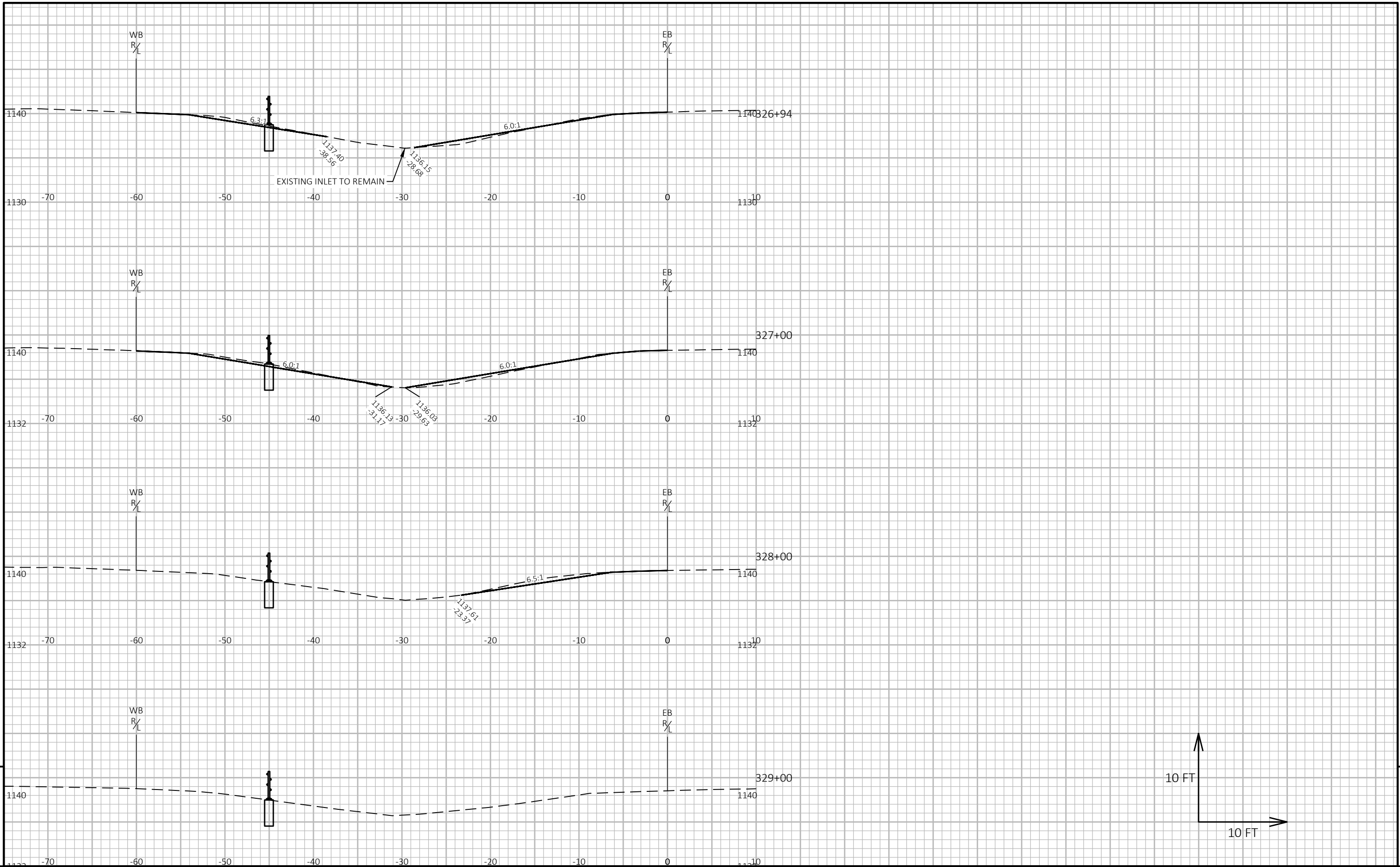


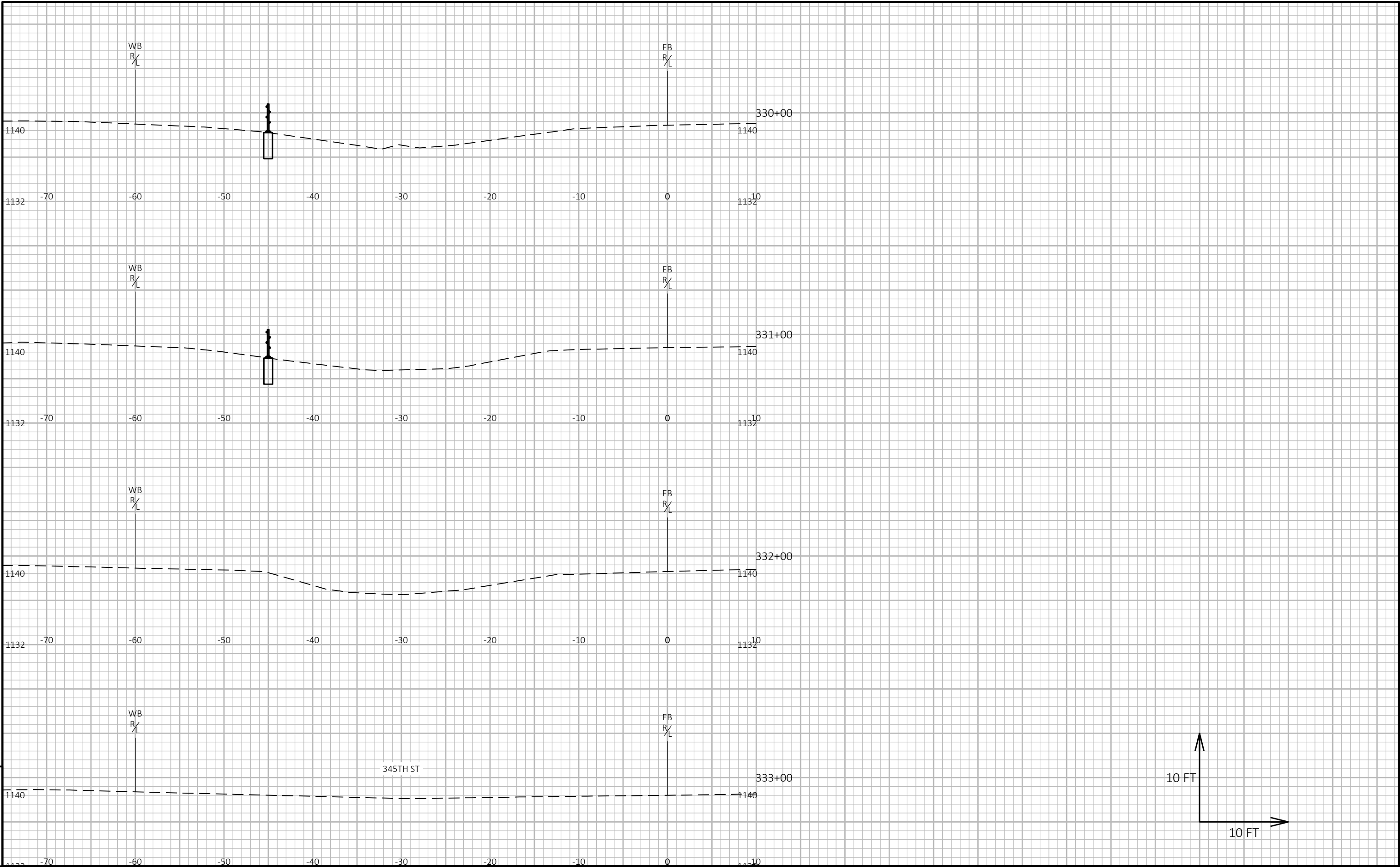
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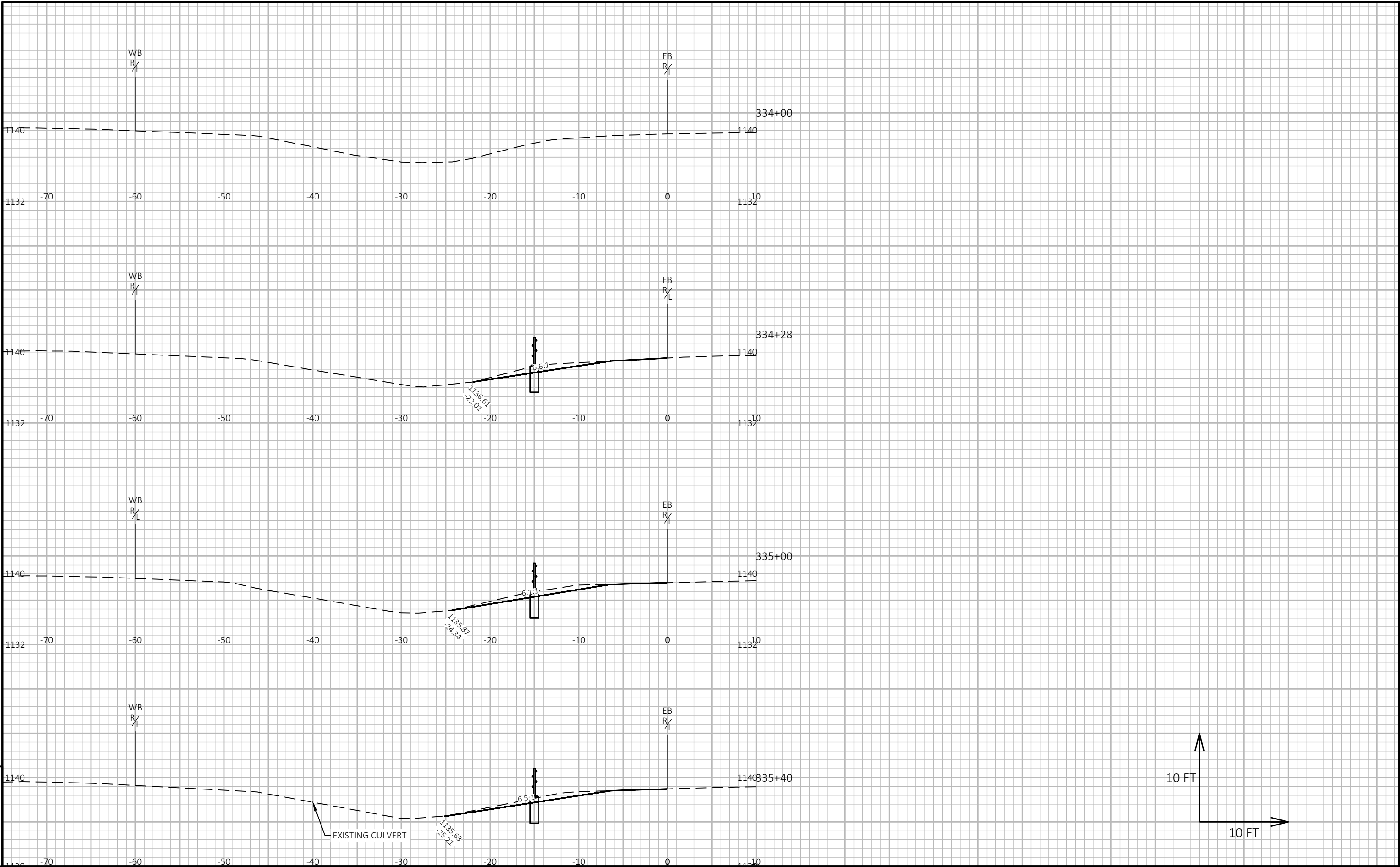


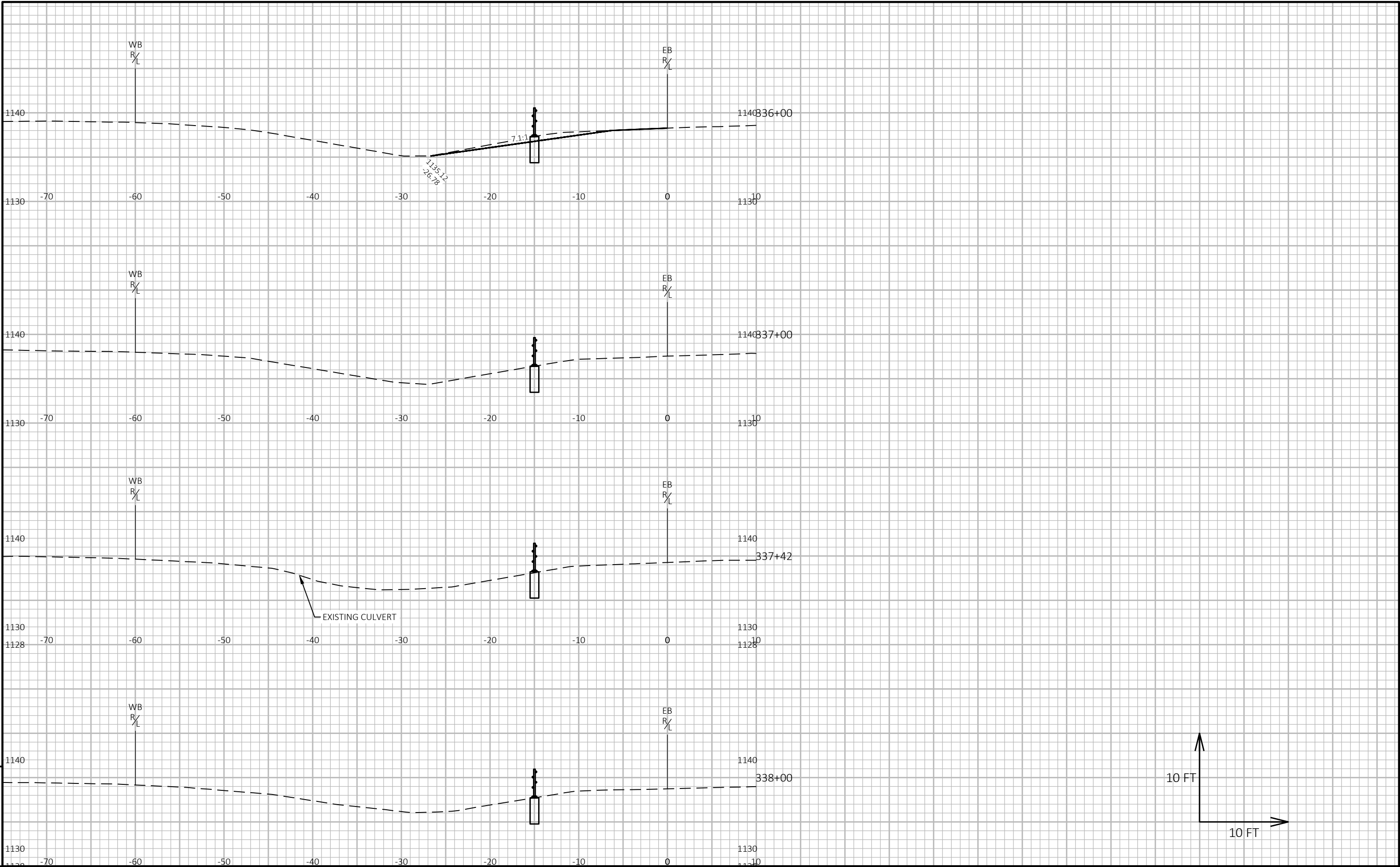


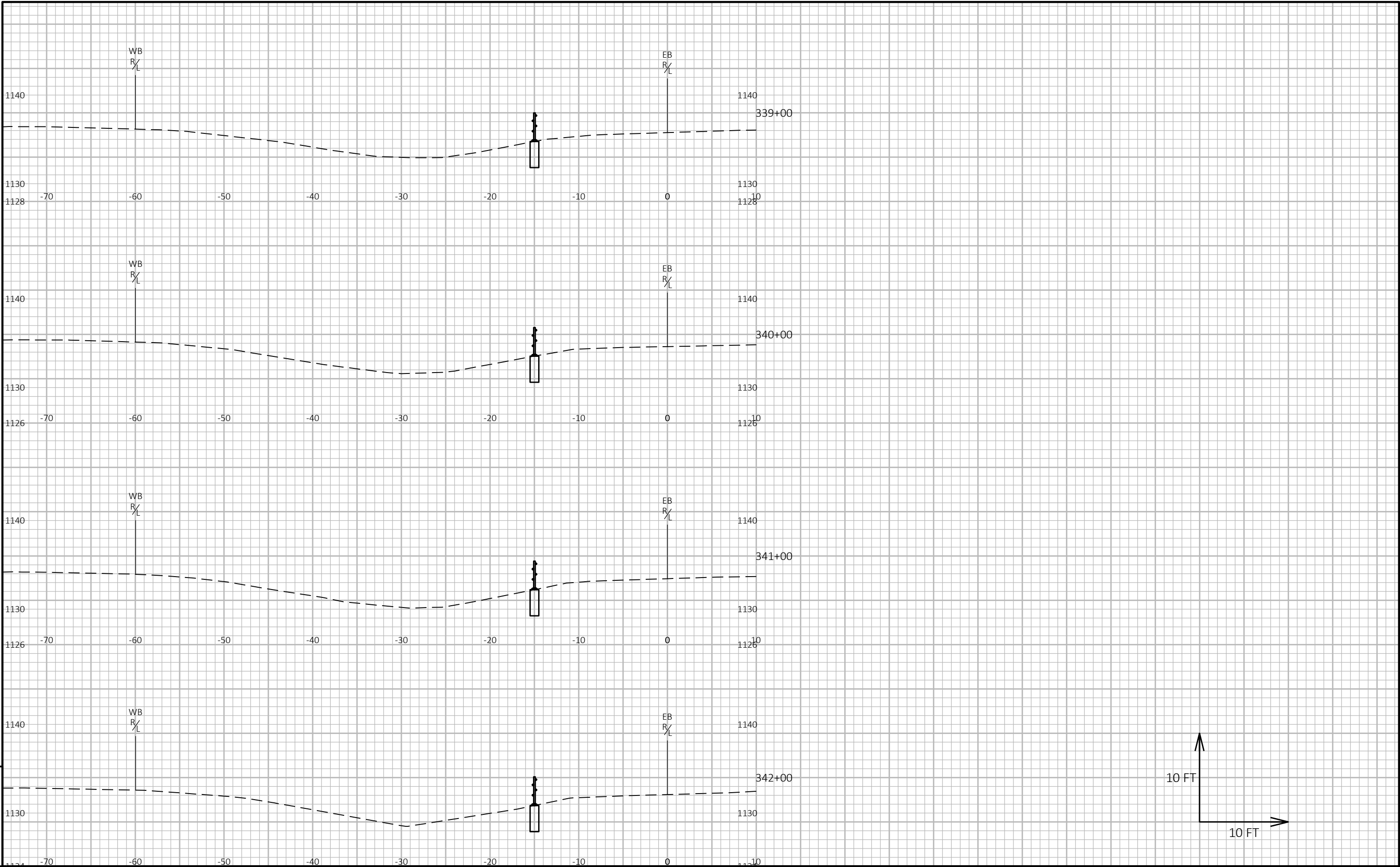


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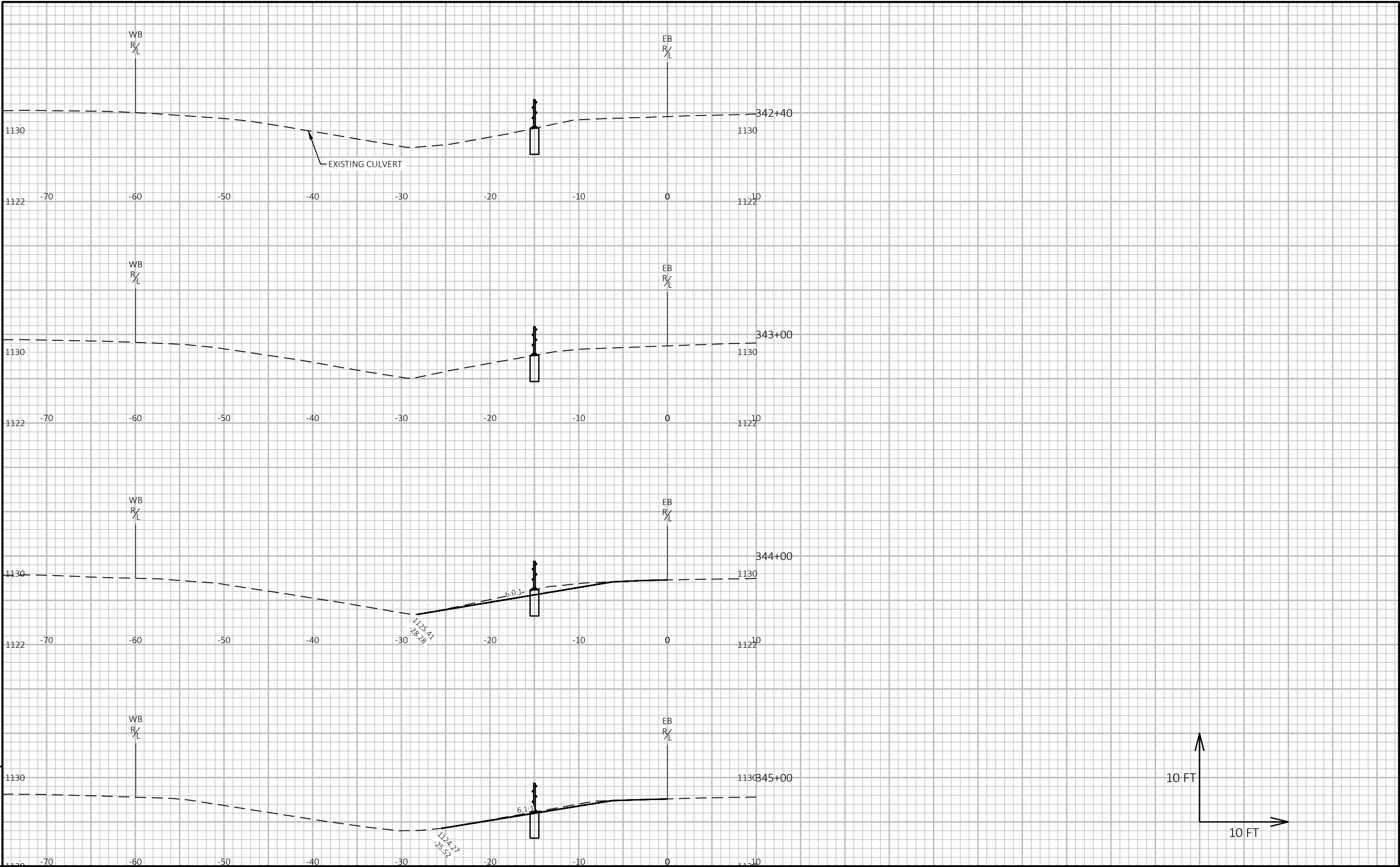


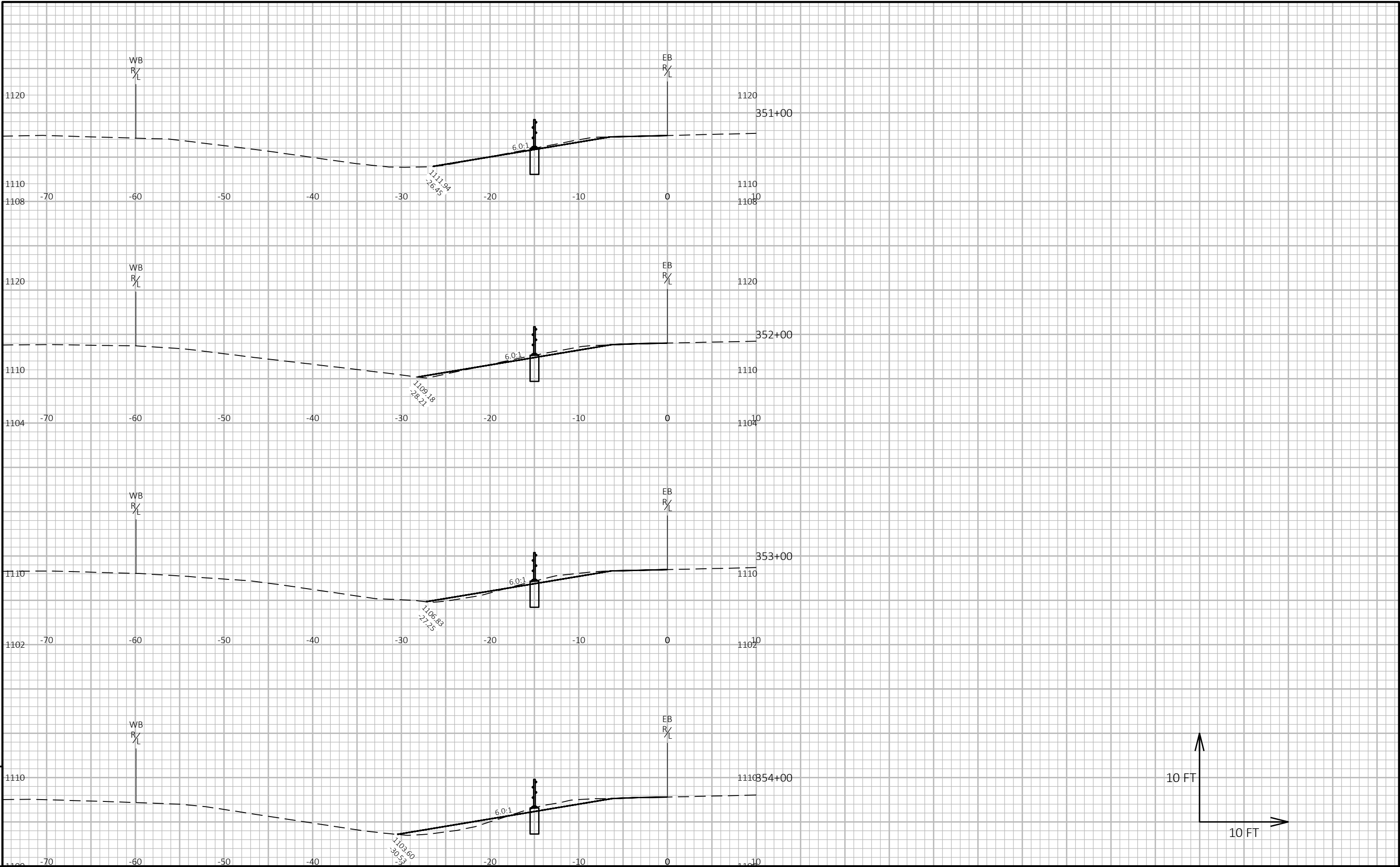


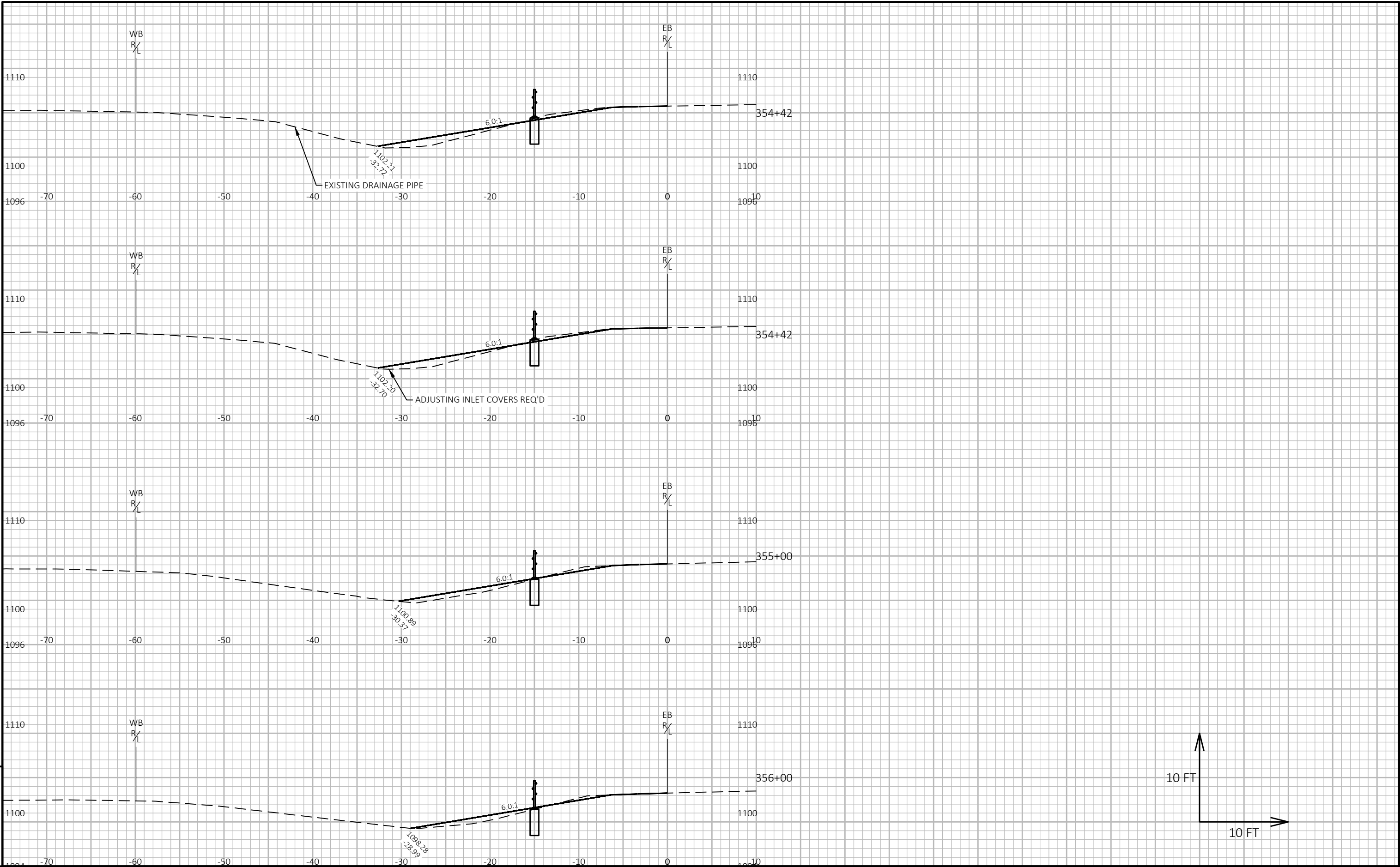


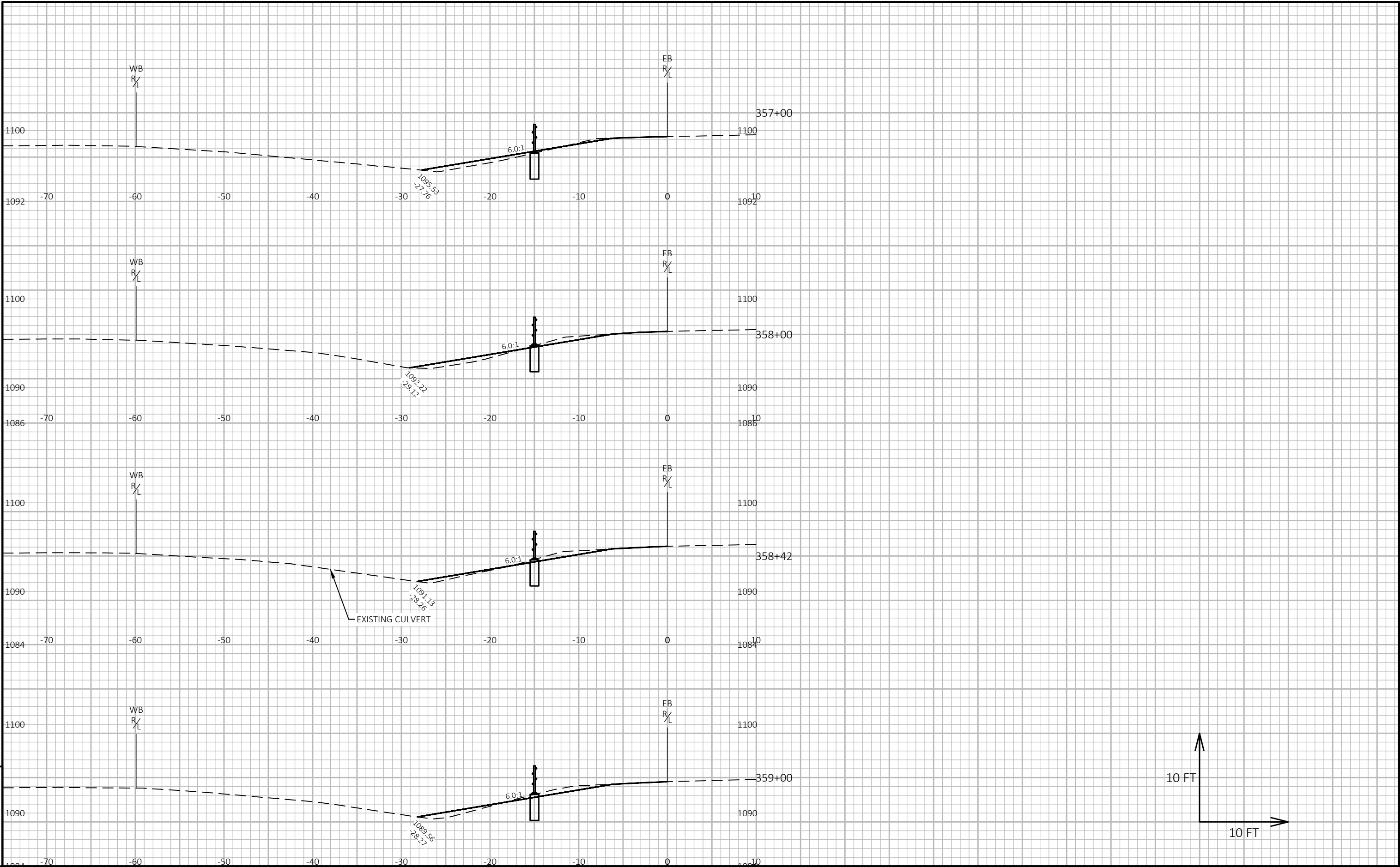
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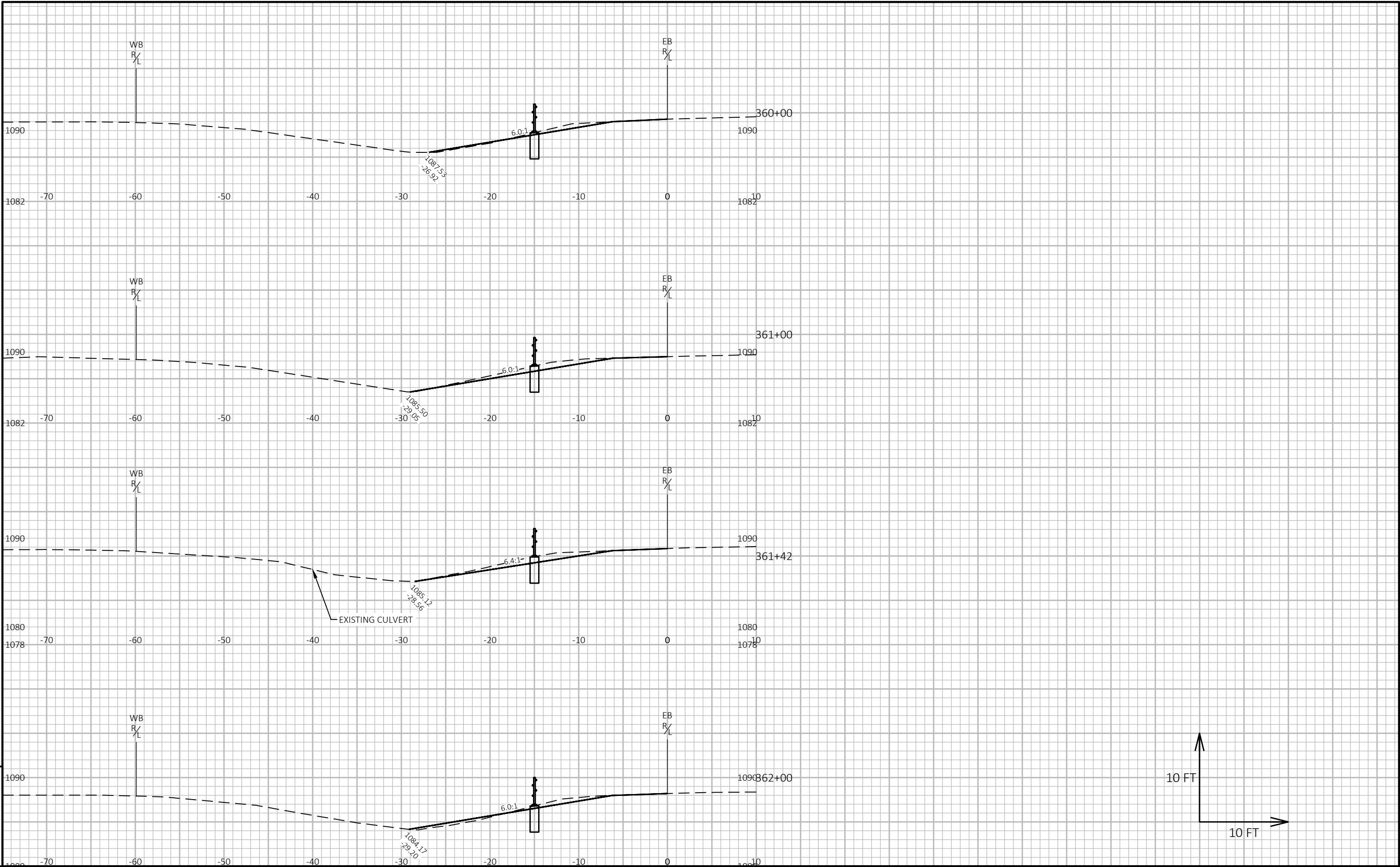
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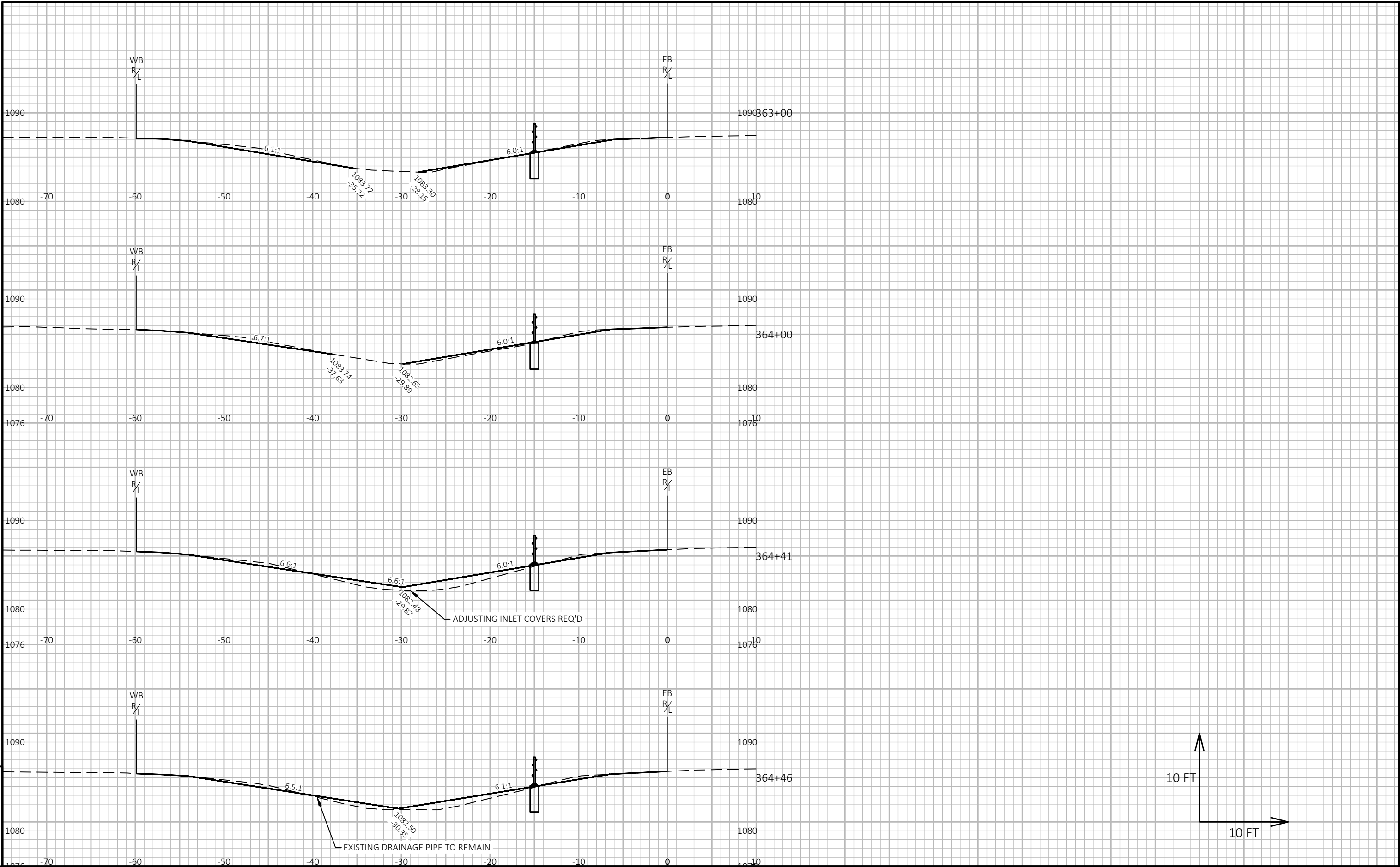


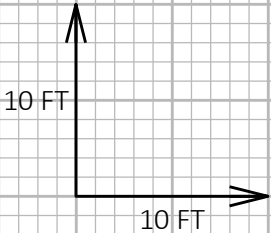
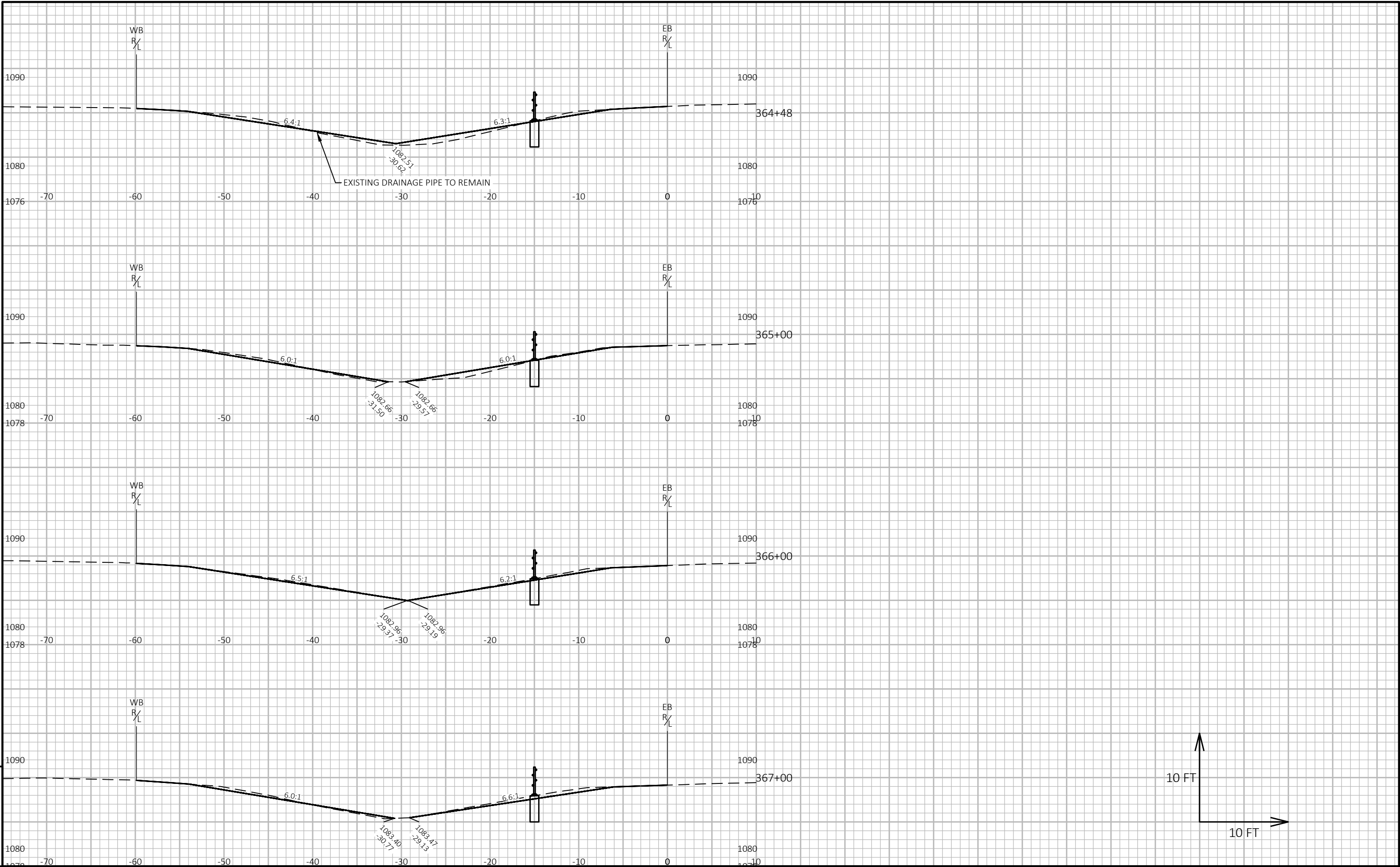


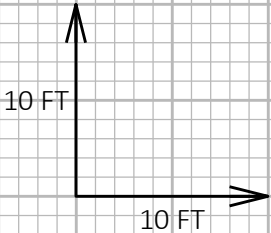
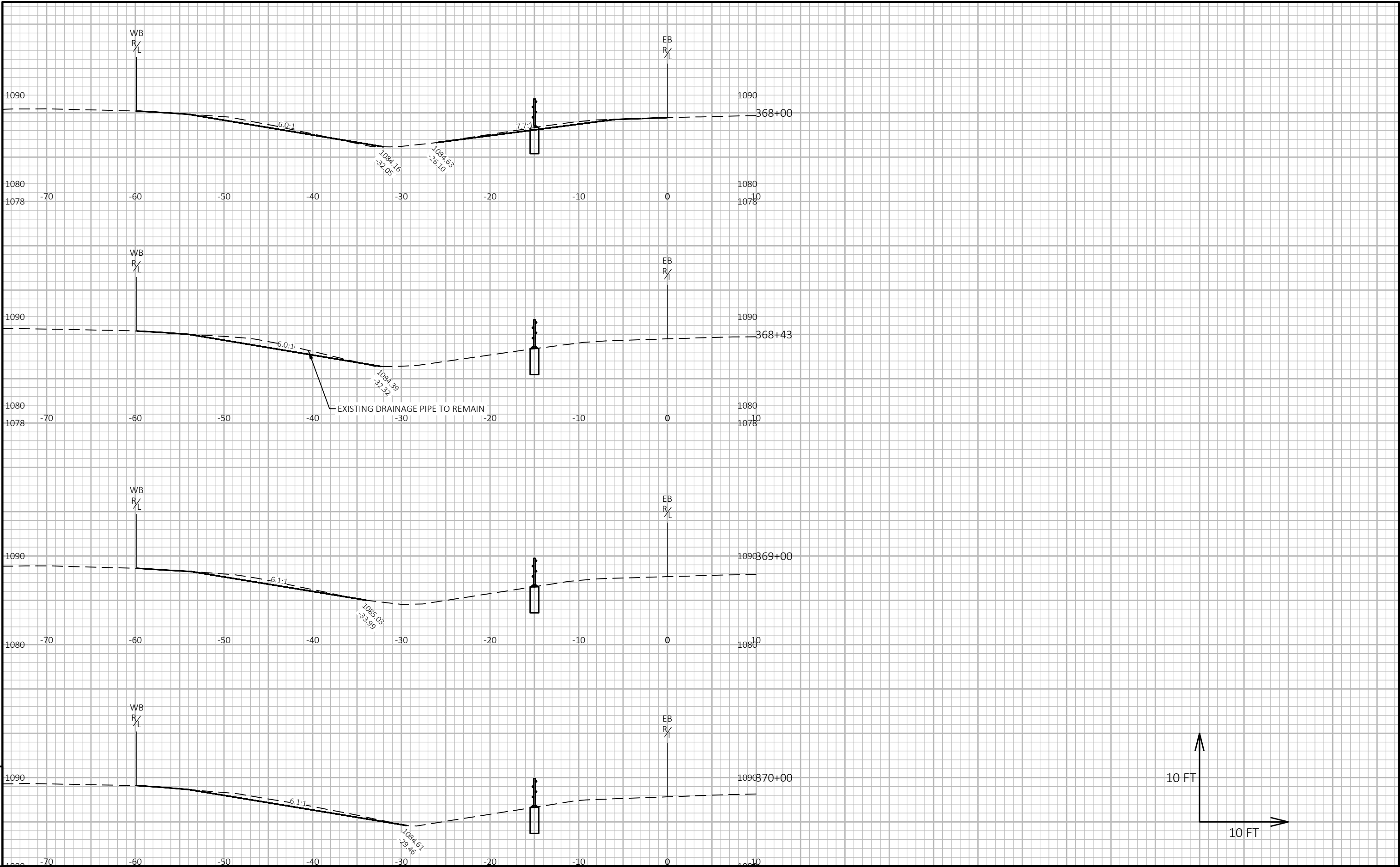


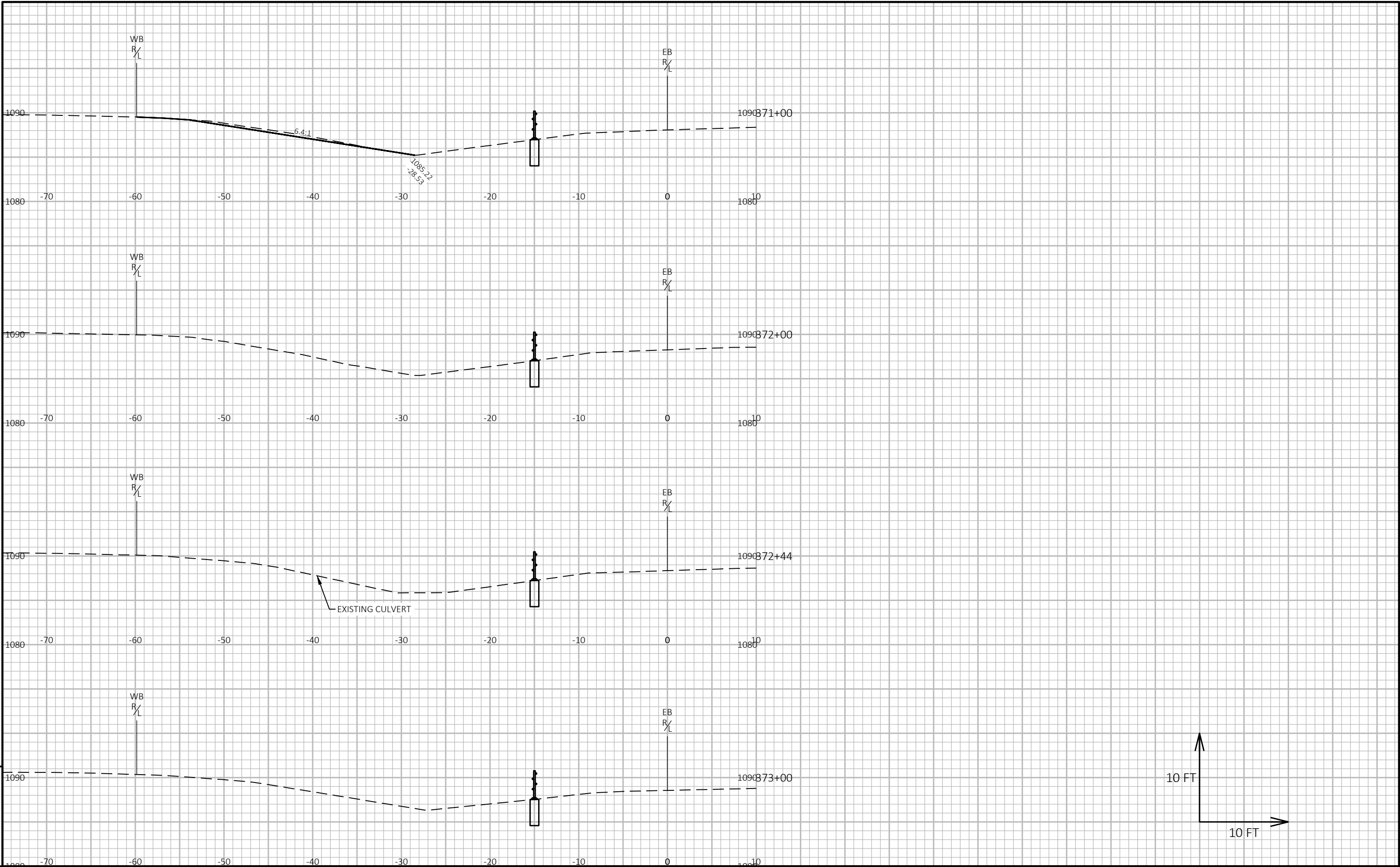


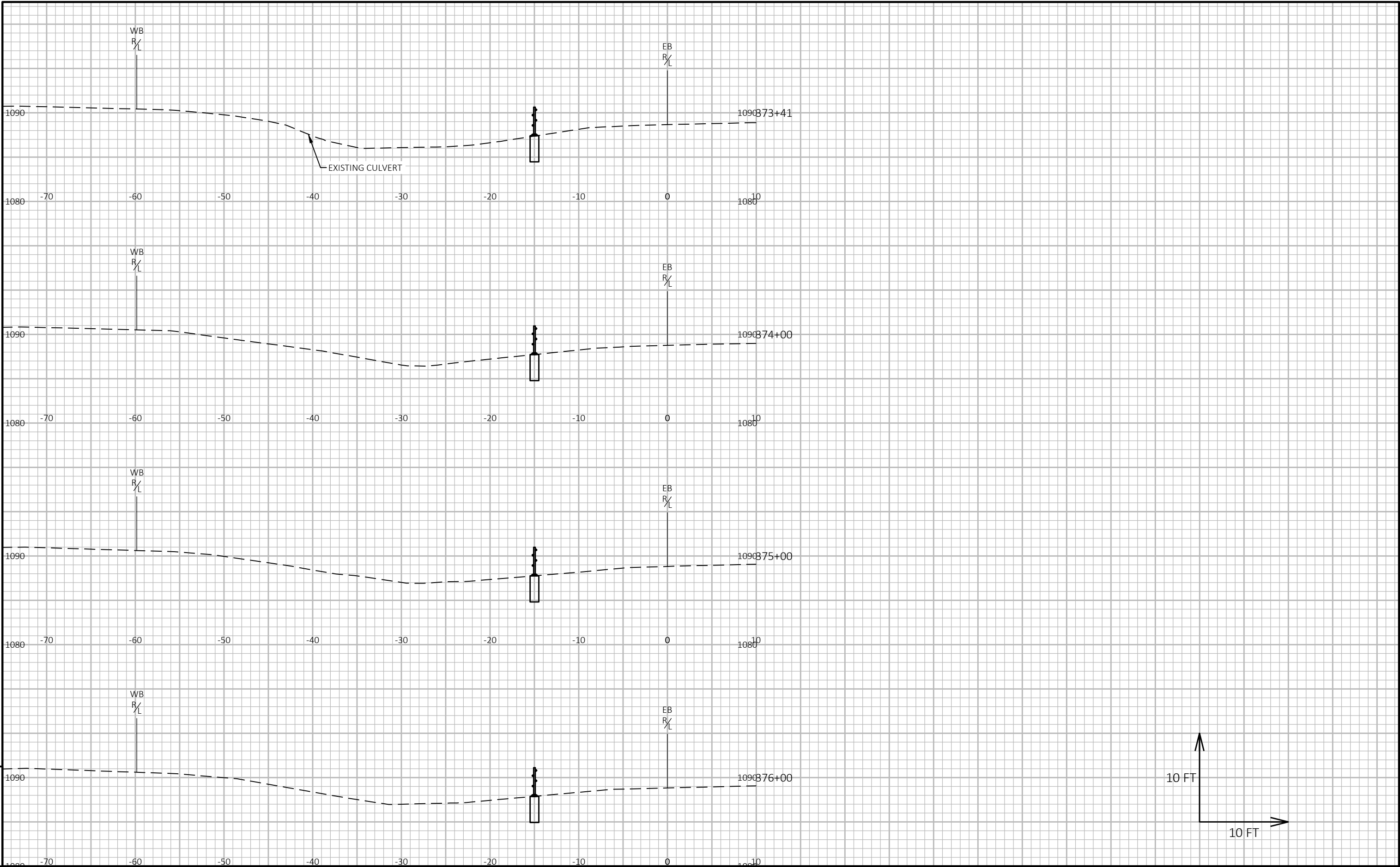


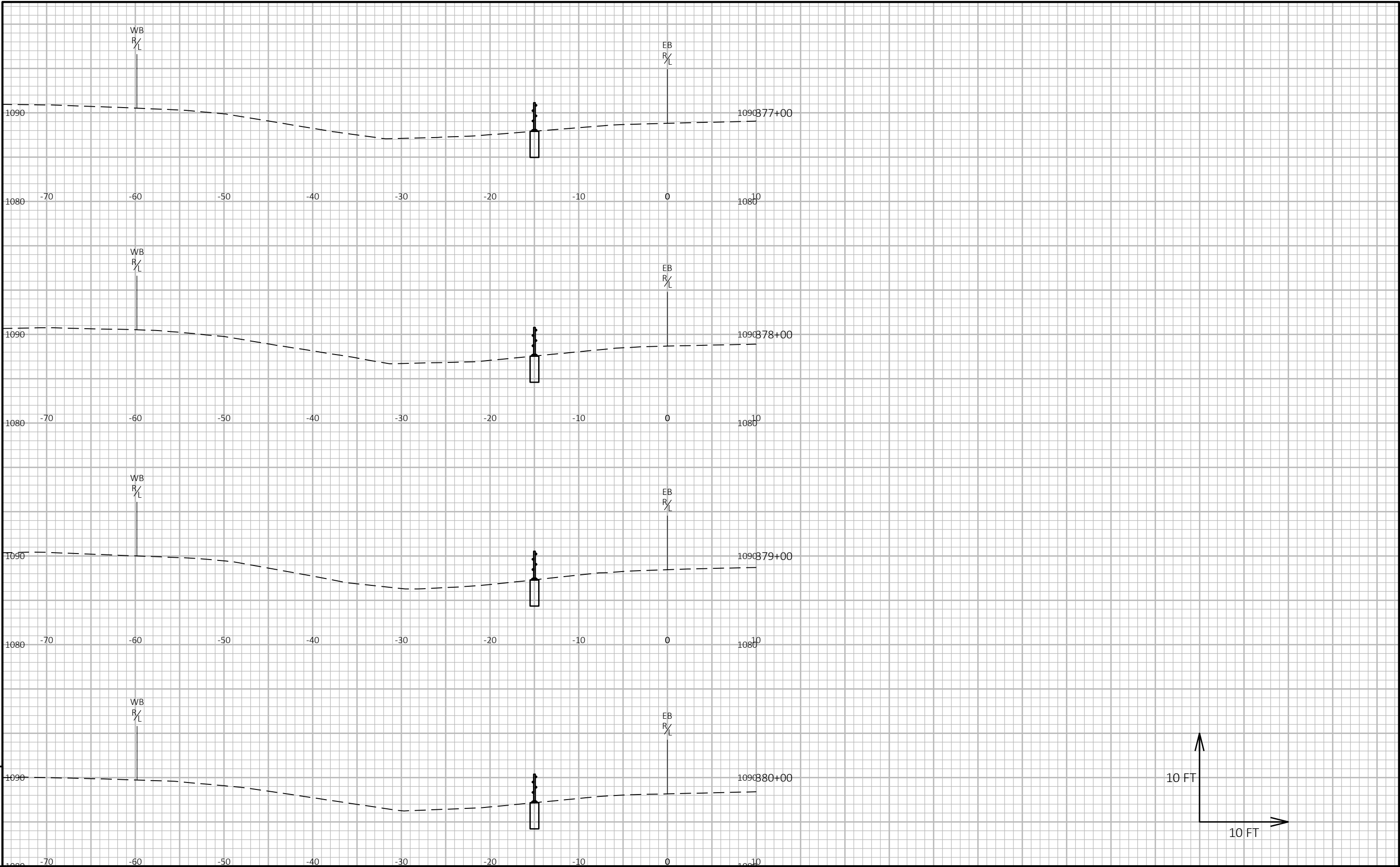


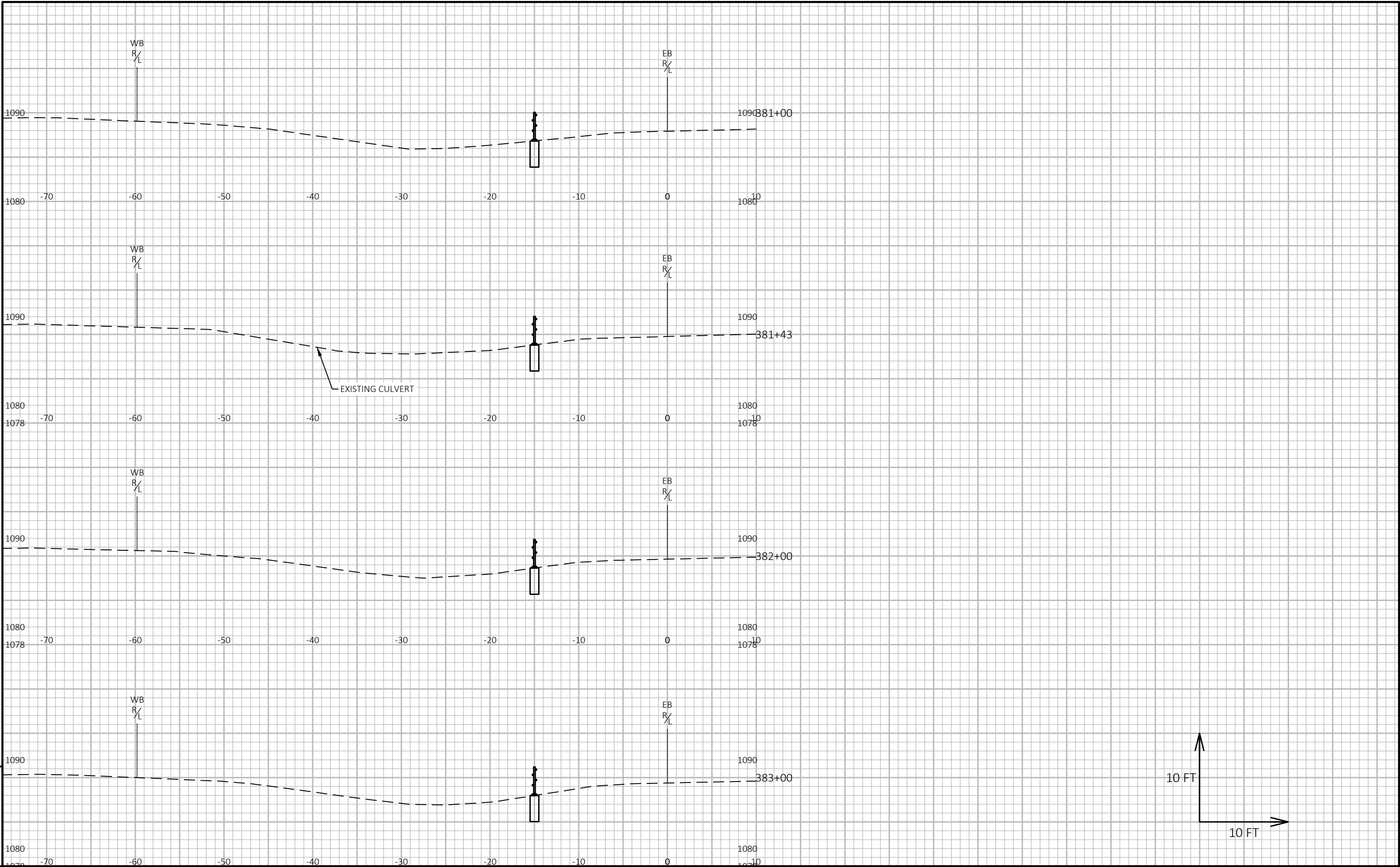






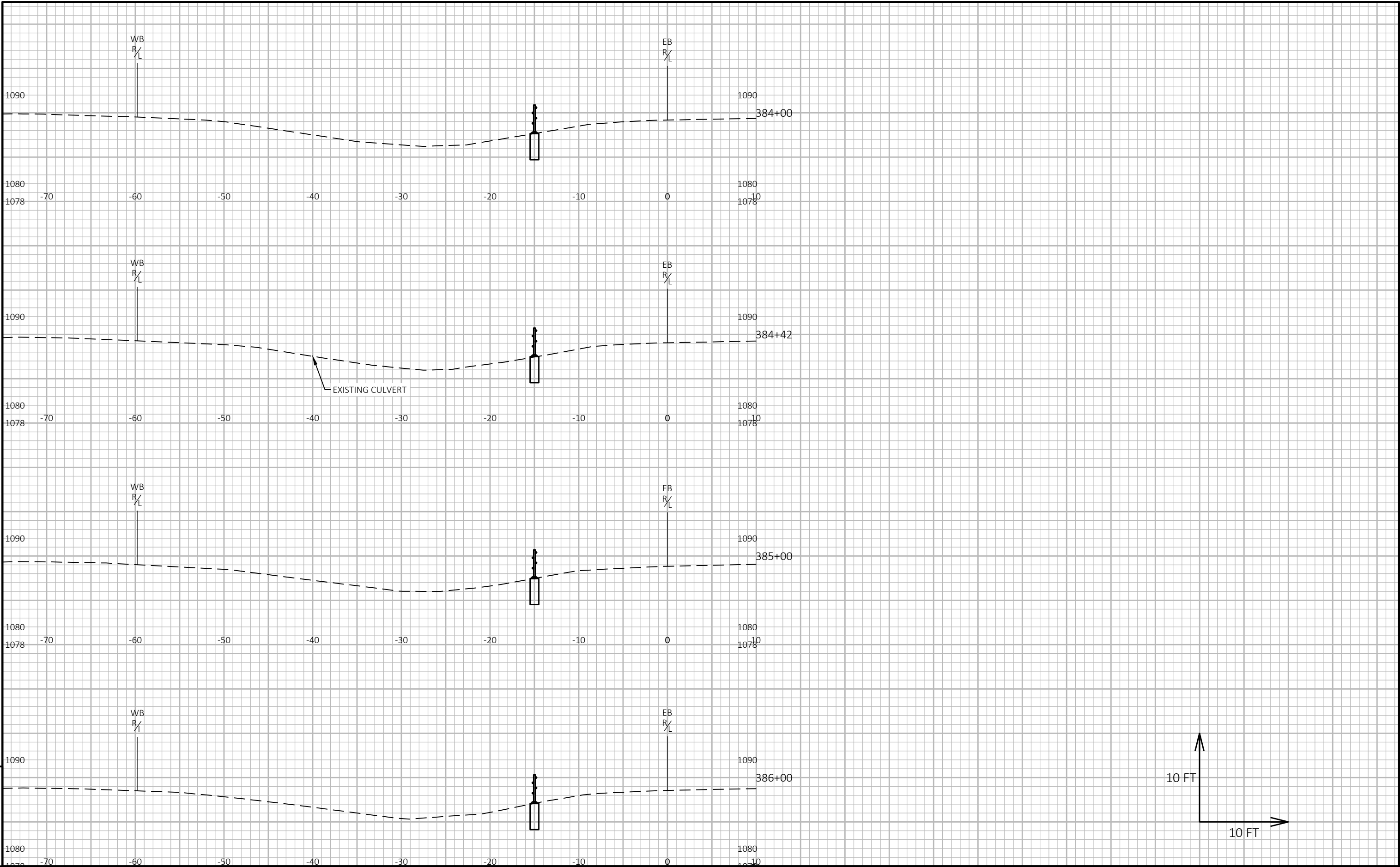


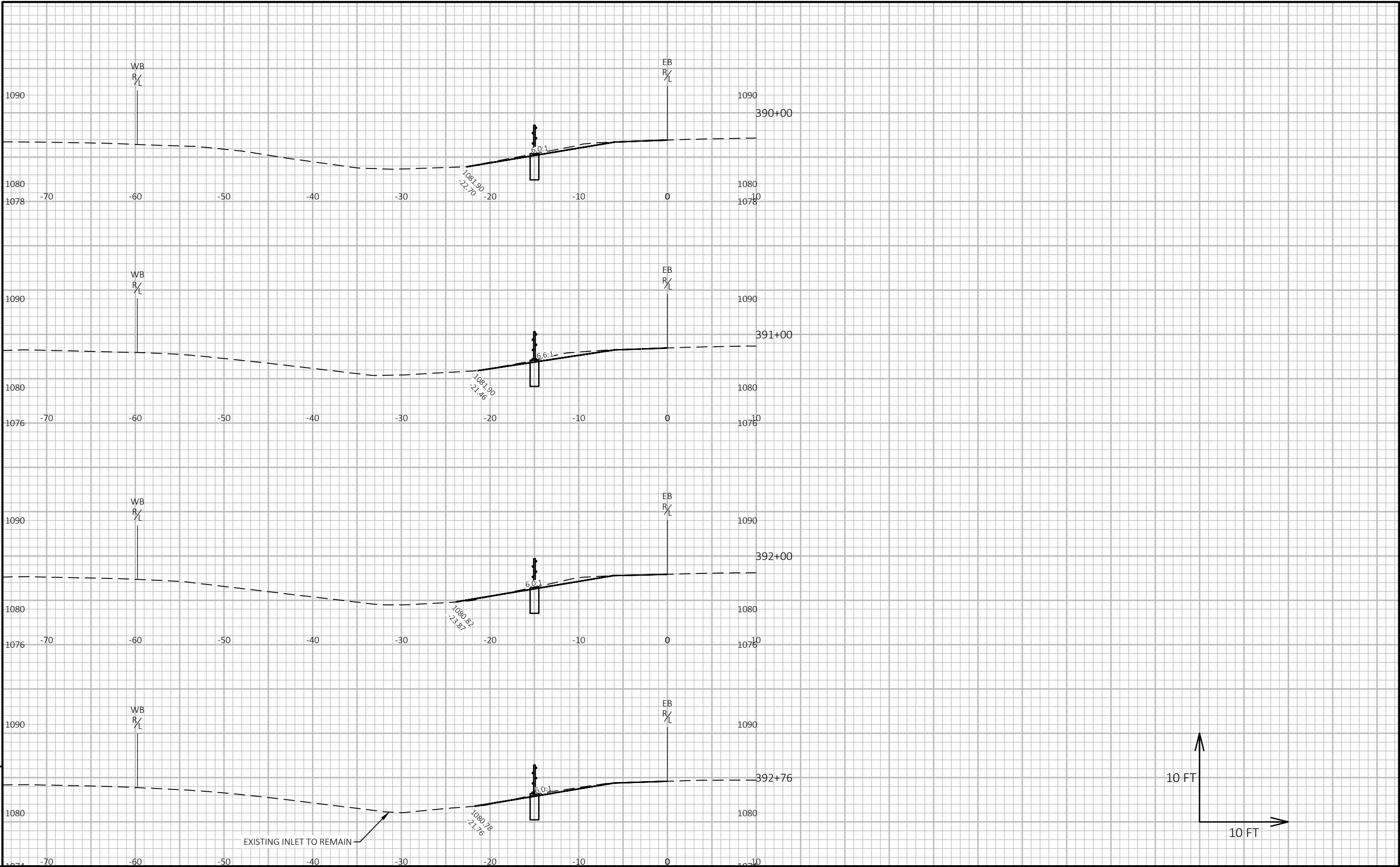


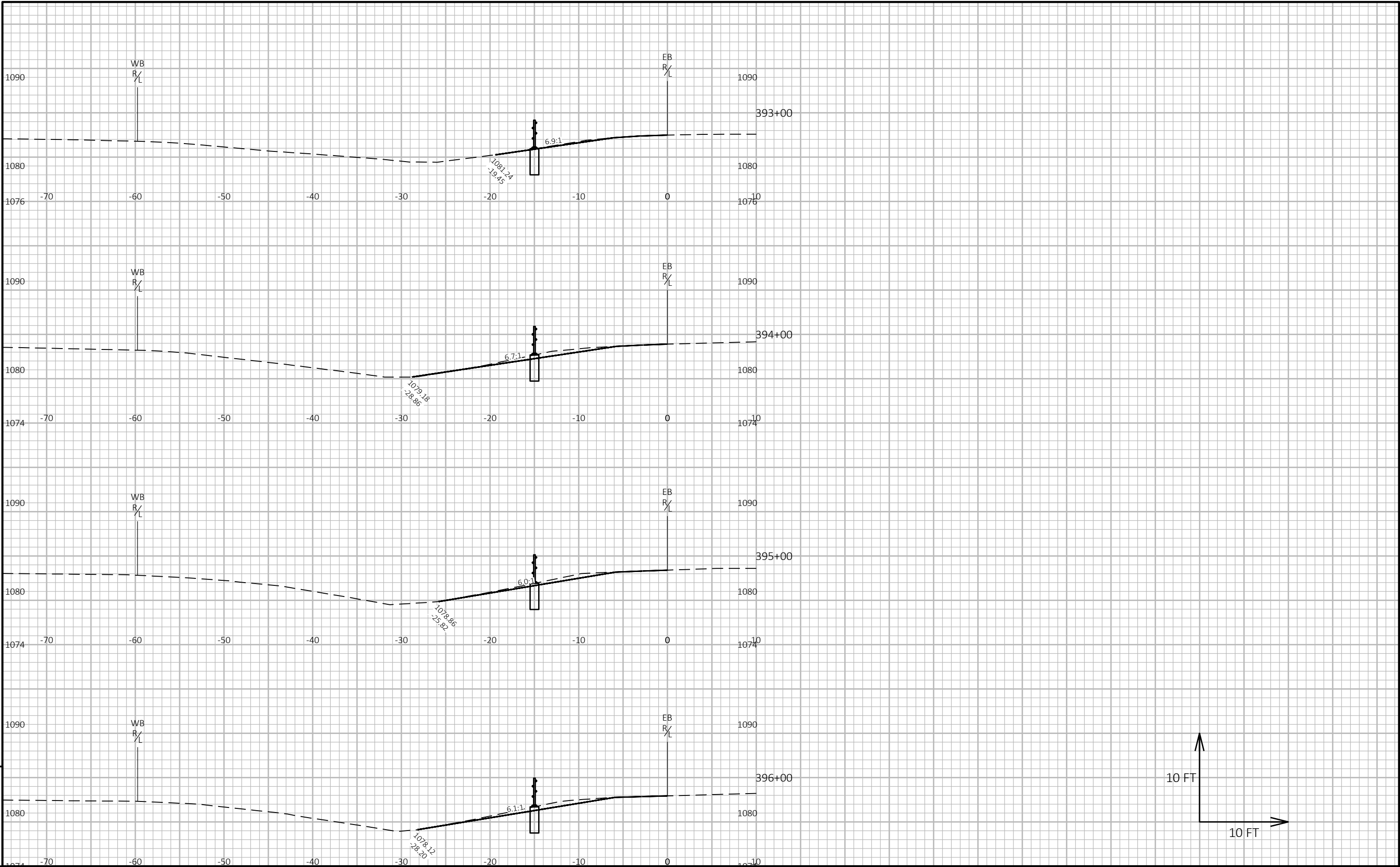


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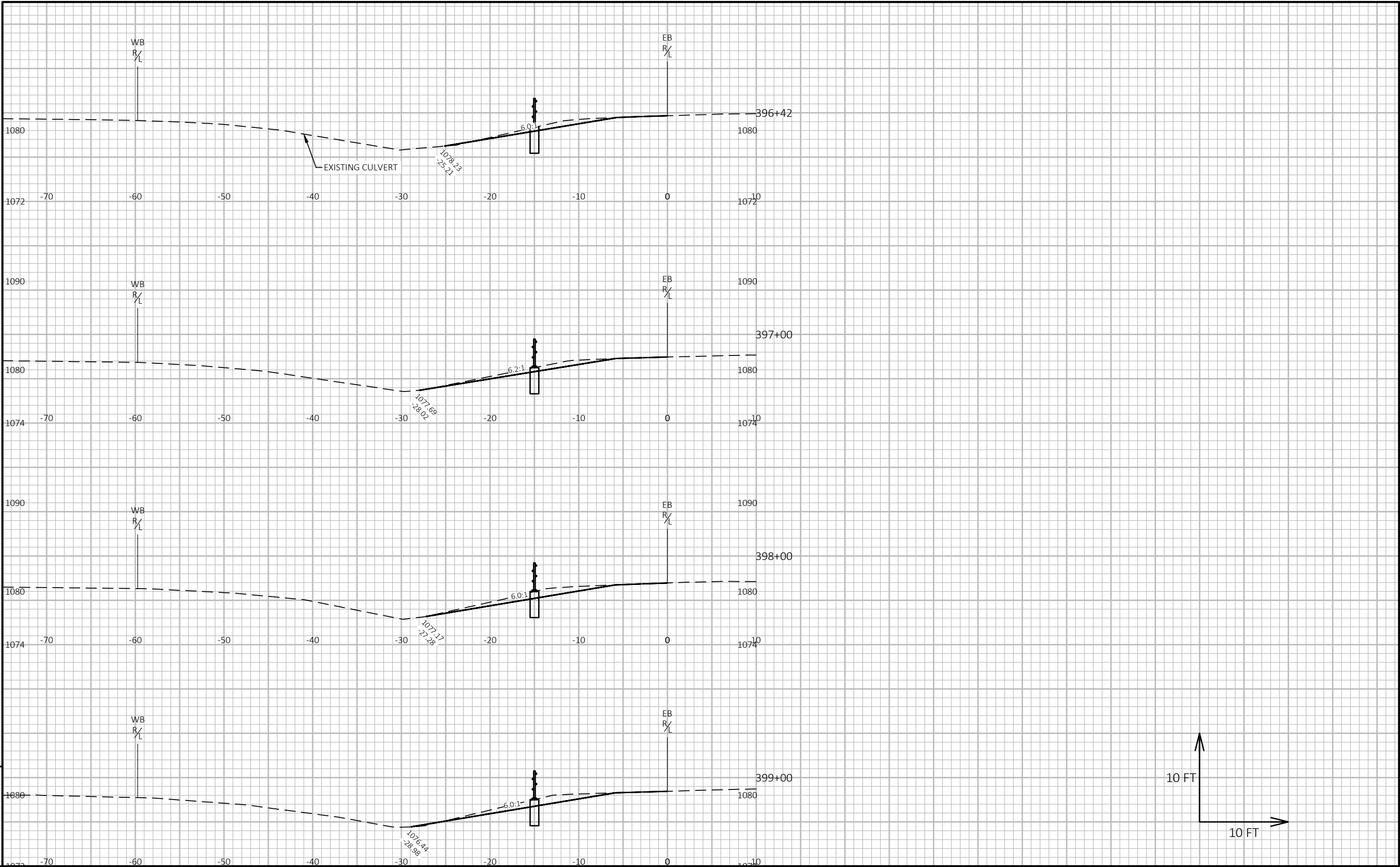


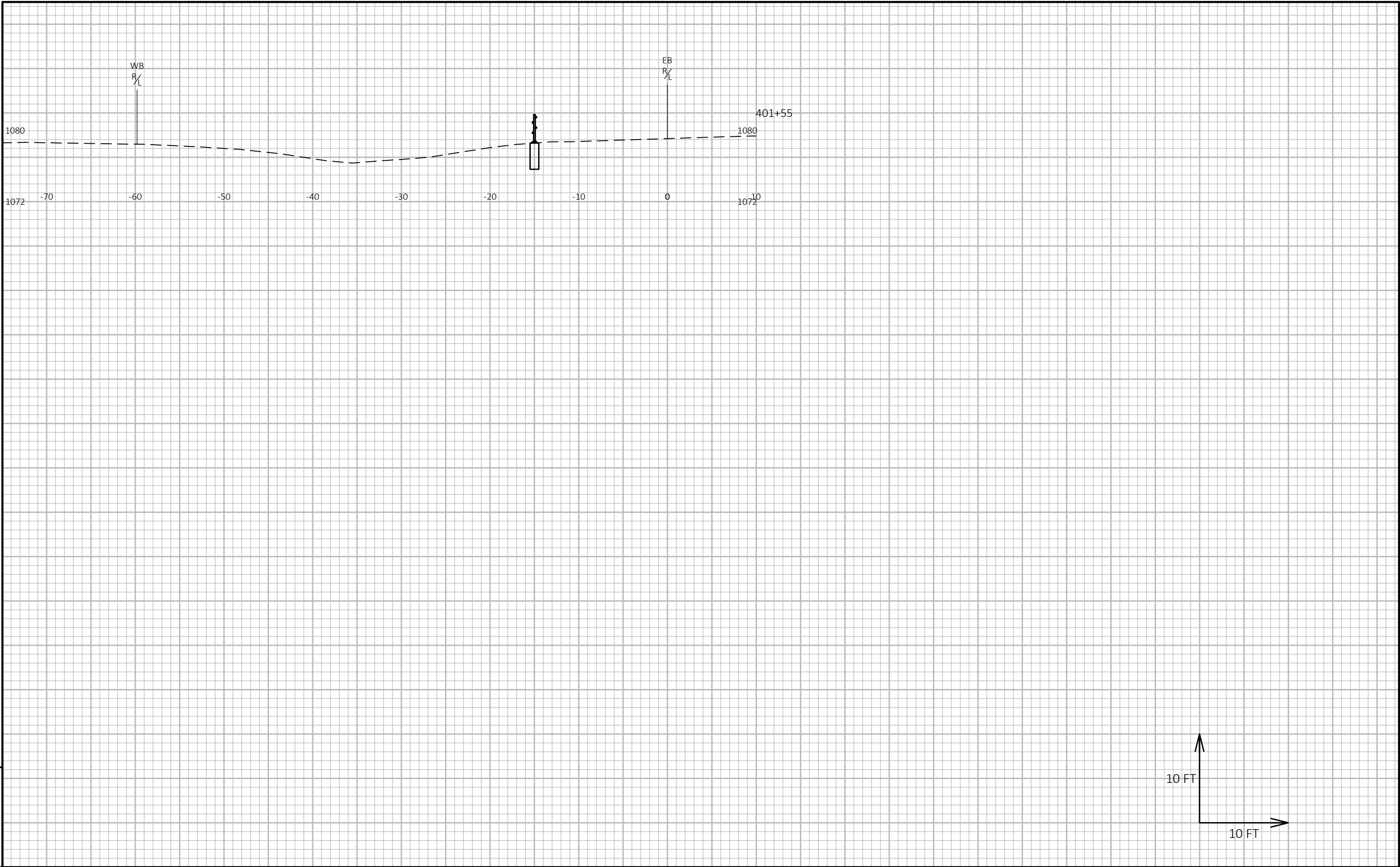




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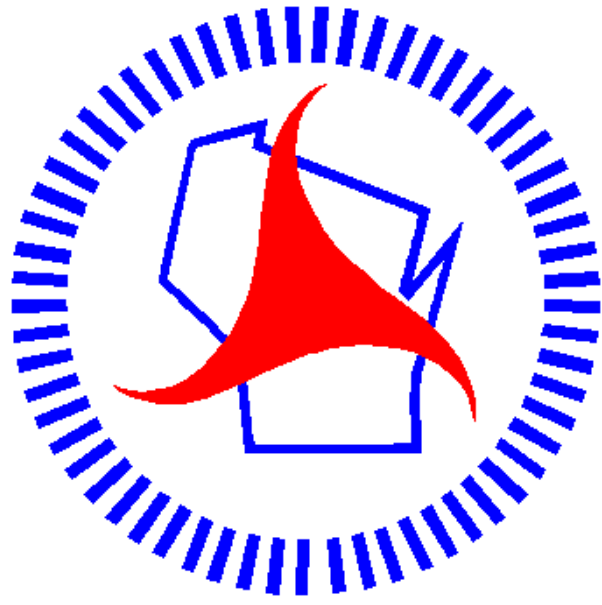




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Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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EAU

PROJECT ID: 1190-01-86

WITH: 1020-00-84 & 1050-00-80

COUNTY: EAU CLAIRE

APRIL 2025

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 = 70



DESIGN DESIGNATION

A.A.D.T.	(2021)	=	45,100
A.A.D.T.		=	N/A
D.H.V.		=	N/A
D.D.		=	N/A
T.		=	8.5%
DESIGN SPEED		=	70 MPH
ESALS		=	N/A

CONVENTIONAL SYMBOLS

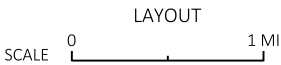
PLAN	
CORPORATE LIMITS	
PROPERTY LINE	
LOT LINE	
LIMITED HIGHWAY EASEMENT	
EXISTING RIGHT OF WAY	
PROPOSED OR NEW R/W LINE	
SLOPE INTERCEPT	
REFERENCE LINE	
EXISTING CULVERT	
PROPOSED CULVERT (Box or Pipe)	
COMBUSTIBLE FLUIDS	
MARSH AREA	
WOODED OR SHRUB AREA	

BEGIN PROJECT 1190-01-86
STA 103+42.3
Y = 284,163.445
X = 351,245.664

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
PLAN OF PROPOSED IMPROVEMENT
EAU CLAIRE - CHIPPEWA FALLS
CTH QQ TO LA SALLE ST
USH 53
EAU CLAIRE COUNTY

STATE PROJECT NUMBER
1190-01-86



TOTAL NET LENGTH OF CENTERLINE = 1.525 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), EAU CLAIRE 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
1190-01-86	WISC 2025427	1

WSP USA

MAXWELL L. SEBESTA
E-48682
LA CROSSE
WIS.

10/23/2024
DATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor

Designer

Project Manager

Regional Examiner

Regional Supervisor

WISDOT

WSP USA

TYSON PELKOFE, P.E.

WISDOT

JAMES KOENIG, P.E.

APPROVED FOR THE DEPARTMENT

DATE:

Signature

Signature

DATE:

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. THE CONTRACTOR SHALL COORDINATE THEIR CONSTRUCTION ACTIVITIES WITH A CALL TO DIGGERS HOTLINE AND/OR A DIRECT CALL TO THE UTILITIES THAT HAVE FACILITIES IN THE AREAS. NOT ALL UTILITIES ARE MEMBERS OF DIGGERS HOTLINE.

UTILITY LINES IN THE CROSS SECTIONS ARE FOR HORIZONTAL REFERENCE ONLY.

CONTRACTOR WILL BE RESPONSIBLE FOR RESHAPING AND SEEDING ANY PREVIOUSLY GRASSED AREAS WHICH ARE DISTURBED BY THEIR OPERATION OUTSIDE OF THE NORMAL CONSTRUCTION LIMITS. DISTURBED AREAS WITHIN THE RIGHT OF WAY ARE TO BE TOPSOILED (SALVAGED), FERTILIZED, SEEDED, AND EMATTED/MULCHED AS DIRECTED BY THE ENGINEER.

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

TYPICAL FINISHED SECTIONS SHOW THE GENERAL ROADWAY FEATURES THROUGHOUT THE PROJECT. SLOPES AND DISTANCES MAY VARY WITHIN THE STATION LIMITS.

COUNTY SPECIFIC CABLE GUARD SYSTEMS:

- GIBALTAR TL-4 AS TL-3, 3 CABLES
- NUCOR/MARION TL-4, LOW CABLE AT 15", 4 CABLES

SECTION 2 ORDER OF SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
ALIGNMENT DETAILS
BORINGS

ABBREVIATIONS CONT'D

PCC	PORTLAND CEMENT CONCRETE
PE	PRIVATE ENTRANCE
PGL	PROFILE GRADE LINE
PL	PROPERTY LINE
R	RADIUS OR RANGE
R/L	REFERENCE LINE
RCCP	REINFORCED CONCRETE CULVERT PIPE
REQ'D	REQUIRED
RT	RIGHT
R/W	RIGHT OF WAY
RD	ROAD
SHLD	SHOULDER(S)
S	SOUTH
SB	SOUTHBOUND
SF	SQUARE FOOT (FEET)
SDD	STANDARD DETAIL DRAWING(S)
STH	STATE TRUNK HIGHWAYS
SS	STORM SEWER
SSD	STOPPING SIGHT DISTANCE
STA	STATION
SE	SUPERELEVATION
S/L	SURVEY LINE
SYM	SYMMETRICAL
T	TRUCKS (PERCENT OF)
TEL	TELEPHONE
TEMP	TEMPORARY
TLE	TEMPORARY LIMITED EASEMENT
TOC	TOP OF CURB
TYP	TYPICAL
UNCL	UNCLASSIFIED
UG	UNDERGROUND
VAR	VARIABLE
VC	VERTICAL CURVE
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
WT	WEIGHT
W	WEST
WB	WEST BOUND

ABBREVIATIONS

AC	ACRE
AGG	AGGREGATE
<	ANGLE
AE, AEW	APRON ENDWALL
ASPH	ASPHALTIC
ADT	AVERAGE DAILY TRAFFIC
AADT	ANNUAL AVERAGE DAILY TRAFFIC
BAD	BASE AGGREGATE DENSE
BF	BACK FACE
BM	BENCHMARK
BTWN	BETWEEN
CTR	CENTER
C/L	CENTERLINE
Δ	CENTRAL ANGLE OR DELTA
CE	COMMERCIAL ENTRANCE
CONST	CONSTRUCTION
CMCP	CORRUGATED METAL CULVERT PIPE
CMP	CORRUGATED METAL PIPE
CO	COUNTY
CTH	COUNTY TRUNK HIGHWAYS
CY	CUBIC YARD
CP	CONTROL POINT OR CULVERT PIPE
C&G	CURB AND GUTTER
D	DEGREE OF CURVE
DHV	DESIGN HOUR VOLUME
DIA	DIAMETER
DD	DIRECTIONAL DISTRIBUTION
DISCH	DISCHARGE
DMS	DYNAMIC MESSAGE SIGN
EA	EACH
E	EAST
EB	EASTBOUND
ELEC	ELECTRIC(AL), ELEC. CABLE
EL, ELEV	ELEVATION
ESALS	EQUIVALENT SINGLE AXLE LOADS
EXC	EXCAVATION
EXIST	EXISTING
FF	FACE TO FACE
FERT	FERTILIZER
FE	FIELD ENTRANCE
F/L, FL	FLOW LINE
GALV	GALVANIZE
HS	HIGH STRENGTH
CWT	HUNDRED WEIGHT
INL	INLET
INTER	INTERSECTION
JT	JOINT
LT	LEFT
L	LENGTH OF CURVE
LF	LINEAR FOOT (FEET)
LC	LONG CHORD
LS	LUMP SUM
MP	MARKER POST
MGAL	1000 GALLONS
NC	NORMAL CROWN
N	NORTH
NB	NORTH BOUND
NOR	NORMAL
NO	NUMBER
PAV'T	PAVEMENT
PLE	PERMANENT LIMITED EASEMENT
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENCY

SYSTEM SPECIFIC INFORMATION								
SYSTEM	POST SPACING	DEFLECTION (WORKING WIDTH) FOR 15' SPACING	POST SPACING	DEFLECTION (WORKING WIDTH) FOR 10' SPACING	CURVE RADIUS	REQ'D CURVE POST SPACING	END TERMINAL LENGTH	TAPER RATE
GIBALTAR	15'-0"	7'-4.5"	10'-0"	6'-8"	1500'-2000'	20'-0"	27'-6"	50:1
NUCOR/MARION	15'-0"	6'-0"	10'-0"	5'-0"	2100'	12'-6"	57'-9"	50:1
WISDOT/PROJECT REQUIREMENT	15' MAX	12'-0"	10'-0"	7'-0"	2292'	15'-0"	VARIES	75:1

DESIGN CONTACTS

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COMMUNICATION LINE
RICK PODOLAK
304 S DEWEY ST.
EAU CLAIRE, WI 54701
(715) 410-0656
RP4514@ATT.COM

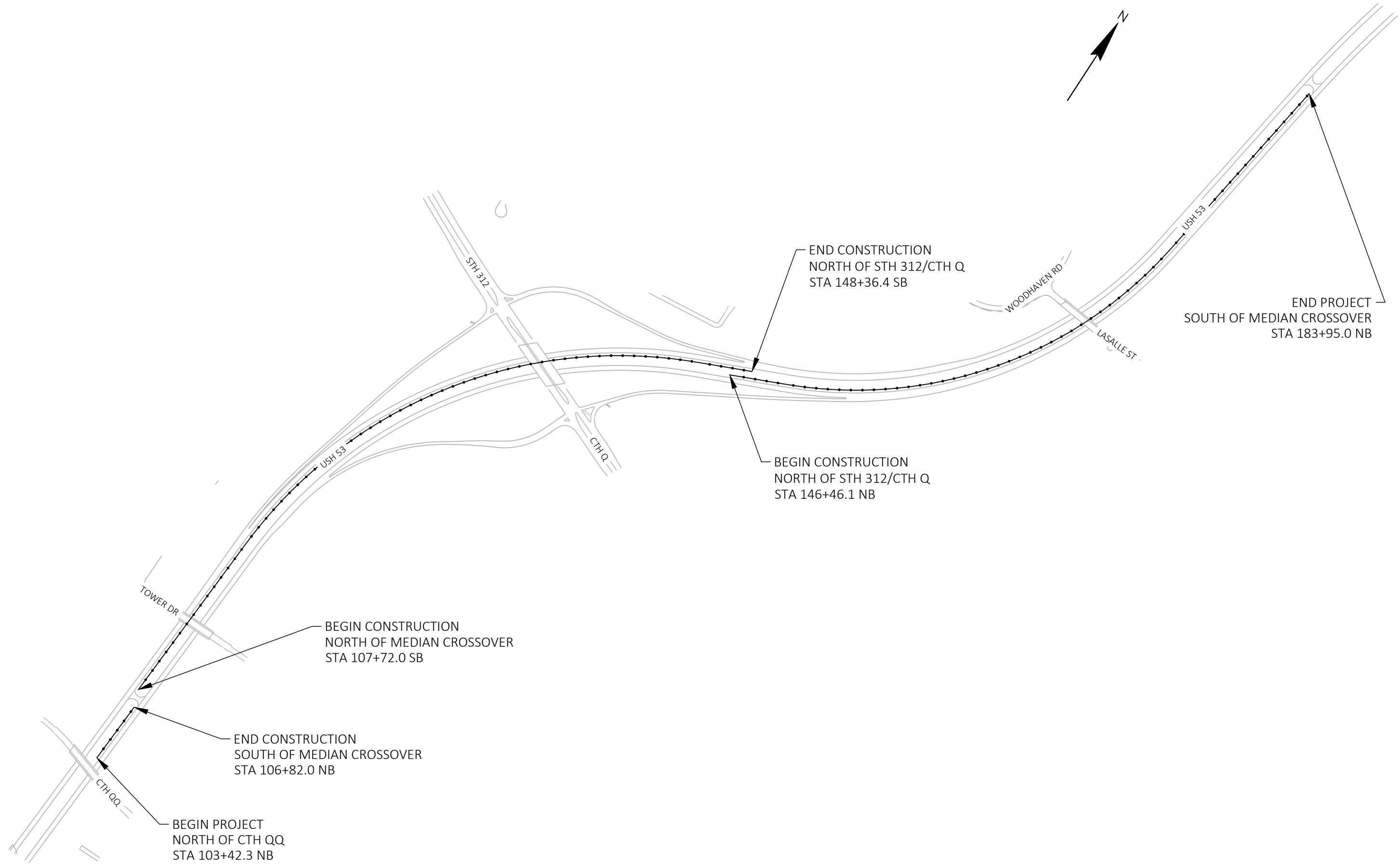
SPECTRUM
COMMUNICATION LINE
SUNNY RICHARDSON
1201 MCCANN DR.
ALTOONA, WI 54720
(715) 893-6503
SUNNY.RICHARDSON@CHARTER.COM

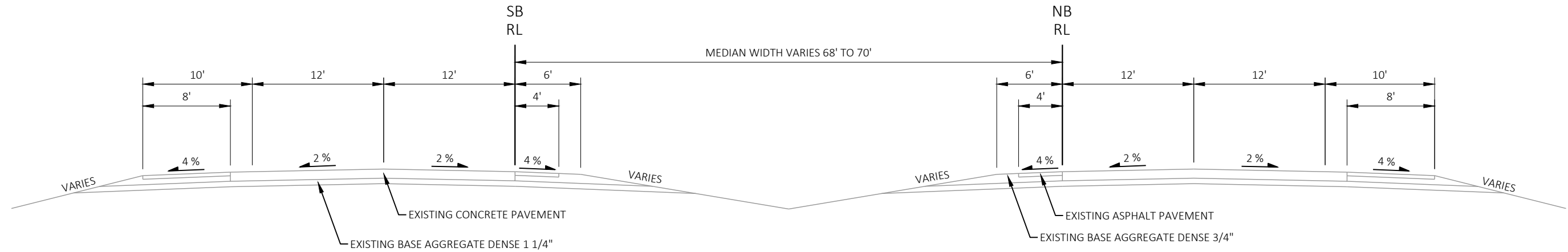
CENTURYLINK COMMUNICATIONS, LLC
COMMUNICATION LINE
RYAN HEIKKILA
6540 SHINGLE CREEK PKWY
BROOKLYN CENTER, MN 55430
(612) 741-2782
RYAN.HEIKKILA@LUMEN.COM



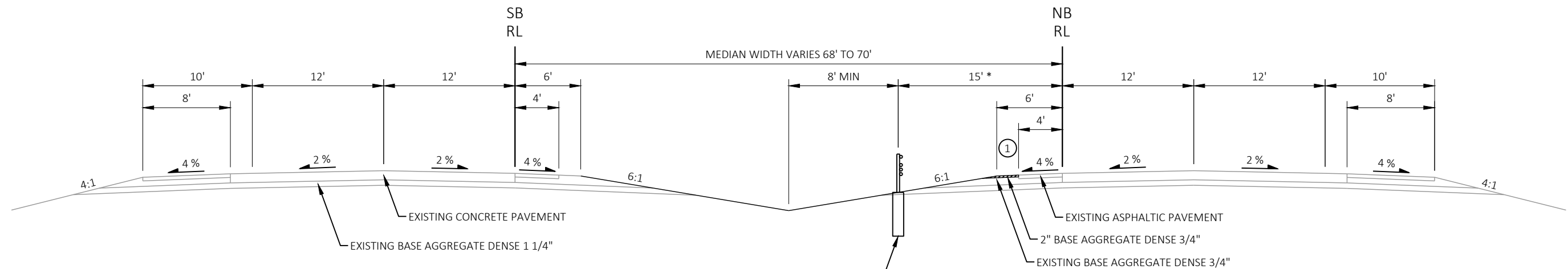
Dial 811 or (800)242-8511

www.DiggersHotline.com





EXISTING TYPICAL SECTION
STA 103+42 - 183+95



48" MIN. DEPTH SOCKETED HIGH-TENSION
TL-4 CABLE BARRIER
60" MIN. DEPTH TERMINALS REQUIRED

FINISHED TYPICAL SECTION
STA 103+42 - 106+82
STA 147+61 - 183+95

NOTES:

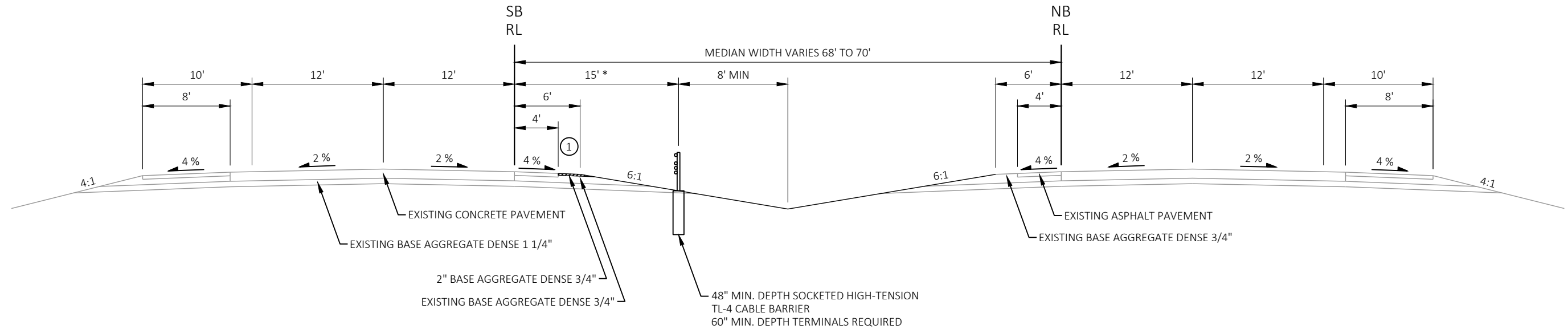
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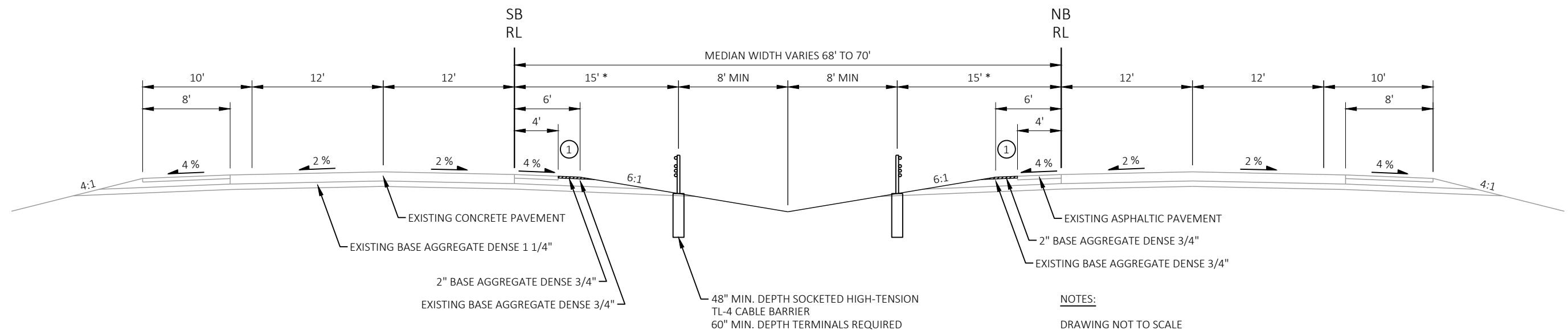
ADJUST BARRIER POST SPACING AS ALLOWED PER STANDARD DETAIL DRAWINGS, DETAIL DRAWINGS, AND BARRIER SYSTEM SPECIAL PROVISIONS TO AVOID ALL UNDERGROUND UTILITIES AS REQUIRED BY STATUTE. PROVIDE GAPS IN THE BARRIER SYSTEM WHEN POST SPACING VARIATION DOES NOT PROVIDE ENOUGH ADJUSTMENT. NO UNDERGROUND UTILITIES WILL BE REQUIRED TO BE RELOCATED TO AVOID BARRIER SYSTEM CONFLICTS. IN ADDITION, ALL OVERHEAD UTILITIES WILL REMAIN IN SERVICE THROUGHOUT CONSTRUCTION.

① ROUND SHOULDER TO MATCH EXISTING SLOPE

* ASSUMES 15' POST SPACING

**FINISHED TYPICAL SECTION**

STA 107+72 - 146+46

**FINISHED TYPICAL SECTION**

STA 146+46 - 147+61

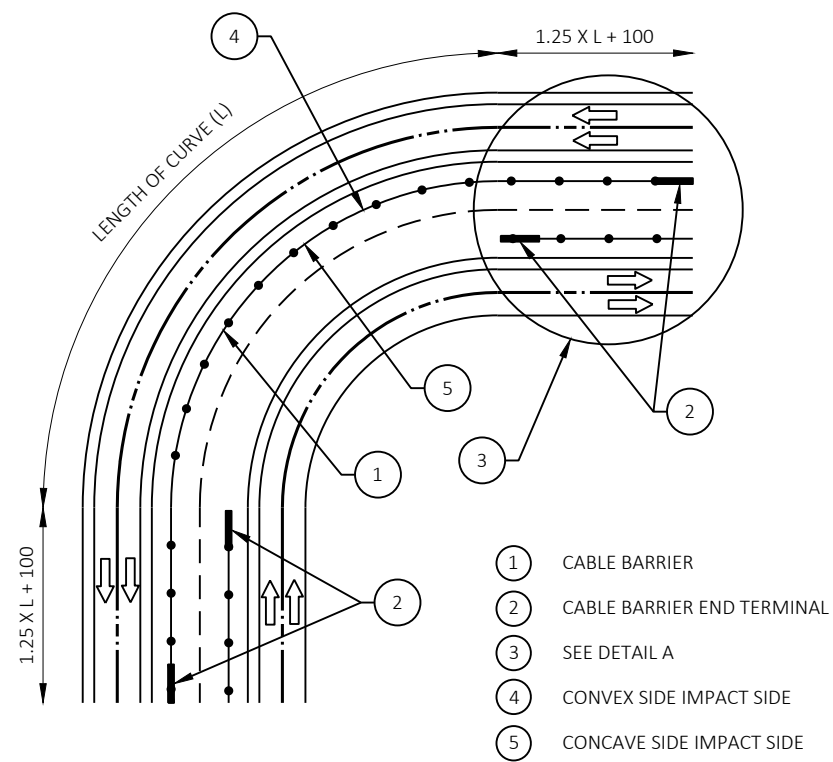
NOTES:

DRAWING NOT TO SCALE

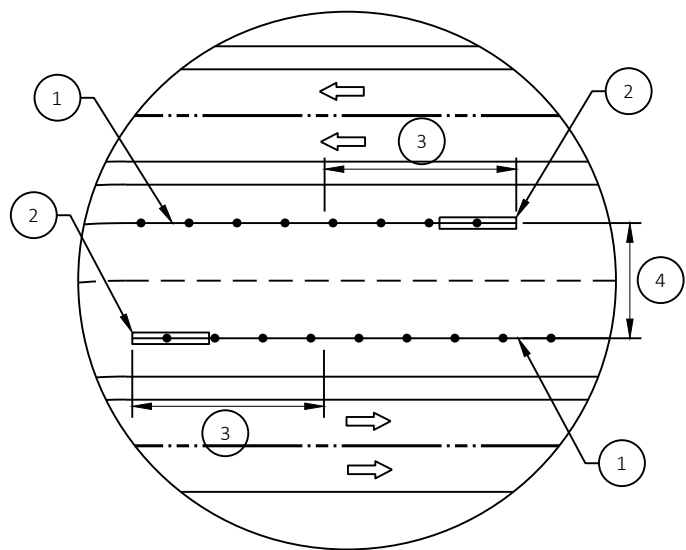
CABLE BARRIER PLACEMENT COULD OCCUR ON EITHER SIDE OF THE MEDIAN OR BOTH SIDES OF THE MEDIAN BASED ON THE SYSTEM DESIGN.

ADJUST BARRIER POST SPACING AS ALLOWED PER STANDARD DETAIL DRAWINGS, DETAIL DRAWINGS, AND BARRIER SYSTEM SPECIAL PROVISIONS TO AVOID ALL UNDERGROUND UTILITIES AS REQUIRED BY STATUTE. PROVIDE GAPS IN THE BARRIER SYSTEM WHEN POST SPACING VARIATION DOES NOT PROVIDE ENOUGH ADJUSTMENT. NO UNDERGROUND UTILITIES WILL BE REQUIRED TO BE RELOCATED TO AVOID BARRIER SYSTEM CONFLICTS. IN ADDITION, ALL OVERHEAD UTILITIES WILL REMAIN IN SERVICE THROUGHOUT CONSTRUCTION.

① ROUND SHOULDER TO MATCH EXISTING SLOPE

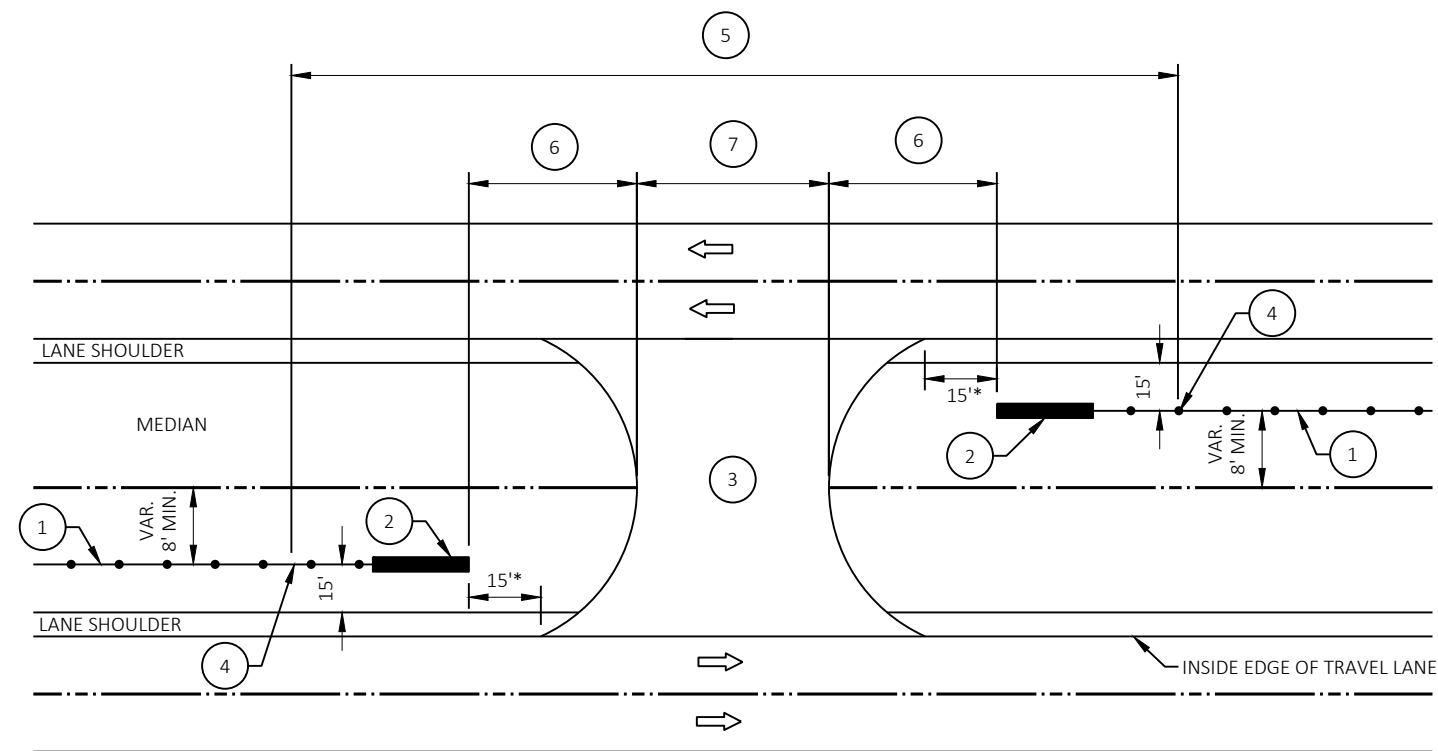


CONTINUOUS INSTALLATION OF CABLE BARRIER ON CURVE



- 1 CABLE BARRIER
- 2 CABLE BARRIER END TERMINAL
- 3 LENGTH OF NEED POINT OF CABLE BARRIER END TERMINAL
- 4 ADEQUATE WORKING WIDTH BETWEEN CABLE BARRIERS

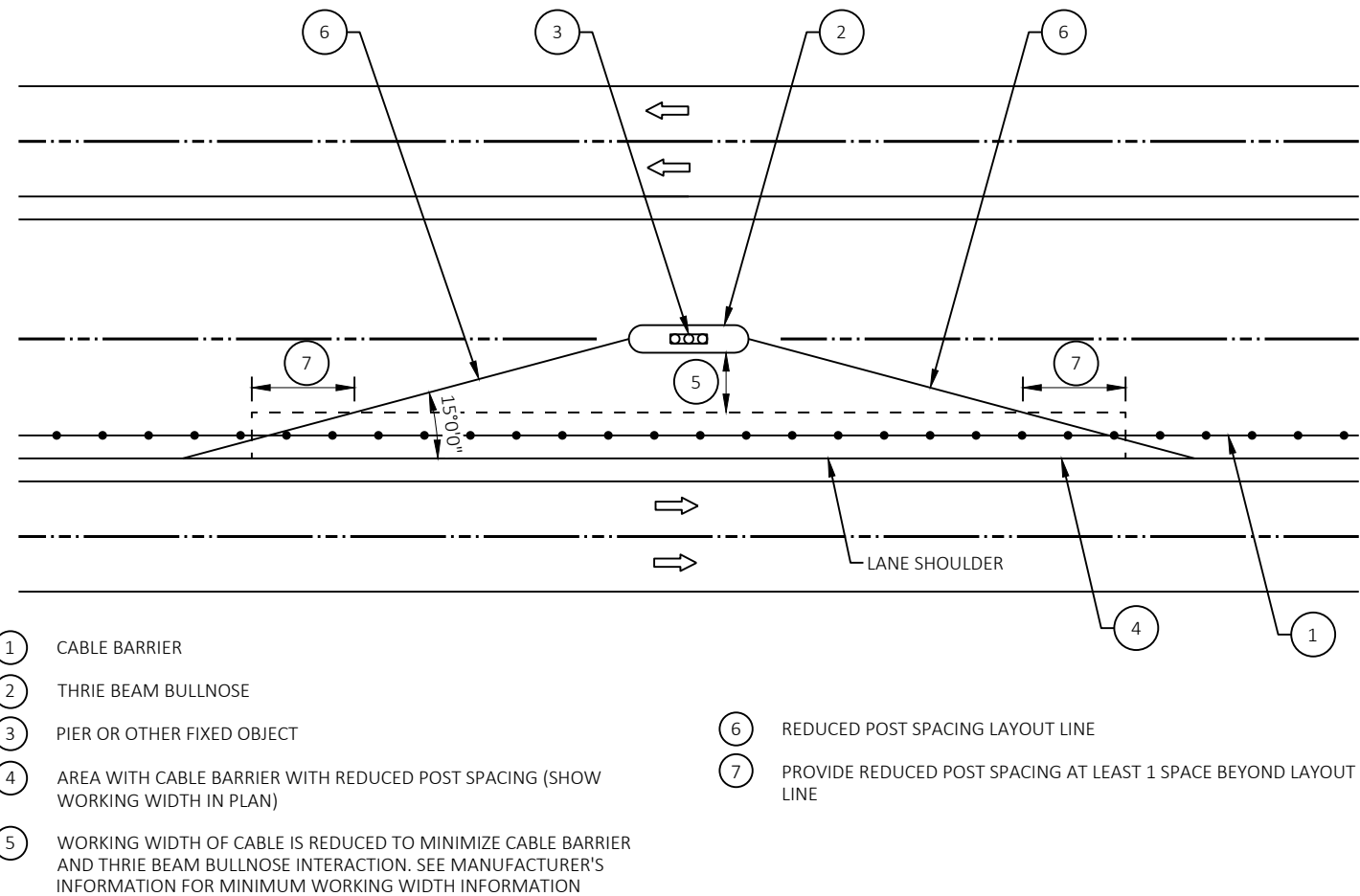
DETAIL A



*DISTANCE MEASURED FROM NEAREST EDGE OF ASPHALTIC PAVEMENT TO THE TERMINAL

- 1 CABLE BARRIER
- 2 CABLE BARRIER END TERMINAL
- 3 MAINTENANCE CROSSOVER
- 4 LENGTH OF NEED POINT OF CABLE BARRIER END TERMINAL
- 5 LENGTH OF ROADWAY UNSHIELDED FROM CROSSOVER MEDIAN CRASH
- 6 OFFSET FROM PAVED MAINTENANCE CROSSOVER AND 1ST CABLE BARRIER END TERMINAL ANCHOR
- 7 WIDTH OF MAINTENANCE CROSSOVER

CABLE BARRIER LAYOUT BY MAINTENANCE CROSSOVER



REDUCED CABLE BARRIER POST SPACING BY PIERS
BULLNOSE IS PROVIDING VEHICLE PROTECTION
FOR PIER FOR ONE DIRECTION OF TRAVEL

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

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

CONSIDER ROADWAY GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS AND PLACE TEMPORARY PAVEMENT MARKING LINE IF LANE CLOSURE IS TO BE IN PLACE 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

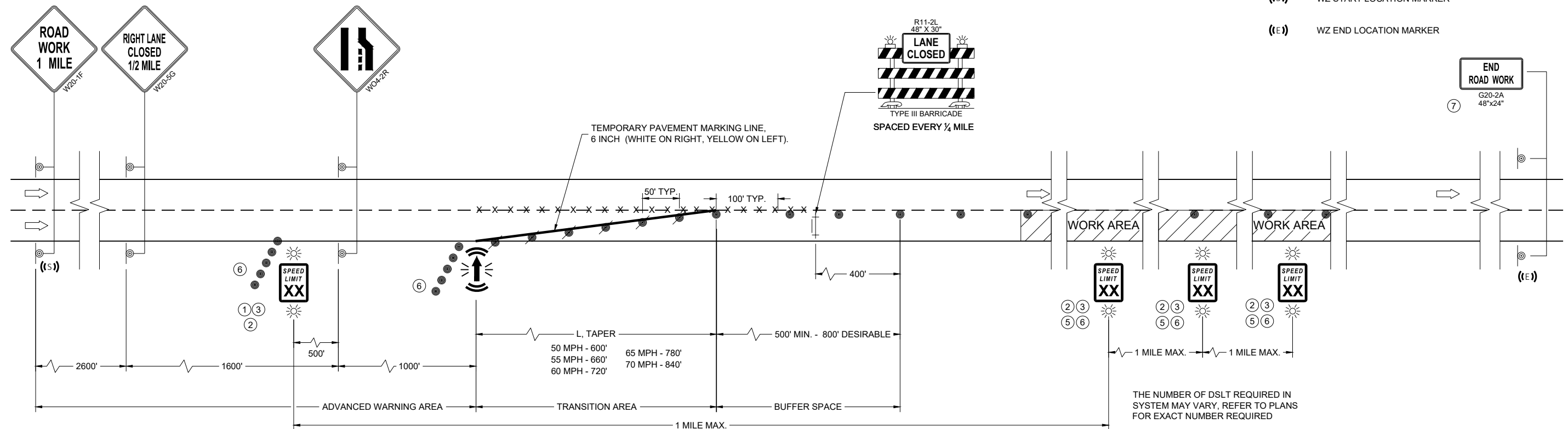
ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP OR INTERSECTION. THE LANE CLOSURE MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE ONE HALF THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

IF THE SPEED LIMIT WILL CHANGE BASED ON THE PRESENCE OF WORKERS, USE THE TAPER LENGTH THAT MATCHES THE HIGHER OF THE TWO SPEEDS FOR A CONTINUOUS LANE CLOSURE.

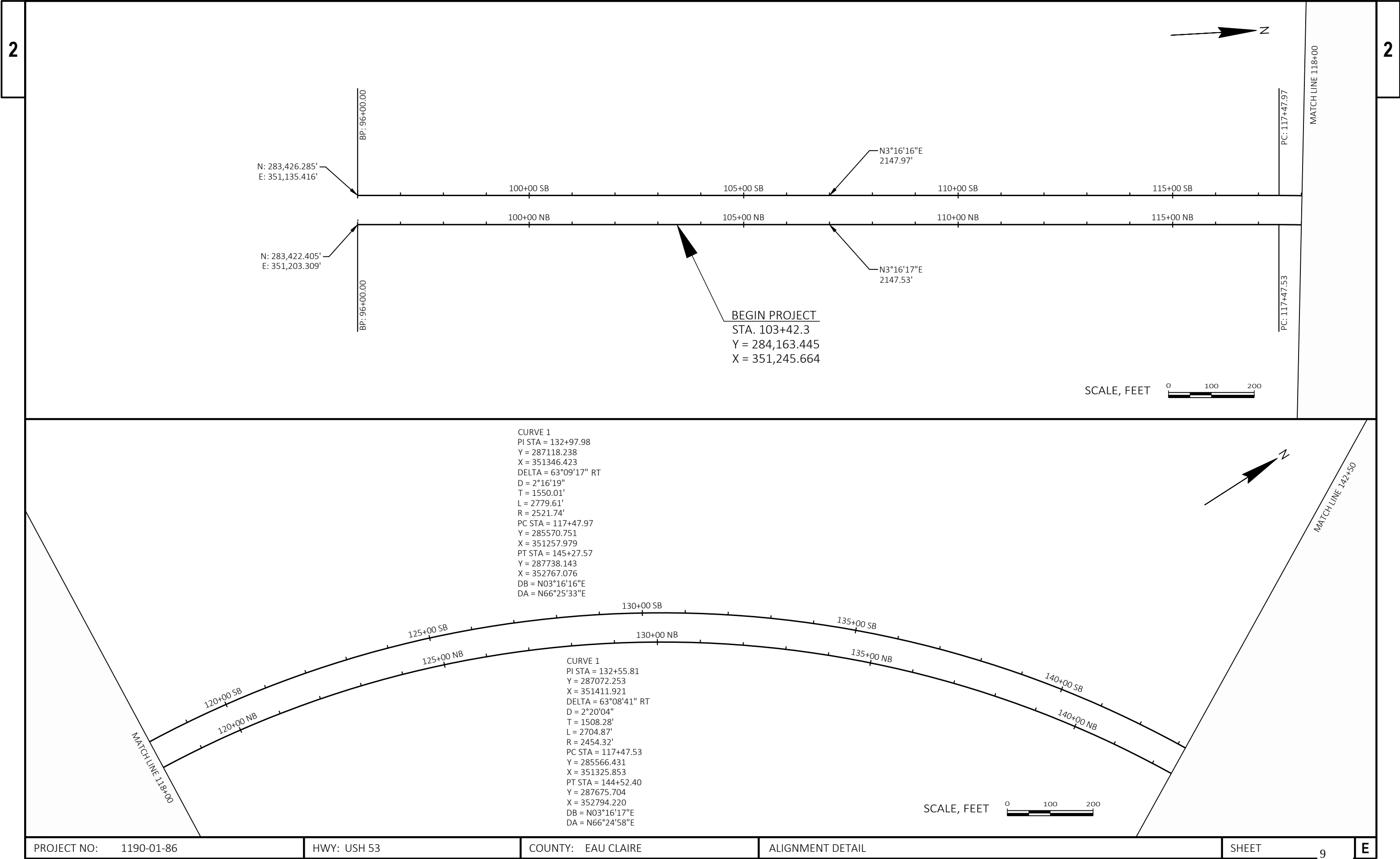
- EXISTING POST MOUNTED SPEED LIMIT SIGNS SHOULD BE COVERED OR REMOVED.
- PLACE DSLT IN ADVANCE WARNING AREA AND THROUGHOUT PROJECT LIMITS. IF THE LANE CLOSURE MOVES DOWNSTREAM, LEAVE DSLT IN PLACE.
- AT EXISTING POST MOUNTED SPEED LIMIT SIGN AFTER THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. IF THERE IS NOT AN EXISTING SIGN, PLACE 1,500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP
- IF WORK AREA STARTS LESS THAN 1,000 FEET FROM END OF LANE CLOSURE TAPER, OMIT DIGITAL SPEED LIMIT TRAILER AT THAT LOCATION.
- PLACE A DIGITAL SPEED LIMIT TRAILER A MINIMUM OF EVERY ONE MILE. MODIFY PLACEMENT AS DIRECTED BY AN ENGINEER WHEN DIGITAL SPEED LIMIT TRAILER IS LOCATED IN CLOSE PROXIMITY TO AN ACCELERATION LANE OF AN ENTRANCE RAMP.
- 5 DRUMS SPACED @ 10' INTERVALS AS NEEDED.
- INCLUDE NON-DIGITAL R2-1 RESUME SPEED LIMIT SIGNS 200 FEET MINIMUM (500 FEET DESIRABLE) BEYOND THE "END ROAD WORK" SIGN.

LEGEND

- SIGN ON PERMANENT SUPPORT
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TYPE III BARRICADE WITH ATTACHED SIGN
- TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKINGS
- DIRECTION OF TRAFFIC
- WORK AREA
- CONNECTED ARROW BOARD
- DIGITAL SPEED LIMIT TRAILER (DSL)
- WZ START LOCATION MARKER
- WZ END LOCATION MARKER

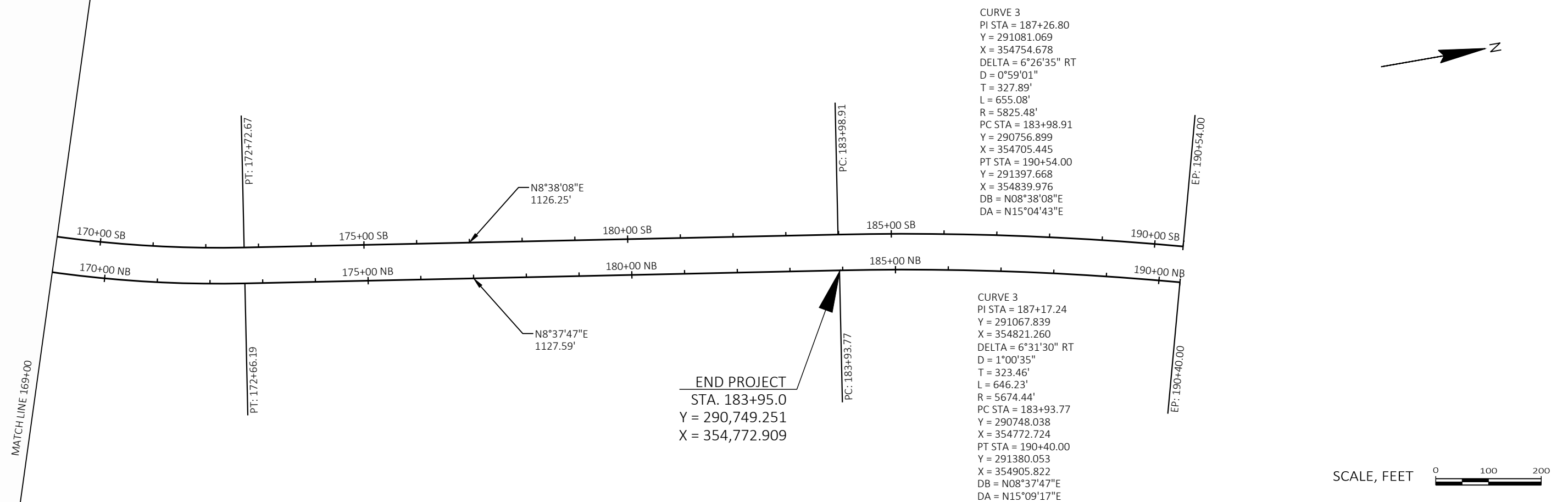
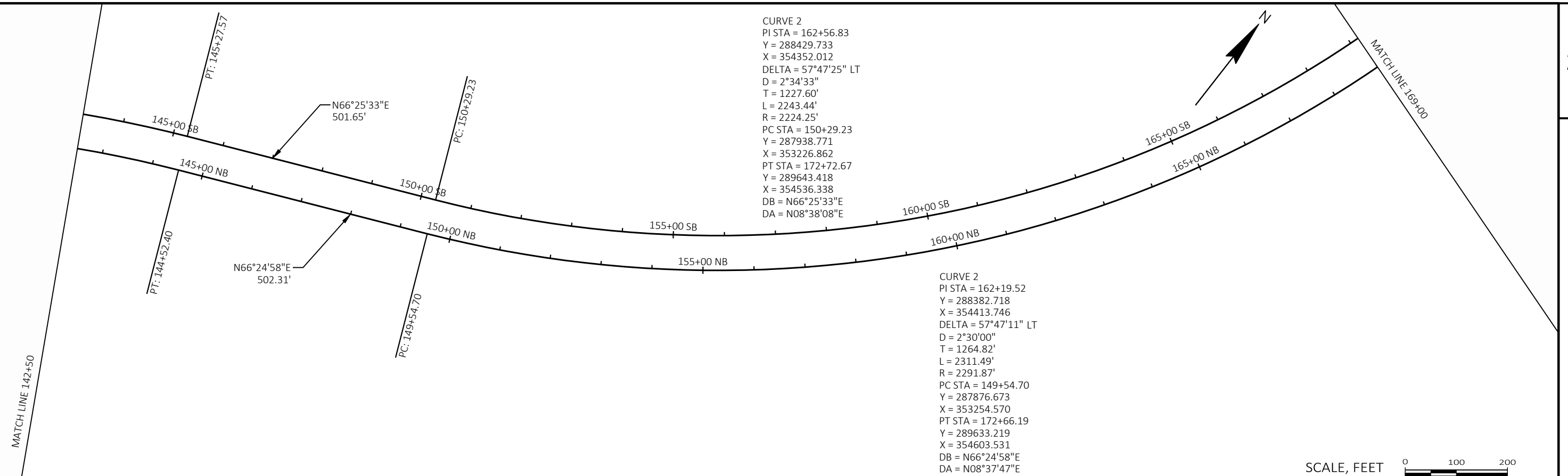


SPV.0045.01 DIGITAL SPEED REDUCTION SYSTEM (DSRS)



PROJECT NO: 1190-01-86	HWY: USH 53	COUNTY: EAU CLAIRE	ALIGNMENT DETAIL	SHEET 9	E
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2



PROJECT NO:	1190-01-86
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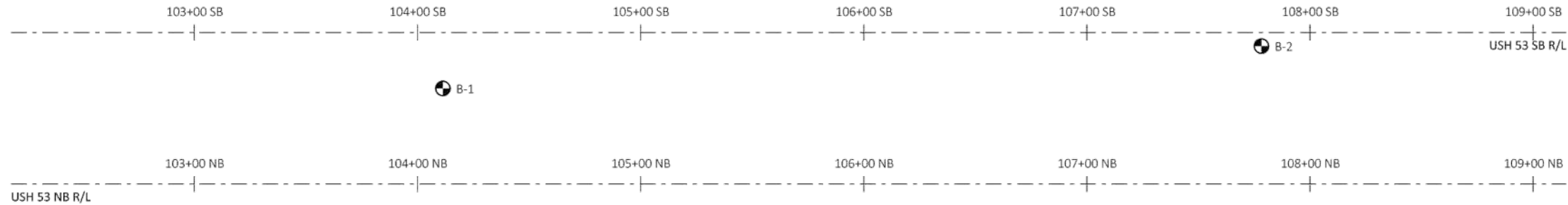
HWY: USH 53

COUNTY: EAU CLAIRE

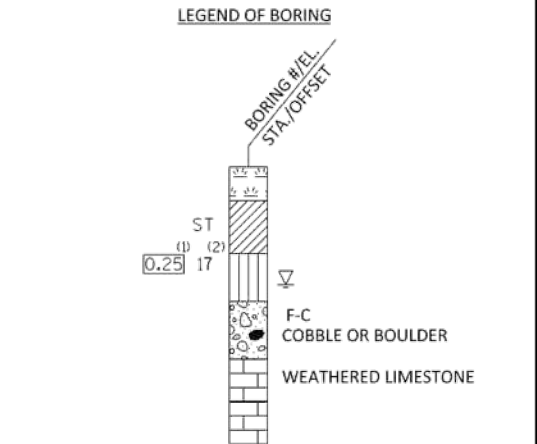
ALIGNMENT DETAIL

SHEET 10

E



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



(1) Unconfined STRENGTH, as determined by a pocket penetrometer (tsf)

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

GROUND WATER ELEVATION

▽ AT TIME OF DRILLING

▽ END OF DRILLING

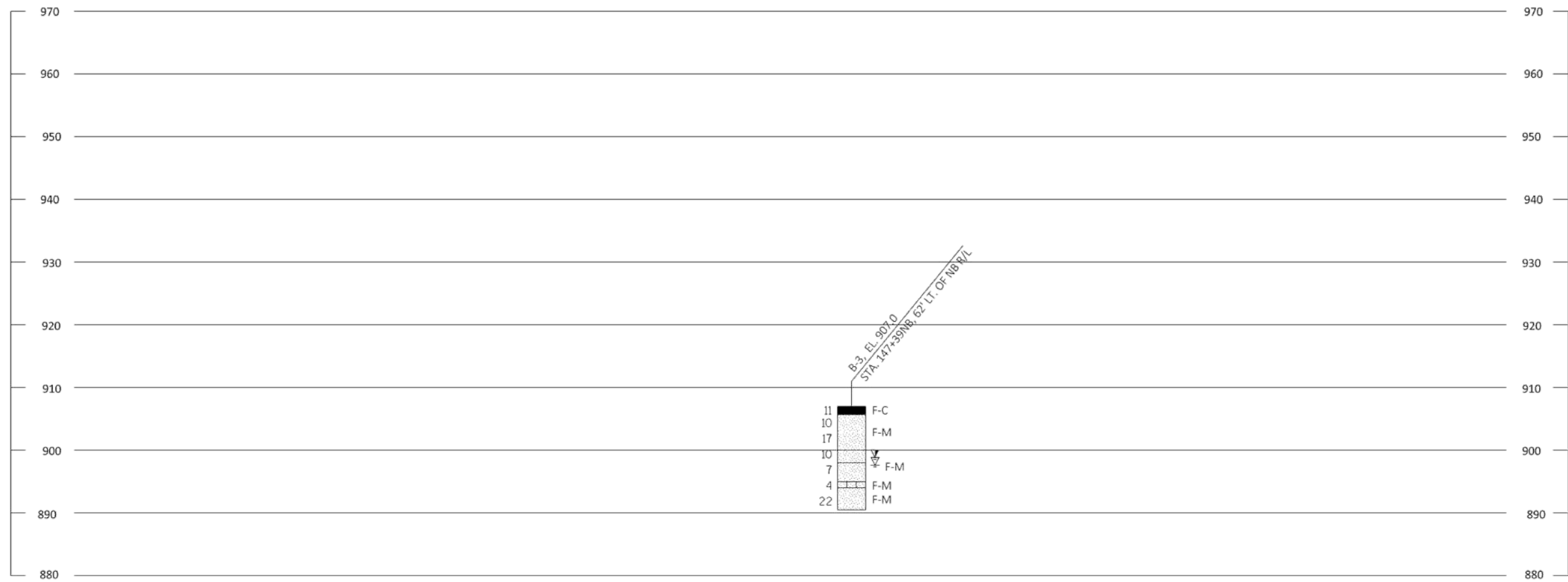
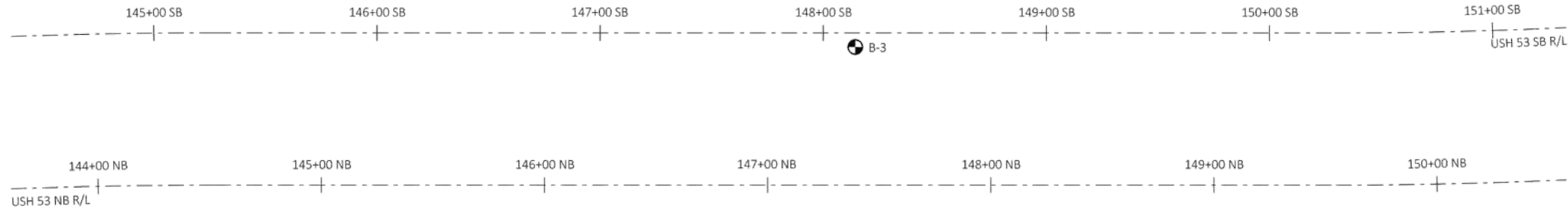
▽ AFTER DRILLING

ABBREVIATIONS

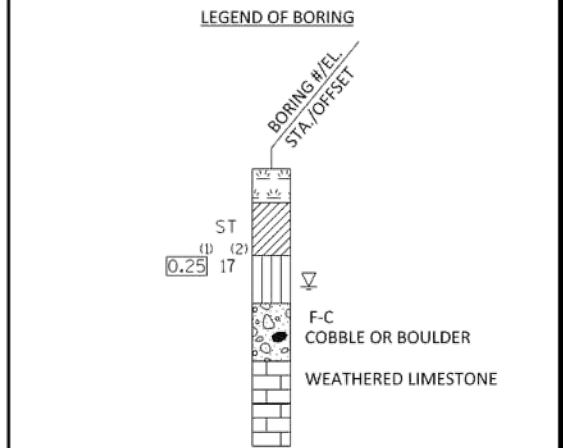
F-FINE M-MEDIUM C-COARSE ST - SHELBY TUBE

SUBSURFACE EXPLORATION FOR FOUNDATION DESIGN AND BIDDERS INFORMATION

Borings were completed at points approximately as indicated on this drawing to obtain information concerning the character of subsurface materials found at the site. Because the investigated depths are limited and the area of the borings is very small in relation to the entire site, the Wisconsin Department of Transportation does not warrant similar subsurface conditions below, between, or beyond these borings. Variations in soil conditions should be expected and fluctuations in groundwater levels may occur.



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



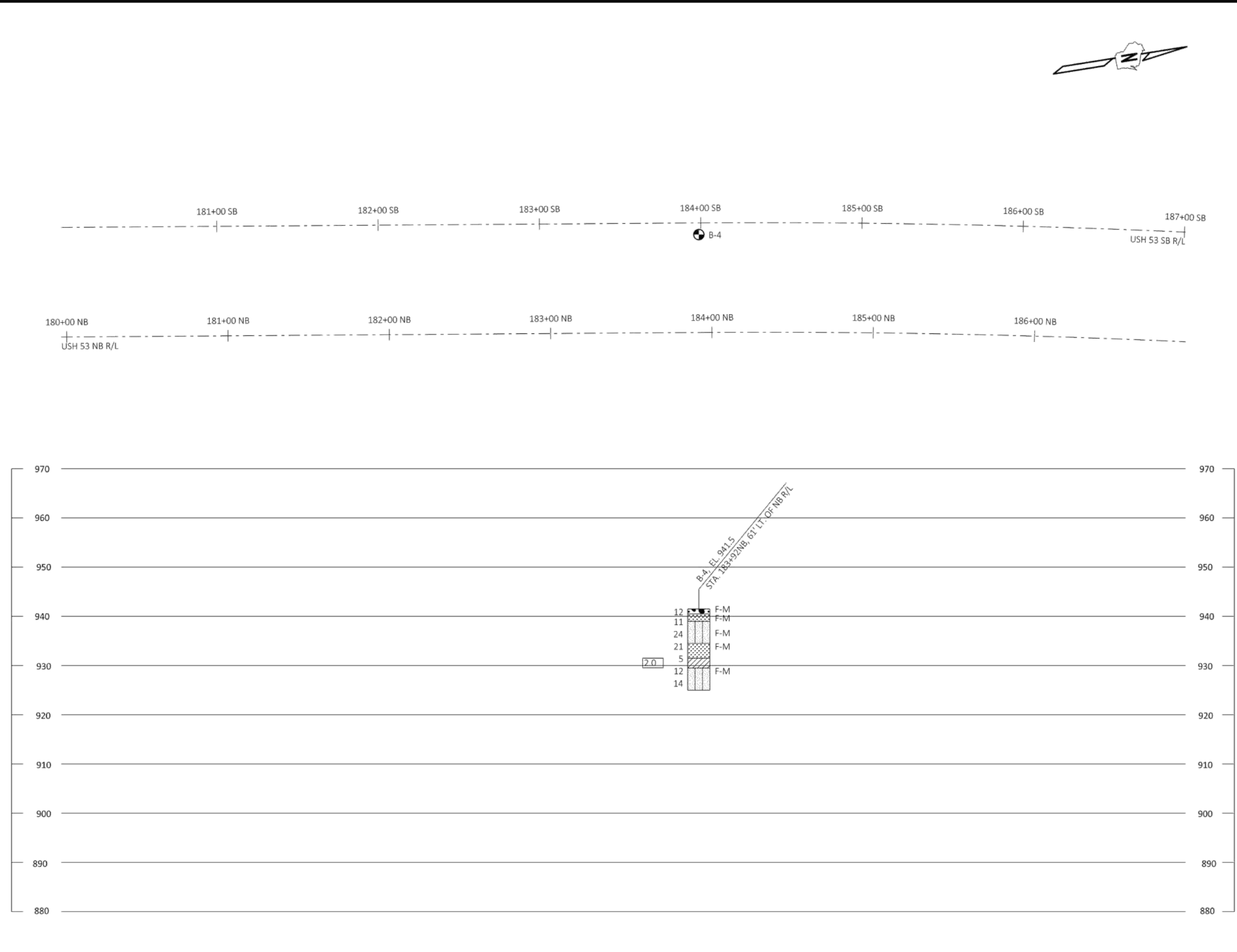
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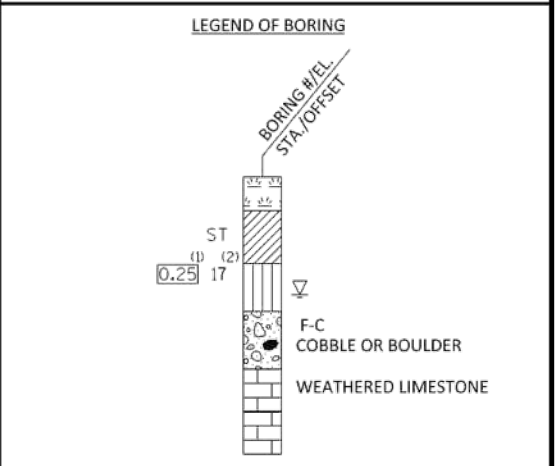
GROUND WATER ELEVATION			
	AT TIME OF DRILLING		END OF DRILLING
	AFTER DRILLING		
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Estimate Of Quantities By Plan Sets

1190-01-86					
Line	Item	Item Description	Unit	Total	Qty
0006	205.0100	Excavation Common	CY	83.000	83.000
0008	208.0100	Borrow	CY	332.000	332.000
0014	213.0100	Finishing Roadway (project) 03. 1190-01-86	EACH	1.000	1.000
0016	305.0110	Base Aggregate Dense 3/4-Inch	TON	211.000	211.000
0018	611.0430	Reconstructing Inlets	EACH	1.000	1.000
0024	611.8115	Adjusting Inlet Covers	EACH	1.000	1.000
0026	613.1100.S	Cable Barrier Type 1	LF	7,958.000	7,958.000
0028	613.1200.S	Cable Barrier End Terminal Type 1	EACH	6.000	6.000
0034	618.0100	Maintenance and Repair of Haul Roads (project) 03. 1190-01-86	EACH	1.000	1.000
0036	619.1000	Mobilization	EACH	0.150	0.150
0038	624.0100	Water	MGAL	4.000	4.000
0040	625.0500	Salvaged Topsoil	SY	7,082.000	7,082.000
0042	627.0200	Mulching	SY	5,629.000	5,629.000
0044	628.1504	Silt Fence	LF	50.000	50.000
0046	628.1520	Silt Fence Maintenance	LF	50.000	50.000
0048	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0050	628.1910	Mobilizations Emergency Erosion Control	EACH	2.000	2.000
0052	628.2008	Erosion Mat Urban Class I Type B	SY	1,454.000	1,454.000
0054	628.7005	Inlet Protection Type A	EACH	2.000	2.000
0056	628.7504	Temporary Ditch Checks	LF	120.000	120.000
0060	629.0210	Fertilizer Type B	CWT	4.470	4.470
0066	630.0200	Seeding Temporary	LB	25.000	25.000
0068	630.0500	Seed Water	MGAL	41.000	41.000
0070	642.5001	Field Office Type B	EACH	0.150	0.150
0072	643.0300	Traffic Control Drums	DAY	1,417.000	1,417.000
0074	643.0420	Traffic Control Barricades Type III	DAY	78.000	78.000
0076	643.0705	Traffic Control Warning Lights Type A	DAY	156.000	156.000
0078	643.0715	Traffic Control Warning Lights Type C	DAY	221.000	221.000
0080	643.0800	Traffic Control Arrow Boards	DAY	13.000	13.000
0082	643.0900	Traffic Control Signs	DAY	182.000	182.000
0084	643.1051	Traffic Control Signs PCMS with TMC Communications	DAY	14.000	14.000
0086	643.1205.S	Basic Traffic Queue Warning System	DAY	26.000	26.000
0088	643.5000	Traffic Control	EACH	0.150	0.150
0094	650.9911	Construction Staking Supplemental Control (project) 03. 1190-01-86	EACH	1.000	1.000
0096	650.9920	Construction Staking Slope Stakes	LF	1,489.000	1,489.000
0102	SPV.0045	Special 01. Digital Speed Reduction System (DSRS)	DAY	26.000	26.000
0106	SPV.0085	Special 01. Native Seeding Mixture No. 75 Updated	LB	20.000	20.000
0108	SPV.0090	Special 01. Construction Staking Median Cable Barrier	LF	8,123.000	8,123.000

3

EXCAVATION COMMON

CATEGORY	STATION	TO	STATION	LOCATION	204.0100 CY	REMARKS
0010	119+82	-	183+95	USH 53	83	
PROJECT TOTAL =					83	

BORROW

CATEGORY	STATION	TO	STATION	LOCATION	208.0100 CY	REMARKS
0010	119+82	-	183+95	USH 53	332	
PROJECT TOTAL =					332	

INLET SUMMARY

CATEGORY	STATION	OFFSET	LOCATION	RECONSTRUCTING INLETS 611.0430	ADJUSTING INLET COVERS 611.8115	REMARKS
				EACH	EACH	
0010	119+84	SB 32.8' LT	USH 53	1	-	
0010	176+81	NB 34.3' LT	USH 53	-	1	
PROJECT TOTAL =				1	1	

3

BASE MATERIAL SUMMARY

							BAD 3/4-INCH 305.0110	
CATEGORY	STATION	TO	STATION	LOCATION		TON	REMARKS	
0010	103+42	NB -	106+82	NB	USH 53	9	CTH QQ TO CROSSOVER NORTH OF CTH QQ	
0010	107+72	SB -	148+36	SB	USH 53	105	CROSSOVER NORTH OF CTH QQ TO STH 312	
0010	146+46	NB -	183+95	NB	USH 53	97	STH 312 TO CROSSOVER NORTH OF LASALLE ST	
PROJECT TOTAL =						211		

WATER

CATEGORY	LOCATION	624.0100 MGAL	REMARKS
0010	USH 53	4	BAD 3/4-INCH
PROJECT TOTAL =		4	

CABLE BARRIER SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	CABLE BARRIER	CABLE BARRIER END	REMARKS
					TYPE 1	TERMINAL TYPE 1	
					613.1100.S	613.1200.S	
					LF	EACH	
0010	103+42	NB -	106+82	NB USH 53	285	2	CTH QQ TO CROSSOVER NORTH OF CTH QQ
0010	107+72	SB -	148+36	SB USH 53	3,993	2	CROSSOVER NORTH OF CTH QQ TO STH 312
0010	146+46	NB -	183+95	NB USH 53	3,680	2	STH 312 TO CROSSOVER NORTH OF LASALLE ST
PROJECT TOTALS =					7,958	6	

ALL ITEMS ARE CAT 0010 UNLESS NOTED OTHERWISE

EROSION CONTROL ITEMS

																	EROSION																					
																	MAT URBAN		INLET		TEMPORARY		NATIVE SEEDING															
																	SALVAGED				SILT		SILT FENCE		CLASS I		PROTECTION		DITCH		FERTILIZER		SEEDING		SEED		MIXTURE NO. 75	
																	TOPSOIL		MULCHING		FENCE		MAINTENANCE		TYPE A		TYPE A		CHECKS		TYPE B		TEMPORARY		WATER		UPDATED	
																	625.0500		627.0200		628.1504		628.1520		628.2006		628.7005		628.7504		629.0210		630.0200		630.0500		SPV.0085.01	
CATEGORY	STATION	TO	STATION	LOCATION	SY	SY	LF	LF	SY	EACH	LF	CWT	LB	MGAL	LB	REMARKS																						
0010	119+82	SB	- 126+65	SB	USH 53	2,427	1,798	-	-	629	1	60	1.53	-	14	7	E-MAT ALONG DITCH LINE																					
0010	175+86	NB/SB	- 183+74	NB/SB	USH 53	4,011	3,319	-	-	692	1	60	2.53	-	23	11	E-MAT ALONG DITCH LINE																					
0010	PROJECT LIMITS				UNDISTRIBUTED	644	512	50	50	133	-	-	0.41	25	4	2																						
PROJECT TOTALS =						7,082	5,629	50	50	1,454	2	120	4.47	25	41	20																						

MOBILIZATION EROSION CONTROL ITEMS

CATEGORY	LOCATION	MOBILIZATIONS		REMARKS
		EROSION	EMERGENCY	
		CONTROL	EROSION CONTROL	
		628.1905	628.1910	
		EACH	EACH	
0010	USH 53 - SEGMENT 1	3	2	
PROJECT TOTALS =		3	2	

ALL ITEMS ARE CAT 0010 UNLESS NOTED OTHERWISE

TRAFFIC CONTROL SUMMARY

CATEGORY	LOCATION	LENGTH (DAYS)	TRAFFIC CONTROL DRUMS 643.0300 DAY	TRAFFIC CONTROL BARRICADES TYPE III 643.0420 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE A 643.0705 DAY	TRAFFIC CONTROL WARNING LIGHTS TYPE C 643.0715 DAY	TRAFFIC CONTROL ARROW BOARDS 643.0800 DAY	TRAFFIC CONTROL SIGNS 643.0900 DAY	TRAFFIC CONTROL PCMS BOARD W/ CELLULAR COMMUNICATIONS 643.1051 DAY	TRAFFIC CONTROL 643.5000 EACH	DIGITAL SPEED REDUCTION SYSTEM (DSRS) SPV.0045.01 DAY	REMARKS
0010	USH 53	13	1,417	78	156	221	13	182	14	1	26	EB/WB CLOSURES
PROJECT TOTALS =		13	1,417	78	156	221	13	182	14	1	26	

BASIC TRAFFIC QUEUE WARNING SYSTEM SUMMARY

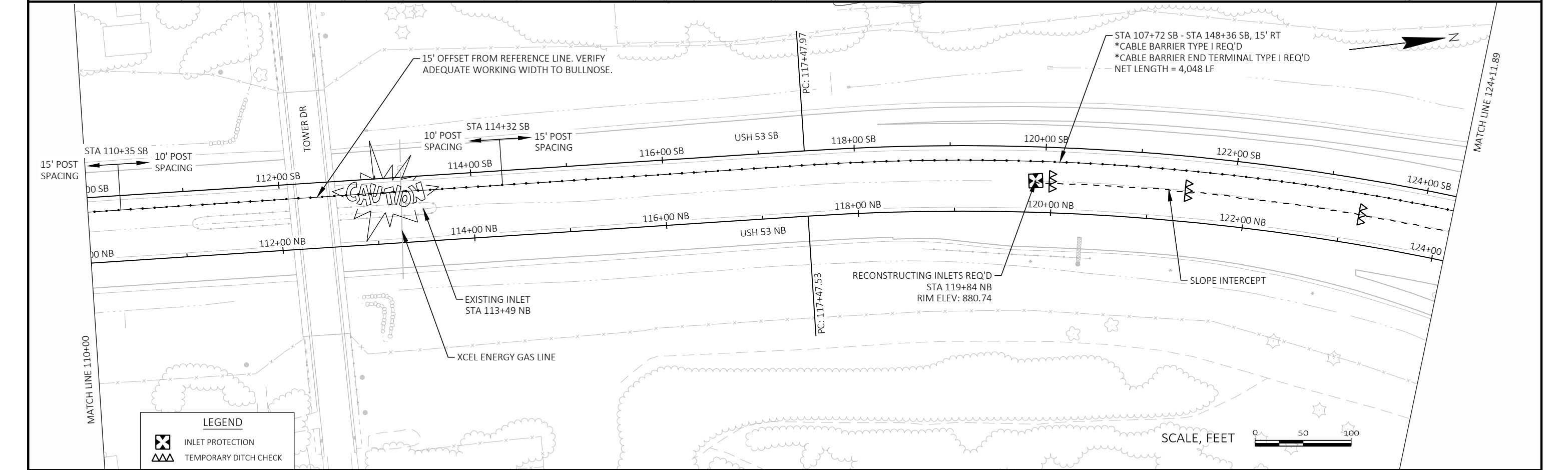
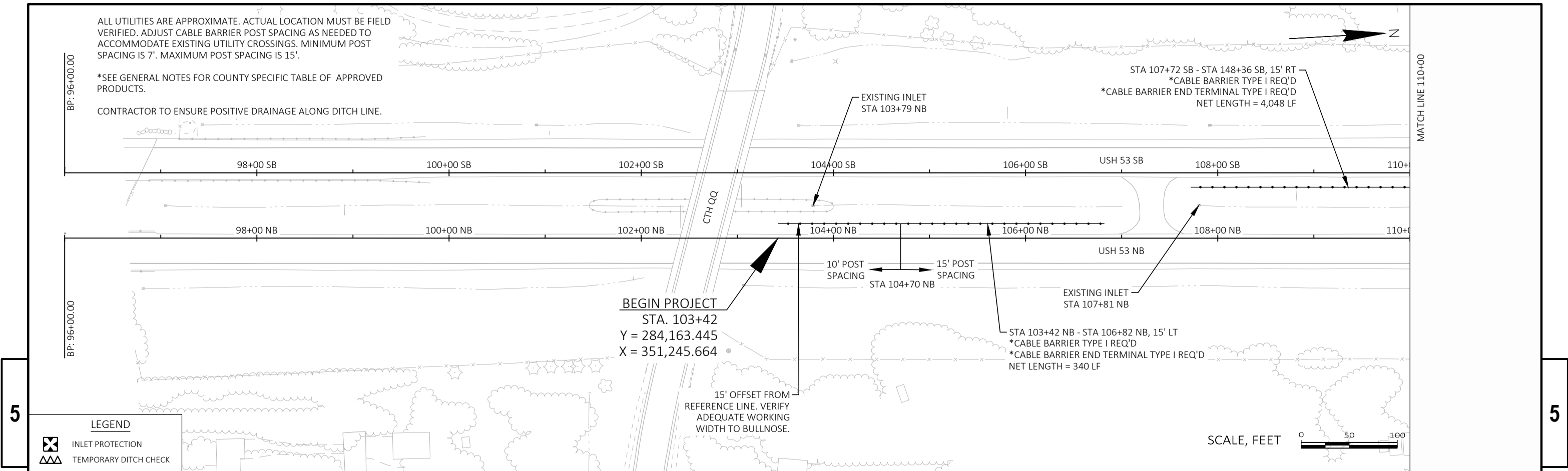
CATEGORY	LOCATION	FLASHING BEACON SIGNS (FBS) *	PORTABLE TRAFFIC SENSORS (PTS) *	BASIC QUEUE WARNING SYSTEM 643.1205.S DAY
0010	USH 53 NB - SEGMENT 1	3	3	13
0010	USH 53 SB - SEGMENT 1	3	3	13
PROJECT TOTALS =		6	6	26

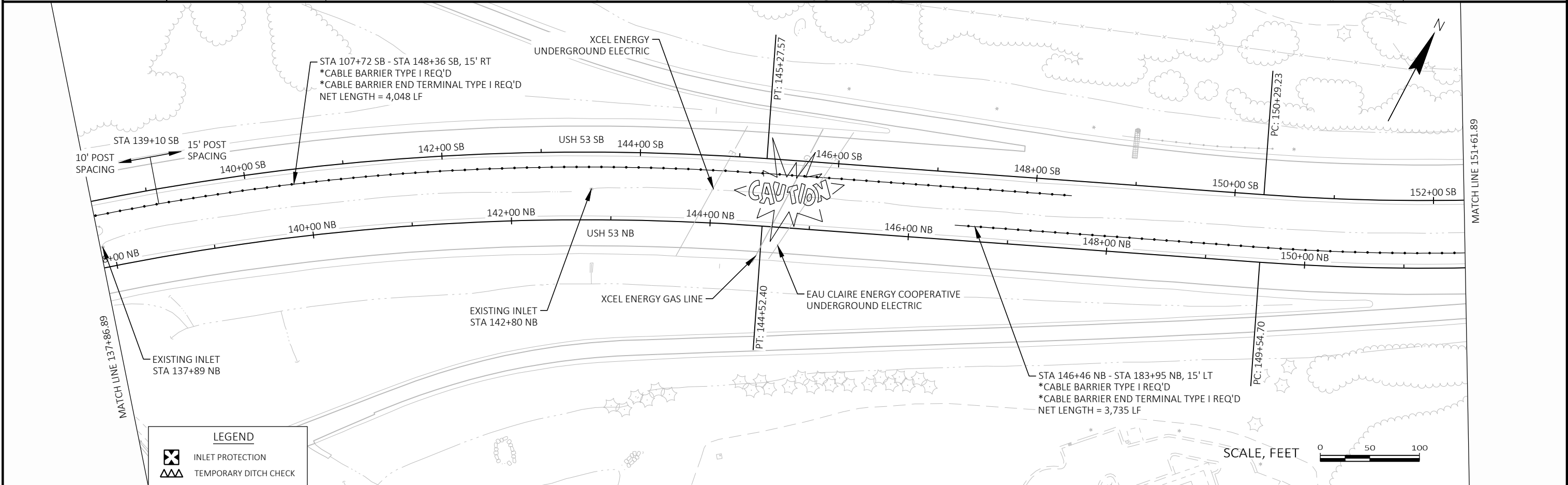
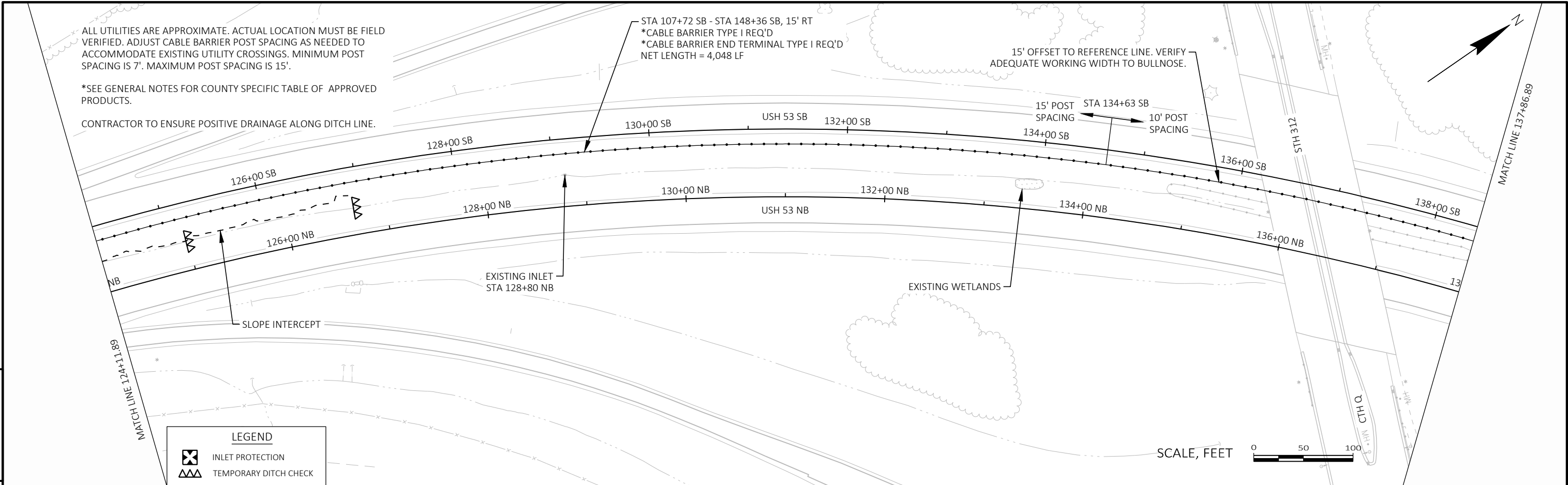
*THESE ITEMS ARE PART OF THE QWS AND ARE PAID FOR AS ONE COMPLETE SYSTEM PER ROADWAY

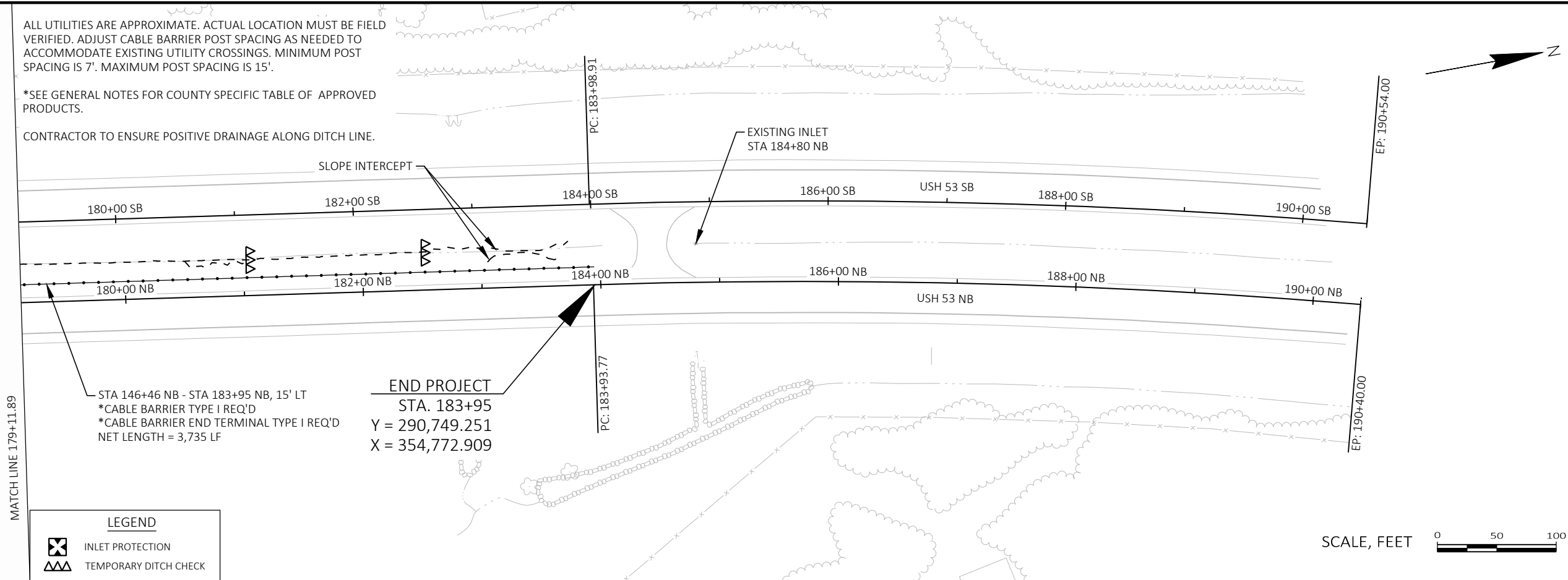
CONSTRUCTION STAKING SUMMARY

CATEGORY	STATION	TO	STATION	LOCATION	CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1190-01-16 650.9911 EACH	CONSTRUCTION STAKING SLOPE STAKES 650.9920 LF	CONSTRUCTION STAKING MEDIAN CABLE BARRIER SPV.0090.01 LF
0010	103+42	-	183+95	USH 53	1	1,489	8,123
PROJECT TOTALS =					1	1,489	8,123

ALL ITEMS ARE CAT 0010 UNLESS NOTED OTHERWISE

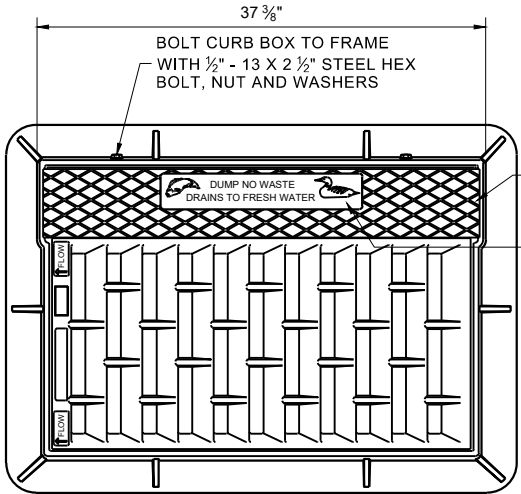






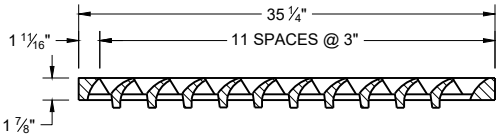
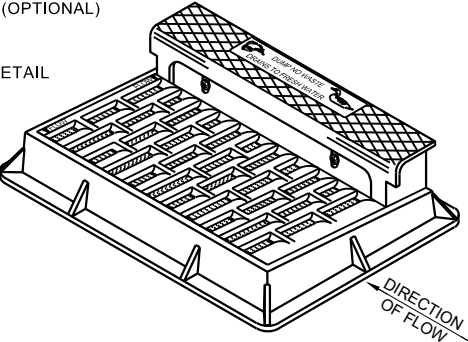
Standard Detail Drawing List

08A05-21A	INLET COVERS TYPE A, H, A-S, H-S & Z
08C08-03	INLETS MEDIAN 1 AND 2 GRATE
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E15-01	CULVERT PIPE CHECK
14B52-03A	CABLE BARRIER TYPE 1 LAYOUT
14B52-03B	CABLE BARRIER TYPE 1 LAYOUT
14B52-03C	CABLE BARRIER TYPE 1 LAYOUT
15C11-10B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15D27-03	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

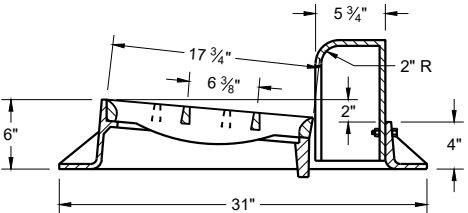
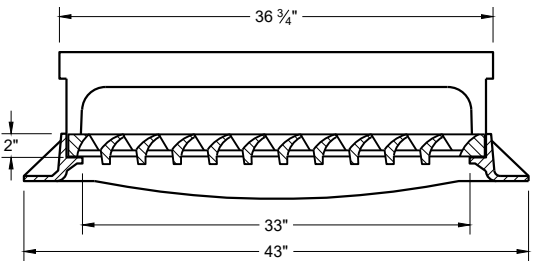
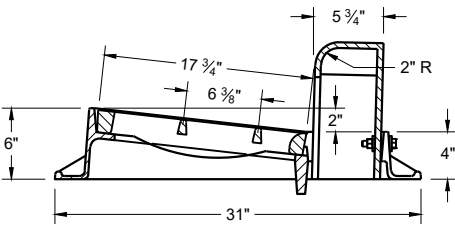
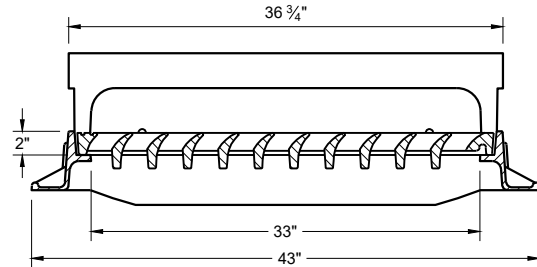


NOTE: EITHER CASTING IS ACCEPTABLE

TYPE "C" CHECKERED TOP DESIGN (OPTIONAL)
SEE LOGO DETAIL

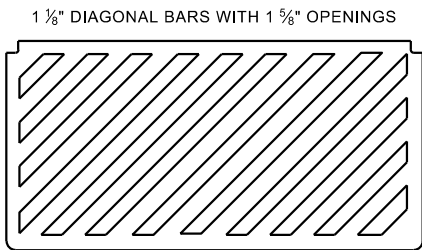


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

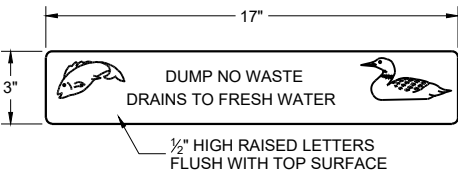


TYPE "H"

NOTE: EITHER CASTING IS ACCEPTABLE



SPECIAL GRATE FOR TYPE "H" COVER
(MEASURES 35" X 17 3/4" X 2")
(NOTED AS TYPE H-S ON DRAINAGE TABLE)



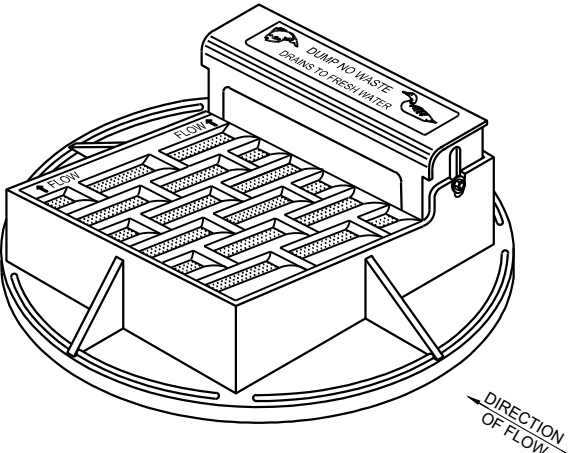
LOGO DETAIL

GENERAL NOTES

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

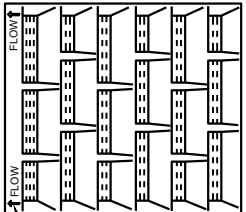
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

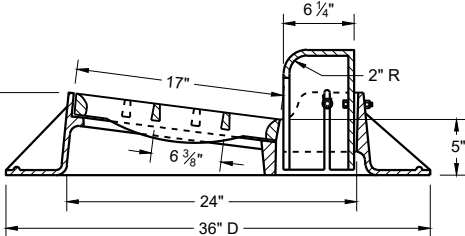
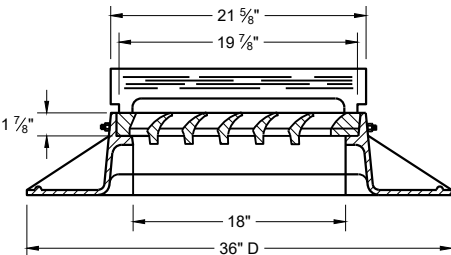
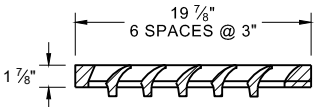


NOTE: CURB BOX HEIGHT ADJUSTABLE 6" - 9"

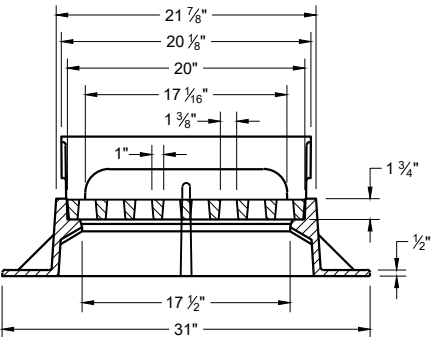
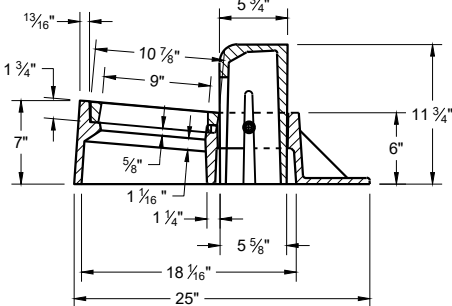
NOTE: EITHER CASTING IS ACCEPTABLE



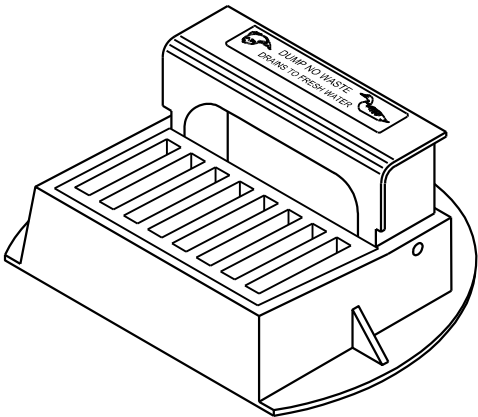
DIRECTION OF FLOW ARROWS



TYPE "A"



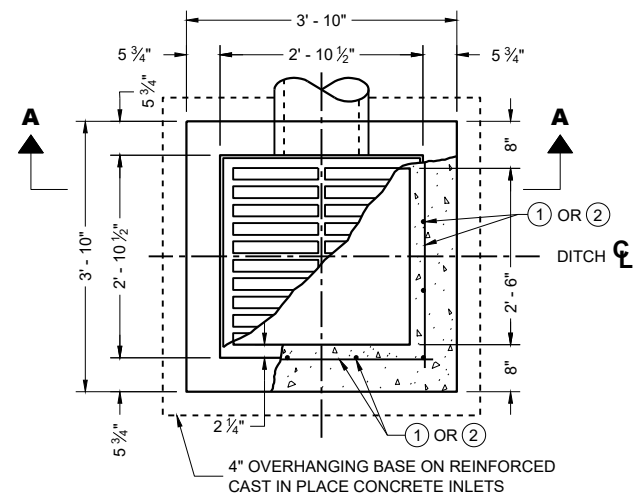
TYPE "Z"



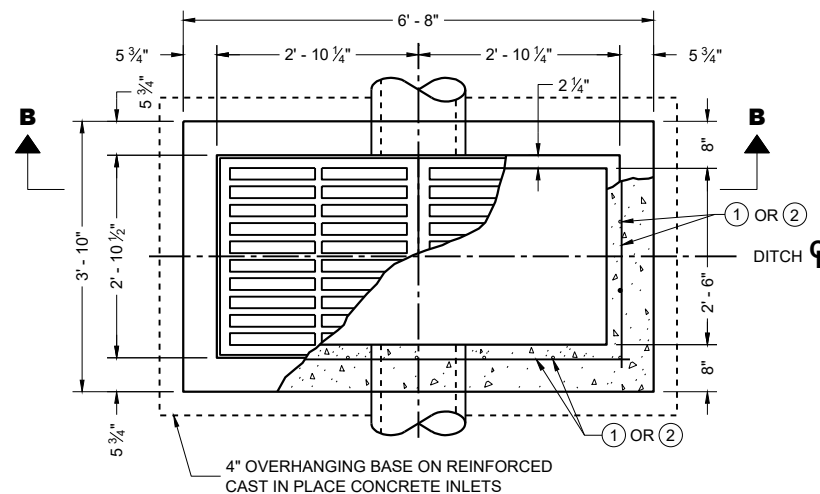
INLET COVERS
TYPES A, H, A-S, H-S AND Z

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

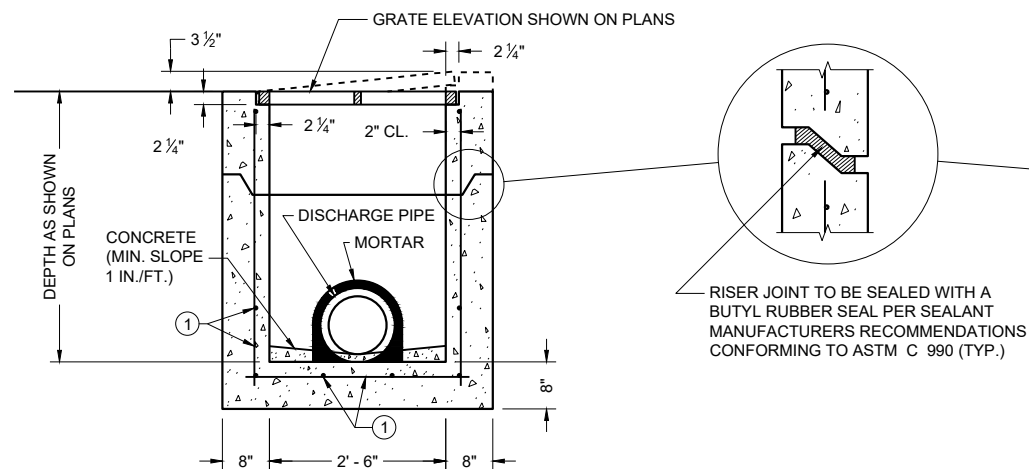
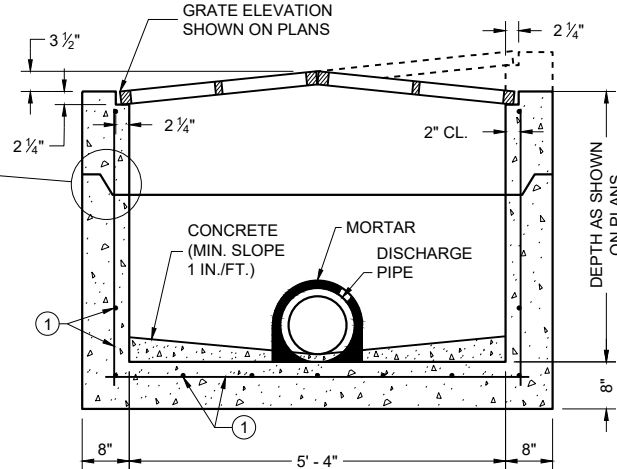
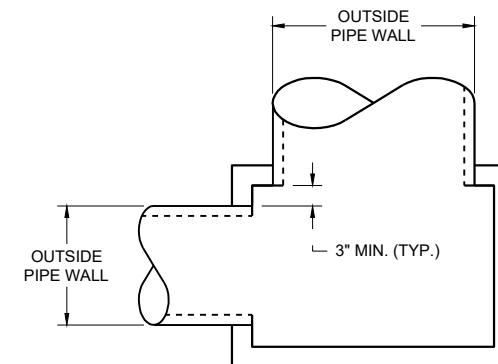
APPROVED
December 2023
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA



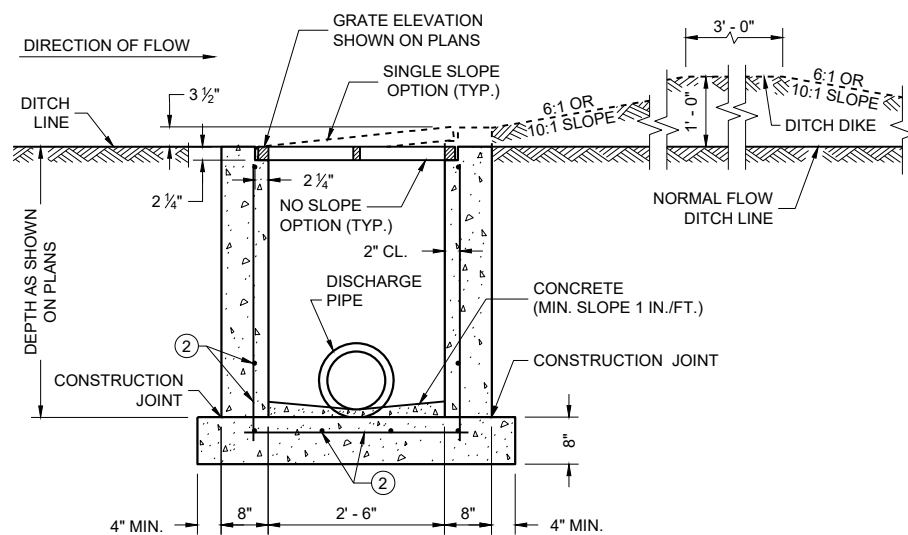
PLAN VIEW



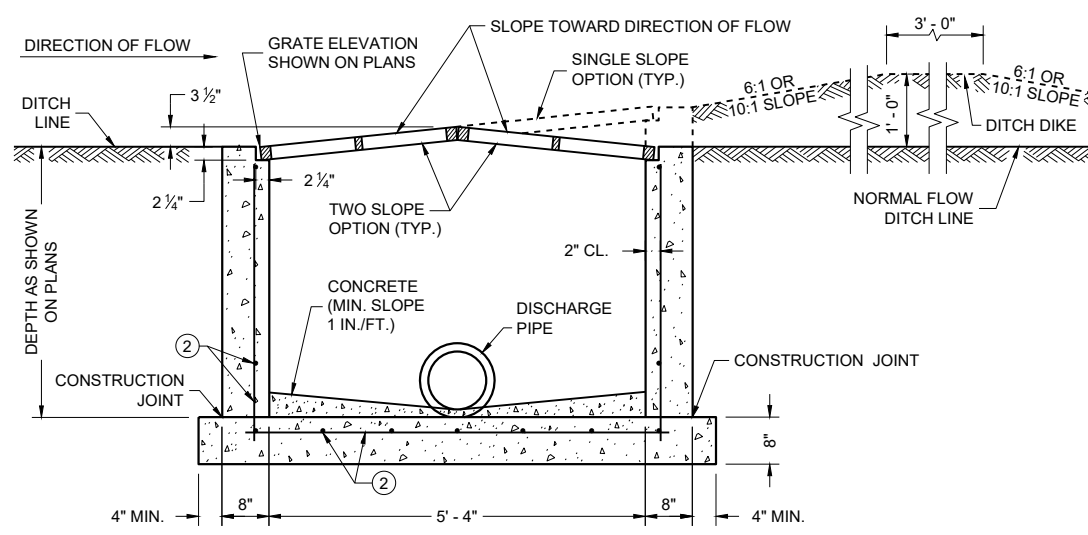
PLAN VIEW

PRECAST REINFORCED CONCRETE
SECTION A - APRECAST REINFORCED CONCRETE
SECTION B - B

DETAIL "A"

REINFORCED CAST IN PLACE CONCRETE
SECTION A - A

INLETS MEDIAN 1 GRATE

REINFORCED CAST IN PLACE CONCRETE
SECTION B - B

INLETS MEDIAN 2 GRATE

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.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF FOUNDATION BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

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

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

- ① FOR PRECAST INLETS AND REINFORCED CONCRETE BASES PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.
- ② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

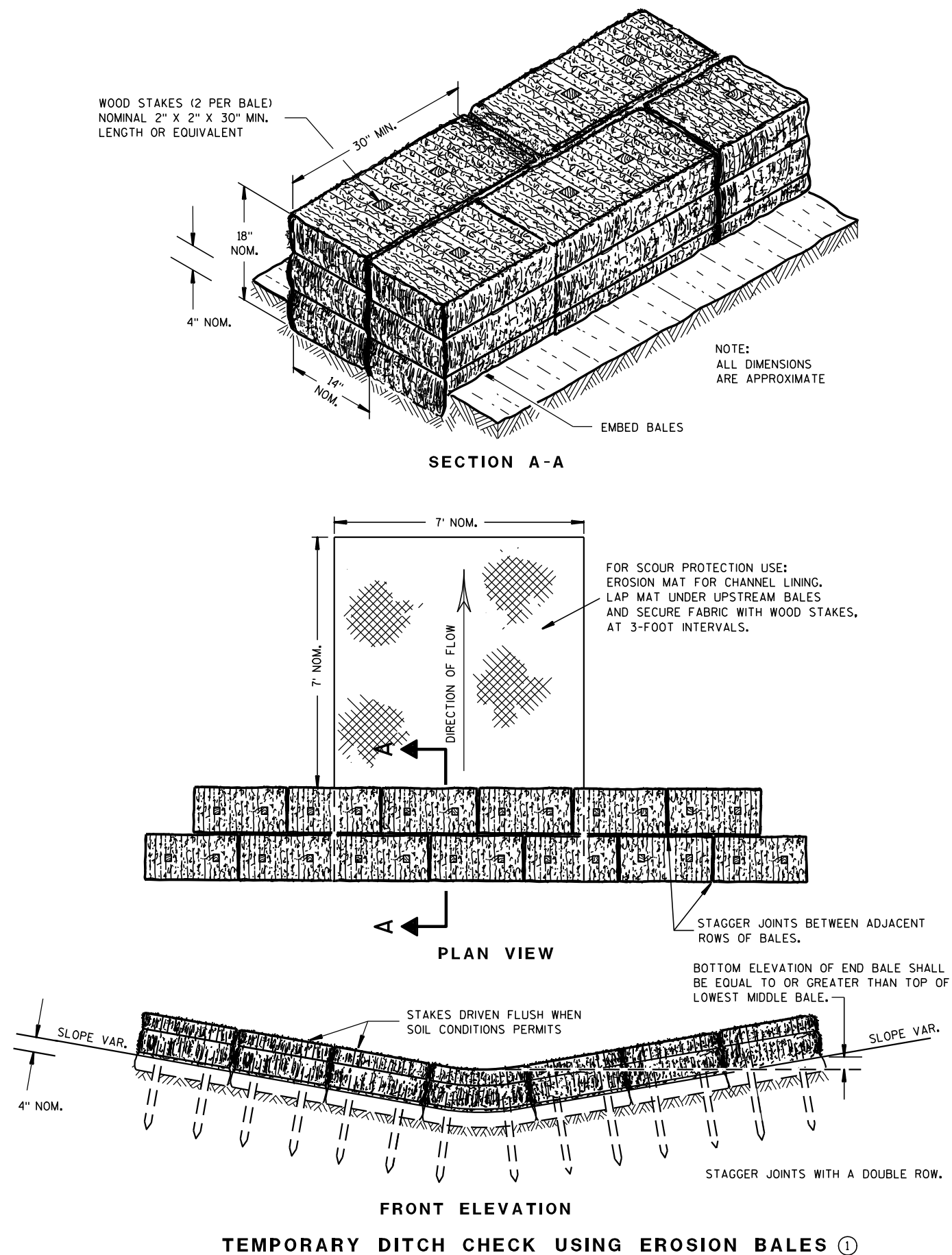
PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42

INLETS
MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

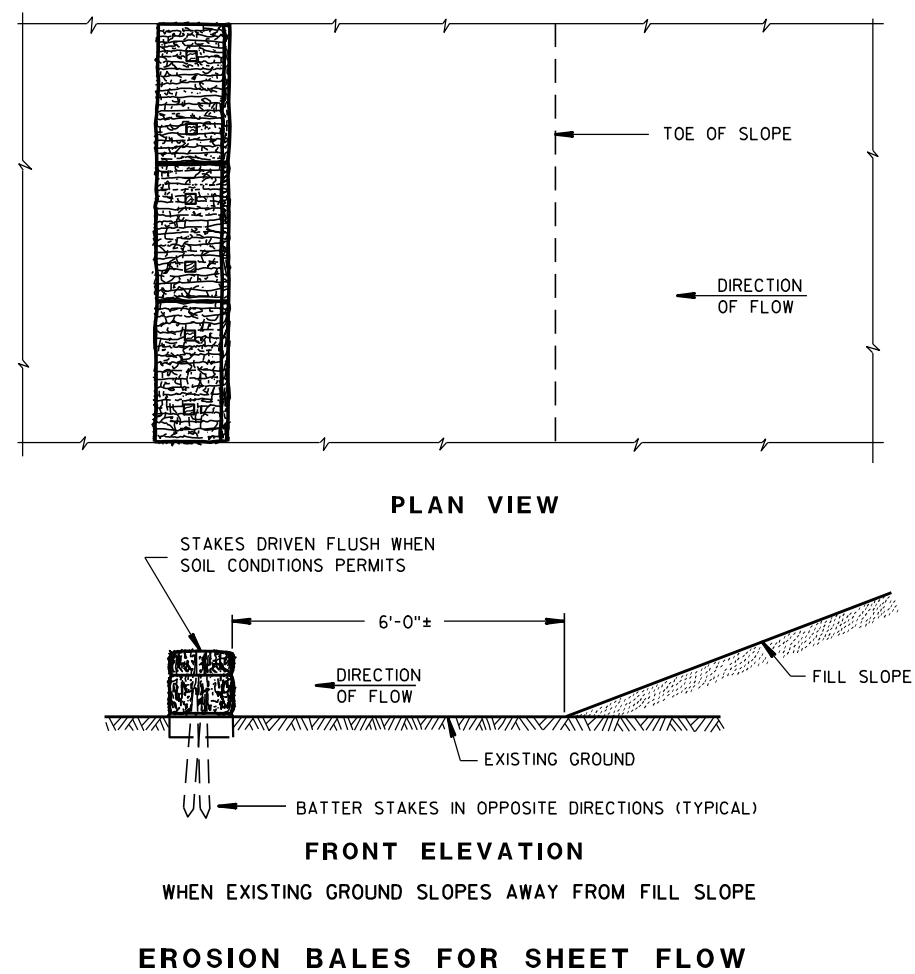
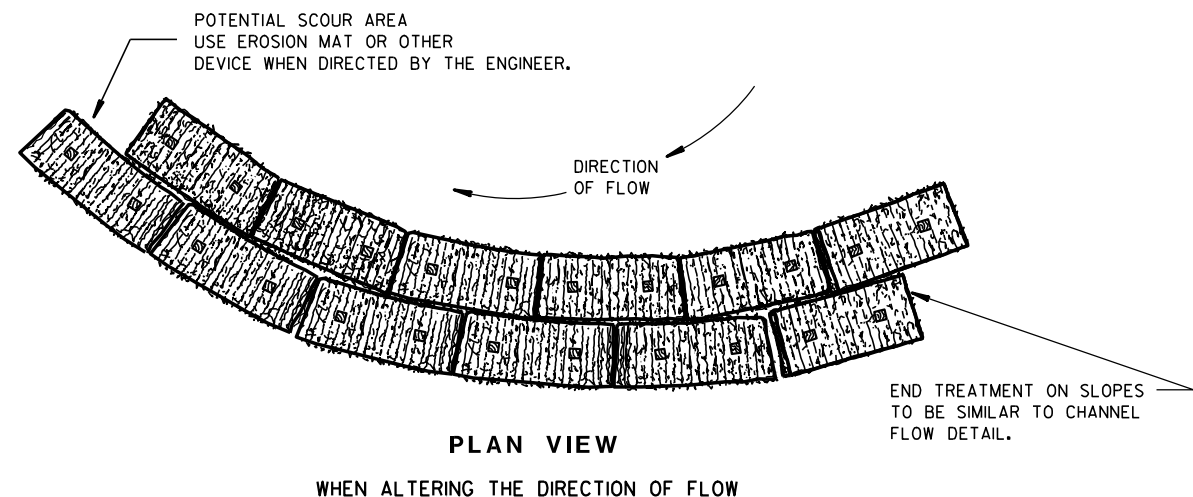
APPROVED
December 2023 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



GENERAL NOTES

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

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

TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

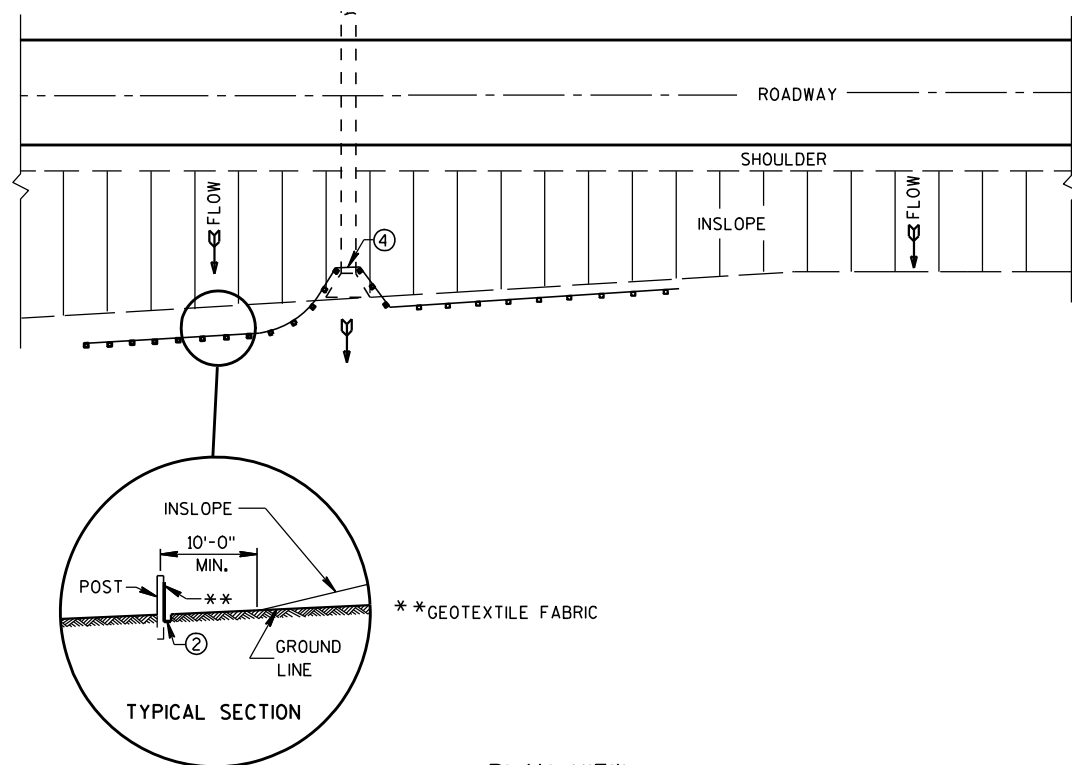
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/04/02
DATE

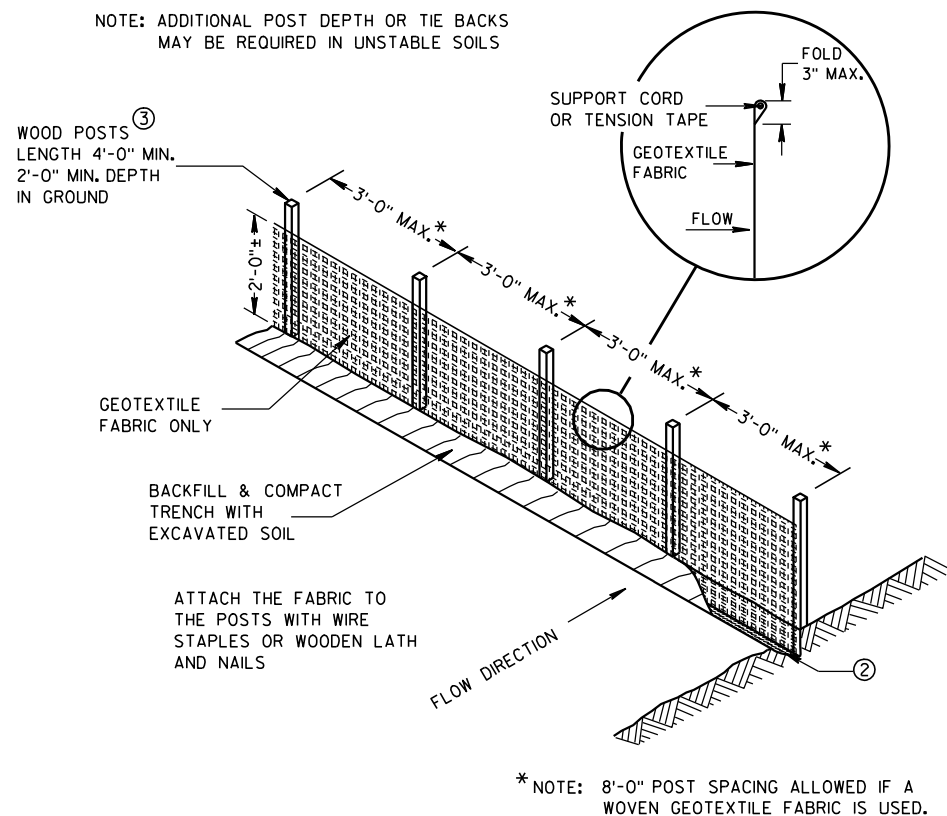
/S/ Beth Conn-----
CHIEF ROADWAY DEVELOP 25 ENGINEER

FHWA

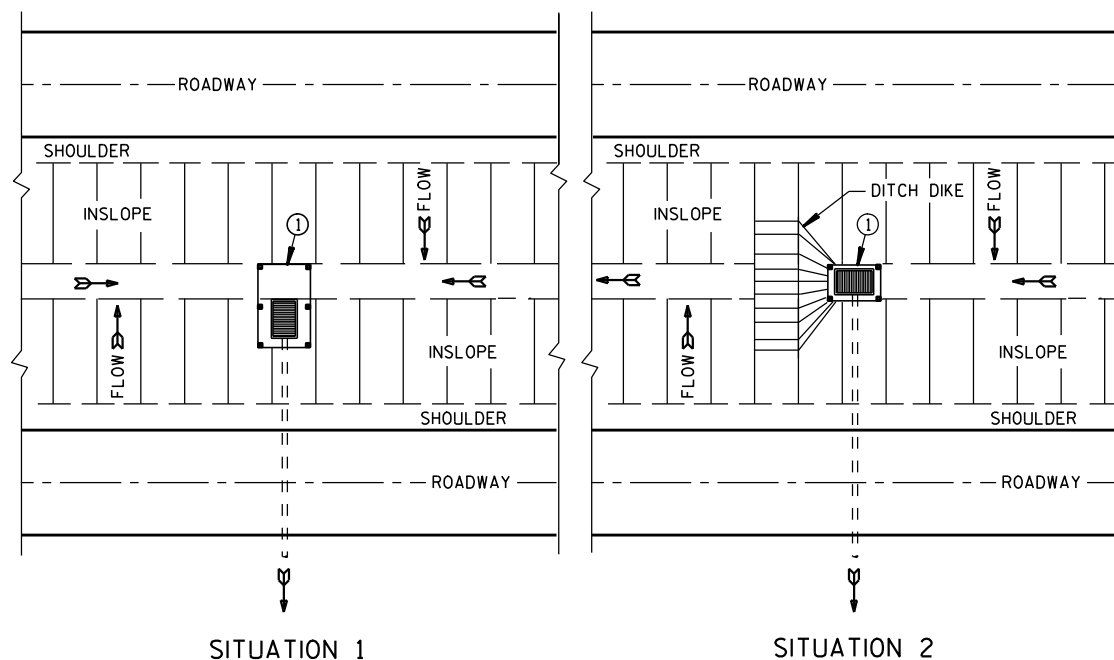


TYPICAL APPLICATION OF SILT FENCE

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

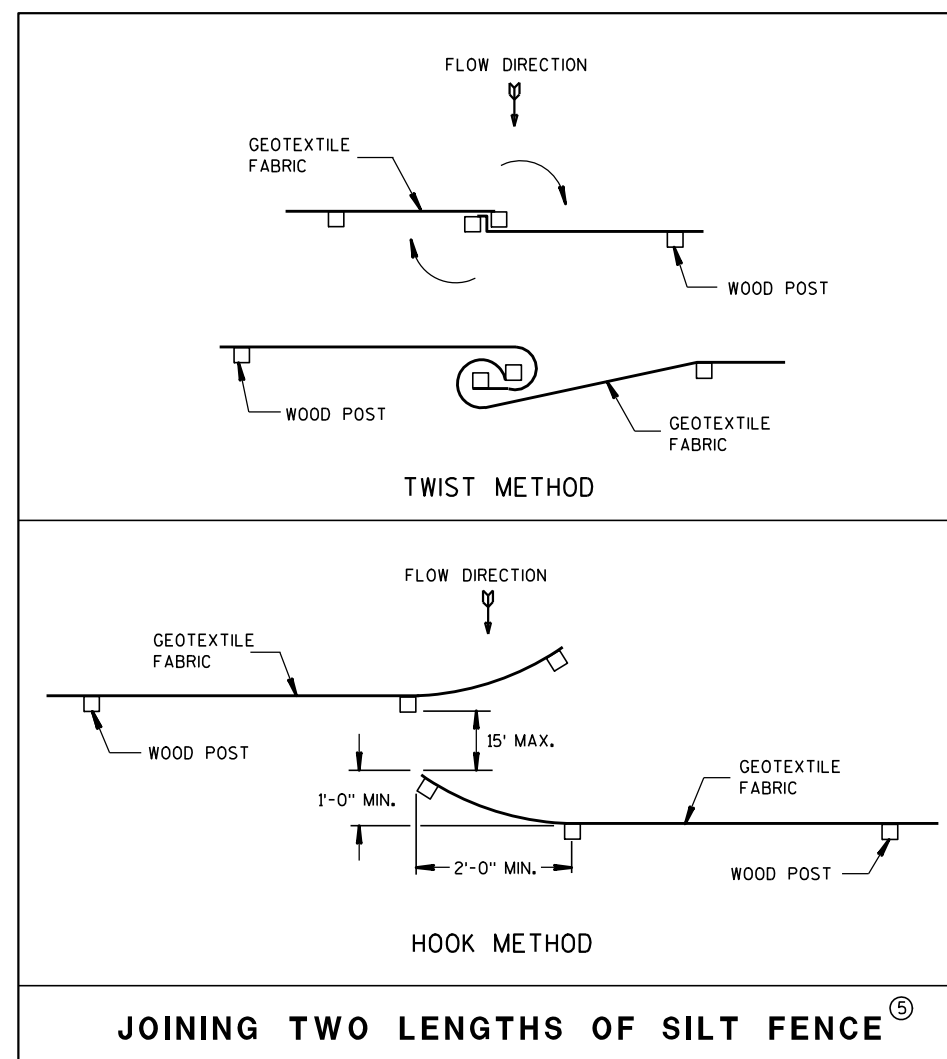


SILT FENCE



PLAN VIEW

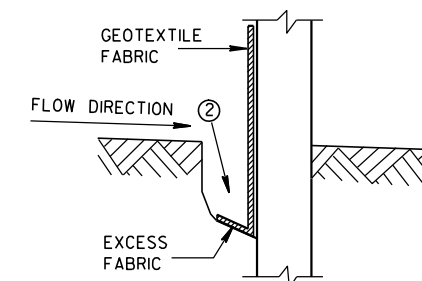
SILT FENCE AT MEDIAN SURFACE DRAINS



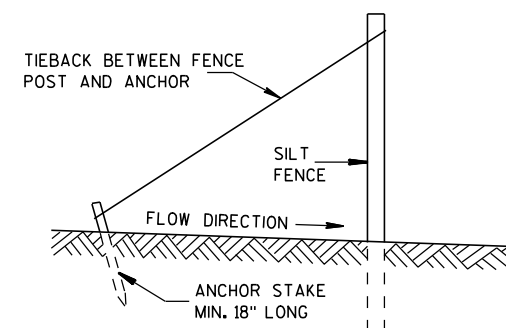
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-29-05

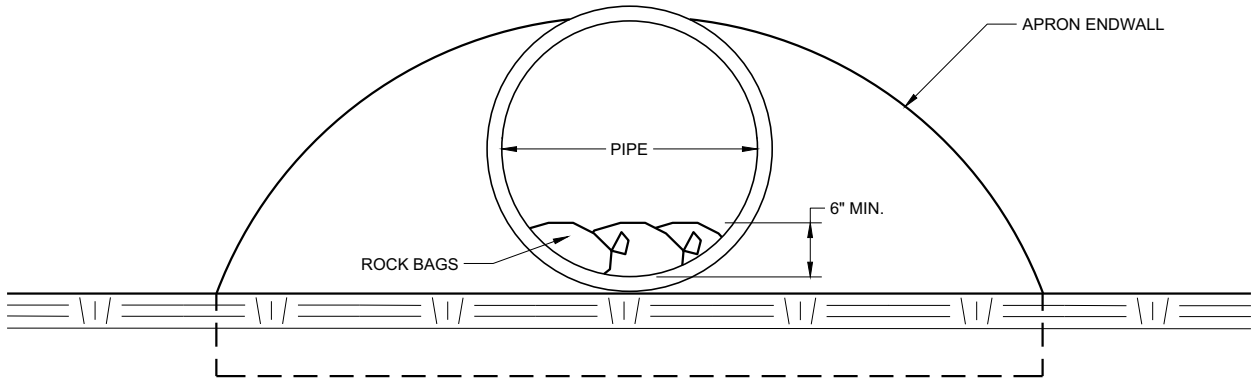
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/S/ Beth Conn

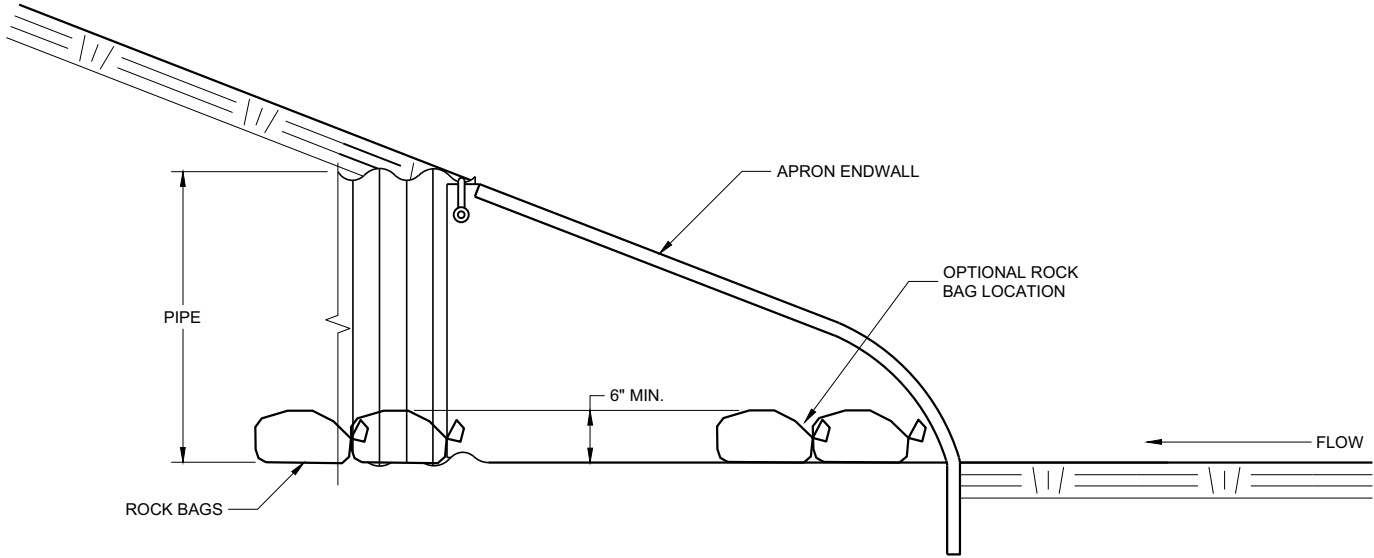
CHIEF ROADWAY DEVELOPER

FHWA

ENGINEER



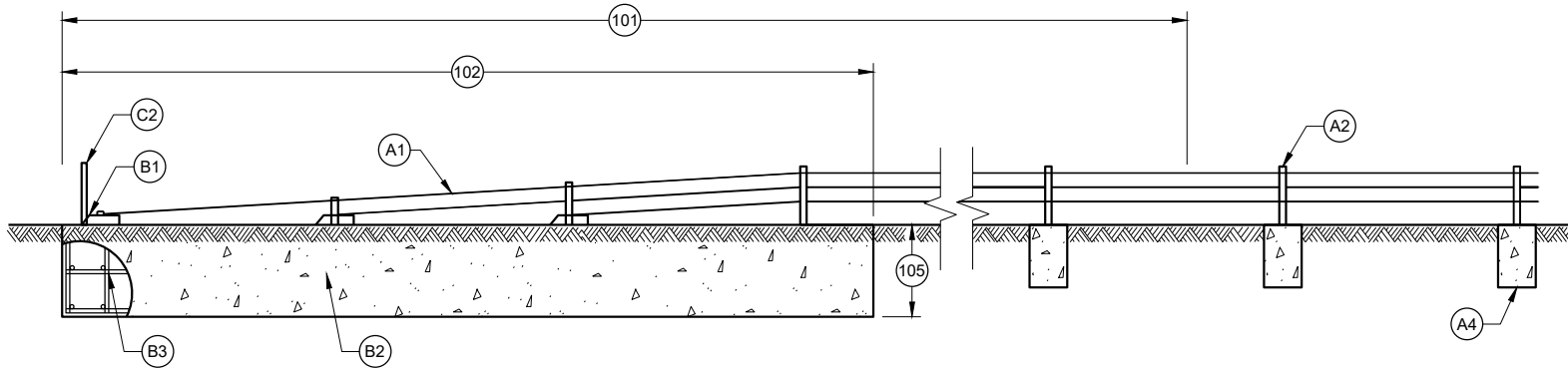
END VIEW



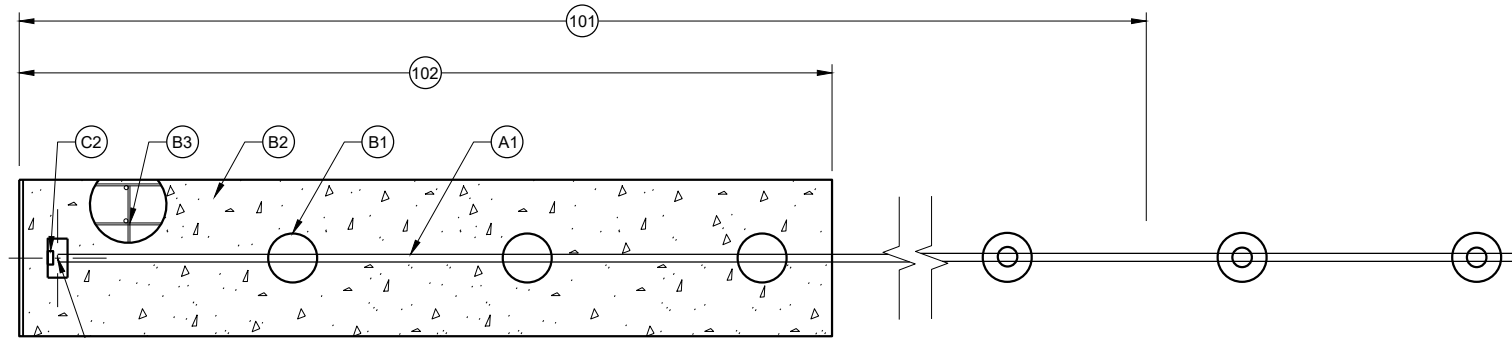
SIDE VIEW

CULVERT PIPE CHECK
(INSTALL ON INLET END ONLY)

CULVERT PIPE CHECK	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED May 2019 DATE	/S/ Daniel Schave EROSION CONTROL ENGI 28



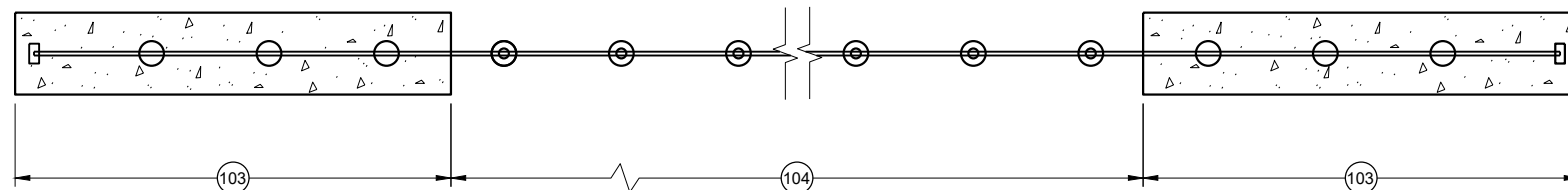
PROFILE VIEW



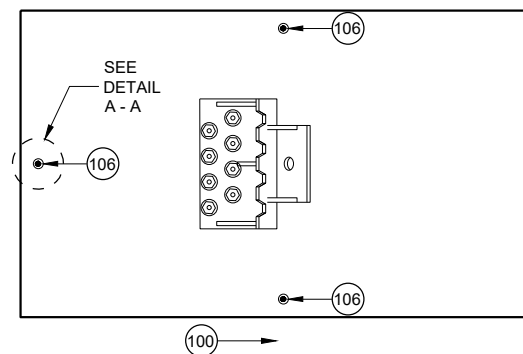
LOCATION OF STATION OFFSET FOR
CABLE BARRIER END TERMINAL

PLAN VIEW

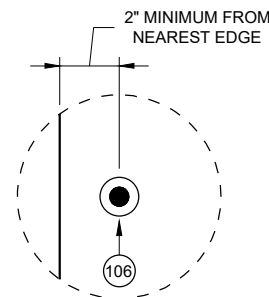
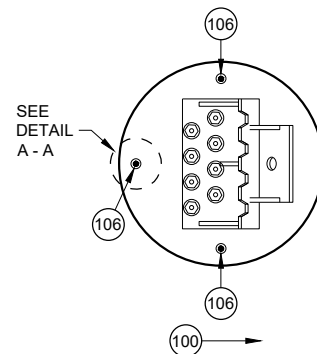
TRANSITION FROM CABLE BARRIER TERMINAL TO CABLE BARRIER LINE POSTS



TYPICAL PLAN VIEW



**ANCHOR MONITOR POINTS FOR
CABLE BARRIER END TERMINAL ANCHORS**



DETAIL A - A

GENERAL NOTES

DRAWINGS ARE GENERAL IN NATURE. SEE MANUFACTURER'S INFORMATION FOR MORE DETAIL.

PROVIDE 2 INCH CLEAR COVER FROM OUTER EDGE OF CONCRETE FOOTINGS TO REINFORCEMENT.

INSTALL LINE POSTS PLUMB. LINE POSTS ARE TO BE EASILY REMOVED BY HAND AND HOLD CABLES AT THE PROPER ELEVATION.

PROVIDE CABLE BARRIER SYSTEM FROM APPROVED PRODUCT LIST.

PROVIDE A SYSTEM TO HAVE THE WORKING WIDTH INDICATED IN PLAN.

PROVIDE DOCUMENTATION HOW POST SPACING, RADIUS OF CURVE AND ANCHOR SPACING INFLUENCES WORKING WIDTH TO CONSTRUCTION STAFF.

CONSTRUCT SHAFTS VERTICALLY. VERTICAL TOLERANCE OF SHAFT IS $\frac{1}{8}$ " PER FOOT OF DEPTH. SHAFTS ARE TO MINIMIZE DISTURBANCE TO ADJACENT SOILS.

SECURE STEEL REINFORCEMENT AND STEEL SLEEVE PRIOR TO PLACEMENT OF CONCRETE. MAINTAIN CLEAR DISTANCE BETWEEN SOIL AND REINFORCEMENT CAGE.

PLACE CONCRETE IN ONE CONTINUOUS POUR FOR EACH FOOTING. USE VIBRATION TO CONSOLIDATE CONCRETE.

PROVIDE CASING AS NECESSARY TO PREVENT INTRUSION OF UNCONSOLIDATED MATERIALS OR WATER. USE CASINGS WHEN THERE IS 3 OR MORE INCHES OF WATER IN EXCAVATION.

PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN USING A CASING AND CONSTRUCTION SEQUENCE. PROJECT ENGINEER WILL REVIEW AND APPROVED CASING DESIGN AND CONSTRUCTION SEQUENCE. CASING IS TO HAVE INTIMATE CONTACT WITH SHAFT SIDEWALL. CASING IT TO WITHSTAND INSERTION STRESS, REMOVAL STRESS, CONCRETE PRESSURE AND SOIL PRESSURE. REMOVE CASING DURING CONCRETE PLACEMENT OR IMMEDIATELY AFTER CONCRETE PLACEMENT. NO TEMPORARY CASING MAY REMAIN IN-PLACE.

PROVIDE WISCONSIN PROFESSIONAL ENGINEER SIGNED AND APPROVED FOOTING DESIGN AND CONSTRUCTION SEQUENCE WHEN OVER EXCAVATION IS REQUIRED NEAR A FOOTING. PROJECT ENGINEER WILL REVIEW AND APPROVED DESIGN AND CONSTRUCTION SEQUENCE.

FINISH TOP OF FOOTINGS TO THE DIMENSIONS INDICATED IN PLAN. REMOVE EXCESS CONCRETE.

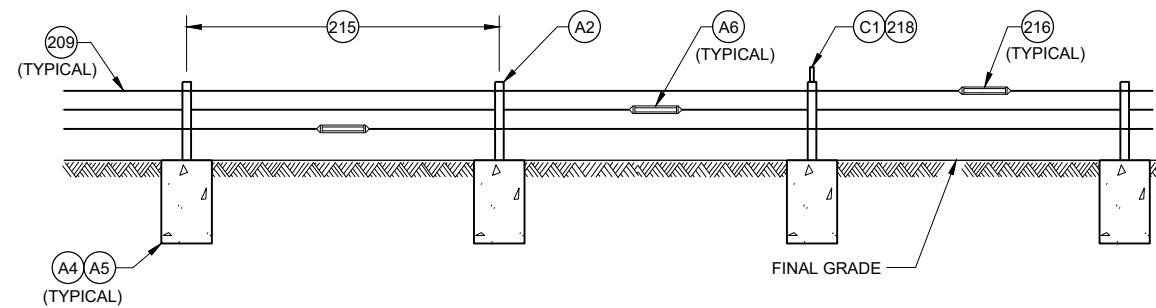
DESIGN POST FOOTINGS SO THAT LINE POST FOOTING MOVE LESS THAN 1 INCH WHEN LINE POST IS IMPACTED BY A NCHRP 350 TL-3 SMALL CAR.

USE MARINE GRADE ANTI-SEIZE LUBRICANT FOR THREADING FITTINGS THAT IS ACCEPTABLE FOR USE ON GALVANIZED STEEL.

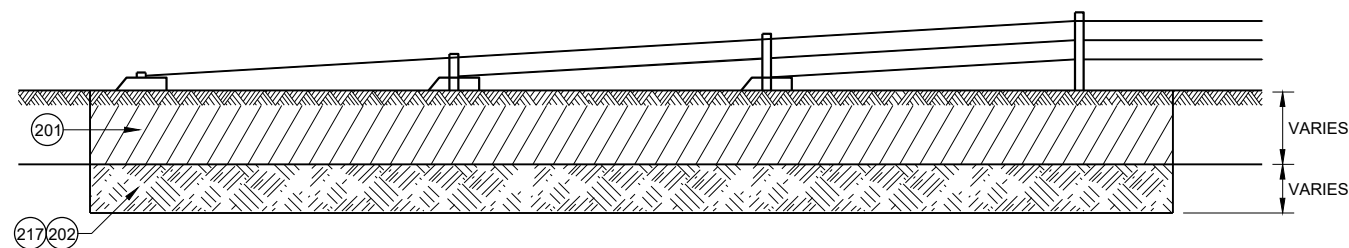
- 100 DIRECTION THAT THE CABLE PULLS THE END ANCHOR FOOTING
- 101 LOCATION OF LENGTH OF NEED POINT FOR CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 102 PAY LIMIT FOR CABLE BARRIER END TERMINAL. LENGTH OF CABLE BARRIER END TERMINAL VARIES. (SEE MANUFACTURER'S INFORMATION)
- 103 CABLE BARRIER END TERMINAL
- 104 CABLE BARRIER AND LINE POSTS
- 105 IN SOIL MINIMUM DEPTH OF CABLE BARRIER END TERMINAL FOOTING IS 60 INCHES. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.
- 106 ANCHOR MONITOR POINTS ARE GALVANIZED SURVEY NAIL, OR MASONRY NAIL, PLACED INTO CONCRETE FOOTING BEFORE HARDENING. IF THERE ARE MULTIPLE ANCHOR POINTS WITHIN A PAY LIMIT FOR A CABLE BARRIER END TERMINAL, EACH ANCHOR POINT NEEDS THREE ANCHOR MONITOR POINTS.

CABLE BARRIER TYPE 1 LAYOUT

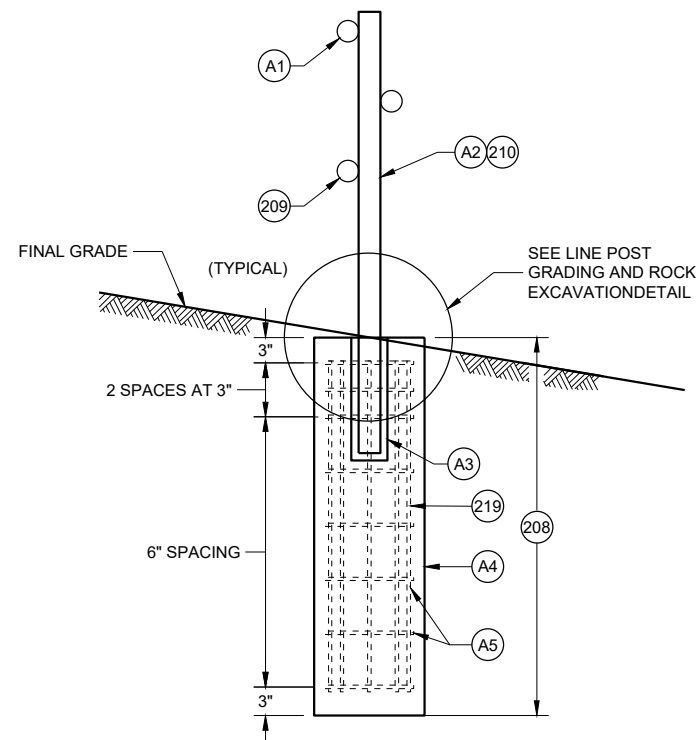
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



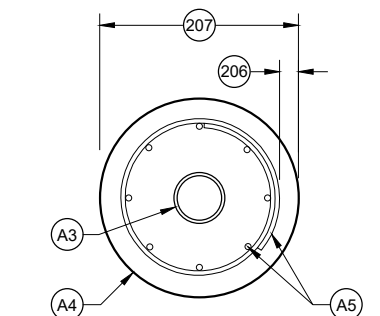
**PROFILE VIEW
LINE POST INSTALLATION**



**CABLE BARRIER END TERMINAL
ROCK EXCAVATION DETAIL**

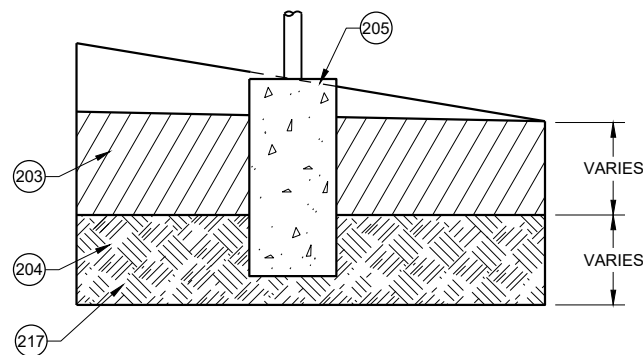


CROSS SECTION



**PROFILE VIEW
(LINE POSTS AND CABLES NOT SHOWN)**

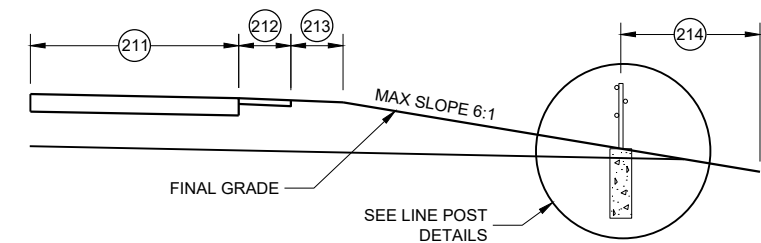
LINE POST DETAILS



**LINE POST GRADING
AND ROCK EXCAVATION DETAIL**

GENERAL NOTES

- (201) SOIL TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES)
- (202) ROCK TO BE EXCAVATED FOR CABLE BARRIER END TERMINAL (VARIES)
- (203) SOIL TO BE EXCAVATED FOR LINE POST (VARIES)
- (204) ROCK TO BE EXCAVATED FOR LINE POST (VARIES)
- (205) EXCAVATE AND GRADE LINE FOR LINE POST FOOTINGS. INSTALL LINE POST FOOTING TO MINIMIZE 4 INCH TALL OBJECT ON 5 FOOT CHORD.
- (206) 2 INCHES OF CLEAR COVER FROM EDGE OF CONCRETE TO REINFORCEMENT.
- (207) DIAMETER OF LINE POST FOOTING VARIES. SEE MANUFACTURERS' INFORMATION.
- (208) MINIMUM DEPTH OF LINE POST FOOTING IS 4' - 0" IN SOIL. DEEPER FOOTINGS PER MANUFACTURER'S RECOMMENDATION ARE ACCEPTABLE.
- (209) NUMBER AND LOCATION OF CABLES VARY. SEE MANUFACTURERS' INFORMATION.
- (210) LINE POST DIMENSIONS AND CONNECTION HARDWARE VARY. SEE MANUFACTURERS' INFORMATION.
- (211) LANE OF ROADWAY (VARIES). SEE PLAN FOR MORE INFORMATION.
- (212) PAVED SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- (213) GRAVEL SHOULDER (VARIES). SEE PLAN FOR MORE INFORMATION.
- (214) CABLE BARRIER OFFSET FROM CENTERLINE OF MEDIAN DITCH (8 FOOT MINIMUM). SEE PLAN FOR MORE INFORMATION.
- (215) MAXIMUM POST SPACING IS 15 FEET.
- (216) STAGGER TURNBUCKLES (TYPICAL).
- (217) SEE MANUFACTURER'S DESIGN WHEN ROCK IS ENCOUNTERED.
- (218) LINE POST DELINEATOR SPACING IS 100 FEET.
- (219) MINIMUM LINE POST FOOTING REINFORCEMENT SHOWN. MANUFACTURER IS TO INDICATE REINFORCEMENT IS ADEQUATE FOR THEIR SYSTEM. IF REINFORCEMENT IS NOT ADEQUATE, PROVIDE FOOTING DESIGN WITH A ADEQUATE REINFORCEMENT.



CABLE BARRIER OFFSET FROM DITCH LINE

**CABLE BARRIER
TYPE 1 LAYOUT**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

BILL OF MATERIALS

PART NUMBER	QTY.	DESCRIPTION	MATERIALS SPECIFICATIONS
(A1)	3 OR 4	¾" 3x7 PRESTRECHED GALVANIZED STEEL WIRE ROPE	AASHTO M30 TYPE 1 CLASS A OR ASTM A741 TYPE 1 CLASS A WITH MINIMUM BREAKING STRENGTH = 39 KIPS (173.5 KN)
(A2)	1 PER LINE POST	GALVANIZED REMOVABLE STEEL LINE POST	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
(A3)	1 PER LINE POST	GALVANIZED STEEL SLEEVE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS. ASTM A123 (GALVANIZATION).
(A4)	VARIES	CONCRETE FOR LINE POST FOOTING	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2 OR AS MANUFACTURER SPECIFIES. STANDARD SPECIFICATION 716 QMP FOR CLASS II ANCILLARY CONCRETE SEE MANUFACTURER'S INFORMATION ON DIMENSIONS.
(A5)	MINIMUM REINFORCEMENT: 8 HORIZONTAL LOOP BARS 8 VERTICAL BARS	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505. ALL BARS ARE NO. 4 BARS
(A6)	VARIES	TURNBUCKLES AND OTHER CABLE CONNECTING HARDWARE	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS. MINIMUM BREAKING STRENGTH OF TURNBUCKLES AND CONNECTION HARDWARE IS EQUAL TO CABLE. TURNBUCKLES AND OTHER CABLE CONNECTION HARDWARE IS FIELD SWAGED PER MANUFACTURER'S RECOMMENDATION AND DETAILS. PROVIDE DOCUMENTATION THAT THE FITTINGS ARE STRONGER THAN THE CABLE BARRIER. DOCUMENTATION IS TO INCLUDE: MANUFACTURER NAME, TESTING RESULTS, AND DATE OF TESTING.
(B1)	VARIES	CABLE CONNECTION TO CABLE BARRIER END TERMINAL	SEE MANUFACTURER'S INFORMATION ON DIMENSIONS AND MATERIAL REQUIREMENTS.
(B2)	VARIES	CONCRETE FOR CABLE BARRIER END TERMINAL	A, A-FA.A-T, OR A-IP OF STANDARD SPECIFICATION 501.2. STANDARD SPECIFICATION 716 QMP FOR CLASS II ANCILLARY CONCRETE
(B3)	VARIES	EPOXY COATED STEEL REINFORCEMENT	STANDARD SPECIFICATION 505.
(C1)	VARIES	LINE POST DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVED PRODUCT LIST YELLOW.
(C2)	VARIES	CABLE BARRIER END TERMINAL DELINEATOR	REFLECTIVE SHEETING TYPE SH. SEE APPROVED PRODUCT LIST OBJECT MARKER TYPE 3 PATTERN

CABLE BARRIER
TYPE 1 LAYOUT

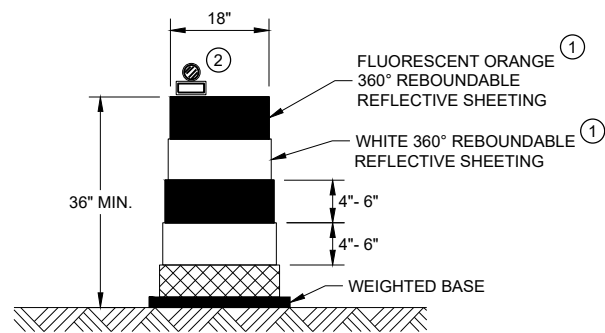
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
May 2022
DATE

/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
ENGINEER

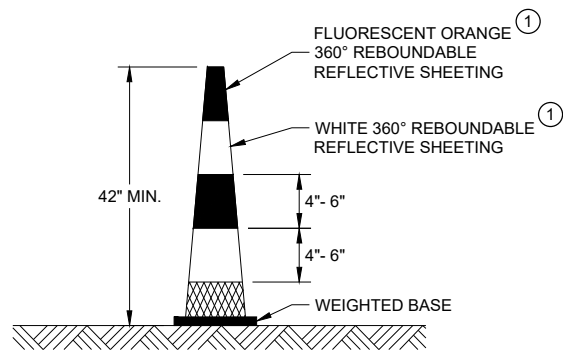
31

FHWA



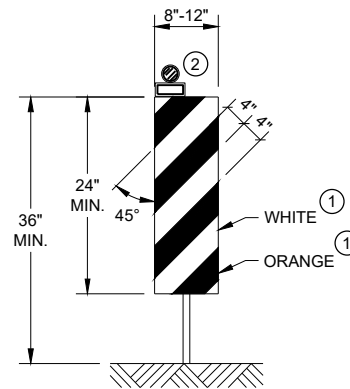
DRUM

BALLAST WIDTHS
RANGE FROM 24"-36"



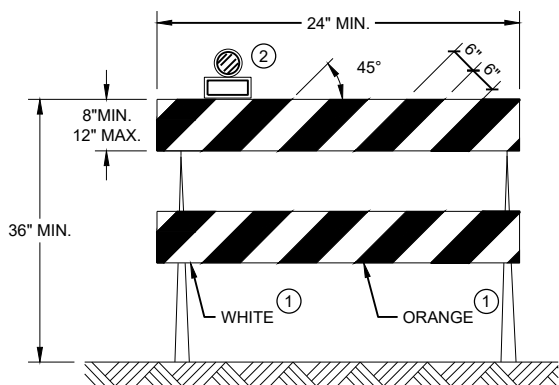
42" CONE

DO NOT USE IN TAPERS
½ SPACING OF DRUMS
BALLAST WIDTHS
RANGE FROM 14"-20"



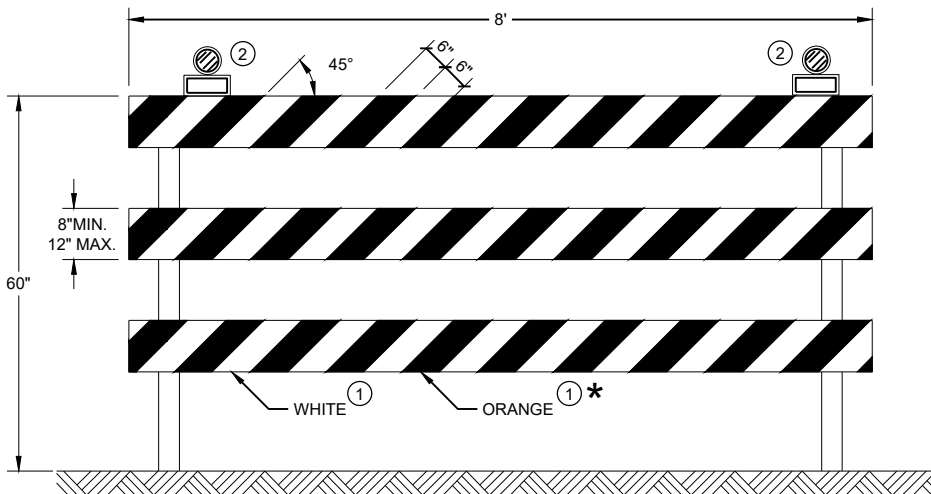
VERTICAL PANEL

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



TYPE II BARRICADE

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



TYPE III BARRICADE

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

* IF USED FOR A PERMANENT APPLICATION USE RED SHEETING.

GENERAL NOTES

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
November 2022 /S/ Andrew Heidtke
DATE WORK ZONE ENGINEER 32
FHWA

LEGEND

- TRAFFIC CONTROL DRUM
- ⦿ SIGN ON PERMANENT SUPPORT
- ➡ DIRECTION OF TRAFFIC
- ⚡➡ FLASHING ARROW BOARD
- ▨ WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

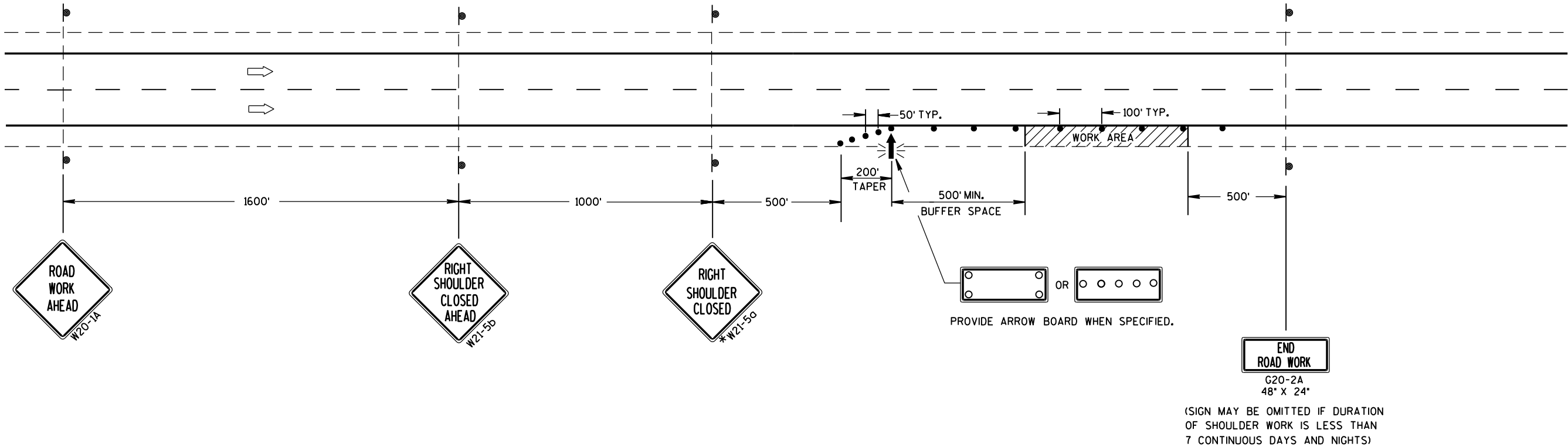
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

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

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

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.

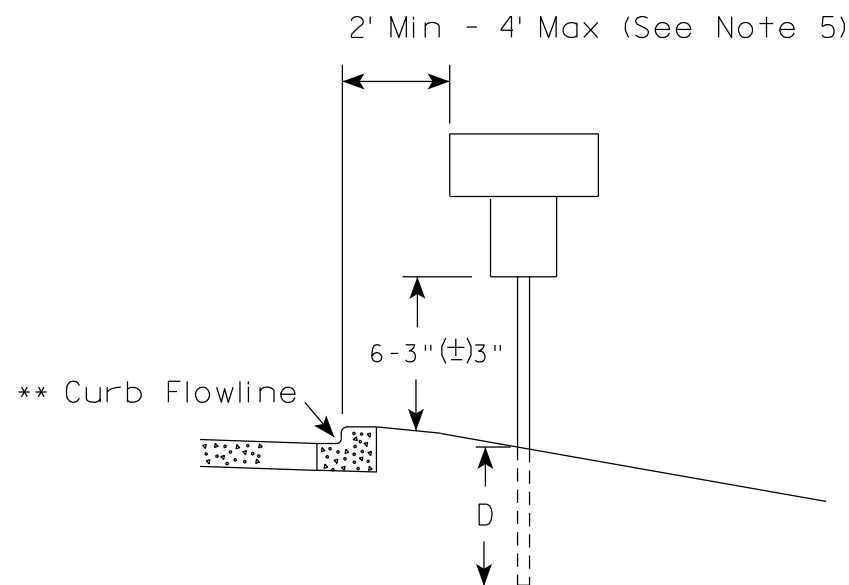
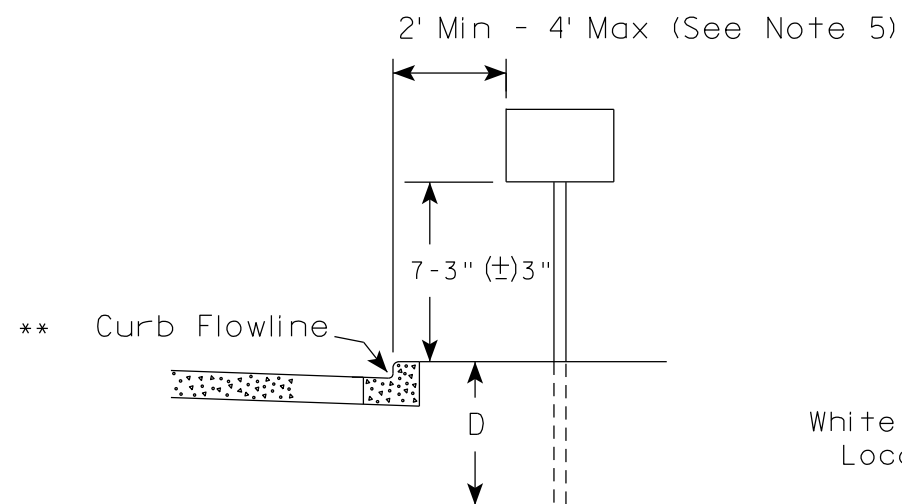


TRAFFIC CONTROL
SHOULDER CLOSURE ON DIVIDED
ROADWAY, SPEEDS GREATER
THAN 40 MPH

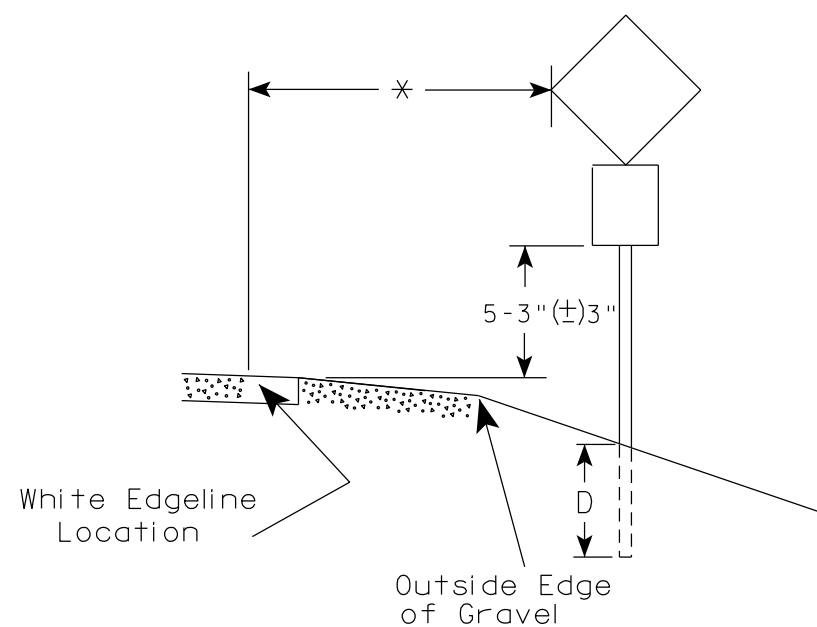
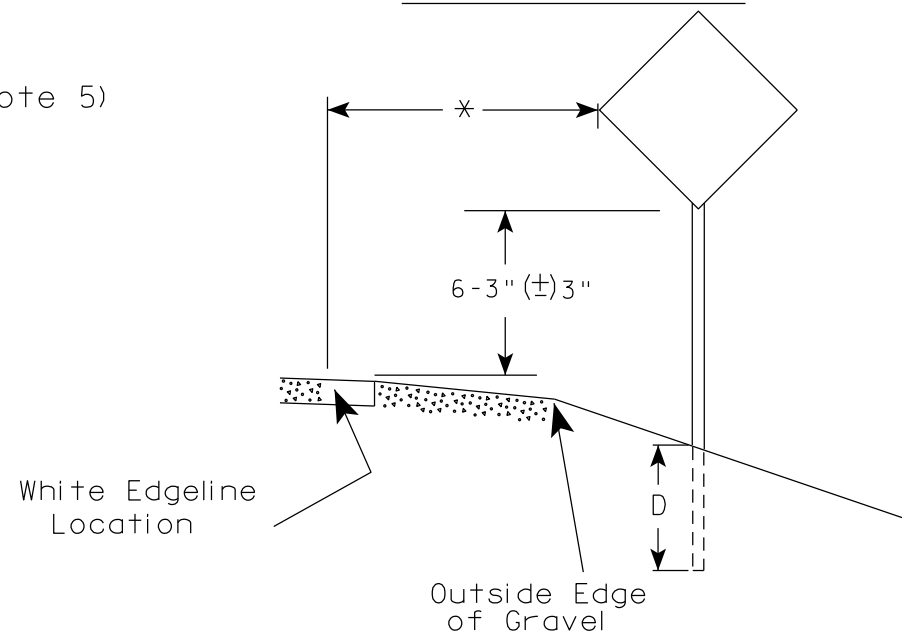
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE SAFETY ENGINEER
FHWA

URBAN AREA



RURAL AREA (See Note 2)



POST EMBEDMENT DEPTH

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

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" (±) 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".
3. For expressways and freeways, mounting height is 7'- 3" (±) 3" or 6'-3" (±) 3" depending upon existence of a sub-sign.
4. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±) 3".
5. Offset distance shall be consistent with existing signs or consistent throughout length of project.
6. Folding signs shall be mounted at a height of 5'-3" (±) 3" or as directed by the 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.

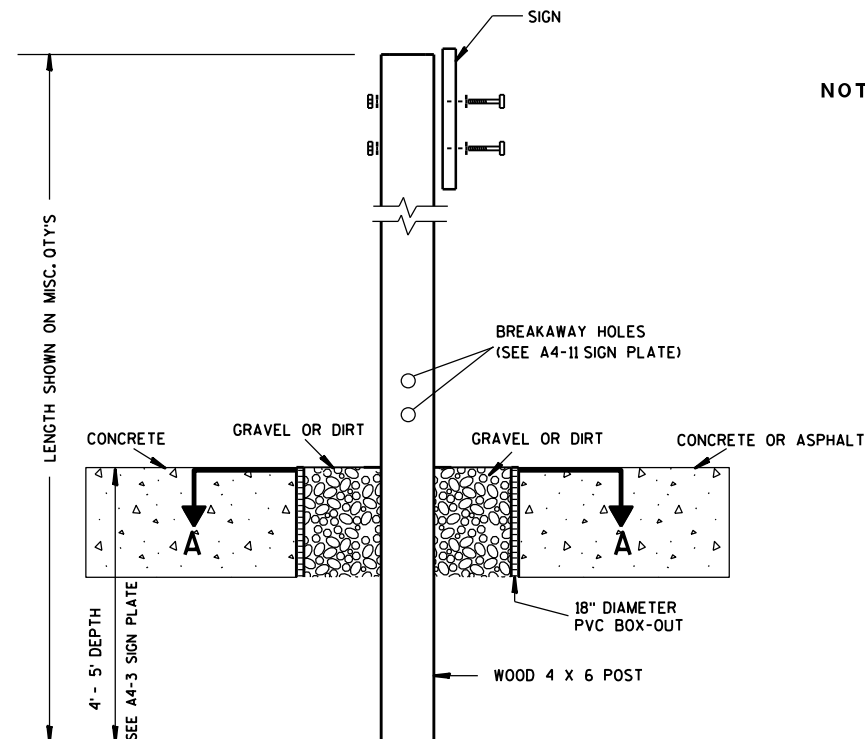
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

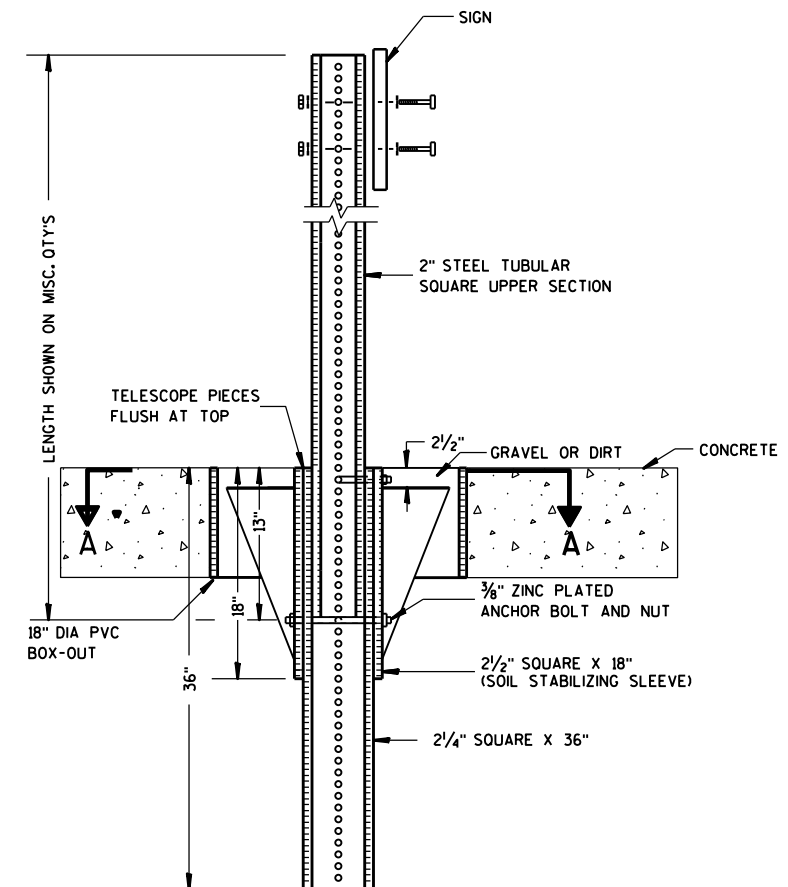
DATE 12/6/23 PLATE NO. A4-3.23



ELEVATION VIEW

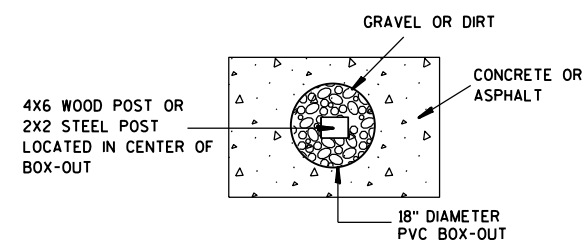
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/27/14 PLAT 35 A4-3B.1

PROJECT NO:

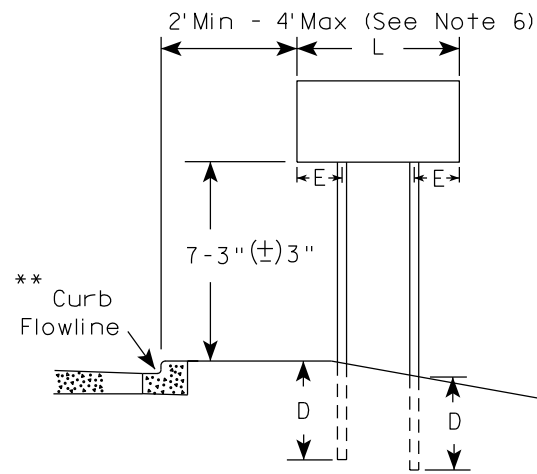
HWY:

COUNTY:

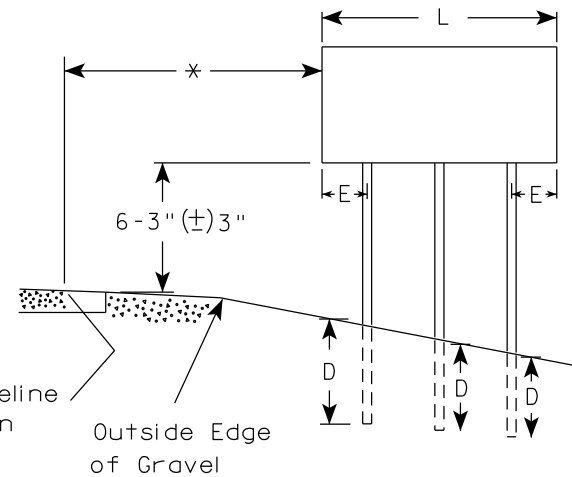
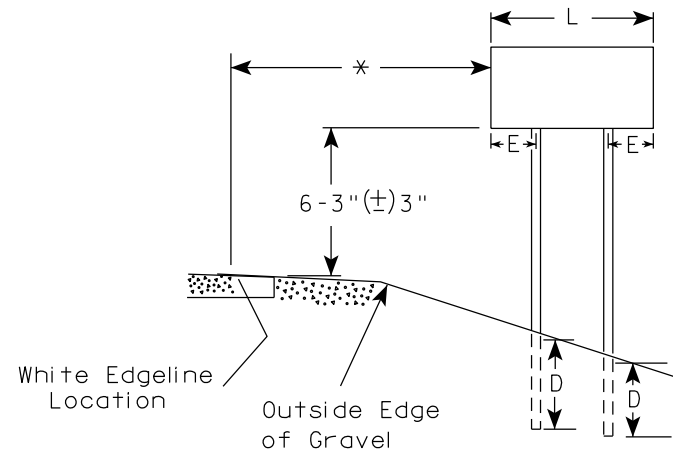
SHEET NO:

E

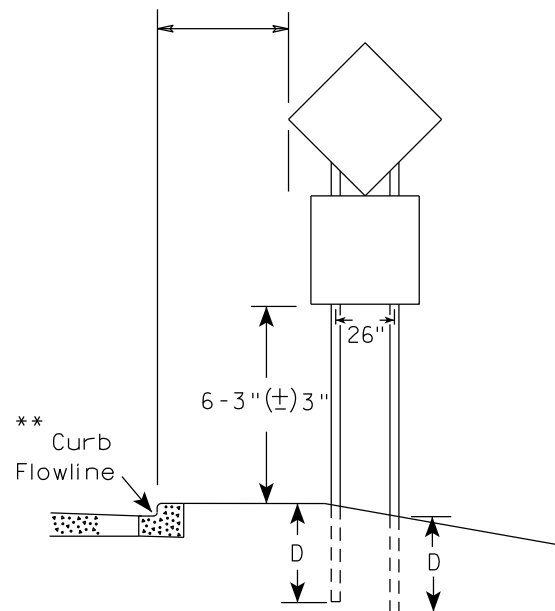
URBAN AREA



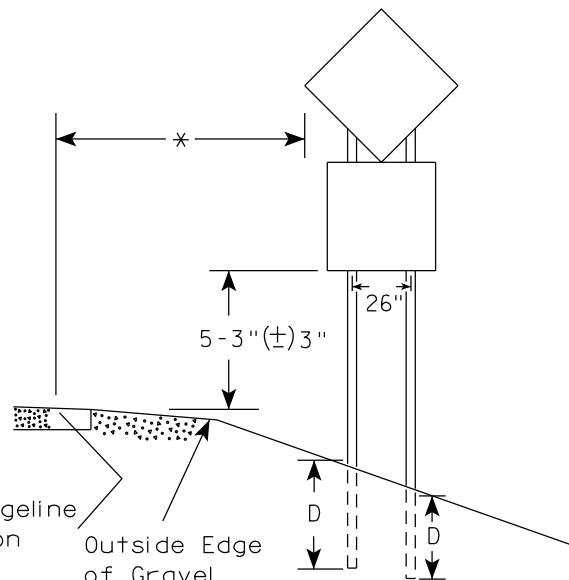
RURAL AREA (See Note 3)



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



48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

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" (±) 3" or 6'-3" (±) 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" (±) 3" or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±) 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" (±) 3".

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

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

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

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 12/6/23 PLATE NO. A4-4.16

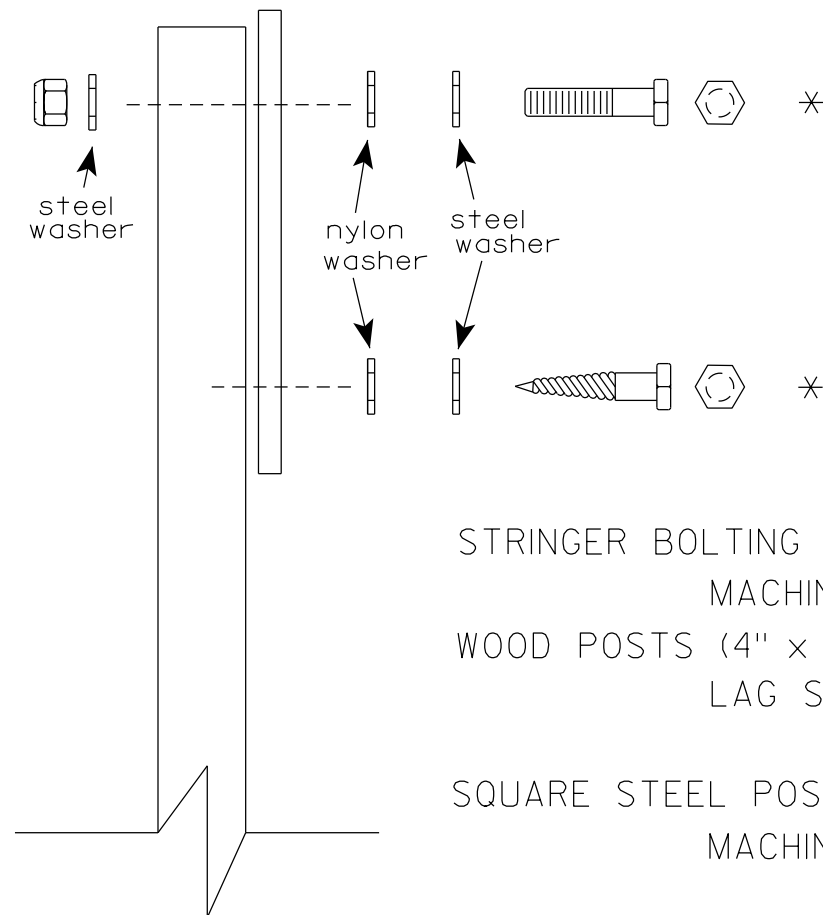
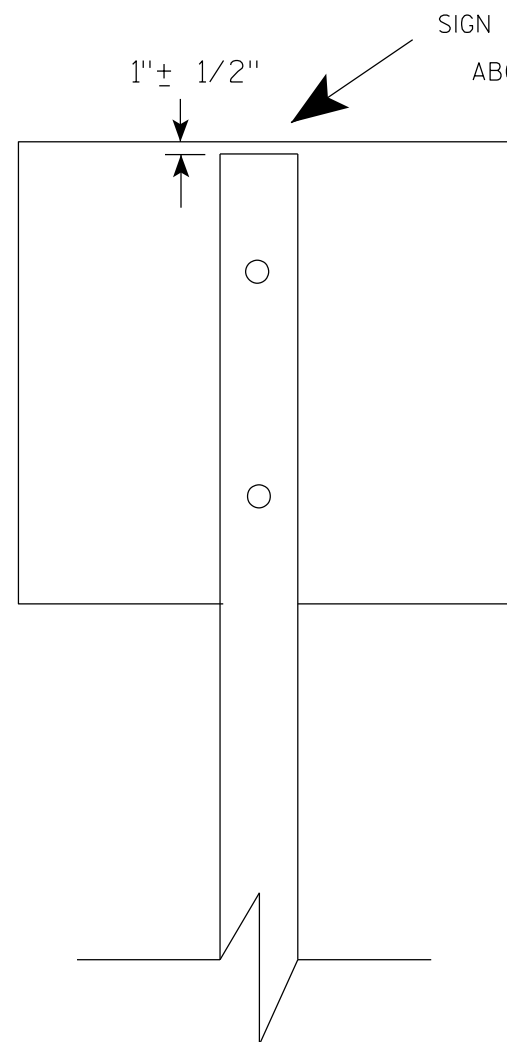
PROJECT NO:

HWY:

COUNTY:

SHEET NO: 36

E



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.

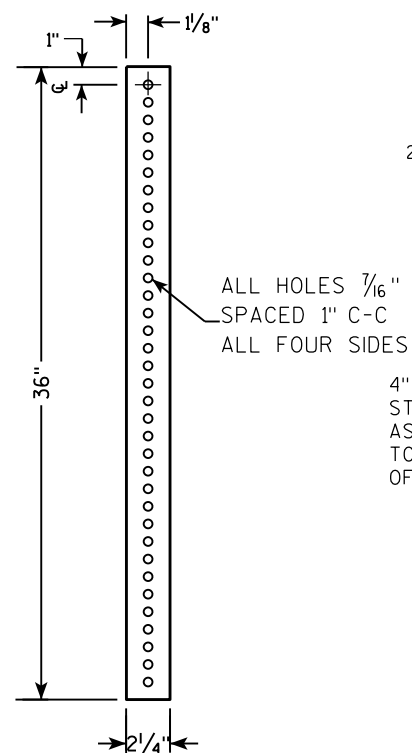
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

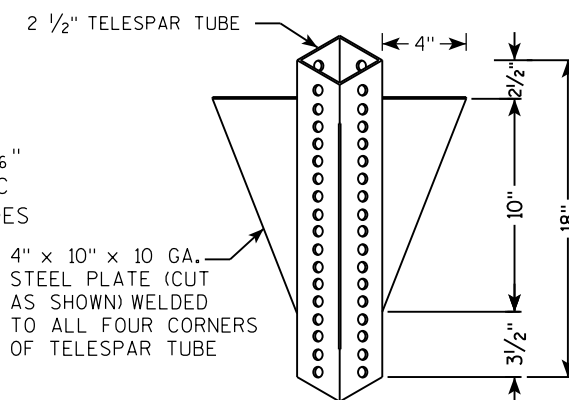
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

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

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



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



TECHNICAL DRAWING OF A SIGN POST ASSEMBLY.

Labels and Dimensions:

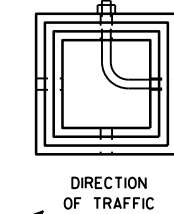
- 18" DIA SCHEDULE 40 PVC BOX-OUT** (Bottom section)
- 36"** (Height of the PVC box-out)
- 13"** (Width of the sign plate)
- 18"** (Width of the soil stabilizing sleeve)
- 2 1/4" SQUARE X 36"** (Main post section)
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)**
- 3/8" ZINC PLATED ANCHOR BOLT AND NUT**
- 2 1/2" GRAVEL OR DIRT**
- 2" STEEL TUBULAR SQUARE UPPER SECTION**
- ALL HOLES 7/16" SPACED 1" C-C ALL FOUR SIDES**
- TELESCOPE PIECES FLUSH AT TOP**
- SIGN** (Top section)
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL**

Vertical Dimension: LENGTH SHOWN ON MISC. QTY'S

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- TELESCOPE PIECES FLUSH AT TOP**: Indicated by a dimension line on the left.
- 2" STEEL TUBULAR SQUARE UPPER SECTION**: The main vertical support.
- ALL HOLES $\frac{7}{16}$ " SPACED 1" C-C ALL FOUR SIDES**: Specification for the perforations in the upper section.
- SIGN**: Attached to the top of the upper section.
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL**: Reference to a separate plate for hardware details.
- 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT**: Hardware used to secure the post to the base.
- 1"**: Dimension for the offset of the anchor bolt from the post face.
- 3/8" ZINC PLATED ANCHOR BOLT AND NUT**: Hardware used to secure the base plate to the ground.
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)**: The base plate of the post.
- 2 1/4" SQUARE X 36"**: The main vertical support post.
- Dimensions**:
 - 36" (Total height of the main post section)
 - 18" (Height of the upper section)
 - 12" (Height of the lower section)
- Arrows A**: Indicate downward forces or weights applied to the top and bottom of the post.

3/8" ZINC PLATED CORNER
ANCHOR BOLT AND NUT



SECTION A-A

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

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

TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthaeus R. Rauch

for State Traffic Engineer

DATE 2/05/15 PLATI 38 14-9.9

SHEET NO: E

PROJECT NO:

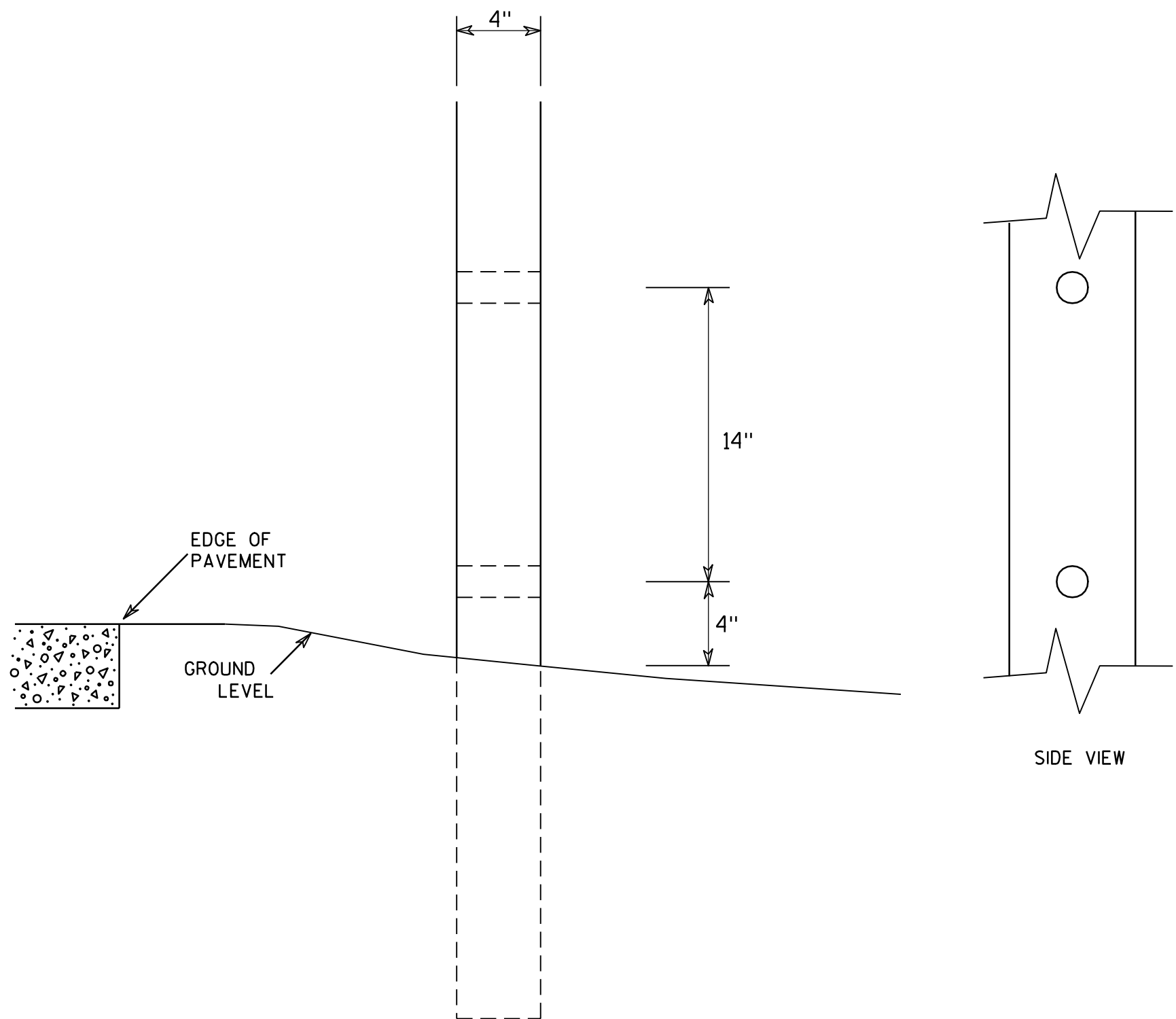
HWY:

COUNTY:

SHEET NO:

TE

7



GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1 1/2" diameter holes drilled perpendicular to the roadway centerline.

7

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

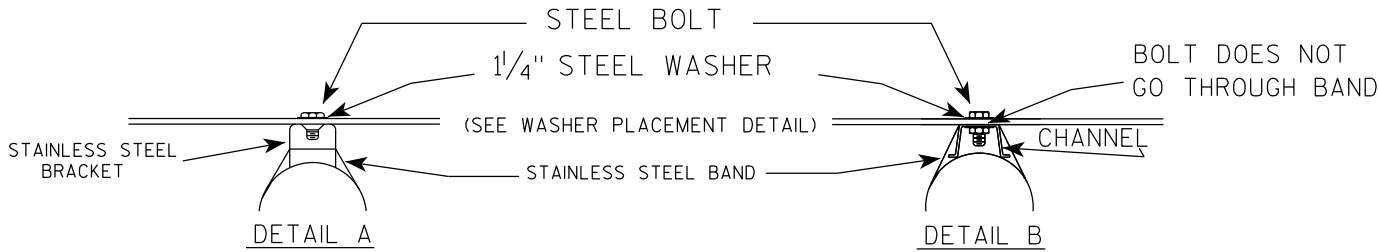
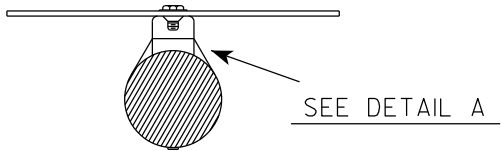
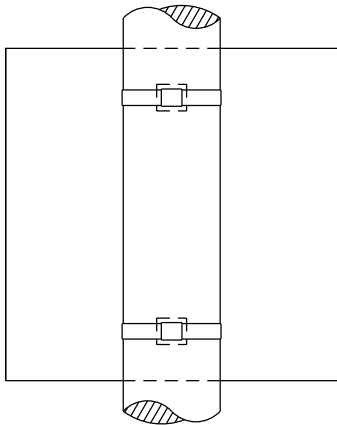
APPROVED *Chester J. Spang*
for State Traffic Engineer

DATE 3/27/97 PLATE NO. A4-11.2

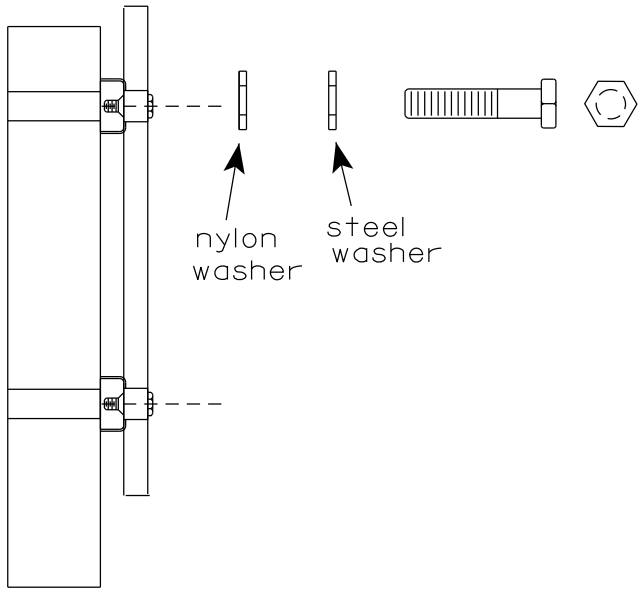
PROJECT NO:	HWY:	COUNTY:	SHEET NO: 39	E
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BANDING

SINGLE SIGN



WASHER PLACEMENT

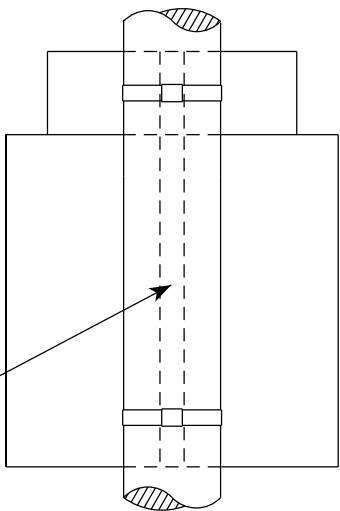


WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

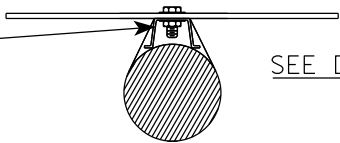
GENERAL NOTES

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

"J" ASSEMBLY



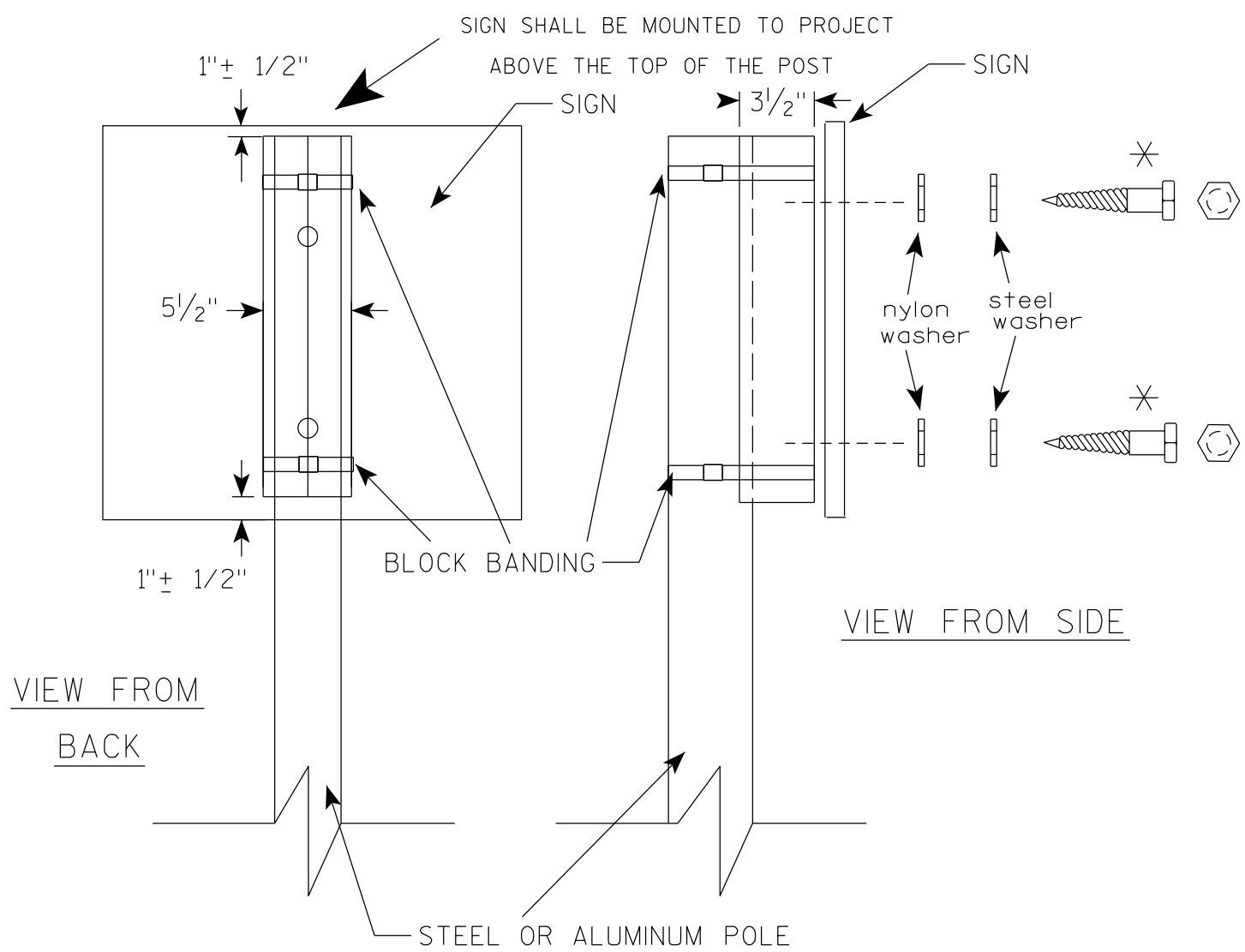
CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



STANDARD SIGN
SIGN BANDING DETAILS

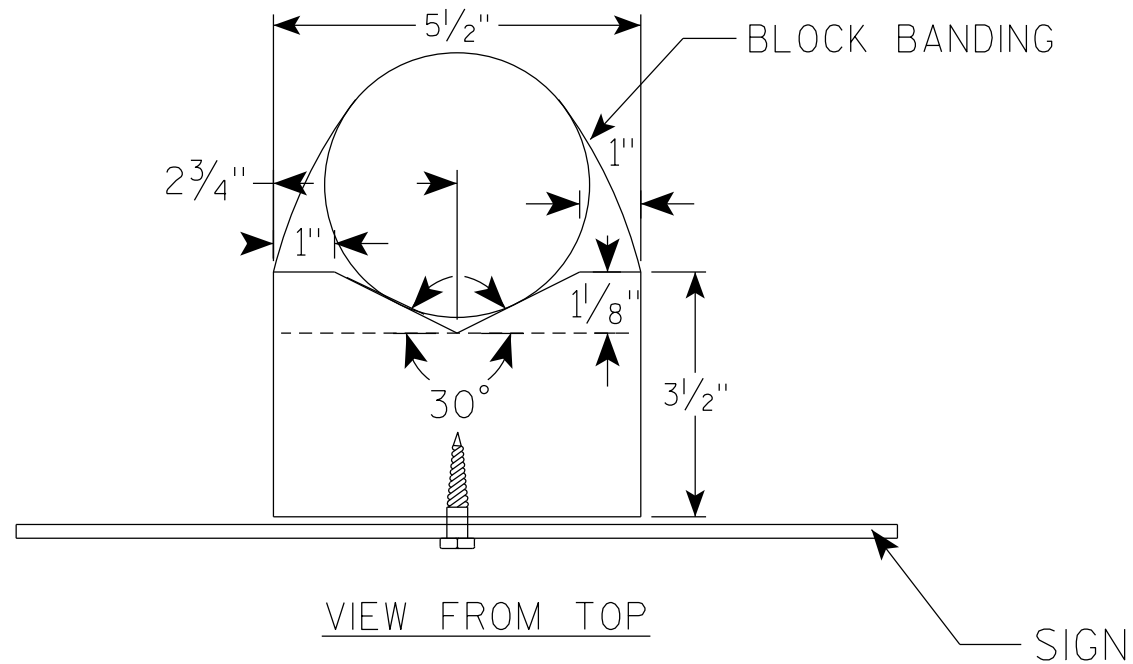
WISCONSIN DEPT OF TRANSPORTATION

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



VIEW FROM
BACK

VIEW FROM SIDE



VIEW FROM TOP

GENERAL NOTES

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

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

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/19/2022 PLATE NO. A5-10.3

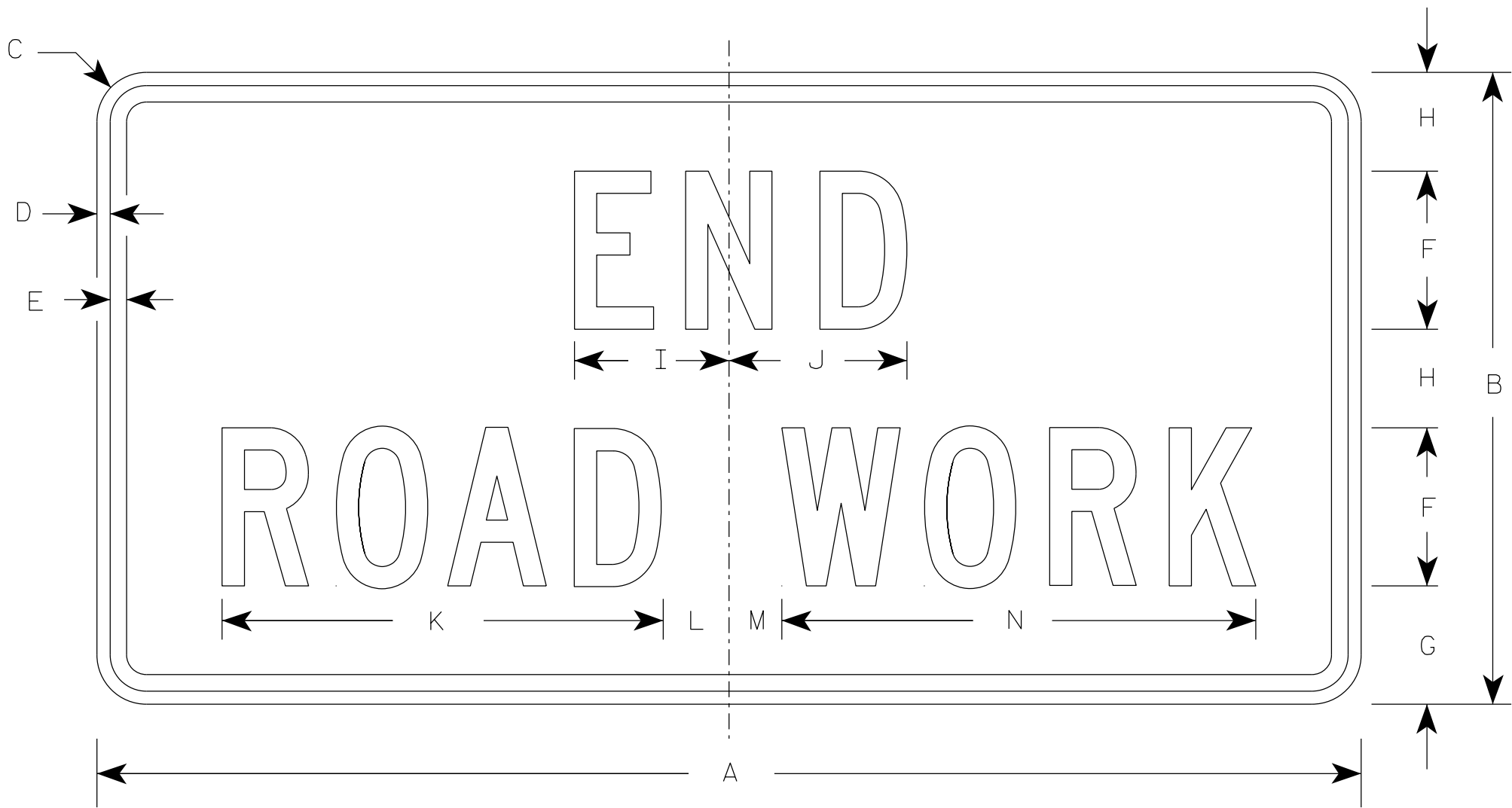
PROJECT NO:

SHEET NO: 41

E

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
 - Background - Orange
 - Message - Black
- 3. Message Series - C
- 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



G20-2A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	18	1 1/2	3/8	1/2	4	3 3/4	2 1/2	4 1/8	4 1/8	11 1/8	2	1	12 1/8													4.5
2	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
2M	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
3	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
4	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0
5	48	24	1 7/8	1/2	5/8	6	4 1/2	3 3/4	5 7/8	6 3/4	16 3/4	2 1/2	1 3/4	18 1/2													8.0

STANDARD SIGN

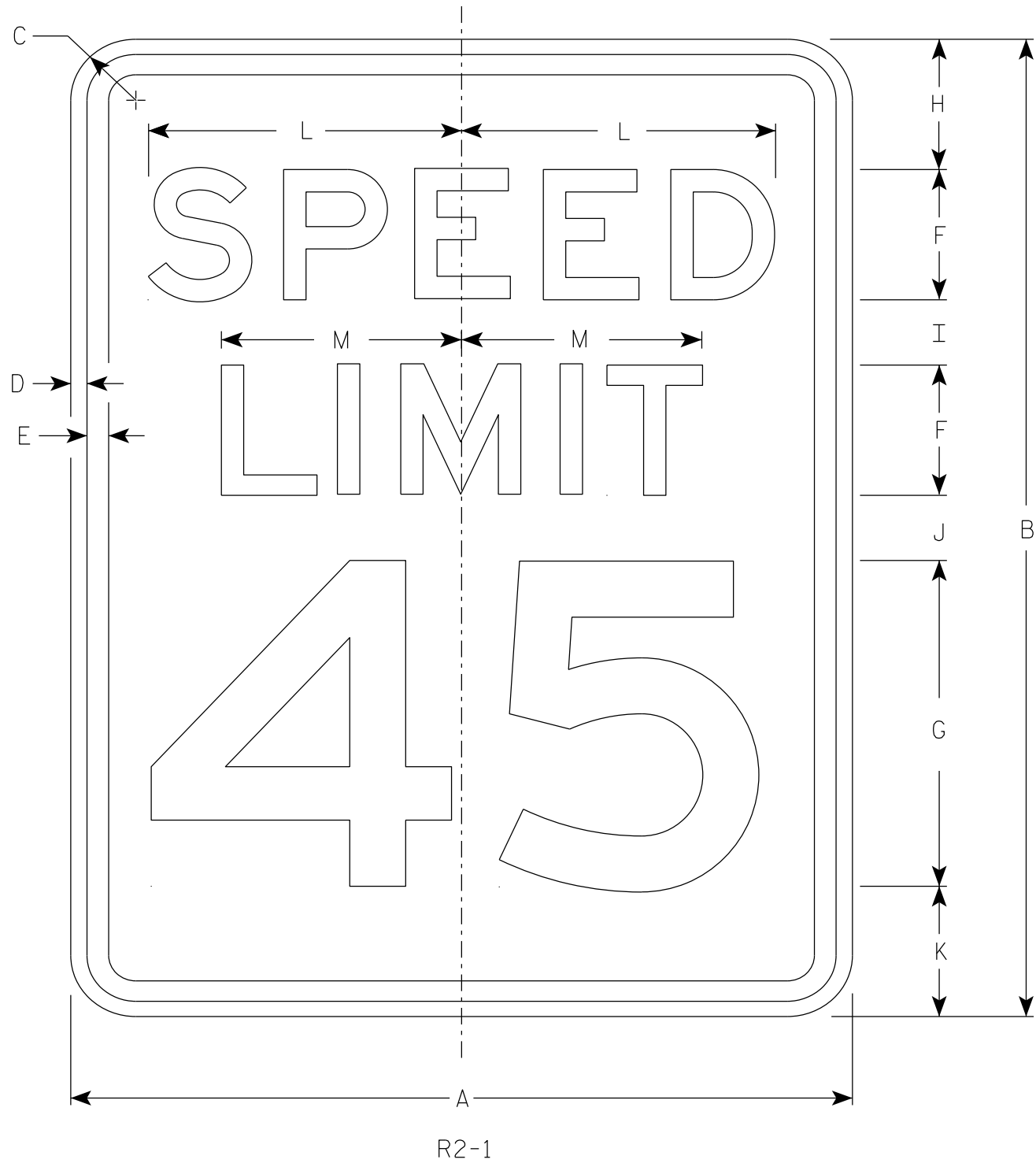
G20-2A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 1/26/2023 PLATE NO. G20-2A.10

7



NOTES

1. Sign is Type II - Type H Reflective
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

7

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

STANDARD SIGN
R2 - 1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 2/1/23 PLATE NO. R2-1.14

R11-2

- ## NOTES
1. Sign is Type II - Type H Reflective
 2. Color:
 - Background - White
 - Message - Black
 3. Message Series - D
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
 5. Modify the message as required.

R11-2R

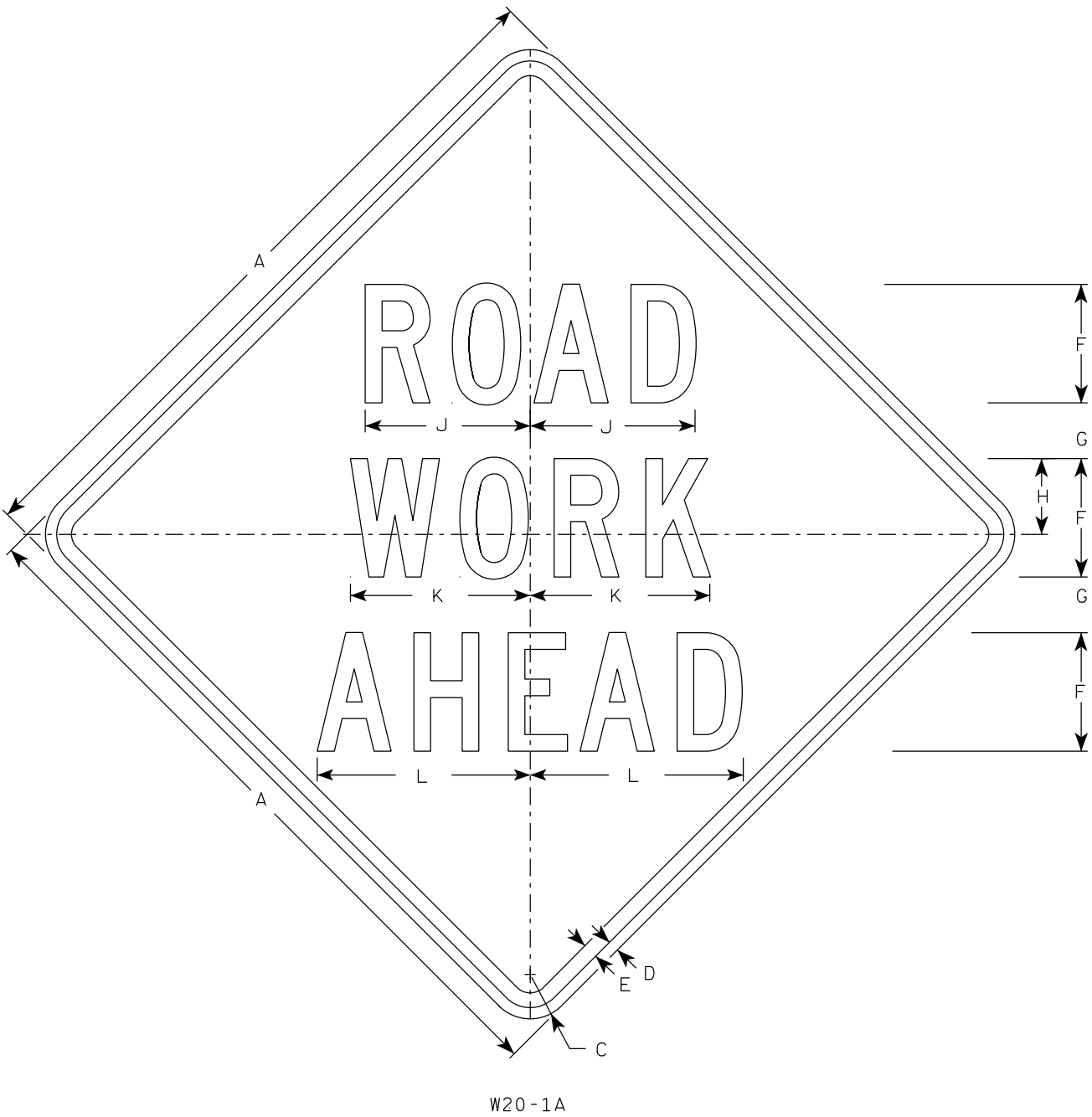
R11-2T

R11-2L

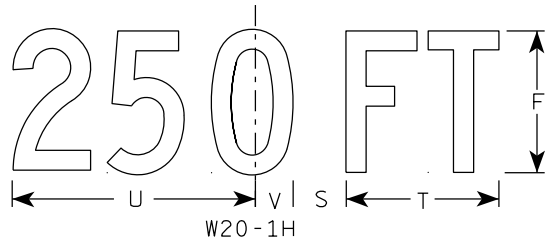
[illegible]

STANDARD SIGN	
R11-2	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Matthew P. Rauch</u> for State Traffic Engineer
DATE <u>2/5/24</u>	PLATE NO. <u>R11-2.12</u>

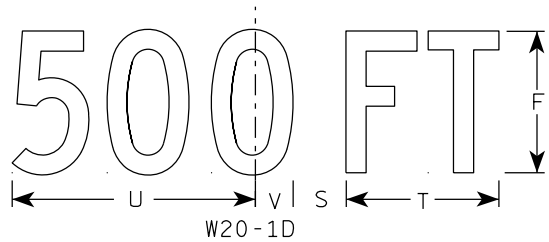
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E
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W20-1A



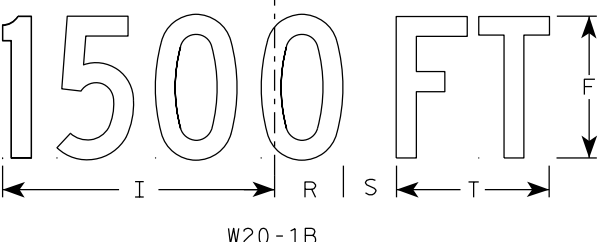
W20-1H



W20-1D

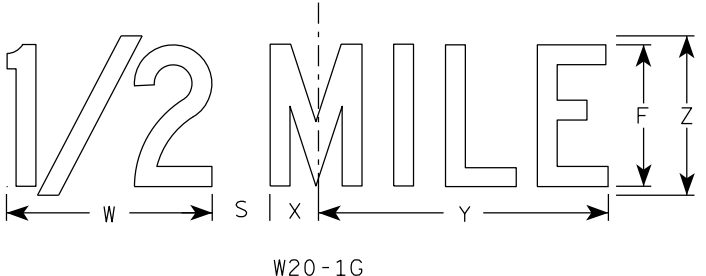


W20-1C

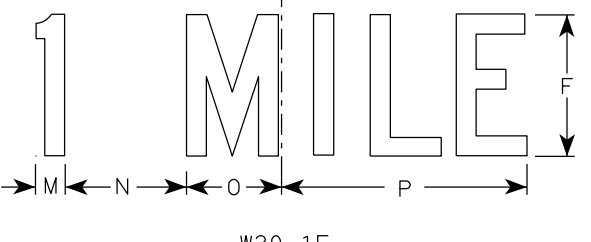


W20-1B

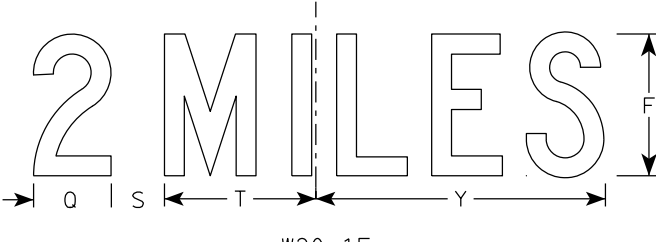
- NOTES
1. Sign is Type II - Type F Reflective
 2. Color:
Background - Orange
Message - Black
 3. Message Series - C
 4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.



W20-1G

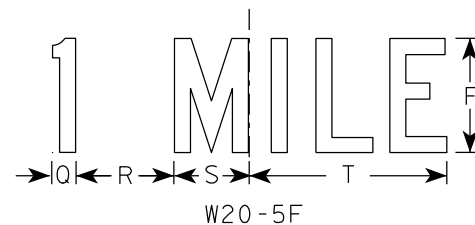
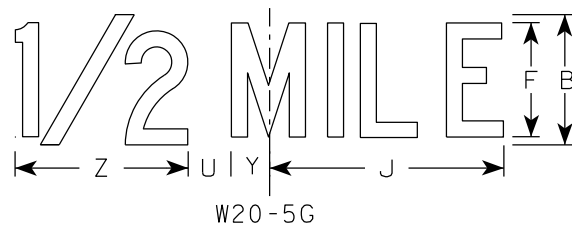
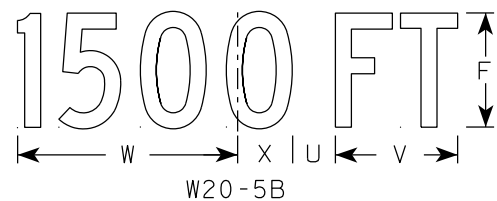
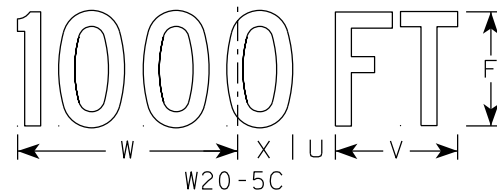
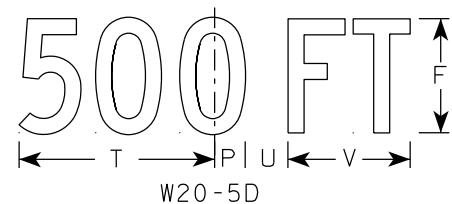
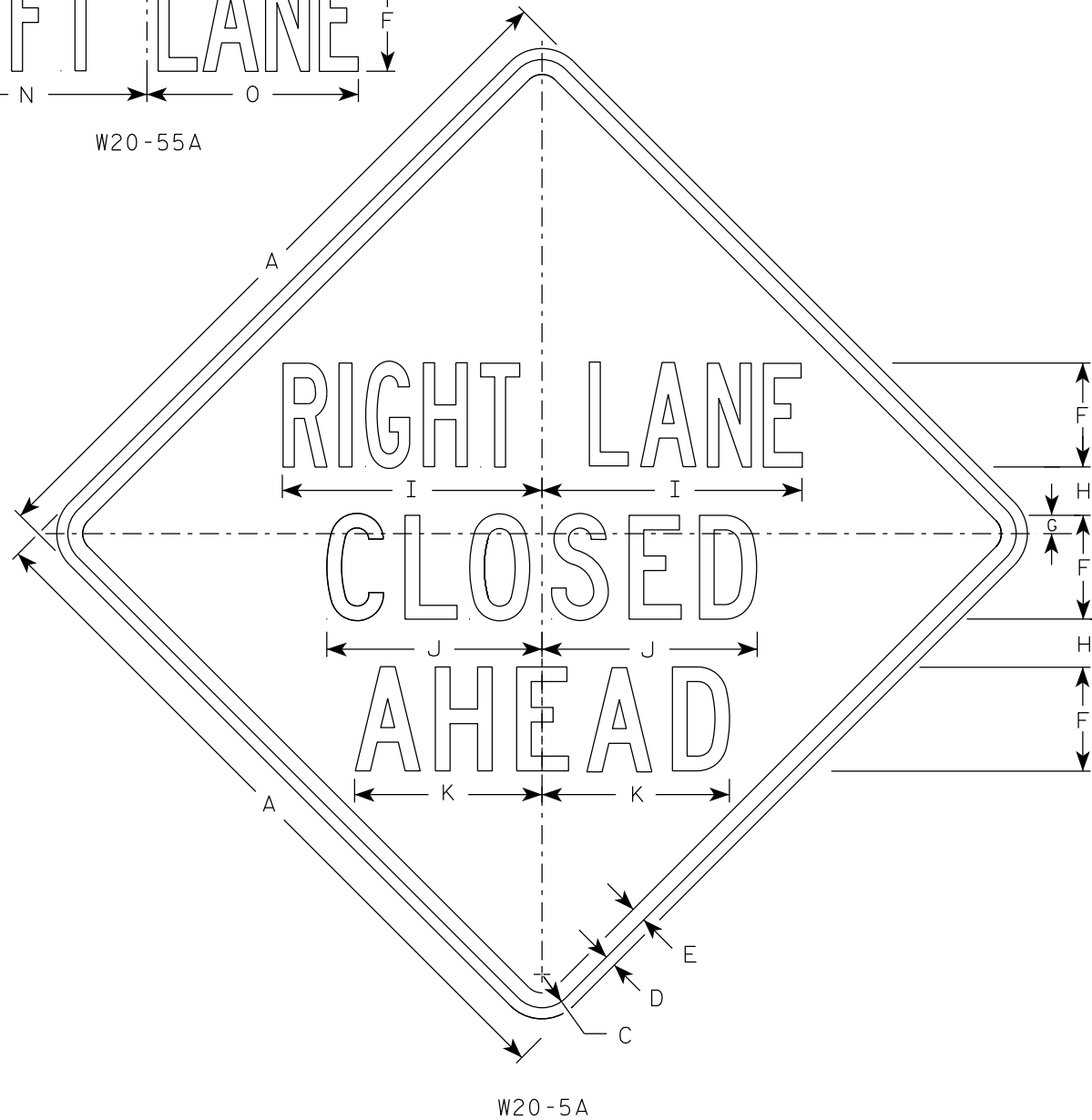
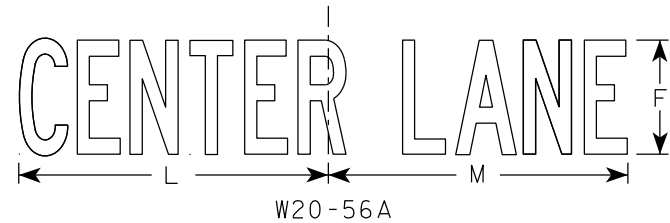


W20-1F



W20-1E

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	v	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9	3 1/4	2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		3	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0



NOTES

- Sign is Type II - Type F Reflective
- Color:
Background - Orange
Message - Black
- Message Series - See Note 5
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- "----- LANE" is Series B.
All other copy is Series C.

7

7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	2 1/4	5/8	3/4	5	7/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 7/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	3	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

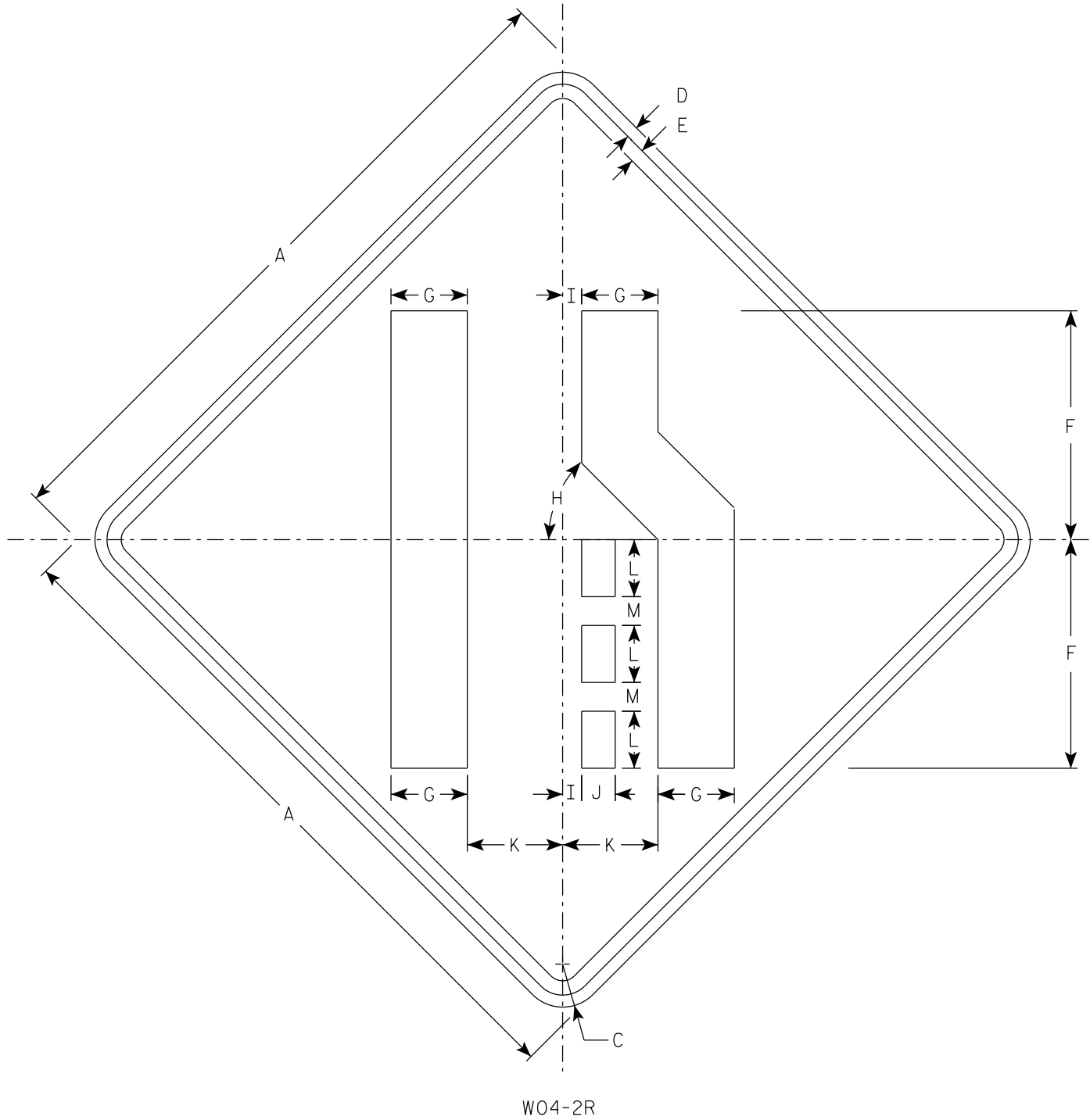
STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
For State Traffic Engineer

DATE 3/27/24 PLATE NO. W20-5.12

7



NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Orange
Message - Black
- 3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- 4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

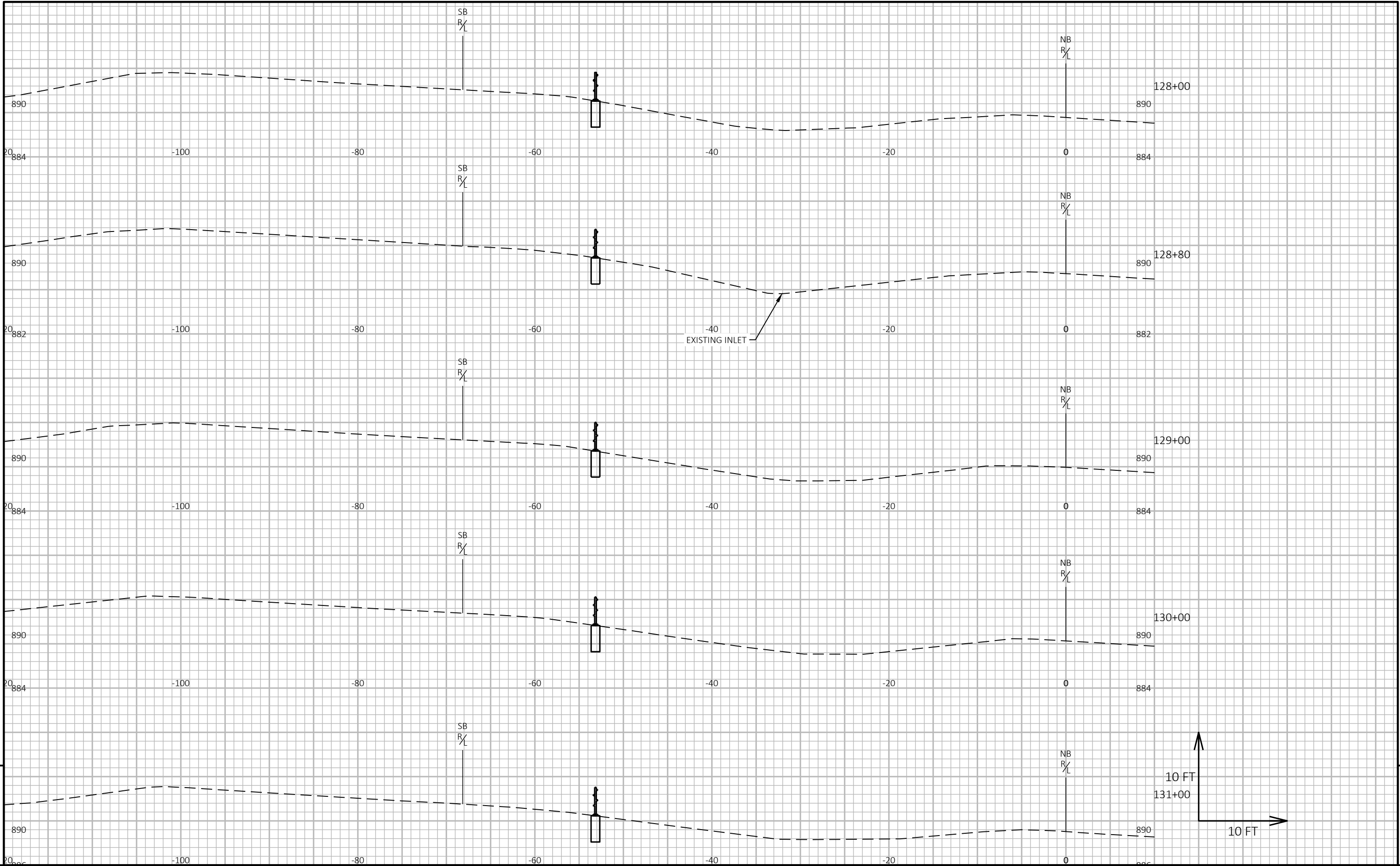
7

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		2 1/4	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		3	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

EARTHWORK ITEMS

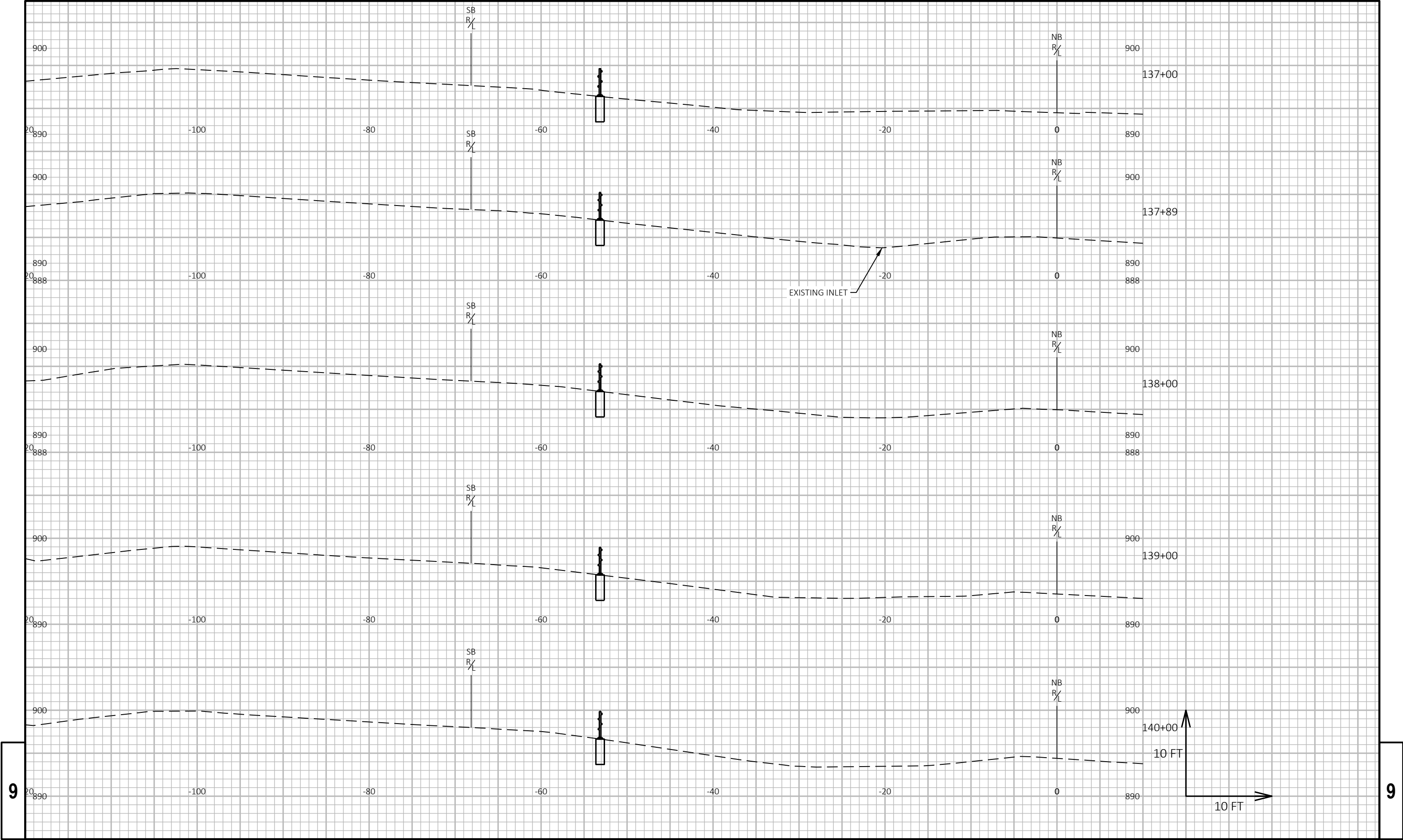
DIVISION 1 - 53-NB											
STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)		
			CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	SALVAGED/UNUSABLE PAVEMENT MATERIAL	FILL	CUT	EXPANDED FILL	MASS ORDINATE
									1.00	1.25	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1		NOTE 8
119+82.44	11982.44	0.00	2.73	0.00	3.24	0	0	0	0	0	0
120+00.00	12000.00	17.56	0.24	0.00	6.94	1	0	3	1	4	-3
121+00.00	12100.00	100.00	1.57	0.00	2.12	3	0	17	4	25	-21
122+00.00	12200.00	100.00	0.71	0.00	6.70	4	0	16	8	45	-37
123+00.00	12300.00	100.00	1.71	0.00	2.99	4	0	18	12	68	-56
124+00.00	12400.00	100.00	0.72	0.00	7.61	4	0	20	16	93	-77
125+00.00	12500.00	100.00	0.71	0.00	3.50	3	0	21	19	119	-100
126+00.00	12600.00	100.00	3.40	0.00	3.55	8	0	13	27	135	-108
126+64.57	12664.57	64.57	0.00	0.00	0.00	4	0	4	31	140	-109
175+86.00	17586.00	4921.43	0.00	0.00	0.00				31	140	-109
175+86.38	17586.38	0.38	2.67	0.00	3.07	0	0	0	31	140	-109
176+00.00	17600.00	13.62	0.14	0.00	4.73	1	0	2	32	143	-111
176+64.00	17664.00	64.00	1.70	0.00	2.02	2	0	8	34	153	-119
176+64.50	17664.50	0.50	1.35	0.00	0.24	0	0	0	34	153	-119
177+00.00	17700.00	35.50	2.07	0.00	3.64	2	0	3	36	156	-120
177+03.00	17703.00	3.00	1.78	0.00	4.02	0	0	0	36	156	-120
177+03.58	17703.58	0.58	1.79	0.00	5.82	0	0	0	36	156	-120
177+34.00	17734.00	30.42	2.05	0.00	2.16	2	0	4	38	161	-123
177+34.50	17734.50	0.50	1.56	0.00	2.02	0	0	0	38	161	-123
178+00.00	17800.00	65.50	1.52	0.00	2.76	4	0	6	42	169	-127
178+36.00	17836.00	36.00	3.13	0.00	1.64	3	0	3	45	173	-128
178+36.51	17836.51	0.51	5.41	0.00	1.78	0	0	0	45	173	-128
179+00.00	17900.00	63.49	2.81	0.00	17.15	10	0	22	55	200	-145
180+00.00	18000.00	100.00	1.54	0.00	12.15	8	0	54	63	268	-205
181+00.00	18100.00	100.00	2.60	0.00	11.07	8	0	43	71	321	-250
181+00.50	18100.50	0.50	0.06	0.00	11.11	0	0	0	71	321	-250
182+00.00	18200.00	99.50	0.30	0.00	10.88	1	0	41	72	373	-301
183+00.00	18300.00	100.00	1.53	0.00	2.21	3	0	24	75	403	-328
183+05.00	18305.00	5.00	1.83	0.00	2.32	0	0	0	75	403	-328
183+05.24	18305.24	0.24	4.33	0.00	2.34	0	0	0	75	403	-328
183+63.00	18363.00	57.76	3.49	0.00	5.63	8	0	9	83	414	-331
183+63.50	18363.50	0.50	0.09	0.00	5.60	0	0	0	83	414	-331
183+73.52	18373.52	10.02	1.80	0.00	0.00	0	0	1	83	415	-332

NOTES:	
1 - CUT	CUT INCLUDES SALVAGED/UNUSABLE PAVEMENT MATERIAL
2 - SALVAGED/UNUSABLE PAVEMENT MATERIAL	THIS DOES NOT SHOW UP IN CROSS SECTIONS
3 - FILL	DOES NOT INCLUDE UNUSABLE PAVEMENT EXC VOLUME
8 - MASS ORDINATE	THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. [CUT - SALVAGED PAVT - ((FILL) * FILL FACTOR)]



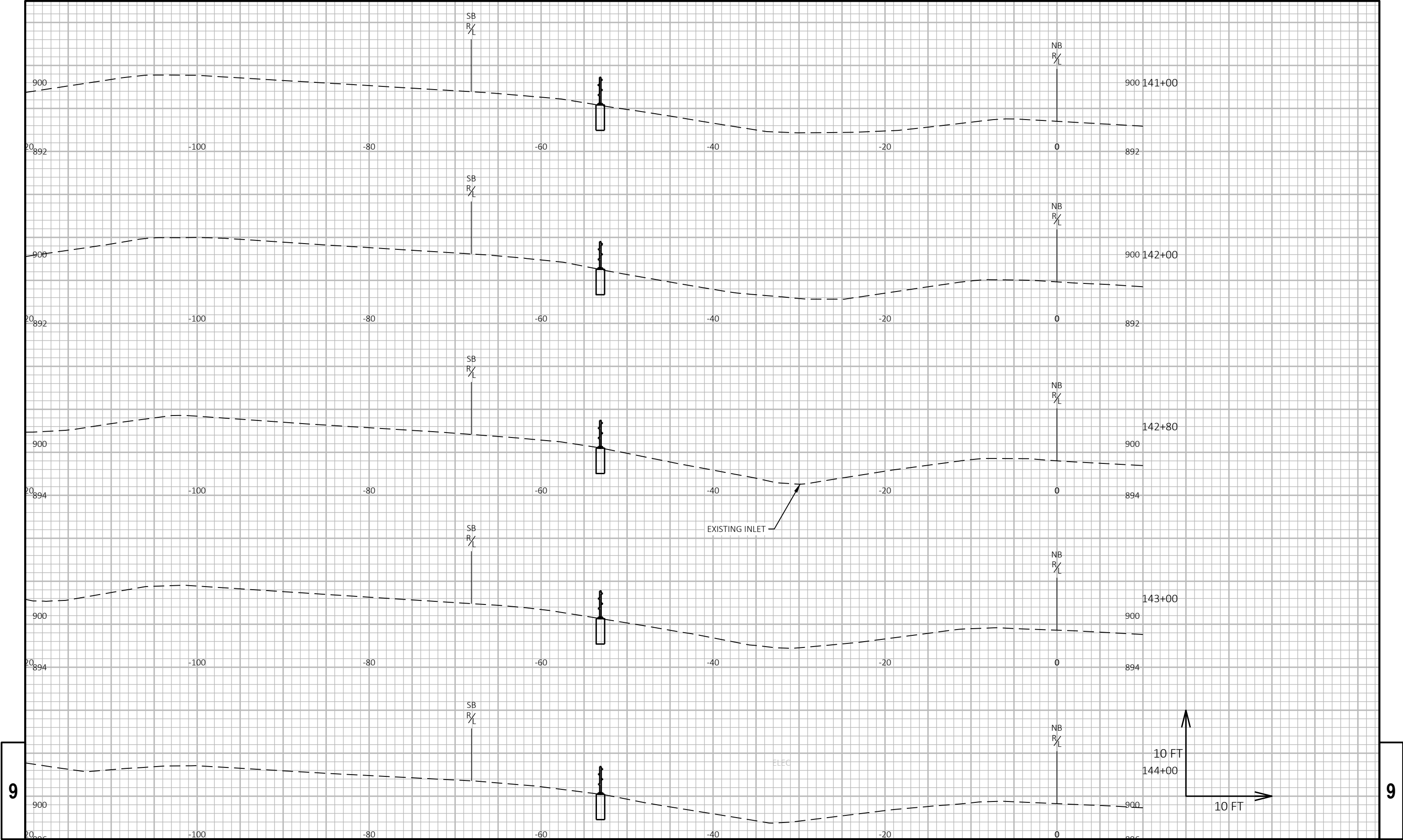
9

9



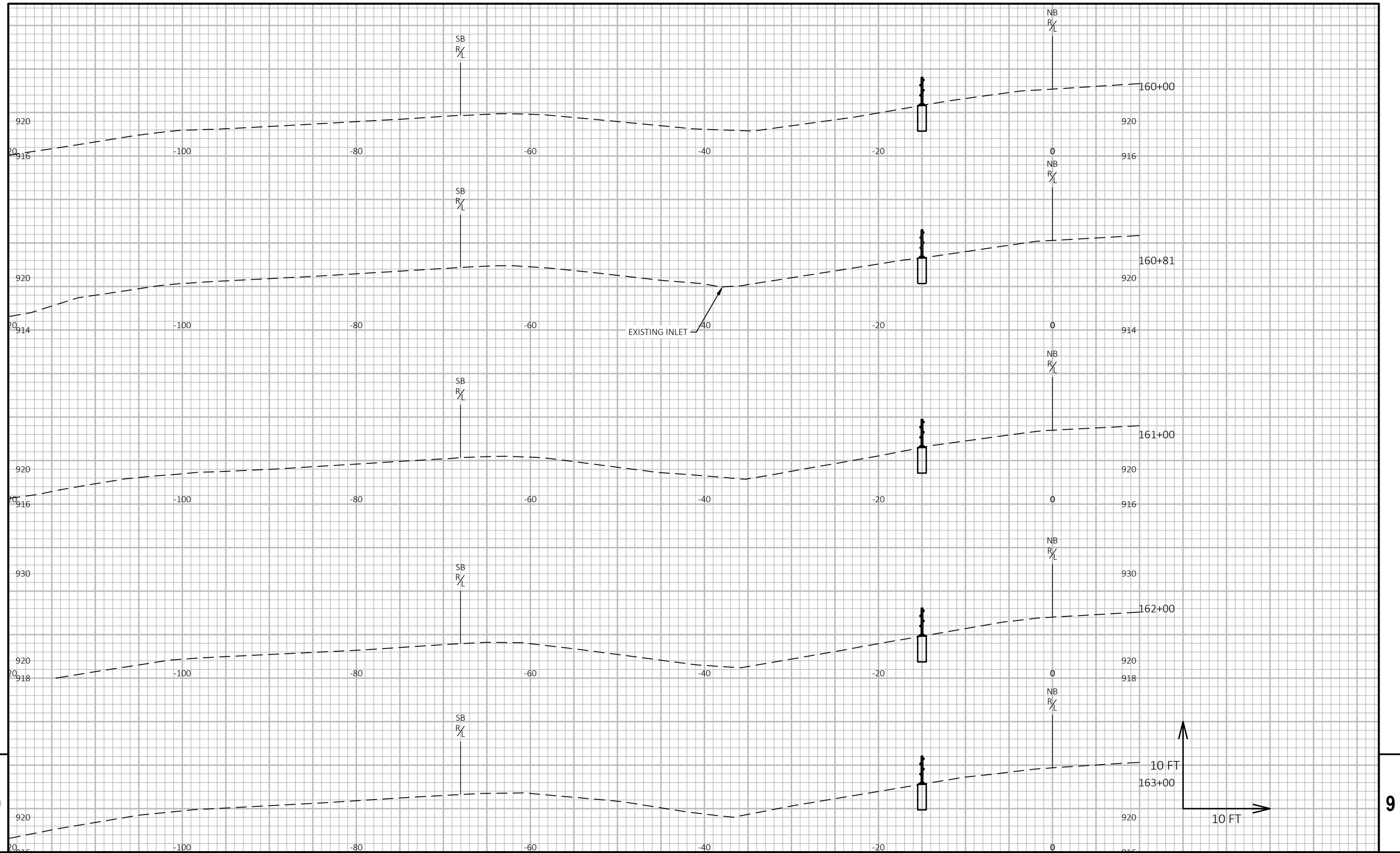
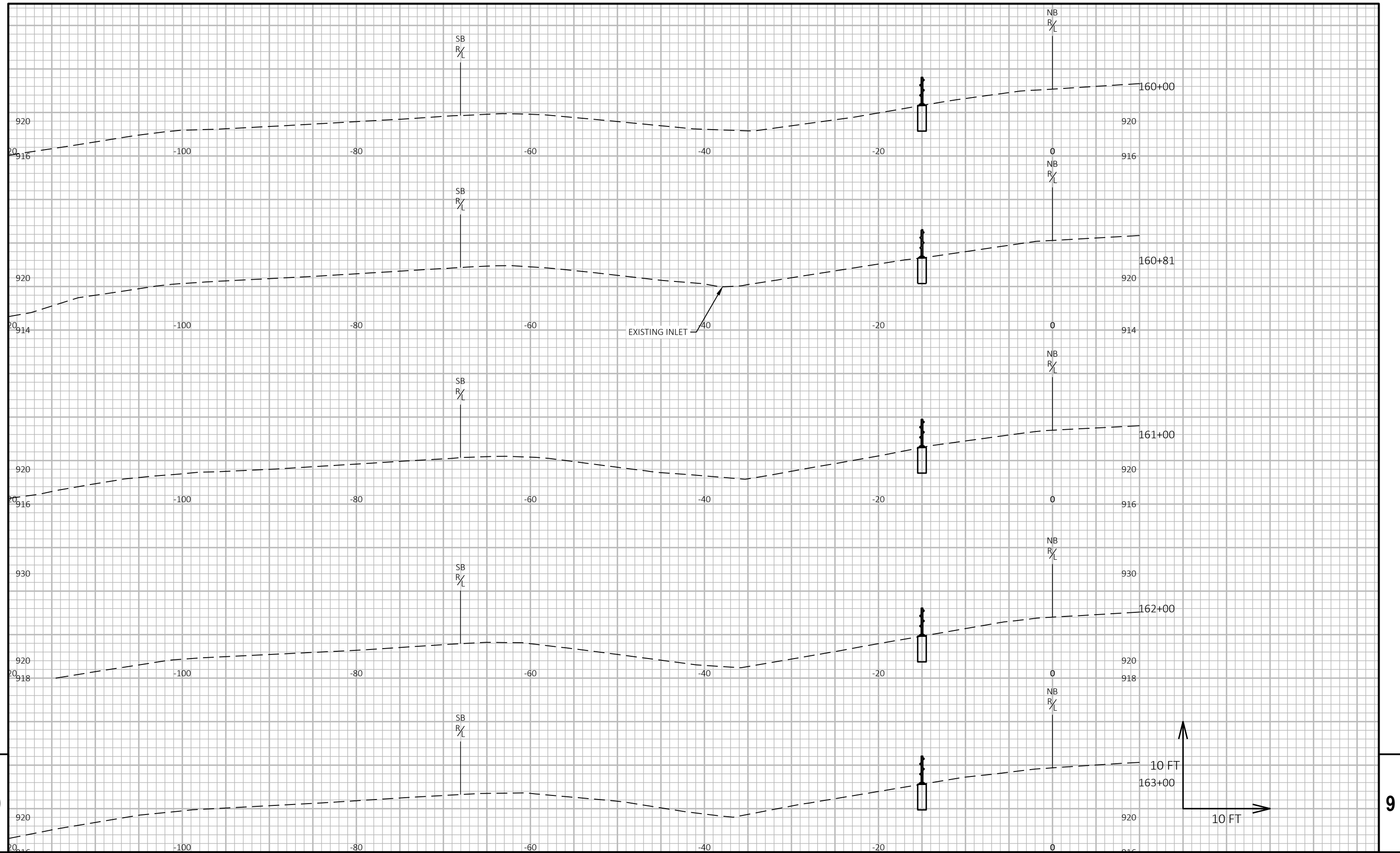
9

9



9

9



PROJECT NO:	1190-01-86
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HWY: USH 53

COUNTY: EAU CLAIRE

CROSS SECTIONS: USH 53

SHEET

63

■

FILE NAME : W:\30902849.000; 1190-01-16, USH 53 CABLE GUARD\CAD\1190-01-16\SHEETS\090201-XS.DWG
LAYOUT NAME - 15

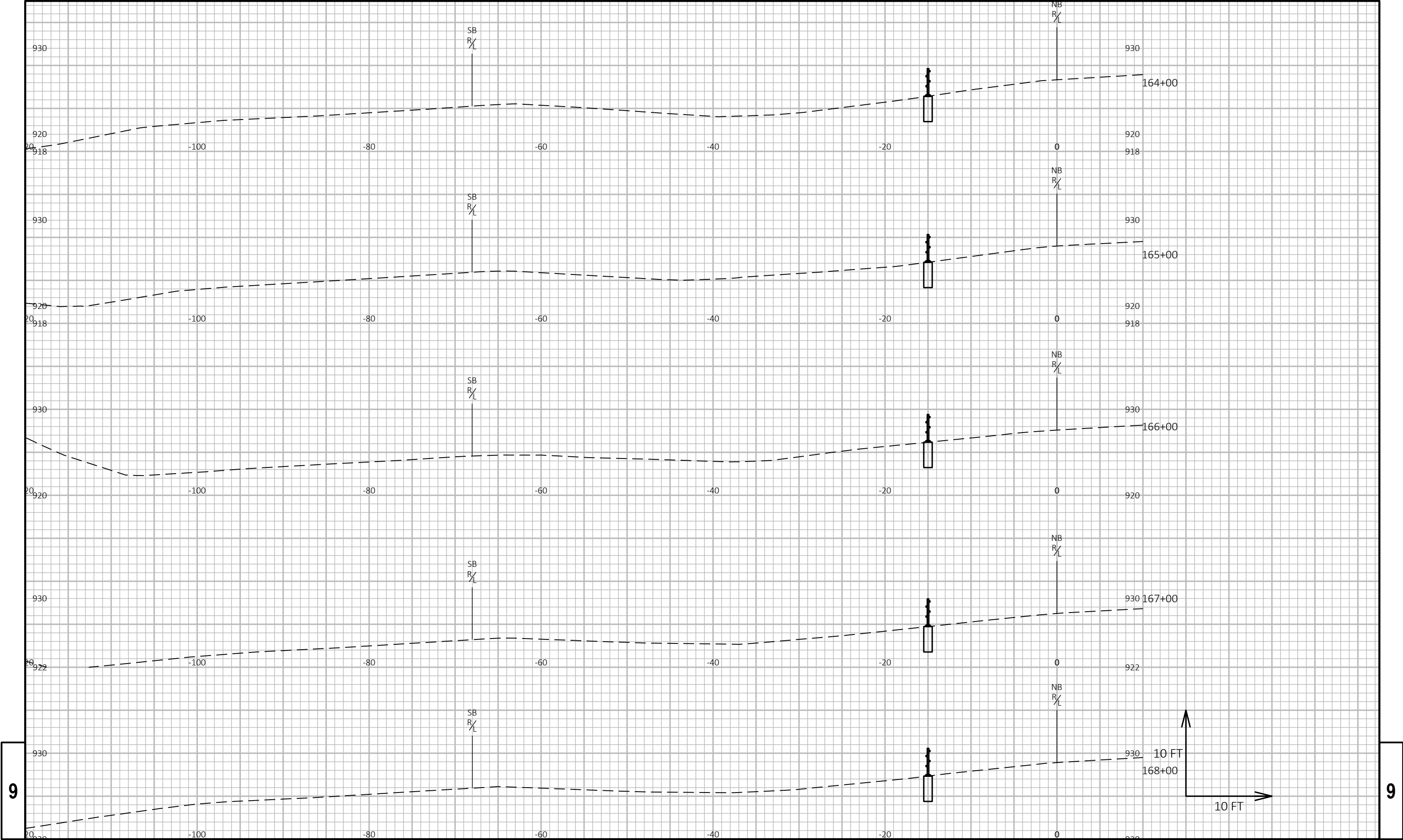
PLOT DATE : 10/23/2024 4:26 PM

PLOT BY : SEBESTA, MAXWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDS SHEET 49



PROJECT NO: 1190-01-86

HWY: USH 53

COUNTY: EAU CLAIRE

CROSS SECTIONS: USH 53

SHEET

64

E

FILE NAME : W:\30902849.000; 1190-01-16, USH 53 CABLE GUARD\CAD\1190-01-16\SHEETS\090201-XS.DWG
LAYOUT NAME - 16

PLOT DATE : 10/23/2024 4:26 PM

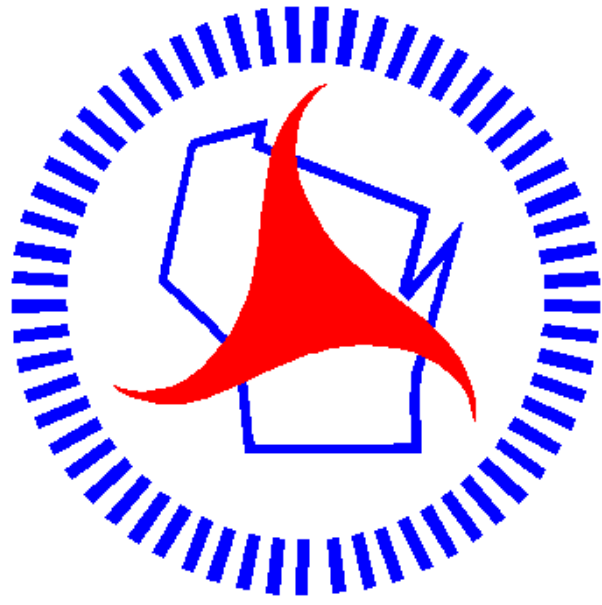
PLOT BY : SEBESTA, MAXWELL

PLOT NAME :

PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.

WISDOT/CADDs SHEET 49

Notes



Wisconsin Department of Transportation

Dedicated people creating transportation solutions through innovation and exceptional service.

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