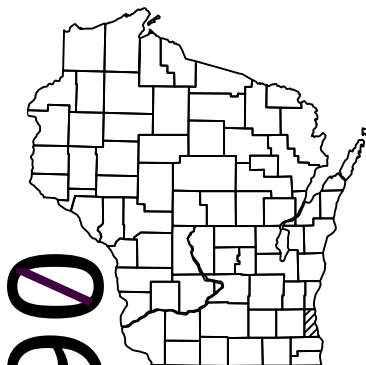


ORDER OF SHEETS

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 = 172



DESIGN DESIGNATION

A.A.D.T.	2013	=	9,400
A.A.D.T.	2036	=	11,100
D.H.V.		=	1030
D.D.		=	59/41
T.		=	7.0%
DESIGN SPEED		=	45 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	

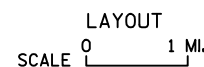
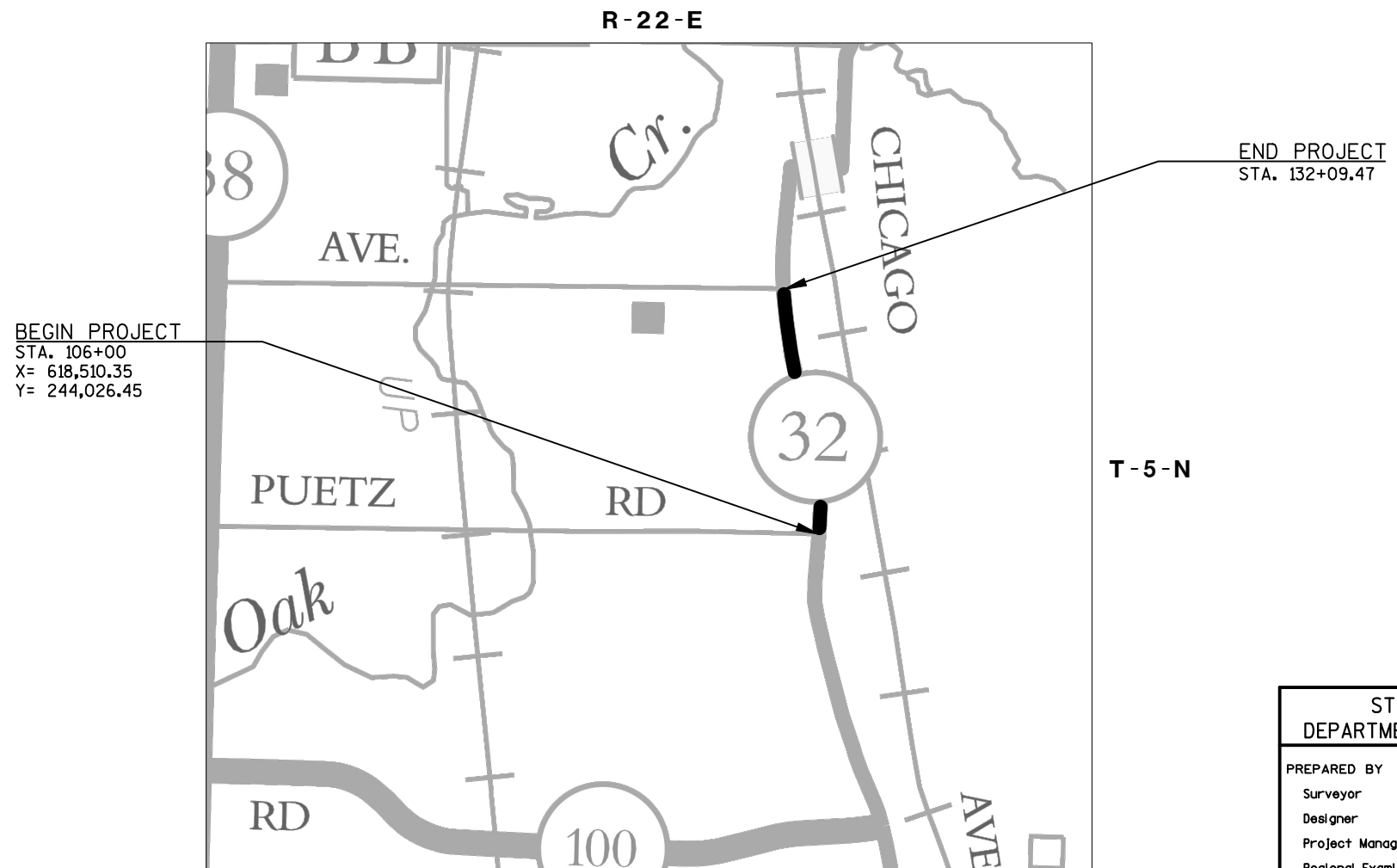
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

STH 32
PUETZ ROAD TO FOREST HILL AVE
STH 32
MILWAUKEE COUNTY

STATE PROJECT NUMBER
2375-07-70

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
2375-07-70	WISC 2017453	1



TOTAL NET LENGTH OF CENTERLINE = 0.49 MI.

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, MILWAUKEE COUNTY, NAD83 (2014), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
PREPARED BY	
Surveyor	R.A. SMITH
Designer	DAWN MARSHALL
Project Manager	MARK WILFERT
Regional Examiner	
Regional Supervisor	
APPROVED FOR THE DEPARTMENT	
DATE: 06/28/2017	

GENERAL NOTES

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

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

MAINTAIN ACCESS TO ALL DRIVEWAYS AND ALL BUSINESSES AT ALL TIMES.

TRAFFIC CONTROL LOCATIONS AS SHOWN IN THE PLAN ARE SUGGESTED LOCATIONS. EXACT LOCATIONS WILL BE DETERMINED BY THE ENGINEER IN THE FIELD.

SHOULDER PAVEMENT SHALL MATCH ADJACENT MAINLINE.

ALL SIGN LOCATIONS SHALL BE REVIEWED BY THE ENGINEER PRIOR TO INSTALLATION.

PAVED SHOULDERS SHALL BE EXPANDED TO TEN FEET.

NO TREES OR SHRUBS SHALL BE REMOVED UNLESS DESIGNATED FOR REMOVAL BY THE ENGINEER.

PROTECT FROM DAMAGE AND COMPLETE SHOULDER WORK AROUND ANY EXISTING SIGNS OR MAILBOXES THAT ARE TO REMAIN IN PLACE.

RESTORATION OF EXPOSED SLOPES AND DITCHES SHALL TAKE PLACE WITHIN 7 CALENDAR DAYS AFTER FINISHED GRADING IS COMPLETE

ALL DISTURBED AREAS WITHIN THE RIGHT-OF-WAY SHALL BE TOPSOILED, FERTILIZED, SEEDED, AND MULCHED AS DIRECTED BY THE ENGINEER

THE LOCATIONS OF EROSION CONTROL ITEMS SHALL BE DETERMINED BY THE ENGINEER. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

ALL CURB AND GUTTER ELEVATIONS PROVIDED ARE AT FLANGE LINE

TEMPORARY STORAGE OF ANY MATERIAL SHALL NOT BE PERMITTED IN WETLANDS. STOCKPILED SOIL SHALL BE PROTECTED AGAINST EROSION. IF STOCKPILED MATERIAL IS LEFT FOR MORE THAN FOURTEEN (14) CALENDAR DAYS, SEED THE STOCKPILE WITH TEMPORARY SEED.

EROSION CONTROL BMP'S, SUCH AS SILT FENCE, DITCH CHECKS AND OTHER EROSION CONTROL DEVICES, ARE AT SUGGESTED LOCATIONS. THE ACTUAL LOCATIONS WILL BE DETERMINED BY THE CONTRACTORS ECIP AND BY THE ENGINEER. EROSION CONTROL BMP'S SHALL BE MAINTAINED UNTIL PERMANENT VEGETATION IS ESTABLISHED OR UNTIL THE ENGINEER DETERMINES THAT THE BMP IS NO LONGER REQUIRED.

CONTRACTOR MUST CONTACT THE PROJECT ENGINEER AND SEWRPC (JOHN WASHBURN) AT LEAST TWO WEEKS PRIOR TO WORK NEAR ANY SECTION CORNER MONUMENT.

STANDARD ABBREVIATIONS

ABUT	Abutment	POT	Point on Tangent
AH	Ahead	R	Radius
AADT	Annual Average Daily Traffic	RL or R/L	Reference Line
BK	Back	RHF	Right-Hand Forward
CL or C/L	Center Line	R/W	Right-of-Way
Δ	Central Angle or Delta	SALV	Salvaged
CH	Chord	SAN S	Sanitary Sewer
D	Degree of Curve	SF	Square Feet
DHV	Design Hour Volume	SY	Square Yard
DIA	Diameter	STD	Standard
X	East Grid Coordinate	SDD	Standard Detail Drawings
EBS	Excavation Below Subgrade	SSD	Stopping Sight Distance
FL or F/L	Flow Line	SE	Superelevation
CWT	Hundredweight	SL or S/L	Survey Line
IN DIA	Inch Diameter	T	Tangent
ID	Inside Diameter	TEL	Telephone
I	Intersection Angle	TLE	Temporary Limited Easement
INV	Invert	T	Ton
LHF	Left-Hand Forward	T	Trucks (percent of)
LC	Long Chord of Curve	UG	Underground
LS	Lump Sum	VAR	Variable
ML or M/L	Match Line	V	Velocity or Design Speed
NC	Normal Crown	VC	Vertical Curve
Y	North Grid Coordinate	VPCC	Vertical Point of Compound Curve
PAVT	Pavement	VPC	Vertical Point of Curve
PCC	Point of Compound Curve	VPI	Vertical Point of Intersection
PC	Point of Curvature	VPRC	Vertical Point of Reverse Curve
PI	Point of Intersection	VPT	Vertical Point of Tangency
PRC	Point of Reverse Curvature	W	Water
PT	Point of Tangency	WM	Water Main
POC	Point On Curve	WV	Water Valve

DIGGERSHOTLINE

Dial 811 or (800) 242-8511

www.DiggersHotline.com

UTILITY CONTACTS

Mark Eder
AT&T Wisconsin - Communication Line
2005 Pewaukee Rd
Waukesha, WI 53188-2443
(262) 896-7434
me1754@att.com

Steven Cramer
Time Warner Cable - Communication Line
1320 N Dr Martin Luther King Jr Dr
Milwaukee, WI 53212-4002
(414) 277-4045
wis.engineering@twcable.com

Brian Johnston
City of Oak Creek - Road Facility
8040 S. 6th STREET
Oak Creek, WI 53154
(414) 766-7038
bjohnston@oakcreekwi.org

Brian Johnston
City of Oak Creek - Street Lighting
8040 S. 6th STREET
Oak Creek, WI 53154
(414) 766-7038
bjohnston@oakcreekwi.org

Micki Klappa-Sullivan
Milwaukee Metropolitan Sewerage District - Sewer
260 W Seeboth St
Milwaukee, WI 53204-1446
(414) 225-2178
Mklappasullivan@mmsd.com

Ron Pritzlaff
City of Oak Creek Sewer & Water Utility - Sewer
170 West Drexel Ave
Oak Creek, WI 53154
(414) 570-8200
rpritzlaff@water.oak-creek.wi.us

Ron Pritzlaff
City of Oak Creek Sewer & Water Utility - Water
170 West Drexel Ave
Oak Creek, WI 53154
(414) 570-8200
rpritzlaff@water.oak-creek.wi.us

Richard Trgovec
Midwest Fiber Networks LLC - Communication Line
6070 North Flint Rd
Glendale, WI 53209
(414) 459-3554
rtrgovec@midwestfibernetworks.com

Elizabeth Lloyd-Weis
Wisconsin Department of Transportation - Wisconsin Signal
141 NW Barstow St
P.O. Box 798
Waukesha, WI 53187-0798
(262) 521-4404
Elizabeth.Lloyd-Weis@dot.wi.gov

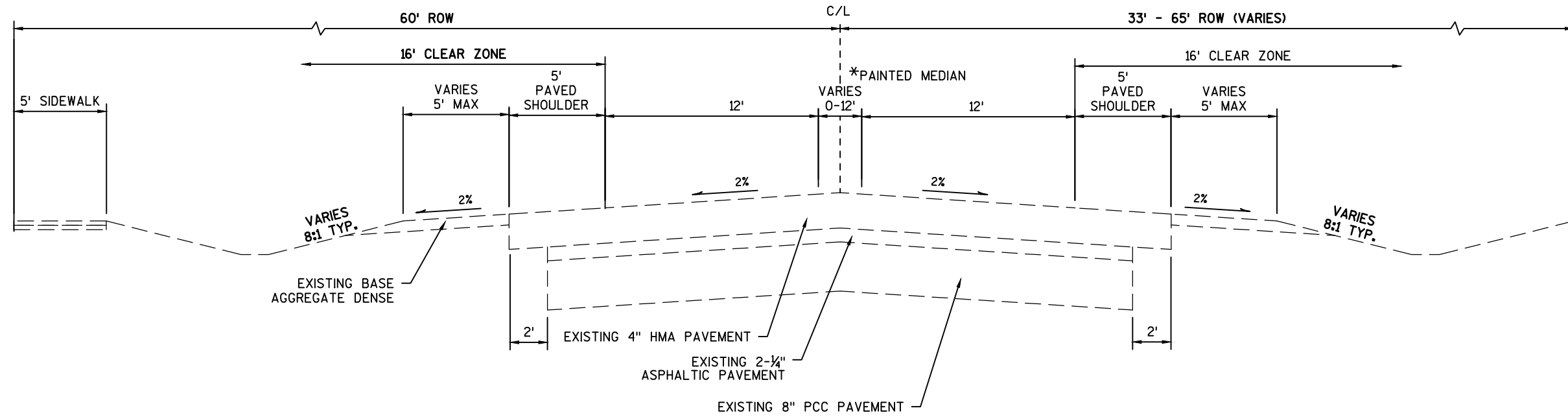
John Washburn
Southeastern Wisconsin Regional Planning Commission
W239 N1812 Rockwood Drive
P.O. Box 1607
Waukesha, WI 53187-1607
Phone (262) 953-4295
Fax (262) 547-1103
jwashburn@sewrpc.org

LaTroy Brumfield
We Energies - Electricity
333 West Everett St, Room A299
Milwaukee, WI 53203
(414) 221-5617
LaTroy.Brumfield@we-energies.com

LaTroy Brumfield
We Energies - Gas/Petroleum
333 West Everett St, Room A299
Milwaukee, WI 53203
(414) 221-5617
LaTroy.Brumfield@we-energies.com

DNR Contact
Kristina Betzold
Environmental Analysis and Review Specialist
Wisconsin Department of Natural Resources
2300 N Dr. Martin Luther King Drive
Milwaukee, WI 53212
(414) 507-4946
kristina.betzold@wisconsin.gov

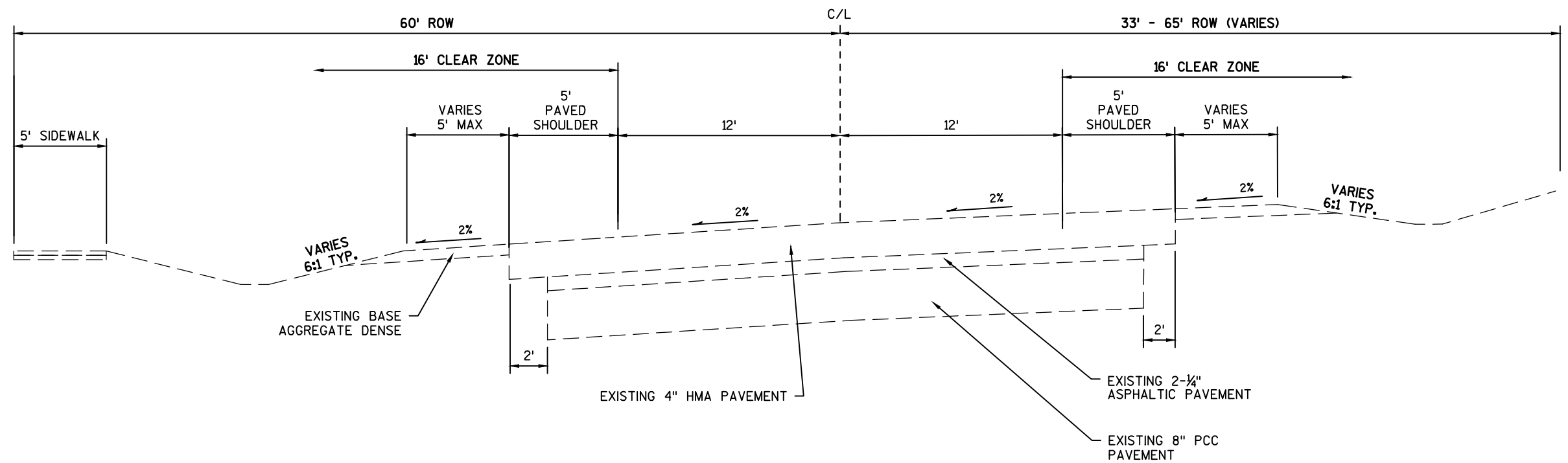




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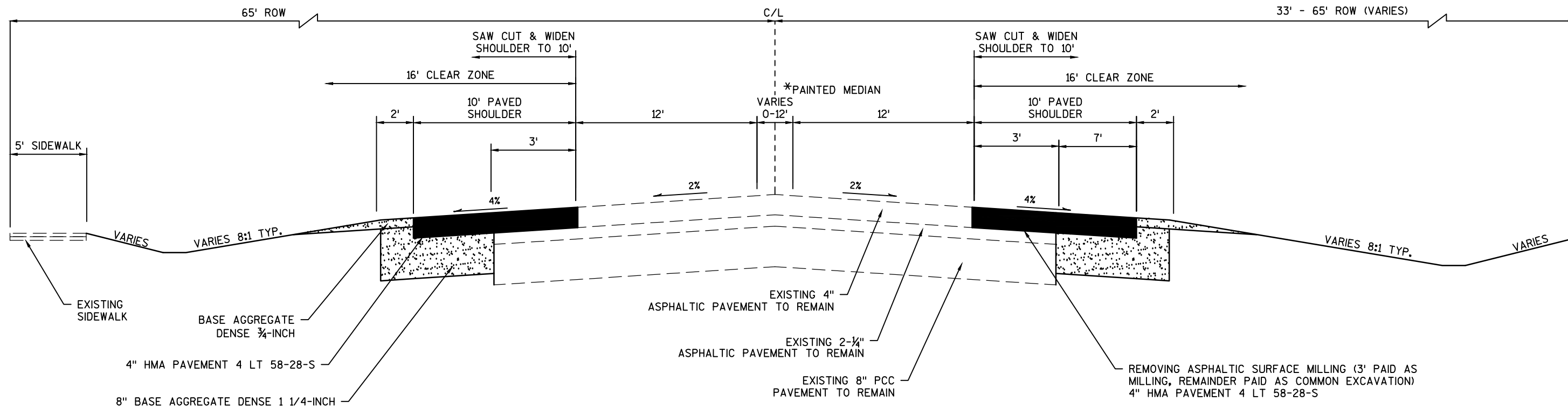
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*PAINTED MEDIAN STA. 106+33 TO 110+33

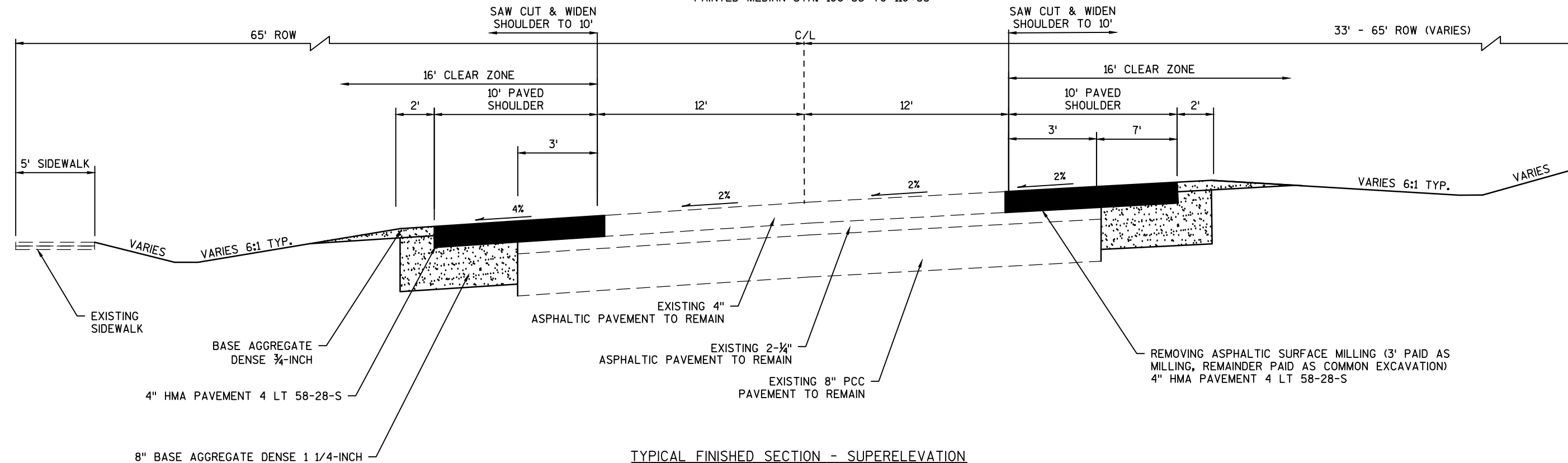


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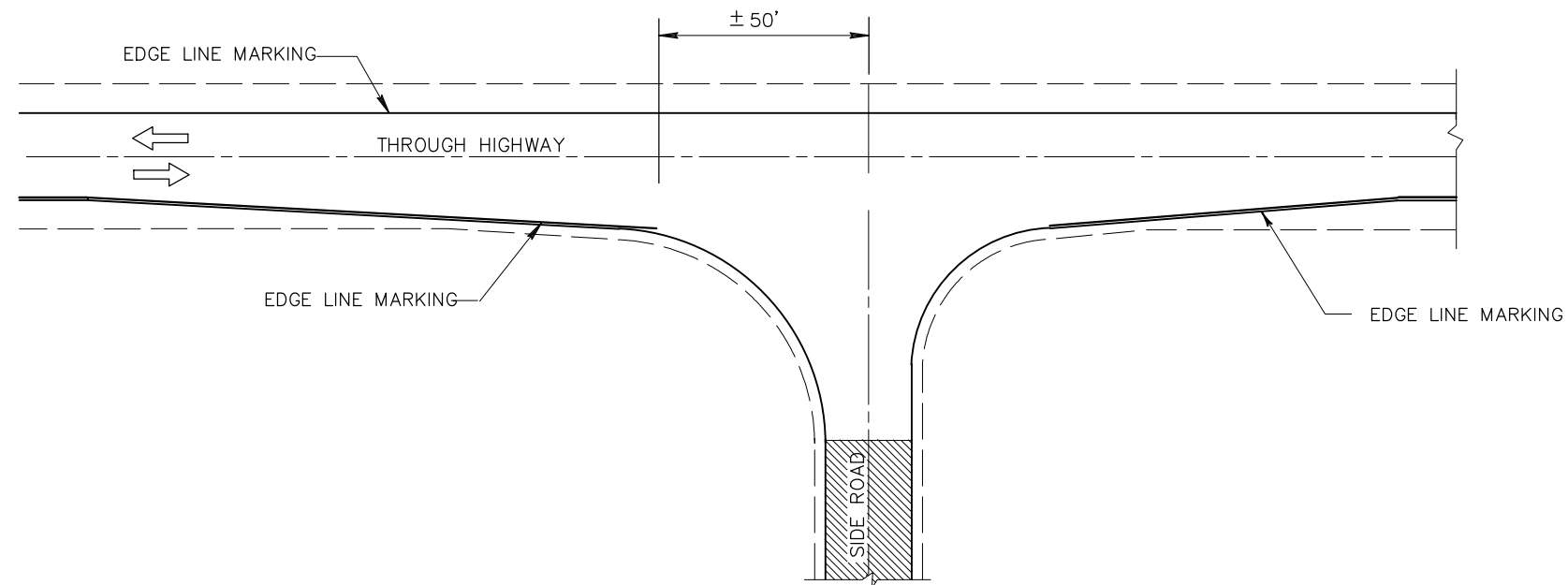
STA. 110+70 TO 132+00



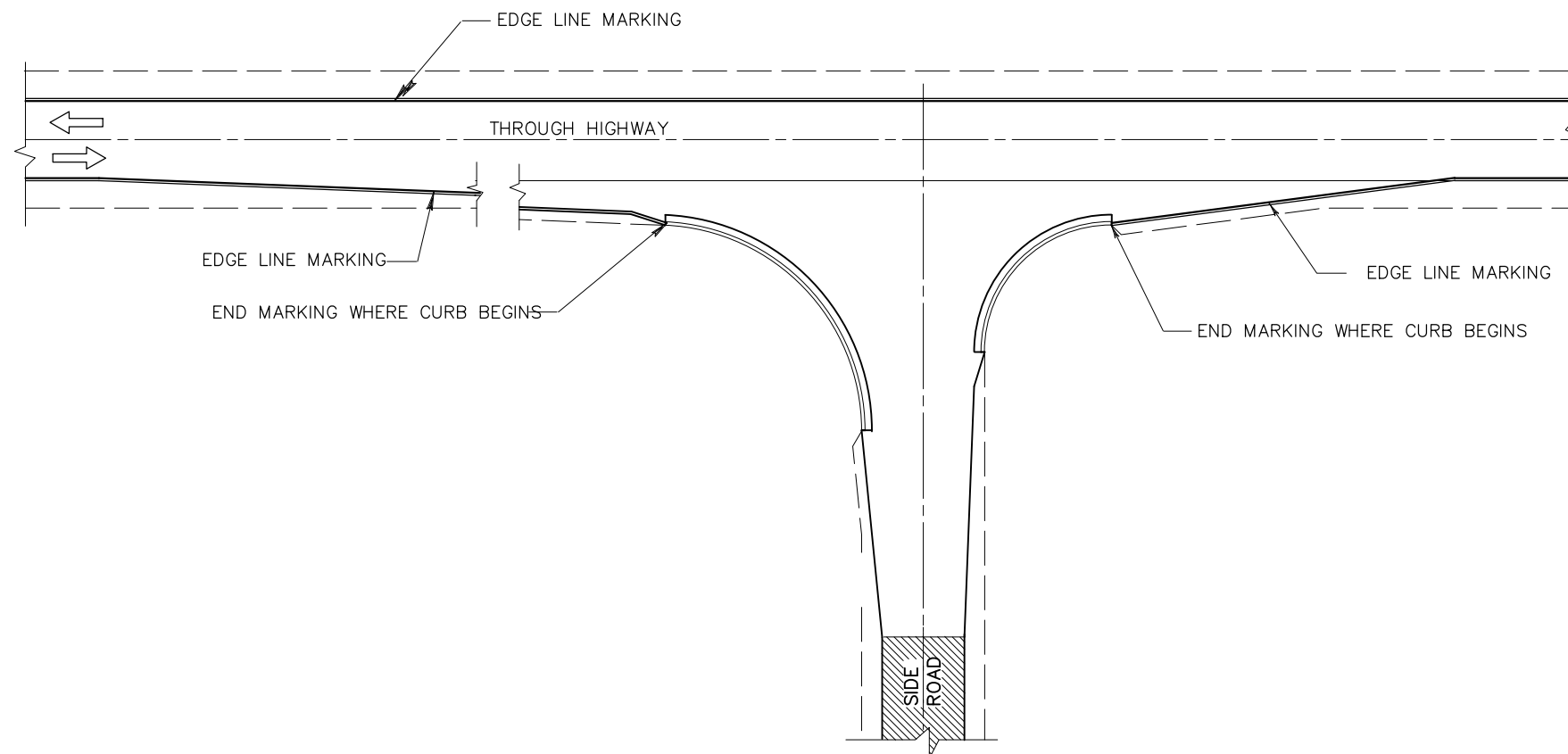
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STA. 106+35.84 TO 110+70
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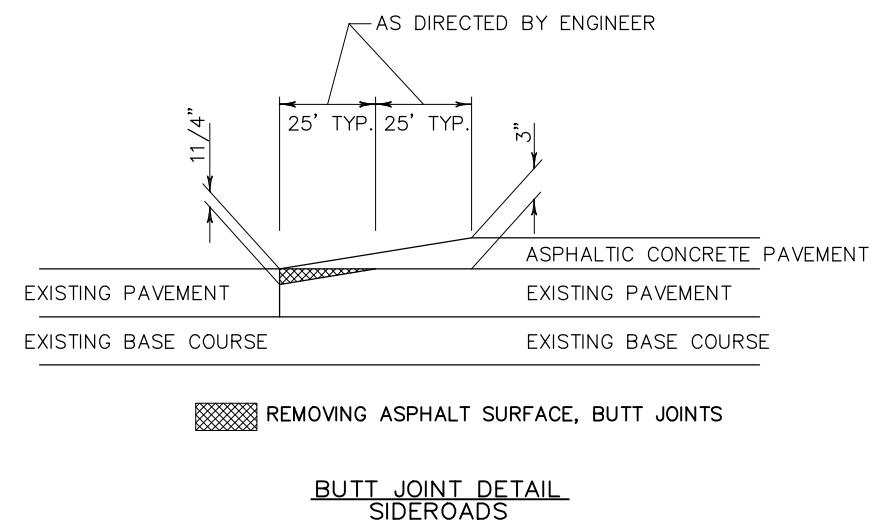
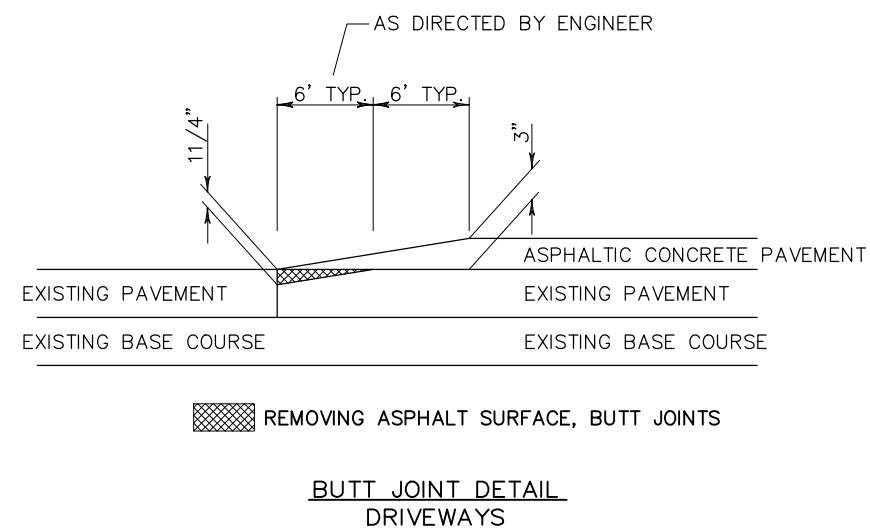
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STA. 110+70 TO 132+00

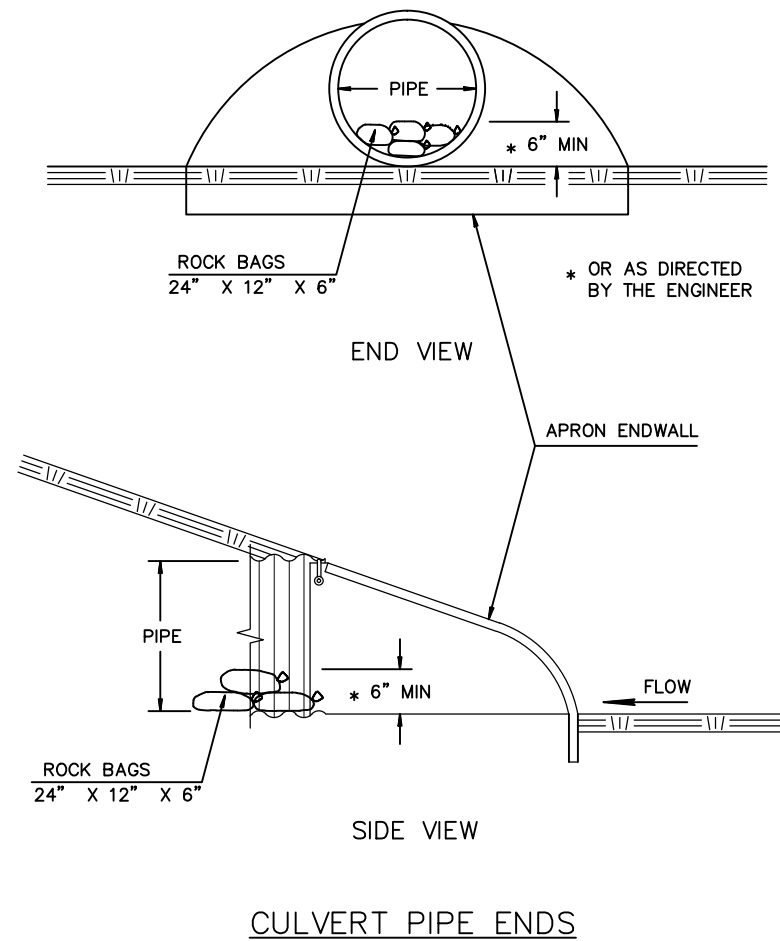


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(TYPICAL MARKING)



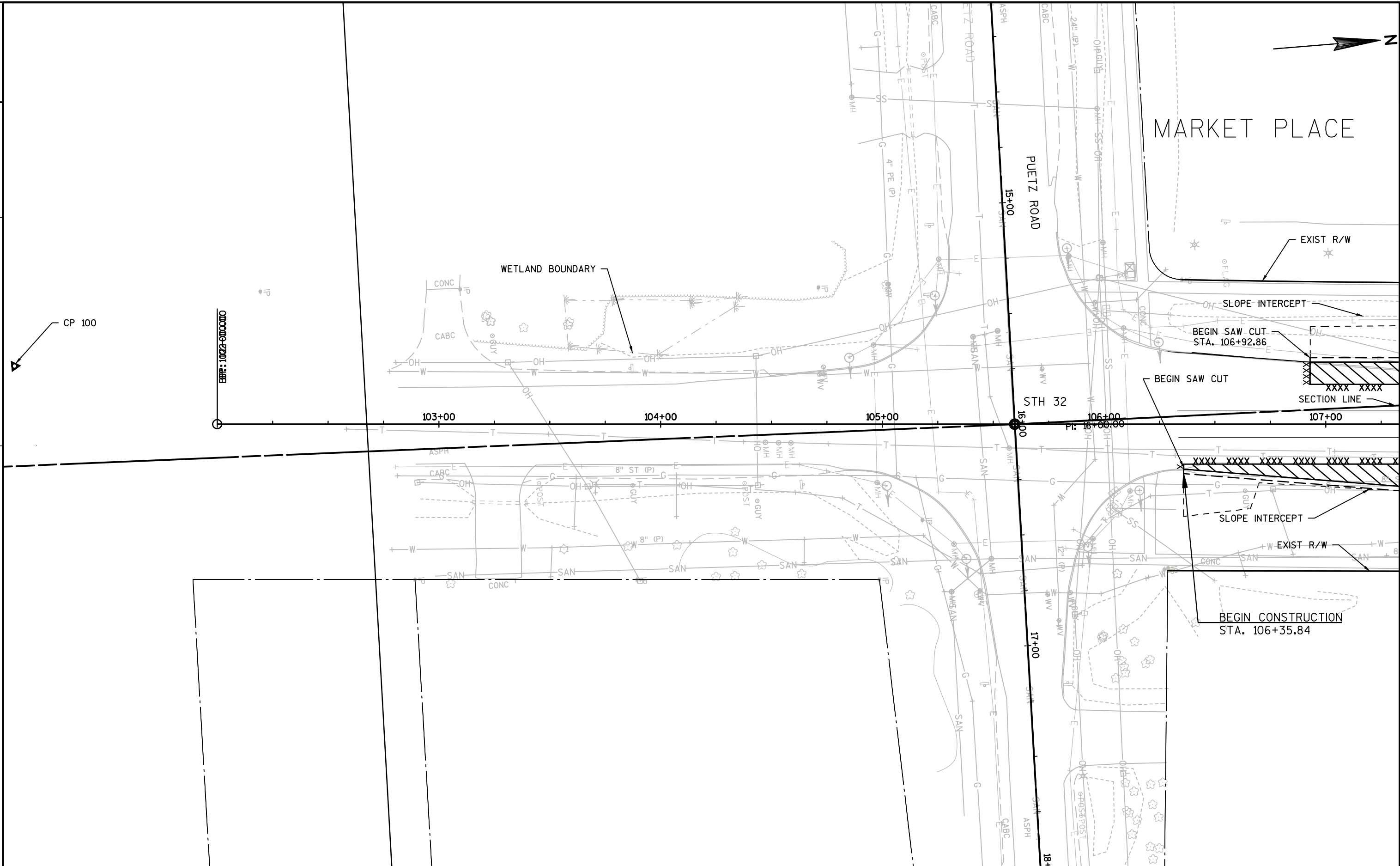
MINOR INTERSECTION WITH CURBS
(TYPICAL MARKING)

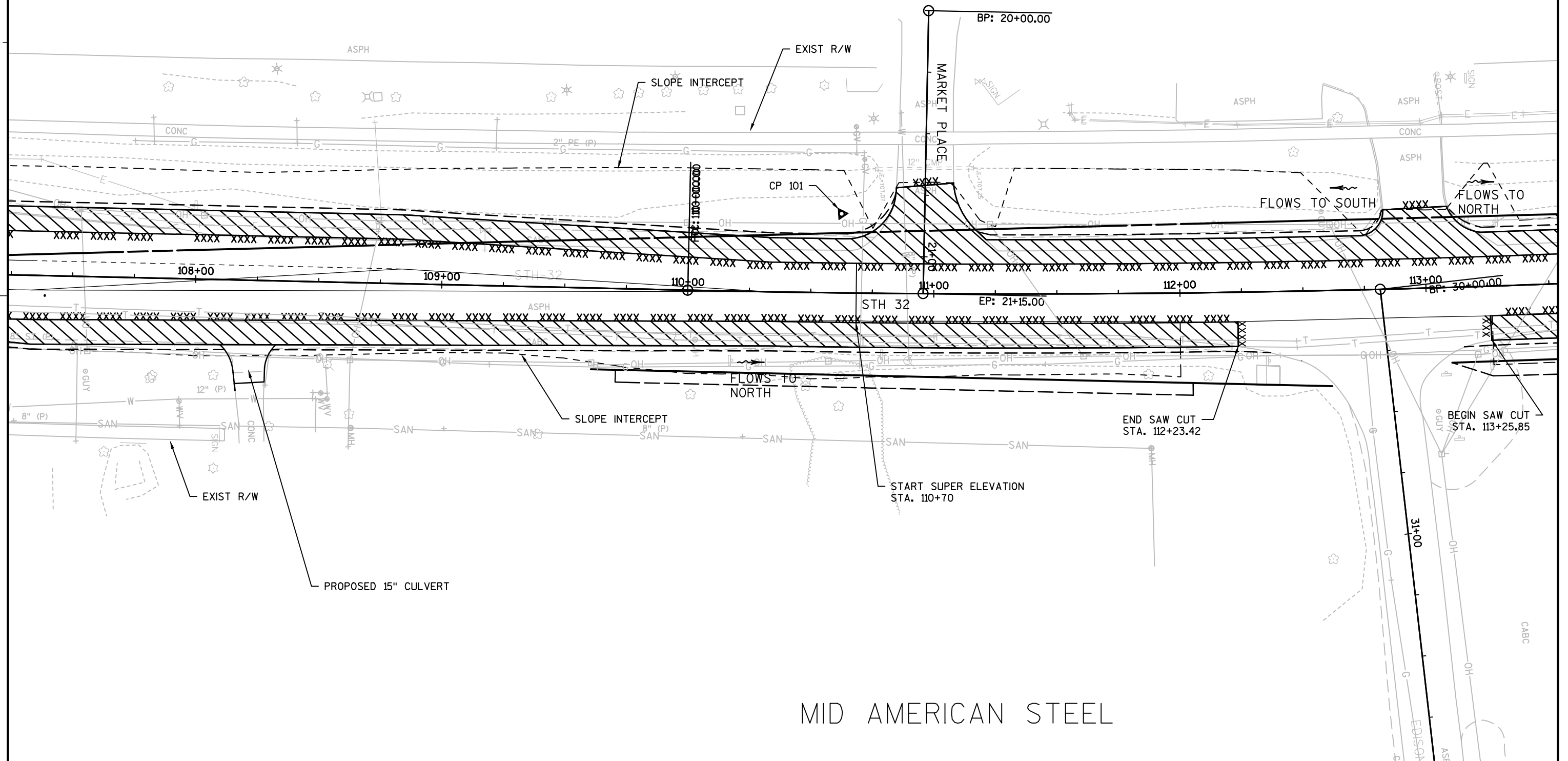


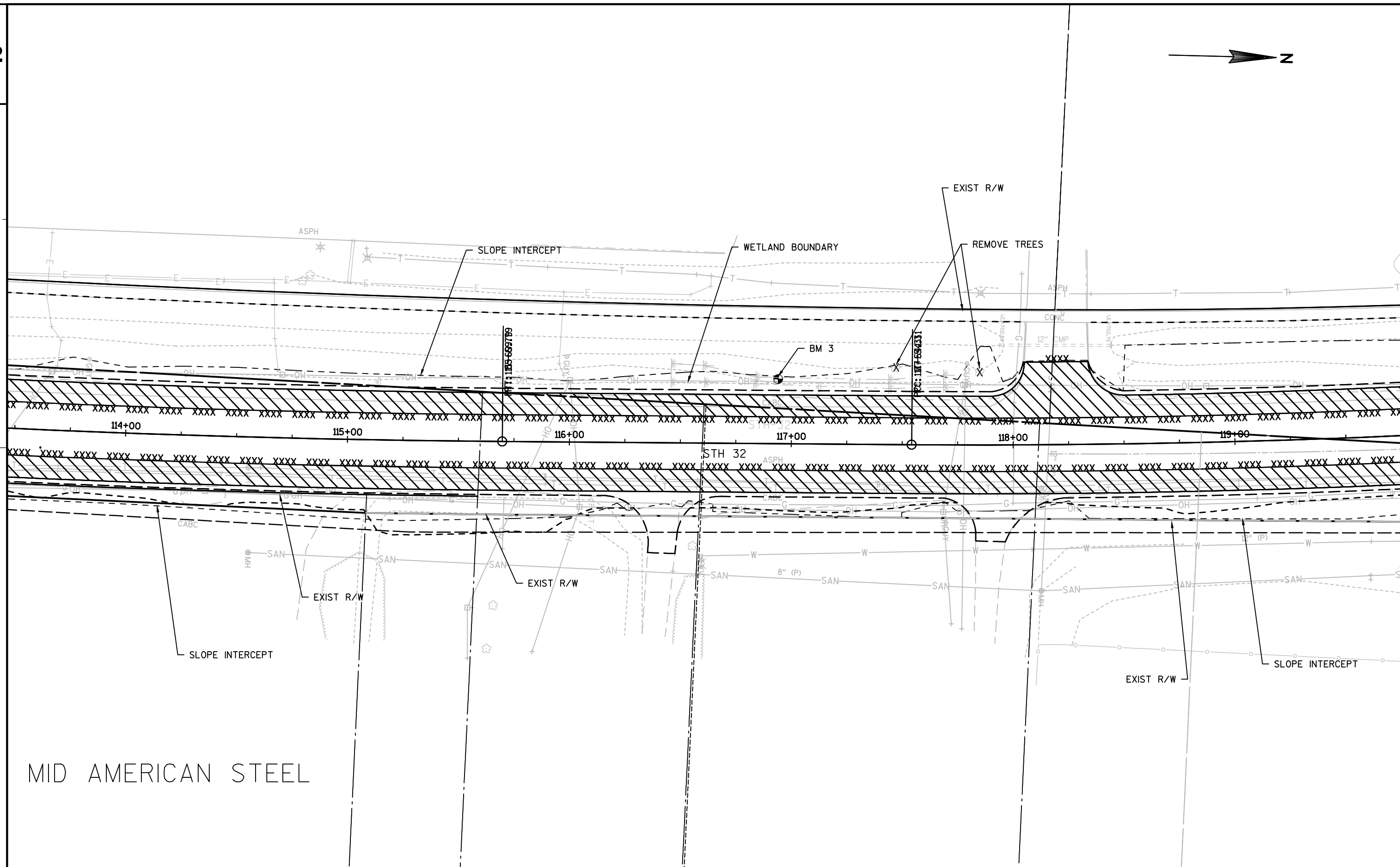


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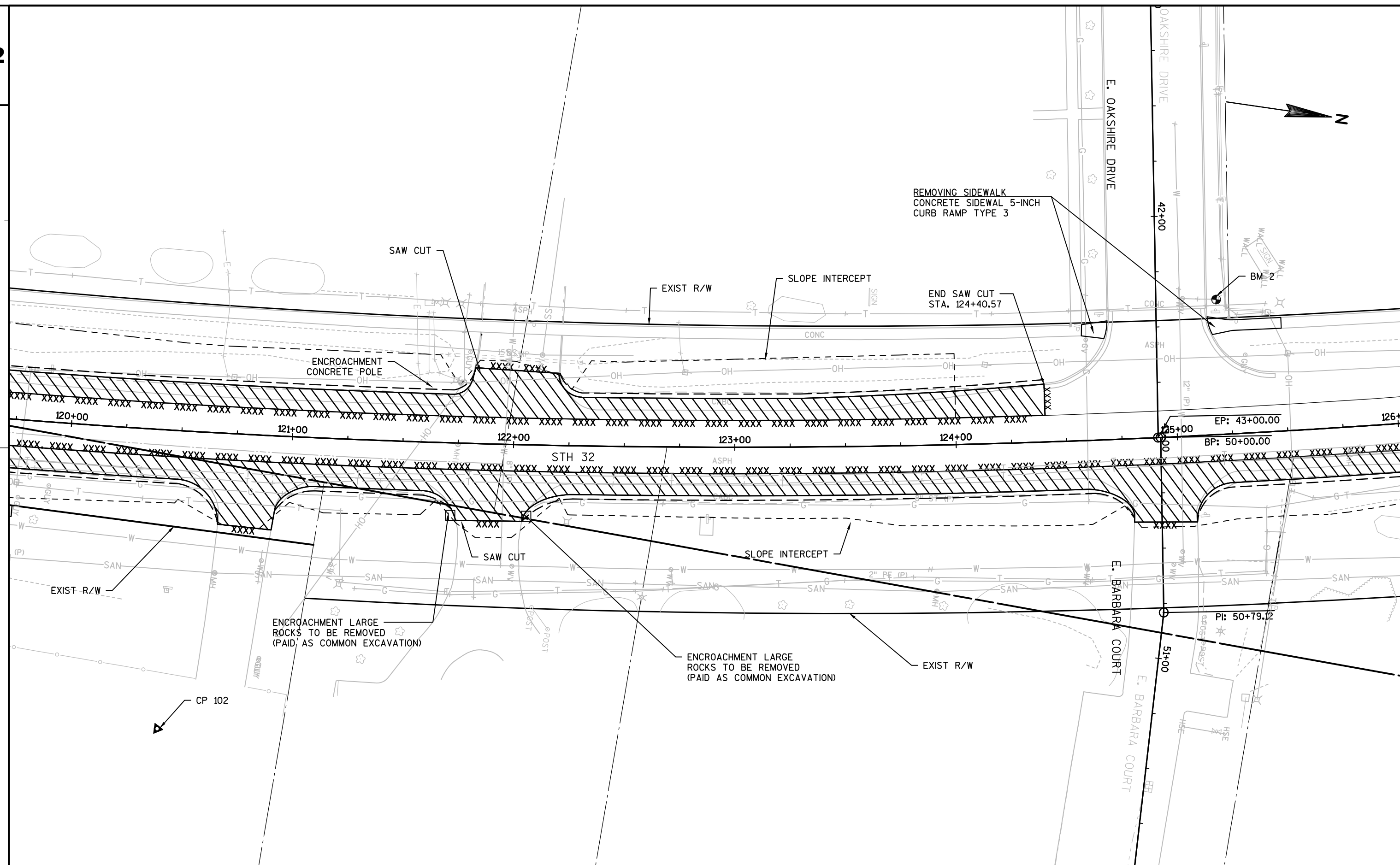




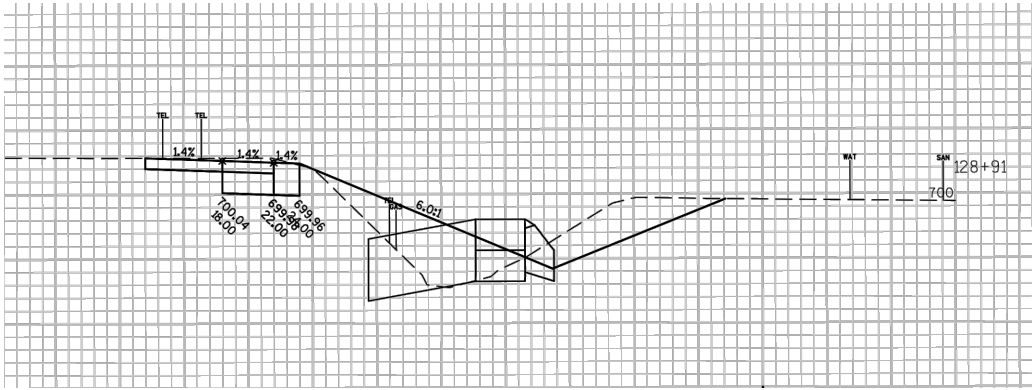


MID AMERICAN STEEL

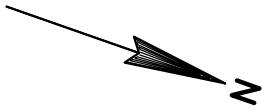
PROJECT NO:2375-07-70	HWY:STH 32	COUNTY:MILWAUKEE	PLAN DETAILS	SHEET	E
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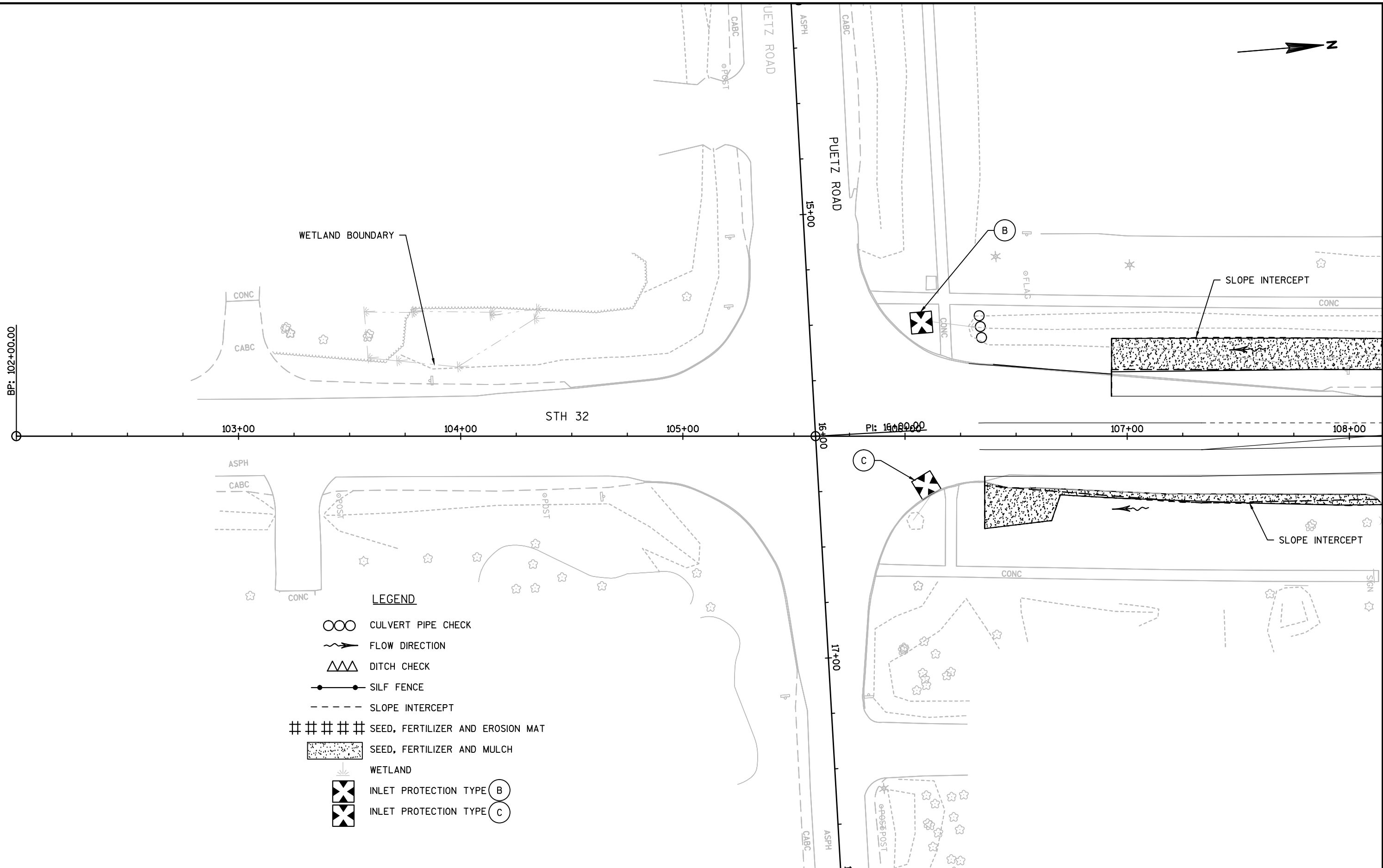


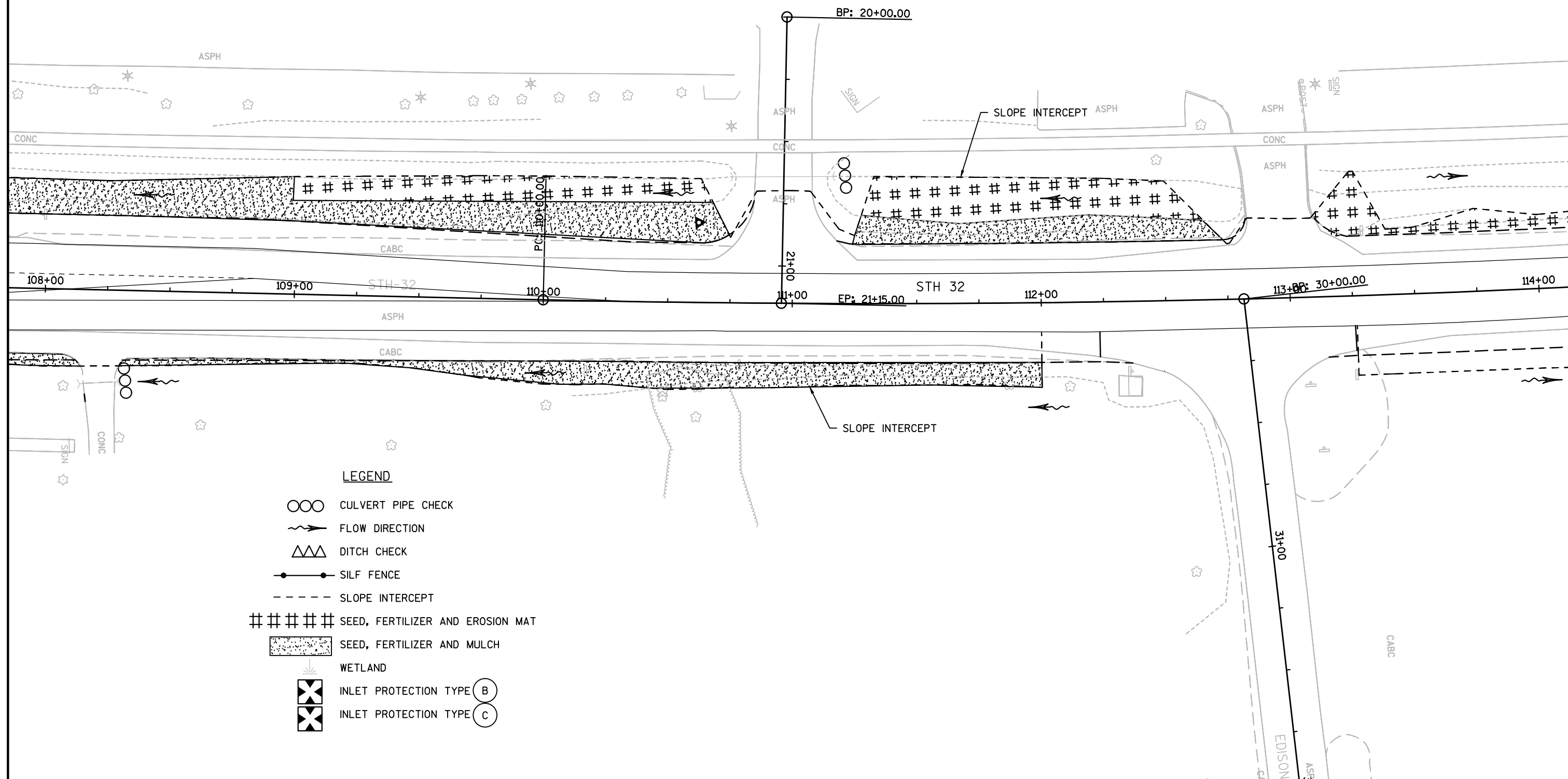
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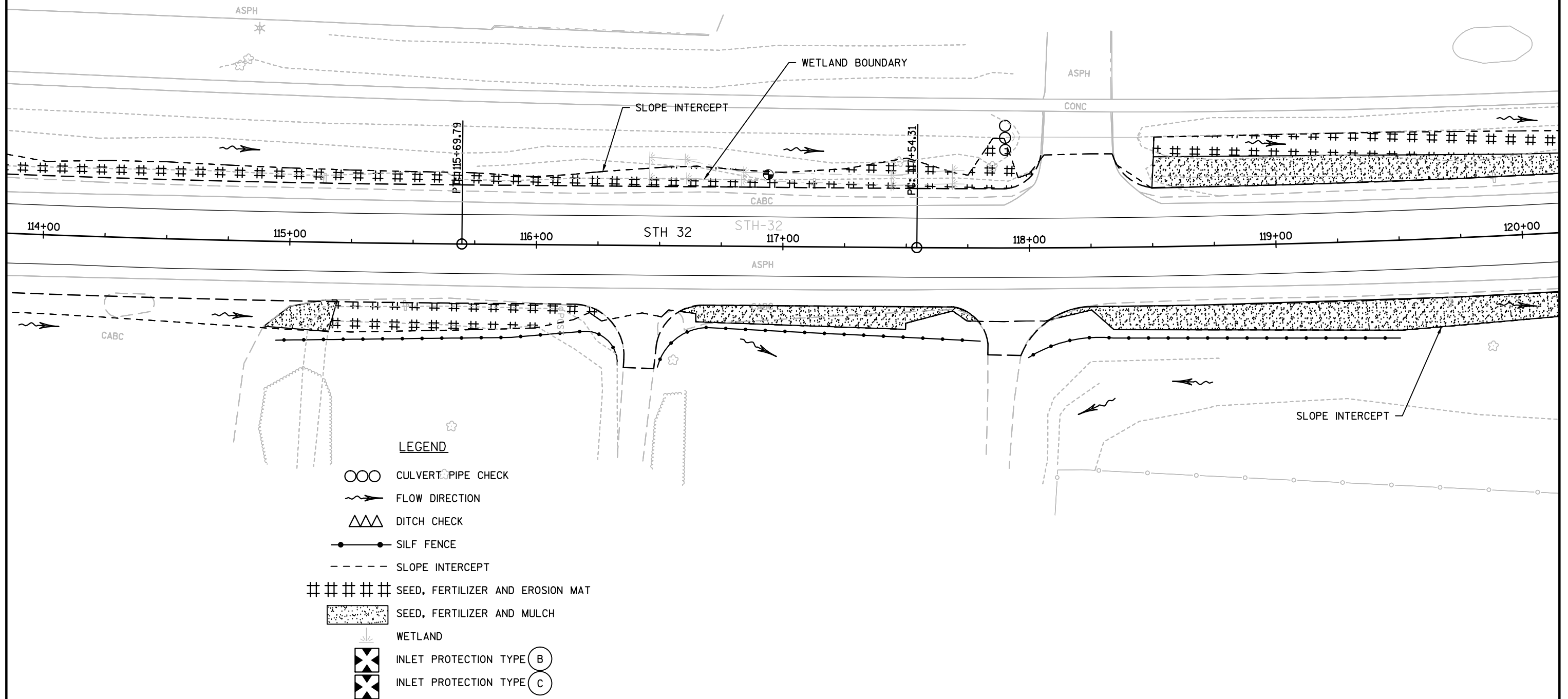


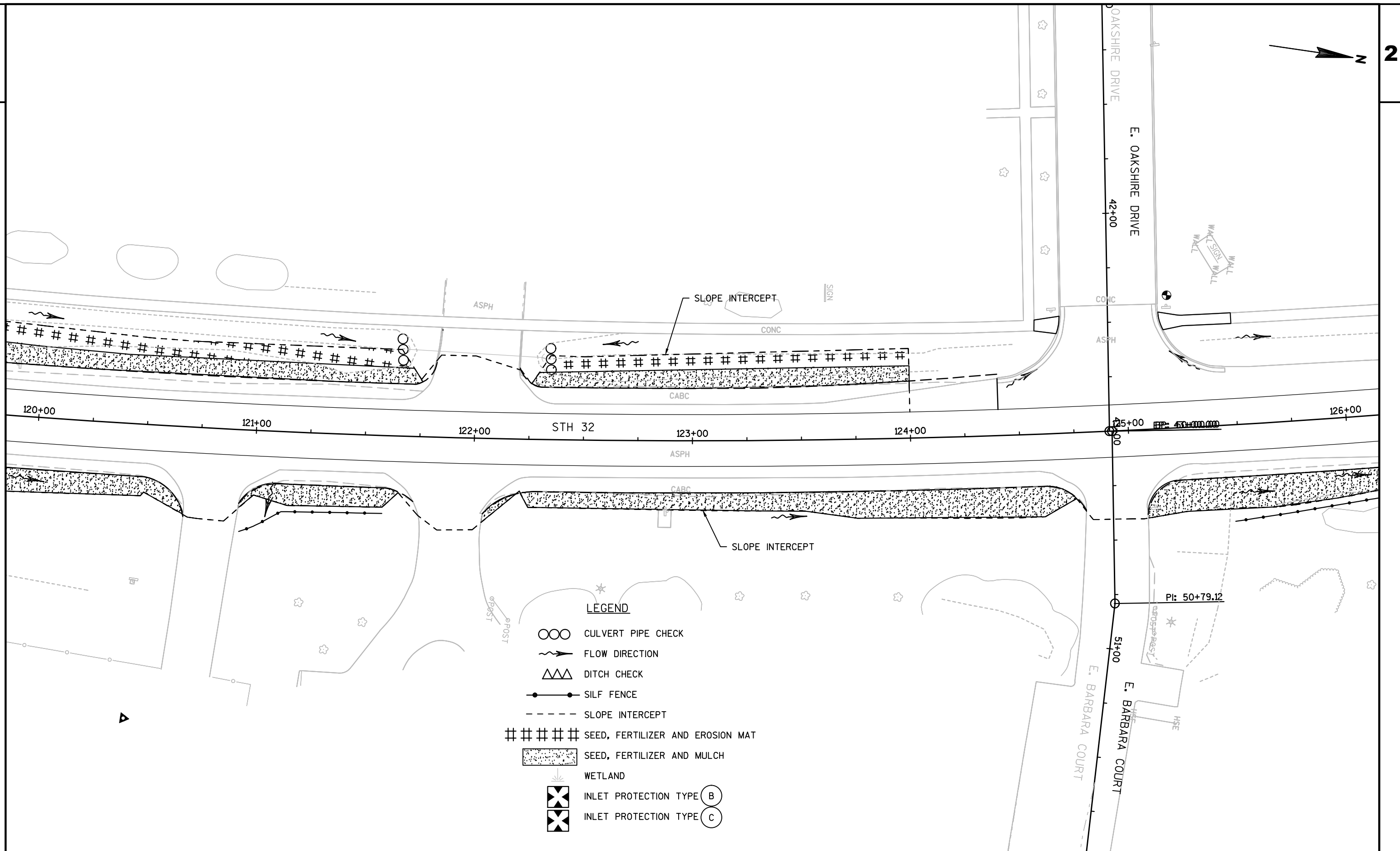
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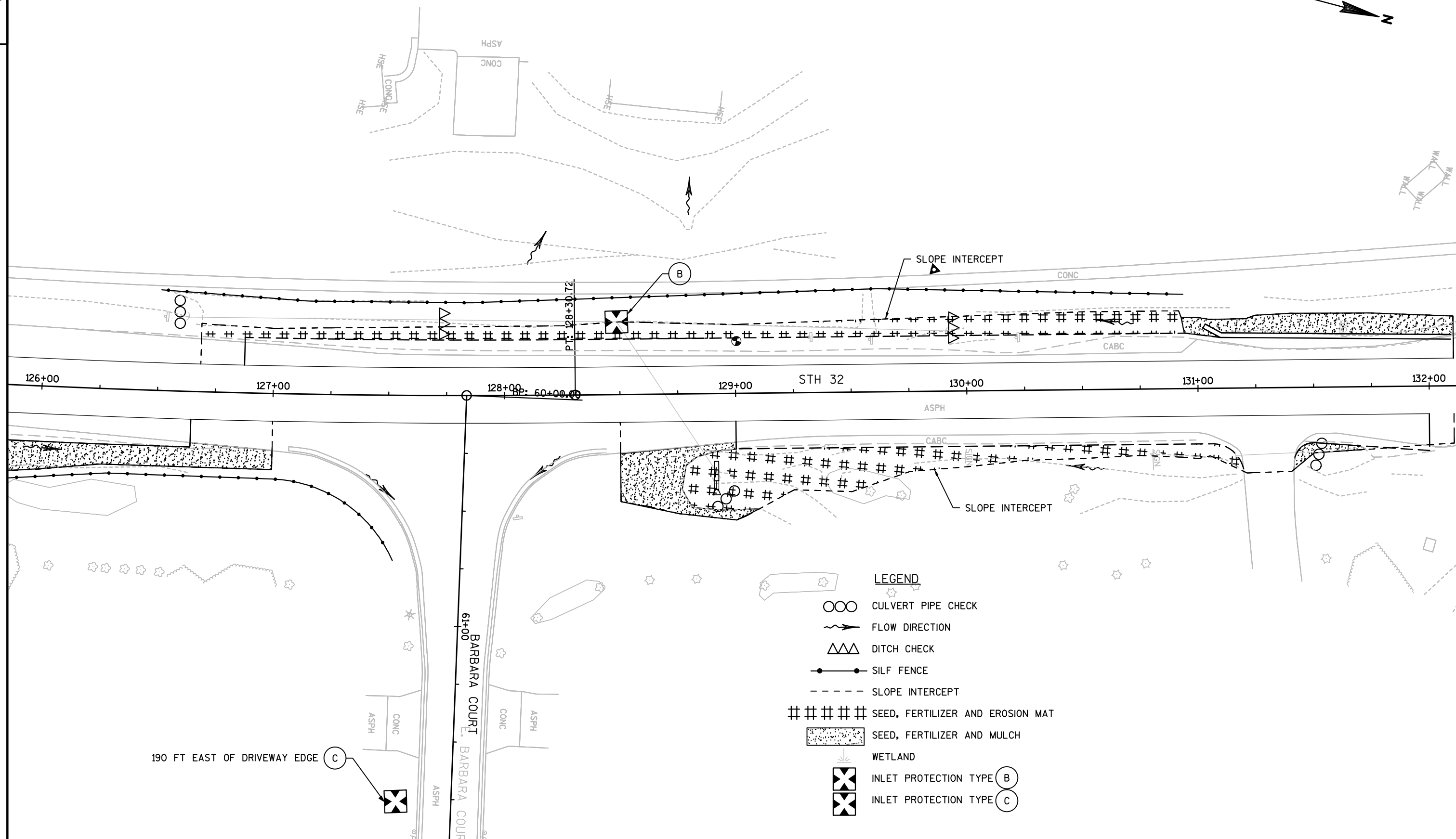
WISDOT/CADDS SHEET 42

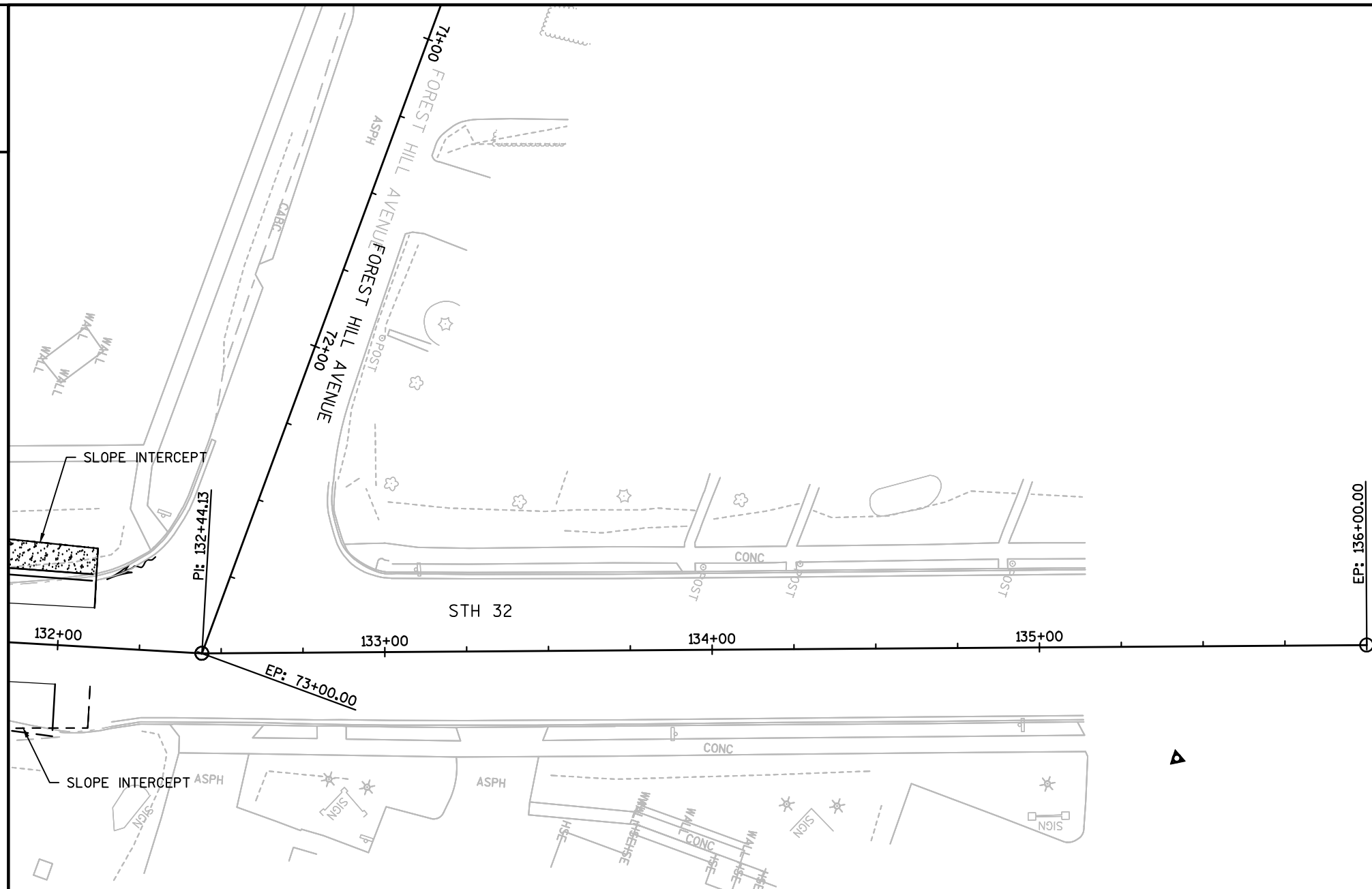












- LEGEND**
- CULVERT PIPE CHECK
 - FLOW DIRECTION
 - DITCH CHECK
 - SILF FENCE
 - SLOPE INTERCEPT
 - SEED, FERTILIZER AND EROSION MAT
 - SEED, FERTILIZER AND MULCH
 - WETLAND
 - INLET PROTECTION TYPE (B)
 - INLET PROTECTION TYPE (C)

Signing notes

Type II aluminum signs removed under the contract shall be delivered to the County sign shop. Contact Dennis Newton, 414-266-1165 for distribution county location.

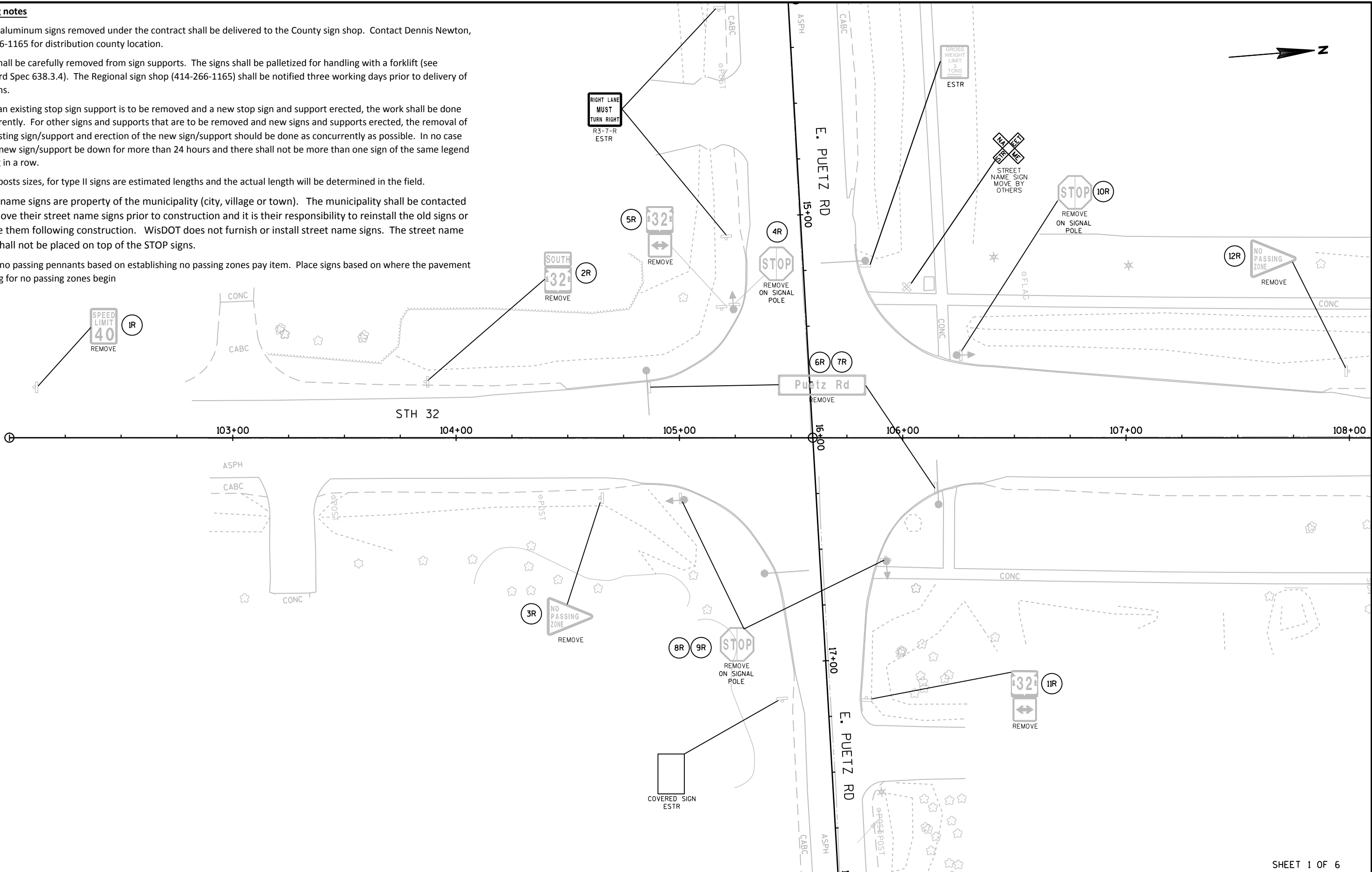
Signs shall be carefully removed from sign supports. The signs shall be palletized for handling with a forklift (see Standard Spec 638.3.4). The Regional sign shop (414-266-1165) shall be notified three working days prior to delivery of the signs.

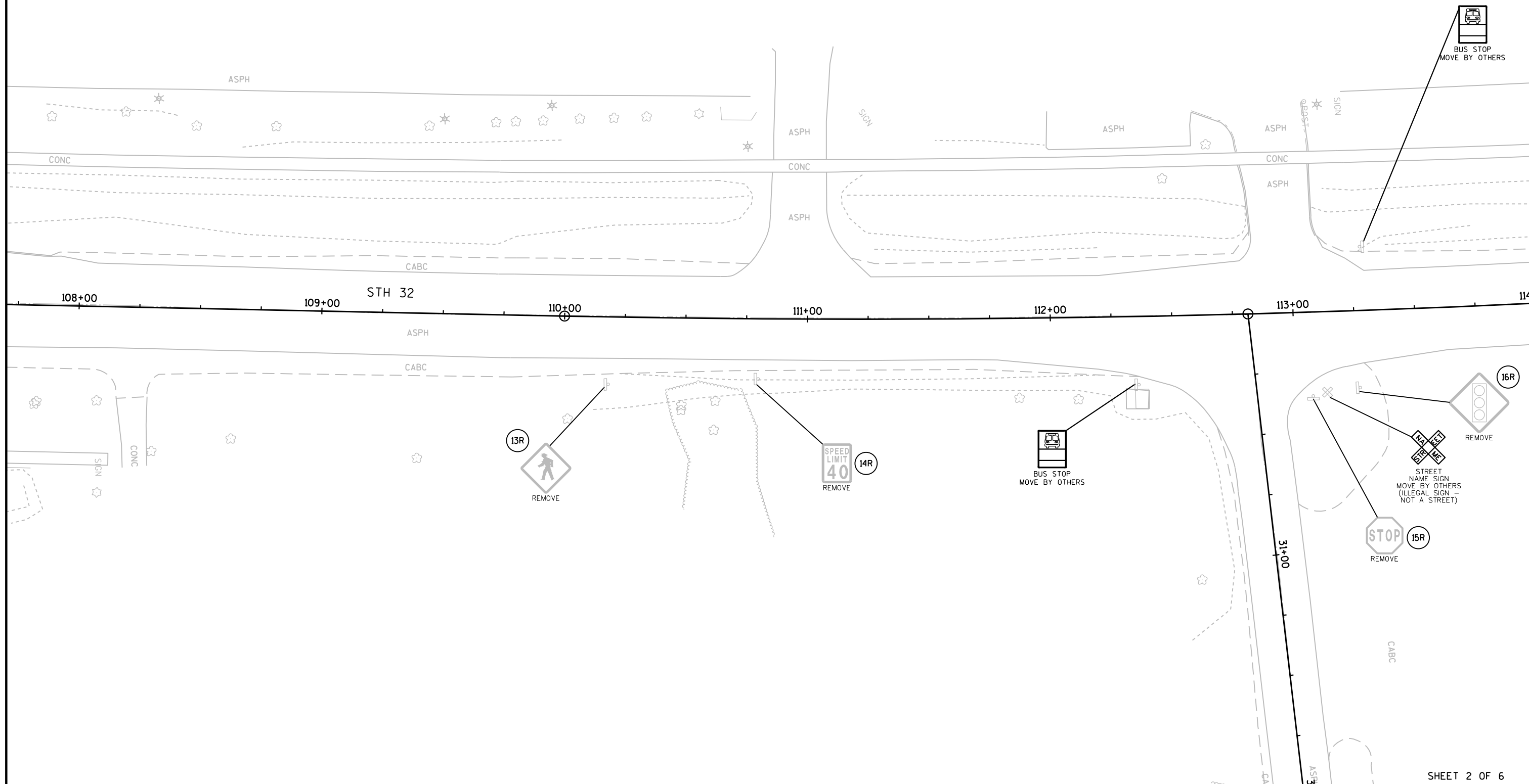
When an existing stop sign support is to be removed and a new stop sign and support erected, the work shall be done concurrently. For other signs and supports that are to be removed and new signs and supports erected, the removal of the existing sign/support and erection of the new sign/support should be done as concurrently as possible. In no case shall a new sign/support be down for more than 24 hours and there shall not be more than one sign of the same legend missing in a row.

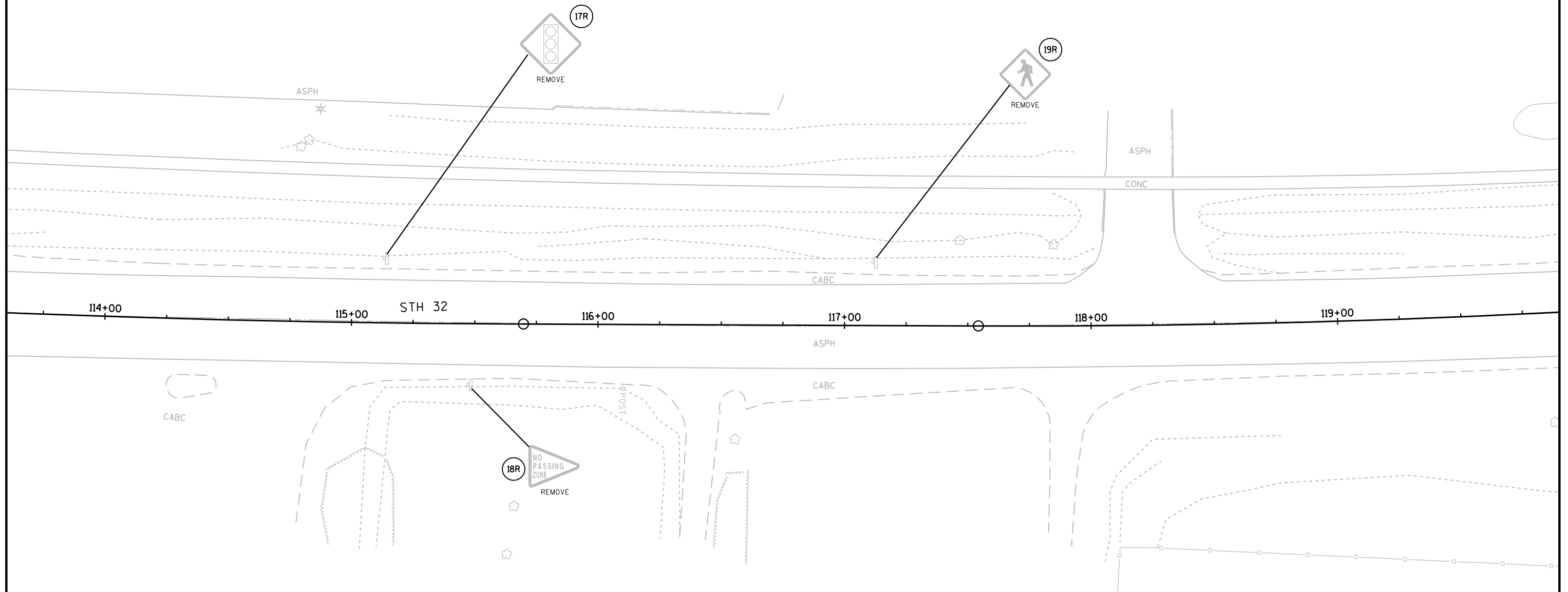
Wood posts sizes, for type II signs are estimated lengths and the actual length will be determined in the field.

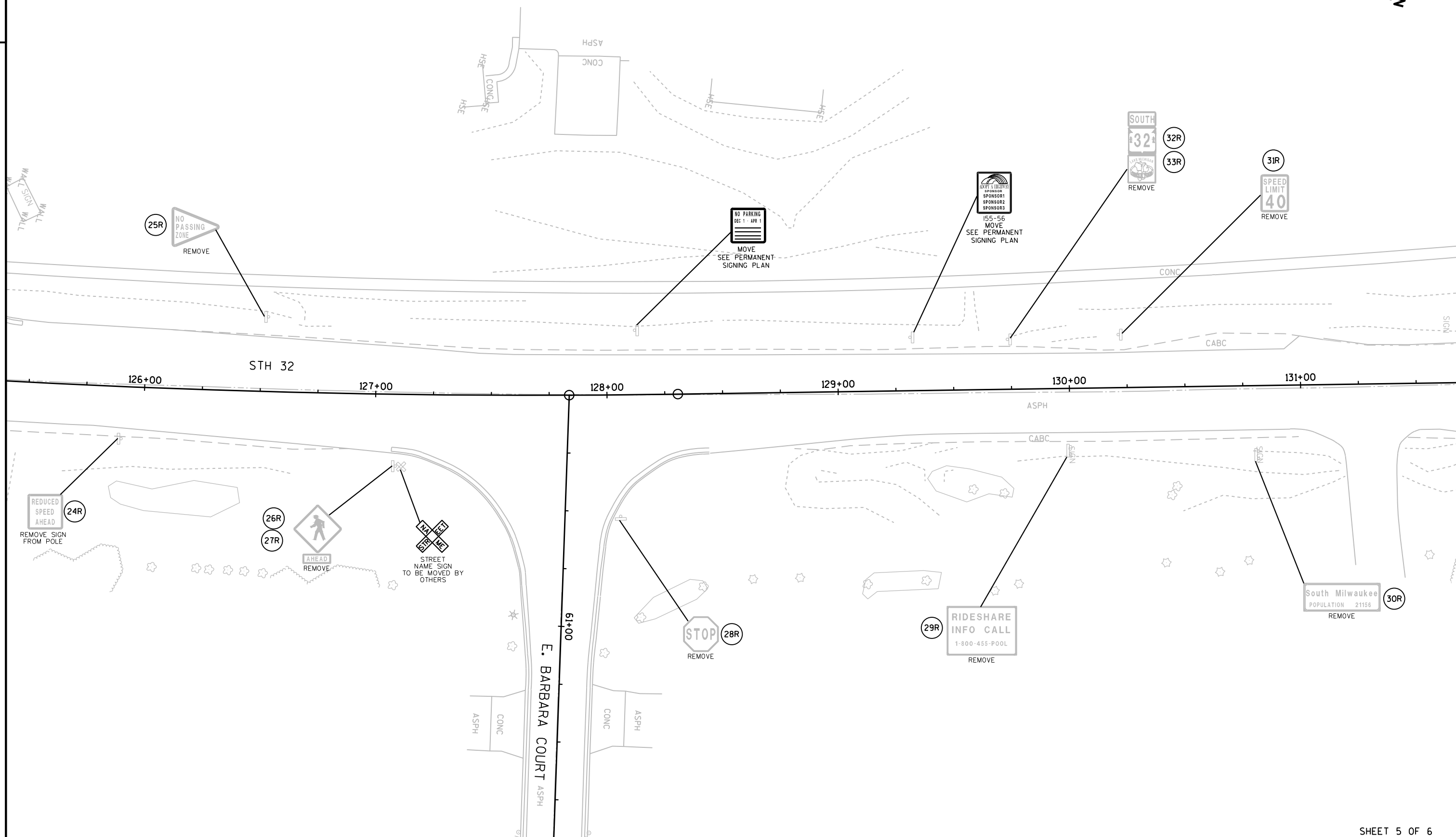
Street name signs are property of the municipality (city, village or town). The municipality shall be contacted to remove their street name signs prior to construction and it is their responsibility to reinstall the old signs or replace them following construction. WisDOT does not furnish or install street name signs. The street name signs shall not be placed on top of the STOP signs.

Locate no passing pennants based on establishing no passing zones pay item. Place signs based on where the pavement marking for no passing zones begin









SHEET 5 OF 6

PROJECT NO:2375-07-70

HWY:STH 32

COUNTY:MILWAUKEE

SIGN REMOVAL PLAN

SHEET

E

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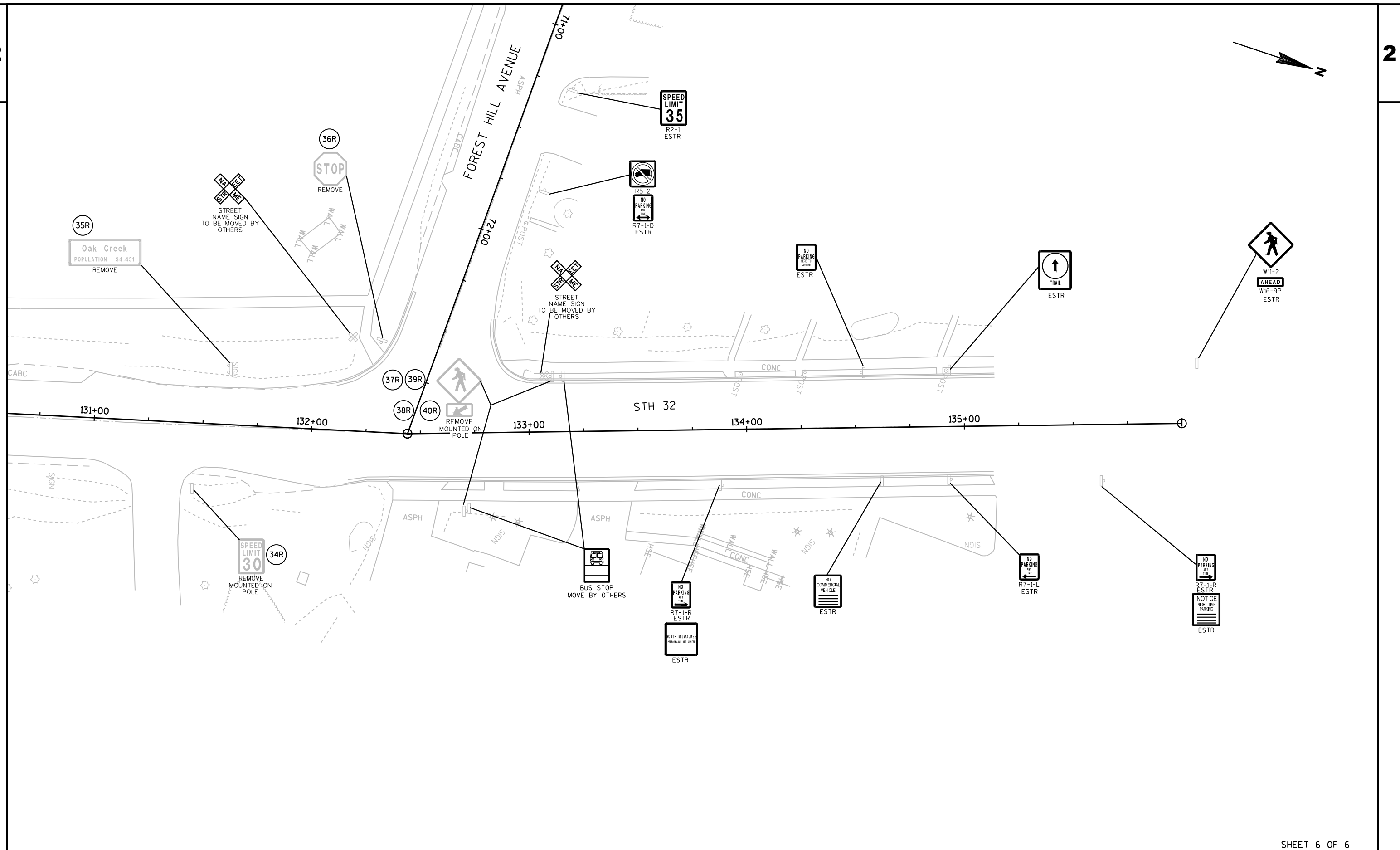
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PLOT BY : VANDE LEEST, CYNTHIA

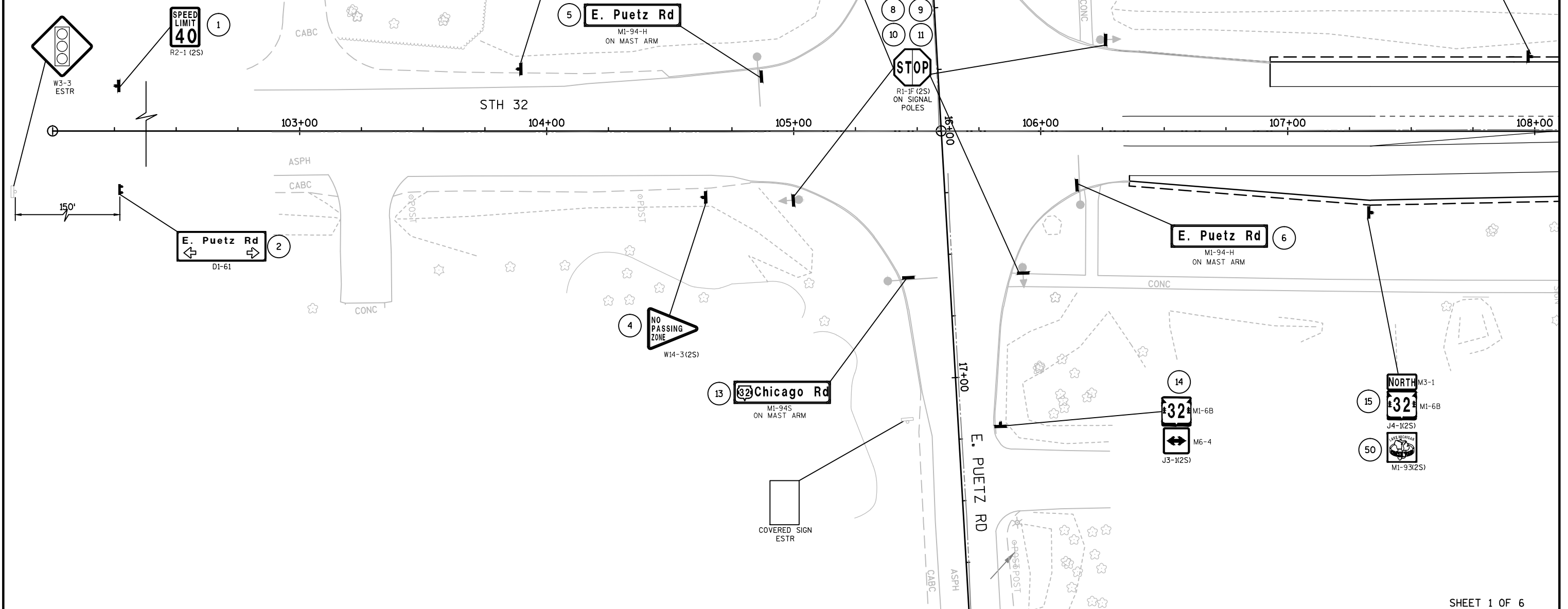
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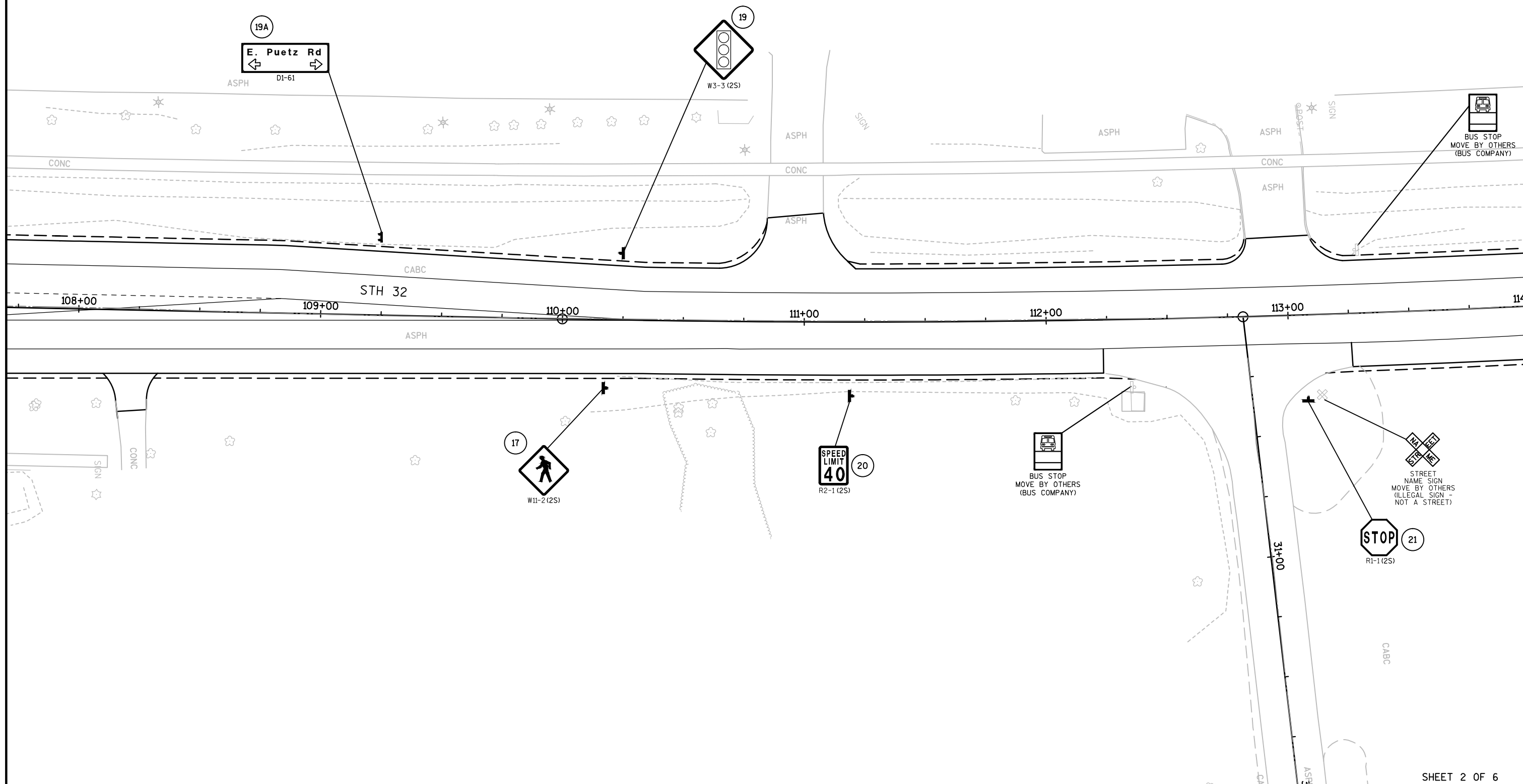
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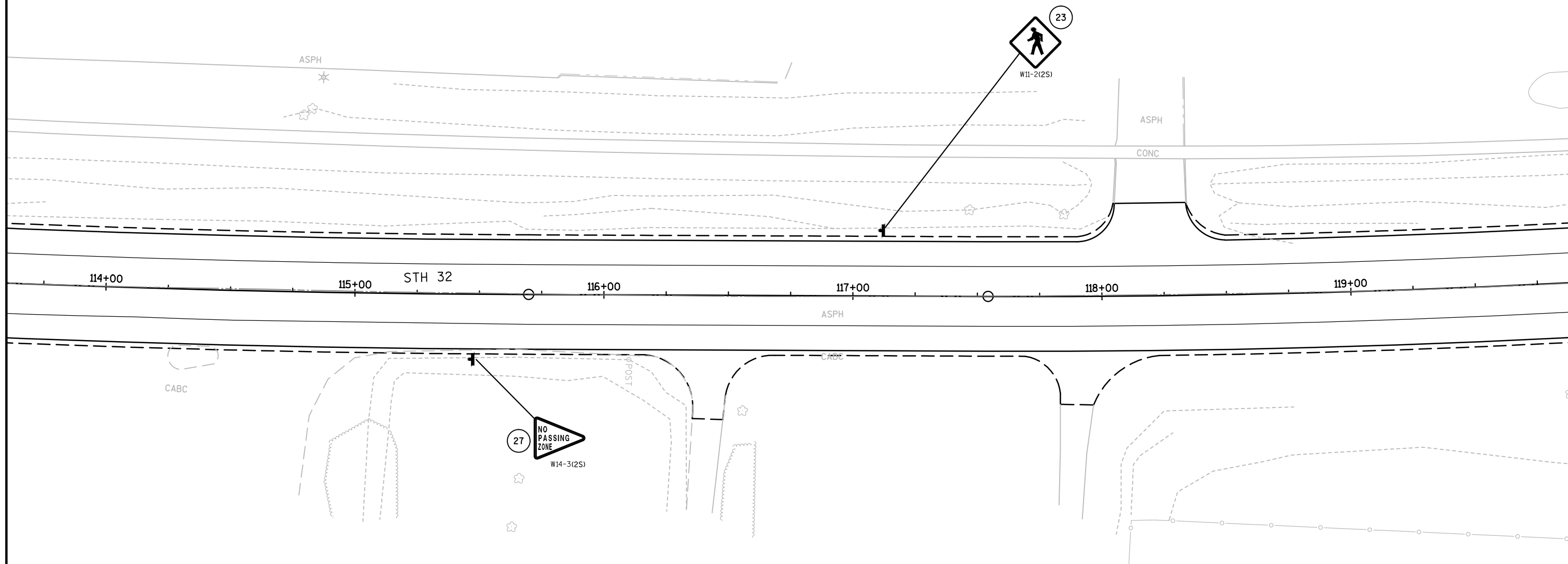
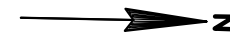
WISDOT/CADDS SHEET 42



Locate no passing pennants based on establishing no passing zones pay item. Place signs based on where the pavement marking for no passing zones begin







SHEET 3 OF 6

PROJECT NO:2375-07-70

HWY:STH 32

COUNTY:MILWAUKEE

PERMANENT SIGNING

SHEET

E

FILE NAME : N:\PDS\C3D\CAD\23750700\SIGN\023201_PS.DWG
LAYOUT NAME - 023203_PS

PLOT DATE : 7/5/2017 8:42 AM

PLOT BY : DODGE, BRIAN M

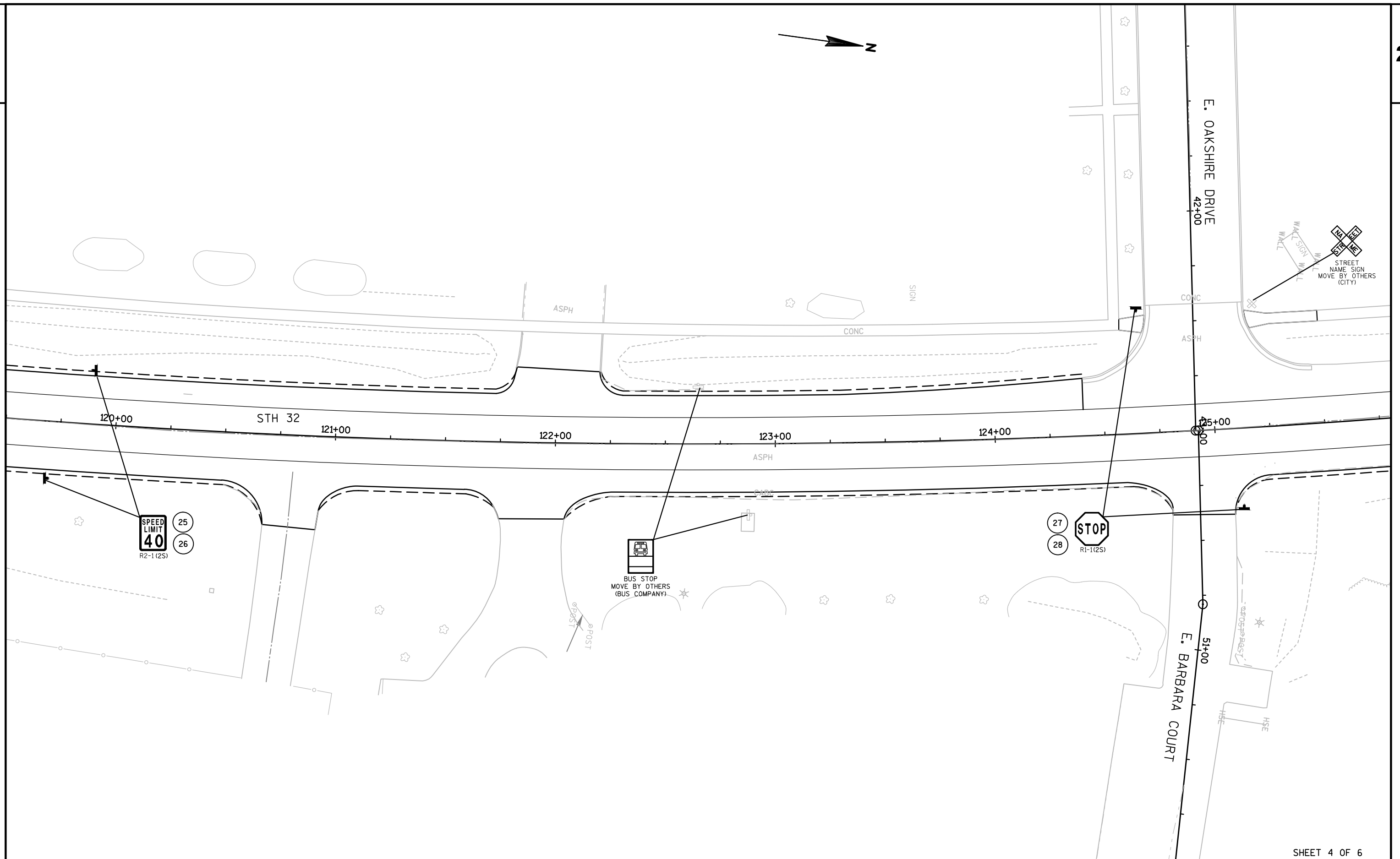
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PLOT SCALE : 1 IN:40 FT

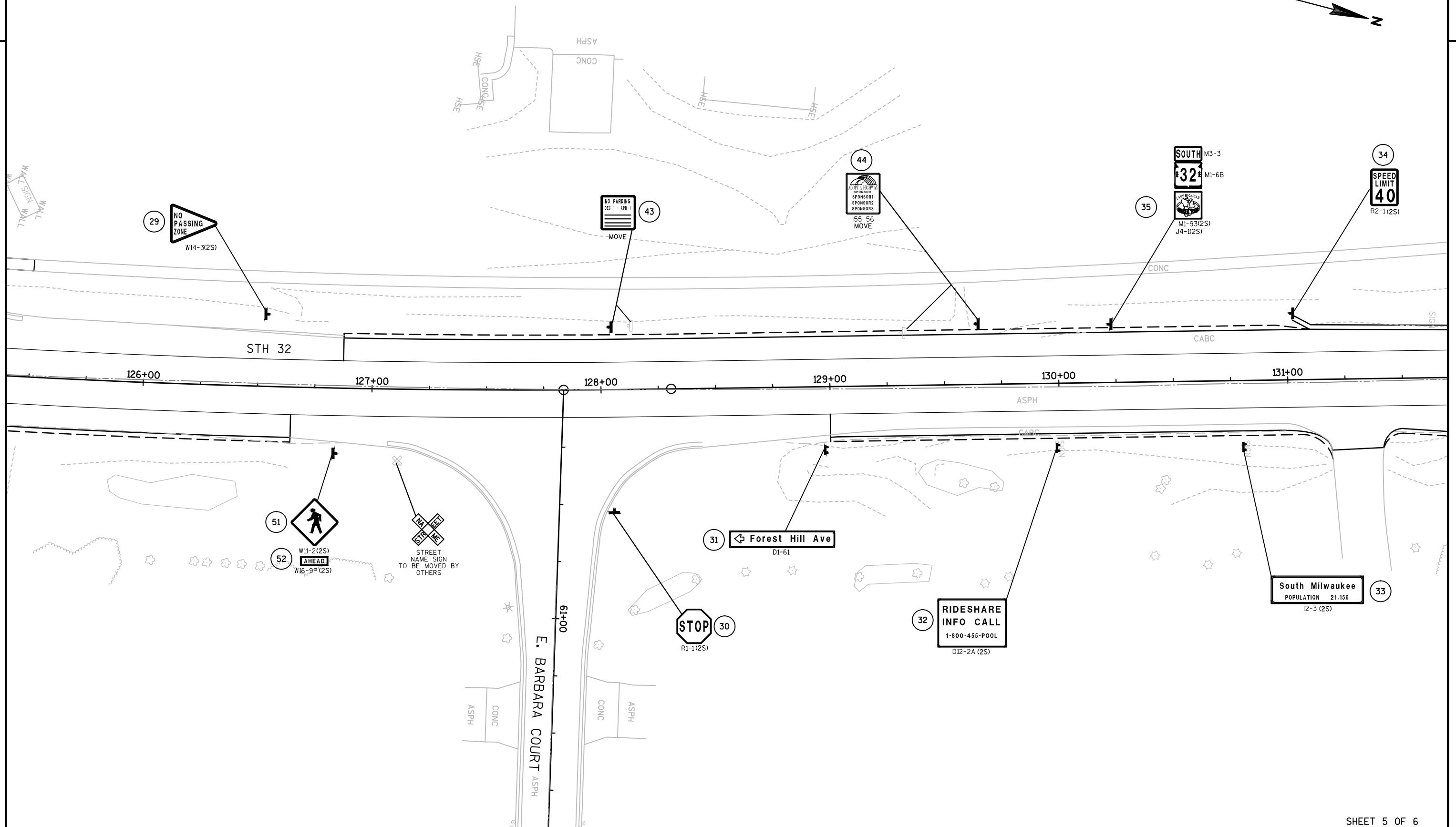
WISDOT/CADDs SHEET 42

2

2 |



PROJECT NO:2375-07-70	HWY:STH 32	COUNTY:MILWAUKEE	PERMANENT SIGNING	SHEET	E
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SHEET 5 OF 6

PROJECT NO:2375-07-70

HWY:STH 32

COUNTY:MILWAUKEE

PERMANENT SIGNING

SHEET

E

FILE NAME : N:\PDS\C3D\CAD\23750700\SIGN\023201_PS.DWG
LAYOUT NAME - 023205_PS

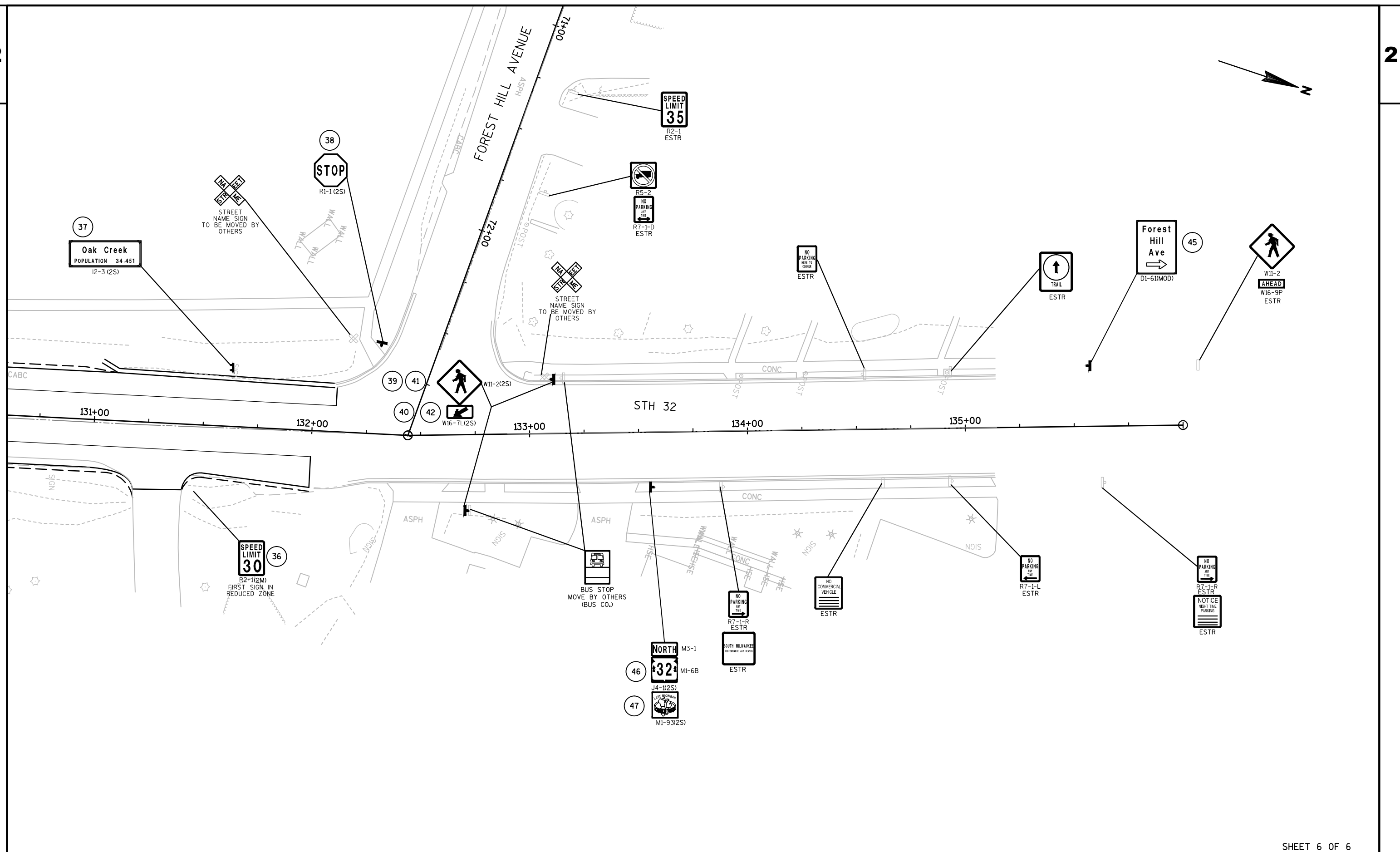
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PLOT BY : DODGE, BRIAN M

PLOT NAME :

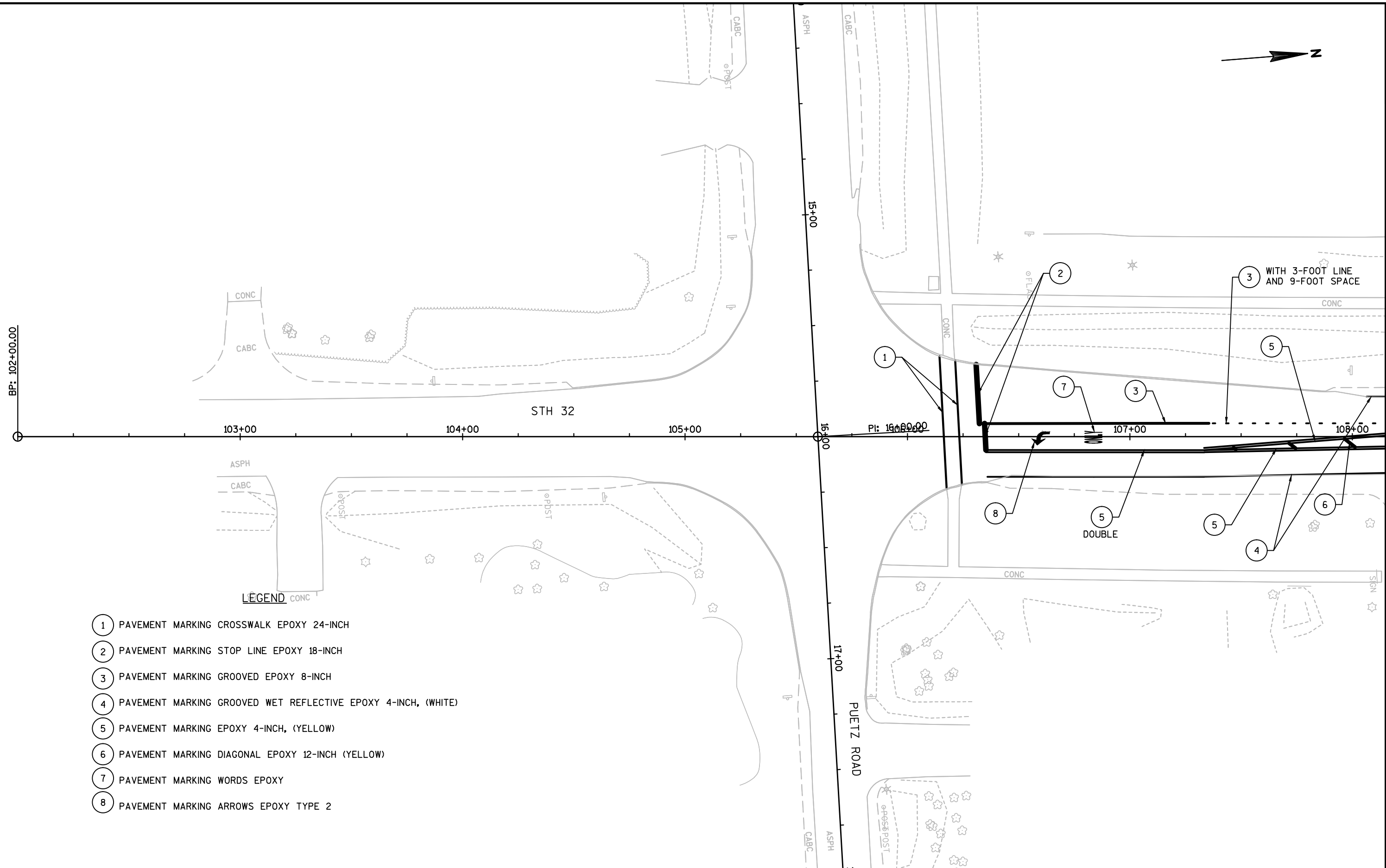
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WISDOT/CADDS SHEET 42

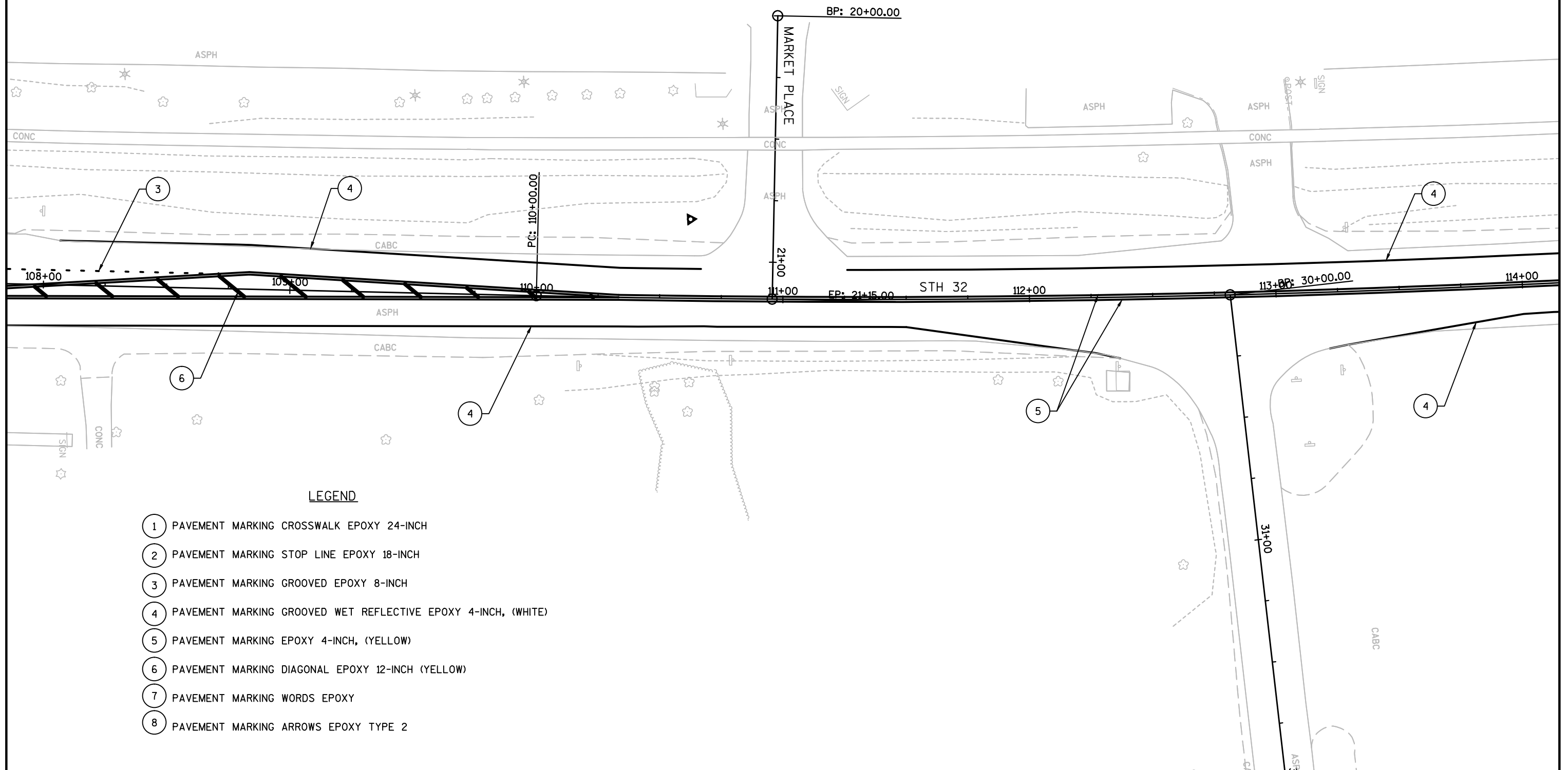


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2 |

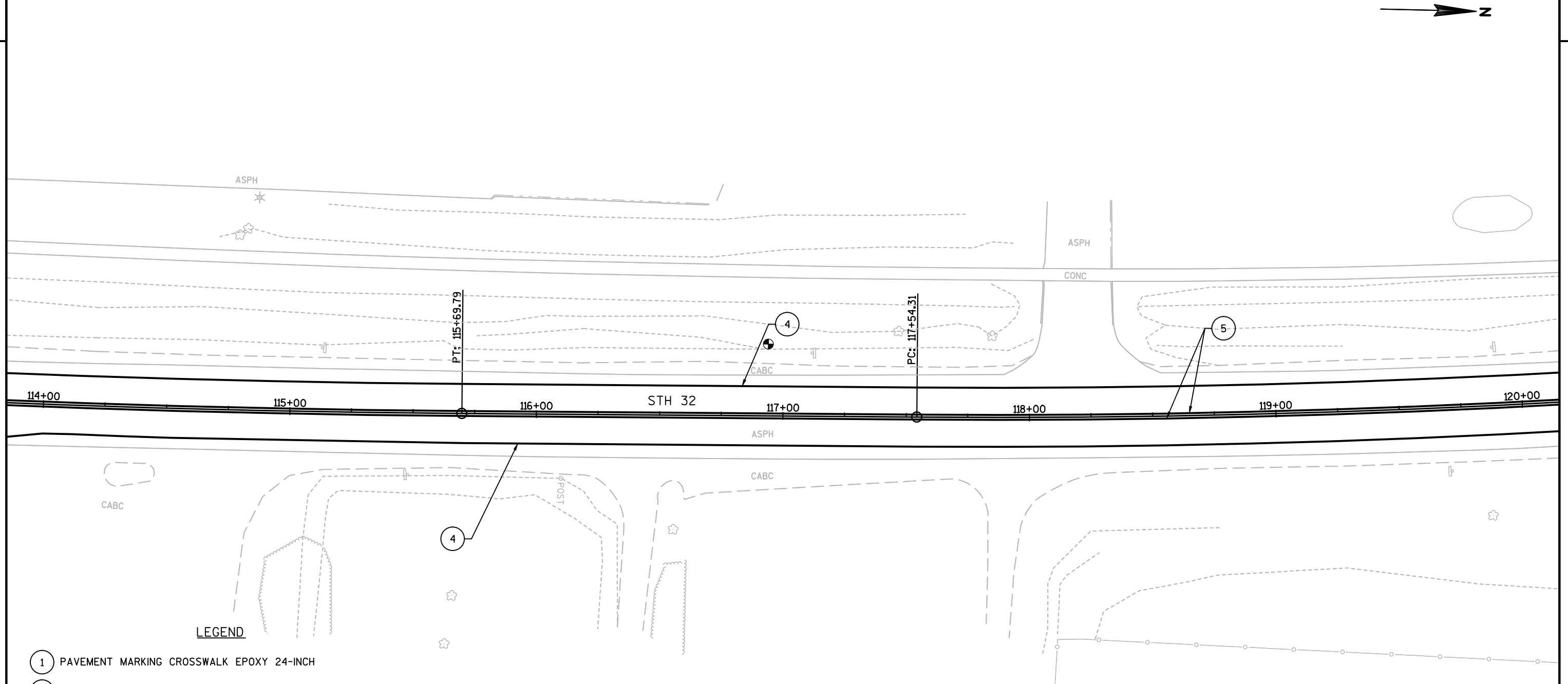


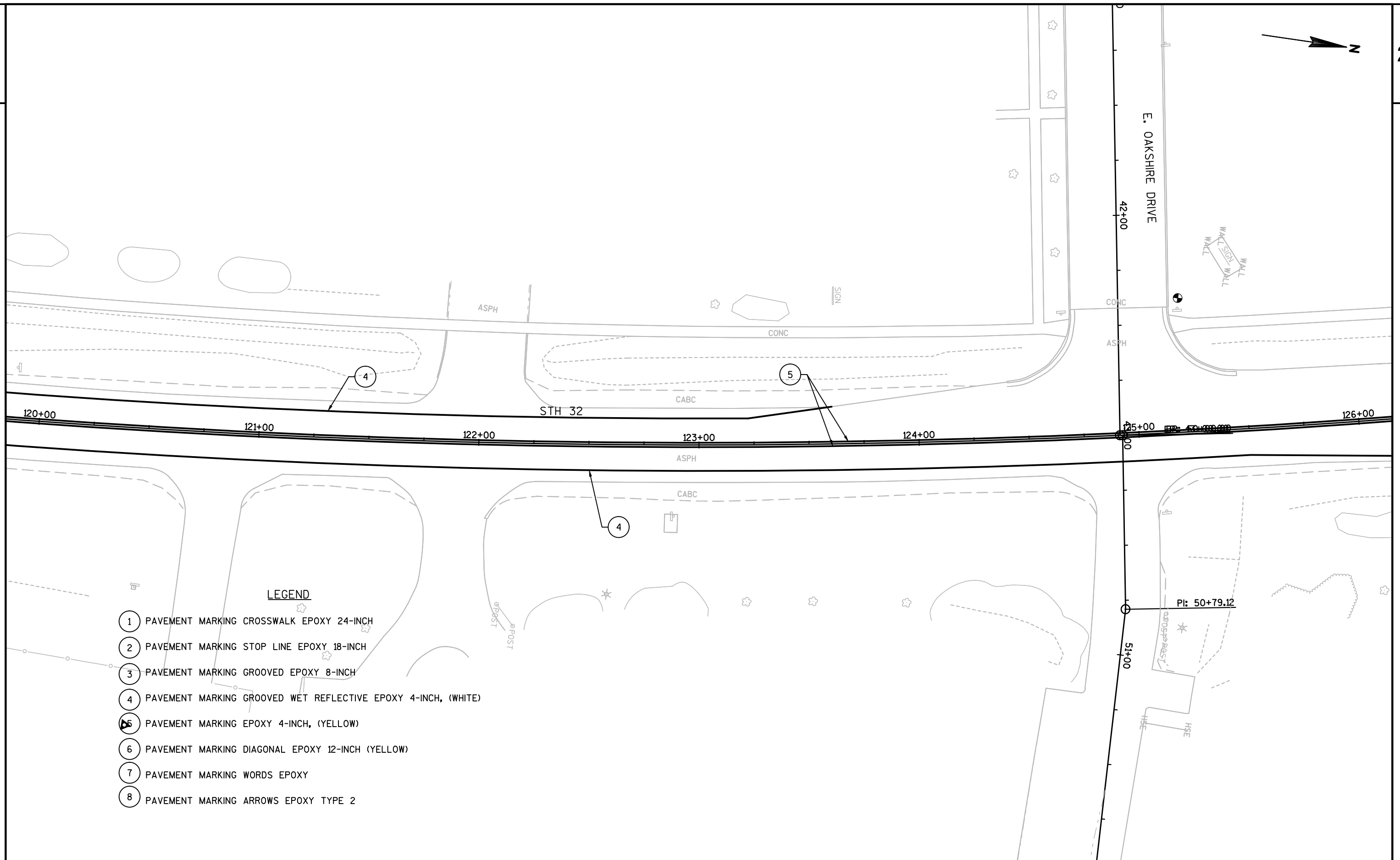
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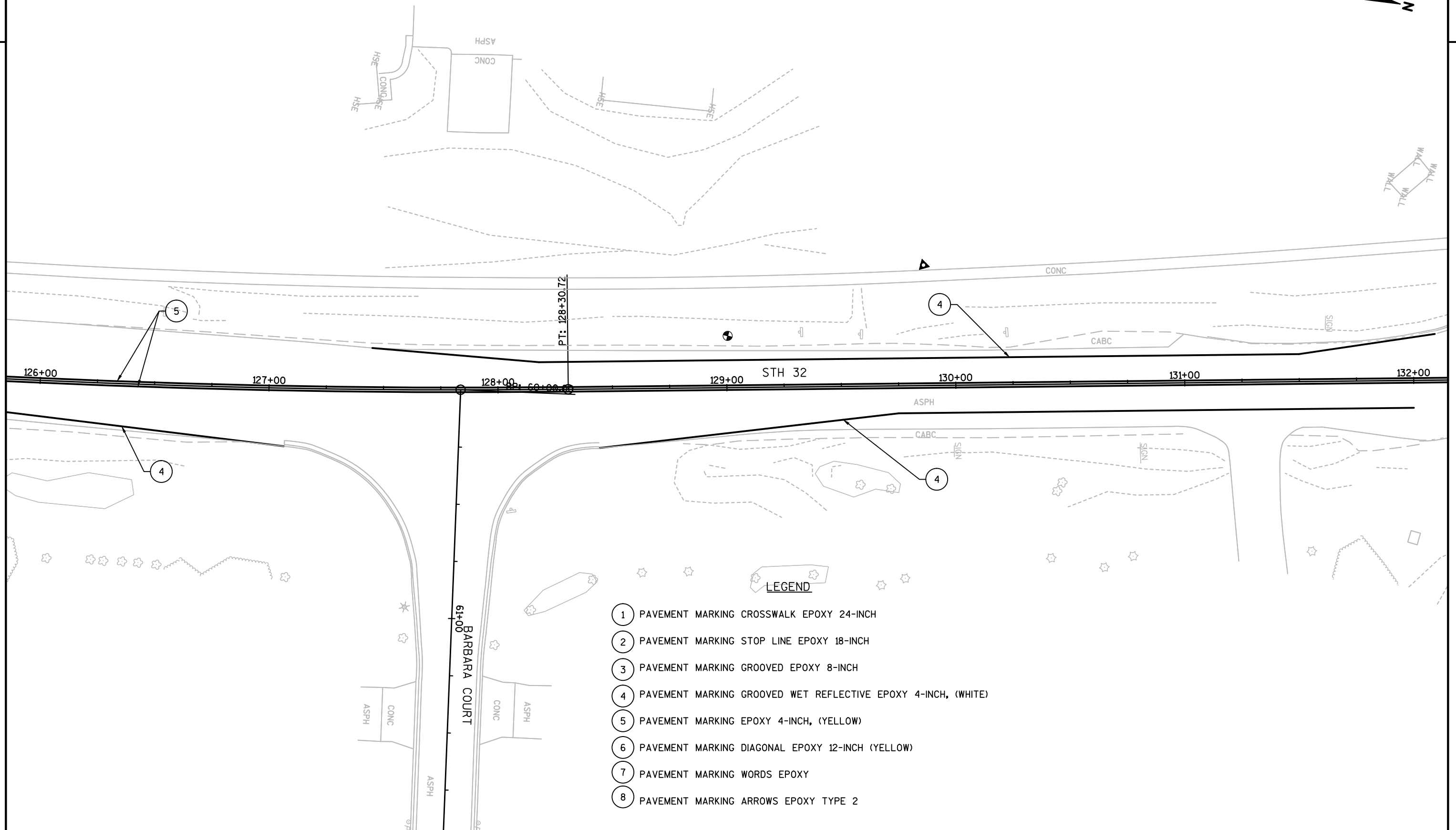


LEGEND

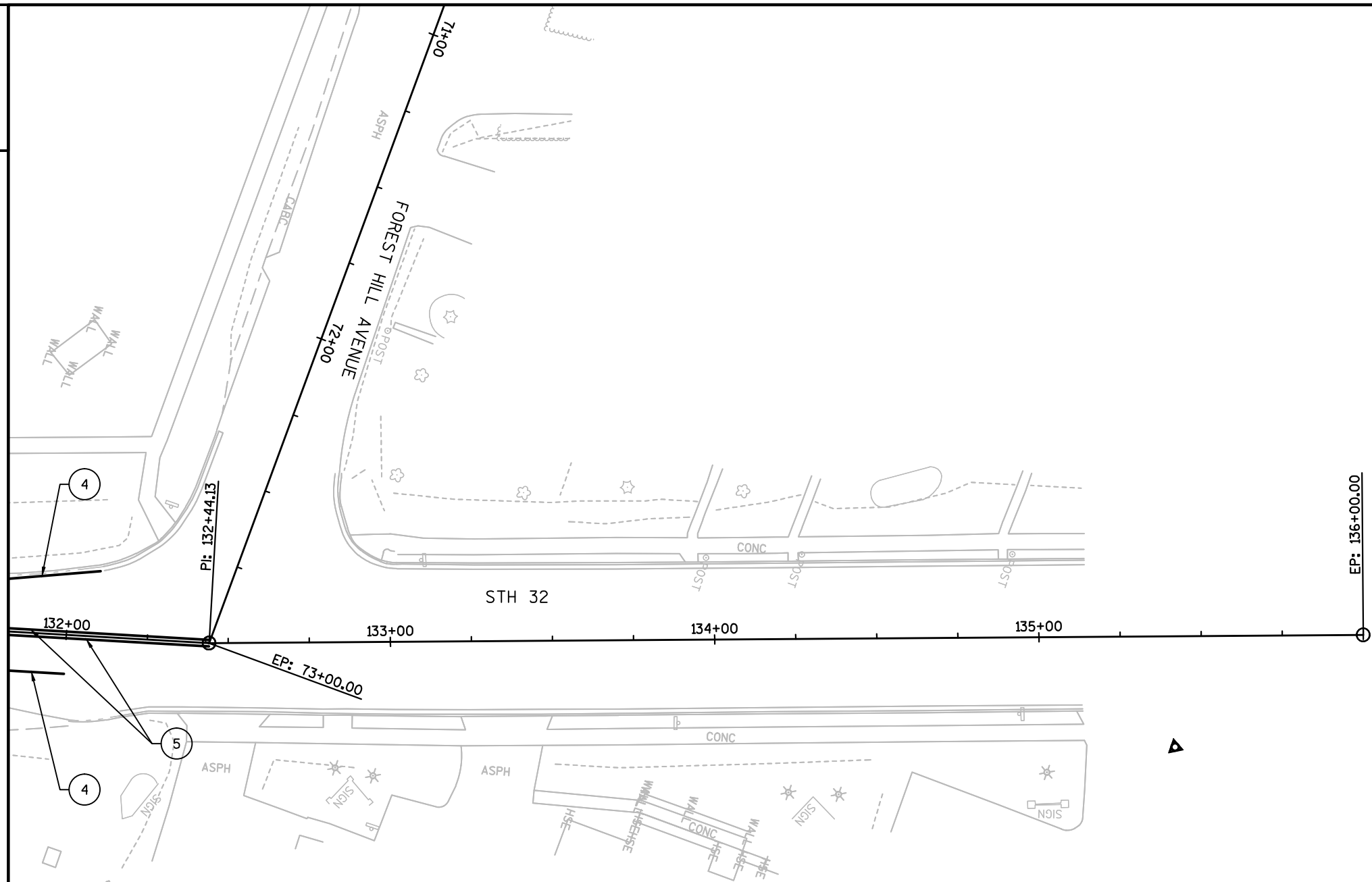
- 1 PAVEMENT MARKING CROSSWALK EPOXY 24-INCH
- 2 PAVEMENT MARKING STOP LINE EPOXY 18-INCH
- 3 PAVEMENT MARKING GROOVED EPOXY 8-INCH
- 4 PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH, (WHITE)
- 5 PAVEMENT MARKING EPOXY 4-INCH, (YELLOW)
- 6 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 7 PAVEMENT MARKING WORDS EPOXY
- 8 PAVEMENT MARKING ARROWS EPOXY TYPE 2







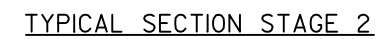
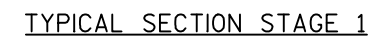
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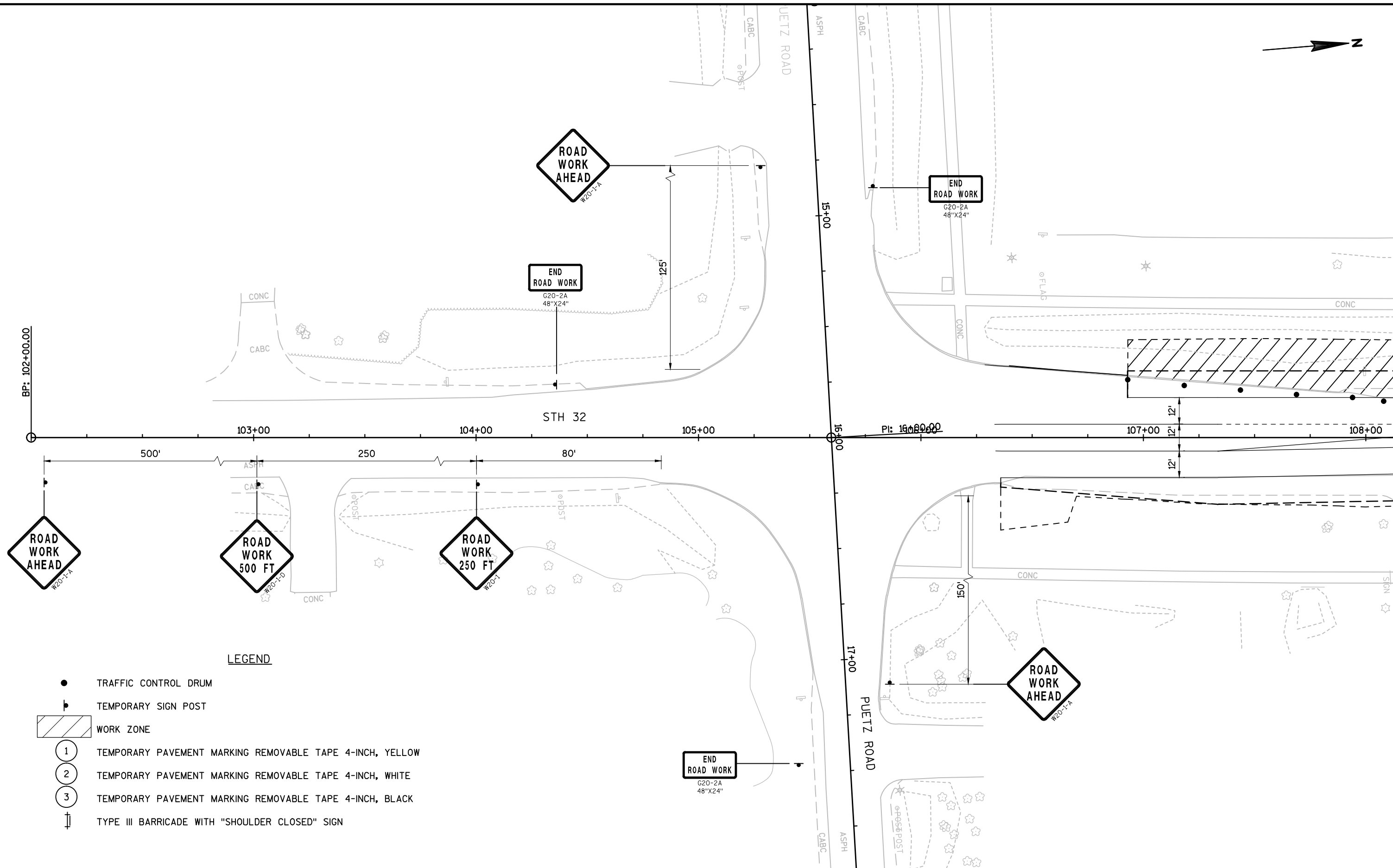


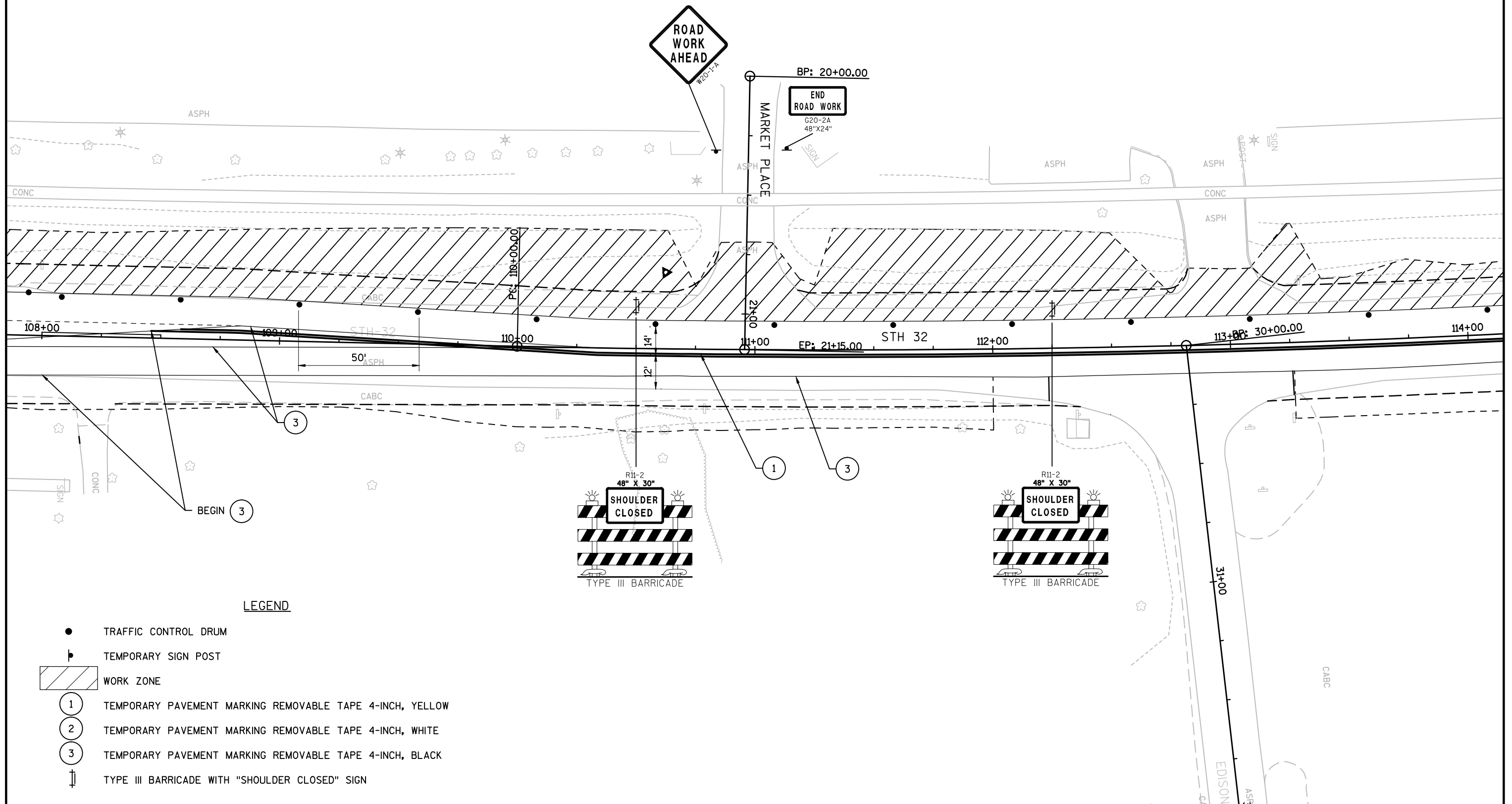
LEGEND

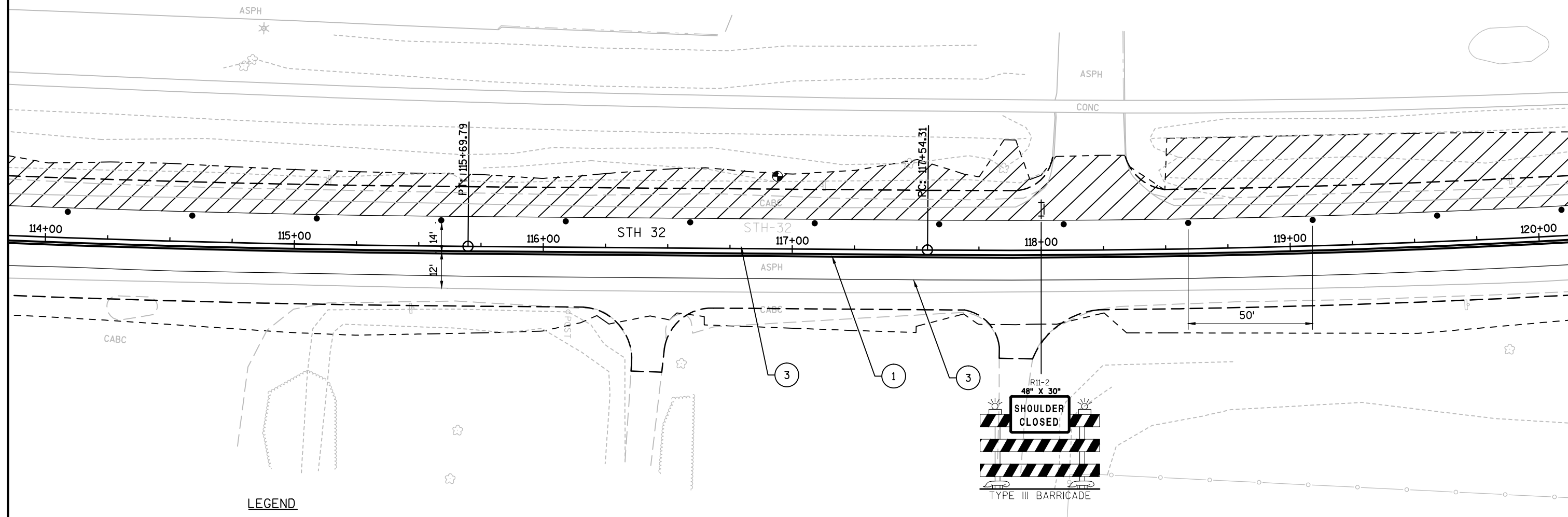
- 1 PAVEMENT MARKING CROSSWALK EPOXY 24-INCH
- 2 PAVEMENT MARKING STOP LINE EPOXY 18-INCH
- 3 PAVEMENT MARKING GROOVED EPOXY 8-INCH
- 4 PAVEMENT MARKING GROOVED WET REFLECTIVE EPOXY 4-INCH, (WHITE)
- 5 PAVEMENT MARKING EPOXY 4-INCH, (YELLOW)
- 6 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (YELLOW)
- 7 PAVEMENT MARKING WORDS EPOXY
- 8 PAVEMENT MARKING ARROWS EPOXY TYPE 2

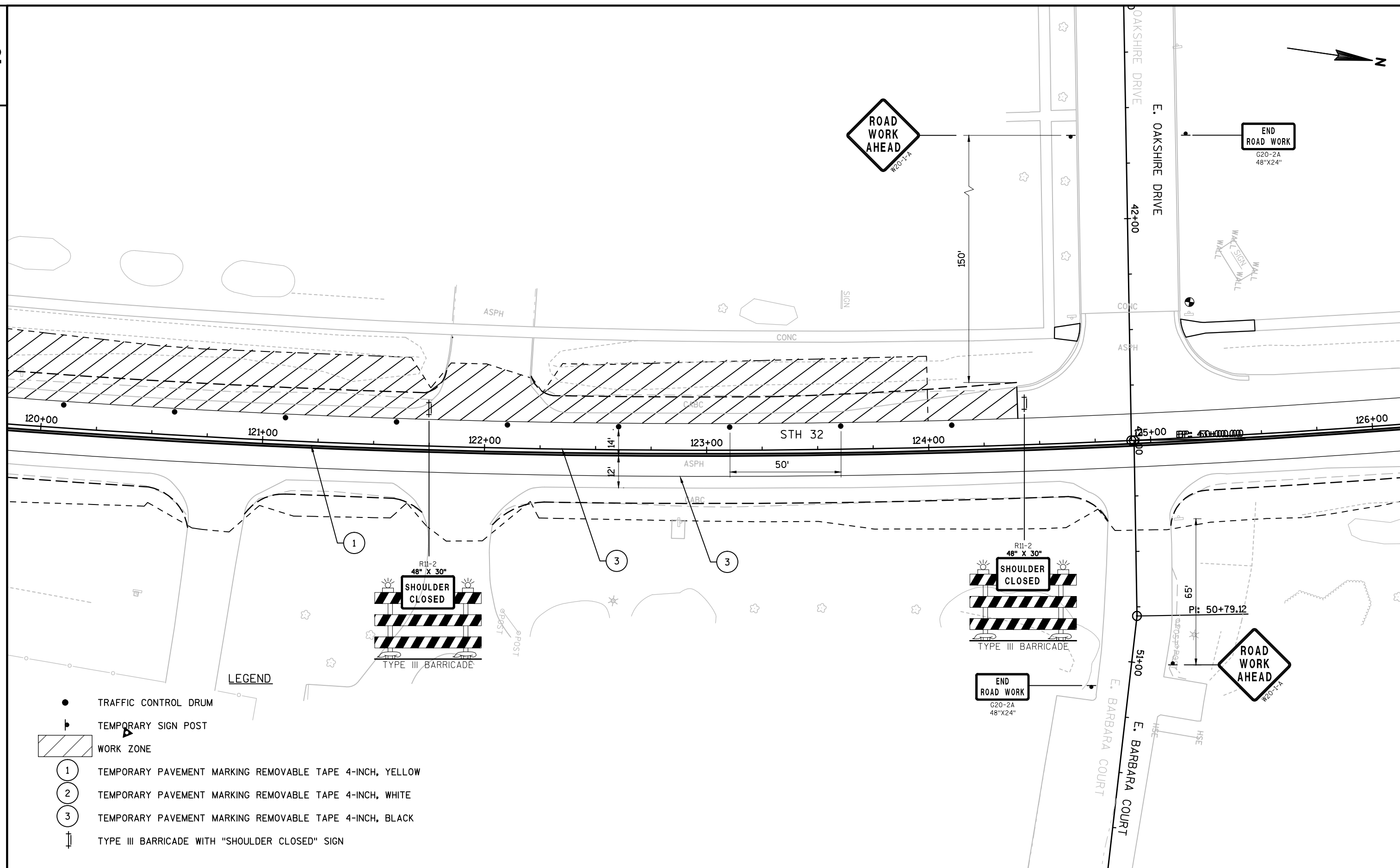
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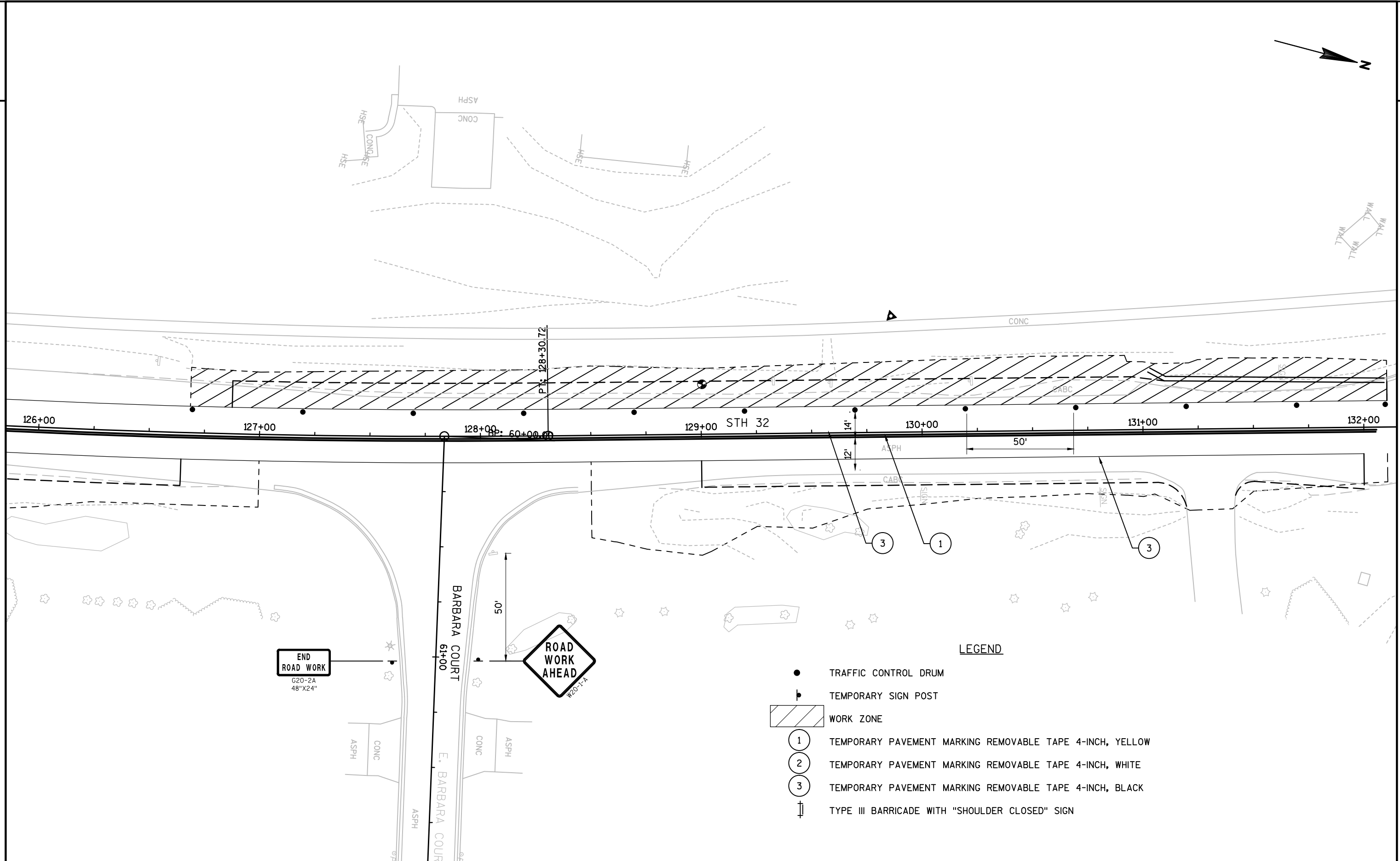


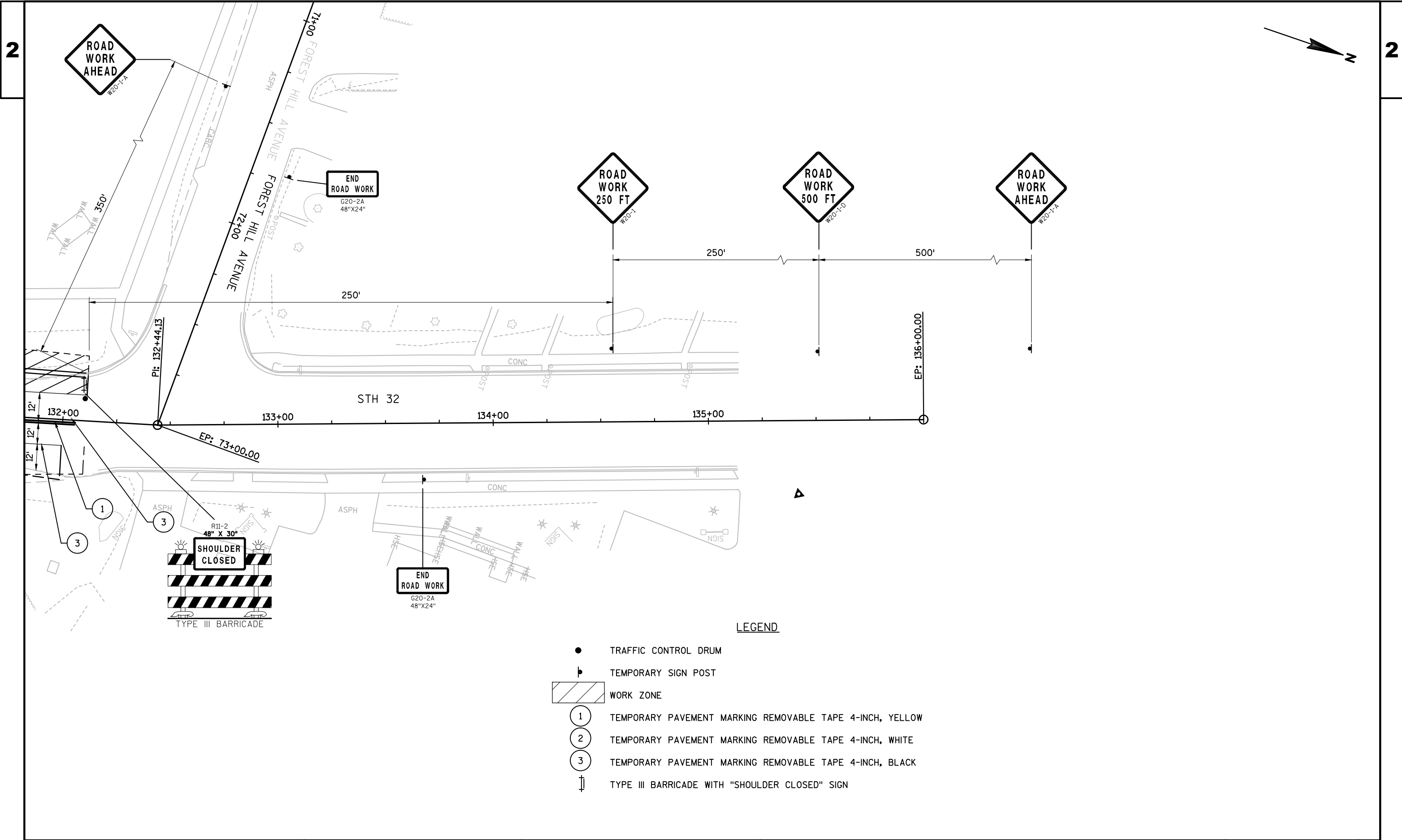




2

2





PROJECT NO:2375-07-70

HWY:STH 32

COUNTY:MILWAUKEE

TRAFFIC CONTROL - STAGE 1

SHEET

E

FILE NAME : N:\PDS\C3D\CAD\23750700\026001_S1.DWG
LAYOUT NAME - 026001_S1 - 026006_S1

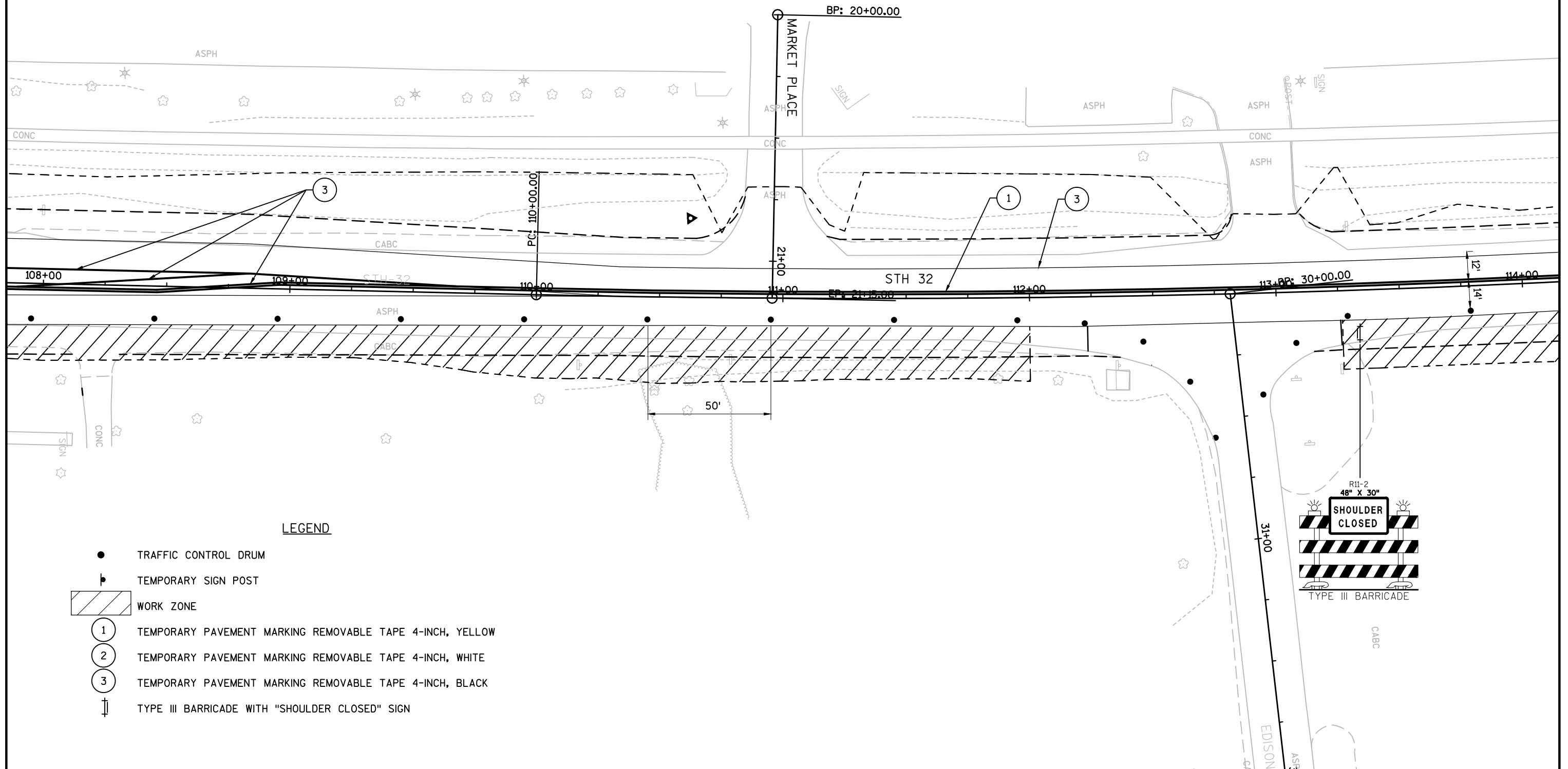
PLOT DATE : 6/28/2017 9:07 AM

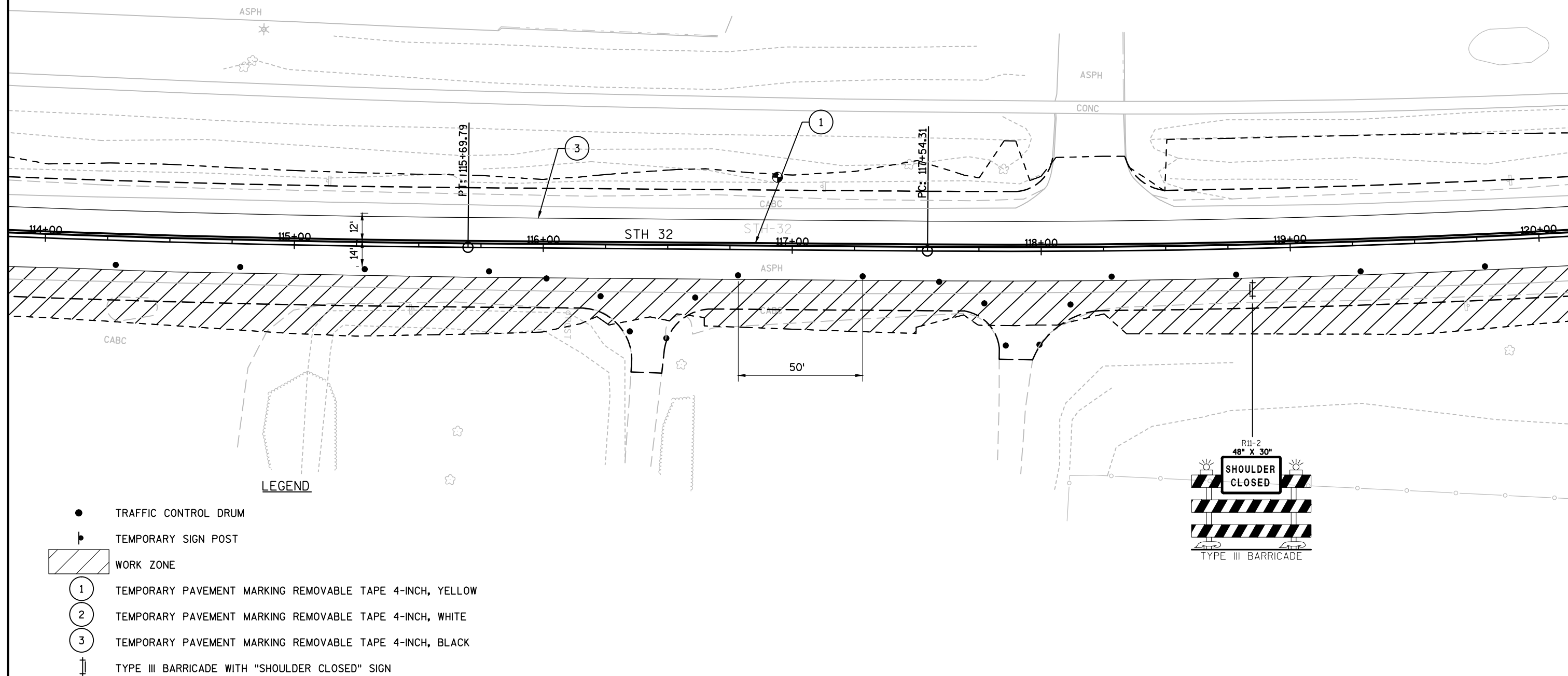
PLOT BY : HAYNES, RONNIE

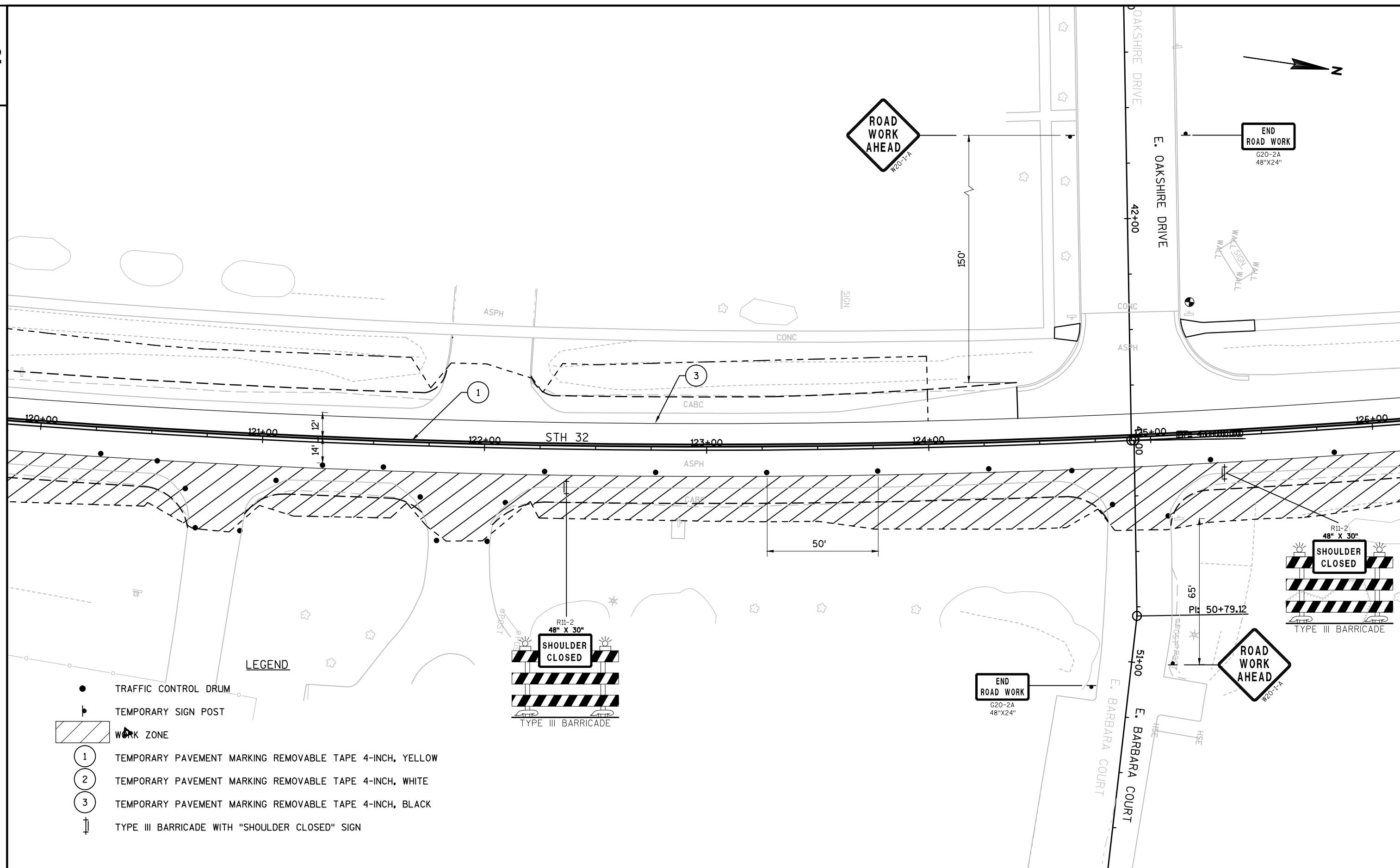
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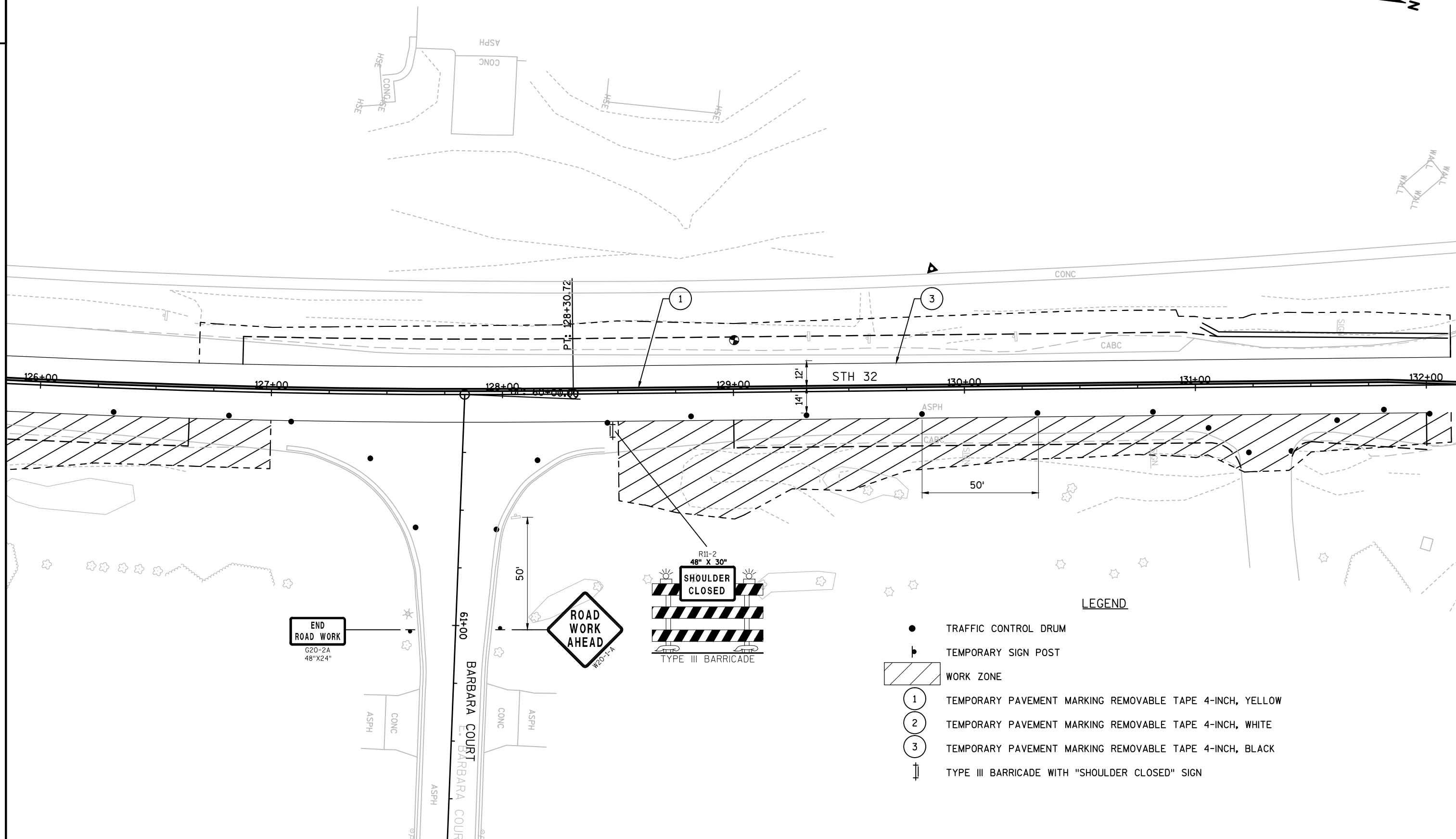
PLOT SCALE : 1 IN:40 FT

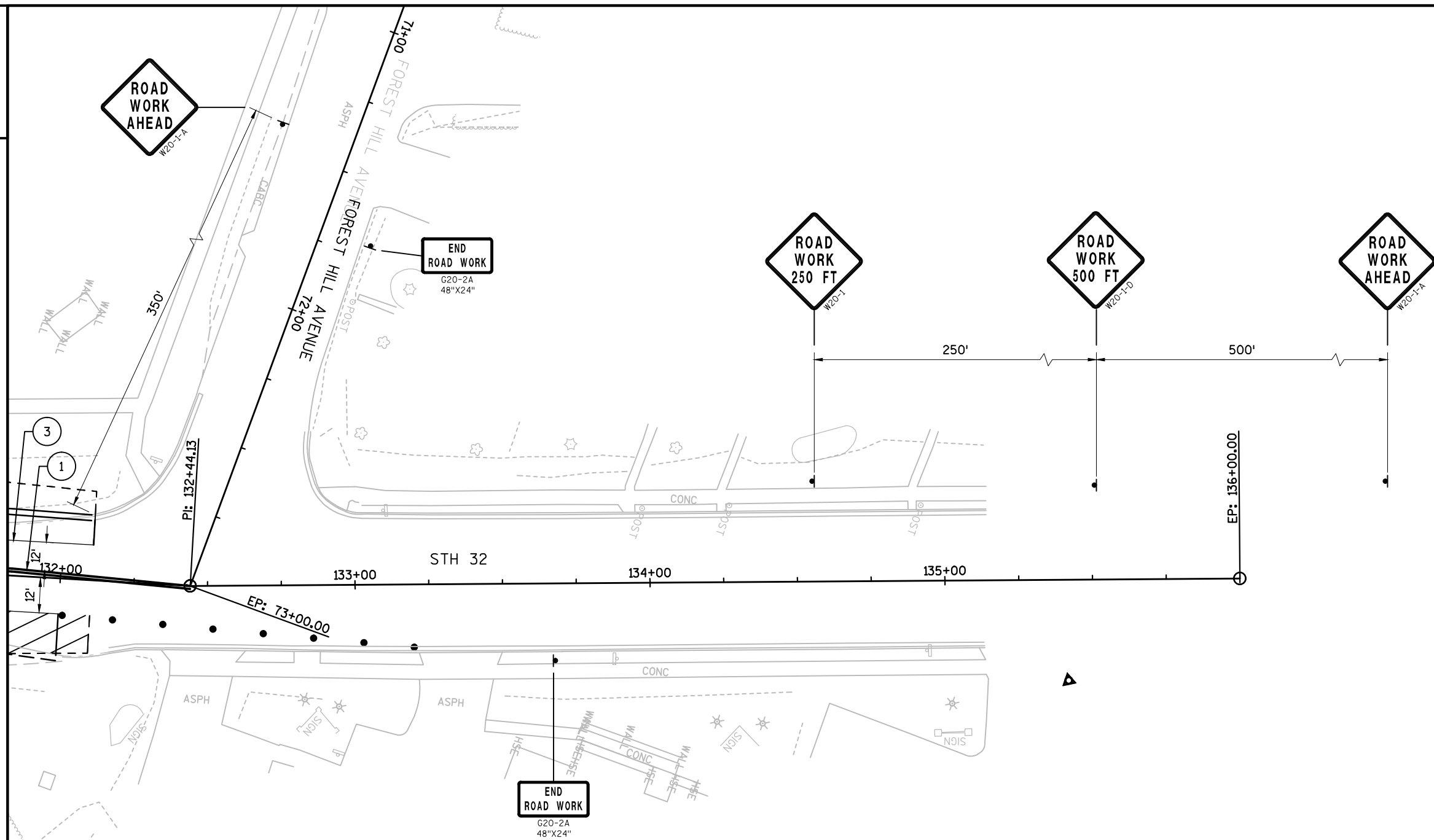
WISDOT/CADDs SHEET 42










**LEGEND**

- TRAFFIC CONTROL DRUM
- ┆ TEMPORARY SIGN POST
-  WORK ZONE
- ① TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, YELLOW
- ② TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, WHITE
- ③ TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH, BLACK
- ┆ TYPE III BARRICADE WITH "SHOULDER CLOSED" SIGN

HMOD DF9541
N = 239440.500
E = 598737.086

BP: 10+00.00
N = 244001.579
E = 617907.269

CURVE 1

PI STA = 112+85.12
Y = 244709.407
X = 618566.190
DELTA = 5°33'42"
D = 0°58'34"
T = 285.12'
L = 569.79'
R = 5870.00'
PC STA = 110+00.00
Y = 244425.237
X = 618542.958
PT STA = 115+69.79
Y = 244994.490
X = 618561.773
BK = N04°40'25.9"E
AH = N00°53'15.7"W

BP: 102+00.00
N = 243627.893
E = 618477.770

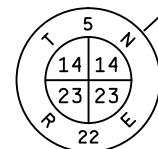
BP: 20+00.00
N = 244529.659
E = 618435.326

N = 243986.111
E = 618507.070
106 PI: 16+00.00

EP: 21+15.00
N = 244520.612
E = 618549.974

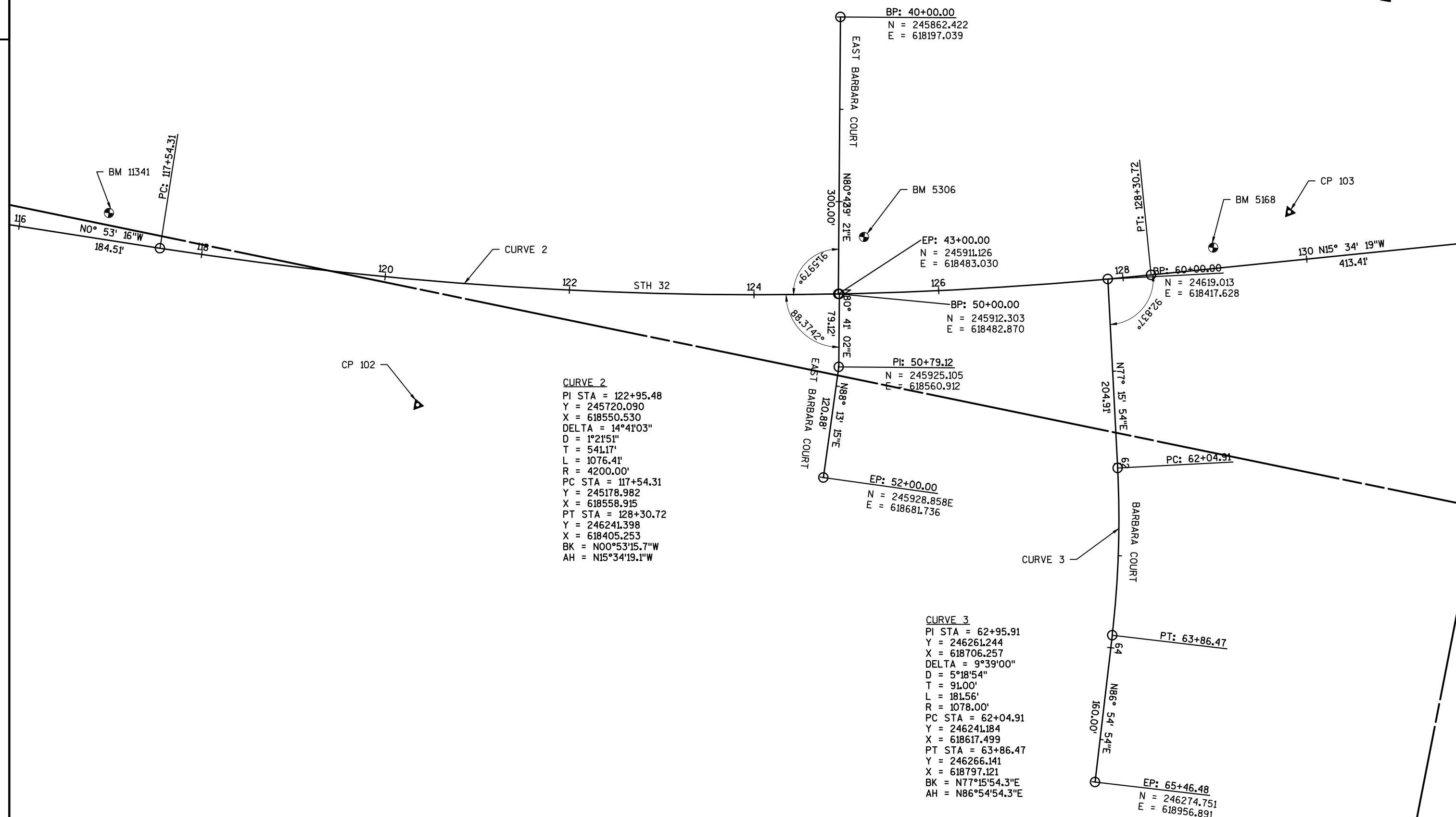
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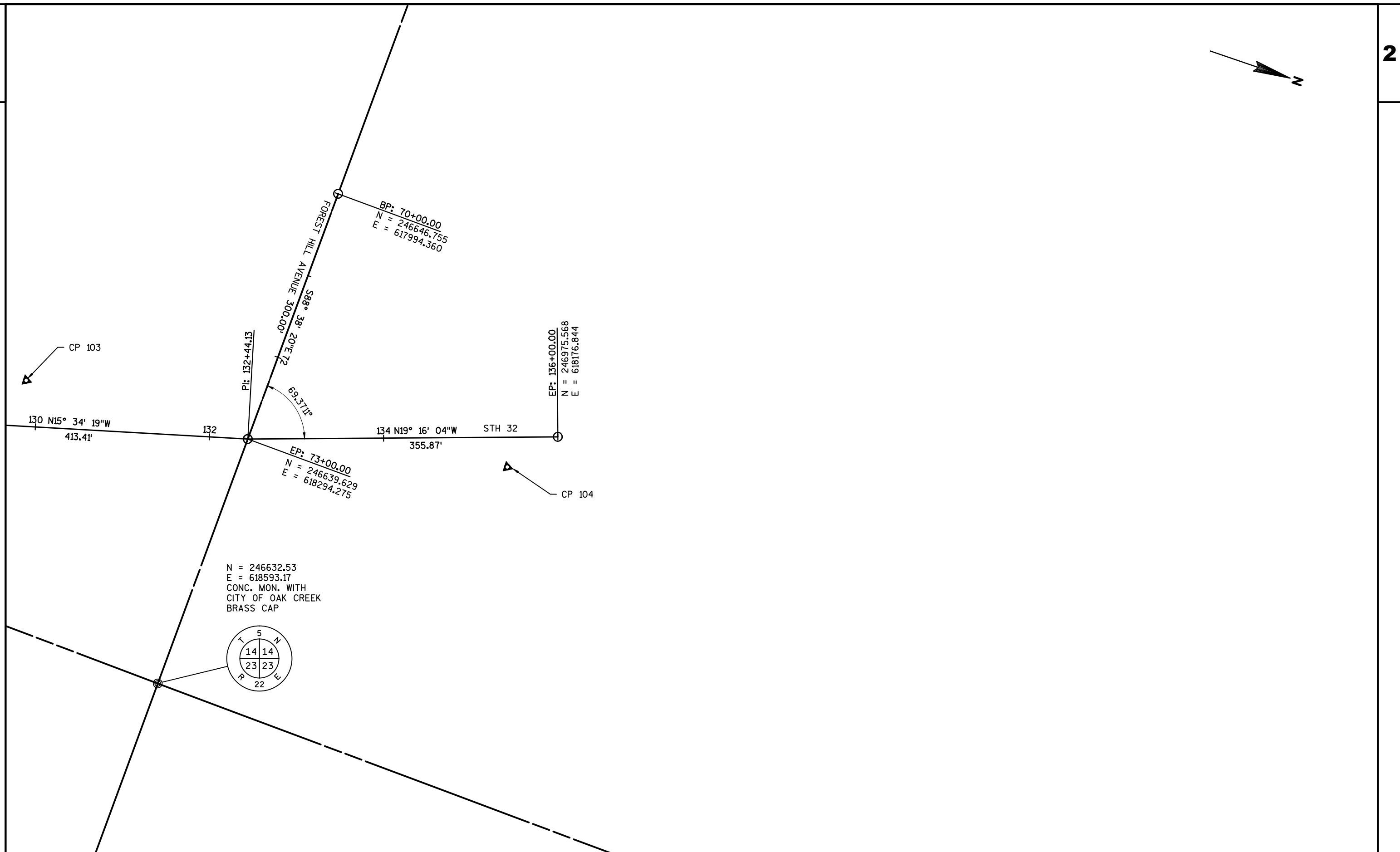
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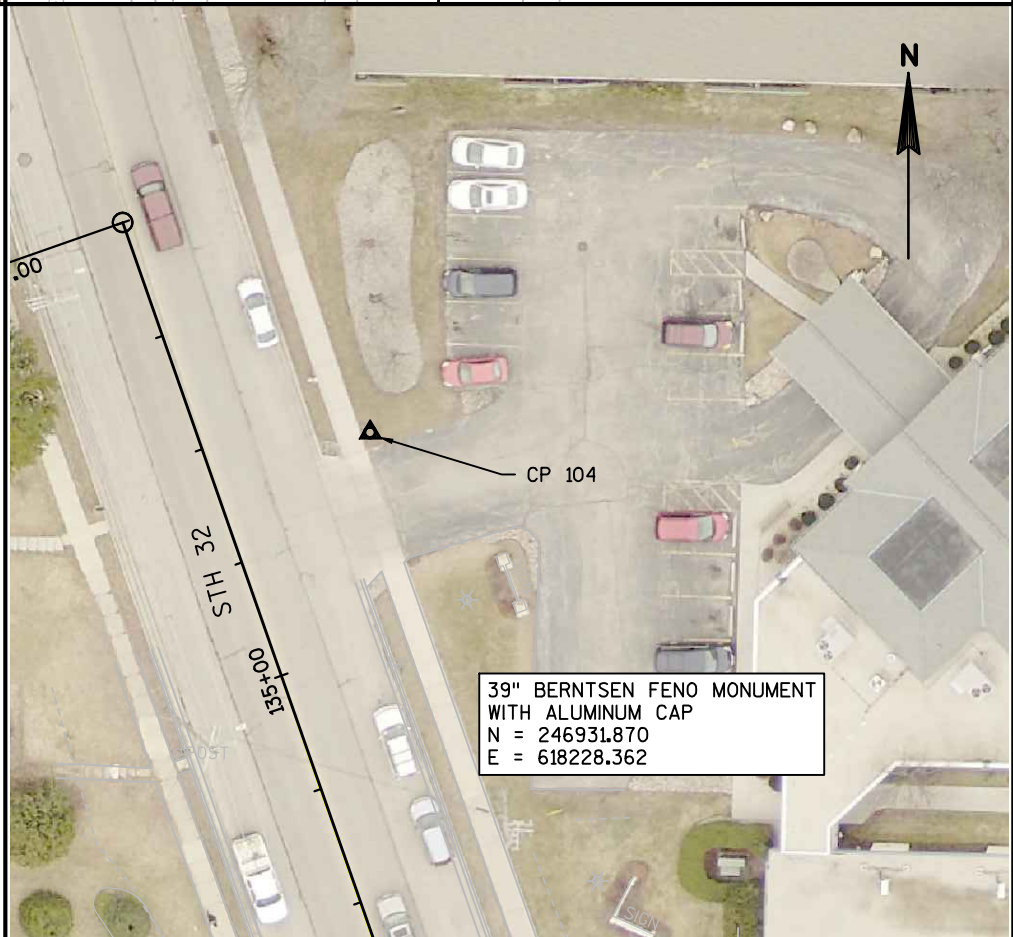
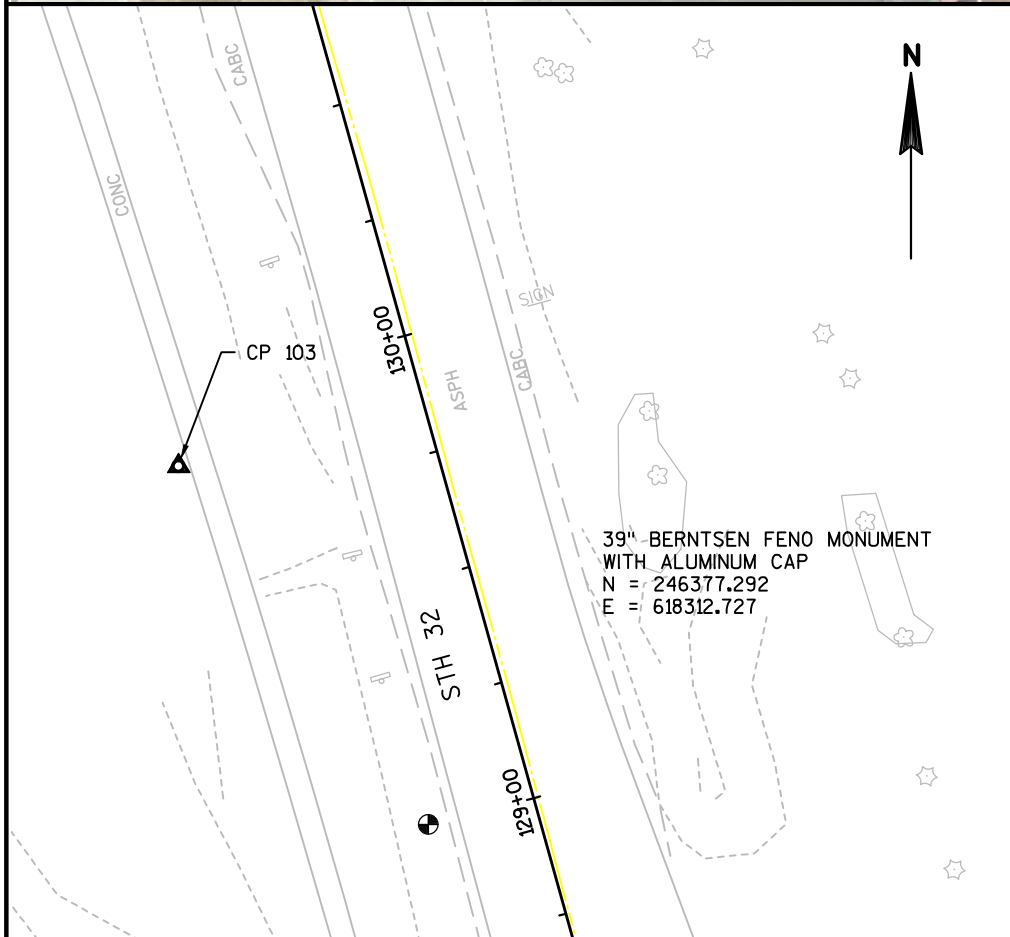
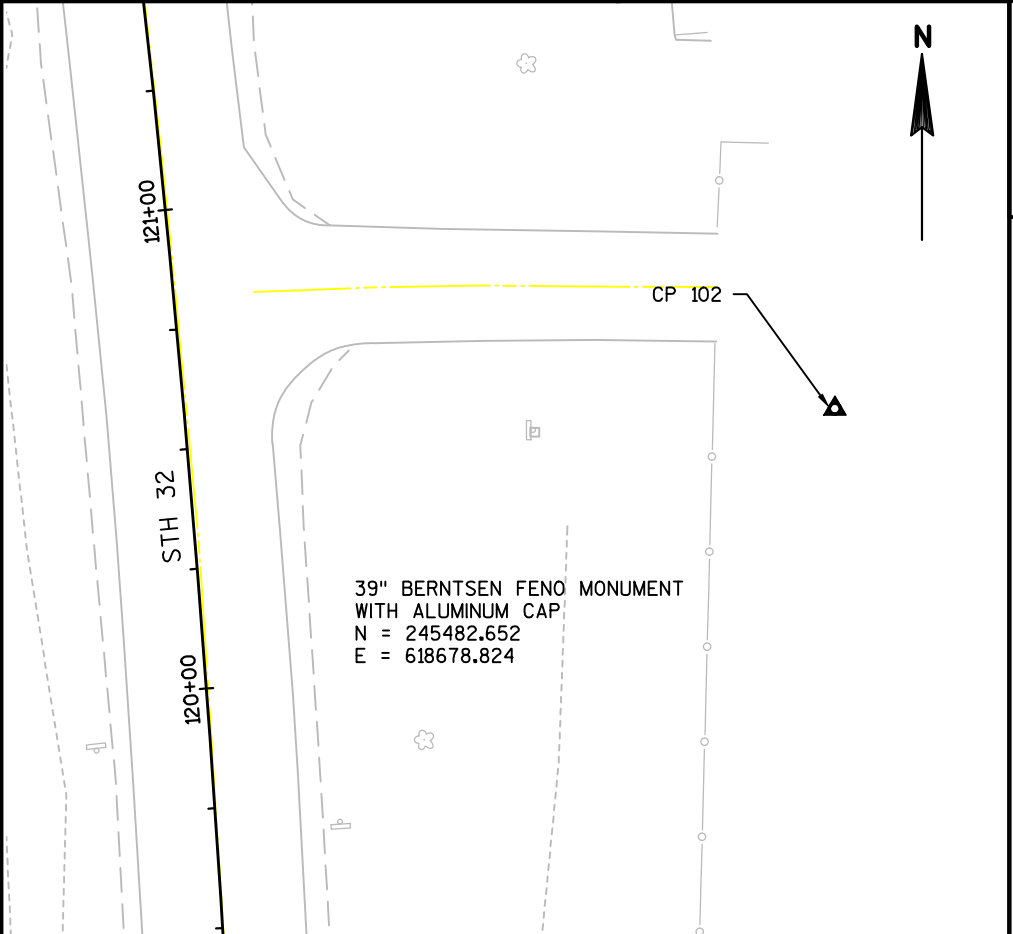
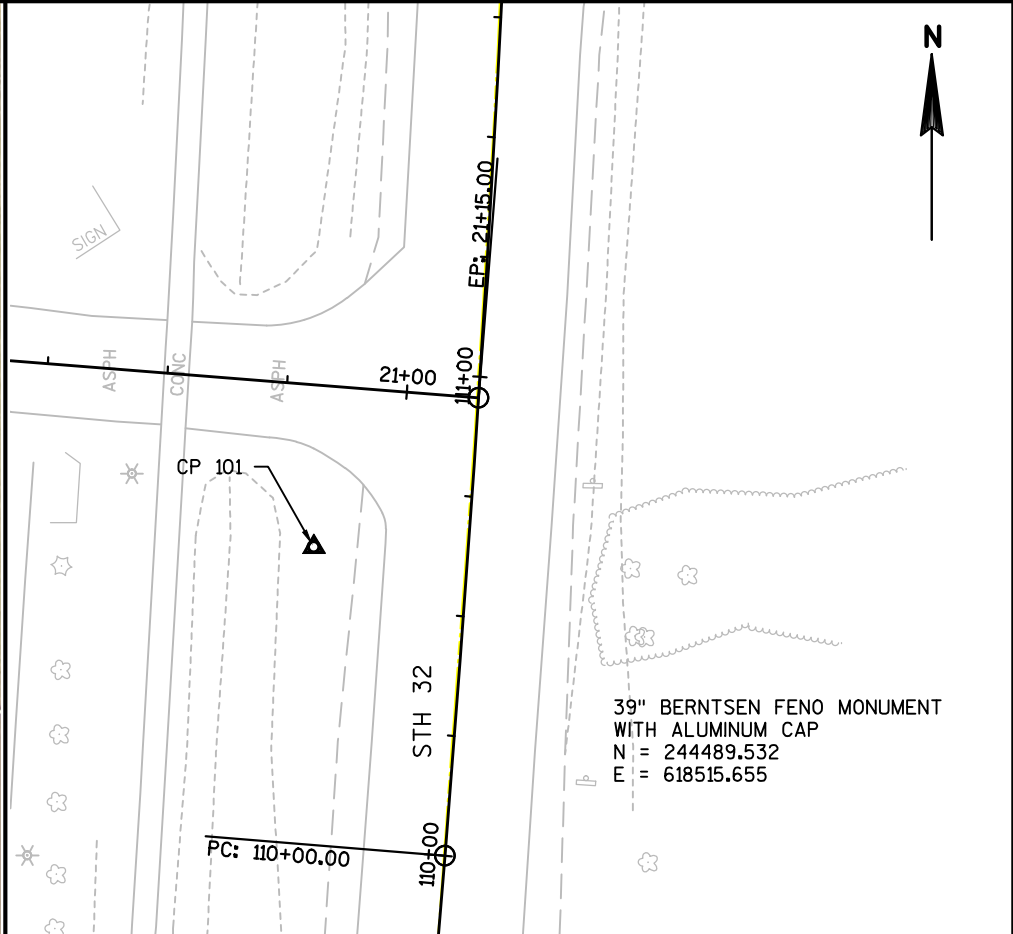


N = 243986.42
E = 618507.08
CONC. MON. WITH
SEWRPC BRASS CAP

EP: 20+00.00







Estimate Of Quantities

2375-07-70

Line	Item	Item Description	Unit	Total	Qty
0002	201.0105	Clearing	STA	3.000	3.000
0004	201.0120	Clearing	ID	42.000	42.000
0006	201.0205	Grubbing	STA	3.000	3.000
0008	201.0220	Grubbing	ID	42.000	42.000
0010	204.0115	Removing Asphaltic Surface Butt Joints	SY	554.000	554.000
0012	204.0120	Removing Asphaltic Surface Milling	SY	1,835.000	1,835.000
0014	204.0130	Removing Curb	LF	25.000	25.000
0016	204.0150	Removing Curb & Gutter	LF	135.000	135.000
0018	204.0155	Removing Concrete Sidewalk	SY	17.000	17.000
0020	205.0100	Excavation Common	CY	1,603.000	1,603.000
0022	213.0100	Finishing Roadway (project) 01. 2375-07-70	EACH	1.000	1.000
0024	305.0110	Base Aggregate Dense 3/4-Inch	TON	180.000	180.000
0026	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	1,544.000	1,544.000
0028	455.0605	Tack Coat	GAL	330.000	330.000
0030	460.2000	Incentive Density HMA Pavement	DOL	1,265.000	1,265.000
0032	460.5224	HMA Pavement 4 LT 58-28 S	TON	1,265.000	1,265.000
0034	522.0118	Culvert Pipe Reinforced Concrete Class III 18-Inch	LF	8.000	8.000
0036	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000
0038	601.0411	Concrete Curb & Gutter 30-Inch Type D	LF	108.000	108.000
0040	602.0410	Concrete Sidewalk 5-Inch	SF	152.000	152.000
0042	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	16.000	16.000
0044	618.0100	Maintenance And Repair of Haul Roads (project) 01. 2375-07-70	EACH	1.000	1.000
0046	619.1000	Mobilization	EACH	1.000	1.000
0048	624.0100	Water	MGAL	19.000	19.000
0050	625.0500	Salvaged Topsoil	SY	5,117.000	5,117.000
0052	627.0200	Mulching	SY	2,763.000	2,763.000
0054	628.1504	Silt Fence	LF	1,170.000	1,170.000
0056	628.1520	Silt Fence Maintenance	LF	1,170.000	1,170.000
0058	628.1905	Mobilizations Erosion Control	EACH	2.000	2.000
0060	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0062	628.2006	Erosion Mat Urban Class I Type A	SY	2,354.000	2,354.000
0064	628.7010	Inlet Protection Type B	EACH	3.000	3.000
0066	628.7015	Inlet Protection Type C	EACH	1.000	1.000
0068	628.7504	Temporary Ditch Checks	LF	24.000	24.000
0070	628.7555	Culvert Pipe Checks	EACH	12.000	12.000
0072	629.0210	Fertilizer Type B	CWT	4.000	4.000
0074	630.0130	Seeding Mixture No. 30	LB	91.000	91.000
0076	630.0200	Seeding Temporary	LB	136.000	136.000

Estimate Of Quantities

2375-07-70

Line	Item	Item Description	Unit	Total	Qty
0078	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	41.000	41.000
0080	637.2210	Signs Type II Reflective H	SF	224.900	224.900
0082	637.2215	Signs Type II Reflective H Folding	SF	25.900	25.900
0084	637.2230	Signs Type II Reflective F	SF	70.250	70.250
0086	638.2102	Moving Signs Type II	EACH	2.000	2.000
0088	638.2602	Removing Signs Type II	EACH	36.000	36.000
0090	638.3000	Removing Small Sign Supports	EACH	29.000	29.000
0092	642.5001	Field Office Type B	EACH	1.000	1.000
0094	643.0100	Traffic Control (project) 01. 2375-07-70	EACH	1.000	1.000
0096	643.0300	Traffic Control Drums	DAY	4,440.000	4,440.000
0098	643.0900	Traffic Control Signs	DAY	1,200.000	1,200.000
0100	643.1050	Traffic Control Signs PCMS	DAY	14.000	14.000
0102	646.0106	Pavement Marking Epoxy 4-Inch	LF	5,060.000	5,060.000
0104	646.0127.S	Pavement Marking Grooved Epoxy 8-Inch 01. 2375-07-70	LF	140.000	140.000
0106	646.2304.S	Pavement Marking Grooved Wet Reflective Epoxy 4-Inch	LF	4,695.000	4,695.000
0108	647.0166	Pavement Marking Arrows Epoxy Type 2	EACH	1.000	1.000
0110	647.0356	Pavement Marking Words Epoxy	EACH	1.000	1.000
0112	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	40.000	40.000
0114	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	100.000	100.000
0116	647.0796	Pavement Marking Crosswalk Epoxy 24-Inch	LF	114.000	114.000
0118	648.0100	Locating No-Passing Zones	MI	0.490	0.490
0120	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	7,524.000	7,524.000
0122	649.0801	Temporary Pavement Marking Removable Tape 8-Inch	LF	100.000	100.000
0124	650.4000	Construction Staking Storm Sewer	EACH	2.000	2.000
0126	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	108.000	108.000
0128	650.9920	Construction Staking Slope Stakes	LF	5,240.000	5,240.000
0130	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	306.000	306.000
0132	652.0800	Conduit Loop Detector	LF	28.000	28.000
0134	653.0135	Pull Boxes Steel 24x36-Inch	EACH	1.000	1.000
0136	653.0905	Removing Pull Boxes	EACH	1.000	1.000
0138	655.0700	Loop Detector Lead In Cable	LF	347.000	347.000
0140	655.0800	Loop Detector Wire	LF	370.000	370.000
0142	690.0150	Sawing Asphalt	LF	4,740.000	4,740.000
0144	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	300.000	300.000
0146	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0148	SPV.0105	Special 01. Remove Loop Detector Wire and Lead-in-cable	LS	1.000	1.000

LOCATION	REMOVING CURB 204.0130	REMOVING CURB & GUTTER 204.0150
	LF	LF
STATION 106+93 TO STATION 108+88 LT	--	95
STATION 110+80 TO STATION 111+20 LT	15	--
STATION 118+00 TO STATION 118+40 LT	10	--
STATION 131+70 TO STATION 132+10 LT	--	40
TOTAL	25	135

LOCATION	CLEARING 201.0105	CLEARING 201.0120	GRUBBING 201.0205	GRUBBING 201.0220
	STA	ID	STA	ID
STATION 110+00 TO 111+00 RT	1	--	1	--
STATION 129+00 TO 130+00 RT	1	--	1	--
STATION 117+00 TO 118+00 LT	1	42	1	42
TOTAL	3	42	3	42

LOCATION	REMOVING ASPHALTIC SURFACE MILLING 204.0120
	SY
STATION 106+35 TO STATION 112+00 RT	112
STATION 109+00 TO STATION 110+60 LT	38
STATION 111+25 TO STATION 113+30 LT	147
STATION 113+25 TO STATION 120+50 RT	250
STATION 113+30 TO STATION 118+50 LT	278
STATION 118+50 TO STATION 122+30 LT	225
STATION 120+50 TO STATION 122+25 RT	136
STATION 122+25 TO STATION 125+25 RT	210
STATION 122+30 TO STATION 124+00 LT	63
STATION 125+25 TO STATION 127+00 RT	65
STATION 126+70 TO STATION 131+00 LT	140
STATION 128+50 TO STATION 131+00 RT	80
STATION 131+00 TO STATION 132+10 RT	91
TOTAL	1835

LOCATION	REMOVING CONCRETE SIDEWALK 204.0155
	SY
STATION 124+63. 48' LT	8
STATION 125+16, 48' LT	9
TOTAL	17

LOCATION	FIELD OFFICE TYPE B 642.5001
	EACH
PROJECT LIMITS	1
TOTAL	1

LOCATION	MOBILIZATION 619.1000
	EACH
PROJECT LIMITS	1
TOTAL	1

LOCATION	REMOVING ASPHALTIC SURFACE BUTT JOINTS 204.0115
	SY
STATION 110+75 TO STATION 111+25 LT	77
STATION 112+75 TO STATION 113+25 LT	37
STATION 117+89 TO STATION 118+50 LT	88
STATION 120+50 TO STATION 121+15 RT	72
STATION 121+65 TO STATION 122+21 RT	89
STATION 121+70 TO STATION 122+26 LT	70
STATION 124+60 TO STATION 125+25 RT	81
STATION 131+10 TO STATION 131+50 RT	40
TOTAL	554

FINISHING ROADWAY (2375-07-70) 213.0100 EACH	
LOCATION	
PROJECT LIMITS	1
TOTAL	1

LOCATION	4 LT 58-28 S 460.5224 TON	TACK COAT 455.0605 GAL
STATION 106+35 TO STATION 113+00	327	85
STATION 113+00 TO STATION 118+00	259	67
STATION 118+00 TO STATION 125+00	413	108
STATION 125+00 TO STATION 132+10	266	70
TOTAL	1265	330

LOCATION	CONCRETE SIDEWALK 5-INCH 602.0410 SF	CURB RAMP DETECTABLE WARNING FIELD YELLOW 602.0505 SF
STATION 124+63. 48' LT	72	8
STATION 125+16, 48' LT	80	8
TOTAL	152	16

LOCATION	CONCRETE CURB & GUTTER 30-INCH TYPE D 601.0411 LF
STATION 131+02 TO STATION 132+10, LT	108
TOTAL	108

LOCATION	BASE AGGREGATE DENSE		
	3/4 - INCH 305.0110 TON	1 1/4 - INCH 305.0120 TON	WATER 624.0100 MGAL
STATION 106+35 TO STATION 113+00	55	412	5
STATION 113+00 TO STATION 118+00	45	375	4
STATION 118+00 TO STATION 125+00	70	454	6
STATION 125+00 TO STATION 132+10	10	303	4
TOTAL	180	1544	19

LOCATION	CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH 522.0118 LF	APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH 522.1018 EACH
STATION 128+91, 34' RT	8	1
TOTAL	8	1
EXTEND EXISTING PIPE. END OF APRON ENDWALL AT STATION 128+91.4, 43.8' RT, ELEVATION 697.68		

LOCATION	INLET PROTECTION TYPE B 628.7010 EACH	INLET PROTECTION TYPE C 628.7015 EACH	CULVERT PIPE CHECKS 628.7555 EACH	TEMPORARY DITCH CHECKS 628.7504 LF
STATION 106+04 RT	1	--	--	--
STATION 106+10 LT	1	--	--	--
STATION 106+30 LT	--	--	1	--
STATION 108+30 RT	--	--	1	--
STATION 111+25 LT	--	--	1	--
STATION 117+75 LT	--	--	1	--
STATION 121+65 LT	--	--	1	--
STATION 122+30 LT	--	--	1	--
STATION 126+55 LT	--	--	2	--
STATION 127+70 LT	--	--	--	12
STATION 127+70 RT	--	1	--	--
STATION 128+50 LT	1	--	--	--
STATION 128+95 RT	--	--	2	--
STATION 129+95 LT	--	--	--	12
STATION 131+50 RT	--	--	2	--
TOTAL	3	1	12	24

LOCATION	SAWING ASPHALT 690.0150 LF
STATION 106+35 TO STATION 113+00	1250
STATION 113+00 TO STATION 118+00	940
STATION 118+00 TO STATION 125+00	1490
STATION 125+00 TO STATION 132+10	1060
TOTAL	4740

LOCATION	MOBILIZATIONS	
	EROSION CONTROL 628.1905 EACH	EMERGENCY EROSION 628.191 EACH
ENTIRE PROJECT	2	3
TOTAL	2	3

LOCATION	SALVAGED TOPSOIL 625.0500 SY	MULCHING 627.0200 SY	EROSION MAT URBAN CLASS I TYPE A 628.2006 SY	SILT FENCE 628.1504 LF	SILT FENCE MAINTENANCE 628.1520 LF	FERTILIZER TYPE B 629.0210 CWT	SEEDING MIXTURE NO. 30 630.0130 LB	SEEDING TEMPORARY 630.0200 LB
STATION 106+35 TO STATION 113+00	1515	1023	492	--	--	1	28	42
STATION 113+00 TO STATION 118+00	877	50	827	285	285	1	14	21
STATION 118+00 TO STATION 125+00	1650	1232	418	225	225	1	30	45
STATION 125+00 TO STATION 132+10	1075	457	618	660	660	1	19	28
TOTAL	5117	2763	2354	1170	1170	4	91	136

LOCATION	PAVEMENT MARKING							
	EPOXY	GROOVED WET	GROOVED	ARROWS EPOXY	WORDS EPOXY	STOP LINE	DIAGONAL	CROSSWALK
	4-INCH	REFLECTIVE	EPOXY 8-	TYPE 2		EPOXY 18-INCH	EPOXY 12-INCH	EPOXY 24-INCH
	646.0106	EPOXY 4-INCH	INCH	647.0166	647.0356	647.0566	647.0726	647.0796
	LF	LF	LF	EACH	EACH	LF	LF	LF
STATION 106+35 TO STATION 113+00	1240	1055	140	1	1	40	100	114
STATION 113+00 TO STATION 118+00	1000	980	--	--	--	--	--	--
STATION 118+00 TO STATION 125+00	1400	1400	--	--	--	--	--	--
STATION 125+00 TO STATION 132+10	1420	1260	--	--	--	--	--	--
TOTAL	5060	4695	140	1	1	40	100	114

LOCATION	CONSTRUCTION STAKING		
	STORM	CURB, GUTTER AND	SLOPE
	SEWER	CURB & GUTTER	STAKES
	650.4000	650.5500	650.9920
	EACH	LF	LF
STATION 128+90, 34' RT	1	--	--
STATION 130+93 TO STATION 132+10.60, 22' LT	--	108	--
STATION 106+00 TO 132+20	--	--	--
STATION 106+00 TO 132+20	--	--	5240
TOTAL	1	108	5240

LOCATION	MAINTENANCE AND REPAIR
	OF HAUL ROADS
	618.0100
	EACH
2375-07-70	1
TOTAL	1

LOCATION	TEMPORARY PAVEMENT MARKING	
	REMOVABLE	
	TAPE	TAPE
	4-INCH	8-INCH
	649.0400	649.0801
	LF	LF
STATION 106+35 TO STATION 113+00	3704	100
STATION 113+00 TO STATION 118+00	1000	--
STATION 118+00 TO STATION 125+00	1400	--
STATION 125+00 TO STATION 132+10	1420	--
TOTAL	7524	100

LOCATION	LOCATING NO-
	PASSING ZONES
	648.0100
	MI
PROJECT LIMITS	0.49
TOTAL	0.49

Division	From/To Station	Location	205.0100 Common Excavation	Available Material (1)	Unexpanded Fill	Expanded Fill	Mass Ordinate +/- (2)	Waste	208.0100 Borrow	Comment:
			Cut			Factor 1.25				
Division 1										
Project Limits	106+35.84 to 132+13.07		1,603	1,603	25	31	1,572	1,572	0	
Division 1 Subtotal			1,603	1,603	25	31	1,572	1,572	0	
Grand Total			1,603	1,603	25	31	1,572	1,572	0	
Total Common Exc			1,603							

Notes:
(1) Available Material = Cut - Salvaged/Unusable Pavement Material
(2) 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.

TRAFFIC CONTROL (2375-07-70) 643.0100 EACH	
LOCATION	
ENTIRE PROJECT	1
TOTAL	1

		TRAFFIC CONTROL		
		DRUMS 643.0300	SIGNS 643.0900	PCMS 643.1050
LOCATION	NUMBER OF DAYS	DAY	DAY	DAY
ENTIRE PROJECT				
STAGE 1	30	1500	600	14
STAGE 2	30	2940	600	--
TOTAL	60	4440	1200	14

3

TYPE II PERMANENT SIGNING

2375-07-70 STH 32 -07-70 STH 32

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE W X H [IN.] x [IN.]			637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	634.0618 POSTS WOOD 4"X 6"x18' [EA]	634.0622 POSTS WOOD 4"X 6"x22' [EA]	634.0814 POSTS TUBULAR STEEL 2"x2"x14' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]
1	R2-1 (2S)	SPEED LIMIT 40 E. Puetz Rd (Double Arrows)	24	X	30	5.000	--	1						--
2	D1-61		66	X	24	11.000	--	2						--
3	J4-1 (2S)		24	X	36	6.000	--	1						--
	M3-3		24	x	12	--	--							
	M1-6B		24	x	24	--	--							
4	W14-3 (2S)	E. Puetz Rd	48	X	36	--	6.000	1						--
5	M1-94H (2S)		54	X	18	6.750	--						MOUNT ON MAST ARM	--
6	M1-94H (2S)		54	X	18	6.750	--						MOUNT ON MAST ARM	--
7	J3-1 (2S)		24	X	45	7.500	--	1						--
	M1-6B		24	x	24	--	--							
	M6-4		21	x	21	--	--							
8	R1-1F (2S)	WIS 32 Chicago Rd	30	X	30		--						MOUNT ON SIGNAL POLE	5.180
9	R1-1F (2S)		30	X	30		--						MOUNT ON SIGNAL POLE	5.180
10	R1-1F (2S)		30	X	30		--						MOUNT ON SIGNAL POLE	5.180
11	R1-1F (2S)		30	X	30		--						MOUNT ON SIGNAL POLE	5.180
12	M1-94S (2S)		72	X	18		--						MOUNT ON MAST ARM	5.180
13	M1-94S (2S)	WIS 32 Chicago Rd	72	X	18	9.000	--						MOUNT ON MAST ARM	--
14	J3-1 (2S)		24	X	45	7.500	--	1						--
	M1-6B		24	x	24	--	--							
	M6-4		21	x	21	--	--							
15	J4-1 (2S)		24	X	36	6.000	--	1						--
	M3-1		24	x	12	--	--							
	M1-6B		24	x	24	--	--							
16	W14-3 (2S)		48	X	36	--	6.000	1						--
17	W11-2 (2S)		30	X	30	--	6.250	1						--
18	NOT USED	E. Puetz Rd (Double Arrows)												--
19	W3-3 (2S)		36	X	36	--	9.000	1						--
19A	D1-61		66	X	24	11.000	--	2						--
20	R2-1 (2S)		24	X	30	5.000	--	1						--
21	R1-1 (2S)		30	X	30	5.180	--	1						--

3

TYPE II PERMANENT SIGNING

2375-07-70 STH 32 -07-70 STH 32

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE W X H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	634.0618 POSTS WOOD 4"X 6"x18' [EA]	634.0622 POSTS WOOD 4"X 6"x22' [EA]	634.0814 POSTS TUBULAR STEEL 2"x2"x14' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]
22	W14-3 (2S)	SPEED LIMIT 40	48 X 36	--	6.000	1						--
23	W11-2 (2S)		30 X 30	--	6.250	1						--
24	NOT USED											--
25	R2-1 (2S)		24 X 30	5.000	--	1						--
26	R2-1 (2S)		24 X 30	5.000	--	1						--
27	R1-1 (2S)	Forest Hill Ave (Left Arrow)	30 X 30	5.180	--	1						--
28	R1-1 (2S)		30 X 30	5.180	--	1						--
29	W14-3 (2S)		48 X 36	--	6.000	1						--
30	R1-1 (2S)		30 X 30	5.180	--	1						--
31	D1-1		96 X 15	10.000	--	2						--
32	D12-2A (2S)	SOUTH MILWAUKEE Population 21156	60 X 42	17.500	--	2						--
33	I2-3 (2S)		108 X 24	18.000	--	2						--
34	R2-1 (2S)		24 X 30	5.000	--	1						--
35	J4-1 (2S)		24 X 36	6.000	--	1						--
	M3-3		24 x 12	--	--							
	M1-6B		24 x 24	--	--							
36	R2-1 (2M)	SPEED LIMIT 30	24 X 30	5.000	--	1						--
37	I2-3 (2S)	OAK CREEK Population 34451	72 X 24	12.000	--	2						--
38	R1-1 (2S)		30 X 30	5.180	--	1						--
39	W11-2 (2S)		30 X 30	--	6.250	1						--
40	W16-7L (2S)		24 X 12	--	2.000					39		--
41	W11-2 (2S)	NO PARKING SIGN	30 X 30	--	6.250	1						--
42	W16-7L (2S)		24 X 12	--	2.000					41		--
43	SP			--	--				1		SHEET 5 OF 6 - REUSE POST	--
44	I55-56			--	--				1		SHEET 5 OF 6 - REUSE POST	--
45	D1-61		36 X 48	12.000	--	1					SHEET 6 OF 6	--

TYPE II PERMANENT SIGNING

2375-07-70 STH 32 -07-70 STH 32

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	TYPE II SIGN SIZE W X H [IN.] x [IN.]	637.2210 SIGNS TYPE II REFLC H [SF]	637.2230 SIGNS TYPE II REFLC F [SF]	634.0618 POSTS WOOD 4"X 6"x18' [EA]	634.0622 POSTS WOOD 4"X 6"x22' [EA]	634.0814 POSTS TUBULAR STEEL 2"x2"x14' [EA]	638.2102 MOVE SIGNS TYPE II [EA]	MOUNT ON SAME POST AS SIGN #	REMARKS / NEW SIGN LOCATION	637.2215 SIGNS TYPE II REFLC H FOLDING [SF]
46	J4-1 (2S)		24 X 36	6.000	--	1					SHEET 6 OF 6	--
	M3-1		24 x 12	--	--							
	M1-6B		24 x 24	--	--							
47	M1-93 (2S)		24 X 24	4.000	--					46	MOUNT BELOW J4-1	--
48	M1-93 (2S)		24 X 24	4.000	--					35	MOUNT BELOW J4-1; SHEET 5 OF 6	--
49	M1-93 (2S)		24 X 24	4.000	--					3	MOUNT BELOW J4-1; SHEET 1 OF 6	--
50	M1-93 (2S)		24 X 24	4.000	--					15	MOUNT BELOW J4-1; SHEET 1 OF 6	--
51	W11-2 (2S)		30 X 30	--	6.250	1					SHEET 5 OF 6	
52	W16-9P (2S)		24 X 12	--	2.000					51	SHEET 5 OF 6	
	UNDISTRIBUTED					1						
TOTALS				224.900	70.250	41	0	0	2			25.900

TYPE II SIGN REMOVALS

2375-07-70 STH 32

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	REMARKS / NEW SIGN LOCATION
1R	R2-1	SPEED LIMIT 40	1	1	
2R	J4-1		1	1	
	M3-3		--	--	
	M1-6B		--	--	
3R	W14-3		1	1	
4R	R1-1F		1	--	
5R	J3-1		1	1	
	M1-6B		--	--	
	M6-4		--	--	
6R	M1-94H		1	--	
7R	M1-94H		1	--	
8R	R1-1F		1	--	
9R	R1-1F		1	--	
10R	R1-1F		1	--	
11R	J3-1		1	1	
	M1-6B		--	--	
	M6-4		--	--	
12R	W14-3		1	1	
13R	W11-2		1	1	
14R	R2-1	SPEED LIMIT 40	1	1	
15R	R1-1		1	1	
16R	W3-3		1	1	
17R	W3-3		1	1	
18R	W14-3		1	1	

TYPE II SIGN REMOVALS

2375-07-70 STH 32

SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	REMARKS / NEW SIGN LOCATION
19R	W11-2	SPEED LIMIT 40	1	1	
20R	R2-1		1	1	
21R	R2-1		1	1	
22R	R1-1		1	1	
23R	R1-1		1	1	
24R	W14-3 W11-2 W16-9P	REDUCED SPEED AHEAD	1	--	REMOVED WITH SIGN NO. 26R
25R			1	1	
26R			1	1	
27R			--	--	
28R	R1-1	SOUTH MILWAUKEE Population 21156 SPEED LIMIT 40	1	1	
29R	D12-2A		1	2	
30R	I2-3		1	2	
31R	R2-1		1	1	
32R	J4-1	SPEED LIMIT 30	1	1	REMOVED WITH SIGN NO. 32R SHEET 6 OF 6
	M3-3		--	--	
	M1-6B		--	--	
33R	M1-93		--	--	
34R	R2-1		1	--	
35R	I2-3	OAK CREEK Population 34451	1	2	REMOVED WITH SIGN NO. 37R
36R	R1-1		1	1	
37R	W11-2		1	--	
38R	W16-7L		--	--	

TYPE II SIGN REMOVALS			2375-07-70 STH 32		
SIGN NO.	SIGN CODE & SIZE	SIGN MESSAGE	638.2602 REMOVING SIGNS TYPE II [EA]	638.3000 REMOVING SMALL SIGN SUPPORTS [EA]	REMARKS / NEW SIGN LOCATION
39R	W11-2		1	--	
40R	W16-7L		--	--	REMOVED WITH SIGN NO. 39R
TOTALS			36	29	

STH 32 & PUETZ RD
MILWAUKEE COUNTY
CATEGORY 0020
S40-1208

TRAFFIC DETECTOR LOOPS								
LOOP NO.	HOME RUN PB	LOCATION*	SIZE (FT)x(FT)	NO. OF TURNS	SDD INSTALLATION REFERENCE	652.0800	655.0700	655.0800
						CONDUIT LOOP DETECTOR L.F.	LOOP DETECTOR LEAD IN CABLE L.F.	LOOP DETECTOR WIRE L.F.
21	PB13	109+54.3, 8.8'LT	6'x6'	5	9F15-4B LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	58	360	290
22	PB9	108+24.3, 11.4'LT	6'x6'	4	9F15-4B LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPlice) BOX OFF ROADWAY (OPTION 2)	60	230	240
TOTAL						118	590	530

CONDUIT		
652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH L.F.		
FROM	TO	L.F.
PB1	PB9	216
PB9	PB13	130
TOTAL		346

PULL BOXES		
653.0135 PULL BOXES STEEL 24x36-INCH EACH		
PULL BOX NO.	LOCATION*	EACH
PB9	108+24.3, 32.0'LT	1
PB13	109+54.3, 23.2'LT	1
TOTAL		2

* FINAL LOCATION TO BE DETERMINED BY THE ENGINEER IN THE FIE

REMOVE PULL BOXES	
	653.0905
PULL BOX	REMOVING
NO.	PULL BOXES
	EACH
PB9	1
TOTAL	
	1

REMOVE LOOP DETECTOR WIRE AND LEAD-IN CABLE	
SPV.0105.01 REMOVE LOOP DETECTOR WIRE & LEAD-IN CABLE	
LOCATION	L.S.
STH 32 & PUETZ RD	1
TOTAL	1

TRANSPORTATION PROJECT PLAT NO: 2375-07-20 - 4.01

THAT PART OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 5 NORTH, RANGE 22 EAST IN THE CITY OF OAK CREEK, MILWAUKEE COUNTY, WISCONSIN.

RELOCATION ORDER STH 32 MILWAUKEE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAY OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT IN US SURVEY FEET. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

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

FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.

HWY	BASIS OF EXISTING R/W	WIDTH	YEAR
STH 32	CSM 1751	VARIABLE	1972
STH 32	WIS. STATUTE 82.31(2)	33'	

SCHEDULE OF LANDS AND INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE DEPARTMENT.

PARCEL NUMBER	OWNER	INTEREST REQUIRED	R/W REQUIRED ACRES			T.L.E. TEMP. ACRES	P.L.E. PERM. ACRES
			NEW	EXISTING	TOTAL		
1	MID AMERICA STEEL DRUM PROPERTIES	FEETLE	0.000	0.127	0.127	0.010	
2	MID AMERICA STEEL DRUM PROPERTIES	FEETLE	0.000	0.288	0.288	0.017	

CONVENTIONAL SYMBOLS

SECTION LINE	SECTION CORNER SYMBOL	R/W MONUMENT (TO BE SET)	NON-MONUMENTED R/W POINT	FOUND IRON PIN (3-INCH UNLESS NOTED)	IP
QUARTER LINE	SIXTEENTH LINE	NEW REFERENCE LINE	NEW R/W LINE	EXISTING R/W OR HE LINE	PROPERTY LINE
LOT, TIE & OTHER MINOR LINES	SLOPE INTERCEPT	CORPORATE LIMITS	NEW R/W (FEE OR HE) (MATCHING VARIES BY OWNER)	TEMPORARY LIMITED EASEMENT AREA	EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)
PARALLEL OFFSETS	BUILDING	TO BE REMOVED			

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	Δ/DELTA
LENGTH OF CURVE	L
TANGENT	TAN

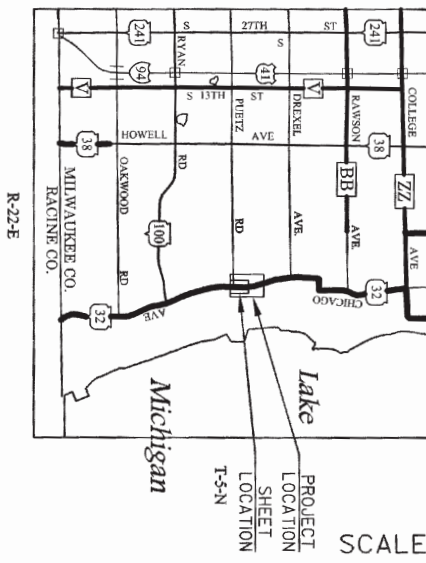
CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	PERMANENT LIMITED EASEMENT	PLE
ACCESS RIGHTS ACRES	AR	PROPERTY LINE	PL
AND OTHERS	ET AL	RECORDED AS	ROR
CENTERLINE	CL	REFERENCE LINE	REL
CERTIFIED SURVEY MAP	CSM	RELEASE OF RIGHTS	ROR
CORNER	COR	REMAINING	REM
DOCUMENT	DOC	RESTRICTED DEVELOP EASEMENT	RDE
EASEMENT	EASE	RIGHT-OF-WAY	R/W
HIGHWAY EASEMENT	HE	SECTION	SEC
LAND CONTRACT	LC	STATION	STA
MONUMENT	MON	TEMPORARY LIMITED EASEMENT	TLE
PAGE	P	VOLUME	V

CONVENTIONAL UTILITY SYMBOLS

WATER	W	POWER POLE	PP
GAS	G	TELEPHONE POLE	TP
TELEPHONE	T	TELEPHONE PEDESTAL	TPD
OVERHEAD	OH	ELECTRIC TOWER	ET
TRANSMISSION LINES	TL		
ELECTRIC	E		
CABLE TELEVISION	TV		
FIBER OPTIC	FO		
SANITARY SEWER	SAN		
STORM SEWER	SS		

THIS IS A COPY. ORIGINAL DOCUMENT IS FILED AT THE MILWAUKEE COUNTY REGISTER OF DEEDS.



SCALE, FEET 0 50 100

STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

I, WALTER C. ZENDEK PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.



SIGNATURE: *Walter C. Zendeck* DATE: 5/23/16
PRINT NAME: WALTER C. ZENDEK
REGISTRATION NUMBER: S-2965

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION SOUTHEAST REGION

SIGNATURE: *Robert L. Duffeck* DATE: 5/23/16
PRINT NAME: ROBERT L. DUFFECK

TRANSPORTATION PROJECT PLAT NO: 2375-07-20 - 4.02

THAT PART OF THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 AND THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 14, TOWNSHIP 5 NORTH, RANGE 22 EAST IN THE CITY OF OAK CREEK, MILWAUKEE COUNTY, WISCONSIN.

RELOCATION ORDER STH 32 MILWAUKEE COUNTY

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3), 84.09, AND 84.30, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.

SCHEDULE OF LANDS AND INTERESTS REQUIRED						OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO THE TRANSFER OF LAND INTEREST TO THE DEPARTMENT.	
PARCEL NUMBER	OWNER	INTEREST REQUIRED	R/W REQUIRED ACRES			T.L.E. TEMP. ACRES	P.L.E. PERM. ACRES
			NEW	EXISTING	TOTAL		
2	MID AMERICA STEEL DRUM PROPERTIES	FEE,TLE	0.030	0.010	0.040	0.039	
4	MID AMERICA STEEL DRUM PROPERTIES	FEE,TLE	0.000	0.122	0.122	0.017	
5	MID AMERICA STEEL DRUM PROPERTIES	FEE,TLE	0.000	0.163	0.163	0.023	
6	CITY OF SOUTH MILWAUKEE	FEE,TLE	0.000	0.252	0.252	0.022	
UTILITY NUMBER							
50	WE ENERGIES GAS	ROR					
51	AT&T WISCONSIN	ROR					
52	CITY OF OAK CREEK	ROR					

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM, MILWAUKEE COUNTY ZONE, NAD83 (2007) ADJUSTMENT IN US SURVEY FEET. THE COORDINATES SHOWN ARE GRID COORDINATES AND ARE TO BE USED AS GRID OR GROUND VALUES ON THIS PLAT.

RIGHT-OF-WAY MONUMENTS ARE TYPE 2 AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

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

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

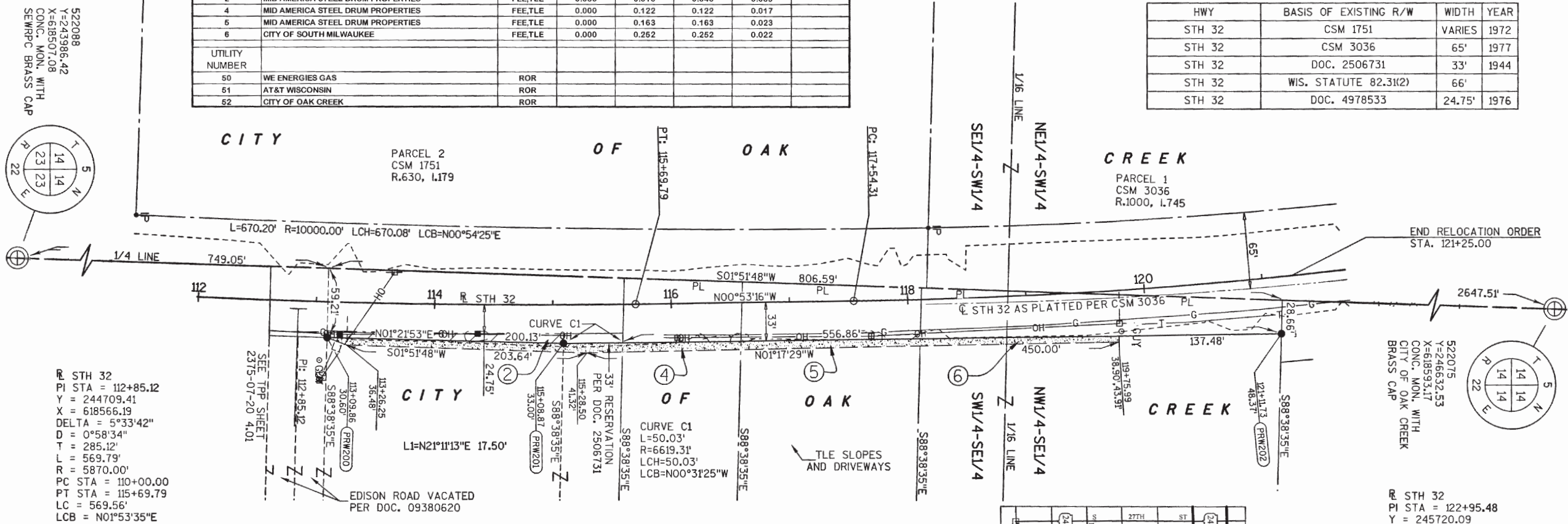
FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN WAUKESHA.

DOC. # 10569608

RECORDED:
06/01/2016 2:24 PM
JOHN LA FAVE
REGISTER OF DEEDS
MILWAUKEE COUNTY, WI
AMOUNT: 25.00
LSE# 1 5899

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 2375-07-20 4.02
AMENDMENT NO:....

HWY	BASIS OF EXISTING R/W	WIDTH	YEAR
STH 32	CSM 1751	VARIES	1972
STH 32	CSM 3036	65'	1977
STH 32	DOC. 2506731	33'	1944
STH 32	WIS. STATUTE 82.31(2)	66'	
STH 32	DOC. 4978533	24.75'	1976



- (50) WE ENERGIES GAS
NO RECORDED
EASEMENT
PCL. 2
- (51) NO RECORDED
EASEMENT
PCL. 2
DOC. 7488840
R.4245, L.240
PCL. 5
- (52) DOC. 4769281
R.727, L.418
PCL. 2
DOC. 4769282
R.727, L.421
PCL. 2
DOC. 4769283
R.727, L.424
PCL. 4
DOC. 4766965
R.725, L.988
PCL. 5
DOC. 4779892
R.735, L.998
PCL. 6

CONVENTIONAL SYMBOLS

SECTION LINE
QUARTER LINE
SIXTEENTH LINE
NEW REFERENCE LINE
NEW R/W LINE
EXISTING R/W OR HE LINE
PROPERTY LINE
LOT, TIE & OTHER
MINOR LINES
SLOPE INTERCEPT
CORPORATE LIMITS
NEW R/W (FEE OR HE)
(HATCHING VARIES BY OWNER)
TEMPORARY LIMITED
EASEMENT AREA
EASEMENT AREA
(PERMANENT LIMITED OR
RESTRICTED DEVELOPMENT)
PARALLEL OFFSETS

SECTION CORNER SYMBOL
SECTION CORNER MONUMENT
SIXTEENTH CORNER MONUMENT
SIGN
GEODETIC SURVEY MONUMENT
SIXTEENTH CORNER MONUMENT
OFF-PREMISE SIGN
ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER
UTILITY NUMBER
R/W BOUNDARY POINT
BUILDING
TO BE REMOVED

R/W MONUMENT
(TO BE SET)
NON-MONUMENTED
R/W POINT
FOUND IRON P/N
(INCH UNLESS NOTED)
IP
Q-25
SIGN
ACCESS RESTRICTED BY ACQUISITION
NO ACCESS (BY STATUTORY AUTHORITY)
ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)
NO ACCESS (NEW HIGHWAY)
PARCEL NUMBER
UTILITY NUMBER
R/W BOUNDARY POINT
BUILDING
TO BE REMOVED

LONG CHORD
LONG CHORD BEARING
RADIUS
DEGREE OF CURVE
CENTRAL ANGLE OR DELTA Δ/DELTA
LENGTH OF CURVE
TANGENT
ACCESS POINT/
DRIVEWAY CONNECTION
ACCESS RIGHTS
ACRES
AND OTHERS
CENTERLINE
CERTIFIED SURVEY MAP
CORNER
DOCUMENT
EASEMENT
HIGHWAY EASEMENT
LAND CONTRACT
MONUMENT
PAGE

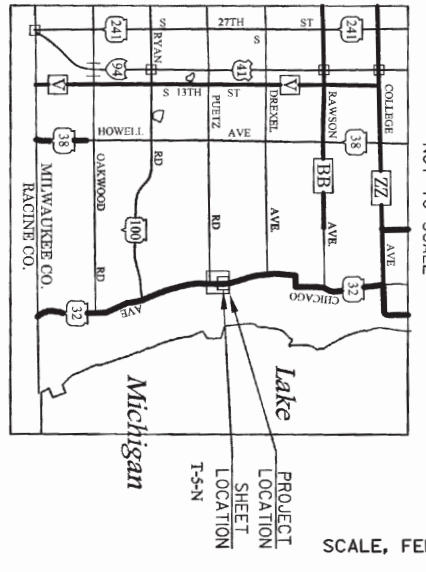
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PERMANENT LIMITED
EASEMENT
PROPERTY LINE
RECORDED AS
REFERENCE LINE
RELEASE OF RIGHTS
REMAINING
RESTRICTED DEVELOP
EASEMENT
RIGHT-OF-WAY
SECTION
STATION
TEMPORARY LIMITED
EASEMENT
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OVERHEAD
TRANSMISSION LINES
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CABLE TELEVISION
FIBER OPTIC
SANITARY SEWER
STORM SEWER
POWER POLE
TELEPHONE POLE
TELEPHONE PEDESTAL
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COMPENSABLE



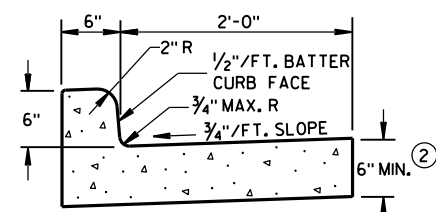
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION

I, WALTER C. ZENDEK PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT OF TRANSPORTATION, I HAVE MAPPED THIS TRANSPORTATION PROJECT PLAT AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

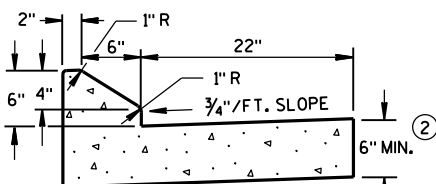
SIGNATURE: *Walter C. Zendeck* DATE: 5/23/16
PRINT NAME: WALTER C. ZENDEK
REGISTRATION NUMBER: S-2965
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR
THE WISCONSIN DEPARTMENT OF TRANSPORTATION
SOUTHEAST REGION
SIGNATURE: *Robert L. Duffeck* DATE: 5/23/16
PRINT NAME: ROBERT L. DUFFECK

Standard Detail Drawing List

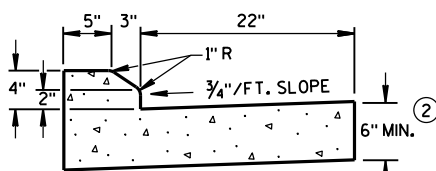
08D01-19	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D05-18A	CURB RAMPS TYPES 1 AND 1-A
08D05-18B	CURB RAMPS TYPES 2 AND 3
08D05-18C	CURB RAMPS TYPES 4A AND 4A1
08D05-18D	CURB RAMPS TYPE 4B AND 4B1
08D05-18E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09B04-11	PULL BOX
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M.P.H. OR LESS
15C07-13B	PAVEMENT MARKING WORDS
15C07-13C	PAVEMENT MARKING ARROWS
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C08-17B	PAVEMENT MARKING (TURN LANES)
15C12-05	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C33-02	STOP LINE AND CROSSWALK PAVEMENT MARKING
15C35-01A	PAVEMENT MARKING (INTERSECTIONS)
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY



TYPES A & D ①

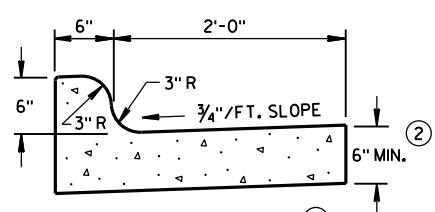


6" SLOPED CURB TYPES G & J ①



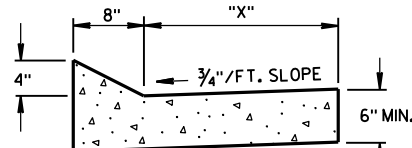
4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"



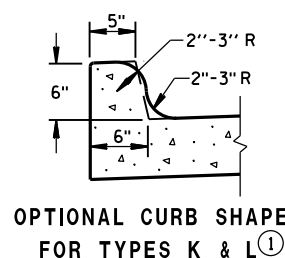
TYPES K & L ①

CONCRETE CURB & GUTTER 30"

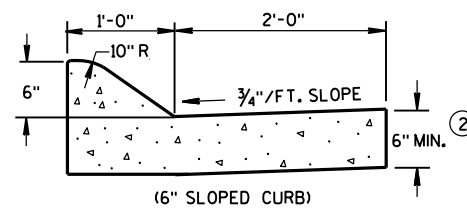


TYPES TBT & TBT ①
CONCRETE CURB & GUTTER

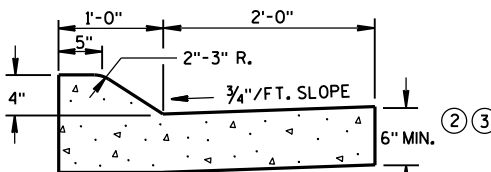
TBT & TBT	"X"
30"	22"
36"	28"



OPTIONAL CURB SHAPE
FOR TYPES K & L ①

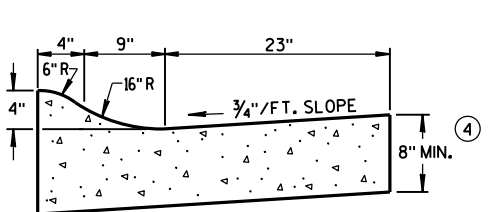


(6" SLOPED CURB)



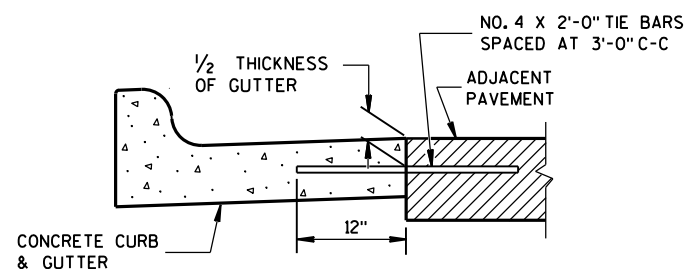
(4" SLOPED CURB)

TYPES A & D ①

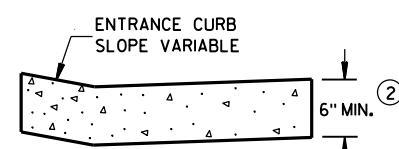


4" SLOPED CURB TYPES R & T ① ⑤

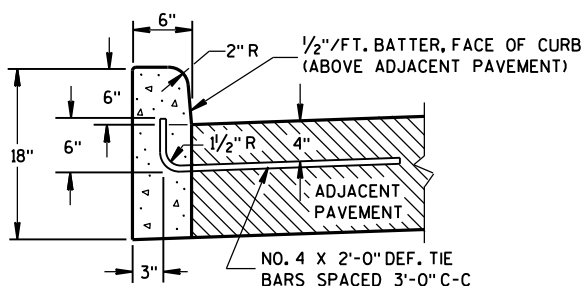
CONCRETE CURB & GUTTER 36"



TYPICAL TIE BAR LOCATION ①

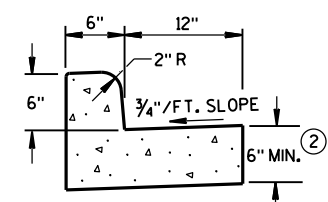


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

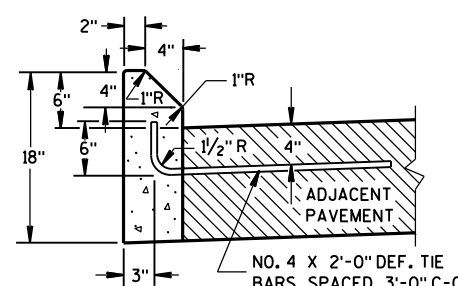


TYPES A & D ①

CONCRETE CURB



TYPES A & D
CONCRETE CURB & GUTTER 18"



TYPES G & J ①

GENERAL NOTES

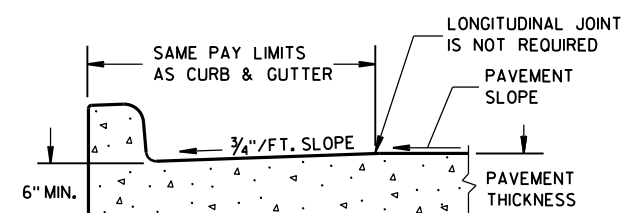
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

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

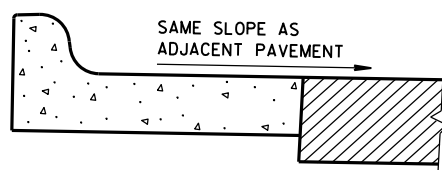
WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

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

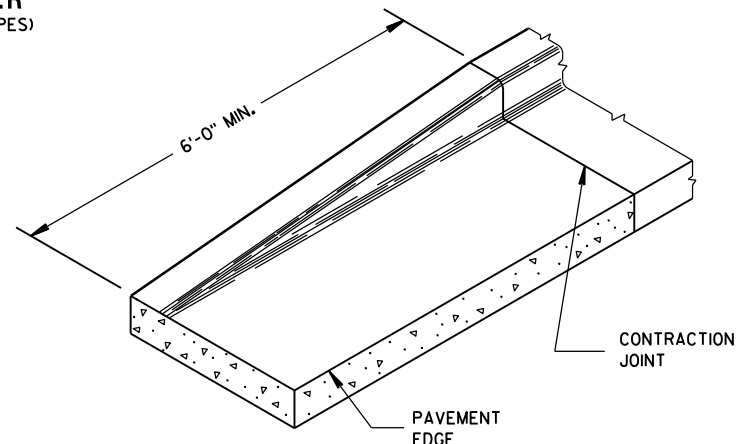
- TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBT.
- THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.
- USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT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



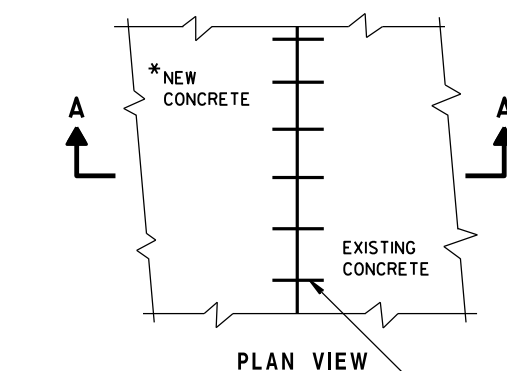
PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



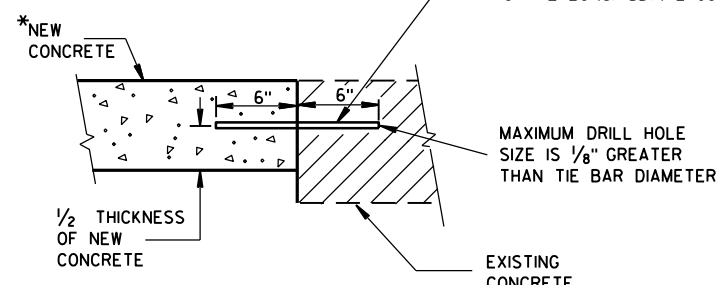
REVERSE SLOPE GUTTER
(TYPICAL FOR ALL CURB & GUTTER TYPES)



END SECTION CURB & GUTTER



PLAN VIEW



SECTION A-A
TIE BARS DRILLED
INTO EXISTING PAVEMENT

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

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

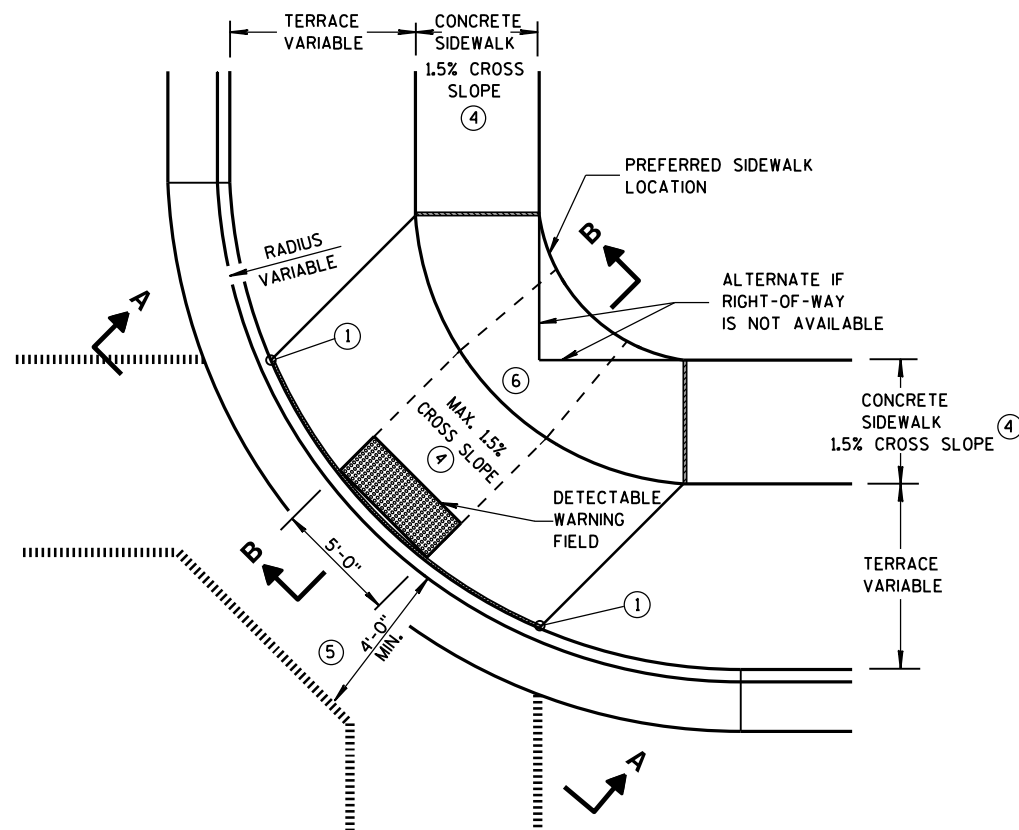
MAXIMUM DRILL HOLE
SIZE IS 1/8" GREATER
THAN TIE BAR DIAMETER

EXISTING CONCRETE

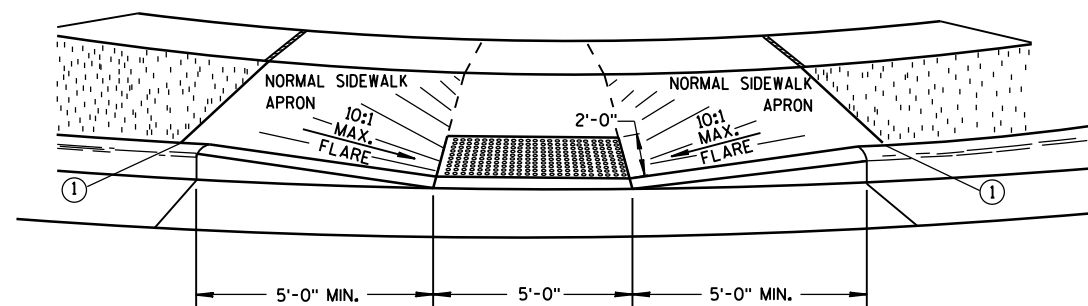
CONCRETE CURB, CONCRETE
CURB & GUTTER AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

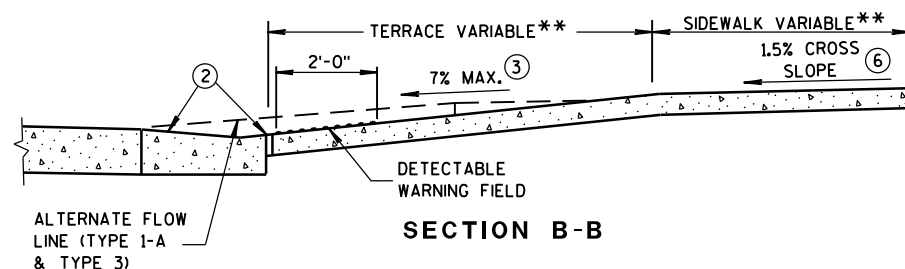


PLAN VIEW
TYPE 1 RAMP
(CENTER OF CORNER RADIUS)

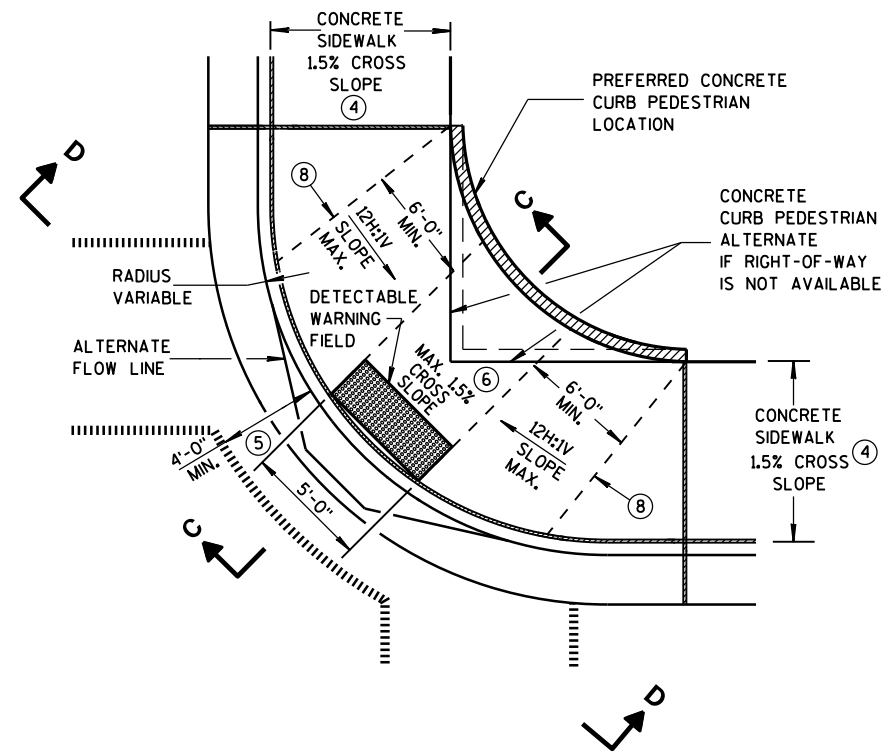


VIEW A-A

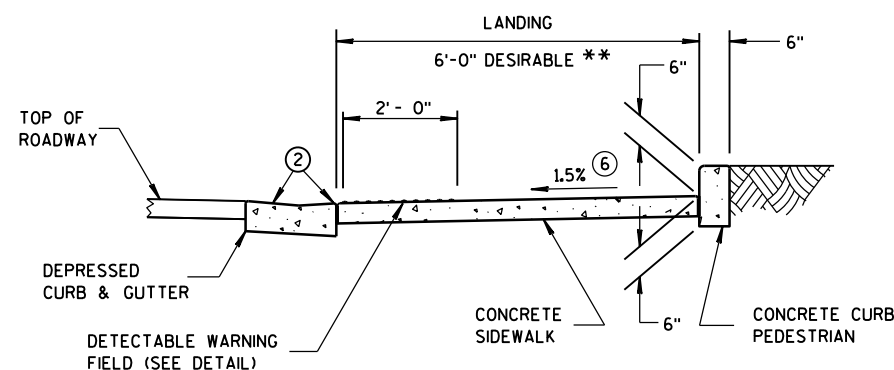
** WIDTH SHOWN ELSEWHERE
IN THE PLANS



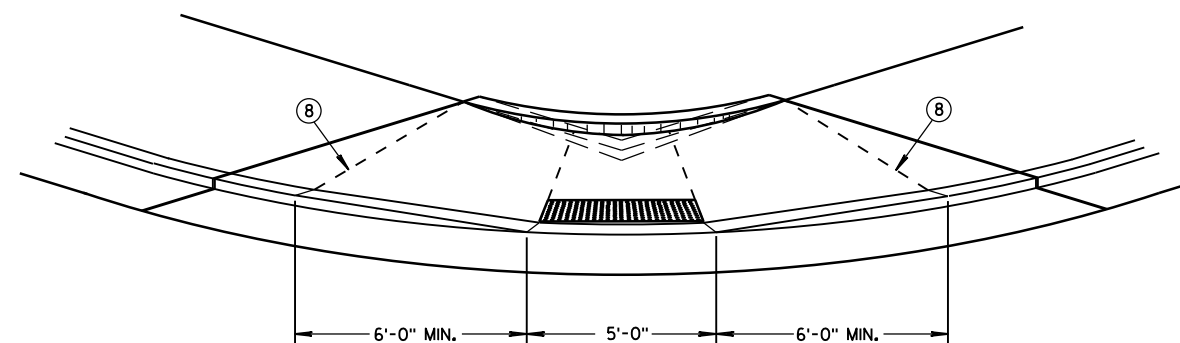
SECTION B-B



PLAN VIEW
TYPE 1-A RAMP
(NO TERRACE)



SECTION C-C



VIEW D-D

GENERAL NOTES

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

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

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

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





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

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

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

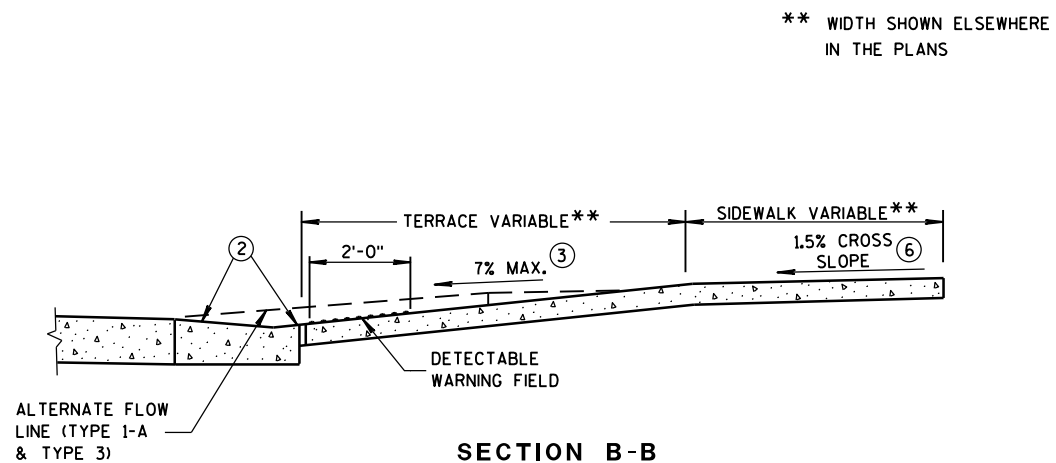
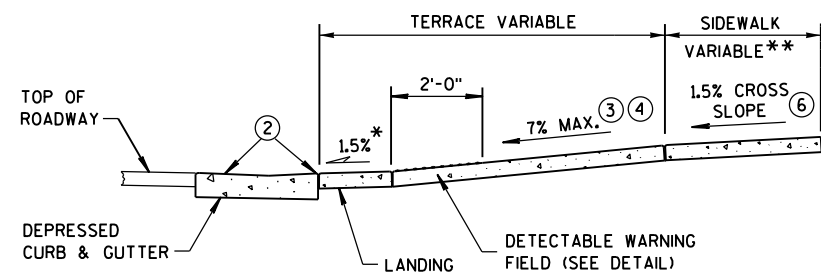
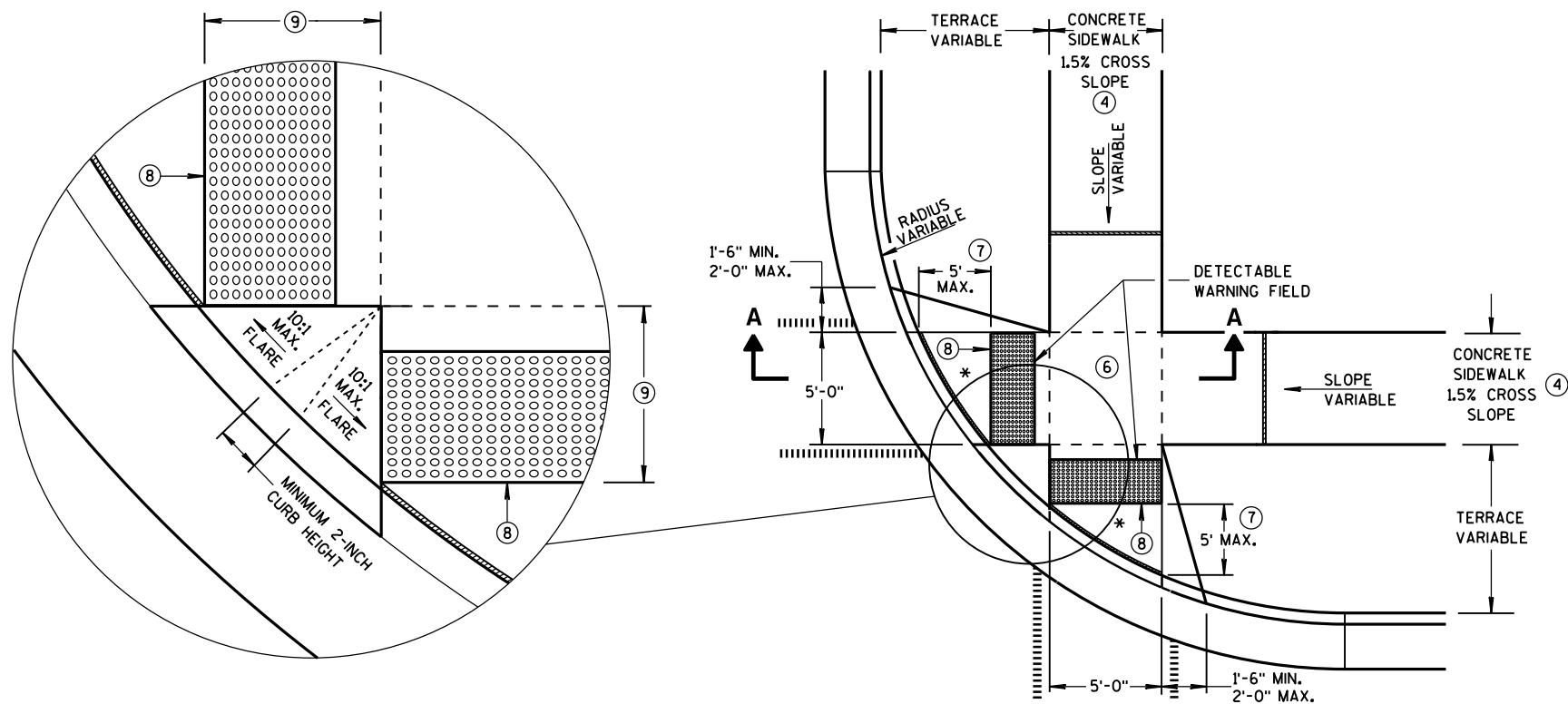
- ① THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB. POINT LOCATION MAY BE ADJUSTED TO ALIGN WITH BEGINNING OF FULL-HEIGHT CURB IF THIS DISTANCE IS SHORT.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑤ PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

LEGEND

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

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



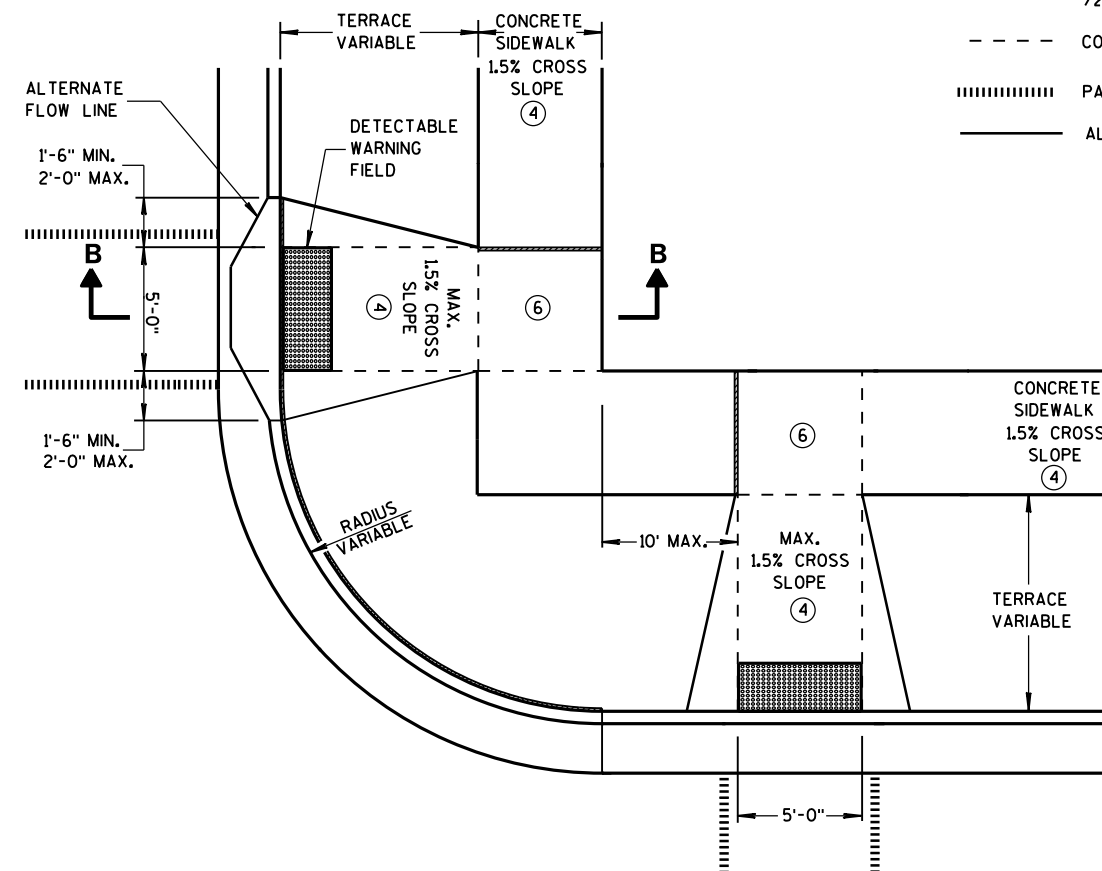
GENERAL NOTES

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

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑨ WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. CONSTRUCT 2-INCH MINIMUM CURB HEIGHT BETWEEN 10:1 FLARES.

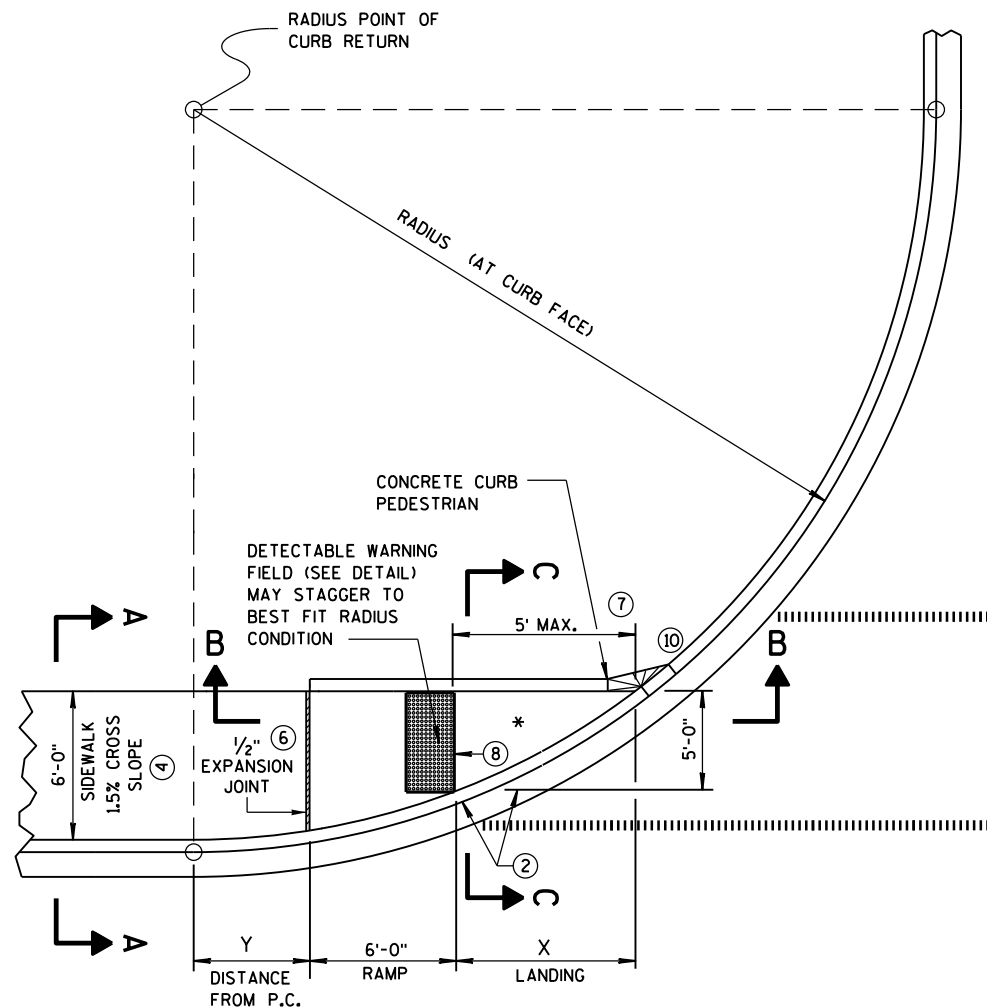
LEGEND

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

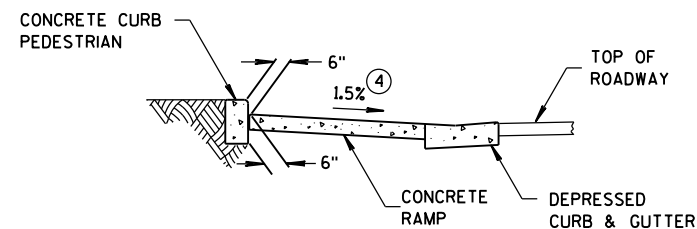


CURB RAMPS
TYPES 2 AND 3

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

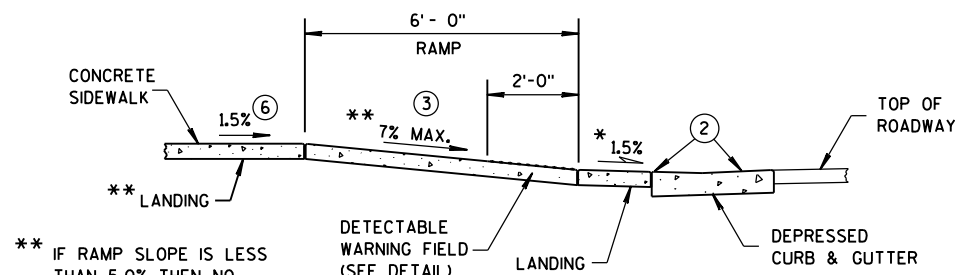


CURB RAMP TYPE 4A
PLAN VIEW



SECTION C-C FOR TYPE 4A

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

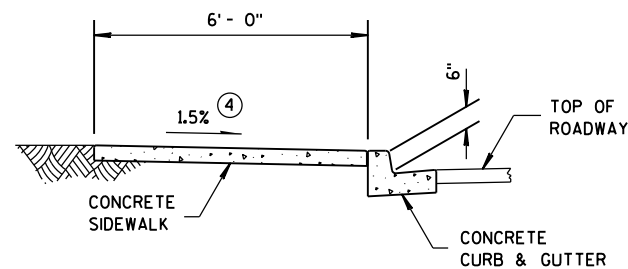


SECTION B-B FOR TYPE 4A

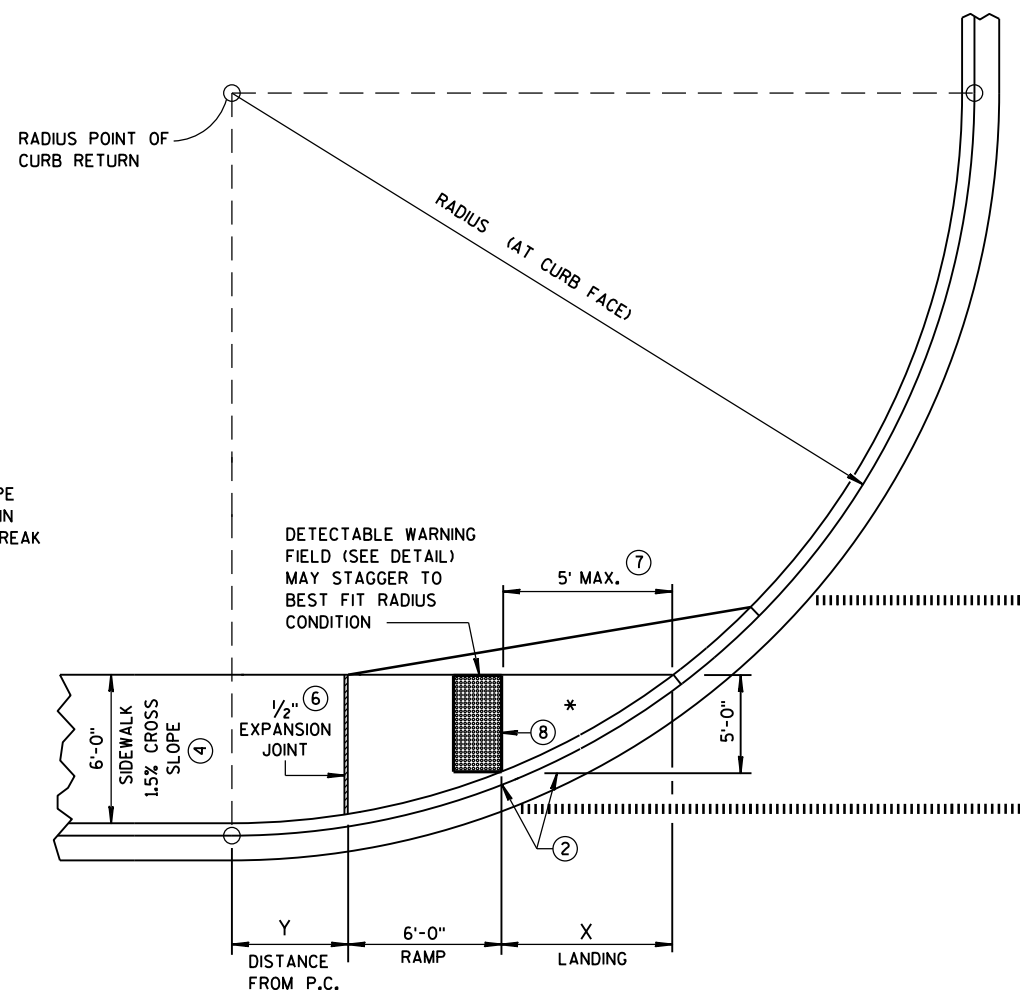
** IF RAMP SLOPE IS LESS
THAN 5.0%, THEN NO
ADJACENT UPHILL LANDING
IS REQUIRED

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

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A



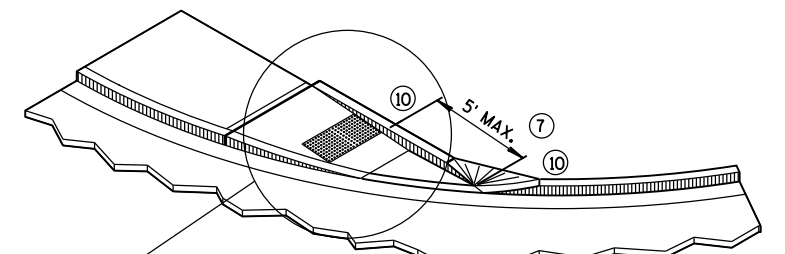
CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

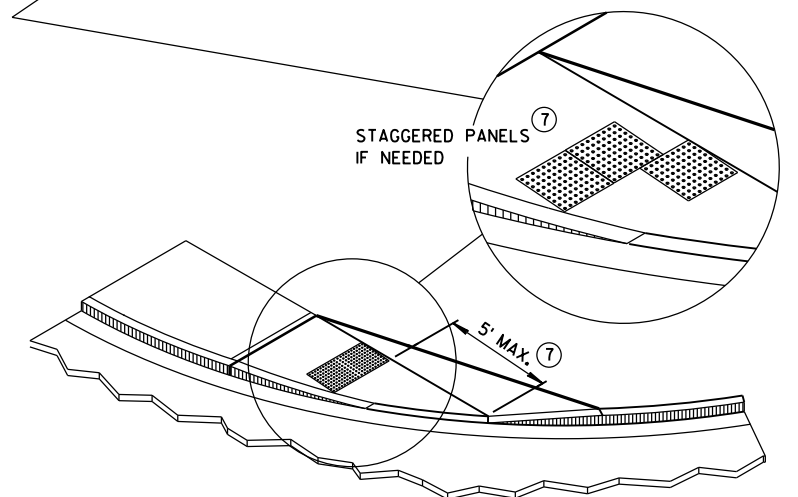
AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

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

- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ $\pm 0.5\%$ CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑦ WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
- ⑧ PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



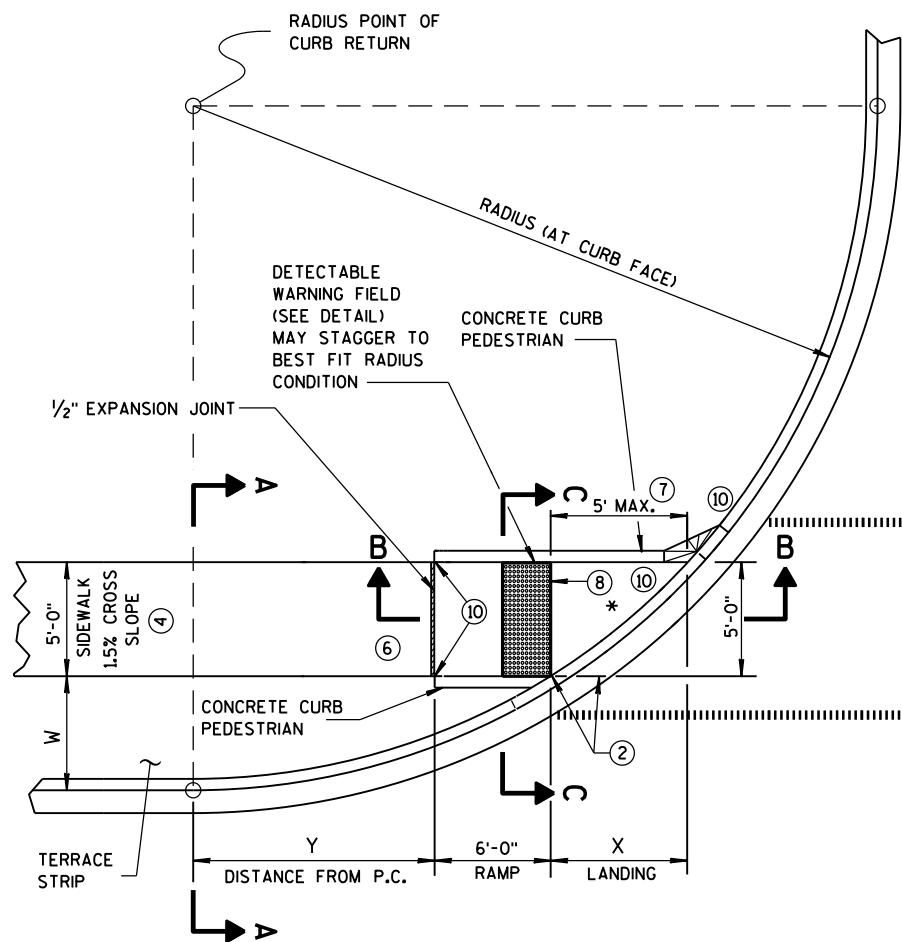
ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

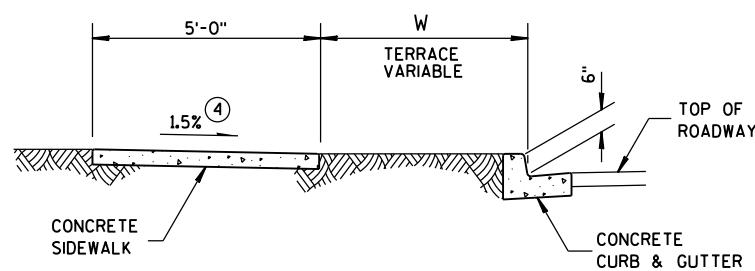
- 1/2" EXPANSION JOINT-SIDEWALK
- - - CONTRACTION JOINT FIELD LOCATED
- ||||| PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS
TYPES 4A AND 4A1

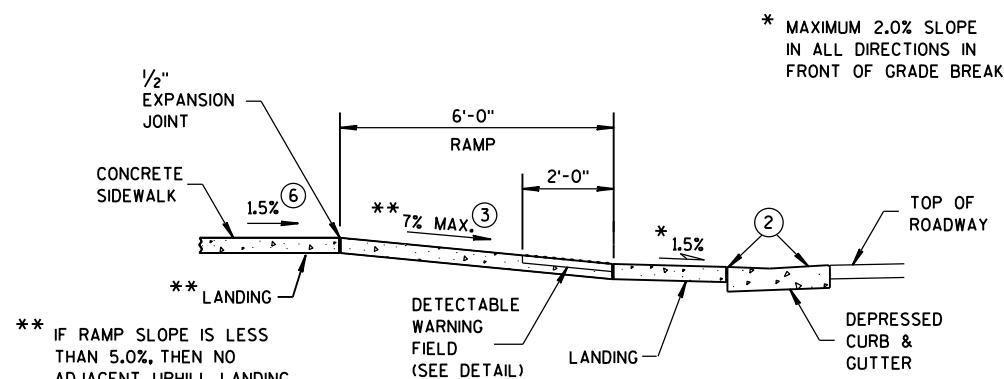
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION



**CURB RAMP TYPE 4B
PLAN VIEW**



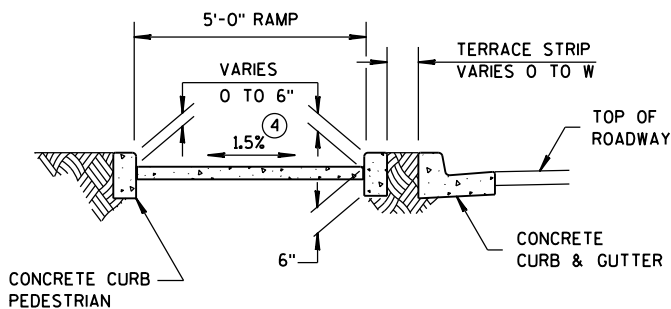
SECTION A-A FOR TYPE 4B



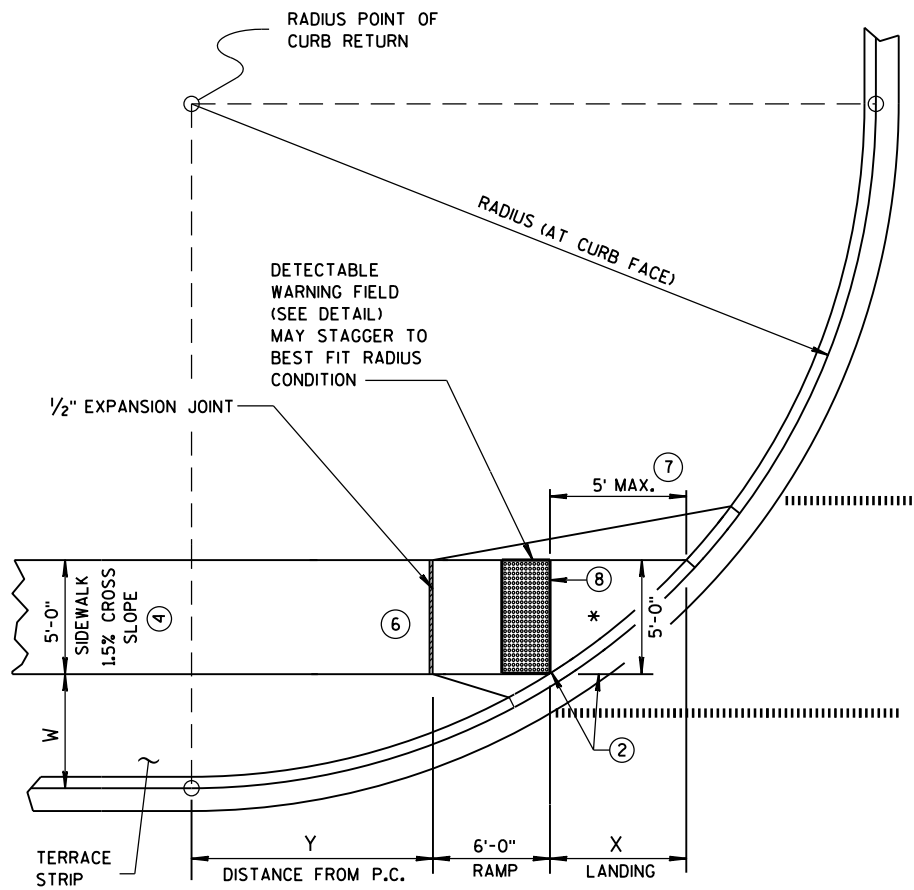
SECTION B-B FOR TYPE 4B

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

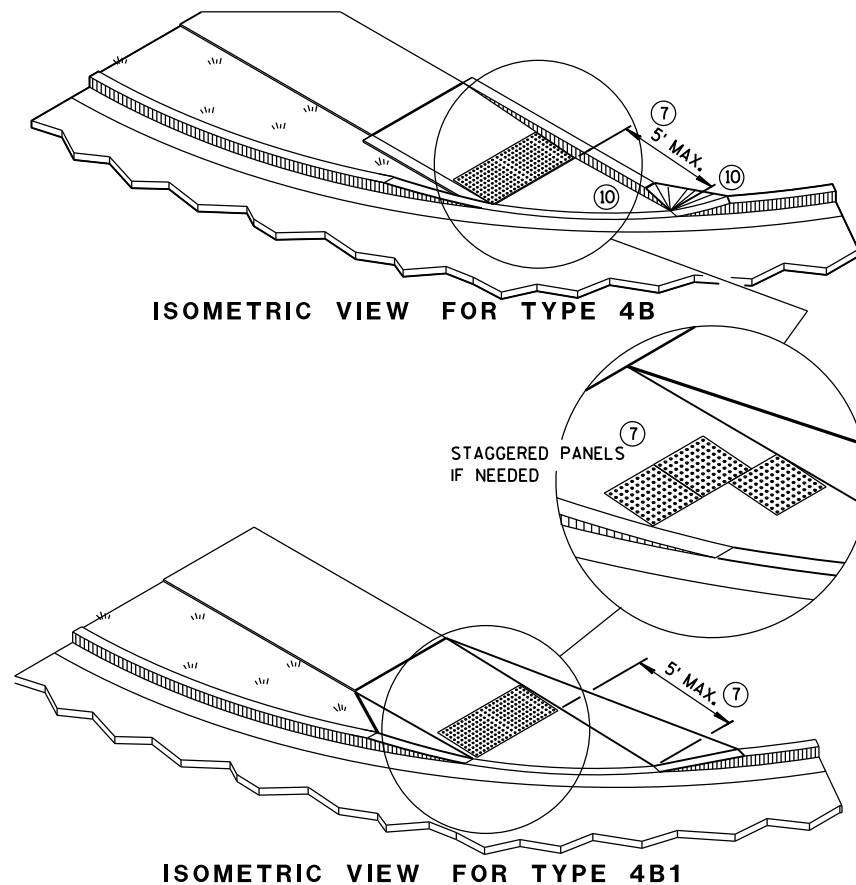
- LEGEND**
- 1/2" EXPANSION JOINT-SIDEWALK
 - CONTRACTION JOINT FIELD LOCATED
 - PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B



**CURB RAMP TYPE 4B1
PLAN VIEW**



**CURB RAMPS
TYPE 4B AND 4B1**

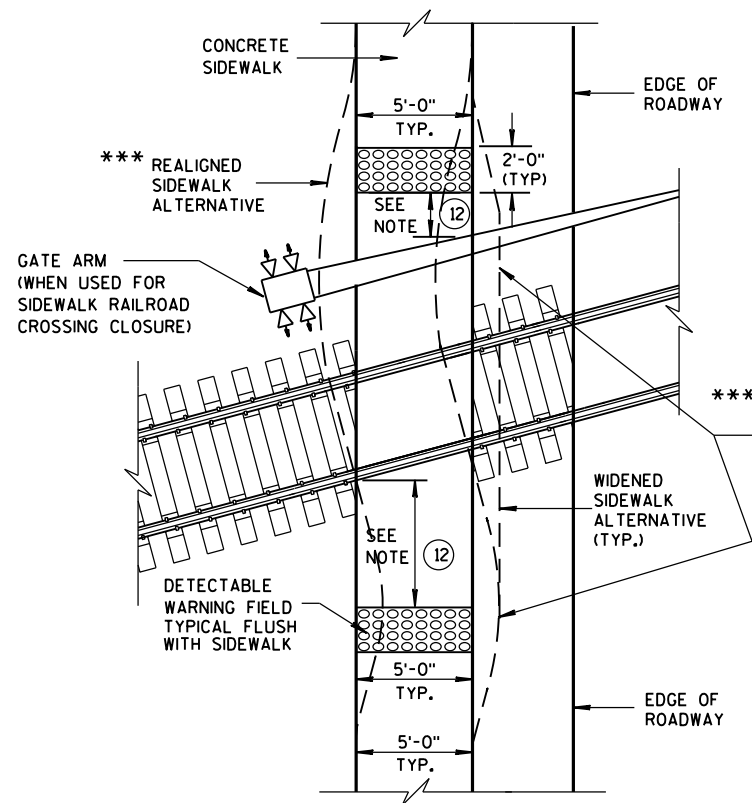
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

GENERAL NOTES

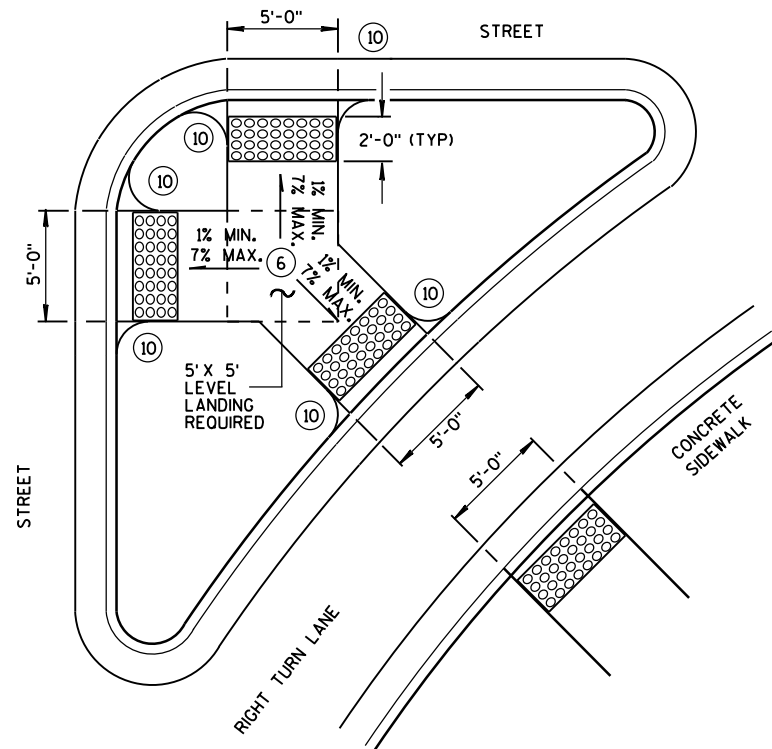
INTERMEDIATE RADII CAN BE INTERPOLATED

- AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS. DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
 - ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
 - ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
 - PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
 - WHEN THIS DISTANCE EXCEEDS 5 FEET, STAGGER ADDITIONAL DETECTABLE WARNING PANEL FORWARD TO REDUCE THIS DISTANCE. PROVIDE MINIMUM 12-INCH ROW OVERLAP TO AVOID SIDESTEP OF DOME DETECTION. USE EQUAL-SIZE PANELS TO DEVELOP OVERLAPPING, STAGGERED ROWS. ALIGN DOMES BETWEEN OVERLAPPING ROWS AND IN DIRECTION OF PEDESTRIAN TRAVEL.
 - PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.
 - INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

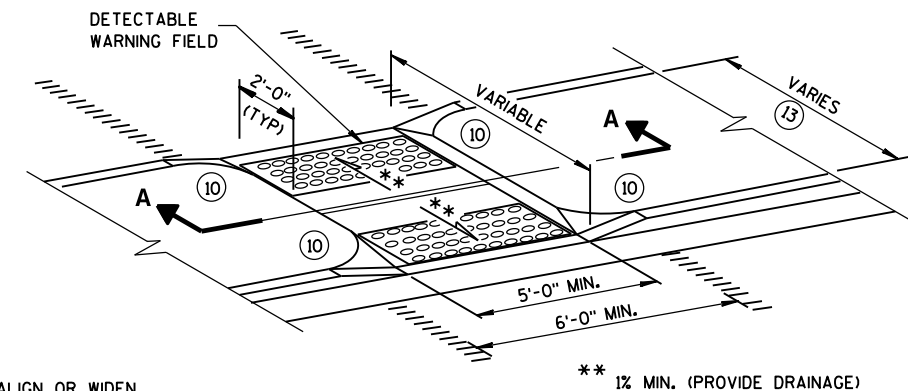


TYPE 8
DETECTABLE WARNINGS
AT RAILROAD CROSSING

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

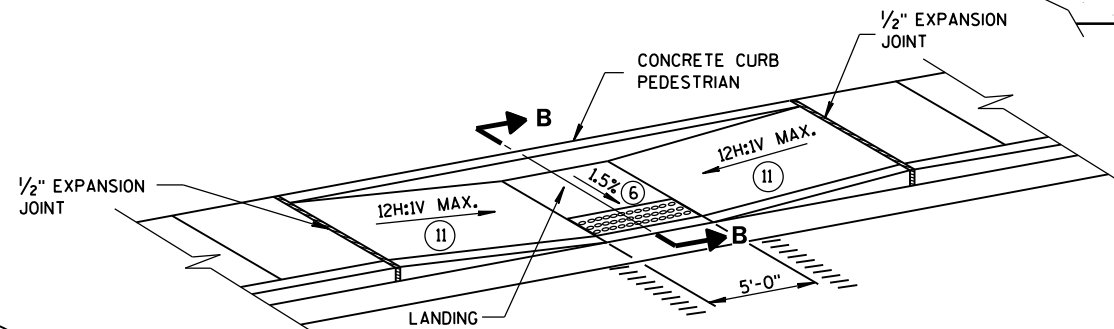


TYPE 6
DETECTABLE WARNING AT ISLANDS

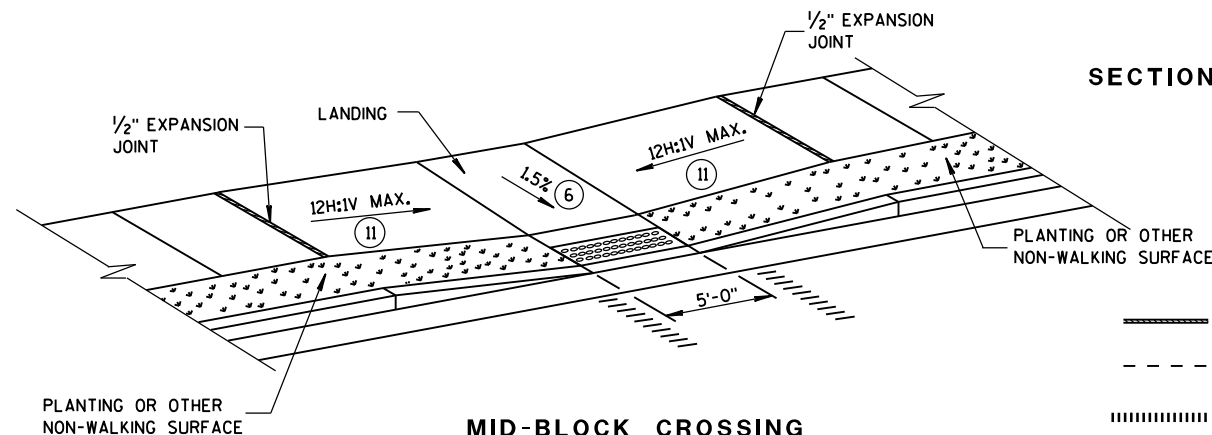


MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

*** DETAILS TO BE DETERMINED
BY DESIGNER



MID-BLOCK CROSSING
TYPE 7A

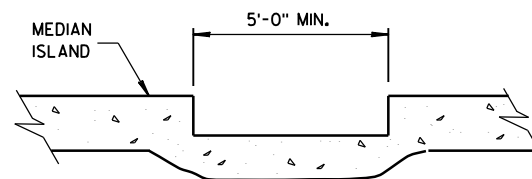


MID-BLOCK CROSSING
TYPE 7B

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

GENERAL NOTES

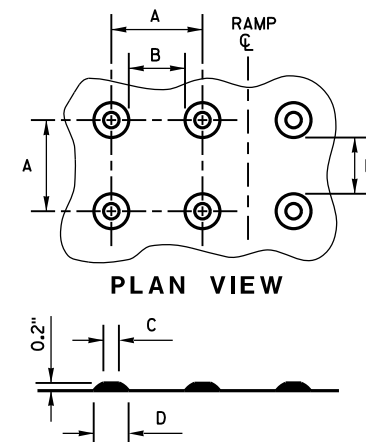
- SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.
- DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.
- ② GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE LONGITUDINAL DRAINAGE AROUND CURB AND AWAY FROM CURB RAMP. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED. SLOPE OF CURB HEAD OPENING SHALL NOT EXCEED 7%.
- ③ ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.
- ④ ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.
- ⑥ PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET.
- ⑩ INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.
- ⑪ SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.
- ⑫ THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.
- ⑬ DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



SECTION A-A

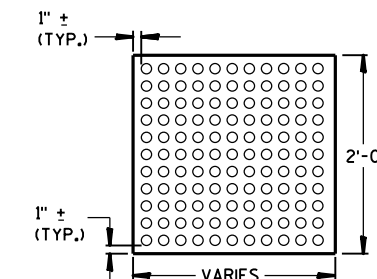
	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

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



ELEVATION VIEW

TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



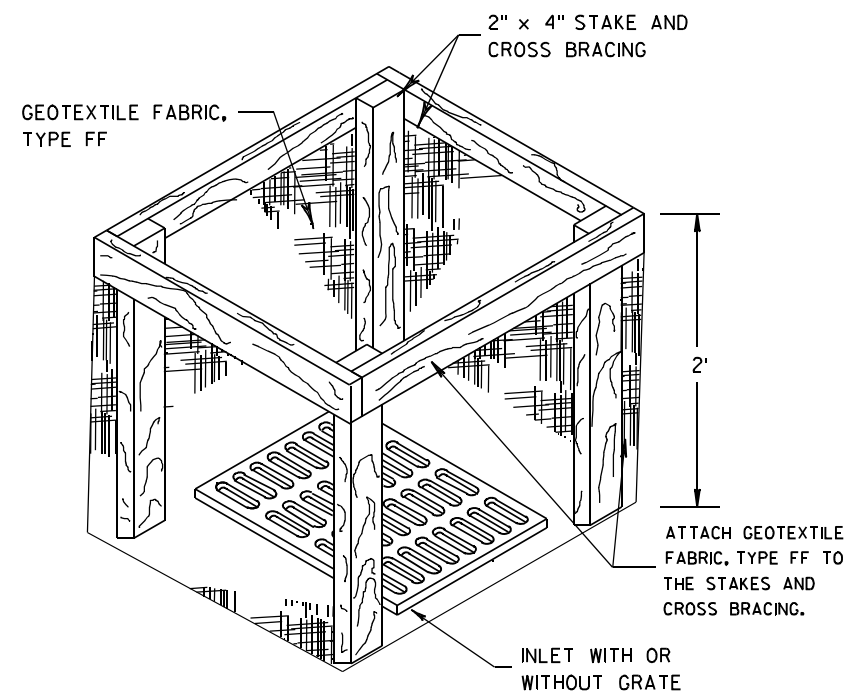
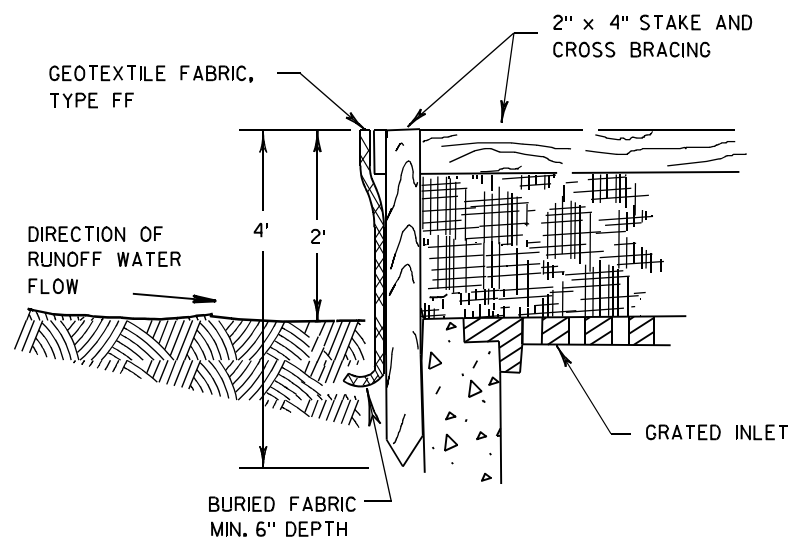
PLAN VIEW
DETECTABLE WARNING
FIELD (TYPICAL)

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

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

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Rodney Taylor
DATE ROADWAY STANDARDS DEVELOPMENT
FHWA UNIT SUPERVISOR



INLET PROTECTION, TYPE A

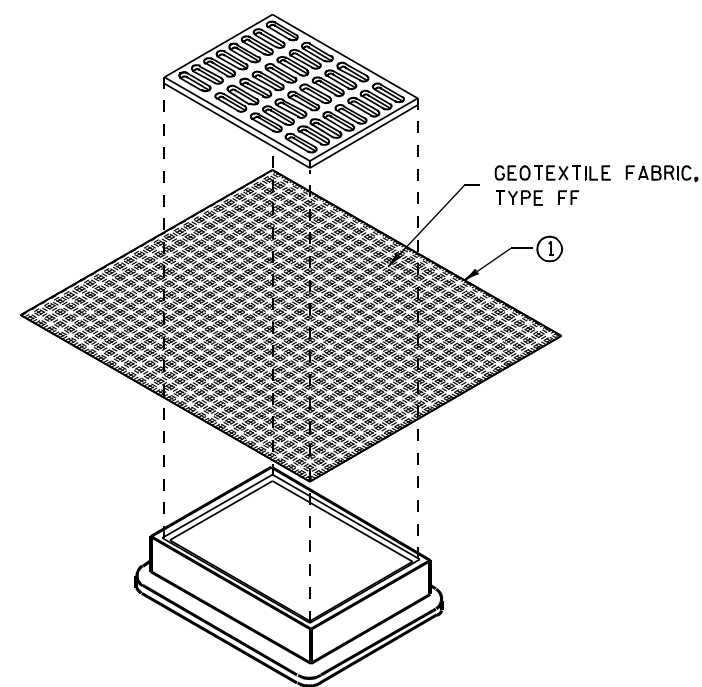
GENERAL NOTES

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

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

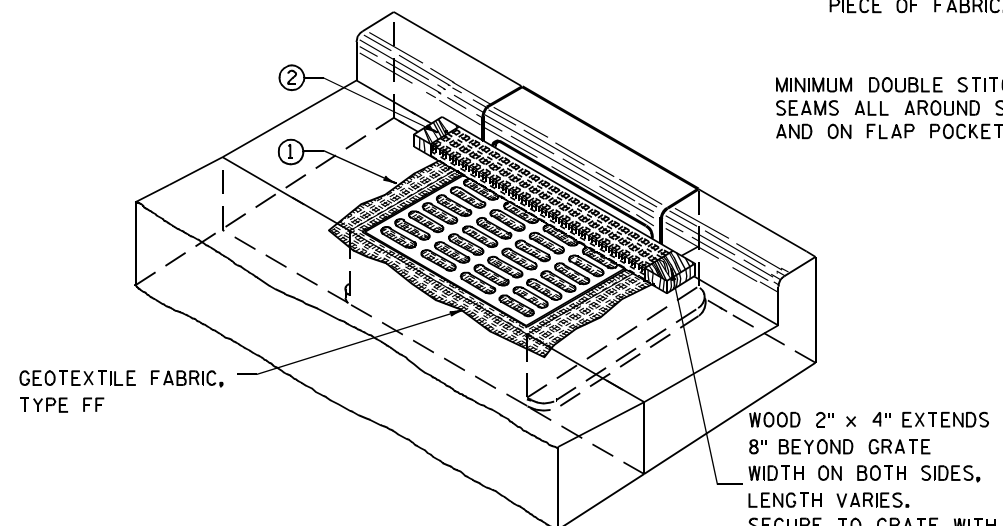
WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

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



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

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



INLET PROTECTION, TYPE C (WITH CURB BOX)

INSTALLATION NOTES

TYPE B & C

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

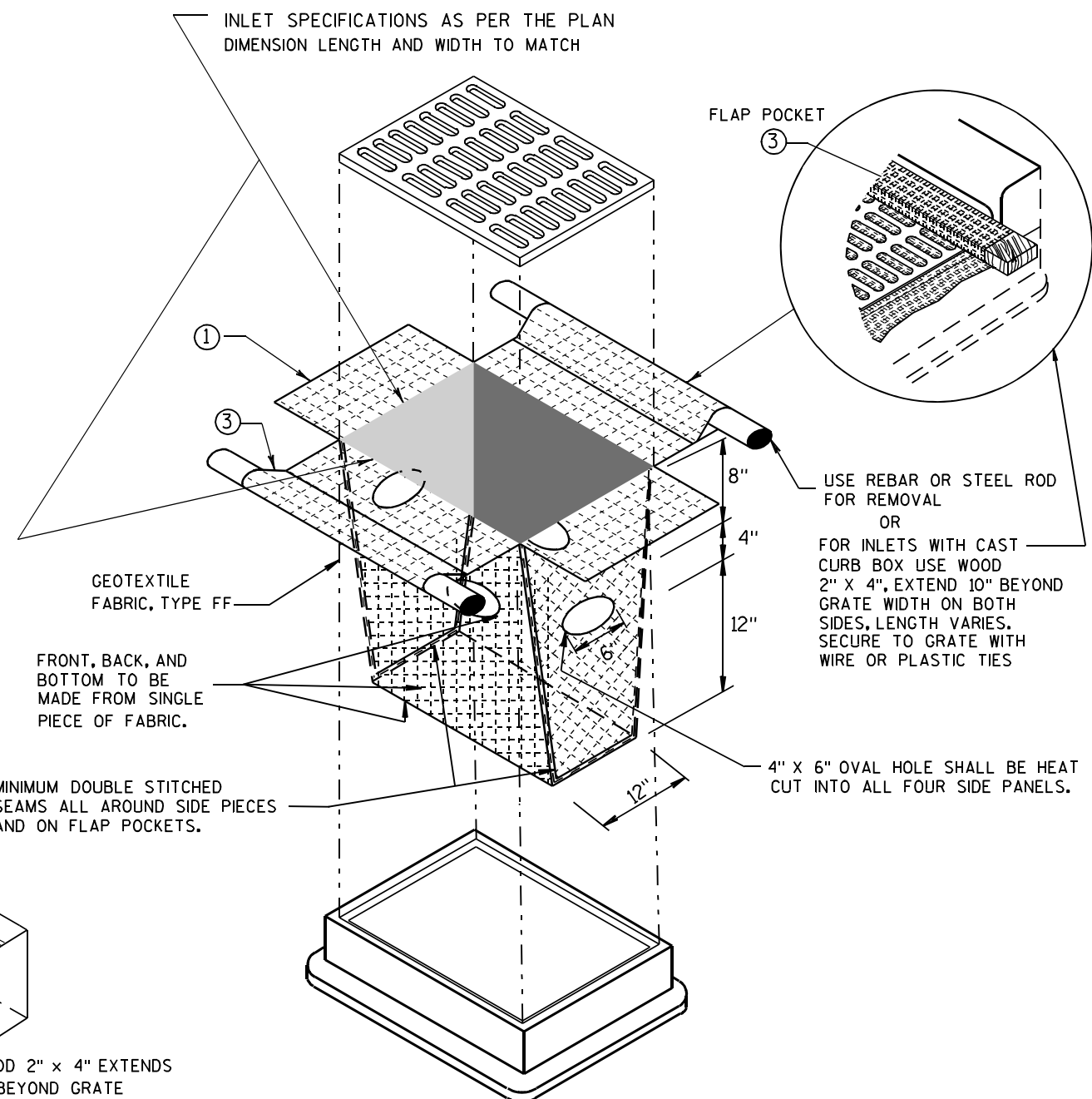
THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

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

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

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



INLET PROTECTION, TYPE D

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

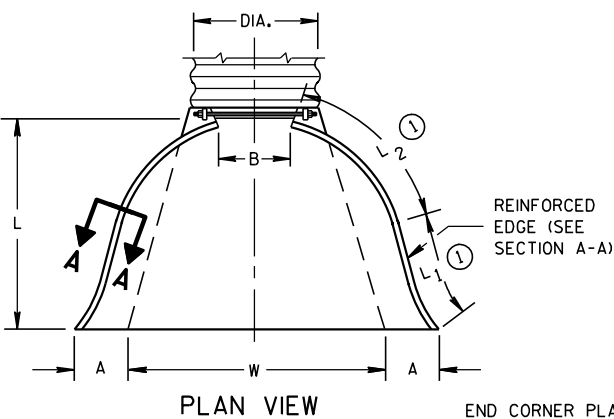
**INLET PROTECTION
TYPE A, B, C, AND D**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

METAL APRON ENDWALLS												
PIPE DIA. (IN.)	MIN. THICK. (Inches)		DIMENSIONS (Inches)							APPROX. SLOPE		BODY
	STEEL	ALUM.	A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")			
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2	Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2	Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3	Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3	Pc.
60	.109x	.105x	18	33	12	87	—	—	114	2 to 1	3	Pc.
66	.109x	.105x	18	36	12	87	—	—	120	2 to 1	3	Pc.
72	.109x	.105x	18	39	12	87	—	—	126	2 to 1	3	Pc.
78	.109x	.105x	18	42	12	87	—	—	132	1 1/2 to 1	3	Pc.
84	.109x	.105x	18	45	12	87	—	—	138	1 1/2 to 1	3	Pc.
90	.109x	.105x	18	37	12	87	—	—	144	1 1/2 to 1	3	Pc.
96	.109x	.105x	18	35	12	87	—	—	150	1 1/2 to 1	3	Pc.

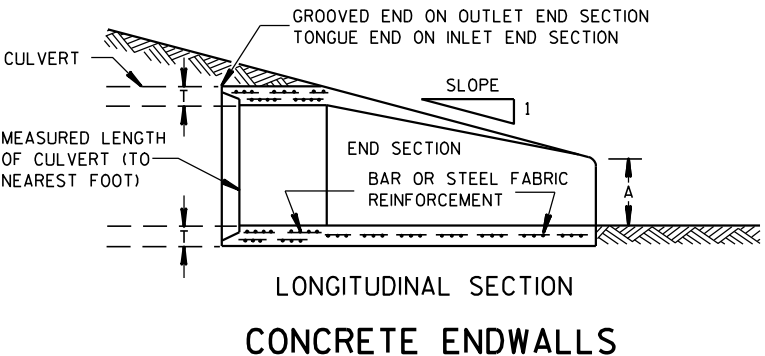
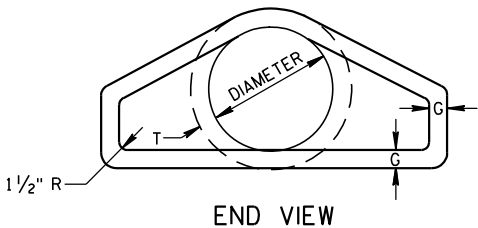
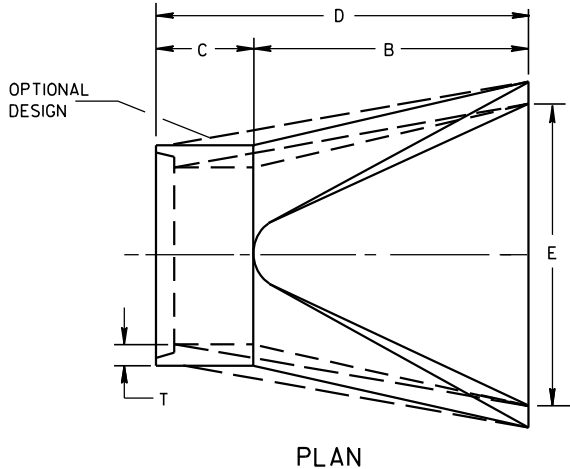
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



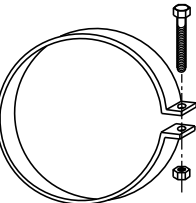
SIDE ELEVATION
METAL ENDWALLS

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

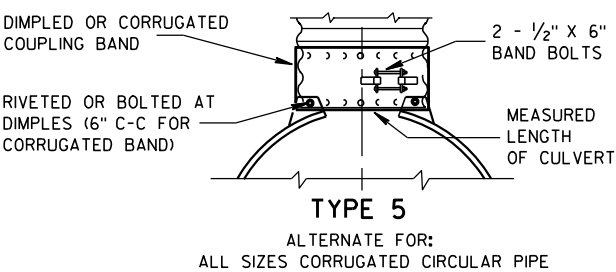
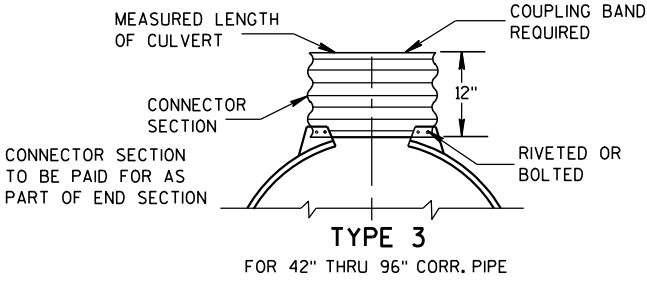
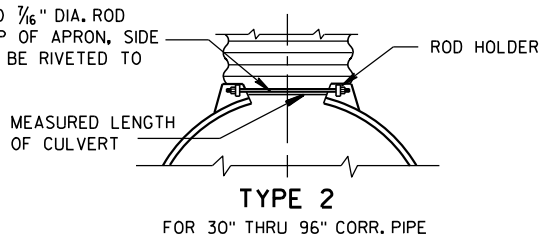
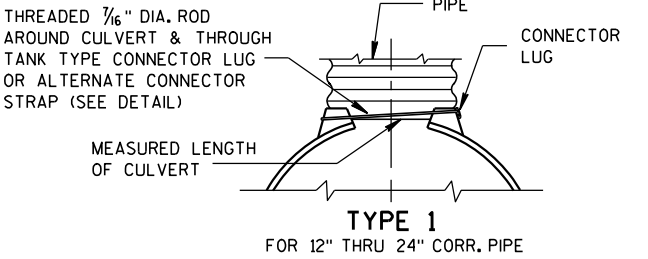
* MINIMUM
** MAXIMUM



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



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



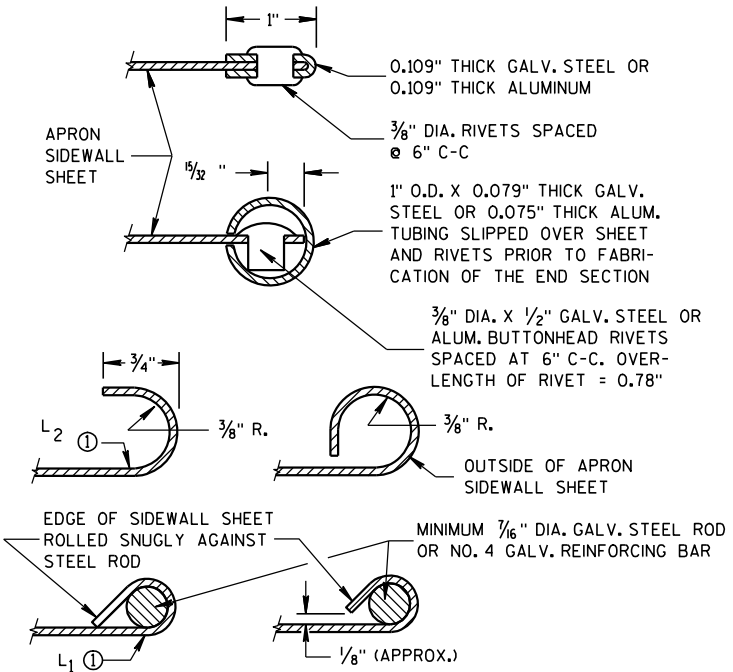
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.
DIMPLED BAND MAY BE USED WITH HELICALLY
CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



GENERAL NOTES

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

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

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

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

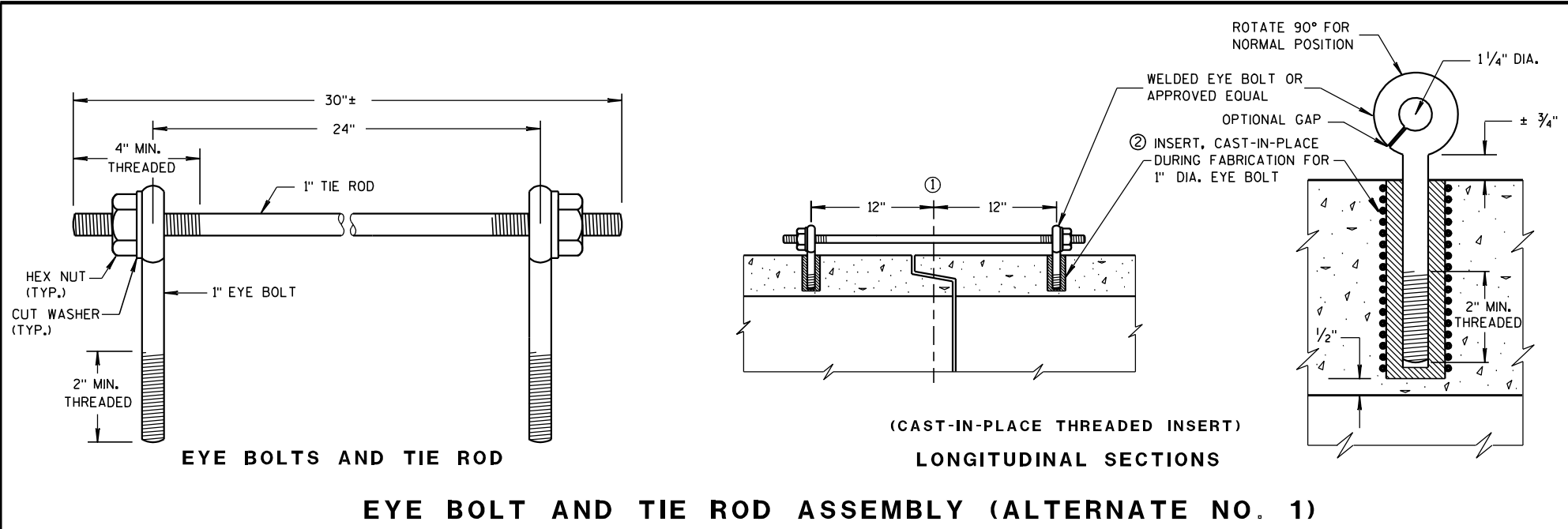
WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT
TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT
TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

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

APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



GENERAL NOTES

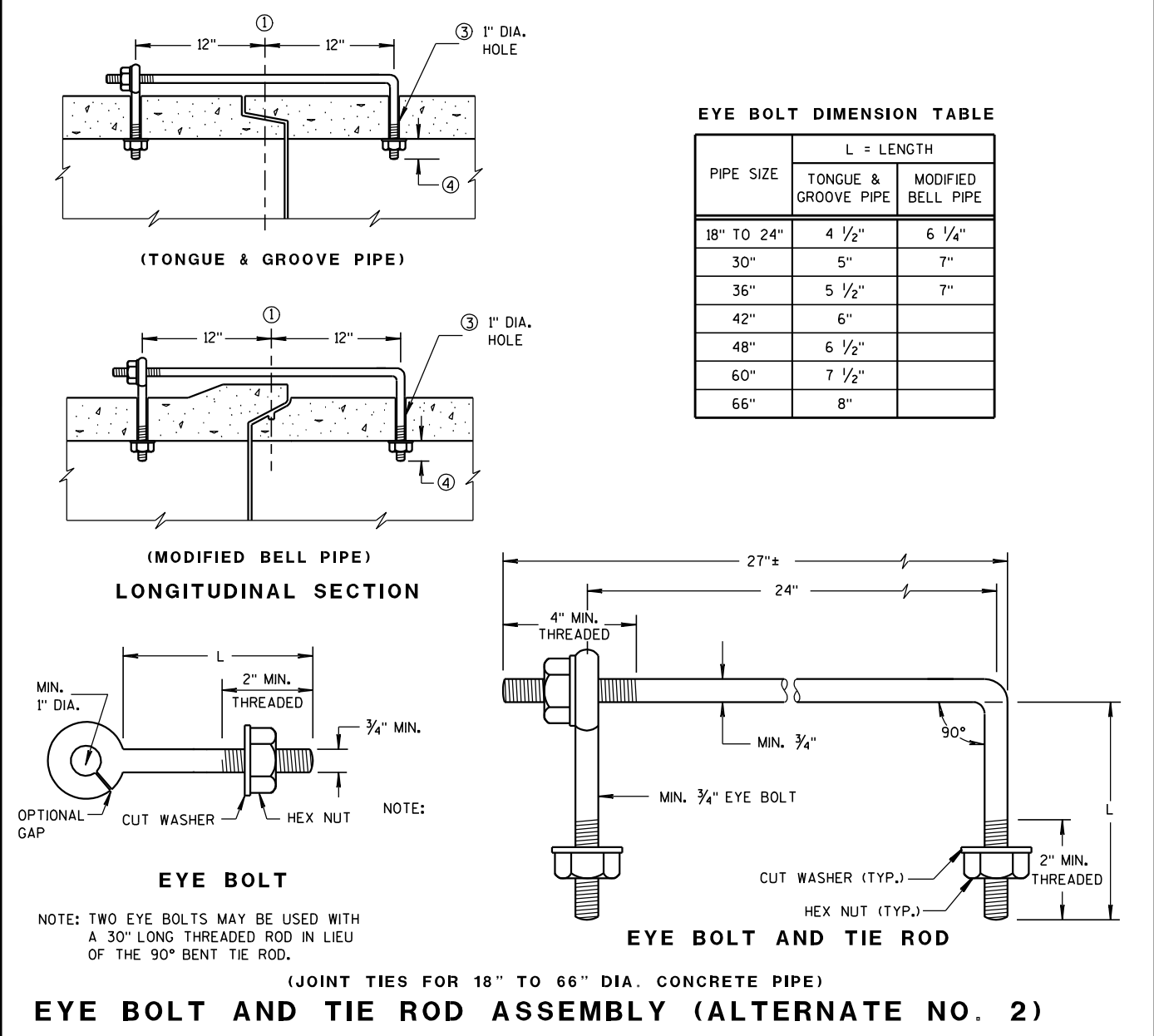
DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

- ① ϕ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.
- ② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.
- ③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ϕ OF TONGUE AND GROOVE.
- ④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.
- ⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.
- ⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



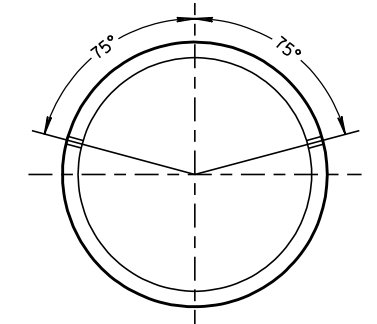
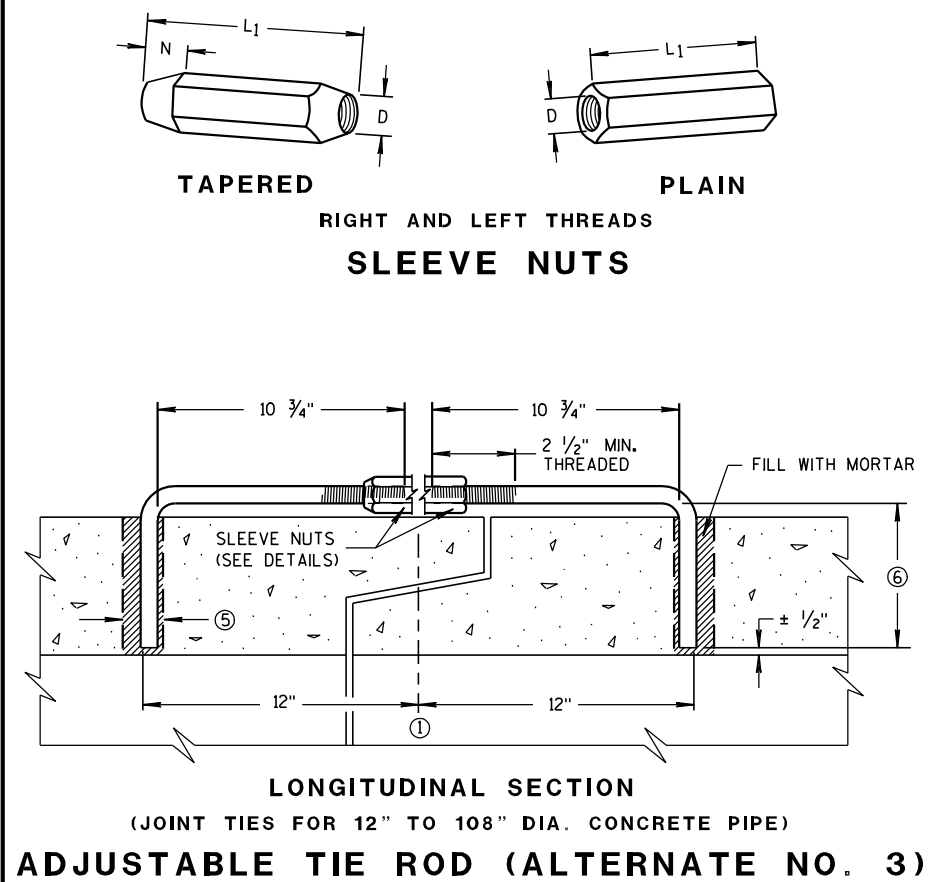
EYE BOLT DIMENSION TABLE

PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	

ADJUSTABLE TIE ROD TABLE

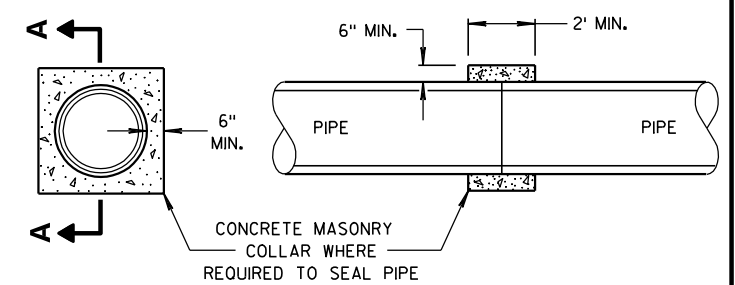
PIPE DIAMETER	TIE ROD DIAMETER	D	L ₁	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



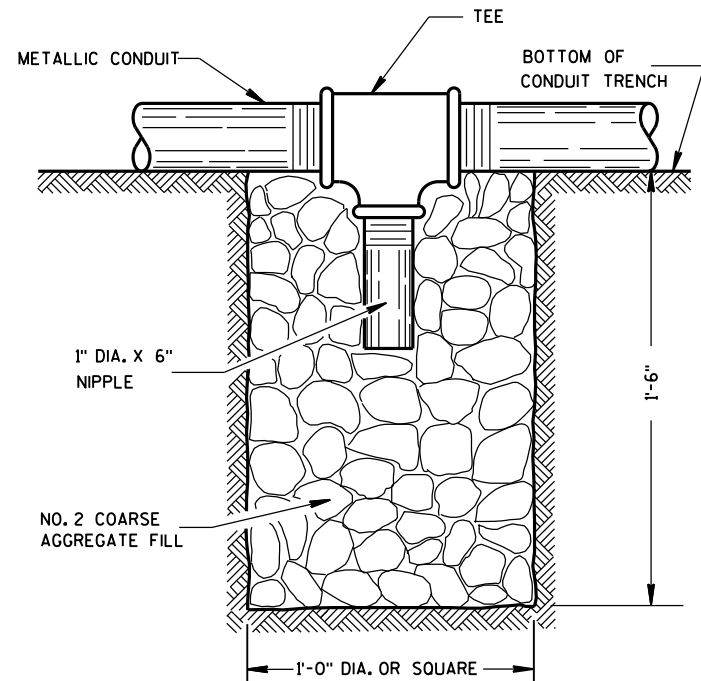
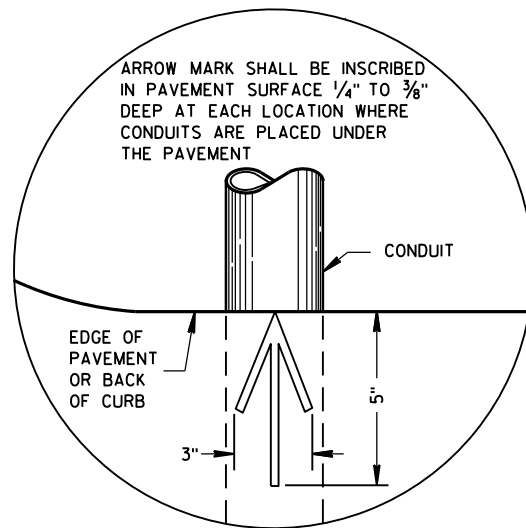
SECTION A-A

CONCRETE COLLAR DETAIL

JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

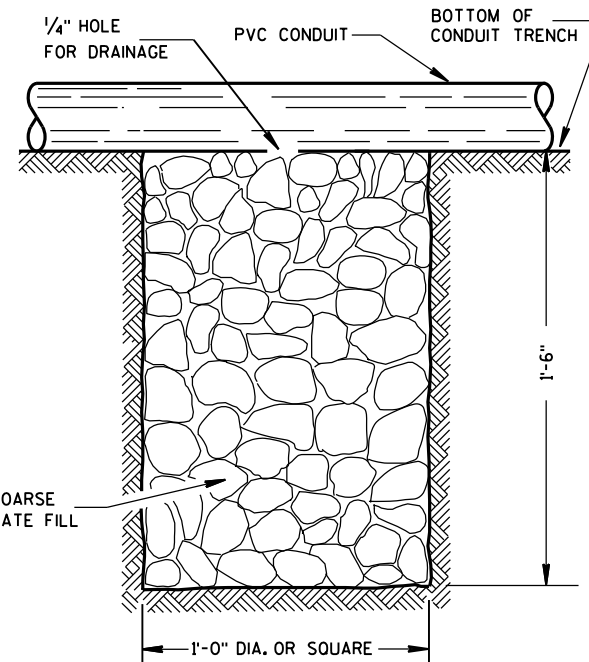
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 /S/ Jerry H. Zogg
DATE ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS
CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS
CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

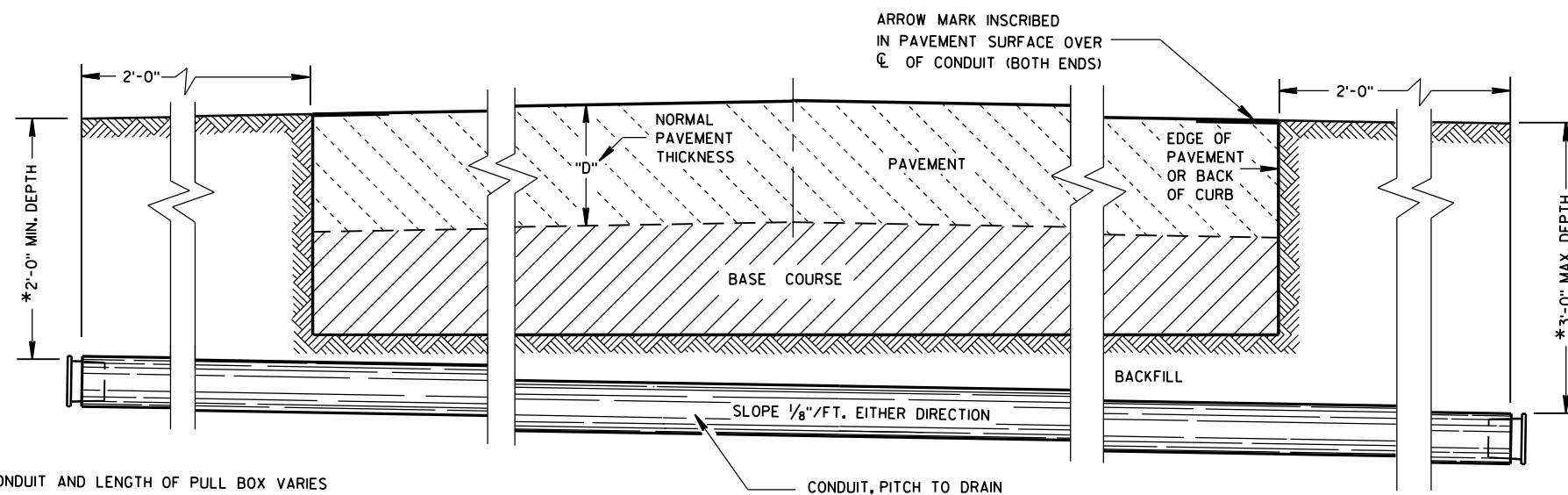
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES
WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION
DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED June, 2015 <hr/> DATE	/S/ Ahmet Demirbilek <hr/> STATE ELECTRICAL ENGINEER
FHWA	

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

DIMENSION IN INCHES		CORRUGATED STEEL PIPE								
PIPE DIAMETER (INSIDE)	A	12	12	12	18	18	18	24	24	24
PIPE LENGTH **	B	24	30	36	24	30	36	36	42	48
WALL THICKNESS	C	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064	0.064
COVER	D	10 1/4	10 1/4	10 1/4	16 1/4	16 1/4	16 1/4	22 1/4	22 1/4	22 1/4
FRAME	E	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2	26 1/2	26 1/2	26 1/2
FRAME	F	8 1/2	8 1/2	8 1/2	14 1/2	14 1/2	14 1/2	20 1/2	20 1/2	20 1/2
FRAME	G	11 1/2	11 1/2	11 1/2	17 1/2	17 1/2	17 1/2	23 1/2	23 1/2	23 1/2
WEIGHT IN POUNDS *										
FRAME AND COVER		60	60	60	110	110	110	155	155	155

* THE ACTUAL WEIGHT OF THE MANHOLE FRAME AND COVER MAY VARY WITHIN 5 PERCENT PLUS OR MINUS OF THE WEIGHTS SHOWN.

** NORMALLY USED LENGTHS. THE PROJECT ENGINEER SHALL DETERMINE IF PIPE LENGTHS, OTHER THAN THOSE SPECIFIED, SHALL BE USED, TO A MAXIMUM OF 48" (CONTINUOUS LENGTH, NON-SPLICED). THE ADDITIONAL LENGTH SHALL BE INCIDENTAL TO THE PULL BOX BID PRICE.

GENERAL NOTES

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

ALL FRAMES AND COVERS SHALL BE HEAVY DUTY TYPE, SUITABLE FOR VEHICULAR TRAFFIC LOADS.

PULL BOXES LOCATED IN THE ROADWAYS SHALL HAVE LOCKING COVERS.

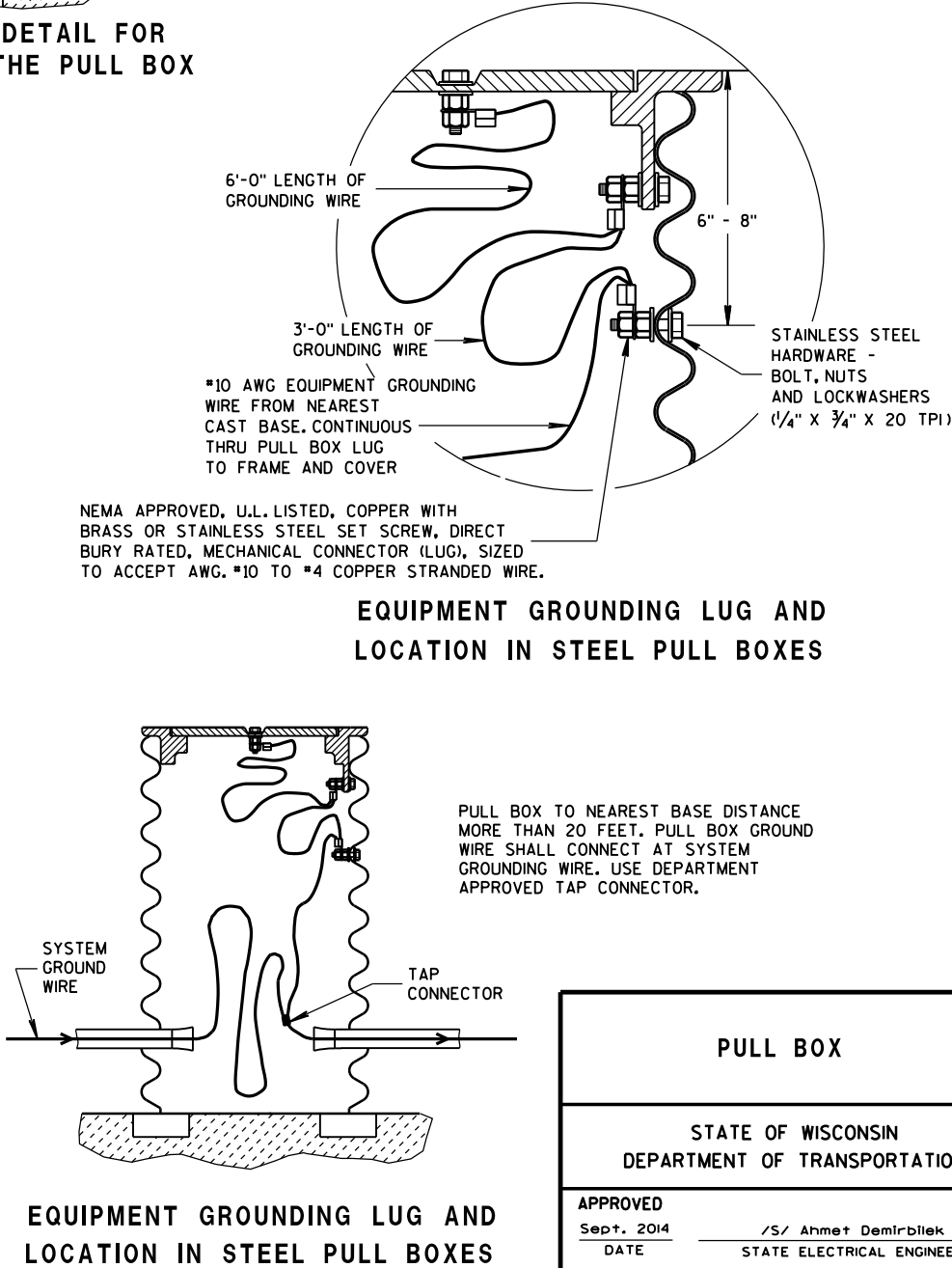
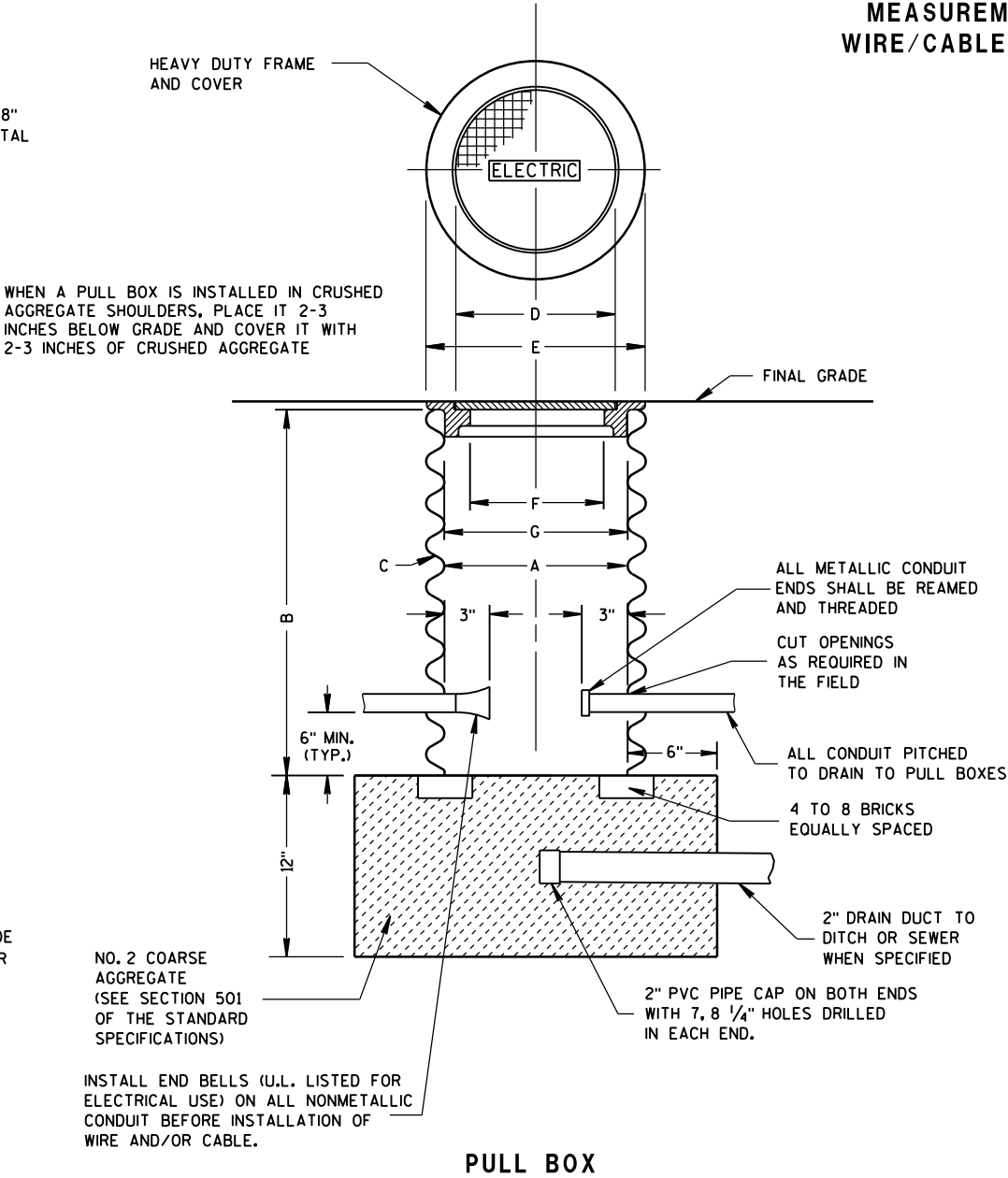
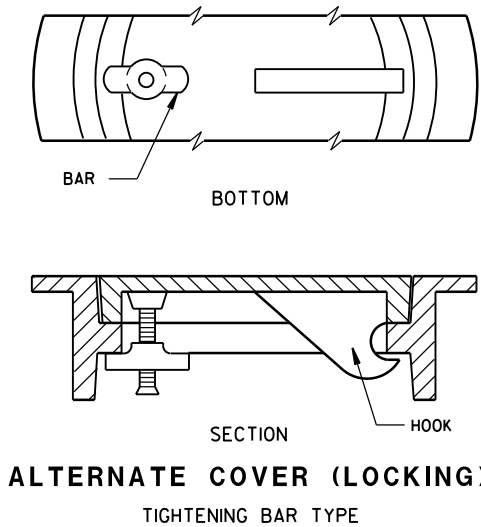
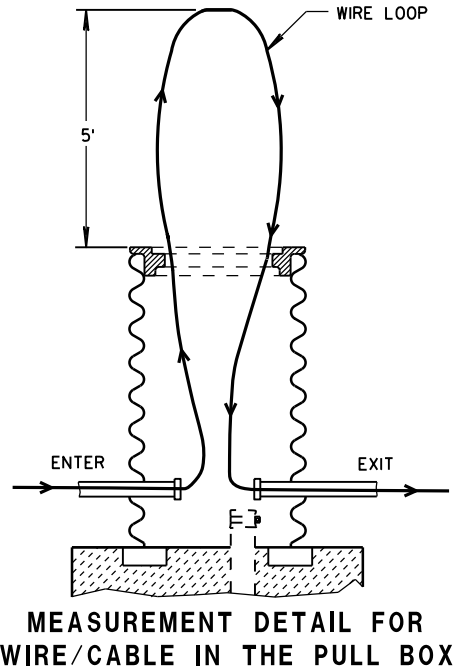
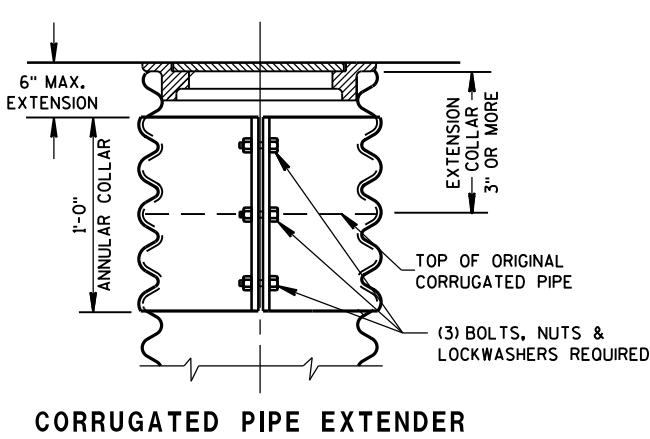
ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

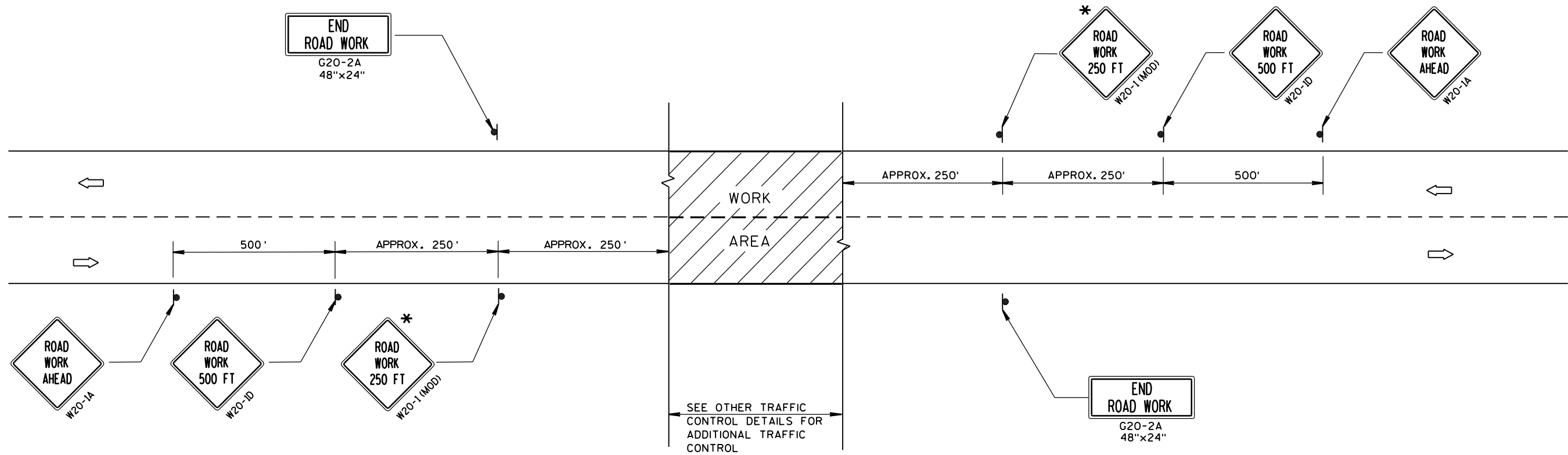
THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED AND APPROVED FOR USE WITH COPPER WIRE.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

WHEN PULL BOXES ARE INSTALLED FOR FUTURE USE, DO NOT INSTALL THE EQUIPMENT GROUNDING LUG. THE EQUIPMENT GROUNDING LUG, THE EQUIPMENT GROUNDING ELECTRODE AND THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE REQUIRED AND INSTALLED UNDER A FUTURE WIRING CONTRACT.





TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL

GENERAL NOTES

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

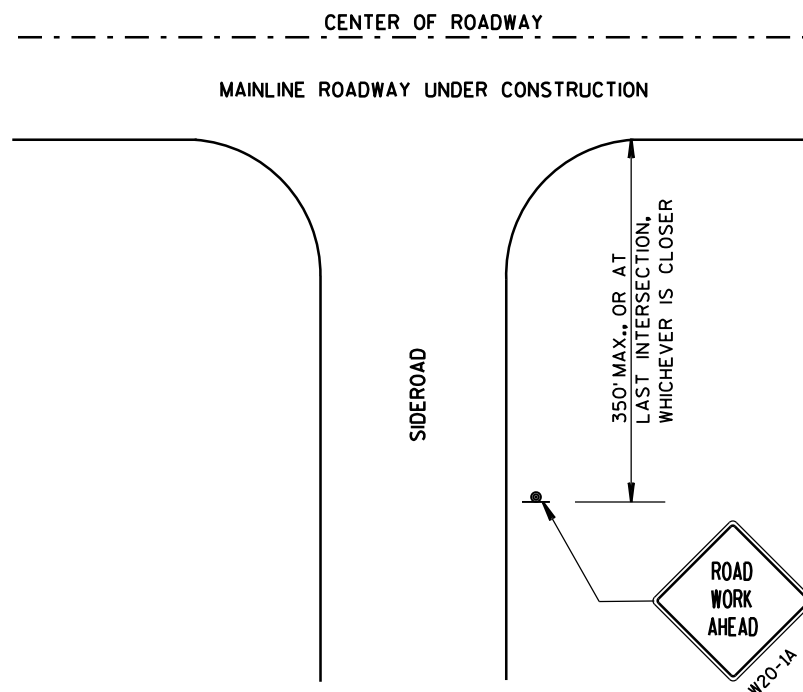
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED. IF NECESSARY DUE TO SPACE CONSTRAINTS, 36"x36" SIGNS MAY BE USED INSTEAD OF 48"x48" SIGNS.

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

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

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



LEGEND

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

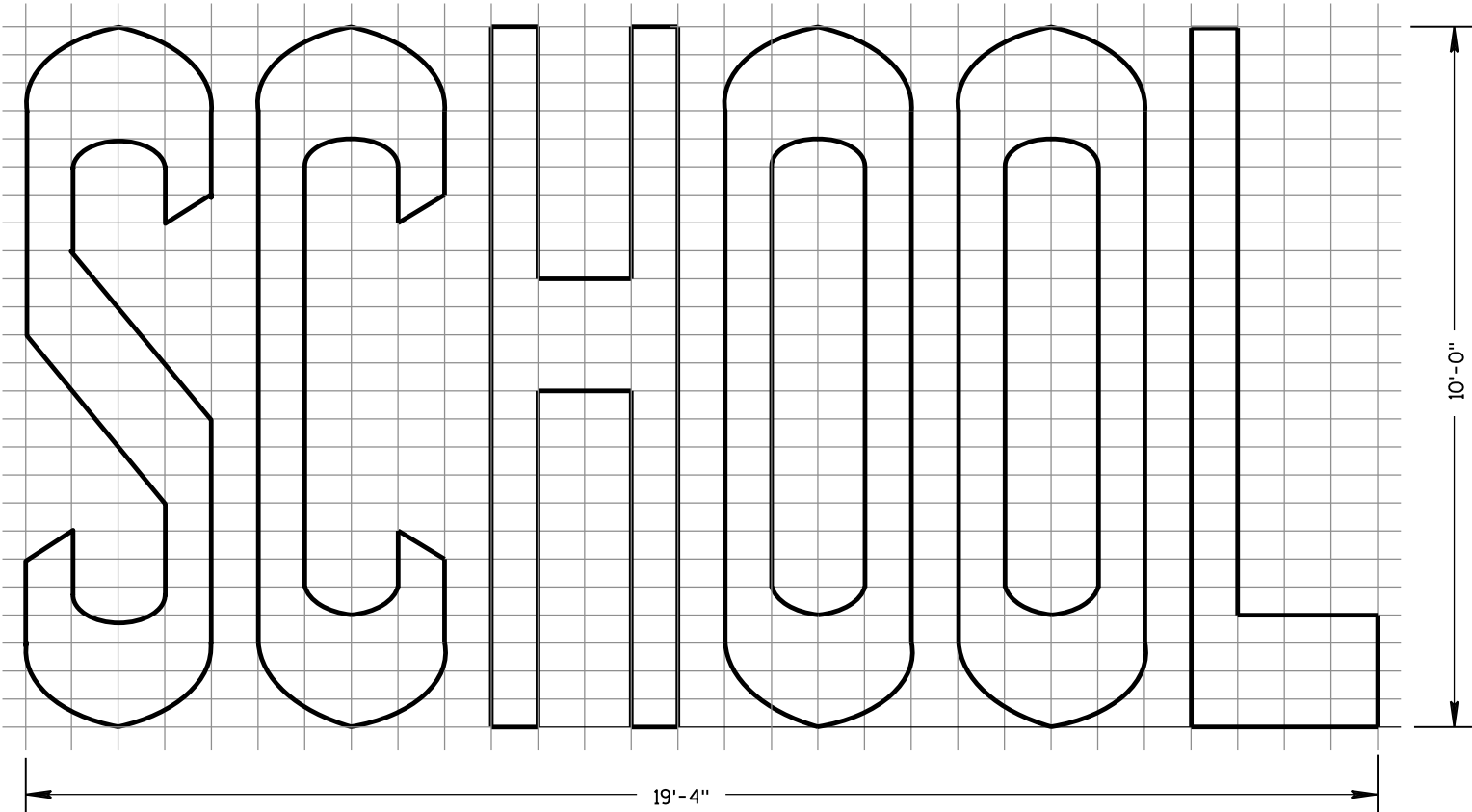
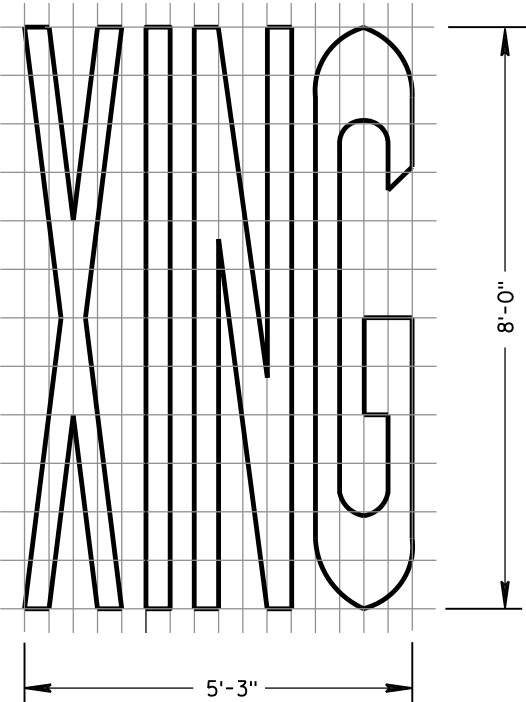
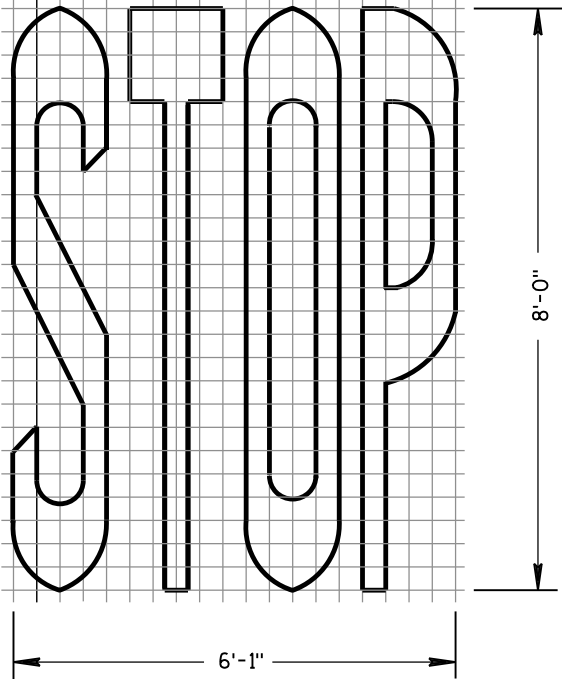
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 40 M.P.H.
OR LESS TWO-WAY UNDIVIDED
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

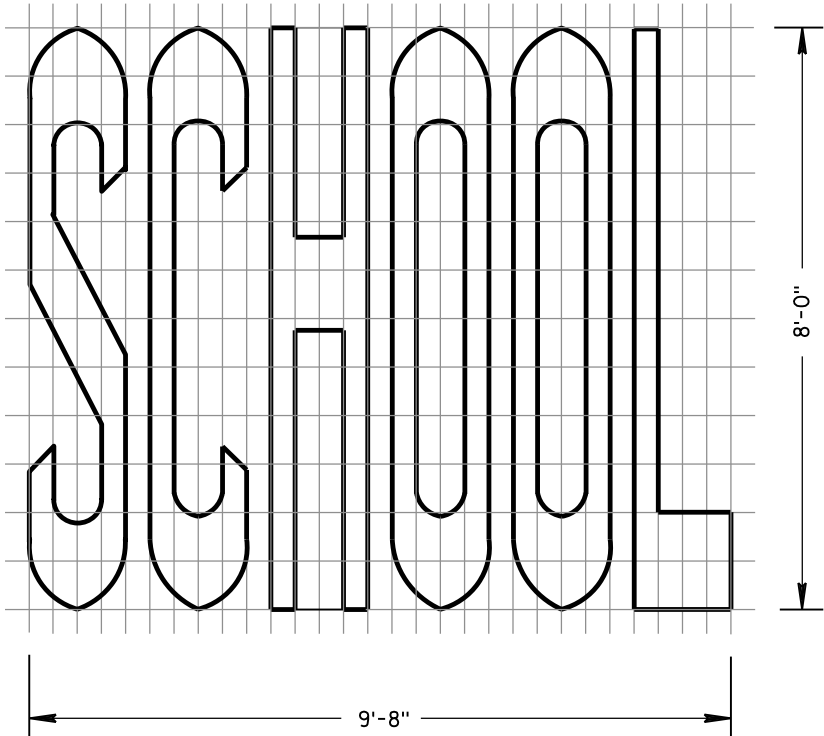
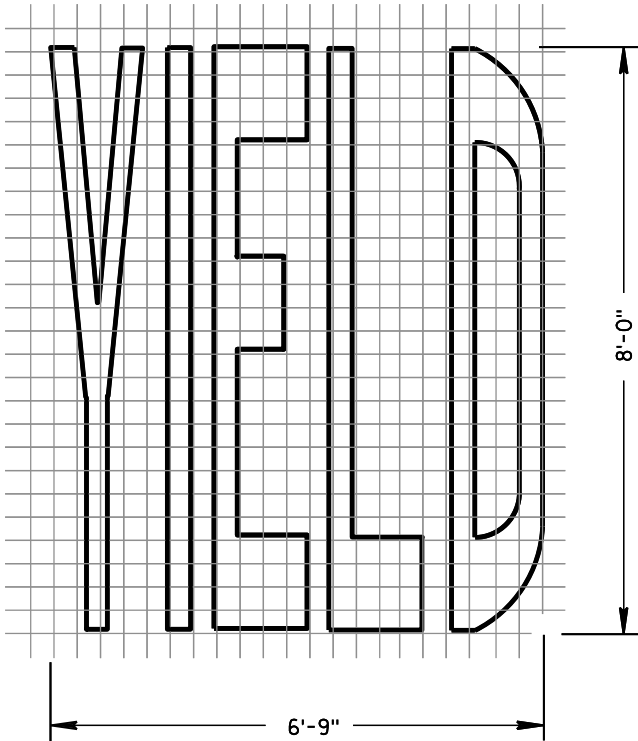
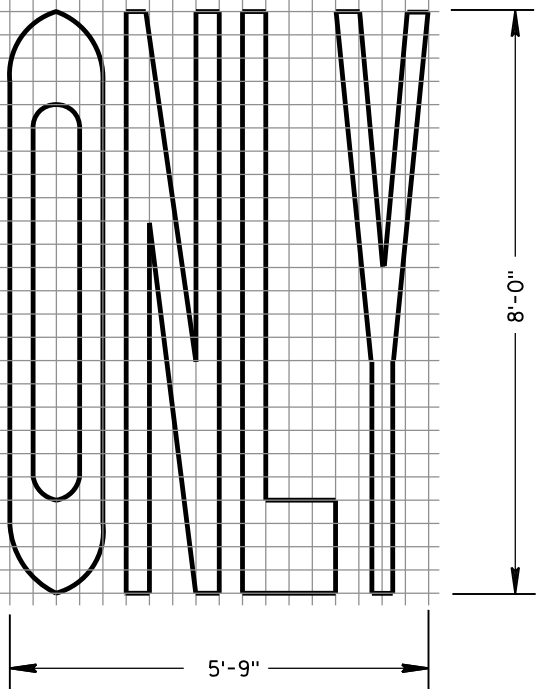
APPROVED
Sept. 2015 /S/ Peter Amakobe Atepe
DATE STATEWIDE WORK ZONE TRAFFIC
FHWA SAFETY ENGINEER

GENERAL NOTES

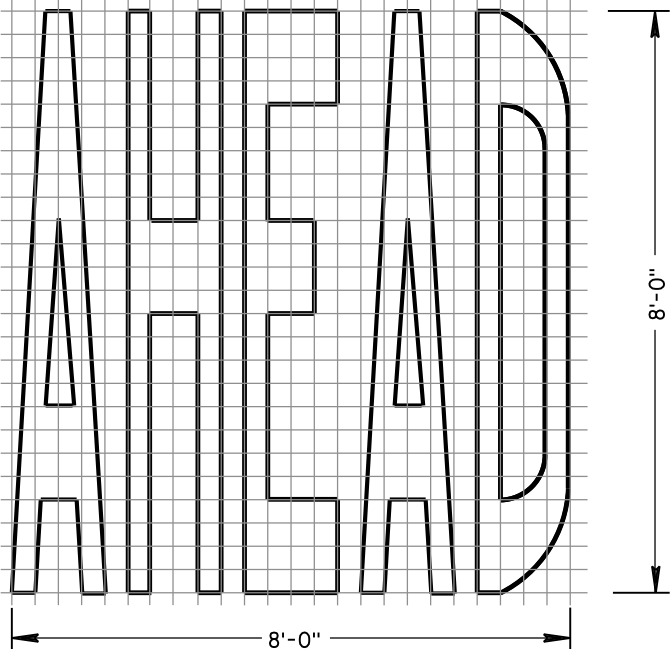
DETAILS OF INSTALLATION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.



TWO-LANE



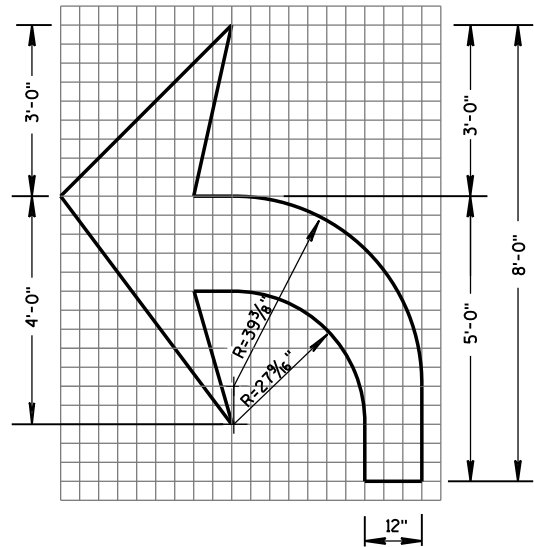
SINGLE-LANE



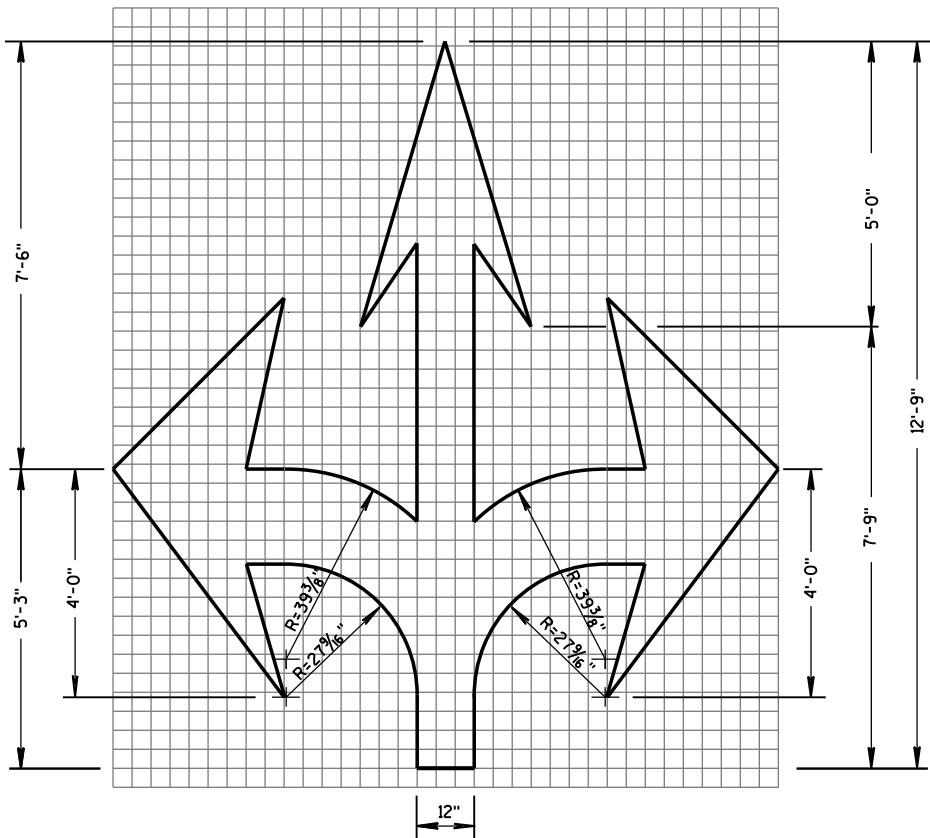
PAVEMENT MARKING WORDS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

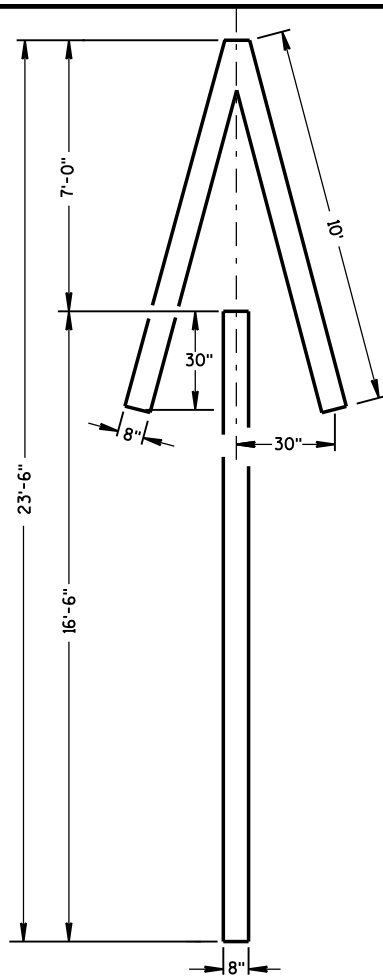
APPROVED
4-18-16 DATE /S/ Matthew R. Rauch
STATE SIGNING AND MARKING ENGINEER
FHWA



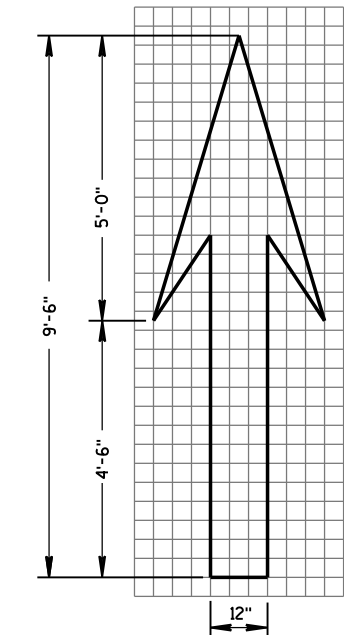
TYPE 2



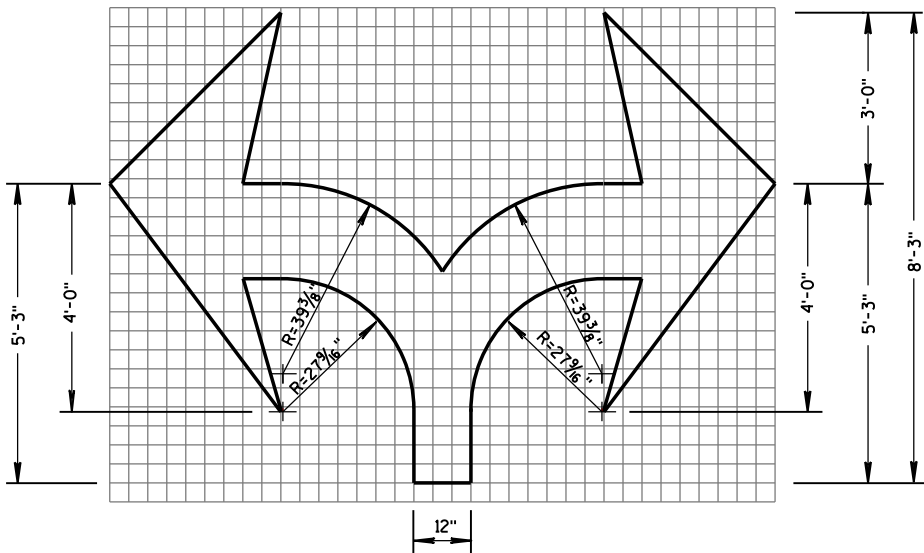
TYPE 6



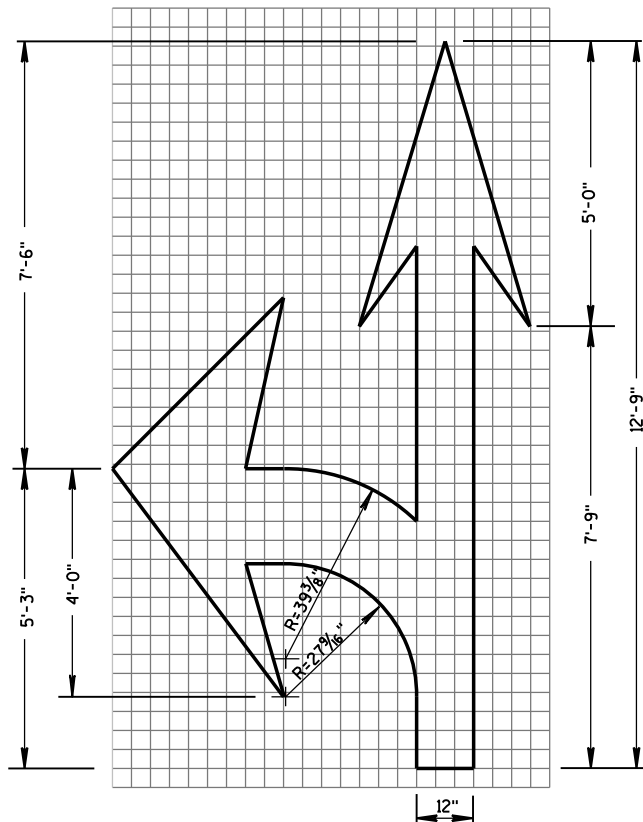
TYPE 4



TYPE 1



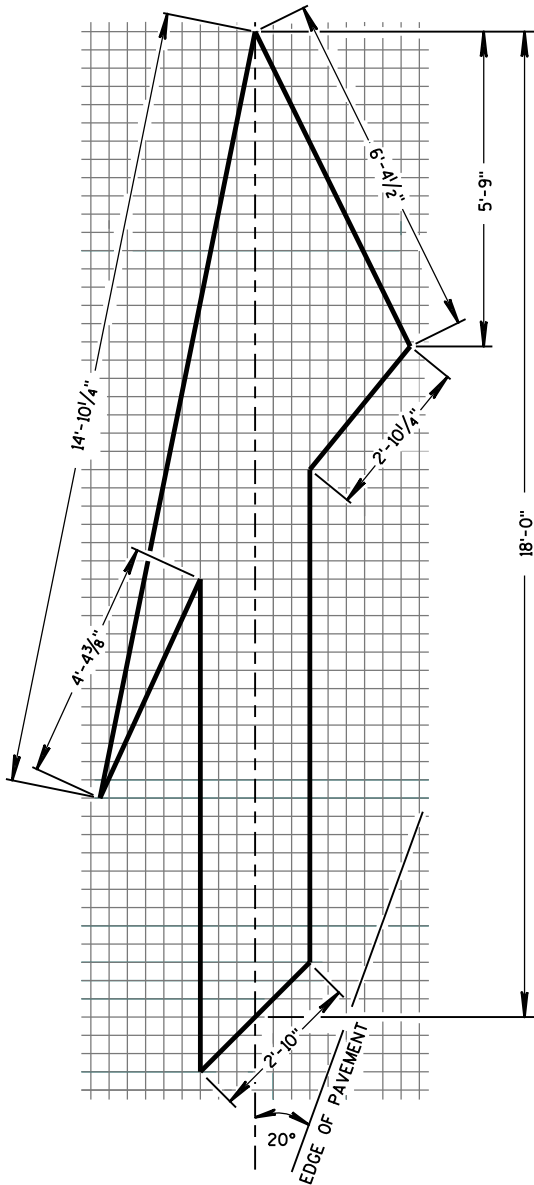
TYPE 7



TYPE 3

GENERAL NOTES

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

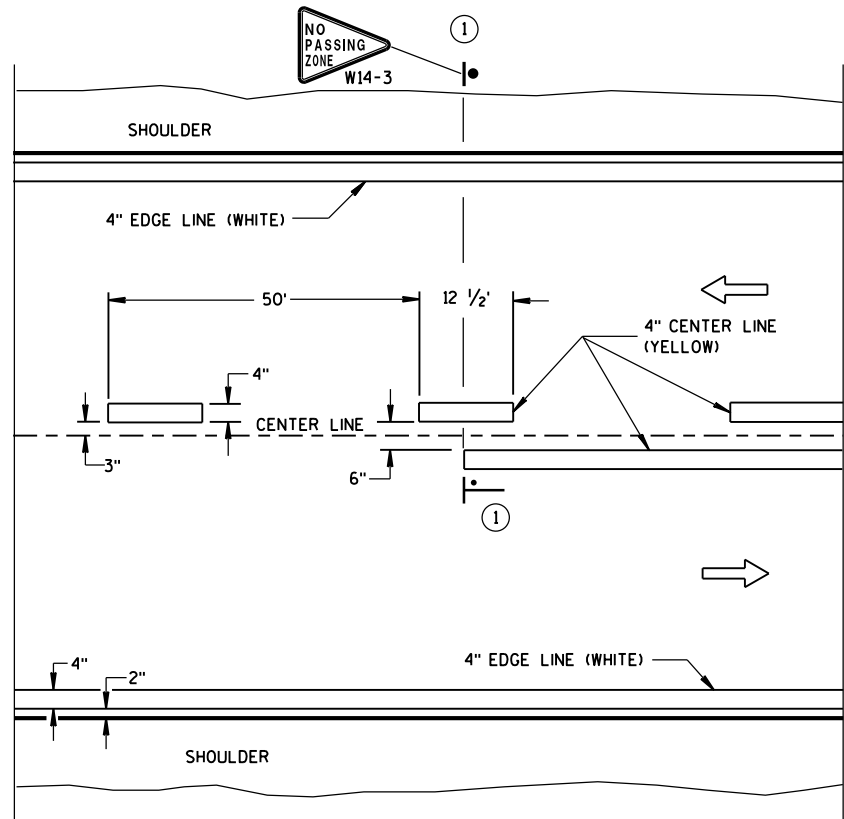


TYPE 5 LANE DROP ARROW

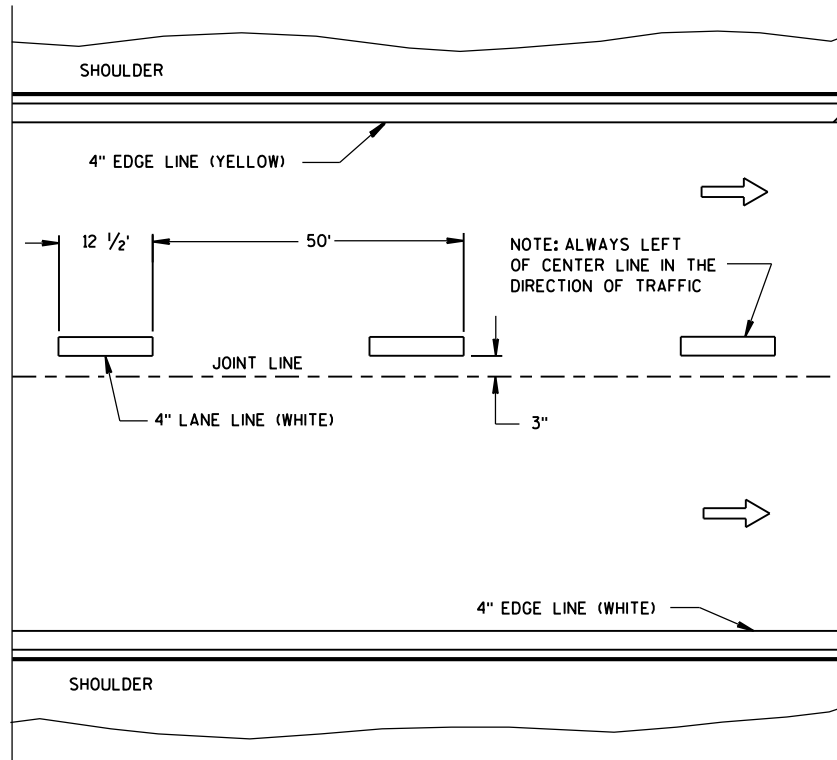
PAVEMENT MARKING ARROWS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4-18-16 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA

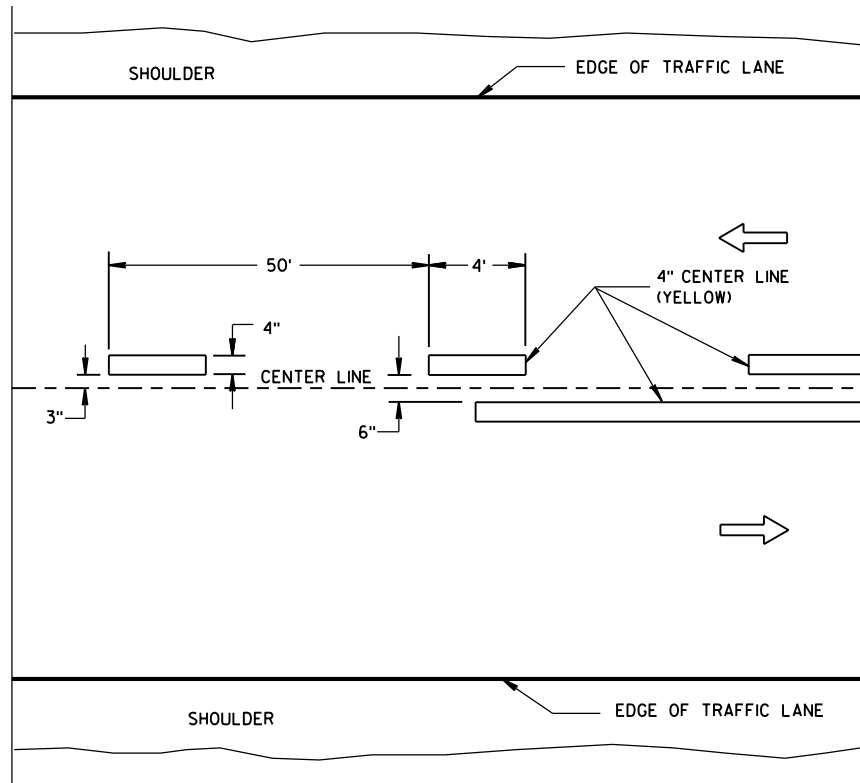


TWO WAY TRAFFIC

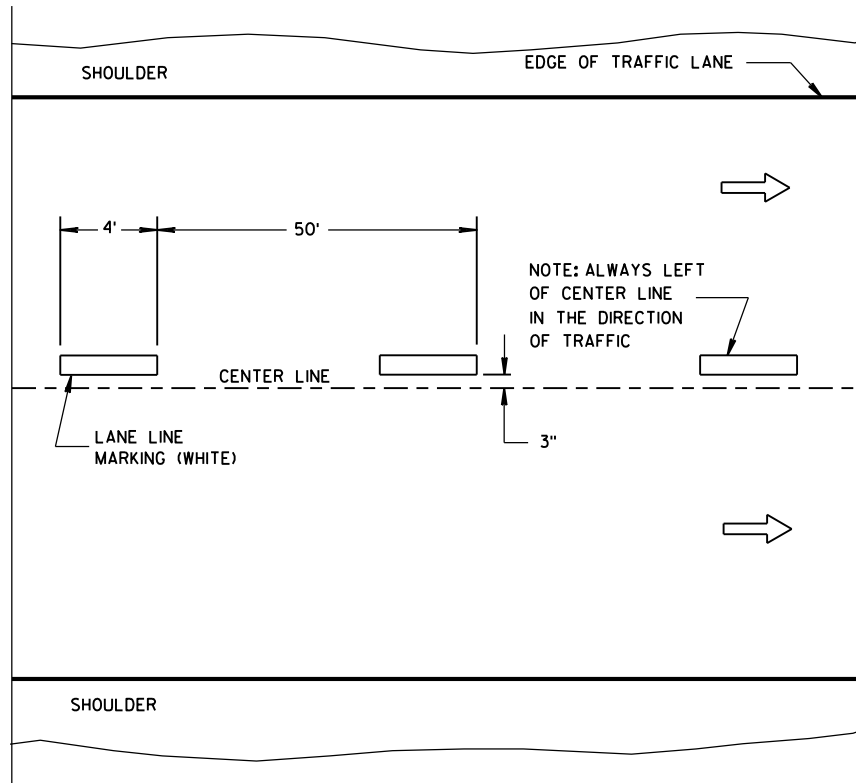


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

GENERAL NOTES

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

① NO PASSING ZONE W14-3 SIGN SHALL BE LOCATED WITHIN 50 FEET OF THE "T" MARKING.

NOTE

ARROW SYMBOL (→) SHOWS DIRECTION OF TRAVEL

LEGEND

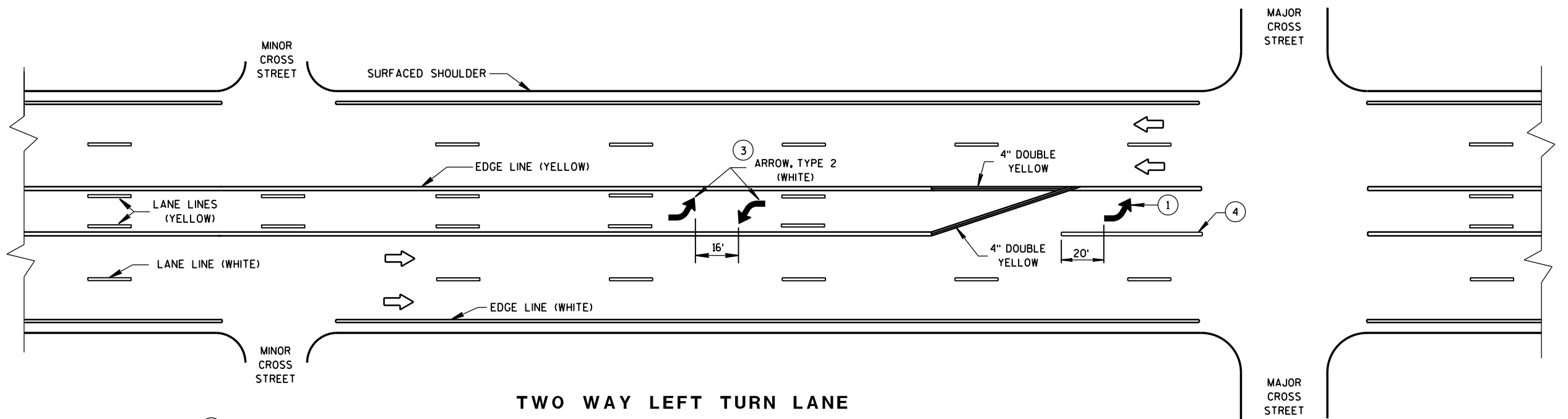
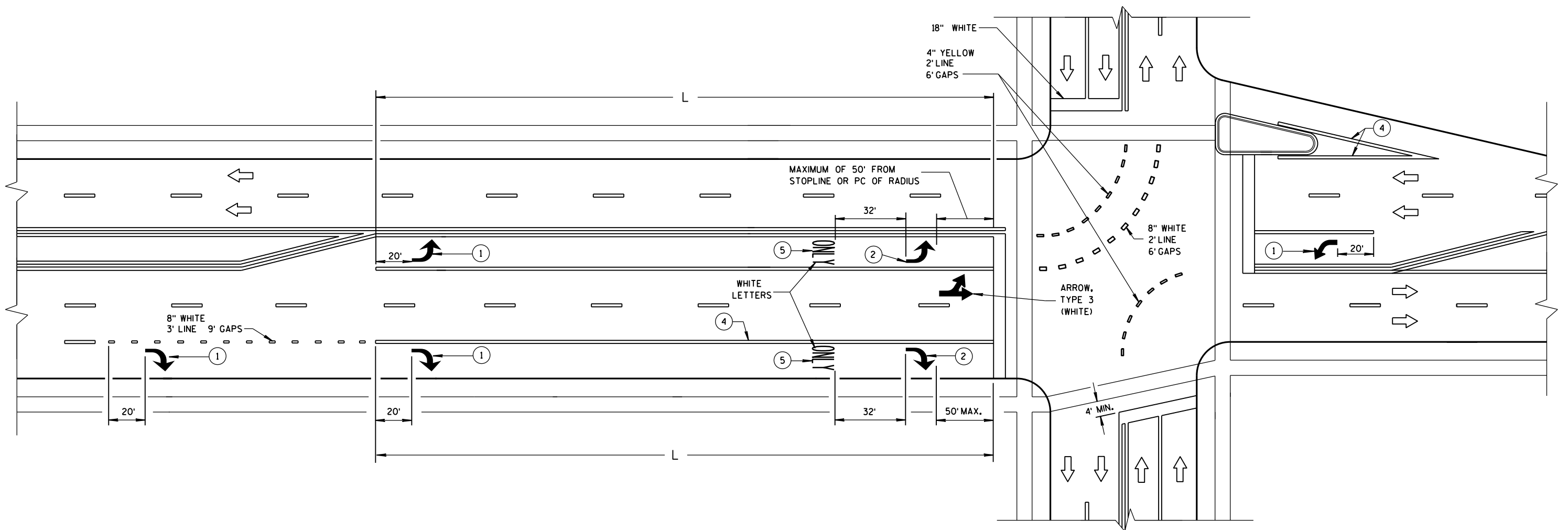
—●— "T" MARKING

● POST MOUNTED SIGN

LONGITUDINAL MARKING
(MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2016 /S/ Matthew R. Rauch
DATE STATE SIGNING AND MARKING ENGINEER
FHWA



GENERAL NOTES

- ① REQUIRED ARROW, TYPE 2 (WHITE).
- ② REQUIRED ARROW, TYPE 2 (WHITE) WHEN L IS GREATER THAN 78 FEET AND LESS THAN OR EQUAL TO 166 FEET.
- ③ A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- ④ 8" WHITE
- ⑤ REQUIRED WORD ONLY WHEN L IS GREATER THAN 166 FEET.

TWO WAY LEFT TURN LANE

NOTE:
ARROW SYMBOL (→)
SHOWS DIRECTION OF TRAVEL

L = LENGTH OF TURN BAY

PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

LEGEND

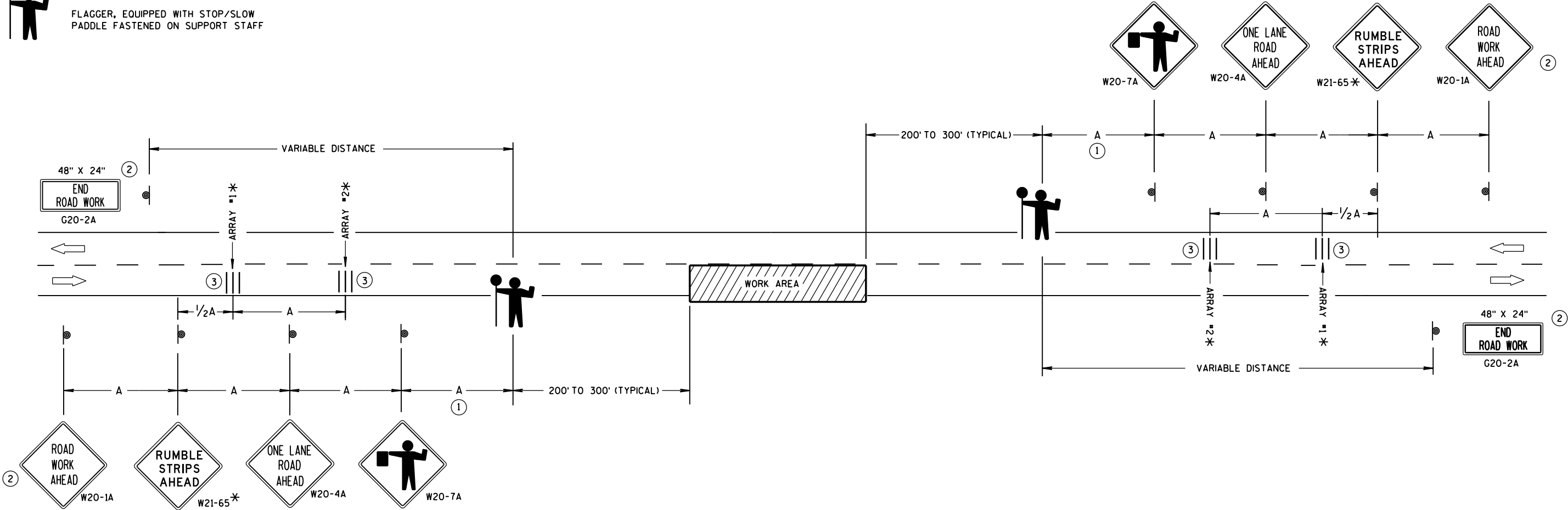
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

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



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



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

GENERAL NOTES

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

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

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

"W0" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

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

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS. PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

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

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

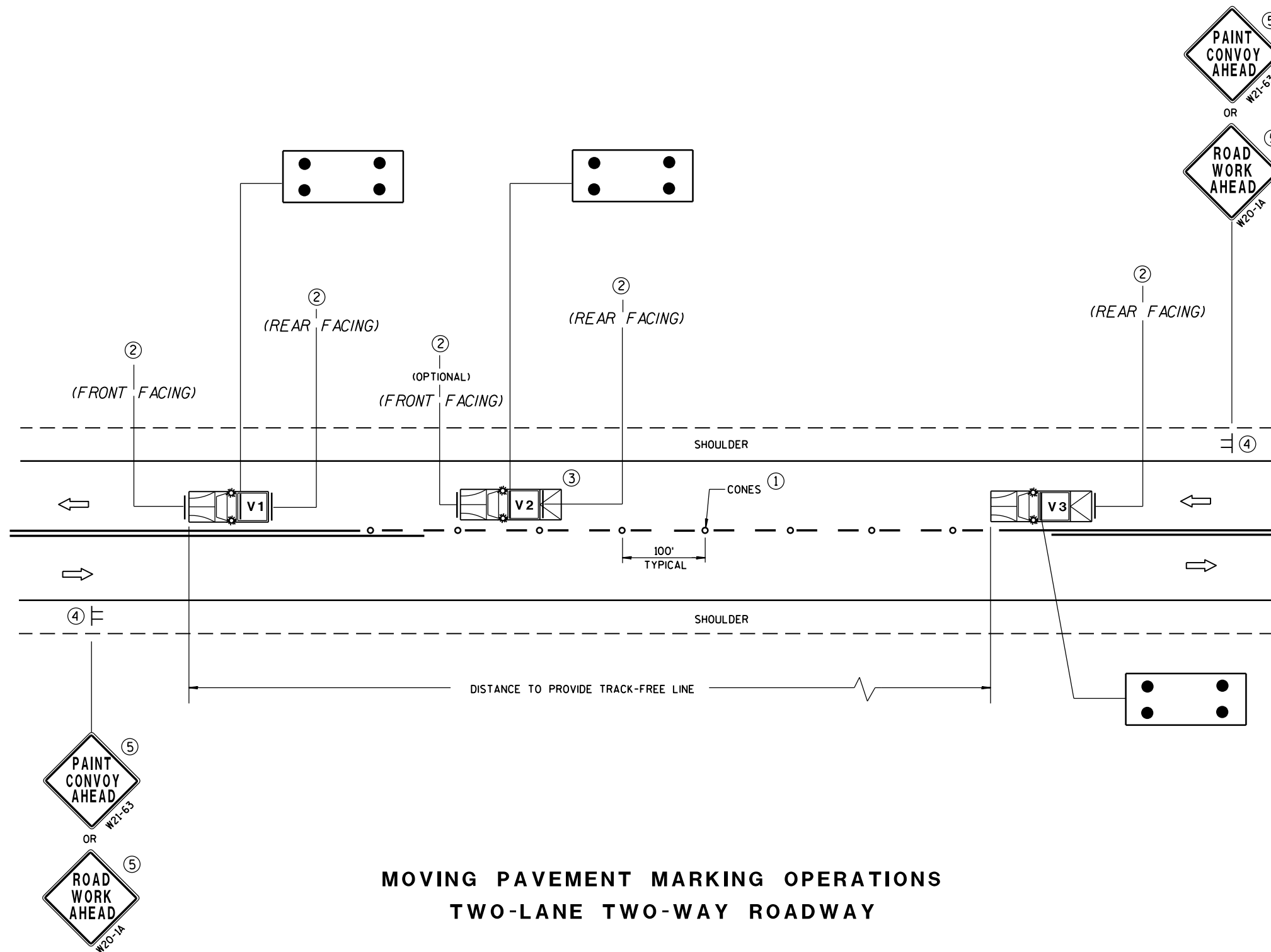
* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

- FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.
- SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
December, 2016 /S/ Andrew Heldtke
DATE WORK ZONE ENGINEER
FHWA



MOVING PAVEMENT MARKING OPERATIONS TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

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

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

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

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

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

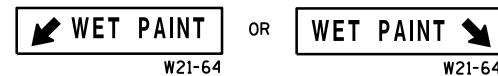
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

① CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

② USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.



③ OPTIONAL TRUCK-MOUNTED ATTENUATOR.

④ SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

⑤ IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1 LEAD VEHICLE

V2 SHADOW VEHICLE

V3 TRAIL VEHICLE WITH TMA

TMA TRUCK-MOUNTED ATTENUATOR

SIGN ON TEMPORARY SUPPORT

DIRECTION OF TRAFFIC

CONES

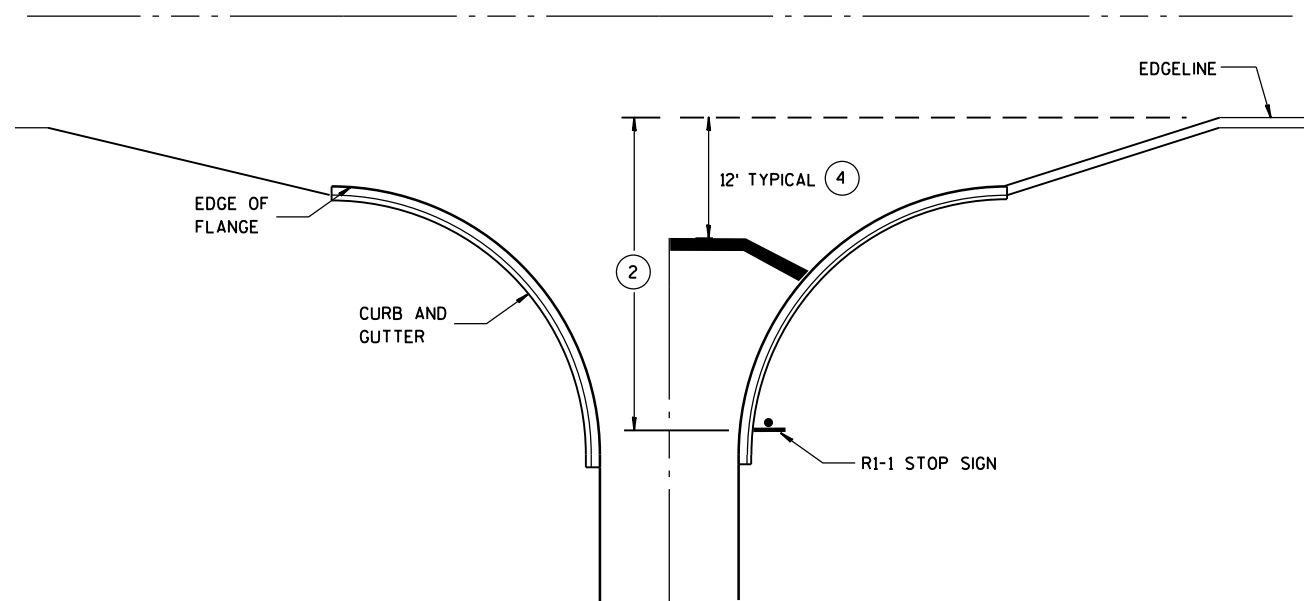
FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING
OPERATION
TWO-LANE TWO-WAY ROADWAY

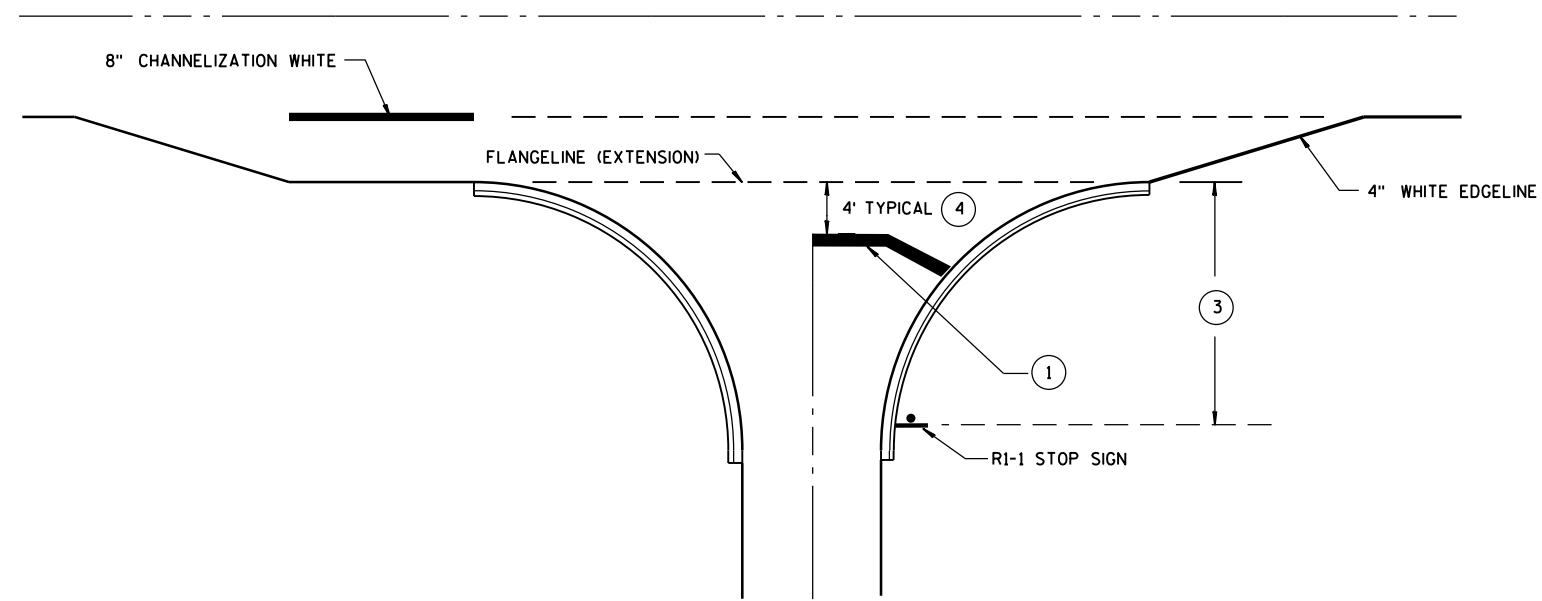
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2016
DATE
FHWA

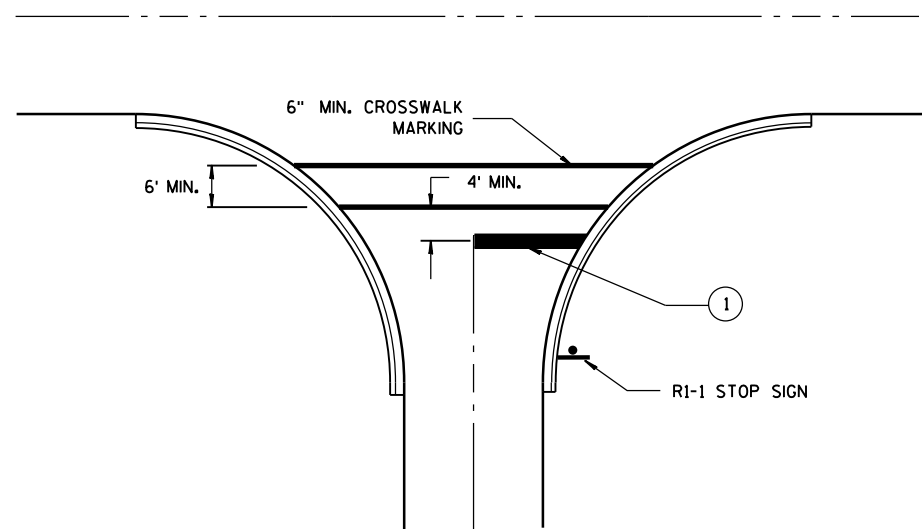
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER



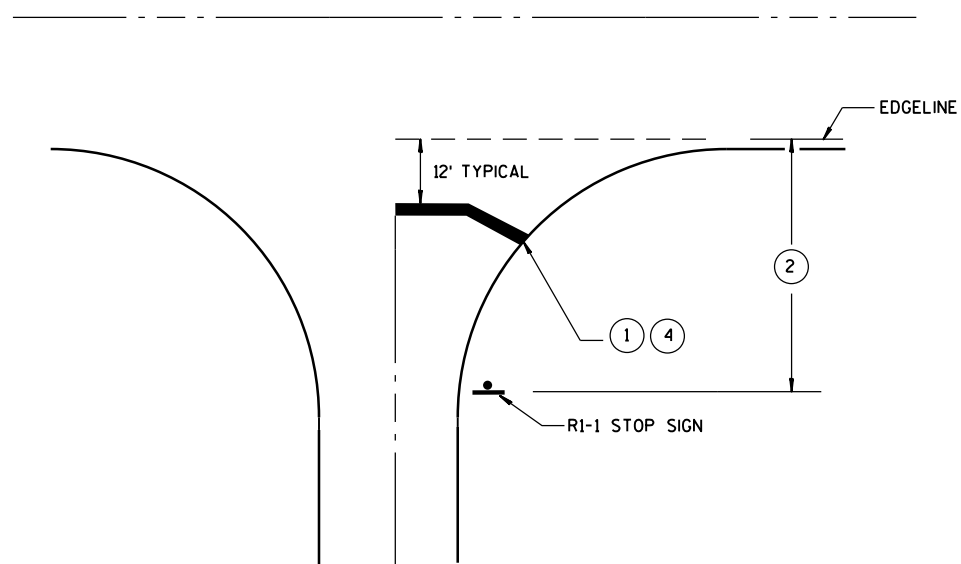
**TYPICAL STOP LINE PAVEMENT MARKING
WITH CURB AND GUTTER**



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



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



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

GENERAL NOTES

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

STOP LINE AND CROSSWALK PAVEMENT MARKING

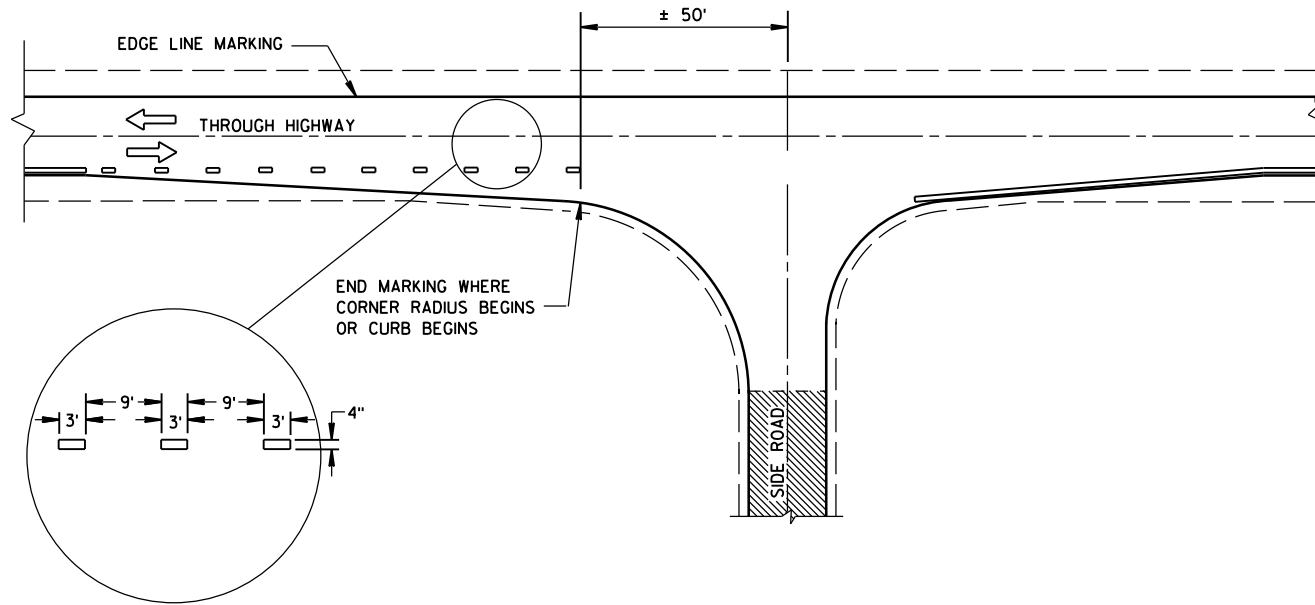
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4-18-2016
DATE

FHWA

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




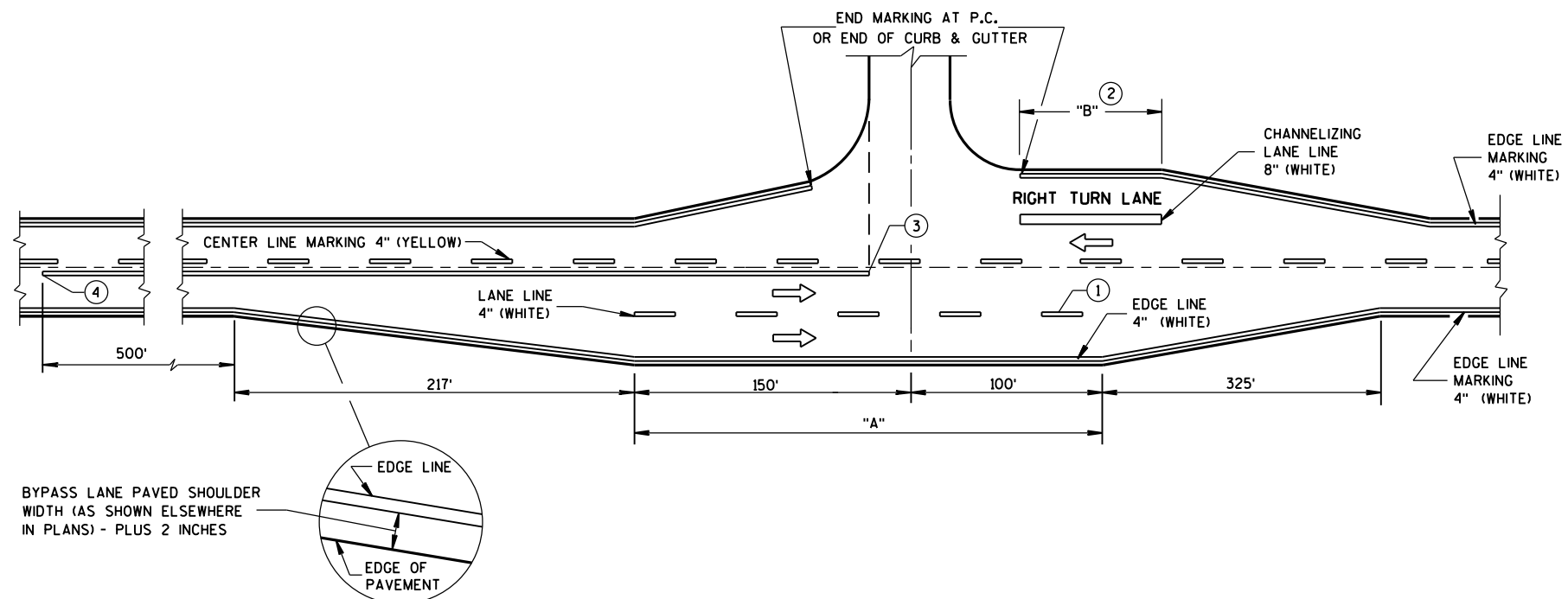
MINOR INTERSECTION WITHOUT CURBS

GENERAL NOTES

EDGE LINES SHALL BE OMITTED THROUGH INTERSECTIONS. EDGE LINES SHALL BE CONTINUED THROUGH DRIVEWAYS.

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

ARROW SYMBOL () SHOWS DIRECTION OF TRAVEL



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

**PAVEMENT MARKING
(INTERSECTIONS)**

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

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

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

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

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

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

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

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

TABLE A

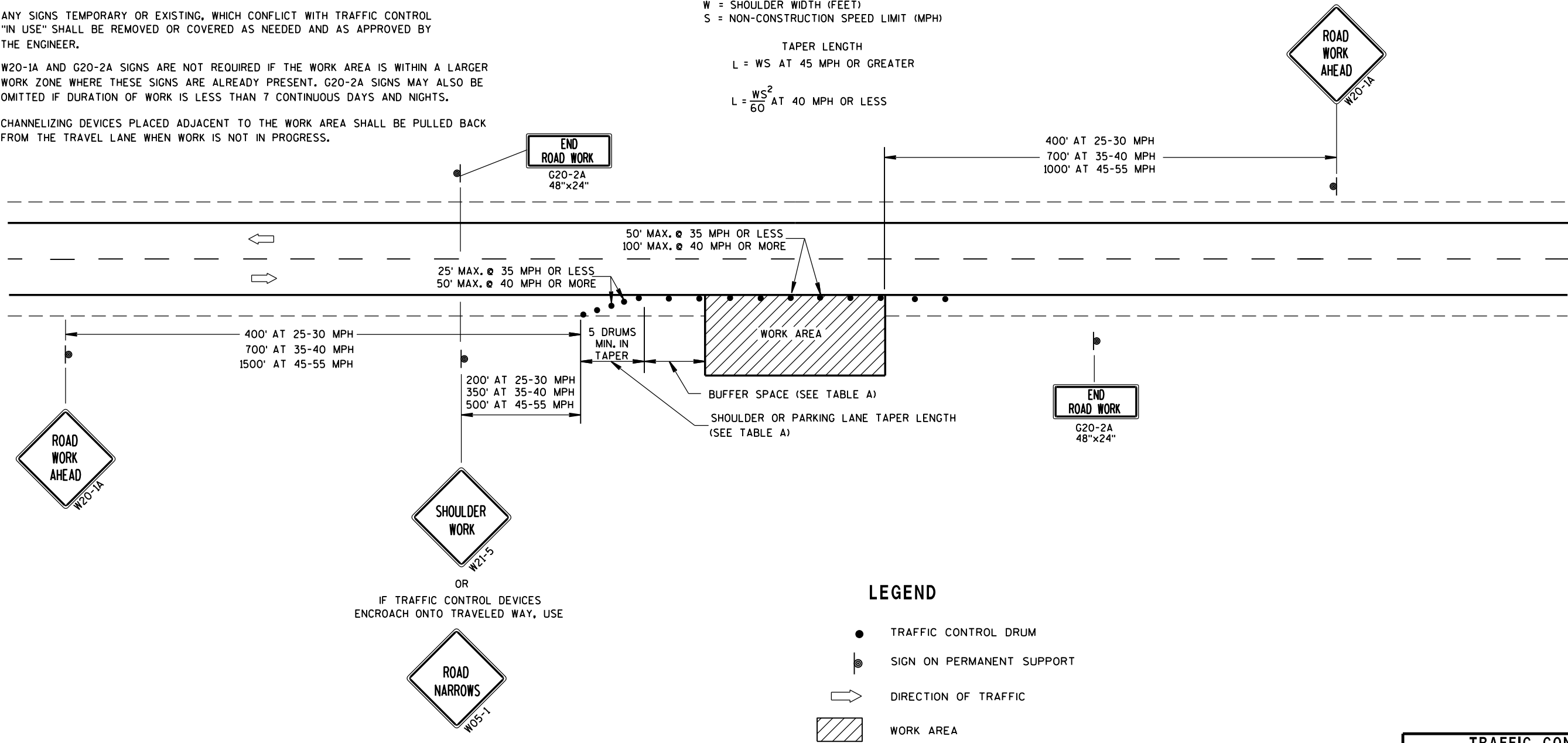
SHOULDER TAPER LENGTH (FEET)					BUFFER SPACE (FEET)
S \ W	4	6	8	10	
30	20	30	40	50	200
35	30	45	55	70	250
40	40	55	75	90	305
45	60	90	120	150	360
50	70	100	135	170	425
55	75	110	150	185	495

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

TAPER LENGTH
L = WS AT 45 MPH OR GREATER

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

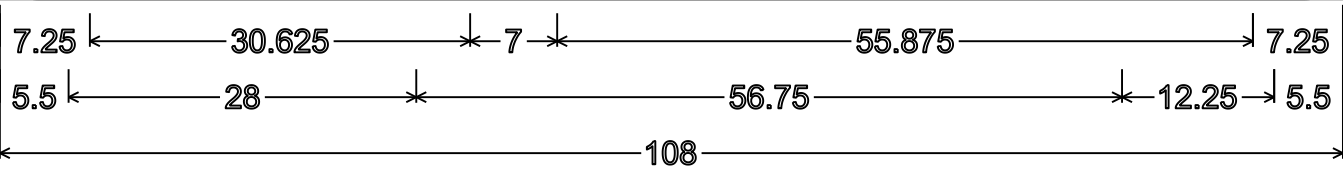
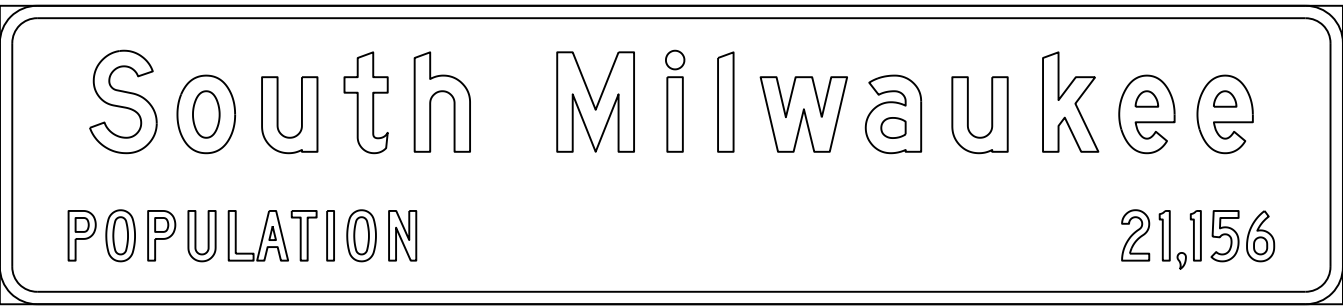
SHOULDER TAPER LENGTH = $\frac{1}{3}L$



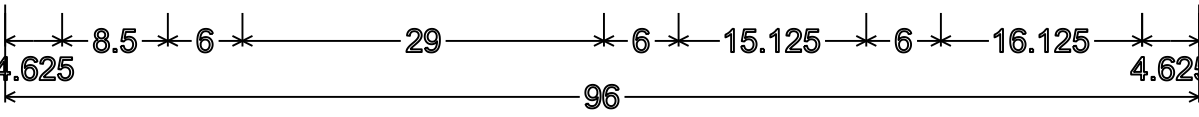
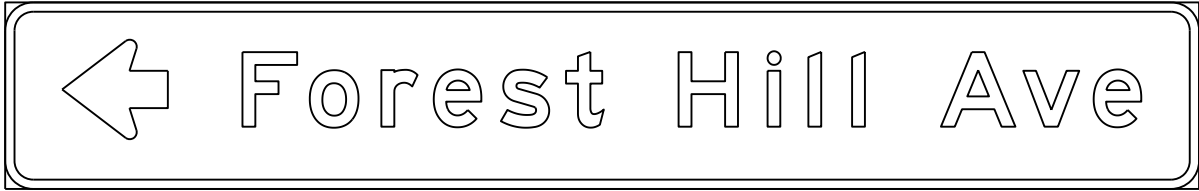
LEGEND

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

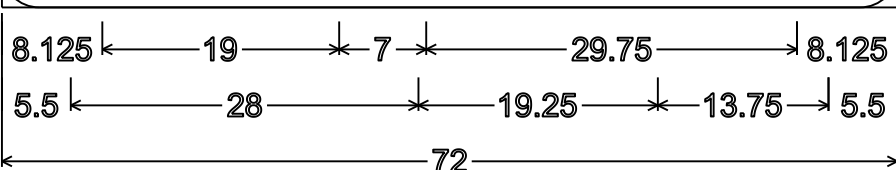
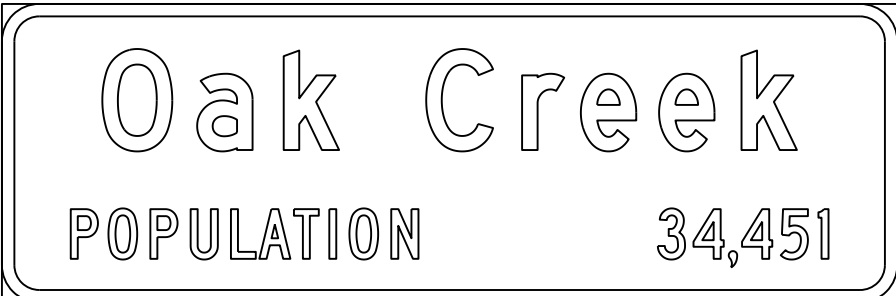
TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED July 14, 2015 DATE	/S/ Peter Amakobe Atepe STATEWIDE WORK ZONE TRAFFIC SAFETY ENGINEER
FHWA	



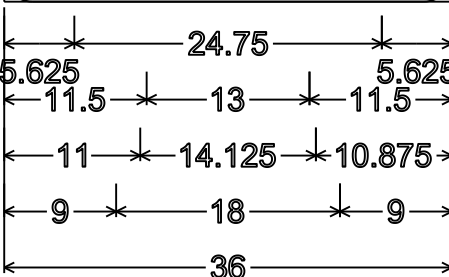
I2-3; 3.000" Radius, 1.000" Border,
"South" D; "Milwaukee" D; "POPULATION" C; "21,156" C



D1-1; 2.250" Radius, 0.750" Border

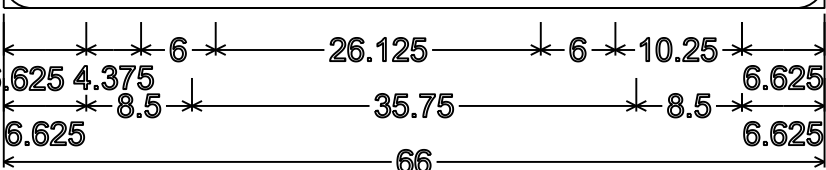
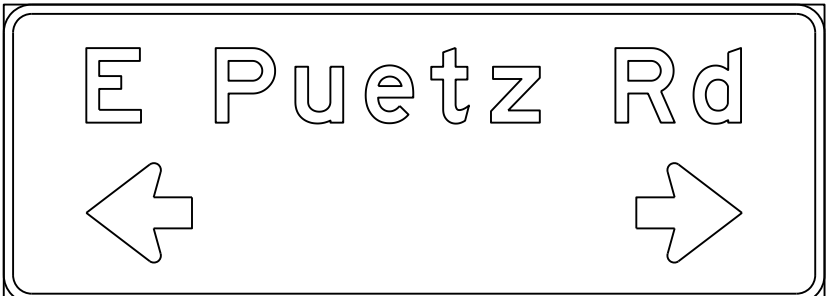


I2-3; 3.000" Radius, 1.000" Border,
"Oak" D; "Creek" D; "POPULATION" C; "34,451" C

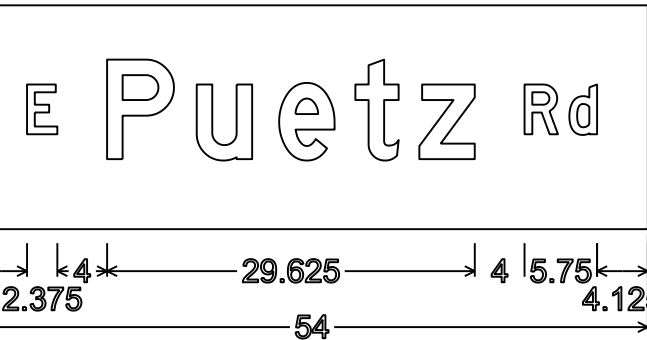


2.250" Radius, 0.750" Border,
"Forest" D; "Hill" D; "Ave" D

- NOTES
- Signs are Type II- Type H Reflective
 - Color:
Background - Green
Message - White
 - Message Series - E except as noted
 - M1-94S and M1-94H base material .125" aluminum



D1-61;
2.250" Radius, 0.750" Border

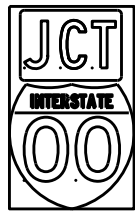


M1-94H; No border,
"E" D; "Puetz" D; "Rd" D

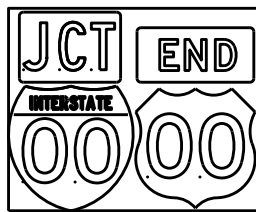


M1-94S; No border,
"Chicago" D; "Rd" D

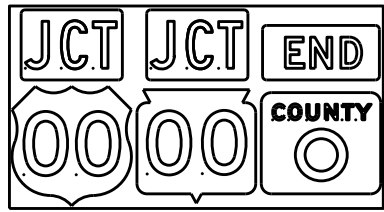
TYPICAL ASSEMBLIES



J1-1



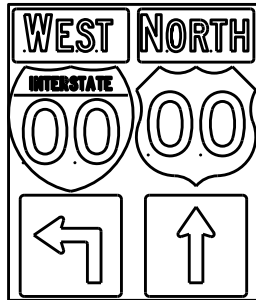
J1-2



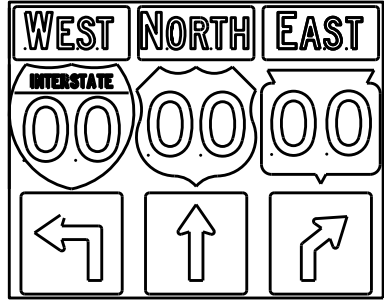
J1-3



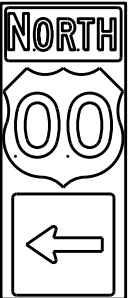
J2-1



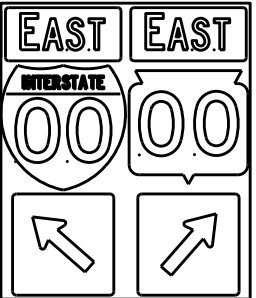
J2-2



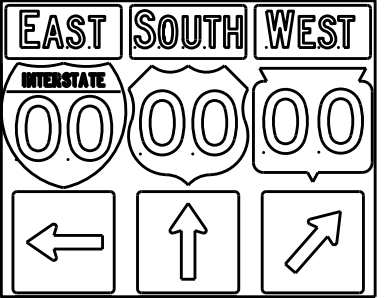
J2-3



J3-1



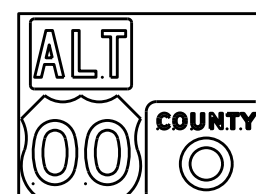
J3-2



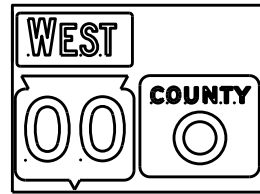
J3-3



J4-1



J4-2



J4-2



J13-1



J12-1



J32-1



J33-1



J23-1

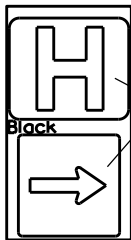


J22-1



JV

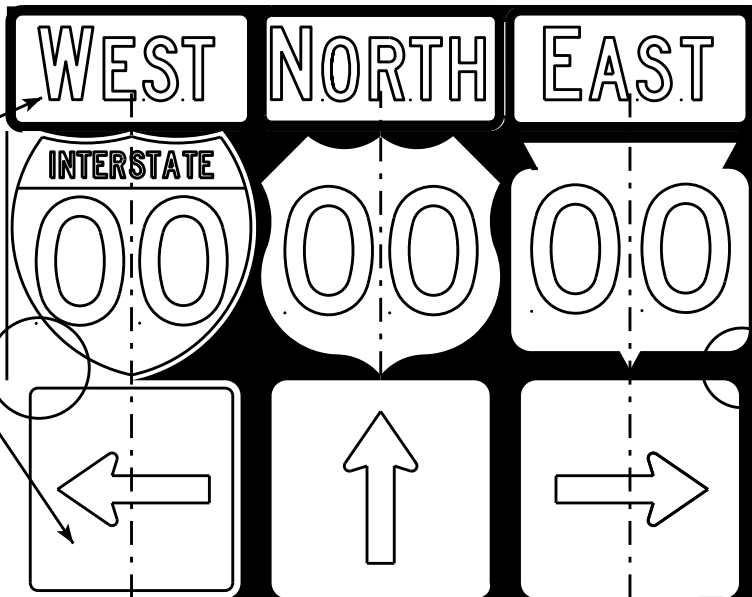
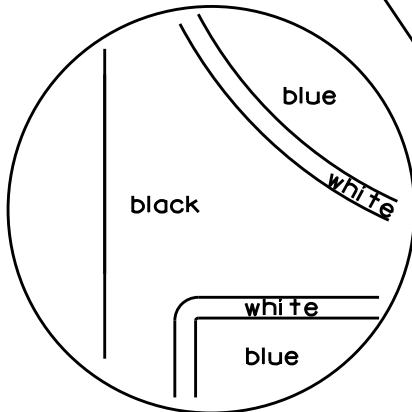
(Typical Vertical J-Assembly
See Note 10 and 11)



JH-1

Blue Background

[blue background
with interstate]



[black background]

ROUTE MARKERS & COMPONENTS
IN TYPICAL ASSEMBLIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
For State Traffic Engineer

DATE 2/06/14 PLATE NO. A2-1S.8

NOTES

1. Signs are Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Black Non-reflective
Message - see Note 5
3. Message Series - See Note 5
4. Corners shall be square or rounded if base material is plywood. If base material is metal the corners shall be rounded.
5. The colors and message spacing on each marker shall be according to the applicable route marker panel specifications.
6. Certain marker heads require the component pieces to be the same color. As an example, all the components used with an M1-1 Interstate marker shall be blue.
7. Single panel j-assemblies shall only be used with route marker shields that are same size. If the route marker shields are different size use multiple piece component.
8. Route assemblies that have 24 inch route shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have one horizontal splice between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 inches or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
9. Route assemblies that have 36 inch shields and have dimensions greater than 48 inches (both vertical and horizontal) shall have two horizontal splices. One horizontal splice shall be between the cardinal direction and route shields and the other horizontal splice shall be between the arrows and route shields. Vertical splices shall not be used on route assemblies with a horizontal dimension of 144 or less. The contractor shall not use more than one vertical joint per sign and the joint shall be between route shields.
10. All Vertical J Assemblies are given a Sign Code of JV
11. For JV Assemblies that have a mixture of Interstate and non Interstate shields, arrows and cardinals shall be white on blue.

PROJECT NO:

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A21S.DGN

PLOT DATE : 06-FEB-2014 14:10

PLOT BY : mscs.ja

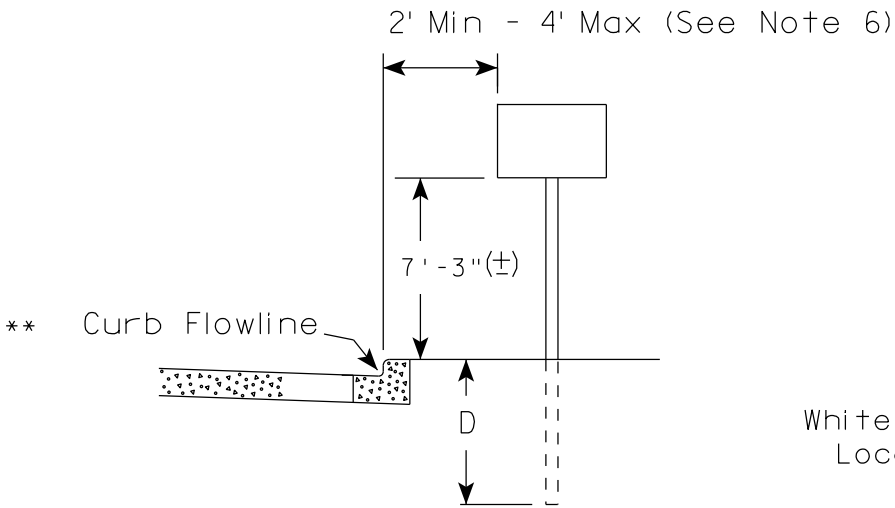
PLOT NAME :

SHEET NO:

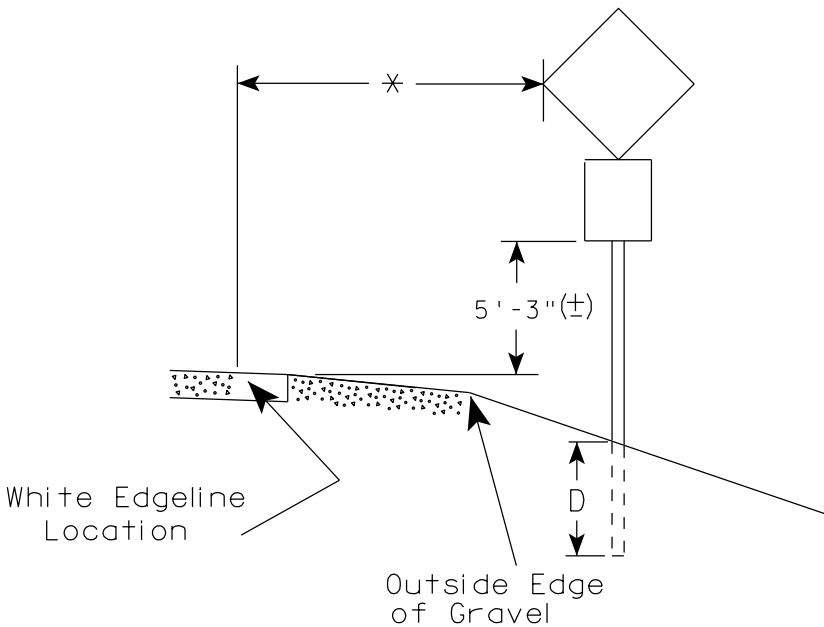
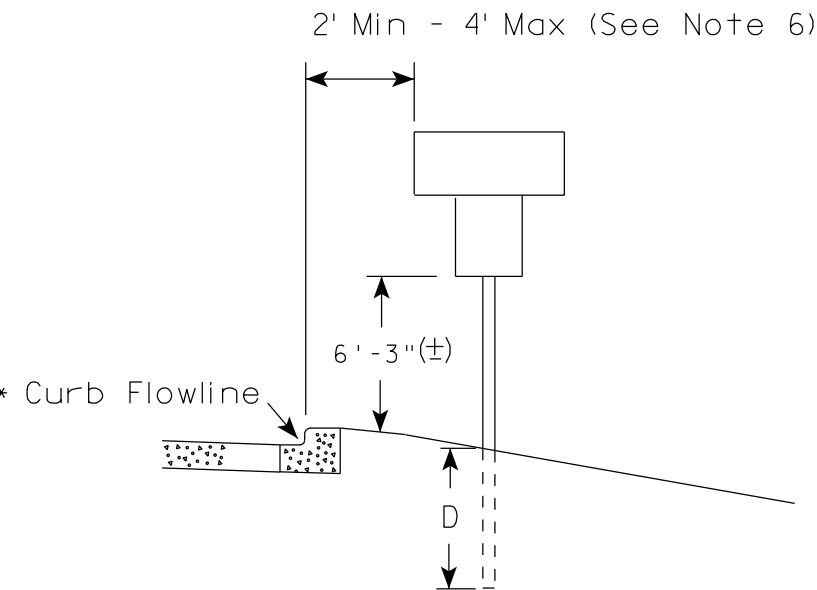
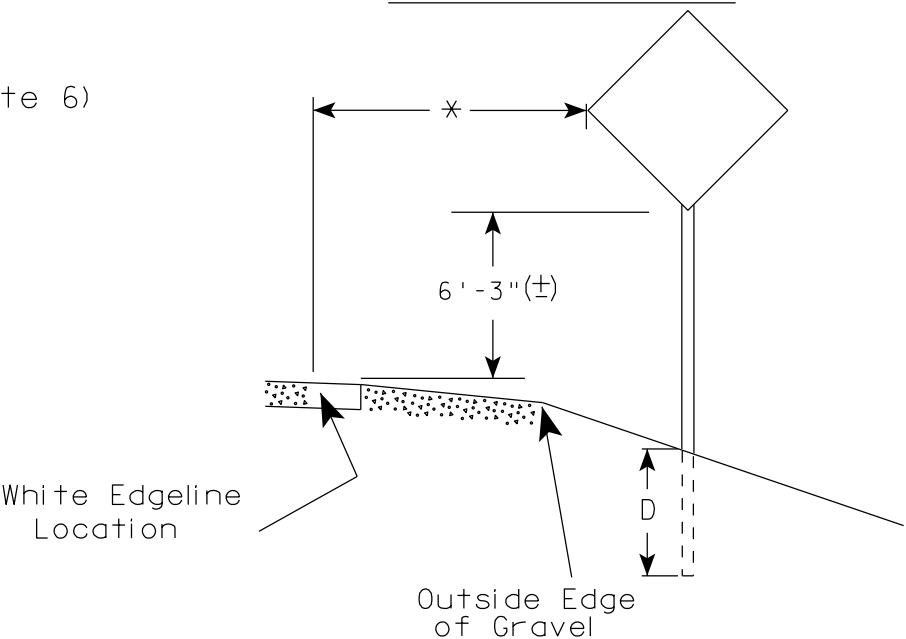
E

WISDOT/CADDs SHEET 42

URBAN AREA



RURAL AREA (See Note 2)



GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

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

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

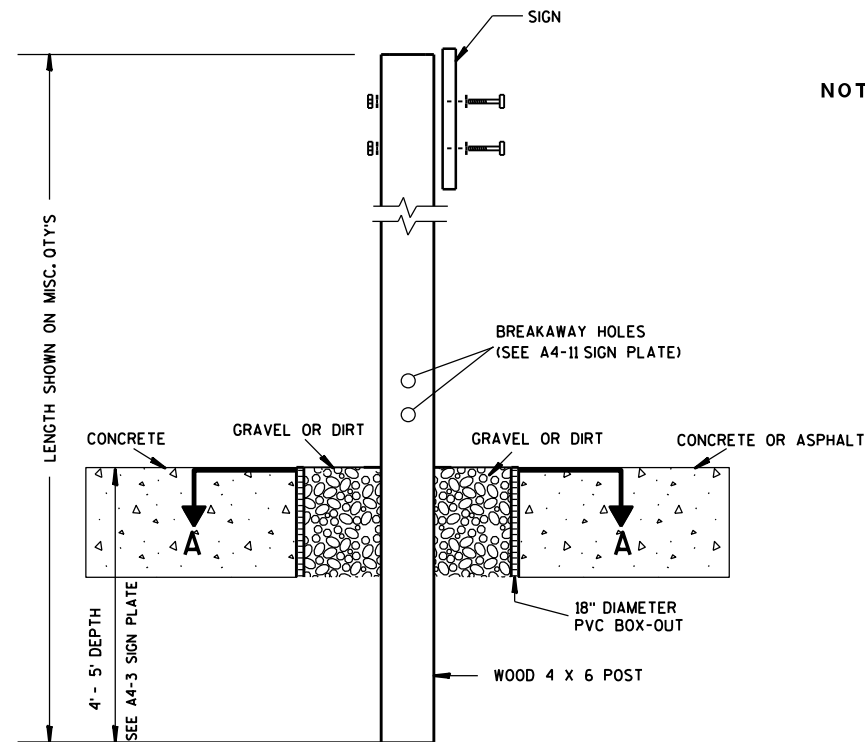
* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

TYPICAL INSTALLATION
OF PERMANENT TYPE II
SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

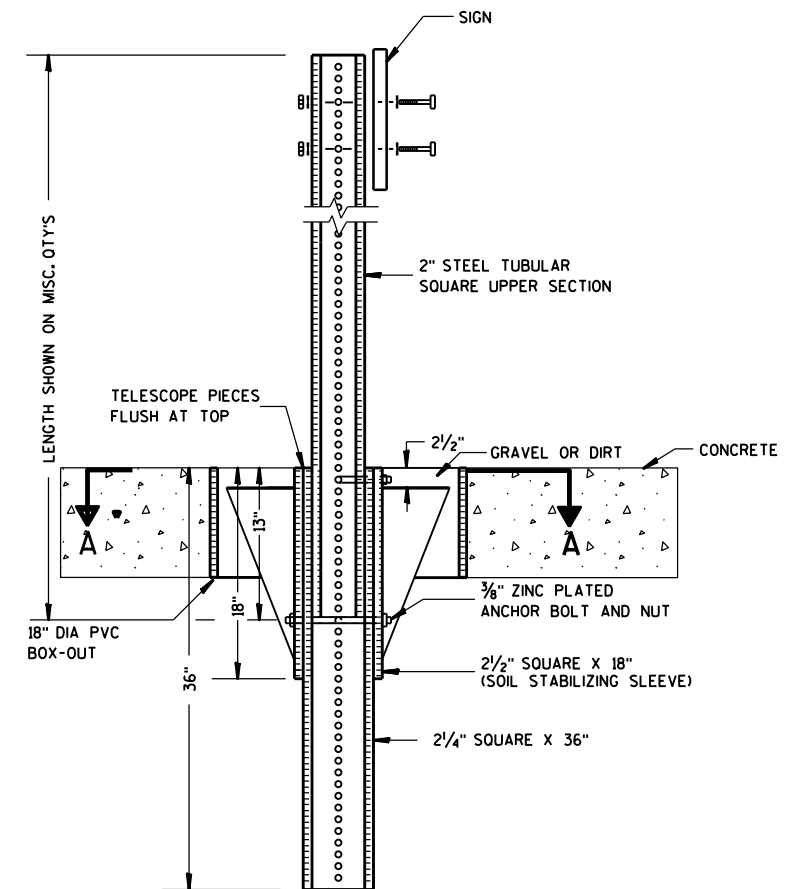
DATE 7/23/15 PLATE NO. A4-3.20



ELEVATION VIEW

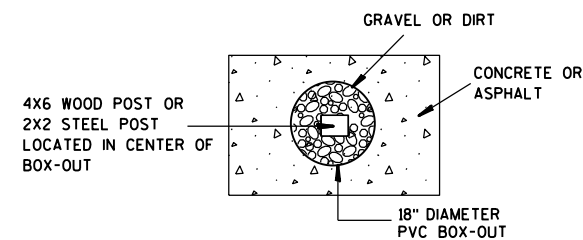
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

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



ELEVATION VIEW

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



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST
BOX-OUTS
A4-3B

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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

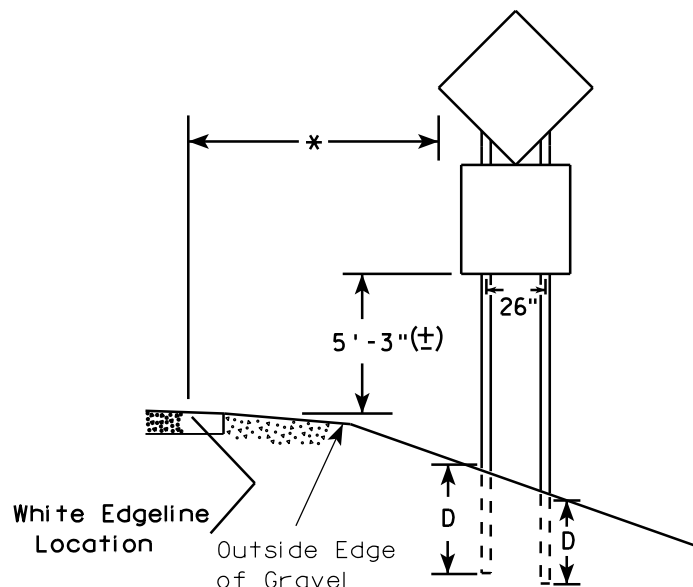
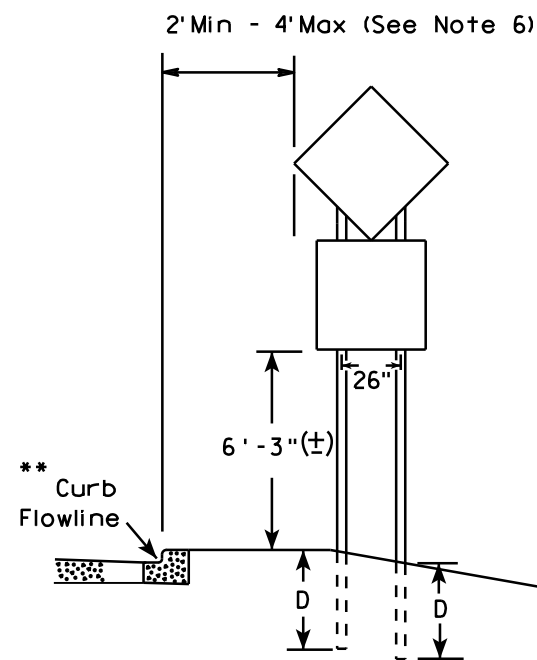
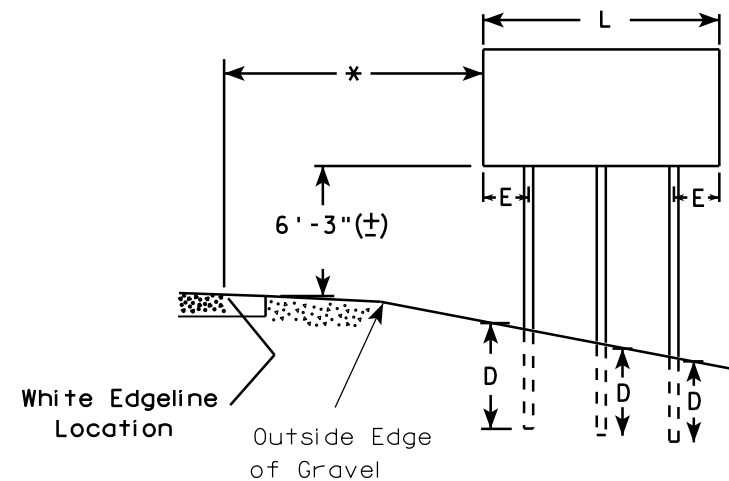
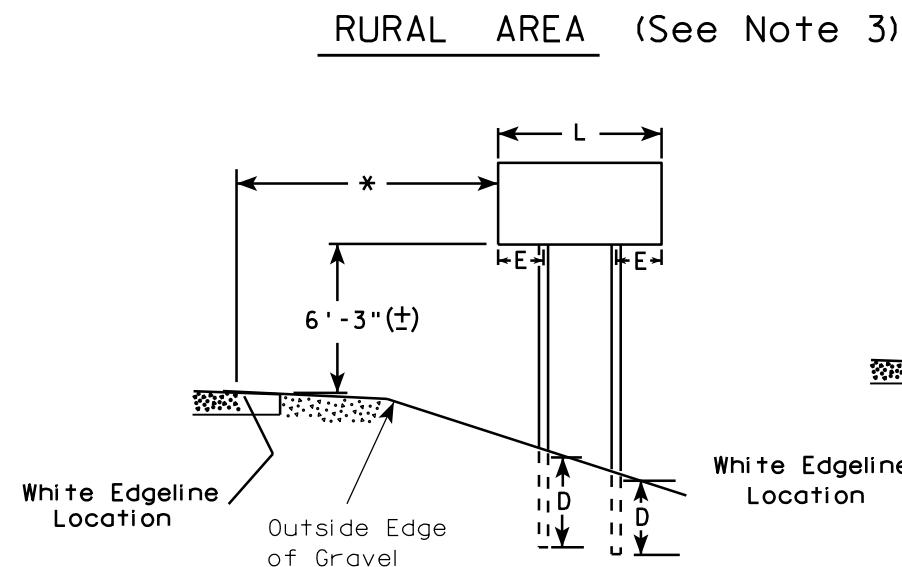
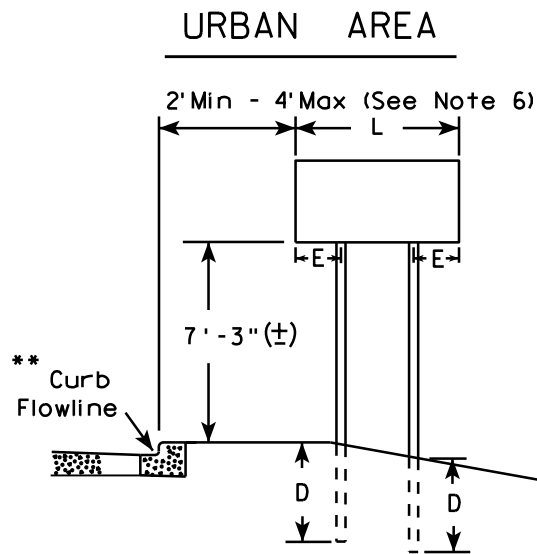
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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" (±) or 6'-3" (±) depending upon existence of sub-sign.
 4. The (±) tolerance for mounting height is 3 inches.
 5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
 6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
 7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
 8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

* 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 120"	L/5

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

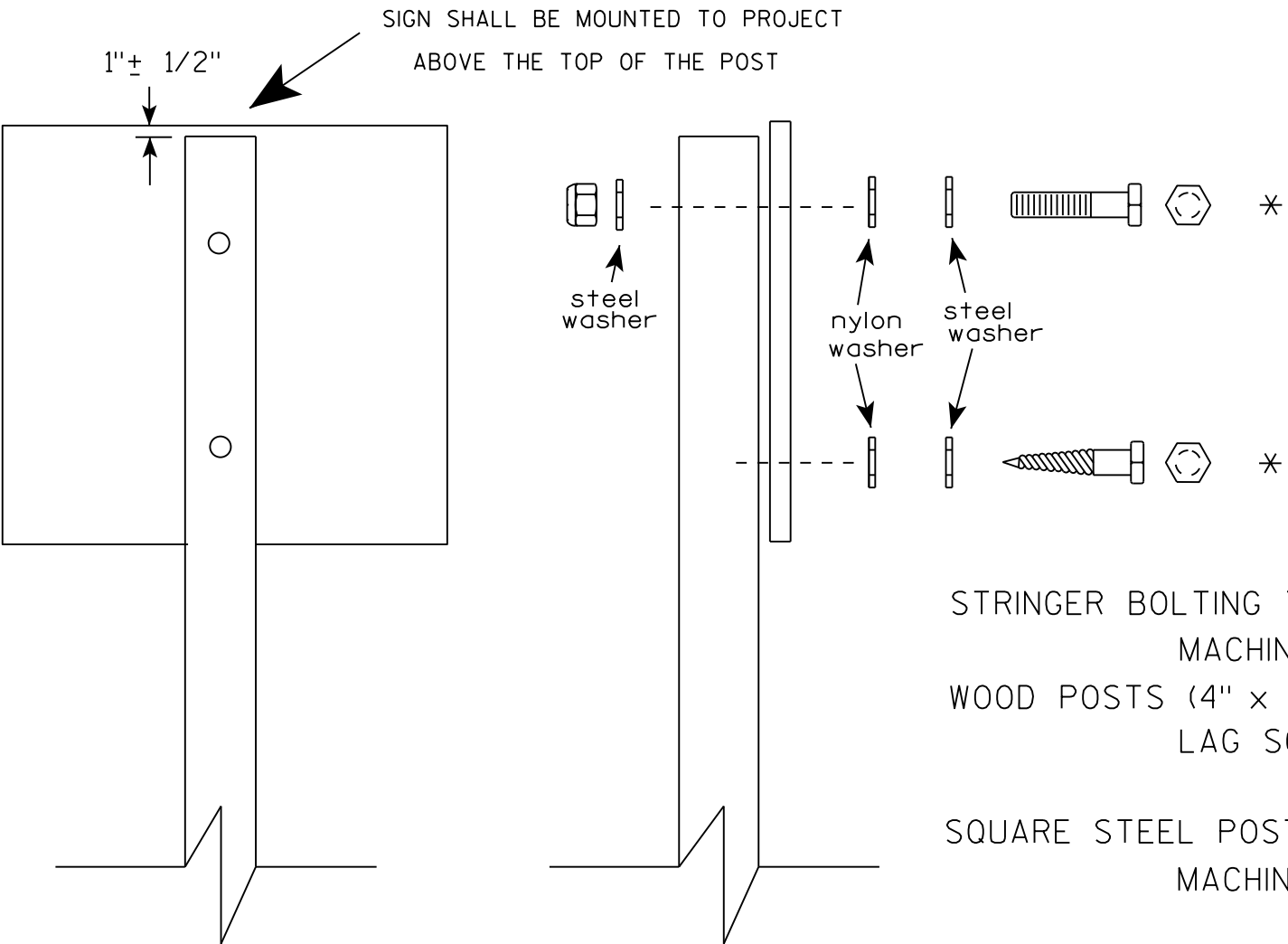
Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION
OF TYPE II SIGNS
ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4.14



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

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

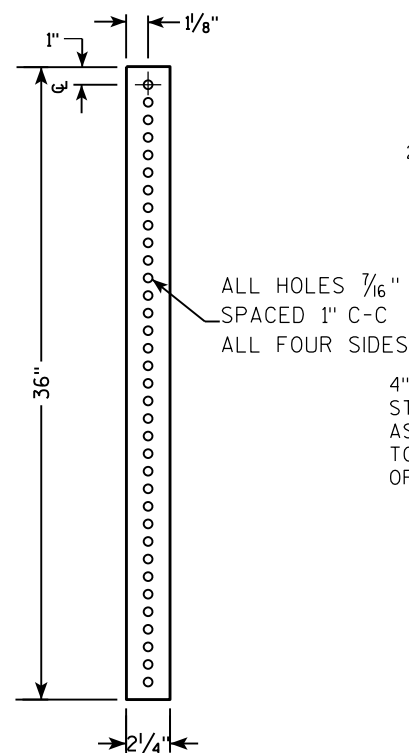
Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

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

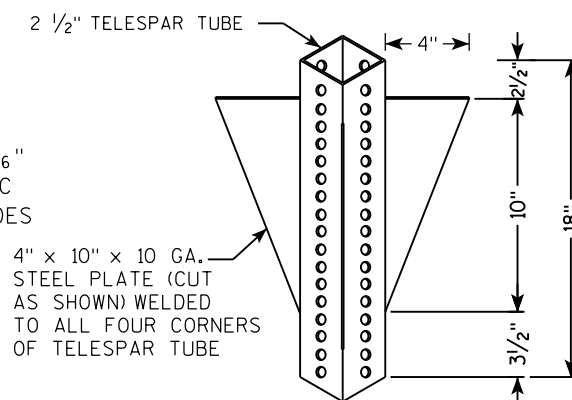
* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require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

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

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



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



TELESCOPE PIECES
FLUSH AT TOP

18" DIA SCHEDULE
40 PVC
BOX-OUT

36"

13"

18"

2 1/2" GRAVEL OR DIRT

3/8" ZINC PLATED
ANCHOR BOLT AND NUT

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

2 1/4" SQUARE X 36"

2" STEEL TUBULAR
SQUARE UPPER SECTION

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

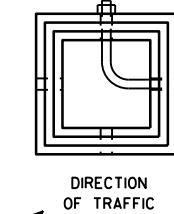
SEE SIGN PLATE
A4-8 FOR BOLT
WASHER, & NUT
MATERIAL

SIGN

TECHNICAL DRAWING OF A SIGNPOST ASSEMBLY:

- 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 upper section's perforations.
- 3/8" ZINC PLATED CORNER ANCHOR BOLT AND NUT**: Located at the top of the upper section.
- 1"**: Dimension for the offset of the anchor bolt.
- 3/8" ZINC PLATED ANCHOR BOLT AND NUT**: Located at the base of the upper section.
- 2 1/2" SQUARE X 18" (SOIL STABILIZING SLEEVE)**: The lower section of the post.
- 2 1/4" SQUARE X 36"**: The base section of the post.
- SIGN**: The sign plate at the top.
- SEE SIGN PLATE A4-8 FOR BOLT WASHER, & NUT MATERIAL**: Reference to the sign plate details.
- LENGTH SHOWN ON MISC. QTY'S**: Dimension line on the left indicating the total length.
- Dimensions**:
 - 36" (Total length of the base section)
 - 18" (Length of the soil stabilizing sleeve)
 - 12" (Offset of the anchor bolt)

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 Matthew R. Rauch

for State Traffic Engineer

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

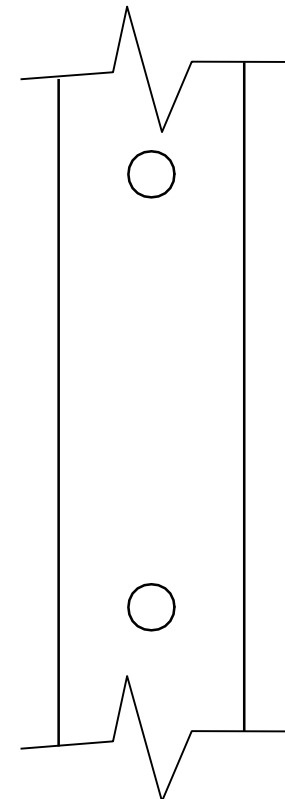
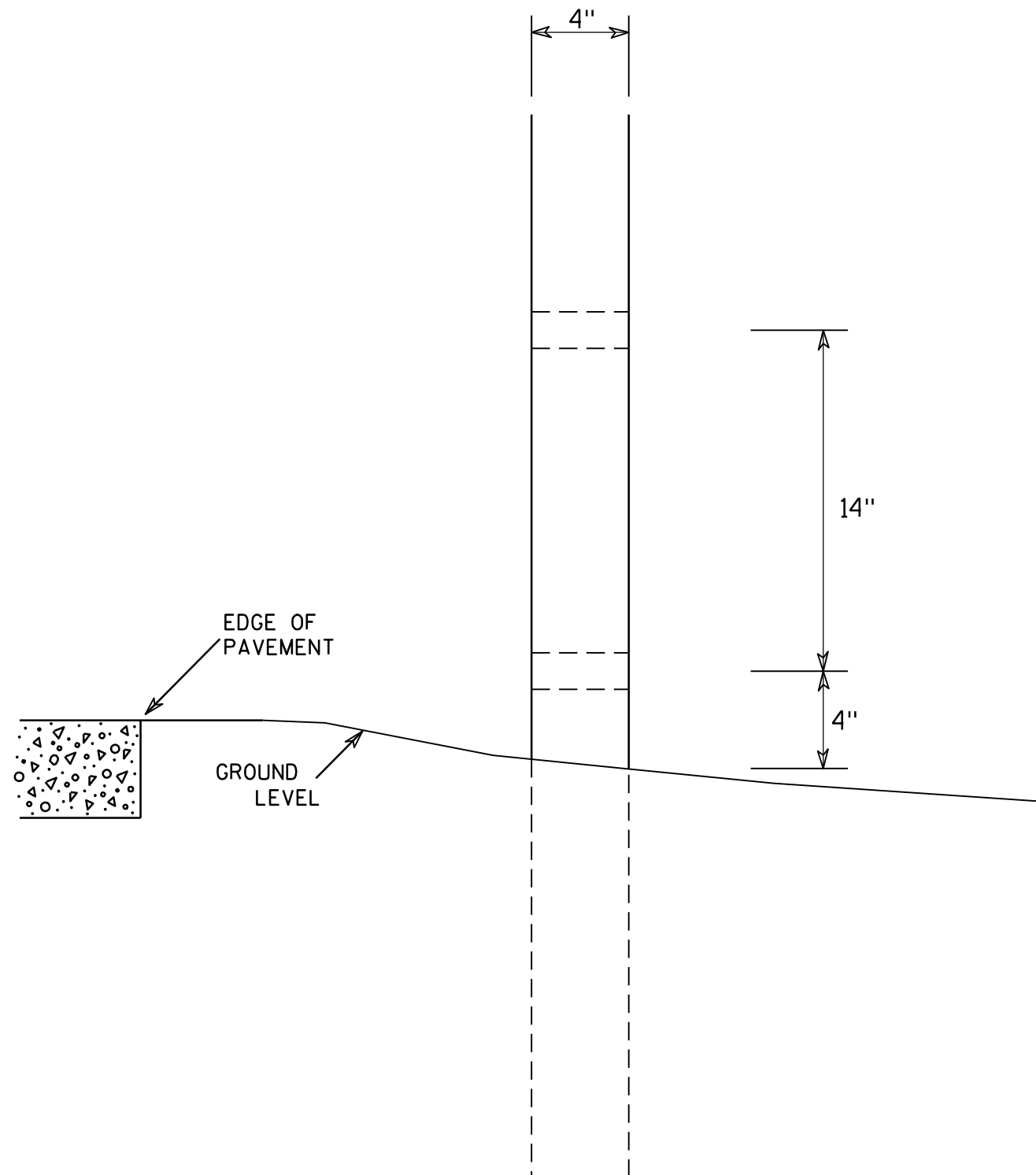
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



SIDE VIEW

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.

4 X 6 WOOD POST MODIFICATIONS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED

Chester J. Spang
for State Traffic Engineer

DATE 3/27/97

PLATE NO. A4-11.2

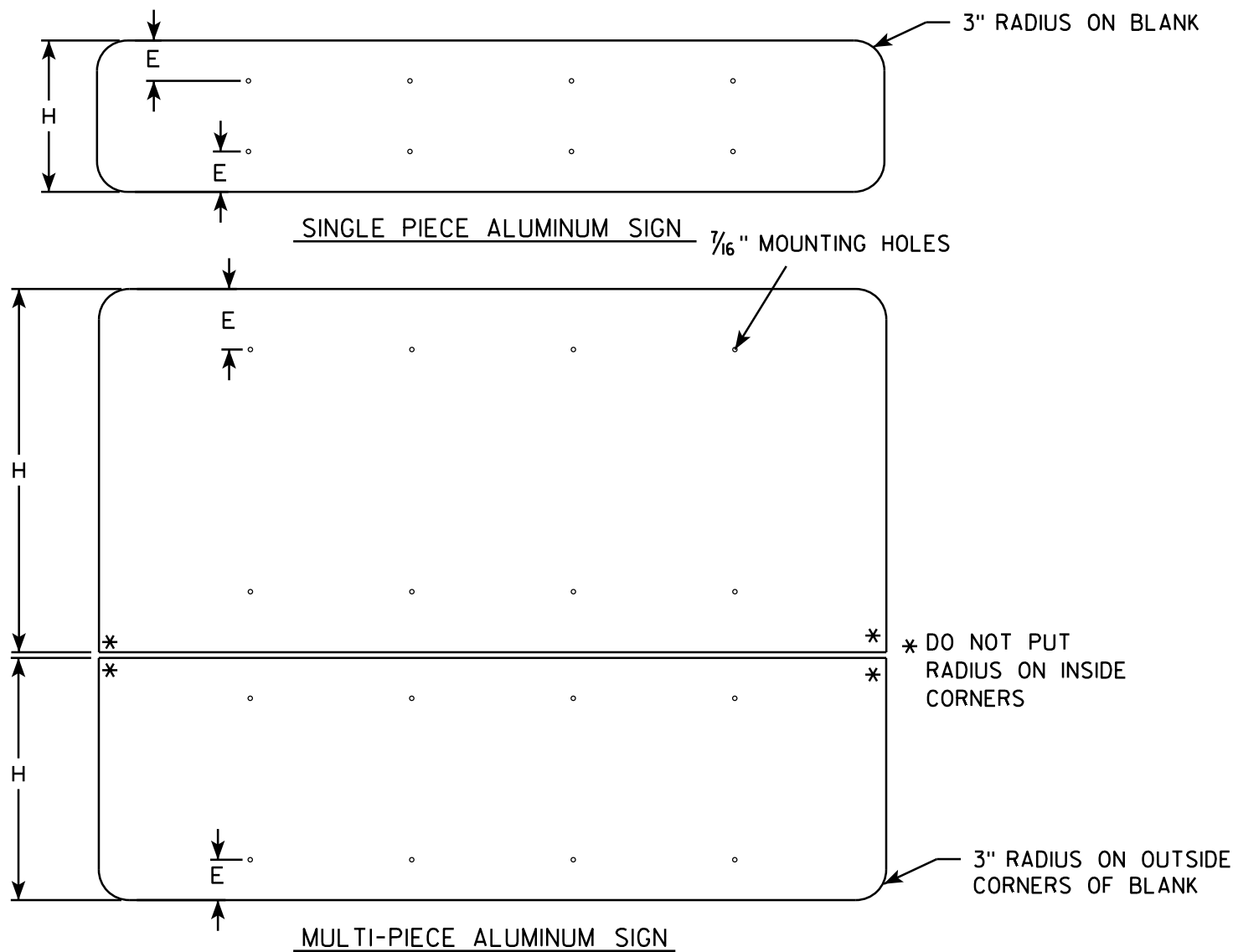
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

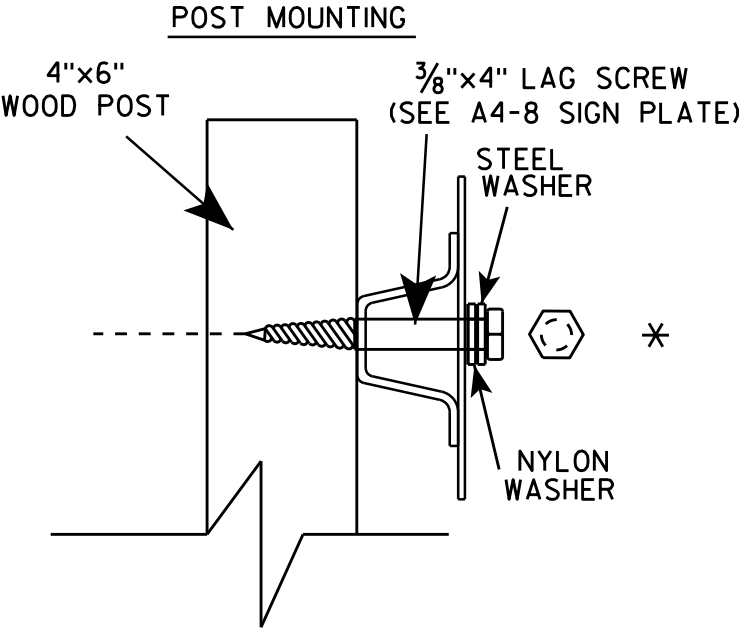
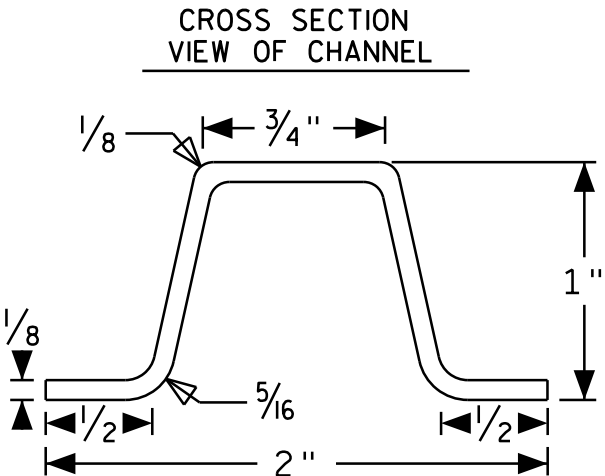
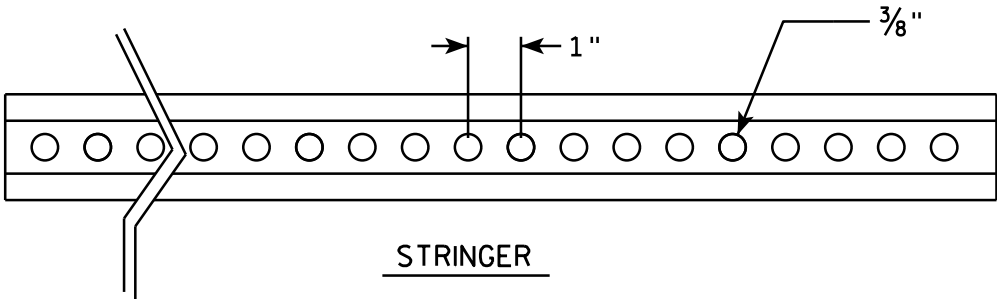
E



GENERAL NOTES

- ALL SIGNS OVER 60" IN WIDTH SHALL HAVE A 3" RADIUS ON THE OUTSIDE CORNERS OF THE ALUMINUM BLANK.
- MOUNTING HOLES SHALL BE 7/16" DIAMETER.
- SEE CHART FOR HOLE SPACING REQUIREMENTS
- FOR SIGN PANELS WITH DIMENSION (H) 36" AND OVER, DIMENSION E SHALL BE 6"
- FOR SIGN PANELS WITH DIMENSION (H) UNDER 36", DIMENSION E SHALL BE 4"
- SIGN STRINGER MATERIAL SHALL CONSIST OF STEEL CHANNEL POST SECTIONS, WEIGHING 1.12 LBS/FT IN ACCORDANCE WITH SECTION 633.2.1 OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.
- SEE SIGN PLATE A4-8 FOR SIGN STRINGER BOLTING REQUIREMENTS.

SIGN WIDTH	STRINGER WIDTH	POSTS	HOLE SPACING	MOUNTING HOLES			
78"	72"	2	16"	15"	31"	47"	63"
84"	72"	2	17"	16 1/2"	33 1/2"	50 1/2"	67 1/2"
90"	72"	2	18"	18"	36"	54"	72"
96"	90"	2	19"	19 1/2"	38 1/2"	57 1/2"	76 1/2"
102"	90"	2	20"	21"	41"	61"	81"
108"	90"	2	21"	22 1/2"	43 1/2"	64 1/2"	85 1/2"
114"	108"	3	15"	12"	27"	42"	57" 72" 87" 102"
120"	108"	3	16"	12"	28"	44"	60" 76" 92" 108"
126"	108"	3	17"	12"	29"	46"	63" 80" 97" 114"
132"	126"	3	18"	12"	30"	48"	66" 84" 102" 120"
138"	126"	3	19"	12"	31"	50"	69" 88" 107" 126"
144"	126"	3	20"	12"	32"	52"	72" 92" 112" 132"



SIGN STRINGER
MOUNTING REQUIREMENTS

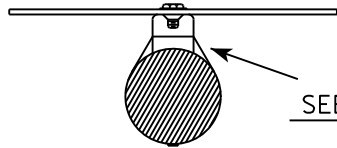
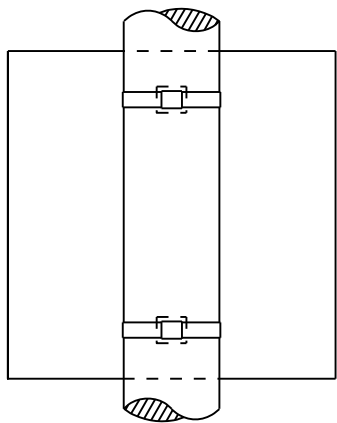
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 4/26/16 PLATE NO. A4-18.1

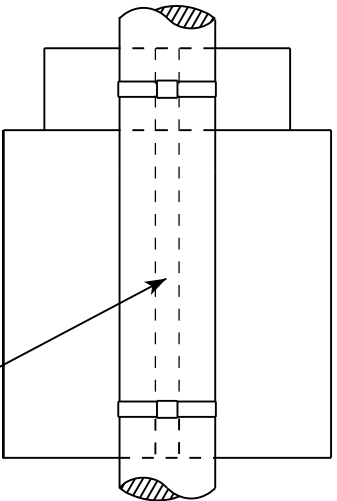
BANDING

SINGLE SIGN

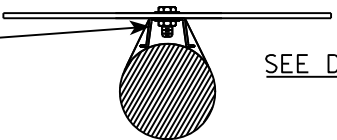


SEE DETAIL A

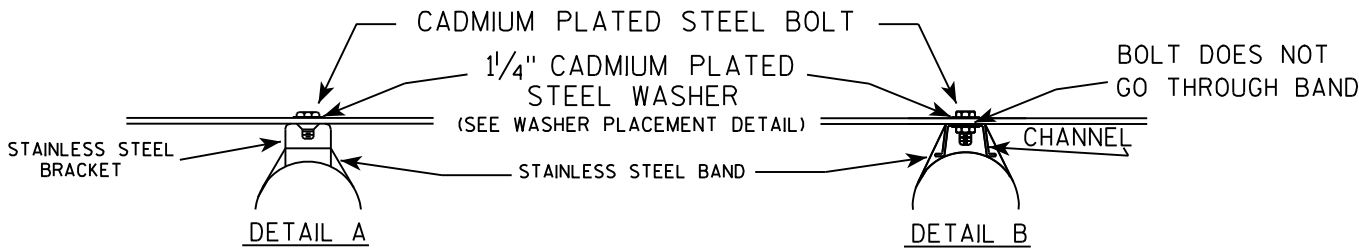
"J" ASSEMBLY



CHANNEL
SEE TYPICAL PANEL
INSTALLATION SHEET



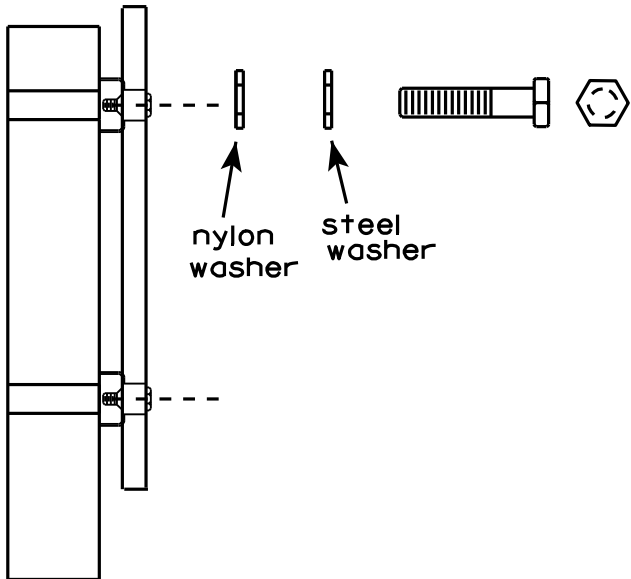
SEE DETAIL B



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.

WASHER PLACEMENT



nylon washer

steel washer

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 8/16/13

PLATE NO. A5-9.3

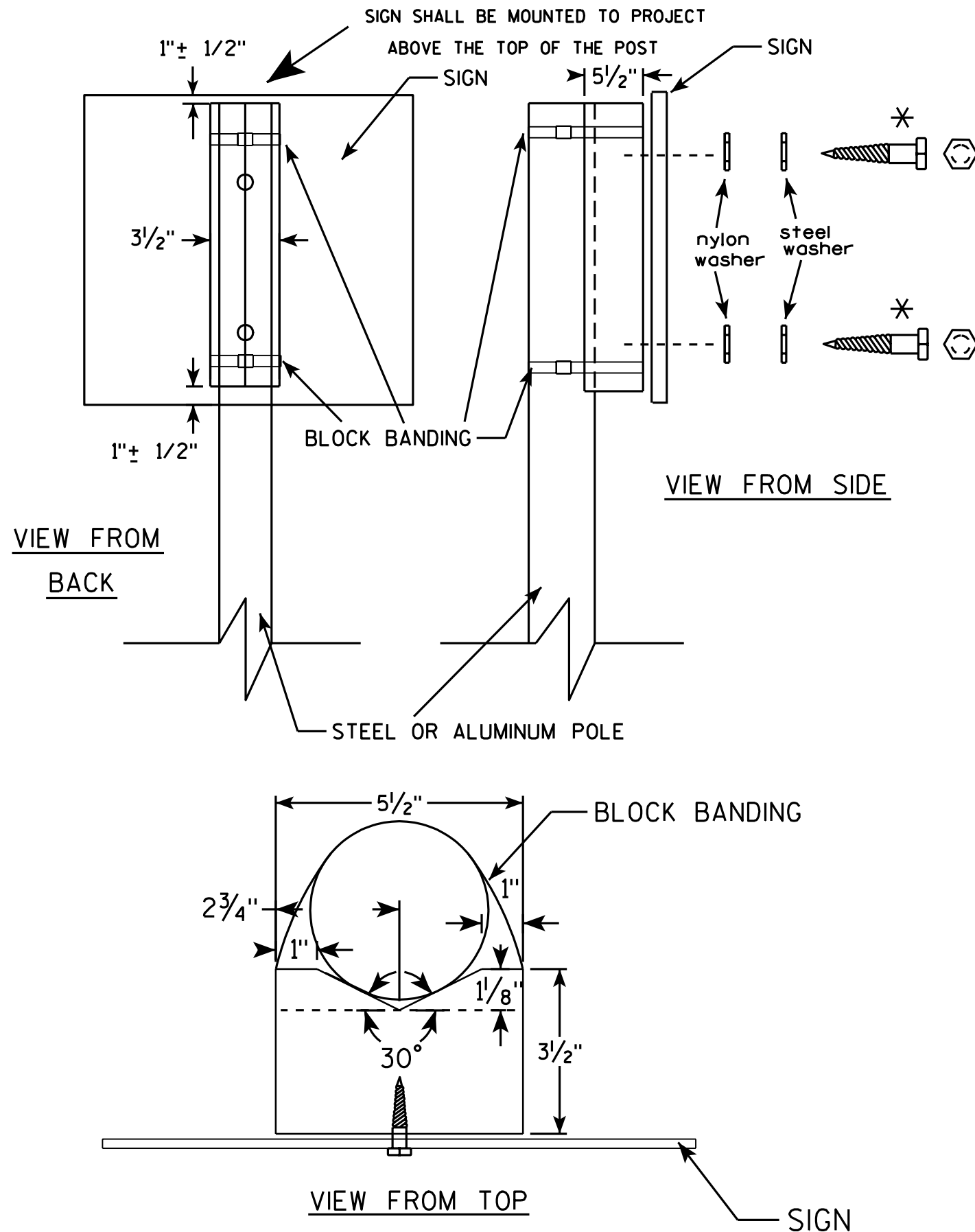
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



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, 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, or
 - b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
 - c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1 1/4" O.D. X 3/8" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✱ LAG BOLTS SHALL BE 3/8" X 2 1/2"

BLOCK BANDING DETAIL
(V-BLOCK OPTION)

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

SHEET NO:

E

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
 - Background - Blue
 - Message - White - Type H Reflective
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. Substitute appropriate numerals and adjust spacing as required to achieve proper balance.



D12-2A

Metric equivalent
for this sign is:

SIZE	
1	1200 mm X 525 mm
2	1500 mm X 1050 mm
3	
4	1500 mm X 1050 mm
5	1950 mm X 1350 mm

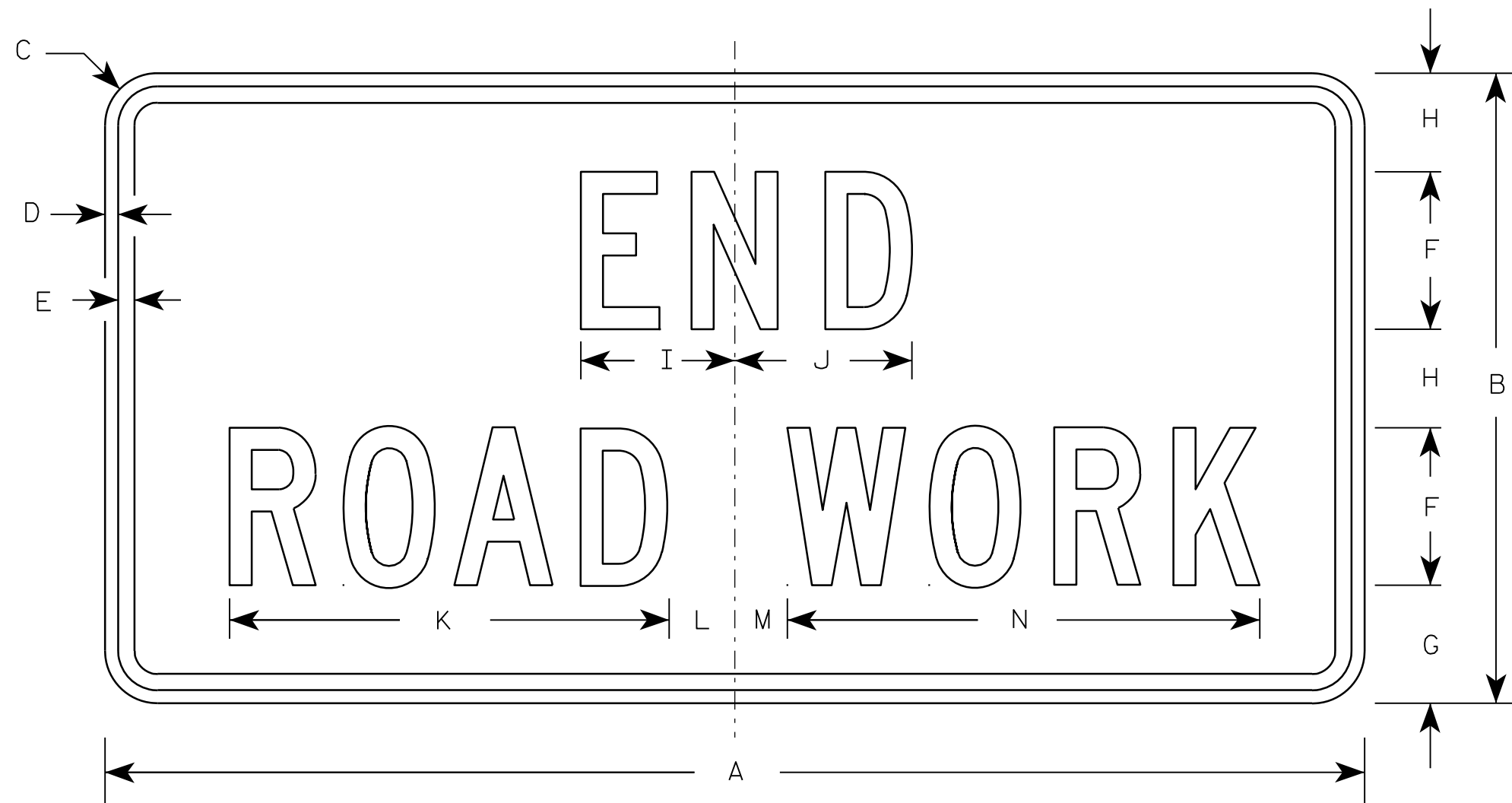
* Variable (See note 5)

[illegible]

STANDARD SIGN	
D12-2A	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<u>Chester J. Spang</u> for State Traffic Engineer
DATE <u>1/16/02</u>	PLATE NO. <u>D12-2A.3</u>

PROJECT NO:				SHEET NO:	
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7



G20-2A

Metric equivalent
for this sign is:

SIZE	
1	900 mm X 450 mm
2	1200 mm X 600 mm
3	1200 mm X 600 mm
4	1200 mm X 600 mm
5	1200 mm X 600 mm

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. m.
1	36	18	1 1/8	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	0.41
2	48	24	1 1/2	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	0.72
3	48	24	1 1/2	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	0.72
4	48	24	1 1/2	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	0.72
5	48	24	1 1/2	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	0.72

NOTES

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

7

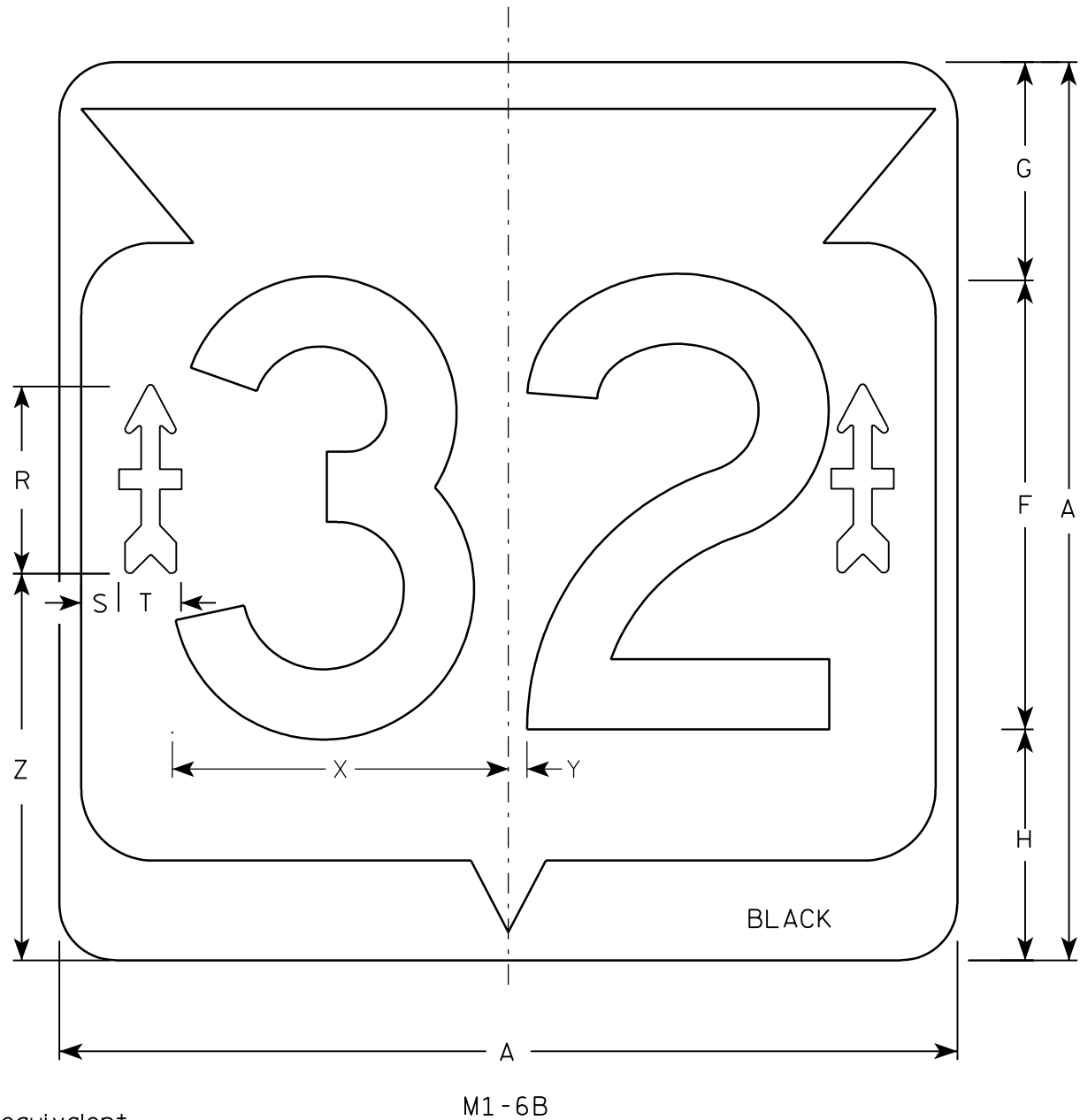
PROJECT NO:

HWY:

COUNTY:

SHEET NO:

E



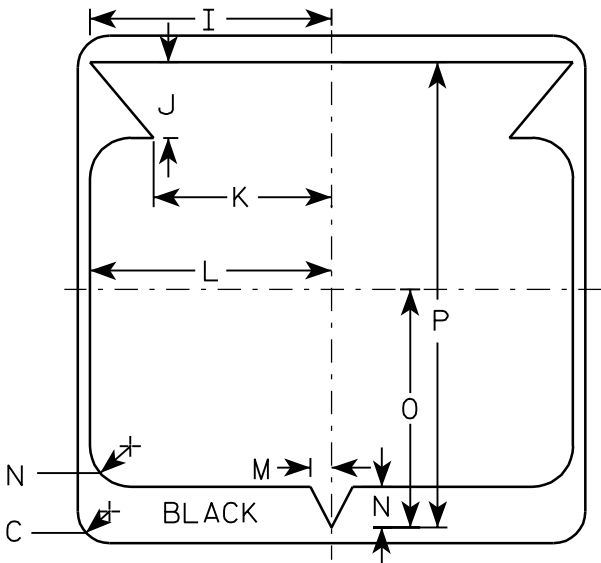
Metric equivalent
for this sign is:

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

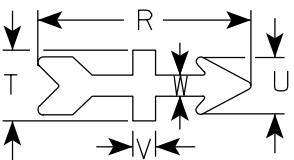
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24		1 1/2			12	5 1/2	6 1/2	10 1/4	2 1/2	8 7/8	11 1/2	1	1 7/8	11 1/4	21 7/8		5 1/8	3/4	1 7/8	1 1/2	5/8	5/8	9	1/2	10 1/2	4.0	.36
3	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81
4	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81
5	36		2 1/4			18	8 3/4	9 1/4	15 3/8	5 3/8	12 5/8	17 1/8	1 1/2	2 7/8	16 7/8	33		7 1/2	1 1/2	2 1/2	2	7/8	3/4	13 1/2	3/4	15 1/2	9.0	.81

NOTES

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



32nd DIVISION ARROW
ACTUAL SIZE





NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area m ²
1																												
2	24			1 1/8	1/2																						4.0	.36
3																												
4	36			1 5/8	3/4																						9.0	.81
5																												

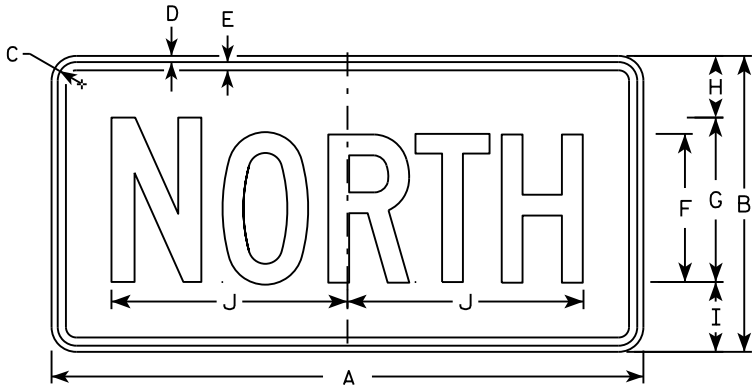
STANDARD SIGN

M1-93

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
State Traffic Engineer

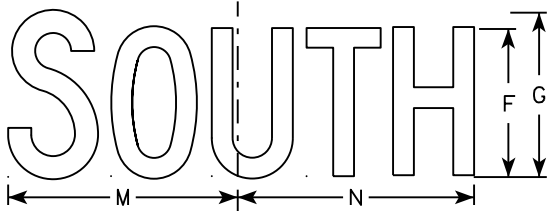
DATE 11/5/15 for PLATE NO. M1-93.2



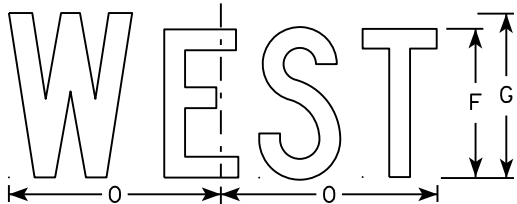
M3-1
MM3-1
MP3-1



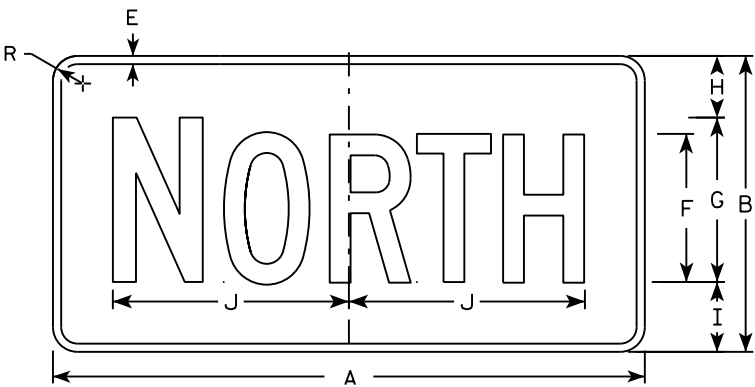
M3-2
MM3-2
MP3-2



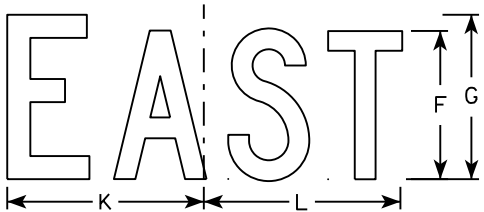
M3-3
MM3-3
MP3-3



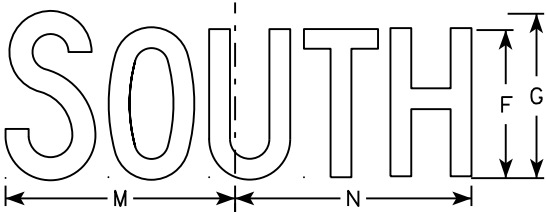
M3-4
MM3-4
MP3-4



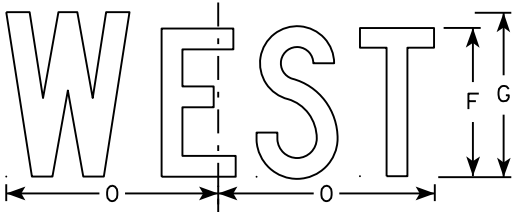
MB3-1
MK3-1
MN3-1



MB3-2
MK3-2
MN3-2



MB3-3
MK3-3
MN3-3



MB3-4
MK3-4
MN3-4

NOTES

1. All Signs Type II - Type H
2. Color:
Background - See note 5
Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. M3-1 thru M3-4 Background - White
Message - Black
MB3-1 thru MB3-4 Background - Blue
Message - White
MK3-1 thru MK3-4 Background - Green
Message - White
MM3-1 thru MM3-4 Background - White
Message - Green
MN3-1 thru MN3-4 Background - Brown
Message - White
MP3-1 thru MP3-4 Background - White
Message - Blue
6. Note the first letter of each direction is larger than the remainder of the message.

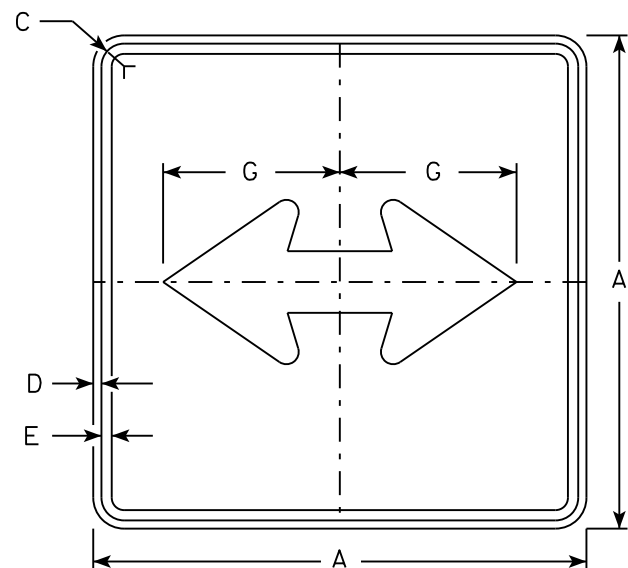
SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	24	12	1 1/8	3/8	3/8	6	7	2 1/4	2 3/4	10 1/4	7 7/8	8 3/8	10 1/4	9 3/4	8 3/4			1 1/2									2.00
3	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
4	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5
5	36	18	1 1/8	3/8	1/2	9	10	3 3/4	4 1/4	14 3/8	12	12 1/8	14	14 1/8	13			1 1/2									4.5

STANDARD SIGNS
M3-1 thru M3-4
SERIES

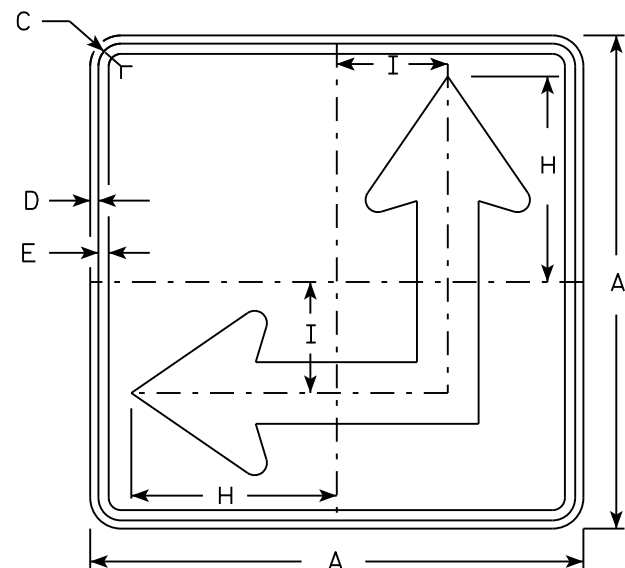
WISCONSIN DEPT OF TRANSPORTATION

APPROVED
Matthew R. Rauch
for State Traffic Engineer

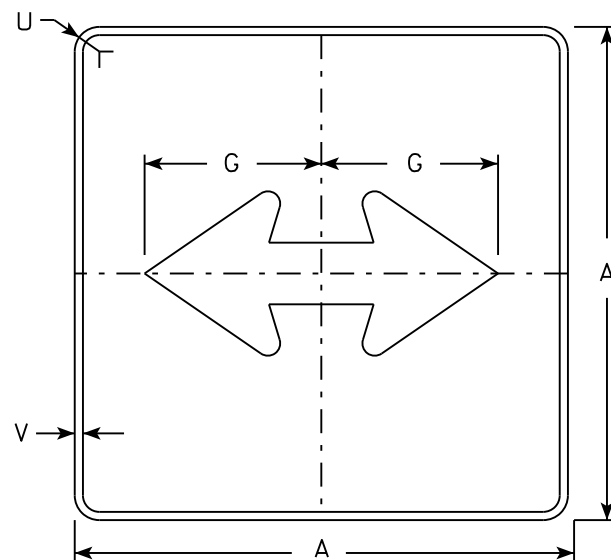
DATE 10/15/15 PLATE NO. M3-1.14



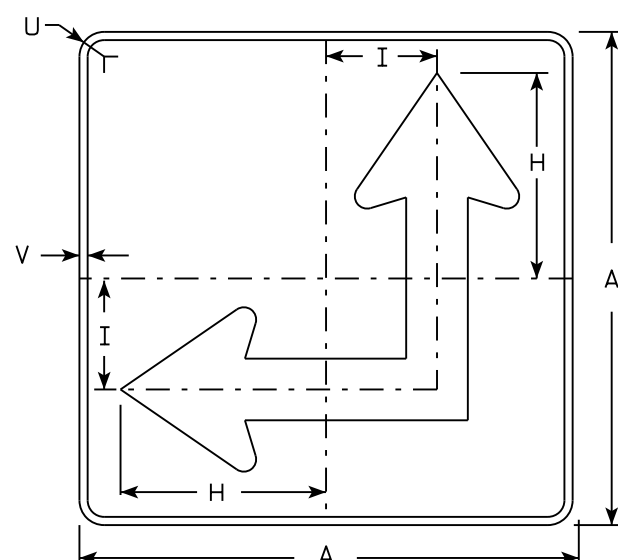
M6 - 4
MM6 - 4
MO6 - 4
MP6 - 4



M6 - 6
MM6 - 6
MO6 - 6
MP6 - 6



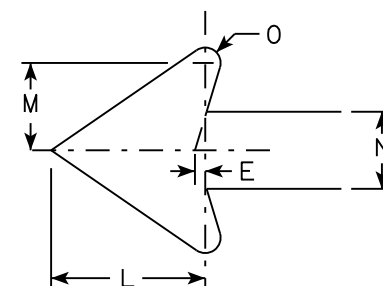
MB6 - 4
MK6 - 4
MN6 - 4
MR6 - 4



MB6 - 6
MK6 - 6
MN6 - 6
MR6 - 6

NOTES

- Signs are Type II - Type H except as Shown
- Color:
Background - See Note 4
Message - See Note 4
- Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
- M6-4 and M6-6 Background - White
Message - Black
MB6-4 and MB6-6 Background - Blue
Message - White
MK6-4 and MK6-6 Background - Green
Message - White
MM6-4 and MM6-6 Background - White
Message - Green
MN6-4 and MN6-6 Background - Brown
Message - White
MO6-4 and MO6-6 Background - Orange - Type F Reflective
Message - Black
MP6-4 and MP6-6 Background - White
Message - Blue
MR6-4 and MR6-6 Background - Brown
Message - Yellow
- M6-6R same as M6-6L except arrow points ahead and right.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	21		1 1/8	3/8	3/8		7 1/2	8 3/4	4 1/4			5 1/4	3	2 5/8	1/2						1 1/2	1/2					3.06
3	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
4	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25
5	30		1 3/8	1/2	5/8		10 3/4	12 1/2	6 3/4			7 1/2	4 1/4	3 3/4	3/4						1 7/8	1/2					6.25

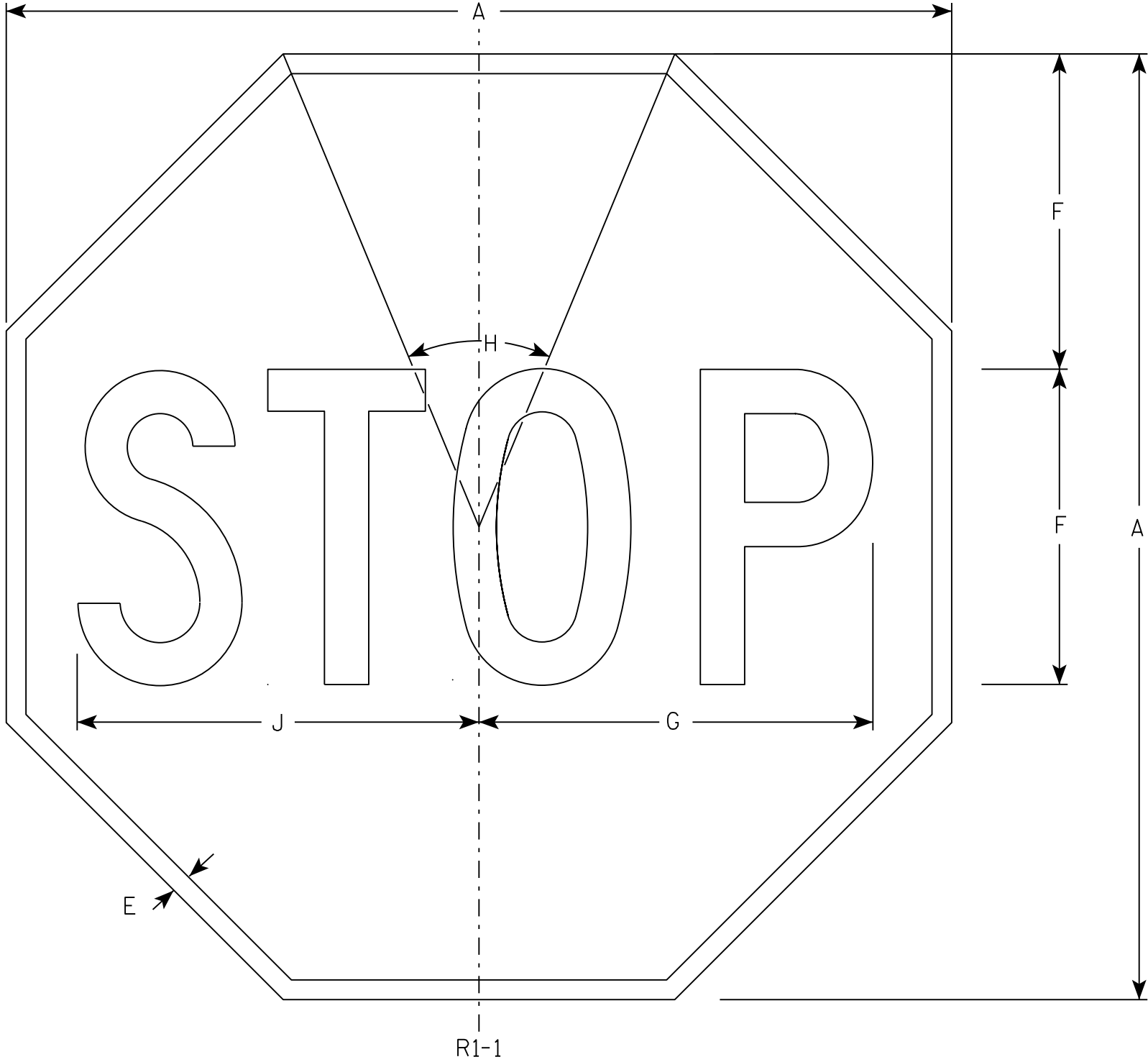
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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STANDARD SIGN
M6 - 4 & M6 - 6
SERIES

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 10/15/15 PLATE NO. M6-4.10



NOTES

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

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

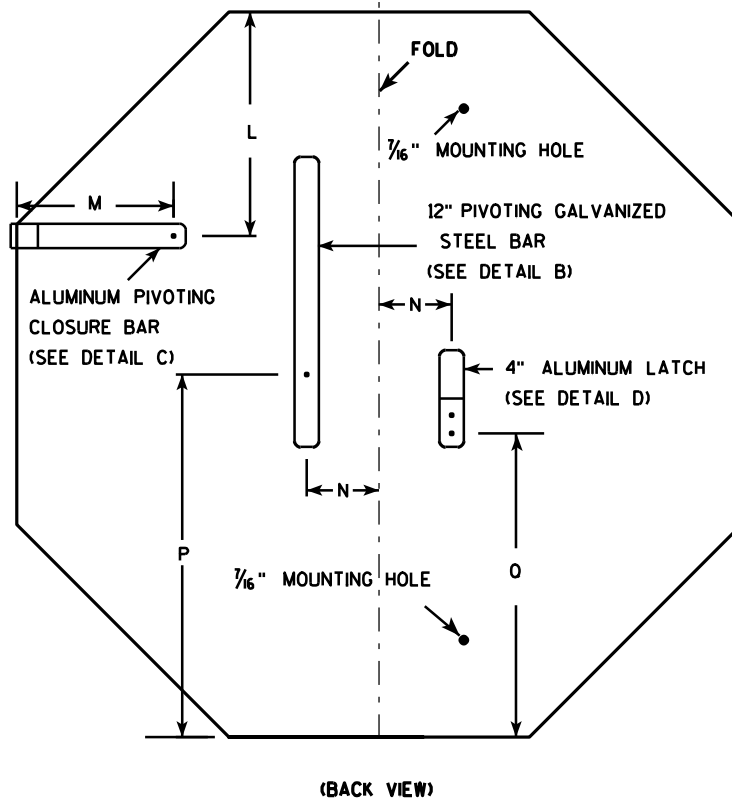
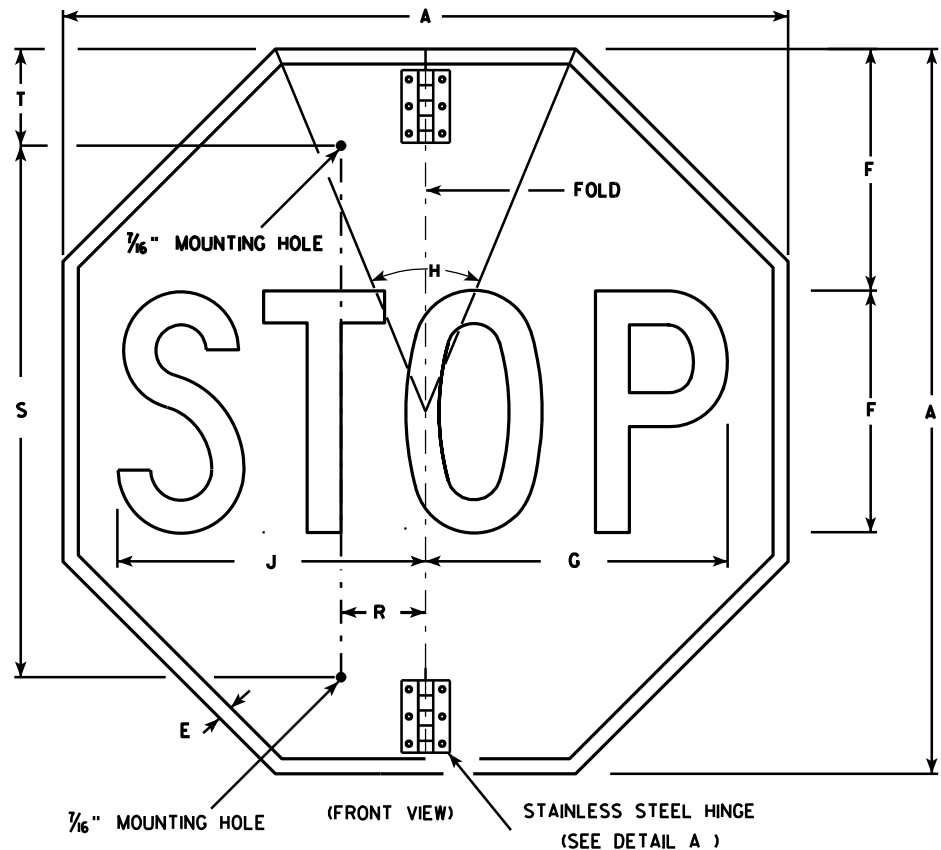
STANDARD SIGN

R1-1

WISCONSIN DEPT OF TRANSPORTATION

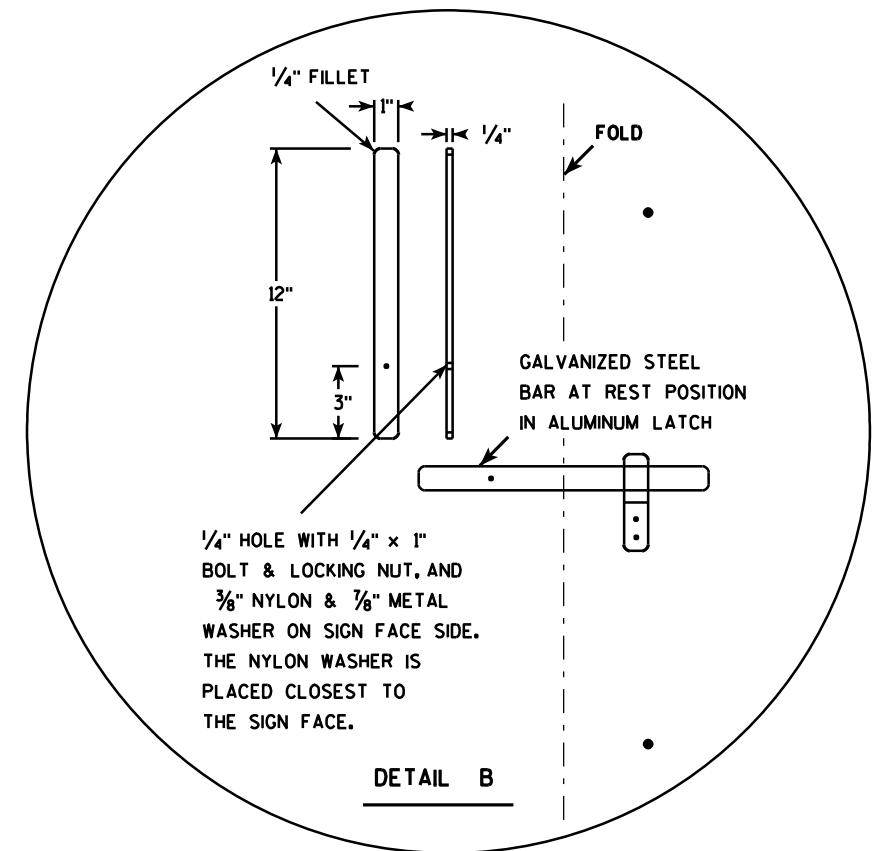
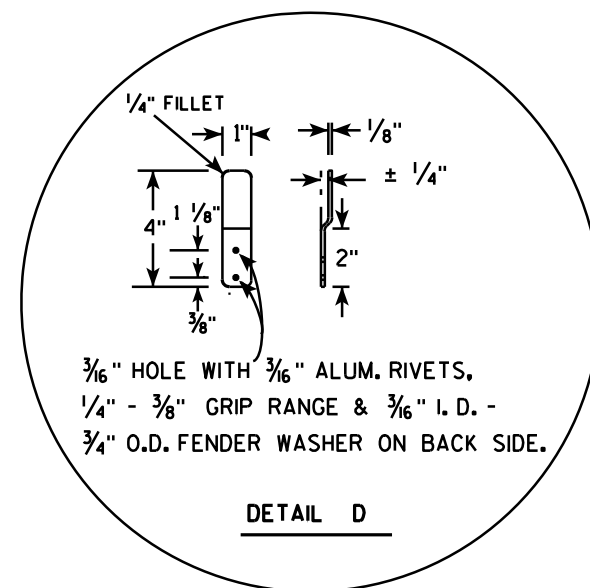
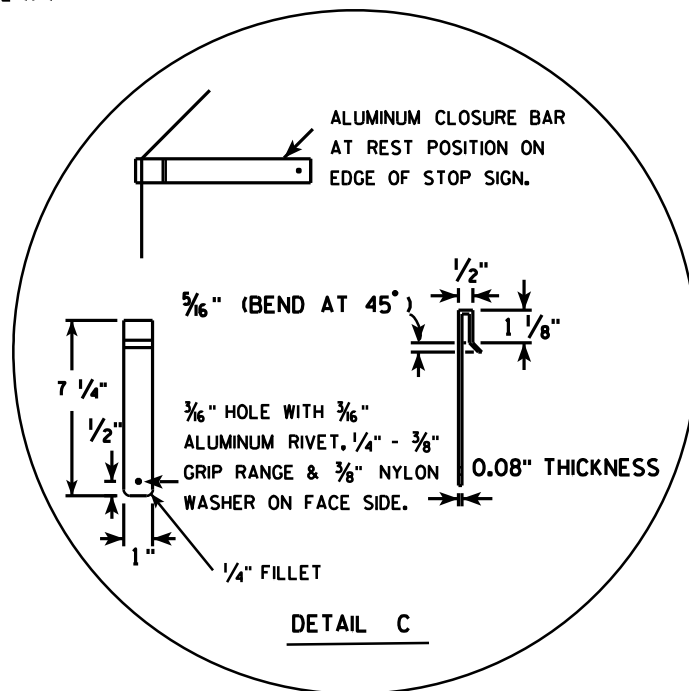
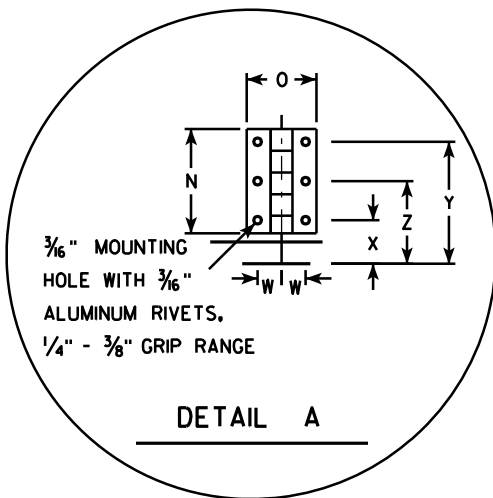
APPROVED *Matthew R. Rauch*
for State Traffic Engineer

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



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Red
Message - White
3. Message Series - C
4. All hardware used on the folding STOP sign installation shall conform to 637.2.4 of the WIS DOT Standard Specification.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30				5/8	10	12 1/2	45		12 3/4		9 1/4	6 1/2	3	2	15	12 3/8	2 1/2	22	5			11/16	1 1/4	3 1/2	2 3/8	5.18
2M	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
3	36				3/4	12	15	45		15 3/8		11	6 1/2	3	2	18	15 3/8	2 1/2	26	5			11/16	1 1/4	3 1/2	2 3/8	7.46
4																											
5																											

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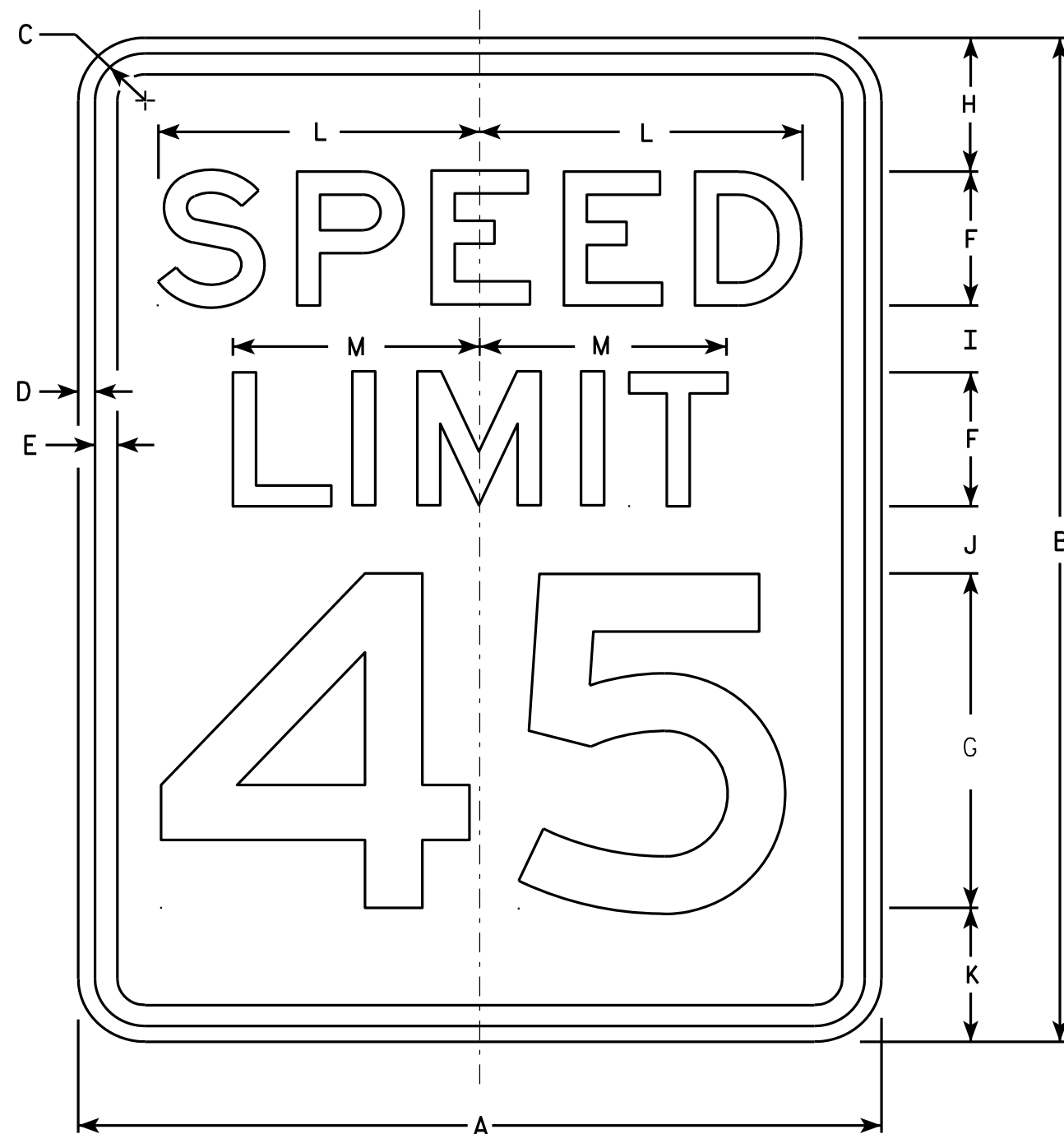
STANDARD SIGN

R1-1F

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 12/03/10 PLATE NO. R1-1F.3



R2-1

NOTES

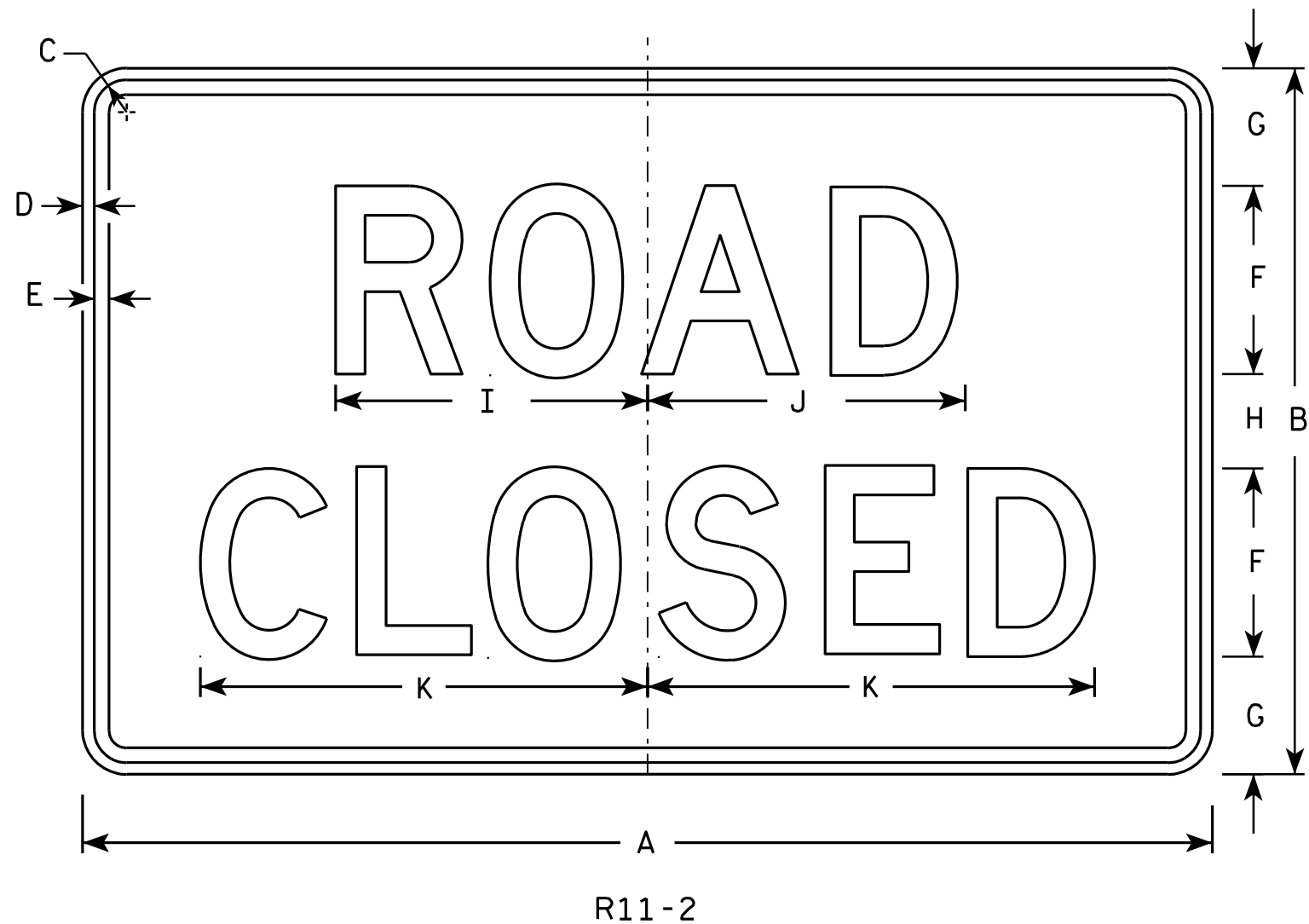
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - White
Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as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

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

STANDARD SIGN R2-1

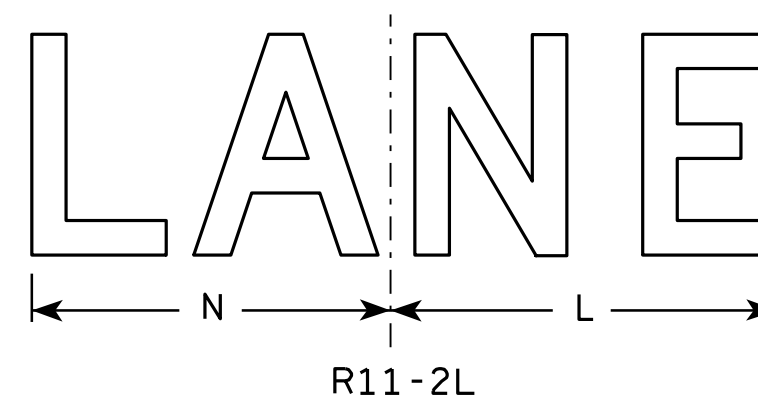
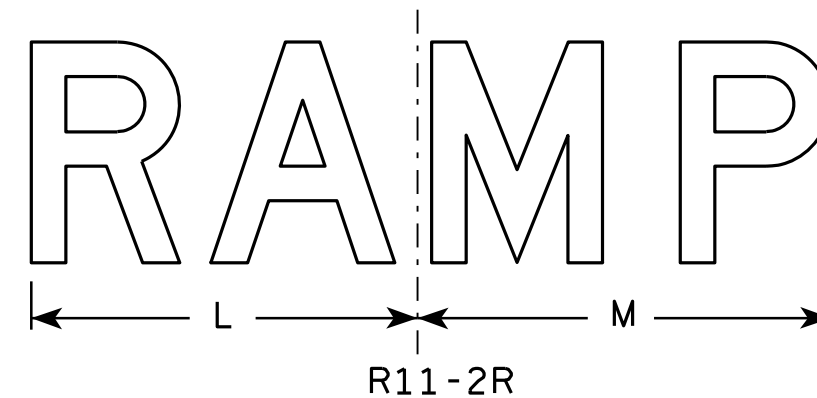
WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
For State Traffic Engineer
DATE 5/26/10 PLATE NO. R2-1.13

PROJECT NO: HWY: COUNTY: SHEET NO: E



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
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.

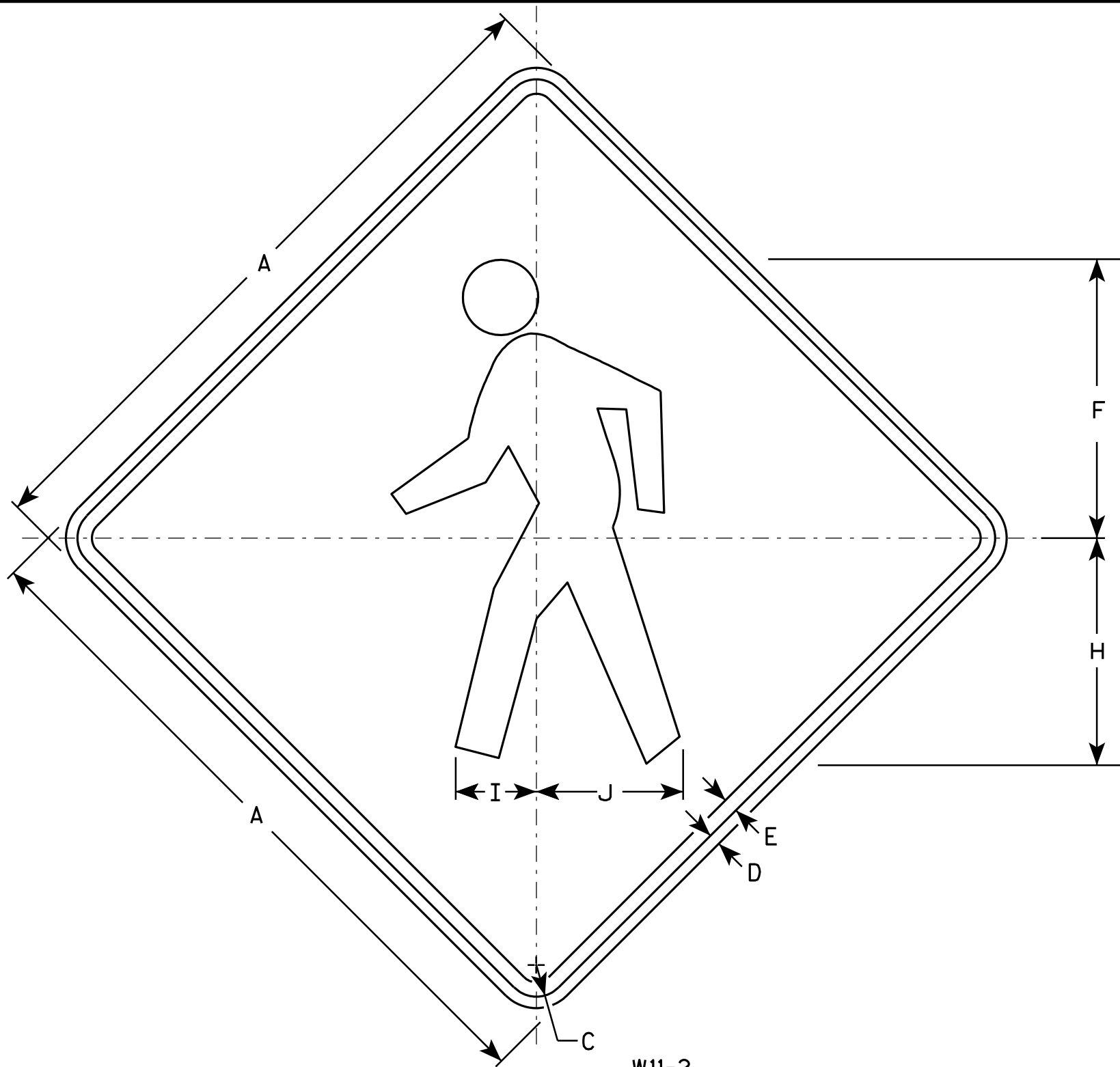


SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
2M	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
3	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
4	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0
5	48	30	1 3⁄8	1⁄2	5⁄8	8	5	4	13 1⁄4	13 1⁄2	19	14	15	13													10.0

STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION
APPROVED *Matthew R. Rauch*
for State Traffic Engineer
DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO: HWY: COUNTY: SHEET NO: E



W11-2

NOTES

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

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	9 3/4		7 7/8	2 7/8	5 1/8																	4.0
2S	30		1 3/8	1/2	5/8	12 1/8		9 7/8	3 1/2	6 3/8																	6.25
2M	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
3	36		1 5/8	5/8	3/4	14 1/2		11 7/8	4 1/4	7 5/8																	9.0
4	48		2 1/4	3/4	1	19 3/8		15 3/4	5 5/8	10 1/4																	16.0
5																											

STANDARD SIGN
W11-2

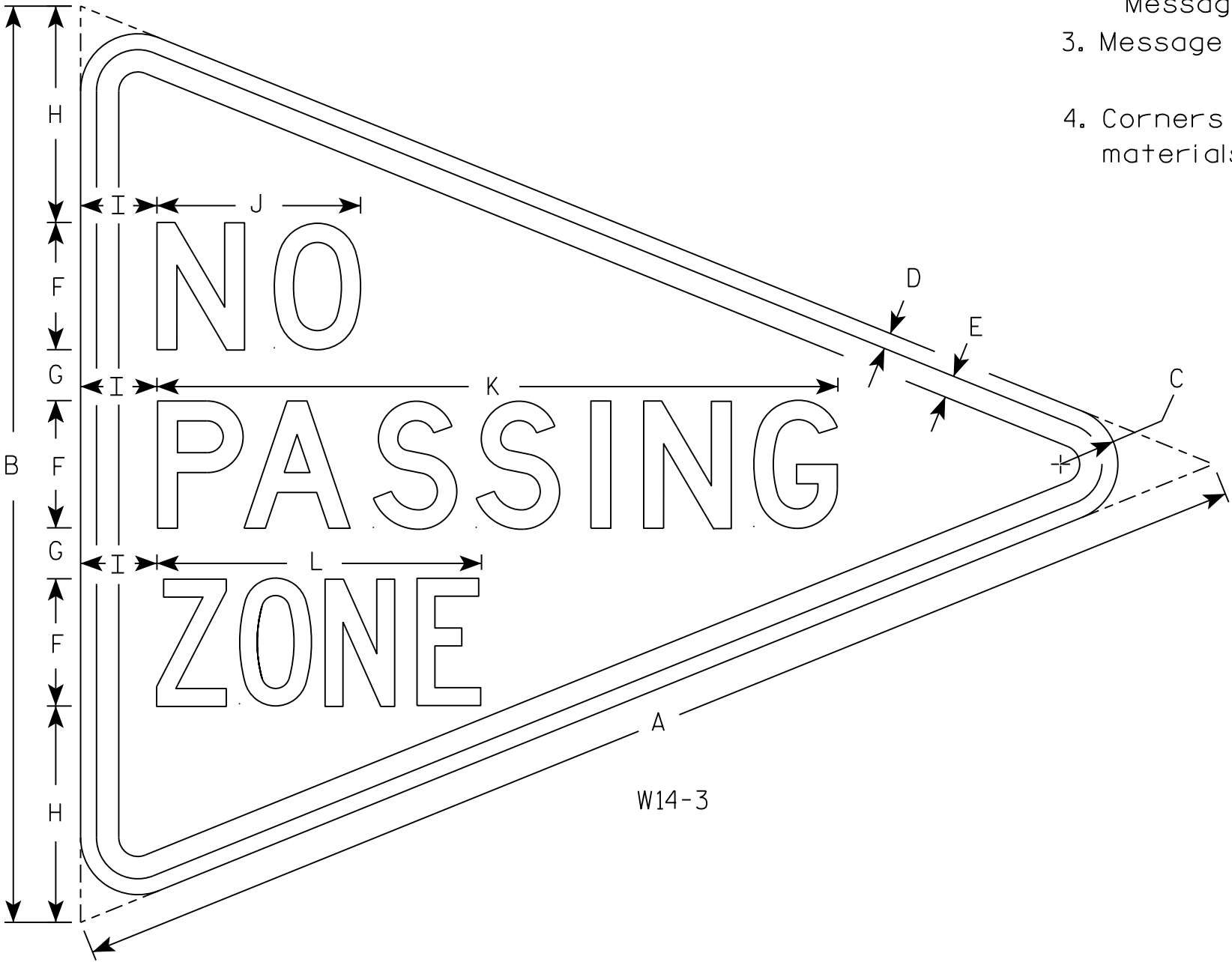
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 6/7/10 PLATE NO. W11-2.7

NOTES

- 1. Sign is Type II - Type F Reflective
- 2. Color:
Background - Yellow
Message - Black
- 3. Message Series - Lines 1 and 2 are Series D.
Line 3 is series C.
- 4. Corners and borders shall be rounded on all base materials for this sign.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	36	2 1/4	5/8	7/8	5	2	8 1/2	3	8	26 3/4	12 3/4															5.56
2M																											
3																											
4																											
5																											

STANDARD SIGN
W14-3

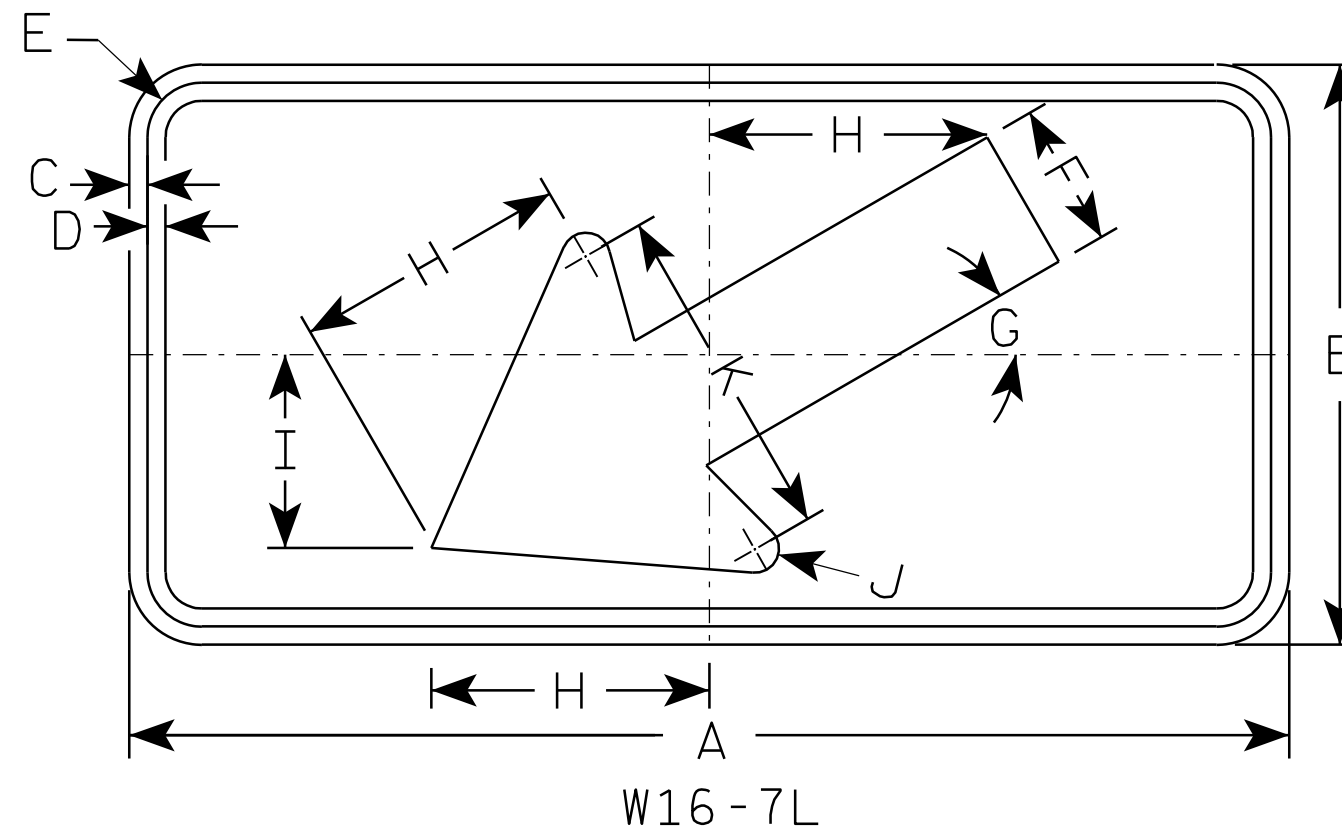
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

DATE 3/21/17 PLATE NO. W14-3.10

NOTES

1. Sign is Type II - Type F Reflective -
reference WIS DOT Standard Specification for
HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
Background - Yellow
Message - Black
3. Corners may be square or rounded when base
material is plywood but borders shall be rounded
as shown. When base material is metal, the
corners and borders shall be rounded.
4. W16-7R is the same as W16-L
except the arrow is reversed along
the vertical centerline.



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	3/8	3/8	1 1/8	3	30°	5 3/4	4	1/2	7																2.0
2M	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
3	30	18	3/8	1/2	1 1/8	4 1/2	30°	8 1/2	6	5/8	10 1/4																3.75
4																											8
5																											8

STANDARD SIGN	
W16-7	
WISCONSIN DEPT OF TRANSPORTATION	
APPROVED	<i>Matthew R. Rauch</i> for State Traffic Engineer
DATE 11/02/10	PLATE NO. W16-7.5

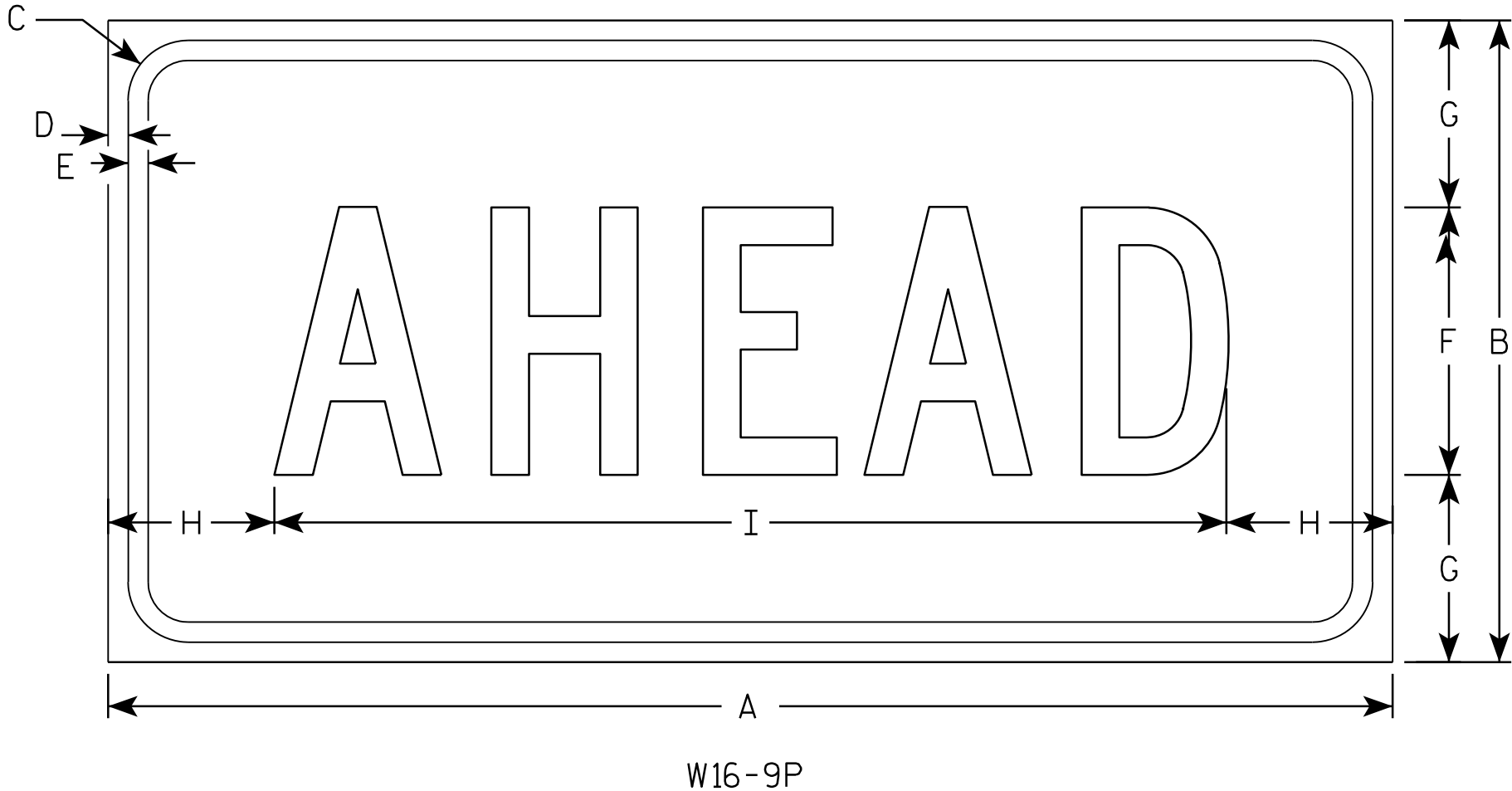
PROJECT NO:	HWY:	COUNTY:	SHEET NO:	E
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7

7

NOTES

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



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	12	1 1/8	3/8	3/8	5	3 1/2	3 1/8	17 3/4																		2.0
2M	30	18	1 1/8	3/8	1/2	7	5 1/2	2 3/4	24 1/2																		3.75
3	30	18	1 1/8	3/8	1/2	7	3 1/2	2 3/4	24 1/2																		3.75
4	48	24	1 3/8	1/2	5/8	10	7	6 1/8	35 3/4																		8.0
5																											

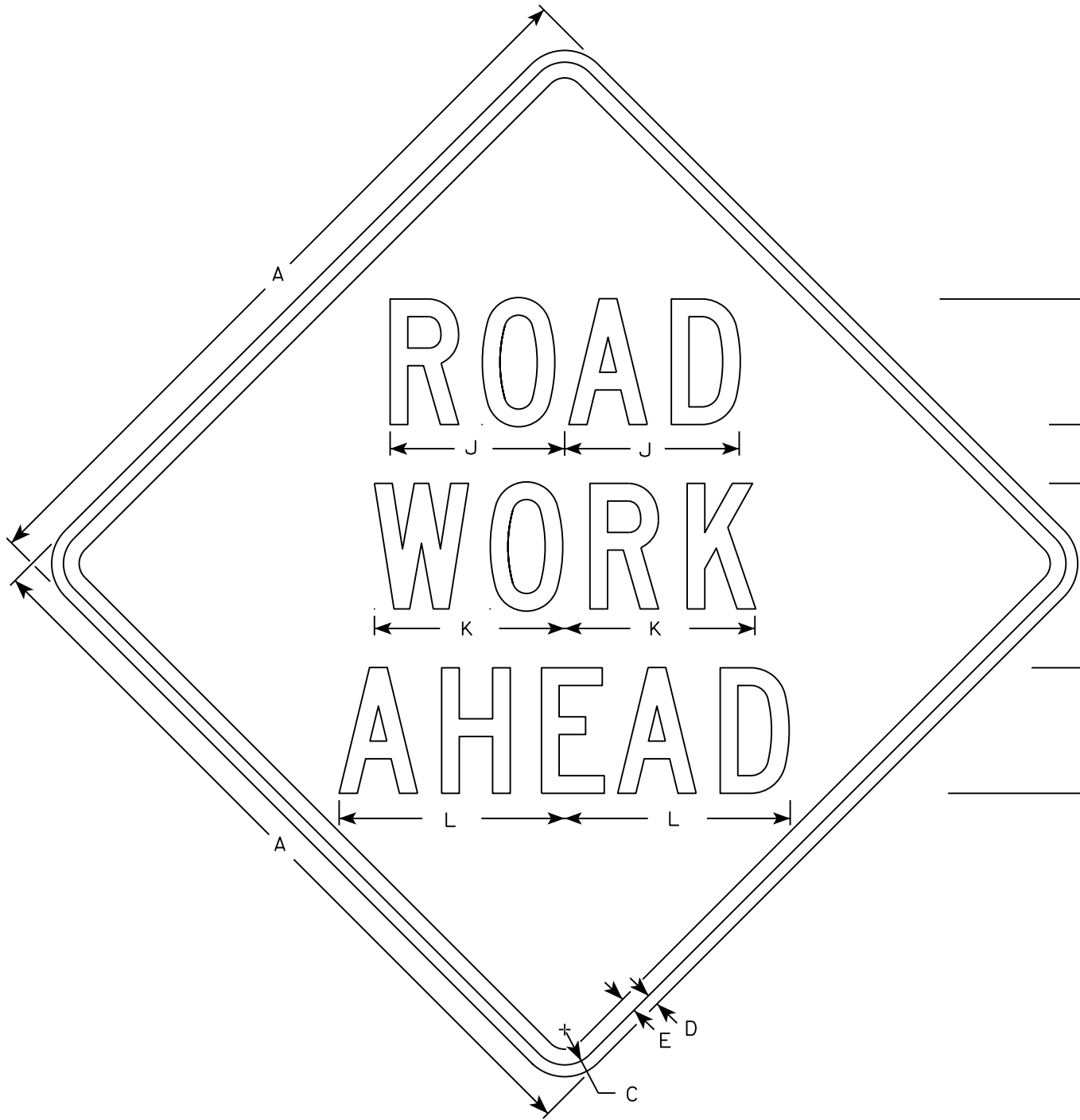
STANDARD SIGN

W16 - 9P

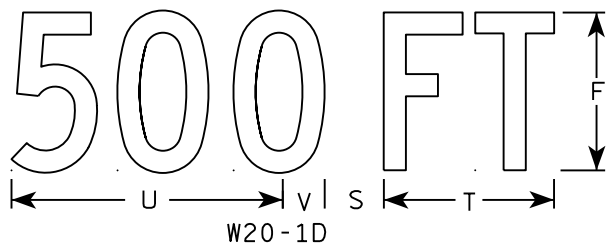
WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

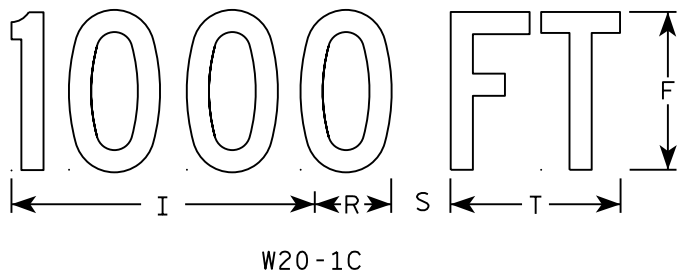
DATE 12/28/10 PLATE NO. W16-9P.6



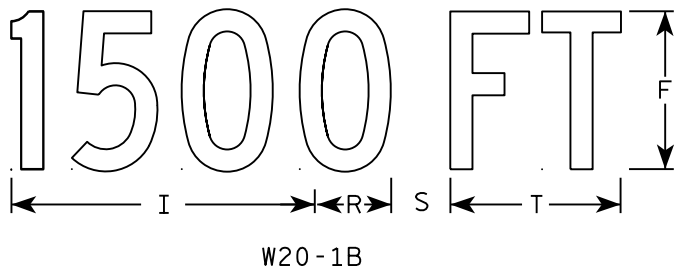
W20-1A



W20-1D



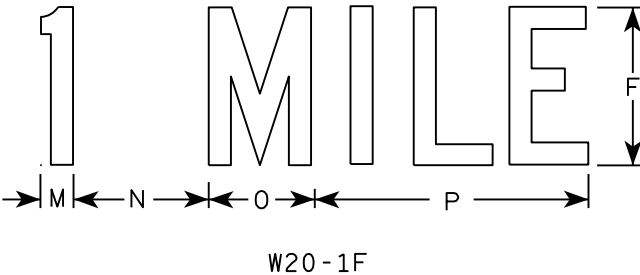
W20-1C



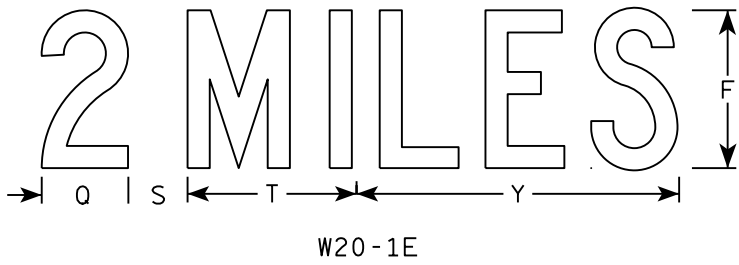
W20-1B



W20-1G



W20-1F



W20-1E

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.

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

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED *Matthew R. Rauch*
for State Traffic Engineer

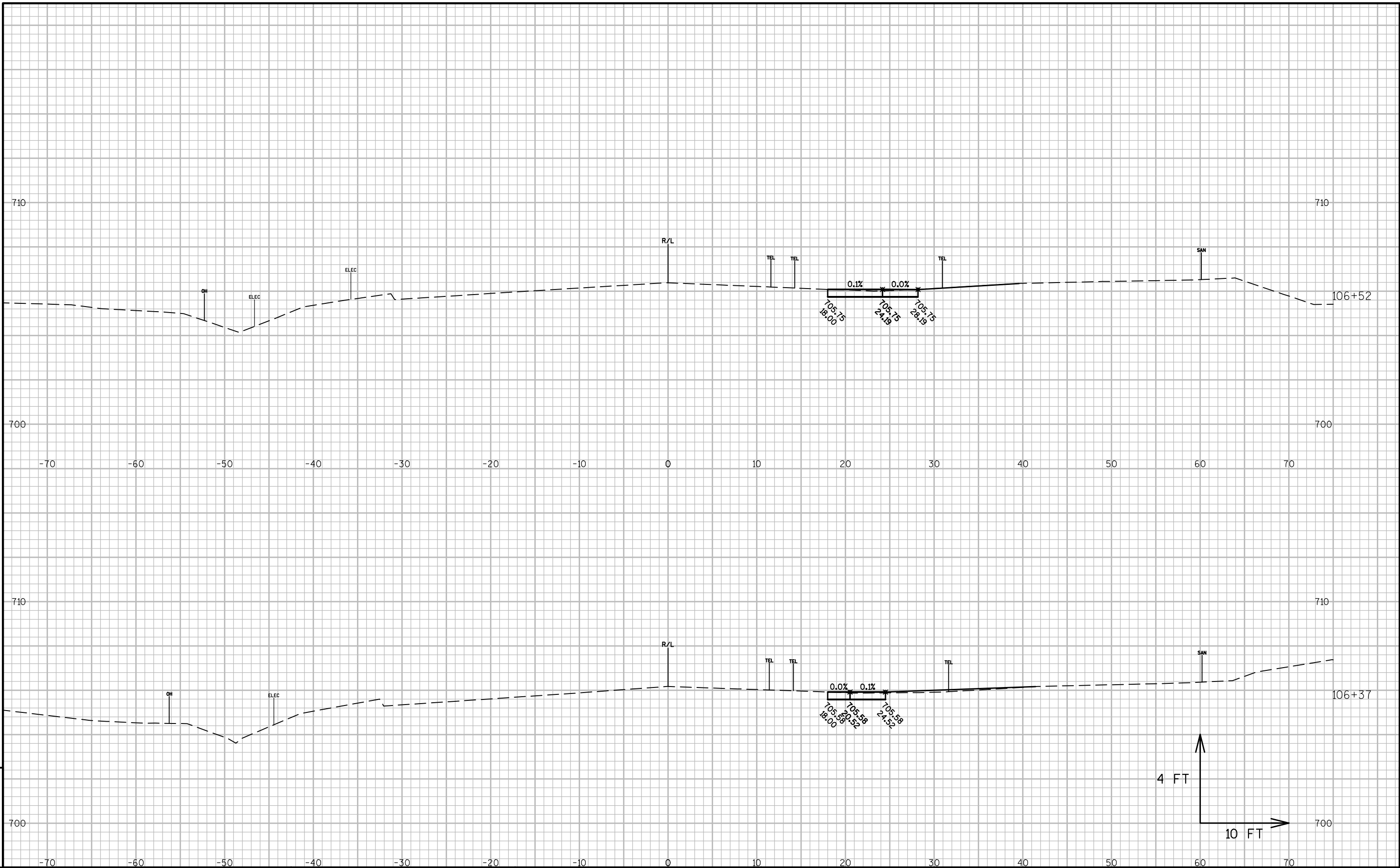
DATE 5/07/15 PLATE NO. W20-1.10

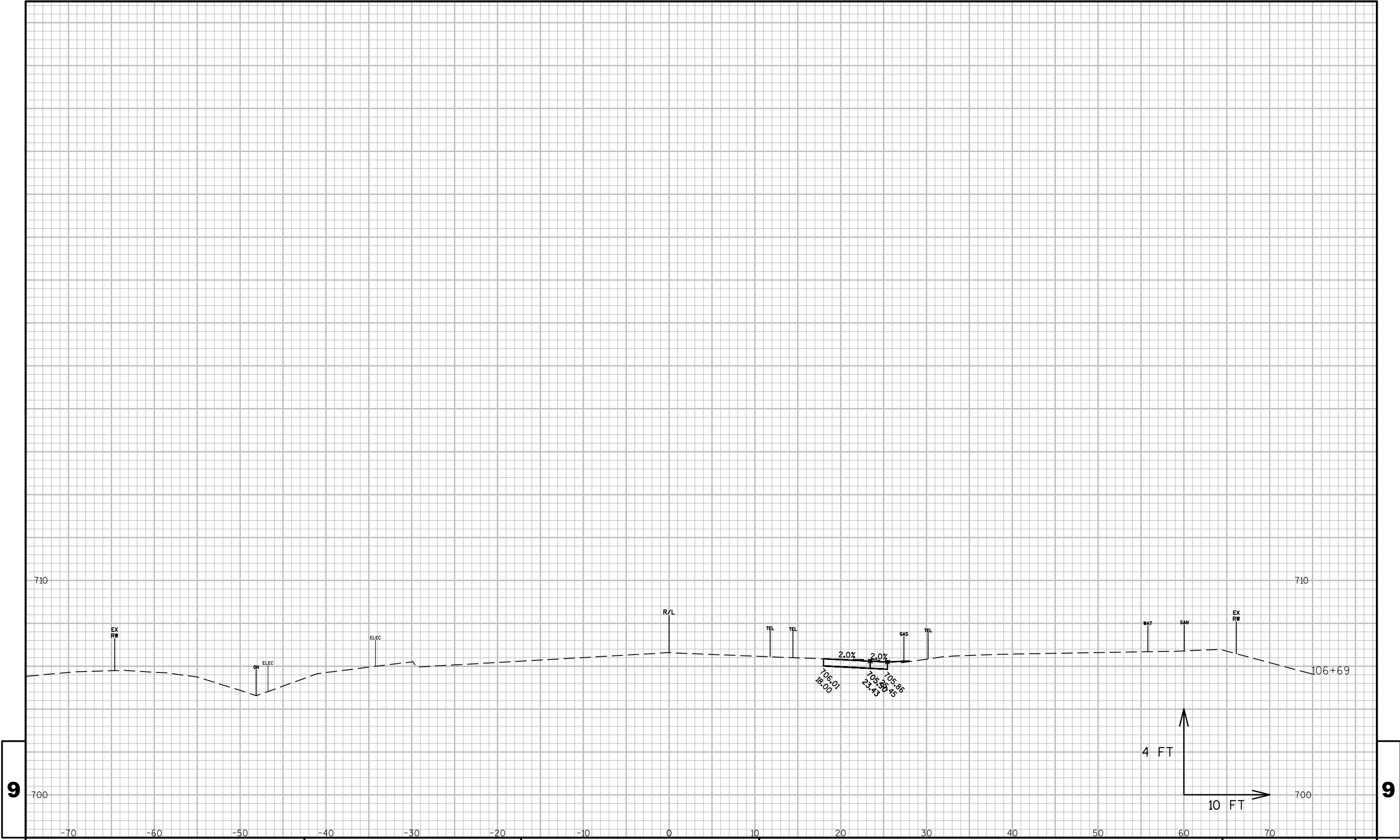
EARTHWORK

STATION	Real Station	Distance	AREA (SF)						Incremental Vol (CY) (Unadjusted)						Cumulative Vol (CY)								Mass Ordinate
			Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Marsh		Expanded EBS		Reduced Marsh	Reduced EBS	
																	Backfill 1.50 Note 4	Expanded Rock 1.10	Backfill 1.30 Note 5	in Fill 0.60 Note 6	In Fill 0.80 Note 7		
																						Note 1	
106+34.72	10634.72	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
106+37.92	10637.92	3.20	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
106+50	10650.00	12.08	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.00
106+75	10675.00	25.00	1.05	0.00	0.00	0.00	0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00	0.00	0.48
106+91.51	10691.51	16.51	2.25	0.00	0.00	0.00	0.00	0.00	1	0	0	0	0	0	1	0	0	0	0	0.00	0.00	0.00	1.49
107+00	10700.00	8.49	20.57	0.00	0.00	0.00	0.00	0.00	4	0	0	0	0	0	5	0	0	0	0	0.00	0.00	0.00	5.08
107+25	10725.00	25.00	22.91	0.00	0.00	0.00	0.00	0.00	20	0	0	0	0	0	25	0	0	0	0	0.00	0.00	0.00	25.21
107+50	10750.00	25.00	23.56	0.00	0.00	0.00	0.00	0.00	22	0	0	0	0	0	47	0	0	0	0	0.00	0.00	0.00	46.72
107+75	10775.00	25.00	22.52	0.00	0.00	0.00	0.00	0.00	21	0	0	0	0	0	68	0	0	0	0	0.00	0.00	0.00	68.06
108+00	10800.00	25.00	19.88	0.00	0.00	0.00	0.00	0.00	20	0	0	0	0	0	88	0	0	0	0	0.00	0.00	0.00	87.68
108+25	10825.00	25.00	18.12	0.00	0.00	0.00	0.00	0.00	18	0	0	0	0	0	105	0	0	0	0	0.00	0.00	0.00	105.28
108+50	10850.00	25.00	14.48	0.00	0.00	0.00	0.00	0.00	15	0	0	0	0	0	120	0	0	0	0	0.00	0.00	0.00	120.36
108+75	10875.00	25.00	11.22	0.00	0.00	0.00	0.00	0.00	12	0	0	0	0	0	132	0	0	0	0	0.00	0.00	0.00	132.26
109+00	10900.00	25.00	12.33	0.00	0.06	0.00	0.00	0.00	11	0	0	0	0	0	143	0	0	0	0	0.00	0.00	0.00	143.13
109+25	10925.00	25.00	13.93	0.00	0.57	0.00	0.00	0.00	12	0	0	0	0	0	155	0	0	0	0	0.00	0.00	0.00	154.92
109+50	10950.00	25.00	19.75	0.00	0.57	0.00	0.00	0.00	16	0	1	0	0	0	171	1	0	0	0	0.00	0.00	0.00	169.85
109+75	10975.00	25.00	27.10	0.00	0.55	0.00	0.00	0.00	22	0	1	0	0	0	193	2	0	0	0	0.00	0.00	0.00	190.89
110+00	11000.00	25.00	30.21	0.00	0.26	0.00	0.00	0.00	27	0	0	0	0	0	219	2	0	0	0	0.00	0.00	0.00	216.95
110+25	11025.00	25.00	30.06	0.00	0.06	0.00	0.00	0.00	28	0	0	0	0	0	247	2	0	0	0	0.00	0.00	0.00	244.67
110+50	11050.00	25.00	24.80	0.00	0.55	0.00	0.00	0.00	25	0	0	0	0	0	272	3	0	0	0	0.00	0.00	0.00	269.71
110+75	11075.00	25.00	7.33	0.00	0.93	0.00	0.00	0.00	15	0	1	0	0	0	287	4	0	0	0	0.00	0.00	0.00	283.73
111+00	11100.00	25.00	4.13	0.00	0.73	0.00	0.00	0.00	5	0	1	0	0	0	293	5	0	0	0	0.00	0.00	0.00	288.09
111+25	11125.00	25.00	11.50	0.00	0.24	0.00	0.00	0.00	7	0	0	0	0	0	300	5	0	0	0	0.00	0.00	0.00	294.76
111+50	11150.00	25.00	29.96	0.00	0.39	0.00	0.00	0.00	19	0	0	0	0	0	319	5	0	0	0	0.00	0.00	0.00	313.59
111+75	11175.00	25.00	29.62	0.00	0.30	0.00	0.00	0.00	28	0	0	0	0	0	347	6	0	0	0	0.00	0.00	0.00	340.77
112+00	11200.00	25.00	32.22	0.00	0.00	0.00	0.00	0.00	29	0	0	0	0	0	375	6	0	0	0	0.00	0.00	0.00	369.23
112+25	11225.00	25.00	25.71	0.00	0.00	0.00	0.00	0.00	27	0	0	0	0	0	402	6	0	0	0	0.00	0.00	0.00	396.05
112+50	11250.00	25.00	26.26	0.00	0.00	0.00	0.00	0.00	24	0	0	0	0	0	426	6	0	0	0	0.00	0.00	0.00	420.11
112+75	11275.00	25.00	4.09	0.00	0.00	0.00	0.00	0.00	14	0	0	0	0	0	440	6	0	0	0	0.00	0.00	0.00	434.15
113+00	11300.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	2	0	0	0	0	0	442	6	0	0	0	0.00	0.00	0.00	436.05
113+25	11325.00	25.00	26.86	0.00	0.00	0.00	0.00	0.00	12	0	0	0	0	0	455	6	0	0	0	0.00	0.00	0.00	448.48
113+28.11	11328.11	3.11	32.72	0.00	0.00	0.00	0.00	0.00	3	0	0	0	0	0	458	6	0	0	0	0.00	0.00	0.00	451.92
113+50	11350.00	21.89	13.53	0.00	0.00	0.00	0.00	0.00	19	0	0	0	0	0	477	6	0	0	0	0.00	0.00	0.00	470.66
113+75	11375.00	25.00	12.47	0.00	0.00	0.00	0.00	0.00	12	0	0	0	0	0	489	6	0	0	0	0.00	0.00	0.00	482.70
114+00	11400.00	25.00	12.71	0.00	0.00	0.00	0.00	0.00	12	0	0	0	0	0	500	6	0	0	0	0.00	0.00	0.00	494.36
114+25	11425.00	25.00	11.59	0.00	0.00	0.00	0.00	0.00	11	0	0	0	0	0	512	6	0	0	0	0.00	0.00	0.00	505.60
114+50	11450.00	25.00	10.27	0.00	0.00	0.00	0.00	0.00	10	0	0	0	0	0	522	6	0	0	0	0.00	0.00	0.00	515.72
114+75	11475.00	25.00	10.36	0.00	0.24	0.00	0.00	0.00	10	0	0	0	0	0	531	6	0	0	0	0.00	0.00	0.00	525.13
115+00	11500.00	25.00	8.21	0.00	0.38	0.00	0.00	0.00	9	0	0	0	0	0	540	7	0	0	0	0.00	0.00	0.00	533.37
115+25	11525.00	25.00	8.93	0.00	2.49	0.00	0.00	0.00	8	0	1	0	0	0	548	8	0	0	0	0.00	0.00	0.00	539.65
115+50	11550.00	25.00	9.74	0.00	1.34	0.00	0.00	0.00	9	0	2	0	0	0	556	10	0	0	0	0.00	0.00	0.00	546.07
115+75	11575.00	25.00	12.26	0.00	0.13	0.00	0.00	0.00	10	0	1	0	0	0	567	11	0	0	0	0.00	0.00	0.00	555.40
116+00	11600.00	25.00	14.51	0.00	0.07	0.00	0.00	0.00	12	0	0	0	0	0	579	11	0	0	0	0.00	0.00	0.00	567.68

EARTHWORK

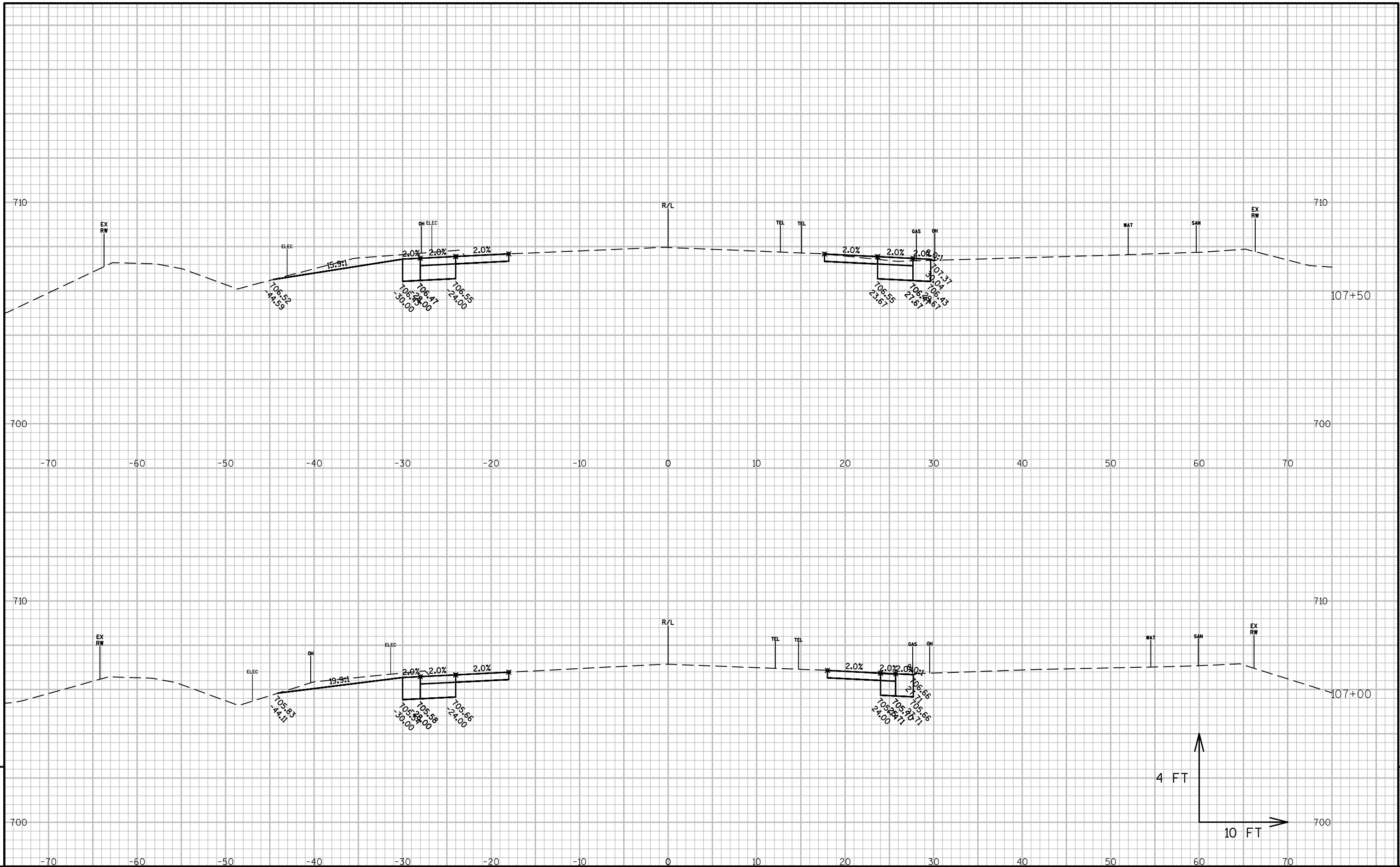
STATION	Real Station	Distance	AREA (SF)						Incremental Vol (CY) (Unadjusted)						Cumulative Vol (CY)								Mass Ordinate		
			Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut	Salvaged/Unusable Pavement Material	Fill	Marsh Exc	Rock Exc	EBS	Cut 1.00	Expanded Fill 1.25	Expanded Marsh		Expanded EBS		Reduced Marsh			Reduced EBS	
																	Backfill 1.50	Expanded Rock 1.10	Backfill 1.30	in Fill 0.60	In Fill 0.80				
																						Note 1		Note 2	Note 3
116+25	11625.00	25.00	6.10	0.00	0.53	0.00	0.00	0.00	10	0	0	0	0	0	589	12	0	0	0	0	0.00	0.00	576.87		
116+50	11650.00	25.00	4.39	0.00	1.74	0.00	0.00	0.00	5	0	1	0	0	0	593	13	0	0	0	0	0.00	0.00	580.41		
116+75	11675.00	25.00	12.84	0.00	2.28	0.00	0.00	0.00	8	0	2	0	0	0	601	15	0	0	0	0	0.00	0.00	586.06		
117+00	11700.00	25.00	11.88	0.00	1.20	0.00	0.00	0.00	11	0	2	0	0	0	613	17	0	0	0	0	0.00	0.00	595.48		
117+25	11725.00	25.00	10.09	0.00	1.24	0.00	0.00	0.00	10	0	1	0	0	0	623	19	0	0	0	0	0.00	0.00	604.24		
117+50	11750.00	25.00	13.57	0.00	0.09	0.00	0.00	0.00	11	0	1	0	0	0	634	20	0	0	0	0	0.00	0.00	614.43		
117+75	11775.00	25.00	6.43	0.00	0.00	0.00	0.00	0.00	9	0	0	0	0	0	643	20	0	0	0	0	0.00	0.00	623.63		
118+00	11800.00	25.00	1.04	0.00	0.00	0.00	0.00	0.00	3	0	0	0	0	0	647	20	0	0	0	0	0.00	0.00	627.09		
118+25	11825.00	25.00	0.82	0.00	0.00	0.00	0.00	0.00	1	0	0	0	0	0	648	20	0	0	0	0	0.00	0.00	627.95		
118+50	11850.00	25.00	7.00	0.00	0.00	0.00	0.00	0.00	4	0	0	0	0	0	651	20	0	0	0	0	0.00	0.00	631.58		
118+75	11875.00	25.00	9.74	0.00	1.80	0.00	0.00	0.00	8	0	1	0	0	0	659	21	0	0	0	0	0.00	0.00	638.29		
119+00	11900.00	25.00	13.29	0.00	0.13	0.00	0.00	0.00	11	0	1	0	0	0	670	22	0	0	0	0	0.00	0.00	647.83		
119+25	11925.00	25.00	20.13	0.00	0.00	0.00	0.00	0.00	15	0	0	0	0	0	685	22	0	0	0	0	0.00	0.00	663.22		
119+50	11950.00	25.00	29.98	0.00	0.00	0.00	0.00	0.00	23	0	0	0	0	0	708	22	0	0	0	0	0.00	0.00	686.42		
119+75	11975.00	25.00	35.61	0.00	0.00	0.00	0.00	0.00	30	0	0	0	0	0	739	22	0	0	0	0	0.00	0.00	716.79		
120+00	12000.00	25.00	31.90	0.00	0.00	0.00	0.00	0.00	31	0	0	0	0	0	770	22	0	0	0	0	0.00	0.00	748.04		
120+25	12025.00	25.00	24.06	0.00	0.00	0.00	0.00	0.00	26	0	0	0	0	0	796	22	0	0	0	0	0.00	0.00	773.94		
120+50	12050.00	25.00	21.76	0.00	0.00	0.00	0.00	0.00	21	0	0	0	0	0	817	22	0	0	0	0	0.00	0.00	795.16		
120+75	12075.00	25.00	14.01	0.00	0.00	0.00	0.00	0.00	17	0	0	0	0	0	834	22	0	0	0	0	0.00	0.00	811.72		
121+00	12100.00	25.00	18.07	0.00	0.00	0.00	0.00	0.00	15	0	0	0	0	0	848	22	0	0	0	0	0.00	0.00	826.57		
121+25	12125.00	25.00	16.98	0.00	0.00	0.00	0.00	0.00	16	0	0	0	0	0	865	22	0	0	0	0	0.00	0.00	842.80		
121+50	12150.00	25.00	18.62	0.00	0.00	0.00	0.00	0.00	16	0	0	0	0	0	881	22	0	0	0	0	0.00	0.00	859.27		
121+75	12175.00	25.00	3.14	0.00	0.00	0.00	0.00	0.00	10	0	0	0	0	0	891	22	0	0	0	0	0.00	0.00	869.35		
122+00	12200.00	25.00	0.00	0.00	0.00	0.00	0.00	0.00	1	0	0	0	0	0	893	22	0	0	0	0	0.00	0.00	870.80		
122+25	12225.00	25.00	10.85	0.00	0.00	0.00	0.00	0.00	5	0	0	0	0	0	898	22	0	0	0	0	0.00	0.00	875.82		
122+50	12250.00	25.00	22.81	0.00	0.00	0.00	0.00	0.00	16	0	0	0	0	0	913	22	0	0	0	0	0.00	0.00	891.40		
122+75	12275.00	25.00	24.14	0.00	0.00	0.00	0.00	0.00	22	0	0	0	0	0	935	22	0	0	0	0	0.00	0.00	913.14		
123+00	12300.00	25.00	24.14	0.00	0.00	0.00	0.00	0.00	22	0	0	0	0	0	957	22	0	0	0	0	0.00	0.00	935.49		
123+25	12325.00	25.00	23.00	0.00	0.06	0.00	0.00	0.00	22	0	0	0	0	0	979	22	0	0	0	0	0.00	0.00	957.28		
123+50	12350.00	25.00	22.05	0.00	0.16	0.00	0.00	0.00	21	0	0	0	0	0	1,000	22	0	0	0	0	0.00	0.00	978.01		
123+75	12375.00	25.00	26.23	0.00	0.09	0.00	0.00	0.00	22	0	0	0	0	0	1,022	22	0	0	0	0	0.00	0.00	1,000.22		
124+00	12400.00	25.00	27.66	0.00	0.04	0.00	0.00	0.00	25	0	0	0	0	0	1,047	22	0	0	0	0	0.00	0.00	1,025.09		
124+25	12425.00	25.00	15.75	0.00	0.00	0.00	0.00	0.00	20	0	0	0	0	0	1,067	22	0	0	0	0	0.00	0.00	1,045.17		
124+50	12450.00	25.00	17.06	0.00	0.00	0.00	0.00	0.00	15	0	0	0	0	0	1,083	22	0	0	0	0	0.00	0.00	1,060.36		
124+75	12475.00	25.00	10.58	0.00	0.00	0.00	0.00	0.00	13	0	0	0	0	0	1,095	22	0	0	0	0	0.00	0.00	1,073.15		
125+00	12500.00	25.00	20.17	0.00	0.00	0.00	0.00	0.00	14	0	0	0	0	0	1,110	22	0	0	0	0	0.00	0.00	1,087.39		
125+25	12525.00	25.00	15.47	0.00	0.00	0.00	0.00	0.00	16	0	0	0	0	0	1,126	22	0	0	0	0	0.00	0.00	1,103.89		
125+50	12550.00	25.00	15.86	0.00	0.00	0.00	0.00	0.00	15	0	0	0	0	0	1,141	22	0	0	0	0	0.00	0.00	1,118.39		
125+75	12575.00	25.00	15.44	0.00	0.00	0.00	0.00	0.00	14	0	0	0	0	0	1,155	22	0	0	0	0	0.00	0.00	1,132.88		
126+00	12600.00	25.00	11.14	0.00	0.00	0.00	0.00	0.00	12	0	0	0	0	0	1,167	22	0	0	0	0	0.00	0.00	1,145.18		
126+25	12625.00	25.00	7.50	0.00	0.00	0.00	0.00	0.00	9	0	0	0	0	0	1,176	22	0	0	0	0	0.00	0.00	1,153.81		
126+50	12650.00	25.00	8.02	0.00	0.00	0.00	0.00	0.00	7	0	0	0	0	0	1,183	22	0	0	0	0	0.00	0.00	1,160.99		
126+67.35	12667.35	17.35	7.25	0.00	0.00	0.00	0.00	0.00	5	0	0	0	0	0	1,188	22	0	0	0	0	0.00	0.00</			

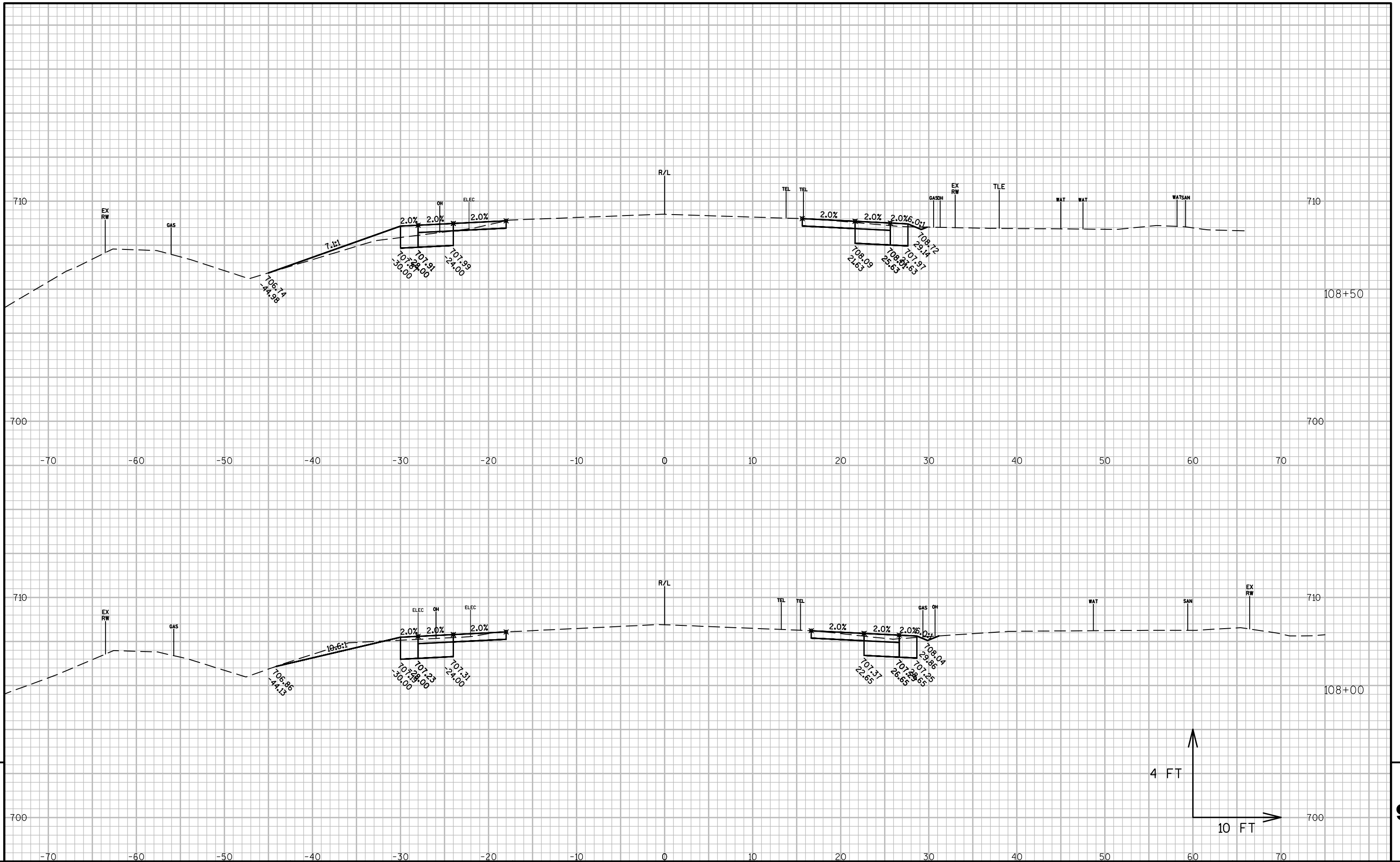




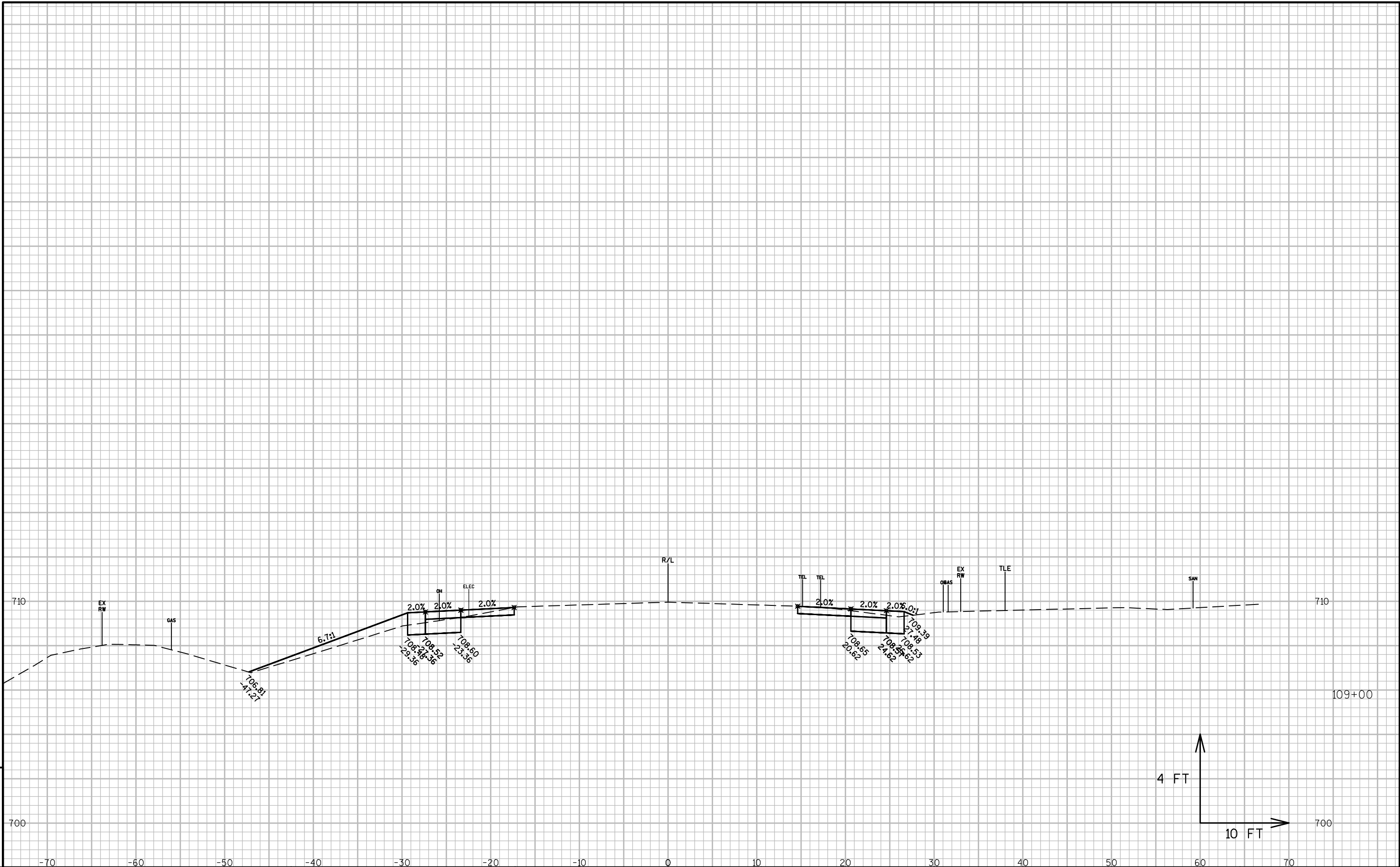
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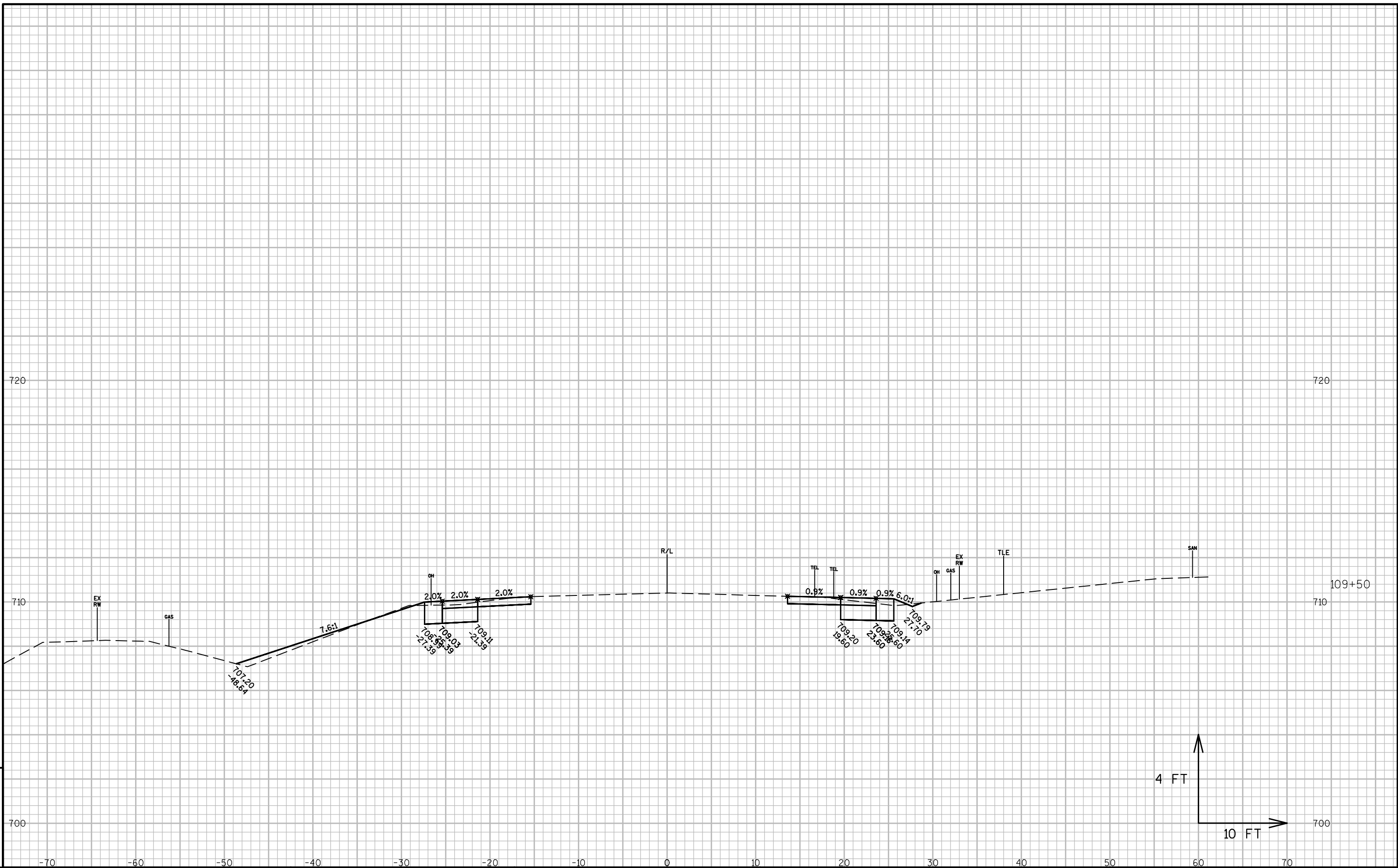


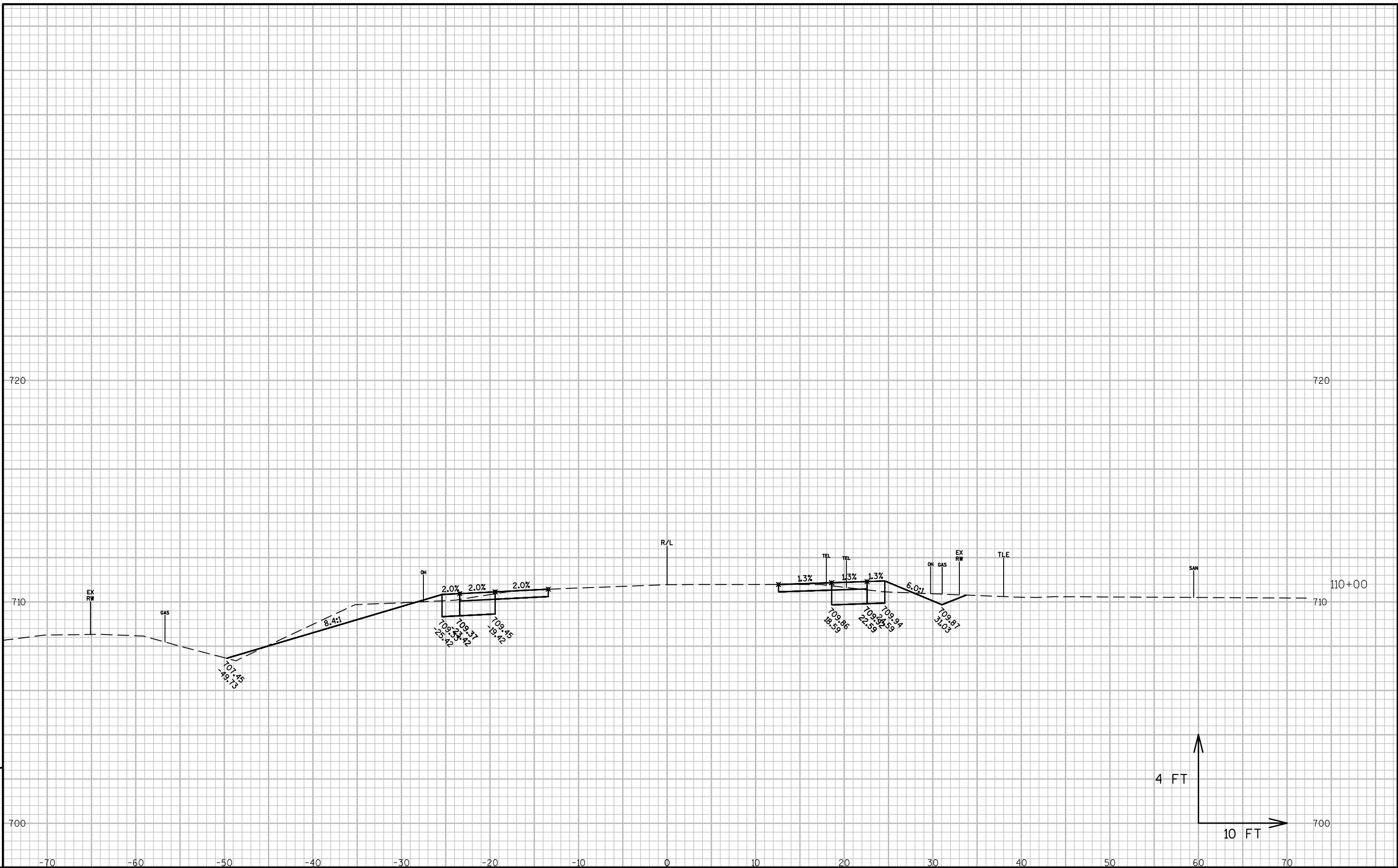


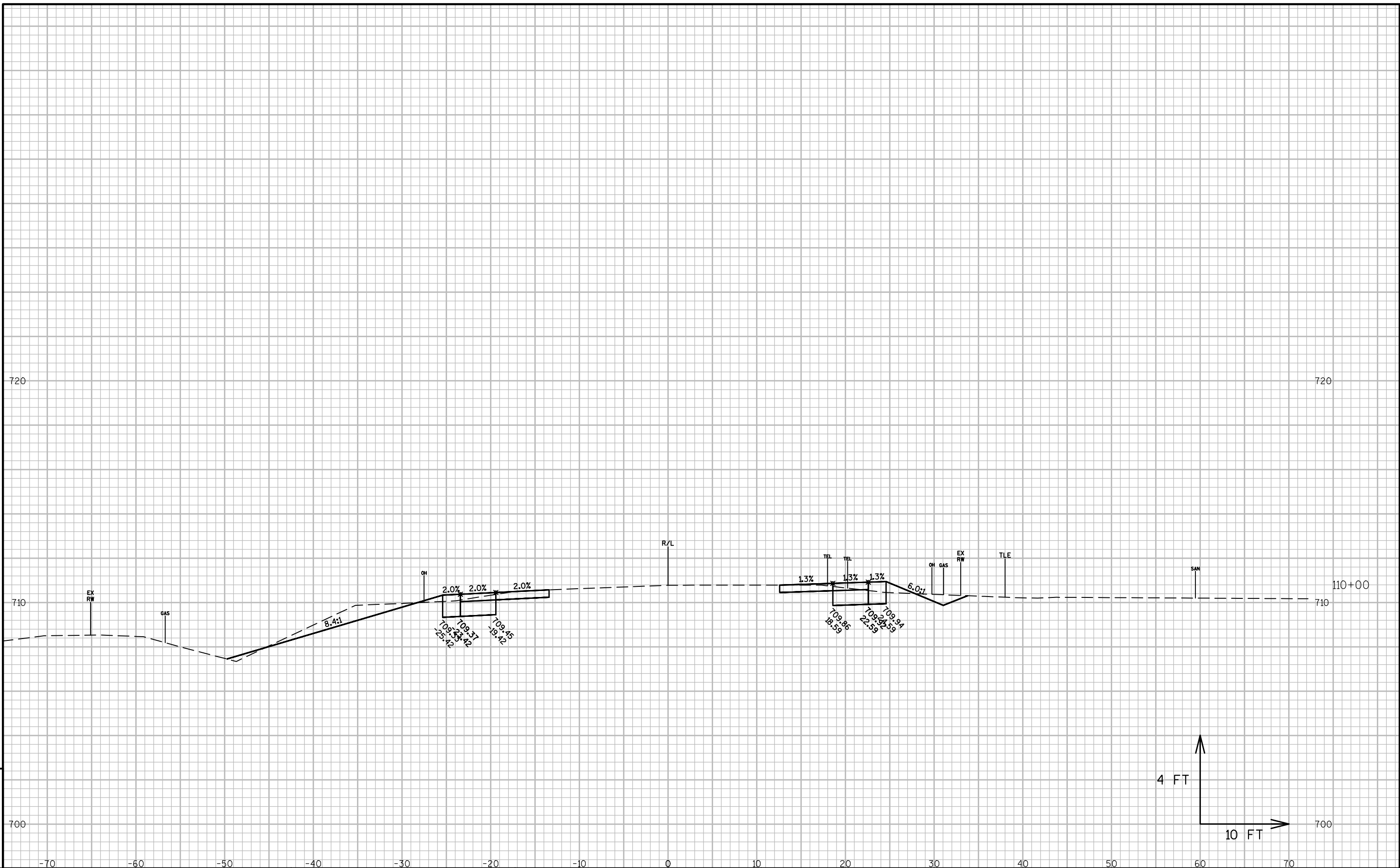
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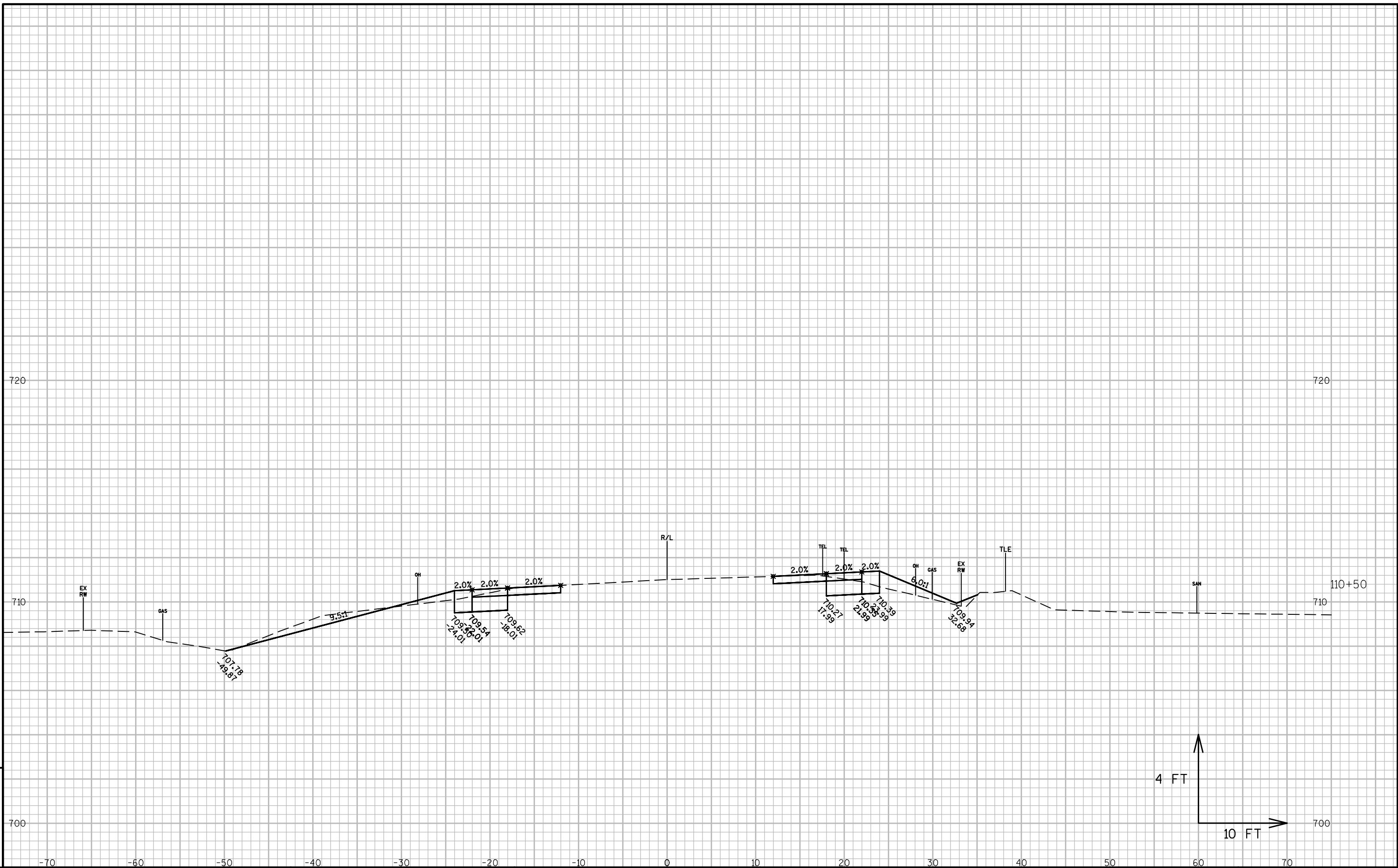


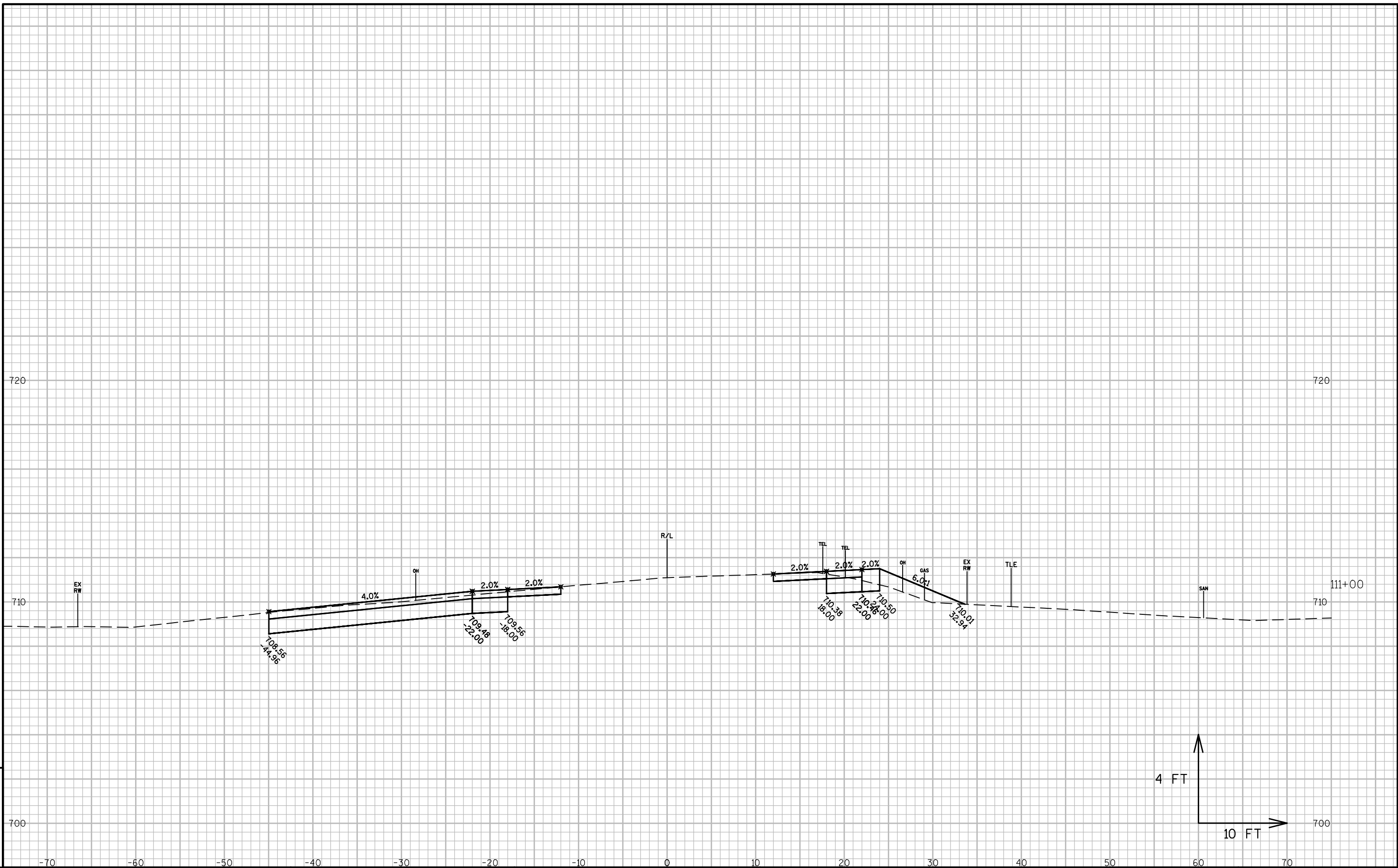


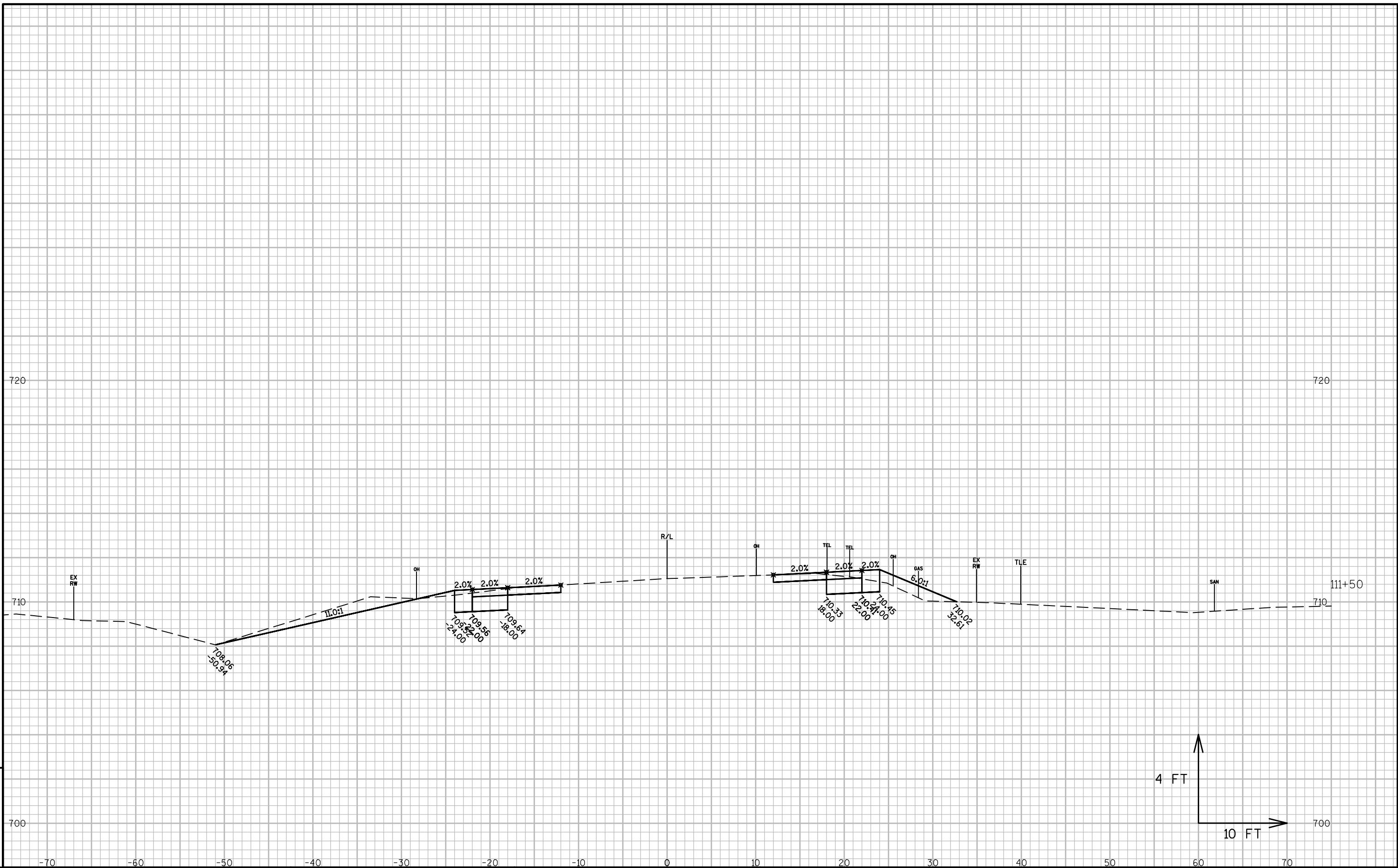


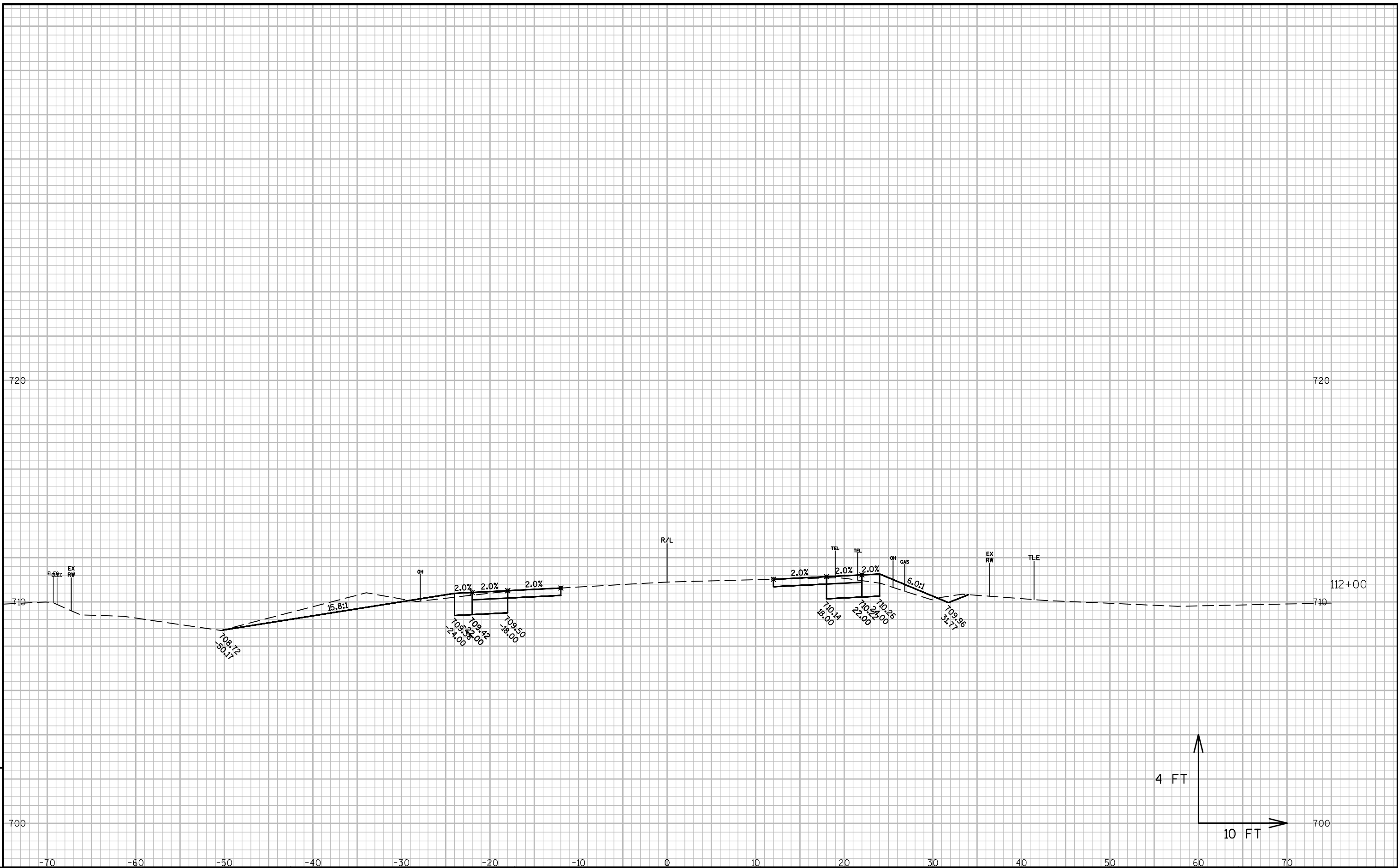
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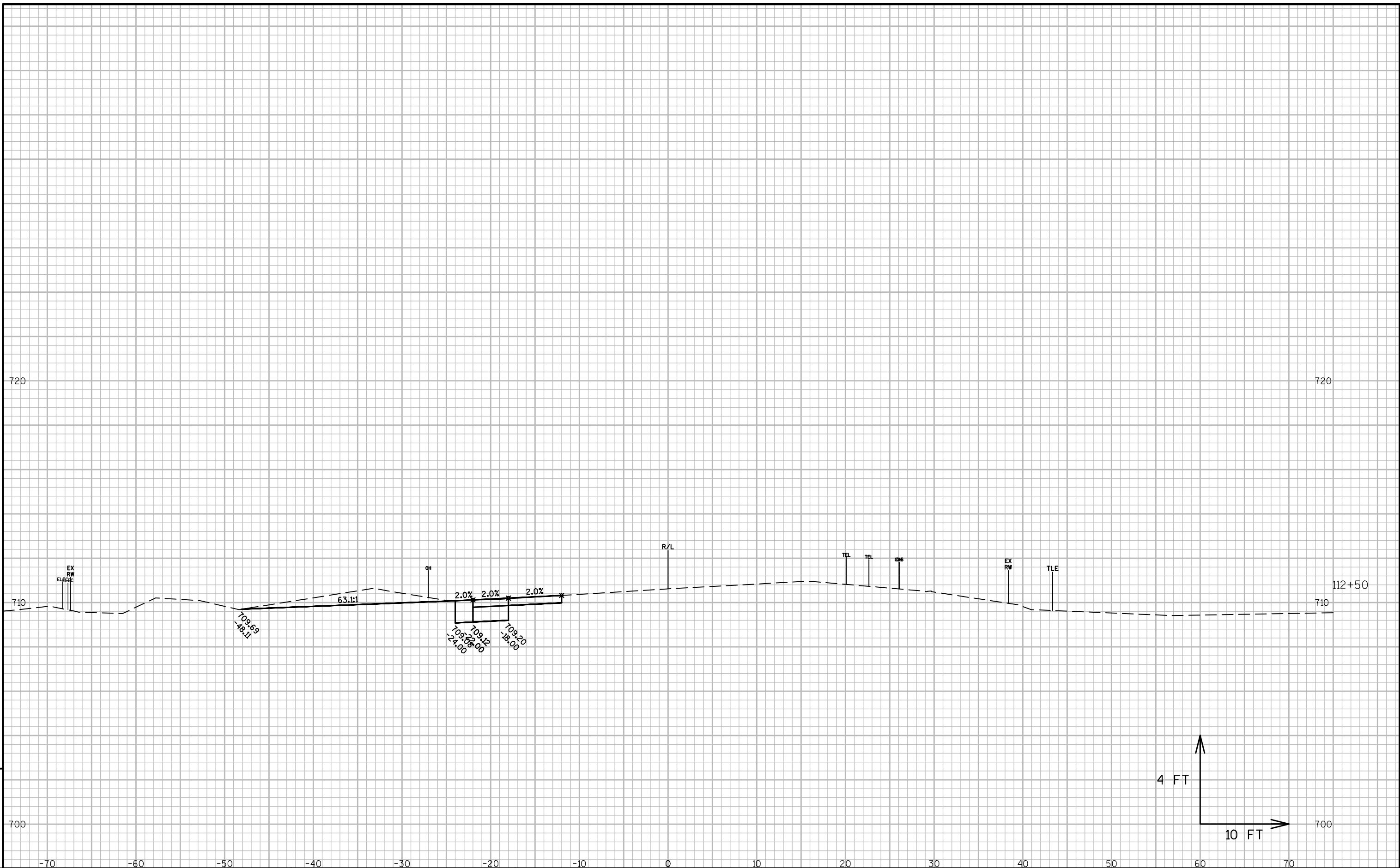
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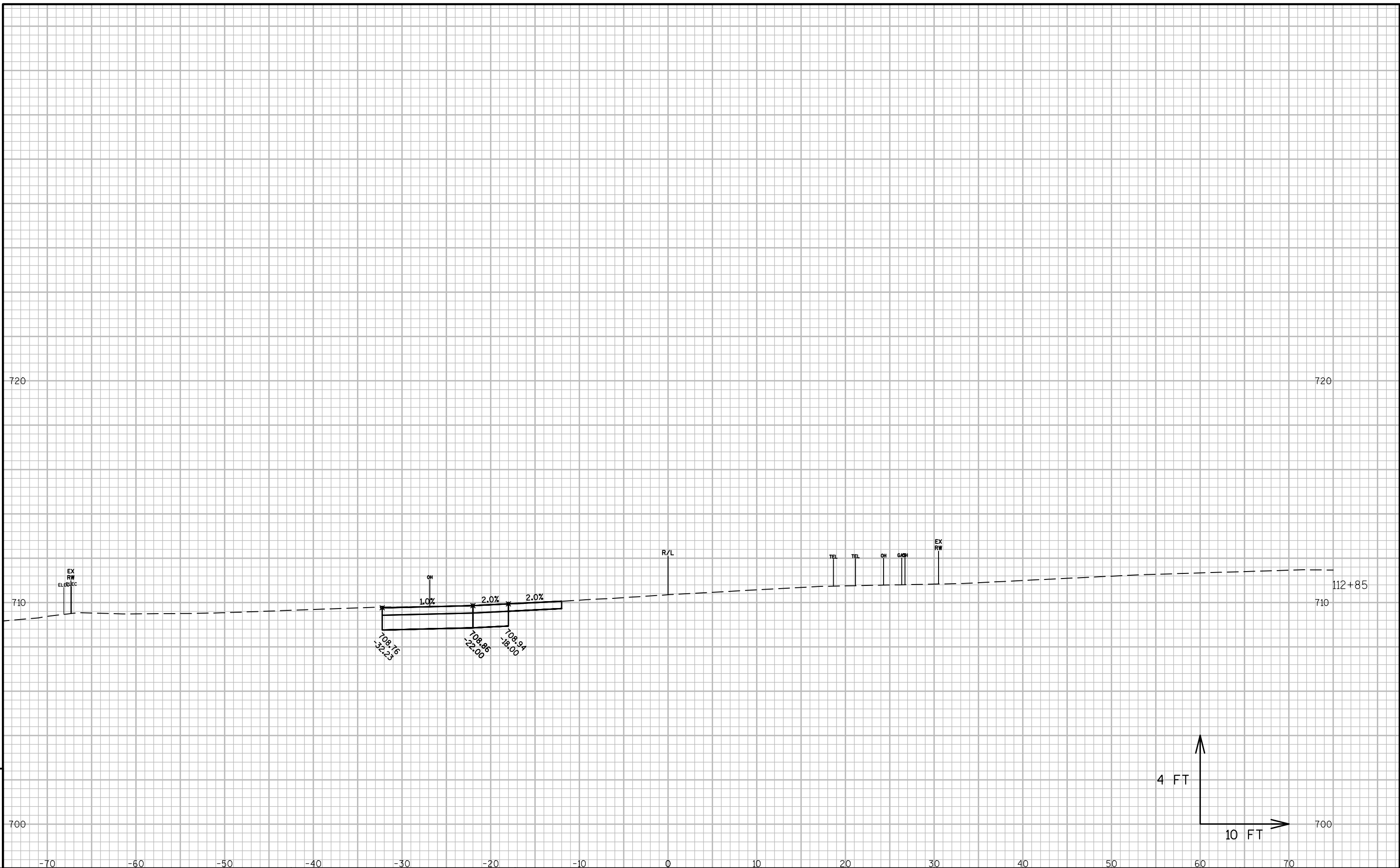


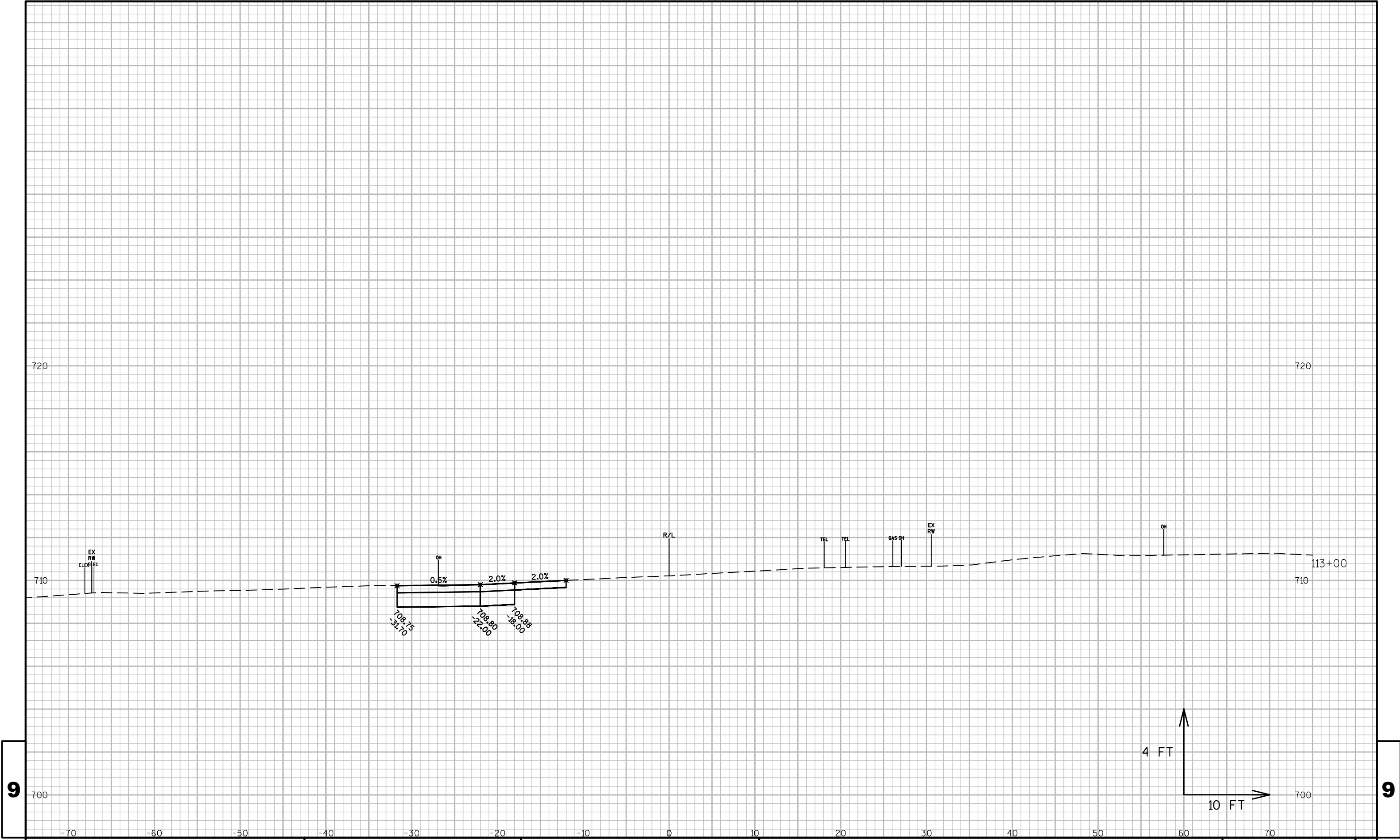






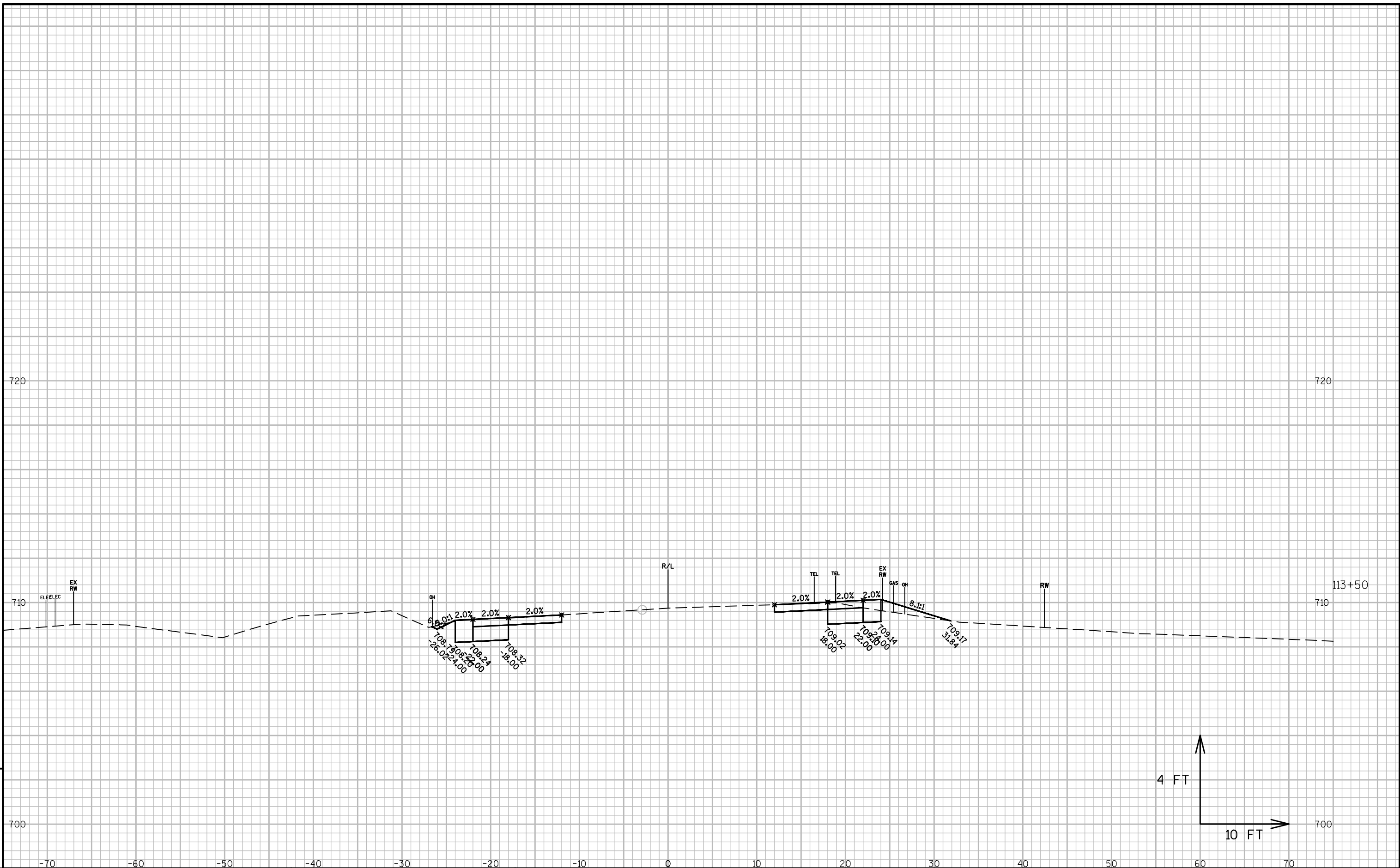


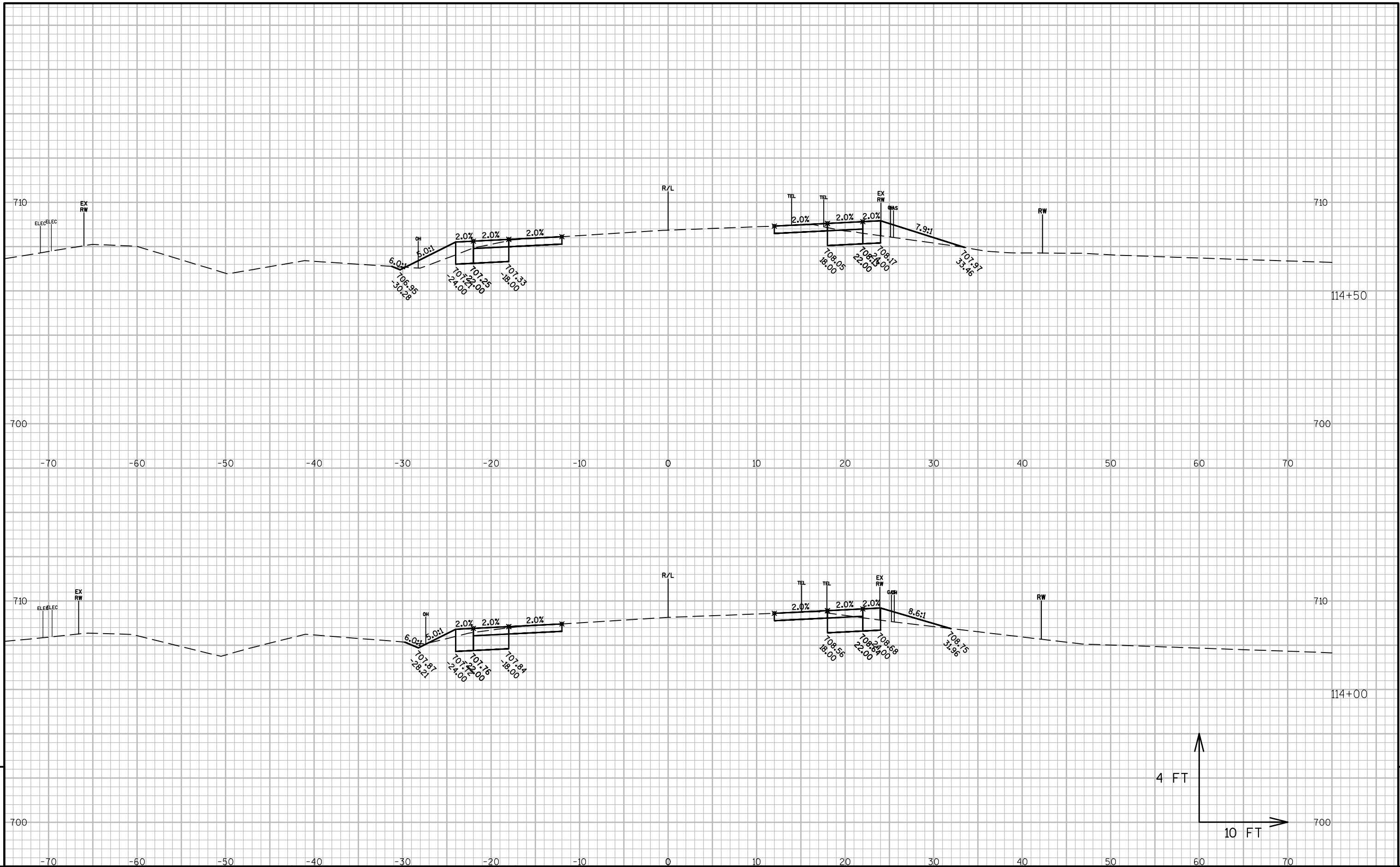


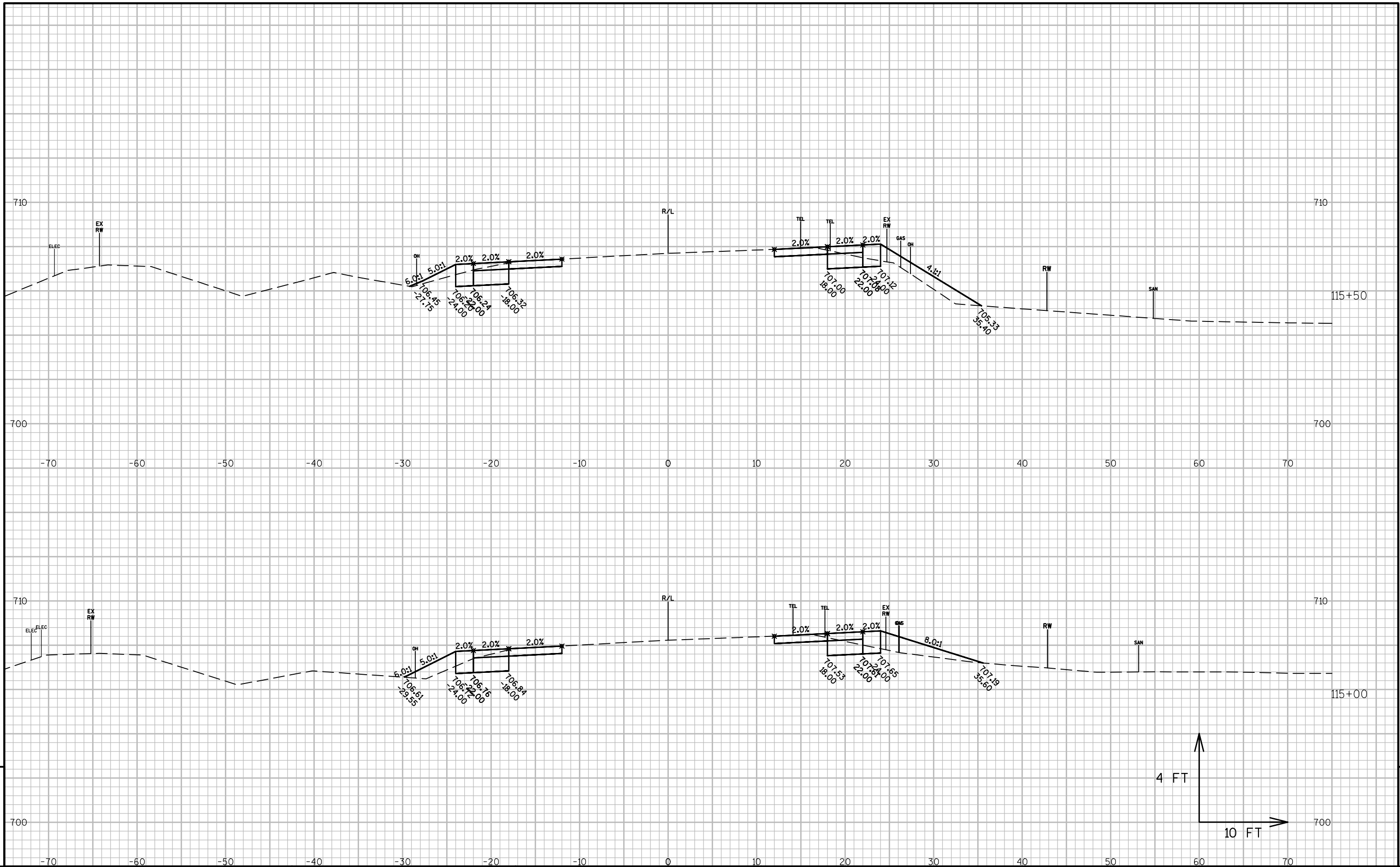


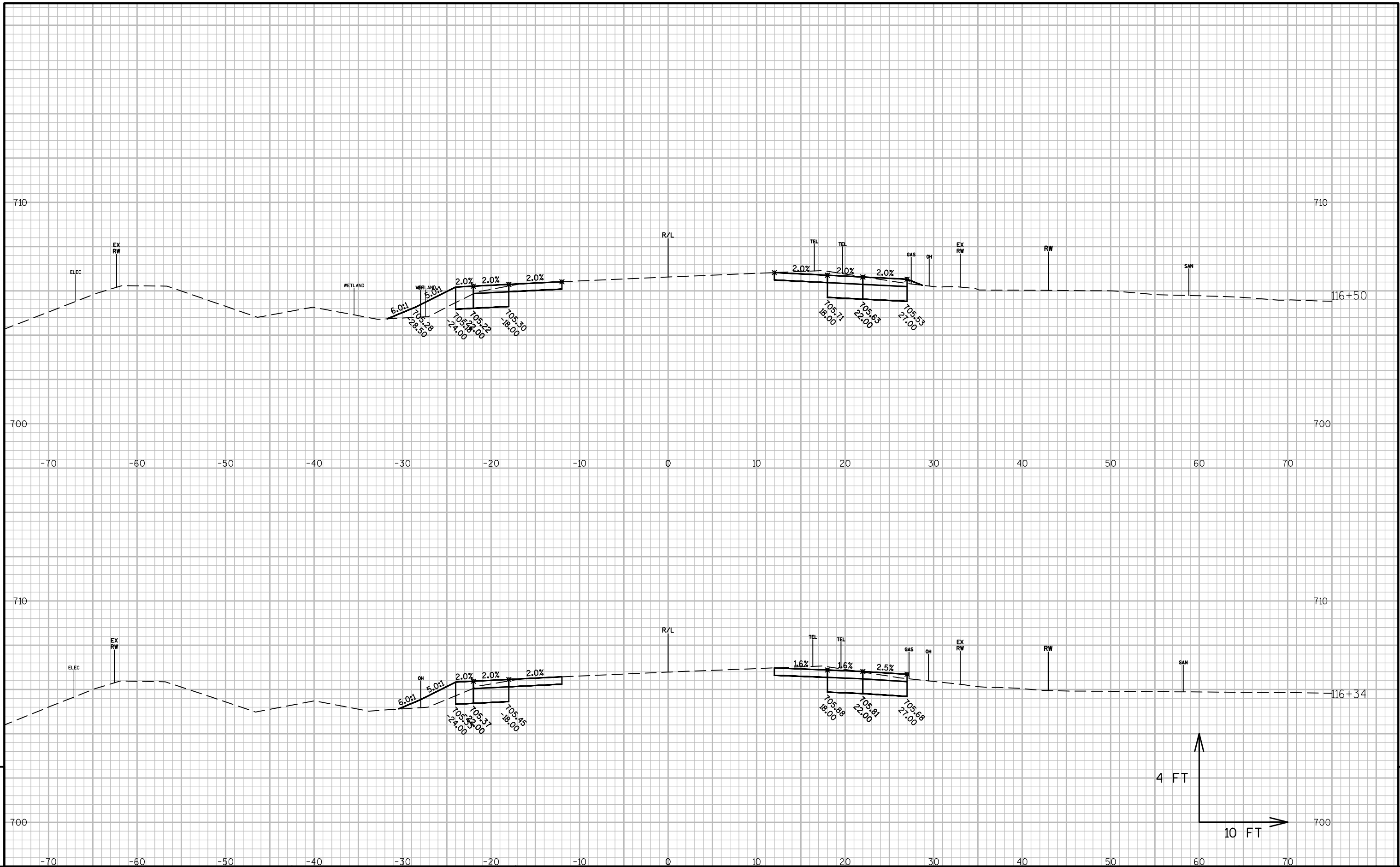
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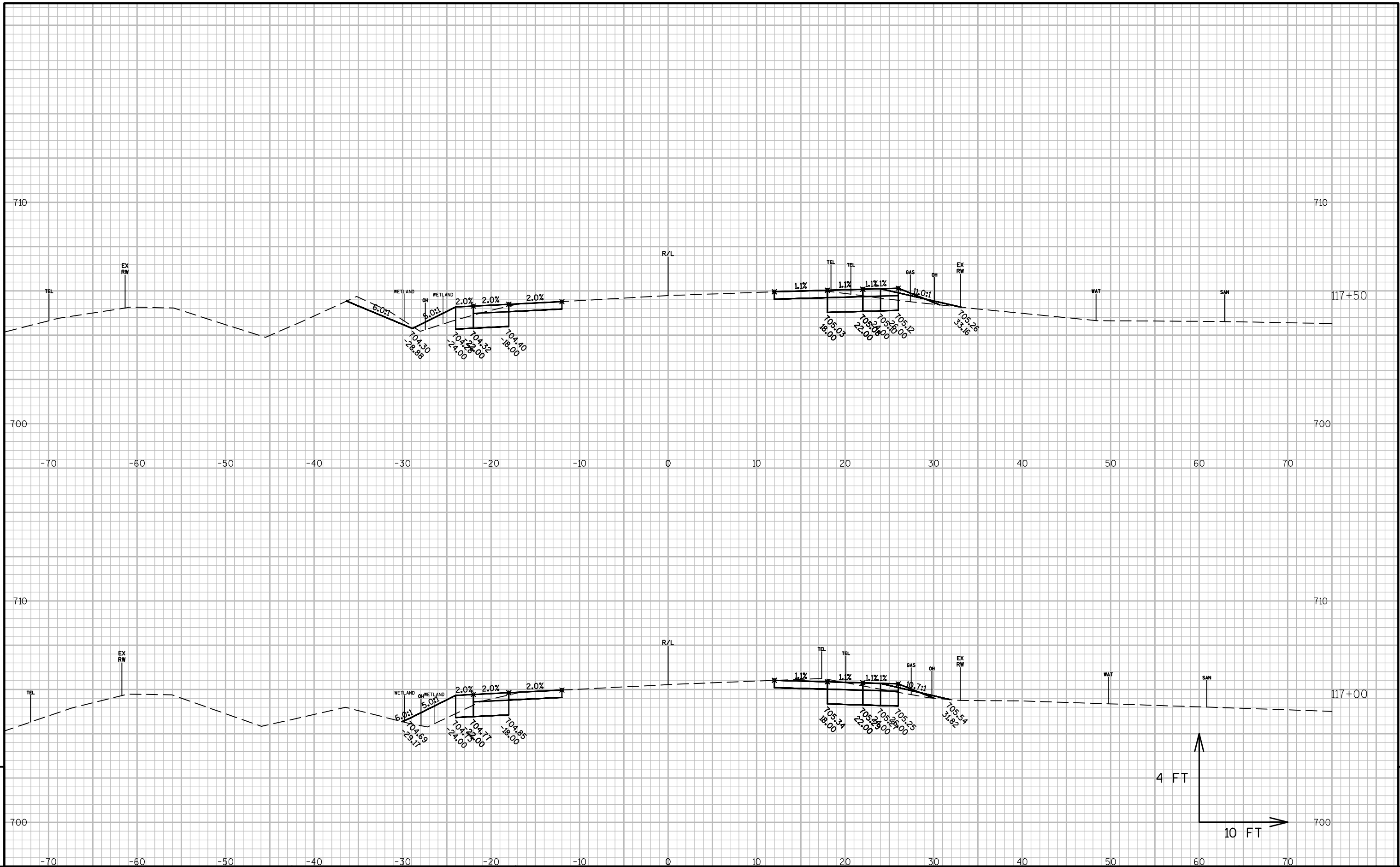
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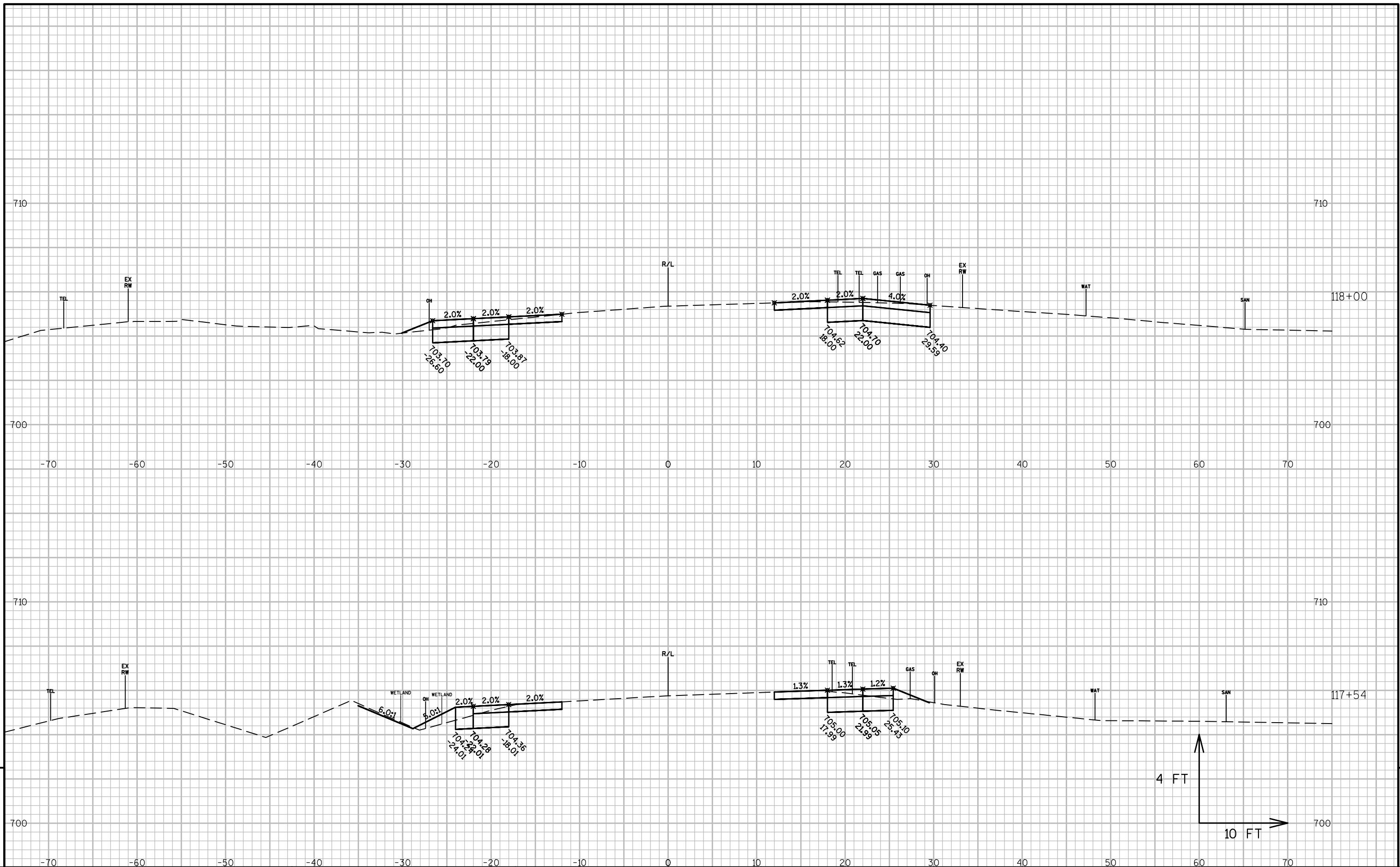


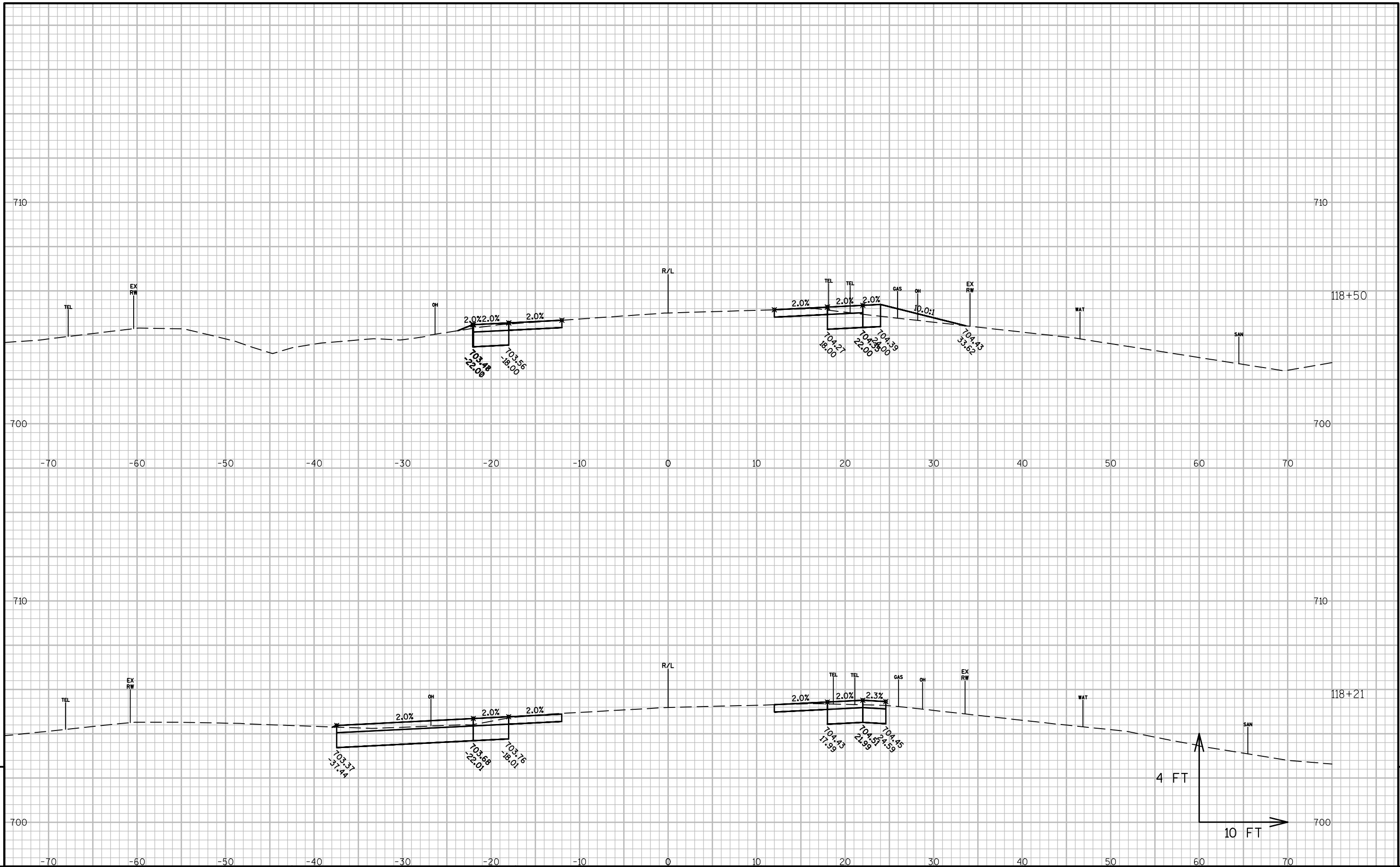


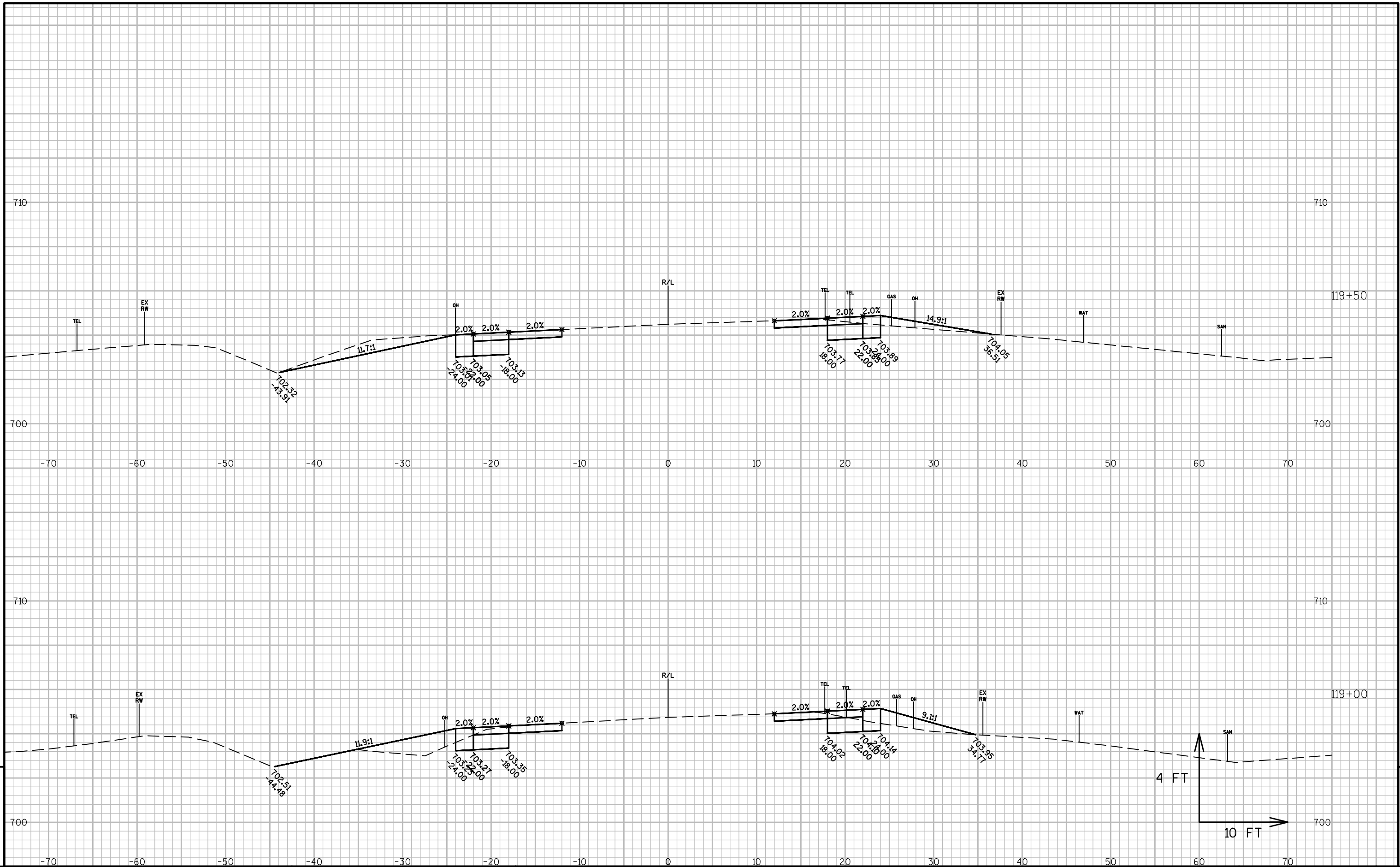


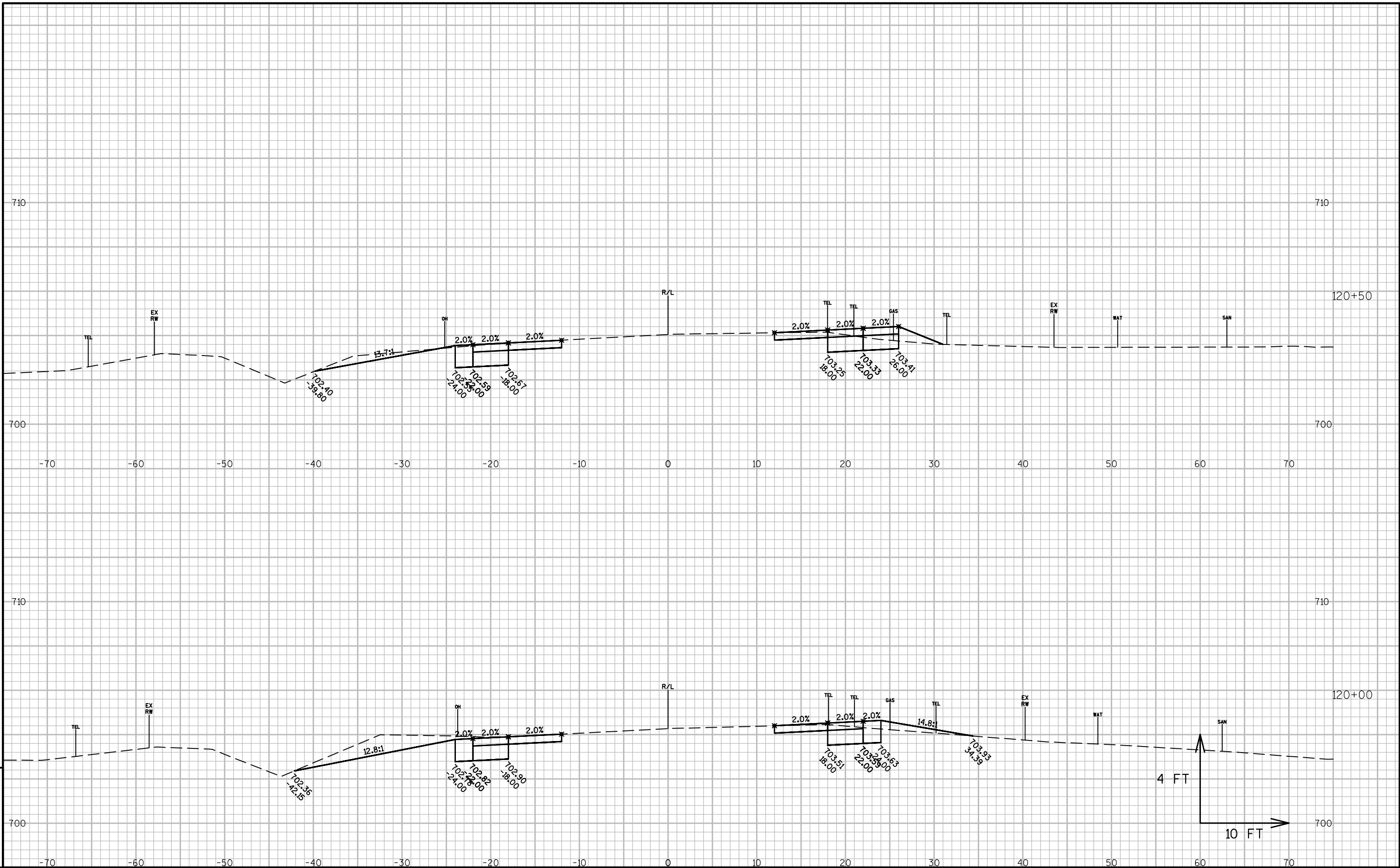


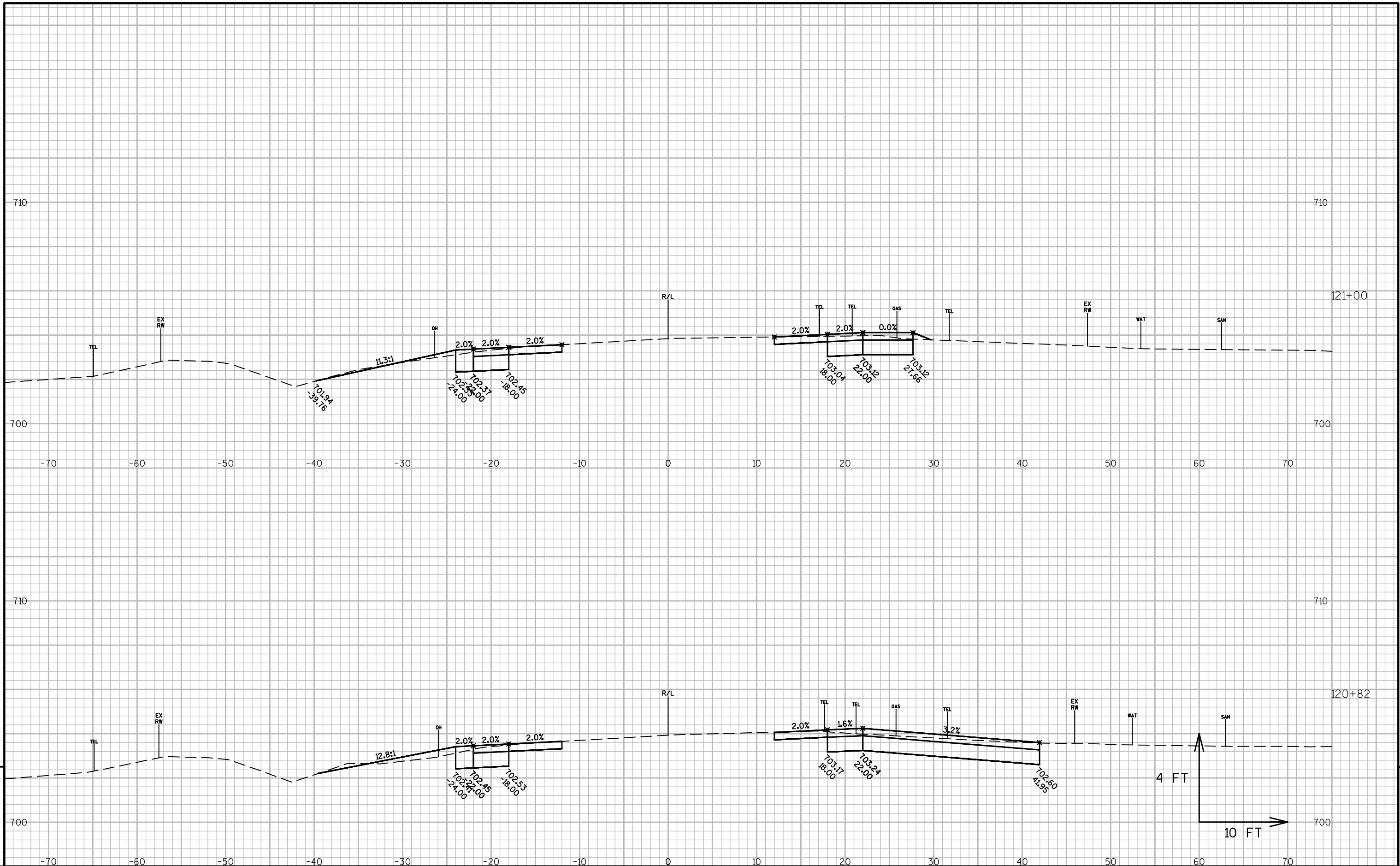


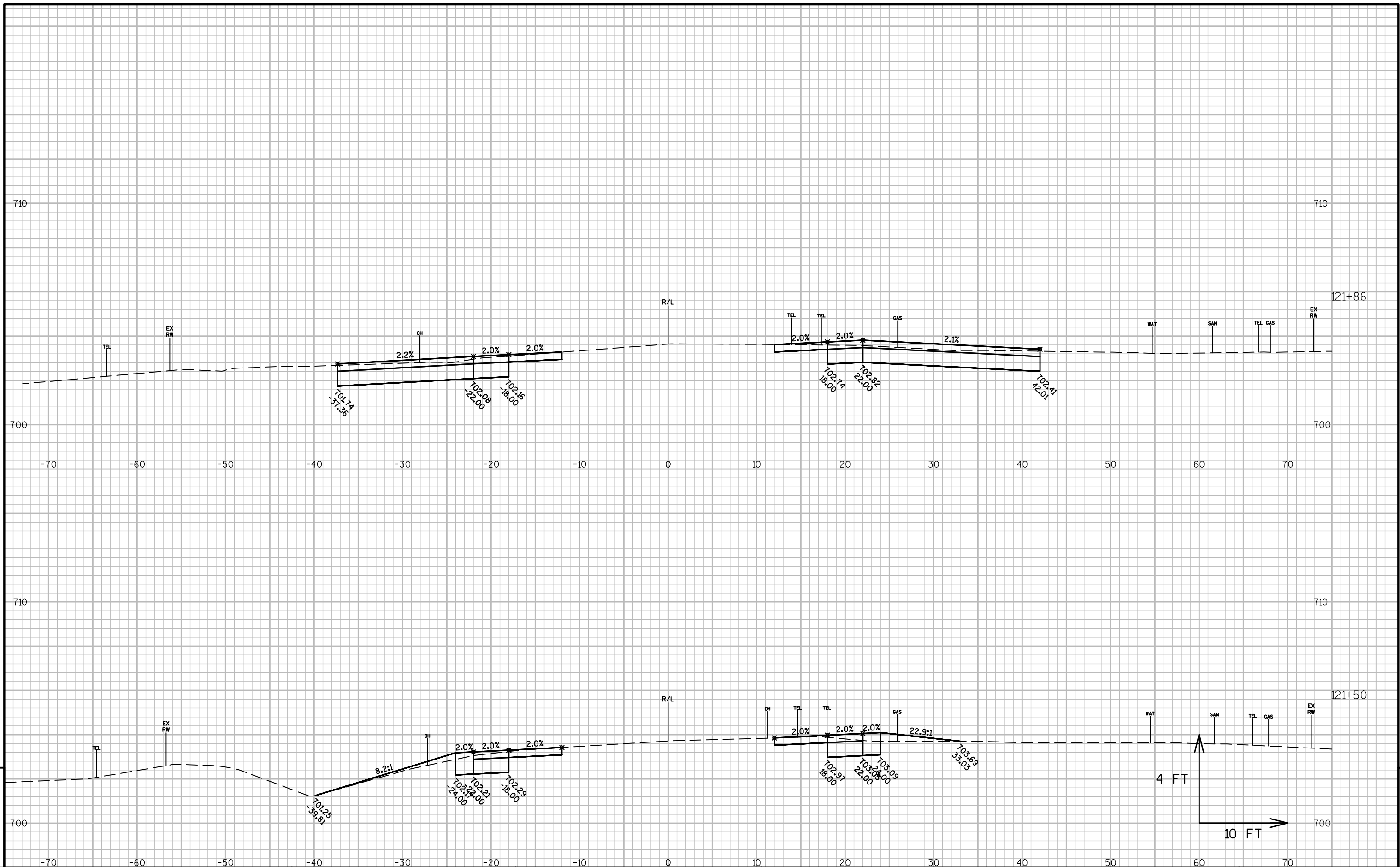


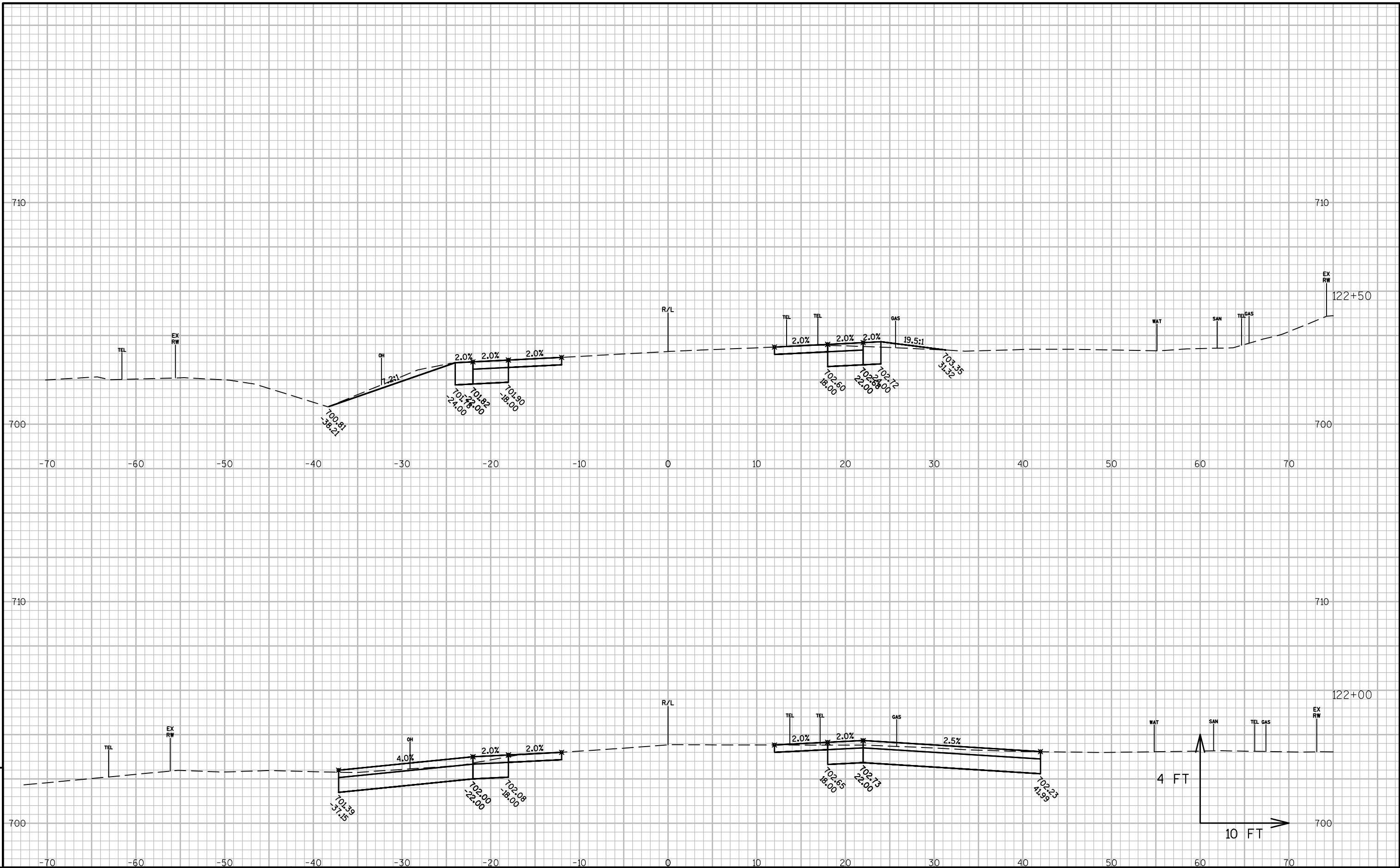


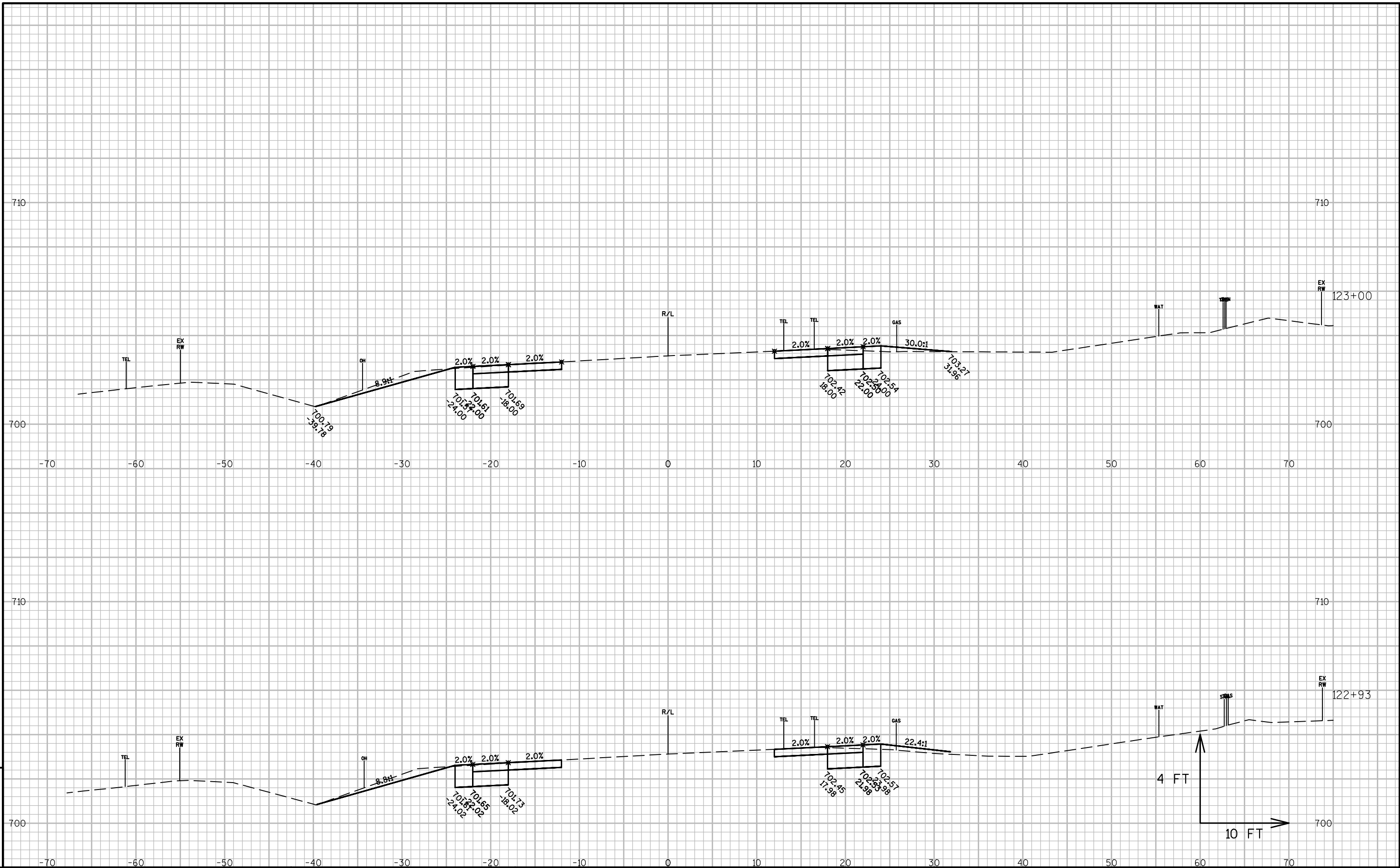


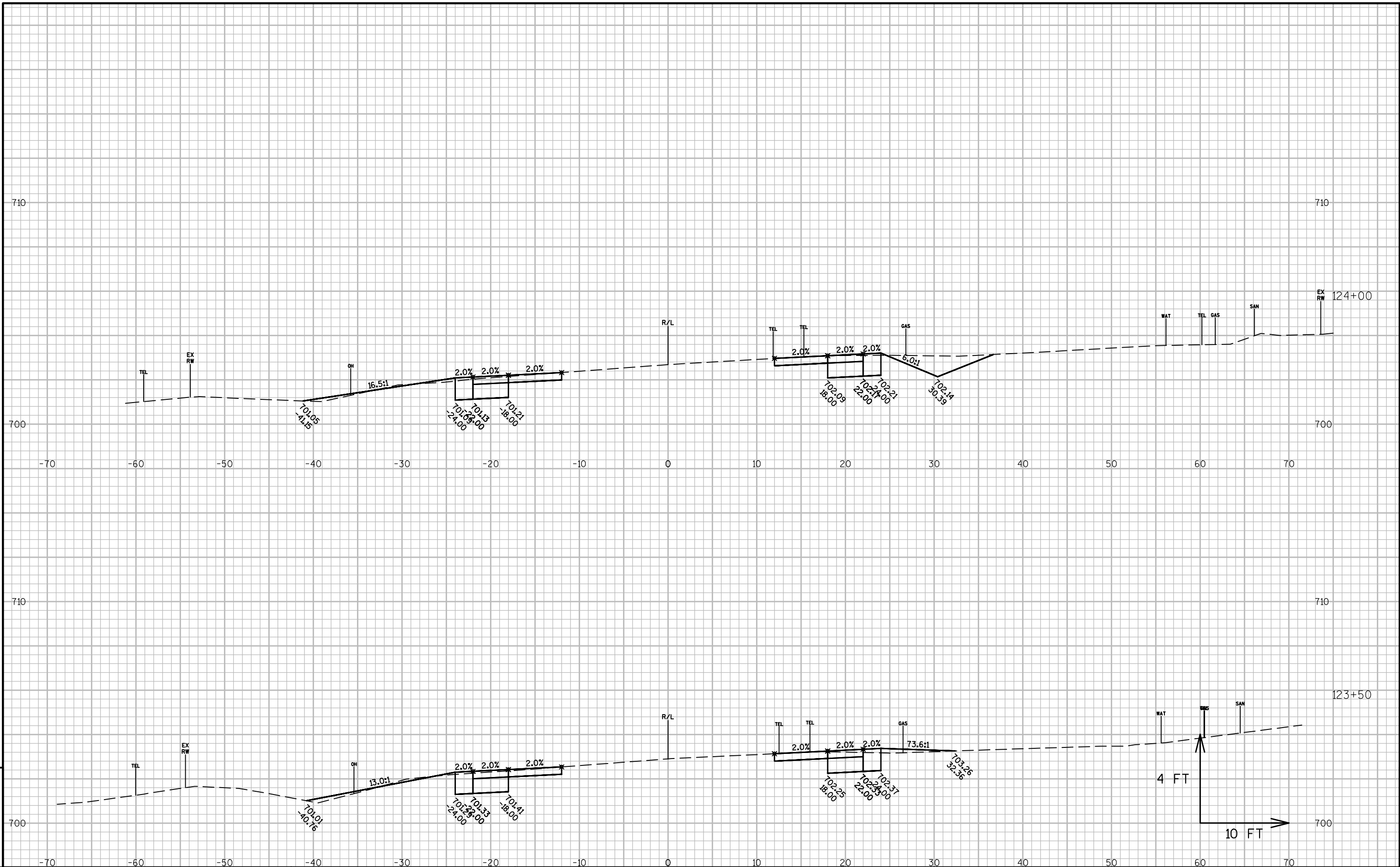


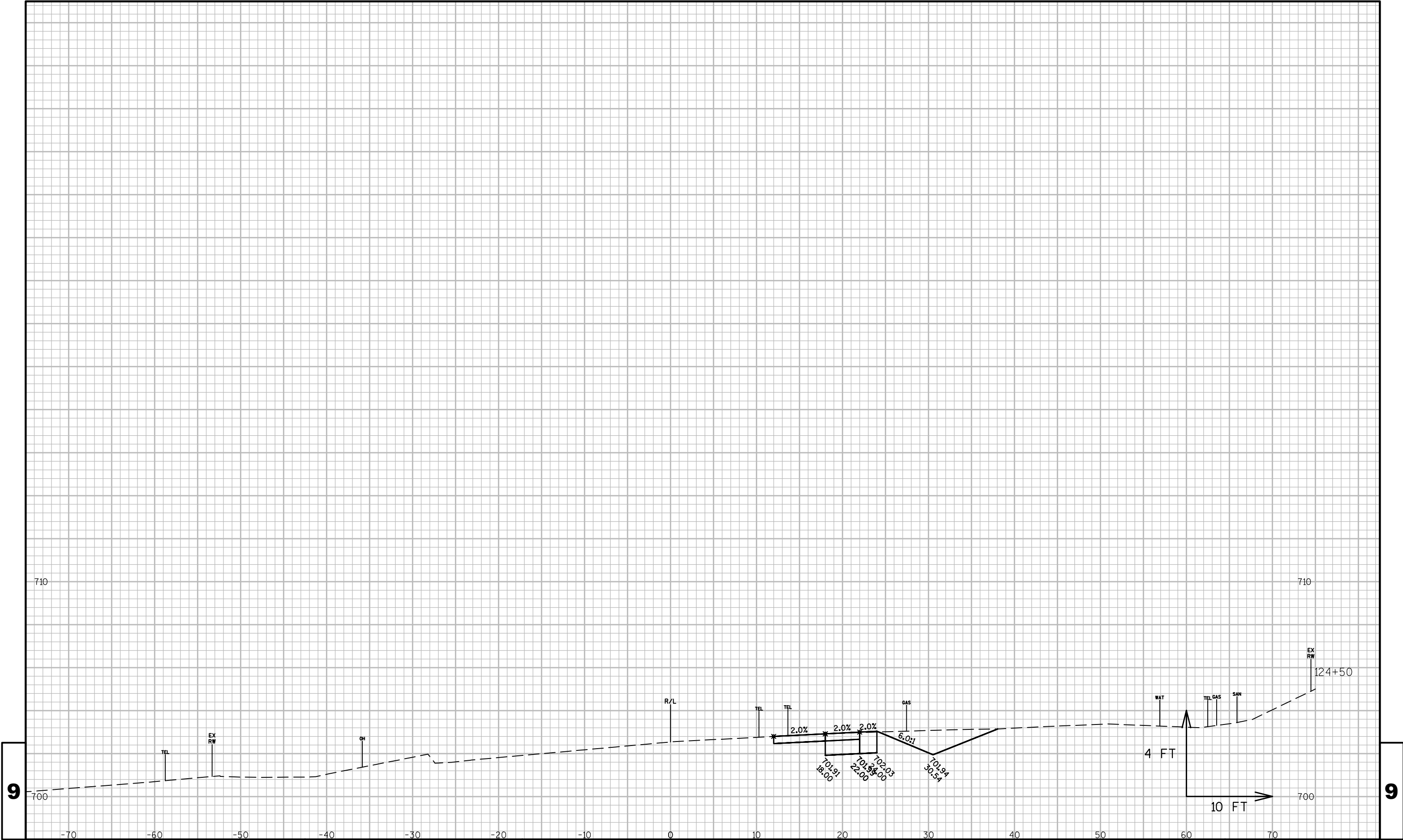












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PROJECT NO:2375-07-70

HWY:STH 32

COUNTY:MILWAUKEE

CROSS SECTIONS:

SHEET

E

FILE NAME : N:\PDS\C3D\23750700\SHEETSOOTHER\23700770_XS.DWG
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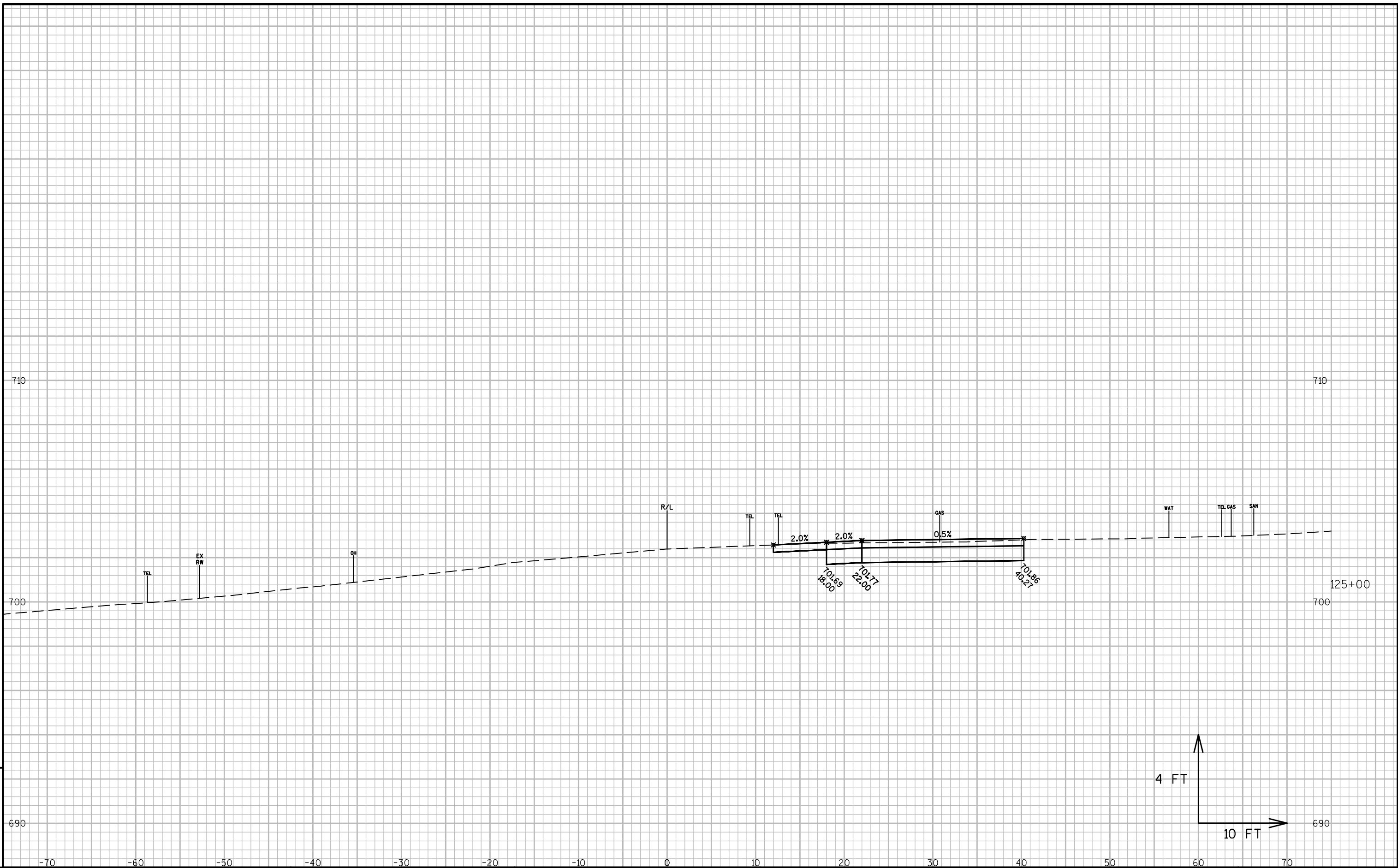
PLOT DATE : 6/28/2017 9:54 AM

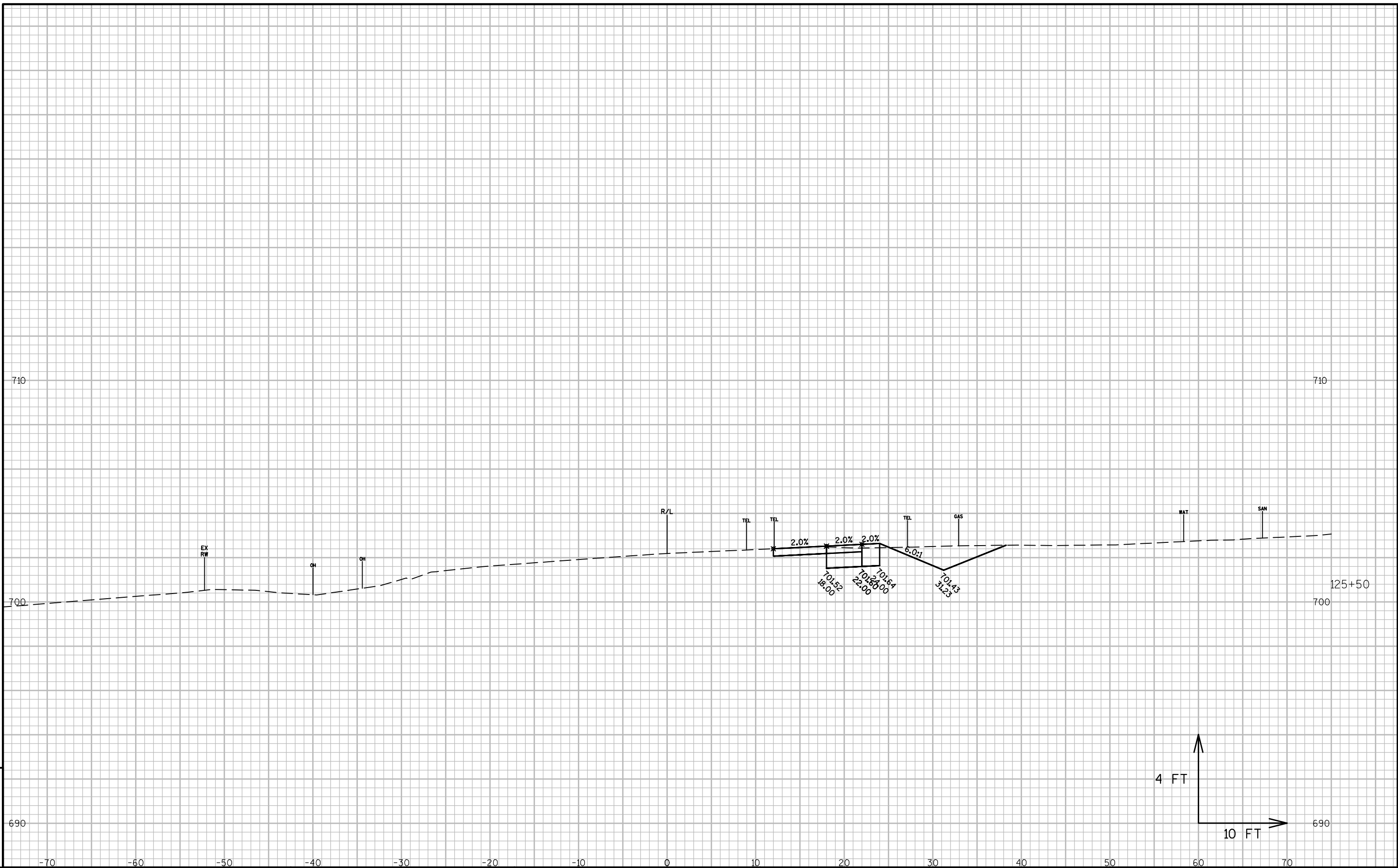
PLOT BY : MARSHALL, DAWN L

PLOT NAME :

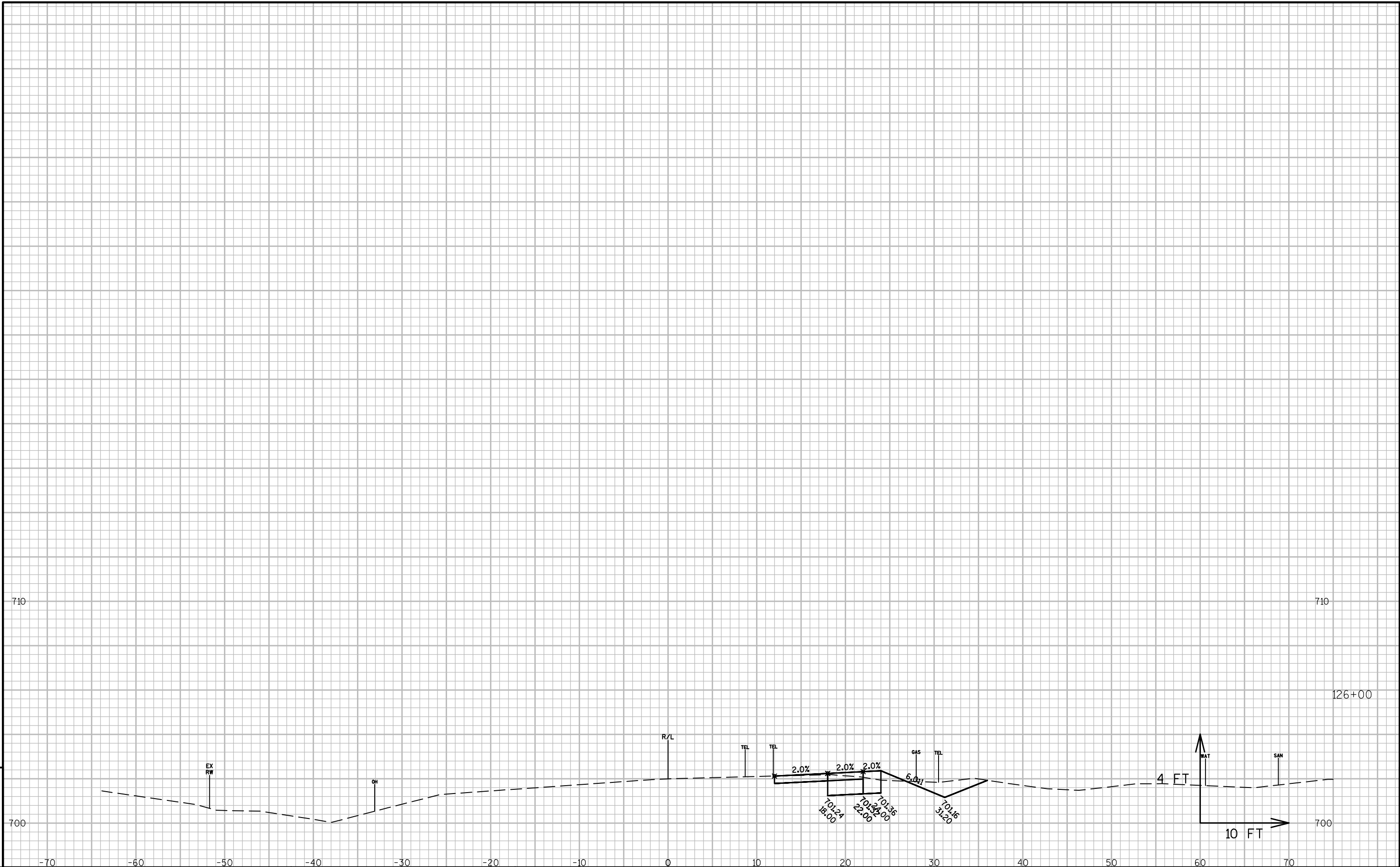
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WISDOT/CADDs SHEET 49

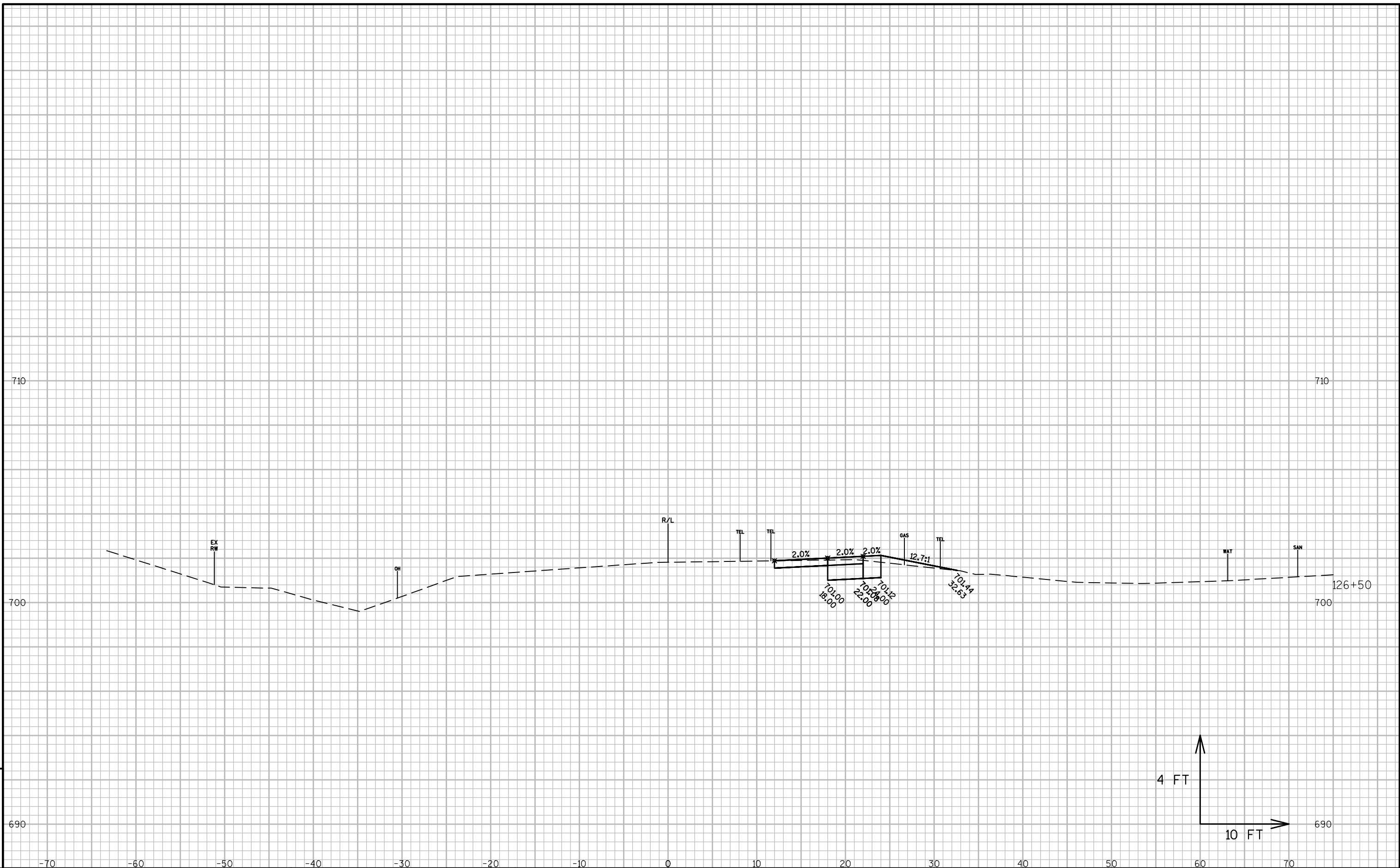




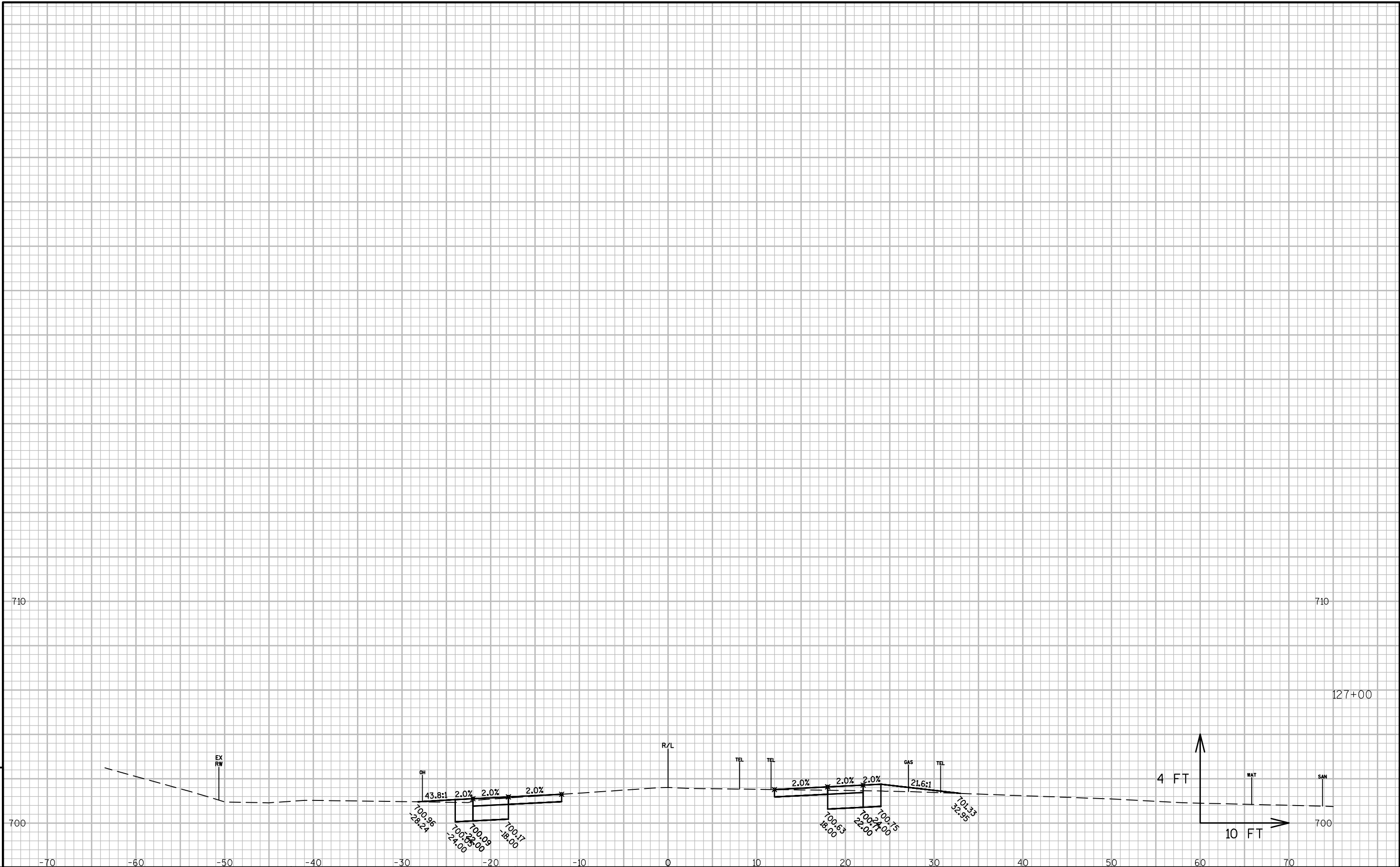
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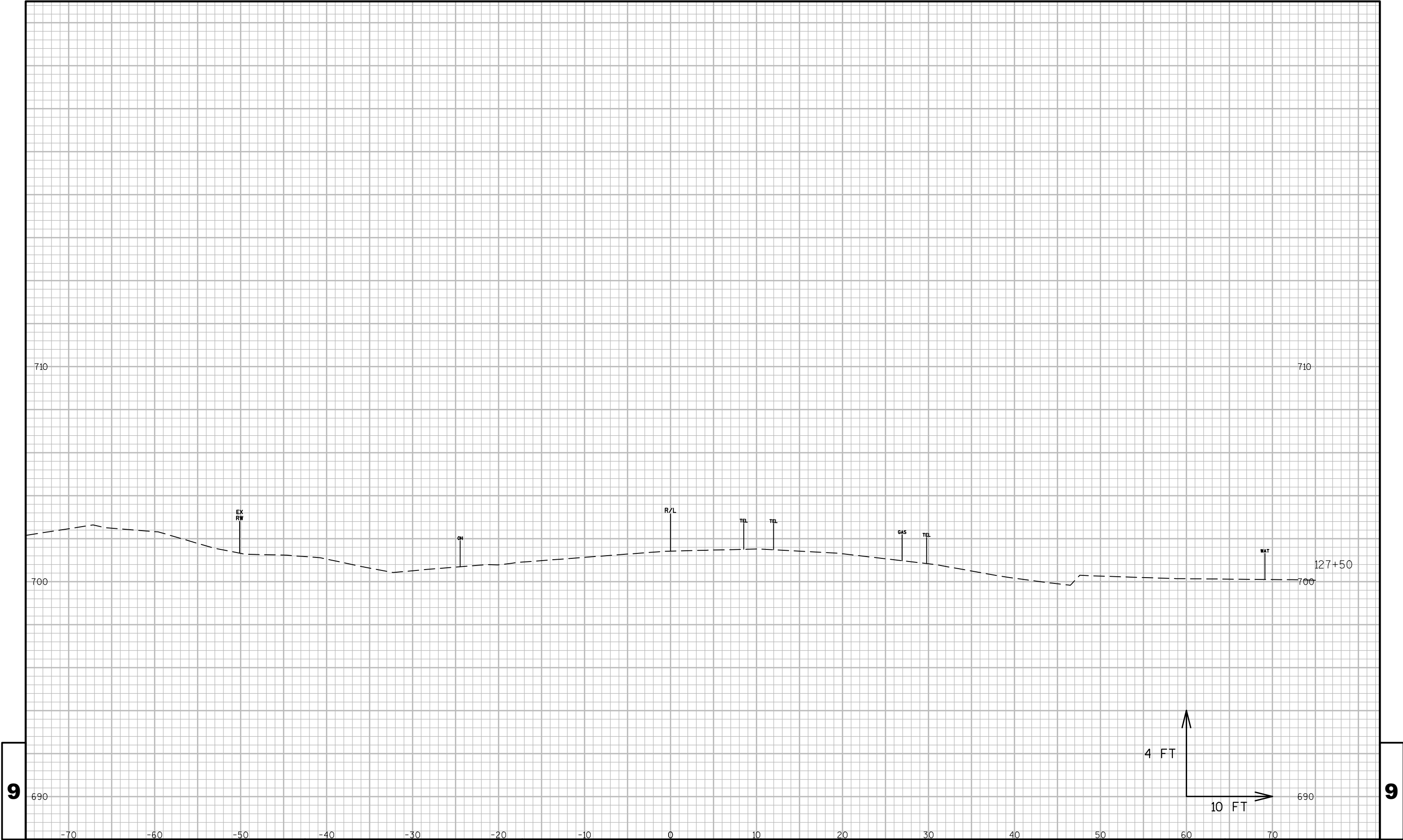
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PROJECT NO:2375-07-70

HWY:STH 32

COUNTY:MILWAUKEE

CROSS SECTIONS:

SHEET

E

FILE NAME : N:\PDS\C3D\23750700\SHEETSOOTHER\23700770_XS.DWG
LAYOUT NAME - SECTION SHEET - (37)

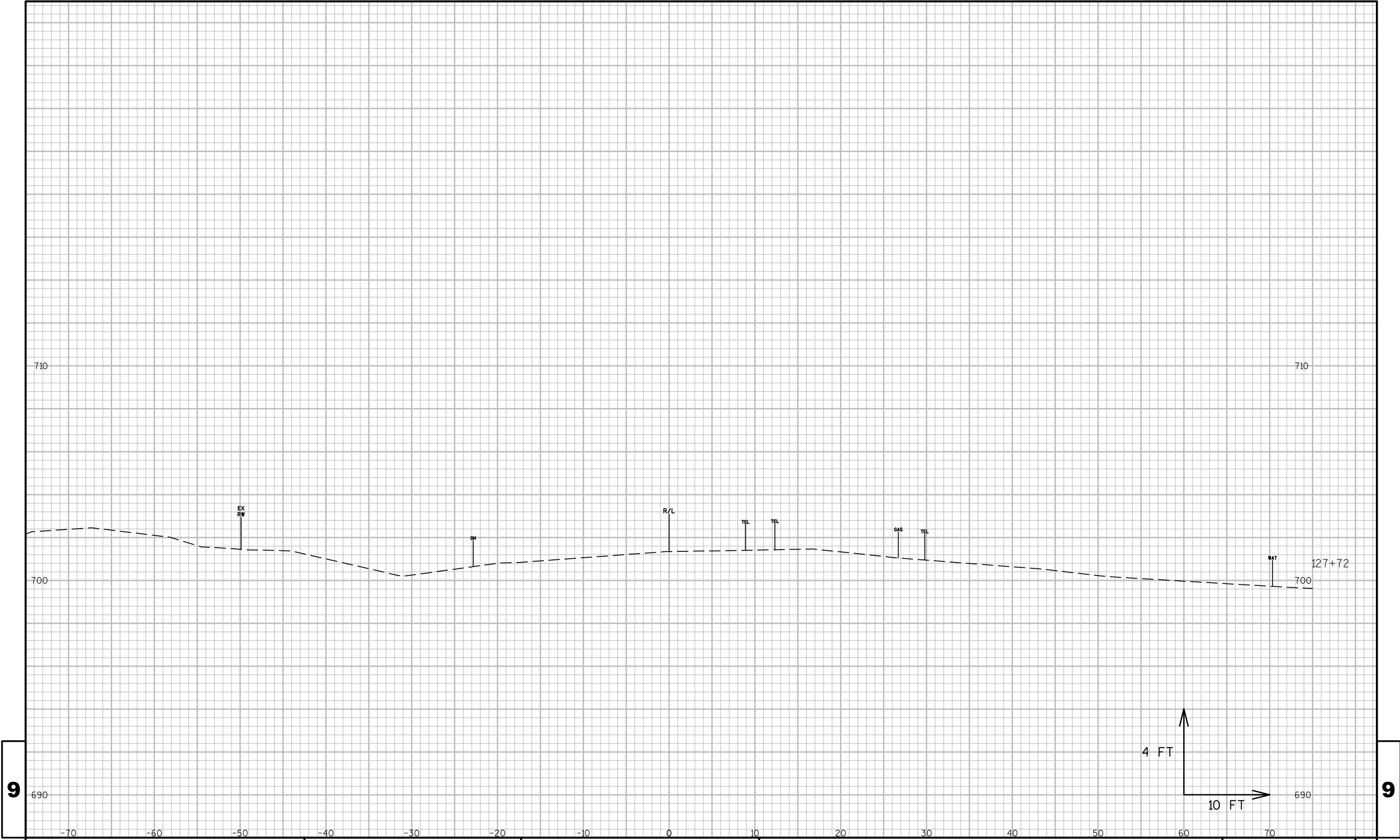
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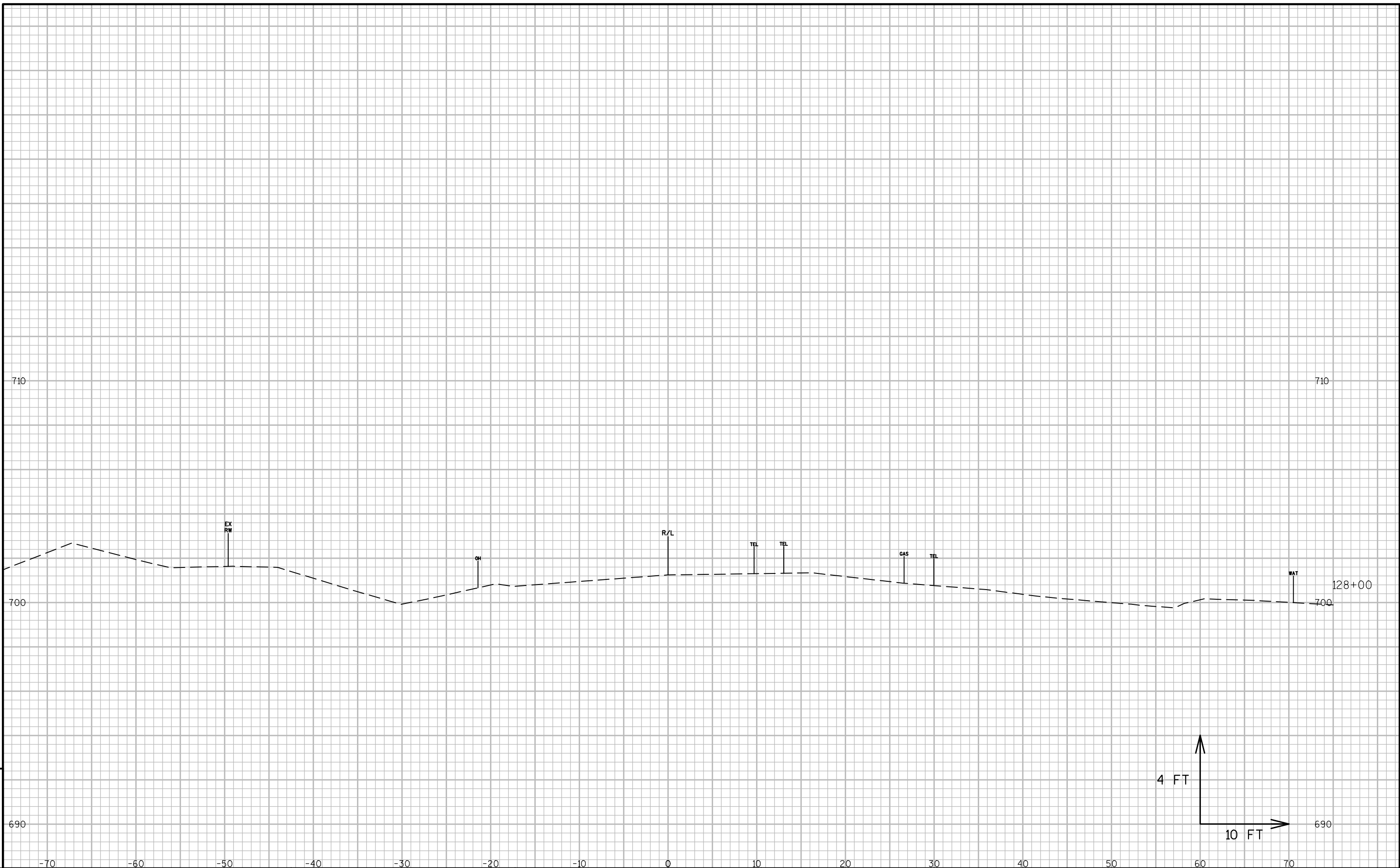
PLOT BY : MARSHALL, DAWN L

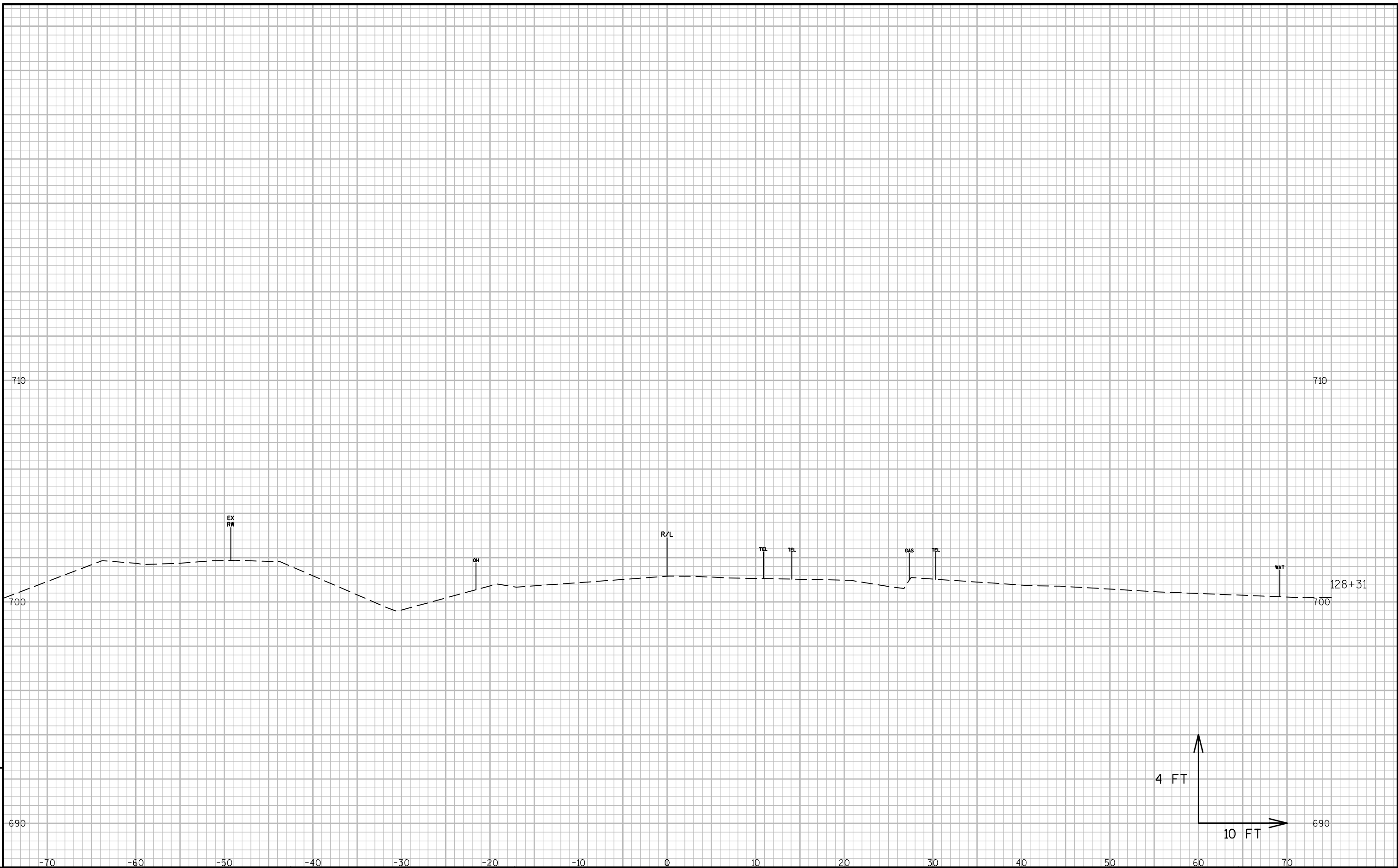
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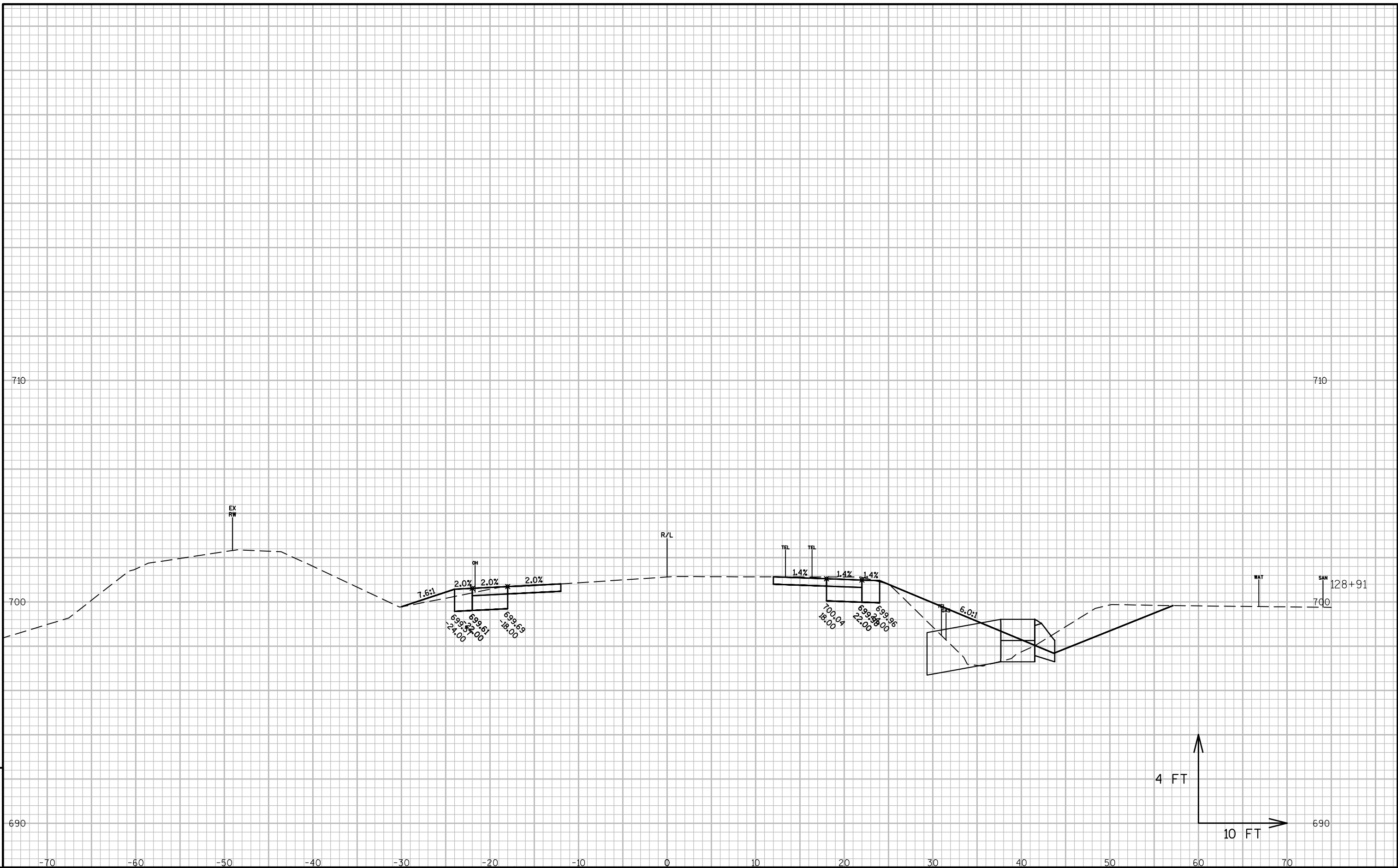
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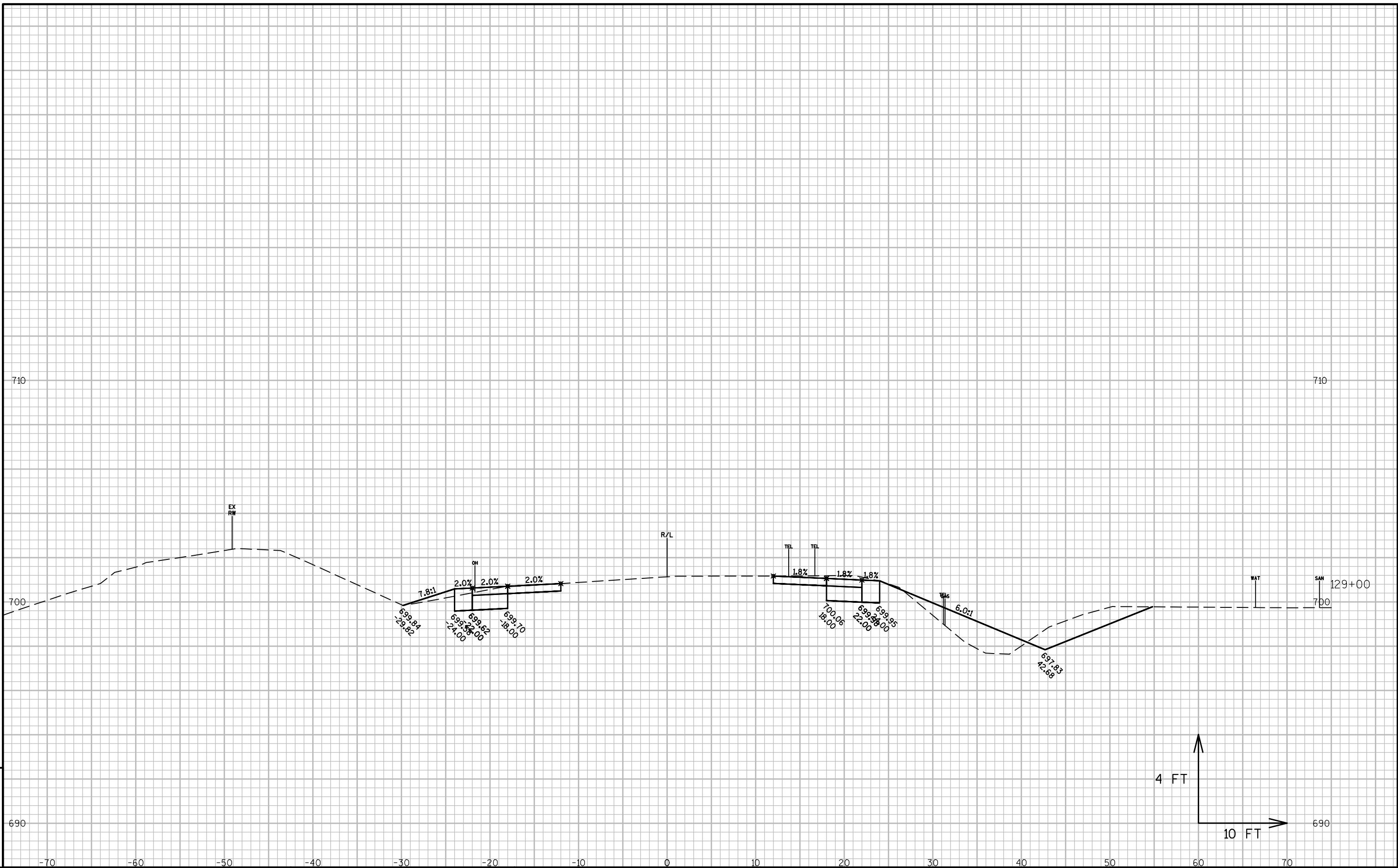
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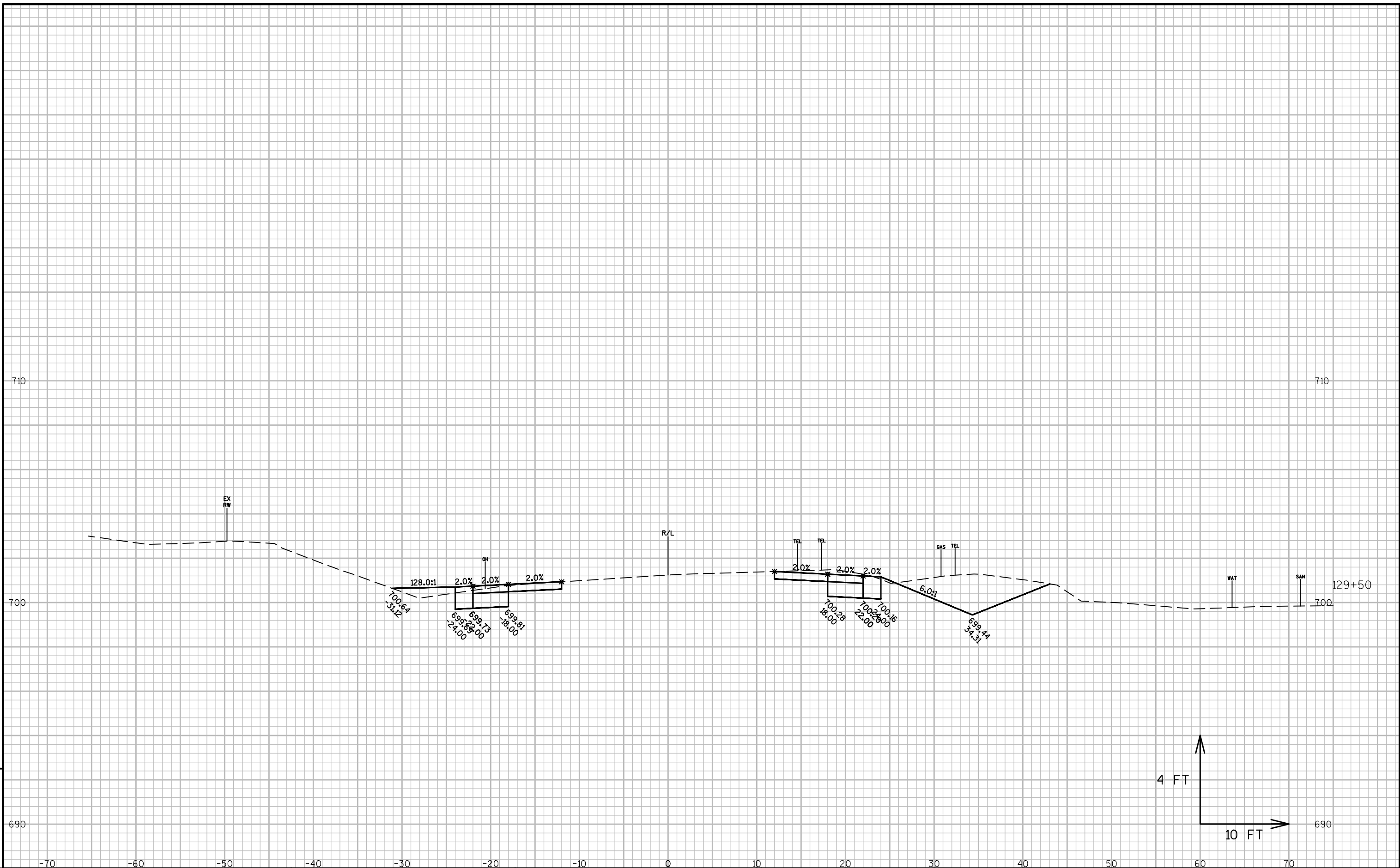


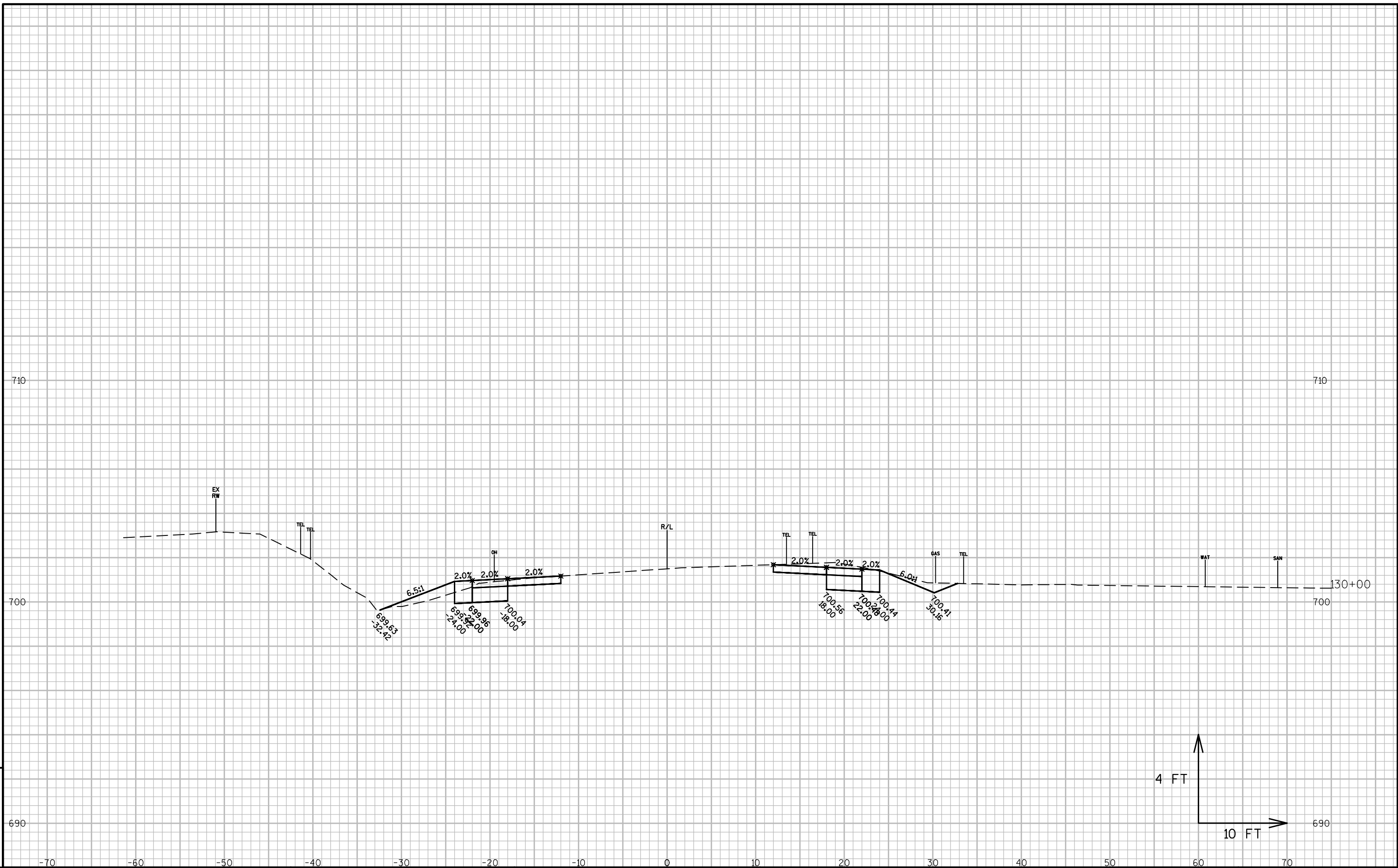


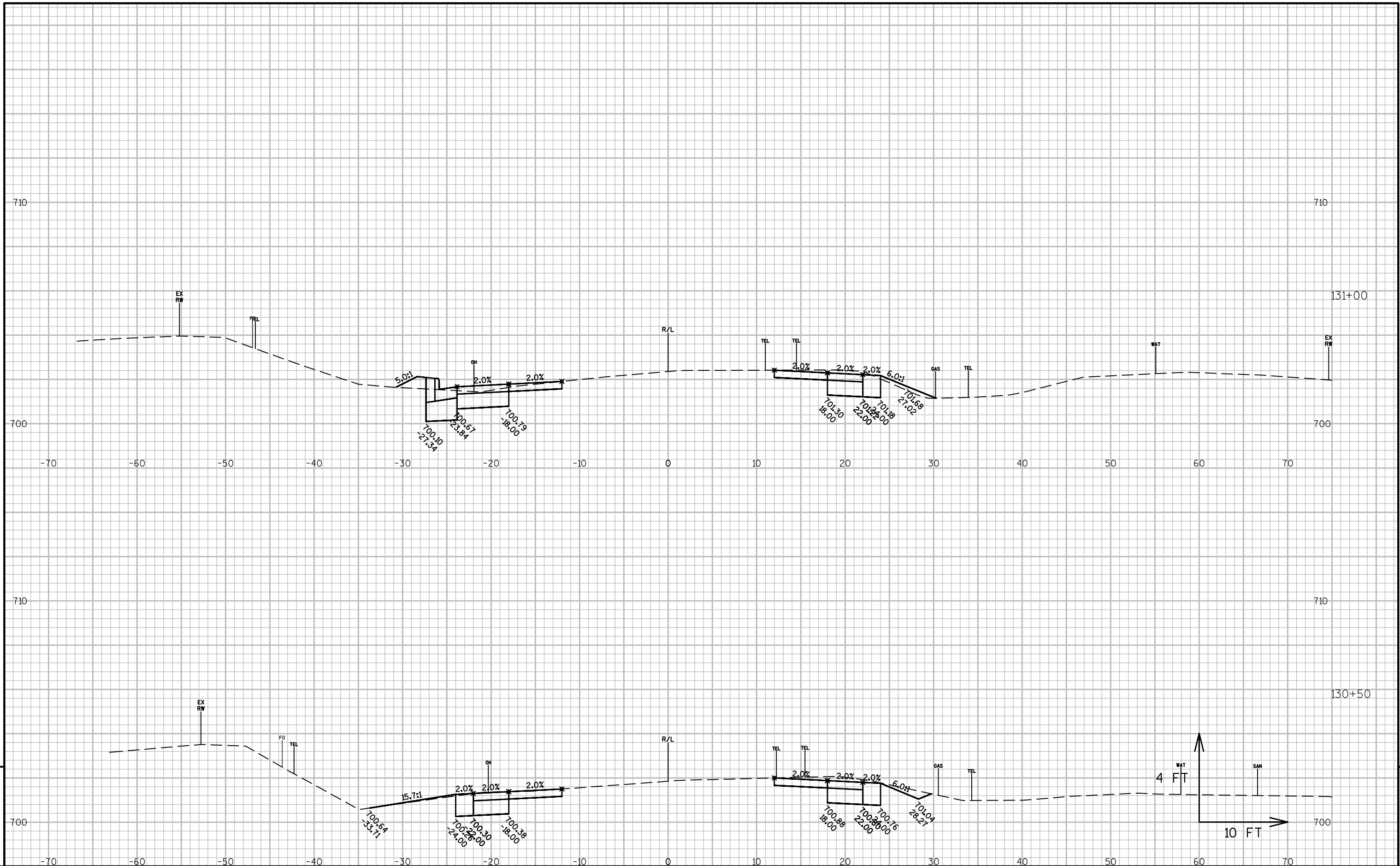


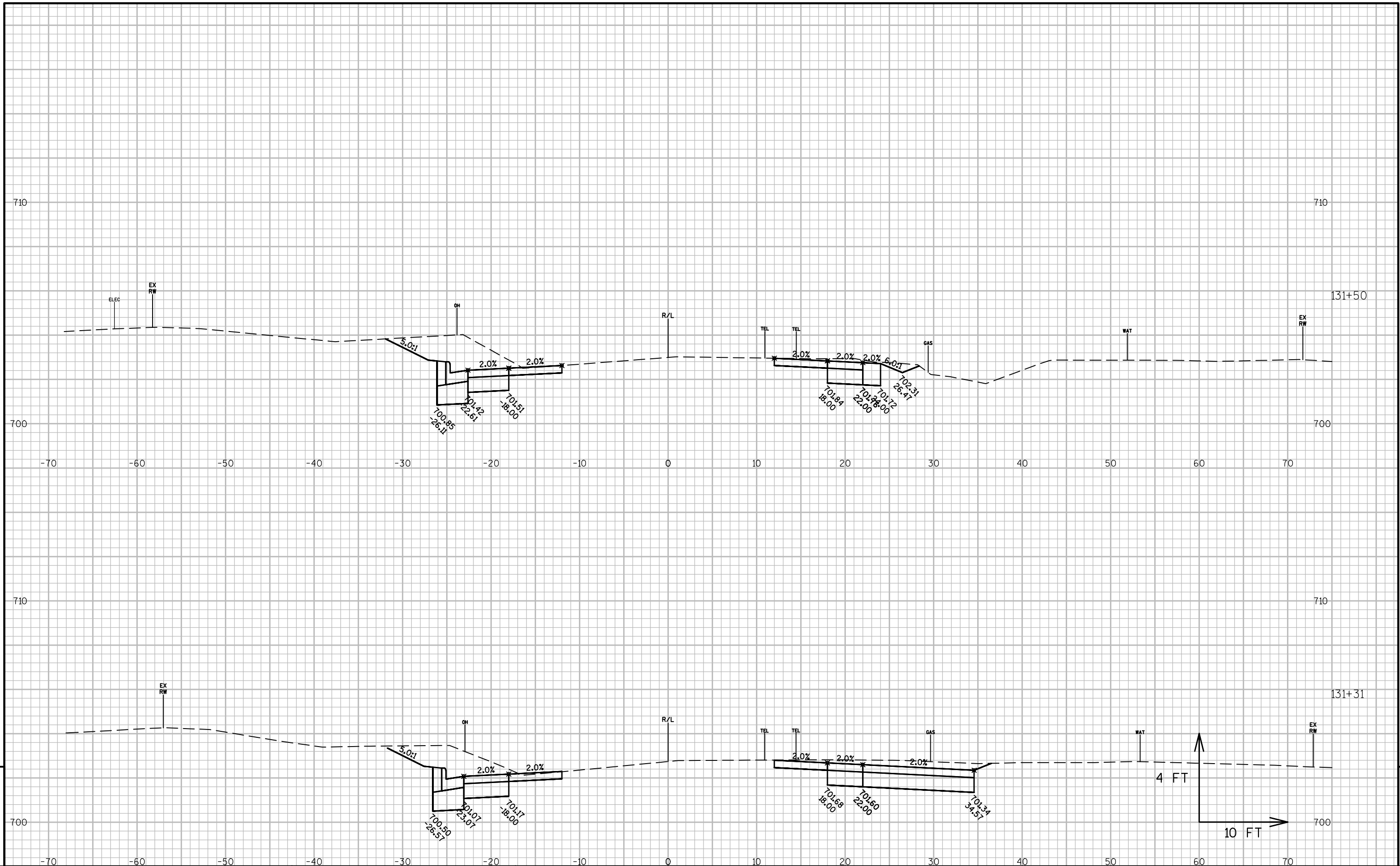


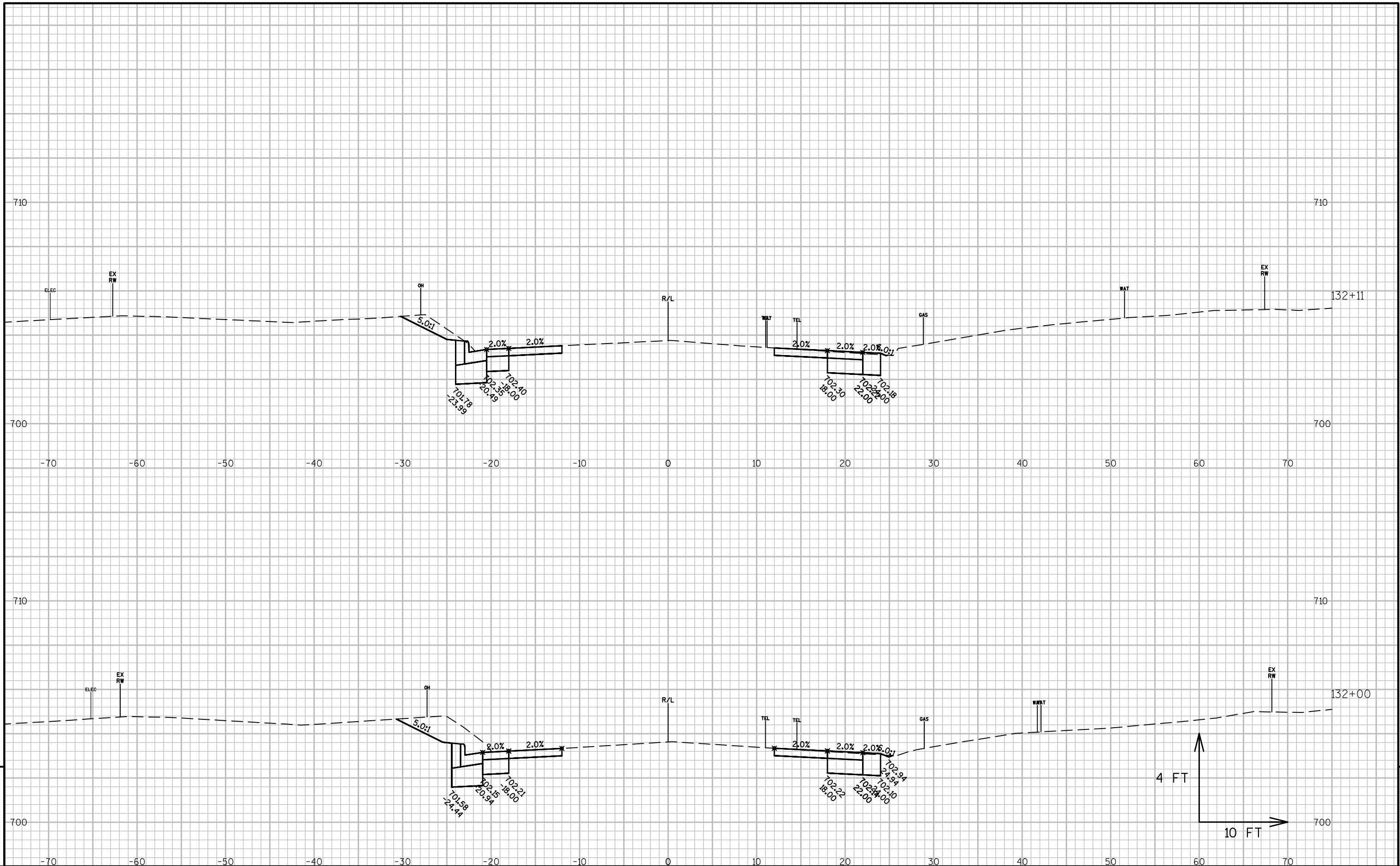














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