

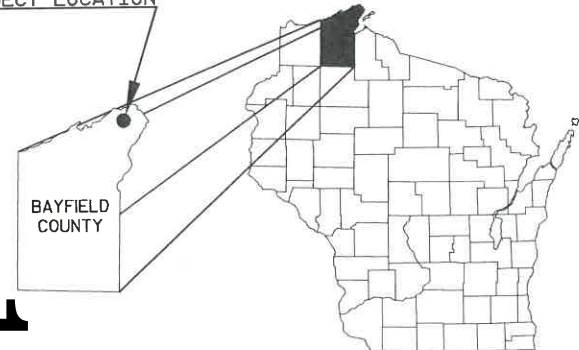
NWL
PROJECT ID: 8357-01-72
WITH: N/A
COUNTY: BAYFIELD

AUGUST 2017
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 = 100

PROJECT LOCATION



DESIGN DESIGNATION

A.A.D.T.	2017	=	360
A.A.D.T.	2037	=	380
D.H.V.		=	NA
D.D.	2017	=	0.5
T.		=	8.7% of A.A.D.T.
DESIGN SPEED		=	40 MPH
ESALS		=	36,000

CONVENTIONAL SYMBOLS

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

PROFILE	
GRADE LINE	
ORIGINAL GROUND	
MARSH OR ROCK PROFILE	
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

T RUSSELL, LITTLE SAND BAY ROAD

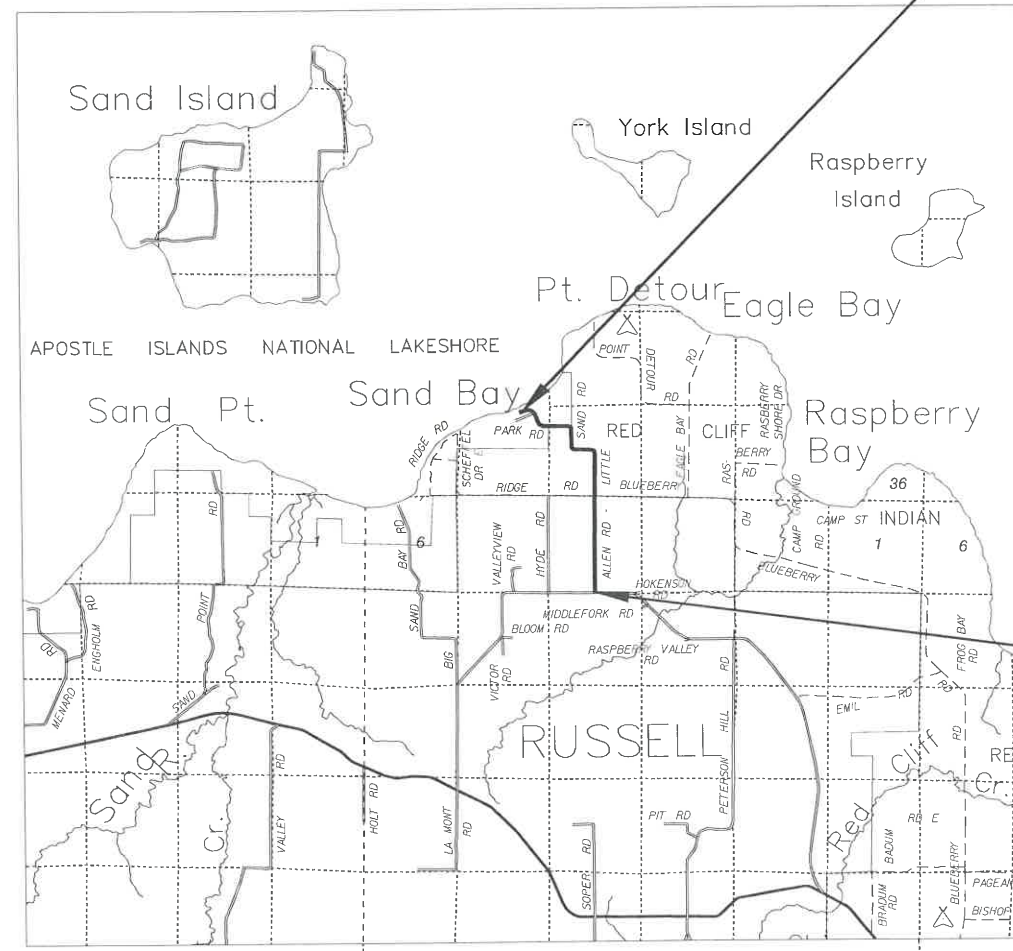
OLD CTH K - TERMINI

LOCAL STREET

BAYFIELD COUNTY

STATE PROJECT NUMBER
8357-01-72

END PROJECT
STA. 239+06.45
X= 815 639.604
Y= 588 254.074



BEGIN PROJECT
STA. 100+16.09
X= 819 930.689
Y= 578 063.387

LAYOUT
SCALE 0 2 MILES
TOTAL NET LENGTH OF CENTERLINE = 2.631 MILES

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

ELEVATIONS SHOWN ON THIS PLAN ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF NAVD 88 (91).

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
8357-01-72		

ACCEPTED FOR
TOWN of RUSSELL
4-5-17 (Date)
(Signature & Title of Official)

ORIGINAL PLANS PREPARED BY

WESTBROOK
Associated Engineers, Inc.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WISCONSIN 53588
PHONE (608) 588-7866
FAX (608) 588-7954

WISCONSIN
AARON B. PALMER
E-35695
RICHLAND CENTER, WI
PROFESSIONAL ENGINEER
April 3, 2017 (Date)
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor LUND ENGINEERING
Designer WESTBROOK
Management Consultant KNIGHT E/A INC.

APPROVED FOR THE DEPARTMENT
DATE: 4/27/17 (Date)
(Signature)

E

GENERAL NOTES

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

DRAINAGE
PRIOR TO ORDERING DRAINAGE PIPES AND STRUCTURES, THE CONTRACTOR SHALL FIELD VERIFY RELATED DRAINAGE INFORMATION IN THE PLAN WITH THE ENGINEER.

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

EXISTING DRAINAGE DITCHES AND CULVERT PIPES SHALL REMAIN FUNCTIONAL DURING EXCAVATION OPERATIONS.

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

THE QUANTITY OF THE ITEMS FOR EROSION PROTECTION INCLUDES AN UNDISTRIBUTED AMOUNT FOR PROTECTION, CONTROL, AND ABATEMENT OF WATER POLLUTION RESULTING FROM SOIL EROSION. THE DISTRIBUTION AND LOCATION OF THESE MATERIALS ARE TO BE DETERMINED BY THE ENGINEER.

DISTURBED AREAS WITHIN THE RIGHT-OF-WAY ARE TO BE FERTILIZED, SEEDED AND TEMPORARILY SEEDED AS DIRECTED BY THE ENGINEER.

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

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

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

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

PAVEMENT REMOVAL WILL BE TO THE NEAREST JOINT OR A SAWED EDGE WILL BE REQUIRED AS DIRECTED BY THE ENGINEER.

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

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

ALL WASTE MATERIAL RESULTING FROM THE VARIOUS CONSTRUCTION OPERATIONS ADJACENT TO THE PAVEMENT UNDER TRAFFIC SHALL BE ENTIRELY REMOVED AND PROPERLY DISPOSED OF IMMEDIATELY OR AS DIRECTED BY THE ENGINEER.

THE EXACT LOCATION AND WIDTH OF DRIVEWAYS WILL BE DETERMINED IN THE FIELD BY THE ENGINEER.

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

WETLANDS EXIST IN THE PROJECT AREA. NO DISTURBANCES SHALL OCCUR OUTSIDE OF THE SLOPE INTERCEPTS IN WETLAND AREAS.

STORAGE OF EQUIPMENT AND/OR MATERIALS OUTSIDE OF THE SHOWN SLOPE INTERCEPTS, IN AREAS OF ADJACENT WETLANDS, IS PROHIBITED.

STATIONING, DISTANCES, AND OFFSETS FOR PROPOSED SIGNS SHOWN ON THE PLANS ARE APPROXIMATE AND THE LOCATIONS OF SIGNS ARE TO BE COORDINATED IN THE FIELD WITH THE ENGINEER.

CONFLICTING SIGNS SHALL BE COVERED OR REMOVED.

ALL COORDINATES ON THIS PLAN ARE REFERENCED TO THE BAYFIELD COUNTY COORDINATE SYSTEM. DISTANCES SHOWN ON THIS PLAN ARE GROUND DISTANCES. BEARINGS SHOWN ON THIS PLAN ARE GRID BEARINGS.

PURSUANT TO CHAPTER 59 OF THE WISCONSIN STATUTES, THE CONTRACTOR SHALL CAREFULLY MAKE A SEARCH FOR EVIDENCE OF A LANDMARK IN ALL AREAS WHERE SUCH A LANDMARK MAY EXIST.

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

HMA PAVEMENT TYPE 4 LT 58-34 S TO BE PLACED IN ONE, 2½-INCH LIFT.

CONSULTANT LIAISON

WESTBROOK ASSOCIATED ENGINEERS, INC.
619 EAST HOXIE STREET
P.O. BOX 429
SPRING GREEN, WI 53588

ATTN: AARON PALMER, P.E.
PH: (608) 588-7866
apalmer@westbrookeng.com

WisDNR LIAISON

DNR NORTHERN REGION HEADQUARTERS
810 W. MAPLE STREET
SPOONER, WI 54801

ATTN: SHAWN HASELEU
PH: (715) 635-4228
shawn.haseleu@wisconsin.gov

TOWN LIAISON

TOWN OF RUSSELL
35900 STH 13
BAYFIELD, WI 54814

ATTN: PAUL TRIBOVICH, CHAIRMAN
PH: (715) 779-5338
townofrussell@centurytel.net

STANDARD ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	L.S.	LUMP SUM
AGG.	AGGREGATE	LT.	LEFT
AH.	AHEAD	M.H.	MANHOLE
ET. AL.	AND OTHERS	MAX.	MAXIMUM
BK.	BACK	MIN.	MINIMUM
B	BARN	N.	NORTH
B.M.	BENCH MARK	NOR.	NORMAL
BIT.	BITUMINOUS	PAV'T.	PAVEMENT
BOT.	BOTTOM	P.C.	POINT OF CURVE
C.A.B.C.	CRUSHED AGGREGATE BASE COURSE	P.I.	POINT OF INTERSECTION
C.B.	CATCH BASIN	P.C.C.	PORTLAND CEMENT CONCRETE
C.E.	COMMERCIAL ENTRANCE	P.E.	PRIVATE ENTRANCE
C OR CL	CENTERLINE	P OR PL	PROPERTY LINE
CH.	CHISELED	P.P.	POWER POLE
CH. CH.	CHANNEL CHANGE	PROJ.	PROJECT
CL.	CLASS	P.T.	POINT OF TANGENCY
C & G	CURB & GUTTER	P.U.	PIPE UNDERDRAIN
C.M.C.P.	CORRUGATED METAL CULVERT PIPE	P.U.U.	PIPE UNDERDRAIN UNPERFORATED
CONC.	CONCRETE	R.	RADIUS
CONST.	CONSTRUCTION	R.C.C.P.	REINFORCED CONCRETE CULVERT PIPE
COR.	CORNER	R.C.P.S.S.	REINFORCED CONCRETE PIPE, STORM SEWER
C.P.	CULVERT PIPE	REQ'D.	REQUIRED
CR.	CRUSHED	R OR RL	REFERENCE LINE
C.T.H.	COUNTY TRUNK HIGHWAY	R.R.	RAILROAD
CWT.	HUNDREDWEIGHT	RT.	RIGHT
C.Y.	CUBIC YARD	R.H.F.	RIGHT HAND FORWARD
D	DEGREE OF CURVE	R/W	RIGHT-OF-WAY
D	DIRECTIONAL DISTRIBUTION	RD.	ROAD
D.H.	DOUBLE HEADED	S.	SOUTH
D.H.V.	DESIGN HOURLY VOLUME	SAN.	SANITARY
DISC.	DISCHARGE	S.E.	SUPERELEVATION
E.	EAST	SHR.	SHRINKAGE
E.B.S.	EXCAVATION BELOW SUBGRADE	S.R.	SIDE ROAD
EL. OR ELEV.	ELEVATION	S.S.	STORM SEWER
E.M.	EROSION MAT	STD.	STANDARD
EXC.	EXCAVATION	S.T.H.	STATE TRUNK HIGHWAY
F.F.	FACE TO FACE	STA.	STATION
F.E.	FIELD ENTRANCE	SURF.	SURFACE
F.L.	FLOW LINE	S.W.	SIDEWALK
FT.	FOOT (FEET)	S.Y.	SQUARE YARD
G.	GARAGE	T	TRUCK PERCENTAGE
GAL.	GALLON	T	TANGENT LENGTH OF CURVE
G.F.	GEOTEXTILE FABRIC	TAN. LINE	TANGENT LINE
H	HOUSE	TAV.	TAVERN
HOR.	HORIZONTAL	T.P.	TELEPHONE POLE
H.P.	HIGH POINT	T.L.E.	TEMPORARY LIMITED EASEMENT
IN.	INCHES	T OR TL	TRANSIT LINE
INL.	INLET	T.S.F.	TEMPORARY SILT FENCE
Δ OR I	INTERSECTION ANGLE	UNCL.	UNCLASSIFIED EXCAVATION
I.P.	IRON PIPE	V	DESIGN SPEED
I.R.	IRON ROD	VAR.	VARIABLE
L.	LENGTH OF CURVE	V.C.	VERTICAL CURVE
L.F.	LINEAR FEET	VERT.	VERTICAL
L.H.E.	LIMITED HIGHWAY EASEMENT	W.	WEST
L.H.F.	LEFT HAND FORWARD		

UTILITIES

COMMUNICATIONS
CENTURYLINK
ATTN: ALAN NICKELL
P.O. BOX 181
SOLON SPRINGS, WI 54873
(715) 378-2131
alan.nickell@centurlink.com

ELECTRIC
BAYFIELD ELECTRIC COOPERATIVE
ATTN: GARY TARASEWICZ
68460 DISTRICT STREET
P.O. BOX 68
IRON RIVER, WI 54847
(715) 372-4287
gary.tarasewicz@bayfieldelectric.com



Dial 811 or (800)242-8511

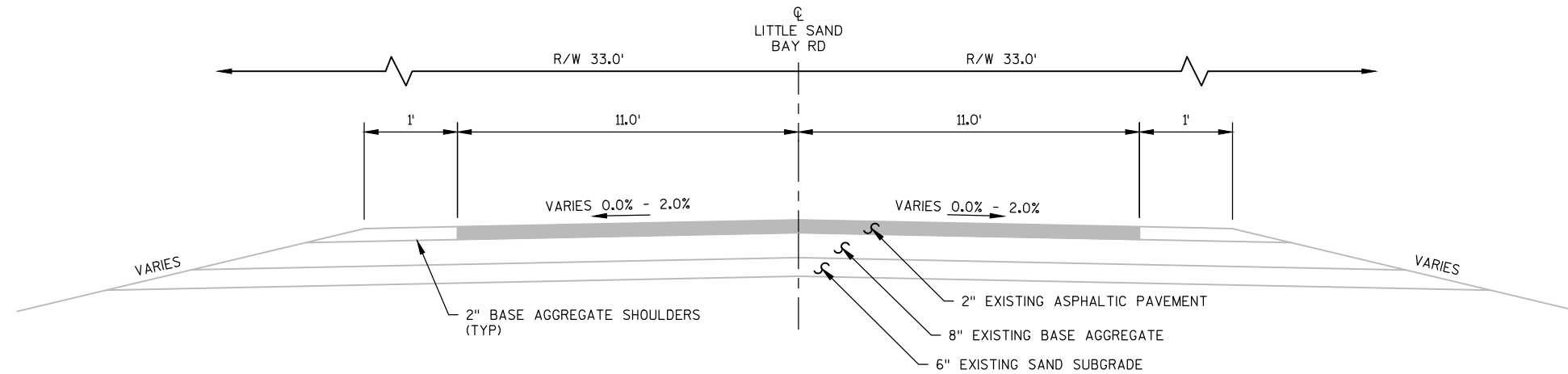
www.DiggersHotline.com

RUNOFF COEFFICIENT TABLE

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

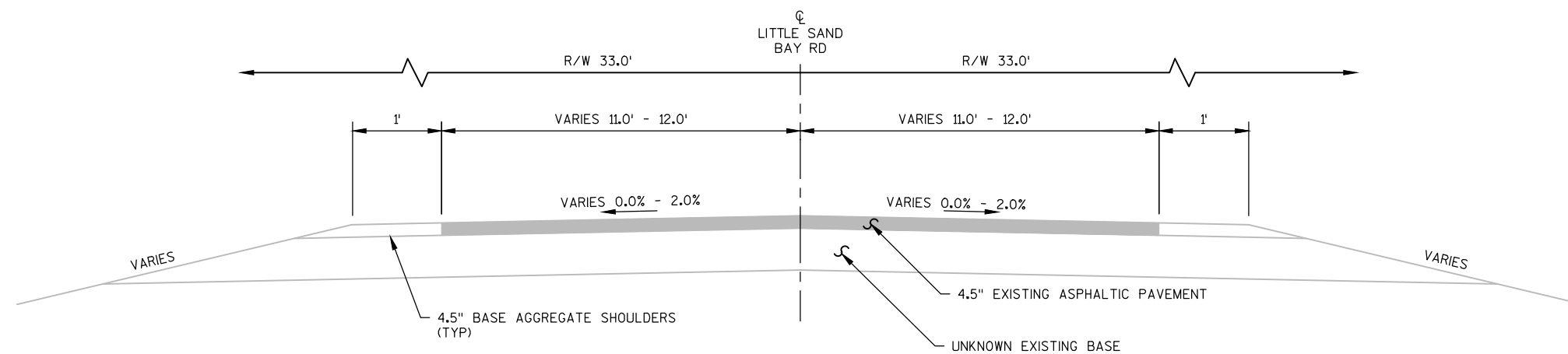
TOTAL PROJECT AREA = 21.04 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 13.97 ACRES





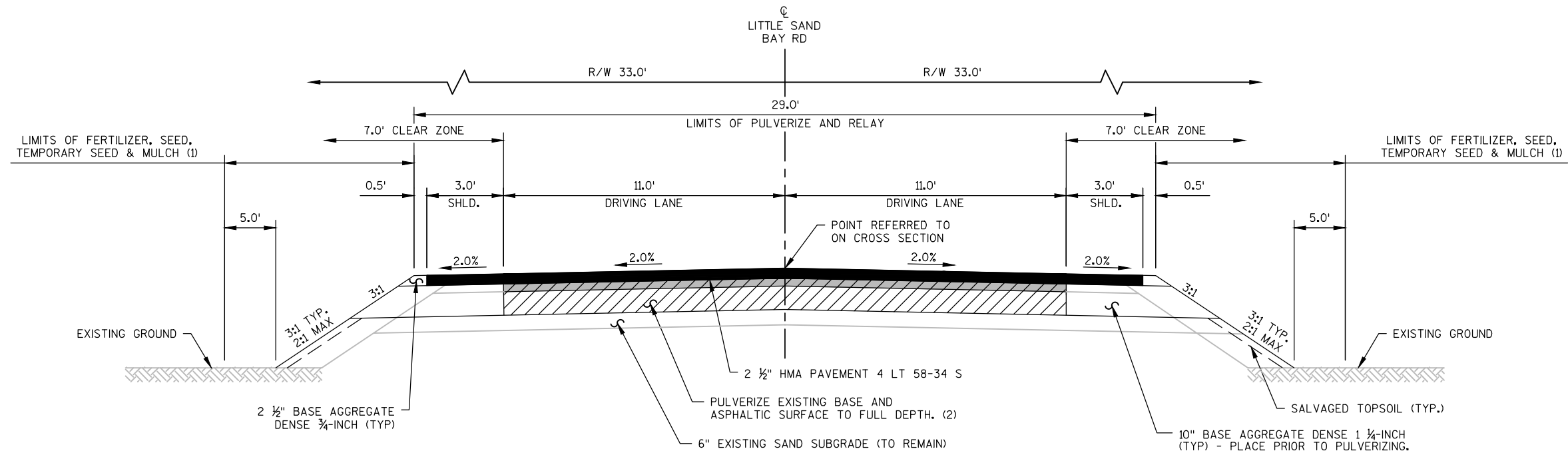
TYPICAL EXISTING SECTION

STA. 100+16.09 - STA. 155+33.29



TYPICAL EXISTING SECTION

STA. 155+33.29 - STA. 239+06.45

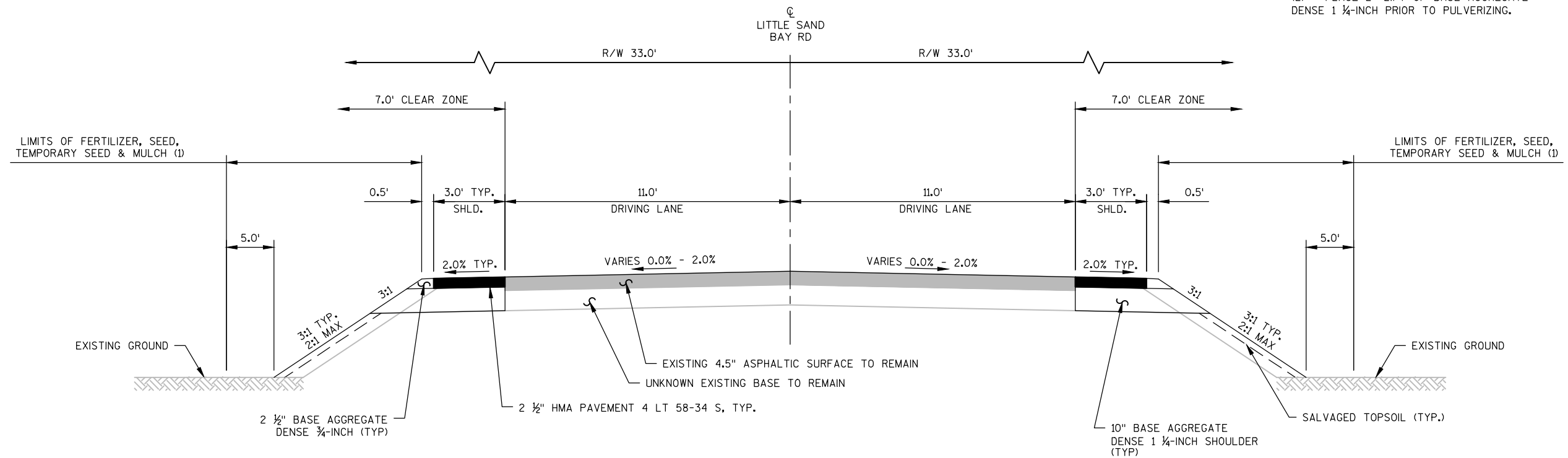


TYPICAL FINISHED SECTION

PULVERIZE FULL DEPTH
STA. 100+16.09 - STA. 155+33.29

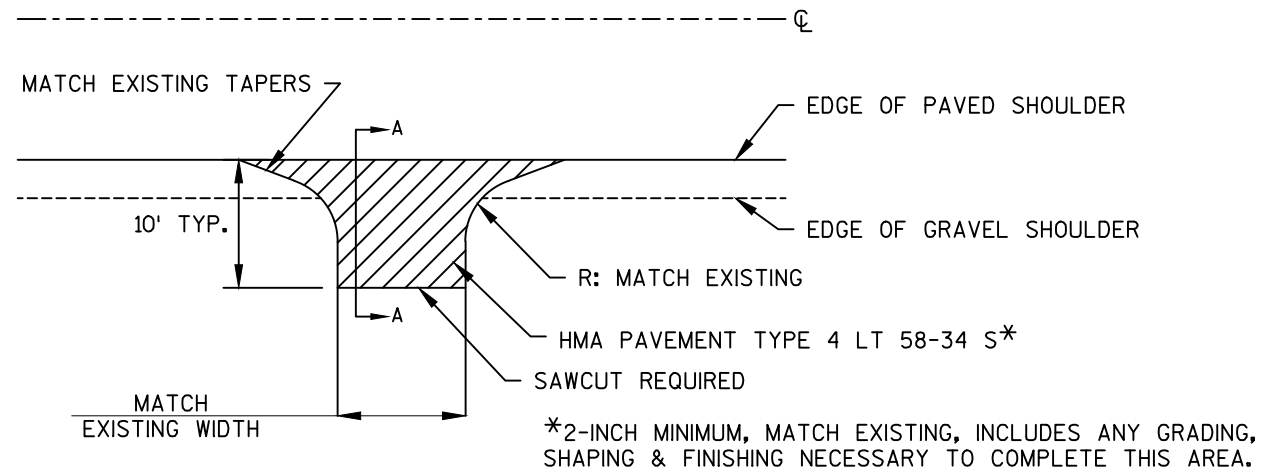
(1) - PLACE EROSION MAT INSTEAD OF MULCH AS SHOWN ON EROSION CONTROL SHEETS OR AS THE ENGINEER DIRECTS.

(2) - PLACE 2" LIFT OF BASE AGGREGATE DENSE 1 1/4-INCH PRIOR TO PULVERIZING.



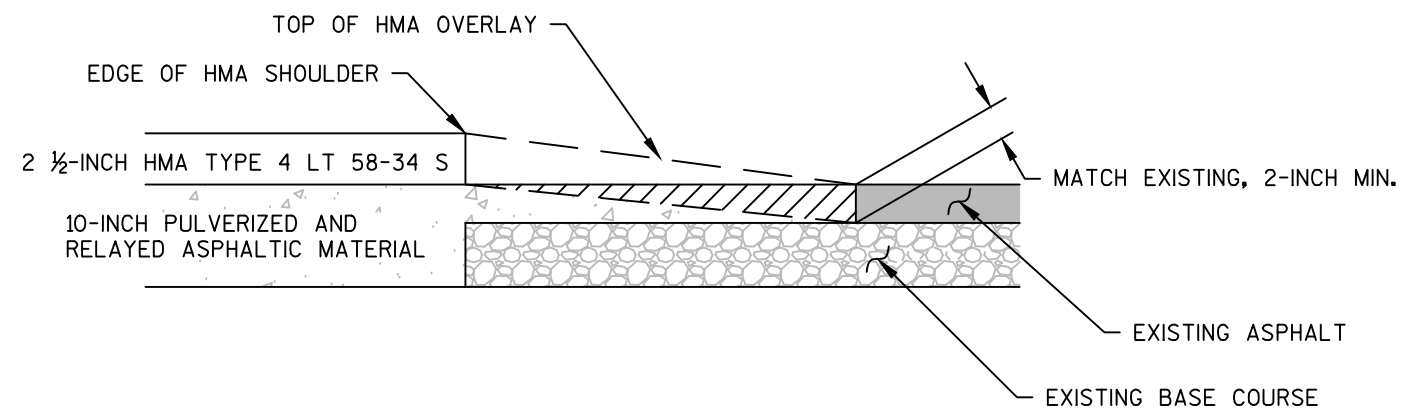
TYPICAL FINISHED SECTION

SHOULDER WIDENING
STA. 155+33.29 - STA. 239+06.45

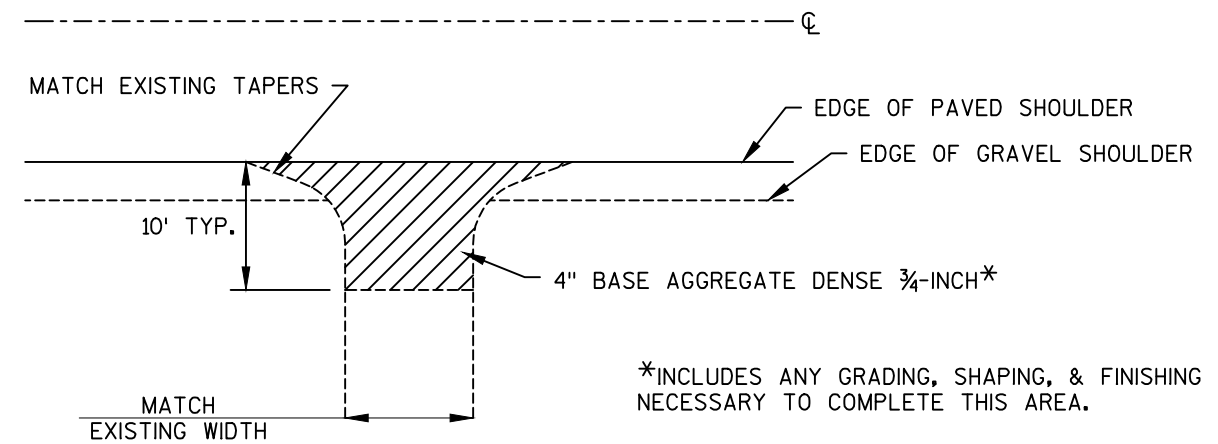


RURAL DRIVEWAY DETAIL - ASPHALT

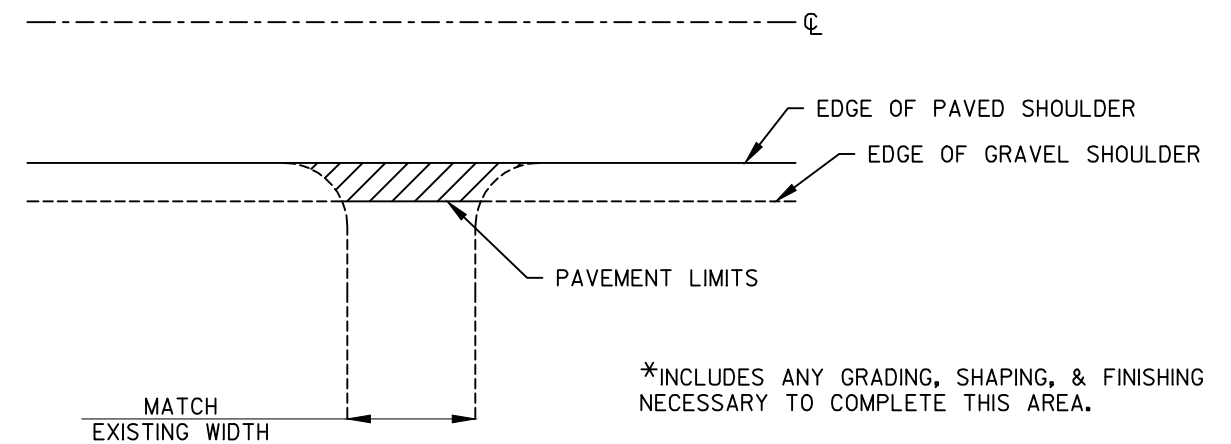
REMOVE ASPHALTIC MATERIAL



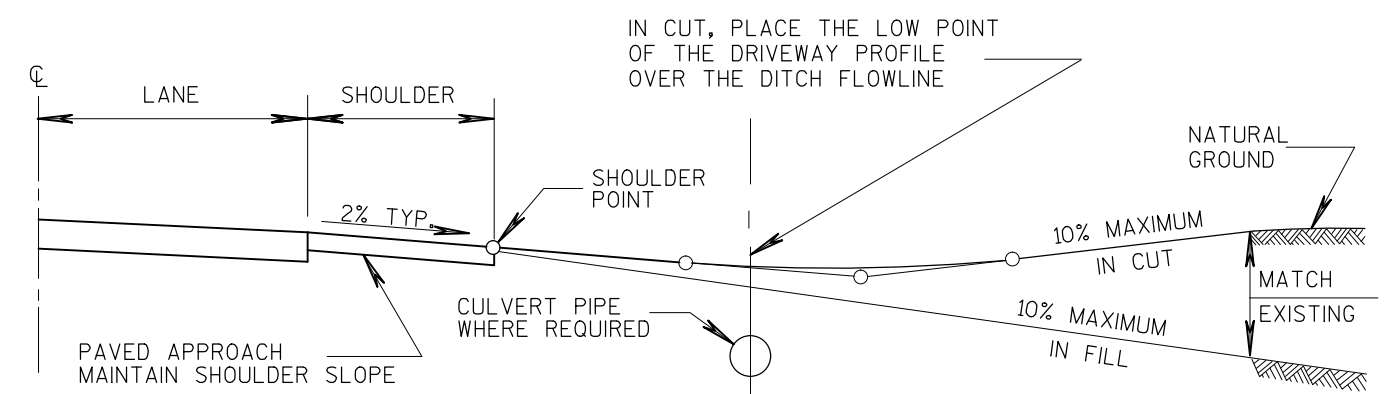
SECTION A-A



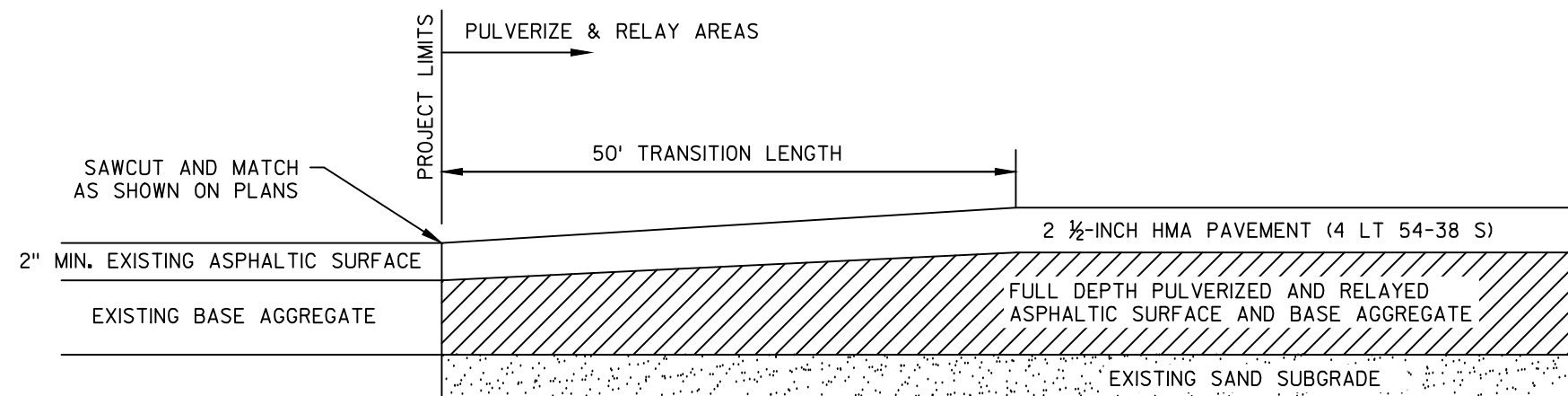
RURAL DRIVEWAY DETAIL - GRAVEL



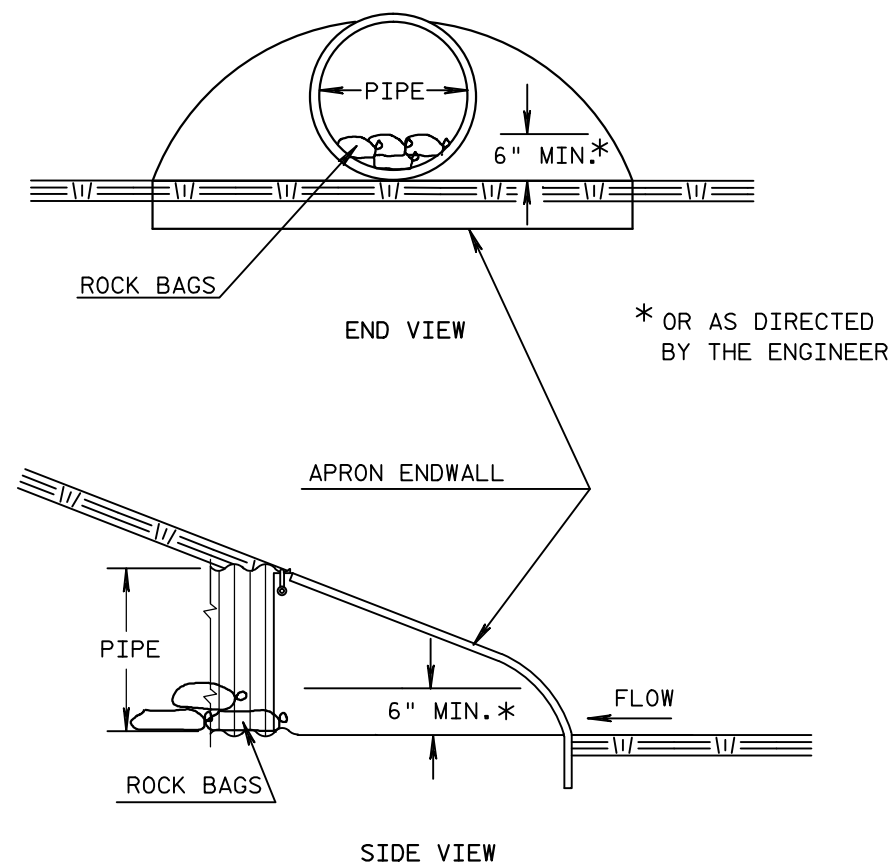
RURAL DRIVEWAY DETAIL - FIELD ENTRANCE



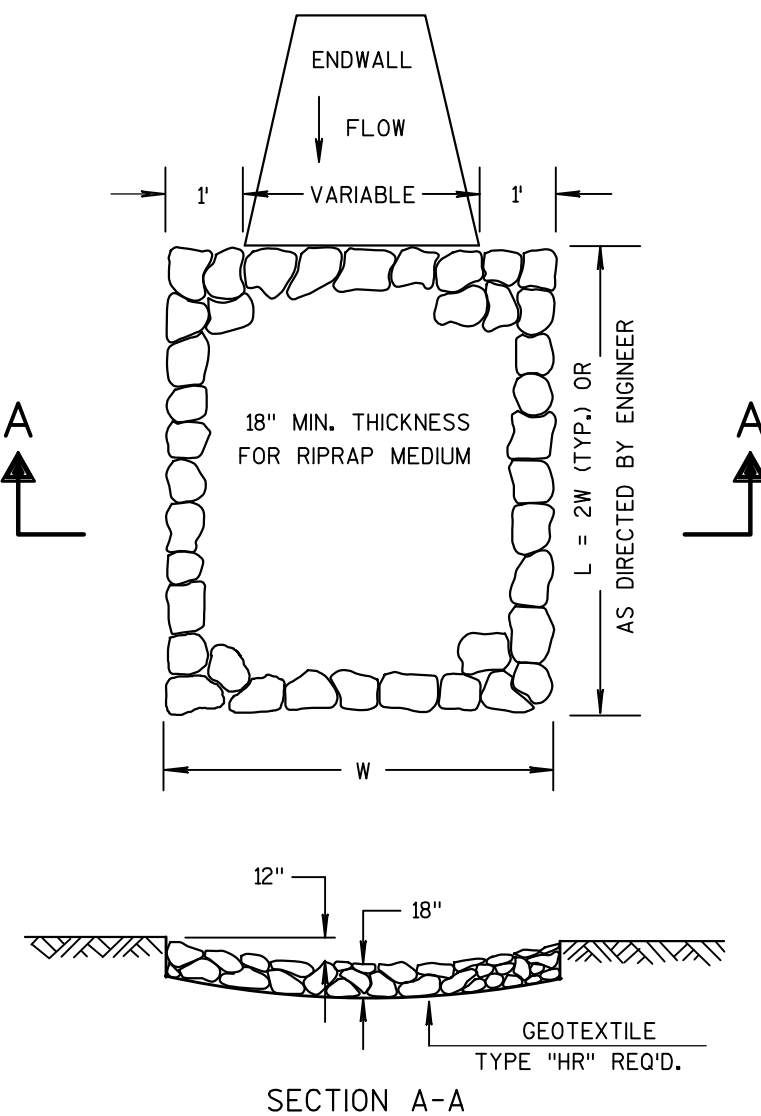
TYPICAL DRIVEWAY PROFILE



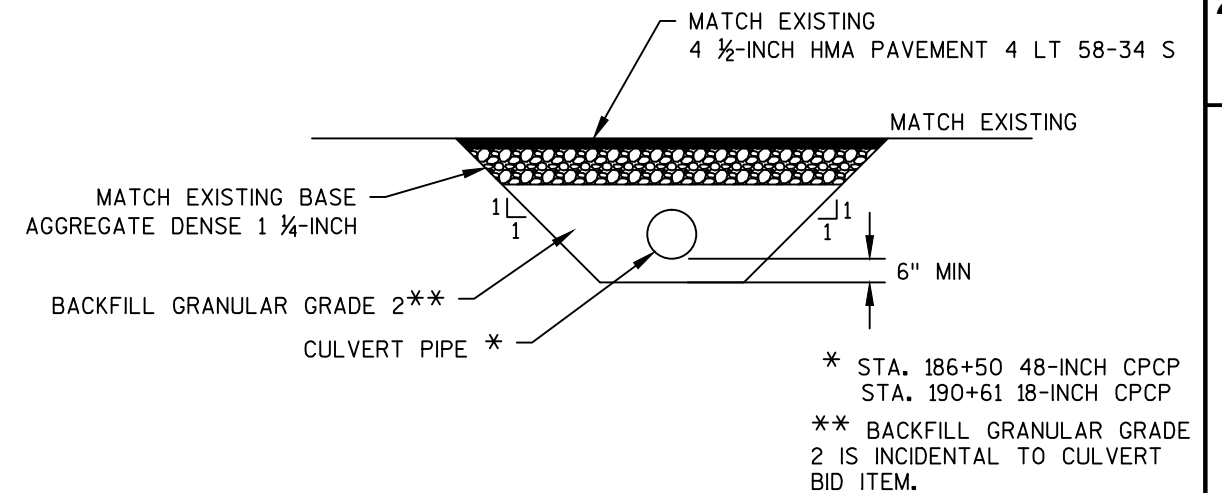
PULVERIZE AND RELAY TRANSITION DETAILS
AT PROJECT LIMITS



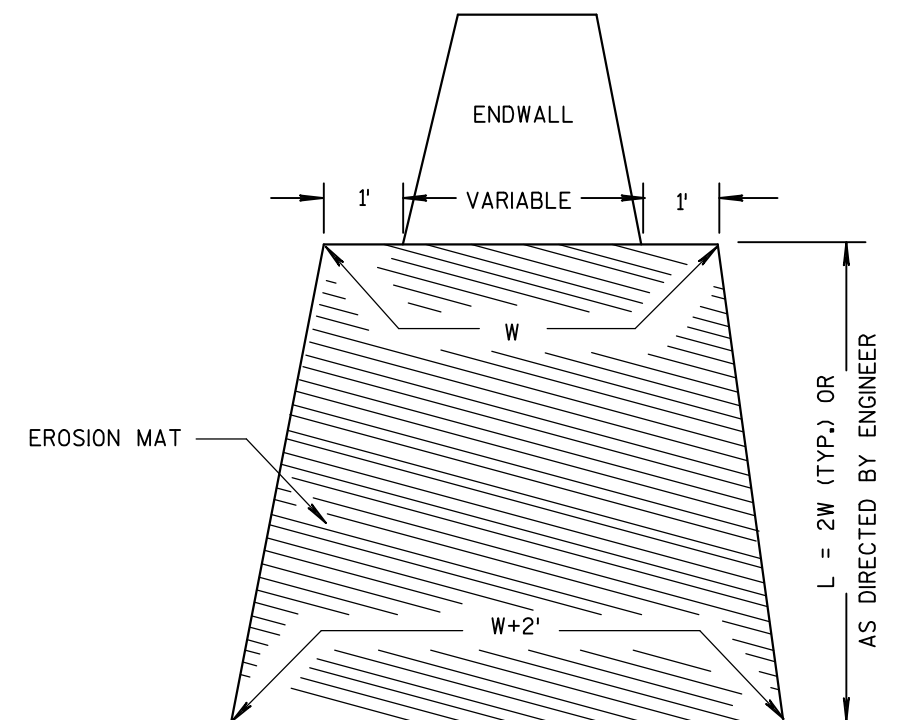
CULVERT PIPE CHECK



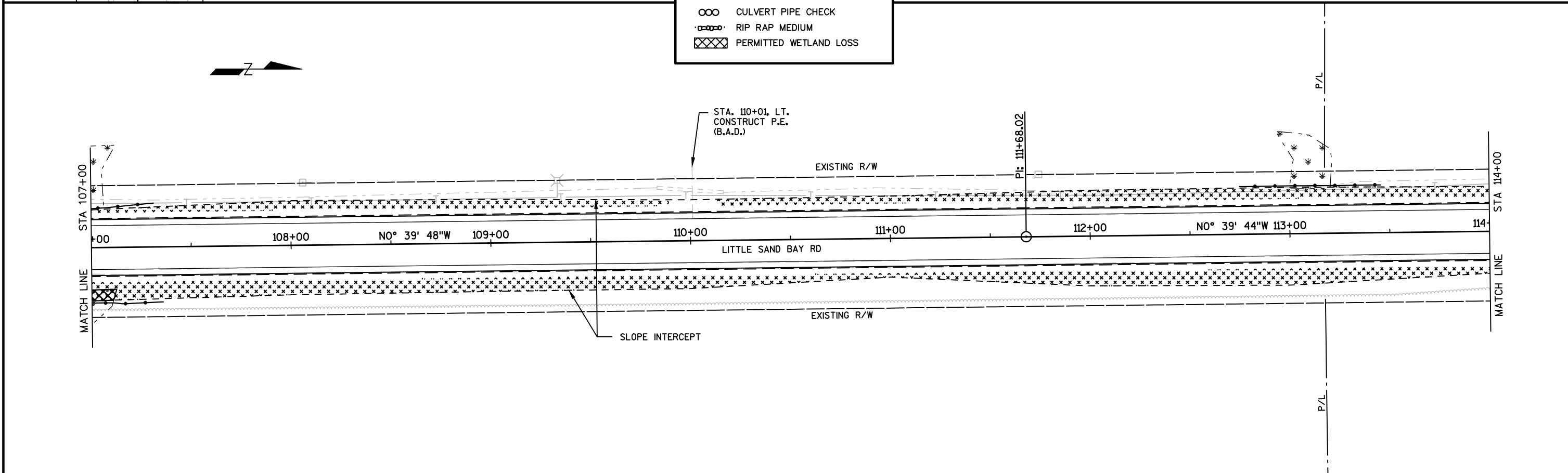
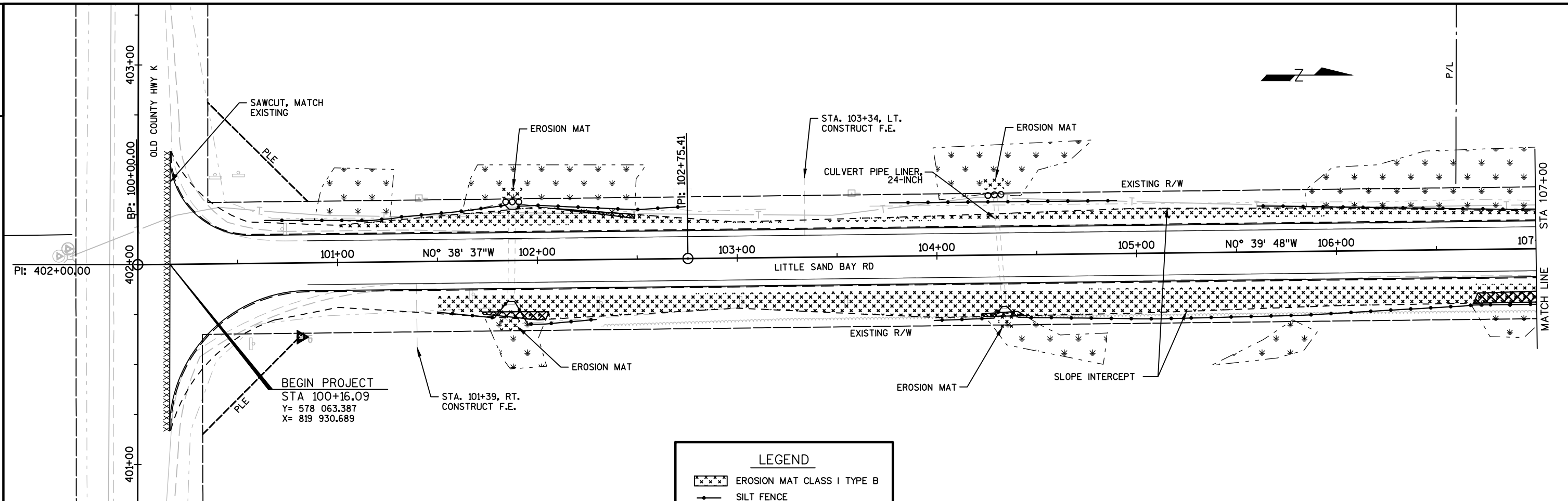
RIPRAP MEDIUM TREATMENT AT CULVERTS

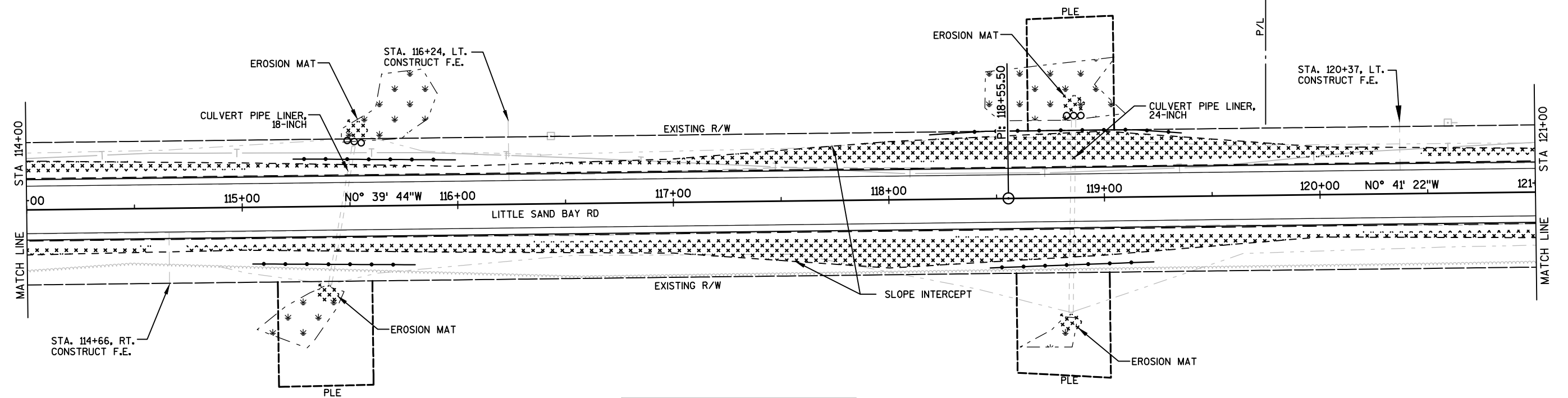


CULVERT REPLACEMENT








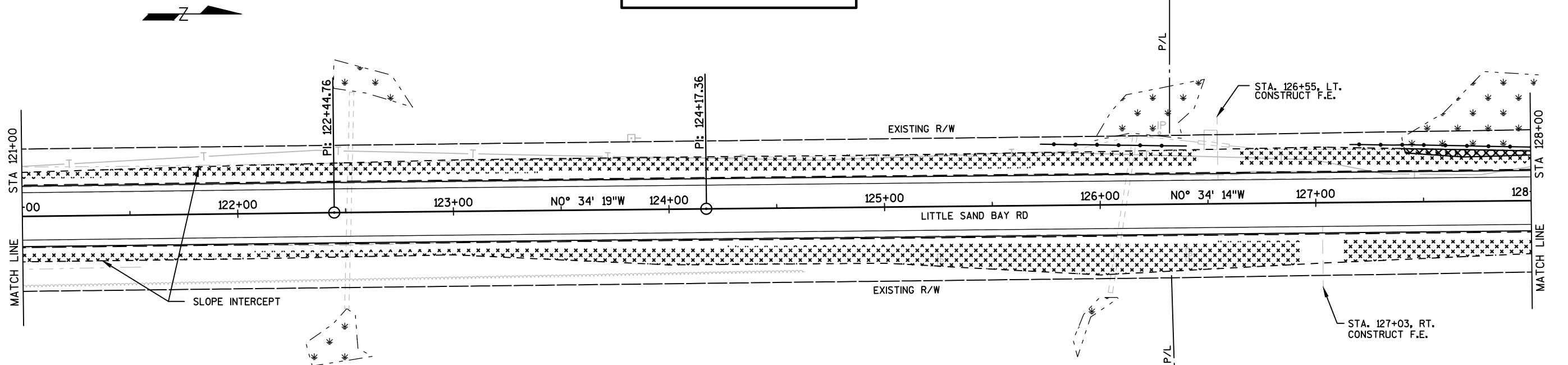
EROSION MAT TREATMENT AT CULVERTS

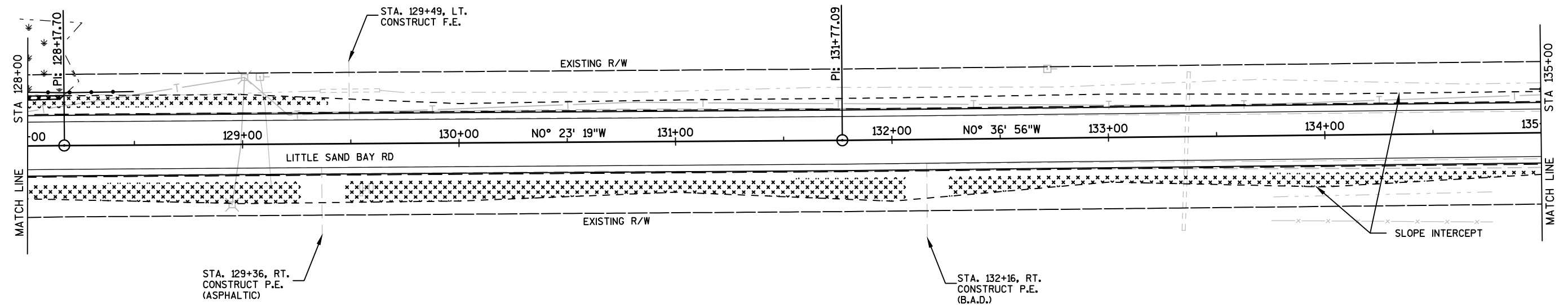




LEGEND

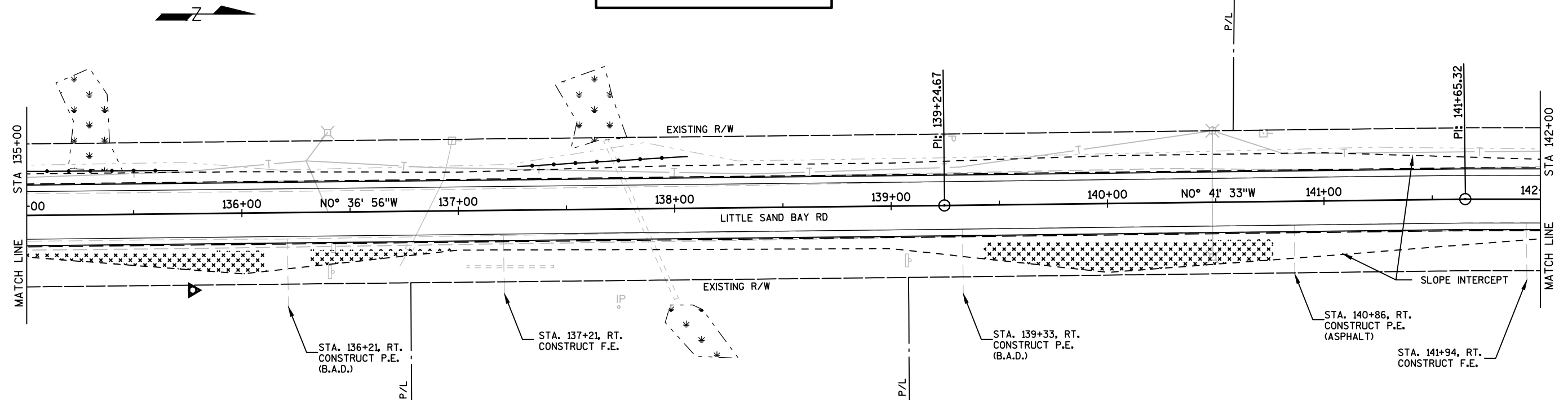
-  EROSION MAT CLASS I TYPE B
-  SILT FENCE
-  CULVERT PIPE CHECK
-  RIP RAP MEDIUM
-  PERMITTED WETLAND LOSS

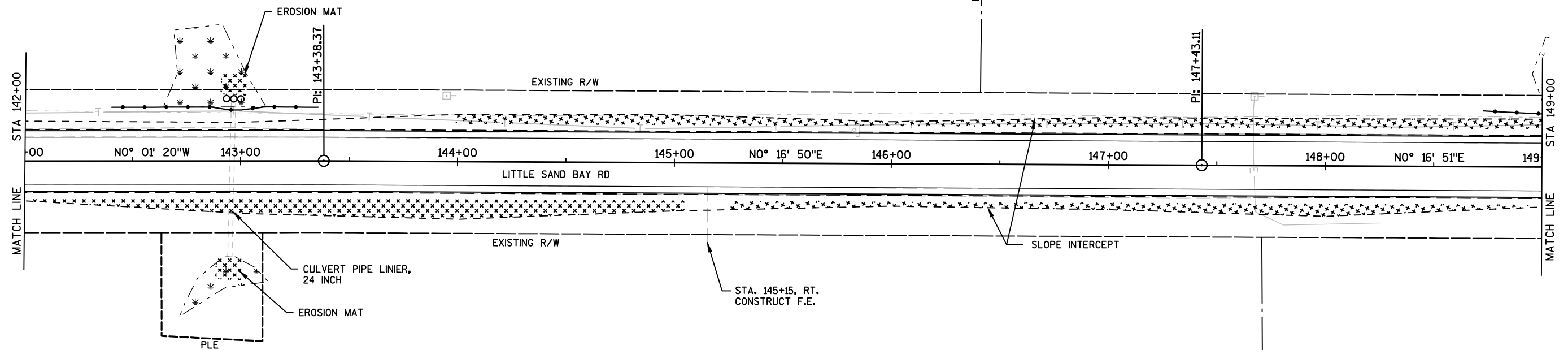




LEGEND

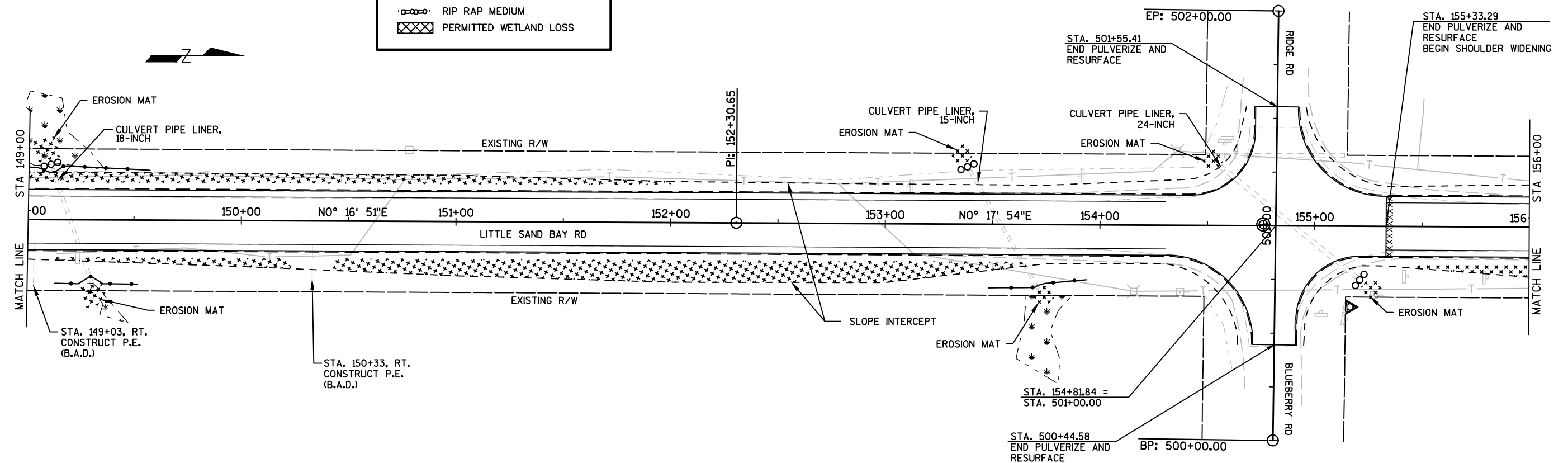
- XXXXX EROSION MAT CLASS I TYPE B
- SILT FENCE
- OOO CULVERT PIPE CHECK
- RIP RAP MEDIUM
- XXXXX PERMITTED WETLAND LOSS

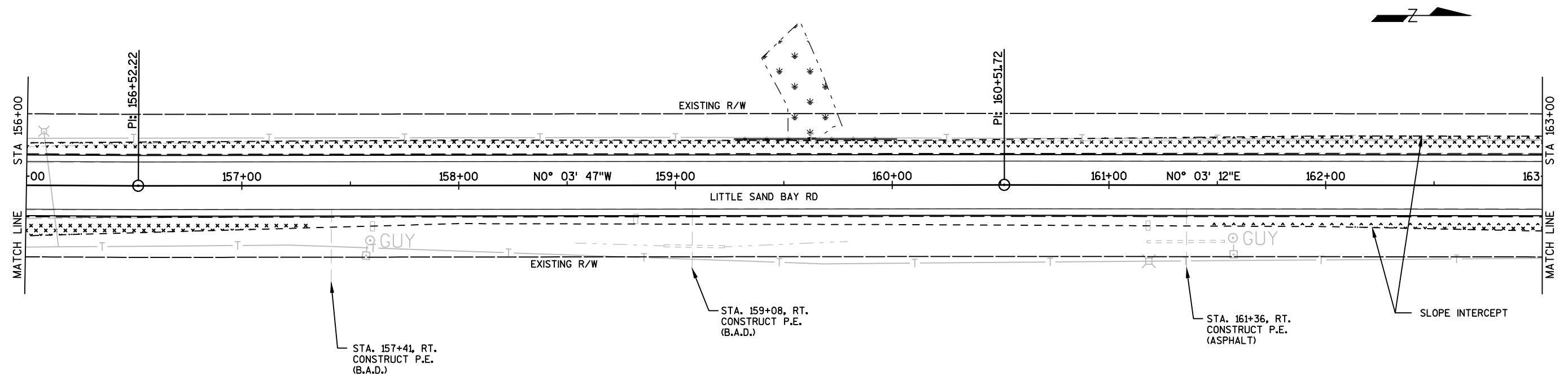




LEGEND

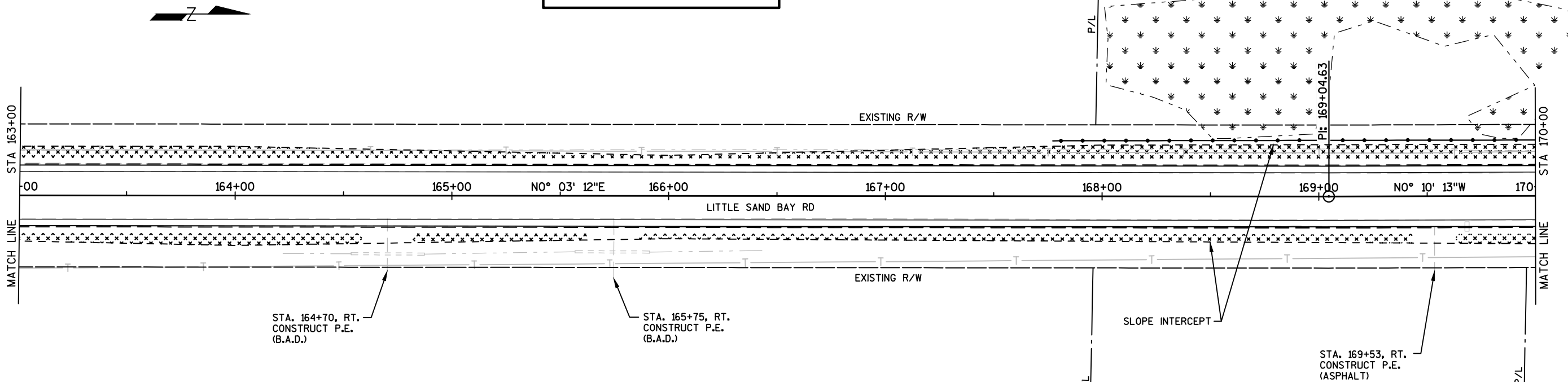
- EROSION MAT CLASS I TYPE B
- SILT FENCE
- CULVERT PIPE CHECK
- RIP RAP MEDIUM
- PERMITTED WETLAND LOSS

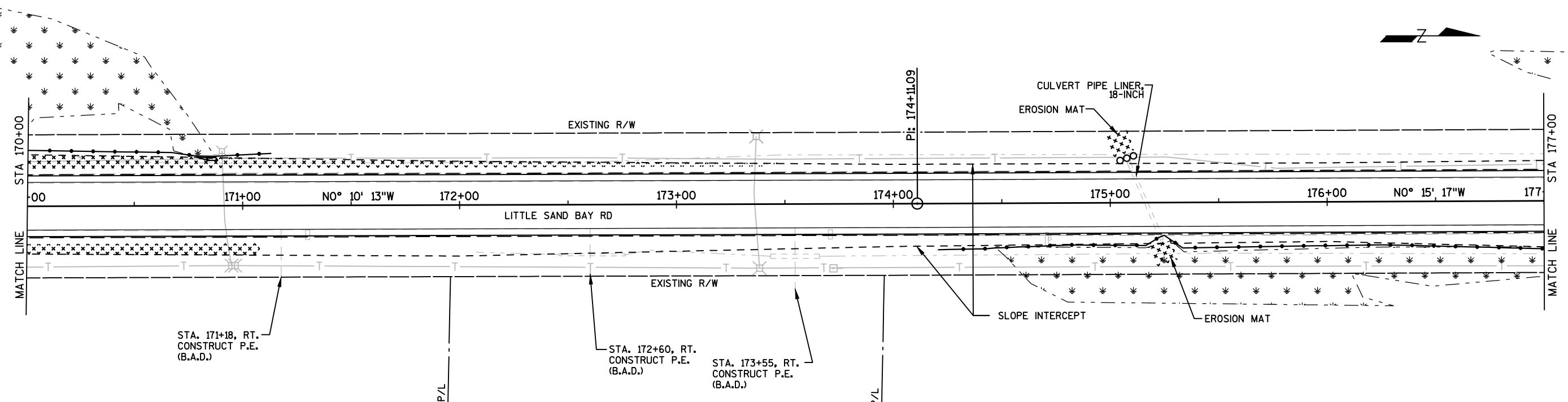




LEGEND

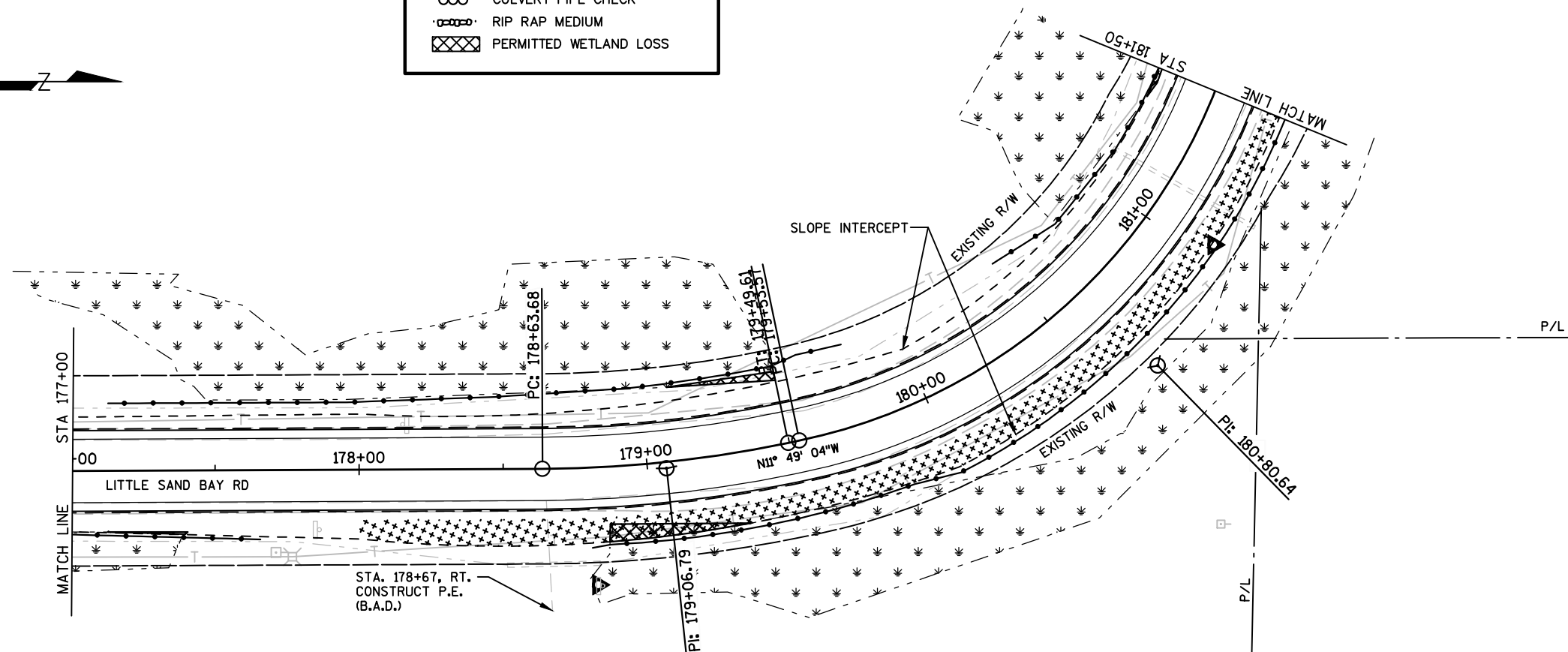
- XXXXX EROSION MAT CLASS I TYPE B
- SILT FENCE
- OOO CULVERT PIPE CHECK
- RIP RAP MEDIUM
- XXXXX PERMITTED WETLAND LOSS

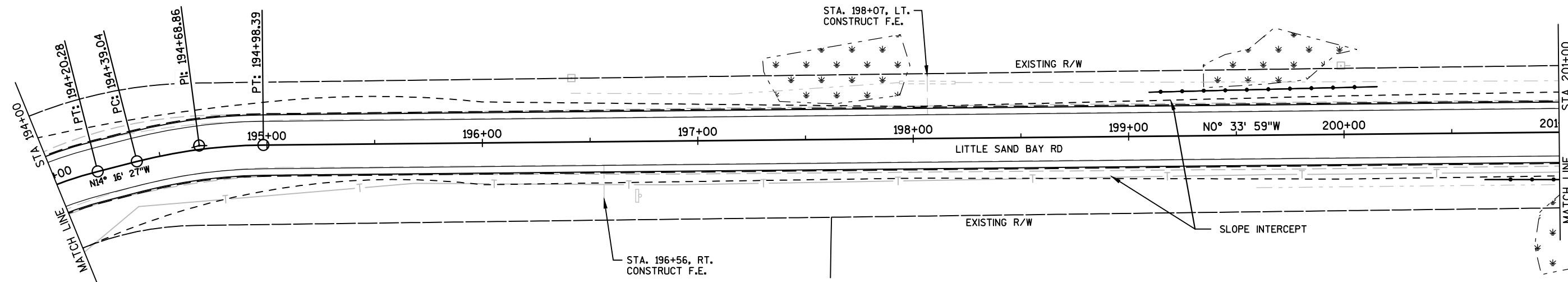




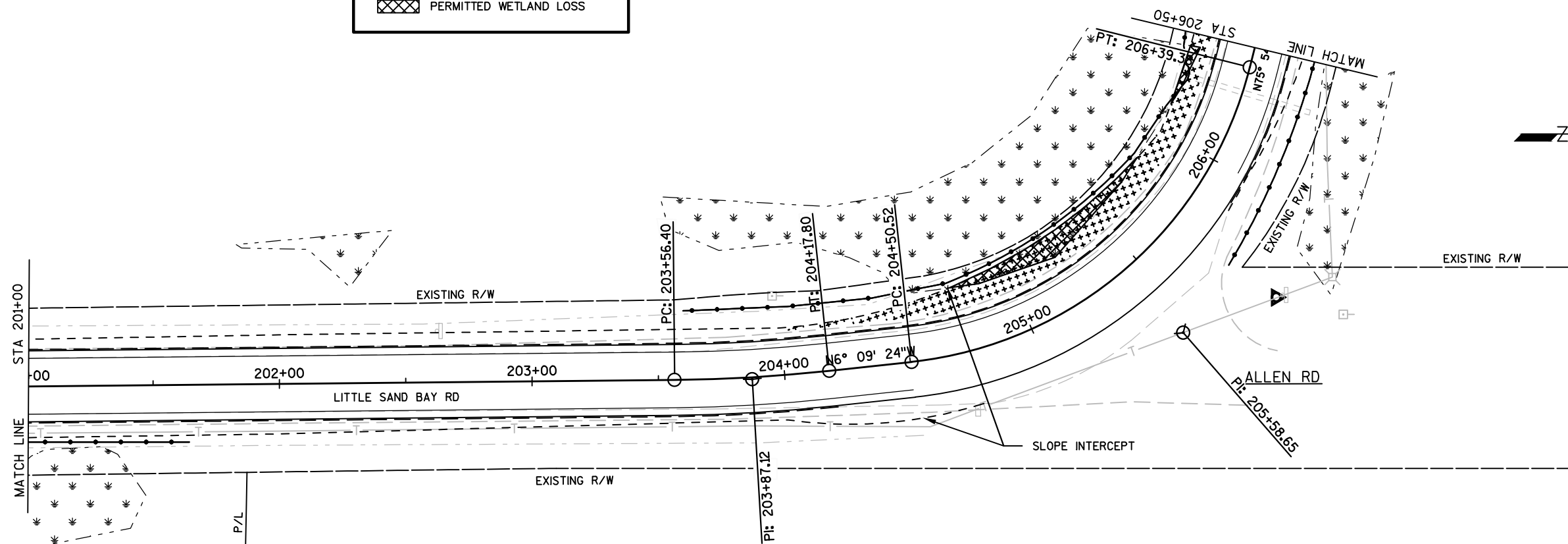
LEGEND

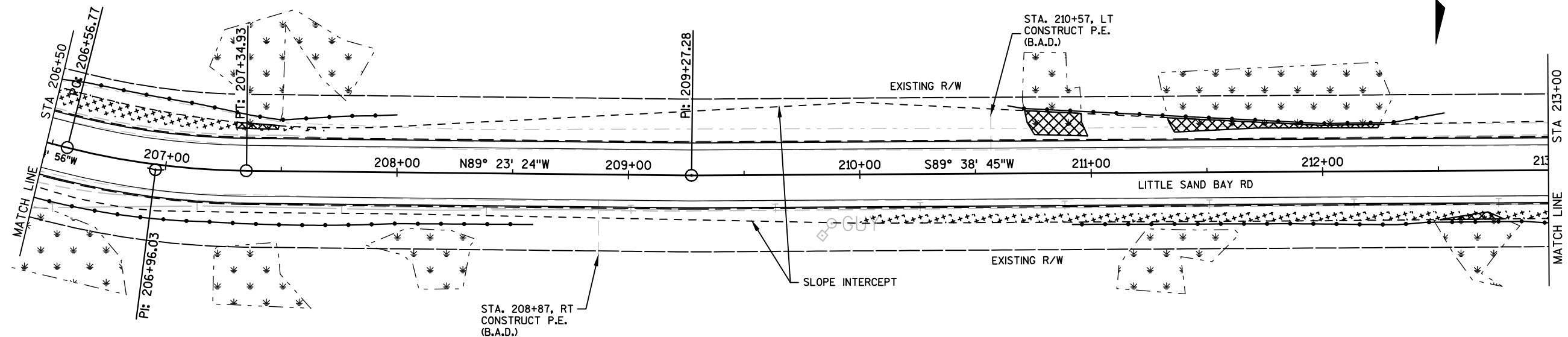
- EROSION MAT CLASS I TYPE B
- SILT FENCE
- CULVERT PIPE CHECK
- RIP RAP MEDIUM
- PERMITTED WETLAND LOSS



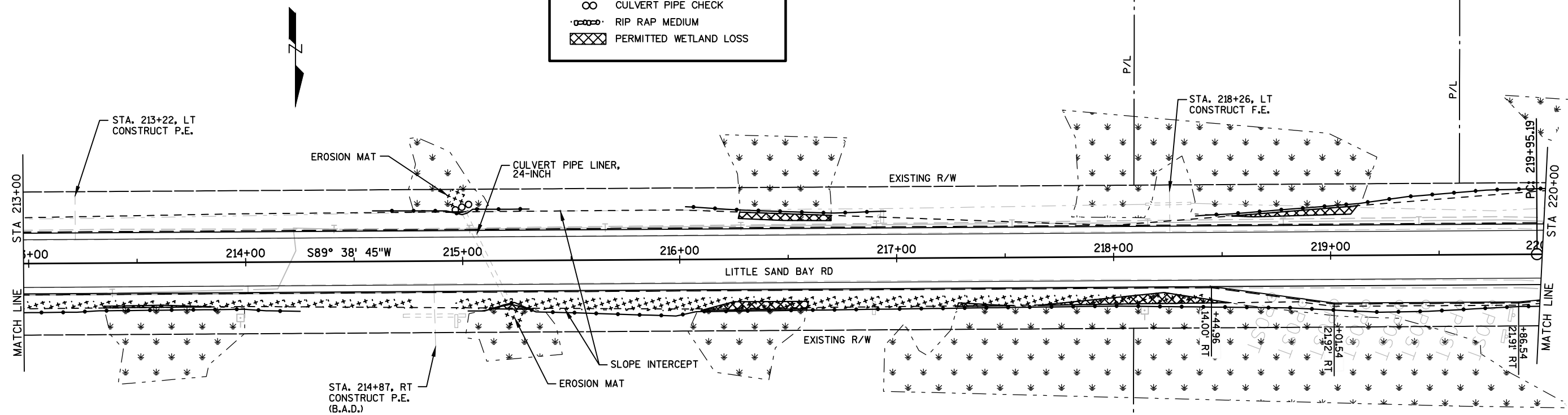


LEGEND	
	EROSION MAT CLASS I TYPE B
	SILT FENCE
	CULVERT PIPE CHECK
	RIP RAP MEDIUM
	PERMITTED WETLAND LOSS



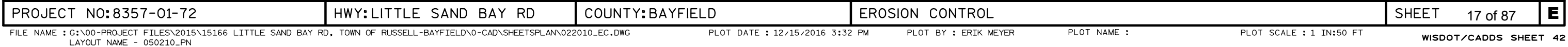
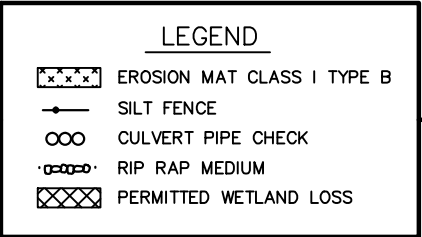


LEGEND	
	EROSION MAT CLASS I TYPE B
	SILT FENCE
	CULVERT PIPE CHECK
	RIP RAP MEDIUM
	PERMITTED WETLAND LOSS



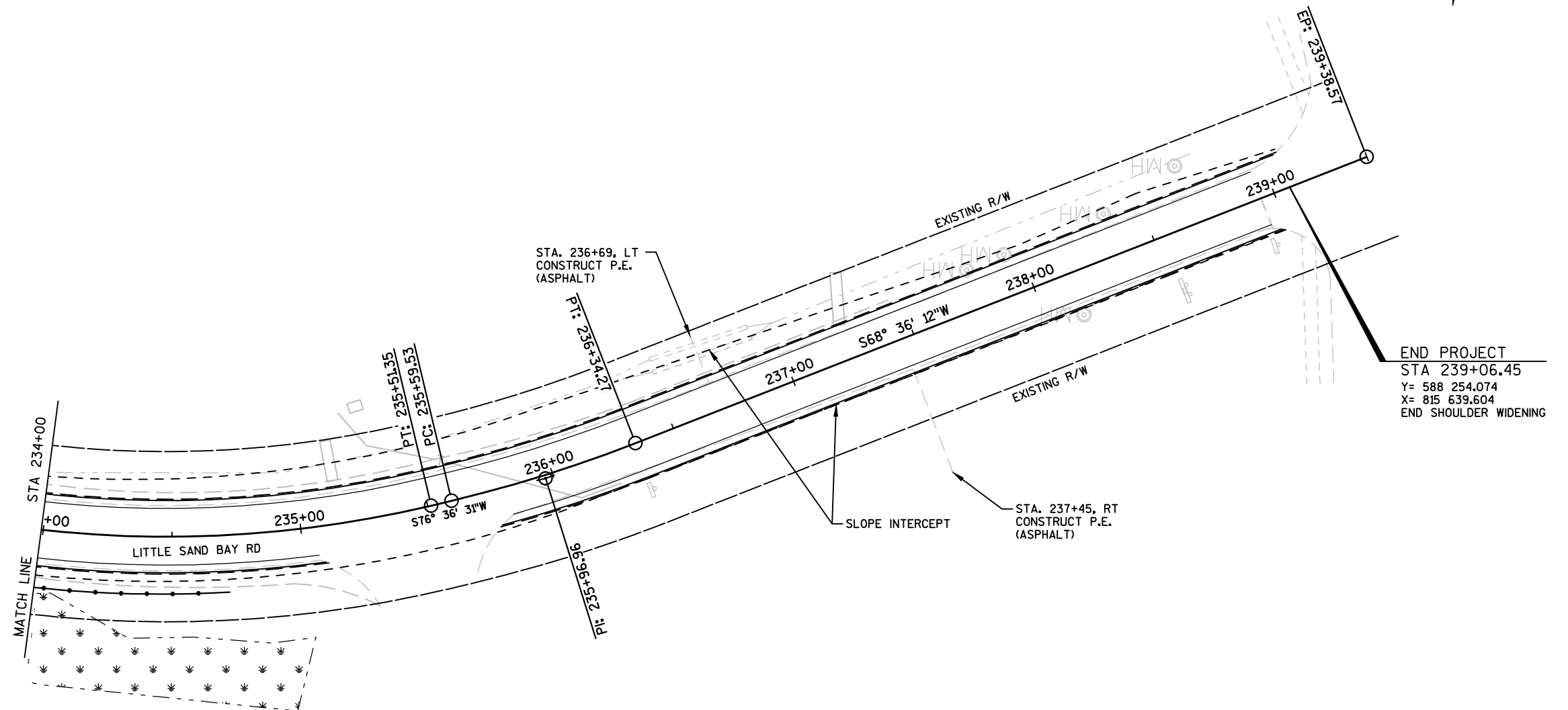
2

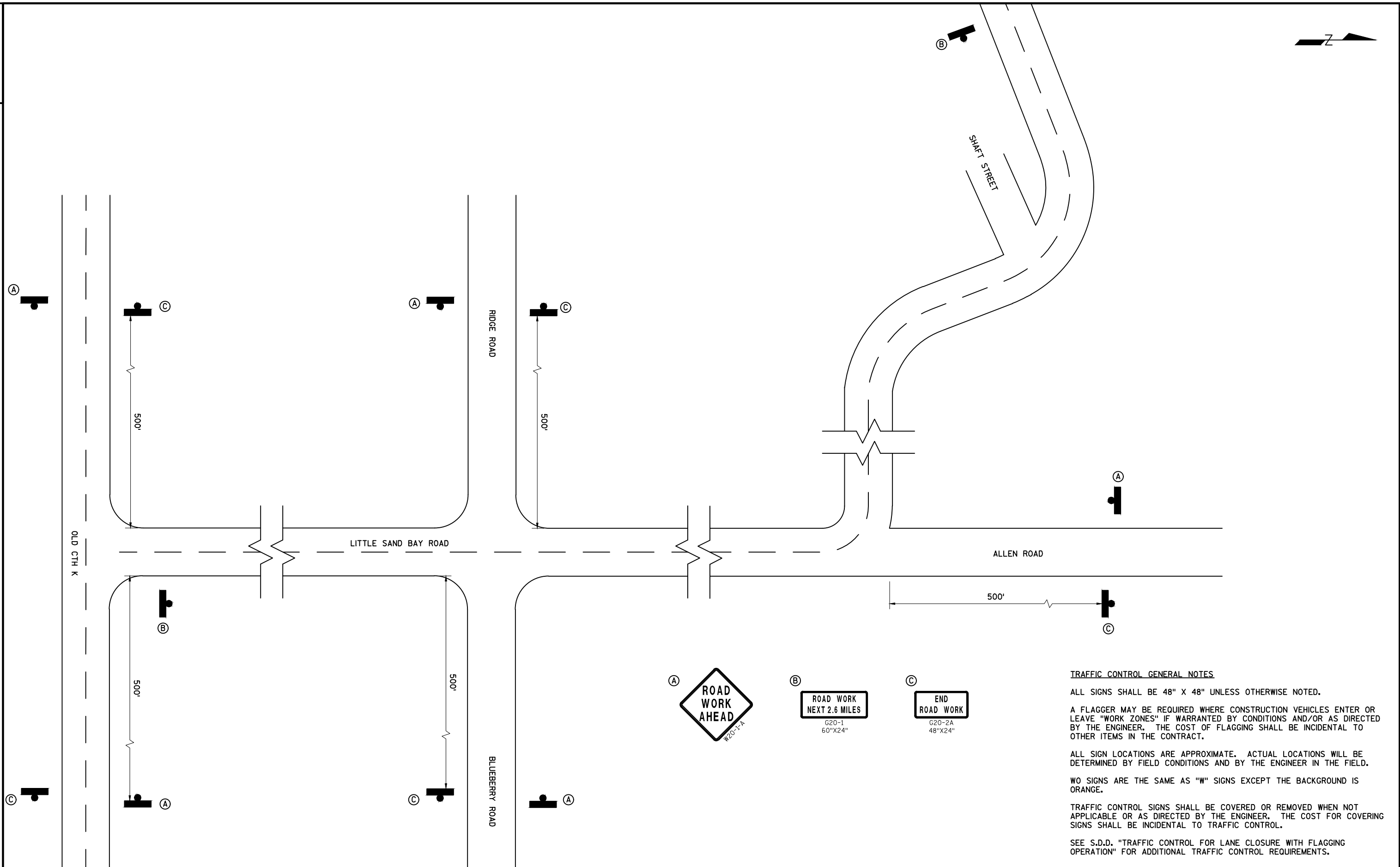
2



LEGEND

- EROSION MAT CLASS I TYPE B
SILT FENCE
CULVERT PIPE CHECK
RIP RAP MEDIUM
PERMITTED WETLAND LOSS





Estimate Of Quantities

8357-01-72					
Line	Item	Item Description	Unit	Total	Qty
0010	201.0105	Clearing	STA	10.000	10.000
0020	201.0205	Grubbing	STA	10.000	10.000
0030	203.0100	Removing Small Pipe Culverts	EACH	2.000	2.000
0040	204.0110	Removing Asphaltic Surface	SY	140.000	140.000
0050	205.0100	Excavation Common	CY	3,934.000	3,934.000
0060	213.0100	Finishing Roadway (project) 01. 8357-01-72	EACH	1.000	1.000
0070	305.0110	Base Aggregate Dense 3/4-Inch	TON	465.000	465.000
0080	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	11,360.000	11,360.000
0090	325.0100	Pulverize and Relay	SY	18,240.000	18,240.000
0100	440.4410	Incentive IRI Ride	DOL	2,080.000	2,080.000
0110	450.4000	HMA Cold Weather Paving	TON	779.000	779.000
0120	460.2000	Incentive Density HMA Pavement	DOL	2,000.000	2,000.000
0130	460.5244	HMA Pavement 4 LT 58-34 S	TON	3,114.000	3,114.000
0140	520.1018	Apron Endwalls for Culvert Pipe 18-Inch	EACH	2.000	2.000
0150	520.1048	Apron Endwalls for Culvert Pipe 48-Inch	EACH	2.000	2.000
0160	520.9700.S	Culvert Pipe Liners (size) 01. 15-Inch	LF	64.000	64.000
0170	520.9700.S	Culvert Pipe Liners (size) 02. 18-Inch	LF	211.000	211.000
0180	520.9700.S	Culvert Pipe Liners (size) 03. 24-Inch	LF	347.000	347.000
0190	520.9700.S	Culvert Pipe Liners (size) 04. 30-Inch	LF	49.000	49.000
0200	520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH	11.000	11.000
0210	530.0118	Culvert Pipe Corrugated Polyethylene 18-Inch	LF	60.000	60.000
0220	606.0200	Riprap Medium	CY	10.000	10.000
0230	619.1000	Mobilization	EACH	1.000	1.000
0240	624.0100	Water	MGAL	100.000	100.000
0250	625.0500	Salvaged Topsoil	SY	16,450.000	16,450.000
0260	627.0200	Mulching	SY	21,200.000	21,200.000
0270	628.1504	Silt Fence	LF	10,610.000	10,610.000
0280	628.1520	Silt Fence Maintenance	LF	31,830.000	31,830.000
0290	628.1905	Mobilizations Erosion Control	EACH	3.000	3.000
0300	628.1910	Mobilizations Emergency Erosion Control	EACH	3.000	3.000
0310	628.2004	Erosion Mat Class I Type B	SY	10,830.000	10,830.000
0320	628.7504	Temporary Ditch Checks	LF	50.000	50.000
0330	628.7555	Culvert Pipe Checks	EACH	51.000	51.000
0340	629.0205	Fertilizer Type A	CWT	3.500	3.500
0350	630.0120	Seeding Mixture No. 20	LB	150.000	150.000
0360	630.0200	Seeding Temporary	LB	20.000	20.000
0370	633.5200	Markers Culvert End	EACH	4.000	4.000
0380	642.5001	Field Office Type B	EACH	1.000	1.000
0390	643.0100	Traffic Control (project) 01. 8357-01-72	EACH	1.000	1.000
0400	643.0900	Traffic Control Signs	DAY	3,336.000	3,336.000

Estimate Of Quantities

8357-01-72					
Line	Item	Item Description	Unit	Total	Qty
0410	645.0120	Geotextile Type HR	SY	30.000	30.000
0420	646.0103	Pavement Marking Paint 4-Inch	LF	42,936.000	42,936.000
0430	650.4500	Construction Staking Subgrade	LF	13,890.000	13,890.000
0440	650.5000	Construction Staking Base	LF	13,890.000	13,890.000
0450	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
0460	650.9910	Construction Staking Supplemental Control (project) 01. 8357-01-72	LS	1.000	1.000
0470	650.9920	Construction Staking Slope Stakes	LF	13,890.000	13,890.000
0480	690.0150	Sawing Asphalt	LF	370.000	370.000
0490	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0500	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	300.000	300.000
0510	SPV.0090	Special 01. Culvert Pipe Corrugated Polyethylene 48-Inch	LF	50.000	50.000

CLEARING AND GRUBBING			201.0105	201.0205	
STATION	-	STATION	LOCATION	CLEARING (STA)	GRUBBING (STA)
--	-	--	UNDISTRIBUTED	10	10
			TOTALS	10	10

203.0100 REMOVING SMALL PIPE CULVERTS			
STATION	LOCATION	DESCRIPTION	EACH
186+50	MAINLINE	48" X 50' CMCP	1
190+61	MAINLINE	18" X 69' CMCP	1
TOTAL			2

EARTHWORK SUMMARY						
From/To Station	Location	Common Excavation (1)	Unexpanded Fill (CY)	Expanded Fill (CY) (13)	Mass Ordinate +/- (CY) (14)	Waste (CY)
		Cut (CY) (2)		Factor 1.30		
100+16 to 155+33	Old CTH K - Ridge Rd	1,161	977	1,270	-109	-109
155+33 to 238+94	Ridge Road - Termini	2,773	586	762	2,011	2,011
Grand Total		3,934	1,563	2,032	1,902	1,902
Total Common Exc			3,934			

Notes: 1) 30% Expansion factor applied to fill.
2) Waste = Excavation Common - Expanded Fill
3) Plus mass ordinate quantity indicates an excess of material.
Minus mass ordinate indicates a shortage of material.

204.0110
REMOVING ASPHALTIC SURFACE

LOCATION	(SY)
DRIVEWAYS	140
TOTAL	140

305.0110					
BASE AGGREGATE DENSE 3/4-INCH					
STATION		-	STATION	LOCATION	(TON)
100+16.09		-	155+33.29	MAINLINE, LT & RT	140
155+33.29		-	239+06.45	MAINLINE, LT & RT	225
—		-	—	DRIVEWAYS	100
TOTAL					465

305.0120
BASE AGGREGATE DENSE 1 1/4-INCH

STATION	-	STATION	LOCATION	(TON)	COMMENTS
100+16.09	-	155+33.29	MAINLINE, LT & RT	5,330	(1)
155+33.29	-	239+06.45	MAINLINE, LT & RT	6,030	
TOTAL				11,360	

(1) - INCLUDES 2-INCH LIFT TO BE PLACED PRIOR TO PULVERIZING.

<u>PULVERIZE AND RELAY ITEMS</u>			325.0100	624.0100	
<u>STATION</u>	-	<u>STATION</u>	<u>LOCATION</u>	PULVERIZE AND RELAY (SY)	WATER (MGAL)
100+16	-	155+33	MAINLINE	18,240	75
TOTALS				18,240	75 *

* MORE QUANTITIES FOUND ELSEWHERE

ASPHALTIC ITEMS			450.4000	460.5244	
STATION	-	STATION	LOCATION	HMA COLD WEATHER PAVING (TON)	HMA PAVEMENT 4 LT 58-34 S (TON)
100+16.09	-	155+33.29	MAINLINE	606	2,425
155+33.29	-	239+06.45	MAINLINE	168	670
—	-	—	DRIVEWAYS	5	19
TOTALS				779	3,114

3

CULVERT PIPE LINERS		520.9700.S.01	520.9700.S.02	520.9700.S.03	520.9700.S.04	520.9750.S		
STATION	LOCATION	15-INCH (LF)	18-INCH (LF)	24-INCH (LF)	30-INCH (LF)	CLEANING CULVERT PIPES FOR LINER VERIFICATION (EACH)	** INLET ELEVATION	** OUTLET ELEVATION
101+87	MAINLINE	—	—	—	49	1	770.65	769.85
104+32	MAINLINE	—	—	56	—	1	771.30	769.63
115+47	MAINLINE	—	65	—	—	1	782.73	780.21
118+85	MAINLINE	—	—	90	—	1	778.40	775.51
142+96	MAINLINE	—	—	70	—	1	798.00	792.16
149+20	MAINLINE	—	57	—	—	1	784.48	783.33
153+54	MAINLINE	64	—	—	—	1	772.25	769.96
154+90	MAINLINE	—	—	82	—	1	767.76	767.73
175+16	MAINLINE	—	39	—	—	1	695.62	695.01
192+81	MAINLINE	—	50	—	—	1	690.20	687.50
215+12	MAINLINE	—	—	49	—	1	634.03	633.06
TOTALS		64	211	347	49	11		

** NON-BID ITEM, FOR INFORMATION ONLY

RIPRAP MEDIUM		606.0200	645.0120
STATION	LOCATION	RIPRAP MEDIUM (CY)	GEOTEXTILE TYPE HR (SY)
186+40	MAINLINE, RT	10	30
TOTALS		10	30

LANDSCAPING ITEMS			624.0100	625.0500	627.0200	629.0205	630.0120	630.0200
STATION	- STATION	LOCATION	WATER (MGAL)	SALVAGED TOPSOIL (SY)	MULCHING (SY)	FERTILIZER TYPE A (CWT)	SEEDING MIXTURE NO. 20 (LB)	SEEDING TEMPORARY (LB)
100+16	- 154+81	CTH K TO RIDGE RD	—	6,230	2,800	1.2	50	—
154+81	- 205+50	RIDGE RD TO ALLEN RD	—	3,955	6,410	1.0	41	—
205+50	- 238+94	ALLEN RD TO CAMPGROUND	—	2,970	7,730	0.6	27	—
		UNDISTRIBUTED	25	3,295	4,260	0.8	32	20
TOTAL			25 *	16,450	21,200	3.5	150	20

* MORE QUANTITIES FOUND ELSEWHERE

EROSION CONTROL MOBILIZATION ITEMS			628.1905	628.1910
LOCATION			MOBILIZATIONS EROSION CONTROL (EACH)	MOBILIZATIONS EMERGENCY EROSION CONTROL (EACH)
ID 8357-01-72			2	2
TOTALS			2	2

CULVERT PIPES		530.0118	SPV.0090.01	520.1018	520.1048	533.5200
STATION	LOCATION	CULVERT PIPE CORRUGATED POLYETHYLENE 18-INCH (LF)	CULVERT PIPE CORRUGATED POLYETHYLENE 48-INCH (LF)	APRON ENDWALLS FOR CULVERT PIPE 18-INCH (EACH)	APRON ENDWALLS FOR CULVERT PIPE 48-INCH (EACH)	MARKERS CULVERT END (EACH)
186+50	MAINLINE	—	50	—	2	2
190+61	MAINLINE	60	—	2	—	2
TOTALS		60	50	2	2	4

619.1000 MOBILIZATION			
STATION	- STATION	LOCATION	(EACH)
100+16	- 238+94	MAINLINE	1
TOTAL			1

SILT FENCE			628.1504	628.1520
STATION	- STATION	LOCATION	SILT FENCE (LF)	SILT FENCE MAINTENANCE (LF)
100+64	- 102+75	MAINLINE, LT	212	424
101+50	- 102+30	MAINLINE, RT	82	164
103+75	- 104+90	MAINLINE, LT	114	228
104+00	- 107+35	MAINLINE, RT	343	686
105+60	- 107+32	MAINLINE, LT	228	456
112+75	- 113+45	MAINLINE, LT	70	140
115+05	- 115+80	MAINLINE, RT	75	150
115+25	- 116+00	MAINLINE, LT	75	150
118+20	- 119+36	MAINLINE, LT	117	234
118+46	- 119+23	MAINLINE, RT	76	152
125+73	- 126+40	MAINLINE, LT	68	136
127+15	- 128+50	MAINLINE, LT	135	270
134+95	- 135+70	MAINLINE, LT	75	150
137+27	- 138+06	MAINLINE, LT	79	158
142+40	- 143+35	MAINLINE, LT	95	190
148+73	- 149+56	MAINLINE, LT	86	172
149+13	- 149+52	MAINLINE, RT	40	80
153+48	- 153+94	MAINLINE, RT	46	92
159+27	- 160+02	MAINLINE, LT	75	150
167+77	- 171+13	MAINLINE, LT	335	670
174+20	- 177+66	MAINLINE, RT	348	696
177+13	- 179+78	MAINLINE, LT	256	512
178+80	- 183+50	MAINLINE, RT	510	1,020
180+48	- 183+58	MAINLINE, LT	290	580
184+10	- 187+68	MAINLINE, LT	365	730
184+67	- 185+14	MAINLINE, RT	47	94
185+97	- 186+70	MAINLINE, RT	74	148
188+00	- 188+60	MAINLINE, LT	60	120
192+40	- 193+24	MAINLINE, RT	75	150
192+55	- 193+03	MAINLINE, LT	54	108
199+10	- 200+16	MAINLINE, LT	106	212
200+65	- 201+65	MAINLINE, RT	100	200
203+60	- 208+00	MAINLINE, LT	164	328
205+71	- 208+59	MAINLINE, RT	304	608
210+64	- 212+53	MAINLINE, LT	189	378
210+92	- 214+25	MAINLINE, RT	333	666
214+59	- 215+31	MAINLINE, LT	73	146
215+02	- 225+17	MAINLINE, RT	996	1,992
216+02	- 216+95	MAINLINE, LT	92	184
218+38	- 224+79	MAINLINE, LT	674	1,348
225+86	- 231+75	MAINLINE, RT	602	1,204
226+50	- 228+55	MAINLINE, LT	205	410
233+20	- 234+72	MAINLINE, RT	160	320
UNDISTRIBUTED			2,107	4,214
TOTALS			10,610	21,220

EROSION MAT			628.2004
STATION	- STATION	LOCATION	EROSION MAT CLASS I TYPE B (SY)
101+00	- 103+25	MAINLINE, LT	115
101+50	- 114+55	MAINLINE, RT	1,160
103+45	- 109+90	MAINLINE, LT	255
110+15	- 115+75	MAINLINE, LT	270
114+75	- 126+90	MAINLINE, RT	935
116+40	- 120+25	MAINLINE, LT	325
120+45	- 126+45	MAINLINE, LT	380
126+65	- 129+40	MAINLINE, LT	190
127+15	- 129+25	MAINLINE, RT	205
129+45	- 132+05	MAINLINE, RT	240
132+25	- 136+10	MAINLINE, RT	225
136+30	- 136+95	MAINLINE, RT	30
139+45	- 140+75	MAINLINE, RT	170
142+05	- 145+05	MAINLINE, RT	215
—	- 143+00	MAINLINE, LT	10
144+00	- 152+00	MAINLINE, LT	350
145+25	- 148+95	MAINLINE, RT	135
149+15	- 150+25	MAINLINE, RT	50
150+45	- 153+75	MAINLINE, RT	300
—	- 153+40	MAINLINE, LT	6
—	- 154+56	MAINLINE, LT	10
—	- 155+20	MAINLINE, RT	10
155+50	- 157+30	MAINLINE, RT	75
156+00	- 173+50	MAINLINE, LT	755
161+50	- 164+60	MAINLINE, RT	116
164+80	- 165+60	MAINLINE, RT	30
165+80	- 169+45	MAINLINE, RT	120
169+65	- 171+10	MAINLINE, RT	75
—	- 175+05	MAINLINE, LT	7
—	- 175+25	MAINLINE, RT	7
178+00	- 182+25	MAINLINE, RT	370
182+00	- 187+75	MAINLINE, LT	455
184+60	- 190+75	MAINLINE, RT	320
188+00	- 191+00	MAINLINE, LT	105
—	- 192+75	MAINLINE, LT	7
—	- 192+85	MAINLINE, RT	7
204+00	- 207+75	MAINLINE, LT	245
210+00	- 214+75	MAINLINE, RT	180
—	- 215+00	MAINLINE, LT	10
215+00	- 218+50	MAINLINE, RT	195
—	- —	UNDISTRIBUTED	2,165
TOTALS			10,830

3

TEMPORARY DITCH CHECKS		628.7504
STATION	LOCATION	TEMPORARY DITCH CHECKS (LF)
—	UNDISTRIBUTED	50
TOTAL		50

CULVERT PIPE CHECKS		628.7555
STATION	LOCATION	CULVERT PIPE CHECKS (EACH)
101+88	MAINLINE, LT	7
104+29	MAINLINE, LT	3
115+52	MAINLINE, LT	2
118+86	MAINLINE, LT	3
142+97	MAINLINE, LT	3
149+11	MAINLINE, LT	1
153+38	MAINLINE, LT	1
155+20	MAINLINE, RT	3
175+08	MAINLINE, LT	2
186+56	MAINLINE, LT	9
190+67	MAINLINE, LT	2
192+78	MAINLINE, LT	2
215+00	MAINLINE, LT	3
	UNDISTRIBUTED	10
TOTAL		51

TRAFFIC CONTROL				643.0900	
				TRAFFIC CONTROL SIGNS (DAYS)	
STATION	-	STATION	LOCATION		NOTES
—	-	—	OLD CTH K	1112	2 - W20-1-A 2 - G20-2A
—	-	—	LITTLE SAND BAY ROAD	556	2 - G20-1, "2.6" MILES AHEAD
—	-	—	RIDGE ROAD	556	1 - W20-1-A 1 - G20-2A
—	-	—	BLUEBERRY ROAD	556	1 - W20-1-A 1 - G20-2A
—	-	—	ALLEN ROAD	556	1 - W20-1-A 1 - G20-2A
TOTALS				3336	

PERMANENT PAVEMENT MARKINGS

646.0103 PAVEMENT MARKING PAINT 4-INCH						
STATION	-	STATION	SOLID WHITE (LF)	SOLID YELLOW (LF)	DASHED YELLOW (LF)	COMMENTS (CENTERLINE MARKINGS)
100+26	-	106+00	1,066	574	144	NB Dashed/SB Solid Yellow
106+00	-	138+75	6,550	—	819	Dashed Yellow
138+75	-	144+00	1,050	525	131	NB Solid Yellow/SB Dashed
144+00	-	151+00	1,400	1,400	—	Double Yellow
151+00	-	168+00	3,195	1,700	425	NB Dashed/SB Solid Yellow
168+00	-	218+50	9,940	10,100	—	Double Yellow
218+50	-	238+94	3,917	—	—	No Proposed C/L Markings
			27,118	14,299	1,519	
TOTAL				42,936		

CONSTRUCTION STAKING			650.4500	650.5000	650.6000	650.9910	650.9920	
STATION	-	STATION	LOCATION	SUBGRADE (LF)	BASE (LF)	PIPE CULVERTS (EACH)	SUPPLEMENTAL CONTROL (LUMP)	SLOPE STAKES (LF)
100+16.09	-	239+06.45	MAINLINE	13,890	13,890	—	—	13,890
—	-	186+50	MAINLINE	—	—	1	—	—
—	-	190+61	MAINLINE	—	—	1	—	—
—	—	—	PROJECT ID 8357-01-72	—	—	—	1	—
TOTALS				13,890	13,890	2	1	13,890

690.0150
SAWING ASPHALT

STATION	LOCATION	(LF)
100+16	MAINLINE, BEGIN PULVERIZE	140
129+36	DRIVEWAY, RT	20
140+86	DRIVEWAY, RT	17
155+33	MAINLINE, END PULVERIZE	28
161+36	DRIVEWAY, RT	27
169+53	DRIVEWAY, RT	14
186+40	MAINLINE	23
186+60	MAINLINE	23
190+51	MAINLINE	22
190+71	MAINLINE	22
236+69	DRIVEWAY, LT	18
237+45	DRIVEWAY, RT	16
TOTAL		370

CONVENTIONAL SYMBOLS

SECTION LINE	---	SECTION CORNER SYMBOL		R/W MONUMENT (TO BE SET)	•
QUARTER LINE	---	SECTION CORNER MONUMENT		NON-MONUMENTED R/W POINT	○
SIXTEENTH LINE	---	SECTION CORNER MONUMENT		FOUND IRON PIN (1/2-INCH UNLESS NOTED)	IP
NEW REFERENCE LINE	---	GEODETIC SURVEY MONUMENT		OFF-PREMISE SIGN	
NEW R/W LINE	---	SIXTEENTH CORNER MONUMENT			
EXISTING R/W OR HE LINE	---	SIGN			
PROPERTY LINE	---				
LOT, TIE & OTHER MINOR LINES	---				
SLOPE INTERCEPT	---				
CORPORATE LIMITS	---				
UNDERGROUND FACILITY (COMMUNICATIONS, ELECTRIC, ETC)	---	ELECTRIC POLE		COMPENSABLE	
NEW R/W (FEE OR HE) (HATCHING VARIES BY OWNER)	---	TELEPHONE POLE		NON-COMPENSABLE	
TEMPORARY LIMITED EASEMENT AREA	---	PEDESTAL (LABEL TYPE) (TV, TEL, ELEC, ETC.)			
EASEMENT AREA (PERMANENT LIMITED OR RESTRICTED DEVELOPMENT)	---	ACCESS RESTRICTED BY ACQUISITION			
TRANSMISSION STRUCTURES	---	NO ACCESS (BY STATUTORY AUTHORITY)			
BUILDING TO BE REMOVED	---	ACCESS RESTRICTED (BY PREVIOUS PROJECT OR CONTROL)			
BRIDGE	---	NO ACCESS (NEW HIGHWAY)			
		PARCEL NUMBER 25	UTILITY NUMBER 40		
		PARALLEL OFFSETS			

CONVENTIONAL ABBREVIATIONS

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

CURVE DATA

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

CONVENTIONAL UTILITY SYMBOLS

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

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COORDINATE REFERENCE SYSTEM COORDINATES (WISCRS), BAYFIELD COUNTY, NAD83 1991 IN US SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

ALL NEW RIGHT-OF-WAY MONUMENTS WILL BE TYPE 2 (TYPICALLY 3/4"X24" IRON REBARS) UNLESS OTHERWISE NOTED, 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.

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

THE PROPOSED REFERENCE LINE IS COINCIDENTAL WITH THE EXISTING CENTERLINE AND IS REFERRED TO AS "ROWY CENTERLINE" WITHIN THIS PLAT.

THE GOVERNMENT LAND LINE AND REFERENCE LINE ARE NOT COINCIDENTAL.

A PERMANENT LIMITED EASEMENT (PLE) IS A RIGHT FOR CONSTRUCTION AND MAINTENANCE 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 DESIRABLE, BUT WITHOUT PREJUDICE TO THE OWNER'S RIGHTS TO MAKE OR CONSTRUCT IMPROVEMENTS ON SAID LANDS OR TO FLATTEN THE SLOPES, SAID ACTIVITIES WILL NOT IMPAIR OR OTHERWISE ADVERSELY AFFECT THE HIGHWAY FACILITIES.

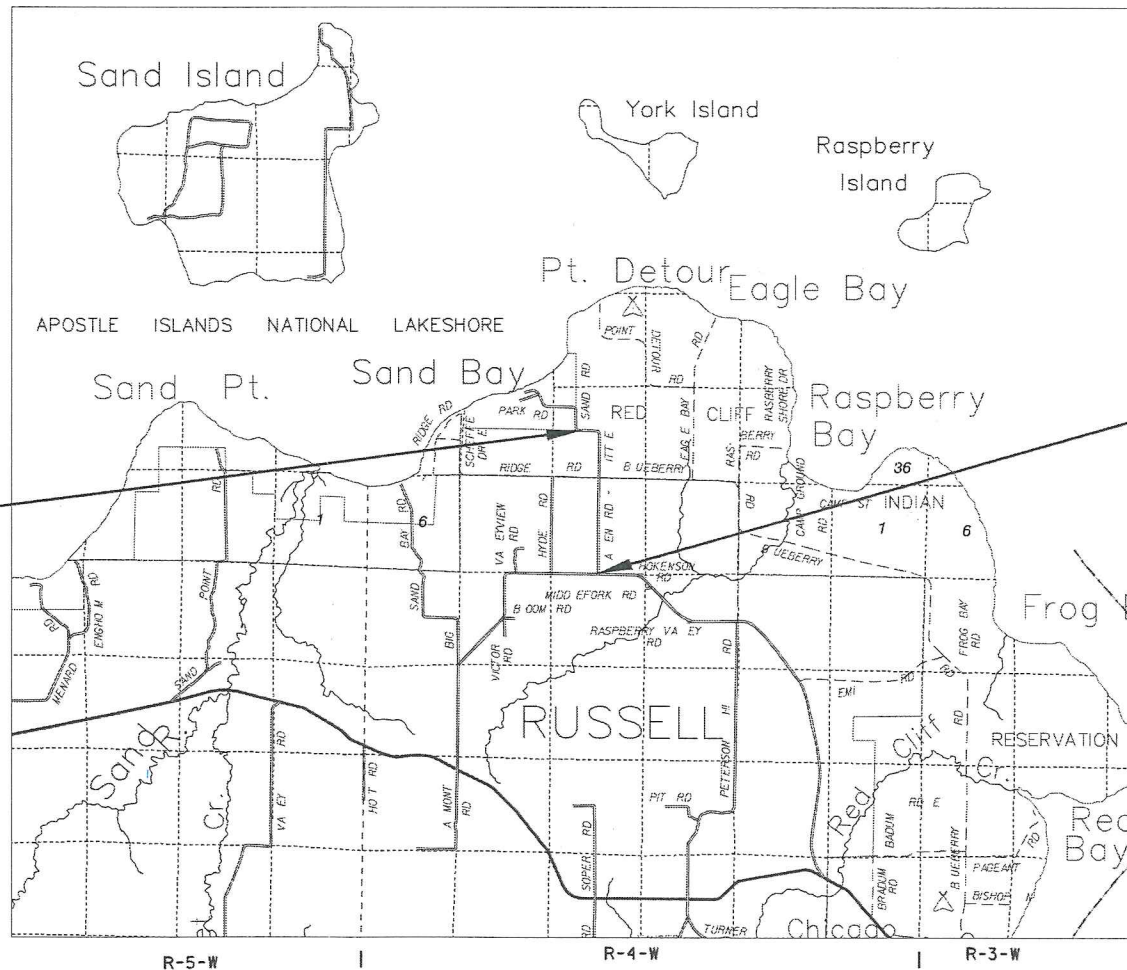
A HIGHWAY EASEMENT (HE) IS, AS LONG AS SO USED, INCLUDING THE RIGHT TO PRESERVE, PROTECT, REMOVE, OR PLANT THEREON ANY VEGETATION THAT THE HIGHWAY AUTHORITIES MAY DEEM DESIRABLE.

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, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

GN

R/W PROJECT NUMBER	8357-01-02	SHEET NUMBER	4.1	TOTAL SHEETS	7
R/W PROJECT NUMBER					
PLAT OF RIGHT OF WAY REQUIRED FOR					
T RUSSELL, LITTLE SAND BAY ROAD					
OLD CTH K TO TERMINI					
LOCAL STREET					
BAYFIELD COUNTY					

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

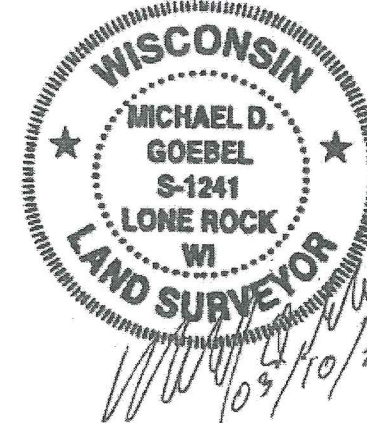


BEGIN RELOCATION ORDER

0.000 FT NORTH AND 0.000 FT EAST OF THE SOUTH QUARTER CORNER OF SEC. 4 T51N R4W

END RELOCATION ORDER

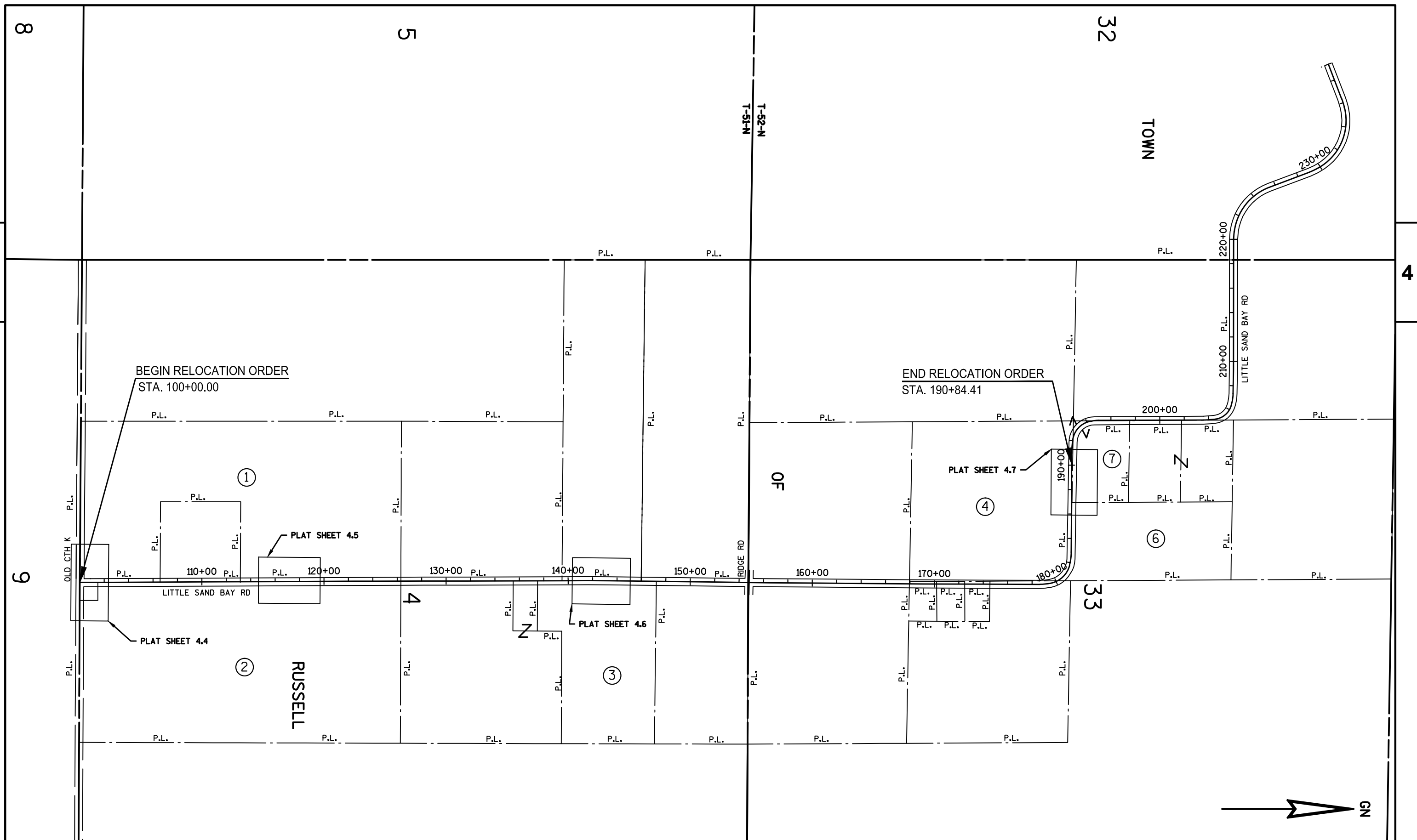
16,879 FT SOUTH AND 1599.656 FT EAST OF THE WEST QUARTER CORNER OF SEC. 33 T52N R4W



REVISION DATE	STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED FOR THE TOWN OF RUSSELL	
DATE: 3-17-17	(Signature)

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

PARCEL NUMBER	SHEET NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED			H.E. ACRES	T.L.E. ACRES	P.L.E. ACRES
				NEW	EXISTING	TOTAL			
1	4.4, 4.5	HAROLD A MAKI	P.L.E	---	---	---	---	---	0.08
2	4.4, 4.5	WALTER S & SHERRI K NEWAGO	P.L.E	---	---	---	---	---	0.13
3	4.6	DANIEL & LINDA E. BROWN	P.L.E	---	---	---	---	---	0.05
4	4.7	RICHARD C PAVLIK	P.L.E	---	---	---	---	---	0.06
6	4.7	HAROLD R & MARGARET E WATKINS	P.L.E	---	---	---	---	---	0.05
7	4.7	TRAVIS W BARNINGHAM	P.L.E	---	---	---	---	---	0.04



REVISION DATE	DATE 03/07/2017	NOT TO SCALE	HWY: LITTLE SAND BAY RD	STATE R/W PROJECT NUMBER 8357-01-02	PLAT SHEET 4.3	E
	GRID FACTOR		COUNTY: BAYFIELD	CONSTRUCTION PROJECT NUMBER 8357-01-72	PS&E SHEET 25 of 87	

NOTE:
EXISTING HIGHWAY R/W ESTABLISHED
FROM CSM 534 AND CSM 1389.



TOWN

SE-SW
4-51-4

LOT 7
CERTIFIED SURVEY #1389
VOL 8 CSM P.239-240

①
HAROLD A MAKI

CSM 1389, VOL. 8 CSM PG. 239-240
SHOWS AN UNDEFINED VIEW
EASEMENT AT THE CORNER OF
LITTLE SAND BAY RD AND CTH K.

SW-SE
4-51-4

POINT	FROM ROAD REFERENCE LINE		NORTHING	EASTING
	STATION	OFFSET		
101	100+31.53	85.24'	578 079.797	820 015.753
102	100+82.43	35.22'	578 130.127	819 965.158
103	100+35.91	-80.76'	578 082.310	819 849.714
104	100+85.36	-30.79'	578 132.313	819 899.127
105	100+00.86	-81.13	578 047.258	819 849.736
106	100+00.00	84.98	578 047.554	820 015.846

②
WALTER S & SHERRI K NEWAGO

RUSSELL

FOUND SPIKE
N = 583 523.153
E = 819 890.813

FOUND SPIKE
N = 578 045.218
E = 819 928.605

BEGIN RELOCATION ORDER
STA 100+00.00
N = 578 047.309
E = 819 930.870

NOTE: THE

REVISION	DATE	BY	CHKD

DATE 03/07/2017
GRID FACTOR



HWY: LITTLE SAND BAY RD
COUNTY: BAYFIELD

STATE R/W PROJECT NUMBER 8357-01-02
CONSTRUCTION PROJECT NUMBER 8357-01-72

PLAT SHEET 4.4
PS&E SHEET 26-of-87-**E**

NOTE:
EXISTING HIGHWAY R/W ESTABLISHED
FROM CSM 1390.

①
HAROLD A MAKI

LOT 4
CERTIFIED SURVEY #1390
VOL 8 CSM P.241-242

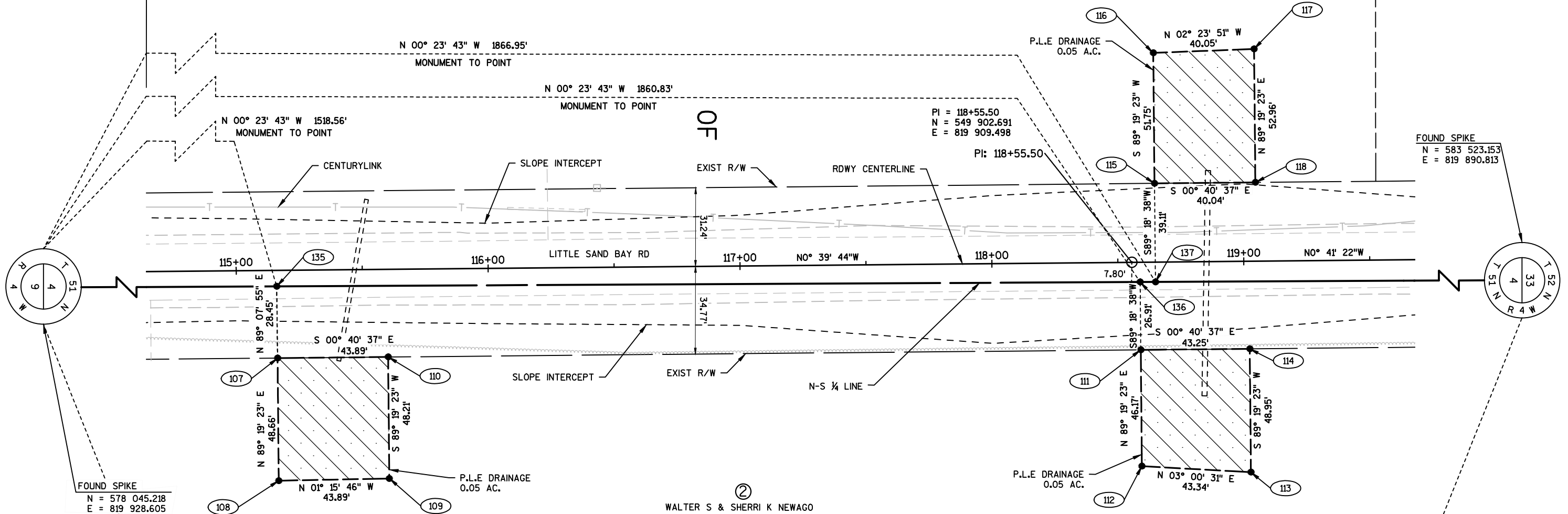
SE-NW
4-51-4

FROM ROAD REFERENCE LINE				
POINT	STATION	OFFSET	NORTHING	EASTING
115	118+64.86	-31.27'	579 911.668	819 878.120
116	118+64.86	-83.03'	579 911.050	819 826.363
117	119+04.90	-84.22'	579 951.070	819 824.687
118	119+04.89	-31.27'	579 951.696	819 877.639
137	118+64.86	7.85'	579 912.139	819 917.229

TOWN



EXISTING ACCESS EASEMENT



FOUND SPIKE
N = 578 045.218
E = 819 928.605

P.L.E. DRAINAGE
0.05 AC.

②
WALTER S & SHERRI K NEWAGO

P.L.E. DRAINAGE
0.05 AC.

FOUND SPIKE
N = 583 523.153
E = 819 890.813

FROM ROAD REFERENCE LINE				
POINT	STATION	OFFSET	NORTHING	EASTING
107	115+16.10	34.81'	579 563.715	819 948.229
108	115+16.12	83.47'	579 564.290	819 996.883
109	115+60.01	83.01'	579 608.173	819 995.916
110	115+60.00	34.80'	579 607.603	819 947.710
135	115+16.00	6.36'	579 563.284	819 919.781

N 00° 23' 43" W 5478.06'
MONUMENT TO MONUMENT

SW-NE
4-51-4

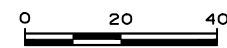
FROM ROAD REFERENCE LINE				
POINT	STATION	OFFSET	NORTHING	EASTING
111	118+58.78	34.72'	579 906.380	819 944.180
112	118+58.77	80.89'	579 906.925	819 990.342
113	119+02.02	83.68'	579 950.206	819 992.616
114	119+02.03	34.73'	579 949.628	819 943.668
136	118+58.78	7.82'	579 906.056	819 917.274

REVISION	DATE	BY	CHKD

DATE 03/07/2017

GRID FACTOR

SCALE, FEET



HWY: LITTLE SAND BAY RD

COUNTY: BAYFIELD

STATE R/W PROJECT NUMBER 8357-01-02

CONSTRUCTION PROJECT NUMBER 8537-01-72

PLAT SHEET 4.5

PS&E SHEET 27-of-87

E

NOTE:
EXISTING HIGHWAY R/W ESTABLISHED
BASED ON STATE STATUTE 82.31.

FROM ROAD REFERENCE LINE				
POINT	STATION	OFFSET	NORTHING	EASTING
119	142+63.51	33.04'	582 310.584	819 918.727
120	142+63.52	80.53'	582 310.607	819 966.216
121	143+10.04	82.94'	582 357.134	819 968.605
122	143+10.04	33.04'	582 357.115	819 918.709
138	143+09.94	13.99'	582 357.004	819 899.659

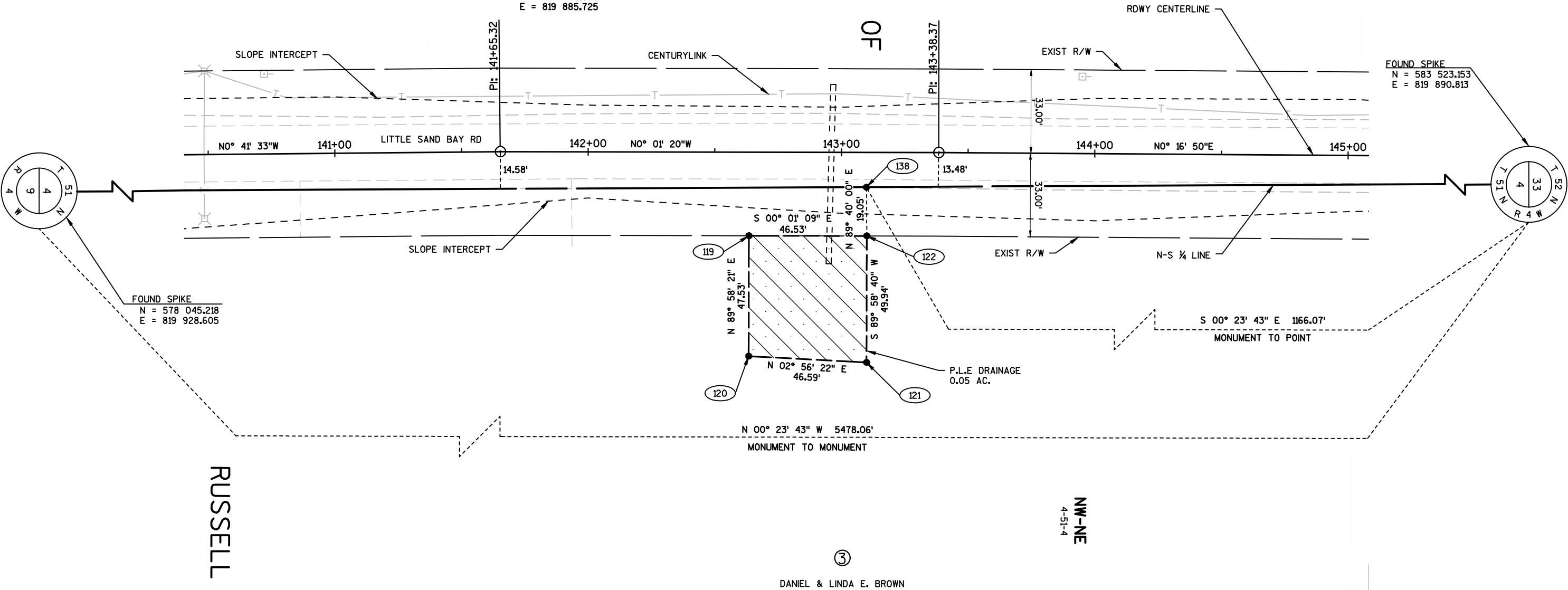
TOWN



NE-NW
4-51-4

PI = 143+38.37
N = 582 385.431
E = 819 885.658

PI = 141+65.32
N = 582 212.376
E = 819 885.725



RUSSELL

③

DANIEL & LINDA E. BROWN

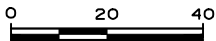
NW-NE
4-51-4

REVISION	DATE	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

DATE 03/07/2017

GRID FACTOR _____

SCALE, FEET



HWY: LITTLE SAND BAY RD

COUNTY: BAYFIELD

STATE R/W PROJECT NUMBER 8357-01-02

CONSTRUCTION PROJECT NUMBER 8357-01-72

PLAT SHEET 4.6

PS&E SHEET 28-of-87-

E



NOTE:
EXISTING HIGHWAY R/W ESTABLISHED
FROM CSM 1399 AND CSM 1831.

TOWN

3" BRASS-CAPPED IRON PIPE
LOCATION BY PLAT OF SURVEY
BY TIMOTHY E OKSIUTA, 8/2/2005
FOR FRED BRUNEY

N = 586 175.619
E = 818 847.259

END RELOCATION ORDER
STA 190+82.90 - 10.19' RT

N = 586 172.896
E = 818 827.314

⑦
TRAVIS W BARNINGHAM

LOT 3
CERTIFIED SURVEY #1399
VOL 8 CSM P. 261-262

SE-NW
35-52-4

POINT	FROM ROAD REFERENCE LINE		NORTHING	EASTING
	STATION	OFFSET		
123	186+17.92	35.13'	586 200.992	819 292.341
124	186+17.39	82.54'	586 248.403	819 292.842
125	186+60.02	83.05'	586 248.892	819 250.210
126	186+60.55	35.60'	586 201.442	819 249.709
127	190+35.79	42.31'	586 205.405	818 874.156
128	190+35.02	82.94'	586 246.040	818 874.584
129	190+75.03	83.01'	586 245.773	818 834.573
130	190+75.79	43.07'	586 205.827	818 834.151
131	190+40.83	-23.59'	586 139.461	818 869.658
132	190+41.99	-85.04'	586 078.007	818 869.010
133	190+84.31	-83.18'	586 079.519	818 826.677
134	190+83.17	-22.80'	586 139.908	818 827.314
139	186+18.29	2.18'	586 168.048	819 291.994
140	190+36.41	9.32'	586 172.405	818 873.807
141	190+40.21	9.39'	586 172.445	818 870.006

⑥
HAROLD R & MARGARET E WATKINS

LOT 1
CERTIFIED SURVEY #1831
VOL 11 CSM P. 3-4

P.L.E DRAINAGE
0.05 AC.

N 89° 20' 28" W 42.63'
S 00° 36' 17" W 47.45'
N 00° 36' 17" E 47.41'
S 89° 23' 43" E 42.63'

P.L.E DRAINAGE
0.04 AC.
S 89° 37' 05" W 40.01'
S 00° 36' 16" W 39.95'
N 00° 36' 16" E 40.64'
S 89° 25' 23" E 40.00'

CENTURYLINK

E-W ¼ LINE

SLOPE INTERCEPT

EXIST R/W

OF

S 89° 24' 23" E

N 89° 31' 31" E

LITTLE SAND BAY RD

CENTURYLINK

RDWY CENTERLINE

SLOPE INTERCEPT

BAYFIELD ELECTRIC

N 89° 57' 57" E

N 89° 24' 33" W 565.01'

PC = 190+95.29
N = 586 162.601
E = 818 815.01

S 89° 23' 44" E 42.35'
N 00° 36' 16" E 60.39'
S 00° 36' 16" W 61.46'
N 87° 57' 11" W 42.36'

P.L.E DRAINAGE
0.06 AC.

NE-SW
35-52-4

N 89° 24' 33" W 982.72'
MONUMENT TO POINT

N 89° 24' 33" W 989.69'
MONUMENT TO POINT

PI = 187+07.99
N = 586 165.810
E = 819 202.295

④
RICHARD C PAVLIK

N 89° 24' 33" W 1310.68'
MONUMENT TO MONUMENT
(LOCATED BY CSM 1399)

RUSSELL

FOUND
3" BRASS-CAPPED IRON PIPE
N = 586 162.101
E = 819 857.868

FOUND SPIKE
N = 583 523.153
E = 819 890.813

REVISION	DATE	BY	CHKD

DATE 03/07/2017

GRID FACTOR

SCALE, FEET

0 20 40

HWY: LITTLE SAND BAY RD

COUNTY: BAYFIELD

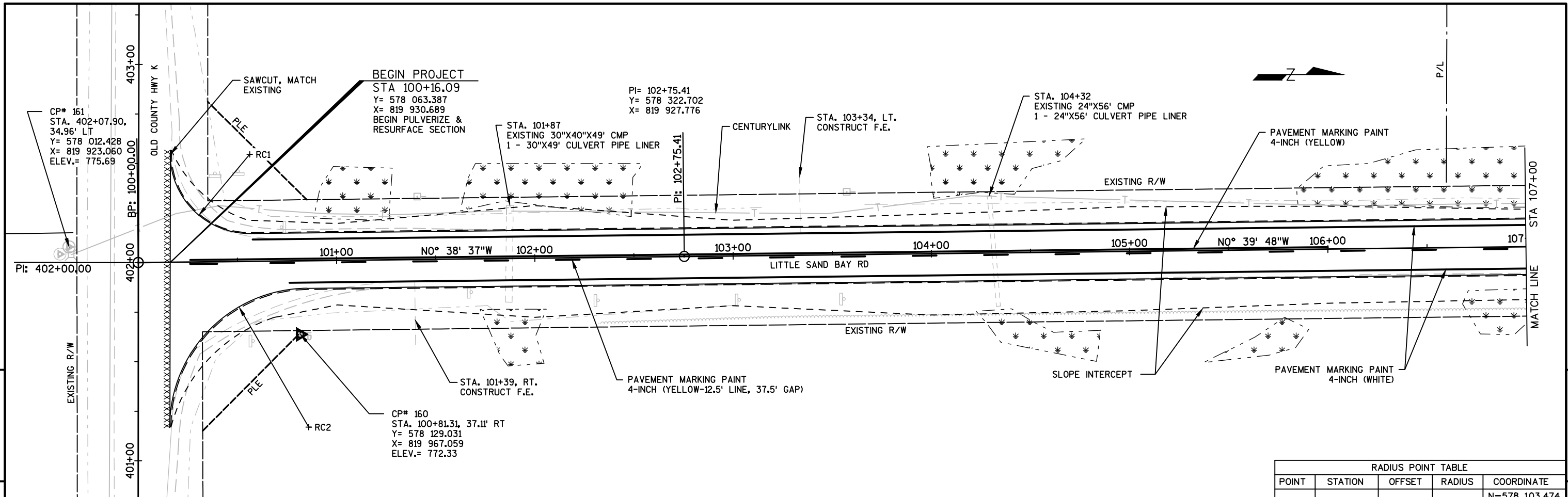
STATE R/W PROJECT NUMBER 8357-01-02

CONSTRUCTION PROJECT NUMBER 8357-01-72

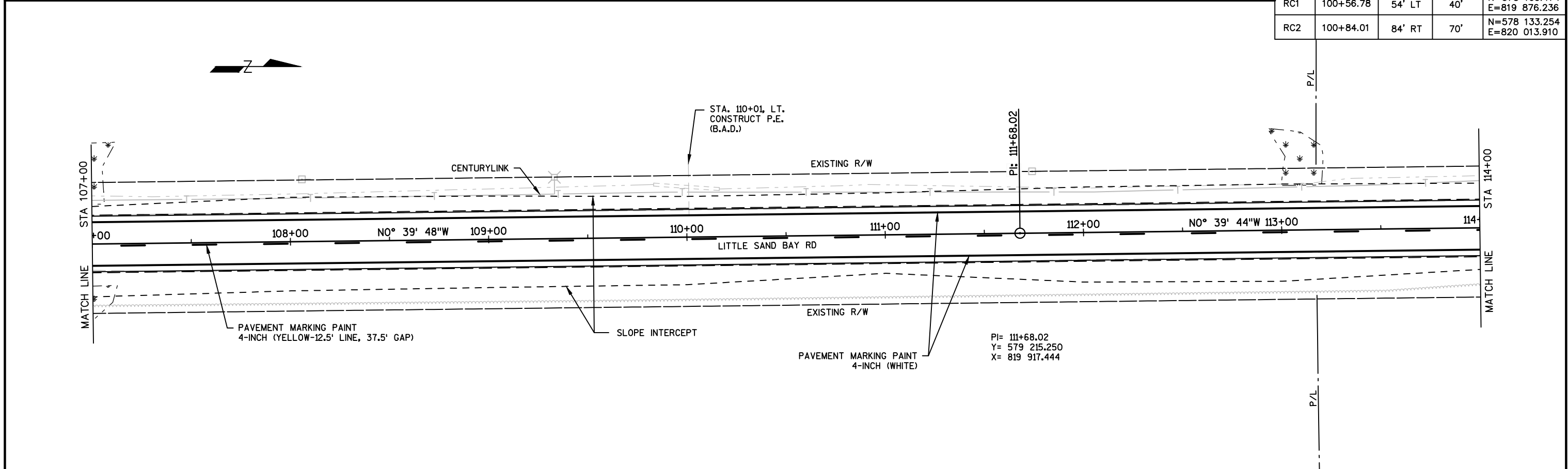
PLAT SHEET 4.7

PS&E SHEET 29 of 87

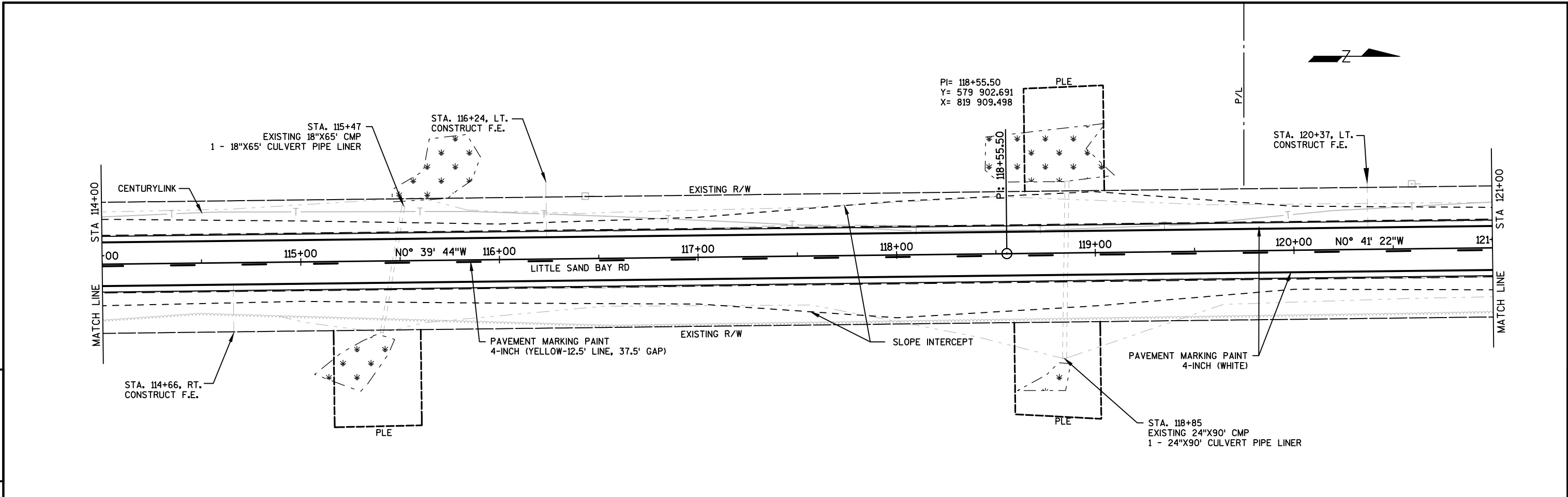
E



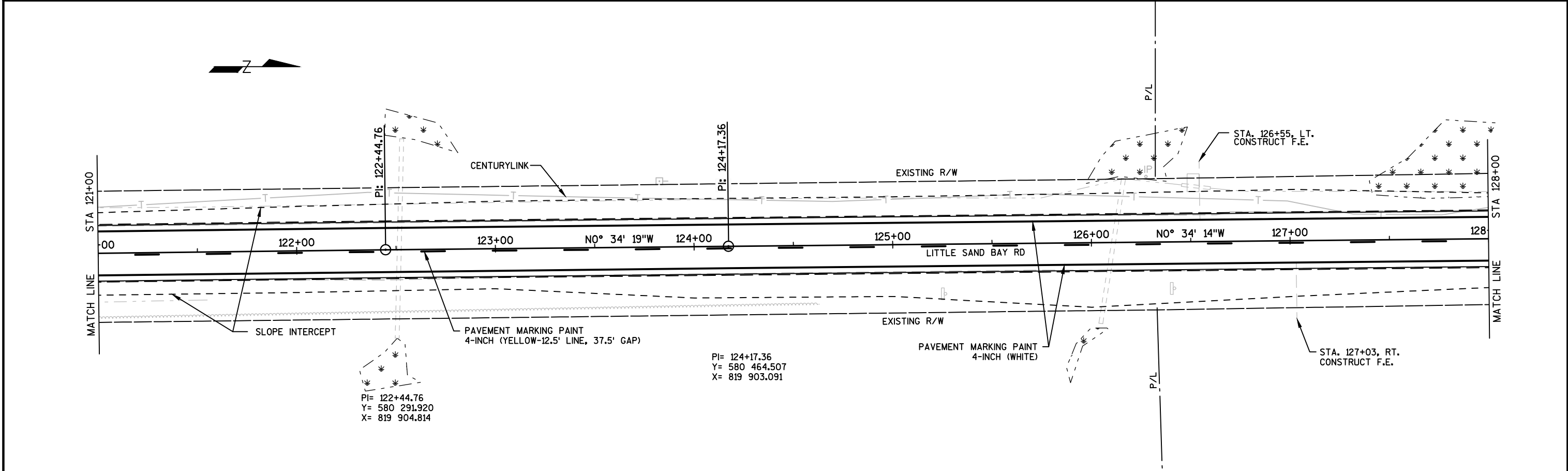
RADIUS POINT TABLE				
POINT	STATION	OFFSET	RADIUS	COORDINATE
RC1	100+56.78	54' LT	40'	N=578 103.474 E=819 876.236
RC2	100+84.01	84' RT	70'	N=578 133.254 E=820 013.910



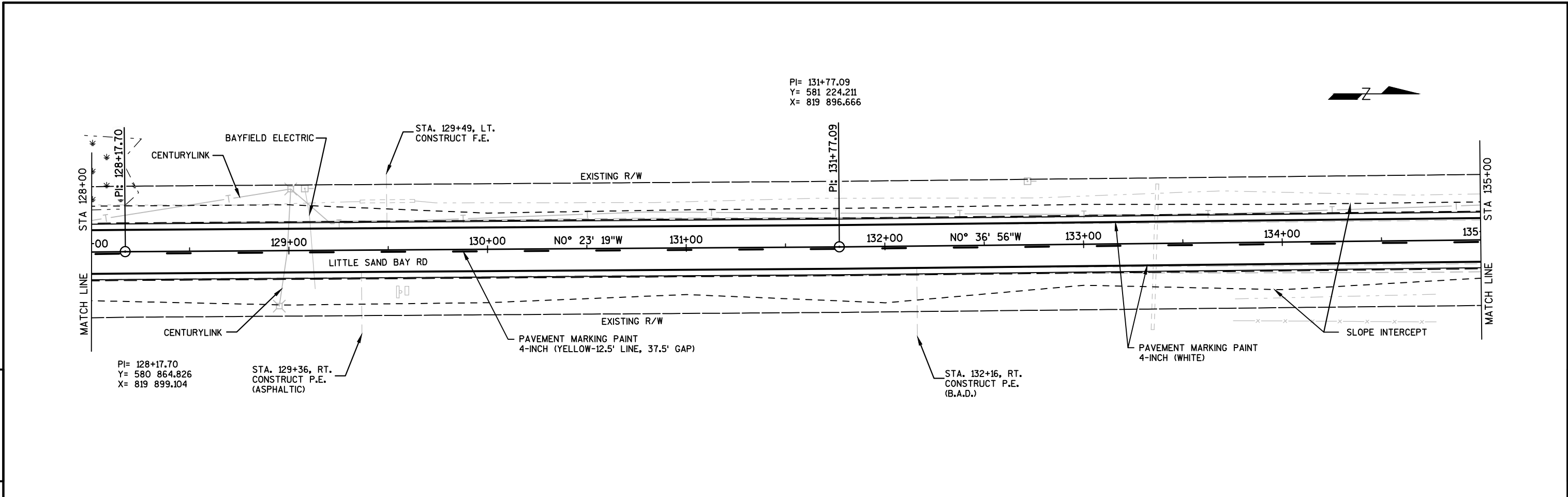
5



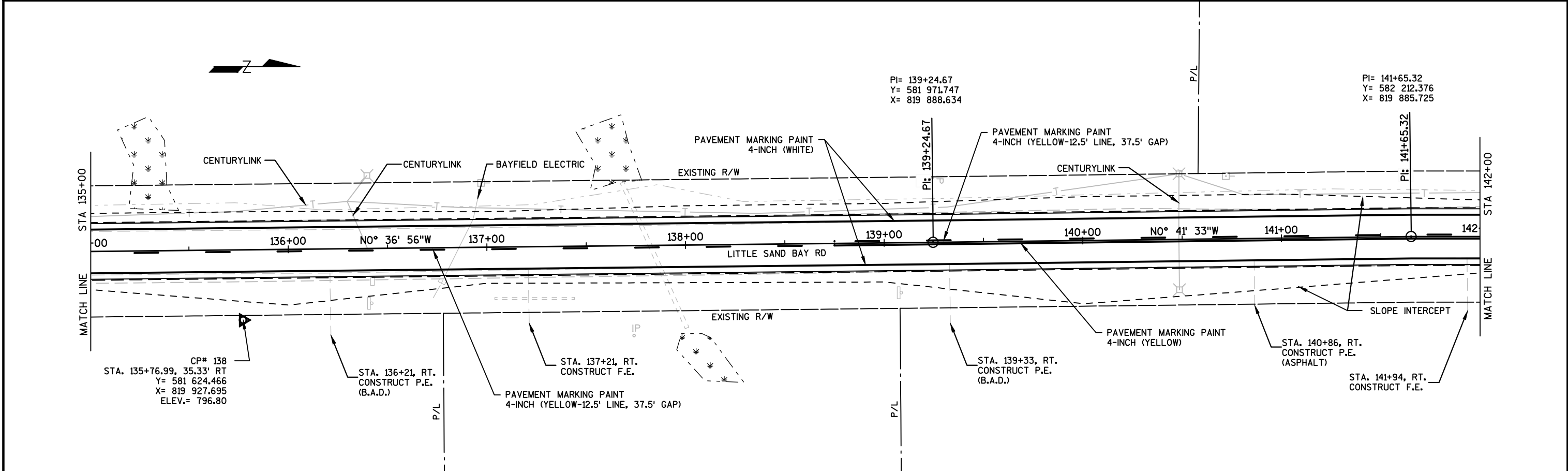
5



5

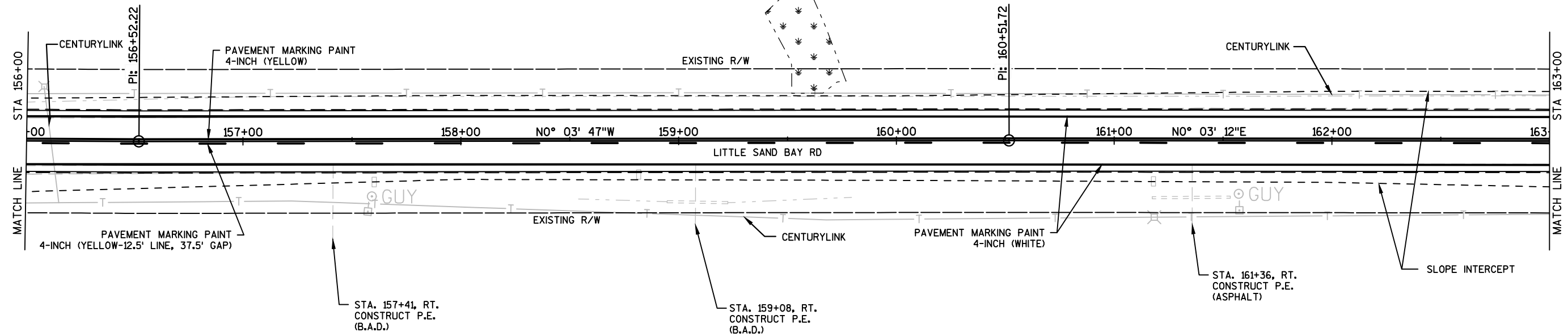
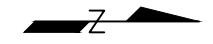


5



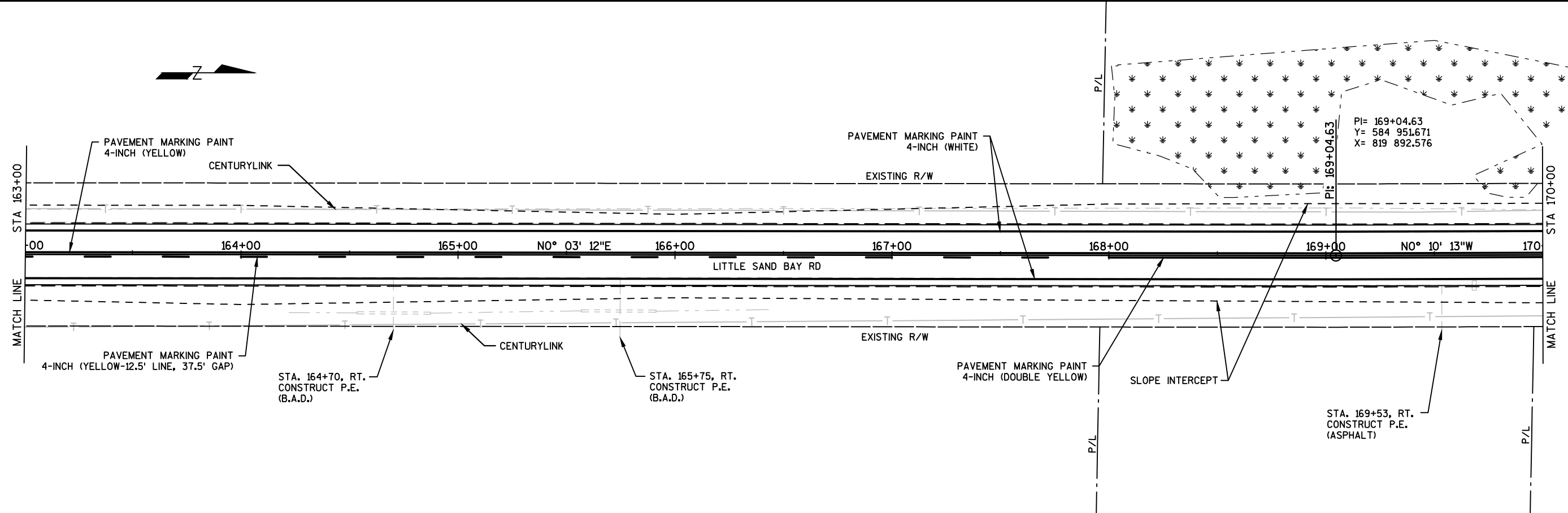
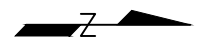
PI= 156+52.22
Y= 583 699.268
X= 819 892.224

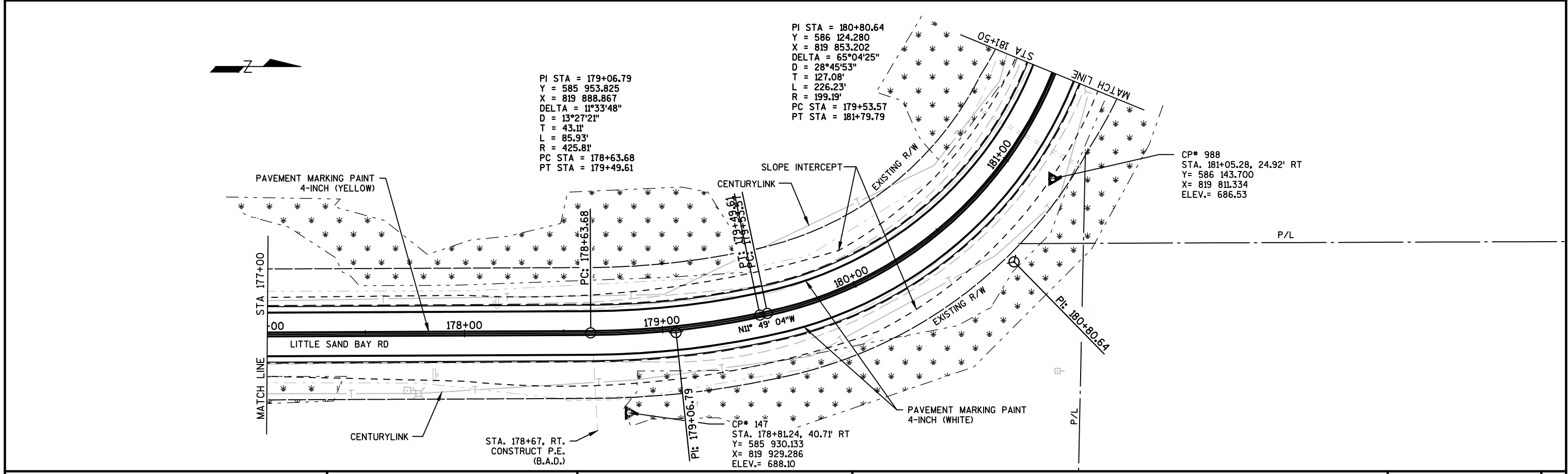
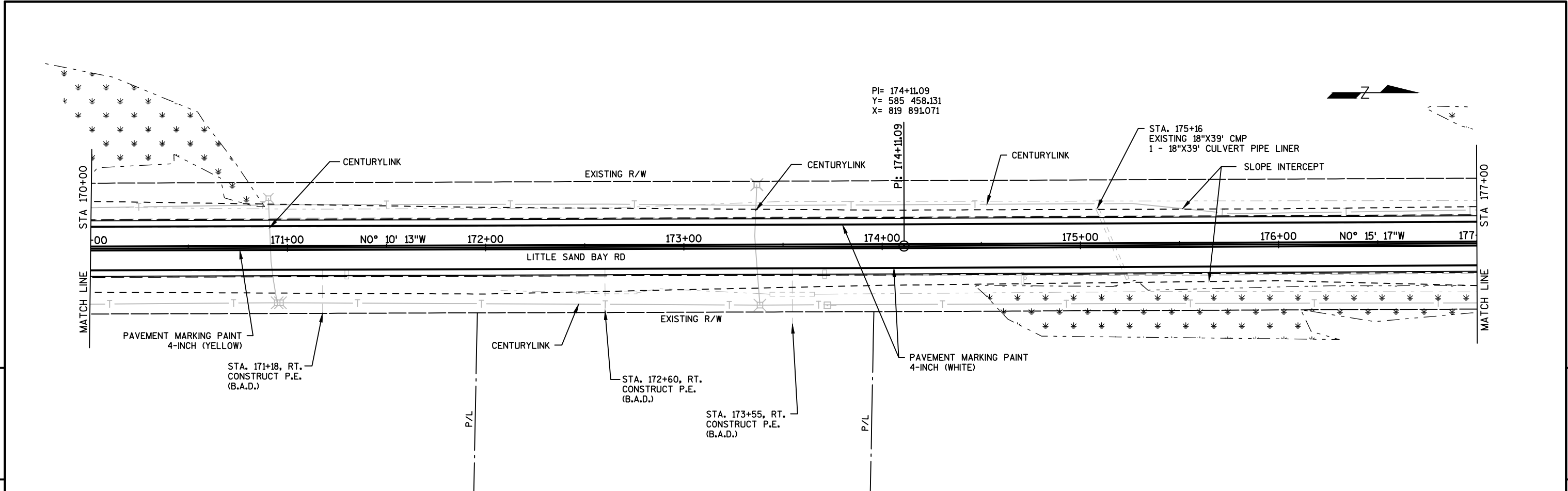
PI= 160+51.72
Y= 584 098.765
X= 819 891.784

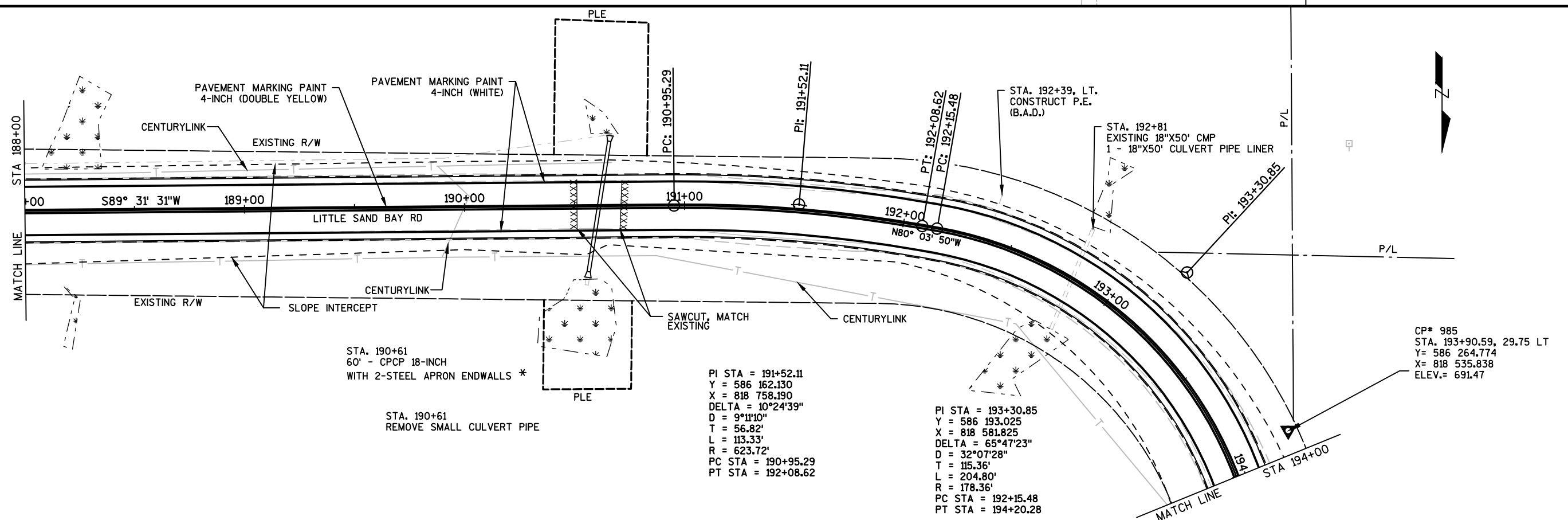
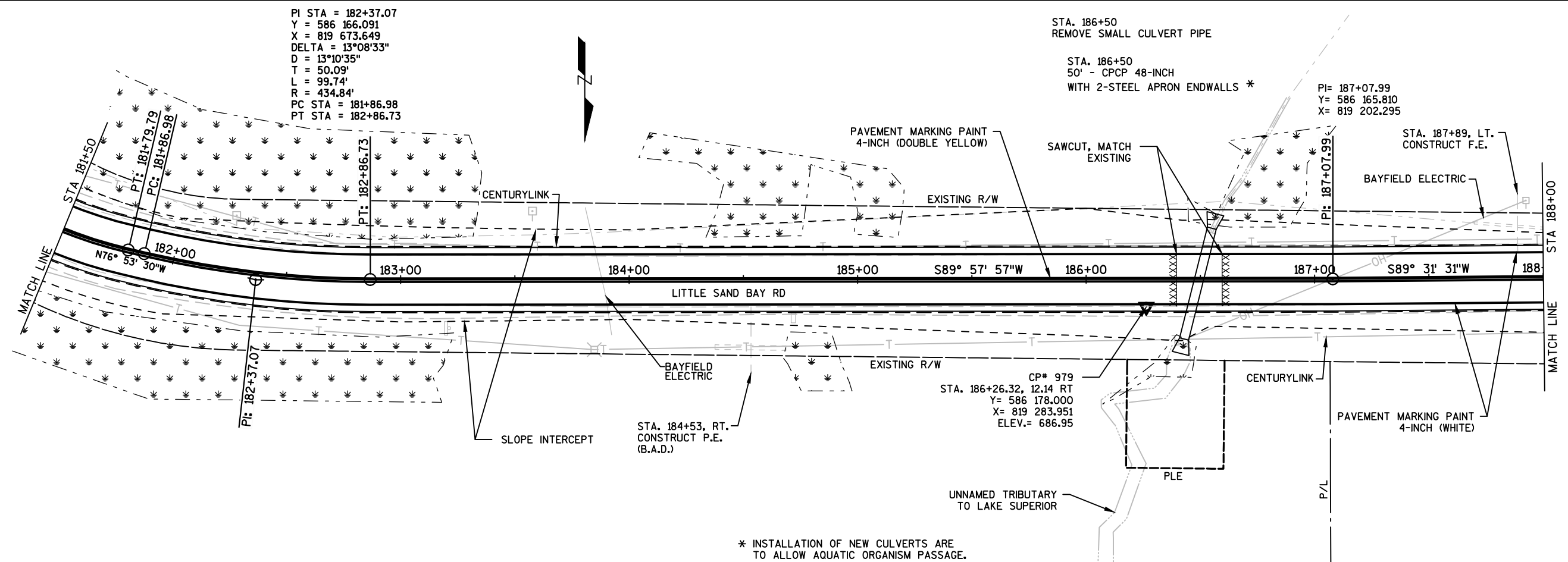


5

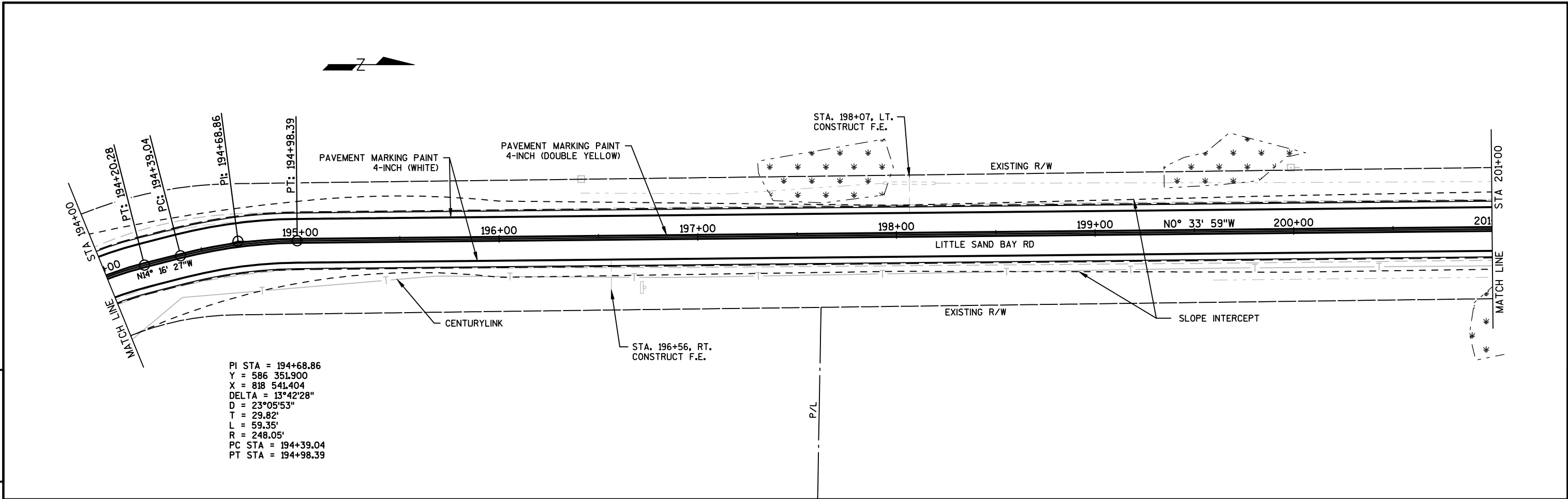
5



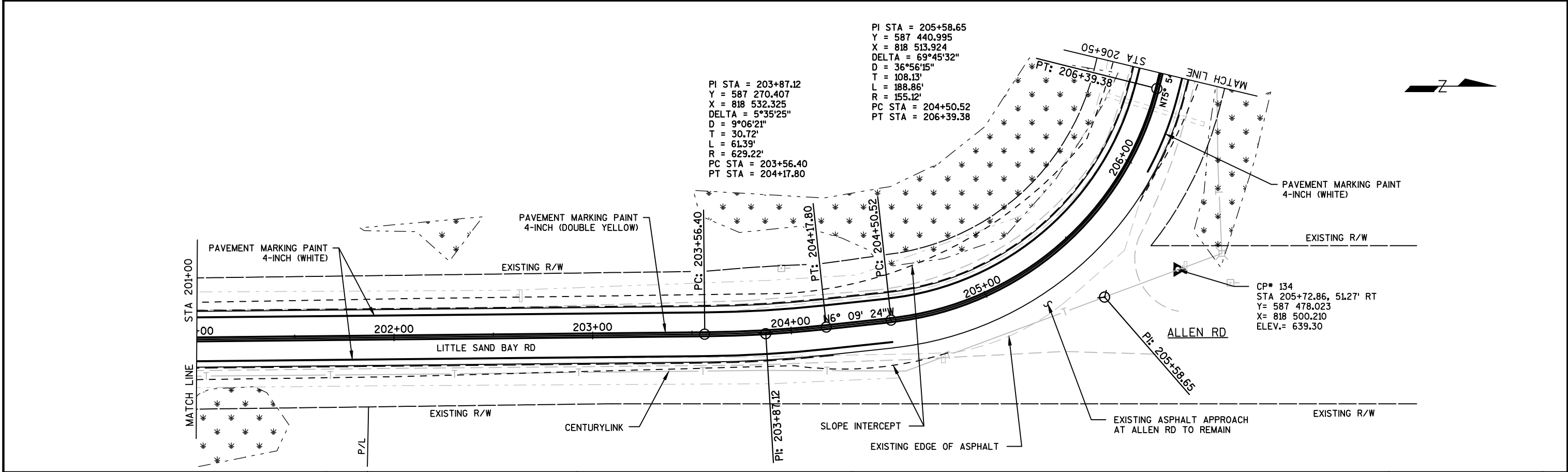


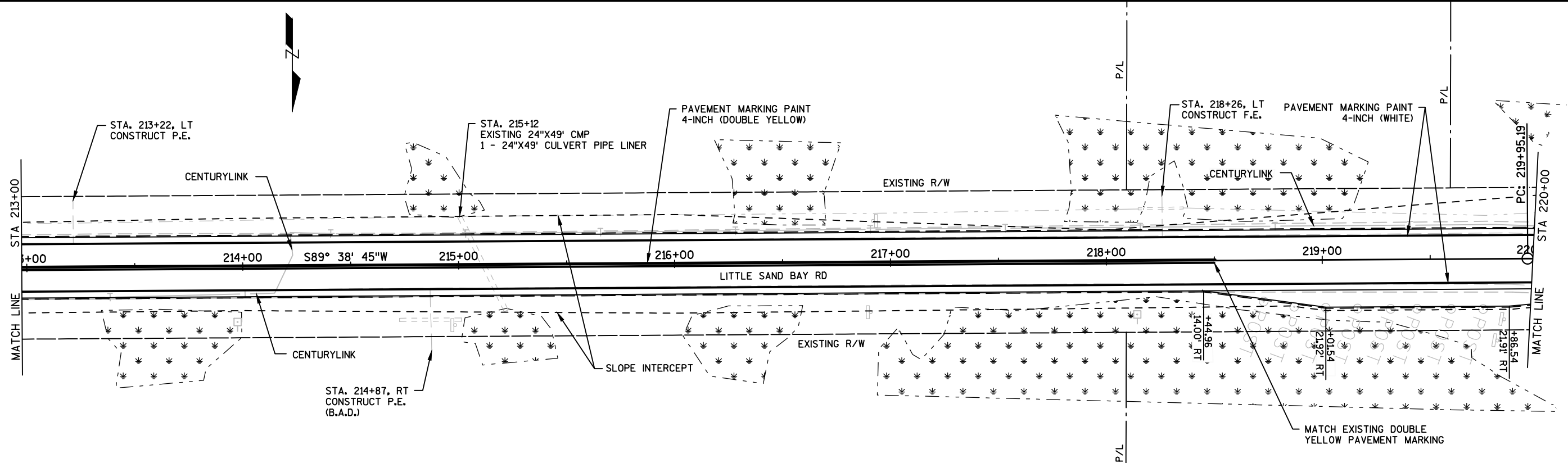
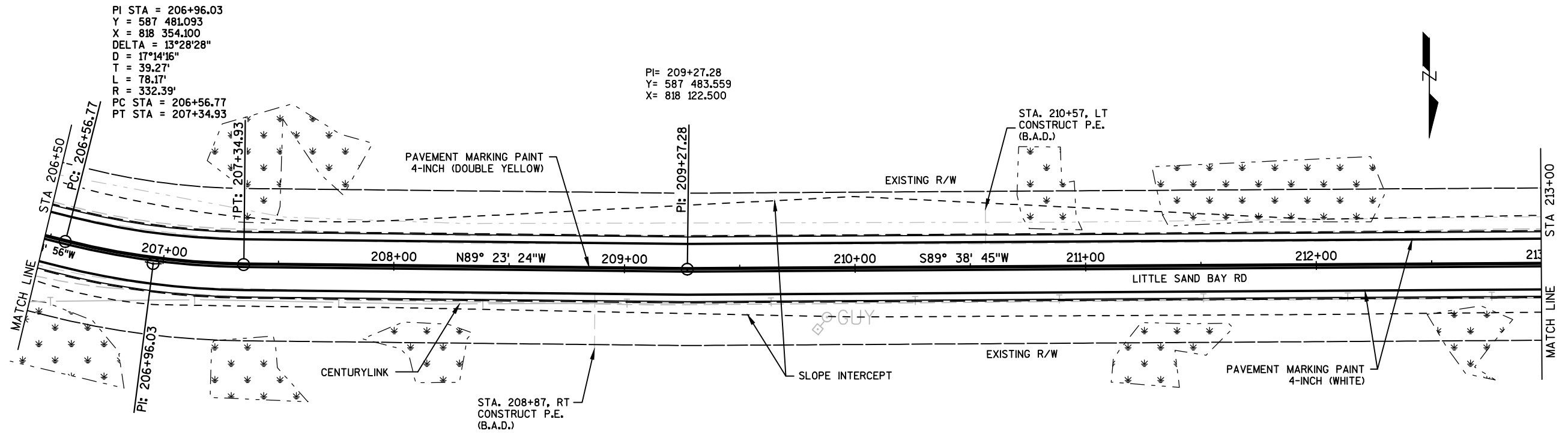


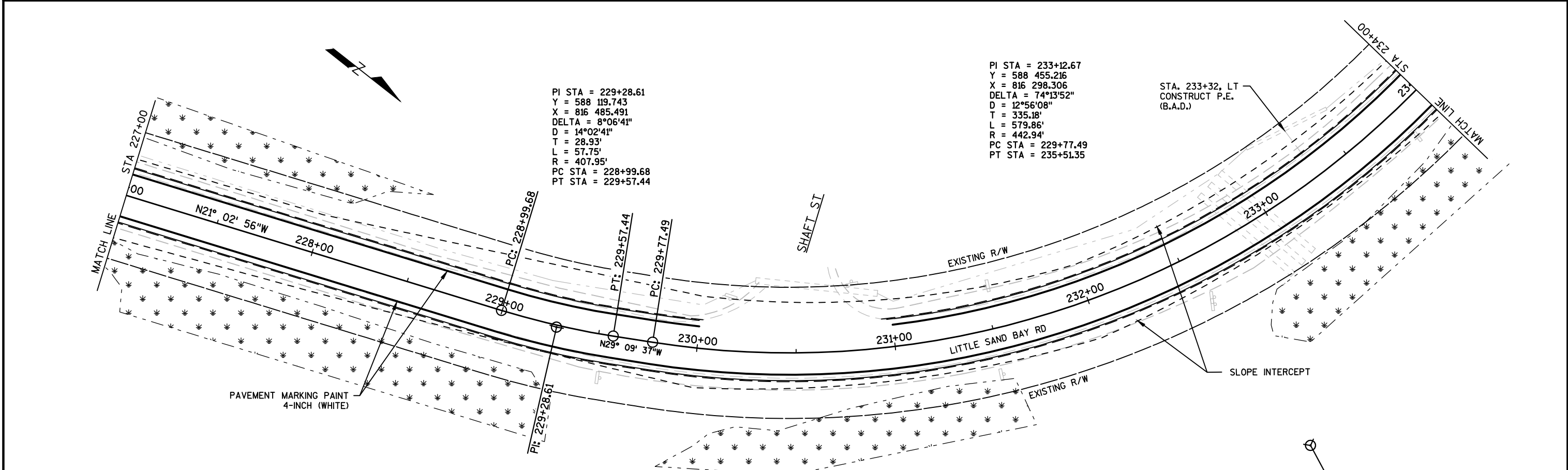
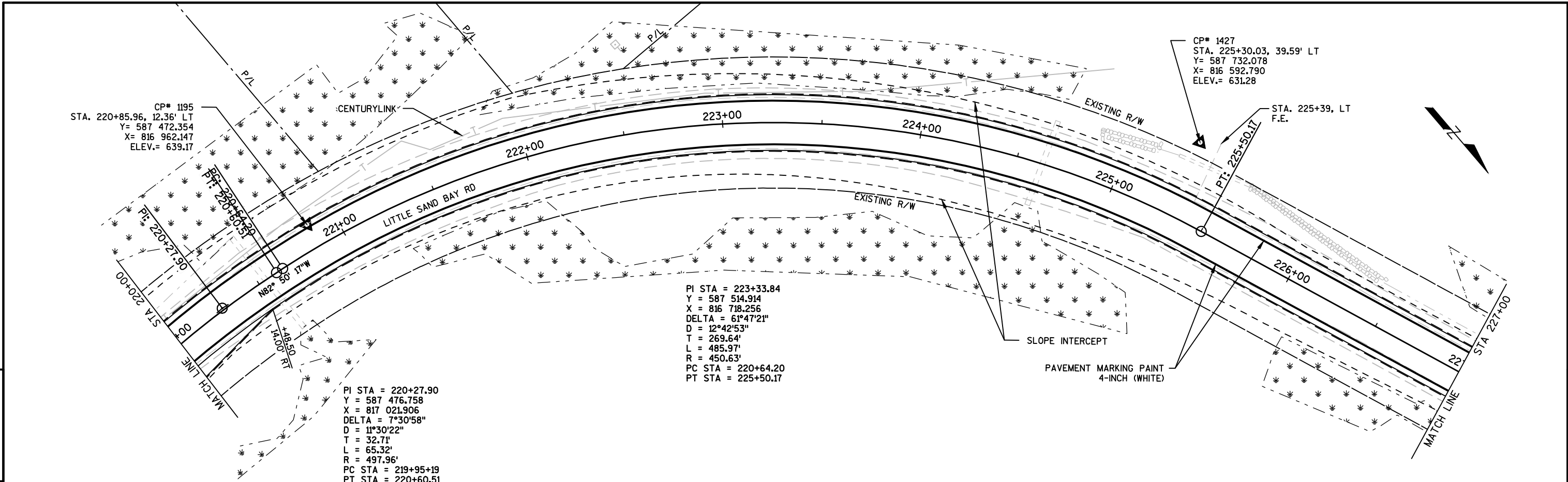
5



5







5

5

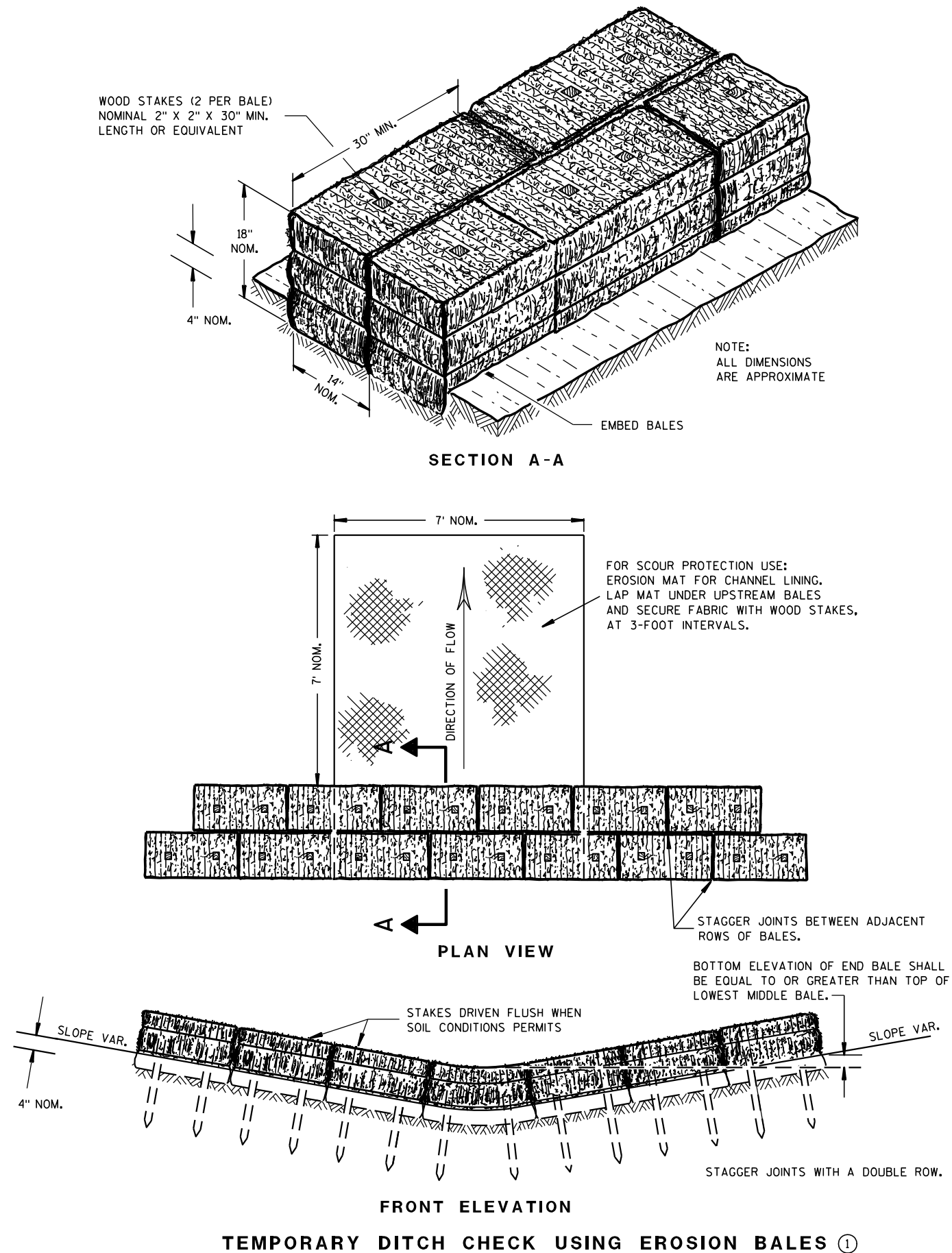


3

WISDOT/CADDS SHEET 42

Standard Detail Drawing List

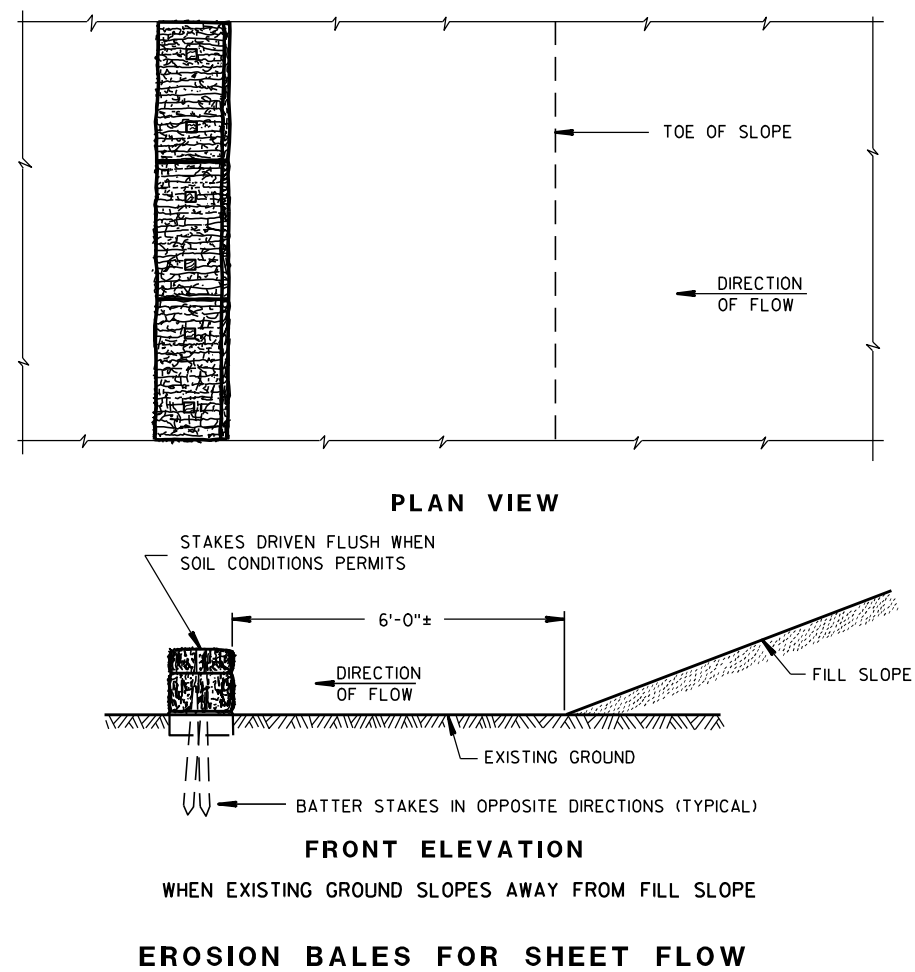
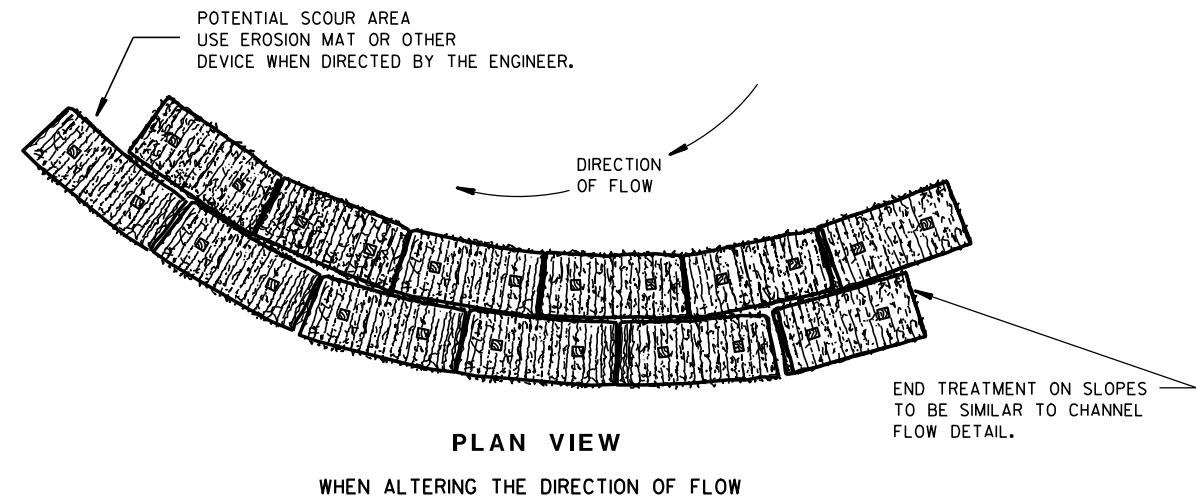
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C05-03	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 40 M. P. H. OR LESS
15C08-17A	LONGITUDINAL MARKING (MAINLINE)
15C12-05	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-04A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY



GENERAL NOTES

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

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

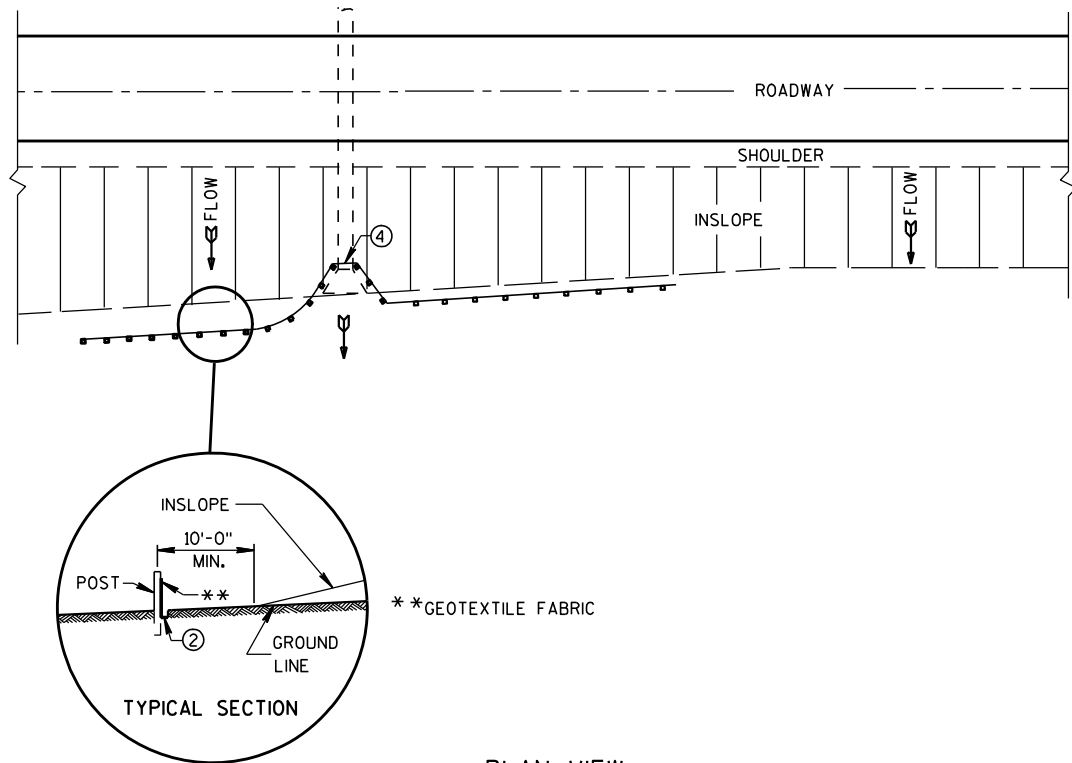
TYPICAL INSTALLATIONS OF
EROSION BALES / TEMPORARY
DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

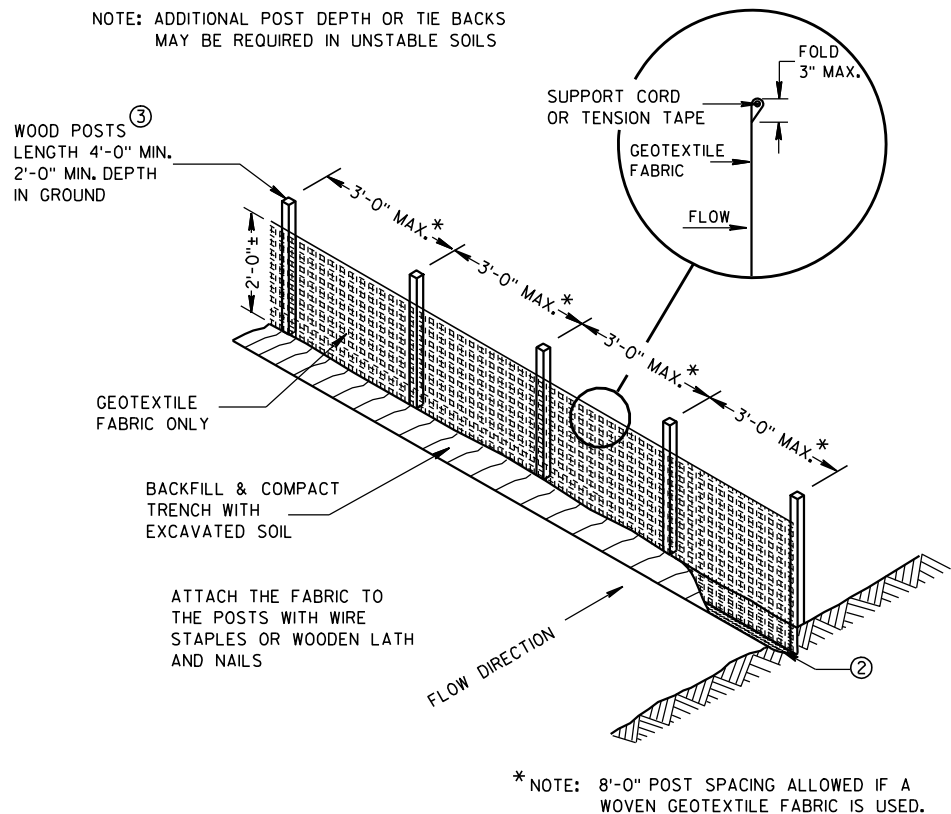
APPROVED

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

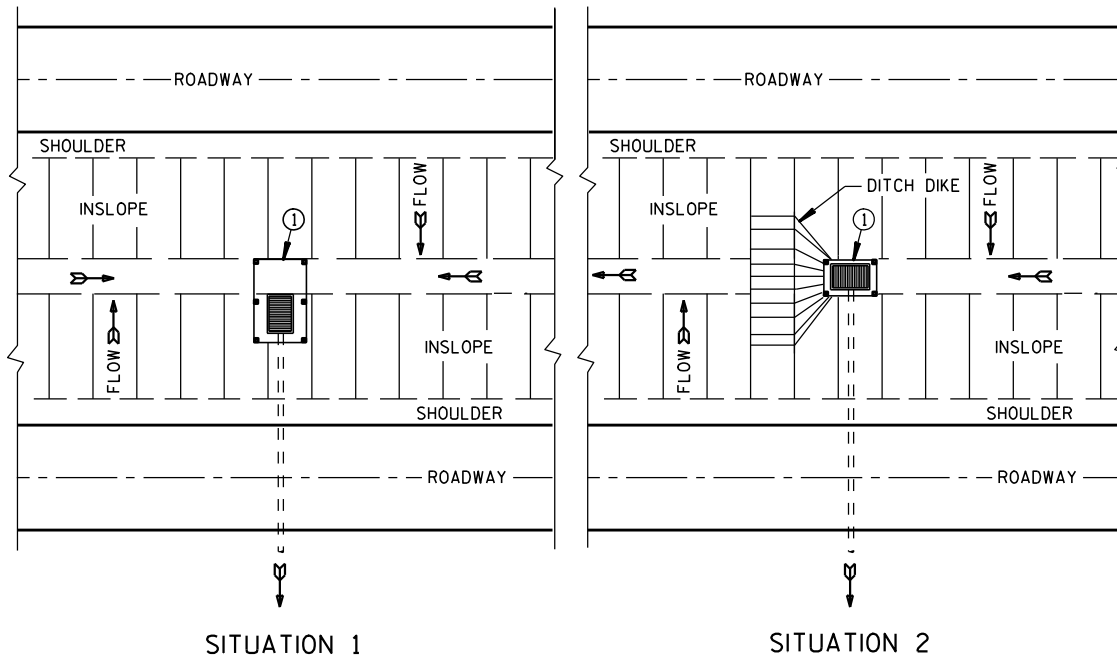
FHWA



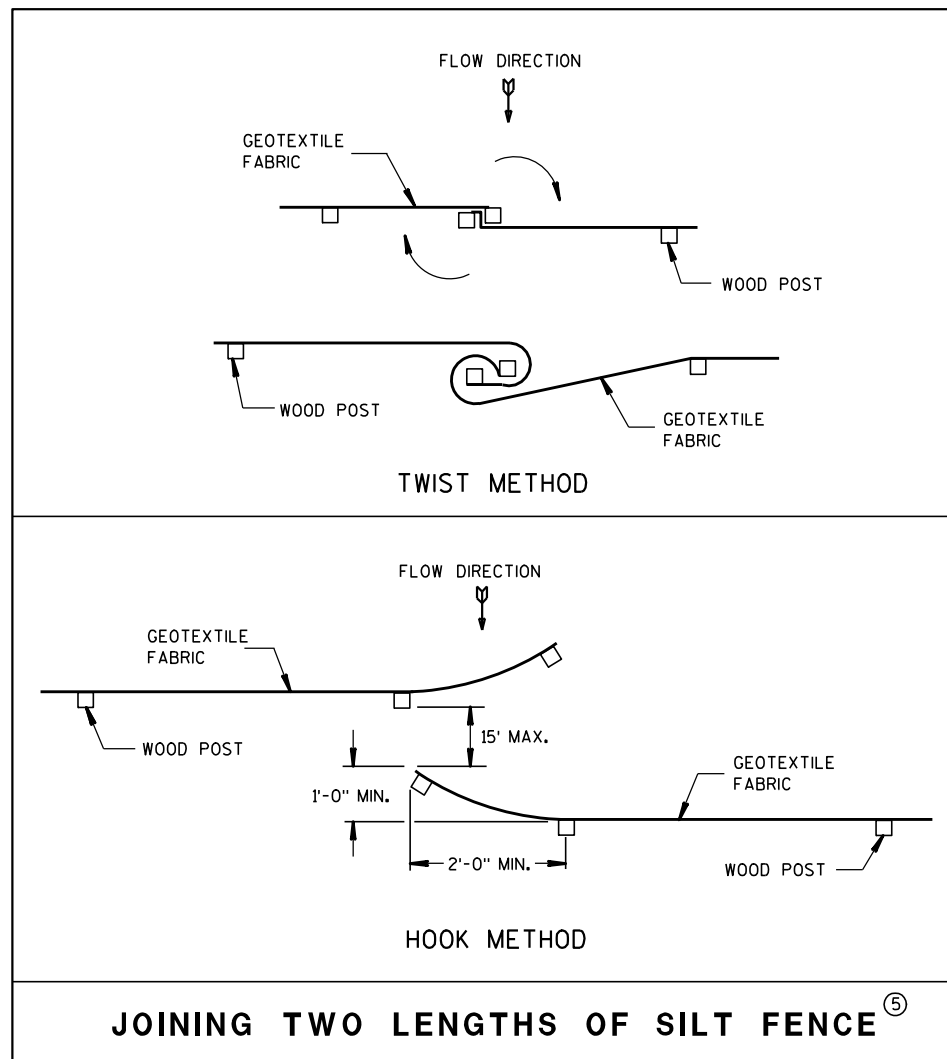
PLAN VIEW
TYPICAL APPLICATION OF SILT FENCE



SILT FENCE



PLAN VIEW
SILT FENCE AT MEDIAN SURFACE DRAINS

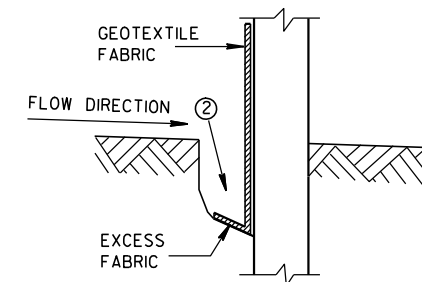


JOINING TWO LENGTHS OF SILT FENCE ⑤

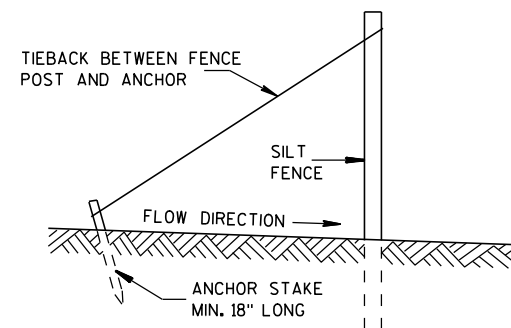
GENERAL NOTES

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

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



TRENCH DETAIL



SILT FENCE TIE BACK
(WHEN REQUIRED BY THE ENGINEER)

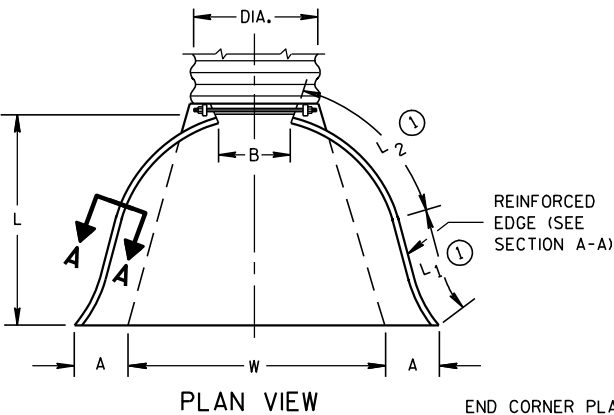
SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

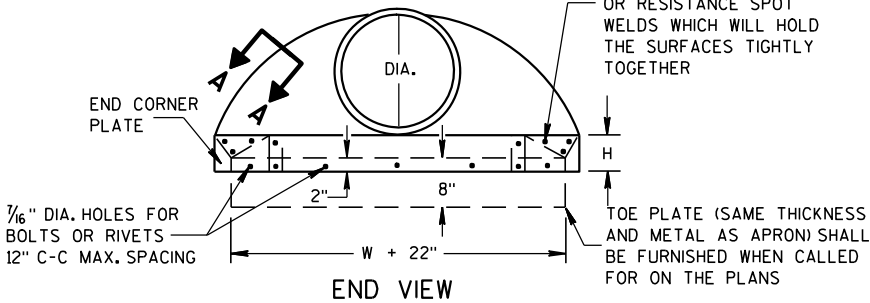
APPROVED
4-29-05 /S/ Beth Canestra
DATE CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

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

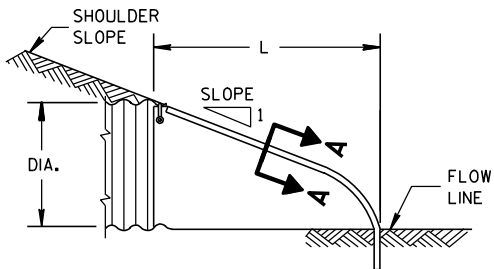
* EXCEPT CENTER PANEL
SEE GENERAL NOTES



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



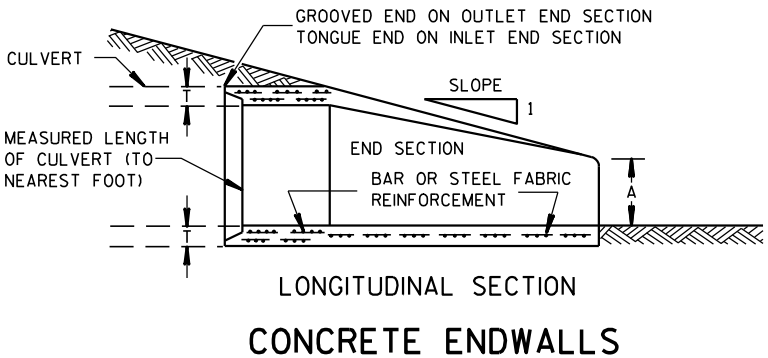
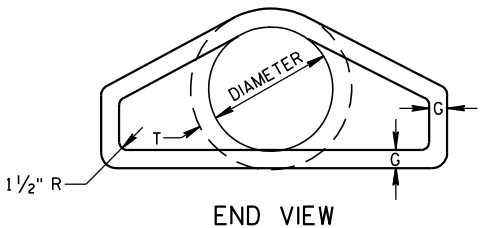
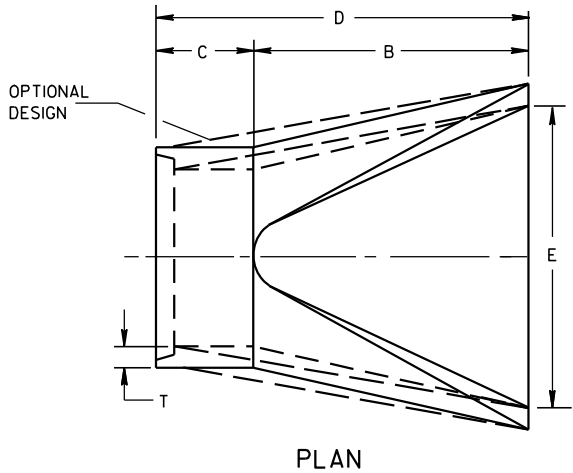
TOE PLATE (SAME THICKNESS
AND METAL AS APRON) SHALL
BE FURNISHED WHEN CALLED
FOR ON THE PLANS



SIDE ELEVATION
METAL ENDWALLS

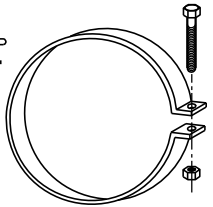
REINFORCED CONCRETE APRON ENDWALLS											
PIPE DIA. (IN.)	DIMENSIONS (Inches)							APPROX. SLOPE			
	T	A	B	C	D	E	G				
12	2	4	24	48 7/8	72 7/8	24	2	3 to 1			
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1			
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1			
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1			
24	3	9 1/2	43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

* MINIMUM
** MAXIMUM

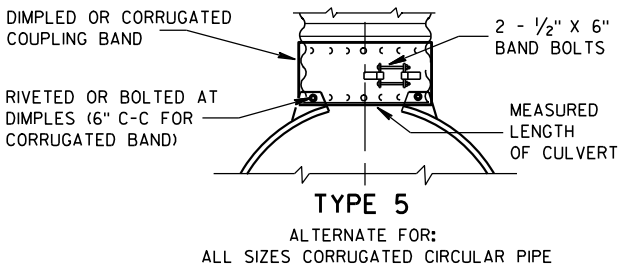
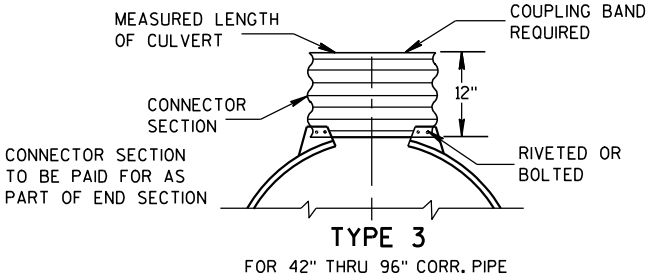
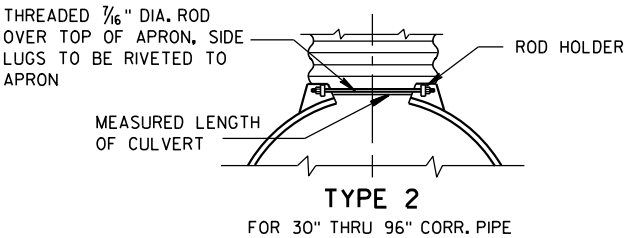
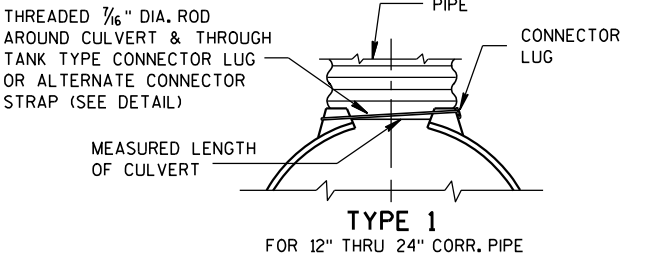


LONGITUDINAL SECTION
CONCRETE ENDWALLS

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



ALTERNATE FOR TYPE 1 CONNECTION
END SECTION CONNECTOR STRAP



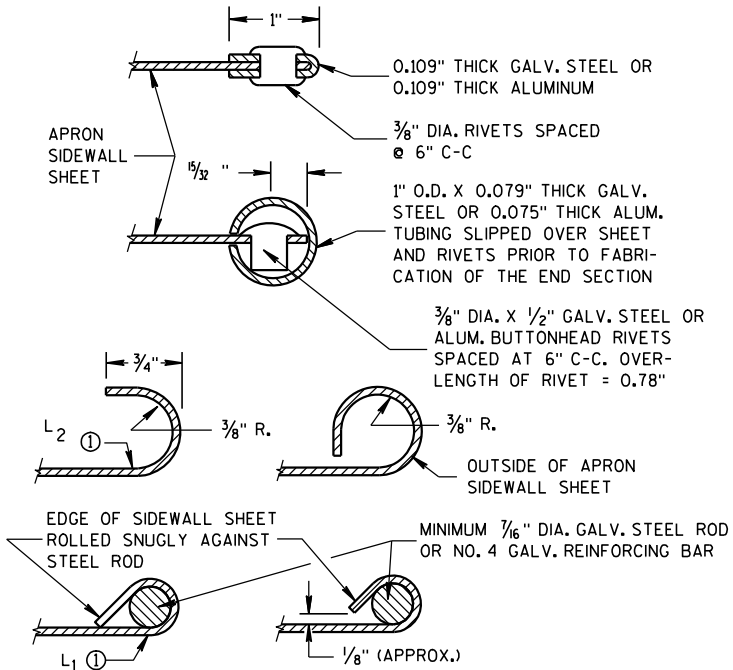
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL,
AND CORRUGATED BAND FITS INSIDE ENDWALL.
DIMPLED BAND MAY BE USED WITH HELICALLY
CORRUGATED PIPE.

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

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

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

CONNECTION DETAILS



SECTION A-A

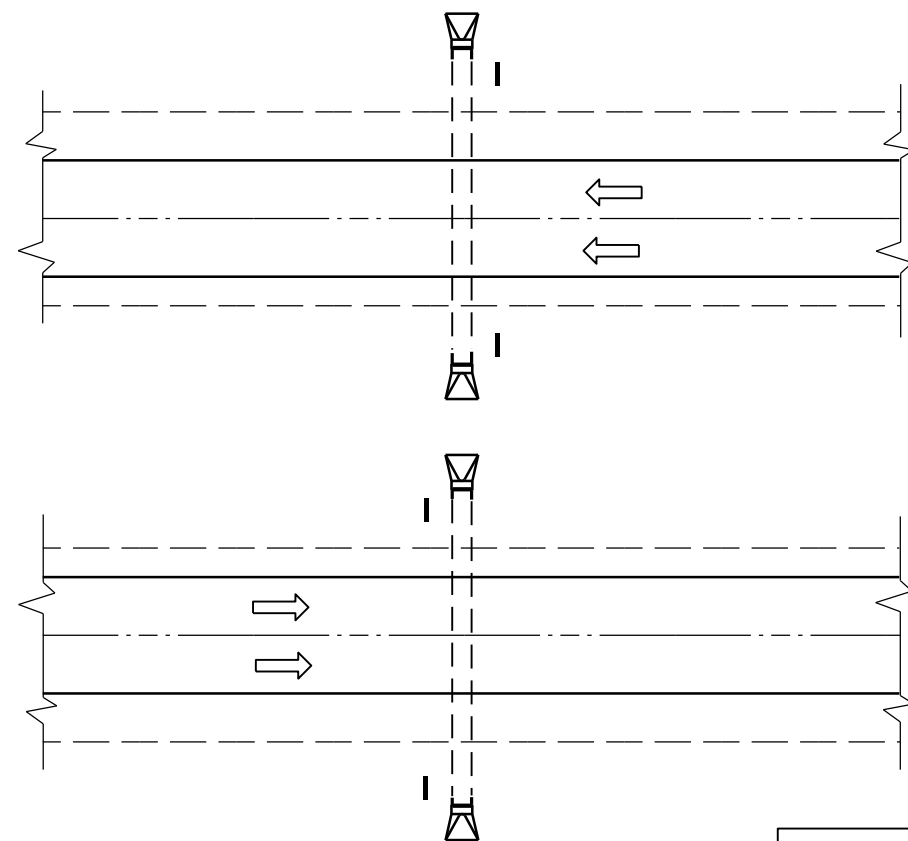
GENERAL NOTES

- DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON
THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE
STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.
- CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL
OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR
ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE
OF THE SAME METAL.
- ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL
THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND
LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH
OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE
PERIMETER.
- LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS
FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS.
FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED
EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH
GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE
ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM
NUTS AND BOLTS FOR ALUMINUM UNITS.
- WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT
TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT
TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.
- ① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED
INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

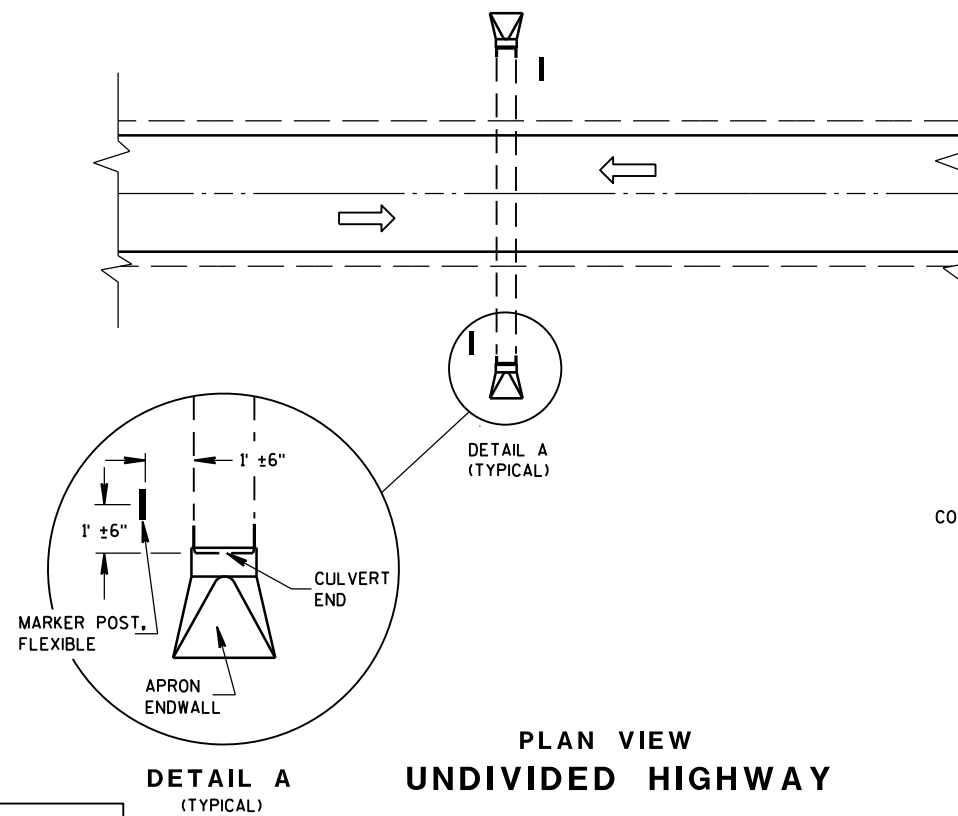
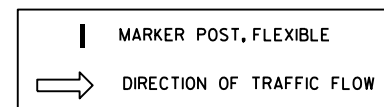
APRON ENDWALLS FOR
CULVERT PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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



PLAN VIEW
DIVIDED HIGHWAY

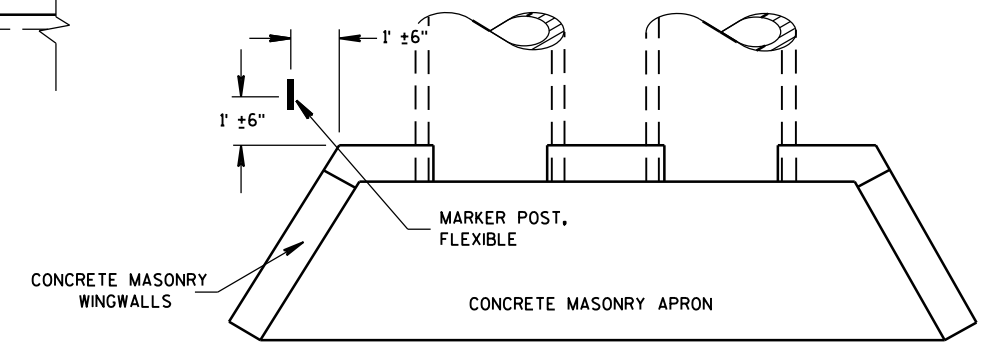


PLAN VIEW
UNDIVIDED HIGHWAY

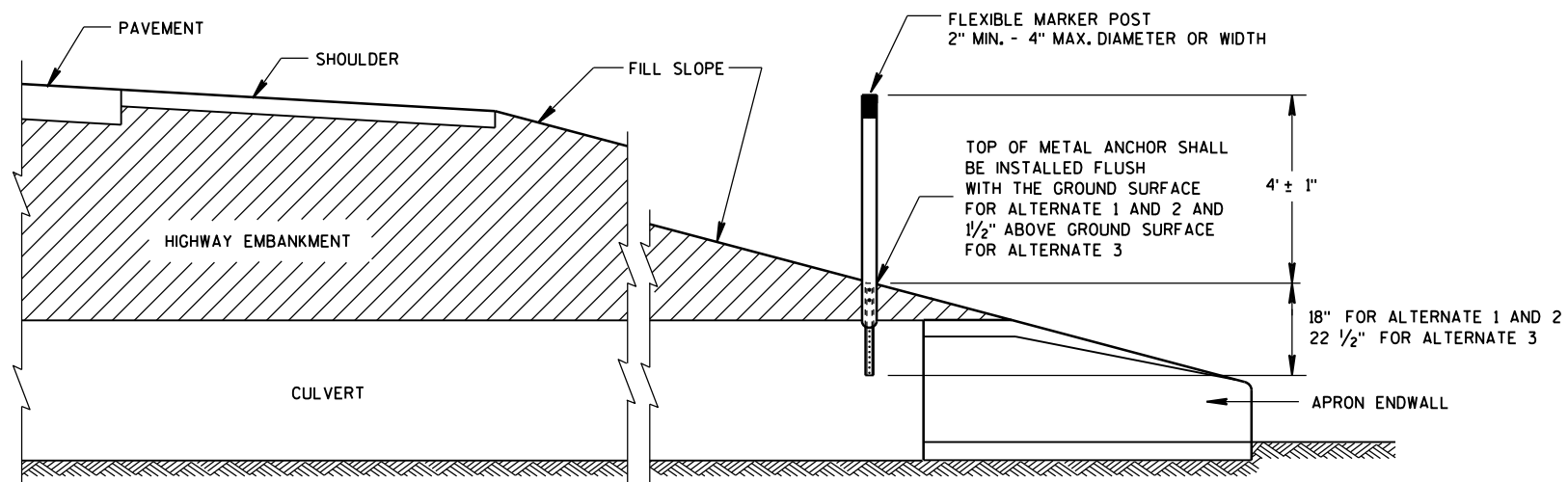
FLEXIBLE MARKER POST LOCATION

GENERAL NOTES

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



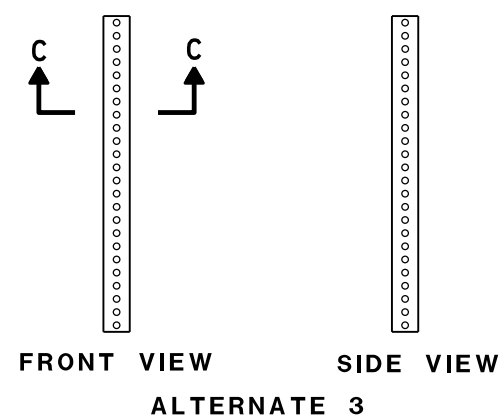
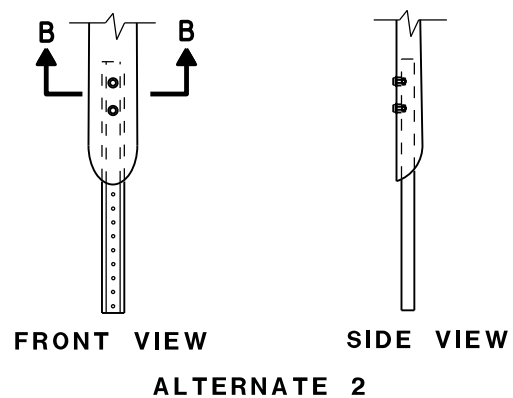
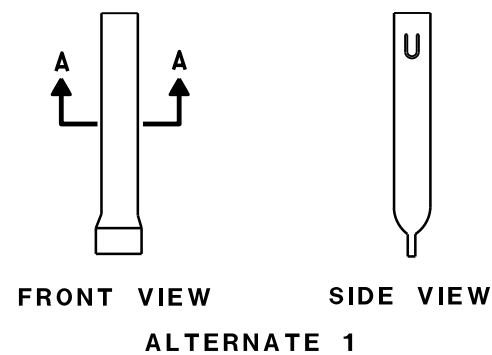
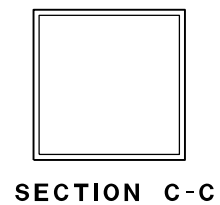
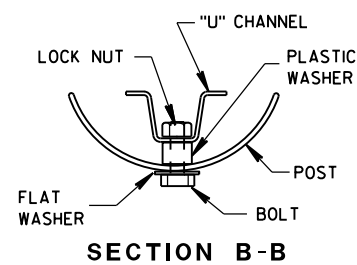
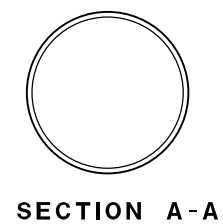
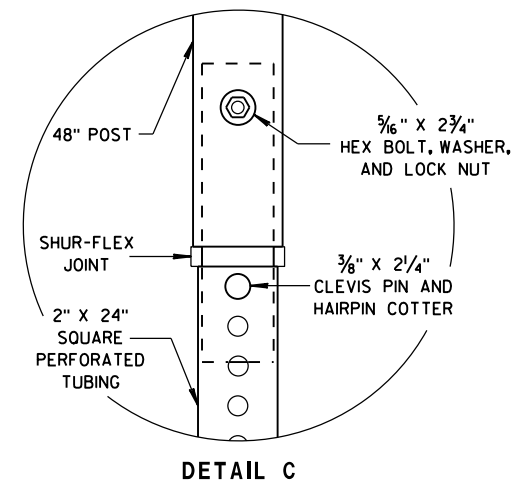
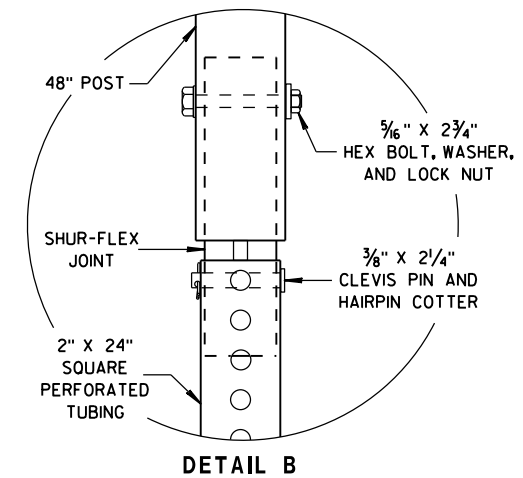
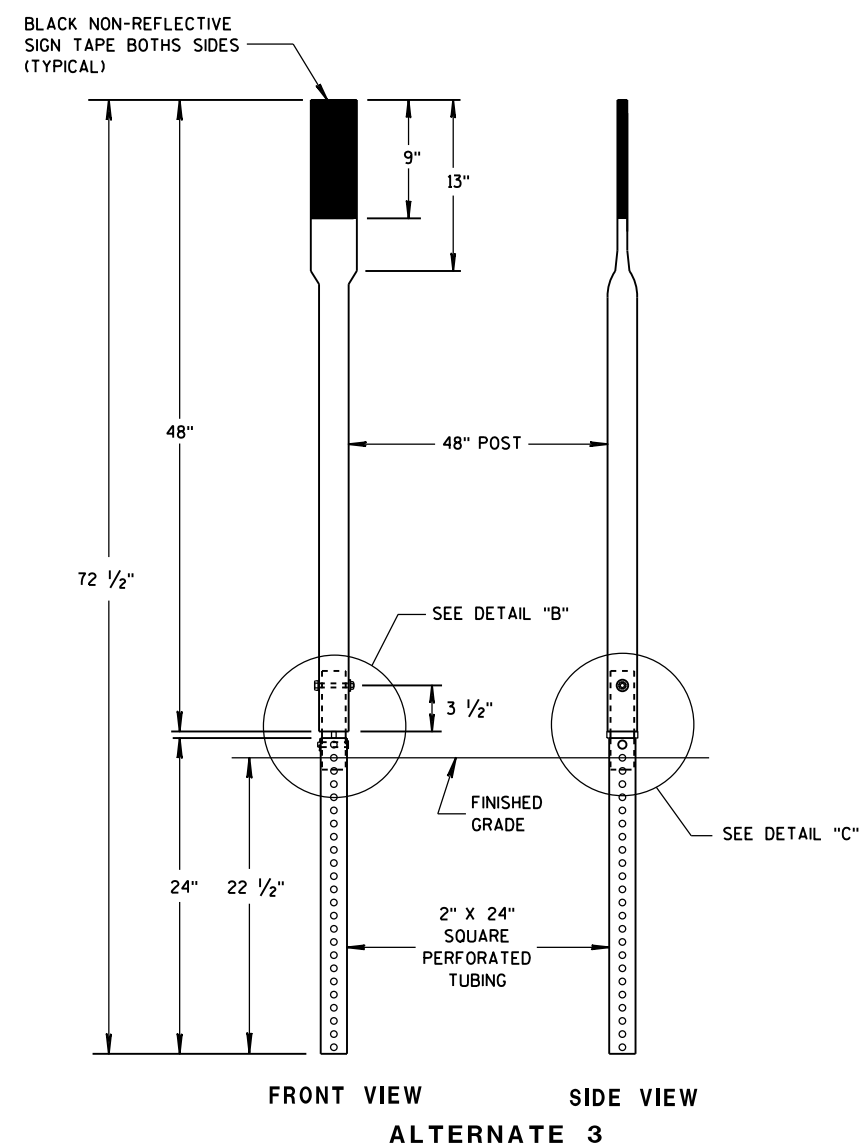
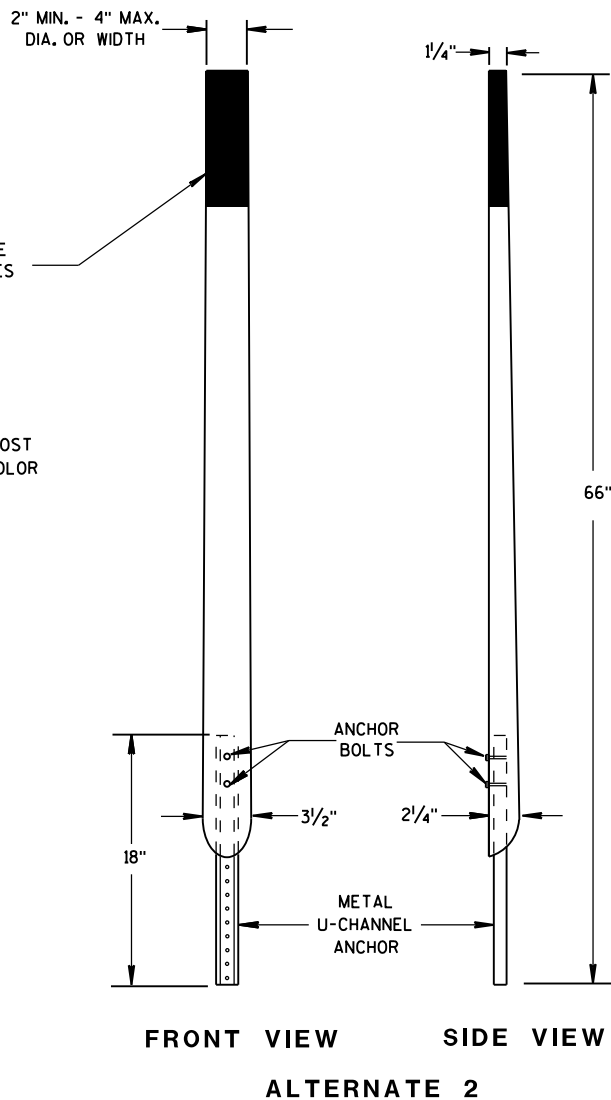
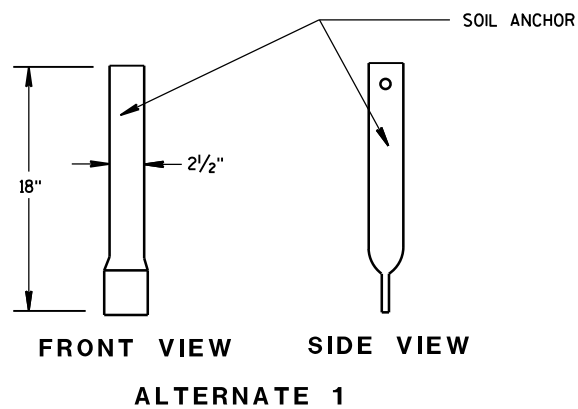
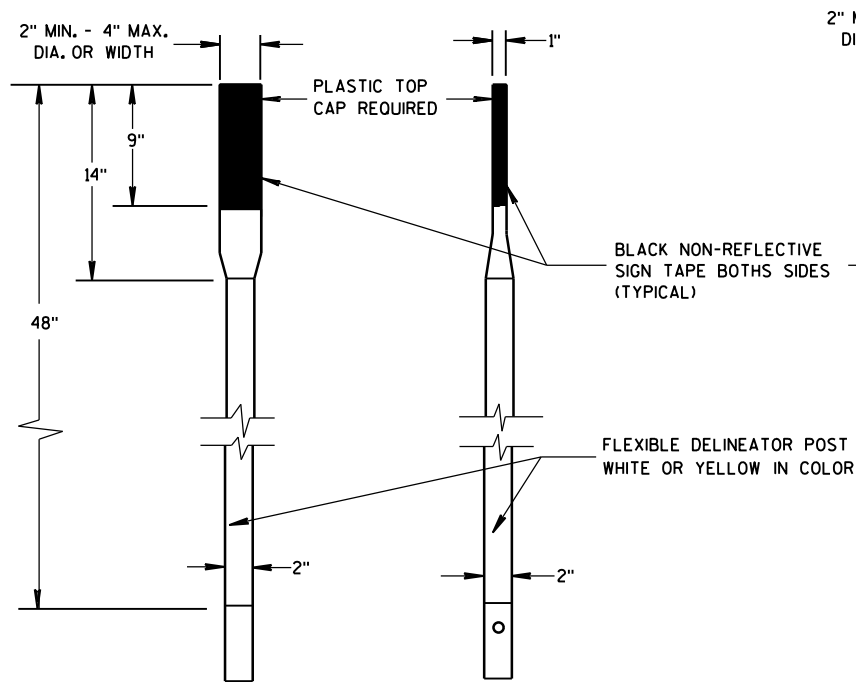
PLAN VIEW
CONCRETE MASONRY ENDWALLS FOR
CULVERT PIPE AND PIPE ARCH



CROSS SECTION
FLEXIBLE MARKER POST

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

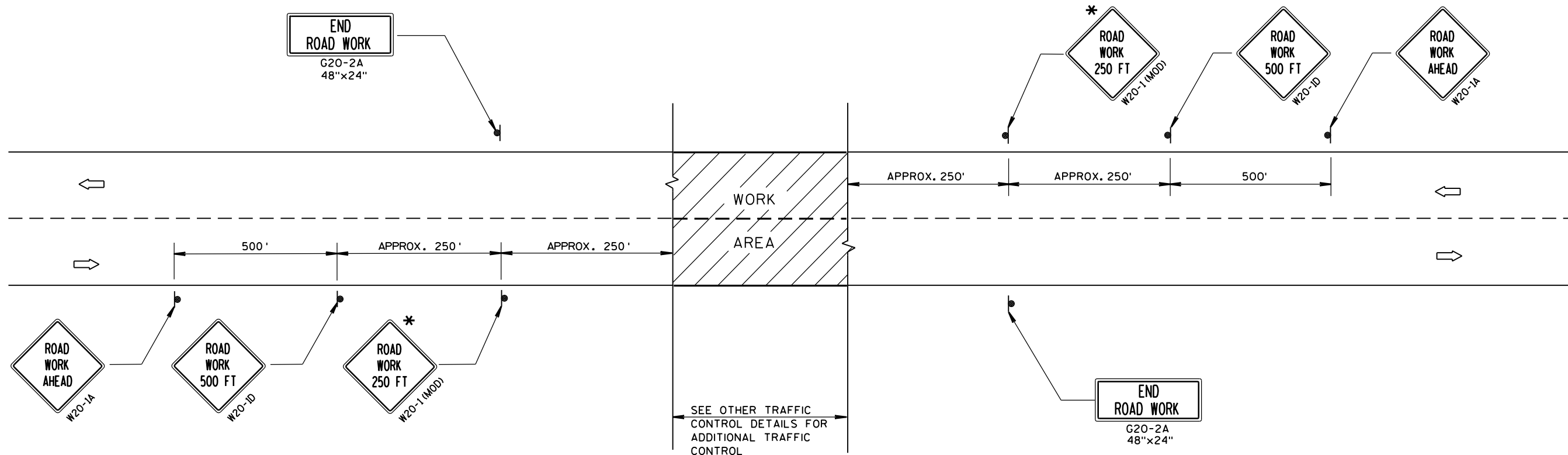


FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/1/2012
DATE
FHWA

/S/ Travis Feltes
STATE TRAFFIC ENGINEER OF DESIGN



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.

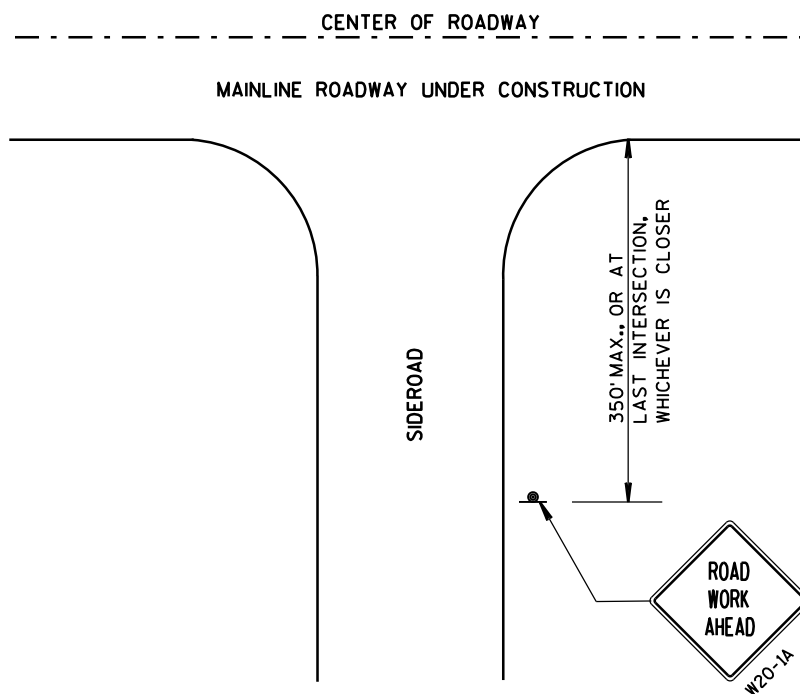
THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A DESIRABLE MINIMUM OF 200 FEET CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

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.



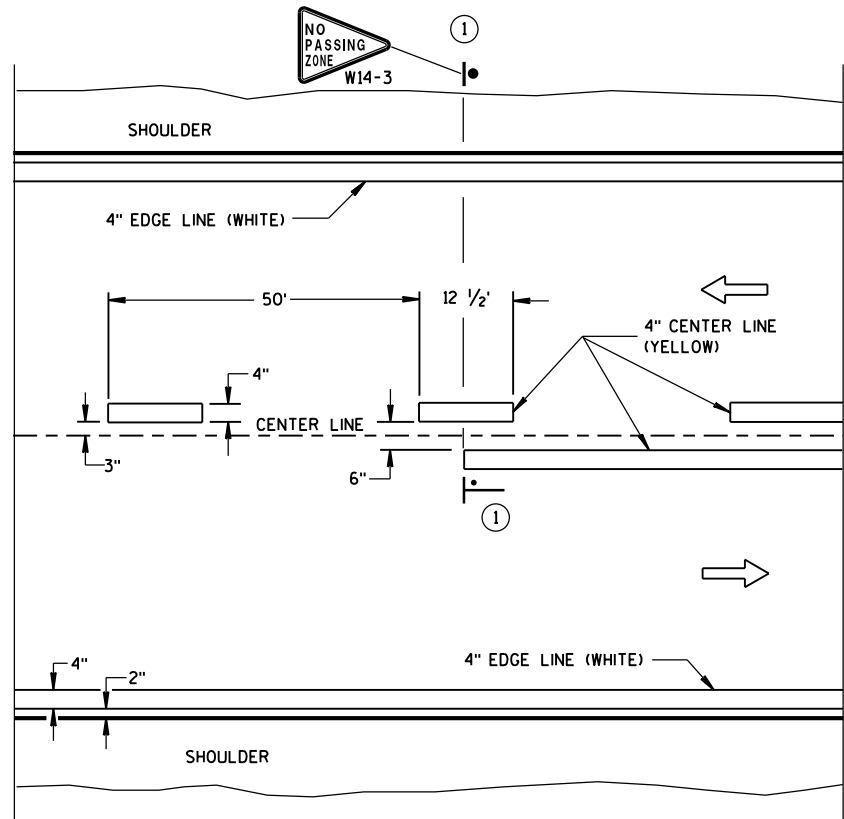
LEGEND

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

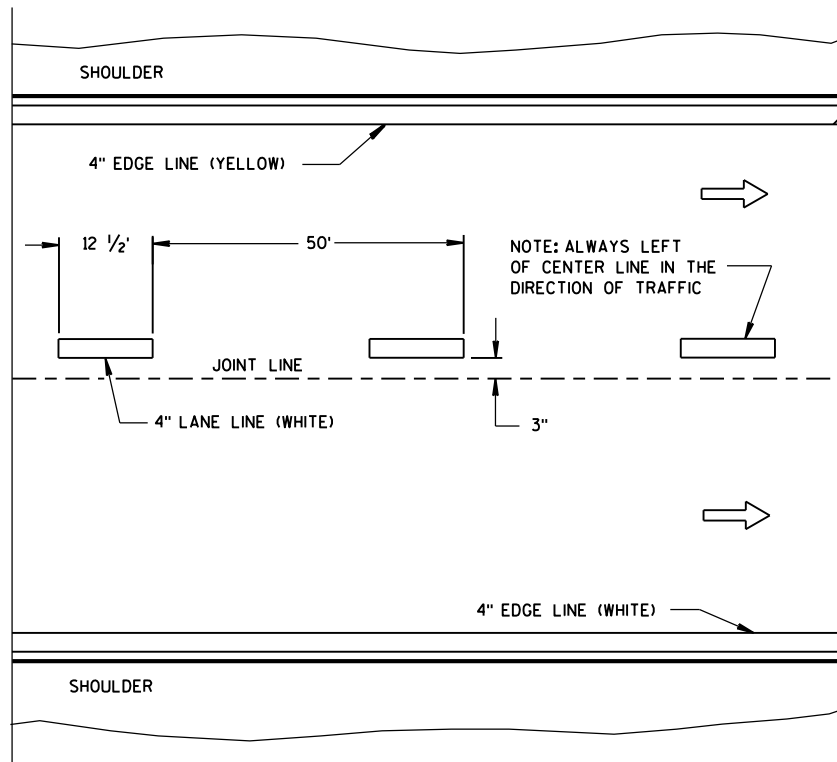
TRAFFIC CONTROL, ADVANCE
WARNING SIGNS 40 M.P.H.
OR LESS TWO-WAY UNDIVIDED
ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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

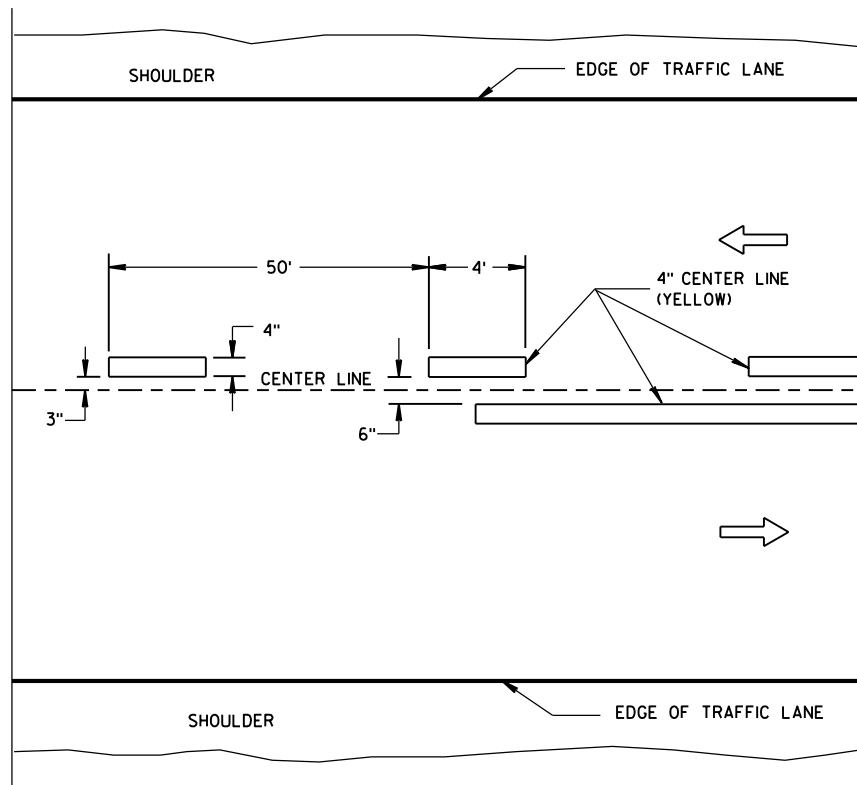


TWO WAY TRAFFIC

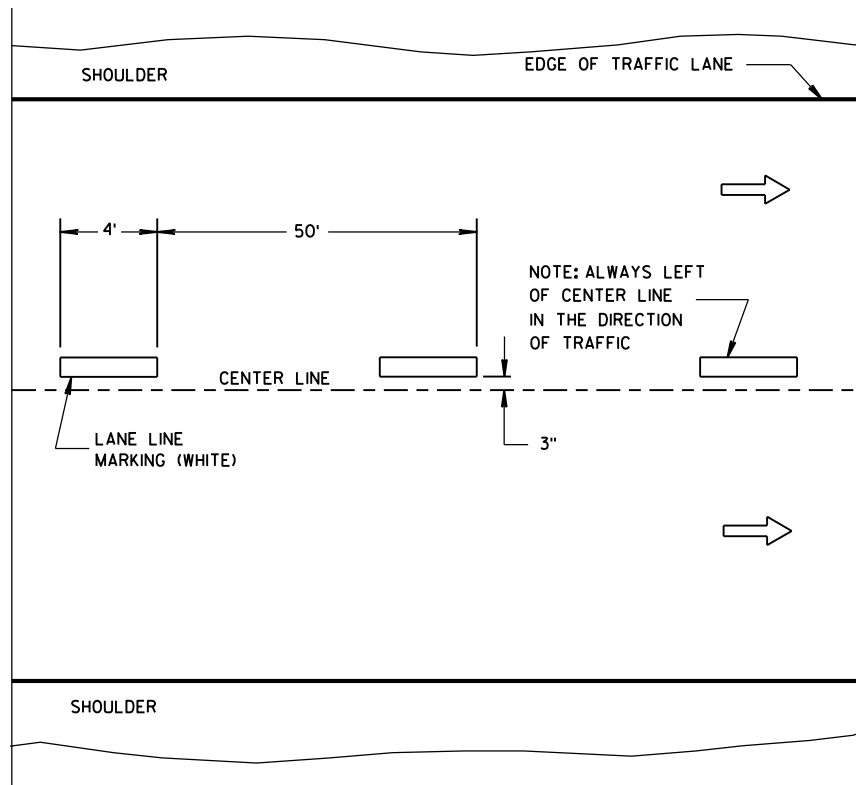


ONE WAY TRAFFIC

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

LEGEND

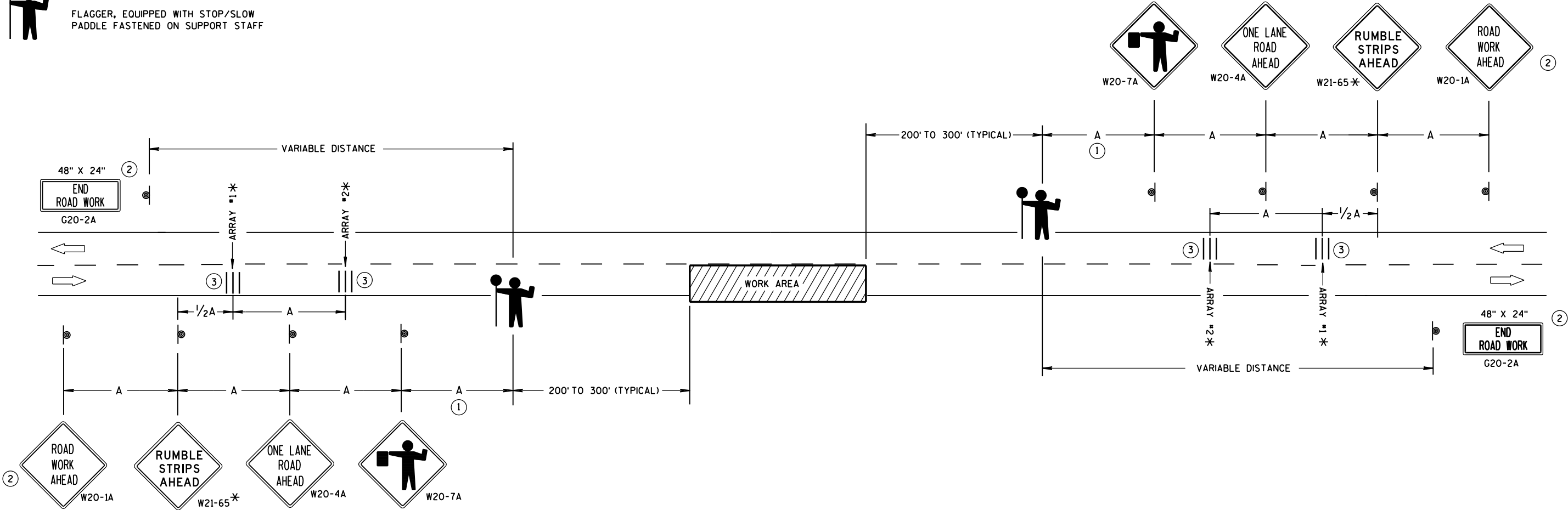
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

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.

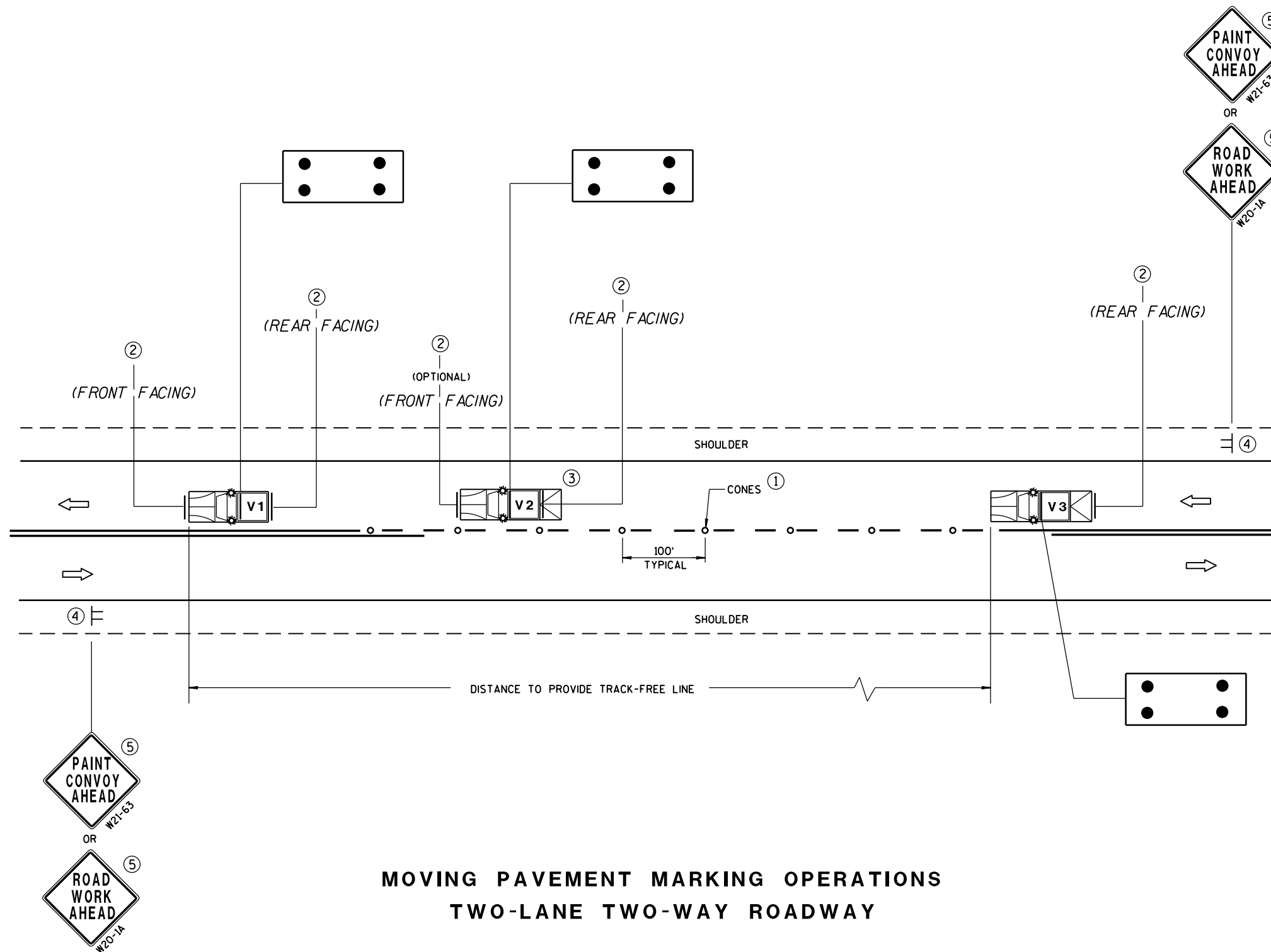
FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

- * UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.
- ① 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.
- ② SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.
- ③ 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.

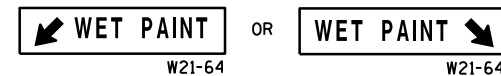
THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

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

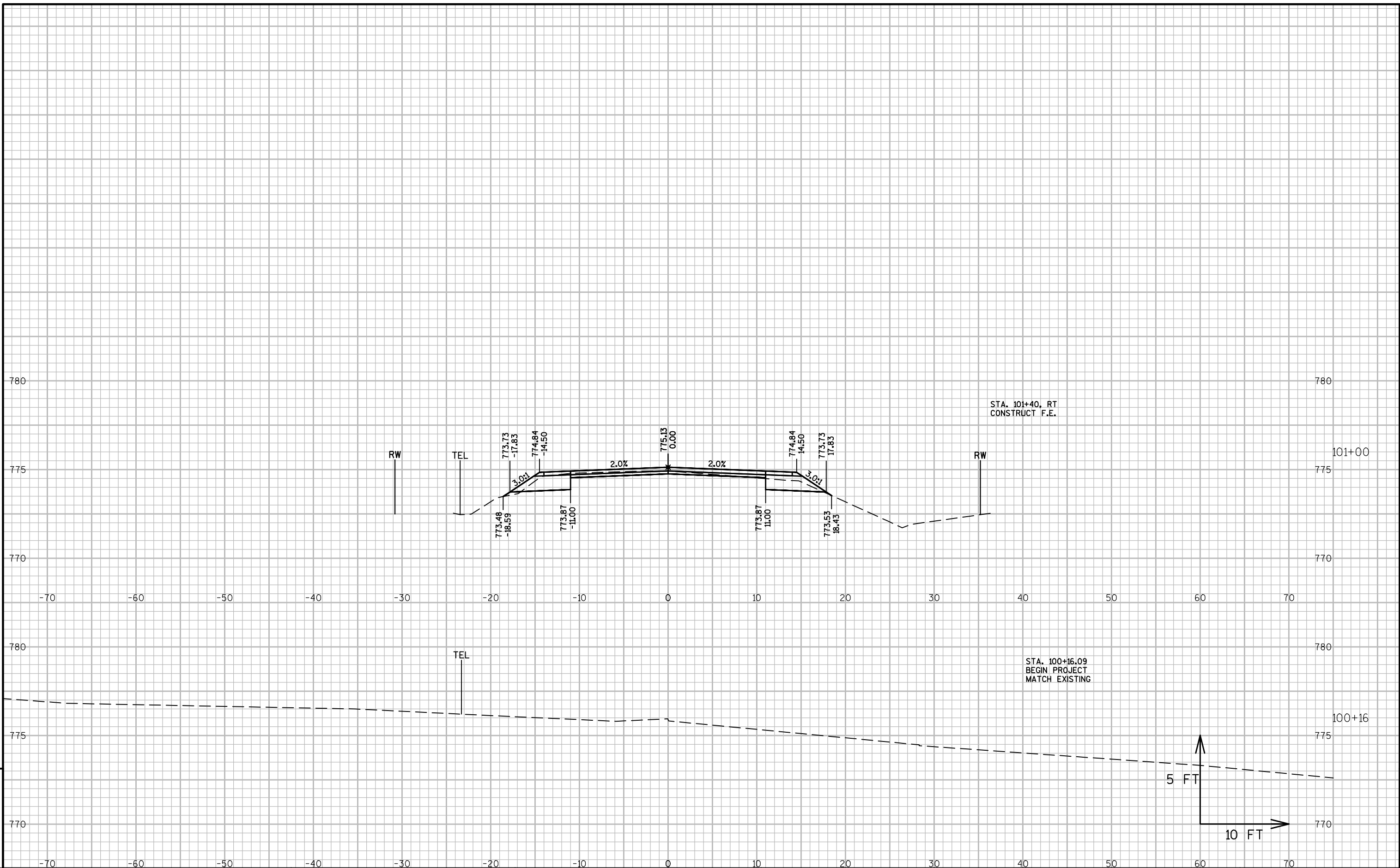
/S/ Peter Amakobe Atepe
STATEWIDE WORK ZONE TRAFFIC
SAFETY ENGINEER

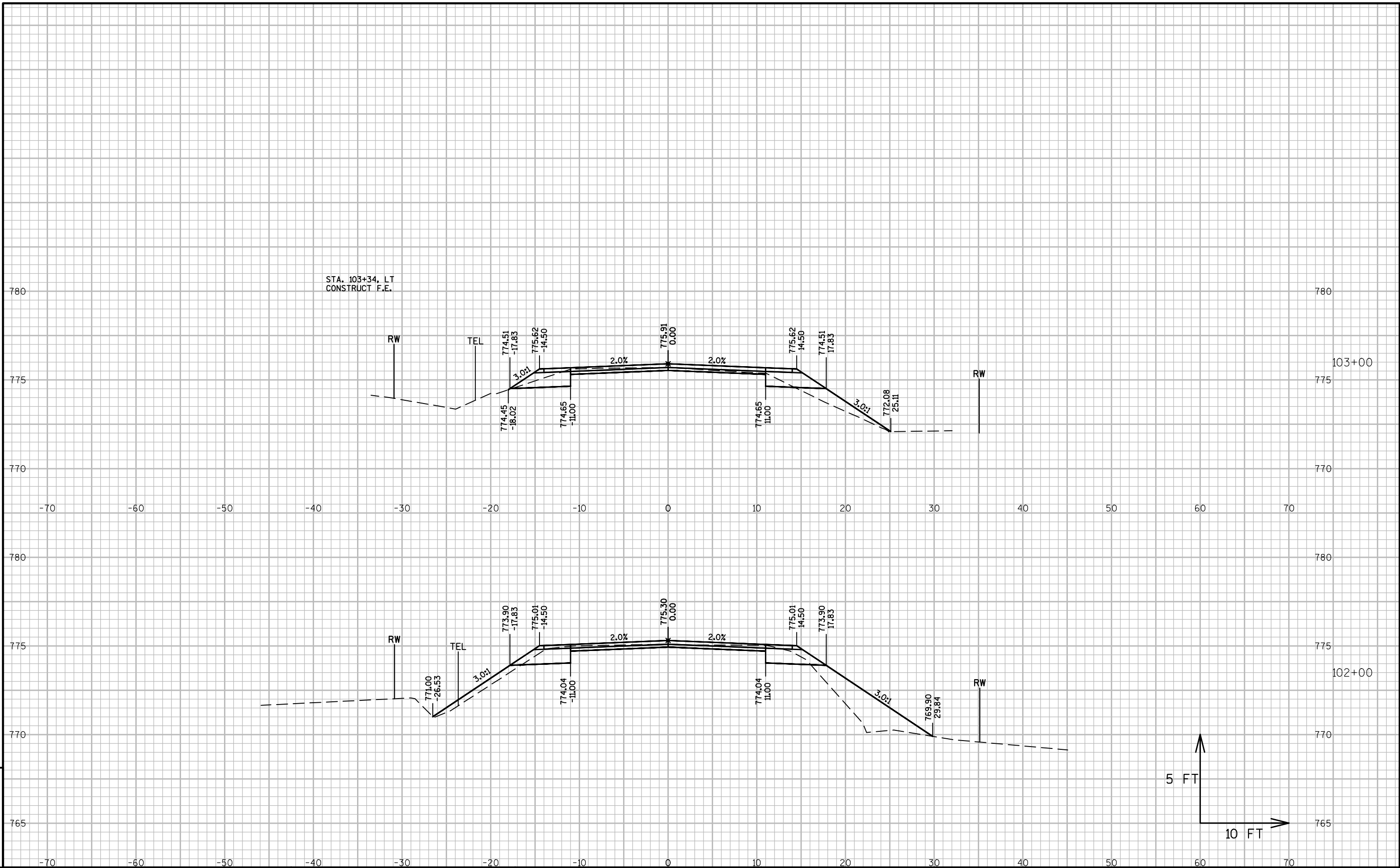
STATION	Distance (FT)	AREA (SF)					Incremental Vol (CY) (Unadjusted)					Cumulative Vol (CY)								Mass Ordinate
		Cut	Fill	Marsh Exc	Rock Exc	EBS	Cut	Fill	Marsh Exc	Rock Exc	EBS	Cut 1.00	Expanded Fill 1.30	Expanded Marsh	Expanded Rock 1.10	Expanded EBS	Reduced Marsh	Reduced EBS		
														Backfill 1.50		in Fill 0.60	In Fill 0.80			
																		Note 1	Note 3	
100+16		0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
101+00	84	6.74	0.25	0	0	0	10	0	0	0	0	10	0	0	0	0	0	0	10	
102+00	100	6.98	18.26	0	0	0	25	34	0	0	0	36	45	0	0	0	0	0	-9	
103+00	100	4.38	4.39	0	0	0	21	42	0	0	0	57	100	0	0	0	0	0	-43	
104+00	100	6.43	18.19	0	0	0	20	42	0	0	0	77	154	0	0	0	0	0	-77	
105+00	100	4.01	12.94	0	0	0	19	58	0	0	0	96	229	0	0	0	0	0	-133	
106+00	100	5.47	6.27	0	0	0	18	36	0	0	0	114	275	0	0	0	0	0	-161	
107+00	100	6.29	6.73	0	0	0	22	24	0	0	0	136	306	0	0	0	0	0	-171	
108+00	100	5.24	4.46	0	0	0	21	21	0	0	0	157	333	0	0	0	0	0	-176	
109+00	100	3.41	5.13	0	0	0	16	18	0	0	0	173	356	0	0	0	0	0	-183	
110+00	100	4.72	2.02	0	0	0	15	13	0	0	0	188	374	0	0	0	0	0	-186	
111+00	100	5.77	1.13	0	0	0	19	6	0	0	0	207	381	0	0	0	0	0	-174	
112+00	100	6.33	4.43	0	0	0	22	10	0	0	0	230	395	0	0	0	0	0	-165	
113+00	100	5.99	5.58	0	0	0	23	19	0	0	0	253	419	0	0	0	0	0	-166	
114+00	100	4.88	2.51	0	0	0	20	15	0	0	0	273	438	0	0	0	0	0	-165	
115+00	100	5.39	1.18	0	0	0	19	7	0	0	0	292	447	0	0	0	0	0	-155	
116+00	100	6.32	1.00	0	0	0	22	4	0	0	0	313	452	0	0	0	0	0	-139	
117+00	100	4.32	3.88	0	0	0	20	9	0	0	0	333	464	0	0	0	0	0	-131	
118+00	100	3.46	17.16	0	0	0	14	39	0	0	0	348	515	0	0	0	0	0	-167	
119+00	100	3.57	16.05	0	0	0	13	62	0	0	0	361	595	0	0	0	0	0	-234	
120+00	100	4.44	1.30	0	0	0	15	32	0	0	0	375	637	0	0	0	0	0	-261	
121+00	100	4.78	2.10	0	0	0	17	6	0	0	0	392	645	0	0	0	0	0	-252	
122+00	100	4.83	2.92	0	0	0	18	9	0	0	0	410	657	0	0	0	0	0	-246	
123+00	100	5.50	3.40	0	0	0	19	12	0	0	0	429	672	0	0	0	0	0	-243	
124+00	100	4.14	7.29	0	0	0	18	20	0	0	0	447	698	0	0	0	0	0	-250	
125+00	100	4.24	11.13	0	0	0	16	34	0	0	0	463	742	0	0	0	0	0	-279	
126+00	100	5.50	6.89	0	0	0	18	33	0	0	0	481	785	0	0	0	0	0	-305	
127+03	103	10.42	7.50	0	0	0	30	27	0	0	0	511	821	0	0	0	0	0	-310	
128+00	97	5.12	10.02	0	0	0	28	31	0	0	0	539	862	0	0	0	0	0	-323	
129+00	100	11.68	0.00	0	0	0	31	19	0	0	0	570	886	0	0	0	0	0	-316	
130+00	100	6.61	3.65	0	0	0	34	7	0	0	0	604	895	0	0	0	0	0	-291	
131+00	100	4.86	2.43	0	0	0	21	11	0	0	0	625	910	0	0	0	0	0	-284	
132+00	100	11.22	0.34	0	0	0	30	5	0	0	0	655	916	0	0	0	0	0	-261	
133+00	100	4.14	1.58	0	0	0	28	4	0	0	0	684	921	0	0	0	0	0	-237	
134+00	100	5.97	0.88	0	0	0	19	5	0	0	0	702	927	0	0	0	0	0	-224	
135+00	100	4.96	0.53	0	0	0	20	3	0	0	0	723	930	0	0	0	0	0	-208	
136+00	100	10.97	0.16	0	0	0	30	1	0	0	0	752	932	0	0	0	0	0	-180	
137+00	100	6.69	0.03	0	0	0	33	0	0	0	0	785	932	0	0	0	0	0	-148	
138+00	100	4.57	0.72	0	0	0	21	1	0	0	0	806	934	0	0	0	0	0	-128	
139+00	100	4.77	1.36	0	0	0	17	4	0	0	0	823	939	0	0	0	0	0	-116	
140+00	100	6.65	11.09	0	0	0	21	23	0	0	0	844	969	0	0	0	0	0	-125	
141+00	100	14.56	0.00	0	0	0	39	21	0	0	0	883	996	0	0	0	0	0	-112	
142+00	100	5.45	0.07	0	0	0	37	0	0	0	0	920	996	0	0	0	0	0	-76	
143+00	100	5.23	1.98	0	0	0	20	4	0	0	0	940	1001	0	0	0	0	0	-61	
144+00	100	3.98	10.86	0	0	0	17	24	0	0	0	957	1032	0	0	0	0	0	-75	
145+00	100	7.05	1.88	0	0	0	20	24	0	0	0	978	1063	0	0	0	0	0	-85	
146+00	100	6.76	0.50	0	0	0	26	4	0	0	0	1003	1068	0	0	0	0	0	-65	
147+00	100	6.30	1.98	0	0	0	24	5	0	0	0	1027	1074	0	0	0	0	0	-47	
148+00	100	4.75	5.56	0	0	0	20	14	0	0	0	1048	1092	0	0	0	0	0	-45	
149+00	100	7.11	0.00	0	0	0	22	10	0	0	0	1070	1106	0	0	0	0	0	-36	
150+00	100	2.71	5.84	0	0	0	18	11	0	0	0	1088	1120	0	0	0	0	0	-32	
151+00	100	3.67	8.97	0	0	0	12	27	0	0	0	1100	1156	0	0	0	0	0	-56	
152+00	100	4.40	11.25	0	0	0	15	37	0	0	0	1115	1204	0	0	0	0	0	-89	
153+00	100	3.96	8.79	0	0	0	15	37	0	0	0	1130	1252	0	0	0	0	0	-122	
153+75	75	5.83	0.34	0	0	0	14	13	0	0	0	1144	1269	0	0	0	0	0	-125	
155+33	158	0.00	0.00	0	0	0	17	1	0	0	0	1161	1270	0	0	0	0	0	-109	
						COLUMN TOTALS	1161	977	0	0	0									

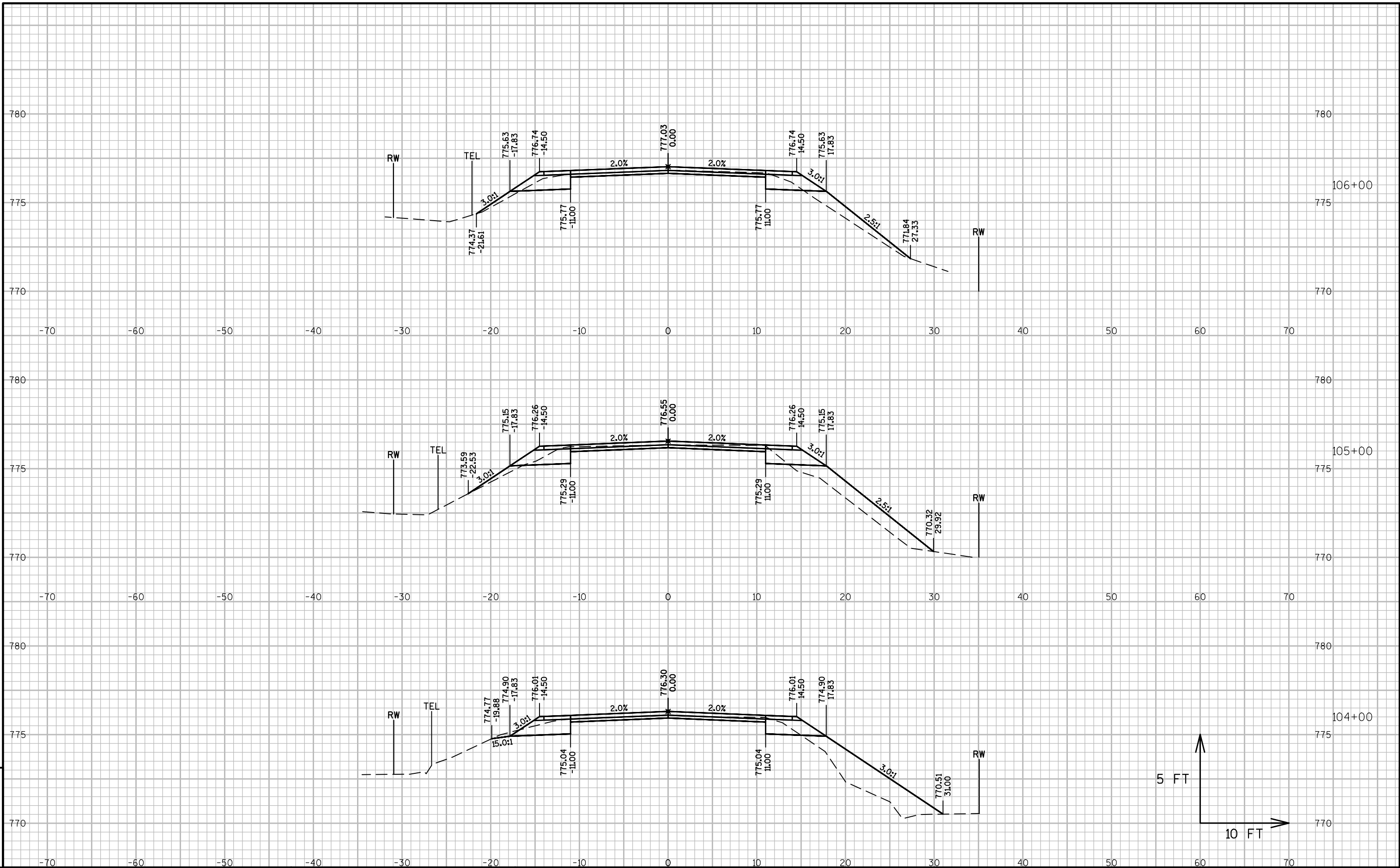
Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded Marsh Backfill	Will be backfilled with Granular Backfill
5 - Expanded EBS	Will be backfilled with Granular Backfill
6 - Reduced Marsh in Fill	Reduced Marsh Excavation that can be used in Fill
7 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
8 - Mass Ordinate	If Marsh or EBS to be backfilled with Cut or Borrow: [(Cut + Marsh Exc + EBS) - ((Fill - Reduced Marsh in Fill) - (Reduced EBS in Fill) - Expanded Rock) * Fill Factor]]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Granular: [(Cut + EBS + Marsh Exc) - ((Fill - (Reduced Marsh in Fill) - (Reduced EBS in Fill) - (Expanded Rock)) * Fill Factor]]]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Granular: [(Cut) - ((Fill - Expanded Rock) * Fill Factor)]]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Cut or Borrow: [(Cut) - ((Fill - Expanded Rock) * Fill Factor)]]

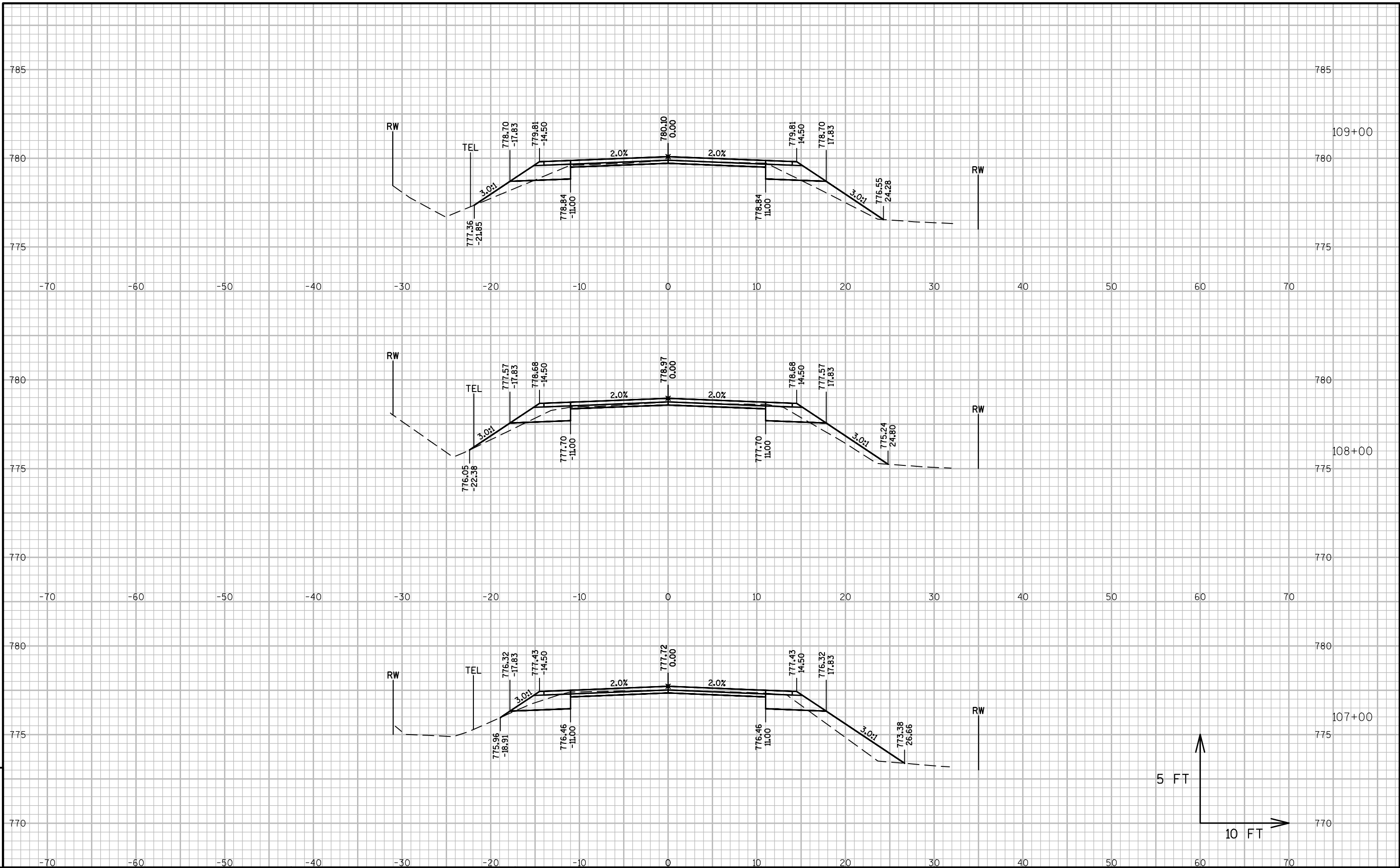
STATION	Distance (FT)	AREA (SF)					Incremental Vol (CY) (Unadjusted)					Cumulative Vol (CY)								Mass Ordinate		
		Cut	Fill	Marsh Exc	Rock Exc	EBS	Cut	Fill	Marsh Exc	Rock Exc	EBS	Cut 1.00 Note 1	Expanded Fill 1.30	Expanded Marsh		Expanded EBS		Reduced Marsh			Reduced EBS	
														Backfill 1.50 Note 4	Expanded Rock 1.10	Backfill 1.50 Note 5	in Fill 0.60 Note 6	In Fill 0.80 Note 7				
155+33		0.00	0.00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
156+00	67	7.33	3.96	0	0	0	9	5	0	0	0	9	6	0	0	0	0	0	0	0	21	
158+00	200	7.70	1.09	0	0	0	56	19	0	0	0	65	31	0	0	0	0	0	0	0	52	
160+00	200	7.93	0.37	0	0	0	58	5	0	0	0	123	38	0	0	0	0	0	0	0	103	
162+00	200	5.76	4.73	0	0	0	51	19	0	0	0	173	62	0	0	0	0	0	0	0	129	
164+00	200	9.41	3.13	0	0	0	56	29	0	0	0	230	100	0	0	0	0	0	0	0	147	
166+00	200	12.81	0.13	0	0	0	82	12	0	0	0	312	116	0	0	0	0	0	0	0	214	
168+00	200	3.70	5.87	0	0	0	61	22	0	0	0	373	145	0	0	0	0	0	0	0	246	
170+00	200	6.98	5.98	0	0	0	40	44	0	0	0	412	202	0	0	0	0	0	0	0	229	
172+00	200	13.55	0.68	0	0	0	76	25	0	0	0	489	234	0	0	0	0	0	0	0	273	
174+00	200	7.93	0.43	0	0	0	80	4	0	0	0	568	239	0	0	0	0	0	0	0	347	
176+00	200	8.72	0.01	0	0	0	62	2	0	0	0	630	241	0	0	0	0	0	0	0	407	
178+00	200	9.55	0.10	0	0	0	68	0	0	0	0	697	242	0	0	0	0	0	0	0	474	
180+00	200	10.56	0.12	0	0	0	74	1	0	0	0	772	243	0	0	0	0	0	0	0	547	
182+00	200	6.32	2.26	0	0	0	63	9	0	0	0	834	254	0	0	0	0	0	0	0	598	
184+00	200	7.77	3.76	0	0	0	52	22	0	0	0	887	283	0	0	0	0	0	0	0	621	
186+00	200	4.59	13.75	0	0	0	46	65	0	0	0	932	368	0	0	0	0	0	0	0	547	
186+42	42	6.30	16.12	0	0	0	8	23	0	0	0	941	398	0	0	0	0	0	0	0	519	
186+57	15	17.85	7.53	0	0	0	7	7	0	0	0	948	406	0	0	0	0	0	0	0	575	
188+00	143	5.76	5.54	0	0	0	63	35	0	0	0	1010	451	0	0	0	0	0	0	0	617	
190+00	200	7.97	0.27	0	0	0	51	22	0	0	0	1061	479	0	0	0	0	0	0	0	604	
190+56	56	17.72	0.52	0	0	0	27	1	0	0	0	1088	480	0	0	0	0	0	0	0	607	
190+66	10	13.64	0.00	0	0	0	6	0	0	0	0	1093	481	0	0	0	0	0	0	0	685	
192+00	134	7.20	0.14	0	0	0	52	0	0	0	0	1145	481	0	0	0	0	0	0	0	762	
194+00	200	18.29	0.00	0	0	0	94	1	0	0	0	1239	482	0	0	0	0	0	0	0	855	
196+00	200	8.42	0.15	0	0	0	99	1	0	0	0	1338	482	0	0	0	0	0	0	0	954	
198+00	200	6.59	0.60	0	0	0	56	3	0	0	0	1394	486	0	0	0	0	0	0	0	1006	
200+00	200	8.93	0.00	0	0	0	57	2	0	0	0	1451	489	0	0	0	0	0	0	0	1060	
202+00	200	8.26	0.29	0	0	0	64	1	0	0	0	1515	490	0	0	0	0	0	0	0	1122	
204+00	200	9.35	0.03	0	0	0	65	1	0	0	0	1580	492	0	0	0	0	0	0	0	1186	
206+00	200	9.48	0.00	0	0	0	70	0	0	0	0	1650	492	0	0	0	0	0	0	0	1256	
208+00	200	8.45	0.53	0	0	0	67	1	0	0	0	1648	494	0	0	0	0	0	0	0	1252	
210+00	200	19.23	0.00	0	0	0	103	2	0	0	0	1750	496	0	0	0	0	0	0	0	1352	
212+00	200	6.35	0.56	0	0	0	95	2	0	0	0	1845	499	0	0	0	0	0	0	0	1444	
214+00	200	6.79	2.22	0	0	0	49	10	0	0	0	1894	512	0	0	0	0	0	0	0	1479	
216+00	200	5.45	18.73	0	0	0	45	78	0	0	0	1939	613	0	0	0	0	0	0	0	1423	
218+00	200	5.27	2.65	0	0	0	40	79	0	0	0	1979	716	0	0	0	0	0	0	0	1360	
220+00	200	15.67	0.00	0	0	0	78	10	0	0	0	2056	729	0	0	0	0	0	0	0	1425	
222+00	200	11.46	0.00	0	0	0	100	0	0	0	0	2157	729	0	0	0	0	0	0	0	1525	
224+00	200	8.45	3.04	0	0	0	74	11	0	0	0	2230	744	0	0	0	0	0	0	0	1584	
226+00	200	6.97	0.00	0	0	0	57	11	0	0	0	2288	758	0	0	0	0	0	0	0	1627	
228+00	200	9.87	0.00	0	0	0	62	0	0	0	0	2350	758	0	0	0	0	0	0	0	1689	
230+00	200	12.89	0.00	0	0	0	84	0	0	0	0	2434	758	0	0	0	0	0	0	0	1774	
232+00	200	8.46	0.12	0	0	0	79	0	0	0	0	2513	759	0	0	0	0	0	0	0	1852	
234+00	200	5.97	0.27	0	0	0	53	1	0	0	0	2567	761	0	0	0	0	0	0	0	1904	
236+00	200	10.36	0.00	0	0	0	60	1	0	0	0	2627	762	0	0	0	0	0	0	0	1963	
238+00	200	4.61	0.00	0	0	0	55	0	0	0	0	2683	762	0	0	0	0	0	0	0	1992	
239+06	106	6.08	0.00	0	0	0	21	0	0	0	0	2648	762	0	0	0	0	0	0	0	1990	
						COLUMN TOTALS	2773	586	0	0	0											

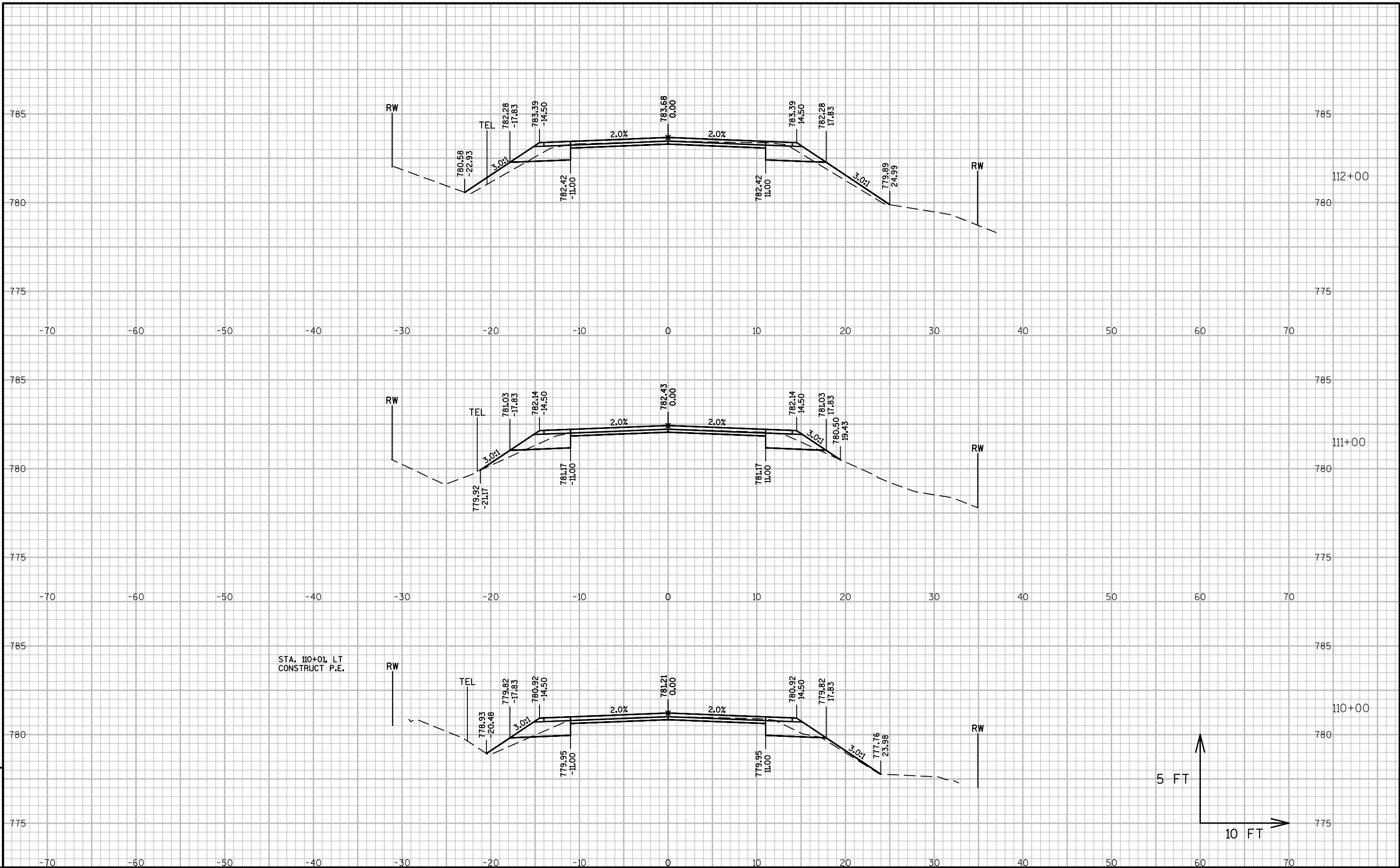
Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded Marsh Backfill	Will be backfilled with Granular Backfill
5 - Expanded EBS	Will be backfilled with Granular Backfill
6 - Reduced Marsh in Fill	Reduced Marsh Excavation that can be used in Fill
7 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
8 - Mass Ordinate	If Marsh or EBS to be backfilled with Cut or Borrow: [(Cut + Marsh Exc + EBS) - ((Fill - Reduced Marsh in Fill) - (Reduced EBS in Fill) - Expanded Rock) * Fill Factor]]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Granular: [(Cut + EBS + Marsh Exc) - ((Fill - (Reduced Marsh in Fill) - (Reduced EBS in Fill) - (Expanded Rock)) * Fill Factor))]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Granular: [(Cut) - ((Fill - Expanded Rock) * Fill Factor))]
8 - Mass Ordinate	If Marsh and EBS to be backfilled with Cut or Borrow: [(Cut) - ((Fill - Expanded Rock) * Fill Factor))]

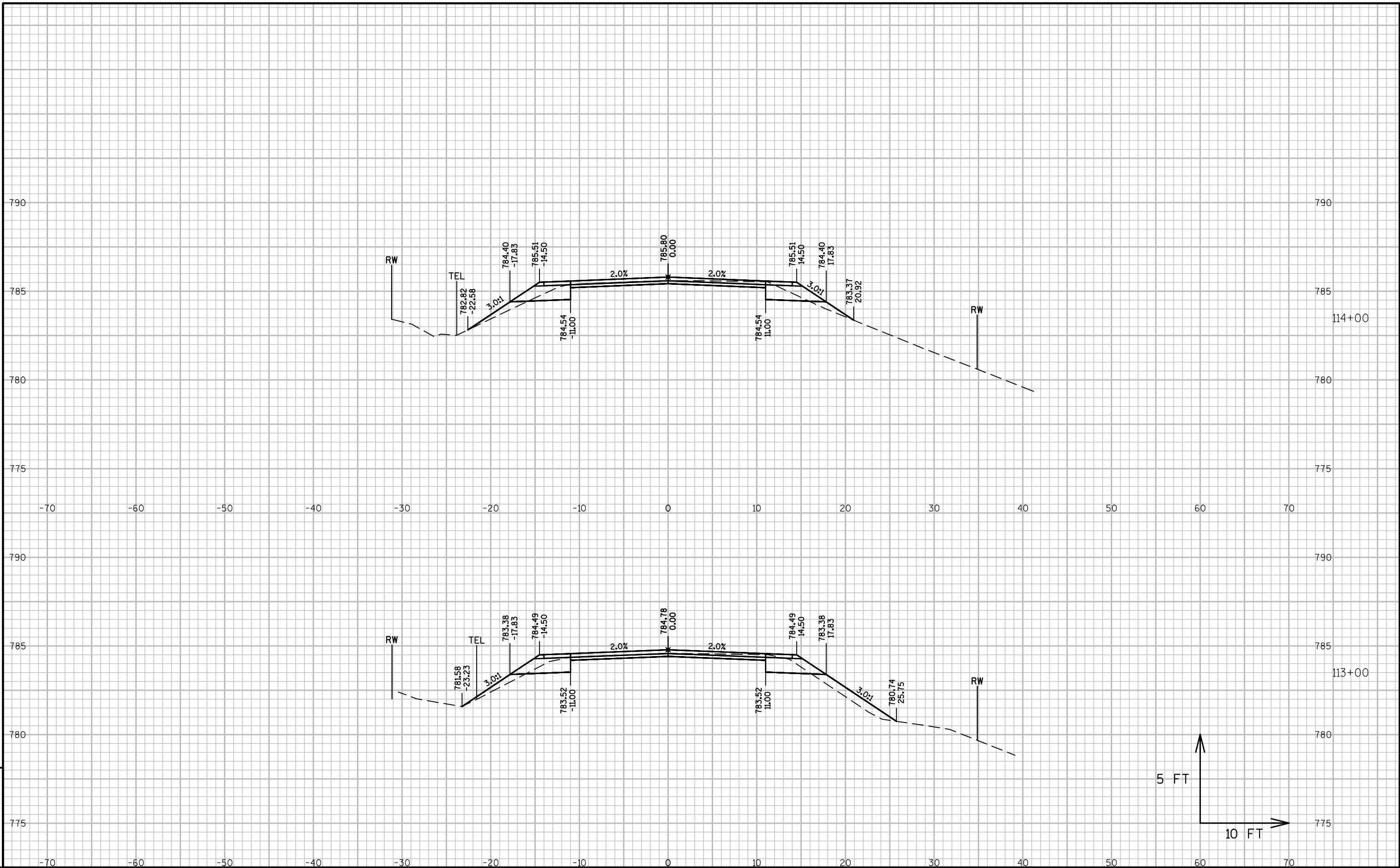


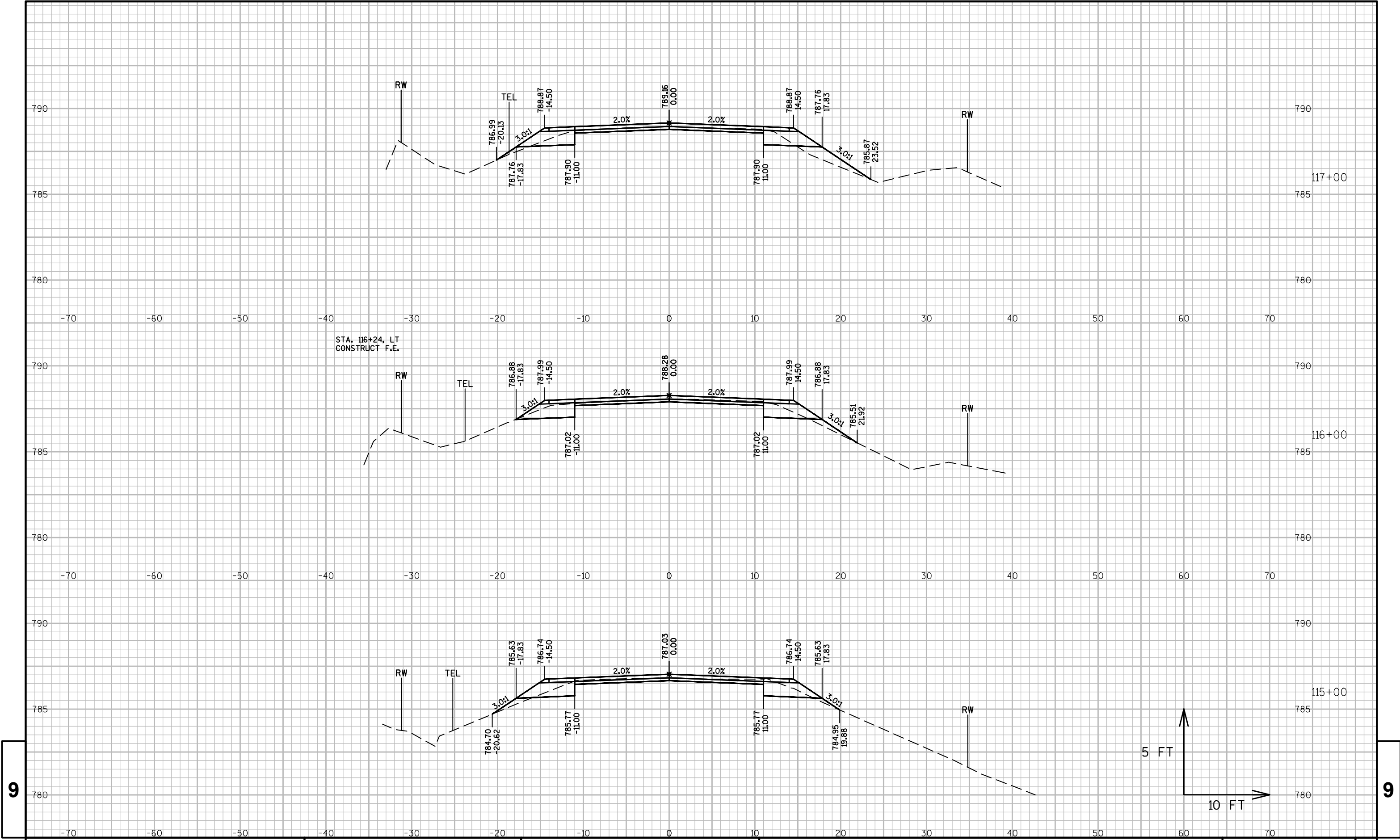






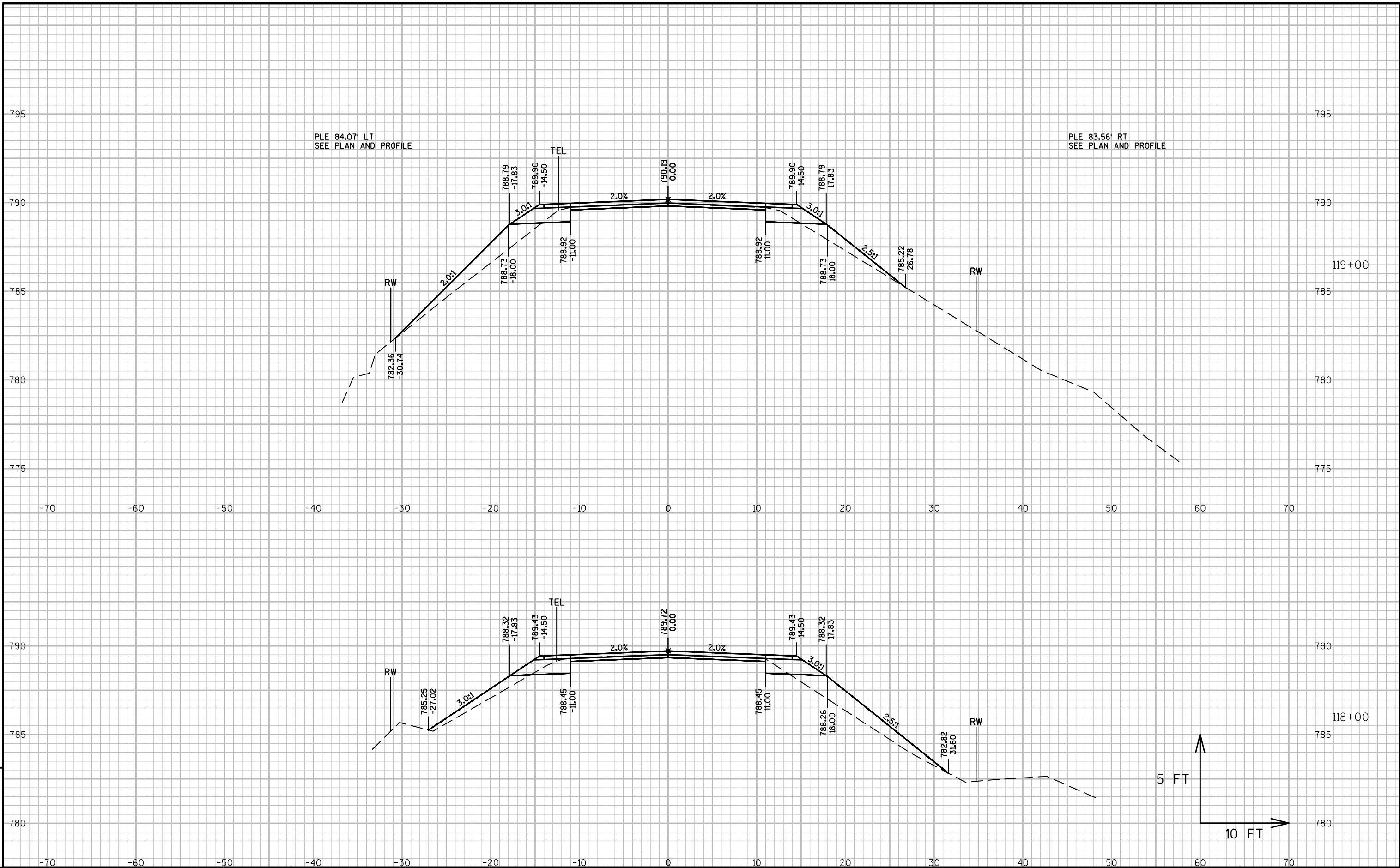






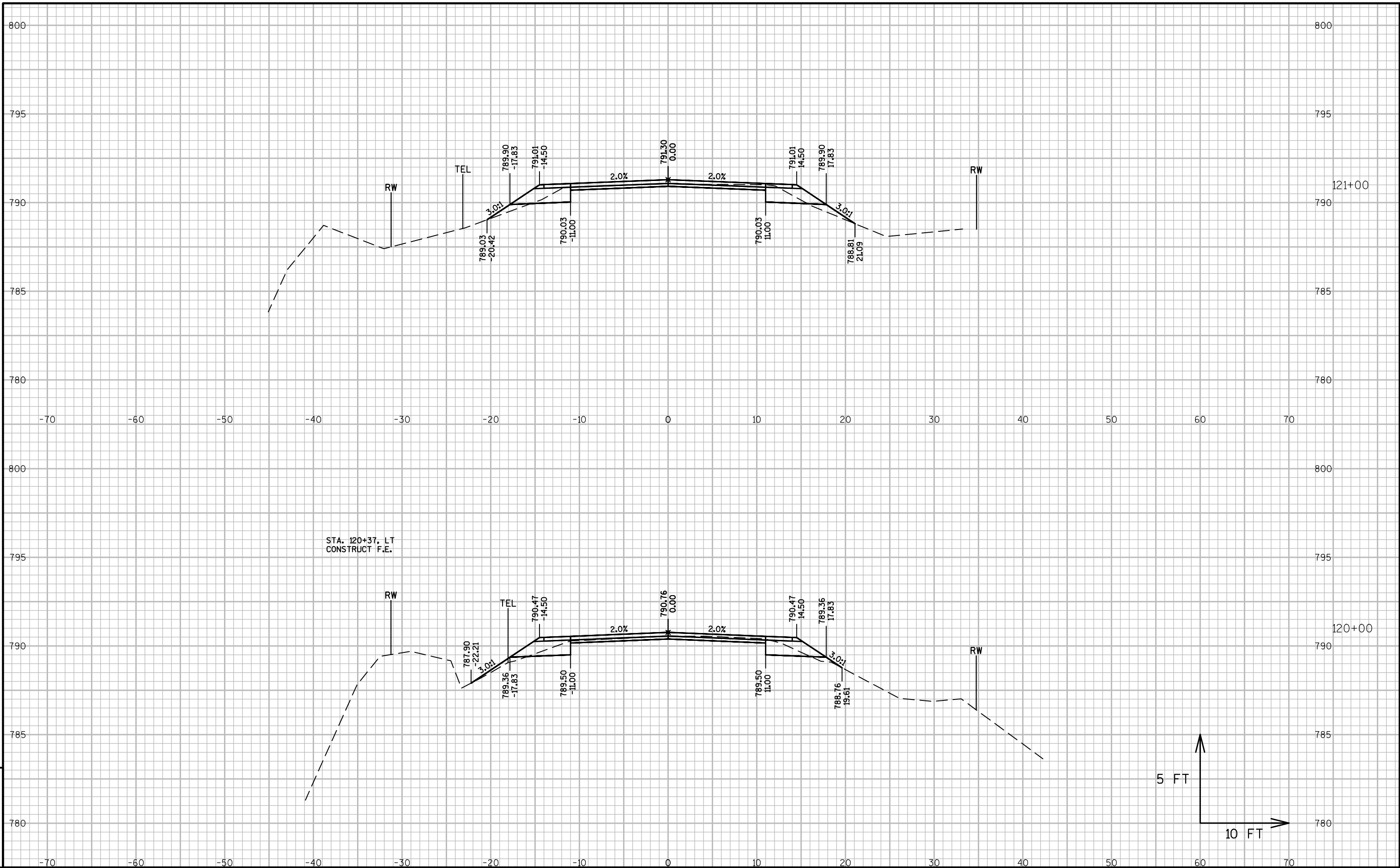
9

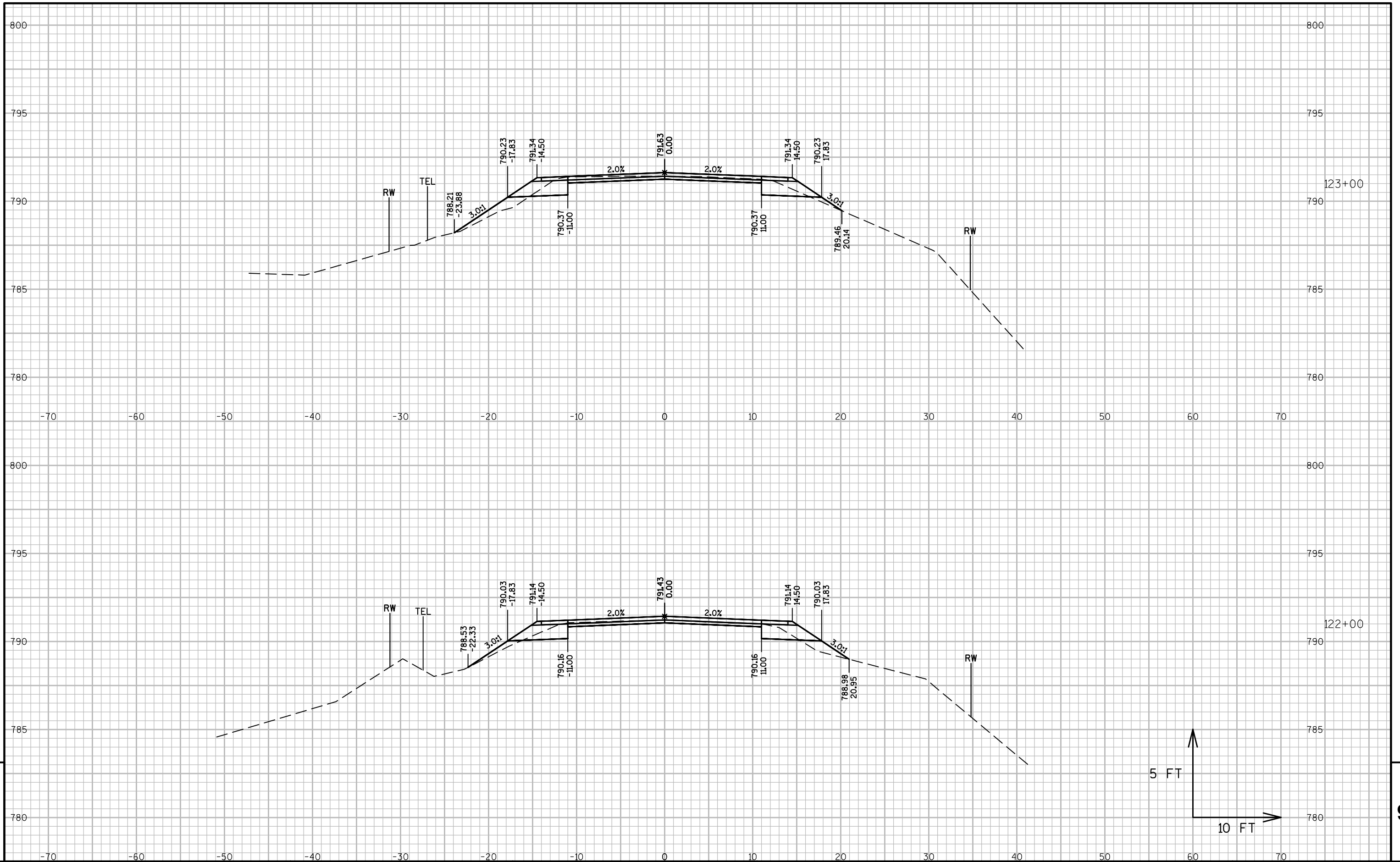
9

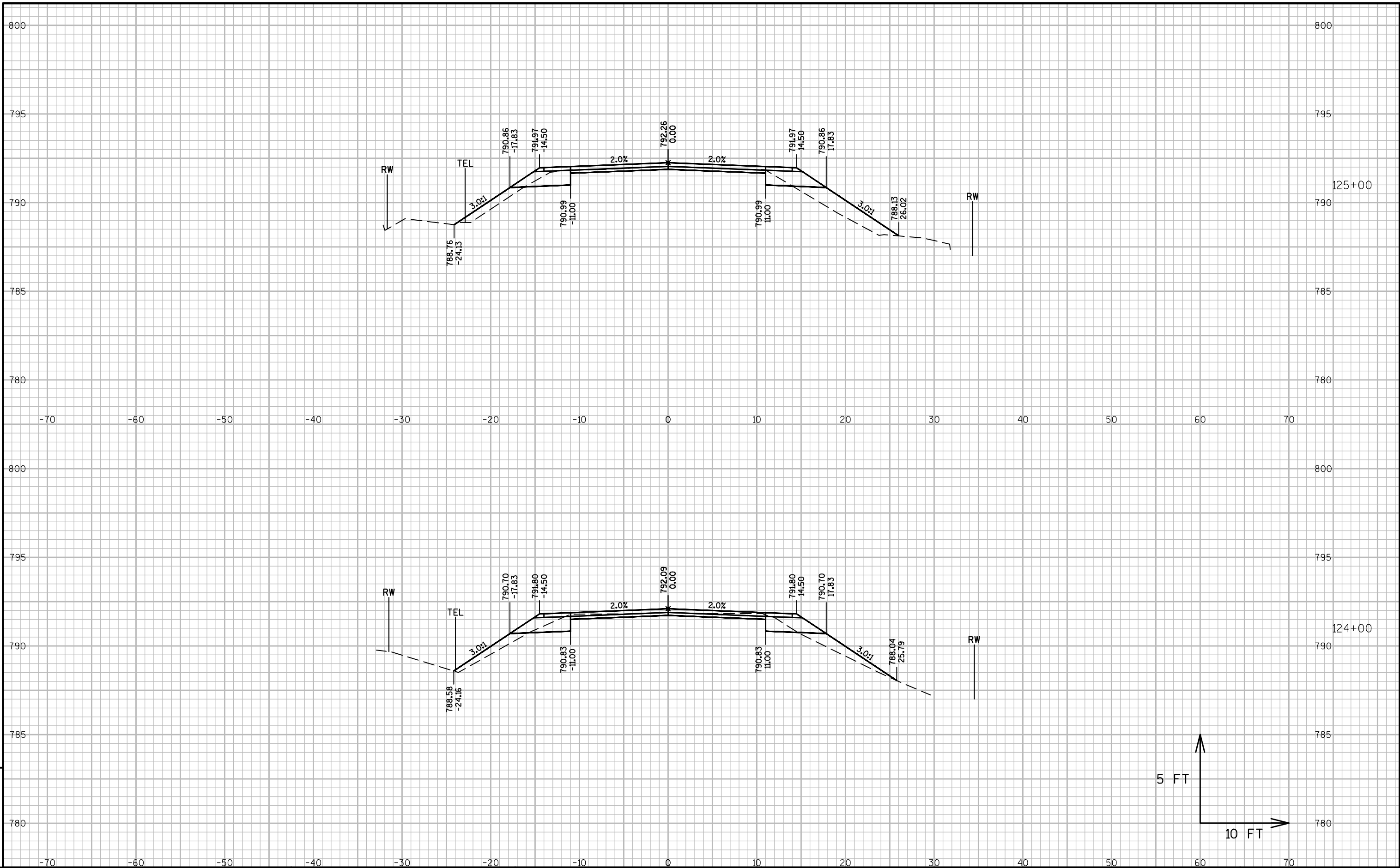


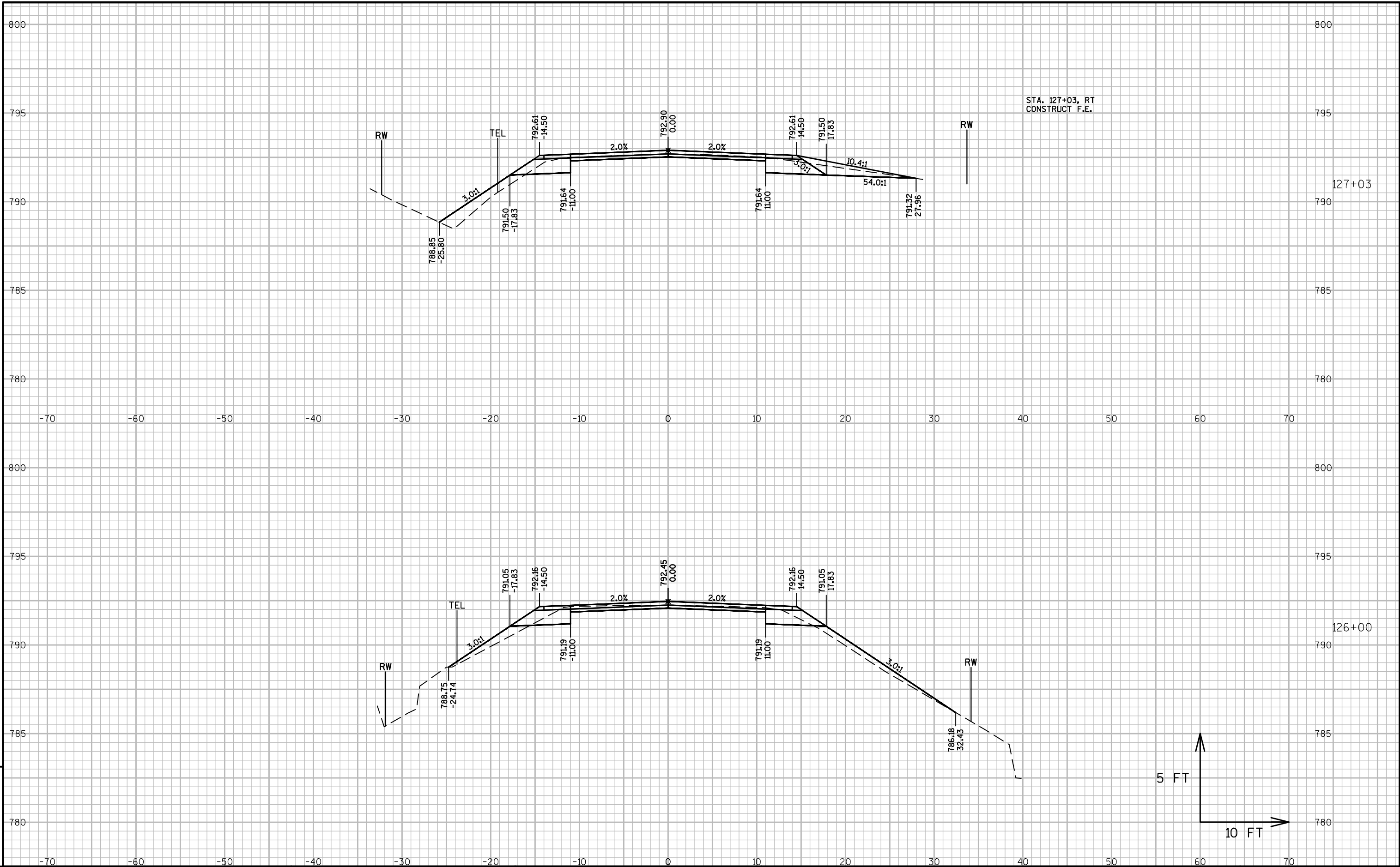
9

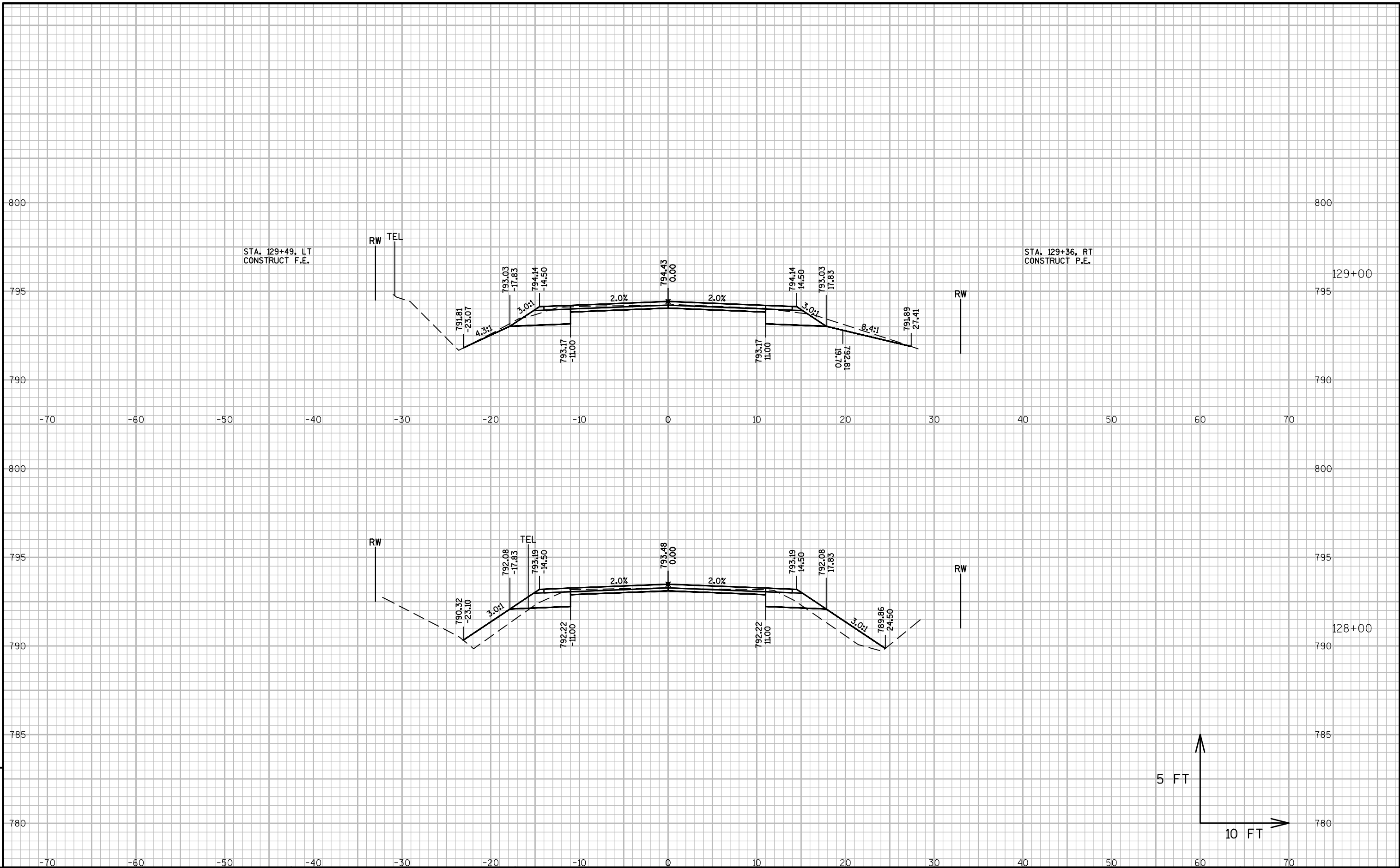
9

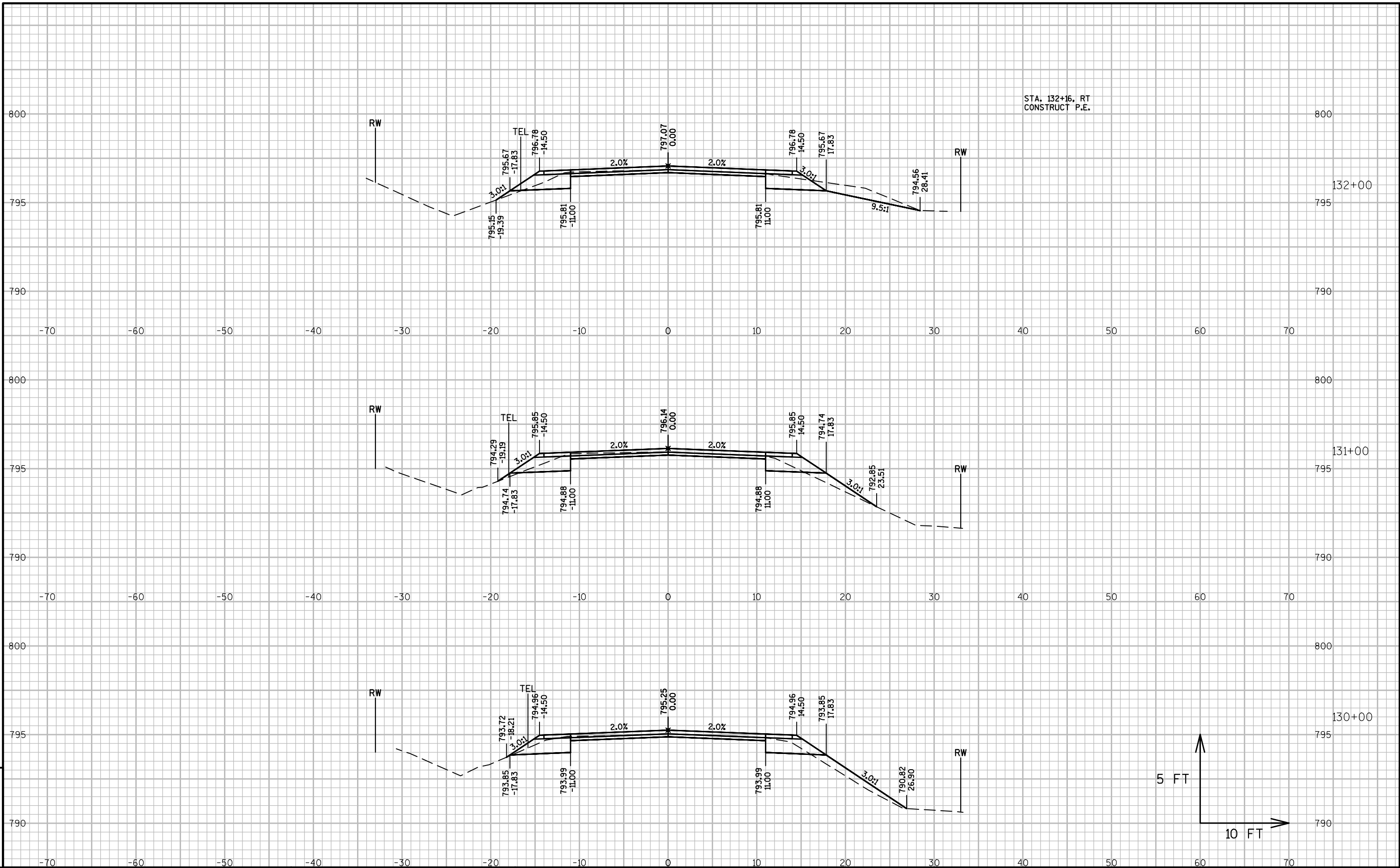


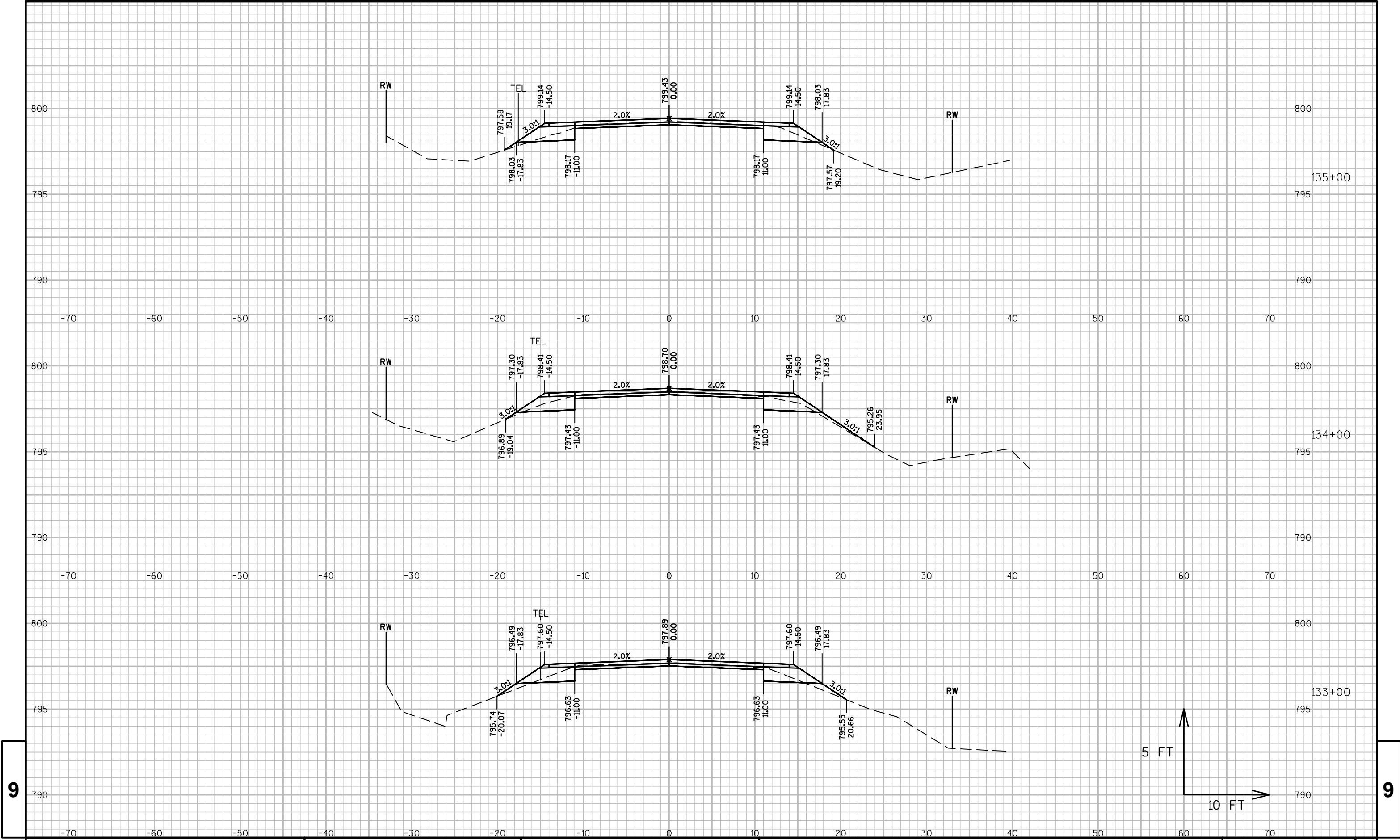


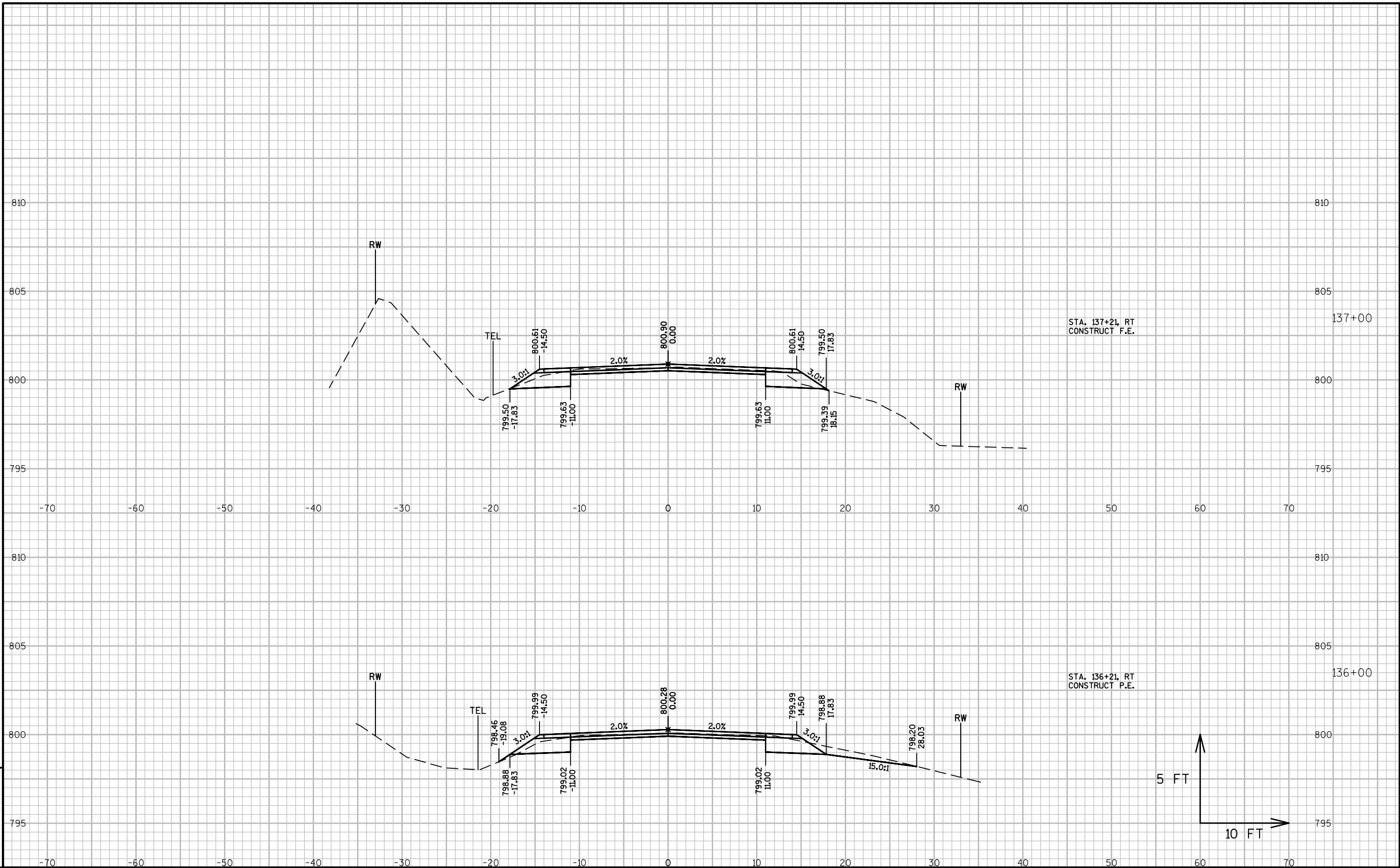


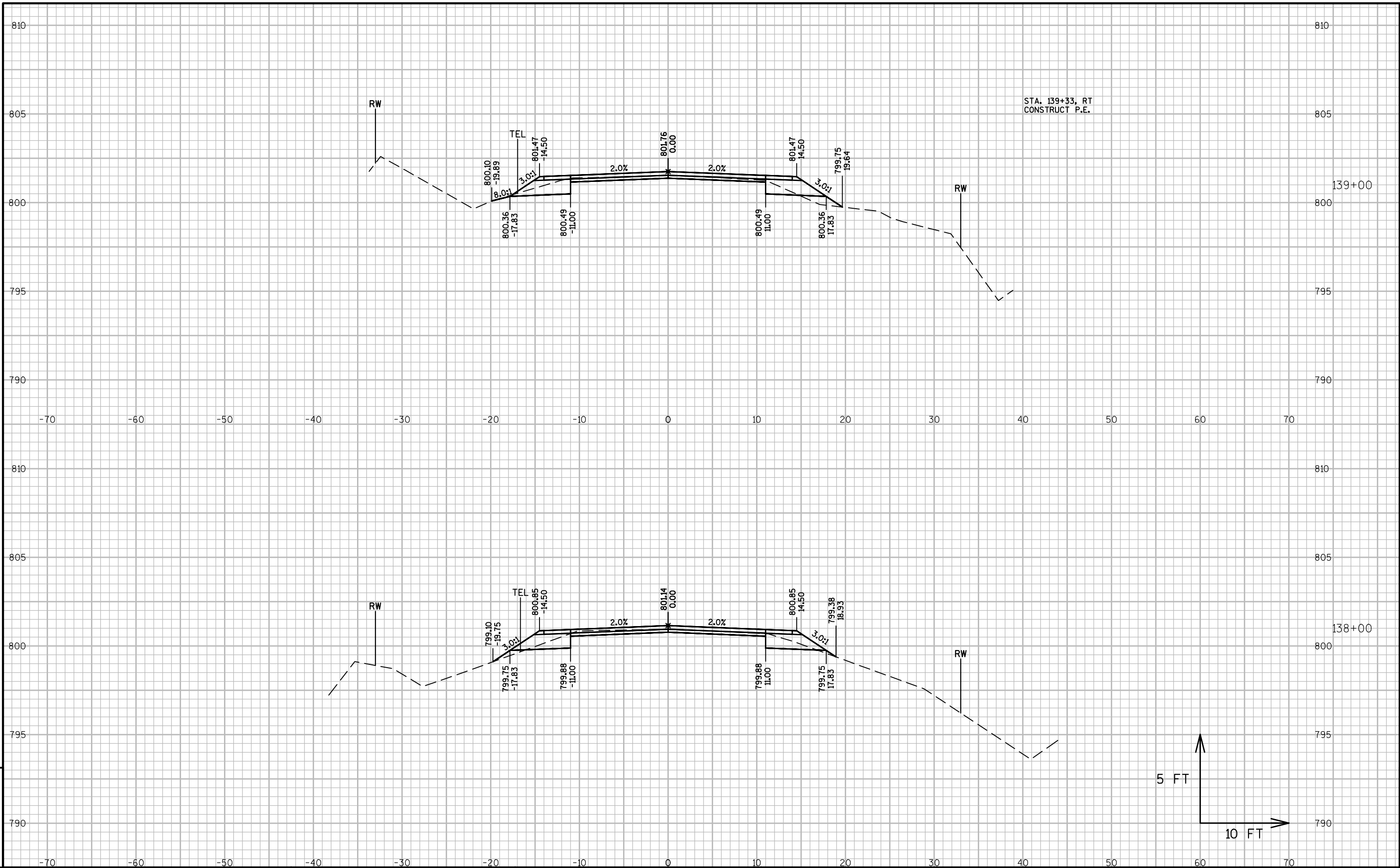


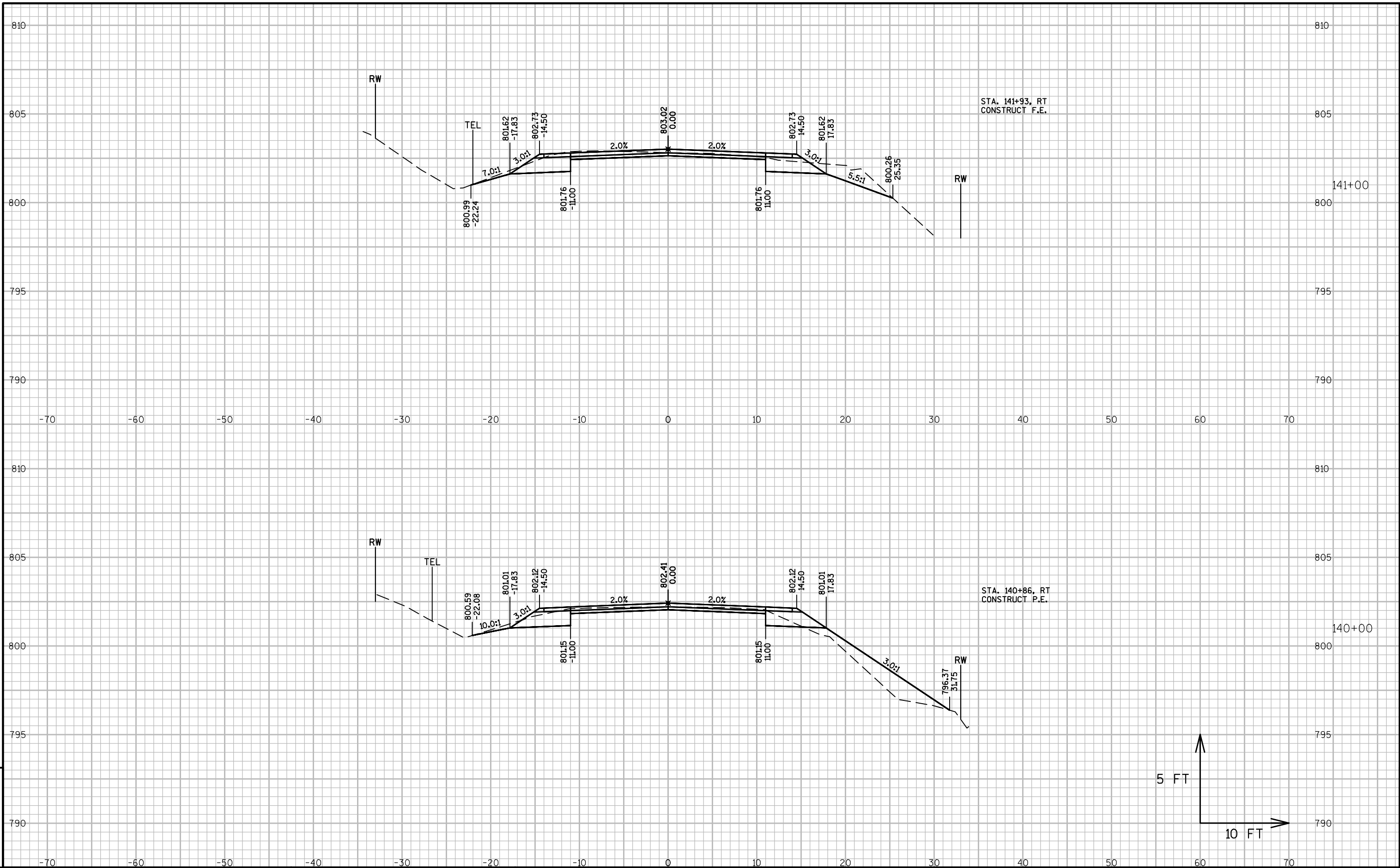


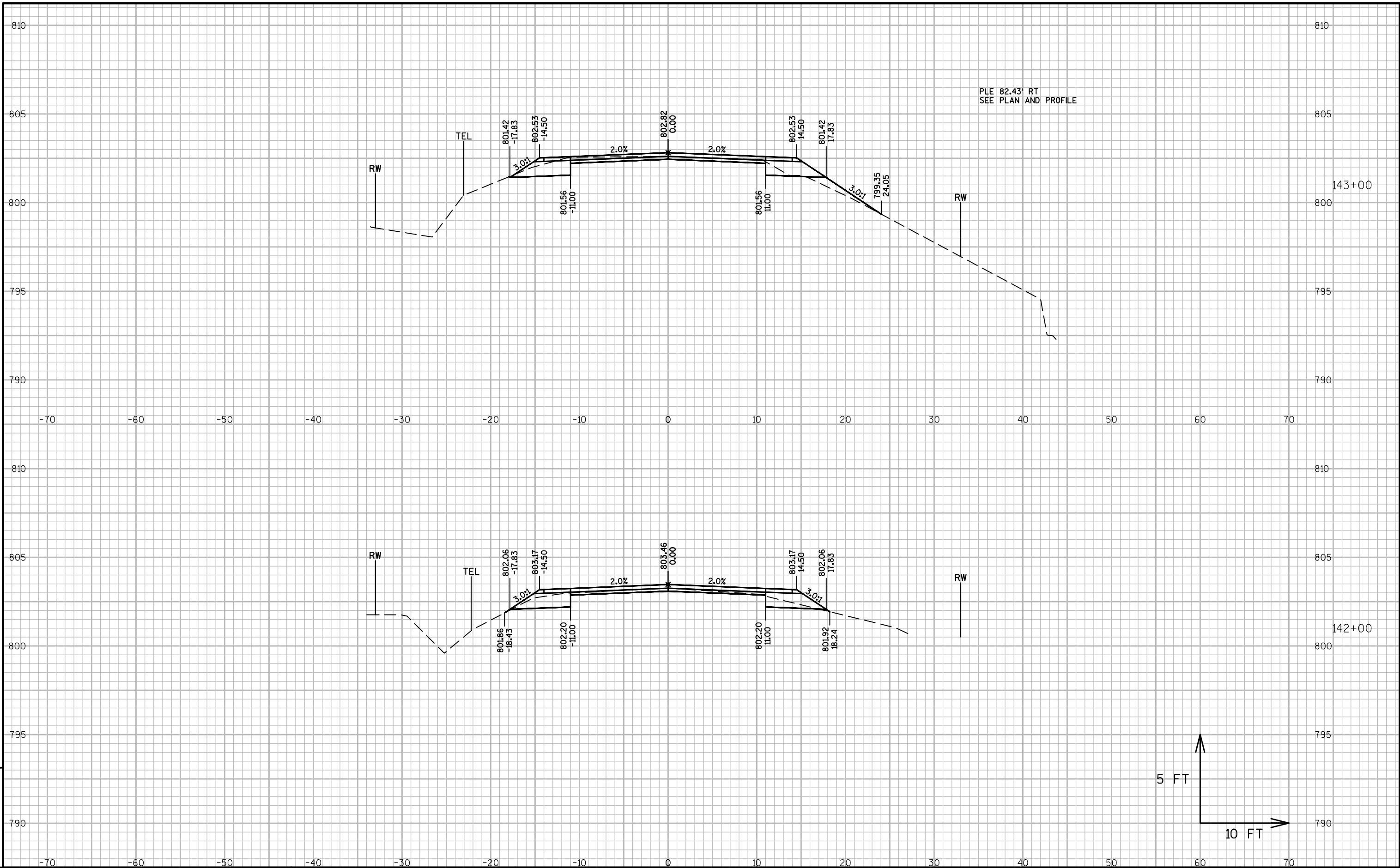


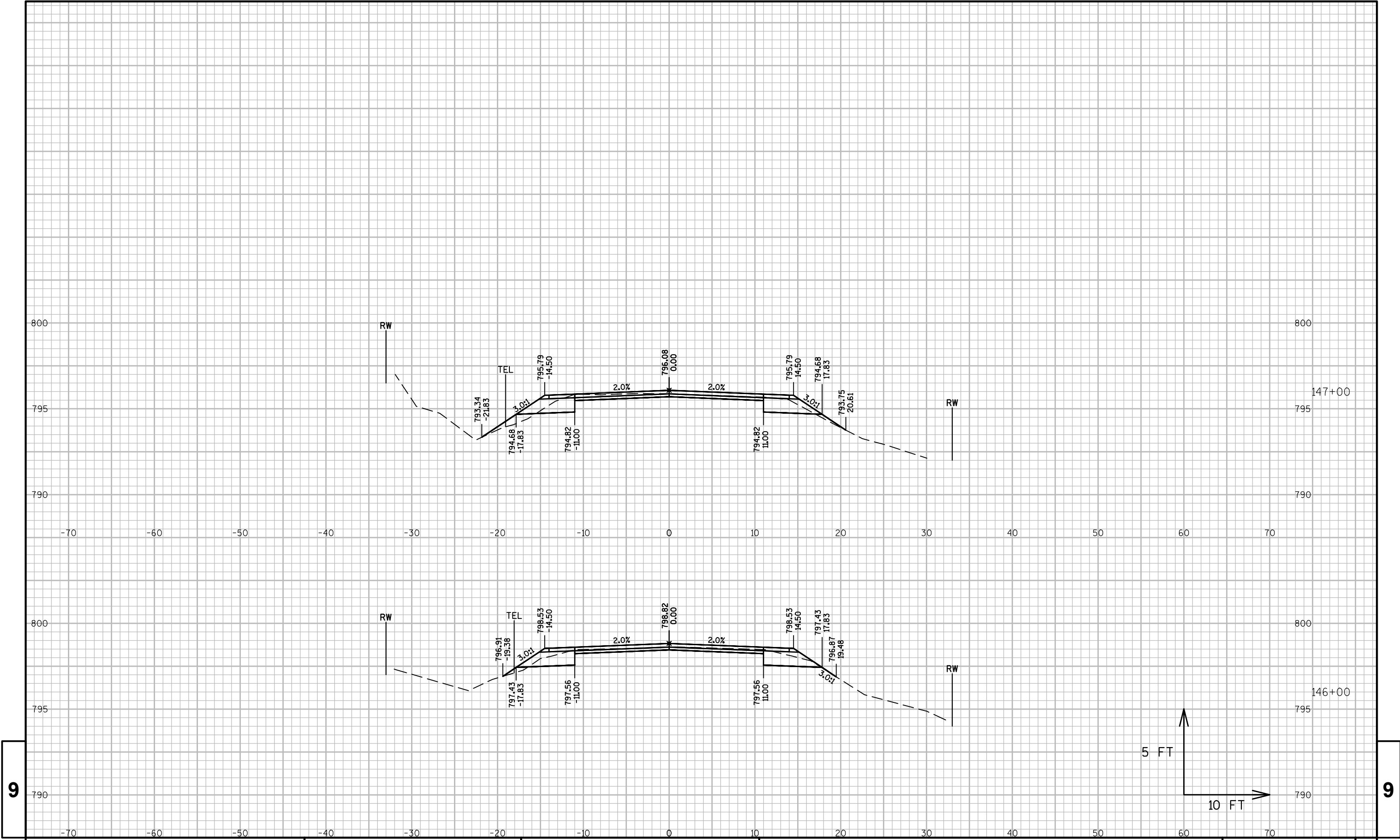






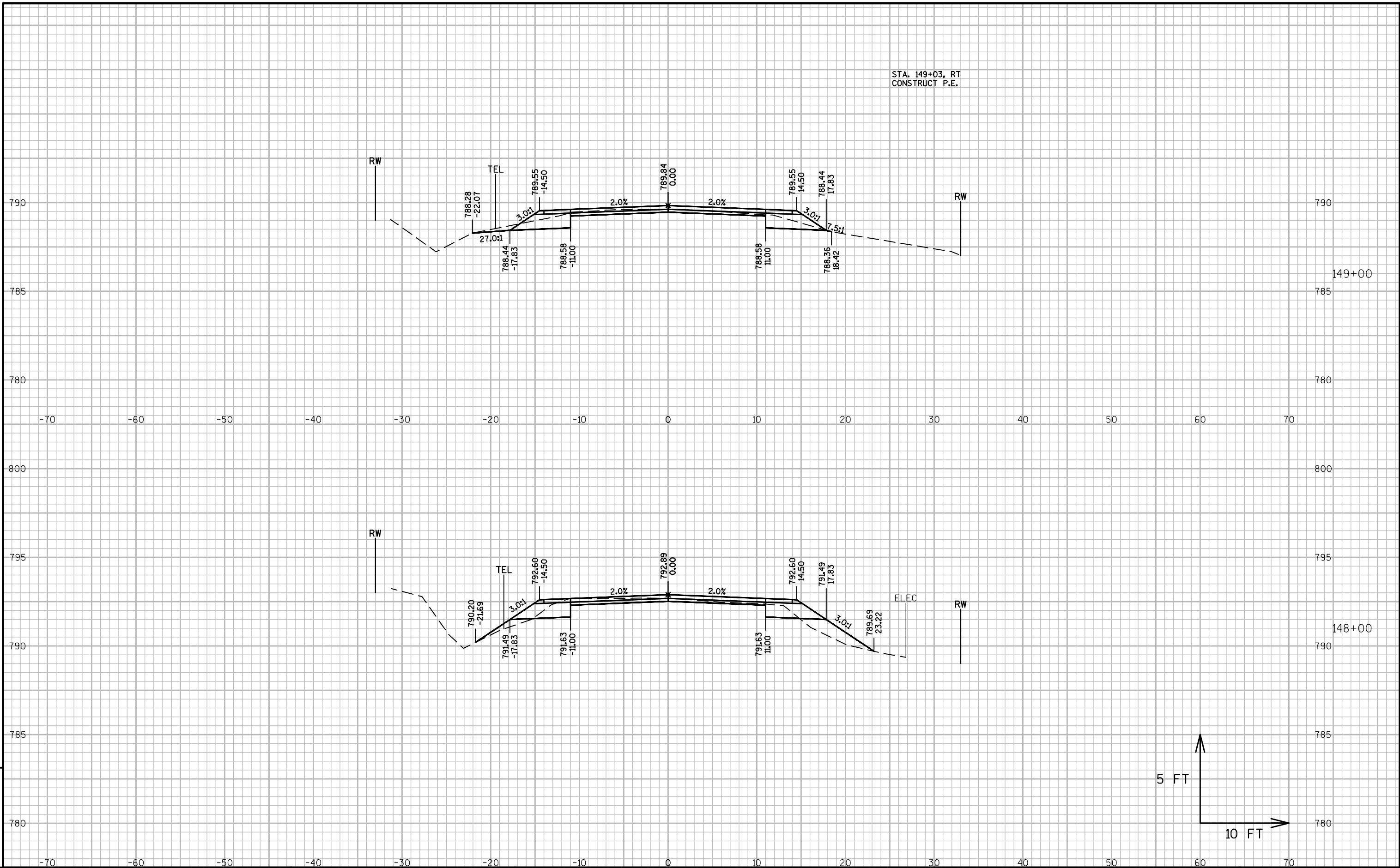


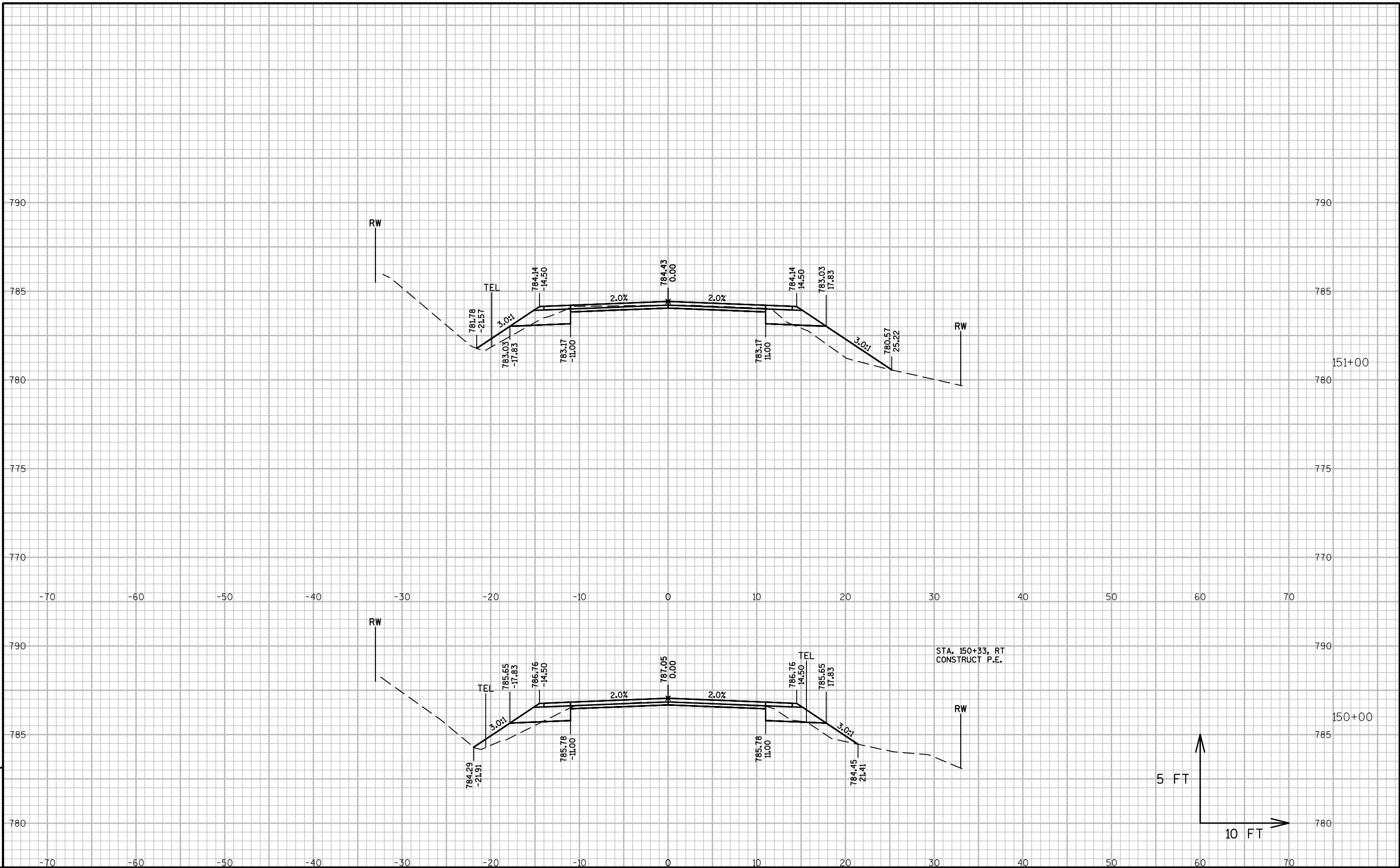


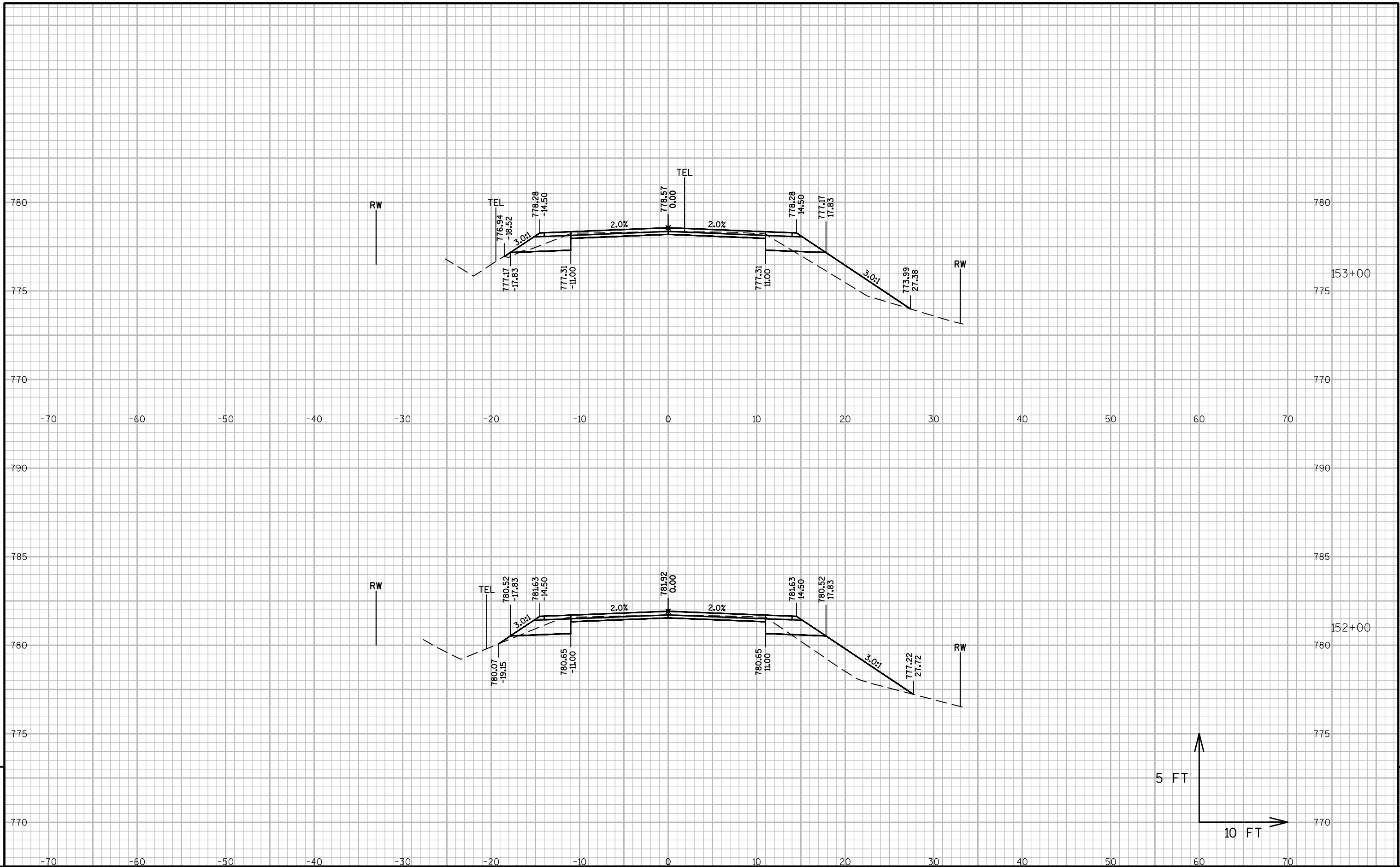


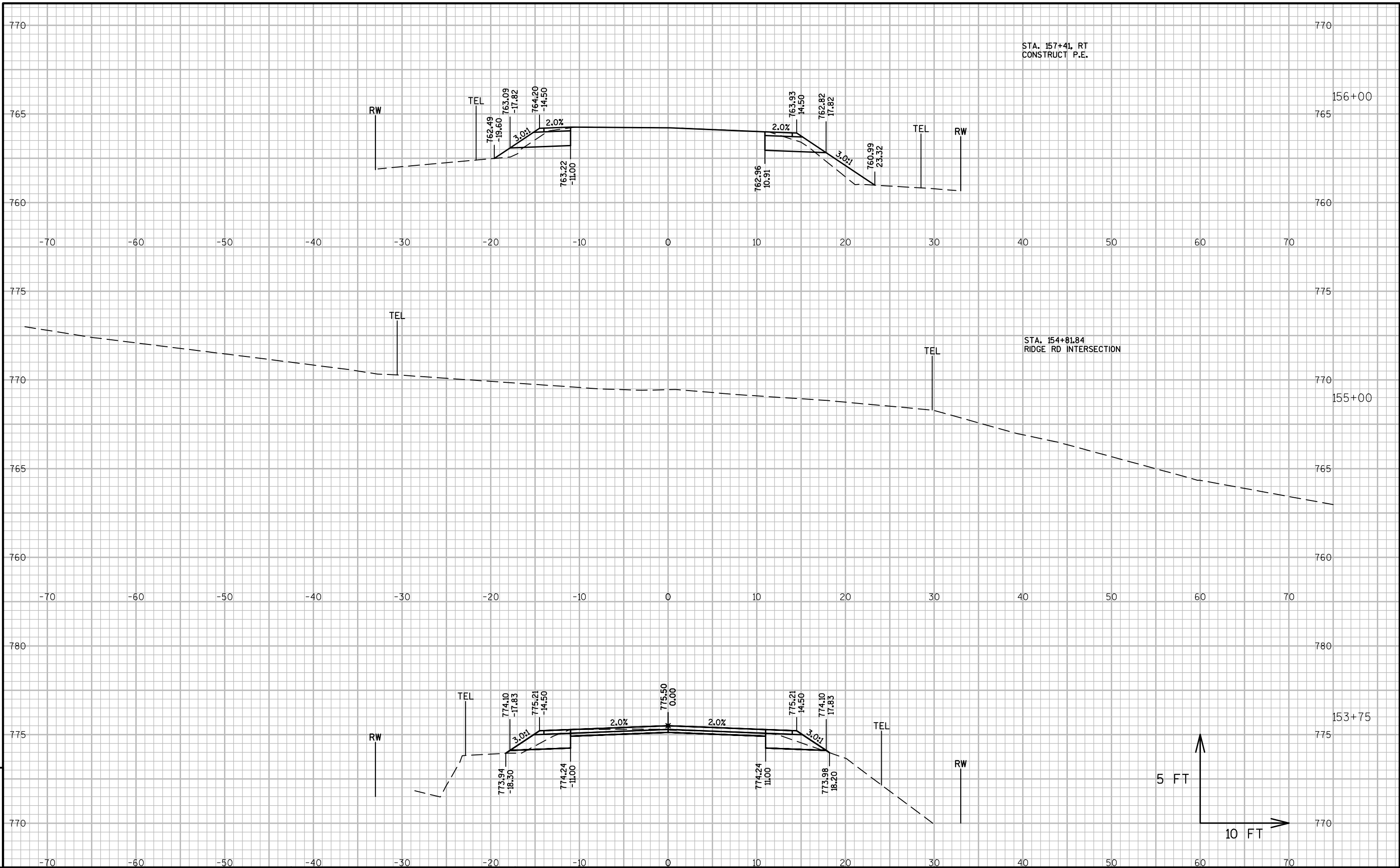
9

9

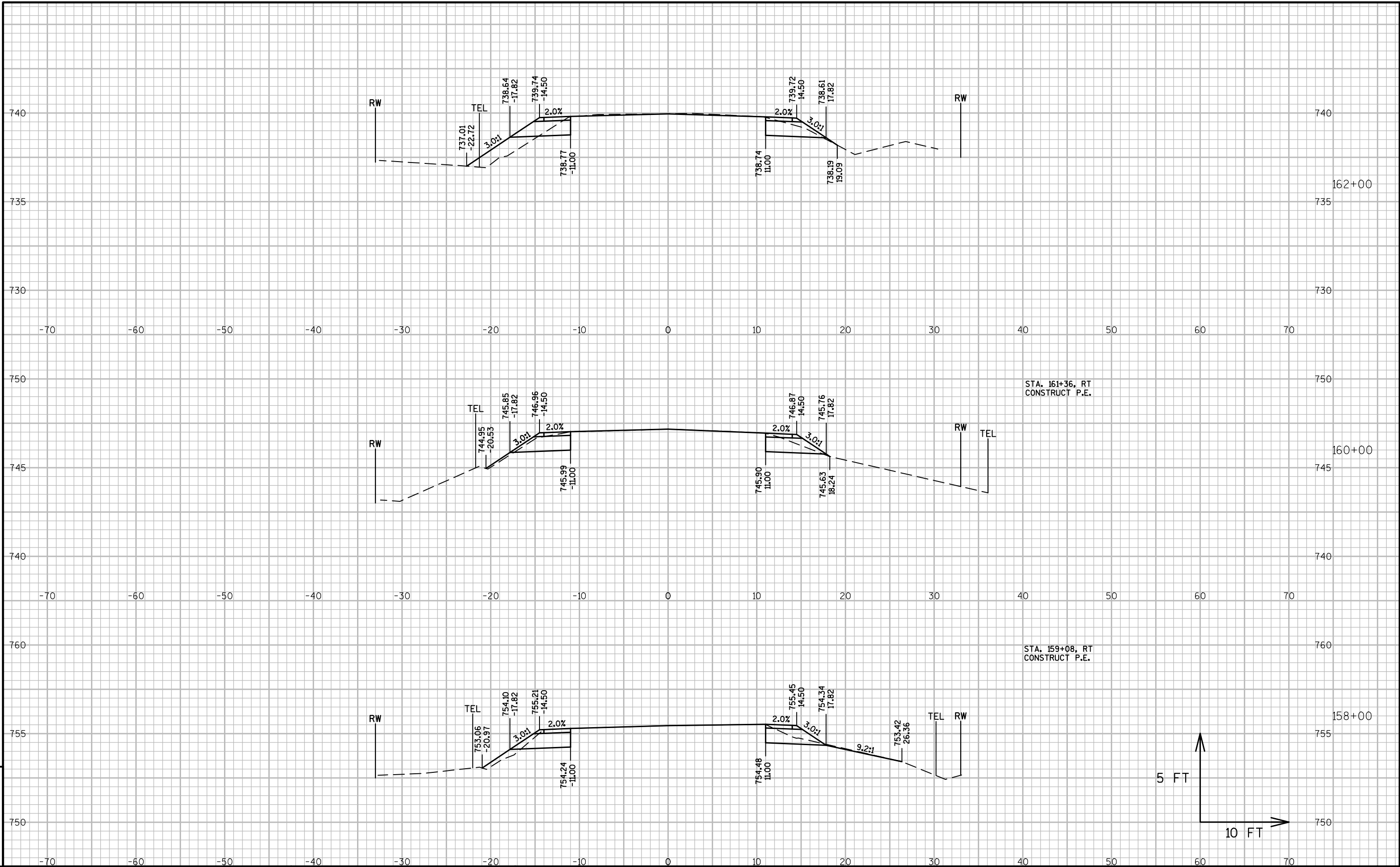




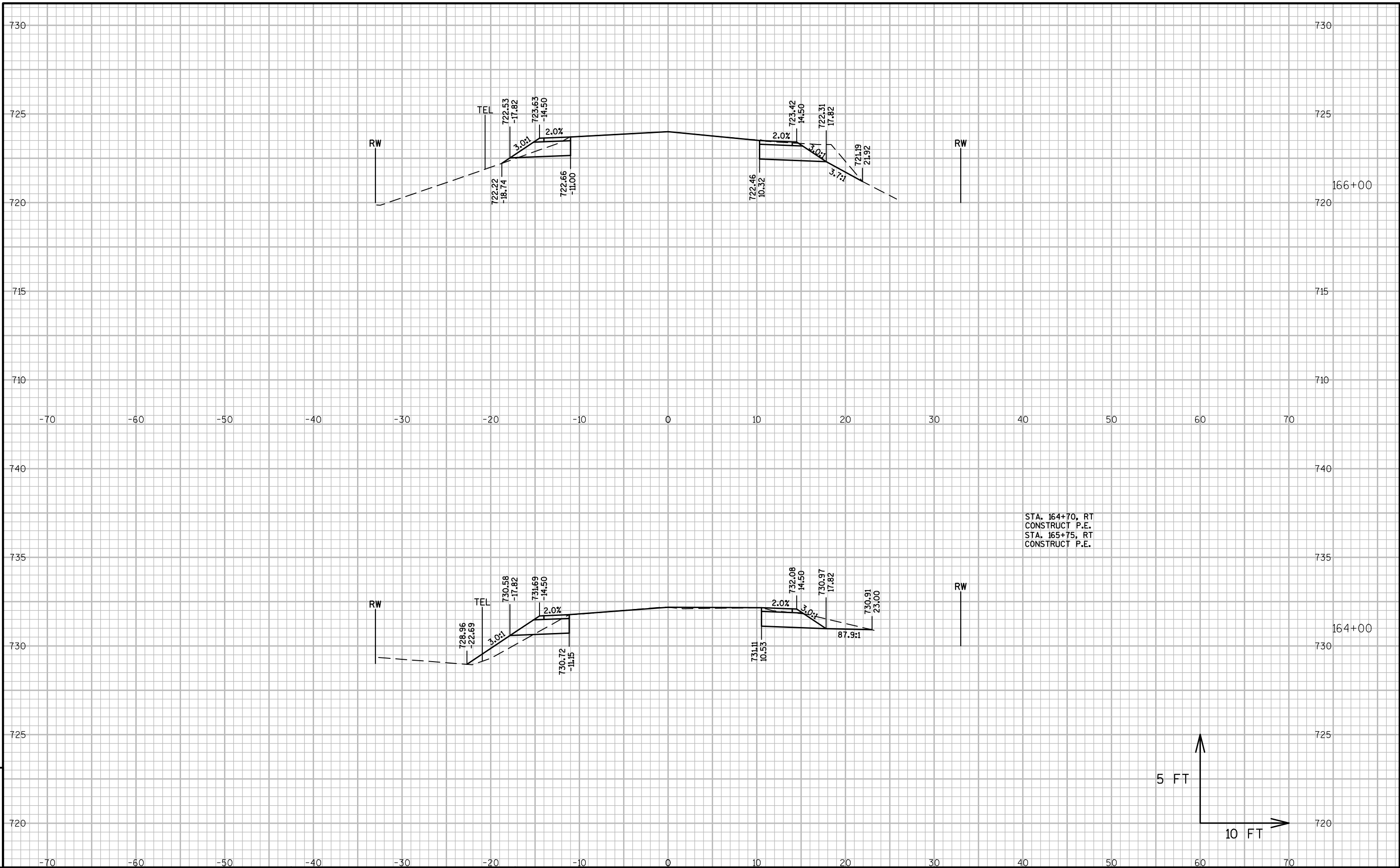


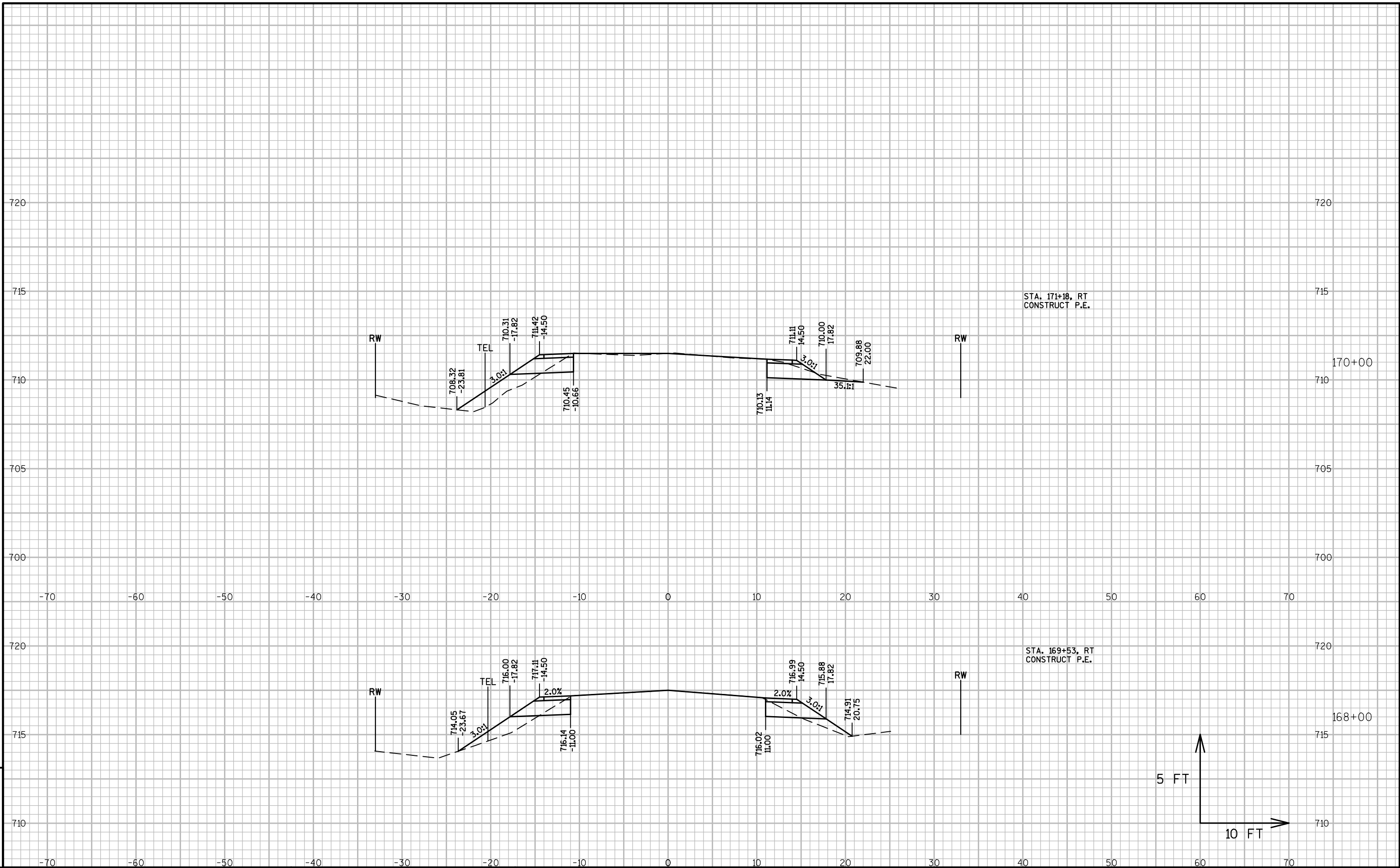


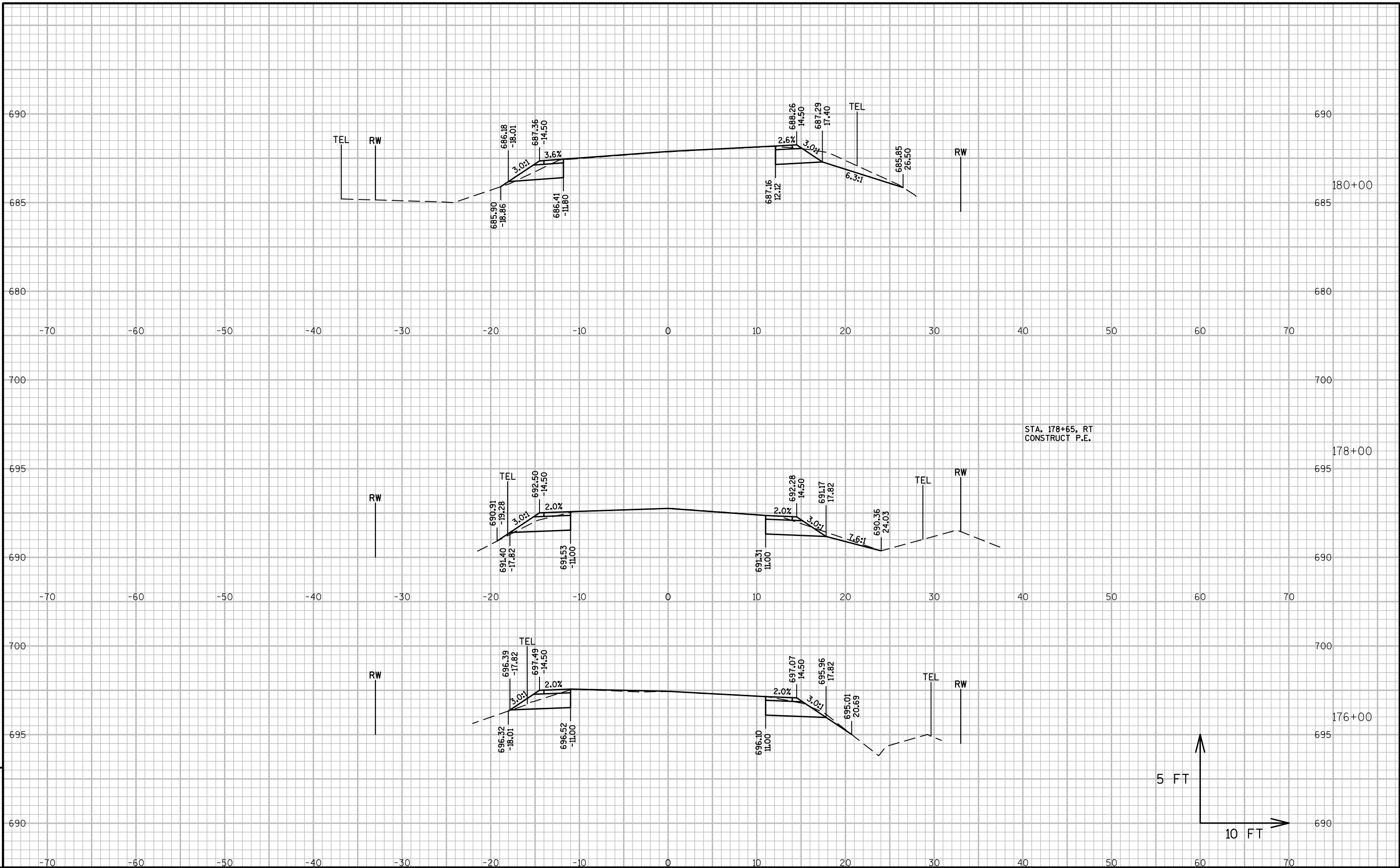
9

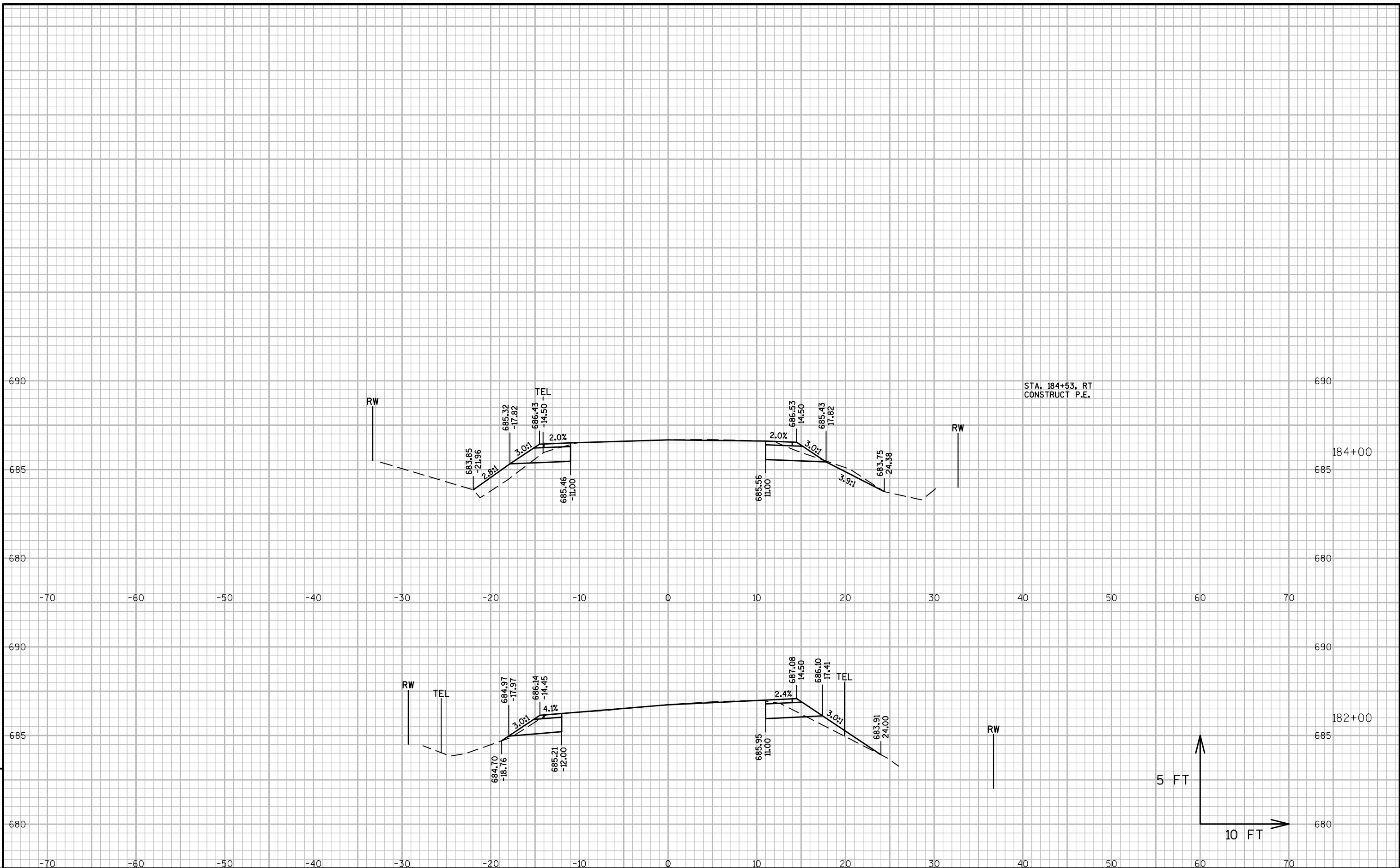


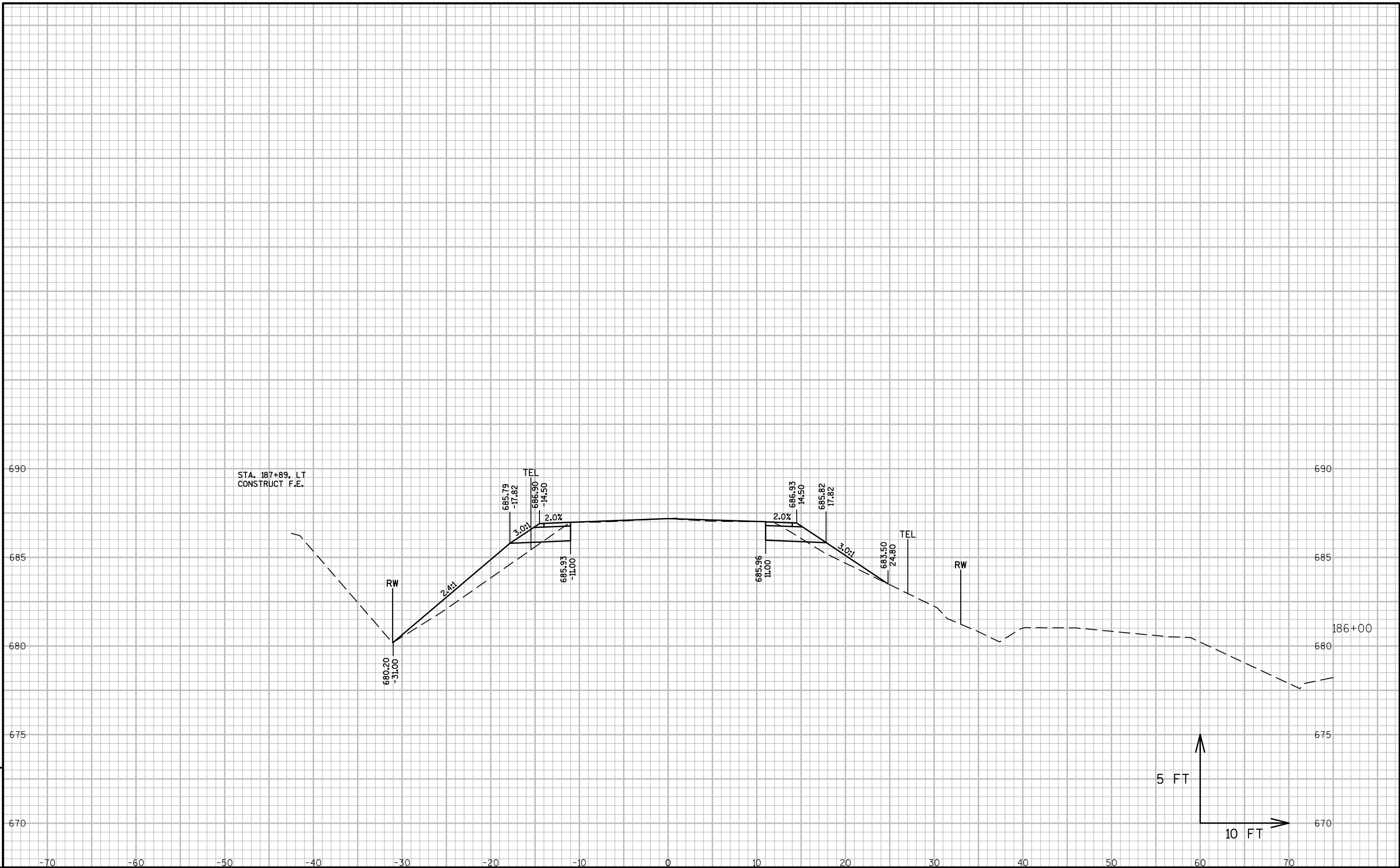
9

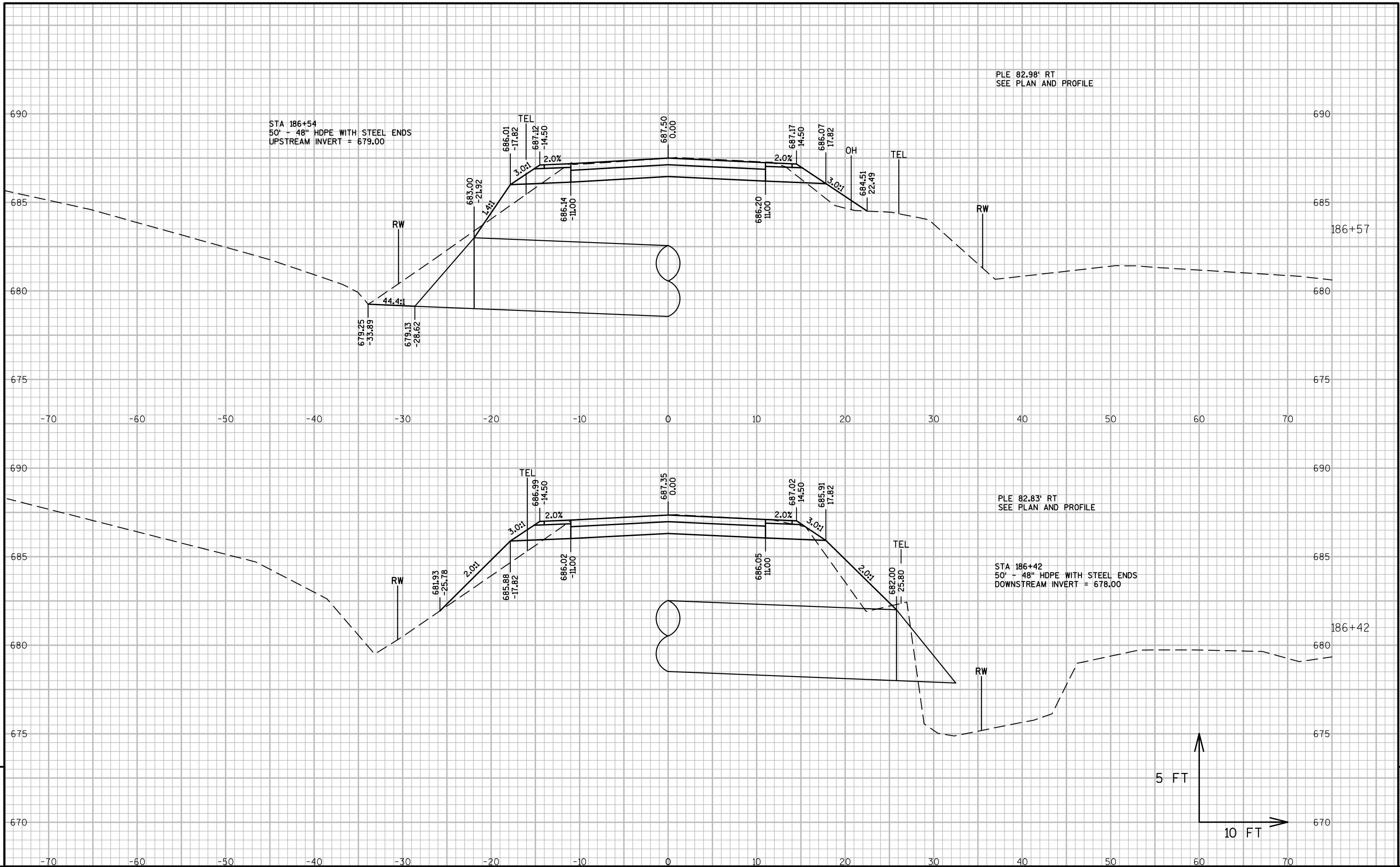


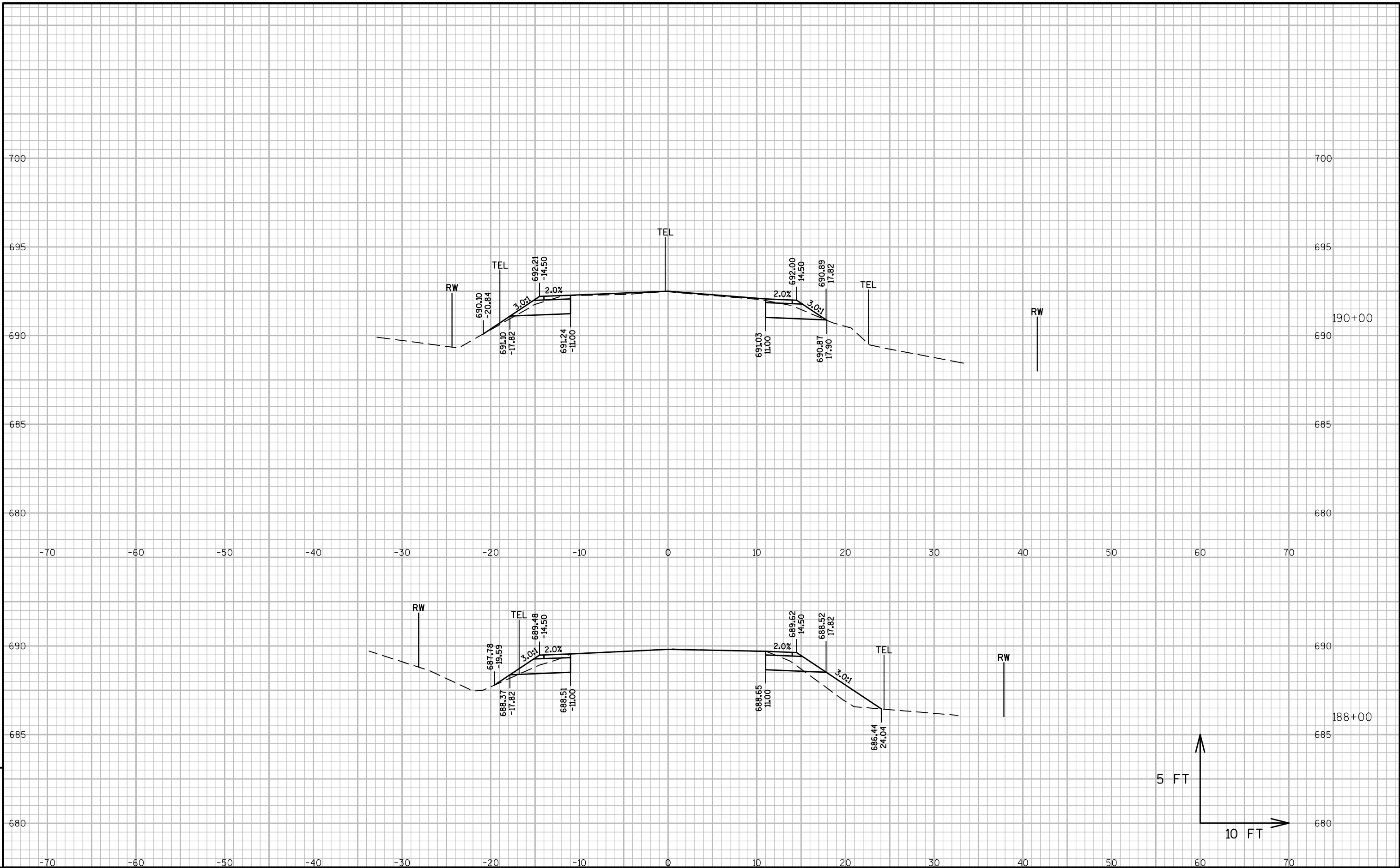


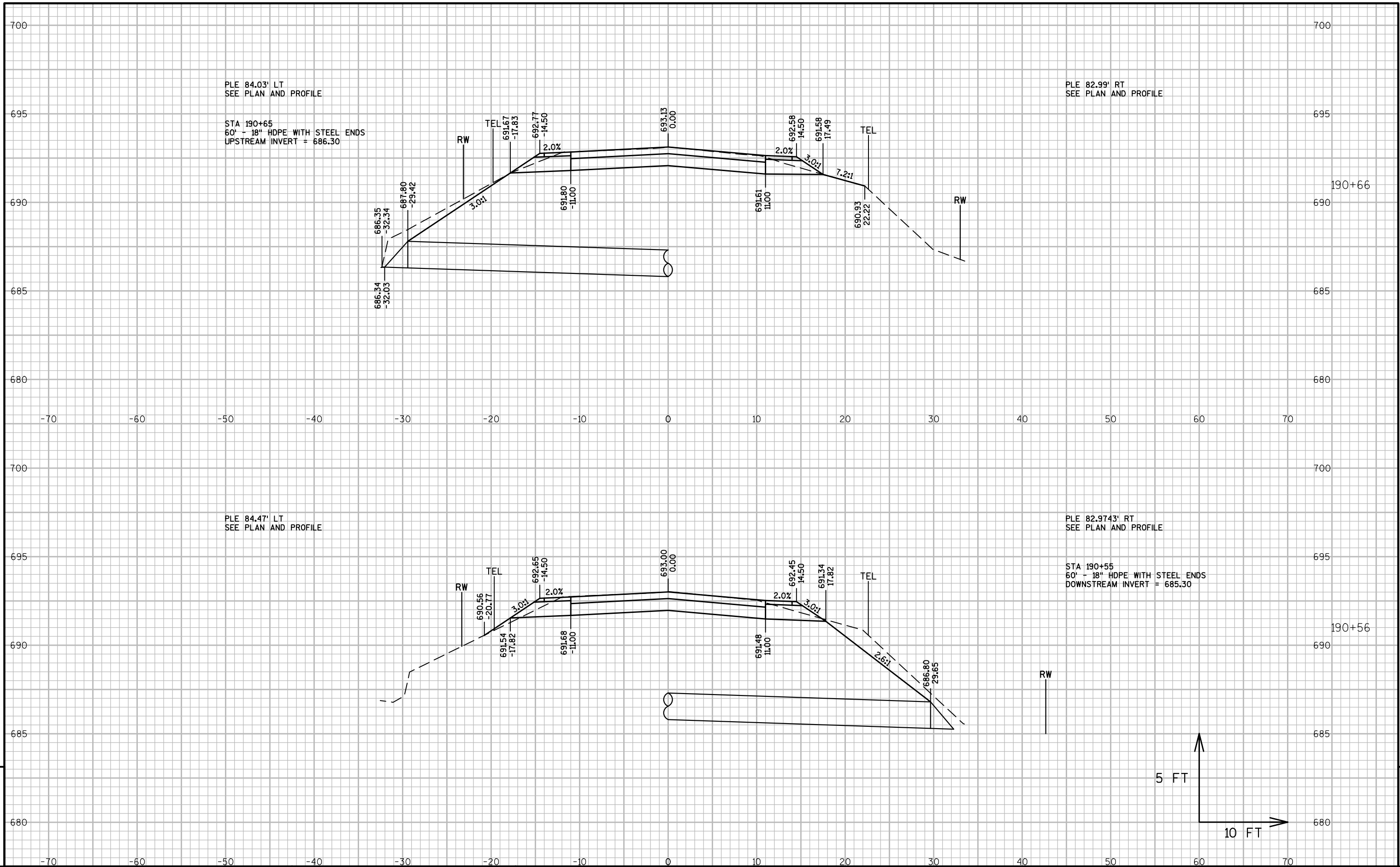


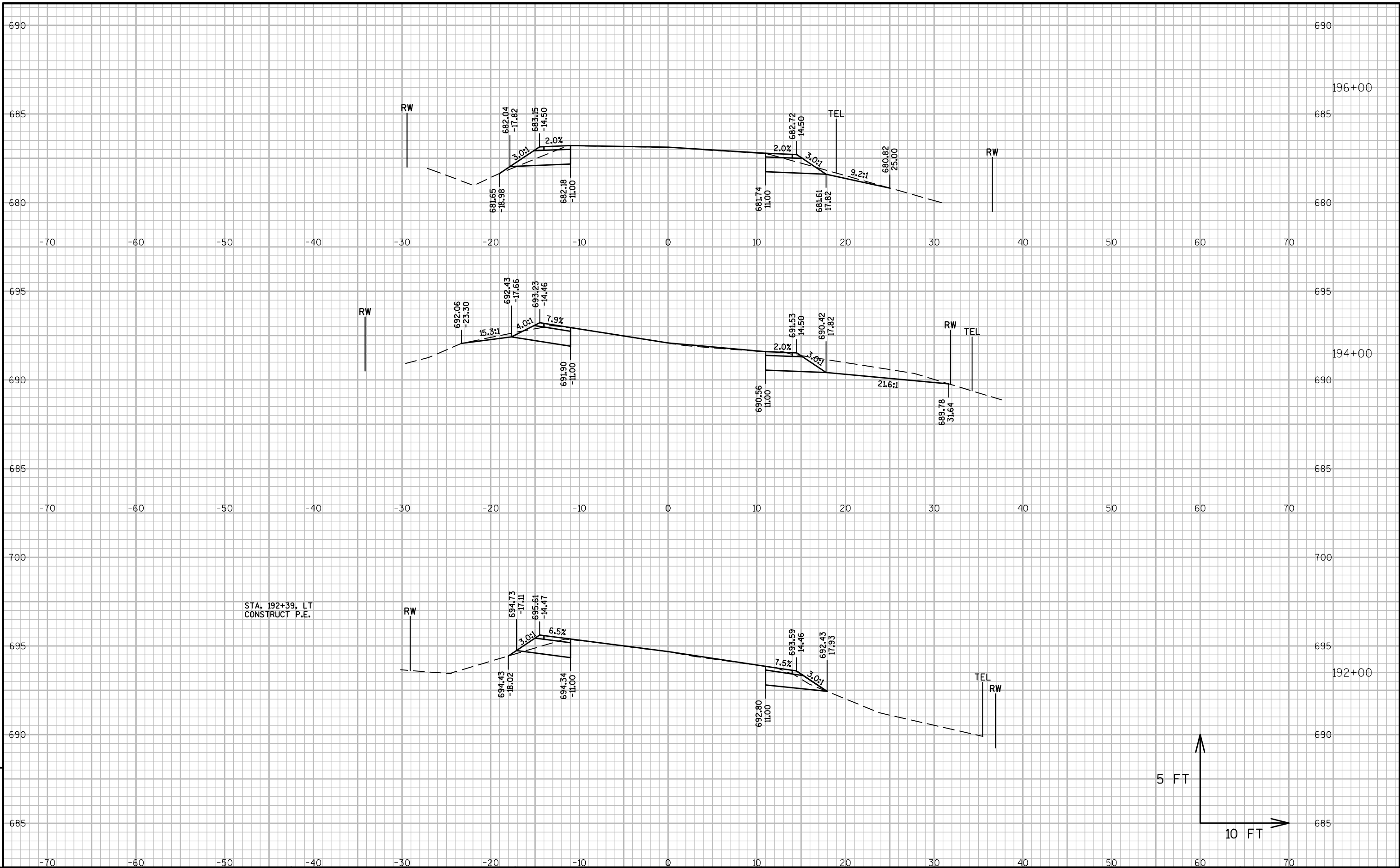


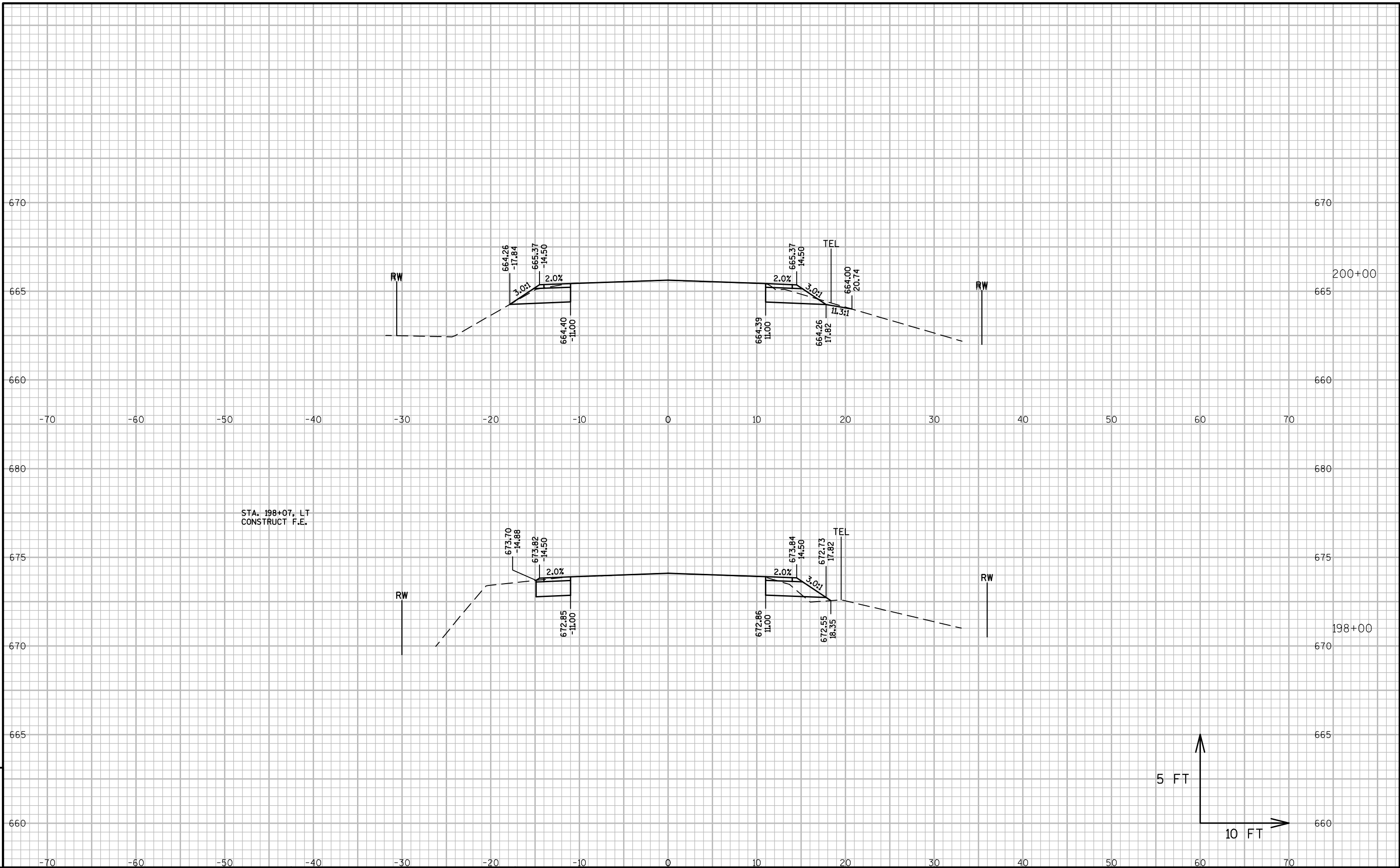


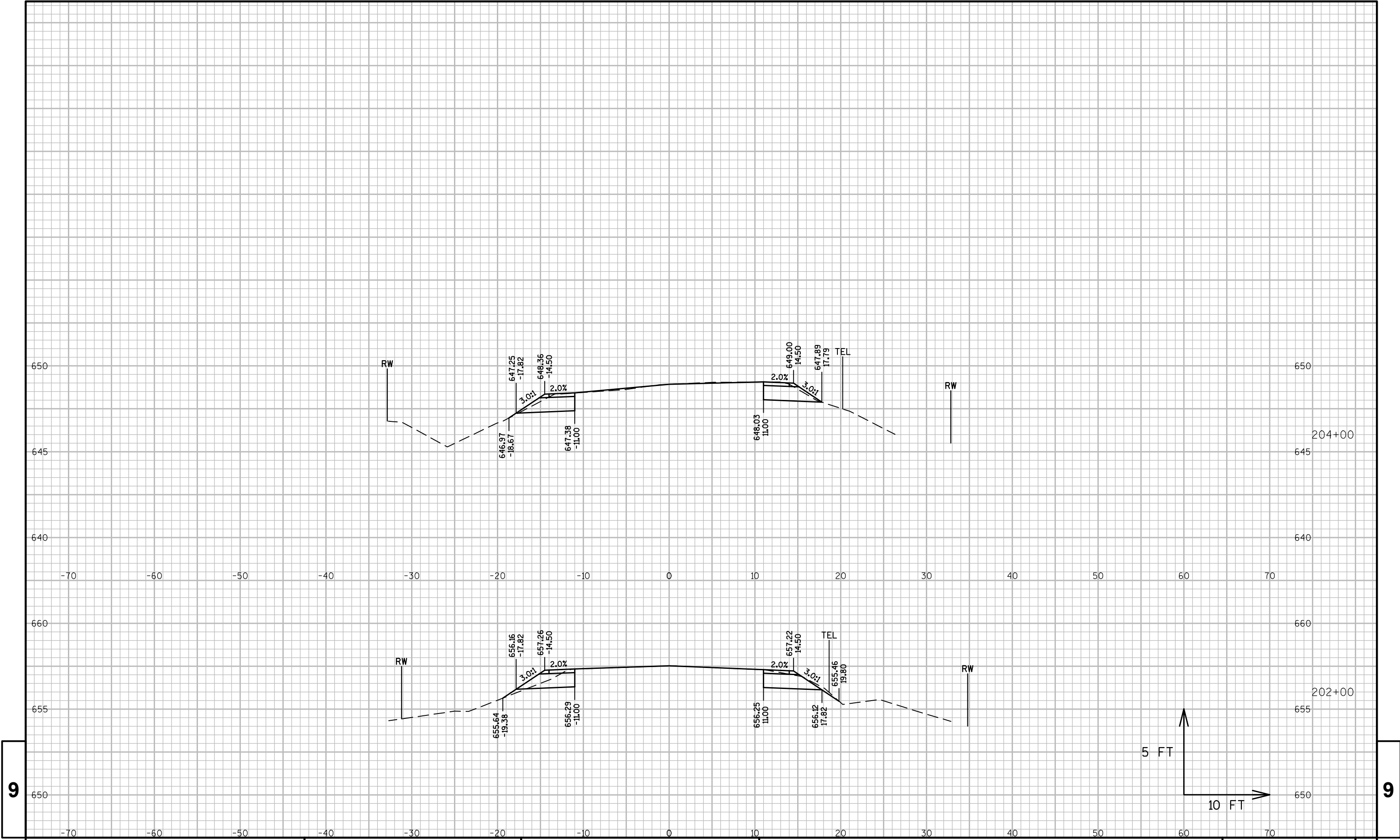


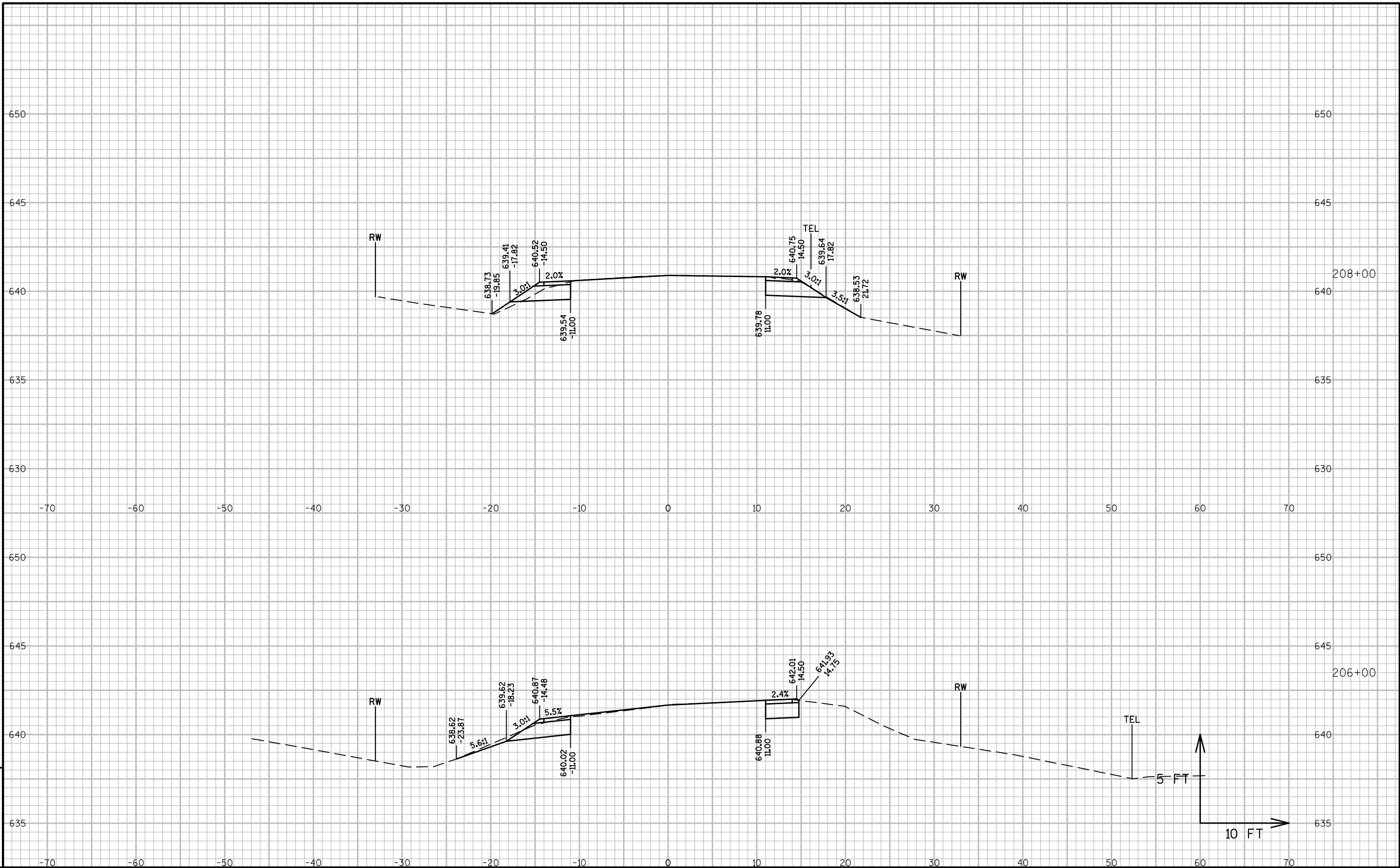


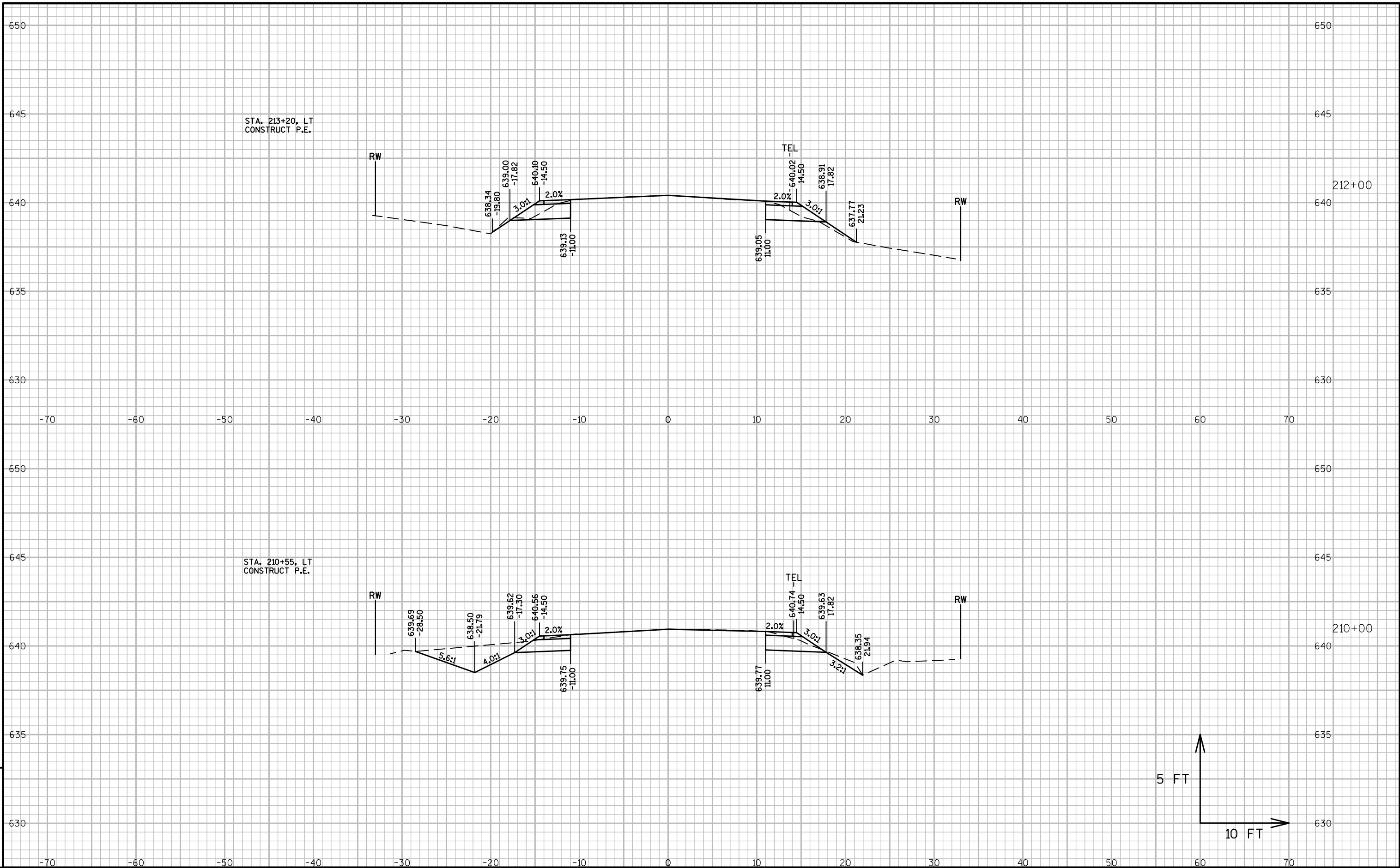


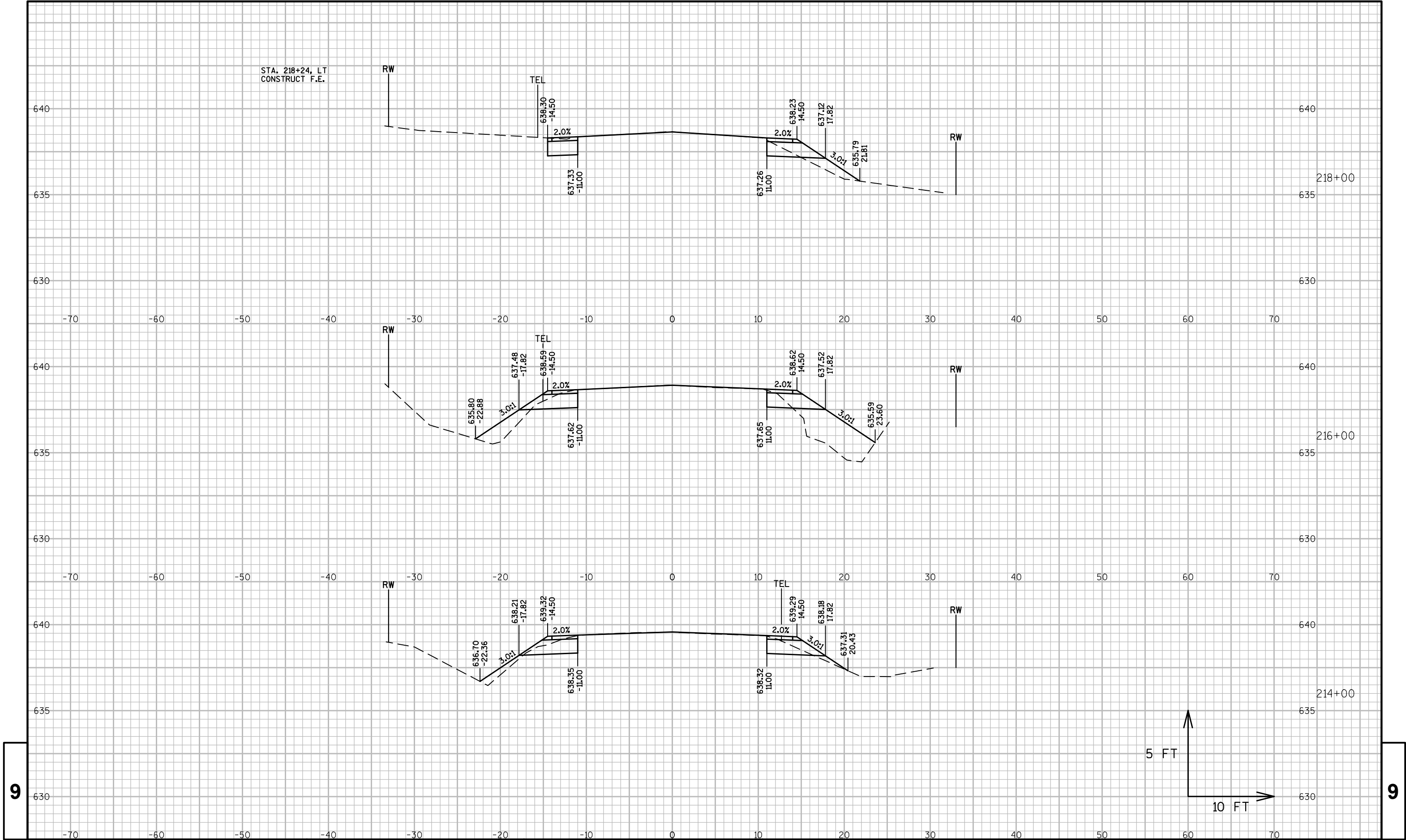












PROJECT NO: 8357-01-72

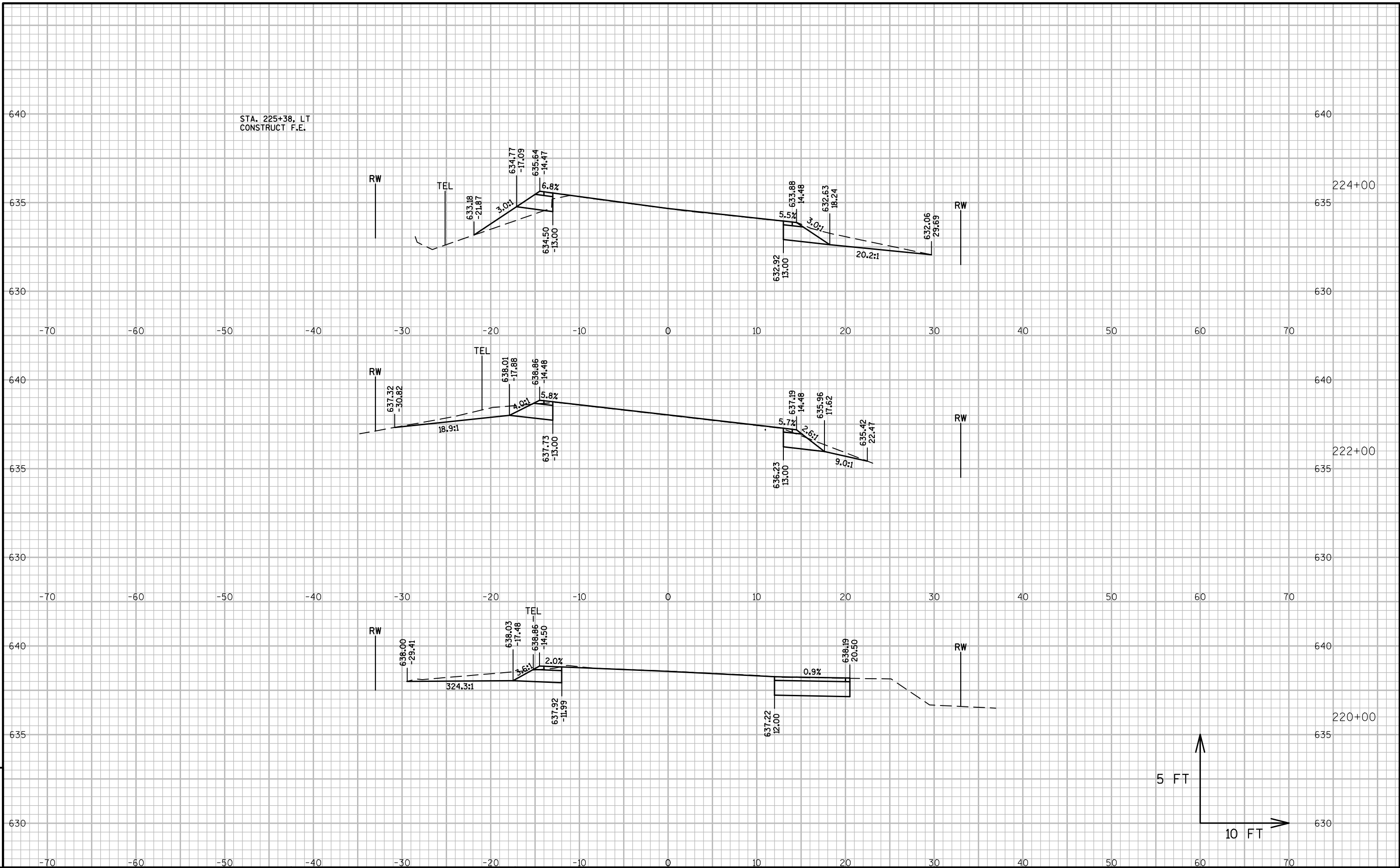
HWY: LITTLE SAND BAY RD

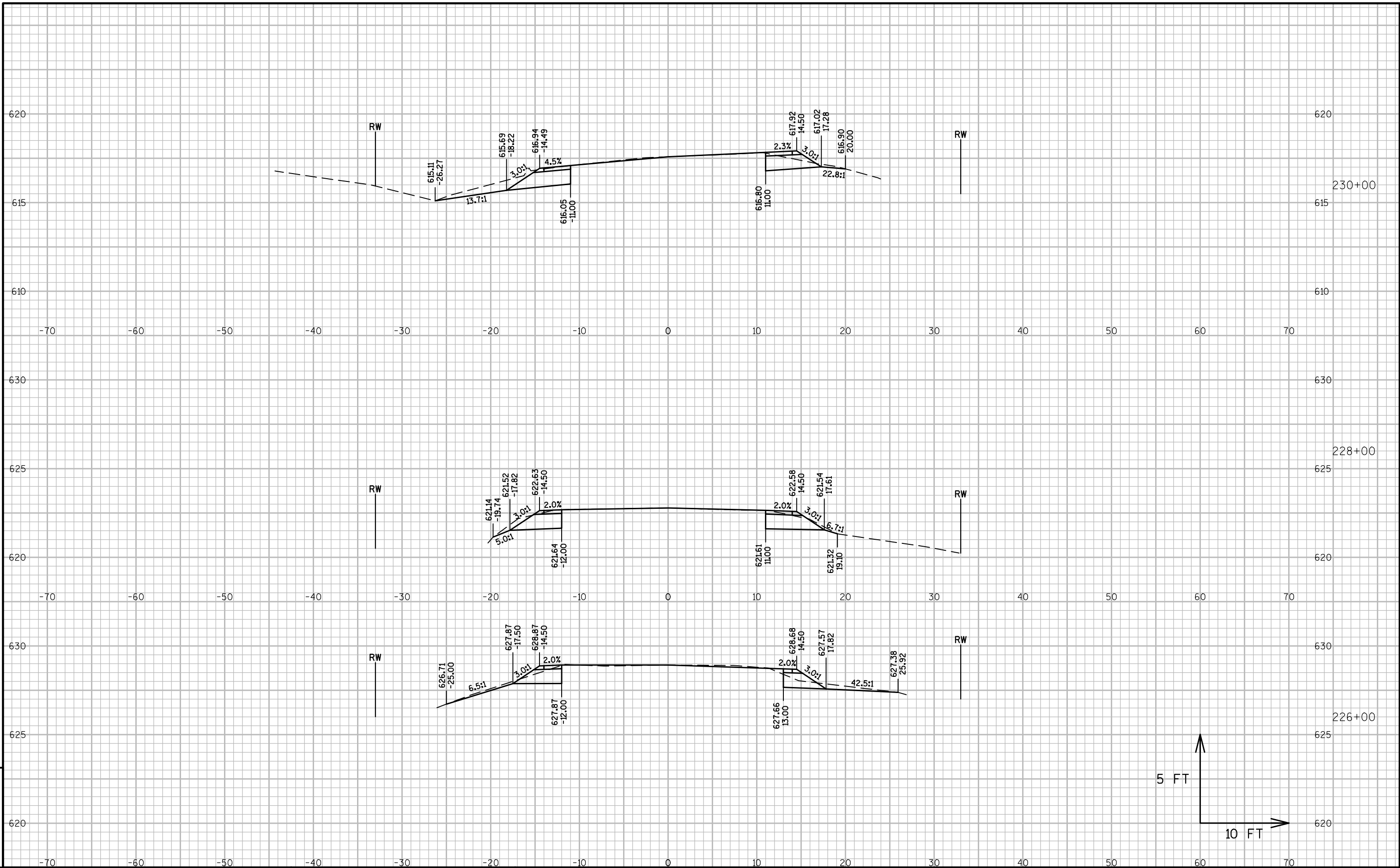
COUNTY: BAYFIELD

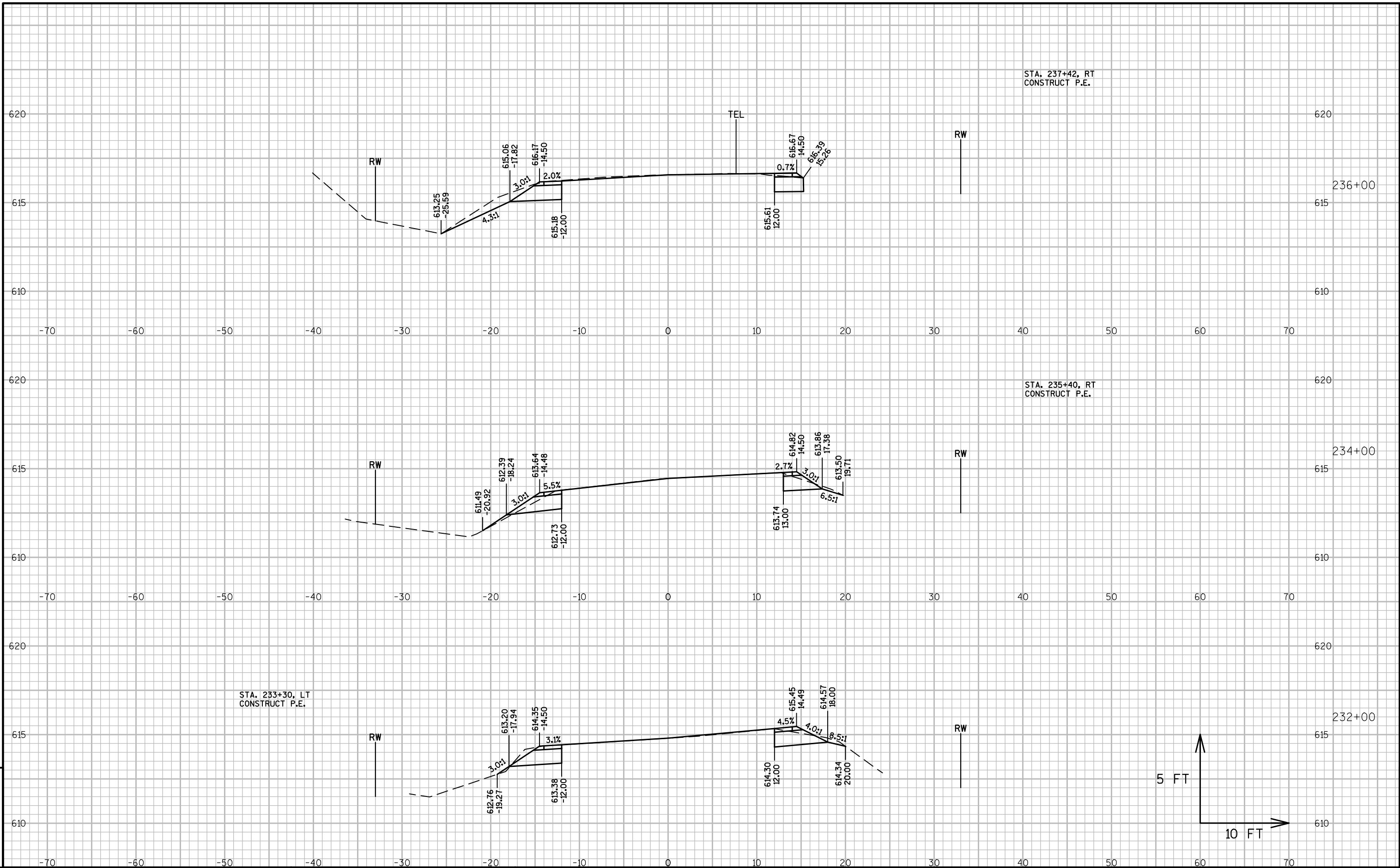
CROSS SECTIONS

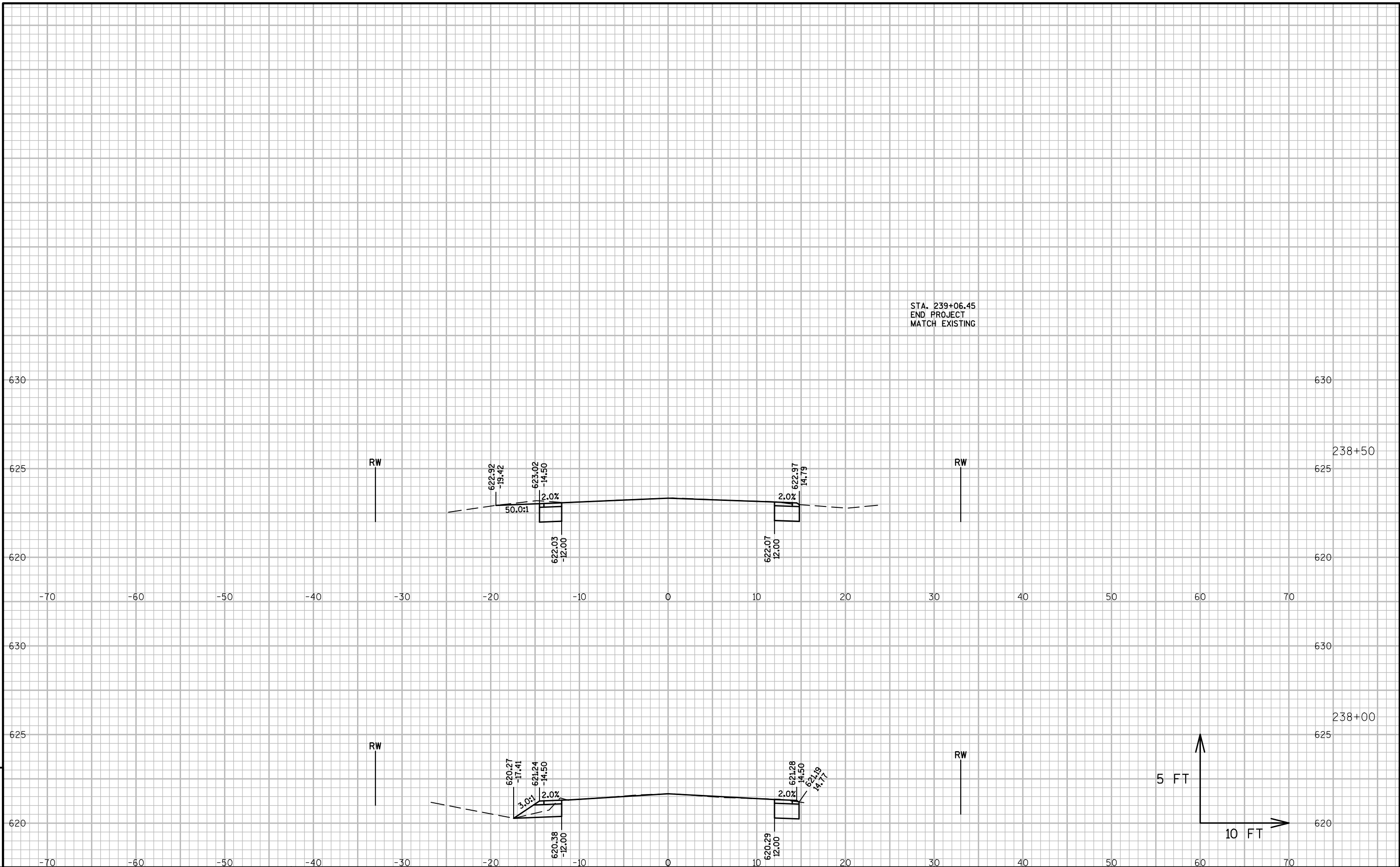
SHEET 83 of 87

E











Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

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