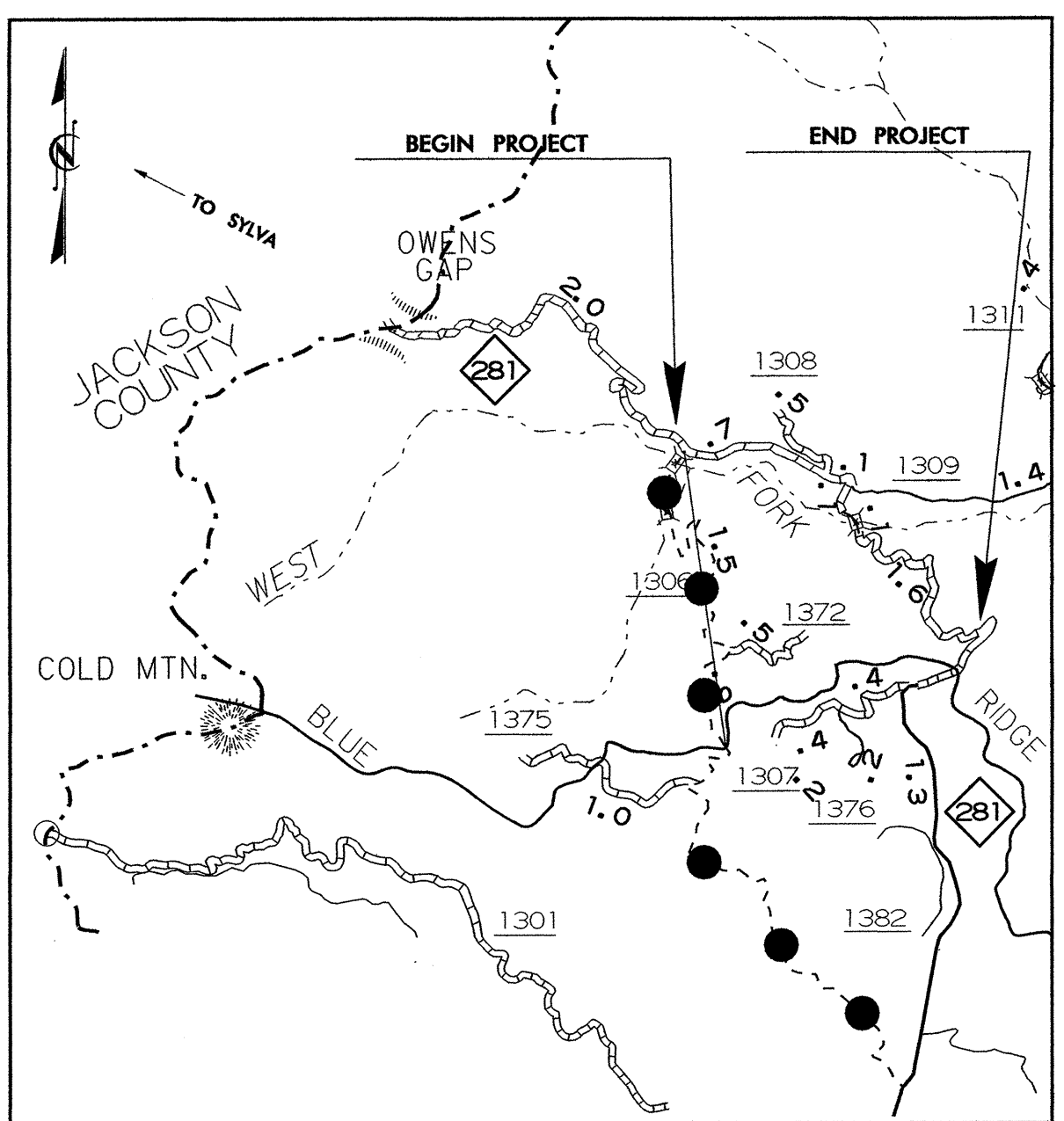


R-0619EI

CONTRACT C201879

STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
TRANSYLVANIA COUNTY
 NC 281

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-0619EI	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
34351.1.5		P.E.	
34351.2.5		R/W	
34351.3.23		CONST.	



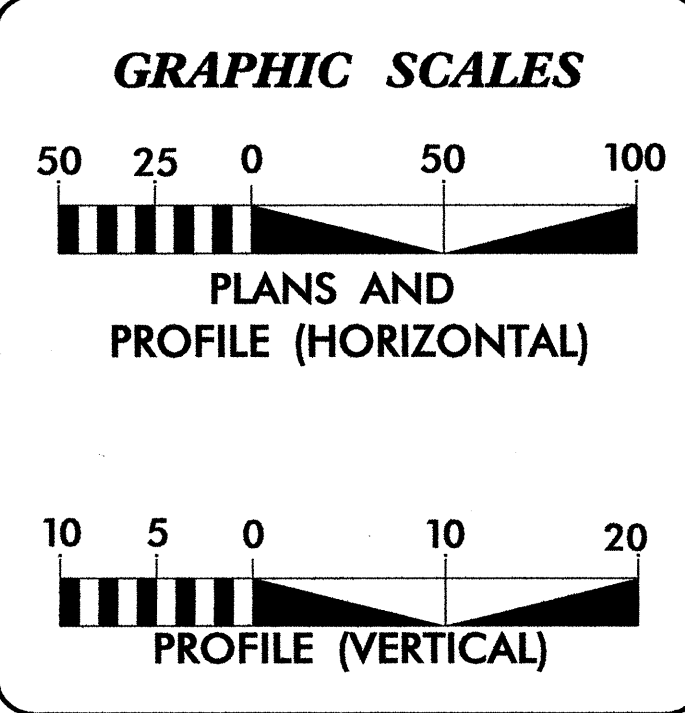
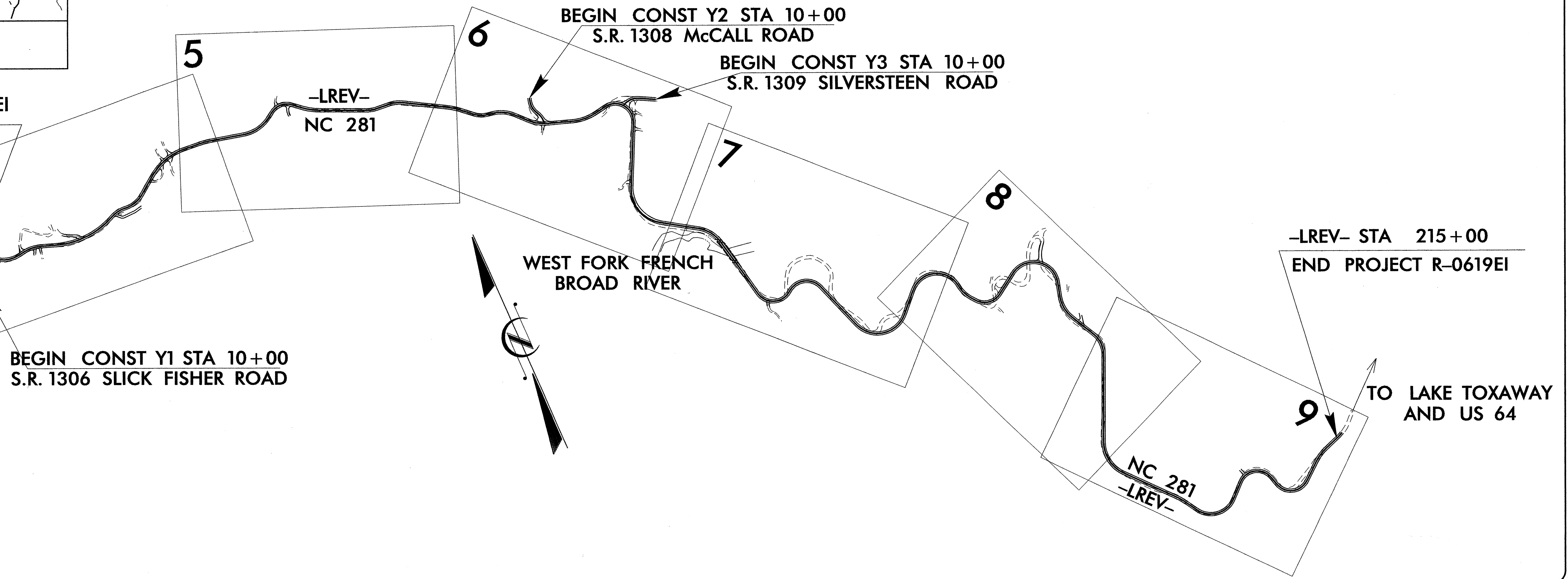
VICINITY MAP
 NOT TO SCALE

**LOCATION: NC 281 FROM WEST OF SR 1306 (SLICK FISHER ROAD)
 TO NORTH OF SR 1307 (SHELTON ROAD)**

TYPE OF WORK: WIDENING, GRADING, DRAINAGE, AND BASE

DETOUR ROUTE - ●- - - ●- - - ●- - -
 BEGIN PROJECT R-0619EI

-LREV- STA 102+50
 TO SYLVA



DESIGN DATA

ADT 2005 =	270
ADT =	
DHV =	%
D =	%
T =	%
V =	20 MPH

PROJECT LENGTH

LENGTH OF ROADWAY STATE PROJ. R-0619EI:	2.081 MI.
LENGTH OF STRUCTURES STATE PROJ. R-0619EI =	0
TOTAL LENGTH STATE PROJ. R-0619EI:	2.081 MI.

Prepared In the Office of:
DIVISION OF HIGHWAYS, DIV. 14
 2006 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: MAY 15, 2002	JAMIE WILSON, P.E. DIVISION CONSTRUCTION ENGINEER
LETTING DATE: FEBRUARY 19, 2008	PAUL WHITE, P.E. DDC ENGINEER

HYDRAULICS ENGINEER
 NORTH CAROLINA PROFESSIONAL SEAL 14447
 SIGNATURE: Paul White P.E. 11-7-07

ROADWAY DESIGN
 NORTH CAROLINA PROFESSIONAL SEAL 14447
 SIGNATURE: Paul White P.E. 11-7-07

**DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA**

STATE HIGHWAY ENGINEER - DESIGN
**DEPARTMENT OF TRANSPORTATION
 FEDERAL HIGHWAY ADMINISTRATION**

APPROVED FOR DIVISION ADMINISTRATOR DATE

PROJECT NO.	SHEET NO.	TOTAL SHEETS
R-0619EI	1A	
STATE PROJECT NO.	F.A. PROJECT NO.	DESCRIPTION

INDEX OF SHEETS

SHEET NO.	SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS GENERAL NOTES ROADWAY STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
1-C - 1-H	SURVEY CONTROL SHEETS
2	TYPICAL SECTIONS
2-A	STREAM RELOCATION
2-B	CROSS VANE ROCK WEIR DETAIL
2-C	GABIONS
2-D	END WALL
2-E	ANCHORAGE FOR FRAMES
2-F	WOVEN WIRE FENCE W/2 STRANDS BARBED WIRE
3	SUMMARY OF QUANTITIES
3-A	SUMMARY OF DRAINAGE QUANTITIES
3-B	GUARDRAIL SUMMARY
3-C	EARTHWORK SUMMARY
3 - D	ROW PARCEL INDEX
4 - 9	PLAN VIEW
10 - 21	PROFILE
TCP 1 - TCP 14	TRAFFIC CONTROL PLANS
EC-1	EROSION CONTROL TITLE SHEET
EC-2	SKIMMER BASIN DETAILS
EC-2-A	COIR FIBER BAFFLE DETAIL
EC-2B	ROCK SILT CHECK TYPE 2B DETAIL
EC-3, EC-3-A	MATTING SUMMARIES
EC-4 - EC-9	EROSION CONTROL C & G
EC-10 - EC-15	EROSION CONTROL FINAL
X-1	CROSS SECTION INDEX
X-1A	CROSS SECTION SUMMARY
X-2 - X-155	CROSS SECTIONS

GENERAL NOTES:

2006 SPECIFICATIONS

EFFECTIVE: 07-18-06
REVISED: 07-18-06

GRADING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED OR FUTURE SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. GRADE LINES MAY BE ADJUSTED AT THEIR BEGINNING AND ENDING AND AT STRUCTURES AS DIRECTED BY THE ENGINEER IN ORDER TO SECURE A PROPER TIE-IN.

CLEARING:

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II.

SUPERELEVATION:

ALL CURVES ON THIS PROJECT SHALL BE SUPERELEVATED IN ACCORDANCE WITH STD. NO. 225.04 USING THE RATE OF SUPERELEVATION AND RUNOFF SHOWN ON THE PLANS. SUPERELEVATION IS TO BE REVOLVED ABOUT THE GRADE POINTS SHOWN ON THE TYPICAL SECTIONS.

SHOULDER CONSTRUCTION:

ASPHALT, EARTH, AND CONCRETE SHOULDER CONSTRUCTION ON THE HIGH SIDE OF SUPERELEVATED CURVES SHALL BE IN ACCORDANCE WITH STD. NO. 560.01.

SIDE ROADS:

THE CONTRACTOR WILL BE REQUIRED TO DO ALL NECESSARY WORK TO PROVIDE SUITABLE CONNECTIONS WITH ALL ROADS, STREETS, AND DRIVES ENTERING THIS PROJECT. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PARTICULAR ITEMS INVOLVED.

UNDERDRAINS:

UNDERDRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. NO. 815.03 AT LOCATIONS DIRECTED BY THE ENGINEER.

GUARDRAIL:

THE GUARDRAIL LOCATIONS SHOWN ON THE PLANS MAY BE ADJUSTED DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER. THE CONTRACTOR SHOULD CONSULT WITH THE ENGINEER PRIOR TO ORDERING GUARDRAIL MATERIAL.

TEMPORARY SHORING:

SHORING REQUIRED FOR THE MAINTENANCE OF TRAFFIC WILL BE PAID FOR AS "EXTRA WORK" IN ACCORDANCE WITH SECTION 104-7.

SUBSURFACE PLANS:

NO SUBSURFACE PLANS ARE AVAILABLE ON THIS PROJECT. THE CONTRACTOR SHOULD MAKE HIS OWN INVESTIGATION AS TO THE SUBSURFACE CONDITIONS.

UTILITIES:

UTILITY OWNERS ON THIS PROJECT ARE Citizen's Telephone Company (828-884-9800), Haywood Electric. ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS.

RIGHT-OF-WAY MARKERS:

ALL RIGHT-OF-WAY MARKERS ON THIS PROJECT SHALL BE PLACED BY OTHERS.

EFF. 07-18-06

REV. 01-02-07

2006 ROADWAY STANDARD DRAWINGS

The following Roadway Standards as appear in "Roadway Standard Drawings" Highway Design Branch - N. C. Department of Transportation - Raleigh, N. C., Dated July 18, 2006 are applicable to this project and by reference hereby are considered a part of these plans:

STD.NO. TITLE

DIVISION 2 - EARTHWORK

- 200.02 Method of Clearing - Method II
- 225.02 Guide for Grading Subgrade - Secondary and Local
- 225.04 Method of Obtaining Superelevation - Two Lane Pavement
- 225.06 Method of Grading Sight Distance at Intersections

DIVISION 3 - PIPE CULVERTS

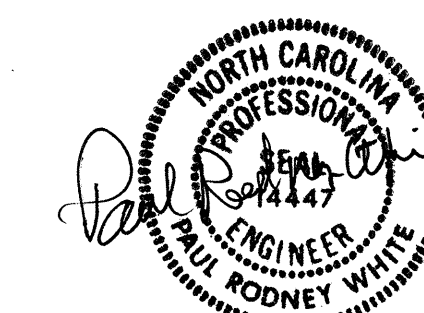
- 300.01 Method of Pipe Installation - Method 'A'
- 310.10 Driveway Pipe Construction

DIVISION 5 - SUBGRADE, BASES AND SHOULDERS

- 560.01 Method of Shoulder Construction - High Side of Superelevated Curve - Method I

DIVISION 8 - INCIDENTALS

- 815.03 Pipe Underdrain and Blind Drain
- 838.01 Concrete Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
- 838.11 Brick Endwall for Single and Double Pipe Culverts - 15" thru 48" Pipe 90 Skew
- 838.80 Precast Endwalls - 12" thru 72" Pipe 90 Skew
- 840.18 Concrete Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
- 840.22 Frames and Wide Slot Sag Grates
- 840.27 Brick Grated Drop Inlet Type 'B' - 12" thru 36" Pipe
- 840.45 Precast Drainage Structure
- 840.72 Pipe Collar
- 862.01 Guardrail Placement
- 862.02 Guardrail Installation
- 862.03 Structure Anchor Units
- 866.02 Woven Wire Fence - with Wood Post
- 866.04 Barbed Wire Fence with Wood Posts (2 - 7 Strands)
- 876.02 Guide for Rip Rap at Pipe Outlets
- 876.03 Drainage Ditches with Class 'A' Rip Rap



11-7-07

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

PROJECT NO. R-0619EI	SHEET NO. 1B	TOTAL SHEETS
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION

CONVENTIONAL SYMBOLS

ROADS & RELATED ITEMS

Edge of Pavement.....	-----
Curb.....	-----
Prop. Slope Stakes Cut.....	-----C-----
Prop. Slope Stakes Fill.....	-----F-----
Prop. Woven Wire Fence.....	○-----○
Prop. Chain Link Fence.....	□-----□
Prop. Wheelchair Ramp.....	-----WCR-----
Exist. Guardrail.....	-----
Prop. Guardrail.....	-----
Prop. Class A Rip Rap Lined Ditch.....	-----

MINOR

Head & End Wall.....	-----
Culvert.....	-----
Footbridge.....	----->-----<-----
Catch Basin.....	-----CB-----
Paved Ditch Gutter.....	-----

UTILITIES

Exist. Pole.....	•
Exist. Power Pole.....	•
Prop. Power Pole.....	○
Exist. Telephone Pole.....	•
Prop. Telephone Pole.....	○
Exist. Joint Use Pole.....	•
Prop. Joint Use Pole.....	○
Telephone Pedestal.....	□
Cable TV Pedestal.....	□
Hydrant.....	◆
Satellite Dish.....	∩
Exist. Water Valve.....	◆
Prop. Water Valve.....	◆
Sewer Clean Out.....	⊕
Power Manhole.....	⊕
Telephone Booth.....	⊕
Water Manhole.....	⊕
Light Pole.....	□
H-Frame Pole.....	●
Power Line Tower.....	⊗
Pole with Base.....	□
Gas Valve.....	◆
Gas Meter.....	◆
Telephone Manhole.....	⊕
Power Transformer.....	⊕
Sanitary Sewer Manhole.....	•
Storm Sewer Manhole.....	⊕
Water Tank.....	○
Water Tank With Legs.....	⊗

Traffic Signal Junction Box.....	-----SIG-----
Fiber Optic Splice Box.....	-----F-----
Television or Radio Tower.....	-----⊗-----
Water Line.....	-----W-----W-----
Sanitary Sewer.....	-----SS-----SS-----
Sanitary Sewer Force Main.....	-----FM-----FM-----
Gas Line.....	-----G-----G-----
Storm Sewer.....	-----S-----S-----
Buried Power Line.....	-----P-----P-----
Buried Telephone Cable.....	-----T-----T-----
Underground Telephone Conduit.....	-----TC-----TC-----
Exist. Iron Pin.....	-----○-----
Exist. Water Meter.....	-----●-----
Prop. Water Meter.....	-----0-----
Television Cable.....	-----TV-----TV-----
Fiber Optics Cable.....	-----FO-----FO-----

BOUNDARIES & PROPERTIES

State Line.....	-----
County Line.....	-----
Town Line.....	-----
City Line.....	-----
Reservation Line.....	-----
Property Line.....	-----
Property Line Symbol.....	-----
Property Corner.....	-----+
Property Monument.....	-----□
Property Number.....	-----7-----
Parcel Number.....	-----6-----
Fence Line.....	-----x-----x-----x-----

BUILDING & OTHER CULTURE

Buildings.....	-----
Foundations.....	-----
Area Outline.....	-----
Gate.....	-----
Gas Pump Vent or U G Tank Cap.....	-----
Church.....	-----
School.....	-----

Park.....	-----
Cemetery.....	-----
Dam.....	-----
Sign.....	-----○-----
Well.....	-----○-----
Small Mine.....	-----⊗-----
Swimming Pool.....	-----

TOPOGRAPHY

Loose Surface.....	-----
Hard Surface.....	-----
Change in Road Surface.....	-----
Curb.....	-----
Right of Way Symbol.....	-----R/W-----
Guard Post.....	-----○ ^{GP} -----
Paved Walk.....	-----
Bridge.....	-----
Box Culvert or Tunnel.....	-----
Ferry.....	-----
Culvert.....	-----
Footbridge.....	-----
Trail, Footpath.....	-----
Light House.....	-----

VEGETATION

Single Tree.....	-----
Single Shrub.....	-----
Hedge.....	-----
Woods Line.....	-----
Orchard.....	-----
Vineyard.....	-----V-----V-----V-----

RAILROADS

Standard Gauge.....	-----
RR Signal Milepost.....	-----
Switch.....	-----

RIGHT OF WAY

Right of Way Marker.....	-----△-----
Exist. Right of Way Line.....	-----△-----
Prop. Right of Way Line (by others).....	-----▲-----
Prop. Right of Way Line (by contract).....	-----▲-----
Exist. Control of Access Line.....	-----⊕-----
Prop. Control of Access Line.....	-----⊕-----
Exist. Easement Line.....	-----E-----E-----E-----
Prop. Temp. Construction Easement Line.....	-----E-----E-----E-----
Prop. Temp. Drainage Easement Line.....	-----TDE-----TDE-----
Prop. Perm. Drainage Easement Line.....	-----PDE-----PDE-----

HYDROLOGY

Stream or Body of Water.....	-----
Flow Arrow.....	----->-----
Disappearing Stream.....	-----
Spring.....	-----○-----
Swamp Marsh.....	-----
Shoreline.....	-----
Wet Land Boundaries.....	-----
Falls.....	-----
Rapids.....	-----

STRUCTURES

MAJOR

Bridge, Tunnel, or Box Culvert.....	-----
Bridge Wing Wall, Head Wall and End Wall.....	-----

050197

REVISIONS

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "CECH" (IN TRANSYLVANIA COUNTY) WITH NAD 1983/86 STATE PLANE GRID COORDINATES OF NORTHING: 539267.98(1) EASTING: 8212017.4(1) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998737 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "CECH" TO -LREV- STATION IS N 60° 45' 36.55" W 6645.93' ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NGVD 29

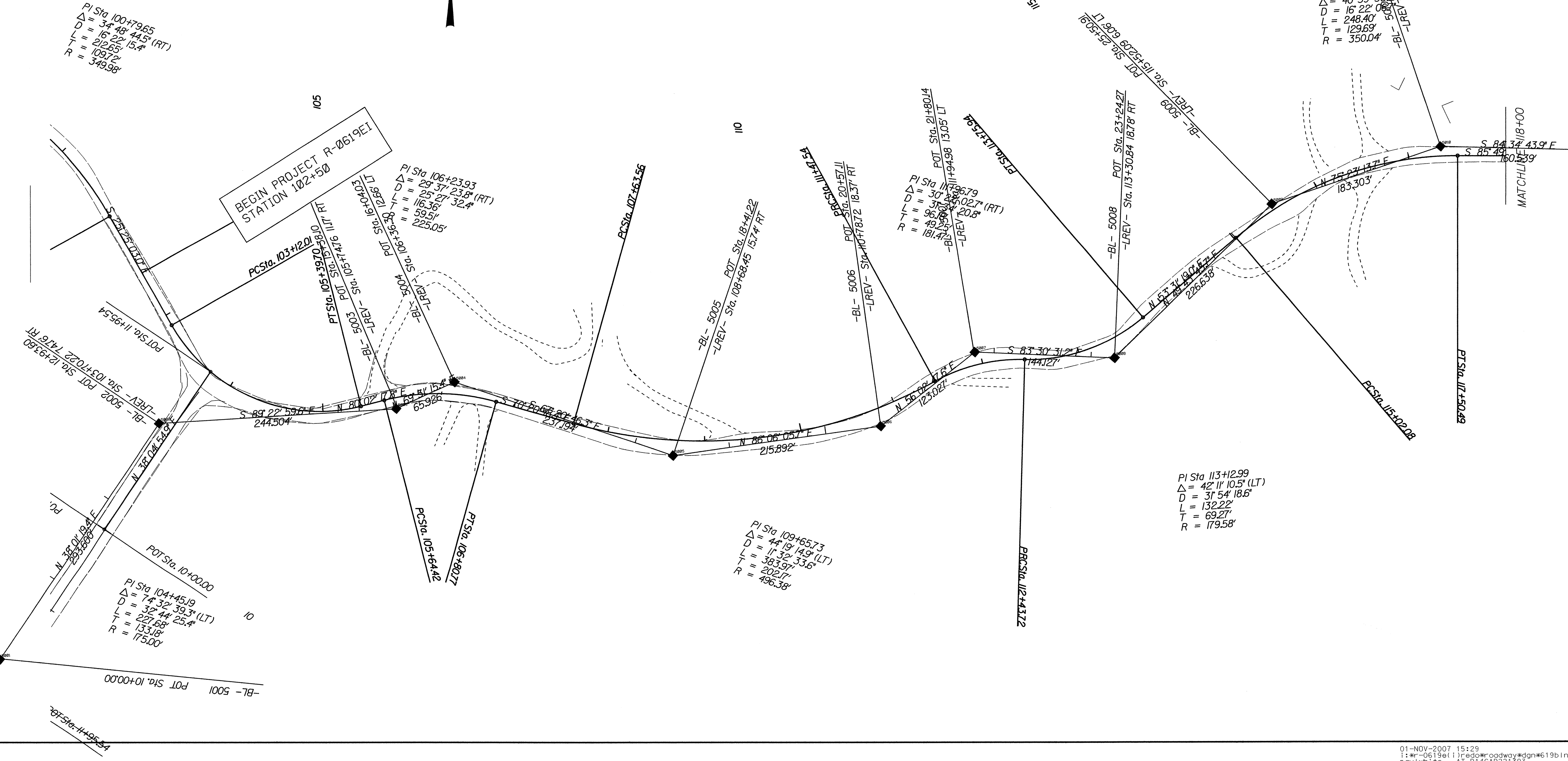
SURVEY CONTROL SHEET

SEE STD.DRWG.876.02,876.03,AND 876.04 FOR PIPE OUTLET PROTECTION ON FILL SLOPES

PROJECT REFERENCE NO. R-0619E1	SHEET NO. 1-C
RW SHEET NO.	
ROADWAY DESIGN ENGINEER PAUL RODNEY WHITE NORTH CAROLINA PROFESSIONAL ENGINEER 14447	HYDRAULICS ENGINEER

11-7-07

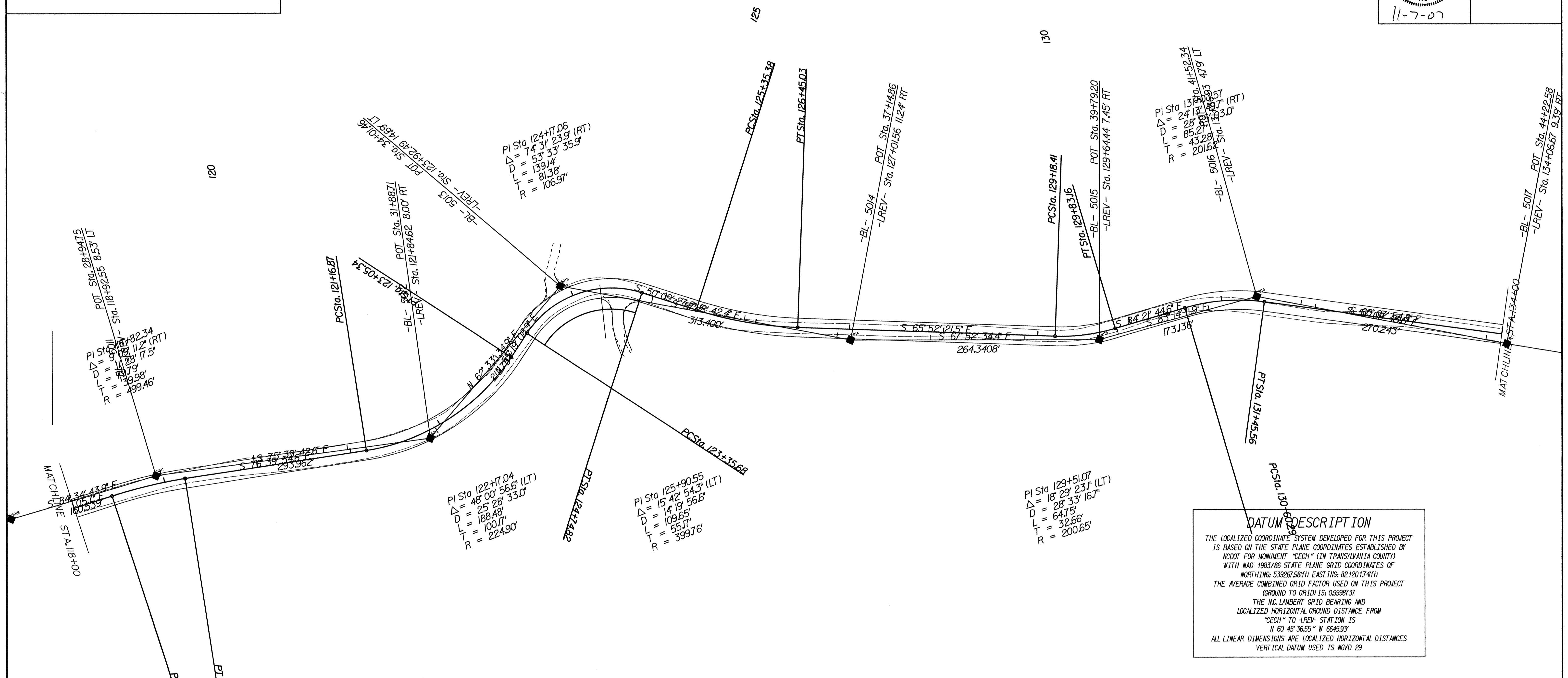
Point Name	North (Y)	East (X)	Elevation	Base Line Station	Description
BL 5001	545,587.2590	820,181.9750	2,715.491	10+00.00	# 5 Iron Pin
BL 5002	545,818.5490	820,362.8220	2,714.800	12+93.60	# 5 Iron Pin
BL 5003	545,815.9170	820,607.3120	2,715.642	15+38.10	# 5 Iron Pin
BL 5004	545,838.9820	820,669.0710	2,715.428	16+04.03	# 5 Iron Pin
BL 5005	545,747.6240	820,887.9650	2,726.620	18+41.22	# 5 Iron Pin
BL 5006	545,762.3020	821,103.3570	2,734.113	20+57.11	# 5 Iron Pin
BL 5007	545,831.0150	821,205.4070	2,735.072	21+80.14	# 5 Iron Pin
BL 5008	545,814.7210	821,348.6100	2,739.754	23+24.27	# 5 Iron Pin
BL 5009	545,961.2210	821,521.5330	2,746.823	25+50.91	# 5 Iron Pin
BL 5010	546,007.4660	821,698.9070	2,762.343	27+34.21	# 5 Iron Pin



REVISIONS

SURVEY CONTROL SHEET

PROJECT REFERENCE NO. R-0619E1	SHEET NO. 1-D
RW SHEET NO.	
ROADWAY DESIGN ENGINEER PAUL ROONEY WHITE	HYDRAULICS ENGINEER
11-7-07	



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "CECH" (IN TRANSYLVANIA COUNTY) WITH NAD 1983/86 STATE PLANE GRID COORDINATES OF NORTHING: 539267.98(1) EASTING: 821201.74(1)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998737

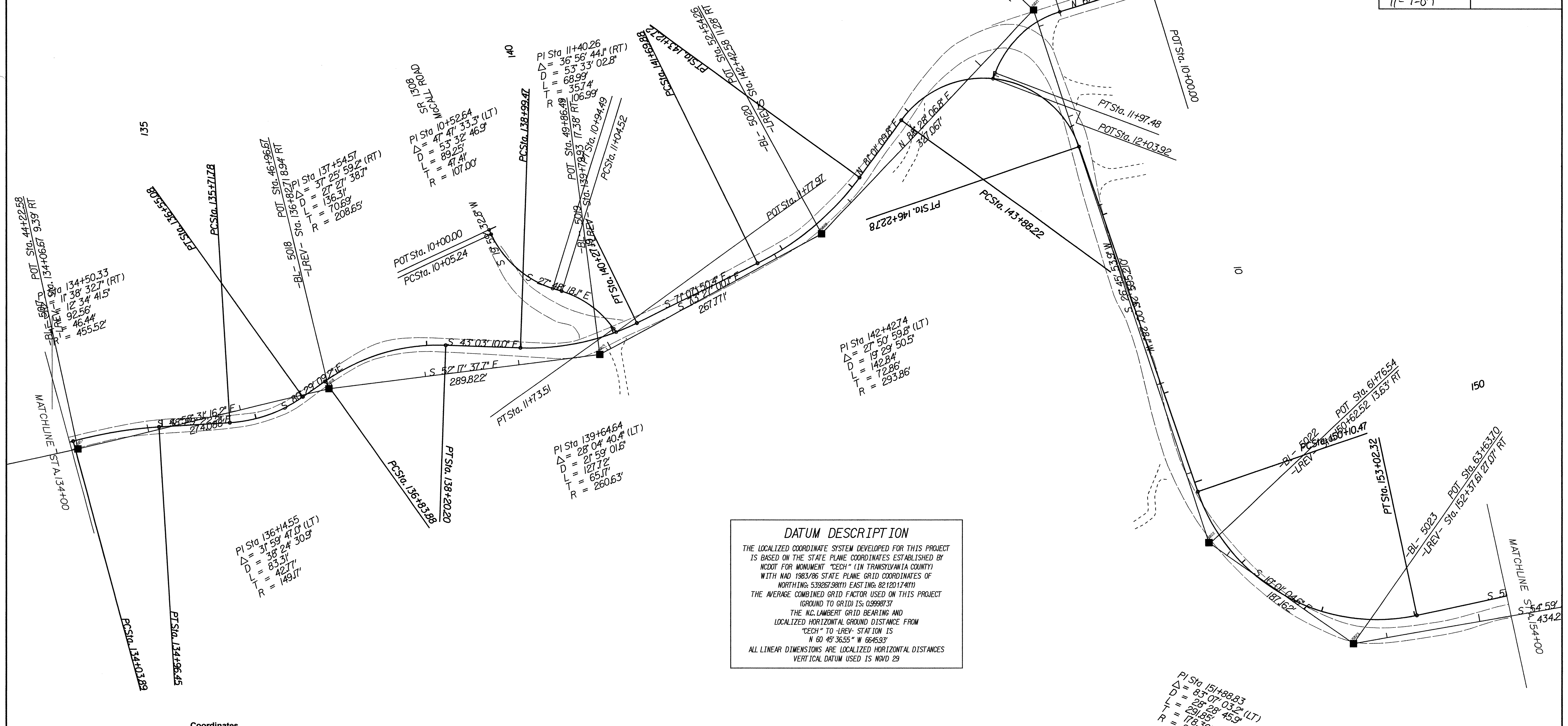
THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "CECH" TO -LREV- STATION IS
N 60 45' 36.55" W 6645.93'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29

Point Name	North (Y)	East (X)	Elevation	Base Line Station	Description
BL 5011	545,992.2990	821,858.7280	2,772.274	28+94.75	# 5 Iron Pin
BL 5012	545,919.5010	822,143.5330	2,743.714	31+88.71	# 5 Iron Pin
BL 5013	546,017.5430	822,332.3500	2,728.773	34+01.46	# 5 Iron Pin
BL 5014	545,848.2860	822,596.1140	2,739.852	37+14.86	# 5 Iron Pin
BL 5015	545,748.7330	822,840.9920	2,745.036	39+79.20	# 5 Iron Pin
BL 5016	545,728.3430	823,012.9230	2,748.096	41+52.34	# 5 Iron Pin
BL 5017	545,581.8020	823,239.9850	2,753.119	44+22.58	# 5 Iron Pin

REVISIONS

PROJECT REFERENCE NO. R-0619E1	SHEET NO. 1-E
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER PAUL RODNEY WHITE 14447	HYDRAULICS ENGINEER
11-7-07	



DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY MCDOT FOR MONUMENT "CECH" (IN TRANSYLVANIA COUNTY) WITH NAD 1983/86 STATE PLANE GRID COORDINATES OF NORTHING: 539267.98(1) EASTING: 821201.74(1)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998737

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "CECH" TO -LREV- STATION IS
N 60 45' 36.55" W 6645.93'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS MVD 29

SURVEY CONTROL SHEET

Point Name	Coordinates		Elevation	Base Line Station	Discription
	North (Y)	East (X)			
BL 5017	545,581.8020	823,239.9850	2,753.119	44+22.58	# 5 Iron Pin
BL 5018	545,438.6780	823,473.7360	2,740.812	46+96.67	# 5 Iron Pin
BL 5019	545,261.4190	823,703.0310	2,744.032	49+86.49	# 5 Iron Pin
BL 5020	545,185.1440	823,959.7090	2,741.103	52+54.26	# 5 Iron Pin
BL 5021	545,193.8850	824,286.6590	2,730.672	55+81.33	# 5 Iron Pin
BL 5022	544,662.4450	824,018.6170	2,703.624	61+76.54	# 5 Iron Pin
BL 5023	544,478.1370	824,051.1750	2,697.045	63+63.70	# 5 Iron Pin

SURVEY CONTROL SHEET

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDDOT FOR MONUMENT "CECH" (IN TRANSYLVANIA COUNTY) WITH NAD 1983/86 STATE PLANE GRID COORDINATES OF NORTHING: 539267.98(11) EASTING: 821201.74(11)

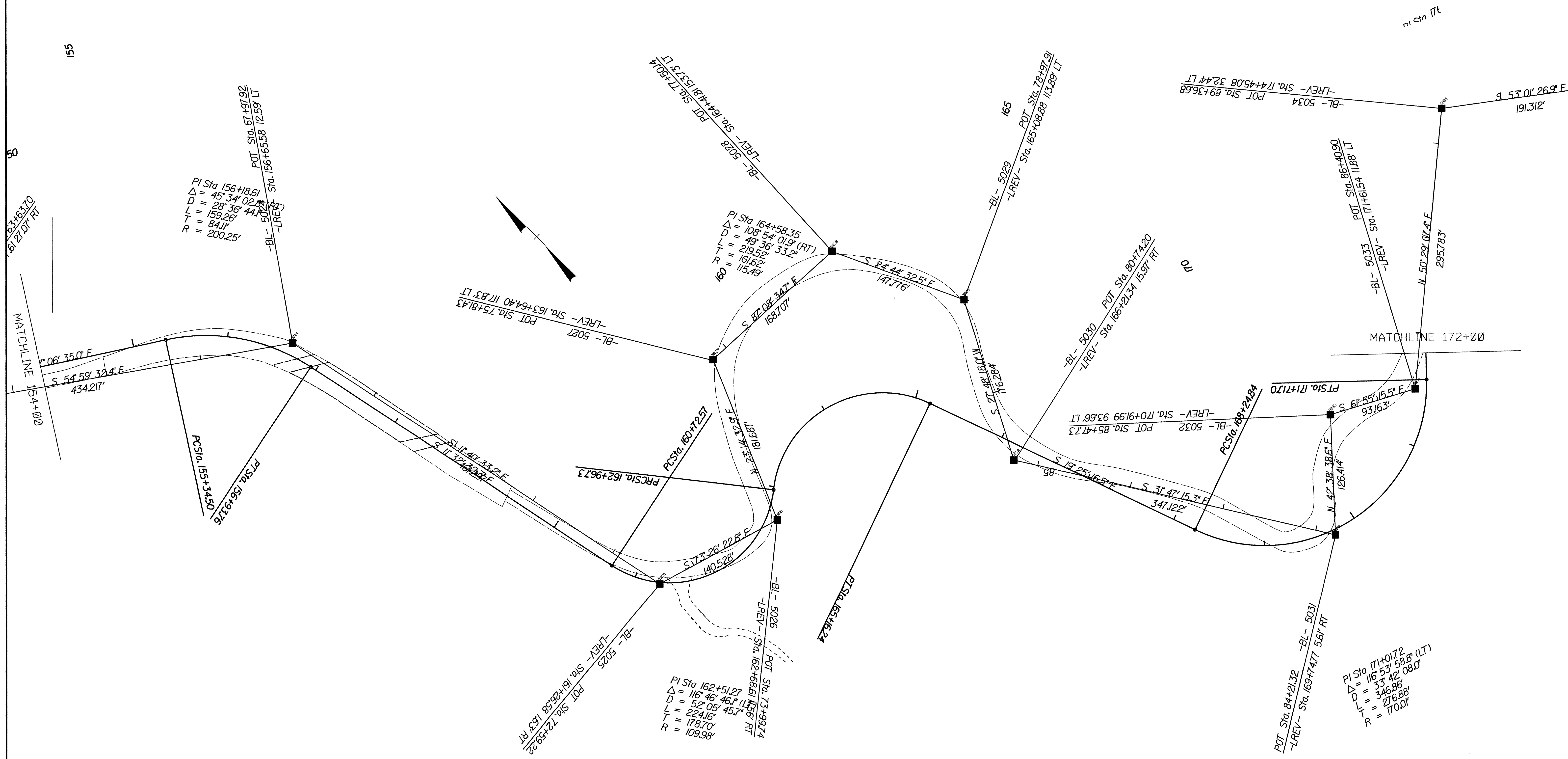
THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998737

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "CECH" TO -LREV- STATION IS
N 60 43' 36.55" W 6645.93'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29

Point Name	North (Y)	East (X)	Elevation	Base Line Station	Description
BL 5024	544,229.0330	824,406.8310	2,697.045	67+97.92	Nail In Pavement
BL 5025	543,777.2810	824,500.1860	2,697.045	72+59.22	# 5 Iron Pin
BL 5026	543,737.2270	824,634.8850	2,697.045	73+99.74	# 5 Iron Pin
BL 5027	543,904.1690	824,706.5830	2,697.045	75+81.43	# 5 Iron Pin
BL 5028	543,895.7600	824,875.0800	2,697.045	77+50.14	# 5 Iron Pin
BL 5029	543,761.5500	824,936.9300	2,697.045	78+97.91	# 5 Iron Pin
BL 5030	543,605.6200	824,854.7000	2,697.045	80+74.20	# 5 Iron Pin
BL 5031	543,310.5640	825,037.5540	2,697.045	84+21.32	# 5 Iron Pin
BL 5032	543,403.5510	825,123.1920	2,697.045	85+47.73	# 5 Iron Pin
BL 5033	543,359.7000	825,205.3900	2,697.045	86+40.90	# 5 Iron Pin
BL 5034	543,547.8990	825,433.5750	2,697.045	89+36.68	# 5 Iron Pin

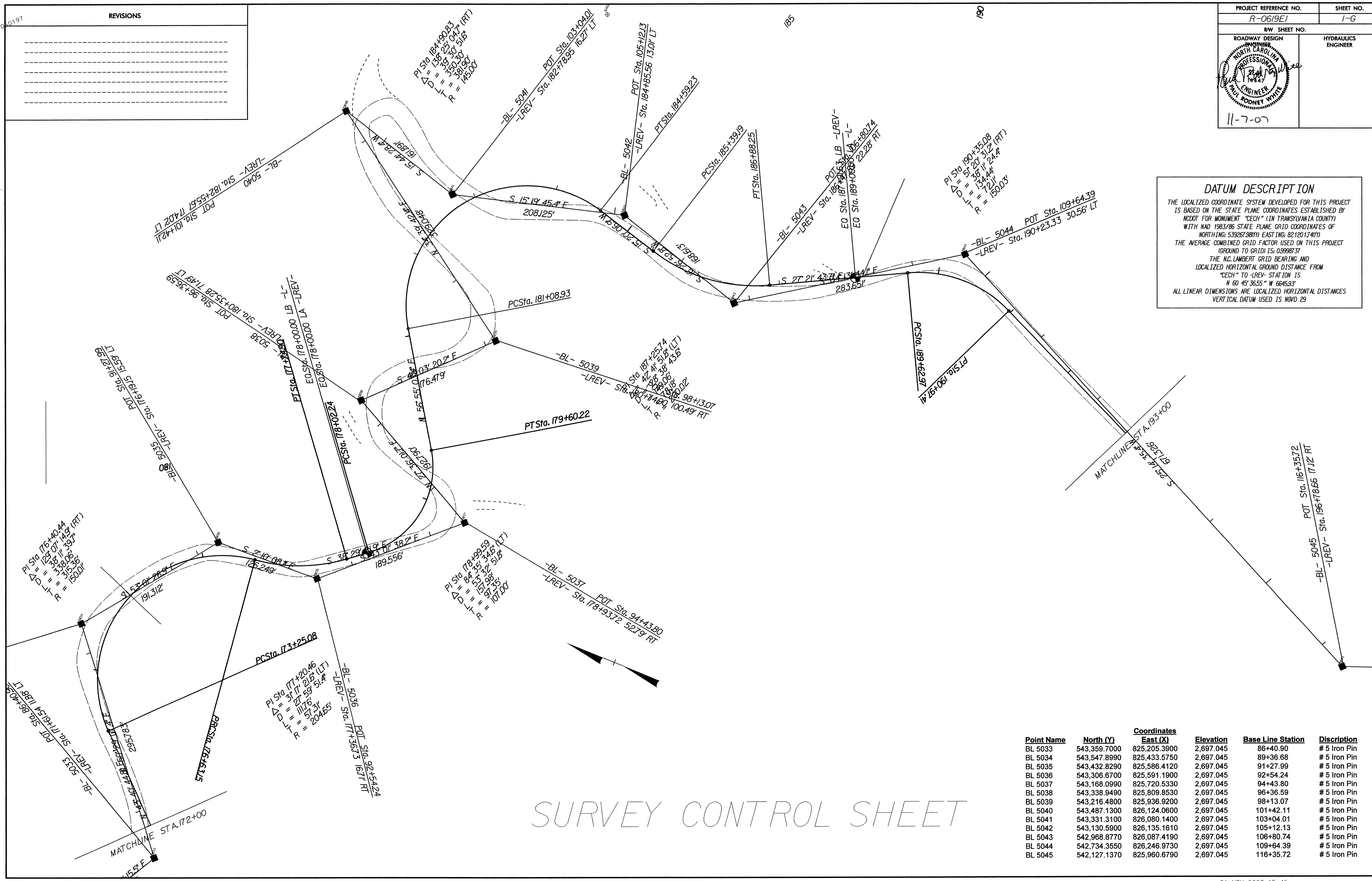
REVISIONS



REVISIONS

PROJECT REFERENCE NO. R-0619E1	SHEET NO. 1-6
RW SHEET NO.	
ROADWAY DESIGN NORTH CAROLINA PROFESSIONAL ENGINEER PAUL RODNEY WHITE 11-7-07	HYDRAULICS ENGINEER

DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "CECH" (IN TRANSYLVANIA COUNTY) WITH NAD 1983/86 STATE PLANE GRID COORDINATES OF NORTHING: 539267.98(11) EASTING: 821201.74(11) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998737
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 N 60 45 36.55" W 6645.93'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
 VERTICAL DATUM USED IS NGVD 29



SURVEY CONTROL SHEET

Point Name	Coordinates		Elevation	Base Line Station	Discription
	North (Y)	East (X)			
BL 5033	543,359.7000	825,205.3900	2,697.045	86+40.90	# 5 Iron Pin
BL 5034	543,547.8990	825,433.5750	2,697.045	89+36.68	# 5 Iron Pin
BL 5035	543,432.8290	825,586.4120	2,697.045	91+27.99	# 5 Iron Pin
BL 5036	543,306.6700	825,591.1900	2,697.045	92+54.24	# 5 Iron Pin
BL 5037	543,168.0990	825,720.5330	2,697.045	94+43.80	# 5 Iron Pin
BL 5038	543,338.9490	825,809.8530	2,697.045	96+36.59	# 5 Iron Pin
BL 5039	543,216.4800	825,936.9200	2,697.045	98+13.07	# 5 Iron Pin
BL 5040	543,487.1300	826,124.0600	2,697.045	101+42.11	# 5 Iron Pin
BL 5041	543,331.3100	826,080.1400	2,697.045	103+04.01	# 5 Iron Pin
BL 5042	543,130.5900	826,135.1610	2,697.045	105+12.13	# 5 Iron Pin
BL 5043	542,968.8770	826,087.4190	2,697.045	106+80.74	# 5 Iron Pin
BL 5044	542,734.3550	826,246.9730	2,697.045	109+64.39	# 5 Iron Pin
BL 5045	542,127.1370	825,960.6790	2,697.045	116+35.72	# 5 Iron Pin

SURVEY CONTROL SHEET

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "CECH" (IN TRANSYLVANIA COUNTY) WITH NAD 1983/86 STATE PLANE GRID COORDINATES OF NORTHING: 539267.98(1) EASTING: 8212017.4(1) THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.9998737

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "CECH" TO -LREV- STATION IS
N 60° 45' 36.55" W 6645.93'

ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES
VERTICAL DATUM USED IS NGVD 29

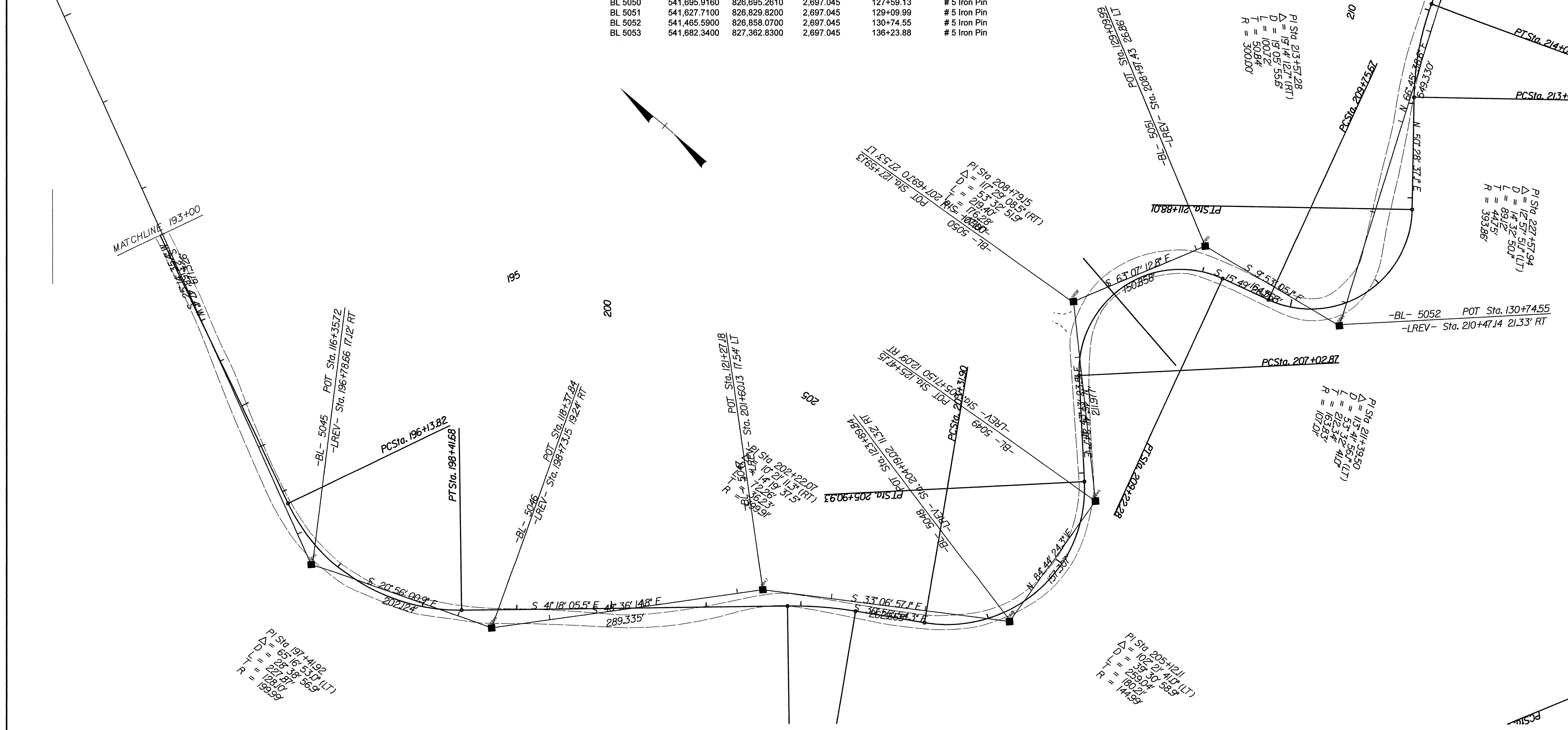
SEE STD.DRWG.876.02,876.03,AND 876.04 FOR PIPE OUTLET PROTECTION ON FILL SLOPES

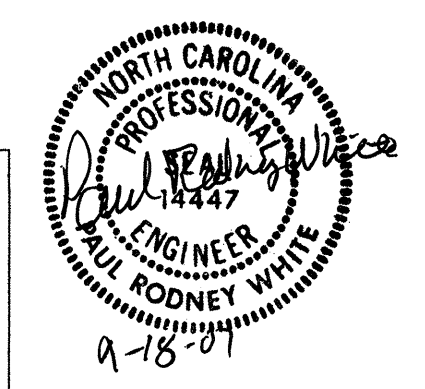
Point Name	North (Y)	East (X)	Elevation	Base Line Station	Description
BL 5044	542,734.3550	826,246.9730	2,697.045	109+64.39	# 5 Iron Pin
BL 5045	542,127.1370	825,960.6790	2,697.045	116+35.72	# 5 Iron Pin
BL 5046	541,938.3540	826,032.8950	2,697.045	118+37.84	# 5 Iron Pin
BL 5047	541,747.0290	826,249.9420	2,697.045	121+27.18	# 5 Iron Pin
BL 5048	541,527.0290	826,393.4450	2,697.045	123+89.84	# 5 Iron Pin
BL 5049	541,541.4500	826,550.0900	2,697.045	125+47.15	# 5 Iron Pin
BL 5050	541,695.9160	826,695.2610	2,697.045	127+59.13	# 5 Iron Pin
BL 5051	541,627.7100	826,829.8200	2,697.045	129+09.99	# 5 Iron Pin
BL 5052	541,465.5900	826,858.0700	2,697.045	130+74.55	# 5 Iron Pin
BL 5053	541,682.3400	827,362.8300	2,697.045	136+23.88	# 5 Iron Pin

REVISIONS

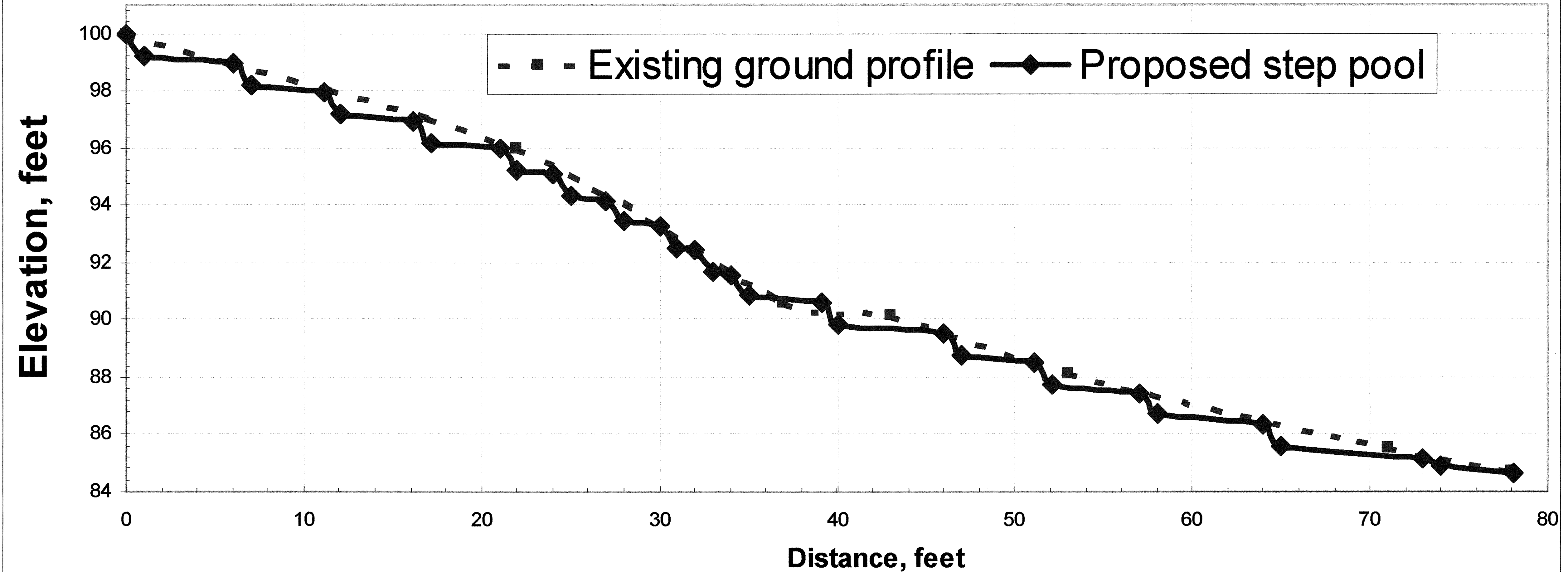
-BL- 5044 POT Sta. 109+64.39
-LREV- Sta. 190+23.33 30.56' LT

END PROJECT R-0619E1
STATION 215+00

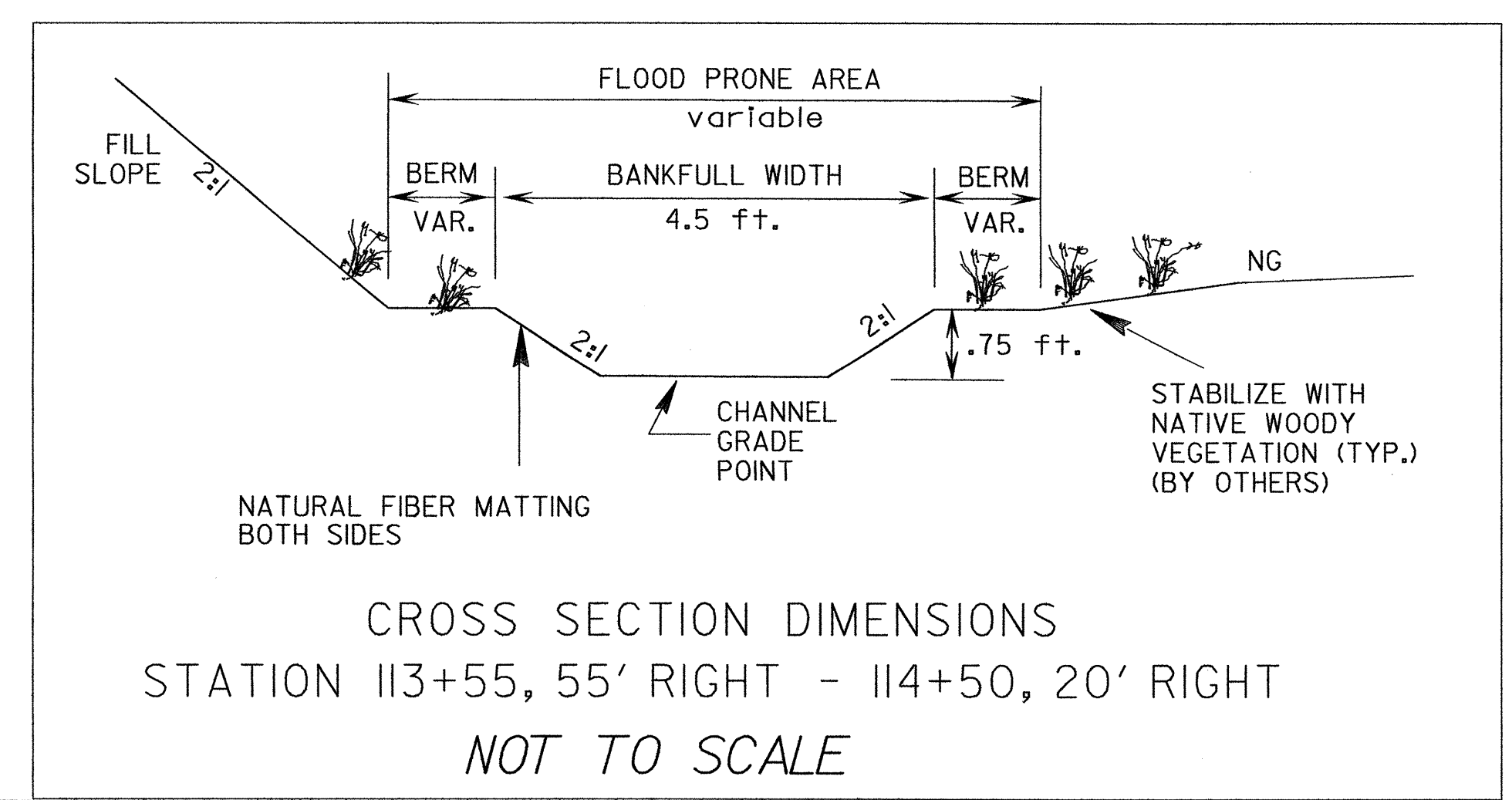




PROPOSED PROFILE OF UN-NAMED TRIBUTARY TO THE WEST FORK FRENCH BROAD RIVER ON NC 281 1050 FEET EAST OF SLICK FISHER ROAD IN TRANSYLVANIA COUNTY



Average Slope = 0.20 ft/ft **Slope Between Steps = 0.049 ft/ft**
Average Step = 0.75 ft **Average Step Spacing = 5.1 ft**



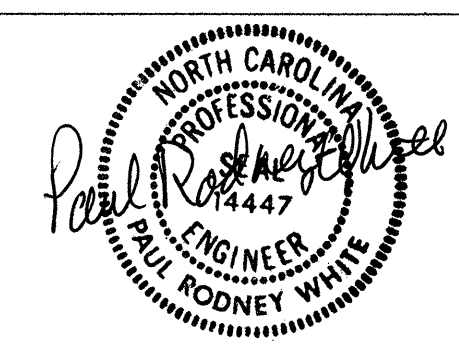
N. C. DEPT. OF TRANSPORTATION
 DIVISION OF HIGHWAYS

 UNNAMED TRIBUTARY TO
 WEST FORK FRENCH BROAD RIVER

 PROJECT R-0619E1 (NC 281)
 1050 FT EAST OF
 SLICK FISHER RD (SR 1306)

 TRANSYLVANIA COUNTY

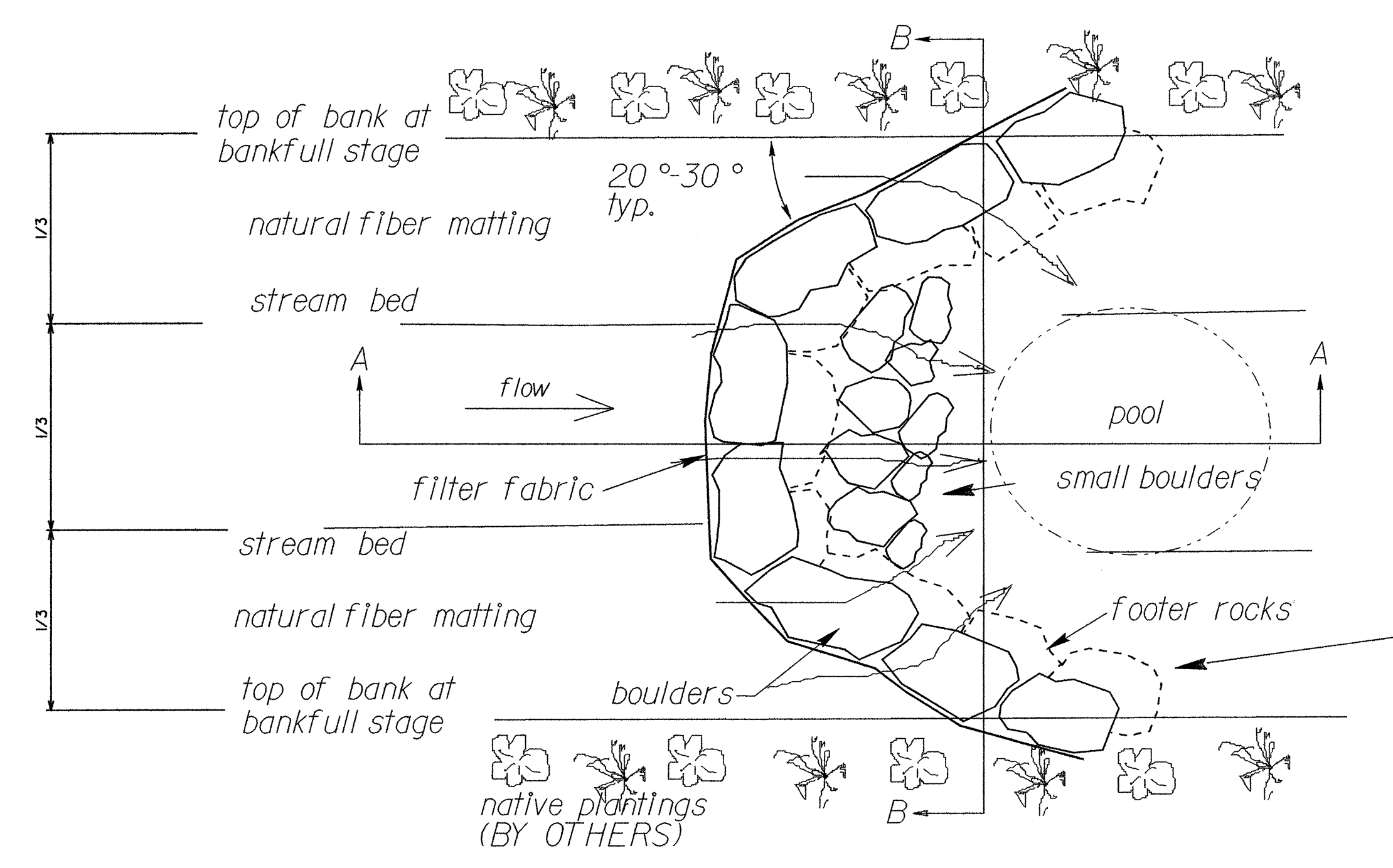
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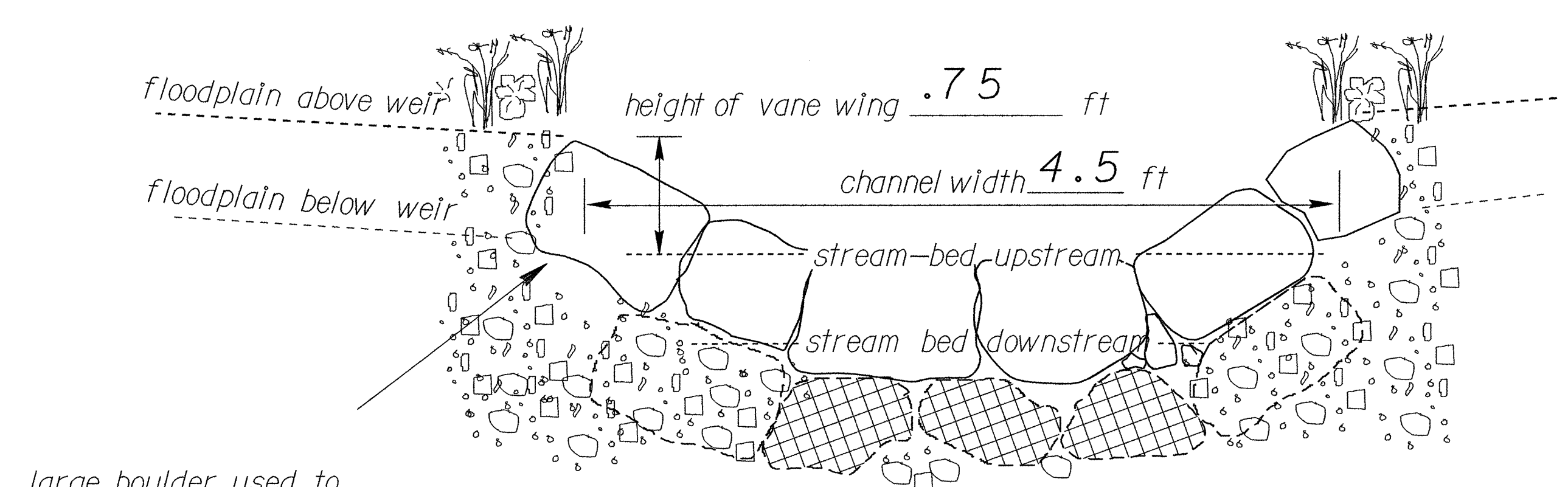
9-18-07

CROSS VANE ROCK WEIR DETAIL

STREAM RELOCATION FROM STATION 113+55.55' RIGHT - STATION 114+50.20' RIGHT
NOT TO SCALE

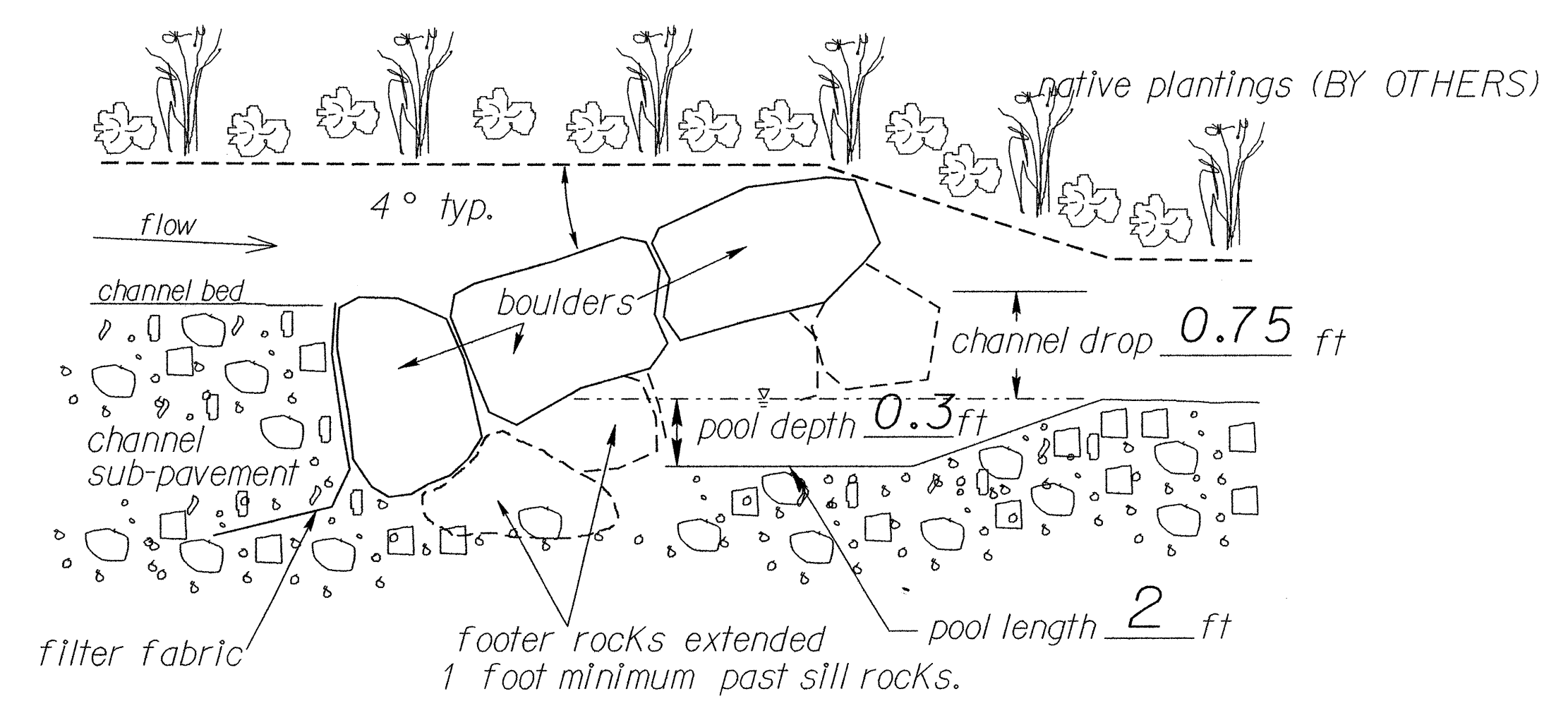


PLAN VIEW



Large boulders should be native stone or shot rock, angular and oblong with effective size (median axis) a minimum of 12".
Nominal size 0.7' x 1' x 2'
Estimated no. of cross vanes: 16
Estimated quantity per cross vane: 2 tons
Estimated total quantity: 32 tons

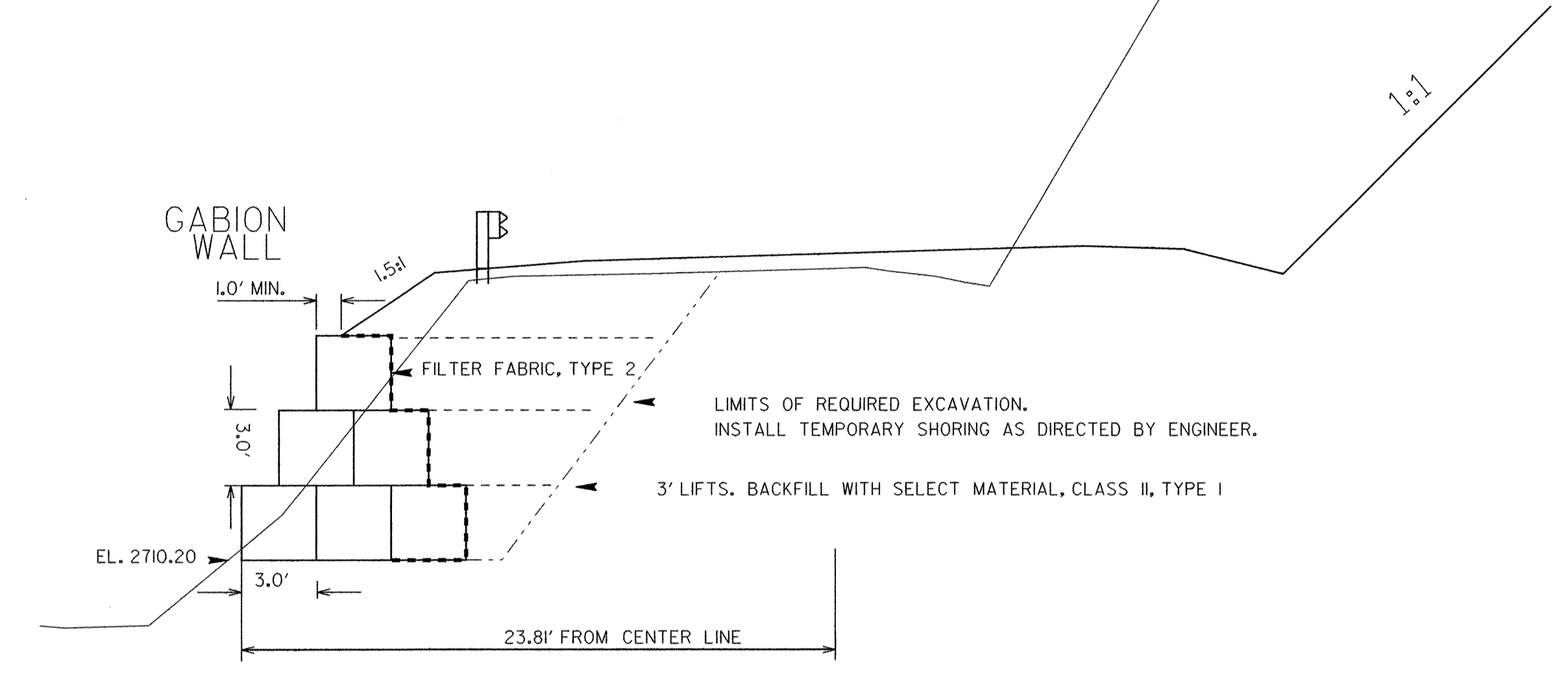
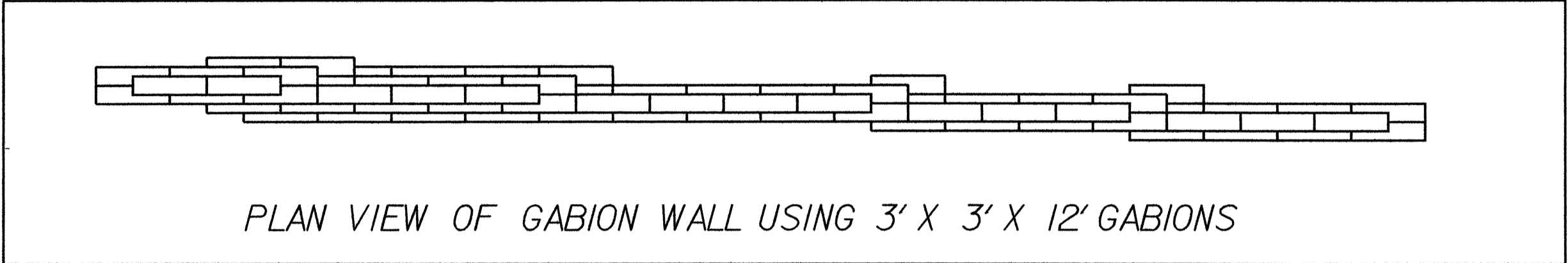
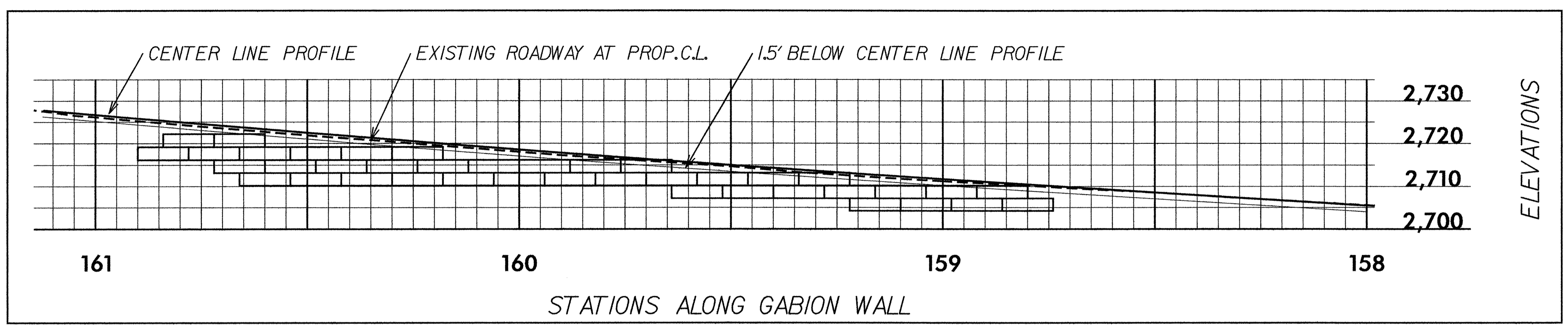
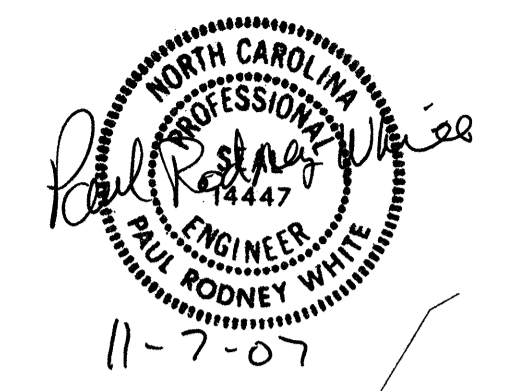
SECTION B-B



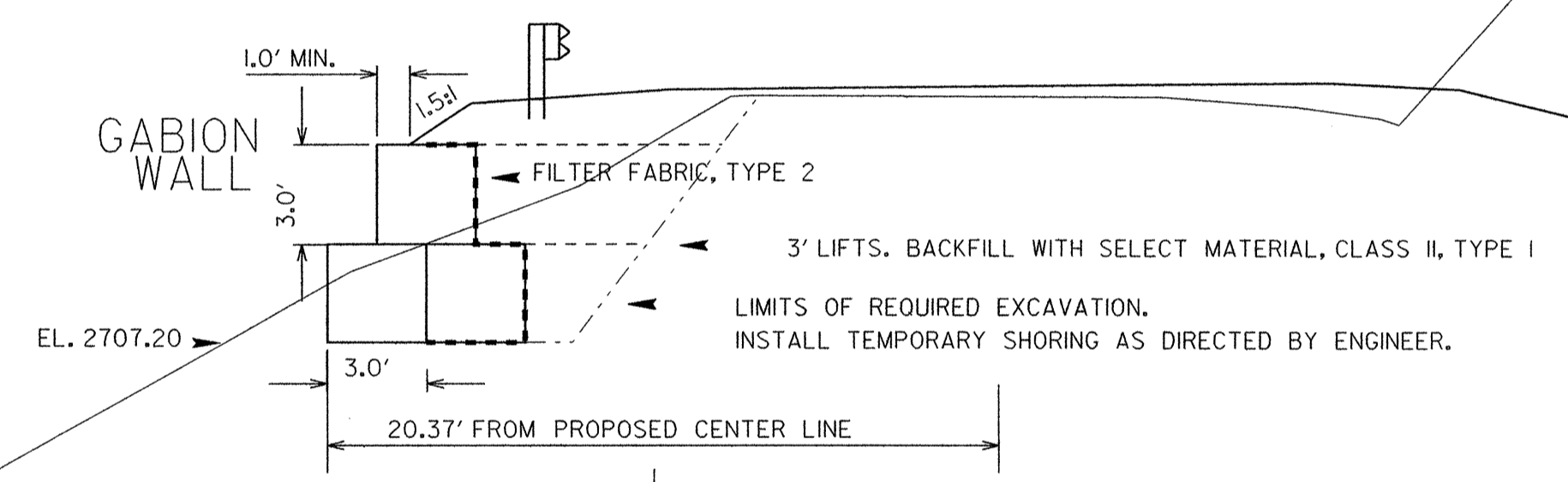
SECTION A-A

N. C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
UNNAMED TRIBUTARY TO
WEST FORK FRENCH BROAD RIVER
PROJECT R-0619EI (NC 281)
1050 FT EAST OF
SLICK FISHER RD (SR 1306)
TRANSYLVANIA COUNTY

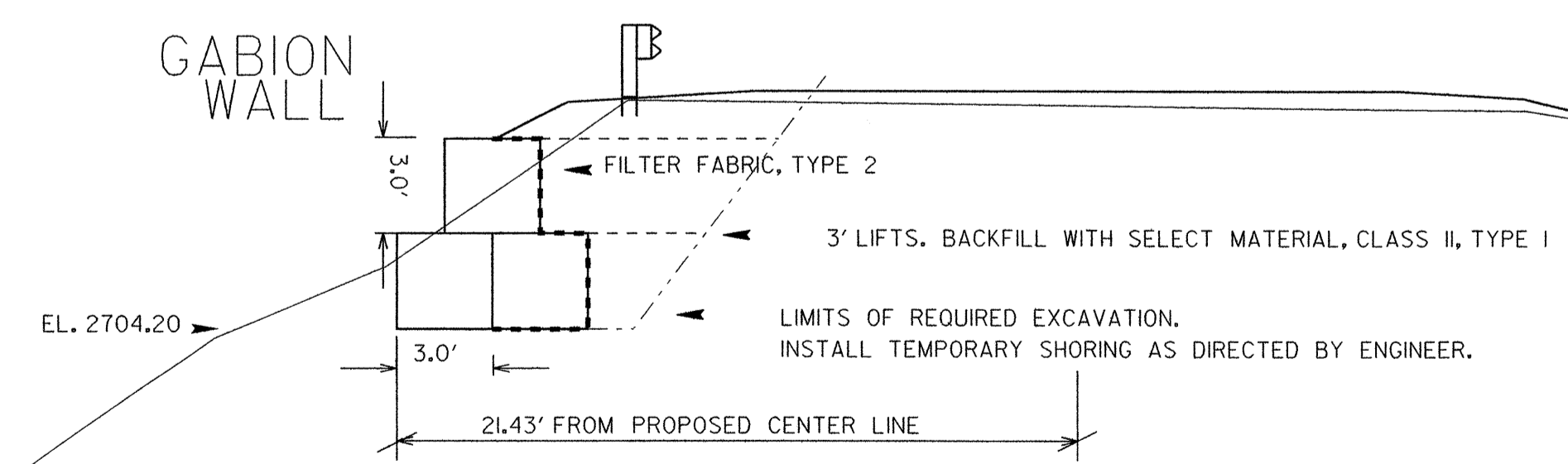
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paulwhite



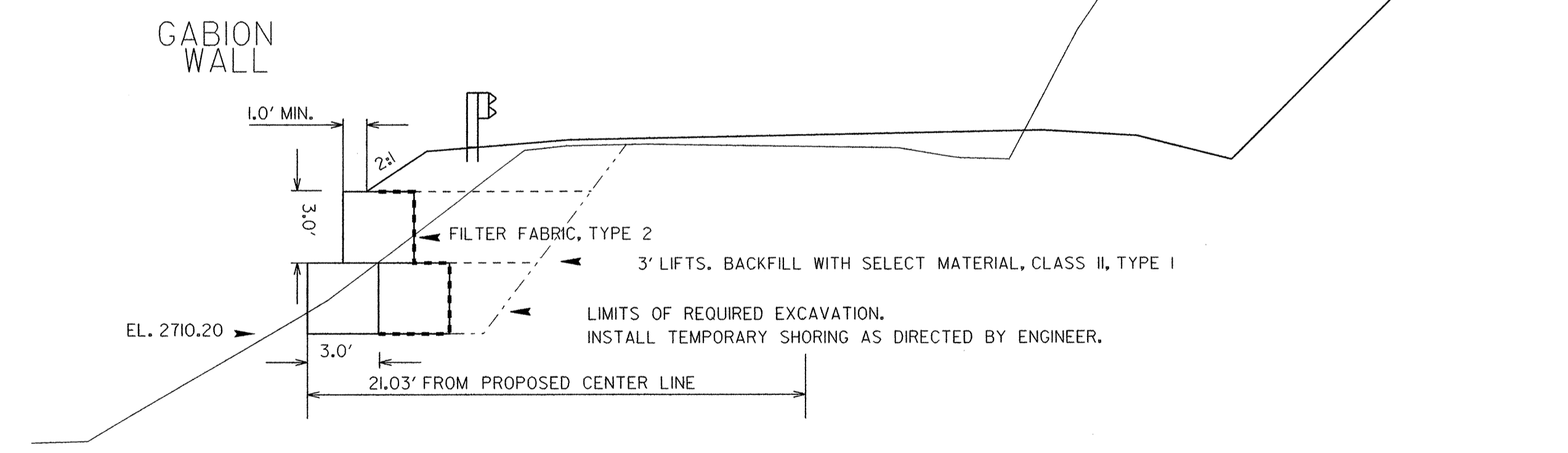
160+50.00



159+50.00

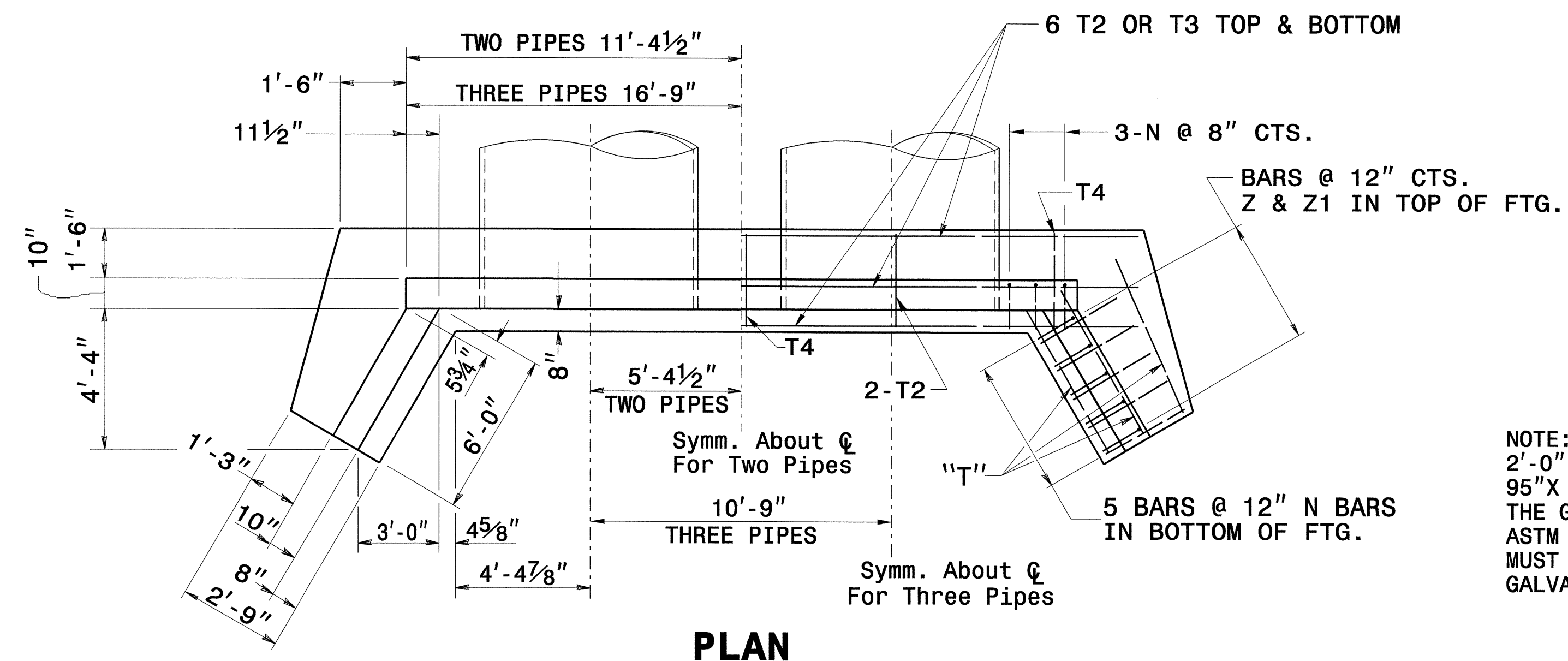


159+00.00

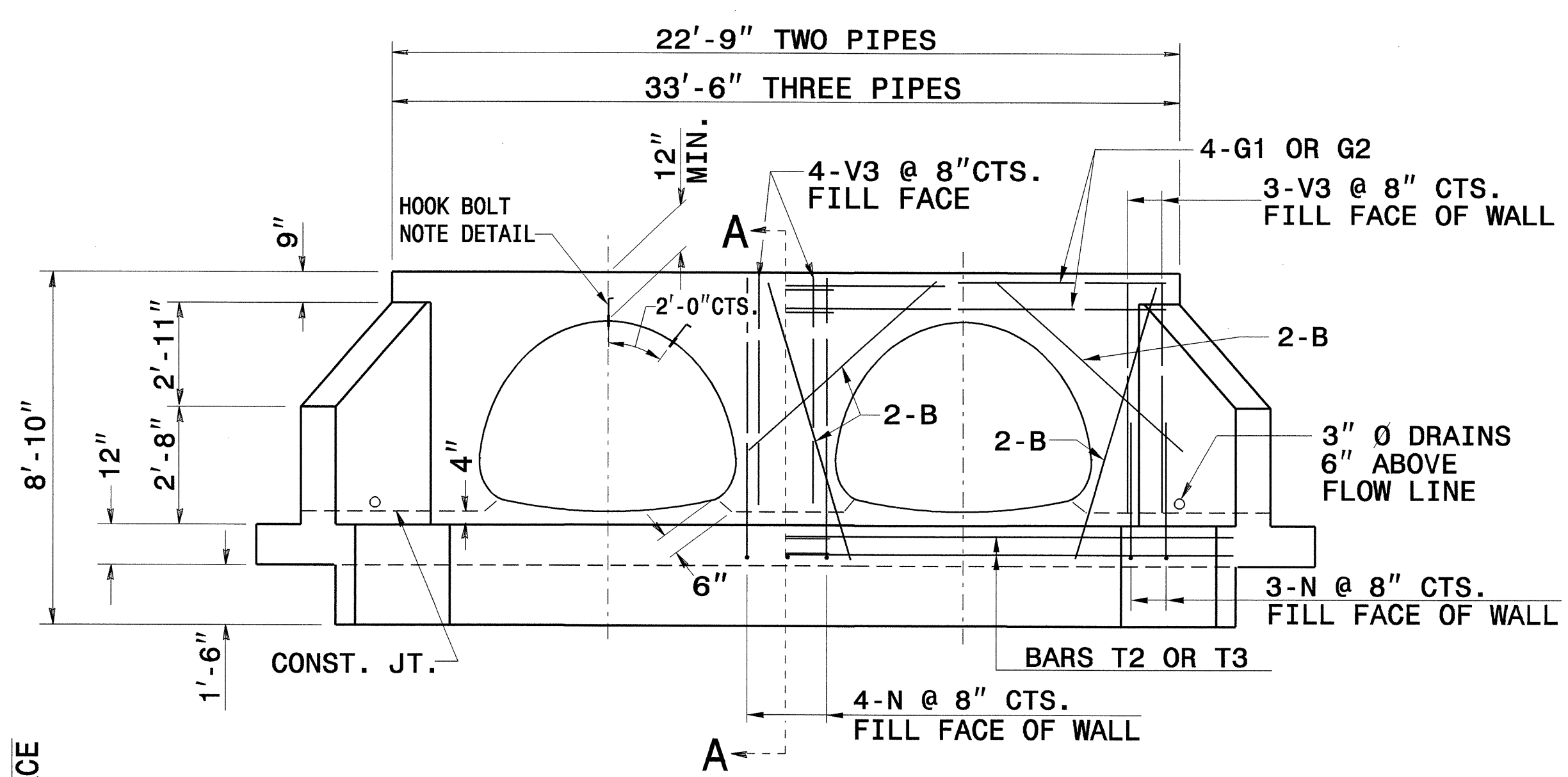


160+00.00

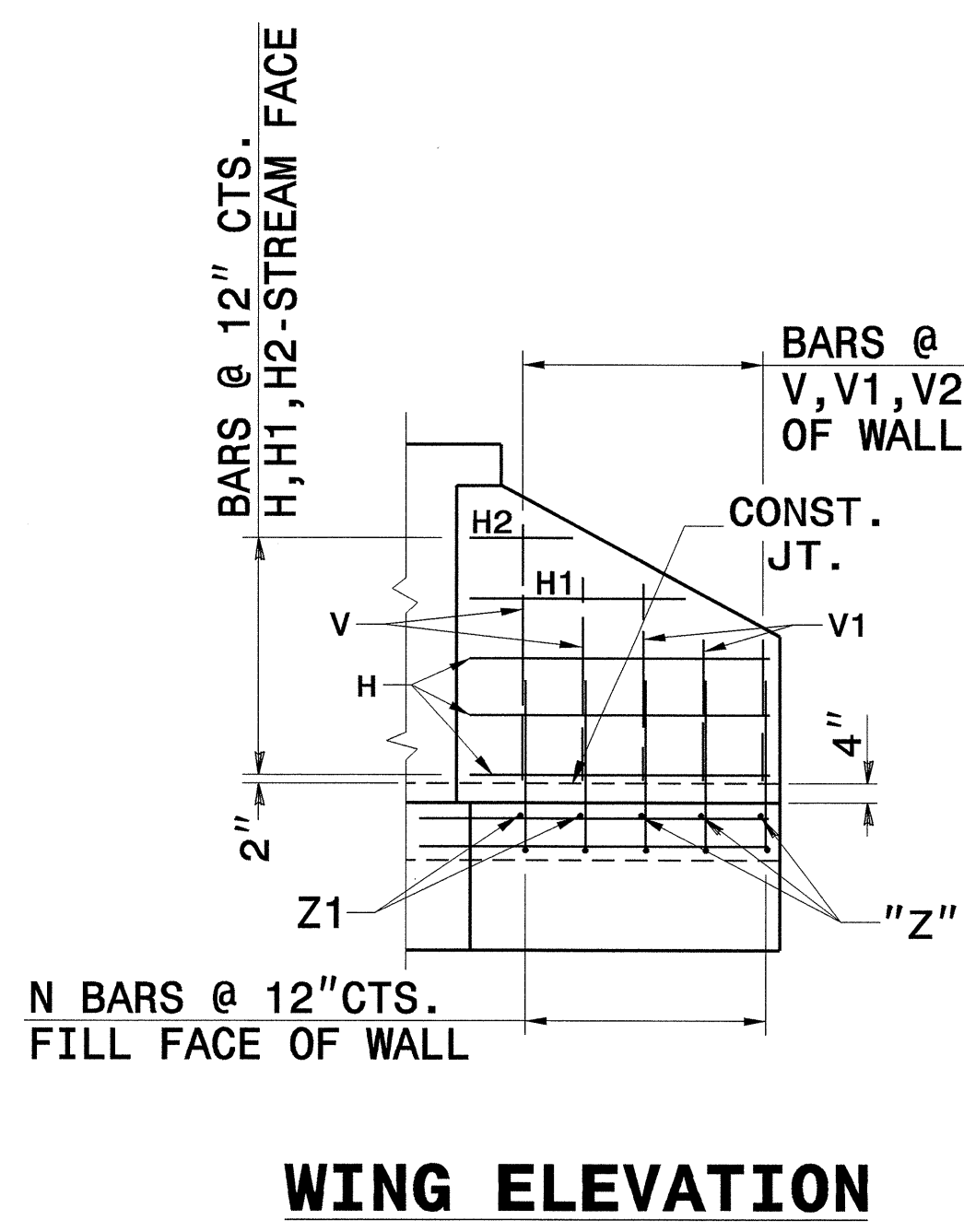
CONSTRUCT GABION WALL FROM -LREV- STATION 158+74 TO 160+90.
 GABIONS ARE TO BE FILLED WITH STONE ACCORDING TO THE SPECIAL PROVISION OR AS DIRECTED BY THE ENGINEER



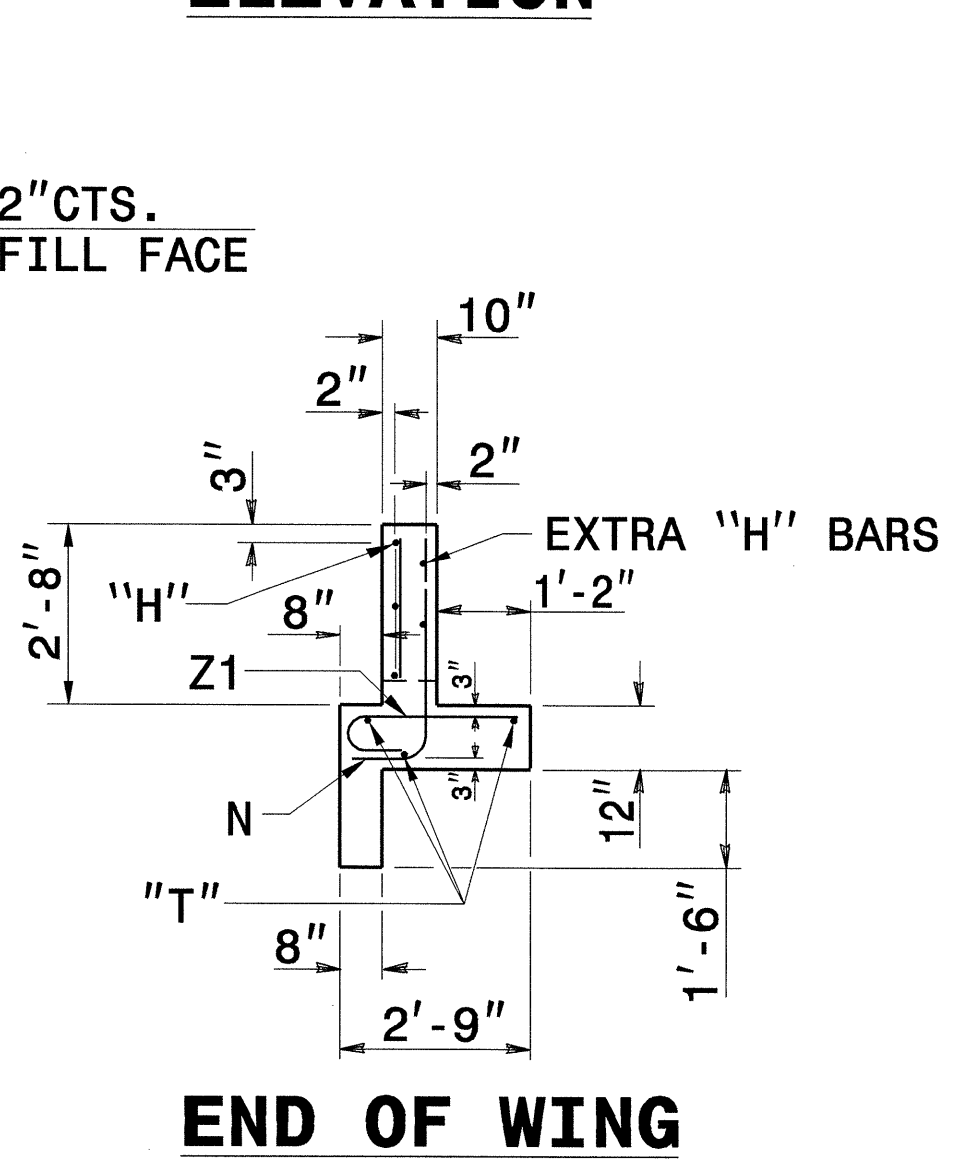
PLAN



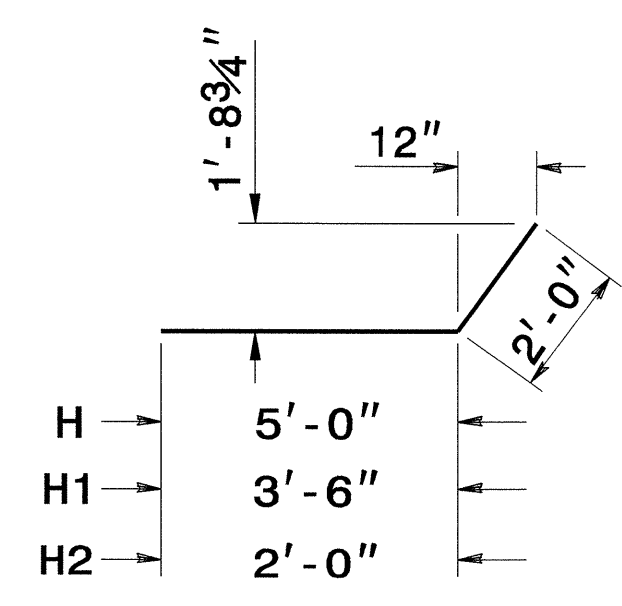
ELEVATION



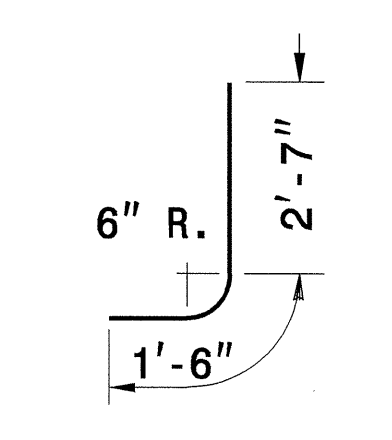
WING ELEVATION



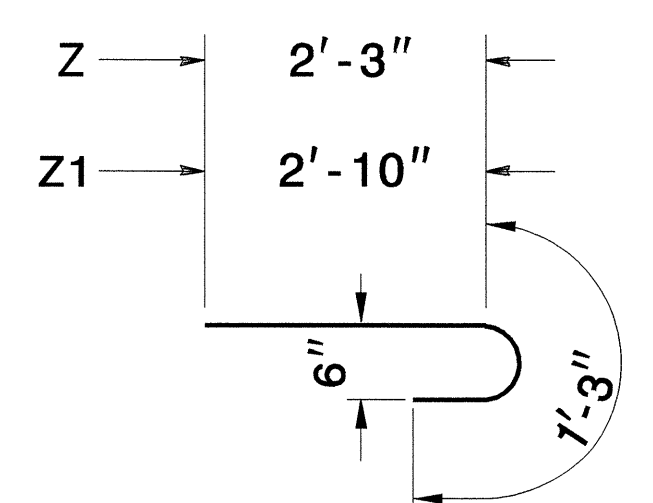
END OF WING



"H" BARS



"N" BARS

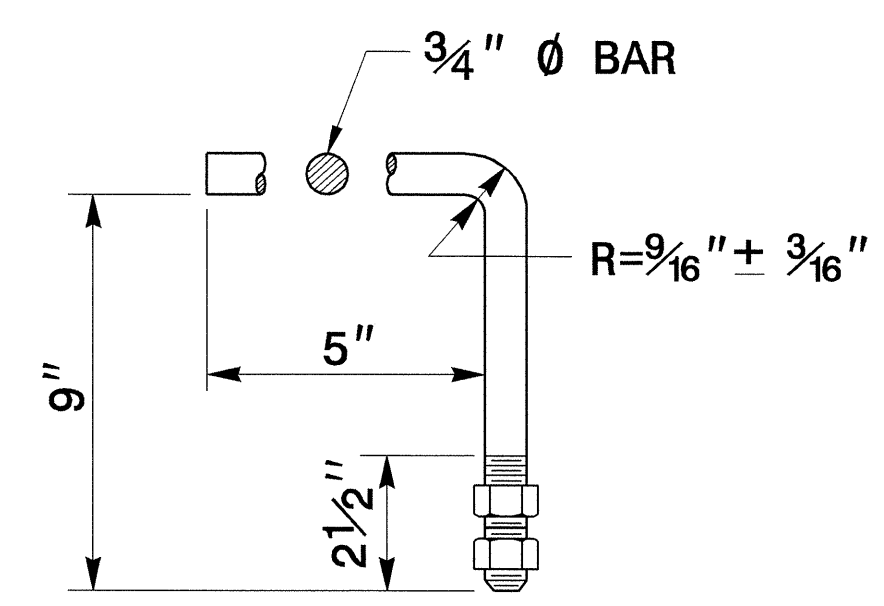


"Z" BARS

"H", "N", & "Z" BAR DIMENSIONS ARE OUT TO OUT.

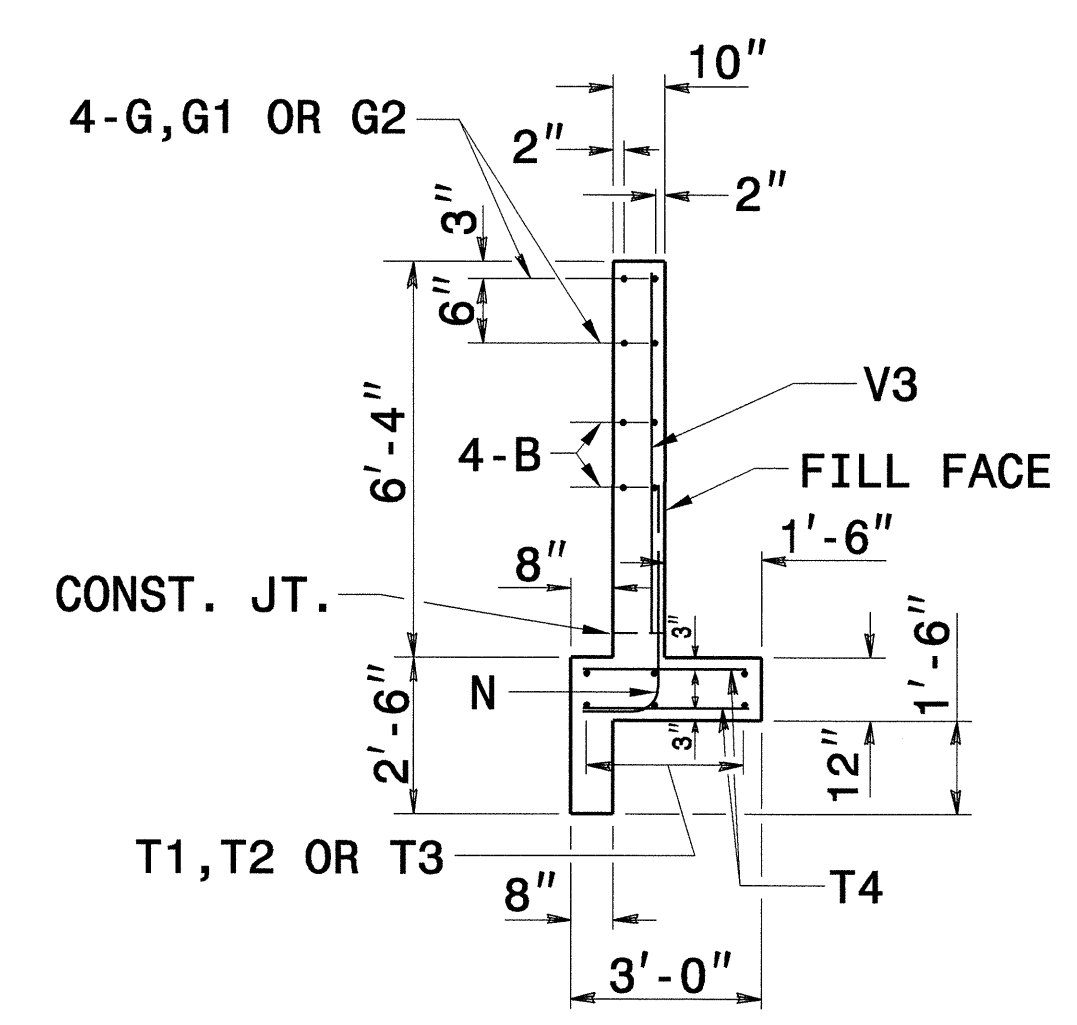
DESIGN DATA

Specifications	A.A.S.H.T.O. (1977)
Steel in tension	20,000 LBS. PER SQ. IN.
Concrete in compression	1,200 LBS. PER SQ. IN.
Shear Class "A" Concrete	SEE A.A.S.H.T.O.
Equiv. fluid pressure of earth	30 LBS. PER CU. FT.



HOOK BOLT

NOTE: CONSTRUCT HOOK BOLTS (ANCHORS) AT 2'-0" CTS. ALONG THE CIRCUMFERENCE OF THE 95"X 67" CMP. EMBED THE HOOK BOLTS 6" IN DEPTH. THE GALVANIZED 3/4" DIA. HOOK BOLTS MUST MEET ASTM A-307 OR ASTM A-836. BOTH BOLTS AND NUTS MUST BE IN ACCORDANCE WITH ASTM A-153 FOR GALVANIZING.



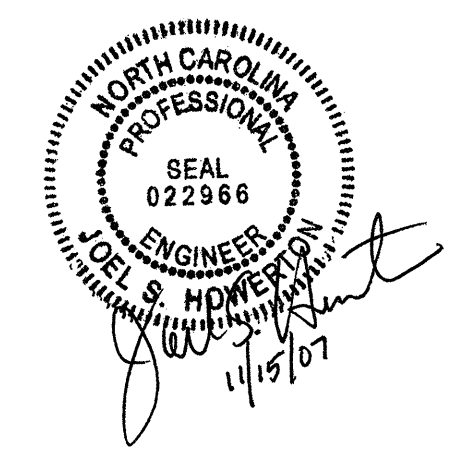
SECTION - AA

NOTES:

- ALL CONCRETE TO BE CLASS "A".
- ALL REINFORCING STEEL SHALL BE ASTM A615-GRADE 60.
- ALL REINFORCING STEEL SHALL BE DEFORMED BARS. WHERE SPLICING OF REINFORCEMENT IS NECESSARY, BARS ARE TO BE LAPPED 45 DIAMETERS. ALL DIMENSIONS RELATIVE TO REINFORCEMENT ARE TO CENTERS OF BARS.
- THE FOOTING, CURTAIN WALL AND 4" OF WALL ARE TO BE POURED IN ONE OPERATION ALLOWING NO TIME FOR INITIAL SET TO TAKE PLACE BETWEEN THEM. THE REMAINING WALL SHALL THEN BE POURED IN ONE OPERATION.
- ALL EXPOSED CORNERS ARE TO BE CHAMFERED 1".
- 3" DIAMETER DRAINS SHALL BE PLACED IN WALL AS SHOWN AND BE 6" ABOVE NORMAL FLOW LINE.
- ALL MATERIAL AND WORKMANSHIP AS PER N.C. DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
- THE EXTRA BARS ARE PROVIDED FOR HOLDING REINFORCING STEEL IN CORRECT POSITION IN WING.

BILL OF MATERIAL FOR ENDWALL

REINFORCING STEEL		1 PIPES	2 PIPES	3 PIPES	
BAR	SIZE	LENGTH	NO. WEIGHT	NO. WEIGHT	
B	#4	6'-6"	8 35	16 69	24 104
G	#5	11'-9"	4 49	- -	- -
G1	#5	12'-6"	- -	8 104	- -
G2	#5	17'-9"	- -	- -	8 148
H	#4	7'-0"	10 47	10 47	10 47
H1	#4	5'-6"	2 7	2 7	2 7
H2	#4	4'-0"	4 11	4 11	4 11
N	#4	4'-1"	16 44	20 55	24 65
T	#4	5'-0"	6 20	6 20	6 20
T1	#4	15'-0"	6 60	- -	- -
T2	#4	14'-0"	- -	12 112	- -
T3	#4	18'-3"	- -	- -	12 146
T4	#4	2'-9"	4 7	7 13	10 18
V	#4	4'-3"	6 17	6 17	6 17
V1	#4	3'-0"	6 12	6 12	6 12
V2	-	-	-	-	-
V3	#4	5'-10"	6 23	10 39	14 55
Z	#4	3'-6"	6 14	6 14	6 14
Z1	#4	4'-1"	4 11	4 11	4 11
REINFORCING STEEL LBS.			357	531	675
CON./R.C. CU. YDS.			6.2	8.6	11.0



**PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN**
Office 919-250-4128 FAX 919-250-4119

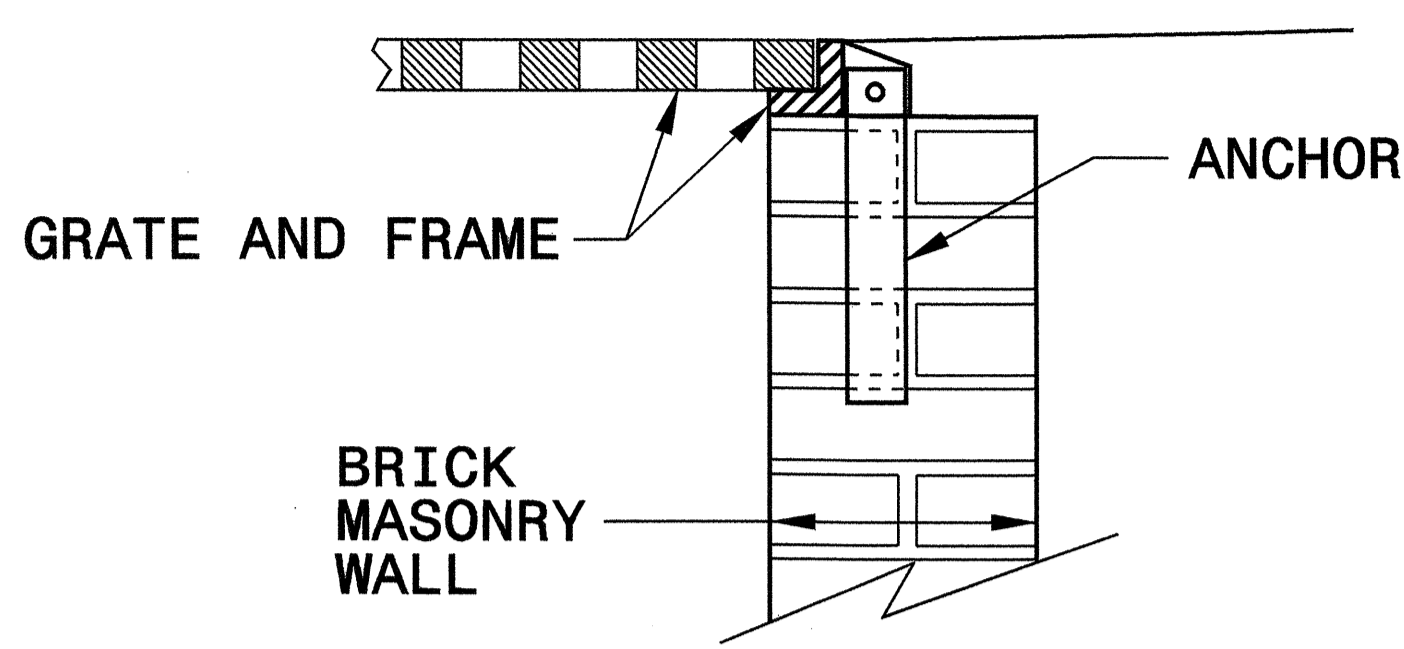
**DETAIL OF REINFORCED
CONCRETE ENDWALL
FOR 95"X 67" (Pipe Arch)-90°**

ORIGINAL BY: _____ DATE: _____
 MODIFIED BY: rnbritt DATE: 5-04-07
 CHECKED BY: _____ DATE: _____
 FILE SPEC: details/rnbritt/english/r4071endwp1parch93x64.dgn

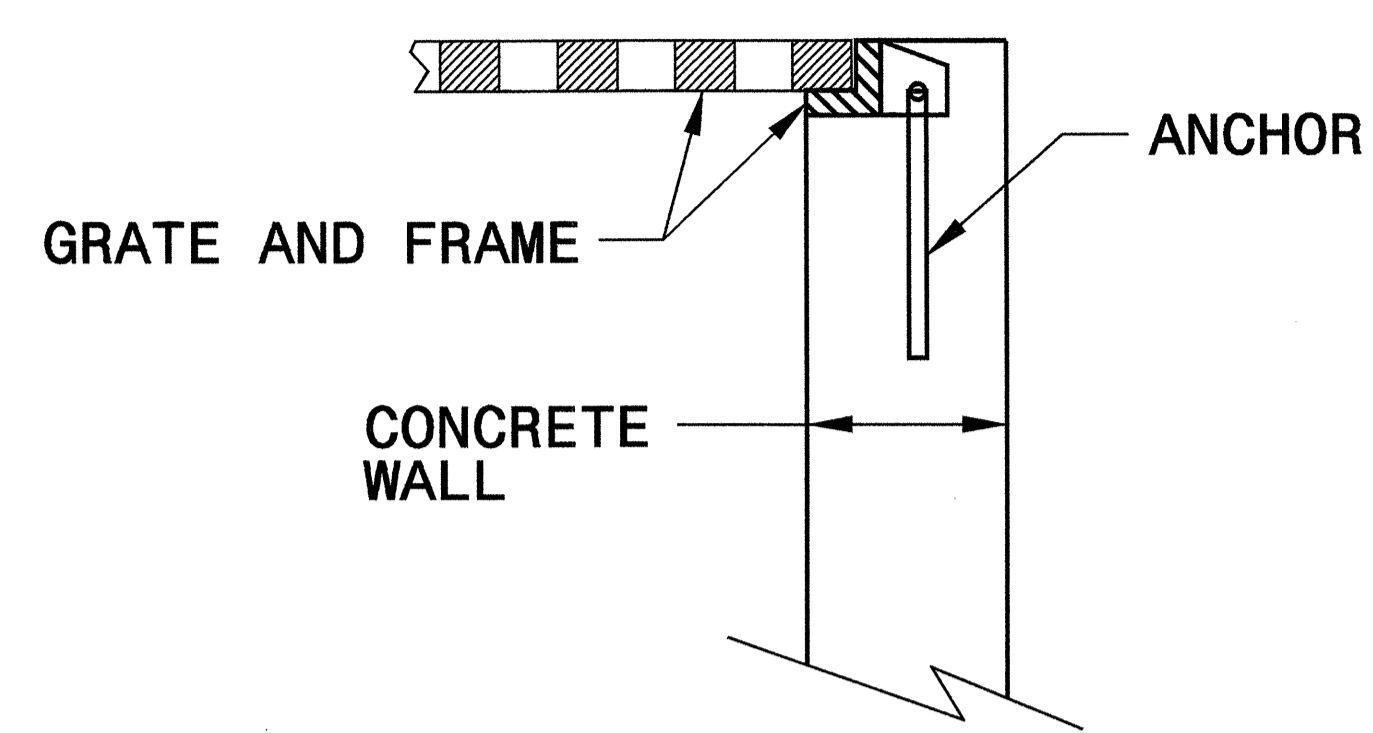
STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

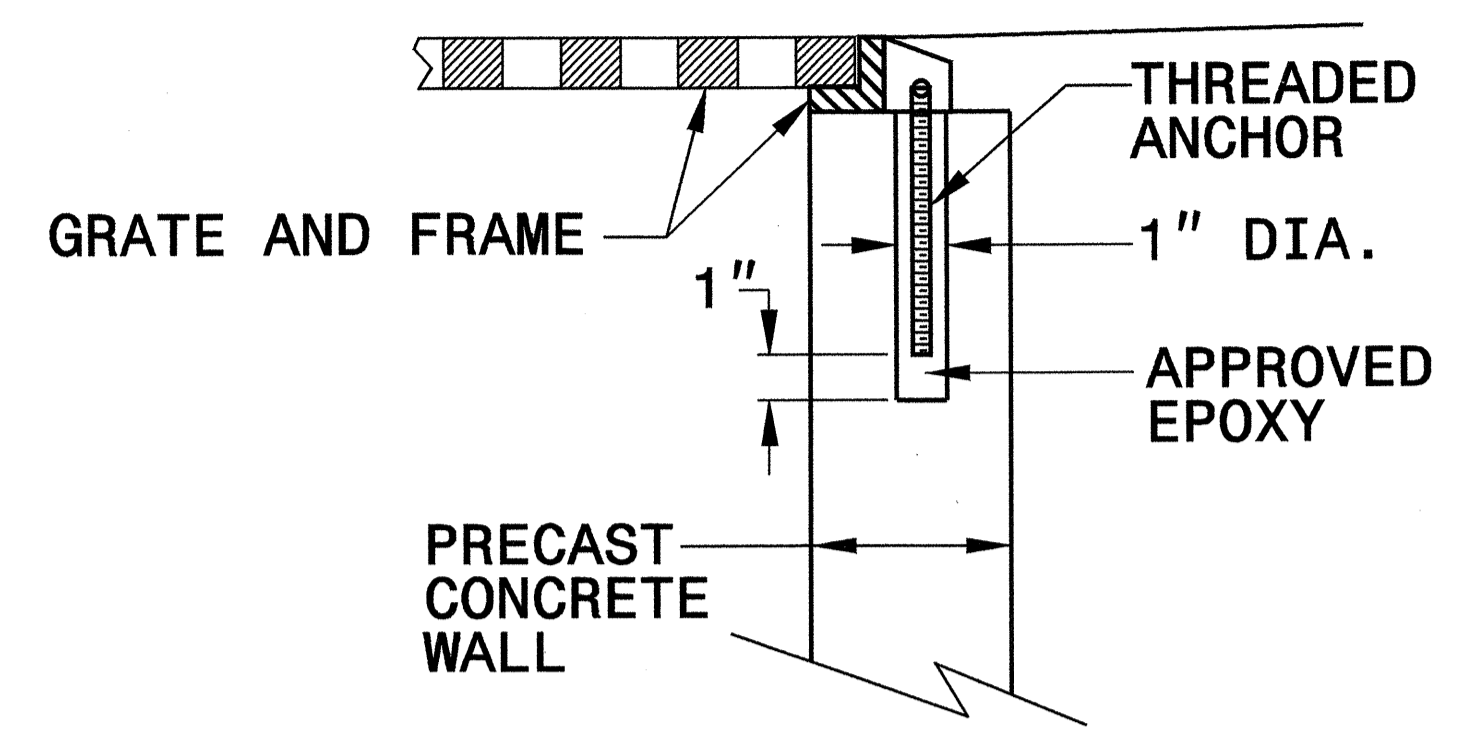
SHEET 1 OF 1
840D25



BRICK MASONRY CONSTRUCTION



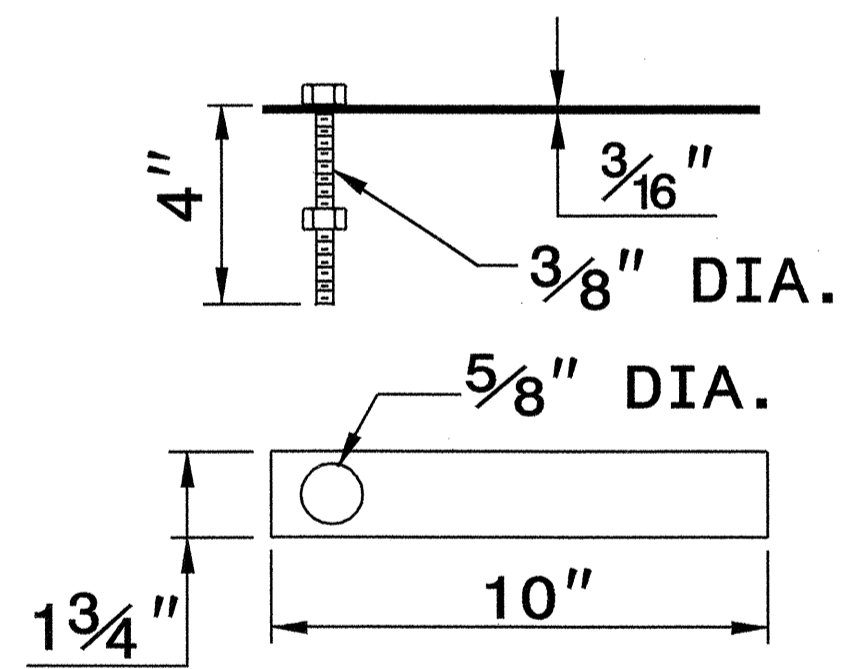
CONCRETE CONSTRUCTION



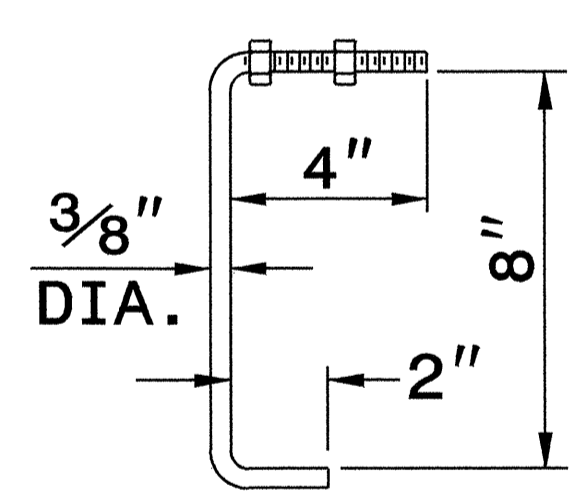
PRECAST CONCRETE CONSTRUCTION

DETAIL SHOWING ANCHORAGE OF FRAME FOR GRATED DROP INLET

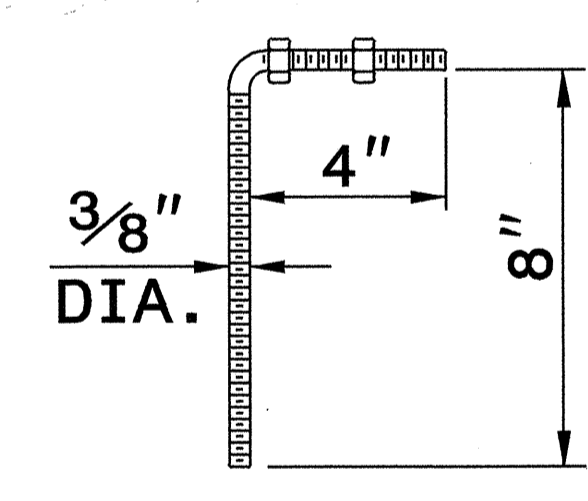
NOTE:
CONSTRUCT GRATED DROP INLET TO COINCIDE WITH NORMAL OR SUPERELEVATED SHOULDER OR PAVEMENT SLOPE.



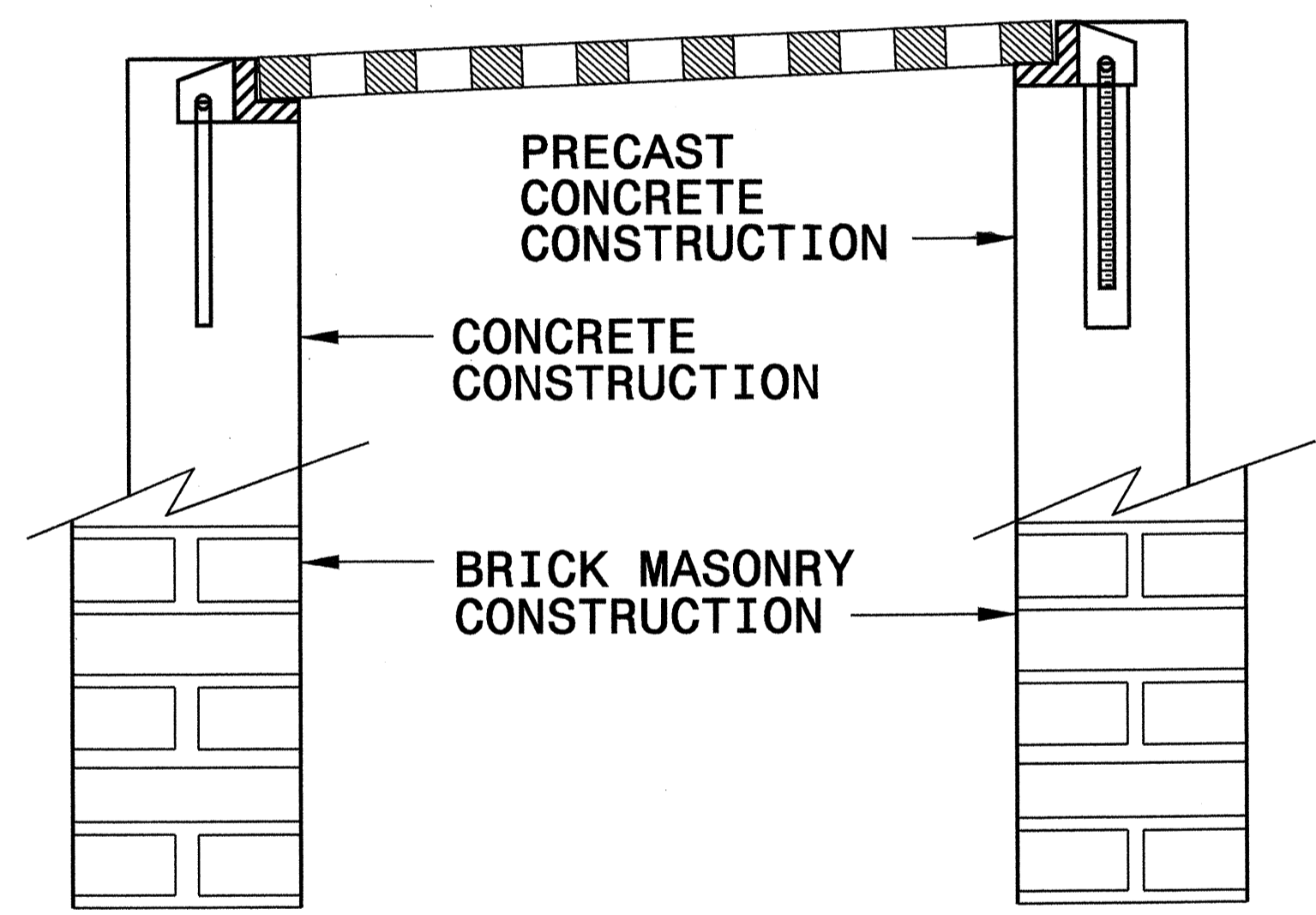
MASONRY ANCHOR
3/8" DIA. BOLT WITH PLATE



CONCRETE ANCHOR
3/8" DIA. BENT BAR



PRECAST CONCRETE ANCHOR
3/8" DIA. BENT BAR



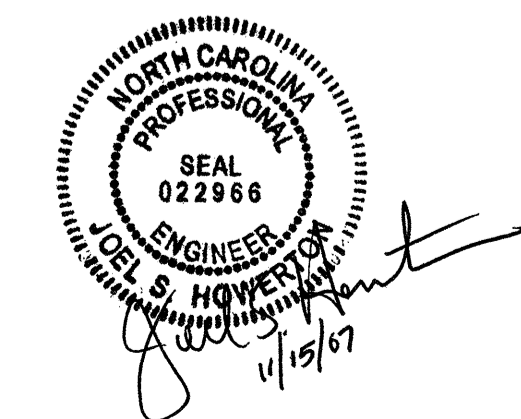
FRAME AND GRATE INSTALLATION FOR NORMAL CROWN AND SUPERELEVATED SECTIONS

STATE OF NORTH CAROLINA
DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS
RALEIGH, N.C.

ENGLISH DETAIL DRAWING FOR
ANCHORAGE FOR FRAMES
BRICK/CONCRETE/PRECAST CONCRETE

SHEET 1 OF 1
840D25

01-WAR-2007-09:04
projects\stds\special details\enrichard\stds\06\stds to special details\84025 anchorage for frames\0840d25.dgn
Shoverton AT PS 2/22/06



**PROJECT SERVICES UNIT
STANDARDS AND SPECIAL DESIGN**
Office 919-250-4128 FAX 919-250-4119

SEE PLATE FOR TITLE

ORIGINAL BY: 2006 STD 840.25 DATE: 07/18/06
MODIFIED BY: E.E. WARD DATE: 9/25/06
CHECKED BY: _____ DATE: _____
FILE SPEC.: _____

DIVISION OF HIGHWAYS STATE OF NORTH CAROLINA

SUMMARY OF QUANTITIES

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS ROADWAY SUMMARY OF QUANTITIES FOR CONTRACT - C201879														
ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description	ItemNumber	Sec #	Quantity	Unit	Description
0000100000-N	800	Lump Sum		MOBILIZATION	2066000000-N	815	2	EA	CONCRETE PAD FOR SUBDRAIN PIPE OUTLET	3566000000-E	867	525	LF	WOVEN WIRE FENCE RESET
0001000000-E	200	Lump Sum		CLEARING & GRUBBING .. ACRE(S)	2077000000-E	815	12	LF	6" OUTLET PIPE (SUBDRAINS)	3569000000-E	867	1,925	LF	BARBED WIRE FENCE RESET
0008000000-E	200	2	ACR	SUPPLEMENTARY CLEARING & GRUBBING	2209000000-E	838	13.3	CY	ENDWALLS	3642000000-E	876	2,000	TON	RIP RAP, CLASS A
0022000000-E	225	105,200	CY	UNCLASSIFIED EXCAVATION	2220000000-E	838	8.6	CY	REINFORCED ENDWALLS	3649000000-E	876	90	TON	RIP RAP, CLASS B
0036000000-E	225	400	CY	UNDERCUT EXCAVATION	2253000000-E	840	0.6	CY	PIPE COLLARS	3651000000-E	SP	37	TON	BOULDERS
0156000000-E	250	180	SY	REMOVAL OF EXISTING ASPHALT PAVEMENT	2286000000-N	840	1	EA	MASONRY DRAINAGE STRUCTURES	3656000000-E	876	5,800	SY	FILTER FABRIC FOR DRAINAGE
0241000000-E	SP	160	SY	GENERIC GRADING ITEM GABION WALL	2365000000-N	840	1	EA	FRAME WITH TWO GRATES, STD 840.22	4400000000-E	1110	334	SF	WORK ZONE SIGNS (STATIONARY)
0318000000-E	300	255	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRS	3030000000-E	862	4,500	LF	STEEL BM GUARDRAIL	4405000000-E	1110	96	SF	WORK ZONE SIGNS (PORTABLE)
0343000000-E	310	270	LF	15" SIDE DRAIN PIPE	3045000000-E	862	750	LF	STEEL BM GUARDRAIL, SHOP CURVED	4430000000-N	1130	120	EA	DRUMS
0344000000-E	310	50	LF	18" SIDE DRAIN PIPE	3150000000-N	862	15	EA	ADDITIONAL GUARDRAIL POSTS	4445000000-E	1145	128	LF	BARRICADES (TYPE III)
0714000000-E	310	1,330	LF	18" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK	3195000000-N	862	1	EA	GUARDRAIL ANCHOR UNITS, TYPE AT-1	4455000000-N	1150	500	MD	FLAGGER
0720000000-E	310	135	LF	24" BIT COAT CS PIPE CULVERTS, TYPE B 0.064" THICK	3270000000-N	SP	26	EA	GUARDRAIL ANCHOR UNITS, TYPE 350	4507000000-E	SP	1,500	LF	WATER FILLED BARRIER
0726000000-E	310	215	LF	30" BIT COAT CS PIPE CULVERTS, TYPE B 0.079" THICK	3360000000-E	863	130	LF	REMOVE EXISTING GUARDRAIL	4508000000-E	SP	10,000	LF	RESET WATER FILLED BARRIER
0732000000-E	310	260	LF	36" BIT COAT CS PIPE CULVERTS, TYPE B 0.079" THICK	3503000000-E	866	530	LF	WOVEN WIRE FENCE, 47" FABRIC	6000000000-E	1605	5,500	LF	TEMPORARY SILT FENCE
0744000000-E	310	45	LF	48" BIT COAT CS PIPE CULVERTS, TYPE B 0.109" THICK	3506000000-E	866	16	EA	4" TIMBER FENCE POSTS, **** LONG (8')	6006000000-E	1610	70	TON	STONE FOR EROSION CONTROL, CLASS A
0908000000-E	310	75	LF	**** X **** BIT COAT CS PIPE ARCH CULVERTS, TYPE B ***** THICK (95" X 67", 0.109")	3509000000-E	866	14	EA	4" TIMBER FENCE POSTS, 7'-6" LONG	6009000000-E	1610	3,000	TON	STONE FOR EROSION CONTROL, CLASS B
0995000000-E	340	300	LF	PIPE REMOVAL	3512000000-E	866	10	EA	5" TIMBER FENCE POSTS, **** LONG (8'-6")	6012000000-E	1610	1,100	TON	SEDIMENT CONTROL STONE
1011000000-N	500	Lump Sum		FINE GRADING	3515000000-E	866	10	EA	5" TIMBER FENCE POSTS, 8'-0" LONG	6015000000-E	1615	11	ACR	TEMPORARY MULCHING
1121000000-E	520	12,300	TON	AGGREGATE BASE COURSE	3557000000-E	866	300	LF	ADDITIONAL BARBED WIRE	6018000000-E	1620	200	LB	SEED FOR TEMPORARY SEEDING
1220000000-E	545	11,250	TON	INCIDENTAL STONE BASE	3559000000-E	866	970	LF	** STRAND BARBED WIRE FENCE WITH POSTS (3)	6021000000-E	1620	2.1	TON	FERTILIZER FOR TEMPORARY SEEDING
2022000000-E	815	180	CY	SUBDRAIN EXCAVATION	3559000000-E	866	730	LF	** STRAND BARBED WIRE FENCE WITH POSTS (4)	6024000000-E	1622	800	LF	TEMPORARY SLOPE DRAINS
2033000000-E	815	135	CY	SUBDRAIN FINE AGGREGATE	3559000000-E	866	230	LF	** STRAND BARBED WIRE FENCE WITH POSTS (5)	6027000000-N	1622	22	EA	INLET PROTECTION AT TEMPORARY SLOPE DRAINS
2044000000-E	815	800	LF	6" PERFORATED SUBDRAIN PIPE						6029000000-E	SP	3,410	LF	SAFETY FENCE
2055000000-E	815	24	EA	6" SUBDRAIN PIPE WYES, TEES, & ELBOWS						6030000000-E	1630	5,600	CY	SILT EXCAVATION
										6036000000-E	1631	63,000	SY	MATting FOR EROSION CONTROL
										6037000000-E	SP	530	SY	COIR FIBER MAT
										6038000000-E	SP	2,000	SY	PERMANENT SOIL REINFORCEMENT MAT
										6042000000-E	1632	4,000	LF	1/4" HARDWARE CLOTH
										6045000000-E	SP	500	LF	*** TEMPORARY PIPE (12")
										6071030000-E	SP	1,200	LF	COIR FIBER BAFFLES
										6071050000-E	SP	57	EA	*** SKIMMER (2")
										6071050000-E	SP	4	EA	*** SKIMMER (3")
										6084000000-E	1660	33	ACR	SEEDING & MULCHING
										6090000000-E	1661	2,250	LB	SEED FOR REPAIR SEEDING
										6093000000-E	1661	2.1	TON	FERTILIZER FOR REPAIR SEEDING
										6108000000-E	1665	0.8	TON	FERTILIZER TOPDRESSING
										6111000000-E	SP	120	LF	IMPERVIOUS DIKE
										6114000000-N	SP	160	HR	SPECIALIZED HAND MOWING
										6117000000-N	SP	30	EA	RESPONSE FOR EROSION CONTROL
										6138000000-E	SP	1,320	CY	GENERIC EROSION CONTROL ITEM TEMPORARY CHANNEL DIVERSION

18-SEP-2007 11:10 I:\S:\1667901\roadway\summary\summary.dgn

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

SUMMARIES

SUMMARY OF EARTHWORK

11/7/2007 In Cubic Yards

Station	Station	Uncl. Excav.	Embank. +%	Borrow	Waste
-LREV- 102+50	133+00	23,742	8,731		15,011
-Y1- 10+00	11+50	8	288	280	
-LREV- 133+00	156+50	13,443	5,956		7,487
-Y2- 10+00	11+50	992	100		892
-Y3- 10+00	11+50	22	549	527	
-LREV- 158+50	187+50	34,139	4,651		29,488
-LREV- 187+50	215+00	31,998	2,964		29,034
Temp. Earth Berm			805	805	
TOTAL R-0619E1:		104,344	24,044	1,612	81,912
WASTE TO REPLACE BORROW:				-1612	-1612
Temp. Earth Berm Removal		700			700
GRAND TOTAL R-0619E1:		105,044	24,044	0	81,000
SAY		105,200	CY		
Estimated undercut = 400 CY					

SUMMARY OF EXISTING ASPHALT PAVEMENT REMOVAL

LINE	Station	Station	LOC LT/RT/CL	YD ²
-LREV-	154+66	155+00	CL	82.11
-LREV-	159+07	159+43	CL	93.67
				175.78
			SAY	180.00

DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

PARCEL INDEX SHEET

PARCEL No.	SHEET No.	PROPERTY OWNER NAME
5	4	BURKHART FARMS LLC
7	4	ROBERT MASTERS CLARK
8	4	STEVE AND GLADYS ROBINSON
8A	4	CHARLES JUNIOR AND MARTHA LYNN ROBINSON
8B	4 & 5	LARRY J. AND ROBIN J. WILSON
10	4 & 5	DEVON AND PATRICIA OWEN
11	5 & 6	ED SCOTT WATSON
12	5, 6 & 7	THEODORE ROSS OWEN, MAX EDDIE OWEN, & MERITA ELAINE OWEN ADAMS
13	6	JANE E. McGUIRE-WATSON & MICHAEL D. McGUIRE
14	6	BENJAMIN LEE OWEN
15	6 & 7	EDDIE LEE & PATRICIA OWEN
1	7, 8 & 9	US FOREST SERVICE
16	8	KELLY O. OWEN ET VIR DARRELL DEWAYNE OWEN

REVISIONS

PROJECT REFERENCE NO. R-0619E1	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER PAUL RODNEY WHITE 14447 11-7-07	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER PAUL RODNEY WHITE 14447 11-7-07

SEE STD.DRWG.876.02,876.03,AND 876.04 FOR PIPE OUTLET PROTECTION ON FILL SLOPES

CLASS "A" STONE LINED DITCHES AND FILTER FABRIC

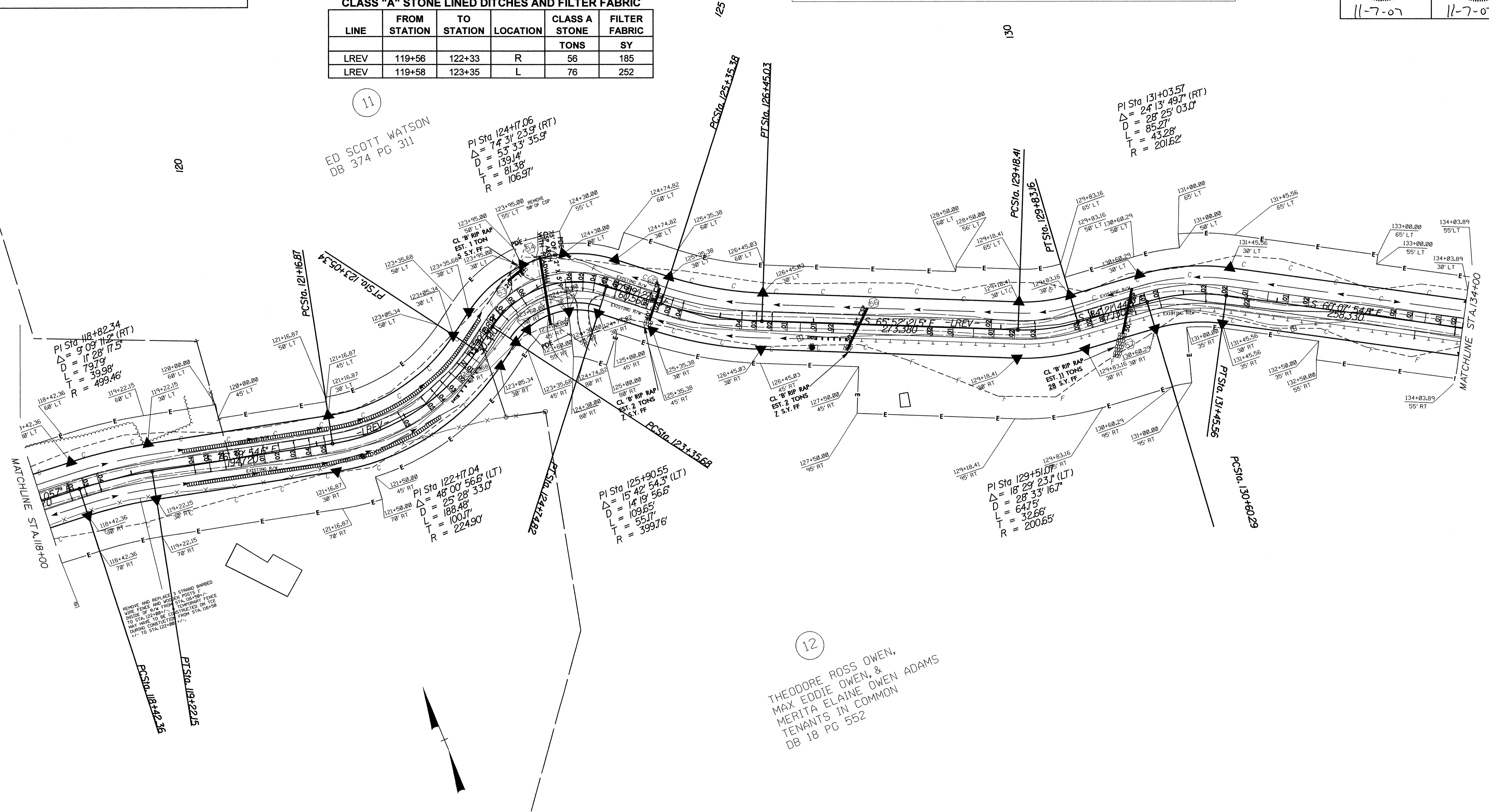
LINE	FROM STATION	TO STATION	LOCATION	CLASS A STONE TONS	FILTER FABRIC SY
LREV	119+56	122+33	R	56	185
LREV	119+58	123+35	L	76	252

11

ED SCOTT WATSON
DB 374 PG 311

PI Sta 124+17.06
Δ = 74° 31' 23.9" (RT)
D = 53' 33" 35.9"
L = 139.14'
T = 81.38'
R = 106.97'

PI Sta 131+03.57
Δ = 24° 13' 49.7" (RT)
D = 28' 25" 03.0"
L = 85.27'
T = 43.28'
R = 201.62'



12

THEODORE ROSS OWEN,
MAX EDDIE OWEN, &
MERITA ELAINE OWEN ADAMS
TENANTS IN COMMON
DB 18 PG 552

REVISIONS

PROJECT REFERENCE NO. R-0619E1	SHEET NO. 7
RW SHEET NO.	
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER PAUL RODNEY WHITE 11-7-07	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER PAUL RODNEY WHITE 11-7-07

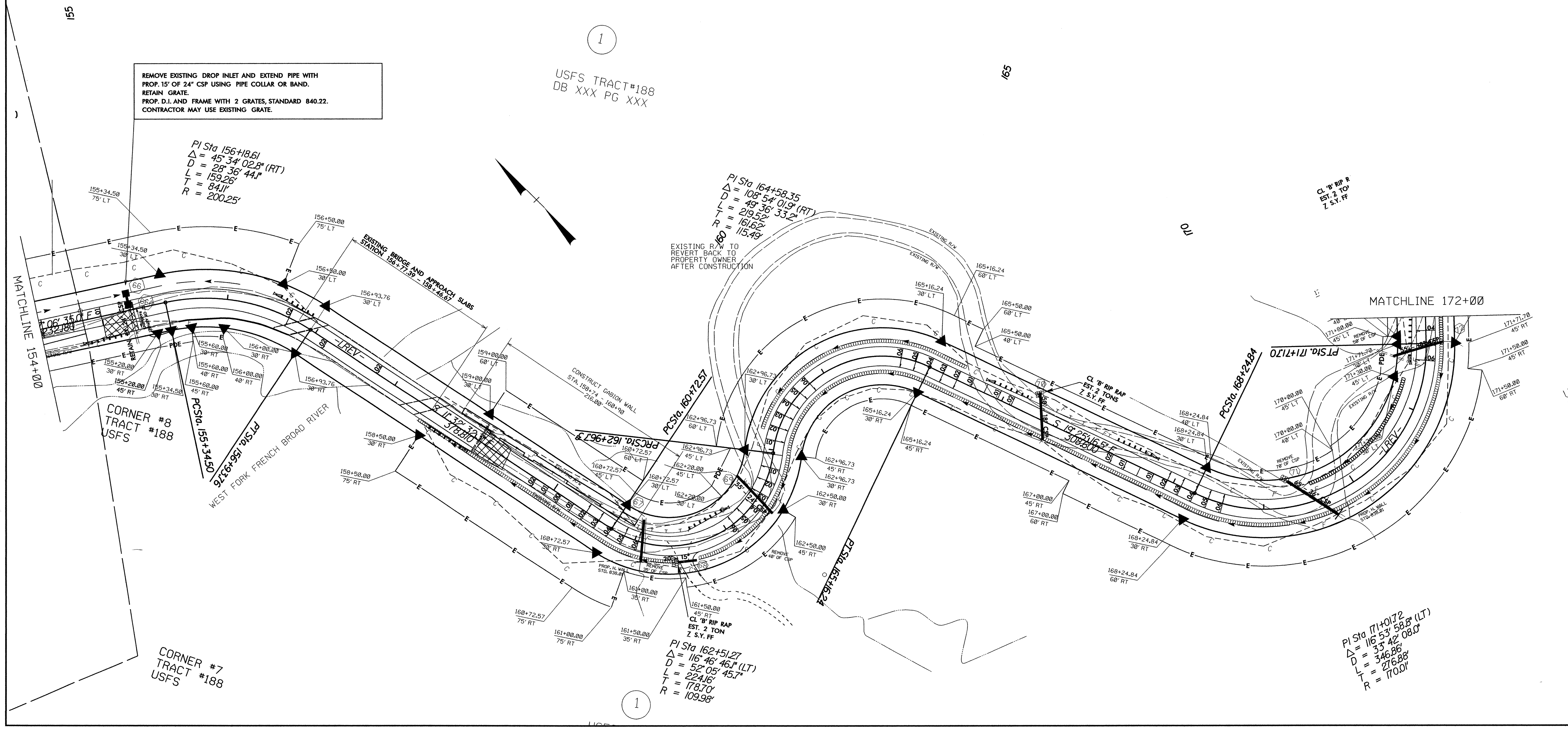
SEE STD.DRWG.876.02,876.03,AND 876.04 FOR PIPE OUTLET PROTECTION ON FILL SLOPES

 PAVEMENT REMOVAL

CLASS "A" STONE LINED DITCHES AND FILTER FABRIC

LINE	FROM STATION	TO STATION	LOCATION	CLASS A STONE TONS	FILTER FABRIC SY
LREV	158+41	161+49	R	62	206
LREV	161+60	172+00	R	209	694
LREV	163+21	165+53	L	47	155
LREV	169+48	171+27	L	36	120

1
USFS TRACT#1,
DB XXX PG XX



PI Sta 171+01.72
Δ = 116° 53' 58.8" (LT)
D = 33' 42' 08.0"
L = 346.86'
T = 276.88'
R = 170.0'

SEE STD.DRWG.876.02,876.03,AND 876.04 FOR PIPE OUTLET PROTECTION ON FILL SLOPES

CLASS "A" STONE LINED DITCHES AND FILTER FABRIC

LINE	FROM STATION	TO STATION	LOCATION	CLASS A TONS	FILTER FABRIC SY
LREV	193+00	199+88	L	138	459
LREV	196+14	202+56	R	129	428
LREV	204+26	204+87	R	12	41
LREV	207+03	209+20	R	44	145
LREV	210+59	211+66	R	22	72
LREV	211+00	211+88	L	18	59
LREV	213+66	215+00	R	27	90

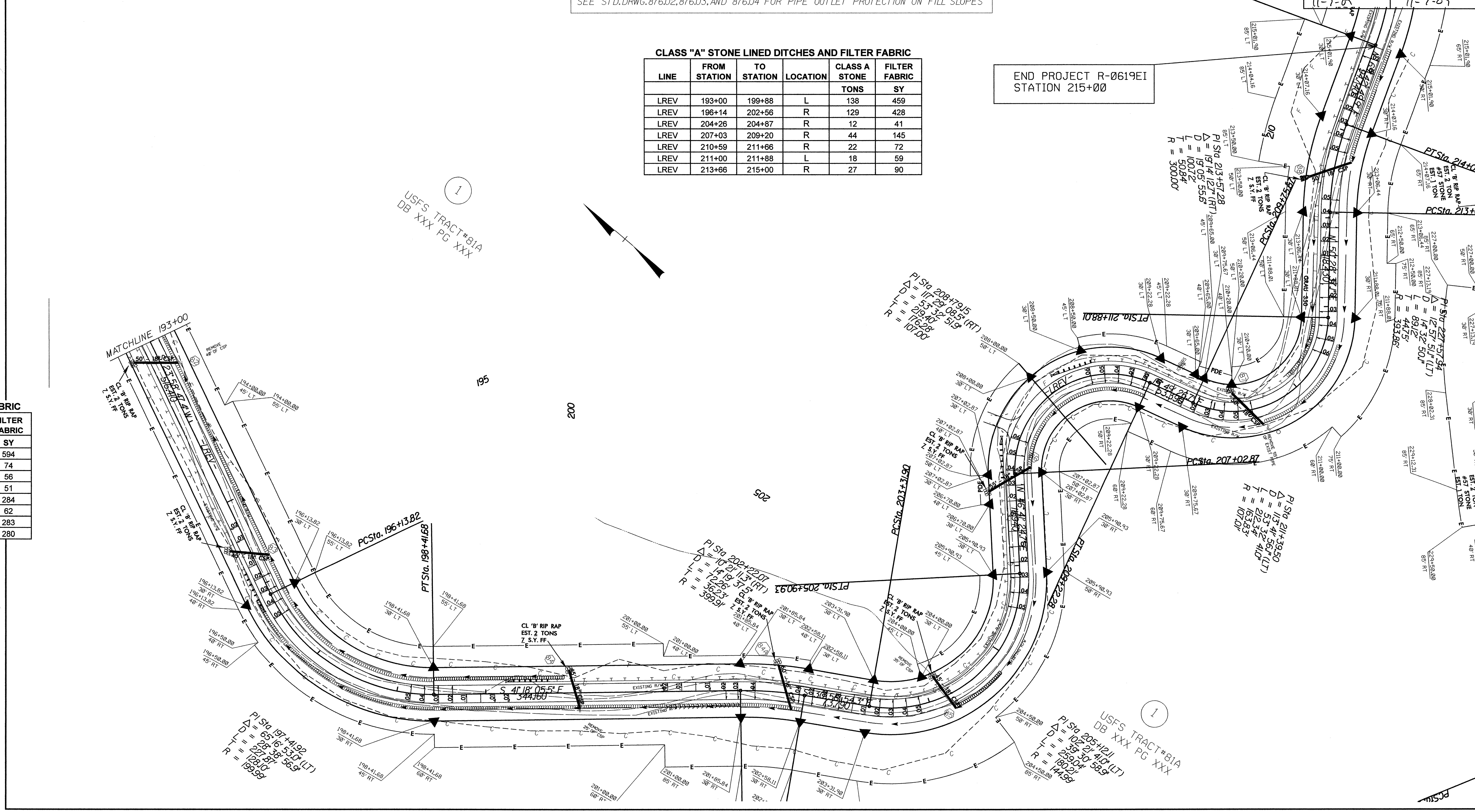
END PROJECT R-0619E1
STATION 215+00

USFS TRACT#81A
DB XXX PG XXX

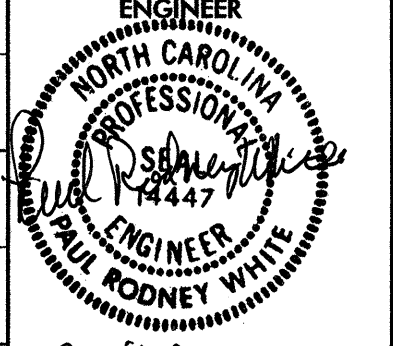
FILTER FABRIC

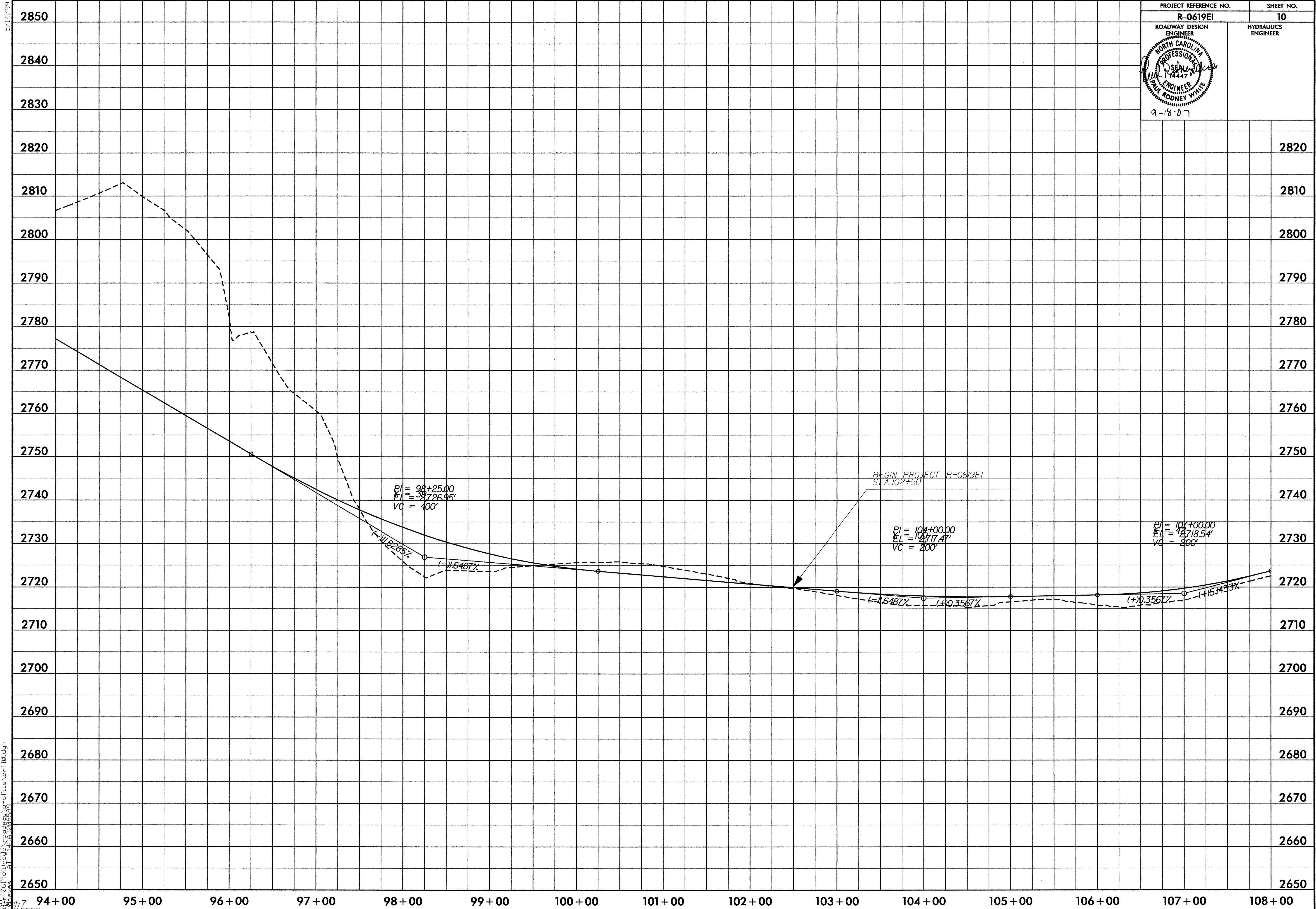
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594	
74	
56	
51	
284	
62	
283	
280	

REVISIONS



5/14/99

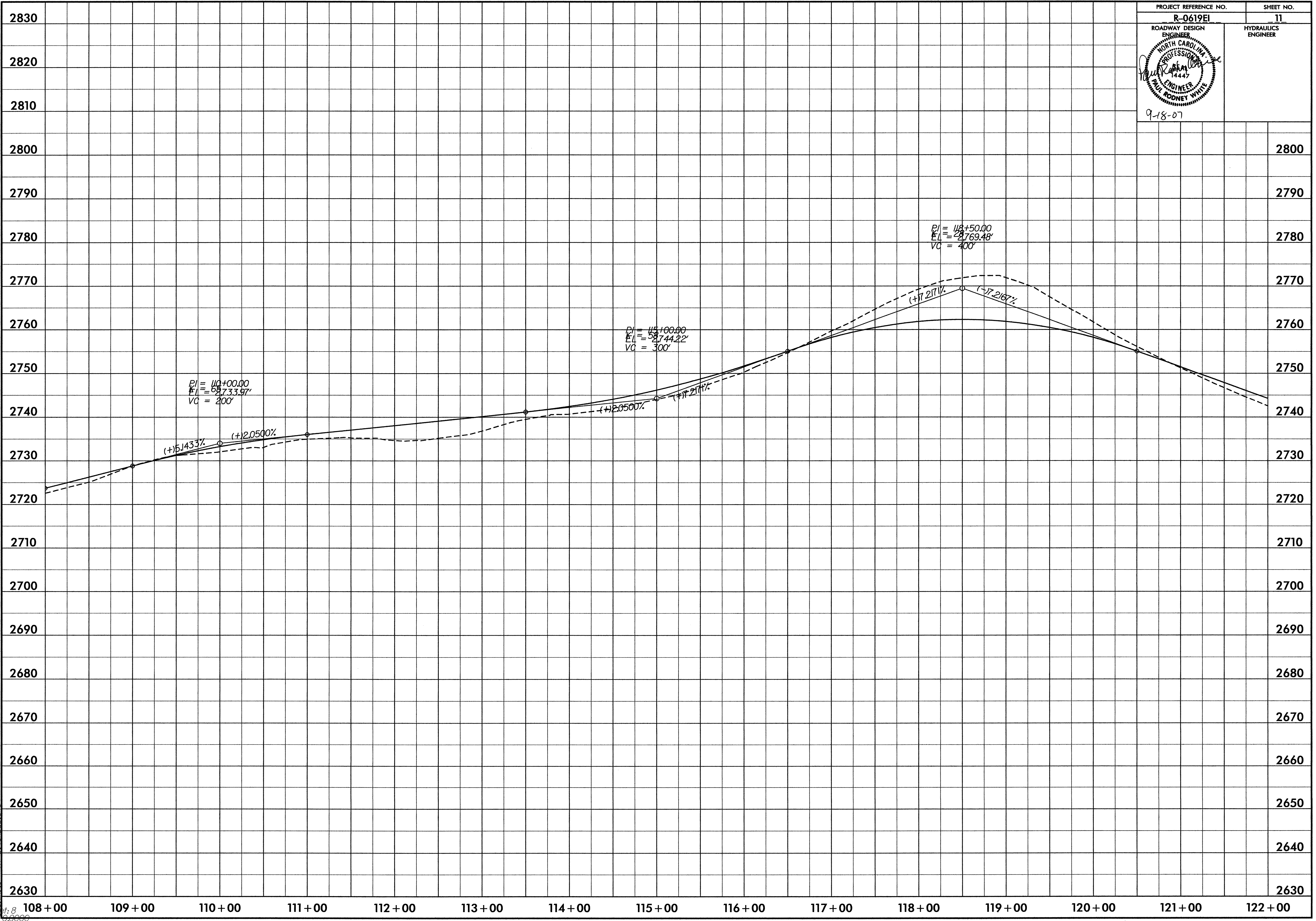
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 RODNEY WHITE ENGINEER 9-18-07	



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5/14/99

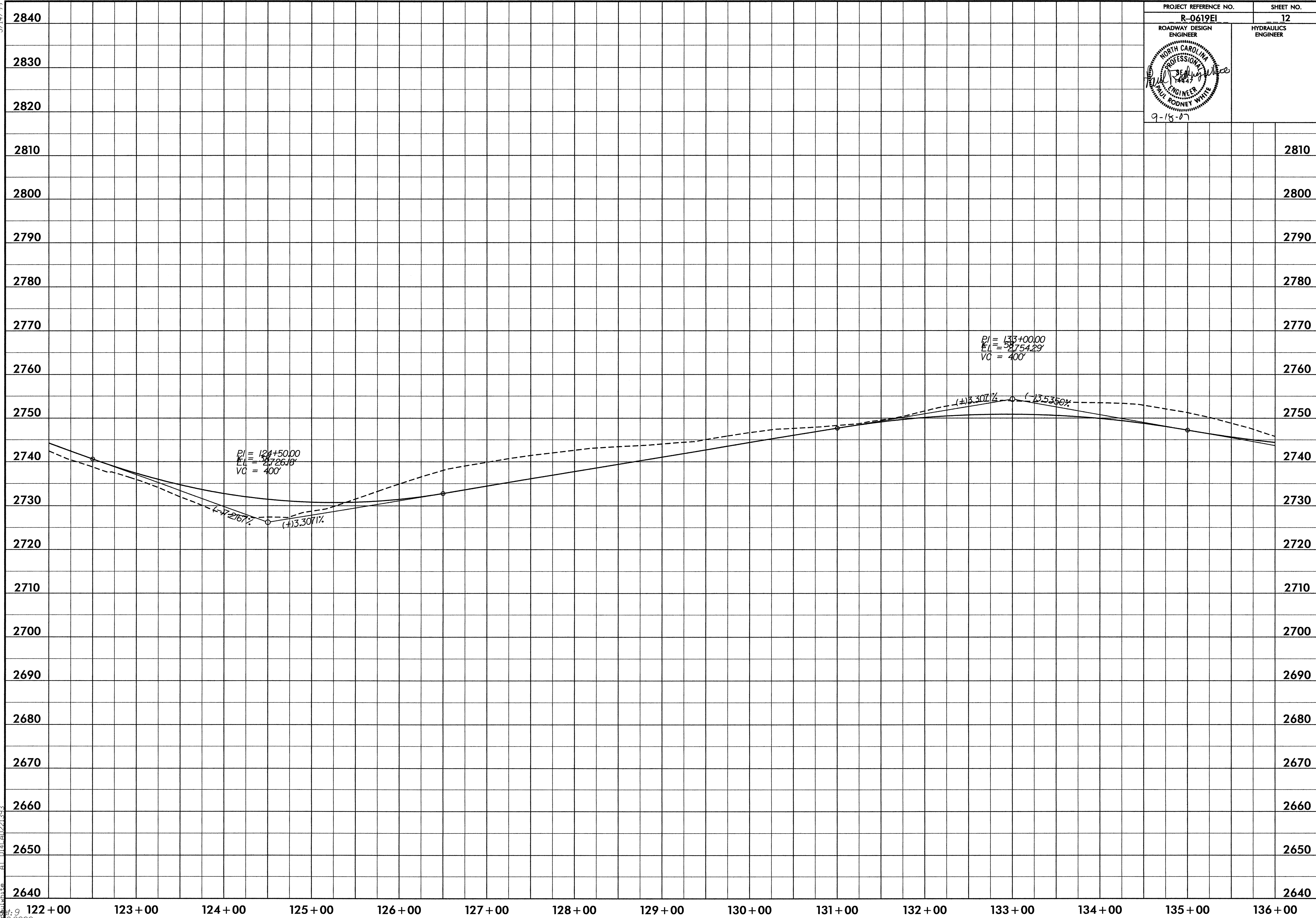
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ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL ENGINEER 14447 <i>Paul Rodney White</i>	HYDRAULICS ENGINEER
9-18-07	



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5/14/99

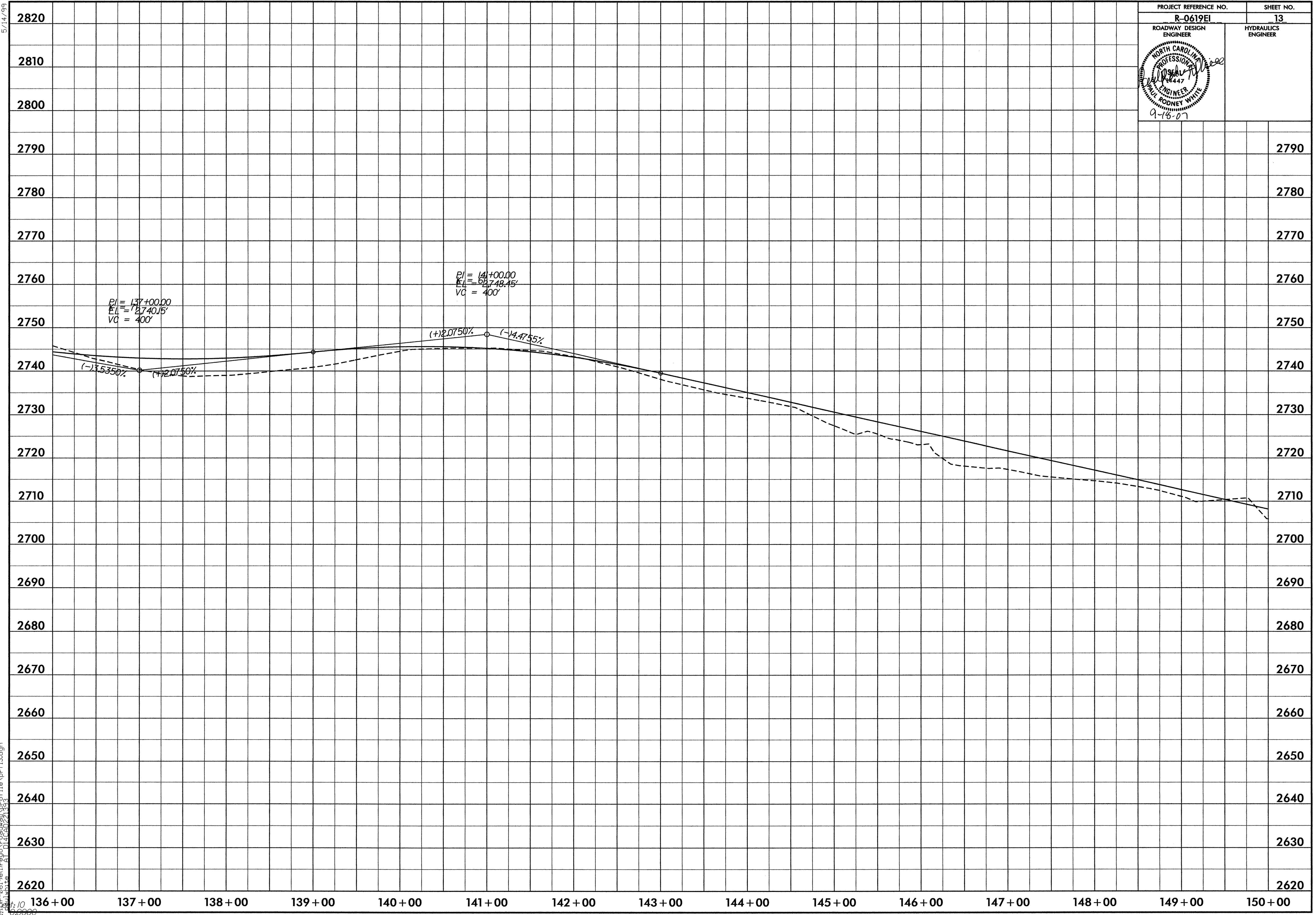
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 9-15-07	



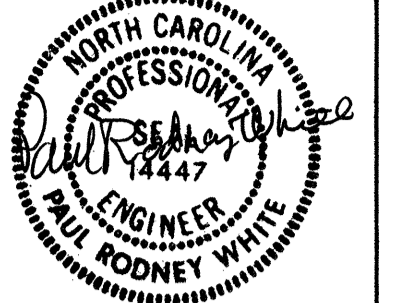
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5/14/99

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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

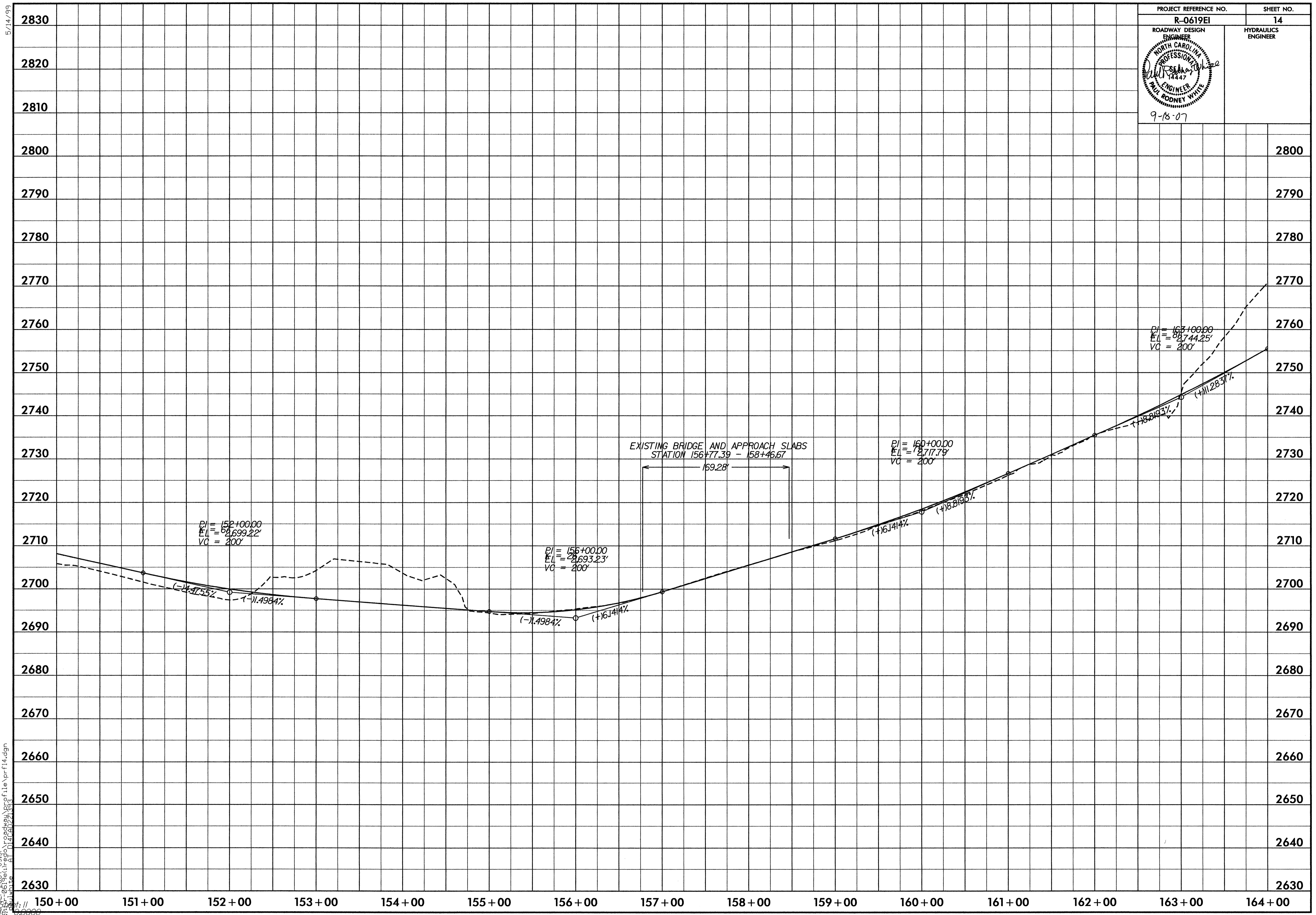


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9-18-07

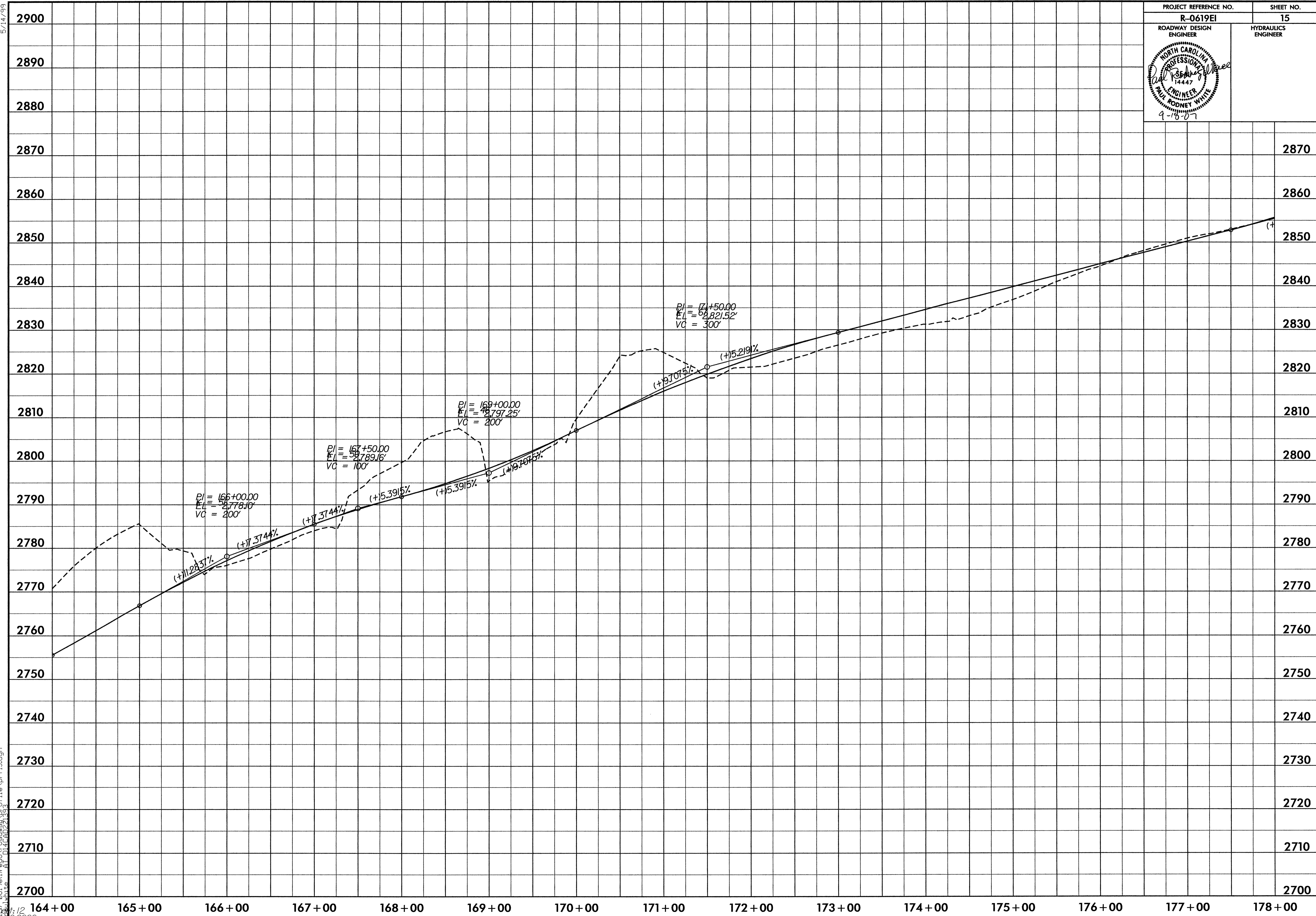
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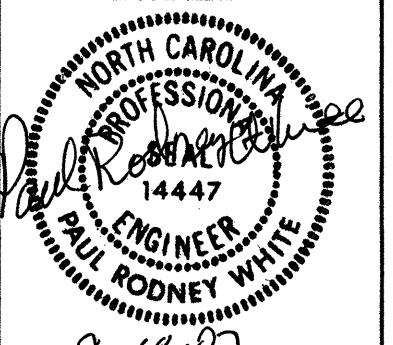
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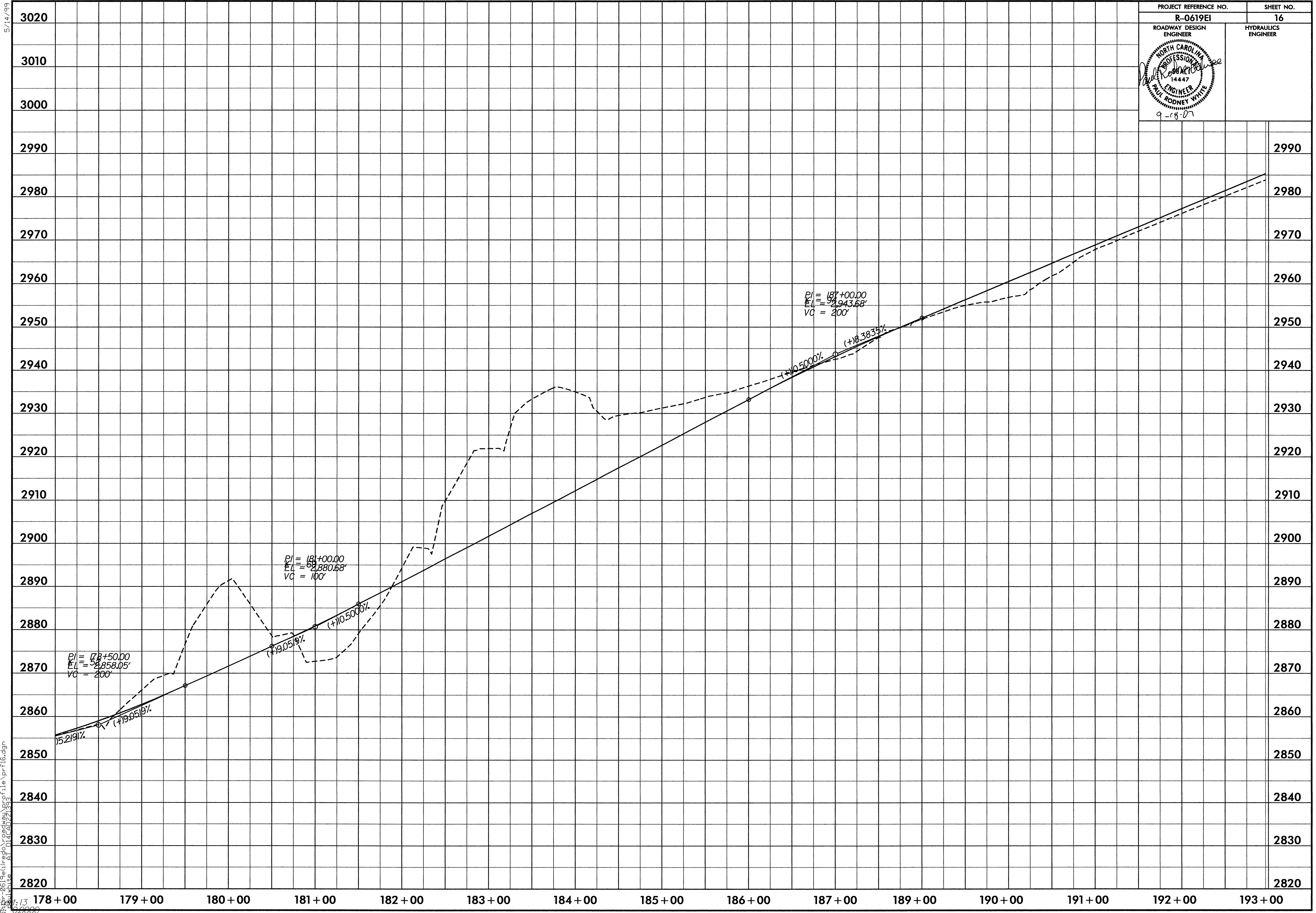
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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5/14/99

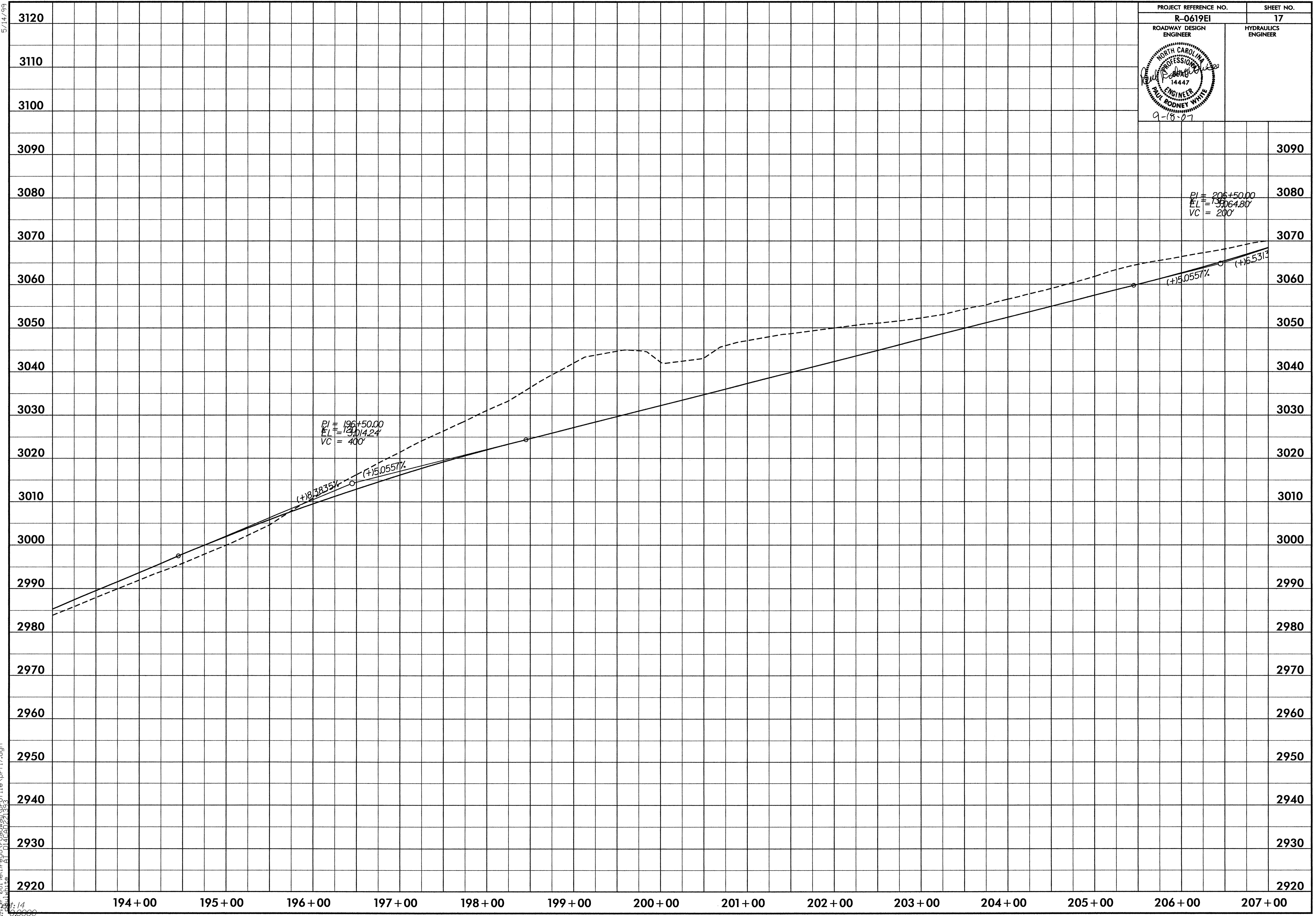
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 NORTH CAROLINA PROFESSIONAL ENGINEER 14447 RODNEY WHITE 9-18-07	



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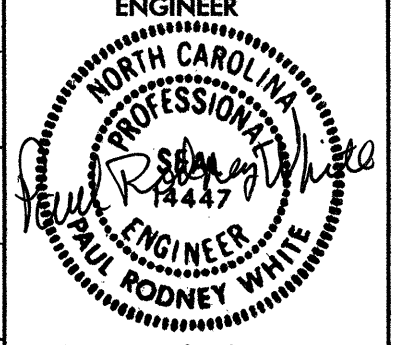
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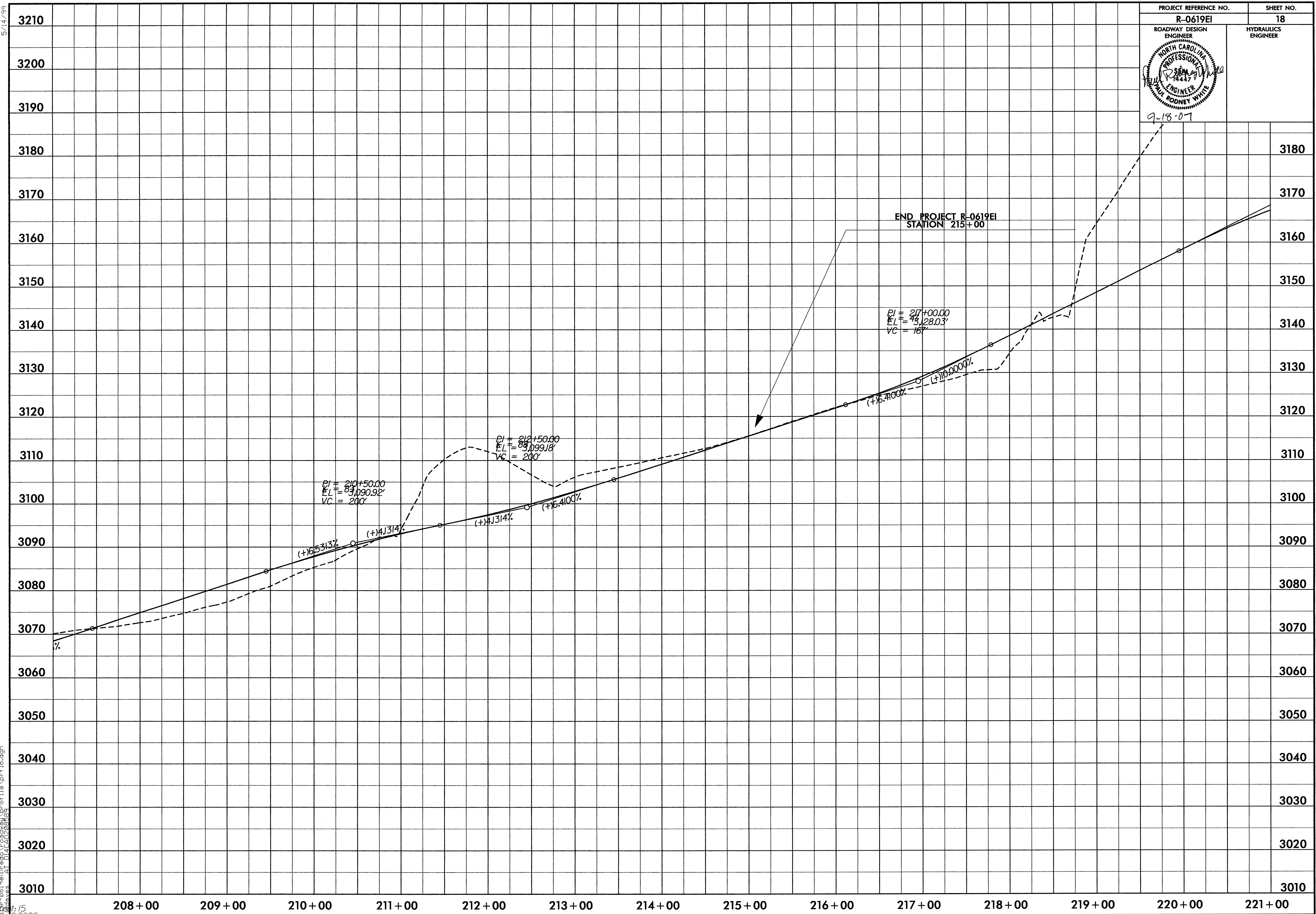
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER



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5/14/99

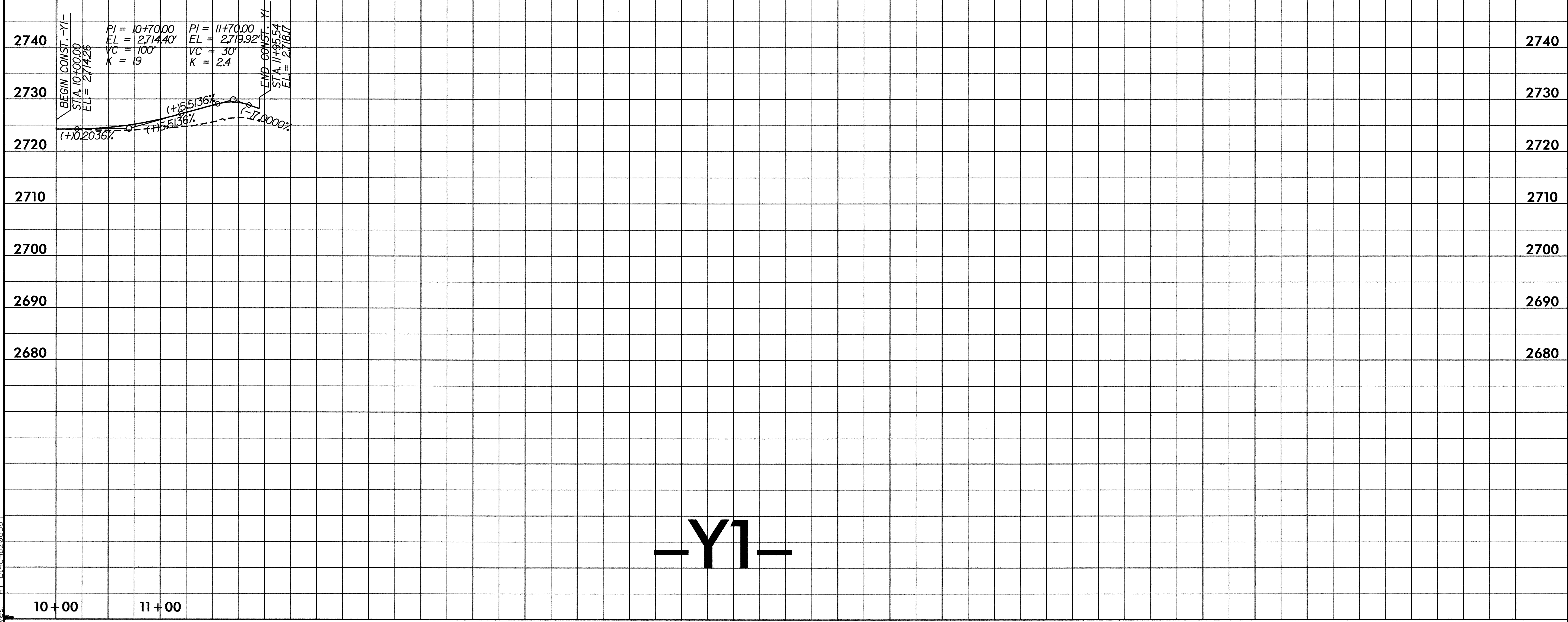
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ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
 9-18-07	



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5/14/99

PROJECT REFERENCE NO. R-0619E1	SHEET NO. 19
ROADWAY DESIGN ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 14447 PAUL RODNEY WHITE 10-16-07	HYDRAULICS ENGINEER NORTH CAROLINA PROFESSIONAL SEAL 14447 PAUL RODNEY WHITE 10-16-07



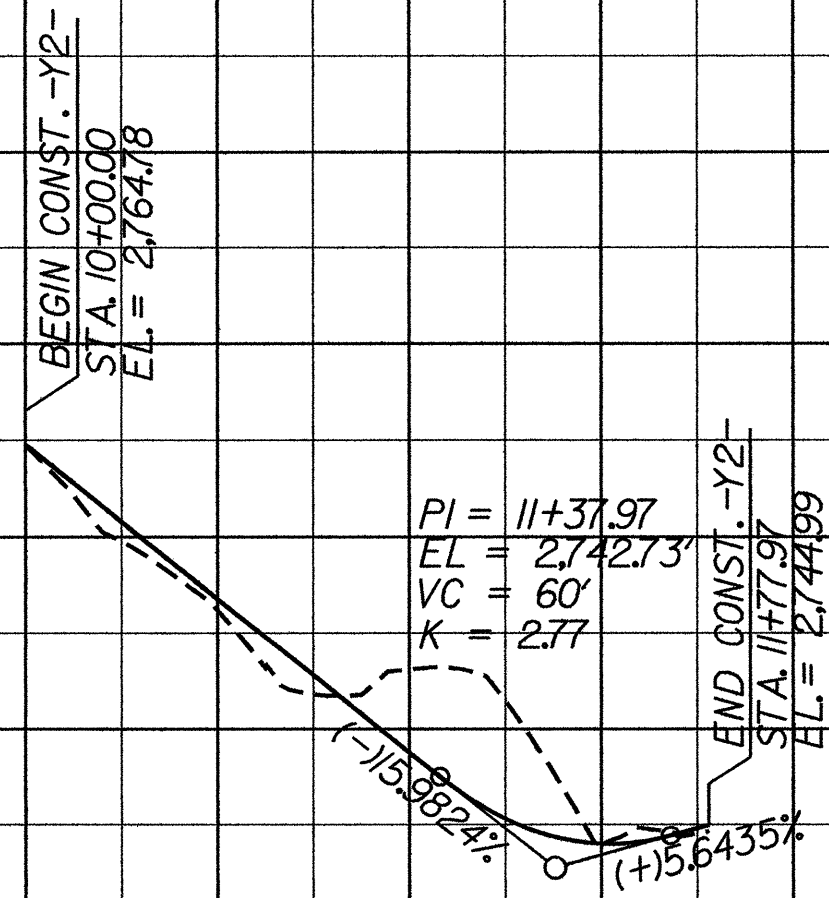
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5/14/99

PROJECT REFERENCE NO. R-0619EI	SHEET NO. 20
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10-16-07	10-16-07

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2730
2720



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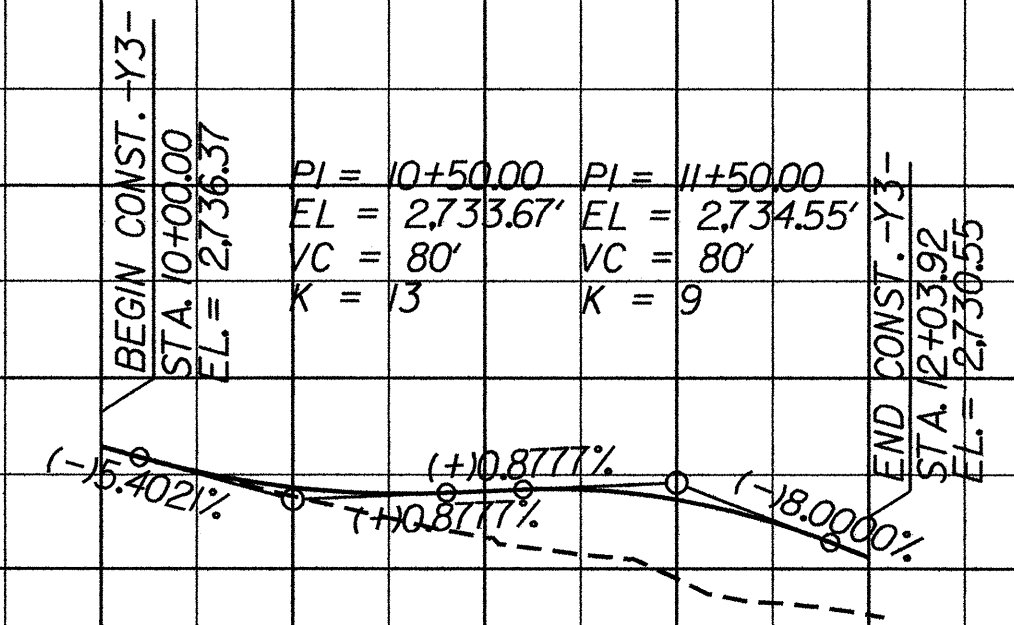
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5/14/99

PROJECT REFERENCE NO. R-0619EI	SHEET NO. 21
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10-16-07	10-16-07

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2730
2720
2710



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