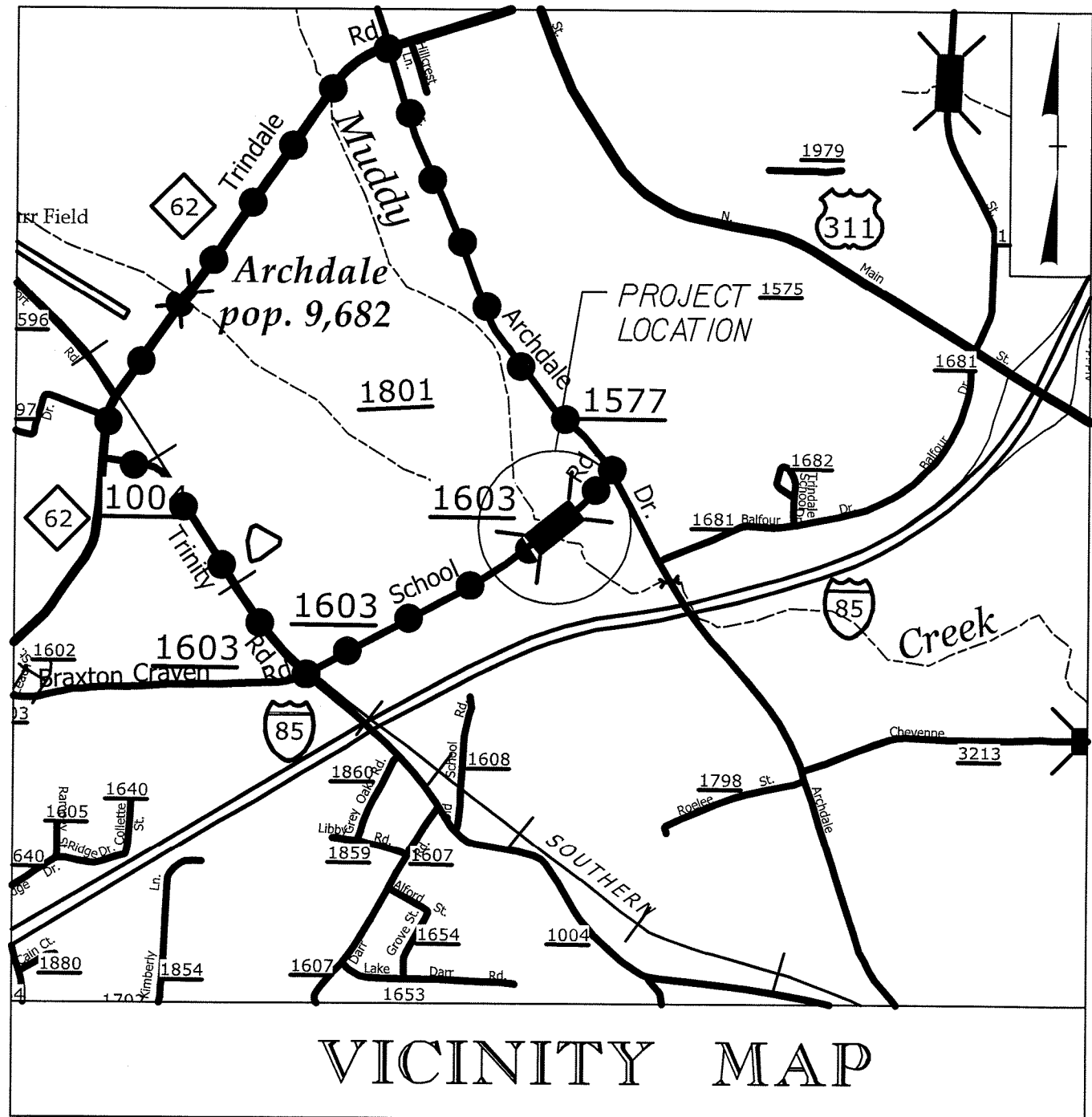


09/08/14

PROJECT: 17BP.8.R.79

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Conventional Symbols
See Sheet 1-C For Survey Control Sheet



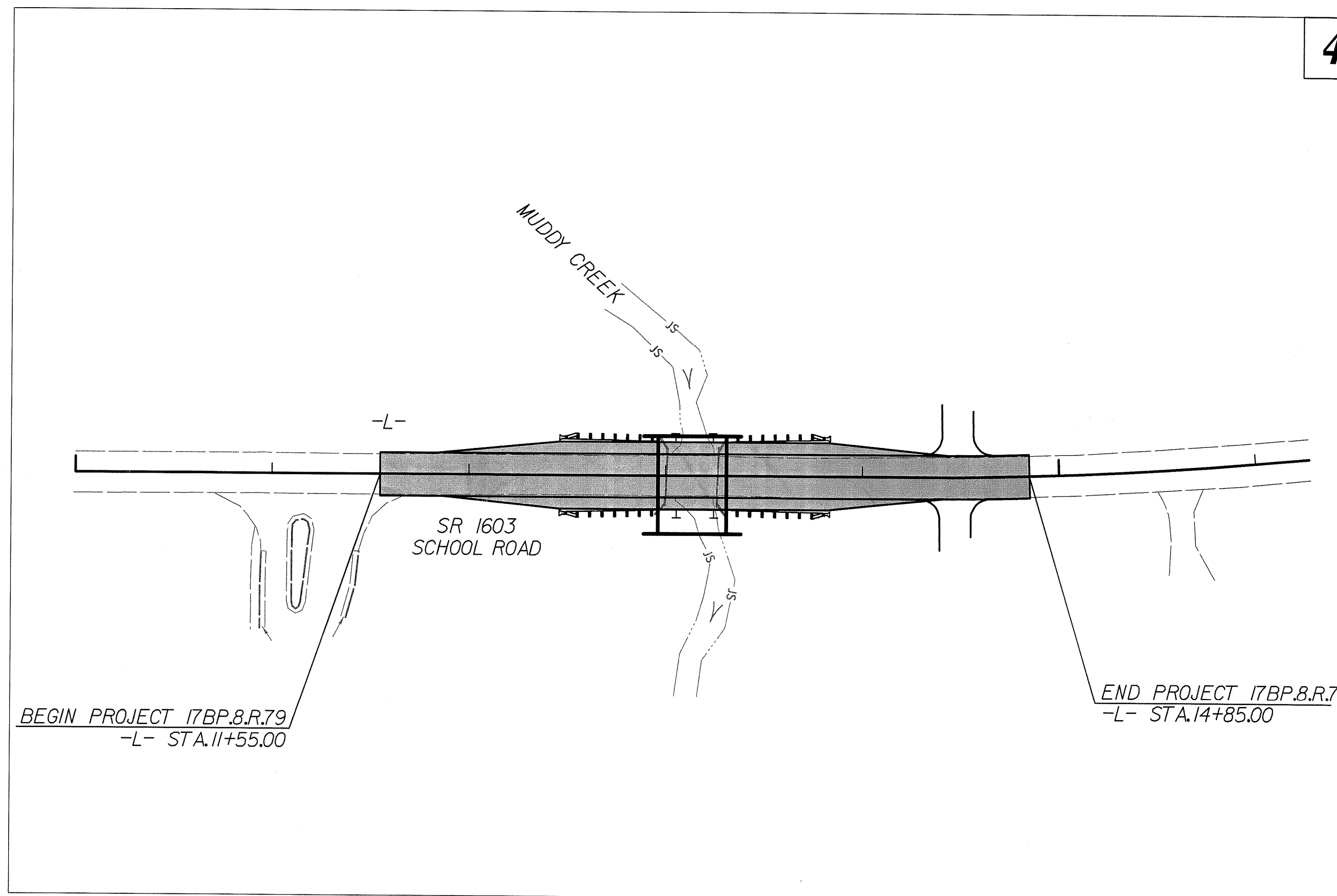
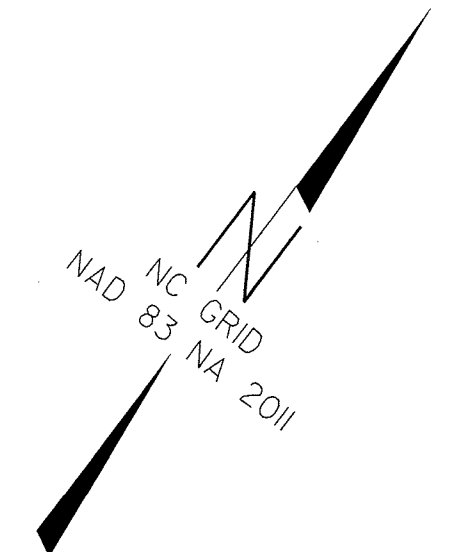
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

RANDOLPH COUNTY

LOCATION: BRIDGE NO. 750084 ON SR 1603 (SCHOOL ROAD)
OVER MUDDY CREEK

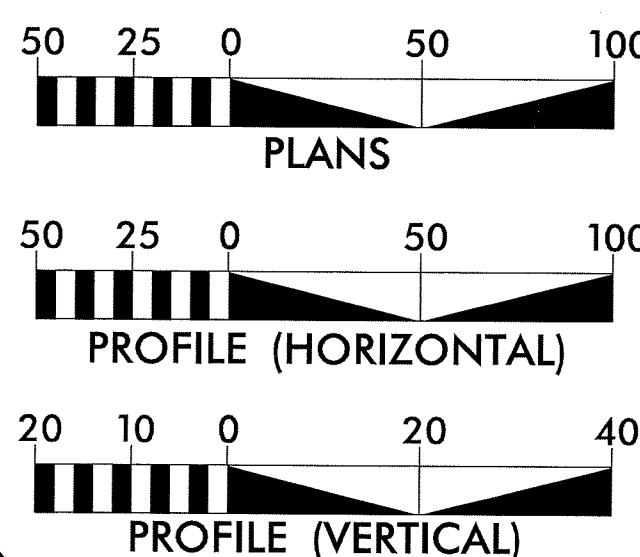
TYPE OF WORK: GRADING, DRAINAGE, PAVING, & STRUCTURE

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.8.R.79	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.8.R.79		PE	
17BP.8.R.79		ROW & UTIL	
17BP.8.R.79		CONST.	



CONTRACT:

GRAPHIC SCALES



DESIGN DATA

ADT 2013 = 4840

T = 7 % *
V = 45 MPH
* TTST = 3% DUAL 4%
FUNC CLASS = LOCAL

SUB-REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT 17BP.8.R.79 = 0.057 MI
LENGTH OF STRUCTURE PROJECT 17BP.8.R.79 = 0.006 MI
TOTAL LENGTH OF PROJECT 17BP.8.R.79 = 0.063 MI

Prepared in the Office of:
SEPI
ENGINEERING & CONSTRUCTION
1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197

FOR THE NORTH CAROLINA DEPT. OF TRANSPORTATION
2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
MARCH, 2014

LETTING DATE:
SEPTEMBER 23, 2014

STEVE SCOTT, PE
PROJECT ENGINEER

AGNIESZKA NAU, PE
PROJECT DESIGN ENGINEER

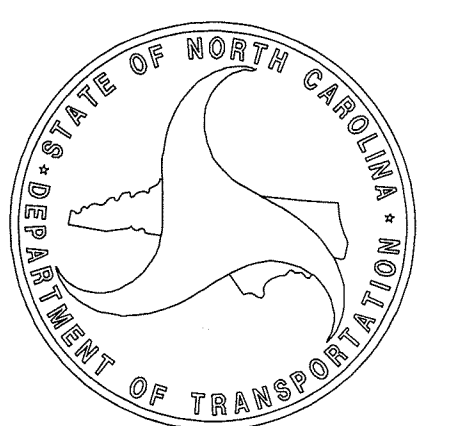
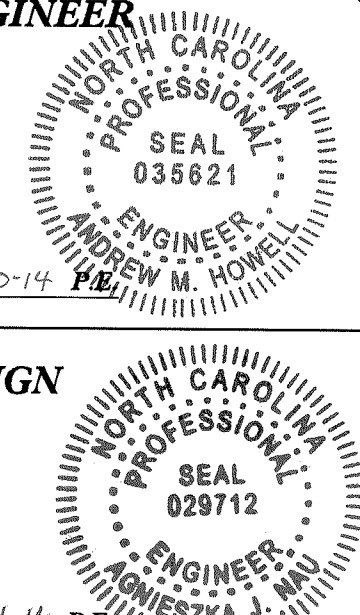
TIM WELCH, PE
NCDOT CONTACT

HYDRAULICS ENGINEER

[Signature] 6-30-14
SIGNATURE:

ROADWAY DESIGN ENGINEER

[Signature] 06-24-14 P.E.
SIGNATURE:



\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARDS

EFF. 01-17-12
REV. 11-01-11

SHEET NUMBER	INDEX OF SHEETS SHEET
1	TITLE SHEET
1-A	INDEX OF SHEETS, GENERAL NOTES, AND LIST OF STANDARD DRAWINGS
1-B	CONVENTIONAL SYMBOLS
2	PAVEMENT SCHEDULE AND TYPICAL SECTIONS
3	SUMMARY OF QUANTITIES
3A	DRAINAGE SUMMARY
3B	SUMMARY OF GUARDRAIL AND EARTHWORK
4	PLAN SHEET
5	PROFILE SHEET
TMP-1 THRU TMP-4	TRAFFIC MANAGEMENT PLANS
EC-1 THRU EC-5	EROSION CONTROL PLANS
RF-1	REFORESTATION DETAIL SHEET
X-1 THRU X-4	CROSS-SECTIONS
C-1 THRU C-2	STRUCTURE PLANS
UC-1 THRU UC-2	UTILITY CONSTRUCTION PLANS
UO-1 THRU UO-2	UTILITIES BY OTHERS PLANS

GENERAL NOTES:

2012 SPECIFICATIONS
EFFECTIVE: 01-17-12
REVISED: 11-01-11

2012 ROADWAY ENGLISH 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:

**GRADE LINE:
GRADING AND SURFACING:**

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED 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.

STD.NO.	TITLE
DIVISION 2 - EARTHWORK	
200.03	Method of Clearing - Method III
225.02	Guide for Grading Subgrade - Secondary and Local
225.04	Method of Obtaining Superelevation - Two Lane Pavement
DIVISION 3 - PIPE CULVERTS	
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	
862.01	Guardrail Placement
862.02	Guardrail Installation
876.02	Guide for Rip Rap at Pipe Outlets
876.04	Drainage Ditches with Class 'B' Rip Rap

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.

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.

UTILITIES:

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 CONTRACT.

8/17/12 8:59:58 AM C:\Users\jgibson\OneDrive\Documents\17BP.8.R.79\1-A.dwg

STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

BOUNDARIES AND PROPERTY:

Table listing symbols for boundaries and property: State Line, County Line, Township Line, City Line, Reservation Line, Property Line, Existing Iron Pin, Property Corner, Property Monument, Parcel/Sequence Number, Existing Fence Line, Proposed Woven Wire Fence, Proposed Chain Link Fence, Proposed Barbed Wire Fence, Existing Wetland Boundary, Proposed Wetland Boundary, Existing Endangered Animal Boundary, Existing Endangered Plant Boundary, Known Soil Contamination: Area or Site, Potential Soil Contamination: Area or Site.

BUILDINGS AND OTHER CULTURE:

Table listing symbols for buildings and other culture: Gas Pump Vent or U/G Tank Cap, Sign, Well, Small Mine, Foundation, Area Outline, Cemetery, Building, School, Church, Dam.

HYDROLOGY:

Table listing symbols for hydrology: Stream or Body of Water, Hydro, Pool or Reservoir, Jurisdictional Stream, Buffer Zone 1, Buffer Zone 2, Flow Arrow, Disappearing Stream, Spring, Wetland, Proposed Lateral, Tail, Head Ditch, False Sump.

RAILROADS:

Table listing symbols for railroads: Standard Gauge, RR Signal Milepost, Switch, RR Abandoned, RR Dismantled.

RIGHT OF WAY:

Table listing symbols for right of way: Baseline Control Point, Existing Right of Way Marker, Existing Right of Way Line, Proposed Right of Way Line, Proposed Right of Way Line with Iron Pin and Cap Marker, Proposed Right of Way Line with Concrete or Granite RW Marker, Proposed Control of Access Line with Concrete CA Marker, Existing Control of Access, Proposed Control of Access, Existing Easement Line, Proposed Temporary Construction Easement, Proposed Temporary Drainage Easement, Proposed Permanent Drainage Easement, Proposed Permanent Drainage / Utility Easement, Proposed Permanent Utility Easement, Proposed Temporary Utility Easement, Proposed Aerial Utility Easement, Proposed Permanent Easement with Iron Pin and Cap Marker.

ROADS AND RELATED FEATURES:

Table listing symbols for roads and related features: Existing Edge of Pavement, Existing Curb, Proposed Slope Stakes Cut, Proposed Slope Stakes Fill, Proposed Curb Ramp, Existing Metal Guardrail, Proposed Guardrail, Existing Cable Guiderail, Proposed Cable Guiderail, Equality Symbol, Pavement Removal.

VEGETATION:

Table listing symbols for vegetation: Single Tree, Single Shrub, Hedge, Woods Line.

Table listing symbols for orchard and vineyard.

EXISTING STRUCTURES:

Table listing symbols for existing structures: MAJOR: Bridge, Tunnel or Box Culvert, Bridge Wing Wall, Head Wall and End Wall; MINOR: Head and End Wall, Pipe Culvert, Footbridge, Drainage Box: Catch Basin, DI or JB, Paved Ditch Gutter, Storm Sewer Manhole, Storm Sewer.

UTILITIES:

Table listing symbols for utilities: POWER: Existing Power Pole, Proposed Power Pole, Existing Joint Use Pole, Proposed Joint Use Pole, Power Manhole, Power Line Tower, Power Transformer, U/G Power Cable Hand Hole, H-Frame Pole, Recorded U/G Power Line, Designated U/G Power Line (S.U.E.*); TELEPHONE: Existing Telephone Pole, Proposed Telephone Pole, Telephone Manhole, Telephone Booth, Telephone Pedestal, Telephone Cell Tower, U/G Telephone Cable Hand Hole, Recorded U/G Telephone Cable, Designated U/G Telephone Cable (S.U.E.*), Recorded U/G Telephone Conduit, Designated U/G Telephone Conduit (S.U.E.*), Recorded U/G Fiber Optics Cable, Designated U/G Fiber Optics Cable (S.U.E.*).

WATER:

Table listing symbols for water: Water Manhole, Water Meter, Water Valve, Water Hydrant, Recorded U/G Water Line, Designated U/G Water Line (S.U.E.*), Above Ground Water Line.

TV:

Table listing symbols for TV: TV Satellite Dish, TV Pedestal, TV Tower, U/G TV Cable Hand Hole, Recorded U/G TV Cable, Designated U/G TV Cable (S.U.E.*), Recorded U/G Fiber Optic Cable, Designated U/G Fiber Optic Cable (S.U.E.*).

GAS:

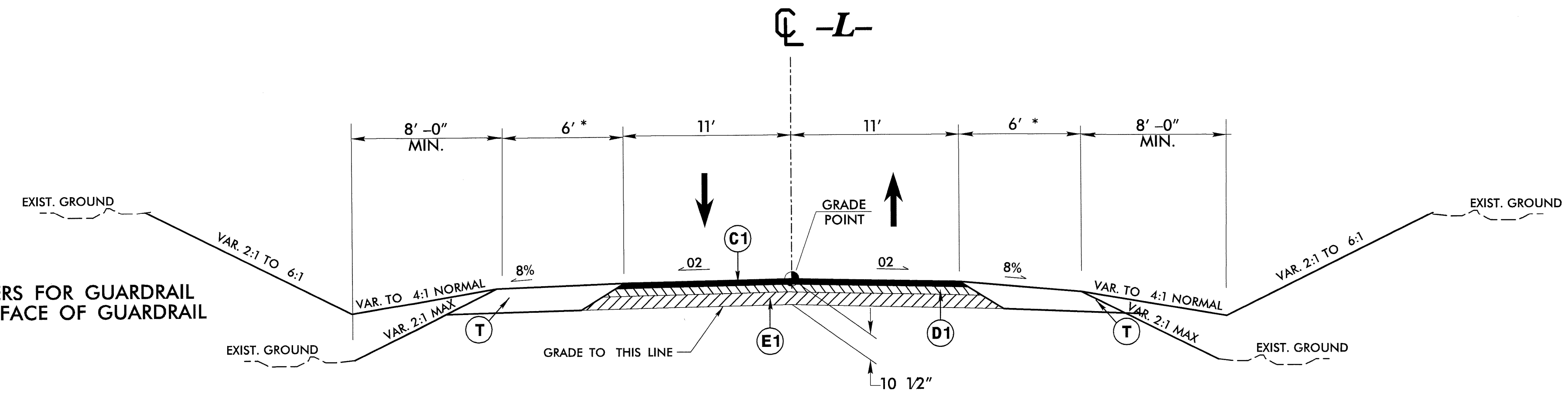
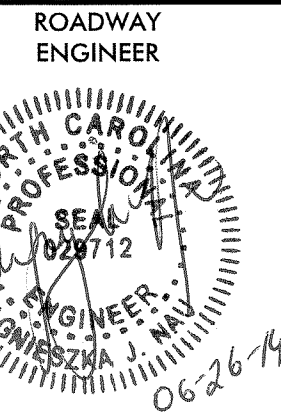
Table listing symbols for gas: Gas Valve, Gas Meter, Recorded U/G Gas Line, Designated U/G Gas Line (S.U.E.*), Above Ground Gas Line.

SANITARY SEWER:

Table listing symbols for sanitary sewer: Sanitary Sewer Manhole, Sanitary Sewer Cleanout, U/G Sanitary Sewer Line, Above Ground Sanitary Sewer, Recorded SS Forced Main Line, Designated SS Forced Main Line (S.U.E.*).

MISCELLANEOUS:

Table listing symbols for miscellaneous: Utility Pole, Utility Pole with Base, Utility Located Object, Utility Traffic Signal Box, Utility Unknown U/G Line, U/G Tank; Water, Gas, Oil, Underground Storage Tank, Approx. Loc., A/G Tank; Water, Gas, Oil, Geoenvironmental Boring, U/G Test Hole (S.U.E.*), Abandoned According to Utility Records, End of Information.



* ADD 3' TO SHOULDERS FOR GUARDRAIL
PAVE SHOULDER TO FACE OF GUARDRAIL

TYPICAL SECTION NO. 1
-L- STA. 11+55.00 TO -L- STA. 14+85.00

PAVEMENT SCHEDULE

C1	PROP. APPROX. 2" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 110 LBS. PER SQ. YD. IN EACH OF TWO LAYERS.
D1	PROP. APPROX. 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE I19.0B, AT AN AVERAGE RATE OF 342 LBS. PER SQ. YD.
E1	PROP. APPROX. 5.5" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 627 LBS. PER SQ. YD.
T	EARTH MATERIAL.

NOTE: PAVEMENT EDGE SLOPES ARE 1:1 UNLESS SHOWN OTHERWISE

5/14/99

UNION

6/21/00

COMPUTED BY: _____ DATE: _____
 CHECKED BY: _____ DATE: _____

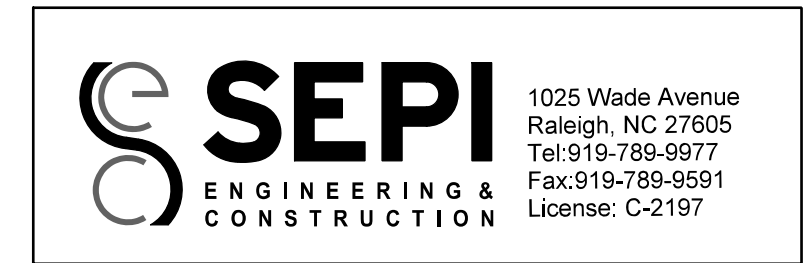
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

PROJECT REFERENCE NO. SHEET NO.
 17BP.8.R.79 3

ITEM NUMBER	SECTION NUMBER	DESCRIPTION	QUANTITY	UNIT	ITEM NUMBER	SECTION NUMBER	DESCRIPTION	QUANTITY	UNIT
000010000-N	800	MOBILIZATION	1	LS	803500000-N	402	REM OF EX STRUCTURE AT STATION 13+14.00 -L-	1	LS
004300000-N	226	GRADING	1	LS	812600000-N	414	CULVERT EXCAVATION, STATION 13+14.00 -L-	1	LS
005000000-E	226	SUPPLEMENTARY CLEARING & GRUBBING	1	ACR	880400000-N	SP	GENERIC CULVERT ITEM ALUMINUM BOX CULVERT	1	LS
107700000-E	SP	#57 STONE	2.2	TON	881800000-E	SP	GENERIC CULVERT ITEM FOUNDATION MATERIAL	140	TON
122000000-E	545	INCIDENTAL STONE	100	TON	882600000-E	SP	GENERIC CULVERT ITEM, PLACEMENT OF NATURAL STREAM MATERIAL	330	CY
148900000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0B	420	TON					
149800000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B	230	TON					
152500000-E	610	ASPHALT CONC SURFACE COURSE, TYPE SF9.5A	160	TON					
157500000-E	620	ASPHALT BINDER FOR PLANT MIX	45	TON					
303000000-E	862	STEEL BM GUARDRAIL	75	LF					
315000000-N	862	ADDITIONAL GUARDRAIL POSTS	5	EA					
327000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE 350	4	EA					
363500000-E	876	RIP RAP, CLASS II	227	TON					
364900000-E	876	RIP RAP, CLASS B	39	TON					
365600000-E	876	GEOTEXTILE FOR DRAINAGE	290	SY					
445700000-N	SP	TEMPORARY TRAFFIC CONTROL	1	LS					
532560000-E	1510	6" WATER LINE	375	LF					
554000000-E	1515	6" VALVE	2	EA					
580000000-E	1530	ABANDON 6" UTILITY PIPE	350	LF					
587140000-E	1550	6" TRENCHLESS INSTALL (IN SOIL)	115	LF					
587141000-E	1550	6" TRENCHLESS INSTALL (NOT IN SOIL)	115	LF					
600000000-E	1605	TEMPORARY SILT FENCE	1495	LF					
600600000-E	1610	STONE FOR EROSION CONTROL, CLASS A	115	TON					
600900000-E	1610	STONE FOR EROSION CONTROL, CLASS B	265	TON					
601200000-E	1610	SEDIMENT CONTROL STONE	145	TON					
601500000-E	1615	TEMPORARY MULCHING	1	ACR					
601800000-E	1620	SEED FOR TEMPORARY SEEDING	100	LB					
602100000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	0.5	TON					
602400000-E	1622	TEMPORARY SLOPE DRAINS	200	LF					
602900000-E	SP	SAFETY FENCE	100	LF					
603000000-E	1630	SILT EXCAVATION	330	CY					
603600000-E	1631	MATting FOR EROSION CONTROL	6,295	SY					
603700000-E	SP	COIR FIBER MAT	100	SY					
603800000-E	SP	PERMANENT SOIL REINFORCEMENT MAT	484	SY					
604200000-E	1632	1/4" HARDWARE CLOTH	90	LF					
604500000-E	SP	*** TEMPORARY PIPE (36")	135	LF					
607000000-N	1639	SPECIAL STILLIN BASIN	2	EA					
6071012000-E	SP	COIR FIBER WATTLE	125	LF					
6071020000-E	SP	POLYACRYLAMIDE (PAM)	30	LB					
608400000-E	1660	SEEDING AND MULCHING	3	ACR					
608700000-E	1660	MOWING	3	ACR					
609000000-E	1661	SEED FOR REPAIR SEEDING	50	LB					
609300000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.25	TON					
609600000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	50	LB					
610800000-E	1665	FERTILIZER TOPDRESSING	0.75	TON					
611100000-E	SP	IMPERVIOUS DIKE	61	LF					
611450000-N	1667	SPECIALIZED HAND MOWING	10	MHR					
611700000-N	SP	RESPONSE FOR EROSION CONTROL	13	EA					
612300000-E	1670	REFORESTATION	0.33	ACR					

6/21/00

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS



PROJECT REFERENCE NO.	SHEET NO.
17BP.8.R.79	3-B
RW SHEET NO.	

**SUMMARY OF EARTHWORK
IN CUBIC YARDS**

LOCATION	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L- STA. 11+55.00 TO 14+85.00	516		121		395
SUBTOTAL	516		121		395
TOTAL	516		121		395
LOSS DUE TO CLEAR & GRUB.					
WASTE IN LEU OF BORROW					
PROJECT TOTAL	516		121		395
EST. 5% TO REPLACE TOP SOIL ON BORROW PIT					
GRAND TOTAL	516		121		395
SAY	520				

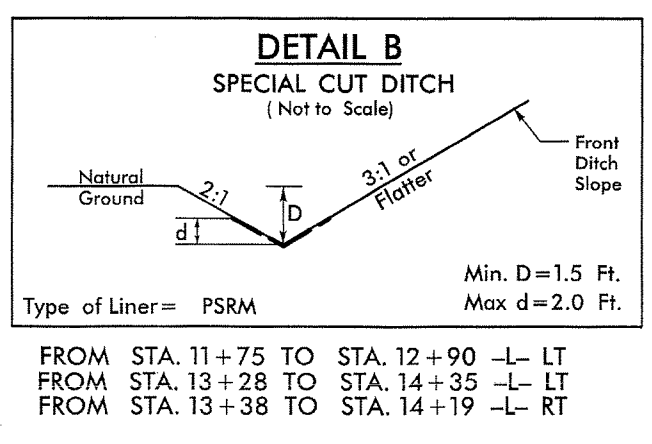
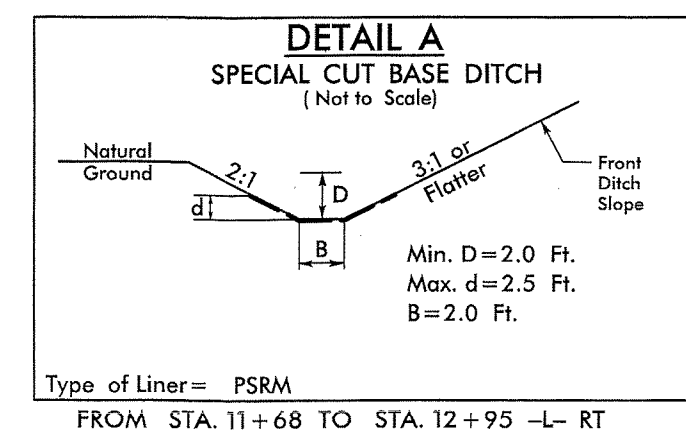
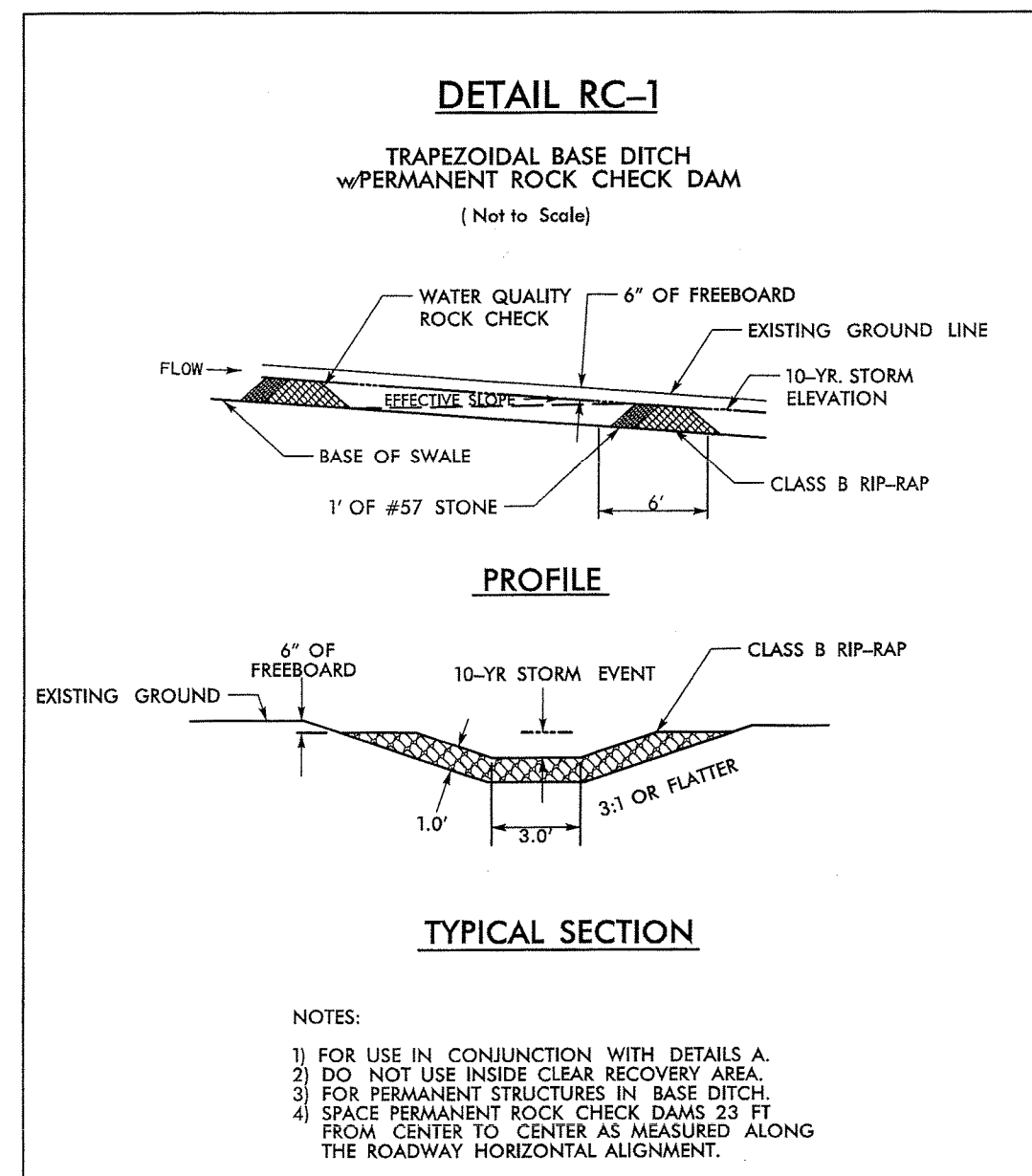
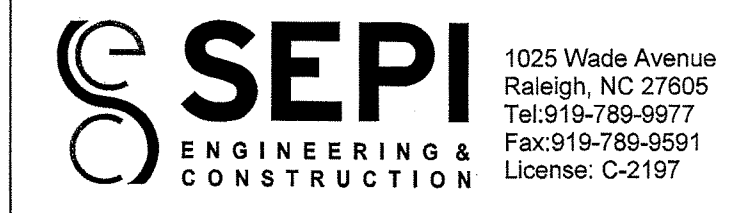
NOTE: Approximate quantities only. Unclassified Excavation, Fine Grading, Clearing and Grubbing, and Removal of Existing Pavement will be paid for at the contract lump sum price for "Grading."

"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
 G = GATING IMPACT ATTENUATOR TYPE 350
 NG = NON-GATING IMPACT ATTENUATOR TYPE 350

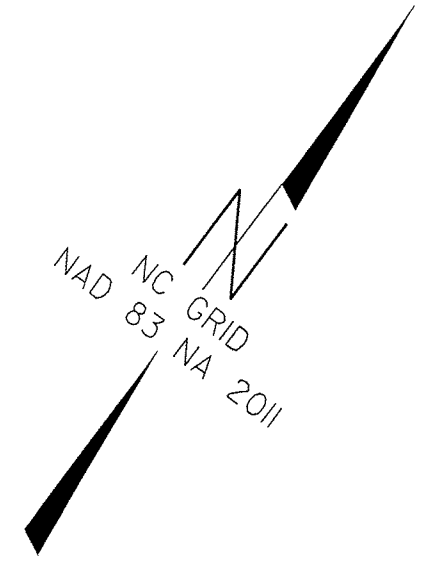
GUARDRAIL SUMMARY

SURVEY LINE	BEGINNING STATION	END STATION	LOCATION	LENGTH			WARRENT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS			REMARKS	
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	GRAU-350	AT-1	TYPE III		
-L-	12+46.00	13+84.00	RT	137.50'					6'-0"	9'-0"							1		
-L-	13+84.00	12+46.00	LT	137.50'					6'-0"	9'-0"							1		
																	1		
																	1		
SUBTOTAL				275.00'															
LESS ANCHOR DEDUCTIONS																			
GRAU-350 4 @ 50' =				-200.00'															
TOTAL				75.00'							ADDITIONAL GUARDRAIL POSTS - 5 EA								
SAY				75.00'													4		

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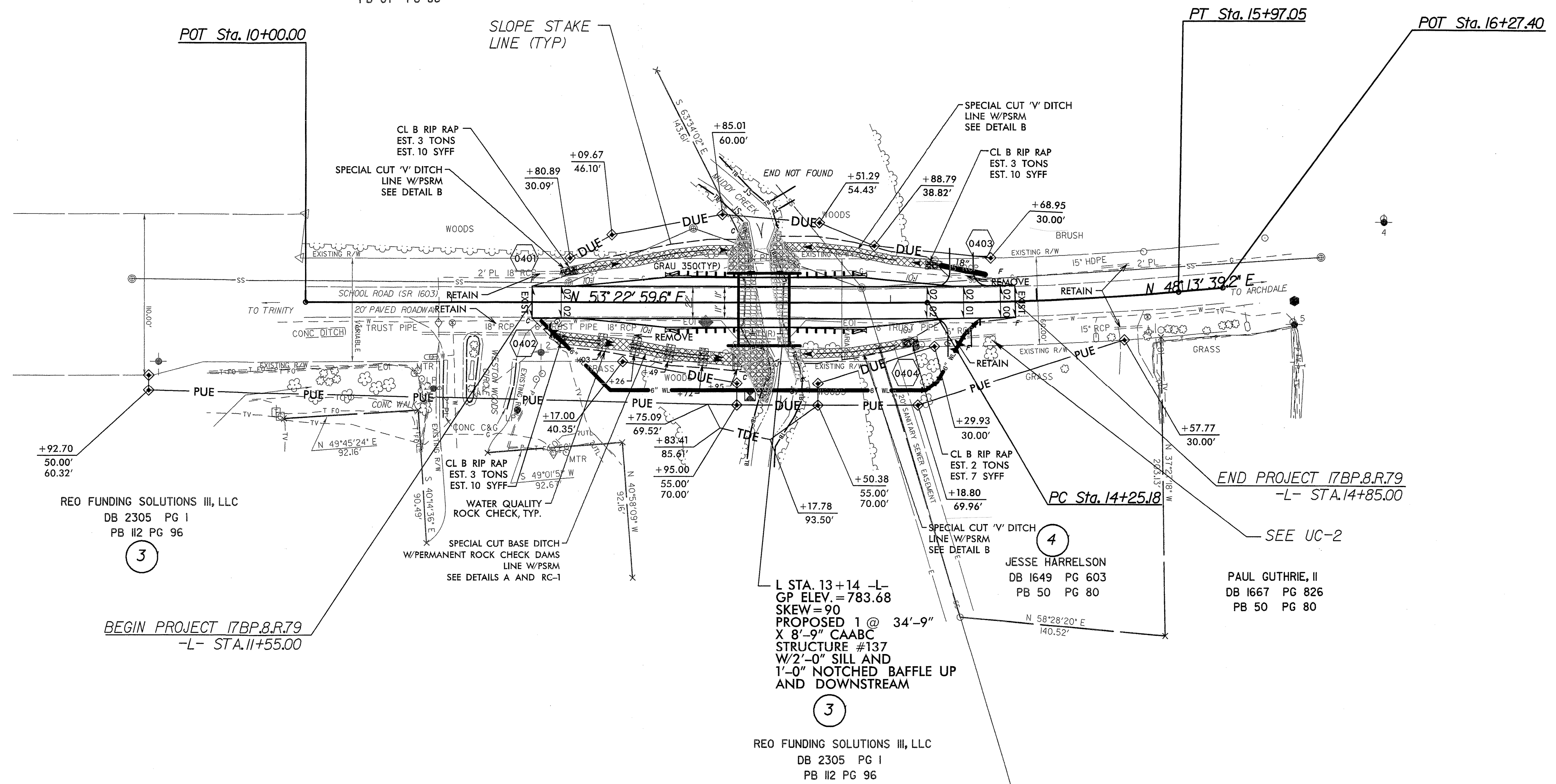
-L-
PI Sta 15+11.18
 $\Delta = 5' 09'' 20.4'' (LT)$
 $D = 2' 59'' 59.2''$
 $L = 171.87'$
 $T = 85.99'$
 $R = 1,910.00'$



FROM STA. 11+68 TO STA. 12+95 -L- RT

1
PHOENIX PM, LLC
DB 1787 PG 2207
PB 67 PG 86

2
TONY WILLIAMS
DB 1688 PG 1586
PB 67 PG 86



3
REO FUNDING SOLUTIONS III, LLC
DB 2305 PG 1
PB 112 PG 96

4
JESSE HARRELSON
DB 1649 PG 603
PB 50 PG 80

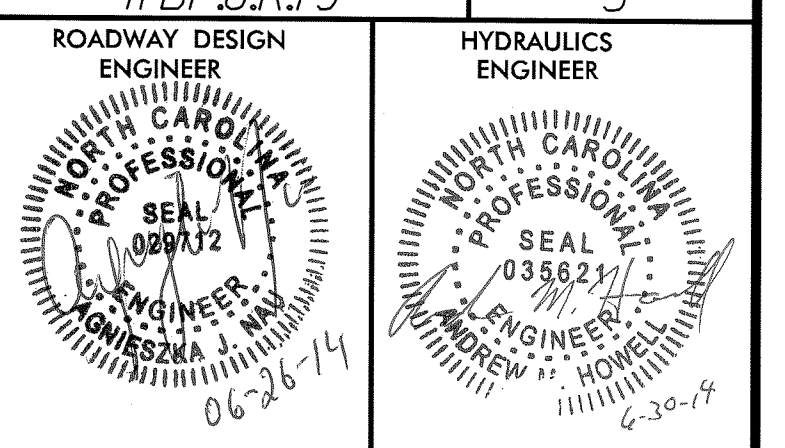
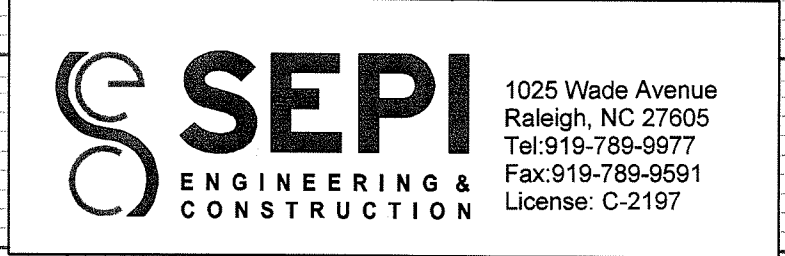
PAUL GUTHRIE, II
DB 1667 PG 826
PB 50 PG 80

3
REO FUNDING SOLUTIONS III, LLC
DB 2305 PG 1
PB 112 PG 96

NOTE: SEE PLAN SHEET 5 FOR PROFILE
NOTE: SEE SHEETS C-1 THRU C-2 FOR STRUCTURE PLANS

REVISIONS

8/17/99

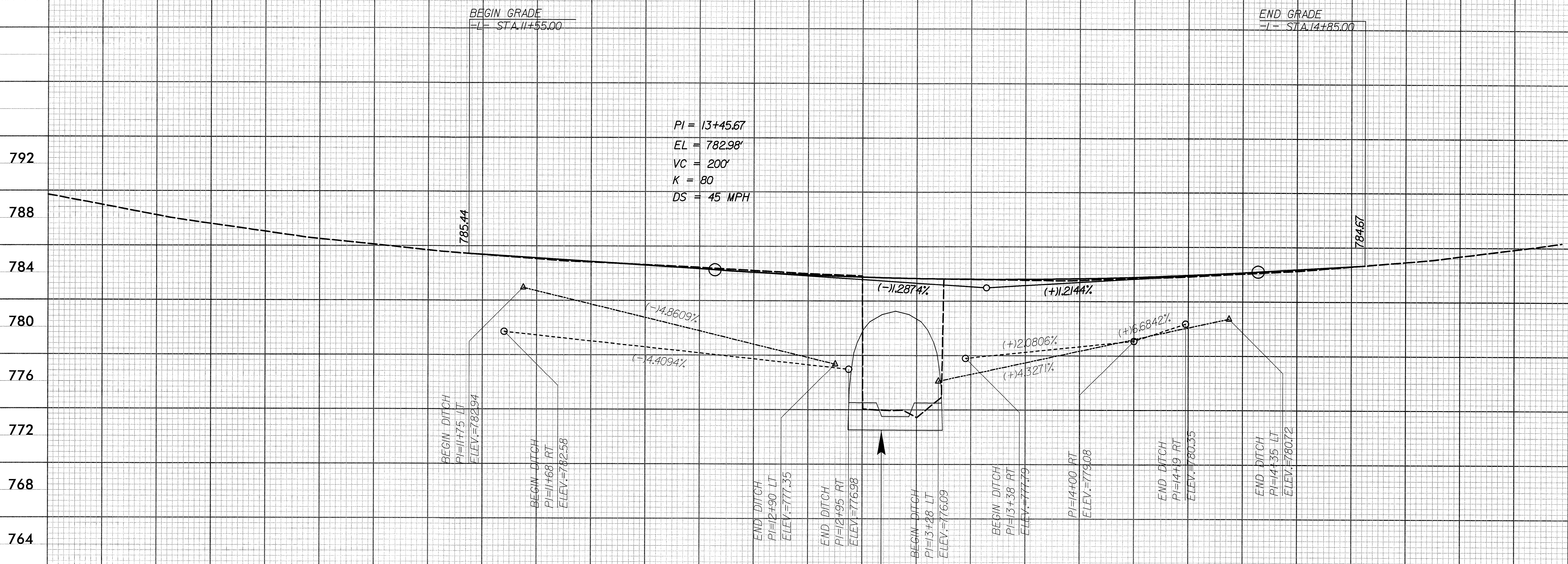


CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 1,200	CFS
DESIGN FREQUENCY	= 10	YRS
DESIGN HW ELEVATION	= 782.2	FT
BASE DISCHARGE	= 2,160	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 784.59	FT
OVERTOPPING DISCHARGE	= 1,200 $Q^{1.5}$	CFS
OVERTOPPING FREQUENCY	= 25-	YRS
OVERTOPPING ELEVATION	= 783.6	FT

BM 1
Sta. -BL- 10+68.00
OFF 51.00' RT
ELEV. 779.92'
RR SPIKE IN BASE
OF 12' SYCAMORE

-L-
Sta. 13+04.4
OFF 63.47' RT



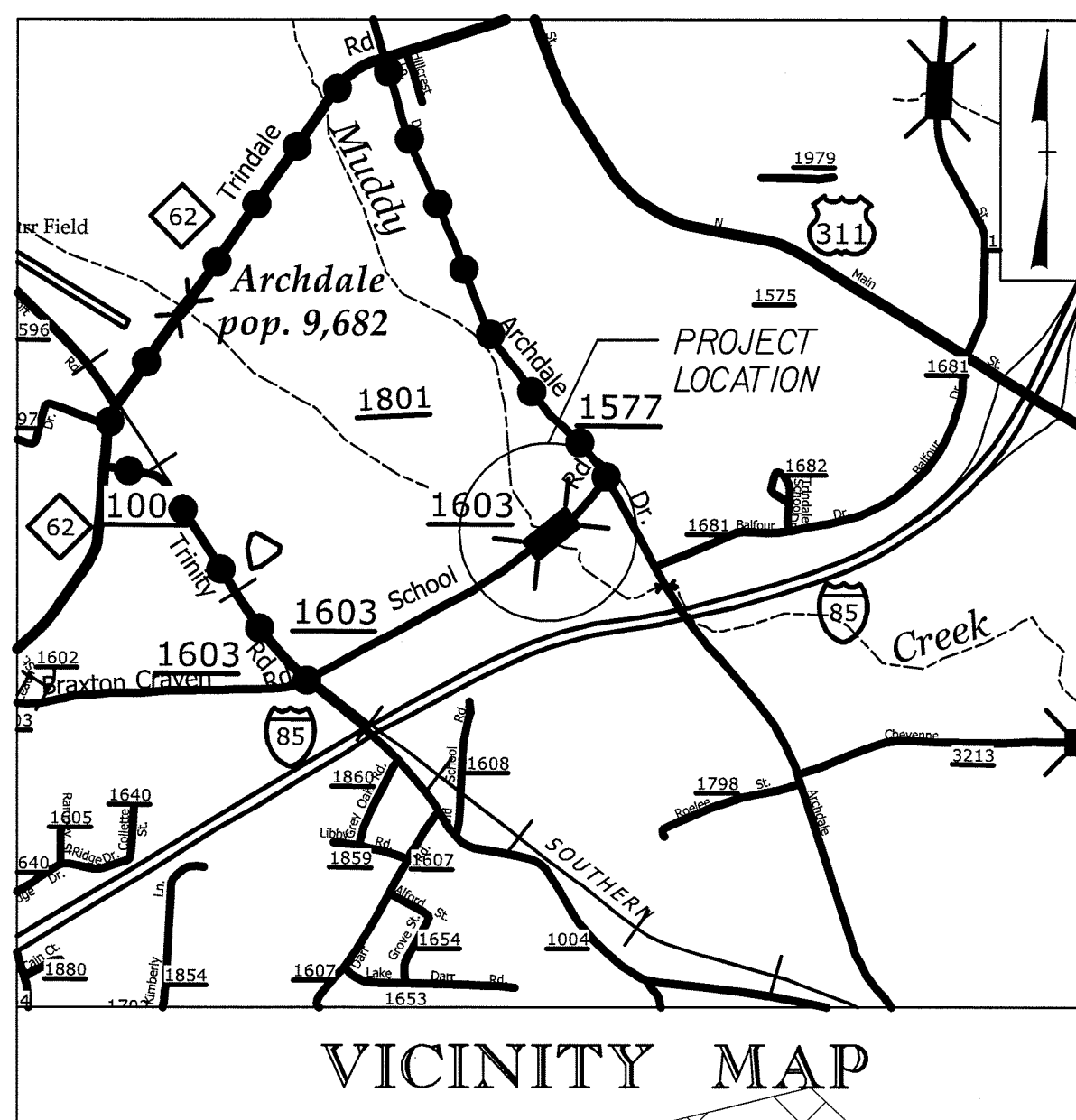
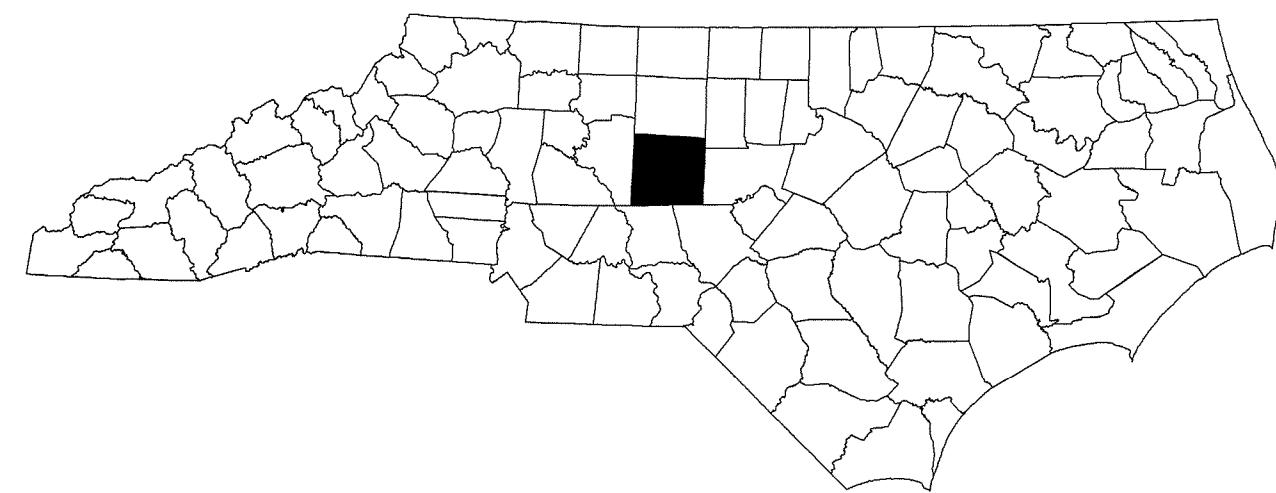
L STA. 13+14 -L-
GP ELEV. = 783.68
SKEW = 90
PROPOSED 1 @ 34'-9"
X 8'-9" CAABC
STRUCTURE #137
W/2'-0" SILL AND
1'-0" NOTCHED BAFFLE UP
AND DOWNSTREAM

NOTE: SEE PLAN SHEET 4 FOR PLAN
NOTE: SEE SHEETS C-1 THRU C-2 FOR STRUCTURE PLANS

5/14/99
\$\$\$\$\$ SYSTEM: \$\$\$\$\$\$
\$\$\$\$\$ USER: \$\$\$\$\$\$
\$\$\$\$\$ DATE: \$\$\$\$\$\$
\$\$\$\$\$ TIME: \$\$\$\$\$\$
\$\$\$\$\$ BY: \$\$\$\$\$\$
\$\$\$\$\$ CHECK: \$\$\$\$\$\$
\$\$\$\$\$ APPR: \$\$\$\$\$\$
\$\$\$\$\$

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN
RANDOLPH COUNTY



*LOCATION: BRIDGE NO. 84 ON SR 1603 (SCHOOL ROAD)
OVER MUDDY CREEK*

TYPE OF WORK: GRADING, DRAINAGE, PAVING, & STRUCTURE

OFF-SITE DETOUR ROUTE

INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET, VICINITY MAP, AND INDEX OF SHEETS
TMP-1A	LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS AND LEGEND
TMP-1B	TRANSPORTATION OPERATIONS PLAN: (MANAGEMENT STRATEGIES, GENERAL NOTES, LOCAL NOTES, AND PHASING)
TMP-2	SPECIAL SIGN DESIGN
TMP-3	OFF-SITE DETOUR
TMP-4	ROAD CLOSURE

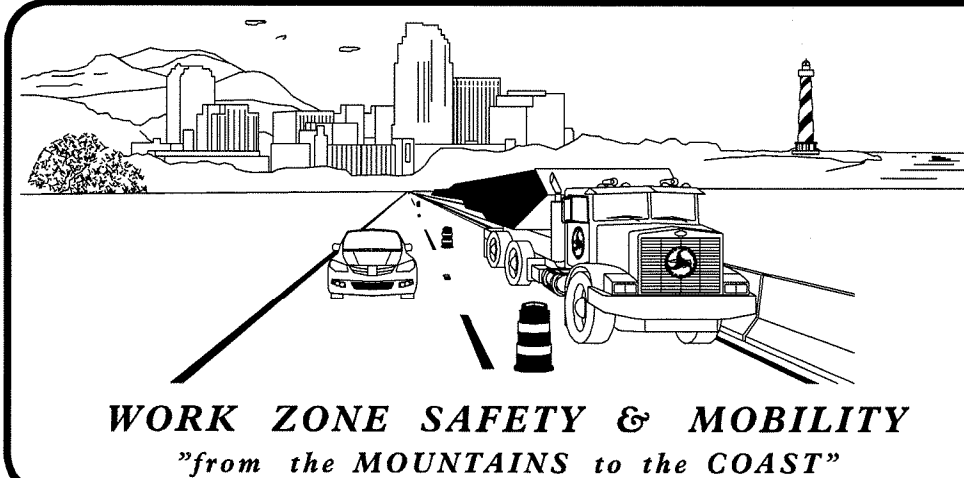
SHEET NO.
TMP-1

TIP PROJECT:
17BP.8.R.79

TIP PROJECT:

SYTIME#####

SUBSERV#####



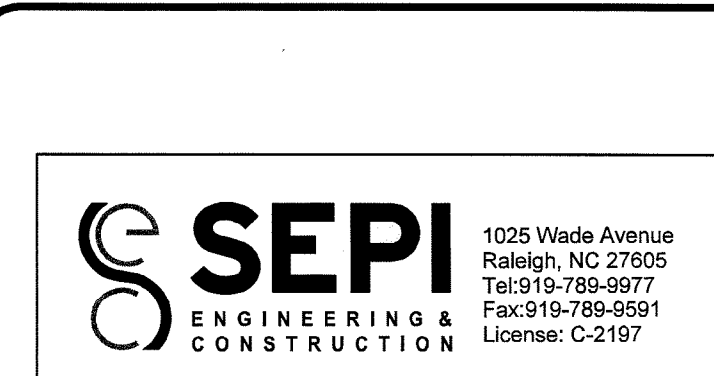
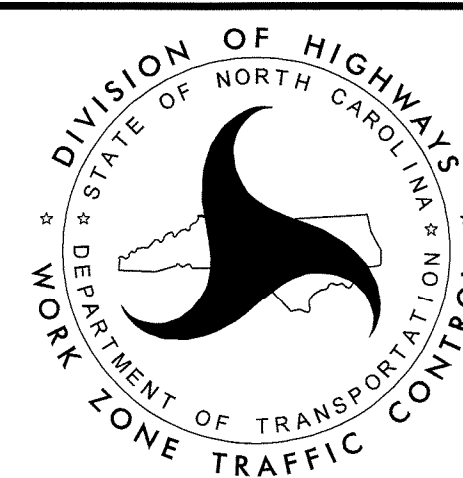
N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
1561 MAIL SERVICE CENTER (MSC) RALEIGH, NC 27699-1561
750 N. GREENFIELD PARKWAY, GARNER, NC 27529 (DELIVERY)
PHONE: (919) 773-2800 FAX: (919) 771-2745

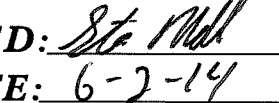
J. S. BOURNE, P.E. STATE TRAFFIC MANAGEMENT ENGINEER

J. ISHAK, P.E. TRAFFIC CONTROL PROJECT ENGINEER


TRAFFIC CONTROL PROJECT DESIGN ENGINEER

TRAFFIC CONTROL DESIGN ENGINEER



APPROVED: 
DATE: 6-2-14

SEAL



ROADWAY STANDARD DRAWINGS

THE FOLLOWING ROADWAY STANDARDS AS SHOWN IN "ROADWAY STANDARD DRAWINGS" - PROJECT SERVICES UNIT - N.C. DEPARTMENT OF TRANSPORTATION - RALEIGH, N.C., DATED JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

<u>STD. NO.</u>	<u>TITLE</u>
1101.03	TEMPORARY ROAD CLOSURES
1101.05	WORK ZONE VEHICLE ACCESSES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES-TYPE III

LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- EXIST. PVMT.
- NORTH ARROW
- PROPOSED PVMT.
- TEMP. SHORING (LOCATION PURPOSES ONLY)

WORK AREA

REMOVAL

USER DEFINED (IF NEEDED)

USER DEFINED (IF NEEDED)

SIGNALS

- EXISTING
- PROPOSED
- TEMPORARY

PAVEMENT MARKINGS

- EXISTING LINES
- TEMPORARY LINES

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)
- CONE
- DRUM SKINNY DRUM TUBULAR MARKER
- TEMPORARY CRASH CUSHION
- FLASHING ARROW BOARD
- FLAGGER
- LAW ENFORCEMENT
- TRUCK MOUNTED ATTENUATOR (TMA)
- CHANGEABLE MESSAGE SIGN

TEMPORARY SIGNING

- PORTABLE SIGN
- STATIONARY SIGN
- STATIONARY OR PORTABLE SIGN

PAVEMENT MARKERS

- CRYSTAL/CRYSTAL
- CRYSTAL/RED
- YELLOW/YELLOW

PAVEMENT MARKING SYMBOLS

- PAVEMENT MARKING SYMBOLS

\$\$\$SYTIME\$\$\$\$
 \$\$\$SERVNAME\$\$\$\$
 \$\$\$\$\$\$

APPROVED: DATE: 6-2-14		
ROADWAY STANDARD DRAWINGS & LEGEND		

MANAGEMENT STRATEGIES

- CLOSE SR 1603 (SCHOOL ROAD) AND DETOUR TRAFFIC OFF-SITE
- LOCAL ACCESS TO ALL RESIDENCES AND BUSINESSES WILL BE MAINTAINED BETWEEN CLOSURE POINTS AT ALL TIMES DURING CONSTRUCTION

GENERAL NOTES

CHANGES MAY BE REQUIRED WHEN PHYSICAL DIMENSIONS IN THE DETAIL DRAWINGS, STANDARD DETAILS, AND ROADWAY DETAILS ARE NOT ATTAINABLE TO MEET FIELD CONDITIONS OR RESULT IN DUPLICATE OR UNDESIRED OVERLAPPING OF DEVICES. MODIFICATION MAY INCLUDE: MOVING, SUPPLEMENTING, COVERING, OR REMOVAL OF DEVICES AS DIRECTED BY THE ENGINEER.

THE FOLLOWING GENERAL NOTES APPLY AT ALL TIMES FOR THE DURATION OF THE CONSTRUCTION PROJECT EXCEPT WHEN OTHERWISE NOTED IN THE PLAN OR DIRECTED BY THE ENGINEER.

SIGNING

- A) PROVIDE SIGNING AND DEVICES REQUIRED TO CLOSE THE ROAD ACCORDING TO THE ROADWAY STANDARD DRAWINGS AND TRAFFIC MANAGEMENT PLANS.

PROVIDE SIGNING REQUIRED FOR THE OFF-SITE DETOUR ROUTE AS SHOWN IN THE TRAFFIC MANAGEMENT PLANS.
- B) COVER OR REMOVE ALL SIGNS AND DEVICES REQUIRED TO CLOSE THE ROAD WHEN ROAD CLOSURE IS NOT IN OPERATION.

COVER OR REMOVE ALL SIGNS REQUIRED FOR THE OFF-SITE DETOUR WHEN THE DETOUR IS NOT IN OPERATION.
- C) ENSURE ALL NECESSARY SIGNING IS IN PLACE PRIOR TO ALTERING ANY TRAFFIC PATTERN.


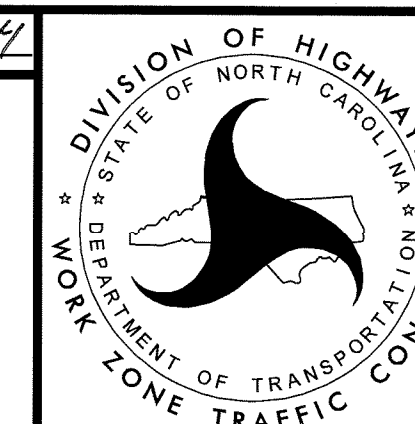
LOCAL NOTES

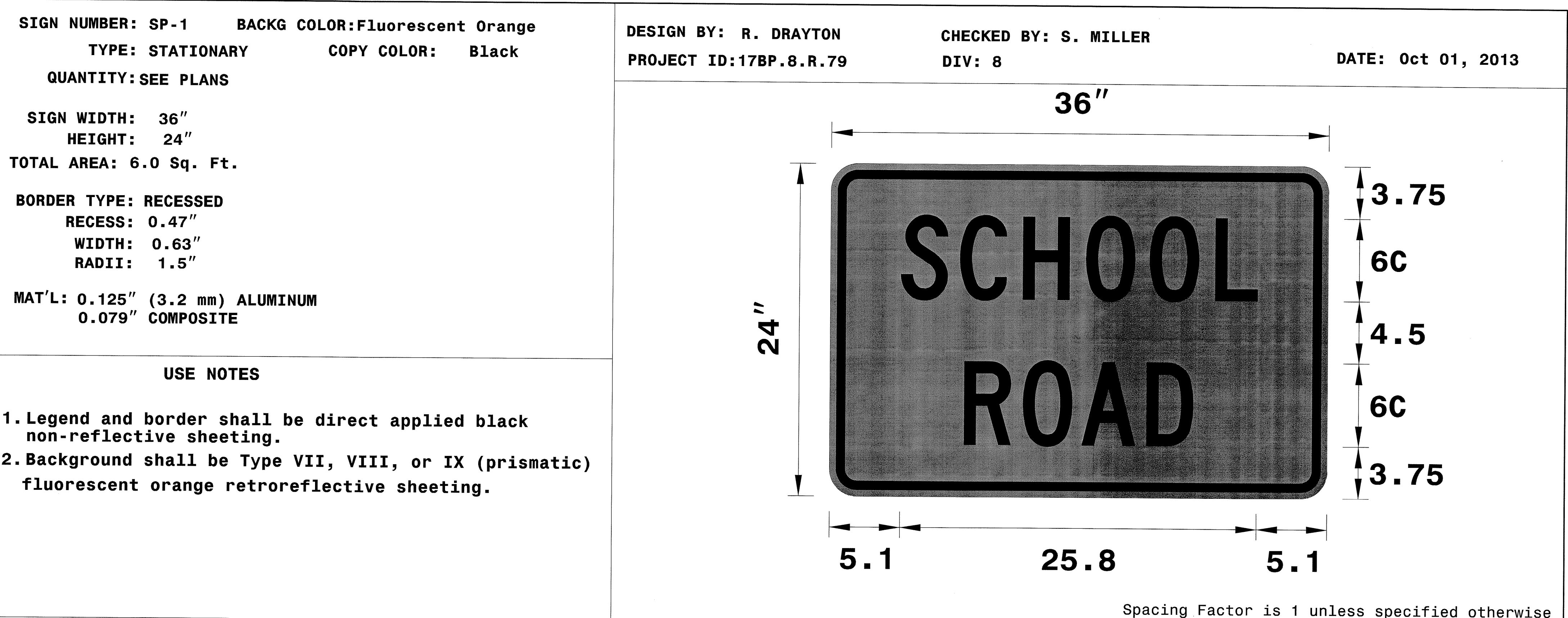
1. NOTIFY THE ENGINEER AT LEAST ONE MONTH PRIOR TO ANY TRAFFIC PATTERN ALTERATION.
2. NOTIFY RANDOLPH COUNTY SCHOOLS AT LEAST ONE MONTH PRIOR TO ROAD CLOSURE.
3. NOTIFY RANDOLPH COUNTY EMERGENCY SERVICES AT LEAST ONE MONTH PRIOR TO ROAD CLOSURE.

PHASING

- STEP 1 USING RSD 1101.03 SHEET 1 OF 9, CLOSE SCHOOL ROAD (SR 1603) AND DETOUR TRAFFIC OFF-SITE AS SHOWN ON TMP-3. MAINTAIN ACCESS TO ALL RESIDENCES AND BUSINESSES BETWEEN CLOSURE POINTS.
- STEP 2 REMOVE THE EXISTING STRUCTURE.
- STEP 3 CONSTRUCT THE PROPOSED STRUCTURE AND ROADWAY.
- STEP 4 PLACE FINAL PAVEMENT MARKINGS ACCORDING TO THE PAVEMENT MARKING PLANS.
- STEP 5 OPEN SCHOOL ROAD (SR 1603) TO TRAFFIC AND REMOVE ALL TRAFFIC CONTROL DEVICES.

\$\$\$SYTIME\$\$\$\$\$
 \$\$\$DCN\$\$\$\$\$
 \$\$\$USERNAME\$\$\$\$\$

APPROVED: <i>[Signature]</i> DATE: 6-2-14			<h1 style="margin: 0;">TRANSPORTATION OPERATIONS PLAN</h1>
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LETTER POSITIONS

Letter spacings are to start of next letter

	S	C	H	O	O	L															Series/Size
	Text Length																				
	5.1	4.26	4.56	4.56	4.62	4.74	3.06	5.1													C 2000
																					25.8

FILENAME: 750084 Sign Design

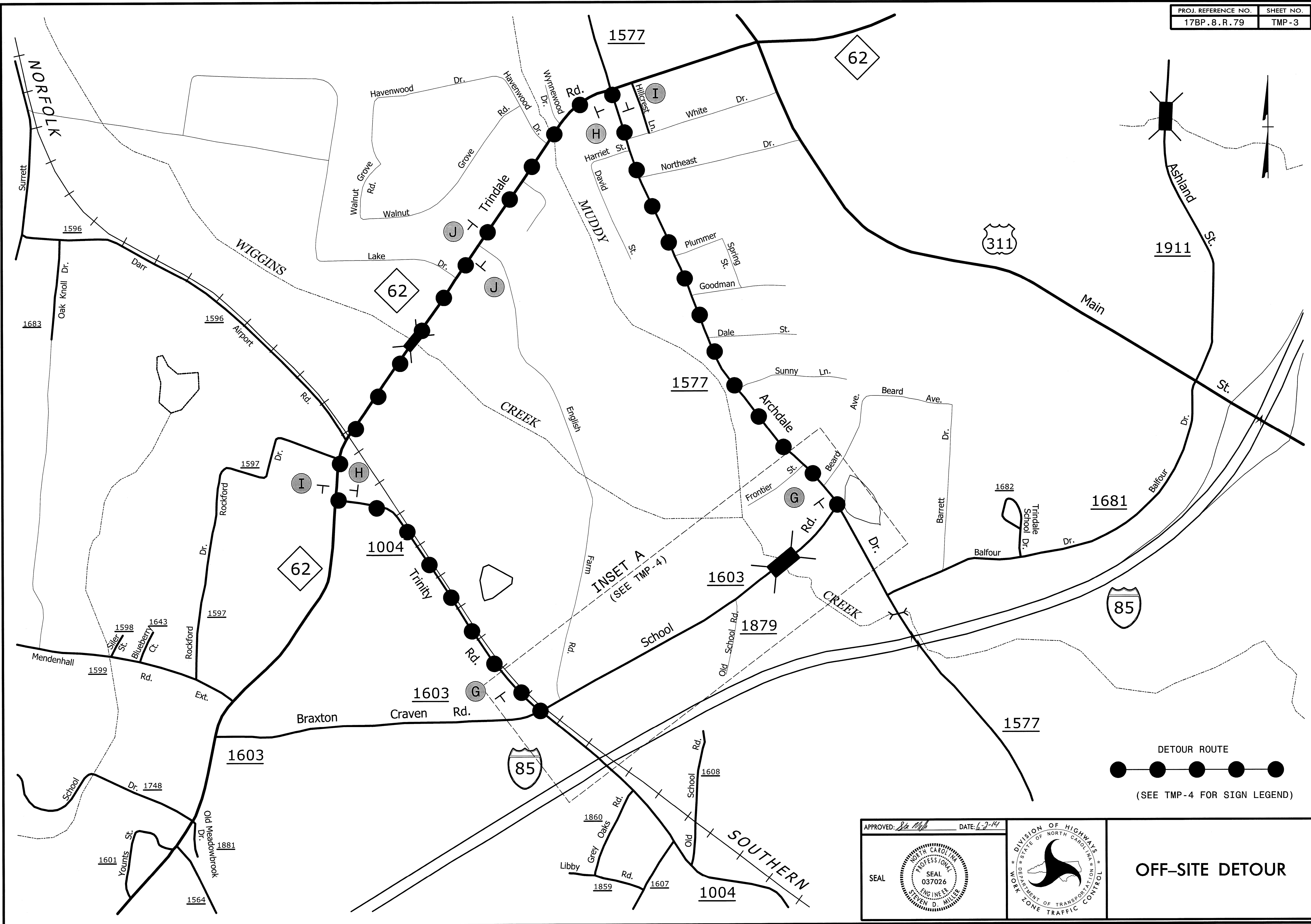
NORTH CAROLINA D.O.T. SIGN DETAIL

\$\$\$SYTIME\$\$\$
 \$\$\$DON\$\$\$
 \$\$\$SERNAME\$\$\$

APPROVED: S. Miller DATE: 6-2-14

SEAL

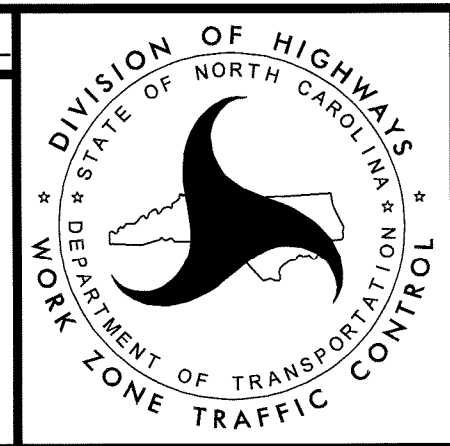
SPECIAL SIGN DESIGN



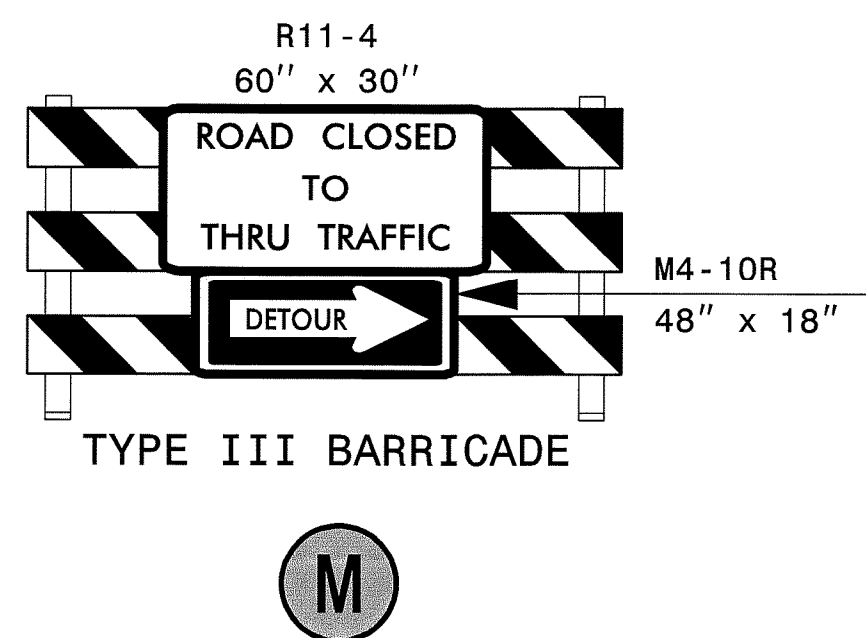
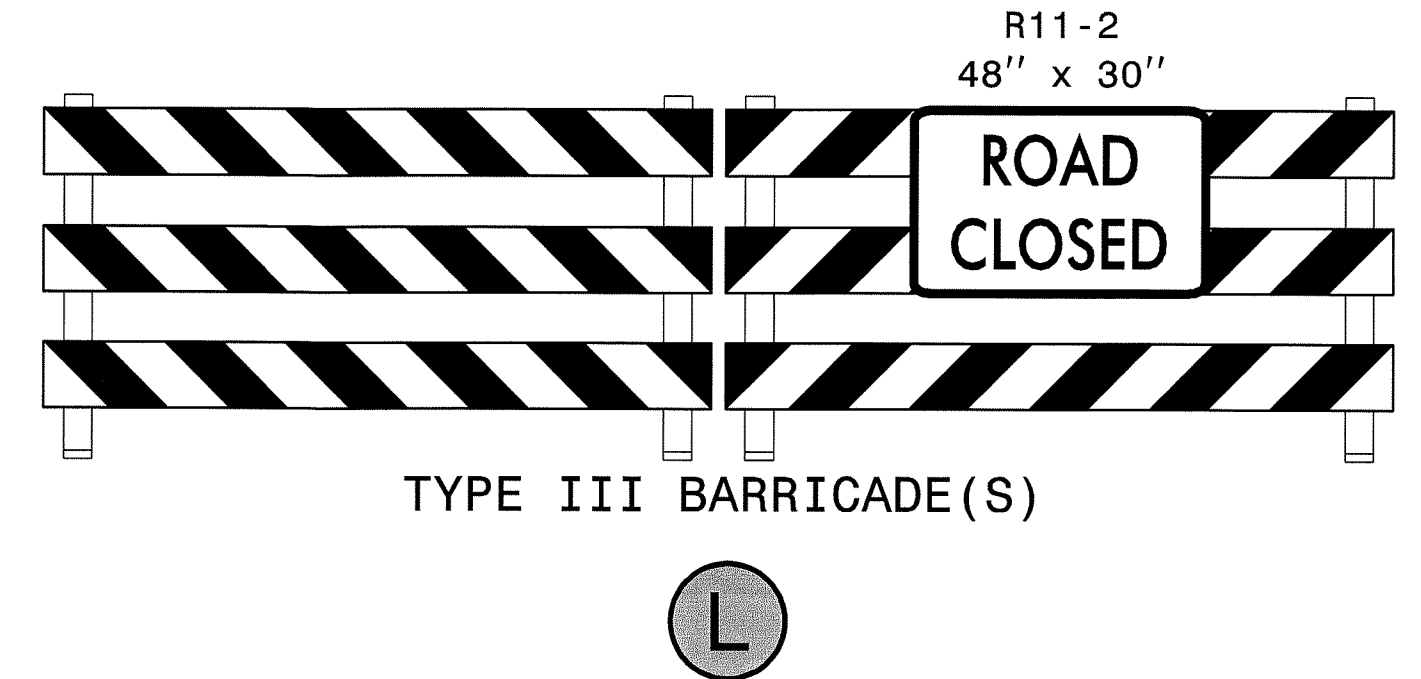
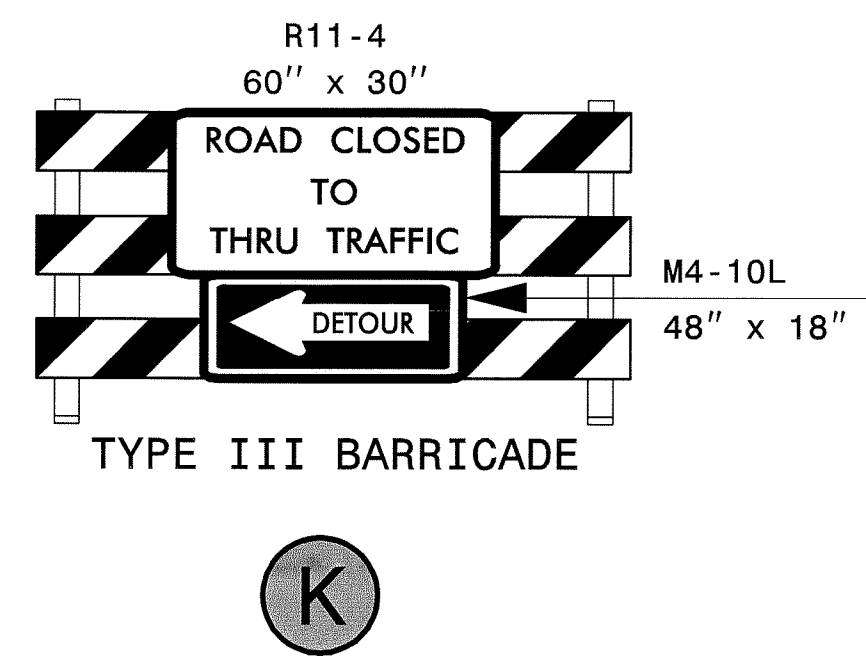
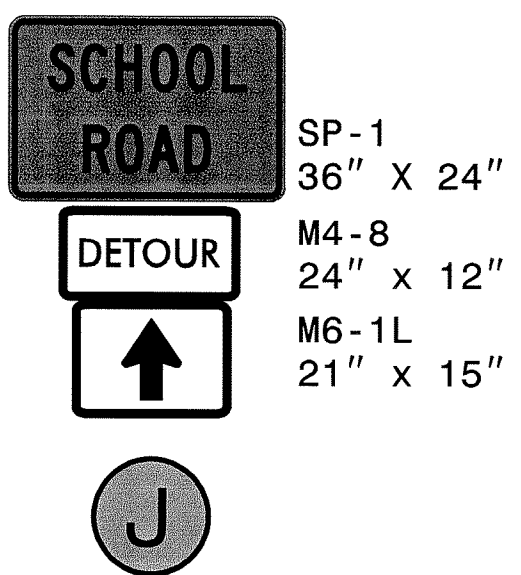
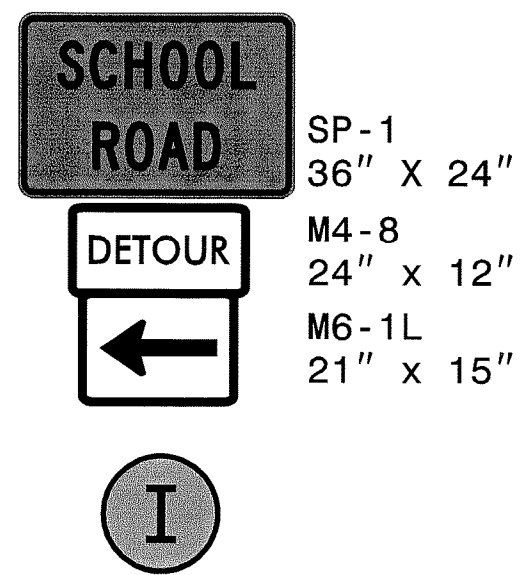
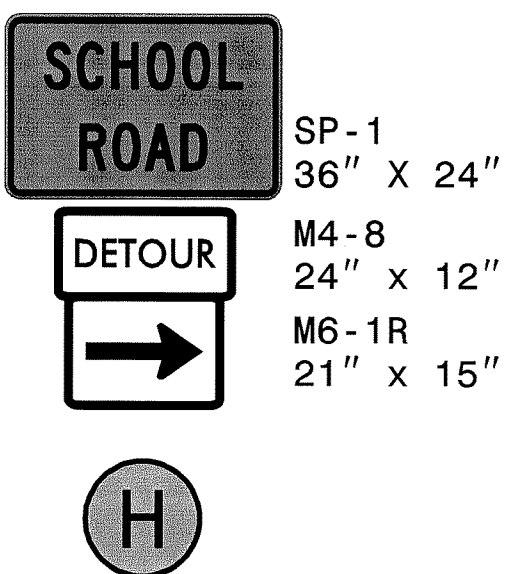
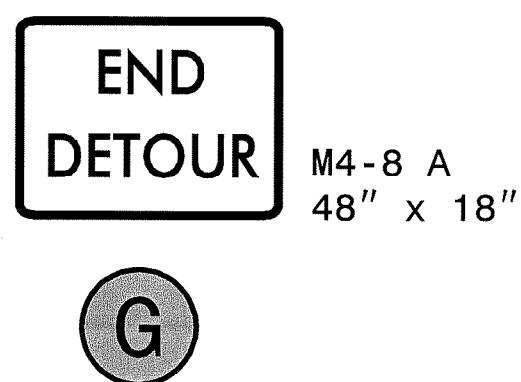
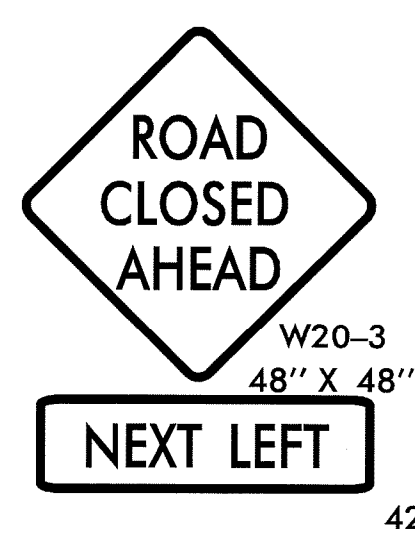
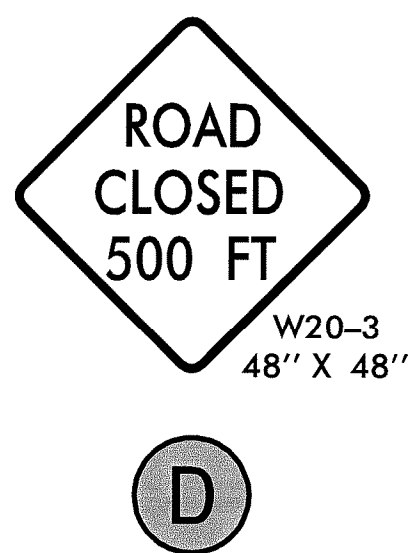
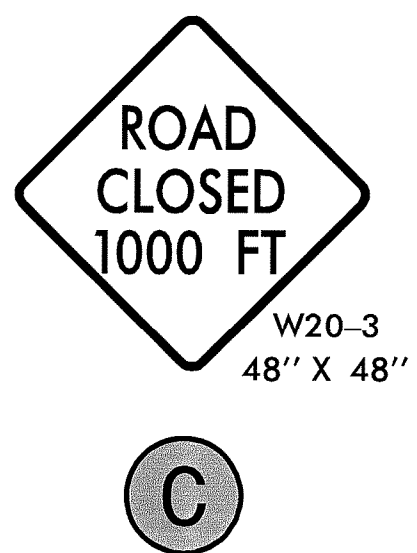
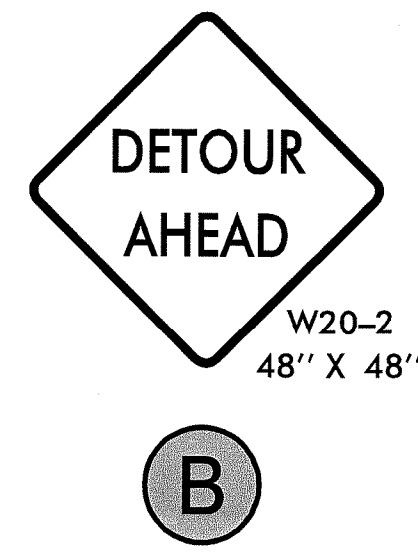
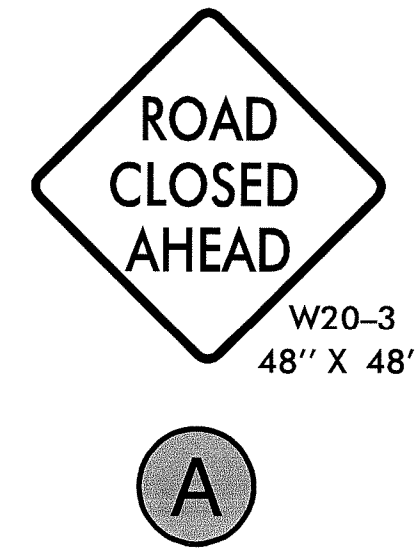
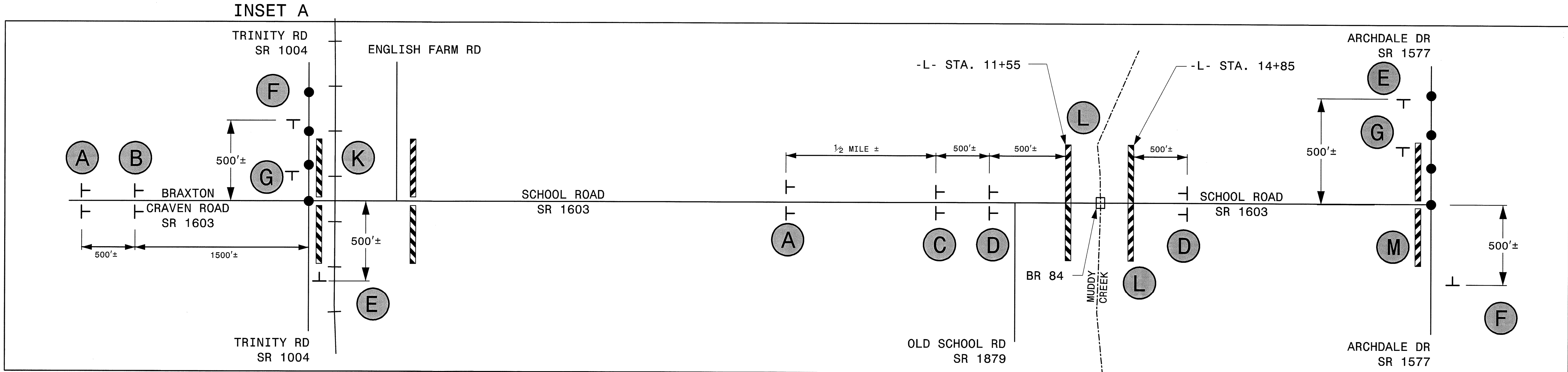
INSET A
(SEE TMP-4)

DETOUR ROUTE
●●●●●
(SEE TMP-4 FOR SIGN LEGEND)

APPROVED: *[Signature]* DATE: 6-2-14
SEAL
NORTH CAROLINA PROFESSIONAL SEAL 037026 ENGINEER STEVEN D. MILLER



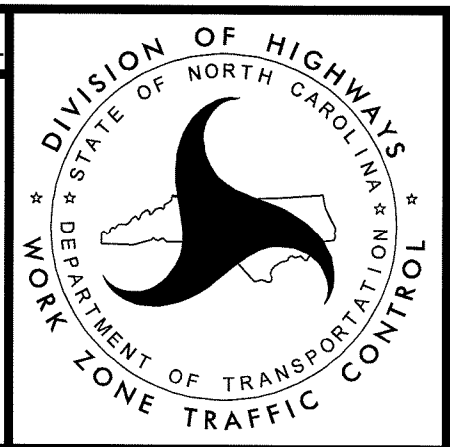
OFF-SITE DETOUR



APPROVED: *[Signature]* DATE: 6-2-14

SEAL

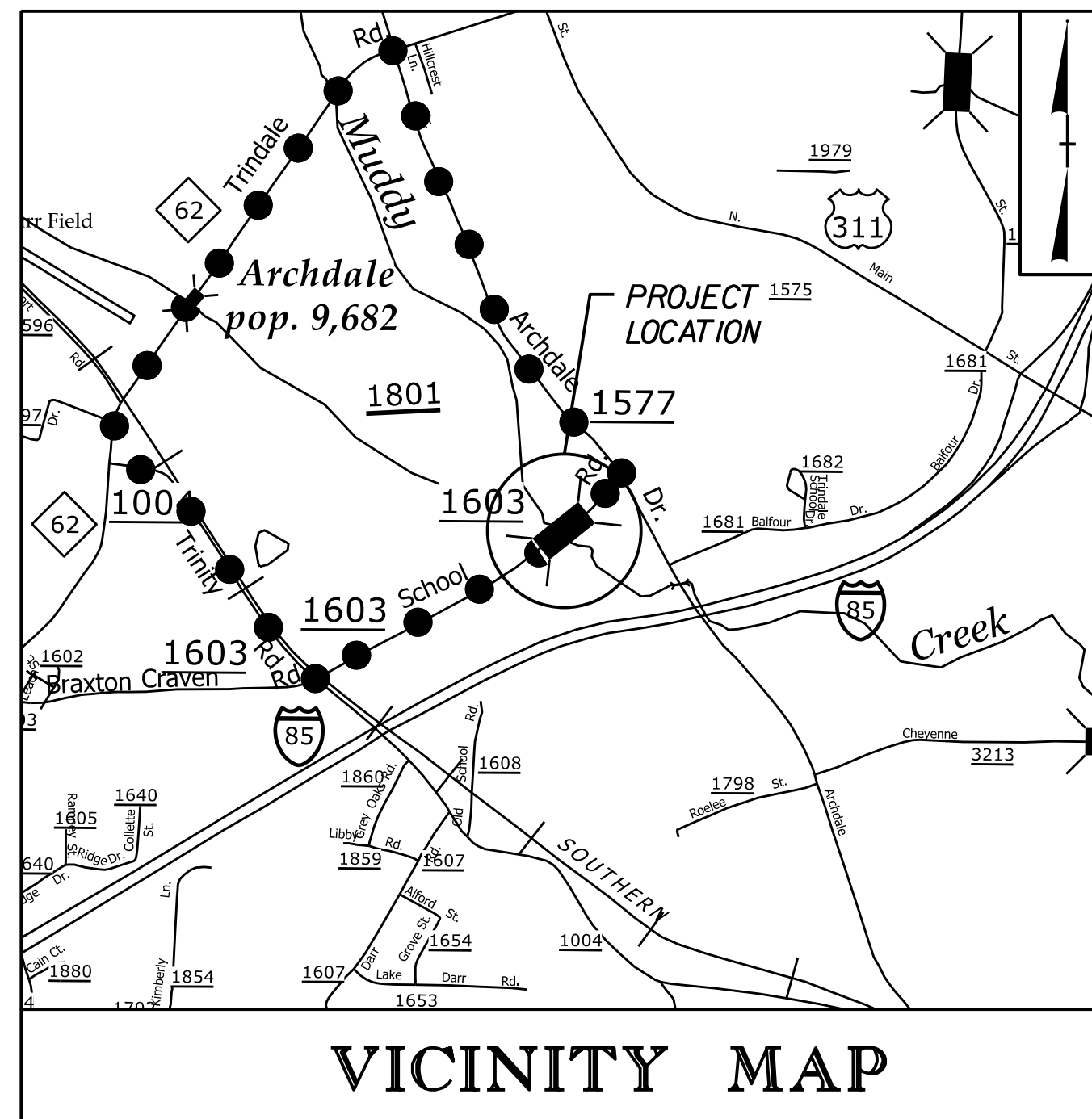
NORTH CAROLINA PROFESSIONAL ENGINEER
SEAL 037026
STEVEN D. MILLER



ROAD CLOSURE

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DCN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

TIP PROJECT: 17BP.8.R.79



OFF-SITE DETOUR ROUTE

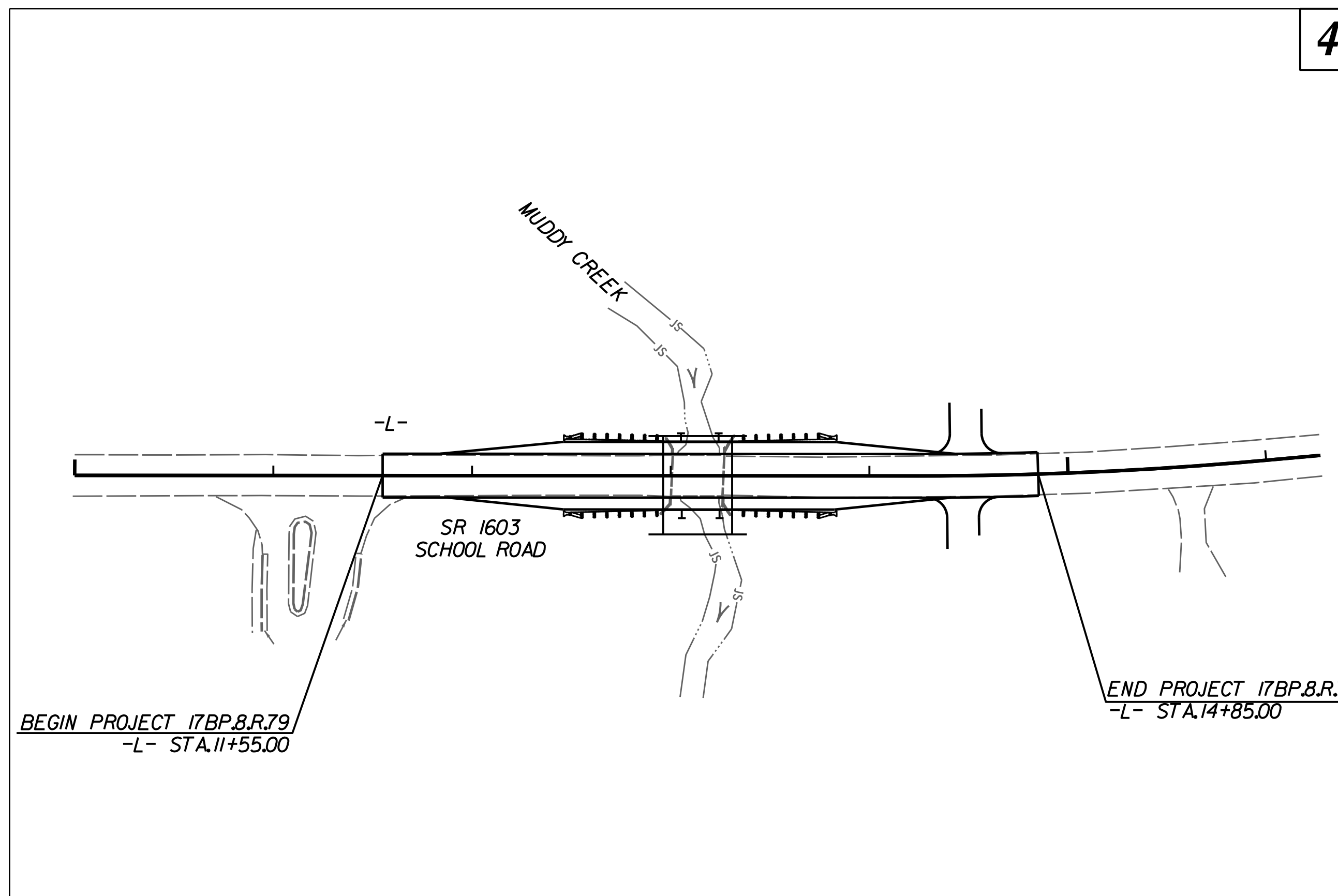
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
 PLAN FOR PROPOSED
 HIGHWAY EROSION CONTROL

RANDOLPH COUNTY

LOCATION: BRIDGE NO. 750084 ON SR 1603 (SCHOOL ROAD)

OVER MUDDY CREEK

TYPE OF WORK: GRADING, DRAINAGE, PAVING, & STRUCTURE



4

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.8.R.79	EC-1	5
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.8.R.79		PE	
17BP.8.R.79		RAW & UTIL.	

EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	
1630.05	Temporary Diversion	
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	
1622.01	Temporary Berms and Slope Drains	
1630.02	Silt Basin Type B	
1633.01	Temporary Rock Silt Check Type-A	
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	
1633.02	Temporary Rock Silt Check Type-B	
	Wattle/Coir Fiber Wattle	
	Wattle/Coir Fiber Wattle with Polyacrylamide (PAM)	
1634.01	Temporary Rock Sediment Dam Type-A	
1634.02	Temporary Rock Sediment Dam Type-B	
1635.01	Rock Pipe Inlet Sediment Trap Type-A	
1635.02	Rock Pipe Inlet Sediment Trap Type-B	
1630.04	Stilling Basin	
1630.06	Special Stilling Basin	
	Rock Inlet Sediment Trap:	
1632.01	Type A	
1632.02	Type B	
1632.03	Type C	
	Skimmer Basin	
	Tiered Skimmer Basin	
	Infiltration Basin	

THIS PROJECT CONTAINS EROSION CONTROL PLANS FOR CLEARING AND GRUBBING PHASE OF CONSTRUCTION.

THIS PROJECT HAS BEEN DESIGNED TO SENSITIVE WATERSHED STANDARDS.

ENVIRONMENTALLY SENSITIVE AREA(S) EXIST ON THIS PROJECT
 Refer To E. C. Special Provisions for Special Considerations.

GRAPHIC SCALE

15' 0 30'

PLANS

ROADSIDE ENVIRONMENTAL UNIT
 DIVISION OF HIGHWAYS
 STATE OF NORTH CAROLINA

ANDREW M. HOWELL, P.E.
 LEVEL III DESIGNER OF EROSION AND SEDIMENT CONTROL PLANS
 3105
 LEVEL III CERTIFICATION NO.

THESE EROSION AND SEDIMENT CONTROL PLANS COMPLY WITH THE REGULATIONS SET FORTH BY THE NCG-010000 GENERAL CONSTRUCTION PERMIT EFFECTIVE AUGUST 3, 2011 ISSUED BY THE NORTH CAROLINA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES DIVISION OF WATER QUALITY.

Prepared in the Office of:

SEPI ENGINEERING & CONSTRUCTION
 2012 STANDARD SPECIFICATIONS

1025 Wade Avenue
 Raleigh, NC 27605
 Tel: 919-789-9977
 Fax: 919-789-9591
 License: C-2197

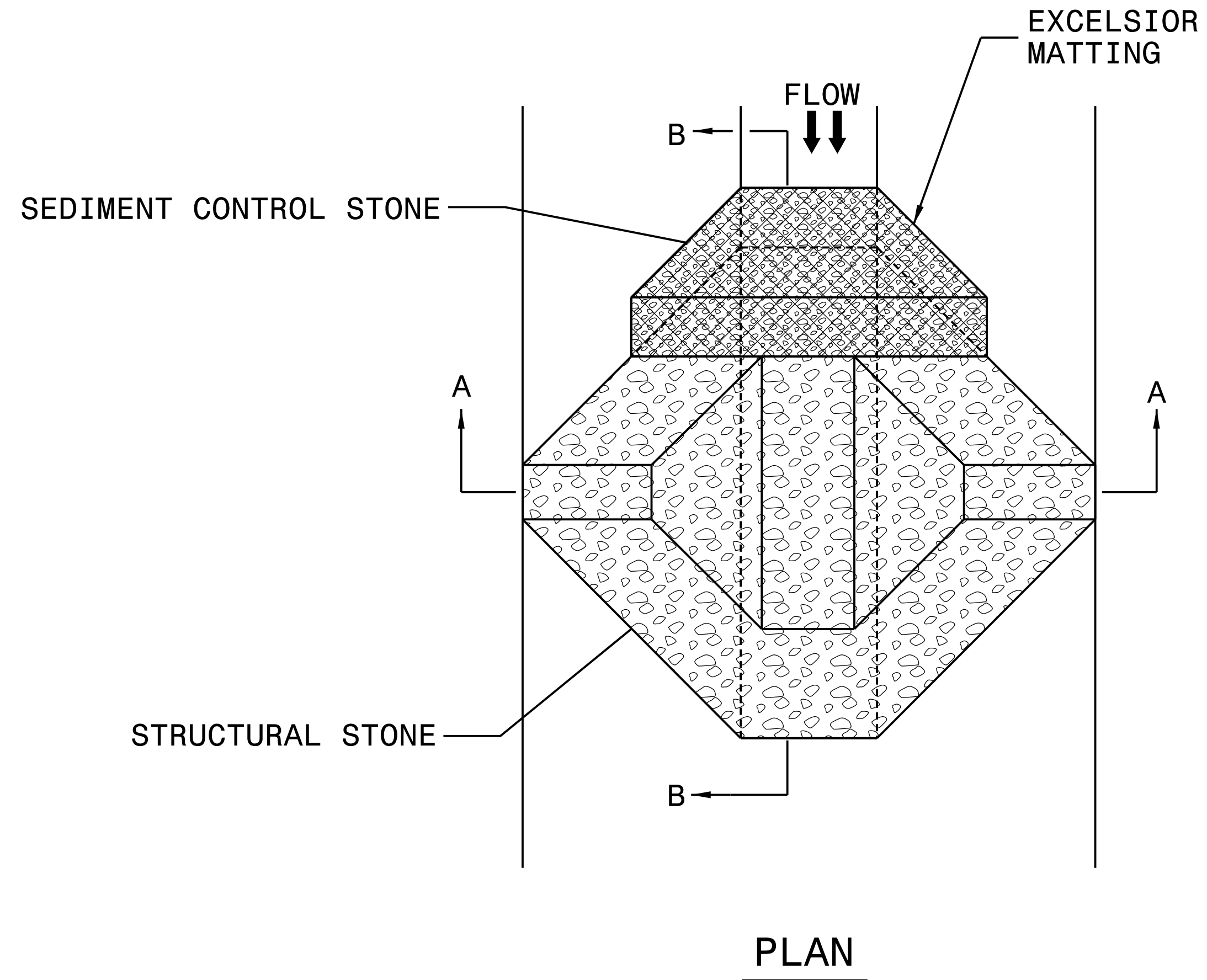
Roadway Standard Drawings

The following roadway english standards as appear in "Roadway Standard Drawings"- Roadway Design Unit - N. C. Department of Transportation - Raleigh, N. C., dated January 2012 and the latest revision thereto are applicable to this project and by reference hereby are considered a part of these plans.

1604.01	Railroad Erosion Control Detail	1632.01	Rock Inlet Sediment Trap Type A
1605.01	Temporary Silt Fence	1632.02	Rock Inlet Sediment Trap Type B
1606.01	Special Sediment Control Fence	1632.03	Rock Inlet Sediment Trap Type C
1607.01	Gravel Construction Entrance	1633.01	Temporary Rock Silt Check Type A
1622.01	Temporary Berms and Slope Drains	1633.02	Temporary Rock Silt Check Type B
1630.01	Riser Basin	1634.01	Temporary Rock Sediment Dam Type A
1630.02	Silt Basin Type B	1634.02	Temporary Rock Sediment Dam Type B
1630.03	Temporary Silt Ditch	1635.01	Rock Pipe Inlet Sediment Trap Type A
1630.04	Stilling Basin	1635.02	Rock Pipe Inlet Sediment Trap Type B
1630.05	Temporary Diversion	1640.01	Coir Fiber Baffle
1630.06	Special Stilling Basin	1645.01	Temporary Stream Crossing
1631.01	Matting Installation		

*****SYSTEMS ENGINEERING & CONSTRUCTION*****
 *****SPECIALISTS*****
 *****SERVICES*****

TEMPORARY ROCK SILT CHECK TYPE 'A' WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM)

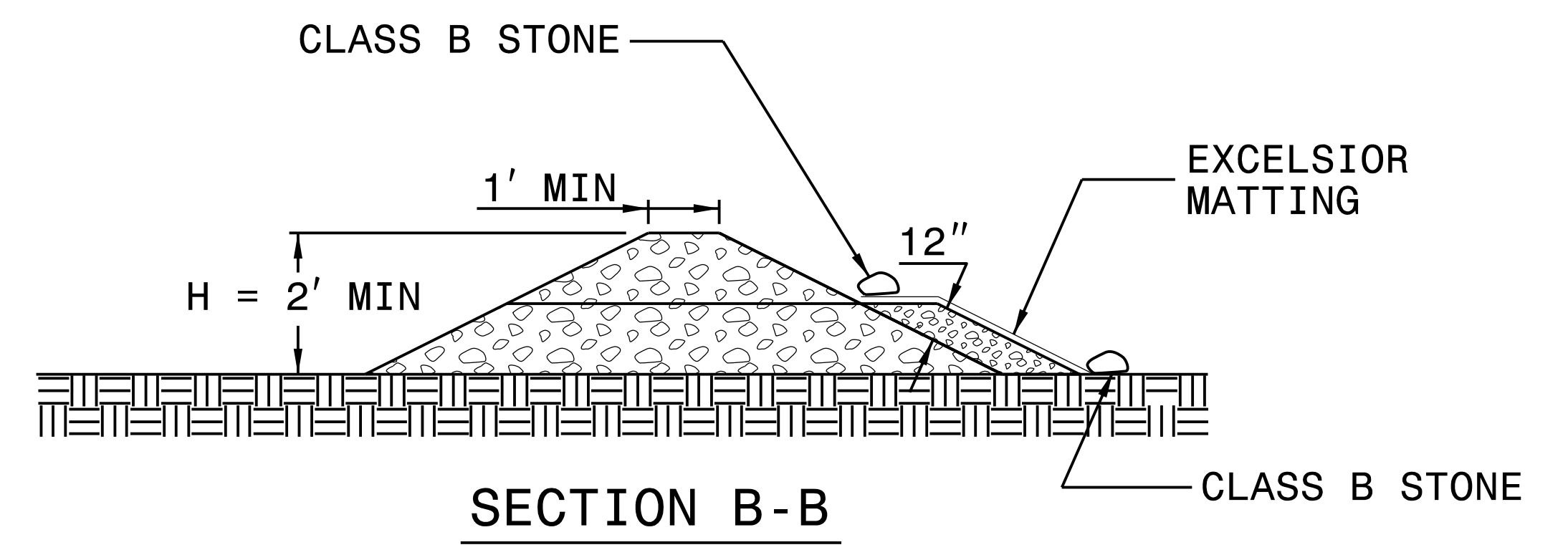
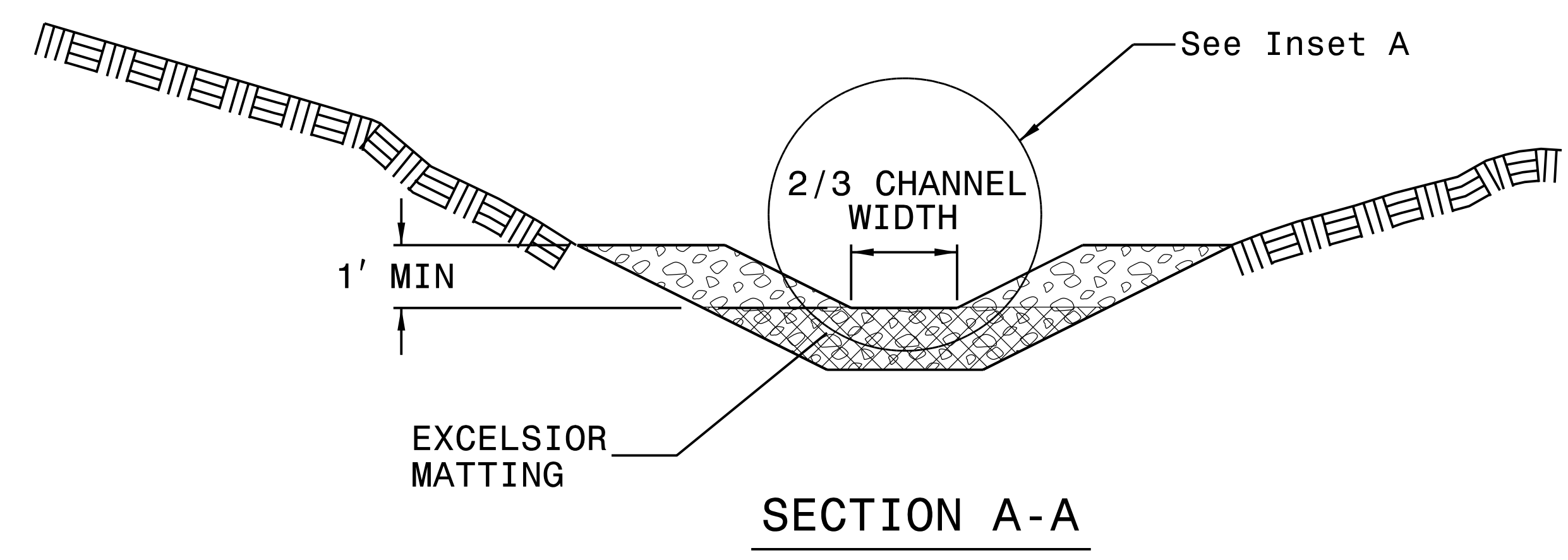
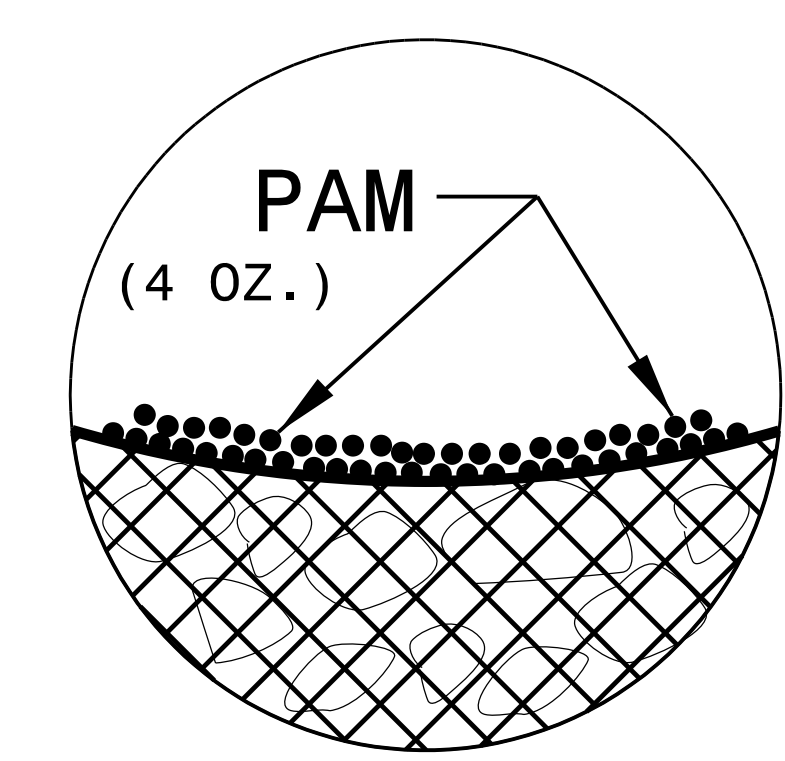


NOTES

USE EXCELSIOR FOR MATTING MATERIAL AND ANCHOR MATTING SECTION AT TOP AND BOTTOM WITH CLASS B STONE.

PRIOR TO POLYACRYLAMIDE (PAM) APPLICATION, OBTAIN A SOIL SAMPLE FROM PROJECT LOCATION, AND FROM OFFSITE MATERIAL, AND ANALYZE FOR APPROPRIATE PAM FLOCCULANT TO BE APPLIED TO EACH ROCK SILT CHECK.

INITIALLY APPLY 4 OUNCES OF POLYACRYLAMIDE (PAM) TO TOP OF MATTING SECTION AND AFTER EVERY RAINFALL EVENT THAT EQUALS OR EXCEEDS 0.50 INCHES.



NOT TO SCALE

DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

SOIL STABILIZATION TIMEFRAMES

<i>SITE DESCRIPTION</i>	<i>STABILIZATION TIME</i>	<i>TIMEFRAME EXCEPTIONS</i>
PERIMETER DIKES, SWALES, DITCHES AND SLOPES	7 DAYS	NONE
HIGH QUALITY WATER (HQW) ZONES	7 DAYS	NONE
SLOPES STEEPER THAN 3:1	7 DAYS	IF SLOPES ARE 10' OR LESS IN LENGTH AND ARE NOT STEEPER THAN 2:1, 14 DAYS ARE ALLOWED.
SLOPES 3:1 OR FLATTER	14 DAYS	7 DAYS FOR SLOPES GREATER THAN 50' IN LENGTH.
ALL OTHER AREAS WITH SLOPES FLATTER THAN 4:1	14 DAYS	NONE, EXCEPT FOR PERIMETERS AND HQW ZONES.

CULVERT CONSTRUCTION SEQUENCE STA. 12+96 TO STA. 13+31 -L-

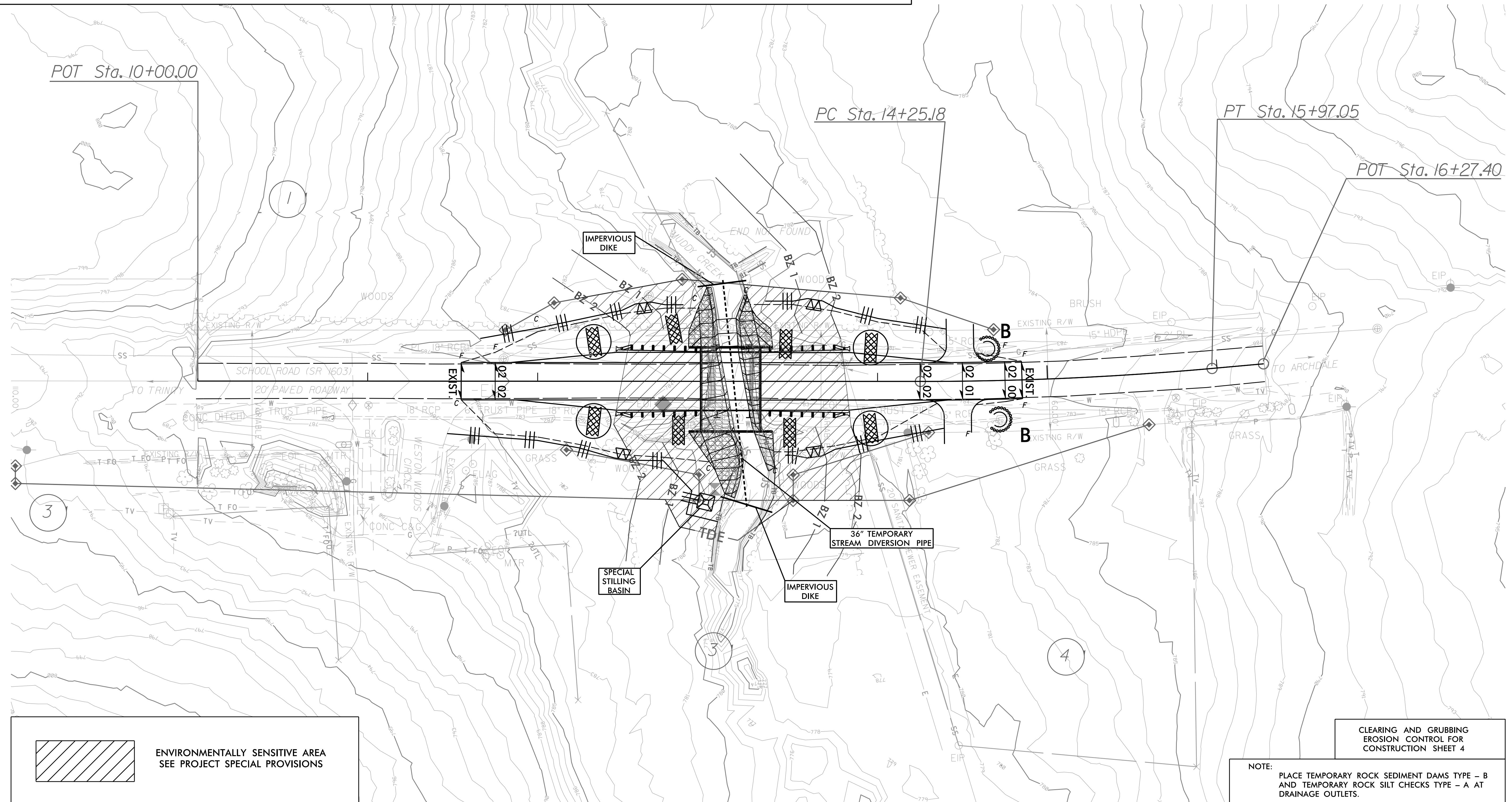
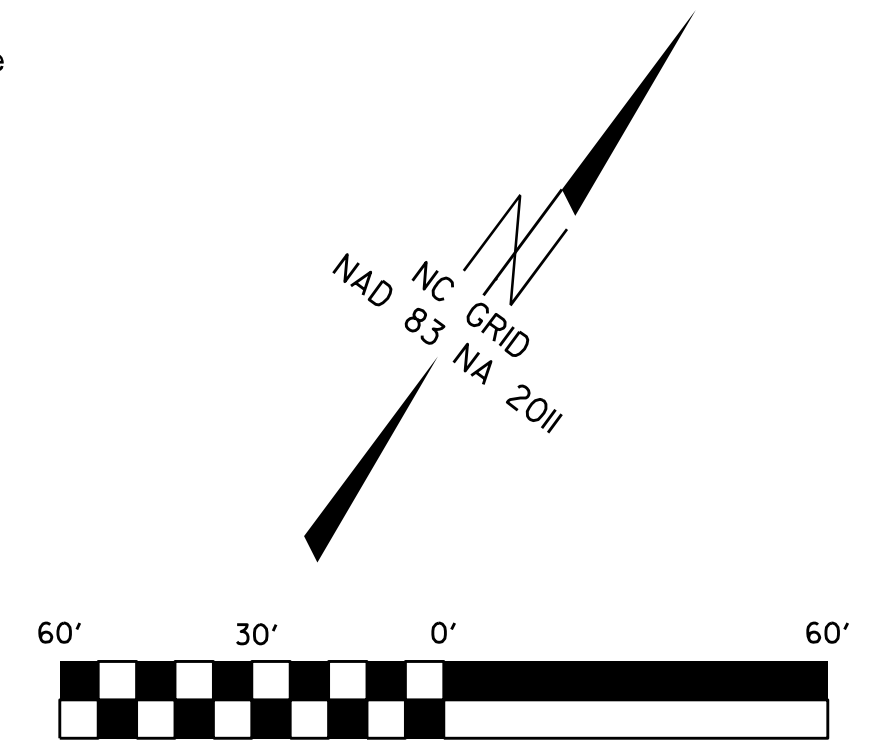
1. ESTABLISH OFFSITE DETOUR.
2. INSTALL CLEARING AND GRUBBING PERIMETER CONTROLS. DO NOT CLEAR BEYOND PERIMETER CONTROLS.
3. INSTALL SPECIAL STILLING BASIN IN THE APPROXIMATE LOCATION SHOWN ON THE PLANS.
4. INSTALL TEMPORARY STREAM DIVERSION PIPE FOR BRIDGE REMOVAL AND IMPERVIOUS DIKES AS SHOWN ON THE PLANS.
5. DEWATER THE AREA UNDER THE EXISTING BRIDGE, DIRECTING PUMPED WATER TO THE SPECIAL STILLING BASIN.
6. REMOVE EXISTING BRIDGE STRUCTURE, INCLUDING FOUNDATION AND WINGWALLS.
7. MODIFY TEMPORARY STREAM DIVERSION PIPE FOR USE IN CULVERT CONSTRUCTION AS NECESSARY. MAKE REPAIRS AS NECESSARY.
8. EXCAVATE BENEATH THE PROPOSED CULVERT SITE AND PLACE FOUNDATION CONDITIONING MATERIAL ACCORDING TO THE GEOTECHNICAL RECOMMENDATIONS.

9. CONSTRUCT PROPOSED CORRUGATED ALUMINUM ALLOY BOX CULVERT ACCORDING TO THE PROJECT PLANS AND DETAILS.
10. CONSTRUCT CHANNEL IMPROVEMENTS AS SHOWN ON THE PLANS.
11. REMOVE IMPERVIOUS DIKES, AND MAKE ANY NECESSARY REPAIRS TO THE STREAM CHANNEL AND TRANSITION AREAS.
12. PLACE FILL OVER THE STRUCTURE ACCORDING TO THE PROJECT PLANS AND DETAILS.
13. CONSTRUCT THE ROADWAY AND INSTALL FINAL EROSION CONTROL ITEMS AS SHOWN ON THE PLANS.
14. STABILIZE THE ENTIRE ROADWAY PROJECT SITE WITHIN THE PERIMETER EROSION CONTROL ELEMENTS.
15. REMOVE ALL FINAL PHASE EROSION CONTROL ITEMS WITHIN THE PERIMETER EROSION CONTROL ELEMENTS.
16. MAKE REPAIRS AS NECESSARY AND STABILIZE THE PROJECT SITE.
17. REMOVE PERIMETER EROSION CONTROL ELEMENTS.
18. RETURN TRAFFIC TO THE COMPLETED PROJECT AREA, PENDING FINAL INSPECTION AND APPROVAL.

SEPI
ENGINEERING & CONSTRUCTION

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Raleigh, NC 27605
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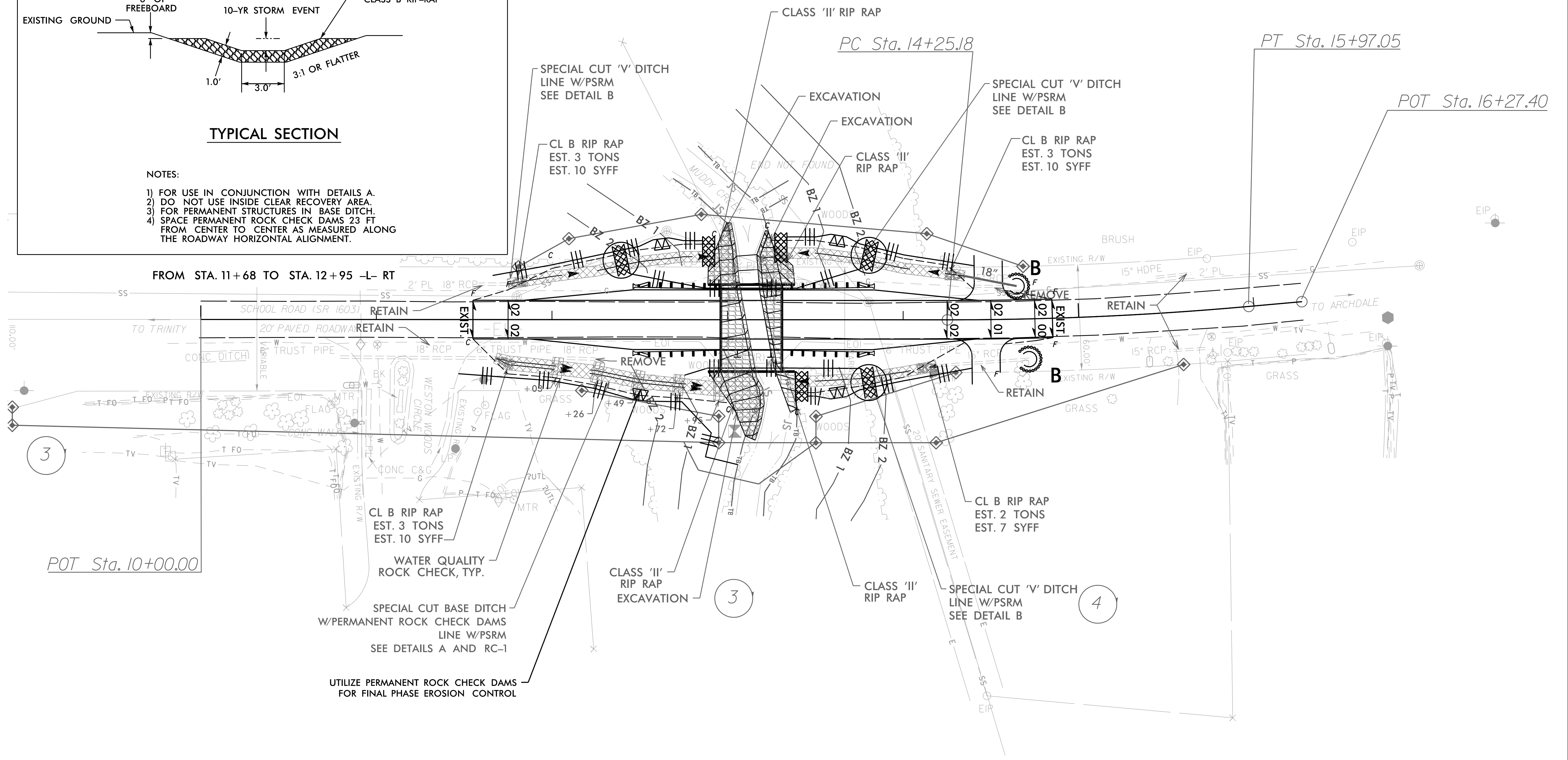
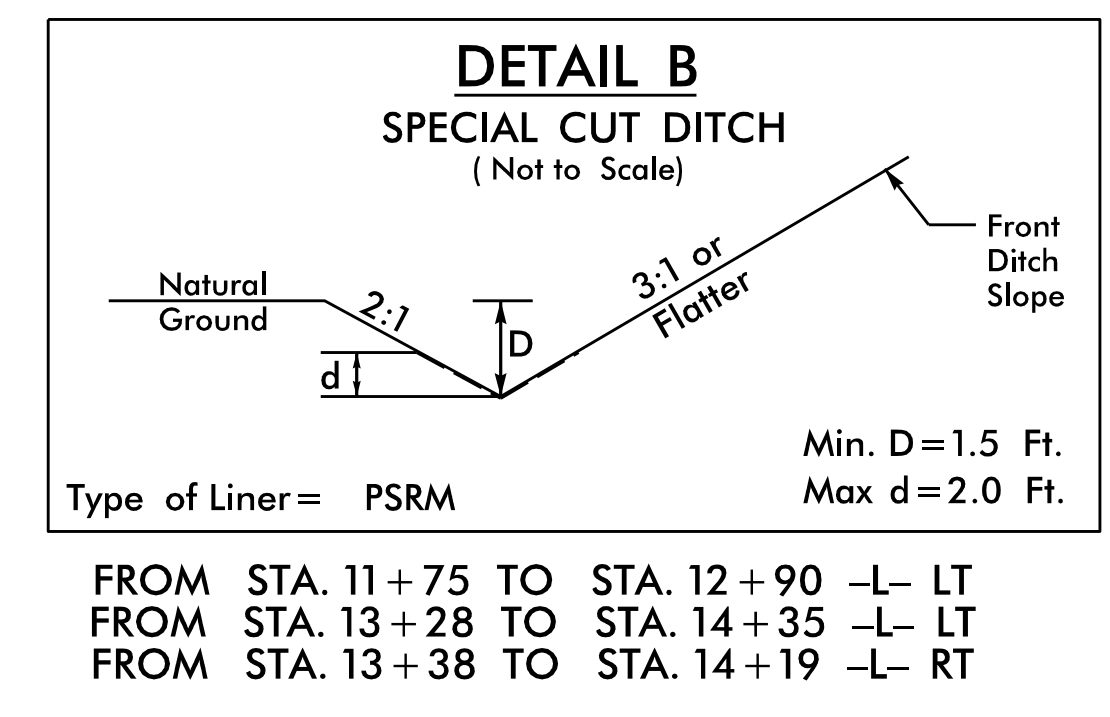
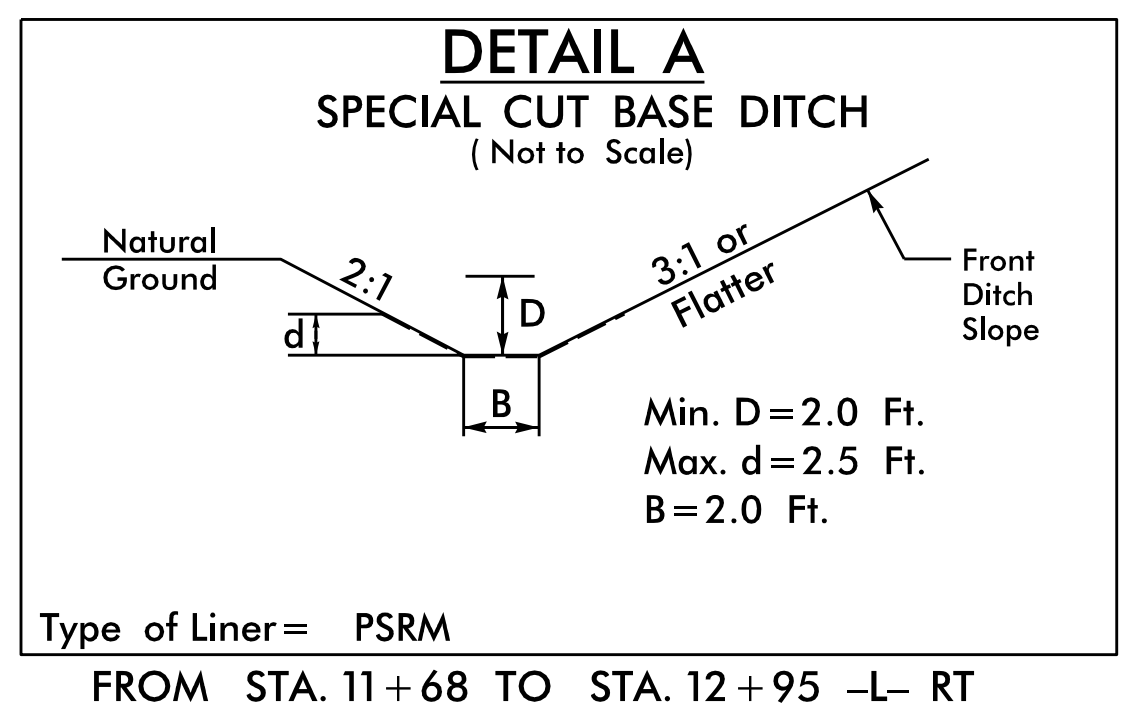
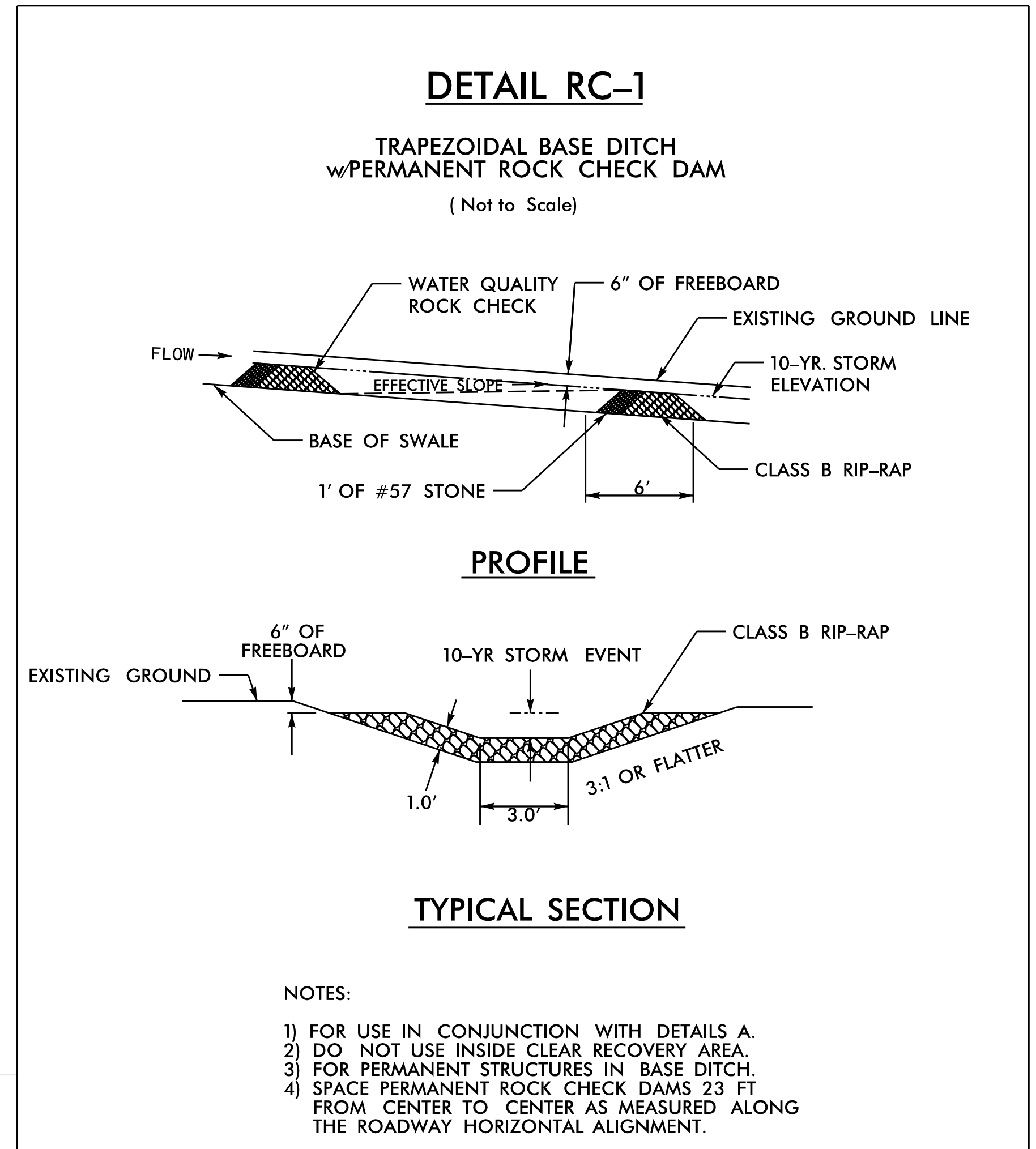
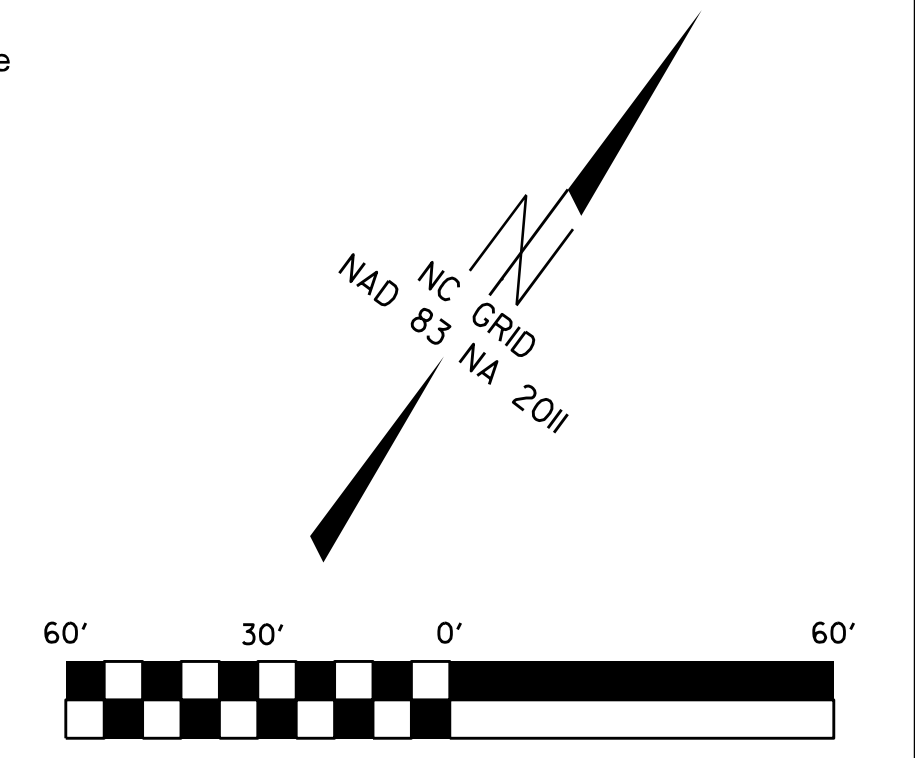
PROJECT REFERENCE NO. 17BP.8.R.79
SHEET NO. EC-4/CONST.4



 ENVIRONMENTALLY SENSITIVE AREA
SEE PROJECT SPECIAL PROVISIONS

CLEARING AND GRUBBING EROSION CONTROL FOR CONSTRUCTION SHEET 4

NOTE: PLACE TEMPORARY ROCK SEDIMENT DAMS TYPE - B AND TEMPORARY ROCK SILT CHECKS TYPE - A AT DRAINAGE OUTLETS.



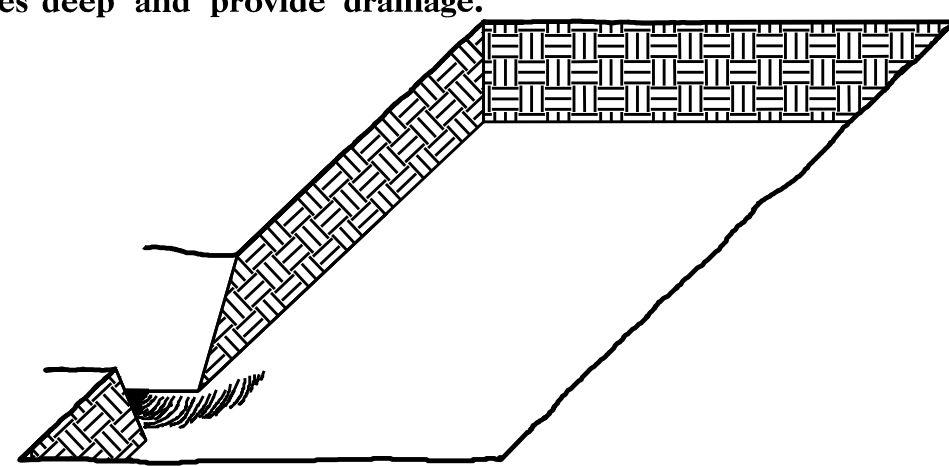
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.8.R.79	RF-1	1
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
17BP.8.R.79		PE	

PLANTING DETAILS

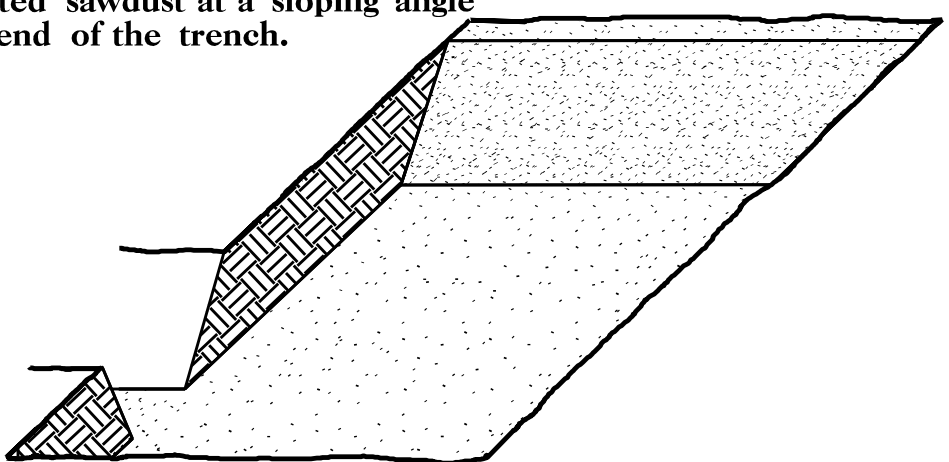
SEEDLING / LINER BAREROOT PLANTING DETAIL

HEALING IN

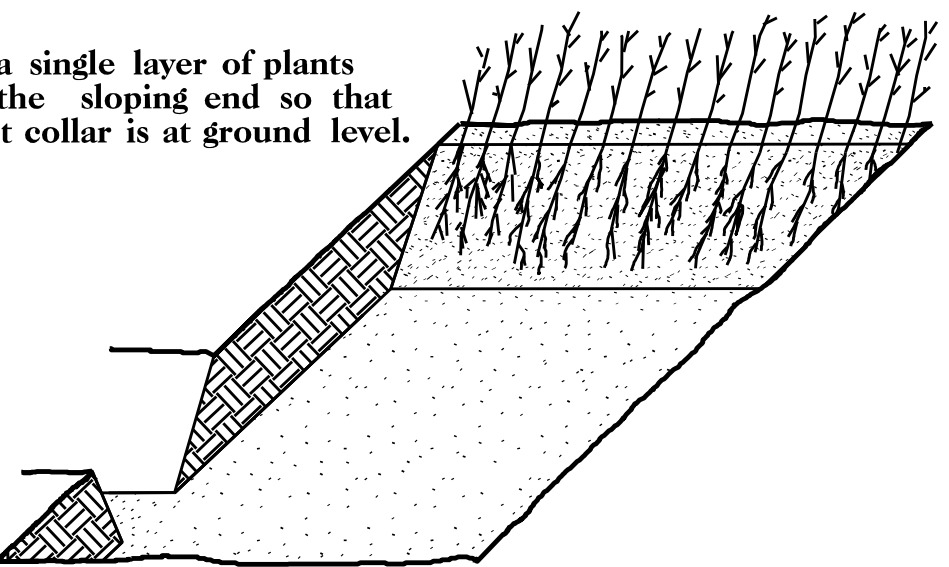
1. Locate a healing-in site in a shady, well protected area.
2. Excavate a flat bottom trench 12 inches deep and provide drainage.



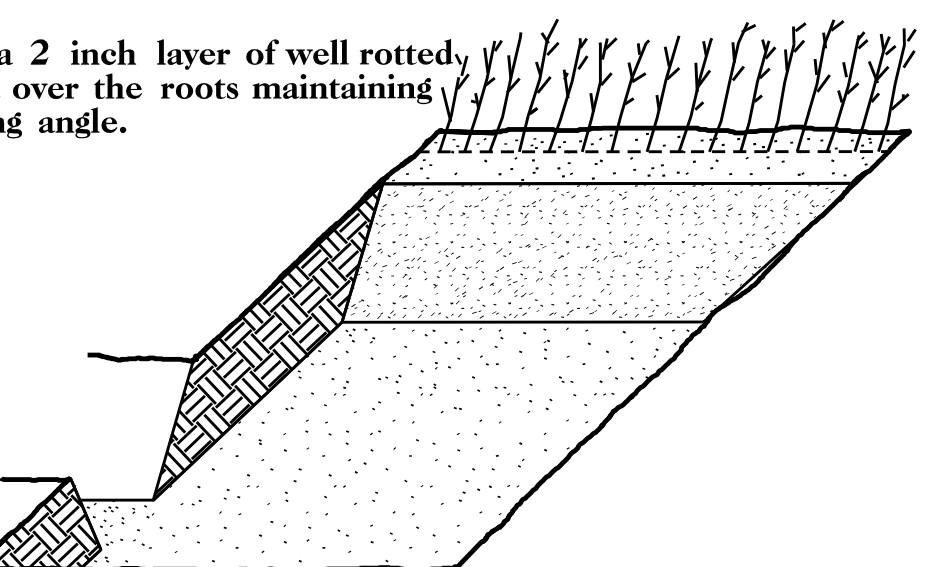
3. Backfill the trench with 2 inches well rotted sawdust. Place a 2 inch layer of well rotted sawdust at a sloping angle at one end of the trench.



4. Place a single layer of plants against the sloping end so that the root collar is at ground level.

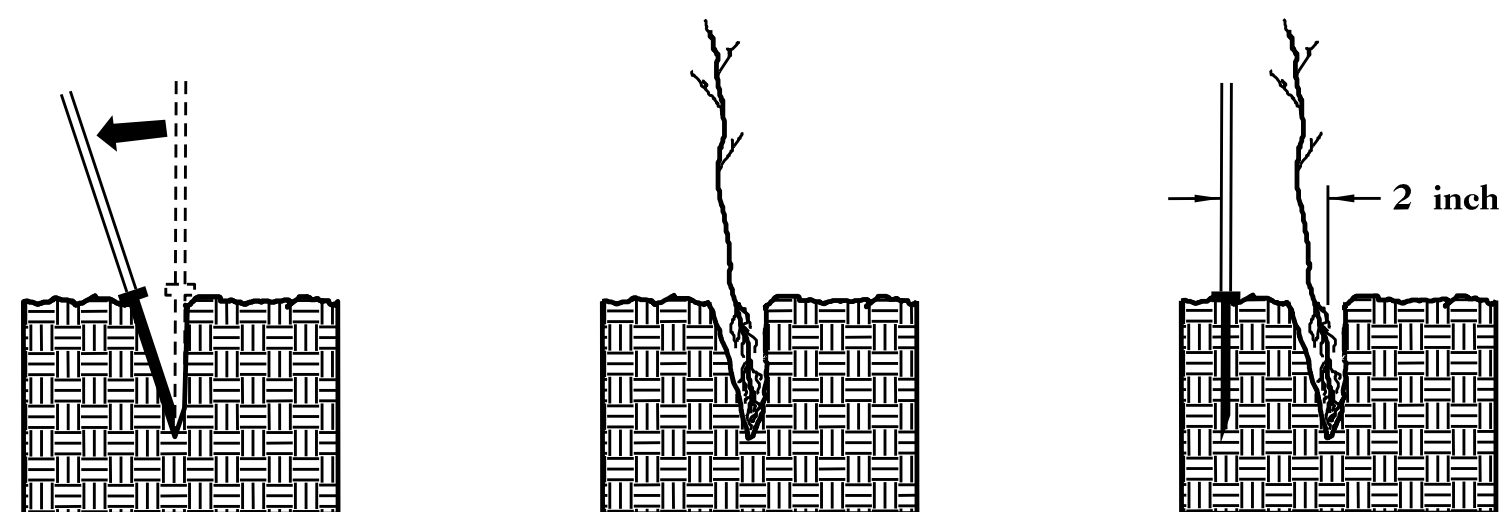


5. Place a 2 inch layer of well rotted sawdust over the roots maintaining a sloping angle.



6. Repeat layers of plants and sawdust as necessary and water thoroughly.

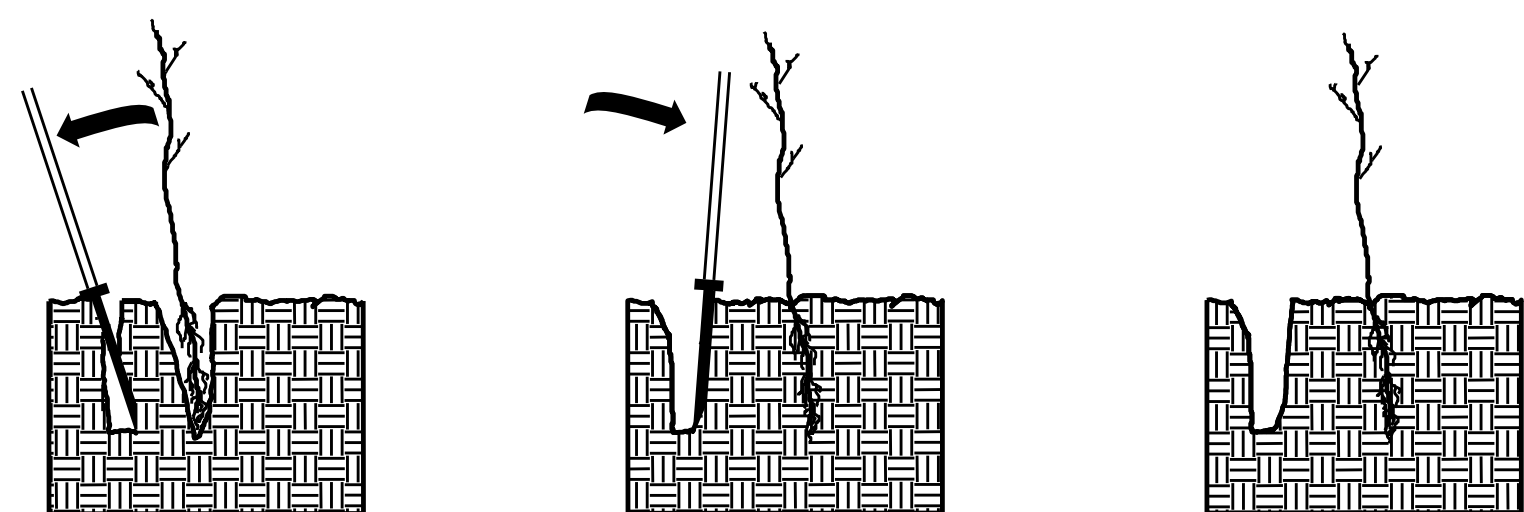
DIBBLE PLANTING METHOD USING THE KBC PLANTING BAR



1. Insert planting bar as shown and pull handle toward planter.

2. Remove planting bar and place seedling at correct depth.

3. Insert planting bar 2 inches toward planter from seedling.



4. Pull handle of bar toward planter, firming soil at bottom.

5. Push handle forward firming soil at top.

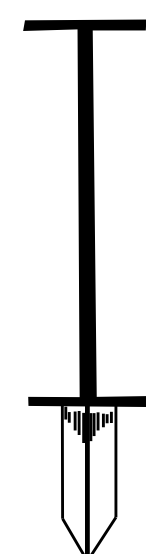
6. Leave compaction hole open. Water thoroughly.

PLANTING NOTES:

PLANTING BAG
During planting, seedlings shall be kept in a moist canvas bag or similar container to prevent the root systems from drying.



KBC PLANTING BAR
Planting bar shall have a blade with a triangular cross section, and shall be 12 inches long, 4 inches wide and 1 inch thick at center.



ROOT PRUNING
All seedlings shall be root pruned, if necessary, so that no roots extend more than 10 inches below the root collar.

REFORESTATION

- TREE REFORESTATION SHALL BE PLANTED 6 FT. TO 10 FT. ON CENTER, RANDOM SPACING, AVERAGING 8 FT. ON CENTER, APPROXIMATELY 680 PLANTS PER ACRE.

REFORESTATION

MIXTURE, TYPE, SIZE, AND FURNISH SHALL CONFORM TO THE FOLLOWING:

25%	LIRIODENDRON TULIPIFERA	TULIP POPLAR	12 in - 18 in BR
25%	PLATANUS OCCIDENTALIS	SYCAMORE	12 in - 18 in BR
25%	FRAXINUS PENNSYLVANICA	GREEN ASH	12 in - 18 in BR
25%	BETULA NIGRA	RIVER BIRCH	12 in - 18 in BR

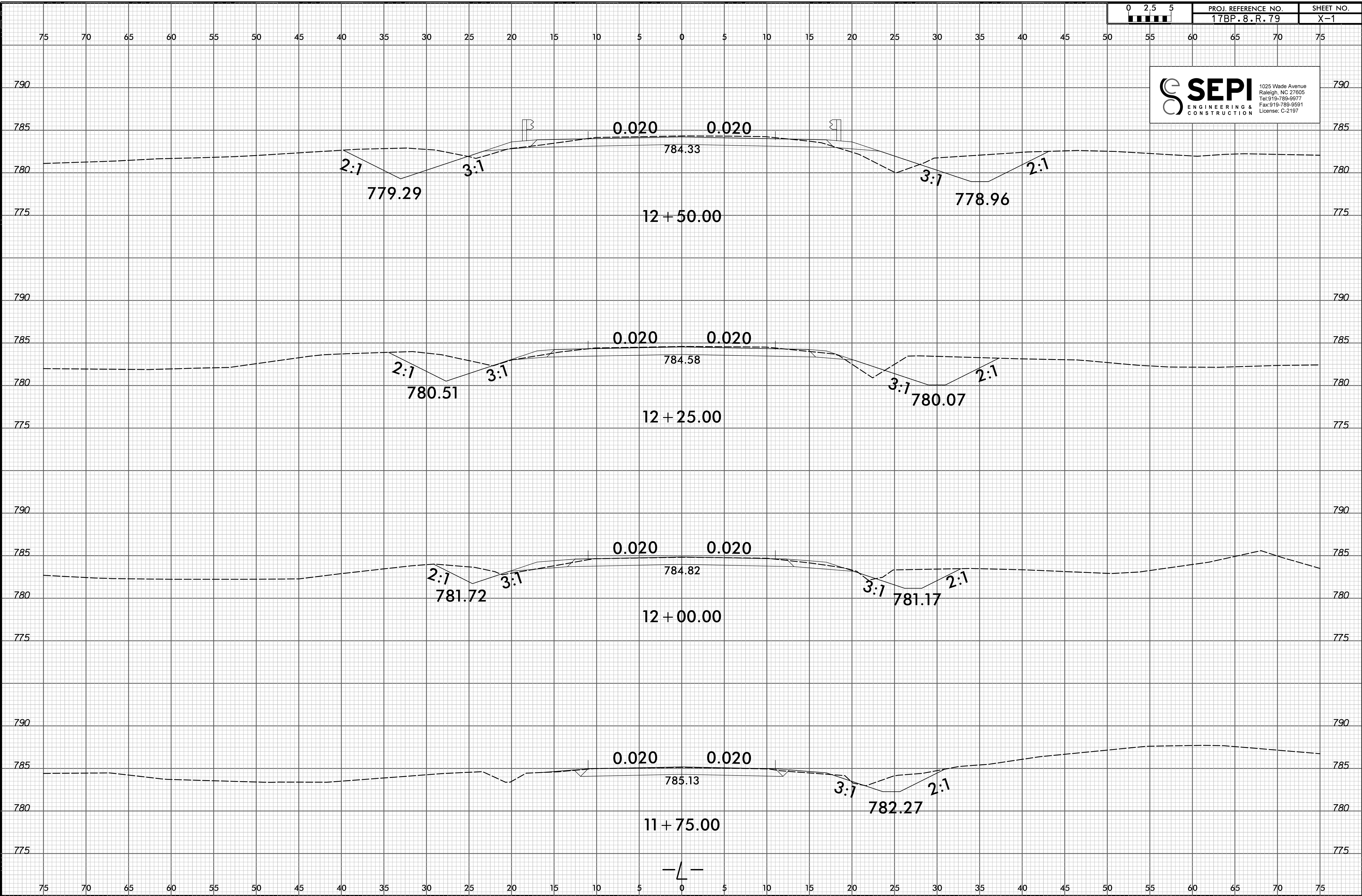
REFORESTATION DETAIL SHEET

N.C.D.O.T. - ROADSIDE ENVIRONMENTAL UNIT

8/23/99



PROJ. REFERENCE NO. 17BP.8.R.79	SHEET NO. X-1
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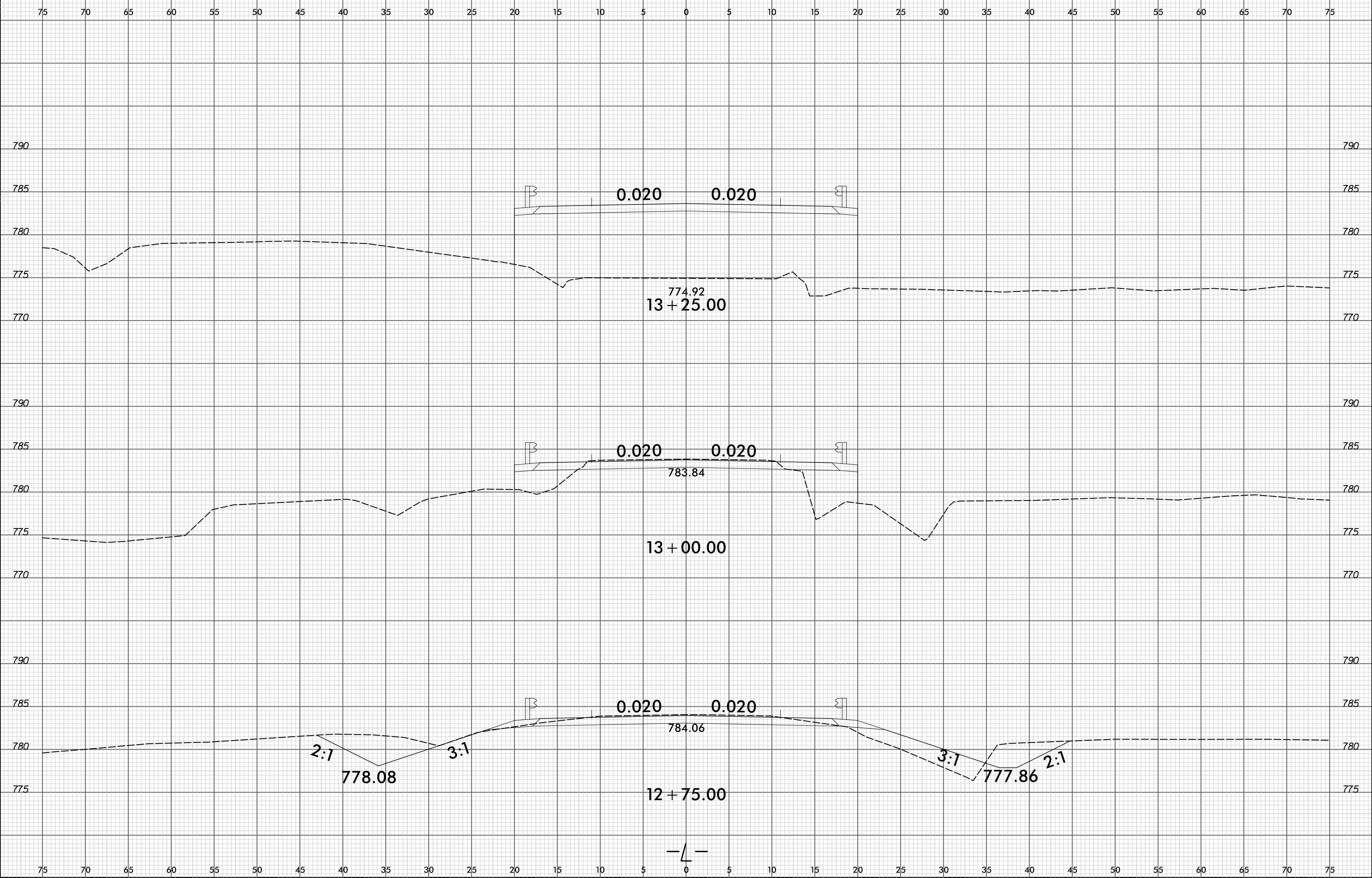


SEPI
ENGINEERING & CONSTRUCTION

1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197

DATE PLOTTED: 8/23/99 10:00 AM

8/23/99

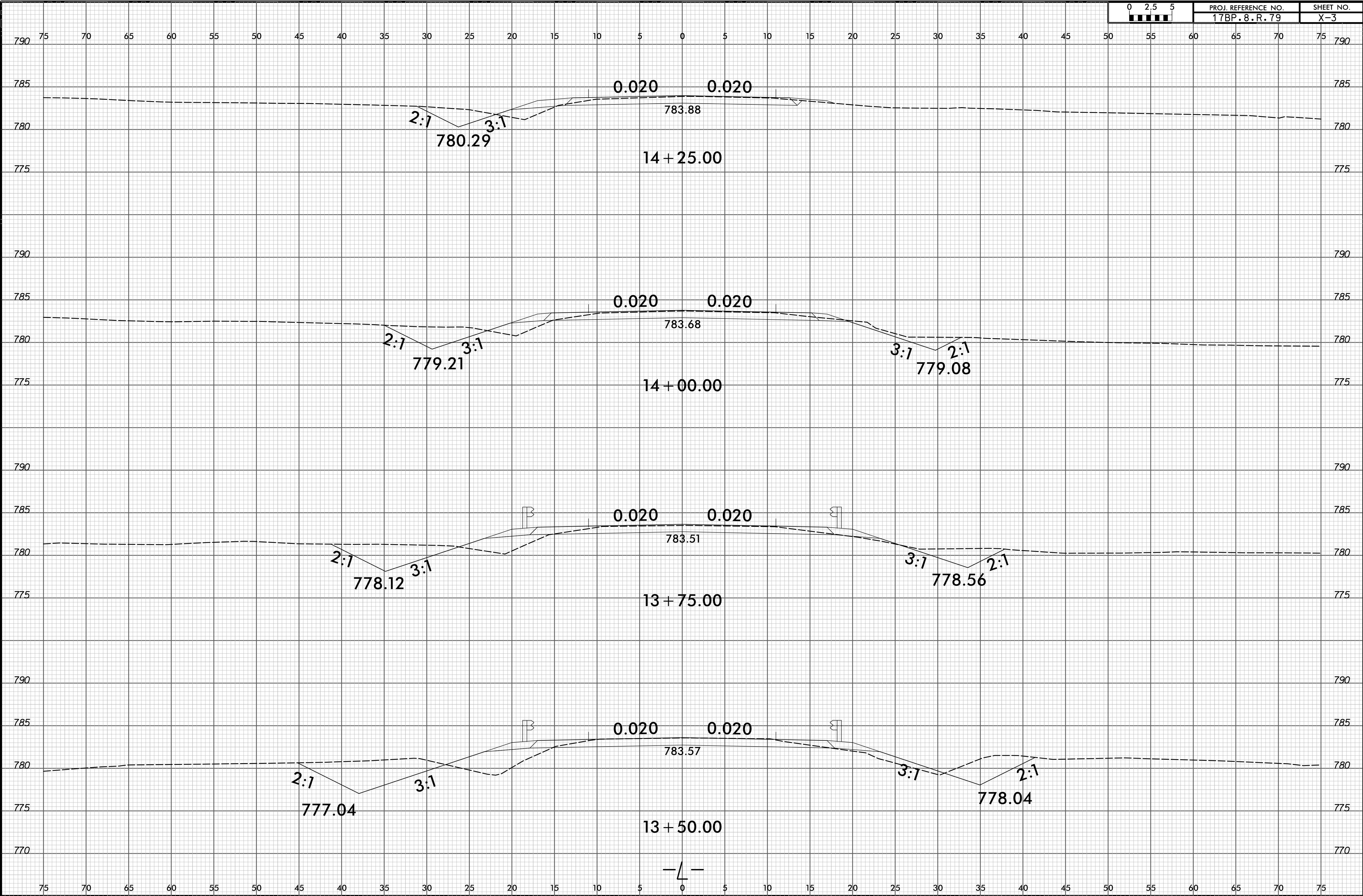


DATE PLOTTED: 8/23/99

8/23/99

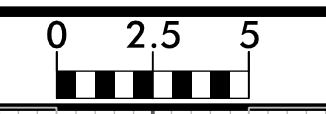


PROJ. REFERENCE NO.	SHEET NO.
17BP.8.R.79	X-3



8/23/99
 17BP.8.R.79
 X-3
 0 2.5 5
 PROJ. REFERENCE NO.
 SHEET NO.
 17BP.8.R.79
 X-3

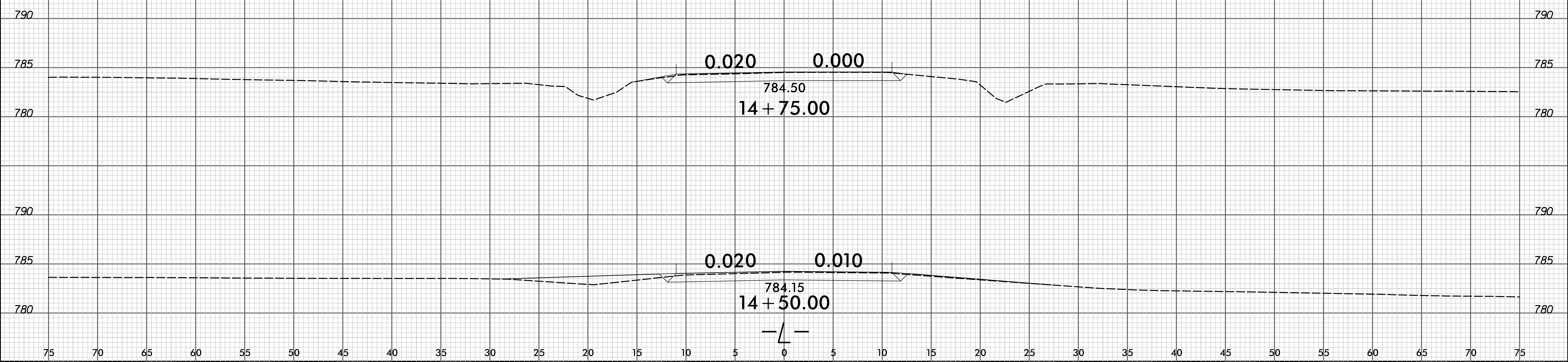
8/23/99



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17BP.8.R.79

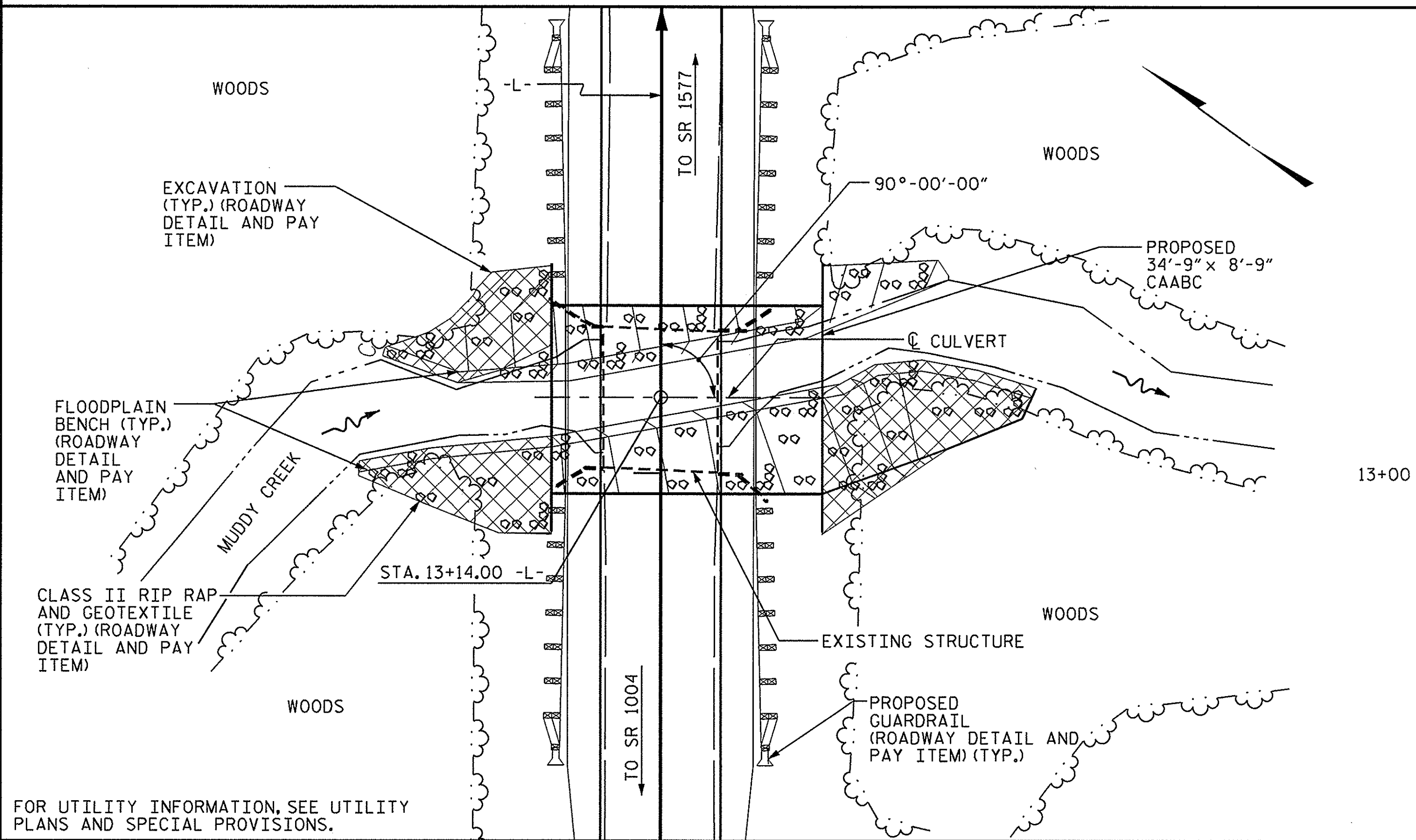
SHEET NO.
X-4

75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75



8/23/99
17BP.8.R.79
X-4

BM#1: RR SPIKE IN BASE OF 12" SYCAMORE TREE, 63.47' RIGHT OF STA. 13+04.14 -L-, EL. 779.92



LOCATION SKETCH

ROADWAY DATA

GRADE PT. EL. @ STA. 13+14.00 -L-	=783.68
BED EL. @ STA. 13+14.00 -L-	=772.51
ROADWAY SLOPES	=VARIES

HYDRAULIC DATA

DESIGN DISCHARGE	=1,200 C.F.S.
FREQUENCY OF DESIGN FLOOD	=10 YR.
DESIGN HIGH WATER ELEVATION	=782.20
DRAINAGE AREA	=2.34 SQ. MI.
BASE DISCHARGE (0100)	=2,160 C.F.S.
BASE HIGH WATER ELEVATION	=784.59

OVERTOPPING FLOOD DATA

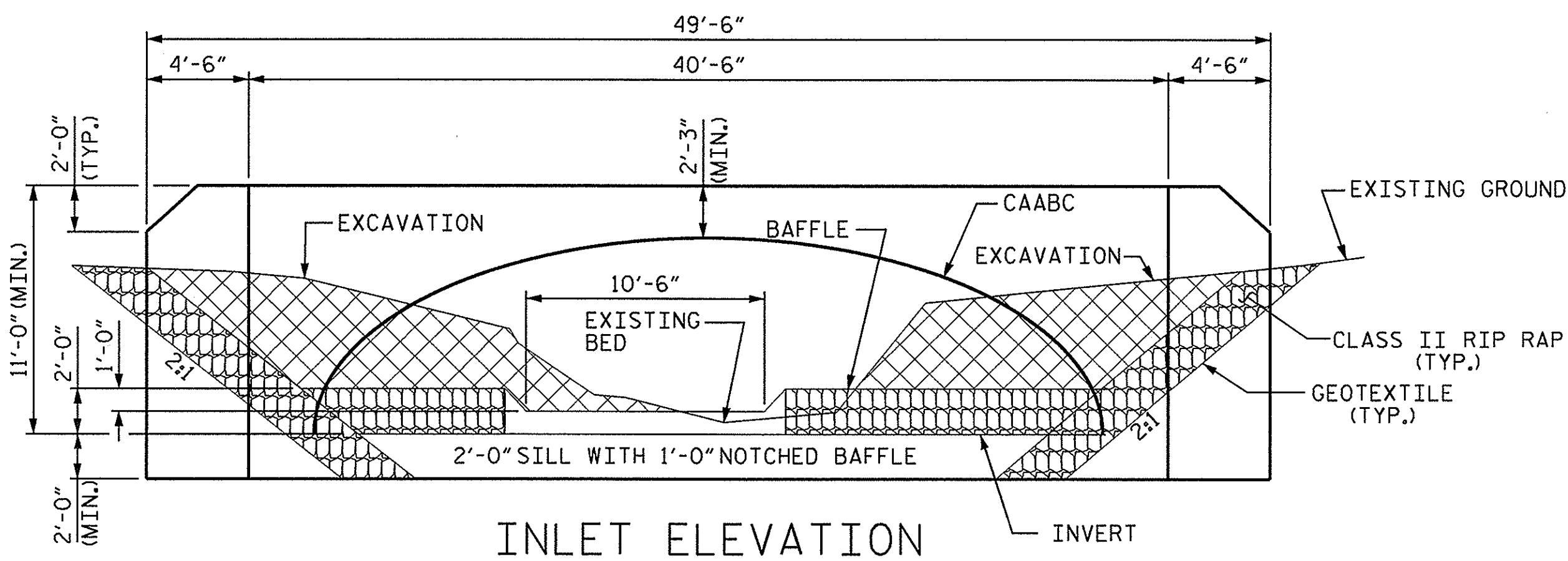
OVERTOPPING DISCHARGE	>1,200; <1,500 C.F.S.
FREQUENCY OF OVERTOPPING FLOOD	=25- YR.
OVERTOPPING HIGH WATER ELEVATION	=783.60

TOTAL STRUCTURE QUANTITIES

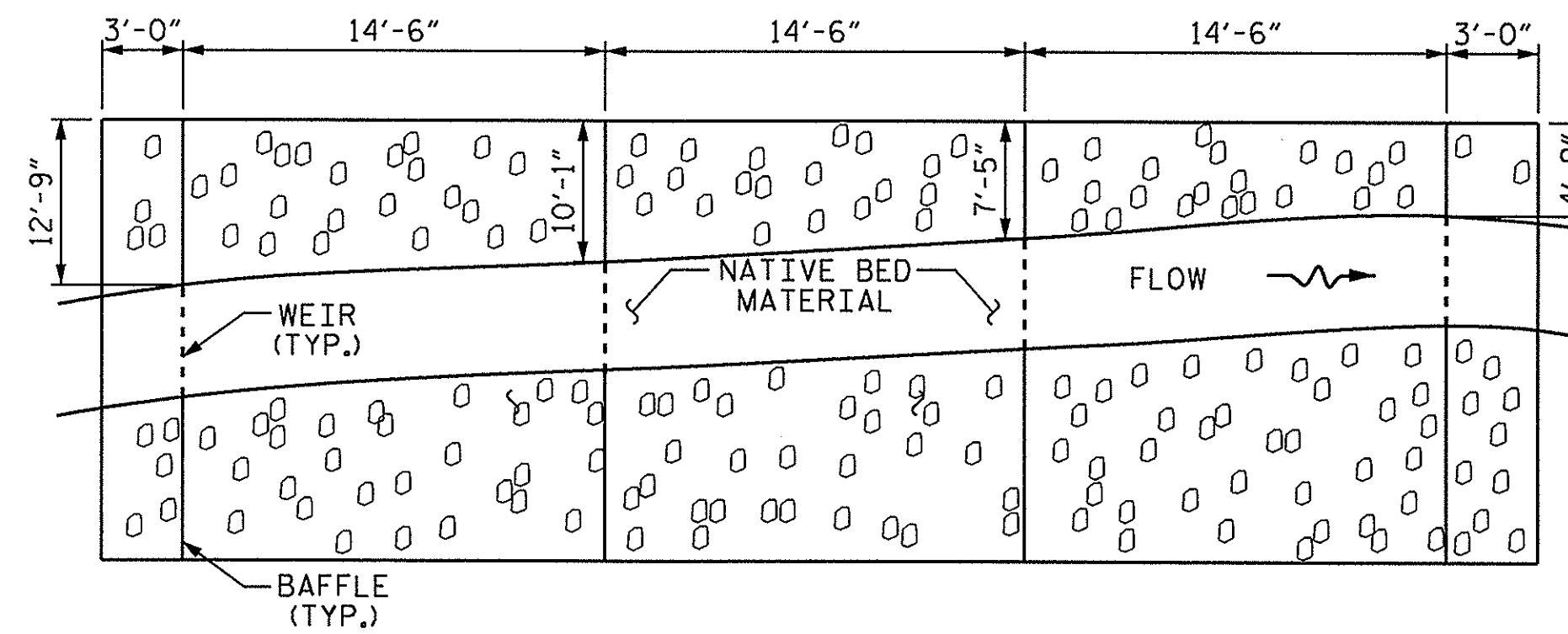
REMOVAL OF EXISTING STRUCTURE	LUMP SUM
ALUMINUM BOX CULVERT	LUMP SUM
CULVERT EXCAVATION	LUMP SUM
FOUNDATION CONDITIONING MATERIAL	140 TONS
PLACEMENT OF NATURAL STREAM BED MATERIAL	LUMP SUM

NOTES

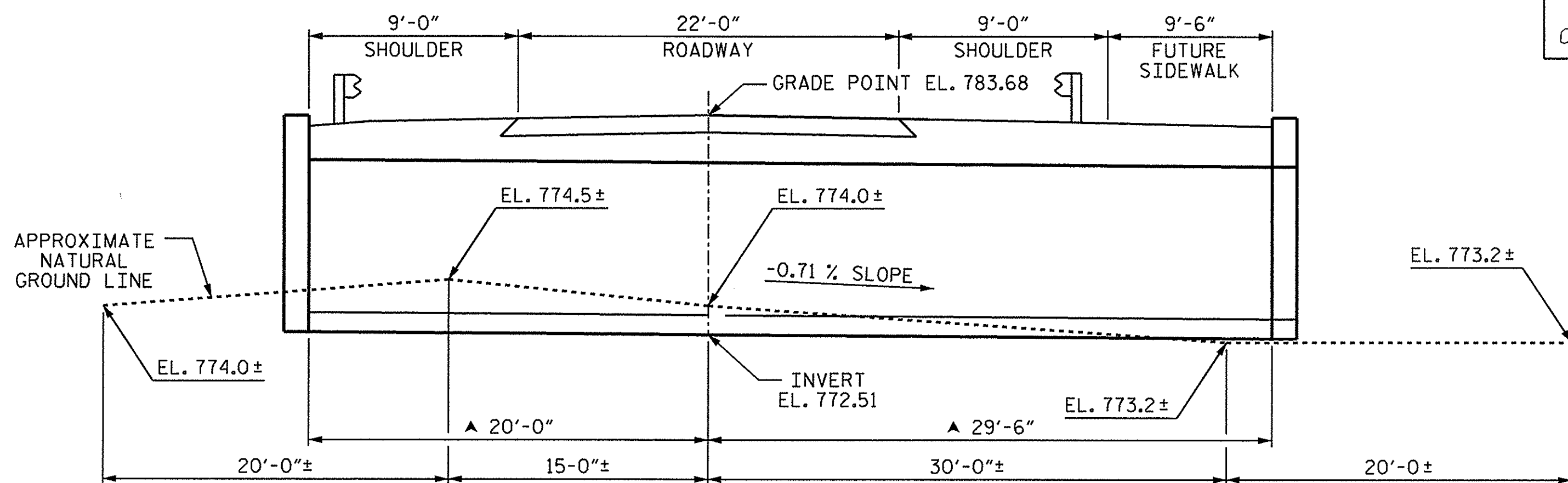
- ASSUMED LIVE LOAD ----- HL-93 OR ALTERNATE LOADING.
- CULVERT IS TO BE DESIGNED FOR A MINIMUM FILL DEPTH OF 2.0' AND A MAXIMUM FILL DEPTH OF 2.4'.
- THE RESIDENT ENGINEER SHALL CHECK THE LENGTH OF CULVERT BEFORE STAKING IT OUT TO MAKE CERTAIN THAT IT WILL PROPERLY TAKE CARE OF THE FILL.
- ALL MATERIALS SHALL MEET THE REQUIREMENTS OF THE NCDOT STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES DATED JANUARY 2012.
- ▲ THE DETAILS SHOWN ARE FOR GENERAL LAYOUT ONLY. UNLESS OTHERWISE INDICATED, THE MANUFACTURER SHALL DESIGN, DETAIL, AND FURNISH ALL STRUCTURAL ELEMENTS AND HARDWARE. FOR ALUMINUM BOX CULVERT AND FOUNDATIONS, SEE SPECIAL PROVISIONS FOR ALUMINUM BOX CULVERT.
- NATIVE BED MATERIAL SHALL BE USED TO BACKFILL CULVERT BETWEEN SILLS AND BAFFLES. SEE SPECIAL PROVISIONS FOR PLACEMENT OF NATURAL STREAM BED MATERIAL.
- THE BOTTOM OF THE CULVERT WILL BE AT OR NEAR THE ROCK LINE. UP TO 1 FOOT OF ROCK EXCAVATION WILL BE REQUIRED BENEATH THE PROPOSED CULVERT. USE A 12 INCH BLANKET OF FOUNDATION CONDITIONING MATERIAL BELOW THE PROPOSED CULVERT. SEE SECTION 414 OF THE STANDARD SPECIFICATIONS.
- BACKFILL CULVERT IN ACCORDANCE WITH SECTION 414 OF THE STANDARD SPECIFICATIONS OR AS RECOMMENDED BY CULVERT MANUFACTURER.
- FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.
- FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.
- FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.
- FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.
- GUARDRAIL POST LOCATIONS SHALL BE DETERMINED IN THE FIELD BY THE ENGINEER TO ENSURE ADEQUATE COVER FOR INSTALLATION.
- REMOVAL OF THE EXISTING BRIDGE SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL INTO THE WATER. THE CONTRACTOR SHALL REMOVE THE BRIDGE AND SUBMIT PLANS FOR DEMOLITION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS.
- THE SUBSTRUCTURE OF THE EXISTING BRIDGE INDICATED ON THE PLANS IS FROM THE BEST INFORMATION AVAILABLE. SINCE THIS INFORMATION IS SHOWN FOR THE CONVENIENCE OF THE CONTRACTOR, THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT OF TRANSPORTATION FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN THE EXISTING BRIDGE SUBSTRUCTURE SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.
- THE EXISTING STRUCTURE CONSISTING OF 2 SPANS @ 13'-5" WITH A 3" ASPHALT WEARING SURFACE, TIMBER DECK ON TIMBER JOISTS AND A CLEAR ROADWAY OF 21'-1" ON MASS CONCRETE AND TIMBER BULKHEADS AND TIMBER CAP AND PILES EACH WITH A PILE ENCASED IN CONCRETE, AND LOCATED AT THE PROPOSED SITE SHALL BE REMOVED.
- FOR EROSION CONTROL MEASURES, SEE EROSION CONTROL PLANS.



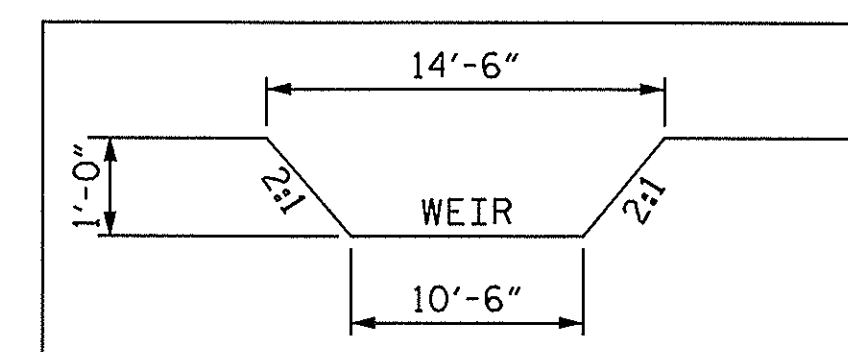
INLET ELEVATION



BAFFLE PLACEMENT DETAIL



CULVERT SECTION NORMAL TO -L-



BAFFLE OPENING DIMENSIONS

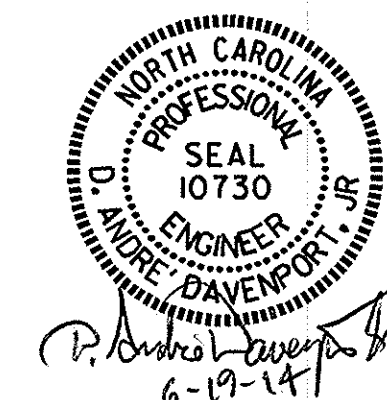
I HEREBY CERTIFY THESE PLANS ARE THE AS-BUILT PLANS.

PROJECT NO. 17BP.8.R.79
 RANDOLPH COUNTY
 STATION: 13+14.00 -L-
 REPLACES BRIDGE NO. 84

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SINGLE 34'-9" X 8'-9" ALUMINUM BOX CULVERT
 90° SKEW

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	C-1
1			3			TOTAL SHEETS
2			4			1



ASSEMBLED BY: D.A. DAVENPORT DATE: 04/24/14
 CHECKED BY: L.E. SUTTON DATE: 5/12/14

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF		
STRUCTURAL STEEL - AASHTO M270 GRADE 36	- -	20,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50W	- -	27,000 LBS. PER SQ. IN.
- AASHTO M270 GRADE 50	- -	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION		
GRADE 60	- -	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR		
UNTREATED - EXTREME FIBER STRESS	-----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2012 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N. C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED 3/4" WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO 1-1/2" RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A 1/4" FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A 1/4" RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.
ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.
IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.
DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.
WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE 7/8" Ø SHEAR STUDS FOR THE 3/4" Ø STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF 7/8" Ø STUDS ALONG THE BEAM AS SHOWN FOR 3/4" Ø STUDS BASED ON THE RATIO OF 3 - 7/8" Ø STUDS FOR 4 - 3/4" Ø STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".
EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST 5/16" IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.
WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY 1/16 INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.
METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINISHES AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

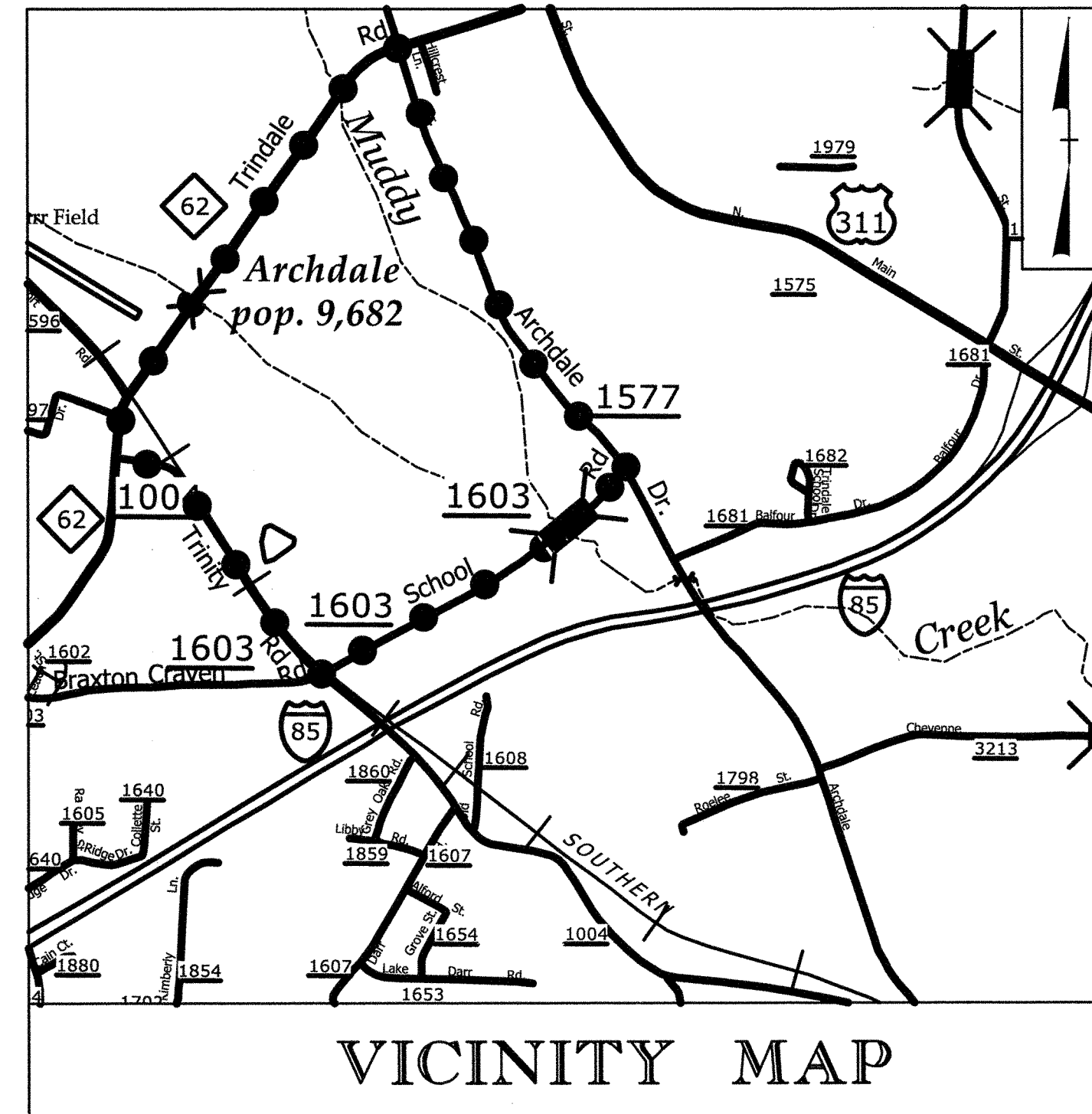
RANDOLPH COUNTY

LOCATION: BRIDGE NO. 750084 ON SR 1603 (SCHOOL ROAD)
OVER MUDDY CREEK

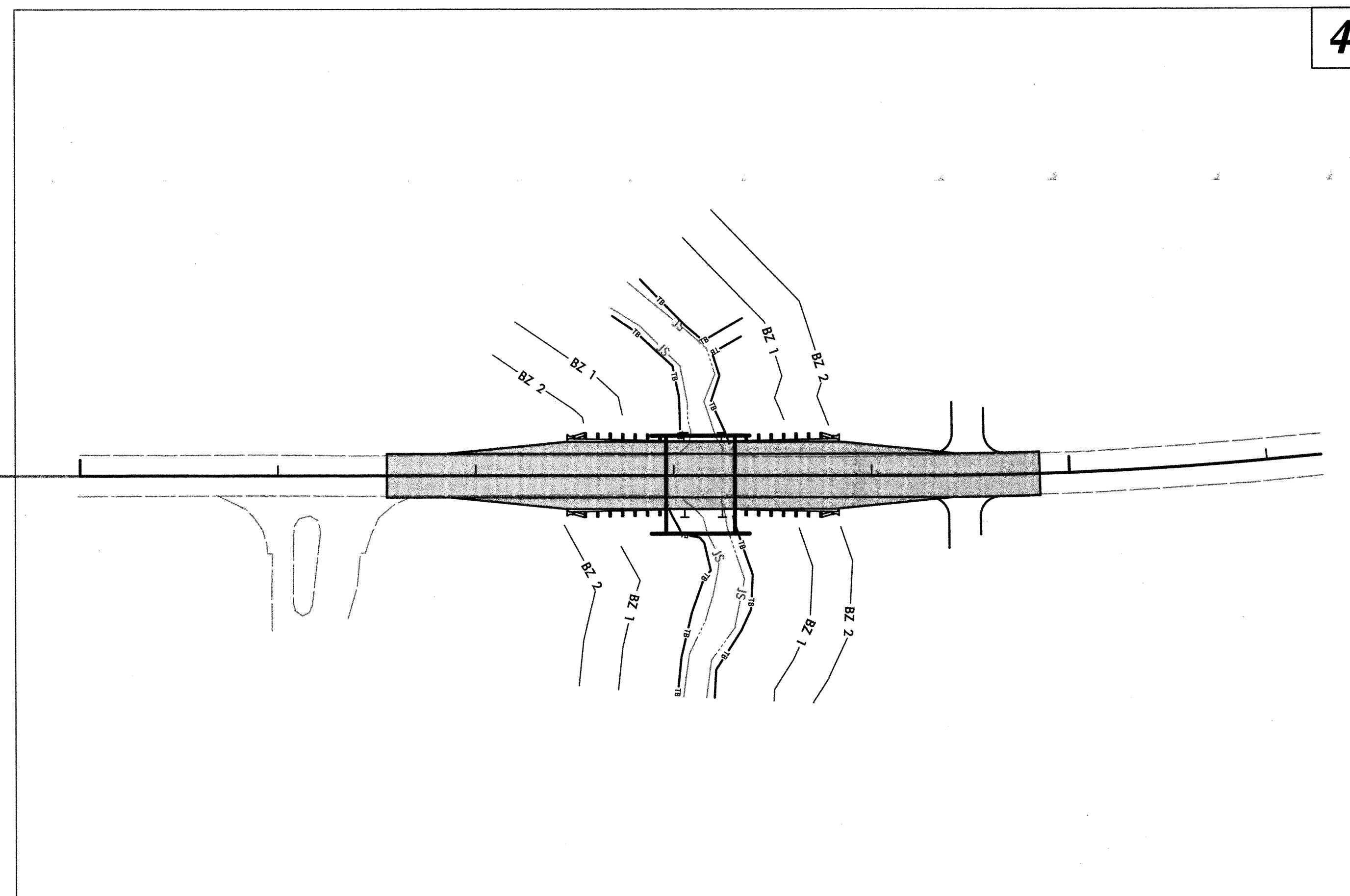
TYPE OF WORK: WATER LINE RELOCATION

T.I.P. NO.	SHEET NO.
17BP.8.R.79	UC-1

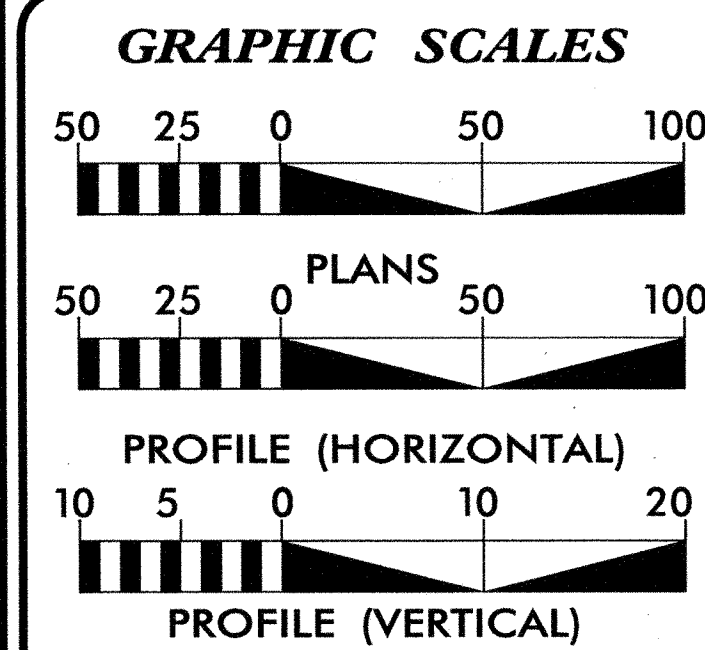
SEPI
ENGINEERING & CONSTRUCTION
1025 Wade Avenue
Raleigh, NC 27605
Tel: 919-789-9977
Fax: 919-789-9591
License: C-2197



VICINITY MAP
OFF-SITE DETOUR ROUTE



TIP PROJECT: 17BP.8.R.79



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	UTILITY CONSTRUCTION PLAN SHEETS

UTILITY OWNERS ON PROJECT

1) WATER - CITY OF ARCHDALE

SEAL

7-16-14

PREPARED IN THE OFFICE OF:
**DIVISION OF HIGHWAYS
UTILITIES ENGINEERING
SECTION**

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 707-6690
FAX (919) 250-4151

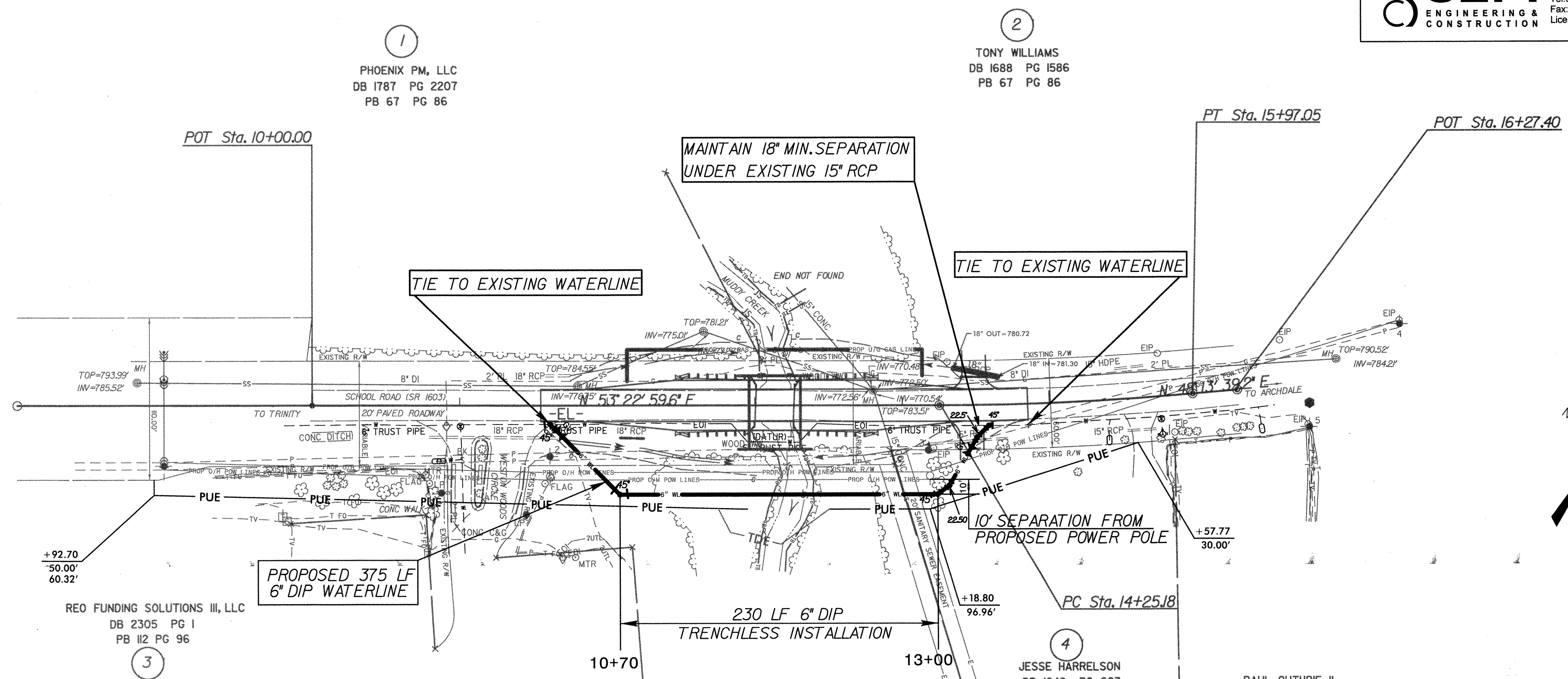
Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Gregory R. Thompson, PE UTILITIES PROJECT DESIGNER

\$\$\$\$\$SYTIME\$\$\$\$\$
\$\$\$\$\$DGN\$\$\$\$\$
\$\$\$\$\$USERNAME\$\$\$\$\$

8/17/95

SEPI ENGINEERING & CONSTRUCTION
 1025 Wade Avenue
 Raleigh, NC 27805
 Tel: 919-789-9977
 Fax: 919-789-9591
 License: C-2197

PROJECT REFERENCE NO. 17BP.8.R.79	SHEET NO. UC-2
R/W SHEET NO.	UTILITY ENGINEER



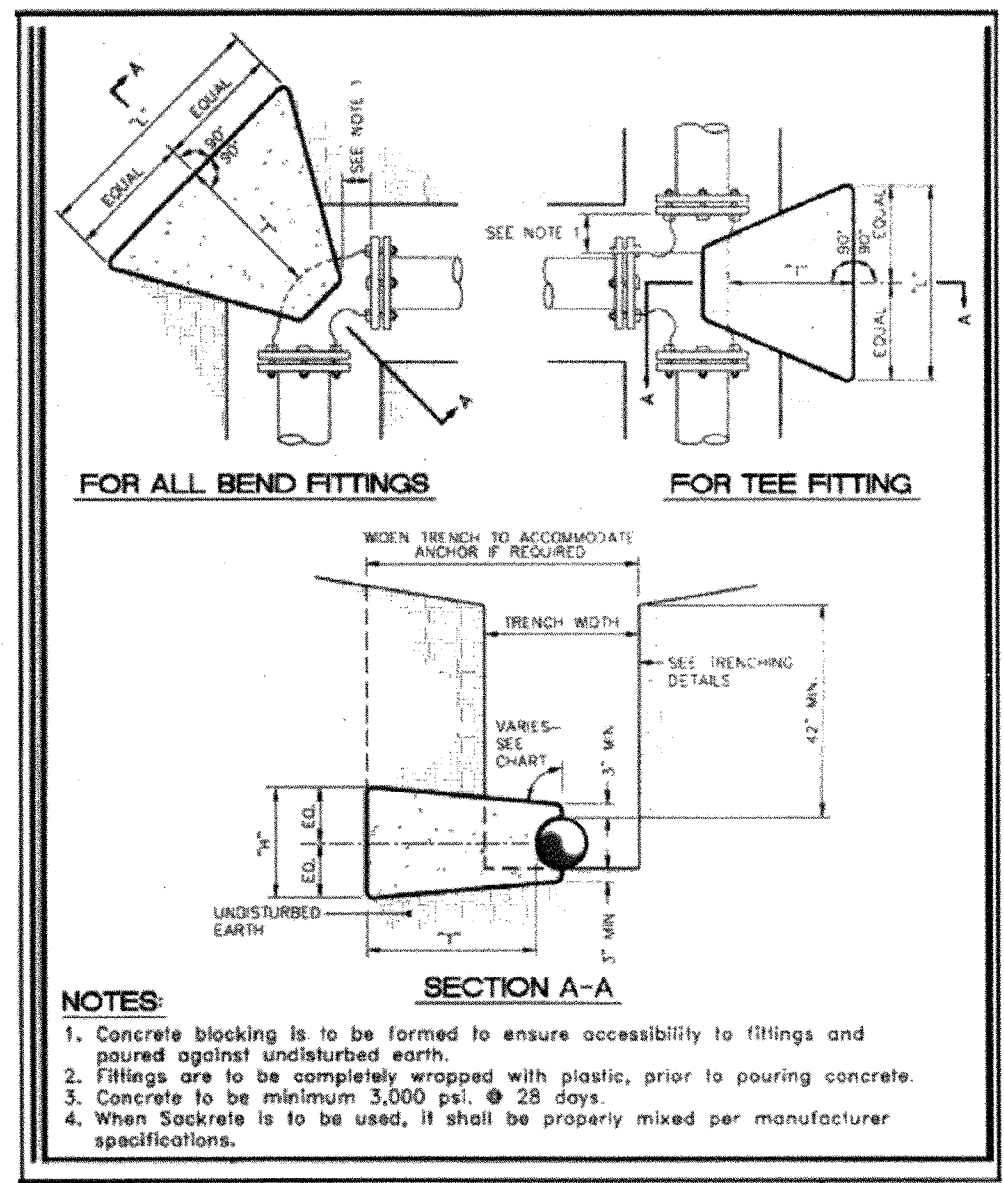
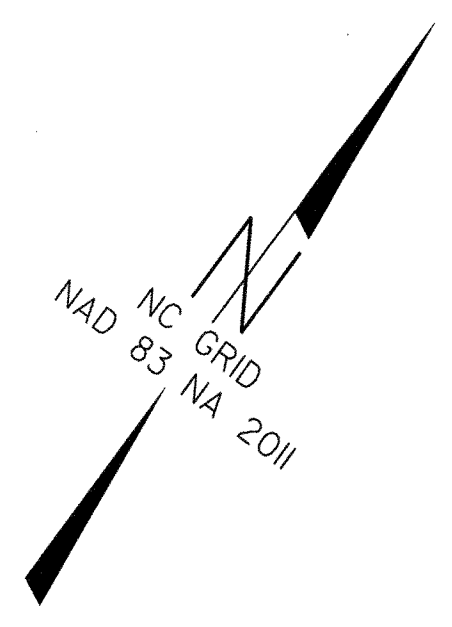
1
 PHOENIX PM, LLC
 DB 1787 PG 2207
 PB 67 PG 86

2
 TONY WILLIAMS
 DB 1688 PG 1586
 PB 67 PG 86

3
 REO FUNDING SOLUTIONS III, LLC
 DB 2305 PG 1
 PB 112 PG 96

4
 JESSE HARRELSON
 DB 1649 PG 603
 PB 50 PG 80

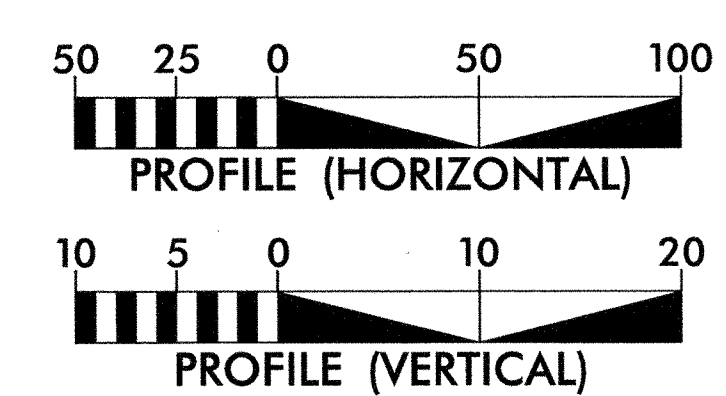
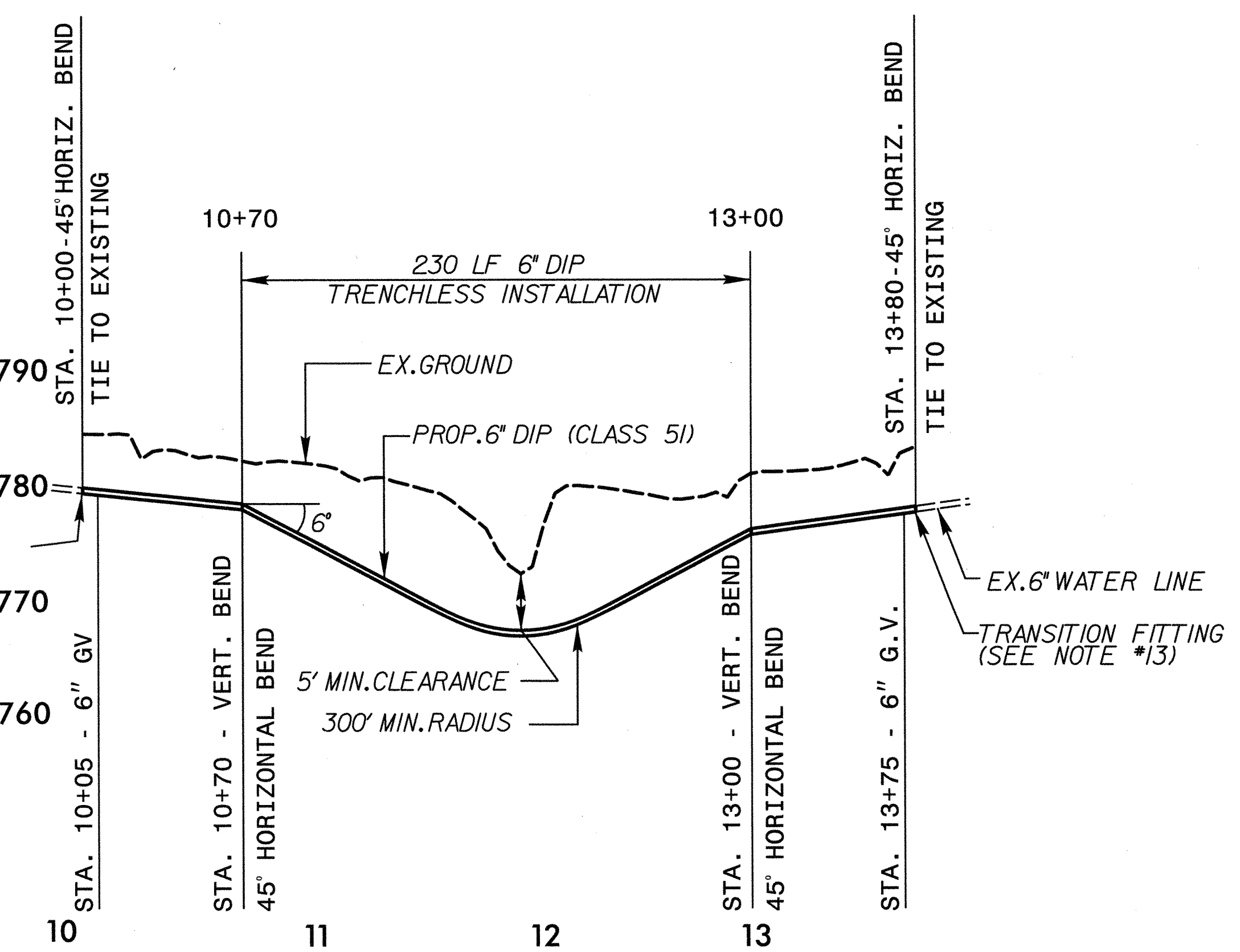
PAUL GUTHRIE, II
 DB 1667 PG 826
 PB 50 PG 80



NOTES:
 1. Concrete blocking is to be formed to ensure accessibility to fittings and poured against undisturbed earth.
 2. Fittings are to be completely wrapped with plastic, prior to pouring concrete.
 3. Concrete to be minimum 3,000 psi @ 28 days.
 4. When Sakrete is to be used, it shall be properly mixed per manufacturer specifications.

TEST PRESSURE - 150 P.S.I.				TEST PRESSURE - 200 P.S.I.			
PIPE SIZE	TYPE FITTING	DIMENSIONS (I.D.)	VOLUME CONCRETE (CU. YD.)	PIPE SIZE	TYPE FITTING	DIMENSIONS (I.D.)	VOLUME CONCRETE (CU. YD.)
11 1/4"	---	---	---	11 1/4"	100	100	0.04
22 1/2"	100	100	0.06	22 1/2"	100	100	0.06
45"	100	100	0.06	45"	100	100	0.06
90"	100	100	0.09	90"	150	150	0.15
180"	100	100	0.07	180"	150	150	0.12
11 1/4"	100	100	0.09	11 1/4"	100	100	0.09
22 1/2"	100	100	0.09	22 1/2"	100	100	0.09
45"	100	100	0.09	45"	150	150	0.15
90"	150	150	0.15	90"	150	150	0.15
180"	150	150	0.12	180"	200	200	0.20
11 1/4"	150	150	0.15	11 1/4"	150	150	0.15
22 1/2"	150	150	0.15	22 1/2"	150	150	0.15
45"	150	150	0.15	45"	200	200	0.20
90"	200	200	0.20	90"	200	200	0.20
180"	200	200	0.20	180"	250	250	0.30
11 1/4"	200	200	0.20	11 1/4"	200	200	0.20
22 1/2"	200	200	0.20	22 1/2"	200	200	0.20
45"	200	200	0.20	45"	250	250	0.25
90"	250	250	0.25	90"	250	250	0.25
180"	250	250	0.25	180"	300	300	0.30
11 1/4"	250	250	0.25	11 1/4"	250	250	0.25
22 1/2"	250	250	0.25	22 1/2"	250	250	0.25
45"	300	300	0.30	45"	300	300	0.30
90"	300	300	0.30	90"	350	350	0.35
180"	300	300	0.30	180"	400	400	0.40
11 1/4"	300	300	0.28	11 1/4"	300	300	0.28
22 1/2"	300	300	0.28	22 1/2"	300	300	0.28
45"	350	350	0.35	45"	350	350	0.35
90"	350	350	0.35	90"	400	400	0.40
180"	350	350	0.35	180"	450	450	0.45
11 1/4"	350	350	0.35	11 1/4"	350	350	0.35
22 1/2"	350	350	0.35	22 1/2"	350	350	0.35
45"	400	400	0.40	45"	400	400	0.40
90"	400	400	0.40	90"	450	450	0.45
180"	400	400	0.40	180"	500	500	0.50
11 1/4"	400	400	0.38	11 1/4"	400	400	0.38
22 1/2"	400	400	0.38	22 1/2"	400	400	0.38
45"	450	450	0.45	45"	450	450	0.45
90"	450	450	0.45	90"	500	500	0.50
180"	450	450	0.45	180"	550	550	0.55
11 1/4"	450	450	0.38	11 1/4"	450	450	0.38
22 1/2"	450	450	0.38	22 1/2"	450	450	0.38
45"	500	500	0.50	45"	500	500	0.50
90"	500	500	0.50	90"	550	550	0.55
180"	500	500	0.50	180"	600	600	0.60
11 1/4"	500	500	0.42	11 1/4"	500	500	0.42
22 1/2"	500	500	0.42	22 1/2"	500	500	0.42
45"	550	550	0.55	45"	550	550	0.55
90"	550	550	0.55	90"	600	600	0.60
180"	550	550	0.55	180"	650	650	0.65
11 1/4"	600	600	0.42	11 1/4"	600	600	0.42
22 1/2"	600	600	0.42	22 1/2"	600	600	0.42
45"	650	650	0.65	45"	650	650	0.65
90"	650	650	0.65	90"	700	700	0.70
180"	650	650	0.65	180"	750	750	0.75
11 1/4"	700	700	0.42	11 1/4"	700	700	0.42
22 1/2"	700	700	0.42	22 1/2"	700	700	0.42
45"	750	750	0.75	45"	750	750	0.75
90"	750	750	0.75	90"	800	800	0.80
180"	750	750	0.75	180"	850	850	0.85

CHART NOTES:
 1. If blocking excavation is in highly compacted fill areas, or in areas where boulders or stumps have been removed, blocking size must be re-sized for the specific location/circumstance by a NC licensed Professional Engineer.
 2. Blocking sizes shown in these tables assume the following:
 a. Blocking is constructed in residual soils as shown in detail.
 b. Soil bearing pressure = 2000 psf
 c. Velocity of flow = 15 fps
 3. This detail not applicable to reducing bends.
 4. Neither the weight of the concrete blocking nor friction between concrete blocking and soil was added into blocking size computation. Therefore, blocking size is conservative.



NOTES:

- CONTRACTOR TO TAKE CARE TO ENSURE INTEGRITY OF EXISTING ASBESTOS CONCRETE PIPE PRIOR TO CONNECTION OF PROPOSED MODIFICATION.
- CAUTION: CONTRACTOR TO TAKE ALL NECESSARY SAFETY PRECAUTIONS WHILE TAPPING EXISTING ASBESTOS CONCRETE PIPE.
- THE CONTRACTOR SHALL COORDINATE ISOLATION OF THE EXISTING WATER MAIN FOR TIE-INS WITH THE CITY OF ARCHDALE. CALL PHILLIP YATES (336) 434-2324.
- FLUSH PROPOSED 6" MAIN AT 2.5 FPS VELOCITY AND PRESSURE TEST PROPOSED 6" WATER MAIN AT MINIMUM 200 PSI FOR 2 HOURS PER NCDOT SPECIFICATIONS.
- AFTER SATISFACTORY BACTERIOLOGICAL SAMPLING AND PRESSURE TEST, RECEIVE FINAL APPROVAL FROM PWSS. MAKE TIE-INS BY ABANDONING EXISTING 6" MAIN AND CONNECTING 6" RESTRAINED JOINT BEND WITH CONCRETE THRUST BLOCK PER DETAIL. CONCRETE SHALL BE POURED A MINIMUM 24 HOURS BEFORE MAKING CONNECTION.
- TRANSITION FITTINGS TO BE RATED AT 350 PSI. CONTRACTOR TO PROVIDE DIP TO ASBESTOS CONCRETE TRANSITION FITTING SPEC. SHEET TO PUBLIC UTILITY FOR APPROVAL PRIOR TO INSTALLATION.
- THE CONTRACTOR SHALL RESTRAIN FITTINGS AND PIPE.
- COVER OVER PIPE AT STREAM CROSSING SHALL BE 5' MIN BELOW STREAM BOTTOM TO TOP OF PIPE.
- AN NCDOT OR CITY OF ARCHDALE REPRESENTATIVE SHALL BE PRESENT FOR ALL TESTS.
- CONTRACTOR SHALL COORDINATE WATER LINE INSTALLATION AND CONNECTION WITH CITY OF ARCHDALE. EXISTING WATER LINE SHALL REMAIN IN SERVICE UNTIL BORE, TESTING AND DISINFECTION OF NEW WATER LINE IS COMPLETE.
- IF TEMPORARY SHUT DOWN IS REQUIRED THE CONTRACTOR WILL COORDINATE THIS SHUT DOWN WITH CITY OF ARCHDALE IN A MANNER THAT IS MOST CONVENIENT FOR CUSTOMERS AND THE CITY.
- HORIZONTAL DIRECTIONAL DRILLING WITH DUCTILE IRON PIPE IN ACCORDANCE WITH ANWA/DIPRA GUIDELINES.
- TRANSITION FITTINGS TO BE RATED AT 350 PSI. CONTRACTOR TO PROVIDE DIP TO ASBESTOS CONCRETE TRANSITION FITTINGS SPEC. SHEET TO PUBLIC UTILITY DEPARTMENT FOR APPROVAL PRIOR TO INSTALLATION.

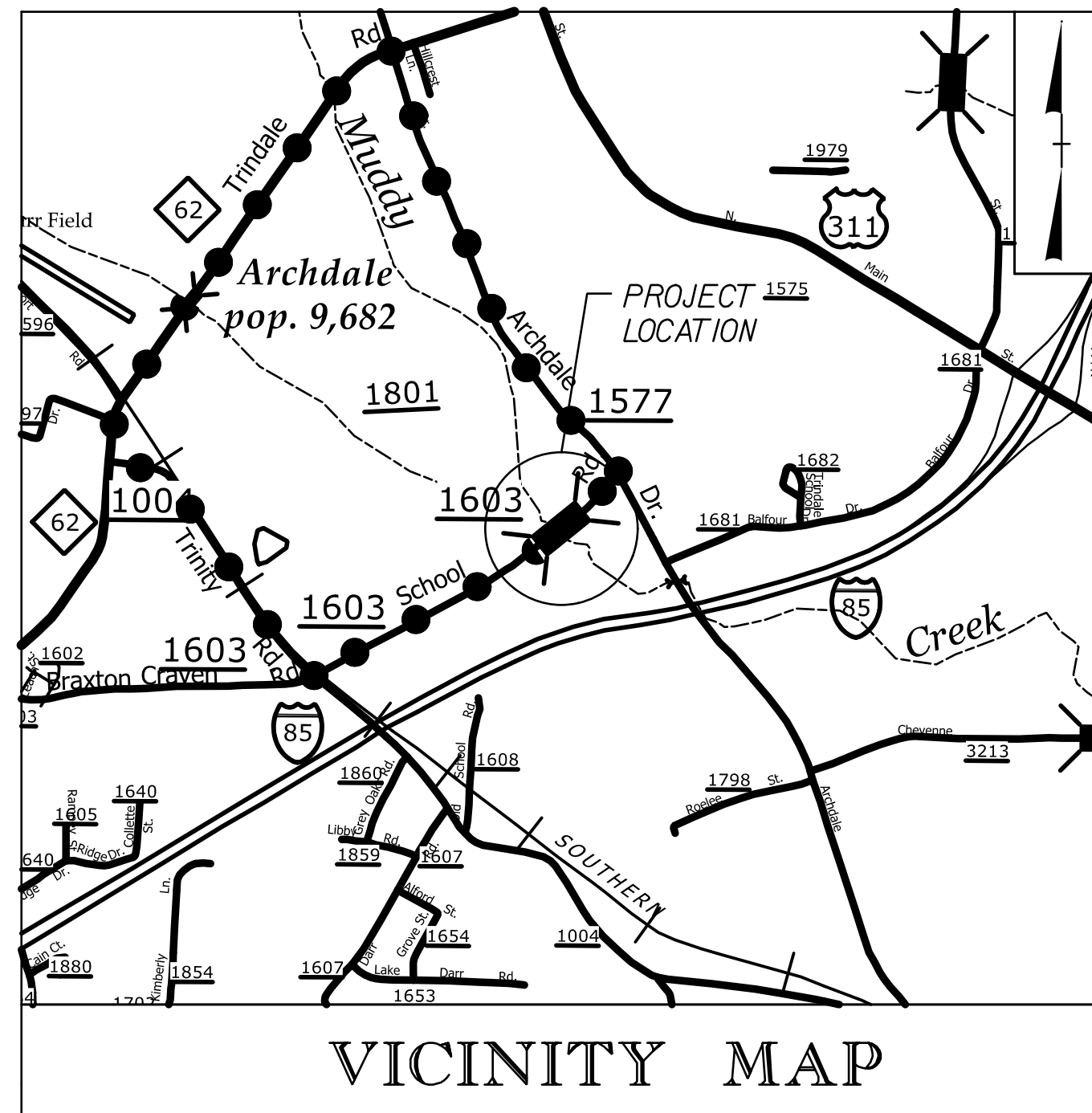
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

T.I.P. NO.	SHEET NO.
17BP.8.R.79	UO-1

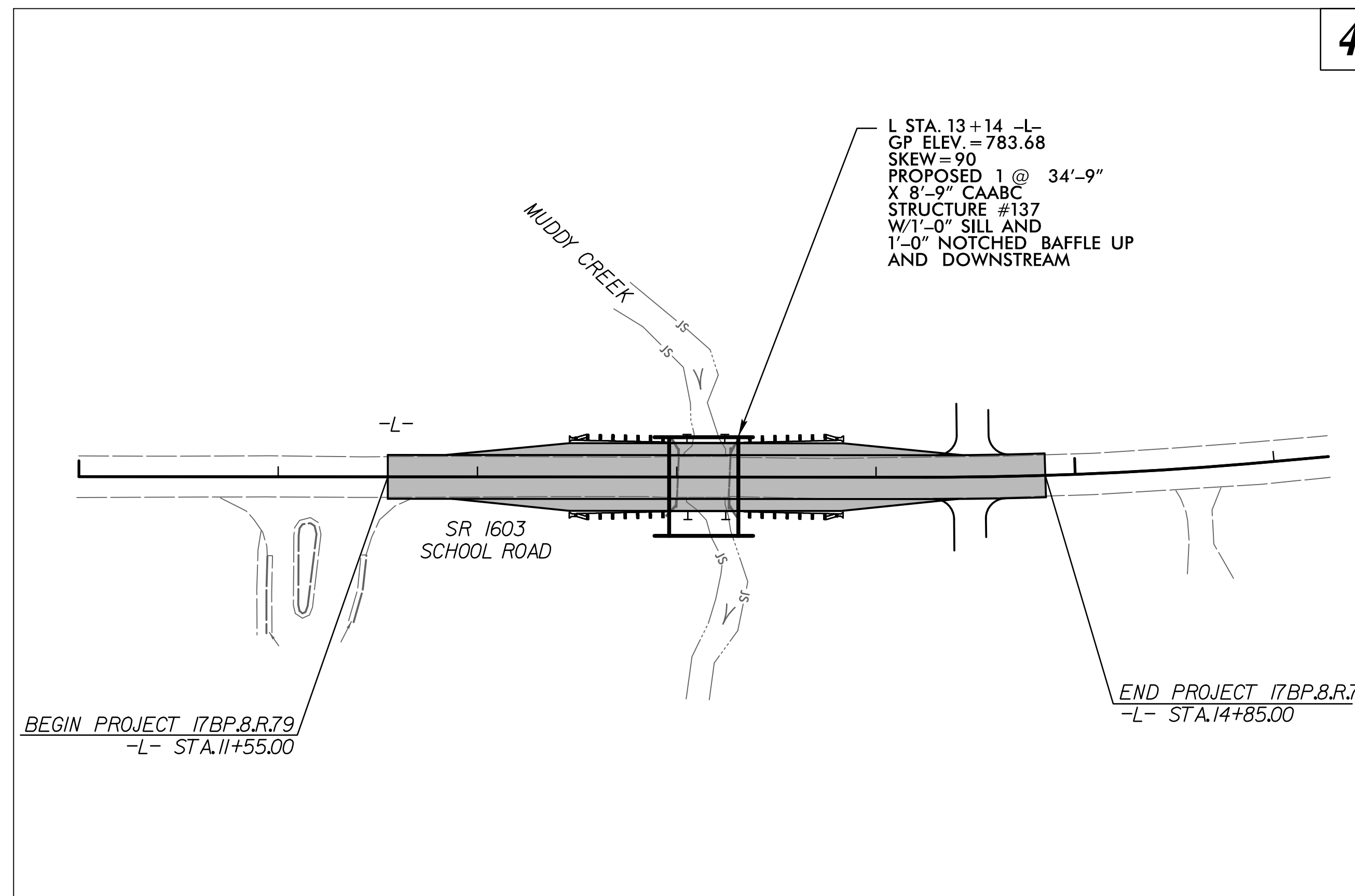
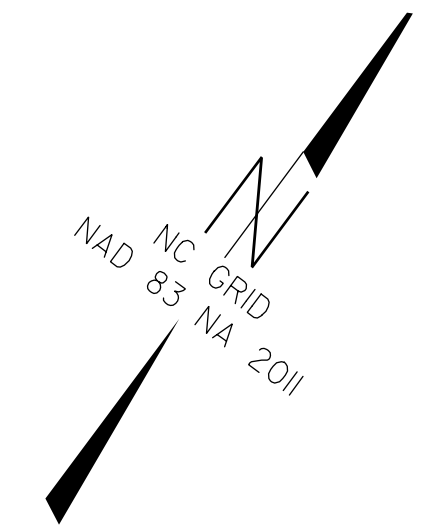
RANDOLPH COUNTY

LOCATION: BRIDGE NO. 750084 ON SR 1603 (SCHOOL ROAD)
OVER MUDDY CREEK

TYPE OF WORK: GRADING, DRAINAGE, PAVING, & STRUCTURE



OFF-SITE DETOUR ROUTE
● ● ● ● ●



TIP PROJECT: 17BP.8.R.79

INDEX OF SHEETS

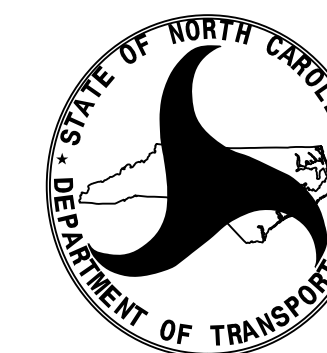
SHEET NO.	DESCRIPTION
UO-1	TITLE SHEET
UO-2	UTILITIES BY OTHERS PLAN SHEET

UTILITY OWNERS ON PROJECT

1) DUKE ENERGY PROGRESS



UTILITIES COORDINATION CONSULTANT
Lavon Tyson



PREPARED IN THE OFFICE OF:
DIVISION OF HIGHWAYS
UTILITIES ENGINEERING SECTION

1591 MAIL SERVICES CENTER
RALEIGH NC 27699-1591
PHONE (919) 707-6690
FAX (919) 250-4151

Roger Worthington, P.E. UTILITIES SECTION ENGINEER
Ron Wilkins, PE UTILITIES SQUAD LEADER PROJECT ENGINEER

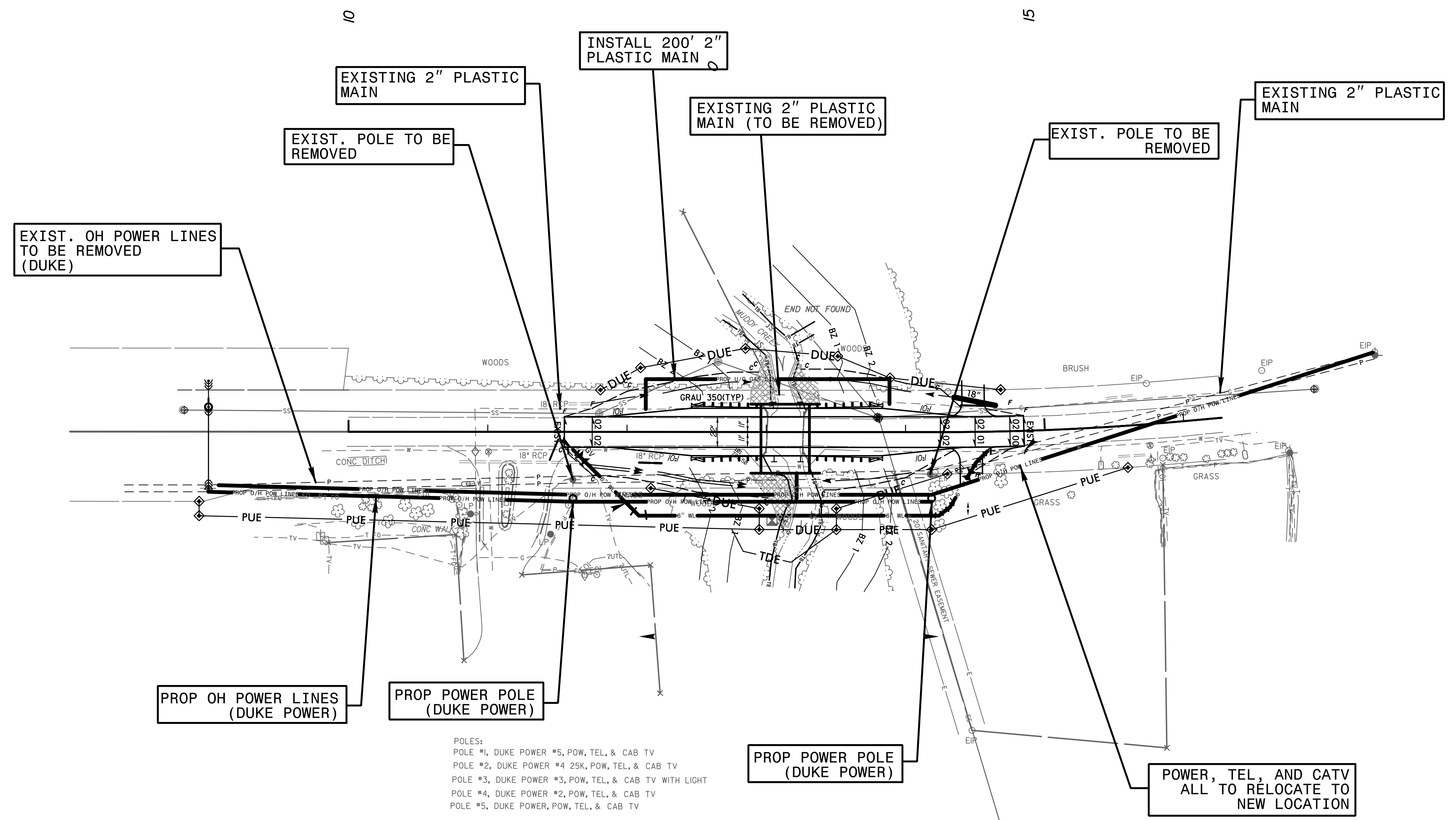
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UTILITIES BY OTHERS

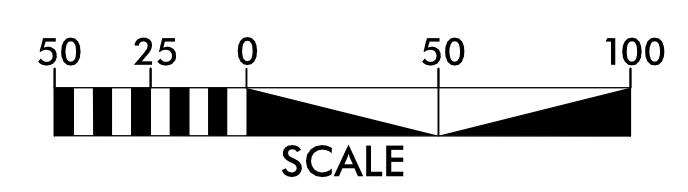
NOTE:
ALL PROPOSED UTILITY WORK SHOWN ON THIS SHEET WILL BE DONE BY OTHERS



REVISIONS



POLES:
POLE #1, DUKE POWER #5, POW, TEL, & CAB TV
POLE #2, DUKE POWER #4 25K, POW, TEL, & CAB TV
POLE #3, DUKE POWER #3, POW, TEL, & CAB TV WITH LIGHT
POLE #4, DUKE POWER #2, POW, TEL, & CAB TV
POLE #5, DUKE POWER, POW, TEL, & CAB TV



8/17/99