

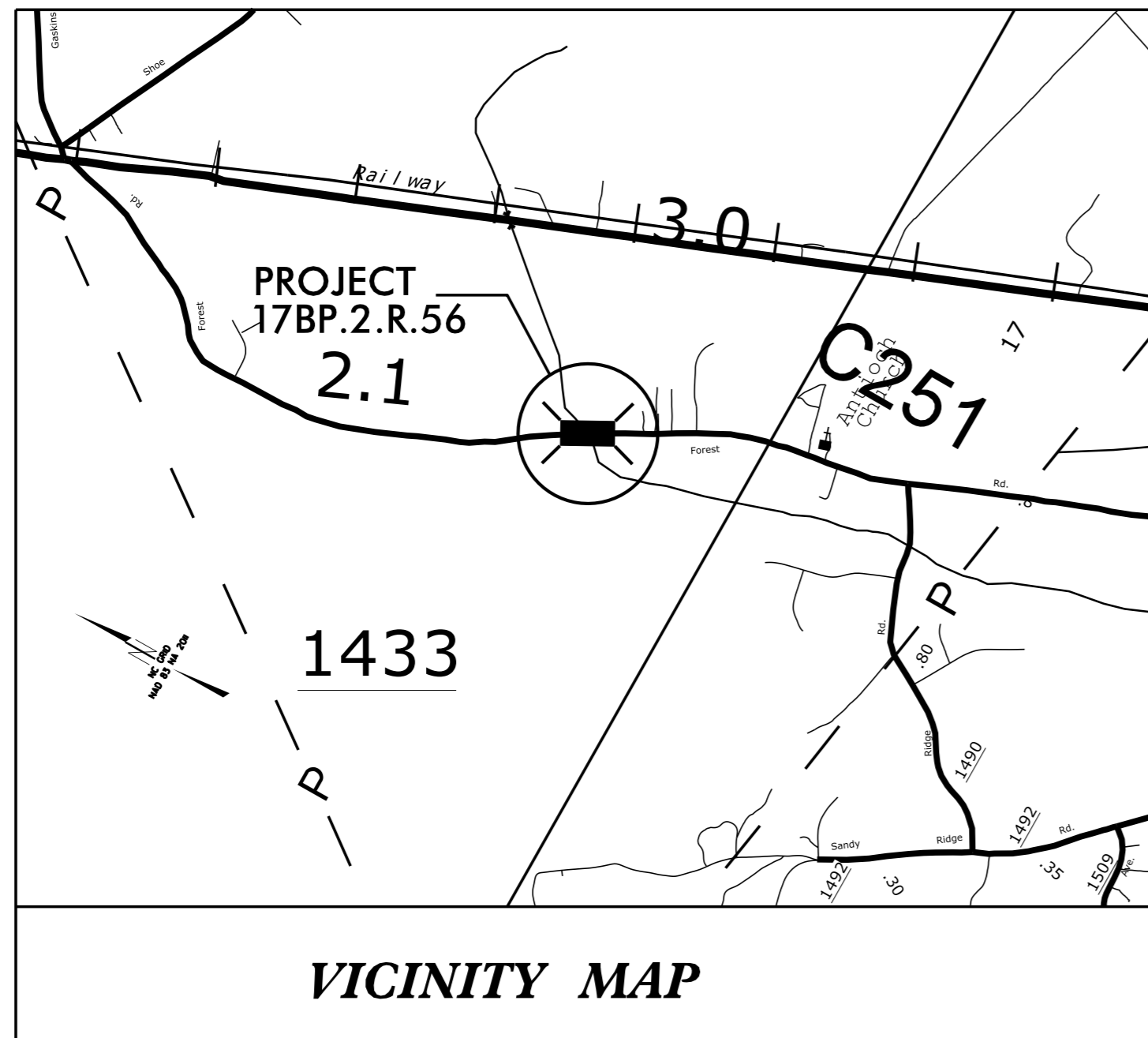
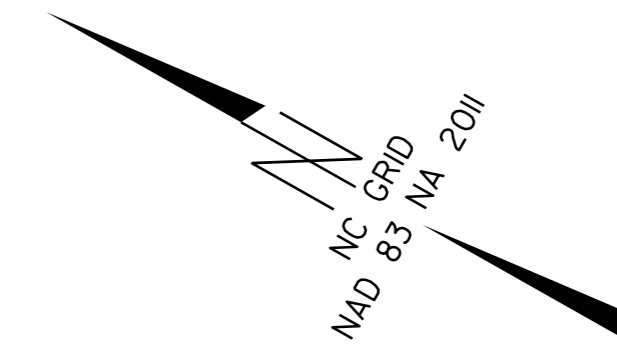
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.2.R.56	1	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

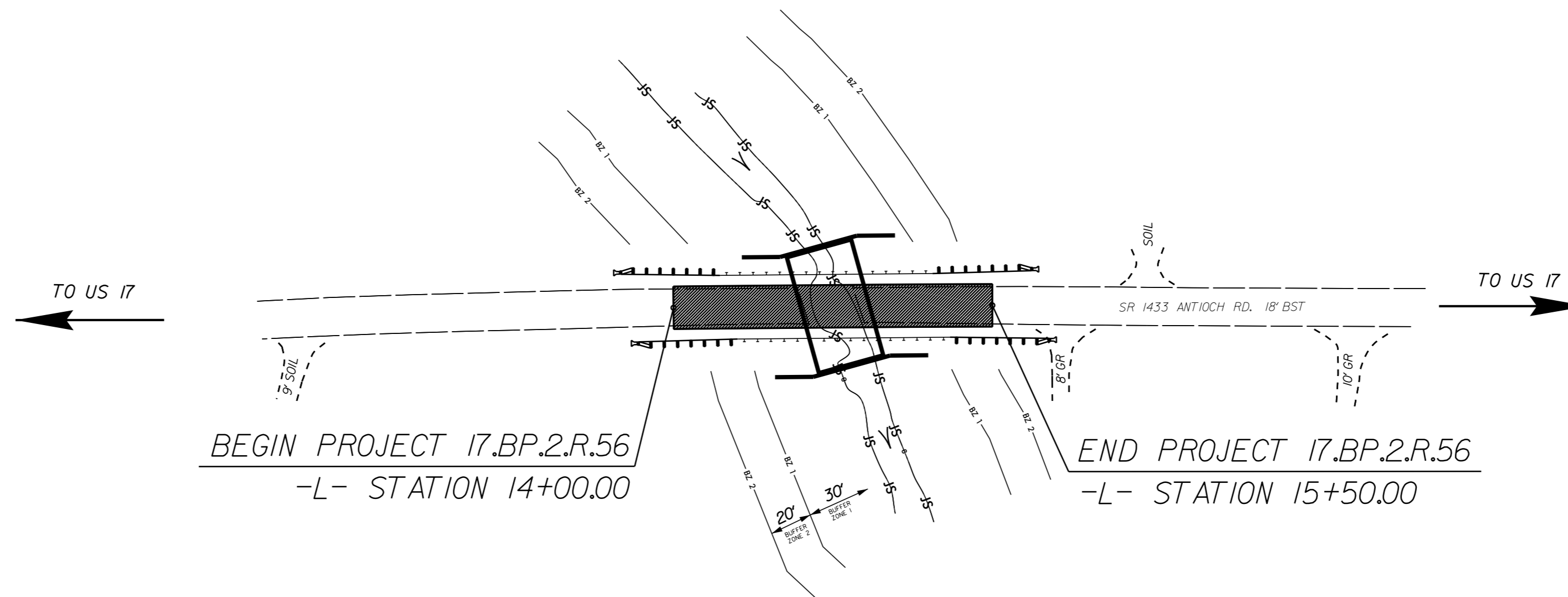
CRAVEN COUNTY

**LOCATION: BRIDGE #124 OVER MILLS BRANCH
ON SR 1433 (ANTIOCH RD)**

**TYPE OF WORK: BRIDGE REPLACEMENT WITH
BOX CULVERT, GUARDRAIL,
PAVING, GRADING AND DRAINAGE**



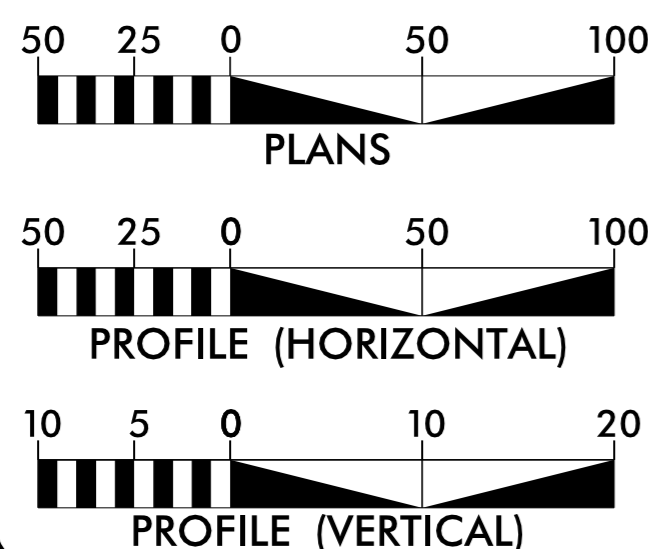
VICINITY MAP
See Sheet 1-A For Index of Sheets



STATE PROJECT: 17BP.2.R.56

CONTRACT: DB00265

GRAPHIC SCALES



PROJECT LENGTH

LENGTH ROADWAY PROJECT 17.BP.2.R.56 = 0.028 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS
1704 N GREENE STREET, GREENVILLE NC, 27835

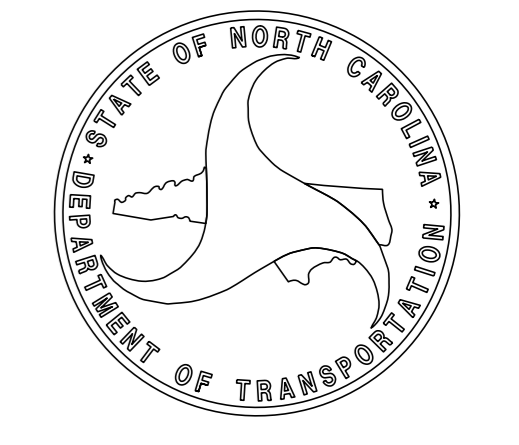
2012 STANDARD SPECIFICATIONS	
RIGHT OF WAY DATE: JANUARY 2016	EDWARD EATMON, PE PROJECT ENGINEER
LETTING DATE: MAY 2016	LANG JONES PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

DocuSigned by:
Edward Eatmon
3/30/2016

ROADWAY DESIGN ENGINEER

DocuSigned by:
Bryce Eatmon
3/30/2016



28-MAR-2016 07:31 G:\PROJECTS\CRAVEN\craven124\CRAVEN124_DDC2_PSHI_CUL.DGN \$\$\$USERNAME\$\$\$

INDEX OF SHEETS

1	TITLE SHEET
1A	INDEX OF SHEETS, GENERAL NOTES, STANDARD DRAWINGS
1B	CONVENTIONAL SYMBOLS
2	TYPICAL SECTIONS
3	SUMMARY OF QUANTITIES
3A	SUMMARY OF DRAINAGE, GUARDRAIL AND EARTHWORK QUANTITIES
4	PLAN AND PROFILE SHEET
UC1-UC4	UTILITY CONSTRUCTION
TMP1-TMP2	TRAFFIC MANAGEMENT PLANS
EC1-EC6	EROSION CONTROL SHEETS
X1A	CROSS-SECTION SUMMARY
X1	CROSS-SECTIONS

GENERAL NOTES:

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

GRADING AND SURFACING OR RESURFACING AND WIDENING:

THE GRADE LINES SHOWN DENOTE THE FINISHED ELEVATION OF THE PROPOSED SURFACING AT GRADE POINTS SHOWN ON THE TYPICAL SECTIONS. WHERE NO GRADE LINES ARE SHOWN, THE PROFILES SHOWN DENOTE THE TOP ELEVATION OF THE EXISTING PAVEMENT ALONG THE CENTER LINE OF SURVEY ON WHICH THE PROPOSED RESURFACING WILL BE PLACED. GRADE LINES MAY BE ADJUSTED 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.

DRIVEWAYS:

DRIVEWAYS SHALL BE CONSTRUCTED IN ACCORDANCE WITH STD. 848.03 AT LOCATIONS SHOWN ON PLANS OR AS 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.

SUBSURFACE PLANS:

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

ANY RELOCATION OF EXISTING UTILITIES WILL BE ACCOMPLISHED BY OTHERS, EXCEPT AS SHOWN ON THE PLANS.

RIGHT-OF-WAY MARKERS:

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

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 January, 2012 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
DIVISION 3 - PIPE CULVERTS	
300.01	Method of Pipe Installation
310.10	Driveway Pipe Construction
DIVISION 8 - INCIDENTALS	
862.01	Guardrail Placement
862.02	Guardrail Installation
862.03	Structure Anchor Units
876.01	Rip Rap in Channels
876.02	Guide for Rip Rap at Pipe Outlets

Note: Not to Scale

*S.U.E. = Subsurface Utility Engineering

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CONVENTIONAL PLAN SHEET SYMBOLS

BOUNDARIES AND PROPERTY:

State Line	-----
County Line	-----
Township Line	-----
City Line	-----
Reservation Line	-----
Property Line	-----
Existing Iron Pin	○ EIP
Property Corner	-----
Property Monument	□ ECM
Parcel/Sequence Number	(23)
Existing Fence Line	-x-x-x-
Proposed Woven Wire Fence	○
Proposed Chain Link Fence	□
Proposed Barbed Wire Fence	◇
Existing Wetland Boundary	--- WL.B ---
Proposed Wetland Boundary	--- WL.B ---
Existing Endangered Animal Boundary	--- EAB ---
Existing Endangered Plant Boundary	--- EPB ---

BUILDINGS AND OTHER CULTURE:

Gas Pump Vent or U/G Tank Cap	○
Sign	○ S
Well	○ W
Small Mine	✕
Foundation	□
Area Outline	□
Cemetery	□ †
Building	□
School	□
Church	□
Dam	---

HYDROLOGY:

Stream or Body of Water	-----
Hydro, Pool or Reservoir	□
Jurisdictional Stream	--- JS ---
Buffer Zone 1	--- BZ 1 ---
Buffer Zone 2	--- BZ 2 ---
Flow Arrow	←
Disappearing Stream	-----
Spring	○
Wetland	---
Proposed Lateral, Tail, Head Ditch	-----
False Sump	▽

RAILROADS:

Standard Gauge	-----
RR Signal Milepost	○ MILEPOST 35
Switch	□ SWITCH
RR Abandoned	-----
RR Dismantled	-----

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 Marker	-----
Existing Control of Access	○ CA
Proposed Control of Access	○ CA
Existing Easement Line	--- E ---
Proposed Temporary Construction Easement	--- E ---
Proposed Temporary Drainage Easement	--- TDE ---
Proposed Permanent Drainage Easement	--- PDE ---
Proposed Permanent Utility Easement	--- PUE ---

ROADS AND RELATED FEATURES:

Existing Edge of Pavement	-----
Existing Curb	-----
Proposed Slope Stakes Cut	--- C ---
Proposed Slope Stakes Fill	--- F ---
Proposed Wheel Chair Ramp	○ WCR
Existing Metal Guardrail	-----
Proposed Guardrail	-----
Existing Cable Guiderail	-----
Proposed Cable Guiderail	-----
Equality Symbol	○
Pavement Removal	□

VEGETATION:

Single Tree	○
Single Shrub	○
Hedge	-----
Woods Line	-----
Orchard	□
Vineyard	□ Vineyard

EXISTING STRUCTURES:

MAJOR:	
Bridge, Tunnel or Box Culvert	-----
Bridge Wing Wall, Head Wall and End Wall	--- CONC WW ---
MINOR:	
Head and End Wall	--- CONC HW ---
Pipe Culvert	-----
Footbridge	-----
Drainage Box: Catch Basin, DI or JB	□ CB
Paved Ditch Gutter	-----
Storm Sewer Manhole	○ S
Storm Sewer	-----

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	--- P ---
Designated U/G Power Line (S.U.E.*)	--- P ---

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	--- T ---
Designated U/G Telephone Cable (S.U.E.*)	--- T ---
Recorded U/G Telephone Conduit	--- TC ---
Designated U/G Telephone Conduit (S.U.E.*)	--- TC ---
Recorded U/G Fiber Optics Cable	--- T FO ---
Designated U/G Fiber Optics Cable (S.U.E.*)	--- T FO ---

WATER:

Water Manhole	○
Water Meter	○
Water Valve	⊗
Water Hydrant	⊕
Recorded U/G Water Line	--- W ---
Designated U/G Water Line (S.U.E.*)	--- W ---
Above Ground Water Line	--- A/G Water ---

TV:

TV Satellite Dish	○
TV Pedestal	□
TV Tower	⊗
U/G TV Cable Hand Hole	□
Recorded U/G TV Cable	--- TV ---
Designated U/G TV Cable (S.U.E.*)	--- TV ---
Recorded U/G Fiber Optic Cable	--- TV FO ---
Designated U/G Fiber Optic Cable (S.U.E.*)	--- TV FO ---

GAS:

Gas Valve	◇
Gas Meter	◇
Recorded U/G Gas Line	--- G ---
Designated U/G Gas Line (S.U.E.*)	--- G ---
Above Ground Gas Line	--- A/G Gas ---

SANITARY SEWER:

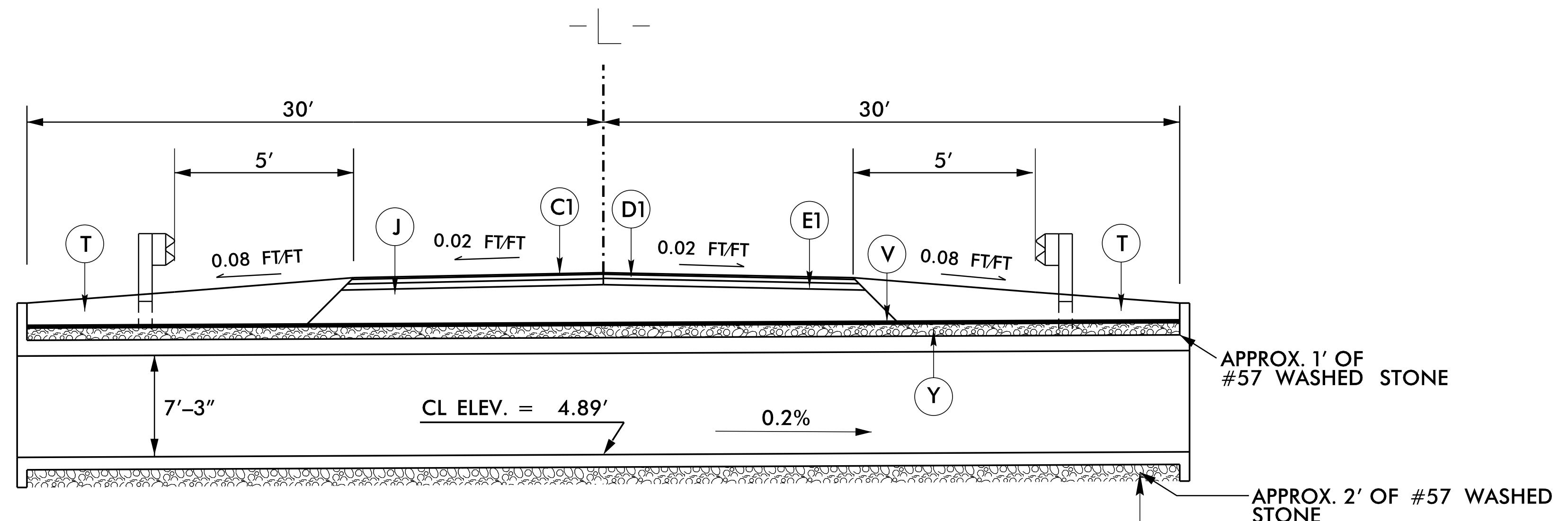
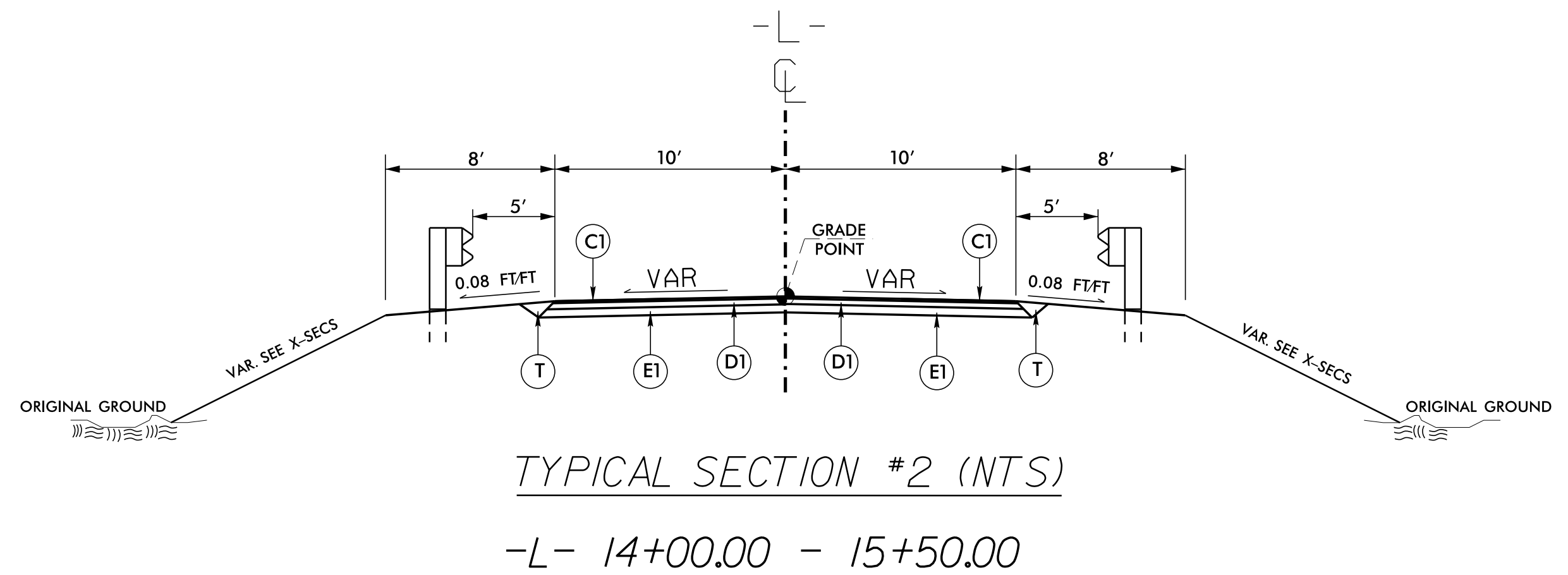
Sanitary Sewer Manhole	⊕
Sanitary Sewer Cleanout	⊕
U/G Sanitary Sewer Line	--- SS ---
Above Ground Sanitary Sewer	--- A/G Sanitary Sewer ---
Recorded SS Forced Main Line	--- FSS ---
Designated SS Forced Main Line (S.U.E.*)	--- FSS ---

MISCELLANEOUS:

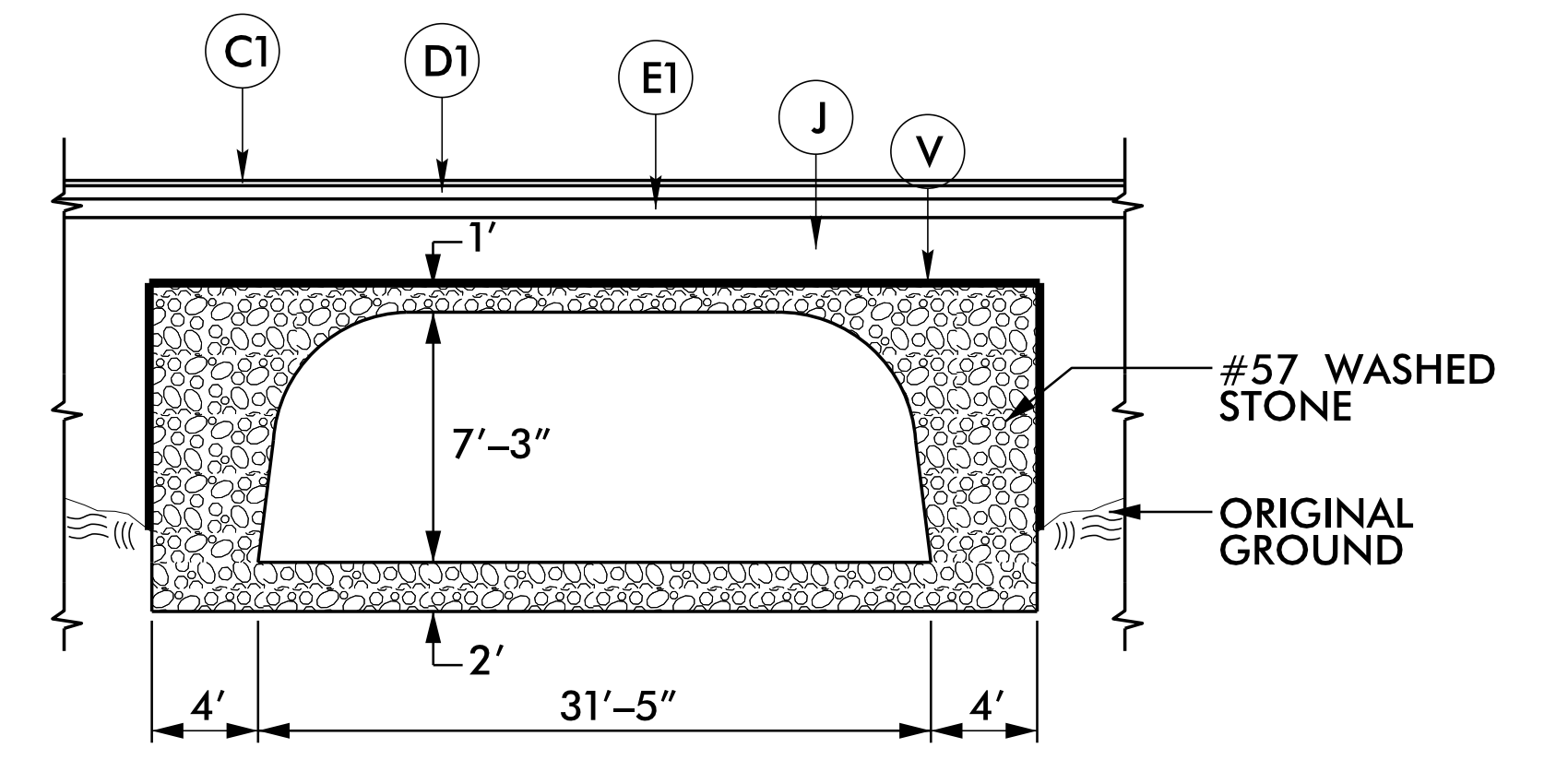
Utility Pole	●
Utility Pole with Base	□
Utility Located Object	○
Utility Traffic Signal Box	□
Utility Unknown U/G Line	--- ?U/L ---
U/G Tank; Water, Gas, Oil	□
A/G Tank; Water, Gas, Oil	□
U/G Test Hole (S.U.E.*)	○
Abandoned According to Utility Records	AATUR
End of Information	E.O.I.

C1	PROP. APPROX. 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A, AT AN AVERAGE RATE OF 165 LBS. PER SQ. YD.
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" ASPHALT CONCRETE BASE COURSE, TYPE B25.0B, AT AN AVERAGE RATE OF 570 LBS. PER SQ. YD.
J	APPROX. 12" AGGREGATE BASE COURSE
T	EARTH MATERIAL.
U	EXISTING PAVEMENT.
V	FILTER FABRIC
Y	#57 WASHED STONE

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



TYPICAL BOX CULVERT SECTION (NTS)
-L- STATION 14+76.00



END VIEW BOX CULVERT (NTS)
-L- STATION 14+76.00

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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS
SUMMARY OF QUANTITIES

SECT	QUANTITY	UNIT	ITEM DESCRIPTION
800	1	LS	MOBILIZATION
801	1	LS	CONSTRUCTION SURVEYING
226	1	LS	GRADING
226	100	CY	UNDERCUT EXCAVATION
300	10	TON	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES
300	20	SY	FOUNDATION CONDITIONING GEOTEXTILE
402	1	LS	REMOVAL OF EXISTING STRUCTURE AT -L- STATION 14+76.00
310	40	LF	15" RC PIPE CULVERTS, CLASS IV
520	252	TON	AGGREGATE BASE COURSE
545	20	TON	INCIDENTAL STONE BASE
610	110	TON	ASPHALT CONCRETE BASE COURSE, TYPE B25.0B
610	66	TON	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 119.0B
610	33	TON	ASPHALT CONCRETE SURFACE COURSE, TYPE SF9.5A
620	15	TON	ASPHALT BINDER FOR PLANT MIX, GRADE PG64-22
862	2	EA	STEEL BEAM GUARDRAIL OVER LOW FILL CULVERT (STD 862.01)
862	4	EA	GUARDRAIL ANCHOR UNITS, TYPE 350
876	160	TON	CLASS 1 RIP RAP
876	175	SY	GEOTEXTILE FOR DRAINAGE
1005	524	TON	*57 STONE
1605	100	LF	SAFETY FENCE
1615	0.5	ACRE	TEMPORARY MULCHING
1620	50	LB	SEED FOR TEMPORARY SEEDING
1620	0.25	TON	FERTILIZER FOR TEMPORARY SEEDING
1630	10	CY	SILT EXCAVATION
1632	150	SY	MATTING FOR EROSION CONTROL
1639	1	EA	SPECIAL STILLING BASIN
1660	1	ACRE	SEEDING AND MULCHING
1661	50	LB	SEED FOR REPAIR SEEDING
1661	0.2	TON	FERTILIZER FOR REPAIR SEEDING
SP	5	EA	RESPONSE FOR EROSION CONTROL
SP	120	LF	COIR FIBER WATTLE
SP	1	LS	60' BY 31'-5" X 7'-3" CORRUGATED ALUMINUM BOX CULVERT WITH HEADWALLS AT -L- STATION 14+76.00
SP	1	LS	RELOCATE EXISTING 6" WATER MAIN
SP	1	LS	DEWATERING
SP	66	LF	IMPERVIOUS DIKE

REVISIONS

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STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS

LIST OF PIPES, ENDWALLS, ETC.

STATION	LOCATION (L, RT, OR CL)	STRUCTURE NO.		TOP ELEVATION	INVERT ELEVATION	INVERT ELEVATION	SLOPE CRITICAL	R.C. PIPE (CLASS III)						PIPE REMOVAL LIN.FT.	ALUMINUM BOX CULVERT
		FROM	TO					15"	18"	24"	30"	36"	42"		
-L- 13+55.79	RT	1		11.06	10.66	1.0%	40'								
-L- 14+76.00	CL	2		5.49	4.29	2.0%								60'	
TOTALS							40'							60'	

NOTE: Invert Elevations are for Bid Purposes only and shall not be used for project construction stakeout. See "Standard Specifications For Roads and Structures, Section 300-5".

**SUMMARY OF EARTHWORK
 IN CUBIC YARDS**

LOCATION	UNCLASSIFIED EXCAVATION	BOX CULVERT EXCAVATION	UNDERCUT	EMBT + %	BORROW	WASTE
-L- 13+00.00 - 15+50.00	129		0	510	410	29
UNDERCUT (CONTINGENCY)			100	120	120	100
UNCLASSIFIED STRUCTURE EXCAVATION		1356		1000		356
SUB TOTAL	129	1356	100	1630	530	485
SAY	130	1360	100	1630	530	490

**PAVEMENT REMOVAL SUMMARY
 IN SQUARE YARDS**

LINE	STATION - STATION	LOCATION	REMOVAL (SY)
-L-	14+00.00 - 15+50.00	CL	300
TOTAL			300
SAY			310

NOTE:

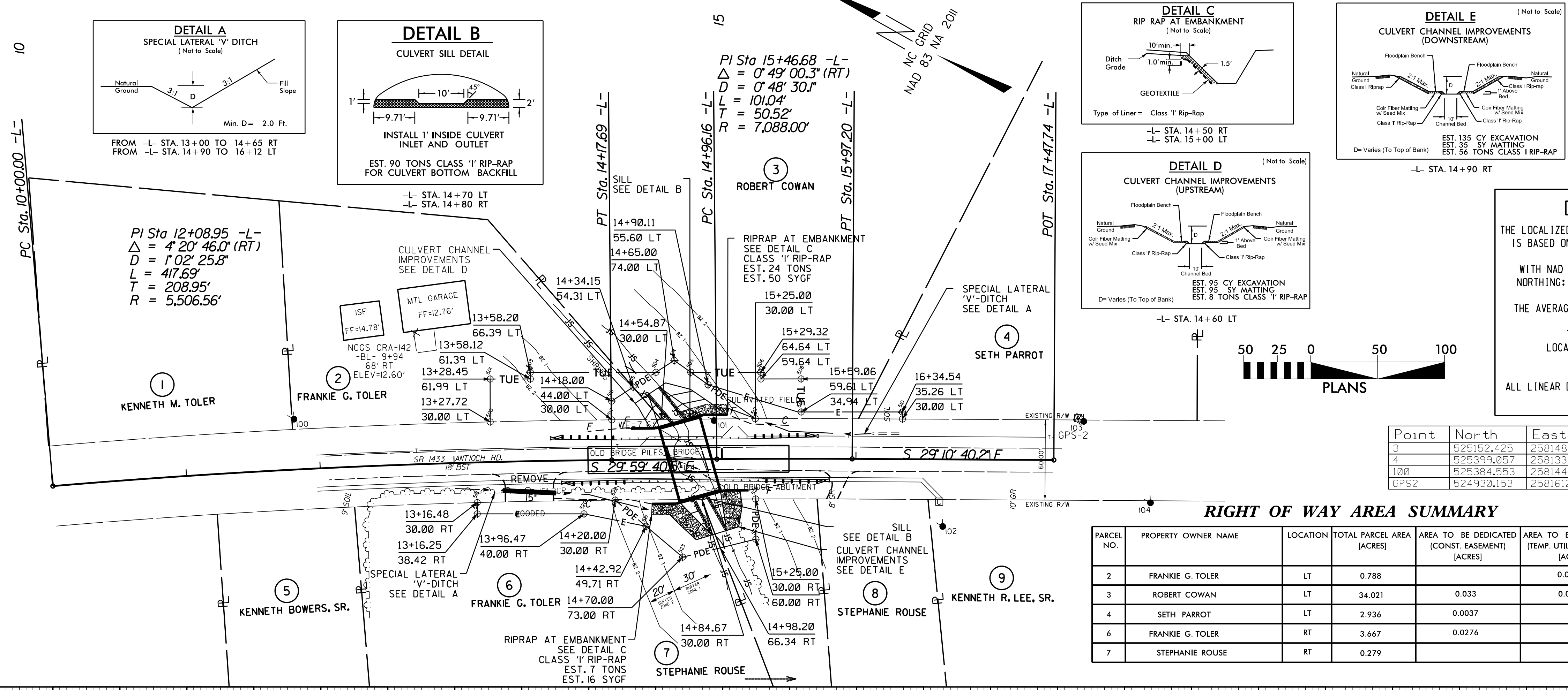
APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, UNCLASSIFIED STRUCTURE EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING."

GUARDRAIL SUMMARY

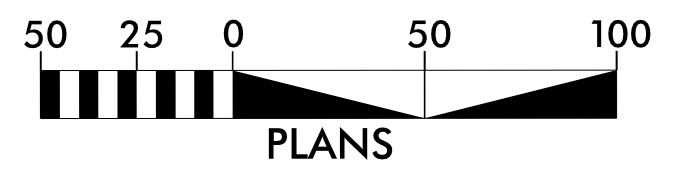
"N" = DISTANCE FROM EDGE OF LANE TO FACE OF GUARDRAIL.
 TOTAL SHOULDER WIDTH = DISTANCE FROM EDGE OF TRAVEL LANE TO SHOULDER BREAK POINT.
 FLARE LENGTH = DISTANCE FROM LAST SECTION OF PARALLEL GUARDRAIL TO END OF GUARDRAIL.
 W = TOTAL WIDTH OF FLARE FROM BEGINNING OF TAPER TO END OF GUARDRAIL.
 G = GATING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

SURVEY LINE	BEG. STA.	END STA.	LOCATION	LENGTH			WARRANT POINT		"N" DIST. FROM E.O.L.	TOTAL SHOULDER WIDTH	FLARE LENGTH		W		ANCHORS										IMPACT ATTENUATOR TYPE 350			REMARKS	
				STRAIGHT	SHOP CURVED	DOUBLE FACED	APPROACH END	TRAILING END			APPROACH END	TRAILING END	APPROACH END	TRAILING END	TYPE 350											PERMITTED	NO.		G
-L-	13+72.11	15+71.81	LT	100			15+71.81	13+72.11	5	8	50	50	1	1	2														
-L-	13+79.92	15+80.19	RT	100			13+79.92	15+80.19	5	8	50	50	1	1	2														
TOTAL				200											4														

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DATUM DESCRIPTION
 THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS-2"
 WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 524930.153(±) EASTING: 2581612.336(±±) ELEVATION: 14.47(±±)
 THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987857
 THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS-2" TO -L- STATION 10+00 IS N 32° 01' 50" W 747.3211'
 ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

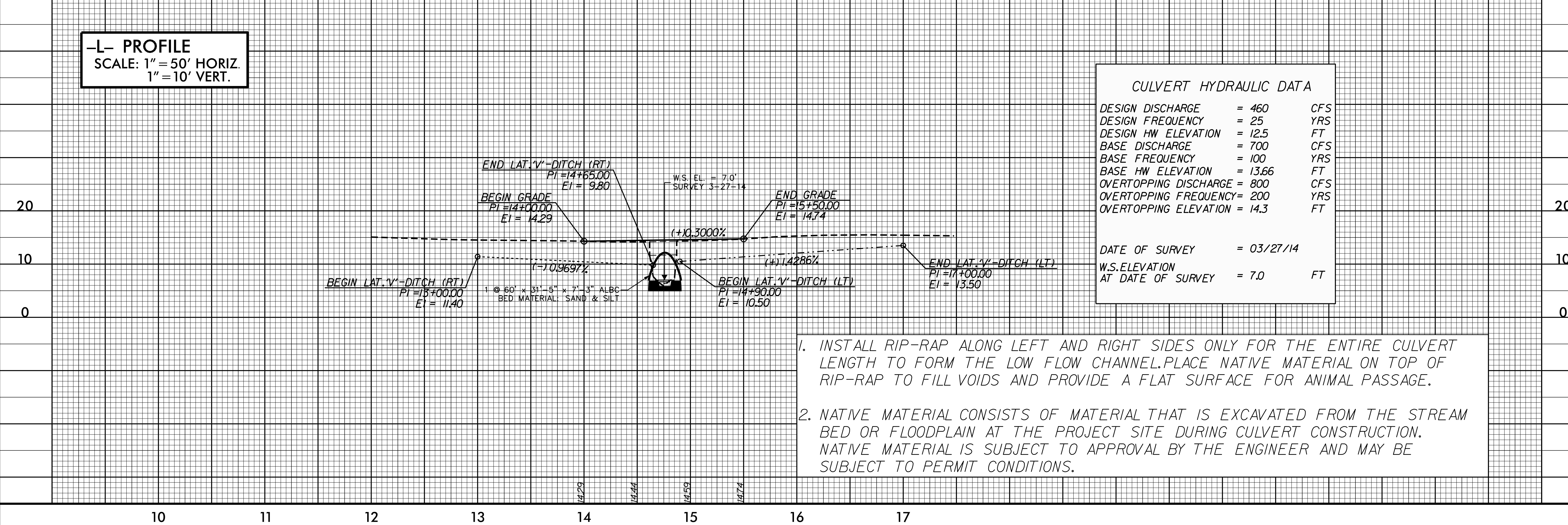


Point	North	East	Elevation	Description
3	525152.425	2581486.132	13.640	BL-3
4	525399.057	2581339.970	14.320	BL-4
100	525384.553	2581448.782	12.600	NCGS "CRA-142"
GPS2	524930.153	2581612.336	14.470	GPS-2

RIGHT OF WAY AREA SUMMARY

PARCEL NO.	PROPERTY OWNER NAME	LOCATION	TOTAL PARCEL AREA (ACRES)	AREA TO BE DEDICATED (CONST. EASEMENT) (ACRES)	AREA TO BE DEDICATED (TEMP. UTIL. EASEMENT) (ACRES)	AREA TO BE PURCHASED (PERM. UTIL. EASEMENT) (ACRES)	PARCEL AREA REMAINING (ACRES)
2	FRANKIE G. TOLER	LT	0.788		0.0766	0.0129	0.699
3	ROBERT COWAN	LT	34.021	0.033	0.0184	0.0487	33.921
4	SETH PARROT	LT	2.936	0.0037			2.932
6	FRANKIE G. TOLER	RT	3.667	0.0276		0.0447	3.595
7	STEPHANIE ROUSE	RT	0.279			0.0259	0.253

-L- PROFILE
 SCALE: 1" = 50' HORIZ.
 1" = 10' VERT.



CULVERT HYDRAULIC DATA

DESIGN DISCHARGE	= 460	CFS
DESIGN FREQUENCY	= 25	YRS
DESIGN HW ELEVATION	= 12.5	FT
BASE DISCHARGE	= 700	CFS
BASE FREQUENCY	= 100	YRS
BASE HW ELEVATION	= 13.66	FT
OVERTOPPING DISCHARGE	= 800	CFS
OVERTOPPING FREQUENCY	= 200	YRS
OVERTOPPING ELEVATION	= 14.3	FT
DATE OF SURVEY	= 03/27/14	
W.S. ELEVATION AT DATE OF SURVEY	= 7.0	FT

- INSTALL RIP-RAP ALONG LEFT AND RIGHT SIDES ONLY FOR THE ENTIRE CULVERT LENGTH TO FORM THE LOW FLOW CHANNEL. PLACE NATIVE MATERIAL ON TOP OF RIP-RAP TO FILL VOIDS AND PROVIDE A FLAT SURFACE FOR ANIMAL PASSAGE.
- NATIVE MATERIAL CONSISTS OF MATERIAL THAT IS EXCAVATED FROM THE STREAM BED OR FLOODPLAIN AT THE PROJECT SITE DURING CULVERT CONSTRUCTION. NATIVE MATERIAL IS SUBJECT TO APPROVAL BY THE ENGINEER AND MAY BE SUBJECT TO PERMIT CONDITIONS.

REVISIONS

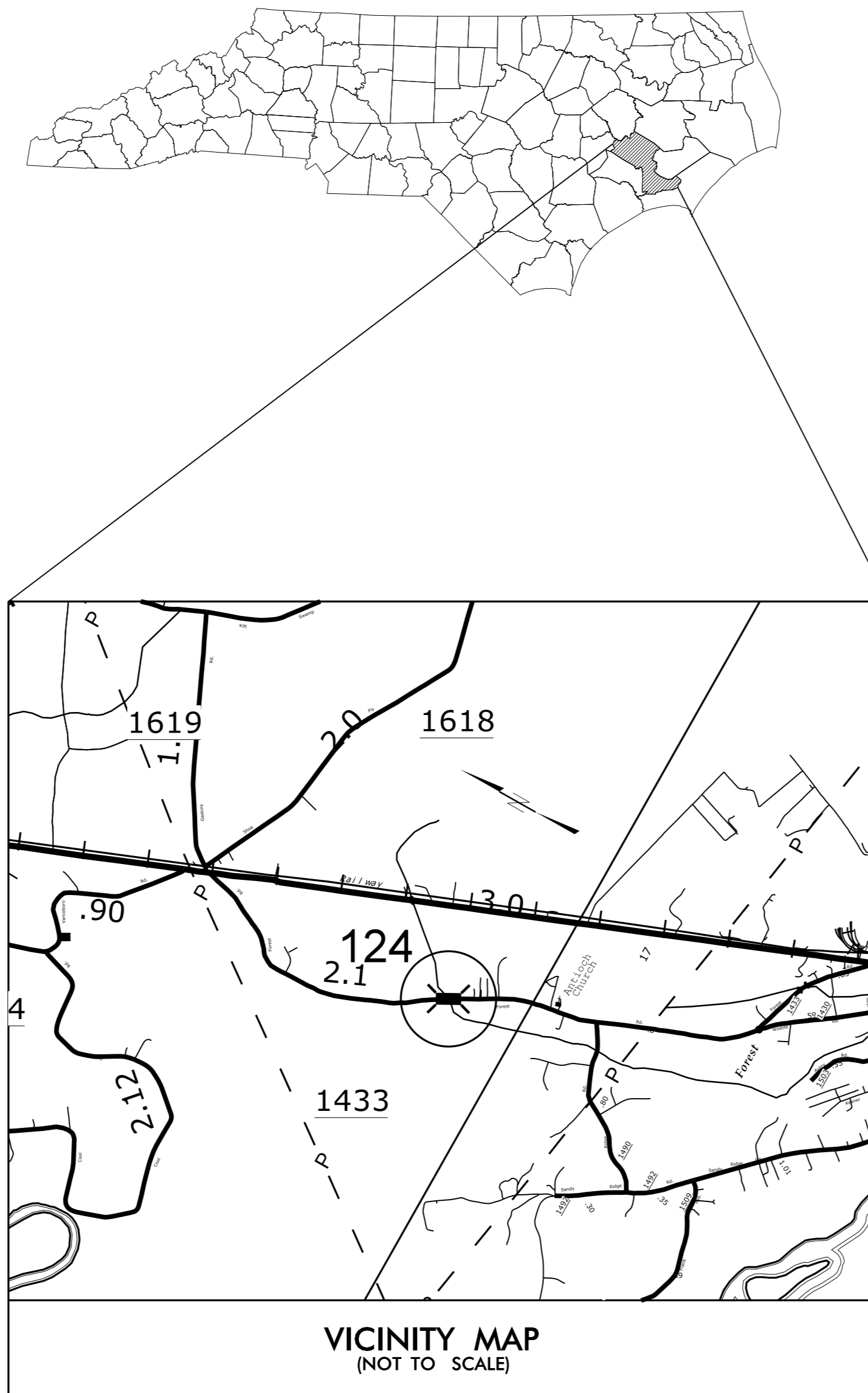
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STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

TRANSPORTATION MANAGEMENT PLAN

PITT COUNTY



INDEX OF SHEETS

SHEET NO.	TITLE
TMP-1	TITLE SHEET WITH VICINITY MAP & INDEX OF SHEETS, LIST OF APPLICABLE ROADWAY STANDARD DRAWINGS, AND LEGEND.
TMP-2	PROJECT NOTES, DETOUR AND PLANS.

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 JANUARY 2012 ARE APPLICABLE TO THIS PROJECT AND BY REFERENCE HEREBY ARE CONSIDERED A PART OF THESE PLANS:

STD. NO.	TITLE
1101.03 (SHT. 1 OF 9)	TEMPORARY ROAD CLOSURES
1101.11	TRAFFIC CONTROL DESIGN TABLES
1110.01	STATIONARY WORK ZONE SIGNS
1145.01	BARRICADES (TYPE III)

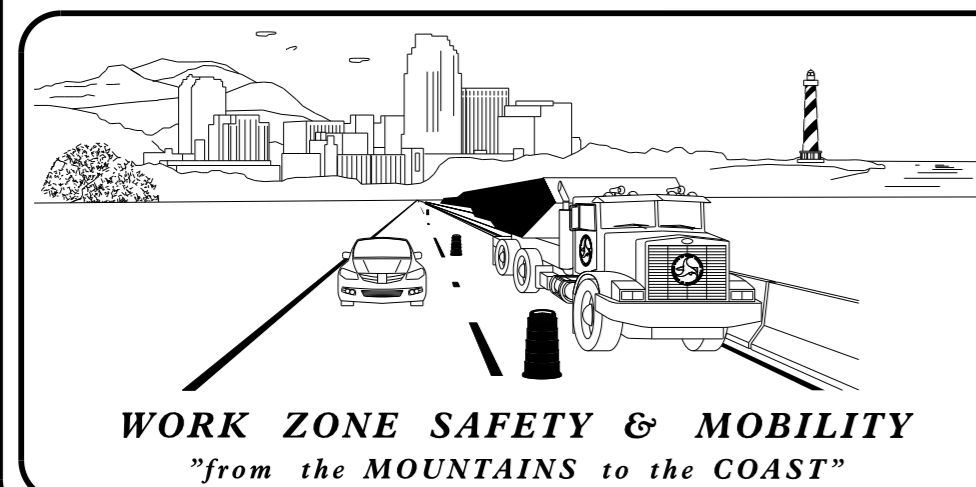
LEGEND

GENERAL

- DIRECTION OF TRAFFIC FLOW
- DIRECTION OF PEDESTRIAN TRAFFIC FLOW
- NORTH ARROW
- PROPOSED PVMT.
- EXIST. PVMT.
- WORK AREA

TRAFFIC CONTROL DEVICES

- BARRICADE (TYPE III)



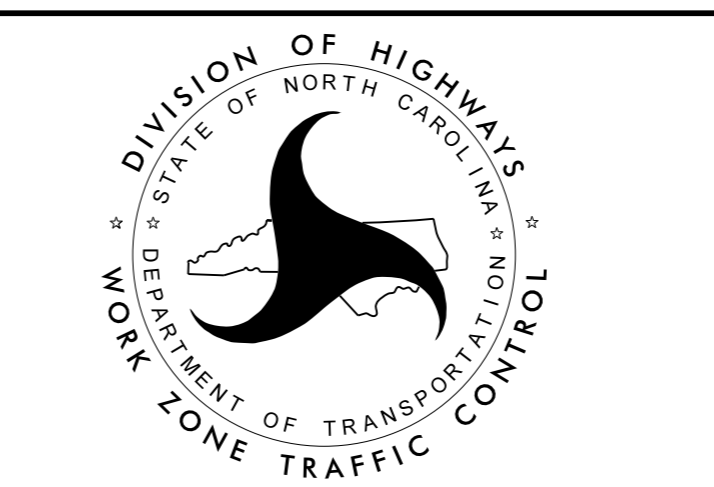
N.C.D.O.T. WORK ZONE TRAFFIC CONTROL
P.O. BOX 1587, GREENVILLE, NC 27835
105 PACTOLUS HWY. (NC 33), GREENVILLE, NC 27835
PHONE: (252) 830-3490 FAX: (252) 830-3352

B. E. EATMON, PE **TRAFFIC ENGINEER**

B. E. EATMON, PE **TRAFFIC CONTROL PROJECT ENGINEER**

LANG JONES **TRAFFIC CONTROL PROJECT DESIGN ENGINEER**

LANG JONES **TRAFFIC CONTROL DESIGN ENGINEER**



APPROVED: **BRUCE EATMON**
DATE: 3/30/2016

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SHEET NO.
TMP-1

17BP.2.R.56

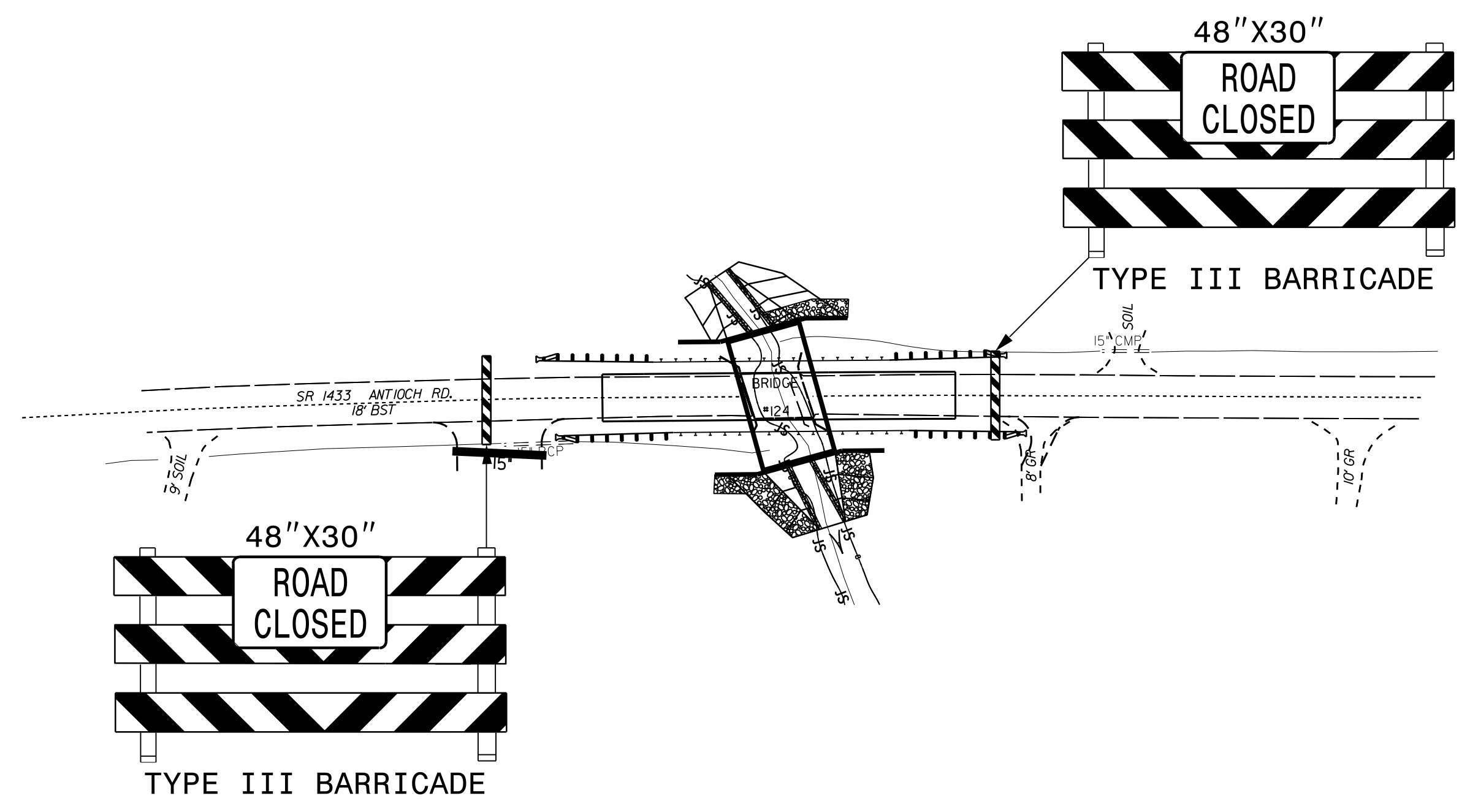
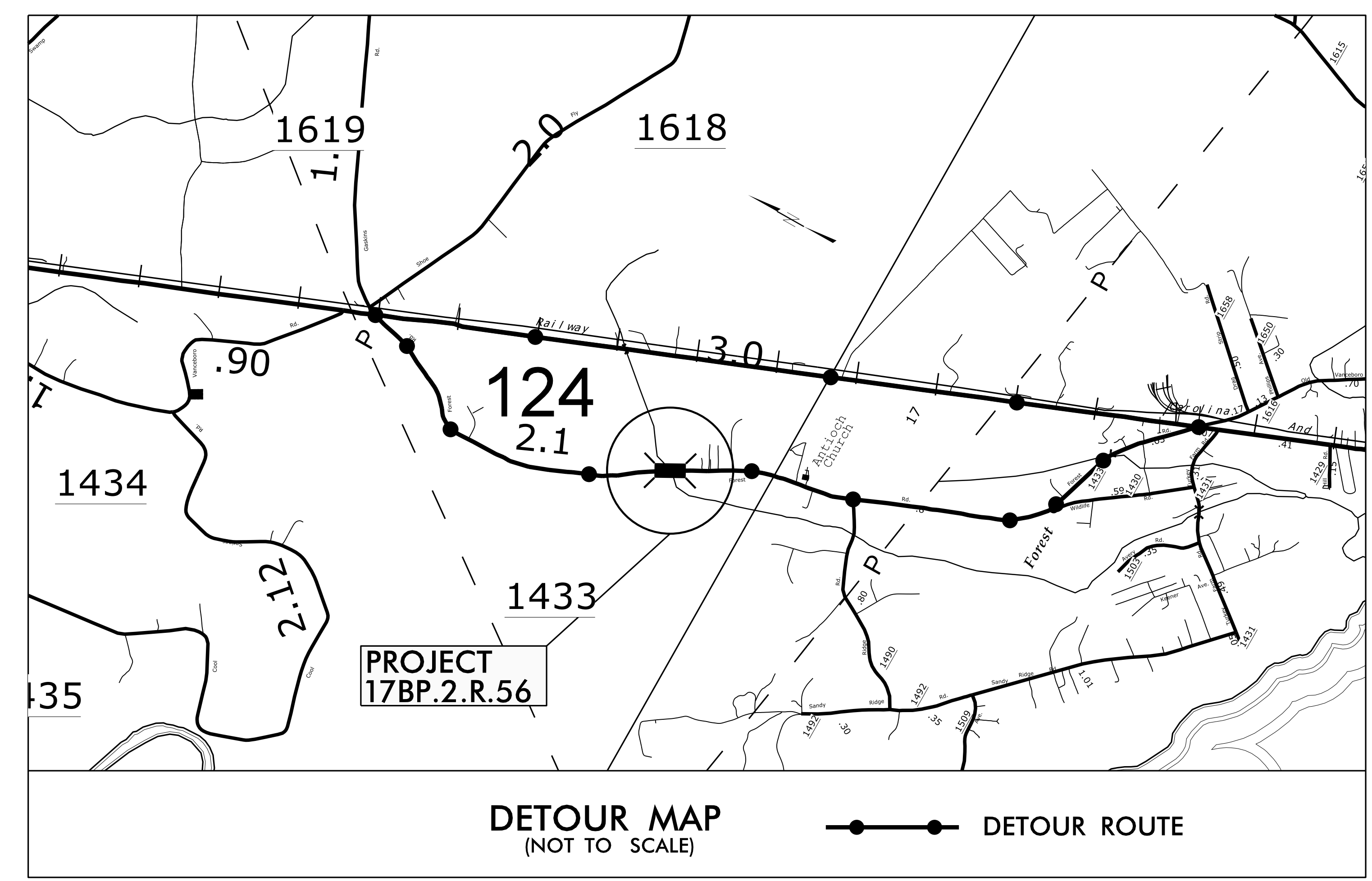
STATE PROJECT:

GENERAL NOTES

IMPLEMENT TRAFFIC CONTROL IN ACCORDANCE WITH THE ROADWAY STANDARD DRAWINGS LISTED ON TMP-1.

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.

STATE FORCES WILL INSTALL AND MAINTAIN THE PROJECT DETOUR AND THE TYPE III BARRICADES AT THE PROJECT LIMITS. STATE FORCES WILL INSTALL PAINT AND MARKERS ON THE FINISHED PROJECT. CALL JIM EVANS AT 252-830-3493 FOR COORDINATION.



APPROVED: <i>Bryce Eatman</i>	PROJECT NOTES	
SEAL		
	SCALE: NONE	REVISIONS
3/30/2016	DATE: 12/15/15	
	DWG. BY: TP	
	DESIGN BY: LJ	
	REVIEWED BY: LJ	

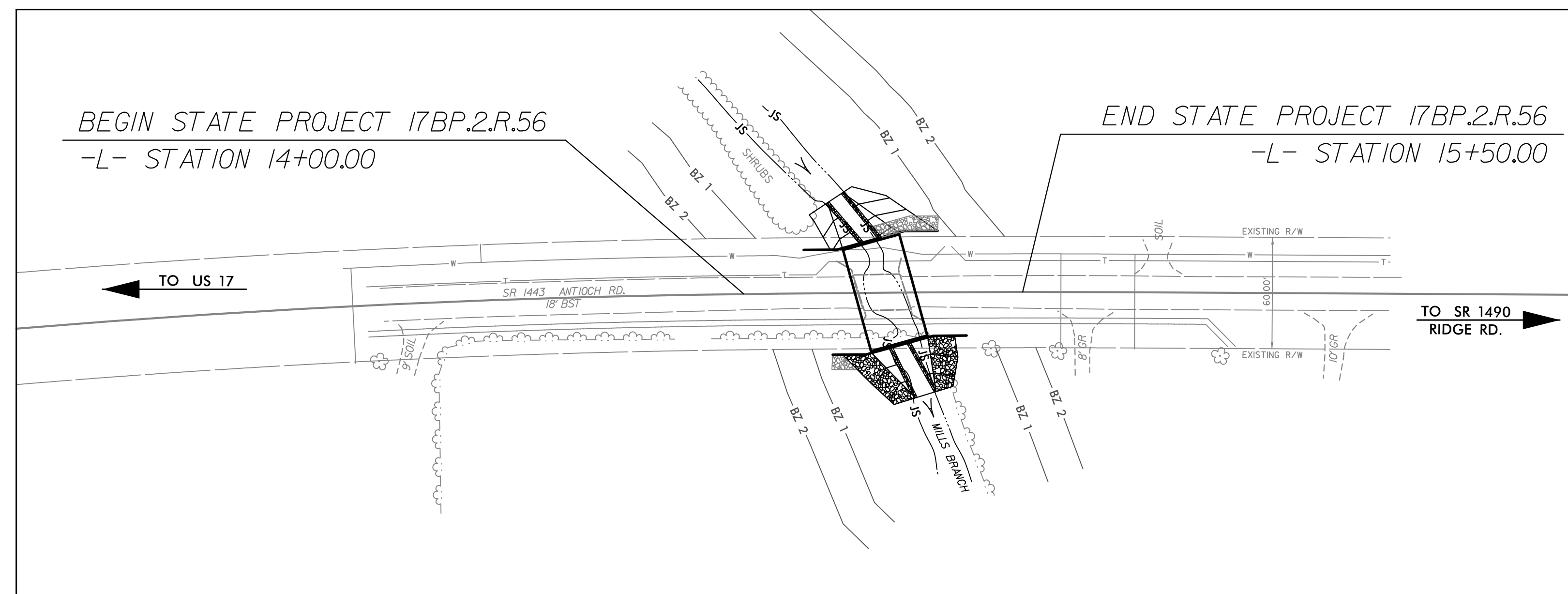
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TIP PROJECT: 17BP.2.R.56

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

**LOCATION: CRAVEN COUNTY BRIDGE #124 OVER MILLS
BRANCH ON SR 1443 (ANTIOCH RD.)**

**TYPE OF WORK: BRIDGE REPLACEMENT WITH BOX CULVERT,
GUARDRAIL, PAVING, GRADING, AND DRAINAGE**



STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	17BP.2.R.56	EC-1	6
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	

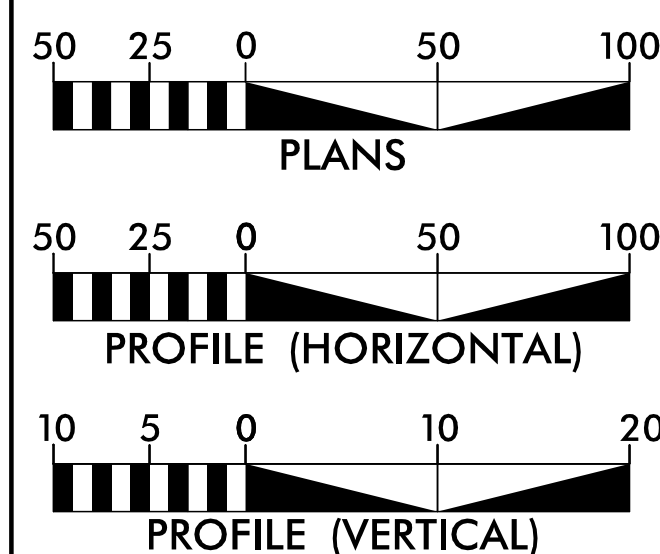
EROSION AND SEDIMENT CONTROL MEASURES

Std. #	Description	Symbol
1630.03	Temporary Silt Ditch	TD
1630.05	Temporary Diversion	TD
1605.01	Temporary Silt Fence	
1606.01	Special Sediment Control Fence	▲▲▲
1622.01	Temporary Berms and Slope Drains	▲▲▲
	Silt Basin Type B	▨
1633.01	Temporary Rock Silt Check Type-A	▨
	Temporary Rock Silt Check Type-A with Matting and Polyacrylamide (PAM)	▨
	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	A
1632.02	Type B	B
1632.03	Type C	C
	Skimmer Basin	▭
	Tiered Skimmer Basin	▭
	Infiltration Basin	▭

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 SCALES



ROADSIDE ENVIRONMENTAL UNIT
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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:

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

2012 STANDARD SPECIFICATIONS

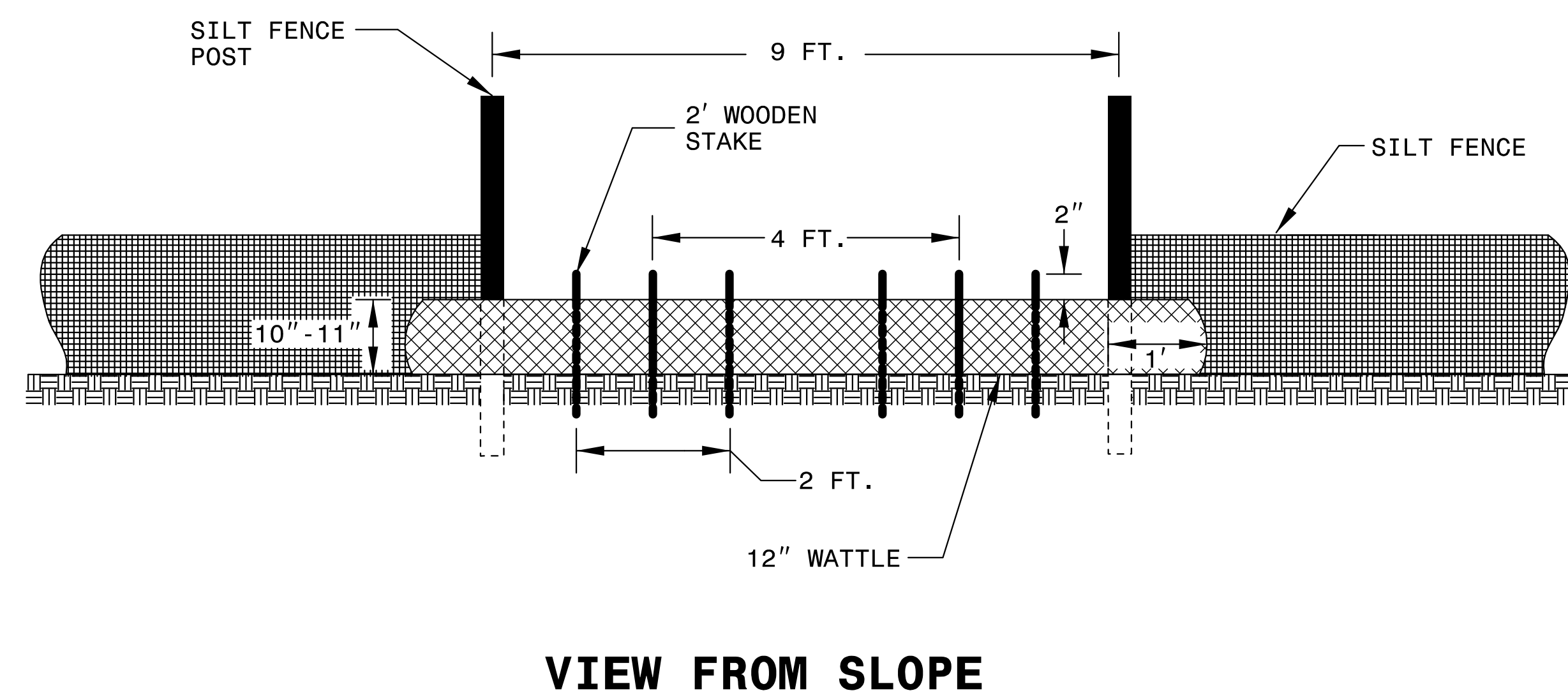
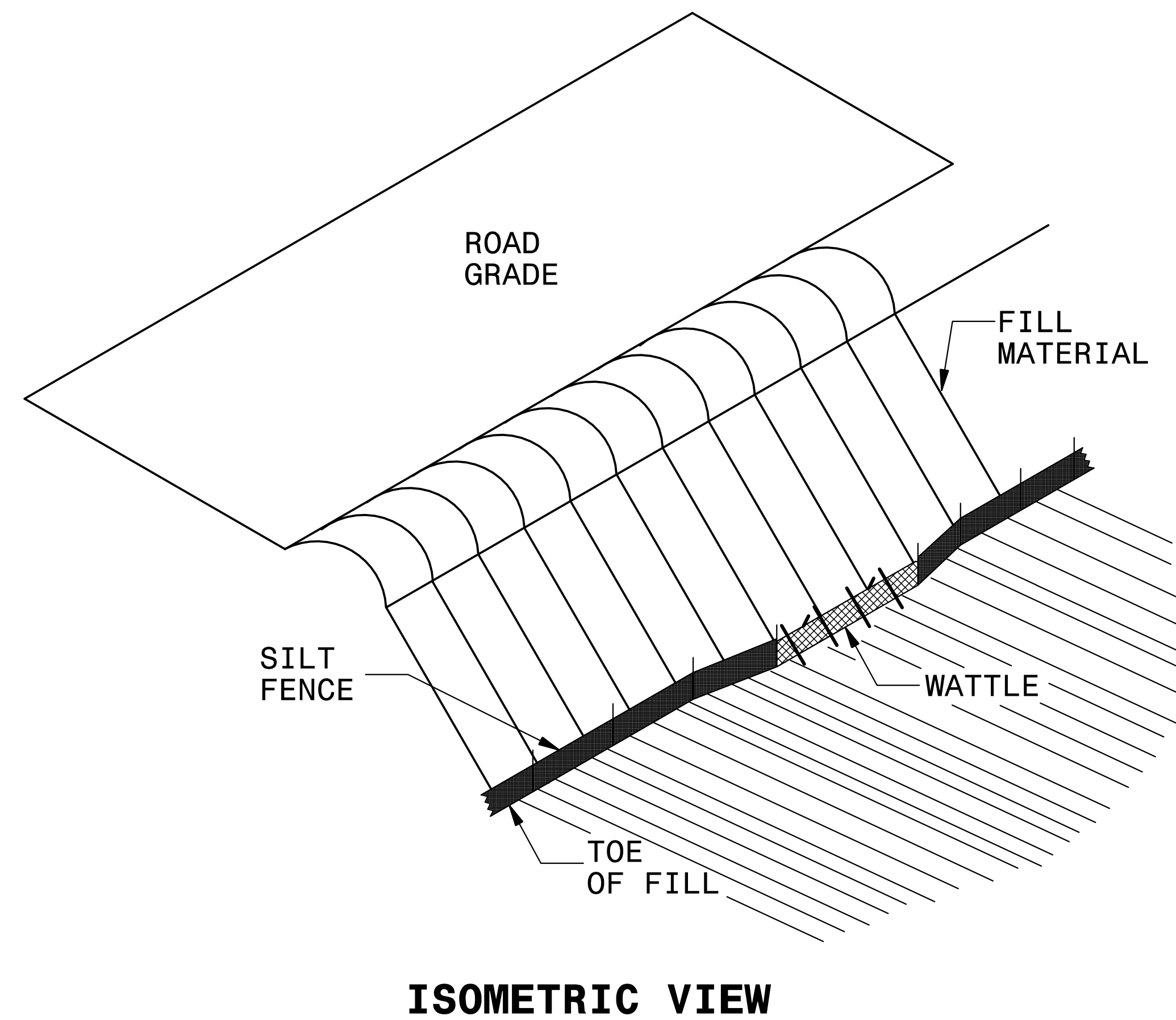
ALLEN T. HODGES, EI
EROSION CONTROL
LEVEL III
CERTIFICATION #3633

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	

SILT FENCE COIR FIBER WATTLE BREAK DETAIL



NOTES:

USE MINIMUM 12 IN. DIAMETER COIR FIBER (COCONUT FIBER) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 1 TO 2 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLE ON TOE OF SLOPE.

USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

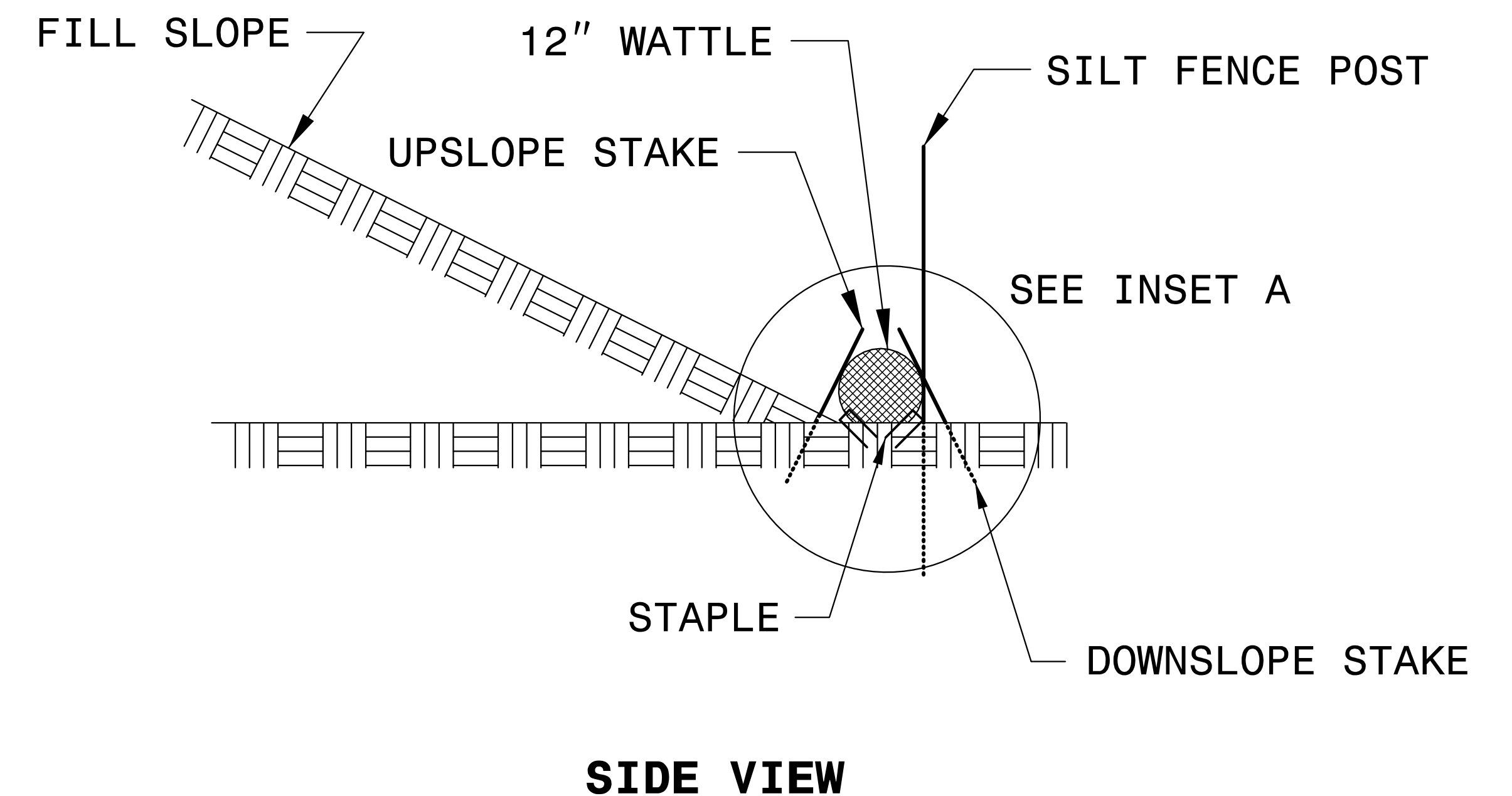
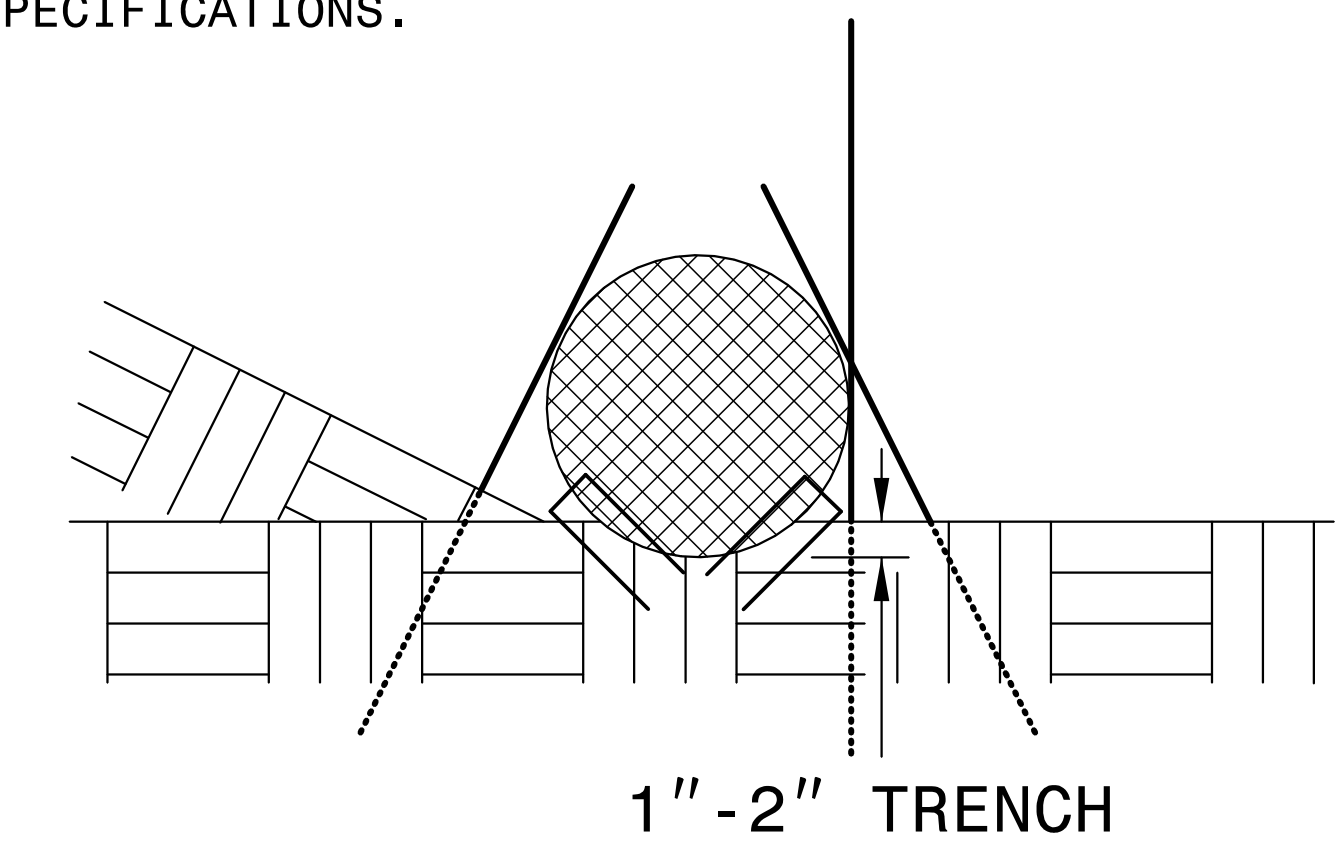
PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

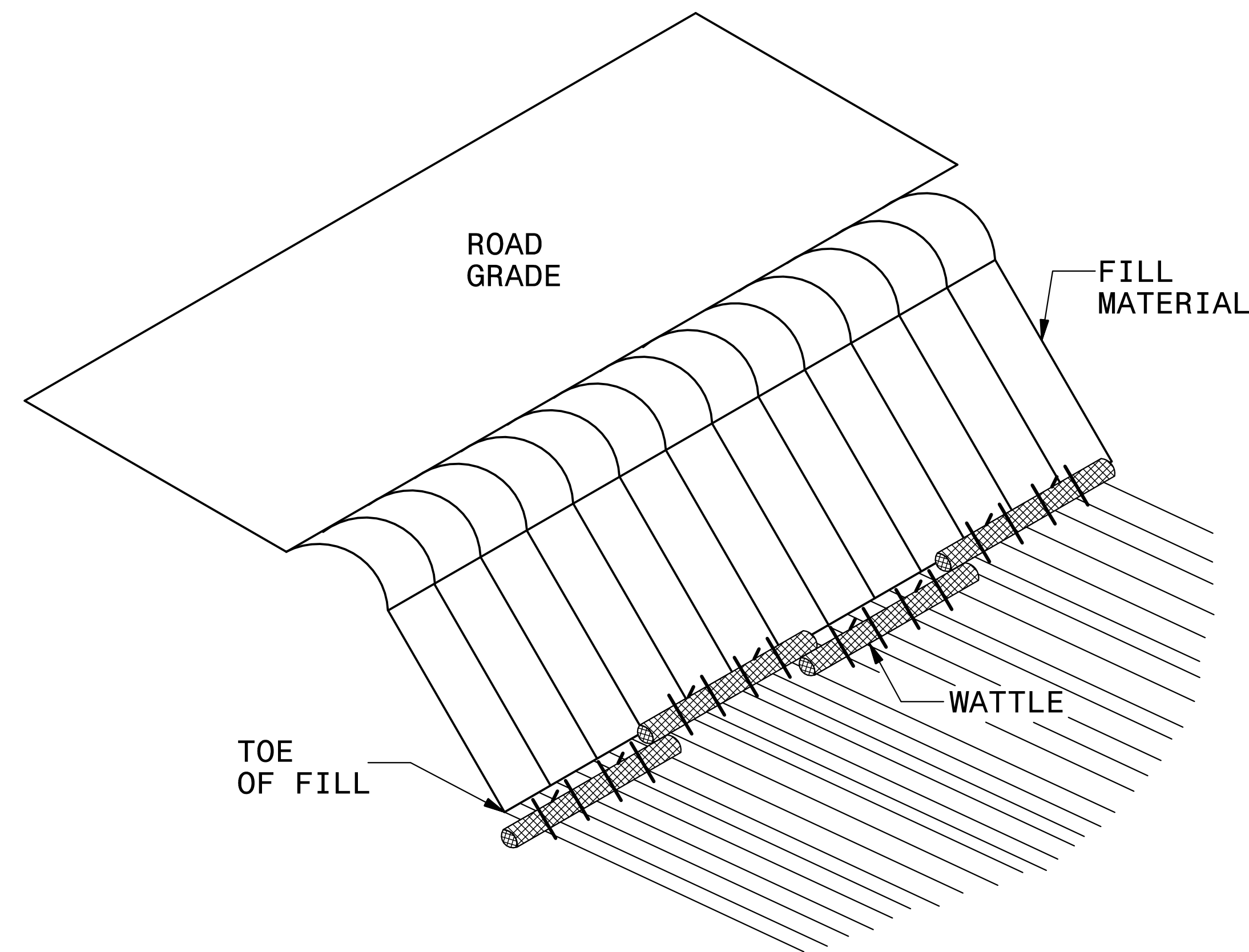
WATTLE INSTALLATION CAN BE ON OUTSIDE OF THE SILT FENCE AS DIRECTED.

INSTALL TEMPORARY SILT FENCE IN ACCORDANCE WITH SECTION 1605 OF THE STANDARD SPECIFICATIONS.

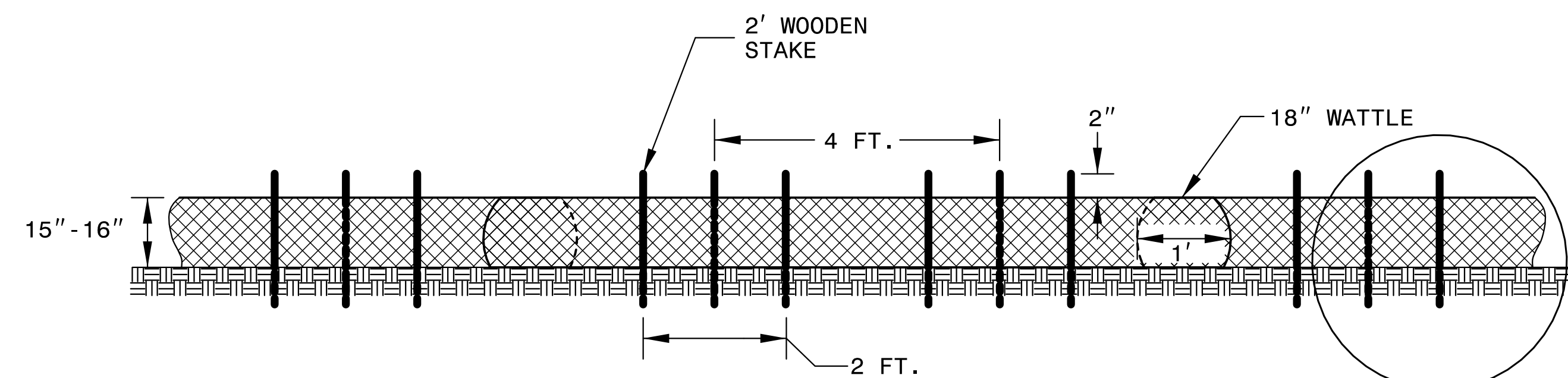
INSET A



COIR FIBER WATTLE BARRIER DETAIL



ISOMETRIC VIEW



FRONT VIEW

NOTES:

USE MINIMUM 18 IN. NOMINAL DIAMETER COIR FIBER (COCONUT) WATTLE AND LENGTH OF 10 FT.

EXCAVATE A 2 TO 3 INCH TRENCH FOR WATTLE TO BE PLACED.

DO NOT PLACE WATTLES ON TOE OF SLOPE.

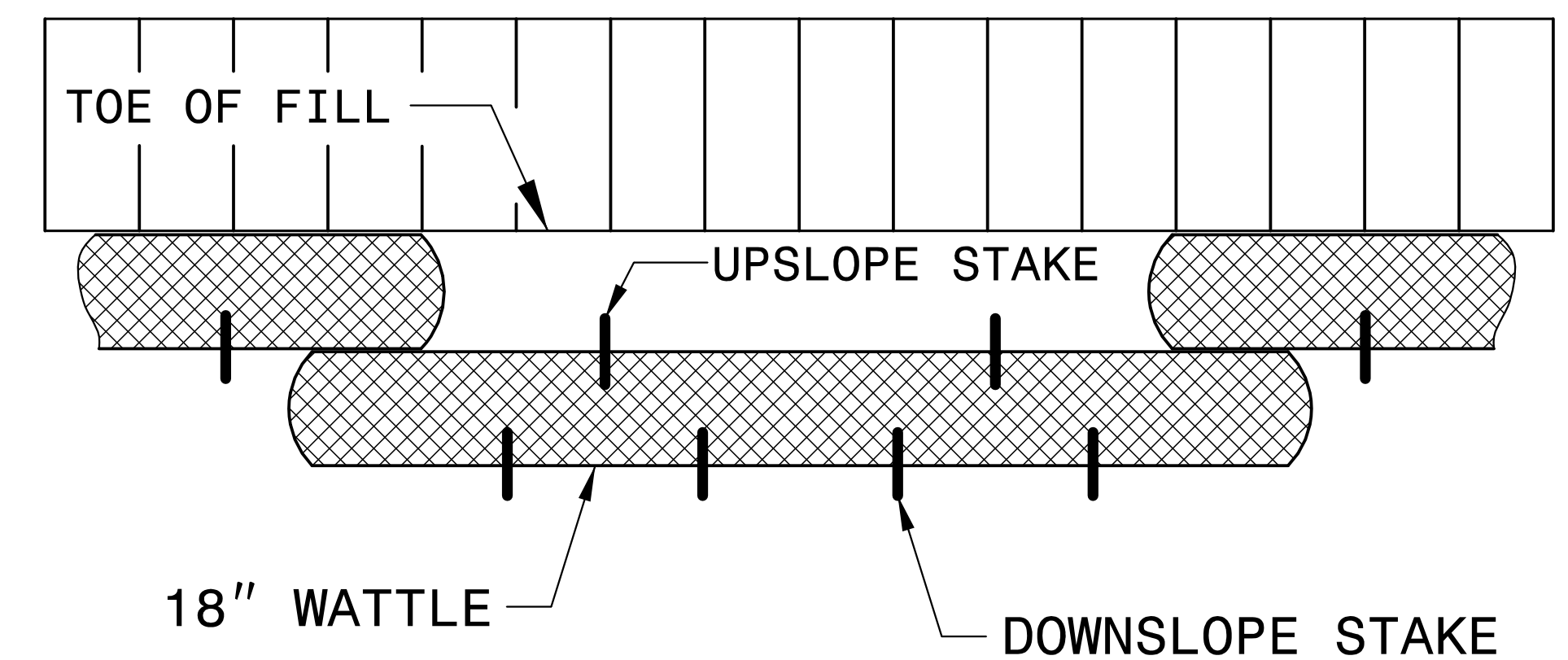
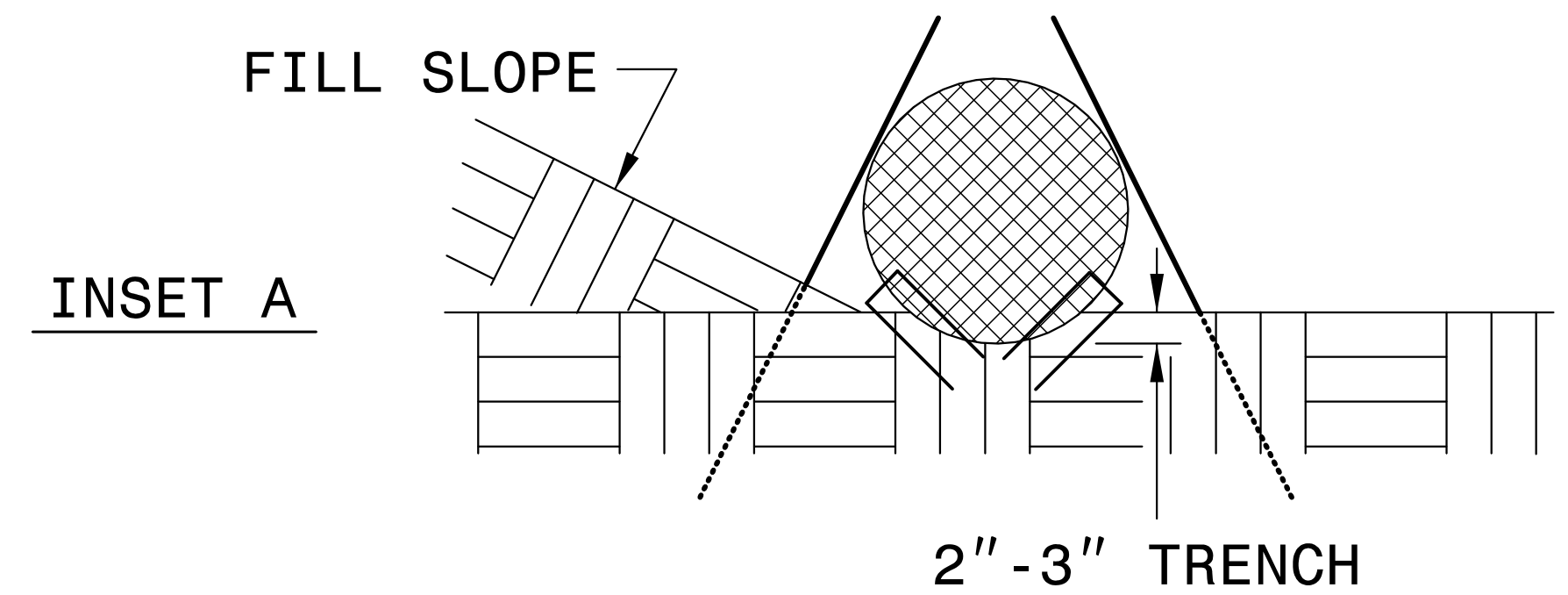
USE 2 FT. WOODEN STAKES WITH A 2 IN. BY 2 IN. NOMINAL CROSS SECTION.

INSTALL A MINIMUM OF 2 UPSLOPE STAKES AND 4 DOWNSLOPE STAKES AT AN ANGLE TO WEDGE WATTLE TO GROUND.

PROVIDE STAPLES MADE OF 0.125 IN. DIAMETER STEEL WIRE FORMED INTO A U SHAPE NOT LESS THAN 12" IN LENGTH.

INSTALL STAPLES APPROXIMATELY EVERY 1 LINEAR FOOT ON BOTH SIDES OF WATTLE AND AT EACH END TO SECURE IT TO THE SOIL.

FOR BREAKS ALONG LARGE SLOPES, USE MAXIMUM SPACING OF 20 FT.



TOP VIEW

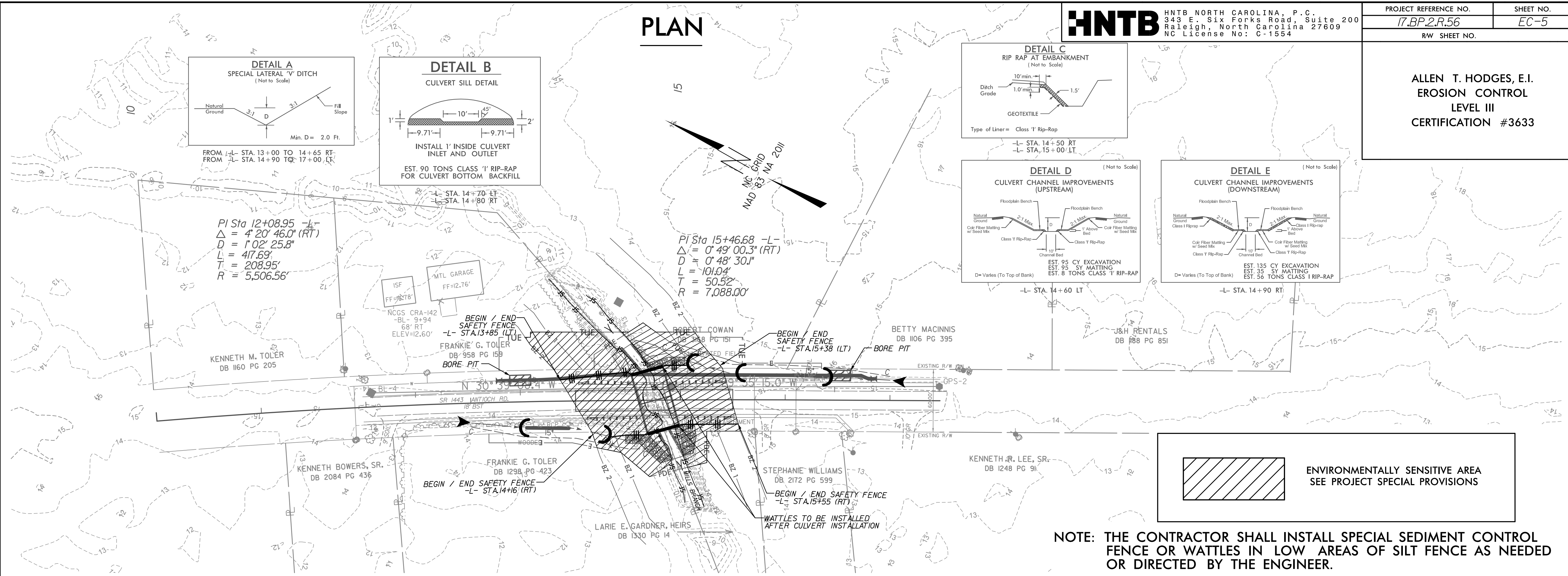
DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

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.

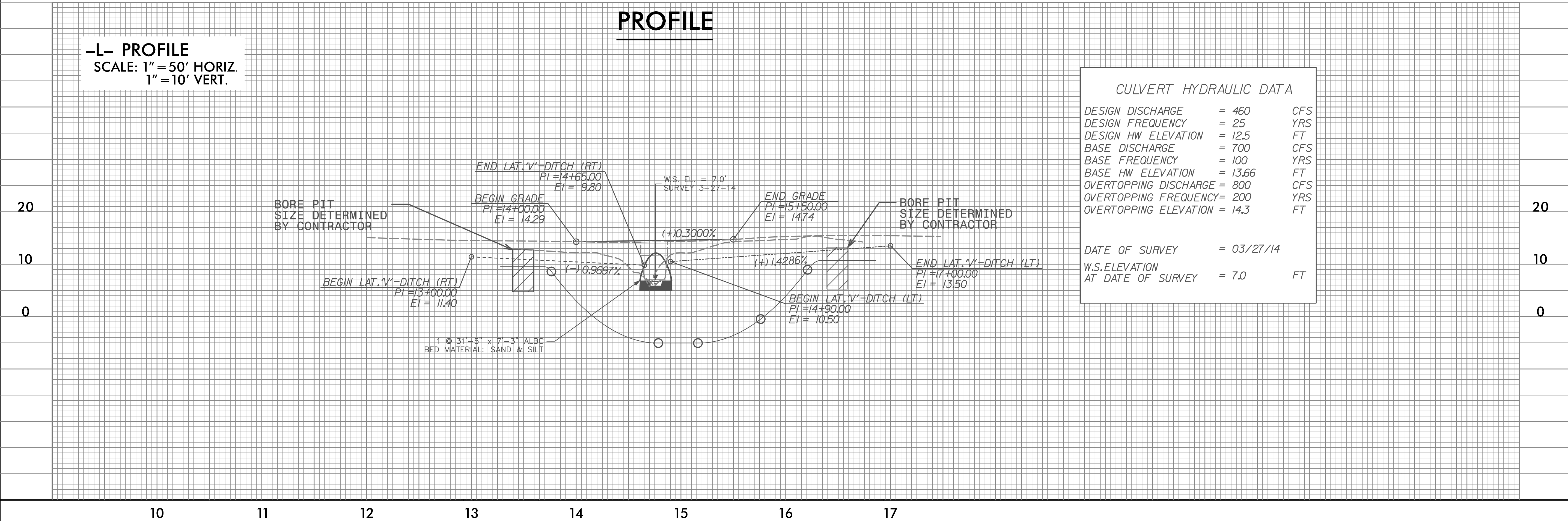
PLAN

ALLEN T. HODGES, E.I.
 EROSION CONTROL
 LEVEL III
 CERTIFICATION #3633



PROFILE

-L- PROFILE
 SCALE: 1" = 50' HORIZ.
 1" = 10' VERT.



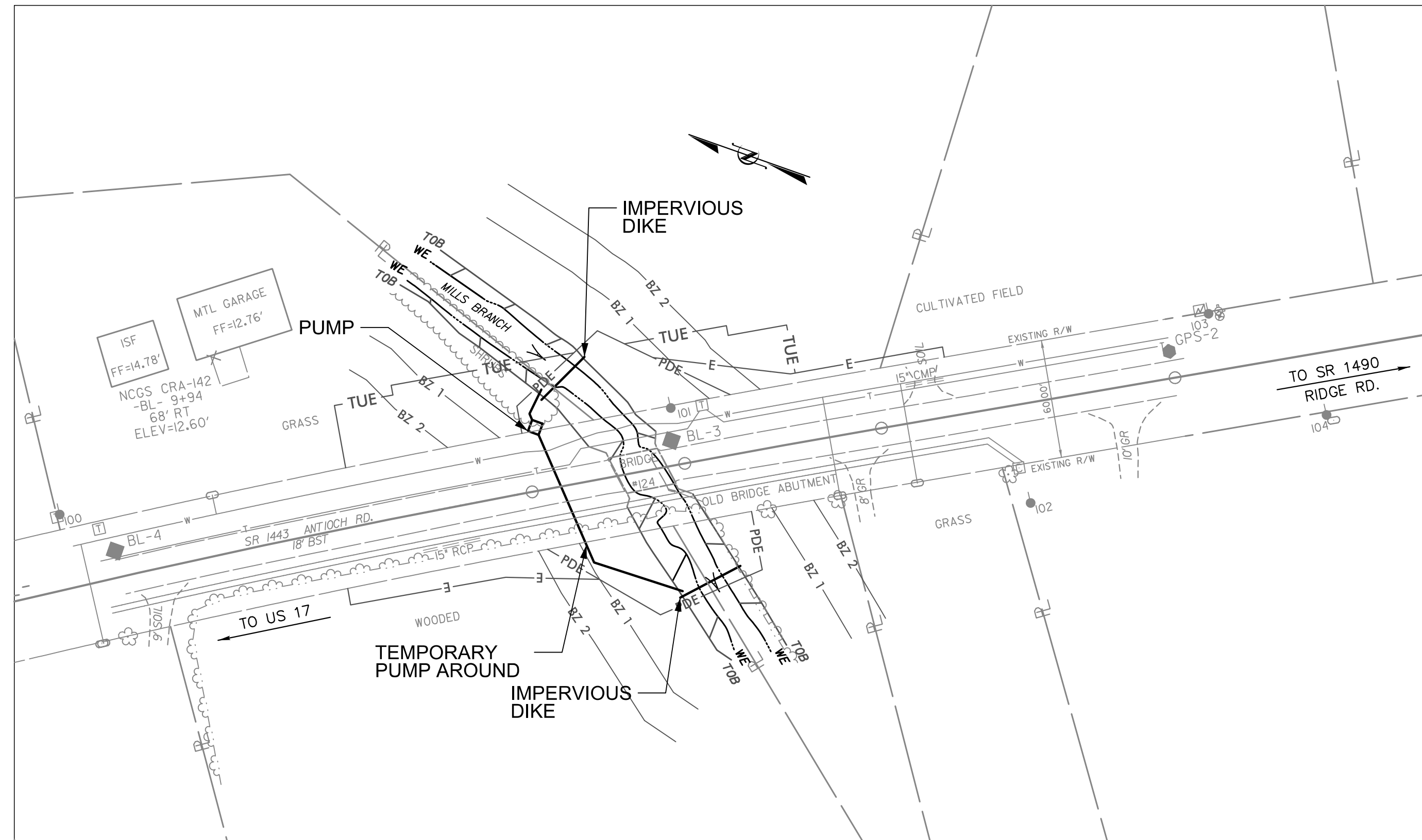
REVISIONS

17BP.2.R.56 CULVERT PHASING MILLS BRANCH CRAVEN COUNTY

HNTB HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

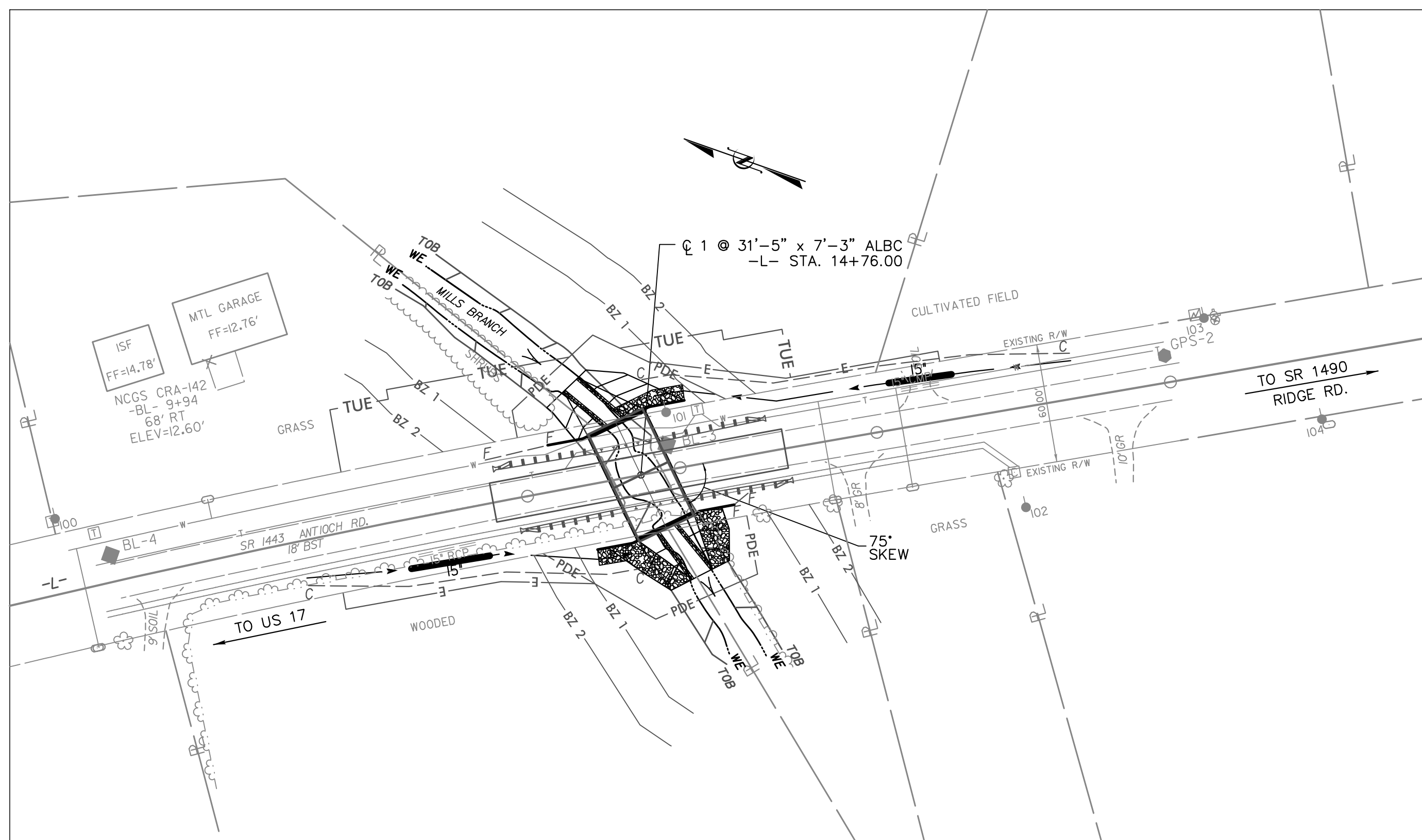
PROJECT REFERENCE NO.	SHEET NO.
17BP.2.R.56	EC-6
RW SHEET NO.	

ALLEN T. HODGES, E.I.
EROSION CONTROL
LEVEL III
CERTIFICATION #3633



PHASE I

1. INSTALL IMPERVIOUS DIKES AS SHOWN.
2. INSTALL PIPE AND PUMP. THEN PUMP MILLS BRANCH AROUND CONSTRUCTION AREA.
3. DEWATER CONSTRUCTION AREA INTO SPECIAL STILLING BASIN(S).



PHASE II

1. REMOVE EXISTING BRIDGE IN ITS ENTIRETY.
2. INSTALL ALUMINUM BOX CULVERT & GRADE CHANNEL. LINE CHANNEL BANKS WITH CLASS I RIP RAP AS SHOWN.
3. REMOVE IMPERVIOUS DIKES, PUMP AND TEMP. PIPE.

STATE PROJECT: 17.BP.2.R.56

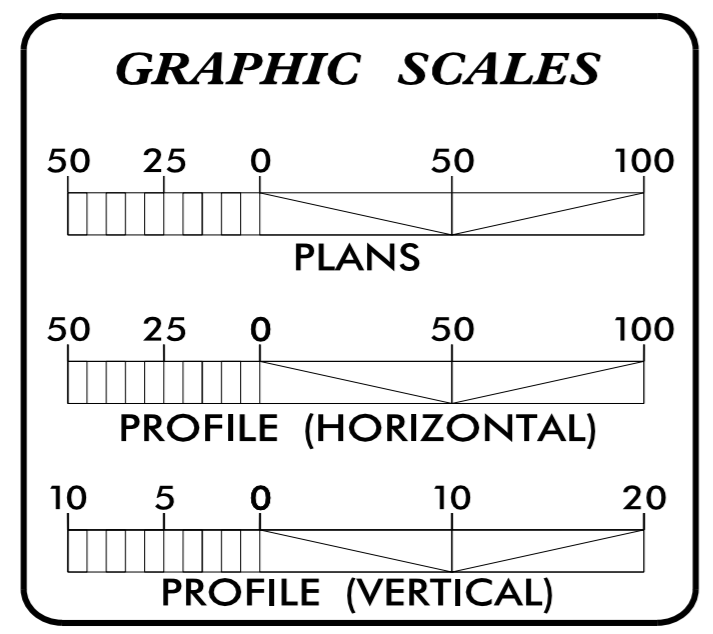
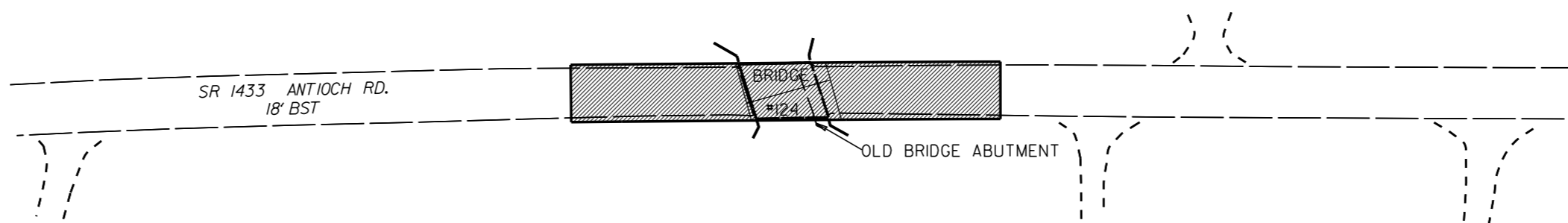
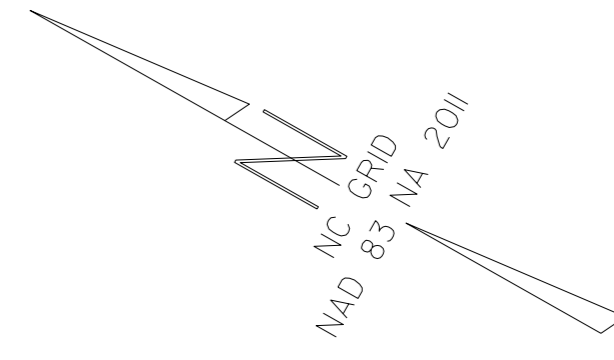
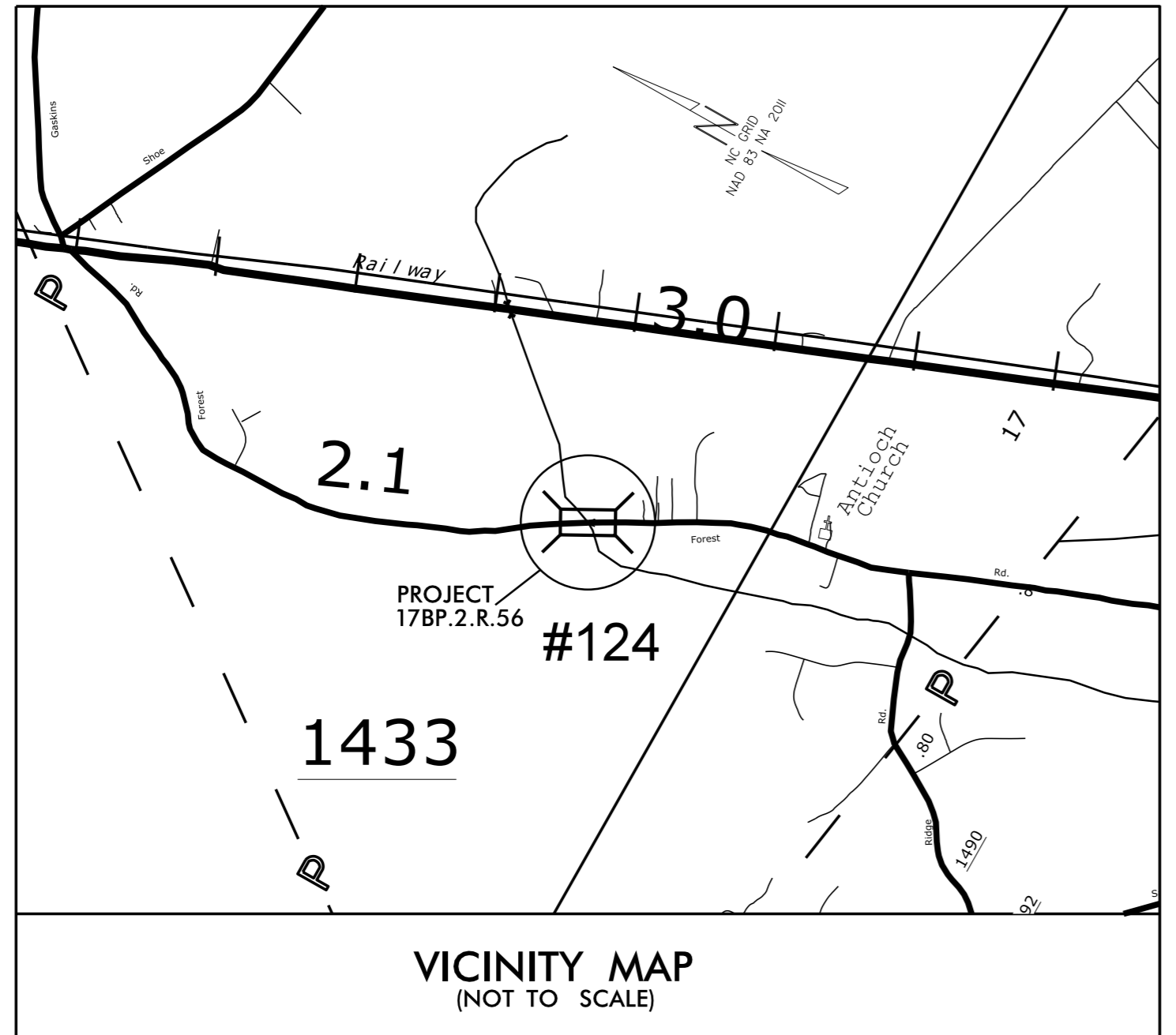
T.I.P. NO.	SHEET NO.
17BP.2.R.56	UC-1

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

**UTILITY CONSTRUCTION PLANS
CRAVEN COUNTY**

**LOCATION: BRIDGE #124 OVER MILLS BRANCH
ON SR 1433 ANTIOCH RD**

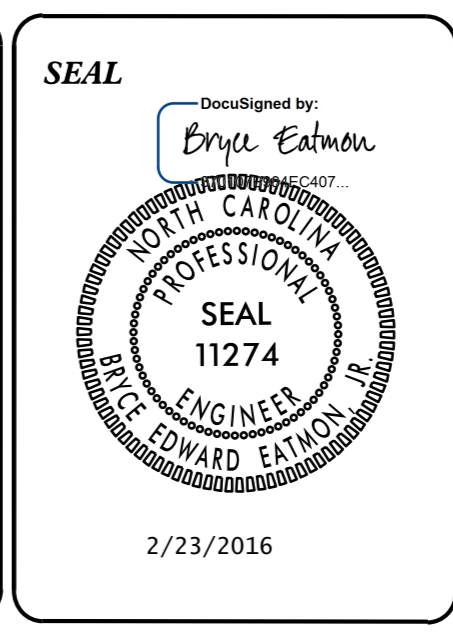
TYPE OF WORK: WATER MAIN RELOCATION



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	SUMMARY OF QUANTITIES
UC-3	UTILITY CONSTRUCTION SHEET
UC-4	DETAILS SHEET

WATER OWNER ON PROJECT
(1) FIRST CRAVEN SANITARY DISTRICT - WATER

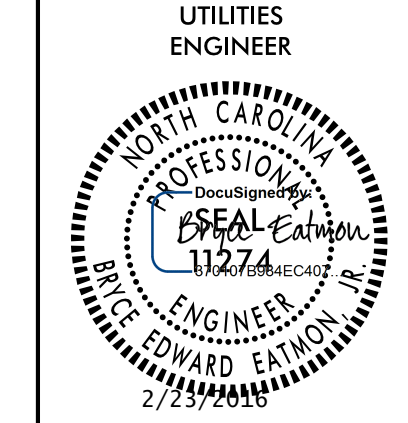


PREPARED IN THE OFFICE OF:
**DIVISION OF HIGHWAYS
DIVISION 2 - DDC**

P.O. BOX 1587
GREENVILLE, NC 27835
PHONE (252) 439-2800
FAX (252) 830-3352

BRYCE E. EATMON UTILITIES ENGINEER
LANG JONES UTILITIES PROJECT DESIGNER

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UTILITY CONSTRUCTION

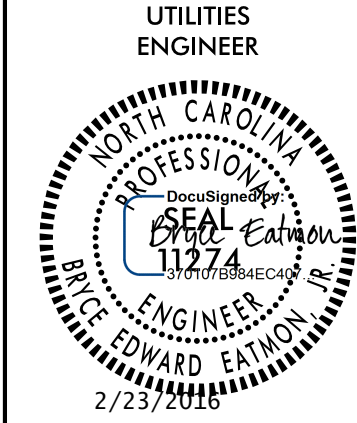
STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS SUMMARY OF QUANTITIES

<i>WATER MAIN</i>	<i>QUANTITY</i>	<i>UNIT</i>	<i>ITEM DESCRIPTION</i>
	60	LF	6" DI PIPE - PC 350 (AWWA C600)
	270	LF	8" HDPE PIPE - DR9 (AWWA C906)
	2	EA	6" GATE VALVE AND VALVE BOX
	2	EA	DI PIPE TO HDPE TRANSITION
	2	EA	CONCRETE THRUST COLLAR
	365	LF	ABANDON 6" UTILITY PIPE
	190	LF	TEMPORARY SILT FENCE
	0.2	ACRES	SEEDING AND MULCHING
	2	EA	33'30" ELBOW WITH RESTRAINED JOINTS

REVISIONS

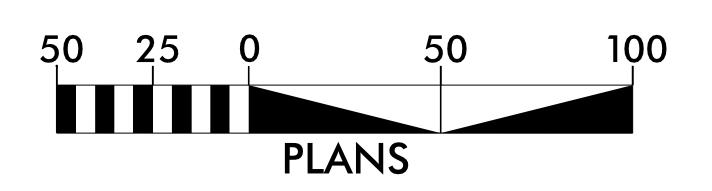
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UTILITY CONSTRUCTION PLAN

- NOTES:
- 8" HDPE WATER MAIN TO CONFORM TO THE FOLLOWING: AWWA C906, AWWA M55, PRESSURE CLASS 200, DR9, DUCTILE IRON PIPE SIZE (DIPS) DIMENSIONS, AND MATERIAL DESIGNATION PE 3408 AND NSF APPROVED FOR POTABLE WATER.
 - THE PROPOSED WATER LINE RELOCATION DOES NOT IMPACT ANY ENVIRONMENTALLY SENSITIVE AREAS AND NO ENVIRONMENTAL PERMITS ARE REQUIRED.
 - LOCATION AND ELEVATION OF ALL UNDERGROUND UTILITIES SHALL BE FIELD VERIFIED BY CONTRACTOR AND MAINTAIN 18" MINIMUM VERTICAL SEPARATION.
 - RECONNECT ALL WATER SERVICE LINES AS NECESSARY.



LEGEND:

- Temporary Silt Fence.....
- Tapping Gate Valve.....
- HDPE to DIP Transition.....
- Thrust Collar.....

DATUM DESCRIPTION

THE LOCALIZED COORDINATE SYSTEM DEVELOPED FOR THIS PROJECT IS BASED ON THE STATE PLANE COORDINATES ESTABLISHED BY NCDOT FOR MONUMENT "GPS-2"

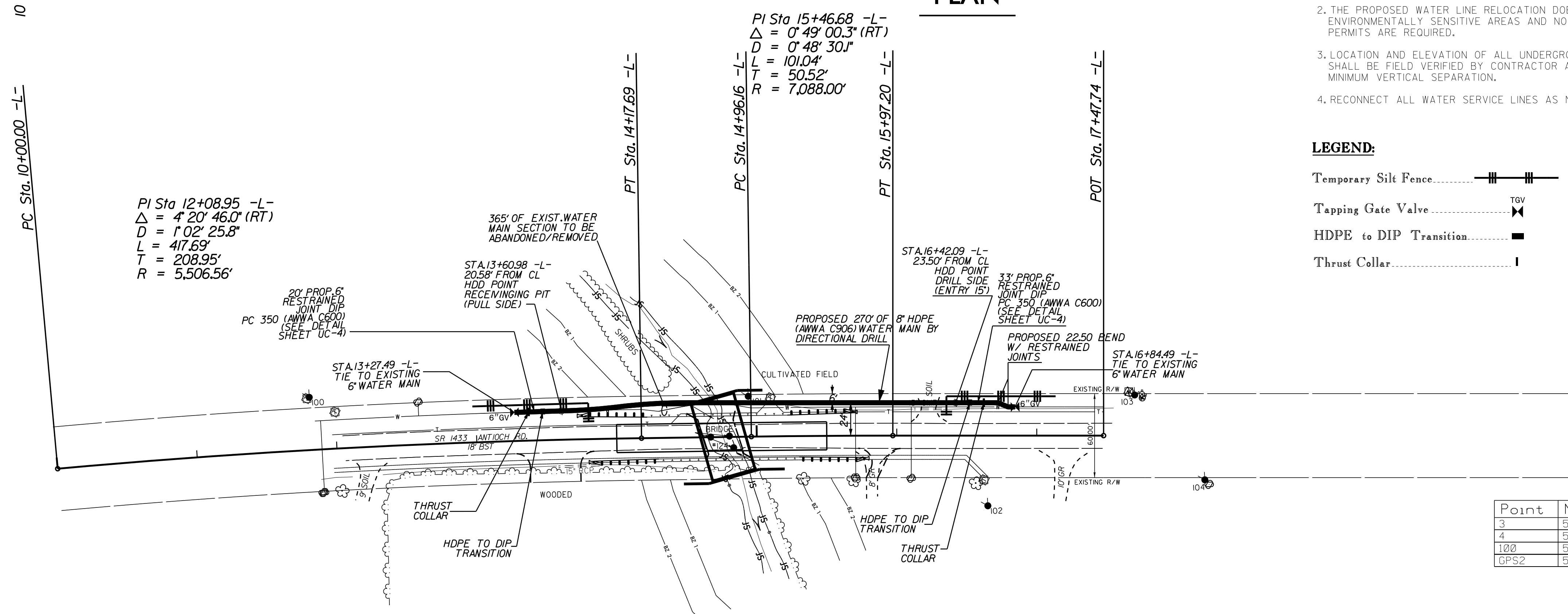
WITH NAD 83/NA 2011 STATE PLANE GRID COORDINATES OF NORTHING: 524930.153(ft) EASTING: 2581612.336(ft) ELEVATION: 14.47(ft)

THE AVERAGE COMBINED GRID FACTOR USED ON THIS PROJECT (GROUND TO GRID) IS: 0.99987857

THE N.C. LAMBERT GRID BEARING AND LOCALIZED HORIZONTAL GROUND DISTANCE FROM "GPS-2" TO -L- STATION 10+00 IS N 32° 01' 50" W 747.3211'

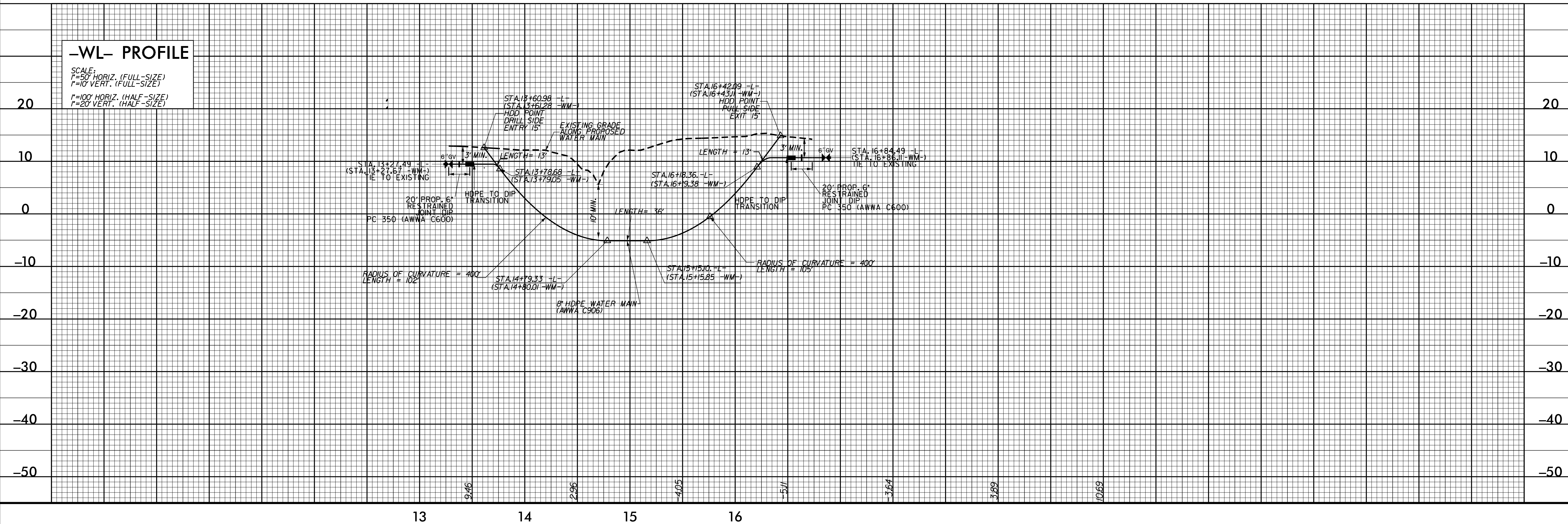
ALL LINEAR DIMENSIONS ARE LOCALIZED HORIZONTAL DISTANCES VERTICAL DATUM USED IS NAVD 88

Point	North	East	Elevation	Description
3	525152.425	2581486.132	13.640	BL-3
4	525399.057	2581339.970	14.320	BL-4
100	525384.553	2581448.782	12.600	NCGS "CRA-142"
GPS2	524930.153	2581612.336	14.470	GPS-2



-WL- PROFILE

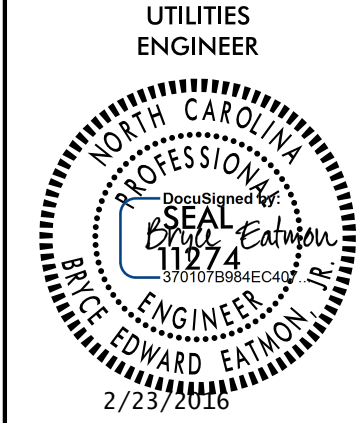
SCALE:
 H=50' HORIZ. (FULL-SIZE)
 V=10' VERT. (FULL-SIZE)
 H=100' HORIZ. (HALF-SIZE)
 V=20' VERT. (HALF-SIZE)



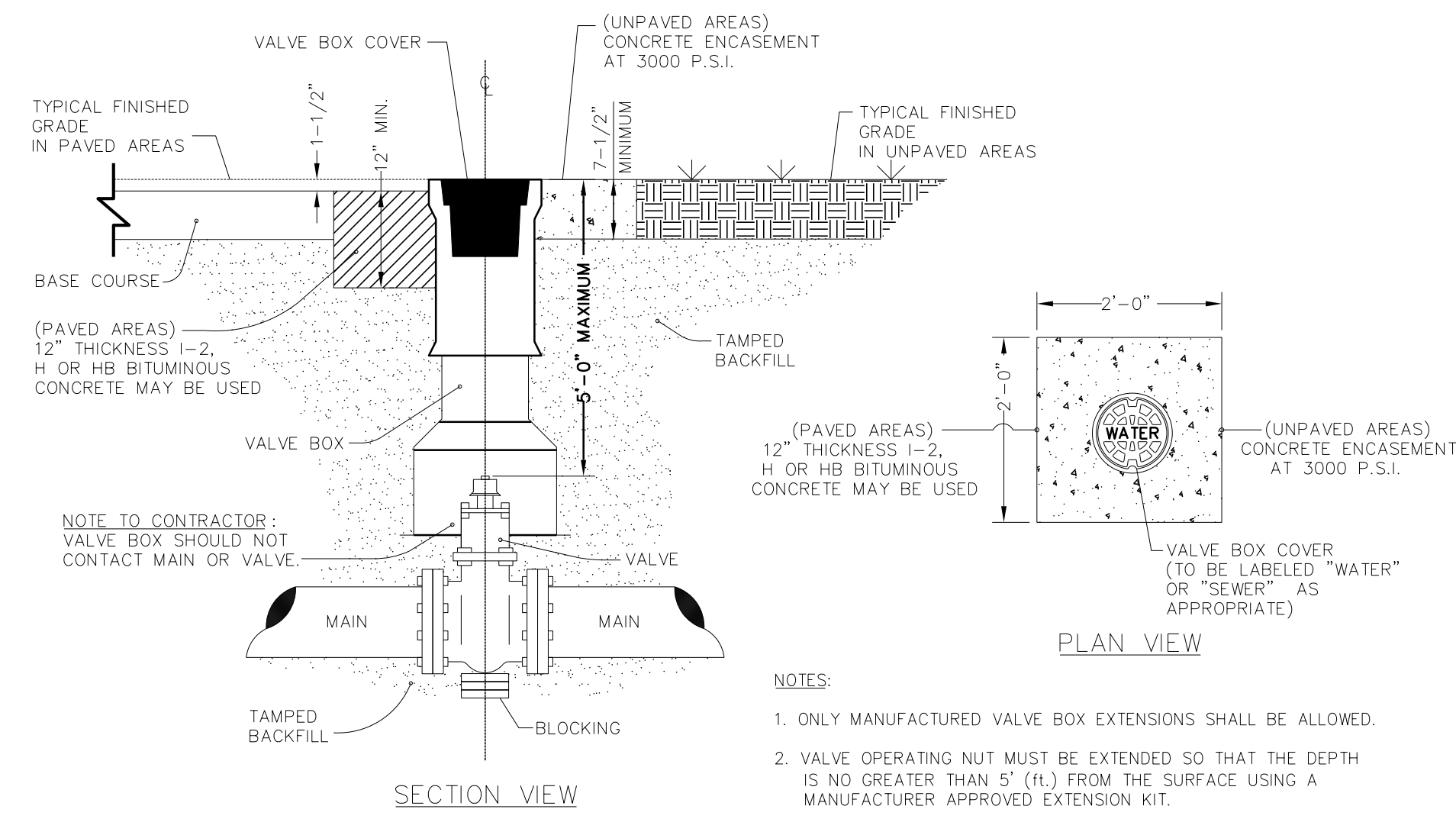
REVISIONS

8/17/99

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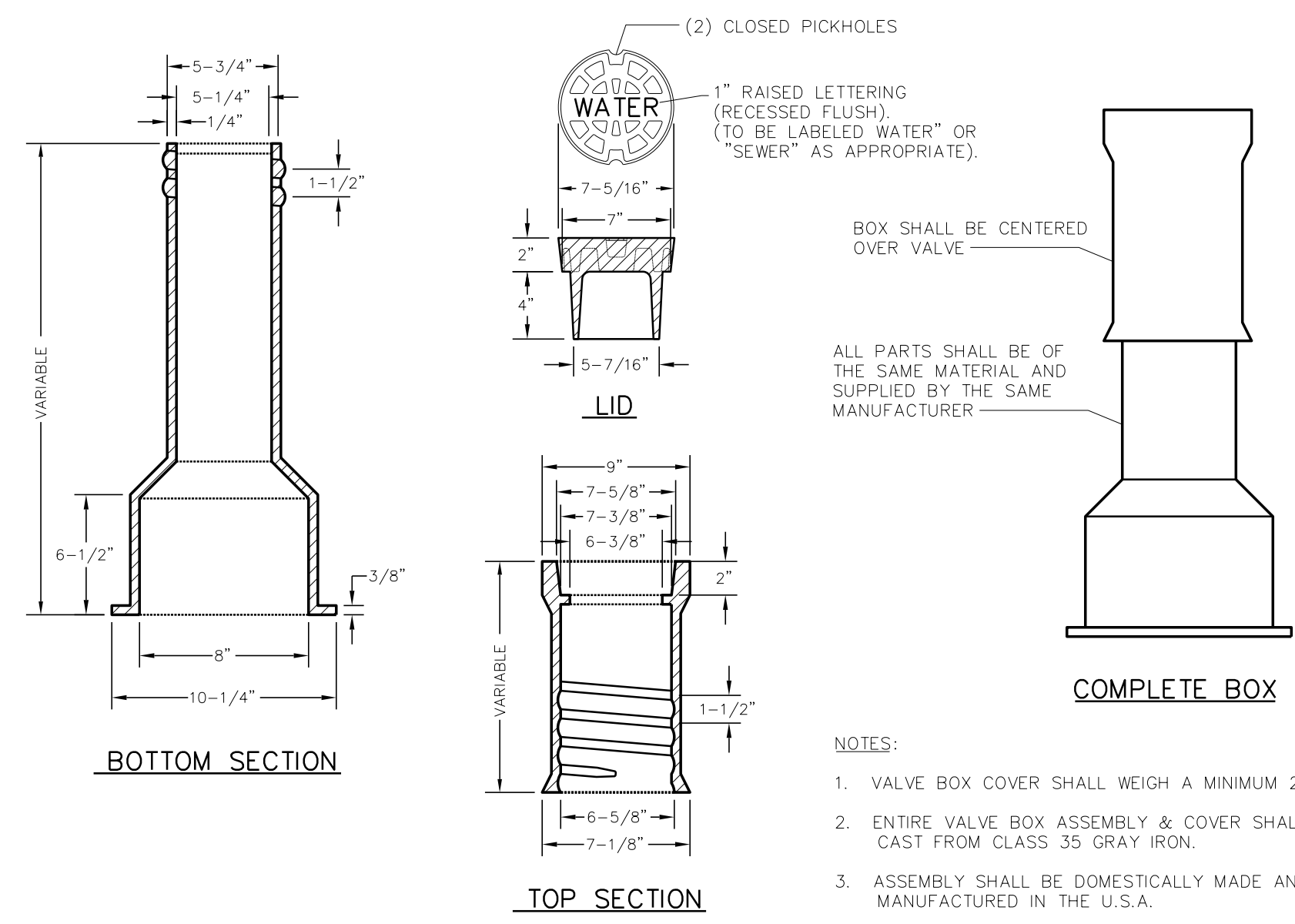


UTILITY CONSTRUCTION DETAILS SHEET



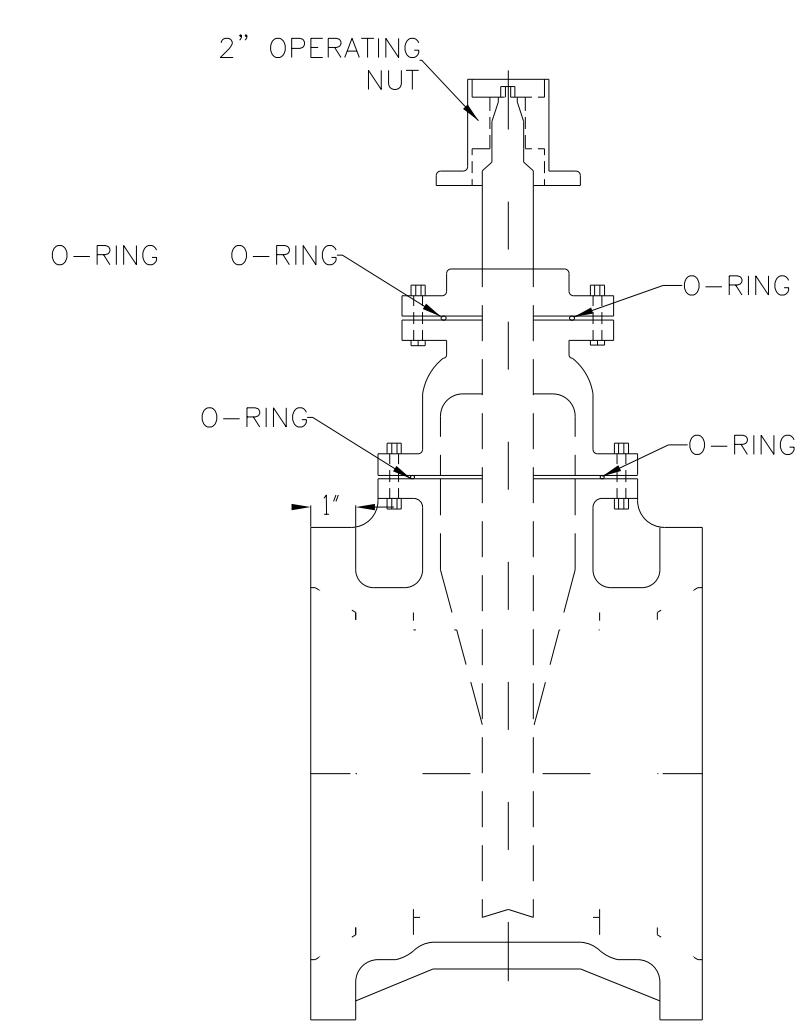
- NOTES:
1. ONLY MANUFACTURED VALVE BOX EXTENSIONS SHALL BE ALLOWED.
 2. VALVE OPERATING NUT MUST BE EXTENDED SO THAT THE DEPTH IS NO GREATER THAN 5' (ft.) FROM THE SURFACE USING A MANUFACTURER APPROVED EXTENSION KIT.
 3. PRECAST CONCRETE ENCASMENT IS ALLOWED OUTSIDE OF PAVED AREAS.

TYPICAL VALVE BOX
NTS

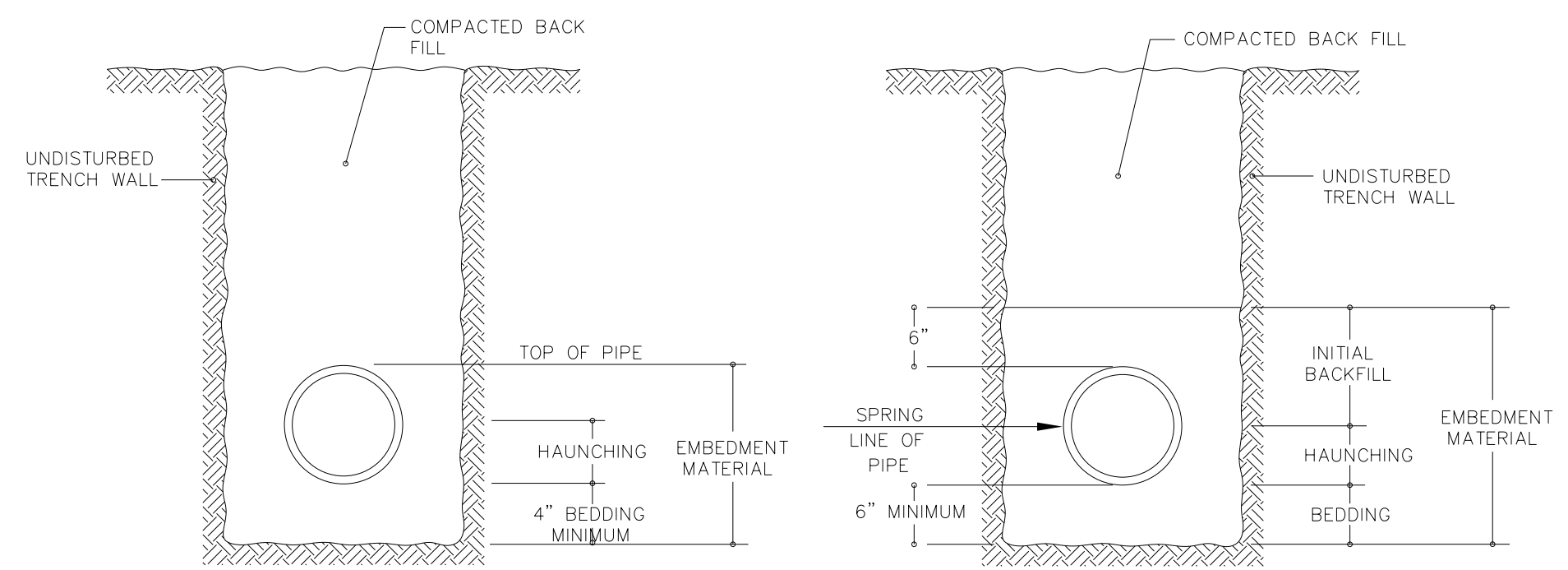


- NOTES:
1. VALVE BOX COVER SHALL WEIGH A MINIMUM 26 lbs.
 2. ENTIRE VALVE BOX ASSEMBLY & COVER SHALL BE CAST FROM CLASS 35 GRAY IRON.
 3. ASSEMBLY SHALL BE DOMESTICALLY MADE AND MANUFACTURED IN THE U.S.A.

TYPICAL VALVE BOX
NTS

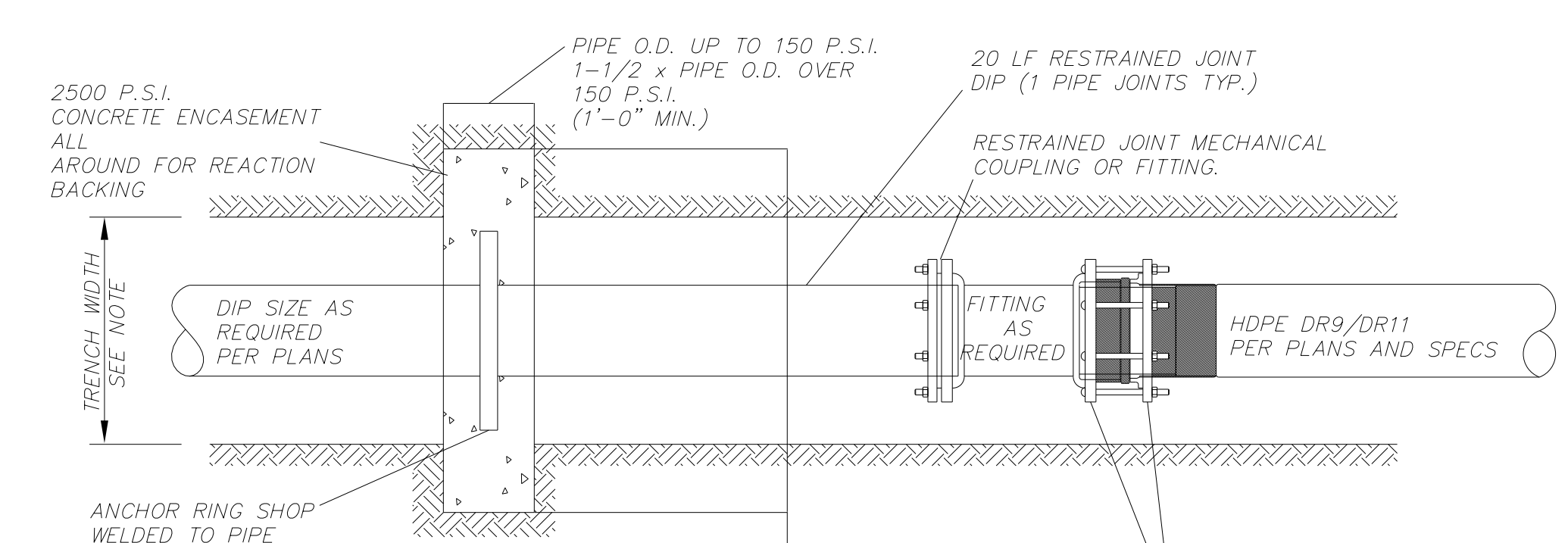


TYPICAL RESILIENT MECHANICAL
JOINT GATE VALVE DETAIL
NTS



- NOTES:
1. EMBEDMENT MATERIAL MUST BE CLASS I (NO. 67 OR NO. 78M WASHED STONE IS TYPICALLY USED).
 2. EMBEDMENT MATERIAL SHALL BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR DENSITY FOR CLASS I MATERIAL.
 3. STANDARD BEDDING SHALL BE UTILIZED FOR ALL CASES WHERE TRENCH BOTTOMS ARE UNSTABLE DUE TO SOIL TYPE, OR MOISTURE CONDITIONS.

TYPICAL BEDDING FOR FLEXIBLE & SEMI-RIGID PIPE
NTS



ANCHOR RING DIMENSIONS		
NOMINAL PIPE SIZE	O.D. OF RINGS	THICKNESS
4" - 12"	PIPE O.D. + 6"	1/2"
16" - 24"	PIPE O.D. + 7"	3/4"
30" & 36"	PIPE O.D. + 8"	1"

BEARING AREA AGAINST UNDISTURBED EARTH MUST EQUAL 7 S.F.

ANSI/AWWA STANDARD MJ GLAND AND GASKETS W/ EXTENDED BOLTS PER MJ FITTING MANUFACTURER

TYPICAL DIP TO HDPE TRANSITION DETAIL WITH THRUST COLLAR
NTS

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DIVISION OF HIGHWAYS
STATE OF NORTH CAROLINA

CROSS-SECTION SUMMARY
IN CUBIC YARDS

NOTE: Approximate quantities only. Unclassified excavation, Borrow Excavation, Fine Grading, Clearing and Grubbing, Removal of Existing Pavement and Breaking of Existing Pavement will be paid for at the contract Lump Sum price for "Grading".

LOCATION (-L-)	UNCLASSIFIED EXCAVATION	UNDERCUT	EMBANKMENT	STRUCTURE EXCAVATION
13+00.00	0	0	0	
13+50.00	7	0	8	0
14+00.00	35	0	22	0
14+30.70	31	0	23	0
14+50.00	15	0	20	216
14+76.00	9	0	185	433
15+00.00	5	0	159	431
15+22.16	10	0	4	276
15+50.00	17	0	5	0

NOTE: EMBANKMENT COLUMN DOES NOT INCLUDE BACKFILL FOR UNDERCUT.

NOTE:
APPROXIMATE QUANTITIES ONLY. UNCLASSIFIED EXCAVATION, UNCLASSIFIED STRUCTURE EXCAVATION, BORROW EXCAVATION, FINE GRADING, CLEARING AND GRUBBING AND REMOVAL OF EXISTING PAVEMENT WILL BE PAID FOR AT THE CONTRACT LUMP SUM PRICE FOR "GRADING."

