

NOTE: SEE SHEET 2A FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GEOTECHNICAL ENGINEERING UNIT

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	38499.1.1 (B-4725)	1	9
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38499.1.1	BRZ-1554(4)	P.E.	
		RW & UTIL.	

CONTENTS

LINE	STATION	PLAN	PROFILE	XSECT
-LDET-	10+00.00 to 19+31.00			4

ROADWAY  
SUBSURFACE INVESTIGATION

PROJ. REFERENCE NO. 38499.1.1 (B-4725) F.A. PROJ. BRZ-1554(4)  
COUNTY Caswell  
PROJECT DESCRIPTION Bridge No. 12 over Country Line Creek on SR 1554 (Yarborough Mill Road)

INVENTORY

CAUTION NOTICE

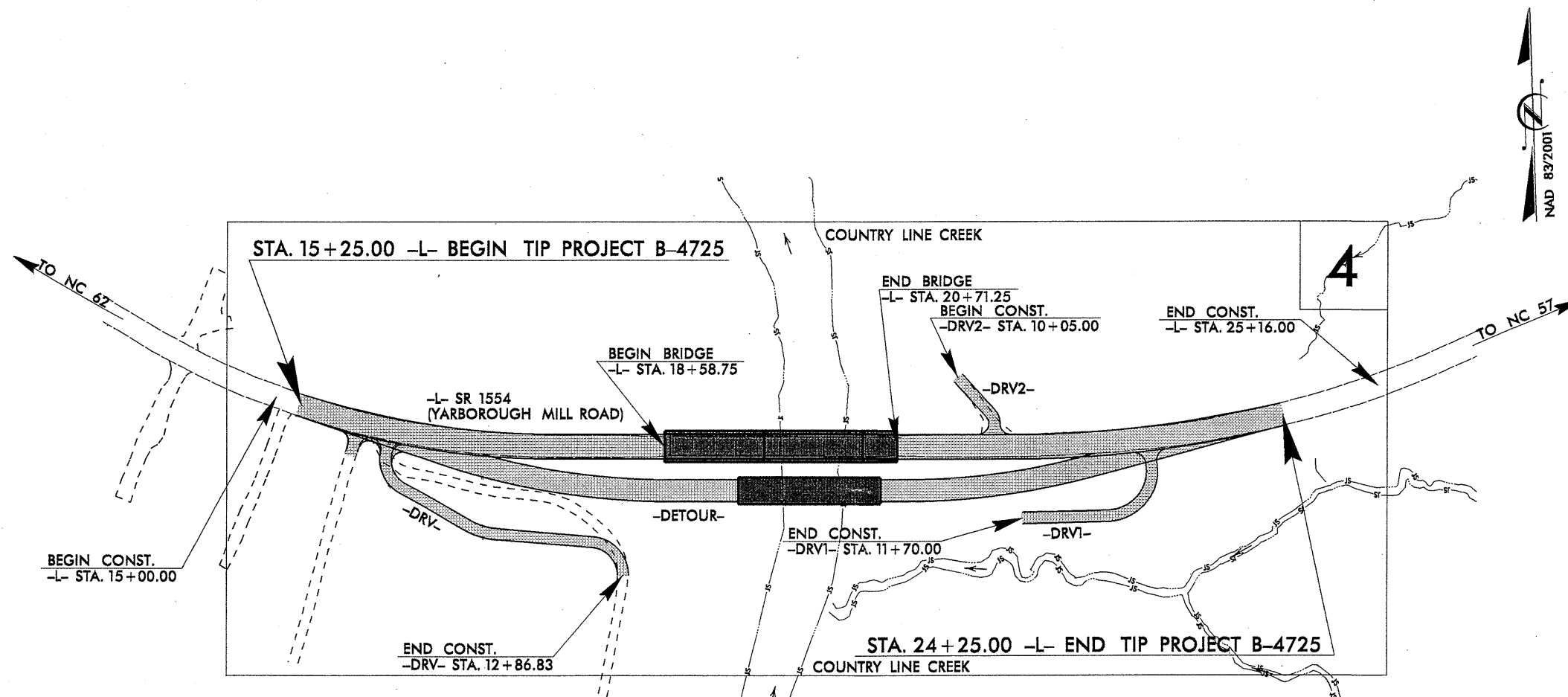
THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING, AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES, AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N.C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. NEITHER THE SUBSURFACE PLANS AND REPORTS, NOR THE FIELD BORING LOGS, ROCK CORES, OR SOIL TEST DATA ARE PART OF THE CONTRACT.

GENERAL SOIL AND ROCK STRATA DESCRIPTIONS AND INDICATED BOUNDARIES ARE BASED ON A GEOTECHNICAL INTERPRETATION OF ALL AVAILABLE SUBSURFACE DATA AND MAY NOT NECESSARILY REFLECT THE ACTUAL SUBSURFACE CONDITIONS BETWEEN BORINGS OR BETWEEN SAMPLED STRATA WITHIN THE BOREHOLE. THE LABORATORY SAMPLE DATA AND THE IN SITU (IN-PLACE) TEST DATA CAN BE RELIED ON ONLY TO THE DEGREE OF RELIABILITY INHERENT IN THE STANDARD TEST METHOD. THE OBSERVED WATER LEVELS OR SOIL MOISTURE CONDITIONS INDICATED IN THE SUBSURFACE INVESTIGATIONS ARE AS RECORDED AT THE TIME OF THE INVESTIGATION. THESE WATER LEVELS OR SOIL MOISTURE CONDITIONS MAY VARY CONSIDERABLY WITH TIME ACCORDING TO CLIMATIC CONDITIONS INCLUDING TEMPERATURES, PRECIPITATION, AND WIND, AS WELL AS OTHER NON-CLIMATIC FACTORS.

THE BIDDER OR CONTRACTOR IS CAUTIONED THAT DETAILS SHOWN ON THE SUBSURFACE PLANS ARE PRELIMINARY ONLY AND IN MANY CASES THE FINAL DESIGN DETAILS ARE DIFFERENT. FOR BIDDING AND CONSTRUCTION PURPOSES, REFER TO THE CONSTRUCTION PLANS AND DOCUMENTS FOR FINAL DESIGN INFORMATION ON THIS PROJECT. THE DEPARTMENT DOES NOT WARRANT OR GUARANTEE THE SUFFICIENCY OR ACCURACY OF THE INVESTIGATION MADE, NOR THE INTERPRETATIONS MADE, OR OPINION OF THE DEPARTMENT AS TO THE TYPE OF MATERIALS AND CONDITIONS TO BE ENCOUNTERED. THE BIDDER OR CONTRACTOR IS CAUTIONED TO MAKE SUCH INDEPENDENT SUBSURFACE INVESTIGATIONS AS HE DEEMS NECESSARY TO SATISFY HIMSELF AS TO CONDITIONS TO BE ENCOUNTERED ON THIS PROJECT. THE CONTRACTOR SHALL HAVE NO CLAIM FOR ADDITIONAL COMPENSATION OR FOR AN EXTENSION OF TIME FOR ANY REASON RESULTING FROM THE ACTUAL CONDITIONS ENCOUNTERED AT THE SITE DIFFERING FROM THOSE INDICATED IN THE SUBSURFACE INFORMATION.

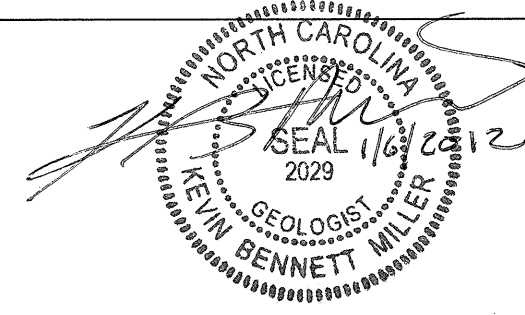
ID: B-4725

CONTRACT: C203079



PERSONNEL  
B.D. WORLEY  
C.M. WHALEN, Jr.

INVESTIGATED BY B.D. WORLEY  
CHECKED BY C.M. WHALEN, Jr.  
SUBMITTED BY K.B. MILLER  
DATE 1/12



DRAWN BY: D. Racey

NOTE - THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N.C. DEPARTMENT OF TRANSPORTATION AS BEING ACCURATE NOR IT IS CONSIDERED TO BE PART OF THE PLANS, SPECIFICATIONS, OR CONTRACT FOR THE PROJECT.

NOTE - BY HAVING REQUESTED THIS INFORMATION THE CONTRACTOR SPECIFICALLY WAIVES ANY CLAIMS FOR INCREASED COMPENSATION OR EXTENSION OF TIME BASED ON DIFFERENCES BETWEEN THE CONDITIONS INDICATED HEREIN AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

**NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GEOTECHNICAL ENGINEERING UNIT**

PROJECT REFERENCE NO.  
38499.11(B-4725) SHEET NO.  
2

**SUBSURFACE INVESTIGATION**

**SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS**

SOIL DESCRIPTION				GRADATION				ROCK DESCRIPTION				TERMS AND DEFINITIONS							
SOIL IS CONSIDERED TO BE THE UNCONSOLIDATED, SEMI-CONSOLIDATED, OR WEATHERED EARTH MATERIALS THAT CAN BE PENETRATED WITH A CONTINUOUS FLIGHT POWER AUGER, AND YIELD LESS THAN 100 BLOWS PER FOOT ACCORDING TO STANDARD PENETRATION TEST (ASTM D-1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY SHALL INCLUDE: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. EXAMPLE: <i>VERY STIFF, GRN. SATY CLM, MOST WITH INTERBEDDED FINE SAND LAYERS, HEAVY PLASTIC, A-7-6</i>				WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE. UNIFORM - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE. (ALSO POORLY GRADED). POORLY GRADED. GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLES OF TWO OR MORE SIZES. ANGULARITY OF GRAINS THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.				HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT IF TESTED, WOULD YIELD SPT REFUSAL. AN INFERRED ROCK LINE INDICATES THE LEVEL AT WHICH NON-COASTAL PLAIN MATERIAL WOULD YIELD SPT REFUSAL. SPT REFUSAL IS PENETRATION BY A SPLIT SPOON SAMPLER EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. IN NON-COASTAL PLAIN MATERIAL, THE TRANSITION BETWEEN SOIL AND ROCK IS OFTEN REPRESENTED BY A ZONE OF WEATHERED ROCK. ROCK MATERIALS ARE TYPICALLY DIVIDED AS FOLLOWS: WEATHERED ROCK (WR) CRYSTALLINE ROCK (CR) NON-CRYSTALLINE ROCK (NCR) COASTAL PLAIN SEDIMENTARY ROCK (CP)				ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. AQUIFER - A WATER BEARING FORMATION OR STRATA. ARENACEOUS - APPLIED TO ROCKS THAT HAVE BEEN DERIVED FROM SAND OR THAT CONTAIN SAND. ARGILLACEOUS - APPLIED TO ALL ROCKS OR SUBSTANCES COMPOSED OF CLAY MINERALS, OR HAVING A NOTABLE PROPORTION OF CLAY IN THEIR COMPOSITION, AS SHALE, SLATE, ETC. ARTESIAN - GROUND WATER THAT IS UNDER SUFFICIENT PRESSURE TO RISE ABOVE THE LEVEL AT WHICH IT IS ENCOUNTERED, BUT WHICH DOES NOT NECESSARILY RISE TO OR ABOVE THE GROUND SURFACE. CALCAREOUS (CALC.) - SOILS THAT CONTAIN APPRECIABLE AMOUNTS OF CALCIUM CARBONATE. COLLUVIUM - ROCK FRAGMENTS MIXED WITH SOIL DEPOSITED BY GRAVITY ON SLOPE OR AT BOTTOM OF SLOPE. CORE RECOVERY (REC.) - TOTAL LENGTH OF ALL MATERIAL RECOVERED IN THE CORE BARREL DIVIDED BY TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. DIKE - A TABULAR BODY OF IGNEOUS ROCK THAT CUTS ACROSS THE STRUCTURE OF ADJACENT ROCKS OR CUTS MASSIVE ROCK. DIP - THE ANGLE AT WHICH A STRATUM OR ANY PLANAR FEATURE IS INCLINED FROM THE HORIZONTAL. DIP DIRECTION (DIP AZIMUTH) - THE DIRECTION OR BEARING OF THE HORIZONTAL TRACE OF THE LINE OF DIP, MEASURED CLOCKWISE FROM NORTH. FAULT - A FRACTURE OR FRACTURE ZONE ALONG WHICH THERE HAS BEEN DISPLACEMENT OF THE SIDES RELATIVE TO ONE ANOTHER PARALLEL TO THE FRACTURE. FISSILE - A PROPERTY OF SPLITTING ALONG CLOSELY SPACED PARALLEL PLANES. FLOAT - ROCK FRAGMENTS ON SURFACE NEAR THEIR ORIGINAL POSITION AND DISLOGGED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (MOTJ) - IRREGULARLY MARKED WITH SPOTS OF DIFFERENT COLORS. MOTTLING IN SOILS USUALLY INDICATES POOR AERATION AND LACK OF GOOD DRAINAGE. PERCHED WATER - WATER MAINTAINED ABOVE THE NORMAL GROUND WATER LEVEL BY THE PRESENCE OF AN INTERVENING IMPERVIOUS STRATUM. RESIDUAL (RES.) SOIL - SOIL FORMED IN PLACE BY THE WEATHERING OF ROCK. ROCK QUALITY DESIGNATION (ROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF CORE RUN AND EXPRESSED AS A PERCENTAGE. SAPROLITE (SAP) - RESIDUAL SOIL THAT RETAINS THE RELIC STRUCTURE OR FABRIC OF THE PARENT ROCK. SILL - AN INTRUSIVE BODY OF IGNEOUS ROCK OF APPROXIMATELY UNIFORM THICKNESS AND RELATIVELY THIN COMPARED WITH ITS LATERAL EXTENT, THAT HAS BEEN EMPLACED PARALLEL TO THE BEDDING OR SCHISTOSITY OF THE INTRUDED ROCKS. SLICKENSIDE - POLISHED AND STRIATED SURFACE THAT RESULTS FROM FRICTION ALONG A FAULT OR SLIP PLANE. STANDARD PENETRATION TEST (PENETRATION RESISTANCE) (SPT) - NUMBER OF BLOWS (N OR BPF) OF A 140 LB. HAMMER FALLING 30 INCHES REQUIRED TO PRODUCE A PENETRATION OF 1 FOOT INTO SOIL WITH A 2 INCH OUTSIDE DIAMETER SPLIT SPOON SAMPLER. SPT REFUSAL IS PENETRATION EQUAL TO OR LESS THAN 0.1 FOOT PER 60 BLOWS. STRATA CORE RECOVERY (SREC) - TOTAL LENGTH OF STRATA MATERIAL RECOVERED DIVIDED BY TOTAL LENGTH OF STRATUM AND EXPRESSED AS A PERCENTAGE. STRATA ROCK QUALITY DESIGNATION (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.							
SOIL LEGEND AND AASHTO CLASSIFICATION				MINERALOGICAL COMPOSITION				WEATHERING											
GENERAL CLASS. GROUP CLASS. SYMBOL % PASSING LIQUID LIMIT PLASTIC INDEX GROUP INDEX USUAL TYPES OF MAJOR MATERIALS GEN. RATING AS A SUBGRADE				SILT-CLAY MATERIALS (> 35% PASSING #200) ORGANIC MATERIALS MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHENEVER THEY ARE CONSIDERED OF SIGNIFICANCE. COMPRESSIONIBILITY PERCENTAGE OF MATERIAL GROUND WATER MISCELLANEOUS SYMBOLS				FRESH VERY SLIGHT (V SLI.) SLIGHT (SLI.) MODERATE (MOD.) MODERATELY SEVERE (MOD. SEV.) SEVERE (SEV.) VERY SEVERE (V SEV.) COMPLETE											
CONSISTENCY OR DENSENESS				TEXTURE OR GRAIN SIZE				ROCK HARDNESS											
PRIMARY SOIL TYPE GENERALY GRANULAR MATERIAL (NON-COHESIVE) GENERALY SILT-CLAY MATERIAL (COHESIVE)				U.S. STD. SIEVE SIZE BOULDER (BLDR.) COBBLE (COB.) GRAVEL (GR.) COARSE SAND (CSE. SD.) FINE SAND (F. SD.) SILT (SL.) CLAY (CL.)				VERY HARD HARD MODERATELY HARD MEDIUM HARD SOFT VERY SOFT											
SOIL MOISTURE - CORRELATION OF TERMS				SOIL MOISTURE SCALE (ATTERBERG LIMITS)				FRACTURE SPACING				BEDDING							
FIELD MOISTURE DESCRIPTION GUIDE FOR FIELD MOISTURE DESCRIPTION				SOIL MOISTURE SCALE (ATTERBERG LIMITS)				TERM VERY WIDE WIDE MODERATELY CLOSE CLOSE VERY CLOSE				TERM VERY THICKLY BEDDED THICKLY BEDDED THINLY BEDDED VERY THINLY BEDDED THICKLY LAMINATED THINLY LAMINATED							
PLASTICITY				EQUIPMENT USED ON SUBJECT PROJECT				INDURATION				BENCH MARK:							
PLASTICITY INDEX (PI) NONPLASTIC LOW PLASTICITY MED. PLASTICITY HIGH PLASTICITY				DRILL UNITS: ADVANCING TOOLS: HAMMER TYPE: CORE SIZE: HAND TOOLS:				FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF THE MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC. FRIABLE MODERATELY INDURATED INDURATED EXTREMELY INDURATED				ELEVATION: FT. NOTES:							
COLOR				DESCRIPTIONS MAY INCLUDE COLOR OR COLOR COMBINATIONS (TAN, RED, YELLOW-BROWN, BLUE-GRAY). MODIFIERS SUCH AS LIGHT, DARK, STREAKED, ETC. ARE USED TO DESCRIBE APPEARANCE.															

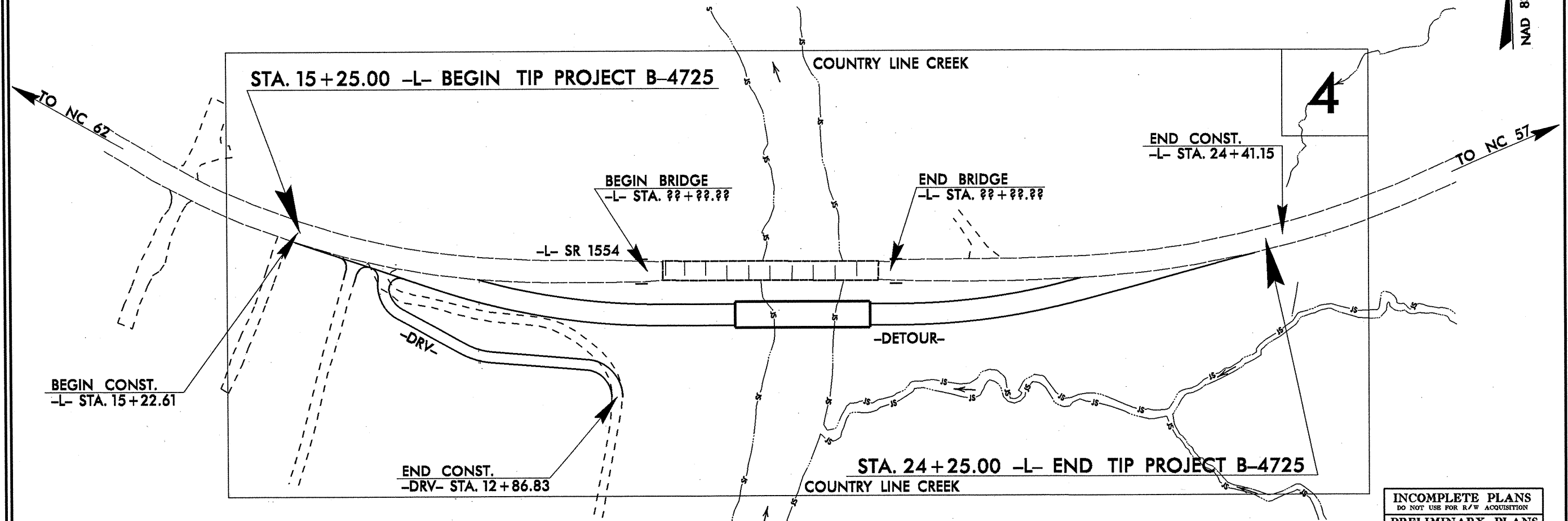
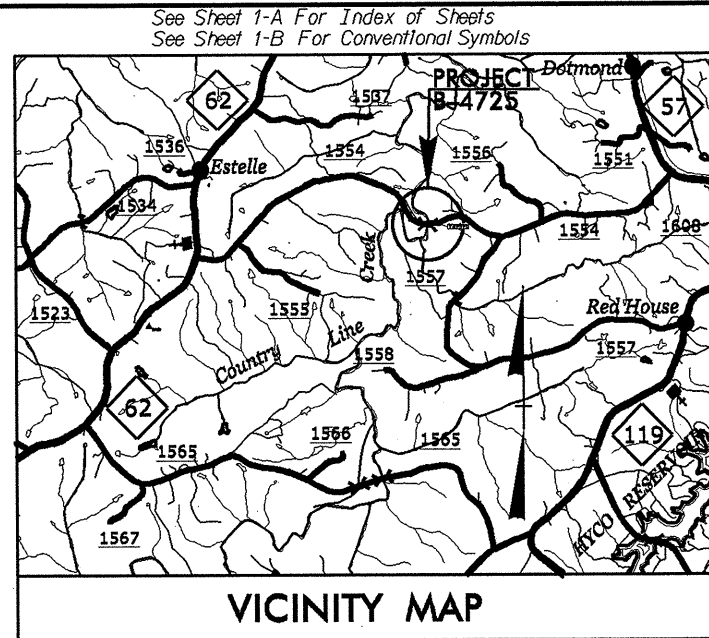
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-4725	2A	9
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
38499.1.1	BRZ-1554(4)	PE	

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS

**CASWELL COUNTY**

**LOCATION: BRIDGE NO. 12 OVER COUNTRY LINE CREEK  
ON SR 1554 (YARBOROUGH MILL ROAD)**

**TYPE OF WORK: GRADING, DRAINAGE, PAVING, AND STRUCTURE**

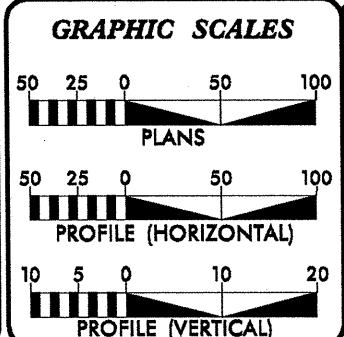


INCOMPLETE PLANS  
DO NOT USE FOR R/W ACQUISITION  
PRELIMINARY PLANS  
DO NOT USE FOR CONSTRUCTION

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.  
CLEARING ON THIS PROJECT SHALL BE PREPARED TO THE LIMITS ESTABLISHED BY METHOD \_\_\_\_.

**CONTRACT: B-4725**

**CONTRACT:**



**DESIGN DATA**

ADT 2012 =	970
ADT 2035 =	1500
DHV =	10 %
D =	55 %
T =	3 % *
V =	55 MPH
* TTST =	1% DUAL = 2%
FUNC. CLASS. =	RURAL COLLECTOR
"SUB-REGIONAL TIER"	

**PROJECT LENGTH**

LENGTH ROADWAY TIP PROJECT B-4725 =	?.??? MILES
LENGTH STRUCTURE TIP PROJECT B-4725 =	?.??? MILES
TOTAL LENGTH OF TIP PROJECT B-4725 =	0.171 MILES

Prepared In the Office of:  
**DIVISION OF HIGHWAYS**  
1000 Birch Ridge Dr., Raleigh NC, 27610

2006 STANDARD SPECIFICATIONS

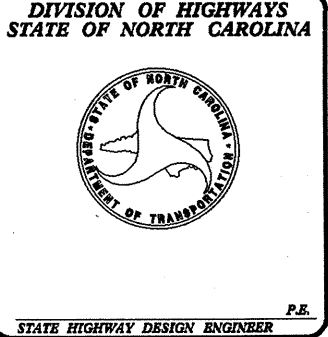
PRODUCTION RIGHT OF WAY DATE: JULY 20, 2012	<b>JAMES A. SPEER, PE</b> PROJECT ENGINEER
PRODUCTION LETTING DATE: JANUARY 15, 2013	<b>DANIEL W. GARDNER, JR., PE</b> PROJECT DESIGN ENGINEER

**HYDRAULICS ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.

**ROADWAY DESIGN ENGINEER**

SIGNATURE: \_\_\_\_\_ P.E.



04-JAN-2012 08:35 S:\Contr\cc\1\vin\est\1gg\hons\TIP\B4725\_GEO\TECH\PlanProf\B4725\_GEO\_BRD50159\_rdy\_tsh.dgn



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE  
GOVERNOR

EUGENE A. CONTI, JR.  
SECRETARY

January 6, 2012

STATE PROJECT: 38499.1.1 (B-4725)  
F.A. PROJECT: BRZ-1554(4)  
COUNTY: Caswell  
DESCRIPTION: Bridge No. 12 Over Country Line Creek on SR 1554  
SUBJECT: Geotechnical Report - Inventory

**Project Description**

The project consists of replacing the existing bridge with a new bridge, raising the grade of the existing roadway approaches and constructing on new location a temporary detour bridge.

The geotechnical investigation was conducted on October 4, 2011 and consisted of two hand auger borings, and two bridge rods. The hand auger borings were advanced to a depth of three feet. The bridge rods were advanced to a depth of fifteen feet.

The following alignment was investigated for this project:

<u>Line</u>	<u>Station(±)</u>
-LDET-	11+39.1 to 17+33.18

**Areas of Special Geotechnical Interest**

- 1) Alluvial Soils- Flood plain deposits, consisting of sands and silty sands are evident in the following section of the project

<u>Line</u>	<u>Station (±)</u>
-LDET-	14+30 to 15+30

- 2) Roadway Embankment Fill- Roadway embankment fill was encountered at the following locations.

<u>Line</u>	<u>Station (±)</u>
-LDET-	10+00 to 13+50
-LDET-	15+50 to 17+40

**Physiography, Geology and Surface Water**

The project corridor is located in the north central portion of the Milton Belt in the Piedmont Physiographic Province in central Caswell County. Topography in the area is generally flat to gently rolling. The project area is comprised of farmland, and medium dense forest with nearby residential structures.

Geologically the project area consists of Proterozoic to Cambrian age gneiss and schist plus the associated residual soils derived from this rock.

Surface water is drained from the corridor by Country Line Creek and several smaller unnamed creeks and tributaries that generally trend north across the project.

**Soils Properties**

Soils encountered along the project corridor consist of roadway embankment, alluvial soils deposited by Country Line Creek, and residual soils derived from the Proterozoic and Cambrian age gneisses and schists of the Milton Belt.

Roadway embankment soils are present along existing SR 1554, parallel to and immediately adjacent to the proposed detour bridge structure.

Alluvial soils are located within the floodplain of Country Line Creek, and consist of sands and silty sands.

MAILING ADDRESS:  
NC DEPARTMENT OF TRANSPORTATION  
GEOTECHNICAL ENGINEERING UNIT  
1589 MAIL SERVICE CENTER  
RALEIGH NC 27699-1589

TELEPHONE: 919-707-6850  
Fax: 919-250-4237  
[www.ncdot.gov/doh/preconstruct/highway/geotech](http://www.ncdot.gov/doh/preconstruct/highway/geotech)

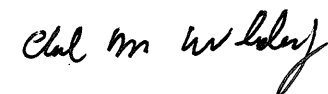
LOCATION:  
CENTURY CENTER COMPLEX  
ENTRANCE B-2  
1020 BIRCH RIDGE DRIVE  
RALEIGH NC 27610

Residual soils generally are present throughout the surrounding region, and consist of silty sands and silty clays.

**Ground Water**

Ground water data was not collected during this investigation.

Respectfully Submitted,

A handwritten signature in cursive script, appearing to read "Chal M Whalen Jr".

Charles M. Whalen, Jr.

STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS

**SUMMARY OF EARTHWORK**  
 IN CUBIC YARDS

LOCATION	EXCAVATION					EMBANKMENT				BORROW	WASTE			
	TOTAL UNCL.	ROCK	UNDERCUT	UNSUIT. UNCL.	SUITABLE UNCL.	TOTAL	ROCK	EARTH	EMBANK (+) 20%		ROCK	SUITABLE	UNSUIT.	TOTAL
<b>PHASE NO. I (DETOUR)</b>														
-LDET- STA. 10+00.00 TO STA. 14+10.00	51				51	4022		4022	4827	4776				
-LDET- STA. 15+40.00 TO STA. 19+31.00	6				6	3093		3093	3712	3706				
-DRV- STA. 10+15.25 TO STA. 10+83.43						66		66	80	80				
-DRV- STA. 12+48.78 TO STA. 12+86.83	21				21						21		21	
<b>PHASE NO. I TOTALS</b>	<b>78</b>				<b>78</b>	<b>7181</b>		<b>7181</b>	<b>8619</b>	<b>8562</b>		<b>21</b>	<b>21</b>	
<b>PHASE NO. II (-L-/-DRV2-)</b>														
-L- STA. 16+50.00 TO STA. 18+58.75	2				2	692		692	831	829				
-L- STA. 20+71.25 TO STA. 22+75.00	47				47	445		445	534	487				
-DRV2- STA. 10+05.00 TO STA. 10+68.49	11				11	24		24	29	18				
<b>PHASE NO. II TOTALS</b>	<b>60</b>				<b>60</b>	<b>1161</b>		<b>1161</b>	<b>1394</b>	<b>1334</b>				
<b>PHASE NO. III (DETOUR REMOVAL-DRV1-)</b>														
-LDET- STA. 10+00.00 TO STA. 14+10.00	2331				2331	143		143	172			2159	2159	
-LDET- STA. 15+40.00 TO STA. 19+31.00	2738				2738	504		504	605			2133	2133	
-DRV1- STA. 10+11.00 TO STA. 10+74.17						836		836	1004	1004				
<b>PHASE NO. III TOTALS</b>	<b>5069</b>				<b>5069</b>	<b>1483</b>		<b>1483</b>	<b>1781</b>	<b>1004</b>		<b>4292</b>	<b>4292</b>	
<b>SUMMARY TOTALS</b>	<b>5207</b>				<b>5207</b>	<b>9825</b>		<b>9825</b>	<b>11794</b>	<b>10900</b>		<b>4313</b>	<b>4313</b>	
<b>WASTE IN LIEU OF BORROW</b>										<b>-21</b>		<b>-21</b>	<b>-21</b>	
<b>PROJECT TOTALS</b>	<b>5207</b>				<b>5207</b>	<b>9825</b>		<b>9825</b>	<b>11794</b>	<b>10879</b>		<b>4292</b>	<b>4292</b>	
5% TO REPLACE TOPSOIL ON BORROW PIT										544				
<b>PROJECT GRAND TOTALS</b>	<b>5207</b>				<b>5207</b>	<b>9825</b>		<b>9825</b>	<b>11794</b>	<b>11423</b>		<b>4292</b>	<b>4292</b>	
<b>SAY</b>	<b>5300</b>									<b>11500</b>				
EST. UNDERCUT CONTINGENCY = 300 CY														
GEOTEXTILE FOR SOIL STABILIZATION = 300 SY														
SELECT GRANULAR MATERIAL = 300 CY														

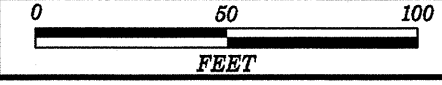
Earthwork quantities are calculated by the Roadway Design Unit. These earthwork quantities are based in part on subsurface data provided by the Geotechnical Engineering Unit.

Note: Approximate quantities only. Unclassified 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."

04-OCT-2012 07:33 P:\Roadgen\p01\ba4725-rdy-sum.dgn



# SITE PLAN



NC GRID  
NAD 83/2001

BM#2  
-BL- STA 37+13.00  
212' LT.  
ELEV. 386.57'

JOHN R. & TERESA W. PEARSON  
DB 490 PG 1  
PB 8 PG 130

RANDY B. WHITT  
DB 512 PG 7  
PB 15 PG 91

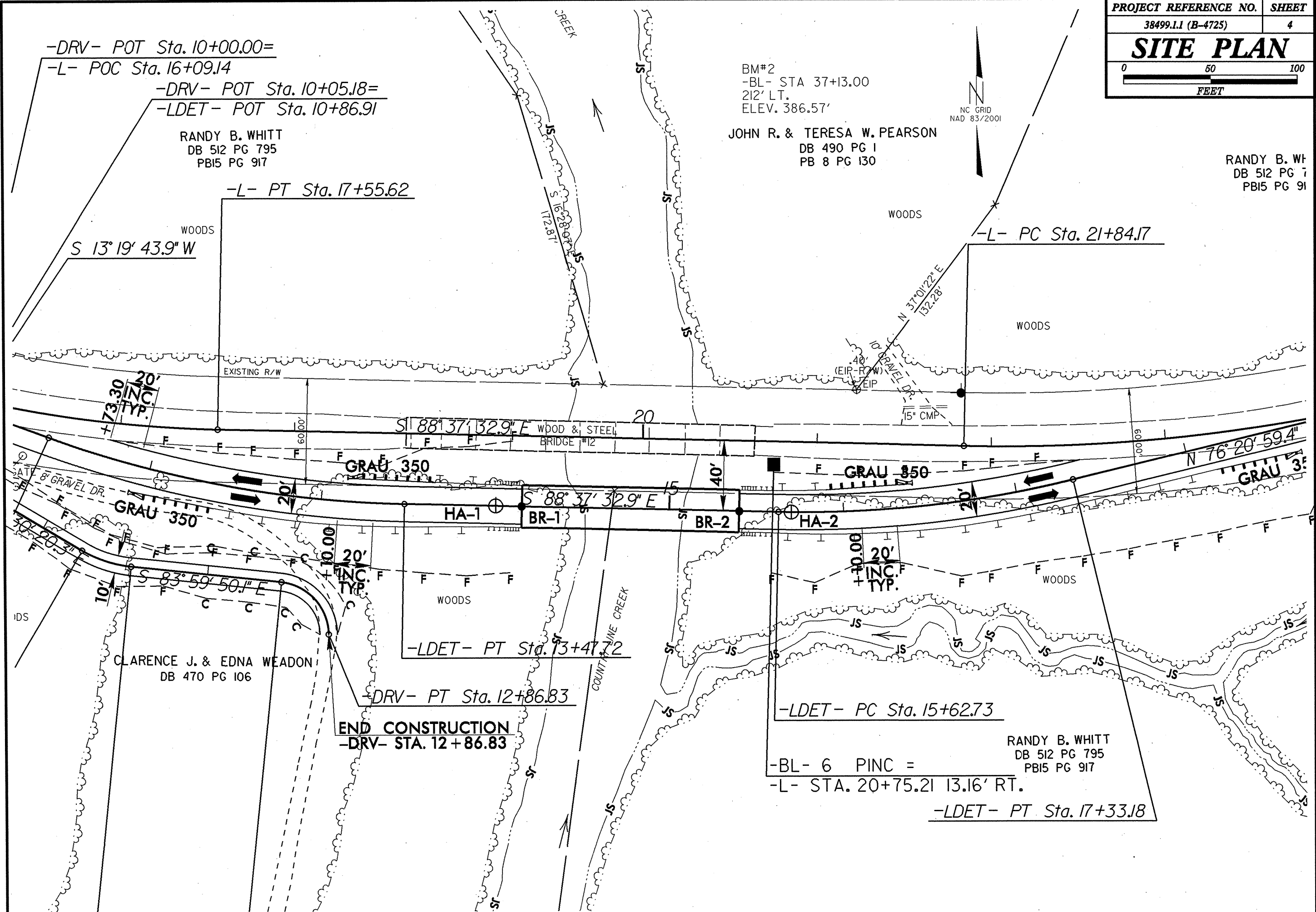
-DRV- POT Sta. 10+00.00=  
-L- POC Sta. 16+09.14  
-DRV- POT Sta. 10+05.18=  
-LDET- POT Sta. 10+86.91

RANDY B. WHITT  
DB 512 PG 795  
PB 15 PG 917

-L- PT Sta. 17+55.62

WOODS  
S 13° 19' 43.9" W

-L- PC Sta. 21+84.17



+73.30  
20'  
TYP.

S 88° 37' 32.9" E  
WOOD & STEEL  
BRIDGE #12

N 37° 01' 22" E  
132.28'  
10' GRAVEL DR.  
(EIP-R/W)  
EIP  
15" CMP

N 76° 20' 59.4"  
GRAU 350

8' GRAVEL DR.  
GRAU 350

HA-1 BR-1 BR-2 HA-2

GRAU 850

10'  
S 83° 59' 50.1" E  
CLARENCE J. & EDNA WEADON  
DB 470 PG 106

-LDET- PT Sta. 13+47.72

-DRV- PT Sta. 12+86.83

END CONSTRUCTION  
-DRV- STA. 12+86.83

-LDET- PC Sta. 15+62.73

-BL- 6 PINC =  
-L- STA. 20+75.21 13.16' RT.

RANDY B. WHITT  
DB 512 PG 795  
PB 15 PG 917

-LDET- PT Sta. 17+33.18

**NCDOT GEOTECHNICAL ENGINEERING UNIT**  
**BORELOG REPORT**

WBS 38499.1.1		TIP B-4725		COUNTY CASWELL		GEOLOGIST Worley, B. D.										
SITE DESCRIPTION N/A							GROUND WTR (ft)									
BORING NO. HA-1		STATION 14+00		ALIGNMENT LDET		0 HR.	N/A									
COLLAR ELEV. N/A		TOTAL DEPTH 3.0 ft		EASTING 1,939,182		24 HR.	N/A									
DRILL RIG/HAMMER EFF./DATE N/A				DRILL METHOD Hand Auger		HAMMER TYPE N/A										
DRILLER N/A		START DATE 10/04/11		COMP. DATE 10/04/11		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	LOG G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
																GROUND SURFACE 0.0
																RESIDUAL Dark Brown Med. Dense Silty Sand 3.0
																Boring Terminated at Depth 3.0 ft Silty Sand

WBS 38499.1.1		TIP B-4725		COUNTY CASWELL		GEOLOGIST Worley, B. D.										
SITE DESCRIPTION N/A							GROUND WTR (ft)									
BORING NO. BR-1		STATION 14+15		ALIGNMENT LDET		0 HR.	N/A									
COLLAR ELEV. N/A		TOTAL DEPTH 15.0 ft		EASTING 1,939,196		24 HR.	N/A									
DRILL RIG/HAMMER EFF./DATE N/A				DRILL METHOD Rod Sounding		HAMMER TYPE N/A										
DRILLER N/A		START DATE 10/04/11		COMP. DATE 10/04/11		SURFACE WATER DEPTH N/A										
ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT			BLOWS PER FOOT					SAMP. NO.	LOG MOI	LOG G	SOIL AND ROCK DESCRIPTION	DEPTH (ft)	
			0.5ft	0.5ft	0.5ft	0	25	50	75	100						
																GROUND SURFACE 0.0
																RESIDUAL Dark Brown Medium Dense Silty Sand
																15.0
																Boring Terminated at Depth 15.0 ft Silty Sand

NCDOT BORE DOUBLE B4725\_GEO\_SOUNDRIGRODS.GPJ NC\_DOT.GDT 1/9/12



