STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	R-1015	1	54

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

STRUCTURE SUBSURFACE INVESTIGATION

COUNTY CRAVEN

PROJECT DESCRIPTION US 70 (HAVELOCK BYPASS) FROM NORTH OF PINE GROVE TO NORTH OF CARTERET COUNTY LINE

SITE DESCRIPTION DUAL BRIDGES ON US 70 BYPASS OVER SOUTHWEST PRONG OF SLOCUM CREEK AT -L- STA. 287+62.5

REFERENCE: R-1015

PROJECT: 34360

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CAUTION NOTICE

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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.

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NOTES:
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2. 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.

PERSONNEL

LAW ENGINEERING

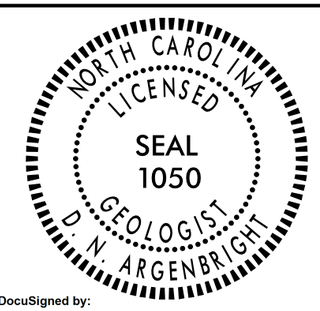
INVESTIGATED BY J.K. CRENSHAW

DRAWN BY C.P. TURNER

CHECKED BY D.N. ARGENBRIGHT

SUBMITTED BY D.N. ARGENBRIGHT

DATE MARCH 2015



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Dean N. Argenbright 10/24/2016
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT

SUBSURFACE INVESTIGATION

SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION

SOIL IS CONSIDERED 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 THE STANDARD PENETRATION TEST (AASHTO T 206, ASTM D1586). SOIL CLASSIFICATION IS BASED ON THE AASHTO SYSTEM. BASIC DESCRIPTIONS GENERALLY INCLUDE THE FOLLOWING: CONSISTENCY, COLOR, TEXTURE, MOISTURE, AASHTO CLASSIFICATION, AND OTHER PERTINENT FACTORS SUCH AS MINERALOGICAL COMPOSITION, ANGULARITY, STRUCTURE, PLASTICITY, ETC. FOR EXAMPLE,
VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6

SOIL LEGEND AND AASHTO CLASSIFICATION

GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)							SILT-CLAY MATERIALS (> 35% PASSING #200)				ORGANIC MATERIALS		
GROUP CLASS.	A-1		A-3	A-2				A-4	A-5	A-6	A-7	A-1, A-2 A-3	A-4, A-5 A-6, A-7	
	A-1-a	A-1-b		A-2-4	A-2-5	A-2-6	A-2-7				A-7-5 A-7-6			
SYMBOL														
% PASSING #10	50 MX											GRANULAR SOILS	SILT-CLAY SOILS	MUCK, PEAT
#40	30 MX	50 MX	51 MN											
#200	15 MX	25 MX	10 MX	35 MX	35 MX	35 MX	35 MX	36 MN	36 MN	36 MN	36 MN			
MATERIAL PASSING #40 LL	—		—	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	40 MX	41 MN	SOILS WITH LITTLE OR MODERATE AMOUNTS OF ORGANIC MATTER		HIGHLY ORGANIC SOILS
PI	6 MX		NP	10 MX	10 MX	11 MN	11 MN	10 MX	10 MX	11 MN	11 MN			
GROUP INDEX	0		0	0		4 MX		8 MX	12 MX	16 MX	NO MX			
USUAL TYPES OF MAJOR MATERIALS	STONE FRAGS. GRAVEL, AND SAND		FINE SAND	SILTY OR CLAYEY GRAVEL AND SAND				SILTY SOILS		CLAYEY SOILS				
GEN. RATING AS SUBGRADE	EXCELLENT TO GOOD							FAIR TO POOR				FAIR TO POOR	POOR	UNSUITABLE

PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30

CONSISTENCY OR DENSENESS

PRIMARY SOIL TYPE	COMPACTNESS OR CONSISTENCY	RANGE OF STANDARD PENETRATION RESISTENCE (N-VALUE)	RANGE OF UNCONFINED COMPRESSIVE STRENGTH ($TONS/FT^2$)
GENERALLY GRANULAR MATERIAL (NON-COHESIVE)	VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE	< 4 4 TO 10 10 TO 30 30 TO 50 > 50	N/A
GENERALLY SILT-CLAY MATERIAL (COHESIVE)	VERY SOFT SOFT MEDIUM STIFF STIFF VERY STIFF HARD	< 2 2 TO 4 4 TO 8 8 TO 15 15 TO 30 > 30	< 0.25 0.25 TO 0.5 0.5 TO 1.0 1 TO 2 2 TO 4 > 4

TEXTURE OR GRAIN SIZE

U.S. STD. SIEVE SIZE	4	10	40	60	200	270
OPENING (MM)	4.76	2.00	0.42	0.25	0.075	0.053

BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE. SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)

GRAIN SIZE MM: 305 | 75 | 2.0 | 0.25 | 0.05 | 0.005
GRAIN SIZE IN.: 12 | 3

SOIL MOISTURE - CORRELATION OF TERMS

SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION
	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE
LL — LIQUID LIMIT		
PLASTIC RANGE (PI)	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE
PL — PLASTIC LIMIT		
OM — OPTIMUM MOISTURE	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE
SL — SHRINKAGE LIMIT		
	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE

PLASTICITY

	PLASTICITY INDEX (PI)	DRY STRENGTH
NON PLASTIC	0-5	VERY LOW
SLIGHTLY PLASTIC	6-15	SLIGHT
MODERATELY PLASTIC	16-25	MEDIUM
HIGHLY PLASTIC	26 OR MORE	HIGH

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.

GRADATION

WELL GRADED - INDICATES A GOOD REPRESENTATION OF PARTICLE SIZES FROM FINE TO COARSE.
UNIFORMLY GRADED - INDICATES THAT SOIL PARTICLES ARE ALL APPROXIMATELY THE SAME SIZE.
GAP-GRADED - INDICATES A MIXTURE OF UNIFORM PARTICLE SIZES 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.

MINERALOGICAL COMPOSITION

MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.

COMPRESSIBILITY

SLIGHTLY COMPRESSIBLE	LL < 31
MODERATELY COMPRESSIBLE	LL = 31 - 50
HIGHLY COMPRESSIBLE	LL > 50

PERCENTAGE OF MATERIAL

ORGANIC MATERIAL	GRANULAR SOILS	SILT - CLAY SOILS	OTHER MATERIAL	
TRACE OF ORGANIC MATTER	2 - 3%	3 - 5%	TRACE	1 - 10%
LITTLE ORGANIC MATTER	3 - 5%	5 - 12%	LITTLE	10 - 20%
MODERATELY ORGANIC	5 - 10%	12 - 20%	SOME	20 - 35%
HIGHLY ORGANIC	> 10%	> 20%	HIGHLY	35% AND ABOVE

GROUND WATER

- WATER LEVEL IN BORE HOLE IMMEDIATELY AFTER DRILLING
- STATIC WATER LEVEL AFTER 24 HOURS
- PW PERCHED WATER, SATURATED ZONE, OR WATER BEARING STRATA
- SPRING OR SEEP

MISCELLANEOUS SYMBOLS

- ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION
- SOIL SYMBOL
- ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT
- INFERRED SOIL BOUNDARY
- INFERRED ROCK LINE
- ALLUVIAL SOIL BOUNDARY
- 25/025 DIP & DIP DIRECTION OF ROCK STRUCTURES
- SPT DPT DMT VST PMT TEST BORING
- AUGER BORING
- CORE BORING
- MW MONITORING WELL
- PIEZOMETER INSTALLATION
- SLOPE INDICATOR INSTALLATION
- CONE PENETROMETER TEST
- SOUNDING ROD
- TEST BORING WITH CORE
- SPT N-VALUE

RECOMMENDATION SYMBOLS

- UNDERCUT EXCAVATION
- SHALLOW UNDERCUT
- UNCLASSIFIED EXCAVATION - UNSUITABLE WASTE
- UNCLASSIFIED EXCAVATION - ACCEPTABLE DEGRADABLE ROCK
- UNCLASSIFIED EXCAVATION - ACCEPTABLE, BUT NOT TO BE USED IN THE TOP 3 FEET OF EMBANKMENT OR BACKFILL

ABBREVIATIONS

AR - AUGER REFUSAL
BT - BORING TERMINATED
CL. - CLAY
CPT - CONE PENETRATION TEST
CSE. - COARSE
DMT - DILATOMETER TEST
DPT - DYNAMIC PENETRATION TEST
e - VOID RATIO
F - FINE
FOSS. - FOSSILIFEROUS
FRAC. - FRACTURED, FRACTURES
FRAGS. - FRAGMENTS
HI. - HIGHLY
MED. - MEDIUM
MICA. - MICACEOUS
MOD. - MODERATELY
NP - NON PLASTIC
ORG. - ORGANIC
PMT - PRESSUREMETER TEST
SAP. - SAPROLITIC
SD. - SAND, SANDY
SL. - SILT, SILTY
SLI. - SLIGHTLY
TCR - TRICONE REFUSAL
w - MOISTURE CONTENT
V - VERY
VST - VANE SHEAR TEST
WEA. - WEATHERED
γ - UNIT WEIGHT
γ_d - DRY UNIT WEIGHT

SAMPLE ABBREVIATIONS

S - BULK
SS - SPLIT SPOON
ST - SHELBY TUBE
RS - ROCK
RT - RECOMPACTED TRIAXIAL
CBR - CALIFORNIA BEARING RATIO

EQUIPMENT USED ON SUBJECT PROJECT

DRILL UNITS:
- [X] CME-45C
- [ ] CME-55
- [ ] CME-550
- [ ] VANE SHEAR TEST
- [ ] PORTABLE HOIST
- [ ] _____
- [ ] _____

ADVANCING TOOLS:
- [ ] CLAY BITS
- [ ] 6" CONTINUOUS FLIGHT AUGER
- [ ] 8" HOLLOW AUGERS
- [ ] HARD FACED FINGER BITS
- [ ] TUNG.-CARBIDE INSERTS
- [X] CASING [ ] W/ ADVANCER
- [X] TRICONE 2 15/16" STEEL TEETH
- [ ] TRICONE _____" TUNG.-CARB.
- [X] CORE BIT
- [ ] _____

HAMMER TYPE:
- [ ] AUTOMATIC [X] MANUAL

CORE SIZE:
- [ ] -B _____ [X] -H Q
- [ ] -N _____

HAND TOOLS:
- [ ] POST HOLE DIGGER
- [ ] HAND AUGER
- [ ] SOUNDING ROD
- [ ] VANE SHEAR TEST
- [ ] _____

ROCK DESCRIPTION

HARD ROCK IS NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT REFUSAL IF TESTED. 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)	NON-COASTAL PLAIN MATERIAL THAT WOULD YIELD SPT N VALUES > 100 BLOWS PER FOOT IF TESTED.
CRYSTALLINE ROCK (CR)	FINE TO COARSE GRAIN IGNEOUS AND METAMORPHIC ROCK THAT WOULD YIELD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES GRANITE, GNEISS, GABBRO, SCHIST, ETC.
NON-CRYSTALLINE ROCK (NCR)	FINE TO COARSE GRAIN METAMORPHIC AND NON-COASTAL PLAIN SEDIMENTARY ROCK THAT WOULD YEILD SPT REFUSAL IF TESTED. ROCK TYPE INCLUDES PHYLLITE, SLATE, SANDSTONE, ETC.
COASTAL PLAIN SEDIMENTARY ROCK (CP)	COASTAL PLAIN SEDIMENTS CEMENTED INTO ROCK, BUT MAY NOT YIELD SPT REFUSAL. ROCK TYPE INCLUDES LIMESTONE, SANDSTONE, CEMENTED SHELL BEDS, ETC.

WEATHERING

FRESH	ROCK FRESH, CRYSTALS BRIGHT, FEW JOINTS MAY SHOW SLIGHT STAINING. ROCK RINGS UNDER HAMMER IF CRYSTALLINE.
VERY SLIGHT (V SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED, SOME JOINTS MAY SHOW THIN CLAY COATINGS IF OPEN, CRYSTALS ON A BROKEN SPECIMEN FACE SHINE BRIGHTLY. ROCK RINGS UNDER HAMMER BLOWS IF OF A CRYSTALLINE NATURE.
SLIGHT (SLI.)	ROCK GENERALLY FRESH, JOINTS STAINED AND DISCOLORATION EXTENDS INTO ROCK UP TO 1 INCH. OPEN JOINTS MAY CONTAIN CLAY. IN GRANITOID ROCKS SOME OCCASIONAL FELDSPAR CRYSTALS ARE DULL AND DISCOLORED. CRYSTALLINE ROCKS RING UNDER HAMMER BLOWS.
MODERATE (MOD.)	SIGNIFICANT PORTIONS OF ROCK SHOW DISCOLORATION AND WEATHERING EFFECTS. IN GRANITOID ROCKS, MOST FELDSPARS ARE DULL AND DISCOLORED, SOME SHOW CLAY. ROCK HAS DULL SOUND UNDER HAMMER BLOWS AND SHOWS SIGNIFICANT LOSS OF STRENGTH AS COMPARED WITH FRESH ROCK.
MODERATELY SEVERE (MOD. SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. IN GRANITOID ROCKS, ALL FELDSPARS DULL AND DISCOLORED AND A MAJORITY SHOW KAOLINIZATION. ROCK SHOWS SEVERE LOSS OF STRENGTH AND CAN BE EXCAVATED WITH A GEOLOGIST'S PICK. ROCK GIVES "CLUNK" SOUND WHEN STRUCK. *IF TESTED, WOULD YIELD SPT REFUSAL*
SEVERE (SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC CLEAR AND EVIDENT BUT REDUCED IN STRENGTH TO STRONG SOIL. IN GRANITOID ROCKS ALL FELDSPARS ARE KAOLINIZED TO SOME EXTENT. SOME FRAGMENTS OF STRONG ROCK USUALLY REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES > 100 BPF*
VERY SEVERE (V SEV.)	ALL ROCK EXCEPT QUARTZ DISCOLORED OR STAINED. ROCK FABRIC ELEMENTS ARE DISCERNIBLE BUT MASS IS EFFECTIVELY REDUCED TO SOIL STATUS, WITH ONLY FRAGMENTS OF STRONG ROCK REMAINING. SAPROLITE IS AN EXAMPLE OF ROCK WEATHERED TO A DEGREE THAT ONLY MINOR VESTIGES OF ORIGINAL ROCK FABRIC REMAIN. *IF TESTED, WOULD YIELD SPT N VALUES < 100 BPF*
COMPLETE	ROCK REDUCED TO SOIL. ROCK FABRIC NOT DISCERNIBLE, OR DISCERNIBLE ONLY IN SMALL AND SCATTERED CONCENTRATIONS. QUARTZ MAY BE PRESENT AS DIKES OR STRINGERS. SAPROLITE IS ALSO AN EXAMPLE.

ROCK HARDNESS

VERY HARD	CANNOT BE SCRATCHED BY KNIFE OR SHARP PICK. BREAKING OF HAND SPECIMENS REQUIRES SEVERAL HARD BLOWS OF THE GEOLOGIST'S PICK.
HARD	CAN BE SCRATCHED BY KNIFE OR PICK ONLY WITH DIFFICULTY. HARD HAMMER BLOWS REQUIRED TO DETACH HAND SPECIMEN.
MODERATELY HARD	CAN BE SCRATCHED BY KNIFE OR PICK. GOUGES OR GROOVES TO 0.25 INCHES DEEP CAN BE EXCAVATED BY HARD BLOW OF A GEOLOGIST'S PICK. HAND SPECIMENS CAN BE DETACHED BY MODERATE BLOWS.
MEDIUM HARD	CAN BE GROOVED OR GOUGED 0.05 INCHES DEEP BY FIRM PRESSURE OF KNIFE OR PICK POINT. CAN BE EXCAVATED IN SMALL CHIPS TO PEICES 1 INCH MAXIMUM SIZE BY HARD BLOWS OF THE POINT OF A GEOLOGIST'S PICK.
SOFT	CAN BE GROVED OR GOUGED READILY BY KNIFE OR PICK. CAN BE EXCAVATED IN FRAGMENTS FROM CHIPS TO SEVERAL INCHES IN SIZE BY MODERATE BLOWS OF A PICK POINT. SMALL, THIN PIECES CAN BE BROKEN BY FINGER PRESSURE.
VERY SOFT	CAN BE CARVED WITH KNIFE. CAN BE EXCAVATED READILY WITH POINT OF PICK. PIECES 1 INCH OR MORE IN THICKNESS CAN BE BROKEN BY FINGER PRESSURE. CAN BE SCRATCHED READILY BY FINGERNAIL.

FRACTURE SPACING

TERM	SPACING
VERY WIDE	MORE THAN 10 FEET
WIDE	3 TO 10 FEET
MODERATELY CLOSE	1 TO 3 FEET
CLOSE	0.16 TO 1 FOOT
VERY CLOSE	LESS THAN 0.16 FEET

BEDDING

TERM	THICKNESS
VERY THICKLY BEDDED	4 FEET
THICKLY BEDDED	1.5 - 4 FEET
THINLY BEDDED	0.16 - 1.5 FEET
VERY THINLY BEDDED	0.03 - 0.16 FEET
THICKLY LAMINATED	0.008 - 0.03 FEET
THINLY LAMINATED	< 0.008 FEET

INDURATION

FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.

FRIABLE	RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.
MODERATELY INDURATED	GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.
INDURATED	GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.
EXTREMELY INDURATED	SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.

TERMS AND DEFINITIONS

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, SUCH 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 DISLODGED 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 (MOT.) - 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 (RQD) - 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 (SRQD) - 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.

BENCH MARK: BM15: RR SPIKE IN TREE AT -BL- STA 210+11, 25' LT
N 418342 E 2616967
ELEVATION: 27.08 FEET

NOTES:

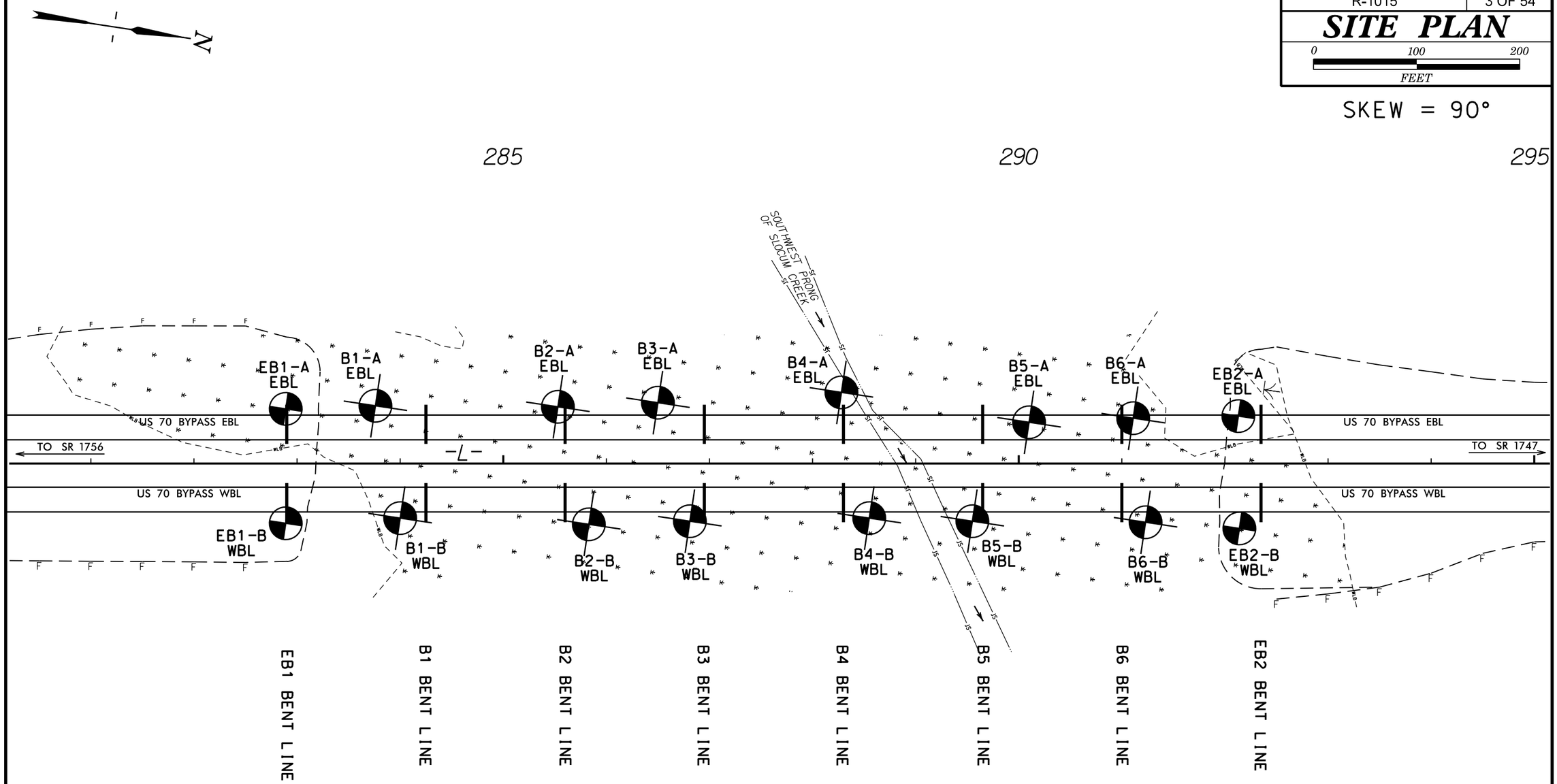
DATE: 8-15-14

PROJECT REFERENCE NO.	SHEET NO.
R-1015	3 OF 54

SITE PLAN

0 100 200
FEET

SKEW = 90°

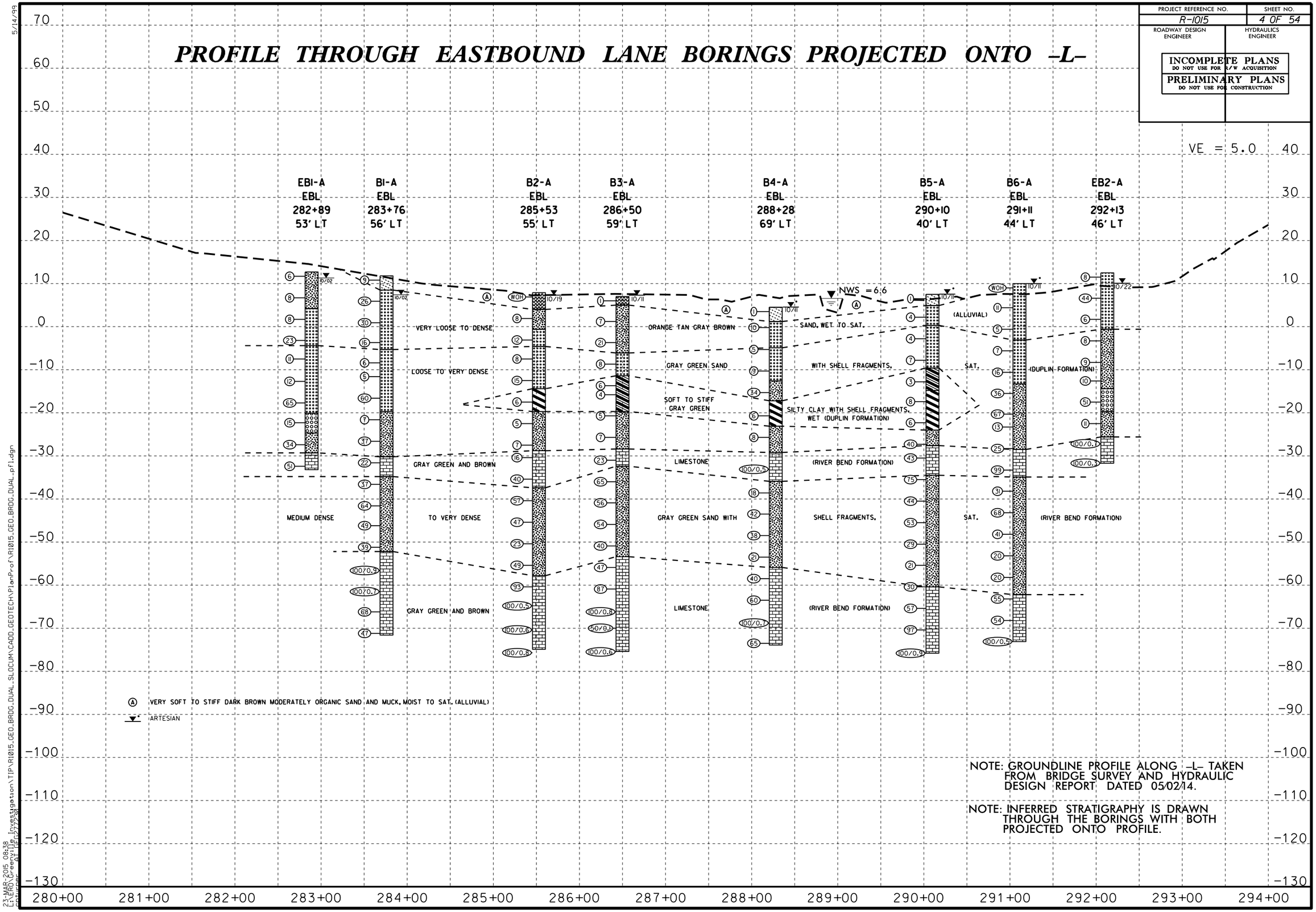


PROJECT REFERENCE NO.	SHEET NO.
R-1015	4 OF 54
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROFILE THROUGH EASTBOUND LANE BORINGS PROJECTED ONTO –L–



NOTE: GROUNDLINE PROFILE ALONG –L– TAKEN FROM BRIDGE SURVEY AND HYDRAULIC DESIGN REPORT DATED 05/02/14.

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

5/14/99

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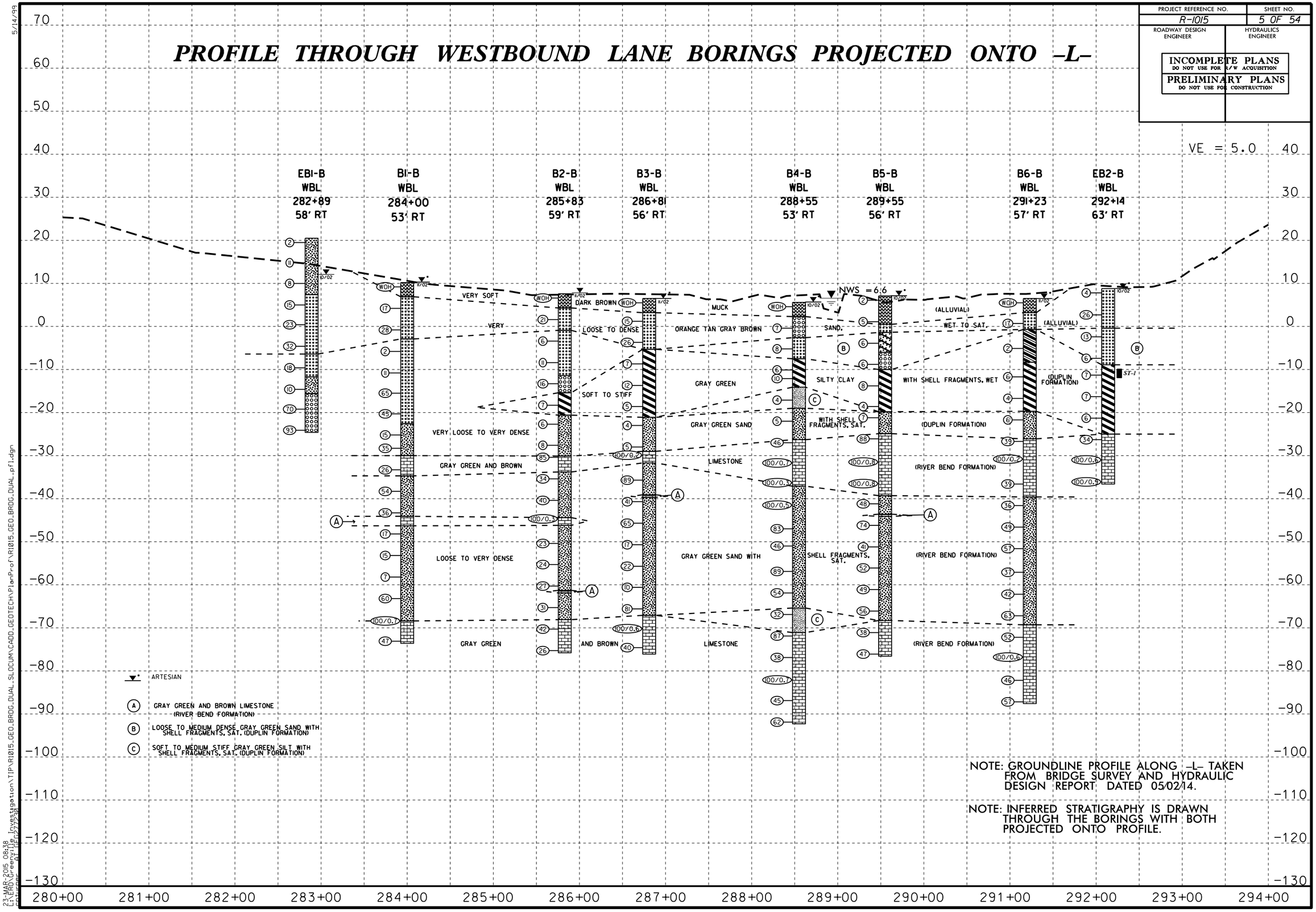
PROJECT REFERENCE NO.	SHEET NO.
R-1015	5 OF 54
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

PROFILE THROUGH WESTBOUND LANE BORINGS PROJECTED ONTO –L–



NOTE: GROUNDLINE PROFILE ALONG –L– TAKEN FROM BRIDGE SURVEY AND HYDRAULIC DESIGN REPORT DATED 05/02/14.

NOTE: INFERRED STRATIGRAPHY IS DRAWN THROUGH THE BORINGS WITH BOTH PROJECTED ONTO PROFILE.

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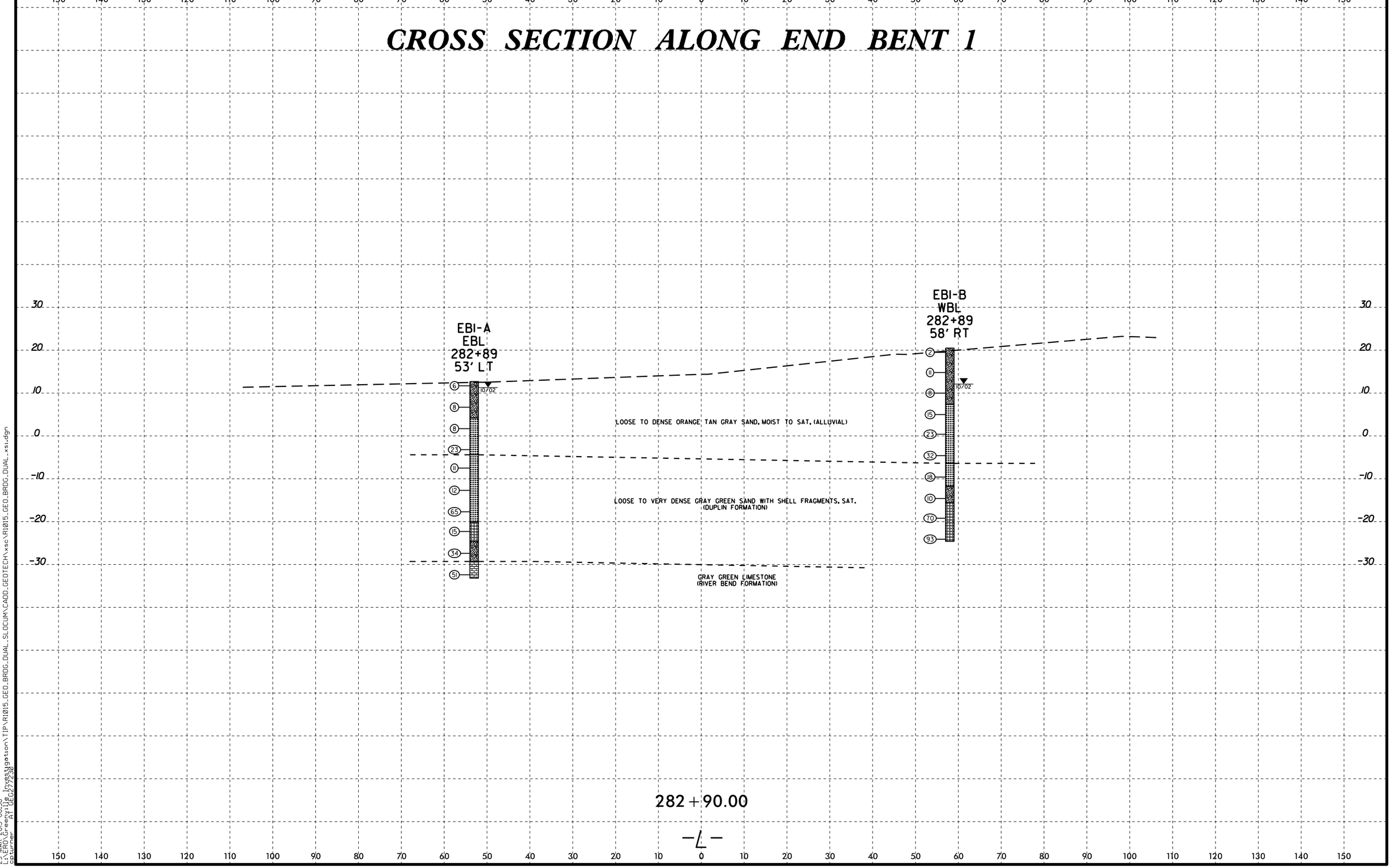
CROSS SECTION ALONG END BENT 1



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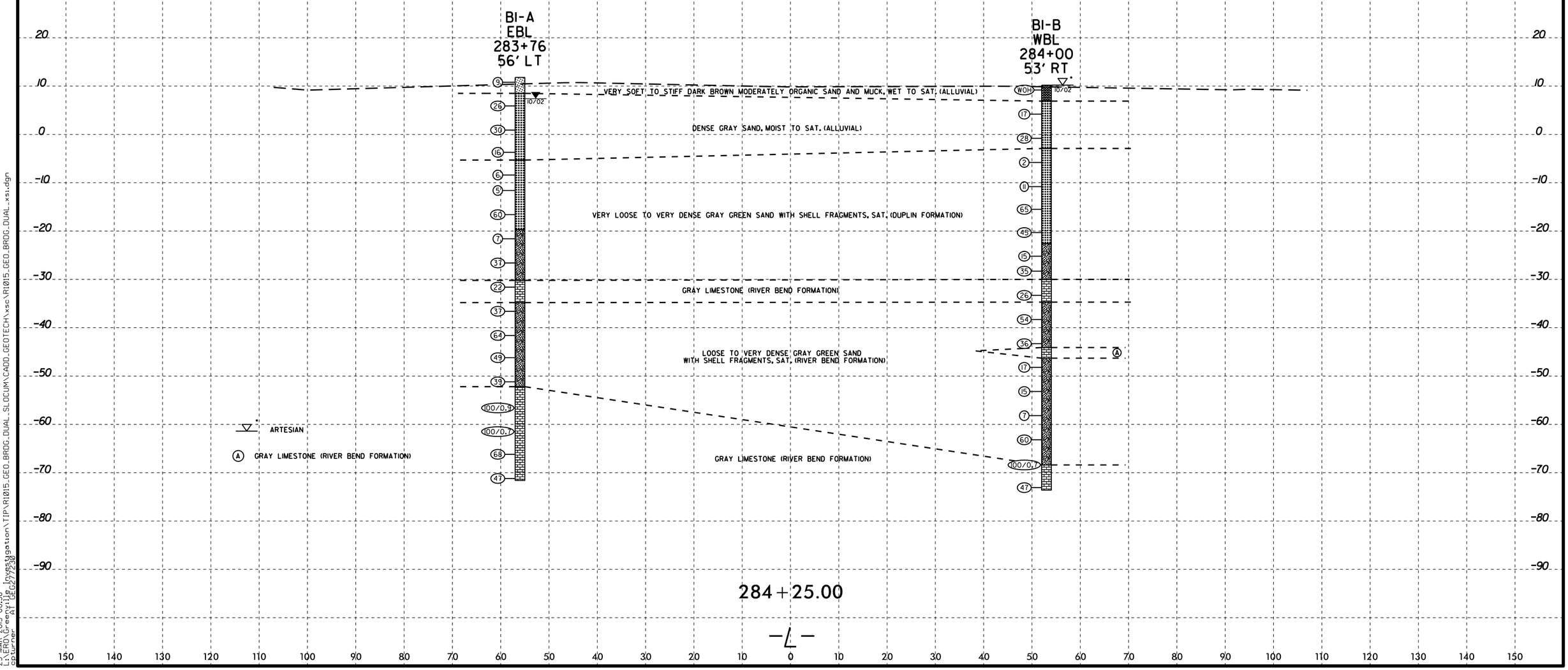
PROJ. REFERENCE NO.	SHEET NO.
R-1015	7 OF 54

CROSS SECTION ALONG BENT 1



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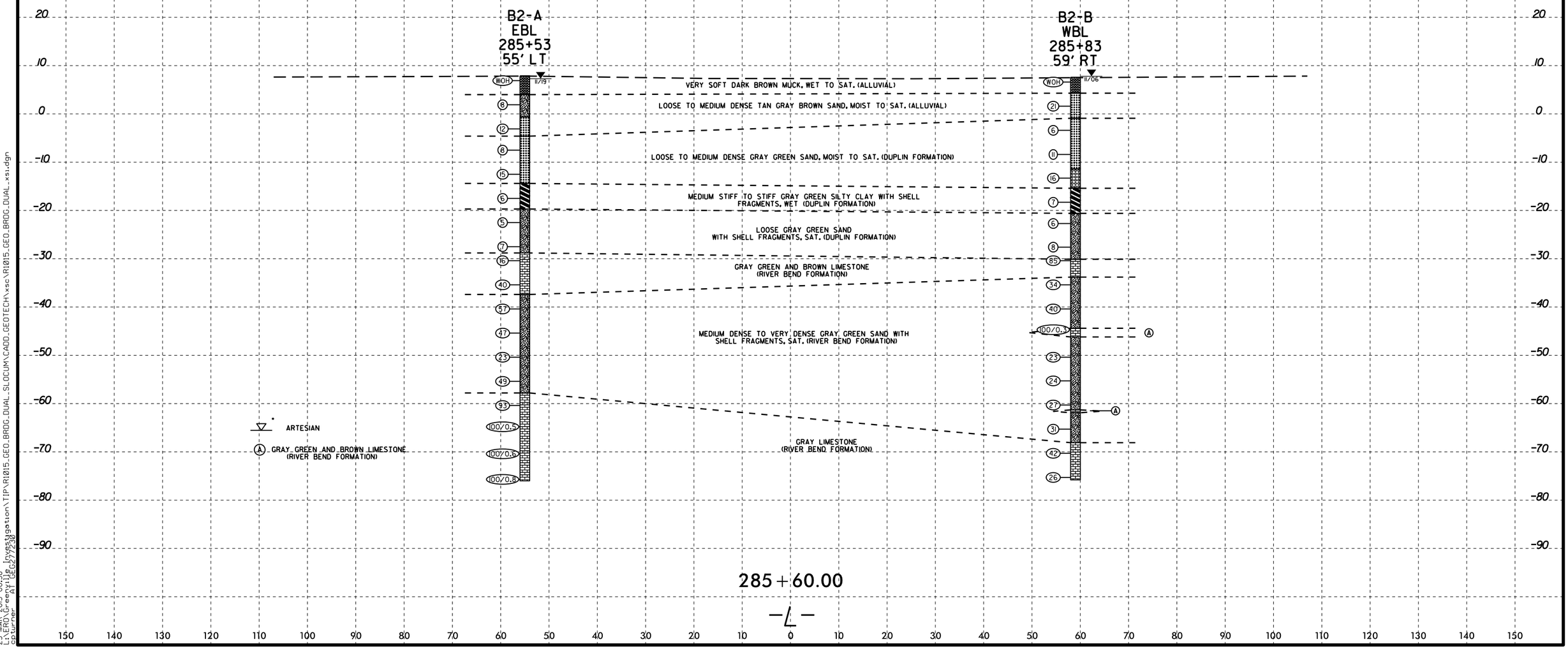

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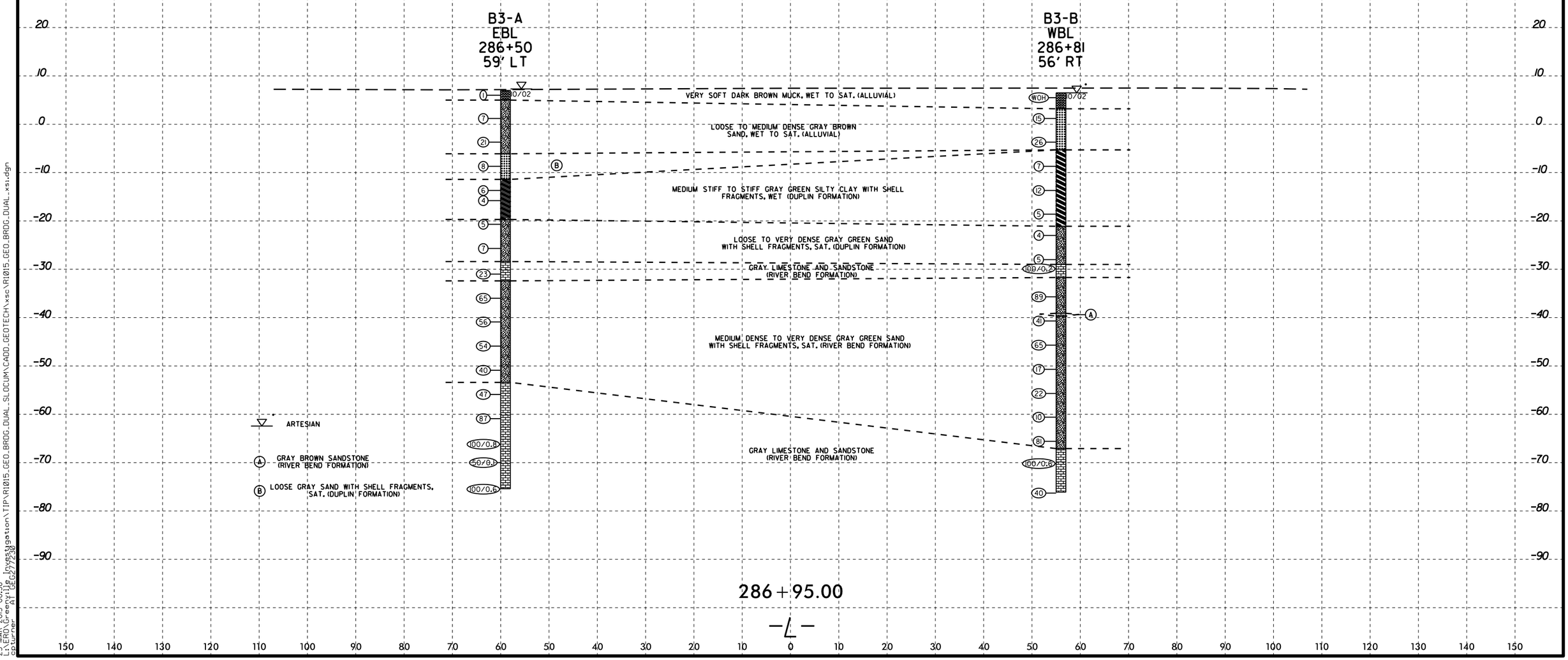

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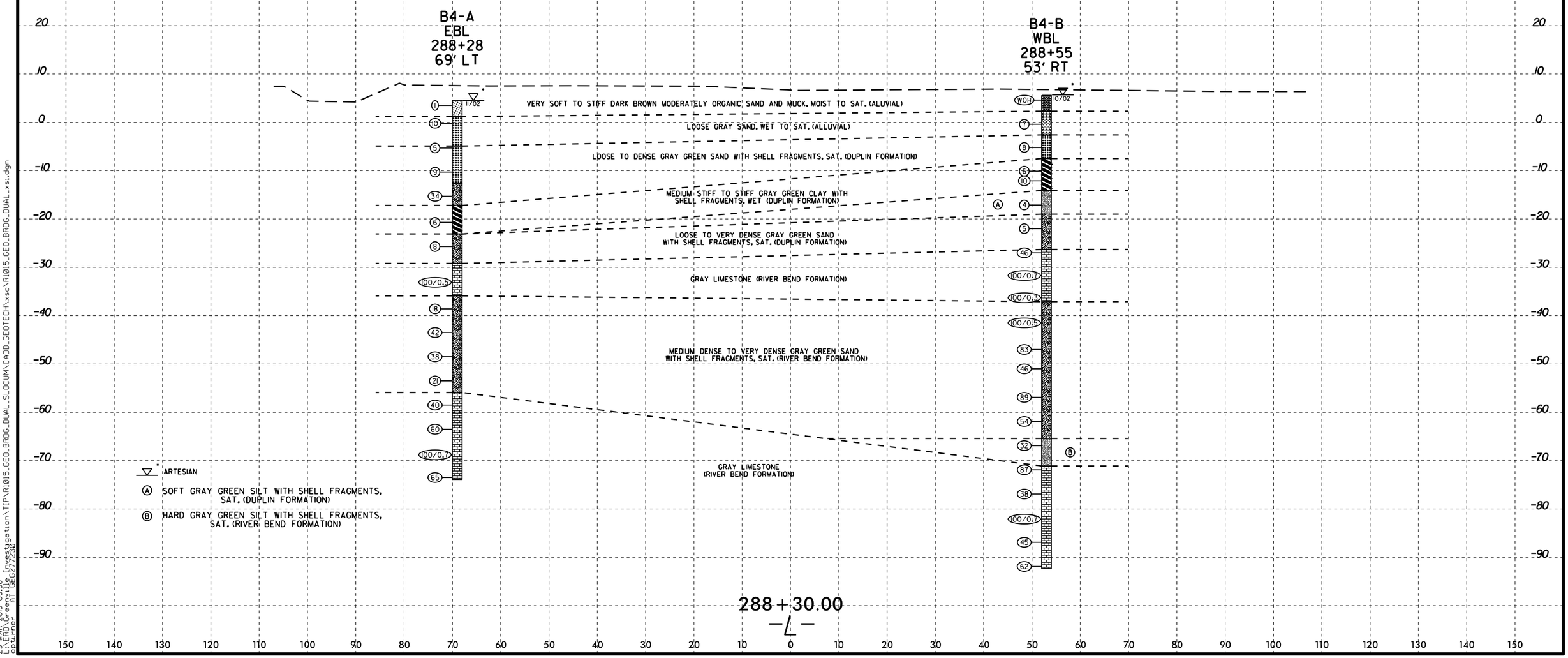

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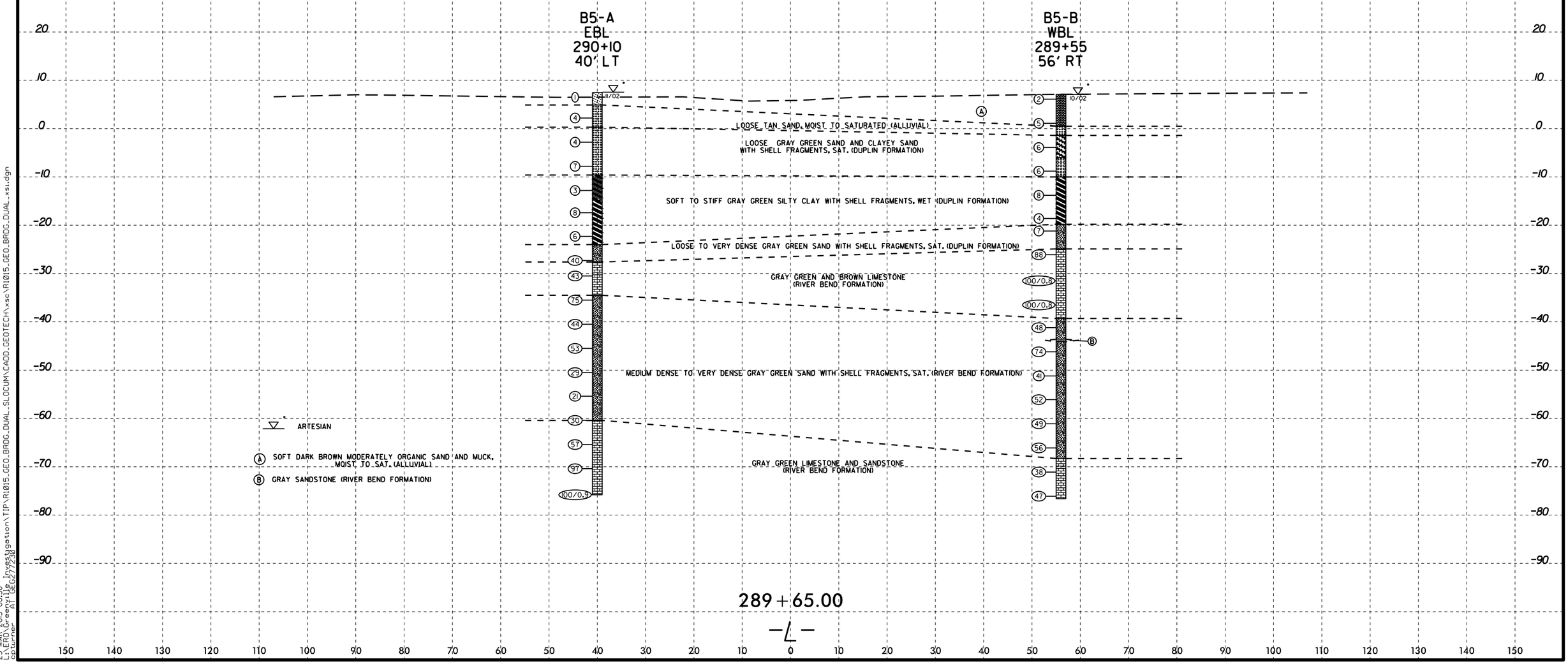

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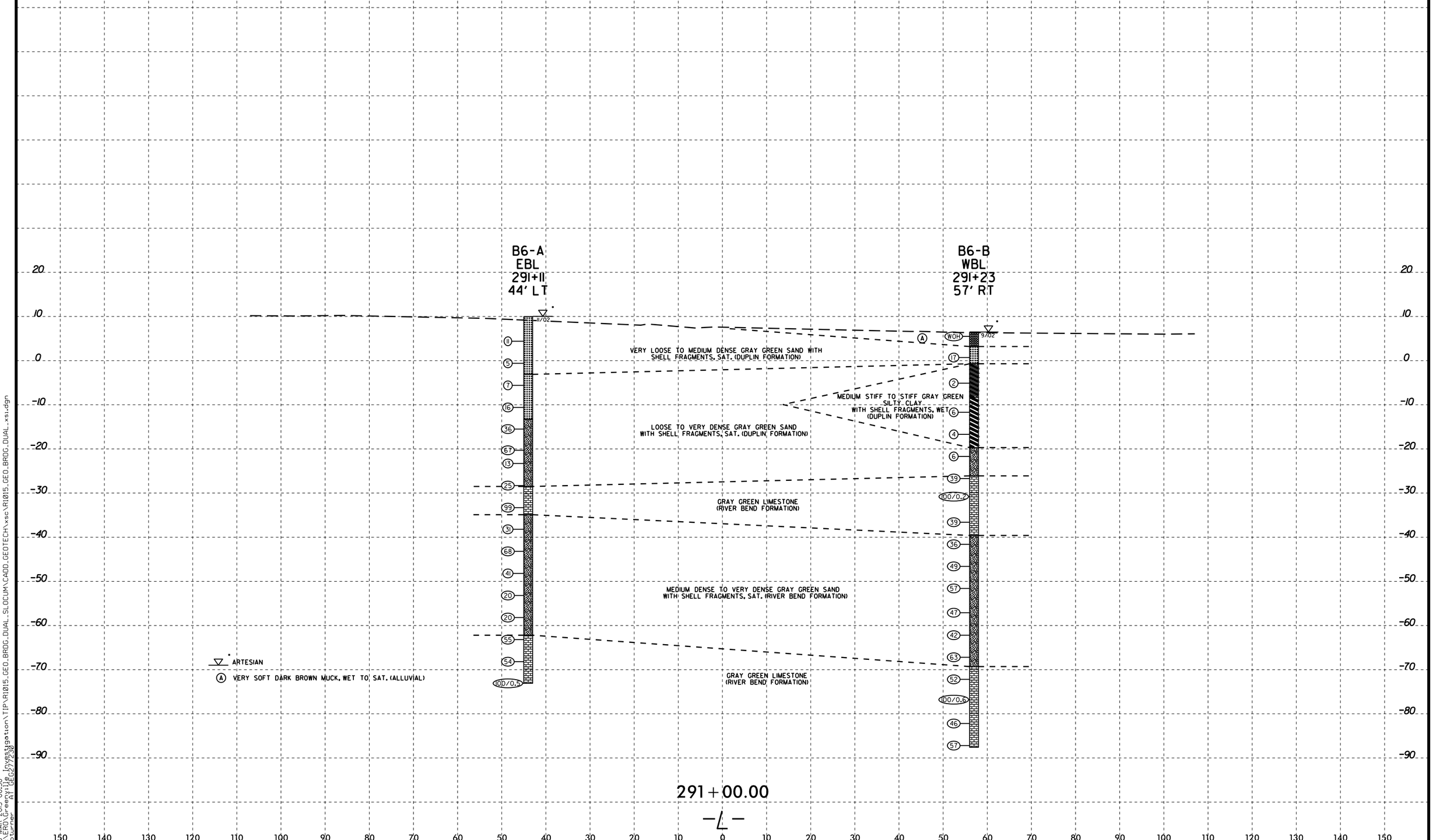

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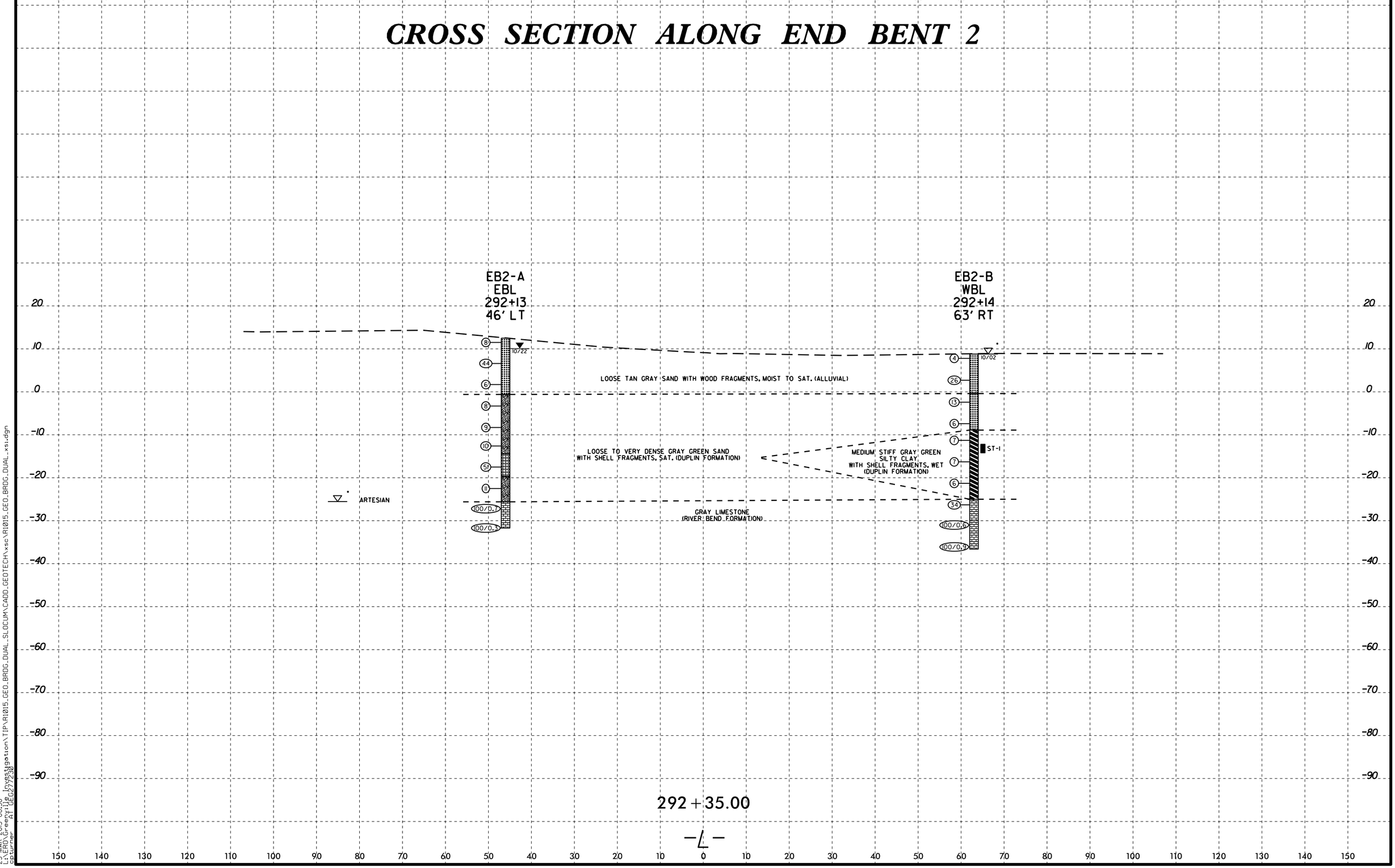
CROSS SECTION ALONG END BENT 2



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cpturner AT GEO277230

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. EB1-A EBL	**STATION** 282+89	**OFFSET** 53 ft LT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 12.7 ft	**TOTAL DEPTH** 45.9 ft	**NORTHING** 416,611	**EASTING** 2,617,431	**24 HR.** 1.4
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** Mud Rotary	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/09/02	**COMP. DATE** 10/09/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT (0 25 50 75 100)	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION	ELEV. (ft)	DEPTH (ft)
	12.7	0.0								GROUND SURFACE	12.7	0.0
			2	2	4	6				**ALLUVIAL** DARK GRAY SAND, WET TO SAT.		
	7.7	5.0	5	3	5	8						
	2.7	10.0	3	3	5	8	SS-46				4.2	8.5
	-2.2	14.9	7	11	12	23	SS-47				-4.4	17.1
	-6.5	19.2	6	5	6	11				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)		
	-11.7	24.4	4	4	8	12						
	-16.7	29.4	19	28	37	65					-20.1	32.8
	-21.3	34.0	10	8	7	15	SS-48				-24.7	37.4
	-26.4	39.1	17	19	15	34	SS-49				-29.3	42.0
	-31.4	44.1	14	21	30	51				**COASTAL PLAIN** GREEN LIMESTONE (RIVER BEND FORMATION)	-33.2	45.9

Boring Terminated at Elevation -33.2 ft in Limestone

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. EB1-B WBL	**STATION** 282+89	**OFFSET** 58 ft RT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 20.5 ft	**TOTAL DEPTH** 45.1 ft	**NORTHING** 416,627	**EASTING** 2,617,542	**24 HR.** 8.4
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** Mud Rotary	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/09/02	**COMP. DATE** 10/09/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT (0 25 50 75 100)	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
25											
20	20.5	0.0	1	1	1	2				20.5 GROUND SURFACE	0.0
										ALLUVIAL TAN ORANGE SAND WITH WOOD FRAGMENTS, MOIST TO SAT.	
15	15.8	4.7	5	5	6	11	SS-41				
10	11.0	9.5	6	5	3	8				7.4	13.1
5	6.0	14.5	6	5	10	15	SS-42				
0	1.4	19.1	11	12	11	23					
-5	-3.6	24.1	14	14	18	32				-6.4	26.9
										COASTAL PLAIN GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
-10	-8.6	29.1	8	9	9	18	SS-43			-11.7	32.2
-15	-13.6	34.1	5	3	7	10	SS-44			-15.6	36.1
-20	-18.2	38.7	28	35	35	70	SS-45				
	-23.1	43.6	27	46	47	93				-24.6	45.1
										Boring Terminated at Elevation -24.6 ft in Very Dense Sand	

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B1-A EBL	**STATION** 283+76	**OFFSET** 56 ft LT	**ALIGNMENT** -L- / **0 HR.** N/A
COLLAR ELEV. 11.8 ft	**TOTAL DEPTH** 83.4 ft	**NORTHING** 416,698	**EASTING** 2,617,416 / **24 HR.** 4.4
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/10/02	**COMP. DATE** 10/10/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
15											
	11.8	0.0								11.8 GROUND SURFACE	0.0
10			3	3	6	9	SS-35			**ALLUVIAL** BROWN MODERATELY ORGANIC SAND, WET TO SAT. (ALLUVIAL)	
	6.9	4.9								8.5 **ALLUVIAL** GRAY SAND	3.3
5			4	10	16	26					
	1.9	9.9									
0			7	11	19	30					
	-2.7	14.5									
-5			6	7	9	16	SS-36			-5.3 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	17.1
	-7.4	19.2									
-10			5	3	3	6					
	-10.6	22.4									
-15			2	2	3	5	SS-37				
	-15.6	27.4									
-20			14	30	30	60	SS-38			-19.7	31.5
	-20.6	32.4									
-25			4	3	4	7	SS-39				
	-25.6	37.4									
-30			23	18	19	37					
	-30.6	42.4								-30.2 **COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	42.0
-35			10	11	11	22					
	-35.6	47.4								-34.8 **COASTAL PLAIN** BROWN GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	46.6
-40			13	13	24	37					
	-40.6	52.4									
-45			56	26	38	64					
	-45.2	57.0									
-50			24	23	26	49					
	-50.2	62.0									
-55			15	17	22	39				-52.2 **COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	64.0
	-55.2	67.0									
-60			30	28	72/0.4	100/0.9					
	-60.2	72.0									
-65			22	70	30/0.2	100/0.7	SS-40				

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B1-A EBL	**STATION** 283+76	**OFFSET** 56 ft LT	**ALIGNMENT** -L- / **0 HR.** N/A
COLLAR ELEV. 11.8 ft	**TOTAL DEPTH** 83.4 ft	**NORTHING** 416,698	**EASTING** 2,617,416 / **24 HR.** 4.4
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/10/02	**COMP. DATE** 10/10/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-65						Match Line				
	-65.2	77.0	33	30	38	68				**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION) *(continued)*
-70										
	-70.2	82.0	21	19	28	47				-71.6 83.4
										Boring Terminated at Elevation -71.6 ft in Limestone

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B1-A EBL	**STATION** 283+76	**OFFSET** 56 ft LT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 11.8 ft	**TOTAL DEPTH** 83.4 ft	**NORTHING** 416,698	**EASTING** 2,617,416	**24 HR.** 4.4
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/10/02	**COMP. DATE** 10/10/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 43.9 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS ELEV. (ft)	DEPTH (ft)
-8.9											Begin Coring @ 20.7 ft	
-10	-8.9	20.7	1.8	0:20/1.0 0:15/0.8 *N=5*	(0.0) 0%						**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION) *(continued)*	
	-10.7	22.5										
	-12.1	23.9					*SS-37*					
			3.5	0:20/1.0 0:17/1.0 0:18/1.0 0:10/0.6 *N=60*	(0.0) 0%							
-15	-15.6	27.4										
	-17.1	28.9					*SS-38*					
			3.5	0:25/1.0 0:23/1.0 0:25/1.0 0:12/0.6 *N=7*	(0.0) 0%							
-20	-20.6	32.4									-19.7	31.5
	-22.1	33.9					*SS-39*					
			3.5	0:25/1.0 0:23/1.0 0:27/1.0 0:17/0.6 *N=37*	(0.0) 0%							
-25	-25.6	37.4										
	-27.1	38.9										
			3.5	0:20/1.0 0:23/1.0 0:21/1.0 0:17/0.6 *N=22*	(0.0) 0%							
-30	-30.6	42.4									-30.2	42.0
	-32.1	43.9									**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	
			3.5	0:42/1.0 0:41/1.0 0:31/1.0 0:15/0.6 *N=37*	(0.0) 0%							
-35	-35.6	47.4									-34.8	46.6
	-37.1	48.9									**COASTAL PLAIN** BROWN GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
			3.5	0:28/1.0 0:23/1.0 0:25/1.0 0:12/0.6 *N=64*	(0.0) 0%							
-40	-40.6	52.4										
	-42.0	53.8										
			3.2	1:53/1.0 0:34/1.0 0:30/1.0 0:17/0.2 *N=49*	(0.0) 0%							
-45	-45.2	57.0										
	-46.7	58.5										
			3.5	0:31/1.0 0:32/1.0 0:28/1.0 0:11/0.6 *N=39*	(0.0) 0%							
-50	-50.2	62.0										
	-51.7	63.5									-52.2	64.0
			3.5	1:37/1.0 1:17/1.0 1:40/1.0 0:42/0.6 *N=100/0.9*	(1.6) 46%						**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	
-55	-55.2	67.0										
	-56.6	68.4										
			3.6	1:29/1.0 1:15/1.0 0:31/1.0 0:15/0.7 *N=100/0.7*	(0.9) 25%							
-60	-60.2	72.0										
	-61.3	73.1					*SS-40*					
			3.8	2:15/1.0 2:40/1.0 2:19/1.0 2:45/0.9 *N=68*	(2.9) 76%							
-65	-65.1	76.9										
	-66.6	78.4										
			3.5	2:37/1.0 2:52/1.0 1:43/1.0 2:21/0.6 *N=47*	(2.5) 71%							
-70	-70.1	81.9									-71.6	83.4
											Boring Terminated at Elevation -71.6 ft in Limestone	

NCDOT CORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B1-B WBL	**STATION** 284+00	**OFFSET** 53 ft RT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 10.2 ft	**TOTAL DEPTH** 83.8 ft	**NORTHING** 416,736	**EASTING** 2,617,520 — **24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/13/02	**COMP. DATE** 11/14/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
15											
10	10.2	0.0	WOH	WOH	WOH	0				10.2 GROUND SURFACE	0.0
										ALLUVIAL DARK BROWN MUCK, MOIST TO SAT.	
										6.9	3.3
5	5.2	5.0	5	8	9	17				**ALLUVIAL** LIGHT GRAY SAND, SAT.	
0	0.2	10.0	10	14	14	28					
										-2.9	13.1
-5	-4.8	15.0	1	1	1	2				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
-10	-9.8	20.0	4	4	7	11					
-15	-14.5	24.7	16	29	36	65					
-20	-19.3	29.5	17	23	22	45					
										-22.6	32.8
-25	-24.2	34.4	6	8	7	15					
	-27.3	37.5	14	16	19	35					
-30										-30.0	40.2
										COASTAL PLAIN GRAY LIMESTONE (RIVER BEND FORMATION)	
	-32.3	42.5	13	15	11	26					
-35										-34.7	44.9
										COASTAL PLAIN GRAY SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
	-37.3	47.5	13	20	34	54					
-40											
	-42.3	52.5	22	19	17	36					
-45										-44.1	54.3
										COASTAL PLAIN GRAY LIMESTONE (RIVER BEND FORMATION)	
	-47.2	57.4	4	9	8	17				-46.3	56.5
-50										**COASTAL PLAIN** GRAY SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
	-52.2	62.4	4	6	9	15					
-55											
	-57.2	67.4	12	3	4	7					
-60											
	-62.2	72.4	9	26	34	60					
-65											

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B1-B WBL	**STATION** 284+00	**OFFSET** 53 ft RT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 10.2 ft	**TOTAL DEPTH** 83.8 ft	**NORTHING** 416,736	**EASTING** 2,617,520 — **24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/13/02	**COMP. DATE** 11/14/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-65						Match Line				
	-67.2	77.4	23	45	55/0.2	100/0.7				**COASTAL PLAIN** GRAY SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION) *(continued)*
-70										-68.4 / 78.6
	-72.1	82.3	36	18	29	47				**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
										-73.6 / 83.8
										Boring Terminated at Elevation -73.6 ft in Limestone
										ARTESIAN HEAD ELEVATION = 10.6

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B1-B WBL	**STATION** 284+00	**OFFSET** 53 ft RT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 10.2 ft	**TOTAL DEPTH** 83.8 ft	**NORTHING** 416,736	**EASTING** 2,617,520	**24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/13/02	**COMP. DATE** 11/14/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 33.3 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS ELEV. (ft)	DEPTH (ft)
-25.7											Begin Coring @ 35.9 ft	
	-25.7 / -27.3	35.9 / 37.5	1.6	0:35/1.0 0:13/0.6 N=35	(0.0) 0%						GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION) *(continued)*	
	-28.8	39.0										
-30			3.5	0:21/1.0 1:55/1.0 1:11/1.0 0:10/0.5 N=26	(0.5) 14%						-30.0	40.2
	-32.3	42.5									**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	
	-33.8	44.0										
-35			3.5	0:25/1.0 0:34/1.0 0:32/1.0 0:12/0.5 N=54	(0.0) 0%						-34.7	44.9
	-37.3	47.5									**COASTAL PLAIN** GRAY SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
	-38.8	49.0										
-40			3.5	0:28/1.0 0:22/1.0 1:06/1.0 0:10/0.5 N=36	(0.5) 14%							
	-42.3	52.5										
	-43.8	54.0									-44.1	54.3
-45			3.5	0:41/1.0 0:44/1.0 0:32/1.0 0:15/0.5 N=17	(2.3) 66%						**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION) -46.3	56.5
	-47.3	57.5									**COASTAL PLAIN** GRAY SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
	-48.8	59.0										
-50			3.5	0:28/1.0 0:30/1.0 0:27/1.0 0:10/0.5 N=15	(0.0) 0%							
	-52.3	62.5										
	-53.8	64.0										
-55			3.5	0:37/1.0 0:22/1.0 0:24/1.0 0:09/0.5 N=7	(0.0) 0%							
	-57.3	67.5										
	-58.8	69.0										
-60			3.5	0:22/1.0 0:31/1.0 0:25/1.0 0:15/0.5 N=60	(0.0) 0%							
	-62.3	72.5										
	-63.8	74.0										
-65			3.5	0:55/1.0 0:43/1.0 0:42/1.0 0:25/0.5 N=100/0.7	(0.0) 0%							
	-67.3	77.5										
	-68.4	78.6									-68.4	78.6
-70			3.7	2:13/1.0 0:22/1.0 1:40/1.0 0:45/0.7 N=47	(1.8) 49%						**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	
	-72.1	82.3										
											-73.6	83.8
											Boring Terminated at Elevation -73.6 ft in Limestone	
											ARTESIAN HEAD ELEVATION = 10.6	

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear / B. Banks
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B2-A EBL	**STATION** 285+53	**OFFSET** 55 ft LT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 7.9 ft	**TOTAL DEPTH** 83.9 ft	**NORTHING** 416,871	**EASTING** 2,617,390 — **24 HR.** 0.6
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/19/02	**COMP. DATE** 11/19/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION — ELEV. (ft)	DEPTH (ft)
	7.9	0.0	WOH	WOH	WOH	0				GROUND SURFACE	0.0
										ALLUVIAL DARK BROWN MUCK, WET TO SAT.	
	4.0	3.9									
	2.9	5.0	9	5	3	8				**ALLUVIAL** TAN GRAY SAND WITH WOOD FRAGMENTS, SAT.	
	-0.6	8.5									
	-2.1	10.0	5	6	6	12					
	-4.6	12.5								**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
	-6.5	14.4	3	4	4	8					
	-11.5	19.4	3	7	8	15					
	-14.4	22.3								**COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION)	
	-16.5	24.4	2	3	3	6					
	-19.7	27.6								**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
	-21.5	29.4	2	3	2	5					
	-26.5	34.4	4	4	3	7					
	-28.8	36.7								**COASTAL PLAIN** GREEN AND BROWN LIMESTONE (RIVER BEND FORMATION)	
	-29.4	37.3	12	8	8	16					
	-34.4	42.3	14	17	23	40					
	-37.4	45.3								**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
	-39.4	47.3	5	26	31	57					
	-44.4	52.3	51	24	23	47					
	-49.4	57.3	7	9	14	23					
	-54.4	62.3	9	26	23	49					
	-57.8	65.7								**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	
	-59.4	67.3	40	53	40	93					
	-64.3	72.2	100/0.5			100/0.5					
	-69.3	77.2									

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear / B. Banks
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B2-A EBL	**STATION** 285+53	**OFFSET** 55 ft LT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 7.9 ft	**TOTAL DEPTH** 83.9 ft	**NORTHING** 416,871	**EASTING** 2,617,390 — **24 HR.** 0.6
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/19/02	**COMP. DATE** 11/19/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-70						Match Line				
			34	55	45/0.1	100/0.6				**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION) *(continued)*
-75	-74.9	82.8	25	75/0.3		100/0.8				
										-76.0 / 83.9 — Boring Terminated at Elevation -76.0 ft in Limestone

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear / B. Banks
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B2-A EBL	**STATION** 285+53	**OFFSET** 55 ft LT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 7.9 ft	**TOTAL DEPTH** 83.9 ft	**NORTHING** 416,871	**EASTING** 2,617,390	**24 HR.** 0.6
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/19/02	**COMP. DATE** 11/19/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 34.4 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS (ELEV. (ft) / DEPTH (ft))
-27.96											Begin Coring @ 35.9 ft
-30	-28.0 / -28.5	35.9 / 37.4	1.5	0:16/1.0 0:15/0.5 N=16	(0.0) 0%						-28.8 / 36.7 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION) *(continued)*
	-30.9	38.8									
-35	-34.4 / -35.9	42.3 / 43.8	3.5	0:28/1.0 1:04/1.0 0:42/1.0 0:20/0.6 N=40	(2.3) 66%						**COASTAL PLAIN** GREEN AND BROWN LIMESTONE (RIVER BEND FORMATION)
-40	-39.4 / -40.9	47.3 / 48.8	3.5	0:31/1.0 0:25/1.0 0:16/1.0 0:10/0.6 N=57	(1.5) 44%						-37.4 / 45.3 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
-45	-44.4 / -45.9	52.3 / 53.8	3.5	0:36/1.0 0:38/1.0 0:31/1.0 0:12/0.6 N=47	(0.0) 0%						
-50	-49.4 / -50.9	57.3 / 58.8	3.5	0:38/1.0 0:34/1.0 0:33/1.0 0:09/0.6 N=23	(0.0) 0%						
-55	-54.4 / -55.9	62.3 / 63.8	3.5	0:22/1.0 0:31/1.0 0:21/1.0 0:13/0.6 N=49	(0.0) 0%						
-60	-59.4 / -60.8	67.3 / 68.7	3.5	0:31/1.0 0:30/1.0 0:35/1.0 0:12/0.6 N=93	(0.0) 0%						-57.8 / 65.7 **COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
-65	-64.3 / -64.8	72.2 / 72.7	3.5	1:34/1.0 0:25/1.0 1:41/1.0 0:26/0.6 N=100/0.5	(1.2) 35%						
-70	-69.3 / -70.4	77.2 / 78.3	4.5	1:16/1.0 0:46/1.0 1:00/1.0 0:23/1.0 0:35/0.6 N=100/0.6	(1.4) 31%						
-75	-74.3	82.2	3.9	1:45/1.0 1:58/1.0 0:42/1.0 0:38/1.0 N=100/0.8	(1.7) 43%						-76.0 / 83.9 Boring Terminated at Elevation -76.0 ft in Limestone

NCDOT CORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B2-B WBL	**STATION** 285+83	**OFFSET** 59 ft RT	**ALIGNMENT** -L- **0 HR.** N/A
COLLAR ELEV. 7.6 ft	**TOTAL DEPTH** 83.4 ft	**NORTHING** 416,918	**EASTING** 2,617,499 **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/06/02	**COMP. DATE** 11/07/02	**SURFACE WATER DEPTH** 0.2ft

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
	7.6	0.0	WOH	WOH	WOH	0				GROUND SURFACE	0.0
										ALLUVIAL DARK BROWN MUCK, WET TO SAT.	3.3
	2.6	5.0	8	9	12	21				**ALLUVIAL** BROWN GRAY SAND WITH WOOD FRAGMENTS, SAT.	8.5
	-2.4	10.0	2	2	4	6				**COASTAL PLAIN** GRAY GREEN SAND, SAT. (DUPLIN FORMATION)	19.0
	-7.4	15.0	6	6	5	11					
	-12.3	19.9	11	11	5	16				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	23.0
	-17.3	24.9	3	3	4	7				**COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION)	28.2
	-21.7	29.3	3	3	3	6				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	37.7
	-26.6	34.2	3	4	4	8					
	-29.4	37.0	7	34	51	85				**COASTAL PLAIN** GRAY GREEN LIMESTONE (RIVER BEND FORMATION)	41.4
	-34.4	42.0	14	13	21	34				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	52.0
	-39.4	47.0	12	17	23	40					
	-44.4	52.0	100/0.3			100/0.3				**COASTAL PLAIN** GRAY GREEN LIMESTONE (RIVER BEND FORMATION)	53.8
	-49.4	57.0	14	9	14	23				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	68.9
	-54.3	61.9	8	7	17	24					
	-59.3	66.9	7	9	18	27				**COASTAL PLAIN** GRAY GREEN LIMESTONE (RIVER BEND FORMATION)	69.5
	-64.3	71.9	7	11	20	31				**COASTAL PLAIN** SILTY SAND, SAT. (RIVER BEND FORMATION)	75.7
	-69.3	76.9									

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B2-B WBL	**STATION** 285+83	**OFFSET** 59 ft RT	**ALIGNMENT** -L- **0 HR.** N/A
COLLAR ELEV. 7.6 ft	**TOTAL DEPTH** 83.4 ft	**NORTHING** 416,918	**EASTING** 2,617,499 **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/06/02	**COMP. DATE** 11/07/02	**SURFACE WATER DEPTH** 0.2ft

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-70			5	16	26	Match Line 42				**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION) *(continued)*
-75	-74.3	81.9	11	12	14	26				-75.8 Boring Terminated at Elevation -75.8 ft in Limestone 83.4

ARTESIAN FLOW

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B2-B WBL	**STATION** 285+83	**OFFSET** 59 ft RT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 7.6 ft	**TOTAL DEPTH** 83.4 ft	**NORTHING** 416,918	**EASTING** 2,617,499	**24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/06/02	**COMP. DATE** 11/07/02	**SURFACE WATER DEPTH** 0.2ft
CORE SIZE HQ	**TOTAL RUN** 33.8 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS (ELEV. (ft) / DEPTH (ft))
-28.1											Begin Coring @ 35.7 ft
-30	-28.1 / -29.4	35.7 / 37.0	1.3	0:22/1.0 0:08/0.3 N=85	(0.0) 0%						-30.1 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION) *(continued)* 37.7
	-30.9	38.5	3.5	1:21/1.0 0:23/1.0 2:36/1.0 0:39/0.6 N=34	(1.1) 31%						**COASTAL PLAIN** GRAY GREEN LIMESTONE (RIVER BEND FORMATION) 41.4
-35	-34.4	42.0									-33.8 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
	-35.9	43.5	3.5	0:34/1.0 1:03/1.0 0:24/1.0 0:29/0.6 N=40	(0.8) 23%						
-40	-39.4	47.0									
	-40.9	48.5	3.5	0:23/1.0 0:22/1.0 0:26/1.0 0:18/0.6 N=100/0.3	(0.0) 0%						
-45	-44.4 / -44.8	52.0 / 52.4	4.5	0:38/1.0 0:26/1.0 0:19/1.0 0:26/1.0 0:15/0.6 N=23	(1.3) 29%						-44.4 52.0 **COASTAL PLAIN** GRAY GREEN LIMESTONE (RIVER BEND FORMATION) 53.8
-50	-49.3	56.9									-46.2 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
	-50.8	58.4	3.5	0:25/1.0 0:25/1.0 0:26/1.0 0:10/0.6 N=24	(0.0) 0%						
-55	-54.3	61.9									
	-55.8	63.4	3.5	0:48/1.0 0:27/1.0 0:27/1.0 0:12/0.6 N=27	(0.0) 0%						
-60	-59.3	66.9									
	-60.8	68.4	3.5	2:56/1.0 2:23/1.0 0:23/1.0 0:10/0.6 N=31	(0.6) 17%						-61.3 68.9 -61.9 69.5 **COASTAL PLAIN** GRAY GREEN LIMESTONE (RIVER BEND FORMATION)
-65	-64.3	71.9									**COASTAL PLAIN** SILTY SAND, SAT. (RIVER BEND FORMATION)
	-65.8	73.4	3.5	0:38/1.0 0:24/1.0 1:05/1.0 0:31/0.6 N=42	(1.2) 34%						-68.1 75.7 **COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
-70	-69.3	76.9									
	-70.8	78.4	3.5	0:32/1.0 0:40/1.0 0:43/1.0 0:19/0.6 N=26	(1.4) 40%						
-75	-74.3	81.9									-75.8 83.4 Boring Terminated at Elevation -75.8 ft in Limestone ARTESIAN FLOW

NCDOT CORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B3-A EBL	**STATION** 286+50	**OFFSET** 59 ft LT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 7.0 ft	**TOTAL DEPTH** 82.4 ft	**NORTHING** 416,967	**EASTING** 2,617,373 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/11/02	**COMP. DATE** 10/16/02	**SURFACE WATER DEPTH** 0.3ft

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
10											
	7.0	0.0	WOH	WOH	1	1	SS-50			7.0 GROUND SURFACE	0.0
5										**ALLUVIAL** DARK BROWN MUCK, WET TO SAT. 5.0	2.0
	2.2	4.8	3	3	4	7	SS-51			**ALLUVIAL** GRAY SAND WITH WOOD FRAGMENTS, MOIST TO SAT.	
0											
	-2.7	9.7	8	13	8	21					
-5										-6.1	13.1
	-7.7	14.7	3	3	5	8				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
-10										-11.4	18.4
	-12.7	19.7	3	3	3	6	SS-52			**COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION)	
-15	-14.8	21.8	2	2	2	4					
-20	-19.7	26.7	3	2	3	5	SS-53			-19.7	26.7
										COASTAL PLAIN GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
-25	-24.7	31.7	3	3	4	7					
-30	-30.0	37.0	17	12	11	23				-28.4	35.4
										COASTAL PLAIN GRAY CALCITE CEMENTED SANDSTONE WITH SHELL FRAGMENTS (RIVER BEND FORMATION)	
-35	-35.0	42.0	41	32	33	65	SS-54			-32.4	39.4
										COASTAL PLAIN GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
-40	-39.9	46.9	15	25	31	56					
-45	-44.9	51.9	19	29	25	54					
-50	-49.9	56.9	12	18	22	40					
-55	-54.9	61.9	9	23	24	47				-53.4	60.4
										COASTAL PLAIN GRAY LIMESTONE (RIVER BEND FORMATION)	
-60	-59.9	66.9	38	33	54	87	SS-55				
-65	-64.9	71.9	19	34	66/0.3	100/0.8					
-70	-69.9	76.9				50/0.1					

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B3-A EBL	**STATION** 286+50	**OFFSET** 59 ft LT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 7.0 ft	**TOTAL DEPTH** 82.4 ft	**NORTHING** 416,967	**EASTING** 2,617,373 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/11/02	**COMP. DATE** 10/16/02	**SURFACE WATER DEPTH** 0.3ft

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-70			50/0.1			Match Line 50/0.1				**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION) *(continued)*
-75	-74.9	81.9	86	14/0.1		100/0.6				-75.4 82.4 Boring Terminated at Elevation -75.4 ft in Limestone

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B3-A EBL	**STATION** 286+50	**OFFSET** 59 ft LT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 7.0 ft	**TOTAL DEPTH** 82.4 ft	**NORTHING** 416,967	**EASTING** 2,617,373	**24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/11/02	**COMP. DATE** 10/16/02	**SURFACE WATER DEPTH** 0.3ft
CORE SIZE HQ	**TOTAL RUN** 44.5 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS (ELEV. (ft) / DEPTH (ft))
-14.16											Begin Coring @ 21.2 ft
-15	-14.2	21.2	0.6	0:20/0.6	(0.0)						**COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION) *(continued)*
	-14.8	21.8		N=4	0%						
	-16.2	23.2	3.5	0:23/1.0	(0.7)						
				0:30/1.0	21%						
				0:27/1.0							
-20	-19.7	26.7		0:08/0.6							-19.7 / 26.7
	-21.2	28.2		N=5			SS-53				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)
			3.5	0:25/1.0	(0.0)						
				0:21/1.0	0%						
				0:22/1.0							
-25	-24.7	31.7		0:09/0.6							
	-26.2	33.2		N=7							
			3.8	0:30/1.0	(0.0)						
				0:23/1.0	0%						
				0:31/1.0							-28.4 / 35.4
-30	-30.0	37.0		0:20/0.8							**COASTAL PLAIN** GRAY CALCITE CEMENTED SANDSTONE WITH SHELL FRAGMENTS (RIVER BEND FORMATION)
	-31.5	38.5		N=23							
			3.5	0:30/1.0	(0.0)						-32.4 / 39.4
				0:31/1.0	0%						**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
				0:28/1.0							
-35	-35.0	42.0		0:15/0.6							
	-36.4	43.4		N=65			SS-54				
			3.5	0:25/1.0	(0.7)						
				0:28/1.0	19%						
				0:21/1.0							
-40	-39.9	46.9		0:15/0.6							
	-41.4	48.4		N=56							
			3.5	0:29/1.0	(1.7)						
				0:27/1.0	50%						
				0:31/1.0							
-45	-44.9	51.9		0:12/0.6							
	-46.4	53.4		N=54							
			3.5	0:20/1.0	(1.1)						
				0:20/1.0	32%						
				0:20/1.0							
-50	-49.9	56.9		0:11/0.6							
	-51.4	58.4		N=40							
			3.5	0:22/1.0	(0.3)						-53.4 / 60.4
				0:21/1.0	9%						**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
				0:24/1.0							
-55	-54.9	61.9		0:15/0.6							
	-56.4	63.4		N=47							
			3.5	1:00/1.0	(0.5)						
				0:54/1.0	15%						
				0:16/1.0							
-60	-59.9	66.9		0:10/0.6							
	-61.4	68.4		N=87			SS-55				
			3.5	0:57/1.0	(1.4)						
				0:45/1.0	39%						
				0:37/1.0							
-65	-64.9	71.9		0:39/0.6							
	-66.2	73.2		N=100/0.8							
			3.7	0:55/1.0	(1.8)						
				1:10/1.0	49%						
				1:15/1.0							
-70	-69.9	76.9		0:45/0.8							
	-69.9	76.9	4.9	1:54/1.0	(1.1)						
				N=50/0.1	23%						
				1:54/1.0							
				1:05/1.0							
				1:10/1.0							
-75	-74.8	81.8		0:45/1.0							-75.4 / 82.4
				0:35/1.0							Boring Terminated at Elevation -75.4 ft in Limestone
				N=100/0.6							

NCDOT CORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B3-B WBL	**STATION** 286+81	**OFFSET** 56 ft RT	**ALIGNMENT** -L- / **0 HR.** N/A
COLLAR ELEV. 6.5 ft	**TOTAL DEPTH** 82.6 ft	**NORTHING** 417,014	**EASTING** 2,617,481 / **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/04/02	**COMP. DATE** 11/05/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
10											
	6.5	0.0	WOH	WOH	WOH	0				6.5 GROUND SURFACE	0.0
5										**ALLUVIAL** DARK BROWN MUCK, WET TO SAT.	
	2.2	4.3	7	8	7	15				3.2 **ALLUVIAL** LIGHT BROWN SAND WITH WOOD FRAGMENTS, SAT.	3.3
0											
	-2.7	9.2	13	14	12	26					
-5										-5.3 **COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION)	11.8
	-7.7	14.2	3	3	4	7					
-10											
	-12.7	19.2	5	6	6	12					
-15											
	-17.6	24.1	2	2	3	5					
-20											
	-22.0	28.5	2	2	2	4				-21.1 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	27.6
-25											
	-27.0	33.5	2	2	3	5					
-30	-29.7	36.2	100/0.2			100/0.2				-29.0 **COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	35.5
										-31.7 **COASTAL PLAIN** GRAY SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	38.2
-35	-34.7	41.2	43	51	38	89					
-40	-39.7	46.2	10	19	22	41				-39.1 **COASTAL PLAIN** GRAY CALCITE CEMENTED SANDSTONE, SAT. (RIVER BEND FORMATION)	45.6
										-39.7 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	46.2
-45	-44.7	51.2	41	36	29	65					
-50	-49.7	56.2	8	6	11	17					
-55	-54.7	61.2	8	6	16	22					
-60	-59.6	66.1	7	5	5	10					
-65	-64.6	71.1	23	38	43	81				-67.1	73.6
-70	-69.6	76.1									

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B3-B WBL	**STATION** 286+81	**OFFSET** 56 ft RT	**ALIGNMENT** -L- / **0 HR.** N/A
COLLAR ELEV. 6.5 ft	**TOTAL DEPTH** 82.6 ft	**NORTHING** 417,014	**EASTING** 2,617,481 / **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/04/02	**COMP. DATE** 11/05/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-70			85	15/0.1		Match Line 100/0.6				**COASTAL PLAIN** GRAY SANDSTONE (RIVER BEND FORMATION) *(continued)*
-75	-74.6	81.1	31	20	20	40				-76.1 Boring Terminated at Elevation -76.1 ft in Sandstone 82.6
										ARTESIAN FLOW

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B3-B WBL	**STATION** 286+81	**OFFSET** 56 ft RT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 6.5 ft	**TOTAL DEPTH** 82.6 ft	**NORTHING** 417,014	**EASTING** 2,617,481	**24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/04/02	**COMP. DATE** 11/05/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 35.0 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS (ELEV. (ft) / DEPTH (ft))
-28.4											Begin Coring @ 34.9 ft
-30	-28.4 / -28.7 / -28.9	34.9 / 36.2 / 36.4	1.3	1:17/1.0	(0.7) 54%						-29.0 / 35.5 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION) *(continued)*
			4.8	*N=100/0.2* 0:25/0.3 0:52/1.0 0:47/1.0 0:46/1.0 0:23/1.0 0:16/0.9 *N=89*	(1.8) 38%						-31.7 / 38.2 **COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
-35	-34.7 / -36.2	41.2 / 42.7									**COASTAL PLAIN** GRAY SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
			3.5	0:20/1.0 0:50/1.0 0:33/1.0 4:12/0.6 *N=41*	(0.6) 17%						
-40	-39.7 / -41.2	46.2 / 47.7									-39.1 / 45.6 -39.7 / 46.2 **COASTAL PLAIN** GRAY CALCITE CEMENTED SANDSTONE, SAT. (RIVER BEND FORMATION)
			3.5	0:31/1.0 0:43/1.0 0:21/1.0 0:12/0.6 *N=65*	(0.0) 0%						**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
-45	-44.7 / -46.2	51.2 / 52.7									
			3.5	0:27/1.0 0:29/1.0 0:31/1.0 0:18/0.6 *N=17*	(0.0) 0%						
-50	-49.7 / -51.1	56.2 / 57.6									
			3.5	0:31/1.0 0:34/1.0 0:24/1.0 0:11/0.6 *N=22*	(0.2) 6%						
-55	-54.6 / -56.1	61.1 / 62.6									
			3.5	1:13/1.0 1:13/1.0 1:03/1.0 0:12/0.6 *N=10*	(0.0) 0%						
-60	-59.6 / -61.1	66.1 / 67.6									
			3.5	0:22/1.0 0:33/1.0 0:29/1.0 0:10/0.6 *N=81*	(0.0) 0%						
-65	-64.6 / -66.1	71.1 / 72.6									
			3.5	0:28/1.0 4:05/1.0 0:31/1.0 0:15/0.6 *N=100/0.6*	(2.2) 63%						-67.1 / 73.6 **COASTAL PLAIN** GRAY SANDSTONE (RIVER BEND FORMATION)
-70	-69.6 / -70.2	76.1 / 76.7									
			4.4	0:45/1.0 0:22/1.0 0:21/1.0 0:58/1.0 0:15/0.5 *N=40*	(1.3) 30%						
-75	-74.6	81.1									-76.1 / 82.6 Boring Terminated at Elevation -76.1 ft in Sandstone

ARTESIAN FLOW

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** B. Banks
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B4-A EBL	**STATION** 288+28	**OFFSET** 69 ft LT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 4.5 ft	**TOTAL DEPTH** 78.4 ft	**NORTHING** 417,142	**EASTING** 2,617,337 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/21/02	**COMP. DATE** 11/22/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION — ELEV. (ft)	DEPTH (ft)
5											
	4.5	0.0	1	0	1	1	SS-61			4.5 GROUND SURFACE	0.0
										ALLUVIAL BROWN MODERATELY ORGANIC SAND, SAT.	
	0.8	3.7	5	4	6	10				1.2	3.3
0										**ALLUVIAL** TAN SAND WITH WOOD FRAGMENTS, WET TO SAT.	
	-4.3	8.8	1	3	2	5				-4.9	9.4
-5										**COASTAL PLAIN** GRAY SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
	-9.3	13.8	4	5	4	9				-12.6	17.1
-10											
	-14.3	18.8	4	13	21	34				-17.2	21.7
-15										**COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION)	
	-19.7	24.2	2	3	3	6				-23.1	27.6
-20										**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
	-24.7	29.2	4	4	4	8				-29.2	33.7
-25										**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	
-30											
	-32.6	37.1	100/0.5			100/0.5				-35.9	40.4
-35										**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
	-37.6	42.1	23	9	9	18					
-40											
	-42.5	47.0	21	18	24	42					
-45											
	-47.5	52.0	42	20	18	38					
-50											
	-52.5	57.0	10	12	9	21					
-55										-55.9	60.4
	-57.5	62.0	12	18	22	40				**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	
-60											
	-62.5	67.0	23	26	34	60					
-65											
	-67.5	72.0	18	25	75/0.2	100/0.7					
-70											
	-72.5	77.0	11	14	51	65				-73.9	78.4

Boring Terminated at Elevation -73.9 ft in

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** B. Banks
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B4-A EBL	**STATION** 288+28	**OFFSET** 69 ft LT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 4.5 ft	**TOTAL DEPTH** 78.4 ft	**NORTHING** 417,142	**EASTING** 2,617,337 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/21/02	**COMP. DATE** 11/22/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-75						Match Line				Limestone
										ARTESIAN HEAD ELEVATION =13.1

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** B. Banks
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B4-A EBL	**STATION** 288+28	**OFFSET** 69 ft LT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 4.5 ft	**TOTAL DEPTH** 78.4 ft	**NORTHING** 417,142	**EASTING** 2,617,337	**24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/21/02	**COMP. DATE** 11/22/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 32.7 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS ELEV. (ft)	DEPTH (ft)
-29.2											Begin Coring @ 33.7 ft	
-30	-29.2	33.7	3.4	1:21/1.0 1:04/1.0 0:25/1.0 0:20/0.5	(1.0) 29%						-29.2 **COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	33.7
	-32.6	37.1										
	-33.1	37.6										
-35			4.5	N=100/0.5 1:54/1.0 0:32/1.0 4:13/1.0 0:15/1.0 0:21/0.6	(1.1) 24%						-35.9	40.4
	-37.6	42.1									**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
	-39.0	43.5		N=18								
-40			3.5	0:23/1.0 0:26/1.0 0:27/1.0 0:16/0.6	(0.0) 0%							
	-42.5	47.0										
	-44.0	48.5		N=42								
-45			3.5	0:23/1.0 0:17/1.0 0:23/1.0 0:12/0.6	(2.8) 80%							
	-47.5	52.0										
	-49.0	53.5		N=38								
-50			3.5	0:26/1.0 0:18/1.0 0:38/1.0 0:12/0.6	(0.0) 0%							
	-52.5	57.0										
	-54.0	58.5		N=21								
-55			3.5	0:22/1.0 0:23/1.0 0:29/1.0 0:11/0.6	(0.7) 20%						-55.9	60.4
	-57.5	62.0									**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	
	-59.0	63.5		N=40								
-60			3.5	0:19/1.0 0:20/1.0 0:20/1.0 0:09/0.6	(1.4) 40%							
	-62.5	67.0										
	-64.0	68.5		N=60								
-65			3.5	0:56/1.0 0:22/1.0 1:10/1.0 0:12/0.6	(2.5) 71%							
	-67.5	72.0										
	-68.6	73.1		N=100/0.7								
-70			3.8	1:36/1.0 0:52/1.0 2:56/1.0 0:59/0.9	(2.0) 53%							
	-72.4	76.9		N=65							-73.9	78.4
											Boring Terminated at Elevation -73.9 ft in Limestone ARTESIAN HEAD ELEVATION =13.1	

NCDOT CORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B4-B WBL	**STATION** 288+55	**OFFSET** 53 ft RT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 5.6 ft	**TOTAL DEPTH** 97.9 ft	**NORTHING** 417,186	**EASTING** 2,617,453 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/02/02	**COMP. DATE** 10/03/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION — ELEV. (ft)	DEPTH (ft)
10											
5	5.6	0.0	WOH	WOH	WOH	0				5.6 GROUND SURFACE	0.0
										ALLUVIAL DARK BROWN MUCK, WET TO SAT.	
										2.3	3.3
0	0.6	5.0	1	3	4	7	SS-59			**ALLUVIAL** GRAY BROWN SAND WITH WOOD FRAGMENTS, SAT.	
										-2.6	8.2
-5	-4.2	9.8	2	4	4	8	SS-13			**COASTAL PLAIN** GRAY BROWN SAND WITH WOOD FRAGMENTS, SAT. (DUPLIN FORMATION)	
										-7.5	13.1
-10	-9.1	14.7	3	3	3	6	SS-14			**COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION)	
	-11.1	16.7	5	5	5	10					
-15										-14.1	19.7
	-16.1	21.7	2	2	2	4	SS-15			**COASTAL PLAIN** GRAY GREEN SILT WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
-20										-19.0	24.6
	-21.0	26.6	3	2	3	5	SS-16			**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
-25											
	-26.0	31.6	12	27	19	46				-26.3	31.9
-30										**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	
	-31.0	36.6	70	30/0.2		100/0.7					
-35											
	-36.0	41.6	100/0.3			100/0.3				-37.1	42.7
-40										**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
	-41.0	46.6	89	11/0.0		100/0.5					
-45											
	-46.0	51.6	18	28	55	83	SS-17				
-50	-50.0	55.6	9	21	25	46	SS-18				
-55											
	-55.9	61.5	12	43	46	89					
-60											
	-60.9	66.5	10	25	29	54	SS-20				
-65										-65.4	71.0
	-65.9	71.5	7	10	22	32	SS-21			**COASTAL PLAIN** GRAY GREEN SILT WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
-70											

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B4-B WBL	**STATION** 288+55	**OFFSET** 53 ft RT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 5.6 ft	**TOTAL DEPTH** 97.9 ft	**NORTHING** 417,186	**EASTING** 2,617,453 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/02/02	**COMP. DATE** 10/03/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-70						Match Line				
	-70.9	76.5	16	45	42	87	SS-22			-71.1 76.7 **COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
-75										
	-75.9	81.5	38	24	14	38	SS-23			
-80										
	-80.9	86.5	42	28	72/0.2	100/0.7				
-85										
	-85.9	91.5	20	20	25	45	SS-24			
-90										
	-90.9	96.5	20	38	24	62	SS-25			-92.3 97.9 Boring Terminated at Elevation -92.3 ft in Limestone

ARTESIAN HEAD ELEVATION =12.2

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B4-B WBL	**STATION** 288+55	**OFFSET** 53 ft RT	**ALIGNMENT** -L- **0 HR.** N/A
COLLAR ELEV. 5.6 ft	**TOTAL DEPTH** 97.9 ft	**NORTHING** 417,186	**EASTING** 2,617,453 **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/02/02	**COMP. DATE** 10/03/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 59.8 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS (ELEV. (ft) / DEPTH (ft))
-10.5											Begin Coring @ 16.1 ft
	-10.5	16.1	0.5	0:30/0.5	(0.0)						**COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION) *(continued)*
	-11.0	16.6		N=10	0%						
	-12.5	18.1	3.5	0:35/1.0	(0.0)						
				0:20/1.0	0%						
-15				0:21/1.0							
	-16.0	21.6		0:15/0.6							
	-17.5	23.1		N=4			SS-15				
			3.5	0:26/1.0	(0.0)						
				0:28/1.0	0%						
-20				0:21/1.0							
	-21.0	26.6		0:10/0.6							
	-22.5	28.1		N=5			SS-16				
			3.5	0:20/1.0	(0.0)						
				0:19/1.0	0%						
-25				0:16/1.0							
	-26.0	31.6		0:10/0.6							
	-27.5	33.1		N=46							
			3.5	4:17/1.0	(2.0)						**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
				3:30/1.0	57%						
-30				2:49/1.0							
	-31.0	36.6		1:50/0.6							
	-31.7	37.3		N=100/0.7							
			4.3	2:30/1.0	(2.9)						
				2:31/1.0	67%						
-35				1:59/1.0							
	-36.0	41.6		2:27/1.0							
	-36.3	41.9		1:00/0.4							
			4.7	N=100/0.3	(0.6)						**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
				1:20/1.0	13%						
-40				0:58/1.0							
				1:15/1.0							
	-41.0	46.6		0:47/1.0							
	-41.5	47.1		0:45/0.7							
			4.5	N=100/0.5	(0.3)						
				0:58/1.0	7%						
-45				1:22/1.0							
				0:51/1.0							
	-46.0	51.6		0:45/1.0							
				0:30/0.5							
	-47.5	53.1		N=83			SS-17				
			3.5	0:30/1.0	(0.3)						
				0:28/1.0	9%						
-50				0:31/1.0							
	-51.0	56.6		N=46			SS-18				
	-52.4	58.0		0:10/0.6							
			3.5	0:23/1.0	(0.0)						
				0:18/1.0	0%						
-55				0:16/1.0							
	-55.9	61.5		0:11/0.6							
	-57.4	63.0		N=89							
			3.5	0:28/1.0	(0.0)						
				0:25/1.0	0%						
-60				0:21/1.0							
	-60.9	66.5		0:10/0.6							
	-62.4	68.0		N=54			SS-20				
			3.5	0:21/1.0	(0.0)						
				0:19/1.0	0%						
-65				0:27/1.0							
	-65.9	71.5		0:09/0.6							
	-67.4	73.0		N=32			SS-21				**COASTAL PLAIN** GRAY GREEN SILT WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)
			3.5	0:25/1.0	(0.0)						
				0:37/1.0	0%						
-70				0:30/1.0							
	-70.9	76.5		0:15/0.6							
	-72.4	78.0		N=87			SS-22				**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
			3.5	1:00/1.0	(1.5)						
				0:54/1.0	43%						
-75				0:45/1.0							
	-75.9	81.5		0:20/0.6							
	-77.4	83.0		N=38			SS-23				
			3.5	0:47/1.0	(1.7)						
				1:17/1.0	49%						
-80				0:50/1.0							
	-80.9	86.5		0:25/0.6							
	-82.0	87.6		N=100/0.7							
			3.8	2:01/1.0	(1.3)						
				1:45/1.0	34%						
-85				1:01/1.0							
	-85.8	91.4		0:45/0.9							
	-87.3	92.9		N=45			SS-24				
			3.5	0:45/1.0	(2.0)						
				1:30/1.0	57%						
-90				3:26/1.0							

STRATA:
- -14.1 / 19.7: COASTAL PLAIN GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION) *(continued)*
- -19.0 / 24.6: COASTAL PLAIN GRAY GREEN SILT WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)
- -26.3 / 31.9: COASTAL PLAIN GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)
- -37.1 / 42.7: COASTAL PLAIN GRAY LIMESTONE (RIVER BEND FORMATION)
- -65.4 / 71.0: COASTAL PLAIN GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
- -71.1 / 76.7: COASTAL PLAIN GRAY GREEN SILT WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B4-B WBL	**STATION** 288+55	**OFFSET** 53 ft RT	**ALIGNMENT** -L- **0 HR.** N/A
COLLAR ELEV. 5.6 ft	**TOTAL DEPTH** 97.9 ft	**NORTHING** 417,186	**EASTING** 2,617,453 **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/02/02	**COMP. DATE** 10/03/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 59.8 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
-90.5											Begin Coring @ 96.1 ft
	-90.8	96.4		2:12/0.6			SS-25				-92.3 / 97.9
				N=62							Boring Terminated at Elevation -92.3 ft in Limestone

ARTESIAN HEAD ELEVATION =12.2

NCDOT CORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** B. Banks
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B5-A EBL	**STATION** 290+10	**OFFSET** 40 ft LT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 7.5 ft	**TOTAL DEPTH** 83.3 ft	**NORTHING** 417,325	**EASTING** 2,617,338 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/22/02	**COMP. DATE** 11/24/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION — ELEV. (ft)	DEPTH (ft)
10											
	7.5	0.0								7.5 GROUND SURFACE	0.0
			1	1	0	1				**ALLUVIAL** DARK BROWN MODERATELY ORGANIC SAND, MOIST	
5										4.9	2.6
	3.2	4.3	3	2	2	4				**ALLUVIAL** TAN SAND, MOIST TO SAT.	
0										0.3	7.2
	-1.8	9.3	6	2	2	4				**COASTAL PLAIN** GRAY SAND, SAT. (DUPLIN FORMATION)	
-5											
	-6.8	14.3	4	4	3	7					
-10										-9.6	17.1
	-11.8	19.3	1	0	3	3				**COASTAL PLAIN** GRAY GREEN CLAY, WET (DUPLIN FORMATION)	
-15										-14.8	22.3
	-16.4	23.9	7	6	2	8				**COASTAL PLAIN** GRAY GREEN SILTY CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION)	
-20											
	-21.3	28.8	2	2	4	6					
-25										-24.0	31.5
	-26.3	33.8	10	12	28	40				**COASTAL PLAIN** GREEN SAND, SAT. (DUPLIN FORMATION)	
-30	-29.5	37.0	53	23	20	43				-27.6 — **COASTAL PLAIN** GREEN GRAY LIMESTONE (RIVER BEND FORMATION)	35.1
-35	-34.5	42.0	36	41	34	75				-34.5 — **COASTAL PLAIN** GRAY GREEN SAND, SAT. (RIVER BEND FORMATION)	42.0
-40	-39.5	47.0	5	16	28	44					
-45	-44.5	52.0	8	26	27	53					
-50	-49.5	57.0	8	13	16	29					
-55	-54.4	61.9	7	10	11	21					
-60	-59.4	66.9	8	9	21	30				-60.4 — **COASTAL PLAIN SEDIMENTARY ROCK** GRAY CALCITE-CEMENTED SANDSTONE WITH SHELL FRAGMENTS (RIVER BEND FORMATION)	67.9
-65	-64.4	71.9	19	34	23	57					
-70	-69.4	76.9									

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** B. Banks
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B5-A EBL	**STATION** 290+10	**OFFSET** 40 ft LT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 7.5 ft	**TOTAL DEPTH** 83.3 ft	**NORTHING** 417,325	**EASTING** 2,617,338 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/22/02	**COMP. DATE** 11/24/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-70						Match Line				
			21	18	79	97				**COASTAL PLAIN SEDIMENTARY ROCK** GRAY CALCITE-CEMENTED SANDSTONE WITH SHELL FRAGMENTS (RIVER BEND FORMATION) *(continued)*
-75	-74.4	81.9	18	50	50/0.4	100/0.9				-75.8 — 83.3
										Boring Terminated at Elevation -75.8 ft in Sandstone
										ARTESIAN HEAD ELEVATION =15.7

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** B. Banks
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B5-A EBL	**STATION** 290+10	**OFFSET** 40 ft LT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 7.5 ft	**TOTAL DEPTH** 83.3 ft	**NORTHING** 417,325	**EASTING** 2,617,338	**24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/22/02	**COMP. DATE** 11/24/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 33.2 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS (ELEV. (ft) / DEPTH (ft))
-27.8											Begin Coring @ 35.3 ft
-30	-27.8 -29.5 -31.0	35.3 37.0 38.5	1.7	3:08/1.0 1:26/0.7 N=43	(0.9) 54%						**COASTAL PLAIN** GREEN GRAY LIMESTONE (RIVER BEND FORMATION) *(continued)*
-35	-34.5 -36.0	42.0 43.5	3.5	1:26/1.0 0:32/1.0 0:52/1.0 0:17/0.6 N=75	(2.1) 60%						-34.5 / 42.0 **COASTAL PLAIN** GRAY GREEN SAND, SAT. (RIVER BEND FORMATION)
-40	-39.5 -41.0	47.0 48.5	3.5	0:53/1.0 0:25/1.0 0:33/1.0 0:24/0.6 N=44	(0.2) 7%						
-45	-44.5 -45.9	52.0 53.4	3.5	0:34/1.0 1:23/1.0 0:28/1.0 0:17/1.0 N=53	(0.0) 0%						
-50	-49.4 -50.9	56.9 58.4	3.5	0:22/1.0 0:50/1.0 0:34/1.0 0:10/0.6 N=29	(0.4) 12%						
-55	-54.4 -55.9	61.9 63.4	3.5	1:20/1.0 1:08/1.0 1:24/1.0 0:17/0.6 N=21	(0.0) 0%						
-60	-59.4 -60.9	66.9 68.4	3.5	0:24/1.0 0:15/1.0 0:37/1.0 0:22/0.6 N=30	(0.0) 0%						-60.4 / 67.9 **COASTAL PLAIN SEDIMENTARY ROCK** GRAY CALCITE-CEMENTED SANDSTONE WITH SHELL FRAGMENTS (RIVER BEND FORMATION)
-65	-64.4 -65.9	71.9 73.4	3.5	0:20/1.0 0:34/1.0 1:24/1.0 0:29/0.6 N=57	(1.4) 41%						
-70	-69.4 -70.9	76.9 78.4	3.5	0:34/1.0 0:49/1.0 0:38/1.0 0:20/0.6 N=97	(1.6) 45%						
-75	-74.4	81.9	3.5	0:53/1.0 1:21/1.0 1:03/1.0 0:31/0.6 N=100/0.9	(1.1) 30%						-75.8 / 83.3 Boring Terminated at Elevation -75.8 ft in Sandstone ARTESIAN HEAD ELEVATION =15.7

NCDOT CORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B5-B WBL	**STATION** 289+55	**OFFSET** 56 ft RT	**ALIGNMENT** -L- **0 HR.** N/A
COLLAR ELEV. 7.1 ft	**TOTAL DEPTH** 83.7 ft	**NORTHING** 417,285	**EASTING** 2,617,441 **24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/29/02	**COMP. DATE** 10/30/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
10											
	7.1	0.0	1	1	1	2	SS-60			7.1 GROUND SURFACE	0.0
5										**ALLUVIAL** DARK BROWN MUCK, WET TO SAT.	
	2.1	5.0	1	1	4	5				0.5	6.6
0										**ALLUVIAL** SAND, SAT.	
	-2.9	10.0	4	3	3	6				-1.4	8.5
-5										**COASTAL PLAIN** GRAY CLAYEY SAND WITH WOOD FRAGMENTS, SAT. (DUPLIN FORMATION)	
	-7.8	14.9	4	3	3	6				-6.0	13.1
-10										**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
	-12.8	19.9	3	4	4	8				-10.0	17.1
-15										**COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION)	
	-17.6	24.7	2	2	2	4					
-20	-20.2	27.3	3	3	4	7				-19.8	26.9
-25	-25.1	32.2	20	36	52	88				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
-30	-30.2	37.3	12	47	53/0.3	100/0.8				-24.9	32.0
-35	-35.2	42.3	32	68/0.3		100/0.8				**COASTAL PLAIN** GREEN BROWN LIMESTONE (RIVER BEND FORMATION)	
-40	-40.2	47.3	30	21	27	48				-39.3	46.4
-45	-45.2	52.3	31	33	41	74				**COASTAL PLAIN** GRAY SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
-50	-50.2	57.3	12	18	23	41				-43.6	50.7
-55	-55.1	62.2	13	23	29	52				-44.1 **COASTAL PLAIN** GRAY CALCITE CEMENTED SANDSTONE (RIVER BEND FORMATION)	51.2
-60	-60.1	67.2	17	22	27	49				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	
-65	-65.1	72.2	9	27	29	56				-68.3	75.4
-70											

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B5-B WBL	**STATION** 289+55	**OFFSET** 56 ft RT	**ALIGNMENT** -L- **0 HR.** N/A
COLLAR ELEV. 7.1 ft	**TOTAL DEPTH** 83.7 ft	**NORTHING** 417,285	**EASTING** 2,617,441 **24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/29/02	**COMP. DATE** 10/30/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-70						Match Line				
	-70.1	77.2	20	19	19	38				**COASTAL PLAIN** GRAY GREEN LIMESTONE (RIVER BEND FORMATION) *(continued)*
-75	-75.1	82.2	18	20	27	47				-76.6 83.7
										Boring Terminated at Elevation -76.6 ft in Limestone
										ARTESIAN HEAD ELEVATION =13.2

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B5-B WBL	**STATION** 289+55	**OFFSET** 56 ft RT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 7.1 ft	**TOTAL DEPTH** 83.7 ft	**NORTHING** 417,285	**EASTING** 2,617,441	**24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/29/02	**COMP. DATE** 10/30/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 40.5 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS (ELEV. (ft) / DEPTH (ft))
-19.1											Begin Coring @ 26.2 ft
-20	-19.1	26.2	1.1	0:31/1.0 0:05/0.1 N=7	(0.0) 0%						-19.8 / 26.9 **COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION) *(continued)*
	-20.2	27.3									
	-21.7	28.8	3.5	0:15/1.0 0:14/1.0 0:15/1.0 1:28/0.6 N=88	(0.3) 9%						**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION) -24.9 / 32.0
-25	-25.2	32.3									
	-26.7	33.8	3.5	1:15/1.0 1:25/1.0 1:56/1.0 1:21/0.6 N=100/0.8	(1.0) 29%						**COASTAL PLAIN** GREEN BROWN LIMESTONE (RIVER BEND FORMATION)
-30	-30.2	37.3									
	-31.5	38.6	3.7	1:34/1.0 1:35/1.0 0:46/1.0 0:15/0.6 N=100/0.8	(1.0) 27%						
-35	-35.2	42.3									
	-36.0	43.1	4.2	0:25/1.0 0:26/1.0 0:24/1.0 0:31/0.8 N=48	(3.2) 76%						-39.3 / 46.4 **COASTAL PLAIN** GRAY SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
-40	-40.2	47.3									
	-41.7	48.8	3.5	0:15/1.0 0:22/1.0 0:26/1.0 3:47/1.0 N=74	(0.5) 14%						-43.6 / 50.7 -44.1 / 51.2 **COASTAL PLAIN** GRAY CALCITE CEMENTED SANDSTONE (RIVER BEND FORMATION)
-45	-45.2	52.3									
	-46.6	53.7	3.5	0:11/0.3 0:35/1.0 0:31/1.0 0:17/1.0 0:12/0.6 N=41	(0.0) 0%						**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
-50	-50.1	57.2									
	-51.6	58.7	3.5	0:24/1.0 0:26/1.0 0:25/1.0 0:14/0.6 N=52	(0.0) 0%						
-55	-55.1	62.2									
	-56.6	63.7	3.5	0:42/1.0 0:21/1.0 0:22/1.0 0:16/0.6 N=49	(0.0) 0%						
-60	-60.1	67.2									
	-61.6	68.7	3.5	0:31/1.0 0:29/1.0 0:27/1.0 0:13/0.6 N=56	(0.0) 0%						
-65	-65.1	72.2									
	-66.6	73.7	3.5	0:31/1.0 0:49/1.0 1:15/1.0 0:25/0.6 N=38	(0.6) 17%						-68.3 / 75.4 **COASTAL PLAIN** GRAY GREEN LIMESTONE (RIVER BEND FORMATION)
-70	-70.1	77.2									
	-71.6	78.7	3.5	1:22/1.0 1:42/1.0 1:31/1.0 0:35/0.6 N=47	(0.9) 26%						
-75	-75.1	82.2									-76.6 / 83.7 Boring Terminated at Elevation -76.6 ft in Limestone

ARTESIAN HEAD ELEVATION =13.2

NCDOT CORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B6-A EBL	**STATION** 291+11	**OFFSET** 44 ft LT	**ALIGNMENT** -L- / **0 HR.** N/A
COLLAR ELEV. 10.0 ft	**TOTAL DEPTH** 83.1 ft	**NORTHING** 417,425	**EASTING** 2,617,319 / **24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/25/02	**COMP. DATE** 11/25/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
10										10.0 GROUND SURFACE	0.0
										ALLUVIAL TAN BROWN SAND, MOIST TO SAT.	
5	5.4	4.6	4	2	9	11					
0	0.4	9.6	2	3	2	5					
-5	-4.6	14.6	3	3	4	7				-3.1 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	13.1
-10	-9.6	19.6	7	7	9	16					
-15	-14.5	24.5	15	15	21	36				-13.3	23.3
-20	-19.3	29.3	32	33	34	67					
-25	-22.3	32.3	4	6	7	13					
-30	-27.3	37.3	7	4	21	25				-28.5 **COASTAL PLAIN** GREEN GRAY LIMESTONE (RIVER BEND FORMATION)	38.5
-35	-32.3	42.3	29	31	68	99				-34.9 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)	44.9
-40	-37.2	47.2	8	16	15	31					
-45	-42.2	52.2	27	37	31	68					
-50	-47.2	57.2	16	17	24	41					
-55	-52.2	62.2	13	8	12	20					
-60	-57.2	67.2	5	8	12	20					
-65	-62.2	72.2	13	22	33	55				-62.2 **COASTAL PLAIN** GREEN GRAY LIMESTONE (RIVER BEND FORMATION)	72.2
-70	-67.2	77.2	21	28	26	54					

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B6-A EBL	**STATION** 291+11	**OFFSET** 44 ft LT	**ALIGNMENT** -L- / **0 HR.** N/A
COLLAR ELEV. 10.0 ft	**TOTAL DEPTH** 83.1 ft	**NORTHING** 417,425	**EASTING** 2,617,319 / **24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/25/02	**COMP. DATE** 11/25/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-70						Match Line				
	-72.6	82.6	100/0.5			100/0.5				-73.1 Boring Terminated at Elevation -73.1 ft in Limestone 83.1
										ARTESIAN HEAD ELEVATION =16.3

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B6-A EBL	**STATION** 291+11	**OFFSET** 44 ft LT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 10.0 ft	**TOTAL DEPTH** 83.1 ft	**NORTHING** 417,425	**EASTING** 2,617,319	**24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 11/25/02	**COMP. DATE** 11/25/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 36.5 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS (ELEV. (ft) / DEPTH (ft))
-20.8											Begin Coring @ 30.8 ft
	-20.8 / -22.3	30.8 / 32.3	1.5	0:19/1.0 0:10/0.5 N=13	(0.0) 0%						GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION) *(continued)*
	-23.8	33.8									
-25	-27.3	37.3	3.5	0:21/1.0 0:21/1.0 0:19/1.0 0:12/0.6 N=25	(0.0) 0%						
	-28.7	38.7									-28.5 / 38.5
-30	-32.2	42.2	3.5	2:29/1.0 1:08/1.0 1:07/1.0 0:22/0.6 N=99	(0.3) 9%						**COASTAL PLAIN** GREEN GRAY LIMESTONE (RIVER BEND FORMATION)
	-33.7	43.7									
-35	-37.2	47.2	3.5	1:03/1.0 0:26/1.0 0:21/1.0 0:18/0.6 N=31	(0.4) 11%						-34.9 / 44.9 **COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (RIVER BEND FORMATION)
	-38.7	48.7									
-40	-42.2	52.2	3.5	0:33/1.0 1:24/1.0 0:48/1.0 0:22/0.6 N=68	(0.0) 0%						
	-43.7	53.7									
-45	-47.2	57.2	3.5	0:38/1.0 0:30/1.0 0:45/1.0 0:23/0.6 N=41	(0.9) 26%						
	-48.7	58.7									
-50	-52.2	62.2	3.5	0:30/1.0 0:28/1.0 0:17/1.0 N=20	(0.7) 20%						
	-53.7	63.7									
-55	-57.2	67.2	3.5	0:38/1.0 0:27/1.0 0:24/1.0 0:13/0.6 N=20	(0.0) 0%						
	-58.7	68.7									
-60	-62.2	72.2	3.5	0:19/1.0 0:34/1.0 0:50/1.0 0:16/0.6 N=55	(0.0) 0%						-62.2 / 72.2 **COASTAL PLAIN** GREEN GRAY LIMESTONE (RIVER BEND FORMATION)
	-63.7	73.7									
-65	-67.2	77.2	3.5	0:40/1.0 0:34/1.0 0:27/1.0 0:25/0.6 N=54	(1.6) 46%						
	-68.6	78.6									
-70	-72.1	82.1	3.5	1:13/1.0 1:10/1.0 0:35/1.0 0:37/0.6 N=100/0.5	(1.7) 49%						-73.1 / 83.1 Boring Terminated at Elevation -73.1 ft in Limestone ARTESIAN HEAD ELEVATION =16.3

NCDOT CORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B6-B WBL	**STATION** 291+23	**OFFSET** 57 ft RT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 6.5 ft	**TOTAL DEPTH** 94.1 ft	**NORTHING** 417,451	**EASTING** 2,617,417 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 09/17/02	**COMP. DATE** 09/17/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
10											
										6.5 GROUND SURFACE	0.0
5										**ALLUVIAL** DARK BROWN MUCK, WET TO SAT.	
	1.7	4.8	10	10	7	17	SS-1			3.2	3.3
0										**ALLUVIAL** GRAY SAND, WET TO SAT.	
	-4.1	10.6	1	1	1	2	SS-2			-0.7	7.2
-5										**COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION)	
-10	-10.7	17.2	1	3	3	6	SS-3			-8.3	14.8
-15	-15.7	22.2	2	2	2	4					
-20	-20.7	27.2	3	2	4	6	SS-4			-19.7	26.2
										COASTAL PLAIN GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
-25	-25.7	32.2	9	16	23	39				-26.1	32.6
										COASTAL PLAIN GRAY LIMESTONE (RIVER BEND FORMATION)	
-30	-30.6	37.1	100/0.2			100/0.2					
-35	-35.6	42.1	15	15	24	39	SS-5				
-40	-40.6	47.1	13	16	20	36	SS-6			-39.6	46.1
										COASTAL PLAIN GRAY GREEN SAND, SAT. (RIVER BEND FORMATION)	
-45	-45.6	52.1	24	23	26	49	SS-7				
-50	-50.6	57.1	28	29	28	57					
-55	-56.1	62.6	10	12	25	37					
-60	-61.2	67.7	11	17	25	42	SS-8				
-65	-66.2	72.7	14	26	37	63	SS-9				
-70										-69.3	75.8

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B6-B WBL	**STATION** 291+23	**OFFSET** 57 ft RT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 6.5 ft	**TOTAL DEPTH** 94.1 ft	**NORTHING** 417,451	**EASTING** 2,617,417 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 09/17/02	**COMP. DATE** 09/17/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION
-70						Match Line				
	-71.2	77.7	39	24	28	52				**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION) *(continued)*
-75	-76.2	82.7	85	15/0.1		100/0.6				
-80	-81.2	87.7	29	24	22	46	SS-10			
-85	-86.2	92.7	25	29	28	57	SS-11			-87.6 94.1
										Boring Terminated at Elevation -87.6 ft in Limestone
										ARTESIAN HEAD ELEVATION = 13.0

NCDOT GEOTECHNICAL ENGINEERING UNIT
CORE BORING REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B6-B WBL	**STATION** 291+23	**OFFSET** 57 ft RT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 6.5 ft	**TOTAL DEPTH** 94.1 ft	**NORTHING** 417,451	**EASTING** 2,617,417 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 09/17/02	**COMP. DATE** 09/17/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 60.4 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS (ELEV. (ft) / DEPTH (ft))
-5.7											Begin Coring @ 12.2 ft
	-5.7	12.2	5.0	0:20/1.0 0:22/1.0 0:13/1.0 0:09/1.0 0:25/1.0	(0.0) 0%						**COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION) *(continued)* — -8.3 / 14.8
-10	-10.7	17.2									
	-12.2	18.7		*N=6*			*SS-3*				
			3.5	1:30/1.0 1:15/1.0 1:08/1.0 0:31/0.6	(0.0) 0%						
-15	-15.7	22.2									
	-17.2	23.7		*N=4*							
			3.5	0:36/1.0 0:28/1.0 0:31/1.0 0:15/0.6	(0.0) 0%						-19.7 / 26.2
-20	-20.7	27.2									**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)
	-22.1	28.6		*N=6*			*SS-4*				
			3.5	0:35/1.0 0:37/1.0 0:29/1.0 0:21/0.6	(0.0) 0%						
-25	-25.6	32.1									
	-27.1	33.6		*N=39*							-26.1 / 32.6
			3.5	2:31/1.0 2:27/1.0 2:20/1.0 0:52/0.6	(2.0) 57%						**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
-30	-30.6	37.1									
	-30.9	37.4	4.8	*N=100/0.2*	(1.3) 27%						
				1:56/1.0 1:58/1.0 1:36/1.0 1:35/1.0							
-35	-35.7	42.2									
	-37.1	43.6		*N=39*			*SS-5*				
			3.5	3:00/0.8 1:13/1.0 1:04/1.0 0:58/1.0	(2.0) 57%						
-40	-40.6	47.1									-39.6 / 46.1
	-42.1	48.6		*N=36*			*SS-6*				**COASTAL PLAIN** GRAY GREEN SAND, SAT. (RIVER BEND FORMATION)
			3.5	0:24/0.6 0:30/1.0 0:21/1.0 0:22/1.0 0:15/0.6	(0.0) 0%						
-45	-45.6	52.1									
	-47.1	53.6		*N=49*			*SS-7*				
			3.5	0:32/1.0 0:42/1.0 0:45/1.0 0:21/0.6	(0.3) 9%						
-50	-50.6	57.1									
	-52.1	58.6		*N=57*							
			4.0	0:20/1.0 0:21/1.0 0:16/1.0 0:10/0.6	(0.0) 0%						
-55	-56.1	62.6									
	-57.5	64.0		*N=37*							
			3.7	0:17/1.0 0:15/1.0 0:18/1.0 0:12/0.7	(0.0) 0%						
-60	-61.2	67.7									
	-62.7	69.2		*N=42*			*SS-8*				
			3.5	0:18/1.0 0:15/1.0 0:16/1.0 0:11/0.6	(0.0) 0%						
-65	-66.2	72.7									
	-67.7	74.2		*N=63*			*SS-9*				
			3.5	0:24/1.0 0:34/1.0 0:23/1.0 0:12/0.6	(0.0) 0%						-69.3 / 75.8
-70	-71.2	77.7									**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
	-72.7	79.2		*N=52*							
			3.5	1:11/1.0 2:19/1.0 0:45/1.0 0:21/0.6	(0.5) 14%						
-75	-76.2	82.7									
	-78.7	83.2	4.4	*N=100/0.6*	(0.4) 9%						
				0:31/1.0 0:35/1.0 0:32/1.0 0:25/1.0 0:15/0.5							
-80	-81.1	87.6									
	-82.6	89.1		*N=46*			*SS-10*				
			3.5	0:45/1.0 0:51/1.0 0:32/1.0	(0.1) 3%						
-85											

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. B6-B WBL	**STATION** 291+23	**OFFSET** 57 ft RT	**ALIGNMENT** -L- — **0 HR.** N/A
COLLAR ELEV. 6.5 ft	**TOTAL DEPTH** 94.1 ft	**NORTHING** 417,451	**EASTING** 2,617,417 — **24 HR.** N/A
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** NW Casing W/SPT & Core	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 09/17/02	**COMP. DATE** 09/17/02	**SURFACE WATER DEPTH** N/A
CORE SIZE HQ	**TOTAL RUN** 60.4 ft		

ELEV (ft)	RUN ELEV (ft)	DEPTH (ft)	RUN (ft)	DRILL RATE (Min/ft)	RUN REC. (ft) %	RUN RQD (ft) %	SAMP. NO.	STRATA REC. (ft) %	STRATA RQD (ft) %	LOG	DESCRIPTION AND REMARKS
-85.7											Begin Coring @ 92.2 ft
	-86.1	92.6		0:25/0.6 *N=57*			*SS-11*				-87.6 / 94.1
											Boring Terminated at Elevation -87.6 ft in Limestone
											ARTESIAN HEAD ELEVATION = 13.0

NCDOT CORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. EB2-A EBL	**STATION** 292+13	**OFFSET** 46 ft LT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 12.5 ft	**TOTAL DEPTH** 44.2 ft	**NORTHING** 417,525	**EASTING** 2,617,302	**24 HR.** 2.4
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** Mud Rotary	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/22/02	**COMP. DATE** 10/23/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT 0 25 50 75 100	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION ELEV. (ft)	DEPTH (ft)
	12.5	0.0								GROUND SURFACE	0.0
			2	3	5	8				**ALLUVIAL** TAN SAND WITH WOOD FRAGMENTS, MOIST TO SAT.	
	7.6	4.9	13	20	24	44					
	2.7	9.8	3	3	3	6				-0.6	13.1
	-2.3	14.8	4	4	4	8				**COASTAL PLAIN** CLAYEY SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
	-7.3	19.8	2	2	7	9					
	-11.6	24.1	4	5	5	10				-14.4	26.9
	-16.5	29.0	17	26	25	51				**COASTAL PLAIN** GRAY GREEN SAND WITH SHELL FRAGMENTS, SAT. (DUPLIN FORMATION)	
	-19.7	32.2									
	-21.5	34.0	4	5	6	11					
	-25.6	38.1								**COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)	
	-26.5	39.0	17	83/0.2		100/0.7					
	-31.4	43.9	100/0.3			100/0.3				-31.7	44.2
										Boring Terminated at Elevation -31.7 ft in Limestone	

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

NCDOT GEOTECHNICAL ENGINEERING UNIT
BORELOG REPORT

WBS 34360.1.1	**TIP** R-1015	**COUNTY** CRAVEN	**GEOLOGIST** M. Lear
SITE DESCRIPTION DUAL BRIDGES ON -L- (US 70 BYPASS) OVER SOUTHWEST PRONG OF SLOCUM CREEK			**GROUND WTR (ft)**
BORING NO. EB2-B WBL	**STATION** 292+14	**OFFSET** 63 ft RT	**ALIGNMENT** -L-	**0 HR.** N/A
COLLAR ELEV. 8.8 ft	**TOTAL DEPTH** 45.4 ft	**NORTHING** 417,542	**EASTING** 2,617,409	**24 HR.** FIAD
DRILL RIG/HAMMER EFF./DATE CME-45		**DRILL METHOD** Mud Rotary	**HAMMER TYPE** Manual
DRILLER Contract Driller	**START DATE** 10/23/02	**COMP. DATE** 10/23/02	**SURFACE WATER DEPTH** N/A

ELEV (ft)	DRIVE ELEV (ft)	DEPTH (ft)	BLOW COUNT 0.5ft	0.5ft	0.5ft	BLOWS PER FOOT (0 25 50 75 100)	SAMP. NO.	MOI	LOG	SOIL AND ROCK DESCRIPTION (ELEV. (ft) / DEPTH (ft))
10										
	8.8	0.0	1	2	2	4				8.8 / 0.0 GROUND SURFACE **ALLUVIAL** GRAY SAND WITH WOOD FRAGMENTS, MOIST TO SAT.
5	3.7	5.1	5	14	12	26				
0	-1.4	10.2	16	8	5	13				-0.4 / 9.2 **COASTAL PLAIN** GRAY GREEN CLAYEY SAND, SAT. (DUPLIN FORMATION)
-5	-6.4	15.2	2	2	4	6				
-10	-10.3	19.1	3	3	4	7				-8.9 / 17.7 **COASTAL PLAIN** GRAY GREEN CLAY WITH SHELL FRAGMENTS, WET (DUPLIN FORMATION)
-15	-15.3	24.1	3	3	4	7				
-20	-20.3	29.1	2	3	3	6				
-25	-25.3	34.1	57	17	17	34				-25.0 / 33.8 **COASTAL PLAIN** GRAY LIMESTONE (RIVER BEND FORMATION)
-30	-30.4	39.2	87	13/0.1		100/0.6				
-35	-35.2	44.0	12	27	73/0.4	100/0.9				-36.6 / 45.4 Boring Terminated at Elevation -36.6 ft in Limestone

ARTESIAN HEAD ELEVATION =13.0

Other Samples:
ST-1 (21.0 - 23.0)

NCDOT BORE DOUBLE BORINGS - COPY.GPJ NC_DOT.GDT 3/23/15

34360

R-1015

DUAL BRIDGES ON US 70 BYPASS OVER SOUTHWEST PRONG OF SLOCUM CREEK AT -L- STA. 287+62.5

EB1-A EBL SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-46	53 LT	282+89	10.0-11.5	A-3	16	NP	21.4	69.7	0.8	8.1	100	97	9	-	-
SS-47	53 LT	282+89	14.9-16.4	A-3	18	NP	7.2	79.3	8.2	5.3	100	98	15	-	-
SS-48	53 LT	282+89	34.0-35.5	A-1-b	25	NP	40.9	44.9	3.5	10.7	74	50	12	-	-
SS-49	53 LT	282+89	39.1-40.6	A-2-4	22	NP	7.2	79.3	8.2	5.3	100	98	15	-	-

EB1-B WBL SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-41	58 RT	282+89	4.7-6.2	A-2-4	22	NP	0.9	86.0	1.8	11.3	100	100	13.9	ND	ND
SS-42	58 RT	282+89	14.5-16.0	A-3	21	NP	8.5	85.8	0.4	5.3	100	99	6.6	ND	ND
SS-43	58 RT	282+89	29.1-30.6	A-3	19	NP	28.0	61.9	1.0	9.1	100	96	10	ND	ND
SS-44	58 RT	282+89	34.1-35.6	A-2-4	17	NP	54.9	28	4.4	12.7	95	73	19	ND	ND
SS-45	58 RT	282+89	38.7-40.2	A-1-B	20	NP	79.2	16.5	1.0	3.2	99	50	5	ND	ND

B1-A EBL SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-35	56 LT	283+76	0.0-1.5	A-2-4	38	NP	11.0	71.1	8.2	9.7	100	96	20	22.2	5.0
SS-36	56 LT	283+76	14.5-16.0	A-3	13	NP	41.1	57.4	0.5	1.0	100	96	2	-	-
SS-37	56 LT	283+76	22.4-23.9	A-3	16	NP	22.0	73.8	0	4.2	100	100	4	26.4	-
SS-38	56 LT	283+76	27.4-28.9	A-3	19	NP	64.8	27.0	3.0	5.2	96	64	9	-	-
SS-39	56 LT	283+76	32.4-33.9	A-2-4	29	NP	3.3	76.0	7.2	13.6	95	93	28	33.4	-
SS-40	56 LT	283+76	72.0-73.2	A-1-b	18	NP	72.1	19.2	3.5	5.2	93	39	9	-	-

B3-A EBL SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-50	59 LT	286+50	0.0-1.5	MUCK	-	NP	-	-	-	-	-	-	-	127.1	11.5
SS-51	59 LT	286+50	4.8-6.3	A-2-4	20	NP	5.2	67.8	8.6	18.4	100	100	30	22.9	-
SS-52	59 LT	286+50	19.7-21.2	A-6(2)	36	18	29.8	30.8	14.1	25.3	86	67	37	41.0	-
SS-53	59 LT	286+50	26.7-28.2	A-2-4	24	NP	71.9	13.3	9.2	5.6	83	34	13	39.6	-
SS-54	59 LT	286+50	42.0-43.5	A-2-4	18	NP	6.6	59.4	27.8	6.2	82	78	30	-	-
SS-55	59 LT	286+50	66.9-68.4	A-1-b	15	NP	71.9	13.3	9.2	5.6	83	34	13	-	-

B4-A EBL SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-61	59 LT	288+28	0.0-1.5	A-2-4	25	NP	17.3	72.0	6.1	4.6	100	95	12	59.1	6.0

B4-B WBL SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-59	53 RT	288+55	5.0-6.5	A-1-B	18	NP	77.0	20.5	0.0	2.5	100	44	3	ND	ND
SS-13	53 RT	288+55	9.8-11.3	A-3	19	NP	63.7	30.2	0.8	5.3	84.9	53	5.5	ND	ND
SS-14	53 RT	288+55	14.7-16.2	A-7-6(52)	74	51	2	6.4	31.8	59.7	98	96	91	78.6	ND
SS-15	53 RT	288+55	21.7-23.2	A-4	32	10	5.2	56.3	24.3	14.2	89	85	40	52.5	ND
SS-16	53 RT	288+55	26.6-28.1	A-2-4	25	NP	4.4	75.1	8.0	12.5	91	87	26	35.4	ND
SS-17	53 RT	288+55	51.6-53.1	A-2-4	19	NP	5.0	83.4	7.3	4.3	100	99	13	21.0	ND
SS-18	53 RT	288+55	56.6-58.1	A-2-4	23	NP	1.3	84.8	7.2	6.6	97	96	16	36.2	ND
SS-20	53 RT	288+55	66.5-68.0	A-2-4	25	NP	0.6	90.5	2.4	6.5	100	100	11.5	36.4	ND
SS-21	53 RT	288+55	71.5-73.0	A-4	23	NP	1.7	53.4	38.6	6.3	99	98	47	34.3	ND
SS-22	53 RT	288+55	76.5-78.0	A-2-4	18	NP	33.2	46.9	12.1	7.8	73	52	16	ND	ND
SS-23	53 RT	288+55	81.5-83.0	A-1-B	17	NP	74.1	12.2	8.2	5.5	75	29	11	ND	ND
SS-24	53 RT	288+55	91.5-93.0	A-3	24	NP	36.1	59.5	0.2	4.2	100	83	5	ND	ND
SS-25	53 RT	288+55	96.5-98.0	A-1-B	17	NP	65.4	21	7.3	6.3	68	29	10	ND	ND

B5-B WBL SOIL TEST RESULTS

SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-60	56 RT	289+55	0.0-1.5	MUCK	46	NP	17.5	61.9	11.8	8.8	100	96	22	115.9	11.3

B6-B WBL SOIL TEST RESULTS

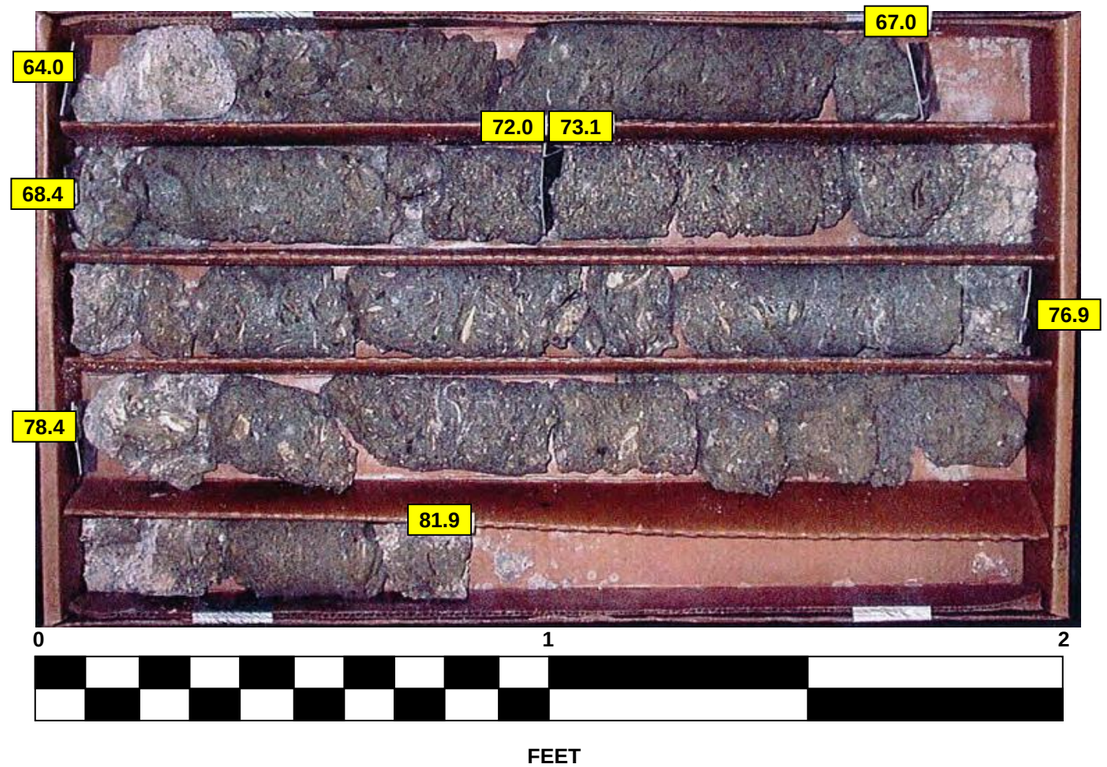
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
SS-1	57 RT	291+23	4.8-6.3	A-3	22	NP	35.7	61.2	0.9	2.2	100	91	4	ND	ND
SS-2	57 RT	291+23	10.6-12.1	A-6	24	9	3.5	57.8	11.3	27.4	100	99	39	49.7	ND
SS-3	57 RT	291+23	17.2-18.7	A-7-6	46	29	9.1	23.1	26.8	41	98	91	70	66.4	ND
SS-4	57 RT	291+23	27.2-28.7	A-2-4	26	NP	18.5	63	4.1	14.5	86	73	20	29.3	ND
SS-5	57 RT	291+23	42.1-43.6	A-2-4	25	NP	3.8	78.8	9	8.4	99	97	21	28.3	ND
SS-6	57 RT	291+23	47.1-48.6	A-2-4	23	NP	7.8	80.8	5.8	5.5	100	97	14	27.1	ND
SS-7	57 RT	291+23	52.1-53.6	A-2-4	19	NP	3.7	81.2	11	4.1	100	98	17	24.6	ND
SS-8	57 RT	291+23	67.7-69.2	A-2-4	23	NP	0.9	86.5	5.3	7.3	100	99	15	35.6	ND
SS-9	57 RT	291+23	72.7-74.2	A-2-4	24	NP	0.9	89.3	4.6	5.2	100	100	11.6	27.9	ND
SS-10	57 RT	291+23	87.7-89.2	A-1-B	17	NP	68.6	17.1	9.1	5.1	75.9	32.2	12.2	ND	ND
SS-11	57 RT	291+23	92.7-94.2	A-1-B	15	NP	72.1	19.1	3.9	5.0	99	39	11	ND	ND

EB2-B WBL SOIL TEST RESULTS

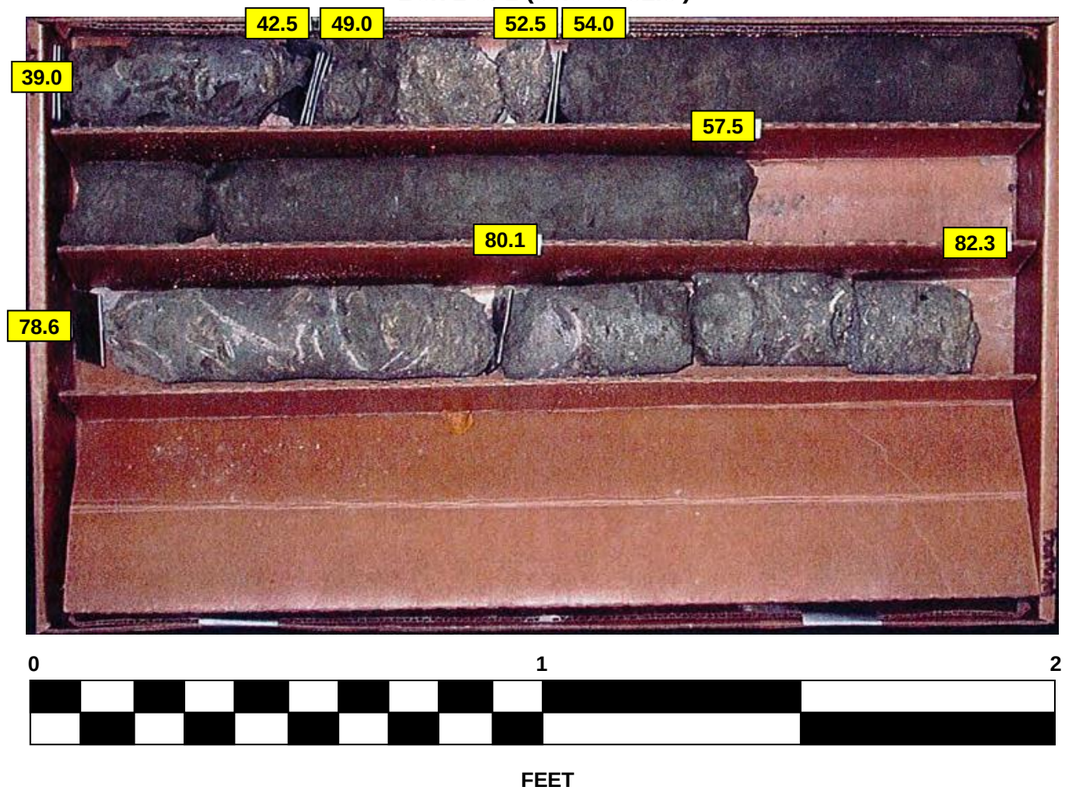
SAMPLE NO.	OFFSET	STATION	DEPTH INTERVAL	AASHTO CLASS.	L.L.	P.I.	% BY WEIGHT				% PASSING (SIEVES)			% MOISTURE	% ORGANIC
							C.SAND	F.SAND	SILT	CLAY	10	40	200		
ST-1	63 RT	292+14	18.7-20.7	A-7-6(37)	67	41	3.3	16.8	25.2	54.7	99	96	83	79.7	ND

5/14/99
23-MAR-2015 08:36
I:\ERO_Greenville_Investigation\TIP\R1015_GEO_BRDG_DUAL_SLOCUM\CADD_GEOTECH\PlanProf\R1015_GEO_BRDG_DUAL_prf1.dgn
pbrunner AT REF:27,28

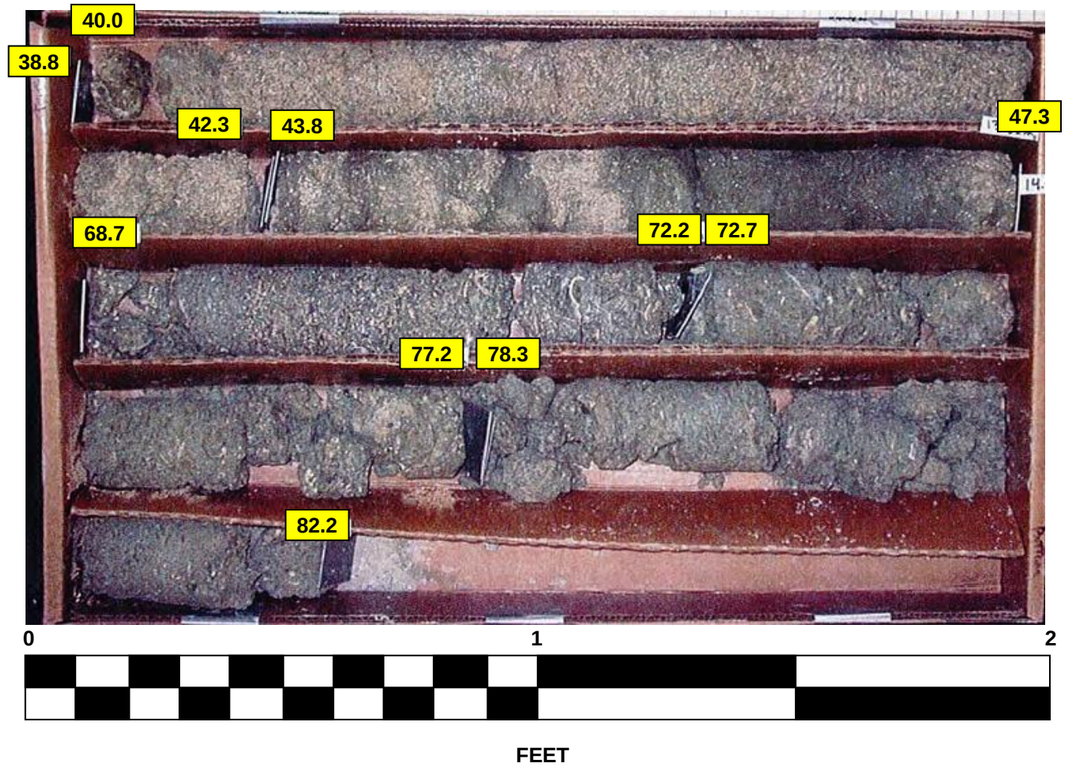
CORE PHOTOGRAPH
B1-A EBL
Box 1 of 1 (64.0' to 81.9')



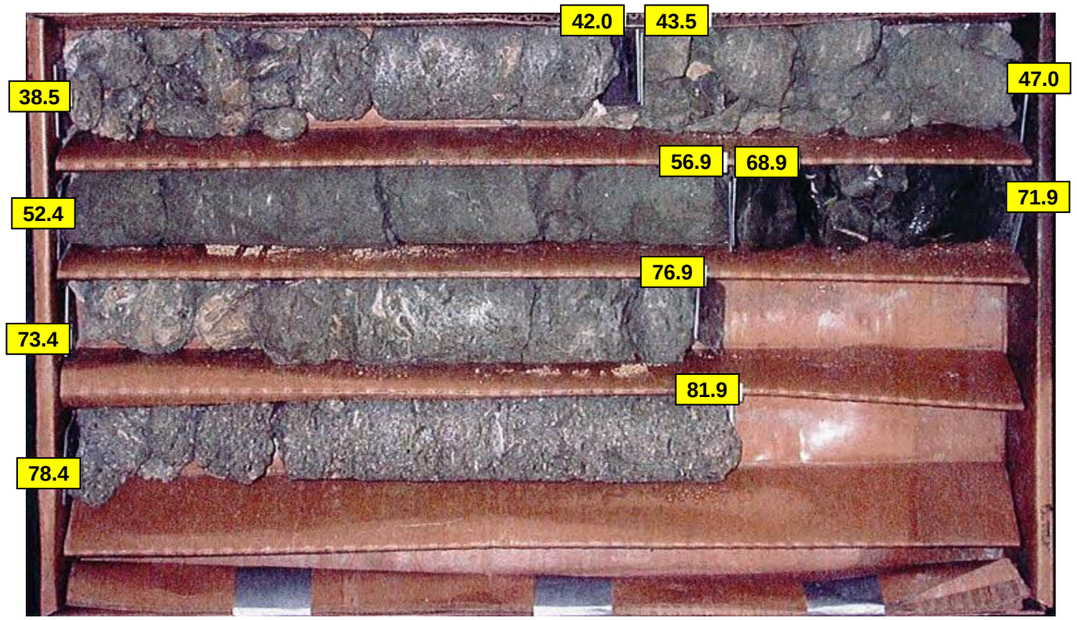
CORE PHOTOGRAPH
B1-B WBL
Box 1 of 1 (39.0' to 82.3')

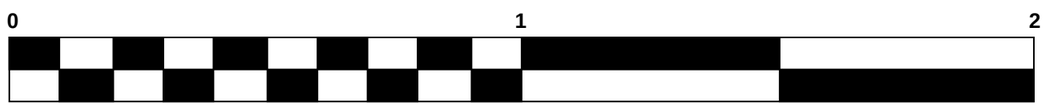


CORE PHOTOGRAPH
B2-A EBL
Box 1 of 1 (38.8' to 82.2')



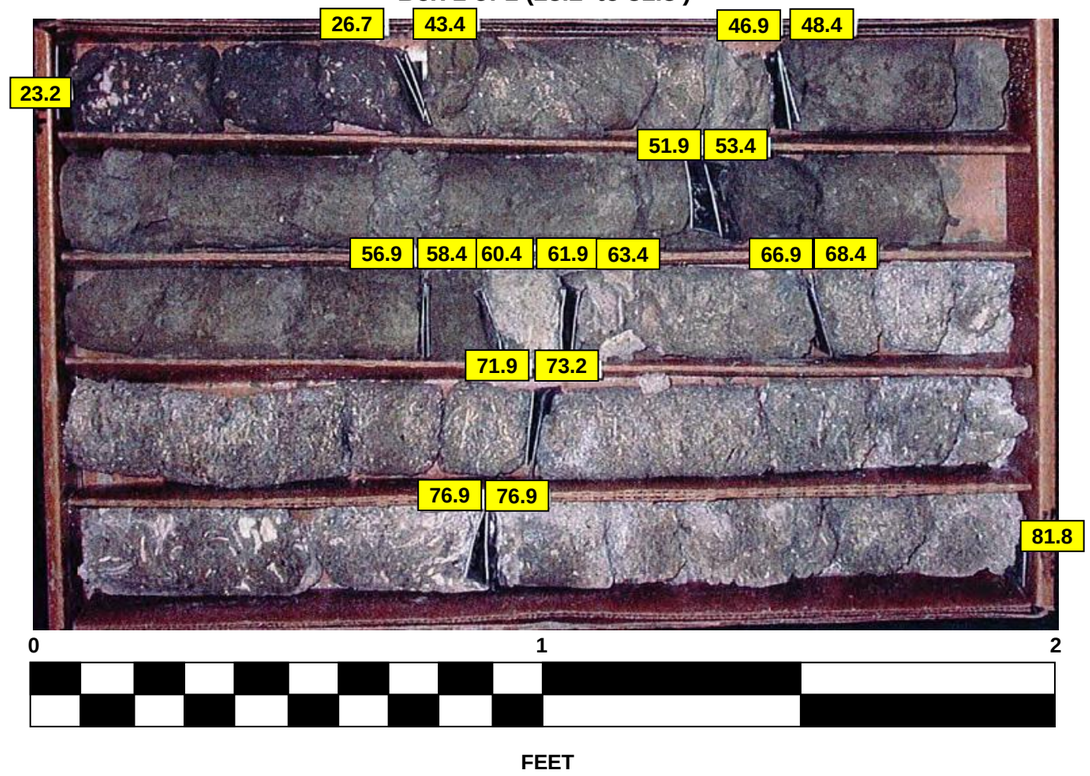
CORE PHOTOGRAPH
B2-B WBL
Box 1 of 1 (38.5' to 81.9')



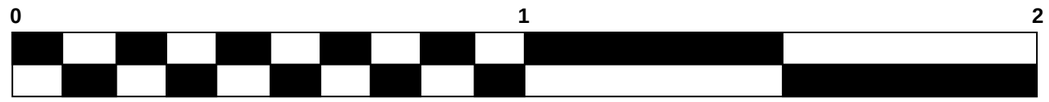


FEET

CORE PHOTOGRAPH
B3-A EBL
Box 1 of 1 (23.2' to 81.8')



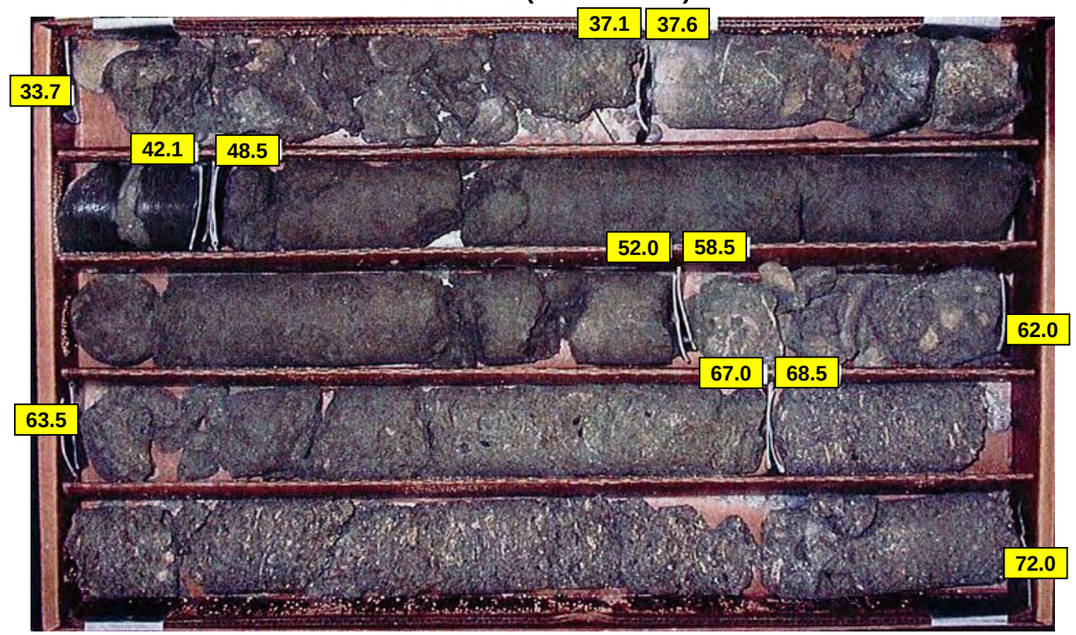
CORE PHOTOGRAPH
B3-B WBL
Box 1 of 1 (35.5' to 81.1')



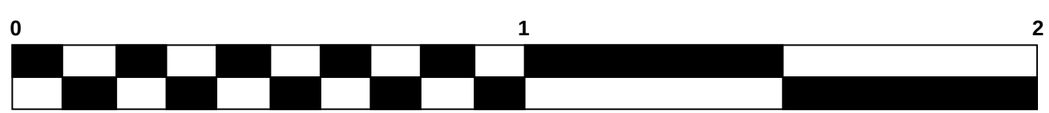
FEET

CORE PHOTOGRAPH
B4-A EBL

Box 1 of 2 (33.7' to 72.0')



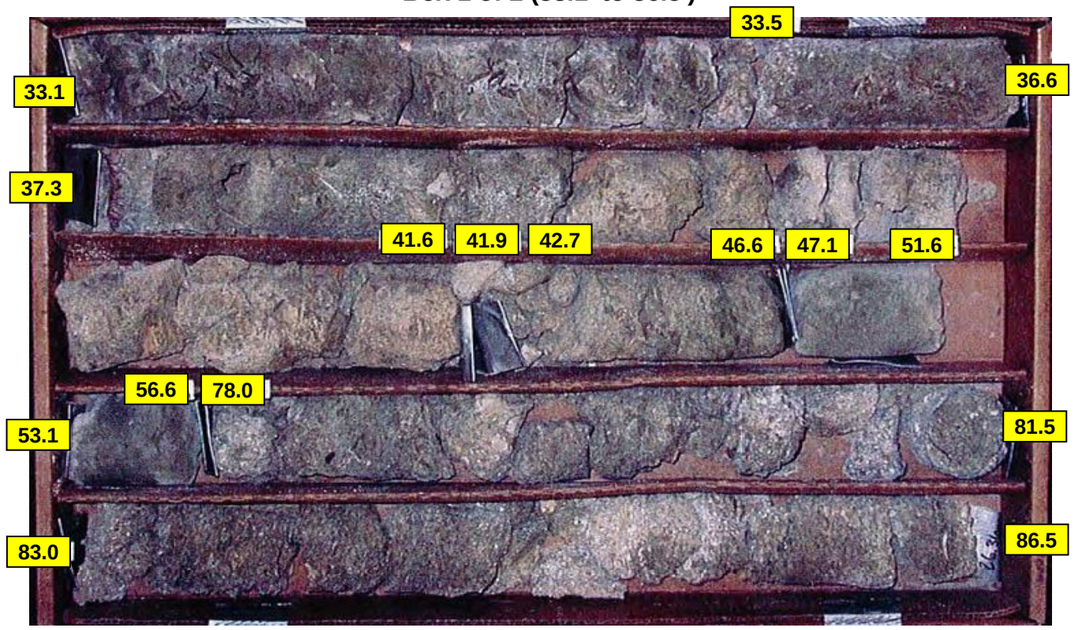
Box 2 of 2 (73.1' to 77.0')



FEET

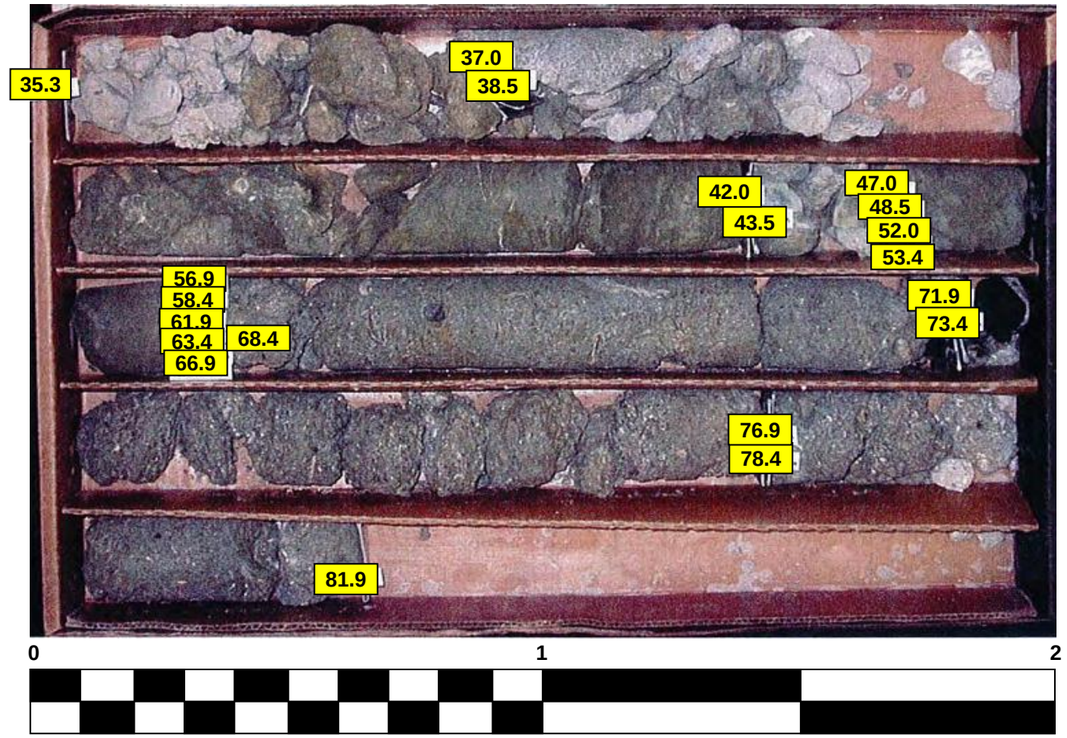
CORE PHOTOGRAPH
B4-B WBL

Box 1 of 2 (33.1' to 86.5')

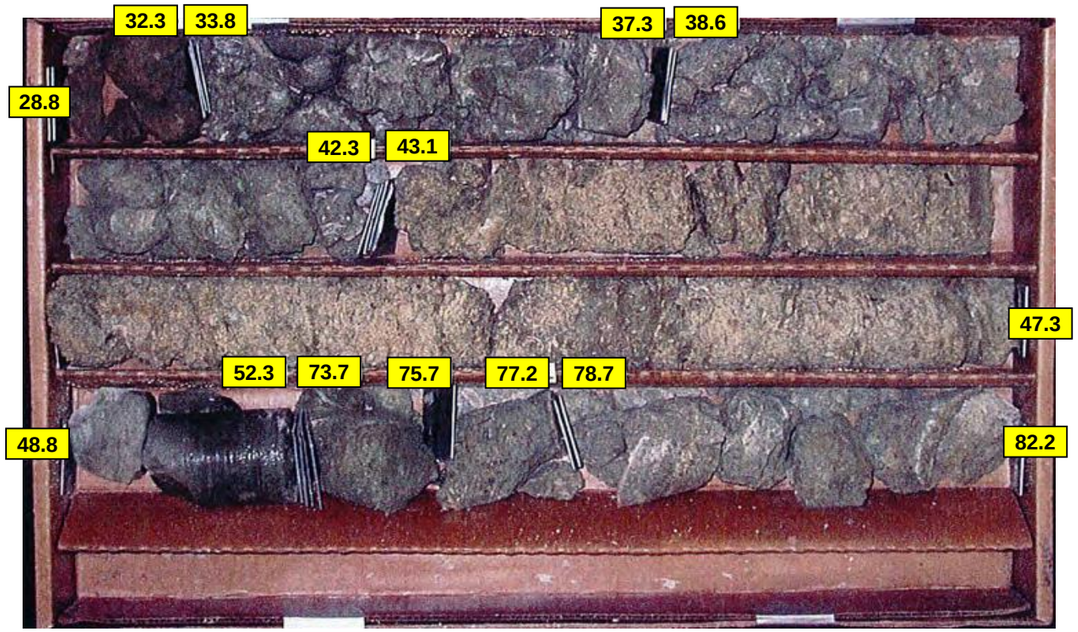


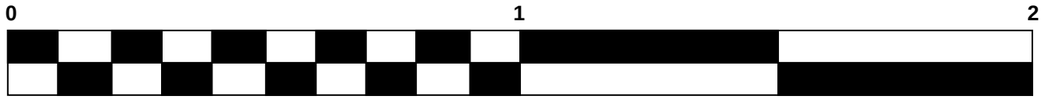
Box 2 of 2 (87.6' to 96.5')

CORE PHOTOGRAPH
B5-A EBL
Box 1 of 1 35.3' to 81.9')



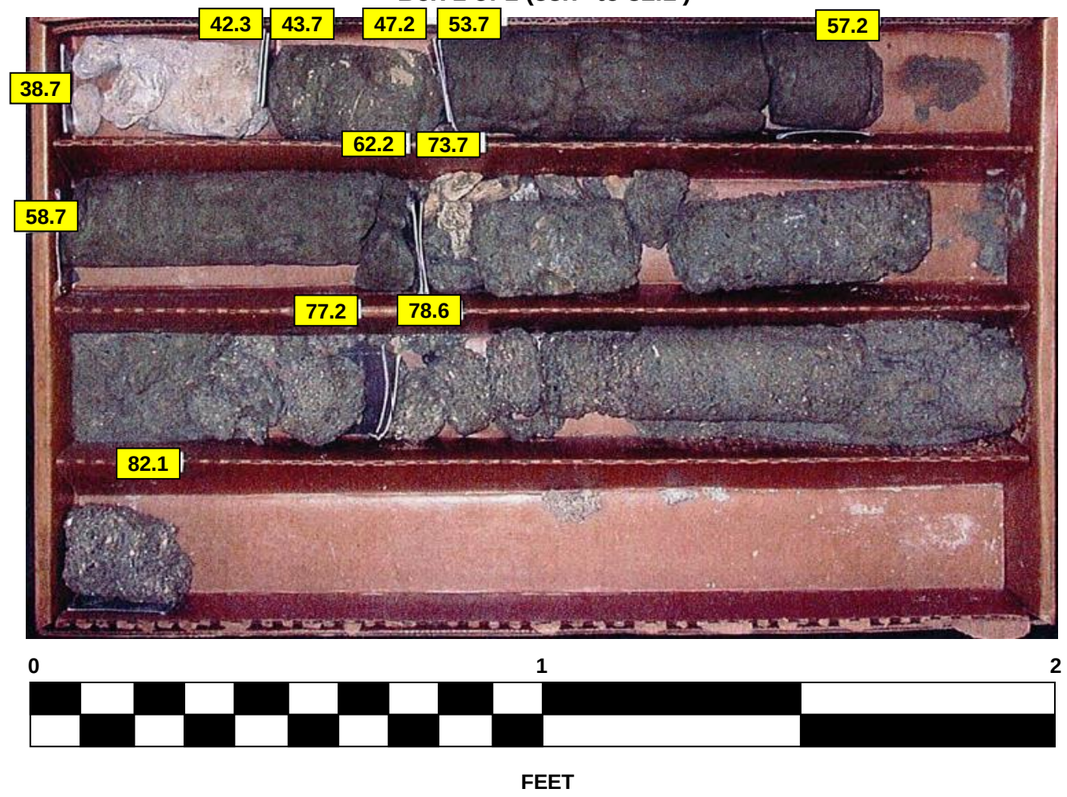
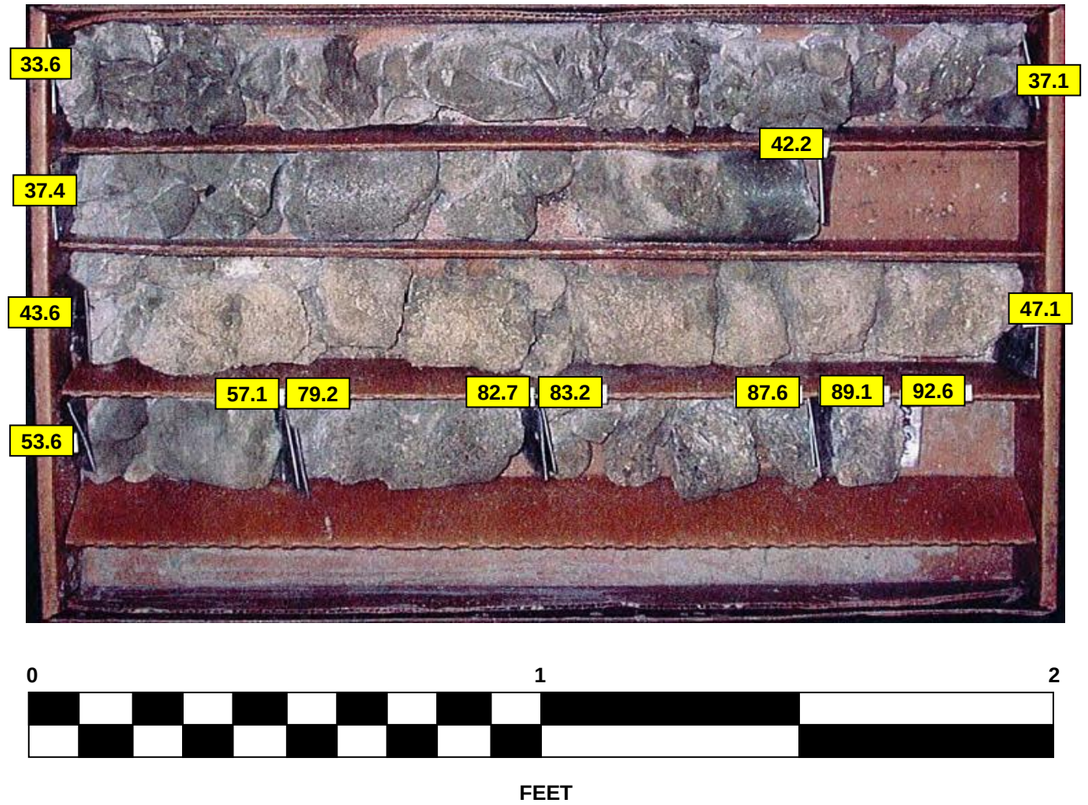
CORE PHOTOGRAPH
B5-B WBL
Box 1 of 1 (28.8' to 82.2')





FEET

CORE PHOTOGRAPH
B6-A EBL
Box 1 of 1 (38.7' to 82.1')



CORE PHOTOGRAPH
B6-B WBL
Box 1 of 1 (33.6' to 92.7')