



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

J. ERIC BOYETTE
SECRETARY

May 6, 2021

MEMORANDUM TO: Clark Morrison PhD, P.E.
State Pavement Design Engineer

Tatia L. White, P.E. PLS
State Roadway Design Engineer

FROM: J. L. Pilipchuk, P.E., L.G.
State Geotechnical Engineer

STATE PROJECT: 47533.1.3 (I-5987B) Turnkey

COUNTY: Robeson

DESCRIPTION: I-95 Improvements from South of NC 20 to South of
Proposed I-295

SUBJECT: Pavement and Subgrade Inventory

DocuSigned by:
John Pilipchuk
52C44B94B8BE444...

The Geotechnical Engineering Unit has completed the evaluation of the pavement and subgrade investigation for this project.

I-5987 Pavement and Subgrade Inventory report has been divided into reports for I-5987A and I-5987B. Project limits of I-5987 were modified from the original request and are shown in this report.

JLP/JBB

ATTACHMENT 1: Pavement and Subgrade Inventory 130

cc: Scott Pridgen

REFERENCE: I-5987B

PROJECT: 47533.1.3

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

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	I-5987B	1	130

CONTENTS

SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	LEGEND (SOIL & ROCK)
3-28	SITE PLANS
29-40	PAVEMENT DATA
41-79	DCP LOGS
80-103	CORE PHOTOS
104-130	LAB SUMMARY

**ROADWAY
SUBSURFACE INVESTIGATION**

COUNTY ROBESON
PROJECT DESCRIPTION I-95 FROM SOUTH OF NC 20
TO SOUTH OF PROPOSED I-295

PAVEMENT AND SUBGRADE INVENTORY

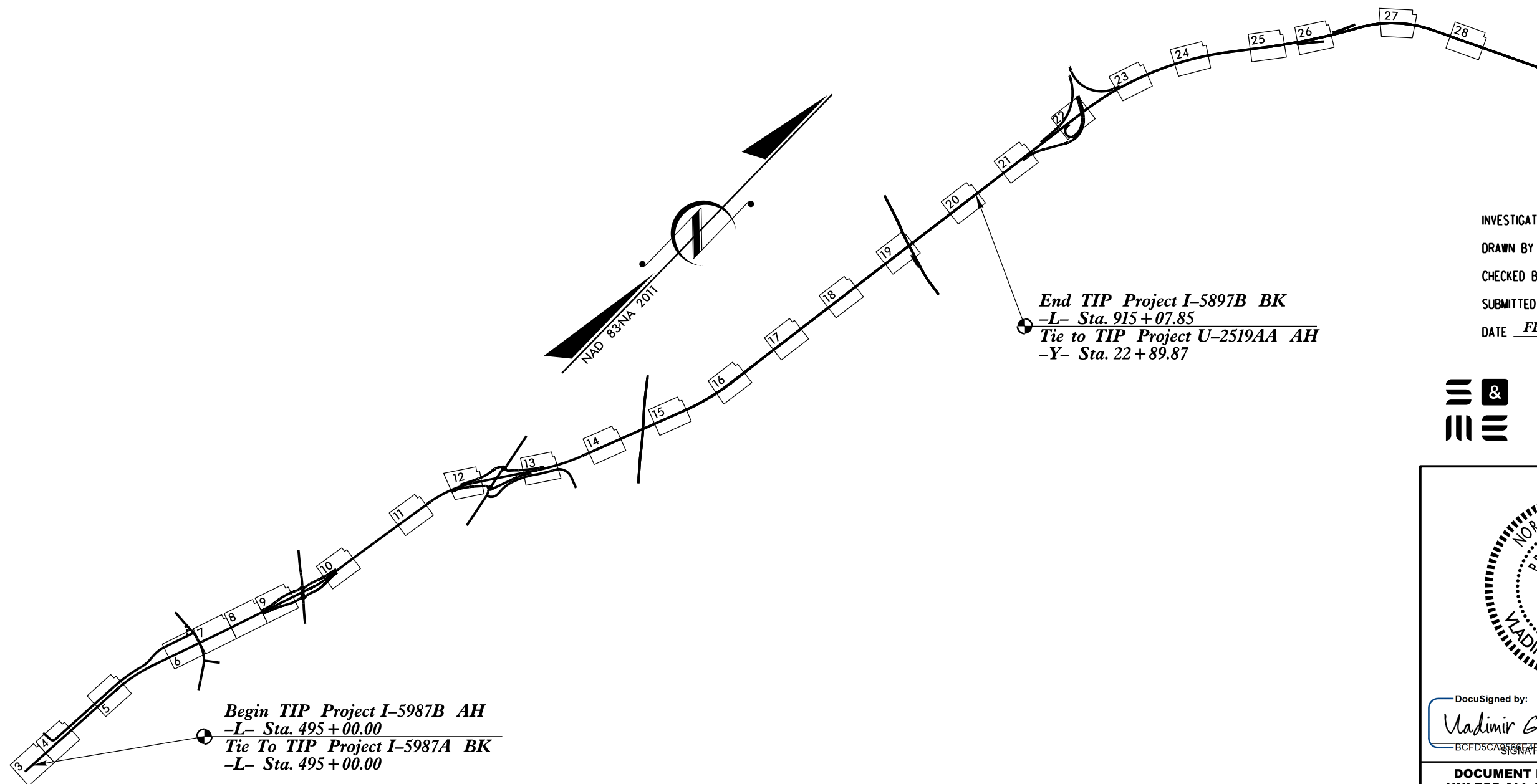
CAUTION NOTICE

THE SUBSURFACE INFORMATION AND THE SUBSURFACE INVESTIGATION ON WHICH IT IS BASED WERE MADE FOR THE PURPOSE OF STUDY, PLANNING AND DESIGN, AND NOT FOR CONSTRUCTION OR PAY PURPOSES. THE VARIOUS FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA AVAILABLE MAY BE REVIEWED OR INSPECTED IN RALEIGH BY CONTACTING THE N. C. DEPARTMENT OF TRANSPORTATION, GEOTECHNICAL ENGINEERING UNIT AT (919) 707-6850. THE SUBSURFACE PLANS AND REPORTS, FIELD BORING LOGS, ROCK CORES AND SOIL TEST DATA ARE NOT PART OF THE CONTRACT.

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

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

NOTES:
1. THE INFORMATION CONTAINED HEREIN IS NOT IMPLIED OR GUARANTEED BY THE N. C. DEPARTMENT OF TRANSPORTATION AS ACCURATE NOR IS IT CONSIDERED PART OF THE PLANS, SPECIFICATIONS OR CONTRACT FOR THE PROJECT.
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

J. SWARTLEY
M. RAWLS
V. MITCHEV
S. HARDEE
F. JOHNSON
T. BRYANT
J. FLORES

INVESTIGATED BY D. STROTHER
DRAWN BY J. NELSON
CHECKED BY V. MITCHEV
SUBMITTED BY V. MITCHEV
DATE FEBRUARY 2021



3201 SPRING FOREST ROAD
RALEIGH, NC 27616
(919) 872-2660



DocuSigned by:
Vladimir G. Mitchev 5/6/2021
BCFD5C... SIGNATURE DATE

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
GEOTECHNICAL ENGINEERING UNIT
SUBSURFACE INVESTIGATION
SOIL AND ROCK LEGEND, TERMS, SYMBOLS, AND ABBREVIATIONS

SOIL DESCRIPTION	GRADATION	ROCK DESCRIPTION	TERMS AND DEFINITIONS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
<p>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 208, 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, <i>VERY STIFF, GRAY, SILTY CLAY, MOIST WITH INTERBEDDED FINE SAND LAYERS, HIGHLY PLASTIC, A-7-6</i></p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2">GENERAL CLASS.</th> <th colspan="7">GRANULAR MATERIALS (≤ 35% PASSING #200)</th> <th colspan="3">SILT-CLAY MATERIALS (> 35% PASSING #200)</th> <th colspan="3">ORGANIC MATERIALS</th> </tr> <tr> <th>A-1</th> <th>A-3</th> <th>A-2</th> <th>A-4</th> <th>A-5</th> <th>A-6</th> <th>A-7</th> <th>A-1, A-2</th> <th>A-3</th> <th>A-4, A-5</th> <th>A-6, A-7</th> <th></th> <th></th> <th></th> </tr> <tr> <td>GROUP CLASS.</td> <td>A-1-a</td> <td>A-1-b</td> <td>A-2-4</td> <td>A-2-5</td> <td>A-2-6</td> <td>A-2-7</td> <td></td> <td>A-7-5</td> <td>A-7-6</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>SYMBOL</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>% PASSING #10 #40 #200</td> <td>50 MX 30 MX 15 MX</td> <td>50 MX 25 MX 10 MN</td> <td>35 MX 35 MX 35 MX</td> <td>35 MX 35 MX 35 MX</td> <td>35 MX 35 MX 35 MX</td> <td>35 MX 35 MX 35 MX</td> <td>36 MN 36 MN 36 MN</td> <td>36 MN 36 MN 36 MN</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>MATERIAL PASSING #40 LL PI</td> <td>- 6 MX</td> <td>- NP</td> <td>40 MX 41 MN 10 MX 11 MN</td> <td>40 MX 41 MN 10 MX 11 MN</td> <td>40 MX 41 MN 10 MX 11 MN</td> <td>40 MX 41 MN 10 MX 11 MN</td> <td>40 MX 41 MN 10 MX 11 MN</td> <td>40 MX 41 MN 10 MX 11 MN</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>GROUP INDEX</td> <td>0</td> <td>0</td> <td>0</td> <td>4 MX</td> <td>8 MX</td> <td>12 MX</td> <td>16 MX</td> <td>NO MX</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>USUAL TYPES OF MAJOR MATERIALS</td> <td>STONE FRAGS. GRAVEL, AND SAND</td> <td>FINE SAND</td> <td>SILTY OR CLAYEY GRAVEL AND SAND</td> <td>SILTY SOILS</td> <td>CLAYEY SOILS</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>GEN. RATING AS SUBGRADE</td> <td colspan="3">EXCELLENT TO GOOD</td> <td colspan="3">FAIR TO POOR</td> <td>FAIR TO POOR</td> <td>POOR</td> <td>UNSUITABLE</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="4" style="text-align: center;">PI OF A-7-5 SUBGROUP IS ≤ LL - 30 ; PI OF A-7-6 SUBGROUP IS > LL - 30</td> </tr> <tr> <td colspan="4" style="text-align: center;">CONSISTENCY OR DENSENESS</td> </tr> <tr> <td>PRIMARY SOIL TYPE</td> <td>COMPACTNESS OR CONSISTENCY</td> <td>RANGE OF STANDARD PENETRATION RESISTANCE (N-VALUE)</td> <td>RANGE OF UNCONFINED COMPRESSIVE STRENGTH (TONS/FT²)</td> </tr> <tr> <td>GENERALLY GRANULAR MATERIAL (NON-COHESIVE)</td> <td>VERY LOOSE LOOSE MEDIUM DENSE DENSE VERY DENSE</td> <td>< 4 4 TO 10 10 TO 30 30 TO 50 > 50</td> <td>N/A</td> </tr> <tr> <td>GENERALLY SILT-CLAY MATERIAL (COHESIVE)</td> <td>VERY SOFT SOFT MEDIUM STIFF STIFF VERY STIFF HARD</td> <td>< 2 2 TO 4 4 TO 8 8 TO 15 15 TO 30 > 30</td> <td>< 0.25 0.25 TO 0.5 0.5 TO 1.0 1 TO 2 2 TO 4 > 4</td> </tr> <tr> <td colspan="4" style="text-align: center;">TEXTURE OR GRAIN SIZE</td> </tr> <tr> <td>U.S. STD. SIEVE SIZE (MM)</td> <td>4 4.76</td> <td>10 2.00</td> <td>40 0.42</td> <td>60 0.25</td> <td>200 0.075</td> <td>270 0.053</td> <td></td> </tr> <tr> <td>BOULDER (BLDR.)</td> <td>COBBLE (COB.)</td> <td>GRAVEL (GR.)</td> <td>COARSE SAND (CSE, SD.)</td> <td>FINE SAND (F SD.)</td> <td>SILT (SL.)</td> <td>CLAY (CL.)</td> <td></td> </tr> <tr> <td>GRAIN SIZE</td> <td>MM 305 IN. 12</td> <td>75 3</td> <td>2.0</td> <td>0.25</td> <td>0.05</td> <td>0.005</td> <td></td> </tr> <tr> <td colspan="4" style="text-align: center;">SOIL MOISTURE - CORRELATION OF TERMS</td> </tr> <tr> <td>SOIL MOISTURE SCALE (ATTERBERG LIMITS)</td> <td>FIELD MOISTURE DESCRIPTION</td> <td>GUIDE FOR FIELD MOISTURE DESCRIPTION</td> <td></td> </tr> <tr> <td>LL - LIQUID LIMIT</td> <td>- SATURATED - (SAT.)</td> <td>USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE</td> <td></td> </tr> <tr> <td>PLASTIC RANGE (PI)</td> <td>- WET - (W)</td> <td>SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE</td> <td></td> </tr> <tr> <td>OM - OPTIMUM MOISTURE SHRINKAGE LIMIT</td> <td>- MOIST - (M)</td> <td>SOLID; AT OR NEAR OPTIMUM MOISTURE</td> <td></td> </tr> <tr> <td>SL - SHRINKAGE LIMIT</td> <td>- DRY - (D)</td> <td>REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE</td> <td></td> </tr> <tr> <td colspan="4" style="text-align: center;">PLASTICITY</td> </tr> <tr> <td>NON PLASTIC</td> <td>PLASTICITY INDEX (PI) 0-5</td> <td>DRY STRENGTH VERY LOW</td> <td></td> </tr> <tr> <td>SLIGHTLY PLASTIC</td> <td>6-15</td> <td>SLIGHT</td> <td></td> </tr> <tr> <td>MODERATELY PLASTIC</td> <td>16-25</td> <td>MEDIUM</td> <td></td> </tr> <tr> <td>HIGHLY PLASTIC</td> <td>26 OR MORE</td> <td>HIGH</td> <td></td> </tr> <tr> <td colspan="4" style="text-align: center;">COLOR</td> </tr> <tr> <td colspan="4">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.</td> </tr> <tr> <td colspan="4" style="text-align: center;">GRADATION</td> </tr> <tr> <td colspan="4">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.</td> </tr> <tr> <td colspan="4" style="text-align: center;">ANGULARITY OF GRAINS</td> </tr> <tr> <td colspan="4">THE ANGULARITY OR ROUNDNESS OF SOIL GRAINS IS DESIGNATED BY THE TERMS: ANGULAR, SUBANGULAR, SUBROUNDED, OR ROUNDED.</td> </tr> <tr> <td colspan="4" style="text-align: center;">MINERALOGICAL COMPOSITION</td> </tr> <tr> <td colspan="4">MINERAL NAMES SUCH AS QUARTZ, FELDSPAR, MICA, TALC, KAOLIN, ETC. ARE USED IN DESCRIPTIONS WHEN THEY ARE CONSIDERED OF SIGNIFICANCE.</td> </tr> <tr> <td colspan="4" style="text-align: center;">COMPRESSIBILITY</td> </tr> <tr> <td colspan="4">SLIGHTLY COMPRESSIBLE LL < 31 MODERATELY COMPRESSIBLE LL = 31 - 50 HIGHLY COMPRESSIBLE LL > 50</td> </tr> <tr> <td colspan="4" style="text-align: center;">PERCENTAGE OF MATERIAL</td> </tr> <tr> <td colspan="4"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>ORGANIC MATERIAL</th> <th>GRANULAR SOILS</th> <th>SILT - CLAY SOILS</th> <th>OTHER MATERIAL</th> </tr> <tr> <td>TRACE OF ORGANIC MATTER</td> <td>2 - 3%</td> <td>3 - 5%</td> <td>TRACE 1 - 10%</td> </tr> <tr> <td>LITTLE ORGANIC MATTER</td> <td>3 - 5%</td> <td>5 - 12%</td> <td>LITTLE 10 - 20%</td> </tr> <tr> <td>MODERATELY ORGANIC</td> <td>5 - 10%</td> <td>12 - 20%</td> <td>SOME 20 - 35%</td> </tr> <tr> <td>HIGHLY ORGANIC</td> <td>> 10%</td> <td>> 20%</td> <td>HIGHLY 35% AND ABOVE</td> </tr> </table> </td> </tr> <tr> <td colspan="4" style="text-align: center;">GROUND WATER</td> </tr> <tr> <td colspan="4"> <p>▽ 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</p> </td> </tr> <tr> <td colspan="4" style="text-align: center;">MISCELLANEOUS SYMBOLS</td> </tr> <tr> <td colspan="4"> <p>ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION SOIL SYMBOL ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT INFERRED SOIL BOUNDARY INFERRED ROCK LINE ALLUVIAL SOIL BOUNDARY</p> <p>25/025 DIP & DIP DIRECTION OF ROCK STRUCTURES SPT DMT TEST BORING AUGER BORING CORE BORING MONITORING WELL TEST BORING WITH CORE SPT N-VALUE</p> <p>SLOPE INDICATOR INSTALLATION CONE PENETROMETER TEST SOUNDING ROD TEST BORING WITH CORE SPT N-VALUE</p> </td> </tr> <tr> <td colspan="4" style="text-align: center;">RECOMMENDATION SYMBOLS</td> </tr> <tr> <td colspan="4"> <p>UNDERCUT 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</p> </td> </tr> <tr> <td colspan="4" style="text-align: center;">ABBREVIATIONS</td> </tr> <tr> <td colspan="4"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>AR - AUGER REFUSAL</td> <td>MED. - MEDIUM</td> <td>VST - VANE SHEAR TEST</td> </tr> <tr> <td>BT - BORING TERMINATED</td> <td>MICA - MICACEOUS</td> <td>WEA. - WEATHERED</td> </tr> <tr> <td>CL. - CLAY</td> <td>MOD. - MODERATELY</td> <td>U - UNIT WEIGHT</td> </tr> <tr> <td>CPT - CONE PENETRATION TEST</td> <td>NP - NON PLASTIC</td> <td>U_g - DRY UNIT WEIGHT</td> </tr> <tr> <td>CSE. - COARSE</td> <td>ORG. - ORGANIC</td> <td></td> </tr> <tr> <td>DMT - DILATOMETER TEST</td> <td>PMT - PRESSUREMETER TEST</td> <td>SAMPLE ABBREVIATIONS</td> </tr> <tr> <td>DPT - DYNAMIC PENETRATION TEST</td> <td>SAP. - SAPROLITIC</td> <td>S - BULK</td> </tr> <tr> <td>e - VOID RATIO</td> <td>SD. - SAND, SANDY</td> <td>SS - SPLIT SPOON</td> </tr> <tr> <td>F - FINE</td> <td>SL. - SILT, SILTY</td> <td>ST - SHELBY TUBE</td> </tr> <tr> <td>FOSS. - FOSSILIFEROUS</td> <td>SLI. - SLIGHTLY</td> <td>RS - ROCK</td> </tr> <tr> <td>FRAC. - FRACTURED, FRACTURES</td> <td>TCR - TRICONE REFUSAL</td> <td>RT - RECOMPACTED TRIAXIAL</td> </tr> <tr> <td>FRAGS. - FRAGMENTS</td> <td>w - MOISTURE CONTENT</td> <td>CBR - CALIFORNIA BEARING RATIO</td> </tr> <tr> <td>HI. - HIGHLY</td> <td>V - VERY</td> <td></td> </tr> </table> </td> </tr> <tr> <td colspan="4" style="text-align: center;">EQUIPMENT USED ON SUBJECT PROJECT</td> </tr> <tr> <td colspan="4"> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>DRILL UNITS:</td> <td>ADVANCING TOOLS:</td> <td>HAMMER TYPE:</td> </tr> <tr> <td><input checked="" type="checkbox"/> CME-45</td> <td><input type="checkbox"/> CLAY BITS</td> <td><input type="checkbox"/> AUTOMATIC <input type="checkbox"/> MANUAL</td> </tr> <tr> <td><input checked="" type="checkbox"/> CME-55</td> <td><input type="checkbox"/> 6" CONTINUOUS FLIGHT AUGER</td> <td></td> </tr> <tr> <td><input type="checkbox"/> CME-550</td> <td><input type="checkbox"/> 8" HOLLOW AUGERS</td> <td>CORE SIZE:</td> </tr> <tr> <td><input type="checkbox"/> VANE SHEAR TEST</td> <td><input type="checkbox"/> HARD FACED FINGER BITS</td> <td><input type="checkbox"/> -B <input type="checkbox"/> -H</td> </tr> <tr> <td><input type="checkbox"/> PORTABLE HOIST</td> <td><input type="checkbox"/> TUNG-CARBIDE INSERTS</td> <td><input type="checkbox"/> -N</td> </tr> <tr> <td></td> <td><input type="checkbox"/> CASING <input type="checkbox"/> w/ ADVANCER</td> <td>HAND TOOLS:</td> </tr> <tr> <td></td> <td><input type="checkbox"/> TRICONE *STEEL TEETH</td> <td><input type="checkbox"/> POST HOLE DIGGER</td> </tr> <tr> <td></td> <td><input type="checkbox"/> TRICONE *TUNG.-CARB.</td> <td><input type="checkbox"/> HAND AUGER</td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> CORE BIT (4.0 INCH)</td> <td><input type="checkbox"/> SOUNDING ROD</td> </tr> <tr> <td></td> <td><input checked="" type="checkbox"/> 3.5 inch auger</td> <td><input type="checkbox"/> VANE SHEAR TEST</td> </tr> </table> </td> </tr> <tr> <td colspan="2" style="text-align: center;">FRACATURE SPACING</td> <td colspan="2" style="text-align: center;">BEDDING</td> </tr> <tr> <td>TERM</td> <td>SPACING</td> <td>TERM</td> <td>THICKNESS</td> </tr> <tr> <td>VERY WIDE</td> <td>MORE THAN 10 FEET</td> <td>VERY THICKLY BEDDED</td> <td>4 FEET</td> </tr> <tr> <td>WIDE</td> <td>3 TO 10 FEET</td> <td>THICKLY BEDDED</td> <td>1.5 - 4 FEET</td> </tr> <tr> <td>MODERATELY CLOSE</td> <td>1 TO 3 FEET</td> <td>THINLY BEDDED</td> <td>0.16 - 1.5 FEET</td> </tr> <tr> <td>CLOSE</td> <td>0.16 TO 1 FOOT</td> <td>VERY THINLY BEDDED</td> <td>0.03 - 0.15 FEET</td> </tr> <tr> <td>VERY CLOSE</td> <td>LESS THAN 0.16 FEET</td> <td>THICKLY LAMINATED</td> <td>0.008 - 0.03 FEET</td> </tr> <tr> <td></td> <td></td> <td>THINLY LAMINATED</td> <td>< 0.008 FEET</td> </tr> <tr> <td colspan="4" style="text-align: center;">INDURATION</td> </tr> <tr> <td colspan="4">FOR SEDIMENTARY ROCKS, INDURATION IS THE HARDENING OF MATERIAL BY CEMENTING, HEAT, PRESSURE, ETC.</td> </tr> <tr> <td>FRIABLE</td> <td colspan="3">RUBBING WITH FINGER FREES NUMEROUS GRAINS; GENTLE BLOW BY HAMMER DISINTEGRATES SAMPLE.</td> </tr> <tr> <td>MODERATELY INDURATED</td> <td colspan="3">GRAINS CAN BE SEPARATED FROM SAMPLE WITH STEEL PROBE; BREAKS EASILY WHEN HIT WITH HAMMER.</td> </tr> <tr> <td>INDURATED</td> <td colspan="3">GRAINS ARE DIFFICULT TO SEPARATE WITH STEEL PROBE; DIFFICULT TO BREAK WITH HAMMER.</td> </tr> <tr> <td>EXTREMELY INDURATED</td> <td colspan="3">SHARP HAMMER BLOWS REQUIRED TO BREAK SAMPLE; SAMPLE BREAKS ACROSS GRAINS.</td> </tr> <tr> <td colspan="4" style="text-align: center;">TERMS AND DEFINITIONS</td> </tr> <tr> <td colspan="4"> <p>ALLUVIUM (ALLUV.) - SOILS THAT HAVE BEEN TRANSPORTED BY WATER. 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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 (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.</p> </td> </tr> <tr> <td colspan="4" style="text-align: center;">BENCH MARK:</td> </tr> <tr> <td colspan="2" style="text-align: center;">ELEVATION:</td> <td colspan="2" style="text-align: center;">FEET</td> </tr> <tr> <td colspan="4" style="text-align: center;">NOTES:</td> </tr> <tr> <td colspan="2">NB - Northbound Lane</td> <td colspan="2">OSS - Outside Shoulder</td> </tr> <tr> <td colspan="2">SB - Southbound Lane</td> <td colspan="2">ISS - Inside Shoulder</td> </tr> <tr> <td colspan="2">OSL - Outside Lane</td> <td colspan="2">GM - Grass Median</td> </tr> <tr> <td colspan="2">ISL - Inside Lane</td> <td colspan="2">OGS - Outside Grass Shoulder</td> </tr> <tr> <td colspan="2">CL - Center Lane</td> <td colspan="2">PS - Paved Shoulder</td> </tr> <tr> <td colspan="2">LTL - Left Turn Lane</td> <td colspan="2">RTL - Right Turn Lane</td> </tr> <tr> <td colspan="2">CTL - Center Turn Lane</td> <td colspan="2">LTL - Left Lane</td> </tr> <tr> <td colspan="2">RTL - Right Turn Lane</td> <td colspan="2">COL - Collector Lane</td> </tr> <tr> <td colspan="2">DECEL - Deceleration Lane</td> <td colspan="2">RT - Right</td> </tr> <tr> <td colspan="2">ACCEL - Acceleration Lane</td> <td colspan="2">LT - Left</td> </tr> </table>				GENERAL CLASS.	GRANULAR MATERIALS (≤ 35% PASSING #200)							SILT-CLAY MATERIALS (> 35% PASSING #200)			ORGANIC MATERIALS			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				GROUP CLASS.	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 #40 #200	50 MX 30 MX 15 MX	50 MX 25 MX 10 MN	35 MX 35 MX 35 MX	35 MX 35 MX 35 MX	35 MX 35 MX 35 MX	35 MX 35 MX 35 MX	36 MN 36 MN 36 MN	36 MN 36 MN 36 MN								MATERIAL PASSING #40 LL PI	- 6 MX	- NP	40 MX 41 MN 10 MX 11 MN	40 MX 41 MN 10 MX 11 MN	40 MX 41 MN 10 MX 11 MN	40 MX 41 MN 10 MX 11 MN	40 MX 41 MN 10 MX 11 MN	40 MX 41 MN 10 MX 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 RESISTANCE (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 (MM)	4 4.76	10 2.00	40 0.42	60 0.25	200 0.075	270 0.053		BOULDER (BLDR.)	COBBLE (COB.)	GRAVEL (GR.)	COARSE SAND (CSE, SD.)	FINE SAND (F SD.)	SILT (SL.)	CLAY (CL.)		GRAIN SIZE	MM 305 IN. 12	75 3	2.0	0.25	0.05	0.005		SOIL MOISTURE - CORRELATION OF TERMS				SOIL MOISTURE SCALE (ATTERBERG LIMITS)	FIELD MOISTURE DESCRIPTION	GUIDE FOR FIELD MOISTURE DESCRIPTION		LL - LIQUID LIMIT	- SATURATED - (SAT.)	USUALLY LIQUID; VERY WET, USUALLY FROM BELOW THE GROUND WATER TABLE		PLASTIC RANGE (PI)	- WET - (W)	SEMISOLID; REQUIRES DRYING TO ATTAIN OPTIMUM MOISTURE		OM - OPTIMUM MOISTURE SHRINKAGE LIMIT	- MOIST - (M)	SOLID; AT OR NEAR OPTIMUM MOISTURE		SL - SHRINKAGE LIMIT	- DRY - (D)	REQUIRES ADDITIONAL WATER TO ATTAIN OPTIMUM MOISTURE		PLASTICITY				NON PLASTIC	PLASTICITY INDEX (PI) 0-5	DRY STRENGTH 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				<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>ORGANIC MATERIAL</th> <th>GRANULAR SOILS</th> <th>SILT - CLAY SOILS</th> <th>OTHER MATERIAL</th> </tr> <tr> <td>TRACE OF ORGANIC MATTER</td> <td>2 - 3%</td> <td>3 - 5%</td> <td>TRACE 1 - 10%</td> </tr> <tr> <td>LITTLE ORGANIC MATTER</td> <td>3 - 5%</td> <td>5 - 12%</td> <td>LITTLE 10 - 20%</td> </tr> <tr> <td>MODERATELY ORGANIC</td> <td>5 - 10%</td> <td>12 - 20%</td> <td>SOME 20 - 35%</td> </tr> <tr> <td>HIGHLY ORGANIC</td> <td>> 10%</td> <td>> 20%</td> <td>HIGHLY 35% AND ABOVE</td> </tr> </table>				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				<p>▽ 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</p>				MISCELLANEOUS SYMBOLS				<p>ROADWAY EMBANKMENT (RE) WITH SOIL DESCRIPTION SOIL SYMBOL ARTIFICIAL FILL (AF) OTHER THAN ROADWAY EMBANKMENT INFERRED SOIL BOUNDARY INFERRED ROCK LINE ALLUVIAL SOIL BOUNDARY</p> <p>25/025 DIP & DIP DIRECTION OF ROCK STRUCTURES SPT DMT TEST BORING AUGER BORING CORE BORING MONITORING WELL TEST BORING WITH CORE SPT N-VALUE</p> <p>SLOPE INDICATOR INSTALLATION CONE PENETROMETER TEST SOUNDING ROD TEST BORING WITH CORE SPT N-VALUE</p>				RECOMMENDATION SYMBOLS				<p>UNDERCUT 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</p>				ABBREVIATIONS				<table border="1" style="width: 100%; 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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				<p>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 DISLOGGED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (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 (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.</p>				BENCH MARK:				ELEVATION:		FEET		NOTES:				NB - Northbound Lane		OSS - Outside Shoulder		SB - Southbound Lane		ISS - Inside Shoulder		OSL - Outside Lane		GM - Grass Median		ISL - Inside Lane		OGS - Outside Grass Shoulder		CL - Center Lane		PS - Paved Shoulder		LTL - Left Turn Lane		RTL - Right Turn Lane		CTL - Center Turn Lane		LTL - Left Lane		RTL - Right Turn Lane		COL - Collector Lane		DECEL - Deceleration Lane		RT - Right		ACCEL - Acceleration Lane		LT - Left	
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<p>UNDERCUT 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</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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<p>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 DISLOGGED FROM PARENT MATERIAL. FLOOD PLAIN (FP) - LAND BORDERING A STREAM, BUILT OF SEDIMENTS DEPOSITED BY THE STREAM. FORMATION (FM) - A MAPPABLE GEOLOGIC UNIT THAT CAN BE RECOGNIZED AND TRACED IN THE FIELD. JOINT - FRACTURE IN ROCK ALONG WHICH NO APPRECIABLE MOVEMENT HAS OCCURRED. LEDGE - A SHELF-LIKE RIDGE OR PROJECTION OF ROCK WHOSE THICKNESS IS SMALL COMPARED TO ITS LATERAL EXTENT. LENS - A BODY OF SOIL OR ROCK THAT THINS OUT IN ONE OR MORE DIRECTIONS. MOTTLED (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 (SROD) - A MEASURE OF ROCK QUALITY DESCRIBED BY TOTAL LENGTH OF ROCK SEGMENTS WITHIN A STRATUM EQUAL TO OR GREATER THAN 4 INCHES DIVIDED BY THE TOTAL LENGTH OF STRATA AND EXPRESSED AS A PERCENTAGE. TOPSOIL (TS.) - SURFACE SOILS USUALLY CONTAINING ORGANIC MATTER.</p>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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CTL - Center Turn Lane		LTL - Left Lane																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
RTL - Right Turn Lane		COL - Collector Lane																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
DECEL - Deceleration Lane		RT - Right																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
ACCEL - Acceleration Lane		LT - Left																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

PROJECT REFERENCE NO. I-5987B	SHEET NO. 3
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 489 + 00



MATCHLINE -L- STA. 502 + 00 SEE SHEET 4

PROJECT REFERENCE NO. I-5987B	SHEET NO. 4
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 502 + 00 SEE SHEET 03



-L- 508 + 50 SB OSS		-L- 508 + 50 SB ISL		-L- 508 + 50 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7"	Asphalt	11.5"	Asphalt	7.5"
STBC	7"	STBC	1"	STBC	5"

Y=375741.9928
X=2001394.3395
-L- 508+50 SB OSS

Y=375740.1321
X=2001420.5919
-L- 508+50 SB ISL

Y=375739.6979
X=2001426.7175
-L-

Y=375735.6461
X=2001483.8833
-L- 508+50 NB ISS

Y=375734.2388
X=2001503.7374
-L- 508+50 NB OSL
-L- 508+50 NB OSS

Y=375733.5477
X=2001513.4887

-L- 508 + 50 NB ISS		-L- 508 + 50 NB OSL		-L- 508 + 50 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7.5"	Asphalt	12"	Asphalt	7"
STBC	4"	STBC	4"	STBC	-

MATCHLINE -L- STA. 514 + 00

5/14/99

PROJECT REFERENCE NO. I-5987B	SHEET NO. 5
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 528 + 00

MATCHLINE -L- STA. 514 + 00



-L- 535+25 SB OSS		-L- 535+25 SB OSL		-L- 535+25 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7.5"	Asphalt	12"	Asphalt	8"
STBC	8"	STBC	8"	STBC	8"

-L- 535+20 NB ISS		-L- 535+20 NB ISL		-L- 535+20 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8"	Asphalt	11.5"	Asphalt	7"
STBC	-	STBC	3.5"	STBC	4"

Y=378410.3366
X=2001582.9302

Y=378409.4944
X=2001594.8124

Y=378407.9931
X=2001615.9947

Y=378399.0591
X=2001671.3204

Y=378398.5599
X=2001678.3630

Y=378397.1651
X=2001698.0416

N 4°03'14.3"E
-SR4-

-L-
N 4°03'14.3"E

SYSTEMS
DESIGNED
BY
CONSTRUCTION

5/14/99

PROJECT REFERENCE NO.	SHEET NO.
1-5987B	6
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -L- STA. 561+00



-L- 562+00 SB OSS		-L- 562+00 SB ISL		-L- 562+00 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7"	Asphalt	12"	Asphalt	7"
STBC	7"	STBC	4"	STBC	6"

-L- 572+20 SB ISS	
Pavement Structure	
Asphalt	4"
STBC	4"

-L- 562+00 NB ISS		-L- 562+00 NB OSL		-L- 562+00 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7.75"	Asphalt	12"	Asphalt	8"
STBC	-	STBC	3.5"	STBC	3.5"

Y=381006.9146
X=2002224.5702
-L- 562+00 SB OSS

Y=380998.3177
X=2002248.7302
-L- 562+00 SB ISL

Y=380995.3746
X=2002257.0011
-L- 562+00 SB ISS

Y=380984.9274
X=2002286.3608
-L- 562+00 NB ISS

Y=380978.8930
X=2002303.3191
-L- 562+00 NB OSL

Y=380975.2050
X=2002313.6838
-L- 562+00 NB OSS

Y=381958.5804
X=2002599.9962
-L- 572+20 SB ISS

MATCHLINE -L- STA. 574+00 SEE SHEET 7

SYSTEMS DESIGN CONSULTANTS

5/14/99

PROJECT REFERENCE NO.		SHEET NO.	
I-5987B		7	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -L- STA. 574 + 00 SEE SHEET 6



-L- 581+70 SB OSS		-L- 581+70 SB OSL	
Pavement Structure		Pavement Structure	
Asphalt	8"	Asphalt	13"
STBC	12"	STBC	3"

Y=382864.3750
X=2002888.3238

Y=382860.4062
X=2002899.3653

-L- 581+70 SB OSS
-L- 581+70 SB OSL

N 19° 36' 03.2" E

MATCHLINE -L- STA. 587 + 00 SEE SHEET 8

SYSTEMS CONDITIONED TO THE RIGHT

5/14/99

PROJECT REFERENCE NO. I-5987B		SHEET NO. 8	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -L- STA. 587 + 00 SEE SHEET 7



-L- 596+90 SB OSS		-L- 596+90 SB ACCEL	
Pavement Structure		Pavement Structure	
Asphalt	14"	Asphalt	11.5"
STBC	-	STBC	-

X=2003392.1916
Y=384298.4041
-L- 596+90 SB OSS
-L- 596+90 SB ACCEL
X=2003398.8943
Y=384296.0190

X=2003458.7676
Y=384274.7141
-L- 596+90 NB ISS
-L- 596+90 NB ISL
X=2003464.8137
Y=384272.5627
-L- 596+90 NB OSS
X=2003486.1272
Y=384264.9786

-L- 596+90 NB ISS		-L- 596+90 NB ISL		-L- 596+90 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8"	Asphalt	11"	Asphalt	7"
STBC	-	STBC	4.5"	STBC	4"

MATCHLINE -L- STA. 600 + 00 SEE SHEET 9

SYSTEMS DESIGN CONSULTANTS

01

5/14/99

PROJECT REFERENCE NO. I-5987B	SHEET NO. 9
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 600+00 SEE SHEET 8

MATCHLINE -L- STA. 613+00



X=2003618.3865
Y=384642.3805
-L- 600+90 NB DECEL
X=2003624.3908
Y=384639.9898
-L- 600+90 NB OSS

-L- 600+90 NB DECEL		-L- 600+90 NB OSS	
Pavement Structure		Pavement Structure	
Asphalt	11"	Asphalt	7.5"
STBC	4"	STBC	6"

-L- 610+70 SB ISL		-L- 610+70 SB ISS	
Pavement Structure		Pavement Structure	
Asphalt	11"	Asphalt	7"
STBC	4"	STBC	2"

X=2003882.5312
Y=385588.6877
-L- 610+70 SB ISL
X=2003890.8664
Y=385585.7218
-L- 610+70 SB ISS
X=2003922.8989
Y=385674.3235
-L- 610+70 NB ISS
X=2003935.9834
Y=385569.6676
-L- 610+70 NB OSL
-L- 610+70 NB OSS
X=2003947.5766
Y=385565.5423

-L- 610+70 NB ISS		-L- 610+70 NB OSL		-L- 610+70 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7.5"	Asphalt	11.25"	Asphalt	8.25"
STBC	-	STBC	2.75"	STBC	2.75"

SYSTEMS DESIGN CONSULTANTS

5/14/99

PROJECT REFERENCE NO. I-5987B	SHEET NO. 10
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCHLINE -L- STA. 627 + 00

MATCHLINE -L- STA. 640 + 00



-L- 628+05 SB GORE	
Pavement Structure	
Asphalt	6"
STBC	-

-L- 637+95 SB OSS		-L- 637+95 SB ISL		-L- 637+95 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6"	Asphalt	11"	Asphalt	7"
STBC	4"	STBC	6"	STBC	10"

-L- 636+50 NB ISS		-L- 636+50 NB ISL		-L- 636+50 NB ACCEL		-L- 636+50 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6.5"	Asphalt	11"	Asphalt	11"	Asphalt	11"
STBC	-	STBC	4"	STBC	-	STBC	-

X=2004356.0982
Y=387241.574

-L- 628+05 SB GORE

S 12° 08' 37.0" W
-Y5RPA-

X=2004521.9577
Y=388217.1657

-L- 637+95 SB OSS

X=2004546.6303
Y=388212.9409

-L- 637+95 SB ISL

-L- 637+95 SB ISS

X=2004553.6317
Y=388211.7420

-L-
N 8° 01' 36.9" E

X=2004575.4330
Y=388061.2409

-L- 636+50 NB ISS

-L- 636+50 NB ISL

X=2004580.1228
Y=388060.0954

-L- 636+50 NB ACCEL

-L- 636+50 NB OSS

X=2004602.1972
Y=388056.3155

X=2004612.6881
Y=388054.5191

-Y5RPD-

SYSTEMS
DESIGNED
BY
CIVIL
ENGINEERS

PROJECT REFERENCE NO. I-5987B	SHEET NO. 11
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 661 + 00

MATCHLINE -L- STA. 674 + 00

-L- 666+40 SB OSS		-L- 666+40 SB ISL		-L- 666+40 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7"	Asphalt	11.75"	Asphalt	6.5"
STBC	2"	STBC	3"	STBC	11"

X=2004976.1496
Y=391025.8004
-L- 666+40 SB OSS

X=2005000.1578
Y=391021.6894
-L- 666+40 SB ISL
-L- 666+40 SB ISS

X=2005007.8090
Y=391020.3793

N 84° 30' E

PROP. TYPE T BARRIER

X=2005105.4433
Y=391003.6609
-L- 666+40 NB ISS

X=2005122.4294
Y=391001.1941
-L- 666+40 NB OSL
-L- 666+40 NB OSS

X=2005134.1762
Y=390999.4881

-L- 666+40 NB ISS		-L- 666+40 NB OSL		-L- 666+40 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8.5"	Asphalt	11"	Asphalt	6"
STBC	3.5"	STBC	4.5"	STBC	4"

5/14/99

PROJECT REFERENCE NO. 1-5987B	SHEET NO. 12
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

-L- 688+25 SB OSS		-L- 688+25 SB OSL		-L- 688+25 SB ACCEL		-L- 688+25 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	15.5"	Asphalt	15"	Asphalt	15.5"	Asphalt	8.5"
STBC	1"	STBC	4"	STBC	0.5"	STBC	-

X=2005538.5389
Y=393151.2196

X=2005546.3377
Y=393147.3364

X=2005555.4643
Y=393142.7920

X=2005572.5875
Y=393134.2659

X=2005664.9183
Y=393171.6653

X=2005681.8836
Y=393162.8619

X=2005688.3820
Y=393159.4899

X=2005658.8679
Y=393174.8049

PROP. TYPE T BARRIER

-L- 689+00 NB ISS		-L- 689+00 NB ISL		-L- 689+00 NB DECEL		-L- 689+00 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	13.5"	Asphalt	16"	Asphalt	14.25"	Asphalt	8"
STBC	5.5"	STBC	3.5"	STBC	2.5"	STBC	5"

MATCHLINE -L- STA. 685+00

MATCHLINE -L- STA. 697+00



SYSTEMS DESIGN CONSULTANTS

5/14/99

PROJECT REFERENCE NO. 1-5987B	SHEET NO. 13
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -L- STA. 713+00

MATCHLINE -L- STA. 726+00

-L- 719+30 SB OSS		-L- 719+30 SB ISL		-L- 719+30 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6.5"	Asphalt	11.5"	Asphalt	7.5"
STBC	3"	STBC	5.5"	STBC	5"

-L- 719+25 NB ISS		-L- 719+25 NB OSL		-L- 719+25 NB ACCEL		-L- 719+25 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8.5"	Asphalt	11.25"	Asphalt	13.25"	Asphalt	15.5"
STBC	-	STBC	3.75"	STBC	-	STBC	-



SYSTEMS DESIGN CONSULTANTS

5/14/99

PROJECT REFERENCE NO.		SHEET NO.	
I-5987B		14	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -L- STA. 739 + 00

MATCHLINE -L- STA. 752 + 00

740

745

750

NAD 83

-L- 745 + 65 SB OSS		-L- 745 + 65 SB OSL		-L- 745 + 65 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7.25"	Asphalt	12.75"	Asphalt	7.5"
STBC	3.75"	STBC	4.25"	STBC	11"

X=2008410.5953
Y=398089.6344

X=2008420.2845
Y=398085.9247

X=2008439.3569
Y=398078.2287

N 21° 59' 00" E
PROP. TYPE T BARRIER

N 21° 59' 00" E
PROP. TYPE T BARRIER

PROP. TYPE T BARRIER

X=2008520.8937
Y=398034.4817

X=2008528.1061
Y=398031.5714

X=2008548.0953
Y=398023.5018

-L- 745 + 55 NB ISS		-L- 745 + 55 NB ISL		-L- 745 + 55 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6.5"	Asphalt	12"	Asphalt	6.25"
STBC	-"	STBC	4"	STBC	-

SYSTEMS DESIGN CONSULTANTS

5/14/99

PROJECT REFERENCE NO. I-5987B	SHEET NO. 15
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 766 + 00

MATCHLINE -L- STA. 779 + 00

-L- 772 + 30 SB OSS		-L- 772 + 30 SB ISL		-L- 772 + 30 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6.5"	Asphalt	12"	Asphalt	8"
STBC	-	STBC	6"	STBC	10"

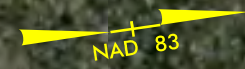
-L- 772 + 25 NB ISS		-L- 772 + 25 NB OSL		-L- 772 + 25 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7.75"	Asphalt	12"	Asphalt	6.5"
STBC	5"	STBC	3.5"	STBC	-



SYSTEMS DESIGN CONSULTANTS

5/14/99

PROJECT REFERENCE NO.		SHEET NO.	
I-5987B		16	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



MATCHLINE -L- STA. 792 +00

MATCHLINE -L- STA. 805 +00

-L- 798+50 SB OSS		-L- 798+50 SB OSL		-L- 798+50 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6"	Asphalt	12"	Asphalt	8"
STBC	5"	STBC	3"	STBC	8"

795

800

X=2010174.0870
Y=403037.4407

X=2010185.6921
Y=403035.7334

X=2010206.2729
Y=403032.7056

X=2010237.0440
Y=403028.1788

X=2010244.7387
Y=403027.0468

X=2010268.4845
Y=403023.5534

-L- 798+50 SB OSS

-L- 798+50 SB OSL

-L- 798+50 SB ISS

-L- 798+50 NB ISS

-L- 798+50 NB ISL

-L- 798+50 NB OSS

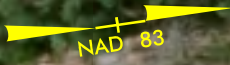
-L-
N 8°19'31.0" E

-L- 798+50 NB ISS		-L- 798+50 NB ISL		-L- 798+50 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7.5"	Asphalt	12"	Asphalt	8"
STBC	5"	STBC	3"	STBC	-

SYSTEMS DESIGN CONSULTANTS INC.

5/14/99

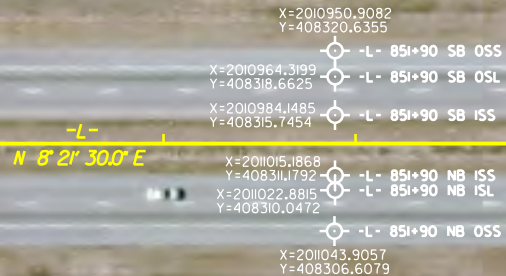
PROJECT REFERENCE NO.		SHEET NO.	
1-5987B		18	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			



-L- 851+90 SB OSS		-L- 851+90 SB OSL		-L- 851+90 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7.5"	Asphalt	14"	Asphalt	8"
STBC	2"	STBC	2"	STBC	6.5"

MATCHLINE -L- STA. 845 + 00

MATCHLINE -L- STA. 858 + 00



-L- 851+90 NB ISS		-L- 851+90 NB ISL		-L- 851+90 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7.5"	Asphalt	11.5"	Asphalt	7.25"
STBC	3"	STBC	3.5"	STBC	-

SYSTEMS DESIGN CONSULTANTS

PROJECT REFERENCE NO. 1-5987B	SHEET NO. 19
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCHLINE -L- STA. 872 + 00

MATCHLINE -L- STA. 885 + 00

-L- 878+15 SB OSS		-L- 878+15 SB ISL		-L- 878+15 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6.5"	Asphalt	13.5"	Asphalt	7.75"
STBC	2"	STBC	5"	STBC	5.25"

X=2011335.2391
Y=410917.3402
-L- 878+15 SB OSS

X=2011358.3493
Y=410913.9403
-L- 878+15 SB ISL

X=2011366.0440
Y=410912.8083
-L- 878+15 SB ISS

X=2011392.7469
Y=410913.9446
-L- 878+20 NB ISS

X=2011415.5596
Y=410910.5885
-L- 878+20 NB OSL

X=2011427.1647
Y=410908.8812
-L- 878+20 NB OSS

-L- 878+20 NB ISS		-L- 878+20 NB OSL		-L- 878+20 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7"	Asphalt	12"	Asphalt	7"
STBC	2"	STBC	3.75"	STBC	-

N 8° 27' 30.0" E

S 23° 47' 53.2" W

S 77° 38' 30.0" E

-100-
-100-
5

SYSTEMS DESIGN CONSULTANTS

5/14/99

PROJECT REFERENCE NO. I-5987B	SHEET NO. 20
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -L- STA. 898 + 00

MATCHLINE -L- STA. 911 + 00



*End TIP Project I-5897B BK
-L- Sta. 915 + 07.85
Tie to TIP Project U-2519AA AH
-Y- Sta. 22 + 89.87*

-L- 904 + 75 SB OSS		-L- 904 + 75 SB OSL		-L- 904 + 75 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	7.5"	Asphalt	13"	Asphalt	7.25"
STBC	2"	STBC	2"	STBC	5.5"

X=2011718.6628
Y=413549.5722

X=2011730.6874
Y=413547.8032

X=2011751.5449
Y=413544.7348

X=2011781.4000
Y=413530.2350

X=2011789.0947
Y=413529.1030

X=2011812.2642
Y=413525.6945

-L- 904 + 65 NB ISS		-L- 904 + 65 NB ISL		-L- 904 + 65 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6.5"	Asphalt	11.5"	Asphalt	7"
STBC	5.5"	STBC	4.5"	STBC	-

SYSTEMS DESIGN CONSULTANTS

5/14/99

PROJECT REFERENCE NO.		SHEET NO.	
I-5987B		21	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -L- STA. 928 + 00



-L- 934+95 SB OSS		-L- 934+95 SB ISL		-L- 934+95 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8.5"	Asphalt	14"	Asphalt	9.5"
STBC	2"	STBC	4.5"	STBC	3"

X=2012161.5784
Y=416547.0260
-L- 934+95 SB OSS

X=2012184.0165
Y=416543.7250
-L- 934+95 SB ISL

X=2012192.3833
Y=416542.4942
-L- 934+95 SB ISS

X=2012224.3280
Y=416532.7408
-L- 934+90 NB ISS

X=2012242.4741
Y=416530.0712
-L- 934+90 NB OSL

X=2012253.1227
Y=416528.5047
-L- 934+90 NB OSS

-L- 934+90 NB ISS		-L- 934+90 NB OSL		-L- 934+90 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	6"	Asphalt	12.5"	Asphalt	7"
STBC	2"	STBC	4"	STBC	2"

MATCHLINE -L- STA. 941 + 00

SYSTEMS DESIGN CONSULTANTS

5/14/99

PROJECT REFERENCE NO. 1-5987B		SHEET NO. 22	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

MATCHLINE -L- STA. 955 + 00

MATCHLINE -L- STA. 968 + 00

-L- 961+00 SB OSS		-L- 961+00 SB OSL		-L- 961+00 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	8"	Asphalt	13"	Asphalt	8"
STBC	4"	STBC	3"	STBC	6"

960

965

X=2012540.8302
Y=419124.2712

X=2012551.5874
Y=419122.6887

X=2012572.1240
Y=419119.6674

X=2012610.6956
Y=419108.9426

X=2012632.1830
Y=419105.7814

-L- 960+95 NB ISL		-L- 960+95 NB OSS	
Pavement Structure		Pavement Structure	
Asphalt	11.5"	Asphalt	7.5"
STBC	2.5"	STBC	2.5"

SYSTEMS DESIGN CONSULTANTS, INC.

PROJECT REFERENCE NO.	SHEET NO.
1-5987B	23
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



MATCHLINE -L- STA. 981 + 00

MATCHLINE -L- STA. 994 + 00

-L- 987 + 25 SB OSS		-L- 987 + 25 SB ISL	
Pavement Structure		Pavement Structure	
Asphalt	4.5"	Asphalt	9.5"
STBC	7"	STBC	4"

-L- 987 + 25 NB OSL		-L- 987 + 50 NB OSS	
Pavement Structure		Pavement Structure	
Asphalt	9"	Asphalt	3.25"
STBC	4"	STBC	2"

985

990

X=2013129.2043
Y=421686.2774

-L- 987+25 SB OSS

-L- 987+25 SB ISL

X=2013148.8510
Y=421679.3527

X=2013206.6563
Y=421658.9785

-L- 987+25 NB OSL

-L- 987+50 OSS

X=2013224.1899
Y=421679.3060

PROJECT REFERENCE NO.		SHEET NO.	
I-5987B		24	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

-L- 1010+15 SB OSS		-L- 1010+15 SB OSL		-L- 1010+15 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	5.5"	Asphalt	11"	Asphalt	6.5"
STBC	5"	STBC	4"	STBC	6"

-L- 1010+15 NB ISS		-L- 1010+15 NB ISL		-L- 1010+15 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	12"	Asphalt	8.5"	Asphalt	6.5"
STBC	4"	STBC	-	STBC	1.5"

X=2014108.6036
 Y=423750.3708
 -L- 1010+15 SB OSL
 X=2014125.7591
 Y=423750.3708
 -L- 1010+15 SB ISS
 X=2014151.9659
 Y=423734.8174
 -L- 1010+15 NB ISS
 X=2014159.2167
 Y=423730.5073
 -L- 1010+15 NB ISL
 X=2014178.7270
 Y=423718.9095
 -L- 1010+15 NB OSS



1010

1015

MATCHLINE -L- STA. 1005 + 00

MATCHLINE -L- STA. 1018 + 00

5/14/99

PROJECT REFERENCE NO.		SHEET NO.	
I-5987B		25	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -L- STA. 1034 + 00

MATCHLINE -L- STA. 1047 + 00

-L- 1037+30 SB OSS		-L- 1037+30 SB OSL		-L- 1037+30 SB ISL		-L- 1037+30 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	12"	Asphalt	12"	Asphalt	13"	Asphalt	11"
STBC	6"	STBC	6"	STBC	9"	STBC	9"

X=2015676.4146
Y=425981.9450
-L- 1037+30 SB OSS

X=2015686.4625
Y=425974.0241
-L- 1037+30 SB OSL

X=2015704.0576
Y=425960.1535
-L- 1037+30 SB ISL
-L- 1037+30 SB ISS

X=2015711.6478
Y=425954.1700

X=2015770.9505
Y=425881.9533
-L- 1037+10 NB OSL2

X=2015780.0685
Y=425874.7654
-L- 1037+10 NB OSL1
-L- 1037+10 NB OSS

X=2015789.2974
Y=425867.4901

-L- 1037+10 NB OSL2		-L- 1037+10 NB OSL1		-L- 1037+10 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	13.5"	Asphalt	11"	Asphalt	5"
STBC	3.5"	STBC	8.5"	STBC	14"

-L- 1043+85 NB ISS	
Pavement Structure	
Asphalt	6.75"
STBC	12.25"

X=2016175.9684
Y=426422.7634
-L- 1043+85 NB ISS



SYSTEMS DESIGN CONSULTANTS

PROJECT REFERENCE NO. I-5987B	SHEET NO. 26
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 1052 + 00

MATCHLINE -L- STA. 1065 + 00



-L- 1053+70 SB OSS		-L- 1053+70 SB OSL1		-L- 1053+70 SB OSL2	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	5"	Asphalt	13"	Asphalt	12"
STBC	10"	STBC	6"	STBC	7"

-L- 1063+70 SB ISS	
Pavement Structure	
Asphalt	13"
STBC	9"

X=2016643.0398
Y=427300.4043
-L- 1053+70 SB OSS
X=2016654.4566
Y=427292.3665
-L- 1053+70 SB OSL1
-L- 1053+70 SB OSL2
X=2016663.7181
Y=427285.8461

-L- 1063+70 SB ISS
X=2017247.5241
Y=428095.0470
X=2017318.1096
Y=428043.9179
-L- 1063+65 NB ISS
X=2017326.0806
Y=428038.8146
-L- 1063+65 NB ISL
-L- 1063+65 NB OSS
X=2017344.9596
Y=428026.7274

-L- 1063+65 NB ISS		-L- 1063+65 NB ISL		-L- 1063+65 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	5.75"	Asphalt	12"	Asphalt	4.5"
STBC	13.25"	STBC	6.5"	STBC	13"

5/14/99

PROJECT REFERENCE NO. I-5987B	SHEET NO. 27
RW SHEET NO.	
ROADWAY DESIGN ENGINEER	HYDRAULICS ENGINEER
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

MATCHLINE -L- STA. 1084 + 00

MATCHLINE -L- STA. 1097 + 00

1085

1090

1095



-L- 1091+30 SB OSS		-L- 1091+30 SB ISL		-L- 1091+30 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	5"	Asphalt	6"	Asphalt	5.5"
STBC	14"	STBC	9"	STBC	14.5"

X=2018847.4956
Y=430350.6876
-L- 1091+30 SB OSS

X=2018864.9898
Y=430330.1738
-L- 1091+30 SB ISL
-L- 1091+30 SB ISS

X=2018870.4442
Y=430323.7780

X=2018919.9858
Y=430250.4295
-L- 1091+20 NB ISS

X=2018933.1451
Y=430235.0670
-L- 1091+20 NB OSL
-L- 1091+20 NB OSS

X=2018940.7529
Y=430226.1856

-L- 1091+20 NB ISS		-L- 1091+20 NB OSL		-L- 1091+20 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	5"	Asphalt	11"	Asphalt	5"
STBC	12"	STBC	9"	STBC	13"

SYSTEMS CONDITIONING ENGINEER

5/14/99

PROJECT REFERENCE NO.		SHEET NO.	
I-5987B		28	
RW SHEET NO.			
ROADWAY DESIGN ENGINEER		HYDRAULICS ENGINEER	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED			

MATCHLINE -L- STA. 1111 + 00

MATCHLINE -L- STA. 1124 + 00

-L- 1116 + 00 SB OSS		-L- 1116 + 00 SB ACCEL		-L- 1116 + 00 SB OSL		-L- 1116 + 00 SB ISS	
Pavement Structure		Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	3.5"	Asphalt	3.5"	Asphalt	11.5"	Asphalt	5"
STBC	14"	STBC	12"	STBC	8"	STBC	9"

-L- 1116 + 00 NB ISS		-L- 1116 + 00 NB ISL		-L- 1116 + 00 NB OSS	
Pavement Structure		Pavement Structure		Pavement Structure	
Asphalt	5.75"	Asphalt	12"	Asphalt	5"
STBC	13.25"	STBC	7"	STBC	12"

X=2021021.9933
Y=431546.8317

X=2021025.8213
Y=431538.4616

X=2021029.7122
Y=431529.9544

X=2021038.3298
Y=431511.1170

-L- 1116+00 SB OSS
-L- 1116+00 SB ACCEL
-L- 1116+00 SB OSL
-L- 1116+00 SB ISS

X=2021074.4077
Y=431432.2035

X=2021077.6428
Y=431425.1308

X=2021087.0456
Y=431404.5142

-L- 1116+00 NB ISS
-L- 1116+00 NB ISL
-L- 1116+00 NB OSS

1115

1120



SYSTEMS DESIGN CONSULTANTS

PAVEMENT INVESTIGATION DATA SHEET

Project: 47533.1.3
TIP: I-5987B

County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Width			Offset Distance (ft)	Crown "C" or Super "S"	Thickness					Pavement Layering	Subgrade					GPS Coordinates		
	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)			Gross to Top of Soil (in)	Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)		Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 508+50 NB ISS	5.0 Fill	11.10	4.80	1.0 EOP	C	11.50	7.50	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	REF S-199	A-2-4	M	5.00	Low Severity Fatigue Cracking and Oxidation in Travel Lane	375725.0	2001479.1
-L- 508+50 NB OSL	3.0 Fill	11.00	11.00	2.0 FWO	C	16.00	12.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Gray, Silty Sand 3.0 - 5.0' = Coastal Plain, Gray, Silty Sand	REF S-179 REF S-22	A-2-4 A-2-4	M M	5.00	No Distresses Present	375732.3	2001503.6
-L- 508+50 NB OSS	3.0 Fill	11.00	11.00	6.0 EOP	C	7.00	7.00	N/A	N/A	N/A	Asphalt	0.0 - 3.0' = Roadway Embankment, Gray, Silty Sand 3.0 - 5.0' = Coastal Plain, Gray, Silty Sand	S-179 (0.0 - 3.0) REF S-22	A-2-4 A-2-4	M M	5.00	No Distresses Present	375729.8	2001508.4
-L- 535+20 NB ISL	4.0 Fill	11.20	4.00	2.3 FYI	C	15.00	11.50	N/A	3.50	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 4.0 - 5.0' = Coastal Plain, Gray, Clayey Sand	REF S-56 REF S-30	A-2-4 A-2-6	M M	5.00	Low Severity Longitudinal Cracking in OWP, Moderate Severity Longitudinal Cracking at Paving Joint	378399.0	2001674.7
-L- 535+20 NB ISS	4.0 Fill	N/A	4.00	2.0 FYI	C	8.00	8.00	N/A	N/A	N/A	Asphalt	0.0 - 4.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 4.0 - 5.0' = Coastal Plain, Gray, Clayey Sand	S-56 REF S-30	A-2-4 A-2-6	M M	5.00	No Distresses Present, Recently Resurfaced	378400.1	2001670.4
-L- 535+20 NB OSS	5.0 Fill	11.00	11.00	5.0 EOP	C	11.00	7.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange and Gray, Clayey-Silty Sand	S-180 (0.0 - 3.0)	A-2-4	M	5.00	Minor Separation at Middle White Line	378399.4	2001698.2
-L- 562+00 NB ISS	5.0 Fill	N/A	4.00	2.8 FYI	C	7.75	7.75	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	REF S-32	A-2-4	M	4.50	Moderate Severity Edge Cracking 6" from EOP, Low Severity Transverse Cracking	380984.5	2002281.9
-L- 562+00 NB OSL	5.0 Fill	11.50	11.00	3.0 FWO	C	15.50	12.00	N/A	3.50	N/A	Asphalt STBC	0.0 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	S-32	A-2-4	M	4.50	Moderate Severity Longitudinal Cracking at Inside Pavement Joint	380976.3	2002302.4
-L- 562+00 NB OSS	5.0 Fill	N/A	11.00	4.8 FWO	C	11.50	8.00	N/A	3.50	N/A	Asphalt STBC	0.0 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	REF S-32	A-2-4	M	4.50	No Distresses Present	380976.5	2002310.0
-L- 596+90 NB ISL	5.0 Fill	11.50	4.00	2.3 FYI	C	15.50	11.00	N/A	4.50	N/A	Asphalt STBC	0.0 - 2.0' = Roadway Embankment, Tan, Silty Sand 2.0 - 5.0' = Roadway Embankment, Tan and Orange, Clayey Sand	S-57 REF S-56	A-2-4 A-2-4	D M	5.00	Moderate Severity Longitudinal Cracking at Inside Paving Joint, Low Severity Transverse Cracking at Inside Paving Joint	384273.4	2003458.3
-L- 596+90 NB ISS	5.0 Fill	N/A	4.00	2.3 FYI	C	8.00	8.00	N/A	N/A	N/A	Asphalt	0.0 - 2.0' = Roadway Embankment, Tan, Silty Sand 2.0 - 5.0' = Roadway Embankment, Tan and Orange, Clayey Sand	REF S-57 REF S-56	A-2-4 A-2-4	M M	5.00	Low Severity Transverse Cracking, Core Cracked Full Depth	384275.4	2003452.2
-L- 596+90 NB OSS	5.0 Fill	11.00	11.00	5.0 EOP	C	11.00	7.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange and Gray, Silty Sand	REF S-181	A-2-4	M	5.00	Minor Separation at Middle White Line	384271.9	2003483.4
-L- 600+90 NB DECEL	5.0 Fill	6.00	5.50	2.5 FWO	C	15.00	11.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	REF S-181	A-2-4	M	5.00	Low Severity Fatigue Cracking	384648.0	2003614.0
-L- 600+90 NB OSS	5.0 Fill	6.00	5.50	3.0 EOP	C	13.50	7.50	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	S-181 (0.0-3.0)	A-2-4	M	5.00	Low Severity Fatigue Cracking	384643.9	2003614.5
-L- 610+70 NB ISS	5.0 Fill	N/A	4.00	2.3 FYI	C	7.50	7.50	N/A	N/A	N/A	Asphalt	0.0 - 5.0' = Roadway Embankment, Orange and Brown, Silty-Clayey Sand	S-58	A-2-6	M	5.00	Low Severity Transverse Cracking	385573.4	2003913.5
-L- 610+70 NB OSL	5.0 Fill	11.50	11.00	3.5 FWO	C	14.00	11.25	N/A	2.75	N/A	Asphalt STBC	0.0-4.5' = Roadway Embankment, Orange and Brown, Silty-Clayey Sand	S-33	A-2-6	M	4.50	Moderate Severity Longitudinal Cracking at OWP, Core Cracked 3.0" Top Down	385564.7	2003934.2

Notes:

OSL = Outside Lane
ISL = Inside Lane
CL = Center Lane
LTL = Left Turn Lane

WP = Wheel Path
IWP = Inside Wheel Path
OWP = Outside Wheel Path
C&G = Curb & Gutter

OSS = Outside Shoulder
ISS = Inside Shoulder
GM = Grass Median
OGS = Outside Grass Shoulder

PS = Paved Shoulder
RT LN = Right Lane
LT LN = Left Lane
COL = Collector Lane

CTL = Center Turn Lane
RTL = Right Turn Lane
DECEL = Deceleration Lane
ACCEL = Acceleration Lane

RT = Right
LT = Left
(I) = Inside
(O) = Outside

NB = Northbound
SB = Southbound
FW = From White
FY = From Yellow

FCG = From Curb & Gutter
AG = At Grade
EOP = Edge of Pavement



S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

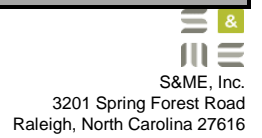
Project: 47533.1.3
TIP: I-5987B

County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Width			Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Thickness				Pavement Layering	Subgrade					GPS Coordinates		
	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)				Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)		Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 610+70 NB OSS	5.0 Fill	N/A	11.00	4.0 FWO	C	11.00	8.25	N/A	2.75	N/A	Asphalt STBC	0.0-4.5' = Roadway Embankment, Orange and Brown, Silty-Clayey Sand	REF S-33	A-2-6	M	4.50	No Distresses Present	385564.8	2003945.9
-L- 636+50 NB ACCEL	5.0 Fill	8.50	8.00	1.4 FWO	C	11.00	11.00	N/A	N/A	N/A	Asphalt	0.0 - 5.0' = Roadway Embankment, Orange, Clayey Sand 5.0 - 6.0' = Coastal Plain, Gray, Sandy Clay with Trace Organics	REF S-180 REF S-184	A-2-4 A-6	M M	6.00	No Distresses Present, Recently Resurfaced	388057.5	2004602.4
-L- 636+50 NB ISL	5.0 Fill	11.80	3.50	2.3 FYI	C	15.00	11.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 2.0' = Roadway Embankment, Orange and Brown, Silty-Clayey Sand 2.0 - 5.0' = Roadway Embankment, Gray and Brown, Silty Sand	REF S-58 S-59	A-2-6 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	388062.8	2004573.7
-L- 636+50 NB ISS	5.0 Fill	N/A	3.50	2.0 FYI	C	6.50	6.50	N/A	N/A	N/A	Asphalt	0.0 - 2.0' = Roadway Embankment, Orange and Brown, Silty-Clayey Sand 2.0 - 5.0' = Roadway Embankment, Gray and Brown, Clayey-Silty Sand	REF S-58 REF S-59	A-2-6 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	388064.3	2004569.1
-L- 636+50 NB OSS	5.0 Fill	8.50	8.00	5.5 EOP	C	11.00	11.00	N/A	N/A	N/A	Asphalt	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	S-182 (0.0 - 3.0)	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	388052.7	2004604.5
-L- 666+40 NB ISS	5.0 Fill	N/A	4.00	2.8 FYI	C	12.00	8.50	N/A	3.50	N/A	Asphalt STBC	0.0 - 2.0' = Roadway Embankment, Orange and Brown, Silty-Clayey Sand 2.0 - 5.0' = Roadway Embankment, Black, Sandy Silt	REF S-58 S-60	A-2-6 A-4	M M	5.00	No Distresses Present, Recently Resurfaced	390999.8	2005096.6
-L- 666+40 NB OSL	5.0 Fill	11.50	10.90	2.0 FWO	C	15.50	11.00	N/A	4.50	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange and Gray, Silty Sand	REF S-181	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	391006.5	2005123.2
-L- 666+40 NB OSS	4.0 Fill	11.50	10.90	5.8 EOP	C	10.00	6.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Orange, Silty Sand 4.0 - 5.0' = Coastal Plain, Gray, Sandy Clay	S-183 (0.0 - 3.0) S-184 (4.0 - 5.0)	A-2-4 A-6	M M	5.00	No Distresses Present, Recently Resurfaced	390999.3	2005127.7
-L- 689+00 NB DECEL	AG	10.00	5.00	2.0 FWO	C	16.75	14.25	N/A	2.50	N/A	Asphalt STBC	0.0-4.5' = Coastal Plain, Tan and Orange, Silty-Clayey Sand	S-34	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	393161.0	2005674.1
-L- 689+00 NB ISL	AG	11.90	3.60	2.0 FYI	C	19.50	16.00	N/A	3.50	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Silty-Clayey Sand	S-61	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	393176.4	2005658.0
-L- 689+00 NB ISS	1.0 Fill	N/A	3.60	2.3 FYI	C	19.00	13.50	N/A	5.50	N/A	Asphalt STBC	0.0 - 1.0' = Roadway Embankment, Orange and Brown, Silty-Clayey Sand 1.0 - 5.0' = Coastal Plain, Orange, Silty-Clayey Sand	S-62 REF S-61	A-2-4 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	393180.9	2005650.0
-L- 689+00 NB OSS	AG	N/A	5.00	2.2 FWO	C	13.00	8.00	N/A	5.00	N/A	Asphalt STBC	0.0-4.5' = Coastal Plain, Tan and Orange, Silty-Clayey Sand	REF S-34	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	393159.8	2005684.7
-L- 719+25 NB ACCEL	6.0 Fill	13.00	4.20	2.2 FWO	C	13.25	13.25	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Roadway Embankment, Gray, Tan and Orange, Silty-Clayey Sand	REF S-35	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	395668.6	2007368.4
-L- 719+25 NB ISS	6.0 Fill	N/A	3.90	2.8 FYI	C	8.50	8.50	N/A	N/A	N/A	Asphalt	0.0 - 1.0' = Roadway Embankment, Orange and Brown, Silty-Clayey Sand 1.0 - 5.0' = Roadway Embankment, Dark Gray, Silty Sand	REF S-62 S-63	A-2-4 A-2-4	M D	5.00	No Distresses Present, Recently Resurfaced	395687.3	2007339.7
-L- 719+25 NB OSL	6.0 Fill	11.50	4.20	2.4 FWO	C	15.00	11.25	N/A	3.75	N/A	Asphalt STBC	0.0 - 4.5' = Roadway Embankment, Gray, Tan and Orange, Silty-Clayey Sand	S-35	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	395674.7	2007361.1
-L- 719+25 NB OSS	6.0 Fill	N/A	4.20	2.0 FWO	C	15.50	15.50	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Roadway Embankment, Gray, Tan and Orange, Silty-Clayey Sand	REF S-35	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	395665.8	2007375.6

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PAVEMENT INVESTIGATION DATA SHEET


Project: 47533.1.3
TIP: I-5987B

County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Width			Offset Distance (ft)	Crown "C" or Super "S"	Thickness					Pavement Layering	Subgrade					GPS Coordinates		
	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)			Gross to Top of Soil (in)	Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)		Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 745+55 NB ISL	5.0 Fill	11.10	4.00	2.0 FYI	C	16.00	12.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 2.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 2.0 - 5.0' = Roadway Embankment, Dark Gray, Silty Sand	REF S-36 REF S-63	A-2-4 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	398038.7	2008521.6
-L- 745+55 NB ISS	5.0 Fill	N/A	4.00	2.5 FYI	C	6.50	6.50	N/A	N/A	N/A	Asphalt	0.0 - 2.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 2.0 - 5.0' = Roadway Embankment, Dark Gray, Silty Sand	S-64 REF S-63	A-2-4 A-2-4	W W	5.00	No Distresses Present, Recently Resurfaced	398039.1	2008520.0
-L- 745+55 NB OSS	5.0 Fill	N/A	11.80	5.0 FWO	C	6.25	6.25	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	S-36	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	398028.3	2008543.9
-L- 772+25 NB ISS	2.0 Cut	N/A	3.70	1.8 FYI	C	12.75	7.75	N/A	5.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Tan and Orange, Silty-Clayey Sand	REF S-37	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	400510.0	2009501.5
-L- 772+25 NB OSL	2.0 Cut	11.20	N/A	3.5 FWO	C	15.50	12.00	N/A	3.50	N/A	Asphalt STBC	0.0 - 4.5' = Coastal Plain, Tan and Orange, Silty-Clayey Sand	S-37	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	400507.1	2009525.8
-L- 772+25 NB OSS	2.0 Cut	N/A	10.70	6.0 FWO	C	6.50	6.50	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Coastal Plain, Tan and Orange, Silty-Clayey Sand	REF S-37	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	400506.9	2009532.6
-L- 798+50 NB ISL	8.0 Fill	12.00	3.70	2.3 FYI	C	15.00	12.00	N/A	3.00	N/A	Asphalt STBC	0.0 - 1.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 1.0 - 5.0' = Roadway Embankment, Brown and Orange, Sandy-Silty Clay	S-65 S-66	A-2-6 A-6	W M	5.00	No Distresses Present, Recently Resurfaced	403025.0	2010237.1
-L- 798+50 NB ISS	8.0 Fill	N/A	3.70	2.0 FYI	C	12.50	7.50	N/A	5.00	N/A	Asphalt STBC	0.0 - 1.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 1.0 - 5.0' = Roadway Embankment, Brown and Orange, Sandy-Silty Clay	REF S-65 REF S-66	A-2-6 A-6	M M	5.00	No Distresses Present, Recently Resurfaced	403025.5	2010231.6
-L- 798+50 NB OSS	8.0 Fill	N/A	11.20	5.7 FWO	C	8.00	8.00	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	S-38	A-2-6	M	4.50	No Distresses Present, Recently Resurfaced	403024.9	2010264.1
-L- 825+00 NB ISS	5.0 Cut	N/A	4.00	2.8 FYI	C	9.75	7.75	N/A	2.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Silty-Clayey Sand	REF S-39	A-2-6	M	5.00	No Distresses Present, Recently Resurfaced	405642.8	2010619.6
-L- 825+00 NB OSL	5.0 Cut	11.60	N/A	3.6 FWO	C	15.50	11.50	N/A	4.00	N/A	Asphalt STBC	0.0 - 4.5' = Coastal Plain, Orange, Silty-Clayey Sand	S-39	A-2-6	M	4.50	No Distresses Present, Recently Resurfaced	405651.9	2010643.4
-L- 825+00 NB OSS	5.0 Cut	N/A	10.60	6.4 FWO	C	7.00	7.00	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Coastal Plain, Orange, Silty-Clayey Sand	REF S-39	A-2-6	M	4.50	No Distresses Present, Recently Resurfaced	405643.9	2010652.0
-L- 851+90 NB ISL	AG	12.00	3.80	2.0 FYI	C	15.00	11.50	N/A	3.50	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Tan and Brown, Clayey-Silty Sand	REF S-67	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	408312.9	2011014.1
-L- 851+90 NB ISS	AG	N/A	3.80	2.5 FYI	C	10.50	7.50	N/A	3.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Brown, Clayey-Silty Sand	S-67	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	408313.1	2011013.1
-L- 851+90 NB OSS	AG	N/A	10.60	5.7 FWO	C	7.25	7.25	N/A	N/A	N/A	Asphalt	0.0 - 4.5' = Coastal Plain, Tan and Orange, Silty-Clayey Sand	REF S-37	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	408306.8	2011042.6
-L- 878+20 NB ISS	AG	N/A	3.90	2.7 FYI	C	9.00	7.00	N/A	2.00	N/A	Asphalt STBC	0.0 - 1.5' = Coastal Plain, Gray, Silty Sand 1.5 - 5.0' = Coastal Plain, Brown and Tan, Silty Sand	S-68 REF S-40	A-2-4 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	410907.5	2011391.8

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S&ME, Inc.
 3201 Spring Forest Road
 Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET


Project: 47533.1.3
TIP: I-5987B

County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Width				Crown "C" or Super "S"	Thickness					Pavement Layering	Subgrade					GPS Coordinates						
	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)	Offset Distance (ft)		Gross to Top of Soil (in)	Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)		Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting				
-L- 878+20 NB OSL	AG	11.50	N/A	2.6 FWO	C	15.75	12.00	N/A	3.75	N/A	Asphalt STBC	0.0 - 4.5' = Coastal Plain, Brown and Tan, Silty Sand					S-40	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	410911.0	2011422.2
-L- 878+20 NB OSS	0.8 Fill	N/A	10.70	4.9 FWO	C	7.00	7.00	N/A	N/A	N/A	Asphalt	0.0 - 0.8' = Roadway Embankment, Orange and Tan, Clayey Sand 0.8 - 4.5' = Coastal Plain, Brown and Tan, Silty Sand					S-41 REF S-40	A-2-4 A-2-4	M M	4.50	No Distresses Present, Recently Resurfaced	410909.7	2011425.7
-L- 904+65 NB ISL	6.0 Fill	12.00	3.90	2.0 FYI	C	16.00	11.50	N/A	4.50	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan and Brown, Clayey-Silty Sand					S-69	A-2-4	W	5.00	No Distresses Present, Recently Resurfaced	413532.8	2011784.7
-L- 904+65 NB ISS	6.0 Fill	N/A	3.90	2.5 FYI	C	12.00	6.50	N/A	5.50	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan and Brown, Clayey-Silty Sand					REF S-69	A-2-4	W	5.00	No Distresses Present, Recently Resurfaced	413533.4	2011778.6
-L- 904+65 NB OSS	6.0 Fill	N/A	10.70	6.0 FWO	C	7.00	7.00	N/A	N/A	N/A	Asphalt	0.0 - 0.8' = Roadway Embankment, Tan and Orange, Clayey Sand 0.8 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand					REF S-41 S-42	A-2-4 A-2-4	M M	4.50	No Distresses Present, Recently Resurfaced	413520.4	2011806.4
-L- 934+90 NB ISS	AG	N/A	3.90	2.7 FYI	C	8.00	6.00	N/A	2.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Brown and Tan, Silty-Clayey Sand					S-70	A-2-4	W	5.00	Low Severity Transverse Cracking in ISS and at Paving Joint, Low Severity Longitudinal Cracking at Paving Joint	416537.6	2012220.7
-L- 934+90 NB OSL	AG	11.00	10.00	3.4 FWO	C	16.50	12.50	N/A	4.00	N/A	Asphalt STBC	0.0 - 4.5' = Coastal Plain, Orange and Brown, Silty-Clayey Sand					S-42A	A-2-4	M	4.50	Moderate Severity Longitudinal Cracking at Outside Paving Joint	416530.0	2012240.1
-L- 934+90 NB OSS	AG	N/A	10.00	3.1 FWO	C	9.00	7.00	N/A	2.00	N/A	Asphalt STBC	0.0 - 4.5' = Coastal Plain, Orange and Brown, Silty-Clayey Sand					REF S-42A	A-2-4	M	4.50	Moderate Severity Longitudinal Cracking at Paving Joint	416531.1	2012249.6
-L- 960+95 NB ISL	5.0 Fill	11.30	3.80	3.5 FYI	C	14.00	11.50	N/A	2.50	N/A	Asphalt STBC	0.0 - 1.5' = Roadway Embankment, Gray and Brown, Clayey-Silty Sand 1.5 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand					S-71 REF S-44	A-2-4 A-2-4	W W	5.00	Low Severity Transverse Cracking at Paving Joint	419112.1	2012603.5
-L- 960+95 NB OSS	5.0 Fill	N/A	10.00	3.2 FWO	C	10.00	7.50	N/A	2.50	N/A	Asphalt STBC	0.0 - 1.0' = Roadway Embankment, Gray and Brown, Clayey-Silty Sand 1.0 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand					S-43 S-44	A-2-4 A-2-4	M M	4.50	Moderate Severity Longitudinal Cracking at Paving Joint	419103.4	2012627.4
-L- 987+25 NB OSL	AG	11.50	10.00	4.0 FWO	C	13.00	9.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 4.5' = Coastal Plain, Orange, Gray and Brown, Silty-Clayey Sand					S-45	A-2-4	M	4.50	Moderate to High Severity Longitudinal Cracking at Both Paving Joints, Moderate Severity Transverse Cracking at Inside Paving Joint	421657.4	2013206.1
-L- 987+50 NB OSS	AG	N/A	10.00	3.3 FWO	C	5.25	3.25	N/A	2.00	N/A	Asphalt STBC	0.0 - 4.5' = Coastal Plain, Orange, Gray and Brown, Silty-Clayey Sand					REF S-45	A-2-4	M	4.50	Low Severity Longitudinal Cracking at Center of Shoulder	421685.0	2013210.7
-L- 1010+15 NB ISL	8.0 Fill	12.00	4.30	2.4 FYI	C	8.50	8.50	N/A	N/A	N/A	Asphalt	0.0 - 5.0' = Roadway Embankment, Tan and Orange, Clayey-Silty Sand					S-72	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	423734.6	2014149.9
-L- 1010+15 NB ISS	8.0 Fill	N/A	4.30	2.8 FYI	C	16.00	12.00	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Gray and Orange, Clayey-Silty Sand					REF S-72	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	423736.9	2014144.9
-L- 1010+15 NB OSS	8.0 Fill	N/A	10.50	6.0 FWO	C	8.00	6.50	N/A	1.50	N/A	Asphalt STBC	0.0 - 4.5' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand					S-46	A-2-4	W	4.50	No Distresses Present, Recently Resurfaced	423719.2	2014172.1
-L- 1037+10 NB OSL1	AG	12.00	9.70	2.8 FWO	C	19.50	11.00	N/A	8.50	N/A	Asphalt STBC	0.0 - 4.5' = Coastal Plain, Orange, Gray and Brown, Clayey-Silty Sand					REF S-47	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	425877.2	2015777.9

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Project: 47533.1.3
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County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Width		Offset Distance (ft)	Crown "C" or Super "S"	Thickness					Pavement Layering	Subgrade					GPS Coordinates		
		Lane(s) (ft)	Shoulder(s) (ft)			Gross to Top of Soil (in)	Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)		Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 1037+10 NB OSL2	AG	11.30	9.70	3.8 FWO	C	17.00	13.50	N/A	3.50	N/A	Asphalt STBC	0.0 - 4.5' = Coastal Plain, Orange, Gray and Brown, Clayey-Silty Sand	S-47	A-2-4	M	4.50	No Distresses Present, Recently Resurfaced	425886.1	2015769.4
-L- 1037+10 NB OSS	AG	12.00	10.50	5.0 EOP	C	19.00	5.00	N/A	14.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Clayey-Silty Sand	S-199 (0.0 - 3.0)	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	425875.5	2015789.2
-L- 1043+85 NB ISS	AG	N/A	4.20	2.1 FYI	C	19.00	6.75	N/A	12.25	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Tan and Orange, Clayey-Silty Sand	S-74	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	426425.8	2016169.0
-L- 1063+65 NB ISL	6.0 Fill	12.00	4.30	2.4 FYI	C	18.50	12.00	N/A	6.50	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange and Gray, Silty-Clayey Sand	S-75	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	428046.3	2017318.6
-L- 1063+65 NB ISS	6.0 Fill	N/A	4.30	2.7 FYI	C	19.00	5.75	N/A	13.25	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange and Gray, Silty-Clayey Sand	REF S-75	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	428047.3	2017317.0
-L- 1063+65 NB OSS	6.0 Fill	11.50	11.00	5.5 EOP	C	17.50	4.50	N/A	13.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange and Gray, Silty Sand	S-200 (0.0 - 3.0)	A-2-4	M	5.40	No Distresses Present, Recently Resurfaced	428033.5	2017337.0
-L- 1091+20 NB ISS	20.0 Fill	N/A	4.00	3.0 FYI	C	17.00	5.00	N/A	12.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Brown and Orange, Clayey-Silty Sand	S-76	A-2-6	M	5.00	No Distresses Present, Recently Resurfaced	430252.8	2018915.7
-L- 1091+20 NB OSL	20.0 Fill	11.20	11.00	2.5 FWO	C	20.00	11.00	N/A	9.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Clay	REF S-201	A-7-6	M	5.00	No Distresses Present, Recently Resurfaced	430239.1	2018932.8
-L- 1091+20 NB OSS	20.0 Fill	11.20	11.00	3.5 FWO	C	18.00	5.00	N/A	13.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Clay	S-201 (0.0 - 3.0)	A-7-6	M	5.00	No Distresses Present, Recently Resurfaced	430234.1	2018932.8
-L- 1116+00 NB ISL	AG	12.00	3.20	2.5 FYI	C	19.00	12.00	N/A	7.00	N/A	Asphalt STBC	0.0 - 3.0' = Coastal Plain, Brown and Orange, Clayey-Silty Sand 3.0 - 5.0' = Coastal Plain, Orange and Gray, Sandy-Silty Clay	REF S-76 S-77	A-2-6 A-6	M M	5.00	No Distresses Present, Recently Resurfaced	431430.9	2021065.9
-L- 1116+00 NB ISS	AG	N/A	3.20	1.4 FYI	C	19.00	5.75	N/A	13.25	N/A	Asphalt STBC	0.0 - 3.0' = Coastal Plain, Brown and Orange, Clayey-Silty Sand 3.0 - 5.0' = Coastal Plain, Orange and Gray, Sandy-Silty Clay	REF S-76 REF S-77	A-2-6 A-6	M M	5.00	No Distresses Present, Recently Resurfaced	431432.5	2021065.3
-L- 1116+00 NB OSS	AG	12.00	11.50	3.0 EOP	C	17.00	5.00	N/A	12.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Sandy Clay	REF S-77	A-6	M	5.00	No Distresses Present, Recently Resurfaced	431406.2	2021090.6
-L- 536+50 NB IES	4.0 Fill	N/A	N/A	1 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-3.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	Bulk 6 IES NB	A-2-4	M	3.00	N/A	378528.7	2001654.7
-L- 589+50 NB OES	4.5 Fill	N/A	N/A	55 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-3.0' = Roadway Embankment, Orange and Gray, Silty Sand	Bulk 7 OES NB	A-2-4	M	3.00	N/A	383562.8	2003246.2
-L- 698+90 NB OES	AG	N/A	N/A	56 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-2.5' = Coastal Plain, Tan and Orange, Silty-Clayey Sand	Bulk 8 OES NB	A-2-4	M	2.50	N/A	393988.4	2006226.3
-L- 800+00 NB OES	7.0 Fill	N/A	N/A	60 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-3.83' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	Bulk 9 OES NB	A-2-6	M	3.83	N/A	403179.9	2010305.5

Notes:
 OSL = Outside Lane WP = Wheel Path OSS = Outside Shoulder PS = Paved Shoulder CTL = Center Turn Lane RT = Right NB = Northbound FCG = From Curb & Gutter
 ISL = Inside Lane IWP = Inside Wheel Path ISS = Inside Shoulder RT LN = Right Lane RTL = Right Turn Lane LT = Left SB = Southbound AG = At Grade
 CL = Center Lane OWP = Outside Wheel Path GM = Grass Median LT LN = Left Lane DECEL = Deceleration Lane (I) = Inside FW = From White EOP = Edge of Pavement
 LTL = Left Turn Lane C&G = Curb & Gutter OGS = Outside Grass Shoulder COL = Collector Lane ACCEL = Acceleration Lane (O) = Outside FY = From Yellow


S&ME, Inc.
 3201 Spring Forest Road
 Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

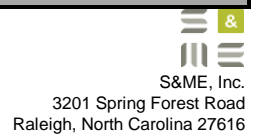
Project: 47533.1.3
TIP: I-5987B

County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Width			Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Thickness				Pavement Layering	Subgrade					GPS Coordinates		
	Cut/Fill (Est. Of Amount) (ft)	Lane(s) (ft)	Shoulder(s) (ft)				Asphalt (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)		Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 905+95 NB OES	5.0 Fill	N/A	N/A	68 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-2.83' = Roadway Embankment, Tan and Orange, Clayey Sand	Bulk 10 OES NB	A-6	M	2.83	N/A	413660.3	2011853.1
-L- 958+70 NB IES	5.0 Fill	N/A	N/A	1 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-3.0' = Roadway Embankment, Gray and Brown, Clayey-Silty Sand	Bulk 2 IES NB	A-1-b	M	3.00	N/A	418888.2	2012551.0
-L- 1011+45 NB OES	6.5 Fill	N/A	N/A	85 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-3.58' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	Bulk 11 OES NB	A-2-6	M	3.58	N/A	423812.5	2014278.2
-L- 1064+30 NB IES	6.0 Fill	N/A	N/A	4 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-3.25' = Roadway Embankment, Orange and Gray, Silty-Clayey Sand	Bulk 1 IES NB	A-2-4	M	3.25	N/A	428118.2	2017319.4
-L- 1117+10 NB OES	AG	N/A	N/A	99 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	0.0-2.0' = Coastal Plain, Orange and Gray, Sandy Clay	Bulk 12 OES NB	A-2-6	M	2.00	N/A	431427.5	2021198.6

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 ISL = Inside Lane IWP = Inside Wheel Path ISS = Inside Shoulder RT LN = Right Lane RTL = Right Turn Lane LT = Left SB = Southbound AG = At Grade
 CL = Center Lane OWP = Outside Wheel Path GM = Grass Median LT LN = Left Lane DECEL = Deceleration Lane (I) = Inside FW = From White EOP = Edge of Pavement
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PAVEMENT INVESTIGATION DATA SHEET

Project: 47533.1.3
TIP: I-5987B

County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Width		Offset Distance (ft)	Crown "C" or Super "S"	Thickness						Pavement Layering	Subgrade					GPS Coordinates						
		Lane(s) (ft)	Shoulder(s) (ft)			Gross to Top of Soil (in)	Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)		Description	Sample Number	AAASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting				
-L- 508+50 SB OSS	AG	12.00	11.00	3.5 EOP	C	14.00	7.00	N/A	N/A	7.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Gray, Silty Sand					S-156 (0.0-3.0)	A-2-4	M	5.00	Low Severity Longitudinal Cracking, Low Severity Transverse Cracking	375746.9	2001394.9
-L- 508+50 SB ISS	4.0 Fill	11.00	4.20	2.0 EOP	C	12.50	7.50	N/A	N/A	5.00	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Orange, Silty Sand 4.0 - 5.0' = Coastal Plain, Brown and Black, Clayey-Silty Sand					REF S-158 REF S-220	A-2-4 A-2-4	M M	5.00	Moderate Severity Transverse Cracking	375745.2	2001424.1
-L- 508+50 SB ISL	4.0 Fill	11.00	4.20	2.0 FWI	C	12.50	11.50	N/A	N/A	1.00	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Orange, Silty Sand 4.0 - 5.0' = Coastal Plain, Brown and Black, Clayey-Silty Sand					REF S-158 S-220 (4.0 - 5.0)	A-2-4 A-2-4	M M	5.00	Moderate Severity Transverse Cracking	375747.3	2001421.1
-L- 535+25 SB OSS	AG	12.00	11.00	6.0 EOP	C	15.50	7.50	N/A	N/A	8.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Clayey Sand					S-154 (0.0 - 3.0)	A-2-6	M	5.00	Minor Separation at Travel Lane Boundary	378408.5	2001582.8
-L- 535+25 SB OSL	AG	12.00	11.00	2.0 FWO	C	20.00	12.00	N/A	N/A	8.00	N/A	Asphalt STBC	0.0 - 2.3' = Coastal Plain, Orange, Clayey Sand 2.3 - 5.0' = Coastal Plain, Orange, Sandy Clay					REF S-154 S-155 (3.0 - 5.0)	A-2-6 A-6	M M	5.00	Low Severity Longitudinal Cracking, Minor Separation at Travel Lane Boundary	378409.9	2001589.3
-L- 535+25 SB ISS	5.0 Fill	11.00	4.20	1.5 EOP	C	16.00	8.00	N/A	N/A	8.00	N/A	Asphalt STBC	0.0 - 3.5' = Roadway Embankment, Tan and Orange, Clayey-Silty Sand 3.5 - 5.0' = Roadway Embankment, Orange, Clayey Sand					S-219 (0.0 - 3.0) REF S-221	A-2-4 A-2-6	M M	5.00	Low Severity Transverse Cracking, Minor Separation Bisecting Travel Lanes	378412.3	2001616.3
-L- 562+00 SB OSS	1.0 Cut	12.00	11.00	6.0 EOP	C	14.00	7.00	N/A	N/A	7.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Sandy Clay					S-153 (0.0 - 3.0)	A-6	M	5.00	Minor Separation at Travel Lane Boundary	381012.9	2002226.7
-L- 562+00 SB ISS	4.0 Cut	11.00	3.80	0.5 EOP	C	13.00	7.00	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Clayey Sand					S-218 (0.0 - 3.0)	A-2-6	M	5.00	Minor Separation at Middle White Line	381001.7	2002254.1
-L- 562+00 SB ISL	4.0 Cut	11.00	3.80	2.5 FWI	C	16.00	12.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Clayey Sand					REF S-218	A-2-6	M	5.00	Minor Separation at Middle White Line	381000.2	2002249.4
-L- 572+20 SB ISS	AG	11.00	3.80	0.5 EOP	C	8.00	4.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Tan and Brown, Clayey Sand					REF S-217	A-2-6	M	5.00	Minor Separation at Middle White Line	381957.8	2002597.9
-L- 581+70 SB OSS	8.0 Fill	11.30	11.80	7.0 EOP	C	20.00	8.00	N/A	N/A	12.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Clayey-Silty Sand					S-152 (0.0 - 3.0)	A-2-4	M	5.00	Low Severity Fatigue Cracking on Rumble Strips	382865.7	2002884.6
-L- 581+70 SB OSL	8.0 Fill	11.30	11.80	2.5 FWO	C	16.00	13.00	N/A	N/A	3.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Clayey-Silty Sand					REF S-152	A-2-4	M	5	Low Severity Longitudinal Cracking Bisecting OSL	382859.8	2002892.5
-L- 596+90 SB OSS	6.0 Fill	12.00	4.80	2.0 EOP	C	14.00	14.00	N/A	N/A	N/A	N/A	Asphalt	0.0 - 1.5' = Roadway Embankment, Brown, Gravelly-Silty Sand 1.5 - 3.4' = Roadway Embankment, Tan, Sandy Silt 3.4 - 5.0' = Roadway Embankment, Orange, Sandy Clay					REF S-150 REF S-215 S-151 (3.4 - 5.0)	A-2-4 A-4 A-6	M M M	5.00	No Distresses Present	384299.0	2003388.5
-L- 596+90 SB ACCEL	6.0 Fill	12.00	4.80	7.0 FWO	C	11.50	11.50	N/A	N/A	N/A	N/A	Asphalt	0.0 - 5.0' = Roadway Embankment, Brown, Silty Sand, Well Graded					S-150 (0.0 - 3.0)	A-2-4	M	5.00	Moderate Severity Longitudinal Cracking with Fatigue Cracking and Oxidation down the Center and LWP	384296.3	2003395.4
-L- 610+70 SB ISS	20.0 Fill	11.00	4.00	1.0 EOP	C	9.00	7.00	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Clayey Sand					S-217 (0.0 - 3.0)	A-2-6	M	5.00	Minor Separation at Middle White Line	385588.2	2003888.8
-L- 610+70 SB ISL	20.0 Fill	11.00	4.00	1.5 FWI	C	15.00	11.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 3.5' = Roadway Embankment, Tan and Orange, Clayey Sand 3.5 - 5.0' = Roadway Embankment, Tan and Orange, Clayey Sand					REF S-217 REF S-216	A-2-6 A-2-6	M M	5.00	Moderate Severity Transverse Cracking, Moderate Severity Longitudinal Cracking	385590.7	2003882.8

Notes:

OSL = Outside Lane
ISL = Inside Lane
CL = Center Lane
LTL = Left Turn Lane

WP = Wheel Path
IWP = Inside Wheel Path
OWP = Outside Wheel Path
C&G = Curb & Gutter

OSS = Outside Shoulder
ISS = Inside Shoulder
GM = Grass Median
OGS = Outside Grass Shoulder


PS = Paved Shoulder
RT LN = Right Lane
LT LN = Left Lane
COL = Collector Lane

CTL = Center Turn Lane
RTL = Right Turn Lane
DECEL = Deceleration Lane
ACCEL = Acceleration Lane

RT = Right
LT = Left
(I) = Inside
(O) = Outside

NB = Northbound
SB = Southbound
FW = From White
FY = From Yellow

FCG = From Curb & Gutter
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 S&ME, Inc.
 3201 Spring Forest Road
 Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

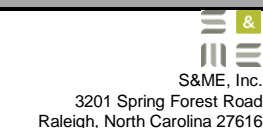
Project: 47533.1.3
TIP: I-5987B

County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Width		Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Thickness				Pavement Layering	Subgrade				GPS Coordinates				
		Lane(s) (ft)	Shoulder(s) (ft)				Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)		Stabilized Soil Subgrade (in)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 628+05 SB GORE	6.0 Fill	12.00	28.00 gore	14.0 FWO	C	N/A	6.00	N/A	N/A	N/A	N/A	Asphalt	DCP Only	N/A	N/A	N/A	N/A	No Distresses Present, Recently Resurfaced	387240.0	2004355.9
-L- 637+95 SB OSS	5.0 Fill	12.00	11.00	3.5 EOP	C	10.00	6.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Sandy Clay	REF S-214	A-6	M	5.00	No Distresses Present, Recently Resurfaced	388211.9	2004517.2
-L- 637+95 SB ISS	6.0 Fill	12.00	4.00	3.5 EOP	C	17.00	7.00	N/A	N/A	10.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	REF S-158	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	388211.3	2004549.7
-L- 637+95 SB ISL	6.0 Fill	12.00	4.00	2.0 FWI	C	17.00	11.00	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange and Tan, Silty Sand	REF S-158	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	388215.1	2004547.0
-L- 666+40 SB OSS	5.0 Fill	12.00	11.00	4.0 EOP	C	9.00	7.00	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange, Sandy Clay 2.5 - 5.0' = Roadway Embankment, Gray, Sandy Clay	REF S-214 S-198 (2.5 - 5.0)	A-6 A-6	M	5.00	No Distresses Present, Recently Resurfaced	391030.9	2004971.8
-L- 666+40 SB ISS	5.0 Fill	12.00	4.00	2.0 EOP	C	17.50	6.50	N/A	N/A	11.00	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Tan, Sandy Silt 3.0 - 5.0' = Roadway Embankment, Gray, Clayey Sand	REF S-215 S-216 (3.0 - 5.0)	A-4 A-2-6	M M	5.00	No Distresses Present, Recently Resurfaced	391024.2	2005006.2
-L- 666+40 SB ISL	5.0 Fill	12.00	4.10	3.0 FYI	C	14.75	11.75	N/A	N/A	3.00	N/A	Asphalt STBC	DCP Only	N/A	N/A	N/A	N/A	No Distresses Present, Recently Resurfaced	391019.6	2004999.8
-L- 688+25 SB OSS	5.0 Fill	N/A	9.60	5.6 FWO	C	16.50	15.50	N/A	N/A	1.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	S-228 (0.0-5.0)	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	393159.8	2005538.6
-L- 688+25 SB OSL	5.0 Fill	11.20	N/A	8.45 FWO	C	19.00	15.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand	S-229 (0.0-1.5)	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	393151.9	2005538.4
-L- 688+25 SB ISS	5.0 Fill	N/A	4.30	2.5 FYI	C	8.50	8.50	N/A	N/A	N/A	N/A	Asphalt	DCP Only	N/A	N/A	N/A	N/A	No Distresses Present, Recently Resurfaced	393131.2	2005564.0
-L- 688+25 SB ACCEL	4.0 Fill	7.65	N/A	1.7 FWO	C	16.00	15.50	N/A	N/A	0.50	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand 4.0 - 5.0' = Coastal Plain, Gray, Orange and Tan, Silty-Clayey Sand	S-230 (0.0-4.0) REF-231	A-2-4 A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	393149.8	2005539.3
-L- 719+30 SB OSS	5.0 Fill	12.00	11.00	4.0 EOP	C	9.50	6.50	N/A	N/A	3.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan and Orange, Sandy Silt	S-197 (0.0-3.0)	A-4	M	5.00	No Distresses Present, Recently Resurfaced	395728.0	2007291.5
-L- 719+30 SB ISS	5.0 Fill	12.00	4.00	2.0 EOP	C	12.50	7.50	N/A	N/A	5.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Sandy Silt	S-215 (0.0 - 3.0)	A-4	M	5.00	No Distresses Present, Recently Resurfaced	395704.7	2007318.3
-L- 719+30 SB ISL	5.0 Fill	12.00	4.00	1.5 FWI	C	17.00	11.50	N/A	N/A	5.50	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Tan, Sandy Silt 3.0 - 5.0' = Roadway Embankment, Gray, Clayey Sand	REF S-215 REF S-216	A-4 A-2-6	M M	5.00	No Distresses Present, Recently Resurfaced	395707.6	2007313.7
-L- 745+65 SB OSS	3.0 Fill	N/A	11.40	6.8 FWO	C	11.00	7.25	N/A	N/A	3.75	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Tan and Orange, Silty Sand 3.0 - 5.0' = Coastal Plain, Gray, Clayey Sand	S-226 (0.0-3.0) REF-227	A-2-4 A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	398094.5	2008402.7
-L- 745+65 SB OSL	3.5 Fill	11.65	N/A	2.0 FWO	C	17.00	12.75	N/A	N/A	4.25	N/A	Asphalt STBC	0.0 - 3.5' = Roadway Embankment, Tan and Orange, Silty Sand 3.5 - 5.0' = Coastal Plain, Gray, Clayey Sand	REF-226 S-227 (3.5-5.0)	A-2-4 A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	398088.9	2008411.9

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PAVEMENT INVESTIGATION DATA SHEET

Project: 47533.1.3
TIP: I-5987B

County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Width		Offset Distance (ft)	Crown "C" or Super "S"	Thickness						Pavement Layering	Subgrade					GPS Coordinates						
		Lane(s) (ft)	Shoulder(s) (ft)			Gross to Top of Soil (in)	Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)		Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting				
-L- 745+65 SB ISS	6.0 Fill	12.00	4.00	2.0 EOP	C	18.50	7.50	N/A	N/A	11.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Sandy Silt					REF S-215	A-4	M	5.00	No Distresses Present, Recently Resurfaced	398076.9	2008430.8
-L- 772+30 SB OSS	1.5 Fill	N/A	11.20	5.8 FWO	C	6.50	6.50	N/A	N/A	N/A	N/A	Asphalt	0.0 - 1.5' = Roadway Embankment, Tan and Orange, Clayey Sand 1.5 - 5.0' = Coastal Plain, Brown, Silty Sand					S-225 (0.0-1.5) REF-231	A-2-4 A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	400562.3	2009415.3
-L- 772+30 SB ISS	6.0 Fill	12.00	3.90	3.0 EOP	C	18.00	8.00	N/A	N/A	10.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Sandy Clay					S-214 (0.0 - 3.0)	A-6	M	5.00	No Distresses Present, Recently Resurfaced	400545.8	2009444.0
-L- 772+30 SB ISL	6.0 Fill	12.00	3.90	2.0 FWI	C	18.00	12.00	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan and Orange, Sandy Clay					REF S-214	A-6	M	5.00	No Distresses Present, Recently Resurfaced	400542.2	2009438.9
-L- 798+50 SB OSS	5.0 Fill	12.00	1.00	5.0 EOP	C	11.00	6.00	N/A	N/A	5.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Clay					S-196 (0.0-3.0)	A-7-6	M	5.00	No Distresses Present, Recently Resurfaced	403038.5	2010172.1
-L- 798+50 SB OSL	5.0 Fill	12.00	11.00	3.0 FWO	C	15.00	12.00	N/A	N/A	3.00	N/A	Asphalt STBC	0.0 - 4.0' = Roadway Embankment, Orange, Sandy Clay 4.0 - 5.0' = Roadway Embankment, Orange, Silty Clay					REF S-204 REF S-196	A-7-6 A-7-6	M M	5.00	No Distresses Present, Recently Resurfaced	403036.4	2010178.1
-L- 798+50 SB ISS	7.0 Fill	11.50	4.20	3.0 EOP	C	16.00	8.00	N/A	N/A	8.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Gray and Orange, Sandy Clay					S-213 (0.0 - 3.0)	A-6	M	5.00	No Distresses Present, Recently Resurfaced	403037.7	2010203.9
-L- 825+00 SB OSS	5.0 Cut	12.00	11.00	4.0 EOP	C	9.00	7.00	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange and Red, Silty Sand					S-195 (0.0 - 3.5)	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	405658.5	2010554.2
-L- 825+00 SB ISS	5.0 Cut	12.00	4.00	1.5 EOP	C	12.00	8.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Clayey Sand					REF S-207	A-6	M	5.00	No Distresses Present	405653.3	2010588.7
-L- 825+00 SB ISL	5.0 Cut	12.00	4.00	2.0 FWI	C	16.00	12.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Coastal Plain, Orange, Clayey Sand					S-207 (0.0 - 3.0)	A-6	M	5.00	No Distresses Present	405657.0	2010584.4
-L- 851+90 SB OSS	5.0 Fill	12.00	10.90	4.0 EOP	C	9.50	7.50	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Silty Sand					REF S-192	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	408319.9	2010950.8
-L- 851+90 SB OSL	5.0 Fill	12.00	10.90	2.0 FWO	C	16.00	14.00	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Sandy Silt					REF S-215	A-4	M	5.00	No Distresses Present, Recently Resurfaced	408318.7	2010964.3
-L- 851+90 SB ISS	2.5 Fill	12.00	4.00	2.0 FWI	C	14.50	8.00	N/A	N/A	6.50	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Brown, Sand 2.5 - 5.0' = Coastal Plain, Brown, Silty Sand					S-141 (0.0 - 2.5) REF S-140	A-2-4 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	408322.7	2010977.3
-L- 878+15 SB OSS	5.0 Fill	12.00	10.90	4.5 EOP	C	8.50	6.50	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Silty Sand					S-194 (0.0-3.0)	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	410921.7	2011329.5
-L- 878+15 SB ISS	2.5 Fill	12.10	3.80	2.0 FWI	C	13.00	7.75	N/A	N/A	5.25	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange, Sand 2.5 - 5.0' = Coastal Plain, Yellow, Silty Sand					REF S-139 REF S-140	A-2-4 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	410911.8	2011360.1
-L- 878+15 SB ISL	2.5 Fill	12.10	3.80	3.2 FWI	C	18.50	13.50	N/A	N/A	5.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange, Sand 2.5 - 5.0' = Coastal Plain, Yellow, Silty Sand					REF S-139 S-140 (2.5 - 5.0)	A-2-4 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	410915.9	2011355.2

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 S&ME, Inc.
 3201 Spring Forest Road
 Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

Project: 47533.1.3
TIP: I-5987B

County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Width		Offset Distance (ft)	Crown "C" or Super "S"	Thickness						Pavement Layering	Subgrade					GPS Coordinates		
		Lane(s) (ft)	Shoulder(s) (ft)			Gross to Top of Soil (in)	Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)		Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting
-L- 904+75 SB OSS	8.0 Fill	11.00	11.00	6.0 FWO	C	9.50	7.50	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Tan, Silty Sand 2.5 - 5.0' = Roadway Embankment, Tan, Sandy Clay	REF S-192 S-193 (2.5 - 5.0)	A-2-4 A-2-6	M M	5.00	No Distresses Present, Recently Resurfaced	413543.7	2011717.8
-L- 904+75 SB OSL	8.0 Fill	11.00	11.00	2.0 FWO	C	15.00	13.00	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Silty Sand	REF S-192	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	413546.4	2011725.9
-L- 904+75 SB ISS	2.5 Fill	12.00	4.00	3.0 FWI	C	12.75	7.25	N/A	N/A	5.50	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange, Silty Sand 2.5 - 5.0' = Coastal Plain, Yellow, Sand	S-139 (0.0 - 2.5) REF S-140	A-2-4 A-2-4	M M	5.00	No Distresses Present, Recently Resurfaced	413546.1	2011750.6
-L- 934+95 SB OSS	6.0 Fill	12.00	8.00	3.0 FWO	C	10.50	8.50	N/A	N/A	2.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Silty Sand	S-192 (0.0-3.0)	A-2-4	M	5.00	Minor Separation at Outside White Line	416544.2	2012158.8
-L- 934+95 SB ISS	1.0 Fill	12.00	3.90	2.6 FWI	C	12.50	9.50	N/A	N/A	3.00	N/A	Asphalt STBC	0.0 - 1.0' = Roadway Embankment, Brown, Sand 1.0 - 5.0' = Coastal Plain, Yellow, Sand	REF S-137 REF S-140	A-1-b A-2-4	M M	5.00	Low Severity Oxidation	416543.8	2012184.0
-L- 934+95 SB ISL	2.5 Fill	12.00	3.90	2 FWI	C	18.50	14.00	N/A	N/A	4.50	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Brown, Sand 2.5 - 5.0' = Coastal Plain, Orange and Yellow, Sand	S-138 (0.4 - 2.0) REF S-140	A-1-b A-2-4	M M	5.00	Low Severity Transverse Cracking, Moderate Severity Oxidation, Low Severity Longitudinal Cracking, Core Cracked Top Down 2.5"	416545.7	2012182.0
-L- 961+00 SB OSS	6.0 Fill	12.00	8.00	4.5 EOP	C	12.00	8.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	S-191 (0.0 - 5.0)	A-2-4	M	5.00	Low Severity Fatigue Cracking and Oxidation in Adjacent Lane	419120.7	2012544.2
-L- 961+00 SB OSL	6.0 Fill	12.00	8.00	2.0 FWO	C	16.00	13.00	N/A	N/A	3.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	REF S-191	A-2-4	M	5.00	Low Severity Fatigue Cracking and Oxidation in Adjacent Lane	419119.9	2012546.4
-L- 961+00 SB ISS	2.5 Fill	12.00	3.80	3.5 FWI	C	14.00	8.00	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Brown, Sand 2.5 - 5.0' = Coastal Plain, Orange, Sand	S-137 (0.0 - 2.5) REF S-140	A-1-b A-2-4	M M	5.00	Moderate Severity Oxidation	419116.9	2012574.4
-L- 987+25 SB OSS	2.5 Fill	12.00	8.00	7.0 EOP	C	11.50	4.50	N/A	N/A	7.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange, Silty Sand 2.5 - 5.0' = Coastal Plain, Gray, Clayey Sand	S-190 (0.0 - 2.5) REF S-193	A-2-4 A-2-6	M M	5.00	Low Severity Fatigue Cracking	421687.4	2013129.6
-L- 987+25 SB ISL	2.5 Fill	11.00	4.00	4.0 FWI	C	13.50	9.50	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Tan, Silty Sand 2.5 - 4.0' = Coastal Plain, Brown, Silty Sand 4.0 - 5.0' = Coastal Plain, Brown, Silty Clay	REF S-206 REF S-206 REF S-204	A-2-4 A-2-4 A-7-6	M M M	5.00	Pothole at Center White Line	421682.4	2013143.2
-L- 1010+15 SB OSS	6.0 Fill	12.00	11.00	5.5 EOP	C	10.50	5.50	N/A	N/A	5.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	REF S-189	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	423772.4	2014097.7
-L- 1010+15 SB OSL	6.0 Fill	12.00	11.00	2.5 FWO	C	15.00	11.00	N/A	N/A	4.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	REF S-189	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	423762.8	2014101.1
-L- 1010+15 SB ISS	7.0 Fill	12.00	4.00	2.0 EOP	C	12.50	6.50	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Silty Sand	S-206 (0.0 - 3.0)	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	423753.2	2014119.6
-L- 1037+30 SB OSS	6.0 Fill	12.00	12.00	5.0 EOP	C	18.00	12.00	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	S-189 (0.0-3.0)	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	425985.3	2015670.1
-L- 1037+30 SB OSL	6.0 Fill	12.00	12.00	2.5 FWO	C	18.00	12.00	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand	REF S-189	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	425977.0	2015676.5

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3201 Spring Forest Road
Raleigh, North Carolina 27616

PAVEMENT INVESTIGATION DATA SHEET

Project: 47533.1.3
TIP: I-5987B

County: Robeson
Route: I-95

Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Width		Offset Distance (ft)	Crown "C" or Super "S"	Thickness						Pavement Layering	Subgrade					GPS Coordinates						
		Lane(s) (ft)	Shoulder(s) (ft)			Gross to Top of Soil (in)	Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)	Stabilized Soil Subgrade (in)		Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting				
-L- 1037+30 SB ISS	5.0 Fill	12.00	4.00	1.5 EOP	C	20.00	11.00	N/A	N/A	9.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Sandy Silt					REF S-205	A-4	M	5.00	No Distresses Present, Recently Resurfaced	425962.6	2015709.0
-L- 1037+30 SB ISL	5.0 Fill	12.00	4.00	1.5 FWO	C	22.00	13.00	N/A	N/A	9.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Sandy Silt					REF S-205	A-4	M	5.00	No Distresses Present, Recently Resurfaced	425966.5	2015698.5
-L- 1053+70 SB OSS	5.0 Fill	12.00	11.00	5.0 EOP	C	15.00	5.00	N/A	N/A	10.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Silty Sand					REF S-188	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	427301.2	2016643.6
-L- 1053+70 SB OSL2	5.0 Fill	12.00	11.00	2.5 FWO	C	19.00	12.00	N/A	N/A	7.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan and Orange, Silty Sand					REF S-188	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	427289.1	2016659.1
-L- 1053+70 SB OSL1	5.0 Fill	12.00	11.00	2.0 FWO	C	19.00	13.00	N/A	N/A	6.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan and Orange, Silty Sand					S-188 (0.0 - 3.0)	A-2-4	M	5.00	No Distresses Present, Recently Resurfaced	427295.8	2016645.4
-L- 1063+70 SB ISS	6.0 Fill	12.00	4.00	2.5 EOP	C	22.00	13.00	N/A	N/A	9.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Tan, Sandy Silty					S-205 (0.0 - 3.0)	A-4	M	5.00	No Distresses Present, Recently Resurfaced	428096.8	2017243.6
-L- 1091+30 SB OSS	30.0 Fill	12.00	12.00	6.5 EOP	C	19.00	5.00	N/A	N/A	14.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange, Clayey Sand					S-187 (0.0 - 3.0)	A-2-6	M	5.00	No Distresses Present, Recently Resurfaced	430351.8	2018848.8
-L- 1091+30 SB ISS	5.0 Fill	12.00	3.50	0.5 EOP	C	20.00	5.50	N/A	N/A	14.50	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange, Sandy Clay 2.5 - 5.0' = Roadway Embankment, Orange, Silty Clay					REF S-203 S-204 (2.5 - 5.0)	A-6 A-7-6	M M	5.00	No Distresses Present	430326.5	2018864.9
-L- 1091+30 SB ISL	5.0 Fill	12.00	3.50	1.0 FWO	C	15.00	6.00	N/A	N/A	9.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange, Sand Clay 2.5 - 5.0' = Roadway Embankment, Orange, Silty Clay					REF S-203 REF S-204	A-6 A-7-6	M M	5.00	No Distresses Present	430333.8	2018861.7
-L- 1116+00 SB OSS	8.0 Fill	12.00	3.50	1.0 EOP	C	17.50	3.50	N/A	N/A	14.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Gray, Sandy Clay					REF S-186	A-6	M	5.00	No Distresses Present, Recently Resurfaced	431554.6	2021019.9
-L- 1116+00 SB OSL	8.0 Fill	12.00	3.50	2.5 FWO	C	19.50	11.50	N/A	N/A	8.00	N/A	Asphalt STBC	0.0 - 5.0' = Roadway Embankment, Orange and Gray, Sandy Clay					REF S-186	A-6	M	5.00	No Distresses Present, Recently Resurfaced	431541.6	2021025.6
-L- 1116+00 SB ISS	5.0 Fill	12.00	3.50	0.5 EOP	C	14.00	5.00	N/A	N/A	9.00	N/A	Asphalt STBC	0.0 - 2.5' = Roadway Embankment, Orange, Sandy Clay 2.5 - 5.0' = Roadway Embankment, Orange, Silty Clay					S-203 (0.0 - 2.5) REF S-204	A-6 A-7-6	M M	5.00	No Distresses Present	431526.1	2021056.3
-L- 1116+00 SB ACCEL	8.0 Fill	12.00	3.50	2.0 FWO	C	15.50	3.50	N/A	N/A	12.00	N/A	Asphalt STBC	0.0 - 3.0' = Roadway Embankment, Orange, Clayey Sand 3.0 - 5.0' = Roadway Embankment, Gray and Orange, Sandy Clay					S-185 (0.0 - 3.0) S-186 (3.0-5.0)	A-2-6 A-6	M M	5.00	No Distresses Present, Recently Resurfaced	431548.2	2021021.5
-L- 590+30 SB OES	6.0 Fill	N/A	N/A	74 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-3.33' = Roadway Embankment, Orange, Clayey-Silty Sand					BULK 6 OES SB	A-2-4	M	3.33	N/A	383683.9	2003152.5
-L- 642+05 SB IES	2.0 Fill	N/A	N/A	5 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-2.5' = Roadway Embankment, Orange, Silty Sand					BULK 5 IES SB	A-2-4	M	2.50	N/A	388615.3	2004642.4
-L- 699+70 SB OES	4.0 Fill	N/A	N/A	74 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-3.25' = Roadway Embankment, Tan and Orange, Silty-Clayey Sand					BULK 5 OES SB	A-7-6	M	3.25	N/A	394127.9	2006164.8

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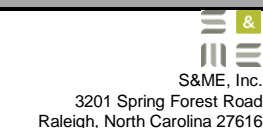
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Date: 12/03/2019 - 12/19/2019
Notes By: D. Strother/J. Swartley/M. Rawls/V. Mitchev

Position (Sta., Lane, Shldr.)	Cut/Fill (Est. Of Amount) (ft)	Width		Offset Distance (ft)	Crown "C" or Super "S"	Gross to Top of Soil (in)	Thickness				Pavement Layering	Subgrade				GPS Coordinates					
		Lane(s) (ft)	Shoulder(s) (ft)				Asphalt (in)	Sand Drainage Base (in)	ABC (in)	Soil Type Base Course (in)		Stabilized Soil Subgrade (in)	Description	Sample Number	AASHTO Classification	Soil Moisture	Probe Depth (ft)	Asphalt Notes	Northing	Easting	
-L- 747+50 SB IES	AG	N/A	N/A	13 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-3.58' = Coastal Plain, Tan, Silty Sand	BULK 4 IES SB	A-4	M	3.58	N/A	398244.1	2008542.4	
-L- 795+90 SB OES	4.0 Fill	N/A	N/A	68 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-2.5' = Roadway Embankment, Orange, Silty Clay	BULK 4 OES SB	A-2-4	M	2.50	N/A	402794.4	2010117.4	
-L- 853+15 SB IES	2.5 Fill	N/A	N/A	7 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-2.92' = Roadway Embankment, Orange, Silty Sand	BULK 3 IES SB	A-2-4	M	2.92	N/A	408446.3	2011010.8	
-L- 895+20 SB OES	7.0 Fill	N/A	N/A	70 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-4.0' = Roadway Embankment, Tan, Sandy Clay	BULK 3 OES SB	A-6	M	4.00	N/A	412618.7	2011560.7	
-L- 1116+00 SB OES	7.0 Fill	N/A	N/A	129 CL	C	0.00	N/A	N/A	N/A	N/A	N/A	N/A	0.0-3.5' = Roadway Embankment, Orange and Gray, Sandy Clay	BULK 1 OES SB	A-2-4	M	3.50	N/A	431587.5	2021001.3	

Notes:
 OSL = Outside Lane WP = Wheel Path OSS = Outside Shoulder PS = Paved Shoulder CTL = Center Turn Lane RT = Right NB = Northbound FCG = From Curb & Gutter
 ISL = Inside Lane IWP = Inside Wheel Path ISS = Inside Shoulder RT LN = Right Lane RTL = Right Turn Lane LT = Left SB = Southbound AG = At Grade
 CL = Center Lane OWP = Outside Wheel Path GM = Grass Median LT LN = Left Lane DECEL = Deceleration Lane (I) = Inside FW = From White EOP = Edge of Pavement
 LTL = Left Turn Lane C&G = Curb & Gutter OGS = Outside Grass Shoulder COL = Collector Lane ACCEL = Acceleration Lane (O) = Outside FY = From Yellow



CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 508+50 NB ISS				12/3 to 12/19/2019	-L- 508+50 NB OSL	12/3 to 12/19/2019				
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING			
STBC	FILL	375725.0	2001479.1	STBC	FILL	375732.3	2001503.6			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
0.7	40.5	62.4		1.1	10.3	18.2	31.3	43.9	56.9	
1.4	41.1	63.0		1.7	10.4	18.5	31.5	44.4	57.1	
2.0	41.6	63.7		2.2	10.6	18.7	31.8	44.8	57.3	
2.7	42.0	64.4		2.8	10.7	19.0	32.0	45.3	57.5	
3.3	42.3	65.1		3.3		19.2	32.1	45.8	57.7	
3.9	42.7	65.7		3.7	Augered 7.6 cm	19.4	32.3	46.3	57.9	
4.7	43.0	66.4		4.1		19.7	32.5	46.8	58.1	
5.3	43.2	67.0		4.6		19.9	32.6	47.3	58.4	
6.0	43.5	67.7		4.8	0.0	20.1	32.8	47.7	58.6	
6.7	44.0	69.1		5.0	1.3	20.3	33.0	48.2	58.8	
7.3	44.5	70.4		5.1	1.6	20.5	33.2	48.7	59.0	
7.9	45.0	71.8		5.3	1.9	20.7	33.4	49.1		
8.4	45.3	72.6		5.5	2.3	20.8	33.7	49.6		
9.0	45.6	73.4		5.6	2.6	21.0	34.0	49.9		
9.6	45.8	74.3		5.8	2.9	21.2	34.4	50.1		
10.7	46.1	75.1		6.0	3.3	21.4	34.6	50.4		
11.7	46.4	75.9		6.2	3.6	21.7	34.7	50.6		
12.8	46.8	76.5		6.3	3.8	21.9	34.9	50.8		
15.9	47.2	77.0		6.5	4.1	22.0	35.2	51.0		
19.0	47.6	77.6		6.7	4.5	22.2	35.4	51.1		
19.6	48.0	78.1		6.8	4.8	22.4	35.7	51.3		
20.1	48.4	78.7		7.0	5.2	22.6	35.9	51.4		
20.7	48.8	79.2		7.1	5.4	22.8	36.1	51.6		
21.3	49.3	79.6		7.2	5.6	23.1	36.3	51.9		
21.8	49.7	80.1		7.3	5.8	23.4	36.5	52.1		
22.4	50.2	80.5		7.4	6.1	23.7	36.6	52.3		
22.9	50.6	81.0		7.5	6.4	24.0	36.8	52.5		
23.5	51.1	81.5		7.6	6.7	24.3	37.0	52.7		
24.0	51.6	82.1		7.7	7.1	24.5	37.2	52.8		
24.6	52.0	82.6		7.8	7.5	24.8	37.5	53.0		
25.3	52.5	83.2		7.9	7.9	25.0	37.7	53.1		
25.9	53.0	83.7		8.1	8.3	25.3	37.9	53.2		
26.6	53.4			8.2	8.8	25.5	38.1	53.3		
27.2	53.8			8.3	9.2	25.8	38.3	53.4		
27.9	54.2			8.4	9.7	26.0	38.5	53.6		
28.7	54.6			8.5	10.3	26.3	38.7	53.7		
29.6	55.0			8.6	10.8	26.6	39.0	53.9		
30.4	55.4			8.7	11.4	26.9	39.2	54.1		
31.1	55.7			8.8	12.0	27.2	39.5	54.2		
31.7	56.1			8.9	12.6	27.4	39.8	54.4		
32.4	56.4			9.0	13.1	27.7	40.0	54.6		
33.1	56.8			9.1	13.6	28.0	40.3	54.7		
33.9	57.2			9.2	14.1	28.3	40.5	54.9		
34.6	57.5			9.3	14.9	28.6	40.7	55.1		
35.4	57.9			9.4	15.3	28.9	41.0	55.4		
36.2	58.2			9.5	15.5	29.2	41.3	55.6		
37.0	58.6			9.6	15.9	29.5	41.6	55.8		
37.6	59.1			9.7	16.4	29.8	41.9	55.9		
38.2	59.6			9.7	16.8	30.1	42.2	56.1		
38.8	60.0			9.8	17.1	30.4	42.5	56.2		
39.2	60.5			9.9	17.4	30.6	42.8	56.4		
39.6	61.0			10.0	17.7	30.8	43.2	56.5		
40.0	61.7			10.1	18.0	31.1	43.5	56.7		

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 508+50 NB OSS				12/3 to 12/19/2019	-L- 535+20 NB ISL	12/3 to 12/19/2019				
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING			
SG	FILL	375729.8	2001508.4	STBC	FILL	378399.0	2001674.7			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
1.1	29.4	53.3	76.3	1.3	13.5	24.7	36.5			
1.8	29.8	53.8	79.6	2.0	13.6	24.9	36.7			
2.5	30.2	54.3	81.0	2.4	13.8	25.1	36.9			
3.1	30.6	54.6	83.7	2.9	13.9	25.4	37.2			
3.6	30.9	55.0	87.6	3.3	14.0	25.6	37.5			
4.1	31.3	55.4	91.6	3.8	14.1	25.8	37.8			
4.8	31.6	55.8	93.0	4.2	14.2	26.0	38.1			
5.4	32.0	56.0	93.8	4.5	14.3	26.2	38.4			
6.0	32.3	56.3	94.4	4.9	14.4	26.5	38.7			
6.5	32.8	56.6	95.0	5.2	14.6	26.7	39.0			
7.1	33.2	56.9	95.6	5.6	14.8	26.9	39.3			
7.7	33.7	57.2	96.1	5.9	14.9	27.1	39.6			
8.4	34.1	57.6	96.6	6.2	15.1	27.3	39.9			
9.0	34.5	58.0		6.5	15.3	27.4	40.1			
9.6	34.9	58.4		6.9	15.5	27.6	40.3			
10.2	35.3	58.7		7.2	15.7	27.8	40.4			
10.9	35.6	59.0		7.5	16.0	28.0	40.6			
11.6	36.0	59.3		7.7	16.2	28.2	40.8			
12.4	36.4	59.6		8.0	16.4	28.3	41.0			
13.1	36.8	59.8		8.2	16.6	28.5	41.2			
13.8	37.2	60.2		8.5	16.8	28.9	41.3			
14.5	37.7	60.6		8.7	17.0	29.1	41.5			
15.3	38.2	61.0		8.9	17.2	29.3	41.7			
16.1	38.7	61.4		9.1	17.4	29.5	41.7			
16.8	39.0	61.7		9.3	17.6	29.7	41.8			
17.5	39.6	62.0		9.5	17.8	29.9	41.8			
18.2	40.2	62.3		9.7	17.9	30.2	41.9			
18.9	40.8	62.7		9.9	18.1	30.5	41.9			
19.5	41.5	63.0		10.0	18.3	30.7	41.9			
20.1	42.1	63.3		10.2	18.5	31.0	42.0			
20.7	42.7	63.6		10.3	18.8	31.3	42.0			
21.2	43.3	64.0		10.5	19.0	31.5	42.1			
21.7	43.9	64.3		10.6	19.3	31.8	42.1			
22.1	44.4	64.6		10.7	19.5	32.0				
22.6	44.9	64.9		10.9	19.7	32.3	DCP REFUSAL			
23.0	45.4	65.3		11.0	20.0	32.5				
23.4	45.7	65.7		11.1	20.2	32.8				
23.8	46.3	66.1		11.2	20.5	33.1				
24.2	46.9	66.5		11.3	20.7	33.3				
24.5	47.5	66.7		11.4	21.0	33.6				
24.8	48.1	67.2		11.5	21.3	33.9				
25.2	48.5	67.7		11.6	21.6	34.1				
25.5	48.9	68.2		11.7	21.9	34.4				
25.9	49.3	68.7		11.9	22.2	34.6				
26.2	49.6	69.0		12.0	22.5	34.9				
26.5	50.0	69.3		12.2	22.7	35.1				
26.8	50.4	69.6		12.3	23.0	35.3				
27.1	50.8	69.9		12.5	23.2	35.5				
27.4	51.1	70.4		12.6	23.5	35.6				
27.8	51.6	70.9		12.8	23.7	35.8				
28.2	52.1	71.4		12.9	24.0	36.0				
28.6	52.6	71.7		13.1	24.2	36.2				
29.0	52.9	73.8		13.3	24.5	36.4				

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
-L- 535+20 NB ISS <td colspan="2">Robeson</td> <td colspan="2">VLAD MITCHEV</td> <td colspan="2">D. Strother/J. Swartley</td>				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
DATE RUN				TEST LOCATION DESCRIPTION		TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019				-L- 535+20 NB OSS		-L- 535+20 NB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL		
SG	FILL	378400.1	2001670.4	STBC	FILL	378399.4	2001698.2				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
1.4	21.4	32.0		0.8	26.0	68.4	91.0				
2.5	21.6	32.1		1.2	26.3	68.9	91.6				
3.0	21.8	32.5		1.6	26.7	69.3	92.1				
3.4	22.0	32.9		2.0	27.1	69.8	92.6				
4.8	22.2	33.2		2.4	27.6	70.2	93.0				
5.2	22.4	33.6		2.8	28.1	70.7	93.3				
5.6	22.6	34.0		3.1	28.7	71.1	93.7				
6.0	22.9	34.2		3.4	29.2	71.7	94.0				
7.2	23.1	34.4		3.8	29.9	72.0	94.4				
7.4	23.3	34.5		4.1	30.5	72.5	94.8				
8.3	23.5	34.7		4.4	31.4	73.0	95.2				
8.9	23.7	34.9		4.7	32.2	73.5	95.6				
9.5	23.9	35.1		4.9	35.2	73.9	96.0				
10.0	24.2	35.3		5.2	35.3	74.3	96.4				
10.5	24.4	35.4		5.4	35.4	74.8	96.8				
11.0	24.6	35.6		5.7	36.6	75.3	97.2				
11.5	24.8	35.8		6.4	37.6	75.8	97.6				
12.0	25.1	36.0		7.1	38.8	76.2	98.0				
12.5	25.3	36.1		7.7	39.8	76.7	98.4				
13.0	25.5	36.3		8.4	40.8	77.1	98.8				
13.4	25.7	36.4		9.1	41.9	77.5	99.1				
13.9	25.9	36.6		9.7	42.9	77.9	99.5				
14.4	26.1			10.0	44.0	78.4	99.8				
14.7	26.3	DCP REFUSAL		10.5	45.2	78.8	100.2				
14.9	26.5			10.9	46.6	79.3					
15.2	26.7			11.4	48.0	79.6					
15.4	26.9			11.9	49.6	80.0					
15.7	27.0			12.6	51.3	80.5					
16.0	27.2			13.3	53.4	80.8					
16.2	27.4			13.8	55.3	81.3					
16.5	27.6			14.3	56.3	81.6					
16.7	27.8			14.9	57.2	82.2					
17.0	28.0			15.5	57.9	82.6					
17.2	28.2			16.1	58.5	83.0					
17.4	28.4			16.6	59.2	83.4					
17.6	28.6			17.2	59.6	83.8					
17.8	28.8			17.7	60.1	84.1					
18.0	29.0			18.3	60.6	84.5					
18.2	29.2			18.8	61.3	84.9					
18.4	29.4			19.4	61.8	85.2					
18.7	29.6			20.0	62.3	85.6					
18.9	29.8			20.6	62.8	86.0					
19.1	30.1			21.2	63.3	86.4					
19.3	30.3			21.7	63.7	86.8					
19.5	30.5			22.2	64.1	87.2					
19.6	30.7			22.7	64.6	87.6					
19.8	30.9			23.2	65.2	88.0					
20.0	31.0			23.7	65.6	88.4					
20.2	31.2			24.1	66.1	88.8					
20.5	31.4			24.5	66.6	89.2					
20.7	31.5			24.8	67.0	89.6					
21.0	31.7			25.2	67.5	90.0					
21.2	31.8			25.6	68.0	90.5					

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
-L- 562+00 NB ISS				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
DATE RUN				TEST LOCATION DESCRIPTION		TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019				-L- 562+00 NB OSS		-L- 562+00 NB OSL		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL		
SG	FILL	380984.5	2002281.9	STBC	FILL	380976.3	2002302.4				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
1.7	30.0	44.5	86.0			0.9	8.6	3.8	13.4	23.4	
3.1	30.2	44.8	86.8			1.5	8.7	4.0	13.6	23.8	
3.9	30.5	45.2	87.5			1.8	8.7	4.2	13.8	24.1	
5.2	30.7	45.5	88.3			2.0	8.8	4.4	13.9	24.4	
6.2	30.9	45.9	89.1			2.3	8.9	4.7	14.1	24.7	
7.3	31.2	46.2	89.9			2.5	9.0	5.0	14.3	25.1	
8.3	31.4	46.7	90.6			2.8	9.1	5.3	14.4	25.4	
9.5	31.7	47.1	91.4			3.0	9.1	5.6	14.6	25.7	
10.9	31.9	47.6	92.2			3.3	9.2	5.9	14.7	26.3	
12.1	32.2	48.0				3.6	9.3	6.1	14.9	26.8	
13.4	32.4	48.5				3.9	9.4	6.2	15.0	27.4	
14.6	32.7	49.1				4.2	9.5	6.4	15.1	27.9	
15.4	32.9	49.6				4.5	9.6	6.5	15.3	28.5	
16.2	33.2	50.2				4.6	9.7	6.7	15.4	29.1	
16.8	33.4	50.7				4.6	9.8	6.9	15.6	29.7	
17.4	33.6	51.3				4.7	9.8	7.1	15.7	30.3	
18.0	33.8	52.0				4.8	9.9	7.3	15.8	30.9	
18.6	34.0	52.7				4.9	10.0	7.5	15.9	31.5	
19.2	34.2	53.4				4.9	10.1	7.7	16.1	32.6	
19.7	34.5	54.1				5.0	10.2	7.9	16.2	33.7	
20.1	34.7	54.8				5.1	10.3	8.0	16.3	34.8	
20.6	35.0	55.6				5.1	10.3	8.2	16.4	36.1	
21.0	35.2	56.4				5.2	10.4	8.3	16.6	37.5	
21.4	35.5	57.3				5.4	10.5	8.5	16.7	38.8	
21.8	35.7	58.1				5.5	10.6	8.7	16.9	40.1	
22.1	35.9	58.9				5.7	10.6	8.9	17.0	41.4	
22.4	36.2	61.0				5.8	10.7	9.0	17.2	42.7	
22.7	36.4	63.0				6.0	10.8	9.2	17.5	44.0	
23.0	36.6	63.2				6.1	10.8	9.4	17.7	45.2	
23.3	36.9	63.4				6.3	10.9	9.7	18.0	46.5	
23.6	37.2	64.5				6.4	10.9	9.9	18.2	47.5	
23.9	37.4	65.6				6.6	11.0	10.2	18.4	48.4	
24.2	37.7	66.7				6.7	11.0	10.4	18.6	49.4	
24.5	38.0	67.8				6.8	11.1	10.7	18.8	50.5	
24.8	38.2	68.9				7.0	11.1	10.8	19.0	51.5	
25.0	38.4	69.9				7.1	11.1	11.0	19.2	52.6	
25.3	38.7	71.0				7.2	11.2	11.1	19.4		
25.6	38.9	72.0				7.4	11.2	11.3	19.6		
25.8	39.1	73.0				7.5	11.3	11.4	19.8		
26.1	39.4	74.0				7.6	11.3	11.5	20.1		
26.4	39.8	75.0				7.7		11.6	20.4		
26.6	40.1	76.0				7.9	Augered 93 cm	11.8	20.6		
26.9	40.5	76.8				8.0		11.9	20.8		
27.2	40.8	77.6				8.1		12.0	20.9		
27.5	41.2	78.5				8.1		12.2	21.1		
27.8	41.6	79.4				8.2	1.4	12.4	21.3		
28.0	42.0	80.3				8.2	2.0	12.5	21.5		
28.3	42.4	81.2				8.3	2.3	12.7	21.7		
28.5	42.8	82.2				8.3	2.6	12.9	22.0		
28.8	43.1	83.2				8.4	2.8	13.0	22.2		
29.2	43.5	83.9				8.4	3.1	13.1	22.4		
29.5	43.8	84.5				8.5	3.4	13.2	22.7		
29.7	44.2	85.3				8.5	3.6	13.3	23.1		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE					
				I-5987B	47533.1.3	I-95					
				COUNTY	ENGINEER	TECHNICIANS					
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley					
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN					
-L- 562+00 NB OSS				12/3 to 12/19/2019	-L- 596+90 NB ISL				12/3 to 12/19/2019		
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING				
STBC	FILL	380976.5	2002310.0	STBC	FILL	384273.4	2003458.3				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
1.5	27.3	38.2		0.5	12.3	20.5	30.2				
2.4	27.6	38.4		1.2	12.4	20.7	30.4				
3.2	27.9	38.6		1.9	12.5	21.0	30.6				
3.5	28.1	38.8		2.7	12.6	21.2	30.7				
4.1	28.4	39.0		3.4	12.8	21.4	30.9				
4.7	28.6	39.2		4.1	12.9	21.5	31.0				
5.3	28.7	39.4		4.3	13.1	21.7	31.2				
5.8	28.9	39.6		4.4	13.2	21.8	31.4				
6.3	29.1	39.8		4.6	13.3	22.0	31.7				
6.8	29.4	40.0		4.7	13.4	22.1	31.9				
7.5	29.6	40.2		4.9	13.6	22.2	32.2				
8.3	29.8	40.4		5.1	13.7	22.4	32.4				
9.0	30.0	40.6		5.3	13.8	22.5	32.6				
10.0	30.2	40.8		5.6	13.9	22.7	32.8				
11.0	30.4	41.0		5.8	14.1	22.8	33.0				
12.0	30.6	41.2		6.0	14.2	23.0	33.2				
12.9	30.8			6.2	14.4	23.2	33.4				
13.7	31.0	DCP Refusal		6.4	14.5	23.4	33.6				
14.6	31.2			6.6	14.6	23.6	33.8				
15.0	31.4			6.8	14.8	23.8	34.0				
15.5	31.6			7.0	14.9	24.0	34.2				
15.9	31.8			7.2	15.1	24.2	34.4				
16.4	32.0			7.3	15.2	24.4					
16.8	32.2			7.5	15.3	24.6	Terminate				
17.3	32.4			7.6	15.5	24.8					
17.7	32.6			7.8	15.6	24.9					
18.2	32.7			8.0	15.8	25.1					
18.6	32.9			8.1	15.9	25.2					
19.0	33.1			8.3	16.0	25.4					
19.4	33.3			8.4	16.2	25.5					
19.8	33.6			8.6	16.3	25.7					
20.2	33.8			8.7	16.5	25.9					
20.6	34.1			8.9	16.6	26.0					
21.0	34.3			9.0	16.8	26.2					
21.4	34.5			9.2	16.9	26.4					
21.7	34.7			9.3	17.1	26.6					
22.1	34.8			9.6	17.2	26.8					
22.4	35.0			9.9	17.4	27.1					
22.8	35.2			10.1	17.6	27.3					
23.1	35.4			10.4	17.8	27.5					
23.4	35.6			10.7	17.9	27.7					
23.8	35.8			10.9	18.1	27.9					
24.1	36.0			11.0	18.3	28.2					
24.4	36.2			11.2	18.5	28.4					
24.7	36.4			11.3	18.7	28.6					
25.0	36.6			11.5	19.0	28.8					
25.3	36.9			11.6	19.2	29.0					
25.7	37.1			11.7	19.4	29.2					
26.0	37.3			11.8	19.6	29.4					
26.2	37.5			11.9	19.8	29.6					
26.5	37.7			12.0	19.9	29.8					
26.7	37.8			12.1	20.1	29.9					
27.0	38.0			12.2	20.3	30.1					

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE					
				I-5987B	47533.1.3	I-95					
				COUNTY	ENGINEER	TECHNICIANS					
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley					
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN					
-L- 596+90 NB ISS				12/3 to 12/19/2019	-L- 596+90 NB OSS				12/3 to 12/19/2019		
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING				
SG	FILL	384275.4	2003452.2	STBC	FILL	384271.9	2003483.4				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
1.4	36.3	55.8		1.6	34.4	57.3	69.4	79.6	92.5		
2.4	36.6	56.2		2.7	35.0	57.5	69.6	79.9	92.8		
3.7	37.0	56.7		3.6	35.6	57.8	69.9	80.1	93.0		
4.7	37.5	57.2		4.4	36.2	58.1	70.1	80.3			
5.6	37.9	57.6		5.2	36.8	58.3	70.3	80.5			
6.6	38.2	58.1		6.0	37.5	58.6	70.6	80.7			
7.5	38.6	58.6		7.0	38.2	58.8	70.8	81.0			
8.5	38.9	59.1		7.9	38.9	59.0	71.0	81.2			
9.6	39.2	59.6		8.7	39.7	59.2	71.3	81.4			
10.4	39.6	60.2		9.8	40.4	59.5	71.5	81.5			
11.3	39.9	60.7		10.9	41.2	59.7	71.7	81.7			
12.0	40.2	61.3		12.0	41.8	60.0	71.9	82.1			
12.8	40.6	61.8		13.4	42.4	60.2	72.1	82.6			
13.5	40.9	62.4		14.5	43.0	60.4	72.2	83.0			
14.2	41.2	62.9		15.4	43.6	60.6	72.4	83.2			
14.9	41.6	63.5		16.2	44.1	60.8	72.5	83.5			
15.5	41.9	64.2		16.7	44.7	61.0	72.7	83.7			
16.0	42.2	64.8		17.2	45.2	61.2	72.8	84.0			
16.6	42.6	65.4		17.5	45.7	61.4	73.0	84.2			
17.2	42.9	65.9		17.9	46.2	61.7	73.2	84.5			
17.8	43.2	66.5		18.4	46.7	61.9	73.4	84.7			
18.4	43.6	67.1		18.8	47.1	62.1	73.6	84.9			
19.1	43.9	67.7		19.3	47.6	62.3	73.8	85.1			
19.7	44.2	68.3		19.7	48.0	62.5	74.0	85.4			
20.4	44.6	68.9		20.2	48.5	62.7	74.2	85.7			
20.9	44.9	69.4		20.7	48.9	62.9	74.4	86.0			
21.3	45.3	70.0		21.1	49.2	63.1	74.6	86.2			
21.8	45.8	70.6		21.6	49.6	63.3	74.8	86.3			
22.4	46.2	71.3		22.0	49.9	63.5	75.0	86.5			
22.9	46.6	71.9		22.5	50.2	63.7	75.2	86.8			
23.5	46.9	72.5		22.9	50.6	64.0	75.4	87.0			
24.0	47.3	73.2		23.4	50.9	64.3	75.6	87.3			
24.6	47.7	73.8		23.9	51.2	64.6	75.7	87.5			
25.1	48.0	74.5		24.4	51.6	64.8	75.9	87.7			
25.7	48.4	75.1		24.9	51.9	65.0	76.1	87.9			
26.4	48.8	75.8		25.3	52.2	65.2	76.3	88.1			
27.0	49.2	76.3		25.8	52.5	65.4	76.5	88.4			
27.7	49.6	76.8		26.3	52.8	65.7	76.7	88.6			
28.3	50.0	77.3		26.9	53.1	65.9	76.9	88.8			
29.0	50.4			27.4	53.4	66.1	77.1	89.0			
29.6	50.8			27.8	53.7	66.3	77.3	89.2			
30.3	51.2			28.3	54.0	66.5	77.4	89.5			
30.9	51.7			28.7	54.2	66.7	77.6	89.7			
31.5	52.1			29.2	54.5	66.9	77.8	90.0			
32.2	52.4			29.7	54.8	67.1	77.9	90.3			
32.8	52.7			30.2	55.2	67.3	78.1	90.5			
33.3	53.0			30.7	55.5	67.5	78.2	90.8			
33.7	53.4			31.1	55.8	67.7	78.4	91.0			
34.2	53.8			31.6	56.0	68.0	78.5	91.3			
34.6	54.2			32.1	56.3	68.4	78.7	91.5			
35.1	54.6			32.7	56.6	68.7	78.8	91.8			
35.5	55.0			33.2	56.8	68.9	79.0	92.0			
35.9	55.4			33.8	57.1	69.2	79.3	92.3			

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
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S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
				COUNTY		ENGINEER		TECHNICIANS			
Robeson				VLAD MITCHEV		D. Strother/J. Swartley					
TEST LOCATIONS DESCRIPTION				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
-L- 600+90 NB DECEL				12/3 to 12/19/2019		-L- 600+90 NB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	384648.0	2003614.0	STBC	FILL	384643.9	2003614.5				
Cumulative Penetration in Centimeters						Cumulative Penetration in Centimeters					
1.0	16.1	28.5	43.4	67.5	77.9	0.9	22.3	38.8	58.5	88.5	
1.5	16.3	28.7	43.7	67.7	78.1	1.8	22.6	39.2	58.9	88.7	
1.9	16.5	28.9	43.9	67.8	78.3	2.5	22.9	39.5	59.4	89.0	
2.2	16.7	29.1	44.2	67.9	78.5	3.3	23.1	39.8	59.9	89.2	
2.5	16.9	29.3	44.5	68.2	78.6	3.7	23.4	40.2	60.3	89.4	
2.8	17.1	29.6	44.8	68.5	78.8	4.1	23.7	40.5	60.8	89.7	
3.0	17.3	29.9	45.1	68.8	78.9	4.5	24.0	40.9	61.2	90.1	
3.3	17.5	30.1	45.4	69.1	79.1	4.9	24.3	41.2	61.8	90.4	
3.6	17.7	30.4	45.7	69.3	79.3	5.5	24.6	41.6	62.4	90.7	
3.9	17.9	30.7	46.0	69.4	79.5	6.0	24.9	42.0	62.9	91.1	
4.1	18.2	31.0	46.3	69.6	79.7	6.5	25.2	42.4	63.5	91.5	
4.7	18.4	31.2	46.6	69.7		7.0	25.5	42.8	65.9	91.8	
5.3	18.7	31.5	46.9	69.9		7.6	25.8	43.2	69.8	92.2	
5.7	18.9	31.8	47.2	70.1		8.2	26.2	43.5	71.1	92.5	
6.1	19.2	32.0	47.5	70.2		8.8	26.7	43.9	72.2	92.7	
6.5	19.5	32.3	47.8	70.4		9.4	27.1	44.2	73.3	93.0	
6.9	19.7	32.5	48.2	70.6		10.0	27.5	44.6	74.6	93.2	
7.2	20.0	32.8	48.6	70.8		10.6	27.9	45.1	75.7		
7.4	20.3	33.1	49.0	71.0		11.2	28.3	45.5	76.6		
7.8	20.5	33.3	49.4	71.2		11.8	28.6	45.9	77.4		
8.1	20.8	33.6	49.9	71.4		12.3	29.0	46.3	78.1		
8.3	21.0	34.0	50.4	71.5		12.8	29.3	46.7	78.6		
8.5	21.3	34.3	50.9	71.7		13.2	29.7	47.0	79.1		
8.8	21.5	34.7	51.4	71.8		13.5	30.0	47.4	79.5		
9.1	21.8	35.0	52.8	72.0		13.9	30.3	47.8	79.9		
9.3	22.0	35.3	54.5	72.2		14.2	30.6	48.2	80.2		
9.6	22.2	35.6	56.6	72.3		14.6	31.0	48.5	80.5		
9.9	22.4	35.8	58.5	72.5		14.9	31.3	48.9	80.8		
10.1	22.6	36.1	59.8	72.7		15.3	31.6	49.3	81.0		
10.4	22.8	36.4	60.8	72.9		15.6	32.0	49.8	81.3		
10.6	23.0	36.7	61.3	73.1		15.9	32.3	50.2	81.6		
10.9	23.3	36.9	61.8	73.3		16.2	32.7	50.6	81.9		
11.2	23.5	37.2	62.3	73.5		16.5	33.0	51.0	82.1		
11.5	23.7	37.5	62.8	73.8		16.8	33.3	51.4	82.4		
11.8	23.9	37.7	63.2	74.0		17.1	33.7	51.8	82.7		
12.1	24.1	38.0	63.8	74.2		17.3	34.0	52.2	83.1		
12.4	24.3	38.2	64.2	74.4		17.6	34.3	52.6	83.4		
12.6	24.5	38.5	64.4	74.6		17.8	34.6	53.0	83.7		
12.9	24.8	38.8	64.6	74.8		18.1	34.9	53.4	84.0		
13.1	25.1	39.0	64.7	75.0		18.3	35.2	53.8	84.2		
13.3	25.4	39.3	64.9	75.2		18.6	35.5	54.1	84.5		
13.5	25.7	39.6	65.1	75.4		18.8	35.8	54.5	84.7		
13.7	25.9	39.9	65.3	75.6		19.1	36.1	54.8	85.0		
13.9	26.2	40.1	65.5	75.8		19.4	36.4	55.1	85.2		
14.1	26.4	40.4	65.7	76.0		19.6	36.7	55.4	85.5		
14.2	26.6	40.9	65.9	76.2		19.9	36.9	55.7	85.7		
14.4	26.8	41.3	66.1	76.4		20.2	37.2	56.0	86.1		
14.6	27.1	41.8	66.3	76.6		20.5	37.4	56.3	86.5		
14.9	27.3	42.2	66.5	76.8		20.7	37.6	56.7	86.8		
15.1	27.5	42.4	66.7	77.1		21.0	37.8	57.0	87.2		
15.3	27.8	42.7	67.0	77.3		21.3	38.1	57.4	87.5		
15.6	28.0	42.9	67.2	77.5		21.7	38.3	57.7	87.9		
15.8	28.3	43.1	67.4	77.7		22.0	38.5	58.1	88.2		

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
				COUNTY		ENGINEER		TECHNICIANS			
Robeson				VLAD MITCHEV		D. Strother/J. Swartley					
TEST LOCATIONS DESCRIPTION				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
-L- 610+70 NB ISS				12/3 to 12/19/2019		-L- 610+70 NB OSL		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
SG	FILL	385573.4	2003913.5	STBC	FILL	385564.7	2003934.2				
Cumulative Penetration in Centimeters						Cumulative Penetration in Centimeters					
1.9	45.2					0.7	14.1	47.5			
2.8	45.8					1.4	14.4	48.6			
3.7	46.3					1.7	14.6	49.5			
4.7	46.8					2.1	14.9	50.6			
5.4	47.3					2.4	15.2	51.3			
6.2	47.8					2.8	15.5	52.2			
6.9	48.6					3.1	15.9	52.9			
7.5	49.3					3.5	16.2	53.7			
8.2	50.1					3.9	16.5	54.4			
8.9	50.8					4.2	16.8	55.2			
9.5	51.4					4.6	17.2	56.0			
10.1	52.1					5.0	17.5	56.9			
10.6	52.6					5.2	17.9	57.7			
11.1	53.1					5.4	18.2	58.7			
11.7	53.6					5.7	18.6	59.6			
12.2	54.2					5.9	18.9	60.5			
12.8	54.9					6.1	19.3	61.4			
13.3	55.5					6.3	19.6	62.2			
13.8	56.2					6.4	20.0	63.2			
14.4	56.9					6.6	20.4	64.2			
14.8	57.6					6.7	20.9	65.1			
15.1	58.6					6.9	21.3	66.1			
15.4	59.7					7.1	21.8	67.0			
15.7	60.7					7.3	22.2	67.9			
16.3	61.7					7.6	22.9	68.6			
16.9	62.8					7.8	23.5	69.4			
17.5	63.8					8.0	24.2	70.0			
18.2	64.7					8.2	24.8	70.7			
19.0	65.6					8.4	25.5	71.4			
19.7	66.5					8.7	26.2	72.1			
20.4	67.3					8.9	26.9				
21.2	68.1					9.1	27.6				
21.9	68.9					9.3	28.2				
22.8	69.8					9.6	28.7				
23.6	70.7					9.8	29.3				
24.5	71.6					10.1	30.2				
25.6	72.5					10.3	31.1				
26.8	73.4					10.5	32.0				
27.9	74.3					10.7	33.1				
29.2	75.1					10.9	34.1				
30.6	75.9					11.1	35.2				
31.9	76.7					11.3	36.6				
33.2	77.5					11.5	37.4				
34.4	78.4					11.7	38.8				
35.7	79.2					12.0	39.8				
36.8	80.0					12.2	40.7				
37.8	80.7					12.4	41.6				
38.9	81.5					12.6	42.5				
40.0	82.4					12.9	43.3				
41.3	83.2					13.1	44.2				
42.4	84.1					13.4	44.8				
43.6						13.6	45.8				
44.4						13.9	46.4				

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
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CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 610+70 NB OSS				12/3 to 12/19/2019	-L- 636+50 NB ACCEL	12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING			
STBC	FILL	385564.8	2003945.9	SG	FILL	388057.5	2004602.4			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
2.4	39.1			2.1	27.0	44.7	64.2	85.8		
3.6	40.4			3.2	27.3	45.0	64.4	86.5		
4.6	41.4			4.3	27.6	45.4	64.6	87.2		
5.4	42.4			5.2	27.9	45.7	64.9			
6.2	43.3			6.0	28.2	46.0	65.1			
6.9	44.1			6.8	28.6	46.5	65.3			
7.5	45.0			7.6	28.9	47.0	65.6			
8.3	45.9			8.2	29.2	47.4	65.8			
9.0	46.9			8.9	29.5	47.9	66.1			
9.7	47.9			9.5	29.9	48.4	66.3			
10.4	48.9			10.2	30.2	48.9	66.6			
11.0	50.1			10.9	30.6	49.4	66.9			
11.6	51.4			11.6	30.9	50.0	67.2			
12.3	52.3			12.1	31.1	50.5	67.4			
12.8	54.2			12.6	31.4	51.0	67.7			
13.6	55.6			13.1	31.6	51.7	68.0			
14.2	56.8			13.6	31.9	52.3	68.3			
15.0	57.9			14.1	32.1	53.0	68.6			
15.7	59.0			14.6	32.4	53.6	69.0			
16.6	60.1			15.1	32.7	54.2	69.3			
17.4	61.0			15.5	33.0	54.8	69.6			
18.2	61.9			16.0	33.3	55.2	69.9			
18.7	62.8			16.4	33.6	55.6	70.3			
19.6	63.6			16.9	33.9	56.0	70.6			
20.1	64.3			17.3	34.3	56.3	71.0			
20.6	65.0			17.7	34.6	56.6	71.3			
20.9	65.8			18.2	35.0	56.9	71.7			
21.4	66.5			18.6	35.3	57.2	72.1			
21.8	67.2			19.0	35.7	57.5	72.6			
22.2	68.0			19.4	36.1	57.8	73.0			
22.6	68.6			19.8	36.6	58.1	73.4			
23.1	69.6			20.1	37.0	58.4	73.8			
23.5	70.1			20.5	37.4	58.7	74.2			
24.0	70.8			20.8	37.8	59.0	74.6			
24.4	71.6			21.2	38.2	59.3	75.0			
24.8	72.4			21.7	38.7	59.6	75.4			
25.2	73.3			22.1	39.1	60.0	76.0			
25.7	74.0			22.4	39.5	60.3	76.5			
26.1	74.8			22.7	39.8	60.6	77.1			
26.6	75.5			23.0	40.2	60.9	77.6			
27.1	76.3			23.3	40.5	61.1	78.2			
27.7	77.0			23.5	40.9	61.4	78.7			
28.2	77.9			23.8	41.2	61.6	79.2			
28.9	78.9			24.1	41.5	61.9	79.7			
29.7	79.9			24.3	41.9	62.1	80.2			
30.4	80.8			24.6	42.2	62.4	80.7			
31.2	81.9			24.9	42.6	62.6	81.3			
32.1	82.9			25.2	42.9	62.9	81.9			
32.9	83.8			25.5	43.2	63.1	82.5			
34.1	84.8			25.8	43.5	63.3	83.1			
35.2	85.9			26.1	43.8	63.5	83.7			
36.4				26.4	44.1	63.8	84.4			
37.7				26.7	44.4	64.0	85.1			

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 636+50 NB ISL				12/3 to 12/19/2019	-L- 636+50 NB ISS	12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING			
STBC	FILL	388062.8	2004573.7	SG	FILL	388064.3	2004569.1			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
0.4	14.1	25.5	35.8			2.2	29.1	41.6	57.8	
1.4	14.2	25.7	35.9			3.3	29.4	42.0	58.0	
2.2	14.4	25.9	36.0			4.3	29.6	42.4	58.1	
2.6	14.6	26.2				5.3	29.9	42.8	58.3	
3.1	14.8	26.4	DCP Refusal			6.1	30.1	43.1	58.5	
3.5	14.9	26.6				6.8	30.3	43.5	58.7	
3.9	15.1	26.9				7.7	30.5	43.9	58.9	
4.4	15.2	27.2				8.7	30.6	44.4	59.1	
4.8	15.4	27.4				9.9	30.8	45.0	59.3	
5.1	15.6	27.7				11.1	31.0	45.5	59.5	
5.4	15.8	28.0				12.1	31.3	46.1	59.6	
5.7	16.0	28.3				13.3	31.6	46.6	59.8	
5.9	16.2	28.6				14.2	31.9	47.4	60.0	
6.2	16.4	28.9				14.9	32.2	48.3	60.2	
6.4	16.6	29.2				15.6	32.5	49.1	60.3	
6.7	16.8	29.5				16.1	32.8	49.6	60.5	
6.9	17.1	29.7				16.6	33.1	50.2	60.6	
7.2	17.3	29.9				17.0	33.3	50.7	60.8	
7.4	17.5	30.2				17.5	33.6	51.0		DCP Refusal
7.7	17.6	30.4				18.0	33.9	51.2		
7.9	17.8	30.6				18.5	34.1	51.5		
8.1	17.9	30.8				19.0	34.3	51.8		
8.3	18.1	31.0				19.3	34.5	52.1		
8.5	18.2	31.3				19.7	34.7	52.3		
8.7	18.4	31.5				20.0	34.9	52.6		
8.8	18.7	31.7				20.4	35.1	52.9		
9.0	18.9	31.8				20.7	35.3	53.0		
9.2	19.2	32.0				21.1	35.5	53.2		
9.3	19.4	32.1				21.5	35.7	53.3		
9.5	19.7	32.3				21.9	35.9	53.5		
9.6	19.9	32.4				22.3	36.1	53.6		
9.8	20.2	32.6				22.7	36.3	53.8		
10.0	20.4	32.7				23.1	36.5	54.1		
10.2	20.7	32.9				23.4	36.7	54.3		
10.5	20.9	33.0				23.7	36.9	54.6		
10.7	21.1	33.2				24.1	37.1	54.8		
10.9	21.3	33.3				24.4	37.3	55.0		
11.1	21.5	33.5				24.7	37.6	55.1		
11.3	21.7	33.6				25.0	37.8	55.3		
11.6	22.0	33.8				25.4	38.0	55.4		
11.8	22.2	33.9				25.7	38.2	55.6		
12.0	22.5	34.1				26.1	38.4	55.8		
12.2	22.7	34.3				26.4	38.7	55.9		
12.3	23.0	34.4				26.7	38.9	56.1		
12.5	23.3	34.6				26.9	39.1	56.2		
12.6	23.5	34.8				27.2	39.3	56.4		
12.8	23.8	34.9				27.4	39.5	56.6		
13.0	24.0	35.0				27.7	39.7	56.7		
13.2	24.3	35.2				27.9	39.9	56.9		
13.3	24.5	35.3				28.2	40.1	57.0		
13.5	24.8	35.4				28.4	40.5	57.2		
13.7	25.0	35.5				28.7	40.9	57.4		
13.9	25.3	35.6				28.9	41.2	57.6		

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CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 636+50 NB OSS				12/3 to 12/19/2019	-L- 666+40 NB ISS	12/3 to 12/19/2019				
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING			
SG	FILL	388052.7	2004604.5	STBC	FILL	390999.8	2005096.6			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
2.2	36.5	56.4		1.1	22.3	33.8	47.2			
3.6	37.1	56.9		2.2	22.5	34.1	47.4			
4.7	37.7	57.4		2.7	22.7	34.4	47.5			
5.7	38.2	57.9		3.5	22.9	34.6	47.7			
6.5	38.7	58.3		4.1	23.1	34.9	48.0			
7.2	39.2	58.8		4.7	23.3	35.2	48.2			
8.0	39.7	59.2		5.4	23.6	35.6	48.5			
8.8	40.1	59.7		6.4	23.8	35.9	48.7			
9.5	40.6	60.2		6.9	24.0	36.3	48.9			
10.3	41.0	60.7		7.8	24.2	36.6	49.1			
11.0	41.3	61.3		8.6	24.4	37.0	49.2			
11.8	41.7	61.8		9.2	24.6	37.5	49.4			
12.8	42.0	62.4		9.9	24.8	37.9	49.6			
13.9	42.4	62.9		10.6	25.0	38.4	49.8			
15.0	42.7	63.5		11.2	25.2	38.8	50.0			
16.2	43.0	64.0		12.0	25.5	39.3	50.2			
17.4	43.3	64.4		12.5	25.7	39.6	50.4			
18.4	43.6	64.8		13.0	26.0	39.9	50.6			
19.3	43.9	65.2		13.5	26.2	40.3				
20.1	44.1	65.6		13.9	26.4	40.6		DCP Refusal		
20.8	44.4	66.1		14.4	26.6	40.9				
21.4	44.7	66.5		14.6	26.9	41.1				
21.8	45.0	66.9		14.8	27.1	41.4				
22.2	45.3	67.3		15.0	27.3	41.6				
22.6	45.6	67.7		15.3	27.5	41.9				
23.0	45.9	68.2		15.7	27.8	42.1				
23.5	46.2	68.6		16.0	28.0	42.3				
23.9	46.4	69.1		16.3	28.3	42.5				
24.4	46.7	69.6		16.5	28.5	42.8				
24.9	46.9	70.2		16.8	28.7	43.0				
25.4	47.3	70.7		17.1	28.9	43.2				
25.9	47.6	71.3		17.3	29.2	43.4				
26.5	48.0	71.8		17.6	29.4	43.6				
27.1	48.3	72.4		17.9	29.6	43.7				
27.7	48.6	73.0		18.1	29.8	43.9				
28.3	48.9	73.5		18.4	30.0	44.1				
28.9	49.3	74.1		18.6	30.2	44.3				
29.5	49.7	74.8		18.9	30.4	44.5				
29.9	49.9	75.5		19.1	30.6	44.6				
30.4	50.3	76.2		19.3	30.8	44.8				
30.8	50.6	77.2		19.4	31.0	45.0				
31.2	51.0	78.2		19.6	31.2	45.2				
31.6	51.4	79.2		19.8	31.4	45.4				
32.0	51.9	80.4		20.0	31.6	45.5				
32.4	52.3	81.5		20.2	31.8	45.7				
32.7	52.7	82.7		20.4	32.0	45.9				
33.1	53.0	84.0		20.6	32.2	46.1				
33.6	53.4	85.4		20.9	32.4	46.3				
34.1	53.9	86.7		21.1	32.6	46.4				
34.6	54.4			21.4	32.8	46.6				
35.0	54.9			21.6	33.1	46.8				
35.5	55.4			21.9	33.3	46.9				
35.9	55.9			22.1	33.6	47.1				

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 666+40 NB OSL				12/3 to 12/19/2019	-L- 666+40 NB OSS	12/3 to 12/19/2019				
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING			
STBC	FILL	391006.5	2005123.2	STBC	FILL	390999.3	2005127.7			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
0.9	10.0	28.1	38.8	2.1	38.4	57.5	83.3			
1.5	10.1	28.5	38.9	3.2	38.8	58.3	83.7			
1.7	10.3	28.8	39.0	4.0	39.1	59.3	84.0			
1.9	10.5	29.2	39.2	4.9	39.5	60.3	84.4			
2.1	10.7	29.5	39.4	5.8	39.9	61.3	84.7			
2.3	11.0	29.9	39.5	6.7	40.2	62.2	85.1			
2.5	11.2	30.2	39.7	7.4	40.5	63.2	85.5			
2.6	11.5	30.5	39.9	8.7	40.7	64.1	86.0			
2.7	11.7	30.8		9.4	41.0	64.6	86.4			
2.9	11.9	31.1	Auger Refusal	10.1	41.3	65.0	86.8			
3.0	12.1	31.4		10.8	41.6	65.5	87.3			
3.1	12.3	31.6		11.7	41.8	65.9	87.7			
3.3	12.5	31.8		12.6	42.1	66.4	88.2			
3.5	12.7	32.0		13.5	42.3	66.9	88.6			
3.7	13.0	32.2		14.6	42.6	67.4	89.1			
3.9	13.3	32.4		15.7	42.9	67.9	89.6			
4.1	13.5	32.6		16.8	43.2	68.4	90.1			
4.2	13.8	32.8		18.1	43.5	68.9	90.6			
4.3	14.1	32.9		19.3	43.8	69.5	91.1			
4.5	14.4	33.1		20.6	44.1	70.1	91.6			
4.6	14.7	33.3		21.6	44.4	70.8	92.4			
4.7	15.1	33.5		22.7	44.8	71.4	93.1			
4.8	15.4	33.7		23.7	45.1	72.0	93.9			
5.0	15.7	33.8		24.3	45.5	72.4	94.6			
5.1	16.0	34.0		25.0	45.8	72.8	95.4			
5.3	16.3	34.2		25.6	46.1	73.3	96.3			
5.4	16.6	34.4		26.2	46.4	73.7	97.2			
5.6	16.9	34.6		26.8	46.6	74.1	98.1			
5.8	17.2	34.7		27.4	46.9	74.4	99.0			
5.9	17.5	34.9		27.9	47.2	74.8	99.9			
6.1	17.9	35.1		28.4	47.4	75.1				
6.3	18.2	35.3		28.9	47.7	75.5				
6.4	18.6	35.5		29.3	47.9	75.8				
6.6	18.9	35.6		29.8	48.2	76.2				
6.7	19.3	35.8		30.2	48.4	76.5				
6.9	19.7	36.0		30.6	48.8	76.9				
7.0	20.2	36.2		30.9	49.1	77.2				
7.2	20.6	36.3		31.3	49.5	77.6				
7.4	21.0	36.5		31.7	49.8	78.0				
7.6	21.4	36.6		32.1	50.2	78.3				
7.8	21.9	36.8		32.6	50.5	78.7				
8.0	22.3	37.0		33.0	50.9	79.0				
8.2	22.8	37.2		33.4	51.2	79.4				
8.3	23.2	37.3		33.8	51.6	79.7				
8.5	23.7	37.5		34.2	51.9	80.1				
8.6	24.2	37.7		34.7	52.4	80.4				
8.8	24.8	37.9		35.1	52.9	80.8				
9.0	25.3	38.0		35.5	53.5	81.1				
9.1	25.8	38.2		36.0	54.0	81.5				
9.3	26.3	38.3		36.5	54.5	81.8				
9.4	26.7	38.5		37.0	55.3	82.2				
9.6	27.2	38.6		37.5	56.0	82.5				
9.8	27.6	38.7		38.0	56.8	82.9				

SG = Subgrade
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CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE	
				I-5987B	47533.1.3	I-95	
TEST LOCATIONS DESCRIPTION				COUNTY	ENGINEER	TECHNICIANS	
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley	
-L- 689+00 NB DECEL				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN	
-L- 689+00 NB DECEL				12/3 to 12/19/2019	-L- 689+00 NB ISL	12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	AG	393161.0	2005674.1	STBC	AG	393176.4	2005658.0
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
1.3	16.0	24.7		0.9	36.7	49.6	
1.7	16.2	24.9		1.7	37.2	49.8	
2.2	16.4	25.0		2.2	37.6	49.9	
2.7	16.6	25.2		2.8	38.1	50.1	
3.2	16.8	25.3		3.5	38.5	50.3	
3.7	16.9	25.5		4.0	38.8	50.4	
4.2	17.1	25.6		4.6	39.2	50.6	
4.7	17.2	25.7		5.1	39.6	50.7	
5.1	17.4	25.9		5.7	40.0	50.9	
5.6	17.6	26.0		6.3	40.4	51.1	
6.0	17.7	26.1		6.9	40.9	51.2	
6.5	17.9	26.2		7.5	41.3	51.4	
6.8	18.0	26.3		8.1	41.8	51.5	
7.2	18.2	26.5		8.7	42.1	51.7	
7.5	18.4	26.6		9.2	42.5	51.8	
7.9	18.6	26.7		9.8	42.8	52.0	
8.2	18.8			10.3	43.1	52.1	
8.5	19.0	DCP Refusal		10.9	43.3	52.3	
8.8	19.2			11.7	43.6	52.4	
9.1	19.3			12.4	43.8		
9.4	19.5			13.1	44.1	DCP Refusal	
9.7	19.6			13.9	44.3		
9.9	19.8			14.8	44.5		
10.1	19.9			15.9	44.7		
10.4	20.1			17.0	45.0		
10.6	20.3			18.1	45.2		
10.8	20.4			19.3	45.4		
11.0	20.6			20.5	45.6		
11.2	20.8			22.0	45.8		
11.4	21.0			23.4	46.1		
11.6	21.1			24.7	46.3		
11.8	21.3			26.0	46.5		
12.0	21.4			27.0	46.6		
12.3	21.6			27.7	46.7		
12.5	21.8			28.3	46.9		
12.8	22.0			28.7	47.0		
13.0	22.1			29.2	47.1		
13.2	22.3			29.7	47.3		
13.4	22.5			30.2	47.4		
13.5	22.6			30.6	47.6		
13.7	22.8			31.1	47.7		
13.9	22.9			31.5	47.9		
14.1	23.1			32.0	48.0		
14.3	23.2			32.5	48.2		
14.4	23.4			33.0	48.3		
14.6	23.6			33.5	48.5		
14.8	23.7			34.0	48.6		
15.0	23.9			34.5	48.7		
15.1	24.1			34.9	48.9		
15.3	24.2			35.4	49.0		
15.4	24.3			35.8	49.2		
15.6	24.5			36.1	49.3		
15.8	24.6			36.4	49.5		

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE	
				I-5987B	47533.1.3	I-95	
TEST LOCATIONS DESCRIPTION				COUNTY	ENGINEER	TECHNICIANS	
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley	
-L- 689+00 NB ISS				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN	
-L- 689+00 NB ISS				12/3 to 12/19/2019	-L- 689+00 NB OSS	12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	393180.9	2005650.0	STBC	AG	393159.8	2005684.7
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
2.8	52.7			1.7	26.0	39.8	59.2
4.7	53.3			2.7	26.4	40.0	59.6
5.6	53.7			3.3	26.8	40.3	59.9
6.2	54.1			4.0	27.1	40.5	60.2
6.7	54.4			4.7	27.5	40.8	60.5
7.1	54.8			5.1	27.8	41.0	60.8
7.6	55.2			5.3	28.1	41.3	61.1
8.1	55.5			5.6	28.4	41.6	61.4
8.6	55.8			5.8	28.6	41.9	61.7
9.1	56.2			6.1	28.9	42.1	62.1
9.6	56.5			6.3	29.1	42.4	62.5
10.5	56.8			6.6	29.3	42.7	62.8
11.4	57.1			6.9	29.6	43.0	63.2
12.2	57.4			7.1	29.8	43.2	63.6
13.1	57.6			7.4	30.1	43.5	63.9
14.0	57.9			7.7	30.3	43.7	64.2
15.0	58.2			7.9	30.6	44.0	64.6
16.0	58.5			8.2	30.8	44.3	64.9
17.1	58.8			8.4	31.1	44.5	65.2
18.1	59.2			8.7	31.3	44.8	65.5
19.2	59.5			8.9	31.6	45.0	65.8
20.2	59.8			9.2	31.9	45.3	66.1
21.1	60.1			9.5	32.2	45.6	66.4
22.0	60.3			9.8	32.5	45.8	66.7
22.9	60.6			10.1	32.8	46.1	67.1
23.9	60.8			10.4	33.1	46.3	67.4
24.9	61.1			10.6	33.3	46.6	67.8
25.9	61.3			10.8	33.6	46.9	68.1
27.0	61.6			11.1	33.8	47.2	68.5
28.1	61.8			11.3	34.1	47.4	68.9
29.2	62.1			11.5	34.4	47.7	69.3
30.6	62.3			11.9	34.6	48.0	69.7
32.0	62.6			12.3	34.9	48.3	70.1
33.4	62.9			12.8	35.1	48.6	70.5
35.8	63.2			13.2	35.4	49.0	71.0
38.2	63.5			13.6	35.6	49.3	71.5
40.6	63.8			14.1	35.9	49.6	71.9
42.6	64.1			14.5	36.1	50.1	72.4
43.2	64.3			15.0	36.4	50.5	72.9
43.8	64.6			15.4	36.6	51.0	73.5
44.5	64.8			15.9	36.8	51.4	74.0
45.2	65.1			16.8	37.1	51.9	74.6
45.8	65.3			17.8	37.3	52.7	75.1
46.5	65.6			18.7	37.6	53.4	75.7
47.2	65.8			19.7	37.8	54.2	76.4
47.8	66.1			20.6	38.0	54.9	77.1
48.4	66.3			21.7	38.3	55.7	77.8
48.9	66.6			22.9	38.5	56.3	78.5
49.5	66.8			24.0	38.8	56.9	79.2
50.1	67.1			24.5	39.0	57.4	
50.7	67.3			24.9	39.2	58.0	
51.4	67.6			25.4	39.4	58.6	
52.0				25.7	39.6	58.9	

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS	
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley	
-L- 719+25 NB ACCEL				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN	
				12/3 to 12/19/2019		-L- 719+25 NB ISS		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
SG	FILL	395668.6	2007368.4	SG	FILL	395687.3	2007339.7		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
3.0	36.8	58.1		5.7	28.1	40.8			
4.5	37.0	58.3		7.7	28.3	41.0			
5.7	37.3	58.5		8.6	28.6	41.2			
6.8	37.5	58.7		9.6	28.9	41.3			
7.6	37.8	58.9		10.4	29.2	41.5			
8.6	38.0	59.1		11.2	29.5	41.7			
9.5	38.3	59.3		12.0	29.7	41.9			
10.3	38.5	59.4		12.4	30.0	42.0			
11.0	38.8	59.6		12.9	30.3	42.2			
11.8	39.1	59.8		13.5	30.5	42.3			
12.4	39.3	59.9		14.0	30.8	42.5			
13.1	39.6	60.1		14.5	31.0				
13.7	39.8	60.2		15.1	31.3	DCP Refusal			
14.3	40.1	60.4		15.5	31.5				
15.0	40.4	60.5		16.1	31.8				
15.9	40.7	60.7		16.6	32.1				
16.8	41.1	60.8		17.0	32.3				
17.7	41.4	61.0		17.3	32.6				
18.5	41.7	61.1		17.7	32.9				
19.3	42.1	61.3		18.0	33.1				
20.1	42.5	61.4		18.4	33.4				
20.7	42.9	61.5		18.7	33.6				
21.4	43.3	61.6		19.1	33.9				
21.8	43.7	61.7		19.4	34.1				
22.4	44.3	61.8		19.8	34.3				
22.9	44.8	61.9		20.1	34.6				
23.6	45.4	62.1		20.5	34.8				
24.3	45.9	62.2		20.8	35.1				
25.0	46.5	62.3		21.1	35.3				
25.8	47.3	62.5		21.5	35.6				
26.6	48.0	62.6		21.8	35.8				
27.5	48.8	62.7		22.1	36.1				
28.4	49.6	62.8		22.4	36.3				
29.3	50.4	63.0		22.6	36.6				
30.2	51.2	63.1		22.9	36.9				
30.7	52.2			23.1	37.2				
31.2	53.2			23.4	37.5				
31.7	54.2			23.7	37.8				
32.2	54.5			24.0	38.1				
32.6	54.9			24.2	38.3				
33.0	55.2			24.5	38.5				
33.4	55.6			24.8	38.7				
33.6	55.9			25.1	38.9				
33.9	56.1			25.4	39.1				
34.1	56.3			25.6	39.3				
34.4	56.6			25.9	39.5				
34.6	56.8			26.2	39.7				
34.9	57.0			26.5	39.9				
35.3	57.2			26.7	40.1				
35.6	57.4			27.0	40.2				
36.0	57.5			27.2	40.4				
36.3	57.7			27.5	40.5				
36.5	57.9			27.8	40.7				

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS	
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley	
-L- 719+25 NB OSL				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN	
				12/3 to 12/19/2019		-L- 719+25 NB OSS		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
STBC	FILL	395674.7	2007361.1	SG	FILL	395665.8	2007375.6		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
0.7	11.5	22.1		2.5	57.5				
1.1	11.7	22.3		4.0	57.9				
1.4	11.8	22.6		5.0	58.2				
1.8	12.0	22.8		6.1	58.6				
2.1	12.2	23.1		7.1	59.0				
2.5	12.3	23.3		8.2	59.3				
2.7	12.5	23.5		9.1	59.6				
2.9	12.7	23.8		10.0	59.9				
3.0	12.8	24.0		10.8	60.2				
3.2	13.0	24.2		11.8	60.5				
3.4	13.1	24.4		12.7	60.9				
3.5	13.3	24.6		13.6	61.2				
3.6	13.4	24.8		14.7	61.6				
3.8	13.6	25.0		15.7	61.9				
3.9	13.8	25.2		16.8	62.3				
4.0	13.9	25.4		18.1	62.7				
4.2	14.1	25.6		19.4	63.0				
4.4	14.3	25.9		20.5	63.4				
4.6	14.5	26.1		21.6	63.7				
4.8	14.7	26.3		22.7	64.1				
5.0	14.8	26.5		23.7	64.4				
5.2	15.0	26.8		24.9	64.7				
5.4	15.2	27.0		26.3	65.1				
5.5	15.4	27.3		27.8	65.4				
5.7	15.6	27.5		29.5	65.7				
5.9	15.7	27.7		31.2	66.0				
6.1	15.9	27.8		32.8	66.3				
6.4	16.1	28.0		34.5	66.6				
6.6	16.3	28.1		36.0	66.9				
6.9	16.5	28.3		37.0	67.2				
7.1	16.6	28.4		38.0	67.5				
7.3	16.8	28.5		38.8	67.8				
7.5	17.0	28.7		39.5	68.0				
7.7	17.2	28.8		40.3	68.3				
7.9	17.4	28.9		41.0	68.6				
8.1	17.6	29.0		41.8	68.9				
8.3	17.8	29.1		42.5	69.2				
8.5	18.0	29.3		43.3	69.5				
8.7	18.2	29.4		44.2	69.8				
8.9	18.4	29.5		45.1	70.1				
9.1	18.7	29.6		46.0	70.3				
9.3	18.9	29.8		47.6	70.6				
9.5	19.1	29.9		49.2	70.8				
9.8	19.4	30.1		50.8	71.1				
10.0	19.6	30.2		52.7	71.3				
10.2	19.9	30.3		53.7	71.6				
10.4	20.1	30.4		54.4	71.8				
10.6	20.4	30.6		54.9	72.1				
10.7	20.7	30.7		55.4	72.3				
10.9	21.0	30.8		55.8	72.6				
11.1	21.2			56.3					
11.2	21.5			56.7					
11.4	21.8			57.1					

SG = Subgrade
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CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE					
				I-5987B	47533.1.3	I-95					
TEST LOCATIONS DESCRIPTION				COUNTY	ENGINEER	TECHNICIANS					
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley					
-L- 745+55 NB ISL				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN					
-L- 745+55 NB ISS				12/3 to 12/19/2019	12/3 to 12/19/2019						
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING				
STBC	FILL	398038.7	2008521.6	SG	FILL	398039.1	2008520.0				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
1.1	12.1	20.1		2.7	24.6	40.5					
1.5	12.2	20.3		3.9	25.0	40.7					
1.8	12.5	20.4		4.9	25.4	41.0					
2.1	12.7	20.5		5.4	25.7	41.2					
2.4	13.0	20.6		6.3	26.0	41.5					
2.7	13.2	20.7		6.9	26.3	41.7					
3.1	13.5	20.9		7.5	26.6	42.0					
3.4	13.7	21.0		8.1	26.8	42.2					
3.7	13.8	21.1		8.6	27.1	42.5					
4.1	14.0	21.2		9.0	27.4	42.8					
4.4	14.1	21.4		9.5	27.8	43.0					
4.7	14.3	21.5		9.9	28.1	43.3					
5.1	14.4	21.7		10.4	28.4	43.5					
5.4	14.6	21.8		10.8	28.7	43.8					
5.7	14.7	21.9		11.2	29.0	44.1					
6.0	14.9	22.0		11.6	29.3	44.4					
6.3	15.0	22.2		12.0	29.7	44.8					
6.5	15.1	22.3		12.4	30.0	45.1					
6.6	15.3	22.4		12.7	30.3	45.4					
6.8	15.4	22.6		13.1	30.5	45.7					
7.0	15.6	22.7		13.5	30.8	45.9					
7.2	15.7	22.9		13.8	31.1	46.2					
7.3	15.8	23.0		14.2	31.4	46.4					
7.5	15.9	23.2		14.5	31.7	46.7					
7.7	16.0	23.3		14.9	32.0	47.0					
8.0	16.1	23.4		15.2	32.2	47.3					
8.3	16.2	23.5		15.6	32.5	47.5					
8.6	16.3	23.6		16.0	32.8	47.8					
8.9	16.4	23.7		16.4	33.1	48.1					
9.2	16.6	23.8		16.8	33.4	48.4					
9.3	16.7	23.9		17.1	33.7	48.7					
9.5	16.8	23.9		17.5	33.9	48.9					
9.6	17.0	24.0		17.8	34.2	49.2					
9.8	17.2	24.1		18.2	34.5	49.5					
9.9	17.3	24.3		18.5	34.9	49.8					
10.0	17.5	24.4		18.8	35.2	50.0					
10.1	17.7	24.6		19.2	35.5	50.3					
10.3	17.8	24.7		19.5	35.9	50.5					
10.4	18.0	24.9		19.8	36.2	50.8					
10.5	18.1	25.0		20.1	36.5						
10.6	18.3	25.2		20.4	36.8		Terminate				
10.7	18.4	25.3		20.8	37.1						
10.8	18.5	25.5		21.1	37.4						
10.9	18.6	25.6		21.5	37.6						
11.0	18.7			21.8	37.9						
11.1	18.8	DCP Refusal		22.0	38.3						
11.3	18.9			22.3	38.6						
11.4	19.1			22.6	39.0						
11.6	19.3			22.9	39.2						
11.7	19.5			23.2	39.5						
11.8	19.7			23.5	39.7						
11.9	19.9			23.9	40.0						
12.0	20.0			24.2	40.2						

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE					
				I-5987B	47533.1.3	I-95					
TEST LOCATIONS DESCRIPTION				COUNTY	ENGINEER	TECHNICIANS					
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley					
-L- 745+55 NB OSS				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN					
-L- 772+25 NB ISS				12/3 to 12/19/2019	12/3 to 12/19/2019						
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING				
SG	FILL	398028.3	2008543.9	STBC	CUT	400510.0	2009501.5				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
2.0	25.1	37.0	53.9	75.0		1.5	21.6	37.2	57.4	81.1	
3.2	25.3	37.2	54.3	75.3		2.4	21.8	37.8	57.7	82.0	
4.2	25.6	37.5	54.7	75.6		3.0	22.0	38.3	58.1	82.8	
4.9	25.9	37.7	55.0	75.9		3.4	22.3	38.9	58.4	83.6	
5.5	26.1	38.0	55.4	76.2		3.9	22.4	39.4	58.8		
6.1	26.3	38.2	55.7	76.6		4.3	22.6	39.9	59.1		
6.8	26.5	38.5	56.1	77.0		4.8	22.8	40.3	59.5		
7.6	26.7	38.7	56.4	77.4		5.1	23.0	40.9	59.9		
8.1	26.9	39.0	56.7	77.8		5.5	23.4	41.4	60.2		
8.5	27.1	39.2	57.1	78.2		5.9	23.6	41.8	60.7		
9.1	27.3	39.5	57.4	78.6		6.2	24.0	42.1	61.0		
9.8	27.6	39.8	57.8	78.9		6.7	24.1	42.6	61.5		
10.4	27.8	40.1	58.1	79.3		7.0	24.5	43.1	61.7		
11.1	28.0	40.4	58.6	79.6		7.2	24.9	43.5	62.1		
11.7	28.2	40.7	59.1	80.0		7.6	25.1	43.9	62.4		
12.4	28.4	41.0	59.6	80.4		7.9	25.5	44.3	62.9		
12.9	28.7	41.3	60.1	80.8		8.3	25.7	44.6	63.1		
13.3	28.9	41.5	60.6	81.1		8.6	26.1	44.8	63.3		
13.8	29.1	41.8	61.0	81.5		8.9	26.3	45.3	63.7		
14.3	29.3	42.0	61.5	81.9		9.4	26.7	45.6	64.1		
14.7	29.5	42.3	61.9	82.3		9.7	26.9	46.0	64.3		
15.2	29.6	42.7	62.4	82.8		10.0	27.1	46.3	64.6		
15.6	29.8	43.0	62.8	83.2		10.4	27.4	46.7	64.9		
16.0	30.0	43.4	63.3	83.7		10.8	27.7	47.0	65.5		
16.4	30.2	43.7	63.7	84.1		11.1	27.9	47.4	65.8		
16.7	30.4	44.1	64.2	84.5		11.3	28.0	47.9	66.3		
17.1	30.7	44.4	64.6	84.9		11.7	28.4	48.2	66.6		
17.4	30.9	44.7	65.1	85.4		12.2	28.6	48.6	66.9		
17.7	31.1	45.1	65.6	85.8		12.6	28.9	49.1	67.4		
18.1	31.3	45.4	66.1	86.2		12.9	29.0	49.5	67.8		
18.4	31.5	45.7	66.5	86.6		13.2	29.4	49.8	68.1		
18.7	31.8	46.0	67.0	87.1		13.6	29.7	50.3	68.5		
19.1	32.0	46.4	67.5	87.5		14.1	29.9	50.6	68.9		
19.4	32.2	46.7	67.9	88.0		14.4	30.2	51.1	69.3		
19.7	32.4	47.1	68.3	88.4		14.9	30.5	51.4	69.5		
20.1	32.7	47.4	68.8	88.9		15.2	30.9	51.8	69.9		
20.4	32.9	47.8	69.2	89.5		15.6	31.2	51.9	70.3		
20.6	33.2	48.1	69.6	90.0		16.1	31.5	52.4	70.9		
20.9	33.4	48.5	69.9	90.6		16.5	31.7	52.6	71.3		
21.1	33.6	48.8	70.3	91.1		16.8	32.1	52.9	71.8		
21.4	33.8	49.2	70.6	91.7		17.2	32.5	53.3	72.3		
21.6	34.1	49.5	71.0	92.3		17.5	32.7	53.7	72.8		
21.9	34.3	49.8	71.3	93.0		17.9	33.0	54.0	73.4		
22.2	34.5	50.2	71.6	93.6		18.3	33.3	54.3	73.9		
22.6	34.7	50.5	71.9	94.2		18.6	33.8	54.7	74.7		
22.9	35.0	50.8	72.3	95.3		18.9	34.1	55.0	75.1		
23.2	35.2	51.2	72.6	96.4		19.3	34.5	55.3	75.8		
23.5	35.5	51.5	72.9	97.5		19.5	34.8	55.5	76.5		
23.7	35.7	51.9	73.3	98.6		19.9	35.2	55.8	77.2		
24.0	36.0	52.2	73.6	99.7		20.2	35.5	56.1	77.8		
24.2	36.2	52.6	74.0			20.5	35.9	56.4	78.6		
24.5	36.5	53.0	74.3			20.8	36.3	56.8	79.2		
24.8	36.7	53.4	74.7			21.2	36.7	57.1	80.1		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
-L- 772+25 NB OSL <td colspan="2">Robeson <td colspan="2">VLAD MITCHEV <td colspan="2">D. Strother/J. Swartley </td></td></td>				Robeson <td colspan="2">VLAD MITCHEV <td colspan="2">D. Strother/J. Swartley </td></td>		VLAD MITCHEV <td colspan="2">D. Strother/J. Swartley </td>		D. Strother/J. Swartley			
DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019		-L- 772+25 NB OSS		12/3 to 12/19/2019		-L- 772+25 NB OSS		12/3 to 12/19/2019			
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING
STBC	CUT	400507.1	2009525.8	SG	CUT	400506.9	2009532.6				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
2.2	19.8	27.9		1.8	28.6	52.0	72.9				
3.2	20.1	28.0		3.0	29.1	52.3	73.6				
3.6	20.3	28.1		3.7	29.7	52.6	74.4				
3.9	20.6	28.2		4.5	30.2	53.0	75.3				
4.1	20.8	28.4		5.2	30.7	53.3	76.1				
4.4	21.0	28.5		5.9	31.2	53.7	77.3				
4.6	21.2	28.6		6.4	31.8	54.0	78.4				
4.9	21.4	28.8		6.8	32.3	54.3	79.6				
5.3	21.6	29.0		7.5	32.9	54.7	81.0				
5.7	21.8	29.2		8.2	33.4	55.0	82.4				
6.2	22.0	29.4		8.9	34.0	55.4	83.8				
6.6	22.1	29.6		9.7	34.5	55.7	85.2				
7.0	22.3	29.7		10.4	35.1	56.0	86.6				
7.3	22.4	29.8		11.2	35.6	56.3	88.0				
7.5	22.6	30.0		11.9	36.2	56.5	89.4				
7.8	22.7	30.1		12.7	36.7	56.8	90.7				
8.0	22.9	30.2		13.4	37.2	57.1	92.1				
8.3	23.0	30.3		14.1	37.8	57.4	93.4				
8.6	23.2	30.4		14.8	38.3	57.7	94.6				
9.0	23.3	30.6		15.5	38.8	58.1	95.9				
9.3	23.4	30.7		15.9	39.4	58.4					
9.7	23.5	30.8		16.3	40.0	58.7					
10.0	23.7	30.9		16.7	40.5	59.1					
10.5	23.8	31.0		17.1	41.1	59.5					
11.1	23.9	31.1		17.4	41.7	59.8					
11.6	24.0	31.2		17.8	42.1	60.2					
12.2	24.2	31.3		18.1	42.6	60.6					
12.7	24.3	31.5		18.5	43.0	60.9					
13.1	24.5	31.7		18.8	43.5	61.2					
13.5	24.6	31.8		19.1	43.9	61.5					
13.9	24.8	32.0		19.5	44.3	61.8					
14.3	25.0	32.2		19.8	44.6	62.1					
14.7	25.1	32.3		20.1	45.0	62.4					
15.0	25.3	32.5		20.5	45.3	62.7					
15.2	25.5	32.6		20.9	45.7	63.1					
15.5	25.6	32.8		21.2	46.0	63.4					
15.7	25.7	32.9		21.6	46.4	63.7					
16.0	25.9	33.0		22.0	46.7	64.1					
16.2	26.0	33.1		22.4	47.1	64.5					
16.5	26.1	33.2		22.8	47.4	64.8					
16.7	26.3	33.3		23.3	47.7	65.2					
17.0	26.5	33.4		23.7	48.0	65.6					
17.2	26.6			24.1	48.4	66.1					
17.4	26.8	DCP REFUSAL		24.5	48.7	66.6					
17.7	27.0			24.9	49.0	67.2					
17.9	27.1			25.3	49.4	67.7					
18.2	27.2			25.7	49.7	68.2					
18.4	27.4			26.1	50.1	68.9					
18.6	27.5			26.5	50.4	69.6					
18.9	27.6			26.9	50.8	70.2					
19.1	27.7			27.3	51.1	70.9					
19.4	27.8			27.7	51.4	71.6					
19.6	27.8			28.1	51.7	72.3					

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
-L- 798+50 NB ISL				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019		-L- 798+50 NB ISS		12/3 to 12/19/2019		-L- 798+50 NB ISS		12/3 to 12/19/2019			
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	403025.0	2010237.1	STBC	FILL	403025.5	2010231.6				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
1.5	58.0			1.3	19.8	56.0					
2.5	58.9			2.0	20.1	56.7					
3.3	59.9			2.6	20.6	57.6					
4.0	60.9			3.1	21.0	58.5					
4.8	61.9			3.4	21.3	59.3					
5.5	62.9			3.8	21.7	60.6					
6.1	64.0			4.1	22.2	62.0					
6.8	65.2			4.4	22.8	63.5					
7.4	66.4			4.6	23.4	64.7					
7.7	67.5			4.9	24.1	65.8					
8.3	68.4			5.3	24.7	66.9					
8.9	69.5			5.6	25.4	68.4					
9.4	70.3			5.7	26.0	70.1					
9.9	71.2			6.0	26.5	71.5					
10.4	72.0			6.3	27.0	73.2					
11.1				6.7	27.6	74.7					
11.8				6.9	28.1	76.4					
12.5				7.2	28.8	77.9					
13.1				7.5	29.6	79.3					
13.8				7.9	30.2	80.9					
14.8				8.1	31.0						
15.7				8.3	31.6						
16.7				8.6	32.3						
18.0				8.7	32.9						
19.3				9.0	33.7						
20.6				9.4	34.2						
22.6				9.7	34.9						
24.6				10.1	35.8						
26.7				10.3	36.7						
28.9				10.7	37.5						
30.9				11.0	38.4						
32.9				11.5	39.2						
34.6				11.7	40.4						
36.4				12.2	41.6						
38.0				12.5	42.7						
39.5				12.8	44.1						
40.6				13.1	45.2						
42.1				13.4	45.8						
43.3				13.8	46.6						
44.7				14.1	47.3						
46.1				14.5	48.1						
47.0				14.8	49.0						
48.2				15.2	49.9						
49.1				15.6	50.5						
50.2				15.9	51.0						
51.1				16.4	51.6						
52.2				17.0	52.0						
53.1				17.5	52.5						
53.9				17.8	52.9						
54.7				18.4	53.5						
55.5				18.7	54.0						
56.3				19.1	54.5						
57.0				19.4	55.2						

SG = Subgrade
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Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE					
				I-5987B	47533.1.3	I-95					
				COUNTY	ENGINEER	TECHNICIANS					
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley					
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN					
-L- 798+50 NB OSS				12/3 to 12/19/2019	-L- 825+00 NB ISS	12/3 to 12/19/2019					
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING				
SG	FILL	403024.9	2010264.1	STBC	CUT	405642.8	2010619.6				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
2.9	65.4			1.6	33.3	62.8	86.5				
4.9	67.4			2.7	33.8	63.2					
6.1	69.9			3.5	34.5	63.8					
7.3	72.1			4.3	35.0	64.2					
8.2	74.1			5.1	35.7	64.6					
8.9	76.1			5.8	36.5	65.1					
9.8	78.0			6.4	37.2	65.5					
10.7	79.8			7.0	37.9	66.0					
11.4	81.6			7.6	38.7	66.4					
12.0	83.2			8.2	39.6	66.9					
13.0	84.8			8.7	40.4	67.2					
13.7	86.4			9.1	41.1	67.6					
14.3	87.7			9.6	41.7	68.0					
15.2	89.0			10.4	42.2	68.4					
15.5	89.8			11.0	42.9	68.7					
16.2	90.5			11.7	43.6	69.2					
16.7				12.2	44.3	69.5					
17.5				12.6	45.0	69.9					
18.3				13.0	45.5	70.3					
19.1				13.5	46.2	70.9					
20.0				14.0	46.9	71.3					
20.9				14.5	47.6	71.6					
21.8				14.9	48.1	72.1					
22.5				15.4	48.7	72.4					
23.2				16.0	49.3	72.7					
23.9				16.4	49.9	73.2					
24.7				16.8	50.4	73.6					
25.4				17.3	51.0	74.0					
26.2				17.7	51.6	74.7					
27.3				18.3	52.1	75.1					
28.5				18.7	52.7	75.6					
29.6				19.4	53.1	75.9					
31.2				20.0	53.5	76.5					
32.9				20.6	53.9	77.0					
34.5				21.2	54.4	77.5					
36.4				21.9	54.9	77.9					
39.2				22.6	55.2	78.3					
41.6				23.3	55.6	78.7					
43.0				24.1	56.1	79.2					
44.1				24.7	56.6	79.6					
45.3				25.2	57.0	80.1					
46.7				25.8	57.5	80.6					
48.3				26.4	58.0	81.1					
49.4				27.3	58.4	81.8					
50.6				28.2	58.9	82.2					
51.7				29.1	59.2	82.6					
53.2				29.5	59.8	83.1					
54.8				30.0	60.3	83.6					
56.2				30.6	60.6	84.2					
57.8				31.1	61.1	84.6					
59.3				31.6	61.5	85.2					
61.0				32.2	61.8	85.6					
63.0				32.7	62.3	86.1					

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE					
				I-5987B	47533.1.3	I-95					
				COUNTY	ENGINEER	TECHNICIANS					
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley					
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN					
-L- 825+00 NB OSL				12/3 to 12/19/2019	-L- 825+00 NB OSS	12/3 to 12/19/2019					
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING				
STBC	CUT	405651.9	2010643.4	SG	CUT	405643.9	2010652.0				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
1.8	11.6	20.3	43.7	59.9	76.5	1.5	26.1	50.7	73.5	88.5	
2.2	11.7	20.5	44.0	60.2	76.9	2.8	26.5	51.1	73.9	88.8	
2.5	11.8	20.8	44.3	60.6	77.4	3.5	26.9	51.3	74.4	89.0	
2.9	12.1	21.0	44.6	60.9	77.9	4.2	27.3	51.6	74.7	89.3	
3.0	12.2	21.2	45.1	61.4	78.5	4.8	27.7	52.1	75.1	89.5	
3.4	12.3	21.3	45.4	61.9	78.9	5.3	28.1	52.6	75.5	89.8	
3.5	12.5	21.6	45.8	62.4	79.2	5.8	28.5	53.0	75.7	90.0	
3.7	12.6	21.8	46.3	62.7	79.7	6.2	28.8	53.3	76.1	90.2	
3.8	12.7	22.0	46.7	63.3	80.1	6.6	29.3	53.6	76.5	90.5	
3.9	13.0	22.1	47.1	63.6	80.5	7.2	29.6	54.1	76.7	90.8	
4.1	13.1	22.5	47.6	63.9	80.8	7.6	30.0	54.4	77.0	91.1	
4.5	13.2	23.1	48.0	64.1	81.0	7.9	30.5	54.6	77.2	91.2	
4.7	13.3	23.8	48.4	64.3	81.3	8.3	30.9	54.9	77.4	91.4	
4.8	13.4	24.3	48.7	64.7	81.6	8.5	31.5	55.2	77.7	91.7	
5.2	13.5	24.8	49.1	65.0	81.8	9.0	32.0	55.5	78.1	91.9	
5.4	13.7	25.3	49.5	65.5	82.1	9.5	32.6	55.8	78.3	92.2	
5.6	13.8	25.6	49.9	65.8	82.4	10.1	33.1	56.3	78.6	92.4	
5.9	13.9	26.2	50.2	66.2	82.8	10.5	33.7	56.8	78.8	92.8	
6.1	14.0	26.5	50.4	66.7	82.9	10.9	34.2	57.2	79.2	93.0	
6.4	14.2	27.0	50.8	66.9	83.3	11.3	34.7	57.8	79.4	93.3	
6.5	14.4	27.6	50.9	67.3	83.6	11.9	35.3	58.2	79.8		
6.7	14.5	28.3	51.3	67.6		12.3	35.7	58.8	80.0		
6.8	14.7	28.8	51.7	68.0		12.9	36.1	59.5	80.3		
7.1	14.9	29.4	51.8	68.3		13.5	36.4	59.9	80.6		
7.2	15.0	30.1	52.2	68.5		13.9	36.8	60.6	80.7		
7.3	15.1	31.0	52.4	68.9		14.5	37.3	61.1	81.0		
7.5	15.2	31.8	52.7	69.1		15.1	37.7	61.8	81.2		
7.7	15.3	32.6	53.0	69.3		15.6	38.2	62.3	81.7		
7.8	15.4	33.6	53.2	69.6		16.2	38.7	62.8	81.9		
8.0	15.6	34.4	53.3	70.0		16.7	39.3	63.4	82.0		
8.3	15.7	35.0	53.7	70.1		17.3	39.8	63.9	82.5		
8.5	15.8	35.5	53.9	70.5		17.7	40.4	64.4	82.6		
8.6	16.0	36.2	54.1	70.7		18.2	40.8	64.9	82.8		
8.7	16.2	36.8	54.4	71.1		18.6	41.4	65.3	83.1		
8.9	16.4	37.4	54.6	71.4		19.2	41.8	65.9	83.4		
9.0	16.5	37.8	54.9	71.7		19.7	42.2	66.3	83.7		
9.2	16.8	38.2	55.1	71.9		20.3	42.7	66.9	84.0		
9.3	17.0	38.7	55.4	72.2		20.7	43.3	67.4	84.2		
9.5	17.1	39.1	55.6	72.4		21.1	43.8	67.9	84.5		
9.6	17.2	39.6	55.9	72.8		21.5	44.2	68.3	84.9		
9.8	17.5	40.0	56.1	73.0		21.7	44.8	68.7	85.2		
10.0	17.6	40.3	56.4	73.3		22.0	45.4	69.0	85.6		
10.1	17.7	40.6	56.6	73.7		22.5	45.8	69.5	85.8		
10.2	17.8	40.9	56.9	74.1		22.8	46.5	69.8	86.2		
10.5	18.2	41.2	57.4	74.4		23.1	46.9	70.2	86.6		
10.6	18.3	41.4	57.6	74.5		23.6	47.3	70.6	86.8		
10.7	18.4	41.8	57.9	74.6		23.9	47.7	70.9	87.1		
10.8	18.7	41.9	58.1	74.8		24.2	48.1	71.3	87.3		
11.0	19.0	42.3	58.4	75.0		24.6	48.4	71.7	87.4		
11.1	19.2	42.6	58.7	75.3		24.9	48.8	72.1	87.7		
11.3	19.5	42.9	59.0	75.7		25.2	49.3	72.4	87.9		
11.4	19.8	43.1	59.2	76.0		25.5	49.8	72.8	88.1		
11.5	20.1	43.4	59.5	76.2		25.8	50.2	73.2	88.3		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 851+90 NB ISL				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 851+90 NB ISS		12/3 to 12/19/2019			
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	408312.9	2011014.1	STBC	AG	408313.1	2011013.1				
Cumulative Penetration in Centimeters						Cumulative Penetration in Centimeters					
1.1	21.2	32.4		1.6	30.0	59.0	80.6				
1.8	21.5	32.5		2.6	30.8	59.5	80.9				
2.3	21.7	32.8		3.4	31.4	59.9	81.1				
2.7	21.9	32.9		4.1	32.3	60.4	81.4				
3.2	22.1	33.1		4.7	33.1	60.7	81.7				
3.5	22.4	33.2		5.4	33.9	61.2	82.1				
4.1	22.6	33.4		6.1	34.9	61.6	82.7				
4.5	22.8	33.7		6.7	35.7	61.9	82.9				
5.0	23.1	33.8		7.2	36.6	62.5	83.4				
5.3	23.4	33.9		7.9	37.5	62.9	83.8				
5.6	23.6	34.2		8.3	38.6	63.3	84.2				
5.9	23.9			9.0	39.4	63.8	84.7				
6.3	24.2			9.7	40.2	64.2	85.1				
6.6	24.5			10.3	41.1	64.5	85.4				
6.8	24.8			10.8	41.9	65.0	85.9				
7.2	24.9			11.2	42.6	65.5	86.3				
7.5	25.3			11.7	43.1	65.8	86.5				
7.9	25.6			12.2	43.7	66.1	87.1				
8.3	25.7			12.4	44.1	66.4	87.4				
8.5	26.0			12.9	44.6	66.8	87.7				
9.0	26.2			13.4	45.0	67.2	88.1				
9.3	26.4			13.6	45.5	67.5	88.4				
9.7	26.5			14.1	45.9	68.0	88.9				
10.1	26.8			14.4	46.3	68.4	89.2				
10.5	26.9			14.7	46.8	68.8					
11.0	27.2			15.1	47.2	69.2					
11.3	27.4			15.6	47.8	69.6					
11.6	27.7			15.9	48.1	70.1					
12.2	27.8			16.4	48.6	70.4					
12.5	28.0			16.8	49.0	70.8					
12.9	28.1			17.3	49.4	71.2					
13.3	28.4			17.8	49.8	71.7					
13.6	28.6			18.3	50.3	72.1					
14.0	28.7			18.7	50.8	72.6					
14.5	28.9			19.1	51.1	73.0					
15.0	29.0			19.6	51.5	73.4					
15.3	29.2			20.3	52.0	73.9					
15.7	29.5			20.8	52.3	74.3					
16.0	29.6			21.3	52.8	74.7					
16.5	29.7			21.6	53.3	75.3					
16.8	29.9			22.2	53.7	75.6					
17.1	30.1			22.8	54.0	76.1					
17.5	30.2			23.3	54.4	76.5					
17.9	30.4			23.7	54.8	76.7					
18.2	30.7			24.2	55.2	77.1					
18.5	30.8			24.8	55.6	77.5					
19.0	31.1			25.4	56.0	77.9					
19.4	31.2			26.1	56.6	78.3					
19.7	31.4			26.5	57.0	78.6					
20.0	31.6			27.2	57.4	79.2					
20.3	31.9			27.9	57.8	79.6					
20.7	32.1			28.6	58.1	79.9					
20.9	32.3			29.3	58.5	80.2					

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 851+90 NB OSS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 878+20 NB ISS		12/3 to 12/19/2019			
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING
SG	AG	408306.8	2011042.6	STBC	AG	410907.5	2011391.8				
Cumulative Penetration in Centimeters						Cumulative Penetration in Centimeters					
2.8	26.5	49.6	70.1	92.2		1.5	39.3	57.7			
4.1	26.8	49.7	70.5	92.6		2.6	39.7	58.1			
5.4	27.1	50.1	70.8	92.9		3.5	40.1	58.4			
6.4	28.2	50.3	71.3			4.3	40.6	58.6			
6.8	29.0	50.7	71.6			5.0	41.1	58.9			
7.2	30.1	51.1	72.0			5.8	41.5	59.3			
7.9	31.0	51.6	72.3			6.3	42.0	59.6			
8.6	32.3	51.8	72.6			7.0	42.3	60.1			
9.1	33.2	52.1	72.9			7.5	42.6	60.5			
9.8	33.9	52.4	73.1			8.3	43.1	60.8			
10.4	34.4	52.8	73.5			9.1	43.5	61.2			
10.9	35.2	53.2	73.7			10.0	43.9	61.5			
11.4	35.7	53.5	74.1			10.6	44.1	61.8			
12.1	36.2	53.8	74.3			11.2	44.4	62.2			
12.4	36.6	54.1	74.8			11.9	44.8	62.5			
13.0	37.1	54.4	75.2			12.6	45.2	63.0			
13.5	37.5	54.7	75.7			13.4	45.6	63.2			
14.0	38.1	54.9	76.0			14.1	45.9	63.5			
14.5	38.4	55.3	76.2			14.9	46.3	64.0			
14.9	38.8	55.6	76.6			15.6	46.8	64.3			
15.3	39.2	55.7	77.0			16.4	47.1	64.8			
15.8	39.6	56.0	77.3			17.1	47.4	65.1			
16.3	39.9	56.4	77.7			17.8	47.9	65.5			
16.8	40.2	57.0	78.1			18.6	48.2	65.8			
17.4	40.6	57.5	78.4			19.4	48.6	66.2			
18.0	40.8	57.7	78.9			20.0	49.1	66.6			
18.4	41.2	58.0	79.3			20.8	49.3	66.8			
18.9	41.6	58.3	79.5			21.6	49.7	67.2			
19.4	41.8	58.8	80.0			22.4	50.0	67.6			
19.8	42.2	59.3	80.8			23.1	50.3	67.9			
20.3	42.5	59.7	81.6			23.9	50.8	68.3			
20.7	42.8	60.2	82.4			24.7	51.1	68.5			
20.8	43.2	60.6	83.0			25.6	51.5	69.0			
21.2	43.5	60.9	83.8			26.5	51.8	69.2			
21.5	43.8	61.5	84.4			27.7	52.2	69.6			
21.7	44.0	61.9	85.1			28.6	52.4	69.9			
21.9	44.4	62.5	85.7			29.6	52.6	70.5			
22.3	44.7	62.9	86.3			30.5	53.0	70.9			
22.6	45.0	63.4	86.6			31.4	53.3	71.3			
22.8	45.4	64.0	86.8			32.2	53.6	71.7			
23.1	45.7	64.5	87.1			32.8	53.9	72.1			
23.3	45.9	65.1	87.6			33.4	54.1	72.4			
23.5	46.3	65.5	88.0			33.8	54.4	72.7			
23.8	46.7	65.8	88.5			34.3	54.7	73.1			
24.0	46.9	66.1	88.9			34.8	54.9	73.4			
24.2	47.2	66.5	89.5			35.2	55.3				
24.5	47.6	66.9	89.9			35.7	55.7				
24.8	47.8	67.1	90.2			36.2	55.9				
25.1	48.0	67.6	90.7			36.7	56.2				
25.4	48.5	68.1	91.0			37.2	56.5				
25.6	48.7	68.8	91.3			37.7	56.7				
26.0	49.0	69.2	91.5			38.2	57.2				
26.3	49.4	69.6	91.9			38.8	57.4				

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
-L- 878+20 NB OSL <td colspan="2">Robeson</td> <td colspan="2">VLAD MITCHEV</td> <td colspan="2">D. Strother/J. Swartley</td>				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019		-L- 878+20 NB OSS		12/3 to 12/19/2019		-L- 878+20 NB OSS		12/3 to 12/19/2019			
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	410911.0	2011422.2	SG	FILL	410909.7	2011425.7				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
0.8	8.8	7.7	16.7			1.9	25.8	38.9	52.7	66.5	
1.2	8.9	7.9				3.0	26.2	39.2	52.9	66.9	
1.5	9.0	8.0	DCP REFUSAL			4.0	26.5	39.5	53.2	67.2	
1.8	9.1	8.2				4.7	26.8	39.8	53.4	67.5	
2.0	9.1	8.4				5.2	27.2	40.1	53.7	67.8	
2.3	9.2	8.6				5.8	27.5	40.4	53.9	68.2	
2.6	9.3	8.7				6.4	27.8	40.6	54.1	68.5	
2.8	9.4	8.9				6.9	28.1	40.9	54.3	68.8	
2.9	9.5	9.1				7.5	28.4	41.2	54.6	69.2	
3.1	9.6	9.3				8.1	28.7	41.5	54.8	69.7	
3.2	9.6	9.5				8.6	29.0	41.8	55.0	70.1	
3.4	9.7	9.7				9.2	29.3	42.2	55.2	70.6	
3.6	9.7	9.9				9.7	29.5	42.5	55.4	71.0	
3.8	9.8	10.1				10.3	29.7	42.8	55.6	71.4	
4.1	9.8	10.3				10.8	30.0	43.1	55.8	71.9	
4.3	9.9	10.5				11.4	30.2	43.4	56.0	72.3	
4.5	9.9	10.8				12.0	30.4	43.8	56.2	72.8	
4.6	10.0	11.0				12.5	30.6	44.1	56.5	73.2	
4.8	10.0	11.2				13.1	30.8	44.4	56.7	73.6	
4.9		11.4				13.7	31.1	44.6	57.0	74.0	
5.1	Augered 5 cm	11.5				14.1	31.3	44.9	57.2	74.5	
5.2		11.7				14.6	31.5	45.1	57.5	74.9	
5.3		11.8				15.0	31.7	45.4	57.8	75.3	
5.5	0.0	12.0				15.5	32.0	45.6	58.2	75.8	
5.6	1.8	12.1				15.9	32.2	45.8	58.5	76.2	
5.8	2.5	12.3				16.3	32.5	46.0	58.8	76.7	
5.9	2.8	12.4				16.7	32.7	46.3	59.1	77.1	
6.0	3.1	12.6				17.1	32.9	46.5	59.3	77.6	
6.1	3.4	12.7				17.5	33.2	46.7	59.6	78.2	
6.1	3.6	12.9				17.9	33.4	47.0	59.8	78.7	
6.2	3.8	13.0				18.2	33.7	47.3	60.1	79.3	
6.3	4.0	13.2				18.5	33.9	47.6	60.3	79.8	
6.5	4.2	13.3				18.9	34.1	47.9	60.5	80.4	
6.7	4.4	13.5				19.2	34.3	48.2	60.8	80.9	
6.8	4.6	13.7				19.5	34.5	48.4	61.0	81.5	
7.0	4.8	13.8				19.8	34.7	48.7	61.2	82.0	
7.2	5.0	14.0				20.1	34.9	48.9	61.5	82.6	
7.3	5.2	14.1				20.4	35.1	49.2	61.7	83.1	
7.4	5.3	14.3				20.7	35.3	49.4	62.0	83.7	
7.6	5.5	14.5				21.0	35.4	49.6	62.2	84.4	
7.7	5.6	14.7				21.4	35.6	49.8	62.5	85.0	
7.8	5.8	14.9				21.7	35.8	50.0	62.8	85.7	
7.9	6.0	15.1				22.1	36.1	50.2	63.1	86.3	
8.0	6.1	15.3				22.4	36.4	50.4	63.5	87.1	
8.0	6.3	15.5				22.8	36.6	50.6	63.8	88.0	
8.1	6.4	15.7				23.1	36.9	50.9	64.1	88.8	
8.2	6.6	15.8				23.4	37.2	51.1	64.4	89.7	
8.3	6.8	16.0				23.7	37.4	51.4	64.7	90.5	
8.4	6.9	16.2				24.0	37.6	51.6	64.9	91.4	
8.4	7.1	16.3				24.3	37.9	51.8	65.2	92.3	
8.5	7.2	16.4				24.7	38.1	52.0	65.5	93.1	
8.6	7.4	16.5				25.1	38.3	52.3	65.8	94.0	
8.7	7.6	16.6				25.4	38.6	52.5	66.2	94.9	

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
-L- 904+65 NB ISL				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019		-L- 904+65 NB ISS		12/3 to 12/19/2019		-L- 904+65 NB ISS		12/3 to 12/19/2019			
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	413532.8	2011784.7	STBC	FILL	413533.4	2011778.6				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
1.9	19.0	39.3	62.1			1.5	28.8	54.6	78.8		
2.7	19.4	39.8	62.5			2.3	29.3	55.2	79.2		
3.4	19.7	40.6	62.8			3.0	29.8	55.7	79.5		
3.9	19.9	41.3	63.3			3.6	30.2	56.2	79.9		
4.3	20.2	41.8	63.5			4.4	30.7	56.8	80.3		
4.7	20.4	42.5	64.0			5.0	31.1	57.3	80.7		
5.1	20.7	43.2	64.4			5.6	31.5	57.9	81.1		
5.5	20.9	43.6	64.8			6.2	32.0	58.4	81.6		
6.1	21.3	44.3	65.3			6.9	32.4	59.0	82.0		
6.4	21.5	44.9	65.7			7.5	32.9	59.5	82.4		
6.9	21.9	45.4	66.1			8.2	33.3	60.1	82.8		
7.1	22.1	46.0				8.8	33.8	60.6	83.2		
7.5	22.3	46.6				9.3	34.3	61.2	83.7		
7.7	22.6	47.1				9.9	34.8	61.6	84.1		
8.1	22.9	47.7				10.5	35.3	62.0	84.5		
8.4	23.4	48.3				11.0	35.8	62.5	84.9		
8.8	23.6	48.7				11.6	36.2	62.9	85.3		
9.0	23.9	49.4				12.1	36.6	63.3	85.8		
9.3	24.3	49.9				12.7	37.1	63.8	86.2		
9.7	24.4	50.2				13.2	37.5	64.2	86.6		
10.0	24.9	50.7				13.7	37.9	64.7	87.0		
10.4	25.1	50.9				14.3	38.4	65.1	87.4		
10.7	25.5	51.3				14.8	38.9	65.6	87.9		
11.1	25.9	51.6				15.3	39.3	66.0	88.3		
11.4	26.2	51.9				15.8	39.8	66.4	88.7		
11.6	26.6	52.4				16.3	40.3	66.7	89.1		
12.0	26.9	52.7				16.8	40.8	67.1	89.6		
12.2	27.3	53.3				17.2	41.3	67.5	90.0		
12.7	27.6	53.6				17.7	41.9	68.0	90.5		
12.9	28.1	54.0				18.2	42.4	68.5	90.9		
13.2	28.5	54.2				18.7	42.9	68.9			
13.4	28.8	54.6				19.2	43.4	69.4			
13.7	29.2	55.0				19.7	43.9	69.9			
13.8	29.7	55.3				20.1	44.5	70.3			
14.1	30.1	55.7				20.6	45.0	70.8			
14.3	30.6	56.0				21.0	45.5	71.2			
14.6	31.0	56.3				21.5	46.0	71.7			
14.9	31.4	56.7				21.9	46.5	72.1			
15.0	31.9	57.0				22.3	47.0	72.6			
15.3	32.5	57.3				22.8	47.5	73.0			
15.6	32.8	57.6				23.2	48.0	73.5			
15.9	33.4	58.0				23.6	48.5	73.9			
16.0	33.9	58.3				24.0	49.0	74.4			
16.3	34.4	58.7				24.4	49.6	74.8			
16.6	34.8	58.9				24.8	50.1	75.2			
16.7	35.3	59.2				25.3	50.6	75.5			
17.0	35.7	59.8				25.7	51.1	75.9			
17.2	36.1	60.0				26.1	51.6	76.3			
17.6	36.7	60.3				26.4	52.0	76.7			
17.8	37.2	60.6				26.8	52.5	77.1			
18.1	37.7	61.0				27.3	53.0	77.6			
18.4	38.2	61.3				27.8	53.5	78.0			
18.6	38.6	61.8				28.3	54.1	78.4			

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE				
				I-5987B		47533.1.3		I-95				
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS				
-L- 904+65 NB OSS <td colspan="2">Robeson <td colspan="2">VLAD MITCHEV <td colspan="2">D. Strother/J. Swartley </td></td></td>				Robeson <td colspan="2">VLAD MITCHEV <td colspan="2">D. Strother/J. Swartley </td></td>		VLAD MITCHEV <td colspan="2">D. Strother/J. Swartley </td>		D. Strother/J. Swartley				
DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN				
12/3 to 12/19/2019		-L- 934+90 NB ISS		12/3 to 12/19/2019		-L- 934+90 NB OSS		12/3 to 12/19/2019				
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	
SG	FILL	413520.4	2011806.4	STBC	AG	416537.6	2012220.7	STBC	AG	416530.0	2012240.1	
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				
1.2	27.8	48.3	78.1	2.4	37.2	61.4	89.1	1.2	18.9	45.2	71.8	91.0
2.3	28.2	49.0	80.2	3.5	37.7	61.9	89.6	1.8	19.2	45.6	72.2	91.4
3.0	28.5	49.7	82.2	4.5	38.1	62.4	90.1	2.4	19.6	46.0	72.5	91.8
3.7	28.9	50.4	84.1	5.4	38.4	62.8		3.1	19.9	46.7	72.8	92.3
4.3	29.2	51.2	85.6	6.4	38.8	63.3		3.5	20.2	47.2	73.1	92.7
5.0	29.6	51.9	87.0	7.2	39.1	64.3		4.0	20.5	47.7	73.6	92.9
5.6	29.9	52.7	88.2	8.0	39.5	64.9		4.4	20.9	48.1	73.9	93.2
6.2	30.2	53.4	89.6	8.8	39.9	65.5		4.8	21.1	48.6	74.2	93.5
6.8	30.6	53.8	90.7	9.7	40.3	66.1		5.1	21.4	49.1	74.6	93.8
7.3	30.9	54.2	91.8	10.5	40.7	66.7		5.5	21.6	49.7	74.9	94.1
7.9	31.3	54.6	92.9	11.4	41.1	67.3		5.9	21.9	50.1	75.5	94.4
8.4	31.6	55.0	94.0	13.0	41.4	67.9		6.1	22.2	50.6	75.8	94.7
9.0	32.0	55.4	95.3	14.6	41.8	68.6		6.5	22.5	51.0	76.1	95.2
9.5	32.4	55.8	96.4	16.2	42.2	69.2		6.8	22.8	51.5	76.4	95.5
10.1	32.7	56.2	98.1	16.9	42.6	69.8		7.1	26.4	52.1	76.8	95.8
10.6	33.1	56.6	99.5	17.5	43.0	70.4		7.4	28.7	52.5	77.2	96.0
11.1	33.5	57.0	100.8	18.2	43.5	71.0		7.8	30.3	53.2	77.7	96.2
11.6	33.8	57.4		18.8	43.9	71.6		8.0	31.5	53.6	78.0	96.5
12.1	34.2	57.8		19.4	44.3	72.2		8.4	32.2	54.2	78.2	
12.6	34.5	58.2		20.0	44.7	72.8		8.7	32.8	54.9	78.5	
13.1	34.9	58.5		20.7	45.2	73.4		8.9	33.3	55.4	79.0	
13.6	35.2	58.9		21.5	45.6	74.0		9.3	33.7	56.0	79.5	
14.1	35.6	59.3		22.2	46.1	74.5		9.6	34.0	56.6	79.8	
14.6	35.9	59.7		22.7	46.5	75.1		9.9	34.3	57.3	80.1	
15.1	36.3	60.1		23.2	47.0	75.6		10.2	34.7	58.0	80.3	
15.7	36.6	60.4		23.7	47.5	76.2		10.5	35.8	58.6	80.7	
16.2	37.0	60.8		24.4	47.9	76.8		10.7	36.7	59.2	81.1	
16.7	37.3	61.2		25.0	48.4	77.3		11.0	37.0	59.8	81.4	
17.2	37.7	61.6		25.7	48.9	77.9		11.3	37.3	60.5	81.8	
17.7	38.0	62.0		26.1	49.3	78.4		11.5	37.6	61.1	82.1	
18.2	38.4	62.5		26.5	49.7	79.0		11.8	37.8	61.6	82.4	
18.8	38.7	62.9		26.9	50.2	79.4		12.1	38.2	62.1	82.8	
19.3	39.0	63.3		27.4	50.6	79.8		12.3	38.5	62.5	83.2	
19.8	39.4	63.7		27.9	51.0	80.3		12.6	38.8	63.1	83.7	
20.2	39.7	64.1		28.4	51.5	80.7		13.0	39.1	63.7	84.1	
20.7	40.0	64.6		28.9	52.0	81.1		13.2	39.4	64.2	84.6	
21.2	40.3	65.0		29.5	52.6	81.6		13.5	39.7	64.7	84.9	
21.6	40.7	65.4		30.0	53.1	82.1		13.9	40.1	65.2	85.2	
22.1	41.0	65.9		30.5	53.6	82.5		14.1	40.4	65.8	85.4	
22.5	41.4	66.3		31.1	54.1	83.0		14.4	40.7	66.2	85.6	
23.0	41.7	66.8		31.6	54.6	83.5		14.7	41.0	66.6	85.9	
23.4	42.1	67.2		32.1	55.1	83.8		15.0	41.4	67.0	86.3	
23.8	42.5	67.7		32.5	55.6	84.2		15.3	41.7	67.4	86.7	
24.2	42.9	68.3		33.0	56.1	84.5		15.7	41.9	67.9	87.0	
24.6	43.3	68.9		33.5	56.6	84.9		16.0	42.1	68.4	87.4	
25.0	43.7	69.4		34.0	57.2	85.2		16.3	42.3	68.7	87.9	
25.3	44.2	70.0		34.5	57.7	85.7		16.6	42.6	69.1	88.3	
25.7	44.7	70.6		34.9	58.3	86.2		16.9	43.0	69.5	88.7	
26.1	45.1	71.7		35.3	58.8	86.6		17.2	43.3	70.0	89.0	
26.4	45.6	72.8		35.7	59.3	87.1		17.6	43.6	70.5	89.3	
26.8	46.1	73.9		36.1	59.8	87.6		17.9	43.9	70.7	89.7	
27.1	46.8	75.0		36.4	60.4	88.1		18.3	44.3	71.1	90.2	
27.5	47.5	76.1		36.8	60.9	88.6		18.6	44.8	71.4	90.6	

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
-L- 934+90 NB OSL				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019		-L- 934+90 NB OSL		12/3 to 12/19/2019		-L- 934+90 NB OSS		12/3 to 12/19/2019			
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING
STBC	AG	416530.0	2012240.1	STBC	AG	416531.1	2012249.6	STBC	AG	416531.1	2012249.6
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
0.5		23.4	29.9	1.2	18.9	45.2	71.8	91.0			
0.7	Augered 7.3 cm	23.6	30.0	1.8	19.2	45.6	72.2	91.4			
1.0		23.7	30.2	2.4	19.6	46.0	72.5	91.8			
1.2		23.9	30.3	3.1	19.9	46.7	72.8	92.3			
1.5	0.0	24.1	30.5	3.5	20.2	47.2	73.1	92.7			
1.7	13.6	24.2	30.6	4.0	20.5	47.7	73.6	92.9			
1.8	14.2	24.4		4.4	20.9	48.1	73.9	93.2			
2.0	14.5	24.5	DCP REFUSAL	4.8	21.1	48.6	74.2	93.5			
2.1	14.8	24.7		5.1	21.4	49.1	74.6	93.8			
2.3	15.2	24.8		5.5	21.6	49.7	74.9	94.1			
2.4	15.5	24.9		5.9	21.9	50.1	75.5	94.4			
2.5	15.8	25.1		6.1	22.2	50.6	75.8	94.7			
2.6	16.0	25.2		6.5	22.5	51.0	76.1	95.2			
2.7	16.3	25.3		6.8	22.8	51.5	76.4	95.5			
2.8	16.5	25.5		7.1	26.4	52.1	76.8	95.8			
2.9	16.8	25.7		7.4	28.7	52.5	77.2	96.0			
3.0	17.0	25.8		7.8	30.3	53.2	77.7	96.2			
3.1	17.2	26.0		8.0	31.5	53.6	78.0	96.5			
3.2	17.4	26.2		8.4	32.2	54.2	78.2				
3.3	17.6	26.3		8.7	32.8	54.9	78.5				
3.4	17.8	26.4		8.9	33.3	55.4	79.0				
3.5	18.0	26.5		9.3	33.7	56.0	79.5				
3.5	18.2	26.6		9.6	34.0	56.6	79.8				
3.6	18.4	26.7		9.9	34.3	57.3	80.1				
3.6	18.6	26.8		10.2	34.7	58.0	80.3				
3.7	18.8	26.9		10.5	35.8	58.6	80.7				
3.8	19.0	27.1		10.7	36.7	59.2	81.1				
3.8	19.2	27.2		11.0	37.0	59.8	81.4				
3.9	19.4	27.3		11.3	37.3	60.5	81.8				
3.9	19.5	27.4		11.5	37.6	61.1	82.1				
4.0	19.7	27.5		11.8	37.8	61.6	82.4				
4.1	19.9	27.7		12.1	38.2	62.1	82.8				
4.1	20.0	27.8		12.3	38.5	62.5	83.2				
4.2	20.2	27.9		12.6	38.8	63.1	83.7				
4.2	20.3	28.0		13.0	39.1	63.7	84.1				
4.3	20.5	28.1		13.2	39.4	64.2	84.6				
4.3	20.6	28.2		13.5	39.7	64.7	84.9				
4.4	20.8	28.3		13.9	40.1	65.2	85.2				
4.4	20.9	28.4		14.1	40.4	65.8	85.4				
4.5	21.1	28.5		14.4	40.7	66.2	85.6				
4.5	21.2	28.6		14.7	41.0	66.6	85.9				
4.5	21.4	28.7		15.0	41.4	67.0	86.3				
4.6	21.6	28.8		15.3	41.7	67.4	86.7				
4.6	21.8	28.9		15.7	41.9	67.9	87.0				
4.7	22.0	29.0		16.0	42.1	68.4	87.4				
4.7	22.2	29.1		16.3	42.3	68.7	87.9				
4.7	22.4	29.2		16.6	42.6	69.1	88.3				
4.8	22.5	29.3		16.9	43.0	69.5	88.7				
4.8	22.7	29.4		17.2	43.3	70.0	89.0				
4.9	22.8	29.5		17.6	43.6	70.5	89.3				
4.9	23.0	29.6		17.9	43.9	70.7	89.7				
	23.1	29.7		18.3	44.3	71.1	90.2				
	23.3	29.8		18.6	44.8	71.4	90.6				

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
				COUNTY		ENGINEER		TECHNICIANS			
TEST LOCATIONS DESCRIPTION				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
-L- 960+95 NB ISL				12/3 to 12/19/2019		-L- 960+95 NB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	419112.1	2012603.5	STBC	FILL	419103.4	2012627.4				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
1.1	13.4	20.2		0.9	15.5	26.6	41.4	56.5	69.6		
2.0	13.5	20.4		1.3	15.7	26.8	41.7	56.8	69.9		
2.6	13.7	20.5		1.8	15.9	27.0	42.0	57.0	70.2		
3.0	13.9	20.7		2.2	16.2	27.2	42.2	57.2	70.5		
3.4	14.0	20.9		2.7	16.4	27.5	42.5	57.5	70.9		
3.8	14.1	21.1		3.1	16.7	27.7	42.8	57.7	71.3		
4.1	14.3	21.2		3.6	16.9	28.0	43.1	57.9	71.6		
4.3	14.4	21.4		4.0	17.1	28.2	43.5	58.2	72.0		
4.6	14.5	21.6		4.4	17.3	28.4	43.8	58.4	72.4		
4.9	14.6	21.7		4.8	17.6	28.7	44.1	58.7	72.8		
5.1	14.7	21.9		5.2	17.8	28.9	44.4	58.9	73.2		
5.4	14.9	22.0		5.5	18.0	29.2	44.7	59.2	73.6		
5.7	15.0	22.1		5.9	18.1	29.4	45.0	59.4	74.0		
5.9	15.1	22.3		6.2	18.3	29.7	45.3	59.6	74.4		
6.2	15.2	22.4		6.7	18.4	30.0	45.6	59.9	75.0		
6.4	15.3	22.5		7.2	18.6	30.3	45.8	60.1	75.6		
6.7	15.3	22.6		7.7	18.7	30.6	46.0	60.3	76.1		
7.0	15.4	22.7		7.9	18.8	30.9	46.3	60.5	76.7		
7.4	15.5	22.9		8.1	18.9	31.2	46.5	60.7	77.3		
7.8	15.7	23.0		8.3	19.1	31.5	46.7	60.9	77.9		
8.1	15.9	23.1		8.4	19.2	31.7	47.0	61.1	78.4		
8.4	16.0	23.3		8.5	19.3	32.0	47.3	61.3	79.0		
8.5	16.2	23.5		8.7	19.5	32.3	47.6	61.5	79.6		
8.7	16.4	23.6		8.8	19.6	32.6	47.9	61.8	80.2		
8.8	16.5	23.8		8.9	19.8	32.8	48.2	62.0	80.8		
9.0	16.7	24.0		9.1	19.9	33.1	48.5	62.3	81.3		
9.1	16.8	24.2		9.4	20.1	33.3	48.7	62.5	81.9		
9.3	17.0	24.4		9.6	20.4	33.6	49.0	62.8	82.4		
9.4	17.1	24.5		9.8	20.6	33.9	49.2	63.1	82.9		
9.6	17.2	24.7		10.1	20.9	34.2	49.5	63.4	83.5		
9.7	17.3	24.9		10.3	21.1	34.4	49.8	63.7	84.0		
9.9	17.5		DCP REFUSAL	10.5	21.4	34.7	50.1	64.0	84.5		
10.1	17.6			10.7	21.7	35.0	50.3	64.2	85.1		
10.2	17.7			11.0	21.9	35.3	50.6	64.4	85.6		
10.4	17.8			11.2	22.2	35.6	50.9	64.7	86.1		
10.5	17.9			11.4	22.4	35.8	51.3	64.9	86.7		
10.7	18.0			11.7	22.7	36.1	51.6	65.1	87.2		
10.9	18.1			11.9	22.9	36.4	52.0	65.4	87.8		
11.0	18.2			12.2	23.2	36.7	52.3	65.6	88.3		
11.2	18.3			12.4	23.4	37.0	52.7	65.9	88.9		
11.3	18.4			12.6	23.7	37.4	53.0	66.1	89.5		
11.5	18.6			12.9	23.9	37.7	53.2	66.4	90.0		
11.7	18.7			13.1	24.2	38.0	53.5	66.6	90.6		
11.8	18.8			13.4	24.4	38.3	53.7	66.9	91.2		
12.0	19.0			13.6	24.7	38.6	54.0	67.1	92.8		
12.1	19.2			13.8	24.9	39.0	54.2	67.4	92.9		
12.3	19.3			14.0	25.1	39.3	54.5	67.6	93.1		
12.4	19.5			14.2	25.3	39.6	54.7	67.9	93.9		
12.6	19.7			14.4	25.6	39.9	55.0	68.2	94.6		
12.7	19.8			14.6	25.8	40.2	55.2	68.4	95.6		
12.9	19.9			14.8	26.0	40.5	55.5	68.7	96.5		
13.0	20.0			15.0	26.2	40.8	55.8	69.0	97.5		
13.2	20.1			15.3	26.4	41.1	56.2	69.3	98.4		

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
				COUNTY		ENGINEER		TECHNICIANS			
TEST LOCATIONS DESCRIPTION				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
-L- 987+25 NB OSL				12/3 to 12/19/2019		-L- 987+50 NB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	AG	421657.4	2013206.1	STBC	AG	421685.0	2013210.7				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
0.7	10.7	23.5	52.3	63.6	78.5	0.9	16.6	40.5	74.2		
0.9	10.9	23.9	52.6	63.8	79.0	1.5	17.0	41.4	74.8		
1.1	11.1	24.2	53.0	64.0	79.5	1.9	17.3	42.3	75.4		
1.3	11.3	24.6	53.3	64.3	80.2	2.3	17.6	43.3	76.0		
1.5	11.5	25.1	53.5	64.5	80.9	2.7	17.9	44.2	76.7		
1.8	11.7	25.6	53.8	64.7	81.7	3.1	18.2	45.1	77.3		
2.0	11.9	26.1	54.0	64.9	82.4	3.5	18.6	46.6	77.9		
2.2	12.1	26.6	54.2	65.1	83.1	3.8	18.9	48.0	78.6		
2.4	12.3	27.1	54.4	65.4	84.2	4.1	19.2	49.5	79.2		
2.6	12.5	27.6	54.6	65.6	85.4	4.5	19.5	51.4	79.9		
2.8	12.7	28.1	54.9	65.8	86.5	4.8	19.8	53.3	80.5		
3.0	12.9	28.5	55.1	66.0	87.7	5.1	20.0	55.2	81.2		
3.2	13.1	29.0	55.4	66.3	88.8	5.4	20.3	55.9	82.0		
3.4	13.4	29.5	55.6	66.5	90.2	5.7	20.6	56.7	82.8		
3.6	13.6	30.0	55.7	66.8	91.6	6.0	20.9	57.4	83.5		
3.8	13.9	30.5	55.9	67.0	93.0	6.3	21.2	57.8	84.3		
3.9	14.1	30.9	56.1	67.3		6.6	21.4	58.1	85.1		
4.1	14.3	31.4	56.2	67.5		6.9	21.7	58.5	86.1		
4.2	14.5	31.9	56.4	67.8		7.1	22.0	59.0	87.1		
4.4	14.6	32.5	56.6	68.0		7.4	22.3	59.4	88.0		
4.5	14.8	33.1	56.9	68.3		7.6	22.6	59.9	89.0		
4.6	15.0	33.8	57.1	68.5		7.9	22.9	60.3	90.0		
4.8	15.3	34.4	57.4	68.7		8.2	23.2	60.7	90.9		
4.9	15.6	35.0	57.6	68.9		8.4	23.5	61.1	91.8		
5.0	15.9	35.6	57.8	69.1		8.7	23.9	61.5	92.6		
5.1	16.2	36.2	58.0	69.3		8.9	24.3	61.9	93.5		
5.2	16.5	36.8	58.3	69.6		9.2	24.6	62.3	94.4		
5.4	16.8	37.4	58.5	69.8		9.4	25.0	62.7	95.2		
5.5	17.0	38.0	58.7	70.1		9.7	25.4	63.1	96.1		
5.6	17.3	38.6	58.8	70.3		9.9	25.8	63.5	96.9		
5.9	17.5	39.3	59.0	70.6		10.2	26.3	63.9	97.8		
6.1	17.8	40.1	59.1	70.9		10.4	26.7	64.3	98.6		
6.4	18.0	40.8	59.3	71.2		10.7	27.2	64.8	99.4		
6.6	18.2	41.7	59.4	71.4		11.0	27.6	65.2	100.2		
6.9	18.5	42.5	59.6	71.7		11.2	28.1	65.6	101.1		
7.1	18.7	43.4	59.8	72.0		11.5	28.6	66.0	101.9		
7.3	18.9	44.2	60.1	72.3		11.8	29.2	66.4	102.7		
7.5	19.1	45.1	60.3	72.7		12.1	29.7	66.9	103.5		
7.7	19.3	45.9	60.5	73.0		12.4	30.2	67.3	104.3		
7.9	19.5	46.5	60.7	73.4		12.6	30.8	67.7	105.2		
8.1	19.7	47.2	60.9	73.7		12.9	31.4	68.1	106.0		
8.3	19.9	47.8	61.2	74.0		13.2	32.0	68.5	106.8		
8.5	20.2	48.3	61.4	74.3		13.5	32.6	69.0			
8.7	20.5	48.9	61.6	74.5		13.8	33.2	69.4			
8.9	20.7	49.4	61.8	74.8		14.0	33.9	69.8			
9.1	21.0	49.8	61.9	75.1		14.3	34.6	70.2			
9.3	21.3	50.3	62.1	75.5		14.6	35.2	70.7			
9.4	21.6	50.7	62.2	75.9		14.9	35.9	71.2			
9.6	21.9	51.0	62.4	76.2		15.2	36.6	71.6			
9.8	22.2	51.4	62.6	76.6		15.4	37.4	72.0			
10.0	22.5	51.7	62.9	77.0		15.7	38.2	72.6			
10.2	22.8	51.9	63.1	77.5		16.0	38.9	73.1			
10.5	23.2	52.1	63.4	78.0		16.3	39.7	73.7			

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
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3201 Spring Forest Road
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CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE						
				I-5987B	47533.1.3	I-95						
TEST LOCATIONS DESCRIPTION				COUNTY	ENGINEER	TECHNICIANS						
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley						
-L- 1010+15 NB ISL				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN						
				12/3 to 12/19/2019	-L- 1010+15 NB ISS	12/3 to 12/19/2019						
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING					
SG	FILL	423734.6	2014149.9	STBC	FILL	423736.9	2014144.9					
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters								
1.3	14.5	24.9	39.3	60.0	4.5	33.4	52.1	68.6				
1.8	14.7	25.1	39.6	60.3	6.1	33.8	52.5	68.9				
2.4	14.9	25.3	40.0	60.7	7.2	34.2	52.9	69.2				
2.9	15.0	25.5	40.3	61.1	8.1	34.5	53.3	69.4				
3.3	15.2	25.8	40.7	61.6	8.8	34.9	53.6	69.7				
3.6	15.4	26.0	41.1	62.0	9.5	35.2	53.9	70.0				
4.0	15.6	26.3	41.4	62.4	10.2	35.5	54.2	70.3				
4.3	15.8	26.5	41.8	62.8	10.9	35.7	54.5	70.6				
4.6	16.0	26.7	42.1	63.3	11.6	36.0	54.8	70.8				
4.9	16.2	26.9	42.5	63.7	12.2	36.3	55.1	71.1				
5.2	16.4	27.0	42.9	64.2	13.0	36.7	55.4	71.4				
5.5	16.6	27.2	43.4	64.6	13.7	37.0	55.6	71.7				
5.8	16.9	27.4	43.8	65.2	14.6	37.3	55.9	72.0				
6.0	17.1	27.7	44.3	65.7	15.3	37.7	56.2	72.3				
6.3	17.4	28.0	44.7	66.3	16.0	38.0	56.5	72.6				
6.5	17.6	28.4	45.1	66.8	16.6	38.4	56.8	72.9				
6.7	17.8	28.7	45.5	67.4	17.0	38.7	57.2	73.2				
6.8	18.0	29.0	45.8	67.9	17.5	39.1	57.5	73.5				
7.0	18.2	29.2	46.2	68.5	18.1	39.5	57.8	73.7				
7.3	18.4	29.4	46.6	69.0	18.6	39.9	58.2	74.0				
7.6	18.6	29.6	47.1	69.6	19.1	40.3	58.6	74.3				
7.9	18.9	29.8	47.5	70.1	19.5	40.7	59.1	74.5				
8.2	19.1	30.0	48.0		20.0	41.0	59.5	74.7				
8.5	19.4	30.3	48.4		20.5	41.3	59.9	74.9				
8.7	19.6	30.6	48.9		21.0	41.6	60.2	75.1				
8.9	19.9	30.8	49.3		21.5	41.9	60.5	75.3				
9.1	20.1	31.1	49.7		21.9	42.2	60.8	75.5				
9.3	20.2	31.4	50.2		22.4	42.5	61.1	75.7				
9.5	20.4	31.7	50.6		22.8	42.8	61.4	75.8				
9.7	20.5	32.0	51.0		23.3	43.1	61.6	76.0				
9.9	20.7	32.3	51.5		23.7	43.4	61.9	76.2				
10.1	20.9	32.6	52.0		24.2	43.7	62.1	76.4				
10.3	21.1	32.9	52.4		24.6	44.0	62.4	76.6				
10.5	21.3	33.1	52.9		25.1	44.4	62.6	76.7				
10.7	21.5	33.4	53.4		25.5	44.7	63.0	76.9				
10.8	21.7	33.6	53.8		25.9	45.1	63.3	77.1				
11.0	21.9	33.9	54.2		26.4	45.4	63.7					
11.1	22.1	34.1	54.7		26.8	45.8	64.0					
11.3	22.3	34.3	55.1		27.3	46.1	64.4					
11.5	22.5	34.5	55.5		27.8	46.5	64.7					
11.7	22.7	34.7	55.9		28.3	46.8	65.0					
12.0	22.9	34.9	56.3		28.7	47.2	65.4					
12.2	23.1	35.1	56.6		29.1	47.6	65.7					
12.4	23.2	35.5	57.0		29.5	48.0	66.0					
12.6	23.4	35.9	57.4		29.9	48.3	66.3					
12.8	23.6	36.2	57.7		30.4	48.7	66.6					
13.0	23.7	36.6	58.0		30.8	49.1	66.8					
13.2	23.9	37.0	58.3		31.2	49.5	67.1					
13.4	24.0	37.4	58.6		31.6	50.0	67.4					
13.6	24.2	37.8	58.9		32.0	50.4	67.6					
13.8	24.3	38.1	59.2		32.3	50.9	67.9					
14.0	24.5	38.5	59.5		32.7	51.3	68.1					
14.2	24.7	38.9	59.7		33.0	51.7	68.4					

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE						
				I-5987B	47533.1.3	I-95						
TEST LOCATIONS DESCRIPTION				COUNTY	ENGINEER	TECHNICIANS						
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley						
-L- 1010+15 NB OSS				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN						
				12/3 to 12/19/2019	-L- 1037+10 NB OSL1	12/3 to 12/19/2019						
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING					
STBC	FILL	423719.2	2014172.1	STBC	AG	425877.2	2015777.9					
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters								
0.8	31.8	51.4	72.0	93.2	0.8	8.4	12.8					
1.5	32.3	51.8	72.4	93.8	1.1	8.5	13.0					
2.1	32.7	52.2	72.7	94.4	1.4	8.6	13.2					
2.6	33.2	52.7	73.1	95.0	1.6		13.4					
3.2	33.6	53.1	73.4		1.9	Augered 21.6 cm	13.6					
3.7	34.0	53.5	73.8		2.2		13.8					
4.3	34.4	53.9	74.1		2.3		14.0					
4.8	34.8	54.3	74.5		2.4	0.0	14.2					
5.3	35.1	54.7	74.8		2.5	1.4	14.3					
5.7	35.5	55.2	75.2		2.6	1.7	14.5					
6.2	35.8	55.6	75.6		2.7	2.1	14.7					
6.7	36.2	56.0	76.0		2.8	2.4	14.9					
7.2	36.5	56.5	76.3		3.0	2.8	15.1					
7.7	36.9	56.9	76.6		3.1	3.1	15.2					
8.1	37.2	57.3	76.9		3.3	3.5	15.4					
8.6	37.6	57.7	77.2		3.4	3.9	15.6					
9.1	37.9	58.1	77.5		3.5	4.2	15.8					
9.7	38.3	58.5	77.8		3.7	4.6	15.9					
10.3	38.6	59.0	78.1		3.8	5.0	16.1					
10.8	38.9	59.4	78.4		4.0	5.4	16.2					
11.4	39.3	59.8	78.7		4.1	5.7	16.4					
12.0	39.6	60.3	79.0		4.2	6.1	16.6					
12.9	40.0	60.7	79.4		4.3	6.4	16.8					
13.9	40.3	61.1	79.7		4.5	6.8	16.9					
14.8	40.7	61.6	80.0		4.6	7.0	17.1					
15.8	41.0	62.0	80.4		4.7	7.3	17.3					
16.7	41.4	62.4	80.7		4.9	7.5						
18.1	41.7	62.8	81.0		5.1	7.8	DCP REFUSAL					
19.4	42.0	63.2	81.4		5.2	8.0						
20.8	42.4	63.6	81.7		5.4	8.2						
21.4	42.7	64.0	82.0		5.6	8.4						
22.1	43.1	64.4	82.4		5.7	8.7						
22.7	43.4	64.8	82.7		5.8	8.9						
23.2	43.8	65.2	83.0		6.0	9.1						
23.7	44.1	65.6	83.4		6.1	9.3						
24.2	44.5	66.0	83.7		6.2	9.5						
24.6	44.8	66.3	84.1		6.3	9.7						
25.0	45.2	66.7	84.4		6.5	9.9						
25.4	45.7	67.0	84.8		6.6	10.1						
25.8	46.1	67.4	85.2		6.8	10.3						
26.2	46.4	67.7	85.6		6.9	10.5						
26.6	46.8	68.0	86.0		7.0	10.7						
27.0	47.1	68.3	86.5		7.1	10.9						
27.4	47.5	68.6	87.0		7.2	11.1						
27.8	47.9	69.0	87.5		7.3	11.3						
28.2	48.3	69.3	88.1		7.4	11.5						
28.7	48.7	69.7	88.6		7.5	11.6						
29.1	49.1	70.0	89.2		7.6	11.8						
29.5	49.5	70.4	89.9		7.8	12.0						
29.9	49.9	70.7	90.5		7.9	12.2						
30.3	50.3	71.0	91.2		8.0	12.3						
30.8	50.7	71.4	91.9		8.1	12.5						
31.3	51.1	71.7	92.5		8.2	12.6						

SG = Subgrade
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CTBC = Cement-Treated Base Course
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CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 1037+10 NB OSL2				12/3 to 12/19/2019	-L- 1037+10 NB OSS	12/3 to 12/19/2019				
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING			
STBC	AG	425886.1	2015769.4	STBC	AG	425875.5	2015789.2			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
1.1	17.9	32.4		0.2	2.6	18.5	35.9	51.4	70.7	
2.6	18.2	32.5		0.3	2.8	18.9	36.2	51.7	71.2	
3.4	18.5	32.6		0.4	3.0	19.2	36.5	52.0	71.7	
3.7	18.8	32.7		0.6	3.2	19.5	36.8	52.3	72.2	
4.2	19.0	32.9		0.7	3.3	19.9	37.1	52.6		
4.5	19.3	33.0		0.9	3.5	20.2	37.4	52.9		
4.7	19.6	33.2		1.0	3.7	20.5	37.7	53.2		
5.0	19.9	33.4		1.2	3.9	20.8	38.0	53.5		
5.2	20.2	33.6		1.3	4.1	21.2	38.2	53.8		
5.5	20.4	33.7		1.5	4.3	21.5	38.5	54.1		
5.9	20.7	33.9		1.6	4.5	21.8	38.8	54.4		
6.3	21.0	34.1		1.8	4.6	22.1	39.2	54.7		
6.7	21.3	34.2		1.9	4.8	22.5	39.5	55.0		
7.1	21.6	34.4		2.1	5.1	22.8	39.8	55.4		
7.5	21.8	34.6		2.2	5.3	23.1	40.1	55.7		
7.8	22.1	34.7		2.4	5.6	23.5	40.4	56.1		
8.2	22.4	34.9		2.5	5.8	23.9	40.7	56.4		
8.5	22.8	35.1		2.7	6.1	24.2	41.0	56.7		
8.9	23.1	35.3		2.8	6.4	24.6	41.3	57.1		
9.2	23.5	35.4		2.9	6.6	24.9	41.6	57.4		
9.4	23.8	35.6		3.0	6.9	25.2	41.8	57.7		
9.6	24.2	35.8		3.2	7.1	25.5	42.1	58.0		
9.8	24.5	35.9		3.3	7.4	25.8	42.4	58.4		
10.0	24.8	36.1		3.4	7.6	26.1	42.8	58.7		
10.2	25.0	36.3		3.6	7.9	26.5	43.1	59.0		
10.5	25.3	36.4		3.7	8.2	26.8	43.4	59.3		
10.8	25.6	36.6		3.8	8.4	27.1	43.7	59.6		
11.0	25.8	36.8		3.9	8.7	27.4	44.1	59.8		
11.3	26.0	37.0		4.1	8.9	27.7	44.4	60.1		
11.6	26.3	37.1		4.2	9.2	28.0	44.7	60.4		
11.8	26.5	37.3		4.3	9.5	28.3	45.0	60.8		
12.0	26.7	37.5		4.5	9.8	28.6	45.2	61.1		
12.3	27.1	37.6		4.6	10.0	29.0	45.5	61.4		
12.5	27.5	37.8		4.7	10.3	29.3	45.7	61.8		
12.7	27.8		DCP	4.9	10.6	29.6	46.0	62.2		
13.0	28.2		REFUSAL	5.0	11.0	29.9	46.3	62.5		
13.3	28.6			5.1	11.3	30.3	46.5	62.9		
13.5	28.9			5.2	11.6	30.6	46.8	63.3		
13.8	29.1			5.4	12.0	30.9	47.1	63.7		
14.1	29.4			5.5	12.3	31.2	47.4	64.1		
14.4	29.6				12.6	31.5	47.7	64.3		
14.7	29.9			Augered	13.0	31.8	48.0	64.7		
14.9	30.2			7.8 cm	13.5	32.1	48.3	65.0		
15.2	30.5				13.9	32.5	48.6	65.4		
15.5	30.8			0.0	14.4	32.8	48.9	65.7		
15.8	31.1			0.3	14.8	33.2	49.2	66.2		
16.1	31.4			0.7	15.2	33.5	49.5	66.8		
16.3	31.6			1.0	15.7	33.8	49.7	67.3		
16.6	31.7			1.3	16.2	34.2	50.0	67.8		
16.9	31.9			1.7	16.7	34.5	50.2	68.4		
17.2	32.0			2.0	17.2	34.8	50.5	69.0		
17.4	32.2			2.3	17.7	35.2	50.8	69.6		
17.7	32.3			2.5	18.1	35.5	51.1	70.2		

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 1043+85 NB ISS				12/3 to 12/19/2019	-L- 1063+65 NB ISL	12/3 to 12/19/2019				
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING			
STBC	AG	426425.8	2016169.0	STBC	FILL	428046.3	2017318.6			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
1.6	20.3	40.4	52.6			0.9	18.1	37.6	68.9	
2.6	20.6	40.8	52.8			1.4	18.5	37.9	69.7	
3.2	21.1	41.1	53.0			1.7	18.8	38.2	70.5	
3.7	21.5	41.4	53.1			2.0	19.2	38.6	71.3	
4.2	22.0	41.7	53.3			2.4	19.6	38.9		
4.8	22.4	41.9	53.5			2.7	20.0	39.2		
5.3	22.9	42.2		Terminate		3.0	20.5	39.7		
5.9	23.3	42.4				3.3	20.9	40.2		
6.3	23.7	42.7				3.7	21.3	40.8		
6.8	24.0	42.9				4.0	21.7	41.3		
7.2	24.4	43.1				4.4	22.1	41.8		
7.6	24.8	43.4				4.7	22.4	42.4		
8.1	25.1	43.6				5.0	22.8	43.1		
8.5	25.4	43.8				5.3	23.2	43.7		
8.9	25.8	44.0				5.7	23.5	44.4		
9.3	26.1	44.2				6.0	23.9	45.0		
9.7	26.4	44.4				6.3	24.2	45.6		
10.1	26.8	44.6				6.6	24.6	46.2		
10.4	27.1	44.8				6.9	24.9	46.8		
10.8	27.5	45.0				7.3	25.2	47.4		
11.1	27.8	45.2				7.6	25.6	48.0		
11.4	28.2	45.5				7.9	25.9	48.5		
11.6	28.5	45.7				8.2	26.3	49.0		
11.9	28.8	45.9				8.5	26.6	49.5		
12.2	29.1	46.1				8.9	26.9	50.0		
12.5	29.4	46.3				9.2	27.3	50.6		
12.8	29.7	46.6				9.5	27.6	51.1		
13.1	30.1	46.8				9.8	28.0	51.6		
13.4	30.4	47.0				10.1	28.3	52.0		
13.7	30.8	47.2				10.4	28.7	52.5		
14.0	31.1	47.4				10.7	29.1	53.0		
14.2	31.5	47.7				11.0	29.4	53.5		
14.5	31.9	47.9				11.3	29.8	54.0		
14.7	32.3	48.1				11.6	30.2	54.5		
15.0	32.8	48.3				11.9	30.6	55.1		
15.3	33.2	48.5				12.2	31.0	55.6		
15.6	33.6	48.7				12.5	31.3	56.2		
15.8	34.0	48.9				12.9	31.7	56.7		
16.1	34.4	49.1				13.2	32.1	57.3		
16.4	34.9	49.3				13.6	32.5	58.0		
16.7	35.3	49.5				13.9	32.9	58.7		
17.0	35.7	49.8				14.3	33.2	59.4		
17.2	36.1	50.0				14.6	33.6	60.3		
17.5	36.5	50.2				14.9	34.0	61.3		
17.8	36.9	50.4				15.2	34.3	62.2		
18.1	37.3	50.7				15.5	34.7	63.1		
18.3	37.7	50.9				15.8	35.0	64.0		
18.6	38.1	51.2				16.1	35.4	64.9		
18.8	38.5	51.4				16.4	35.7	65.6		
19.1	39.0	51.6				16.8	36.1	66.3		
19.4	39.4	51.9				17.1	36.5	67.0		
19.7	39.8	52.1				17.4	36.8	67.6		
20.0	40.1	52.4				17.8	37.2	68.3		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 1063+65 NB ISS				12/3 to 12/19/2019	-L- 1063+65 NB OSS	12/3 to 12/19/2019				
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING			
STBC	FILL	428047.3	2017317.0	STBC	FILL	428033.5	2017337.0			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
0.7	15.9	42.9		0.1	2.6	20.3	37.8	56.5		
1.2	16.3	44.6		0.2	2.8	20.7	38.1	56.8		
1.7	16.7	45.8		0.4	3.1	21.0	38.5	57.1		
2.3	17.0	48.0		0.5	3.4	21.3	38.8	57.5		
2.8	17.4	49.9		0.6	3.6	21.7	39.2	57.9		
3.3	17.7	51.7		0.7	3.9	22.1	39.5	58.3		
3.7	18.1	53.4		0.8	4.2	22.4	39.8	58.7		
4.1	18.4	55.3		1.0	4.4	22.8	40.1	59.1		
4.6	18.7	57.5		1.1	4.6	23.2	40.5	59.6		
5.0	19.0	59.6		1.2	4.9	23.6	40.8	60.0		
5.4	19.3	62.1		1.3	5.1	23.9	41.1	60.5		
5.7	19.6	64.4		1.4	5.3	24.3	41.4	60.9		
6.0	19.9	66.4		1.6	5.6	24.6	41.7	61.4		
6.3	20.2	68.3		1.7	6.0	25.0	42.1	61.8		
6.6	20.6	70.3		1.8	6.3	25.3	42.4	62.2		
6.9	20.9	72.8		1.9	6.7	25.7	42.7	62.6		
7.1	21.3	76.4		2.0	7.0	26.0	43.0	63.0		
7.4	21.6	80.2		2.2	7.3	26.4	43.3	63.4		
7.6	21.9	83.7		2.3	7.6	26.7	43.6	64.2		
7.9	22.2	87.4		2.4	8.0	27.1	43.9	64.9		
8.1	22.4			2.6	8.3	27.5	44.2	65.7		
8.4	22.7			2.7	8.6	27.8	44.5	66.4		
8.7	23.0			2.9	9.0	28.2	44.9	67.2		
9.0	23.3			3.1	9.4	28.6	45.2	67.6		
9.3	23.6			3.3	9.8	28.9	45.6	68.0		
9.6	23.8			3.4	10.2	29.2	45.9	68.3		
9.8	24.1			3.6	10.6	29.6	46.3	68.7		
9.9	24.4			3.8	11.0	29.9	46.6	69.1		
10.1	24.7			3.9	11.3	30.2	47.0	69.5		
10.2	25.0			4.1	11.7	30.6	47.3	70.0		
10.4	25.2			4.3	12.0	30.9	47.7	70.4		
10.5	25.5			4.4	12.4	31.3	48.1	70.9		
10.6	25.8			4.6	12.8	31.6	48.5	71.3		
10.7	26.1			4.8	13.2	32.0	48.9	71.7		
10.8	26.4			5.0	13.7	32.3	49.3	72.2		
10.9	26.8			5.1	14.1	32.6	49.7	72.6		
11.2	27.1			5.3	14.5	32.8	50.1	73.1		
11.5	27.4			5.5	14.9	33.1	50.5	73.5		
11.7	27.7			5.6	15.2	33.4	51.0	74.2		
12.0	28.0			5.8	15.6	33.7	51.4	74.9		
12.3	28.3				15.9	34.0	51.8	75.6		
12.6	28.6				16.3	34.4	52.2	76.3		
12.9	28.9				16.6	34.7	52.6	77.0		
13.2	29.2				16.9	35.0	53.0			
13.5	29.5			0.0	17.3	35.3	53.4			
13.8	29.8			0.3	17.6	35.6	53.8			
14.0	30.1			0.7	17.9	36.0	54.1			
14.2	30.4			1.0	18.3	36.3	54.5			
14.4	32.3			1.4	18.6	36.6	54.8			
14.6	34.6			1.7	19.0	36.8	55.2			
14.8	36.7			1.9	19.3	37.1	55.5			
15.2	38.9			2.1	19.7	37.3	55.8			
15.6	41.0			2.4	20.0	37.6	56.1			

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 1091+20 NB ISS				12/3 to 12/19/2019	-L- 1091+20 NB OSL	12/3 to 12/19/2019				
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING			
STBC	FILL	430252.8	2018915.7	STBC	FILL	430239.1	2018932.8			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
1.2	15.5	31.5	82.3	0.5	1.1	45.5				
2.1	15.7	32.1	83.0	1.1	1.4	46.5				
3.0	16.0	32.8	83.7	1.6	1.8	47.3				
3.7	16.3	33.4	84.3	2.2	2.2	48.0				
4.2	16.5	34.2	85.0	2.7	2.7	48.8				
4.5	16.8	35.1	85.7	2.9	3.1	49.6				
4.9	17.1	35.9	86.4	3.1	3.5	50.3				
5.2	17.3	36.8	87.1	3.4	4.1	51.1				
5.6	17.5	37.7	87.8	3.6	4.8	52.2				
5.9	17.6	38.6		3.8	5.4	53.3				
6.2	17.8	39.4		4.0	6.1	54.4				
6.5	18.0	40.1		4.2	6.7	55.8				
6.7	18.2	40.9		4.3	7.5	57.3				
7.0	18.4	42.6		4.5	8.2	58.7				
7.3	18.7	44.4		4.7	9.0	59.8				
7.6	18.9	46.1		4.9	9.7	60.9				
7.9	19.1	47.4		5.1	10.5	62.0				
8.1	19.3	48.6		5.4	11.2	62.9				
8.4	19.6	49.9		5.6	11.9	63.9				
8.7	19.8	51.4		5.8	12.6	64.9				
8.9	20.1	52.1		6.0	13.3	65.8				
9.1	20.3	53.0		6.2	14.0	66.6				
9.3	20.5	53.9		6.3	14.6	67.5				
9.5	20.7	54.8		6.5	15.2	68.6				
9.7	20.9	55.7		6.7	15.7	69.8				
9.9	21.1	56.6		6.9	16.3	70.9				
10.1	21.3	57.6		7.1	16.9					
10.4	21.5	58.8		7.3	17.5					
10.6	21.7	60.2		7.5	18.2					
10.8	21.8	61.5		7.7	18.8					
10.9	22.0	62.8		7.9	19.5					
11.0	22.2	64.1		8.1	20.1					
11.1	22.5	65.2		8.3	21.5					
11.2	22.8	66.2		8.5	22.9					
11.3	23.1	67.2		8.7	24.3					
11.5	23.4	67.9		8.9	25.7					
11.7	23.7	68.7		9.1	27.1					
11.9	24.0	69.3		9.3	28.6					
12.1	24.3	70.2		9.5	30.2					
12.3	24.7	71.1		9.7	31.7					
12.5	25.0	72.0		9.9	32.4					
12.7	25.3	72.9		10.1	33.2					
12.9	25.7	73.8		10.3	33.9					
13.1	26.1	74.8		10.5	34.7					
13.3	26.6	75.8		10.7	35.8					
13.6	27.0	76.6			36.7					
13.9	27.4	77.4			38.0					
14.1	28.0	78.2			39.3					
14.4	28.5	79.1			40.6					
14.7	29.1	79.7		0.0	41.6					
14.9	29.6	80.4		0.3	42.7					
15.1	30.2	81.2		0.6	43.7					
15.3	30.8	81.8		0.8	44.6					

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 1091+20 NB OSS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 1116+00 NB ISL		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	430234.1	2018932.8	STBC	AG	431430.9	2021065.9				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
0.2	16.6	32.9	87.9	0.6	35.0	64.7					
0.4	17.1	33.4	89.1	1.1	35.6	65.3					
0.6	17.2	33.9	90.3	1.6	36.3	65.8					
0.8	17.4	34.2	91.5	2.0	37.0	66.4					
1.0	17.5	34.7	92.5	2.5	37.6	66.9					
1.2	17.7	35.3	93.5	3.0	38.3	67.4					
1.4	17.8	35.8	94.5	3.3	39.0	67.9					
1.6	18.2	36.4	95.4	3.7	39.6	68.4					
1.8	18.6	36.9	96.9	4.0	40.3	68.9					
2.0	19.1	37.7	98.4	4.4	40.8	69.4					
2.2	19.5	38.4	99.3	4.7	41.3						
2.4	19.9	39.2	100.1	5.1	41.8						
2.6	20.2	39.9	101.3	5.4	42.3						
2.8	20.5	40.7	102.4	5.8	42.9						
3.0	20.9	41.4		6.1	43.4						
3.2	21.2	42.2		6.5	44.0						
3.5	21.5	42.9		7.0	44.5						
3.7	21.7	43.7		7.5	45.1						
4.0	21.8	44.4		8.1	45.6						
4.2	22.0	45.6		8.6	46.2						
4.4	22.1	46.7		9.1	46.7						
4.7	22.3	47.8		9.7	47.3						
4.9	22.7	48.8		10.2	47.8						
5.2	23.1	50.2		10.8	48.4						
5.4	23.5	51.5		11.3	49.0						
5.8	23.9	53.2		11.9	49.5						
6.2	24.3	54.8		12.6	50.1						
6.5	24.6	56.6		13.4	50.6						
6.9	24.9	57.7		14.1	51.1						
7.3	25.3	58.4		14.8	51.6						
7.8	25.6	59.2		15.5	52.2						
8.3	25.9	60.0		16.2	52.8						
8.8	26.2	60.8		17.0	53.4						
9.3	26.4	61.9		17.7	54.0						
9.8	26.7	62.9		18.5	54.5						
10.2	26.9	64.5		19.5	55.1						
10.7	27.2	66.0		20.4	55.6						
11.1	27.4	67.7		21.4	56.1						
11.6	27.7	69.4		22.4	56.6						
12.0	27.9	71.0		23.3	57.2						
12.3	28.2	72.5		24.3	57.7						
12.6	28.4	73.7		25.3	58.3						
12.9	28.8	74.8		26.2	58.9						
13.2	29.1	75.9		27.2	59.4						
13.5	29.5	76.9		28.2	60.0						
13.8	29.9	78.0		29.1	60.5						
14.0	30.3	79.0		30.1	61.1						
14.3	30.6	80.2		30.8	61.6						
14.5	31.0	81.4		31.5	62.1						
14.8	31.4	82.8		32.2	62.6						
15.3	31.7	84.1		32.9	63.1						
15.7	32.1	85.4		33.6	63.6						
16.2	32.5	86.6		34.3	64.2						

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 1116+00 NB ISS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 1116+00 NB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	AG	431432.5	2021065.3	STBC	AG	431406.2	2021090.6				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
0.6		26.2	54.7	0.2	35.4	93.1					
0.9	Augered 19.6 cm	26.9	55.2	0.4	36.8						
1.2		27.5	55.6	0.6	38.0						
1.4		28.2	56.1	0.8	39.2						
1.7	0.0	28.9	56.5	1.0	40.4						
2.0	1.1	29.5	57.0	1.2	41.6						
2.2	1.7	30.2	57.6	1.4	42.8						
2.4	2.1	30.8	58.1	1.6	44.0						
2.5	2.5	31.5	58.5	1.8	45.1						
2.7	2.9	32.1	58.9	2.0	46.1						
2.9	3.2	32.6	59.3	2.2	47.1						
3.1	3.6	33.2	59.8	2.4	48.0						
3.3	4.0	33.7	60.3	2.7	49.0						
3.5	4.6	34.2	60.8	2.9	50.0						
3.7	5.1	34.8		3.1	50.9						
3.9	5.7	35.3		3.3	51.7						
4.1	6.2	35.8		3.5	52.6						
4.3	6.8	36.4		3.7	53.4						
4.5	7.4	36.9		3.9	54.3						
4.7	7.9	37.4		4.1	55.1						
4.9	8.5	37.9		4.3	56.3						
5.0	9.0	38.4		4.6	57.5						
5.1	9.6	38.9		4.8	58.6						
5.2	10.2	39.3		5.1	59.6						
5.3	10.7	39.8		5.3	61.0						
5.4	11.3	40.3		5.5	62.4						
5.5	11.8	40.8		5.8	63.9						
5.7	12.4	41.3		6.0	65.3						
5.8	12.8	41.8		6.3	66.6						
6.0	13.3	42.3		6.5	67.9						
6.1	13.7	42.8		6.9	69.3						
6.2	14.2	43.3		7.3	70.7						
6.3	14.6	43.8		7.7	72.0						
6.4	15.0	44.3		8.1	73.3						
6.4	15.3	44.8		8.5	74.6						
6.5	15.7	45.2		9.8	75.8						
6.7	16.0	45.7		11.0	77.1						
6.8	16.4	46.3		11.3	78.3						
7.0	16.8	46.8		11.7	79.3						
7.1	17.2	47.4		12.0	80.2						
7.3	17.7	47.9		12.4	81.2						
7.4	18.1	48.4		12.7	82.2						
7.4	18.5	48.9		14.8	83.1						
7.5	19.1	49.4		16.2	83.9						
7.5	19.8	50.0		18.0	84.7						
7.6	20.4	50.5		20.0	85.4						
7.6	21.1	51.0		24.4	86.2						
7.8	21.7	51.6		26.2	87.0						
7.9	22.4	52.1		27.9	87.9						
8.1	23.2	52.6		29.5	88.7						
8.2	23.9	53.2		31.0	89.7						
	24.7	53.7		32.5	90.6						
	25.4	54.2		34.0	91.9						

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
				COUNTY		ENGINEER		TECHNICIANS	
TEST LOCATIONS DESCRIPTION				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN	
-L- 508+50 SB ISS				12/3 to 12/19/2019		-L- 508+50 SB ISL		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	EASTING
STBC	FILL	375745.2	2001424.1	STBC	FILL	375747.3	2001421.1		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
1.7	29.2	47.0		0.6	11.7	23.0			
3.0	29.6	47.3		1.1	11.9	23.1			
3.9	30.0	47.5		1.7	12.1	23.2			
4.3	30.5	47.7		2.0	12.3	23.3			
5.4	30.8	47.9		2.2	12.4	23.6			
5.9	31.1	48.0		2.8	12.8	23.8			
6.6	31.4	48.5		3.1	13.0	23.9			
7.6	31.7	48.9		3.3	13.2	24.0			
8.1	32.0	49.0		3.5	13.4	24.2			
8.8	32.3	49.5		3.7	13.5	24.5			
9.3	32.8	49.9		3.9	13.6	24.8			
9.7	33.0	50.1		4.0	13.7	24.9			
10.4	33.4	50.3		4.1	13.8	25.1			
10.8	33.8	50.5		4.2	14.0	25.2			
11.3	34.0	50.6		4.3	14.2	25.4			
11.8	34.5	50.9		4.5	14.4	25.7			
12.3	34.8	51.2		4.7	14.6	25.8			
12.7	35.1	51.4		4.8	14.8	25.9			
13.1	35.6	51.7		4.9	15.0	26.0			
13.7	35.9	52.0		5.1	15.3	26.3			
14.2	36.5	52.4		5.5	15.7	26.4			
14.7	36.8	52.8		5.8	16.0	26.6			
15.0	37.2	53.0		6.0	16.2	26.7			
15.5	37.6	53.1		6.1	16.3	26.8			
16.0	37.8	53.3		6.3	16.5				
16.5	38.0	53.7		6.5	16.7				
16.9	38.2	53.9		6.7	16.8				
17.3	38.4	54.1		6.9	17.0				
17.6	38.7	54.5		7.0	17.2				
18.0	39.0	54.8		7.2	17.4				
18.4	39.3	55.1		7.4	17.5				
18.6	39.7	55.4		7.6	17.6				
19.0	40.2	55.6		7.7	17.9				
19.3	40.9	55.9		7.9	18.1				
19.7	41.0	56.0		8.0	18.3				
20.3	41.4	56.3		8.2	18.5				
20.8	41.7	56.6		8.5	19.0				
21.2	42.0	56.9		8.7	19.3				
21.7	42.7	57.0		8.9	19.5				
22.1	42.9	57.2		9.3	19.9				
22.8	43.1			9.5	20.5				
23.2	43.5			9.6	21.1				
23.7	43.9			9.7	21.2				
24.2	44.2			9.8	21.3				
24.7	44.7			9.9	21.4				
25.8	44.9			10.1	21.5				
26.2	45.1			10.3	21.7				
26.7	45.4			10.4	21.9				
27.2	45.8			10.6	22.0				
27.7	46.0			10.8	22.1				
28.3	46.2			11.0	22.3				
28.7	46.5			11.3	22.5				
28.8	46.8			11.5	22.8				

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE		
				I-5987B		47533.1.3		I-95		
				COUNTY		ENGINEER		TECHNICIANS		
TEST LOCATIONS DESCRIPTION				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		
-L- 535+25 SB OSS				12/3 to 12/19/2019		-L- 535+25 SB OSL		12/3 to 12/19/2019		
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	EASTING	
STBC	AG	378408.5	2001582.8	STBC	AG	378409.9	2001589.3			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
1.4	23.1	43.9	66.8			1.3	Auger	58.1	68.5	79.1
2.9	23.4	44.1	68.0			1.6		58.3	68.6	79.3
3.4	23.9	44.5	70.4			2.0		58.5	68.8	79.4
4.0	24.2	44.9	71.6			2.2	40.6	58.7	69.0	79.5
4.5	24.4	45.3	72.6			2.4	41.2	58.9	69.2	79.7
5.2	24.8	45.8	74.0			2.5	41.9	59.0	69.4	79.9
5.6	25.1	46.5	75.1			2.6	42.3	59.2	69.6	80.0
5.8	25.4	46.9	76.0			2.7	43.2	59.4	69.9	80.2
6.3	25.8	47.2	77.5			2.9	43.8	59.5	70.0	80.3
6.7	26.3	47.5	78.2			3.1	44.5	59.6	70.3	80.6
7.0	26.7	47.9	79.5			3.3	45.1	59.8	70.5	80.7
7.5	27.0	48.0	80.3			3.5	45.9	60.0	70.8	81.0
7.9	27.3	48.2	81.3			3.8	46.5	60.2	71.0	81.3
8.3	27.6	48.5	82.5			4.0	47.0	60.3	71.3	81.6
8.6	27.9	49.0	83.4			4.1	47.4	60.4	71.4	82.0
8.9	28.2	49.3	84.5			4.2	47.8	60.5	71.9	82.2
9.4	28.6	49.5	85.1			4.3	48.3	60.7	72.1	82.5
9.9	28.9	49.7	86.2			4.5	48.7	60.9	72.3	82.8
10.3	29.1	50.0	87.3			4.7	48.9	61.0	72.5	83.1
10.6	29.5	50.3	88.7			4.9	49.1	61.1	72.8	83.4
11.0	29.8	50.6	89.5			5.0	49.2	61.3	73.1	83.6
11.4	30.2	51.0	90.3			5.1	49.5	61.5	73.3	83.7
11.8	30.4	51.2	91.0			5.3	49.8	61.8	73.5	84.0
12.1	30.9	51.5	92.5			5.5	50.1	61.9	73.8	84.1
12.6	31.2	51.8	93.6			5.6	51.0	62.1	74.0	84.4
12.9	31.7	52.1	94.0			5.8	51.3	62.4	74.1	84.5
13.2	32.1	52.3	94.6			6.0	51.6	62.5	74.2	84.7
13.6	32.5	52.5				6.1	51.8	62.8	74.4	84.9
14.2	33.1	52.8				6.3	52.0	63.1	74.5	85.3
14.6	33.5	53.0				6.5	52.6	63.4	74.6	85.5
14.8	34.0	53.3				6.7	52.9	63.7	74.9	85.7
14.9	34.4	53.4				6.9	53.0	64.0	75.0	
15.0	35.0	53.6				7.1	53.5	64.2	75.1	
15.2	35.7	54.0				7.2	53.9	64.5	75.3	
15.6	36.5	54.3				7.3	54.5	64.6	75.5	
16.0	37.3	54.7				7.4	54.8	64.7	75.6	
16.5	38.0	55.0				7.4	55.0	65.0	75.7	
16.9	38.5	55.6				7.5	55.1	65.2	75.9	
17.3	39.0	56.2				7.7	55.3	65.5	76.1	
17.8	39.4	56.8				7.8	55.6	65.6	76.2	
18.2	39.8	57.2				7.9	55.9	65.8	76.6	
18.6	40.2	57.6				8.1	56.0	66.0	76.8	
19.1	40.6	58.1				8.3	56.2	66.2	76.9	
19.4	40.9	58.5				8.5	56.4	66.4	77.2	
19.9	41.1	59.0				8.6	56.7	66.6	77.4	
20.3	41.3	59.6				8.7	56.9	66.9	77.5	
20.6	41.6	60.0				8.8	57.1	67.0	77.8	
21.0	41.7	60.6				9.0	57.3	67.2	78.0	
21.4	42.0	61.1				9.2	57.4	67.5	78.1	
21.7	42.4	61.5				9.3	57.5	67.6	78.4	
22.1	42.8	62.0				9.5	57.7	67.9	78.6	
22.4	43.0	62.5				9.7	57.9	68.0	78.7	
22.8	43.3	63.0				9.9	58.0	68.2	78.9	

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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS	
-L- 535+25 SB ISS				Robeson		VLAD MITCHEV		D. Strother/J. Swartley	
DATE RUN				TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019				-L- 562+00 SB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
STBC	FILL	378412.3	2001616.3	STBC	CUT	381012.9	2002226.7		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
1.3	31.9	51.4	71.0	1.8	25.0	42.7	70.5	96.1	
2.2	32.0	51.9	71.4	2.3	25.3	43.3	70.9	96.4	
2.7	32.3	52.3	71.8	3.1	25.5	44.0	71.2	96.7	
3.4	32.5	52.6	72.3	3.6	25.7	44.7	71.7	97.1	
4.2	32.9	52.9	72.9	4.2	26.0	45.4	72.0	97.6	
4.8	33.5	53.1	73.7	4.6	26.3	46.1	72.3		
5.4	34.2	53.5	74.0	5.1	26.5	47.4	72.8		
6.7	34.6	53.9	74.3	5.6	26.6	48.9	73.1		
7.0	34.9	54.6	74.8	6.2	26.9	50.1	73.4		
8.2	35.5	54.9	75.3	6.7	27.1	51.2	73.9		
9.1	36.0	55.3	75.8	7.1	27.4	51.8	74.5		
9.9	36.6	55.7	76.1	7.8	27.5	52.3	74.9		
10.1	36.9	56.1	76.5	8.2	27.9	52.8	75.2		
11.2	37.4	56.5	77.0	8.6	28.0	53.1	75.8		
11.9	38.0	56.9	77.3	9.1	28.2	53.6	76.5		
12.5	38.4	57.4	77.7	9.5	28.4	54.2	76.9		
13.4	38.7	57.9		9.9	28.5	54.7	77.2		
14.0	39.0	58.3		10.3	28.8	55.2	77.5		
14.9	39.3	58.7		10.8	29.0	55.6	78.0		
15.4	39.8	59.0		11.4	29.1	56.0	78.8		
15.9	40.1	59.4		11.8	29.5	56.4	79.5		
16.7	40.5	59.8		12.2	29.7	57.0	80.0		
17.3	40.9	60.2		12.7	30.0	57.4	80.4		
17.8	41.3	60.7		13.3	30.4	57.6	80.8		
18.4	41.7	61.1		13.9	30.8	57.9	81.1		
19.0	41.9	61.4		14.4	31.1	58.4	81.5		
19.8	42.2	61.7		14.9	31.5	58.8	82.0		
20.3	42.5	62.5		15.4	31.8	59.3	82.6		
20.7	42.8	63.1		16.0	32.1	59.6	83.3		
21.0	43.0	63.5		16.5	32.5	60.0	83.6		
21.9	43.4	63.9		17.0	33.0	60.3	84.0		
22.4	43.8	64.5		17.3	33.4	60.7	84.5		
22.8	44.1	65.0		17.8	33.8	61.1	85.0		
23.3	44.4	65.4		18.3	34.2	61.5	85.6		
23.9	44.8	65.9		18.7	34.6	61.9	86.3		
24.5	45.0	66.1		19.2	35.1	62.3	86.7		
25.0	45.2	66.3		19.8	35.6	62.6	87.1		
25.9	45.5	66.5		20.0	36.3	63.0	87.5		
26.4	45.8	66.7		20.4	36.7	63.5	88.0		
26.8	46.0	66.9		20.7	37.3	63.8	88.4		
27.1	46.4	67.2		21.1	37.8	64.2	89.0		
27.6	46.9	67.5		21.6	38.1	64.5	89.7		
27.9	47.3	67.8		21.9	38.6	65.0	90.3		
28.1	47.6	68.0		22.2	38.9	65.4	90.7		
28.6	47.9	68.3		22.7	39.2	66.0	91.2		
28.8	48.3	68.6		22.9	39.5	66.4	91.6		
29.1	48.6	68.9		23.3	39.9	66.8	92.0		
29.5	48.9	69.1		23.7	40.1	67.3	92.7		
29.9	49.2	69.3		23.9	40.4	67.7	93.2		
30.1	49.6	69.8		24.1	40.9	68.0	93.7		
30.8	50.0	70.0		24.2	41.2	68.7	94.0		
31.3	50.5	70.4		24.6	41.6	69.5	94.8		
31.7	50.9	70.7		24.8	42.1	70.0	95.4		

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS	
-L- 562+00 SB ISS				Robeson		VLAD MITCHEV		D. Strother/J. Swartley	
DATE RUN				TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019				-L- 562+00 SB ISL		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
STBC	CUT	381001.7	2002254.1	STBC	CUT	381000.2	2002249.4		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
1.8	32.9	55.0		0.2	16.2	36.3			
2.5	33.3	55.6		0.3	16.4	36.7			
3.9	33.7	56.1		0.5	16.7	37.1			
5.3	34.0	56.7		0.6	16.9	37.7			
6.0	34.4	57.4		0.7	17.1	37.9			
6.8	34.9	58.1		0.8	17.5	38.4			
7.9	35.2	59.2		1.0	17.8	38.8			
8.7	35.7	60.1		1.2	18.1	39.5			
9.6	35.9	60.8		1.5	18.5	40.4			
10.4	36.2	61.7		1.7	18.8	40.9			
10.9	36.6	62.8		1.9	19.0	41.4			
12.5	36.9	63.7		2.2	19.1	41.6			
13.0	37.2	64.4		2.6	19.3	42.1			
13.9	37.8	65.2		3.1	19.6	43.4			
14.6	38.0	66.3		3.9	19.8	43.9			
15.3	38.3	68.4		4.2	20.1	44.5			
15.9	38.7	70.5		4.5	20.5	44.9			
16.6	39.1	72.0		4.8	20.9	45.6			
17.7	39.5	73.5		6.0	21.3	46.5			
18.5	39.9	75.2		6.2	21.8	46.9			
19.0	40.3	76.5		6.5	22.0	47.5			
19.7	40.6	78.1		6.8	22.1	48.1			
20.2	40.8	79.3		7.1	22.4	49.3			
20.9	41.3	81.3		7.9	22.9	50.2			
21.4	41.7	82.1		8.5	23.2	50.8			
21.9	42.1	83.5		8.8	23.5	51.4			
22.5	42.6	84.6		9.1	23.9	52.5			
23.0	42.9	85.7		9.3	24.2	53.6			
23.8	43.2	86.8		9.5	25.1	54.2			
24.2	43.5	88.1		9.9	25.6	54.9			
24.5	43.9	89.4		10.3	25.9	55.4			
24.9	44.3			10.5	26.2	55.9			
25.6	44.6			10.8	26.4	57.3			
26.0	45.3			11.0	26.7	58.8			
26.6	45.9			11.3	27.0	59.8			
26.9	46.4			11.6	27.6	61.2			
27.3	47.1			12.0	28.9	63.6			
27.9	47.4			12.2	29.4	64.8			
28.1	47.8			12.4	29.8	66.1			
28.3	48.1			12.7	30.1	67.0			
28.9	48.5			12.9	30.8	68.1			
29.1	48.9			13.2	31.3	70.0			
29.4	49.5			13.6	31.6	71.3			
29.8	49.9			13.7	32.0	72.1			
30.3	50.3			13.9	32.4	72.9			
30.6	50.7			14.2	32.9	73.4			
30.8	51.2			14.5	33.6	73.9			
31.0	51.8			14.8	33.9	74.6			
31.4	52.5			14.9	34.3				
31.7	53.0			15.0	34.8				
32.1	53.4			15.2	35.0				
32.4	53.8			15.6	35.5				
32.6	54.2			15.9	35.9				

SG = Subgrade
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CTBC = Cement-Treated Base Course
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CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 572+20 SB ISS				12/3 to 12/19/2019	-L- 581+70 SB OSS	12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING			
STBC	AG	381957.8	2002597.9	STBC	FILL	382865.7	2002884.6			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
1.0	30.0	53.9		1.5	30.8	50.0	78.8			
1.9	30.4	54.5		2.1	31.2	50.3	79.5			
2.8	30.8	54.8		3.2	31.6	50.7	80.4			
3.5	31.0	55.0		3.9	32.0	51.2	81.0			
5.0	31.6	55.6		4.3	32.2	51.6	81.8			
6.1	32.2	55.9		4.8	32.7	52.0	82.5			
6.8	33.0	56.4		5.2	33.0	52.2	83.7			
7.2	33.4	56.8		5.8	33.4	52.7	84.5			
7.9	33.9	57.4		6.5	33.7	53.1	85.2			
8.6	34.3	57.9		7.1	34.1	53.3	85.9			
9.4	34.8	58.3		7.6	34.4	53.7	86.6			
10.0	35.7	58.8		8.3	34.9	54.1	87.5			
10.5	36.1	59.3		9.0	35.3	54.6	88.2			
11.2	36.6	59.6		9.5	35.8	55.0	89.3			
12.0	37.2	60.0		10.1	35.9	55.4	90.5			
12.5	37.7	60.4		10.9	36.4	55.9	91.4			
13.2	38.1	60.8		11.5	36.7	56.2	92.0			
13.8	38.5	61.2		12.2	37.2	56.6	92.8			
14.2	38.9	61.8		12.8	37.5	57.0	93.5			
15.3	39.4	62.2		13.5	37.9	57.5	94.2			
15.6	39.7	62.6		14.5	38.2	57.9	95.0			
16.2	40.0	62.9		15.0	38.6	58.2	96.0			
16.6	40.3	63.5		15.6	39.0	58.6	96.5			
17.0	40.8	64.3		16.5	39.3	59.0	97.1			
17.4	41.1	64.9		17.1	39.7	59.5	98.0			
17.9	41.4	65.3		18.0	40.0	60.0	99.0			
18.2	41.7	65.8		18.5	40.5	60.7				
18.6	42.0	66.5		19.2	40.8	61.2				
19.2	42.4	67.0		20.0	40.9	61.9				
19.5	42.8	67.4		20.5	41.2	62.5				
19.8	43.2	67.9		21.0	41.5	63.0				
20.3	43.7	68.4		21.6	42.0	63.5				
20.6	44.1	68.7		22.0	42.1	64.1				
20.9	44.4	69.1		22.4	42.6	64.8				
21.5	44.8	69.5		22.6	43.0	65.4				
21.8	45.5	69.9		22.9	43.2	65.9				
22.0	46.2	70.2		23.6	43.5	66.5				
22.5	46.6	71.1		24.3	43.8	66.9				
22.8	46.9	72.5		24.9	44.1	67.4				
23.4	47.4	72.9		25.3	44.6	68.0				
23.8	47.9	73.5		25.8	45.0	68.8				
24.0	48.6	73.8		26.2	45.5	69.4				
24.4	48.9	74.7		26.5	45.8	70.0				
24.9	49.4	75.5		26.9	46.1	70.7				
25.6	49.6			27.3	46.4	71.6				
25.9	49.9			27.6	46.9	72.4				
26.3	50.7			28.2	47.2	73.4				
26.7	51.4			28.5	47.7	74.0				
27.6	51.7			28.8	48.0	74.6				
28.2	51.9			29.1	48.5	75.4				
28.8	52.5			29.6	48.8	76.2				
29.5	53.1			30.0	49.2	76.9				
29.8	53.6			30.3	49.6	77.8				

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 581+70 SB OSL				12/3 to 12/19/2019	-L- 596+90 SB OSS	12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING			
STBC	FILL	382859.8	2002892.5	SG	FILL	384299.0	2003388.5			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
0.7	8.8	20.6	47.5	60.9		4.0	76.5			
1.1	8.9	20.7	48.3	61.0		5.7	76.8			
1.5	9.1	20.8	48.5	61.2		7.0	77.1			
1.7	9.1	21.0	48.9	61.3		8.1	77.5			
2.0	9.2	21.2	49.2	61.5		9.2	78.1			
2.3	9.2	21.3	49.6	61.7		9.5	78.6			
2.6	9.3	21.5	49.8	61.9		10.5	79.0			
2.9	9.4	21.6	50.2	62.2		11.4	79.3			
3.0	9.5	21.7	50.5	62.5		12.5				
3.2	9.5	21.8	50.8	62.9		13.2				
3.4	9.6	22.0	51.1	63.1		14.0				
3.6	9.8	22.3	51.2	63.6		15.0				
3.8	9.8	22.5	51.5	64.1		15.9				
4.1	10.0	22.7	51.8	64.5		16.5				
4.3	10.0	22.9	51.9	64.9		17.1				
4.4	10.2	22.9	52.2	65.2		18.1				
4.5	10.4	22.9	52.5	65.7		19.2				
4.6	10.6	23.0	52.7	66.2		19.8				
4.7	10.7	23.0	52.8	66.7		21.0				
4.9	10.8	23.0	53.1	67.3		21.8				
5.0	10.9	23.2	53.3	67.8		22.8				
5.1	11.0	23.4	53.5	68.4		23.5				
5.4	11.0	23.4	53.8	68.8		24.4				
5.5	11.1	23.7	54.1	69.3		25.3				
5.6	11.1	23.8	54.3	69.5		26.0				
5.7	11.1	23.9	54.5	70.0		27.1				
5.8	11.3	24.0	54.8	70.7		28.6				
6.0	11.3	24.0	55.0	71.3		30.5				
6.1	11.4	24.0	55.2	71.9		32.6				
6.2	11.7	24.2	55.3	72.7		35.0				
6.3	11.8	24.3	55.5	73.4		38.4				
6.3	Auger	24.4	55.7	74.2		50.0				
6.4	Auger	24.4	55.9	74.8		54.6				
6.5	Auger	24.5	56.1	75.6		58.0				
6.5	16.4	24.6	56.2	76.3		61.8				
6.6	16.7	24.7	56.7	77.0		63.6				
6.9	16.9	24.7	56.8	77.4		65.0				
7.0	17.2	24.8	57.0	78.2		66.1				
7.0	17.4	24.8	57.1	79.1		67.2				
7.2	17.7	25.0	57.2	79.7		68.0				
7.2	17.8	25.1	57.6	80.0		68.6				
7.2	17.8	25.4	57.8	80.6		69.3				
7.4	17.8	25.5	58.2	81.0		70.0				
7.5	18.0	25.6	58.5	81.5		71.2				
7.6	18.0	25.8	58.8	82.1		71.6				
7.8	18.5	25.9	59.0	82.6		72.5				
7.9	18.8	26.0	59.2			72.8				
8.1	19.0	26.0	59.5			73.5				
8.3	19.4	26.1	59.8			74.0				
8.4	19.6	26.1	60.1			74.5				
8.5	19.8	Auger	60.3			75.0				
8.6	20.2	Auger	60.6			75.5				
8.7	20.5	Auger	60.8			76.1				

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
				COUNTY		ENGINEER		TECHNICIANS	
Robeson				VLAD MITCHEV		D. Strother/J. Swartley			
TEST LOCATIONS DESCRIPTION				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN	
-L- 596+90 SB ACCEL				12/3 to 12/19/2019		-L- 610+70 SB ISS		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
SG	FILL	384296.3	2003395.4	STBC	FILL	385588.2	2003888.8		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
1.6	21.3	38.5	54.0	68.8	82.8	1.5	29.2	57.0	
2.8	21.6	38.8	54.3	69.3	82.9	2.6	29.4	57.8	
3.6	21.8	39.0	54.7	69.6	83.1	3.4	29.6	58.7	
4.5	22.1	39.3	55.0	69.9	83.3	4.2	30.0	59.4	
5.1	22.3	39.6	55.2	70.0	83.4	5.0	30.4	60.1	
5.8	22.5	39.8	55.6	70.3	83.5	5.7	30.6	60.9	
6.4	22.9	39.9	55.8	70.6	83.7	6.5	31.0	61.8	
6.8	23.2	40.0	55.9	70.7	84.0	7.3	31.5	62.5	
7.5	23.5	40.2	56.0	71.0	84.3	8.0	31.8	62.9	
8.1	23.6	40.5	56.3	71.2	84.5	8.7	32.3	63.5	
8.7	24.0	40.7	56.5	71.6	84.7	9.3	32.7	63.8	
9.2	24.3	41.0	56.6	71.9	84.9	9.9	33.1	64.3	
9.7	24.7	41.2	56.9	72.1	85.1	10.3	33.5	64.8	
10.1	25.0	41.4	57.1	72.3	85.3	10.9	33.7	65.4	
10.3	25.4	41.8	57.5	72.7	85.4	11.6	34.2	66.0	
10.5	25.7	42.1	57.8	73.0	85.7	12.0	34.4	66.6	
10.8	26.0	42.3	58.0	73.4		12.7	34.7	67.3	
11.0	26.3	42.7	58.5	73.8		13.4	35.2	67.9	
11.3	26.8	42.9	58.8	74.2		13.9	35.5	68.7	
11.5	27.0	43.0	59.0	74.6		14.6	35.8	69.4	
11.7	27.3	43.2	59.4	74.8		15.2	36.2	70.1	
12.0	27.6	43.5	59.8	75.1		15.8	36.6	70.9	
12.3	28.0	44.1	60.1	75.2		16.5	37.2	71.5	
12.5	28.3	44.5	60.2	75.5		17.1	37.6	72.1	
12.9	28.6	44.8	60.6	75.8		17.6	38.1	72.7	
13.3	28.9	45.0	60.8	76.0		18.2	38.7	73.2	
13.7	29.4	45.2	61.0	76.2		18.6	39.3	73.7	
14.1	29.7	45.5	61.3	76.4		19.2	39.9	74.2	
14.5	30.1	45.9	61.4	76.6		19.6	40.3	74.9	
14.6	30.5	46.2	61.7	76.9		20.1	41.0	75.6	
14.7	30.7	46.6	61.8	77.1		20.6	41.5	76.4	
14.7	31.1	46.8	62.1	77.4		21.0	42.4	77.3	
14.8	31.4	47.0	62.4	77.5		21.4	43.1	78.0	
14.9	31.8	47.3	62.6	77.8		21.8	44.0	78.9	
15.2	32.2	47.5	63.0	78.0		22.2	44.8	79.9	
15.6	32.5	47.8	63.3	78.3		22.6	45.7	80.7	
16.0	32.9	48.1	63.6	78.4		22.9	46.3	81.7	
16.2	33.4	48.2	63.9	78.8		23.1	46.8	82.5	
16.4	33.8	48.4	64.2	79.0		23.6	47.5	83.6	
16.6	34.2	48.9	64.4	79.3		24.0	47.8	84.5	
17.2	34.5	49.5	64.8	79.4		24.6	48.5	85.3	
17.5	34.8	50.0	65.1	79.7		25.0	49.1	86.2	
18.0	35.2	50.3	65.3	79.8		25.4	49.7		
18.4	35.6	50.6	65.7	80.1		25.9	50.3		
18.6	35.9	51.1	66.0	80.4		26.1	50.9		
18.9	36.1	51.6	66.2	80.7		26.3	51.5		
19.3	36.5	51.9	66.5	80.9		26.7	52.2		
19.5	36.8	52.4	66.7	81.3		27.1	52.6		
19.9	37.3	52.7	67.0	81.5		27.5	53.4		
20.1	37.7	52.9	67.4	81.8		27.8	53.9		
20.4	37.8	53.2	67.6	82.0		28.2	54.6		
20.6	38.0	53.5	68.0	82.3		28.5	55.4		
20.9	38.2	53.7	68.4	82.5		28.9	56.2		

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
				COUNTY		ENGINEER		TECHNICIANS	
Robeson				VLAD MITCHEV		D. Strother/J. Swartley			
TEST LOCATIONS DESCRIPTION				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN	
-L- 610+70 SB ISL				12/3 to 12/19/2019		-L- 628+05 SB GORE		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
STBC	FILL	385590.7	2003882.8	SG	FILL	387240.0	2004355.9		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
0.3	16.7	33.5	57.2					0.2	9.6
0.8	17.0	33.7	57.7					0.5	9.9
1.1	17.4	33.9	58.3					0.7	10.2
1.6	17.6	34.2	58.9					1.0	10.5
1.9	17.9	34.7	59.6					1.2	10.9
2.4	18.2	35.0	60.3					1.4	11.2
2.8	18.6	35.3	61.0					1.5	11.5
3.1	18.8	35.7	61.6					1.7	
3.6	19.1	36.1	62.1					1.8	
4.1	19.5	36.5	62.8					2.0	
4.4	19.6	37.1	63.6					2.2	
4.9	20.0	37.5	64.2					2.4	
5.1	20.5	38.0	65.0					2.6	
5.5	20.7	38.5	65.5					2.8	
6.0	21.2	38.7	66.0					3.0	
6.3	21.6	39.1	66.8					3.2	
6.6	22.0	39.5	67.5					3.4	
6.9	22.3	39.9	68.1					3.6	
7.2	22.8	40.1	68.7					3.8	
7.5	23.3	40.3	69.3					4.0	
7.8	23.6	40.6	70.0					4.1	
7.9	24.0	40.9	71.1					4.3	
8.2	24.3	41.3	72.3					4.4	
8.5	24.7	41.6	72.9					4.6	
8.6	24.9	41.9	73.6					4.7	
8.9	25.2	42.4	74.4					4.8	
9.0	25.6	42.7	75.1					5.0	
9.3	25.9	43.1						5.1	
9.4	26.3	43.5						5.3	
9.6	26.7	43.9						5.4	
10.0	26.9	44.3						5.5	
10.1	27.3	44.8						5.6	
10.5	27.5	45.3						5.7	
10.8	27.8	45.7						5.8	
11.1	28.0	46.2						6.0	
11.5	28.2	46.7						6.1	
11.7	28.5	47.2						6.2	
12.0	28.8	47.6						6.3	
12.1	28.9	48.2						6.4	
12.5	29.2	48.6						6.5	
12.8	29.3	49.1						6.7	
12.9	29.6	49.8						6.9	
13.2	29.9	50.2						7.0	
13.4	30.2	50.7						7.2	
13.6	30.5	51.4						7.4	
14.0	31.0	52.1						7.6	
14.2	31.2	52.7						7.8	
14.7	31.5	53.3						7.9	
14.9	31.8	54.0						8.1	
15.3	32.2	54.7						8.3	
15.6	32.5	55.3						8.6	
16.0	32.9	56.0						8.9	
16.3	33.2	56.6						9.3	

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 637+95 SB OSS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 637+95 SB ISS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	388211.9	2004517.2	STBC	FILL	388211.3	2004549.7				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
1.6	28.3	49.8	80.4	0.7	17.8	37.1	58.9				
3.2	28.9	50.1	80.9	1.5	18.0	37.3	59.4				
3.9	29.4	50.3	81.3	2.1	18.2	37.6	59.9				
4.6	29.9	50.6	81.8	2.5	18.4	37.8	60.4				
5.1	30.4	51.0	82.2	2.9	18.6	38.1	60.6				
5.5	30.9	51.3	82.7	3.4	18.9	38.4	61.0				
6.1	31.4	51.7	83.2	4.0	19.3	38.6	61.2				
6.7	32.1	52.0	83.7	4.5	19.7	38.9	61.4				
7.0	32.8	52.4	84.3	5.1	20.2	39.3	61.7				
7.3	33.5	52.9	84.8	5.3	20.5	39.7	61.8				
7.7	34.2	53.5	85.3	5.4	20.8	40.2	62.2				
8.2	34.9	54.0	85.9	5.7	21.1	40.5	62.3				
8.6	35.4	54.6	86.6	6.0	21.5	40.7	62.5				
9.1	35.9	55.1	87.2	6.4	21.7	40.9	62.8				
9.5	36.4	55.4	87.9	6.8	22.0	41.1	63.1				
9.9	36.9	55.7	88.5	7.0	22.4	41.2	63.3				
10.2	37.4	56.0	89.1	7.4	22.7	41.5	63.5				
10.6	37.9	56.3	89.7	7.6	23.1	41.8	63.7				
10.9	38.3	56.6	90.4	7.9	23.2	42.0	64.0				
11.3	38.8	57.0	91.0	8.2	23.6	42.4	64.2				
11.7	39.2	57.4	91.6	8.5	24.1	42.7	64.4				
12.1	39.7	57.9		8.9	24.5	42.9	64.7				
12.6	40.1	58.3		9.2	24.8	43.2	64.9				
13.0	40.4	58.7		9.4	25.1	43.7	65.1				
13.4	40.8	59.3		9.8	25.6	44.0	65.2				
13.9	41.1	59.9		10.0	26.0	44.4	65.3				
14.3	41.5	60.4		10.4	26.4	44.7	65.4				
14.8	41.8	61.0		10.6	26.9	45.1	65.5				
15.2	42.1	61.6		10.9	27.2	45.6	65.7				
15.7	42.4	62.5		11.1	27.7	46.0	66.0				
16.2	42.7	63.4		11.4	28.1	46.5	66.3				
16.6	43.0	64.3		11.6	28.5	47.0	66.4				
17.1	43.3	65.2		11.9	29.0	47.5	66.7				
17.5	43.6	66.1		12.2	29.6	48.1	67.0				
18.0	43.9	67.0		12.6	30.0	48.4	67.2				
18.5	44.2	67.9		12.7	30.5	48.9	67.5				
19.0	44.5	68.9		13.2	31.1	49.5	67.6				
19.5	44.8	69.8		13.4	31.5	50.2	68.0				
20.0	45.1	70.7		13.7	31.9	50.6	68.1				
20.5	45.5	71.4		14.2	32.5	51.2	68.3				
21.0	45.8	72.0		14.3	33.0	51.8	68.6				
21.5	46.1	72.7		14.8	33.3	52.3	68.8				
21.9	46.5	73.3		15.1	33.8	52.9	69.0				
22.4	46.8	74.0		15.3	34.1	53.4	69.2				
22.9	47.2	74.6		15.6	34.6	54.1	69.5				
23.5	47.5	75.2		15.7	35.0	54.4	69.6				
24.1	47.9	75.9		15.9	35.3	55.1	69.8				
24.8	48.2	76.5		16.2	35.7	55.6	69.9				
25.4	48.5	77.1		16.5	35.9	56.2	70.1				
26.0	48.7	77.8		16.8	36.3	56.9					
26.6	49.0	78.4		17.1	36.5	57.3					
27.2	49.3	79.1		17.3	36.7	58.0					
27.7	49.6	79.7		17.6	36.9	58.5					

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 637+95 SB ISL				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 666+40 SB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	388215.1	2004547.0	STBC	FILL	391030.9	2004971.8				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
0.3	14.4	28.4		1.2	39.7	70.6					
0.7	14.7	28.6		2.4	40.2	71.8					
1.1	15.0	28.8		3.2	40.7	72.6					
1.4	15.4	29.0		3.9	41.1	73.5					
1.6	15.8	29.1		5.1	41.8	74.7					
1.9	16.1	29.4		6.2	42.0	75.5					
2.1	16.5	29.6		7.1	42.3	76.6					
2.4	16.8	29.7		7.9	42.6	77.5					
2.6	17.2	30.0		8.5	43.1	78.9					
3.0	17.6	30.2		9.2	43.8	80.5					
3.3	18.0	30.3		10.3	44.3	85.0					
3.5	18.3	30.7		11.3	44.8	88.1					
3.7	18.6	30.8		11.9	45.1	90.6					
4.0	18.9	31.1		12.5	45.7						
4.2	19.1	31.4		14.6	46.2						
4.5	19.4	31.5		15.2	46.8						
4.7	19.7	31.6		15.9	47.4						
4.8	20.1	31.8		16.6	47.9						
5.0	20.5	32.0		17.0	48.2						
5.2	20.8	32.3		17.7	48.7						
5.5	21.2	32.6		18.1	49.0						
5.7	21.5	32.9		18.8	49.9						
5.9	21.7	33.3		19.3	50.3						
6.1	22.0	33.6		19.6	50.9						
6.4	22.3			20.3	51.4						
6.6	22.6			20.8	51.8						
6.8	22.8			21.3	52.1						
6.9	23.1			21.9	52.9						
7.1	23.3			22.2	53.4						
7.3	23.4			22.5	53.9						
7.5	23.7			22.9	54.3						
7.8	23.9			23.5	54.9						
8.0	24.2			24.0	55.5						
8.2	24.3			24.6	56.0						
8.5	24.7			25.0	56.6						
8.8	24.8			25.8	57.1						
9.2	25.0			26.4	57.9						
9.5	25.2			27.3	58.4						
9.8	25.4			28.7	59.0						
10.2	25.6			29.3	59.8						
10.6	25.9			30.4	60.3						
10.8	26.1			32.1	60.9						
11.1	26.3			33.2	61.8						
11.5	26.5			33.9	62.3						
11.7	26.6			34.8	62.9						
12.0	26.9			35.7	63.8						
12.3	27.0			36.2	64.4						
12.6	27.2			36.8	64.9						
13.1	27.5			37.1	66.2						
13.4	27.7			37.9	66.9						
13.6	27.9			38.5	67.8						
13.9	28.0			38.9	68.8						
14.1	28.2			39.1	69.7						

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE		
				I-5987B		47533.1.3		I-95		
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS		
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley		
-L- 666+40 SB ISS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		
				12/3 to 12/19/2019		-L- 666+40 SB ISL		12/3 to 12/19/2019		
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	EASTING	
STBC	FILL	391024.2	2005006.2	STBC	FILL	391019.6	2004999.8			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
0.8	25.6	53.8	87.8					1.1	10.5	28.9
1.7	26.2	54.2	88.4					1.3	10.7	29.3
2.3	26.9	54.6	89.0					1.5	11.0	29.7
2.9	27.5	54.8	89.6					1.9	11.4	30.1
3.3	28.1	55.2						2.1	11.8	30.4
3.8	28.9	55.6						2.3	12.2	30.7
4.2	29.4	55.9						2.4	12.6	31.0
4.5	30.1	56.3						2.5	12.9	31.1
4.8	30.9	56.8						2.6	13.4	31.5
5.3	31.5	57.1						2.7	13.6	31.7
5.7	32.1	57.6						2.9	13.9	32.0
6.3	32.8	57.9						3.1	14.3	32.2
6.8	33.4	58.3						3.4	14.6	32.6
7.2	34.1	58.6						3.6	14.9	32.7
7.5	34.8	59.0						3.8	15.2	32.9
7.8	35.6	59.3						4.0	15.4	33.2
8.3	36.2	59.8						4.1	15.8	33.5
8.7	36.9	60.2						4.2	16.1	33.7
9.0	37.6	60.5						4.3	16.5	33.8
9.4	38.2	60.9						4.4	16.8	34.1
9.7	39.0	61.7						4.5	17.1	34.3
10.1	39.6	62.5						4.6	17.4	34.6
10.6	40.2	63.1						4.7	17.7	34.7
11.1	40.5	63.9						4.9	18.0	35.0
11.4	40.9	64.8						5.1	18.2	35.2
11.9	41.2	65.3						5.2	18.7	35.5
12.4	41.7	65.7						5.4	18.9	
12.8	42.0	66.3						5.7	19.3	
13.1	42.4	66.8						5.9	19.7	
13.5	43.0	67.2						6.1	20.0	
14.0	43.4	67.7						6.3	20.2	
14.4	43.8	68.4						6.4	20.6	
14.7	44.4	68.9						6.7	21.0	
15.2	44.7	69.4						6.8	21.3	
15.5	45.1	70.0						7.0	21.7	
15.9	45.4	70.8						7.1	21.9	
16.3	45.9	71.5						7.4	22.4	
16.8	46.2	72.2						7.6	22.7	
17.3	46.6	73.1						7.9	23.1	
17.8	47.0	73.9						8.1	23.4	
18.2	47.3	74.9						8.4	23.9	
18.7	47.6	75.8						8.5	24.1	
19.4	48.0	76.8						8.5	24.5	
19.9	48.4	77.8						8.6	24.9	
20.5	48.6	78.7						8.7	25.3	
21.0	49.0	79.7						8.8	25.6	
21.5	49.3	80.8						8.9	26.1	
22.0	49.7	82.0						9.1	26.5	
22.7	50.4	83.0						9.3	26.9	
23.2	51.3	84.3						9.4	27.2	
23.7	52.0	85.3						9.7	27.8	
24.2	52.7	86.6						10.0	28.2	
24.9	53.4	87.2						10.2	28.5	

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE		
				I-5987B		47533.1.3		I-95		
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS		
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley		
-L- 688+25 SB OSS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		
				12/3 to 12/19/2019		-L- 688+25 SB OSL		12/3 to 12/19/2019		
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	EASTING	
STBC	FILL	393159.8	2005538.6	STBC	FILL	393151.9	2005538.4			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
2.5	48.5							0.3	7.8	18.5
3.8	49.0							0.6	7.9	18.6
5.2	49.6							1.0	8.0	18.7
6.5	50.3							1.2	Auger	18.8
8.9	51.0							1.4		19.0
11.2	51.5							1.7		19.3
13.5	52.2							1.9	9.7	19.6
14.7	52.8							2.0	9.8	19.8
15.7	53.7							2.1	9.9	20.0
16.9	54.3							2.2	10.0	20.1
17.8	55.1							2.4	10.1	20.2
18.6	55.9							2.5	10.2	20.3
19.6	56.6							2.7	10.4	20.4
20.4	57.5							2.8	10.6	20.5
21.3	58.1							2.9	10.8	20.6
22.1	59.0							3.0	11.0	20.7
22.7	59.9							3.1	11.3	20.8
23.5	60.8							3.2	11.4	20.9
24.1	61.7							3.3	11.8	21.1
24.7	62.7							3.4	12.0	21.2
25.5	63.5							3.5	12.2	21.3
26.2	64.5							3.6	12.3	21.4
27.0	65.5							3.7	12.5	21.5
27.6	66.5							3.9	12.7	21.6
28.4	67.4							4.0	12.8	21.7
29.2	68.4							4.2	12.9	21.8
30.1	69.3							4.3	13.2	21.9
30.8	70.3							4.5	13.5	22.1
31.8								4.7	13.7	22.2
32.8								4.8	13.9	22.3
33.9								5.0	14.3	22.4
34.7								5.1	14.4	22.5
35.6								5.2	14.6	22.6
36.1								5.3	14.9	22.7
36.6								5.4	15.1	22.8
37.3								5.5	15.4	22.9
37.8								5.6	15.6	23.0
38.5								5.7	15.8	23.1
39.2								5.9	16.0	23.2
39.9								6.0	16.2	23.3
40.5								6.1	16.4	23.4
41.2								6.2	16.5	23.5
42.0								6.3	16.6	23.6
42.6								6.4	16.7	23.7
43.3								6.6	17.0	23.8
43.8								6.7	17.1	23.9
44.2								6.8	17.3	24.0
44.8								6.9	17.5	24.1
45.5								7.0	17.8	24.1
46.0								7.1	17.9	
46.7								7.3	18.0	
47.2								7.5	18.2	
47.8								7.7	18.3	

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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
-L- 688+25 SB ISS				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019		-L- 688+25 SB ACCEL		12/3 to 12/19/2019		-L- 719+30 SB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
SG	FILL	393131.2	2005564.0	STBC	FILL	393149.8	2005539.3	STBC	FILL	395728.0	2007291.5
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
2.4	17.8	39.4		1.9	20.7	32.2	42.6	54.6			
3.0	18.2	39.9		2.7	20.9	32.4	42.7	54.7			
3.6	18.5	40.3		3.3	21.1	32.7	42.7	55.1			
3.9	18.8	40.8		3.9	21.2	32.9	42.8	55.3			
4.2	19.3	41.3		4.6	21.4	33.1	43.1	55.5			
4.5	19.6	42.0		5.4	21.7	33.4	43.2	55.8			
4.8	19.9	42.5		5.9	22.0	33.5	43.6	56.0			
5.0	20.4	43.1		6.4	22.1	33.8	43.7	56.3			
5.4	20.9	43.6		6.9	22.4	34.1	44.0	56.5			
5.7	21.3	44.0		7.5	22.6	34.3	44.2	56.8			
6.1	21.7	44.7		7.8	22.9	34.5	44.3	57.1			
6.4	22.1	45.3		8.4	23.1	34.7	44.4	57.4			
6.7	22.3	45.7		8.9	23.2	34.8	44.5	57.6			
7.1	22.7	46.1		9.2	23.5	35.1	44.8	57.8			
7.3	22.9	46.7		9.5	23.7	35.3	45.0	58.0			
7.7	23.2	47.1		9.9	23.9	35.5	45.4	58.3			
7.8	23.5	47.6		10.3	24.0	35.6	45.6	58.5			
8.2	23.8	48.1		10.7	24.3	35.7	45.8	58.8			
8.5	23.9	48.4		11.0	24.4	35.8	46.2	59.0			
8.8	24.2	48.8		11.5	24.6	35.8	46.4	59.4			
8.9	24.5	49.1		11.8	25.0	35.9	46.8	59.8			
9.1	24.8	49.6		12.2	25.1	35.9	46.9	60.1			
9.3	25.4	50.0		12.5	25.4	36.2	47.2	60.5			
9.6	25.6	50.3		12.9	25.6	36.5	47.5	60.9			
9.9	26.0	50.7		13.2	25.9	36.7	47.6	61.4			
10.2	26.5	50.9		13.6	26.1	37.0	48.0	61.8			
10.4	26.8	51.1		13.9	26.2	37.1	48.1	62.2			
10.8	27.3	51.5		14.2	26.5	37.3	48.4				
11.0	27.7	51.9		14.4	26.6	37.4	48.6				
11.2	28.1	52.2		14.7	26.9	37.7	48.8				
11.5	28.5	52.5		14.9	27.0	37.9	49.2				
11.6	29.0	52.8		15.2	27.3	38.0	49.5				
11.9	29.6	53.2		15.5	27.5	38.2	49.7				
12.0	30.2	53.5		15.9	27.8	38.3	50.0				
12.3	30.8	53.9		16.2	28.1	38.5	50.3				
12.6	31.3	54.3		16.4	28.2	38.8	50.6				
12.9	31.9	54.8		16.8	28.3	38.9	50.8				
13.2	32.5	55.1		17.1	28.6	39.2	50.9				
13.4	33.0	55.4		17.4	28.7	39.3	51.2				
13.8	33.7	55.9		17.7	29.0	39.6	51.4				
14.1	34.2	56.3		17.9	29.3	39.7	51.6				
14.4	34.6	56.7		18.2	29.5	40.0	51.8				
14.7	35.0	57.0		18.4	29.7	40.2	51.9				
15.0	35.4	57.3		18.6	30.0	40.4	52.2				
15.3	35.8	57.7		18.7	30.3	40.6	52.5				
15.6	36.2	58.1		18.9	30.4	40.8	52.7				
15.9	36.6	58.4		19.1	30.5	41.0	52.9				
16.1	37.0	58.7		19.3	30.7	41.3	53.2				
16.4	37.3			19.5	30.9	41.5	53.5				
16.7	37.7			19.9	31.1	41.7	53.7				
17.0	38.1			20.1	31.3	42.0	53.9				
17.2	38.5			20.3	31.6	42.4	54.2				
17.5	38.9			20.5	31.9	42.5	54.4				

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
-L- 719+30 SB OSS				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
12/3 to 12/19/2019		-L- 719+30 SB ISS		12/3 to 12/19/2019		-L- 719+30 SB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	395728.0	2007291.5	STBC	FILL	395704.7	2007318.3	STBC	FILL	395704.7	2007318.3
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
1.1	26.4	50.4	65.6	81.3		0.4	26.0	44.3	58.0		
2.4	26.7	50.7	65.8	81.6		0.9	26.5	44.7	58.1		
3.7	27.4	51.0	66.0	82.0		1.3	26.9	44.9	58.5		
5.2	27.8	51.2	66.3	82.5		1.8	27.2	45.1	58.7		
5.9	28.1	51.5	66.6	82.9		2.2	27.6	45.3	58.9		
6.5	28.6	51.7	66.8	83.4		2.8	28.1	45.6	59.1		
7.0	29.1	52.0	67.1	83.9		3.3	28.5	46.0	59.3		
7.6	29.6	52.3	67.4	84.4		3.9	28.8	46.1	59.4		
7.9	30.1	52.6	67.7	84.9		4.5	29.4	46.5	59.5		
8.2	30.8	52.8	67.9	85.4		5.1	29.6	46.8	59.6		
8.6	31.3	53.1	68.2	85.8		5.8	30.0	47.1	59.8		
9.0	31.9	53.4	68.4	86.2		6.3	30.4	47.4	60.0		
9.4	32.4	53.7	68.7	86.7		6.9	30.8	47.8	60.3		
9.8	33.0	54.0	69.0	87.1		7.8	31.1	48.0	60.5		
10.2	33.5	54.2	69.2	87.5		8.3	31.6	48.4	60.6		
10.6	34.0	54.5	69.5			8.8	32.0	48.6	60.8		
11.0	34.5	54.8	69.7			9.4	32.4	48.9	61.0		
11.4	34.9	55.1	70.0			9.9	32.8	49.2	61.2		
11.7	35.4	55.4	70.3			10.3	33.0	49.6	61.5		
12.0	35.9	55.7	70.6			10.9	33.4	49.9	61.6		
12.3	36.6	56.0	70.9			11.4	33.6	50.4	61.8		
12.6	37.2	56.3	71.2			11.7	34.0	50.6	62.0		
12.9	37.9	56.7	71.5			12.2	34.5	51.0	62.1		
13.2	38.5	57.0	71.7			12.7	34.8	51.4	62.3		
13.5	39.2	57.4	72.0			13.0	35.2	51.6	62.4		
13.8	39.9	57.7	72.2			13.4	35.6	52.0	62.5		
14.1	40.6	58.0	72.5			14.0	36.0	52.3			
14.4	41.4	58.2	72.7			14.5	36.2	52.4			
14.7	42.1	58.5	73.0			15.0	36.7	52.7			
15.0	42.8	58.7	73.3			15.4	37.1	53.0			
15.2	43.3	59.0	73.5			15.9	37.4	53.2			
15.5	43.8	59.3	73.8			16.2	37.7	53.4			
15.8	44.4	59.6	74.1			16.6	38.1	53.7			
16.2	44.9	60.0	74.4			17.1	38.2	54.0			
16.6	45.4	60.3	74.6			17.6	38.5	54.3			
17.1	45.7	60.6	74.9			18.1	38.8	54.4			
17.5	46.0	60.9	75.1			18.3	39.2	54.5			
17.9	46.2	61.2	75.4			18.8	39.6	54.7			
18.5	46.5	61.4	75.7			19.2	39.9	55.0			
19.1	46.8	61.7	76.0			19.6	40.0	55.3			
19.6	47.1	62.0	76.4			20.2	40.3	55.5			
20.2	47.3	62.3	76.7			20.6	40.7	55.7			
20.8	47.6	62.6	77.0			21.0	41.0	56.0			
21.3	47.8	62.8	77.4			21.5	41.2	56.2			
21.8	48.1	63.1	77.8			22.0	41.5	56.3			
22.2	48.4	63.4	78.3			22.4	41.7	56.6			
22.7	48.6	63.6	78.7			22.9	42.0	56.7			
23.2	48.9	63.9	79.1			23.3	42.3	56.9			
23.7	49.1	64.1	79.5			23.7	42.7	57.1			
24.2	49.4	64.4	79.8			24.2	43.0	57.3			
24.8	49.6	64.6	80.2			24.6	43.1	57.5			
25.3	49.9	64.9	80.5			25.1	43.5	57.7			
25.8	50.1	65.3	80.9			25.5	43.8	57.9			

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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ESG = Estimated Subgrade
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 719+30 SB ISL				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 745+65 SB OSS		12/3 to 12/19/2019			
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	395707.6	2007313.7	STBC	FILL	398094.5	2008402.7				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
0.4	32.2	52.5		0.9	24.8	43.2	65.0				
0.9	32.8	52.8		2.0	25.2	43.7	65.6				
1.3	33.5	53.1		2.7	25.6	44.0	66.1				
1.7	34.1	53.3		3.4	26.0	44.3	66.7				
2.1	34.6	53.6		4.3	26.3	44.8	67.3				
2.6	35.2	53.7		4.9	26.5	45.2	67.9				
3.4	35.6	54.0		5.6	26.8	45.7	68.4				
3.8	36.0	54.3		6.1	27.2	46.2	68.9				
4.6	36.6	54.4		6.6	27.5	46.7	69.6				
5.1	37.0	54.7		7.0	27.8	47.1	70.1				
5.5	37.4	54.8		7.4	28.4	47.5	70.6				
5.9	37.7	55.1		8.0	28.7	48.0	70.9				
6.3	38.1	55.3		8.4	28.9	48.4	71.5				
6.6	38.5	55.6		8.9	29.1	48.8	72.0				
7.1	38.8	55.7		9.3	29.6	49.1	72.4				
7.6	39.3	55.8		9.7	29.7	49.2	72.8				
8.4	39.8	56.1		10.0	30.0	49.7	73.2				
9.0	40.2	56.2		10.3	30.4	49.8	73.7				
9.7	40.6	56.4		10.8	30.6	50.1	74.0				
10.3	41.1	56.6		11.0	31.0	50.5	74.5				
10.9	41.6	56.8		11.6	31.2	50.8	75.0				
11.5	42.0	57.0		12.1	31.6	51.3	75.5				
11.9	42.3	57.1		12.6	31.8	51.6	76.1				
12.4	42.8	57.3		13.0	32.2	52.1	76.6				
13.0	43.1	57.5		13.5	32.5	52.6	77.1				
13.5	43.6	57.7		13.9	32.7	52.8	77.7				
14.0	44.2	57.8		14.3	33.0	53.2	78.0				
14.3	44.9	58.0		14.6	33.4	53.6	78.3				
14.9	45.4	58.1		15.0	33.7	53.9	78.9				
15.3	45.7	58.2		15.4	34.1	54.3	79.1				
15.6	46.2	58.4		15.8	34.5	54.5	79.5				
16.1	46.5	58.5		16.1	34.8	54.8	80.0				
16.4	47.1	58.6		16.6	35.0	55.2	80.3				
16.8	47.4	58.7		17.0	35.4	55.6	80.7				
17.1	47.7	58.9		17.3	35.8	56.2	81.2				
17.9	48.1	59.1		17.6	36.1	56.7	81.6				
18.6	48.4	59.2		17.9	36.4	57.1	82.1				
19.5	48.7			18.2	36.7	57.7	82.6				
20.2	48.9			18.6	37.1	58.2	83.1				
21.0	49.3			19.1	37.5	58.6	83.5				
21.9	49.6			19.6	37.8	58.9	84.0				
22.5	49.8			20.2	38.2	59.3	84.4				
23.3	50.0			20.7	38.5	59.7	84.9				
24.0	50.3			21.3	38.9	60.1	85.5				
24.8	50.5			21.7	39.3	60.7	86.0				
25.8	50.8			22.0	39.7	61.1	86.5				
26.7	51.0			22.4	40.0	61.6	87.0				
27.7	51.2			22.8	40.5	62.1	87.6				
28.7	51.5			23.3	41.0	62.7	88.2				
29.5	51.6			23.6	41.4	63.2	89.0				
30.4	51.8			23.9	42.0	63.7	89.5				
30.9	52.1			24.1	42.4	64.1					
31.6	52.3			24.4	42.8	64.5					

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 745+65 SB OSL				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 745+65 SB ISS		12/3 to 12/19/2019			
DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING	DATUM	CUT/ FILL	NORTHING	EASTING
STBC	FILL	398088.9	2008411.9	STBC	FILL	398076.9	2008430.8				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters			
1.1	10.7	21.4	32.9	40.9	52.1	0.7	24.3	40.3	60.7	75.7	
1.3	10.8	21.7	33.0	41.0	52.2	1.3	24.6	40.8	60.9	76.0	
1.6	10.9	21.9	33.2	41.1	52.3	1.9	24.9	41.4	61.3	76.3	
1.7	11.2	22.2	33.3	41.2	52.4	2.5	25.2	41.9	61.6	76.7	
2.0	11.3	22.4	33.4	41.4	52.5	3.1	25.5	42.7	61.8	76.9	
2.5	11.5	22.7	33.5	41.7	52.6	3.8	25.7	43.4	62.0	77.4	
2.8	11.7	23.0	33.6	41.8	52.7	4.3	26.0	44.2	62.3	77.6	
3.1	11.8	23.1	33.9	42.0	52.8	4.9	26.3	44.8	62.6	78.0	
3.4	11.9	23.3	34.1	42.1	52.9	5.6	26.6	45.7	63.0	78.4	
3.5	12.2	23.5	34.2	42.2	53.0	6.1	26.9	46.3	63.3	78.9	
3.7	12.3	23.7	34.4	42.3	53.0	6.6	27.2	46.9	63.7	79.4	
3.8	12.5	23.8	34.5	42.4	53.1	7.2	27.5	47.5	64.0	79.8	
4.1	12.6	23.9	34.7	42.5	53.5	7.7	27.8	48.2	64.2	80.3	
4.3	12.8	24.1	34.8	42.7	53.7	8.2	28.0	48.8	64.3		
4.4	13.0	24.2	35.0	42.9	53.8	8.7	28.2	49.2	64.6		
4.7	13.1	24.4	35.1	43.2	54.1	9.0	28.5	49.7	64.7		
4.8	13.2	24.6	35.2	43.3	54.4	9.4	28.6	50.0	65.0		
4.9	13.4	24.8	35.3	43.6	54.5	10.0	28.8	50.4	65.2		
5.2	13.7	25.0	35.4	43.9	54.7	10.4	29.1	50.8	65.5		
5.4	14.0	25.2	35.5	44.2	54.9	10.8	29.5	51.2	65.7		
5.6	14.3	25.4	35.6	44.4	55.1	11.2	29.8	51.4	66.1		
5.8	14.5	25.7	35.9	44.7	55.4	11.6	30.0	51.6	66.4		
5.9	14.7	25.9	36.0	44.9	55.5	11.9	30.4	51.9	66.8		
6.1	14.9	26.2	36.2	45.1	55.6	12.5	30.6	52.3	67.1		
6.3	15.2	26.5	36.5	45.3	55.7	12.8	30.9	52.6	67.4		
6.4	15.3	26.8	36.6	45.7	56.0	13.2	31.3	53.1	67.7		
6.5	15.5	27.1	36.7	45.9	56.4	13.9	31.5	53.5	68.0		
6.6	15.7	27.4	36.9	46.1	56.8	14.3	31.7	53.8	68.1		
6.9	16.0	27.7	37.0	46.4	57.1	14.8	32.0	54.2	68.3		
7.0	16.2	27.9	37.2	46.8	57.4	15.4	32.2	54.5	68.5		
7.1	16.5	28.3	37.3	47.2	57.7	15.8	32.5	54.8	68.8		
7.3	16.7	28.4	37.4	47.5	57.8	16.3	32.8	55.1	69.2		
7.4	17.0	28.7	37.5	47.8	58.1	16.8	33.0	55.6	69.5		
7.5	17.2	28.9	37.7	48.0	58.2	17.2	33.2	55.8	69.8		
7.7	17.5	29.2	37.8	48.2	58.4	17.7	33.5	56.0	70.3		
7.8	17.9	29.4	37.9	48.5	58.6	18.1	33.8	56.2	70.5		
8.1	18.1	29.7	38.2	48.8		18.5	34.0	56.6	70.8		
8.2	18.2	30.1	38.3	49.1		19.1	34.3	56.7	70.9		
8.4	18.4	30.4	38.6	49.2		19.5	34.7	57.0	71.4		
8.5	18.7	30.5	38.7	49.6		19.9	35.0	57.2	71.6		
8.7	18.9	30.6	38.8	49.8		20.3	35.3	57.5	71.8		
8.8	19.0	30.8	39.0	50.0		20.7	35.7	57.8	72.1		
8.9	19.2	30.9	39.2	50.2		21.1	36.0	58.0	72.5		
9.2	19.5	31.0	39.3	50.4		21.3	36.5	58.3	72.9		
9.3	19.6	31.2	39.4	50.5		21.7	36.8	58.6	73.0		
9.5	19.8	31.5	39.6	50.6		22.0	37.1	58.8	73.4		
9.6	20.1	31.6	39.9	50.8		22.3	37.4	59.0	73.8		
9.7	20.2	31.9	40.0	51.0		22.7	37.7	59.2	74.0		
10.0	20.4	32.2	40.1	51.2		23.0	38.3	59.5	74.2		
10.1	20.7	32.4	40.3	51.3		23.4	38.6	60.1	74.5		
10.3	20.8	32.5	40.5	51.5		23.6	39.0	60.3	74.9		
10.4	21.0	32.7	40.7	51.9		23.9	39.5	60.4	75.1		
10.5	21.2	32.8	40.8	52.0		24.1	39.9	60.6	75.4		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
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CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 772+30 SB OSS				12/3 to 12/19/2019	-L- 772+30 SB ISS	12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING			
SG	FILL	400562.3	2009415.3	STBC	FILL	400545.8	2009444.0			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
1.4	24.6	59.3		0.5	22.6	41.1	57.2	79.1		
2.3	25.4	59.8		1.1	23.1	41.5	57.5	79.6		
3.0	26.2	60.2		1.7	23.4	41.8	57.9	80.3		
3.5	26.9	60.7		2.3	23.8	42.1	58.2			
4.1	27.8	61.2		2.8	24.3	42.5	58.6			
4.5	28.7	61.7		3.4	24.8	43.0	58.9			
4.9	29.5	62.2		4.0	25.1	43.5	59.3			
5.5	30.3	62.8		4.5	25.6	43.9	59.7			
6.0	31.2	63.3		4.9	25.8	44.4	60.0			
6.4	32.0	63.9		5.5	26.2	44.8	60.5			
6.8	32.9	64.5		6.0	26.6	45.2	60.8			
7.1	34.0	65.2		6.5	27.0	45.9	61.1			
7.5	34.9	65.7		6.8	27.4	46.2	61.6			
7.8	35.9	66.3		7.4	27.7	46.7	61.8			
8.2	36.5	67.0		7.8	28.0	47.0	62.2			
8.6	37.5	67.7		8.4	28.4	47.3	62.6			
9.0	38.3	68.2		8.8	28.7	47.8	63.0			
9.3	39.3	68.9		9.2	28.9	48.0	63.4			
9.8	40.0	69.5		9.8	29.4	48.4	63.9			
10.1	40.7	70.2		10.3	29.7	48.6	64.1			
10.5	41.4	70.9		10.7	29.9	48.8	64.6			
10.9	42.0	71.7		11.0	30.2	49.2	65.0			
11.4	42.6	72.4		11.4	30.6	49.4	65.5			
11.9	43.2	73.2		11.7	31.0	49.6	65.9			
12.3	43.9	73.9		12.2	31.3	49.8	66.3			
12.7	44.3	74.5		12.5	31.6	50.0	66.7			
13.0	44.7	75.4		12.9	32.0	50.2	67.2			
13.6	45.0	76.1		13.1	32.2	50.4	67.4			
14.1	45.5	76.9		13.4	32.7	50.6	67.9			
14.5	45.9	77.6		13.8	33.0	51.0	68.5			
14.8	46.5	78.4		14.1	33.3	51.3	68.8			
15.2	47.0	79.0		14.4	33.7	51.4	69.3			
15.5	47.5	80.0		14.8	34.0	51.8	69.7			
15.9	48.0	81.1		15.2	34.3	52.0	70.0			
16.3	48.6	82.0		15.5	34.6	52.3	70.5			
16.9	49.4	82.8		15.9	34.9	52.7	70.9			
17.3	49.9	83.8		16.3	35.1	52.9	71.2			
17.7	50.5	84.8		16.6	35.4	53.3	71.5			
18.0	51.2	85.8		17.0	35.8	53.6	72.0			
18.3	51.7	86.6		17.4	36.1	53.7	72.2			
18.8	52.2	87.7		17.7	36.4	53.8	72.6			
19.2	52.9	88.6		18.0	36.8	54.0	73.0			
19.5	53.5	89.4		18.3	37.2	54.1	73.7			
19.8	54.0	90.4		18.6	37.4	54.2	74.0			
20.3	54.6	91.2		19.0	37.8	54.6	74.4			
20.6	55.0	92.1		19.3	38.2	54.8	75.0			
21.1	55.5	93.1		19.7	38.5	55.1	75.5			
21.5	56.2	94.1		20.1	39.0	55.4	76.0			
22.0	56.8	95.0		20.4	39.2	55.7	76.7			
22.5	57.2	96.0		20.8	39.7	56.0	77.2			
22.9	57.8			21.3	40.0	56.3	77.8			
23.4	58.2			21.7	40.4	56.6	78.2			
24.0	58.8			22.2	40.8	56.9	78.7			

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 772+30 SB ISL				12/3 to 12/19/2019	-L- 798+50 SB OSS	12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING			
STBC	FILL	400542.2	2009438.9	STBC	FILL	403038.5	2010172.1			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
0.4	30.5	46.9	68.3	1.4	48.4					
0.9	31.0	47.1	68.8	2.3	50.2					
1.3	31.5	47.3	69.5	3.0	51.3					
1.8	32.1	47.5	69.9	3.7	52.6					
2.2	32.6	47.7	70.5	4.5	53.7					
2.8	33.1	48.0	71.1	5.1	54.9					
3.4	33.7	48.4	71.6	5.5	56.1					
4.0	34.2	48.6	72.2	5.9	57.8					
4.6	34.6	48.9	72.6	6.6	59.3					
5.1	35.3	49.2	73.2	6.8	62.2					
6.1	35.7	49.5	73.7	7.5	64.7					
7.1	36.3	49.8	74.2	7.9	67.2					
8.1	36.6	50.0	74.6	8.4	69.8					
8.8	37.0	50.3	75.0	9.4	72.6					
9.4	37.4	50.5	75.4	10.2	75.1					
10.1	38.0	50.8	75.9	10.4	77.4					
11.9	38.3	51.1		10.6	80.0					
13.0	38.5	51.5		11.0	82.4					
13.7	38.9	51.7		11.6	84.8					
14.4	39.1	52.0		12.5	86.8					
14.8	39.4	52.2		12.9	88.7					
15.5	39.8	52.5		13.6	90.1					
15.9	40.1	52.9		14.5	91.6					
16.4	40.3	53.2		15.1						
16.9	40.6	53.5		16.0						
17.4	40.7	54.0		17.0						
18.0	41.0	54.5		18.2						
18.4	41.2	54.8		19.0						
19.0	41.4	55.2		20.2						
19.4	41.5	55.7		21.1						
19.9	41.8	56.2		22.4						
20.3	42.0	56.4		23.2						
20.9	42.3	57.0		24.8						
21.3	42.4	57.4		26.0						
21.7	42.6	57.8		27.2						
22.1	42.9	58.3		28.3						
22.7	43.2	58.7		29.7						
23.1	43.5	59.2		31.1						
23.6	43.6	59.6		32.8						
24.0	43.8	60.3		33.7						
24.5	44.0	60.8		34.9						
24.8	44.1	61.5		35.8						
25.2	44.3	62.1		36.5						
25.8	44.5	62.8		37.3						
26.2	44.7	63.3		38.0						
26.6	44.9	63.8		38.8						
27.1	45.1	64.4		39.5						
27.5	45.3	65.0		40.2						
28.1	45.6	65.5		41.2						
28.5	45.9	66.1		42.3						
29.0	46.0	66.6		43.4						
29.6	46.3	67.2		44.9						
30.1	46.7	67.7		46.5						

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
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AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


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Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE					
				I-5987B	47533.1.3	I-95					
TEST LOCATIONS DESCRIPTION				COUNTY	ENGINEER	TECHNICIANS					
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley					
-L- 798+50 SB OSL				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN					
				12/3 to 12/19/2019		12/3 to 12/19/2019					
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING				
STBC	FILL	403036.4	2010178.1	STBC	FILL	403037.7	2010203.9				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
0.4	21.0	74.9		0.8	20.4	66.3					
0.6	21.8	76.1		1.7	21.0	67.2					
0.9	22.3	77.3		2.5	21.7	68.2					
1.1	22.5	78.2		3.2	22.4	69.0					
1.3	23.3	79.4		3.4	23.0	69.9					
1.5	23.9	80.3		3.8	23.7	70.7					
1.7	24.6	81.3		4.1	24.3	71.3					
2.0	25.0	82.2		4.2	25.2	72.2					
2.2	25.8	83.4		4.6	25.9	73.0					
2.4	26.4			4.7	26.6	73.8					
2.7	26.9			5.1	27.3	74.5					
2.9	27.7			5.2	28.1	75.4					
3.1	28.1			5.5	28.7	76.1					
3.4	28.8			5.7	29.7	77.0					
3.7	29.7			6.0	30.4	77.9					
3.9	30.1			6.1	31.1	78.7					
4.2	30.8			6.2	31.9	79.6					
4.5	31.5			6.5	32.5	80.4					
4.8	32.6			6.7	33.4						
5.1	33.0			6.8	34.1						
5.3	34.1			7.0	34.9						
5.6	35.3			7.3	35.6						
5.9	36.4			7.5	36.3						
6.3	37.6			7.6	37.0						
6.7	39.1			7.9	37.7						
7.0	40.9			8.3	38.5						
7.3	42.1			8.6	39.3						
7.7	43.2			8.9	40.2						
8.0	43.9			9.2	41.1						
8.3	44.8			9.6	41.8						
8.7	45.2			9.9	42.7						
9.2	46.5			10.3	44.0						
9.5	47.0			10.8	45.1						
9.8	47.8			11.1	46.3						
10.2	48.4			11.4	47.5						
10.6	49.9			11.9	48.7						
10.9	51.3			12.2	49.9						
11.4	52.9			12.6	51.0						
11.8	53.3			12.9	52.1						
12.2	56.8			13.1	53.3						
12.9	58.3			13.5	54.4						
13.3	60.5			13.9	55.5						
13.7	62.5			14.2	56.3						
14.0	63.9			14.4	57.3						
14.4	65.5			14.9	58.3						
14.6	66.9			15.4	59.4						
15.9	68.0			16.0	60.3						
16.2	69.1			16.3	61.1						
16.8	70.1			16.9	61.9						
17.5	71.0			17.5	62.6						
18.4	72.0			18.4	63.5						
18.8	72.8			18.9	64.4						
20.1	73.4			19.6	65.3						

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE					
				I-5987B	47533.1.3	I-95					
TEST LOCATIONS DESCRIPTION				COUNTY	ENGINEER	TECHNICIANS					
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley					
-L- 825+00 SB OSS				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN					
				12/3 to 12/19/2019		12/3 to 12/19/2019					
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING				
STBC	CUT	405658.5	2010554.2	STBC	CUT	405653.3	2010588.7				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
0.6	23.8	60.7		2.1	24.7	50.1					
1.1	24.3	61.6		3.0	25.1	50.6					
1.6	24.9	62.4		3.7	25.4	51.1					
2.0	25.5	62.8		4.6	25.8	51.4					
2.5	25.9	63.4		5.4	25.9	52.0					
2.8	26.5	63.9		6.1	26.2	52.3					
3.3	27.1	64.4		6.8	26.5	52.8					
3.8	27.6	65.1		7.6	26.8						
4.2	28.3	65.8		8.1	27.2						
4.6	28.6	66.4		8.8	27.4						
5.0	29.3	67.1		9.2	27.7						
5.4	29.8	67.7		9.6	27.9						
5.8	30.3	68.5		10.1	28.2						
6.3	30.6	69.3		10.7	28.4						
6.7	31.1	70.1		11.1	28.6						
7.2	31.7	70.8		11.5	28.9						
7.8	32.0	71.7		12.0	29.2						
8.2	32.4	72.4		12.5	29.7						
8.6	32.8	73.2		12.9	30.0						
9.1	33.3	73.8		13.3	30.4						
9.6	33.5	74.5		13.8	30.8						
9.9	34.0	75.3		14.1	31.3						
10.3	34.5	75.9		14.5	31.6						
10.8	34.8	76.8		14.8	32.0						
11.2	35.3	77.5		14.9	32.5						
11.5	35.6	78.0		15.2	33.1						
11.9	36.0	78.6		15.5	33.4						
12.3	36.6	79.2		15.8	34.0						
12.7	37.3	79.9		16.1	34.5						
13.0	37.8	80.6		16.4	35.0						
13.4	38.5	81.4		16.8	35.7						
13.8	39.1	82.1		17.0	36.2						
14.2	40.2	82.8		17.3	36.8						
14.5	41.3	83.5		17.9	37.5						
14.9	42.3	84.4		18.3	38.1						
15.2	43.9	85.0		18.7	38.6						
15.7	45.2	85.9		19.0	39.4						
16.0	46.7	86.7		19.5	39.9						
16.3	47.8	87.5		19.9	40.5						
16.7	48.7	88.4		20.3	41.2						
17.2	49.5	89.0		20.6	41.8						
17.6	50.2	89.9		20.8	42.5						
18.1	51.0	90.5		21.2	43.2						
18.5	52.0	91.2		21.5	43.8						
19.0	52.7	91.7		21.9	44.5						
19.4	53.5	92.3		22.2	45.1						
20.1	54.3			22.6	45.7						
20.7	55.1			23.0	46.4						
21.1	55.9			23.2	47.1						
21.6	56.8			23.5	47.7						
22.1	57.8			23.8	48.3						
22.6	58.7			24.2	48.9						
23.2	59.7			24.4	49.5						

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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS	
-L- 825+00 SB ISL				Robeson		VLAD MITCHEV		D. Strother/J. Swartley	
DATE RUN				TEST LOCATION DESCRIPTION		DATE RUN		DATE RUN	
12/3 to 12/19/2019				-L- 851+90 SB OSS		12/3 to 12/19/2019		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	EASTING
STBC	CUT	405657.0	2010584.4	STBC	FILL	408319.9	2010950.8		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
1.8	20.8			0.6	21.1	35.5	48.1	63.7	
3.2	21.1			1.1	21.4	35.8	48.4	64.1	
3.9	21.5			1.7	21.8	35.9	48.6	64.5	
4.7	22.1			2.2	22.0	36.0	48.9	64.7	
5.5	22.6			2.6	22.5	36.2	49.1	65.2	
6.0	23.2			3.0	22.7	36.4	49.4	65.5	
6.5	24.0			3.5	23.1	36.7	49.6	65.8	
7.0	24.6			3.8	23.3	36.8	49.8	66.4	
7.4	25.4			4.2	23.6	37.0	50.0	66.9	
7.7	26.0			4.7	24.0	37.3	50.3	67.3	
8.0	26.8			5.0	24.2	37.6	50.4	67.8	
8.3	27.6			5.3	24.5	37.9	50.7	68.4	
8.8	28.5			5.8	24.8	38.2	51.0	68.8	
9.1	29.3			6.2	25.1	38.4	51.3	69.4	
9.3	30.2			6.4	25.3	38.6	51.5	69.8	
9.5	31.1			6.8	25.6	38.7	51.9	70.3	
9.8	32.0			7.0	26.1	39.0	52.1	70.7	
10.1	32.8			7.5	26.3	39.4	52.4	71.3	
10.4	33.6			7.8	26.4	39.6	52.7	71.7	
10.6	34.5			8.2	26.7	40.0	52.8	72.3	
10.8	35.2			8.7	26.9	40.2	53.0	72.9	
11.1	35.9			9.0	27.1	40.4	53.2	73.5	
11.4	36.6			9.5	27.6	40.8	53.5	74.0	
11.6	37.7			9.8	28.1	41.0	53.8	74.5	
11.8	38.6			10.3	28.5	41.4	54.1	74.8	
12.0	39.7			10.7	29.0	41.5	54.5	75.4	
12.6	40.9			11.3	29.2	41.8	54.9	75.8	
13.0	42.2			11.6	29.6	41.9	55.1	76.7	
13.1	43.4			12.2	29.7	42.1	55.5	77.4	
13.4	44.1			12.6	30.0	42.3	55.8	78.3	
13.6	44.9			12.9	30.3	42.7	56.2	79.2	
13.8	45.6			13.4	30.5	42.9	56.4	79.8	
14.1	46.1			13.7	30.7	43.2	56.9	80.6	
14.4	46.3			13.9	30.9	43.4	57.3	81.4	
14.7	46.7			14.4	31.1	43.7	57.6	82.1	
15.0	47.3			14.9	31.5	43.9	58.0	82.8	
15.2	47.8			15.2	31.6	44.1	58.4	83.2	
15.4	48.4			15.7	31.9	44.4	58.7	83.7	
15.8				16.0	32.1	44.6	59.1	84.4	
16.0				16.4	32.3	44.9	59.4	85.3	
16.1				16.8	32.5	45.0	59.6	86.2	
16.4				17.2	32.7	45.3	60.0	87.0	
16.7				17.5	32.9	45.5	60.3	87.9	
17.0				17.8	33.2	45.7	60.6	88.7	
17.3				18.1	33.4	46.0	60.8	89.4	
17.7				18.4	33.6	46.3	61.2	90.2	
18.1				18.8	33.9	46.5	61.5	90.8	
18.5				19.2	34.0	46.6	61.8		
18.9				19.6	34.4	46.9	62.1		
19.2				19.8	34.6	47.1	62.4		
19.7				20.2	34.7	47.4	62.6		
20.0				20.5	35.0	47.7	63.0		
20.4				20.8	35.2	47.9	63.3		

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS	
-L- 851+90 SB OSL				Robeson		VLAD MITCHEV		D. Strother/J. Swartley	
DATE RUN				TEST LOCATION DESCRIPTION		DATE RUN		DATE RUN	
12/3 to 12/19/2019				-L- 851+90 SB ISS		12/3 to 12/19/2019		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	EASTING
STBC	FILL	408318.7	2010964.3	STBC	FILL	408322.7	2010977.3		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
0.5	19.5	22.6	24.9	27.5	30.3	1.5	13.8	22.1	33.4
0.8	19.5	22.6	24.9	27.5	30.4	2.1	14.1	22.4	33.5
1.0	19.6	22.7	25.0	27.6	30.4	2.6	14.2	22.7	33.7
1.1	19.6	22.7	25.0	27.6	30.5	3.1	14.4	22.9	33.8
1.2	19.7	22.7	25.1	27.7	30.5	3.6	14.6	23.0	34.2
1.3	19.8	22.8	25.1	27.7	30.5	4.0	14.8	23.4	34.3
1.5	19.8	22.8	25.2	27.8	30.6	4.2	15.0	23.5	34.5
1.8	19.9	22.9	25.2	27.8	30.6	4.5	15.1	23.8	34.6
2.0	20.0	22.9	25.3	27.9	30.7	4.9	15.2	24.0	35.0
2.1	20.1	22.9	25.3	27.9	30.7	5.2	15.4	24.2	35.2
2.3	20.1	23.0	25.4	28.0	30.7	5.4	15.5	24.4	35.3
2.5	20.2	23.0	25.4	28.0	30.8	5.8	15.6	24.6	35.6
2.6	20.3	23.1	25.5	28.1	30.8	5.9	15.8	24.8	35.7
2.8	20.4	23.1	25.5	28.1	30.8	6.4	16.0	25.0	35.8
3.0	20.5	23.2	25.6	28.2	30.9	6.6	16.2	25.3	35.9
3.2	20.6	23.2	25.7	28.3	30.9	6.9	16.4	25.4	36.1
3.3	20.6	23.2	25.7	28.4	31.0	7.3	16.6	25.6	36.3
3.5	20.7	23.3	25.8	28.4	31.0	7.5	16.7	26.0	36.4
3.6	20.8	23.3	25.8	28.5	31.1	7.8	16.8	26.1	36.6
3.7	20.9	23.4	25.9	28.5	31.1	8.1	16.9	26.2	36.7
3.7	20.9	23.4	25.9	28.6	31.2	8.4	17.0	26.4	36.9
3.8	21.0	23.4	26.0	28.6	31.2	8.6	17.1	26.7	37.0
4.1	21.1	23.5	26.0	28.7	31.3	8.9	17.3	26.8	37.2
4.2	21.1	23.5	26.1	28.7	31.3	9.2	17.4	27.1	37.4
4.3	21.2	23.6	26.1	28.8	31.4	9.5	17.5	27.3	37.6
4.4	21.2	23.6	26.2	28.9	31.4	9.7	17.7	27.5	37.7
4.5	21.3	23.6	26.3	29.0	31.4	9.8	17.8	27.7	37.9
4.6	21.3	23.6	26.3	29.0	31.4	10.0	17.9	27.8	38.1
4.6	21.3	23.7	26.4	29.0	31.5	10.2	17.9	28.1	38.3
4.7	21.4	23.7	26.4	29.1	31.5	10.3	18.0	28.3	38.6
4.7	21.4	23.7	26.5	29.1	31.5	10.4	18.0	28.5	38.7
4.8	21.4	23.8	26.5	29.2	31.5	10.5	18.0	28.6	38.9
4.9	21.4	23.8	26.5	29.3	31.5	10.8	18.1	28.8	39.1
4.9	21.5	23.8	26.6	29.3	31.5	11.0	18.3	29.1	39.2
5.0	21.5	23.9	26.6	29.4		11.1	18.4	29.2	39.3
5.0	21.5	23.9	26.7	29.4		11.4	18.5	29.4	39.4
5.1	21.6	23.9	26.7	29.5		11.5	18.6	29.7	39.5
5.2	21.6	24.0	26.7	29.5		11.7	18.7	29.9	39.6
5.2	21.7	24.0	26.8	29.6		11.9	18.9	30.3	39.7
5.3	21.7	24.0	26.8	29.6		12.0	19.1	30.5	39.8
5.4	21.7	24.1	26.8	29.7		12.2	19.2	30.7	39.9
5.4	21.8	24.1	26.9	29.7		12.3	19.3	30.9	40.0
5.5	21.8	24.2	26.9	29.8		12.6	19.6	31.0	40.2
5.6	21.9	24.2	26.9	29.8		12.7	19.7	31.3	40.3
5.7	21.9	24.2	27.0	29.9		12.9	20.1	31.5	40.4
Auger	22.0	24.3	27.0	29.9		13.0	20.3	31.7	40.5
	22.1	24.3	27.1	30.0		13.1	20.5	32.1	40.7
	22.2	24.4	27.1	30.0		13.1	20.8	32.3	
19.2	22.3	24.4	27.2	30.1		13.1	20.9	32.5	
19.2	22.3	24.5	27.3	30.1		13.2	21.3	32.8	
19.3	22.4	24.6	27.3	30.2		13.3	21.5	33.0	
19.3	22.5	24.7	27.4	30.3		13.4	21.7	33.2	
19.4	22.5	24.9	27.4	30.3		13.6	21.9	33.3	

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
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S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS	
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley	
-L- 878+15 SB OSS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN	
				12/3 to 12/19/2019		-L- 878+15 SB ISS		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
STBC	FILL	410921.7	2011329.5	STBC	FILL	410911.8	2011360.1		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
0.4	27.6	45.7	60.6	78.2	1.4	24.0	38.6		
0.8	28.8	46.0	60.9	78.6	1.9	24.3	38.9		
1.1	29.4	46.3	61.2	78.9	2.6	24.4	39.2		
1.8	30.2	46.6	61.5	79.4	3.9	24.7	39.4		
2.4	30.6	46.8	61.8	79.9	5.3	24.8	39.8		
3.2	31.1	47.0	62.1	80.3	6.6	25.0	40.0		
3.6	31.6	47.3	62.4	80.7	7.6	25.2	40.5		
4.0	32.1	47.5	62.7	81.3	9.0	25.5	40.9		
4.5	32.5	47.7	62.9	81.7	10.0	25.8	41.3		
4.8	32.9	48.1	63.2	82.2	10.9	26.0	41.7		
5.0	33.2	48.2	63.5	82.5	11.8	26.3	42.2		
5.4	33.5	48.5	63.8	82.9	12.4	26.5	42.5		
5.8	33.7	48.8	64.0	83.4	12.9	27.0	42.9		
6.2	34.1	49.1	64.2	83.7	13.4	27.1	43.3		
6.5	34.3	49.2	64.6	84.2	13.8	27.5	43.7		
6.9	34.6	49.5	64.9	84.7	14.0	27.8	44.1		
7.3	35.1	49.8	65.2	85.1	14.4	27.9	44.3		
7.7	35.5	50.1	65.5	85.7	14.7	28.1	44.8		
8.1	36.1	50.2	65.9	86.2	15.1	28.3	45.1		
8.6	36.6	50.6	66.2	86.7	15.5	28.5	45.4		
9.2	36.9	50.9	66.5	87.2	15.7	28.7	45.6		
9.6	37.2	51.1	66.8	87.8	16.1	28.9	46.0		
10.2	37.5	51.4	67.1	88.3	16.5	29.1	46.2		
10.5	37.7	51.7	67.4	88.8	16.8	29.4	46.5		
11.0	38.1	52.0	67.8	89.2	17.0	29.7	46.9		
11.4	38.3	52.3	68.0	89.8	17.3	30.0	47.2		
12.0	38.7	52.6	68.4	90.1	17.6	30.2	47.5		
12.6	39.1	52.8	68.7	90.5	17.8	30.5	47.7		
13.1	39.2	53.0	69.1	90.8	18.1	30.6	48.1		
13.6	39.5	53.5	69.5	91.1	18.3	31.0	48.4		
14.1	39.8	53.8	69.8	91.6	18.6	31.3	48.8		
14.7	40.0	54.0	70.3	92.2	18.7	31.4	49.0		
15.1	40.3	54.3	70.5	92.8	18.8	31.7	49.4		
15.6	40.7	54.5	71.1	93.3	19.1	32.0	49.6		
16.0	41.0	54.8	71.4	93.7	19.4	32.2	49.9		
16.4	41.3	55.1	71.7	94.2	19.7	32.4	50.2		
16.9	41.7	55.4	72.1	94.8	19.9	32.7	50.7		
17.4	41.8	55.8	72.3	95.2	20.2	33.0	51.4		
17.8	42.1	56.2	72.7		20.5	33.3	51.9		
18.4	42.5	56.4	72.9		20.6	33.7	52.4		
18.8	42.7	56.7	73.4		20.9	34.0	53.0		
19.4	43.0	57.0	73.6		21.1	34.5	53.5		
19.9	43.3	57.3	74.0		21.3	34.7	53.8		
20.2	43.5	57.7	74.5		21.5	35.2	54.1		
20.8	43.7	58.0	75.0		21.7	35.6	54.6		
21.4	43.9	58.3	75.5		22.0	35.8	55.0		
21.9	44.1	58.5	75.9		22.4	36.2	55.5		
22.5	44.4	58.8	76.1		22.5	36.6	56.1		
23.1	44.5	59.1	76.5		22.8	36.9	56.6		
24.1	44.8	59.3	76.9		23.1	37.2	56.9		
24.7	45.1	59.7	77.2		23.4	37.6	57.5		
25.6	45.3	59.9	77.6		23.5	37.9			
26.5	45.5	60.3	77.9		23.9	38.3			

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS	
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley	
-L- 878+15 SB ISL				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN	
				12/3 to 12/19/2019		-L- 904+75 SB OSS		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
STBC	FILL	410915.9	2011355.2	STBC	FILL	413543.7	2011717.8		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
1.0	13.2					1.1	31.5	68.5	
1.3	13.5					1.8	32.0	70.3	
1.5	13.8					2.5	32.8	71.6	
1.7	14.0					2.9	33.5	73.3	
2.1	14.2					3.8	34.6	74.2	
2.4	14.5					4.4	35.2	75.5	
2.8	14.7					5.0	36.3	76.6	
3.1	15.0					5.7	37.2	77.8	
3.5	15.3					6.2	38.1	79.3	
3.7	15.5					6.6	39.0	80.9	
4.0	15.7					7.1	39.8	82.5	
4.1	16.0					7.8	40.9	84.5	
4.4	16.1					8.3	41.7	86.6	
4.7	16.2					8.9	42.9	88.7	
4.9	16.3					9.4	43.7	90.5	
5.1	16.4					9.9	44.8	92.4	
5.4	16.5					10.4	45.8	93.9	
5.5	16.7					10.9	46.6		
5.7	16.9					11.5	47.0		
6.0	17.2					12.0	47.6		
6.2	17.3					12.5	48.2		
6.4	17.6					13.1	48.7		
6.6	17.8					13.6	49.1		
6.9	17.9					14.1	49.6		
7.0	18.0					14.4	50.0		
7.2	18.1					14.9	50.5		
7.3	18.3					15.3	51.1		
7.5	18.4					15.7	51.7		
7.7	18.5					16.1	52.1		
7.9	18.6					16.7	52.7		
8.2	18.8					17.2	53.5		
8.5	19.0					17.7	54.0		
8.7	19.1					18.0	54.6		
9.0	19.3					18.3	54.9		
9.2	19.4					18.9	55.0		
9.4	19.5					19.5	55.7		
9.7	19.6					19.9	56.1		
9.8	19.8					20.5	56.7		
9.9	19.9					21.6	57.2		
10.2	20.2					22.1	57.9		
10.3	20.3					23.6	58.5		
10.5	20.5					24.7	59.1		
10.8	20.6					25.8	59.8		
10.9	20.7					26.7	60.5		
11.2	20.8					27.2	60.9		
11.4	20.9					27.9	61.4		
11.5	21.0					28.1	62.0		
11.7						28.8	62.7		
12.1	Rejected					29.2	63.5		
12.2						29.6	64.1		
12.5						30.0	64.8		
12.7						30.5	65.8		
13.0						30.9	67.1		

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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS	
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley	
-L- 904+75 SB OSL				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN	
				12/3 to 12/19/2019		-L- 904+75 SB ISS		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
STBC	FILL	413546.4	2011725.9	STBC	FILL	413546.1	2011750.6		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
1.5	27.7	47.0		1.4	24.0	38.6			
2.7	28.0	47.2		1.9	24.2	38.9			
3.8	28.4	47.5		2.6	24.4	39.3			
4.4	28.9	47.8		3.9	24.6	39.4			
4.8	29.3	48.1		5.3	24.8	39.8			
5.2	29.7	48.4		6.6	25.0	40.0			
5.6	30.4	48.8		7.6	25.3	40.5			
6.0	30.8	49.4		9.0	25.5	40.9			
6.4	31.1	50.4		10.0	25.9	41.3			
6.7	31.4	50.7		10.8	26.1	41.8			
6.9	31.7	50.9		11.8	26.3	42.2			
7.2	32.2	51.0		12.3	26.6	42.6			
7.5	32.8	51.2		12.8	27.0	43.0			
7.9	33.2	51.4		13.4	27.2	43.3			
8.4	33.5	51.8		13.8	27.5	43.8			
8.9	33.7	52.1		14.1	27.8	44.1			
9.2	33.9	52.6		14.5	28.0	44.4			
9.6	34.1	53.4		14.7	28.2	44.7			
10.0	34.3	53.9		15.1	28.3	45.0			
10.3	34.8	54.3		15.4	28.5	45.2			
10.6	35.3	54.7		15.8	28.7	45.6			
10.9	35.6	55.0		16.1	29.0	46.0			
11.4	35.9	55.5		16.4	29.2	46.2			
11.7	36.3	55.8		16.8	29.5	46.5			
12.0	36.8	56.1		17.0	29.7	46.8			
12.5	37.5	56.3		17.4	29.9	47.2			
13.0	37.8	57.2		17.5	30.2	47.4			
13.4	38.0	57.9		17.8	30.4	47.8			
13.8	38.2	58.6		18.1	30.8	48.1			
14.2	38.6	58.8		18.3	30.9	48.5			
14.8	39.1	60.0		18.5	31.3	48.8			
15.0	39.3	60.2		18.8	31.5	49.0			
15.4	39.7	60.5		18.9	31.7	49.3			
15.7	39.9	60.9		19.1	32.0	49.6			
16.4	40.4	61.3		19.4	32.1	50.0			
17.0	40.8	62.1		19.6	32.5	50.2			
17.8	41.1	62.7		19.9	32.7	50.8			
18.3	41.4	63.5		20.2	33.1	51.3			
19.0	41.8	63.9		20.5	33.3	51.9			
19.7	42.0	64.5		20.7	33.7	52.5			
20.3	42.8	65.0		20.9	34.1	53.0			
20.9	43.1	67.1		21.0	34.4	53.3			
21.4	43.5	68.2		21.3	34.8	53.8			
22.0	43.8	68.9		21.5	35.2	54.3			
23.1	44.1	69.8		21.7	35.6	54.6			
23.9	44.5	70.7		21.9	35.8	55.0			
24.2	44.8	72.1		22.2	36.2	55.5			
25.0	45.1	74.9		22.5	36.5	56.0			
25.5	45.3	76.9		22.8	36.9	56.6			
25.9	45.8	78.6		23.0	37.2	56.9			
26.5	46.1	80.9		23.2	37.5	57.5			
26.9	46.4	82.5		23.5	37.9				
27.3	46.7	84.1		23.7	38.2				

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE	
				I-5987B		47533.1.3		I-95	
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS	
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley	
-L- 934+95 SB OSS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN	
				12/3 to 12/19/2019		-L- 934+95 SB ISS		12/3 to 12/19/2019	
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
STBC	FILL	416544.2	2012158.8	STBC	FILL	416543.8	2012184.0		
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters					
0.2	30.0	52.0		2.2	24.5	48.6			
0.4	30.1	52.5		3.3	25.0	49.1			
0.7	30.1	52.9		4.0	25.6	49.5			
0.9	30.3	53.3		4.8	26.0	50.0			
1.1	30.5	53.9		5.2	26.6	50.4			
1.3	30.8	54.2		5.6	27.1	51.1			
1.6	31.2	54.8		6.1	27.6	51.5			
1.7	31.6	55.1		6.6	28.2	51.9			
1.9	31.9	55.4		7.0	28.5	52.5			
2.0	32.4	55.9		7.5	29.0	53.0			
2.2	32.7	56.7		7.8	29.6	53.6			
2.5	33.0	57.1		8.1	30.0	54.1			
2.6	33.2	57.7		8.3	30.4	54.6			
2.7	33.6	58.1		8.6	30.9	55.2			
2.8	33.9	58.6		9.0	31.4	57.9			
3.0	34.3	59.1		9.5	31.8	58.5			
3.1	34.8	59.7		9.8	32.3	59.0			
3.4	35.4	60.2		10.3	32.8	59.6			
3.5	35.7	60.8		10.7	33.2	60.1			
3.6	35.9	61.1		11.1	33.7	60.6			
3.7	36.5	61.7		11.4	34.1	61.1			
3.7	37.0	62.2		11.9	34.6	61.7			
3.8	37.5	63.0		12.1	35.1	62.3			
3.8	37.8	63.8		12.6	35.4	62.8			
3.9	38.2	64.3		12.8	35.9	63.4			
3.9	38.6	65.1		13.2	36.3	64.0			
4.0	39.2	65.6		13.6	36.8	64.6			
4.0	39.7	66.1		13.7	37.2	65.2			
4.1	40.0	66.9		14.1	37.7	65.8			
4.1	40.3	67.7		14.5	38.1	66.5			
4.2	40.7	68.2		14.9	38.6				
4.2	41.1	69.5		15.3	39.0				
4.3	41.4	70.3		15.8	39.5				
4.3	41.8	70.9		16.1	39.8				
4.4	42.2	72.2		16.6	40.2				
4.4	42.7	73.1		17.1	40.6				
4.5	43.2	74.3		17.4	41.0				
4.5	43.7	75.1		17.9	41.4				
4.6	44.3	76.0		18.2	41.8				
4.6	44.8	77.2		18.6	42.3				
Auger	45.6	78.1		18.9	42.5				
	46.1	79.0		19.4	43.0				
	46.9	80.2		19.8	43.5				
25.2	47.5	81.1		20.2	43.9				
26.3	47.9	82.9		20.6	44.3				
27.0	48.6	84.4		21.0	44.8				
27.3	49.1	86.1		21.4	45.2				
27.7	49.8	88.2		21.8	45.6				
27.9	50.1	90.4		22.3	46.1				
28.2	50.5	92.5		22.7	46.5				
28.5	50.8			23.1	47.0				
28.7	51.1			23.6	47.4				
28.9	51.6			24.0	48.0				

SG = Subgrade
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CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 934+95 SB ISL				12/3 to 12/19/2019	-L- 961+00 SB OSS	12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING			
STBC	FILL	416545.7	2012182.0	STBC	FILL	419120.7	2012544.2			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
0.5		21.9		0.9	22.1	39.7	65.7			
1.1	Auger	22.0		1.6	22.5	40.2	66.4			
1.7		22.3		2.1	22.7	40.5	67.2			
2.0		22.4		2.7	23.0	40.9	68.0			
2.2	9.6	22.5		3.3	23.4	41.4	68.7			
2.5	10.3	22.8		4.0	23.6	41.7	69.6			
2.7	10.7	23.0		4.4	24.0	42.0	70.3			
3.0	10.8	23.1		4.8	24.2	42.5	71.2			
3.1	11.2	23.2		5.3	24.5	42.8	72.1			
3.5	14.6	23.2		5.7	24.9	43.2	72.8			
3.6	14.9	23.3		6.2	25.2	43.5	73.5			
3.8	15.0	23.3		6.6	25.5	43.9	74.4			
4.0	15.1	23.5		7.1	25.9	44.4	75.5			
4.1	15.3	23.6		7.6	26.2	44.8	76.5			
4.3	15.5	23.7		8.0	26.7	45.2	77.6			
4.4	15.6	23.8		8.5	27.0	45.6	78.6			
4.5	16.0	24.0		8.9	27.2	46.0	79.6			
4.6	16.1	24.2		9.5	27.5	46.4	80.8			
4.7	16.4	24.4		9.8	27.8	46.9	82.1			
5.0	16.5	24.6		9.9	28.1	47.2	83.0			
5.1	16.7	24.9		10.1	28.4	47.7	84.0			
5.4	16.9	25.0		10.5	28.7	48.0	84.8			
5.5	17.2	25.2		10.8	29.1	48.5	85.5			
5.6	17.3	25.3		11.3	29.4	48.8	85.9			
5.7	17.6	25.6		11.6	29.8	49.2	86.5			
5.7	17.8	25.8		12.0	30.2	49.6	87.1			
5.8	17.9	25.9		12.4	30.4	50.1	87.6			
5.8	18.0			12.8	30.6	50.6				
5.8	18.1	Refusal		13.2	31.1	51.1				
5.9	18.2			13.5	31.6	51.5				
5.9	18.3			13.9	32.0	52.1				
6.0	18.4			14.2	32.4	52.5				
6.0	18.6			14.6	32.6	52.8				
6.1	18.9			15.0	33.0	53.3				
6.2	19.0			15.5	33.5	53.6				
6.3	19.2			15.8	33.8	54.0				
6.4	19.4			16.3	34.2	54.6				
6.5	19.6			16.6	34.4	55.1				
6.6	19.8			17.0	34.8	55.5				
6.7	19.9			17.2	35.1	56.0				
6.8	20.0			17.6	35.3	56.5				
7.0	20.1			18.0	35.7	57.1				
7.2	20.2			18.4	36.0	57.6				
7.3	20.3			18.7	36.4	58.3				
7.4	20.4			19.0	36.7	58.8				
7.5	20.5			19.4	37.2	59.4				
7.6	20.7			19.8	37.4	59.9				
7.8	20.9			20.1	38.0	60.7				
7.9	21.2			20.5	38.2	61.4				
8.1	21.3			20.7	38.5	62.0				
8.2	21.5			21.1	38.8	62.5				
8.4	21.7			21.5	39.1	63.1				
8.5	21.8			21.7	39.4	63.6				

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 961+00 SB OSL				12/3 to 12/19/2019	-L- 961+00 SB ISS	12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING			
STBC	FILL	419119.9	2012546.4	STBC	FILL	419116.9	2012574.4			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
0.3	7.4	12.4	16.4	19.9	23.8	1.3	27.3	43.2	60.1	
0.7	7.5	12.5	16.4	19.9	23.9	2.0	27.6	43.5	60.5	
1.0	7.6	12.6	16.5	20.0	24.0	2.6	28.0	43.8	61.0	
1.1	7.8	12.7	16.6	20.1	24.1	3.3	28.3	44.0	61.4	
1.2	8.0	12.8	16.7	20.1	24.2	3.8	28.6	44.2	61.9	
1.4	8.1	12.9	16.8	20.2	24.3	4.3	29.0	44.4	62.3	
1.5	8.2	13.0	16.8	20.3	24.5	5.0	29.3	44.7	62.8	
1.7	8.3	13.1	16.9	20.3	24.6	5.5	29.6	45.0	63.2	
1.8	8.4	13.1	16.9	20.4	24.7	6.1	30.0	45.2	63.8	
2.0	8.5	13.2	17.0	20.4	24.8	6.6	30.3	45.5	64.1	
2.2	8.6	13.2	17.0	20.5	24.9	7.3	30.7	45.7	64.6	
2.4	8.7	13.3	17.0	20.6	25.0	7.9	31.0	46.1	65.1	
2.5	8.8	13.3	17.1	20.6	25.1	8.6	31.3	46.3	65.6	
2.8	8.9	13.4	17.1	20.7	25.3	9.2	31.8	46.7	66.0	
2.9	9.0	13.4	17.1	20.8	25.4	9.9	32.1	47.0	66.6	
3.0	9.1	13.5	17.2	20.8	25.5	10.8	32.3	47.2	67.1	
3.1	9.2	13.5	17.2	20.9	25.6	11.5	32.7	47.5	67.5	
3.2	9.3	13.6	17.2	20.9	25.7	12.3	33.0	47.8	68.0	
3.3	9.4	13.6	17.3	21.0	25.8	13.2	33.2	48.1	68.4	
3.4	9.5	13.7	17.3	21.0	25.9	14.0	33.5	48.3	68.9	
3.6	9.6	13.7	17.4	21.1	26.0	14.6	33.9	48.6	69.4	
3.7	9.7	13.8	17.4	21.1	26.1	15.0	34.1	48.8	69.8	
3.9	9.8	13.9	17.4	21.2	26.2	15.4	34.4	49.1	70.4	
4.0	9.9	13.9	17.5	21.3	26.3	16.0	34.8	49.3	70.9	
4.1	10.0	14.0	17.5	21.3	26.4	16.5	35.1	49.6	71.5	
4.2	10.1	14.0	17.6	21.4		17.0	35.4	49.9	72.0	
4.3	10.2	14.1	17.6	21.4		17.4	35.7	50.1	72.5	
4.5	10.3	14.1	17.6	21.5		17.8	36.0	50.4	72.8	
4.6	10.3	14.2	17.7	21.6		18.4	36.2	50.8	73.4	
4.7	10.4	14.3	17.7	21.7		18.8	36.4	51.0	73.8	
4.8	10.4	14.3	17.8	21.8		19.2	36.7	51.4	74.1	
4.9	10.5	14.4	17.9	21.9		19.7	37.0	51.6	74.6	
5.0	10.6	14.4	18.0	22.0		20.2	37.2	52.0	75.2	
5.1	10.6	14.5	18.1	22.1		20.5	37.6	52.3	75.7	
5.2	10.7	14.6	18.2	22.2		21.0	37.9	52.7	76.2	
5.3	10.8	14.7	18.3	22.3		21.3	38.2	53.1	76.8	
5.4	10.8	14.8	18.4	22.4		21.6	38.5	53.4	77.2	
5.5	10.9	14.9	18.5	22.5		22.0	38.8	53.9	77.7	
5.6	11.0	15.0	18.6	22.5		22.1	39.1	54.2	78.4	
5.7	11.1	15.1	18.7	22.6		22.5	39.3	54.6	78.9	
5.9	11.2	15.2	18.8	22.7		22.8	39.8	54.9	79.5	
6.1	11.3	15.3	18.9	22.8		23.2	40.0	55.4	80.1	
6.2	11.4	15.4	19.0	22.9		23.4	40.3	55.5	80.6	
6.4	11.5	15.5	19.1	22.9		23.8	40.5	56.0	81.0	
6.5	11.6	15.6	19.2	23.0		24.1	40.7	56.3	81.5	
6.6	11.7	15.7	19.3	23.1		24.5	40.9	56.7	81.8	
6.7	11.8	15.8	19.4	23.2		24.8	41.2	57.1	82.3	
6.8	11.9	15.9	19.4	23.3		25.2	41.5	57.6	83.0	
6.9	12.0	16.0	19.5	23.4		25.6	41.7	57.9	83.4	
7.0	12.1	16.1	19.5	23.5		26.0	42.0	58.4	84.0	
7.1	12.2	16.2	19.6	23.6		26.3	42.3	58.9	84.5	
7.2	12.3	16.2	19.7	23.7		26.7	42.6	59.3	85.2	
7.3	12.4	16.3	19.8	23.7		27.0	42.9	59.7		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 987+25 SB OSS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 987+25 SB ISL		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	421687.4	2013129.6	STBC	FILL	421682.4	2013143.2				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
1.1	20.5	39.5	54.3	68.5	0.9	11.7	19.3	26.5			
2.0	20.8	39.8	54.5	68.9	1.6	11.9	19.6	26.6			
2.7	22.1	40.2	54.8	69.0	2.4	12.0	19.8	26.7			
3.3	22.5	40.3	55.0	69.4	2.9	12.1	20.0	26.8			
3.8	22.8	40.6	55.2	69.8	3.3	12.3	20.1	27.0			
4.2	23.3	41.0	55.3	70.0	3.6	12.5	20.2	27.1			
4.7	23.6	41.4	55.6	70.4	3.9	12.6	20.3	27.2			
5.2	24.0	41.5	55.9	70.6	4.2	12.7	20.4	27.3			
5.6	24.3	41.8	56.0	70.9	4.5	12.8	20.6	27.4			
6.1	24.6	42.3	56.3	71.2	4.8	13.1	20.7	27.6			
6.6	25.0	42.5	56.6	71.6	5.1	13.2	20.8	27.7			
6.8	25.3	42.7	56.9	71.9	5.2	13.3	20.9				
6.9	25.6	42.8	57.2	72.3	5.3	13.4	21.0				
7.2	25.8	43.1	57.5	72.7	5.4	13.6	21.1				
7.4	26.2	43.4	57.8	73.2	5.6	13.7	21.2				
7.6	26.5	43.5	58.1	73.5	5.7	13.8	21.3				
7.9	26.8	43.8	58.3	73.8	6.0	14.0	21.5				
8.2	27.0	44.1	58.7	74.3	6.3	14.2	21.6				
8.7	27.3	44.5	58.9	74.8	6.6	14.4	21.7				
9.0	27.7	44.7	59.3	75.1	6.9	14.5	21.9				
9.4	28.0	45.1	59.4	75.5	7.1	14.6	22.1				
9.9	28.3	45.3	59.8	76.2	7.3	14.8	22.2				
10.2	28.6	45.6	59.9	77.0	7.4	15.0	22.4				
10.5	29.0	45.9	60.3	77.5	7.5	15.1	22.5				
10.8	29.1	46.2	60.5	78.4	7.6	15.3	22.7				
11.3	29.6	46.4	60.9	79.0	7.8	15.4	22.8				
11.7	29.9	46.7	61.1	79.7	8.0	15.5	23.0				
11.9	30.2	47.2	61.4	80.4	8.3	15.6	23.3				
12.3	30.7	47.4	61.7	81.0	8.6	15.8	23.4				
12.6	31.0	47.8	61.9	81.5	8.8	15.9	23.5				
13.0	31.4	48.2	62.2	82.2	9.0	16.2	23.8				
13.3	31.9	48.5	62.4	84.0	9.0	16.3	23.9				
13.7	32.3	48.9	62.7	85.7	9.1	16.5	24.0				
14.0	32.9	49.1	63.0	87.9	9.2	16.6	24.2				
14.3	33.3	49.5	63.3	90.2	9.3	16.8	24.3				
14.6	33.7	49.8	63.5	93.0	9.4	17.0	24.4				
15.0	34.2	50.0	63.6	96.1	9.5	17.1	24.5				
15.3	34.8	50.2	63.9	98.6	9.6	17.2	24.6				
15.7	35.2	50.4	64.1	100.7	9.7	17.3	24.7				
16.2	35.4	50.6	64.3	103.5	9.9	17.4	24.8				
16.5	35.6	51.0	64.6		10.0	17.5	24.9				
16.8	36.1	51.1	65.0		10.1	17.6	25.0				
17.1	36.3	51.3	65.2		10.2	17.7	25.1				
17.5	36.6	51.6	65.5		10.4	17.8	25.1				
17.7	36.9	51.9	65.9		10.5	17.9	25.3				
18.1	37.1	52.2	66.2		10.6	18.0	25.4				
18.5	37.5	52.5	66.4		10.8	18.1	25.6				
18.8	37.8	52.7	66.6		10.9	18.3	25.7				
19.2	38.0	52.9	67.0		11.0	18.4	25.8				
19.4	38.4	53.3	67.3		11.1	18.5	25.9				
19.8	38.5	53.6	67.6		11.3	18.7	26.0				
20.0	38.9	53.8	67.9		11.4	18.9	26.1				
20.2	39.2	54.1	68.2		11.6	19.1	26.4				

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE				
				I-5987B		47533.1.3		I-95				
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS				
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley				
-L- 1010+15 SB OSS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN				
				12/3 to 12/19/2019		-L- 1010+15 SB OSL		12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	
STBC	FILL	423772.4	2014097.7	STBC	FILL	423762.8	2014101.1					
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters								
0.6	33.5	53.7	81.4					0.3	12.7	21.3	27.7	33.4
1.2	33.9	54.0	81.8					0.8	13.0	21.4	27.8	33.5
1.7	34.1	54.5	82.2					1.0	13.4	21.6	27.9	33.6
2.3	34.6	55.0	82.5					1.4	13.7	21.7	28.1	33.7
2.9	34.8	55.6	83.0					1.8	14.0	21.8	28.2	33.8
3.5	35.3	56.0	83.5					2.1	14.4	21.9	28.3	33.9
4.1	35.5	56.2	84.0					2.6	14.7	22.0	28.4	34.0
4.6	35.8	56.5	84.4					2.9	14.9	22.2	28.5	34.1
5.0	36.2	57.0	85.0					3.2	15.0	22.3	28.6	34.2
5.5	36.5	57.5	85.4					3.5	15.2	22.4	28.7	34.3
6.1	36.8	58.1	86.0					3.8	15.5	22.6	28.8	34.4
6.5	37.1	58.5	86.4					4.0	15.7	22.7	28.9	34.6
7.0	37.5	59.0	86.9					4.2	15.8	22.8	29.0	34.7
7.5	37.7	59.5	87.3					4.5	16.0	22.9	29.1	34.8
8.1	38.0	59.9	87.7					4.9	16.3	23.0	29.2	34.9
8.6	38.2	60.5	88.2					5.0	16.4	23.2	29.3	35.0
9.2	38.5	61.0	88.6					5.5	16.6	23.4	29.4	35.0
9.6	38.7	61.7	89.1					5.8	16.8	23.5	29.5	35.1
10.1	39.0	62.2	89.5					5.9	16.9	23.7	29.6	35.2
10.6	39.3	62.8	89.8					6.3	17.1	23.8	29.6	35.3
11.3	39.7	63.4	90.2					6.5	17.2	23.9	29.7	35.3
11.7	40.0	63.9	90.6					6.8	17.3	24.0	29.8	35.4
12.1	40.4	64.6	91.0					7.0	17.4	24.2	29.9	35.5
12.5	40.8	65.2	91.5					7.1	17.5	24.3	30.0	35.6
13.1	41.2	65.9	91.9					7.4	17.6	24.5	30.1	35.7
13.7	41.5	66.5	92.6					7.6	17.7	24.6	30.2	35.7
14.2	41.7	67.1	93.0					7.8	17.9	24.7	30.3	35.8
14.5	42.0	67.8	93.4					8.0	18.0	24.8	30.4	35.9
15.2	42.6	68.4	94.0					8.3	18.1	24.9	30.5	36.0
15.5	43.4	69.1	94.3					8.5	18.2	25.0	30.6	36.1
16.1	43.9	69.7	94.6					8.8	18.3	25.1	30.7	36.2
16.6	44.2	70.3	95.0					9.0	18.4	25.2	30.8	36.2
17.1	44.5	70.9	95.5					9.1	18.5	25.3	30.9	36.3
17.7	44.8	71.5	95.9					9.2	18.6	25.4	31.0	
18.3	45.1	72.0	96.4					9.3	18.7	25.5	31.2	
18.9	45.3	72.7	96.7					9.4	18.8	25.6	31.3	
19.4	45.6	73.5	97.0					9.5	18.9	25.7	31.4	
20.1	46.2	74.3	97.6					9.6	19.0	25.8	31.6	
20.6	46.9	74.8	98.0					9.8	19.1	25.9	31.7	
21.3	47.5	75.1	98.6					9.9	19.3	26.0	31.8	
21.8	48.0	75.6	99.2					10.2	19.4	26.1	32.0	
22.5	48.5	76.1	99.7					10.3	19.5	26.2	32.1	
23.1	49.0	76.6						10.5	19.6	26.3	32.2	
23.6	49.3	77.1						10.8	19.7	26.4	32.3	
24.2	49.8	77.6						10.9	19.8	26.6	32.5	
25.0	50.2	78.2						11.2	20.0	26.7	32.6	
25.7	50.7	78.6						11.4	20.1	26.9	32.7	
26.6	51.2	79.1						11.5	20.2	27.0	32.8	
27.9	51.6	79.4						11.8	20.4	27.1	32.9	
29.3	52.0	79.9						12.0	20.6	27.2	33.0	
30.7	52.5	80.3						12.1	20.8	27.3	33.1	
32.1	52.9	80.6						12.2	21.0	27.4	33.2	
32.8	53.3	81.0						12.4	21.1	27.6	33.3	

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 1010+15 SB ISS				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 1037+30 SB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	423753.2	2014119.6	STBC	FILL	425985.3	2015670.1				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
5.4	30.0	44.7	57.3			0.6	14.1	28.0	40.4	53.7	70.6
8.5	30.1	45.0	57.6			1.1	14.4	28.2	40.6	53.8	71.0
11.6	30.2	45.3	57.9			1.8	14.6	28.6	40.8	54.2	71.3
14.2	30.6	45.6	58.2			2.1	14.9	28.7	41.0	54.5	71.7
15.6	30.7	45.9	58.4			2.2	15.2	28.9	41.3	54.6	72.0
16.4	31.2	46.2	58.8			2.6	15.6	29.3	41.6	54.8	72.4
17.3	31.4	46.4	59.1			2.8	15.8	29.6	41.8	55.1	72.6
18.1	31.8	46.5	59.3			3.0	16.1	29.7	42.2	55.3	72.8
18.5	32.1	46.8	59.5			3.1	16.4	29.9	42.5	55.7	73.2
19.0	32.3	47.0	59.8			3.3	16.7	30.0	42.8	56.2	73.5
19.5	32.7	47.3	60.0			3.5	17.0	30.3	43.0	56.8	73.7
19.9	33.0	47.6	60.2			3.6	17.2	30.6	43.3	57.3	74.1
20.3	33.2	47.9	60.5			3.8	17.5	30.8	43.5	57.8	74.3
20.6	33.5	48.1	60.7			4.0	17.9	31.0	43.7	58.2	74.7
21.2	33.7	48.5	60.9			4.4	18.1	31.1	44.0	58.5	75.2
21.7	34.0	48.7	61.2			4.5	18.4	31.3	44.2	58.7	75.6
22.2	34.3	49.0	61.4			4.9	18.6	31.5	44.5	59.0	76.0
22.5	34.6	49.1	61.8			5.0	19.0	31.7	44.9	59.3	
22.8	34.8	49.4	62.2			5.2	19.2	31.8	45.1	59.5	
23.1	35.2	49.5	62.5			5.5	19.5	32.1	45.3	59.8	
23.3	35.4	49.8	62.7			5.7	19.8	32.4	45.6	60.2	
23.7	35.8	50.0	63.1			5.8	20.0	32.6	45.8	60.4	
23.9	36.0	50.2	63.4			6.0	20.4	32.9	46.1	60.6	
24.0	36.2	50.5	63.7			6.3	20.7	33.0	46.2	60.7	
24.1	36.5	50.7	64.1			6.6	21.0	33.3	46.4	61.0	
24.2	36.6	51.0	64.4			6.7	21.1	33.6	46.7	61.3	
24.4	37.0	51.2	64.7			7.0	21.5	33.9	47.0	61.5	
24.7	37.2	51.5				7.1	21.7	34.1	47.3	61.8	
24.8	37.5	51.6				7.4	21.8	34.2	47.7	62.2	
24.9	37.7	51.9				7.6	21.9	34.4	47.9	62.5	
25.2	37.9	52.1				7.8	22.1	34.7	48.1	62.8	
25.4	38.2	52.2				8.1	22.2	34.9	48.4	63.2	
25.6	38.5	52.5				8.3	22.5	35.2	48.5	63.5	
25.7	38.8	52.7				8.7	22.8	35.4	48.7	63.6	
26.0	39.1	52.8				9.0	23.0	35.6	49.0	64.0	
26.2	39.4	53.1				9.2	23.2	35.8	49.1	64.1	
26.4	39.7	53.4				9.5	23.6	36.1	49.4	64.3	
26.5	40.0	53.6				9.6	23.8	36.4	49.7	64.6	
26.8	40.2	53.8				10.1	24.1	36.7	50.0	64.8	
26.9	40.5	54.0				10.3	24.3	36.9	50.1	65.2	
27.2	40.7	54.1				10.6	24.7	37.1	50.4	65.5	
27.3	40.9	54.5				10.8	25.0	37.3	50.7	65.9	
27.4	41.2	54.7				11.1	25.2	37.5	51.0	66.1	
27.7	41.5	54.8				11.3	25.3	37.7	51.3	66.5	
27.9	41.8	55.1				11.5	25.6	37.9	51.6	66.8	
28.0	42.2	55.3				11.7	25.8	38.2	51.9	67.2	
28.4	42.4	55.6				12.0	26.0	38.5	52.2	67.6	
28.6	42.7	55.8				12.1	26.2	38.8	52.4	68.2	
29.0	43.0	56.1				12.4	26.6	39.2	52.8	68.5	
29.2	43.4	56.4				12.7	26.7	39.4	52.9	68.7	
29.6	43.8	56.7				13.2	27.0	39.6	53.2	69.0	
29.8	44.1	56.8				13.5	27.3	39.8	53.3	69.2	
29.9	44.4	57.1				13.7	27.7	40.2	53.5	69.5	

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
TEST LOCATIONS DESCRIPTION				COUNTY		ENGINEER		TECHNICIANS			
				Robeson		VLAD MITCHEV		D. Strother/J. Swartley			
-L- 1037+30 SB OSL				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
				12/3 to 12/19/2019		-L- 1037+30 SB ISS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	425977.0	2015676.5	STBC	FILL	425962.6	2015709.0				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
0.6	15.0	27.0	36.7			0.5	27.7	40.0			
0.9	15.3	27.1	36.9			0.9	27.9	40.2			
1.5	15.6	27.4	37.1			1.3	28.2	40.4			
1.7	15.9	27.6	37.4			1.7	28.3	40.7			
2.0	16.1	27.8	37.6			2.1	28.6	40.9			
2.1	16.4	27.9	37.7			2.5	28.8	41.3			
2.4	16.6	28.1	37.8			3.0	29.0	41.5			
2.8	16.9	28.2	38.1			3.3	29.3	41.8			
3.3	17.2	28.3	38.2			3.8	29.5	41.9			
3.7	17.5	28.6	38.5			4.3	29.8	42.1			
4.0	17.8	28.7	38.6			5.6	30.0	42.4			
4.3	18.3	28.9	38.7			6.8	30.3	42.5			
4.6	18.5	29.0	38.9			7.3	30.5	42.6			
4.8	18.9	29.2	39.1			7.8	30.8				
5.0	19.0	29.5	39.3			8.4	31.1				
5.3	19.2	29.6	39.4			8.9	31.4				
5.4	19.4	29.7	39.5			9.4	31.6				
5.8	19.6	29.9	39.7			10.1	31.7				
6.0	19.8	30.2				10.6	32.0				
6.3	20.2	30.4	DCP			11.2	32.3				
6.6	20.4	30.7				12.0	32.5				
6.7	20.7	30.8				12.6	32.6				
7.1	20.9	31.0				13.2	32.8				
7.3	21.2	31.3				13.9	32.9				
7.7	21.4	31.4				14.5	33.0				
8.0	21.7	31.7				15.1	33.2				
8.2	22.0	31.9				15.6	33.4				
8.5	22.1	32.2				16.2	33.7				
8.6	22.3	32.4				16.8	34.0				
8.9	22.4	32.5				17.4	34.3				
9.1	22.6	32.7				18.1	34.5				
9.3	22.8	32.9				18.8	34.8				
9.5	23.1	33.0				19.4	35.1				
9.8	23.3	33.2				20.0	35.3				
10.1	23.5	33.4				20.6	35.6				
10.2	23.7	33.6				21.3	36.0				
10.3	23.9	33.8				21.8	36.3				
10.6	24.0	33.9				22.5	36.5				
10.7	24.2	34.1				23.2	36.6				
11.0	24.3	34.3				23.7	36.8				
11.3	24.5	34.5				23.9	37.0				
11.7	24.8	34.7				24.2	37.3				
12.0	25.1	34.8				24.7	37.6				
12.3	25.2	35.1				25.0	37.8				
12.5	25.4	35.2				25.3	37.9				
12.8	25.5	35.4				25.6	38.2				
13.0	25.8	35.6				25.9	38.5				
13.4	25.9	35.7				26.2	38.7				
13.6	26.1	35.9				26.5	38.9				
13.9	26.3	36.0				26.8	39.1				
14.3	26.4	36.2				27.0	39.3				
14.6	26.5	36.5				27.2	39.6				
14.8	26.9	36.6				27.4	39.8				

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 1037+30 SB ISL				12/3 to 12/19/2019	-L- 1053+70 SB OSS	12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING			
STBC	FILL	425966.5	2015698.5	STBC	FILL	427301.2	2016643.6			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
0.5	23.4	35.9		0.9	11.8	16.5	22.2	28.9	35.7	
0.8	23.8	36.1		1.7	11.9	16.6	22.3	29.0	35.8	
1.3	24.2	36.3		2.0	12.0	16.7	22.4	29.1	36.0	
1.7	24.6	36.4		2.3	12.2	16.8	22.5	29.1	36.1	
2.0	25.1	36.7		2.7	12.3	16.9	22.6	29.2	36.3	
2.5	25.6	36.9		3.0	12.5	17.2	22.7	29.3	36.4	
2.8	26.0	37.0		3.3	12.6	17.4	22.8	29.4	36.6	
3.2	26.5	37.2		3.6	12.7	17.5	22.9	29.5	36.8	
3.6	26.9	37.3		4.0	12.8	17.7	23.0	29.6	36.9	
3.9	27.2	37.5		4.2	13.0	17.8	23.1	29.7	37.0	
4.3	27.6	37.6		4.5	13.1	17.9	23.2	29.8	37.1	
4.8	28.0	37.8		5.0	13.2	18.0	23.3	29.9	37.4	
5.1	28.3	38.0		5.3	13.3	18.1	23.4	30.1	37.5	
5.6	28.5	38.2		5.5	13.5	18.2	23.5	30.2	37.6	
6.0	28.7	38.3		5.9	13.5	18.3	23.6	30.3	37.7	
6.4	28.9	38.5		6.3	13.5	18.3	23.7	30.3	37.7	
6.9	29.2	38.8		6.5	13.6	18.4	23.8	30.5	37.7	
7.4	29.5	38.9		6.6	13.6	18.5	23.9	30.6	37.8	
8.0	29.6			7.0	13.6	18.5	24.0	30.7	37.9	
8.5	29.9			7.1	13.7	18.6	24.1	30.8	38.0	
9.0	30.2			7.3	13.7	18.7	24.3	30.9	37.9	
9.4	30.4			7.6	13.7	18.7	24.4	31.0	38.0	
9.7	30.5			7.8	13.8	18.8	24.7	31.2	38.1	
10.1	30.8			7.9	13.8	18.9	24.8	31.3	38.2	
10.5	31.0			8.1	13.8	19.0	25.1	31.4	38.4	
10.9	31.2			8.2	13.9	19.1	25.2	31.5	38.5	
11.1	31.3			8.3	14.0	19.1	25.3	31.6	38.7	
11.5	31.4			8.4	14.1	19.2	25.4	31.8	38.8	
11.7	31.6			8.6	14.2	19.3	25.6	32.0	38.9	
11.9	31.7			8.7	14.3	19.4	25.7	32.1	39.0	
12.2	31.8			8.8	14.3	19.5	25.9	32.2	39.1	
12.7	31.9			9.0	14.4	19.6	26.2	32.3	39.3	
13.2	32.2			9.1	14.5	19.6	26.3	32.4	39.4	
13.6	32.3			9.3	14.5	19.7	26.5	32.7	39.5	
14.1	32.6			9.6	14.6	19.8	26.6	32.8	39.7	
14.6	32.7			9.8	14.7	19.9	26.7	32.9	39.9	
15.2	32.9			10.0	14.8	20.0	27.0	33.0	40.1	
15.7	33.2			10.1	14.9	20.1	27.1	33.2	40.2	
16.3	33.4			10.2	15.0	20.2	27.3	33.4	40.4	
16.8	33.7			10.3	15.1	20.3	27.5	33.5	40.6	
17.4	33.9			10.4	15.2	20.4	27.6	33.7	40.7	
17.8	34.0			10.5	15.2	20.5	27.7	34.0	41.0	
18.4	34.1			10.7	15.3	20.5	27.8	34.2	41.1	
18.9	34.2			10.8	15.4	20.7	27.9	34.3	41.3	
19.3	34.3			10.9	15.5	20.8	28.0	34.5	41.5	
19.8	34.4			11.0	15.6	21.0	28.1	34.6		DCP Refusal
20.3	34.7			11.1	15.7	21.1	28.3	34.7		
20.8	34.8			11.2	15.8	21.3	28.4	34.8		
21.0	35.1			11.3	15.9	21.4	28.6	34.9		
21.5	35.4			11.4	16.0	21.6	28.7	35.1		
22.0	35.5			11.5	16.2	21.8	28.8	35.2		
22.4	35.6			11.6	16.4	22.0	28.8	35.4		
22.8	35.7			11.7	16.5	22.1	28.9	35.5		

CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE				
				I-5987B	47533.1.3	I-95				
				COUNTY	ENGINEER	TECHNICIANS				
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley				
TEST LOCATIONS DESCRIPTION				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN				
-L- 1053+70 SB OSL2				12/3 to 12/19/2019	-L- 1053+70 SB OSL1	12/3 to 12/19/2019				
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING			
STBC	FILL	427289.1	2016659.1	STBC	FILL	427295.8	2016645.4			
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters						
1.2	15.5	27.3	34.5	0.4	13.9	27.7	40.2	53.6	68.3	
2.2	15.7	27.5	34.7	0.9	14.1	28.0	40.4	53.8	68.4	
2.7	16.1	27.7	34.8	1.4	14.4	28.3	40.6	54.0	68.6	
3.3	16.5	27.8	34.9	1.7	14.7	28.4	40.9	54.2	68.8	
3.5	16.7	28.0	35.0	1.9	15.1	28.6	41.0	54.3	69.1	
3.8	17.0	28.1	35.1	2.2	15.4	28.9	41.3	54.5	69.5	
4.1	17.2	28.4	35.2	2.4	15.6	29.2	41.5	54.7	69.8	
4.4	17.4	28.5	35.3	2.7	15.9	29.4	41.7	54.9	69.9	
4.6	17.6	28.7	35.4	2.9	16.2	29.6	42.0	55.2	70.3	
4.8	17.7	28.9	35.5	3.1	16.4	29.8	42.3	55.5	70.7	
5.0	17.9	29.1	35.6	3.3	16.6	30.0	42.7	55.7	71.0	
5.3	18.1	29.2	35.7	3.5	17.0	30.2	42.9	56.0	71.2	
5.6	18.2	29.5	35.8	3.6	17.2	30.5	43.2	56.3	71.6	
5.8	18.4	29.6	35.9	3.8	17.7	30.6	43.6	56.6	71.9	
6.1	18.5	29.7	36.0	4.0	18.0	30.8	43.8	57.0	72.3	
6.4	18.7	29.9	36.1	4.3	18.3	31.1	44.1	57.3	72.7	
6.8	19.0	30.0	36.2	4.4	18.4	31.3	44.4	57.6	73.0	
7.2	19.3	30.1	36.3	4.6	18.8	31.5	44.5	58.0	73.2	
7.4	19.5	30.3	36.4	4.8	19.0	31.8	44.7	58.1	73.4	
7.6	19.7	30.4	36.5	5.1	19.3	32.0	45.0	58.5	73.8	
7.9	20.0	30.5	36.6	5.4	19.6	32.3	45.1	58.8	74.0	
8.1	20.3	30.6	36.7	5.6	19.7	32.5	45.3	59.2	74.4	
8.4	20.4	30.7	36.8	5.9	20.0	32.6	45.5	59.4	74.8	
8.5	20.6	30.8	36.9	6.1	20.2	32.9	45.8	59.7	75.2	
8.7	21.0	30.9	37.0	6.3	20.6	33.1	46.0	60.0	75.5	
8.9	21.2	31.0		6.5	20.7	33.3	46.2	60.2		
9.2	21.4	31.1	DCP Refusal	6.7	21.0	33.5	46.5	60.4		
9.4	21.5	31.3		6.9	21.2	33.6	46.7	60.7		
9.7	21.7	31.4		7.0	21.5	33.9	47.0	61.0		
10.0	21.9	31.5		7.3	21.7	34.1	47.3	61.2		
10.2	22.1	31.6		7.6	21.9	34.3	47.4	61.5		
10.6	22.5	31.8		8.0	22.0	34.6	47.7	61.7		
10.9	22.8	31.9		8.1	22.2	34.7	48.0	62.0		
11.2	23.2	32.0		8.4	22.5	35.0	48.4	62.3		
11.4	23.5	32.1		8.8	22.6	35.2	48.6	62.6		
11.6	23.9	32.2		9.0	23.0	35.4	49.0	62.9		
11.9	24.0	32.5		9.2	23.2	35.8	49.3	63.2		
12.1	24.3	32.6		9.5	23.6	36.0	49.4	63.4		
12.2	24.5	32.8		9.8	23.9	36.3	49.7	63.6		
12.4	24.6	32.9		10.0	24.1	36.4	49.9	63.9		
12.5	24.8	33.0		10.3	24.4	36.6	50.1	64.1		
12.9	25.0	33.1		10.5	24.7	36.9	50.4	64.3		
13.0	25.2	33.2		10.7	25.0	37.3	50.8	64.5		
13.2	25.4	33.3		11.0	25.1	37.5	51.1	64.7		
13.6	25.5	33.4		11.3	25.4	37.8	51.4	65.0		
14.0	25.7	33.7		11.4	25.5	38.0	51.7	65.4		
14.3	25.9	33.8		11.7	25.7	38.2	51.8	65.7		
14.6	26.2	33.9		11.9	25.9	38.4	52.0	66.1		
15.0	26.4	34.0		12.3	26.3	38.8	52.3	66.5		
15.1	26.5	34.1		12.6	26.4	39.0	52.6	66.9		
15.2	26.8	34.2		12.9	26.7	39.3	52.9	67.2		
15.3	27.0	34.3		13.3	27.0	39.6	53.2	67.6		
15.4	27.1	34.4		13.5	27.4	39.9	53.5	68.0		

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base



S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE			
				I-5987B		47533.1.3		I-95			
				COUNTY		ENGINEER		TECHNICIANS			
Robeson				VLAD MITCHEV		D. Strother/J. Swartley					
TEST LOCATIONS DESCRIPTION				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN			
-L- 1063+70 SB ISS				12/3 to 12/19/2019		-L- 1091+30 SB OSS		12/3 to 12/19/2019			
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING
STBC	FILL	428096.8	2017243.6	STBC	FILL	430351.8	2018848.8				
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters							
0.2	14.4	31.2	42.8	0.3	20.0	26.3	45.9	86.0			
0.6	15.0	31.4	43.0	0.6	20.4	26.5	46.5	87.1			
0.7	15.6	31.7	43.2	0.8	20.6	26.7	47.4	88.1			
1.0	16.1	31.8	43.4	1.0	20.7	26.9	48.7	89.6			
1.3	16.4	32.1	43.5	1.1	20.8	27.1	49.6	90.3			
1.5	16.8	32.3	43.7	1.3	20.9	27.3	50.5	91.2			
1.8	16.9	32.5	44.0	1.5	21.0	27.5	51.3	92.7			
1.9	17.3	32.7	44.2	1.6	21.1	27.7	52.0	93.8			
2.3	17.6	32.9	44.4	1.8	21.2	27.9	52.8	95.1			
2.5	17.9	33.1	44.6	2.0	21.4	28.1	53.3	96.5			
2.8	18.4	33.4	44.7	2.1	21.5	28.2	53.9	97.4			
3.1	18.8	33.7	44.9	2.2	21.6	28.4	54.6	99.1			
3.4	19.1	33.9	45.1	2.5	21.7	28.5	55.0	100.3			
3.5	19.5	34.1	45.2	2.6	21.8	28.6	55.5	101.6			
3.9	19.8	34.4	45.4	2.7	21.9	28.8	55.9	102.4			
4.2	20.1	34.6	45.8	2.8	22.0	29.2	56.4	103.1			
4.5	20.5	34.9	46.0	3.0	22.1	29.3	56.8	104.5			
4.6	21.0	35.1	46.2	3.1	22.2	29.5	57.3				
4.9	21.3	35.3	46.3	3.2	22.3	29.6	57.7				
5.2	21.7	35.5	46.6	3.4	22.4	29.8	58.1				
5.5	21.8	35.7	46.7	3.6	22.5	29.9	58.6				
5.6	22.1	35.9	46.9	3.8	22.6	30.2	59.0				
5.7	22.5	36.0	47.2	3.9	22.7	30.4	59.6				
5.9	22.7	36.3		4.1	22.8	30.5	60.0				
6.2	23.0	36.4		4.2	22.9	30.7	60.7				
6.3	23.4	36.6		4.3	23.1	31.3	61.1				
6.4	23.8	36.9		4.5	23.2	31.7	61.8				
6.6	24.1	37.1		4.7	23.3	31.9	62.0				
6.7	24.5	37.2		4.9	23.4	32.1	62.4				
7.0	24.9	37.4		5.0	23.5	32.4	63.0				
7.2	25.2	37.7		5.1	23.6	32.6	63.6				
7.5	25.5	38.0		5.2	23.8	32.8	64.1				
7.7	25.8	38.2		5.3	23.9	33.1	65.1				
8.1	26.2	38.4		5.4	24.0	33.7	65.7				
8.3	26.4	38.7		5.4	24.1	34.2	66.7				
8.5	26.5	38.8		5.5	24.2	34.9	67.4				
8.7	26.7	39.0		5.7	24.3	35.3	68.3				
9.0	26.8	39.2		5.9	24.4	35.7	68.9				
9.1	27.0	39.4		6.1	24.5	36.0	69.8				
9.4	27.4	39.7		6.3	24.6	36.5	70.6				
9.6	27.8	39.8		6.4	24.6	36.9	71.6				
9.8	28.0	40.1		6.5	24.7	37.4	72.3				
10.1	28.3	40.4		6.6	24.8	37.9	73.1				
10.3	28.7	40.5		6.7	24.9	38.3	73.9				
10.5	29.0	40.7		6.9	25.0	38.9	74.8				
10.7	29.2	41.0		7.0	25.1	39.3	75.7				
10.9	29.5	41.1		7.2	25.2	41.0	76.4				
11.2	29.7	41.4		7.3	25.3	41.6	77.8				
11.4	29.8	41.6		7.5	25.5	42.0	79.0				
11.5	30.1	41.8		7.6	25.7	42.7	80.5				
12.2	30.3	42.0		7.7	25.9	43.3	82.0				
13.0	30.7	42.3		Auger	26.0	44.6	83.5				
13.7	31.0	42.6			26.2	45.0	84.8				

SG = Subgrade
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RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
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CONE PENETROMETER DATA CODE SHEET				TIP		PROJECT I.D.		ROUTE					
				I-5987B		47533.1.3		I-95					
				COUNTY		ENGINEER		TECHNICIANS					
Robeson				VLAD MITCHEV		D. Strother/J. Swartley							
TEST LOCATIONS DESCRIPTION				DATE RUN		TEST LOCATION DESCRIPTION		DATE RUN					
-L- 1091+30 SB ISS				12/3 to 12/19/2019		-L- 1091+30 SB ISL		12/3 to 12/19/2019					
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING		
STBC	FILL	430326.5	2018864.9	STBC	FILL	430333.8	2018861.7						
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters									
0.2	11.3	19.4	43.5	75.2				0.1	8.1	11.3	16.5	25.8	51.7
0.6	11.5	19.6	44.0	75.8				0.5	8.2	11.4	16.6	26.4	52.2
0.8	11.6	19.7	44.4	76.6				0.7	8.3	11.5	16.7	27.1	52.7
1.2	11.7	20.0	44.9	77.2				0.8	8.4	11.6	16.8	27.6	53.2
1.4	11.7	20.2	45.3	78.0				1.1	8.5	11.7	16.9	28.2	53.6
1.5	11.7	20.3	45.7	79.1				1.3	8.6	11.8	17.0	28.8	54.1
1.8	11.8	20.4	46.2	80.0				1.5	8.7	11.9	17.1	29.6	54.5
2.1	12.0	20.6	46.6	80.8				1.9	8.8	12.0	17.2	30.3	55.0
2.2	12.1	20.8	47.2	81.7				2.2	8.9	12.1	17.3	31.0	55.4
2.5	12.3	21.0	47.6	83.0				2.3	9.0	12.2	17.5	31.8	55.8
2.7	12.5	21.2	48.0	84.3				2.6	9.1	12.3	17.6	32.5	56.3
3.0	12.6	21.5	48.5	85.5				2.7	9.1	12.4	17.7	33.2	56.6
3.1	12.7	21.7	48.9	86.8				2.9	9.2	12.5	17.8	34.1	57.1
3.4	12.8	21.9	49.2	88.0				3.0	9.2	12.6	18.0	34.9	57.9
3.6	13.0	22.3	49.6	89.2				3.2	9.3	12.7	18.1	35.6	58.6
3.7	13.2	22.5	50.1	90.3				3.4	9.4	12.8	18.2	36.4	59.4
4.1	13.3	22.6	50.5	91.3				3.7	9.5	12.9	18.3	37.0	60.2
4.3	13.5	22.8	50.9	92.5				3.8	9.6	13.0	18.4	37.6	61.0
4.4	13.6	23.1	51.2	93.6				4.1	9.6	13.1	18.5	38.2	61.5
4.6	13.8	23.4	51.7					4.2	9.7	13.2	18.6	38.8	61.9
4.8	14.0	23.9	52.0					4.3	9.7	13.3	18.8	39.3	62.4
5.3	14.1	24.2	52.3					4.5	9.7	13.4	19.0	39.6	63.0
5.6	14.3	24.6	52.7					4.6	9.8	13.5	19.2	40.1	63.4
5.8	14.4	24.9	53.2					4.9	9.9	13.6	19.3	40.3	63.9
6.1	14.5	25.4	53.7					5.0	9.9	13.7	19.5	40.8	64.3
6.3	14.6	25.7	54.0					5.2	10.0	13.8	19.7	41.1	64.6
6.5	14.8	26.2	54.5					5.3	10.0	13.9	19.8	41.5	65.1
6.6	14.9	26.6	55.2					5.4	10.1	14.0	20.0	42.1	65.6
6.7	15.1	27.1	55.8					5.7	10.2	14.1	20.1	42.5	65.9
6.9	15.3	27.4	56.5					5.8	10.2	14.2	20.3	43.1	66.4
7.2	15.4	28.1	57.1					5.9	10.3	14.3	20.5	43.6	66.8
7.5	15.6	29.0	57.8					6.0	10.3	14.4	20.6	44.0	67.2
7.7	15.7	29.8	58.7					6.1	10.4	14.5	20.7	44.4	67.5
8.0	15.9	30.6	59.5					6.2	10.4	14.6	20.9	44.8	68.1
8.3	16.2	31.4	60.5					6.2	10.5	14.7	21.0	45.1	68.6
8.4	16.3	32.2	61.3					6.3	10.5	14.8	21.2	45.4	69.2
8.5	16.4	32.8	62.1					6.4	10.5	14.9	21.3	45.7	69.8
8.6	16.7	33.6	63.1					6.5	10.6	15.0	21.5	46.0	70.3
8.7	16.9	34.4	64.1					6.6	10.7	15.1	21.7	46.3	71.0
8.8	17.0	35.2	65.0					6.7	10.8	15.2	21.9	46.6	71.5
8.9	17.2	35.9	65.9					6.8	10.8	15.3	22.1	47.0	72.1
9.0	17.4	36.7	66.8					6.9	10.9	15.4	22.3	47.3	72.8
9.3	17.5	37.3	67.4					7.0	10.9	15.6	22.6	47.7	73.3
9.4	17.6	38.1	68.2					7.1	11.0	15.6	22.8	48.0	74.8
9.5	17.9	38.8	68.8					7.2	11.0	15.7	23.3	48.4	76.4
9.6	18.0	39.3	69.5					7.3	11.1	15.8	23.6	48.7	78.0
9.8	18.1	40.0	70.1					7.4	11.1	15.9	23.8	48.9	78.9
9.9	18.4	40.4	70.8					7.5	11.1	16.0	24.0	49.3	79.9
10.0	18.5	41.0	71.6					7.6	11.2	16.1	24.3	49.8	80.8
10.2	18.8	41.6	72.4					7.7	11.2	16.2	24.5	50.0	81.8
10.3	18.9	42.2	73.1					7.8	11.2	16.3	24.9	50.4	82.6
10.7	19.1	42.6	73.8					7.9	11.3	16.4	25.3	50.8	
11.0	19.2	43.0	74.5					8.0	11.3	16.5	25.6	51.4	


S&ME, Inc.
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CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE							
				I-5987B	47533.1.3	I-95							
TEST LOCATIONS DESCRIPTION				COUNTY	ENGINEER	TECHNICIANS							
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley							
-L- 1116+00 SB OSS				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN							
				12/3 to 12/19/2019	-L- 1116+00 SB OSL	12/3 to 12/19/2019							
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING						
STBC	FILL	431554.6	2021019.9	STBC	FILL	431541.6	2021025.6						
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters									
0.4		77.5		0.6	13.7	55.6							
0.8	Auger	78.0		1.0	13.9	56.1							
1.3		78.9		1.3	14.1	56.7							
1.5		79.5		1.7	14.4	57.1							
1.6	30.2	80.3		1.8	14.9	57.6							
1.7	30.9	81.1		1.9	15.3	58.1							
1.9	31.2	81.9		2.0	16.0	58.7							
2.3	31.6	82.3		2.2	16.7	59.0							
2.5	32.2	83.0		2.4	17.0	59.4							
2.6	32.6	84.5		2.8	17.4	59.9							
2.8	33.0	85.0		3.0	17.7	60.3							
2.9	34.2	86.4		3.2	18.0	60.9							
3.1	35.6	86.9		3.5	18.6	61.5							
3.3	36.7	87.5		3.8	19.0	62.0							
3.5	37.1	88.3		4.0	19.6	62.7							
3.8	38.0	88.7		4.2	20.0	63.1							
4.0	38.8	89.5		4.5	20.9	63.7							
4.2	39.6	90.2		4.7	21.2	64.1							
4.4	41.2	90.6		4.9	22.1	64.6							
4.6	42.9	91.4		5.0	22.9	65.0							
4.7	44.5	92.0		5.3	23.5	65.7							
4.8	45.9	92.7		5.5	24.4	66.4							
4.8	47.2	93.3		5.7	25.5	67.1							
4.9	48.3	94.0		5.8	26.7	67.8							
5.0	49.6	95.0		6.0	27.7	68.7							
5.2	50.8	95.7		6.1	29.3	69.2							
5.2	51.8	96.6		6.3	30.2	69.8							
5.3	53.0	97.6		6.4	31.3	70.5							
5.3	54.1	98.3		6.7	32.5	71.0							
5.4	55.0	99.0		6.9	33.8	72.3							
5.4	56.0	99.5		7.0	34.6	73.5							
5.5	57.1	100.3		7.2	35.6	74.6							
5.6	58.0	100.8		7.4	37.0	75.0							
5.7	59.1	101.5		7.6	38.0	76.2							
5.8	60.0	102.2		7.8	39.1	77.1							
5.9	61.1	103.0		8.0	40.0	77.9							
6.0	62.2	103.8		8.4	41.0	78.7							
6.2	62.8	104.4		8.9	42.1	79.3							
6.3	63.7	105.4		9.2	43.2	80.0							
6.4	64.5	106.3		9.7	44.4	80.9							
6.6	65.3	107.0		9.9	45.6	81.9							
6.7	66.0	107.5		10.2	46.7	82.6							
6.8	67.1	108.0		10.5	47.8	83.2							
6.9	68.8	109.3		10.8	48.5	83.8							
7.0	69.5			11.1	49.5	84.8							
7.2	70.4			11.7	50.4	85.7							
7.3	71.7			11.9	51.3	86.6							
7.4	72.5			12.1	52.1								
7.5	73.1			12.3	53.2								
7.7	74.6			12.6	53.8								
7.8	75.4			12.9	54.0								
7.9	76.1			13.2	54.5								
8.0	76.8			13.5	55.0								

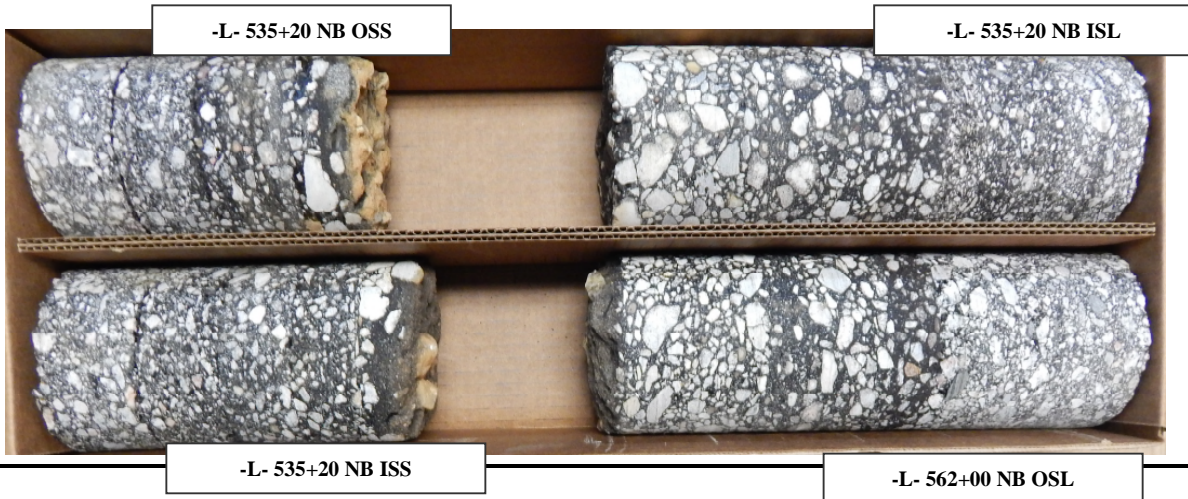
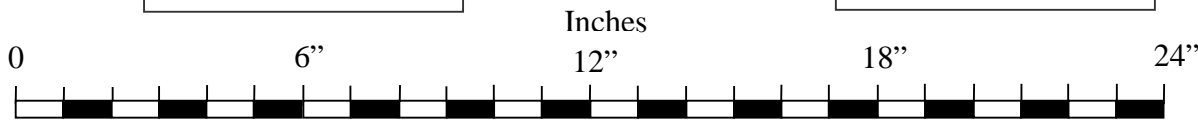
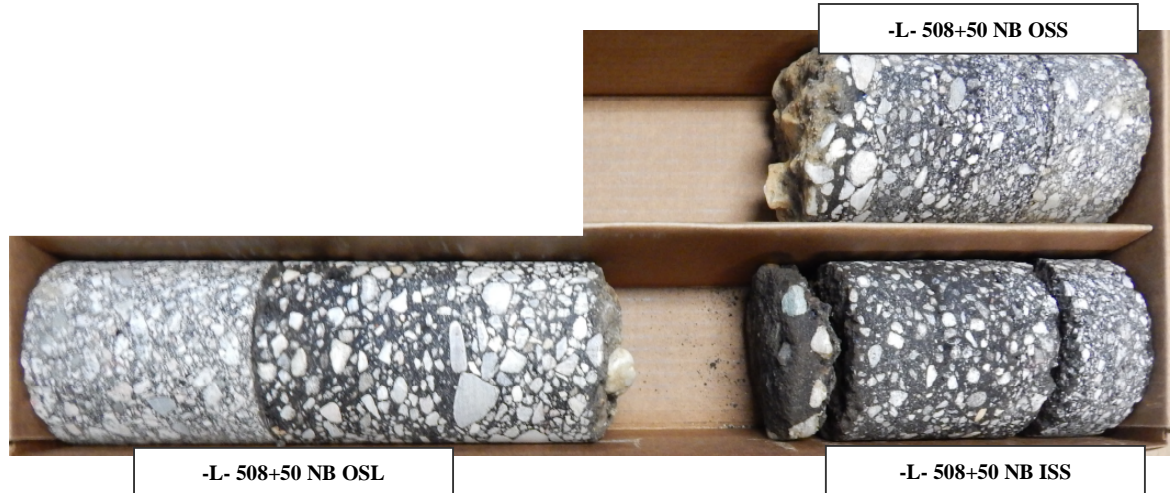
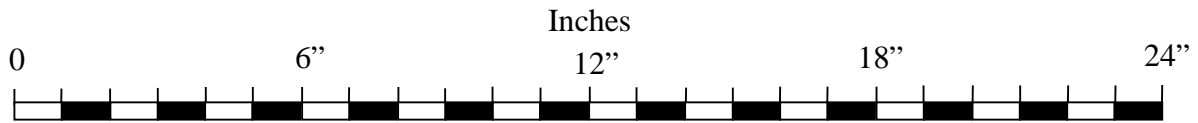
CONE PENETROMETER DATA CODE SHEET				TIP	PROJECT I.D.	ROUTE							
				I-5987B	47533.1.3	I-95							
TEST LOCATIONS DESCRIPTION				COUNTY	ENGINEER	TECHNICIANS							
				Robeson	VLAD MITCHEV	D. Strother/J. Swartley							
-L- 1116+00 SB ISS				DATE RUN	TEST LOCATION DESCRIPTION	DATE RUN							
				12/3 to 12/19/2019	-L- 1116+00 SB ACCEL	12/3 to 12/19/2019							
DATUM	CUT/FILL	NORTHING	EASTING	DATUM	CUT/FILL	NORTHING	EASTING						
STBC	FILL	431526.1	2021056.3	STBC	FILL	431548.2	2021021.5						
Cumulative Penetration in Centimeters				Cumulative Penetration in Centimeters									
0.4		12.7	23.2	62.3			0.6	8.6	17.1	53.1	101.1		
0.6		12.9	23.5	62.6			1.0	8.7	17.2	54.2	101.9		
0.8		13.0	23.7	63.0			1.3	8.9	17.3	55.0	102.8		
1.1		13.3	23.9	63.3			1.8	8.9	17.4	55.9	103.5		
1.2		13.5	24.3	63.8			2.0	9.0	17.5	56.6			
1.5		13.6	24.9	64.2			2.3	9.0		57.4			
1.8		13.8	25.4	64.8			2.8	9.1	Auger	58.1			
2.0		14.2	25.8	65.5			3.0	9.2		58.9			
2.2		14.3	26.3	66.0			3.2	9.3		59.4			
2.5		14.5	27.0	66.4			3.4	9.4	22.8	60.0			
2.7		14.8	28.0	67.0			3.6	9.5	23.1	60.8			
3.0		15.1	28.8	67.6			3.7	9.6	23.5	61.3			
3.4		15.2	29.6	68.0			3.9	9.6	23.9	62.0			
3.6		15.5	30.5	68.7			4.2	9.7	24.1	62.8			
3.8		15.8	31.9	69.3			4.4	9.8	24.3	63.7			
4.1		16.0	33.4	69.8			4.5	9.8	24.5	64.2			
4.3		16.1	34.5	70.6			4.7		24.9	64.7			
4.4		16.4	35.7	71.1			4.9	Auger	25.1	65.5			
4.9		16.6	36.6	71.9			5.0		25.6	66.1			
5.0		16.7	37.5	72.4			5.1		25.9	67.4			
5.3		16.9	38.1	73.2			5.2	13.5	26.2	68.8			
5.6		17.2	38.9	73.8			5.3	13.7	26.4	70.2			
5.8		17.4	39.9	74.6			5.4	13.9	26.8	71.2			
6.0		17.6	40.7	75.4			5.5	14.0	27.0	72.0			
6.2		17.7	41.6	76.0			5.7	14.1	27.1	73.2			
6.5		17.9	42.6	76.8			5.8	14.2	27.4	74.6			
6.6		18.1	43.5	77.5			6.0	14.3	27.8	75.7			
6.9		18.2	44.5	78.2			6.2	14.4	28.0	77.0			
7.1		18.3	45.3	78.9			6.4	14.5	28.4	78.2			
7.4		18.5	46.0	79.6			6.5	14.6	28.9	79.3			
7.6		18.7	46.9	80.2			6.6	14.7	29.2	80.3			
7.7		18.9	47.7	80.9			6.7	14.9	30.5	81.2			
8.0		19.0	48.4	81.5			6.8	15.0	32.4	82.3			
8.1		19.1	49.2	82.1			6.9	15.1	34.9	83.4			
8.3		19.2	49.9	82.8			7.0	15.2	36.0	85.5			
8.4		19.4	50.5	83.5			7.1	15.2	37.4	86.4			
8.6		19.6	51.1	84.2			7.2	15.3	38.8	87.2			
8.8		19.8	51.7	84.7			7.3	15.4	39.7	88.0			
9.0		19.9	52.5	85.3			7.4	15.5	40.6	89.0			
9.2		20.1	53.3	85.9			7.5	15.6	41.6	90.0			
9.3		20.2	54.0	86.5			7.5	15.7	42.6	90.8			
9.4		20.3	54.8	86.9			7.6	15.8	43.5	91.7			
9.6		20.4	55.6	87.6			7.7	15.9	44.5	92.3			
9.8		20.7	56.3	88.1			7.7	16.1	45.0	93.1			
10.2		20.9	57.0	88.6			7.8	16.2	45.9	94.0			
10.3		21.0	57.5	89.2			7.9	16.3	46.6	94.9			
10.5		21.2	58.2	89.7			8.0	16.4	47.4	95.5			
10.7		21.4	58.8	90.2			8.1	16.5	48.0	96.3			
10.8		21.7	59.4				8.2	16.6	48.7	97.0			
10.9		22.0	60.1				8.3	16.7	49.6	97.8			
11.2		22.4	60.7				8.4	16.8	50.4	98.6			
11.8		22.7	61.2				8.5	16.9	51.3	99.5			
12.2		23.0	61.7				8.6	17.0	52.0	100.4			

SG = Subgrade
SS = Stabilized Soil
CTBC = Cement-Treated Base Course
ABC = Aggregate Base Course
ESG = Estimated Subgrade
AG = At Grade

RGDL = Rounded Gravel Drainage Layer
STBC = Soil Type Base Course
SDB = Sand Drainage Base


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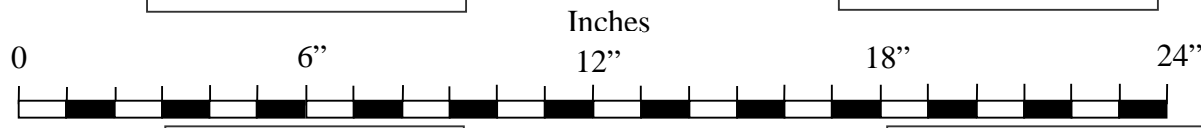
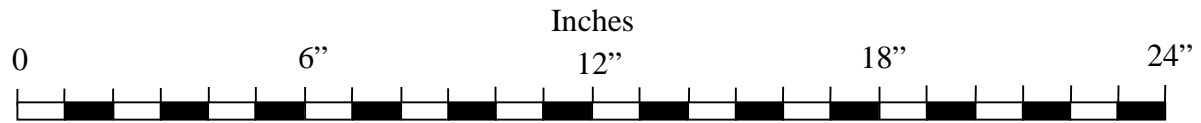
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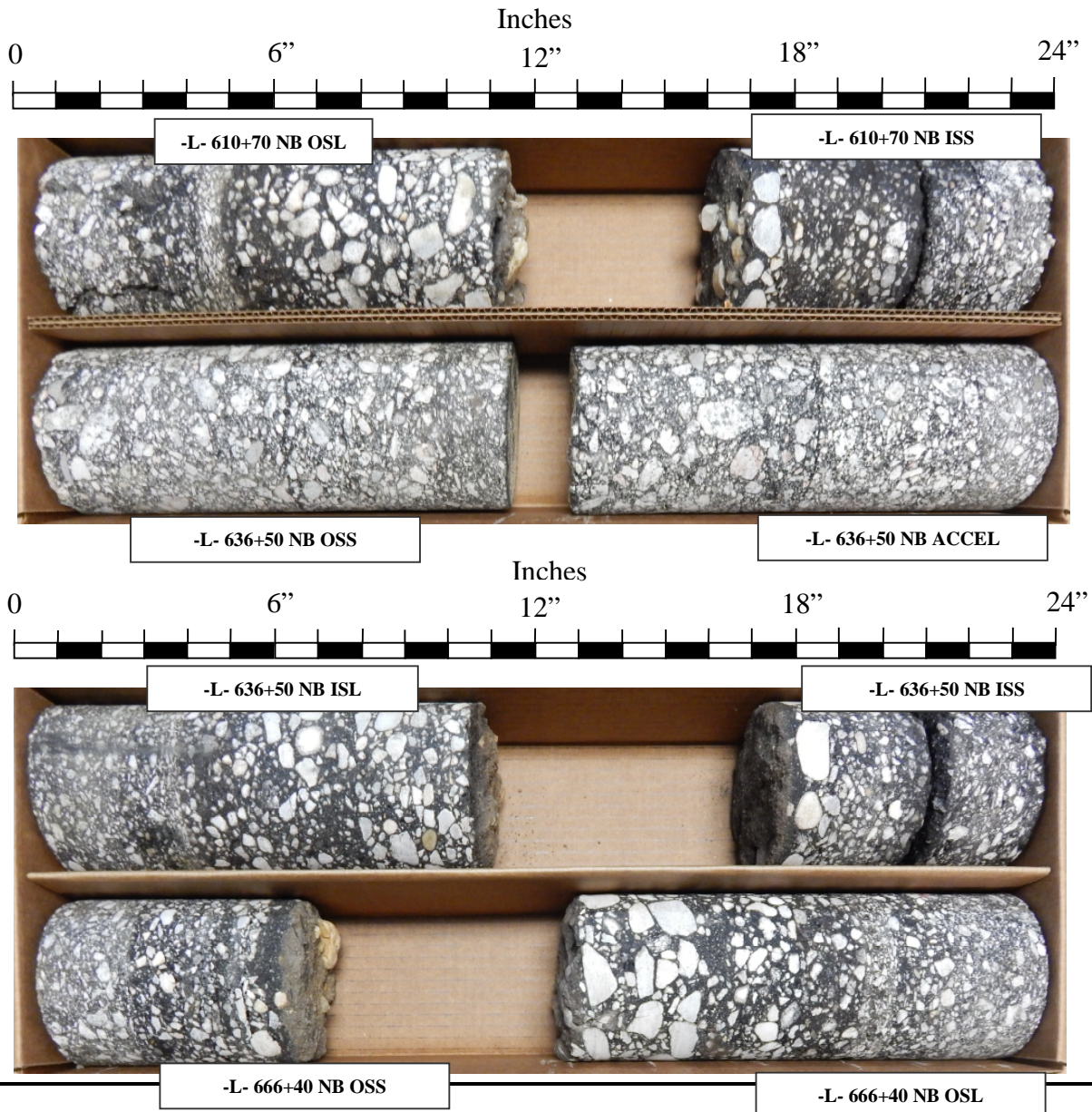
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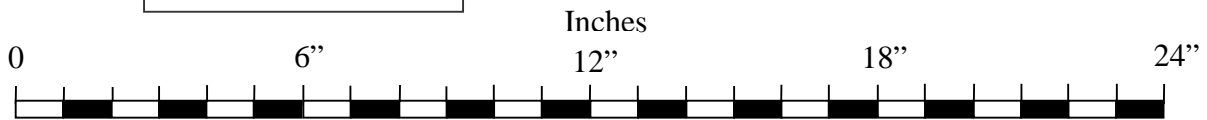
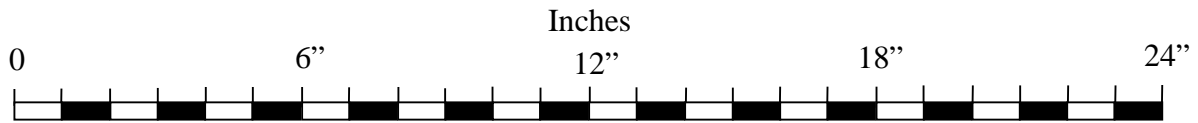
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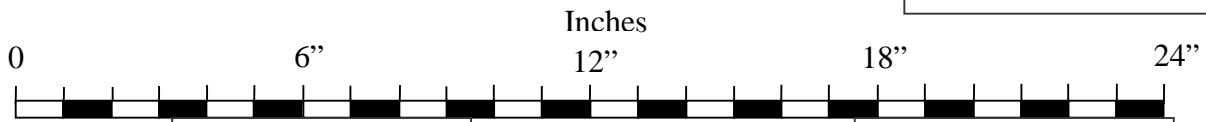
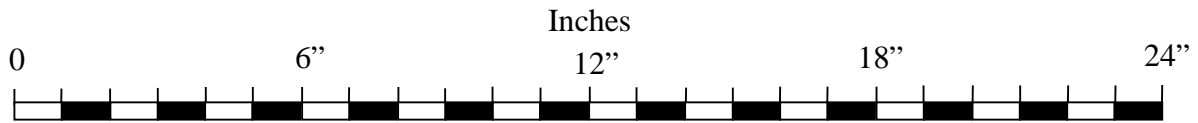
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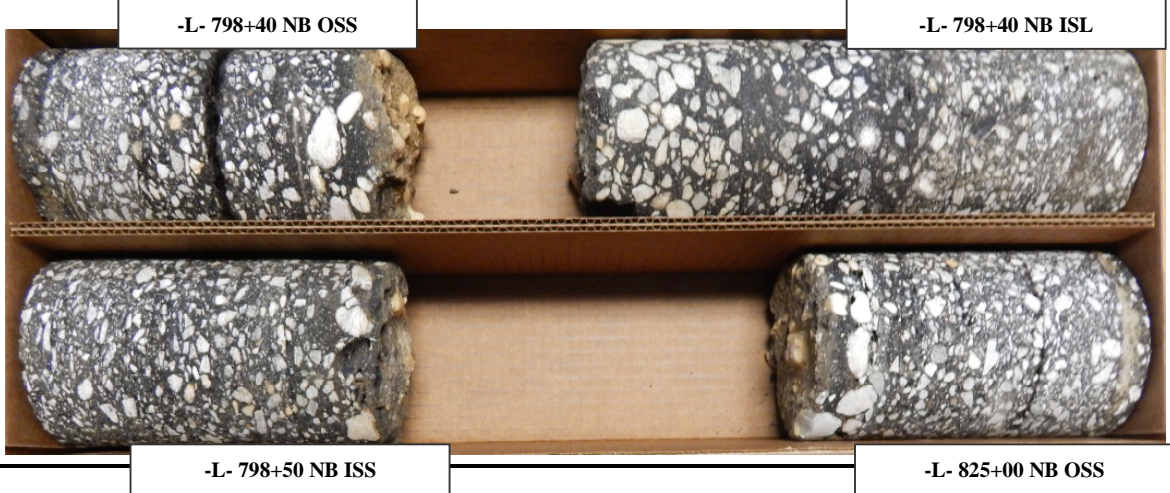
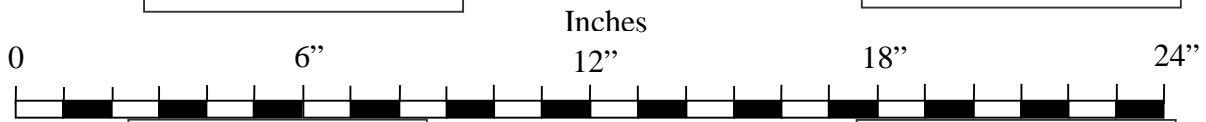
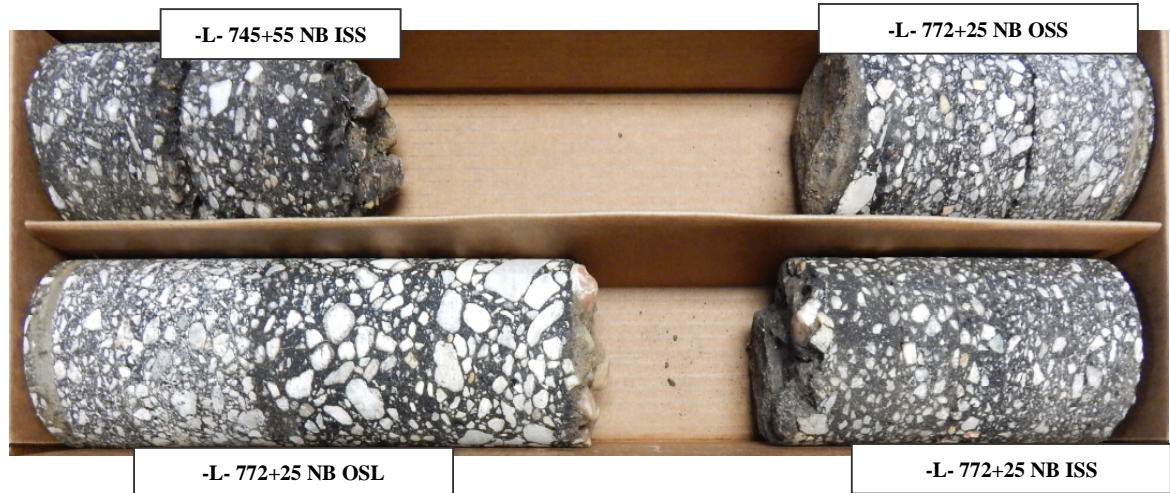
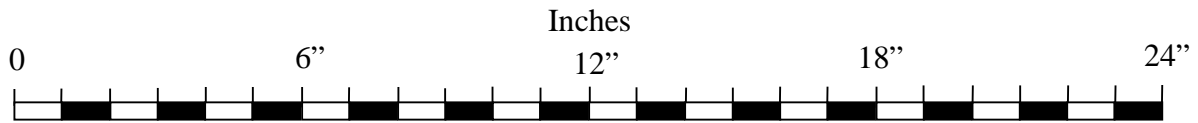
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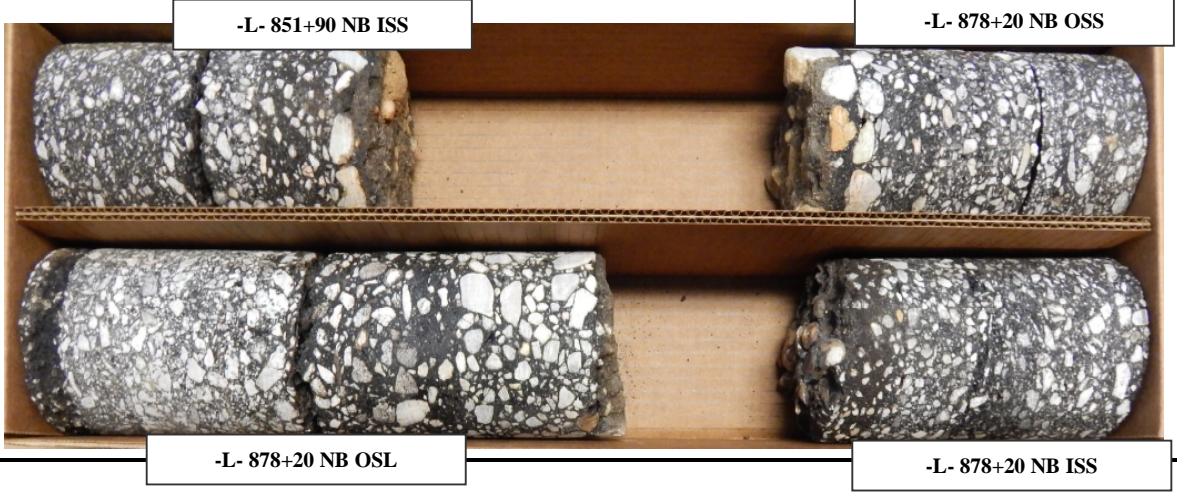
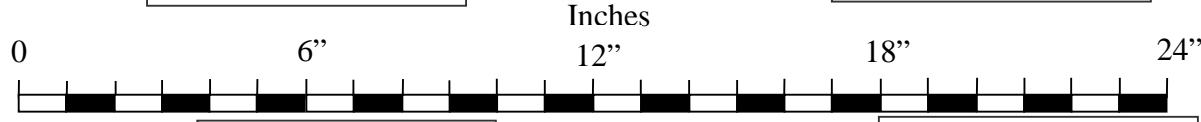
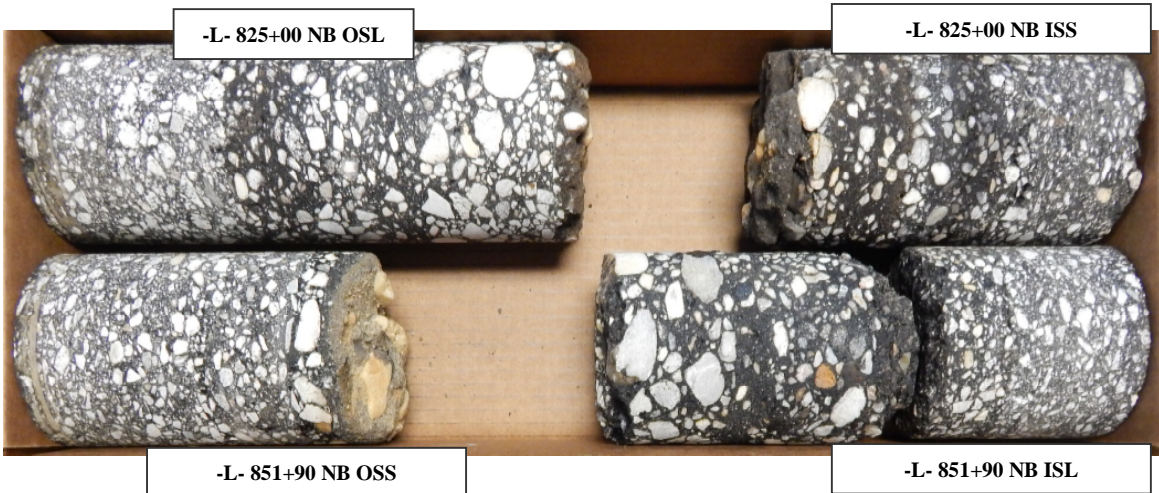
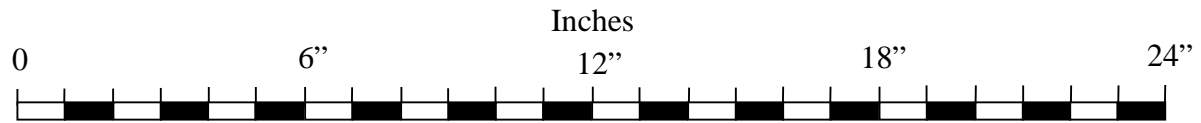
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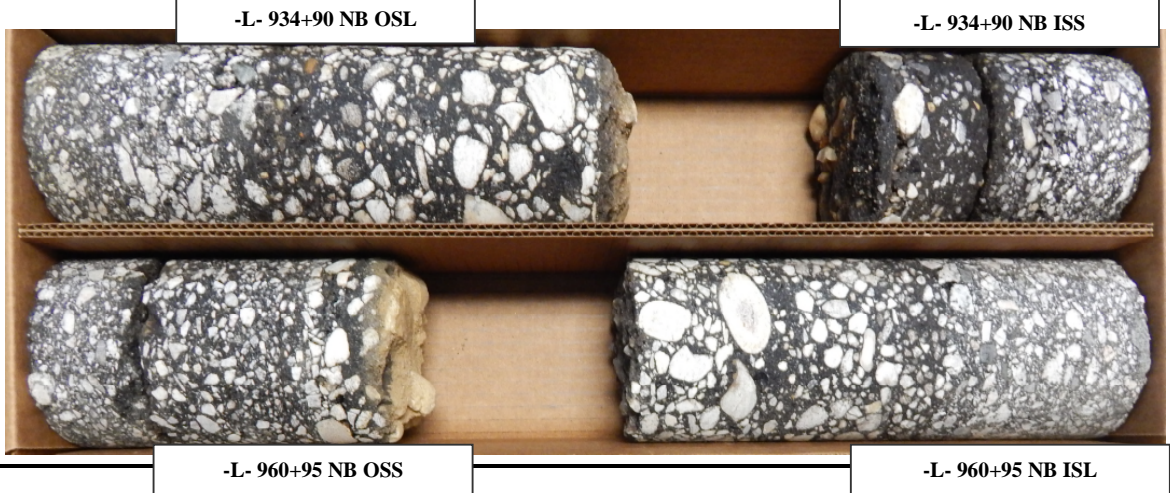
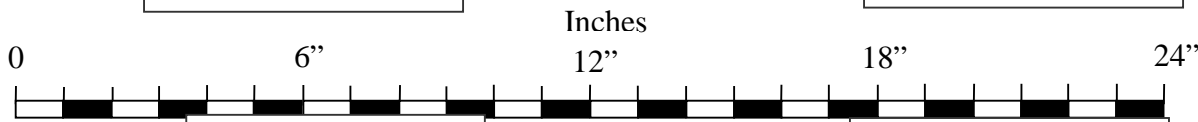
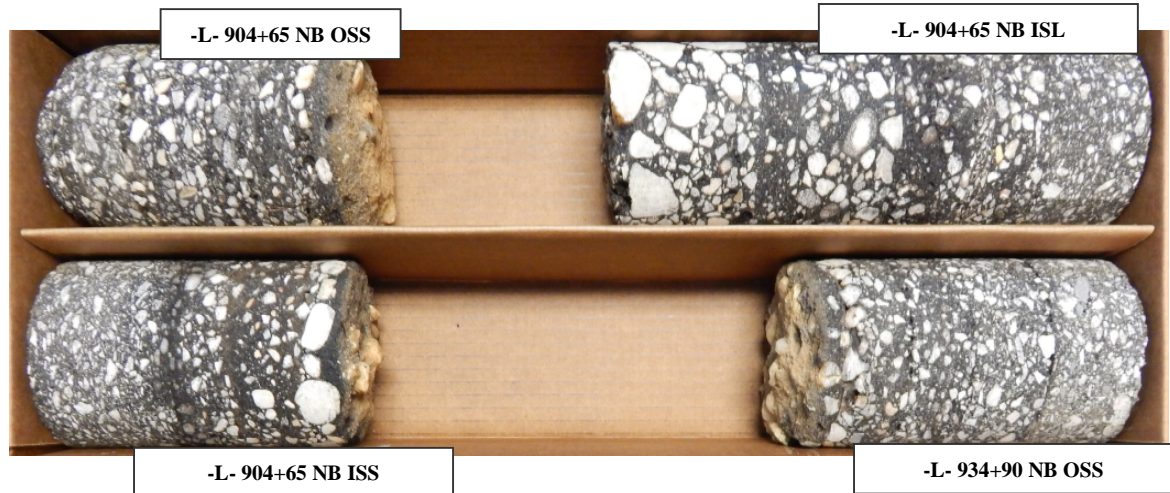
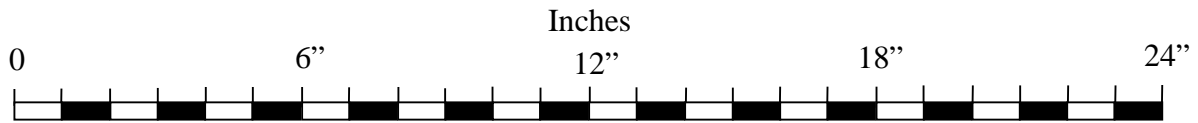
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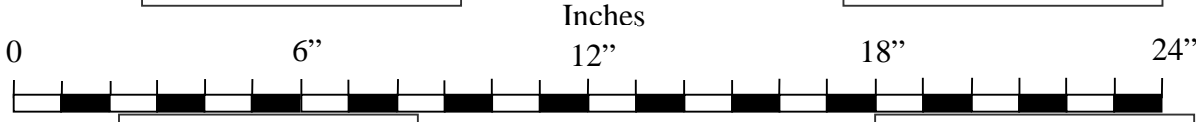
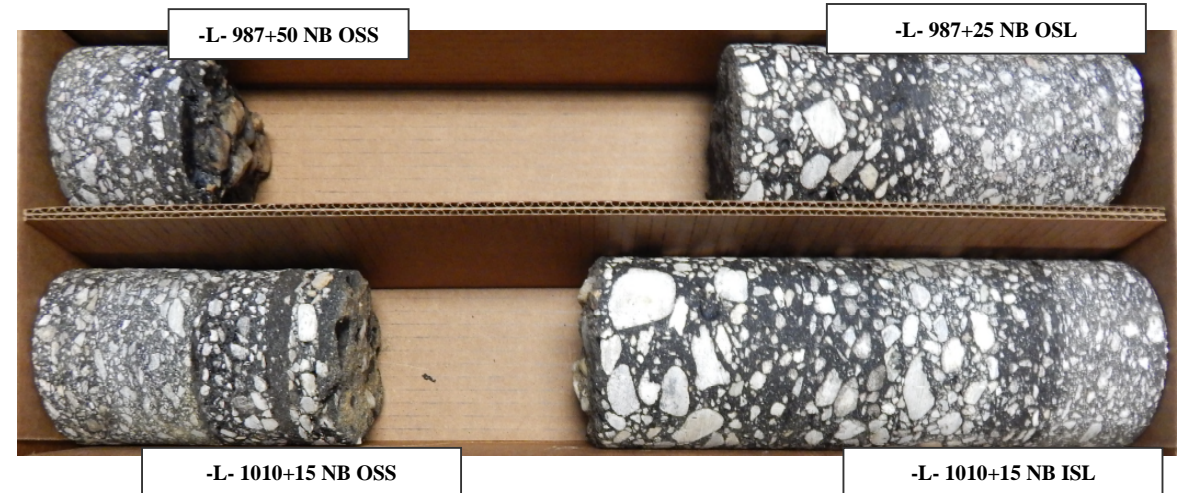
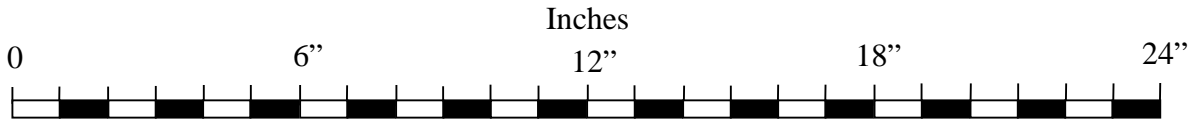
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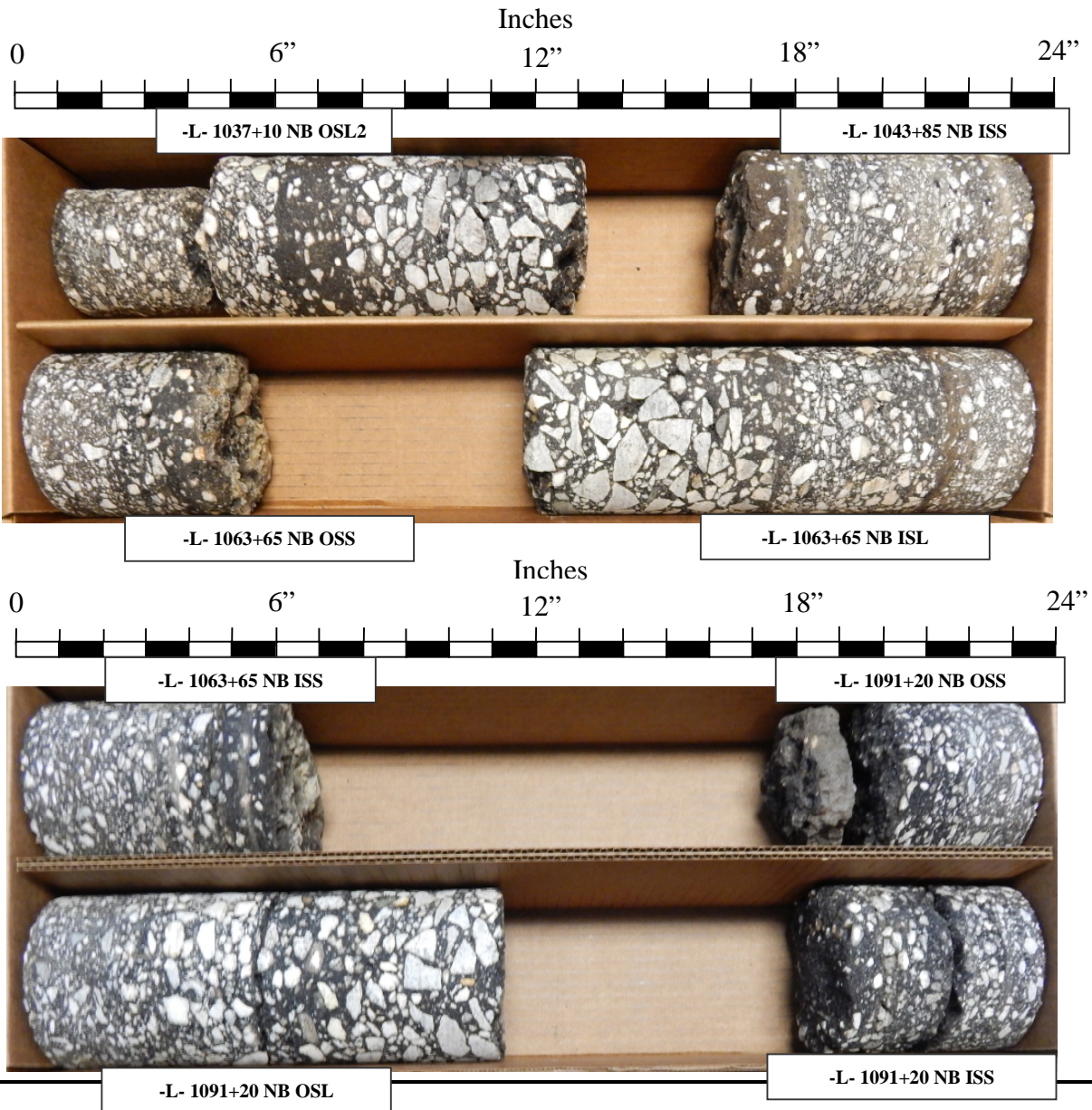
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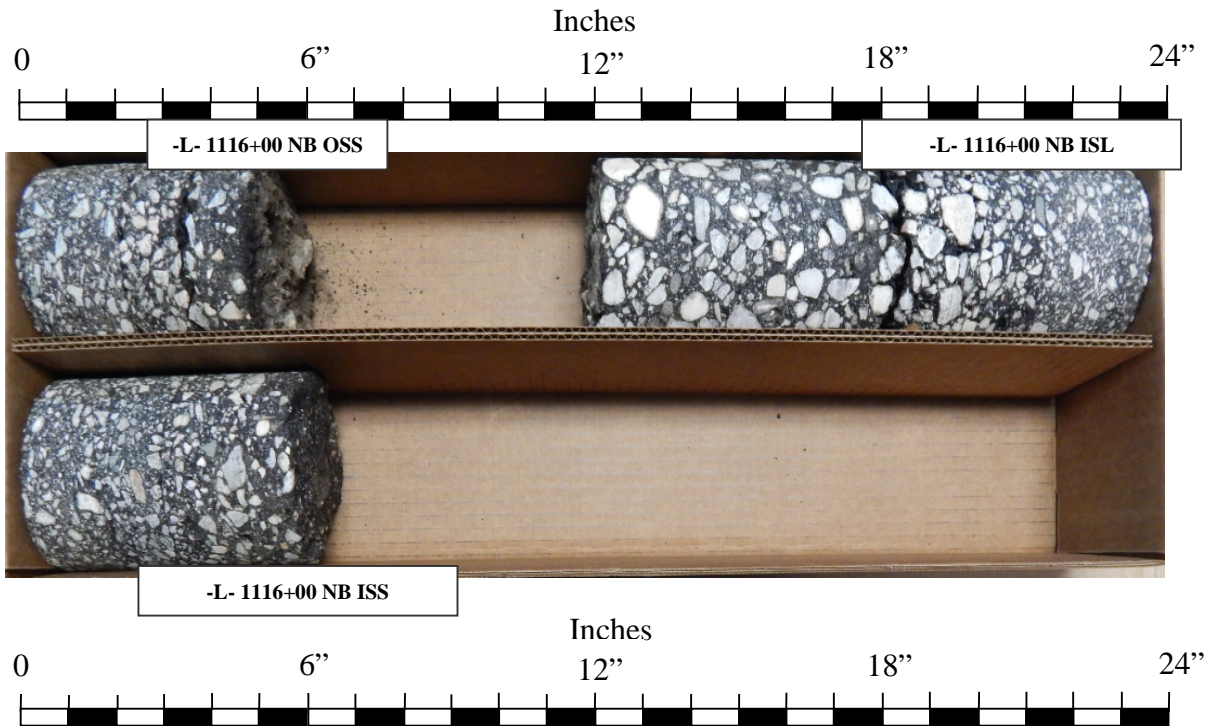
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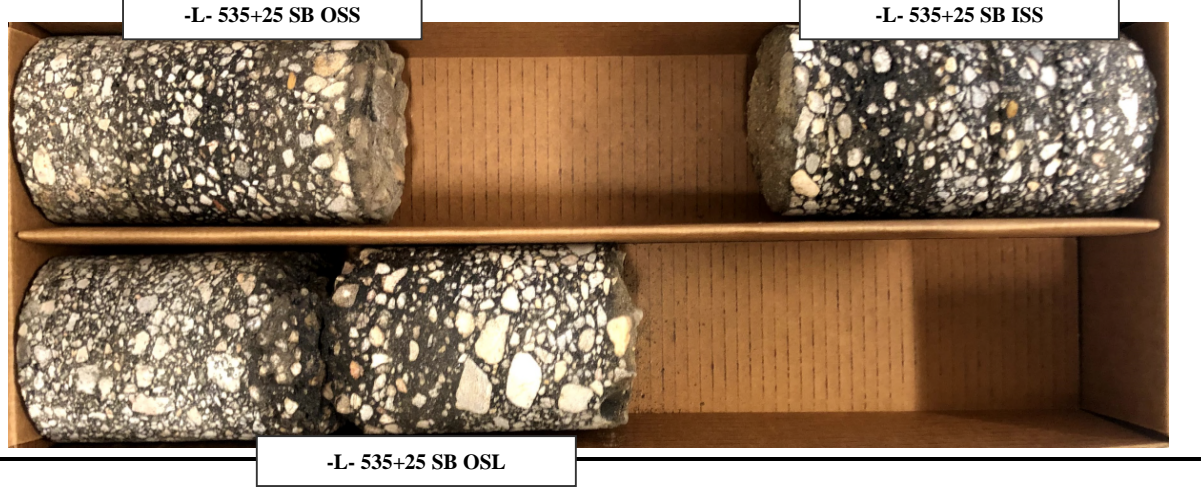
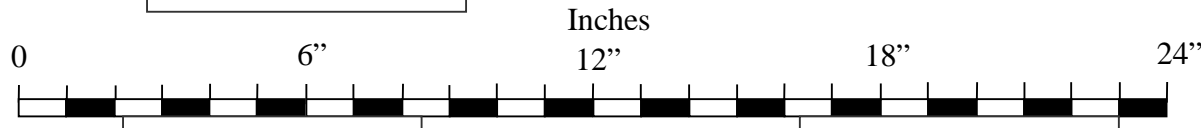
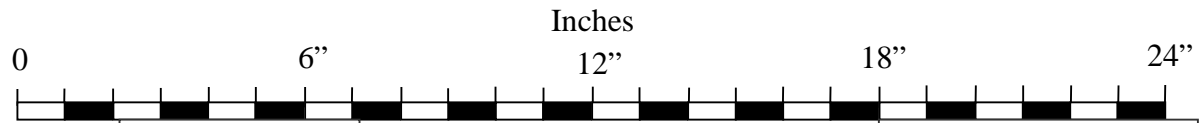
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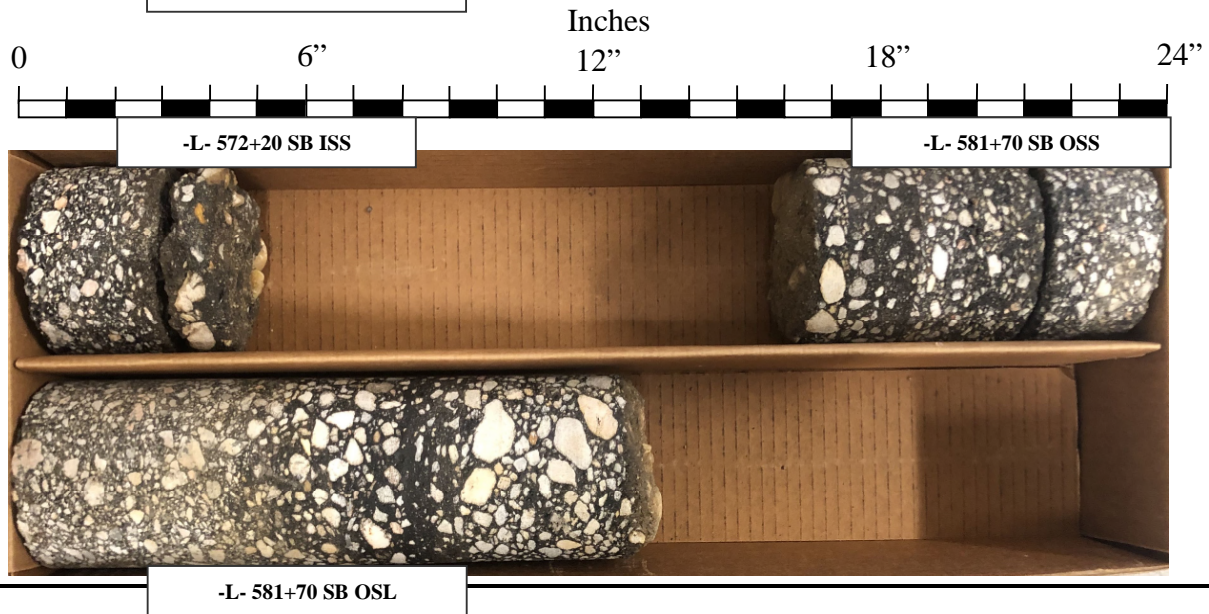
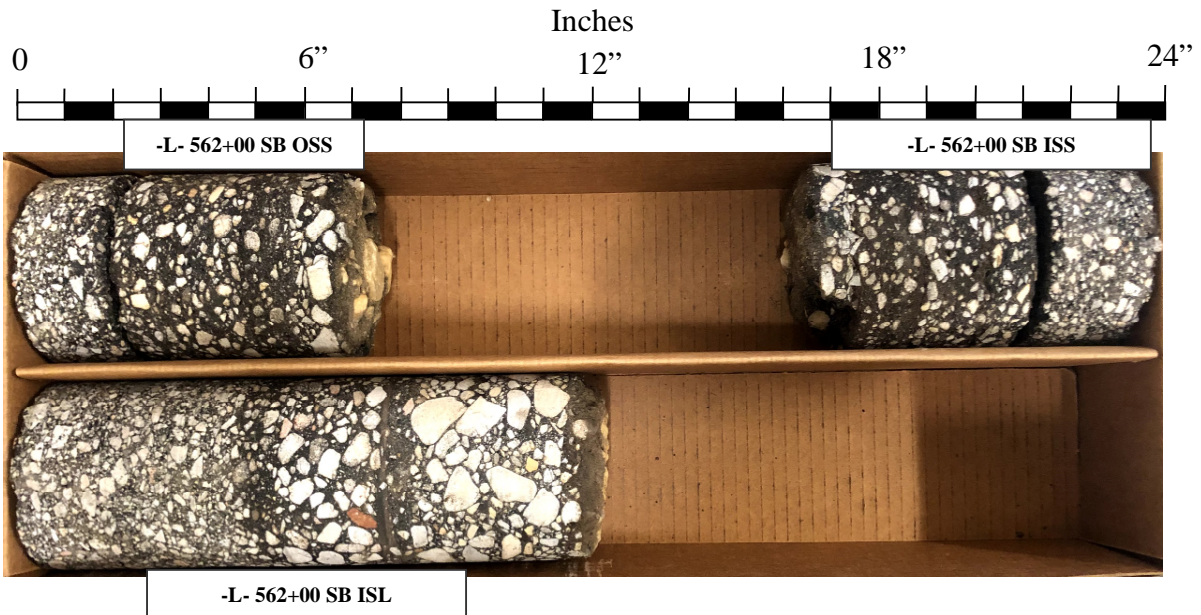
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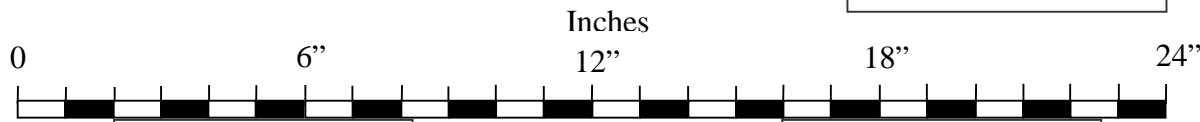
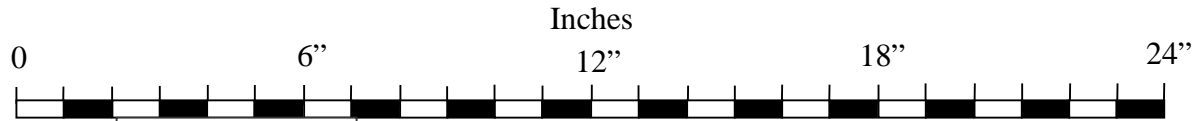
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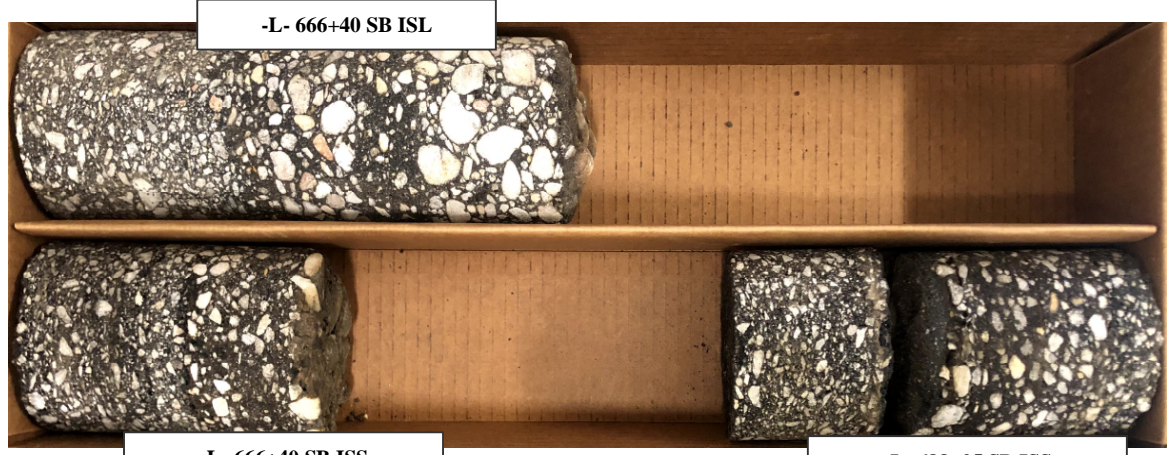
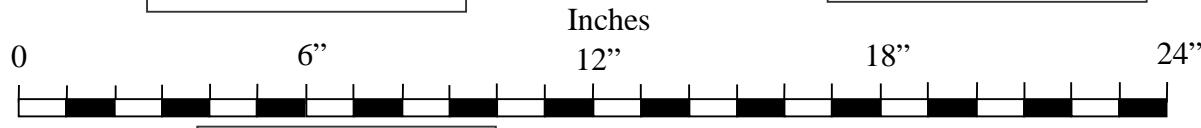
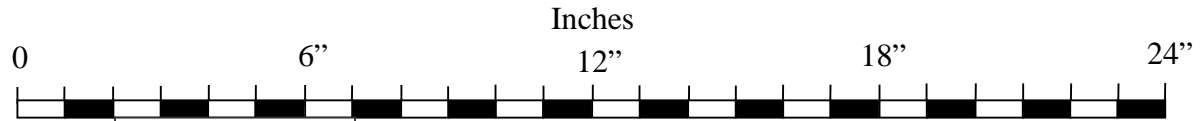
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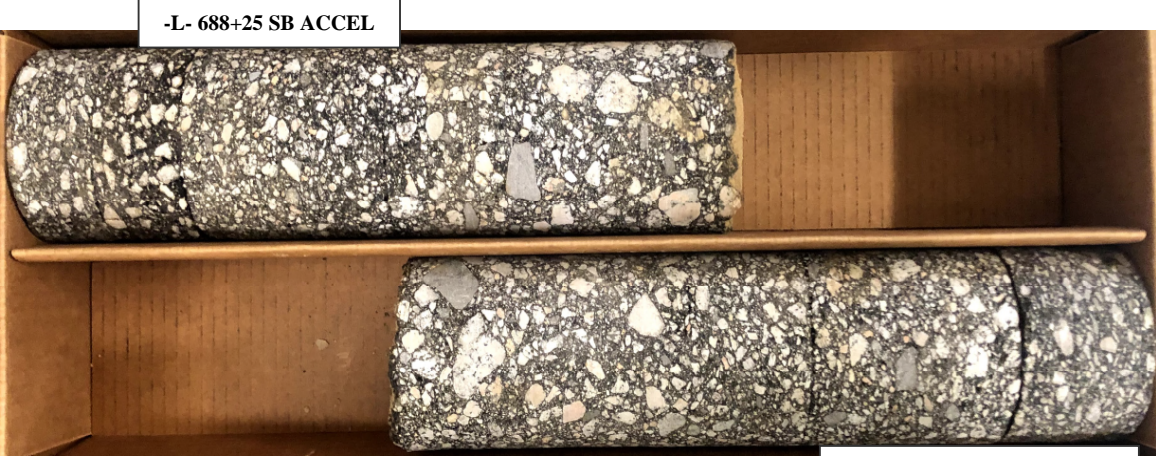
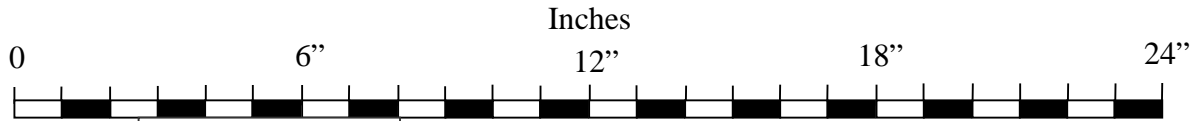
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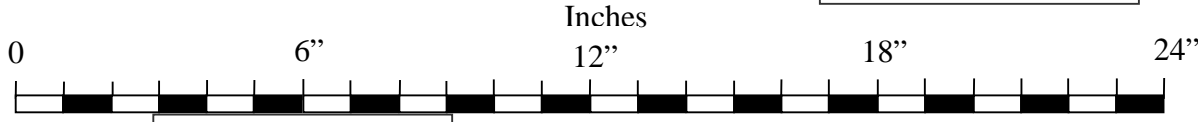


S&ME, Inc.
3201 Spring Forest Road
Raleigh, North Carolina 27616

<i>Project No.:</i> 47533.1.3	<i>I.D. No.:</i> I-5987B	<i>County:</i> Robeson	<i>Dates:</i> 12/3/19-12/19/19
<i>Site Description:</i> I-95 from South of NC 20 to South of Proposed I-295			
<i>Consultant:</i> S&ME, Inc.	<i>Core Size:</i> 4 - inch	<i>Drill Machine:</i> CME-55	
<i>Geologist / Engineer:</i> Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			



-L- 688+25 SB OSS



-L- 719+30 SB ISS

-L- 719+30 SB OSS

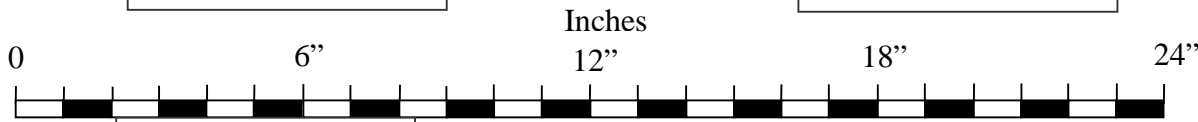
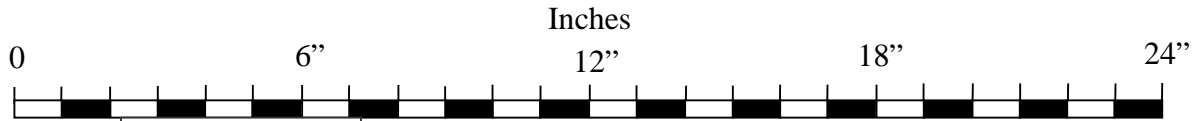
Notes:

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Project No.: 47533.1.3	I.D. No.: I-5987B	County: Robeson	Dates: 12/3/19-12/19/19
Site Description: I-95 from South of NC 20 to South of Proposed I-295			
Consultant: S&ME, Inc.	Core Size: 4 - inch	Drill Machine: CME-55	
Geologist / Engineer: Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			



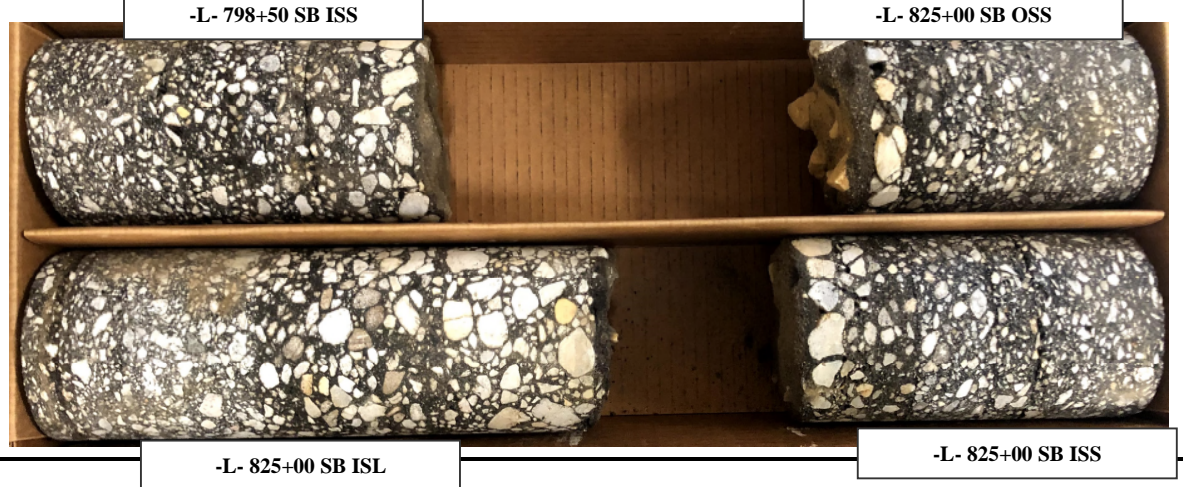
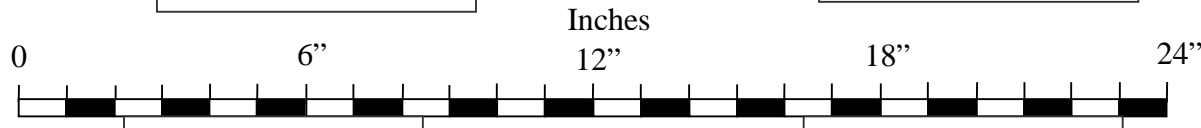
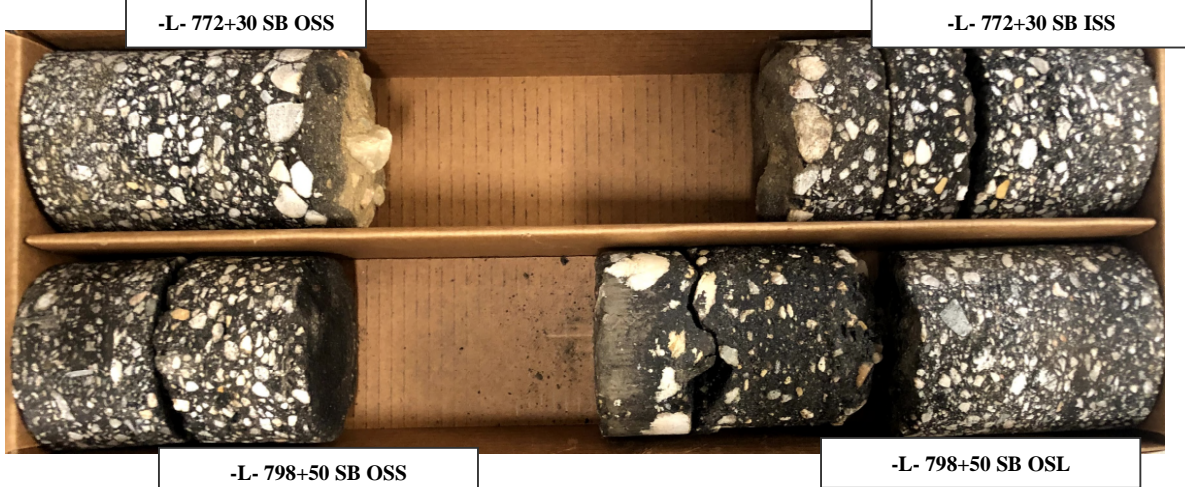
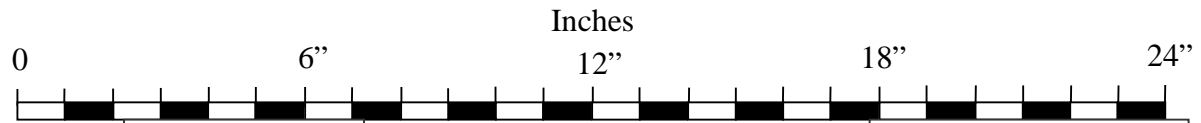
Notes:

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Site Description: I-95 from South of NC 20 to South of Proposed I-295			
Consultant: S&ME, Inc.	Core Size: 4 - inch	Drill Machine: CME-55	
Geologist / Engineer: Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			



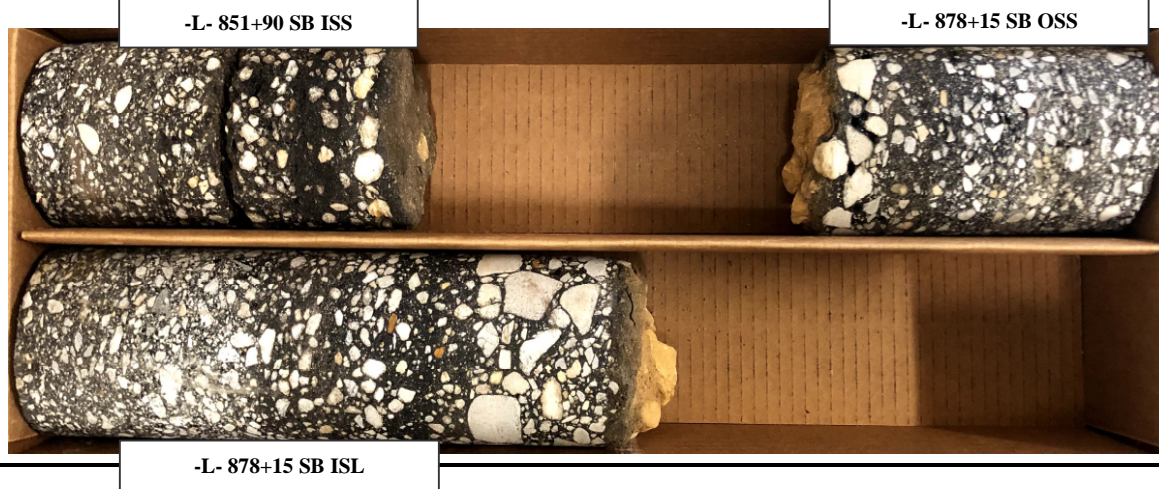
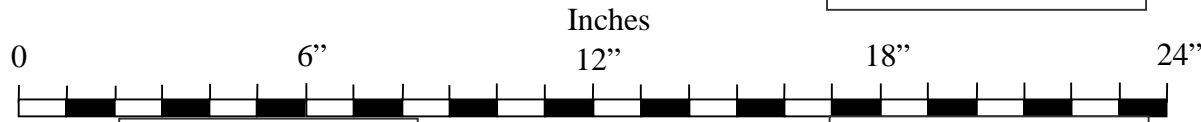
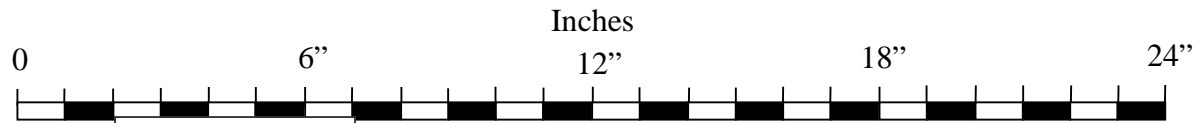
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<i>Site Description:</i> I-95 from South of NC 20 to South of Proposed I-295			
<i>Consultant:</i> S&ME, Inc.		<i>Core Size:</i> 4 - inch	<i>Drill Machine:</i> CME-55
<i>Geologist / Engineer:</i> Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			



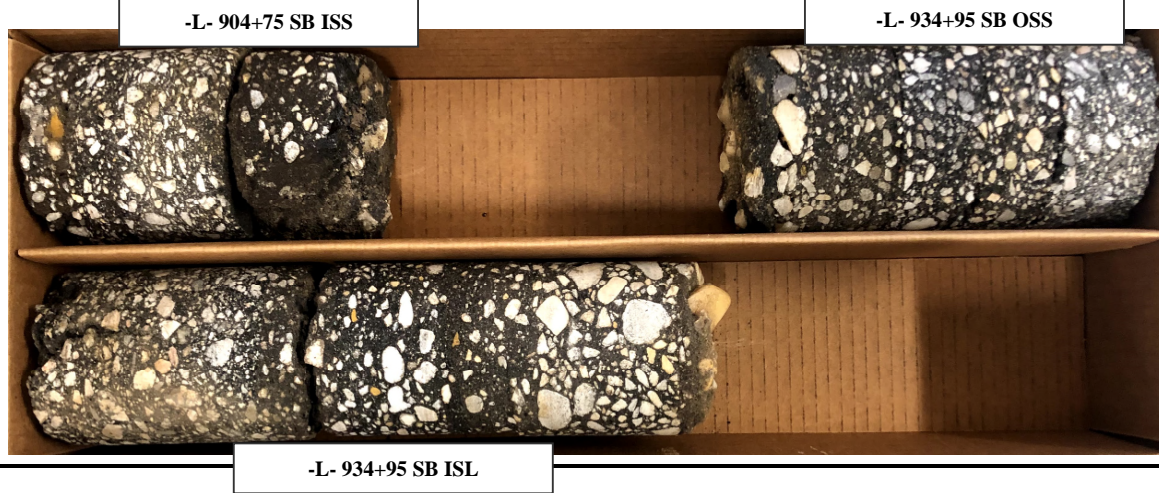
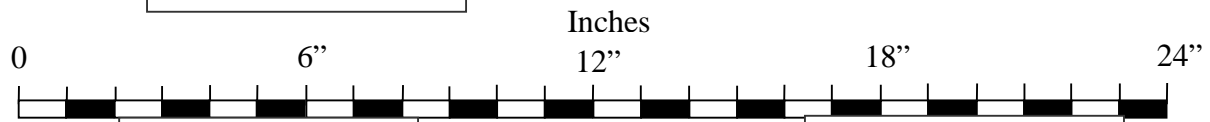
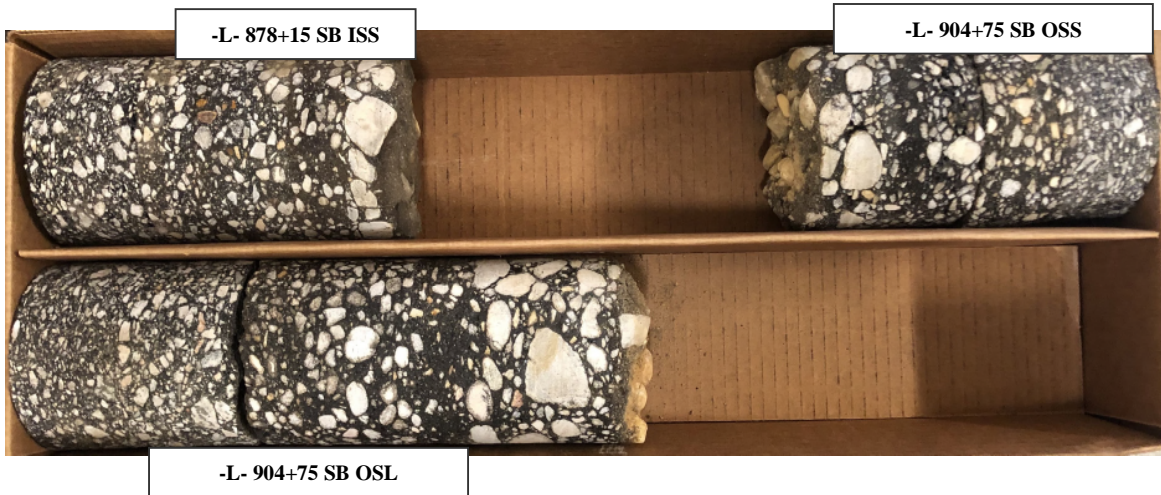
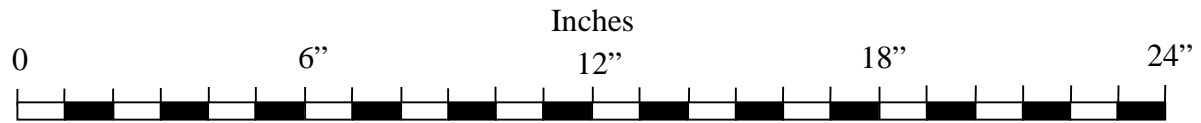
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<i>Geologist / Engineer:</i> Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			



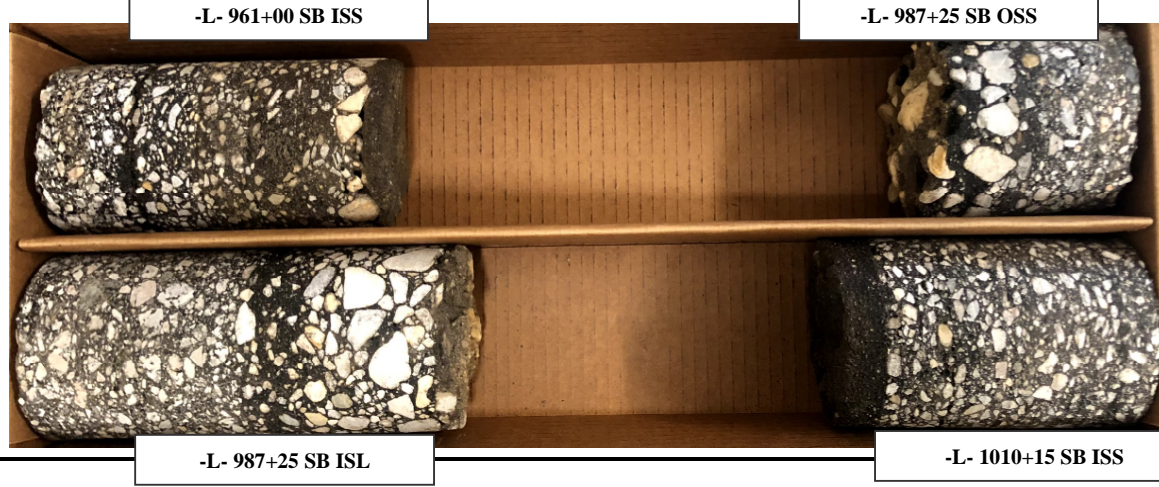
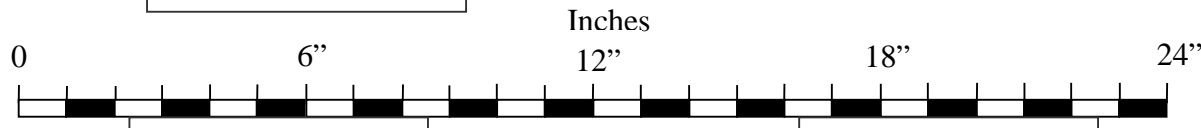
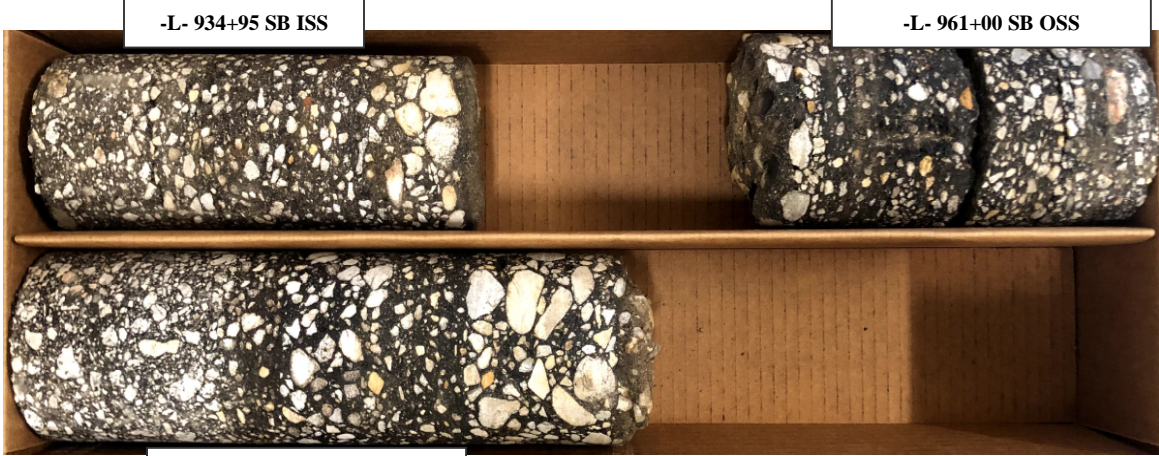
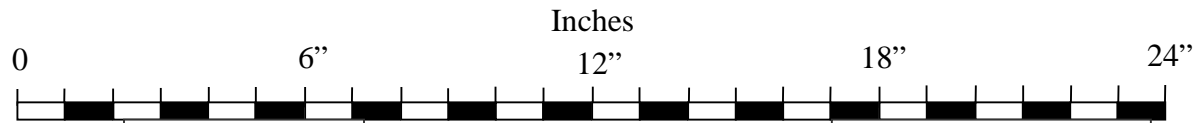
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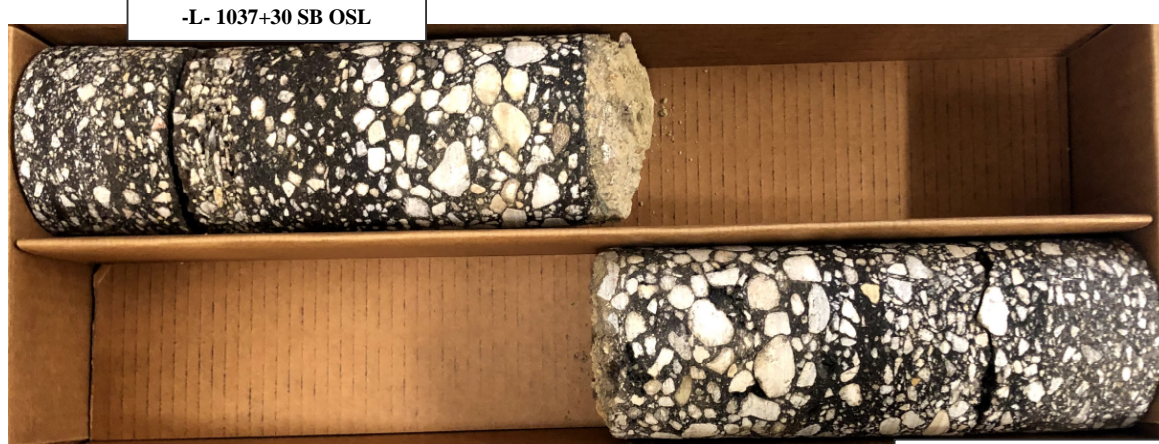
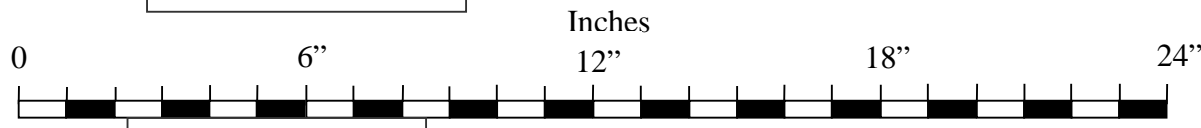
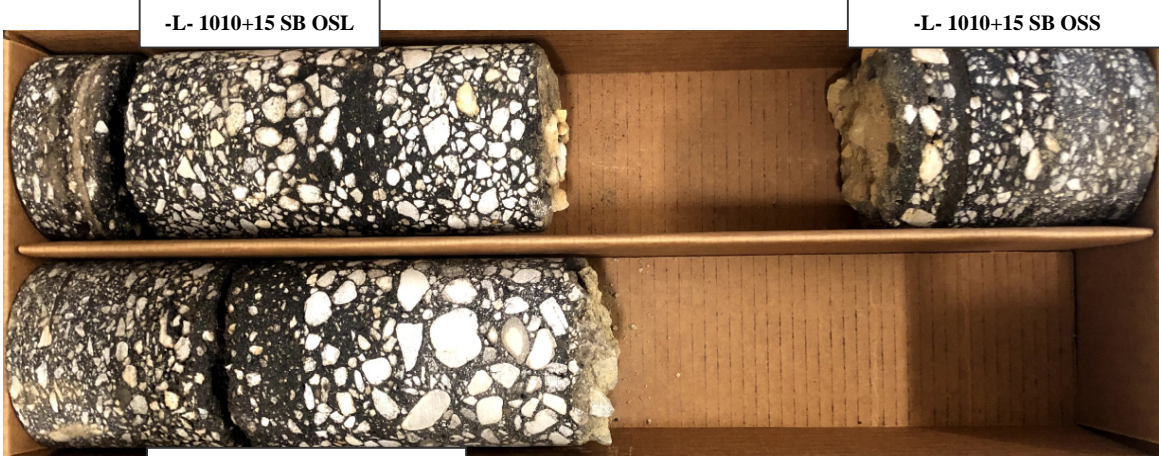
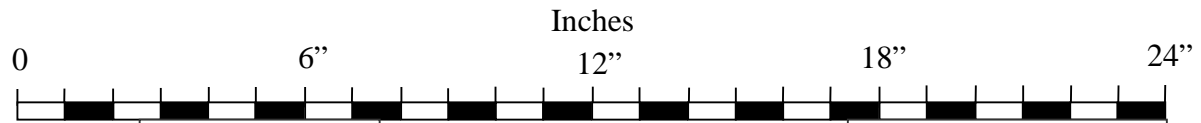
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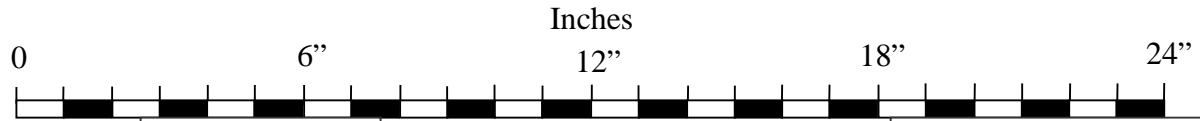
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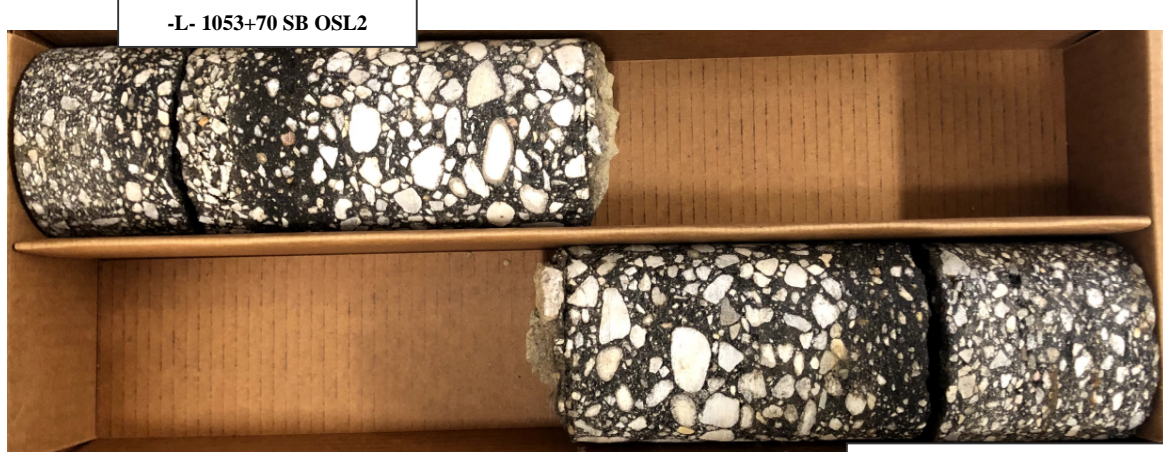
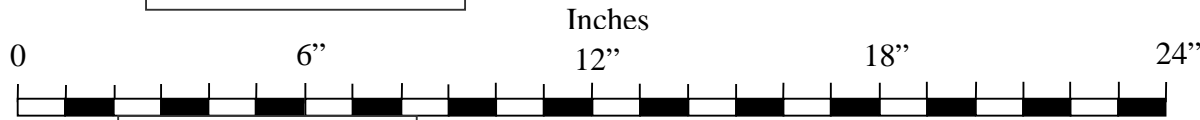


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<i>Geologist / Engineer:</i> Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			



-L- 1053+70 SB OSL1



-L- 1063+70 SB ISS

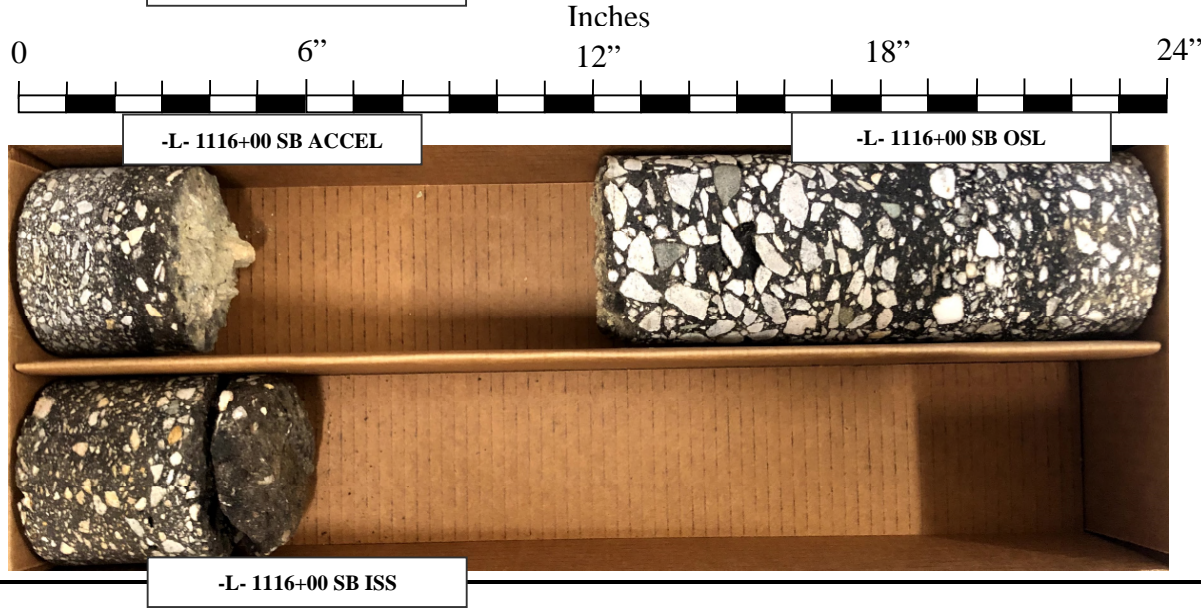
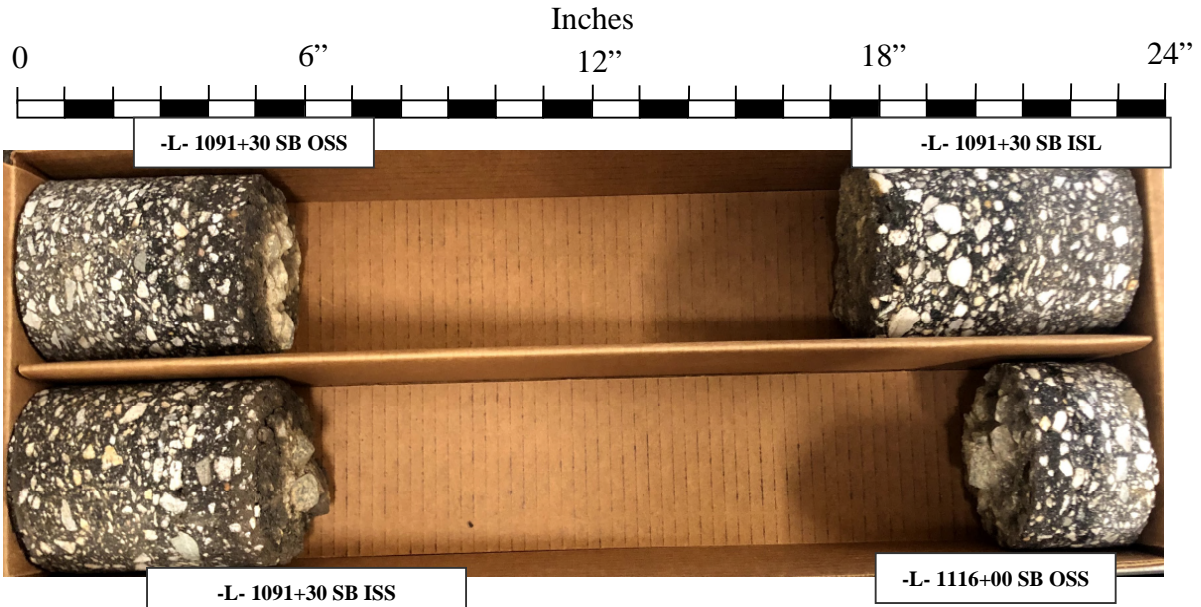
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<i>Geologist / Engineer:</i> Darin Strother, Jarett Swartley, Mary Rawls, Vladimir Mitchev			



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S&ME, Inc.
 3201 Spring Forest Road
 Raleigh, North Carolina 27616



SUMMARY OF LABORATORY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986	Date Report	12/30/2019
State Project No.:	47533.1.3	County:	Robeson
Federal ID No.:		Date Tested	12/6 - 12/30/19
Project Name:	I-95 from South of NC 20 to South of Proposed I-295		
Client Name:	NCDOT	TIP No.:	I-5987B
		Client Address:	Raleigh, NC

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification	Total % Passing				Total Mortar Fraction (%)				LL	PL	PI	Moist. %
							Sieve #				Coarse Sand	Fine Sand	Silt	Clay				
							10	40	60	200								
562+00 NB OSS	S-32	NB-24 OSL	N/A	-L-	0.0-4.5	A-2-4 (0)	94	61	47	25.8	50	26	7	17	19	12	7	8.5
610+70 NB OSL	S-33	NB-27 OSL	N/A	-L-	0.0-4.5	A-2-6 (0)	95	65	47	28.5	51	22	3	24	28	16	12	12.9
689+00 NB DECEL	S-34	NB-30 DECEL	N/A	-L-	0.0-4.5	A-2-4 (0)	97	54	36	11.3	63	26	2	9	N.P	N.P	N.P	11.9
719+25 NB OSL	S-35	NB-31 OSL	N/A	-L-	0.0-4.5	A-2-4 (0)	98	68	49	27.5	51	25	4	20	22	13	9	9.5
745+55 NB OSS	S-36	NB-32 OSS	N/A	-L-	0.0-4.5	A-2-4 (0)	98	68	51	26.8	48	28	6	18	19	13	6	8.2
772+25 NB OSL	S-37	NB-33 OSL	N/A	-L-	0.0-4.5	A-2-4 (0)	97	61	42	24.9	57	20	2	21	24	15	9	12.2
798+50 NB OSS	S-38	NB-34 OSS	N/A	-L-	0.0-4.5	A-2-6 (0)	99	66	51	29.3	49	25	2	24	29	16	13	11.4
825+00 NB OSL	S-39	NB-35 OSL	N/A	-L-	0.0-4.5	A-2-6 (0)	95	61	48	32.7	50	18	3	29	35	22	13	12.5
878+20 NB OSL	S-40	NB-37 OSL	N/A	-L-	0.0-4.5	A-2-4 (0)	98	52	30	13.6	69	19	2	10	N.P	N.P	N.P	4.3
878+20 NB OSS	S-41	NB-37 OSS	N/A	-L-	0.0-0.8	A-2-4 (0)	99	60	42	22.2	58	22	3	17	18	14	4	8.0
904+65 NB OSS	S-42	NB-38 OSS	N/A	-L-	0.8-4.5	A-2-4 (0)	100	58	36	20.9	64	17	6	13	18	14	4	12.5
934+90 NB OSL	S-42A	NB-39 OSL	N/A	-L-	0.0-4.5	A-2-4 (0)	88	53	39	20.8	56	24	10	10	N.P	N.P	N.P	5.9
960+95 NB OSS	S-43	NB-40 OSS	N/A	-L-	0.0-1.0	A-2-4 (0)	93	53	37	19.2	60	22	11	7	N.P	N.P	N.P	5.6
960+95 NB OSS	S-44	NB-40 OSS	N/A	-L-	1.0-4.5	A-2-4 (0)	98	56	38	19.6	61	21	7	11	18	14	4	10.5
987+25 NB OSL	S-45	NB-41 OSL	N/A	-L-	0.0-4.5	A-2-4 (0)	100	75	56	30.9	44	29	12	15	16	13	3	9.7
1010+15 NB OSS	S-46	NB-42 OSS	N/A	-L-	0.0-4.5	A-2-4 (0)	99	53	35	16.0	64	22	7	7	16	14	2	12.4
1037+10 NB OSL2	S-47	NB-43 OSL2	N/A	-L-	0.0-4.5	A-2-4 (0)	79	61	45	23.3	43	32	11	14	18	14	4	8.9
535+20 NB ISS	S-56	NB-23 ISS	N/A	-L-	0.0-4.0	A-2-4 (0)	96	62	45	22.8	53	27	7	13	19	14	5	10.5
596+90 NB ISL	S-57	NB-25 ISL	N/A	-L-	0.0-2.0	A-2-4 (0)	95	68	49	24.0	48	30	10	12	N.P	N.P	N.P	6.0



SUMMARY OF LABORATORY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986	Date Report	12/30/2019
State Project No.:	47533.1.3	County:	Robeson
Federal ID No.:		TIP No.:	I-5987B
Project Name:	I-95 from South of NC 20 to South of Proposed I-295		
Client Name:	NCDOT	Client Address:	Raleigh, NC

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification	Total % Passing				Total Mortar Fraction (%)				LL	PL	PI	Moist. %
							Sieve #				Coarse Sand	Fine Sand	Silt	Clay				
							10	40	60	200								
610+70 NB ISS	S-58	NB-27 ISS	N/A	-L-	0.0-5.0	A-2-6 (0)	100	70	54	33.0	46	23	8	23	32	18	14	11.5
636+50 NB ISL	S-59	NB-28 ISL	N/A	-L-	2.0-5.0	A-2-4 (0)	99	73	56	30.0	44	29	8	19	21	16	5	8.6
666+40 NB ISS	S-60	NB-29 ISS	N/A	-L-	2.0-5.0	A-4 (0)	99	70	55	38.3	44	20	16	20	21	14	7	10.1
689+00 NB ISL	S-61	NB-30 ISL	N/A	-L-	0.0-5.0	A-2-4 (0)	92	63	48	26.6	48	26	8	18	24	18	6	10.3
689+00 NB ISS	S-62	NB-30 ISS	N/A	-L-	0.0-1.0	A-2-4 (0)	98	66	47	27.0	52	23	7	18	26	17	9	12.1
719+25 NB ISS	S-63	NB-31 ISS	N/A	-L-	1.0-5.0	A-2-4 (0)	100	74	50	25.3	50	29	7	14	N.P	N.P	N.P	6.5
745+55 NB ISS	S-64	NB-32 ISS	N/A	-L-	0.0-2.0	A-2-4 (0)	99	66	45	19.8	55	27	7	11	N.P	N.P	N.P	12.6
798+50 NB ISL	S-65	NB-34 ISL	N/A	-L-	0.0-1.0	A-2-6 (0)	95	68	49	25.7	49	27	4	20	28	17	11	13.4
798+50 NB ISL	S-66	NB-34 ISL	N/A	-L-	1.0-5.0	A-6 (3)	98	71	56	36.1	43	23	5	29	40	19	21	15.3
851+90 NB ISS	S-67	NB-36 ISS	N/A	-L-	0.0-5.0	A-2-4 (0)	100	68	42	22.0	58	23	6	13	N.P	N.P	N.P	9.8
878+20 NB ISS	S-68	NB-37 ISS	N/A	-L-	0.0-1.5	A-2-4 (0)	100	61	40	19.8	60	23	9	8	N.P	N.P	N.P	10.0
904+65 NB ISL	S-69	NB-38 ISL	N/A	-L-	0.0-5.0	A-2-4 (0)	94	55	39	18.1	59	25	6	10	N.P	N.P	N.P	11.6
934+90 NB ISS	S-70	NB-39 ISS	N/A	-L-	0.0-5.0	A-2-4 (0)	99	52	31	14.4	69	19	3	9	N.P	N.P	N.P	13.2
960+95 NB ISL	S-71	NB-40 ISL	N/A	-L-	0.0-1.5	A-2-4 (0)	98	61	36	17.9	63	21	6	10	N.P	N.P	N.P	11.2
1010+15 NB ISL	S-72	NB-42 ISL	N/A	-L-	0.0-5.0	A-2-4 (0)	100	73	45	20.1	56	27	4	13	N.P	N.P	N.P	11.8
1043+85 NB ISS	S-74	NB-43 ISS	N/A	-L-	0.0-5.0	A-2-4 (0)	99	74	50	22.2	50	31	10	9	N.P	N.P	N.P	6.5
1063+65 NB ISL	S-75	NB-44 ISL	N/A	-L-	0.0-5.0	A-2-4 (0)	97	70	45	24.0	53	24	5	18	23	16	7	11.0
1091+20 NB ISS	S-76	NB-45 ISS	N/A	-L-	0.0-5.0	A-2-6 (0)	98	69	55	30.3	44	27	5	24	33	17	16	11.7
1116+00 NB ISL	S-77	NB-46 ISL	N/A	-L-	3.0-5.0	A-6 (2)	98	80	64	39.8	35	27	6	32	39	23	16	16.9



SUMMARY OF LABORATORY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986	Date Report	12/30/2019
State Project No.:	47533.1.3	County:	Robeson
Federal ID No.:		Date Tested	12/6 - 12/30/19
Project Name:	I-95 from South of NC 20 to South of Proposed I-295		
Client Name:	NCDOT	TIP No.:	I-5987B
		Client Address:	Raleigh, NC

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification	Total % Passing				Total Mortar Fraction (%)				LL	PL	PI	Moist. %
							Sieve #				Coarse Sand	Fine Sand	Silt	Clay				
							10	40	60	200								
508+50 NB OSS	S-179	NB-22 OSS	N/A	-L-	0.0-3.0	A-2-4 (0)	100	74	53	27.8	47	28	9	16	16	14	2	10.6
535+20 NB OSS	S-180	NB-23 OSS	N/A	-L-	0.0-3.0	A-2-4 (0)	96	61	46	24.4	52	26	9	13	N.P	N.P	N.P	11.2
600+90 NB OSS	S-181	NB-26 OSS	N/A	-L-	0.0-3.0	A-2-4 (0)	99	66	48	28.2	51	23	9	17	20	15	5	8.1
636+50 NB OSS	S-182	NB-28 OSS	N/A	-L-	0.0-3.0	A-2-4 (0)	100	73	55	27.9	45	31	6	18	21	17	4	10.0
666+40 NB OSS	S-183	NB-29 OSS	N/A	-L-	0.0-3.0	A-2-4 (0)	99	69	51	27.1	49	27	8	16	N.P	N.P	N.P	9.6
666+40 NB OSS	S-184	NB-29 OSS	N/A	-L-	4.0-5.0	A-6 (1)	99	68	54	37.1	45	20	11	24	27	14	13	13.4
1037+10 NB OSS	S-199	NB-43 OSS	N/A	-L-	0.0-3.0	A-2-4 (0)	98	77	56	30.6	43	30	13	14	17	10	7	9.4
1063+65 NB OSS	S-200	NB-44 OSS	N/A	-L-	0.0-3.0	A-2-4 (0)	96	75	58	34.5	39	29	15	17	18	12	6	7.9
1091+20 NB OSS	S-201	NB-45 OSS	N/A	-L-	0.0-3.0	A-7-6 (4)	99	79	63	36.4	36	29	5	30	43	15	28	16.5
1064+30 NB IES	Bulk-1 IES NB	N/A	N/A	-L-	0-3.25	A-2-4 (0)	95	63	32	13.9	66	20	3	11	N.P.	N.P.	N.P.	9.3
958+70 NB IES	Bulk-2 IES NB	N/A	N/A	-L-	0-3.0	A-1-b (1)	98	47	28	7.9	72	21	1	6	N.P.	N.P.	N.P.	24.3
536+50 NB IES	Bulk-6 IES NB	N/A	N/A	-L-	0-3.0	A-2-4 (0)	98	61	42	15.7	57	29	3	11	N.P.	N.P.	N.P.	10.6
589+50 NB OES	Bulk-7 OES NB	N/A	N/A	-L-	1.5-3.0	A-2-4 (0)	99	64	42	20.0	57	25	4	14	22	18	4	14.0
698+90 NB OES	Bulk-8 OES NB	N/A	N/A	-L-	0-2.5	A-2-4 (0)	99	64	44	22.7	56	24	5	15	20	14	6	10.1
800+00 NB OES	Bulk-9 OES NB	N/A	N/A	-L-	0-3.83	A-2-6 (0)	100	66	47	29.0	53	20	5	22	28	15	13	17.2
905+95 NB OES	Bulk-10 OES NB	N/A	N/A	-L-	0-2.83	A-6 (2)	98	67	52	35.6	47	18	5	30	38	19	19	16.2
1011+45 NB OES	Bulk-11 OES NB	N/A	N/A	-L-	0-3.58	A-2-6 (0)	100	67	44	26.2	56	20	3	21	33	18	15	17.9
1117+10 NB OES	Bulk-12 OES NB	N/A	N/A	-L-	0-2.0	A-2-6 (3)	100	80	63	34.4	37	32	10	21	38	13	25	10.6



SUMMARY OF LABORATORY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986		Date Report	12/30/2019	
State Project No.:	47533.1.3	County:	Robeson	Date Tested	12/6 - 12/30/19
Federal ID No.:		TIP No.:	I-5987B		
Project Name:	I-95 from South of NC 20 to South of Proposed I-295				
Client Name:	NCDOT		Client Address: Raleigh, NC		

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification	Total % Passing				Total Mortar Fraction (%)				LL	PL	PI	Moist. %
							Sieve #				Coarse Sand	Fine Sand	Silt	Clay				
							10	40	60	200								

References / Comments / Deviations: NP=Non-Plastic

AASHTO T88: Particle Size Analysis of Soils as Modified by the NCDOT AASHTO T89: Determining the Liquid Limit of Soils

AASHTO T90: Determining the Plastic Limit & Plasticity Index of Soils AASHTO T265: Laboratory Determination of Moisture Content of Soils

AASHTO M145: The Classification of Soils and Soil Aggregate Mixtures for Highway Construction Purposes

Mal Krajan, ET
Technician Name:



Signature

104-01-0703
Certification #

Vlad Mitchev, P.E.
Technical Responsibility:

Project Manager
Position

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SUMMARY OF LABORATORY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986	Date Report	1/3-7/2020
State Project No.:	47533.1.3	County:	Robeson
Federal ID No.:		Date Tested	12/16/19-1/7/20
Project Name:	I-95 from South of NC 20 to South of Proposed I-295		
Client Name:	NCDOT	TIP No.:	I-5987B
Client Address:	Raleigh, NC		

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification		Total % Passing				Total Mortar Fraction (%)				LL	PL	PI	Organic	Moist. %
								Sieve #				Coarse Sand	Fine Sand	Silt	Clay					
								10	40	60	200									
1116+00 SB ACCEL	S-185	SB-1 ACCEL	NI	-L-	0-3	A-2-6	(1)	97	79	66	35.0	32	35	10	23	30	14	16	NI	11.9
1116+00 SB ACCEL	S-186	SB-1 ACCEL	NI	-L-	3-5	A-6	(4)	100	83	69	43.8	31	28	9	32	34	17	17	NI	17.3
1116+00 SB OSL	OS-6	SB-1 OSL	NI	-L-	ABC	A-1-b	(0)	42	27	23	15.6	45	23	20	12	21	18	3	NI	9.5
1091+30 SB OSS	S-187	SB-2 OSS	NI	-L-	0-3	A-2-6	(0)	97	79	63	33.6	36	33	12	19	23	12	11	NI	9.6
1053+70 SB OSL1	S-188	SB-3 OSL1	NI	-L-	0-3	A-2-4	(0)	100	69	47	24.8	54	24	12	10	NP	NP	NP	NI	6.8
1037+30 SB OSS	S-189	SB-4 OSS	NI	-L-	0-3	A-2-4	(0)	99	56	37	19.5	63	20	9	9	NP	NP	NP	NI	9.8
987+25 SB OSS	S-190	SB-6 OSS	NI	-L-	0-2.5	A-2-4	(0)	98	64	43	22.0	56	25	10	10	NP	NP	NP	NI	9.2
961+00 SB OSS	S-191	SB-7 OSS	NI	-L-	0-5	A-2-4	(0)	96	51	31	17.0	68	16	9	7	NP	NP	NP	NI	14.7
1116+00 SB OES	Bulk-1	BULK-1 SB OES	NI	-L-	0-3.5	A-2-4	(0)	100	83	66	26.1	34	43	6	17	19	15	4	NI	ND
895+20 SB OES	Bulk-3	BULK-3 SB OES	NI	-L-	0-4.0	A-6	(4)	100	72	62	41.9	38	25	21	16	38	18	20	NI	14.9
795+90 SB OES	Bulk-4	BULK-4 SB OES	NI	-L-	0-2.5	A-2-4	(0)	100	82	54	12.7	46	44	7	3	NP	NP	NP	NI	17.0
961+00 SB ISS	S-137	SB-7 ISS	NI	-L-	0.0-2.5	A-1-b	(0)	96	40	26	10.9	73	17	3	6	NP	NP	NP	NI	7.6
934+95 SB ISL	S-138	SB-8 ISL	NI	-L-	0.4-2.0	A-1-b	(1)	98	38	19	7.5	81	13	1	6	NP	NP	NP	NI	10.4
904+75 SB ISS	S-139	SB-9 ISS	NI	-L-	0-2.5	A-2-4	(0)	93	52	36	18.7	61	21	7	11	18	14	4	NI	12.3
878+15 SB ISL	S-140	SB-10 ISL	NI	-L-	2.5-5	A-2-4	(0)	99	58	40	24.2	60	18	12	10	14	12	2	NI	7.2
851+90 SB ISS	S-141	SB-11 ISS	NI	-L-	0-2.5	A-2-4	(0)	99	6	41	22.3	59	22	9	11	NP	NP	NP	NI	7.5
508+50 SB OSS	S-156	SB-27-OSS	NI	-L-	0-3.0	A-2-4	(0)	98	70	49	24.1	50	28	10	12	NP	NP	NP	NI	11.6
482+45 SB OSS	S-157	SB-28 OSS	NI	-L-	0-3.0	A-2-6	(0)	96	63	47	29.9	51	20	8	21	28	17	11	NI	13.4
454+50 SB OSS	S-158	SB-29 OSS	NI	-L-	0-3.0	A-2-4	(0)	99	67	50	30.1	50	23	9	19	24	15	9	NI	10.0
535+25 SB OSL	S-155	SB-26 OSL	NI	-L-	3.0-5.0	A-6	(3)	99	74	61	43.9	38	21	9	32	34	18	16	NI	16.3
535+25 SB OSS	S-154	SB-26 OSS	NI	-L-	0-3.0	A-2-6	(0)	99	70	54	34.5	46	22	10	22	27	16	11	NI	12.1
562+00 SB OSS	S-153	SB-25 OSS	NI	-L-	0-3.0	A-6	(0)	99	69	52	36.6	47	18	8	27	31	20	11	NI	12.3
581+70 SB OSS	S-152	SB-24 OSS	NI	-L-	0-3.0	A-2-4	(0)	98	70	53	27.0	46	30	12	12	21	16	5	NI	11.0
596+90 SB OSS	S-151	SB-23 OSS	NI	-L-	3.4-5.0	A-6	(3)	98	73	56	35.7	43	22	3	31	39	17	22	NI	16.3



SUMMARY OF LABORATORY TEST DATA

Soil Classification and Gradation

S&ME, Inc. Raleigh, 3201 Spring Forest Road, Raleigh, North Carolina 27616

S&ME Project #:	210986	Date Report	1/3-7/2020
State Project No.:	47533.1.3	County:	Robeson
Federal ID No.:		Date Tested	12/16/19-1/7/20
Project Name:	I-95 from South of NC 20 to South of Proposed I-295		
Client Name:	NCDOT	TIP No.:	I-5987B
Client Address:	Raleigh, NC		

Station No.	Sample No.	Boring No.	Offset	Alignment	Sample Depth (ft)	AASHTO Classification		Total % Passing				Total Mortar Fraction (%)				LL	PL	PI	Organic	Moist. %
								Sieve #				Coarse Sand	Fine Sand	Silt	Clay					
								10	40	60	200									
596+90 SB ACCEL	S-150	SB-23 ACCEL	NI	-L-	0-3.0	A-2-4	(0)	100	72	49	19.5	51	33	6	11	NP	NP	NP	NI	9.3
508+50 SB ISL	S-220	SB-27 ISL	NI	-L-	4.0-5.0	A-2-4	(0)	100	72	53	30.0	48	26	10	16	15	11	4	NI	8.1
535+25 SB ISS	S-219	SB-26 ISS	NI	-L-	0-3.0	A-2-4	(0)	100	69	52	32.7	48	23	14	16	19	13	6	NI	8.4
562+00 SB ISS	S-218	SB-25 ISS	NI	-L-	0-3.0	A-2-6	(0)	99	68	49	32.1	50	20	10	20	27	15	12	NI	9.5
610+70 SB ISS	S-217	SB-22 ISS	NI	-L-	0-3.0	A-2-6	(0)	98	60	45	28.8	54	18	6	21	32	15	17	NI	12.4
666+40 SB ISS	S-216	SB-19 ISS	NI	-L-	3.0-5.0	A-2-6	(0)	99	65	50	32.6	49	20	11	19	23	11	12	NI	16.1
719+30 SB ISS	S-215	SB-16 ISS	NI	-L-	0-3.0	A-4	(0)	99	77	62	38.8	37	28	20	14	14	12	2	NI	7.6
772+30 SB ISS	S-214	SB-14 ISS	NI	-L-	0-3.0	A-6	(1)	99	82	65	36.5	35	32	12	21	25	13	12	NI	9.6
798+50 SB ISS	S-213	SB-13 ISS	NI	-L-	0-3.0	A-6	(1)	99	66	53	36.2	47	19	8	26	32	17	15	NI	12.9
934+95 SB OSS	S-192	SB-8 OSS	NI	-L-	0-3.0	A-2-4	(0)	99	58	36	16.5	64	22	7	7	NP	NP	NP	NI	7.4
904+75 SB OSS	S-193	SB-9 OSS	NI	-L-	2.5-5.0	A-2-6	(1)	99	65	50	31.4	50	21	7	22	32	15	17	NI	13.8
825+00 SB OSS	S-195	SB-12 OSS	NI	-L-	0-3.5	A-2-4	(0)	99	66	46	30.3	54	17	7	22	29	21	8	NI	11.9
878+15 SB OSS	S-194	SB-10 OSS	NI	-L-	0-3.0	A-2-4	(0)	100	67	48	24.0	52	27	11	10	NP	NP	NP	NI	3.9
1091+30 SB ISS	S-204	SB-2 ISS	NI	-L-	2.5-5	A-7-6	(3)	99	72	58	35.5	42	24	2	32	44	19	25	NI	15.9
1010+15 SB ISS	S-206	SB-5 ISS	NI	-L-	0-3.0	A-2-4	(0)	100	82	63	35.0	38	32	15	16	18	13	5	NI	10.2
825+00 SB ISL	S-207	SB-12 ISL	NI	-L-	0-3.0	A-6	(6)	96	68	51	35.8	47	18	6	29	40	19	21	NI	14.5
1063+70 SB ISS	S-205	SB-3 ISS	NI	-L-	0-3.0	A-4	(0)	100	83	65	37.8	35	33	18	15	14	12	2	NI	9.3
719+30 SB OSS	S-197	SB-16 OSS	NI	-L-	0-3.0	A-4	(0)	100	80	62	36.6	38	31	20	12	13	12	1	NI	8.4
1116+00 SB ISS	S-203	SB-1 ISS	NI	-L-	0-2.5	A-6	(2)	96	75	63	38.3	35	28	9	28	28	13	15	NI	10.9
666+40 SB OSS	S-198	SB-19 OSS	NI	-L-	2.5-5	A-6	(1)	99	73	57	37.7	42	23	11	24	27	14	13	NI	13.5
688+25 SB ACCEL	S-230	SB-18 ACCEL	NI	-L-	0-4.0	A-2-4	(0)	99	63	42	20.7	57	25	8	10	NP	NP	NP	NI	10.4
688+25 SB OSL	S-229	SB-18 OSL	NI	-L-	0-1.5	A-2-4	(0)	99	63	46	25.6	53	24	11	12	NP	NP	NP	NI	7.8
688+25 SB OSS	S-228	SB-18 OSS	NI	-L-	0-5.0	A-2-4	(0)	97	54	37	21.3	62	18	7	14	18	13	5	NI	9.6
745+65 SB OSS	S-226	SB-15 OSS	NI	-L-	0-3.0	A-2-4	(0)	100	57	33	17.6	67	18	7	9	NP	NP	NP	NI	9.9

MOISTURE - DENSITY REPORT

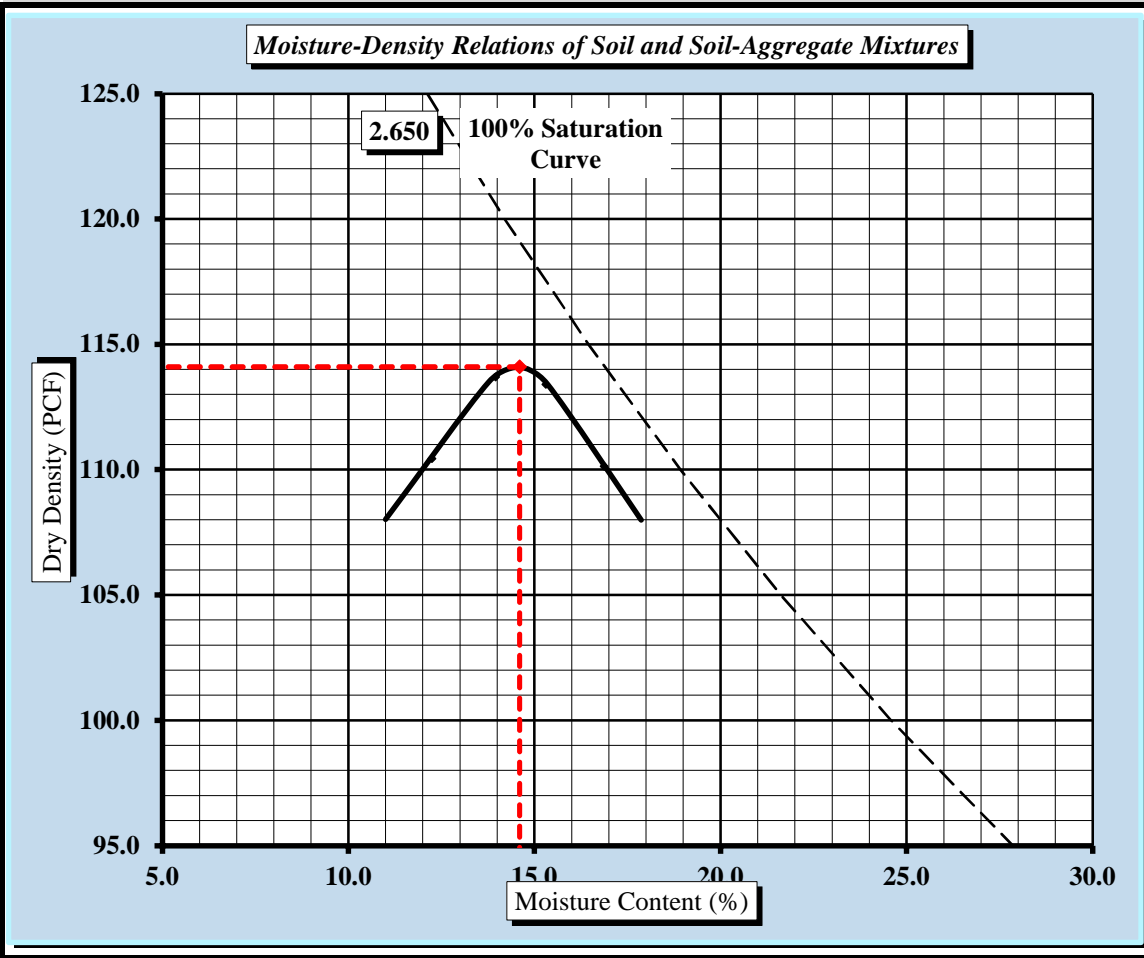


Quality Assurance

S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616			
S&ME Project #:	210986	Report Date:	1/20/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/16 - 1/20/20
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #:	Bulk 10 OES NB
		Sample Date:	1/15/2020
Location:	-L- 905+95 NB OES	Offset:	N/A
		Depth (ft):	N/A
Sample Description:	Tan-Brown Fine to Coarse Sandy Silty CLAY (A-6) (2)		

Maximum Dry Density	114.1	PCF.	Optimum Moisture Content	14.6%
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AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	16.2%
Assumed Specific Gravity	2.650
Liquid Limit	38
Plastic Limit	19
Plastic Index	19
% Passing	
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	98.0%
#40	67.0%
#60	52.0%
#200	35.6%
Oversize Fraction	
Bulk Gravity	
% Moisture	
% Oversize	
MDD	
Opt. MC	

Moisture-Density Curve Displayed: Fine Fraction Corrected for Oversize Fraction (ASTM D 4718)
 Sieve Size used to separate the Oversize Fraction: #4 Sieve 3/8 inch Sieve 3/4 inch Sieve
 Mechanical Rammer Manual Rammer Moist Preparation Dry Preparation

References / Comments / Deviations:

AASHTO T265: Laboratory Determination of Moisture Content of Soils
 AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Mal Krajan, ET
 Technical Responsibility

Signature

Laboratory Manager
 Position

1/20/2020
 Date

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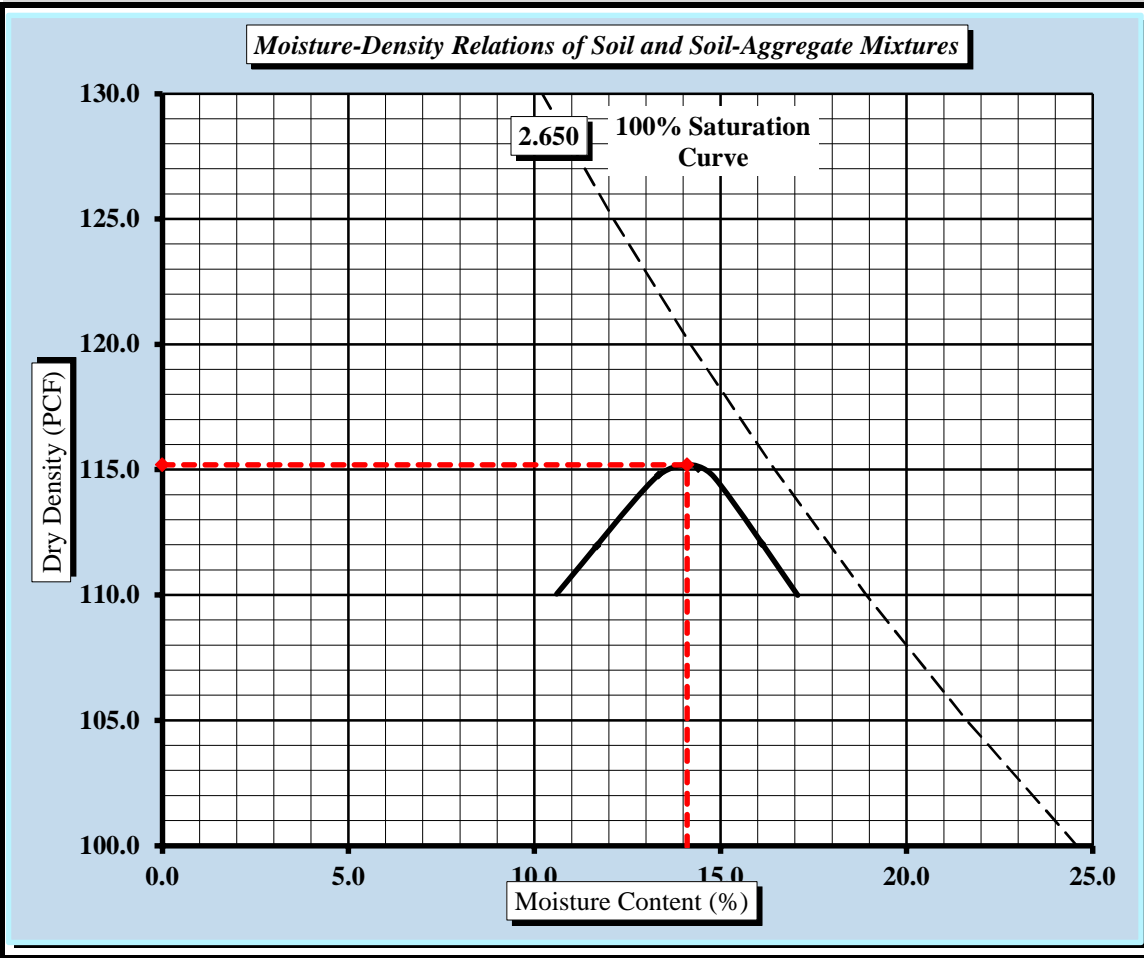
MOISTURE - DENSITY REPORT



Quality Assurance

S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616			
S&ME Project #:	210986	Report Date:	1/19/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/17 - 1/19/20
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #:	Bulk 11 OES NB
		Sample Date:	1/15/2020
Location:	-L- 1011+45 NB OES	Offset:	N/A
		Depth (ft):	N/A
Sample Description:	Tan-Brown Silty Clayey Fine to Coarse SAND (A-2-6) (0)		

Maximum Dry Density	115.2	PCF.	Optimum Moisture Content	14.1%
AASHTO T99 - - Method A				



Soil Properties	
Natural Moisture Content	17.9%
Assumed Specific Gravity	2.650
Liquid Limit	33
Plastic Limit	18
Plastic Index	15
% Passing	
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#40	67.0%
#60	44.0%
#200	26.2%
Oversize Fraction	
Bulk Gravity	
% Moisture	
% Oversize	
MDD	
Opt. MC	

Moisture-Density Curve Displayed: Fine Fraction Corrected for Oversize Fraction (ASTM D 4718)
 Sieve Size used to separate the Oversize Fraction: #4 Sieve 3/8 inch Sieve 3/4 inch Sieve
 Mechanical Rammer Manual Rammer Moist Preparation Dry Preparation

References / Comments / Deviations:

AASHTO T265: Laboratory Determination of Moisture Content of Soils
 AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Mal Krajan, ET
 Technical Responsibility

Signature

Laboratory Manager
 Position

1/20/2020
 Date

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MOISTURE - DENSITY REPORT

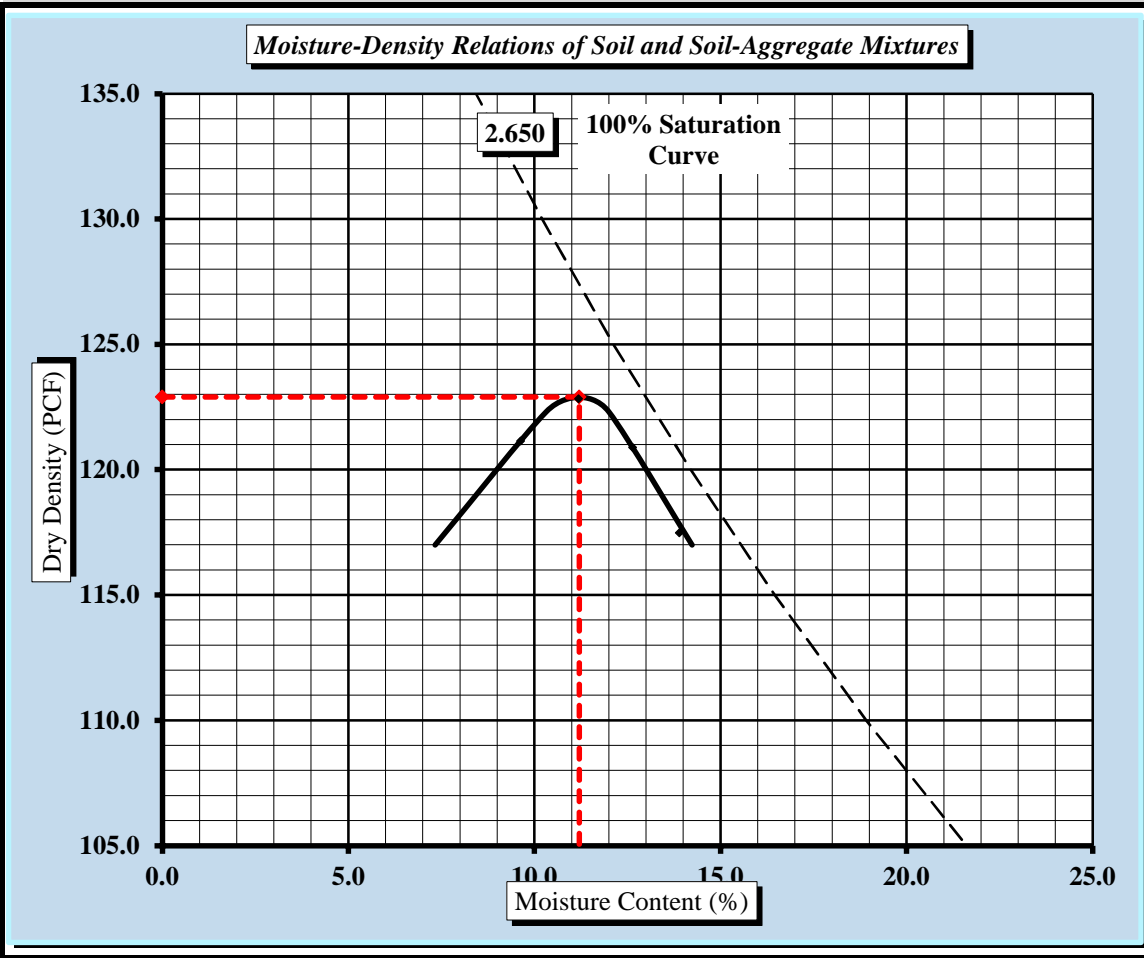


Quality Assurance

S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616			
S&ME Project #:	210986	Report Date:	1/21/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/17 - 1/21/20
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #:	Bulk 12 OES NB
		Sample Date:	1/15/2020
Location:	-L- 1117+10 NB OES	Offset:	N/A
		Depth (ft):	N/A
Sample Description:	Gray Silty Clayey Fine to Coarse SAND (A-2-6) (3)		

Maximum Dry Density	122.9	PCF.	Optimum Moisture Content	11.2%
---------------------	-------	------	--------------------------	-------

AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	10.6%
Assumed Specific Gravity	2.650
Liquid Limit	38
Plastic Limit	13
Plastic Index	25
% Passing	
3/4"	100.0%
3/8"	100.0%
#4	100.0%
#10	100.0%
#40	80.0%
#60	63.0%
#200	34.4%
Oversize Fraction	
Bulk Gravity	
% Moisture	
% Oversize	
MDD	
Opt. MC	

Moisture-Density Curve Displayed: Fine Fraction Corrected for Oversize Fraction (ASTM D 4718)
 Sieve Size used to separate the Oversize Fraction: #4 Sieve 3/8 inch Sieve 3/4 inch Sieve
 Mechanical Rammer Manual Rammer Moist Preparation Dry Preparation

References / Comments / Deviations:

AASHTO T265: Laboratory Determination of Moisture Content of Soils
 AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Mal Krajan, ET
 Technical Responsibility

Signature

Laboratory Manager
 Position

1/21/2020
 Date

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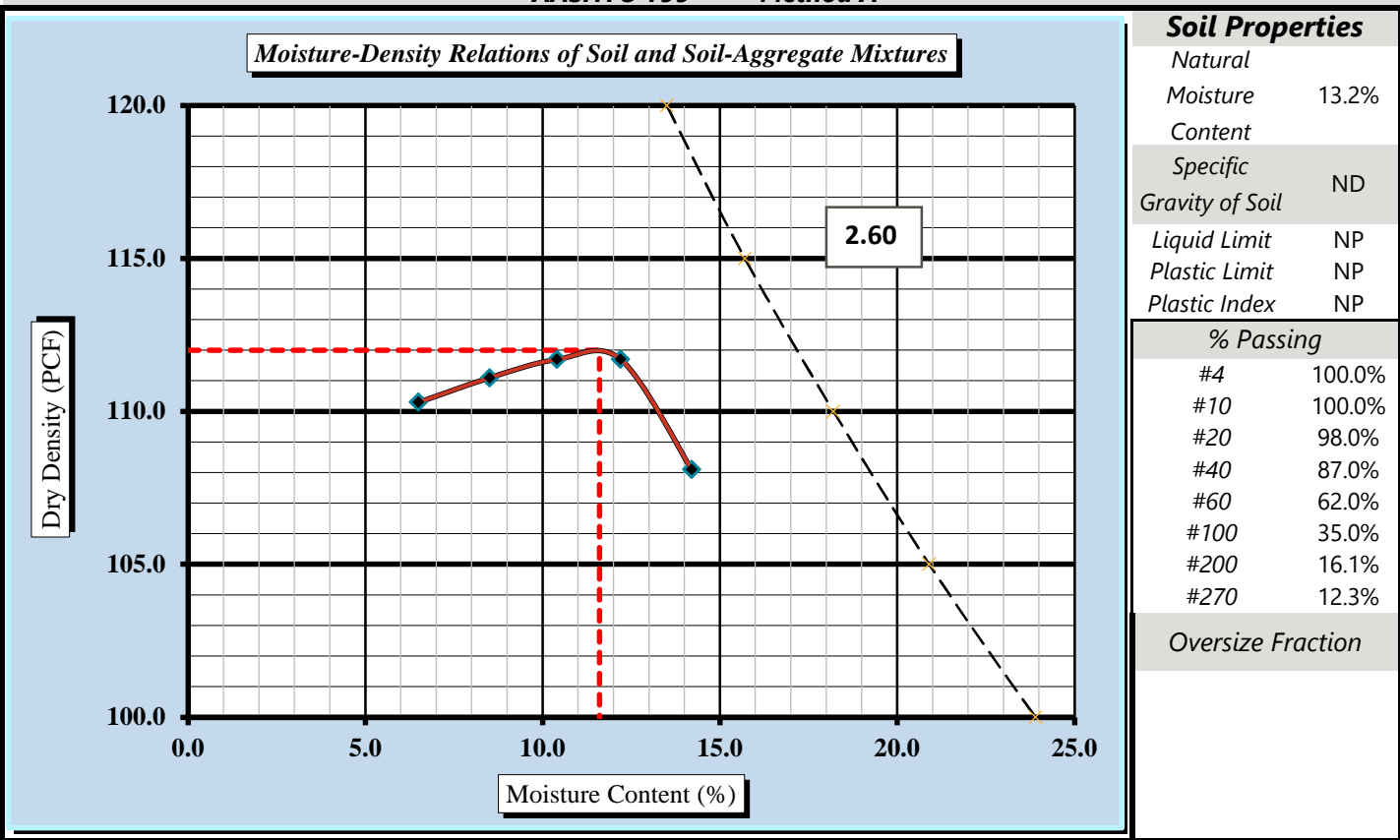
MOISTURE - DENSITY REPORT



Quality Assurance

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273			
S&ME Project #:	210986	Report Date:	1/14/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/3-14/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 6 OES SB
Location:	-L- 590+30 SB OES	Sample Date:	12/11/2019
		Offset:	NI
		Depth:	0-40"
Sample Description:	A-2-4 (0)		

Maximum Dry Density 112.0 PCF. Optimum Moisture Content 11.6%
AASHTO T99 - - Method A



Moisture-Density Curve Displayed: Fine Fraction Corrected for Oversize Fraction (ASTM D 4718)
 Sieve Size used to separate the Oversize Fraction: #4 Sieve 3/8 inch Sieve 3/4 inch Sieve
 Mechanical Rammer Manual Rammer Moist Preparation Dry Preparation

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev
 Technical Responsibility

Signature

Project Manager
 Position

Date

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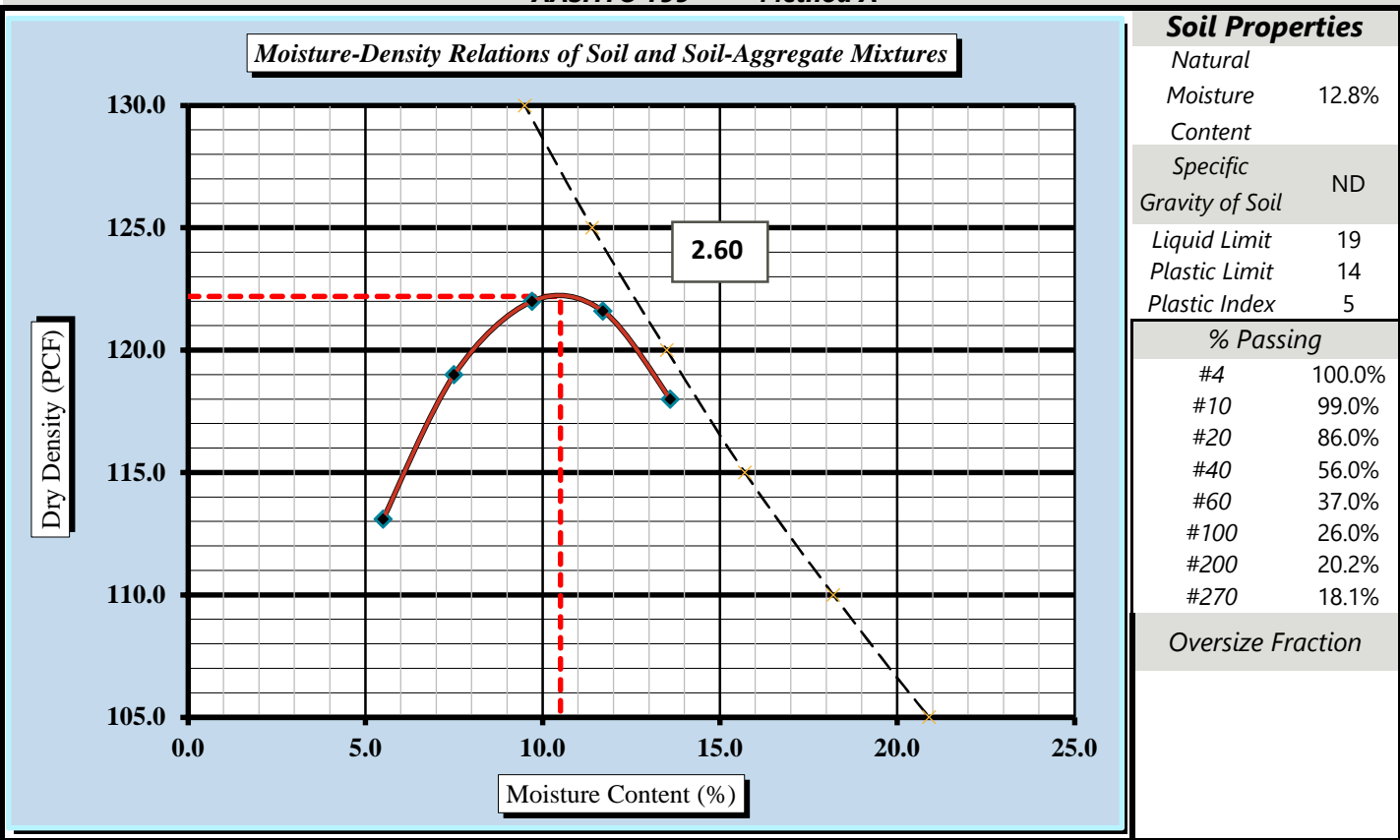
MOISTURE - DENSITY REPORT



Quality Assurance

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273			
S&ME Project #:	210986	Report Date:	1/15/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/10-15/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 5 IES SB
Location:	-L- 642+05 SB IES	Offset:	NI
		Sample Date:	12/15/2019
		Depth:	0-30"
Sample Description:	A-2-4(0)		

Maximum Dry Density 122.2 PCF. Optimum Moisture Content 10.5%
AASHTO T99 - - Method A



Moisture-Density Curve Displayed: Fine Fraction Corrected for Oversize Fraction (ASTM D 4718)
 Sieve Size used to separate the Oversize Fraction: #4 Sieve 3/8 inch Sieve 3/4 inch Sieve
 Mechanical Rammer Manual Rammer Moist Preparation Dry Preparation

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev
 Technical Responsibility

Signature

Project Manager
 Position

Date

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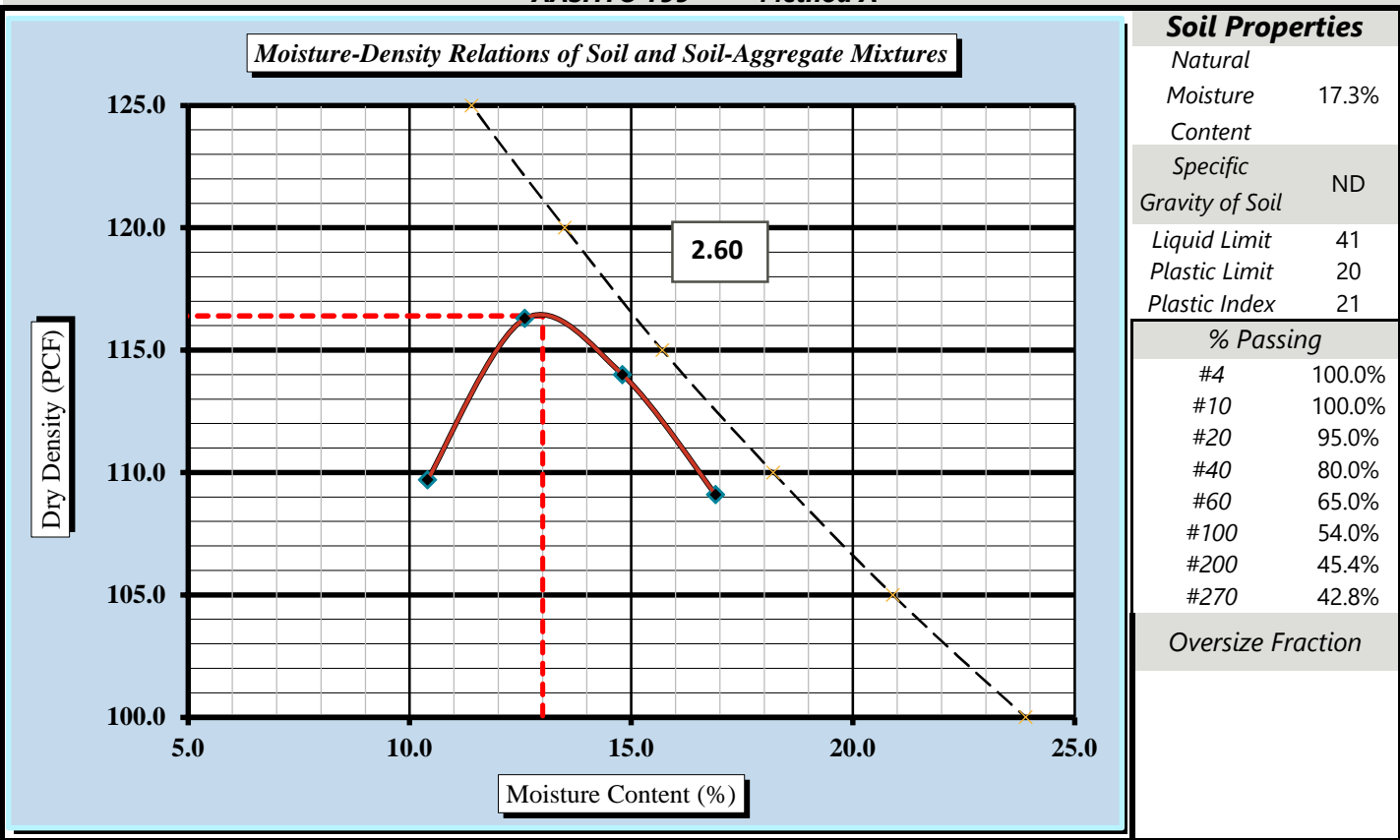
MOISTURE - DENSITY REPORT



Quality Assurance

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273			
S&ME Project #:	210986	Report Date:	1/15/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/10-15/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 5 OES SB
Location:	-L- 699+70 SB OES	Sample Date:	12/15/2019
		Offset:	NI
		Depth:	0-39"
Sample Description:	A-7-6 (5)		

Maximum Dry Density 116.4 PCF. Optimum Moisture Content 13.0%
AASHTO T99 - - Method A



Soil Properties	
Natural Moisture Content	17.3%
Specific Gravity of Soil	ND
Liquid Limit	41
Plastic Limit	20
Plastic Index	21
% Passing	
#4	100.0%
#10	100.0%
#20	95.0%
#40	80.0%
#60	65.0%
#100	54.0%
#200	45.4%
#270	42.8%

Oversize Fraction	

Moisture-Density Curve Displayed: Fine Fraction Corrected for Oversize Fraction (ASTM D 4718)
 Sieve Size used to separate the Oversize Fraction: #4 Sieve 3/8 inch Sieve 3/4 inch Sieve
 Mechanical Rammer Manual Rammer Moist Preparation Dry Preparation
 References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev
 Technical Responsibility

Signature

Project Manager
 Position

Date

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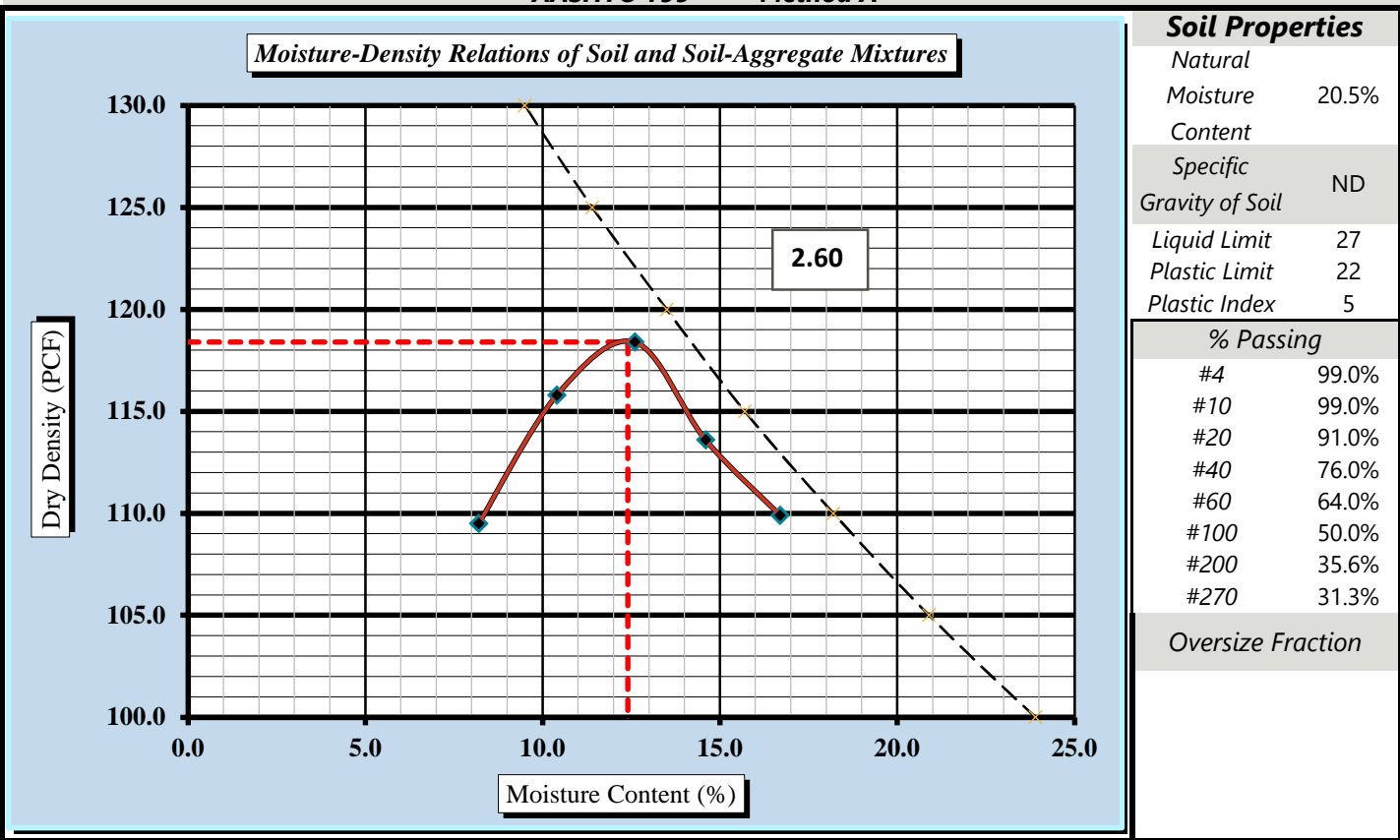
MOISTURE - DENSITY REPORT



Quality Assurance

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273			
S&ME Project #:	210986	Report Date:	1/16/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/10-16/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 4 IES SB
Location:	-L- 747+50 SB IES	Offset:	NI
Sample Description:		Sample Date:	12/15/2019
		Depth:	0-43"
			A-4 (0)

Maximum Dry Density 118.4 PCF. Optimum Moisture Content 12.4%
AASHTO T99 - - Method A



Moisture-Density Curve Displayed: Fine Fraction Corrected for Oversize Fraction (ASTM D 4718)
 Sieve Size used to separate the Oversize Fraction: #4 Sieve 3/8 inch Sieve 3/4 inch Sieve
 Mechanical Rammer Manual Rammer Moist Preparation Dry Preparation

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev
 Technical Responsibility

Signature

Project Manager
 Position

Date

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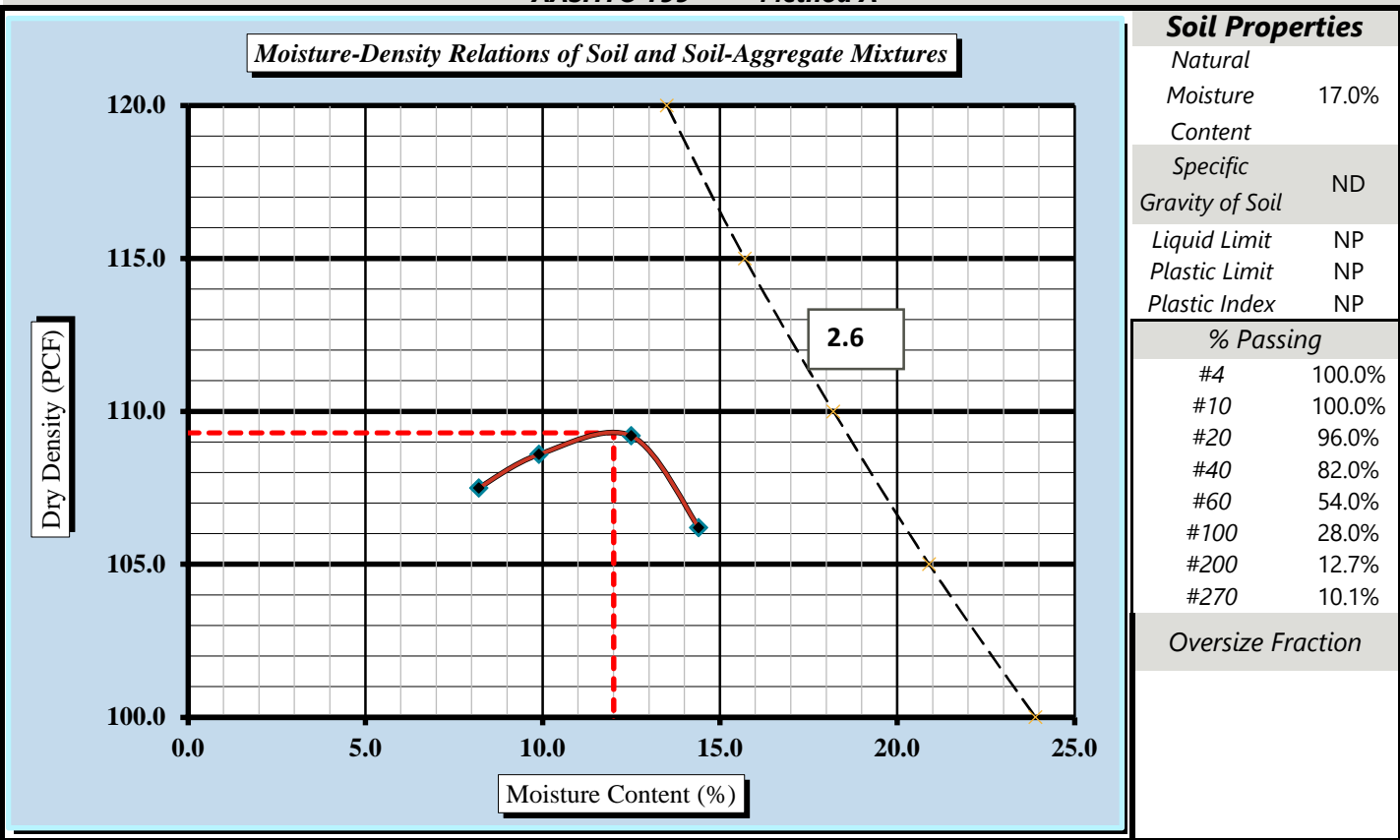
MOISTURE - DENSITY REPORT



Quality Assurance

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273			
S&ME Project #:	210986	Report Date:	1/2/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	12/16-30/19
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 4 OES SB
Location:	-L- 795+90 SB OES	Offset:	NI
Sample Description:		Sample Date:	12/11/2019
		Depth:	0-30"
			A-2-4 (0)

Maximum Dry Density 109.3 PCF. Optimum Moisture Content 12.0%
AASHTO T99 - - Method A



Moisture-Density Curve Displayed: Fine Fraction Corrected for Oversize Fraction (ASTM D 4718)
 Sieve Size used to separate the Oversize Fraction: #4 Sieve 3/8 inch Sieve 3/4 inch Sieve
 Mechanical Rammer Manual Rammer Moist Preparation Dry Preparation

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev
 Technical Responsibility

Signature

Project Manager
 Position

Date

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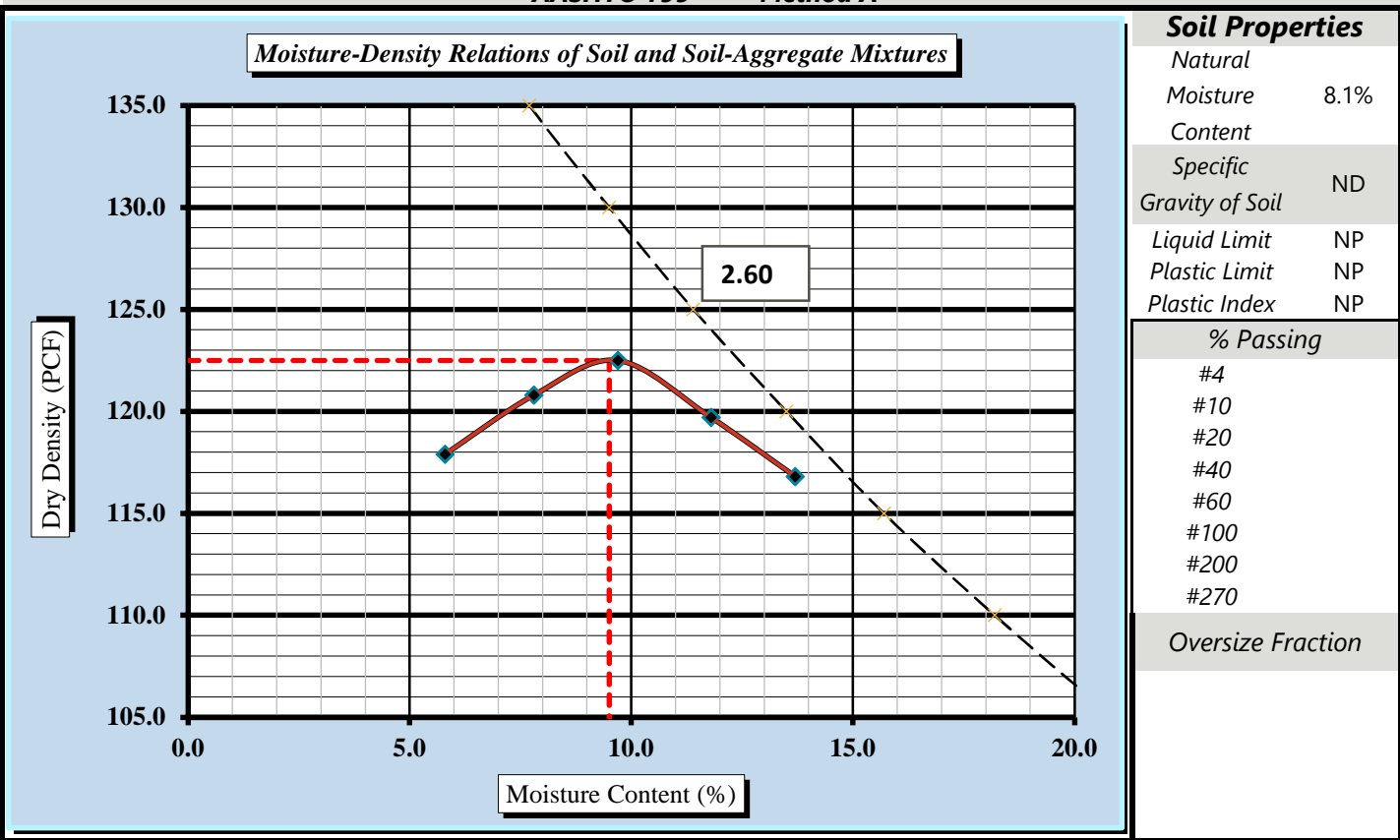
MOISTURE - DENSITY REPORT



Quality Assurance

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273			
S&ME Project #:	210986	Report Date:	1/15/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	1/10-15/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 3 IES SB
Location:	-L- 853+15 SB IES	Sample Date:	12/15/2019
		Offset:	NI
		Depth:	0-35"
Sample Description:	A-2-4 (0)		

Maximum Dry Density 122.5 PCF. Optimum Moisture Content 9.5%
AASHTO T99 - - Method A



References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev
 Technical Responsibility

Project Manager
 Position

Date

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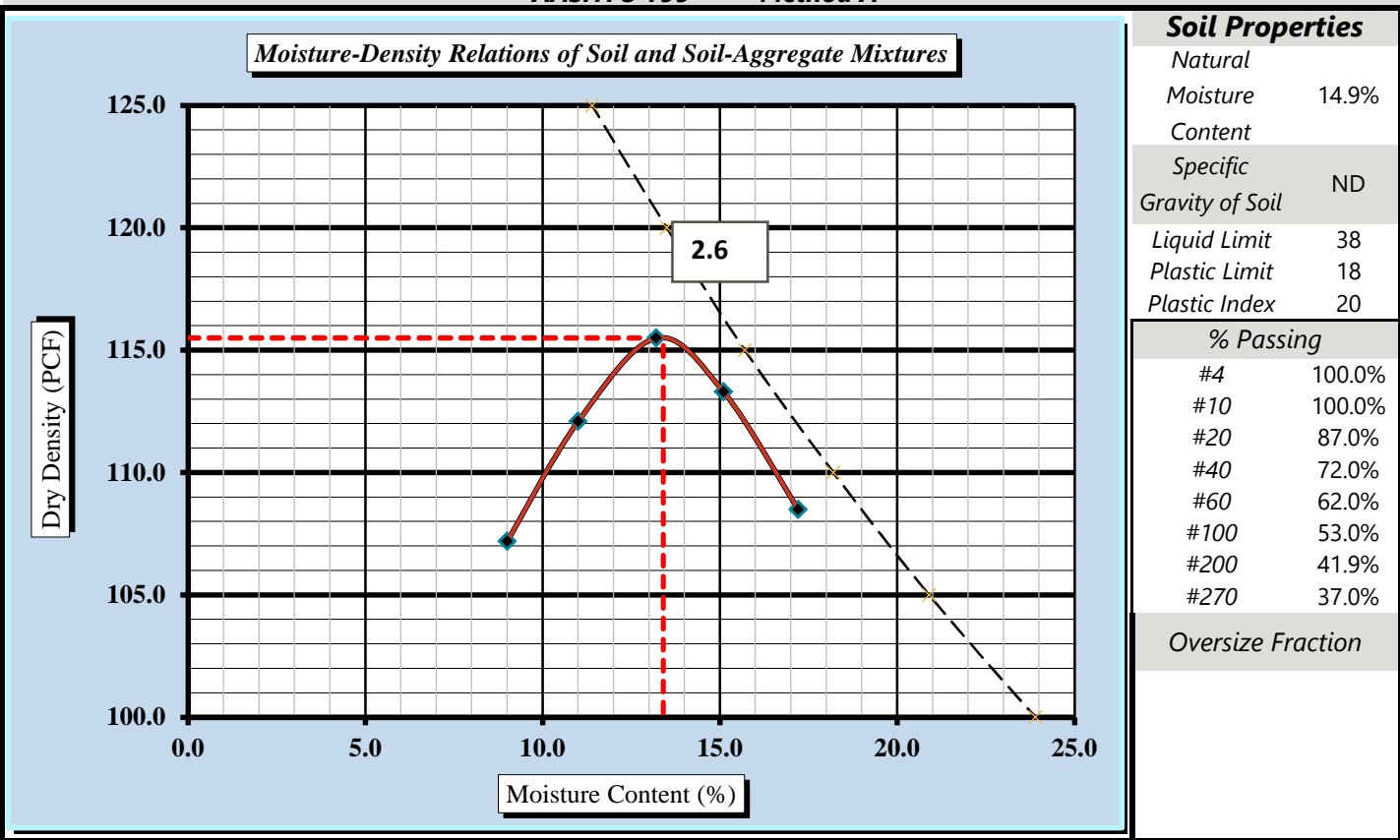
MOISTURE - DENSITY REPORT



Quality Assurance

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273			
S&ME Project #:	210986	Report Date:	1/2/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	12/16-28/19
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 3 OES SB
Location:	-L- 895+20 SB OES	Sample Date:	12/11/2019
		Offset:	NI
		Depth:	0-48"
Sample Description:	A-6 (4)		

Maximum Dry Density 115.5 PCF. Optimum Moisture Content 13.4%
AASHTO T99 - - Method A



Moisture-Density Curve Displayed: Fine Fraction Corrected for Oversize Fraction (ASTM D 4718)
 Sieve Size used to separate the Oversize Fraction: #4 Sieve 3/8 inch Sieve 3/4 inch Sieve
 Mechanical Rammer Manual Rammer Moist Preparation Dry Preparation

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Mitchev
 Technical Responsibility

Signature

Project Manager
 Position

Date

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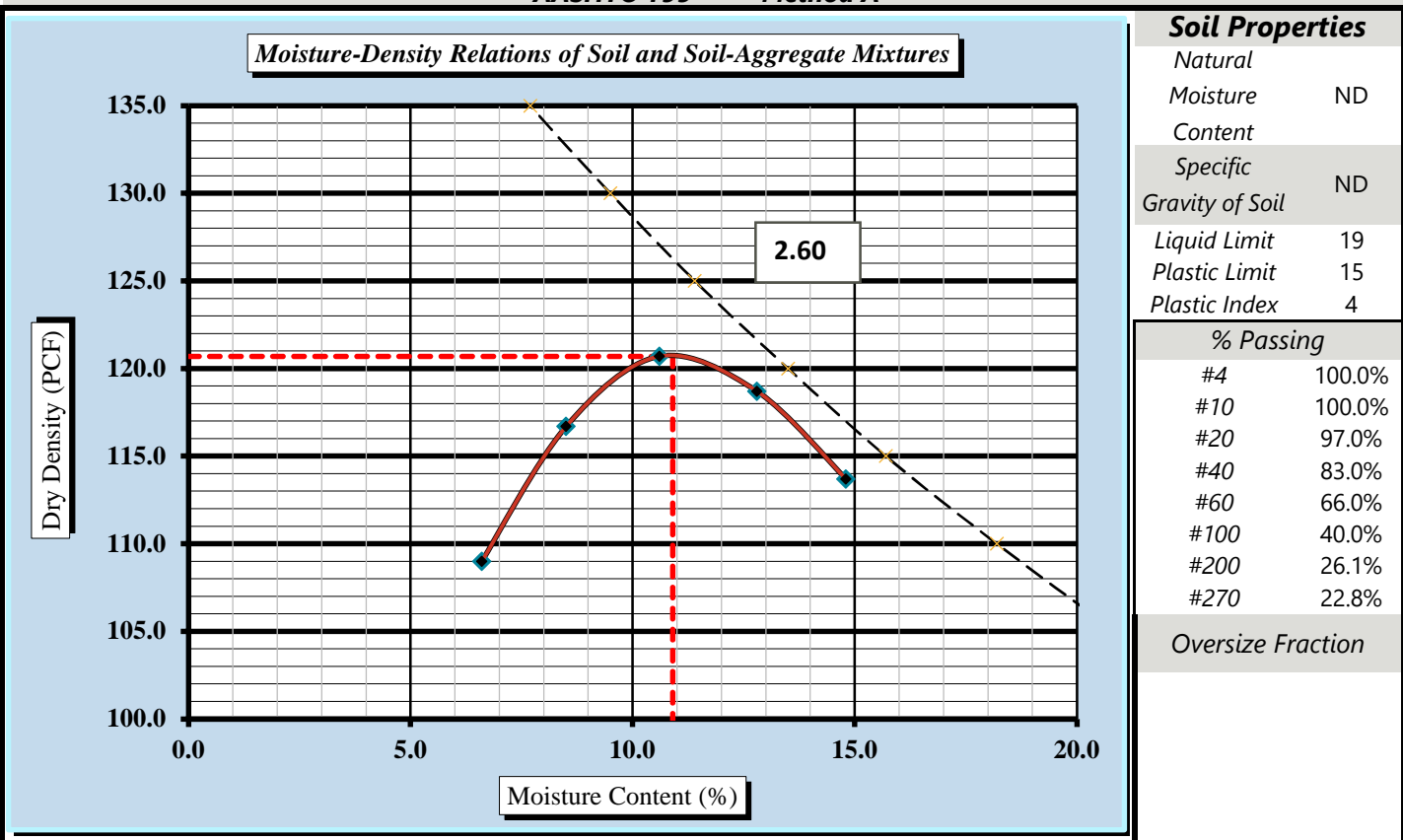
MOISTURE - DENSITY REPORT



Quality Assurance

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273			
S&ME Project #:	210986	Report Date:	12/28/19
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s):	12/9-28/19
Client Name:	NCDOT		
Client Address:	Raleigh		
Boring #:	NI	Sample #:	BULK 1 OES SB
Location:	-L- 1116+00 SB OES	Sample Date:	12/6/2019
		Offset:	NI
		Depth:	0-42"
Sample Description:	A-2-4 (0)		

Maximum Dry Density 120.7 PCF. Optimum Moisture Content 10.9%
AASHTO T99 - - Method A



Moisture-Density Curve Displayed: Fine Fraction Corrected for Oversize Fraction (ASTM D 4718)
 Sieve Size used to separate the Oversize Fraction: #4 Sieve 3/8 inch Sieve 3/4 inch Sieve
 Mechanical Rammer Manual Rammer Moist Preparation Dry Preparation

References / Comments / Deviations: ND: Not Determined NI: No Information Provided

AASHTO T 99: Moisture-Density Relations of Soil Using a 5.5 Lb. Rammer and a 12" Drop

Vlad Michev
 Technical Responsibility

Signature

Project Manager
 Position

Date

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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



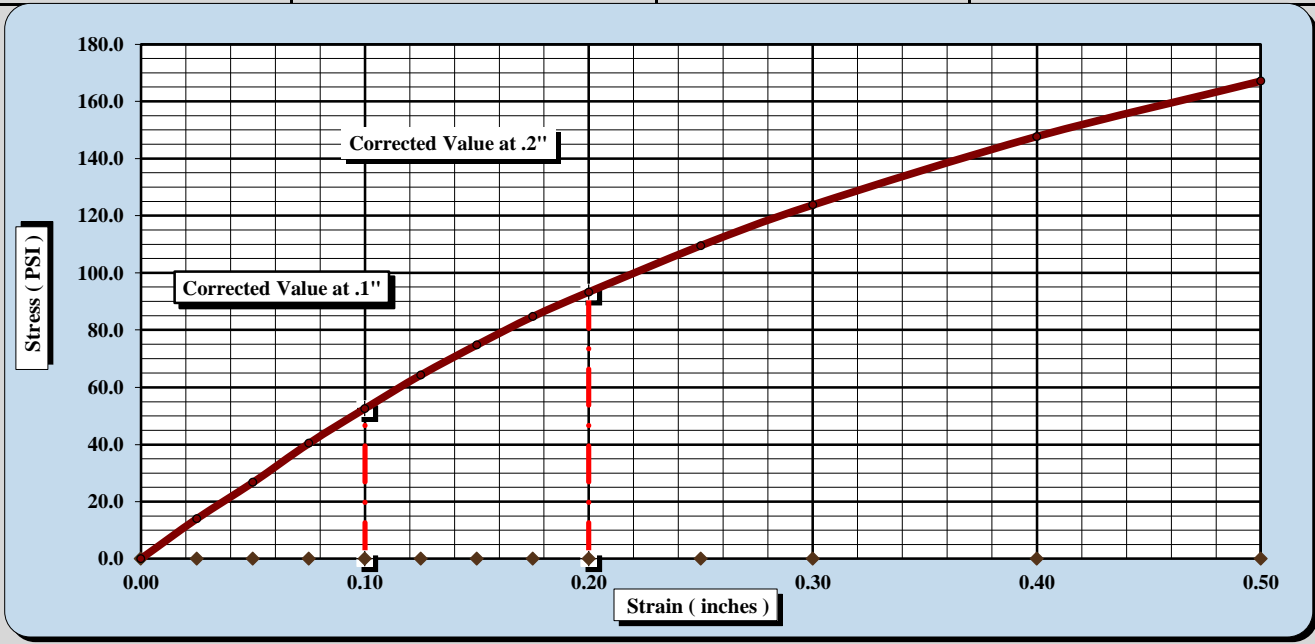
AASHTO T 193

S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

Project #:	210986	Report Date:	1/28/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/22 - 1/28/20
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #:	Bulk 10 OES NB
		Sample Date:	1/15/2020
Location:	-L- 905+95 NB OES	Offset:	N/A
		Depth (ft):	N/A
Sample Description:	Tan-Brown Fine to Coarse Sandy Silty CLAY (A-6) (2)		

AASHTO T99	Method A	Maximum Dry Density:	114.1 PCF	Optimum Moisture Content:	14.6%
Compaction Test performed on grading complying with CBR spec.				% Retained on the 3/4" sieve:	0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	5.3	CBR at 0.2 in.	6.2
CBR at 0.1 in.	5.3	CBR at 0.2 in.	6.2



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with AASHTO T 193, Section 5.1.1

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	56	Final Dry Density (PCF)	112.0
Initial Dry Density (PCF)	114.3	Average Final Moisture Content	15.8%
Moisture Content of the Compacted Specimen	15.2%	Moisture Content (top 1" after soaking)	16.2%
Percent Compaction	100.2%	Percent Swell	2.3%

Soak Time:	96 hrs.	Surcharge Weight	10.0
Liquid Limit	38	Surcharge Wt. per sq. Ft.	50.9
		Plastic Index	19

Notes/Deviations/References:

Test specimen compacted to 100% at optimum moisture.

Mal Krajan, ET
Technical Responsibility

Signature

Laboratory Manager
Position

2/2/2020
Date

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**CBR (CALIFORNIA BEARING RATIO)
 OF LABORATORY COMPACTED SOIL**



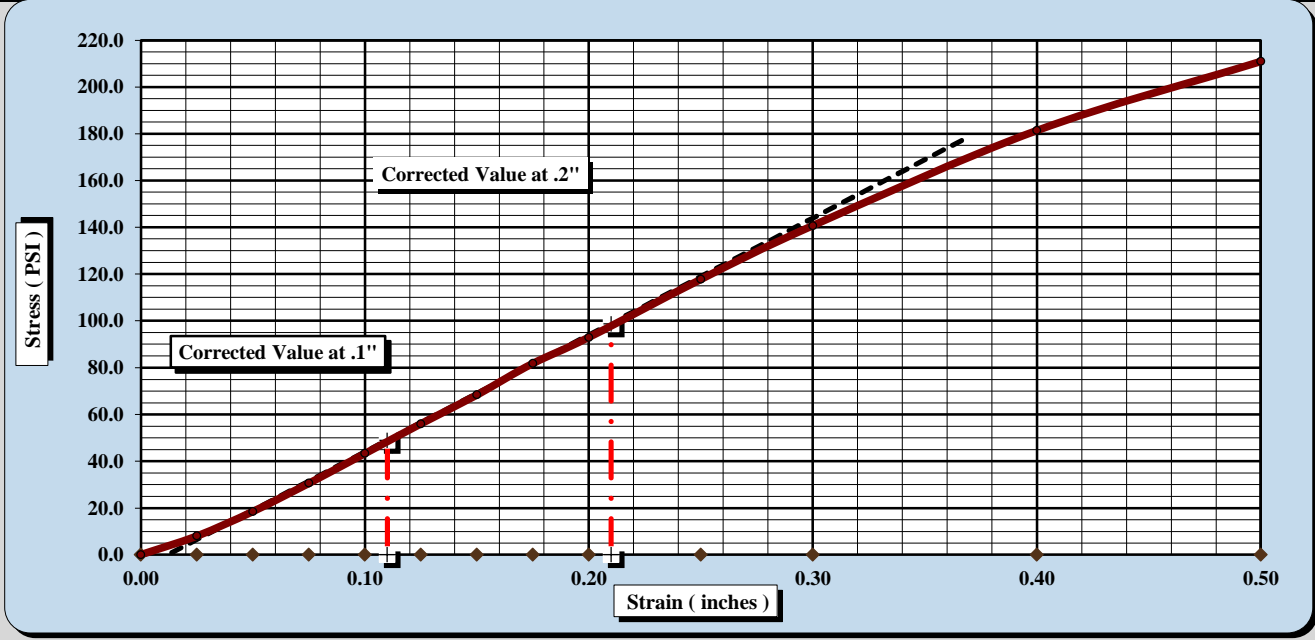
AASHTO T 193

S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

Project #:	210986	Report Date:	1/25/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/19 - 1/25/2020
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #:	Bulk 11 OES NB
		Sample Date:	1/15/2020
Location:	-L- 1011+45 NB OES	Offset:	N/A
		Depth (ft):	N/A
Sample Description:	Tan-Brown Silty Clayey to Fine to Coarse SAND (A-2-6) (0)		

AASHTO T99 Method A	Maximum Dry Density:	115.2 PCF	Optimum Moisture Content:	14.1%
Compaction Test performed on grading complying with CBR spec.			% Retained on the 3/4" sieve:	0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	4.3	CBR at 0.1 in.	4.9
CBR at 0.2 in.	6.2	CBR at 0.2 in.	6.6



CBR Sample Preparation:
The entire gradation was used and compacted in a 6" CBR mold in accordance with AASHTO T 193, Section 5.1.1

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	56	Final Dry Density (PCF)	115.3
Initial Dry Density (PCF)	115.1	Average Final Moisture Content	15.2%
Moisture Content of the Compacted Specimen	14.5%	Moisture Content (top 1" after soaking)	15.4%
Percent Compaction	99.9%	Percent Swell	0.1%

Soak Time:	96 hrs.	Surcharge Weight	10.0	Surcharge Wt. per sq. Ft.	50.9
Liquid Limit	33	Plastic Index	15		

Notes/Deviations/References:
 Test specimen compacted to 100% at optimum moisture.

<u>Mal Krajan, ET</u> Technical Responsibility	 Signature	<u>Laboratory Manager</u> Position	<u>1/25/2020</u> Date
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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



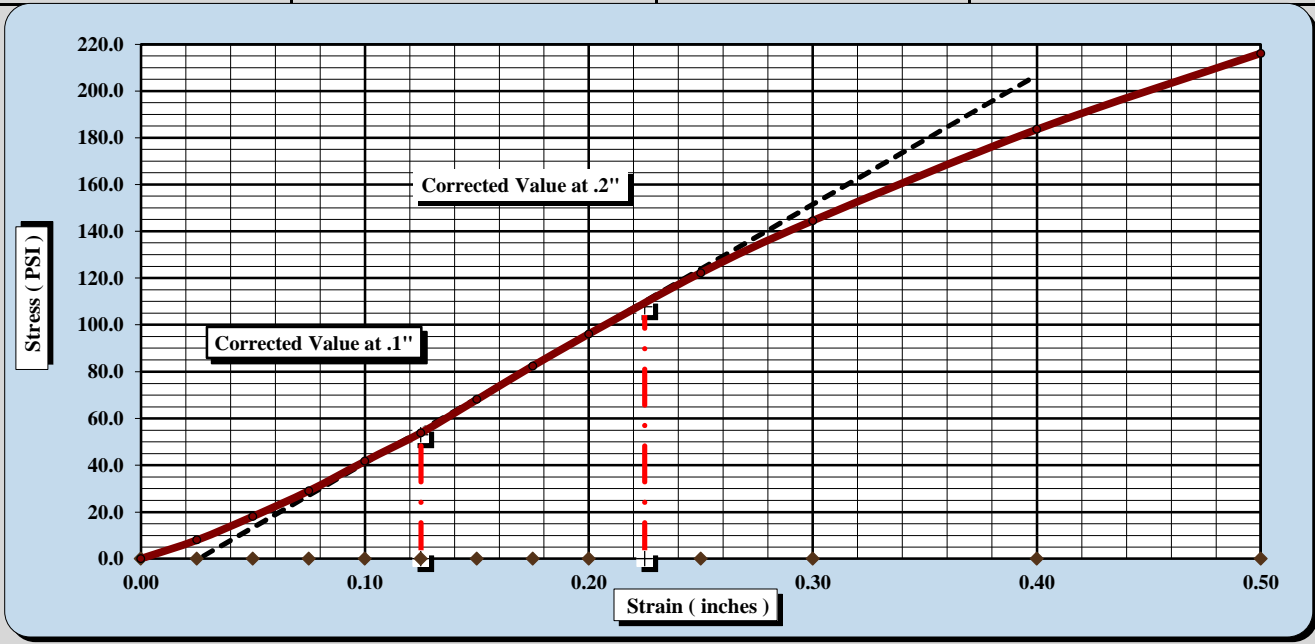
ASTM D 1883

S&ME, Inc. Raleigh: 3201 Spring Forest Road, Raleigh, NC 27616

Project #:	210986	Report Date:	1/28/2020
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/22 - 1/28/2020
Client Name:	NCDOT		
Client Address:			
Boring #:	N/A	Sample #:	Bulk 12 OES NB
		Sample Date:	1/15/20
Location:	-L- 1117+10 NB OES	Offset:	N/A
		Depth (ft):	N/A
Sample Description:	Gray Silty Clayey Fine to Coarse Sandy SAND (A-2-6) (3)		

AASHTO T99	Method A	Maximum Dry Density:	122.9	PCF	Optimum Moisture Content:	11.2%
Compaction Test performed on grading complying with CBR spec.					% Retained on the 3/4" sieve:	0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	4.2	CBR at 0.2 in.	6.4
CBR at 0.1 in.	5.3	CBR at 0.2 in.	7.2



CBR Sample Preparation:
The entire gradation was used and compacted in a 6" CBR mold in accordance with AASHTO T 193, Section 5.1.1

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	56	Final Dry Density (PCF)	122.9
Initial Dry Density (PCF)	122.7	Average Final Moisture Content	11.7%
Moisture Content of the Compacted Specimen	11.5%	Moisture Content (top 1" after soaking)	12.2%
Percent Compaction	99.8%	Percent Swell	0.0%

Soak Time:	96 hrs.	Surcharge Weight	10.0
Liquid Limit	38	Plastic Index	25
		Surcharge Wt. per sq. Ft.	50.9

Notes/Deviations/References:
 Test specimen compacted to 100% at optimum moisture.

Mal Krajan, ET <small>Technical Responsibility</small>	 <small>Signature</small>	Laboratory Manager <small>Position</small>	1/28/2020 <small>Date</small>
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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



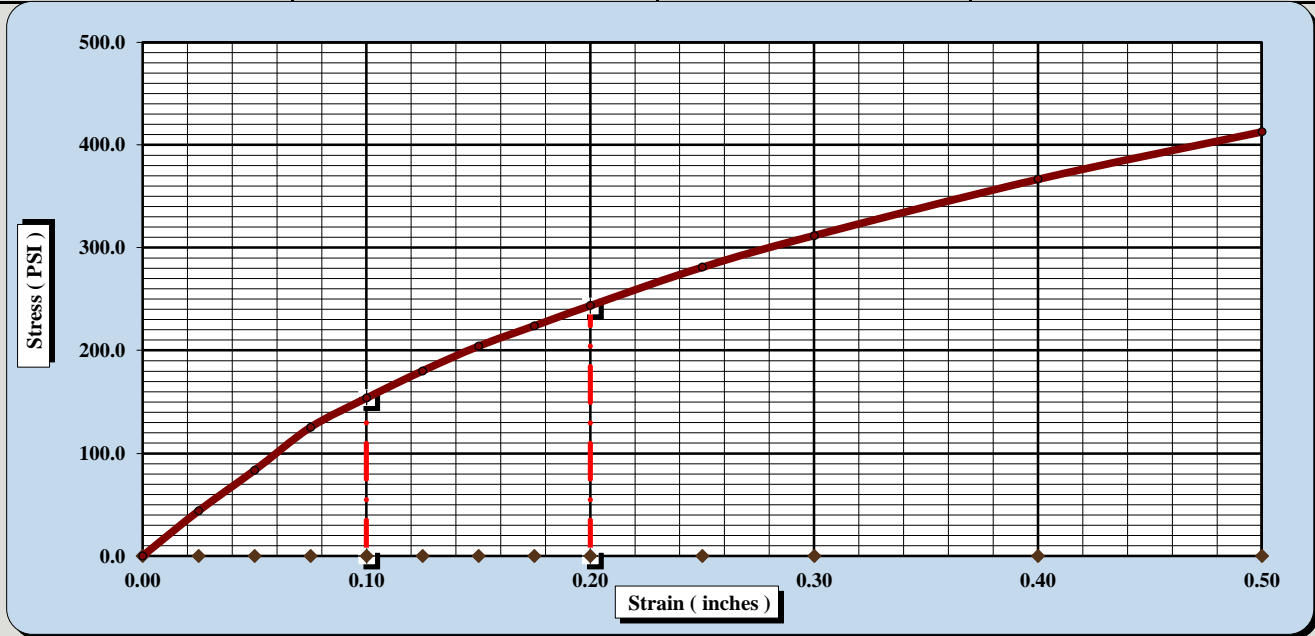
AASHTO T 193

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

Project #:	210986	Report Date:	1/22/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/3-21/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 5 OES (A)
Location:	-L- 699+70 SB OES	Offset:	NI
		Elevation:	0-39"
Sample Description:	A-7-6 (5)		

AASHTO T99	Method A	Maximum Dry Density:	116.4	PCF	Optimum Moisture Content:	13.0%
					% Retained on the 3/4" sieve:	0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	15.4	CBR at 0.2 in.	16.2
		CBR at 0.1 in.	15.4
		CBR at 0.2 in.	16.2



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	56		
Initial Dry Density (PCF)	117.4	Final Dry Density (PCF)	117.1
Moisture Content of the Compacted Specimen	13.0%	Moisture Content (top 1" after soaking)	12.4%
Percent Compaction	100.9%	Percent Swell	0.0%

Soak Time:	96 Hrs.	Surcharge Weight	10.0
Liquid Limit	41	Surcharge Wt. per sq. Ft.	50.9
		Assumed Apparent Relative Density	2.600
		Plastic Index	21

Notes/Deviations/References:

Test Performed as Modified by NCDOT

Vlad Mitchev

Technical Responsibility

Project Manager

Position

Date

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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



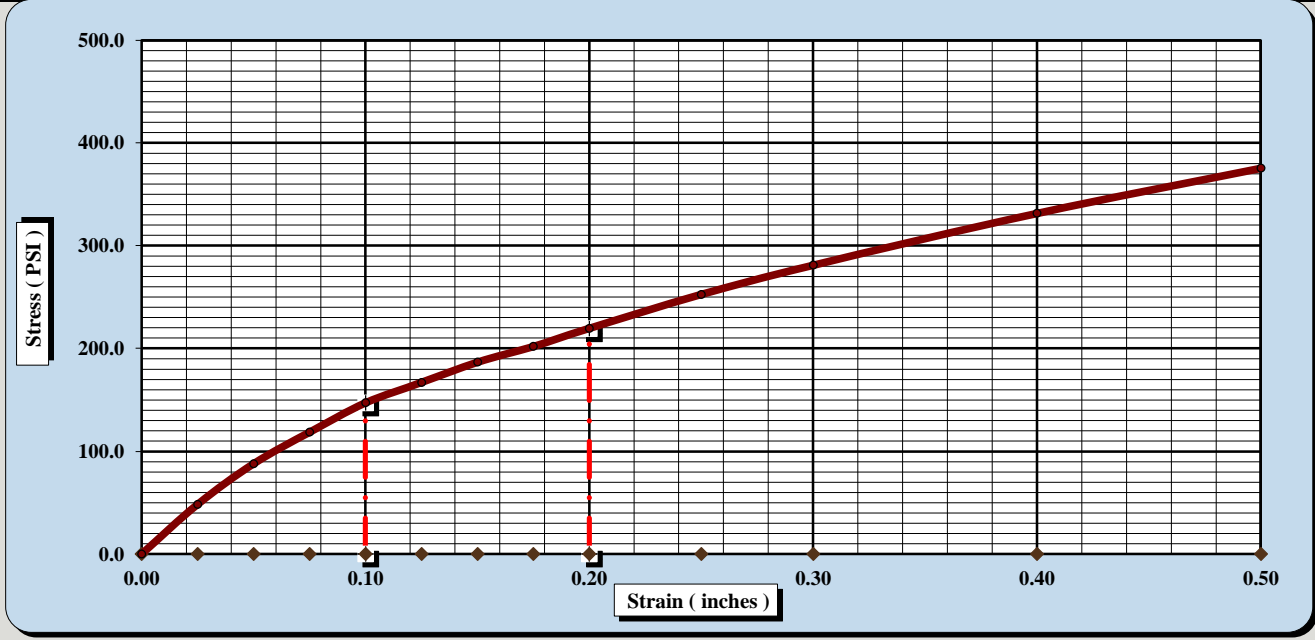
AASHTO T 193

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

Project #:	210986	Report Date:	1/22/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	1/3-21/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 5 OES (B)
Location:	-L- 699+70 SB OES	Offset:	NI
		Elevation:	0-39"
Sample Description:	A-7-6 (5)		

AASHTO T99	Method A	Maximum Dry Density:	116.4 PCF	Optimum Moisture Content:	13.0%
				% Retained on the 3/4" sieve:	0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	14.7	CBR at 0.2 in.	14.6
		CBR at 0.1 in.	14.7
		CBR at 0.2 in.	14.6



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	56		
Initial Dry Density (PCF)	115.9	Final Dry Density (PCF)	115.9
Moisture Content of the Compacted Specimen	13.0%	Moisture Content (top 1" after soaking)	14.7%
Percent Compaction	99.6%	Percent Swell	0.0%

Soak Time:	96 Hrs.	Surcharge Weight	10.0
Liquid Limit	41	Surcharge Wt. per sq. Ft.	50.9
		Assumed Apparent Relative Density	2.600

Notes/Deviations/References:

Test Performed as Modified by NCDOT

Vlad Mitchev

Technical Responsibility

Signature

Project Manager

Position

Date

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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



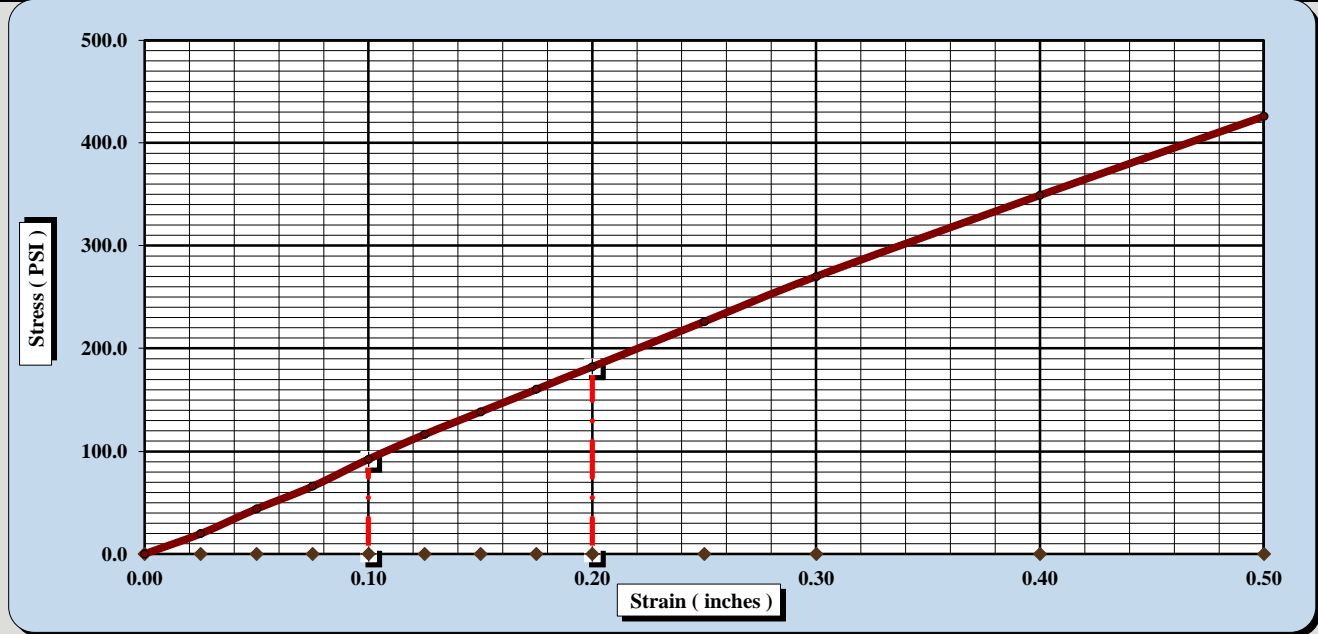
AASHTO T 193

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

Project #:	210986	Report Date:	1/2/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	12/12-1/2/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 3 OES (A)
Sample Date:	12/11/19		
Location:	-L- 895+20 SB OES	Offset:	NI
Elevation:	0-48"		
Sample Description:	A-6 (4)		

AASHTO T99	Method A	Maximum Dry Density:	115.5 PCF	Optimum Moisture Content:	13.4%
				% Retained on the 3/4" sieve:	0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	9.2	CBR at 0.2 in.	12.1
CBR at 0.1 in.	9.2	CBR at 0.2 in.	12.1



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	56		
Initial Dry Density (PCF)	116.9	Final Dry Density (PCF)	116.6
Moisture Content of the Compacted Specimen	13.4%	Moisture Content (top 1" after soaking)	14.1%
Percent Compaction	101.2%	Percent Swell	0.0%

Soak Time:	96 Hrs.	Surcharge Weight	10.0
Liquid Limit	38	Surcharge Wt. per sq. Ft.	50.9
		Plastic Index	20
		Assumed Apparent Relative Density	2.600

Notes/Deviations/References:

Test Performed as Modified by NCDOT

Vlad Mitchev

Technical Responsibility

Project Manager

Position

Date

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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



AASHTO T 193

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

Project #:	210986	Report Date:	1/2/20
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	12/12-1/2/20
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 3 OES (B)
		Sample Date:	12/11/19
Location:	-L- 895+20 SB OES	Offset:	NI
		Elevation:	0-48"
Sample Description:	A-6 (4)		

AASHTO T99	Method A	Maximum Dry Density:	115.5 PCF	Optimum Moisture Content:	13.4%
				% Retained on the 3/4" sieve:	0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	8.1	CBR at 0.1 in.	8.1
		CBR at 0.2 in.	10.7



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	56		
Initial Dry Density (PCF)	116.2	Final Dry Density (PCF)	116.0
Moisture Content of the Compacted Specimen	13.5%	Moisture Content (top 1" after soaking)	14.3%
Percent Compaction	100.6%	Percent Swell	0.1%

Soak Time:	96 Hrs.	Surcharge Weight	10.0
Liquid Limit	38	Surcharge Wt. per sq. Ft.	50.9
		Assumed Apparent Relative Density	2.600

Notes/Deviations/References:

Test Performed as Modified by NCDOT

Vlad Mitchev

Technical Responsibility

Signature

Project Manager

Position

Date

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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



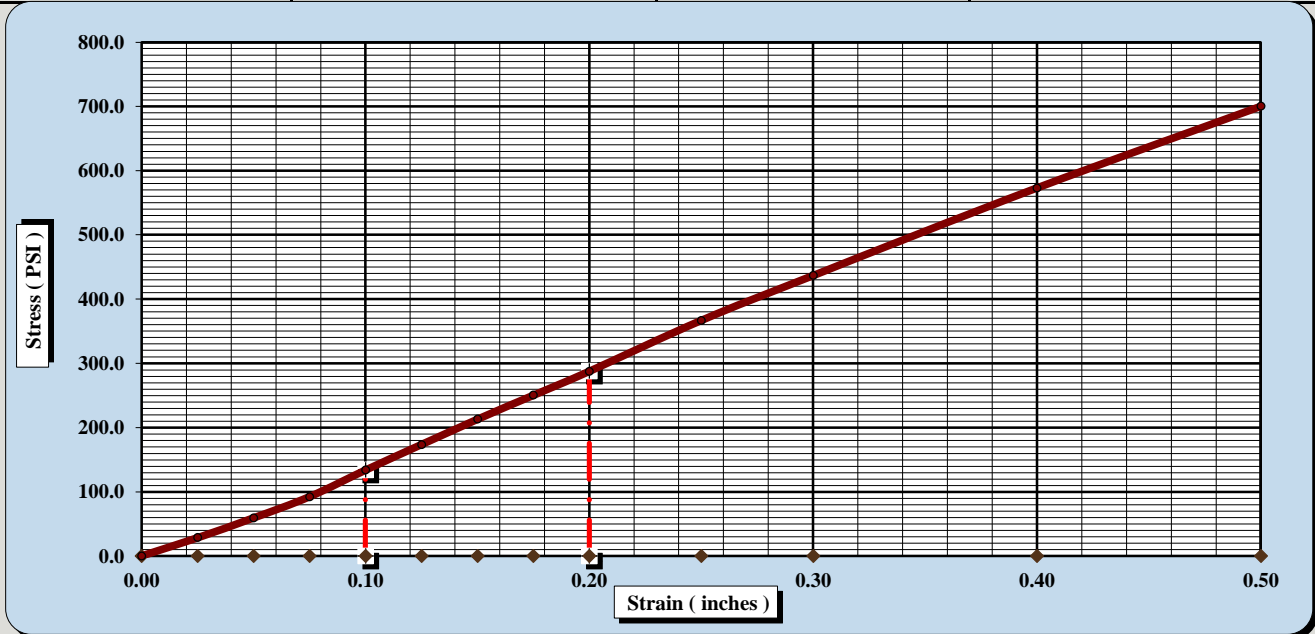
AASHTO T 193

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

Project #:	210986	Report Date:	12/28/19
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	12/6-28/19
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 1 OES (A)
		Sample Date:	12/6/19
Location:	-L- 1116+00 SB OES	Offset:	NI
		Elevation:	0-42"
Sample Description:	A-2-4		

AASHTO T99	Method A	Maximum Dry Density:	120.7	PCF	Optimum Moisture Content:	10.9%
					% Retained on the 3/4" sieve:	0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	13.4	CBR at 0.2 in.	19.2
CBR at 0.1 in.	13.4	CBR at 0.2 in.	19.2



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	56		
Initial Dry Density (PCF)	122.5	Final Dry Density (PCF)	122.1
Moisture Content of the Compacted Specimen	11.0%	Moisture Content (top 1" after soaking)	11.9%
Percent Compaction	101.5%	Percent Swell	0.1%

Soak Time:	96 Hrs.	Surcharge Weight	10.0
Liquid Limit	19	Surcharge Wt. per sq. Ft.	50.9
		Plastic Index	4
		Apparent Relative Density	2.600

Notes/Deviations/References:

Test Performed as Modified by NCDOT

Vlad Mitchev

Technical Responsibility

Project Manager

Position

Date

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CBR (CALIFORNIA BEARING RATIO) OF LABORATORY COMPACTED SOIL



AASHTO T 193

S&ME, Inc. Charlotte: 9751 Southern Pine Boulevard, Charlotte, NC 28273

Project #:	210986	Report Date:	12/28/19
Project Name:	I-95 from North of NC 211 to South of NC 20	Test Date(s)	12/6-28/19
Client Name:	NCDOT		
Client Address:	Raleigh, NC		
Boring #:	NI	Sample #:	BULK 1 OES (B)
		Sample Date:	12/6/19
Location:	-L- 1116+00 SB OES	Offset:	NI
		Elevation:	0-42"
Sample Description:	A-2-4		

AASHTO T99	Method A	Maximum Dry Density:	120.7	PCF	Optimum Moisture Content:	10.9%
					% Retained on the 3/4" sieve:	0.0%

Uncorrected CBR Values		Corrected CBR Values	
CBR at 0.1 in.	12.5	CBR at 0.2 in.	18.3
		CBR at 0.1 in.	12.5
		CBR at 0.2 in.	18.3



CBR Sample Preparation:

The entire gradation was used and compacted in a 6" CBR mold in accordance with

Before Soaking		After Soaking	
Compactive Effort (Blows per Layer)	56		
Initial Dry Density (PCF)	122.5	Final Dry Density (PCF)	122.5
Moisture Content of the Compacted Specimen	10.9%	Moisture Content (top 1" after soaking)	11.9%
Percent Compaction	101.5%	Percent Swell	0.1%

Soak Time:	96 Hrs.	Surcharge Weight	10.0
Liquid Limit	19	Surcharge Wt. per sq. Ft.	50.9
		Plastic Index	4
		Apparent Relative Density	2.600

Notes/Deviations/References:

Test Performed as Modified by NCDOT

Vlad Mitchev

Technical Responsibility

Project Manager

Position

Date

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