

REFERENCE: B-5303

PROJECT: 46017

SEE SHEET 3 FOR PLAN SHEET LAYOUT AT TIME OF INVESTIGATION

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

**ROADWAY
 SUBSURFACE INVESTIGATION**

COUNTY DUPLIN
 PROJECT DESCRIPTION BRIDGE NO. 45 ON SR 1162
OVER ISLAND CREEK

INVENTORY

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5303	1	5

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:
- 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.
 - 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.K. CRENSHAW
J.M. EDMONSON

INVESTIGATED BY J.K. CRENSHAW
 DRAWN BY J.K. CRENSHAW
 CHECKED BY D.N. ARGENBRIGHT
 SUBMITTED BY D.N. ARGENBRIGHT
 DATE JULY 2016



DocuSigned by:
Tyler Bottoms 11/16/2016
 48A2D3BD08CF4A6
 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

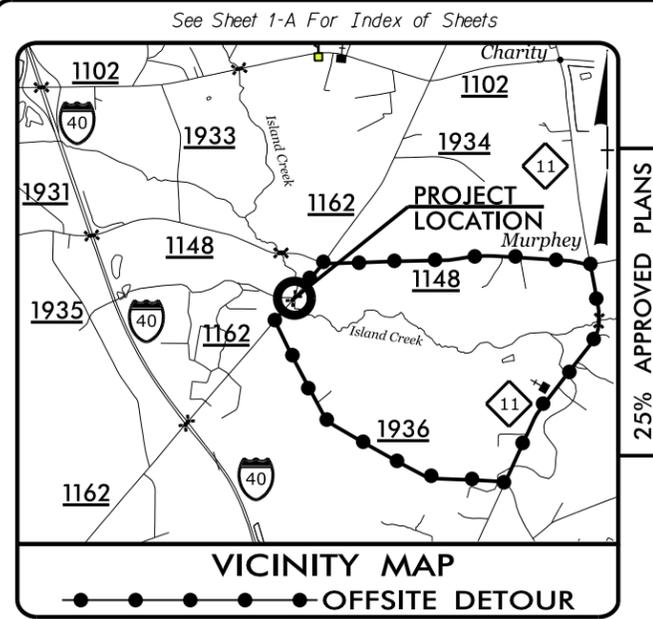
Table with multiple columns: SOIL DESCRIPTION, GRADATION, ROCK DESCRIPTION, TERMS AND DEFINITIONS, SOIL LEGEND AND AASHTO CLASSIFICATION, MINERALOGICAL COMPOSITION, COMPRESSIBILITY, PERCENTAGE OF MATERIAL, GROUND WATER, MISCELLANEOUS SYMBOLS, RECOMMENDATION SYMBOLS, ABBREVIATIONS, EQUIPMENT USED ON SUBJECT PROJECT, FRACTURE SPACING, BEDDING, INDURATION, PLASTICITY, COLOR.

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-5303	3	5
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
46017.1.1	BRZ-1162(7)	PE	

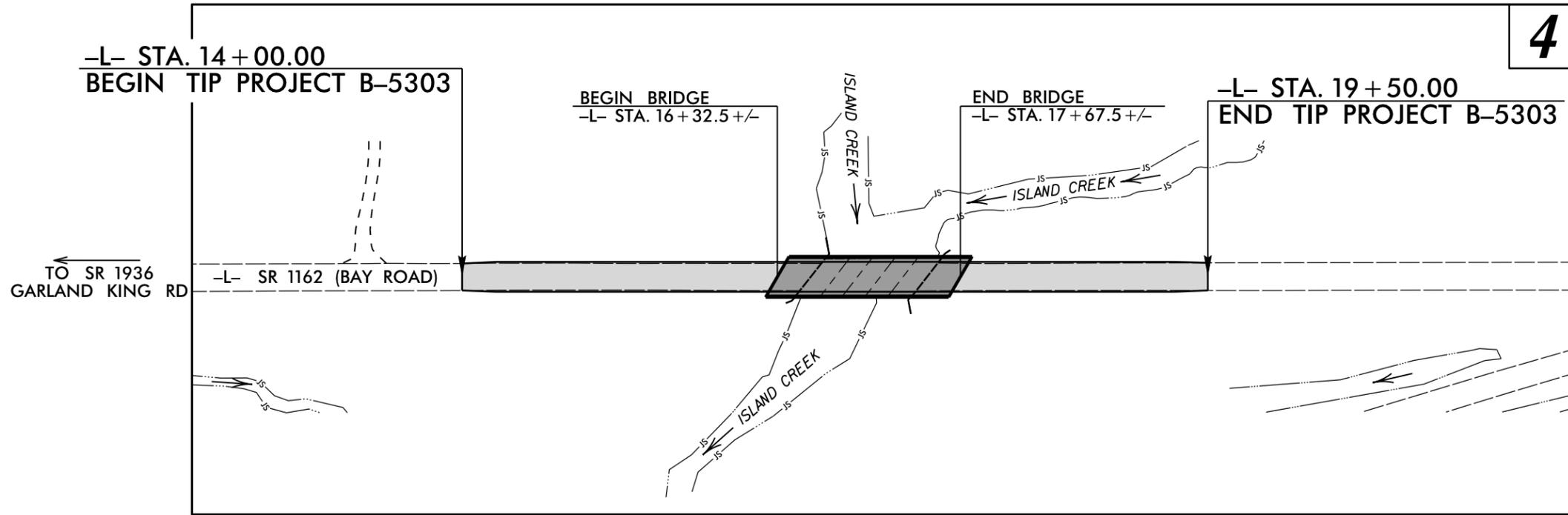
STATE OF NORTH CAROLINA
 DIVISION OF HIGHWAYS
DUPLIN COUNTY

**LOCATION: REPLACE BRIDGE NO. 45 OVER ISLAND CREEK
 ON SR 1162 (BAY ROAD)**

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



TIP PROJECT: B-5303

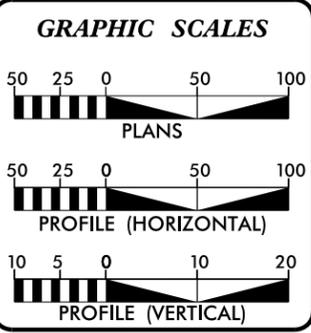


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CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD ____.
 THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES.

INCOMPLETE PLANS
 DO NOT USE FOR R/W ACQUISITION
 DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED

CONTRACT:



DESIGN DATA

ADT 2018 =	845
ADT 2038 =	1030
K =	10 %
D =	55 %
T =	6 % *
V =	60 MPH
* TTST=1% DUAL=5%	
FUNC CLASS =	
MINOR COLLECTOR	
SUB-REGIONAL TIER	

PROJECT LENGTH

LENGTH ROADWAY TIP PROJECT B-5303	=	0.078 mile +/-
LENGTH STRUCTURES TIP PROJECT B-5303	=	0.026 mile +/-
TOTAL LENGTH TIP PROJECT B-5303	=	0.104 mile +/-

Prepared For:
DIVISION OF HIGHWAYS
 1000 Birch Ridge Dr., Raleigh NC, 27610

By:
TGS ENGINEERS
 706 HILLSBOROUGH ST
 SUITE 200
 RALEIGH, NC 27603

PH (919) 773-8887
 CORP. LICENSE NO.: C-0275

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
 JUNE 16, 2017

LETTING DATE:
 JUNE 19, 2018

V. MARCUS LOWERY, PE
 PROJECT ENGINEER

TRAVIS COOK, EI
 PROJECT DESIGN ENGINEER

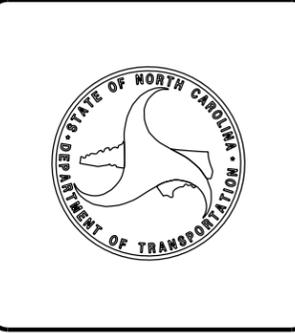
GARY LOVERING, PE
 PROJECT ENGINEER
 NCDOT ROADWAY DESIGN

HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.



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PAT McCRORY
Governor
NICHOLAS J. TENNYSON
Secretary

Physiography and Geology

This project corridor is located within the Coastal Plain Physiographic Province. Topography along the project is nearly flat to gently sloping. Natural ground elevations range from 34± feet in the bed of Island Creek to 48± feet above sea level along the existing SR 1162 embankment.

Surficial soils in this area are generally classified as alluvial.

Ground Water

Ground water data was collected in June 2016, during a time of normal precipitation. Ground water elevations ranged from 41± to 43± feet above sea level.

Soils

Soils within this project area have been divided into two categories: roadway embankment and alluvial.

Roadway embankment soils were encountered along existing SR 1162. These soils are comprised of 1± to 6± feet of medium dense sand (A-2-4) and sandy clay (A-6).

Alluvial soils were encountered beneath the roadway embankment and in the vicinity of the stream channel. They are comprised of 0.5± or more feet of medium dense sand (A-2-4). Some alluvial soils were identified in the field as containing moderate amounts of organic material.

July 13, 2016

STATE PROJECT: 46017.1.1 (B-5303)
F.A. PROJECT: BRZ-1162(7)
COUNTY: Duplin
DESCRIPTION: Bridge No. 45 on SR 1162 over Island Creek
SUBJECT: Geotechnical Inventory

Project Description

This project is located in Duplin County at the existing bridge on SR 1162 over Island Creek. Proposed construction consists of widening the existing bridge approach. This geotechnical investigation was confined to the areas of proposed construction.

Fieldwork for this project was conducted during June 2016. Hand auger borings were completed and representative soil samples were collected for visual classification in the field.

The following alignments were investigated. No plans, profiles or cross sections will be included in this report.

<u>Line</u>	<u>Station(±)</u>
-L-	14+00 to 19+50

Areas of Special Geotechnical Interest

- 1) The entire project was found to exhibit seasonal high ground water.
- 2) Organic sediments were encountered within the proposed construction limits at the following stations.

<u>Line</u>	<u>Station(±)</u>
-L-	15+25 to 16+40



