



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

October 8, 2019

STATE PROJECT: 67039.1.1 (BR-0039)
FEDERAL PROJECT: N/A
COUNTY: NASH

DESCRIPTION: Bridge No. 224 on Watson Seed Farm Road over I-95

SUBJECT: Geotechnical Report – Inventory

The Geotechnical Engineering Unit has completed a subsurface investigation for this project and presents the following inventory.

Project Description

This project consists of replacing Bridge No. 224 on Watson Seed Farm Road over I-95.

A geotechnical investigation was conducted during September of 2019. Four mud rotary borings and two core borings were performed for Bridge No. 224 by the Geotechnical Engineering Unit. Representative soil samples were collected for visual classification in the field.

The following alignment, totaling .289 miles, was investigated.

<u>Line</u>	<u>Stations</u>
-L-	18+50 to 37+58

Physiography and Geology

The project is located outside the city limits of Castalia, and within the Coastal Plain physiographic province of North Carolina. The site consists of Tertiary-aged sands of the Coastal Plain. The topography is mostly flat. The rural widening project area consists of agricultural fields, sparse homes, and wooded areas.

Soils Properties

Soils encountered during this investigation are roadway embankment and Coastal Plain.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
GEOTECHNICAL ENGINEERING UNIT
1589 MAIL SERVICE CENTER
RALEIGH, NC 27699-1589

Telephone: (919) 707-6850
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
1020 BIRCH RIDGE DRIVE
RALEIGH, NC 27610

Roadway Embankment soils are present throughout the entire project. These soils primarily consist of orange-brown and gray, moist, medium dense, silty sand (A-2-4) and orange-brown, moist, stiff to very stiff, sandy clay (A-6).

Coastal Plain soils are also present throughout the entire project. These soils are characterized by light to dark gray, brown and green, moist to saturated, loose to dense silty (A-2-4) and coarse sand (A-1-b) and very soft to medium stiff, sandy clay (A-6).

Groundwater

Groundwater measurements were taken in September of 2019 during below average rainfall conditions. Groundwater was present in all but one boring, ranging from 31.8 feet to 9.5 feet from the ground surface.

Respectively Submitted,



DocuSigned by:

Nicholas O'Neil Moore

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10/10/2019

Nick Moore, LG
Project Geological Engineer