



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

August 13, 2019

STATE PROJECT: 67113.1.1 (BR-0113)
FEDERAL PROJECT: N/A
COUNTY: HALIFAX

DESCRIPTION: Replace Bridge 410115 on SR 1601 over Rocky Swamp

SUBJECT: Geotechnical Report – Inventory

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

Project Description

This project consists of widening of existing Sledge Road (SR 1601) and replacing the existing structure. The types of work include grading, drainage, paving, and structure. The structure inventory will be submitted in a separate report.

A geotechnical investigation was conducted during July of 2019. Borings done during structure investigation were used to create the roadway inventory. Six SPT borings were performed by the Geotechnical Engineering Unit. Representative soil samples were collected for visual classification in the field.

The following alignment, totaling 0.112 miles, was investigated.

<u>Line</u>	<u>Stations</u>
-L-	13+38 to 19+30

Physiography and Geology

The project is located 13.7 miles northwest of the town of Enfield and within the Eastern Slate Belt. Soils consist of residual soils derived from the underlying crystalline rock. The terrain is rolling hills and farmlands. The widening project mostly consists of woods and swamps areas.

Soils Properties

Soils encountered during this investigation are roadway embankment, residual, and alluvial.

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ENTRANCE B-2
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RALEIGH NC

Roadway Embankment soils are present throughout the project. These soils primarily consist of orange-brown, dry to moist, very loose to loose, silty sand (A-2-4).

Alluvial soils are anticipated to be found throughout the entire project. These soils consist of gray and tan, saturated, very loose to loose, silty sand (A-2-4) and coarse sand (A-1-b), and gray to dark gray, soft to stiff, moist to saturated, sandy silt (A-4) and sandy clay (A-6).

Undivided Coastal Plain soils were encountered throughout the project. These soils are characterized by tan, brown, and orange, moist to saturated, very loose to loose, silty sand (A-2-4).

Groundwater

Groundwater measurements were taken in May of 2019 during average rainfall conditions. Groundwater measurements ranged from 6.0 to 8.5 ft from the ground surface.