STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY
GOVERNOR

ANTHONY J. TATA
SECRETARY

February 24, 2014

STATE PROJECT: 33217.1.1 (B-3673)
COUNTY: McDowell
DESCRIPTION: Replacement of Bridge No. 17 over Second Broad River on US 221

SUBJECT: Geotechnical Report – Inventory

PROJECT DESCRIPTION

This project includes the approaches to the proposed new location of bridge number 17 on US 221. The proposed relocation consists of minor vertical and horizontal alignment changes along existing. It is anticipated that existing culverts and cross-pipes will be extended. The terrain is mountainous and riverine, but does not include unusually large cuts or fills. The following alignments were investigated:

-L- Station: 12+16.15– 39+12.16

The total length of lines investigated by field reconnaissance and drilling is .51 miles.

AREAS OF SPECIAL GEOTECHNICAL INTEREST

Crystalline Rock: Weathered to crystalline rock should be expected within 6' of grade in the following Station intervals:

-L-
Sta. 17+00 – 29+00

SOIL PROPERTIES

Soils on the project are derived from biotite gneiss rock (Ybgg) encountered within the project corridor. The dominant alluvial, residual and saprolitic soil types encountered are

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RALEIGH NC 27699-1589

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LOCATION:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC

micaceous silty sand, silty sand (AASHTO A-4). Weathered and crystalline rock may require blasting and is unlikely to produce durable stone for use on the project.

Respectfully submitted,

Matt Mullen PE

Matt Mullen. PE
Project Geological Engineer