



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

March 14, 2012

Addendum No. 2

Contract No.: C 202942
TIP No.: 17BP.3.R.26
Counties: Brunswick and Pender
Project Description: Replacement of 7 Bridges in Brunswick County, 2 Bridges in Pender County

RE: Addendum No. 2 to Final RFP

March 20, 2012 Letting

To Whom It May Concern:

Reference is made to the Final Request for Proposals dated February 10, 2012 recently furnished to you on the above project. We have since incorporated changes, and have attached a copy of Addendum No. 2 for your information. Please note the sole revision has been highlighted in gray and is as follows:

Page No. 56 of the *Geotechnical Engineering Scope of Work* has been revised. Please void Page No. 56 in your proposal and staple the revised Page No. 56 thereto.

If you have any questions or need additional information, I can be reached by telephone at (919) 707-6900.

Sincerely,

A handwritten signature in black ink, appearing to read "R.A. Garris".

R.A. Garris, P.E.
Contract Officer

RAG/rdr

cc: Mr. Victor Barbour, PE
Mr. Rodger Rochelle, PE
Ms. Teresa Bruton, PE

Ms. Karen Fussell, PE
Ms. Virginia Mabry

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slopes, and construction vibrations. Submit the proposed remedial measures to the Geotechnical Engineering Unit for review and acceptance prior to incorporation.

The Design-Build Team shall be responsible for any damage or claim caused by construction, including damage caused by vibration (see 2012 *Standard Specifications for Roads and Structures* Article 107-14). The Design-Build Team shall be responsible for deciding what, if any, pre and post-construction monitoring and inventories need to be conducted to satisfy their liability concerns. Any monitoring and inventory work shall be performed by a qualified private engineering firm experienced in the effects of construction on existing structures.

The geotechnical firm that prepared the foundation designs shall review and approve all pile driving hammers and drilled pier construction sequences. After the geotechnical firm has approved these submittals, the Design-Build Team shall submit to the NCDOT for review prior to beginning construction.

Perform hammer approvals with GRLWEAP Version 2002 or later and in accordance with the NCDOT LRFD Driven Pile Foundation Design Policy. Provide pile driving inspection charts or tables for all approved pile hammers.

Limit driving stresses in accordance with the AASHTO LRFD *Bridge Design Specifications*. If a tip elevation is noted on the plans, drive piles to the minimum required driving resistance and tip elevation.

The minimum required driving resistance is equal to the factored resistance noted on the plans divided by a resistance factor plus any additional resistance for downdrag and scour if applicable. When performing PDA testing in accordance with the AASHTO LRFD Bridge Design Specifications, the resistance factor is 0.75. Otherwise, the resistance factor for the wave equation analysis is 0.60.

Otherwise, drive piles to the minimum required driving resistance and a penetration into natural ground of at least 10 ft. Unless otherwise approved, stop driving piles when refusal is reached. Refusal is defined as 240 blows per foot or any equivalent set.

PDA testing is not required unless the proposed Required Driving Resistance of HP12x53 piles exceed 350 kips, the proposed Required Driving Resistance of HP14x73 piles exceed 500 kips, or if a pile type other than HP12x53 or HP14x73 is used. Otherwise, for each permanent bridge that includes driven pile bents or driven pile footings, perform a minimum of one (1) PDA test (dual bridges are counted as one structure) for each bridge. Perform Pile Driving Analyzer (PDA) testing using a NCDOT prequalified company to develop pile driving inspection charts or tables. Additional PDA tests may be required based upon the AASHTO LRFD Bridge Design Specifications. Provide additional PDA testing for any revisions to pile type, size or hammer previously approved. The locations of specific piles to be tested must be accepted by the NCDOT prior to any PDA test. Perform PDA tests in accordance with ASTM D 4945-89, Standard Test Method for High Strain Dynamic Testing of Piles and this scope of work.