STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

ROY COOPER
GOVERNOR

JAMES H. TROGDON, III
SECRETARY

August 8, 2017

Addendum No. 2

Contract No.:	C204003
TIP No.:	R-4467
County:	Perquimans
Project Description:	US 17 Business / NC 37 (North Church Street) from south of the Perquimans River Bridge to north of NC 37 (Winfall Boulevard); including the replacement of Bridge No. 8
RE:	Addendum No. 2 to Final RFP

November 21, 2017 Letting

To Whom It May Concern:

Reference is made to the Final Request for Proposals Including Addendum No. 1 dated July 18, 2017 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 that all revisions have been highlighted in gray and are as follows:

The first and second pages of the *Table of Contents* have been revised. Please void the first and second pages in your proposal and staple the revised first and second pages thereto.

Page No. 5 of the *Submittal of Quantities, Fuel Base Index Price and Opt-Out Option Project Special Provision* has been revised. Please void Page No. 5 in your proposal and staple the revised Page No. 5 thereto.

Page No. 13 of the *Schedule of Estimated Completion Progress Project Special Provision* has been revised. Please void Page No. 13 in your proposal and staple the revised Page No. 13 thereto.

Page No. 44 of the *Price Adjustments for Asphalt Binder Project Special Provision* has been revised. Please void Page No. 44 in your proposal and staple the revised Page No. 44 thereto.

Page No. 97 of the *General Section* has been revised. Please void Page No. 97 in your proposal and staple the revised Page No. 97 thereto.

Page Nos. 121, 122, 123, and 125 of the *Structures Scope of Work* have been revised. Please void Page Nos. 121, 122, 123, and 125 in your proposal and staple the revised Page Nos. 121, 122, 123, and 125 thereto.

Mailing Address:
NC DEPARTMENT OF TRANSPORTATION
CONTRACT STANDARDS AND
DEVELOPMENT UNIT
1591 MAIL SERVICE CENTER
RALEIGH, NC 27699-1591

Telephone: (919) 707-6900
Fax: (919) 250-4119
Customer Service: 1-877-368-4968

Website: www.ncdot.gov

Location:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH, NC 27610

Page No. 129 of the *Geotechnical Engineering Scope of Work* has been revised. Please void Page No. 129 in your proposal and staple the revised Page No. 129 thereto.

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

Sincerely,

R. E. Davenport, Jr., PE
State Contract Officer

RED/dth

cc: Bobby Lewis, PE
Jerry Jennings, PE
Teresa Bruton, PE
Ron McCollum, PE
David Hering, LG, PE
File

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STANDARD SPECIAL PROVISIONS

SUBMITTAL OF QUANTITIES, FUEL BASE INDEX PRICE AND OPT-OUT OPTION

1/23/14 DB1 G43

(A) **Submittal of Quantities**

Submit quantities on the *Fuel Usage Factor Chart and Estimate of Quantities* sheet, located in the back of this RFP, following the Itemized Proposal Sheet.

The Design-Build Team shall prepare an Estimate of Quantities that they anticipate incorporating into the completed project and upon which the Price Proposal was based. The quantity breakdown shall include all items of work that appear in the *Fuel Usage Factor Chart and Estimate of Quantities* sheet. Only those items of work which are specifically noted in the *Fuel Usage Factor Chart and Estimate of Quantities* sheet will be subject to fuel price adjustments.

Submittal The submittal shall be signed and dated by an officer of the Design-Build Team. The information shall be copied and submitted in a separate sealed package with the outer wrapping clearly marked "Fuel Price Adjustment" and shall be delivered at the same time and location as the Technical and Price Proposal. The original shall be submitted in the Price Proposal.

Trade Secret Information submitted on the *Fuel Usage Factor Chart and Estimate of Quantities* sheet will be considered "Trade Secret" in accordance with the requirements of G.S. 66-152(3) until such time as the Price Proposal is opened.

(B) **Base Index Price**

The Design-Build Team's Estimate of Quantities will be used on the various partial payment estimates to determine fuel price adjustments. The Design-Build Team shall submit a payment request for quantities of work completed based on the work completed for that estimate period. The quantities requested for partial payment shall be reflective of the work actually accomplished for the specified period. The Design-Build Team shall certify that the quantities are reasonable for the specified period. The base index price for DIESEL #2 FUEL is **$1.6761** per gallon.

(C) **Opt Out of Fuel Price Adjustment**

If the Design-Build Team elects not to pursue reimbursement for Fuel Price Adjustments, a quantity of zero shall be entered for all quantities in the *Fuel Usage Factor Chart and Estimate of Quantities* sheet and the declination box shall be checked. Failure to complete this form will mean that the Design-Build Team is declining the Fuel Price Adjustments for this project.

Transportation's schedule of estimated completion progress for this project, as required by that Standard Special Provision, is as follows:

Fiscal Year	Progress (% of Dollar Value)
2018 (07/01/17 – 06/30/18)	5% of Total Amount Bid
2019 (07/01/18 – 06/30/19)	10% of Total Amount Bid
2020 (07/01/19 – 06/30/20)	49% of Total Amount Bid
2021 (07/01/20 – 06/30/21)	30% of Total Amount Bid
2022 (07/01/21 – 06/30/22)	6% of Total Amount Bid

The Design-Build Team shall also furnish its own progress schedule in accordance with Article 108-2 of the 2012 *Standard Specifications for Roads and Structures*. Any acceleration of the progress as shown by the Design-Build Team's progress schedule over the progress as shown above shall be subject to the approval of the Engineer.

MINORITY BUSINESS ENTERPRISE AND WOMEN BUSINESS ENTERPRISE

(10-16-07)(Rev. 11-30-16) 102-15(J) DB1 G66

Description

The purpose of this project special provision is to carry out the North Carolina Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts financed in whole or in part with State funds.

Definitions

Additional MBE / WBE Subcontractors - Any MBE / WBE submitted at the time of bid that will not be used to meet either the MBE or WBE goal. No submittal of a Letter of Intent is required, unless the additional participation is used for banking purposes.

Committed MBE / WBE Subcontractor - Any MBE / WBE submitted at the time of bid that is being used to meet either the MBE or WBE goal by submission of a Letter of Intent. Or any MBE or WBE used as a replacement for a previously committed MBE or WBE firm.

Contract Goals Requirement - The approved MBE and WBE participation at time of award, but not greater than the advertised contract goals for each.

Goal Confirmation Letter - Written documentation from the Department to the Proposer confirming the Design-Build Team's approved, committed MBE and WBE participation along with a listing of the committed MBE and WBE firms.

Manufacturer - A firm that operates or maintains a factory or establishment that produces on the premises, the materials or supplies obtained by the Design-Build Team.

MBE Goal - A portion of the total contract, expressed as a percentage, that is to be performed by committed MBE subcontractor(s).

- Reinforced Concrete Pipe class and the appropriate gage thickness for Corrugated Aluminum Alloy Pipe and Aluminized Corrugated Steel Pipe shall be selected based on fill height.

- Site specific conditions may limit a particular material beyond what is identified in this Project Special Provision. These conditions include, but are not limited to, abrasion, environmental, soil resistivity and pH, high ground water and special loading conditions. The Design-Build Team shall determine if additional restrictions are necessary.

- Slope drains shall be Corrugated Aluminum Alloy Pipe, Corrugated Polyethylene Pipe (HDPE Pipe) or Polyvinyl-Chloride Pipe (PVC Pipe).

- Transverse median drains, storm drainage system pipes and open-ended cross drains shall be Reinforced Concrete Pipe unless the pipe slope is greater than 10%, in which case the pipe shall be Corrugated Aluminum Alloy Pipe.

PRICE ADJUSTMENTS FOR ASPHALT BINDER

(9-1-11) DB6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the 2012 *Standard Specifications for Roads and Structures.*

When it is determined that the monthly selling price of asphalt binder on the first business day of the calendar month during which the last day of the partial payment period occurs varies either upward or downward from the Base Price Index, the partial payment for that period will be adjusted. The partial payment will be adjusted by adding the difference (+ or -) of the base price index subtracted from the monthly selling price multiplied by the total theoretical quantity of asphalt binder authorized for use in the plant mix placed during the partial payment period involved.

The base price index for asphalt binder for plant mix is $**366.00** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on August 1, 2017.

PRICE ADJUSTMENTS - ASPHALT CONCRETE PLANT MIX

(9-1-11) (Rev. 3-13-13) DB6 R26

Revise the 2012 *Standard Specifications for Roads and Structures* as follows:

Page 6-18, Article 609-11 and Page 6-35, Article 610-14

Add the following paragraph before the first paragraph:

The "Asphalt Price" used to calculate any price adjustments set forth in this section shall be $40.00 per theoretical ton. This price shall apply for all mix types.

GENERAL

Technical and Price Proposals will be accepted until **4:00 p.m. Local Time on Thursday, October 26, 2017**, at the office of the State Contract Officer:

Mr. Ron Davenport, PE
Contract Standards and Development
1020 Birch Ridge Drive
Century Center Complex - Building B
Raleigh, NC 27610

No Proposals will be accepted after the time specified.

Proposals shall be submitted in two separate, sealed parcels containing the Technical Proposal in one and the Price Proposal in the other parcel.

TECHNICAL PROPOSAL - Hard Copies

Hard copies of the Technical Proposal shall be submitted in a sealed package. The outer wrapping shall clearly indicate the following information:

Technical Proposal – Hard Copies
Submitted By: (Design-Build Team's Name)
Design-Build Team Address
Contract Number C204003
TIP Number R-4467
Perquimans County
US 17 Business / NC 37 (North Church Street) from south of the Perquimans River Bridge to north of NC 37 (Winfall Boulevard); Including the Replacement of Bridge No. 8

If delivered by mail, the sealed envelope shall be placed in another sealed envelope and the outer envelope addressed to the State Contract Officer as stated in the Request for Proposals. The outer envelope shall also bear the statement "Technical Proposal for the Design-Build of State Highway Contract No. C204003".

Technical Proposal Requirements

14 Copies
8 ½ inch by 11 inch pages
No fold-out sheets allowed
Printed on one side only
Double-spaced
Font size 12
Minimal font size 10 is permissible within embedded tables, charts, or graphics. No more than 50 pages, excluding the introductory letter to Mr. Ron Davenport, P.E. (two-page maximum length) and the 11 inch by 17 inch appropriate plan sheets

STRUCTURES SCOPE OF WORK (8-8-17)

Throughout this RFP, references to the approach spans shall denote the sections of the bridge outside of the limits of the swing span section of the bridge.

Throughout this RFP, references to the bridge and / or the Perquimans River Bridge shall denote the entire bridge.

Throughout this RFP, references to the Minimum Technical Requirements shall denote the August 8, 2017 R-4467 Swing Span Minimum Technical Requirements document provided by the Department.

Project Details

The Design-Build Team shall design and construct a bridge to replace the existing bridge over the Perquimans River (Bridge No. 8). The replacement structure shall include a swing span section over the navigational channel of the Perquimans River and bridge the adjacent earthen causeway as shown on the Preliminary Roadway Plans provided by the Department.

The bridge typical section shall consist of two 12-foot travel lanes, minimum four-foot shoulders on both sides of the bridge, and a 5.5-foot raised concrete sidewalk along the east side of the bridge. On both sides of the bridge, the bridge rails shall be 42-inch Oregon Rail, per standard drawings BMR1011_12. However, the final bridge rail designs must be reviewed and endorsed by the State Historic Preservation Officer, as required by Section 106 commitments to be provided by the Department, prior to incorporation.

The bridge shall meet the accepted roadway typical section and grades. Bridge geometry (width, length, skew, span arrangement, etc.) shall be in accordance with the requirements herein and the Structure Recommendations and / or the Hydraulic Bridge Survey Report prepared by the Design-Build Team and accepted by the Department.

The minimum vertical clearance for the swing span section of the bridge shall be 12’-0” above the mean high water elevation. The minimum vertical clearance for the portions of the approach span sections of the bridge constructed (1) over the Perquimans River and (2) within the limits of proposed deck drains shall be 12’-0” above the mean high water elevation. Outside the aforementioned areas, the minimum vertical clearance of the bridge shall be 4’-0” above mean high water or final finished grade, whichever is higher.

The minimum vertical roadway clearance from the top surface of the roadway to the lowest element of the swing span truss, including but not limited to all non-structural attachments, shall be 15’-6”.

The Design-Build Team shall design and construct two six-foot wide by ten-foot long observation areas, level with the sidewalk, along the east side of the bridge. Unless noted otherwise elsewhere in this RFP, the observation areas shall be located at approximately the locations shown on the Preliminary Roadway Plans provided by the Department. If the

horizontal alignment required to obtain the minimum navigational channel depth prevents locating one of the aforementioned observation areas south of the swing span section of the bridge, in the Department's sole discretion, the Design-Build Team shall relocate that observation area to a location near the turtle log. The observation areas shall not be located between the traffic gates for the swing span.

The Design-Build Team shall design and construct aesthetic treatments on the bridge in accordance with the following requirements:

- Decorative street lighting and outriggers to support the decorative street lighting shall be provided along the approach spans in accordance with the Lighting Scope of Work found elsewhere in this RFP.

- Decorative treatments for the Bridge Tender's house shall be provided in accordance with the Section 106 commitments to be provided by the Department.

Unless noted otherwise elsewhere in this RFP or Minimum Technical Requirements, vessel impact design will not be required for the bridge substructure and superstructure.

The bridge foundations, bulkhead, and retaining walls shall be designed for scour as detailed in the Hydraulics and Geotechnical Scopes of Work found elsewhere in this RFP.

Waterline pile footings over open water shall be constructed such that the bottom of the pile footing is no higher than one foot above the mean low water elevation. Precast soffits used as falsework and forms for waterline footings shall meet all corrosion protection and reinforcing steel requirements. Precast soffits shall be sacrificial and shall not contribute to footing strength. All steel precast soffit supports to remain within the cast-in-place footing shall be epoxy coated.

The Design-Build Team shall not use concrete pile splices and buildups.

The NCDOT will make available a stockpile of 30" square prestressed concrete piles for the Design-Build Team's use. A list of pile lengths and quantities, as well as the pile detail sheet for the stockpile of 30" square prestressed concrete piles, will be provided to the Design-Build Teams. The use of the aforementioned prestressed concrete piles shall be in accordance with the following:

- The Design-Build Team may use a portion of the available piles for the construction of the R-4467 Project, pending review and acceptance of a design that adheres to all requirements. The purchase cost shall be deducted from monies due to the Design-Build Team at a cost of $26.00 per linear foot. The Department will deduct the cost of the concrete piles removed from the stockpile by the Design-Build Team from the lump sum price bid for the entire project in the first monthly payment after the concrete piles are removed.

- The Design-Build Team may take ownership of **all** the available concrete piles, at no cost to the Design-Build Team. Should the Design-Build Team choose to take ownership of

all the available piles, the Design-Build Team shall (1) accept ownership of all the piles at the date of Contract Execution and (2) remove all the piles from the current storage facility, or enter into an executed lease agreement with the current storage facility, no later than May 31, 2018. The Design-Build Team may use all or a portion of the piles to construct the R-4467 Project, pending review and acceptance of a design that adheres to all requirements.

- The Design-Build Team shall be responsible for all transportation, handling, loading and unloading costs, as well as all disposal costs should the concrete piles be unsuitable and / or not used for any reason. The Design-Build Team shall assume all risks associated with the use of the concrete piles. The Department will not honor any requests for additional contract time or compensation for any efforts associated with using the concrete piles, including but not limited to additional design effort, additional construction effort, and / or additional coordination and approvals.

- The Design-Build Team shall indicate in the Technical Proposal if they intend to (1) take ownership of **all** the concrete piles or (2) use a portion the concrete piles and the quantity to be used. If the Design-Build Team does not indicate their intention to take ownership of the concrete piles or use a portion of the concrete piles and the quantity to be used in the Technical Proposal, the concrete piles may not be available to the Design-Build Team; and the Department will not honor any requests for additional contract time or compensation due to their unavailability.

From the beginning of the existing timber bulkhead located on the southeast side of the existing bridge continuously to the most eastern of (1) the limits of the existing bulkhead or (2) the northeast Waddell property corner, the Design-Build Team shall design and construct a painted galvanized steel sheet pile bulkhead or a concrete sheet pile bulkhead. The aforementioned new bulkhead shall (1) be designed and constructed with cast-in-place coping and (2) be installed at the location of the existing bulkhead or in front of the existing bulkhead at an offset distance not to exceed two-feet. The top elevation of the new bulkhead shall be at or above the existing natural ground elevation behind the existing bulkhead. If the Design-Build Team elects to construct the new bulkhead in front of the existing bulkhead, the area between the new and existing bulkhead shall be backfilled with sand and / or soil. (Reference the *Painting Over Hot Dip Galvanized Surfaces* Project Special Provision found elsewhere in this RFP)

The number of expansion joints for the approach spans shall be kept to a minimum. Structures shall be integral if the criteria listed in the NCDOT *Structures Management Unit Manual* is met. When required by the criteria in Section 6.2.3.2 of the NCDOT *Structures Management Unit Manual*, the Design-Build Team shall use expansion joints, except Bullets 3 and 4 in the aforementioned Section shall apply to all roadways.

The Design-Build Team shall use one type of expansion joint throughout the approach spans. Expansion joints shall have a maximum four-inch joint opening and a minimum ¾" opening. Creep and shrinkage movement may be excluded from the total movement calculations. The Design-Build Team shall indicate the type and number of bridge expansion joints in the Technical Proposal. For joint requirements at the interface between the approach spans and the swing span, reference the Minimum Technical Requirements.

- Excluding high strength bolts, nuts and washers, all structural steel and steel components of the bridge shall be metalized with a 15 mil DFT of 99% Aluminum and 1.5mil DFT seal coating in accordance with the 2012 NCDOT *Standard Specifications for Roads and Structures* and the *Thermal Sprayed Coatings* Special Provision. Additionally, all metalized surfaces in contact with concrete shall be painted in accordance with the 2012 NCDOT *Standard Specifications for Roads and Structures*. All truss elements shall be considered exposed surfaces for repair, and shall have a uniform appearance, in the Department's sole discretion, prior to final acceptance of the project.

- All high strength bolts, nuts and washers shall be galvanized.

- Provide calcium nitrite [$Ca(NO_2)_2$] corrosion inhibitor and substitute fly ash and microsilica for a portion of the portland cement in accordance with rates and locations shown below:

	$Ca(NO_2)_2$ (gal/yd^3)	Microsilica	Fly Ash
Deck Slab	3.0	-	20% [1]
End Diaphragms	3.0	-	20% [1]
Bent Diaphragms	3.0	-	20% [1]
Median and Parapets	3.0	-	20% [1]
Prestressed Concrete Girders	3.0	-	-
Prestressed Concrete Piles	3.0	5% [2]	-
Interior Bent Caps	3.0	-	20% [1]
Bent Columns	3.0	5% [2]	20% [2]
Bent Footings	3.0	5% [2]	30% [2]
Precast Footing Soffits	3.0	5% [2]	30% [2]

[1] The rate of substitution shall be 1.2 pound of pozzolan per 1.0 pound of cement
[2] The rate of substitution shall be 1.0 pound of pozzolan per 1.0 pound of cement

Movable Span

The Design-Build Team shall design and construct the swing span in accordance with the requirements herein and the Minimum Technical Requirements.

Alternative Technical Concepts proposing a movable span design other than a swing span will not be permitted.

The swing span truss shall be a structural truss. Alternative Technical Concepts proposing a faux truss or aesthetic truss for the swing span will not be permitted.

the subsurface investigation provided by the NCDOT is adequate for design purposes and the justification is acceptable to the Department. Any deviations to the requirements noted above shall require acceptance from the NCDOT Geotechnical Engineering Unit prior to the foundation design submittal.

The maximum spacing between borings for retaining walls shall be 100 feet, with a minimum of two borings; one at each end of the wall. Drill borings for retaining walls a minimum depth below the bottom of the wall equal to twice the maximum wall height.

The Design-Build Team is permitted to design bridges on this project using software that accounts for the structural effects of soil / pier interaction.

II. DESCRIPTION OF WORK

Unless noted otherwise herein, the Design-Build Team shall design foundations, embankments, slopes and retaining walls in accordance with the edition effective on the Technical Proposal submittal date of the AASHTO *LRFD Bridge Design Specifications*, NCDOT *LRFD Driven Pile Foundation Design Policy,* all applicable NCDOT Geotechnical Engineering Unit Standard Provisions, NCDOT *Structures Management Unit Manual*, and NCDOT *Roadway Design Manual*. The NCDOT *LRFD Driven Pile Foundation Design Policy* is located on the NCDOT Geotechnical Engineering Unit's website at:

https://connect.ncdot.gov/resources/Geological/Pages/default.aspx

For *Geotechnical Guidelines for Design-Build Projects,* the Design-Build Team shall adhere to the guidelines located at the following website:

https://connect.ncdot.gov/letting/Pages/Design-Build-Resources.aspx

A. Structure Foundations

Permanent steel casings shall be required for drilled piers that are constructed in six inches or more of water. Permanent steel casings shall be required for drilled piers constructed on sloped stream banks subject to degradation from flooding.

The 100-year design scour elevations shall be equal to the 100-year hydraulic scour elevations from the structure survey report developed by the Design-Build Team and accepted by the NCDOT Hydraulics Unit.

The design scour elevation for the new sheet pile bulkhead located on the southeast side of the existing bridge shall be -10.0 (NAVD 88). (Reference the Structures Scope of Work found elsewhere in this RPF)

Analyze drilled pier and pile foundations using FB-MultiPier. Design drilled piers and vertical piles with a sufficient embedment in soil and / or rock to achieve "fixity". L-Pile software may be used to set the minimum tip elevations for drilled pier and pile bent foundations.