



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

PAT MCCRORY  
GOVERNOR

ANTHONY J. TATA  
SECRETARY

March 9, 2015

**Addendum No. 1**

Contract No.: C 203609  
TIP No.: R-2250  
County: Pitt  
Project Description: Greenville Southwest Bypass from south of Old NC 11 to US 264

RE: Addendum No. 1 to Final RFP

**April 21, 2015 Letting**

To Whom It May Concern:

Reference is made to the Final Request for Proposals dated February 24, 2015 recently furnished to you on the above project. We have since incorporated changes, and have attached a copy of Addendum No. 1 for your information. Please note that all revisions have been highlighted in gray and are as follows:

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

Page No. 2 of the *Other Liquidated Damages and Incentives Project Special Provision* has been revised. Please void Page No. 2 in your proposal and staple the revised Page No. 2 thereto.

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

Page No. 45 of the *Price Adjustments for Asphalt Binder Project Special Provision* has been revised. Please void Page No. 45 in your proposal and staple the revised Page No. 45 thereto.

Page No. 124 of the *Sound Barrier Wall Project Special Provision* has been revised. Please void Page No. 124 in your proposal and staple the revised Page No. 124 thereto.

Page Nos. 131 through 135 of the *Thermal Sprayed Coatings (Metallization) Project Special Provision* have been revised. Please void Page Nos. 131 through 135 in your proposal and staple the revised Page Nos. 131 through 135 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  
**WEBSITE:**  
[WWW.NCDOT.GOV](http://WWW.NCDOT.GOV)

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

Page No. 147 of the *General Section* has been revised. Please void Page No. 147 in your proposal and staple the revised Page No. 147 thereto

Page No. 158 of the *Roadway Scope of Work* has been revised. Please void Page No. 158 in your proposal and staple the revised Page No. 158 thereto

Page No. 168 of the *Pavement Management Scope of Work* has been revised. Please void Page No. 168 in your proposal and staple the revised Page No. 168 thereto.

Page Nos. 171 and 172 of the *Structures Scope of Work* have been revised. Please void Page Nos. 171 and 172 in your proposal and staple the revised Page Nos. 171 and 172 thereto

Page Nos. 211 and 212 of the *Transportation Management Scope of Work* have been revised. Please void Page Nos. 211 and 212 in your proposal and staple the revised Page Nos. 211 and 212 thereto.

Page Nos. 238 and 239 of the *Signing Scope of Work* have been revised. Please void Page Nos. 238 and 239 in your proposal and staple the revised Page Nos. 238 and 239 thereto.

Page No. 275 of the *Asphalt Pavements – Superpave Standard Special Provision* has been revised. Please void Page No. 275 in your proposal and staple the revised Page No. 275 thereto.

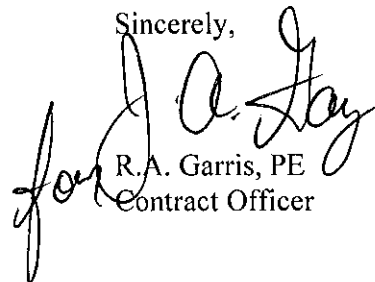
Page No. 293 of the *Materials Standard Special Provision* has been revised. Please void Page No. 293 in your proposal and staple the revised Page No. 293 thereto.

Page No. 317 of the *On-the-Job Training Standard Special Provision* has been revised. Please void Page No. 317 in your proposal and staple the revised Page No. 317 thereto.

Page No. 323 of the *Errata* has been revised. Please void Page No. 323 in your proposal and staple the revised Page No. 323 thereto.

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

Sincerely,

  
R.A. Garris, PE  
Contract Officer

RAG/btk

cc: Mr. Rodger Rochelle, PE  
Mr. Zak Hamidi, PE

Mr. John Rouse, PE  
Mr. David Hering, PE

Ms. Teresa Bruton, PE  
File

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**PROPOSAL FORMS - ITEMIZED SHEET, ETC.**

- Itemized Proposal Sheet (TAN SHEET)
- Fuel Usage Factor Chart and Estimate of Quantities
- Listing of MBE / WBE Subcontractors
- Execution of Bid, Non-Collusion Affidavit, Debarment Certification and Gift Ban Certification
- Signature Sheet

Liquidated Damages for Intermediate Contract Time #2 for lane narrowing, lane closure, holiday, and special event time restrictions for NC 11, Forlines Road and US 13 / US 264 Alternate (including all ramps and loops) are \$500.00 per hour or any portion thereof.

Liquidated Damages for Intermediate Contract Time #3 for road closure time restrictions for NC 11 and US 264 (including all ramps and loops) are \$500.00 per 15-minute period, or any portion thereof.

Liquidated Damages for Intermediate Contract Time #4 for road closure time restrictions for Old Snow Hill Road (SR 1113), Abbot Farm Road (SR 1117), NC 903, and US 13 / US 264 Alternate (including all ramps and loops) are \$500.00 per 15-minute period, or any portion thereof.

Liquidated Damages for Intermediate Contract Time #5 for continuous road closure time restriction of Pocosin Road (SR 1125) are \$3000.00 per day or any portion thereof.

Liquidated Damages for Intermediate Contract Time #6 for continuous road closure time restriction of Frog Level Road (SR 1127) are \$750.00 per day or any portion thereof.

Liquidated Damages for Intermediate Contract Time #7 for road closure time restrictions for the US 13 / US 264 Alternate ramps and / or loops and the US 264 ramps and / or loops are \$1,000.00 per 15-minute period or any portion thereof.

Liquidated Damages for Intermediate Contract Time #8 for continuous road closure time restriction of Bell Arthur Road (SR 1206) are \$1500.00 per day or any portion thereof.

### **Erosion and Sedimentation Control Incentives**

The Design-Build Team will be eligible for an incentive in the amount of \$100,000.00 if construction operations have been performed in accordance with all environmental regulations and the Specifications, and the Design-Build Team does not receive any violations (ICA, CICA, NOV and / or C&D) at any time during project construction.

### **Reference the Erosion and Sedimentation Control Scope of Work found elsewhere in this RFP for additional information on the liquidated damages noted below:**

The Design-Build Team's first NOV or C&D violation shall result in the forfeiture of the entire \$100,000 incentive noted above or the remaining portion thereof. If \$25,000 is not available in the \$100,000 incentive noted above, the first NOV or C&D violation shall result in the forfeiture of the remaining portion plus Liquidated Damages in the amount necessary to equal \$25,000 when added to the remaining portion of the incentive. All subsequent NOV and C&D violations shall result in Liquidated Damages in the amount of \$25,000 per violation.

Each ICA and CICA violation shall result in a \$12,500 reduction from the monies remaining in the aforementioned incentive. If monies are not available in the \$100,000 incentive noted above, each ICA and CICA violation shall result in Liquidated Damages in the amount of \$12,500 per violation.

All Liquidated Damages shall be deducted from the lump sum amount for the project due the Design-Build Team.

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 \$2.1882 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* 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.

(D) **Change Option**

The proposer will not be permitted to change the option after the Price Proposal and the copy of the *Fuel Usage Factor Chart and Estimate of Quantities* sheet are submitted.

(E) **Failure to Submit**

Failure to submit the *completed Fuel Usage Factor Chart and Estimate of Quantities* sheet separately and in the Price Proposal will result in the Technical and Price Proposal being considered irregular by the Department and the Technical and Price Proposal may be rejected.

**INDIVIDUAL MEETINGS WITH PROPOSERS**

(9-1-11)

DB1 G048

The Department will provide at least two Question and Answer Sessions to meet with each proposer individually to specifically address questions regarding the draft Requests for Proposals.

The Department will attempt to arrange for a meeting between each individual proposer and the affected utility owners.

### **Submittals for Review During Construction**

The Design-Build Team shall submit the unconfined compressive strength test results for review and acceptance.

#### **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 **\$540.77 per ton**.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **March 1, 2015**.

#### **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 per theoretical ton. This price shall apply for all mix types.

#### **FIELD OFFICE**

(6-1-07)

DB 08-01

#### **Description**

This work consists of furnishing, erecting, equipping, and maintaining a field office for the exclusive use of Department Engineers and Inspectors at a location on the project approved by the Engineer. Provide a field office that complies with the current A.D.A. Design and Accessibility Standards, the National Electric Code, local, state, and federal regulations, and the following:



**SOUND BARRIER WALL**

(3-06-15)

**1.0 DESCRIPTION**

This work consists of furnishing precast panels, structural steel, concrete, and all other materials; handling, transporting, fabricating, galvanizing, and storing materials; furnishing erection drawings, pile excavation, backfilling, erecting and installing the sound barrier wall members and all other materials as required by the plans developed by the Design-Build Team, the 2012 *Standard Specifications for Roads and Structures* and this Project Special Provision.

Unless otherwise approved by the Engineer, the Design-Build Team has a choice of ten or 15-foot pile spacing. Pile spacing greater than 15 feet will not be permitted. Provide consistent pile spacing the entire length of the wall. Use odd pile spacing, if necessary, only at the ends of the wall and at turning points, as approved by the Engineer.

A maximum one-foot drop or rise in elevation between wall sections is permitted. Elevation changes greater than one foot, if necessary, will be allowed only at the end of the wall. Top of wall elevation changes that result in a jagged appearance shall not be allowed. Unless otherwise approved by NCDOT, the wall shall adhere to the March 31, 2009 R-2250C Design Noise Report Memorandum provided by the Department and as superseded in the March 9, 2015 R-2250C Design Noise Report Memorandum – Addendum No. 1 provided by the Department.

**2.0 ALTERNATE PILE SPACING**

As an alternate, the Design-Build Team may submit plans for pile spacing greater than 10 feet and less than 15 feet for review and approval. A submittal reducing the post spacing shall include the material and design specifications. The submittal shall also include an elevation view depicting the revised post spacing and proposed top of wall elevations. The proposed top of wall elevations shall be equal to or greater than the dimensions shown in the March 31, 2009 R-2250C Design Noise Report Memorandum and as superseded in the R-2250C Design Noise Report Memorandum – Addendum No. 1. The excavated hole diameter, excavation depth and reinforcing steel shall be equal to the amount required for 15-foot pile spacing. A variance in the reinforcing steel will be allowed for the length of horizontal and number of vertical reinforcement bars in the precast panel for the alternate pile spacing.

Submit two sets of detailed plans for review. Include all details in the plans developed by the Design-Build Team, including the size and spacing of required reinforcement necessary to fabricate the precast panels. Have a North Carolina Registered Professional Engineer check, seal and date the aforementioned plans.

**3.0 ALTERNATE WALL TYPE**

Walls that have been assigned “Approved” or “Approved for Provisional Use” status by the Product Evaluation Program will be considered for substitution to the detailed Standard

48 hours after color / stain application. Consult the manufacturer's recommendations for preparation, application, curing and storage of coloring agents / stains. The Design-Build Team shall provide a Color Application Artist who is trained in the special techniques to achieve realistic surface appearances, if requested by the Engineer. Treated surfaces located adjacent to exposed soil or pavement shall be temporarily covered to prevent dirt or soil splatter from rain.

Following the completion of all work, repairs of any damage made by other construction operations shall be made to the form lined and colored surfaces, as directed by the Engineer.

**Experience and Qualifications** – The Design-Build Team shall have a minimum of three consecutive years' experience in architectural concrete surface treatment construction on similar types of projects. The Design-Build Team shall furnish to the Engineer five references who were responsible for supervision of similar projects and will testify to the successful completion of these projects. Include name, address, telephone number, and specific type of application.

**\*\* NOTE \*\* Deleted *Thermal Sprayed Coatings (Metallization)* Project Special Provision**

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- Estimate a minimum ten-year cost saving resulting from incorporation of these special materials, design or construction methods into the project.

#### 4. Schedule and Milestones – 25 points

- Provide a detailed schedule for the project, including both design and construction activities. The schedule shall show the sequence and continuity of operations, as well as the month of delivery of usable segments of the project.
- The schedule shall also include the Design-Build Team's final completion date and, if proposed, their substantial completion date. **These dates shall be clearly indicated on the Project Schedule and labeled "Final Completion Date" and "Substantial Completion Date"**.
- The schedule shall include the Design-Build Team's committed durations for Intermediate Contract Time Nos. 5, 6 and 8.

#### 5. Innovation – 8 points

- Identify any aspects of the design or construction elements that the Design-Build Team considers innovative. Include a description of alternatives that were considered whether implemented or not.

#### 6. Maintenance of Traffic and Safety Plan – 10 points

##### *Maintenance of Traffic*

- Describe any traffic control requirements that will be used for each construction phase.
- Describe how traffic will be maintained as appropriate and describe the Design-Build Team's understanding of any time restrictions noted in the RFP.
- Identify any self-imposed liquidated damages and associated Intermediate Contract Time(s), if applicable.
- Specifically describe how business, school and residential access will be maintained, if applicable.
- Address how hauling will be conducted, including but not limited to, hauling of materials to and from the site and hauling of materials within NCDOT right of way.
- If a temporary barrier system will be utilized, provide the type, duration and why it is needed.
- If temporary shoring will be required, provide the type and why it is required.
- Identify all proposed road closures and / or offsite detour routes; reason for need and duration.
- Address where and how law enforcement officers will be used.
- Describe the Design-Build Team's approach to provide the public with communication access to project personnel to inquire as to traffic impacts, including vehicular and pedestrian.
- Identify a Traffic Control Supervisor and briefly describe their qualifications for this role.

- The Design-Build Team shall provide milled rumble strips along the mainline outside and median paved shoulders, including ramp and loop terminals, and acceleration, deceleration and auxiliary lanes, in accordance with the January 2012 Roadway Standard Drawings.
- For all bridges over roadways, the Design-Build Team shall submit vertical and horizontal clearance design calculations at all critical points. The Design-Build Team shall submit post construction survey points for the aforementioned critical points to verify that the construction adhered to the vertical and horizontal clearances accepted by the Department. The Design-Build Team shall be responsible for all costs associated with correcting vertical and horizontal clearances resulting from any construction variation from the design accepted by the Department.
- The Design-Build Team shall design and construct the sound barrier wall listed in the March 31, 2009 R-2250C Design Noise Report Memorandum, and as superseded in the **March 9, 2015 R-2250C Design Noise Report Memorandum – Addendum No. 1**, and perform any additional geotechnical investigation necessary to design the foundation. The Design-Build Team shall be responsible for the wall envelope details. If the Design-Build Team revises the horizontal and / or vertical alignments such that greater noise impacts are possible on surrounding receptors, the Design-Build Team shall re-analyze and complete a revised noise report that adheres to current guidelines / policy, if necessary, for NCDOT review and acceptance. The R-2250C Final Design Noise Report will be provided to the Design-Build Team to assist in their determination of anticipated additional noise impact on current receptors due to design changes. If adjustments to, or addition of, sound barrier walls are required as a result of design deviations, the Design-Build Team shall be responsible for all costs associated with the adjustments and / or additions.
- The Design-Build Team shall develop Service Road Studies for all land-locked parcels and / or as required by variations to the Department’s design. If the aforementioned Service Road Studies indicate that service roads are required that are not shown on the Preliminary Roadway Plans provided by the Department, the design and construction costs of the additional service roads shall be as follows:
  - If the Design-Build Team demonstrates to the Department’s satisfaction that the additional service road(s) are required for the Department’s preliminary design, the service road(s) design and construction, including all associated NEPA requirements, will be paid for as extra work in accordance with Subarticle 104-8-(A) of the 2012 *Standard Specifications for Roads and Structures*.
  - If variations to the Department’s proposed design and / or construction methods require additional service road(s), the service road(s) design and construction, as well as all associated NEPA requirements, shall be included in the Design-Build Team’s lump sum bid for the entire project.
- The Design-Build Team shall design and construct all service roads to meet a minimum 40 mph design speed using the 0.04 superelevation chart. The Design-Build Team shall design and construct all service roads with two 12-foot lanes and six-foot minimum



acceptable level. Temporary pavements shall be designed in accordance with the most recent version of the North Carolina DOT *Pavement Design Procedure*. Temporary pavement designs and associated calculations shall be submitted for review and comments using the Design-Build submittal process prior to incorporation. The expected duration for traffic on temporary pavement must be included as part of the submittal.

All driveways, up to the radius point, shall be constructed with the full-depth pavement design of the intersecting roadway. The entire impacted length of all non-concrete driveways with a 10% grade shall be constructed with 1.5" S9.5B (or SF9.5A) and 8" ABC. Unless otherwise noted above, the Design-Build Team shall adhere to the following for all driveway construction:

- For existing gravel and soil driveways, use 8" ABC.
- For existing asphalt driveways, use 1.5" S9.5B (or SF9.5A) and 8" ABC with prime coat.
- For existing concrete driveways, use 6" jointed concrete reinforced with woven wire mesh.

The rate of application and the maximum and minimum thickness per application and layer shall be in accordance with the NCDOT Roadway Design Manual.

Shoulder drains will not be required.

Unless noted otherwise elsewhere in this RFP, the Design-Build Team shall pave from 1) the edge of all paved shoulders to the face of all single face barrier / guardrail 2) from the edge of all paved shoulders to the edge of all expressway / shoulder berm gutter and 3) from the edge of all paved shoulders to the face of proposed retaining walls and sound barrier walls located on the outside shoulder with 6" of ABC (or 4" B25.0B or B25.0C), a split seal and two lifts of surface course. If a split seal is not used, the ABC pavement design shall require prime coat at the normal application rate. In these areas, the Design-Build Team's installation of ABC or black base shall be consistent with the pavement type for the specific roadway. As an alternative to the above pavement design for paving the shoulders to the face of the aforementioned features, the Design-Build Team may use the adjacent travel lane pavement design.

When a resurfacing grade ties to an existing curb, bridge and / or pavement, the Design-Build Team shall perform incidental milling, such that the new pavement ties flush with the existing features(s). When tying to the aforementioned feature(s), the Design-Build Team shall not reduce the minimum required surface layer pavement thickness noted above. At existing pavement ties, the Design-Build Team shall perform incidental milling for a minimum distance of 25 feet at bridges and six feet at curb sections. The Design-Build Team shall not perform incidental milling more than 72 hours prior to placement of the asphalt surface layer.

**STRUCTURES SCOPE OF WORK** (3-9-15)

**Project Details**

The Design-Build Team shall be responsible for all structures necessary to complete the project, including at the following locations:

- Bridge(s) at NC 11 southbound (-FLYBY7\_2) and the -L- Line
- Bridge(s) at Old Snow Hill Road (SR 1113) and the -L- Line
- Bridge(s) at NC 102 and the -L- Line
- Dual bridges on the -L- Line over Abbott Farm Road (SR 1117)
- Dual bridges on the -L- Line over NC 903
- Bridge(s) at Pocosin Road (SR 1125) and the -L- Line
- Bridge(s) at Forlines Road (SR 1126) and the -L- Line
- Bridge(s) at Davenport Farm Road (SR 1128) and the -L- Line
- Bridge(s) at US 13 / US 264 Alternate and the -L- Line
- Bridge(s) at Froglevel Road (SR 1127) and the -L- Line
- Bridge(s) on the -L- Line over Carolina Coastal Railroad (Service Road -SR10- has been deleted)
- Bridge(s) at Stantonsburg Road (SR 1200) and the -L- Line
- All reinforced concrete box culverts required by the Design-Build Team's design
- Sound barrier walls required by the Design-Build Team's design (Reference the Roadway Scope of Work found elsewhere in this RFP)

If the Design-Build Team elects to construct a bridge on NC 102 over the -L- Line, the Design-Build Team shall design and construct a bridge that carries three 12-foot travel lanes and a minimum four-foot wide concrete monolithic island. The Design-Build Team shall also design and construct 5'-6" sidewalks, that are offset two feet from the edge of the travel lanes, and 3-bar metal rails on both sides of an NC 102 bridge over the -L- Line. (Reference the Roadway Scope of Work found elsewhere in this RFP)

If the Design-Build Team elects to construct a bridge on Forlines Road over the -L- Line, the Design-Build Team shall design and construct a bridge wide enough to carry three 12-foot travel lanes and a minimum four-foot wide concrete monolithic island, with appropriate bridge rail offset. (Reference the Roadway Scope of Work found elsewhere in this RFP)

At the following locations, the outside bridge barrier shall be per Standard Drawing BMR3 and BMR4; and the median barrier rail shall be per Standard Drawing CBR1. All other proposed bridge barrier rails shall be per Standard Drawing CBR1.

- Dual bridges on the -L- Line over Abbott Farm Road (SR 1117)
- Dual bridges on the -L- Line over NC 903

If the Design-Build Team elects to construct a diamond or partial cloverleaf interchange at NC 102, Forlines Road (SR 1126) and / or US 13 / US 264 Alternate, the Design-Build Team shall design and construct bridges at the aforementioned interchanges wide enough, long enough and high enough to allow for the future construction required for a full cloverleaf interchange (ramps and loops in all quadrants) without design exceptions or additional construction. The Design-Build Team shall also design and construct all grade separations impacted by the future

full cloverleaf interchanges, including but not limited to structures that will accommodate future continuous auxiliary lanes, wide enough, long enough and high enough to allow the aforementioned future interchange construction without design exceptions or additional construction. (Reference the Roadway Scope of Work found elsewhere in this RFP)

The following locations shall have standard spill through end bents with concrete slope protection. No retaining walls, including but not limited to any combination of a retaining wall, concrete barrier and slope protection, will be allowed in lieu of the aforementioned concrete slope protection. The exposed end bent cap height, from the top of the concrete slope protection berm to the highest bridge seat, shall not exceed three feet.

- Dual bridges on the -L- Line over Abbott Farm Road (SR 1117)
- Dual bridges on the -L- Line over NC 903

The minimum vertical clearance for bridges constructed over all interstates, freeways and arterials shall be 17'-0". The minimum vertical clearance for bridges constructed over all local roads and collector roads shall be 15'-6". The minimum vertical clearance for bridges constructed over a railroad shall be 23'-0".

End bents and end bent slopes at each end of a bridge shall have the same appearance.

Regardless of wall height, sound barrier walls shall be designed in accordance with AASHTO LRFD Bridge Design Specifications. The traffic side of all sound barrier walls shall be form lined with a pattern to be determined by the Engineer. All ground-mounted sound barrier walls shall be detailed in accordance with Structure Standards SBW1 and SBW2, and concrete piles shall be used. Unless otherwise approved by the Department, the top of all sound barrier walls shall be constructed to provide a continuous elevation transition in increments no greater than one-foot. (Reference the *Sound Barrier Wall* and *Architectural Concrete Surface Treatment* Project Special Provisions, and the Roadway Scope of Work found elsewhere in this RFP)

The number of expansion joints for each structure 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.

All bridges shall meet approved roadway typical sections and grades. Bridge geometry (width, length, skew, span arrangement, etc.) shall be in accordance with the accepted Structure Recommendations prepared by the Design-Build Team.

A live load rating chart for proposed girders shall be included with the highway bridge plans and shall state design assumptions and methodology used in the load rating calculations. The load rating shall be in accordance with the NCDOT *Structures Management Unit Manual* (including policy memos) and AASHTO's *Manual for Bridge Evaluation*.

A live load rating chart for reinforced concrete box culverts shall be included in the culvert plans.

**Liquidated Damages for Intermediate Contract Time #5 for the above continuous road closure time restriction of Pocosin Road (SR 1125) are \$3000.00 per day or any portion thereof.**

**5. Intermediate Contract Time #6 for Continuous Road Closure of Frog Level Road (SR 1127)**

With an approved offsite detour, the Design-Build Team may continuously close Frog Level Road (SR 1127) for **no more than 540 consecutive days**. Prior to the continuous road closure, the Design-Build Team shall install a Department approved detour route. The Design-Build Team shall not concurrently close any combination of Frog Level Road (SR 1127), Bell Arthur Road (SR 1206), and Pocosin Road (SR 1125).

The Design-Build Team shall identify the road closure justification and duration, the detour route, and all proposed improvements to the detour route in the Technical Proposal.

The duration of this intermediate contract time shall begin the day that the Design-Build Team shifts traffic from the existing traffic pattern to the detour route.

The duration of the continuous road closure shall be defined as the duration committed to in the Technical Proposal. The duration thus proposed shall be used to assess liquidated damages in accordance with ICT #6.

**Liquidated Damages for Intermediate Contract Time #6 for the above continuous road closure time restriction of Frog Level Road (SR 1127) are \$750.00 per day or any portion thereof.**

**6. Intermediate Contract #7 for Ramp and Loop Road Closure Restrictions for Resurfacing Operations**

As a minimum, the Design-Build Team shall maintain the existing traffic pattern and follow the road closure restrictions listed below. When a ramp and / or loop closure is used, the Design-Build Team shall reopen the travel lanes by the end of the road closure duration.

The Design-Build Team shall not close any direction of travel for the following ramps and / or loops during the times noted below. Closure shall only be allowed for resurfacing tie-in operations.

<b>Road</b>	<b>Day and Time Restrictions</b>
US 13 / US 264 Alternate Ramps / Loops US 264 Ramps / Loops	Monday thru Sunday 6:00 a.m. to 10:00 p.m.

Proposed road closures for any ramp or loop shall be approved by the Engineer prior to incorporation in the Transportation Management Plans.

**Liquidated Damages for Intermediate Contract Time #7 for the above road closure time restrictions for the US 13 / US 264 Alternate ramps and / or loops and the US 264 ramps and / or loops are \$1,000.00 per 15-minute period or any portion thereof.**

**7. Intermediate Contract Time #8 for Continuous Road Closure of Bell Arthur Road (SR 1206)**

With an approved offsite detour, the Design-Build Team may continuously close Bell Arthur Road (SR 1206) for **no more than 100 consecutive days**. Prior to the continuous road closure, the Design-Build Team shall install a Department approved detour route. The

Design-Build Team shall not concurrently close Bell Arthur Road (SR 1206) and Frog Level Road (SR 1127).

The Design-Build Team shall identify the road closure justification and duration, the detour route, and all proposed improvements to the detour route in the Technical Proposal.

The duration of this intermediate contract time shall begin the day that the Design-Build Team shifts traffic from the existing traffic pattern to the detour route.

The duration of the continuous road closure shall be defined as the duration committed to in the Technical Proposal. The duration thus proposed shall be used to assess liquidated damages in accordance with ICT #8.

**Liquidated Damages for Intermediate Contract Time #8 for the above continuous road closure time restriction of Bell Arthur Road (SR 1206) are \$1500.00 per day or any portion thereof.**

## B. Hauling Restrictions

The Design-Build Team shall adhere to the hauling restrictions noted in the NCDOT 2012 *Standard Specifications for Roads and Structures*.

The Design-Build Team shall conduct all hauling operations as follows:

- The Design-Build Team shall not conduct any hauling operations against the flow of traffic of an open travelway unless an approved temporary traffic barrier or guardrail separates the traffic from the hauling operation.
- Haul vehicles shall not enter and / or exit an open travel lane at speeds more than 10 mph below the posted speed limit.
- Hauling entrances, exits and crossings shall be shown on the Transportation Management Plan and be in accordance with the NCDOT 2012 Roadway Standard Drawings.
- Hauling operations that perpendicularly cross a roadway shall require Traffic Control and shall be subject to the time restrictions, and holiday, holiday weekend and special event restrictions listed in ICT #1 and #2.

The Design-Build Team shall address how hauling will be conducted in the Technical Proposal, including but not limited to, hauling of any materials to and from the site and hauling material within the NCDOT right of way.

## C. Lane and Shoulder Closure Requirements

The Design-Build Team shall remove lane closure devices from the lane when work is not being performed behind the lane closure or when a lane closure is no longer needed.

When barrier is placed on the shoulder of a roadway, the Design-Build Team shall install shoulder closure signs and devices in advance of the barrier using NCDOT 2012 Roadway Standard Drawing No. 1101.04.

When personnel and / or equipment are working within 15 feet of an open travel lane, the Design-Build Team shall close the nearest open shoulder using NCDOT 2012 Roadway Standard Drawings, unless the work area is protected by an approved temporary traffic barrier or guardrail.

Within the project limits, only US 13 and NC 11 shall be rerouted onto the Greenville Southwest Bypass (-L- Line); and shall continue on US 264 to the US 264 / US 13 / NC 11 - NC 903 (North Memorial Drive) interchange. The Design-Build Team shall design, fabricate and install all Type A and B signs and F-Assemblies required along the Greenville Southwest Bypass (-L- Line), US 13, NC 11, NC 33, NC 43 and US 264 (from the US 264 / John P East Memorial Highway to the US 264 / US 13 / NC 11 – NC 903 (North Memorial Drive) interchange) for the aforementioned rerouting. The Department will remove the existing US 13 and NC 11 signs that are no longer required. **The Design-Build Team will not be required to design, fabricate or install F-Assemblies on existing US 13 or existing NC 11.**

### **Sign Locations**

The Design-Build Team shall determine the station location of all signs and sign structures.

The Design-Build Team shall provide a minimum of two advanced guide signs for all freeway / expressway interchange approaches.

To avoid placing a sign or sign structure in a location that might be in conflict with future roadway projects and / or limit its usefulness / lifespan, the Design-Build Team shall coordinate all proposed sign designs and locations with the Department.

### **Ground Mounted Sign Supports**

The Design-Build Team shall locate, design and install all ground mounted sign supports.

The Design-Build Team shall design, fabricate and install ground mounted signs supports in accordance with the revised NCDOT Roadway Standard Drawing No. 903D10, Sheet 2 of 3, dated March 8, 2012. The aforementioned revised Roadway Standard Drawing and the associated software for the design of Type A and B ground mounted sign supports may be referenced on the website noted below:

**<https://connect.ncdot.gov/resources/safety/Pages/Signing-and-Delineation.aspx>**

Unless otherwise approved by the Department, the vertical mounting height for ground mounted signs shall be a minimum of seven feet and maximum of eight feet from the edge of the travel lane to the bottom of the sign.

On freeways and expressways, the minimum lateral offset for Type A and B ground mounted signs on breakaway supports shall be 30 feet, unless approved otherwise by the Department. The lateral offset shall be measured from the edge of the travel lane closest to the shoulder to the closest sign edge.

On freeways and expressways, all Type A and B ground mounted signs on simple (non-breakaway) supports shall be protected by guardrail, barrier or another form of approved positive protection. The minimum lateral distance between the face of guardrail and the closest sign edge shall be six feet.

Unless noted otherwise elsewhere in this RFP, all Type D signs shall be installed on U-channel posts in accordance with the NCDOT Roadway Standard Drawings. Type D signs shall not exceed eight feet in width and / or 24 square feet. Unless positively protected, all Type D signs shall be installed on a maximum of two U-channel posts.

The Design-Build Team shall install all Type E and F signs on a maximum of two wood supports.

### **Overhead Sign Structures**

The Design-Build Team shall consider the proposed roadway geometry, number of lanes, and all advisory signing needs when selecting the type of overhead signing for a given location. At a minimum, the Design-Build Team shall provide overhead signing at the locations identified in the *MUTCD*, Section 2E.24 – Signing for Interchange Lane Drops, Section 2A.17 - Overhead Sign Installations, Items A – M, and the following locations:

- An option lane at a multi-lane exit or freeway / ramp split (use Arrow Per Lane signs)
- A freeway ends and “All Traffic Must Exit”
- A freeway lane ends (freeway lane drop)
- Three or more lanes on a freeway ramp
- At the NC 11 / Greenville Southwest Bypass (-L- Line) Split – A series of two NC 11 northbound Arrow-per-Lane Guide Signs (with the first advance guide sign, for a total of three, ground mounted)
- Unless as allowed otherwise below, at the US 264 / Greenville Southwest Bypass (-L- Line) interchange – With appropriate pull-through signs, two Greenville Southwest Bypass northbound Full Span Exit Directionals and one US 264 eastbound Full Span Exit Directional.

The Design-Build Team shall locate, design and install overhead sign structures that meet all Department requirements, including the calculation of windload areas. The windload area shall be flush with the sign height, including exit panels, and sign width. In addition to the area of signs on the structure at the completion of the project, the windload area shall include the area of all future signs that have larger areas. The wind speed for the overhead sign structure and foundation designs for this project shall be 120 mph.

The Design-Build Team shall design, fabricate and install overhead sign supports and foundations in accordance with the *Foundation and Anchor Rod Assemblies for Metal Poles, Overhead and Dynamic Message Sign Foundations* and *Overhead Sign Supports Project Special Provisions* found elsewhere in this RFP.

The Design-Build Team may only install proposed signs on the overhead sign assembly(ies) attached to the bridges at the US 264 interchange that are equal or smaller in size than the existing signs. If the Design-Build Team does not install signs on the overhead sign assembly(ies) attached to the bridges at the US 264 interchange, in accordance with the requirement above, the Design-Build Team shall remove and dispose of the overhead sign assembly(ies) attached to the bridges at the US 264 interchange.

**Page 6-22, Article 610-4 WEATHER, TEMPERATURE AND SEASONAL LIMITATIONS FOR PRODUCING AND PLACING ASPHALT MIXTURES**, lines 15-17, replace the second sentence of the first paragraph with the following:

Do not place asphalt material when the air or surface temperatures, measured at the location of the paving operation away from artificial heat, do not meet Table 610-5.

**Page 6-23, Article 610-4 WEATHER, TEMPERATURE AND SEASONAL LIMITATIONS FOR PRODUCING AND PLACING ASPHALT MIXTURES**, replace Table 610-5 with the following:

<b>Asphalt Concrete Mix Type</b>	<b>Minimum Surface and Air Temperature</b>
B25.0B, C	35°F
I19.0B, C, D	35°F
SF9.5A, S9.5B	40°F
S9.5C, S12.5C	45°F
S9.5D, S12.5D	50°F

**Page 6-26, Article 610-7 HAULING OF ASPHALT MIXTURE**, lines 22-23, in the fourth sentence of the first paragraph replace “so as to overlap the top of the truck bed and” with “to”.

**Page 6-41, Subarticle 650-3(B) Mix Design Criteria**, replace Table 650-1 with the following:

<b>Grading Requirements</b> <i>Sieve Size (mm)</i>	<b>Total Percent Passing</b>		
	<i>Type FC-1</i>	<i>Type FC-1 Modified</i>	<i>Type FC-2 Modified</i>
19.0	-	-	100
12.5	100	100	80 - 100
9.50	75 - 100	75 - 100	55 - 80
4.75	25 - 45	25 - 45	15 - 30
2.36	5 - 15	5 - 15	5 - 15
0.075	1.0 - 3.0	1.0 - 3.0	2.0 - 4.0

**\*\* NOTE \*\* Deleted reference to Page 6-50, Table 660-1 MATERIAL APPLICATION RATES AND TEMPERATURES**



**Page 10-126, Table 1078-1, REQUIREMENTS FOR CONCRETE**, replace with the following:

<b>TABLE 1078-1 REQUIREMENTS FOR CONCRETE</b>		
<b>Property</b>	<b>28 Day Design Compressive Strength 6,000 psi or less</b>	<b>28 Day Design Compressive Strength greater than 6,000 psi</b>
Maximum Water / Cementitious Material Ratio	0.45	0.40
Maximum Slump without HRWR	3.5"	3.5"
Maximum Slump with HRWR	8"	8"
Air Content (upon discharge into forms)	5 + 2%	5 + 2%

**Page 10-151, Article 1080-4 Inspection and Sampling, lines 18-22**, replace (B), (C) and (D) with the following:

(B) At least 3 panels prepared as specified in 5.5.10 of AASHTO M 300, Bullet Hole Immersion Test.

(C) At least 3 panels of 4"x6"x1/4" for the Elcometer Adhesion Pull Off Test, ASTM D4541.

(D) A certified test report from an approved independent testing laboratory for the Salt Fog Resistance Test, Cyclic Weathering Resistance Test, and Bullet Hole Immersion Test as specified in AASHTO M 300.

(E) A certified test report from an approved independent testing laboratory that the product has been tested for slip coefficient and meets AASHTO M253, Class B.

**Page 10-161, Subarticle 1081-1(A) Classifications, lines 29-33**, delete first 3 sentences of the description for Type 2 and replace with the following:

**Type 2** - A low-modulus, general-purpose adhesive used in epoxy mortar repairs. It may be used to patch spalled, cracked or broken concrete where vibration, shock or expansion and contraction are expected.

**Page 10-162, Subarticle 1081-1(A) Classifications, lines 4-7**, delete the second and third sentences of the description for Type 3A. **Lines 16-22**, delete Types 6A, 6B and 6C.

**Page 10-162, Subarticle 1081-1(B) Requirements, lines 26-30**, replace the second paragraph with the following:

For epoxy resin systems used for embedding dowel bars, threaded rods, rebar, anchor bolts and other fixtures in hardened concrete, the manufacturer shall submit test results showing that the bonding system will obtain 125% of the specified required yield strength of the fixture. Furnish

The Contractor shall sign an agreement to fulfill their annual goal for the year.

### **Training Classifications**

The Contractor shall provide on-the-job training aimed at developing full journeyman level workers in the construction craft/operator positions. Preference shall be given to providing training in the following skilled work classifications:

Equipment Operators	Office Engineers
Truck Drivers	Estimators
Carpenters	Iron / Reinforcing Steel Workers
Concrete Finishers	Mechanics
Pipe Layers	Welders

The Department has established common training classifications and their respective training requirements that may be used by the contractors. However, the classifications established are not all-inclusive. Where the training is oriented toward construction applications, training will be allowed in lower-level management positions such as office engineers and estimators. Contractors shall submit new classifications for specific job functions that their employees are performing. The Department will review and recommend for acceptance to FHWA the new classifications proposed by contractors, if applicable. New classifications shall meet the following requirements:

Proposed training classifications are reasonable and realistic based on the job skill classification needs, and

The number of training hours specified in the training classification is consistent with common practices and provides enough time for the trainee to obtain journeyman level status.

The Contractor may allow trainees to be trained by a subcontractor provided that the Contractor retains primary responsibility for meeting the training and this provision is made applicable to the subcontract. However, only the Contractor will receive credit towards the annual goal for the trainee.

Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment.

**STANDARD SPECIAL PROVISION****ERRATA**

(02-24-15) (Rev.3-2-15)

Z-4

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

**Division 2**

**Page 2-7, line 31, Article 215-2 Construction Methods**, replace “Article 107-26” with “Article 107-25”.

**Page 2-17, Article 226-3, Measurement and Payment, line 2**, delete “pipe culverts,”.

**Page 2-20, Subarticle 230-4(B), Contractor Furnished Sources, change references as follows:** **Line 1**, replace “(4) Buffer Zone” with “(c) Buffer Zone”; **Line 12**, replace “(5) Evaluation for Potential Wetlands and Endangered Species” with “(d) Evaluation for Potential Wetlands and Endangered Species”; and **Line 33**, replace “(6) Approval” with “(4) Approval”.

**Division 3**

**Page 3-1, after line 15, Article 300-2 Materials**, replace “1032-9(F)” with “1032-6(F)”.

**Division 4**

**Page 4-77, line 27, Subarticle 452-3(C) Concrete Coping**, replace “sheet pile” with “reinforcement”.

**Division 6**

**Page 6-7, line 31, Article 609-3 Field Verification of Mixture and Job Mix Formula Adjustments**, replace “30” with “45”.

**Page 6-10, line 42, Subarticle 609-6(C)(2)**, replace “Subarticle 609-6(E)” with “Subarticle 609-6(D)”.

**Page 6-11, Table 609-1 Control Limits**, replace “Max. Spec. Limit” for the Target Source of  $P_{0.075}/P_{be}$  Ratio with “1.0”.

**Page 6-40, Article 650-2 Materials**, replace “Subarticle 1012-1(F)” with “Subarticle 1012-1(E)”

**Division 7**

**Page 7-1, Article 700-3, CONCRETE HAULING EQUIPMENT**, line 33, replace “competition” with “completion”.

**Division 8**

**Page 8-23, line 10, Article 838-2 Materials**, replace “Portland Cement Concrete, Class B” with “Portland Cement Concrete, Class A”.