



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

March 16, 2006

Addendum No. 1

RE: Contract ID: C201279
TIP Number: R-4463B
Craven County
Project Description: NC 43 Connector from US 70 to NC 43 / NC 55

May 18, 2006 Letting

To Whom It May Concern:

Reference is made to the Final Request for Proposal recently furnished to you on the above project. The following revisions have been made to the Request for Proposal:

Table of Contents has been revised. Please void the existing Table of Contents in your proposal and staple the revised Table of Contents thereto.

Pages 2, and 24 through 29 in the *PROJECT SPECIAL PROVISIONS* have been revised. Please void Pages 2, and 24 through 29 in your proposal and staple the revised Pages 2, and 24 through 29 thereto.

Page 31A has been added to the *PROJECT SPECIAL PROVISIONS*. Please staple Page 31A into your proposal.

Pages 32 and 39 in the *GENERAL SECTION* have been revised. Please void Pages 32 and 39 in your proposal and staple the revised Pages 32 and 39 thereto.

Pages 44 through 46 in the *ROADWAY SCOPE OF WORK* have been revised. Please void Pages 44 through 46 in your proposal and staple the revised Pages 44 through 46 thereto.

Page 51 in the *PAVEMENT MANAGEMENT SCOPE OF WORK* has been revised. Please void Page No. 51 in your proposal and staple the revised Page No. 51 thereto.

Page 52 in the *STRUCTURES SCOPE OF WORK* has been revised. Please void Page No. 52 in your proposal and staple the revised Page No. 52 thereto.

Page 55 in the *RAILROAD COORDINATION SCOPE OF WORK* has been revised. Please void Page No. 55 in your proposal and staple the revised Page No. 55 thereto.

Page 58 in the *HYDRAULICS SCOPE OF WORK* has been revised. Please void Page No. 58 in your proposal and staple the revised Page No. 58 thereto.

Pages 59 and 60, in the *GEOTECHNICAL ENGINEERING SCOPE OF WORK* have been revised. Please void pages 59 and 60 in your proposal and staple the revised pages 59 and 60 thereto.

MAILING ADDRESS:
NC DEPARTMENT OF TRANSPORTATION
PROJECT SERVICES UNIT
1591 MAIL SERVICE CENTER
RALEIGH NC 27699-1591

TELEPHONE: 919-250-4128
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LOCATION:
CENTURY CENTER COMPLEX
ENTRANCE B-2
1020 BIRCH RIDGE DRIVE
RALEIGH NC

Page 68 in the *ENVIRONMENTAL PERMITS SCOPE OF WORK* has been revised. Please void Page 68 in your proposal and staple the revised Page 68 thereto.

Pages 71 through 73 in the *GEOENVIRONMENTAL ENGINEERING SCOPE OF WORK* have been revised. Please void Pages 71 through 73 in your proposal and staple the revised Pages 71 through 73 thereto.

Pages 85 and 90, in the *TRAFFIC CONTROL SCOPE OF WORK* have been revised. Please void Pages 85 and 90 in your proposal and staple the revised Pages 85 and 90 thereto.

Sincerely,

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

c: Mr. Steve DeWitt, PE (w/)
Mr. Steve Varnedoe, PE
Ms. Deborah Barbour, PE
Mr. Victor Barbour, PE (w/)
Mr. Art McMillan, PE
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Mr. Marshall Clawson, PE (w/)
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Mr. Ayman Alqudwah, PE
Mr. Steve Walker
Mr. Wayne Johnson, PE (w/)
Ms. Marsha Sample (w/)
Mr. Robert Memory (w/)
Ms. Teresa Bruton, PE (w/)
Mr. Andy Gay (w/)
Ms. Betty Rawls (w/)

Mr. Greg Brew, PE - Roadway (w/)
Dr. Clark Morrison, PE - Pavement Design (w/)
Dr. K.J. Kim, PE - Geotechnical (w/)
Mr. Lonnie Brooks - Structures (w/)
Ms. Elizabeth Lusk - Environmental Permits (w/)
Ms. Michelle Long, PE - Public Information (w/)
Mr. Neal Strickland - Right-of-Way (w/)
Mr. Greg Smith, PE - Geo-Environmental (w/)
Mr. Barney Blackburn, PE - Erosion & Sed. Cont. (w/)
Mr. Murray Howell - Utility Coordination (w/)
Mr. Stephen Worthy - Utility Coordination (w/)
Mr. Tim Williams, PE - Signals (w/)
Mr. Neil Avery - Signal Communications (w/)
Mr. David Hinnant - Railroad Coordination (w/)
Mr. Mitch Hendee, PE - Traffic Control (w/)
Mr. Tim McFadden - Signing (w/)
Ms. Anne Gamber, PE - Hydraulics (w/)
Ms. Virginia Mabry (w/)
Ms. Jennifer Evan, PE (w/)
Technical Review Committee Members (w/)
File (w/)

Mr. Neil Lassiter, PE
Mr. Jay Bennett, PE
Mr. Stuart Bourne, PE
Dr. Judith Corley-Lay, Ph.D., PE
Mr. Dave Henderson, PE
Mr. Ron King, PE
Mr. Don Lee
Mr. Calvin Leggett, PE
Mr. Richard Mullinax, PE
Mr. Greg Perfetti, PE
Mr. Ellis Powell, PE
Dr. Greg Thorpe, Ph.D.
Mr. Njoroge Wainaina, PE
Mr. John Williamson

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Liquidated Damages for road closure time restrictions on NC 43 and NC 55, are \$200.00 per 15 minute period or any portion thereof for this Intermediate Contract Time.

Liquidated Damages for road closure duration committed by the Contractor for tie-in work on NC 55, are \$2,000.00 per calendar day for this Intermediate Contract Time.

Liquidated Damages for road closure duration committed by the Contractor for tie-in work on NC 43, are \$2,000.00 per calendar day for this Intermediate Contract Time.

- **Refer to the Erosion and Sedimentation Control Scope of Work for more information on the following incentives and liquidated damages:**

The Design-Build Team will be eligible for an incentive in the amount of \$50,000 if construction operations have been performed in accordance with all environmental regulations and the Specifications, and no violations have been issued.

The Design-Build Team’s first two violations shall result in a reduction of \$25,000 from the \$50,000 incentive noted above for each ICA, CICA, NOV, and / or C&D violation. Beginning with the third violation, Liquidated Damages in the amount of \$25,000 per violation shall be deducted from the lump sum bid amount due the Design-Build Team.

DB1 G11

MOBILIZATION (10-3-05)

Revise the 2002 *Standard Specifications* as follows:

Page 8-1, Subarticle 800-2, COMPENSATION

Delete this subarticle in its entirety and replace with the following:

800-2 COMPENSATION

5 percent of the “Total Amount Bid for Entire Project” shall be considered the lump sum amount for Mobilization. Partial payments for Mobilization will be made beginning with the first partial pay estimate paid on the contract. Payment will be made at the rate of 50 percent of the lump sum amount calculated for Mobilization. The remaining 50 percent will be paid with the partial pay estimate following approval of all permits required in the Environmental Permits Scope of Work for this project.

DB1 G15

PROJECT SCHEDULE (8-3-05)

DESCRIPTION

Perform the work of developing, implementing, monitoring, updating and revising a Project Schedule. Utilize this Project Schedule in coordinating work activities with subcontractors, vendors, suppliers, utilities, railroads, NCDOT, and others, as may be needed, to construct the project.

DESIGN-BUILD TEAM’S SCHEDULING REPRESENTATIVE

Designate a Design-Build Team authorized representative responsible for developing, updating, and revising the Design-Build Team’s Project Schedule. The scheduling representative should attend all schedule related meetings and be capable of providing and presenting information

EROSION & SEDIMENT CONTROL/STORMWATER CERTIFICATION: (3-16-06)**I. General**

The purpose of this certification program is to assure that all responsible parties involved in the construction of this project are properly trained and have the skills necessary to fulfill all environmental commitments required of this project. It is intended that the contractor/subcontractor representatives work jointly with the Department on the project to assure that all plan and contract requirements are met, that necessary adjustments are made and that all devices and features are installed in a timely manner. In the case of difference of opinion or interpretation of plan or contract requirements between the Contractor and the Engineer, the Engineer's determination and decision will be final.

Schedule and conduct construction activities in a manner that will minimize soil erosion and the resulting sedimentation and turbidity of surface waters. Comply with the requirements herein regardless of whether or not a National Pollutant Discharge Elimination System (NPDES) permit for the work is required.

Establish a chain of responsibility for operations and subcontractor's operations to ensure that the *Erosion and Sediment Control Stormwater (E&SC/SW) Pollution Prevention Plan* is implemented and maintained over the life of the contract.

- (A) *Certified Supervisor* –Provide a certified E&SC/SW Supervisor to manage the Design-Build Team and subcontractor(s) operations, insure compliance with Federal, State and Local ordinances and regulations, and to manage the Quality Control Program.
- (B) *Certified Foreman* – Provide certified, trained foremen for each construction operation that increases the potential for soil erosion or the possible sedimentation and turbidity of surface waters.

II. Roles and Responsibilities

- (A) *Certified E&SC/SW Supervisor* - The Certified Supervisor shall be responsible for ensuring E&SC/SW is adequately implemented and maintained on the project and conducting the quality control program. The Certified Supervisor shall be on the project within 24 hours from initial exposure of an erodible surface to the project's final acceptance when questions or concerns arise with E&SC/SW issues. Perform the following duties:
 - (1) **Manage Operations** - Coordinate and schedule the work of subcontractors so E&SC/SW measures are fully executed for each operation and in a timely manner over the duration of the contract.

Oversee the work of subcontractors so that appropriate E&SC/SW preventive measures are conformed to at each stage of the work.

Prepare the required weekly erosion control punchlist and present it to the Engineer.

Attend all weekly or monthly construction meetings to discuss the findings of the NPDES inspection log and other related issues.

Implement the E&SC/SW site plans requested.

Provide for E&SC/SW methods for Design-Build Team's temporary work not shown on the plans, such as, but not limited to work platforms, temporary construction, pumping operations, plant and storage yards, and cofferdams.

Acquire applicable permits and comply with requirements for borrow pits, dewatering, and any temporary work conducted by the Design-Build Team in jurisdictional areas.

Conduct all E&SC/SW work in a timely and workmanlike manner.

Fully install E&SC/SW work prior to suspension of the work.

Coordinate with the Department, Federal, State and Local Regulatory agencies on resolution of E&SC/SW issues due to the Design-Build Team's operations.

Ensure that proper cleanup occurs from vehicle tracking on paved surfaces and/or any location where sediment leaves the Right-of-Way.

Have available a set of erosion control plans that has been properly updated to reflect necessary plan and field changes for use and review by Department personnel as well as regulatory agencies.

- (2) Requirements set forth under the NPDES Permit - The Department's NPDES permit outlines certain objectives and management measures pertaining to construction activities. The permit references *NCG010000, General Permit to Discharge Stormwater* under the NPDES, and states that the Department shall incorporate the applicable requirements into its delegated E&SC/SW Program. Some of the requirements are, but are not limited to:

Control project site waste to prevent contamination of surface or ground waters of the state (i.e. construction materials, concrete washout, chemicals, litter, fuels, lubricants, coolants, hydraulic fluids, any other petroleum products, and sanitary waste).

Inspect E&SC/SW devices at least once every 7 calendar days, twice weekly for 303(d) impaired streams, and within 24 hours after a significant rainfall event of 0.5 inches within 24 hours.

Maintain an onsite rain gauge and a record of rainfall amounts and dates

Maintain E&SC/SW inspection records for review by Department and Regulatory personnel upon request.

Implement approved reclamation plans on all borrow pits and waste sites.

Maintain a log of turbidity test results as outlined in the Department's Procedure for Monitoring Borrow Pit Discharge.

Provide secondary containment for bulk storage of liquid materials.

Provide training for employees concerning general E&SC/SW awareness, the NPDES Permit requirements, and the requirements of the *General Permit, NCG010000*.

Report violations of the NPDES permit to the Engineer so that the DWQ Regional Office can be notified within 24 hours. The Supervisor will immediately notify the Engineer of any violations so that proper notification can be made to DWQ.

- (3) Quality Control Program - Maintain a quality control program to control erosion, prevent sedimentation and follow provisions of permits. The quality control program shall:

Follow permit requirements related to the Design-Build Team and subcontractors' construction activities.

Ensure that all operators and/or subcontractor(s) on site have the proper E&SC/SW certification.

Notify the Engineer when the required certified E&SC/SW personnel are not available on the job site when needed.

Conduct the inspections required by the NPDES permit.

Take corrective actions in the proper timeframe as required by the NPDES permit for problem areas identified during the NPDES inspections.

Incorporate erosion control into the work in a timely manner and stabilize disturbed areas with mulch/seed or vegetative cover on a section-by-section basis.

Maintain temporary E&SC/SW devices.

Remove temporary erosion or sediment control devices when they are no longer necessary as agreed upon by the Engineer.

The Design-Build Team's quality control and inspection procedures shall be subject to review by the Engineer. Maintain NPDES inspection records at the project site. Make NPDES inspection records available at all times for verification by the Engineer.

- (B) *Certified Foreman* - At least one Certified Foreman shall be onsite for each type of work listed herein during the respective construction activities to control erosion, prevent sedimentation and follow permit provisions:

Foreman in charge of grading activities

Foreman in charge of bridge or culvert construction over jurisdictional areas

Foreman in charge of utility activities

The Design-Build Team may request to use the same person as the Level II Supervisor and Level II Foreman. This person shall be on site whenever construction activities as described above are taking place. This request shall be approved by the Engineer prior to work beginning.

The Design-Build Team may request to name a single Level II Foreman to oversee multiple construction activities on small bridge or culvert replacement projects. This request shall be approved by the Engineer prior to work beginning.

III. Preconstruction Meeting

Furnish the names of the Certified E&SC/SW Supervisor, Certified Foremen, and notify the Engineer of changes in certified personnel over the life of the contract within 2 days of change.

IV. Ethical Responsibility

Any company performing work for the North Carolina Department of Transportation has the ethical responsibility to fully disclose any reprimand or dismissal of an employee resulting from improper testing or falsification of records.

V. Revocation or Suspension of Certification

Upon recommendation of the Director of Construction to the certification entity, certification for Supervisor and Certified Foremen may be revoked or suspended with the issuance of a *Continuing Immediate Corrective Action (CICA)*, *Notice of Violation*, or *Cease and Desist (C&D) Order* for E&SC/SW related issues.

Should any of the following circumstances occur, the Director of Construction may suspend or permanently revoke such certification.

Failure to adequately perform the duties as defined within the certification program

Issuance of a CICA, NOV, or C&D Order

Failure to fully perform environmental commitments as detailed within the permit conditions and specifications

Demonstration of erroneous documentation or reporting techniques

Cheating or copying another candidate's work on an examination

Intentional falsification of records

Directing a subordinate under direct or indirect supervision to perform any of the above actions

Dismissal from a company for any of the above reasons

Suspension or revocation of one's certification within another state

Suspension or revocation of a certification will be sent by certified mail to the registrant and the Corporate Head of the company that employs the registrant.

A registrant has the right to appeal any adverse action which results in suspension or permanent revocation of certification by responding, in writing, to the Director of Construction within 10 calendar days after receiving notice of the proposed adverse action.

Director of Construction
1520 Mail Service Center
Raleigh, NC 27699-1520

Failure to appeal within 10 calendar days will result in the proposed adverse action becoming effective on the date specified on the certified notice. Failure to appeal within the time specified will result in a waiver of all future appeal rights regarding the adverse action taken. The registrant will not be allowed to perform duties associated with the certification during the appeal process.

The Director of Construction will hear the appeal and make a decision within 7 days of hearing the appeal. Decision of the Director of Construction will be final and will be made in writing to the registrant.

If a certification is temporarily suspended, the registrant shall pass any applicable written examination and any proficiency examination, at the conclusion of the specified suspension period, prior to having the certification reinstated.

VII. Measurement and Payment

Certified E&SC/SW Supervisor is incidental to the project for which no direct compensation will be made.

Certified Foremen are incidental to the project for which no direct compensation will be made.

DB1G180

CLEARING AND GRUBBING (9-17-02)

Perform clearing on this project to the limits established by Method "III" shown on Standard No. 200.03 of the Roadway Standards.

The 2002 Standard Specifications shall be revised as follows:

Page 2-3, Article 200-5

Delete the first sentence of this article and insert the following:

The property owner will have no right to use or reserve for his use any timber on the project. All timber cut during the clearing operations is to become the property of the Design-Build Team, and shall be either removed from the project by him, or else shall be satisfactorily disposed of as hereinafter provided.

DB2 R01

SHOULDER AND FILL SLOPE MATERIAL

GENERAL

Perform the required shoulder and slope construction for this project in accordance with the applicable requirements of Section 560 and Section 235 of the *Standard Specifications* except as follows:

Construct the top 6 inches (150-mm) of shoulder and fill slopes with soils capable of supporting vegetation.

Provide soil with a P.I. greater than 6 and less than 25 and with a pH ranging from 5.5 to 6.8. Remove stones and other foreign material 2 inches (50 mm) or larger in diameter. All soil is subject to test and acceptance or rejection by the Engineer.

Obtain material from within the project limits or approved borrow source.

DB2 R50

GENERAL**NO CONTACT CLAUSE**

To ensure that information is distributed equitably to all short listed Design-Build Teams, all questions and requests for information shall be directed to the State Contract Officer through the Design-Build e-mail address. This precludes any Design- Build Team Member, or representative, from contacting representatives of the Department, other State Agencies or Federal Agencies either by phone, e-mail or in person concerning the Design-Build Project.

USE OF TERMS

Throughout this Request for Proposals and all manuals, documents and standards referred to in the Request for Proposals the terms Contractor, Bidder, Design-Builder, Design-Build Team, Team, Firm, Company, and Proposer are synonymous. Throughout this Request for Proposals and all manuals, documents and standards referred to in the Request for Proposals, the terms NCDOT, Department, Engineer, and State are synonymous.

DESIGN REFERENCES

Design references developed and published by NCDOT and those developed and published by other agencies and adopted for use by NCDOT which are to be used in the design of this project may be obtained by contacting the Contract Office of the Project Services Unit. Standard prices for materials, which the Department normally sells for a fee, will be in effect. The Design-Build Team is responsible for designing in accordance with the applicable documents and current revisions and supplements thereto.

REVIEW OF SUBMITTALS

Major design milestones and required design submittals shall be identified as activities on a CPM, bar chart, or other scheduling tool. This schedule shall be submitted to the State Alternative Delivery Systems Engineer and Resident Engineer concurrently with the first design submittal, or within 30 days of the contract award, whichever is earlier. The schedule shall be revised and resubmitted as design milestones change or as directed by the State Alternative Delivery Systems Engineer. Submittals will be reviewed within 10 working days (15 days for temporary structures, overhead sign assemblies, MSE walls, and temporary shoring) from the date of receipt by NCDOT unless otherwise stipulated in the scope of work. All submittals shall be prepared and submitted in accordance with the "*Design-Build Submittal Guidelines*", which by reference are incorporated and made a part of this contract. All submittals shall be made simultaneously to the State Alternative Delivery Systems Engineer and the Resident Engineer. The Department will not accept subsequent submittals until prior submittal reviews have been completed for that item. The Design-Build Team shall prioritize submittals in the event that multiple submittals are made based on the current schedule. All submittals shall include pertinent Special Provisions. No work shall be performed prior to Department review of the design submittals.

OVERVIEW

The Design-Build Project, R-4463B, extends from US 70 to NC 43 / NC 55, a distance of approximately 2.5 miles. The proposed NC 43 connector consist of a four-lane, median divided partial control of access facility on new location.

- Identify methods of construction in wetlands.
- Describe any Notice of Violations (NOV's) or Immediate Corrective Actions (ICA's) the Design-Build Team has received and the disposition of any NOV's or ICA's.
- Describe the Design-Build Teams approach to Sedimentation and Erosion Control for the project.
- Describe efforts to minimize excavation within the contaminated sites and associated disturbance to underlying soil.

Design Features – 17 points

- Show plan view of design concepts with key elements noted.
- Identify preliminary horizontal and vertical alignments of all roadway elements.
- Show typical sections for the mainline of the project.
- Identify drainage modifications and designs to be implemented.
- Identify the appropriate design criteria for each feature if not provided.
- Identify all bridge types to be constructed, including any special design features or construction techniques needed.
- Identify any deviations, including proposed design exceptions, from the established design criteria that will be utilized. Explain why the deviation is necessary. Describe any Geotechnical investigations to be performed by the Design-Build Team.
- Identify any special aesthetics considerations that will be part of the design..
- Describe how any utility conflicts will be addressed and any special utility design considerations. Describe how the Design-Build Team's design and construction methods minimize the Department's utility relocation costs.
- Identify types of any retaining walls and /or noise walls if applicable.
- Address the approach to coordinating any necessary efforts with railroad owners.

3. Long Term Maintenance – 5 points

- Describe any special materials, not referenced elsewhere in the contract, incorporated into the project that would result in long term reduction in maintenance.
- Describe any special designs or construction methods that would reduce future maintenance costs to the Department.
- Describe any additional commitments that the Design-Build Team is including that decrease future maintenance costs.
- Estimate a minimum ten-year cost savings resulting from incorporation of these special materials, design, or construction methods into the project.

4. Schedule and Milestones – 20 points

- Provide a schedule for the project including both design and construction. 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".**

ROADWAY SCOPE OF WORK (3-16-06)**Project Details**

- The Design-Build Team shall design and construct a four-lane divided partial control of access facility with a 46-foot median, unless indicated otherwise, from south of US 70 to NC 43 / NC 55 (Neuse Boulevard). The Design-Build Team shall design and construct the NC 43 Connector (-L- Line) providing access and improvements as indicated on the Public Hearing Map and the Indirect and Cumulative Impacts (ICI) Report. The -L- Line southern limits shall be of sufficient length to accommodate the intersection of the southern most ramp junction with -L-. Also, at the southern project limits, the transition to existing ground shall not be steeper than a 4:1 slope. The limits of -L- Line construction at the northern project terminus shall be of sufficient length to tie to existing based upon the current guidelines and standards. Along the proposed alignment, the NC 43 Connector shall be designed and constructed to meet a 60-mph design speed for a flat rural arterial with the exception of the proposed curve approaching the NC 55 intersection. This curve shall be designed and constructed to meet a 40-mph design speed for a flat rural arterial. The pavement cross slope shall be a minimum of 2.5%. The design speed for US 70 shall be 70 mph. -Y8- shall be designed for local road criteria. The Design-Build Team shall provide all other design criteria in the Technical Proposal.
- The Design-Build Team shall design and construct at-grade intersections, along the -L- Line, with full movement crossovers at the NC 43 Connector / US 70 Interchange ramp junctions, -Y8- (connection from Bosch Boulevard to NC 43 Connector) and NC 55. The NC 55 intersection shall be signalized. The Design-Build Team shall design, construct and obtain sufficient right of way at the NC 43 Connector / -Y8- intersection and the US 70 Interchange ramp junctions to accommodate future signals.
- The Design-Build Team shall design and construct an additional at-grade intersection along the -L- Line between US 70 and the Norfolk Southern Railroad as summarized in the Indirect and Cumulative Impacts (ICI) Report and the NEPA/404 Merger Team Meeting Agreement, Concurrence Point 4A: Avoidance and Minimization. The additional at-grade intersection shall be designed and constructed as a directional crossover with median u-turns based on the memo "Implementation of Directional Crossover with Median U-turns" dated January 6, 2006. The u-turn bulb-outs shall be located to avoid environmental impacts. The design vehicle for the bulb-outs and directional crossover shall be a WB-62.
- With the exception of the US 70 eastbound on-ramp, the Design-Build Team shall design and construct an interchange at US 70 to accommodate the current and future turning movements, except signals, as shown on the Public Hearing Map. The median width on US 70 shall not be reduced. The Design-Build Team shall prepare functional horizontal and vertical designs for the US 70 eastbound on-ramp and make a determination of, and acquire, the additional right of way required by the future ramp. The proposed US 70 westbound exit ramp shall be designed to accommodate a future loop design. The design

of this ramp need not accommodate future loop acceleration lane/taper design requirements. Design-Build Team shall design, construct and sign the intersections of the eastbound off-ramp from US 70 to the NC 43 Connector and the westbound on-ramp from NC 43 to US 70 terminals to provide free flow movements from the ramps to the NC 43 Connector. The free flow movements shall be designed to meet a 25-mph design speed. The design shall allow for the future operation of the interchange as shown on the Public Hearing Map.

- The Design-Build Team shall design and construct -Y- Lines, ramps and cul-de-sacs, providing access, widening and improvements as indicated on the Public Hearing Map unless indicated otherwise. The limits of -Y-Line construction shall be of sufficient length to tie to existing based upon current guidelines and standards.
- To accommodate future auxiliary lanes the Design-Build Team shall design and construct a full lane and shoulder width throughout the entire limits of the Eastbound off ramp and Westbound on ramp adjacent to US 70 including all tapers which will be painted.
- The Design-Build Team shall design and construct the NC 43 and NC 55 widening in a manner that minimizes encroachment onto properties. If total acquisition is unavoidable, due to encroachment into wells and/ or septic lines, see Utilities Scope of Work. The Design-Build Team shall discuss minimization efforts in the Technical Proposal.
- Channelization will be required at signalized intersections, directional crossovers and ramp junctions.
- All ramps shall have a lane width of 14 feet with 10-foot shoulders on the left side of traffic, 4-foot of which is full depth paved, and 12-foot wide shoulders on the right side of traffic, 4-foot of which is full depth paved. In areas along the ramp where guardrail is required along the right side of traffic, provide a shoulder width of 15 feet. Spiral curves are required for ramp alignments that tie to the mainline near the gore area. The use of spiral curves at other locations along the ramp alignment is optional. NCDOT prefers angular exit ramp design and parallel entrance ramp design.
- Loops shall have a lane width of 16 feet. Loops shall use curb and gutter along the inside of the loop in conjunction with a berm width of 10 feet. Design efforts should be made to eliminate guardrail along the loop, however, if guardrail should be required along the inside of a loop, provide a berm width of 14 feet and set the guardrail 12 feet from the face of curb and gutter. Provide a shoulder width of 10 feet (13 feet with guardrail) on the outside or left side of traffic, 4 feet of which is full depth paved.
- Along the -L- Line, the Design-Build Team shall design and construct 10-foot outside shoulders (13-foot with guardrail), four-foot of which shall be full depth paved shoulders and six-foot median shoulders, two-foot of which shall be full depth paved shoulders.
- Revisions that lower the vertical alignment from the preliminary design on NC 55 at the intersection with the proposed NC 43 Connector will be allowed provided the Design

Build team can demonstrate to the permitting agencies that impacts to jurisdictional streams or wetlands are not increased as a result of this change.

- The Design-Build Team shall design and construct bridge rail offsets that are based upon the current guidelines and standards.
- Concurrence Point 4A, Avoidance and Minimization, has been reached with the Environmental Agencies. Any variations in the Department's proposed design and or construction methods that nullify Concurrence Point 4A and / or require additional coordination with the Environmental Agencies shall be the sole responsibility of the Design-Build Team. The NCDOT shall not allow any contract time extensions associated with this additional coordination.
- The Design-Build Team shall design and construct resurfacing grades for all roadways impacted by construction, excluding haul roads and US 70. Both directions of US 70 shall be overlaid for the same length from a point at the eastern most ramp taper limit to a point at the western most ramp taper limit. Rumble strips shall be required on US 70. The Design-Build Team shall design and construct grades that adhere to the design criteria and standards, providing all required pavement wedging.
- The maximum allowable cut slope or fill slope on this project shall be 3:1. The slopes in the interchange area shall follow the requirements set forth in the *Roadway Design Guidelines for Design-Build Projects* located on the Design-Build web site. Inside the interchange quadrants the maximum slope allowed shall be 4:1.
- The Design-Build Team shall inform the State Alternative Delivery Systems Engineer of any proposed changes to the NCDOT preliminary design or previously reviewed submittals and obtain approval prior to incorporation. The Design-Build Team shall note any proposed deviations to the preliminary design shown on the Public Hearing Map in the Technical Proposal.
- Beneath the proposed structures, the proposed horizontal and vertical clearances on US 70 shall accommodate two lanes and the proposed outside acceleration lane in the eastbound direction and two lanes and a future outside acceleration lane in the westbound direction, while maintaining the existing median width. The horizontal clearances shall include standard shoulder widths that meet current guidelines and standards. MSE walls in front of end bents will be permitted at this interchange.
- Design exceptions shall not be allowed for the NC 43 Connector. The NCDOT prefers not to have design exceptions for the -Y- Lines and ramps. If the Design-Build Team anticipates any design exceptions, they shall be clearly noted in the Technical Proposal. Prior to requesting / incorporating a design exception, the Design-Build Team must obtain prior approval from the NCDOT. If approval is obtained, the Design-Build Team shall be responsible for the development and approval of all design exceptions.
- The Design-Build Team shall place rebar and caps with carsonite posts for right of way monument locations as directed by the Resident Engineer. The NCDOT shall furnish the caps and carsonite posts in accordance with Department policy.

Shoulder drains are not required for this project.

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

In areas where the existing shoulder is proposed to be incorporated into a permanent travel lane (ramp/loop tie-ins, etc.), the Design-Build Team shall be responsible for evaluating the existing paved shoulders regarding their suitability for carrying the projected traffic volumes. In the event that the existing paved shoulders are found to be inadequate, the Design-Build Team shall be responsible for removing the existing paved shoulders. The Design-Build Team shall submit their evaluation and proposed use of the shoulders to the State Alternative Delivery Systems Engineer for review, approval or rejection.

The Design-Build Team shall be responsible for the design of all temporary pavements and for evaluation of existing shoulders and roadways regarding their suitability for carrying traffic during construction, if necessary. In the event that the existing shoulders and roadways are found to be inadequate for the proposed temporary traffic volumes and durations, the Design-Build Team shall be responsible for upgrading the pavement to an 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 shall be submitted for review and comment using the contract submittal process. The expected duration for traffic on temporary pavement must be included as part of the submittal.

If the Design-Build Team elects to use a posted road as part of a detour route, as discussed in the Traffic Control Scope of Work, pavement strengthening will be required prior to placing detour traffic on the route. The Team shall overlay the route with one lift of 1.5" S9.5B surface course.

In addition, the Team will be responsible for:

1. Maintenance of the posted road in a satisfactory condition from the start date of the detour throughout the remainder of the project.
2. Repair of all damages to the posted road at the end of the detour period to place it in a condition as good as it was prior to detouring traffic.
3. Maintaining property access within the closure area at all times.

STRUCTURES SCOPE OF WORK (3-16-06)**Project Details**

The Design-Build Team shall be responsible for all structures necessary to complete the project.

- Bridge(s) on NC 43 Connector over NSC / NCRR Railroad.
- Bridge(s) on NC 43 Connector over US 70.

The minimum vertical clearance required over US 70 shall be 17'-0". The minimum vertical clearance over the railroad shall be 23'-0".

Only one bent per bridge may be placed in the median of US 70. Median embankment in place of bridge will not be allowed.

Galvanized or metalized pipe piles may be used in pile bents. The Design-Build Team's use of pipe piles on the railroad overhead structure is subject to approval of the Railroad. Appearance painting will be required for exposed galvanized or metalized pipe piles used for the bridges on NC 43 Connector over US 70. Appearance painting will consist of the following:

- Two field applied gray waterborne acrylic finish coats with 3-5 mils of dry film thickness.
- Surface preparation and adhesion of galvanized surfaces shall meet ASTM 6386-99 and ASTM D3359 respectively.

Alternative details for intermediate diaphragms for prestressed concrete girders may be used in accordance with recently revised NCDOT policy. This policy may be extended to other concrete girder shapes or to end diaphragms provided adequate supporting documentation/computations are reviewed and approved by the Department prior to their use.

Railroad Overhead Design and Coordination

NCDOT requires a minimum 25'-0" horizontal clearance from the centerline of track to any substructure unit. Crashwalls on interior bents shall not be permitted. Reference Theoretical Section in the Norfolk Southern Corporation "*Guidelines for the Design of Grade Separation Structures*".

The Design-Build Team shall design the railroad overhead structure to accommodate one future track on each side of the existing track for a total of three tracks. A minimum clearance of 14' centerline to centerline is required.

Only NSC or NCRR may grant exceptions to their guidelines or AREMA.

Reference Railroad Coordination Scope of Work.

General

The Design-Build Team's primary structural design firm shall be on the Highway Design Branch list of firms qualified for Structure Design and maintain an office in North Carolina.

Design shall be in accordance with the Seventeenth Edition AASHTO Standard Specifications for Highway Bridges, NCDOT Structure Design Manual (including policy memos), NCDOT Bridge Policy Manual, Norfolk Southern Corporation "*Guidelines for the Design of Grade*

RAILROAD COORDINATION SCOPE OF WORK (3/16/06)

Unless a distinction is made, it is the Department's intention that whenever this scope of work references "Railroad" this would include both the North Carolina Railroad and the Norfolk Southern Corporation.

The Design-Build Team shall be responsible for coordinating all Railroad design and construction details on Railroad right of way. Coordination shall include any necessary agreements required by the NCDOT and / or Railroad. The Design-Build Team shall be responsible for all Railroad costs associated with this project to include, but not be limited to, crossing surfaces, track materials, insurance, flagging, and right of way acquisition.

Preparation for Construction within the Existing Railroad Right of Way

- I. The Design-Build Team shall be required to use the following guidelines and any other guidelines as required by the Railroad.
 - (A) *AREMA Manual for Railroad Engineering*
 - (B) *Norfolk Southern Guide Lines for Design of Grade Separation Structures (Shoring)*
 - (C) *Federal Aid Policy Guide 23 CFR 140I*
 - (D) *Federal Aid Policy Guide 23 CFR 646*
 - (E) *NCDOT Construction Manual Section 105-8*
 - (F) *NCDOT Standard Specifications for Roads and Structures Section 107-9 (Excluding Paragraph 2)*
 - (G) *North Carolina Administrative Code Section T19A: 02B, 0153 through 0159*
 - (H) *Norfolk Southern Corporation Special Provisions for Protection of Railway Interest*
 - (I) *North Carolina Railroad Company Form NCR 103 Specific Requirements of North Carolina Railroad Company For work on its Right of Way*
- II. Per Norfolk Southern Corporation, there is an average of 4 freight trains per day through the proposed bridge site at a maximum speed of 25 miles per hour. The Design-Build Team shall be responsible for verifying the number of trains per day and maximum speed allowed.
- III. See Right of Way scope of work for any temporary or permanent right of way acquisition.

Arrangements for Protection and Adjustments to Existing and Proposed Railroad Crossing Surface and Roadbeds:

- I. The Design-Build Team shall make the necessary arrangements with the Railroad for the installation of new grade crossing surfaces, (permanent and temporary construction crossing), removal of temporary construction crossing after completion of project, shoring plans, encroachment agreements, and railroad force account estimates and agreements. All permanent crossing surfaces shall be concrete, both field and gauge.

HYDRAULICS SCOPE OF WORK (3-16-06)

- The Design-Build Team shall hold a pre-design meeting with the State Alternative Delivery Systems Engineer upon acceptance of the Preliminary Roadway Plans.
- The Design-Build Team shall develop all designs in accordance with criteria provided in the North Carolina Division of Highways “*Guidelines for Drainage Studies and Hydraulics Design-1999*” and the addendum “*Handbook of Design for Highway Drainage Studies-1973*” and the NCDOT Hydraulic Unit web site.
- The Design-Build Team shall conduct the 4B and 4C Meetings. All work associated with and resulting from the hydraulics and permit reviews shall be the responsibility of the Design-Build Team. The Design-Build Team shall provide hydraulics plans and permit impact sheets to the State Alternative Delivery Systems Engineer a minimum of five weeks prior to the respective meetings. The Design-Build Team shall take minutes of the above referenced meetings and provide them to the Department within three business days.
- The Design-Build Team shall be responsible for obtaining the phased or preliminary permit for R-4463A and the final design permit for R-4463B.
- Ditches shall not be allowed in wetlands.
- The minimum allowable ditch grade shall be 0.3% unless otherwise required by the “*Guidelines for Drainage Studies and Hydraulic Design – 1999.*”

Additional items required of the Design-Build Team are:

- Storm drainage design and installation
- Stormwater Management Plan
- State Stormwater Permit

GEOTECHNICAL ENGINEERING UNIT SCOPE OF WORK (3-16-06)**I. GENERAL**

Obtain the services of a firm prequalified for geotechnical work from the Highway Design Branch List. The prequalified geotechnical firm shall prepare foundation design recommendation reports for use in designing structure foundations, roadway foundations, retaining walls, sound barrier foundations and temporary structures. Based upon the subsurface information provided by NCDOT and the final roadway and structure designs, the prequalified geotechnical firm must determine if additional subsurface information, other than that required and noted elsewhere in this RFP, is required. If a determination is made that additional subsurface information is required, the Design Build Team must perform any additional subsurface investigation and laboratory testing in accordance with the current NCDOT *Geotechnical Unit Guidelines and Procedure Manual*.

A minimum of one (1) standard penetration test (SPT)/rock core or cone penetration test (CPT) boring per bent shall be required for all bridges except dual bridges. For dual bridges, a minimum of one (1) SPT/rock core or CPT boring per bent shall be required for each of the right and left lane dual bridges.

Locate all borings for pile bents or footing on piles within 75 feet of the proposed bent location to be counted for this minimum boring requirement. The 75-foot limit may be relaxed for portions of the bridge for which the Design Build Team can demonstrate geological uniformity to the Department's satisfaction.

Locate all borings for bents using drilled piers within 75 feet of the proposed bent location. Drill borings deep enough to show a complete soil profile to the depth of the foundation supporting layer. Space borings for retaining walls no more than 100 feet apart with a minimum of two borings; one at each end of the wall. Drill borings for retaining walls to twice the maximum height of the wall.

For the purpose of this scope, a sinkhole is defined as a surface depression or underground void that is caused by below-ground dissolution of limestone or lime cementation in soils. After clearing and grubbing operations are complete within a section of the project, the Design-Build Team shall immediately notify the Department and shall allow the Department to evaluate the three potential sinkholes identified in the original subsurface investigation and verify that no other sinkholes are present within the construction limits. The Design-Build Team shall then allow the Department a maximum of 30 days per cleared and grubbed section to perform geophysical testing, conduct geotechnical confirmation, and provide the Design-Build Team with the remediation scheme to be performed at each sinkhole within that section. Remediation of sinkholes deemed necessary by the Department will be the responsibility of the Design-Build Team and will be paid for in accordance with Article 104-7 of the Standard Specifications.

II. DESCRIPTION OF WORK

Design foundations, embankments, slopes, retaining walls, sound barrier foundations and temporary structures in accordance with the current allowable strength design AASHTO *Standard Specifications for Highway Bridges*, NCDOT *Structure Design Manual*, NCDOT *Roadway Design Manual* and the Geotechnical Engineering Unit *Roadway and Structure Foundation Guidelines*.

A. Structure Foundations

Design foundations with concrete footings, prestressed concrete piles, steel piles or drilled piers. Steel reinforcement is required for concrete foundations. Design spread footings with the bottom of footing elevation at or below the weathered rock or hard rock elevation.

The Design-Build Team may use design software or methodology that accommodates soil-structure interaction effects.

Piles must have at least 10 feet of embedment below the lowest of the following: bottom of footing elevation, finished or existing grade elevation.

End bent fill slopes up to 35 feet in height (defined as the difference between grade point elevation and finished grade at toe of slope) must be 1.5:1 (H:V) or flatter. End bent fill slopes with heights greater than 35 feet and end bent cut slopes must be 2:1 or flatter. Extend end bent slope protection from the toe of slope to berm and to 2.75:1 (H:V) slope.

Design foundations for service loads using allowable stress design. The ultimate bearing capacity of all piles shall be determined by Section III, Construction Requirements, of this scope.

Analyze drilled pier and pile bent foundations using either Lpile or FB-Pier. Design drilled piers and vertical piles with a sufficient embedment in soil and / or rock to achieve "fixity" so that a decrease in pier or pile length shall not significantly increase the top deflection. The Design-Build Team's structural engineer shall submit correspondence to the Department approving all deflections greater than one inch in the free head condition for either top of pile for a pile bent or top of column for post and beam construction and drilled piers.

B. Roadway Foundations

Design all non-reinforced fill slopes for a slope of 3:1 (H:V) or flatter except bridge end bent slopes (see Section A) and a minimum stability factor of safety of 1.3. Design all cut slopes for a slope of 3:1 (H:V) or flatter and a minimum stability factor of safety of 1.5. Use limiting equilibrium methods, such as Modified Bishop, Simplified Janbu, Spencer or any other generally accepted method for slope stability analysis.

Design sound barrier foundations in accordance with current allowable stress design *AASHTO Guide Specifications for Structural Design of Sound Barriers*. A minimum factor of safety of 1.5 is required for shaft embedment depths.

Design and construct embankments such that no more than 2" of settlement shall occur after the waiting period end (refer to Section III for additional criteria for ending the actual waiting period). The Design-Build Team shall determine the waiting period and include their recommendations in the foundation design report for the Department's review and approval. Soil improvement techniques to mitigate long term settlement problems or to transfer the embankment load to a deeper bearing stratum are allowed. Soil improvement techniques shall follow the current industry standard practices and the guidelines of *Ground*

the Design-Build Team shall describe the methods of construction of all structures. The description of the temporary impacts (haul roads, utility relocations, work bridges, etc.) shall include restoration plans, schedules, and disposal plans. This information shall be included in the permit application. This information shall also be part of the data presented at the 4B and 4C meetings.

The NCDOT hereby commits to ensuring, to the greatest extent possible, that the footprint of the impacts in areas under the jurisdiction of the federal Clean Water Act shall not be increased during the Design-Build effort. All fill material shall be immediately stabilized and maintained to prevent sediment from entering adjacent waters or wetlands. The Design-Build Team shall be responsible for ensuring that the design and construction of the project will not impair the movement of aquatic life.

The Design-Build Team shall submit one permit application for the entire project. The Design-Build Team shall not submit multiple applications to develop a “staged permitting” process to expedite construction activities in a phased fashion.

Requests made for modifications to the permits obtained by the Design-Build Team shall only be allowed if the Engineer determines it to be in the best interest of the Department and will be strongly discouraged. The Design-Build Team shall not take an iterative approach to hydraulic design issues. The design shall be complete prior to permit modification application.

Major Permit Timeframe

The Design-Build Team should expect it to take up to 11 months to accurately and adequately complete all designs necessary for the permit application, submit application to the Department, and obtain approval for the permits from the environmental agencies. Agency review time will be approximately 100 days from receipt of a “complete” package. No requests for additional contract time or compensation will be allowed if the permits are obtained within this 11-month period. With the exception of location and survey work, no mobilization of men, materials, or equipment for site investigation **within the project limits** or construction of the project shall occur prior to obtaining the permits (either within the 11-month period or beyond the 11-month period). This limitation does not preclude the off-site fabrication of bridge members or equipment. The Department will not honor any requests for additional contract time or compensation, including idle equipment or mobilization or demobilization costs, for the Design-Build Team mobilizing men, materials (or ordering materials), or equipment prior to obtaining all permits. The Department will consider requests for contract time extensions for obtaining the permits only if the Design-Build Team has pursued the work with due diligence, the delay is beyond their control, and the 11-month period has been exceeded. If additional contract time were granted, it would be only for that time exceeding the 11-month period. This 11-month period is considered to begin on the Date of Availability, as noted in the contract.

The Design-Build Team needs to be aware that the timeframes listed above for review by PDEA, NCDWQ, NCDCEM, and the US Army Corps of Engineers, to review any permit applications begin only after a fully complete and 100% accurate submittal.

GEOENVIRONMENTAL SCOPE OF WORK (3/16/06)**I. DESCRIPTION OF WORK**

The Department identified four known contaminated areas within the project corridor. The areas include two former gas stations, one active gas station, and one Inactive Hazardous Waste Site as follows:

1. Former Scotchman #61 Gas Station, 215 Washington Post Road
2. Trade Mart #49 Gas Station, 275 Washington Post Road
3. Texfi Industries/Amital Spinning Textile Manufacturing Inactive Hazardous Waste Site, 197 Bosch Blvd
4. Hulmet Treschan Property, Former Gas Station, 325 West NC 55

The water table mentioned in this scope of work is defined on all four sites as 20 feet above mean sea level. Any excavation below 20 feet above mean sea level will be considered below the water table.

For the purpose of this scope, the phrases “Area of Contaminated Soil” and “Area of Contaminated Soil Below the Water Table” refer to those areas designated as such in the GeoEnvironmental Areas of Contaminated Material Plan Sheets provided by the Department by letter dated March 13, 2006.

Department Responsibilities**Site 1**

- Abandon monitoring and recovery wells located within the project limits
- Relocate monitoring and recovery wells outside the project limits if needed
- Relocate treatment system outside project limits if needed
- Excavate contaminated soil identified as Unavoidable Excavation above the water table as noted below
- Provide GeoEnvironmental Plan Sheets
- Provide Right of Way recommendations

Sites 2 and 4

- Remove underground storage tanks and contaminated soil above the water table.
- Provide GeoEnvironmental Plan Sheets
- Provide Right of Way Recommendations

Site 3

- Abandon monitoring and recovery wells located within the project limits
- Relocate monitoring and recovery wells outside the project limits if needed
- Provide GeoEnvironmental Plan Sheets
- Provide Right of Way Recommendations

Site Specific Design-Build Team Responsibilities**Site 1**

- Eliminate or minimize excavation on this site in the “Area of Contaminated Soil.”
- The Design-Build Team shall quantify, in the Technical Proposal, the amount of Unavoidable Excavation required by their design and as defined below.
- Excavate and dispose of contaminated materials caused by Excessive Excavation as defined below.

Site 2

- Dispose of concrete/asphalt paving after the Department removes the USTs.

Sites 1, 2, 3, and 4

- Eliminate or minimize all contact with the water table in the “Area of Contaminated Soil Below the Water Table.” The Design-Build Team will be responsible for proper disposal of any material removed from below the water table in accordance with Section IV below.
- Install sealed drainage if necessary. (see below).
- Acquire right of way, raze buildings, and notify the Department of the acquisition.

Right of Way Acquisition:

The Design-Build Team shall acquire the right of way for the above sites as early as possible. The Department will require 30 days after notification that the right of way has been acquired and cleared of above ground structures to conduct the work noted above. The Design-Build Team shall adhere to all Right of Way Branch procedures regarding the acquisition of contaminated property and the right of way acquisition recommendations provided by the Department.

Removal of Contaminated Soil on Site 1 for Unavoidable Excavation:

Unavoidable Excavation is defined as all excavation within the “Area of Contaminated Soil” at Site 1 noted above required by the Design-Build Team’s design and as submitted in the Technical Proposal. If the Design-Build Team’s design requires Unavoidable Excavation, the Department will remove these materials to a quantity equal to the amount noted in the Technical Proposal or to the water table, whichever is less. In such case, the Design-Build Team shall provide plans and cross sections for the proposed excavation. For removal of these materials, the Design-Build Team shall allow the Department 30 days from (1) the time the plans and cross sections are submitted or (2) the date the property is vacated and cleared of above ground structures, whichever is later, as noted above. The removal performed by the Department can occur prior to the acquisition of permits.

Removal of Contaminated Soil on Site 1 for Excessive Excavation:

Excessive Excavation is defined as any excavation within the “Area of Contaminated Soil” at Site 1 noted above that exceeds the amounts noted in the Technical Proposal or excavation plans and cross sections. The Design-Build Team shall be responsible for the removal of contaminated soils only to the extent that the excavation exceeds the amount noted in the Technical Proposal or excavation plans and cross sections; and for those soils below the water table. The removal performed by the Design-Build Team shall not occur prior to obtaining all permits for the project. All contaminated soils shall be removed in accordance with Section IV below.

Drainage within Contaminated Sites:

If drainage is required below the water table within the “Area of Contaminated Soil” or the “Area of Contaminated Soil Below the Water Table” at Sites 1, 2, 3, or 4, the Design-Build Team shall construct a sealed drainage system in these areas. Soil excavated below the water table is to be considered contaminated and shall be handled in accordance with Section IV below.

Contamination by Design-Build Team:

The Design-Build Team shall be responsible for any costs (direct or indirect) associated with damage and or cleanup of a hazardous substance and / or oil spill caused by it or its agent. This responsibility shall extend to freight carriers hired by the Design-Build Team to deliver a commodity or service to the Department. The Design-Build Team shall comply with all Local, State, and Federal requirements for the proper handling of hazardous substances and/or oil. In addition, the Design-Build Team agrees to indemnify and hold the Department harmless against all claims, liabilities, and costs, including attorneys’ fees, incurred in the defense of any claim brought against the Department resulting from such a spill.

II. INFORMATION PROVIDED BY NCDOT:

- Former Scotchman #61, 215 Washington Post Road Assessment Report
- Trade Mart #49, 275 Washington Post Road Assessment Report
- Texfi Industries/Amital Spinning, 197 Bosch Blvd Assessment Report
- Helmut Treschan ,325 West NC 55 Assessment Report
- Right of Way Acquisition Recommendations
- GeoEnvironmental Areas of Contaminated Material Plan Sheets

Monday thru Thursday from 6:00 a.m. to 12:00 a.m. (Midnight) and
from 6:00 a.m. Friday to 12:00 a.m. (Midnight) Sunday

Liquidated Damages for the above road closure time restrictions on US 70 are \$500.00 per 15 minute period or any portion thereof for this Intermediate Contract Time.

- b) The Design-Build Team shall not close NC 43 or NC 55 during the times listed below. Also, the Closures will only be allowed for a maximum of **30 minutes and only for Traffic shifts, including tie-in work and placement of pavement markings.**

Monday thru Sunday from 6:00 a.m. to 8:00 p.m.

Liquidated Damages for the above road closure time restrictions on NC 43 and NC55 are \$200.00 per 15 minute period or any portion thereof for this Intermediate Contract Time.

- c) The Design-Build Team may close NC 55 one time for tie-in and grade change construction for no more than thirty (30) consecutive calendar days.

If this option is used, the Design-Build Team must commit to a maximum road closure duration in the Technical Proposal and specify the proposed detour route as well as the Traffic Control concept.

If the proposed detour route requires the use of a posted road, The Design-Build Team shall strengthen the road prior to use as a detour route. See Pavement Management Scope of work for strengthening requirements. In addition, the Team will be responsible for maintaining property access within the closure area at all times.

Liquidated Damages for the above road closure duration committed by the Contractor for tie-in work on NC 55, are \$2,000.00 per calendar day for this Intermediate Contract Time.

- d) The Design-Build Team may close NC 43 one time for tie-in and grade change construction for no more than fifteen (15) consecutive calendar days.

If this option is used, the Design-Build Team must commit to a maximum road closure duration in the Technical Proposal and specify the proposed detour route as well as the Traffic Control concept.

If the proposed detour route requires the use of a posted road, The Design-Build Team shall strengthen the road prior to use as a detour route. See Pavement Management Scope of work for strengthening requirements. In addition, the Team will be responsible for maintaining property access within the closure area at all times.

Liquidated Damages for the above road closure duration committed by the Contractor for tie-in work on NC 43, are \$2,000.00 per calendar day for this Intermediate Contract Time.

3. Hauling Restrictions

The Design-Build Team shall adhere to the hauling operations (Article 1101-30) noted in the *2002 NCDOT Standard Specifications for Roads and Structures*.

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.

When using Polyurea marking, black skips are not required on concrete surfaces.

Refer to the Polyurea Special Provision, which is available on the Traffic Control Website.

All Interstates and US routes with full control of access require 50% wider markings, i.e., lane lines, edge lines and skips shall be 6" in width.

The Final Pavement Marking plan at the NC43 Connector/US70 interchange shall show Tubular markers (fixed) (see section 1266) and Type III barricades with red and white striped rails required for the interim traffic pattern that will be in use until R-4463A is completed in the future.

The Design-Build Team shall install temporary pavement markings and temporary pavement markers on the interim surface or temporary pattern as follows:

Road	Marking	Marker
All Roads, Ramps and Existing Structures.	Minimum of Paint	Temporary Raised
Proposed Structures	Temporary Tape	Temporary Raised

Trace the edge of proposed monolithic islands with the proper color pavement marking prior to installation of a proposed monolithic island.

If paint is used, the Design-Build Team shall place at least two applications of paint on the wearing surface where traffic patterns will be in place more than three (3) months. The Design-Build Team shall place additional applications of paint upon sufficient drying time, as determined by the Engineer.

Tie proposed pavement marking lines to existing pavement marking lines.

Replace any pavement markings that have been damaged by the end of each day's operation.

Remove any conflicting markings or markers before shifting traffic to a new pattern.

Removal of the temporary pavement markings shall be accomplished by using water blasting, sand blasting, shot blasting or other approved systems to minimize damage to the road surface. All systems shall be required to remove 100% of the pavement marking without removing more than 1/32 inch of the pavement surface.

I. Temporary/Final Signals

Notify the Engineer two months before a traffic signal installation is required.

Shift and revise all signal heads as required by the approved Signal Plans developed by the Design-Build Team.

J. Miscellaneous

Provide portable temporary lighting to conduct night work in accordance with the NCDOT *Standard Specifications for Roads and Structures*.

Police may be used to maintain traffic through intersections. The Design-Build Team shall be responsible for coordinating with the law enforcement agency if they will be