



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

MICHAEL F. EASLEY
GOVERNOR

LYNDO TIPPETT
SECRETARY

November 1, 2006

Addendum No. 4

RE: Contract ID: C201269
TIP Number: I-2808A
FA No.: IMF-77-1 (157)72
Yadkin County
Project Description: I-77 from south of SR 1125 (Ashbury Church Road) to US 21

January 3, 2007 Letting

To Whom It May Concern:

Reference is made to the Final Request for Proposal with label furnished to you on February 7, 2006 for the above project.

The *COVER SHEET* has been revised.

The *TABLE OF CONTENTS* has been revised.

Pages 1, 3 - 5, 8, 12, 16, 21, 23, 28 - 29A of the *PROJECT SPECIAL PROVISIONS SECTION* have been revised.

Pages 30 - 31 and 33 of the *GENERAL SECTION* have been revised.

Page 45 of the *PAVEMENT MANAGEMENT SCOPE OF WORK* has been revised.

Pages 71 - 74 of the *EROSION AND SEDIMENTATION CONTROL SCOPE OF WORK* have been revised.

Page 115 of the *STANDARD SPECIAL PROVISIONS SECTION* has been revised.

Page 192 of the *DIVISION 1 - SECTION 105-2* has been revised.

Sincerely,

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

TELEPHONE: 919-250-4128
FAX: 919-250-4119
WEBSITE: WWW.DOH.DOT.STATE.NC.US

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

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

cc: Mr. Steve Varnedoe, PE
Ms. Deborah Barbour, PE
Mr. Victor Barbour, PE (w/)
Mr. Art McMillan, PE
Mr. Clarence Coleman, PE - FHWA (w/3)
Mr. Phillip Harris, PE
Mr. Rodger Rochelle, PE (w/)
Mr. Carl Goode
Mr. Shannon Sweitzer, PE (w/)
Mr. Ron Hancock, PE (w/)
Mr. David Harris, PE
Mr. Ron Davenport, PE (w/)
Mr. Van Argabright, PE
Mr. Trent Beaver, PE (w/3)
Mr. Jimmy Hamrick, PE (w/)
Mr. Dean Ledbetter, PE (w/)
Mr. Jesse Gilstrap (w/)
Mr. Marshall Clawson, PE (w/)
Ms. Lori Cove, PE (w/)
Mr. Roger Worthington, PE (w/)
Mr. Brian Mayhew, PE (w/)
Mr. John Emerson (w/)
Ms. Jennifer Brandenburg, PE (w/)
Mr. Tony Wyatt, PE (w/)
Mr. Wayne Johnson, PE (w/)
Ms. Virginia Mabry (w/)
Ms. Teresa Bruton, PE (w/3 copies)
Mr. Khaled Al-Akhdar (w/)
Ms. Marsha Sample (w/)
Mr. Ayman Alqudwah, PE (w/)
Mr. James Bridges, PE
Ms. Cheryl Gregory (w/)
Mr. Andy Gay, PE (w/)
Ms. Betty Rawls (w/)
Technical Review Committee Members (w/)
File (w/)

Ms. Brenda Moore, PE - Roadway (w/)
Dr. Clark Morrison, PE - Pavement Design (w/)
Mr. John Pilipchuk, PE - Geotechnical (w/)
Ms. Elizabeth Lusk - Environmental Permits (w/)
Ms. Michelle Long, PE - Public Information (w/)
Mr. Stephen Worthy - Utility Coordination (w/)
Mr. Barney Blackburn - Erosion & Sed. Cont. (w/)
Mr. Mitch Hendee, PE - Traffic Control (w/)
Mr. Tim McFadden - Signing (w/)
Ms. Anne Gamber, PE - Hydraulics (w/)
Mr. Richard Mullinax, PE
Mr. Michael Pettyjohn, PE
Mr. Njoroge Wainaina, PE
Mr. Ron King, PE
Mr. Greg Perfetti, PE
Dr. Greg Thorpe, Ph.D.
Mr. Stuart Bourne, PE
Dr. Judith Corley-Lay, Ph.D., PE
Mr. Calvin Leggett, PE
Mr. Don Lee
Mr. Ellis Powell, PE
Mr. Jay Bennett, PE
Mr. Dave Henderson, PE
Mr. John Williamson

-- STATE OF NORTH CAROLINA--
DEPARTMENT OF TRANSPORTATION
RALEIGH, N.C.

FINAL RFP

Includes

Addendum No. 1 March 3, 2006, Addendum No. 2 March 15, 2006,
Addendum No. 3 April 12, 2006 and Addendum No. 4 November 1, 2006

DESIGN-BUILD PROJECT

TIP I-2808A

November 1, 2006

VOID FOR BIDDING

DATE AND TIME OF TECHNICAL AND PRICE PROPOSAL SUBMISSION: **November 20, 2006** AT **4:00 PM**

DATE AND TIME OF PRICE PROPOSAL OPENING: **December 21, 2006** AT **10:00 AM**

CONTRACT ID: C 201269

WBS ELEMENT NO. 34173.2.2

FEDERAL-AID NO. IMF-77-1 (157) 72

COUNTY: YADKIN

ROUTE NO. INTERSTATE 77

MILES: 6.574

LOCATION: I-77 SOUTH OF SR 1225 TO US 21

TYPE OF WORK: DESIGN-BUILD AS SPECIFIED IN THE SCOPE OF WORK
CONTAINED IN THE **RFP**

NOTICE:

ALL PROPOSERS SHALL COMPLY WITH ALL APPLICABLE LAWS REGULATING THE PRACTICE OF GENERAL CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA WHICH REQUIRES THE PROPOSER TO BE LICENSED BY THE N.C. LICENSING BOARD FOR CONTRACTORS WHEN BIDDING ON ANY NON-FEDERAL AID PROJECT WHERE THE BID IS \$30,000 OR MORE, EXCEPT FOR CERTAIN SPECIALTY WORK AS DETERMINED BY THE LICENSING BOARD. PROPOSERS SHALL ALSO COMPLY WITH ALL OTHER APPLICABLE LAWS REGULATING THE PRACTICES OF ELECTRICAL, PLUMBING, HEATING AND AIR CONDITIONING AND REFRIGERATION CONTRACTING AS CONTAINED IN CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA. NOT WITHSTANDING THESE LIMITATIONS ON BIDDING, THE PROPOSER WHO IS AWARDED ANY PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING, REGARDLESS OF FUNDING SOURCES.

_____ 5% BID BOND OR BID DEPOSIT REQUIRED

of portions of the Department design, modification of such design, or other designs as may be submitted by the Design-Build Team.

The Design-Build Team shall be fully and totally responsible for the accuracy and completeness of all work performed under this contract, and shall indemnify and hold the Department harmless for any additional costs and all claims against the Department or the State which may arise due to errors or omissions of the Department in furnishing the preliminary project designs and information, and of the Design-Build Team in performing the work.

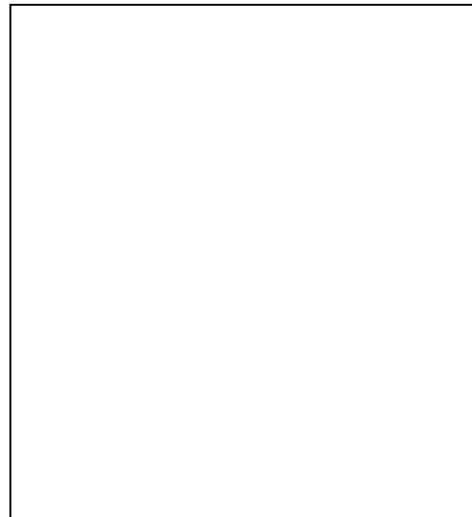
The published volume entitled *North Carolina Department of Transportation, Raleigh, Standard Specifications for Roads and Structures, JANUARY 2002*, as well as, all design manuals, policy and procedures manuals, and AASHTO publications and guidelines referenced in the Request For Proposal, with all amendments and supplements thereto, are by reference, incorporated and made part of this contract; that, except as herein modified, all the design, construction and Construction Engineering Inspection included in this contract is to be done in accordance with the documents noted above and under the direction of the Engineer.

If the Design-Build Proposal is accepted and the award is made, the Technical Proposal submitted by the Design-Build Team is by reference, incorporated and made part of this contract. The contract is valid only when signed either by the Contract Officer or such other person as may be designated by the Secretary to sign for the Department of Transportation. The conditions and provisions herein cannot be changed except by written approval as allowed by the Request For Proposal.

Accompanying the Design-Build Proposal shall be a bid bond secured by a corporate surety, or certified check payable to the order of the Department of Transportation, for five percent of the total bid price, which deposit is to be forfeited as liquidated damages in case this bid is accepted and the Design-Build Team shall fail to provide the required payment and performance bonds with the Department of Transportation, under the condition of this proposal, within 14 calendar days after the written notice of award is received by them, as provided in the Standard Specifications; otherwise said deposit will be returned to the Design-Build Team.



*State Alternative Delivery
Engineer*



State Contract Officer

TABLE OF CONTENTS

COVER SHEET

PROPOSAL SHEETS

PROJECT SPECIAL PROVISIONS (GREEN SHEETS)	<i>PAGE NO.</i>
Contract Time and Liquidated Damages.....	1
Other Liquidated Damages.....	1
Project Schedule.....	2-3
Payout Schedule	3
Mobilization	4
Fuel Price Adjustment.....	4-5
Partnering.....	5-6
Execution of Signature Sheets and Debarment Certification.....	6
Submission of Design-Build Proposals.....	6-7
Confidential Questions.....	7
Value Analysis.....	8
Schedule of Estimated Completion Progress.....	8
Disadvantaged Business Enterprise.....	8-16
Certification for Federal-Aid Contracts.....	16-17
Contractor's License Requirements.....	17
Domestic Steel and Iron Products.....	17-18
U. S. Department of Transportation Hotline.....	18
Submission of Records – Federal-Aid Projects.....	18
Design-Build Team Borrow Source.....	18-19
Subsurface Information.....	19
Training Requirements	19
Safety Vests.....	19
Bid Documentation.....	20-22
Twelve Month Guarantee.....	22-23
Outsourcing Outside U.S.A.....	23
Disqualification of Bidders.....	23-24
Rejection of Bids.....	24
Erosion & Sediment Control / Stormwater Certification.....	24-29
Price Adjustments for Asphalt Binder.....	29-29A
Price Adjustments Asphalt Concrete Plant Mix.....	29A
Recycling Concrete Pavement.....	29A
GENERAL (GREEN SHEETS)	30-41A
SCOPES OF WORK (GREEN SHEETS)	
Roadway	42-44
Pavement Management	45-49
Hydraulics	50
Traffic Control	51-63
Geotechnical	64-68
Signing.....	69-70
Erosion and Sedimentation Control.....	71-74
Public Information.....	75-76
Utilities Coordination.....	77-81

STANDARD SPECIAL PROVISIONS (YELLOW SHEETS)

Prompt Payment of Monies Due to Subcontractors.....	82
Borrow and Waste Site Reclamation Procedures.....	82
Plant Pest Quarantine.....	82-83
Control of Erosion, Siltation, and Pollution.....	83
Roadway Excavation.....	83-84
Shallow Undercut.....	84
Borrow Excavation (Evaluation of Wetlands).....	84-85
Preparation of Subgrade and Base.....	85
Asphalt Pavements- Superpave.....	85-98
Asphalt Binder Content of Asphalt Plant Mixes.....	98
Disposal of Waste and Debris.....	99
Guardrail Posts and Offset Blocks.....	99-100
Street Signs and Markers and Route Markers.....	101
Aggregate Production.....	101
Concrete Brick and Block Production.....	101
Fine Aggregate.....	101
Borrow Material.....	102
Retroreflective Sheeting.....	102-105
Drums.....	105
Portable Concrete Barrier.....	105
Work Zone Signs.....	105-106
Barricades.....	106-107
Pavement Marking General Requirements.....	107
Diamond Grinding Concrete Pavement.....	108
General Requirements for Portland Cement Concrete Paving.....	109-119
Concrete Pavement.....	119-125
Concrete Shoulders.....	125-127
Field Laboratory for Portland Cement Concrete Pavement.....	127-128
Portland Cement Concrete Production and Delivery.....	128-130
Availability of Funds – Termination of Contracts.....	131
NCDOT General Seed Specification for Seed Quality.....	132-134
Errata.....	135-136
Award of Contract.....	137
Minority and Female Employment Requirements.....	138-140
Required Contract Provisions Federal-Aid Construction Contracts.....	141-149
Training Special Provisions.....	150-152
Wage Rates.....	153-156
Division One.....	157-238

PROPOSAL FORMS - ITEMIZED SHEET, ETC.

Itemized Proposal Sheet (WHITE SHEET)

Fuel Usage Factor Chart and Estimate of Quantities (WHITE SHEET)

Award Limits on Multiple Projects (YELLOW SHEET)

Listing of DBE Subcontractors (YELLOW SHEETS)

Execution of Bid, Noncollusion Affidavit & Debarment Certification Signature Sheet (YELLOW SHEETS)

***** PROJECT SPECIAL PROVISIONS *****

CONTRACT TIME AND LIQUIDATED DAMAGES (Projects without Permits)

The date of availability for this contract is **March 9, 2007**.

The completion date for this contract is defined as the date proposed in the Technical Proposal by the proposer who is awarded the project. The completion date thus proposed shall not be later than **April 15, 2009**.

The actual completion date proposed by the Design-Build Team is **(to be filled in by NCDOT after award)**.

When observation periods are required by the special provisions, they are not a part of the work to be completed by the completion date and/or intermediate contract times. Should an observation period extend beyond the final completion date, the acceptable completion of the observation period shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are **Five Thousand Dollars** (\$5,000.00) per calendar day. As an exception to this amount, where the contract has been determined to be substantially complete as defined in Section 105-18 of the Standard Special Provisions – Division 1 contained elsewhere in this **RFP**, the liquidated damages will be reduced to **One Thousand Dollars** (\$1,000.00) per calendar day.

Where the Design-Build Team who is awarded the contract has proposed a completion date for the contract as required above, but also has proposed an earlier date for substantial completion, then both of these proposed dates will become contract requirements.

Liquidated damages of **Five Thousand Dollars** (\$5,000.00) per calendar day will be applicable to the early date for substantial completion proposed by the bidder. Liquidated damages of **One Thousand Dollars** (\$1,000.00) per calendar day will be applicable to the final completion date proposed by the bidder where the Design-Build Team has proposed an earlier date for substantial completion.

DB1 G06

OTHER LIQUIDATED DAMAGES AND INCENTIVES (12/12/05)

Refer to the Traffic Control Scope of Work for more information on the following time restrictions and liquidated damages:

Liquidated Damages for lane narrowing, lane closure, holiday, special event time and crossover restrictions for I-77 and US 421 are **\$5,000.00** per hour for this Intermediate Contract Time.

Liquidated Damages for road and ramp closure time restrictions on I-77 and US 421, are **\$1,250.00** per 15 minute period or any portion thereof for this Intermediate Contract Time.

Liquidated damages for Erosion Control efforts apply to this project. Reference Erosion and Sedimentation Control Scope of Work under liquidated damages.

Major Milestones are derived from the project construction phasing and should include, at minimum, the following:

- Date of availability
- Start of construction
- Intermediate completion dates or times
- Seasonal limitation durations
- Permit restrictions/conditions
- Traffic shifts
- Detour installation
- Road openings
- Beginning and end of each traffic control phase or work area
- Construction completion date
- Contract completion date

As part of the project schedule package, the Design-Build Team shall provide a written narrative that explains the sequence of work, the controlling operation or operations, intermediate completion dates, milestones, project phasing, anticipated work schedule, and estimated resources. In addition, the Design-Build Team shall explain how permit requirements, environmental requirements, submittal tracking, and coordination with subcontractors, utility companies and other entities will be performed.

The Design-Build Team shall provide a written narrative each month detailing the work and percentage of work completed, anticipated sequence of upcoming work (2 month forecast), controlling operation/s, interim completion dates/times, and milestones. If any milestones are exceeded or will not be attained, the Design-Build Team shall provide in the written narrative details of the delay; controlling operation affected, impacts to other operations; revisions to future interim completion dates and milestones; and remedial action necessary to get the project back to the original completion date.

**** NOTE ** Deleted Compensation Bullet**

DB1 G12

PAYOUT SCHEDULE (1-24-06)

No later than three business days prior to the opening of the Price Proposal, the proposer shall submit a proposed "Anticipated Monthly Payout Schedule" to the office of the State Contract Officer. The Design-Build Team shall submit the Anticipated Monthly Payout Schedule in a sealed package with the outer wrapping clearly indicating the information required for the Price Proposal that is noted elsewhere in this RFP. The Anticipated Monthly Payout Schedule shall not be opened by the Department until such time as all Price Proposal, Technical Scores and adjusted Prices are read publicly. The Anticipated Monthly Payout Schedule will be used by the Department, to establish the monthly funding levels for this project. The Anticipated Monthly Payout Schedule shall parallel, and agree with, the project schedule the Design-Build Team submits as a part of their Technical Proposal. The schedule shall include a monthly cost percentage breakdown (in terms of the total contract amount percentages) of the work anticipated to be completed. The schedule shall begin with the Date of Availability and end with the Actual Completion Date proposed by the Design-Build Team. **If the payout schedule is not submitted as outlined above, the Technical and Price Proposals shall be considered irregular by the Department and the bid may be rejected.**

DB1 G13

MOBILIZATION (10-31-05)

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 second partial pay estimate.**

DB1 G15

FUEL PRICE ADJUSTMENT (10-4-05)

Fuel price adjustments will be made to the payments due the Design-Build Team for specific items of work shown in the Fuel Usage Factor Chart, when the average terminal price has fluctuated from the Base Index Price contained in the contract. **The Fuel Usage Factor Chart is located in the back of this RFP, following the Itemized Proposal Sheet.** The average terminal price is the average of the F.O.B. price for diesel fuel at the terminals in Charlotte, Wilmington and Selma, North Carolina. When the average terminal price fluctuates upward or downward from the Base Index Price, an amount will be added to or deducted from the monies due the Design-Build Team as follows.

The quantity for the specified items for which payment is being requested will be multiplied by the respective Diesel Fuel Usage Factor contained in the contract to determine the theoretical diesel fuel usage for each specified item. The sum of the theoretical diesel fuel usage for all specified items will be multiplied by the algebraic difference between the average F.O.B. price for diesel fuel at the above specified terminals and the Base Index Price contained in the contract to determine the fuel price adjustment to be made on the partial payment estimate. Fuel Price Adjustments will apply only to Diesel #2 Fuel.

The following formula will be used to calculate the appropriate payment or credit on the estimate.

$$S = (A - B)(\Sigma QF)$$

- Where:
- S = Fuel Price Adjustment for partial payment
 - B = Base Index Price
 - A = Average terminal price
 - Q = Partial payment quantity for contract item
 - F = Fuel factor for contract item

The average terminal price in effect on the first day of the month in which the partial payment period ends will be used to make payment adjustments for fuel whether or not more than one price fluctuation has occurred within a single partial payment period.

The fuel price adjustment for the specified item will be determined by multiplying the cumulative fuel price adjustment made for that specified item for the previous estimate period(s) by the adjusted quantity for that specified item and divided by the total quantity of work paid for the previous estimates for the specified item

The Design-Build Team shall prepare, and present with their Price Proposal, an Estimate of Quantities of which they anticipate incorporating into the completed project and upon which the Price Proposal was based. The quantity breakdown shall include all items of work, which appear in the Fuel Usage Factor Chart. This chart is found in the back of this RFP following the Itemized Proposal sheet. The quantity estimate submitted in the Price Proposal is the final total quantity for which fuel price adjustments will be made for each item, regardless of supplemental agreements. The Department shall review the Estimate of Quantities to insure its reasonableness to the proposed design. Agreement of quantities is a prerequisite prior to execution of the contract.

The Design-Build Team's Estimate of Quantities shall be utilized 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. A licensed Professional Engineer shall sign and seal that the quantities are reasonable for the specified period. Only those items of work which are specifically noted in the Fuel Usage Factor Chart will be subject to fuel price adjustments.

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 (found immediately after the **Itemized** Proposal Sheet) and the declination box checked. Failure to complete this form will be taken as declining Fuel Price Adjustments for this project.

The base index price for DIESEL #2 FUEL is **\$ 1.8001 per gallon.**

DB1 G43

PARTNERING

As a part of its quality management program, the North Carolina Department of Transportation intends to encourage the formation of a cohesive relationship with the Design-Build Team and its principal subcontractors and suppliers. This relationship will be structured to draw on the strengths of each organization to identify and achieve reciprocal goals. The objectives are safe, effective, and efficient contract performance; and completion within budget, on schedule, and in accordance with the plans and specifications.

VALUE ANALYSIS (9-27-05)

Value Engineering Construction Proposals (VECP), as identified in Article 104-12 of the Standard Special Provisions, Division 1 (found elsewhere in this RFP), will be accepted. Only proposals, which alter the requirements of the RFP issued by the Department, will be considered as Value Engineering Construction Proposals.

DB1 G57

SCHEDULE OF ESTIMATED COMPLETION PROGRESS (9-27-05)

The Design-Build Team's attention is directed to the Standard Special Provision entitled "Availability Of Funds - Termination Of Contracts" included elsewhere in this RFP. The Department of Transportation's schedule of estimated completion progress for this project as required by that Standard Special Provision is as follows:

<u>Fiscal Year</u>	<u>Progress (Dollar Value)</u>
2007 (7/01/06 – 6/30/07)	13 % of Total Amount Bid
2008 (7/01/07 – 6/30/08)	52 % of Total Amount Bid
2009 (7/01/08 – 6/30/09)	35 % of Total Amount Bid

The Design-Build Team shall also furnish its own progress schedule in accordance with the Project Special Provision entitled PROJECT SCHEDULE (found elsewhere in this RFP). Any acceleration of the progress as shown by the Design-Build Team's progress schedule over the progress as shown above shall be subject to the approval of the Engineer.

DB1 G58

DISADVANTAGED BUSINESS ENTERPRISE (2/24/04)

POLICY

It is the policy of the North Carolina Department of Transportation that Disadvantaged Business Enterprises shall have the opportunity to participate in the performance of contracts financed in whole or in part by Federal Funds in order to create a level playing field.

The Design-Build Team is also encouraged to give every opportunity to allow DBE participation in Supplemental Agreements.

OBLIGATION

The Design-Build Team, subcontractor, and sub-recipient shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Design-Build Team shall carry out applicable requirements of 49 CFR 26 in the award and administration of federally assisted contracts as approved by the Federal Highway Administration.. Failure by the Design-Build Team to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the Department deems necessary.

This obligation shall be incorporated into any subsequent contract at any level that is executed under the terms of this contract.

reconsideration. A committee appointed by the Department will hear administrative reconsideration. Members of this committee will be officials who did not take part in the original determination by the Goal Compliance Committee. The Proposer will have the opportunity to present written documentation or argument concerning the issue of whether it met the goal or made an adequate good faith effort. The Proposer will receive a written decision on the reconsideration. Explaining the basis for finding that the Proposer did or did not meet the goal or made adequate Good Faith efforts to do so. The result of the reconsideration process is not administratively appealable to the Department.

In the event that the Department does not award the contract to the apparent lowest responsive Proposer, the Department reserves the right to award the contract to the next lowest responsive Proposer that can satisfy the Department that the contract goal can be met or that adequate good faith efforts have been made to meet the goal.

DBE DIRECTORY

A searchable list of business that are DBE certified by the North Carolina Department of Transportation is available at the following website:

<http://apps.dot.state.nc.us/Vendor/Directory/Cert.aspx>

Only those DBE firms with current certification may be listed in the proposal form.

The listing of an individual firm in the Department's directory shall not be construed as an endorsement of the firms' capability to perform certain work.

REPLACEMENT OF DBEs

A. Performance Related

If any DBE Subcontractor submitted on the form for listing of DBE Subcontractors, contained elsewhere in this proposal form, is terminated or fails to complete its work on the contract for any reason, the Design-Build Team shall take all necessary, reasonable steps to replace the DBE Subcontractor with another DBE Subcontractor to perform at least the same amount of work of the contract as the DBE that was terminated.

To demonstrate necessary, reasonable Good Faith efforts, the Design-Build Team shall document the steps it has taken to replace any DBE Subcontractor who is unable to perform successfully with another DBE Subcontractor. Such documentation shall include but not be limited to the following:

1. Copies of written notification to DBEs that their interest is solicited in subcontracting the work defaulted by the previous DBE subcontractor or in subcontracting other items of work in the contract.
2. Efforts to negotiate with DBEs for specific subbids including, at a minimum:
 - a. The names, addresses, and telephone numbers of DBEs who were contacted;
 - b. A description of the information provided to DBEs regarding the plans and specifications for portions of the work to be performed; and
3. For each DBE contacted but rejected as unqualified, the reasons for the Design-Build Team's conclusion.

REPORTS

All requests for subcontracts involving DBE subcontractors shall be accompanied by a certification executed by both the Design-Build Team and the DBE subcontractor attesting to the agreed upon unit prices and extensions for the affected contract items. This document shall be on the Department's Form RS-1-D, or in lieu of using the Department's Form, copies of the actual executed agreement between the Design-Build Team and the DBE subcontractor may be submitted. In any event, the Department reserves the right to require copies of actual subcontract agreements involving DBE Subcontractors.

The RS-1-D certification forms may be obtained from the Department's Resident Engineer.

These certifications shall be considered a part of the project records, and consequently will be subject to penalties under Federal Law associated with falsifications of records related to projects.

REPORTING DISADVANTAGED BUSINESS ENTERPRISE PARTICIPATION

When payments are made to Disadvantaged Business Enterprise firms, including material suppliers, contractors at all levels (prime, subcontractor, or second tier subcontractor) shall provide the Engineer with an accounting of said payments. This accounting shall be furnished to the Engineer for any given month by the end of the following month. Failure to submit this information accordingly may result in (1) withholding of money due in the next partial pay estimate; or (2) removal of an approved Design-Build team member from the Department's appropriate prequalified list or (3) the removal of other entities from the approved subcontractors list. The accounting shall list for each payment made to a Disadvantaged Business Enterprise firm the following:

- DOT Project Number
- Payee Design-Build Team Name
- Receiving Design-Build Team or Material Supplier
- DBE Certification Basis, e.g., Woman Owned, Native American, African American, etc.
- Amount of Payment
- Date of Payment

A responsible fiscal officer of the payee Design-Build Team, subcontractor, or second tier subcontractor who can attest to the date and amounts of the payments shall certify that the accounting is correct. A copy of an acceptable report may be obtained from the Engineer.

DB1 G61

CERTIFICATION FOR FEDERAL-AID CONTRACTS

The Proposer certifies, by signing and submitting a Design-Build Proposal, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal,

documentation, that the affidavit lists all of the documents used by the Proposer to determine the bid for this project, and that all such bid documentation has been included.

Verification

Upon delivery of the bid documentation, the Department's Contract Officer and the Proposer's representative will verify the accuracy and completeness of the bid documentation compared to the affidavit. Should a discrepancy exist, the Proposer's representative shall immediately furnish the Department's Contract Officer with any other needed bid documentation. The Department's Contract Officer upon determining that the bid documentation is complete will, in the presence of the Proposer's representative, immediately place the complete bid documentation and affidavit in the container and seal it. Both parties will deliver the sealed container to a banking institution or other bonded document storage facility selected by the Department for placement in a safety deposit box, vault, or other secure accommodation.

Duration and Use

The bid documentation and affidavit shall remain in escrow until sixty (60) calendar days from the time the Design-Build Team receives the final estimate; or until such time as the Design-Build Team gives written notice of intent to file a claim, files a written claim, files a written and verified claim, or initiates litigation against the Department related to the contract; or until authorized in writing by the Design-Build Team. Upon the giving of written notice of intent to file a claim, filing a written claim, filing a written and verified claim, or the initiation of litigation by the Design-Build Team against the Department, or receipt of a letter from the Design-Build Team authorizing release, the Department may obtain the release and custody of the bid documentation. If the bid documentation remains in escrow sixty (60) calendar days after the time the Design-Build Team receives the final estimate and the Design-Build Team has not filed a written claim, filed a written and verified claim, or has not initiated litigation against the Department related to the contract, the Department shall instruct the banking institution or other bonded document storage facility to release the sealed container to the Design-Build Team.

The Proposer certifies and agrees that the sealed container placed in escrow contains all of the bid documentation used to determine the bid and that no other bid documentation shall be relevant or material in litigation over claims brought by the Design-Build Team arising out of this contract.

Failure to Provide Bid Documentation

The Proposer's failure to provide the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation within ten (10) days after the notice of award is received by **the Proposer** may be just cause for rescinding the award of the contract and may result in the removal of the Proposer from the Department's **appropriate prequalified list** for a period up to 180 days. Award may then be made to the next lowest responsible Proposer or the work may be readvertised and constructed under the contract or otherwise, as the Board of Transportation may decide.

Escrow Agreement

The Proposer will be required to sign an Escrow Agreement within ten (10) days after the notice of award is received by **the Proposer**. A copy of this Escrow Agreement document will be mailed to the Proposer with the notice of award for informational purposes. The Proposer and Department

C. **** NOTE ** Deleted bullet regarding mitigation sites**

This guarantee provision shall be invoked only for major components of work for which the Design-Build Team would be wholly responsible under the terms of the contract. Examples would include pavement structures, bridge components, noise walls, and sign structures. This provision shall not be used as a mechanism to force the Design-Build Team to return to the project to make repairs or perform additional work for which the Department would normally compensate the Design-Build Team. In addition, routine maintenance activities (i.e. mowing grass, debris removal, ruts in earth shoulders,) are not parts of this guarantee.

Appropriate provisions of the payment and/or performance bonds shall cover this guarantee for the project. In addition, failure on the part of the responsible entity(ies) of the Design-Build Team to perform guarantee work within the terms of this provision shall be just cause to remove the responsible entity(ies) from the Department's corresponding prequalified list. The Design-Build Team will be removed for a minimum of 6 months and will be reinstated only after all work has been corrected and the Design-Build Team requests reinstatement in writing.

To ensure uniform application statewide the Division Engineer will forward details regarding the circumstances surrounding any proposed guarantee repairs to the Chief Engineer for review and approval prior to the work being performed.

DB1 G145

OUTSOURCING OUTSIDE THE USA (9/21/04)

All work on consultant contracts, services contracts, and construction contracts shall be performed in the United States of America. No work shall be outsourced outside of the United States of America.

Outsourcing for the purpose of this provision is defined as the practice of subcontracting labor, work, services, staffing, or personnel to entities located outside of the United States.

The Secretary of Transportation shall approve exceptions to this provision in writing.

DB1 G150

DISQUALIFICATION OF BIDDERS (11/16/04)

The 2002 *Standard Specifications* are revised as follows:

Page 1-17 Article 102-16, replace No.12 with the following:

12. Failure to submit the documents required by Article 109-10 within 60 days after request by the Engineer.

Page 1-18 Article 102-16, add the following after Number 15.

16. False information submitted on any application, statement, certification, report, records and/or reproduction.

Conviction of any employee of company, of any applicable state or federal law, may be fully imputed to the business firm with which he is or was associated or by whom he was

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 **Chief Engineer - Operations** to the certification entity, certification for Supervisors, Certified Foremen and Certified Installers may be revoked or suspended with the issuance of a *Continuing Immediate Corrective Action (Continuing ICA), Notice of Violation, or Cease and Desist Order* for erosion and sediment control / stormwater related issues.

Should any of the following circumstances occur, the **Chief Engineer - Operations** may suspend or permanently revoke such certification.

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

Issuance of a continuing ICA, NOV, or Cease and Desist 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 Chief Engineer - Operations within 10 calendar days after receiving notice of the proposed adverse action.

Chief Engineer - Operations
1537 Mail Service Center
Raleigh, NC 27699-1537

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 Chief Engineer - Operations will hear the appeal and make a decision within 7 days of hearing the appeal. Decision of the Chief Engineer - Operations 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 Erosion & Sediment Control Stormwater 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

PRICE ADJUSTMENTS FOR ASPHALT BINDER (11-21-00)

Adjustments will be made to the payments due the Design-Build Team for each grade of asphalt binder when it has been determined that the monthly average terminal F.O.B. Selling Price of asphalt binder, Grade PG 64-22, has fluctuated from the Base Price Index for Asphalt Binder included in this Project Special Provision. The methods for calculating a Base Price Index, for calculating the monthly average terminal F.O.B. Selling Price and for determining the terminals used are in accordance with procedures on file with the Department's Construction Unit.

When it is determined that the monthly average terminal F.O.B. 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 this project is \$ 392.50 per ton.

DB6 R25

PRICE ADJUSTMENTS - ASPHALT CONCRETE PLANT MIX (2-2-06)

Revise the 2002 Standard Specifications as follows:

Page 6-20, Article 609-8 and Page 6-36, Article 610-13

Add the following paragraph before the first paragraph:

The “Asphalt Price” used to calculate any price adjustments set forth in this section shall be \$35 per theoretical ton. This price shall apply for all mix types.

DB6 R26

RECYCLING CONCRETE PAVEMENT (3-3-06)

The existing concrete pavement may be recycled into the future concrete pavement provided the Design Build Team utilizes a nationally recognized expert in the field of recycled/reclaimed concrete pavement construction. This individual will be responsible for performing or directly overseeing any testing of the existing concrete materials, to potentially include chemical and structural analysis; mix design; process control and testing. This expert shall also be intimately involved in crushing operations, production and associated process control to ensure that a quality, durable concrete pavement is produced which meets the Contract requirements. This individual shall be accessible to the Department to address any concerns or answer questions, which may arise during design or recycling operations.

If the Design Build Team elects to recycle the existing concrete into the future concrete pavement, the name of the nationally recognized expert, proposed to perform the items detailed above, should be documented in the Technical Proposal.

The Design Build Team should perform any initial evaluation of the existing concrete pavement as deemed necessary prior to bid. The Department does not guarantee the quality or consistency of this concrete pavement, including the concrete’s quality for recycling purposes.

SPI

GENERAL

The State will not be bound by oral explanations or instructions given at any time during the bidding process or after award. Only information that is received in response to this RFP will be evaluated; reference to information previously submitted will not suffice as a response to this solicitation.

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 shall be 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 inform the State Alternative Delivery Engineer in writing of any proposed changes to the NCDOT preliminary designs, Technical Proposal and / or previously reviewed submittals and obtain approval prior to incorporation. 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 project will re-construct approximately 6.5 miles of I-77, including ramps at the US 421 interchange. The re-construction of I-77 shall include four 12-foot concrete lanes and ten-foot full-depth asphalt shoulders. The re-construction of the US 421 ramps and loops shall include 16-foot wide and 19-foot wide concrete lanes, respectively, with four-foot asphalt shoulders. The project is located in Yadkin County.

Project services shall include but are not limited to:

- **Design Services** – completion of construction plans.
The PCE was approved on April 11, 2005.
- **Construction Services** – necessary to build and ensure workmanship of the designed facility.
- **Construction Engineering Inspection will be provided by NCDOT Division Personnel.**

GENERAL SCOPE

The scope of work for this project will include design, construction and management of the project. The design work will include all aspects to re-construct the existing lanes on I-77 and ramps on US 421. The designs shall meet all appropriate latest versions of *AASHTO Policy on Geometric Design of Highways and Streets*, *AASHTO Standard Specifications for the Design of Highway Bridges*, *Manual of Uniform Traffic Control Devices*, and all NCDOT design policies that are current as of the Technical and Price Proposal submission date.

Construction will include, but not be limited to, all necessary roadway, drainage, utility coordination, and erosion and sediment control work items. Construction will comply with *NCDOT Standard Specifications for Roadways and Structures Edition of 2002* and any special provisions.

Areas of work required for this project will include, but are not limited to the following items:

1. Roadway Design
2. Hydraulic Design
3. Construction
4. Subgrade Stabilization
5. Erosion and Sediment Control
6. Traffic Control and Pavement Marking Design
7. Signing Design
8. Project and Construction Management
9. Construction Surveying
10. Location and Surveys
11. Public Information
12. R/W Utilities, Conflicts and / or Construction
13. Geotechnical Investigations / Recommendations

All designs shall be in Microstation format using Geopak software (current version used by the Department)

Department's ethics policy. Failure to comply with the ethics policy will result in the employee's removal from the project and may result in removal of the Company from the Department's appropriate prequalified list.

APPROVAL OF PERSONNEL

The Department will have the right to approve or reject any personnel, assigned to a project by the Design-Build Team.

The Design-Build Team or any subcontractor for the Design-Build Team which are employed to provide services for this project shall not discuss employment opportunities or engage the services of any person or persons, now in the employment of the State during the time of this contract, without written consent of the State.

In the event of engagement, the Design-Build Team or their subcontractors shall restrict such person or persons from working on any of the Design-Build Team's contracted projects in which the person or persons were "formerly involved" while employed by the State. The restriction period shall be for the duration of the contracted project with which the person was involved. *Former Involvement* shall be defined as active participation in any of the following activities:

- Drafting the contract
- Defining the scope of the contract
- Selection of the Design-Build Team
- Negotiation of the cost of the contract (including calculating manhours or fees); and
- Administration of the contract.

An exception to these terms may be granted when recommended by the Secretary and approved by the Board of Transportation.

Failure to comply with the terms stated above in this section shall be grounds for termination of this contract and/or not being considered for selection of work on future contracts for a period of one year.

SUBMITTAL OF TECHNICAL AND PRICE PROPOSALS

GENERAL

Technical and Price Proposals will be accepted until **4:00 P.M. Local Time on Monday November 20, 2006**, at the office of the State Contract Officer:

Mr. Randy A. Garris, PE
NCDOT - Project Services Unit
1020 Birch Ridge Drive
Century Center Complex Bldg. B
Raleigh, NC 27610

No Proposals will be accepted after the time specified.

Proposals shall be submitted in 2 separate, sealed parcels containing the Technical Proposal in one and the Price Proposal in the other parcel.

PAVEMENT MANAGEMENT SCOPE OF WORK (10-16-06)

Three pavement options are provided for the mainline travel lanes as shown below:

Option 1: The Design-Build Team shall construct an unbonded overlay consisting of 11” doweled jointed concrete with 15’ uniform joint spacing and a bond-breaking layer of 1.5” minimum SF9.5A or S9.5B. If the depth of this layer is greater than 3” to accommodate the final grade, then either I19.0B or B25.0B may be used below the 1.5” SF9.5A or S9.5B. If traffic will be placed on the bond-breaking layer, S9.5B shall be used. Defects in the existing pavement shall be repaired prior to constructing the unbonded overlay. Any punchouts or transverse cracks with ruptured steel will require full depth repair with concrete. High severity spalling at existing cracks should be filled with hot mix asphalt. The Design-Build Team may shift the location of the unbonded overlay up to 12’ toward the median as measured from the edge of the existing concrete. If this is done, the median side shoulder must be removed and replaced with 8” of doweled jointed concrete pavement over 4” of B25.0B. The new concrete shall be tied into the existing concrete with tie bars in accordance with standard detail sheets 700D01 entitled ‘Concrete Pavement Joints’ provided by the Department. Joints in the 8” concrete pavement shall have a uniform spacing of 15 feet and shall consist of a single unsealed 4” saw cut that shall be made with an early entry saw. The width of the 8” concrete and 4” B25.0B shall be at least 4 feet and shall completely support the unbonded overlay. The intent of this design is to provide uniform support for the unbonded overlay. Undercut is anticipated when the existing shoulders are removed and shall be the Design-Build Team’s responsibility. The Design-Build Team shall determine, and be responsible for, the undercut requirements in accordance with the “Construction Requirements” contained within the Geotechnical Scope of Work

Option 2: The Design-Build Team shall remove the existing 8” CRC pavement and underlying material to a total depth of 17.5”. The Design-Build Team shall place 1.5” SF9.5A on exposed subgrade. It is anticipated that aggregate stabilization may be required and shall be the Design-Build Team’s responsibility. It is also anticipated that undercut may be required at weak or wet subgrade and shall be the Design-Build Team’s responsibility. The Design-Build Team shall determine, and be responsible for, the undercut requirements in accordance with the “Construction Requirements” contained within the Geotechnical Scope of Work. The Design-Build Team shall place 3” B25.0B on the top of the SF9.5A, then place 13” doweled jointed concrete with 15’ uniform joint spacing. As presented in the special provisions, traffic may be placed on this pavement when maturity testing indicates a flexural strength of 450 psi has been achieved.

Option 3: The Design-Build Team shall remove only the existing 8” CRC pavement. Repair of the underlying material, along with undercut, is anticipated and shall be the Design-Build Team’s responsibility. The Design-Build Team shall determine, and be responsible for, the undercut requirements in accordance with the

EROSION AND SEDIMENTATION CONTROL SCOPE OF WORK (09-18-06)

The NCDOT REU shall review and accept all Erosion and Sedimentation Control Plans. Release for Construction (RFC) Erosion Control Plans shall be submitted to all NCDOT Personnel listed in the Design-Build Submittal Guidelines before **any** land disturbing activities can commence. If the Design-Build Team chooses to perform the work in discrete sections, then a complete set of RFC **Erosion Control Plans** shall be submitted, accepted, and distributed as noted above prior to land disturbing activities commencing in that section. No land disturbing activities shall occur in any **location** that does not have accepted RFC **Erosion Control Plans**.

Erosion and Sedimentation Control Plans shall at a minimum address the following:

I. Complete Set of Plans**A. Clearing and Grubbing Phase**

1. Use correct NCDOT symbology
2. Protect existing drainage structure inlets with Rock Inlet Sediment Trap Type 'A' (RIST-A), Rock Inlet Sediment Trap Type 'C' (RIST-C), Rock Pipe Inlet Sediment Trap Type 'A' (PIST-A), etc.
3. Utilize adequate perimeter controls (temporary diversions, silt fence, etc.)
4. Utilize rock measures with sediment control stone at drainage outlets (Temporary Rock Sediment Dam Type 'B' (TRSD-B), Temporary Rock Silt Check Type 'A' (TRSC-A), etc.)
5. Take into account existing topography and show contour lines
6. Utilize Temporary Rock Silt Checks Type 'B' (TRSC-B) to reduce velocity in existing ditches with spacing of 300 feet divided by percentage of ditch grade
7. Protect existing streams
8. Provide adequate silt storage for 1800 cubic feet per disturbed acre and sediment basins shall be sized with surface area equal to 0.01 times the peak inflow rate, Q10, using 10-year peak runoff data (*NCDENR- Erosion and Sediment Control Planning and Design Manual*). A Sediment Basin Designer Spreadsheet will be provided by the NCDOT Roadside Environmental Unit (REU) **upon request**.
9. Design Riser Basins to the following standards:
 - a. Surface Area shall be determined by Equation $A(\text{sq. ft.}) = Q10(\text{cfs}) * 435.6$
 - b. Riser Pipe shall have a cross-sectional area 1.5 times that of the barrel pipe
 - c. Perforations in the riser pipe shall be reduced to increase dewatering time to twenty-four (24) hours
 - d. See *NCDENR- Erosion and Sediment Control Planning and Design Manual* for additional design criteria

B. Final Grade Phase

1. Use correct NCDOT symbology
2. Protect existing and proposed drainage structure inlets with RIST-A, RIST-C, PIST-A, etc.
3. Utilize TRSC-B's to reduce velocity in existing and proposed ditches with spacing of 300 feet divided by percentage of ditch grade
4. Utilize temporary slope drains and earth berms at top of fill slopes 8 feet or higher and a fill slope grade of 3:1 or steeper, or where there are superelevations above 0.04 and fills are greater than 5 feet. Maximum slope drain spacing shall be 200 feet
5. Utilize rock energy dissipater and / or silt basin at outlet of slope drain
6. Devices at all drainage turnouts shall utilize sediment control stone (TRSD-B, TRSC-A, etc.)
7. Provide adequate silt storage for 1800 cubic feet per disturbed acre and sediment basins shall be sized with surface area equal to 0.01 times the peak inflow rate, Q10, using 10-year peak runoff data (*NCDENR- Erosion and Sediment Control Planning and Design Manual*) A Sediment Basin Designer Spreadsheet will be provided by NCDOT REU upon request.
8. Provide matting for erosion control in all ditch lines where Shear Stress is greater than 0.15 psf, but less than or equal to 1.55 psf. For ditch lines with a Shear Stress above 1.55 psf, Permanent Soil Reinforcement Mat or Rip Rap shall be utilized
9. Design Riser Basins to the following standards:
 - a. Surface Area shall be determined by Equation $A(\text{sq. ft.}) = Q10(\text{cfs}) * 435.6$
 - b. Riser Pipe shall have a cross-sectional area 1.5 times that of the barrel pipe
 - c. Perforations in the riser pipe shall be reduced to increase dewatering time to twenty-four (24) hours
 - d. See *NCDENR- Erosion and Sediment Control Planning and Design Manual* for additional design criteria
10. **** NOTE ** Deleted Bullet No. 10**

C. Intermediate Phase

Intermediate Erosion Control Plans shall only be required if design modifications and / or site conditions require additional erosion control design or the Design-Build Team proposes design revisions that impact the RFC Clearing and Grubbing and / or RFC Final Grade Erosion Control Plans. Intermediate Plans shall be submitted for review and shall be accepted prior to construction of any aspect impacted by the revised erosion control design. For any intermediate phase, comply with Section B, "Final Grade Phase" above.

II. Detail Sheets and Notes

- A. Provide construction entrance detail
- B. Provide project specific special details and notes
- C. Provide reforestation sheet(s): regular, wetland, streambank showing appropriate species

III. Title Sheet

- A. Show correct notes: HQW, ESA, clearing and grubbing, etc.
- B. Show correct standards for project
- C. List of standard NCDOT symbology

IV. Special Provisions

- A. Erosion Control Special Provisions are available at the following website:
http://www.ncdot.org/doh/operations/dp_chief_eng/roadside/soil_water/special_provisions/
- B. References in the Erosion Control Special Provisions from the aforementioned website to Method of Measurement, Basis of Payment, or any other statement regarding direct payment for Erosion and Sediment Control measures shall be disregarded.
- C. Erosion Control / Stormwater Certification found elsewhere in this RFP.

V. Miscellaneous

- A. Plan submittals shall include all pertinent design information required for review, such as design calculations, drainage areas, etc.
- B. The NCDOT REU will provide a sample set of Erosion and Sedimentation Control Plans (including any special details or special provisions used by the NCDOT REU) and MicroStation Erosion Control Workspace to the Design-Build Team for reference upon request.
- C. Plans shall address any environmental issues raised during the permitting process.
- D. Sufficient time shall be allowed for the Design-Build Team to make any changes to the Erosion and Sedimentation Control Plans deemed necessary by the NCDOT REU.
- E. **** NOTE **** Revised and Relocated Bullet E
- F. Temporary access and haul roads, other than public roads, constructed or used in connection with the project shall be considered a part of the project and addressed in the Erosion and Sedimentation Control Plans and Project Special Provisions.
- G. Borrow or waste areas that are part of the project shall require a separate Erosion and Sedimentation Control Plan, unless the borrow or waste activity is regulated under the *Mining Act of 1971*, or is a landfill regulated by the Division of Solid Waste Management (NCDENR). The Design-Build Team shall submit the permit number for waste / borrow sites covered by the Mining Act or regulated by DSWM (DENR) concurrently to the State Alternative Delivery Engineer and the Resident Engineer.
- H. Whenever the Engineer determines that significant erosion and sedimentation continues despite the installation of approved protective practices, the Design-Build Team shall be required to and shall take additional protective action.
- I. **** NOTE **** Deleted Bullet I
- J. An approved Erosion and Sedimentation Control Plan does not exempt the Design-Build Team from making every effort to contain sediment onsite.
- K. Any Erosion Control Design revisions made during the construction of the project shall be submitted to REU by the 15th of the month, via the State Alternative Delivery Engineer. At anytime requested by the Engineer or the Roadside Environmental Unit, the

Design-Build Team shall provide an updated version of the Erosion and Sedimentation Control Plans for distribution to all parties involved in the construction process.

- L. The Design-Build Team shall comply with the *North Carolina Administrative Code Title 15 A Department of Environment and Natural Resources Chapter 4, Sediment Control*.
- M. A pre-design meeting shall take place between the NCDOT REU Soil & Water Engineering Section, the Design-Build Team, and any other pertinent NCDOT personnel before Erosion and Sedimentation Control Design begins. Erosion and Sedimentation Control Plan submittals shall only be reviewed and **accepted** by NCDOT REU after the Erosion Control Pre-Design Meeting.
- N. All RFC Erosion **and Sedimentation** Control Plans, including any red line revisions, shall be kept on site at all times throughout the duration of the project.
- O. Erosion Control / Stormwater Certification shall be required according to the Project Special Provision found elsewhere in this **RFP**.

EROSION CONTROL LIQUIDATED DAMAGES:

The Design-Build Team shall take all reasonable precautions to comply with all regulations of all authorities having jurisdiction over public and private land governing the protection of erosion and sedimentation. Any fines, remediation required or charges levied against the Department for failing to comply with all rules and regulations concerning erosion and sediment control, due to the Design-Build Team's negligence, carelessness, or failure to implement the erosion and sediment control plan and specifications; **or failure to maintain an approved Storm Water Pollution Prevention Plan (SWPPP), regardless of absence of neglect, shall** be deducted from monies due the Design-Build Team. In addition to said fines, remediation required, or charges levied, any associated engineering costs or actions taken by the Department in order for the Department to comply with rules and regulations, as a result of the Design-Build Team's negligence, carelessness, or failure to implement the Erosion and Sedimentation Control Plans and Specifications; **and / or the SWPPP, regardless of absence of neglect, shall** be deducted from the monies due to the Design-Build Team.

Saturate the burlap thoroughly prior to placing on the concrete and keep thoroughly wet throughout the curing period.

700-10 REMOVING FORMS

Do not remove forms from freshly placed concrete until at least 12 hours after placement and the concrete has hardened sufficiently to resist spalling, cracking, or any other damage. Repair any honeycombed areas along the sides or edges of the slab by filling with mortar immediately after the forms have been removed. Use mortar consisting of 1 part cement to 2 parts fine aggregate.

700-11 JOINT CONSTRUCTION

(A) General

Construct all joints in accordance with the requirements of these Specifications and the details shown on the plans. Saw all joints and seal them with joint sealer in accordance with the dimensions and details shown in the contract. Seal joints in accordance with the requirements of Article 700-12.

Utilize an early entry dry-cutting sawing system. Have an adequate amount of sawing equipment available to match the production and concrete paving operations. A minimum of one standby sawing unit is recommended. Construct the joint groove using a 1/8" saw blade to a minimum depth of 4". Perform sawing as soon as the concrete has hardened sufficiently without undercutting, spalling and raveling to control random cracking. Complete all saw cutting before seven hours has elapsed from the time of concrete placement.

Saw the concrete pavement as soon as it can support the weight of the equipment and operator without disturbing the final finish. Saw joints in a neat, vertical straight line without chipping, spalling, tearing or disturbing the final finish.

Immediately reapply curing membrane following the sawing operation.

Deviations from the method of joint construction specified in the plans or Specifications requires prior approval in writing. Such approval is conditional and is subject to obtaining satisfactory results.

The Engineer may order any concrete pavement or shoulder where uncontrolled cracking has occurred prior to final acceptance to be removed and replaced at no cost to the Department. Where permitted, the Design-Build Team may be allowed to repair the cracking in a manner acceptable to the Engineer.

Prior to placing either concrete pavement or concrete shoulders adjacent to a previously placed pavement, cover the transverse joint opening on the edge of the existing slab to prevent intrusion of grout into the opening.

(B) Transverse Contraction Joints

Construct transverse contraction joints in accordance with the details, dimensions and intervals as shown on the plans.

(C) Longitudinal Contraction Joints

Construct longitudinal contraction joints in all pavements wider than 16 feet in accordance with the details and dimensions shown on the plans.

SECTION 105**CONTROL OF WORK****105-1 AUTHORITY OF THE ENGINEER.**

The Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; all questions which may arise as to the interpretation of the contract; and all questions as to the acceptable fulfillment of the contract on the part of the Design-Builder. His decision shall be final and he shall have executive authority to enforce and make effective such decisions and orders as the Design-Builder fails to carry out promptly.

The Engineer shall have the authority to issue any written order to the Design-Builder which he considers necessary to the prosecution of the work, and shall have executive authority to enforce such written orders as the Design-Builder fails to carry out promptly. Failure on the part of the Design-Builder to comply with any written order issued by the Engineer may be justification for disqualifying the Design-Builder from further bidding in accordance with Article 102-16.

105-2 PLANS AND WORKING DRAWINGS.

See Scope of Work and the Design-Build Submittal Guidelines

105-3 CONFORMITY WITH PLANS AND SPECIFICATIONS.

All work performed and all materials furnished shall be in reasonably close conformity with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown on the plans, or indicated in the specifications.

In the event the Engineer finds the materials or the finished product in which the materials are used not within reasonably close conformity with the plans and specifications but that reasonably acceptable work has been produced, he will then make a determination if the work is to be accepted and remain in place. If the Engineer determines that the work is to be accepted, he will have the authority to make such adjustment in contract price as he deems warranted based upon his engineering judgment and the final estimate will be paid accordingly.

In the event the Engineer finds the materials or the finished product in which the materials are used or the work performed are not in reasonably close conformity with the plans and specifications and have resulted in an inferior or unsatisfactory product, the work or materials shall be removed and replaced or otherwise corrected by the contractor at no cost to the Department.

The Design-Builder shall bear all the costs of providing the burden of proof that the nonconforming work is reasonable and adequately addresses the design purpose. The Design-Builder shall bear all risk for continuing with nonconforming work in question until it is accepted.

The Engineer may impose conditions for acceptance of the nonconforming work. The Design-Builder shall bear all costs for fulfilling the conditions.

The decisions whether the product satisfies the design purpose, whether the nonconforming work is reasonably acceptable and the conditions for acceptance are within the sole discretion of the Engineer.