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

FINAL RFP

DESIGN-BUILD PROJECT

TIP U-3412A

JULY 3, 2007

VOID FOR BIDDING

DATE AND TIME OF TECHNICAL AND PRICE PROPOSAL SUBMISSION: **August 29, 2007** AT **4:00 PM**

DATE AND TIME OF PRICE PROPOSAL OPENING: **September 18, 2007** AT **10:00 AM**

CONTRACT ID:	C 201752
WBS ELEMENT NO.	34938.3.3
FEDERAL-AID NO.	STP-1223(1)
COUNTY:	Union
ROUTE NO.	SR 1223 (Martin Luther King, Jr. Boulevard)
MILES:	Approximately 3 miles
LOCATION:	SR 1223 (Martin Luther King, Jr. Boulevard) from NC 200 (Lancaster Avenue) to SR 1162 (Goldmine Road)
TYPE OF WORK:	DESIGN-BUILD AS SPECIFIED IN THE SCOPE OF WORK CONTAINED IN THE REQUEST FOR PROPOSALS

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

_____

PROPOSAL FORM FOR THE CONSTRUCTION OF CONTRACT NO. C201752

IN UNION COUNTY, NORTH CAROLINA

Date_____ 20_____

DEPARTMENT OF TRANSPORTATION,

RALEIGH, NORTH CAROLINA

The Design-Build Team herein acknowledges that it has carefully examined the location of the proposed work to be known as Contract No. C201752; has carefully examined the Final Request for Proposal (RFP) and all addendums thereto, specifications, special provisions, the form of contract, and the forms of contract payment bond and contract performance bonds, which are acknowledged to be part of the Contract; and thoroughly understands the stipulations, requirements and provisions. The undersigned Design-Build Team agrees to be bound upon their execution of the Contract and including any subsequent award to them by the Board of Transportation in accordance with this Contract to provide the necessary contract payment bond and contract performance bond within fourteen calendar days after the written notice of award is received by them.

The undersigned Design-Build Team further agrees to provide all necessary materials, machinery, implements, appliances, tools, labor, and other means of construction, except as otherwise noted, to perform all the work and required labor to design, construct and complete all the work necessary for State Highway Contract No. C201752 in Union County by no later than the dates(s) specified in the Final RFP or Technical Proposal, whichever is earlier, and in accordance with the requirements of the Engineer, the Final RFP, the *2006 Standard Specifications for Roads and Structures*, specifications prepared by the Department, the Technical Proposal prepared by the Design-Build Team, at the lump sum price(s) bid by the Design-Build Team in their Price Proposal.

The Design-Build Team shall provide signed and sealed documents prepared by the Design-Build Team, which specifications and plans show the details covering this project and adhere to the items noted above.

The Design-Build Team acknowledges that project documents furnished by the Department are preliminary and provided solely to assist the Design-Build Team in the development of the project design. Unless otherwise noted herein, the Department does not warrant or guarantee the sufficiency or accuracy of any information furnished by the Department.

The Department does not warrant or guarantee the sufficiency or accuracy of any investigations made, nor the interpretations made or opinions of the Department as to the type of materials and conditions to be encountered at the project site. The Design-Build Team is advised to make such independent investigations, as they deem necessary to satisfy their self as to conditions to be encountered on this project. The Design-Build Team shall have no claim for additional compensation or for an extension of contract time for any reason resulting from the actual conditions encountered at the site differing from those indicated in any of the information or documents furnished by the Department except as may be allowed under the provisions of the Standard Specifications.

Although the Department has furnished preliminary designs for this project, unless otherwise noted herein, the Design-Build Team shall assume full responsibility, including liability, for the

project design, including the use 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, JULY 2006,* 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*

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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

DB1 G04

The date of availability for this contract is **October 29, 2007** except that the Design-Build Team shall not begin ground disturbing activities, including utility relocations and tree harvesting, (this does not include permitted investigative borings covered under a Nationwide Permit No. 6) until the required permits have been acquired, as stipulated in the Environmental Permits Scope of Work contained elsewhere in this Request for Proposals (RFP). The Design-Build Team shall consider this factor in determining the proposed completion date for this project.

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 **October 1, 2010**.

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 by the Special Provision entitled "Substantial Completion" found 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.

OTHER LIQUIDATED DAMAGES AND INCENTIVES

(3/22/07) DB1 G11

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

Liquidated Damages for Intermediate Contract Time #1 for lane narrowing, lane closure, holiday and special event time restrictions for NC 200, NC 75, NC 84, SR 1200, SR 1162 and Martin Luther King Jr. Boulevard are $1,000.00 per hour.

Liquidated Damage for Intermediate Contract Time #2 for road closure time restrictions for construction operations for NC 200, NC 75, NC 84, SR 1200, SR 1162 and Martin Luther King Jr. Boulevard, and Martin Luther King Jr. Blvd. access from NC 75 and NC 84 are $500.00 per 15 minute period or any portion thereof.

Erosion and Sedimentation Control Incentives:

The Design-Build Team will be eligible for an incentive in the amount of $40,000 if construction operations have been performed in accordance with all environmental regulations and the Specifications, and the Design-Build Team does not receive any violations (ICA, CICA, NOV and / or C&D) at any time during project construction.

Reference Erosion and Sedimentation Control Scope of Work for additional information.

Liquidated Damages for Erosion Control efforts apply to this project:

The Design-Build Team's first four violations shall result in a reduction of $10,000 from the $40,000 incentive noted above for each ICA, CICA, NOV, and / or C&D violation. Beginning with the fifth violation, Liquidated Damages in the amount of $10,000 per violation shall be deducted from the lump sum bid amount due the Design-Build Team.

Reference the Erosion and Sedimentation Control Scope of Work for additional information and additional Liquidated Damages.

PROJECT SCHEDULE

(08-3-06) DB1 G12

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 related to the Project Schedule, updates, revisions and related impacts to construction activities, milestones and overall progress.

Project Schedule

The Design-Build Team shall submit a Project Schedule for review within thirty (30) calendar days of receiving the Notice of Award. The Department will review the Project Schedule within twenty-one (21) calendar days of receipt. The Design-Build Team shall make any necessary corrections or adjustments to the Project Schedule as necessitated by the Department's review

within seven (7) calendar days. The Department will review the revised Project Schedule within seven (7) calendar days of receipt.

The Department's review of the Project Schedule in no way attests to the validity of the assumptions, constraints, resource allocations, production rates or any other aspect of the Project Schedule. The Design-Build Team is solely responsible for the planning and execution of work in order to meet project milestones and contract completion dates.

The Design-Build Team shall develop a Project Schedule containing the following items:

(1) A time scale diagram with milestone dates and, within each milestone, major work activities clearly labeled.
(2) A cash curve corresponding to the milestones and work activities established above

Major work activities are defined as components comprising more than five (5) percent of the total project cost or occupying more than ten (10) percent of total contract time and should include, at minimum if applicable, the following:

Submittals
Clearing and grubbing
Drainage installation
Grading (to include unclassified excavation and borrow excavation)
Soil stabilization
Aggregate base course placement
Utility installation (water and sewer)
Culvert construction
Bridge construction (including removal)
Pavement installation
Signals, ITS and lighting installation
Sign installation
Utility Relocation
Observation Periods/ Moratoriums/ Seasonal Limitations

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

Date of availability
Design Submittals
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.

Compensation

Payment at the Lump Sum unit price for the contract will be full compensation for all work covered by this section.

PAYOUT SCHEDULE

(5-23-07) DB1 G13

No later than 12:00 o'clock noon on the sixth day after the opening of the Price Proposal, the responsive proposer with the lowest adjusted price shall submit a proposed Anticipated Monthly Payout Schedule to the office of the State Contract Officer. The information shall be submitted in a sealed package with the outer wrapping clearly marked "Anticipated Monthly Payout Schedule" along with the Design-Build Team name and the contract number. 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 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 stated herein, the Technical and Price Proposals will be considered irregular by the Department, and the bid may be rejected.

MOBILIZATION

(3-22-07) DB1 G15

Revise the *2006 Standard Specifications* as follows:

Page 8-1, Subarticle 800-2, MEASUREMENT AND PAYMENT

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

800-2 MEASUREMENT AND PAYMENT

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.

SUBMITTAL OF QUANTITIES, DIESEL # 2 FUEL BASE INDEX PRICE AND OPT-OUT OPTION:
(5-23-07)

(A) **Submittal of Quantities**

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

The Design-Build Team shall prepare an Estimate of Quantities that they anticipate incorporating into the completed project and upon which the Price Proposal was based. The quantity breakdown shall include all items of work that appear in the *Fuel Usage Factor Chart and Estimate of Quantities* sheet. Only those items of work which are specifically noted in the Fuel Usage Factor Chart will be subject to fuel price adjustments. The quantity estimate submitted in the Price Proposal shall be the final total quantity for which fuel price adjustments will be made for each item, regardless of supplemental agreements. The Department will review the Estimate of Quantities to ensure its reasonableness to the proposed design. Agreement of quantities will be a prerequisite prior to execution of the contract.

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

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

(B) **Base Index Price**

The Design-Build Team's Estimate of Quantities will be used on the various partial payment estimates to determine fuel price adjustments. The Design-Build Team shall submit a payment request for quantities of work completed based on the work completed for that estimate period. The quantities requested for partial payment shall be reflective of the work actually accomplished for the specified period. The Design-Build Team shall certify that the quantities are reasonable for the specified period. The base index price for DIESEL #2 FUEL is **$ 2.0502** per gallon.

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

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

(D) **Change Option** The proposer will not be permitted to change the option after the Price Proposal and the copy of the *Fuel Usage Factor Chart and Estimate of Quantities* sheet is submitted.

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

PARTNERING

DB 1 G49

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.

This relationship will be bilateral in makeup and participation will be totally voluntary. The cost associated with effectuating this relationship will be agreed to by both parties and shall be shared equally. Compensation for the Department’s share of the partnering costs will be by Supplemental Agreement.

To implement this initiative prior to starting work in accordance with the requirements of Section 108 of the Standard Specifications and the Standard Special Provision for Division One (found elsewhere in this RFP), and prior to the preconstruction conference, the Design-Build Team's management personnel and Division Construction Engineer will initiate a partnering development seminar/team building workshop. Project personnel working with the assistance of the Construction Unit will make arrangements to determine attendees at the workshop, agenda of the workshop, duration, and location. Persons required to be in attendance will be the NCDOT Resident Engineer, the NCDOT Division Construction Engineer, and key project personnel; the Design-Build Team's senior management personnel, the Design-Build Team's on-site project manager, and key project supervisory personnel for both the Design-Build Team and principal subcontractors and suppliers. The project design engineers, FHWA, and key local government personnel will also be invited to attend as necessary.

Follow-up workshops may be held periodically throughout the duration of the contract as agreed by the Design-Build Team and the North Carolina Department of Transportation.

The establishment of the partnering charter on a project will not change the legal relationship to the contract nor relieve either party from any of the terms of the contract.

EXECUTION OF SIGNATURE SHEETS AND DEBARMENT CERTIFICATION

(9/07/05) DB1 G52

The Proposer's attention is directed to the various sheets in the Request for Proposal which are to be signed by the Proposer. A list of these sheets is shown below. The signature sheets are located behind the Itemized Proposal Sheet in this Request for Proposals. The NCDOT bid bond form is available on-line at: **http://ncdot.org/doh/forms/files/bidbond.pdf** or by contacting the Records and Documents office at 919-250-4124.

1. Applicable Signature Sheets: 1, 2, 3, 4, 5, or 6 (Bid)

2. Bid Bond

The Proposer shall certify to the best of his knowledge all subcontractors, material suppliers and vendors utilized herein current status concerning suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal agency, in accordance with the "Debarment Certification" located behind the *Execution of Bid Noncollusion Affidavit and Debarment Certification* signature sheets in this RFP. Execution of the bid signature sheets in conjunction with any applicable statements concerning exceptions, when such statements have been made on the "Debarment Certification", constitutes the Proposer's certification of "status" under penalty of perjury under the laws of the United States.

SUBMISSION OF DESIGN BUILD PROPOSAL

DB1 G55

The Proposer's attention is directed that each Proposer's Design-Build Proposal shall comply with the following requirements in order for that Design-Build Proposal to be responsive and considered for award.

1. The Proposer shall be prequalified with the Department prior to submitting a Design-Build Proposal.

2. The Proposer shall deliver the Design-Build Proposal to the place indicated, and prior to the time indicated in this Request for Proposal.

3. The Design-Build Proposal documents shall be signed by an authorized employee of the Proposer.

4. The Design-Build Proposal shall be accompanied by Bid surety in the form of a Bid bond or Bid deposit.

5. If Disadvantaged Business Enterprises (DBE) goals are established for this contract, the Proposer shall complete the form Listing of DBE Subcontractors contained elsewhere in

this RFP in accordance with the Project Special Provision entitled Disadvantaged Business Enterprises.

6. The Design-Build Proposal shall address all the requirements as specified in this Request for Proposal document.

In addition to the above requirements, failure to comply with any of the requirements of Article 102-8 of the Standard Special Provisions, Division One (found elsewhere in this RFP) or Articles 102-9, 102-10, or 102-11 of the *2006 Standard Specifications* may result in a Design-Build Proposal being rejected.

CONFIDENTIAL QUESTIONS

(4-5-04) (Rev 1-5-07) DB1 G56

The Design-Build Team will be permitted to ask confidential questions of the Department, which neither the question nor answer will be shared with other proposing teams. For the purpose of this provision, *confidential question is defined as a private inquiry containing information whose disclosure could alert others to certain details of doing business in a particular manner. The Department will determine if the question is considered a confidential question.*

I. Confidential questions arising prior to issuance of the Final Request for Proposal will be allowed at the External RFP review with the individual teams.

   The Department will answer the confidential question verbally at the meeting if possible. If not answered verbally during the meeting, the Department will answer the confidential question by subtle changes in the Final Request for Proposal, which will clarify the scope by either allowing or disallowing the request. The revision will be made in such a manner as to not disclose the confidential question.

II. After the issuance of the Final Request for Proposal, confidential questions may be asked by requesting a meeting with the Contract Officer. The request shall be in writing and provide sufficient detail to evaluate the magnitude of the request. Questions shall be of such magnitude as to warrant a special meeting. Minor questions will not be acknowledged or answered.

   After evaluation, the Contract Officer will respond to the question in writing to the Design-Build Team only. Other teams will not be notified of the question or answer.

If the Design-Build Team includes work based on the confidential questions and answers, the work shall be included and discussed in the Technical Proposal. The Technical Proposal will be evaluated in accordance with existing policies.

VALUE ANALYSIS

(9-27-05) (Rev 1-5-07) DB2 R12

Value Engineering Construction Proposals (VECP), as identified in Article 104-12 of the *2006 Standard Specifications* will be accepted. Only proposals, which alter the requirements of the RFP issued by the Department, will be considered as Value Engineering Construction Proposals.

SCHEDULE OF ESTIMATED COMPLETION PROGRESS

(10-6-05) DB1 G58

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:

Fiscal Year	Progress (Dollar Value)
2007 (07/01/07 – 06/30/08)	20 % of Total Amount Bid
2008 (07/01/08 – 06/30/09)	37 % of Total Amount Bid
2009 (07/01/09 – 06/30/10)	37 % of Total Amount Bid
2010 (07/01/10 – 06/30/11)	6 % of Total Amount Bid

The Design-Build Team shall also furnish its own progress schedule in accordance with 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.

SUBSTANTIAL COMPLETION

(3-22-07) DB1 G16

When the special provisions provide for a reduction in the rate of liquidated damages for the contract time or an intermediate contract time after the work is substantially complete, the work will be considered substantially complete when the following requirements are satisfied:

1. Through traffic has been placed along the project or along the work required by an intermediate contract time and the work is complete to the extent specified below, and all lanes and shoulders are open such that traffic can move unimpeded at the posted speed. Intersecting roads and service roads are complete to the extent that they provide the safe and convenient use of the facility by the public.
2. The final layers of pavement for all lanes and shoulders along the project or along the work required by an intermediate contract time are complete.
3. All signs are complete and accepted except for the signs on intersecting roadways.
4. All guardrails, drainage devices, ditches, excavation and embankment are complete.
5. Remaining work along the project consists of permanent pavement markings, permanent pavement markers or incidental construction that is away from the paved portion of the roadway.

Upon apparent substantial completion of the entire project or the work required by an intermediate contract time, the Engineer will make an inspection of the work. If the inspection discloses the entire project or the work required by an intermediate contract time is substantially complete; the Engineer will notify the Design-Builder in writing that the work is substantially complete. If the inspection discloses the entire project or the work required by an intermediate contract time is not substantially complete, the Engineer will notify the Design-Builder in writing

of the work that is not substantially complete. The entire project or the work required by an intermediate contract time will not be considered substantially complete until all of the recommendations made at the time of the inspection have been satisfactorily completed.

DISADVANTAGED BUSINESS ENTERPRISE

(3-22-07) DB1 061

Policy

It is the policy of the North Carolina Department of Transportation that Disadvantaged Business Enterprises (DBEs) as defined in *49 CFR Part 26* 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 on which DBEs can compete fairly.

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 Part 26* in the award and administration of federally assisted contracts. 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.

Definitions

Commitment - The DBE participation submitted by the Design-Build Team during the bidding process. Once the Department accepts the commitment, the commitment becomes the contract requirement.

Committed DBE - Any DBE listed on the Listing of DBE Subcontractors at the time of Price Proposal submission or any DBE utilized as a replacement for a DBE firm listed on the Listing of DBE Subcontractors.

Department - North Carolina Department of Transportation

Disadvantaged Business Enterprise (DBE) – A firm certified through the North Carolina Unified Certification Program in accordance with *49 CFR Part 26*.

Goal - The DBE participation specified herein.

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

Regular Dealer - A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. A regular dealer engages in, as its principal business and in its own name, the purchase and sale or lease of the products in question. A regular dealer in such bulk items as steel, cement, gravel, stone, and

petroleum products need not keep such products in stock, if it owns or operates distribution equipment. Brokers and packagers are not regarded as manufacturers or regular dealers within the meaning of this section.

North Carolina Unified Certification Program - A program that provides one-stop shopping to applicants for certification, such that an applicant is required to apply only once for a DBE certification that will be honored by all recipients of USDOT funds in the state.

USDOT - United States Department of Transportation, including the Office of the Secretary, the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), and the Federal Aviation Administration (FAA).

Goal

The following goal for participation by Disadvantaged Business Enterprises is established for this contract:

Disadvantaged Business Enterprises **10 %**

This goal is to be met through utilization of highway construction contractors. Utilization of DBE firms performing design, other preconstruction services, or Construction Engineering and Inspection are not included in this goal. DBE utilization for engineering related services is expected and is credited through the technical scoring process.

The Design-Build Team shall exercise all necessary and reasonable steps to ensure that Disadvantaged Business Enterprises participate in at least the percent of the contract as set forth above as the goal.

Listing of DBE Subcontractors

(A) Proposers, at the time the Price Proposal is submitted, shall also submit a listing of DBE participation on the appropriate form (or facsimile thereof) contained elsewhere in this RFP in order for the bid to be considered responsive. Proposers shall indicate the total dollar value of the DBE participation for the contract. In the event the Proposer has no DBE participation, he shall indicate this on the forms by entering the word or number zero. Blank forms will not be deemed to represent zero participation. Price Proposals submitted that do not have DBE participation indicated on the appropriate form will not be read publicly during the opening of the Price Proposals. The Department will not consider these Price Proposals for award and they will be returned to the Proposer.

The Proposer shall indicate the following information on the appropriate form(s) contained elsewhere in this RFP:

(1) The names and addresses of DBE firms committed to participate in the contract.

(2) The type of work to be performed by each DBE.

(3) The total dollar amount to be paid to each DBE based upon agreed prices.

(B) If the DBE participation submitted in the Price Proposal by the Proposer with the apparent adjusted low price does not meet or exceed the DBE contract goal, this Proposer shall submit to the Department documentation of its good faith efforts made to reach the contract goal. One complete set and 9 copies of this information shall be received in the office of the State Contractor Utilization Engineer no later than 12:00 noon of the sixth day following opening of the Price Proposals. Where the information submitted includes repetitious solicitation letters it will be acceptable to submit a representative letter along with a distribution list of the firms that were solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal as necessary to demonstrate compliance with the factors listed below which the Department considers in judging good faith efforts. This documentation may include written subcontractor quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The following factors are used to determine if the Proposer has made adequate good faith effort:

(1) Whether the Proposer attended any pre-bid meetings that were scheduled by the Department to inform DBEs of subcontracting opportunities.

(2) Whether the Proposer provided solicitations through all reasonable and available means (e.g. advertising in newspapers owned and targeted to the Disadvantaged) at least 10 days prior to bid opening. Whether the Proposer provided written notice to all DBEs listed in the NCDOT Directory of Transportation Firms, within the Divisions and surrounding Divisions where the project is located, that specialize in the areas of work (as noted in the DBE Directory) that the Proposer will be subletting.

(3) Whether the Proposer followed up initial solicitations of interests by contacting DBEs to determine with certainty whether they were interested. If a reasonable amount of DBEs within the targeted Divisions do not provide an intent to quote or no DBEs specialize in the subcontracted areas, the Proposer shall notify DBEs outside of the targeted Divisions that specialize in the subcontracted areas, as well as call the Contract Compliance Manager in the Office of Civil Rights to give notification of the Proposer's inability to get DBE quotes.

(4) Whether the Proposer selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the contract goals. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the Proposer might otherwise perform these work items with its own forces.

(5) Whether the Proposer provided interested DBEs with adequate and timely information about the plans, specifications and requirements of the contract.

(6) Whether the Proposer negotiated in good faith with interested DBEs not rejecting them as unqualified without sound reasons based on a thorough investigation of

their capabilities. Any rejection should be so noted in writing with a description as to why an agreement could not be reached.

(7) Whether quotations were received from interested DBE firms but rejected as unacceptable without sound reasons why the quotations were considered unacceptable. The fact that the DBE firms quotation for the work is not the lowest quotation received will not in itself be considered as a sound reason for rejecting the quotation as unacceptable. The fact that the Proposer has the ability and/or desire to perform the contract work with its own forces will not be considered as sound reason for rejecting a DBE quote. Nothing in this provision shall be construed to require the Proposer to accept unreasonable quotes in order to satisfy contract goals.

(8) Whether the Proposer specifically negotiated with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be sublet includes potential for DBE participation.

(9) Whether the Proposer made any efforts and/or offered assistance to interested DBEs in obtaining the necessary equipment, supplies, materials, insurance, and/or bonding to satisfy the work requirements in the bid proposal.

(10) Any other evidence that the Proposer submits which show that the Proposer has made reasonable good faith efforts to meet the contract goal.

In the event a Proposer is the Proposer with the apparent adjusted low price or apparent lowest responsive bidder on more that one project within the same letting located in the same geographic area of the state, as a part of the good faith effort the Department will consider allowing the Proposer to combine the DBE participation as long as the overall goal value of the combined projects is achieved.

(C) The Proposer will be required to submit written documentation of the Proposer/offeror's commitment to use a DBE subcontractor whose participation it submits to meet a contract goal and written confirmation from each DBE, listed in the proposal, indicating their participation in the contract. This documentation will be submitted on the Department's form titled "Letter of Intent to Perform as a Subcontractor" and shall be received in the office of the State Contractor Utilization Engineer no later than 12:00 noon of the sixth day following opening of bids.

If the Proposer fails to submit written confirmation from each committed DBE, listed in the proposal, indicating their participation in the contract, the Proposer shall submit information to satisfy the Department that sufficient good faith efforts have been made to meet the contract goals. The following factors are used to determine if the Proposer has made adequate good faith effort to obtain written confirmation from committed DBEs indicating their participation in the contract:

(1) Whether the Proposer with the apparent adjusted low price, within 30 hours following bid opening, provided each DBE listed in the proposal written

notification that it is participating in the contract and attaching the required forms for execution.

(2) Whether the Proposer, within 48 hours following bid opening, followed up initial notification by contacting each DBE to confirm receipt of the written documentation and to confirm the firms intent to execute and return the forms.

(3) Whether the Proposer provided each DBE with adequate and timely information about the forms.

(4) Copies of written quotations received from each DBE listed in the proposal for which written confirmation from DBE indicating their participation in the contract is not provided.

(5) Any other evidence that the Proposer submits which show that the Proposer has made reasonable good faith efforts to obtain written confirmation from DBEs indicating their participation in the contract.

(6) If the participation supported by Letters of Intent to Perform as a Subcontractor does not meet or exceed the contract goal the Proposer shall submit the information documenting good faith in accordance with item (B) of this section.

(D) Where the Proposer fails to provide the required information in the required timeframe, the Department may impose one or more of the following sanctions:

(1) Disqualify the Design-Build Team and any affiliated companies from further bidding for a period of time of no more than 90 days from the date of disqualification as established in notification by certified mail,

(2) disqualify the Design-Build Team and any affiliated companies from award of all contracts for which bids or Price Proposals have been received and opened,

(3) disqualify the Design-Build Team from the contract in question.

(E) When the Proposer with the apparent adjusted low price fails to submit sufficient participation by DBE firms to meet the contract goal and upon a determination by the Goal Compliance Committee based upon the information submitted that the Proposer with the apparent adjusted low price failed to make sufficient reasonable efforts to meet the contract goal, the Proposer will be offered the opportunity to meet in person for administrative reconsideration. A committee appointed by the Department will hear administrative reconsideration. Members of this committee will be officials that 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, including the basis for finding. The result of the reconsideration process will not be administratively appealable to the USDOT.

In the event that the Department does not award the contract to the Proposer with the apparent adjusted low price, the Department reserves the right to award the contract to the Proposer with the next lowest adjusted price that submits participation to meet the contract goal or documents that adequate good faith efforts have been made to meet the goal.

Directory of Transportation Firms

Real-time information about firms doing business with the Department and firms that are certified through North Carolina's Unified Certification Program is available in the Directory of Transportation Firms. The Directory can be accessed by the link on the Department's homepage or by entering http://apps.dot.state.nc.us/vendor/directory in the address bar of your web browser.

The Directory allows the display to be customized and the firms listed to be filtered by attributes, including work types, certification type and desired work area. The list can be printed or downloaded as a Microsoft Excel file. Firms identified as DBE certified in the Directory can be utilized to meet the contract goals.

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

Replacement of DBE

The Design-Build Team shall not terminate a committed DBE subcontractor for convenience or perform the work with its own forces or those of an affiliate. If the Design-Build Team fails to demonstrate reasonable efforts to replace a committed DBE firm that does not perform as intended or completes the work with its own forces without the Engineer's approval, the Design-Build Team and any of its affiliated companies may be disqualified from further bidding for a period of up to 6 months.

The Design-Build Team shall comply with the following for replacement of committed DBE.

(A) Performance Related

When a DBE 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 as the DBE that was terminated. The Design-Build Team is encouraged to first attempt to find another DBE firm to do the same work as the DBE that was being 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.

(3) For each DBE contacted but rejected as unqualified, the reasons for the Design-Build Team's conclusion.

(4) Efforts made to assist the DBEs contacted, if needed, in obtaining bonding or insurance required by the Design-Build Team.

(B) Decertification

(1) When a committed DBE is decertified by the Department after a Request for Subcontract has been received by the Department, the Department will not require the Design-Build Team to solicit replacement DBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract commitment.

(2) When a committed DBE is decertified prior to the Department receiving a Request for Subcontract for the named DBE firm, the Design-Build Team shall take all necessary and reasonable steps to replace the DBE subcontractor with another DBE subcontractor to perform at least the same amount of work to meet the contract goal or demonstrate that it has made a good faith effort to do so.

Changes in the Work

When the Engineer makes changes that result in the reduction or elimination of work to be performed by a committed DBE, the Design-Build Team will not be required to seek additional participation. When the Engineer makes changes that result in additional work to be performed by a DBE based upon the Design-Build Team's commitment, the DBE shall participate in additional work to the same extent as the DBE participated in the original contract work.

When the Engineer makes changes that result in extra work, which has more than a minimal impact on the contract amount, the Design-Build Team shall seek additional participation by DBEs unless otherwise approved by the Engineer.

When the Engineer makes changes that result in an alteration of plans or details of construction and a portion or all of work had been expected to be performed by a committed DBE; the Design-Build Team shall seek participation by DBEs unless otherwise approved by the Engineer.

When the Design-Build Team requests changes in the work that result in the reduction or elimination of work that the Design-Build Team committed to be performed by a DBE, the Design-Build Team shall seek additional participation by DBEs equal to the reduced DBE participation caused by the changes.

Counting DBE Participation Toward Meeting the DBE Goal

(A) If a firm is determined to be an eligible DBE firm, the total dollar value of the participation by the DBE will be counted toward the contract commitment. The total dollar value of participation by a certified DBE will be based upon the value of work actually performed by the DBE and the actual payments to DBE firms by the Design-Build Team.

(B) When a DBE performs as a participant in a joint venture, the Design-Build Team may count toward its DBE goal a portion of the total value of participation with the DBE in the joint venture, that portion of the total dollar value being a distinct clearly defined portion of work that the DBE performs with its forces.

(C) (1) The Design-Build Team may count toward its DBE goal only expenditures to DBEs that perform a commercially useful function in the work of a contract. A DBE is considered to perform a commercially useful function when it is responsible for execution of a distinct element of the work of a contract and carrying out its responsibilities by actually performing, managing, and supervising the work involved. To determine whether a DBE is performing a commercially useful function, the Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and other relevant factors.

(2) Consistent with normal industry practices, a DBE may enter into subcontracts. Work that a DBE subcontracts to another DBE firm may be counted toward the contract goal. Work that a DBE subcontracts to a non-DBE firm does not count toward the contract goal. If a DBE contractor or subcontractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of normal industry practices, the DBE shall be presumed not to be performing a commercially useful function. The DBE may present evidence to rebut this presumption to the Department for commercially useful functions. The Department's decision on the rebuttal of this presumption is subject to review by the Federal Highway Administration but is not administratively appealable to USDOT.

(3) The following factors will be used to determine if a DBE trucking firm is performing a commercially useful function.

(a) The DBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.

(b) The DBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.

(c) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.

(d) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.

(e) The DBE may also lease trucks from a non-DBE firm, including from an owner-operator. The DBE who leases trucks from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE lessees not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE lessees receives credit only for the fee or commission it receives as a result of the lease arrangement.

(f) For purposes of this paragraph, a lease shall indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks shall display the name and identification number of the DBE.

(D) A Design-Build Team may count toward its DBE goal 60 percent of its expenditures for materials and supplies required to complete the contract and obtained from a DBE regular dealer and 100 percent of such expenditures to a DBE manufacturer.

(E) A Design-Build Team may count toward its DBE goal the following expenditures to DBE firms that are not manufacturers or regular dealers:

(1) The fees or commissions charged by a DBE firm for providing a bona fide service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, provided the fees or commissions are determined to be reasonable and not excessive as compared with fees and commissions customarily allowed for similar services.

(2) The fees or commissions charged for assistance in the procurement of the materials and supplies, or for transportation charges for the delivery of materials or supplies required on a job site (but not the cost of the materials and supplies themselves), provided the fees are not from a manufacturer or regular dealer and provided the fees are determined to be reasonable and not excessive as compared with fees customarily allowed for similar services.

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 information shall be supplied on the Department Form RS-1-D unless otherwise approved by the Engineer. In any event, the Department reserves the right to require copies of actual subcontract agreements involving DBE subcontractors.

Within 30 days of entering into an agreement with a DBE for materials, supplies or services, not otherwise documented by a Request for Subcontract as specified above, the Design-Build Team shall furnish the Engineer a copy of the agreement. The documentation should also indicate the percentage (60% or 100%) of expenditures claimed for DBE credit.

All certifications will 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

The Design-Build Team shall provide the Engineer with an accounting of payments made to Disadvantaged Business Enterprise firms, including material suppliers, contractors at all levels (prime, subcontractor, or second tier subcontractor). 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 any affiliated company of the Design-Build Team from the Department's appropriate prequalified list or the removal of other entities from the approved subcontractors list.

The Design-Build Team shall report the accounting of payments through the Department's DBE Payment Tracking System, which is a web based application. The system can be accessed through the following web link: https://apps.dot.state.nc.us/Vendor/PaymentTracking/. The Design-Build Team shall also provide the Engineer an affidavit attesting the accuracy of the information submitted in the Payment Tracking System. This too shall be submitted for any given month by the end of the following month.

Design-Build Teams reporting transportation services provided by non-DBE lessees in accordance with item (C)(3)(e) above shall evaluate the value of services provided during the month of the reporting period only.

Prior to payment of the final estimate, the Design-Build Team shall furnish an accounting of total payment to each DBE. 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

While each contractor (prime, subcontractor, 2nd tier subcontractor) is responsible for accurate accounting of payments to DBEs, it shall be the prime contractor's responsibility to report all monthly and final payment information in the Tracking System.

Failure on the part of the Design-Build Team to submit the required information in the time frame specified may result in the disqualification of that Design-Build Team and any affiliate companies from further bidding until the required information is submitted.

Failure on the part of any subcontractor to submit the required information in the time frame specified may result in the disqualification of that contractor and any affiliate companies from working on any DOT project until the required information is submitted.

CERTIFICATION FOR FEDERAL-AID CONTRACTS

(3-21-90) DB1 G85

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, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid 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 this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, *Disclosure Form to Report Lobbying*, in accordance with its instructions.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by *Section 1352, Title 31, U.S. Code*. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Proposer also agrees by submitting a Design-Build Proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such sub-recipients shall certify and disclose accordingly.

CONTRACTOR'S LICENSE REQUIREMENTS

(7-1-95) DB1 G88

If the Design-Build Team does not hold the proper license to perform any plumbing, heating, air conditioning, or electrical work in this contract, he will be required to sublet such work to a contractor properly licensed in accordance with *Article 2 of Chapter 87 of the General Statutes* (licensing of heating, plumbing, and air conditioning contractors) and *Article 4 of Chapter 87* of the *General Statutes* (licensing of electrical contractors).

U.S. DEPARTMENT OF TRANSPORTATION HOTLINE

(11-22-94) DB1 G100

To report bid rigging activities call: **1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free *hotline* Monday through Friday, 8:00 a.m. to 5:00 p.m. eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the *hotline* to report such activities.

The *hotline* is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

SUBMISSION OF RECORDS - FEDERAL-AID PROJECTS

(7-1-95) DB1 G109

The Design-Build Team's attention is directed to the Standard Special Provisions entitled *Required Contract Provisions - Federal-Aid Construction Contracts* contained elsewhere in this RFP.

This project is **not** located on the National Highway System, therefore, federal form FHWA-47 is not required.

SUBSURFACE INFORMATION

(3-22-07) DB1 G119

Available subsurface information will be provided on this project. The Design-Build Team shall be responsible for additional investigations and for verifying the accuracy of the subsurface information supplied by the Department.

BID DOCUMENTATION

(5/6/04) DB1 G142

General

The successful Design-Build Team shall submit the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation used to prepare the Price Proposal for this contract to the Department. Such documentation shall be placed in escrow with a banking

institution or other bonded document storage facility selected by the Department and preserved by that institution or facility as specified in the following sections of this provision.

Bid Documentation

The term "bid documentation" as used in this provision means all written information, working papers, computer printouts and electronic media, charts, and all other data compilations which contain or reflect information, data, and calculations used by the Proposer in the preparation of their Price Proposal. The term "bid documentation" includes, but is not limited to, Design-Build Team equipment rates, Design-Build Team overhead rates, labor rates, efficiency or productivity factors, arithmetical calculations, and quotations from subcontractors and material suppliers to the extent that such rates and quotations were used by the Proposer in formulating and determining the Price Proposal. The term "bid documentation" also includes any manuals, which are standard to the industry used by the Proposer in determining the Price Proposal. Such manuals may be included in the bid documentation by reference. Such reference shall include the name and date of the publication and the publisher. The term does not include bid documents provided by the Department for use by the Proposer in bidding on this project.

Submittal of Bid Documentation

A representative of the Proposer shall deliver the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation to the Department, in a container suitable for sealing, within ten (10) days after the notice of award is received by the Proposer. Bid documentation will be considered a certified copy if the Proposer includes a letter to the Department from a chief officer of the company stating that the enclosed documentation is an EXACT copy of the original documentation. The letter must be signed by a chief officer of the company, have the person’s name and title typed below the signature, and the signature shall be notarized at the bottom of the letter. The Department will not execute the contract until the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation has been received by the Department. The container shall be clearly marked "Bid Documentation" and shall also show on the face of the container the Proposer's name, Proposer's address, the date of submittal, the Project Number, and the County.

Affidavit

In addition to the bid documentation, an affidavit signed under oath by an individual authorized by the Proposer to execute the bid shall be included. The affidavit shall list each bid document with sufficient specificity so a comparison may be made between the list and the bid documentation to ensure that all of the bid documentation listed in the affidavit has been enclosed. The affidavit shall attest that the affiant has personally examined the bid documentation, that the affidavit lists all of the documents used by the Proposer to determine the Price Proposal 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 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 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 Price Proposal 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 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 Proposer with the next lowest adjusted price 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 10 days after the Proposer receives the notice of award. 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 will sign the Escrow Agreement at the time that the bid documentation is delivered to a Banking Institution or other facility as outlined above. The Proposer's failure to sign the Escrow Agreement at the time the bid documentation is delivered 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 Proposer with the next lowest adjusted price or the work may be readvertised and constructed under the contract or otherwise, as the Board of Transportation may decide.

Confidentiality of Bid Documentation

The bid documentation and affidavit in escrow are, and will remain, the property of the Proposer. The Department has no interest in, or right to, the bid documentation and affidavit other than to verify the contents and legibility of the bid documentation unless 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. In the event of such written notice of intent to file a claim, filing of a written claim, filing a written and verified claim, or initiation of litigation against the Department, or receipt of a letter from the Design-Build Team authorizing release, the bid documentation and affidavit may become the property of the Department for use in considering any claim or in litigation as the Department may deem appropriate.

Any portion or portions of the bid documentation designated by the Proposer as a "trade secret" at the time the bid documentation is delivered to the Department's Contract Officer shall be protected from disclosure as provided by G.S. 132-1.2.

Cost and Escrow Instructions

The cost of the escrow will be borne by the Department. The Department will provide escrow instructions to the banking institution or other bonded document storage facility consistent with this provision.

Payment

There will be no separate payment for all costs of compilation of the data, container, or verification of the bid documentation. Payment at the lump sum price for the Design-Build project will be full compensation for all such costs.

TWELVE MONTH GUARANTEE

(7-15-03) DB1 G145

(A) The Design-Build Team shall guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to the Department. The Design-Build Team will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of the Department, and / or for use in excess of the design.

(B) Where items of equipment or material carry a manufacturer’s guarantee for any period in excess of twelve months, then the manufacturer’s guarantee shall apply for that particular piece of equipment or material. The Department’s first remedy shall be through the manufacturer although the Design-Build Team is responsible for invoking the warranted

repair work with the manufacturer. The Design-Build Team's responsibility shall be limited to the term of the manufacturer's guarantee. NCDOT would be afforded the same warranty as provided by the Manufacturer.

(C) The Design-Build Team shall be responsible for any and all remediation activities at the on-site stream and wetland mitigation sites for a period of twelve months following final acceptance of the project at no additional cost to the Department.

This guarantee provision shall be invoked only for major components of work in which the Design-Build Team would be wholly responsible for under the terms of the contract. Examples would include pavement structures, bridge components, on-site mitigation, and sign structures. This provision will not be used as a mechanism to force the Design-Build Team to return to the project to make repairs or perform additional work that the Department would normally compensate the Design-Build Team for. 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.

OUTSOURCING OUTSIDE THE USA

(9-21-04) (5-16-06) DB1 G150

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

CLEARING AND GRUBBING

(3-22-07) DB2 R01

With the exception of areas with Permanent Utility Easements, perform clearing on this project to the limits established by Method "III" shown on Standard No. 200.03 of *the 2006 NCDOT Roadway Standard Drawings*. In areas with Permanent Utility Easements that are adjacent to the right of way located along the near-side of the constructed two-lane facility, clearing shall extend to the Right of Way.

Hand clearing shall be required for installation of the woven wire fence along the proposed right of way adjacent to the future widened section.

EROSION & SEDIMENT CONTROL / STORMWATER CERTIFICATION

1-16-07 DB1 G180

General

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 subcontractors' operations to ensure that the *Erosion and Sediment Control / Stormwater Pollution Prevention Plan* is implemented and maintained over the life of the contract.

(A) *Certified Supervisor* – Provide a certified Erosion & Sediment Control / Stormwater (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 a certified, trained foreman for each construction operation that increases the potential for soil erosion or the possible sedimentation and turbidity of surface waters.

(C) *Certified Installer* – Provide a certified installer to install or direct the installation for erosion or sediment / stormwater control practices.

In the case of difference of opinion or interpretation of plan or contract requirements between the Design-Build Team and the Engineer, the Engineer's determination and decision will be final.

Roles and Responsibilities

(A) *Certified Erosion & Sediment Control / Stormwater Supervisor* - The Certified Supervisor shall be responsible for ensuring erosion and sediment control / stormwater 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 Erosion and Sedimentation Control / Stormwater issues. Perform the following duties:

(1) (a) Manage Operations - Coordinate and schedule the work of subcontractors so that erosion and sediment control / stormwater measures are fully executed for each operation and in a timely manner over the duration of the contract.

(b) Oversee the work of subcontractors so that appropriate erosion and sediment control / stormwater preventive measures are conformed to at each stage of the work.
(c) Prepare the required weekly erosion control punchlist and submit to the Engineer.
(d) Attend all weekly or monthly construction meetings to discuss the findings of the NPDES inspection and other related issues.
(e) Implement the erosion and sediment control / stormwater site plans requested.
(f) Provide for erosion and sediment control / stormwater methods for the 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.
(g) Acquire applicable permits and comply with requirements for borrow pits, dewatering, and any temporary work conducted by the Design-Build Team in jurisdictional areas.
(h) Conduct all erosion and sediment control / stormwater work in a timely and workmanlike manner.
(i) Fully install erosion and sediment control / stormwater work prior to suspension of the work.
(j) Coordinate with Department, Federal, State and Local Regulatory agencies on resolution of erosion and sediment control / stormwater issues due to the Design-Build Team's operations.
(k) Ensure that proper cleanup occurs from vehicle tracking on paved surfaces and / or any location where sediment leaves the Right-of-Way.
(l) 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 Erosion and Sediment Control Program. Some of the requirements are, but are not limited to:

(a) 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).
(b) Inspect erosion and sediment control / stormwater 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.
(c) Maintain an onsite rain gauge and a record of rainfall amounts and dates.
(d) Maintain erosion and sediment control / stormwater inspection records for review by Department and Regulatory personnel upon request.

(e) Implement approved reclamation plans on all borrow pits and waste sites.
(f) Maintain a log of turbidity test results as outlined in the Department's Procedure for Monitoring Borrow Pit Discharge.
(g) Provide secondary containment for bulk storage of liquid materials.
(h) Provide training for employees concerning general erosion and sediment control / stormwater awareness, the NPDES Permit requirements, and the requirements of the *General Permit, NCG010000*.
(i) Report violations of the NPDES permit to the Engineer who will notify the DWQ Regional Office within 24 hours.

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

(a) Follow permit requirements related to the Design-Build Team and subcontractors' construction activities.
(b) Ensure that all operators and / or subcontractor(s) on site have the proper erosion and sediment control / stormwater certification.
(c) Notify the Engineer when the required certified erosion and sediment control / stormwater personnel are not available on the job site when needed.
(d) Conduct the inspections required by the NPDES permit.
(e) Take corrective actions in the proper timeframe as required by the NPDES permit for problem areas identified during the NPDES inspections.
(f) 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.
(g) Maintain temporary erosion and sediment control devices.
(h) Remove temporary erosion or sediment control devices when they are no longer necessary as agreed upon by the Engineer.
(i) 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:

(1) Foreman in charge of grading activities
(2) Foreman in charge of bridge or culvert construction over jurisdictional areas
(3) 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 onsite 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.

(C) *Certified Installers* - Provide at least one onsite, certified installer for each of the following erosion or sediment control / stormwater crew:

(1) Seeding and Mulching
(2) Temporary Seeding
(3) Temporary Mulching
(4) Sodding
(5) Silt fence or other perimeter erosion/sediment control device installations
(6) Erosion control blanket installation
(7) Hydraulic tackifier installation
(8) Turbidity curtain installation
(9) Rock ditch check/sediment dam installation
(10) Ditch liner/matting installation
(11) Inlet protection
(12) Riprap placement
(13) Stormwater BMP installations (such as but not limited to level spreaders, retention/detention devices)
(14) Pipe installations within jurisdictional areas

If a *Certified Installer* is not onsite, the Design-Build Team may substitute a Level I Installer with a Level II Foreman, provided the Level II Foreman is not tasked to another crew requiring Level II Foreman oversight.

Preconstruction Meeting

Furnish the names of the *Certified Erosion & Sediment Control Stormwater Supervisor, Certified Foremen, and Certified Installers* and notify the Engineer in writing of changes in certified personnel over the life of the contract within 2 days of change.

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

Revocation or Suspension of Certification

Upon recommendation of the Chief Engineer - Operations to the certification entity, certification for Certified Erosion & Sediment Control Stormwater Supervisor, 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 C*ease and Desist Order* for erosion and sediment control / stormwater related issues.

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

(A) Failure to adequately perform the duties as defined within the certification program
(B) Issuance of a Continuing ICA, NOV, or Cease and Desist Order
(C) Failure to fully perform environmental commitments as detailed within the permit conditions and specifications
(D) Demonstration of erroneous documentation or reporting techniques
(E) Cheating or copying another candidate's work on an examination
(F) Intentional falsification of records
(G) Directing a subordinate under direct or indirect supervision to perform any of the above actions
(H) Dismissal from a company for any of the above reasons
(I) 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 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.

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.

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

PROCEDURE FOR MONITORING BORROW PIT DISCHARGE

2-20-07 DB1 G181

Water discharge from borrow pit sites shall not cause surface waters to exceed 50 NTUs (nephelometric turbidity unit) in streams not designated as trout waters and 10 NTUs in streams, lakes or reservoirs designated as trout waters. For lakes and reservoirs not designated as trout waters, the turbidity shall not exceed 25 NTUs. If the turbidity exceeds these levels due to natural background conditions, the existing turbidity level shall not be increased.

If during any operating day, the downstream water quality exceeds the standard, the Design-Build Team shall do all of the following:

(A) Either cease discharge or modify the discharge volume or turbidity levels to bring the downstream turbidity levels into compliance, or

(B) Evaluate the upstream conditions to determine if the exceedance of the standard is due to natural background conditions. If the background turbidity measurements exceed the standard, operation of the pit and discharge can continue as long as the stream turbidity levels are not increased due to the discharge.

(C) Measure and record the turbidity test results (time, date and sampler) at all defined sampling locations 30 minutes after startup and at a minimum, one additional sampling of all sampling locations during that 24-hour period in which the borrow pit is discharging.

(D) Notify DWQ within 24 hours of any stream turbidity standard exceedances that are not brought into compliance.

During the Environmental Assessment required by Article 230-4 of the *Standard Specifications*, the Design-Build Team shall define the point at which the discharge enters into the State's surface waters and the appropriate sampling locations. Sampling locations shall include points upstream and downstream from the point at which the discharge enters these waters. Upstream sampling location shall be located so that it is not influenced by backwater conditions and represents natural background conditions. Downstream sampling location shall be located at the point where complete mixing of the discharge and receiving water has occurred.

The discharge shall be closely monitored when water from the dewatering activities is introduced into jurisdictional wetlands. Any time visible sedimentation (deposition of sediment) on the wetland surface is observed, the dewatering activity shall be suspended until turbidity levels in

the stilling basin can be reduced to a level where sediment deposition does not occur. Staining of wetland surfaces from suspended clay particles, occurring after evaporation or infiltration, does not constitute sedimentation. No activities shall occur in wetlands that adversely affect the functioning of a wetland. Visible sedimentation shall be considered an indication of possible adverse impacts on wetland use.

The Engineer shall perform independent turbidity tests on a random basis. These results shall be maintained in a log within the project records. Records will include, at a minimum, turbidity test results, time, date and name of sampler. Should the Department's test results exceed those of the Design-Build Team's test results, an immediate test shall be performed jointly with the results superceding the previous test results of both the Department and the Design-Build Team.

The Design-Build Team shall use the *NCDOT Turbidity Reduction Options for Borrow Pits Matrix*, available at http://www.ncdot.org/doh/preconstruct/ps/contracts/letting.html to plan, design, construct, and maintain BMPs to address water quality standards. Tier I Methods include stilling basins which are standard compensatory BMPs. Other Tier I methods are noncompensatory and shall be used when needed to meet the stream turbidity standards. Tier II Methods are also noncompensatory and are options that may be needed for protection of rare or unique resources or where special environmental conditions exist at the site which have led to additional requirements being placed in the DWQ's 401 Certifications and approval letters, Isolated Wetland Permits, Riparian Buffer Authorization or a DOT Reclamation Plan's Environmental Assessment for the specific site. Should the Design-Build Team exhaust all Tier I Methods on a site exclusive of rare or unique resources or special environmental conditions, Tier II Methods may be required by regulators on a case by case basis per supplemental agreement.

The Design-Build Team may use cation exchange capacity (CEC) values from proposed site borings to plan and develop the Price Proposal for the project. CEC values exceeding 15 milliequivalents per 100 grams of soil may indicate a high potential for turbidity and should be avoided when dewatering into surface water is proposed.

No additional compensation for monitoring borrow pit discharge will be paid.

BUILDING AND APPURTENANCE REMOVAL / DEMOLITION

DB2 R12

Unless otherwise noted in the GeoEnvironmental Scope of Work and as agreed upon by the Department, remove or demolish all buildings and appurtenances, in their entirety, that are located either partially or completely within the project's right-of-way limits or are located outside the project's right of way limits but within property purchased as an uneconomical remnant in accordance with Sections 210 and 215 of the 2006 *Standard Specifications* and the following:

- Prior to removal or demolition of any building, comply with the notification requirements of *Title 40 Code of Federal Regulations*, Part 61, Subpart M, which are applicable to asbestos. Give notification to the North Carolina Department of Health and Human Services, Division of Public Health, Health Hazards Control Unit and / or the appropriate county agency when

the county performs enforcement of the Federal Regulation. Submit a copy of the notification to the Engineer prior to the any building removal or demolition.

- Perform removal and disposal of asbestos in accordance with the requirements of *Title 40 Code of Federal Regulations*; comply with all Federal, State and local regulations when performing building removal and / or asbestos removal and disposal. Any fines resulting from violations of any regulation are the sole responsibility of the Design-Build Team and the Design-Build Team agrees to indemnify and hold harmless the Department against any assessment of such fines.

- It shall be the responsibility of the Design-Build Team to perform all asbestos assessment for all buildings and appurtenances located either partially or completely within the project's right-of-way limits or located outside the project's right of way limits but within property purchased as an uneconomical remnant. The cost of all asbestos assessments required shall be borne by the Design-Build Team and included in the lump sum bid cost for the project. The cost of asbestos removal and disposal will be paid for in accordance with Article 104-7 of the Standard Special Provisions, Division 1 (found elsewhere in this RFP). When a building has had or will have asbestos removed and the Design-Build Team elects to remove the building such that it becomes a public area, the Design-Build Team shall be responsible for any additional costs incurred including final air monitoring.

CEMENT AND LIME STABILIZATION OF SUB-GRADE SOILS

General

The Design-Build Team shall be responsible for the following:

1. Performing all laboratory tests in a laboratory certified by the AMRL / NCDOT Laboratory Proficiency Program
2. Sampling Sub-grade soils
3. Conducting Laboratory tests to determine:
    a. Soil classifications
    b. Moisture-density relationships
    c. Quantity of lime or cement required to achieve specified strengths
4. Designating areas to be stabilized by either lime or cement and the required rates of application
5. Conducting field tests to determine unconfined compressive strength

Sampling

The Design-Build Team shall take soil samples, after the project has been graded to within 2 inches of final sub-grade elevation. The Design-Build Team shall sample the top 8 inches at a minimum frequency of one sample per 1,000 feet, per each lane, for classification tests; and one sample per 3,000 feet, per each lane, for moisture density tests and lime or cement mix design tests. Additional samples shall be taken to ensure that all the predominant soil types, limits of distribution of these soils and different site conditions have been represented.

Classification Tests

The Design-Build Team shall perform the following tests to determine AASHTO classifications of different soils in accordance with AASHTO specifications as modified by NCDOT. Copies of these modified procedures can be obtained from Materials and Test Unit's Soils Labratory.

TABLE 1

TEST	AASHTO DESIGNATION
Dry Preparation of Disturbed Soils	T-87
Particle Size Analysis of Soils	T-88
Determining the Liquid Limit of Soils	T-89
Determining the Plastic Limit and Plasticity Index of Soils	T-90

Moisture Density Test

Based on the criteria set in Table 2, below, the Design-Build Team shall perform the Moisture Density Tests, using either lime or cement. The Design-Build Team shall use 10% cement by weight in soil cement and 4% lime by weight, in soil-lime mixtures. The Design-Build Team shall conduct the tests in accordance with AASHTO T-99, and T-134 for soil-lime and soil-cement mixtures, respectively. In each case, The Design-Build Team shall determine the maximum dry density and optimum moisture content.

TABLE 2

CRITERIA FOR SELECTING LIME OR CEMENT

PROPERTY	A	B
Percent passing #200 Sieve	35 Max	36 Min
Liquid Limit	40 Max	41 Min
Plasticity Index	10 Max	25 Min

The Design-Build Team shall use cement for all soils meeting criteria in Column A and lime for all soils meeting criteria in Column B. The Design-Build Team may choose either lime or cement for all soils not meeting all criteria in either Column A or B.

DETERMINING THE APPLICATION RATES FOR SOIL-CEMENT AND SOIL-LIME MIXTURES

Soil-Cement Mixtures

For soil-cement mixtures, the Design-Build Team shall be required to do the following:

- Make specimens at optimum moisture content using a quantity of cement in the range of 5 to 12 percent by weight.
- Compact the specimens to a minimum density of 95% of maximum dry density obtained using AASHTO T 134.
- Make a minimum of 2 specimens for each selected cement rate.
- Cure the specimens for 7 days in a moist room maintained at a temperature of 73°F ±2.7° and a humidity of 100%. At the end of the curing period, immerse the specimens in water for 4 hours.
- After immersion, test the specimens in unconfined compression in accordance with ASTM D 1633.
- Report the maximum strength obtained and the corresponding percent strain.
- Select the rate of cement that provides a minimum unconfined compressive strength of 200 psi and a maximum of 400 psi.

Soil-Lime Mixtures

For soil-lime mixtures, the Design-Build Team shall be required to do the following:

- Make specimens at optimum moisture content using a quantity of lime in the range of 3.5 to 6.5 percent by weight.
- Compact specimens to a minimum density of 95% of maximum dry density obtained by AASHTO T99.
- Make a minimum of two specimens for each selected lime rate.
- Cure the specimens in sealed plastic bags for 48 hours in an oven at a temperature of 118 °F. Do not immerse the specimens in water at the end of the curing period.
- Test the specimens in unconfined compression in accordance with AASHTO T 208. Report the maximum strength obtained and the corresponding percent strain.
- Select the rate of lime that provides a minimum unconfined compressive strength of 60 psi.

Submittals for Review and Approval Prior to Construction

The Design-Build Team shall adhere to the following submittal guidelines:

- Submit all laboratory test results for review.
- Submit a sketch in plan view showing areas of the project to be stabilized by either lime or cement and application rates for each stabilizer.
- Submit any other documentation that supports the Design-Build Team's recommendations.

Construction of Lime Treated Subgrade

The Design-Build Team shall construct the lime treated sub-grade as specified in Section 501 of the North Carolina Department of Transportation *2006 Standard Specifications for Roads and Structures* with the following exceptions:

Subsection 501-4 Equipment
Contractor's equipment will not require engineer's approval.

Subsection 501-8 (A) General
Paragraph #1 is not applicable to this project.

Subsection 501-9 (B) Preliminary Curing
Amend as follows: Allow a minimum of 2 days and a maximum of 4 days for preliminary curing.

Subsection 501-10 Compacting, Shaping, and Finishing
Last paragraph is not applicable.

Subsection 501-11 Thickness
Last two paragraphs are not applicable.

Subsection 501-15 Method of Measurement
The entire sub-sections are not applicable.

Subsection 501-16 Basis of Payment
The entire sub-section is not applicable.

Construction of Cement Treated Subgrade

The Design-Build Team shall construct the soil cement sub-grade as specified in section 542 of the North Carolina Department of Transportation *2006 Standard Specifications for Roads and Structures*, with the following exceptions:

Subsection 542-4 Equipment
Contractor's equipment will not require Engineer's approval.

Subsection 542-7 Application of Cement
First paragraph is not applicable.

Subsection 542-11 Thickness
Paragraphs 2 and 3 are not applicable.

Subsection 542-16 Method of Measurement
This entire sub-section is not applicable.

Subsection 542-17 Basis of Payment
This entire sub-section is not applicable.

Unconfined Compressive Strength

The Design-Build Team shall allow a minimum of seven days curing before testing for strength.

The lime-stabilized subgrades shall be tested using Dynamic Cone Penetrometer (DCP) in accordance with *Quality Assurance Testing of Lime-Treated Soils Utilizing the Dynamic Cone Penetrometer*, Test Method #1-2005. The Design-Build Team shall adhere to the testing equipment requirements and procedures as outlined in *Dynamic Cone Penetrometer Testing for Subgrade Stability* except that the minimum penetration depth shall be eight inches. Upon request, a copy of the aforementioned documents can be obtained from the NCDOT Geotechnical Engineering Unit. The required unconfined compressive strength for lime shall be 60 psi, which corresponds to a penetration per blow of approximately 0.5 inches of the Dynamic Cone Penetrometer.

For cement-stabilized subgrades, the Design-Build Team shall make field specimens, cure them for seven days and test them in the laboratory. The minimum and maximum required unconfined compressive strength for soil cement shall be 200 psi and 400 psi, respectively.

For both lime and cement stabilized subgrades, one test shall be required for every 400 feet per lane width at random locations selected using random number tables.

Submittals for Review During Construction

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

EMBANKMENT MONITORING

(7-1-95) (Rev 7-18-06) DB2 R75

Settlement Gauges

Settlement plates consisting of wood or metal shall be placed on a level surface near natural ground as shown in the plans developed by the Design-Build Team. Extend the 2½" ø metal pipe by adding pipe sections at threaded couplings as the embankment is progressed. Make sure that the top of the extension section is no less than 1 foot above the embankment surface and no higher than 6 feet. Make the exposed length of pipe conspicuous to avoid chance of damage.

Conduct operations in such a manner that the gauges are not damaged. Compact fill around the gauge pipes and plates to the same density as the surrounding material. Restore or replace any settlement gauge pipe damaged or destroyed due to fault or negligence on the part of the Design-Build Team at no additional cost. No additional payment will be made for compaction of fill around and over the settlement gauges or for interference with the Design-Build Team's operations resulting from settlement gauge installations. Perform installation operations such that the 2½" ø pipe remains plumb.

Provide ASTM A53 type F 2½" ø pipe, threaded with a black finish.

Monitoring

Settlement gauges shall be installed before any fill is placed. Settlement gauge elevations are to be surveyed weekly by the Design-Build Team. The initial elevation of the settlement gauge plate (at the top of the plate) shall be determined at the time of installation along with the embankment elevation. When new sections of pipe are added, elevations shall be recorded at the top of existing pipe and at the top of the new pipe. This is to take into account interim settlement, variable pipe lengths and thread lengths in coupling. Results of settlement gauge readings shall be forwarded to NCDOT Geotechnical Engineering Unit along with the letter by the prequalified geotechnical firm releasing the embankment from the waiting period.

PRICE ADJUSTMENTS - ASPHALT CONCRETE PLANT MIX

(2-6-06) DB6 R26

Revise the *2006 Standard Specifications* as follows:

Page 6-27, Article 609-8 and Page 6-49, 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.

PRICE ADJUSTMENTS FOR ASPHALT BINDER

(03-22-07) DB6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the *2006 Standard Specifications.*

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

The base price index for asphalt binder for plant mix is **$ 310.00** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on June 1, 2007.

TRAINING REQUIREMENTS

(7-1-95) DB1 G136

The Design-Build Team's attention is directed to the Standard Special Provision "Training Special Provision" included elsewhere in this Request for Proposal.

The number of trainees to be trained on this project shall be two.

FIELD OFFICE

Description

This work shall consist of furnishing, erecting, equipping, and maintaining a field office for the exclusive use of Department Engineers and Inspectors at a location on the project approved by the Engineer.

Procedures

The field office and equipment shall remain the property of the Design-Build Team. The field office shall be separated from buildings and trailers used by the Design-Build Team and shall be erected and functional as an initial operation. Failure to have the field office functional when work first begins on the project shall result in withholding payment of the Design-Build Team's monthly progress estimate. The field office shall be operational throughout the duration of the project and shall be removed upon completion and final acceptance of the project.

The field office shall be weatherproof, tightly floored and roofed, constructed with an air space above the ceiling for ventilation, and supported above the ground. The width of the field office shall be at least 10 feet, and the floor-to-ceiling height shall be at least 7 feet 6 inches. The inside walls and ceiling shall be constructed of plywood, masonite, gypsum board, or other suitable materials. The exterior walls, ceiling, and floor shall be insulated.

The field office shall have a floor space of at least 500 square feet and shall be equipped with the following:

Number	Item
1	Double-pedestal desk (approximately 60 by 34 inches), at least 2,000 square inches
1	Plan and drafting table (approximately 30 by 96 inches) with adjustable stool
1	Computer table having a minimum size of 48 by 30 by 29 inches
1	Plan rack for 24 by 36-inch drawings with 6 plan clamps
1	Printing calculator
2	2-drawer fire protection file, 15-inch drawer width, minimum UL rating of Class 350
6	Office chairs with a minimum of two having casters
2	Wastebaskets
1	Pencil sharpener
1	Copy machine (8-inch x 11-inch copies)
1	Telephone
1	Fax Machine
1	Answering machine

Windows and Doors

The field office shall have at least three windows, with blinds, each having an area of at least 540 square inches, capable of being easily opened and secured from the inside and shall have at least two exterior passage doors. Doors shall be at least 30 inches in width and 78 inches in height. Screens for windows and doors shall be provided. Exterior passage door(s) shall be equipped with lock(s), and at least two keys shall be furnished the Engineer or inspector.

Steps

Steps shall conform to the requirements of the State Building Code and shall be maintained free from obstructions.

Storage Facility for Nuclear Gage

The field office shall be furnished with an outside storage facility for the Department's nuclear gage, which shall not be located within 10 feet of any other structure.

Lighting, Heating and Air Conditioning

The field office shall have satisfactory lighting, electrical outlets, heating equipment, an exhaust fan, and an air conditioner connected to an operational power source. At least one of the light fixtures shall be a fluorescent light situated over the plan and drafting table. Electrical current and fuel for heating equipment shall be furnished by the Design-Build Team.

Fire Extinguishers

The Design-Build Team shall furnish and maintain one fire extinguisher for each required exterior passage door. Fire extinguisher(s) may be chemical or dry powder. UL Classification 10-B:C (minimum), suitable for Type A:B:C: fires and shall be mounted and maintained in accordance with OSHA Safety and Health Standards.

Toilets

A toilet conforming to the requirements of the state and local boards of health or other bodies or courts having jurisdiction in the area shall be provided. When separate facilities for men and women are not available, a sign with the words "Rest Room" (with letters at least 1 inch in height) shall be placed over the doorway, and an adequate positive locking system shall be provided on the inside of the doorway. The Design-Build Team shall be responsible for the water and sewer connections or the installation and connection of a water well and septic tank and drain field. These facilities shall conform to all local and state permits.

Utilities

Except for telephone service, the Design-Build Team shall make arrangement for necessary utility connections, maintain utilities, pay utility service fees and bills, and make arrangements for final disconnection of utilities. The Design-Build Team shall also furnish a telephone in each field office and permit the work necessary to install it.

Storage Facility for Test Equipment

The field office shall be provided with a storage facility, separate from the office for storage of test equipment, other than the nuclear gage. The facility shall have a minimum floor space of 64 square feet, shall be weatherproof, tightly floored and roofed, having a tamper resistant key operated lock.

Miscellaneous Items

The field office shall also include the following:

1. A certification that the office is free of asbestos and other hazardous materials

2. A broom, dust pan, mop and bucket, and general cleaning supplies

3. Provide and maintain an all weather parking area for six vehicles, including graveled access to the paved surface

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 RFP and all manuals, documents and standards referred to in the RFP the terms Contractor, Bidder, Design-Builder, Design-Build Team, Team, Firm, Company, and Proposer are synonymous.

Throughout this RFP and all manuals, documents and standards referred to in the RFP, the terms NCDOT, Department, Engineer, and State are synonymous.

Throughout this RFP and all documents referred to in the RFP, references to the Technical Proposal include all Technical Proposal supplemental information that may be submitted in response to a Best and Final Offer RFP.

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 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 Engineer. Submittals will be reviewed within 10 working days (15 days for temporary structures, overhead sign assemblies, MSE walls, FEMA compliance documents 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 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 Design-Build Project, U-3412A, is the extension of Martin Luther King, Jr. Boulevard (SR 1223) on new location from NC 200 (Lancaster Avenue) to SR 1162 (Goldmine Road) in Union County. The total project length is approximately 3 miles. A two-lane roadway on multi-lane right of way is proposed. It is anticipated that approximately 200 feet of right of way will be required to accommodate this facility.

Project services shall include but are not limited to:

- **Design Services** – completion of construction plans, including as-builts
- **Construction Services** – necessary to build and ensure workmanship of the designed facility.
- **Permit Preparation/Application**
- **Construction Engineering Inspection** – provided by NCDOT Division personnel.
- **Right of Way** – acquisition of right of way necessary to construct project.

The EA was approved on February 1, 2005
The FONSI was approved on August 17, 2006

GENERAL SCOPE

The scope of work for this project includes design, construction and management of the project. The design work includes all aspects to construct approximately 3 miles of a two-lane roadway and acquire right of way for a future four-lane divided facility. The designs shall meet all appropriate latest versions of *AASHTO Policy on Geometric Design of Highways and Streets, AASHTO LRFD Bridge Design Specifications, Manual of Uniform Traffic Control Devices,* and all NCDOT design policies that are current as of the Technical and Price Proposal submission date or the Best and Final Offer submission date.

With the exception of utility coordination and relocation, which shall be performed for the future four-lane divided facility, construction shall include, but not be limited to, all necessary clearing, grading, roadway, drainage, structures and erosion and sediment control work items for the proposed two-lane facility and installation of the control of access fence. Construction engineering and management will be the responsibility of the Design-Build Team. Construction shall comply with *2006 NCDOT Standard Specifications for Roadways and Structures* and any special provisions.

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

Roadway Design
Preliminary and Final Bridge Design
Culvert Design
Hydraulics / Drainage Design
Foundation Design for Structures and Roadway
Erosion and Sediment Control Design and Implementation
Subgrade Stabilization
Permit Application
On-Site Mitigation
R/W Utilities, Conflicts and / or Construction
Traffic Control and Pavement Marking Plans
Sign Design
Traffic Management and Signal System Design
Construction
Project Management
Construction Management
Construction Surveying
R/W Acquisition
Public Information
Supplemental Surveys

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

DESIGN AND CONSTRUCTION PERFORMED BY DESIGN-BUILD TEAM

The design work consists of the preparation of all construction documents for constructing approximately 3 miles of a two-lane roadway on multi-lane right of way as outlined in the Scope of Work section of this RFP. The Design-Build Team shall prepare final designs, construction drawings and special provisions.

The Design-Build Team shall acknowledge that project documents furnished by the Department are preliminary and provided solely to assist the Design-Build Team in the development of the project design. The Design-Build Team shall be fully and totally responsible for the accuracy and completeness of all work performed under this contract and shall save the State harmless and shall be fully liable for any additional costs and all claims against the State which may arise due to errors, omissions and negligence of the Design-Build Team in performing the work required by this contract.

There shall be no assignment, subletting or transfer of the interest of the Design-Build Team in any of the work covered by the Contract without the written consent of the State, except that the Design-Build Team may, with prior written notification of such action to the State, sublet property searches and related services without further approval of the State.

The Design-Build Team shall certify all plans, specifications, estimates and engineering data furnished by the Team.

All work by the Design-Build Team shall be performed in a manner satisfactory to the State and in accordance with the established customs, practices, and procedures of the North Carolina Department of Transportation, and in conformity with the standards adopted by the American Association of State Highway Transportation Officials, and approved by the U.S. Secretary of Transportation as provided in Title 23, U.S. Code, Section 109 (b). The decision of the Engineer/State/Department shall control in all questions regarding location, type of design, dimension of design, and similar questions.

Alternate designs, details, or construction practices (such as those employed by other states, but not standard practice in NC) are subject to Department review and will be evaluated on a case by case basis.

The Design-Build Team shall not change team members, subconsultants or subcontractors identified in the Statement of Qualifications (SOQ) or Technical Proposal without written consent of the Engineer. In addition, subconsultants and subcontractors not identified in the SOQ or Technical Proposal shall not perform any work without written consent by the Engineer. Individual offices of the Design-Build Team not identified in the Statement of Qualifications or the Technical Proposal submitted shall not perform any work without written consent by the Engineer. Failure to comply with this requirement may be justification for removing the Team from further consideration for this project and disqualification from submitting on future Design-Build Projects.

The Department shall prequalify all firms for the work they are identified to perform. Design firms and Natural Systems firms are prequalified by the particular office performing the work. If the work shall be performed by an office other than the one that is prequalified, that office shall be prequalified prior to any design submittals.

ETHICS POLICY

Employees employed by the Design-Build Team or employees employed by any subconsultant for the Design-Build Team to provide services for this project shall comply with the 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

Technical and / or Price Proposals that do not adhere to all the requirements noted below may be considered non-responsive and may result in the Department not considering the Design-Build Team for award of the contract or reading their Price Proposal publicly.

GENERAL

Technical and Price Proposals will be accepted until **4:00 P.M. Local Time on Wednesday, August 29, 2007**, at the office of the State Contract Officer:

Mr. Randy A. Garris, PE
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.

TECHNICAL PROPOSAL

Technical Proposals shall be submitted in a sealed package. The outer wrapping shall clearly indicate the following information:

Technical Proposal
Submitted By: (Design-Build Team's Name)
Contract Number C201752
TIP Number U-3412A
Union County
Martin Luther King, Jr. Boulevard from Lancaster Avenue to Goldmine Road

Technical Proposal Requirements

12 Copies
8 ½ inch by 11 inch pages
No fold-out sheets allowed
Printed on one side only
Double-spaced
Font size 12
No more than 50 pages, excluding the 11 inch by 17 inch appropriate plan sheets
24 x 36 inch fold out sheets will only be allowed to present interchange plans

Key Project Team members, identified in the Statement of Qualifications, shall not be modified in the Technical Proposal without written approval of the Department. Any such request should be sent to the attention of Mr. Randy Garris, PE, at the address below:

NCDOT-Project Services Unit
Century Center-Building B
1020 Birch Ridge Drive
Raleigh, NC 27610

PRICE PROPOSAL

Price Proposals shall be submitted in a sealed package. The outer wrapping will clearly indicate the following information:

Price Proposal
Submitted by (Design-Build Team's Name)
Contract Number C201752
TIP Number U-3412A
Union County
Martin Luther King, Jr. Boulevard from Lancaster Avenue to Goldmine Road

The Price Proposal shall be submitted by returning the Request for Proposals with the item sheets completed, and all required signatures and bonds. Failure to execute the required documents may render the proposal non-responsive.

EVALUATIONS

Technical Proposals shall address the technical elements of the design and construction of the project. The Technical Review Committee will consider the understanding of the project, the anticipated problems and the solutions to those problems, in addition to other evaluation criteria identified herein.

The Design-Build Team's Technical Proposal shall be developed using narratives, tables, charts, plots, drawings and sketches as appropriate. The purpose of the Technical Proposal is to document the firm's understanding of the project, demonstrate the Team's capabilities to complete the project, document their selection of appropriate design criteria, and state their approach and schedule for completing all design and construction activities.

The award of the Design-Build contract does not in any way imply that the Department accepts, approves or will allow the details of the Technical Proposal submitted by the Design-Build Team. Decisions based on cost alone will not establish the design standards for the project.

The Technical Proposal will be evaluated in each of the following major categories:

	EVALUATION FACTORS	POINTS
1.	Management	17
2.	Responsiveness to Request for Proposal	28
3.	Long Term Maintenance	8
4.	Schedule and Milestones	20
5.	Innovation	10
6.	Maintenance of Traffic and Safety Plan	12
7.	Oral Interview	5

TECHNICAL PROPOSAL EVALUATION CRITERIA

1. Management – 17 points

Design-Build Team Management

- Describe the Design-Build Team's concept of design management. The proposal shall identify key positions and subordinate organizational units.
- Describe the plan for the coordination of civil / structural, utilities, traffic maintenance, constructability and environmental responsibility.
- Provide a narrative description of the proposed location of the design office(s) and their respective responsibilities.
- Describe how the designs developed by different firms and offices will be integrated.
- Describe how design personnel will interface with the construction personnel.
- Describe the overall strengths of the Design Team and their ability to fulfill the design requirements of this project.

Quality Management

- Describe how the Design-Build Team will comply with the quality control requirements for both design and construction. Specifically, include a narrative describing the Design-Build Team's understanding of the Department's construction quality control philosophy for this project and how the Design-Build Team will implement it.
- The Design-Build Team should detail the number of inspectors they expect the Department to furnish, during various phases, to allow satisfactory progress of project construction.
- The narrative shall include both design and construction activities.

Construction Management

- Describe the Design-Build Team's concept of the project construction management organization and how it interrelates with the other elements of the Design-Build Team's organization for the project.
- Provide a brief narrative description of the Design-Build Team's proposed plan for performing construction on the project. This description shall include at least the following:

    - A construction organization chart for the project, showing the relationships between functions shown on the chart and the functional relationships with subcontractors.
    - The chart shall indicate how the Design-Build Team intends to divide the project into work segments to enable optimum construction performance.
    - Descriptions of those categories of work that the Design-Build Team anticipates will be performed by the Design-Build Team's own direct labor force and those categories that will be performed by subcontractors.
    - The Design-Build Team's plans and procedures to insure timely deliveries of materials to achieve the project schedule.
    - Describe the overall strengths of the construction team and their ability to fulfill the construction and construction management requirements of this project.
    - Describe the Design-Build Team's approach to site access and material staging.

2. Responsiveness to RFP – 28 points

Disadvantaged Business Enterprises (DBE)

- Describe the Design-Build Team's approach to ensuring that DBE will have opportunity to participate in the design of the project.
- DBE firms, to be utilized in the design shall be noted in the Technical Proposal.
- It is expected that DBE design will be at least 5% of the overall design cost.
- The overall approach to ensuring DBE participation in all areas of work also needs to be addressed.

Natural Environmental Responsibility

- Describe the Design-Build Team's approach to addressing environmental concerns within the project boundaries.
- Identify efforts to minimize impacts on wetlands, streams, riparian buffers, and other environmentally sensitive areas.
- Identify innovative approaches to minimize any impacts in environmentally sensitive areas. Describe any temporary impacts and associated minimization approaches.
- Describe the Design-Build Team's understanding of the overall approach to permitting and the Team's comfort level with obtaining the required permits within the allowed timeframe.
- Identify methods of construction in wetlands, streams, and buffers.
- Describe any Notice of Violations (NOV's) or Immediate Corrective Actions (ICA's) the Design-Build Team members have 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 the Design-Build Team's approach to and plan for On-Site Mitigation.
- Describe efforts to minimize excavation within the contaminated sites and associated disturbance to underlying soil.

Design Features

- 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.
- Describe how the design will affect the Department's right-of-way costs.
- Identify types of any retaining walls and / or noise walls if applicable.
- Address the approach to coordinating any necessary efforts with railroad owners.
- Describe how the Design-Build Team's design will accommodate / benefit the future four-lane construction.
- Indicate the Design-Build Team's intent to perform additional grading operations within the proposed right of way to obtain borrow material and detail how it will affect / benefit the future project.

3. Long Term Maintenance – 8 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.
- 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 detailed schedule for the project including both design and construction activities. The schedule shall show the sequence and continuity of operations, as well as the month of delivery of usable segments of the project.

- The schedule shall also include the Design-Build Team's final completion date and, if proposed, their substantial completion date. **These dates shall be clearly indicated on the Project Schedule and labeled "Final Completion Date" and "Substantial Completion Date"**.

5. Innovation – 10 points

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

6. Maintenance of Traffic and Safety Plan – 12 points

Maintenance of Traffic

- Describe any traffic control requirements that will be used for each construction phase.
- Describe how traffic will be maintained as appropriate and describe the Design-Build Team's understanding of any time restrictions noted in the RFP.
- Specifically describe how business, school, and residential access will be maintained, if applicable.
- Address how hauling will be conducted.
- If a temporary portable barrier system will be utilized, provide the type and why it is needed.
- Note the type of material to be installed for the Final Pavement Markings.
- If temporary shoring will be required, provide the type and why it is required.

Safety Plan

- Describe the safety considerations specific to the project.
- Discuss the Design-Build Team's overall approach to safety.

- Describe any proposed improvements that will be made prior to or during construction that will enhance the safety of the work force and/or travelling public both during and after the construction of the project.

7. Oral Interview – 5 points

- The Design-Build Team's Project Management Team shall present a brief introduction of the project team and design / construction approach.
- Introductory comments shall be held to no more than 30 minutes.
- The Department will use this interview to ask specific questions about the Team's Technical Proposal, background, philosophies, and approach to the project.
- Presentation, questions, and answers shall not exceed 90 minutes. No more than 10 people from the Design-Build Team may attend.

The Department will use the information presented in the oral interview to assist in the evaluation of the Technical Proposal.

Additional Warranty and / or Guarantee

- **The Extra Credit for this project shall be a Maximum of 5 Points.**

A twelve-month guarantee as outlined in the *Twelve-Month Guarantee* Project Special Provision is required for this project. However, the Design-Build Team may provide additional warranties and / or guarantees at their discretion. The Design-Build Team may be awarded additional points as "extra credit" to be added to the technical score.

The Design-Build Team may provide warranties and / or guarantees for major components of the project. Examples of major components are pavements, bridge components, and sign structures. If additional warranties and / or guarantees are offered, the Design-Build Team shall indicate in the Technical Proposal the general terms of the warranties and / or guarantees, a list of the items covered, performance parameters, notification and response parameters for corrective action, and evaluation periods. The Department will be responsible for annual inspections of the components covered by all warranties and / or guarantees offered by the Design-Build Team that extend beyond the required Twelve-Month Guarantee. The warranties and / or guarantees shall also define how disputes will be handled. Prior to the first partial payment, the Design-Build Team shall submit a document that provides additional warranty / guarantee specifics in sufficient detail that allows the document to be made a part of the contract through supplemental agreement.

No direct payment will be made for warranties and / or guarantees. Payment will be considered incidental to the lump sum price for the contract.

SELECTION PROCEDURE

There will be a Technical Review Committee (TRC) composed of five or more senior personnel from involved engineering groups that will evaluate the Technical Proposal on the basis of the criteria provided in the Request For Proposal.

The selection of a Design-Build Team will involve both technical quality and price. The Technical Proposals will be presented to the TRC for evaluation. The TRC shall first determine whether the proposals are responsive to the requirements of the Request for Proposals. Each responsive Technical Proposal shall be evaluated based on the rating criteria provided in the Request for Proposals. The TRC will submit an overall consensus Technical Proposal score for each Design-Build Team to the State Contract Officer.

Quality Credit Evaluation Factors for Technical Proposals

Management	17
Responsiveness to Request for Proposal	28
Long Term Maintenance	8
Schedule and Milestones	20
Innovation	10
Maintenance of Traffic and Safety Plan	12
Oral Interview	5
Maximum Score	**100**

The State Contract Officer will use a table based on the maximum quality credit percentage to assign a Quality Credit Percentage to each proposal based on the proposal's overall technical score. The maximum quality credit percentage for this project will be **15**%.

Quality Credit Percentage for Technical Proposals

Technical Score	Quality Credit (%)	Technical Score	Quality Credit (%)
100	15.00	84	7.00
99	14.50	83	6.50
98	14.00	82	6.00
97	13.50	81	5.50
96	13.00	80	5.00
95	12.50	79	4.50
94	12.00	78	4.00
93	11.50	77	3.50
92	11.00	76	3.00
91	10.50	75	2.50
90	10.00	74	2.00
89	9.50	73	1.50
88	9.00	72	1.00
87	8.50	71	0.50
86	8.00	70	0.00
85	7.50		

The maximum Technical Score, including any extra credit given for warranties or guarantees, shall not exceed 100 points in determining the Quality Credit percentage.

If any of the Technical Proposals are considered non-responsive, the State Contract Officer will notify those Design-Build Teams of that fact. The State Contract Officer shall publicly open the

sealed Price Proposals and multiply each Design-Build Team's Price Proposal by the Quality Credit Percentage earned by the Design-Build Team's Technical Proposal to obtain the Quality Value of each Design-Build Team's Technical Proposal. The Quality Value will then be subtracted from each Design-Build Team's Price Proposal to obtain an Adjusted Price based upon Price and Quality combined. Unless all Proposals are rejected or the Department elects to proceed with the Best and Final Offer process, the Department will recommend to the State Transportation Board that the Design-Build Team having the lowest adjusted price be awarded the contract. The cost of the design-build contract will be the amount received as the Price Proposal.

The following table shows an example of the calculations involved in this process.

An Example of Calculating Quality Adjusted Price Ranking

Proposal	Technical Score	Quality Credit (%)	Price Proposal ($)	Quality Value ($)	Adjusted Price ($)
A	95	12.50	3,000,000	375,000	2,625,000
B	90	10.00	2,900,000	290,000	2,610,000
C *	90	10.00	2,800,000	280,000	2,520,000
D	80	5.00	2,700,000	135,000	2,565,000
E	70	0.00	2,600,000	0	2,600,000
* Successful Design-Build Team – Contract Cost $2,520,000					

Opening of Price Proposals

Prior to opening the Price Proposals, the State Contract Officer will provide to each Design-Build Team their technical score in a sealed envelope. The sealed envelope will contain that Team’s score only.

At the time and date specified, the State Contract Officer will open the Price Proposals and calculate the percentage difference between the Price Proposals submitted and the Engineer’s Estimate.

Should all of the Price Proposals be within an acceptable range or below the Engineer’s Estimate the State Contract Officer will proceed to calculate the quality credit and publicly read the Price Proposal, technical score, and adjusted price as outlined in the selection procedure above.

Should any one or more of the Price Proposals be within an acceptable range or below the Engineer’s Estimate and the remaining Price Proposals exceed an acceptable range of the Engineer’s Estimate the State Contract Officer will go to a separate location to calculate the quality credit and determine if the Design-Build Team with the lowest adjusted price is within an acceptable range of the Engineer’s Estimate. Should the Price Proposal of the Design-Build Team with the lowest adjusted price be within an acceptable range of the Engineer’s Estimate or below the Engineer’s Estimate the State Contract Officer will proceed to publicly read the Price Proposals, technical scores, and adjusted prices. Should the Price Proposal of the Design-Build Team with the lowest adjusted price exceed an acceptable range of the Engineer’s Estimate the State Contract Officer will publicly read the Price Proposals only and the Department will then determine whether to proceed to request a Best and Final Offer (BAFO) as outlined below.

Should all Price Proposals submitted exceed an acceptable range of the Engineer's Estimate the State Contract Officer will publicly read the Price Proposals only. The Department will then determine whether to proceed to request a Best and Final Offer (BAFO) as outlined below.

Provided the Department elects to proceed to request a Best and Final Offer (BAFO), at the date and time specified, the State Contract Officer will open the Best and Final Offer Price Proposals and proceed to publicly read all Price Proposals, technical scores and adjusted prices.

Best and Final Offer

In the event initial Price Proposals exceed an acceptable range of the Engineer's Estimate or if the Department feels it is necessary for any reason the Department may choose to make amendments to the details of the RFP and request a Best and Final Offer from all of the previously short-listed teams. Alternately, the Department may choose to redistribute to the short-listed Design-Build Teams another RFP for the project with no amendments to the RFP scope.

After receipt of the redistributed RFP, the Design-Build Team has the option of changing their Technical Proposal details. If the Design-Build Team changes any component of the Technical Proposal, the TRC will review those amended components of the Technical Proposal and reevaluate the scores accordingly. The Design-Build Team shall highlight the changes to bring them to the Department's attention. A revised total score will be calculated, if appropriate, based on these amendments to the Technical Proposal.

Additional oral interviews will not be held. The Design-Build Teams shall submit both a revised Price Proposal and a revised Technical Proposal (if applicable) at the time, place, and date specified in the redistributed RFP. A revised Quality Credit Percentage (if required) and Adjusted Price will be determined. This will constitute the Design-Build Team's Best and Final Offer. Award of the project may be made to the Design-Build Team with the lowest adjusted price on this Best and Final Offer for the project.

Stipend

A stipulated fee of **$40,000** will be awarded to each short-listed Design-Build Team that provides a responsive, but unsuccessful, Design-Build Proposal. If a contract award is not made, all short-listed Design-Build Teams that provide a responsive Design-Build Proposal shall receive the stipulated fee. Once award is made, or a decision is made not to award, unsuccessful Design-Build Teams will be notified of the opportunity to apply for the stipulated fee. If the Design-Build Team accepts the stipulated fee, the Department reserves the right to use any ideas or information contained in the Design-Build Proposals in connection with any contract awarded for the project, or in connection with any subsequent procurement, with no obligation to pay additional compensation to the unsuccessful Design-Build Team. The stipulated fee shall be paid to eligible Design-Build Teams within ninety days after the award of the contract or the decision not to award. Unsuccessful Design-Build Teams may elect to refuse payment of the stipulated fee and retain any rights to its Design-Build Proposal and the ideas and information contained therein.

ROADWAY SCOPE OF WORK (6-28-07)

It should be noted that TIP Project U-3412A, as referenced herein, represents both U-3412A and U-3412B as delineated on the Combined Public Hearing Map.

Project Details

- The Design-Build Team shall design and construct a two-lane facility on new location, unless noted otherwise, that will serve as the extension of Martin Luther King Jr. Boulevard (SR 1223) from NC 200 (Lancaster Highway) to Goldmine Road (SR 1162). Unless otherwise noted herein, the Design-Build Team shall design and construct the –L– Line providing access, widening and improvements as indicated on the Preliminary Plans and Alternate One of the Combined Public Hearing Map provided by the Department. Both the southern and northern project termini shall transition to the existing two-lane paved shoulder typical sections. The limits of –L– Line construction shall be of sufficient length to tie to existing based upon the current NCDOT guidelines and standards. The Design-Build Team shall minimize impacts to the two schools along the –L– Line.

- Martin Luther King Jr. Boulevard (SR 1223) shall be designed as a two-lane facility that meets a 50-mph design speed for a rolling rural major arterial. In tangent sections, the two-lane Martin Luther King Jr. Boulevard (SR 1223) facility shall be designed and constructed with "roof top" cross slopes. The Design-Build Team shall provide all other design criteria in the Technical Proposal for review and acceptance prior to submittal of Preliminary Plans.

- The Design-Build Team shall prepare functional horizontal and vertical designs (line and grade) for a future four-lane divided facility, with a 23-foot median, along Martin Luther King Jr. Boulevard. The Design-Build Team shall design and construct the proposed two-lane facility such that widening for the future four-lane facility shall occur with minimal impacts to the constructed two-lane roadway. The two-lane roadway shall be designed such that the future widening shall occur as much as possible along one side of the constructed facility. The Design-Build Team shall make a determination of, and acquire, the additional right of way required for the future four-lane divided facility. The right of way shall be wide enough to include all cross-sectional elements for the four-lane divided facility throughout the project limits. (Reference the Right of Way Scope of Work.)

- The Design-Build Team shall design and construct at-grade intersections as required by the Preliminary Plans provided by the Department. With the exception of the eastbound left turn lanes on Goldmine Road and NC 84, and the southbound left turn lane on Martin Luther King Jr. Boulevard at the NC 75 "ramp", the turn lane lengths shall meet the current NCDOT standards or the August 4, 2006 Traffic Analysis, whichever is greater. The aforementioned three left turn lanes shall adhere to the current NCDOT standards. The design vehicle for all turning movements shall be a WB-50.

- The Design-Build Team shall design and construct –Y– Lines and cul-de-sacs, providing access, widening and improvements as indicated on the Preliminary Plans and Combined Public Hearing Map provided by the Department. The limits of –Y– Line construction shall be of sufficient length to tie to existing based upon the current NCDOT guidelines and standards.

- Along the -L- Line and all –Y– Lines, the Design-Build Team shall design and construct shoulder widths that adhere to the NCDOT Design Manual, four-foot of which shall be full depth paved shoulders. Functional classifications that have a defined usable shoulder width shall have the appropriately wider overall shoulder width.

- Milled rumble strips will not be required.

- The Design-Build Team shall design and construct bridge rail offsets as indicated in the *NCDOT Roadway Design Manual* or that are equal to the approach roadway paved shoulders, whichever is greater.

- 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 is the sole responsibility of the Design-Build Team. The Department shall not allow any contract time extensions associated with this additional coordination. (Reference Environmental Permits Scope of Work).

- The Design-Build Team shall design and construct resurfacing grades for all roadways impacted by construction, excluding haul roads. 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 permanent cut or fill slope shall be 2:1, unless noted otherwise in this RFP.

- Contingent on obtaining environmental agencies approval, the Design-Build Team may perform grading operations outside jurisdictional areas within the proposed right of way to obtain borrow material. This additional grading shall not in any way be detrimental to, or result in additional expense for, the future widening to a four-lane divided facility.

- The Design-Build Team shall inform the State Alternative Delivery Engineer, in writing, of any proposed changes to the NCDOT preliminary design, previously reviewed submittals or the Design-Build Team's Technical Proposal and obtain approval prior to incorporation. The Design-Build Team shall note in the Technical Proposal any proposed deviations to the Combined Public Hearing Map or the Preliminary Plans provided by the Department. The Design-Build Team shall be responsible for any activities, as deemed necessary by the Department or the FHWA, resulting from changes to the NCDOT preliminary design, including but not limited to, public involvement and NEPA re-evaluation. The Department shall not honor any requests for additional

contract time or compensation for completion of the required activities resulting from changes to the NCDOT preliminary design

- No Design Exceptions shall be allowed for the proposed two-lane facility or the future four-lane facility on Martin Luther King Jr. Boulevard. NCDOT prefers not to have design exceptions for the –Y– Lines. 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 conceptual approval from the State Alternative Delivery Engineer and FHWA. 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 for all parcels, as directed by the Engineer. The Department shall furnish the caps and carsonite posts in accordance with Department policy.

- The Design-Build Team shall submit Structure Recommendations and Design Criteria for NCDOT and FHWA review and acceptance prior to submittal of the Preliminary Plans developed by the Design-Build Team. The Design-Build Team shall develop Structure Recommendations that adhere to the format noted in the March 25, 2003 and September 1, 2004 memos from Mr. Jay Bennett, PE, State Roadway Design Engineer.

- There are no noise walls required on this project as currently designed for the two-lane or future four-lane facility. If the Design-Build Team revises the horizontal and / or vertical alignments such that greater noise impacts are possible on surrounding receptors, the Design-Build Team shall re-analyze and complete a revised noise report, if necessary, for NCDOT and FHWA review and acceptance. The original noise report (and subsequent correspondence between the Department and FHWA) will be provided to the Design-Build Team to assist in determination of anticipated additional noise impact on current receptors due to a design change. If noise walls are required as a result of design deviations, the Design-Build Team shall be responsible for all costs associated with the walls, including, but not limited to, public involvement, geotechnical investigation, shaft and wall designs and construction.

- Martin Luther King Jr. Boulevard (SR 1223) is a partial control of access facility. The Design-Build Team shall bring to the Department's attention any deviations from the proposed control of access shown on the Combined Public Hearing Map provided by the Department. All parcels with 2000 feet of frontage, or less, along Martin Luther King Jr. Boulevard (SR 1223) shall be provided only one access point, unless otherwise approved by the Engineer. For those parcels with less than 2000 feet of frontage along Martin Luther King Jr. Boulevard (SR 1223) and access along another roadway, access may be denied along Martin Luther King Jr. Boulevard (SR 1223). For parcels currently without existing driveways, the Design-Build Team shall only be responsible for providing control of access breaks, not for the construction of driveway stubouts. The Design-Build Team shall be responsible for coordination with and approval by the NCDOT of

the woven wire fence placement and access control break locations. The Design-Build Team shall be responsible for installation of the woven wire fence.

- No Right of Way or easement acquisition will be allowed along the Robert Ney McNeely historic property, which is shown on the NCDOT Preliminary Plans as belonging to Brendan Sheprow. The Design-Build Team shall minimize the tree removal between the proposed –L– line and Robert Ney McNeeely historic property. The Department will design and construct the landscape screen for the Robert Ney McNeely historic property.

- The Design-Build Team shall be responsible for the evaluation of the algebraic difference in rates of cross slope (roll-over) between existing shoulders and roadways and the associated suitability for carrying traffic during construction, if necessary. In the event that the roll-over is found to be unacceptable for the proposed temporary traffic patterns, the Design-Build Team shall be responsible for providing cross slopes that meet design standards and eliminate roll-over concerns.

- Unless noted otherwise in this RFP, all guardrail placement shall be in accordance with the 2006 *NCDOT Standard Drawings* and / or approved details in lieu of standards. The guardrail design shall be submitted for review with the Preliminary Plans submittal.

- Within the vehicle recovery area, the Design-Build Team shall design and construct concrete median barrier in front of all retaining walls and all elements acting as a retaining wall that are subject to vehicular impact.

General

The Design-Build Team shall adhere to the *Roadway Design Guidelines for Design-Build Projects*, which by reference is incorporated herein and made a part of the contract.

The design shall be in accordance with the *2004 AASHTO A Policy on Geometric Design of Highways and Streets, 2006 NCDOT Roadway Standard Drawings, NCDOT 2002 Roadway Design Manual, Roadway Design Policy and Procedure Manual, Roadway Design Guidelines, for Design-Build Projects, 2006 North Carolina Standard Specifications for Roads and Structures, and the AASHTO Roadside Design Guide 2002.*

If the *NCDOT Roadway Design Manual*, the *2004 AASHTO A Policy on Geometric Design of Highways and Streets*, the *2006 Roadway Standard Drawings* and/or any other guidelines, standards or policies have desirable and/or minimum values, the Design-Build Team shall use the desirable values unless otherwise noted elsewhere in this RFP. Similarly, in case of conflicting design parameters in the various resources, the proposed design shall adhere to the most conservative values.

NCDOT Information Supplied

- The NCDOT will provide copies of the EA (Environmental Assessment), FONSI (Finding of No Significant Impact), and the latest list of environmental commitments,

municipal agreements and all pertinent approvals and correspondence. The Design-Build Team shall adhere to all commitments stated in the environmental documents.

- The NCDOT will provide electronic surveys to the Design-Build Team. Any supplemental surveys, including but not limited to additional topography, existing and proposed roadway, structure sites, underground and overhead utilities, existing and proposed drainage, wetland delineation, right of way, parcel names, and deed research and descriptions shall be the responsibility of the Design-Build Team to acquire and process. Known existing utilities have been located and will be included with the survey data. The Design-Build Team will be responsible for confirming the location of the utilities and type of facility. All supplemental SUE work shall be the responsibility of the Design-Build Team.

- The NCDOT will provide Preliminary Plans and Combined Public Hearing Map for U-3412A. The Design-Build Team is cautioned that the preliminary design shown on the Preliminary Plans and Combined Public Hearing Map provided by the Department is provided solely to assist the Design-Build Team in the development of the project design. The Design-Build Team shall be fully and totally responsible for the accuracy and completeness of the project design, including, but not limited to, the use of the NCDOT's design, the use of portions of the NCDOT's design or modifications to the NCDOT's design.

- The NCDOT will provide final pavement designs for U-3412A (Reference the Pavement Management Scope of Work). The Design-Build Team shall be responsible for all temporary pavement designs.

- The NCDOT will provide a Geotechnical Subsurface Investigation for U-3412A (Reference the Geotechnical Scope of Work). The Design-Build Team shall be responsible for any additional geotechnical information, all geotechnical recommendations, and supplemental structural and roadway investigations.

PAVEMENT MANAGEMENT SCOPE OF WORK (06-06-07)

The pavement design for the mainline new location areas shall consist of one of the following alternates:

Alternate 1

3.0" S9.5B
3.0" I19.0B
3.0" B25.0B
Subgrade Stabilization

Alternate 2

3.0" S9.5B
2.5" I19.0B
8.0" ABC
Subgrade Stabilization

Subgrade stabilization shall be to a depth of 8 inches for lime and 7 inches for cement. The type of subgrade stabilization and amount of stabilizing agent shall be determined in accordance with the Cement and Lime Stabilization of Subgrade Soils Project Special Provision found elsewhere in this Request for Proposals. Typically, projects adjacent to this one have been stabilized with lime.

The Design-Build Team shall maintain the same pavement design for the mainline new location areas as identified above. Once the pavement design is selected, the Design-Build Team shall stay with the selected alternate throughout the project. The Design-Build Team shall specify in the Technical Proposal the pavement alternate to be used.

Other pavement designs for this project are listed in the table below:

LINE	Surface	Intermediate	Base	ABC
-L- Line, widening	3.0" S9.5B	4.0" I19.0B	5.0" B25.0B	-----
-Y1- (NC 200, Lancaster Hwy)	3.0" S9.5B	3.0" I19.0B	5.5" B25.0B	-----
-Y2- (NC 75, Waxhaw Hwy)	3.0" S9.5B	3.0" I19.0B	5.5" B25.0B	-----
RAMP @ -Y2-	3.0" S9.5B	3.0" I19.0B	-----	10.0"
-Y5- (NC 84, Weddington Road)	3.0" S9.5B	3.0" I19.0B	4.0" B25.0B	-----
-Y6- (SR 1162, Goldmine Road)	3.0" S9.5B	3.0" I19.0B	4.0" B25.0B	-----
-Y7A- (SR 1158, Corinth Church Rd.)	3.0" S9.5B	-----	5.5" B25.0B	-----

The Design-Build Team shall resurface the existing mainline pavement with a minimum 3.0" S9.5B and 2.5" I19.0B at the following locations:

Sta. 10+00 ± to Sta. 12+25 ± (preliminary roadway plans dated 11/21/06)
Sta. 56+13 ± to Sta. 77+50 ± (preliminary roadway plans dated 11/21/06)
Sta. 111+35 ± to Sta. 138+00 ± (preliminary roadway plans dated 11/21/06)

For all other locations, the Design-Build Team shall resurface the existing mainline pavement with a minimum 3.0" S9.5B. The Design-Build Team shall resurface the existing -Y- Lines

with a minimum pavement depth that equals the full thickness of surface course as provided in the table above (Reference Roadway Scope of Work).

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

For existing gravel and soil driveways, use 8” Incidental Stone
For existing asphalt driveways use 1.5” S9.5B and 8” Incidental Stone
For existing concrete driveways, use 6” jointed concrete reinforced with woven wire mesh

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

The Design-Build Team shall pave from the edge of the proposed paved shoulder to the face of guardrail with 6” of ABC (or 4” B25.0B) and at least one lift of S9.5B surface course. The ABC pavement design shall require prime coat at the normal application rate. In these areas, the Design-Build Team’s installation of ABC or Black Base shall be consistent with the pavement type chosen for the specific roadway.

The Design-Build Team shall be responsible for the design of all temporary pavements and for the 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 are to 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. (Reference the Roadway Scope of Work)

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

Shoulder drains are required for areas of the mainline on new location. The Design-Build Team shall be responsible for designing shoulder drain locations in accordance with the most recent version of the NCDOT’s Pavement Design Procedures and submit the designs to the State Alternative Delivery Engineer for review and acceptance.

STRUCTURES SCOPE OF WORK (06-12-07)

Project Details

The Design Build team shall be responsible for all structures necessary to complete the project. The following structures are anticipated:

- Bridge on –L– over NC 75.
- Bridge on –L– over CSX Railroad.
- Bridge on –L– over Bearskin Creek
- Structure for Dry Fork Creek near Sta. 155+00 +/- –L– (preliminary roadway plans dated 11/21/06)
- One Box Culvert on unnamed tributary near Sta. 68+60 +/- –L– (preliminary roadway plans dated 11/21/06)
- One Box Culvert on Dry Fork Creek near Sta. 16+80 +/- –Y6– (preliminary roadway plans dated 11/21/06)

The proposed bridge on – L – over Bearskin Creek shall be designed at a length sufficient to ensure that the 100-year water surface elevation does not exceed the 1-foot differential allowed in the FEMA detailed study. (Reference the Hydraulics Scope of Work).

The existing bridge at Sta. 16+80 –Y6– shall be removed.

Size of box culverts to be determined by the Design-Build Team.

The minimum vertical clearance required for bridge(s) over NC75 is 15'-6". The minimum vertical clearance over the railroad is 23'-0". NCDOT requires a minimum Horizontal Clearance from the centerline of track of 25'-0" to any substructure unit. Crashwalls on interior bents shall not be permitted.

All bridge barrier rails shall be jersey shaped barriers per Standard Drawing CBR1.

Shoulder piers for grade separations shall be avoided when possible. MSE walls in front of end bents are allowed provided ample room remains underneath the bridge for clear recovery on the proposed roadway or (2) future widening to six lanes, whichever governs.

A live load rating chart for girders will be required on the bridge plans.

Conduit for fiber communications will be required on bridges carrying MLK Blvd. See Signals scope of work for conduit location and details.

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.

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

Design shall be in accordance with AASHTO LRFD Bridge Design Specifications, NCDOT Structure Design Manual (including policy memos), NCDOT Bridge Policy Manual, CSX Transportation's *Public Project Information Guidelines for Bridge Design*, *CSX Design and Construction Standard Specifications* and *AREMA*.

Construction and Materials shall be in accordance with 2006 NCDOT Standard Specifications For Roads and Structures, NCDOT Structure Design Unit Project Special Provisions, NCDOT Structure Design Unit Standard Drawings, CSX Transportation Special Provisions and State-Railroad Agreements.

Alternate designs, details, or construction practices (such as those employed by other states, but not standard practice in NC) are subject to Department review and will be evaluated on a case by case basis.

Monotube or cantilever sign support structures will not be allowed.

Attachment of sign structures to bridges will not be allowed.

Any required bridge attachments (e.g. ITS conduit, water lines) will not be allowed in the overhang of grade separations. Casting of conduit in the bridge deck or outside railing will not be allowed.

Capacity of overhang falsework hangers placed at the edge of the thin top flange concrete girders (such as bulb tee girders) is limited to 75% of the manufacturer's safe working load. Use of Meadow Burke HF-42 and HF-43 hangers is not allowed.

When using bridge deck slab overhang falsework systems that transmit torsion to the exterior girders bracing will be required. Bracing shall limit the magnitude of torsional stresses (concrete girders) or lateral flange bending (steel girders) in the exterior girders caused by falsework system loads and limit the magnitude of stresses in the component elements, welds, or connections.

The sizing spacing and details of the bracing elements shall be sufficient to meet the design requirements stated below. Design calculations and working drawings submitted for review should consider the horizontal force effects of the falsework on the girder and on the bracing elements themselves.

For concrete girders, torsional stresses in girders resulting from falsework and other dead loads shall not exceed one quarter of the cracking torque. Torsional stresses due to all dead loads and live loads shall not exceed one half of the cracking torque. Cracking torque of prestressed concrete girders shall be computed in accordance with ACI 318-02, Section 11.6.1. For steel girders, lateral flange bending stresses shall not exceed 2000 psi.

Bracing shall be installed prior to any application of loads from screed equipment or work platform bridges. Bracing shall be removed after the deck is cured.

Railroad Overhead Design and Coordination:

CSX has indicated the need for 1 additional future track north of the existing track (15’ center to center of tracks) and a maintenance roadway on the south side of the existing track (15’ clear from center of existing track).

There are approximately 16 trains per day operating at a maximum speed of 40 miles per hour at this location (Milepost SF-307.72)

Only CSX may grant exceptions to their guidelines or *AREMA.*

Reference Railroad Coordination Scope of Work.

RAILROAD COORDINATION SCOPE OF WORK (06-12-07)

Unless a distinction is made, it is the Department's intention that whenever this scope of work references "Railroad" this would be CSX Transportation. 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) *CSX Public Project Information dated 12/7/2005*
(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) *CSX Transportation Special Provisions for Protection of Railway Interest*
(I) *CSX Design and Construction Standard Specifications*

II. The Design-Build Team shall be responsible for verifying the number of trains per day and maximum speed allowed.

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. The Design-Build Team shall not commence any work on the Railroad right of way until all agreements have been executed, insurance acquired and approved, and all construction plans have been approved by the Railroad. The Design-Build Team shall make the necessary arrangements with the Railroad that are required to protect against property damage that may result in loss of service, expense, or loss of life. The Design-Build Team shall be responsible for all damage to the Railroad resulting from their operations and the Railroad may issue a stop order until all dangerous situations are remedied. The

Design-Build Team shall be responsible for providing Railroad Protective Liability Insurance for Bodily Injury Liability, Property Damage Liability, and Physical Damage to Property in the amount of **$5,000,000** Per Occurrence for freight rail and / or **$10,000,000** for passenger rail. The Design-Build Team shall obtain **$5,000,000** in Aggregate coverage for freight and / or **$10,000,000** for passenger Per Annual. The Design-Build Team shall be responsible for verifying and obtaining the appropriate insurance and / or coverage with the Railroad. Other insurance requirements, including those for all subcontractors, is detailed in the standard CSX Transportation Railroad Agreement provided to the short-listed teams.

II. The Design-Build Team shall be required to use the Standard NCDOT Cost Agreement and Insurance Special Provisions forms, that will be supplied by the NCDOT Utility Unit Railroad Section upon request.

III. After negotiations between the Design-Build Team and the Railroad have been finalized, the Design-Build Team shall submit executed agreements and plans to NCDOT's State Bridge Design Engineer for plan approval and final agreement execution by NCDOT, prior to authorizing railroad work. After approval by NCDOT, one copy of the executed agreement will be returned to the Design-Build Team and one copy forwarded to the NCDOT's Resident Engineer, prior to any construction work by the Design-Build Team or Railroad.

Coordination with CSX Transportation:

The Design-Build Team shall coordinate with Shelby L. Stevenson, Principal Engineer - Public Projects, CSX Transportation, 500 Water Street (J-301), Jacksonville, Florida 32202, (904) 359-1177. Contact with the railroad shall be made through CSX Transportation's General Engineering Consultant (GEC) , DMJM HARRIS. Contact at DMJM HARRIS is Jeffery A. Konrad, PE, The Atlantic Building, 260 South Broad Street, Suite 1500, Philadelphia, PA 19102, (215) 735-0832 to obtain plan approval and a partially executed legal agreement with CSX Transportation and the Department of Transportation as the parties in the agreement for overhead bridges crossing CSX Transportation in the vicinity of Milepost SF-307.72. The Department will review the agreement prior to submittal to the Railroad. The Department will execute and distribute the Agreement within 14 calendar days of receipt. The agreement shall include necessary Force Account items such as preliminary engineering, construction engineering, flagging, and signal and communication lines. The Department will be responsible for payment of the Railroad Force Account work; however, the Design-Build Team shall reimburse the Department for these costs including any Force Account estimate overruns. This reimbursement shall be incidental to the lump sum price bid for the project. Upon request, the Department will provide copies of the railroad's invoices to the Design-Build Team for review. The Design-Build Team shall have ten (10) days to provide comments to the Department, after which the Department will pay the invoice. The Design-Build Team shall be responsible for maintaining records to verify the invoice items.

The preliminary plan submittal to the Railroad shall include bridge plans, the Railroad's "Overhead Bridge Crossing Data," appropriate roadway plan sheets showing impacts to the Railroad's right of way, erosion control plans, and drainage calculations for any drainage on or across the Railroad's right of way. A minimum of five **(5)** half-size sets of preliminary plans and data shall be submitted to DMJM HARRIS on behalf of CSX Transportation through the NCDOT Alternative Delivery Systems Engineer. If the Railroad requires RFC's and / or final plans, then **five (5)** half size sets shall be provided to the Railroad. If any re-submittals of plans or any additional information is required, **five (5)** half size sets shall be submitted to the Railroad. Working Drawings affecting the Railroad's operations and / or right of way shall follow submittal process as outlined in the *Standard Specifications for Roads and Structures* or Special Provisions.

GEOTECHNICAL ENGINEERING SCOPE OF WORK (06-29-07)

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, overhead sign structure foundations, overhead sign structures and temporary structures.

Prior to any geotechnical design submittal, the foundation design recommendation reports shall (1) be sealed by a Professional Engineer registered in the State of North Carolina who has completed a minimum of three geotechnical design projects of scope and complexity similar to that anticipated for this project using the load and resistance factor design (LRFD) method and in accordance with the AASHTO LRFD Bridge Design Specifications or (2) undergo an independent peer review by a Professional Engineer with the aforementioned experience. The Design-Build Team shall submit documentation verifying the Engineer of Record's or Peer's experience in LRFD including the project owner's name and current contact information with descriptions of each project designed by the LRFD method.

The prequalified geotechnical firm shall also determine if additional subsurface information, other than that required and noted elsewhere in this RFP, is required based upon the subsurface information provided by NCDOT and the final roadway and structure designs. If a determination is made that additional subsurface information is required; the Design-Build Team shall perform all additional subsurface investigation and laboratory testing in accordance with the current NCDOT *Geotechnical Unit Guidelines and Procedure Manual*.

A minimum of 2 standard penetration test (SPT) / rock core borings shall be required per bent for all bridges. All borings shall be located within 25 feet of the proposed bent location. All borings shall be deep enough to show a complete soil and rock profile to the depth of the foundation-supporting layer. The Design-Build Team shall be responsible for obtaining the borings noted above for all bents where subsurface information is not sufficient, unless the prequalified geotechnical firm submits documented justification that the subsurface investigation provided by the NCDOT is adequate for design purposes and the justification is acceptable to the Department. The Design-Build Team shall present any proposed deviation from these requirements in the Technical Proposal. Any deviations to the requirements noted above shall require acceptance from the NCDOT Geotechnical Unit prior to construction.

The maximum spacing between borings for retaining walls shall be 200 feet, 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.

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

II. DESCRIPTION OF WORK:

The Design-Build Team shall design foundations, embankments, slopes, retaining walls, sound barrier foundations and temporary structures in accordance with the current AASHTO *LRFD Bridge Design Specifications*, NCDOT *Structure Design Manual*, NCDOT *Roadway Design Manual* and the Geotechnical Engineering Unit *Roadway and Structure Foundation Guidelines*, unless otherwise noted in this scope of work.

A. Structure Foundations

Key in spread footings of structures crossing streams a minimum of full depth below the 100-year design scour elevation and provide scour protection in accordance with scour protection detail in the *NCDOT Structure Design Manual*.

Obtain acceptance from the NCDOT Hydraulics Unit for any longitudinally battered piles for pile bents of structures crossing streams or wetlands. Permanent steel casings shall be required for drilled piers that are constructed in six inches or more of water. Permanent casings shall be required where drilled piers are constructed on stream banks that are subject to flooding.

When the weathered rock or rock elevation is below the 100-year hydraulic scour elevation, the 100-year and 500-year design scour elevations are equal to the 100-year and 500-year hydraulic scour elevations from the structure survey report approved by the NCDOT Hydraulics Unit. When the weathered rock or rock elevation is above the 100-year hydraulic scour elevation, the 100-year design scour elevation may be considered equal to the top of the weathered rock or rock elevation, whichever is higher, and the 500-year design scour elevation may be set two feet below the 100-year design scour 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) shall be 1.5:1 (H:V) or flatter. End bent fill slopes with heights greater than 35 feet or end bent cut slopes shall be 2:1 or flatter. Extend end bent slope protection from the toe of slope to berm and to 1.75:1 (H:V) slope for 1.5:1 fill slopes or to the limits of the superstructure for cut slopes and for 2:1 or flatter fill slopes.

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”.

B. Roadway Foundations

Design all unreinforced fill slopes for a slope of 2:1 (H:V) or flatter except bridge end bent slopes (see Section A). In order to eliminate “sliver fills” that are difficult to tie into existing fill slopes, the Design-Build Team can use a slightly steeper slope at the top of fill, provided the design meets the minimum stability requirement for the new and overall slope and utilizes permanent erosion control measures that are acceptable to the Department. All soil cut slopes shall be 2:1

(H:V) or flatter, unless the slopes are designed with an adequate reinforcement to provide the required stability. Submit detailed design calculations and slope stability analysis for any cut or fill slope steeper than 2:1 (H:V) to the NCDOT Geotechnical Engineering Unit for review and acceptance prior to construction.

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 shall be required for shaft embedment depths.

Design and construct bridge approach embankments such that no more than 2" of settlement will occur after the waiting periods end. 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 Improvement Methods FHWA publication NHI-04-001 or Geosynthetic Design and Construction Guidelines FHWA-HI-95-038.* Embankment settlement monitoring in accordance with the Embankment Monitoring Special Provision and the Standard Settlement Plate Detail shall be required when a waiting period of more than one month is recommended in the foundation design recommendation reports. Install and monitor a minimum of two settlement plates at each bridge end bent location and at locations no more than 200 feet apart. Settlement gauges, surveyed stakes on finished subgrade or other methods may be used instead of settlement plates, but alternatives to settlement plates shall be submitted to the NCDOT Geotechnical Engineering Unit, via the State Alternative Delivery Engineer, for review and acceptance prior to installation.

Reinforced bridge approach fills in accordance with the NCDOT standard shall be required for end bents on all bridges.

C. Permanent Retaining Wall Structures

Extensible reinforcement shall not be allowed for any permanent retaining walls. Modular block walls shall not be allowed for critical wall structures. Critical wall structures include walls supporting or adjacent to interstate highways, bridge abutments, wing walls and walls over 18 feet in height.

Design and construct permanent retaining walls, with the exception of gravity walls and cast-in-place cantilever walls, in accordance with the applicable NCDOT *Project Special Provisions*. For each retaining wall, with the exception of gravity walls, submit a wall layout and design. The wall layout submittal shall include the following:

- Wall envelope with top of wall, bottom of wall, existing ground and finished grade elevations at incremental stations.
- Wall alignment with stations and offsets.
- Typical sections showing top and bottom of wall, drainage, embedment, slopes, barriers, fences, etc.
- Calculations for bearing capacity, global stability and settlement.
- Details of conflicts with utilities and drainage structures.

- Roadway plan sheets showing the wall (half size).
- Roadway cross sections showing the wall (half size).
- Traffic control plans showing the wall (half size).

Gravity walls shall be designed and constructed in accordance with the NCDOT Structure Standard Drawings and the NCDOT 2006 *Standard Specifications*. Gravity walls do not require any submittals and shall be identified in the roadway foundation design recommendation report. Cast-in-place cantilever walls shall be designed and constructed in accordance with the NCDOT 2006 *Standard Specifications.*

Locate retaining walls at toe of slopes unless restricted by right of way limits. The Design-Build Team shall submit global stability calculations for slopes at retaining walls and obtain acceptance from the NCDOT Geotechnical Engineering Unit prior to construction. Any slopes behind walls shall be 2:1 (H:V) or flatter.

Drainage over the top of retaining walls shall not be allowed. Sags in the top of walls shall be avoided. Direct runoff above and below walls away from walls, if possible, or collect runoff at the walls and transmit it away. Curb and gutter or cast-in-place single faced barrier with paving up to the wall shall be required when runoff can not be directed away from the back or front of the wall. A paved concrete ditch with a minimum depth of six inches shall be required at the top of walls when slopes steeper than 6:1 (H:V) intersect the back of walls.

Precast or cast-in-place coping shall be required for walls without a cast-in-place face with the exception of when a barrier is integrated into the top of the wall. Extend coping or cast-in-place face a minimum of six inches above where the finished or existing grade intersects the back of the wall. A fence shall be required on top of the facing, coping or barrier or immediately behind the wall, if there is no slope behind the wall.

Design end bents with abutment retaining walls for deep foundations only. Wing walls independent of abutment retaining walls shall be required unless approved otherwise by the NCDOT. When using abutment retaining walls, design and construct the end bent and the wall independent of each other. When using piles and abutment retaining walls, the end bent foundation must include brace piles battered toward the wall, or be supported on either a single row of plumb piles with MSE reinforcement strapped to the back of the cap, on a double row of plumb piles or on drilled piers. If fill is required around piles or drilled piers, install foundations before placing any fill.

D. Temporary Structures

Design temporary retaining structures, which include earth retaining structures and cofferdams, in accordance with current allowable stress design AASHTO *Guide Design Specifications for Bridge Temporary Works* and the NCDOT Temporary Shoring Special Provision. The only submittal required to use the standard sheeting design is the “Standard Shoring Selection Form”.

Design and construct temporary retaining walls in accordance with the applicable NCDOT *Project Special Provision*. Place the barrier at the top of wall based on the detail from the Work Zone Traffic Control Unit. If anchored barrier is required, then anchor the barrier in accordance with Roadway Standard Detail No. 1170.01.

III. CONSTRUCTION REQUIREMENTS:

All construction and materials shall be in accordance with the NCDOT 2006 *Standard Specifications* and current NCDOT *Project Special Provisions* unless otherwise stated in this scope of work. The Design-Build Team shall be responsible for investigating, proposing and incorporating remedial measures for any construction problems related to foundations, retaining walls, subgrades, settlement, slopes, and construction vibrations. The NCDOT Geotechnical Engineering Unit shall review and accept these proposals.

The Design-Build Team shall be responsible for any damage or claim caused by construction, including damage caused by vibration (see Article 107-15 *NCDOT Standard Specifications for Roads and Structures*). The Design-Build Team shall be responsible for deciding what, if any, pre and post-construction monitoring and inventories need to be conducted to satisfy their liability concerns. Any monitoring and inventory work shall be performed by a qualified private engineering firm experienced in the effects of construction on existing structures.

The prequalified geotechnical firm that did the foundation designs must review the embankment settlement monitoring data a minimum of once a month and issue a letter prior to releasing the embankment from the waiting period. Waiting periods may not be ended until less than 0.1 inches of settlement is measured over a period of four weeks. Submit the settlement monitoring data to the Department prior to issuing the release letter.

The prequalified geotechnical firm that did the foundation designs shall review and approve all pile driving hammers and drilled pier construction sequences. The NCDOT Geotechnical Engineering Unit shall review these approvals prior to beginning construction.

Perform hammer approvals with GRLWEAP Version 2002 or later and in accordance with the *NCDOT 2006 Standard Specifications*. Provide pile driving inspection charts or tables for all approved pile hammers.

Perform Pile Driving Analyzer (PDA) testing to develop pile driving inspection charts or tables. Provide PDA testing, and pile driving inspection charts or tables by a NCDOT pre-approved company. Meet the guidelines for NCDOT PDA reports from the Geotechnical Engineering Testing Contract for PDA test reports. To obtain a list of pre-approved Geotechnical Engineering Testing Contract companies to perform PDA testing and guidelines for PDA test report, contact the Geotechnical Engineering Unit Contract Administrator at 919-250-4088. PDA Testing Engineer must be a professional engineer registered in the State of North Carolina. Submit a complete PDA report sealed by the professional engineer who performed the test to the foundation design firm. The

foundation design firm shall develop pile driving inspection charts or tables for acceptance by the Geotechnical Engineering Unit prior to pile installation.

For each bridge that includes driven pile bents or driven pile footings, perform a minimum of one (1) PDA test (dual bridges are counted as one structure) for each pile size, pile type and pile driving hammer combination. If the bridge length with driven pile foundation is longer than 600 feet, perform additional PDA test at every 600 feet interval. Provide additional PDA testing for any revisions to pile type, size or hammer previously approved. The locations of PDA test piles must be approved by the Geotechnical Engineering Unit prior to any PDA test. Test piles in accordance with ASTM D 4945-89, Standard Test Method for High Strain Dynamic Testing of Piles and this scope of work.

Use current NCDOT inspection forms for drilled piers available on the Geotechnical Engineering Unit's webpage. The Department will use the Shaft Inspection Device (SID) in accordance with the Drilled Piers Special Provision to inspect all drilled pier excavations that are not hand cleaned. Install Crosshole Sonic Logging (CSL) tubes in all drilled piers. CSL testing shall be required for up to 25% of the drilled piers for each bridge. If a CSL test identifies defect in the drilled pier, then CSL testing more than 25% of drilled piers may be required at the discretion of the Department. The Department will determine which piers will be CSL tested. The Geotechnical Engineering Unit will determine if the CSL results are acceptable.

Provide field quality control for all bridge foundations, retaining wall and sound barrier foundations including verifying subsurface conditions for drilled piers and bearing for shallow foundations.

The prequalified geotechnical firm that did the original design shall perform any changes to the foundation designs. All changes shall be based upon additional information, subsurface investigation and / or testing. Drilled pier tip elevations shall not be changed during construction unless the prequalified geotechnical firm that did the bridge foundation design redesigns the drilled pier from an SPT / rock core boring in accordance with ASTM standards at the subject pier location or observations of the drilled pier excavation. If a drilled pier is designed based on a boring, do not drill a boring inside an open drilled pier excavation. Locate the boring within three pier diameters of the center of the subject pier and drill to a depth of two pier diameters below the revised tip elevation. If a drilled pier is redesigned based upon observations of the drilled pier excavation, the geotechnical engineer of record shall be present during the excavation to determine the actual subsurface conditions. Send copies of revised designs including additional subsurface information, calculations and any other supporting documentation sealed by a professional engineer registered in the State of North Carolina to the State Alternative Delivery Engineer for review by the NCDOT Geotechnical Engineering Unit. Also, send copies of any inspection forms related to foundations, settlement or retaining walls to the State Alternative Delivery Engineer for review by the Geotechnical Engineering Unit.

Conduct proofrolling in accordance with Section 260 of the NCDOT 2006 *Standard Specifications for Roads and Structures.*

ROADWAY AND STRUCTURE FOUNDATION GUIDELINES

The Design-Build Team shall be responsible for, but not limited to, addressing, and incorporating if necessary, the following items for the roadway and structure foundation design of the project.

1. Analyze the stability of embankments and utilize recognized geotechnical engineering designs and construction methods approved by NCDOT to ensure embankment stability.
2. Analyze embankment settlement and if necessary, recommend and incorporate mitigation through the use of undercut or soil improvement methods such as surcharges, waiting periods, wick drains, column supported embankments, etc.
3. Address, and incorporate if needed, the following regarding embankment problems:
    a. The feasibility of using geo-textiles to achieve stability, reduce excavation of soft soils and reduce the effect of settlement on the roadway.
    b. The need for settlement gages, slope inclinometers and other embankment monitoring devices and their placement and location.
4. Determine the feasibility, recommend and incorporate types of retaining walls and / or shoring for permanent and / or temporary situations. Design all retaining walls in accordance with the current AASHTO *LRFD Bridge Design Specifications* and applicable FHWA manuals. If the AASHTO LRFD Bridge Design Specifications do not provide applicable load and/or resistance factors for certain retaining wall types, then design these walls in accordance with the latest AASHTO Standard Specification for Highway Bridges allowable strength design methods.
5. Determine amount of, recommend and incorporate methods to mitigate any differential settlement problems at locations of culverts and utilities.
6. Analyze the stability of cut sections. Utilize recognized geotechnical engineering designs and construction methods to ensure cut slope stability.
7. Analyze the stability of roadway approaches (to the distance from the bridge that affects the stability and design of the bridge foundations) and particularly the end slopes under the bridge, utilizing recognized geotechnical engineering designs and construction methods to ensure stability.
8. Recommend pile, drilled pier or spread footing foundations for structures with regard to bearing capacity, lateral stability, buckling analysis for piles, scour, settlement and constructability.
9. Recommend maximum bearing pressure for spread footings considering both strength limit and service limit states, and effects of adjacent foundations, water table, scour, etc. The scour critical elevation for a spread footing shall be at the bottom of footing elevation.
10. Address the following regarding pile and / or drilled pier foundations:
    a. Method of support – skin friction, tip bearing or combination of both.
    b. Tip elevations no higher than and estimated pile lengths.
    c. Ultimate axial load.
    d. Settlement.

e. Number and location of test piles or piers and dynamic and / or static load testing.
f. Wave equation analysis using an appropriately chosen pile hammer and cushion material.
g. Necessity of using steel pile tips for concrete piles or pile points for steel piles.
h. Effects of vibration on adjacent construction or existing structures.
i. Corrosion effects of various soils and water (See Structure Design Unit's Policy Manual).
j. Downdrag on piles or piers.
k. Lateral stability and horizontal deflections.
l. Design scour and scour critical elevations. The scour critical elevation for drilled piers and pile foundations shall be the 500-year design scour elevation.
m. Point of fixity.
n. Lateral squeeze for piles.

11. Include in the geotechnical recommendations report a summary table of the bridge foundation recommendations including the following:

    a. State project number, TIP number, county, description and bridge station.
    b. Bent (work point) stations, types of foundations, allowable loads, bottom of cap or footing elevations, estimated pile lengths and tip elevations.

12. Address the following items, when applicable, as notes on plans or comments and attach to the summary table:

    a. All appropriate notes on plans (See Structure Design Unit's Standard Foundation Notes on Plans).
    b. End slope and extent of slope protection.
    c. Waiting periods for approach slab construction or end bent construction.
    d. Battered piles.
    e. Point of fixity elevations.
    f. Design and scour critical elevations.
    g. Tip elevations no higher than.
    h. Steel pile points for steel piles or steel pile tips for concrete piles.
    i. Number and location of test piles or piers, load tests, dynamic and/or static testing.
    j. Required rock socket for drilled piers.
    k. Need for permanent steel casing including casing tip elevations, SPT, SID Inspection, CSL and slurry use in accordance with the Drilled Piers Special Provision.
    l. Range of estimated hammer energies for concrete and pipe piles.

Address any other items affecting the foundation design on the summary sheets and include all final recommendations on the summary sheets.

GEOENVIRONMENTAL SCOPE OF WORK (06-12-2007)

I. DEFINITION

For the purpose of this scope of work, contamination / contaminants are defined as any substance, which when discharged in any quantity may present an imminent and substantial danger to the public health or welfare. Petroleum is defined as any oil of any kind and in any form, including, but not limited to, crude oil, diesel fuel, fuel oil, gasoline, lubrication oil, oil refuse, oil mixed with other waste, oil sludge, petroleum related products or by-products, and all other liquid hydrocarbons, regardless of specific gravity, whether singly or in combination with other substances.

II. DESCRIPTION OF WORK

The Department identified one Area of Known Contamination and four Areas of Potential Contamination within or within close proximity to the project limits. The areas, shown on the Geoenvironmental Plan Sheets 1 –4 provided by the Department, occur at four sites including two retail gas stations, a private residence, and an engine rebuilding shop as follows:

1) Parkgrove Grocery, Ronald W. Laney Property, Station 14+40 to 18+00 –Y1- (NC 200), Left. Property contains the Area of Known Contamination and an Area of Potential Contamination area.
2) SavWay #20, Petro Associates Gaffney LLC Property, Station 18+50 to 21+60 – Y1- (NC 200), Left. Property contains an Area of Potential Contamination.
3) Victor N. Shaw Residence, Station 20+00 to 21+00 –L1- (Martin Luther King Jr. Blvd.), Left. Property contains an Area of Potential Contamination.
4) Parks Nash Engine Rebuilds, P. Howard Nash Jr. Property, -Y4- (Newtown Road), Left. Property contains an Area of Potential Contamination.

Contaminated materials need only be removed from these sites if excavation is necessary. Therefore, the Design-Build Team shall avoid or minimize excavation within the limits of the areas defined above. If the Design-Build Team's design is such that excavation is required in the Area of Known Contamination, the extent of that anticipated excavation shall be noted in the Technical Proposal. Removal of contaminated material from the Area of Known Contamination will be handled in accordance with Article 107-26 of the Standard Specifications. If the Design-Build Team's design is such that excavation extends into one or more of the Areas of Potential Contamination, then the Design-Build Team shall be fully responsible for the removal and disposal of all encountered USTs and contaminated material at these sites at no additional cost to the Department and in accordance with Section V below.

Parkgrove Grocery

This active gas station has five registered USTs ranging in size from 1,000 to 8,000 gallons. Soil contamination has been confirmed in the existing right of way along NC

200 (-Y1-) and is documented in the Preliminary Site Assessment Report prepared by S&ME, Inc. and GeoEnvironmental Plan Sheet 1.

SavWay #20

This active gas station has four registered USTs ranging in size from 4,000 to 14,000 gallons. No soil contamination was found in the areas tested as documented in the enclosed Preliminary Site Assessment Report prepared by S&ME, Inc. An area of potential contamination is shown on GeoEnvironmental Plan Sheet 2.

Victor N. Shaw Residence

This dwelling has three known heating oil USTs currently located outside the area of impact shown on the NCDOT Preliminary Plans. The known USTs and area of potential contamination are shown on the GeoEnvironmental Plan Sheet 3.

Parks Nash Engine Rebuilds

Business practices at this engine rebuilding facility may have resulted in contaminated soil and/or ground water. This facility is currently located outside the project limits shown on the NCDOT Preliminary Plans. An area of potential contamination is shown on GeoEnvironmental Plan Sheet 4.

Right of Way Acquisition:

The Design-Build Team shall adhere to all Right of Way Branch procedures regarding the acquisition of contaminated property and any Right of Way Acquisition Recommendations provided by the Department. If the Design-Build Team's design is such that the known USTs or the Areas of Potential Contamination on the project will be impacted, the Department shall require 60 days from written notification from the Design-Build Team to investigate the area and provide right of way recommendations. The Design-Build Team shall notify the State Alternative Delivery Engineer in writing of any underground heating oil tanks found during property appraisals and acquire the property as permanent easement. The Department shall require 30 days from the time the structures are razed to remove the heating oil tanks found during property appraisals.

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 petroleum 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. In addition, the Design-Build Team shall 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.

III. INFORMATION PROVIDED BY NCDOT:

- Preliminary Site Assessment Report for Robert W. Laney Property
- Preliminary Site Assessment Report for Petro Associates Gaffney LLC Property
- GeoEnvironmental Plan Sheets – Nos. 1, 2, 3, and 4

** NOTE ** Removed Right of Way Recommendations

IV. UNKNOWN CONTAMINATED SITES:

The Design-Build Team shall immediately notify the Department when the Design-Build Team's operations encounter or expose any abnormal condition which may indicate the presence of a hazardous, contaminated, and / or toxic material not previously identified in the Preliminary Environmental Site Assessments. Unknown contaminated sites will be addressed in accordance with Article 107-26 of the Standard Specifications. If the Engineer elects to have the Design-Build Team remove and dispose of contaminated material within an unknown contaminated site, the removal and disposal of this material shall be performed in accordance with Article 107-26 and Section V below.

V. DESIGN-BUILD TEAM REMOVAL OF CONTAMINATED SOILS:

This Section V applies only if removal of contaminated material is to be performed by the Design-Build Team.

The Design-Build Team shall employ a fully experienced and qualified geoenvironmental firm to dispose of contaminated soil and groundwater and any other contaminants removed from within the project right of way during construction activities. The Design-Build Team shall furnish and deliver to the Department three (3) reports accompanied by all documents necessary to meet the laws, rules and regulations of the environmental regulatory agency(ies) having jurisdiction over each respective site from which waste materials are removed. Reports documenting the Design-Build Team's work and laboratory analyses of collected samples shall be submitted to the Department within 30 calendar days after its completion. If the Design-Build Team removes any underground storage tanks, a UST Closure Report shall be presented to the Department within twenty-five (25) calendar days after receipt of laboratory data. The Design-Build Team shall not submit any reports directly to the regulatory agencies.

Contaminated material removed during construction shall be transported to a waste treatment / disposal facility that is fully approved and permitted by all applicable environmental regulatory agencies to receive, treat and / or dispose of the material. Contaminated material is only to be removed to the extent necessary to complete a task or as directed by the Engineer. Remaining contamination shall be left in place and documented in reports provided to the Department. It shall be the Design-Build Team's

responsibility to locate such a facility. Departmental approval of the specific facility identified for use by the Design-Build Team shall occur prior to removal of any materials from the project limits. The Design-Build Team shall provide to the Department all transportation manifests and certificates of acceptance from the receiving disposal facility on a weekly basis. The Design-Build Team shall present all disposal manifests to the Engineer within twenty (20) days of completion of the excavation. The Design-Build Team shall provide to the Department a Certificate of Remediation from the disposing / treating facility within sixty (60) days after removal of the materials from the project site unless alternate arrangements are approved in writing by the Department. The Department will be the regulatory generator of all waste excavated and removed from within its right of way. The Design-Build Team shall act as agents of the Department for signing all waste transportation and disposal manifests as necessary.

The Design-Build Team shall maintain qualified personnel onsite at all times during removal of materials from within known areas of contamination to monitor ambient air quality. The qualified personnel shall be knowledgeable with the use of an Organic Vapor Analyzer, Flame Ionization Detector, Photo Ionization Detector, or similar equipment.

The Design-Build Team shall be entirely responsible for compliance with all OSHA, EPA, DOT, DENR and local rules and regulations pertaining to excavation, transportation and treatment / disposal of the contaminated media. Examples of such rules and regulations include, but are not limited to, 29 CFR 1910 and 1926, 40 CFR 260 - 265, 49 CFR 173 and 178, 15A NCAC 13A North Carolina Hazardous Waste Management Rules, NCGS 130A - 310 Inactive Hazardous Sites, the Federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) and the Federal Resource Conservation and Recovery Act (RCRA). It must be noted that inclusion of this paragraph is meant to highlight the Design-Build Team's responsibility for regulatory compliance in all phases of work on this project.

Cleaning of Equipment and Vehicles:

All equipment, tools, etc. utilized in the removal of contaminated materials, including drilled shaft excavation, shall be thoroughly cleaned to the satisfaction of the Engineer prior to leaving the project limits.

No vehicles exiting the known contaminated areas are to leave soil or other debris on public or private roadways. Provisions for ensuring all vehicle tires are free from contaminated soil or debris prior to exiting the project limits shall be the responsibility of the Design-Build Team for the duration of the project.

Dust is not to be produced by the excavation activities in areas of known contamination. It is the Design-Build Team's responsibility to provide dust control throughout the duration of the project.

HYDRAULICS SCOPE OF WORK (06-26-07)

Project Details

- The proposed bridge on – L – over Bearskin Creek and floodway shall be designed at a length sufficient to ensure that the 100 year water surface elevation does not rise more than the 1 foot surcharge allowed in the FEMA detailed study.
- Note that the far southern end of the project slightly infringes on the tributaries to Beaverdam Creek which are WS-IV streams in a protected watershed. No hazardous spill basins are required.
- No vertical low point shall be allowed on any bridge or approach slabs.
- The Design Build Team shall investigate natural channel design for crossing near stream S2c. (Reference On-Site Mitigation Scope of Work)
- The Design Build Team shall conduct the 4B & 4C meetings. All associated work resulting from the agencies' and the Department's hydraulics review and permit review shall be the responsibility of the Design-Build Team.
- The Design Build Team shall provide roadway plans with contours (1/2 size plans) for the 4B meeting and hydraulic plans and permit impact sheets (1/2 size plans) and permit documentation for the 4C meeting to the State Alternative Delivery Engineer 5 weeks before respective meetings. The Design Build Team shall provide minutes of the above meetings to the Department within 3 business days.
- The Design-Build Team shall not discharge additional storm water from the bridge or approaching roadways into the railroad right-of-way.
- The Design Build Team shall prepare permit drawings for an Individual Section 404 permit and Individual 401 Water Quality Certification for the 2-lane design.
- The Design Build Team shall utilize the preliminary Hec Ras models provided by the Department for Bearskin Creek and Dry Fork Creek and coordinate the final hydraulic design and impacts to the floodway and floodplain with Union County and NC Floodway Mapping. Note that these are preliminary Hec Ras models and are subject to change. The final models are anticipated to be available in the next few months and shall be acquired and used by the Design-Build Team in their design and the preparation of the CLOMR submittal.
- The Design Build Team shall be responsible for compiling all FEMA CLOMR and LOMR Forms, Letters, and Mapping for NCDOT submittal. No construction activity shall occur in FEMA regulated floodplains prior to obtaining an approved CLOMR. Department will be responsible for all associated fees.
- The Design Build Team shall design and construct drainage for a 2-lane facility.

General

- The Design Build Team shall develop all drainage 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 page.
- The Design-Build Team shall hold a pre-design meeting with NCDOT.
- The Design Build Team shall develop drainage design plans using the current version of Microstation and Geopak software required by NCDOT and shall be in English units. The plans shall follow NCDOT CADD standards including but not limited to NCDOT's file naming convention, leveling chart, and file folder structure.
- For pipes up to 48" in diameter and not located under travelways or curb and gutter, Type S or Type D, HDPE pipe meeting the requirements of AASHTO M294 or Aluminized Corrugated Steel Pipe, Type IR meeting the requirements of Article 1032-3(A)-7 of the NCDOT Standard Specifications may be used instead of Reinforced Concrete Pipe, Class III. Installation of both alternate pipe materials shall conform to the requirements of Section 300 of the Standard Specifications for Method A, except that the minimum cover shall be at least 12 inches. HDPE Pipe shall not be allowed beneath the travelway, median or curb and gutter of the future four-lane divided facility.
- The Design Build Team shall use 2:1 side slopes in wetlands and stream areas.
- The Design Build Team shall avoid ditches in wetlands.
- The Design Build Team shall prepare Culvert Survey Reports or Bridge Survey Reports for all crossings conveying greater than a 72" pipe capacity that are proposed, extended, replaced, or rehabilitated.
- The Design Build Team shall develop a State Stormwater Management Plan.
- The Design Build Team shall analyze pre and post designs for increases in discharge and take appropriate action in accordance with the above guidelines to make sure additional drainage is adequately handled. Design-Build Teams are not responsible for addressing the adequacy of pipe systems outside of the NCDOT right-of-way.

Information Supplied:

- Preliminary Hec Ras models for Bearskin Creek and Dry Fork Creek.
- Drainage work files

SIGNING SCOPE OF WORK (06-26-07)

General: The Signing Plans shall be prepared by the Design-Build Team in accordance with the latest edition of the *2003 Manual on Uniform Traffic Control Devices (MUTCD), the 2004 NC Supplement to the MUTCD, NCDOT Standard Specifications for Roads and Structures* (July 2006), the 2006 NCDOT Roadway Standard Drawings for the design and development of signing plans, the latest Standard Specifications for *Structural Supports for Highway Signs, Luminaires, and Traffic Signals* published by AASHTO, "*Guidelines for Preparation of Signing Plans for Design-Build Projects*", and the "*Design-Build Submittal Guidelines*".

Signing Plan Requirement: The Design-Build Team shall select a Private Engineering Firm (PEF) that has experience in designing and sealing Signing Plans for NCDOT on projects comparable to this project.

Signs Furnished by Design-Build Team: The signs shall be furnished by the Design-Build Team according to the specifications provided by the Department.

Signing Project Limits: The Design-Build Team shall be responsible for the design, fabrication and installation of all signs required through the construction limits of the mainline, all –Y- Lines and all cul-de-sacs. The Design-Build Team shall also be responsible for the design, fabrication and installation of all signs required beyond the construction limits of the mainline, all –Y- Lines and all cul-de-sacs to ensure adequate advance signage and spacing is provided.

The posted speed limit for Martin Luther King Jr. Boulevard shall be 45 mph.

Sign Design: The Design-Build Team shall be responsible for designing, fabricating and installing the appropriate signing for the project. The Design-Build Team shall be responsible for all Type A, B, and D sign designs, fabrication and installation for ground mounted signs. The Design-Build Team shall be responsible for determining, sizing, fabricating, locating and installing all Type E (warning and regulatory signs) and Type F signs (route marker assemblies).

All individual sign designs shall be prepared using the latest version of GuideSign software. All individual sign designs shall be included in the Signing Plans.

Sign Maintenance: The Design-Build Team shall maintain all existing signs during construction, to ensure signs are properly maintained and visible during project construction. The Design-Build Team shall be responsible for designing and installing temporary sign supports. Reference Signing Section of the Traffic Control Scope of Work for temporary signing requirements.

Sign Locations: The Design-Build Team shall be responsible for determining the station locations for all signs. To avoid sign placement in locations where their usefulness will be short- lived, the Design-Build Team shall coordinate the proposed sign designs and locations with existing and future projects through the Department.

**** NOTE ****

Deleted *Coordination of Signing Plans with Division and Regional Traffic Engineers* paragraph

Ground Mounted Support Designs: NCDOT will provide the software for ground mounted sign support designs. The Design-Build Team shall be responsible for all design, fabrication, and installation of ground mounted supports and signs. Instructions for loading support design software will be made available upon request.

Signing Typical Sheets: Sheets to be used in summarizing quantities, standard specifications, and compiling Type E and F signs will be provided by the Department electronically upon request. The Design-Build Team shall incorporate the appropriate information onto these sheets and submit them to the State Alternative Delivery Engineer for review and acceptance.

Removal and Disposal of Existing Signs: The Design-Build Team shall be responsible for determining those existing signs that will no longer be needed upon completion of the project, such as on -Y- Lines and project tie-ins. The Design-Build Team shall be responsible for removal and disposal of these signs and supports. The Design-Build Team shall show and note these signs on the signing plan view sheets.

Guardrail or Other Protection for Signs: The Design-Build Team shall be responsible for determining, designing and installing any protection for proposed and existing sign supports.

Signing Roadway Standards, Typical Sheets and Specifications: Roadway standards and typical sheets to be used in summarizing quantities, standard specifications, and compiling Type E and F signs can be located at the following website:

http://www.ncdot.org/doh/preconstruct/traffic/congestion/SIGN/default.html

The Design-Build Team shall incorporate the appropriate information onto these sheets and submit them to the State Alternative Delivery Engineer for review and acceptance.

Signing Construction Revisions: All construction revisions shall be submitted to the Department for review prior to incorporation.

TRAFFIC CONTROL AND PAVEMENT MARKINGS SCOPE OF WORK (06/14/07)

I. Traffic Control Plans

A. Design Parameters

The Design-Build Team shall prepare the Traffic Control and Pavement Marking Plans for this project following the parameters listed below:

1. Maintain a minimum of one 11-foot lane in each direction on all roadways, unless otherwise noted below.
2. Maintain existing shoulder widths unless there is a permanent obstruction, i.e. curb and gutter, guardrail, etc. In addition, if any traffic control device is utilized, then a minimum 2-foot offset (shy distance) shall be required from the edge of travel lane to the traffic control device.
3. All temporary alignments shall be designed for at least 45 mph. The Design-Build Team shall not anticipate a speed reduction ordinance (see below).
4. Roadway Standard Drawing 1101.11 shall be used for merge and shift tapers. All other temporary designs shall follow the NCDOT Roadway Design Manual, 2004 AASHTO A Policy on Geometric Design of Highways and Streets and the most current Highway Capacity Manual.
5. Maintain access to all residents, schools and businesses at all times, unless otherwise noted below.

Construction shall not begin until the first phase submittal meets the requirements of the RFP. The Staging Concept and Preliminary Pavement Marking Plans shall meet the RFP requirements before the first phase submittal can be submitted. Construction shall not begin on subsequent phase submittals until they meet the requirements of the RFP, the "*Guidelines for Preparation of Traffic Control and Pavement Marking Plans for Design-Build Projects*", and the "*Design-Build Submittal Guidelines*". If a temporary traffic barrier system will be used, the Staging Concept shall identify the proposed type of barrier system for approval by the State Alternative Delivery Engineer.

The Work Zone Traffic Control website contains useful information that may be needed for the traffic control design.

http://www.ncdot.org/doh/preconstruct/wztc/

B. Traffic Control and Final Pavement Marking Plan requirements:

The Design-Build Team shall select a Private Engineering Firm (PEF) that has a minimum of five years of designing and sealing Traffic Control and Pavement Marking Plans for the Department on comparable projects. The Technical Proposal shall list projects, including description and similarity to the subject project, designed by the PEF.

The Design-Build Team shall develop Traffic Control and Pavement Marking Plans that maintain all types of traffic, pedestrian traffic and be ADA complaint using the following at a minimum, the 2006 Roadway Standard Drawings, 2006 Standard Specifications for Roadways and Structures, 2003 Manual on Uniform Traffic Control Devices, "*Design-*

Build Submittal Guidelines" and "*Guidelines for Preparation of Traffic Control and Pavement Marking Plans for Design-Build Projects*".

** NOTE ** Revised and relocated Section C. to the Technical Proposal Evaluation Criteria located elsewhere in this RFP (Reference the General Section).

II. Project Operations Requirements

The following are Time Restrictions and notes that shall be included with the Traffic Control Plans General Notes:

A. Time Restrictions

1. Intermediate Contract Time #1 for Lane Narrowing, Closure, Holiday and Special Event Restrictions.

As a minimum, the Design-Build Team shall maintain existing traffic patterns and not close or narrow a lane during the times below. When traffic is placed into the final pattern for any roadway, that will become the minimal traffic pattern and the following time restrictions will still apply.

Road name	Times
NC 200, NC 75, NC 84, Dickerson Blvd (SR 1200), Goldmine Rd (SR 1162) and Martin Luther King Jr. Blvd (SR 1223)	Monday to Thursday – 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m. Friday - 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 9:00 p.m.

The Design-Build Team shall not install, maintain or remove any traffic control device required for narrowing or closing a lane during the times listed above.

In addition to the lane narrowing and closure restrictions stated above, during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy on the roadways listed here within, the Design-Build Team shall not close or narrow a lane of traffic, detain the traffic flow or alter the traffic flow. As a minimum, these requirements / restrictions apply to the following schedules:

(a) For New Year's between the hours of 7:00 a.m. December 31st to 6:00 p.m. January 3rd. If New Year's Day is on a Friday, Saturday or a Sunday, then from 7:00 a.m. the Friday before New Year's Day to 6:00 p.m. the following Tuesday.

(b) For Easter, between the hours of 7:00 a.m. the Friday before Easter and 6:00 p.m. the Tuesday after Easter.

(c) For Memorial Day, between the hours of 7:00 a.m. the Friday before Memorial Day to 6:00 p.m. the Wednesday after Memorial Day.

(d) For Independence Day, between the hours of 7:00 a.m. July 3rd and 6:00 p.m. July 6th. If Independence Day is on a Friday, Saturday or Sunday, between the hours of 7:00 a.m. the Thursday before Independence Day and 6:00 p.m. the Tuesday after Independence Day.

(e) For Labor Day, between the hours of 7:00 a.m. the Friday before Labor Day to 6:00 p.m. the Wednesday after Labor Day.

(f) For Thanksgiving, between the hours of 7:00 a.m. the Tuesday before Thanksgiving to 6:00 p.m. the Tuesday of the following week.

(g) For Christmas, between the hours of 7:00 a.m. the Friday before the week of Christmas Day and 6:00 p.m. the following Tuesday after the week of Christmas Day.

(h) For NASCAR events at Charlotte, NC and Darlington, SC, from 7:00 a.m. the Friday before the event to 6:00 p.m. Monday after the event.

(i) For the Pageland Watermelon Festival in Pageland, SC, from 4:00 p.m. the Thursday before the event to 9:00 a.m. the Monday after the event.

Liquidated Damages for Intermediate Contract Time #1 for the above lane narrowing, lane closure, holiday and special event time restrictions for NC 200, NC 75, NC 84, SR 1200, SR 1162 and Martin Luther King Jr. Boulevard are $1,000.00 per hour.

2. Intermediate Contract Time #2 for Road Closure Restrictions for Construction Operations.

As a minimum, the Design-Build Team shall maintain the existing traffic pattern for all roadways and follow the road closure restrictions listed below. When a road closure is used, the Design-Build Team shall reopen the travel lanes by the end of the road closure duration to allow the traffic queue to deplete before re-closing the roadway.

The Design-Build Team shall not close existing Martin Luther King Jr. Blvd. access from NC 75 and NC 84 at any time.

The Design-Build Team may close NC 200, NC 75, NC 84, Dickerson Blvd (SR 1200), Goldmine Rd (SR 1162) and Martin Luther King Jr. Blvd. for the construction operations listed below. Road closures shall not be utilized during the following time restrictions.

Road Closures shall only be allowed for the operations and durations listed below the time restrictions.

Sunday to Saturday - 6:00 a.m. - 9:00 p.m.

Maximum road closure duration of **30 minutes** shall be allowed for the following operations:

- Traffic shifts, including tie-in work and placement of pavement markings.
- Tie-in work for -L- and / or -Y- Lines.

Maximum road closure duration of **60 minutes** shall be allowed for girder installation.

All road closures are subject to Department approval. The Design-Build Team shall be responsible for investigating all detour routes, including, but not limited to, analyzing the traffic capacity and improvements required to accommodate the detoured traffic. Prior to utilizing a detour, the Design-Build Team shall be responsible for obtaining Department approval and installing improvements required to accommodate the detoured traffic.

Liquidated Damages for Intermediate Contract Time #2 for the above road closure time restrictions for NC 200, NC 75, NC 84, SR 1200, SR 1162 and Martin Luther King Jr. Boulevard, and Martin Luther King Jr. Boulevard access from NC 75 and NC 84 are $500.00 per 15 minute period or any portion thereof.

3. Hauling Restrictions

The Design-Build Team shall adhere to the hauling restrictions noted in the *2006 NCDOT Standard Specifications for Roads and Structures.*

The Design-Build Team shall not conduct any hauling operations against the flow of traffic of an open travelway unless the work area is protected by an approved temporary traffic barrier or guardrail.

Hauling vehicles shall not leave or enter an open travel lane at less than 10 mph below the posted speed limit unless flaggers or lane closure operations are utilized. All entrances and exits for hauling to the work zone shall follow the Roadway Standard Drawings.

B. Lane and Shoulder Closure Requirements

The Design-Build Team shall not install more than 2.0 miles of lane closures on any roadway within the project limits, measured from the beginning of the merge taper to the end of the lane closure.

Within the project limits, the Design-Build Team shall not install more than one lane closure, in any one direction, on any roadway. A lane closure may be installed in opposing directions (maximum of one in each direction) as long as a minimum distance of four miles is maintained between the lane closure limits.

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

When personnel and / or equipment are working within 40 feet of an open travel lane, the Design-Build Team shall close the nearest open shoulder using *Roadway Standard Drawing No. 1101.04*, unless the work area is protected by an approved temporary traffic barrier or guardrail.

When personnel and / or equipment are working on the shoulder adjacent to an undivided facility and within 5 feet of an open travel lane, the Design-Build Team shall close the nearest open travel lane using *Roadway Standard Drawing* No. 1101.02, unless the work area is protected by an approved temporary traffic barrier or guardrail.

When personnel and / or equipment are working on the shoulder adjacent to a divided facility and within 10 feet of an open travel lane, the Design-Build Team shall close the nearest open travel lane using NCDOT 2006 *Roadway Standard Drawings* No. 1101.02, unless the work area is protected by an approved temporary traffic barrier or guardrail.

When personnel and / or equipment are working within a lane of travel of an undivided or divided facility, the Design-Build Team shall close the lane using the appropriate roadway standard drawing from the NCDOT 2006 *Roadway Standard Drawings.* The Design-Build Team shall conduct the work so that all personnel and / or equipment remain within the closed travel lane.

The Design-Build Team shall not perform work involving heavy equipment within 15 feet of the edge of travelway when work is being performed behind a lane closure on the opposite side of the travelway.

C. Pavement Edge Drop off Requirements

The Design-Build Team shall backfill at a 6:1 slope up to the edge and elevation of existing pavement in areas that are within 10’ of an opened travel lane that has a drop-off as follows:

Backfill drop-offs that exceed 2 inches on roadways with posted speed limits of 45 mph or greater.

Backfill drop-offs that exceed 3 inches on roadways with posted speed limits less than 45 mph.

Backfill drop-offs with acceptable material and compact at no expense to the Department.

Do not exceed a difference of 1.5 inches in elevation between open lanes of traffic. Install advance warning “UNEVEN LANES” signs (W8-11) 500 feet in advance.

OR

Do not exceed a difference of 2.0 inches in elevation between open lanes of traffic. If the difference between open lanes is between 1.5 inches and 2.0 inches,

provide a 1:1 slope at edge of pavement separating the lanes of travel. Install advance warning "UNEVEN LANES" signs (W8-11) 500 feet in advance and a minimum of once every ½ mile throughout the uneven area.

D. Traffic Pattern Alterations

The Design-Build Team shall notify the Engineer in writing twenty-one (21) calendar days prior to any traffic pattern alteration. See the Public Information Scope of Work for providing information to the public.

E. Signing

The Design-Build Team shall install advance work zone warning signs when work is within 100 feet from the edge of travel lane and no more than three days prior to the beginning of construction.

When no work is being conducted for a period longer than one week, the Design-Build Team shall remove or cover all advance work zone warning signs, as directed by the Engineer, at no cost to the Department.

All detour signing shall be the responsibility of the Design-Build Team. The Design-Build Team shall provide detailed information on the route, devices required and why needed in the Staging Concept. Possible detour needs could include, but are not limited to, road closures, limited horizontal (17' clear width or less) or vertical clearance limits, grade changes in tie in areas and oversize and / or overweight limits.

The Design-Build Team shall cover or remove all detour signs within and off the project limits when a detour is not in operation.

The Design-Build Team shall ensure all necessary signing is in place prior to altering any traffic pattern.

The Design-Build Team shall maintain all Guide Signs throughout the life of the project, and remove any Guide Signs when the signs are no longer applicable.

F. Traffic Barrier

The Department will not provide any moveable barrier or transfer vehicles for this project. The Design-Build Team shall adhere to the following requirements:

Install an approved temporary traffic barrier system a maximum of two (2) weeks prior to beginning work in any location. Once the approved temporary traffic barrier system is installed at any location, proceed in a continuous manner to complete the proposed work in that location.

Once the approved temporary traffic barrier system is installed and no work has been performed behind the approved temporary traffic barrier system for a period longer than two (2) months, remove / reset the approved temporary traffic barrier system at no cost to the Department, unless barrier is protecting a hazard.

Protect the approach end of the approved temporary traffic barrier system at all times during the installation and removal of the barrier. If system requires installation of a temporary crash cushion, a truck mounted impact attenuator can be used for a maximum of 72 hours until the temporary crash cushion can be installed.

Offset the approach end of the approved temporary traffic barrier system a minimum of 40 feet from oncoming traffic or protect at all times by a temporary crash cushion if the approved temporary traffic barrier system requires a temporary crash cushion.

Install approved temporary traffic barrier system with the traffic flow, beginning with the upstream side of traffic. Remove the approved temporary traffic barrier system against the traffic flow, beginning with the downstream side of traffic.

Install and space drums no greater than twice the posted speed limit (mph) to close or keep closed the section of the roadway until the approved temporary traffic barrier system can be placed or after the approved temporary barrier system is removed.

The Design-Build Team shall be responsible for providing a safe area (lateral offset behind barrier to work area) behind the approved temporary barrier system in accordance with the NCHRP-350 deflections from crash testing. If the safe area can not be maintained, an anchored barrier system shall be required.

G. Traffic Control Devices

The Design-Build Team shall adhere to the following requirements:

Use traffic control devices that conform to all NCDOT requirements and are listed on the Department's Approved Products List as shown on NCDOT's Work Zone Traffic Control website. Use of devices not shown on the Approved Product List shall require approval from the State Alternative Delivery Engineer.

Space channelizing devices in work areas no greater than twice the posted speed limit (mph), except 10 feet on-center in radii, and 3 feet off the edge of an open travelway, when lane closures are not in effect.

Place Type III barricades, with "ROAD CLOSED" Sign R11-2 attached, of sufficient length to close entire roadway. Stagger or overlap barricades to allow for ingress or egress.

Place sets of three drums perpendicular to the edge of the travelway on 500-foot centers when unopened lanes are closed to traffic. These drums shall be in addition to channelizing devices.

H. Pavement Markings, Markers and Delineation

The Design-Build Team shall adhere to the following:

Placement of final pavement markings and markers shall proceed only if the Final Pavement Marking Plans meet the requirements of the RFP, the "*Guidelines for Preparation of Traffic Control and Pavement Marking Plans for Design-Build Projects*", and the "*Design-Build Submittal Guidelines*".

The Design-Build Team shall use pavement marking and marker products that conform to all NCDOT's requirements and specifications, as listed on the Department's Approved Products List located on the NCDOT's Work Zone Traffic Control website.

The Design-Build Team shall install pavement markings and markers in accordance with NCDOT's 2006 *Standard Specifications for Roads and Structures*, and in accordance with the manufacturer's procedures and specifications.

The Final Pavement Marking Plans shall address any changes to markings outside the project limits as a result of the proposed construction of this project. The Design-Build Team shall be responsible for installing such markings and markers.

The Design-Build Team shall install pavement markings and pavement markers on the final surface as follows:

Road	Marking	Marker
Asphalt surfaces	Thermoplastic or Polyurea with Standard Bead	Raised Permanent
For bridge deck surfaces	Polyurea with Standard Bead	Raised Permanent

Refer to the Polyurea with Standard Bead Special Provision, which is available on the NCDOT's Work Zone Traffic Control website.

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 and Existing Structures	Minimum of Paint	Temporary Raised
Proposed Structures	Temporary Tape	Temporary Raised

When using removable tape pavement markings, place temporary raised markers half on and half off edgelines and centerlines to help secure the tape to the roadway. Markers shall be spaced the appropriate distance apart as described by RSD 1250.01, Sheet 1 of 3.

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

Place at least two applications of paint on the final wearing surface on new pavement. Place additional applications of paint upon sufficient drying time, as determined by the Engineer.

Place at least two applications of paint for temporary traffic patterns that will remain in place over three (3) months. 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 systems 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

The Design-Build Team shall adhere to the following:

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 used. The Traffic Control Staging Concept shall address when police will be used, where they will be used, duration and why. Utilize Officers who are outfitted with law enforcement uniforms and marked vehicles, which are equipped with proper lights mounted on top of the vehicle, and agency emblems.

Coordinate with the Engineer in charge of any project in the vicinity of this project for any work that may effect the construction and the Traffic Control of this project.

In accordance with the 2003 MUTCD, the Traffic Control Plans shall maintain pedestrian traffic through the project sections where sidewalk is in place prior to the project being awarded.

The Design-Build Team shall not anticipate a speed reduction or $250 speeding penalty ordinance for this project.

Temporary Shoring for the Maintenance of Traffic may be required, and estimated locations where temporary shoring will be anticipated shall be identified in the Staging Concept. The Work Zone Traffic Control Unit has a detail providing design information on where temporary NCDOT barrier shall be located in relation to the

shoring and traffic location. The Geotechnical Engineering Unit web site has more information on temporary shoring.

http://www.ncdot.org/doh/preconstruct/highway/geotech/formdet/standards.html

The Design-Build Team shall adhere to the additional shoring requirements located on the Work Zone Traffic Control Unit and Geotechnical Engineering Unit web sites.

The Design-Build team shall identify on the appropriate Traffic Control detail where temporary shoring will be used by providing station limits, offsets, the type of shoring and where temporary traffic barrier will be located if needed.

UTILITIES COORDINATION SCOPE OF WORK (06-27-07)

- **Overview**

The Design-Build Team shall obtain the services of a Private Engineering Firm (PEF) knowledgeable in the NCDOT Utility Coordination Process, involved with utility relocation / installation and highway construction. The Design-Build Team shall be responsible for coordinating all utility relocations. Coordination shall include any necessary utility agreements when applicable. The NCDOT will be responsible for non-betterment utility relocation cost when the utility company has prior rights of way / compensable interest. The utility company shall be responsible for the relocation costs if they can not furnish evidence of prior rights of way or a compensable interest in their facilities. The Design-Build Team shall be responsible for determining the cost responsibility for the utility relocations. The Design-Build Team shall be responsible for all costs associated with utility relocations due to haul roads and / or any other temporary conditions resulting from the Design-Build Team's methods of operation or sequence of work. NCDOT will be the approving authority for all utility agreements and approval of plans.

- **Preparation for relocating utilities within the existing or proposed highway Rights of Way**

I. The Design-Build Team shall be required to use the guidelines as set forth in the following:

(A) *NCDOT Utility Manual - Policies & Procedures for Accommodating Utilities on Highway Rights of Way*

(B) *Federal Aid Policy Guide- Subchapter G, Part 645, Subparts A & B*

(C) *Federal Highway Administration's Program Guide, Utility Adjustments & Accommodations on Federal Aid Highway Projects*

(D) *NCDOT Construction Manual Section 105-8*

(E) *NCDOT Right of Way Manual - Chapter 16 Utility Relocations*

(F) *NCDENR Public Water Supply - Rules governing public water supply*

(G) *NCDENR Division of Water Quality - Title 15A - Environment and Natural Resources*

II. The Design-Build Team shall be responsible for confirming the utility locations, confirming the type of facilities, identifying the utility owners and determining the cost responsibilities in order to coordinate the relocation of any utilities in conflict with the project.

- **Arrangements for Protection or Adjustments to Existing Utilities**

I. The Design-Build Team shall make the necessary arrangements with the utility owners for adjustments, relocations or removals where the Design-Build Team and Utility Company, with concurrence from the Department, determine that such work is essential for highway safety and performance of the required construction.

The Design-Build Team shall not commence work at points where the highway construction operations are adjacent to utility facilities, until making arrangements with the utility company to protect against damage that might result in expense, loss, disruption of service or other undue inconvenience to the public or utility owner. The Design-Build Team shall be responsible for damage to the existing or relocated utilities resulting from his operations. In the event of interruption of any utilities by the project construction, the Design-Build Team shall promptly notify the proper authority (Utility Company) and cooperate with the authority in the prompt restoration of service.

The Design-Build Team shall accommodate utility adjustments, reconstruction, new installation and routine maintenance work that may be underway or take place during the progress of the contract.

II. In the event of a utility conflict, the Design-Build Team shall request that the utility company submit relocation plans (Highway Construction Plans to be provided by the Design-Build Team to Utility Owners) that show existing utilities and proposed utility relocations for approval by the NCDOT.

The Design-Build Team shall be required to submit (3) three copies of the Utility Relocation Plans to the NCDOT State Utility Agent, via the State Alternative Delivery Engineer, for review and approval prior to relocation work beginning. If the Design-Build Team determines the cost to be borne by NCDOT, then the Design-Build Team shall be required to submit three (3) copies of a detailed utility relocation estimate and copies of verification of compensable interest. The Design-Build Team shall also be responsible for submitting the appropriate agreements to be used with the Utility Relocation Plans (See Agreements under line items V and VI). After the review process is complete, the NCDOT Utility Unit will submit one (1) copy of the Utility Relocation Plans, executed agreements and any necessary comments back to the Design-Build Team. The NCDOT Utility Unit will also submit a copy of the approved Utility Relocation Plans to the Department's Resident Engineer. If the Utility Relocation Plans are approved subject to changes, it shall be the Design-Build Team's responsibility to coordinate these changes with the appropriate utility company.

III. The cost for non-betterment utility relocation due to the highway construction will be the responsibility of NCDOT when the utility company has prior rights of way / compensable interest. As stated in the overview, the Design-Build Team shall be responsible for determining cost responsibility / compensable interest. A compensable interest is identified as follows:

(A) Existing or prior easement rights within the limits of the project, either by recorded right of way or adverse possession (Utility occupying the same location for twenty (20) plus years outside the existing highway rights of way).

(B) Entities covered under *General Statute 136-27.1 and 136-27.2.* Statute requires the NCDOT to pay the non-betterment cost for certain water, sewer and gas relocations.

The cost in relocating CATV due to the highway construction shall be the responsibility of the CATV Company; however, under the following conditions the NCDOT will bear the relocation expense:

(A) If the CATV Company can validate a recorded easement for facilities outside the maintained NCDOT rights of way.

(B) The adjustment is needed on existing utility poles to accommodate for a proposed NCDOT Traffic Management System Fiber Optic Communication Cable Project.

The NCDOT shall not permit CATV to place poles within the highway rights of way but will allow down guys for their facilities within the highway rights of way. Under most circumstances, the CATV Company will continue a joint-use attachment with the local Power and Telephone Company. If the CATV proposed relocation places buried facilities within the highway rights of way then plans and encroachment agreements shall be required by the NCDOT.

IV. If the Design-Build Team elects to make arrangements with a utility company to incorporate a new utility installation or relocation as part of the highway construction, the utility work done by the Design-Build Team and the associated costs for the work shall be negotiated and agreed upon between the Design-Build Team and the utility company.

If the Design-Build Team elects to make arrangements with a utility company to incorporate the relocation of existing water or sewer facilities as part of the highway construction, the costs for all engineering charges associated with the design for relocating existing water and sewer facilities shall be the responsibility of the Design-Build Team.

The Design-Build Team shall make arrangements to relocate water or sewer line facilities in which the entities are covered under *General Statute 136-27.1* or occupying a compensable interest. The non-betterment costs associated with this work will be borne by NCDOT and shall be addressed in accordance with Article 104-7 of the Standard Special Provisions, Division One, contained elsewhere in this RFP.

If total property acquisition is unavoidable due to encroachment into wells and / or septic systems, then the Design-Build Team shall investigate and determine if extending water and / or sewer lines to the affected property is cost effective. If the Department concurs with the determination that a utility extension is cost effective, the costs associated with the utility construction shall be addressed in accordance with Article 104-7 of the Standard Specifications.

If the Design-Build Team is requested, in writing, by an entity to relocate upgrade or incorporate new water and sewer facilities as part of the highway construction, designs shall be coordinated with the Utility Owner and NCDOT Utility Unit. The associated design and construction costs shall be negotiated and agreed upon between the Design-

Build Team and the utility company. The Design-Build Team shall develop designs; prepare all plans for needed agreements and permits; submit permits directly to the agencies and obtain approval from the agencies. The Design-Build Team shall be responsible for all permit fees.

If the Design-Build Team elects to make arrangements with a Governmental Agency or any other utility owner for proposed utility construction, in which the Agency / Utility Owner shall be responsible for the costs of work to be performed by the Design-Build Team, the Design-Build Team shall be responsible for negotiating all costs associated with the proposed construction. Once the Design-Build Team and the Agency / Utility Owner agree on a plan and a lump sum estimated cost for the utility construction, the Design-Build Team shall be responsible for submitting five (5) sets of 11 x 17 utility construction drawings to the State Utility Agent, via the State Alternative Delivery Engineer, for further handling. Each set shall include a title sheet, plan sheets, profiles and special provisions if required. Also, a letter from the Agency / Utility Owner agreeing to the plans and lump sum cost must accompany this package. The NCDOT will reimburse the Design-Build Team the estimated lump sum cost under a Supplemental Agreement. The necessary Utility Agreement to the Agency / Utility Owner for reimbursement shall be a two party agreement between the NCDOT and the Agency / Utility Owner; and will be developed and executed by the Department.

V. The Design-Build Team shall be required to utilize the NCDOT Standard Utility Encroachment Agreements as necessary in relocating utilities. The Encroachment Agreements shall be used under the following conditions:

(A) If a utility company is not occupying a valid right of way / compensable interest and the proposed relocation will place the relocated utilities within the existing or proposed highway rights of way.

(B) For **all** new utility installations within the existing or proposed highway rights of way. This includes all water, sewer and gas lines owned by entities covered under *General Statute 136-27.1 and 136-27.2.*

VI. The NCDOT State Utility Agent must execute approved agreements on Design-Build highway projects. The Utility Relocation Agreements (Cost Agreement) and encroachment agreements are available from the NCDOT Utility Unit. See Pages 59 and 60 of the *NCDOT Utility Manual on Policies & Procedures for Accommodating Utilities on Highway Rights of Way* for the different types of encroachment agreements available for use.

- **Requirements for attachments to existing and / or proposed structures**

I. The Design-Build Team shall avoid attachments to structures where feasible. Attachments shall only be considered when other alternatives are cost prohibitive and / or are not feasible due to environmental or geographical features. Attachments shall be prohibited under the following conditions:

(A) Unless noted otherwise elsewhere in this RFP, no attachments shall be allowed to a bridge located parallel within the C/A carrying the freeway over streams, other roadways or railroads. (No parallel utility installations within the C/A)

(B) Unless noted otherwise elsewhere in this RFP, no attachments shall be allowed to cored-slab bridges.

(C) Unless noted otherwise elsewhere in this RFP, no attachments shall be allowed to curved bridges.

II. Attachments to structures, if allowed, shall meet the following criteria:

(A) No attachments shall be allowed below the bottom of the beams and / or girders.

(B) Drilling of, or attachments to, beams and / or girders shall not be allowed. Attachments shall only be allowed to the bottom of the bridge deck.

(C) For water and sewer force mains, only restrained joint ductile iron pipe shall be allowed.

(D) A minimum of 18" of clearance to beams and / or girders shall be maintained if possible.

III. Documentation of adverse conditions or cost estimates of all feasible alternatives shall be submitted to the NCDOT State Utility Agent, via the State Alternative Delivery Engineer, when seeking approval of a structure attachment. Cost estimates shall consider all costs involved with each alternative and impacts to the utility and the highway project as a whole.

- **Preparation for Communication Cables / Electrical Services for Lighting, Signing, Signals, & ITS Devices:**

I. Prior to establishing the location for new meter poles / boxes, the Design-Build Team shall coordinate with the local Power Distribution Company concerning accessibility of E/C Service and safety in maintenance of the meter.

II. Prior to installation, the Design-Build Team shall provide plans for review and approval for all service taps that require a parallel installation within the C/A.

Parallel service installations within C/A shall be buried and located as close to the R/W line as practical. Only due to unusual circumstances will parallel aerial service installations within C/A be allowed. The Design-Build Team shall justify the allowance of parallel aerial service installation and obtain NCDOT approval prior to installation.

III. The Design-Build Team shall be responsible for all coordination activities required for the utility company to provide service taps. Prior to the Design-Build Team developing the associated designs and / or instructing the utility company to proceed with providing the service taps, the Design-Build Team shall obtain approval from the Resident

Engineer. The NCDOT will be responsible for construction costs associated with the utility company providing service taps.

- **Preparation for Adjusting Existing Utilities due to Proposed Traffic Management Systems Fiber Optic Communication Cables:**

I. See Signals Scope of Work

II. The Design-Build Team shall be responsible for coordination activities required for the utility company to adjust or relocate existing facilities to accommodate the proposed ITS Communication Cable. The Resident Engineer shall approve adjustments and relocations of existing facilities prior to the Design-Build Team developing the associated designs. The NCDOT will be responsible for utility adjustment or relocation costs associated with the proposed ITS Communication Cable installation.

SIGNALS SCOPE OF WORK (06-21-07)

I. TRAFFIC SIGNALS

The Design-Build Team shall design and prepare plans for the traffic signal installations. This work shall include, but not be limited to, the preparation of Traffic Signal Plans, Electrical and Programming Details, Utility Make-Ready Plans, Communications Cable & Conduit Routing Plans and Project Special Provisions. These plans shall be prepared in accordance with the "*Design-Build Submittal Guidelines*" and the "*Guidelines for Preparation of Traffic Signal & Intelligent Transportation System Plans on Design-Build Projects*" available on the Design-Build website.

The Design-Build Team shall select a Private Engineering Firm (PEF) that has experience designing and sealing ITS & Signal plans for NCDOT on comparable projects. The Technical Proposal shall list projects, including description and similarity to the subject project.

A pre-design meeting shall take place between the NCDOT ITS & Signals Unit, the Design-Build Team, and any other pertinent NCDOT personnel before ITS & Signal designs begin. ITS & Signal plan submittals shall only be reviewed and approved by NCDOT ITS & Signals Unit after this pre-design meeting.

This work consists of installing FIVE (5) new traffic signals at the intersections listed below and connecting them into a Fiber Optic Closed Loop Signal System. In addition, the Design-Build Team shall revise TWO (2) existing traffic signals at the northern end of SR 1223 (MLK Jr. Blvd / Dickerson Blvd) and add those signals to the new MLK Jr. Blvd Closed Loop Signal System. The signal locations are:

Signal Inventory Number	Intersection Description	Existing or New	Work Requirements
10-1971	SR 1223 (MLK Jr. Blvd.) at NC 200	New	Install a new, fully actuated Traffic Signal using wood poles & spanwire as the signal supports, and a 2070L controller. Include this signal in the new MLK Jr. Blvd. Closed Loop Signal System.
10-1972	SR 1223 (MLK Jr. Blvd.) at NC 75 Access Ramp	New	Install a new, fully actuated Traffic Signal using wood poles & spanwire as the signal supports, and a 2070L controller. Include this signal in the new MLK Jr. Blvd. Closed Loop Signal System.
10-1973	NC 75 at SR 1223 (MLK Jr. Blvd.) Access Ramp	New	Install a new, fully actuated Traffic Signal using wood poles & spanwire as the signal supports, and a 2070L controller. Include this signal in the new MLK Jr. Blvd. Closed Loop Signal System.
10-1974	SR 1223 (MLK Jr. Blvd.) at NC 84	New	Install a new, fully actuated Traffic Signal using wood poles & spanwire as the signal supports, and a 2070L controller. Include this signal in the new MLK Jr. Blvd. Closed Loop Signal System.
10-1669	SR 1223 (MLK Jr. Blvd.) at SR 1162 (Gold Mine Road)	New	Install a new, fully actuated Traffic Signal using wood poles & spanwire as the signal supports, and a 2070L controller. Include this signal in the new MLK Jr. Blvd. Closed Loop Signal System.

10-1237	SR 1223 (MLK Jr. Blvd / Dickerson Blvd.) at SR 1009 (Charlotte Ave.)	**Revise** (Existing)	Revise the existing Traffic Signal at this intersection by installing a new 2070L controller, new cabinet, closed loop system detectors, system interconnection equipment, in order to incorporate this traffic signal to the proposed MLK Jr. Blvd. Closed Loop Signal System.
10-1827	SR 1223 (MLK Jr. Blvd. / Dickerson Blvd. at Commerce Drive	**Revise (**Existing)	Revise the existing Traffic Signal at this intersection by installing closed loop system detectors & system interconnection equipment, in order to incorporate this traffic signal to the proposed MLK Jr. Blvd. Closed Loop Signal System. **This signal currently has a 2070L controller.**
10-0670	SR 1223 (MLK Jr. Blvd. / Dickerson Blvd. at US 74	Existing	Run Fiber Optic cable to this controller and coil sufficient amount of Fiber Optic cable in the same quadrant as the existing traffic signal controller cabinet in order to tie in the controller at this location. This Fiber Optic cable will be used for future connection & coordination (by others) with the US 74 Closed Loop Signal System.

The Design-Build Team shall coordinate and implement the signal designs at the appropriate time as directed by the Engineer. The Design-Build Team shall maintain, monitor, and adjust the traffic signals as needed throughout the project. The Design-Build Team shall also be responsible for the design and implementation of all **temporary signal designs** needed to maintain traffic during construction. **The Design-Build Team shall maintain full actuation of the traffic signals on this project during the life of the project.**

Traffic signal designs shall incorporate the use of 2070L equipment including base adapters, and wood poles with spanwire as the signal supports. These wood poles shall be placed to accommodate the ultimate 4-lane roadway section.

The Design-Build Team shall be responsible for providing the safest and most economical design for the public. The Design-Build Team shall be responsible for ensuring that all plans and designs conform to the current design standards of the Intelligent Transportation Systems & Signals Unit. All plans and associated design material and specifications must be reviewed and approved by NCDOT before installation.

II. COMMUNICATIONS CABLE AND CONDUIT ROUTING PLANS

Overview

The Design-Build team shall be responsible for routing Fiber Optic Communications Cable **(12-fiber)** to interconnect the following signals into a new Closed Loop Traffic Signal System along MLK Jr. Blvd.

1. SR 1223 (MLK Jr. Blvd.) at NC 200
2. SR 1223 (MLK Jr. Blvd.) at NC 75 Access Ramp
3. NC 75 at SR 1223 (MLK Jr. Blvd.) Access Ramp
4. SR 1223 (MLK Jr. Blvd.) at NC 84
5. SR 1223 (MLK Jr. Blvd.) at SR 1162 (Gold Mine Road)
6. SR 1223 (MLK Jr. Blvd / Dickerson Blvd.) at SR 1009 (Charlotte Ave.)
7. SR 1223 (MLK Jr. Blvd. / Dickerson Blvd. at Commerce Drive

The Design-Build team shall be responsible for running Fiber Optic communications cable to the existing traffic signal controller cabinet location at SR 1223 (MLK Jr. Blvd. / Dickerson Blvd.) at US 74 and coiling a sufficient amount of fiber optic cable in the same quadrant of the existing cabinet location. This Fiber Optic communications cable will be used for future interconnection and coordination (by others) with the existing US 74 Closed Loop Signal System.

The Design-Build team shall be responsible for pursuing necessary agreements with the CSX Railroad Company for running communications cable.

The Design-Build team shall be responsible for providing a 4-inch outerduct conduit with four 1-inch innerduct conduits for installation on bridge structures. These conduits will be provided for routing the fiber optics communications cable (12-fiber) and spare conduits for future ITS expansion. The Design-Build team shall be responsible for coordinating location and installation of conduit on the bridge structures with the installation of the Communications Systems.

Utility Make-Ready Plans

In conjunction with the development of the Communications Cable and Conduit Routing Plans and Traffic Signal Plans, the Design-Build Team shall also develop a set of **Utility Make-Ready Plans**

Communications Cable & Conduit Routing Plans, and Project Special Provisions

Prior to construction, the Design-Build Team shall provide a detailed set of Communications Cable & Conduit Routing Plans, and Project Special Provisions for the Department's review and approval. No construction related to the installation of the communications system shall begin until NCDOT has approved the RFC plans and specifications.

The Communications Cable & Conduit Routing Plans, and Project Special Provisions shall consist of three major items listed below:

- Communications Cable & Conduit Routing Plans (with Cable Termination Plans)
- Project Special Provisions
- Catalog Cut Sheets

RIGHT OF WAY SCOPE OF WORK (06-11-07)

The Design-Build Team shall employ qualified, competent personnel who are currently **approved by the NCDOT Right of Way Branch,** herein after referred to as the Department, to provide all services necessary to perform all appraisal, appraisal review, negotiation and relocation services required for completion of the project in accordance with G.S. 136-28.1 of the General Statutes of North Carolina, as amended, and in accordance with the requirements set forth in the *Uniform Appraisal Standards and General Legal Principles for Highway Right of Way*, the *North Carolina Department of Transportation's Right of Way Manual*, the *North Carolina Department of Transportation's Rules and Regulations for the Use of Right of Way Consultants*, the *Code of Federal Regulations*, and *Chapter 133 of the General Statutes of North Carolina from Section 133-5 through 133-18*, hereby incorporated by reference, including the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended. For a list of firms currently approved, the Design-Build Team should contact Mr. Neal Strickland, in the NCDOT Right-of-Way Branch, at 919-733-7932, extension 317. The Design-Build Team shall perform the services as set forth herein and furnish and deliver to the Department reports accompanied by all documents necessary for the settlement of claims and the recordation of deeds, or necessary for condemnation proceedings covering said properties. The Design-Build Team, acting as an agent on behalf of the State of North Carolina shall provide right of way acquisition services for TIP U-3412A in Union County.

The Design-Build Team shall complete appraisals affected by the potential on-site mitigation sites a minimum of twelve weeks prior to the Concurrence Point 4B Meeting. These appraisals shall detail the differential costs for the right of way necessary to construct the project (4-lane) versus that needed for the various on-site mitigation sites (reference the On-Site Mitigation Scope of Work).

The right of way purchased by the Design-Build Team shall be of sufficient width to provide for future widening of the facility to a four-lane divided facility with a 23' median.

If removal of contaminated material is the responsibility of the Department (reference the GeoEnvironmental Scope of Work), the Design-Build Team shall make every effort to purchase this right of way as early as possible.

The Design-Build Team shall carry out the responsibilities as follows:

- With respect to the payments, costs and fees associated with the acquisition of right of way in this contract, the Department shall be responsible for only direct payments to property owners for negotiated settlements, recording fees, any relocation benefits, and deposits and fees involved in the filing of condemnation an any claims. The Department shall assume responsibility for all costs associated with the litigation of condemned claims, including testimony by the appraiser(s). The Design-Build Team shall be responsible for all other acquisition related payments, costs and fees.

- A Department representative will be available to provide technical guidance on right of way acquisition procedures and to make timely decisions on approving relocation benefits and approving administrative adjustment settlements on behalf of the Department over and above the authority granted to the Department Right of Way Consultant Project Managers.

- The Design-Build Team shall submit a right of way project tracking report and right of way quality control plan to the Department. The Department standard forms and documents shall be used to the extent possible.

- The Design-Build Team shall provide a current title certificate for each parcel as of the date of closing or the date of filing of condemnation, unless required otherwise in the Department's Right of Way Manual.

- The following shall be required:

    - The Design-Build Team shall prepare, execute and record documents conveying title to acquired properties to the Department with the Register of Deeds.

    - The Design-Build Team shall deliver all executed and recorded deeds and easements to the Department.

    - For all property purchased in conjunction with the project, title shall be acquired in fee simple or easement and shall be conveyed to "The North Carolina Department of Transportation", free and clear of all liens and encumbrances except permitted encumbrances.

- It is understood and agreed by and between the parties hereto that all reports, surveys, studies, specifications, memoranda, estimates, etc., secured by and for the Design-Build Team shall become and remain the sole property of the Department upon termination or completion of the work, and the Department shall have the right to use same for any public purpose without compensation to the Design-Build Team.

- The Design-Build Team shall prepare appraisals in accordance with the Department's *Uniform Appraisal Standards and General Legal Principles for Highway Right of Way Acquisitions*. The Design-Build Team's appraiser shall be on the Department's approved state certified appraiser list. The Design-Build Team may request its state certified appraiser be added to the approved state certified appraiser list, subject to approval by the Department's State Appraiser.

- The Design-Build Team shall provide appraisal reviews complying with The Department's *Uniform Appraisal Standards and General Legal Principles for Highway Right of Way Acquisitions*. The reviewer shall determine that the appraisal meets the Department's guidelines and requirements, conforms to acceptable appraisal standards and techniques, does not include any non-compensible items or exclude any compensible items and that the value conclusions are reasonable and based on facts presented in the appraisal. The reviewer

has the authority to approve, adjust, request additional data or corrections, or not to recommend and request another appraisal. The reviewer has the authority to approve appraisals not in excess of $750,000.00. All appraisals showing compensation in excess of $750,000.00 are referred to the Department's State Appraiser for approval, with the written recommendation of the reviewer. The Design-Build Team's reviewer shall be on the Department's approved state certified reviewer appraiser list. The Design-Build Team may request its state certified review appraiser to be added to the approved state certified reviewer appraiser list, subject to approval by the Department's State Appraiser.

- The Design-Build Team shall provide a right of way certification prior to entering the property.

EROSION AND SEDIMENTATION CONTROL SCOPE OF WORK (06-12-07)

The NCDOT REU shall review and accept all Erosion and Sedimentation Control Plans. Clearing & Grubbing and Final Grade 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, including clearing and grubbing, can commence. If the Design-Build Team chooses to perform the work in discrete sections, then a complete set of Clearing & Grubbing and Final Grade RFC Erosion Control Plans shall be submitted, accepted, and distributed as noted above prior to land disturbing activities, including clearing and grubbing, commencing in that section. No land disturbing activities, including clearing and grubbing, shall occur in any location that does not have accepted Clearing & Grubbing and Final Grade 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 skimmer basins and 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; do not place erosion control devices in streams
8. Provide adequate silt storage for 3600 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 rainfall 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(sq. feet.) = Q10(cfs) * 435
   b. Volume requirement shall be 1800 cubic feet per disturbed acre draining to the riser basin
   c. Riser Pipe shall have a cross-sectional area 1.5 times that of the barrel pipe
   d. Perforations in the riser pipe shall be reduced to increase dewatering time to twenty-four (24) hours
   e. See *NCDENR- Erosion and Sediment Control Planning and Design Manual* for additional design criteria

10. Skimmer Basins shall provide adequate silt storage for 1800 cubic feet per disturbed acre with surface area equal to 0.0075 times the peak inflow rate, Q10, using the 10-year peak rainfall 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
11. The minimum and maximum length to width ratio of all Sediment Basins shall be 2:1 and 6:1, respectively
12. Coir Fiber Baffles shall be installed in all silt basins and sediment dams at drainage outlets. For silt basins with a 20-foot or longer length, three Coir Fiber Baffles shall be installed with a spacing of 1/4 the basin length. For silt basins with a length less than 20 feet, a minimum of two Coir Fiber baffles shall be installed, with a spacing of 1/3 the basin length. The Design-Build Team will not be required to show the individual baffles on the Erosion Control Plans, but will be required to incorporate the Coir Fiber Baffle Detail on the Erosion Control Plans

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 skimmers or sediment control stone (TRSD-B, TRSC-A, etc.)
7. Provide adequate silt storage for 3600 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 rainfall 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(sq. feet.) = Q10(cfs) * 435
    b. Volume requirement shall be 1800 cubic feet per disturbed acre draining to the riser basin
    c. Riser Pipe shall have a cross-sectional area 1.5 times that of the barrel pipe
    d. Perforations in the riser pipe shall be reduced to increase dewatering time to twenty-four (24) hours
    e. See *NCDENR- Erosion and Sediment Control Planning and Design Manual* for additional design criteria
10. Skimmer Basins shall provide adequate silt storage for 1800 cubic feet per disturbed acre with surface area equal to 0.0075 times the peak inflow rate, Q10, using the 10-

year peak rainfall 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

11. The minimum and maximum length to width ratio of all Sediment Basins shall be 2:1 and 6:1, respectively
12. Coir Fiber Baffles shall be installed in all silt basins and sediment dams at drainage outlets. For silt basins with a 20-foot or longer length, three Coir Fiber Baffles shall be installed with a spacing of 1/4 the basin length. For silt basins with a length less than 20 feet, a minimum of two Coir Fiber baffles shall be installed, with a spacing of 1/3 the basin length. The Design-Build Team will not be required to show the individual baffles on the Erosion Control Plans, but will be required to incorporate the Coir Fiber Baffle Detail on the Erosion Control Plans

C. Intermediate Phase

Intermediate Erosion Control Plans shall only be required if design modifications and / or site conditions require additional erosion control design or design revisions to 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 project specific special notes and details such as temporary rock silt check type B, coir fiber baffle, skimmer basin, etc.
B. Provide matting summary sheet(s): matting for erosion control and permanent soil reinforcement mat
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 Erosion Control Special Provisions from the aforementioned website to Method of Measurement, Basis of Payment, or any other statement regarding direct payment for Erosion & 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. 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.
F. 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.
G. 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.
H. An approved Erosion and Sedimentation Control Plan does not exempt the Design-Build Team from making every effort to contain sediment onsite.
I. Any Erosion Control Design revisions made during the construction of the project shall be submitted to NCDOT 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.
J. 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*.
K. 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 any Erosion and Sedimentation Control Designs are submitted to NCDOT REU. Erosion and Sedimentation Control Plan submittals shall only be reviewed and accepted by NCDOT REU after the Erosion Control Pre-Design Meeting.
L. 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.
M. Erosion Control / Stormwater Certification shall be required according to the Project Special Provision found elsewhere in this RFP.

ENVIRONMENTAL INCENTIVES:

The Design-Build Team shall observe and comply with Federal and State Laws, Local Laws, Ordinances, and Regulations; as well as Orders and Decrees of Bodies having any jurisdiction or authority in accordance with Section 107 of the Standard Specifications.

The Design-Build Team will be eligible for an incentive in the amount of $40,000 if construction operations have been performed in accordance with all environmental regulations and the Specifications, and no violations have been issued. Violations are defined as:

Violation	Issuing Entity
Immediate Corrective Action (ICA)	Department
Continuance of an ICA (CICA)	Department
Notice of Violation (NOV)	Regulatory Agencies
Cease and Desist (C&D)	Corp of Engineers

The incentive payment shall be paid at the completion of the project as long as the Design-Build Team does not receive any violations at any time during project construction.

EROSION CONTROL LIQUIDATED DAMAGES:

The Design-Build Team's first four violations shall result in a reduction of $10,000 from the $40,000 noted above for each ICA, CICA, NOV, and/or C&D violation. Beginning with the fifth violation, Liquidated Damages in the amount of $10,000 per violation shall be deducted from monies due the Design-Build Team.

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 Sediment Control Plan and Specifications; and / or the SWPPP, regardless of absence of neglect, shall be deducted from the monies due to the Design-Build Team.

ON-SITE MITIGATION SCOPE OF WORK (06-29-07)

General

As required by the NEPA process and the ACOE/EPA Section 404 B1 Guidelines, to offset potential wetland and stream impacts, the Design-Build Team shall investigate the on-site mitigation potential of the sites identified in the Site Specific Information (below) provided by the Department and any necessary stream relocations. The Natural Environment Unit's Indirect and Cumulative Impacts and Engineering Groups have reviewed the sites for feasibility from a hydraulic and biological viewpoint. Therefore, the Design-Build Team need only evaluate these sites in terms of economic feasibility.

The Design-Build Team shall provide the Department early right-of-way appraisals to assist in the determination of the economic feasibility of acquiring land for on-site mitigation. The early appraisals shall indicate the differential right-of-way cost between that right-of-way necessary to construct the project, including accommodation for the future four lane section, and the right-of-way necessary to provide the various mitigation sites. The early appraisals shall be submitted to the State Alternative Delivery Engineer at least twelve weeks prior to the 4B meeting (reference Right-of-Way Scope of Work). The Department will respond to this submittal, providing direction on which sites to further pursue, within five business days of this submittal.

Elimination from further consideration of any of the sites outlined herein may only occur through concurrence by the Department.

The Design-Build Team shall be responsible for acquisition services for the purchase of the mitigation sites at no additional cost to the Department. The Department will be responsible for the actual cost of the right-of-way. If the sites can be acquired, then the Design-Build Team shall be responsible for plan, design and successful construction of all on-site mitigation including, but not limited to, the following:

- One mitigation plan document shall be prepared to encompass all sites selected.
- Complete conceptual mitigation plans, as described below, for the sites that are successfully acquired through eminent domain or voluntary landowner cooperation
- Complete all preliminary mitigation design plans and specifications, as described below, to be presented at the 4C meeting.
- Address agency comments and obtain agency approval for all on-site mitigation sites (after 60% design is completed).
- Conduct field review of on-site mitigation as requested by the agencies.
- Complete final mitigation plan, design, and permit drawings for inclusion in the environmental permit application.

The Design-Build Team shall be responsible for fulfilling all permit conditions. The Design-Build Team shall be responsible for ensuring that all wetland and stream

mitigation sites are constructed according to the approved mitigation and design/construction plans. The Design-Build Team is not responsible for post-construction monitoring after the completion of the Twelve-Month Guarantee provided elsewhere in this RFP or as otherwise offered by the Design-Build Team in the Technical Proposal.

The Design-Build Team shall use MicroStation and GeoPak to complete all plans and specifications to meet NCDOT standards. Included in this task are the setup and creation of design sheets. These sheets shall include title, detail, plan, profile, and cross section sheets.

The Design-Build Team shall include the following in the Technical Proposal: (1) the anticipated schedule for submitting the early appraisals; and (2) any additional warranty or monitoring of this mitigation that is included in the Price Proposal.

Site Specific Information

The following sites were recommended for review by the agencies for on-site mitigation potential. These sites are graphically depicted in Figures 1 and 2 as provided by the Department. Pursuing the sites should be dependent on Right of Way acquisition and/or landowner willingness as well as agency approval.

- W26 and W29 as wetland preservation sites
- W28 as a wetland enhancement site
- P3 as a wetland restoration site
- S12 and 13b as stream preservation sites
- S2c and associated wetlands W4 and W5 as a stream restoration site

Conceptual Mitigation Plans

The Design-Build Team shall prepare the conceptual mitigation plan for presentation at the 4B meeting. All planting related to on-site mitigation will be conducted by the Department. Post-construction monitoring plan and success criteria shall be included in the narrative for the site. The Project Development and Environmental Analysis Branch-Indirect and Cumulative Impacts Group shall be provided the draft mitigation plan for review seven (7) weeks prior to the 4B meeting. The Design-Build Team shall address comments before presentation at the 4B meeting.

Much of the following information detailed under stream and wetland conceptual mitigation plans is not necessary in the case of stream or wetland preservation sites. Additionally, the following scoped activities will not be required or necessary at all for preservation sites: site layouts, natural channel design, and preliminary and final construction design plans.

Conceptual Plan for Wetlands

The Design-Build Team shall prepare a conceptual mitigation plan describing the site's existing conditions, reference wetland information, proposed conditions and monitoring plan.

The existing conditions of the plan include, but are not limited to, the following: the sites history, location of jurisdictional wetlands and/or streams, location of fill material in wetlands, stream and/or ditch locations, vegetation communities, hydrology, soils, threatened or endangered species, adjacent land use and any constraints to work.

The reference wetland information includes, but is not limited to, the following: target hydrology data, reference vegetation communities, target ground elevations, soils and hydrogeomorphology. This information is only necessary in the case that wetland enhancement or restoration is proposed.

The proposed conditions include, but are not limited to, the following: mapped areas of wetland restoration, enhancement and preservation, a table showing the acreage of each proposed mitigation type area, construction and silvicultural activities, timeline of activities, proposed hydrology, sediment and erosion control and planting plan. A post-construction monitoring plan shall include the success criteria and methodology for monitoring of the site. Much of this information is not necessary in the case of a wetland preservation site.

Conceptual Plan for Streams

The Design-Build Team shall conduct a survey of the existing channel features and adjacent areas to adequately define the stream morphology and to prepare the hydraulic model. Additionally, a morphological survey of at least one reference reach in the same region as the project stream shall be conducted to serve as a guide for the design. The existing channel and reference reach surveys include channel dimension, pattern, profile, bankfull identification and verification, and appropriate substrate analysis. These activities are not necessary for preservation sites.

The Design-Build Team shall provide a Level II Rosgen geomorphic classification of the existing stream and reference reach. Additionally, the Design-Build Team shall prepare the data for input into the sediment transport analysis and hydraulic model of the existing stream. The following calculations and ratios shall be developed for the existing channel, proposed channel, and reference reach. These calculations need only be shown in table form in the plan and do not need to be performed in the case of a preservation site.

1. Stream type (level II).
2. Drainage area (square miles)
3. Bankfull width (W_{bkf})(taken in straight section)
4. Bankfull mean depth (d_{bkf})
5. Width/depth ratio (W_{bkf}/d_{bkf})
6. Bankfull cross sectional area (A_{bkf})

7. Bankfull velocity (U_{bkf})
8. Bankfull discharge (Q_{bkf})
9. Bankfull maximum Depth (d_{max})
10. Ratio of bankfull max depth to bankfull mean depth (d_{max}/d_{bkf})
11. Width of flood prone area (W_{fpa})
12. Entrenchment ratio (W_{fpa}/W_{bkf})
13. Meander length (L_m)
14. Ratio of meander length to bankfull width (L_m/W_{bkf})
15. Radius of Curvature (Rc)
16. Ratio of Radius of Curvature to bankfull width (R_c/W_{bkf})
17. Belt width (W_{blt})
18. Meander width ratio (W_{blt}/W_{bkf})
19. Sinuosity (K, stream length/valley distance)
20. Average slope (S)
21. Riffle slope (S_{riff})
22. Ratio of riffle slope to mean
23. Pool slope (S_{pool})
24. Ratio of pool slope to average slope (S_{pool}/S_{ave})
25. Maximum pool depth (d_{pool})
26. Ratio of pool depth to average bankfull depth (d_{pool} / d_{bkf})
27. Pool width (W_{pool})
28. Ratio pool width to bankfull width (W_{pool}/ W_{bkf})
29. Pool/pool spacing
30. P/P spacing/W_{bkf}
31. Low Bank Height/Max Bankfull Depth

The mitigation plan document shall be a brief narrative (1-2 pages) of existing and proposed site conditions. The existing conditions shall include degrading factors, physiography, land use, plant communities, soils, hydrology, and wetland delineations. The description of the proposed site shall include planting plan, success criteria for monitoring and design assumptions with description of analysis and limiting factors associated with the proposed design and construction. A location map, the morphological table for the existing, proposed, and reference channels mentioned above, and existing and proposed channel cross sections, profiles and plan views shall be attached to the narrative. It is unnecessary to repeat any information that can be found in the attachments in the body of the narrative and unnecessary to provide much of this information if the stream is being proposed for preservation.

Natural Channel Stream Design

Data from the existing condition and reference reach surveys shall be used to design the dimension, pattern, and profile of the new channel. The Design-Build Team shall complete the proposed critical shear stress analysis. This analysis shall be used to ensure that the new channel does not aggrade or degrade. The sediment transport calculations shall be made on the existing channel, the reference reach channels, and the design channels for comparison. The hydrology and hydraulics shall include analysis of the

bankfull discharge along with the 10-year, 50-year and 100-year discharge. The hydraulic analysis shall consist of preparing a single section analysis of the existing and proposed stream geometry. The bankfull discharge shall be used to develop the proposed channel dimension and to assess performance while the larger discharges shall be used assess alteration to the flood stages.

Site Layout for Wetlands

The Design-Build Team shall refine the limits of the restoration and/or enhancement areas. The Design-Build Team shall conduct topographic surveys of the proposed wetland areas to supplement the existing aerial survey and topographic mapping provided by the Department. The surveys shall involve spot elevations in the existing wetlands adjacent to the proposed mitigation areas. The Design-Build Team shall develop the proposed grade elevations based on field visits, the Department aerial survey and topographic mapping, spot elevations, and gauge data. The elevations shall be shown on the existing topographic mapping. The existing and proposed design contours shall be depicted on the plan sheet. The proposed design shall depict all proposed elevations, cut/fill locations, ditch plug locations, site boundary, restoration/enhancement areas, preservation areas, and any additional information necessary to complete construction.

The existing and design cross sections shall be plotted and shown on cross section sheets. Typical design cross sections for the site shall be provided. Miscellaneous details, sequencing, etc. shall also be included on the plan sheets. The Design-Build Team shall produce a cut/fill and cross section plan as part of this task.

Site Layout for Streams

The existing and design longitudinal profiles shall be plotted. The design longitudinal profile will show the maximum cut depth (thalweg). The bankfull stage will be used as a control elevation to ensure that the bank height ratio is near or equal to one. The longitudinal profile will be iterative and proposed slopes will be based on design parameters and hydraulic analysis while also maintaining a bank height ratio of one. The existing and design cross sections will be plotted and shown on cross section sheets. Typical design cross sections for straight sections and pools will be shown. Cross sections will be iterated to ensure that the design bankfull dimensions are maintained while maintaining a low bank height ratio.

The Design-Build Team will also develop the horizontal alignments of the proposed channels. This will include computing the horizontal and vertical location of key channel features that are necessary for construction, such as the centers of radius of curvature, head of riffles, structure locations, and grade controls.

The morphological tables for existing, proposed and reference channels will be provided on a detail sheet. Miscellaneous details, sequencing, etc. will also be included on the plan sheets. The Design-Build Team will produce a construction-staking plan as part of this task.

Preliminary Construction Plans (60% Design)

The Design-Build Team shall prepare preliminary wetland restoration/enhancement and stream design plans based on the roadway plans for each site. The Design-Build Team shall include a morphological table in the detail sheets. The design plans shall consist of the following items in plan view on Roadway plan sheets (Scale 1:50).

For Wetlands:

- Typical sheet
- Detail sheet
- Existing conditions plan sheet - Include existing topography
- Proposed design plan sheet - Include contours
- Cross section layout sheet
- Planting plan detail sheet
- Cross sections sheet by station number

For Streams:

- Stream plan view on the Roadway plan sheet (Scale 1:50)
- 1 detail sheet to include:
    - Details-utilize NCDOT Standard Natural Stream Details (to be provided by the Department to the Design-Build Team)
    - Riffle and Pool typical sections
    - Profile with in-stream structure data
    - Horizontal curve data

The Design-Build Team shall provide 60% plans for review by the Project Development and Environmental Analysis Branch-Natural Environment Unit's Engineering Group a minimum of seven (7) weeks prior to the 4C meeting.

Prepare Final Design Plan and Mitigation Plan

The Design-Build Team shall address the Regulatory Agencies and NCDOT's comments immediately after review of the 60% design plans and 4C meeting. The Design-Build Team shall complete the requested changes and submit the mitigation and design plans to NCDOT for 90% review by the NEU ICI-On-site Mitigation and Engineering groups. Once the 90% review comments are addressed, the final mitigation and design plan shall be submitted with all information necessary to complete construction, as well as the project special provisions and specifications. The Design-Build Team shall include the final wetland and stream construction plans with the roadway construction plans.

Site Construction - General

Construction of the stream and wetland mitigation sites shall be done in accordance with the approved permit drawings, mitigation plan, design/construction plans, and special

provisions. The Design-Build Team shall follow all NCDOT standards and specifications set forth in the construction plans. The Design-Build Team shall ensure that the site designer shall be on-site as needed during the construction of the stream and wetland mitigation. Any and all alterations/changes to the approved design shall be approved by the Department/Engineer. All changes to the approved design shall be noted and included in the as-built plans. The as-built plans for the stream and wetland mitigation sites shall be submitted to NCDOT within 60 days of completion of the construction to meet permit requirements.

Site Construction – Wetlands

The Design-Build Team shall be responsible for any and all remediation activities at the sites through the end of the Twelve-Month Guarantee period as provided elsewhere in this RFP or for a longer period as offered by the Design-Build Team in their Technical Proposal. The Design-Built Team shall also be responsible for establishing any post construction monitoring criteria as stated in the approved permit/mitigation plan. This includes but is not limited to vegetation plots, groundwater and surface water monitoring gauge installation, and photo point locations. The Department shall provide all the groundwater and surface water monitoring gauges to the Design-Build Team for installation. The groundwater and surface water monitoring gauges shall be installed according to the Departments established installation protocol. The Design-Build Team shall use GPS and MicroStation to identify the locations of all vegetation plots, groundwater and surface water gauges, and photo point locations. This information shall then be provided to NCDOT in electronic as well as hard copy format within 60 days of completion of construction.

Site-Construction - Streams

The Design-Build Team shall be responsible for any and all remediation activities at the sites through final acceptance of the roadway project. The Design-Built Team shall also be responsible for establishing any post construction monitoring criteria as stated in the approved permit/mitigation plan. This includes but is not limited to permanent cross sections, longitudinal profile stationing, vegetation plots, and photo point locations. The Design-Build Team shall use GPS and MicroStation to compile this information. This information shall then be provided to NCDOT in electronic as well as hard copy format within 60 days of completion of construction.

Compensation

Since the quantity of on-site mitigation is still unknown due to dependence on the Design -Build/Merger process and right-of-way acquisition, the Design-Build Team shall not include the cost of constructing on-site stream and wetland mitigation in the Price Proposal. Instead payment shall be made through Supplemental Agreement for every foot and tenth of an acre of mitigation that is (1) approved for use by the agencies and NCDOT during the permitting process; (2) built in accordance with NCDOT standards; and (3) accepted by the Engineer at the completion of the project. Instead, the Design-

Build Team shall be paid, through supplemental agreement, $200 per linear foot of stream and $12,000 per acre of wetland for enhancement and restoration sites. No payment will be made for preservation sites.

The quantity of stream mitigation and wetland mitigation, measured as provided above, will be paid for at the unit price of $200 per linear foot of stream mitigation and $1,200 per tenth of an acre of wetland mitigation. The unit prices will be full compensation for construction of this mitigation; designer on-site as needed; installation of Department-supplied monitoring gauges; production of mitigation as-built plans; all remediation activities necessary until the end of the Twelve-Month Guarantee period as provided elsewhere in this RFP or for a longer period as offered by the Design-Build Team in their Technical Proposal; and development of location plans of all vegetation plots, monitoring gauges, cross sections, longitudinal profile, and photo point locations.

PUBLIC INFORMATION SCOPE OF WORK (6/18/07)

NCDOT will take the lead role on this project and be responsible for a portion of the public information efforts through the Department's IMPACT Team. The NCDOT responsibilities include:

- Organizing public meetings
- Providing media announcements
- Developing and producing informational print materials
- Soliciting and administering advertisements, as deemed necessary
- Mailings to the identified target audiences, including information development and postage.

The Design-Build Team shall coordinate with the Department to promote public awareness for this project. The Design-Build Team's responsibilities shall include:

- Providing details surrounding the impacts to the public
- Providing advance notice to the Department of upcoming project impacts
- Assisting the Department in the development of the target audience list
- Attending and / or speaking at public meetings
- Hand delivery of time sensitive informational materials.

The Design-Build Team shall hold an initial project coordination meeting with NCDOT one month prior to start of construction to discuss project impacts to the public. This information will be used by the Department to create a Public Information Plan.

The Design-Build Team shall inform the Department at least 3 weeks in advance of any construction activity that will have significant impact on the public, including, but not limited to, the start of construction, major traffic shifts, road closures, ramp closures, detours, night work and project completion.

NCDOT will develop, with the assistance of the Design-Build Team, the specific list of target audiences for this project. The following groups are identified as typical target audiences to receive informational materials:

- Governmental agencies
- Municipalities directly affected by construction
- Transportation services
- Emergency services
- Neighborhood groups and private homes
- Industry and businesses
- Chamber of Commerce
- Individual schools effected by the project
- County/City school systems
- Any other organization as deemed necessary by the Department.

The amount of public involvement required for this project is directly based on the Design-Build Team's Traffic Control Plan and construction details. As a minimum, the Design-Build Team shall be responsible for the following involvement:

- Public Meetings – If Beginning of Construction meeting for area businesses and residents is held, attending and / or speaking at this event.
- Distribution of Informational Materials - For beginning of construction and for all road / ramp closures with detour routes, the Design-Build Team shall be responsible for delivering time sensitive informational material provided by the NCDOT directly to portions of the target audience. Distribution responsibilities shall include all resources necessary to hand deliver the informational materials to the affected target audiences.

The Design-Build Team shall include in their Lump Sum Bid price for the project, all costs associated with their involvement in the Public Information Scope of Work.

A web site is not required for this project. However, if the Design-Build Team proposes a project web site maintained on a NCDOT server, all web site development must use the current NCDOT ITS Operations project web design template and must adhere to current software development, security and technical infrastructure standards. All web site design and implementation shall be coordinated with Mr. Ryan Nolan, Internet Web Content Manager, NCDOT Emerging Technologies. The Design-Build Team shall indicate in their Technical Proposal their intent to utilize a web site for this project. All costs associated with setting up and maintaining this website shall be included in the lump sum bid for this project.

ENVIRONMENTAL PERMITS SCOPE OF WORK (06-18-07)

General

The Department will allow no direct contact between the Design-Build Team and representatives of the environmental agencies. No contact between the Design-Build Team and the environmental agencies shall be allowed either by phone, e-mail or in person, without representatives of the Department's Project Development & Environmental Analysis Branch's (PDEA) Branch and / or the Division's Environmental Officer present. A representative from the Alternative Delivery Unit shall be included on all correspondence.

The Design-Build Team shall be responsible for preparing all documents necessary for the Department to obtain the environmental permits for the construction requirements of this project. Permit applications shall be required for the US Army Corps of Engineers Section 404 Permit, and the NC Department of Natural Resources (DENR), Division of Water Quality (DWQ) Section 401 Water Quality Certification. The Design-Build Team shall not begin ground-disturbing activities, including utility relocation, until all environmental permits have been issued (this does not include permitted investigative borings covered under a Nationwide Permit #6).

The Department has reached Concurrence Point 4A in the Merger 01 Process used by the environmental agencies and the Department to obtain environmental permits for highway projects. The Design-Build Team shall be responsible for conducting the Concurrence Point 4B and 4C meetings. 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 Department shall not allow any contract time extensions associated with this additional coordination. The Design-Build Team shall follow the appropriate details in the document titled "Merger 01 Implementation Team – Merger 01 Process Information" which will be provided to the short-listed firms.

Unless the Design-Build Team proposes earlier dates in their Technical Proposal, the Department will schedule the 4B and 4C meetings for U-3412A for March 2008 and June 2008, respectively. The Design-Build Team shall clearly identify in their Technical Proposal what months they would like the Department to schedule these meetings. Failure on the part of the Design-Build Team to meet the dates, as identified in their Technical Proposal, places all responsibility for associated delays solely in the hands of the Design-Build Team.

The Design-Build Team shall be bound by the terms of all signed planning documents and approved minutes and commitments of all concurrence meetings and shall be held accountable for meeting all permit conditions. The Design-Build Team shall be required to staff any personnel the Design-Build Team deems necessary to provide permit compliance.

Major Permit Application Process

It shall be the Design-Build Team's responsibility to acquire information and prepare permit drawings that reflect the impacts and minimization efforts resulting from the Merger 01 Process and as designed by the Design-Build Team. Further it shall be the Design-Build Team's responsibility to provide these permit impact sheets (drawings) depicting the design and construction details to the Department as part of the permit application. The Design-Build Team shall be responsible for developing the permit application for all jurisdictional impacts. The permit application shall include all utility relocations. The permit application shall consist of, at a minimum, the following:

- Cover Letter
- Minutes from the 4B and 4C meetings
- Permit drawings
- Half-size plans
- Completed forms (Section 404, etc.) appropriate for impacts

The Department shall re-verify and update, as needed, the required environmental data that expires prior to the completion of the activity causing the impact in the jurisdictional areas. These include, but are not limited to, federally protected species, re-verification of wetland jurisdictional areas, historic and archaeological sites, and 303d (impaired) streams.

Direct coordination between the Design-Build Team, the Department's Alternative Delivery Engineer, Resident Engineer, and the Office of Natural Environment (PDEA-NEU) shall be necessary to ensure proper permit application development. Upon completion of the permit application package, the Design-Build Team shall concurrently forward the package to the State Alternative Delivery Engineer, Resident Engineer, Division Environmental Officer (DEO) and PDEA-NEU for review and approval. The Department will subsequently forward the package to the appropriate agencies to have the permit application placed on public notice.

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.

Any temporary construction measures, including de-watering, construction access, etc. shall be addressed in the permit application. Impacts that result from so-called temporary measures may not be judged to be temporary impacts by the agencies. These issues must be addressed and reviewed by PDEA-NEU prior to the 4B and 4C meetings and resolved with the agencies during the 4B and 4C meetings.

The Design-Build Team shall clearly indicate the location of and impacts of haul roads and utility relocations on jurisdictional areas. The Design-Build Team shall identify all proposed borrow and waste sites. These details shall be included in the permit application data. Further, 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.

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 shall 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 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 permit application, submit the permit application request to the Department and obtain approval for the permit from the environmental agencies. Agency review time will be approximately 90 days from receipt of a "complete" package. No requests for additional contract time or compensation shall 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 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 the team's control, and the 11-month period has been exceeded. If 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 to review any permit applications and/or modifications begin only after a fully complete and 100% accurate submittal.

Mitigation Responsibilities of the Design-Build Team

The Design-Build Team shall be responsible for examining and providing economically feasible on-site mitigation for U-3412A. See the "On-Site Mitigation Scope of Work" for details.

The Department will be responsible for any remaining compensatory mitigation for unavoidable impacts to wetlands and surface waters due to project construction from the Ecosystem Enhancement Program.

Any changes proposed by the Design-Build Team to any design or construction details provided by the Department shall be approved by the Department prior to being submitted to the resource agencies for their approval.

Should additional jurisdictional impacts result from revised design / construction details, suitable compensatory mitigation for wetlands and / or streams shall be the sole responsibility of the Design-Build Team. Therefore, it is important to note that additional mitigation shall be approved by the agencies and such approval shall require, at a minimum, the preparation and approval of a mitigation plan before permit modification(s) is / are approved and before construction shall commence.

The Design-Build Team shall analyze all new areas to be impacted that have not been analyzed during the NEPA process and preparation of permit applications. This analysis shall include performing all environmental assessments. These assessments shall require the Design-Build Team to engage the services of a competent environmental consultant to conduct a full environmental investigation to include, but not be limited to, Federally Listed Threatened and Endangered Species, wetlands, streams, avoidance and minimization in jurisdictional areas, compensatory mitigation, FEMA compliance, and historical, archaeological, and cultural resources surveys in these areas. The environmental consultant shall obtain concurrence through PDEA-NEU from the United States Fish and Wildlife Service to document compliance with Section 7 of the *Endangered Species Act* for those species requiring such concurrence. In addition, the Design-Build Team shall identify additional mitigation required; identify the amount of time the modification will take beyond the 11-month period; and fulfill any other requirements that may be imposed by the permitting agencies to obtain the permit modification. Any contract extensions resulting from additional environmental assessments required by the Design-Build Team's design and / or construction details impacting areas outside those previously analyzed through the NEPA Process shall be solely at the Department's discretion.

If any staging areas are located outside the project right-of-way, the Design-Build Team shall engage the services of a competent environmental consultant to conduct a full environmental investigation to include, but not be limited to, Federally Listed Threatened and Endangered Species, wetlands, streams, avoidance and minimization in jurisdictional areas, compensatory mitigation, FEMA compliance, and historical, archaeological, and cultural resources surveys in these areas.

Commitments

The NCDOT is committed to incorporating all reasonable and practicable design features to avoid and minimize wetland impacts and to provide full compensatory mitigation of all remaining wetland impacts. Avoidance measures were taken during the planning and NEPA Process and minimization measures were incorporated as part of the preliminary project design. The Design-Build Team shall incorporate these avoidance and minimization features, plus any minimization identified during the interagency meeting, into the design.

All work by the Design-Build Team shall be accomplished in strict compliance with the plans submitted with the Section 404 and 401 permit applications and in compliance with all conditions of all permits and certifications issued by the agencies. The Design-Build Team shall provide each of its contractors and / or agents associated with the construction or maintenance of this project with a copy of the permits.

The Design-Build Team shall strictly adhere to these commitments, as well as others, including but not limited to, those included in the EA, FONSI, all permits and interagency meetings.

Indirect and Cumulative Effects

The Department will provide the Design-Build Team with an ICE report completed by the Department PDEA-NEU in April, 2005. PDEA-NEU will address any questions related to the ICE during the merger process.

Archeological Sites

If the Design-Build Team discovers any previously unknown historic or archeological remains while accomplishing the authorized work, they shall immediately notify NCDOT Staff Archaeologist and / or NCDOT Project Development Manager, as listed below, who will initiate the required State / Federal coordination. A representative from the Alternative Delivery Unit shall also be notified. All questions regarding these sites shall be addressed to Mr. Matthew Wilkerson, NCDOT Archaeology and Mr. Paul Mohler, NCDOT Staff Archaeologist or Mr. Rob Hanson, PE, NCDOT Project Development Manager.

***** STANDARD SPECIAL PROVISIONS *****

PLANT AND PEST QUARANTINES
(Imported Fire Ant, Gypsy Moth, Witchweed, And Other Noxious Weeds)
(3-18-03) DB1 G130

Within Quarantined Area
This project may be within a county regulated for plant and/or pests. If the project or any part of the Design Build Team's operations is located within a quarantined area, thoroughly clean all equipment prior to moving out of the quarantined area. Comply with federal/state regulations by obtaining a certificate or limited permit for any regulated article moving from the quarantined area.

Originating in a Quarantined County
Obtain a certificate or limited permit issued by the N.C. Department of Agriculture/United States Department of Agriculture. Have the certificate or limited permit accompany the article when it arrives at the project site.

Contact
Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-733-6932, or **http://www.ncagr.com/plantind/** to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include
1. Soil, sand, gravel, compost, peat, humus, muck, and decomposed manure, separately or with other articles. This includes movement of articles listed above that may be associated with cut/waste, ditch pulling, and shoulder cutting.
2. Plants with roots including grass sod.
3. Plant crowns and roots.
4. Bulbs, corms, rhizomes, and tubers of ornamental plants.
5. Hay, straw, fodder, and plant litter of any kind.
6. Clearing and grubbing debris.
7. Used agricultural cultivating and harvesting equipment.
8. Used earth-moving equipment.
9. Any other products, articles, or means of conveyance, of any character, if determined by an inspector to present a hazard of spreading imported fire ant, gypsy moth, witchweed or other noxious weeds.

SHOULDER AND FILL SLOPE MATERIAL (Lump Sum Grading)
(5-21-02) SP2 R45

Perform the required shoulder and slope construction for this project in accordance with the applicable requirements of Section 226 of the *Standard Specifications* except as follows:

Construct the top 6 inches 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 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.

REINFORCED BRIDGE APPROACH FILLS

7-18-06 DB4 R 01

Description

This work consists of all work necessary to construct reinforced bridge approach fills in accordance with these provisions and the plans, and as directed by the Engineer.

Materials

Geomembrane

Provide geomembrane that is impermeable, composed of polyethylene polymers or polyvinyl chloride, and meets the following physical requirements:

Property	Requirements	Test Method
Thickness	25 mils Minimum	ASTM D1593
Tensile Strength at Break	100 lb/inch Minimum	ASTM D638
Puncture Strength	40 lbs Minimum	ASTM D4833
Moisture Vapor Transmission Rate	0.018 ounce/yard^2 per Day Maximum	ASTM E96

Fabric

Refer to Section 1056 for Type 2 Engineering Fabric and the following:

Use a woven fabric consisting of strong rot-proof synthetic fibers such as polypropylene, polyethylene, or polyester formed into a stable network such that the filaments or yarns retain their relative positions to each other.

Fabric Property	Requirements	Test Method
Minimum Flow Rate	2 gallons/min/square foot	ASTM D 4491

Lamination of fabric sheets to produce the physical requirements of a fabric layer will not be accepted. Furnish letters of certification from the manufacturer with each shipment of the fabric and geomembrane attesting that the material meets the requirements of this provision; however, the material is subject to inspection, test, or rejection by the Engineer at any time.

During all periods of shipment and storage, wrap the geomembrane and fabric in a heavy-duty protective covering to protect the material from ultraviolet rays. After the protective wrapping has been removed, do not leave the material uncovered under any circumstances for longer than 4 days.

Select Material

Provide select material meeting the requirements of Class III, Type 1 or Type 2, or Class V select material of Section 1016 of the *2006 Standard Specifications*. When select material is required under water, use select material class V only, up to one foot above the existing water elevation.

4 inch Diameter Corrugated Drainage Pipe and Fittings

Provide pipe and fittings that meet all the applicable requirements of Section 815 or 816 of the *2006 Standard Specifications*.

Construction Methods

Place the geomembrane and fabric as shown on the plans or as directed by the Engineer. Perform the excavation for the fabric reinforced fill to the limits shown on the plans. Provide an excavated surface free of obstructions, debris, pockets, stumps, and cleared of all vegetation. The geomembrane or fabric will be rejected if it has defects, rips, holes, flaws, deterioration or damage incurred during manufacture, transportation, handling or storage. Lay all layers smooth, and free from tension, stress, folds, wrinkles or creases. Place all the fabric layers with the machine direction (roll direction) parallel to the centerline of the roadway. A minimum roll width of 10.0 feet for the fabric is required. Overlap geomembrane or fabric splices parallel to the centerline of the roadway a minimum of 18 inches. Geomembrane or fabric splices parallel to the backwall face will not be allowed.

Deposit and spread select material in successive, uniform, approximately horizontal layers of not more than 10 inches in depth, loose measurement, for the full width of the cross section, and keep each layer approximately level. Place and compact each layer of select material fill no more than 10 inches thick with low ground pressure equipment. Use hand operated equipment to compact the fill material within three feet of the backwall and wingwalls as directed by the Engineer. Compact select material to a density equal to at least 95% of that obtained by compacting a sample of the material in accordance with AASHTO T99 as modified by the Department. Compact the top eight inches of select material to a density to at least 100% of that obtained by compacting a sample of the material in accordance with AASHTO T99 as modified by the Department. Density requirements are not applicable to select material, class V; however compact the fill with at least four passes of low ground pressure equipment on the entire surface as directed by the Engineer. The compaction of each layer of select material shall be inspected and approved by the Department prior to the placement of the next fill layer. No equipment will be allowed to operate on the drainage pipe or any geomembrane/fabric layer until it is covered with at least six inches of fill material. Compaction shall not damage the drainage pipe, geomembrane, or fabric under the fill. Cover the geomembrane/fabric with a layer of fill

material within four days after placement of the geomembrane/fabric. Geomembrane and fabric that are damaged as a result of installation will be replaced as directed by the Department at no additional cost.

Place the geomembrane on the ground, and attach and secure it tightly to the vertical face of the backwall and wingwalls with adhesives, duct-tape, nails or any other method approved by the Engineer. Place the first fabric layer on the surface of the geomembrane with the same dimensions of the geomembrane. No material or void is allowed between the geomembrane and the first fabric layer. Place and fold the remaining fabric layers on the edges as shown on the plans or as directed by the Engineer. Provide vertical separation between fabric layers as specified on the plans. The number of fabric layers will be shown in the plans.

Place four inch diameter perforated drainage pipe along the base of the backwall and sloped to drain as shown on the plans. Completely wrap perforated drainage pipe and #78M stone with Type 2 Engineering Fabric as shown on the plan detail. Install a pipe sleeve through the bottom of or under the wing wall prior to placing concrete for the wing wall. The pipe sleeve shall be of adequate strength to withstand the wingwall load. Place the pipe sleeve in position to allow the drainage pipe to go through the wing wall with a proper slope. Connect four-inch diameter nonperforated (plain) drainage pipe with a coupling to the perforated pipe near the inside face of the wingwall. Place the nonperforated drainage pipe through the pipe sleeve, extend down to the toe of the slope and connect, to a ditch or other drainage systems as directed by the Engineer. For bridge approaches in cut sections where no side slope is available, direct the drainage pipe outlet to the end slope down to the toe using elbows as directed by the Engineer.

AGGREGATE BASE COURSE

12-19-06 SP5R03

Revise the *2006 Standard Specifications* as follows:

Page 5-11, Article 520-5 Hauling and Placing Aggregate Base Material, 6th paragraph, replace the first sentence with the following:

Base course that is in place on November 15 shall have been covered with a subsequent layer of pavement structure or with a sand seal. Base course that has been placed between November 16 and March 15 inclusive shall be covered within 7 calendar days with a subsequent layer of pavement structure or with a sand seal.

ASPHALT PAVEMENTS – SUPERPAVE

(9-19-06) SP6 R01

Revise the *2006 Standard Specifications* as follows:

Page 6-2, Article 600-9 Measurement and Payment

Delete the second paragraph.

Page 6-12, 609-5(C)2(c) add after (AASHTO T 209):

or ASTM D 2041

Page 6-13, last line on page & Page 6-14, Subarticle 609-5(C)(2)(e), delete and substitute the following:

(e) Retained Tensile Strength (TSR) - (AASHTO T 283 Modified), add subarticle (1) Option 1 before the first paragraph.

(1) Option 1

Add subarticle (2) Option 2 and the following sentence as the first sentence of the second paragraph:

(2) Option 2

Mix sampled from truck at plant with one set of specimens prepared by the Contractor and then tested jointly by QA and QC at a mutually agreed upon lab site within the first 7 calendar days after beginning production of each new mix design.

Page 6-28, 610-3(A) Mix Design-General, third sentence of the fourth paragraph:

Substitute 20% for 15%

First, second and third sentences of the fifth paragraph:

Substitute 20% for 15%

Page 6-44, 610-8, third full paragraph, replace the first sentence with the following:

Use the 30 foot minimum length mobile grade reference system or the non-contacting laser or sonar type ski *with at least four referencing stations mounted on the paver at a minimum length of 24 feet* to control the longitudinal profile when placing the initial lanes and all adjacent lanes of all layers, including resurfacing and asphalt in-lays, unless otherwise specified or approved.

Page 6-54, Article 620-4, add the following pay item:

Pay Item	**Pay Unit**
Asphalt Binder for Plant Mix, Grade PG 70-28	Ton

Page 6-69, Table 660-1 **Material Application Rates and Temperatures**, add the following:

Type of Coat	**Grade of Asphalt**	**Asphalt Rate gal/yd^2**	**Application Temperature ^{0}F**	**Aggregate Size**	**Aggregate Rate lb./sq. yd. Total**
Sand Seal	CRS-2 or CRS-2P	0.22-0.30	150-175	Blotting Sand	12-15

Page 6-75, 660-9(B), add the following as sub-item (5)

(5) Sand Seal

Place the fully required amount of asphalt material in one application and immediately cover with the seal coat aggregate. Uniformly spread the fully required amount of aggregate in one application and correct all non-uniform areas prior to rolling.

Immediately after the aggregate has been uniformly spread, perform rolling.

When directed, broom excess aggregate material from the surface of the seal coat.

When the sand seal is to be constructed for temporary sealing purposes only and will not be used by traffic, other grades of asphalt material meeting the requirements of Articles 1020-6 and 1020-7 may be used in lieu of the grade of asphalt required by Table 660-1 when approved.

Page 10-41, Table 1012-1, add the following:

Mix Type	Course Aggregate Angularity [(b)] ASTM D5821	Fine Aggregate Angularity % Minimum AASHTO T304 Method A	Sand Equivalent % Minimum AASHTO T176	Flat & Elongated 5:1 Ratio % Maximum ASTM D4791 Section 8.4
S 9.5 D	100/100	45	50	10

Page 10-45, Replace Table 1012-2 with the following:

TABLE 1012-2
NEW SOURCE RAP GRADATION and BINDER TOLERANCES
(Apply Tolerances to Mix Design Data)

Mix Type	0-20% RAP			21-25% RAP			26%+ RAP		
Sieve (mm)	Base	Inter.	Surf.	Base	Inter.	Surf.	Base	Inter.	Surf.
P_b, %		± 0.7%			± 0.4%			± 0.3%	
1 1/2" (37.5)	±10	-	-	±7	-	-	±5	-	-
3/4" (19.0)	±10	±10	-	±7	±7	-	±5	±5	-
1/2" (12.5)	-	±10	±6	-	±7	±3	-	±5	±2
3/8" (9.5)	-	-	±8	-	-	±5	-	-	±4
No. 4 (4.75)	±10	-	±10	±7	-	±7	±5	-	±5
No. 8 (2.36)	±8	±8	±8	±5	±5	±5	±4	±4	±4
No.16 (1.18)	±8	±8	±8	±5	±5	±5	±4	±4	±4
No. 30 (0.600)	±8	±8	±8	±5	±5	±5	±4	±4	±4
No. 50	-	-	±8	-	-	±5	-	-	±4

(0.300)									
No. 200 (0.075)	±4	±4	±4	±2	±2	±2	±1.5	±1.5	±1.5

ASPHALT PAVER - FIXED AND MOBILE STRING LINE

10-21-03 DB6 R07

The Design Build Team's attention is directed to Article 610-8 of the *2006 Standard Specifications* dealing with automatically controlled screeds on the asphalt pavement spreaders.

A mobile string line consisting of a 30 to 40 foot long ski is required for the widening and resurfacing on this project. A fixed string line is required for the new pavement construction on this project.

ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES

(10-6-05) DB6 R15

The approximate asphalt binder content of the asphalt concrete plant mixtures used on this project will be as follows:

Asphalt Concrete Base Course	Type B 25.0_	4.3%
Asphalt Concrete Intermediate Course	Type I 19.0_	4.7%
Asphalt Concrete Surface Course	Type S 4.75_	7.0%
Asphalt Concrete Surface Course	Type SF 9.5_	6.5%
Asphalt Concrete Surface Course	Type S 9.5_	6.0%
Asphalt Concrete Surface Course	Type S 12.5_	5.5%

The actual asphalt binder content will be established during construction by the Engineer within the limits established in the *2006 Standard Specifications* or Project Special Provisions.

ASPHALT PLANT MIXTURES

(7-1-95) DB6 R20

Place asphalt concrete base course material in trench sections with asphalt pavement spreaders made for the purpose or with other equipment approved by the Engineer.

FINAL SURFACE TESTING - ASPHALT PAVEMENTS

(4/16/07) DB6R45

Perform acceptance testing of the longitudinal profile of the finished pavement surface in accordance with these provisions using a North Carolina Hearne Straightedge (Model No. 1). Furnish and operate the straightedge to determine and record the longitudinal profile of the pavement on a continuous graph. Final surface testing is an integral part of the paving operation and is subject to observation and inspection by the Engineer as deemed necessary.

Push the straightedge manually over the pavement at a speed not exceeding 2 miles per hour (3 kilometers per hour). For all lanes, take profiles in the right wheel path approximately 3 ft (1 m) from the right edge of pavement in the same direction as the paving operation, unless otherwise approved due to traffic control or safety considerations. Make one pass of the

straightedge in each full width travel lane. The full lane width should be comparable in ride quality to the area evaluated with the Hearne Straightedge. If deviations exist at other locations across the lane width, utilize a 10 foot non-mobile straightedge or the Hearne Straightedge to evaluate which areas may require corrective action. Take profiles as soon as practical after the pavement has been rolled and compacted but in no event later than 24 hours following placement of the pavement, unless otherwise authorized by the Engineer. Take profiles over the entire length of final surface travel lane pavement exclusive of -Y- line travel lanes less than or equal to 300 feet (90 meters) in length, turn lanes less than or equal to 300 feet (90 meters) in length, structures, approach slabs, paved shoulders, loops, and tapers or other irregular shaped areas of pavement, unless otherwise approved by the Engineer. Test in accordance with this provision all mainline travel lanes, full width acceleration or deceleration lanes, -Y- line travel lanes greater than 300 feet (90 meters) in length, ramps, full width turn lanes greater than 300 feet (90 meters) in length, and collector lanes.

At the beginning and end of each day's testing operations, and at such other times as determined necessary by the Engineer, operate the straightedge over a calibration strip so that the Engineer can verify correct operation of the straightedge. The calibration strip must be a 100 ft (30 m) section of pavement that is reasonably level and smooth. Submit each day’s calibration graphs with that day’s test section graphs to the Engineer. Calibrate the straightedge in accordance with the current NCDOT procedure titled "North Carolina Hearne Straightedge - Calibration and Determination of Cumulative Straightedge Index". Copies of this procedure may be obtained from the Department's Pavement Construction Section.

Plot the straightedge graph at a horizontal scale of approximately 25 ft per inch (3 m per cm) with the vertical scale plotted at a true scale. Record station numbers and references (bridges, approach slabs, culverts, etc.) on the graphs, and distances between references/stations must not exceed 100 ft (30 m). Have the operator record the Date, Project No., Lane Location, Wheel Path Location, Type Mix, and Operator’s Name on the graph.

Upon completion of each day's testing, evaluate the graph, calculate the Cumulative Straightedge Index (CSI), and determine which lots, if any, require corrective action. Document the evaluation of each lot on a QA/QC-7 form. Submit the graphs along with the completed QA/QC-7 forms to the Engineer, within 24 hours after profiles are completed, for verification of the results. The Engineer will furnish results of their acceptance evaluation to the Design-Build Team within 48 hours of receiving the graphs. In the event of discrepancies, the Engineer’s evaluation of the graphs will prevail for acceptance purposes. The Engineer will retain all graphs and forms.

Use blanking bands of 0.2 inches, 0.3 inches, and 0.4 inches (5 mm, 7.5 mm, and 10 mm) to evaluate the graph for acceptance. The 0.2 inch and 0.3 inch (5 mm and 7.5 mm) blanking bands are used to determine the Straightedge Index (SEI), which is a number that indicates the deviations that exceed each of the 0.2 inch and 0.3 inch (5 mm and 7.5 mm) bands within a 100 ft (30 m) test section. The Cumulative Straightedge Index (CSI) is a number representing the total of the SEIs for one lot, which consist of not more than 25 consecutive test sections. In addition, the 0.4 inch (10 mm) blanking band is used to further evaluate deviations on an individual basis. The Cumulative Straightedge Index (CSI) will be determined by the Engineer

in accordance with the current procedure titled "North Carolina Hearne Straightedge - Calibration and Determination of Cumulative Straightedge Index".

The pavement will be accepted for surface smoothness on a lot by lot basis. A test section represents pavement one travel lane wide not more than 100 ft (30 m) in length. A lot will consist of 25 consecutive test sections, except that separate lots will be established for each travel lane, unless otherwise approved by the Engineer. In addition, full width acceleration or deceleration lanes, ramps, turn lanes, and collector lanes, will be evaluated as separate lots.

If during the evaluation of the graphs, 5 lots (mainline travel lanes and full width -Y- line travel lanes greater than 300 feet in length only) require corrective action, then proceed on limited production for unsatisfactory laydown in accordance with Article 610-12. Proceeding on limited production is based upon the Design-Build Team's initial evaluation of the straightedge test results and must begin immediately upon obtaining those results. Additionally, the Engineer may direct the Design-Build Team to proceed on limited production in accordance with Article 610-12 due to unsatisfactory laydown or workmanship.

Limited production for unsatisfactory laydown is defined as being restricted to the production, placement, compaction, and final surface testing of a sufficient quantity of mix necessary to construct only 2500 feet (750 meter) of pavement at the laydown width. Once this lot is complete, the final surface testing graphs will be evaluated jointly by the Design-Build Team and the Engineer. Remain on limited production until such time as acceptable laydown results are obtained or until three consecutive 2500 foot (750 meter) sections have been attempted without achieving acceptable laydown results. The Engineer will determine if normal production may resume based upon the CSI for the limited production lot and any adjustments to the equipment, placement methods, and/or personnel performing the work. Once on limited production, the Engineer may require the Design-Build Team to evaluate the smoothness of the previous asphalt layer and take appropriate action to reduce and/or eliminate corrective measures on the final surface course. Additionally, the Design-Build Team may be required to demonstrate acceptable laydown techniques off the project limits prior to proceeding on the project.

If the Design-Build Team fails to achieve acceptable laydown results after three consecutive 2500 foot (750 meter) sections have been attempted, cease production of that mix type until such time as the cause of the unsatisfactory laydown results can be determined.

As an exception, the Engineer may grant approval to produce a different mix design of the same mix type if the cause is related to mix problem(s) rather than laydown procedures. If production of a new mix design is allowed, proceed under the limited production procedures detailed above.

After initially proceeding under limited production, the Design-Build Team shall immediately notify the Engineer if any additional lot on the project requires corrective action. The Engineer will determine if limited production procedures are warranted for continued production.

If the Design-Build Team does not operate by the limited production procedures as specified above, the 5 lots, which require corrective action, will be considered unacceptable and may be subject to removal and replacement.

The adjustment schedule for the Cumulative Straightedge Index (CSI) test results per lot is as follows:

Adjustment Schedule for Cumulative Straightedge Index (CSI) (Obtained by adding SE Index of up to 25 consecutive 100 ft. (30m) sections)		
***CSI**	**ACCEPTANCE CATEGORY**	**CORRECTIVE ACTION**
0-0	Acceptable	None
1-0 or 2-0	Acceptable	None
3-0 or 4-0	Acceptable	None
Any other Number	Unacceptable	Required

***Either Before or After Corrective Actions**

Correct any deviation that exceeds a 0.3 inch (7.5 mm) blanking band such that the deviation is reduced to 0.2 inches (5.0 mm) or less.

Corrective actions shall be performed at the Design-Build Team's expense and shall be presented for evaluation and approval by the Engineer prior to proceeding. Any corrective action performed shall not reduce the integrity or durability of the pavement which is to remain in place. Corrective action for deviation repair may consist of overlaying or removing and replacing. Scraping of the pavement with any blade type device will not be allowed as a corrective action. Provide overlays of the same type mix, full roadway width, and to the length and depth established by the Engineer. Tapering of the longitudinal edges of the overlay will not be allowed.

Take corrective actions as specified if the CSI indicates “Required” corrective action. The CSI after corrective action should meet or exceed “Acceptable” requirements.

Where corrective action is required, the test section(s) requiring corrective action will be retested, unless the Engineer directs the retesting of the of the entire lot.

Test sections and/or lots that are initially tested by the Design-Build Team which indicate excessive deviations such that corrective action is required, may be re-rolled with asphalt rollers while the mix is still warm and in a workable condition, to possibly correct the problem. In this instance, reevaluation of the test section(s) must be completed within 24 hours of pavement placement and these test results will serve as the initial test results.
Areas excluded from testing by the N.C. Hearne Straightedge will be tested by using a non-mobile 10-foot (3m) straightedge. Assure that the variation of the surface from the testing edge of the straightedge between any two contact points with the surface is not more than 1/8

inch (3mm). Correct deviations exceeding the allowable tolerance in accordance with the corrective actions specified above, unless the Engineer permits other corrective actions.

Furnish the North Carolina Hearne Straightedge(s) necessary to perform this work. Maintain responsibility for all costs relating to the procurement, handling, and maintenance of these devices. The Department has entered into a license agreement with a manufacturer to fabricate, sell, and distribute the N.C. Hearne Straightedge. The Department's Pavement Construction Section may be contacted for the name of the current manufacturer and the approximate price of the straightedge.

STREET SIGNS AND MARKERS AND ROUTE MARKERS
(7-1-95) DB9 R01

Move any existing street signs, markers, and route markers out of the construction limits of the project and install the street signs and markers and route markers so that they will be visible to the traveling public if there is sufficient right of way for these signs and markers outside of the construction limits.

Near the completion of the project and when so directed by the Engineer, move the signs and markers and install them in their proper location in regard to the finished pavement of the project.
Stockpile any signs or markers that cannot be relocated due to lack of right of way, or any signs and markers that will no longer be applicable after the construction of the project, at locations directed by the Engineer for removal by others.

The Design-Build Team shall be responsible to the owners for any damage to any street signs and markers or route markers during the above described operations.

STEEL U-CHANNEL POSTS
(7-18-06) DB9 R02

Amend the *2006 Standard Specifications* as follows:

Page 9-15 Subarticle 903-3(D) first paragraph, last sentence, delete the last sentence and add the following:

Use posts of sufficient length to permit the appropriate sign mounting height. Spliced posts are not permitted on new construction.

AGGREGATE PRODUCTION
(11-20-01) DB10 R05

Provide aggregate from a producer who utilizes the new Aggregate Quality Control / Quality Assurance Program that is in effect at the time of shipment.

No price adjustment is allowed to Design-Build Team or producers who utilize the new program. Participation in the new program does not relieve the producer of the responsibility of complying

with all requirements of the *2006 Standard Specifications*. Copies of this procedure are available upon request from the Materials and Test Unit.

CONCRETE BRICK AND BLOCK PRODUCTION

(11-20-01) DB10 R10

Provide concrete brick and block from a producer who utilizes the new Solid Concrete Masonry Brick / Unit Quality Control / Quality Assurance Program that is in effect on the date that material is received on the project.

No price adjustment is allowed to Design-Build Team or producers who utilize the new program. Participation in the new program does not relieve the producer of the responsibility of complying with all requirements of the *2006 Standard Specifications*. Copies of this procedure are available upon request from the Materials and Test Unit.

PORTLAND CEMENT CONCRETE (Alkali-Silica Reaction)

2-20-07 SP10 R16

Revise the *2006 Standard Specifications* as follows:

Article 1024-1(A), replace the 2nd paragraph with the following:

Certain combinations of cement and aggregate exhibit an adverse alkali-silica reaction. The alkalinity of any cement, expressed as sodium-oxide equivalent, shall not exceed 1.0 percent. For mix designs that contain non-reactive aggregates and cement with an alkali content less than 0.6%, straight cement or a combination of cement and fly ash, cement and ground granulated blast furnace slag or cement and microsilica may be used. The pozzolan quantity shall not exceed the amount shown in Table 1024-1. For mixes that contain cement with an alkali content between 0.6% and 1.0%, and for mixes that contain a reactive aggregate documented by the Department, regardless of the alkali content of the cement, use a pozzolan in the amount shown in Table 1024-1.

Obtain the list of reactive aggregates documented by the Department at:

http://www.ncdot.org/doh/operations/materials/pdf/quarryasrprob.pdf

Table 1024-1

Pozzolans for Use in Portland Cement Concrete

Pozzolan	*Rate*
Class F Fly Ash	20% by weight of required cement content, with 1.2 lbs Class F fly ash per lb of cement replaced
Ground Granulated Blast Furnace Slag	35%-50% by weight of required cement content with 1 lb slag per lb of cement replaced
Microsilica	4%-8% by weight of required cement content, with 1 lb microsilica per lb of cement replaced

GLASS BEADS

(7-18-06) SP10 R35

Revise the *2006 Standard Specifications* as follows:

Page 10-223, 1087-4(C) Gradation & Roundness

Replace the second sentence of the first paragraph with the following:

All Drop-On and Intermixed Glass Beads shall be tested in accordance with ASTM D1155.

Delete the last paragraph.

ENGINEERING FABRICS TABLE 1056-1

(7-18-06) SP10 R40

Revise the *2006 Standard Specifications* as follows:

Page 10-100, Table 1056-1, replace the values for Trapezoidal Tear Strength with the following:

Physical Property	ASTM Test Method	Type 1	Type 2	Type 3		Type 4
				Class A	Class B	
Typical Applications		Shoulder Drain	Under Riprap	Temporary Silt Fence		Soil Stabilization
Trapezoidal Tear Strength	D4533	*45* lb	*75* lb	--	--	*75* lb

PAINT SAMPLING AND TESTING

(8-15-06) DB10 R 45

Revise the *2006 Standard Specifications* as follows:

Page 10-190, Article 1080-4, Delete the first paragraph and replace with the following:

All paint will be sampled, either at the point of manufacture or at the point of destination. Inspection and sampling will be performed at the point of manufacture wherever possible. The Design-Build Team shall not begin painting until the analysis of the paint has been performed, and the paint has been accepted.

PORTABLE CONCRETE BARRIER

(2-20-07) DB10 R50

The *2006 Standard Specifications* is revised as follows:

Page 10-245, Article 1090-1(A) General, add the following after the first sentence:

The requirement for approved galvanized connectors will be waived if the barrier remains the property of the Design-Build Team.

CHANGEABLE MESSAGE SIGNS

(11-21-06) DB11 R 11

Revise the *2006 Standard Specifications* as follows:

Page 11-9, Article 1120-3, Replace the 3rd sentence with the following:

Sign operator will adjust flash rate so that no more than two messages will be displayed and be legible to a driver when approaching the sign at the posted speed.

TEMPORARY SHORING

(2-20-07) DB11 R02

Description

Design and construct temporary shoring in accordance with the contract. Temporary shoring includes standard shoring, temporary mechanically stabilized earth (MSE) walls and non-anchored temporary shoring. Trench boxes are not considered temporary shoring. "Standard shoring" refers to *standard temporary shoring* and *standard temporary MSE walls*. Notes on plans may restrict the use of one or both types of standard shoring. Notes on plans may also require or prohibit temporary MSE walls.

Unless noted otherwise on the plans, temporary shoring is required as shown on the plans and to maintain traffic. Temporary shoring to maintain traffic is defined as shoring necessary to provide lateral support to the side of an excavation or embankment parallel to an open travelway when a theoretical 2:1 (H:V) slope from the bottom of the excavation or embankment intersects the existing ground line closer than 5 ft from the edge of pavement of the open travelway.

This provision is not applicable to anchored temporary shoring or the installation of pipes, drop inlets and utilities unless noted otherwise on the plans. Provide all shoring submittals before beginning work.

Materials

(A) Certifications, Storage and Handling

Provide Type 7 Contractor's Certifications in accordance with Article 106-3 of the *Standard Specifications* for all shoring materials used with the exception of reinforcing fabrics and geogrids. Furnish Type 2 Typical Certified Mill Test Reports in accordance with Article 106-3 of the *Standard Specifications* for all seam strengths and reinforcing fabric and geogrid properties. Provide minimum average roll values (MARV) in accordance with ASTM D4759 for test reports. For testing reinforcing fabric and geogrids, a lot is defined as a single day's production.

Load, transport, unload and store shoring materials such that they are kept clean and free of damage. Identify, store and handle all geogrids and geotextile fabrics in accordance with ASTM D4873. Geogrids and fabrics with defects, flaws, deterioration or damage will be rejected. Do not leave fabrics or geogrids uncovered for more than 7 days.

(B) Shoring Backfill

Use shoring backfill for the construction of all temporary shoring including backfilling behind non-anchored temporary shoring and in the reinforced zone for temporary MSE walls. Unless backfilling around culverts, use shoring backfill that meets the requirements of Class II Type I, Class III, Class V or Class VI select material in accordance with Section 1016 of the *Standard Specifications* or AASHTO M145 for soil classification A-2-4 with a maximum plasticity index (PI) of 6. For backfilling around culverts, use shoring backfill as defined herein except for A-2-4 soil.

(C) Non-anchored Temporary Shoring

Use steel shapes, plates and piles that meet the requirements of ASTM A36 and steel sheet piles that meet the requirements of Article 1084-2 of the *Standard Specifications*. Use timber lagging with a minimum allowable bending stress of 1000 psi that meets the requirements of Article 1082-1 of the *Standard Specifications*. For standard temporary shoring, use pile sections and lengths and lagging sizes as shown on the plans.

(D) Temporary MSE Walls

Use welded wire reinforcement forms, facings, mesh and mats that meet the requirements of AASHTO M55 or M221. Use connector bars and wires for welded wire wall components and support struts that meet the requirements of AASHTO M32. For standard temporary MSE walls, use wire gauges, strut sizes and welded wire components as shown on the plans.

(1) Geotextile Fabrics

Use geotextile fabrics that meet the requirements of Article 1056-1 of the *Standard Specifications*.

(a) Reinforcing Fabric

The reinforcement direction (RD) is defined as the direction perpendicular to the wall face and the cross-reinforcement direction (CRD) is defined as the direction parallel to the wall face.

Use woven polyester or polypropylene fabric that meets the following properties:

Property	Test Method	Requirement (MARV)
Wide Width Tensile Strength @ Ultimate (RD)	ASTM D4595	Varies – 200 lb/in min
Wide Width Tensile Strength @ Ultimate (CRD)	ASTM D4595	100 lb/in min
Trapezoidal Tear Strength	ASTM D4533	100 lb min
CBR Puncture Strength	ASTM D6241	600 lb min
UV Resistance after 500 hrs	ASTM D4355	70 %
Apparent Opening Size (AOS), US Sieve	ASTM D4751	20 min – 70 max
Permittivity	ASTM D4491	0.20 sec^{-1}

For standard temporary MSE walls (temporary fabric wall) use reinforcing fabric wide width tensile strengths and lengths in the RD as shown on the plans.

(b) Retention Fabric

Retain shoring backfill at the face of temporary MSE walls with retention fabric. Use fabric that meets the requirements of Class 3 and the UV resistance, AOS and permittivity for separation geotextile in accordance with AASHTO M288.

(2) SierraScape Temporary Wall

Use uniaxial (UX) geogrids composed of high-density polyethylene (HDPE) manufactured by Tensar Earth Technologies. Test geogrids in accordance with ASTM D6637. Use connection rods manufactured by Tensar Earth Technologies to transfer the load between the facings and geogrids.

For standard temporary MSE walls (SierraScape temporary wall) use geogrid types and lengths as shown on the plans.

(3) Terratrel Temporary Wall

Use ribbed reinforcing steel strips manufactured by The Reinforced Earth Company that meet the requirements of ASTM A572, Grade 65. Use connector rods that meet the requirements of AASHTO M31, Grade 60 and hair pin connectors that meet the requirements of ASTM A1011, Grade 50. Use bolts, nuts and washers that meet the requirements of AASHTO M164.

For standard temporary MSE walls (Terratrel temporary wall) use ribbed steel strip size and lengths, rod lengths and diameters, hairpin connectors, bolts, nuts and washers as shown on the plans.

Embedment

"Embedment" is defined as the depth of shoring below the bottom of the excavation or the grade in front of the shoring. For cantilever shoring, embedment is the depth of the piling below the grade in front of the shoring. For temporary MSE walls, embedment is the difference between the grade elevation in front of the wall and the elevation of the bottom of the reinforced zone.

Portable Concrete Barriers

Provide portable concrete barriers in accordance with the plans and if shoring is located within the clear zone as defined in the *AASHTO Roadside Design Guide*. Use NCDOT portable concrete barriers (PCBs) in accordance with Roadway Standard Drawing No. 1170.01 and Section 1170 of the *Standard Specifications*. Use Oregon Tall F-Shape Concrete Barriers in accordance with detail drawing and special provision obtained from:

http://www.ncdot.org/doh/preconstruct/wztc/DesRes/English/DesResEng.html

The clear distance is defined as the horizontal distance from the back face of the barrier to the edge of pavement and the minimum required clear distance is shown on the traffic control plans. At the Contractor's option or if the minimum required clear distance is not available, set an unanchored PCB against the traffic side of the shoring and design shoring for traffic impact or use the "surcharge case with traffic impact" for the standard temporary shoring. An anchored PCB or Oregon barrier is required for barriers above and behind temporary MSE walls.

Contractor Designed Shoring

"Contractor designed shoring" is defined as non-anchored temporary shoring or temporary MSE walls designed by the Contractor. Unless prohibited or required, Contractor designed shoring is optional. Contractor designed shoring is required when notes on plans prohibit the use of standard shoring. Non-anchored Contractor designed shoring is prohibited when notes on plans require the use of temporary MSE walls and Contractor designed temporary MSE walls are prohibited when notes on plans prohibit the use of temporary MSE walls.

Before beginning design, survey the shoring location to determine existing elevations and actual design heights. Submit design calculations and drawings including typical sections for review and acceptance showing details of the proposed design and construction sequence in accordance with Article 105-2 of the *Standard Specifications*. Have shoring designed, detailed and sealed by a Professional Engineer registered in the State of North Carolina. Submit 3 hard copies of design calculations and 10 hard copies of drawings and an electronic copy (pdf or jpeg format on CD or DVD) of both the calculations and drawings.

Design non-anchored temporary shoring in accordance with the *AASHTO Guide Design Specifications for Bridge Temporary Works* and temporary MSE walls in accordance with the *AASHTO Allowable Stress Design Standard Specifications for Highway Bridges*. Use the following soil parameters for shoring backfill in the reinforced zone.

Total Unit Weight = 120 pcf
Friction Angle = 30 degrees
Cohesion = 0 psf

Design temporary shoring in accordance with the in-situ assumed soil parameters shown on the plans. Design shoring for a 3-year design service life and a traffic surcharge equal to 240 psf. This surcharge is not applicable for construction traffic. If a construction surcharge will be present within a horizontal distance equal to the height of the shoring, design the shoring for the required construction surcharge. If the edge of pavement or a structure to be protected is within a horizontal distance equal to the height of the shoring, design shoring for a maximum deflection of 3". Otherwise, design shoring for a maximum deflection of 6".

For non-anchored temporary shoring, the top of shoring elevation is defined as the elevation where the grade intersects the back face of the shoring. For traffic impact, apply 2 kips/ft to the shoring 1.5 ft above the top of shoring elevation. When designing for traffic impact, extend shoring at least 32" above the top of shoring elevation. Otherwise, extend shoring at least 6" above the top of shoring elevation.

Standard Shoring

Unless notes on plans prohibit the use of one or both types of standard shoring, standard shoring is optional. Submit a "Standard Temporary MSE Wall Selection Form" for each standard temporary MSE wall location and a "Standard Temporary Shoring Selection Form" for up to three standard temporary shoring locations. Submit selection forms at least 14 days before beginning shoring construction. Obtain standard shoring selection forms from:

http://www.ncdot.org/doh/preconstruct/highway/geotech/formprovdet/

(A) Standard Temporary Shoring

Determine the shoring height, traffic impact, groundwater condition and slope or surcharge case for each standard temporary shoring location. Determine the minimum required extension, embedment and sheet pile section modulus or H pile section from the plans for each location.

(B) Standard Temporary MSE Walls

Choose a standard temporary MSE wall from the multiple temporary MSE wall options shown in the plans. Do not use more than one option per wall location.

Step bottom of reinforced zone in increments equal to vertical reinforcement spacing for the wall option chosen. Determine the wall height and slope or surcharge case for each section of standard temporary MSE wall. With the exception of either the first or last section of wall, use horizontal section lengths in increments equal to the following for the wall option chosen.

Standard Temporary MSE Wall Option	Increment
Temporary Fabric Wall	9 ft min (varies)
Hilfiker Temporary Wall	10 ft min (varies)
SierraScape Temporary Wall	18 ft – 7 ¼ in
Retained Earth Temporary Wall	24 ft
Terratrel Temporary Wall	19 ft – 8 in

Determine the appropriate facings and/or forms and reinforcement length, spacing, strength, type, density and/or size from the plans for each wall section.

Construction Methods

When using an anchored PCB, anchor the barrier in accordance with Roadway Standard Drawing 1170.01 and Section 1170 of the *Standard Specifications*. Control drainage during construction in the vicinity of temporary shoring. Collect and direct run off away from temporary MSE walls, shoring and shoring backfill.

(A) Non-anchored Temporary Shoring

Install and interlock sheet piling or install piles as shown on the plans or accepted submittals with a tolerance of 1/2 inch per foot from vertical. Contact the Engineer if the design embedment is not achieved. If piles are placed in drilled holes, perform pile excavation to the required elevations and backfill excavations with concrete and lean sand grout.

Remove grout as necessary to install timber lagging. Install timber lagging with a minimum bearing distance of 3” on each pile flange. Backfill voids behind lagging with shoring backfill.

Perform welding in accordance with the accepted submittals and Article 1072-20 of the *Standard Specifications*.

(1) Pile Excavation

Excavate a hole with a diameter that will result in at least 3” of clearance around the entire pile. Use equipment of adequate capacity and capable of drilling through soil and non-soil including rock, boulders, debris, man-made objects and any other materials encountered. Blasting is not permitted to advance excavations. Blasting for core removal is permitted only when approved by the Engineer. Dispose of drilling spoils in accordance with Section 802 of the

Standard Specifications. Drilling spoils consist of all excavated material including water removed from excavations by either pumping or drilling tools.

If unstable, caving or sloughing soils are encountered, stabilize excavations with clean watertight steel casing. Steel casings may be either sectional type or one continuous corrugated or non-corrugated piece. Provide casings of ample strength to withstand handling and driving stresses and the pressures imposed by concrete, earth or backfill. Use steel casings with an outside diameter equal to the hole size and a minimum wall thickness of 1/4 inch.

Before placing concrete, check the water inflow rate in the excavation after any pumps have been removed. If the inflow rate is less than 6" per half hour, remove any water and free fall the concrete into the excavation. Ensure that concrete flows completely around the pile. If the water inflow rate is greater than 6" per half hour, propose and obtain approval of the concrete placement procedure before placing concrete.

Center the pile in the excavation and fill the excavation with Class A concrete in accordance with Section 1000 of the *Standard Specifications* except as modified herein. Provide concrete with a slump of 6 to 8 inches. Use an approved high-range water reducer to achieve this slump. Place concrete in a continuous manner to the bottom of shoring or the elevations shown on the accepted submittals. Fill the remainder of the excavation with a lean sand grout and remove all casings.

(B) Temporary MSE Walls

The Engineer may require a wall preconstruction meeting to discuss the construction and inspection of the temporary MSE walls. If required, conduct the meeting with the Site Superintendent, the Resident or Bridge Maintenance Engineer, the Bridge Construction Engineer and the Geotechnical Operations Engineer before beginning wall construction.

Perform all necessary clearing and grubbing in accordance with Section 200 of the *Standard Specifications*. Excavate as necessary as shown on the plans or accepted submittals. Notify the Engineer when foundation excavation is complete. Do not place shoring backfill or first reinforcement layer until obtaining approval of the excavation depth and checking foundation material for in-situ assumed soil parameters.

If applicable, install foundations located within the reinforced zone in accordance with the plans or accepted submittals.

Erect and maintain facings and forms as shown on the plans or accepted submittals. Stagger vertical joints of facings and forms to create a running bond when possible unless shown otherwise on the plans or accepted submittals.

Place facings and forms as near to vertical as possible with no negative batter. Construct temporary MSE walls with a vertical and horizontal tolerance of 3" when measured with

a 10 ft straight edge and an overall vertical plumbness (batter) and horizontal alignment of less than 6".

Place reinforcement at locations and elevations shown on the plans or accepted submittals and in slight tension free of kinks, folds, wrinkles or creases. Repair or replace any damaged reinforcement. Contact the Engineer when existing or future structures such as foundations, pavements, pipes, inlets or utilities will interfere with reinforcement. To avoid structures, deflect, skew and modify reinforcement.

Do not splice reinforcement in the reinforcement direction (RD), i.e., parallel to the wall face. Seams are allowed in the cross-reinforcement direction (CRD). Bond or sew adjacent reinforcing fabric together or overlap fabric a minimum of 18" with seams oriented perpendicular to the wall face.

Place shoring backfill in 8 to 10 inch thick lifts and compact in accordance with Subarticle 235-4(C) of the *Standard Specifications*. Use only hand operated compaction equipment within 3 ft of the wall face. Do not damage reinforcement when placing and compacting shoring backfill. End dumping directly on the reinforcement is not permitted. Do not operate heavy equipment on reinforcement until it is covered with at least 10" of shoring backfill. Do not use sheepsfoot, grid rollers or other types of compaction equipment with feet.

Cover reinforcing and retention fabric with at least 3" of shoring backfill. Place top reinforcement layer between 4 and 24 inches below top of wall as shown on the plans or accepted submittals.

Bench temporary MSE walls into the sides of excavations where applicable. If the top of wall is within 5 ft of finished grade, remove top form or facing and incorporate the top reinforcement layer into the fill when placing fill in front of the wall. Temporary MSE walls remain in place permanently unless required otherwise.

TRAINING SPECIAL PROVISIONS

This project special provision will not be applicable to those Contractors who have elected to participate in the Department's *Alternative On-The-Job Training Program.* In the event the Contractor is participating in the Department's *Alternative On-The-Job Training Program*, the On-The-Job Training program of the Construction Unit, Contractual Services Section will certify that participation to the appropriate Highway Division and Resident Engineers.

This Training Special Provision supersedes subparagraph 7b of the Special Provision entitled "*Specific Equal Employment Opportunity Responsibilities,"* (Attachment 1), and is in implementation of 23 USC 140(a). As a part of the Design-Build Team's equal opportunity affirmative action program, training shall be provided as follows:

The Design-Build Team shall provide on-the-job training aimed at developing full journey workers in the type of trade or classification involved. Preference shall be given to providing training in the following skilled work classifications:

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

The number of trainees to be trained under this contract will be as specified in the project special provisions included else where in the proposal form.

In the event that the Design-Build Team subcontracts a portion of the contract work, he shall determine how many, if any, of the trainees are to be trained by the subcontractor, provided, however, the Prime Contractor shall maintain the primary responsibility for meeting the training requirements imposed by this special provision and the subcontractor has an approved on-the-job training program. The Prime Contractor shall also insure that this training special provision is made applicable to such subcontract. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

The number of trainees shall be distributed among the skilled work classifications on the basis of the Design-Build Team's needs and the availability of journey workers in the various classifications within a reasonable area of recruitment. Prior to commencing construction, the Design-Build Team shall submit to the Department for approval the number of trainees to be trained in each selected classification and the training program to be used. Furthermore, the Design-Build Team shall specify the starting time for training in each of the classifications on the form provided by the Department. That form shall be submitted by the Design-Build Team to the Department on or before the date of the pre-construction conference. The Design-Build Team will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and who receives training for at least 50 percent of the specific program requirement.

Training and upgrading of minorities and women toward journey worker_status is a primary objective of this Training Special Provision. Accordingly, the Design-Build Team shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private resources likely to yield minority and women trainees) to the extent that such persons are available within a reasonable area of recruitment. The Design-Build Team will be responsible for demonstrating the steps he has taken in the pursuance thereof, prior to a determination as to whether the Design-Build Team is in compliance with this Training Special Provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which he has successfully completed a training course leading to journey worker_status or in which he has been employed as a journey worker. The Design-Build Team should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the Design-Build Team's records should document the finding in each case.

The minimum length and type of training for each classification will be as established in the training program selected by the Design-Build Team and approved by the Department. The Department shall approve a program if it is reasonably calculated to meet the equal employment opportunity obligations of the Design-Build Team and to qualify the average trainee for journey worker status in the classification concerned by the end of the training period. Furthermore, apprenticeship programs registered with the US Department of Labor, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the US Department of Labor, Manpower Administration, Bureau of Apprenticeship and Training, shall also be considered acceptable provided it is being administered in a manner consistent with the equal employment obligations of Federal-Aid highway construction contracts. Approval or acceptance of a training program shall be obtained from the Department prior to commencing work on the classification covered by the program. It is the intention of these provisions that training be provided in the construction crafts rather than clerk-typist or secretarial-type positions. Training is permissible in lower level management positions such as office engineers, estimators, timekeepers, etc., where the training is provided and approved by the Department and the Federal Highway Administration. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

It is normally expected that a trainee will begin his training on the project as soon as feasible after the start of work utilizing the skill involved and remain on the project as long as training opportunities exist in the work classification or until he has completed his training program. It is not required that all trainees be on board for the entire length of the contract. A Design-Build Team will have fulfilled their responsibilities under this training special provision if he has provided acceptable training to the number of trainees specified. The number trained shall be determined on the basis of the total number enrolled on the Design-Build Team for a significant period.

Trainees will be paid at least 60 percent of the appropriate minimum journey worker's rate specified in the contract for the first half of the training period, 75 percent for the third quarter of the training period, and 90 percent for the last quarter of the training period, unless apprentices

or trainees in an approved existing program are enrolled as trainees on this project. In that case, the appropriate rates approved by the Departments of Labor or Transportation in connection with the existing program shall apply to all trainees being trained for the same classification who are covered by this Training Special Provision.

The Design-Build Team shall furnish the trainee a copy of the program he will be following providing the training. The Design-Build Team shall provide each trainee with a certificate showing the type and length of training satisfactorily completed.

The Design-Build Team will provide for maintenance of records and furnish periodic reports documenting his performance under this Training Special Provision.

***** STANDARD SPECIAL PROVISIONS *****

AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS

(7-1-06) Z-2

In accordance with *General Statute 143-28.1 (6), Subsection (5) of G.S. 143-28.1* is hereby incorporated verbatim in this contract. *General Statute. 143-28.1(5)* is as follows:

"(5). Amounts Obligated - Payments subject to the Availability of Funds - Termination of Contracts. Highway maintenance and construction appropriations may be obligated in the amount of allotments made to the Department of Transportation by the Office of State Budget and Management for the estimated payments for maintenance and construction contract work to be performed in the appropriation fiscal year. The allotments shall be multi-year allotments and shall be based on estimated revenues and shall be subject to the maximum contract authority contained in subdivision (2) above. Payment for highway maintenance and construction work performed pursuant to contract in any fiscal year other than the current fiscal year will be subject to appropriations by the General Assembly. Highway maintenance and construction contracts shall contain a schedule of estimated completion progress and any acceleration of this progress shall be subject to the approval of the Department of Transportation provided funds are available. The State reserves the right to terminate or suspend any highway maintenance or construction contract and any highway maintenance or construction contract shall be so terminated or suspended if funds will not be available for payment of the work to be performed during that fiscal year pursuant to the contract. In the event of termination of any contract, the contractor shall be given a written notice of termination at least 60 days before completion of schedule work for which funds are available. In the event of termination, the contractor shall be paid for the work already performed in accordance with the contract specifications".

Payment will be made on any contract terminated pursuant to the special provision in accordance with Article 108-13(E), of the *North Carolina Department of Transportation Standard Specifications for Roads and Structures*, dated July 1, 2006.

***** STANDARD SPECIAL PROVISIONS *****

NCDOT GENERAL SEED SPECIFICATIONS FOR SEED QUALITY

(5-17-05) Z-3

Seed shall be sampled and tested by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory. When said samples are collected, the vendor shall supply an independent laboratory report for each lot to be tested. Results from seed so sampled shall be final. Seed not meeting the specifications shall be rejected by the Department of Transportation and shall not be delivered to North Carolina Department of Transportation warehouses. If seed has been delivered it shall be available for pickup and replacement at the supplier's expense.

Any re-labeling required by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory, that would cause the label to reflect as otherwise specified herein shall be rejected by the North Carolina Department of Transportation.

Seed shall be free from seeds of the noxious weeds Johnsongrass, Balloonvine, Jimsonweed, Witchweed, Itchgrass, Serrated Tussock, Showy Crotalaria, Smooth Crotalaria, Sicklepod, Sandbur, Wild Onion, and Wild Garlic. Seed shall not be labeled with the above weed species on the seed analysis label. Tolerances as applied by the Association of Official Seed Analysts will NOT be allowed for the above noxious weeds except for Wild Onion and Wild Garlic.

Tolerances established by the Association of Official Seed Analysts will generally be recognized. However, for the purpose of figuring pure live seed, the found pure seed and found germination percentages as reported by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory will be used. Allowances, as established by the NCDOT, will be recognized for minimum pure live seed as listed on the following pages.

The specifications for restricted noxious weed seed refers to the number per pound as follows:

Restricted Noxious Weed	Limitations per Lb. Of Seed	Restricted Noxious Weed	Limitations per Lb. of Seed
Blessed Thistle	4 seeds	Bermudagrass	27 seeds
Cocklebur	4 seeds	Cornflower (Ragged Robin)	27 seeds
Spurred Anoda	4 seeds	Texas Panicum	27 seeds
Velvetleaf	4 seeds	Bracted Plantain	54 seeds
Morning-glory	8 seeds	Buckhorn Plantain	54 seeds
Corn Cockle	10 seeds	Broadleaf Dock	54 seeds
Wild Radish	12 seeds	Curly Dock	54 seeds
Purple Nutsedge	27 seeds	Dodder	54 seeds
Yellow Nutsedge	27 seeds	Giant Foxtail	54 seeds
Canada Thistle	27 seeds	Horsenettle	54 seeds
Field Bindweed	27 seeds	Quackgrass	54 seeds
Hedge Bindweed	27 seeds	Wild Mustard	54 seeds

Seed of Pensacola Bahiagrass shall not contain more than 7% inert matter, Kentucky Bluegrass and Fine or Hard Fescue shall not contain more than 5% inert matter whereas a maximum of 2% inert matter will be allowed on all other kinds of seed. In addition, all seed shall not contain

more than 2% other crop seed or more than 1% total weed seed. The germination rate as tested by the North Carolina Department of Agriculture shall not fall below 70%, which includes both dormant and hard seed. Seed shall be labeled with not more than 7%, 5% or 2% inert matter (according to above specifications), 2% other crop seed and 1% total weed seed.

Exceptions may be made for minimum pure live seed allowances when cases of seed variety shortages are verified. Pure live seed percentages will be applied in a verified shortage situation. Those purchase orders of deficient seed lots will be credited with the percentage that the seed is deficient.

FURTHER SPECIFICATIONS FOR EACH SEED GROUP ARE GIVE BELOW:

Minimum 85% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 83% pure live seed will not be approved.

Sericea Lespedeza
Oats (seeds)

Minimum 80% pure live seed; maximum 1% total weed seed; maximum 2% total other crop; maximum 144 restricted noxious weed seed per pound. Seed less than 78% pure live seed will not be approved.

Tall Fescue (all approved varieties)	Bermudagrass
Kobe Lespedeza	Browntop Millet
Korean Lespedeza	German Millet - Strain R
Weeping Lovegrass	Centipedegrass
Carpetgrass	Clover - Red/White/Crimson

Minimum 78% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 76% pure live seed will not be approved.

Common or Sweet Sundangrass

Minimum 76% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 74% pure live seed will not be approved.

Rye (grain; all varieties)
Kentucky Bluegrass (all approved varieties)
Hard Fescue (all approved varieties)
Shrub (bicolor) Lespedeza

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 70% pure live seed will not be approved.

Crownvetch
Japanese Millet
Reed Canary Grass
Pensacola Bahiagrass
Switchgrass

Minimum 65% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 60% pure live seed will not be approved.

Little Bluestem
Switchgrass

Minimum 75% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 70% pure live seed will not be approved.

Big Bluestem

Minimum 78% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 73% pure live seed will not be approved.

Indiangrass

***** STANDARD SPECIAL PROVISIONS *****

ERRATA

(4-17-07) Z-4

Revise the *Standard Specifications for Roads and Structures July 2006* on all projects as follows:

Division 1

- Page 1-1, replace AREA - American Railway Engineering Association with ***American Railway Engineering and Maintenance of Way Association*.**
- Page 1-7, remove **–L-** in middle of page after INVITATION TO BID and before LABORATORY.
- Page 1-25, 102-16(R), move 2nd paragraph to left margin. It is not a part of this subarticle, but part of the entire article.

Division 2

- Page 2-15, Subarticle 226-3, 5th paragraph, first line, replace the word *in* with the word ***is***.
- Page 2-23, Subarticle 235-4(B)(9), at the end of the sentence, replace finished greater with finished ***grade***.
- Page 2-28, Article 260-3, First paragraph, second line, remove the word *foot*.

Division 3

- Page 3-13, Article 340-4, Second paragraph, change Flowable Backfill to Flowable ***Fill***

Division 4

- Page 4-70, 442-13(B) Second sentence, change SSPC Guide 6I to SSPC Guide ***6.***
- Pages 4-72, 4-74, 4-76, at the top of the page, substitute the heading Section 452 with Section ***450*.**
- Page 4-79, at the top of the page, substitute the heading Section 450 with Section ***452***
- Page 4-80, change 452-7 to 452-***6*** at the top of the page.
- Page 4-80, change Pay Item ___Steel Pile Retaining Walls, to ***Sheet*** Pile Retaining Walls.
- Page 4-88, 462-4, Title, Replace last word Measurement with the word ***PAYMENT***

Division 5

- Page 5-8, Article 501-15 Measurement and Payment, delete the 4th paragraph that begins The quantity of lime, measured as provided …

Division 6

- Page 6-3, Article 600-9, 2nd Paragraph on this page, replace 818-5 with 818-***4***.
- Pages 6-30 and 31, Subarticle 610-3(A)(13) Move 2 paragraphs from the margin to the right under the number (13).

- Page 6-43, Article 610-8, 4th paragraph, remove the first ***the***
- Page 6-44, 2nd full paragraph, 1st sentence, delete the first ***and*** and add ***transverse*** just before cross-slope control.
- Page 6-51, at the top of the page, add ***610-14*** on the same line, and just before the heading MAINTENANCE.
- Page 6-53, Article 620-4 sixth paragraph, second line; the word that should be ***which***.
- Page 6-66, title, Replace EXISTNG with **EXISTING**
- Page 6-67, at the top of the page, substitute the heading Section 654 with Section ***657.***
- Page 6-71, 660-9(B)(1), Replace the first sentence of the first paragraph with the following:

  Using the quantities shown in *Table 660-1*, apply asphalt material to the existing surface followed by an application of No. 78 M or lightweight aggregate.

- Page 6-89, Add a period at the end of the last sentence at the bottom of the page.
- Page 6-90, Article 663-5, first paragraph, first sentence, change 50oF to ***50^oF;*** third paragraph, fourth sentence change 325oF to ***325^oF.***

Division 7

- Page 7-12, at the top of the page, substitute the heading Section 710 with Section ***700***.
- Page 7-15, Article 710-9, 4th paragraph, last line, change 710-11(B) to 710-1***0***(B).

Division 8

- Page 8-13, Article 808-3, 4th Paragraph, third line, replace Eexcavation with ***Excavation***
- Page 8-35, Article 848-2, Item: Replace Cncrete with ***Concrete***

Division 9

- Page 9-2, add ***901-3*** just before CONSTRUCTION METHODS

Division 10

- Page 10-12, near bottom of page add ***(C)*** before Proportioning and Mixing of Modified Compositions, which should be bold type.
- Page 10-28, at the top of the page, substitute Section 100***6*** for 1005.
- Page 10-54, Subarticle 1018-2A), First line, substitute ***(B)*** for II, third line, substitute ***(B)(2)*** for II-b.
- Pages 10-56, 10-58, 10-60 at the top of the page, substitute Section 1018 with Section ***1020.***
- Page 10-84, Table 1042-1, Class 2, Maximum, change from 23r to ***23***.
- Page 10-84, Article 1042-2 Testing, last sentence, replace the word alterations with the word ***cycles***.

- Page 10-100, Table 1056-1, replace on the line for Trapezoidal Tear Strength:

Type 1	Type 2	Type 3		Type 4
		Class A	Class B	Soil Stabilization
45 lb	***75*** lb	--	--	***75*** lb

- Page 10-116, Subarticle 1070-10, first paragraph, second sentence, add ***or*** just before cold-forged sleeve.
- Pages 10-136 through 10-147, at the top of the page, substitute Section 1074 with Section ***1072***.
- Page 10-211, at the top of the page, substitute Section 1081 with Section ***1082.***
- Page 10-229, add ***1088-6 BLANK*** on the line above 1088-7 TUBULAR MARKERS.
- Page 10-244, add **1089-10** ***BLANK*** and **1089-11** ***BLANK*** on the lines just above 1089-12 FLAGGER.
- Page 10-272, delete Article 1098-6 in its entirety. Renumber Articles 1098-7 through 1098-17 as Articles 1098-6 through 1098-16 consecutively.

Division 12

- Page 12-21 Add ***1266-2*** just before the heading MATERIALS.

Division 15

- Page 15-2 add ***1500-4*** just before the heading WEEKEND, NIGHT AND HOLIDAY WORK.
- Page 15-4, Subarticle 1505-3(A)(2), replace the 2nd line with the following: ***Provide shielding or shoring as required under Section 150 or as required elsewhere in the contract.***
- Page 15-5, add ***1505-6*** on the same line and just before the heading MEASUREMENT AND PAYMENT. (Remove the period after PAYMENT.)
- Page 15-6, Article 1505-6(3), delete *in Section 1175* and replace it with *elsewhere in the contract*.
- Page 15-8, add **1510-4** on the same line and just before the heading MEASUREMENT AND PAYMENT.
- Page 15-10, substitute **BLANK** for CONSTRUCTION REQUIREMENTS on the same line and just before 1515-4.
- Page 15-10, substitute **CONSTRUCTION REQUIREMENTS** for General Requirements
- Page 15-13, Article 1520-3, 8th paragraph, add ***pipe*** after diameter.

- Page 15-22, add ***1540-3*** on the same line and just before the heading CONSTRUCTION REQUIREMENTS
- Page 15-28, Replace 1550-6 METHOD OF MEASUREMENT with ***MEASUREMENT AND PAYMENT.***

Division 16

- Page 16-12, Subarticle 1632-1(C) ¼ Inch hardware cloth, change the minimum width from 24 inches to ***48*** inches.

END

***** STANDARD SPECIAL PROVISIONS *****

AWARD OF CONTRACT

(6-28-77) Z-6

"The North Carolina Department of Transportation, in accordance with the provisions of *Title VI of the Civil Rights Act of 1964* (78 Stat. 252) and the Regulations of the Department of Transportation (*49 C.F.R., Part 21*), issued pursuant to such act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin".

***** STANDARD SPECIAL PROVISIONS *****

MINORITY AND FEMALE EMPLOYMENT REQUIREMENTS

Z-7

NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (*EXECUTIVE NUMBER 11246*)

1. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, see as shown on the attached sheet entitled "Employment Goals for Minority and Female Participation".

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in *41 CFR Part 60-4* shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in *41 CFR 60-4.3(a)*, and its effort to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project or the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the executive Order and the regulations *in 41 CFR Part 60-4*. Compliance with the goals will be measured against the total work hours performed.

2. As used in this Notice and in the contract resulting from this solicitation, the "covered area" is the county or counties shown on the cover sheet of the proposal form and contract.

EMPLOYMENT GOALS FOR MINORITY AND FEMALE PARTICIPATION

Economic Areas

Area 023 29.7%
Bertie County
Camden County
Chowan County
Gates County
Hertford County
Pasquotank County
Perquimans County

Area 024 31.7%
Beaufort County
Carteret County
Craven County
Dare County
Edgecombe County
Green County
Halifax County
Hyde County
Jones County
Lenoir County
Martin County
Nash County
Northampton County
Pamlico County
Pitt County
Tyrrell County
Washington County
Wayne County
Wilson County

Area 025 23.5%
Columbus County
Duplin County
Onslow County
Pender County

Area 026 33.5%
Bladen County
Hoke County
Richmond County
Robeson County
Sampson County
Scotland County

Area 027 24.7%
Chatham County
Franklin County
Granville County
Harnett County
Johnston County
Lee County
Person County
Vance County
Warren County

Area 028 15.5%
Alleghany County
Ashe County
Caswell County
Davie County
Montgomery County
Moore County
Rockingham County
Surry County
Watauga County
Wilkes County

Area 029 15.7%
Alexander County
Anson County
Burke County
Cabarrus County
Caldwell County
Catawba County
Cleveland County
Iredell County
Lincoln County
Polk County
Rowan County
Rutherford County
Stanly County

Area 0480 8.5%
Buncombe County
Madison County

Area 030 6.3%
Avery County
Cherokee County
Clay County
Graham County
Haywood County
Henderson County
Jackson County
McDowell County
Macon County
Mitchell County
Swain County
Transylvania County
Yancey County

SMSA Areas

Area 5720 26.6%
Currituck County

Area 9200 20.7%
Brunswick County
New Hanover County

Area 2560 24.2%
Cumberland County

Area 6640 22.8%
Durham County
Orange County
Wake County

Area 1300 16.2%
Alamance County

Area 3120 16.4%
Davidson County
Forsyth County
Guilford County
Randolph County
Stokes County
Yadkin County

Area 1520 18.3%
Gaston County
Mecklenburg County
Union County

Goals for Female

Participation in Each Trade

(Statewide) 6.9%

*** STANDARD SPECIAL PROVISIONS ***

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS (FHWA-1273)

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Payment of Predetermined Minimum Wage
V. Statements and Payrolls
VI. Record of Materials, Supplies, and Labor
VII. Subletting or Assigning the Contract
VIII. Safety: Accident Prevention
IX. False Statements Concerning Highway Projects
X. Implementation of Clean Air Act and Federal Water Pollution Control Act
XI. Certification Regarding Debarment, Suspension Ineligibility, and Voluntary Exclusion
XII. Certification Regarding Use of Contract Funds for Lobbying

I. GENERAL

1. These contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
2. Except as otherwise provided for in each section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions, and further require their inclusion in any lower tier subcontract or purchase order that may in turn be made. The Required Contract Provisions shall not be incorporated by reference in any case. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with these Required Contract Provisions.
3. A breach of any of the stipulations contained in these Required Contract Provisions shall be sufficient grounds for termination of the contract.
4. A breach of the following clauses of the Required Contract Provisions may also be grounds for debarment as provided in 29 CFR 5.12:

   Section I, paragraph 2;

   Section IV, paragraphs 1, 2, 3, 4, and 7;

   Section V, paragraphs 1 and 2a through 2g.
5. Disputes arising out of the labor standards provisions of Section IV (except paragraph 5) and Section V of these Required Contract Provisions shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor (DOL) as set forth in 29 CFR 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the DOL, or the contractor's employees or their representatives.
6. **Selection of Labor:** During the performance of this contract, the contractor shall not:
   a. discriminate against labor from any other State, possession, or territory of the United States (except for employment preference for Appalachian contracts, when applicable, as specified in Attachment A), or
   b. employ convict labor for any purpose within the limits of the project unless it is labor performed by convicts who are on parole, supervised release, or probation.

II. NONDISCRIMINATION

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630 and 41 CFR 60) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The Equal Opportunity Construction Contract Specifications set forth under 41 CFR 60-4.3 and the provisions of the American Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:
   a. The contractor will work with the State highway agency (SHA) and the Federal Government in carrying out EEO obligations and in their review of his/her activities under the contract.

b. The contractor will accept as his operating policy the following statement:

> "It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, preapprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the SHA contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active contractor program of EEO and who must be assigned adequate authority and responsibility to do so.

3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

   a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

   b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

   c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minority group employees.

   d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

   e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minority groups in the area from which the project work force would normally be derived.

   a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minority group applicants. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority group applicants may be referred to the contractor for employment consideration.

   b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, he is expected to observe the provisions of that agreement to the extent that the system permits the contractor's compliance with EEO contract provisions. (The DOL has held that where implementation of such agreements have the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Executive Order 11246, as amended.)

   c. The contractor will encourage his present employees to refer minority group applicants for employment. Information and procedures with regard to referring minority group applicants will be discussed with employees.

5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

   a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

   b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

   c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

   d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with his obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of his avenues of appeal.

6. **Training and Promotion:**

   a. The contractor will assist in locating, qualifying, and increasing the skills of minority group and women employees, and applicants for employment.

   b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision.

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of minority group and women employees and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use his/her best efforts to obtain the cooperation of such unions to increase opportunities for minority groups and women within the unions, and to effect referrals by such unions of minority and female employees. Actions by the contractor either directly or through a contractor's association acting as agent will include the procedures set forth below:

   a. The contractor will use best efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minority group members and women for membership in the unions and increasing the skills of minority group employees and women so that they may qualify for higher paying employment.

   b. The contractor will use best efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

   c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the SHA and shall set forth what efforts have been made to obtain such information.

   d. In the event the union is unable to provide the contractor with a reasonable flow of minority and women referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minority group persons and women. (The DOL has held that it shall be no excuse that the union with which the contractor has a collective bargaining agreement providing for exclusive referral failed to refer minority employees.) In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the SHA.

8. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment.

   a. The contractor shall notify all potential subcontractors and suppliers of his/her EEO obligations under this contract.

   b. Disadvantaged business enterprises (DBE), as defined in 49 CFR 23, shall have equal opportunity to compete for and perform subcontracts which the contractor enters into pursuant to this contract. The contractor will use his best efforts to solicit bids from and to utilize DBE subcontractors or subcontractors with meaningful minority group and female representation among their employees. Contractors shall obtain lists of DBE construction firms from SHA personnel.

   c. The contractor will use his best efforts to ensure subcontractor compliance with their EEO obligations.

9. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following completion of the contract work and shall be available at reasonable times and places for inspection by authorized representatives of the SHA and the FHWA.

   a. The records kept by the contractor shall document the following:

      1. The number of minority and non-minority group members and women employed in each work classification on the project;

      2. The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women;

      3. The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minority and female employees; and

      4. The progress and efforts being made in securing the services of DBE subcontractors or subcontractors with meaningful minority and female representation among their employees.

   b. The contractors will submit an annual report to the SHA each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data.

III. **NONSEGREGATED FACILITIES**

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $10,000 or more.)

a. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.

b. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).

c. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to award of subcontracts or consummation of material supply agreements of $10,000 or more and that it will retain such certifications in its files.

IV. **PAYMENT OF PREDETERMINED MINIMUM WAGE**

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural minor collectors, which are exempt.)

1. **General:**

a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally and not less often than once a week and without subsequent deduction or rebate on any account [except such payroll deductions as are permitted by regulations (29 CFR 3) issued by the Secretary of Labor under the Copeland Act (40 U.S.C. 276c)] the full amounts of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment. The payment shall be computed at wage rates not less than those contained in the wage determination of the Secretary of Labor (hereinafter "the wage determination") which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor or its subcontractors and such laborers and mechanics. The wage determination (including any additional classifications and wage rates conformed under paragraph 2 of this Section IV and the DOL poster (WH-1321) or Form FHWA-1495) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers. For the purpose of this Section, contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act (40 U.S.C. 276a) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of Section IV, paragraph 3b, hereof. Also, for the purpose of this Section, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in paragraphs 4 and 5 of this Section IV.

b. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed.

c. All rulings and interpretations of the Davis-Bacon Act and related acts contained in 29 CFR 1, 3, and 5 are herein incorporated by reference in this contract.

2. **Classification:**

a. The SHA contracting officer shall require that any class of laborers or mechanics employed under the contract, which is not listed in the wage determination, shall be classified in conformance with the wage determination.

b. The contracting officer shall approve an additional classification, wage rate and fringe benefits only when the following criteria have been met:

1. the work to be performed by the additional classification requested is not performed by a classification in the wage determination;

2. the additional classification is utilized in the area by the construction industry;

3. the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and

4. with respect to helpers, when such a classification prevails in the area in which the work is performed.

c. If the contractor or subcontractors, as appropriate, the laborers and mechanics (if known) to be employed in the additional classification or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the DOL, Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, D.C. 20210. The Wage and Hour Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

d. In the event the contractor or subcontractors, as appropriate, the laborers or mechanics to be employed in the additional classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. Said Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary

e. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 2c or 2d of this Section IV shall be paid to all workers performing work in the additional classification from the first day on which work is performed in the classification.

3. **Payment of Fringe Benefits:**

a. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor or subcontractors, as appropriate, shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly case equivalent thereof.

b. If the contractor or subcontractor, as appropriate, does not make payments to a trustee or other third person, he/she may consider as a part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

4. **Apprentices and Trainees (Programs of the U.S. DOL) and Helpers:**

a. Apprentices:

1. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the DOL, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State apprenticeship agency recognized by the Bureau, or if a person is employed in his/her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State apprenticeship agency (where appropriate) to be eligible for probationary employment as an apprentice.

2. The allowable ratio of apprentices to journeyman-level employees on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate listed in the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor or subcontractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman-level hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

3. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator for the Wage and Hour Division determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

4. In the event the Bureau of Apprenticeship and Training, or a State apprenticeship agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor or subcontractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the comparable work performed by regular employees until an acceptable program is approved.

b. Trainees:

1. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the DOL, Employment and Training Administration.

2. The ratio of trainees to journeyman-level employees on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

3. Every trainee must be paid at not less than the rate specified in the approved program for his/her level of progress, expressed as a percentage of the journeyman-level hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman-level wage rate on the wage determination which provides for less than full fringe benefits for apprentices, in which case such trainees shall receive the same fringe benefits as apprentices.

4. In the event the Employment and Training Administration withdraws approval of a training program, the contractor or subcontractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Helpers:

Helpers will be permitted to work on a project if the helper classification is specified and defined on the applicable wage determination or is approved pursuant to the conformance procedure set forth in Section IV.2. Any worker listed on a payroll at a helper wage rate, who is not a helper under a approved definition, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed.

5. **Apprentices and Trainees (Programs of the U.S. DOT):**

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements

of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

6. **Withholding:**

The SHA shall upon its own action or upon written request of an authorized representative of the DOL withhold, or cause to be withheld, from the contractor or subcontractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, as much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the SHA contracting officer may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

7. **Overtime Requirements:**

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers, mechanics, watchmen, or guards (including apprentices, trainees, and helpers described in paragraphs 4 and 5 above) shall require or permit any laborer, mechanic, watchman, or guard in any workweek in which he/she is employed on such work, to work in excess of 40 hours in such workweek unless such laborer, mechanic, watchman, or guard receives compensation at a rate not less than one-and-one-half times his/her basic rate of pay for all hours worked in excess of 40 hours in such workweek.

8. **Violation:**

Liability for Unpaid Wages; Liquidated Damages: In the event of any violation of the clause set forth in paragraph 7 above, the contractor and any subcontractor responsible thereof shall be liable to the affected employee for his/her unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer, mechanic, watchman, or guard employed in violation of the clause set forth in paragraph 7, in the sum of $10 for each calendar day on which such employee was required or permitted to work in excess of the standard work week of 40 hours without payment of the overtime wages required by the clause set forth in paragraph 7.

9. **Withholding for Unpaid Wages and Liquidated Damages:**

The SHA shall upon its own action or upon written request of any authorized representative of the DOL withhold, or cause to be withheld, from any monies payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph 8 above.

V. **STATEMENTS AND PAYROLLS**

(Applicable to all Federal-aid construction contracts exceeding $2,000 and to all related subcontracts, except for projects located on roadways classified as local roads or rural collectors, which are exempt.)

1. **Compliance with Copeland Regulations (29 CFR 3):**

The contractor shall comply with the Copeland Regulations of the Secretary of Labor which are herein incorporated by reference.

2. **Payrolls and Payroll Records:**

a. Payrolls and basic records relating thereto shall be maintained by the contractor and each subcontractor during the course of the work and preserved for a period of 3 years from the date of completion of the contract for all laborers, mechanics, apprentices, trainees, watchmen, helpers, and guards working at the site of the work.

b. The payroll records shall contain the name, social security number, and address of each such employee; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalent thereof the types described in Section 1(b)(2)(B) of the Davis Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. In addition, for Appalachian contracts, the payroll records shall contain a notation indicating whether the employee does, or does not, normally reside in the labor area as defined in Attachment A, paragraph 1. Whenever the Secretary of Labor, pursuant to Section IV, paragraph 3b, has found that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis Bacon Act, the contractor and each subcontractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, that the plan or program has been communicated in writing to the laborers or mechanics affected, and show the cost anticipated or the actual cost incurred in providing benefits. Contractors or subcontractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprentices and trainees, and ratios and wage rates prescribed in the applicable programs.

c. Each contractor and subcontractor shall furnish, each week in which any contract work is performed, to the SHA resident engineer a payroll of wages paid each of its employees (including apprentices, trainees, and helpers, described in Section IV, paragraphs 4 and 5, and watchmen and guards engaged on work during the preceding weekly payroll period). The payroll submitted shall set out accurately and completely all of the information required to be maintained under paragraph 2b of this Section V. This information may be submitted in any form desired. Optional Form WH-347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal stock number 029-005-0014-1), U.S. Government Printing

Office, Washington, D.C. 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

d. Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his/her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

1. that the payroll for the payroll period contains the information required to be maintained under paragraph 2b of this Section V and that such information is correct and complete;

2. that such laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in the Regulations, 29 CFR 3;

3. that each laborer or mechanic has been paid not less that the applicable wage rate and fringe benefits or cash equivalent for the classification of worked performed, as specified in the applicable wage determination incorporated into the contract.

e. The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 2d of this Section V.

f. The falsification of any of the above certifications may subject the contractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 231.

g. The contractor or subcontractor shall make the records required under paragraph 2b of this Section V available for inspection, copying, or transcription by authorized representatives of the SHA, the FHWA, or the DOL, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the SHA, the FHWA, the DOL, or all may, after written notice to the contractor, sponsor, applicant, or owner, take such actions as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

VI. **RECORD OF MATERIALS, SUPPLIES, AND LABOR THIS SECTION DELETED JUNE 4, 2007.**

VII. **SUBLETTING OR ASSIGNING THE CONTRACT**

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the State. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635).

a. "Its own organization" shall be construed to include only workers employed and paid directly by the prime contractor and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor, assignee, or agent of the prime contractor.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph 1 of Section VII is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the SHA contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the SHA contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the SHA has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

VIII. **SAFETY: ACCIDENT PREVENTION**

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the SHA contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety

and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

IX. **FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, the following notice shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

NOTICE TO ALL PERSONNEL ENGAGED ON FEDERAL-AID HIGHWAY PROJECTS

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined not more that $10,000 or imprisoned not more than 5 years or both."

X. **IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

(Applicable to all Federal-aid construction contracts and to all related subcontracts of $100,000 or more.)

By submission of this bid or the execution of this contract, or subcontract, as appropriate, the bidder, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any facility that is or will be utilized in the performance of this contract, unless such contract is exempt under the Clean Air Act, as amended (42 U.S.C. 1857 et seq., as amended by Pub.L. 91-604), and under the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251 et seq., as amended by Pub.L. 92-500), Executive Order 11738, and regulations in implementation thereof (40 CFR 15) is not listed, on the date of contract award, on the U.S. Environmental Protection Agency (EPA) List of Violating Facilities pursuant to 40 CFR 15.20.
2. That the firm agrees to comply and remain in compliance with all the requirements of Section 114 of the Clean Air Act and Section 308 of the Federal Water Pollution Control Act and all regulations and guidelines listed thereunder.
3. That the firm shall promptly notify the SHA of the receipt of any communication from the Director, Office of Federal Activities, EPA, indicating that a facility that is or will be utilized for the contract is under consideration to be listed on the EPA List of Violating Facilities.
4. That the firm agrees to include or cause to be included the requirements of paragraph 1 through 4 of this Section X in every nonexempt subcontract, and further agrees to take such action as the government may direct as a means of enforcing such requirements.

XI. **CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

1. **Instructions for Certification - Primary Covered Transactions:**

(Applicable to all Federal-aid contracts - 49 CFR 29)

a. By signing and submitting this proposal, the prospective primary participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective primary participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the department or agency determined to enter into this transaction. If it is later determined that the prospective primary participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause of default.

d. The prospective primary participant shall provide immediate written notice to the department or agency to whom this proposal is submitted if any time the prospective primary participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the department or agency to which this proposal is submitted for assistance in obtaining a copy of those regulations.

f. The prospective primary participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective primary participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," provided by the department or agency entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the nonprocurement portion of the "Lists of Parties Excluded From Federal Procurement or Nonprocurement Programs" (Nonprocurement List) which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph f of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Primary Covered Transactions

1. The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:

   a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

   b. Have not within a 3-year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

   c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph 1b of this certification; and

   d. Have not within a 3-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

2. **Instructions for Certification - Lower Tier Covered Transactions:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions of $25,000 or more - 49 CFR 29)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "primary covered transaction," "participant," "person," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of rules implementing Executive Order 12549. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations.

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals. Each participant may, but is not required to, check the Nonprocurement List.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Covered Transactions:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XII. **CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

(Applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 - 49 CFR 20)

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

   a. 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, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

   b. If any funds other than Federal appropriated funds have been paid or will be paid 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 this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

***** STANDARD SPECIAL PROVISIONS *****

GENERAL DECISION NC20070011 NC11

Z-12

Date: February 9, 2007

General Decision Number NC20070011

Superseded General Decision No. NC20030011

State: North Carolina

Construction Type: HIGHWAY

COUNTIES:

Alamance	Durham	Orange
Alexander	Forsyth	Randolph
Buncombe	Franklin	Rowan
Burke	Gaston	Stokes
Cabarrus	Guilford	Union
Catawba	Lincoln	Wake
Cumberland	Mecklenburg	Yadkin
Davidson	New Hanover	
Davie	Onslow	

HIGHWAY CONSTRUCTION PROJECTS (does not include tunnels, building structures in rest area projects, railroad construction, and, bascule, suspension and spandrel arch bridges, bridges designed for commercial navigation, and bridges involving marine construction, and other major bridges).

Modification Number	Publication Date
0	02/09/2007

SUNC1990-014 02/12/1990

	Rates	Fringes
CARPENTER	7.63	
CONCRETE FINISHER	7.52	
ELECTRICIAN	10.26	
IRONWORKERS (reinforcing)	9.76	
LABORER		
Common	5.33	
Asphalt Lay Down Man	5.60	
Asphalt Raker	6.14	
Form Setter (road)	8.57	
Mason (brick, block, stone)	7.44	
Pipe Layer	6.23	
Power Tool Operator	8.28	

POWER EQUIPMENT OPERATORS		
Asphalt Distributor	6.78	
Asphalt Paver	7.47	
Bulldozer	7.33	
Bulldozer (utility)	6.72	
Concrete Curb Machine	7.09	
Concrete Finishing Machine	7.85	
Concrete Paver	6.90	
Crane, Backhoe, Shovel & Dragline (over 1 yd)	8.16	
Crane, Backhoe, Shovel & Dragline(1 yd and under)	6.95	
Drill Operator	7.34	
Grade Checker	5.45	
Gradeall	8.38	
Greaseman	6.49	
Loader	7.09	
Mechanic	8.47	
Motor Grader (Fine Grade)	8.04	
Motor Grader(Rough Grade)	7.68	
Oiler	5.88	
Roller (Finisher)	6.70	
Roller (Rough)	5.65	
Scraper	6.63	
Screed Asphalt	7.09	
Stone Spreader	6.02	
Stripping Machine Operator	6.00	
Subgrade Machine	7.13	
Sweeper	5.80	
Tractor (Utility)	5.47	

TRUCK DRIVERS		
Trucks – Single Rear Axle	5.42	
Trucks – Multi Rear Axle	6.08	
Trucks – Heavy Duty	9.47	

WELDERS – Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

In the listing above, the "SU" designation means that rates listed under that identifier do not reflect collectively bargained wage and fringe benefit rates. Other designations indicate unions whose rates have been determined to be prevailing.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U. S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

***** STANDARD SPECIAL PROVISIONS *****

DIVISION ONE OF STANDARD SPECIFICATIONS

Division One of the *2006 NCDOT Standard Specifications for Roads and Structures* (*Standard Specifications*) shall apply except as follows:

Definitions: Throughout Division One of the *Standard Specifications*, the term "Contractor" is replaced with "Design-Build Team", the term "Bidder" is replaced with "Proposer," the term "Bid" is replaced by "Price Proposal," and the phrase "lowest Responsible Bidder" is replaced with "responsible Proposer with the lowest adjusted price." The replacement of "Contractor" with "Design-Build Team" does not apply to Article 102-2. The replacement of the above terms also does not apply when the terms are part of a phrase (e.g. bid bond, prime contractor, total amount bid, etc.)

Deletions: Articles 102-4, 102-10(C)(2), 102-11(A), 103-2(B), 103-4(B), 104-13, and 108-2 of the *Standard Specifications* are deleted from Design-Build Contracts.

Modifications: The remainder of this Standard Special Provision includes modifications to Division One of the *Standard Specifications*.

SECTION 101
DEFINITION OF TERMS

Page 1-2, Article 101-3, replace and add certain definitions as follows:

ADDITIONAL WORK

Additional work is that which results from a change or alteration in the contract and for which there are contract unit prices in the original contract or an executed supplemental agreement.

ADVERTISEMENT

The public advertisement inviting Statements of Qualifications for the design and construction of specific projects.

AWARD

The decision of the Board of Transportation to accept the proposal of the selected Design-Build Team for work which is subject to the furnishing of payment and performance bonds, and such other conditions as may be otherwise provided by law, the Request for Proposals, and the *Standard Specifications*.

CONTRACT

The executed agreement between the Department of Transportation and the successful proposer, covering the performance of the work and the compensation therefor.

The term contract is all inclusive with reference to all written agreements affecting a contractual relationship and all documents referred to therein. The contract shall specifically

include, but not be limited to, the Request for Proposals, the Technical Proposal, the Price Proposal, the printed contract form and all attachments thereto, the contract bonds, the plans and associated special provisions prepared by the Design-Build Team, the standard specifications and all supplemental specifications thereto, the standard special provisions and the project special provisions contained in the Request for Proposals, and all executed supplemental agreements, all of which shall constitute one instrument.

DATE OF AVAILABILITY

That date set forth in the Request for Proposals, by which it is anticipated that the Contract will be executed and sufficient design efforts or work sites within the project limits will be available for the Design-Build Team to begin his controlling operations or design.

DESIGN-BUILD

A form of contracting in which the successful proposer undertakes responsibility for both the design and construction of a project.

DESIGN-BUILD TEAM

An individual, partnership, joint venture, corporation or other legal entity that furnishes the necessary design and construction services, whether by itself or through subcontracts.

DESIGN-BUILD PROPOSAL

A proposal to contract consisting of a separately sealed Technical Proposal and a separately sealed Price Proposal submitted in response to a Request for Proposals on a Design-Build project.

PLANS

The project plans, Standard Drawings, working drawings and supplemental drawings, or reproductions thereof, accepted by the Engineer, which show the location, character, dimensions and details of the work to be performed.

(A) Standard Drawings:

Drawings approved for repetitive use, showing details to be used where appropriate. All Standard Drawings approved by the Department plus subsequent revisions and additions. Standard Drawings are available for purchase from:

Randy A. Garris, PE
State Contract Officer
1591 Mail Service Center
Raleigh, NC 27699-1591

(B) Preliminary Plans:

Department-furnished drawings included along with a Request for Proposals, or as developed by the Design-Build Team.

(C) Project Plans:

Construction drawings prepared, sealed and completed by the Design-Build Team, or as provided by the Department, that contain specific details and dimensions peculiar to the work.

(D) Working Drawings and Supplemental Drawings:

Supplemental design sheets, shop drawings, or similar data which the Design-Build Team is required to submit to the Engineer.

(E) As-Constructed Drawings:

Final drawings prepared by the Design-Build Team, documenting the details and dimensions of the completed work.

PRICE PROPOSAL

The offer of a Proposer, submitted on the prescribed forms, to perform the work and furnish the labor and materials at the price quoted.

PROPOSAL (OR REQUEST FOR PROPOSALS)

The paper document provided by the Department that the proposer uses to develop his paper offer to perform the work at designated bid prices.

PROPOSER

An individual, partnership, firm, corporation, LLC, or joint venture formally submitting a Technical Proposal and Price Proposal in response to a Request for Proposals.

RIGHT OF WAY

The land area shown on the plans as right of way within which the project is to be constructed.

SCHEDULE OF VALUES

A schedule of work items necessary to complete work, along with the progress of each work item, primarily for the purpose of partial payments.

TABLE OF QUANTITIES

A listing of work items (corresponding to the items in the Trns*port pay item list) that contributes to a project completion. The table shall include estimated quantities for each work item.

TECHNICAL PROPOSAL

A submittal from a proposer, in accordance with requirements of the Request for Proposals, for the purpose of final selection.

SECTION 102
PROPOSAL REQUIREMENTS AND CONDITIONS

Page 1-11, delete Article 102-1 and replace with the following:

102-1 INVITATION TO BID

After the advertisement has been made, an invitation to bid will be mailed to known prequalified contractors and any other contracting firms, material suppliers, and other interested parties who have requested they be placed on the invitation to bid mailing list informing them that bids will be received for the construction of specific projects. Such invitation will indicate the contract identification number, length, locations, and descriptions; a general summary of the items of work to be performed; and information on how to receive a Request for Qualifications.

All projects will be advertised in daily newspapers throughout the state prior to the bid opening.

Page 1-15, delete Article 102-3 and replace with the following:

102-3 CONTENTS OF REQUEST FOR PROPOSALS

A Request for Proposals will be furnished by the Department to the selected proposers from among the respondents to the Request for Qualifications. Each Request for Proposals will be marked on the front cover by the Department with an identifier of the Proposer to whom it is being furnished. This Request for Proposals will state the location of the project and will show a schedule of contract items for which Technical and Price Proposals are invited. It will set forth the date and time Technical and Price Proposals are to be submitted and will be opened. The Request for Proposals will also include any special provisions or requirements that vary from or are not contained in any preliminary design information or standard specifications.

The Request for Proposals will also include the printed contract forms and signature sheets for execution by both parties to the contract. In the event the Proposer is awarded the contract, execution of the Request for Proposals by the Proposer is considered the same as execution of the contract.

Standard specifications, sealed plans specifically identified as the Department's responsibility and other documents designated in the Request for Proposals shall be considered a part of the Request for Proposals whether or not they are attached thereto. All papers bound with the proposal are necessary parts thereof and shall not be detached, taken apart, or altered.

The names and identity of each prospective Proposer that receives a copy of the Request for Qualifications for the purposes of submitting a Statement of Qualifications shall be made public, except that a potential Proposer who obtains a Request for Qualifications may, at the time of ordering, request that his name remain confidential.

Up to three copies of the Request for Proposals will be furnished to each prospective Proposer. Additional copies may be purchased for the sum of $25 each. The copy marked with the Proposer's name and prequalification number shall be returned to the Department.

Page 1-16, Article 102-6, replace the first paragraph with the following:

The Proposer shall examine carefully the site of the work contemplated, the preliminary plans and specifications, and the Request for Proposals. The submission of a Technical Proposal and a Price Proposal shall be conclusive evidence that the Proposer has investigated and is satisfied as to the conditions to be encountered; as to the character, quality, and scope of work to be performed; the quantities of materials to be furnished; and as to the conditions and requirements of the proposed contract.

Page 1-17, delete Article 102-7 and replace with following:

102-7 SUBSURFACE INVESTIGATION REPORT

The Subsurface Investigation and report was made for the purpose of information only.

If a subsurface investigation report is available on this project, a copy may be obtained by the prospective proposers upon request.

The subsurface investigation on which the report is based was made for the purpose of information only. The various field boring logs, rock cores, and soil test data available may be reviewed or inspected in Raleigh at the office of the Geotechnical Unit. Neither the subsurface investigation report nor the field boring logs, rock cores, or soil test data is part of the contract.

General soil and rock strata descriptions and indicated boundaries are based on a geotechnical interpretation of all available subsurface data and may not necessarily reflect the actual subsurface conditions between borings or between sampled strata within the borehole. The laboratory sample data and the in situ (in-place) test data can be relied on only to the degree of reliability inherent in the standard test method. The observed water levels or soil moisture conditions indicated in the subsurface investigations are as recorded at the time of the investigation. These water levels or soil moisture conditions may vary considerably with time according to climatic conditions including temperature, precipitation, and wind, as well as other nonclimatic factors.

The Proposer is cautioned that details shown in the subsurface investigation report are preliminary only. The Department does not warrant or guarantee the sufficiency or accuracy of the investigation made, nor the interpretations made or opinions of the Department as to the type of materials and conditions that may be encountered. The proposer is cautioned to make such independent subsurface investigations, as he deems necessary to satisfy himself as to conditions to be encountered on this project. The Design-Build Team shall have no claim for additional compensation or for an extension of time for any reason resulting from the actual conditions encountered at the site differing from those indicated in the subsurface investigation.

Pages 1-17, delete Article 102-8 and replace with the following:

102-8 PREPARATION AND SUBMISSION OF BIDS

All Price Proposals shall be prepared and submitted in accordance with the following requirements:

1. The Request for Proposals provided by the Department shall be used and shall not be taken apart or altered. The Price Proposal shall be submitted on the same form, which has

been furnished to the Proposer by the Department as identified by the Proposer's name marked on the front cover by the Department.

2. All entries including signatures shall be written in ink.

3. The Proposer shall submit a lump sum or unit price for every item in the Price Proposal. The lump sum or unit prices bid for the various contract items shall be written in figures.

4. An amount bid shall be entered in the Request for Proposals for every item and the price shall be written in figures in the "Amount Bid" column in the Request for Proposals.

5. The total amount bid shall be written in figures in the proper place in the Request for Proposals. The total amount bid shall be determined by adding the amounts bid for each lump sum item.

6. Changes in any entry shall be made by marking through the entry in ink and making the correct entry adjacent thereto in ink. A representative of the Proposer shall initial the change in ink.

7. The Price Proposal shall be properly executed. In order to constitute proper execution, the Price Proposal shall be executed in strict compliance with the following:

   a. If a Price Proposal is by an individual, it shall show the name of the individual and shall be signed by the individual with the word "Individually" appearing under the signature. If the individual operates under a firm name, the bid shall be signed in the name of the individual doing business under the firm name.

   b. If the Price Proposal is by a corporation, it shall be executed in the name of the corporation by the President, Vice President, or Assistant Vice President. It shall be attested by the Secretary or Assistant Secretary. The seal of the corporation shall be affixed. If the Price Proposal is executed on behalf of a corporation in any other manner than as above, a certified copy of the minutes of the Board of Directors of said corporation authorizing the manner and style of execution and the authority of the person executing shall be attached to the Price Proposal or shall be on file with the Department.

   c. If the Price Proposal is made by a partnership, it shall be executed in the name of the partnership by one of the general partners.

   d. If the Price Proposal is made by a Limited Liability Company (LLC), it shall be signed by the manager and notarized.

   e. If the Price Proposal is made by a joint venture, it shall be executed by each of the joint venturers in the appropriate manner set out above. In addition, the execution by the joint venturers shall appear below their names.

   f. The Price Proposal execution shall be notarized by a notary public whose commission is in effect on the date of execution. Such notarization shall be applicable both to the Price Proposal and to the non-collusion affidavit which is part of the signature sheets.

8. The Price Proposal shall not contain any unauthorized additions, deletions, or conditional bids.

9. The Proposer shall not add any provision reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
10. The Price Proposal shall be accompanied by a bid bond on the form furnished by the Department or by a bid deposit. The bid bond shall be completely and properly executed in accordance with the requirements of Article 102-11. The bid deposit shall be a certified check or cashier check in accordance with Article 102-11.
11. The Price Proposal shall be placed in a sealed envelope and shall have been delivered to and received by the Department prior to the time specified in the Request for Proposals.

Page 1-22, delete Article 102-12 and replace with the following:

102-12 DELIVERY OF BIDS

All Price Proposals shall be placed in a sealed envelope having the name and address of the Proposer, and the statement " Price Proposal for the Design/Build of State Highway Project No. _____ in _____County(ies)" on the outside of the envelope. If delivered by mail, the sealed envelope shall be placed in another sealed envelope and the outer envelope addressed to the Contract Officer as stated in the Request for Proposals. The outer envelope shall also bear the statement "Price Proposal for the Design/Build of State Highway Project No. _____". All Technical Proposals shall be placed in a sealed envelope having the name and address of the Proposer, and the statement "Technical Proposal for the Design/Build of State Highway Project No. _____ in _____County(ies)" on the outside of the envelope. If delivered by mail, the sealed envelope shall be placed in another sealed envelope and the outer envelope addressed to the Contract Officer as stated in the Request for Proposal. The outer envelope shall also bear the statement "Technical Proposal for the Design/Build of State Highway Project No. _____". If delivered in person on or before the due date, the sealed envelope shall be delivered to the office of the Contract Officer as indicated in the Request for Proposals. Price Proposals and Technical Proposals shall be submitted in accordance with the project special provision “Submittal of Proposals” contained elsewhere in this Request for Proposals.

All Price Proposals and Technical Proposals shall be delivered prior to the time specified in the Request for Proposals. Price proposals and Technical Proposals received after such time will not be accepted and will be returned to the Proposer unopened.

Pages 1-22, delete Article 102-13 and replace with the following:

102-13 WITHDRAWAL OR REVISION OF BIDS

A Design-Build Team will not be permitted to withdraw its Technical and Price Proposals after they have been submitted to the Department, unless allowed under Article 103-3 or unless otherwise approved by the State Highway Administrator.

Page 1-23, delete Article 102-14 and replace with the following:

102-14 RECEIPT AND OPENING OF BIDS

Price Proposals will be opened and read publicly at the time and place indicated in the Request for Proposals. The scores of the previously conducted evaluation of the Technical Proposals will also be read publicly in accordance with the procedures outlined in the Request

for Proposals. Proposers, their authorized agents, and other interested parties are invited to be present.

Page 1-23, Article 102-15, Replace the 1st paragraph with the following:

102-15 REJECTION OF BIDS

Any Price Proposal submitted which fails to comply with any of the requirements of Articles 102-8, 102-10 or 102-11, or with the requirements of the project scope and functional specifications shall be considered irregular and may be rejected. A Price Proposal that does not contain costs for all proposal items shall be considered irregular and may be rejected.

SECTION 103
AWARD AND EXECUTION OF CONTRACT

Page 1-25, delete Article 103-1 and replace with the following:

103-1 CONSIDERATION OF PRICE PROPOSALS

After the Price Proposals are opened and read, they will be tabulated. The Price Proposal and score of the Technical Proposal will be made available in accordance with procedures outlined in the Request for Proposals. In the event of errors, omissions, or discrepancies in the costs, corrections to the Price Proposal will be made in accordance with the provisions of Article 103-2. Such corrected costs will be used to determine the lowest adjusted price.

After the reading of the Price Proposals and technical scores, the Department will calculate the lowest adjusted price as described in the "Selection Procedure" section of the Request for Proposals.

The right is reserved to reject any or all Price Proposals, to waive technicalities, to request the Proposer with the lowest adjusted price to submit an up-to-date financial and operating statement, to advertise for new proposals, or to proceed to do the work otherwise, if in the judgment of the Board, the best interests of the State will be promoted thereby.

Page 1-26, Subarticle 103-2(A), add items (7) and (8) as follows:

(7) **Discrepancy in the "Total Amount Bid" and the addition of the "Amount Bid" for each line Item**

In the case of the Total Amount Bid does not equal the summation of each Amount Bid for the line items, the summation of each Amount Bid for the line items shall be deemed to be the correct total for the entire project.

(8) **Omitted Total Amount Bid –Amount Bid Completed**

If the Total Amount Bid is not completed and the Amount Bid for all line items is completed the Total Amount Bid shall be the summation of the Amount Bid for all line items.

Page 1-29, delete Article 103-6 and replace with the following:

103-6 RETURN OF BID BOND OR BID DEPOSIT

Checks that have been furnished as a bid deposit will be retained until after the contract bonds have been furnished by the successful proposer, at which time Department of Transportation warrants in the equivalent amount of checks that were furnished as a bid deposit will be issued.

Paper bid bonds will be retained by the Department until the contract bonds are furnished by the successful proposer, after which all such bid bonds will be destroyed unless the individual bid bond form contains a note requesting that it be returned to the proposer or the Surety.

Page 1-30, delete Article 103-9 and replace with the following:

103-9 FAILURE TO FURNISH CONTRACT BONDS

The successful proposer's failure to file acceptable bonds within 14 calendar days after the notice of award is received by him shall be just cause for the forfeiture of the bid bond or bid deposit and rescinding the award of the contract. Award may then be made to the responsible proposer with the next lowest adjusted price or the work may be readvertised and constructed under contract or otherwise, as the Board of Transportation may decide.

SECTION 104
SCOPE OF WORK

Page 1-30, delete Article 104-1 and replace with the following:

104-1 INTENT OF CONTRACT

The intent of the contract is to prescribe the work or improvements that the Design-Build Team undertakes to perform, in full compliance with the contract. In case the method or character of any part of the work is not covered by the contract, this section shall apply. The Design-Build Team shall perform all work in accordance with the contract or as may be modified by written orders, and shall do such special, additional, extra, and incidental work as may be considered necessary to complete the work to the full intent of the contract. Unless otherwise provided elsewhere in the contract, the Design-Build Team shall furnish all implements, machinery, equipment, tools, materials, supplies, transportation, and labor necessary for the design, prosecution and completion of the work.

Page 1-31, Article 104-3, replace "plans or details of construction" with "contract" in all instances within this Article.

Page 1-40, Article 104-10, replace the 1st paragraph with the following:

104-10 MAINTENANCE OF THE PROJECT

The Design-Build Team shall maintain the project from the date of beginning construction on the project until the project is finally accepted. This maintenance shall be continuous and

effective and shall be prosecuted with adequate equipment and forces to the end that all work covered by the contract is kept in satisfactory and acceptable conditions at all times.

SECTION 105
CONTROL OF WORK

Pages 1-46, delete Article 105-2 and replace with the following:

105-2 PLANS AND WORKING DRAWINGS

All plans shall be supplemented by such approved working drawings as are necessary to adequately control the work. Working drawings furnished by the Design-Build Team and approved by the Engineer shall consist of such detailed drawings as may be required to adequately control the work. They may include stress sheets, shop drawings, erection drawings, falsework drawings, cofferdam drawings, bending diagrams for reinforcing steel, catalog cuts, or any other supplementary drawings or similar data required of the Design-Build Team. When working drawings are approved by the Engineer, such approval shall not operate to relieve the Design-Build Team of any of his responsibility under the contract for the successful completion of the work.

Changes on shop drawings after approval and/or distribution shall be subject to the approval of the Engineer and he shall be furnished a record of such changes.

Page 1-47, Article 105-3, add the following after the 3rd paragraph:

The Design-Build Team 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-Build Team 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-Build Team 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 at the sole discretion of the Engineer.

Pages 1-47, delete Article 105-4 and replace with the following:

105-4 COORDINATION OF PLANS, SPECIFICATIONS, SUPPLEMENTAL SPECIFICATIONS, AND SPECIAL PROVISIONS

The Request for Proposals, all Plans, the Standard Specifications, and all supplementary documents are essential parts of the contract and a requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work.

In case of discrepancy or conflict, the order in which they govern shall be as follows:

(A) Request for Proposals

(B) Technical Proposal from the Design-Build Team

(C) Accepted Plans and Details from the Design-Build Team, or sealed plans provided by the Department, as applicable

(D) Standard Drawings

(E) Standard Specifications

Where dimensions on the plans are given or can be computed from other given dimensions they shall govern over scaled dimensions.

The Design-Build Team shall take no advantage of any error or omission in the plans, estimated quantities, or specifications. In the event the Design-Build Team discovers an error or omission, he shall immediately notify the Engineer.

Page 1-50, delete Article 105-9 and replace with the following:

105-9 CONTRUCTION STAKES, LINES, AND GRADES

The Design-Build Team shall be responsible for any surveying, construction staking and layout required in the performance of the work. He will be responsible for the accuracy of lines, slopes, grades and other engineering work which he provides under this contract. Unless otherwise specified in the Request for Proposals, no measurement or direct payment will be made for this work. The cost shall be considered as included in other contract items.

SECTION 106
CONTROL OF MATERIAL

Page 1-56, Article 106-2, add the following after the second paragraph:

Prior to beginning construction, the Design-Build Team shall provide a Table of Quantities as described in Article 101-3 of these specifications.

The Table of Quantities Work Items shall correspond to Pay Items as defined in the Standard Specifications. These Work Items have associated Materials and Conversion Factors. For non-standard Work Items, a Generic Work Item with the correct Unit of Measure and in an appropriate category will be used. For example, “GENERIC TRAFFIC CONTROL ITEM – EA” or “GENERIC RETAINING WALL ITEM – LF”. For these Generic Work Items, Materials must be defined and appropriate conversion factors submitted

An initial Table of Quantities shall be submitted not less than 30 calendar days after the date of award. The Table of Quantities shall be updated and resubmitted within 14 days of when a set of Plans is sealed as Release for Construction (RFC) plans, and whenever there are substantial changes to the Quantities on previously incorporated RFC plans.

Page 1-58, Article 106-6, replace “specifications” with “contract” as the last word of the 1st paragraph.

Page 1-58, Article 106-6(C), replace the 2nd paragraph with the following:

Where the Department agrees to inspect or test materials during their production or at the source of supply, the Design-Build Team shall bear the cost of testing performed on materials

ordered by him but not incorporated into the project. For items normally pretested by the Department, the Design-Build Team shall provide a minimum of 30 days notice prior to the beginning of production of the items for this project along with final approved shop drawings.

SECTION 107
LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

Page 1-69, Article 107-18, in the last sentence of the first paragraph, replace the word "legally" with the word "contractually".

Page 1-69, delete Article 107-19 and replace with the following:

107-19 FURNISHING RIGHT OF WAY

The responsibility for coordinating the securing of all necessary rights of way is as outlined in the Request for Proposals.

SECTION 108
PROSECUTION AND PROGRESS

Page 1-71, Article 108-1, add the following sentence to the end of the 1st paragraph:

The Design-Build Team shall not commence work prior to execution of the contract by both the Department and the Design-Build Team.

Page 1-72, delete Article 108-3 and replace with the following:

108-3 PRECONSTRUCTION AND PRE-DESIGN CONFERENCES

The selected Design-Build Team shall meet with the Engineer for a pre-design conference concerning the design phase of the work. This conference shall be held prior to the commencement of work, as it is determined according to Article 108-1, and will be scheduled by the Engineer. At the predesign conference, the Design-Build Team shall furnish authorized signature forms and a list of any proposed subcontractors associated with the design of the project.

A preconstruction conference shall be held at least 10 working days before construction activity begins. This second conference, concerning the construction phase, shall also be scheduled by the Engineer. The Design-Build Team shall give the Engineer a minimum of 45 days notice before he plans to begin construction activities. This will allow the Engineer time for any environmental agency representatives involved in the permitting process, as well as any other pertinent entities, to be scheduled to attend the preconstruction conference. If the Design-Build Team is responsible for utilities in accordance with Article 105-8 and the Request for Proposals, he shall be responsible for coordinating with the Engineer in scheduling their attendance and for notifying them. The Design-Build Team shall also be responsible for

coordinating with the Engineer in scheduling the attendance of subcontractors and others deemed appropriate, and for notifying them.

At the preconstruction conference, a list of any proposed subcontractors and major material suppliers associated with the construction of the project will be submitted.

If the contract has a DBE requirement, the Design-Build Team shall submit copies of completed and signed DBE subcontracts, purchase orders, or invoices to the Department.

The Design-Build Team shall submit a traffic control plan in accordance with Article 1101-5 and the Request for Proposals. The Design-Build Team shall designate an employee who is competent and experienced in traffic control to implement and monitor the traffic control plan. The qualifications of the designated employee must be satisfactory to the Engineer.

The Design-Build Team shall submit a safety plan and designate an employee as Safety Supervisor.

Both plans shall be submitted at the preconstruction conference and must be satisfactory to the Engineer. Should the design plan include activities that would place personnel on the work site, traffic control and safety plans for those activities shall be submitted at the predesign conference.

During the preconstruction conference, the Engineer will designate a Department employee or employees who will be responsible to see that the traffic control plans and any alterations thereto are implemented and monitored to the end that traffic is carried through the work in an effective manner. If approved by the Engineer, the Design-Build Team may designate one employee to be responsible for both the traffic control and safety plans. The Design-Build Team shall not designate its superintendent as the responsible person for either the traffic control plan or the safety plan, unless approved by the Engineer.

If the project requires that Design-Build Team or State personnel work from falsework, within shoring, or in any other hazardous area the Design-Build Team shall submit, as part of the Design-Build Team's safety plan, specific measures it will use to ensure worker safety.

The Design-Build Team shall also submit a program for erosion control and pollution prevention on all projects involving clearing and grubbing, earthwork, structural work, or other construction, when such work is likely to create erosion or pollution problems.

If the Design-Build Team fails to provide the required submissions, the Engineer may order the preconstruction conference suspended until such time as they are furnished. Work shall not begin until the preconstruction conference has been concluded and the safety plan has been approved, unless authorized by the Engineer. The Design-Build Team shall not be entitled to additional compensation or an extension of contract time resulting from any delays due to such a suspension.

The Design-Build Team shall designate a qualified employee as Quality Control Manager. The Quality Control Manager shall be responsible for implementing and monitoring the quality control requirements of the project.

Page 1-72, Article 108-4, add the following sentence to the end of this article:

The Design-Build Team shall record the proceedings of these conferences and distribute the final minutes of the conferences to all attendees.

Page 1-74, Article 108-6, replace "40 percent" with "30 percent" in the 1st paragraph.

Page 1-74, Article 108-6, delete the second paragraph and replace with the following:

In any event, the Contractor shall perform with his own organization work amounting to not less than 25% of the difference between the total amount bid and the value of specialty items that have been sublet.

Pages 1-75, delete Article 108-8 and replace with the following:

108-8 FAILURE TO MAINTAIN SATISFACTORY PROGRESS

The Engineer will check the Design-Build Team's progress at the time each partial pay request is received. The Design-Build Team's progress may be considered as unsatisfactory if, according to the Project Schedule, the projected finish date for all work exceeds the scheduled finish date by more than 10%.

When the Design-Build Team's progress is found to be unsatisfactory as described above, the Engineer may make written demand of the Design-Build Team to state in writing the reason for the unsatisfactory progress and produce such supporting data as the Engineer may require or the Design-Build Team may desire to submit. The Engineer will consider the justifications submitted by the Design-Build Team and extensions of the completion date that have or may be allowed in accordance with Article 108-10(B).

When the Design-Build Team cannot satisfactorily justify the unsatisfactory progress the Engineer may invoke one or more of the following sanctions:

1. Withhold anticipated liquidated damages from amounts currently due or which become due.
2. Remove the Design-Build Team and individual managing firms of the Design-Build Team and/or prequalified design firms from the Department's Prequalified Bidders List.

When any of the above sanctions have been invoked, they shall remain in effect until rescinded by the Engineer.

Page 1-79, Article 108-10(B), add the following as the first paragraph:

Only delays to activities which affect the completion date or intermediate contract date will be considered for an extension of contract time. No extensions will be granted until a delay occurs which impacts the project's critical path and extends the work beyond the contract completion date or intermediate completion date. Any extension to the completion date or intermediate contract date will be based on the number of calendar days the completion date or intermediate completion date is impacted as determined by the Engineer's analysis.

Pages 1-79, delete Subarticle 108-10(B)(1) in its entirety.

Page 1-83, Article 108-13, delete bullet (E)(2) in its entirety.

SECTION 109
MEASUREMENT AND PAYMENT

Page 1-85, Article 109-2, delete the last sentence of the 1st paragraph and replace with the following:

Payment to the Design-Build Team will be made only for the work completed, certified and accepted in accordance with the terms of the contract.

Pages 1-90, delete Article 109-4(A) and replace with the following:

109-4 PARTIAL PAYMENTS

(A) **General:**

Partial payments will be based upon progress estimates prepared by the Engineer at least once each month on the date established by the Engineer. Partial payments may be made twice each month if in the judgment of the Engineer the amount of work performed is sufficient to warrant such payment. No partial payment will be made when the total value of work performed since the last partial payment amounts to less than $10,000.00. Partial payments will be approximate only and will be subject to correction in the final estimate and payment.

When the contract includes one lump sum price for the entire work required by the contract, partial payments for the lump sum design-build price shall be based on a certified Schedule of Values submitted by the successful Design-Build Team and approved by the Engineer. The certification shall indicate the Design-Build Team has reviewed the information submitted and the information accurately represents the work performed for which payment is requested. The certified Schedule of Values shall be submitted no later than 30 calendar days after the date of award. Each item on the certified Schedule of Values shall be assigned a cost and quantity and shall be identified as an activity on the project schedule. A revised certified Schedule of Values shall be submitted with each update of the Project Schedule as described in Article 108-2 or when requested by the Engineer. A certified copy of the Table of Quantities shall also be submitted with each payment request. The certification of the Table of Quantities shall indicate the Design-Build Team has reviewed the information submitted and the information accurately represent the materials for the work performed for which payment is requested.

When the contract includes lump sum items for portions of the work required by the contract, and the applicable section of the Specifications or Request for Proposals specify the means by which the total amount bid be included in the partial pay estimates, the Engineer will determine amounts due on the partial pay estimate in accordance with the applicable portion of the Specifications or Request for Proposals.

The Engineer will withhold an amount sufficient to cover anticipated liquidated damages as determined by the Engineer.

Page 1-92, Subarticle 109-5(D), delete the 4th and 5th paragraphs and replace with the following:

Partial payments will not be made on seed or any living or perishable plant materials.

Partial payment requests shall not be submitted by the Design-Build Team until those items requested have corresponding signed and sealed RFC plans accepted by the Department.

Pages 1-94, Article 109-10, add the following as bullets (E) and (F) under the 1st paragraph.

(E) As-constructed plans or other submittals as required by the Contract.

(G) Documents or guarantees to support any warranty provided by the Design Build Team.

ITEMIZED PROPOSAL FOR CONTRACT No. C 201752

May 09, 2007 11:08 am

County: Union

Line #	Item Number #	Sec #	Description	Quantity	Unit Cost	Amount
			ROADWAY ITEMS			
0001	0000900000-N	SP	GENERIC MISCELLANEOUS ITEM DESIGN AND CONSTRUCT	Lump Sum	L.S.	

1405/Nov02/Q1.0/D 900000 /E1

Total Amount Of Bid For Entire Project:_____

FUEL USAGE FACTOR CHART AND ESTIMATE OF QUANTITIES

Description of Work	Units	Fuel Usage Factor Diesel #2	Estimate of Quantities
Unclassified and Borrow Excavation	Gal/CY	0.29	_____cy
Aggregate Base Course	Gal/Ton	0.55	_____tons
Aggregate for Cement Treated Base Course			
Portland Cement for Cement Treated Base Course			
Asphalt Concrete Base Course	Gal/Ton	2.90	_____tons
Asphalt Concrete Intermediate Course			
Asphalt Concrete Surface Course			
Open-Graded Asphalt Friction Course			
Sand Asphalt Surface Course, Type F-1			
Portland Cement Concrete Pavement	Gal/CY	0.98	_____cy
Structural Concrete			
Concrete Shoulders Adjacent to Pavement			

☐ The above quantities represent a reasonable estimate of the total quantities anticipated, for each item, as pertaining to fuel price adjustments, and is representative of the design proposed in the Technical Proposal submitted under separate cover.

Or

☐ The Design-Build Team elects not to pursue reimbursement for Fuel Price Adjustments on this project.

The information submitted on this sheet is claimed as a "Trade Secret" in accordance with the requirements of G.S. 66-152(3) until such time as the Price Proposal is opened.

_____ _____

Signature, Title Dated

_____

Print Name, Title

(Submit a copy of this sheet in a separate sealed package with the outer wrapping clearly marked "Fuel Price Adjustment" and deliver with the Technical and Cost Proposal.)

12/19/89

AWARD LIMITS ON MULTIPLE PROJECTS

It is the desire of the Proposer to be awarded contracts, the value of which will not exceed a total of $_____, for those projects indicated below on which bids are being opened on the same date as shown in the Proposal Form. Individual projects shall be indicated by placing the project number and county in the appropriate place below. Projects not selected will not be subject to an award limit.

_____	_____
(Project Number)	(County)
_____	_____
(Project Number)	(County)
_____	_____
(Project Number)	(County)
_____	_____
(Project Number)	(County)

*If a Proposer desires to limit the total amount of work awarded to him in this letting, he shall state such limit in the space provided above in the second line of this form.

It is agreed that in the event that I am (we are) the successful Design Build Team on indicated projects, the total value of which is more that the above stipulated award limits, the Board of Transportation will award me (us) projects from among those indicated which have a total value not exceeding the award limit and which will result in the best advantage to the Department of Transportation.

_____
**Signature of Authorized Person

**Only those persons authorized to sign bids under the provisions of Article 102-8, Item 7, shall be authorized to sign this form.

LISTING OF DBE SUBCONTRACTORS

Sheet ____ of ____

FIRM NAME AND ADDRESS	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF SUBLET ITEM

CONTRACT NO._____ **COUNTY**_____ **FIRM**_____

THIS FORM MUST BE COMPLETED IN ORDER FOR THE BID TO BE CONSIDERED RESPONSIVE AND BE PUBLICLY READ.
BIDDERS WITH NO DBE PARTICIPATION MUST SO INDICATE THIS ON THE FORM BY ENTERING THE WORD OR NUMBER ZERO.

LISTING OF DBE SUBCONTRACTORS

Sheet ____ of ____

FIRM NAME AND ADDRESS	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF SUBLET ITEM

CONTRACT NO._____ COUNTY_____ FIRM_____

LISTING OF DBE SUBCONTRACTORS

Sheet ____ of ____

FIRM NAME AND ADDRESS	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF SUBLET ITEM

CONTRACT NO._____ COUNTY_____ FIRM_____

LISTING OF DBE SUBCONTRACTORS

Sheet ____ of ____

FIRM NAME AND ADDRESS	ITEM NO.	ITEM DESCRIPTION	(*) AGREED UPON UNIT PRICE	DOLLAR VOLUME OF SUBLET ITEM

CONTRACT NO._____ **COUNTY**_____ **FIRM**_____

COST OF CONSTRUCTION WORK ONLY **$** _____

(*) The Dollar Volume Shown In This Column Shall be Actual Price Agreed Upon by the Prime Contractor and the DBE Subcontractor, and These Prices Will Be Used to Determine The Percentage of the DBE Participation in this Contract.

Dollar Volume of DBE Subcontractor **$ _____

Percentage of Total Construction Cost _____**%**

**MUST HAVE ENTRY EVEN IF FIGURE TO BE ENTERED IS ZERO.

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(If a corporation uses this sheet)

_____

(Print full name of corporation)

_____

(Address as Prequalified)

Attest_____ By_____

(Secretary) (Assistant Secretary) (President) (Vice President)
Delete inappropriate title (Asst. Vice President)
Delete inappropriate title

_____ _____

Print Signer's Name Print Signer's Name

CORPORATE SEAL

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

_____ day of _____, 20_____.

_____

(Signature of Notary Public) NOTARY SEAL:

of _____County.

State of _____.

My Commission Expires: _____

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(If a joint venture, use this sheet)

Instructions to Bidders: On Line (1), print the name of each contractor. On Line (2), print the name of one of the joint venturers and execute below in the appropriate manner and furnish in the following lines all information required by Article 102-8 of the Specifications. On Line (3), print the name of the other joint venturer and execute below in the appropriate manner and furnish all information required by said article of the Specifications. For correct form of execution and information required for execution of this sheet by an individual, see Signature Sheets 3 and 4; for a corporation, see Signature Sheet 1; and for a partnership, see Signature Sheet 5.

(1)_____ and _____
A Joint Venture

(2)_____(Seal)
(Name of Contractor)

_____

_____ By_____
Witness or Attest

_____ _____
Print Signer's Name Print Signer's Name
If a corporation, affix corporate seal:

and

(3)_____(Seal)
(Name of Contractor)

_____
(Address as Prequalified)

_____ By_____
Witness or Attest

_____ _____
Print Signer's Name Print Signer's Name
If a corporation, affix corporate seal:

NOTE - AFFIDAVIT MUST BE NOTARIZED For Line (2)

Subscribed and sworn to before me

this the _____day of _____, 20_____.

_____
(Signature of Notary Public & Seal)

of _____County.

State of _____.

My Commission Expires:_____

NOTE - AFFIDAVIT MUST BE NOTARIZED For Line (3)

Subscribed and sworn to before me

this the _____ day of _____, 20_____.

_____
(Signature of Notary Public & Seal)

of _____County.

State of _____.

My Commission Expires_____.

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(If an individual doing business under a
firm name, use this sheet)

Name of Contractor_____trading
(Print individual name)

_____
Witness

and doing business as _____
(Print firm name)

_____
Print Signer's Name

_____
(Address as Prequalified)

Signature of Contractor_____
(Individually)

_____
Print Signer's Name

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

NOTARY SEAL

_____ day of _____, 20_____.

_____
(Signature of Notary Public)

of _____County.

State of _____.

My Commission Expires:_____

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(If an individual doing business in
his own name, use this sheet)

Name of Contractor_____
(Print)

_____
(Address as Prequalified)

_____ Signature of Contractor_____
Witness (Individually)

_____ _____
Print Signer's Name Print Signer's Name

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the NOTARY SEAL

_____ day of _____, 20_____.

_____
(Signature of Notary Public)

of _____County.

State of _____.

My Commission Expires:_____

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(If a partnership, use this sheet)

_____
(Print Name of Partnership)

_____
(Address as Prequalified)

_____ By_____
Witness Partner

_____ _____
Print Signer's Name Print Signer's Name

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the NOTARY SEAL

_____ day of _____, 20_____.

_____
(Signature of Notary Public)

of _____County.

State of _____.

My Commission Expires:_____

EXECUTION OF BID, NONCOLLUSION AFFIDAVIT, AND DEBARMENT CERTIFICATION

The person executing the bid, on behalf of the Bidder, being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the Bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor.

In addition, execution of this bid in the proper manner also constitutes the Bidder's certification of "Status" under penalty of perjury under the laws of the United States in accordance with the Debarment Certification included elsewhere in the proposal form, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

SIGNATURE OF CONTRACTOR
(Limited Liability Company, use this sheet)

Name of Contractor_____
(Print firm name)

_____
(Address as Prequalified)

Signature of Manager_____
(Individually)

_____
Print Signer's Name

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

_____ day of _____, 20____. NOTARY SEAL

_____
(Signature of Notary Public)

of _____County.

State of _____.

My Commission Expires:_____

2/16/99

Contract No: C 201752

County: Union

ACCEPTED BY THE
DEPARTMENT OF TRANSPORTATION

_____
Contract Officer

_____
Date

Execution of Contract and Bonds
Approved as to Form:

_____
Attorney General

DEBARMENT CERTIFICATION OF BIDDERS

Instructions & conditions for certification

1. By signing and submitting this proposal, the bidder is providing the certification set out below.

2. The inability of a bidder to provide the certification required below will not necessarily result in denial of participation in this contract. If the certification is not provided, the bidder must submit an explanation (exception) of why it cannot provide the certification set out below. The certification or explanation (exception) will be considered in connection with the Department's determination whether to award the contract. However, failure of the prospective bidder to furnish a certification or an explanation (exception) may be grounds for rejection of the bid.

3. The certification in this provision is a material representation of fact upon which reliance is placed when the Department determines whether or not to award the contract. If it is later determined that the bidder knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the Department may terminate this contract for cause of default.

4. The prospective bidder shall provide immediate written notice to the Department if at any time the bidder learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing *Executive Order 12540*. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.

6. The bidder agrees by submitting this bid that, should the contract be awarded, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this contract, unless authorized by the Department.

7. The prospective bidder further agrees by submitting this proposal that it will include the Federal-Aid Provision titled "Required Contract Provisions Federal-Aid Construction Contract" (Form FHWA PR 1273) provided by the Department, without subsequent modification, in all lower tier covered transactions.

8. The prospective bidder may rely upon a certification of a prospective participant in a lower tier covered transaction that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant may decide the method and frequency by which it determines the eligibility of its principals.

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if the successful bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the Department may terminate this transaction for cause of default.

DEBARMENT CERTIFICATION

The bidder certifies to the best of its knowledge and belief, that it and its principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and

d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective bidder is unable to certify to any of the statements in this certification, it shall attach an explanation to this proposal.

****

IF AN EXPLANATION, AS PROVIDED IN THE ABOVE DEBARMENT CERTIFICATION, HAS BEEN ATTACHED TO THE PROPOSAL, PLEASE CHECK THE BOX SHOWN BELOW:

☐ An explanation has been attached to the proposal.