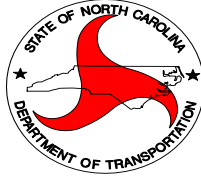


STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION



DIVISION 11

CONTRACT PROPOSAL

WBS ELEMENT NUMBER: Various CONTRACT: 11-00-096
ROUTE: Various COUNTY: Division 11
DESCRIPTION: Emergency / Urgent Landslide Repair at Various Locations upon Request in Division 11

BID OPENING: October 16, 2014 @ 10:00 AM

NOTICE:

ALL BIDDERS 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 BIDDER 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 OR SBE PROJECT. BIDDERS 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.

NAME OF BIDDER

N.C. CONTRACTOR'S LICENSE NUMBER

ADDRESS OF BIDDER

RETURN BIDS TO:

QUOTE NO: 11-00-096 - DIVISION 11 LANDSLIDE REPAIR
N.C. DEPARTMENT OF TRANSPORTATION
JOE L. LAWS, PE, DIVISION PROJECT MANAGER
801 STATESVILLE ROAD
P.O. BOX 250
NORTH WILKESBORO, NORTH CAROLINA 28659

INSTRUCTIONS TO BIDDERS

PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE PREPARING AND SUBMITTING YOUR BID

All bids shall be prepared and submitted in accordance with the following requirements. Failure to comply with any requirement shall cause the bid to be considered irregular and shall be grounds for rejection of the bid.

1. The bid sheet furnished by NCDOT with the proposal shall be used and shall not be altered in any manner. **DO NOT SEPARATE THE BID SHEET FROM THE PROPOSAL!**
2. All entries on the bid sheet, including signatures, shall be written in ink.
3. The Bidder shall submit a unit price for every item on the bid form. The unit prices for the various contract items shall be written in figures.
4. An amount bid shall be entered on the bid sheet for every item. The amount bid for each item shall be determined by multiplying each unit bid by the quantity for that item, and shall be written in figures in the "Amount Bid" column of the sheet.
5. The total amount bid shall be written in figures in the proper place on the bid sheet. The total amount shall be determined by adding the amounts bid for each 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 Bidder shall initial the change in ink.
7. The bid shall be properly executed. All bids shall show the following information:
 - a. Name of individual, firm, corporation, partnership, or joint venture submitting bid.
 - b. Name and signature of individual or representative submitting bid and position or title.
 - c. Name, signature, and position or title of witness.
 - d. Contractor's License Number (if Applicable)
8. Bids submitted by corporations shall bear the seal of the corporation.
9. The bid shall not contain any unauthorized additions, deletions, or conditional bids.
10. The bidder shall not add any provision reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.
11. **THE PROPOSAL WITH THE BID SHEET STILL ATTACHED SHALL BE PLACED IN A SEALED ENVELOPE AND SHALL HAVE BEEN DELIVERED TO AND RECEIVED IN THE DIVISION ENGINEER'S OFFICE AT 801 STATEVILLE ROAD, P.O. BOX 250, NORTH WILKESBORO, NORTH CAROLINA 28659 BY 10:00 AM ON OCTOBER 16, 2014.**
12. The sealed bid must display the following statement on the front of the sealed envelope:

QUOTE NO: 11-00-096 - DIVISION 11 LANDSLIDE REPAIR

13. If delivered by mail, the sealed envelope shall be placed in another sealed envelope and the outer envelope shall be addressed as follows:

**JOE L. LAWS, PE, DIVISION PROJECT MANAGER
N.C. DEPARTMENT OF TRANSPORTATION
P.O. BOX 250
801 STATESVILLE ROAD
NORTH WILKESBORO, NORTH CAROLINA 28659**

AWARD OF CONTRACT

The award of the contract, if it be awarded, will be made to the lowest responsible Bidder in accordance with Section 102 of the 2012 Standard Specifications for Roads and Structures. The lowest responsible Bidder will be notified that his bid has been accepted and that he has been awarded the contract. NCDOT reserves the right to reject all bids.

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DIVISION CONTRACT

General Provisions

GENERAL

The North Carolina Department of Transportation (NCDOT) is soliciting bids from interested firms to establish a contract to provide labor, equipment, stamped engineered design, materials, supervision and service warranty to provide “on-call” services as needed for emergency/urgent landslide repairs using reinforcement technologies developed for landslide repair conditions (launched soil nails, permanently cased soil nails, self-drilling soil nails, self-drilling micropiles and ancillary items as defined within these specifications). These services will be provided in Alleghany, Ashe, Avery, Caldwell, Surry, Watauga, Wilkes, and Yadkin Counties.

The quantities shown in the itemized proposal for the project are considered to be approximate only and are given as the basis for comparison of bids. The Department of Transportation may increase or decrease the quantity of any item or portion of the work as may be deemed necessary or expedient. An increase or decrease in the quantity of any item will not be regarded as sufficient ground for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided for in the contract.

All work and materials shall be in accordance with the provisions of the General Guidelines of this contract, the Project Special Provisions, the *North Carolina Department of Transportation Standard Specifications for Roads and Structures*, the *North Carolina Department of Transportation Roadway Standards Drawings*, and the current edition of the *Manual of Uniform Traffic Control Devices (MUTCD)*. These manuals may be found on the internet at:

<http://www.ncdot.gov/doh/preconstruct/ps/specifications/2012draft.pdf>

http://www.ncdot.gov/doh/preconstruct/ps/std_draw/default.html

<http://mutcd.fhwa.dot.gov/>

Be advised that Item Unit Prices will be used to determine the lowest acceptable bidder. Actual Item Quantities will vary and will be determined based on the amount of “Slope Repairs” required and the availability of funds. See Bid Form for complete list of Estimated Quantities.

MANDATORY PRE-BID CONFERENCE AND PROPOSAL REVIEW

Due to the highly specialized nature of the work involved and in order for all prospective bidders to have an extensive knowledge of the work and risks entailed, all prospective bidders shall attend a mandatory pre-bid conference at the following location on:

Date and Time: October 2, 2014 at 10:00 AM

Place: Division 11 Engineer’s Office – Large Conference Room

Location: 801 Statesville Road, North Wilkesboro, NC 28659

Contact for Directions: Joe L. Laws – 336-903-9138

Note: If you plan to attend this showing, please notify Joe Laws so that contract materials will be available.

The Mandatory Pre-Bid Conference will begin promptly at **10:00 AM**. An official clock for the pre-bid conference will be designated. Contractors who are late will not be permitted to sign in or to participate in the conference.

The pre-bid conference will include a thorough discussion of the contract goals, typical projects, special provisions, pre-qualifications, and warranty requirements.

No questions concerning the project will be answered by any Department personnel at any time, except at the Mandatory Pre-Bid Conference.

This conference will be conducted by Department personnel to ensure all prospective bidders are given an opportunity to obtain information relevant to the project and given an opportunity to ask any questions they may have.

The Engineer will explain areas of responsibility, standards of performance and expected results. This is also intended to be a time for the Contractor to raise questions as to the present condition of the facility. Any changes made to the contract during the pre-bid conference will be documented and included in an addendum. The entire addendum must be returned with the bid package, signed and dated. Failure to do so will result in disqualification of bid.

Eligibility to Bid

All prospective bidders at the Mandatory Pre-Bid Conference shall meet all of the requirements as shown below:

1. Only Bidders who have attended the entire conference and properly registered at the Mandatory Pre-Bid Conference will be considered eligible to bid on this project. A bid received from a Bidder who has not attended and properly registered at the conference will not be considered for award.
2. Attendance at the Mandatory Pre-Bid Conference will not meet the requirements of proper registration unless the individual attending has registered at the conference in accordance with the following:
 - The individual attending the Mandatory Pre-Bid Conference is a full time employee of the company being represented and has **administrative and/or supervisory** authority over the work to be performed under this contract.
 - The individual signs his/her name and company title on the official roster.
 - The individual writes in the name and address of the company he or she represents.
 - Only one company is shown as being represented by the individual attending.
 - The individual shall sign out when the conference is over.

Attendance at any prior pre-bid conference will not meet the requirement of this provision.

SITE INVESTIGATION AND REPRESENTATION

By signing the proposal documents, the Contractor acknowledges that:

- (A) He understands the nature of the work and general and local conditions, particularly those bearing on transportation;
- (B) He is familiar with the availability and cost of labor and materials;
- (C) He will to adhere to State regulations for safety and security of property, roads, and facilities;
- (D) He is able to prosecute the work in accordance with all applicable local, state and federal rules and regulations, and;

Any failure on the part of the Contractor to acquaint himself with all available information shall not relieve him from the responsibility any aspect of the contracting process. No adjustment in contract time or contract prices will be made due to the Contractor's negligence in familiarizing himself with the contract or project site(s).

CONTRACT REQUIREMENTS

Work shall consist of the Contractor stabilizing identified landslides by internally reinforcing the soil mass with reinforcing elements (soil nails and/or micropiles) using installation methods as specified in this contract. NCDOT will identify locations of all work to be performed as specified herein.

The Contractor may be called out for a site visit prior to issuance of a Work Request. The purpose of the site visit will be for the Contractor to evaluate and prepare an estimate of the materials and services needed to repair the site to the engineer's specifications. Unless otherwise requested by NCDOT, Contractor shall schedule the site visit within **twenty-four (24) hours** following notification by NCDOT personnel, and shall provide a detailed written estimate of materials and services needed to repair the site to NCDOT's specifications within **twenty-four (24) hours** following the site visit. Any necessary subsurface exploration, site survey, and slope stability modeling to prepare the estimate is the responsibility of the Contractor. **All written estimates must contain a warranty statement guaranteeing the roadway platform stability for the repaired section for a period of five (5) years and that any necessary repairs will be made in a timely manner at no cost to NCDOT. This warranty statement must be jointly endorsed by the Contractor and the Contractor's Engineer.**

Following issuance of a Work Request, the Contractor will provide all necessary engineering plans and details required to successfully repair landslides. These plans shall be stamped by a Registered Professional Engineer (PE), licensed in the State of North Carolina, who is knowledgeable and experienced in the design and implementation of slope stabilization with soil nails and related work. Changes or deviations from the approved submittals must be resubmitted

for approval. No adjustments in project time will be allowed due to incomplete submittals. The PE stamped submittals shall include at a minimum the following information:

1. A description of the soil nail construction sequence and a schedule for the work.
2. A description and detail of the size and spacing of soil nails to be placed in order to meet minimum static/seismic factors of safety for global stability of the repair. The materials and components selected will meet a 75-year design life. Designs will include consideration of appropriate loadings, geometry, and material properties associated with the native soils, backfill, reinforcement connections, facing, and other design elements.
3. All necessary details to successfully construct any temporary/permanent facing and drainage system.

The Division Engineer or his duly appointed representative will review the estimate submitted by the contractor and once measures needed have been agreed upon, contractor will be given the approval to commence work.

Unless otherwise approved by NCDOT, repair operations commencement and submittal of stamped plans shall be within **forty-eight (48) hours** after receipt of a Work Request. Once repair has commenced, it must continue until completion. The Contractor must also have the ability to design and repair three (3) sites at the same time, if necessary, to efficiently provide maintenance and emergency repairs as required.

CONTRACTOR QUALIFICATIONS

Timeliness of Contract Execution is critical to the success of emergency/urgent repairs. To meet the needs of providing emergency design/build services, the Bidder must show that they have enough registered professional engineers on staff (consultants and manufacturer's representatives will not qualify) and enough operational soil nail installation rigs and crews to design, supervise, and repair to up to **three (3)** sites simultaneously, and have extensive experience repairing landslides under active roadway traffic. NCDOT reserves the right to contact references and investigate past performance and qualifications of the Bidder, and employees, including contacting third parties and/or the references provided by the Bidder.

The equipment offered by bidders shall be suitable for the intended purpose and shall meet all North Carolina regulations. All Crew persons and operators shall possess the knowledge, skills, and abilities to perform all aspects of operation of the equipment and to follow the practices and methods of roadway maintenance and construction used by NCDOT. The Contractor shall submit documentation showing that project personnel have appropriate qualifications.

The contractor's operators shall not create any hazardous condition with the operation of the equipment. All personnel shall, at all times, wear approved protective clothing, safety vests, and any other equipment required to meet OSHA and NCDOT standards. They will obey all traffic and safety rules and regulations.

To assist NCDOT in the review of the Bidder's qualifications, the Bidder shall provide written documentation showing how the Bidder meets the requirements outlined below. The Bidder shall submit all qualification information at the time of bidding. Incomplete bids will not be considered.

1. Firm Qualifications:
 - a. At least ten (10) years of experience repairing landslides.
 - b. Recent and relevant experience with each of the nail/micropile types specified in this contract. Within the last five (5) years, Bidder must show that they have successfully engineered and constructed the following minimum number of active landslide repairs on active, public roadways while maintaining traffic on the impacted roadway using:
 - i. Launched Soil Nails (10 projects)
 - ii. Permanently Cased Soil Nails (10 projects)
 - iii. Self-Drilling Soil Nails (10 projects)
 - iv. Self-Drilling Micropiles (10 projects)
 - c. Submit documentation showing personnel have appropriate qualifications in Attachment B.
2. Supervising Professional Engineer Qualifications (three individuals):
 - a. The Contractor's Engineers must be under full-time employment of the Bidder and have at least three (3) years of verifiable experience with the Contractor in landslide stabilization using soil nails and micropiles.
 - b. The Contractor shall submit documentation showing that the Engineers have successfully designed no less than ten (10) total projects for the Contractor within the last five (5) years which successfully stabilized an active landslide using the soil nail/micropile types specified in this contract (at least one each: launched soil nails, permanently cased soil nails, self-drilling soil nails, self-drilling micropiles) on an active, public roadway while maintaining traffic on the impacted roadway.
 - c. Submit documentation showing personnel have appropriate qualifications in Attachment B.
3. Project Manager/Superintendent Qualifications (three individuals):
 - a. The Contractor's Project Managers/Superintendents must be under full-time employment of the Bidder and have at least five (5) years of verifiable experience with the Contractor in landslide stabilization using soil nails and micropiles.
 - b. The Contractor shall submit documentation showing that the Project Managers/Superintendents have successfully managed no less than ten (10) total projects within the last five (5) years which successfully stabilized an active landslide using the soil nail/micropile types specified in this contract (at least one each: launched soil nails, permanently cased soil nails, self-drilling soil nails, self-drilling micropiles) on an active, public roadway while maintaining traffic on the impacted roadway.
 - c. Submit documentation showing personnel have appropriate qualifications in Attachment B.
4. Soil Nail rig operators (three individuals):
 - a. Have successfully operated rigs for the Contractor on no less than five projects within the last five years which successfully stabilized an active landslide using soil nails or

- micropiles on an active, public roadway while maintaining traffic on the impacted roadway.
 - b. Submit documentation showing personnel have appropriate qualifications in Attachment B.
5. Shotcrete Nozzlemen (three individuals):
- a. Current ACI Nozzlemen Certification.
 - b. Have successfully installed no less than 10,000 square of shotcrete within the last five (5) years on an active, public roadway while maintaining traffic on the impacted roadway.
 - c. Submit documentation showing personnel have appropriate qualifications in Attachment B.

Replacement of these key personnel will only be permitted with the prior written approval of NCDOT. Proposed replacements shall demonstrate their experience with the elements listed in the previous sections.

1. The Bidder shall provide a copy of any official documentation which reflects any written warnings or violations of any local, state, or federal environmental laws or regulations during the last ten (10) years.
2. NCDOT will evaluate to determine if the Bidder's criminal history demonstrates inappropriate character, integrity, reputation, judgment, and experience of the Bidder.
3. At NCDOT's request, provide any additional explanation or information, which would assist in evaluating the qualifications of the Bidder, and bid price.
4. The bidder shall submit qualification information at the time of bidding. Incomplete bids will not be considered.

CONTRACT TIME & LIQUIDATED DAMAGES

This contract shall be effective November 1, 2014. Work requests will be made on an as-needed basis; therefore each request will have its own date of availability and required completion date which will be determined from the information contained in the estimate submitted by the Contractor.

All work will be done at the request of the District Engineer or his representative. Notification will be made via fax or email and will include the location of the work, description of the work to be performed, and the approximate quantities required. Each work request may consist of multiple locations within a general work area. Each notification will be considered a separate and independent project.

Unless otherwise agreed to by the Engineer, repair operations shall commence within **forty-eight (48) hours** from notification of approval of the work request submittal. In the event that the Contractor fails to respond to the work request within **forty-eight (48) hours**, liquidated damages in the amount of **One Thousand Dollars (\$1,000.00) per calendar day, or a portion thereof**, will be deducted from the monies due to the Contractor.

No extensions will be authorized except as authorized by Article 108-10 of the *2012 Standard Specifications*.

The determination towards failure to physically respond in a timely manner will be at the discretion of the Engineer. Failure to respond may result in cancellation of the contract.

No work will be permitted and no contract will be executed until all prerequisite conditions and certifications have been satisfied.

TERM OF THE CONTRACT

The contractor shall submit his bid for one year. At the option of the Department, this contract may be extended two (2) additional periods of one (1) year each (maximum of three (3) years total). The unit bid price will be increased by **five (5) percent** for each one-year extension. No changes in the terms, conditions, etc. of this contract will be made when an extension of the contract is implemented. The Engineer will notify the Contractor in writing by **September 1, 2015** if the contract may be extended. The Contractor must notify the Engineer in writing by **September 15, 2015** of his acceptance or rejection of this offer. Failure on the part of the Contractor to reply will be received as a rejection of contract extension.

The period covered by this contract will be from November 1, 2014 until October 31, 2015.

MAJOR CONTRACT ITEMS

None of the items included in this contract will be major items.

SPECIALTY ITEMS

All of the items included in this contract will be considered specialty items. See Article 108-6 of the *2012 Standard Specifications*.

PREPARATION AND SUBMISSION OF BIDS

The entire bid proposal package, properly signed and executed, must be returned in order for the bid to be considered as responsive. **Incomplete proposal packages may be considered unresponsive.** Bid proposals shall be completed in ink and any corrections shall have one strike through with the correction initialed by the bidder.

Effective July 1, 2014, Division Let contracts should only be awarded to firms listed in the Directory of Transportation Firms as either a Bidder or PO Prime Contractor. After this date, firms that are prequalified as subcontractors only cannot bid on Division Let projects. Applications and details on becoming a prequalified Bidder or PO Prime Contractor can be found at: <https://connect.ncdot.gov/business/Prequal/Pages/default.aspx>

Any firm that wishes to bid on this project as the prime contractor must be prequalified for the type of work they wish to perform prior to submitting their bid.

All bids shall be prepared and submitted in accordance with the listed requirements of Article 102-8 of the *2012 Standard Specifications*.

In accordance with GS 136-28.1(b), if the total bid amount of the contract exceeds **\$2,500,000**, the bid will not be considered for award.

BID BOND

A Bid Bond is not required for the submission of bids for this project.

EXECUTION OF SIGNATURE SHEETS AND DEBARMENT CERTIFICATION

The Bidder's attention is directed to the various sheets in the contract proposal, which are to be completed and/or signed by the Bidder. A list of these sheets is shown below. The signature sheets are located behind the Bid Form(s) in the contract proposal.

1. Execution of Bid including Non-Collusion Affidavit, Debarment Certification, & Gift Ban
2. MBE/WBE/DBE Subcontract Listing Form

The Bidder shall certify his and 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 signature sheets in the proposal forms. 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 Bidders certification of "status" under penalty of perjury under the laws of the United States.

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)

*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 bidder on indicated projects, the total value of which is more than 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.

CONTRACT PAYMENT AND PERFORMANCE BOND

A performance bond in the amount of **one hundred percent (100%)** of the contract amount, conditioned upon the faithful performance of the contract in accordance with specifications and conditions of the contract is required for Construction contracts of **\$500,000.00** or more. Such bond shall be solely for the protection of the North Carolina Department of Transportation and the State of North Carolina.

A payment bond in the amount of **one hundred percent (100%)** of the contract amount, conditioned upon the prompt payment for all labor or materials for which the Contractor, or his subcontractors, is liable is required for Construction contracts greater than **\$500,000.00**. The payment bond shall be solely for the protection of persons or firms furnishing materials or performing labor for this contract for which the Contractor is liable.

The successful bidder, **within fourteen (14) days after notice of award**, shall provide the Department with a contract payment bond and a contract performance bond each in an amount equal to 100 percent of the amount of the contract.

WORKMEN'S COMPENSATION INSURANCE

The contractor shall defend, indemnify and hold harmless the North Carolina Department of Transportation, its officers and employees from any claim, demand, suit, liability, judgment and expense (including attorney's fees and other costs of litigation) arising out of or relating to injury, disease, or death of persons or damage to or loss of property resulting from or in connection with the negligent performance of this contract by the contractor, its agents, employees, and subcontractors or any one for whom the contractor may be responsible. The obligations,

indemnities and liabilities assumed by the contractor under this paragraph shall not extend to any liability caused by the negligence of the Department of Transportation or its employees. The contractor's liability shall not be limited by any provisions or limits of insurance set forth in this contract.

The contractor shall indemnify and hold harmless the Department of Transportation from any claim, demand, suit, liability, judgment, and expense involving damage or loss to the contractor's equipment (including vandalism, theft, fire and acts of God) arising out of or relating to work performed under this agreement. The obligations, indemnities and liabilities assumed by the contractor under this paragraph shall not extend to any liability caused by the negligence of the Department of Transportation or its employees. The contractor's liability shall not be limited by any provisions or limits of insurance set forth in this contract.

The contractor further agrees to indemnify the Department of Transportation for any damages to the roadway, highway signs, highway equipment and other property owned or in possession of the Department of Transportation, brought about by reason of the negligent operation of the leased equipment. The contractor further agrees to indemnify and save harmless the Department of Transportation, its officers and employees from any claims or amounts recovered by any of the contractor's employees under the Worker's Compensation Act.

Pursuant to N.C.G.S. § 97-19, all contractors of the Department of Transportation are, prior to beginning services, required to show proof of coverage issued by a workers' compensation insurance carrier, or a certificate of compliance issued by the Department of Insurance for self-insured subcontractors stating that it has complied with N.C.G.S. § 97-93 irrespective of whether subcontractors have regularly in service fewer than three employees in the same business within the State of North Carolina, and subcontractors shall be hereinafter liable under the Workers' Compensation Act for payment of compensation and other benefits to its employees for any injury or death due to an accident arising out of and in the course of performance of the work insured by the subcontractor.

Proof of insurance shall be furnished to the Engineer prior to beginning work.

LIABILITY INSURANCE

Provide liability insurance in accordance with Article 107-15 of the *2012 Standard Specifications*.

Revise the *2012 Standard Specifications* as follows:

Page 1-60, Article 107-15 Liability Insurance, line 23, replace the first sentence of the fourth paragraph with the following:

Upon award of the contract, provide evidence of the above insurance requirements to the Engineer.

LICENSES

The contractor must be properly licensed as required by the State of North Carolina. The General Statutes of North Carolina (G.S. 87-1) require the contractor to be licensed by the State for any contract totaling **\$30,000.00** or more.

SUBLETTING OF CONTRACT

The Contractor shall not sublet, sell, transfer, assign or otherwise dispose of this contract or any portion thereof; or his right, title, or interest therein; without written consent of the Engineer. Subletting of this contract or any portion of the contract shall conform to the requirements of Article of 108-6 of the *2012 Standard Specifications*.

DEFAULT OF CONTRACT

The Department of Transportation shall have the right to declare a default of contract for breach by the Contractor of any material term or condition of the contract. Default of contract shall be in accordance with the terms, conditions, and procedures of Article 108-9 of the *2012 Standard Specifications*.

PARTIAL PAYMENT

The Contractor may submit a request for payment at the end of each work request. Compensation for all pay items shall be in accordance with the *Standard Specifications*. One hundred percent (100%) payment shall be made after successful completion of the work as verified by the final inspection.

Requests for payment can be made on the form furnished to the Contractor by the Department of Transportation. The form shall be completely and legibly filled out with all appropriate information supplied and shall be signed by an authorized representative of the Contractor.

All invoice items and unit costs shall correspond to contract pay items. In the event of error or discrepancy in items or unit costs, the Department may return the invoice to the contractor for correction. Invoices must be "electronically scanned" by our office and the image is transmitted to the Purchasing Unit to verify payment. To avoid confusion and delay of payments each invoice should have a **Unique Invoice Number**, i.e. 1, 2, 3... In addition, the invoice should be positively identified and associated with the Purchase Order by including the **Purchase Order Number** on the Invoice.

Minority Business Enterprise (MBE), Women's Business Enterprise (WBE) and/or Disadvantage Business Enterprise (DBE) participation shall be listed on the appropriate form (DBE-IS) and shall accompany all requests for payment. If there is no participation the word "**None**" or the figure "**0**" shall be entered. Requests for payment will not be processed without the submission of

the DBE-IS form. One hundred percent (100%) payment shall be made after successful completion of the work as verified by the final inspection.

RETAINAGE AND PROMPT PAYMENT

Prompt Payment of Monies Due Subcontractors, Second Tier Subcontractors and Material Suppliers and Release of Retainage

Contractors at all levels; prime, subcontractor, or second tier contractor, shall within seven calendar days of receipt of monies, resulting from work performed on the project or services rendered, pay subcontractors, second tier subcontractors, or material suppliers, as appropriate. This seven-day period begins upon knowledgeable receipt by the contracting firm obligated to make a subsequent periodic or final payment. These prompt payment requirements will be met if each firm mails the payment to the next level firm by evidence of postmark within the seven-day period.

This provision for prompt payment shall be incorporated into each subcontract or second tier subcontract issued for work performed on the project or for services provided.

The Contractor may withhold up to 3% retainage if any subcontractor does not obtain a payment and performance bond for their portion of the work. If any retainage is held on subcontractors, all retainage shall be released within seven calendar days of satisfactory completion of all work. For the purpose of release of retainage, satisfactory completion is defined as completion of all physical elements and corresponding documentation as defined in the contract, as well as agreement between the parties as to the final quantities for all work performed in the subcontract. The Department will provide internal controls to expedite the determination and processing of the final quantities for the satisfactorily completed subcontract portions of the project.

Failure of any entity to make prompt payment as defined herein may result in (1) withholding of money due to that entity in the next partial payment until such assurances are made satisfactory to this provision; or (2) removal of an approved contractor from the prequalified bidders list or the removal of other entities from the approved subcontractors list.

MANDATORY SUBCONTRACTOR INFORMATION

The Contractor is to provide a list of all proposed subcontractors he or she plans to use on this project. This list shall include all subcontractors that will be used, not only MBE, WBE or DBE firms. Only pre-approved subcontractors that are registered with the NCDOT may be used. A listing of all contractors (prime or subcontractor) may be found at the following website:

<https://partner.ncdot.gov/VendorDirectory/default.html>

Subcontract Approval Form (Form SAF) must be completed for each subcontractor that will be used and returned prior to the issuance of the purchase order. This form can be found at the following website:

http://www.ncdot.org/doh/operations/dp_chief_eng/constructionunit/saf.xls

If the proposed subcontractor cannot fulfill their obligation and a substitute must be used, then an appropriate form for the replacement subcontractor must be delivered to the administering officer before the new subcontractor is used.

Failure to provide this information (regardless of any goals in contract) may result in the contract being awarded to another contractor.

AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS

General Statute 143C-6-11. (h) Highway Appropriation is hereby incorporated verbatim in this contract as follows:

(h) Amounts Encumbered. – Transportation project appropriations may be encumbered in the amount of allotments made to the Department of Transportation by the Director for the estimated payments for transportation project contract work to be performed in the appropriation fiscal year. The allotments shall be multiyear allotments and shall be based on estimated revenues and shall be subject to the maximum contract authority contained in *General Statute 143C-6-11(c)*. Payment for transportation project work performed pursuant to contract in any fiscal year other than the current fiscal year is subject to appropriations by the General Assembly. Transportation project 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 transportation project contract, and any transportation project 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 scheduled 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 January 2012*.

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

Laws to be Observed

In accordance with 107-1 of the *Standard Specifications*, The Contractor shall keep himself fully informed of all Federal and State laws, all local laws, ordinances, and regulations, and all orders and decrees of bodies or tribunals having any jurisdiction or authority which may in any manner affect those engaged or employed in the work, or which in any way affect the conduct of the work. He shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall indemnify and hold harmless the Board of Transportation and the Department of Transportation and their agents and employees from any claim or liability arising

from or based on the violation of any such law, ordinance, regulations, order, or decree, by the Contractor or by his agents and employees.

Responsibility For Damage Claims

In accordance with 107-14 of the *Standard Specifications*, The Contractor shall indemnify and save harmless the Board of Transportation and its members and the Department of Transportation and its officers, agents, and employees from all suits, actions, or claims of any character brought for any injury or damages received or sustained by any person, persons, or property by reason of any act of the Contractor, Subcontractor, its agents or employees, in the performance of the contract.

Safety and Accident Protection

In accordance with 107-21 of the *Standard Specifications*, The Contractor shall comply with all applicable Federal, State, and local laws, ordinances, and regulations governing safety, health, and sanitation, and shall provide all safeguards, safety devices, and protective equipment, and shall take any other needed actions, on his own responsibility that are 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.

All Contractors' personnel, all subcontractors and their personnel, and any material suppliers and their personnel shall wear a reflective vest or outer garment conforming to the requirements of MUTCD at all times while on the project.

BANKRUPTCY

The Department of Transportation, at its option, may terminate the contract upon the filing by the contractor of any petition for protection under the provisions of the Federal Bankruptcy Act.

EXTENSION OF CONTRACT TIME

Failure on the part of the Contractor to furnish bonds or certifications or to satisfy preliminary requirements necessary to issue the purchase order will not constitute grounds for extension of the contract time. If the Contractor has fulfilled all preliminary requirements for the issuance of a purchase order, and the purchase order authorization is not available by the date of availability, the Contractor shall be granted an extension equal to the number of calendar days the purchase order authorization is delayed after the date of availability.

CLAIMS FOR ADDITIONAL COMPENSATION OR EXTENSION OF TIME

Any claims for additional compensation and/or extensions of the completion date shall be submitted to the Division Engineer with detailed justification within thirty (30) days after receipt

of the final invoice payment. The failure of the Contractor to submit the claim(s) within thirty days shall be a bar to recovery.

CONTRACTOR CLAIM SUBMITTAL FORM

If the Contractor elects to file a written claim or requests an extension of contract time, it shall be submitted on the Contractor Claim Submittal Form (CCSF) available through the Construction Unit or http://ncdot.org/doh/operations/dp_chief_eng/constructionunit/formsmanuals/.

PROSECUTION AND PROGRESS

The Contractor will be required to prosecute the work in a continuous and uninterrupted manner from the time he begins the work until completion and final acceptance of the project. The contractor will not be permitted to suspend his operations except for reasons beyond his control except where the Engineer has authorized a suspension of the contractor's operations in writing.

The Contractor shall pursue the work diligently with workmen in sufficient numbers, abilities, and supervision, and with equipment, materials, and methods of construction as may be required to complete the work described in the contract by the completion date and in accordance with Section 108 of the *Standard Specifications*.

In the event that the Contractor's operations are suspended in violation of the above provisions, the sum of **One Thousand Dollars (\$1,000.00)** will be charged the Contractor for each and every calendar day that such suspension takes place. The said amount is hereby agreed upon as liquidated damages due to extra engineering and maintenance costs and due to increased public hazard resulting from a suspension of the work. Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to failure to complete the work on time.

TEMPORARY SUSPENSION OF WORK

In accordance with Article 108-7 of the *2012 Standard Specifications*, the Engineer will have the authority to suspend the work wholly or in part, any written order for such periods as he may deem necessary for any of the following reasons.

1. Conditions considered unfavorable for the suitable prosecution of the work, or
2. The Contractor's failure for correct conditions unsafe for workmen or the general public, or
3. The Contractor has not carried out orders given to him by the Engineer, or
4. The Contractor's failure to perform any provisions of the contract.

No extension of the completion date will be allowed for the above suspensions except as may be provided for in Article 108-10.

AUTHORITY OF THE ENGINEER

The Engineer for this project shall be the Division Engineer, Division 11, Division of Highways, North Carolina Department of Transportation, acting directly or through his duly authorized representatives.

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

APPROVAL OF PERSONNEL

The State shall have the right to approve or reject the project engineer and other supervisory personnel, assigned to a project.

The Engineers or any subcontractor for the Engineers which are employed to provide engineering services for this project shall not engage the services of any person or persons, now in the employment of the State during the time of this Agreement, without written consent of the State.

In the event of engagement, the Engineers or their subcontractors shall restrict such person or persons from working on any of the Engineers' contracted projects in which the person or persons were formerly involved while employed by the State. This restriction period shall be for the duration of the contracted project with which the person or persons was involved. "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 Engineers' firm for services;
- Negotiation of the cost of the contract (including calculating man-hours 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.

SUPERVISION BY CONTRACTOR

At all times during the life of the project the Contractor shall provide one permanent employee who shall have the authority and capability for overall responsibility of the project and who shall be personally available at the work site within 24 hours notice. Such employee shall be fully authorized to conduct all business with the subcontractors, to negotiate and execute all supplemental agreements, and to execute the orders or directions of the Engineer.

At all times that work is actually being performed, the Contractor shall have present on the project one competent individual who is authorized to act in a supervisory capacity over all work on the project, including work subcontracted. The individual who has been so authorized shall be experienced in the type of work being performed and shall be fully capable of managing, directing, and coordinating the work; of reading and thoroughly understanding the contract; and receiving and carrying out directions from the Engineer or his authorized representatives. He shall be an employee of the Contractor unless otherwise approved by the Engineer.

The Contractor may, at his option, designate one employee to meet the requirements of both positions. However, whenever the designated employee is absent from the work site, an authorized individual qualified to act in a supervisory capacity on the project shall be present.

CONTRACTOR PERSONNEL

The Department will not be responsible in any way to the Contractor's personnel for damages, destruction or loss, from any cause, to the Contractor's equipment, supplies, materials or tools or the personal property of the Contractor's personnel. The Contractor will be responsible for all repairs, regardless of cost, resulting from the negligence of the Contractor or Contractor's employees. The Department will not participate in the cost of such repairs.

INSPECTION

All work shall be subject to inspection by the Engineer at any time. Routinely, the Engineer will make periodic inspections of the completed work. It will be the responsibility of the Contractor to keep the Engineer informed of his proposed work plan and to submit written reports of work accomplished on a frequency to be determined by the Engineer.

MATERIALS AND TESTING

The Engineer reserves the right to perform all sampling and testing in accordance with Section 106 of the *Standard Specifications* and the Department's "Materials and Test Manual." However the Engineer may reduce the frequency of sampling and testing where he deems it appropriate for the project under construction.

The Contractor shall furnish the applicable certifications and documentation for all materials as required by the *Standard Specifications*. Material that is not properly certified will not be accepted.

COOPERATION BETWEEN CONTRACTORS

The Contractor's attention is directed to Article 105-7 of the *2012 Standard Specifications*.

The Contractor on this project shall cooperate with Contractor(s) and state forces working within or adjacent to the limits of this project to the extent that the work can be carried out to the best advantage of all concerned.

RESOURCE CONSERVATION

In accordance with North Carolina Executive Order 156, NCGS 130A-309.14(2), and NCGS 136-28.8, it is the policy of the Department to aid in the reduction of materials that become a part of our solid waste stream, to divert materials from landfills, and to find ways to recycle and reuse materials for the benefit of the Citizens of North Carolina.

Initiate, develop and use products and construction methods that incorporate the use of recycled or solid waste products in accordance with Article 104-13 of the *2012 Standard Specifications*. Report the quantities of reused or recycled materials either incorporated in the project or diverted from landfills on the Project Construction Reuse and Recycling Reporting Form.

A location-based tool for finding local recycling facilities and the Project Construction Reuse and Recycling Reporting Form are available at:

<http://connect.ncdot.gov/resources/Environmental/Pages/North-Carolina-Recycling-Locations.aspx>

OUTSOURCING OUTSIDE THE USA

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.

PLAN, DETAIL AND QUANTITY ADJUSTMENTS

The Department reserves the right to make, at any time during the progress of the work, such alterations in plans or the details of construction as may be found necessary or desirable by the Engineer to complete the project.

LOCATING EXISTING UNDERGROUND UTILITIES

Revise the *2012 Standard Specifications* as follows:

Page 1-43, Article 105-8, line 28, after the first sentence, add the following:

Identify excavation locations by means of pre-marking with white paint, flags, or stakes or provide a specific written description of the location in the locate request.

UTILITY CONFLICTS

It shall be the responsibility of the Contractor to contact all affected utility owners and determine the precise locations of all utilities prior to beginning construction. Utility owners shall be contacted a minimum of 48 hours prior to the commencement of operations. Special care shall be used in working around or near existing utilities, protecting them when necessary to provide uninterrupted service. In the event that any utility service is interrupted, the Contractor shall notify the utility owner immediately and shall cooperate with the owner, or his representative, in the restoration of service in the shortest time possible. Existing fire hydrants shall be kept accessible to fire departments at all times.

The Contractor shall adhere to all applicable regulations and follow accepted safety procedures when working in the vicinity of utilities in order to insure the safety of construction personnel and the public.

GIFTS FROM VENDORS AND CONTRACTORS

By Executive Order 24, issued by Governor Perdue, and *N.C. G.S. § 133-32*, it is unlawful for any vendor or contractor (i.e. architect, bidder, contractor, construction manager, design professional, engineer, landlord, offer or, seller, subcontractor, supplier, or vendor), to make gifts or to give favors to any State employee of the Governor's Cabinet Agencies (i.e. Administration, Commerce, Correction, Crime Control and Public Safety, Cultural Resources, Environment and Natural Resources, Health and Human Services, Juvenile Justice and Delinquency Prevention, Revenue, Transportation, and the Office of the Governor). This prohibition covers those vendors and contractors who:

- (1) have a contract with a governmental agency; or
- (2) have performed under such a contract within the past year; or
- (3) anticipate bidding on such a contract in the future.

For additional information regarding the specific requirements and exemptions, vendors and contractors are encouraged to review Executive Order 24 and *G.S. § 133-32*.

Executive Order 24 also encouraged and invited other State Agencies to implement the requirements and prohibitions of the Executive Order to their agencies. Vendors and contractors should contact other State Agencies to determine if those agencies have adopted Executive Order 24.

Special Provisions

NOTES TO CONTRACTOR

1. Refer to the *Standard Specifications for Roads and Structures and Roadway Standard Drawings dated January 2012* and any Special Provisions in contract for guidelines on this project.
2. All work performed by the contractor shall be in compliance with the *2012 Standard Specifications* and Workmanship/Appearance done to the satisfaction of the Engineer.
3. All work items necessary to complete the work other than listed on the "Bid Proposal Form" will be considered incidental in nature and no further compensation will be made. Any work performed in an unsatisfactory manner could be basis for cancellation of the contract.

STATE HIGHWAY ADMINISTRATOR TITLE CHANGE

Revise the *2012 Standard Specifications* as follows:

Replace all references to "State Highway Administrator" with "Chief Engineer".

PRECONSTRUCTION CONFERENCE

Depending upon the size and location of any slope failures occurring during this contract, the contractor may or may not be required to have a preconstruction conference with Division Eleven Engineering Personnel. The Contractor will be informed if a preconstruction conference will be necessary after his/her evaluation and submittal of slope failure recommendations.

EMPLOYMENT

Revise the *2012 Standard Specifications* as follows:

Page 1-20, Subarticle 102-15(O), delete and replace with the following:

(O) Failure to restrict a former Department employee as prohibited by Article 108-5.

Page 1-65, Article 108-5 Character of Workmen, Methods, and Equipment, line 32, delete all of line 32, the first sentence of the second paragraph and the first word of the second sentence of the second paragraph.

E-VERIFY COMPLIANCE

Contractors and subcontractors shall comply with the E-Verify requirements of N.C.G.S. Chapter 64, Article 2. Contractors are directed to review the foregoing laws. By signing this bid, any awarded Contractor certifies its compliance with the E-Verify requirements and will do so on a periodic basis thereafter as may be required by the Department.

CONTRACT BID QUANTITIES

The quantities shown in the itemized proposal for the project are considered to be approximate only and are given as the basis for comparison of bids. The Department of Transportation may increase or decrease the quantity of any item or portion of the work as may be deemed necessary or expedient.

An increase or decrease in the quantity of any item will not be regarded as sufficient ground for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided for the contract.

Contractor's pricing shall be based on the estimated quantities per Division. These estimated amounts are submitted to assist contractors in the bidding process. Estimated quantities are not to be regarded as actual requirements. The State shall not be obligated to purchase any specific quantity.

SUBSURFACE INFORMATION

There is **no** subsurface information available on this project. The Contractor shall make his own investigation of subsurface conditions.

MOBILIZATION

Mobilization will be paid for each location of work in which equipment cannot move to under the equipment's own power.

EXCAVATION AND DISPOSAL OF MATERIAL

The North Carolina Department of Transportation will perform all necessary excavation for this project. Removal of all excavated excess materials resulting from work on this project will also be performed by State Forces.

FINAL ACCEPTANCE

Final acceptance will be made only after the satisfactory completion of all work covered by this contract. All work shall be completed in a neat, workmanlike manner. That work which has not been completed in such a manner will not be accepted.

AGGREGATE PRODUCTION

Provide aggregate from a producer who uses the current Aggregate Quality Control/Quality Assurance Program, which is in effect at the time of shipment.

No price adjustment is allowed to contractors or producers who use the program. Participation in the program does not relieve the producer of the responsibility of complying with all requirements of the *Standard Specifications*. Copies of this procedure are available upon request from the Materials and Test Unit.

MATERIALS

Revise the *2012 Standard Specifications* as follows:

Page 10-1, Article 1000-1, DESCRIPTION, lines 9-10, replace the last sentence of the first paragraph with the following:

Type IL, IP, IS or IT blended cement may be used instead of Portland cement.

Page 10-1, Article 1000-1, DESCRIPTION, line 14, add the following:

Use materials which do not produce a mottled appearance through rusting or other staining of the finished concrete surface.

Page 10-1, Article 1000-2, MATERIALS, line 16, add the following to the table of item references:

Item	Section
Type IL Blended Cement	1024-1

Page 10-5, Table 1000-1, REQUIREMENTS FOR CONCRETE, replace with the following:

TABLE 1000-1 REQUIREMENTS FOR CONCRETE											
Class of Concrete	Min. Comp. Strength at 28 days	Maximum Water-Cement Ratio				Consistency Max. Slump		Cement Content			
		Air-Entrained Concrete		Non Air-Entrained Concrete		Vibrated	Non-Vibrated	Vibrated		Non- Vibrated	
		Rounded Aggregate	Angular Aggregate	Rounded Aggregate	Angular Aggregate			Min.	Max.	Min.	Max.
Units	psi					inch	inch	lb/cy	lb/cy	lb/cy	lb/cy
AA	4,500	0.381	0.426	-	-	3.5	-	639	715	-	-
AA Slip Form	4,500	0.381	0.426	-	-	1.5	-	639	715	-	-
Drilled Pier	4,500	-	-	0.450	0.450	-	5-7 dry 7-9 wet	-	-	640	800
A	3,000	0.488	0.532	0.550	0.594	3.5	4	564	-	602	-
B	2,500	0.488	0.567	0.559	0.630	2.5	4	508	-	545	-
B Slip Formed	2,500	0.488	0.567	-	-	1.5	-	508	-	-	-
Sand Light-weight	4,500	-	0.420	-	-	4	-	715	-	-	-
Latex Modified	3,000 7 day	0.400	0.400	-	-	6	-	658	-	-	-
Flowable Fill excavatable	150 max. at 56 days	as needed	as needed	as needed	as needed	-	Flow-able	-	-	40	100
Flowable Fill non-excavatable	125	as needed	as needed	as needed	as needed	-	Flow-able	-	-	100	as needed
Pavement	4,500 design, field 650 flexural, design only	0.559	0.559	-	-	1.5 slip form 3.0 hand place	-	526	-	-	-
Precast	See Table 1077-1	as needed	as needed	-	-	6	as needed	as needed	as needed	as needed	as needed
Prestress	per contract	See Table 1078-1	See Table 1078-1	-	-	8	-	564	as needed	-	-

**TABLE 1005-1
AGGREGATE GRADATION - COARSE AGGREGATE**

Percentage of Total by Weight Passing														Remarks
Std. Size #	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4	#8	#10	#16	#40	#200		
4	100	90-100	20-55	0-15	-	0-5	-	-	-	-	-	A	Asphalt Plant Mix	
467M	100	95-100	-	35-70	-	0-30	0-5	-	-	-	-	A	Asphalt Plant Mix	
5	-	100	90-100	20-55	0-10	0-5	-	-	-	-	-	A	AST, Sediment Control Stone	
57	-	100	95-100	-	25-60	-	0-10	0-5	-	-	-	A	AST, Str. Concrete, Shoulder Drain, Sediment Control Stone	
57M	-	100	95-100	-	25-45	-	0-10	0-5	-	-	-	A	AST, Concrete Pavement	
6M	-	-	100	90-100	20-55	0-20	0-8	-	-	-	-	A	AST	
67	-	-	100	90-100	-	20-55	0-10	0-5	-	-	-	A	AST, Str. Concrete, Asphalt Plant Mix	
78M	-	-	-	100	98-100	75-100	20-45	0-15	-	-	-	A	Asphalt Plant Mix, AST, Str. Conc, Weep Hole Drains	
14M	-	-	-	-	-	100	35-70	5-20	-	0-8	-	A	Asphalt Plant Mix, AST, Weep Hole Drains, Str. Concrete	
9	-	-	-	-	-	100	85-100	10-40	-	0-10	-	A	AST	
ABC	-	100	75-97	-	55-80	-	35-55	-	25-45	-	14-30	4-12 ^B	Aggregate Base Course, Aggregate Stabilization	
ABC (M)	-	100	75-100	-	45-79	-	20-40	-	0-25	-	-	0-12 ^B	Maintenance Stabilization	
Light-C weight	-	-	-	-	100	80-100	5-40	0-20	-	0-10	-	0-2.5	AST	

- A. See Subarticle 1005-4(A).
- B. See Subarticle 1005-4(B).
- C. For Lightweight Aggregate used in Structural Concrete, see Subarticle 1014-2(E)(6).

Page 10-46, Article 1024-1, PORTLAND CEMENT, line 33, add the following as the ninth paragraph:

Use Type IL blended cement that meets AASHTO M 240, except that the limestone content is limited to between 5 and 12% by weight and the constituents shall be interground. Class F fly ash can replace a portion of Type IL blended cement and shall be replaced as outlined in Subarticle 1000-4(I) for Portland cement. For mixes that contain cement with alkali content between 0.6% and 1.0% and for mixes that contain a reactive aggregate documented by the Department, use a pozzolan in the amount shown in Table 1024-1.

Page 10-65, Article 1050-1, GENERAL, line 41, replace the first sentence with the following:

All fencing material and accessories shall meet Section 106.

Page 10-73, Article 1056-1 DESCRIPTION, lines 7-8, delete the first sentence of the second paragraph and replace with the following:

Use geotextile fabrics that are on the NCDOT Approved Products List.

Page 10-73, Article 1056-2 HANDLING AND STORING, line 17, replace “mechanically stabilized earth (MSE) wall faces” with “temporary wall faces”.

Page 10-74, TABLE 1056-1 GEOTEXTILE REQUIREMENTS, replace table with the following:

TABLE 1056-1 GEOTEXTILE REQUIREMENTS						
Property	Requirement (MARV ^A)					Test Method
	Type 1	Type 2	Type 3 ^B	Type 4	Type 5 ^C	
<i>Typical Application</i>	<i>Shoulder Drains</i>	<i>Under Rip Rap</i>	<i>Temporary Silt Fence</i>	<i>Soil Stabilization</i>	<i>Temporary Walls</i>	
Elongation (MD & CD)	≥ 50%	≥ 50%	≤ 25%	< 50%	< 50%	ASTM D4632
Grab Strength (MD & CD)	Table 1 ^D , Class 3	Table 1 ^D , Class 1	100 lb	Table 1 ^D , Class 3	-	ASTM D4632
Tear Strength (MD & CD)			-		-	ASTM D4533
Puncture Strength			-		-	ASTM D6241
Ultimate Tensile Strength (MD & CD)	-	-	-	-	2,400 lb/ft (unless required otherwise in the contract)	ASTM D4595
Permittivity	Table 2 ^D , 15% to 50% <i>in Situ</i> Soil Passing No. 200 ^E		Table 7 ^D	Table 5 ^D	0.20 sec ⁻¹	ASTM D4491
Apparent Opening Size					No. 30 ^E	ASTM D4751
UV Stability (Retained Strength)					70%	ASTM D4355

- A. MARV does not apply to elongation
- B. Minimum roll width of 36" required
- C. Minimum roll width of 13 ft required
- D. AASHTO M 288
- E. US Sieve No. per AASHTO M 92

Page 10-115, Subarticle 1074-7(B), Gray Iron Castings, lines 10-11, replace with the first two sentences with the following:

Supply gray iron castings meeting all facets of AASHTO M 306 excluding proof load. Proof load testing will only be required for new casting designs during the design process, and conformance to M306 loading (40,000 lbs.) will be required only when noted on the design documents.

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

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

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

- (B) At least 3 panels prepared as specified in 5.5.10 of AASHTO M 300, Bullet Hole Immersion Test.
- (C) At least 3 panels of 4"x6"x1/4" for the Elcometer Adhesion Pull Off Test, ASTM D4541.
- (D) A certified test report from an approved independent testing laboratory for the Salt Fog Resistance Test, Cyclic Weathering Resistance Test, and Bullet Hole Immersion Test as specified in AASHTO M 300.
- (E) A certified test report from an approved independent testing laboratory that the product has been tested for slip coefficient and meets AASHTO M253, Class B.

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

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

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

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

For epoxy resin systems used for embedding dowel bars, threaded rods, rebar, anchor bolts and other fixtures in hardened concrete, the manufacturer shall submit test results showing that the bonding system will obtain 125% of the specified required yield strength of the fixture. Furnish certification that, for the particular bolt grade, diameter and embedment depth required, the anchor system will not fail by adhesive failure and that there is no movement of the anchor bolt.

For certification and anchorage, use 3,000 psi as the minimum Portland cement concrete compressive strength used in this test. Use adhesives that meet Section 1081.

List the properties of the adhesive on the container and include density, minimum and maximum temperature application, setting time, shelf life, pot life, shear strength and compressive strength.

Page 10-163, Table 1081-1 Properties of Mixed Epoxy Resin Systems, replace table with the following:

Table 1081-1 Properties of Mixed Epoxy Resin Systems							
Property	Type 1	Type 2	Type 3	Type 3A	Type 4A	Type 4B	Type 5
Viscosity-Poises at 77°F ± 2°F	Gel	10-30	25-75	Gel	40-150	40-150	1-6
Spindle No.	-	3	4	--	4	4	2
Speed (RPM)	-	20	20	--	10	10	50
Pot Life (Minutes)	20-50	30-60	20-50	5-50	40-80	40-80	20-60
Minimum Tensile Strength at 7 days (psi)	1,500	2,000	4,000	4,000	1,500	1,500	4,000
Tensile Elongation at 7 days (%)	30 min.	30 min.	2-5	2-5	5-15	5-15	2-5
Min. Compressive Strength of 2" mortar cubes at 24 hours	3,000 (Neat)	4,000-	6,000-	6,000 (Neat)	3,000	3,000	6,000
Min. Compressive Strength of 2" mortar cubes at 7 days	5,000 (Neat)	-	-	-	-	5,000	-
Maximum Water Absorption (%)	1.5	1.0	1.0	1.5	1.0	1.0	1.0
Min. Bond Strength Slant Shear Test at 14 days (psi)	1,500	1,500	2,000	2,000	1,500	1,500	1,500

Page 10-164, Subarticle 1081-1(E) Prequalification, lines 31-33, replace the second sentence of the first paragraph with the following:

Manufacturers choosing to supply material for Department jobs must submit an application

through the Value Management Unit with the following information for each type and brand name:

Page 10-164, Subarticle 1081-1(E)(3), line 37, replace this subarticle with the following:

(3) Type of the material in accordance with Articles 1081-1 and 1081-4,

Page 10-165, Subarticle 1081-1(E)(6), line 1, in the first sentence of the first paragraph replace “AASHTO M 237” with “the specifications”.

Page 10-165, Subarticle 1081-1(E) Prequalification, line 9-10, delete the second sentence of the last paragraph.

Page 10-165, Subarticle 1081-1(F) Acceptance, line 14, in the first sentence of the first paragraph replace “Type 1” with “Type 3”.

Page 10-169, Subarticle 1081-3(G) Anchor Bolt Adhesives, delete this subarticle.

Page 10-170, Article 1081-3 Hot Bitumen, line 9, add the following at the end of Section 1081:

1081-4 EPOXY RESIN ADHESIVE FOR BONDING TRAFFIC MARKINGS

(A) General

This section covers epoxy resin adhesive for bonding traffic markers to pavement surfaces.

(B) Classification

The types of epoxies and their uses are as shown below:

Type I – Rapid Setting, High Viscosity, Epoxy Adhesive. This type of adhesive provides rapid adherence to traffic markers to the surface of pavement.

Type II – Standard Setting, High Viscosity, Epoxy Adhesive. This type of adhesive is recommended for adherence of traffic markers to pavement surfaces when rapid set is not required.

Type III – Rapid Setting, Low Viscosity, Water Resistant, Epoxy Adhesive. This type of rapid setting adhesive, due to its low viscosity, is appropriate only for use with embedded traffic markers.

Type IV – Standard Set Epoxy for Blade Deflecting-Type Plowable Markers.

(C) Requirements

Epoxies shall conform to the requirements set forth in AASHTO M 237.

(D) Prequalification

Refer to Subarticle 1081-1(E).

(E) Acceptance

Refer to Subarticle 1081-1(F).

Page 10-173, Article 1084-2 STEEL SHEET PILES, lines 37-38, replace first paragraph with the following:

Steel sheet piles detailed for permanent applications shall be hot rolled and meet ASTM A572 or ASTM A690 unless otherwise required by the plans. Steel sheet piles shall be coated as required by the plans. Galvanized sheet piles shall be coated in accordance with Section 1076. Metallized sheet piles shall be metallized in accordance to the Project Special Provision “Thermal Sprayed Coatings (Metallization)” with an 8 mil, 99.9% aluminum alloy coating and a 0.5 mil seal coating. Any portion of the metallized sheet piling encased in concrete shall receive a barrier coat. The barrier coat shall be an approved waterborne coating with a low-viscosity which readily absorbs into the pores of the aluminum thermal sprayed coating. The waterborne coating shall be applied at a spreading rate that results in a theoretical 1.5 mil dry film thickness. The manufacturer shall issue a letter of certification that the resin chemistry of the waterborne coating is compatible with the 99.9% aluminum thermal sprayed alloy and suitable for tidal water applications.

Page 10-174, Subarticle 1086-1(B)(1) Epoxy, lines 18-24, replace this subarticle with the following:

The epoxy shall meet Article 1081-4.

The 2 types of epoxy adhesive which may be used are Type I, Rapid Setting, and Type II, Standard Setting. Use Type II when the pavement temperature is above 60°F or per the manufacturer’s recommendations whichever is more stringent. Use Type I when the pavement temperature is between 50°F and 60°F or per the manufacturer’s recommendations whichever is more stringent. Epoxy adhesive Type I, Cold Set, may be used to attach temporary pavement markers to the pavement surface when the pavement temperature is between 32°F and 50°F or per the manufacturer’s recommendations whichever is more stringent.

Page 10-175, Subarticle 1086-2(E) Epoxy Adhesives, line 27, replace “Section 1081” with “Article 1081-4”.

Page 10-177, Subarticle 1086-3(E) Epoxy Adhesives, line 22, replace “Section 1081” with “Article 1081-4”.

Page 10-179, Subarticle 1087-4(A) Composition, lines 39-41, replace the third paragraph with the following:

All intermixed and drop-on glass beads shall not contain more than 75 ppm arsenic or 200 ppm lead.

Page 10-180, Subarticle 1087-4(B) Physical Characteristics, line 8, replace the second paragraph with the following:

All intermixed and drop-on glass beads shall comply with NCGS § 136-30.2 and 23 USC § 109(r).

Page 10-181, Subarticle 1087-7(A) Intermixed and Drop-on Glass Beads, line 24, add the following after the first paragraph:

Use X-ray Fluorescence for the normal sampling procedure for intermixed and drop-on beads, without crushing, to check for any levels of arsenic and lead. If any arsenic or lead is detected, the sample shall be crushed and repeat the test using X-ray Fluorescence. If the X-ray Fluorescence test shows more than a LOD of 5 ppm, test the beads using United States Environmental Protection Agency Method 6010B, 6010C or 3052 for no more than 75 ppm arsenic or 200 ppm lead.

Page 10-204, Subarticle 1092-2(A) Performance and Test Requirements, replace **Table 1092-3 Minimum Coefficient of Retroreflection for NC Grade A** with the following:

Observation Angle, degrees	Entrance Angle, degrees	White	Yellow	Green	Red	Blue	Fluorescent Yellow Green	Fluorescent Yellow
0.2	-4.0	525	395	52	95	30	420	315
0.2	30.0	215	162	22	43	10	170	130
0.5	-4.0	310	230	31	56	18	245	185
0.5	30.0	135	100	14	27	6	110	81
1.0	-4.0	120	60	8	16	3.6	64	48
1.0	30.0	45	34	4.5	9	2	36	27

SOIL NAILS FOR SLOPE REPAIR

The Contractor, at his option and at the approval of the Engineer, may install soil nails for slope repair by means of launching soil nails or the use of self-drilling soil nails. All work for *Installing Soil Nails for Slope Repair* shall be in accordance with the special provisions contained elsewhere in this contract for *Launched Soil Nails for Slope Repair* and *Self Drilling Soil Nails for Slope Repair*.

LAUNCHED SOIL NAILS FOR SLOPE REPAIR

1. GENERAL

The work under this provision consists of design, plan preparation, and construction of launched soil nails for slope repairs at locations directed by the Engineer.

No disturbance to the terrain or vegetation adjacent to the repaired slopes will be allowed.

2. LAUNCHED SOIL NAILS, LAUNCHER AND APPLICATION LIMIT

The launcher typically launches steel nails up to 1.5 inches in diameter and up to 20 feet or longer in length. Launched soil nails are launched at speeds of over 200 miles per hour, at pressures approaching 2500 psi.

In general, using 20-foot long nails, launched soil nailing is limited to slides where the thickness from the slope surface to the slide plane is no more than about 15 feet. The excavator used with the launcher may have a limit of no more than 35 feet up or down a slope. However, these restrictions do not limit the proposed design.

3. QUALITY ASSURANCE

The superintendent is required to have a minimum of three years experience and the soil nail launcher operators and on-site supervisors are required to have a minimum of one year experience installing permanent launched soil nails. Submit a list identifying the superintendent, soil nail launcher operators, and on-site supervisors assigned to the project before starting the work. Summarize each individual's experience sufficiently for the Engineer to evaluate the individual's qualifications. Do not use consultants or manufacturer's representatives to satisfy the requirements of this provision.

All nozzle men are required to have at least one year of continuous experience in similar shotcrete application work and demonstrate ability to satisfactorily place the material in accordance with the recommendations of ACI 506.3R Guide to Certification of Shotcrete Nozzle men. Present evidence of the certification to the requirements of ACI 506.3R of the proposed nozzle men within the last five years.

Do not start work or order materials until the personnel qualifications have been approved by the Engineer. The Engineer may suspend the work if non-approved personnel are substituted for approved personnel. No adjustments in the contract time or costs resulting from the work suspension will be allowed.

4. DESIGN CRITERIA

Review all available subsurface information and conduct additional investigations, as needed prior to beginning design.

Design the launched soil nails for slope repair in accordance with the following references.

- Application Guide for Launched Soil Nails, USDA Forest Service, EM 7170-12A, FHWA-FPL-93-003, July 1994
- Project Report for Launched Soil Nails – 1992 Demonstration Project, USDA Forest Service, EM 7170-12B, FHWA-FPL-93-004, July 1994

Shotcrete facing, if proposed, is required to have a minimum of 6 inches in thickness and reinforced with welded wire mesh. Geocomposite drainage mats at minimum 10 foot centers are required if shotcrete facing is proposed.

Prepare plans to include but not limited to the following:

- Elevation views showing all nail locations, existing ground line elevations and stations.
- Plan views
- Typical section views showing shotcrete (if needed), nail locations, nail inclinations and drainage details (if needed), etc.
- Details of drainage mats, if needed.
- Verification test nail locations and required design adhesion values.
- Construction sequence

5. CONSTRUCTION SUBMITTALS

Provide the following submittals for the Engineer's review and approval. Re-submit all changes or deviations from the reviewed submittals for approval by the Engineer. Wall construction will not be allowed to begin until all submittal requirements are satisfied and found acceptable to the Engineer. No adjustments in contract time will be allowed due to incomplete submittals. Items listed below that have been included on the prepared plans and have been found acceptable need not be resubmitted.

Submit the following to the Engineer for review before initiating the work:

- a. Proposed schedule and detailed launched soil nails for slope repair construction sequences.
- b. Launched soil nail testing methods and equipment including:
 - Details of the jacking frame and appurtenant bracing.
 - Details showing methods of isolating test nails during shotcrete application (i.e., methods to prevent bonding of the launched soil nail bar and the shotcrete).
 - Equipment list.
- c. Provide the identification number and certified calibration records for each load cell, test jack pressure gauge, and jack master pressure gauge to be used. Include the date tested, device identification number, and certified calibration test results for an accuracy of at least two percent of the applied certification loads by a qualified independent testing laboratory within 30 days before the submittal.

- d. Certified mill test results for nail bars together with properly marked samples from each heat specifying the ultimate strength, yield strength, elongation and composition.
- e. Shotcrete Placement (if needed):
 - Written documentation of the nozzle men qualifications. Resubmit at any subsequent time for new or additional nozzle men.
 - Proposed methods of shotcrete placement and of controlling and maintaining facing alignment and location and shotcrete thickness.
 - Shotcrete mix design performed by a Certified ACI Level II Technician including:
 - a) Type of Portland cement.
 - b) Aggregate source and gradation.
 - c) Proportions of mix by weight and water-cement ratio.
 - d) Proposed admixtures, manufacturer, dosage, technical literature.
 - Compressive strength test results verifying the 3-day and 28-day compressive strengths.
 - Previous strength test results for the proposed shotcrete mix completed within one year of the start of shotcreting may be submitted for initial verification of the required compressive strengths at start of production work.
- f. Complete engineering data for the drainage geotextile and Geocomposite drain strip including a one (1) ft square sample, manufacturers' certificate of compliance, and installation instructions (if used).
- g. Certifications of Compliance for weep hole drainage pipes and curing compounds (if used).
- h. Specification and data for review on equipment proposed for the project including shotcreting and compressed air equipment, proposed access arrangements, and capacities.

6. MATERIALS

6.1 Launched Soil Nails

Furnish launched soil nails that are either solid or hollow steel bars with a nominal outer diameter up to 1.5 inches and up to 25 feet or longer in length. The minimum hollow steel bars wall thickness is 0.120. Use ASTM A513, Type 1-5, galvanized steel tubes without splices or lateral welds. Use only new, straight, undamaged, and galvanized bars. Do not reuse excess cutoffs from previously launched nails.

6.2 Geocomposite Drain, Weepholes and Drainage Pipe

Geocomposite Drain Miradrain 6200 or Equal.

Weep Hole ASTM 1785 Schedule 40 PVC, solid and perforated wall.

Drainage Pipe

Cell classification 12454-B or 12354-C, wall thickness SDR 35, with solvent weld or elastomeric gasket joints.

7. HANDLING AND STORAGE

Carefully handle all steel reinforcement items and nail steel and store on supports to prevent contact with the ground. Damage to the nail steel as a result of abrasion, cuts or nicks, welds and weld spatter will be the cause for rejection. Grounding of welding leads to the nail steel will not be allowed. Protect nail steel from dirt, rust, and other deleterious substances at all times. Corrosion or pitting of the nails will be cause for rejection.

Provide drainage geotextile and Geocomposite drains in rolls wrapped with a protective covering and stored in a manner which protects the fabric from mud, dust, dirt, debris, and shotcrete rebound. Do not remove protective wrapping until the geotextile or drain strip is installed. Avoid extended exposure to ultra-violet light. Label each roll of geotextile or drain strip in the shipment to identify that production run.

8. CONSTRUCTION

8.1 Launched Soil Nails

Furnish launched soil nails and equipment and incidentals necessary to complete work. Insert launched soil nails with a single stroke at initial velocities in excess of 200 miles per hour.

Install launched soil nails at the locations and to the lengths as shown in the plans or designated by the Engineer. Nails may be added, eliminated, or relocated as determined by the Engineer to accommodate actual field conditions.

Do not leave more than 4 feet of soil nail exposed after launching unless approved by the Engineer. Cut off the exposed portion of installed nails flush with ground level or as directed by the Engineer. Dispose of the cut-off portions of the launch soil nails off the right of way at sites obtained by the Contractor at no additional cost to the Department. Do not reuse remaining lengths from cut nails for launched soil nails.

8.2 Drainage Network

The drainage network consists of installing prefabricated Geocomposite drainage strips and weep hole drain pipes as shown in the plans or as directed by the Engineer. Install all elements of the drainage network before installing shotcrete.

8.2.1 Geocomposite Drain Strips

Install Geocomposite drain strips as shown in the plans. Place drain strips at construction joints such that the joint is aligned as close as practical along the middle of the longitudinal axis of the drain strip.

Secure at least 12 inches wide Geocomposite drain strips to the cut face with the geotextile side against the ground before shotcreting. Use at least 8 inches long securing pins with a 1.5 inch diameter head and installed on a minimum grid pattern of 24 inches on center. Use only continuous drain strips. Use splices with a 12-inch minimum overlap such that the flow is not impeded.

When the drain strips cannot be secured tight against the slope face, place polyethylene film over the drain edges to prevent excess shotcrete from entering the sides of the drain. Alternatively, the drains may be installed in 16 inch wide strips and the film omitted.

8.2.2 Weep Hole Drainage Pipes

Install weep hole drainage pipes at locations shown in the plans or as directed by the Engineer. Use no more than 10 feet between weep holes. Use pipe lengths of solid PVC pipe installed to direct water from the Geocomposite drain strips to the outside of the shotcrete facing. Connect pipes to the drain strips by installing prefabricated drain grates in accordance with the drain strip manufacturer's recommendations. Seal joints between the drain grate, the drain strip and the drainage pipe to prevent shotcrete intrusion. Installation of additional weep holes will be required, for any Geocomposite drainage boards that are damaged and may cause interruption in flow as determined by the Engineer. The department for this work or additional materials will make no additional payment.

9. SAMPLING AND TESTING

Acceptance of the launch soil nails will be by Manufacturer's and/or Vendor's certification to the Engineer stating the material composition conforms to this provision and visual inspection of the in place nails by the Engineer.

Proof testing of the nails may be requested by NCDOT. Supply all material, equipment, and labor to perform the tests. The Engineer will collect all required data with the assistance of the Contractor. Do not perform testing on nails within three days of shotcrete application.

If requested by NCDOT, perform proof testing on up to five percent of the production nails in each slope repair site to verify the methods and the design nail capacity. The Engineer will determine the locations and number of these tests.

Materials found not in compliance with the requirements of this Contract may be rejected, removed and replaced at the Vendor's expense, or accepted at a reduction in Contract price determined by the Engineer.

10. MEASUREMENT AND PAYMENT

10.1 Launched Soil Nails

The Department will measure Launched Soil Nails in individual nails, each. Upon receipt of proper invoices, the Department will pay for the materials delivered and accepted at the Vendor's unit bid price per each Soil Nail. The Department will not make payment for partial deliveries.

Payment at the Contract unit price each will be full compensation for all labor, materials, equipment, and incidentals to furnish and place Launched Soil Nails

Payment will be made under:

Furnish & Install Launched Soil Nails up to 20' Each

SELF DRILLING SOIL NAILS FOR SLOPE REPAIR

Furnish self-drilling soil nails that consist of a hollow, threaded bar with a sacrificial drill bit. Multiple bars may be coupled to produce final length. Bar thread pattern should be continuous and conform to ASTM A 615 (Williams Form Engineering “B7X” or Ischebeck “Titan” bars, or approved equivalent). R-thread bars, bars/couplers made from high carbon (>0.20%) or high phosphorous (>0.06%) steels, or bars/couplers made from steels that do not meet the tensile ductility requirements of ASTM A 615 are not allowed. Bar outer diameters shall be a minimum of 1.5 inches (38/40 mm) and up to and 3 inches (70/71 mm) depending on design load.

Use drilling rigs capable of drilling through whatever materials are encountered to the dimensions and orientations required for the soil nail wall design. Drill straight and clean holes at locations shown in the accepted submittals. Drill hole locations and inclinations are required to be within 6” (150 mm) and 5 degrees, respectively, of that shown in the accepted submittals unless approved otherwise by the Engineer. Drill all self-drilling nails with continuous grout injection unless approved otherwise by the Engineer.

NCDOT will measure self-drilling soil nails in seven units of measure. They will be measured up to 20 feet, up to 30 feet, up to 40 feet, up to 50 feet, up to 60 feet, up to 70 feet, and up to 80 feet in length. NCDOT will not make payment for materials on site and not installed. Upon receipt of proper invoices, NCDOT will pay for the materials delivered and installed and accepted at the Contractors unit price per Soil Nail. NCDOT will not make payment for materials on site and not installed. Payment at the Contract unit price each shall be full compensation for all labor, materials, equipment, and incidentals to furnish and place required Soil Nails.

Payment will be made under:

Furnish & Install Self-Drilling Soil Nails up to 20' Each
Furnish & Install Self-Drilling Soil Nails up to 30' Each
Furnish & Install Self-Drilling Soil Nails up to 40' Each
Furnish & Install Self-Drilling Soil Nails up to 50' Each
Furnish & Install Self-Drilling Soil Nails up to 60' Each
Furnish & Install Self-Drilling Soil Nails up to 70' Each
Furnish & Install Self-Drilling Soil Nails up to 80' Each

PERMANENTLY CASED SOIL NAILS

Furnish Permanently Cased Soil Nails that are a three stage construction including installation of (1) an outer tube (1.5 inch outside diameter, 0.120 inch wall thickness hot-dipped galvanized steel tube that is mechanically deformed or galvanized to produce a plurality of surficial asperities); (2) neat cement grout that completely fills the outer tube; and (3) an inner bar consisting of epoxy coated, #6 (or greater) grade 60 or grade 75 rebar or threadbar. When applicable, provide perforated tubes that can be pressure grouted.

Permanently Cased Soil Nails will be constructed by launching an outer tube with a single stroke at initial velocities in excess of 200 miles per hour or by drilling a hole to prescribed depth at the prescribed location as shown on the plans, inserting a 1.5 inch outside diameter steel pipe (Outer Tube) fully encasing the inside of the Outer Tube with grout (neat cement) and immediately inserting an epoxy coated #6 reinforcing rebar as the Inner Bar. Provide perforated tube and grout under pressure when applicable. The Contractor bears the risk of unforeseen groundwater or adverse launching or drilling conditions.

NCDOT will measure Permanently Cased Soil Nails in seven units of measure. They will be measured up to 20 feet, up to 30 feet, up to 40 feet, up to 50 feet, up to 60 feet, up to 70 feet, and up to 80 feet in length. NCDOT will not make payment for materials on site and not installed. Upon receipt of proper invoices, NCDOT will pay for the materials delivered and installed and accepted at the Contractors unit price per Permanently Cased Soil Nail. NCDOT will not make payment for materials on site and not installed. Payment at the Contract unit price each shall be full compensation for all labor, materials, equipment, and incidentals to furnish and place required Nails.

Payment will be made under:

Furnish & Install Permanently Cased Soil Nails up to 20'	Each
Furnish & Install Permanently Cased Soil Nails up to 30'	Each
Furnish & Install Permanently Cased Soil Nails up to 40'	Each
Furnish & Install Permanently Cased Soil Nails up to 50'	Each
Furnish & Install Permanently Cased Soil Nails up to 60'	Each
Furnish & Install Permanently Cased Soil Nails up to 70'	Each
Furnish & Install Permanently Cased Soil Nails up to 80'	Each

SELF-DRILLING MICROPILES FOR SLOPE REPAIR

Furnish self-drilling micropiles that consist of a hollow, threaded bar with a sacrificial drill bit. Multiple bars may be coupled to produce final length. Bar thread pattern should be continuous and conform to ASTM A 615 (Williams Form Engineering “B7X” or Ischebeck “Titan” bars, or approved equivalent). R-thread bars are not allowed. Bar outer diameters shall be a minimum of 2 inches and up to and 3 inches depending on design load.

Use drilling rigs capable of drilling through whatever materials are encountered to the dimensions and orientations required for the soil nail wall design. Drill straight and clean holes at locations

shown in the accepted submittals. Drill hole locations and inclinations are required to be within 6” (150 mm) and 5 degrees, respectively, of that shown in the accepted submittals unless approved otherwise by the Engineer. Drill all self-drilling micropiles with continuous grout injection unless approved otherwise by the Engineer.

NCDOT will measure self-drilling micropiles in seven units of measure. They will be measured up to 20 feet, up to 30 feet, up to 40 feet, up to 50 feet, up to 60 feet, up to 70 feet, and up to 80 feet in length. NCDOT will not make payment for materials on site and not installed. Upon receipt of proper invoices, NCDOT will pay for the materials delivered and installed and accepted at the Contractors unit price per micropile. NCDOT will not make payment for materials on site and not installed. Payment at the Contract unit price each shall be full compensation for all labor, materials, equipment, and incidentals to furnish and place required micropile.

Payment will be made under:

Furnish & Install Self-Drilling Micropiles up to 20’	Each
Furnish & Install Self-Drilling Micropiles up to 30’	Each
Furnish & Install Self-Drilling Micropiles up to 40’	Each
Furnish & Install Self-Drilling Micropiles up to 50’	Each
Furnish & Install Self-Drilling Micropiles up to 60’	Each
Furnish & Install Self-Drilling Micropiles up to 70’	Each
Furnish & Install Self-Drilling Micropiles up to 80’	Each

WIRE MESH SURFACE TREATMENT (INCLUDES PLATES)

This work shall consist of furnishing and installing high strength single twist wire mesh to prevent shallow plane failures around a soil nail array.

- Mesh Type: High strength single twist rockfall mesh
- Wire diameter: .118 inches or greater
- Wire Strength: 75 ksi or greater
- Wire Coating: Minimum of 0.8 ounces/square foot (as determined by ASTM A-90) Zinc/Aluminum Alloy (as per ASTM B750-09). Plain hot-dip galvanized is not acceptable.
- Mesh Opening Size: 2.56 inches or smaller (using maximum circle method), area of opening shall not be less than 8.2 square inches
- Plate Material: ASTM A36 Steel or stronger
- Plate Coating: Hot dip galvanized in accordance with ASTM A153/A123
- Plate Thickness: 3/8 or 1/2 inch, depending on design
- Plate dimensions: Square or Diamond Shaped, minimum area 48 square inches

The mesh shall be stretched tight across the slope and over the nail tips. Shallow depressions at least 12 inches in diameter shall be dug around the nail tips. Galvanized steel plates shall be installed over the nail tips and post-tensioned to up to 10,000 pounds-force, as specified on the plans. Torque-tension relationships may be used to verify appropriate loading.

Silica Fume: ASTM C1240, 90 percent minimum silicon dioxide solids content, not to exceed 12 percent by weight of cement.

Welded Wire Fabric AASHTO M55/ASTM A185 or A497.

Prepackaged Shotcrete ASTM C928.

Deliver, store, and handle materials to prevent contamination, segregation, corrosion or damage. Store liquid admixtures to prevent evaporation and freezing.

Obtain Engineer's approval for the proposed mix design and method of placement before beginning shotcrete placement.

Use aggregate for shotcrete meeting the strength and durability requirements of AASHTO, as applicable, and the following gradation requirements:

Sieve Size	Percent Passing by Weight
1/2"	100
3/8"	90-100
No. 4	70-85
No. 8	50-70
No. 16	35-55
No. 30	20-35
No. 50	8-20
No. 100	2-10

Proportion the shotcrete to be pumpable with the concrete pump furnished for the work, with a cementing materials content of at least 24.3 pounds per cubic foot and water/cement ratio not greater than 0.50. Do not use admixtures unless approved by the Engineer. Thoroughly mix admixtures into the shotcrete at the rate specified by the manufacturer. Use only accelerators compatible with the cement used, non-corrosive to steel, and not promoting other detrimental effects such as cracking or excessive shrinkage. The maximum allowable chloride ion content of all ingredients is 0.10% when tested to AASHTO T260.

Air entrainment is not required for temporary shotcrete construction facings.

Provide shotcrete with a design compressive strength of 2000 psi in 3 days and 4000 psi in 28 days.

Batch aggregate and cement by weight or by volume in accordance with the requirements of ASTM C94 or AASHTO M241/ASTM C685. Use mixing equipment that thoroughly blends the materials in sufficient quantity to maintain placing continuity. Produce ready mix shotcrete complying with AASHTO M157. Batch, deliver, and place shotcrete within 90 minutes of mixing. The use of retarding admixtures may extend application time beyond 90 minutes if approved by the Engineer.

Premixed and packaged shotcrete mix may be provided for on-site mixing. Use packages containing materials conforming to the Material section of this provision. Placing time limit after mixing is per the manufacturers' recommendations.

Store cement adequately to prevent moisture degradation and partial hydration. Do not use cement that is caked or lumpy.

Construction Method

Construct shotcrete with a minimum thickness of **6 inches, 8 inches, or 12 inches** (based on design) with welded-wire fabric a minimum of **2 inches** from the ground surface. Do not begin shotcrete construction or incorporate materials into the work until the submittal requirements are satisfied and accepted by the Engineer. Any changes or deviations from the accepted submittals or re-submittals before proceeding with work are not allowed. No adjustments in contract time will be allowed due to incomplete submittals.

Ensure the minimum thickness of shotcrete using shooting wires, thickness control pins, or other devices acceptable to the Engineer. Install thickness control devices normal to the surface such that they protrude the required shotcrete thickness outside the surface. Ensure that the front face of the shotcrete does not extend beyond the limits established by the Engineer.

Clean the face of the excavation and other proposed shotcrete surfaces of loose materials, mud, rebound, overspray or other foreign matter that could prevent or reduce shotcrete bond. Protect adjacent surfaces from over spray during shooting. Avoid loosening, cracking, or shattering the ground during excavation and cleaning. Remove any surface material that is so loosened or damaged, to a sufficient depth to provide a base that is suitable to receive the shotcrete. Remove material that loosens as the shotcrete is applied. The cost of additional shotcrete is incidental to the work. Divert water flow and remove standing water so that shotcrete placement will not be detrimentally affected by standing water. Do not place shotcrete on frozen surfaces.

Maintain a clean, dry, oil-free supply of compressed air sufficient for maintaining adequate nozzle velocity at all times. Use equipment capable of delivering the premixed material accurately, uniformly, and continuously through the delivery hose. Control shotcrete application thickness, nozzle technique, air pressure, and rate of shotcrete placement to prevent sagging or sloughing of freshly-applied shotcrete.

Begin shotcrete production work only upon initial approval of the design mix and nozzle men's qualifications and continue if the specified strengths are obtained. Suspend the shotcrete work if the test results of the work do not satisfy the strength requirements and change all or some of the following: the mix, the crew, the equipment, or the procedures. Before resuming work, submit additional test panels using the new crew, materials and/or methods that demonstrate to the satisfaction of the Engineer that the shotcrete in the panels satisfies the specified strength requirements. Provide all work required to obtain satisfactory strength tests at no additional cost to the Department.

Apply the shotcrete from the lower part of the area upward to prevent accumulation of rebound. Orient nozzle at a distance and approximately perpendicular to the working face so that rebound will be minimal and compaction will be maximized. Pay special attention to encapsulating reinforcement. Do not work rebound back into the construction. Where shotcrete is used to complete the zone of the nail near the face, position the nozzle to completely fill any voids.

A clearly defined pattern of continuous horizontal or vertical ridges or depressions at the reinforcing elements after they are covered with shotcrete will be considered an indication of insufficient reinforcement cover or poor nozzle techniques. In this case immediately suspend the application of shotcrete and implement corrective measures before resuming the shotcrete operations. Correct the shotcreting procedure by adjusting the nozzle distance and orientation, by insuring adequate cover over the reinforcement, by adjusting the water content of the shotcrete mix or other means. Adjustment in water content of wet-mix will require additional submittal and review of the shotcrete mix.

Repair shotcrete surface defects as soon as possible after placement. Remove and replace shotcrete that exhibits segregation, honeycombing, lamination, voids, or sand pockets. In-place shotcrete not meeting the specified strength requirement will be subject to remediation. Possible remediation options include placement of additional shotcrete thickness or removal and replacement, at no additional cost to the Department.

Taper construction joints uniformly toward the excavation face over a minimum distance equal to the thickness of the shotcrete layer. Provide a minimum reinforcement overlap at reinforcement splice joints as shown in the Construction Plans. Clean and wet the surface of a joint before adjacent shotcrete is applied. Where shotcrete is used to complete the top ungrouted zone of the nail drill hole near the face, to the maximum extent practical, clean and dampen the upper grout surface to receive shotcrete, similar to a construction joint.

Use either an undisturbed gun finish as applied from the nozzle or a rough screeded finish. Remove shotcrete extending into the CIP finish face section beyond the tolerances specified herein.

Do not place shotcrete if the ambient air or ground temperature is below 40° F. Maintain cold weather protection if the temperature after place is below 40° F until the in-place compressive strength of the shotcrete is greater than 725 psi. Cold weather protection includes blankets, heating under tents, or other means acceptable to the Engineer. Deposit the shotcrete mix at a temperature of not less than 50° F or more than 100° F.

Suspend shotcrete application during high winds and heavy rains unless suitable protective covers, enclosures or wind breaks are installed. Remove and replace newly placed shotcrete exposed to rain that washes out cement or otherwise makes the shotcrete unacceptable. Provide a polyethylene film or equivalent to protect the work from exposure to adverse weather.

Meeting all federal, state, and local safety code requirements is mandatory.

Sampling and Testing

Acceptance of shotcrete will be by visual inspection by the Engineer of the work, preconstruction test panels (for nozzle men without previous ACI certification), and, if requested by NCDOT, production test panels from the wall facing. If requested by NCDOT, perform shotcreting of test panels using qualified personnel in the presence of the Engineer. Furnish at least one production test panel during the first production application of shotcrete. Construct the production test panels simultaneously with the shotcrete facing installation at times designated by the Engineer. Make production test panels with minimum dimensions of 18"x18" square and at least 4" thick.

Materials found not in compliance with the requirements of this Contract may be rejected, removed and replaced at the Vendor's expense, or accepted at a reduction in Contract price determined by the Engineer.

Shotcrete Shoulder Build-Up may be required to regain roadway width up to 3 feet wide when installing a shotcrete retaining wall. This item includes all necessary components that may not be included in typical Shotcrete bid items such as unique structural design, extra steel reinforcement, coordination with guardrail installer, Sonotube/cutouts for guardrail installation, and any extra required formwork.

Measurement and Payment

The Department will measure Shotcrete in square feet, and Shotcrete Shoulder Build-Up in linear feet. Upon receipt of proper invoices, the Department will pay for the materials delivered and accepted at the Vendor's unit bid price per square foot or linear foot. The Department will not make payment for partial deliveries. Payment at the contract unit price per square foot will be full compensation for all materials, labor, equipment, geocomposite drainage strips, weep holes, reinforcing steel, shotcrete and all incidentals for placing shotcrete around the soil nails and/or micropiles. Payment at the Contract unit price per square foot or linear foot will be full compensation for all labor, materials, equipment, and incidentals to furnish and place shotcrete including but not limited to any preparatory trimming and cleaning of soil/rock surfaces and shotcrete cold joints in preparation for receiving new shotcrete.

Payment will be made under:

Furnish & Install 6" Reinforced Shotcrete.....	Square feet
Furnish & Install 8" Reinforced Shotcrete.....	Square feet
Furnish & Install 12" Reinforced Shotcrete.....	Square feet
Furnish & Install Shotcrete Shoulder Build-Up.....	Linear feet

HORIZONTAL DRAINS

Horizontal drains consist of 1.5-inch diameter (or larger) slotted schedule 80 (or thicker) polyvinyl chloride (PVC) plastic pipe conforming to the requirements of ASTM Designation: D 1785. These pipes are inserted into drilled holes to reduce water pressures within slide masses.

Pipe Slots/Perforations: Slotted pipe shall have 2 rows of slots. The rows shall be in the longitudinal direction of the pipe and the slots shall be cut in the circumferential direction of the pipe. The rows shall be centered on 2 of the third points (120 degrees apart) of the pipe circumference. Each row of slots shall conform to one of the following configurations. Slots shall be spaced uniformly along the pipe. The minimum opening will be measured on the inner surface of the pipe.

Number of Slots (± 3) per meter	Width of Slot (millimeters)	Minimum Opening per meter (square millimeters)
72	1.27	2110
75	0.51	975
151	0.25	975

Perforated pipe shall have 3 rows of perforations with one row on each side of the pipe and the third row in the top. The perforations shall be 10 mm in diameter spaced at 75-mm centers with the top perforations staggered in relation with the holes on either side. Fittings for the PVC plastic pipe shall be Schedule 80 Type II PVC solvent weld type fittings conforming to the requirements in ASTM Designation: D 2467. Machined male and female ends may be used in lieu of couplings. Unslotted or unperforated PVC plastic pipe, between 1 m to 9 m in length, shall be provided at the outlet of the drain.

NCDOT will measure horizontal drains in linear feet. Upon receipt of proper invoices, NCDOT will pay for the materials delivered and accepted at the Contractors unit price per linear feet per site as required. NCDOT will not make payment for partial deliveries. Payment at the contract unit price for each unit shall be full compensation for all materials.

Payment will be made under:

- Furnish & Install Horizontal Drains up to 20' Each
- Furnish & Install Horizontal Drains up to 30' Each
- Furnish & Install Horizontal Drains up to 40' Each
- Furnish & Install Horizontal Drains up to 50' Each
- Furnish & Install Horizontal Drains up to 60' Each
- Furnish & Install Horizontal Drains up to 70' Each
- Furnish & Install Horizontal Drains up to 80' Each

PLAN SUBMITTAL

The Contractor shall submit 5 copies of plans and calculations to the Engineer for review and approval in accordance with Section 105-2 of the *Standard Specifications*. Prepare and seal the plans and calculations using a North Carolina Registered Professional Engineer.

Payment will be made under:

Plan Submittal Each

GEOSYNTHETICALLY CONFINED SOIL WALL

Geosynthetically Confined Soil Walls may be used in conjunction with soil nails/micropiles and/or shotcrete to create a wider roadway platform or to construct a small box or abutment wall. This wall shall consist of a standard split faced concrete masonry unit (CMU), road base backfill, and a woven polypropylene geosynthetic fabric placed between each block. Geosynthetically Confined Soil Walls wall will be constructed to lines and grades determined by NCDOT and the Contractor’s Engineer. CMU blocks shall meet ASTM C-90 criteria. Backfill (provided by NCDOT) shall be crushed aggregate road base with maximum particle size of 2 inches and with a Plastic Index (PI) below 6. Compaction should be 95% of AASHTO T-180. Geotextile shall be per design but in no case shall have less than a wide width strip tensile capacity of 2400 pounds per foot.

NCDOT will measure Geosynthetically Confined Soil Wall materials (Concrete Masonry Units; each; Geosynthetic Fabric; square feet) separately from Geosynthetically Confined Soil Wall Construction; square feet; to allow NCDOT the option to build the Geosynthetically Confined Soil Wall with their own forces on certain projects. Upon receipt of proper invoices, NCDOT will pay for the materials delivered and accepted at the Contractors unit price per linear feet per site as required. NCDOT will not make payment for partial deliveries. Payment at the contract unit price for each unit shall be full compensation for all materials.

Payment will be made under:

Furnish Concrete Masonry Units Each
Furnish Geosynthetic Fabric..... Square Feet
Install Geosynthetically Confined Soil Wall..... Square Feet

TRAFFIC CONTROL AND WORK ZONE SIGNING

The North Carolina Department of Transportation will install and maintain all Traffic Control and Work Zone Signing for this project.

MINORITY BUSINESS ENTERPRISE AND WOMEN BUSINESS ENTERPRISE (DIVISIONS)

Description

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

Definitions

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

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

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

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

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

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

Minority Business Enterprise (MBE) - A firm certified as a Disadvantaged Minority-Owned Business Enterprise through the North Carolina Unified Certification Program.

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 and operates distribution equipment for the products. Brokers and packagers are not regarded as manufacturers or regular dealers within the meaning of this section.

North Carolina Unified Certification Program (NCUCP) - A program that provides comprehensive services and information to applicants for MBE/WBE certification. The MBE/WBE program follows the same regulations as the federal Disadvantaged Business Enterprise (DBE) program in accordance with 49 CFR Part 26.

United States Department of Transportation (USDOT) - Federal agency responsible for issuing regulations (49 CFR Part 26) and official guidance for the DBE program.

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

Women Business Enterprise (WBE) - A firm certified as a Disadvantaged Women-Owned Business Enterprise through the North Carolina Unified Certification Program.

Forms and Websites Referenced in this Provision

Payment Tracking System - On-line system in which the Contractor enters the payments made to MBE and WBE subcontractors who have performed work on the project.
<https://apps.dot.state.nc.us/Vendor/PaymentTracking/>

DBE-IS Subcontractor Payment Information - Form for reporting the payments made to all MBE/WBE firms working on the project. This form is for paper bid projects only.
<http://www.ncdot.org/doh/forms/files/DBE-IS.xls>

RF-1 MBE/WBE Replacement Request Form - Form for replacing a committed MBE or WBE.
<http://connect.ncdot.gov/projects/construction/Construction%20Forms/DBE%20MBE%20WBE%20Replacement%20Request%20Form.pdf>

SAF Subcontract Approval Form - Form required for approval to sublet the contract.
<http://connect.ncdot.gov/projects/construction/Construction%20Forms/Subcontract%20Approval%20Form%20Rev.%202012.zip>

JC-1 Joint Check Notification Form - Form and procedures for joint check notification. The form acts as a written joint check agreement among the parties providing full and prompt disclosure of the expected use of joint checks.
<http://connect.ncdot.gov/projects/construction/Construction%20Forms/Joint%20Check%20Notification%20Form.pdf>

Letter of Intent - Form signed by the Contractor and the MBE/WBE subcontractor, manufacturer or regular dealer that affirms that a portion of said contract is going to be performed by the signed MBE/WBE for the amount listed at the time of bid.
<http://connect.ncdot.gov/letting/LetCentral/Letter%20of%20Intent%20to%20Perform%20as%20a%20Subcontractor.pdf>

Listing of MBE and WBE Subcontractors Form - Form for entering MBE/WBE subcontractors on a project that will meet this MBE and WBE goals. This form is for paper bids only.
[http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/09%20MBE-WBE%20Subcontractors%20\(State\).doc](http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/09%20MBE-WBE%20Subcontractors%20(State).doc)

Subcontractor Quote Comparison Sheet - Spreadsheet for showing all subcontractor quotes in the work areas where MBEs and WBEs quoted on the project. This sheet is submitted with good faith effort packages.
<http://connect.ncdot.gov/business/SmallBusiness/Documents/DBE%20Subcontractor%20Quote%20Comparison%20Example.xls>

MBE and WBE Goal

The following goals for participation by Minority Business Enterprises and Women Business Enterprises are established for this contract:

- (A) Minority Business Enterprises **0.0** %
 - (1) *If the MBE goal is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that MBEs participate in at least the percent of the contract as set forth above as the MBE goal.
 - (2) *If the MBE goal is zero*, the Contractor shall make an effort to recruit and use MBEs during the performance of the contract. Any MBE participation obtained shall be reported to the Department.

- (B) Women Business Enterprises **0.0** %
 - (1) *If the WBE goal is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that WBEs participate in at least the percent of the contract as set forth above as the WBE goal.
 - (2) *If the WBE goal is zero*, the Contractor shall make an effort to recruit and use WBEs during the performance of the contract. Any WBE participation obtained shall be reported to the Department.

Directory of Transportation Firms (Directory)

Real-time information is available about firms doing business with the Department and firms that are certified through NCUCP in the Directory of Transportation Firms. Only firms identified in the Directory as MBE and WBE certified shall be used to meet the MBE and WBE goals respectively. The Directory can be found at the following link. <https://partner.ncdot.gov/VendorDirectory/default.html>

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

Listing of MBE/WBE Subcontractors

At the time of bid, bidders shall submit all MBE and WBE participation that they anticipate to use during the life of the contract. Only those identified to meet the MBE goal and the WBE goal will be considered committed, even though the listing shall include both committed MBE/WBE subcontractors and additional MBE/WBE subcontractors. Any additional MBE/WBE subcontractor participation submitted at the time of bid will be used toward overall race-neutral goals. Only those firms with current MBE and WBE certification at the time of bid opening will be acceptable for listing in the bidder's submittal of MBE and WBE participation. The Contractor shall indicate the following required information:

- (A) *If either the MBE or WBE goal is more than zero,*
- (1) Bidders, at the time the bid proposal is submitted, shall submit a listing of MBE/WBE participation, including the names and addresses on *Listing of MBE and WBE Subcontractors* contained elsewhere in the contract documents in order for the bid to be considered responsive. Bidders shall indicate the total dollar value of the MBE and WBE participation for the contract.
 - (2) If bidders have no MBE or WBE participation, they shall indicate this on the *Listing of MBE and WBE Subcontractors* by entering the word “None” or the number “0.” This form shall be completed in its entirety. **Blank forms will not be deemed to represent zero participation.** Bids submitted that do not have MBE and WBE participation indicated on the appropriate form will not be read publicly during the opening of bids. The Department will not consider these bids for award and the proposal will be rejected.
 - (3) The bidder shall be responsible for ensuring that the MBE/WBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that MBE’s or WBE’s participation will not count towards achieving the corresponding goal.
- (B) *If either the MBE or WBE goal is zero,* entries on the *Listing of MBE and WBE Subcontractors* are not required for the zero goal, however any MBE or WBE participation that is achieved during the project shall be reported in accordance with requirements contained elsewhere in the special provision.

MBE or WBE Prime Contractor

When a certified MBE or WBE firm bids on a contract that contains MBE and WBE goals, the firm is responsible for meeting the goals or making good faith efforts to meet the goals, just like any other bidder. In most cases, a MBE or WBE bidder on a contract will meet one of the goals by virtue of the work it performs on the contract with its own forces. However, all the work that is performed by the MBE or WBE bidder and any other similarly certified subcontractors will count toward the goal. The MBE or WBE bidder shall list itself along with any MBE or WBE subcontractors, if any, in order to receive credit toward the goals.

For example, on a proposed contract, the WBE goal is 10%, and the MBE goal is 8%. A WBE bidder puts in a bid where they will perform 40% of the contract work and have a WBE subcontractor which will perform another 5% of the work. Together the two WBE firms submit on the *Listing of MBE and WBE Subcontractors* a value of 45% of the contract which fulfills the WBE goal. The 8% MBE goal shall be obtained through MBE participation with MBE certified subcontractors or documented through a good faith effort. It should be noted that you cannot combine the two goals to meet an overall value. The two goals shall remain separate.

MBE/WBE prime contractors shall also follow Sections A or B listed under *Listing of MBE/WBE Subcontractors* just as a non-MBE/WBE bidder would.

Written Documentation – Letter of Intent

The bidder shall submit written documentation for each MBE/WBE that will be used to meet the MBE and WBE goals of the contract, indicating the bidder's commitment to use the MBE/WBE in the contract. This documentation shall be submitted on the Department's form titled *Letter of Intent*.

The documentation shall be received in the office of the Engineer no later than 12:00 noon of the sixth calendar day following opening of bids, unless the sixth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 12:00 noon on the next official state business day.

If the bidder fails to submit the Letter of Intent from each committed MBE and WBE to be used toward the MBE and WBE goals, or if the form is incomplete (i.e. both signatures are not present), the MBE/WBE participation will not count toward meeting the MBE/WBE goal. If the lack of this participation drops the commitment below either the MBE or WBE goal, the Contractor shall submit evidence of good faith efforts for the goal not met, completed in its entirety, to the Engineer no later than 12:00 noon of the eighth calendar day following opening of bids, unless the eighth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 12:00 noon on the next official state business day.

Submission of Good Faith Effort

If the bidder fails to meet or exceed either the MBE or the WBE goal, the apparent lowest responsive bidder shall submit to the Department documentation of adequate good faith efforts made to reach that specific goal(s).

One complete set and three (3) copies of this information shall be received in the office of the Engineer no later than 12:00 noon of the sixth calendar day following opening of bids, unless the sixth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 12:00 noon on the next official state business day.

Note: 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 MBE/WBE quotations shall be a part of the good faith effort submittal. This documentation may include written subcontractor quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

Consideration of Good Faith Effort for Projects with MBE/WBE Goals More Than Zero

Adequate good faith efforts mean that the bidder took all necessary and reasonable steps to achieve the goal which, by their scope, intensity, and appropriateness, could reasonably be expected to obtain sufficient MBE/WBE participation. Adequate good faith efforts also mean that the bidder actively and aggressively sought MBE/WBE participation. Mere *pro forma* efforts are not considered good faith efforts.

The Department will consider the quality, quantity, and intensity of the different kinds of efforts a bidder has made. Listed below are examples of the types of actions a bidder will take in making a good faith effort to meet the goals and are not intended to be exclusive or exhaustive, nor is it intended to be a mandatory checklist.

- (A) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising, written notices, use of verifiable electronic means through the use of the NCDOT Directory of Transportation Firms) the interest of all certified MBEs/WBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within at least 10 days prior to bid opening to allow the MBEs/WBEs to respond to the solicitation. Solicitation shall provide the opportunity to MBEs/WBEs within the Division and surrounding Divisions where the project is located. The bidder must determine with certainty if the MBEs/WBEs are interested by taking appropriate steps to follow up initial solicitations.
- (B) Selecting portions of the work to be performed by MBEs/WBEs in order to increase the likelihood that the MBE and WBE goals will be achieved.
 - (1) Where appropriate, break out contract work items into economically feasible units to facilitate MBE/WBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
 - (2) Negotiate with subcontractors to assume part of the responsibility to meet the contract MBE/WBE goals when the work to be sublet includes potential for MBE/WBE participation (2nd and 3rd tier subcontractors).
- (C) Providing interested MBEs/WBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (D)
 - (1) Negotiating in good faith with interested MBEs/WBEs. It is the bidder's responsibility to make a portion of the work available to MBE/WBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available MBE/WBE subcontractors and suppliers, so as to facilitate MBE/WBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of MBEs/WBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for MBEs/WBEs to perform the work.
 - (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including MBE/WBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using MBEs/WBEs is not in itself sufficient reason for a bidder's failure to meet the contract MBE or WBE goals, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work

of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidding contractors are not, however, required to accept higher quotes from MBEs/WBEs if the price difference is excessive or unreasonable.

- (E) Not rejecting MBEs/WBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associates and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
- (F) Making efforts to assist interested MBEs/WBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or bidder.
- (G) Making efforts to assist interested MBEs/WBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (H) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; Federal, State, and local minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of MBEs/WBEs. Contact within 7 days from the bid opening NCDOT's Business Development Manager in the Business Opportunity and Work Force Development Unit to give notification of the bidder's inability to get MBE or WBE quotes.
- (I) Any other evidence that the bidder submits which shows that the bidder has made reasonable good faith efforts to meet the MBE and WBE goal.

In addition, the Department may take into account the following:

- (1) Whether the bidder's documentation reflects a clear and realistic plan for achieving the MBE and WBE goals.
- (2) The bidders' past performance in meeting the MBE and WBE goals.
- (3) The performance of other bidders in meeting the MBE and WBE goals. For example, when the apparent successful bidder fails to meet the goals, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts the apparent successful bidder could have met the goals. If the apparent successful bidder fails to meet the MBE and WBE goals, but meets or exceeds the average MBE and WBE participation obtained by other bidders, the Department may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made a good faith effort.

If the Department does not award the contract to the apparent lowest responsive bidder, the Department reserves the right to award the contract to the next lowest responsive bidder that

can satisfy to the Department that the MBE and WBE goals can be met or that an adequate good faith effort has been made to meet the MBE and WBE goals.

Non-Good Faith Appeal

The Engineer will notify the contractor verbally and in writing of non-good faith. A contractor may appeal a determination of non-good faith made by the Goal Compliance Committee. If a contractor wishes to appeal the determination made by the Committee, they shall provide written notification to the Engineer. The appeal shall be made within 2 business days of notification of the determination of non-good faith.

Counting MBE/WBE Participation Toward Meeting MBE/WBE Goals

(A) Participation

The total dollar value of the participation by a committed MBE/WBE will be counted toward the contract goal requirements. The total dollar value of participation by a committed MBE/WBE will be based upon the value of work actually performed by the MBE/WBE and the actual payments to MBE/WBE firms by the Contractor.

(B) Joint Checks

Prior notification of joint check use shall be required when counting MBE/WBE participation for services or purchases that involves the use of a joint check. Notification shall be through submission of Form JC-1 (*Joint Check Notification Form*) and the use of joint checks shall be in accordance with the Department's Joint Check Procedures.

(C) Subcontracts (Non-Trucking)

A MBE/WBE may enter into subcontracts. Work that a MBE subcontracts to another MBE firm may be counted toward the MBE contract goal requirement. The same holds for work that a WBE subcontracts to another WBE firm. Work that a MBE subcontracts to a non-MBE firm does not count toward the MBE contract goal requirement. Again, the same holds true for the work that a WBE subcontracts to a non-WBE firm. If a MBE or WBE contractor or subcontractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of standard industry practices, it shall be presumed that the MBE or WBE is not performing a commercially useful function. The MBE/WBE may present evidence to rebut this presumption to the Department. The Department's decision on the rebuttal of this presumption may be subject to review by the Office of Inspector General, NCDOT.

(D) Joint Venture

When a MBE or WBE performs as a participant in a joint venture, the Contractor may count toward its contract goal requirement a portion of the total value of participation

with the MBE or WBE in the joint venture, that portion of the total dollar value being a distinct clearly defined portion of work that the MBE or WBE performs with its forces.

(E) Suppliers

A contractor may count toward its MBE or WBE requirement 60 percent of its expenditures for materials and supplies required to complete the contract and obtained from a MBE or WBE regular dealer and 100 percent of such expenditures from a MBE or WBE manufacturer.

(F) Manufacturers and Regular Dealers

A contractor may count toward its MBE or WBE requirement the following expenditures to MBE/WBE firms that are not manufacturers or regular dealers:

- (1) The fees or commissions charged by a MBE/WBE 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) With respect to materials or supplies purchased from a MBE/WBE, which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or 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 determined to be reasonable and not excessive as compared with fees customarily allowed for similar services.

Commercially Useful Function

(A) MBE/WBE Utilization

The Contractor may count toward its contract goal requirement only expenditures to MBEs and WBEs that perform a commercially useful function in the work of a contract. A MBE/WBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the MBE/WBE shall also be responsible with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material and installing (where applicable) and paying for the material itself. To determine whether a MBE/WBE 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 MBE/WBE credit claimed for its performance of the work, and any other relevant factors.

(B) MBE/WBE Utilization in Trucking

The following factors will be used to determine if a MBE or WBE trucking firm is performing a commercially useful function:

- (1) The MBE/WBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there shall not be a contrived arrangement for the purpose of meeting the MBE or WBE goal.
- (2) The MBE/WBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- (3) The MBE/WBE 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.
- (4) The MBE may subcontract the work to another MBE firm, including an owner-operator who is certified as a MBE. The same holds true that a WBE may subcontract the work to another WBE firm, including an owner-operator who is certified as a WBE. When this occurs, the MBE or WBE who subcontracts work receives credit for the total value of the transportation services the subcontracted MBE or WBE provides on the contract. It should be noted that every effort shall be made by MBE and WBE contractors to subcontract to the same certification (i.e., MBEs to MBEs and WBEs to WBEs), in order to fulfill the goal requirement. This, however, may not always be possible due to the limitation of firms in the area. If the MBE or WBE firm shows a good faith effort has been made to reach out to similarly certified transportation service providers and there is no interest or availability, and they can get assistance from other certified providers, the Engineer will not hold the prime liable for meeting the goal.
- (5) The MBE/WBE may also subcontract the work to a non-MBE/WBE firm, including from an owner-operator. The MBE/WBE who subcontracts the work to a non-MBE/WBE is entitled to credit for the total value of transportation services provided by the non-MBE/WBE subcontractor not to exceed the value of transportation services provided by MBE/WBE-owned trucks on the contract. Additional participation by non-MBE/WBE subcontractors receives credit only for the fee or commission it receives as a result of the subcontract arrangement. The value of services performed under subcontract agreements between the MBE/WBE and the Contractor will not count towards the MBE/WBE contract requirement.
- (6) A MBE/WBE may lease truck(s) from an established equipment leasing business open to the general public. The lease must indicate that the MBE/WBE has exclusive use of and control over the truck. This requirement does not preclude the leased truck from working for others during the term of the lease with the

consent of the MBE/WBE, so long as the lease gives the MBE/WBE absolute priority for use of the leased truck. This type of lease may count toward the MBE/WBE's credit as long as the driver is under the MBE/WBE's payroll.

- (7) Subcontracted/leased trucks shall display clearly on the dashboard the name of the MBE/WBE that they are subcontracted/leased to and their own company name if it is not identified on the truck itself. Magnetic door signs are not permitted.

MBE/WBE Replacement

When a Contractor has relied on a commitment to a MBE or WBE firm (or an approved substitute MBE or WBE firm) to meet all or part of a contract goal requirement, the contractor shall not terminate the MBE/WBE for convenience. This includes, but is not limited to, instances in which the Contractor seeks to perform the work of the terminated subcontractor with another MBE/WBE subcontractor, a non-MBE/WBE subcontractor, or with the Contractor's own forces or those of an affiliate. A MBE/WBE may only be terminated after receiving the Engineer's written approval based upon a finding of good cause for the termination.

All requests for replacement of a committed MBE/WBE firm shall be submitted to the Engineer for approval on Form RF-1 (*Replacement Request*). If the Contractor fails to follow this procedure, the Contractor may be disqualified from further bidding for a period of up to 6 months.

The Contractor shall comply with the following for replacement of a committed MBE/WBE:

(A) Performance Related Replacement

When a committed MBE is terminated for good cause as stated above, an additional MBE that was submitted at the time of bid may be used to fulfill the MBE commitment. The same holds true if a committed WBE is terminated for good cause, an additional WBE that was submitted at the time of bid may be used to fulfill the WBE goal. A good faith effort will only be required for removing a committed MBE/WBE if there were no additional MBEs/WBEs submitted at the time of bid to cover the same amount of work as the MBE/WBE that was terminated.

If a replacement MBE/WBE is not found that can perform at least the same amount of work as the terminated MBE/WBE, the Contractor shall submit a good faith effort documenting the steps taken. Such documentation shall include, but not be limited to, the following:

- (1) Copies of written notification to MBEs/WBEs that their interest is solicited in contracting the work defaulted by the previous MBE/WBE or in subcontracting other items of work in the contract.
- (2) Efforts to negotiate with MBEs/WBEs for specific subbids including, at a minimum:

- (a) The names, addresses, and telephone numbers of MBEs/WBEs who were contacted.
 - (b) A description of the information provided to MBEs/WBEs regarding the plans and specifications for portions of the work to be performed.
- (3) A list of reasons why MBE/WBE quotes were not accepted.
 - (4) Efforts made to assist the MBEs/WBEs contacted, if needed, in obtaining bonding or insurance required by the Contractor.
- (B) Decertification Replacement
- (1) When a committed MBE/WBE is decertified by the Department after the SAF (*Subcontract Approval Form*) has been received by the Department, the Department will not require the Contractor to solicit replacement MBE/WBE 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 goal requirement.
 - (2) When a committed MBE/WBE is decertified prior to the Department receiving the SAF (*Subcontract Approval Form*) for the named MBE/WBE firm, the Contractor shall take all necessary and reasonable steps to replace the MBE/WBE subcontractor with another similarly certified MBE/WBE subcontractor to perform at least the same amount of work to meet the MBE/WBE goal requirement. If a MBE/WBE firm is not found to do the same amount of work, a good faith effort must be submitted to NCDOT (see A herein for required documentation).

Changes in the Work

When the Engineer makes changes that result in the reduction or elimination of work to be performed by a committed MBE/WBE, the Contractor will not be required to seek additional participation. When the Engineer makes changes that result in additional work to be performed by a MBE/WBE based upon the Contractor's commitment, the MBE/WBE shall participate in additional work to the same extent as the MBE/WBE 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 Contractor shall seek additional participation by MBEs/WBEs 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 the work had been expected to be performed by a committed MBE/WBE, the Contractor shall seek participation by MBEs/WBEs unless otherwise approved by the Engineer.

When the Contractor requests changes in the work that result in the reduction or elimination of work that the Contractor committed to be performed by a MBE/WBE, the Contractor shall seek

additional participation by MBEs/WBEs equal to the reduced MBE/WBE participation caused by the changes.

Reports and Documentation

A SAF (*Subcontract Approval Form*) shall be submitted for all work which is to be performed by a MBE/WBE subcontractor. The Department reserves the right to require copies of actual subcontract agreements involving MBE/WBE subcontractors.

When using transportation services to meet the contract commitment, the Contractor shall submit a proposed trucking plan in addition to the SAF. The plan shall be submitted prior to beginning construction on the project. The plan shall include the names of all trucking firms proposed for use, their certification type(s), the number of trucks owned by the firm, as well as the individual truck identification numbers, and the line item(s) being performed.

Within 30 calendar days of entering into an agreement with a MBE/WBE for materials, supplies or services, not otherwise documented by the SAF as specified above, the Contractor shall furnish the Engineer a copy of the agreement. The documentation shall also indicate the percentage (60% or 100%) of expenditures claimed for MBE/WBE credit.

Reporting Minority and Women Business Enterprise Participation

The Contractor shall provide the Engineer with an accounting of payments made to all MBE and WBE firms, including material suppliers and 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 the following action:

- (A) Withholding of money due in the next partial pay estimate; or
- (B) Removal of an approved contractor from the prequalified bidders' list or the removal of other entities from the approved subcontractors list.

While each contractor (prime, subcontractor, 2nd tier subcontractor) is responsible for accurate accounting of payments to MBEs/WBEs, it shall be the prime contractor's responsibility to report all monthly and final payment information in the correct reporting manner.

Failure on the part of the Contractor to submit the required information in the time frame specified may result in the disqualification of that contractor 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 being approved for further work on future projects until the required information is submitted.

Contractors reporting transportation services provided by non-MBE/WBE lessees shall evaluate the value of services provided during the month of the reporting period only.

At any time, the Engineer can request written verification of subcontractor payments.

The Contractor shall report the accounting of payments on the Department's DBE-IS (*Subcontractor Payment Information*) with each invoice. Invoices will not be processed for payment until the DBE-IS is received.

Failure to Meet Contract Requirements

Failure to meet contract requirements in accordance with Subarticle 102-15(J) of the *2012 Standard Specifications* may be cause to disqualify the Contractor.

ERRATA

Revise the *2012 Standard Specifications* as follows:

Division 2

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

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

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

Division 3

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

Division 4

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

Division 6

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

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

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

Page 6-40, Article 650-2 Materials, replace "Subarticle 1012-1(F)" with "Subarticle 1012-1(E)".

Division 8

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

Division 12

Page 12-7, Table 1205-3, add “FOR THERMOPLASTIC” to the end of the title.

Page 12-8, Subarticle 1205-5(B), line 13, replace “Table 1205-2” with “Table 1205-4”.

Page 12-8, Table 1205-4 and 1205-5, replace “THERMOPLASTIC” in the title of these tables with “POLYUREA”.

Page 12-9, Subarticle 1205-6(B), line 21, replace “Table 1205-4” with “Table 1205-6”.

Page 12-11, Subarticle 1205-8(C), line 25, replace “Table 1205-5” with “Table 1205-7”.

Division 15

Page 15-4, Subarticle 1505-3(F) Backfilling, line 26, replace “Subarticle 235-4(C)” with “Subarticle 235-3(C)”.

Page 15-6, Subarticle 1510-3(B), after line 21, replace the allowable leakage formula with the following: $W = LD\sqrt{P} \div 148,000$

Page 15-6, Subarticle 1510-3(B), line 32, delete “may be performed concurrently or” and replace with “shall be performed”.

Page 15-17, Subarticle 1540-3(E), line 27, delete “Type 1”.

Division 17

Page 17-26, line 42, Subarticle 1731-3(D) Termination and Splicing within Interconnect Center, delete this subarticle.

Revise the *2012 Roadway Standard Drawings* as follows:

1633.01 Sheet 1 of 1, English Standard Drawing for Matting Installation, replace “1633.01” with “1631.01”.

MINIMUM WAGES

FEDERAL The Fair Labor Standards Act provides that with certain exceptions every employer shall pay wages at the rate of not less than SEVEN DOLLARS AND TWENTY-FIVE CENTS (\$7.25) per hour.

STATE The North Carolina Minimum Wage Act provides that every employer shall pay to each of his employees' wages at a rate of not less than SEVEN DOLLARS AND TWENTY-FIVE CENTS (\$7.25) per hour.

The minimum wage paid to all skilled labor employed on this contract shall be SEVEN DOLLARS AND TWENTY-FIVE CENTS (\$7.25) per hour.

The minimum wage paid to all intermediate labor employed on this contract shall be SEVEN DOLLARS AND TWENTY-FIVE CENTS (\$7.25) per hour.

The minimum wage paid to all unskilled labor on this contract shall be SEVEN DOLLARS AND TWENTY-FIVE CENTS (\$7.25) per hour.

This determination of the intent of the application of this act to the contract on this project is the responsibility of the Contractor.

The Contractor shall have no claim against the Department of Transportation for any changes in the minimum wage laws, State or Federal. It is the responsibility of the Contractor to keep himself fully informed of all Federal and State Laws affecting his contract.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION BID FORM

WBS Element: Various

Contract Number: 11-00-096

DESCRIPTION: Emergency / Urgent Landslide Repair at Various Locations upon Request in Division 11

PAGE 1 OF 2

LINE	ITEM NUMBER	SECT	DESCRIPTION	QUAN	UNIT	UNIT BID	AMOUNT BID
1	0000100000-N	800	Mobilization	8	EACH		
2	0000915000-N	SP	Plan Submittal	8	EACH		
3	8834000000-N	SP	F & I Launched Soil Nails up to 20'	10	EACH		
4	8834000000-N	SP	F & I Permanently Cased Soil Nails up to 20'	50	EACH		
5	8834000000-N	SP	F & I Permanently Cased Soil Nails up to 30'	40	EACH		
6	8834000000-N	SP	F & I Permanently Cased Soil Nails up to 40'	30	EACH		
7	8834000000-N	SP	F & I Permanently Cased Soil Nails up to 50'	10	EACH		
8	8834000000-N	SP	F & I Permanently Cased Soil Nails up to 60'	5	EACH		
9	8834000000-N	SP	F & I Permanently Cased Soil Nails up to 70'	5	EACH		
10	8834000000-N	SP	F & I Permanently Cased Soil Nails up to 80'	2	EACH		
11	8834000000-N	SP	F & I Self-Drilling Soil Nails up to 20'	50	EACH		
12	8834000000-N	SP	F & I Self-Drilling Soil Nails up to 30'	40	EACH		
13	8834000000-N	SP	F & I Self-Drilling Soil Nails up to 40'	30	EACH		
14	8834000000-N	SP	F & I Self-Drilling Soil Nails up to 50'	10	EACH		
15	8834000000-N	SP	F & I Self-Drilling Soil Nails up to 60'	10	EACH		
16	8834000000-N	SP	F & I Self-Drilling Soil Nails up to 70'	5	EACH		
17	8834000000-N	SP	F & I Self-Drilling Soil Nails up to 80'	2	EACH		
18	8834000000-N	SP	F & I Self-Drilling Micropiles up to 20'	25	EACH		
19	8834000000-N	SP	F & I Self-Drilling Micropiles up to 30'	25	EACH		
20	8834000000-N	SP	F & I Self-Drilling Micropiles up to 40'	10	EACH		
21	8834000000-N	SP	F & I Self-Drilling Micropiles up to 50'	10	EACH		
22	8834000000-N	SP	F & I Self-Drilling Micropiles up to 60'	5	EACH		

CONTINUED ON PAGE 2

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION **BID FORM**

WBS Element: Various

Contract Number: 11-00-096

DESCRIPTION: Emergency / Urgent Landslide Repair at Various Locations upon Request in Division 11

PAGE 2 OF 2

LINE	ITEM NUMBER	SECT	DESCRIPTION	QUAN	UNIT	UNIT BID	AMOUNT BID
23	883400000-N	SP	F & I Self-Drilling Micropiles up to 70'	2	EACH		
24	883400000-N	SP	F & I Self-Drilling Micropiles up to 80'	2	EACH		
25	883400000-N	SP	F & I Horiz. Drains up to 20'	25	EACH		
26	883400000-N	SP	F & I Horiz. Drains up to 30'	20	EACH		
27	883400000-N	SP	F & I Horiz. Drains up to 40'	10	EACH		
28	883400000-N	SP	F & I Horiz. Drains up to 50'	5	EACH		
29	883400000-N	SP	F & I Horiz. Drains up to 60'	5	EACH		
30	883400000-N	SP	F & I Horiz. Drains up to 70'	2	EACH		
31	883400000-N	SP	F & I Horiz. Drains up to 80'	2	EACH		
32	883400000-N	SP	Furnish Concrete Masonry Units	8,000	EACH		
33	883900000-E	SP	F & I, Shotcrete Shoulder Build-Up	500	LFT		
34	884700000-E	SP	F & I Wire Mesh Surface Treatment	1,500	SFT		
35	884700000-E	SP	F & I, 6" Reinforced Shotcrete	5,000	SFT		
36	884700000-E	SP	F & I, 8" Reinforced Shotcrete	5,000	SFT		
37	884700000-E	SP	F & I, 12" Reinforced Shotcrete	2,500	SFT		
38	884700000-N	SP	Furnish Geosynthetic Fabric	9,000	SFT		
39	883400000-N	SP	Install Geosynthetically Confined Soil Wall	10,000	SFT		

TOTAL BID FOR PROJECT: _____

THIS SECTION TO BE COMPLETED BY NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

This bid has been reviewed in accordance with Article 103-1 of the Standard Specifications for Roads and Structures 2012.

Reviewed by _____ (date)

EXECUTION OF BID

NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

CORPORATION

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 any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, 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 attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

_____ Full name of Corporation

_____ Address as Prequalified

Attest _____
Secretary/Assistant Secretary
Select appropriate title

By _____
President/Vice President/Assistant Vice President
Select appropriate title

_____ Print or type Signer's name

_____ Print or type Signer's name

CORPORATE SEAL

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

NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

PARTNERSHIP

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 any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, 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 attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

_____ Full Name of Partnership

_____ Address as Prequalified

_____ Signature of Witness By _____ Signature of Partner

_____ Print or type Signer's name _____ Print or type Signer's name

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

NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

LIMITED LIABILITY COMPANY

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 any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, 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 attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

_____ Full Name of Firm

_____ Address as Prequalified

_____ Signature of Manager _____

Signature of Witness

Individually

_____ Print or type Signer's name

_____ Print or type Signer's name

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

NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS UNDER A FIRM NAME

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 any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, 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 attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

Name of Contractor

Individual Name

Trading and doing business as

Full name of Firm

Address as Prequalified

Signature of Witness

Signature of Contractor, Individually

Print or type Signer's name

Print or type Signer's name

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

NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

INDIVIDUAL DOING BUSINESS IN HIS OWN NAME

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 any bid or contract, that the bidder has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, 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 attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

N.C.G.S. § 133-32 and Executive Order 24 prohibit the offer to, or acceptance by, any State Employee of any gift from anyone with a contract with the State, or from any person seeking to do business with the State. By execution of any response in this procurement, you attest, for your entire organization and its employees or agents, that you are not aware that any such gift has been offered, accepted, or promised by any employees of your organization.

SIGNATURE OF CONTRACTOR

Name of Contractor _____
Print or type Individual Name

Address as Prequalified

Signature of Contractor, Individually

Print or type Signer's name

Signature of Witness

Print or type Signer's name

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: _____

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation filed with the Department, or has become erroneous because of changed circumstances.
2. 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 12549. 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.
3. The prequalified bidder agrees by submitting this form that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.
4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he 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.
5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
6. 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.
7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the 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 by the Federal Government.

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his 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.
- e.** Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

If the prequalified bidder cannot certify that he is not debarred, he shall provide an explanation with this submittal. An explanation will not necessarily result in denial of participation in a contract.

Failure to submit a non-collusion affidavit and debarment certification will result in the prequalified bidder's bid being considered non-responsive.

Check here if an explanation is attached to this certification.

Contract No: 11-00-096

County: Division 11

ACCEPTED BY THE
DEPARTMENT OF TRANSPORTATION

Contract Officer

Date

