STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PURDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

December 22, 2011

NOTICE TO PROSPECTIVE BIDDERS

Subject: Invitation to Bid on Purchase Order Contract

Description: Airfield Testing Activities at North Carolina Airports

The North Carolina Department of Transportation – Division of Aviation is requesting bids for a purchase order contract involving various airfield testing activities at North Carolina airports. Activities include pavement friction testing, retroreflectivity testing, airfield marking testing, pavement smoothness testing, falling weight deflectometer testing, photometric testing, rejuvenation testing, macro-texture testing, and other additional items. The Contractor is to furnish labor, materials, equipment and traffic control and be available to perform work at any airport within North Carolina.

The **availability date is January 13, 2012**, and the **completion date is January 14, 2013**. At the option of the Division of Aviation, the contract may be extended for two (2) additional periods of one (1) year each, for a maximum period of three (3) years total.

The NCDOT, in accordance with the provisions of Title VI of the Civil Rights of 1964 (78 Stat.252) and the Regulations of the Department of Transportation (49 C.F.R., Part 21), issued pursuant to such act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this notice will be awarded to the lowest responsible bidder without discrimination on the grounds of sex, race, color, or national origin.

Statements of Minority and Women Business Enterprises participation must be presented with the bids. The contract goal for this contract has been set at **0%.**

MAILING ADDRESS:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF AVIATION
1560 MAIL SERVICE CENTER
RALEIGH NC 27699-1560

TELEPHONE: 919-840-0112
Fax: 919-840-0645

http://www.ncdot.org/aviation/

LOCATION:

RDU AIRPORT
1050 MERIDAN DRIVE
RDU NC 27623

Firms that wish to bid on this Contract as the prime contractor must be prequalified as a Consultant, with the NCDOT Discipline 00431-Airport Construction Admin/Inspection, no later than two (2) weeks after the "date of availability" in order to be awarded the contract. Firms that wish to perform as a subcontractor to the prime contractor must be prequalified to at least "Subcontractor" with the appropriate NCDOT Work Codes prior to beginning work on a project.

If you have questions, please contact myself or Philip Lanier, Airport Development Engineer at 919-840-0112.

Sincerely,

Bobby Walston, P.E.
Manager of Statewide Plans & Programs

BLW/prl

MAILING ADDRESS:

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF AVIATION
1560 MAIL SERVICE CENTER
RALEIGH NC 27699-1560

TELEPHONE: 919-840-0112
Fax: 919-840-0645

http://www.ncdot.org/aviation/

LOCATION:

RDU AIRPORT
1050 MERIDAN DRIVE
RDU NC 27623

STATE OF NORTH CAROLINA

DEPARTMENT OF TRANSPORTATION

DIVISION OF AVIATION

CONTRACT PROPOSAL

LOCATION: North Carolina Airports

COUNTY: Various

DESCRIPTION: Airfield Testing Activities at North Carolina Airports

DATE: December 21, 2011

BID OPENING: January 13, 2012 at 2:00 P.M.

_____

NAME OF BIDDER

_____

ADDRESS OF BIDDER

RETURN BIDS TO:

MAIL:
NCDOT – DIVISION OF AVIATION
ATTN: PHILIP LANIER
1560 MAIL SERVICE CENTER
RALEIGH, NC 27699-1560
Phone Number: 919-840-0112

COURIER:
NCDOT – DIVISION OF AVIATION
ATTN: PHILIP LANIER
1050 MERIDIAN DRIVE
RDU AIRPORT, NC 27623
Phone Number: 919-840-0112

Table of Contents

STANDARD SPECIAL PROVISIONS (continued)

PROJECT SPECIAL PROVISIONS

SAFETY DRAWINGS

AIRPORTS MAP

DOCUMENTS TO BE COMPLETED

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. **Unit prices must be limited to two decimal places.**
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. Federal Identification Number (or Social Security Number of Individual)
   e. 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 NCDOT – DIVISION OF AVIATION OFFICE AT RDU AIRPORT ON MERIDIAN DRIVE BY 2:00 P.M. ON FRIDAY, JANUARY 13, 2012.**

12. The sealed bid must display the following statement on the front of the sealed envelope:
QUOTATION FOR AIRFIELD TESTING ACTIVITIES AT NORTH CAROLINA AIRPORTS TO BE OPENED AT THE NCDOT - DIVISION OF AVIATION ON JANUARY 13, 2012 AT 2:00 P.M.

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

MAIL:	**COURIER:**
NCDOT – DIVISION OF AVIATION	**NCDOT – DIVISION OF AVIATION**
ATTN: PHILIP LANIER	**ATTN: PHILIP LANIER**
1560 MAIL SERVICE CENTER	**1050 MERIDIAN DRIVE**
RALEIGH, NC 27699-1560	**RDU AIRPORT, NC 27623**

14. **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 *(excluding 102-2 and 102-10)* of the Standard Specifications for Roads and Structures 2012. 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.**

Standard Special Provisions

GENERAL

This contract is for various airfield testing activities at North Carolina publicly owned, publicly used airports statewide. The Contractor shall provide and furnish all the materials, machinery, implements, traffic control devices, appliances and tools, and perform the work and required labor at any airport in North Carolina.

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 (2012 or newer adopted version), the Federal Highway Administration - Manual of Uniform Traffic Control Devices (2009 or newer adopted version), the Federal Aviation Administration - Advisory Circular 150/5370-10E Standards for Specifying Construction of Airports (9/30/2009 or newer adopted version), and the Federal Aviation Administration - Advisory Circular 150/5370-2E Operational Safety on Airports During Construction (1/17/03 or newer adopted version), with the exception that bid bonds are not required.

The Contractor shall keep himself fully informed of, and in full compliance with, all Federal, State and local laws, ordinances, and regulations, and shall comply with the provisions of Section 107 of the Standard Specifications for Roads and Structures.

TERM OF CONTRACT

The term of this contract is from **January 13, 2012 until January 13, 2013**. The Contractor shall submit his bid for this one (1) year term. At the option of the Division of Aviation, this contract may be extended for two (2) additional periods of one (1) year each, for a maximum period of three (3) years total. The unit bid prices will be increased by three percent (3%) for each one-year extension. No changes in the terms, conditions, etc. of this contract will be made when an extension to the contract is implemented. The Engineer will notify the Contractor in writing twenty (20) calendar days prior to the term ending date if the contract may be extended. The Contractor must notify the Engineer in writing within fifteen (15) calendar days of his/her acceptance or rejection of this offer. Failure on the part of the Contractor to reply will be considered as a rejection of contract extension.

CONTRACT TIME

The date of availability for this contract is upon notification of approval of the purchase order, no earlier than January 13, 2012. The Contractor shall not begin work prior to this date without written approval from the Engineer.

No work will be permitted and no purchase order will be issued until all prerequisite conditions, and certifications have been satisfied.

The completion date for this contract is January 13, 2013. No extensions will be authorized except as authorized by Article 108-10 of the Standard Specifications for Roads and Structures.

NOTIFICATION OF WORK

The Engineer will notify the Contractor when a testing project is required at an airport. A project will consist of any combination and quantity of contract items needed for testing at an airport. The Engineer's notification to the Contractor will consist of a project scope, necessary project details, and an itemized list of testing services needed.

When notified by the Engineer that an airport project is required, the Contractor shall respond and begin work at the airport within fourteen (14) calendar days after the date of notification, or as otherwise specifically directed by the Engineer.

The Contractor shall notify the Engineer and the Airport Manager three (3) days in advance of arriving and/or beginning work on any project, at any airport for this contract. The Contractor shall give the Engineer sufficient notice of all his operations.

AWARD OF CONTRACT

The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252) and the Regulations of the Department of Transportation (49 C.F.R., Part 21), issued pursuant to such act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin.

PRE-CONSTRUCTION CONFERENCE AND WORK PLAN

In accordance with Section 108-3 of the Standard Specifications for Roads and Structures, a pre-construction conference will be required prior to beginning testing work at each airport. Immediately after being notified of testing required at an airport, the Engineer and Contractor will establish a mutually agreeable date, time, and location of the pre-construction conference. Attendance by the Contractor is mandatory and attendance by subcontractors is as required by the Engineer. In addition, the airport manager and all other affected parties should be in attendance.

The Contractor shall prepare and submit to the Engineer a proposed work plan no later than one (1) day prior to the pre-construction conference. The work plan should indicate the proposed chronological sequence of operations including duration of activities, and may be revised within the limits of the contract with the approval of the Engineer. This work plan will also be used to advise the Airport regarding the impact of the work being performed on its daily operations so that the Airport can communicate this information to its users and the public.

PROSECUTION AND PROGRESS

The Contractor shall pursue the work diligently with workmen in sufficient numbers, abilities, and supervision, and with equipment, materials, and methods of testing as may be required to complete the work, and in accordance with Section 108 of the Standard Specifications for Roads and Structures.

The Contractor's operations are restricted to pavement areas and times that are approved by the Engineer and Airport Manager. No work may be performed on Sundays and legal State holidays. Work shall only be performed when weather and visibility conditions allow safe operations.

The Contractor shall temporarily remove his equipment from the travel way for declared emergencies, emergency vehicles, traffic, or as directed by authorized airport personnel, or the Engineer.

PURCHASE ORDER CONTRACT PREQUALIFICATION

Any firm that wishes to perform work on Division of Aviation Purchase Order Contracts as either the prime contractor or as a subcontractor on the project must be prequalified with the NCDOT Contractual Services Unit. Firms that wish to bid on this Contract as the prime contractor must be prequalified as a “Professional Consultant”, with the consulting discipline 00431-Airport Construction Admin/Inspection, no later than two (2) weeks after the "date of availability" in order to be awarded the contract. Firms that wish to perform as a subcontractor to the prime contractor must be prequalified to at least “Subcontractor” with the appropriate NCDOT work codes prior to beginning work on a project.

Information regarding the requirements to become prequalified with the NCDOT Contractual Services Unit, including the application to become prequalified if you are not already prequalified, can be found at the following website:

http://www.ncdot.gov/business/

BRAND REFERENCE SPECIFICATIONS

Any listing of manufacturers or products stated within this contract is for guidance purposes only and not intended as an endorsement nor exclusion of any product meeting or exceeding the requirements listed. Cited examples are used only to denote the quality standard of products desired and do not restrict bidders to a specific brand, make, manufacturer or specific name; they are used only to set forth and convey to bidders the general style, type, character and quality of product desired; and equivalent products will be acceptable. Bidders who wish to substitute items of equal or equivalent design for a product not listed is to submit those items to the Engineer for approval or disapproval no later than seven days prior to the bid opening. The Engineer must approve or disapprove any substitute items submitted by bidders, and will notify the bidders of their approval or disapproval, before the bid opening.

AUTHORITY OF THE ENGINEER

The Engineer for this contract shall be the Airport Development Engineer, Division of Aviation, North Carolina Department of Transportation, acting directly or through his duly authorized representatives.

In accordance with Article 105-1 of the Standard Specifications for Roads and Structures, 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.

LABORATORY REQUIREMENTS

The Contractors testing laboratories shall meet the requirements of ASTM C 1077 that relate to the minimum technical requirements for laboratory equipment utilized in testing concrete and concrete aggregates for use in contraction or be accredited by NCDOT or AASHTO for concrete testing. The Contractors testing laboratory shall meet the requirements of ASTM D3666, and shall be accredited by a national authority such as the National Voluntary Laboratory Accreditation Program (NVLAP), the American Association for Laboratory Accreditation (AALA), or AASHTO Accreditation Program (AAP)."

CONTRACT ITEM ADJUSTMENTS

The Contractor shall note that the contract quantities are considered to be approximate only, and are given as the basis for comparison of bids. The Engineer reserves the right to increase or decrease contract item quantities, or completely delete contract items. Due to the variable parameters of maintenance projects, the requirements of Article 104-5 of the Standard Specifications for Roads and Structures, pertaining to revised contract prices for overruns and underruns will not apply to items in this contract. No minimum amount of work is guaranteed under this contract.

BIDS

In accordance with GS 136-28.1(b), if the total bid amount for the contract exceeds $1,200,000, the bid will not be considered for award.

PLAN & DETAIL ALTERATIONS

NCDOT reserves the right, at anytime during the progress of the work, to make alterations in the plans, details, or scope of the projects as may be found necessary or desirable by the Engineer to complete the project. Corresponding adjustments of a projects completion date as a result of alterations will be determined by the Engineer.

AVAILABILITY OF FUNDS – CONTRACT TERMINATION

Payments on this contract are subject to availability of funds as allocated by the General Assembly. If the General Assembly fails to allocate adequate funds, the Department reserves the right to terminate this contract.

In the event of termination, the Contractor shall be given a written notice of termination at least sixty (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.

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 be in accordance to Article of 108-6 of the Standard Specifications for Roads and Structures.

CONTRACT PAYMENT AND PERFORMANCE BOND

No Payment or Performance Bond will be required for this contract

BANKRUPTCY

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

COOPERATION BETWEEN CONTRACTORS

The Contractors attention is directed to Article 105-7 of the Standard Specifications for Roads and Structures, as the Department reserves the right at any time to contract for and perform other or additional work on or near the work covered by the contract.

It is common for multiple contractors to be working on unique and different projects within or adjacent to the limits of the airport. The Contractor shall conduct his work so as not to interfere with or hinder in any way the progress of completion of the work being performed by other contractors, and shall work in cooperation with and to the best advantage of all who are concerned.

The Department will under no circumstances be liable for any claim for additional compensation due to acts of one Contractor holding up the work of another.

The Department will under no circumstances be liable for any damages experienced by one Contractor as a result of the presence and operations of other contractors working within or adjacent to the limits of the airport.

LIABILITY INSURANCE

The Contractor is directed to Article 107-15 of the Standard Specifications for Roads and Structures.

TEMPORARY SUSPENSION OF WORK

In accordance with Article 108-7 of the Standard Specifications for Roads and Structures, 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.

Conditions considered unfavorable for the suitable prosecution of the work, or

the Contractor's failure to correct conditions unsafe for workmen or the general public, or

the Contractor has not carried out orders given to him by the Engineer, or

the Contractor's failure to perform any provisions of the contract.

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

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 to Article 108-9 of the Standard Specifications for Roads and Structures.

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.

The Contractor shall not perform work without the presence of the Engineer or his authorized representative(s), unless previously approved by the Engineer. Any work done without the presence of the Engineer is subject to nonpayment, unless approved by the same.

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 twenty-four (24) hours notice. Such an 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; shall have a copy of this complete contract and any other applicable contracts with them and be capable of reading and thoroughly understanding the contract/contracts; 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.

PAYMENT AND RETAINAGE

Payment requests shall be made by Contractor's Invoice to the Engineer after project completion and final inspection. All invoice items and unit costs shall correspond to contract items. In the event of error or discrepancy in items or unit costs, the Department may return the invoice to the contractor for correction. The invoice shall be completely and legibly filled out with all appropriate information and shall be signed by an authorized representative of the Contractor. Compensation for all contract items shall be in accordance with Article 109 of the Standard Specifications for Roads and Structures.

Partial Payment requests may be submitted by the Contractor on a monthly basis, or other interval as approved by the Engineer. The amount of partial payments will be based on the work accomplished and accepted.

Electronic Requests (preferred method) for payment shall be made by signed and certified pdf invoice submitted to:

Philip Lanier
planier@ncdot.gov

Hardcopy Requests for payment shall be made by a signed Contractor's invoice and submitted to:

NCDOT – Division of Aviation
Attn: Philip Lanier
1560 Mail Service Center
Raleigh, NC 27699-1560

Telephone: (919) 840-0112
Fax: (919) 840-9267

Minority Business Enterprise (MBE) and Women Business Enterprise (WBE) participation shall be listed in the appropriate spaces on all requests for payment. If there is no participation the word "None" or the figure "0" shall be entered.

Due to the nature of the contract, no retainage will be withheld. However, the Department reserves the right to withhold payment for a specific project until after successful completion of all work as verified by the final inspection of that project. One hundred percent (100%) payment shall be made after successful completion of the project as verified by final inspection.

CLAIMS FOR ADDITIONAL COMPENSATION OR EXTENSION OF TIME

Any claims for additional compensation and/or extensions of the project completion date shall be submitted to the Engineer with detailed justification within seven (7) days after project completion, and prior to project final inspection. The failure of the Contractor to submit the claim(s) within thirty (30) days shall be a bar to recovery.

PROMPT PAYMENT OF SUBCONTRACTORS AND SUPPLIERS

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.

WASTE MATERIAL DISPOSAL

All waste material shall be removed from the project site prior to one hundred percent (100%) project completion. All waste disposal shall be in accordance with Federal, State, and local regulations regarding the disposal of waste material(s). All permits and fees for any such disposal shall be the responsibility of the Contractor, and the Department shall not be held liable for any such disposal of material(s). No separate payment will be made for waste material disposal.

GIFTS FROM VENDORS AND CONTRACTORS

(12-15-09) SP1 G152

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, offeror, 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.

OUTSOURCING OUTSIDE THE USA

(9-21-04) (5-16-06) SP1 G150

All work on consultant contracts, services contracts, and construction contracts shall be performed in the United States of America. No work shall be outsourced outside of the United States of America. *Outsourcing* for the purpose of this provision is defined as the practice of subcontracting labor, work, services, staffing, or personnel to entities located outside of the United States. The North Carolina Secretary of Transportation shall approve exceptions to this provision in writing.

EROSION, SILTATION, AND POLLUTION CONTROL

The Contractor shall exercise every reasonable precaution and take all necessary measures throughout the life of the project to prevent erosion, siltation, and pollution in accordance with Section 107-12 of the Standard Specifications. Silt fence and erosion control measures shall be installed in accordance with Section 1605 of the Standard Specifications and in locations directed by the Engineer or his representative.

(3-18-03) PLANT AND PEST QUARANTINES

(Imported Fire Ant, Gypsy Moth, Witchweed, And Other Noxious Weeds)

Within quarantined area

This project may be within a county regulated for plant and/or pests. If the project or any part of the Contractor's operations is located within a quarantined area, thoroughly clean all equipment prior to moving out of the quarantined area. Comply with federal/state regulations by obtaining a certificate or limited permit for any regulated article moving from the quarantined area.

Originating in a quarantined county

Obtain a certificate or limited permit issued by the N.C. Department of Agriculture/United States Department of Agriculture. Have the certificate or limited permit accompany the article when it arrives at the project site.

Contact

Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-733-6932, or *http://www.ncagr.com/plantind/* to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include

1. Soil, sand, gravel, compost, peat, humus, muck, and decomposed manure, separately or with other articles. This includes movement of articles listed above that may be associated with cut/waste, ditch pulling, and shoulder cutting.
2. Plants with roots including grass sod.
3. Plant crowns and roots.
4. Bulbs, corms, rhizomes, and tubers of ornamental plants.
5. Hay, straw, fodder, and plant litter of any kind.
6. Clearing and grubbing debris.
7. Used agricultural cultivating and harvesting equipment.
8. Used earth-moving equipment.
9. Any other products, articles, or means of conveyance, of any character, if determined by an inspector to present a hazard of spreading imported fire ant, gypsy moth, witchweed or other noxious weeds.

WORK ZONE SAFETY AND TRAFFIC CONTROL

In accordance with Article 107-21 of the Standard Specifications for Roads and Structures, 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 MUTCD at all times while on the project.

The Contractor shall maintain aviation and vehicular traffic to the extent directed by the Engineer during construction and provide, install, and maintain all traffic control devices in accordance with these *project guidelines,* the Project Special Provisions, the North Carolina Department of Transportation Standard Specifications for Roads and Structures 2006, the current edition of the Manual of Uniform Traffic Control Devices (MUTCD), and the current edition of FAA AC 150/5370-2E *Operational Safety on Airports During Construction* (1/17/03).

SAFETY PLAN REQUIREMENTS

Airport Air Operations Areas will be closed to air traffic on an intermittent basis to facilitate operations during this project. However, no areas will be closed unless both the Airport Manager and the Engineer approve.

The Contractor shall not begin work within any Air Operations Area unless and until three (3) days prior notice has been given to the Engineer and the Airport Manager. Additionally, Contractor shall not enter the Air Operations Area (AOA) or begin any work at any airport unless they have ensured the proper NOTAM's, issued by the Manager of the airport, have been properly issued by calling 1-800-WX-BRIEF, or any other FAA approved source. Contractor shall ensure the properly issued NOTAM's are effective throughout the project.

The Contractor shall utilize complete and proper traffic controls and traffic control devices during all operations. All traffic control and traffic control devices required for any operation shall be functional and in place prior to the commencement of that operation. (See enclosed details) Signs for temporary operations shall be removed during periods of inactivity. The Contractor is required to leave the project in a manner that will be safe to aviation, pedestrian and vehicular traffic.

When a runway has to be closed for work on this contract, the Contractor shall furnish and place crosses at each end of the runway prior to commencing any work to the pavement. Crosses shall be in accordance with the details as shown in these plans and in accordance with FAA AC 150/5340-1K (9/3/2010), or current version. Crosses shall remain in good condition until completion of the project. On airports having multiple runways where air traffic will be maintained, the Contractor will be required to furnish, erect, and maintain barricades and/or warning signs necessary to protect the public and the work as deemed necessary by the Engineer and Airport Management. On multiple runway airports one runway must remain open at all times except for time when work is required at intersection of the two runways.

The Contractor shall maintain two-way radio communications with the airport for increased safety at all times.

All equipment, tools, machinery, incidentals, implements, and other devices used in the execution of this contract shall be safe and in good working condition at all times, and shall only be operated by highly skilled and properly trained personnel.

The Contractor shall coordinate ingress-egress requirements with the Airport Manager. The Contractor shall be responsible for securing all gates at the end of each day's operations.

The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to the FAA Advisory Circular 150/5370-2E, "Operational Safety on Airports During Construction." (Copies of the Advisory Circular are available upon request and can be viewed online at http://www.faa.gov/

Equipment and materials shall not be left on or within 200-feet of the runway edges or 50-feet of the taxiway edges after work operations are ceased each day.

The Contractor shall keep all active airfield pavements clear of debris, stones, etc., during construction. These areas shall be cleaned of construction debris and spillage immediately. The Contractor shall visually inspect active airfield pavement after each crossing by vehicles during hauling operations.

The Contractor shall clean all construction areas of litter, loose papers, debris, etc., on a daily basis, or as directed by the Engineer or Airport Manager. All spillage in active Air Operation Areas shall be cleaned up immediately**.** The Contractor will be required to have a power broom available on site whenever crack routing or other maintenance activities generate appreciable foreign object debris (FOD). Other methods of cleaning may be used if approved by the Engineer.

Men, equipment or other construction-related material will be permitted in the approach or departure zones of active runway, provided that the construction activity is conducted below the 20:1 approach plane of reference originating 200-feet from the threshold end of the runway. Any construction activity that is in the approach zones, which will violate these planes of reference, will require special consideration and specific approval. (See enclosed detail)

Open trenches, excavation, drop-offs, and stockpiled material will not be permitted within 200-feet of active runway edges or within 50-feet of active taxiway edges, unless approved by the Engineer. Coverings for open trenches must be of such strength to support critical vehicles as determined by the Engineer or the Airport Manager.

The Contractor shall furnish flaggers as required by the operation being conducted and as directed by the Engineer. In situations where sight distance is limited, or where greater distances are involved, the Contractor shall provide additional means of controlling traffic, including, but not limited to, two-way radios, pilot vehicles, or additional flaggers.

At all times, all personnel shall wear an approved safety vest, or shirt or jacket which meets the color requirements of the Manual of Uniform Traffic Control Devices (MUTCD).

The Contractor shall provide for the free and unobstructed movement of aircraft on areas of the airport not affected by the project. The Contractor shall at all times conduct his operations as to create no hindrance, hazard, or obstacle to aircraft using the airport and must, at all times, conduct the work in accordance with requirements of the Engineer and Airport Management.

Failure to comply with any of the requirements for safety and traffic control of this contract shall result in suspension of work as provided in subarticle 108-7(2) of the Standard Specifications.

All costs incurred in complying with the above requirements shall be considered work under this contract and no additional payment therefore shall be made.

STATE APPROVED HOLIDAYS

The following is a listing of legal State holidays during the Term of this Contract:

New Years
MLK, Jr. Birthday
Good Friday
Memorial Day
Independence Day
Labor Day
Veteran's Day
Thanksgiving
Christmas

NIGHT OPERATIONS

This contract is intended for daylight operations only, however the Contractor may, with the approval of the Engineer and Airport, conduct his operations during night hours. Any additional compensation the Contractor requests for conducting night operations at the request of the Airport, shall be funded by the Airport with 100% local funds, unless determined otherwise. For the purposes of this contract, night hours shall be defined as the period between dusk and dawn when natural light, as determined by the Engineer or his representative, is insufficient to safely and effectively perform contract operations.

If the Contractor elects to perform any phase of this contract during night hours, he shall submit, in writing, to the Engineer, a full and complete plan for traffic control and construction lighting which shall be approved prior to beginning construction.

All traffic control devices shall meet the requirements for night use as set forth in the Standard Specifications and the current edition of FAA AC 150/5370-2E *Operational Safety on Airports During Construction* (1/17/03).

TAXIWAYS AND PRIVATE PROPERTY

The Contractor shall maintain access to taxiways for all residents, businesses, and property owners throughout the life of the project.

The Contractor shall not perform work for private citizens or agencies in conjunction with this project or within the project limits of this contract.

USE OF TAXIWAYS FOR TAKEOFF AND LANDING OPERATIONS

The use of taxiways for takeoff and landing operations while work is being conducted under this contract is strongly discouraged due to the inherent safety risks associated with such operations to both the aircraft occupants and personnel on the ground.

PAVEMENT DAMAGE

It will be the responsibility of the Contractor to ensure that no damage is done to the existing pavement structure due to the Contractor's equipment. It shall be the responsibility of the Contractor to repair or replace any damaged pavement back to a satisfactory condition as determined by the Engineer. Airport pavement strengths are available and reported in maximum allowable aircraft single wheel (SW) loading. Single wheel loading strength is the standard reporting value required by FAA.

MINORITY AND WOMEN BUSINESS

(10-16-07) (12-21-10) SP1G68

Policy

It is the policy of the North Carolina Department of Transportation that Minority Business Enterprises (MBEs) and Women Business Enterprises (WBEs) as defined in *GS 136-28.4* shall have the equal opportunity to compete fairly for and to participate in the performance of contracts financed in whole or in part by State Funds.

Obligation

The Contractor, subcontractor, and sub-recipient shall not discriminate on the basis of race, religion, color, creed, national origin, sex, handicapping condition or age in the performance of this contract. The Contractor shall comply with applicable requirements of *GS 136-28.4* in the award and administration of state funded contracts. Failure by the Contractor to comply with these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy, as the Department deems necessary.

Definitions

Commitment - The approved MBE/WBE participation submitted by the prime contractor during the bidding process.

Committed MBE/WBE - Any MBE/WBE listed on the MBE/WBE commitment list approved by the Department at the time of bid submission or any MBE/WBE utilized as a replacement for a MBE/WBE firm listed on the commitment list.

Department (DOT)- North Carolina Department of Transportation (See Municipality)

Municipality – The entity letting the contract, when this provision refers to the Department or DOT, it shall mean the municipality, if applicable.

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

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

MBE/WBE – This term is used for convenience only. Minority Business Enterprise and Women Business Enterprise are not interchangeable terms and the goals for either or both are not interchangeable.

Goal - The MBE/WBE participation specified herein

Letter of Intent – Written documentation of the bidder/offeror's commitment to use a MBE/WBE subcontractor and confirmation from the MBE/WBE that it is participating in the contract.

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

Regular Dealer - A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. A regular dealer engages in, as its principal business and in its own name, the purchase and sale or lease of the products in question. A regular dealer in such bulk items as steel, cement, gravel, stone, and petroleum products need not keep such products in stock, if it owns or operates distribution equipment. Brokers and packagers are not regarded as manufacturers or regular dealers within the meaning of this section.

Form RS-1-D - Form for subcontracts involving MBE/WBE subcontractors attesting to the agreed upon unit prices and extensions for the affected contract items.

North Carolina Unified Certification Program - A program that provides comprehensive information to applicants for certification, such that an applicant is required to apply only once for a MBE/WBE certification that will be honored by all recipients of USDOT funds in the state and not limited to the Department of Transportation only. The Certification Program is in accordance with *49 CFR Part 26*.

Standard Specifications – The general term comprising all directions, provisions, and requirements contained or referred to in the *North Carolina Department of Transportation Standard Specifications for Roads and Structures* and any subsequent revisions or additions to such book that are issued under the title *Supplemental Specifications*.

Contract Goal

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

(A) Minority Business Enterprises **(0)** %

(1) *If the goal is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that Minority Business Enterprises participate in at least the percent of the contract as set forth above as the goal.

(2) *If the goal is zero*, the Contractor shall continue to recruit the MBEs and report the use of MBEs during the construction of the project. A good faith effort will not be required with a zero goal.

(B) Women Business Enterprises (**0)** %

(1) *If the goal is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that Women Business Enterprises participate in at least the percent of the contract as set forth above as the goal.

(2) *If the goal is zero*, the Contractor shall continue to recruit the WBEs and report the use of WBEs during the construction of the project. A good faith effort will not be required with a zero goal.

Contract Requirement

The approved MBE/WBE participation submitted by the Contractor shall be the **Contract Requirement.**

Certified Transportation Firms Directory

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

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

Listing of MBE/WBE Subcontractors in Contract

Only those MBE/WBE firms with current certification are acceptable for listing in the bidder's submittal of MBE/WBE participation. The Contractor shall indicate the following required information:

(A) *If the goal is more than zero* bidders, at the time the bid proposal is submitted, shall submit a listing of MBE/WBE participation on the appropriate form (or facsimile thereof) 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/WBE participation for the contract. If the bidder has no MBE/WBE participation, he shall indicate this on the form "Listing of MBE/WBE Subcontractors" by entering the word or number zero. This form shall be completed in its entirety. **Blank forms will not be deemed to represent zero participation**. Bids submitted that do not have WBE/MBE 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 returned to the bidder.

(B) *If the goal is zero,* bidders at the time the bid proposal is submitted, shall enter the word "zero" or number "0" or if there is participation, add the value on the "Listing of MBE/WBE Subcontractors" (or facsimile thereof) contained elsewhere in the contract documents.

Written Documentation – Letter of Intent

The bidder shall submit written documentation of the bidder/offeror's commitment to use MBE/WBE subcontractors whose participation it submits to meet a contract goal and written confirmation from each MBE/WBE, listed in the proposal, indicating their participation in the contract. This documentation shall be submitted on the Department's form titled "Letter of Intent to Perform as Subcontractor". This letter of intent form is available at: http://www.ncdot.org/doh/preconstruct/ps/contracts/letterofintent.pdf. It shall be received in the office of the (Officer/Engineer) no later than (Time of Day) of the (No. of Days) calendar day following opening of bids.

If the bidder fails to submit the letter of intent from each committed MBE/WBE listed in the proposal indicating their participation in the contract, the MBE/WBE participation will not count toward meeting the goal.

Counting MBE/WBE Participation Toward Meeting MBE/WBE Goal of Zero or More

(A) If a firm is determined to be an eligible MBE/WBE firm, the total dollar value of the participation by the MBE/WBE will be counted toward the contract requirement. The total dollar value of participation by a certified 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) When a MBE/WBE performs as a participant in a joint venture, the Contractor may count toward its MBE/WBE goal a portion of the total value of participation with the MBE/WBE in the joint venture, that portion of the total dollar value being a distinct clearly defined portion of work that the MBE/WBE performs with its forces.

(C) (1) The Contractor may count toward its MBE/WBE goal only expenditures to MBE/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 (Insert Municipality Name and delete Department, if applicable) 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 other relevant factors.

(2) A MBE/WBE may enter into subcontracts. Work that a MBE/WBE subcontracts to another MBE/WBE firm may be counted toward the contract goal. Work that a MBE/WBE subcontracts to a non-MBE/WBE firm does not count toward the contract goal. If a MBE/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, the MBE/WBE shall be presumed not to be performing a commercially useful function. The MBE/WBE may present evidence to rebut this presumption to the Department (Insert Municipality Name and delete Department, if applicable) for commercially useful functions. The Department's (Insert Municipality Name and delete Department, if applicable) decision on the rebuttal of this presumption will be final.

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

(a) 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 MBE/WBE goals.

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

(c) 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.

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

(e) The MBE/WBE may also lease trucks from a non-MBE/WBE firm, including from an owner-operator. The MBE/WBE who leases trucks from a non-MBE/WBE is entitled to credit for the total value of transportation services provided by non-MBE/WBE lessees not to exceed the value of transportation services provided by MBE/WBE-owned trucks on the contract. Additional participation by non-MBE/WBE lessees receives credit only for the fee or commission it receives as a result of the lease arrangement. The value of services performed under lease agreements between the MBE/WBE and Contractor will not count towards the contract requirement.

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

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

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

Good Faith Effort for Projects with Goals more than Zero

If the MBE/WBE participation submitted in the bid by the apparent lowest responsive bidder does not meet or exceed the MBE/WBE contract goals, the apparent lowest responsive bidder shall submit to the (Officer/Engineer) documentation of its good faith efforts made to reach each contract goal. One complete set and 9 copies of this information shall be received in the office of the (Officer/Engineer) no later than (Time of Day) of the (No. of Days) calendar day following opening of bids. 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 as necessary to demonstrate compliance with the factors listed below which the Department (Insert Municipality Name and delete Department, if applicable) considers in judging good faith efforts. This documentation may include written subcontractor quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

The following factors will be used to determine if the bidder has made adequate good faith effort:

(A Whether the bidder attended any pre-bid meetings that were scheduled by the Department (Insert Municipality Name and delete Department, if applicable) to inform MBE/WBEs of subcontracting opportunities.

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

(C) Whether the bidder followed up initial solicitations of interests by contacting MBE/WBEs to determine with certainty whether they were interested. If a

reasonable amount of MBE/WBEs within the targeted Divisions do not provide an intent to quote or no MBE/WBEs specialize in the subcontracted areas, the bidder shall notify MBE/WBEs outside of the targeted Divisions that specialize in the subcontracted areas, and call the Director of Business and Opportunity Workforce Development (Insert Municipality Name and delete Department title, if applicable) to give notification of the bidder's inability to get MBE/WBE quotes.

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

(E) Whether the bidder provided interested MBE/WBEs with adequate and timely information about the plans, specifications and requirements of the contract.

(F) Whether the bidder negotiated in good faith with interested MBE/WBEs without rejecting them as unqualified without sound reasons based on a thorough investigation of their capabilities. Any rejection should be noted in writing with a description as to why an agreement could not be reached.

(G) Whether quotations were received from interested MBE/WBE firms but rejected as unacceptable without sound reasons why the quotations were considered unacceptable.

(H) Whether the bidder specifically negotiated 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.

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

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

If a bidder is the apparent lowest responsive bidder on more than one project within the same letting located in the same geographic area of the state, as a part of the good faith effort the Department (Insert Municipality Name and delete Department, if applicable) will consider allowing the bidder to combine the MBE participation as long as the MBE overall goal value of the combined projects is achieved.

If a bidder is the apparent lowest responsive bidder on more than one project within the same letting located in the same geographic area of the state, as a part of the good faith effort the Department (Insert Municipality Name and delete Department, if applicable) will consider

allowing the bidder to combine the WBE participation as long as the WBE overall goal value of the combined projects is achieved.

If the Department (Insert Municipality Name and delete Department, if applicable) does not award the contract to the apparent lowest responsive bidder, the Department (Insert Municipality Name and delete Department, if applicable) reserves the right to award the contract to the next lowest responsive bidder that can satisfy the Department (Insert Municipality Name and delete Department, if applicable) that the contract goal can be met or that adequate good faith efforts have been made to meet the goal.

MBE/WBE Replacement

The Contractor shall not terminate a committed MBE/WBE subcontractor for convenience or perform the work with its own forces or those of an affiliate. If the Contractor fails to demonstrate reasonable efforts to replace a committed MBE/WBE firm that does not perform as intended with another committed MBE/WBE firm or completes the work with its own forces without the Engineer (Insert Title and delete Engineer, if applicable)'s approval, 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 committed MBE/WBE.

(A) Performance Related Replacement

When a MBE/WBE is terminated or fails to complete its work on the contract for any reason, the Contractor shall take all necessary, reasonable steps to replace the MBE/WBE subcontractor with another MBE/WBE subcontractor to perform at least the same amount of work as the MBE/WBE that was terminated. The Contractor is encouraged to first attempt to find another MBE/WBE firm to do the same work as the MBE/WBE that was being terminated.

To demonstrate necessary, reasonable good faith efforts, the Contractor shall document the steps they have taken to replace any MBE/WBE subcontractor who is unable to perform successfully with another MBE/WBE subcontractor. Such documentation shall include but not be limited to the following:

(1) Copies of written notification to MBE/WBEs that their interest is solicited in subcontracting the work defaulted by the previous MBE/WBE subcontractor or in subcontracting other items of work in the contract.

(2) Efforts to negotiate with MBE/WBEs for specific subbids including, at a minimum:

(a) The names, addresses, and telephone numbers of MBE/WBEs who were contacted.

(b) A description of the information provided to MBE/WBEs regarding the plans and specifications for portions of the work to be performed.

(3) For each MBE/WBE contacted but rejected as unqualified, the reasons for the Contractor's conclusion.

(4) Efforts made to assist the MBE/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 (Insert Municipality Name and delete Department, if applicable) after a Request for Subcontract has been received by the Department (Insert Municipality Name and delete Department, if applicable), the Department (Insert Municipality Name and delete Department, if applicable) will not require the Prime 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 requirement.

(2) When a committed MBE/WBE is decertified prior to the Department (Insert Municipality Name and delete Department, if applicable) receiving a Request for Subcontract for the named MBE/WBE firm, the Prime Contractor shall take all necessary and reasonable steps to replace the MBE/WBE subcontractor with another MBE/WBE subcontractor to perform at least the same amount of work to meet the contract goal or demonstrate that it has made a good faith effort to do so.

Changes in the Work

When the Engineer makes changes that result in the reduction or elimination of work to be performed by a committed 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 MBE/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 work had been expected to be performed by a committed MBE/WBE, the Contractor shall seek participation by MBE/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 MBE/WBEs equal to the reduced MBE/WBE participation caused by the changes.

Reports

All requests for subcontracts involving MBE/WBE subcontractors shall be accompanied by a certification executed by both the Prime Contractor and the MBE/WBE subcontractor attesting to the agreed upon unit prices and extensions for the affected contract items. This information shall be submitted on the Department Form RS-1-D, located at: http://www.ncdot.org/doh/forms/files/FORMRS-1-D.doc unless otherwise approved by the Engineer (Insert Municipality Name and delete Engineer, if applicable). The Department (Insert Municipality Name and delete Department, if applicable) reserves the right to require copies of actual subcontract agreements involving MBE/WBE subcontractors.

Within 30 (Enter No. of Days) calendar days of entering an agreement with a MBE/WBE for materials, supplies or services, not otherwise documented by a Request for Subcontract as specified above, the Contractor shall furnish the Engineer a copy of the agreement. The documentation should also indicate the percentage (60% or 100%) of expenditures claimed for MBE/WBE credit.

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

Commitment

MBE/WBE firms submitted with the Letter of Intent to participate in the work shall be used unless otherwise approved by the Department. Provisions for replacement of MBE/WBE firms are included in this provision.

Reporting MBE/WBE Participation

(A) The Contractor shall provide the Engineer with an accounting of payments made to MBE/WBE firms, including material suppliers, contractors at all levels (prime, subcontractor, or second tier subcontractor). This accounting shall be furnished to the Engineer for any given month by the end of the following month. Failure to submit this information accordingly may result in the following action:

(1) Withholding of money due in the next partial pay estimate; or

(2) Removal of an approved contractor from the prequalified bidders list or the removal of other entities from the approved subcontractors list. (Municipality may add to, change or delete this section.)

(B) The Contractor shall report the accounting of payments on the Department's MBE/WBE Subcontractor Payment Information Form DBE-IS, which is available at http://www.ncdot.org/doh/forms/files/DBE-IS.xls. This shall be reported to the (Officer/Engineer).

(C) 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.

Prior to payment of the final estimate, the Contractor shall furnish an accounting of total payment to each MBE/WBE. A responsible fiscal officer of the payee contractor, subcontractor, or second tier subcontractor who can attest to the date and amounts of the payments shall certify that the accounting is correct.

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

Because NCDOT funding is being used to fund this project, 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 on any NCDOT funded projects until the required information is submitted.

Because NCDOT funding is being used to fund this project, 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 further working on any State or Federally funded projects until the required information is submitted.

Failure to Meet Contract Requirements

Failure to meet contract requirements in accordance with Article 102-16(J) of the *Standard Specifications* may be cause to disqualify the Contractor.

Project Special Provisions

MOBILIZATION

DESCRIPTION:

This item consists of preparatory work and operations, including but not limited to the movement of personnel, equipment, supplies, and incidentals to each airport project site and to perform the required work and the removal and disbandment of those personnel, equipment, supplies, or incidentals that are used for the prosecution of the work.

COMPENSATION:

All work covered by this section will be paid for at the contract price for "Mobilization for …..." The Contractor will be eligible to receive the contract price for each type of Mobilization once per each airport where applicable work is performed under this contract, after acceptance of the work by the Engineer.

BASIS OF PAYMENT:

Payment for "Mobilization for……" will be per each airport and will be made available after satisfactory completion of the required work under this contract at each airport.

Payment will be made under:

"Mobilization for Pavement Friction Testing……..… Ea."

"Mobilization for Retroreflectivity Testing…… Ea."

"Mobilization for Airfield Marking Testing……..……..... Ea."

"Mobilization for Pavement Smoothness Testing ……..……..…. Ea."

"Mobilization for FWD Testing….....…….…….…..... Ea."

"Mobilization for Photometric Testing……...……... Ea."

"Mobilization for Rejuvenation Testing……..……... Ea."

"Mobilization for Macro-Texture Testing……..……... Ea."

PAVEMENT FRICTION TESTING

DESCRIPTION

This item shall consist of conducting friction evaluations with Continuous Friction Measuring Equipment (CFME) of pavement areas as required by the Engineer and providing the tests results in the form of a report to the Engineer. Friction testing should meet the guidelines as set forth in FAA AC 150/5320-12C, *Measurement, Construction, and Maintenance of Skid-Resistant Airport Pavement Surfaces,* including revisions and changes.

EQUIPMENT

The equipment used for performing the friction testing must be included within the list of FAA qualified Product List as contained in the most current version and change of FAA AC 150/5320-12C.

All equipment shall be checked for calibration within tolerances given by the manufacturer and available to be provided to the Engineer upon request.

WEATHER LIMITATIONS

Except as approved by the Engineer, do not perform work when the atmospheric temperature is below 40°F or when the pavement is covered with snow or ice.

TESTING METHODS

Testing methods should follow the general guidelines for testing as provided in FAA AC 150/5320-12C, Section 3, Conducting Friction Evaluations with CFME. Testing shall be conducted at both 40 mph and 60 mph. The areas to be tested on an airport will be identified and provided to the Contractor by the Engineer. Friction testing on runways should be conducted left and right of the centerline in the typical path of aircraft usage. Contractor will be required to test for both narrow and wide body aircraft at each airport.

DELIVERABLES

A maximum of seven days after an airport has been tested, a basic electronic report containing all the information listed below shall be provided to the Engineer.

- Pertinent background information; i.e. Contractor, date tested, airport tested, airport personnel notified, site conditions, operator qualifications, etc.
- Equipment used and calibration information
- Test procedures and standards used
- Test Results (shall include comparisons with the applicable Friction Level Classification for Runway Pavement Surfaces values as presented in Table 3-2, FAA AC 150/5320-12C latest revision)
- Photography with descriptions showing equipment, airport, and tests being conducted
- Supporting Charts, Summaries, Recommendations, Tables, and Maps

All testing results should be included in a singular electronic report. Reports shall be provided in a combined PDF format, or other approved format, properly oriented and organized such that it may be easily printed to hard copy. As each testing project may present unique challenges, the content and information presented in each report shall be provided as directed by the Engineer.

METHOD OF MEASUREMENT

A completed Pavement Friction Test is one in which the Contractor has performed testing of the identified pavement areas on one runway or equivalent area, in both directions, at both 40 mph and 60 mph, and has generated data from a calibrated and qualified CFME, and provided the Engineer with a electronic copy of the report for that airport.

BASIS OF PAYMENT

For pavement friction testing, payment shall be made at the contract unit price per completed Pavement Friction Test. When pavement friction testing is required on multiple runways or equivalent areas at an airport, each Pavement Friction Test will be paid for separately at the contract unit price. This contract price shall be full compensation for all work and for furnishing all material, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

"Pavement Friction Testing ……...each"

RETROREFLECTIVITY TESTING

DESCRIPTION

This item shall consist of measuring the retroreflectivity of pavement markings on various airport surfaces using a mobile retroreflectometer, in accordance with these specifications and at locations shown on the plans, or as directed by the Engineer. Data collected will be used to assist the Department in determining existing pavement marking retroreflectivity, and will be used in the Quality Control/Quality Assurance of new pavement marking application.

CONTRACTOR PRE-QUALIFICATION REQUIREMENTS

The Contractor must demonstrate sufficient data collection equipment, resources, and expertise with the equipment to meet the project schedule and scope of services. Contractor shall have a minimum of three (3) years of mobile retroreflectivity data collection experience.

Contractor must demonstrate full comprehension of the recommended guidelines, standards, and specifications within the NCDOT Division of Aviation Airfield Maintenance Contracts, FAA AC 150/5340-1K (or newer adopted version), FAA AC 150/5370-10E Item P-620 (or newer adopted version), and Airfield Marking Handbook Report IPRF 01-G-002-051.

EQUIPMENT

Contractor shall measure retroreflectivity using a Department approved GPS enabled 30m mobile retroreflectometer with a traceable, repeatable calibration source to collect data as described in other sections of this specification. Use a Department approved handheld retroreflectometer as part of the calibration procedure of the mobile retroreflectometer as needed. The approved retroreflectometers shall be capable of measuring and reporting pavement marking retroreflectivity in units of millicandelas per meter squared per lux (mcd/m²/lux).

All equipment shall be checked for calibration within tolerances given by the manufacturer and available to the Engineer upon request. It will be the responsibility of the Contractor to maintain and service the mobile and handheld retroreflectometer.

The Contractor will have a written training and procedure manual for all operators and staff. Contractor will provide documentation to the Department that all Contractor personnel have completed the training program.

WEATHER LIMITATIONS

Except as approved by the Engineer, do not perform work when the pavement is covered with snow or ice.

TESTING METHODS

The areas to be tested on an airport will be identified and provided to the Contractor by the Engineer. The Contractor shall be capable of taking readings on dry pavement and on pavement pre-wetted for the purpose of taking readings on wet pavement with a mobile retroreflectometer. When required, wet retroreflectivity readings will be taken in accordance with ASTM Standards or as directed by the Engineer.

DELIVERABLES

A maximum of seven days after an airport has been tested, a basic electronic report containing all the information listed below shall be provided to the Engineer.

- Pertinent background information; i.e. Contractor, date tested, airport tested, airport personnel notified, site conditions, operator qualifications, etc.
- Equipment used and calibration information
- Test procedures and standards used
- Test Results (indicated in mcd/m²/lux)
- Photography with descriptions showing equipment, airport, markings, and tests being conducted
- Supporting Charts, Summaries, Recommendations, Tables, and Maps

All testing results should be included in a singular electronic report. Reports shall be provided in a combined PDF format, or other approved format, properly oriented and organized such that it may be easily printed to hard copy. As each testing project may present unique challenges, the content and information presented in each report shall be provided as directed by the Engineer.

METHOD OF MEASUREMENT

The quantity of retroreflectivity testing to be paid for shall be the number of square feet of markings properly tested at an airport in accordance with the specifications and accepted by the Engineer.

The following are representative quantities of runway markings at typically sized airports. This is provided here simply as a means of relative scale:

- Length 3000 ft , Width 75 ft , Average Total Markings 40,000 ft²
- Length 4000 ft , Width 75 ft , Average Total Markings 45,000 ft²
- Length 5500 ft , Width 100 ft , Average Total Markings 75,000 ft²
- Length 7000 ft , Width 150 ft , Average Total Markings 110,000 ft²
- Length 8000 ft , Width 150 ft , Average Total Markings 120,000 ft²

BASIS OF PAYMENT

Payment for retroreflectivity testing shall be made at the contract items bid price per square feet of pavement markings tested. These prices shall be full compensation for furnishing all materials and for all labor, equipment, tools, deliverables, and incidentals necessary to complete this contract item.

Payment will be made under:

"Dry Mobile Retroreflectivity Testing,…….…….…….....….Square Feet"
"Wet Mobile Retroreflectivity Testing …….…….Square Feet"

AIRFIELD MARKING TESTING

DESCRIPTION

This item shall consist of conducting various tests on pavement markings to ensure airfield markings last longer and provide excellent performance as outlined in IPRF Report 01-G-002-05. This testing work involves various site specific analyses, inspections, investigations, training, research and development, and will concern such items as materials, surface preparation, marking removal, application procedures, etc. All work shall be closely coordinated and directed by the Engineer.

CONTRACTOR PRE-QUALIFICATION REQUIREMENTS

The Contractor must demonstrate sufficient equipment, resources, and expertise to meet the project schedule and scope of services. Contractor shall have a minimum of ten (10) years of airfield marking related experience.

Contractor must demonstrate full comprehension of the recommended guidelines, standards, and specifications within the NCDOT Division of Aviation Airfield Maintenance Contracts, FAA AC 150/5340-1K (or newer adopted version), FAA AC 150/5370-10E Item P-620 (or newer adopted version), and Airfield Marking Handbook Report IPRF 01-G-002-05.

DELIVERABLES

A maximum of seven days after an airport has been tested, a basic electronic report containing all the information listed below shall be provided to the Engineer.

- Pertinent background information; i.e. Contractor, date tested, airport tested, airport personnel notified, site conditions, operator qualifications, etc.
- Equipment used and calibration information
- Audit and Testing procedures and standards used
- Results
- Photography with descriptions showing equipment, airport, and tests being conducted
- Supporting Charts, Summaries, Recommendations, Tables, and Maps

All testing results should be included in a singular electronic report. Reports shall be provided in a combined PDF format, or other approved format, properly oriented and organized such that it may be easily printed to hard copy. As each testing project may present unique challenges, the content and information presented in each report shall be provided as directed by the Engineer.

METHOD OF MEASUREMENT

The quantity for airfield marking testing to be paid for shall be the number of calendar days an airport has successfully been tested. Working a minimum of eight (8) hours per calendar day shall be considered a successful day. Unless otherwise approved, all testing shall be conducted in the presence of the Engineer.

BASIS OF PAYMENT

For airfield marking testing, payment shall be made at the contract unit price per calendar day worked. This contract price shall be full compensation for all work and for furnishing all material, labor, equipment, tools, deliverables, and incidentals necessary to complete the item.

Payment will be made under:

"Airfield Marking Testing ……..Day"

PAVEMENT SMOOTHNESS TESTING

DESCRIPTION

This item shall consist of conducting smoothness testing of pavement areas as required by the Engineer and providing a runway surface on an airport, or equivalent pavement surface, using an Inertial Profiler in accordance with these specifications and at locations shown on the plans, or as directed by the Engineer.

EQUIPMENT

Regardless of pavement type, Contractor shall utilize an Inertial Profiler with line-laser technology. Single-point laser technology will not be allowed.

The Inertial Profiler shall be calibrated and verified in accordance with the most current version of AASHTO M 328. Provide certification documentation that the inertial profiler meets AASHTO M 328 to the Engineer before the Inertial Profiler is used on any portion of the airport.

Contractor shall provide a competent operator, trained in the operation of the Inertial Profiler. The Contractor will have a written training and procedure manual for all operators and staff. Contractor will provide documentation to the Department that all Contractor personnel have completed the training program. Operation of the Inertial Profiling system shall conform to the most current version of AASHTO R 57.

WEATHER LIMITATIONS

Except as approved by the Engineer, do not perform work when the pavement is covered with rain, ice, or snow.

TESTING METHODS

Use an Inertial Profiler to measure the longitudinal pavement profile for safety evaluations, construction quality control and smoothness acceptance. Use testing and recording software to produce electronic inertial road profiles in a format compatible with the latest version of FAA's ProFAA and FHWA's ProVAL (Profile Viewing and Analysis) software. Produce International Roughness Index (IRI) and Mean Roughness Index (MRI) values for measuring smoothness.

Configure the profiler to record the actual elevation of the pavement surface. Do not use the profiler's internal IRI calculation mode. The profile data shall be filtered with a cutoff wavelength of 300 ft. The interval at which relative profile elevations are reported shall be one inch (1").

Provide IRI data in accordance with the most current version of ASTM E1926. Utilize personnel trained to record and evaluate IRI data.

Provide the user selected Inertial Profiler settings to the Engineer for the project records. Certification of the Inertial Profiling system shall conform to the most current version of AASHTO R 56.

Remove all objects and foreign material on the pavement surface prior to longitudinal pavement profile testing.

Operate the profiler at any speed as per the manufacturer's recommendations, however, the speed must be constant to within ± 3 mph of the intended speed and any required acceleration should be as gradual as possible. For example, if the intended speed were 30 mph, the acceptable range of speed for testing would be 27 to 33 mph.

Operate the Inertial Profiler in both directions of traffic. Collect IRI data from both wheel paths during the same run. It is permissible to collect data one wheel path at a time if each wheel path is tested and evaluated separately. A wheel path will be determined based on an airport's Airport Reference Code (ARC). MRI values are the average of the IRI values from both wheel paths. When using an inertial profiler that collects a single trace per pass, take care to ensure that the measurements from each trace in a travel lane start and stop at the same longitudinal locations. Unless otherwise specified, multiple runs are not necessary for data collection.

Operate the automatic triggering method at all times unless impractical. A tape stripe or traffic cone wrapped with reflective material may be used to alert the profiler's automatic triggering sensor to begin data collection. The profiler shall reach the intended operating speed before entering the test section. The runup and runout distances should be sufficient to obtain the intended operating speed and to slow down after testing is completed.

The evaluation of the profiles will be performed for each identified Runway, or as directed by the Engineer. For each runway tested, Contractor should expect to profile entire length and width of pavement surface.

Mark the limits of structures and other special areas to be excluded from testing using the profiler's event identifier such that the exact locations can be extracted from the profile data file during processing.

Unless otherwise authorized by the Engineer, perform all smoothness testing in the presence of the Engineer. Coordinate with and receive authorization from the Airport Manager and Engineer before starting smoothness testing. Perform smoothness tests within 7 days after receiving authorization. Any testing performed without the Engineer's presence, unless otherwise authorized, may be ordered retested at the Contractor's expense.

DELIVERABLES

A maximum of seven days after an airport has been tested, a basic electronic report containing all the information listed below shall be provided to the Engineer.

- Pertinent background information; i.e. Contractor, date tested, airport tested, airport personnel notified, site conditions, operator qualifications, etc.
- Equipment used and calibration information
- Test procedures and standards used
- Test Results (shall include an electronic copy of the profile data in the requested format as approved by the Engineer)
- Photography with descriptions showing equipment, airport, and tests being conducted
- Supporting Charts, Summaries, Recommendations, Tables, and Maps

All testing results should be included in a singular electronic report. Reports shall be provided in a combined PDF format, or other approved format, properly oriented and organized such that it may be easily printed to hard copy. As each testing project may present unique challenges, the content and information presented in each report shall be provided as directed by the Engineer.

METHOD OF MEASUREMENT

A completed Pavement Smoothness Test is one in which the Contractor has performed testing on one runway or equivalent area, in both directions, at the required speed, and has generated data from a calibrated and qualified inertial profiler, and provided the Engineer with a electronic copy of the report for that airport. When testing is required on multiple runways or equivalent areas, each test will be paid for separately. In these cases, multiple test results may be included in a single report.

BASIS OF PAYMENT

For pavement smoothness testing, payment shall be made at the contract unit price per completed Pavement Smoothness Test at an airport. This contract price shall be full compensation for all testing, labor, materials, equipment, tools, deliverables, and incidentals necessary to complete this contract item.

Payment will be made under:

"Pavement Smoothness Testing……...each"

FALLING WEIGHT DEFLECTOMETER TESTING

DESCRIPTION

This item shall consist of the use of falling weight deflectometers (FWD) to determine structural properties of the pavement and/or subgrade in areas as required by the Engineer. FWD testing shall be conducted in general accordance with FAA publication 150-5370-11B unless approved by the Engineer.

EQUIPMENT

Regardless of pavement type, Contractor shall utilize a FWD device. Light weight deflectometers (LWD) will not be allowed.

The FWD device shall be calibrated and verified in accordance with the most current version of AASHTO R 32. Provide certification documentation that the FWD meets AASHTO and ASTM standards to the Engineer before it is used on any portion of the airport.

Contractor shall provide a competent operator, trained in the operation of the FWD. The Contractor will have a written training and procedure manual for all operators and staff. Contractor will provide documentation to the Department that all Contractor personnel have completed the training program. Operation of the FWD shall conform to the most current version of ASTM D 4694 and ASTM D 4695.

WEATHER LIMITATIONS

Except as approved by the Engineer, do not perform work when the pavement is covered with rain, ice, or snow.

TESTING METHODS

Use the FWD to characterize the pavement structure. Collect data at locations selected by the Engineer. Conduct coring and patching, if needed, of Hot Mix Asphalt (HMA) or Portland concrete (PCC) pavements to determine thicknesses for analysis.

The FWD may be used to determine the load carrying characteristics of the pavement, provide insitu conditions for rehabilitation and reconstruction, determine the long term performance for a Capital Investment Program, determine load transfer across joints, or determine the location of voids in the pavement structure. The type of testing required will be determined by the Engineer.

Spacing and location of tests in runways, taxiways, and aprons should be performed in general accordance with FAA technical publication AC 150/5370-11B or FHWA's Long Term Pavement Performance Program.

All test locations should have a minimum of three seating drops. A minimum of two recorded drops of the same weight are required at each test location for repeatability. Excessive deflection or destruction of the pavement shall be recorded but not used in analysis. Any instances of this should be reported immediately to the Engineer.

Surface and air temperatures shall be recorded at each test location. These shall be supplemented by periodic measurements of internal temperature from small drill holes in the pavement. Station numbers, measured from a point chosen by the Engineer, lane, and or offset shall be recorded for each test.

Analysis shall be performed by any software approved by the FAA or FHWA. The analysis should indicate what type of testing has been completed and the results of each test. The data shall be presented in a way to aid in the Engineer in decision making regarding the pavement. Typical decisions may involve structural capacity analysis, rehabilitation, or pavement management.

DELIVERABLES

A maximum of seven days after an airport has been tested, a basic electronic report containing all the information listed below shall be provided to the Engineer.

- Pertinent background information; i.e. Contractor, date tested, airport tested, airport personnel notified, site conditions, operator qualifications, etc.
- Equipment used and calibration information
- Test procedures and standards used
- Test Results
- Photography with descriptions showing equipment, airport, and tests being conducted
- Supporting Charts, Summaries, Recommendations, Tables, and Maps

All testing results should be included in a singular electronic report. Reports shall be provided in a combined PDF format, or other approved format, properly oriented and organized such that it may be easily printed to hard copy. As each testing project may present unique challenges, the content and information presented in each report shall be provided as directed by the Engineer.

METHOD OF MEASUREMENT

A completed FWD test is one in which the Contractor has performed testing on one runway or equivalent area, at the frequency required by the Engineer, and has generated data from a calibrated and qualified FWD, and provided the Engineer with a electronic copy of the report for that airport. When testing is required on multiple runways or equivalent areas, each test will be paid for separately. In these cases, multiple test results may be included in a single report.

BASIS OF PAYMENT

For FWD testing, payment shall be made at the contract unit price per completed FWD Test at an airport. This contract price shall be full compensation for all testing, labor, materials, equipment, tools, deliverables, and incidentals necessary to complete this contract item.

Payment will be made under:

"Falling Weight Deflectometer Testing……...each"

PHOTOMETRIC TESTING

DESCRIPTION

This item shall consist of photometric testing of various airfield lighting fixtures as required by the Engineer and providing the tests results in the form of a report to the Engineer. Contractor shall measure existing airfield lighting performance and then compare data to the criteria for beam intensity and orientation as defined in ICAO Annex 14 and FAA AC 150/5345-46. Data collected will be used to identify problems, developing maintenance strategies and produce work schedules and maintenance reports for each airport tested.

CONTRACTOR PRE-QUALIFICATION REQUIREMENTS

The Contractor must demonstrate sufficient data collection equipment, resources, and expertise with the equipment to meet the project schedule and scope of services. Contractor shall have a minimum of three (3) years' experience in photometric testing of airfield lighting systems.

Contractor must demonstrate full comprehension of the recommended guidelines, standards, and specifications within ICAO Annex 14 and FAA AC 150/5345-46D (or newer adopted version),

EQUIPMENT

The photometric test system shall be comprised of:

1) An array of accurate measurement sensors configured to measure light from each light source as system moves away from that light source. There shall be no loss of accuracy at speeds up to at least 50mph.
2) A sensor to trigger measurements simultaneously from all sensors approximately every 4 inches.
3) The capability (including additional sensors) to accurately track the position of each measurement sensor relative to the specified main beam area of each light source being measured.
4) The capability to automatically calculate the average intensity (in candela) in the main beam area and estimate vertical and horizontal beam alignment (in degrees) by identifying the position of the brightest part of the light beam measured.
5) The capability to log data during surveys, display results and identify locations where the average main beam intensity is below agreed levels and/or the beam is mis-aligned either vertically or horizontally.

WEATHER LIMITATIONS

Except as approved by the Engineer, do not perform work when the airfield lighting system is covered with rain, snow or ice.

TESTING METHODS

Photometric testing of the airfield lighting fixtures – runway center line / TDZ / runway edge (inset / elevated) / taxiway centerline and runway guard/stop bar lights – will be identified and provided to the Contractor by the Engineer. Photometric testing shall be performed at night with minimum interference with airport operations. In order to minimize the impact on airport operations, the collection of data shall be undertaken while the survey system is traveling along the runway – typically the total runway access time to survey one direction of a runway center line lighting service shall be less than 15 minutes.

Not more than 24 hours prior to starting the test, the Contractor shall ensure a qualified onsite airport electrician has properly cleaned and aligned all the light fixtures to the best of their ability. Contractor shall also verify with the qualified onsite airport electrician the calibration of constant current regulator output using a true RMS ammeter prior to photometric testing. This proactive preparation will ensure the airport lighting system is ready for the photometric testing.

Once testing is complete, the Contractor will work directly with the qualified onsite airport Electrician to identify any deficient fixtures and circuits. If the corrective measures are made promptly, the circuits and fixtures involved shall be retested during the scheduled period of field testing to assure that proper performance has been achieved. If retesting cannot be done within this reasonable period, additional costs will be paid to the Contractor using a separate line item as described in the "method of measurement" portion of this specification.

DELIVERABLES

A maximum of seven days after an airport has been tested, a basic electronic report containing all the information listed below shall be provided to the Engineer. The content and information presented in each report shall be provided by the Contractor as directed by the Engineer.

- Pertinent background information; i.e. Contractor, date tested, airport tested, airport personnel notified, site conditions, operator qualifications, etc.
- Equipment used and calibration information
- Test procedures and standards used
- Test Results (performance bar chart for each service, and colour iso-candela diagrams of fixture light output for fixtures that have failed due to low light output or mis-alignment). Before and After corrective action results.
- Photography with descriptions showing equipment, airport, various light fixtures, and tests being conducted
- Supporting Charts, Summaries, Recommendations, Tables, and Maps

All testing results should be included in a singular electronic report. Reports shall be provided in a combined PDF format, or other approved format, properly oriented and organized such that it may be easily printed to hard copy. As each testing project may present unique challenges, the content and information presented in each report shall be provided as directed by the Engineer.

METHOD OF MEASUREMENT

The quantity of photometric testing to be paid for shall be the number of airfield lighting fixtures properly tested at an airport in accordance with the specifications and accepted by the Engineer.

If retesting of deficient circuits and fixtures cannot be done within a reasonable period, the Engineer may invoke the line item for photometric re-testing per unit day. The interpretation of "reasonable period" shall be at the sole discretion of the Engineer. When the Engineer chooses to invoke the line item for photometric re-testing, no redundant compensation will be made to the Contractor for per fixture testing other than the original testing cost.

BASIS OF PAYMENT

Payment for photometric testing shall be made at the contract items bid price per each. At the Engineers discretion, photometric retesting shall be made at the contract items bid price per day. These prices shall be full compensation for furnishing all materials and for all labor, equipment, tools, deliverables, and incidentals necessary to complete this contract item.

Payment will be made under:

"Photometric Testing, 0-100 Fixtures …….……....… Each"
"Photometric Testing, 101-500 Fixtures…….…….....… Each"
"Photometric Testing, 501-1,000 Fixtures……..……..……...…...…… Each"
"Photometric Testing, Greater than 1000 Fixtures……...…….…..… Each"
"Photometric Re-Testing…….…..... Day"

ASPHALT REJUVENATION TESTING

DESCRIPTION

This item shall consist of conducting asphalt rejuvenation acceptance testing of pavement areas as required by the Engineer, and providing the tests results in the form of a report to the Engineer.

WEATHER LIMITATIONS

Except as approved by the Engineer, do not perform work when the atmospheric temperature is below 40°F or when the pavement is covered with snow or ice.

TESTING METHODS

The Contractor will be acting as the Engineer's agent, ensuring the rejuvenation acceptance portion of the "Asphalt Rejuvenation" specification is properly executed on maintenance projects. The Contractor shall be responsible for taking samples of rejuvenation product and testing, cutting and extracting cores, repairing sample holes, and properly testing the cores, meeting all guidelines for acceptance testing as set forth in articles 6.1 thru 6.5 of the "Asphalt Rejuvenation" specification of the latest NCDOT Division of Aviation airfield maintenance activities contracts.

Skid resistance testing, outlined in article 6.6 of the "Asphalt Rejuvenation" specification, will be addressed under the "Pavement Friction Testing" specification within this contract at the direction of the Engineer.

A copy of the latest version of all NCDOT Aviation specifications may be found on the Division of Aviation's website or by contacting the Engineer.

DELIVERABLES

A maximum of fourteen days after an airport has been tested, a basic electronic report containing all the information listed below shall be provided to the Engineer. The content and information presented in each report shall be provided by the Contractor as directed by the Engineer.

- Pertinent background information; i.e. Contractor, date tested, airport tested, airport personnel notified, site conditions, operator qualifications, etc.
- Equipment used and calibration information
- Test procedures and standards used
- Test Results (showing actual test results compared with requirements of the NCDOT asphalt rejuvenation specificiation)
- Photography with descriptions showing equipment, airport, cores, and tests being conducted
- Supporting Charts, Summaries, Recommendations, Tables, and Maps

All testing results should be included in a singular electronic report. Reports shall be provided in a combined PDF format, or other approved format, properly oriented and organized such that it may be easily printed to hard copy. As each testing project may present unique challenges, the content and information presented in each report shall be provided as directed by the Engineer.

METHOD OF MEASUREMENT

A completed asphalt rejuvenation test is one in which the Contractor has performed rejuvenation acceptance testing of the identified pavement areas and has provided the Engineer with an electronic copy of the report for that airport. **One test will be measured as three (3) cores.** The Engineer will determine how many "tests" will be required per project.

BASIS OF PAYMENT

For asphalt rejuvenation testing, payment shall be made at the contract unit price per three (3) cores. This contract price shall be full compensation for all work and for furnishing all material, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

"Asphalt Rejuvenation Testing (3 cores)……...each"
"Rejuvenation Product Sampling……..each"

MACRO-TEXTURE TESTING

DESCRIPTION

This item shall consist of the use of an outflow meter to evaluate pavement texture in accordance with these specifications and as required by the Engineer.

EQUIPMENT

Contractor shall measure pavement texture, regardless of pavement type or texture using an outflow meter meeting the requirements of the most recent version of ASTM E2380/E2380M.

The outflow meter device shall be calibrated and verified in accordance with the most recent version of ASTM E2380/E2380. Certification of calibration documentation shall be provided to the department before its use on any airport pavement.

Contractor shall provide a competent operator, trained in the operation of the equipment. The Contractor will have a written training and procedure manual for all operators and staff. Contractor will provide documentation to the Department that all Contractor personnel have completed the training program.

WEATHER LIMITATIONS

Except as approved by the Engineer, do not perform work when the pavement is covered with rain, ice, or snow.

TESTING METHODS

The areas to be tested on an airport will be identified and provided to the Contractor by the Engineer. Lot sizes will be identified and a minimum number of readings will be taken and averaged as described in Section 8 of ASTM E2380/2380M. The lot size and minimum number of tests per lot may be modified by the Engineer based upon pavement conditions and Engineering judgment.

DELIVERABLES

A maximum of seven days after an airport has been tested, a basic electronic report containing all the information listed below shall be provided to the Engineer.

- Pertinent background information; i.e. Contractor, date tested, airport tested, airport personnel notified, site conditions, operator qualifications, etc.
- Equipment used and calibration information
- Test procedures and standards used
- Test Results
- Photography with descriptions showing equipment, airport, and tests being conducted
- Supporting Charts, Summaries, Recommendations, Tables, and Maps

All testing results should be included in a singular electronic report. Reports shall be provided in a combined PDF format, or other approved format, properly oriented and organized such that it may be easily printed to hard copy. As each testing project may present unique challenges, the content and information presented in each report shall be provided as directed by the Engineer.

METHOD OF MEASUREMENT

The quantity of macro-texture testing to be paid for shall be the number of lots tested and reported at an airport in accordance with the specifications. Record and report both individual test results and the average of results for each lot in test reports.

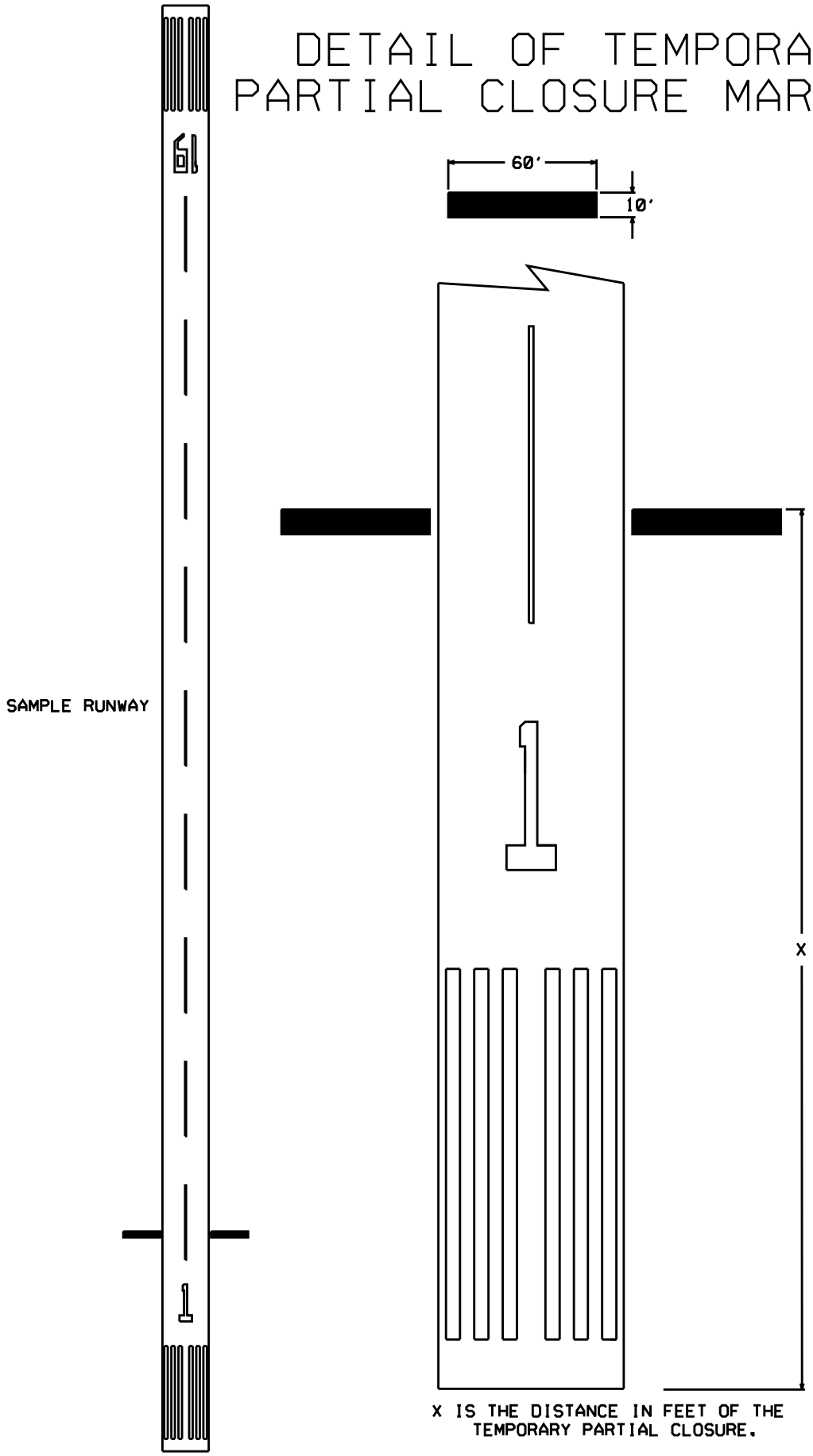
BASIS OF PAYMENT

For macro-texture testing, payment shall be made at the contract unit price per completed macro-texture testing lot at an airport. This contract price shall be full compensation for all testing, labor, materials, equipment, tools, deliverables, and incidentals necessary to complete this contract item.

Payment will be made under:

"Macro-Texture Testing……...each"

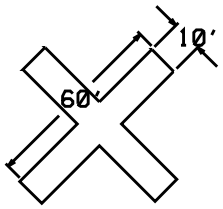
DETAIL OF TEMPORARY PARTIAL CLOSURE MARKING



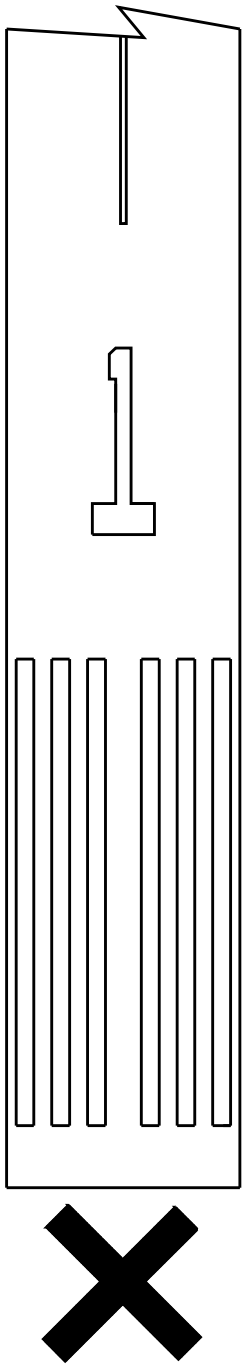
NOTES:
TEMPORARY PARTIAL CLOSURE MARKINGS ARE PLACED ADJACENT TO OR ON THE EDGE OF THE RUNWAY PAVEMENT. THEY ARE TO BE MADE OF A HIGHLY VISIBLE, COLORED MATERIAL AND SHOULD APPEAR SOLID. THE MEASURED DISTANCE OF THE DISPLACEMENT IS FROM THE FRONT OF THE MARKING TO THE LINE OF REGULAR DISPLACEMENT ON THE PARTICULAIR RUNWAY THAT IS DISPLACED OR CLOSED.

D:\DGN\STANDARD\CLOSURE.DGN

DETAIL OF TEMPORARY CLOSURE MARKING



CLOSURE PLACEMENT DETAIL

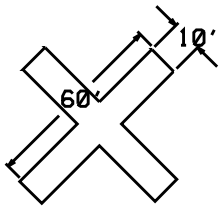


SAMPLE RUNWAY

NOTES:
WHEN CLOSURE MARKERS INTERFERE WITH WORK BEING PERFORMED ON A RUNWAY, THE CLOSURE MARKS SHOULD BE MOVED TO AN AREA BEYOND THE PAVEMENT, IN LINE WITH THE RUNWAY (AS SHOWN ABOVE). THE CROSSES MUST BE OF A BRIGHT COLOR (YELLOW OR ORANGE) SO AS TO CONTRAST THE RUNWAY PAVEMENT SURFACE. MATERIALS USED FOR CLOSURE MARKING SHOULD PROVIDE A SOLID APPEARANCE. TO ENHANCE VISIBILITY OF THE CROSS, A 6" BLACK BORDER MAY BE USED ON THE CLOSURE MARKING.

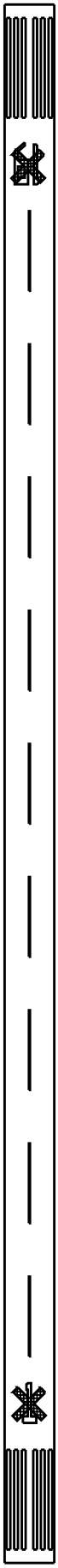
D:\DGN\STANDARD\CLOSURE.DGN

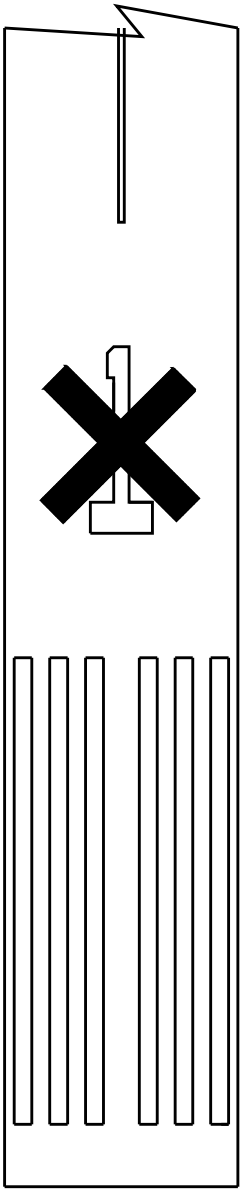
DETAIL OF TEMPORARY CLOSURE MARKING



CLOSURE PLACEMENT DETAIL

SAMPLE RUNWAY



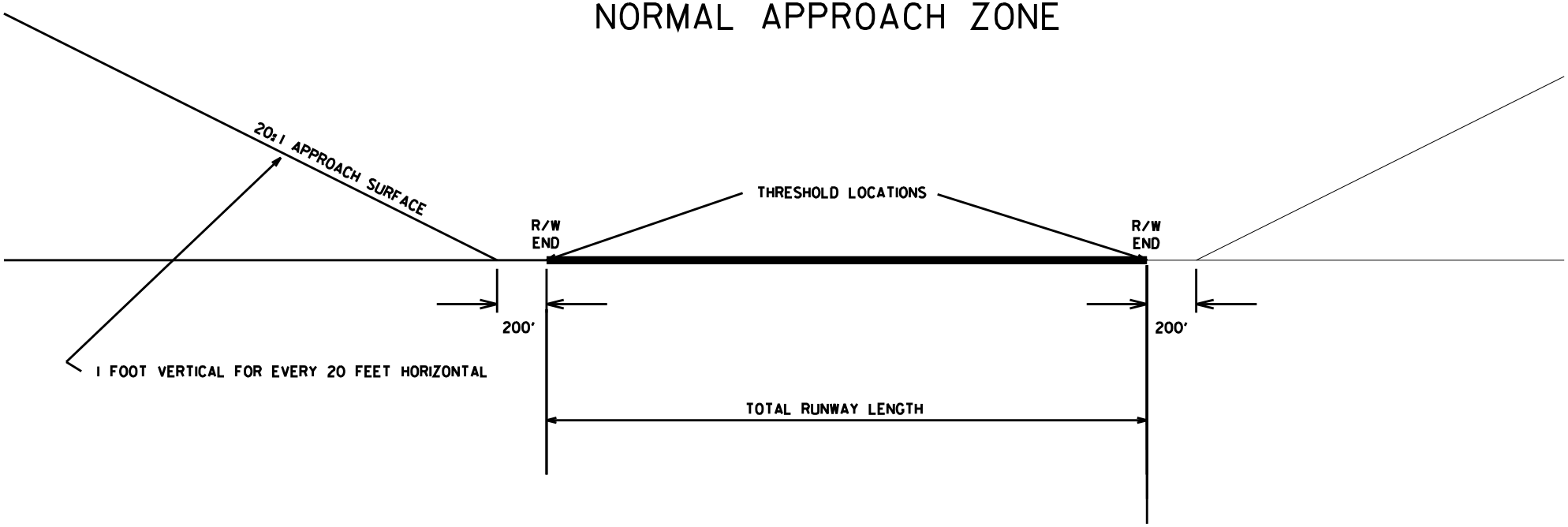


NOTES:

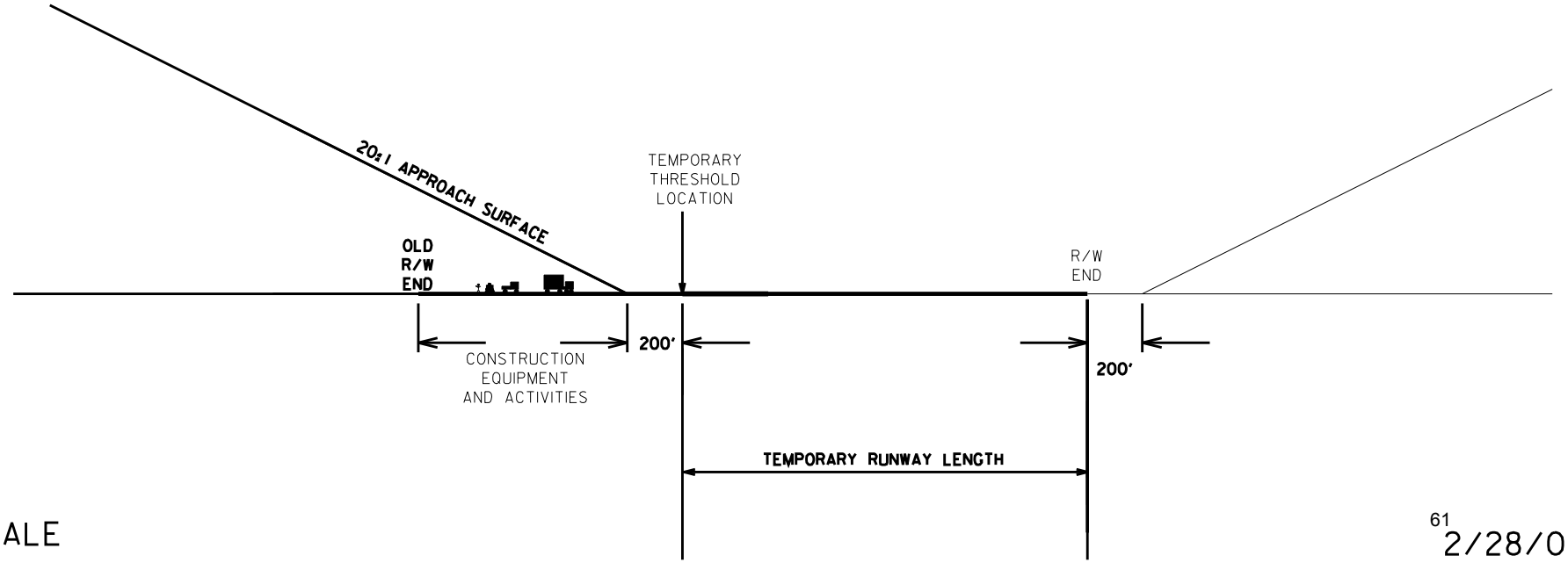
CROSSES ARE ONLY PLACED AT EACH END OF THE RUNWAY. THE CROSSES MUST BE OF A BRIGHT COLOR (YELLOW OR ORANGE) SO AS TO CONTRAST THE RUNWAY PAVEMENT SURFACE. MATERIALS USED FOR CLOSURE MARKING SHOULD PROVIDE A SOLID APPEARANCE. TO ENHANCE VISIBILITY OF THE CROSS, A 6" BLACK BORDER MAY BE USED ON THE CLOSURE MARKING.

D:\DGN\STANDARD\CLOSURE.DGN

NORMAL APPROACH ZONE



APPROACH ZONE LOCATION DURING CONSTRUCTION

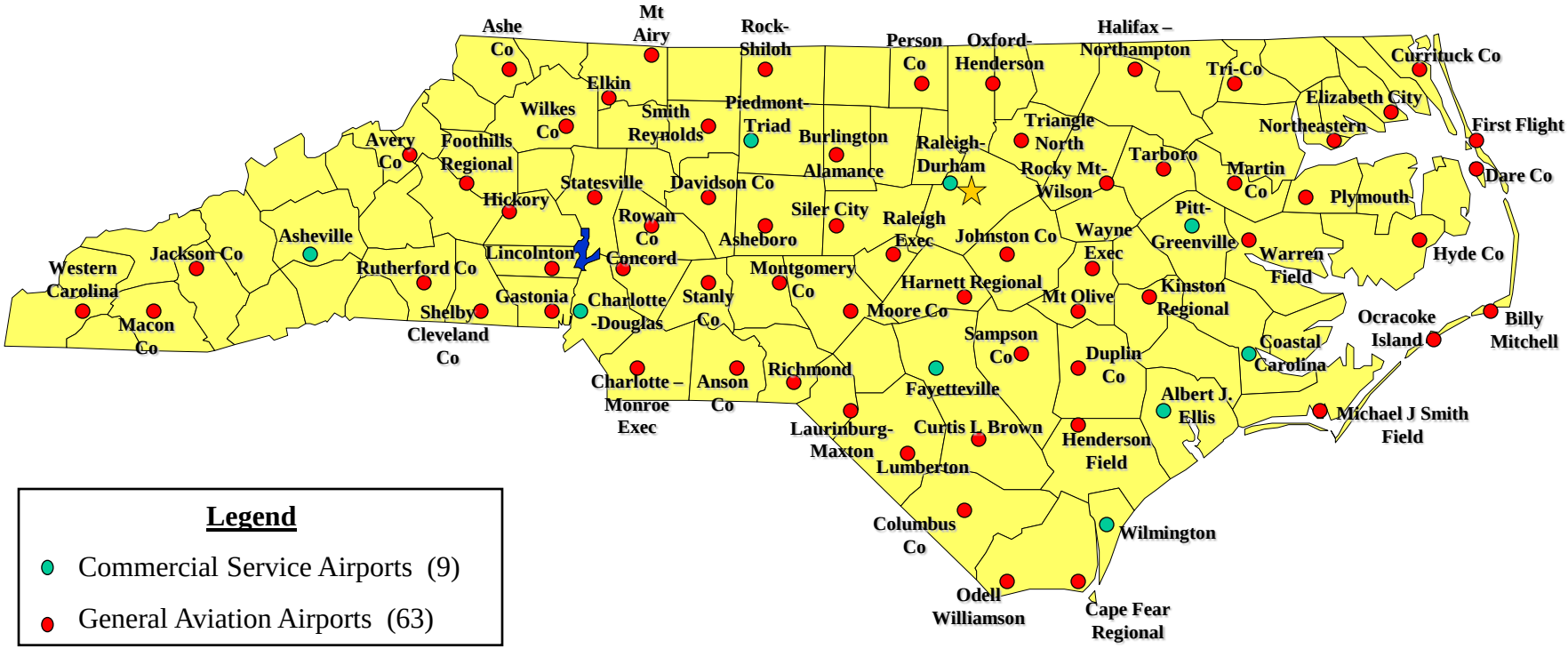


NOT TO SCALE

2/28/07

North Carolina Airports

(72 Publicly Owned / Publicly Operated Airports)



Legend

- Commercial Service Airports (9)
- General Aviation Airports (63)

LISTING OF MB & WB SUBCONTRACTORS

Sheet___of ____

FIRM NAME AND ADDRESS	MB OR WB	ITEM NO.	ITEM DESCRIPTION	* AGREED UPON UNIT PRICE	DOLLAR VOL. OF SUBLET ITEM

DOLLAR VOLUME OF WB SUBCONTRACTOR_____
WB PERCENTAGE OF TOTAL CONTRACT BID PRICE_____
DOLLAR VOLUME OF MB SUBCONTRACTOR_____
MB PERCENTAGE OF TOTAL CONTRACT BID PRICE_____

*** THE DOLLAR VOLUME SHOWN IN THIS COLUMN SHALL BE THE ACTUAL PRICE AGREED UPON BY THE PRIME CONTRACTOR AND THE MB\WB SUB-CONTRACTOR. THESE PRICES WILL BE USED TO DETERMINE THE PERCENTAGES OF MB\WB PARTICIPATION IN THE CONTRACT.**

NON COLLUSION AFFIDAVIT

(To Be Executed and Returned with Quotation)

The person executing this bid solemnly swears (or affirms) that neither he, nor any official, agent, or employee of the bidder has entered into any agreement, restraint of free competitive bidding in connection with this bid.

NAME OF CONTRACTOR _____

SIGNATURE OF CONTRACTOR _____

NOTE - AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to me this the ____ day of _____ 20 ____.

NOTARY SEAL

_____

(SIGNATURE OF NOTARY PUBLIC)

Of _____ County.

State of _____.

My Commission Expires: _____.

North Carolina Department of Transportation
CONTRACT BID FORM

Purchase Order Number: To be determined

Airfield Testing Activities at North Carolina Airports

ITEM	SECT	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	AMOUNT BID
1	**Project Special Provisions**	Mobilization for Pavement Friction Testing	**1**	**Ea**		
2	**Project Special Provisions**	Pavement Friction Testing	**1**	**Ea**		
3	**Project Special Provisions**	Mobilization for Retroreflectivity Testing	**1**	**Ea**		
4	**Project Special Provisions**	Dry Mobile Retroreflectivity Testing	**1**	**Sq Ft**		
5	**Project Special Provisions**	Wet Mobile Retroreflectivity Testing	**1**	**Sq Ft**		
6	**Project Special Provisions**	Mobilization for Airfield Marking Testing	**1**	**Ea**		
7	**Project Special Provisions**	Airfield Marking Testing	**1**	**Day**		
8	**Project Special Provisions**	Mobilization for Pavement Smoothness Testing	**1**	**Ea**		
9	**Project Special Provisions**	Pavement Smoothness Testing	**1**	**Ea**		
10	**Project Special Provisions**	Mobilization for FWD Testing	**1**	**Ea**		
11	**Project Special Provisions**	Falling Weight Deflectometer Testing	**1**	**Ea**		
12	**Project Special Provisions**	Mobilization for Photometric Testing	**1**	**Ea**		
13	**Project Special Provisions**	Photometric Testing, 0-100 Fixtures	**1**	**Ea**		
14	**Project Special Provisions**	Photometric Testing, 101-500 Fixtures	**1**	**Ea**		
15	**Project Special Provisions**	Photometric Testing, 501 – 1,000 Fixtures	**1**	**Ea**		
16	**Project Special Provisions**	Photometric Testing, Greater than 1000 Fixtures	**1**	**Ea**		

17	**Project Special Provisions**	Photometric Re-Testing	**1**	**Day**		
18	**Project Special Provisions**	Mobilization for Asphalt Rejuvenation Testing	**1**	**Ea**		
19	**Project Special Provisions**	Asphalt Rejuvenation Testing (3 Cores)	**1**	**Ea**		
20	**Project Special Provisions**	Rejuvenation Product Sampling	**1**	**Ea**		
21	**Project Special Provisions**	Mobilization for Macro-Texture Testing	**1**	**Ea**		
22	**Project Special Provisions**	Macro-Texture Testing	**1**	**Ea**		
23	**2012 Standard Specifications**	NCDOT QMS Certified Nuclear Density Technician	**1**	**Hour**		
24	**2012 Standard Specifications**	NCDOT Certified Conventional Density Technician, Soil	**1**	**Hour**		
25	**2012 Standard Specifications**	NCDOT QMS Certified Roadway Technician	**1**	**Hour**		
26	**2012 Standard Specifications**	NCDOT/ACI Certified Field Concrete Technician	**1**	**Hour**		

***** Unit Prices Must Be Limited To TWO Decimal Places *****

TOTAL BID FOR PROJECT:_____

CONTRACTOR_____

ADDRESS_____

Federal Identification Number_____Contractors License Number_____

Authorized Agent_____Title_____

Signature_____Date_____

Witness_____Title_____

Signature_____Date_____

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 or newer adopted version)

Reviewed by_____ _____(date)

Accepted by NCDOT_____ Statewide Plans & Programs Engineer _____(date)