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

C203171

CONTRACT AND
CONTRACT BONDS

FOR CONTRACT NO. C203171

WBS	32635.3.FR6 BRNHF-0012(55)
T.I.P NO.	B-2500A
COUNTY OF	DARE
THIS IS THE	ROADWAY & STRUCTURE CONTRACT
ROUTE NUMBER	NC 12 LENGTH 2.355 MILES
LOCATION	LONG TERM IMPROVEMENTS (PHASE II) TO PEA ISLAND ON NC-12.

CONTRACTOR	PARSONS CONSTRUCTION GROUP INC.
ADDRESS	1200 WOODRUFF RD SUITE A-3 GREENVILLE, SC 29607

BIDS OPENED NOVEMBER 19, 2013

CONTRACT EXECUTION DEC 17 2013

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

PROPOSAL

DATE AND TIME OF BID OPENING: **NOVEMBER 19, 2013 AT 2:00 PM**

CONTRACT ID	C203171
WBS	32635.3.FR6

FEDERAL-AID NO.	BRNHF-0012(55)
COUNTY	DARE
T.I.P. NO.	B-2500A
MILES	2.355
ROUTE NO.	NC 12
LOCATION	LONG TERM IMPROVEMENTS (PHASE II) TO PEA ISLAND ON NC-12.

TYPE OF WORK GRADING, DRAINAGE, PAVING, AND STRUCTURE.

NOTICE:

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

BIDS WILL BE RECEIVED AS SHOWN BELOW:

THIS IS A <u>ROADWAY & STRUCTURE</u> PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

_____

PROPOSAL FOR THE CONSTRUCTION OF

CONTRACT No. C203171 IN DARE COUNTY, NORTH CAROLINA

Date_____ 20_____

DEPARTMENT OF TRANSPORTATION,

RALEIGH, NORTH CAROLINA

The Bidder has carefully examined the location of the proposed work to be known as Contract No. **C203171**; has carefully examined the plans and specifications, which are acknowledged to be part of the proposal, the special provisions, the proposal, the form of contract, and the forms of contract payment bond and contract performance bond; and thoroughly understands the stipulations, requirements and provisions. The undersigned bidder agrees to bound upon his execution of the bid and subsequent award to him by the Board of Transportation in accordance with this proposal to provide the necessary contract payment bond and contract performance bond within fourteen days after the written notice of award is received by him. The undersigned Bidder further agrees to provide all necessary machinery, tools, labor, and other means of construction; and to do all the work and to furnish all materials, except as otherwise noted, necessary to perform and complete the said contract in accordance with *the 2012 Standard Specifications for Roads and Structures* by the dates(s) specified in the Project Special Provisions and in accordance with the requirements of the Engineer, and at the unit or lump sum prices, as the case may be, for the various items given on the sheets contained herein.

The Bidder shall provide and furnish all the materials, machinery, implements, appliances and tools, and perform the work and required labor to construct and complete State Highway Contract No. **C203171** in **Dare County**, for the unit or lump sum prices, as the case may be, bid by the Bidder in his bid and according to the proposal, plans, and specifications prepared by said Department, which proposal, plans, and specifications show the details covering this project, and hereby become a part of this contract.

The published volume entitled *North Carolina Department of Transportation, Raleigh, Standard Specifications for Roads and Structures, January 2012* with all amendments and supplements thereto, is by reference incorporated into and made a part of this contract; that, except as herein modified, all the construction and work included in this contract is to be done in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Engineer.

If the proposal is accepted and the award is made, the contract is valid only when signed either by the Contract Officer or such other person as may be designated by the Secretary to sign for the Department of Transportation. The conditions and provisions herein cannot be changed except over the signature of the said Contract Officer.

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

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

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

NORTH CAROLINA PROFESSIONAL SEAL 21076 ENGINEER RANDY A. GARRIS

10/8/13

State Contract Officer

TABLE OF CONTENTS

COVER SHEET
PROPOSAL SHEET

PROJECT SPECIAL PROVISIONS

CONTRACT TIME AND LIQUIDATED DAMAGES: 1
INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES A+B BIDDING: 1
INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES: 5
INTERMEDIATE CONTRACT TIME NUMBER 3 AND LIQUIDATED DAMAGES: 6
INTERMEDIATE CONTRACT TIME NUMBER 4 AND LIQUIDATED DAMAGES: 6
MANDATORY PRE-BID CONFERENCE (Prequalifying To Bid): 7
SUSPENSION OF WORK: 7
PERMANENT VEGETATION ESTABLISHMENT: 8
MAJOR CONTRACT ITEMS: 9
SPECIALTY ITEMS: 9
FUEL PRICE ADJUSTMENT: 9
PAYOUT SCHEDULE: 10
SCHEDULE OF ESTIMATED COMPLETION PROGRESS: 10
DISADVANTAGED BUSINESS ENTERPRISE: 11
CERTIFICATION FOR FEDERAL-AID CONTRACTS: 24
U.S. DEPARTMENT OF TRANSPORTATION HOTLINE: 24
SUBSURFACE INFORMATION: 25
LOCATING EXISTING UNDERGROUND UTILITIES: 25
RESOURCE CONSERVATION: 25
DOMESTIC STEEL: 25
PORTABLE CONCRETE BARRIER - (Partial Payments for Materials): 26
MAINTENANCE OF THE PROJECT: 26
BID DOCUMENTATION: 26
TWELVE MONTH GUARANTEE: 30
GIFTS FROM VENDORS AND CONTRACTORS: 30
EROSION AND SEDIMENT CONTROL/STORMWATER CERTIFICATION: 31
PROCEDURE FOR MONITORING BORROW PIT DISCHARGE: 36
EMPLOYMENT: 38
STATE HIGHWAY ADMINISTRATOR TITLE CHANGE: 38
NOTES TO CONTRACTOR: 38
ROADWAY 39
GEOTECHNICAL 60
UTILITIES BY OTHERS 64
EROSION CONTROL 65
PROJECT SPECIAL PROVISIONS STRUCTURE / CULVERTS 77

PERMITS R-1

STANDARD SPECIAL PROVISIONS

AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS 1
NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY 2
ERRATA 5
PLANT AND PEST QUARANTINES 7
AWARD OF CONTRACT 8
MINORITY AND FEMALE EMPLOYMENT REQUIREMENTS 9
REQUIRED CONTRACT PROVISIONS FEDERAL - AID CONSTRUCTION CONTRACTS 12
ON-THE-JOB TRAINING 21
MINIMUM WAGES 24

PROPOSAL ITEM SHEET AND SIGNATURE SHEET

ITEM SHEET(S) (TAN SHEETS)
SIGNATURE SHEET (BID ACCEPTANCE BY DEPARTMENT)

PROJECT SPECIAL PROVISIONS

GENERAL

CONTRACT TIME AND LIQUIDATED DAMAGES:

(8-15-00) (Rev. 12-18-07) 108 SP1 G07 A

The date of availability for this contract is **January 6, 2014**, except that work in jurisdictional waters and wetlands shall not begin until a meeting between the DOT, Regulatory Agencies, and the Contractor is held as stipulated in the permits contained elsewhere in this proposal. This delay in availability has been considered in determining the contract time for this project.

The completion date for this contract is **May 14, 2018**.

Except where otherwise provided by the contract, observation periods required by the contract will not be a part of the work to be completed by the completion date and/or intermediate contract times stated in the contract. The acceptable completion of the observation periods that extend beyond the final completion date shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are **Two Hundred Dollars ($200.00)** per calendar day. These liquidated damages will not be cumulative with any liquidated damages which may become chargeable under Intermediate Contract Time Number 1.

INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES A+B BIDDING:

(6-19-07) (Rev. 1-17-12) 108 SPI 1-2

Except for the work required under Project Special Provisions entitled *Planting, Reforestation* and/or *Permanent Vegetation Establishment* included elsewhere in the proposal, the Contractor shall complete all work included in this contract and shall place and maintain traffic on same.

The intermediate contract time for this work shall be determined by the Bidder and entered into the itemized electronic bid by the Bidder in the place indicated. In no case shall the Bidder bid more than **one thousand four hundred and nine (1,409)** consecutive calendar days.

The date of availability for this intermediate contract time is **January 6, 2014**.

The daily cost for this intermediate contract time is **Five Thousand Dollars ($5,000.00)** per calendar day.

The liquidated damages for this intermediate contract time are **Five Thousand Dollars ($5,000.00)** per calendar day.

Upon apparent completion of all work required to be completed by this intermediate date, a final inspection will be held in accordance with Article 105-7 of the *2012 Standard Specifications* and upon acceptance, the Department will assume responsibility for the maintenance of all work except *Planting, Reforestation* and/or *Permanent Vegetation Establishment*. The Contractor will be responsible for and make corrections of all damages to the completed roadway caused by his planting operations, whether occurring prior to or after placing traffic through the project.

Revise the *2012 Standard Specifications* as follows:

Page 1-6, Article 101, delete Intermediate Completion Date and the definition and substitute the following:

INTERMEDIATE COMPLETION DATE: That date as determined by adding the number of calendar days bid by the Contractor to the date of availability, or as revised by authorized extensions, by which date it is required that the intermediate work set forth in the contract will be satisfactorily completed. The date of availability will be counted as the first contract calendar day.

Page 1-6, Article 101, delete Intermediate Contract Time (Days) and the definition and substitute the following:

INTERMEDIATE CONTRACT TIME (DAYS): The number of days bid by the Contractor including authorized extensions to the intermediate completion date.

Page 1-15, Subarticle 102-8(A)(6), line 15, delete the second sentence of (6) and substitute the following:

The total amount bid shall be determined by adding the amounts bid for each item and for the contract time.

Page 1-16, Subarticle 102-8(B), add the following paragraph after line 23:

(10) The intermediate contract time bid shall be entered in the Expedite file. The number of calendar days shall be entered in figures in the "Unit Cost" column. The amount bid for the contract time will be determined by multiplying the number of calendar days bid by the daily cost per calendar day indicated in the proposal/electronic bid file and shall be the amount appearing in figures in the "Amount" column of the electronic bid.

Page 1-19, Article 102-14, add the following paragraph after the first paragraph, line 33:

Any bid submitted in which the Bidder fails to bid the intermediate contract time or bids more intermediate contract time than specified in these provisions shall be considered nonresponsive and will not be read.

Page 1-21, Article 103-1, delete the first paragraph and substitute the following:

After the bids are opened and read, they will be compared on the basis of the summation of the products of the quantities shown in the bid schedule and the unit bid prices and the product of the cost per calendar day shown in the bid schedule and the contract time. The results of such comparisons will be immediately available to the public. In the event of errors, omissions, discrepancies, in the bid prices or contract time bid, corrections to the bid prices or contract time bid will be made in accordance with Article 103-2 of the *2012 Standard Specifications*. Such corrected bid prices or contract time bid will be used for comparison and consideration of bids.

Page 1-24, Subarticle 103-4(A), line 10, delete this subarticle and substitute the following:

(A) General

The award of the contract, if it is awarded, will be made by the Department, to the lowest responsible Bidder. In determining the total amount bid by a Bidder, the Department will consider the dollar amount bid to perform all the work under the terms of the contract and the total number of calendar days to complete the intermediate work. The lowest bid will be determined by the Department as the lowest combination of (A) and (B) according to the following formula:

Total Amount Bid = A + (B x DC) where:

A = the total dollar amount for all work to be performed under the contract,

B = the intermediate contract time in calendar days bid not to exceed the maximum number of calendar days specified in the proposal, and

DC = is the daily cost as stipulated in the proposal.

The preceding formula shall be used only to determine the lowest and best bid and shall not be used to determine the final payment to the Contractor upon completion of the work.

In the event that two or more Bidders submit the lowest total bid, the award, if made, will be made to the Bidder bidding the lowest number of calendar days to complete the intermediate work.

The lowest responsible Bidder will be notified by letter that his bid has been accepted and that he has been awarded the contract. This letter shall constitute the notice of award. The notice of award, if the award is made, will be issued within 60 days after the opening of bids, except that with consent of the lowest responsible Bidder, the decision to award the contract to such Bidder may be delayed for as long a time as may be agreed upon by the Department and such Bidder. In the absence of such agreement, the lowest responsible Bidder may withdraw his bid at the expiration of the 60 days without penalty if no notice of award has been issued.

Award of a contract involving any unbalanced bid price(s) may be made in accordance with Article 102-14 of the *2012 Standard Specifications*.

Page 1-71, Subarticle 108-10(B)(1), line 5, delete this subarticle and substitute the following:

(1) If the total dollar value of the final quantities adjusted as provided herein less the dollar value of quantities represented by supplemental agreements which previously extended the completion date, or intermediate completion date, or intermediate completion time, exceeds the dollar value of the total amount bid, excluding the amount bid for contract time or intermediate contract time, the completion date, intermediate completion date or intermediate completion time will be extended by the number of calendar days or hours obtained by multiplying the contract time (days), intermediate contract time (days) or intermediate contract time (hours) as bid or set forth in the special provisions by that percentage that such reduced final dollar value exceeds the total amount bid, excluding

the amount bid for contract time or intermediate contract time. The total dollar value of the final quantities for pro-rata computations shall be adjusted by excluding the following:

(a) Unit bid price changes caused by price adjustments to asphalt cement.

(b) Fuel adjustments.

(c) Unit price reductions under the provisions of Article 105-3 of the *2012 Standard Specifications*.

(d) Payment for trainees.

(e) Unit price changes due to pay factors established by the Specifications.

Page 1-72, Subarticle 108-10(B)(5), line 27, delete this subarticle and substitute the following:

(5) In the event accumulated authorized extensions in the completion date or intermediate completion date extend the completion date or intermediate completion date beyond December 15 following expiration of the completion date or intermediate completion date, the completion date or intermediate complete date will be further extended by the number of calendar days between December 15 of one year and March 16 of the following year, provided the accumulated authorized time extensions equal to or exceed ten percent of the original time bid. Where a contract time or intermediate contract time is specified in the contract, the ten percent exclusion specified herein will not be applicable. If any portion of such accumulated authorized time extensions are for delays which occurred after the original contract time or intermediate contract time (days) expired and during the period between December 15 of one year and March 16 of the following year, this portion of the extension will be deducted from the number of additional calendar days awarded due to the extension of the completion date or intermediate completion date beyond December 15.

The Contractor's plea that the maximum allowable contract time (days), intermediate contract time (days), or intermediate contract time (hours) as specified in the contract was insufficient will not be considered grounds as a valid extension in the completion date, intermediate completion date or intermediate completion time.

Page 1-73, Article 108-11, line 13, insert "as bid or" after the word "times" in the third line of the second paragraph.

Page 8-1, Article 800-2, lines 10-12 and 18-20, insert "excluding the amount bid for contract time or intermediate contract time" following the phrase "% of the total amount bid" throughout the article.

INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES:
(2-20-07) (5-22-13) 108 SP1 G14 A

The Contractor shall complete the required work of installing, maintaining, and removing the traffic control devices for lane closures and restoring traffic to the existing traffic pattern. The Contractor shall not close or narrow a lane of traffic on **NC 12** during the following time restrictions:

DAY AND TIME RESTRICTIONS

September 15 thru June 13
From Friday 3:00 P.M. to Monday 7:00 A.M.

June 14 thru September 14
Tuesday thru Thursday From 6:00 A.M. to 8:00 P.M.
From Friday 6:00 A.M. to Monday 8:00 P.M.

In addition, the Contractor shall not close or narrow a lane of traffic on **NC 12**, detain and/or alter the traffic flow on or during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy, including the following schedules:

HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS

1. For **unexpected occurrence** that creates unusually high traffic volumes, as directed by the Engineer.

2. For **New Year's Day**, between the hours of **6:00 A.M.** December 31st and **8:00 P.M.** January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until **8:00 P.M.** the following Tuesday.

3. For **Easter**, between the hours of **6:00 A.M.** Thursday and **8:00 P.M.** Monday.

4. For **Memorial Day**, between the hours of **6:00 A.M.** Friday and **8:00 P.M.** Tuesday.

5. For **Independence Day**, between the hours of **6:00 A.M.** the day before Independence Day and **8:00 P.M.** the day after Independence Day.

   If **Independence Day** is on a Friday, Saturday, Sunday or Monday, then between the hours of **6:00 A.M.** the Thursday before Independence Day and **8:00 P.M.** the Tuesday after Independence Day.

6. For **Labor Day**, between the hours of **6:00 A.M.** Friday and **8:00 P.M.** Tuesday.

7. For **Thanksgiving Day**, between the hours of **6:00 A.M.** Tuesday and **8:00 P.M.** Monday.

8. For **Christmas**, between the hours of **6:00 A.M.** the Friday before the week of Christmas Day and **8:00 P.M.** the following Tuesday after the week of Christmas Day.

Holidays and holiday weekends shall include New Year's, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The Contractor shall schedule his work so that lane closures will not be required during these periods, unless otherwise directed by the Engineer.

The time of availability for this intermediate contract work shall be the time the Contractor begins to install all traffic control devices for lane closures according to the time restrictions listed herein.

The completion time for this intermediate contract work shall be the time the Contractor is required to complete the removal of all traffic control devices for lane closures according to the time restrictions stated above and place traffic in the existing traffic pattern.

The liquidated damages are **Five Hundred Dollars ($500.00)** per **15 minute time period**.

INTERMEDIATE CONTRACT TIME NUMBER 3 AND LIQUIDATED DAMAGES:
(2-20-07) (5-22-13) 108 SP1 G14 E

The Contractor shall complete the required work of installing, maintaining and removing the traffic control devices for road closures and restoring traffic to the existing traffic pattern. The Contractor shall not close **NC 12** during the following time restrictions:

DAY AND TIME RESTRICTIONS

September 15 thru June 13
From Friday 3:00 P.M. to Monday 7:00 A.M.

June 14 thru September 14
Tuesday thru Thursday From 6:00 A.M. to 8:00 P.M.
From Friday 6:00 A.M. to Monday 8:00 P.M.

The maximum allowable time for **hanging girders or deliveries** is **30** minutes for **NC 12**. The Contractor shall reopen the travel lanes to traffic until the existing traffic queue is depleted.

The time of availability for this intermediate contract time will be the time the Contractor begins to install traffic control devices required for the road closures according to the time restrictions stated herein.

The completion time for this intermediate contract time will be the time the Contractor is required to complete the removal of traffic control devices required for the road closures according to the time restrictions stated herein and restore traffic to the existing traffic pattern.

The liquidated damages are **One Thousand Dollars ($1,000.00)** per **15** minute time period.

INTERMEDIATE CONTRACT TIME NUMBER 4 AND LIQUIDATED DAMAGES:
(6-18-13) 108 SP1 G14 L

The Contractor shall complete all work required to construct the roadway and the proposed structure, including the barrier rail, from -L- Station 3147+60 (Bent 51) to -L-Station 3207+37. The Contractor shall concentrate on constructing the portion of the bridge from -L- Station 3147+50 (Bent 51) to -L- Station 3191+30 (Bent 88) as a first part of this intermediate contract time.

The date of availability for this intermediate contract time is the date of availability of the contract.

The completion date for this intermediate contract time is **July 1, 2016**.

The liquidated damages are **Five Thousand Dollars ($ 5,000.00)** per calendar day.

MANDATORY PRE-BID CONFERENCE (Prequalifying To Bid):
(7-18-06) (Rev. 3-25-13) SPI 1-14

In order for all prospective bidders to have an extensive knowledge of the project, all prospective bidders shall attend a mandatory pre-bid conference **on Tuesday, October 29, 2013 from 10:00 a.m. to 12:00 p.m. at**:

NCDOT Fleet and Material Management Unit
Chief Engineers Conference Room
4809 Beryl Road
Raleigh, NC 27606
919-733-2220

(Contractors please use visitor entrance at front of building for access)
The pre-bid conference will include a thorough discussion of the plans, contract pay items, special provisions, etc.

Only bidders who have attended and properly registered at the above scheduled pre-bid conference and who have met all other prequalification requirements will be considered prequalified to bid on this project. A bid received from a bidder who has not attended and properly registered at the above scheduled pre-bid conference will not be accepted and considered for award.

Attendance at the pre-bid conference will not meet the requirements of proper registration unless the individual attending has registered at the pre-bid conference in accordance with the following:

(A) The individual has signed his name on the official roster no later than thirty (30) minutes after the above noted time for the beginning of the conference.

(B) The individual has written in the name and address of the company he or she represents.

(C) Only one company has been shown as being represented by the individual attending.

(D) The individual attending is an officer or permanent employee of the company they are representing.

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

SUSPENSION OF WORK:

In the event that a suspension of work is issued by the Engineer for more than six months and the suspension is beyond the control of the Contractor or the Department as a result of third-party litigation, an adjustment in payment to the Contractor will be made in accordance with the following:

(A) The 20-City Construction Cost Index published in the Engineering News Record that is in effect on the original contract Date of Availability of the project will serve as the baseline index value. The index value most recently reported for the date that the suspension of work is lifted will be compared to the baseline index value. Should the

comparison show an increase, this percentage increase will be applied to all original contract unit and lump sum prices. No adjustment in contract unit and lump sum prices will be made for suspensions of less than six months.

(B) In the event the suspension is less than one year, the adjustment to the original contract unit and lump sum prices is limited to a total 5% adjustment.

(C) In the unlikely event that the suspension exceeds one year, then the adjustment to the original contract unit and lump sum prices is limited to a percentage equal to 5% per annum, prorated by month (e.g. 7.5% cap for 18-month delay).

(D) After the suspension period, the revised unit and lump sum prices will be paid throughout the duration of the project until final acceptance. Any work completed prior to the suspension will be paid at the original contract unit and lump sum prices.

This provision does not preclude the Department from terminating the contract during the suspension period in accordance with Article 108-13 of the *Standard Specifications*. If the contract is terminated, this bid adjustment provision no longer applies and additional compensation will only be provided as allowed for under Article 104-6 of the *Standard Specifications*.

No adjustment in compensation for suspension of work due to litigation will be allowed under Article 104-4 of the *Standard Specifications* except for idle equipment located on the project or demobilization/mobilization of such equipment as directed by the Engineer.

PERMANENT VEGETATION ESTABLISHMENT:

(2-16-12) (Rev. 10-15-13) 104 SP1 G16

Establish a permanent stand of the vegetation mixture shown in the contract. During the period between initial vegetation planting and final project acceptance, perform all work necessary to establish permanent vegetation on all erodible areas within the project limits, as well as, in borrow and waste pits. This work shall include erosion control device maintenance and installation, repair seeding and mulching, supplemental seeding and mulching, mowing, and fertilizer topdressing, as directed. All work shall be performed in accordance with the applicable section of the *2012 Standard Specifications*. All work required for initial vegetation planting shall be performed as a part of the work necessary for the completion and acceptance of the Intermediate Contract Time (ICT). Between the time of ICT and Final Project acceptance, or otherwise referred to as the vegetation establishment period, the Department will be responsible for preparing the required National Pollutant Discharge Elimination System (NPDES) inspection records.

Once the Engineer has determined that the permanent vegetation establishment requirement has been achieved at an 80% vegetation density (the amount of established vegetation per given area to stabilize the soil) and no erodible areas exist within the project limits, the Contractor will be notified to remove the remaining erosion control devices that are no longer needed. The Contractor will be responsible for, and shall correct any areas disturbed by operations performed in permanent vegetation establishment and the removal of temporary erosion control measures, whether occurring prior to or after placing traffic on the project.

Payment for *Response for Erosion Control, Seeding and Mulching, Repair Seeding, Supplemental Seeding, Mowing, Fertilizer Topdressing, Silt Excavation,* and *Stone for Erosion Control* will be made at contract unit prices for the affected items. Work required that is not represented by contract line items will be paid in accordance with Articles 104-7 or 104-3 of the *2012 Standard Specifications*. No additional compensation will be made for maintenance and removal of temporary erosion control items.

MAJOR CONTRACT ITEMS:
(2-19-02) 104 SP1 G28

The following listed items are the major contract items for this contract (see Article 104-5 of the *2012 Standard Specifications*):

Line #	Description
97	Reinforced Concrete Deck Slab
110	FIB 72" Prestressed Concrete Girders
115	Class AA Concrete (Bridge)
	OR
97	Reinforced Concrete Deck Slab
110	FIB 72" Prestressed Concrete Girders
120	Class AA Concrete (Bridge)

SPECIALTY ITEMS:
(7-1-95)(Rev. 1-17-12) 108-6 SP1 G37

Items listed below will be the specialty items for this contract (see Article 108-6 of the *2012 Standard Specifications*).

Line #	Description
32 thru 36	Guardrail
37	Fencing
40 thru 47	Signing
61 thru 66 & 68	Long-Life Pavement Markings
70	Permanent Pavement Markers
71 thru 90	Erosion Control

FUEL PRICE ADJUSTMENT:
(11-15-05) (Rev. 1-17-12) 109-8 SP1 G43

Revise the *2012 Standard Specifications* as follows:

Page 1-83, Article 109-8, Fuel Price Adjustments, add the following:

The base index price for DIESEL #2 FUEL is **$ 3.0655** per gallon. Where any of the following are included as pay items in the contract, they will be eligible for fuel price adjustment.

The pay items and the fuel factor used in calculating adjustments to be made will be as follows:

Description	Units	Fuel Usage Factor Diesel
Unclassified Excavation	Gal/CY	0.29
Borrow Excavation	Gal/CY	0.29
Class IV Subgrade Stabilization	Gal/Ton	0.55
Aggregate Base Course	Gal/Ton	0.55
Asphalt Concrete Base Course, Type ____	Gal/Ton	2.90
Asphalt Concrete Intermediate Course, Type ____	Gal/Ton	2.90
Asphalt Concrete Surface Course, Type ____	Gal/Ton	2.90
Open-Graded Asphalt Friction Course	Gal/Ton	2.90
Sand Asphalt Surface Course, Type ____	Gal/Ton	2.90
Aggregate for Cement Treated Base Course	Gal/Ton	0.55
Portland Cement for Cement Treated Base Course	Gal/Ton	0.55
__" Portland Cement Concrete Pavement	Gal/SY	0.245
Concrete Shoulders Adjacent to __" Pavement	Gal/SY	0.245

PAYOUT SCHEDULE:

(1-19-10) (Rev. 1-17-12) 108 SP1 G57

Submit an Anticipated Monthly Payout Schedule prior to beginning construction. The Anticipated Monthly Payout Schedule will be used by the Department to monitor funding levels for this project. Include a monthly percentage breakdown (in terms of the total contract amount) of the work anticipated to be completed. The schedule should begin with the date the Contractor plans to begin construction and end with the anticipated completion date. Submit updates of the Anticipated Monthly Payout Schedule on March 15, June 15, September 15, and December 15 of each calendar year until project acceptance. Submit the original Anticipated Monthly Payout Schedule and all subsequent updates to the Resident Engineer with a copy to the State Construction Engineer at 1 South Wilmington Street, 1543 Mail Service Center, Raleigh, NC 27699-1543.

SCHEDULE OF ESTIMATED COMPLETION PROGRESS:

(7-15-08) (Rev. 5-21-13) 108-2 SP1 G58

The Contractor's attention is directed to the Standard Special Provision entitled *Availability of Funds Termination of Contracts* included elsewhere in this proposal. The Department of Transportation's schedule of estimated completion progress for this project as required by that Standard Special Provision is as follows:

Fiscal Year		Progress (% of Dollar Value)
2014	(7/01/13 - 6/30/14)	18% of Total Amount Bid
2015	(7/01/14 - 6/30/15)	34% of Total Amount Bid
2016	(7/01/15- 6/30/16)	25% of Total Amount Bid
2017	(7/01/16 - 6/30/17)	18% of Total Amount Bid
2018	(7/01/17 - 6/30/18)	5% of Total Amount Bid

The Contractor shall also furnish his own progress schedule in accordance with Article 108-2 of the *2012 Standard Specifications*. Any acceleration of the progress as shown by the Contractor's progress schedule over the progress as shown above shall be subject to the approval of the Engineer.

DISADVANTAGED BUSINESS ENTERPRISE:

(10-16-07)(Rev. 5-21-13) 102-15(J) SP1 G61

Description

The purpose of this Special Provision is to carry out the U.S. Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts financed in whole or in part with Federal funds. This provision is guided by 49 CFR Part 26.

Definitions

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

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

Contract Goal Requirement - The approved DBE participation at time of award, but not greater than the advertised contract goal.

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

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

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

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

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

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

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

Forms and Websites Referenced in this Provision

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

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

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

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

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

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

Listing of DBE Subcontractors Form - Form for entering DBE subcontractors on a project that will meet this DBE goal. This form is for paper bids only. http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/08%20DBE%20Subcontractors%20(Federal).doc

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

DBE Goal

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

Disadvantaged Business Enterprises **1.0** %

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

(B) *If the DBE goal is zero*, the Contractor shall make an effort to recruit and use DBEs during the performance of the contract. Any DBE participation obtained shall be reported to the Department.

Directory of Transportation Firms (Directory)

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

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

Listing of DBE Subcontractors

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

(A) Electronic Bids

Bidders shall submit a listing of DBE participation in the appropriate section of Expedite, the bidding software of Bid Express®.

(1) Submit the names and addresses of DBE firms identified to participate in the contract. If the bidder uses the updated listing of DBE firms shown in Expedite, the bidder may use the dropdown menu to access the name and address of the DBE firm.

(2) Submit the contract line numbers of work to be performed by each DBE firm. When no figures or firms are entered, the bidder will be considered to have no DBE participation.

(3) The bidder shall be responsible for ensuring that the DBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that DBE's participation will not count towards achieving the DBE goal.

(B) Paper Bids

Blank forms will not be deemed to represent zero participation. Bids submitted that do not have DBE participation indicated on the appropriate form will not be read publicly during the opening of bids. The Department will not consider these bids for award and the proposal will be rejected.

(1) *If the DBE goal is more than zero,*

(a) Bidders, at the time the bid proposal is submitted, shall submit a listing of DBE participation, including the names and addresses on *Listing of DBE Subcontractors* contained elsewhere in the contract documents in order for the bid to be considered responsive. Bidders shall indicate the total dollar value of the DBE participation for the contract.

(b) If bidders have no DBE participation, they shall indicate this on the *Listing of DBE Subcontractors* by entering the word "None" or the number "0." This form shall be completed in its entirety.

(c) The bidder shall be responsible for ensuring that the DBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that DBE's participation will not count towards achieving the DBE goal.

(2) *If the DBE goal is zero,* bidders, at the time the bid proposal is submitted, shall enter the word "None"; or the number "0"; or if there is participation, add the value on the *Listing of DBE Subcontractors* contained elsewhere in the contract documents.

DBE Prime Contractor

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

For example, if the DBE goal is 45% and the DBE bidder will only perform 40% of the contract work, the prime will list itself at 40%, and the additional 5% shall be obtained through additional DBE participation with DBE subcontractors or documented through a good faith effort.

DBE prime contractors shall also follow Sections A and B listed under *Listing of DBE Subcontractor* just as a non-DBE bidder would.

Written Documentation – Letter of Intent

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

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

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

Submission of Good Faith Effort

If the bidder fails to meet or exceed the DBE goal, the apparent lowest responsive bidder shall submit to the Department documentation of adequate good faith efforts made to reach the DBE goal.

A hard copy and an electronic copy of this information shall be received in the office of the State Contractor Utilization Engineer or at DBE@ncdot.gov no later than 12:00 noon of the sixth calendar day following opening of bids unless the sixth day falls on an official state holiday. In that situation, it is due in the office of the State Contractor Utilization Engineer the next official state business day. If the contractor cannot send the information electronically, then one complete set and 9 copies of this information shall be received under the same time constraints above.

Note: Where the information submitted includes repetitious solicitation letters, it will be acceptable to submit a representative letter along with a distribution list of the firms that were solicited. Documentation of DBE quotations shall be a part of the good faith effort submittal. This documentation may include written subcontractor quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

Consideration of Good Faith Effort for Projects with DBE Goals More Than Zero

Adequate good faith efforts mean that the bidder took all necessary and reasonable steps to achieve the goal which, by their scope, intensity, and appropriateness, could reasonably be

expected to obtain sufficient DBE participation. Adequate good faith efforts also mean that the bidder actively and aggressively sought DBE participation. Mere *pro forma* efforts are not considered good faith efforts.

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

(A) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising, written notices, use of verifiable electronic means through the use of the NCDOT Directory of Transportation Firms) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within at least 10 days prior to bid opening to allow the DBEs to respond to the solicitation. Solicitation shall provide the opportunity to DBEs within the Division and surrounding Divisions where the project is located. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

(B) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved.

(1) Where appropriate, break out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

(2) Negotiate with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be sublet includes potential for DBE participation (2nd and 3rd tier subcontractors).

(C) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

(D) (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration.

However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidding contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

(E) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associates and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.

(F) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or bidder.

(G) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

(H) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; Federal, State, and local minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs. Contact within 7 days from the bid opening the Business Development Manager in the Business Opportunity and Work Force Development Unit to give notification of the bidder's inability to get DBE quotes.

(I) Any other evidence that the bidder submits which shows that the bidder has made reasonable good faith efforts to meet the DBE goal.

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

(1) Whether the bidder's documentation reflects a clear and realistic plan for achieving the DBE goal.

(2) The bidders' past performance in meeting the DBE goals.

(3) The performance of other bidders in meeting the DBE goal. For example, when the apparent successful bidder fails to meet the DBE goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the DBE goal, but meets or exceeds the average DBE participation obtained by other bidders, the Department may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made a good faith effort.

If the Department does not award the contract to the apparent lowest responsive bidder, the Department reserves the right to award the contract to the next lowest responsive bidder that can satisfy to the Department that the DBE goal can be met or that an adequate good faith effort has been made to meet the DBE goal.

Non-Good Faith Appeal

The State Contractor Utilization Engineer will notify the contractor verbally and in writing of non-good faith. A contractor may appeal a determination of non-good faith made by the Goal Compliance Committee. If a contractor wishes to appeal the determination made by the Committee, they shall provide written notification to the State Contractual Services Engineer or at DBE@ncdot.gov. The appeal shall be made within 2 business days of notification of the determination of non-good faith.

Counting DBE Participation Toward Meeting DBE Goal

(A) Participation

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

(B) Joint Checks

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

(C) Subcontracts (Non-Trucking)

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

(D) Joint Venture

When a DBE performs as a participant in a joint venture, the Contractor may count toward its contract goal requirement a portion of the total value of participation with the DBE in the joint venture, that portion of the total dollar value being a distinct clearly defined portion of work that the DBE performs with its forces.

(E) Suppliers

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

(F) Manufacturers and Regular Dealers

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

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

(2) With respect to materials or supplies purchased from a DBE, which is neither a manufacturer nor a regular dealer, count the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site (but not the cost of the materials and supplies themselves), provided the fees are determined to be reasonable and not excessive as compared with fees customarily allowed for similar services.

Commercially Useful Function

(A) DBE Utilization

The Contractor may count toward its contract goal requirement only expenditures to DBEs that perform a commercially useful function in the work of a contract. A DBE 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 DBE 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 DBE is performing a commercially useful function, the Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and any other relevant factors.

(B) DBE Utilization in Trucking

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

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

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

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

(4) The DBE may subcontract the work to another DBE firm, including an owner-operator who is certified as a DBE. The DBE who subcontracts work to another DBE receives credit for the total value of the transportation services the subcontracted DBE provides on the contract.

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

(6) A DBE may lease truck(s) from an established equipment leasing business open to the general public. The lease must indicate that the DBE has exclusive use of and control over the truck. This requirement does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. This type of lease may count toward the DBE's credit as long as the driver is under the DBE's payroll.

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

DBE Replacement

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

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

The Contractor shall comply with the following for replacement of a committed DBE:

(A) Performance Related Replacement

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

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

(1) Copies of written notification to DBEs that their interest is solicited in contracting the work defaulted by the previous DBE or in subcontracting other items of work in the contract.

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

(a) The names, addresses, and telephone numbers of DBEs who were contacted.

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

(3) A list of reasons why DBE quotes were not accepted.

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

(B) Decertification Replacement

(1) When a committed DBE is decertified by the Department after the SAF (*Subcontract Approval Form*) has been received by the Department, the Department will not require the Contractor to solicit replacement DBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement.

(2) When a committed DBE is decertified prior to the Department receiving the SAF (*Subcontract Approval Form*) for the named DBE firm, the Contractor shall take all necessary and reasonable steps to replace the DBE subcontractor with another DBE subcontractor to perform at least the same amount of work to meet the DBE goal requirement. If a DBE firm is not found to do the same amount of work, a good faith effort must be submitted to NCDOT (see A herein for required documentation).

Changes in the Work

When the Engineer makes changes that result in the reduction or elimination of work to be performed by a committed DBE, 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 DBE based upon the Contractor's commitment, the DBE shall participate in additional work to the same extent as the DBE participated in the original contract work.

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

When the Engineer makes changes that result in an alteration of plans or details of construction, and a portion or all of the work had been expected to be performed by a committed DBE, the Contractor shall seek participation by DBEs 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 DBE, the Contractor shall seek additional participation by DBEs equal to the reduced DBE participation caused by the changes.

Reports and Documentation

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

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

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

Reporting Disadvantaged Business Enterprise Participation

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

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

(B) Removal of an approved contractor from the prequalified bidders' list or the removal of other entities from the approved subcontractors list.

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

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

Failure on the part of any subcontractor to submit the required information in the time frame specified may result in the disqualification of that contractor and any affiliate companies from being approved for work on future DOT projects until the required information is submitted.

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

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

(A) Electronic Bids Reporting

The Contractor shall report the accounting of payments through the Department's DBE Payment Tracking System.

(B) Paper Bids Reporting

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

Failure to Meet Contract Requirements

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

CERTIFICATION FOR FEDERAL-AID CONTRACTS:

(3-21-90) SP1 G85

The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

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

(B) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, *Disclosure Form to Report Lobbying*, in accordance with its instructions.

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

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.

U.S. DEPARTMENT OF TRANSPORTATION HOTLINE:

(11-22-94) 108-5 SP1 G100

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

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

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

SUBSURFACE INFORMATION:
(7-1-95) 450 SP1 G112 D

Subsurface information is available on the roadway and structure portions of this project.

LOCATING EXISTING UNDERGROUND UTILITIES:
(3-20-12) 105 SP1 G115

Revise the *2012 Standard Specifications* as follows:

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

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

RESOURCE CONSERVATION:
(5-21-13) 104-13 SP1 G118

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

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

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

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

DOMESTIC STEEL:
(4-16-13) 106 SP1 G120

Revise the *2012 Standard Specifications* as follows:

Page 1-49, Subarticle 106-1(B) Domestic Steel, lines 2-7, replace the first paragraph with the following:

All steel and iron products that are permanently incorporated into this project shall be produced in the United States except minimal amounts of foreign steel and iron products may be used provided the combined material cost of the items involved does not exceed 0.1% of the total amount bid for the entire project or $2,500, whichever is greater. If invoices showing the cost of the material are not provided, the amount of the bid item involving the foreign material will be used for calculations. This minimal amount of foreign produced steel and iron products permitted for use is not applicable to high strength fasteners. Domestically produced high strength fasteners are required.

PORTABLE CONCRETE BARRIER - (Partial Payments for Materials):
(7-1-95) (Rev. 8-16-11) 1170-4 SP1 G121

When so authorized by the Engineer, partial materials payments will be made up to 95 percent of the delivered cost of portable concrete barrier, provided that these materials have been delivered on the project and stored in an acceptable manner, and further provided the documents listed in Subarticle 109-5(C) of the *2012 Standard Specifications* have been furnished to the Engineer.

The provisions of Subarticle 109-5(B) of the *2012 Standard Specifications* will apply to the portable concrete barrier.

MAINTENANCE OF THE PROJECT:
(11-20-07) (Rev. 1-17-12) 104-10 SP1 G125

Revise the *2012 Standard Specifications* as follows:

Page 1-35, Article 104-10 Maintenance of the Project, line 25, add the following after the first sentence of the first paragraph:

All guardrail/guiderail within the project limits shall be included in this maintenance.

Page 1-35, Article 104-10 Maintenance of the Project, line 30, add the following as the last sentence of the first paragraph:

The Contractor shall perform weekly inspections of guardrail and guiderail and shall report damages to the Engineer on the same day of the weekly inspection. *Where damaged guardrail or guiderail is repaired or replaced as a result of maintaining the project in* accordance with this article, such repair or replacement shall be performed within 7 consecutive calendar days of such inspection report.

Page 1-35, Article 104-10 Maintenance of the Project, lines 42-44, replace the last sentence of the last paragraph with the following:

The Contractor will not be directly compensated for any maintenance operations necessary, except for maintenance of guardrail/guiderail, as this work will be considered incidental to the work covered by the various contract items. The provisions of Article 104-7, Extra Work, and Article 104-8, Compensation and Record Keeping will apply to authorized maintenance of guardrail/guiderail. Performance of weekly inspections of guardrail/guiderail, and the damage reports required as described above, will be considered to be an incidental part of the work being paid for by the various contract items.

BID DOCUMENTATION:
(1-1-02) (Rev. 9-18-12) 103 SP1 G142

General

The successful Bidder (Contractor) shall submit the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation used to prepare the bid for this contract to the Department within 10 days after receipt of notice of award of contract. Such

documentation shall be placed in escrow with a banking institution or other bonded document storage facility selected by the Department.

The Department will not execute the contract until the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation has been received by the Department.

Terms

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

Contractor's Representative - Officer of the Contractor's company; if not an officer, the Contractor shall supply a letter signed and notarized by an officer of the Contractor's company, granting permission for the representative to sign the escrow agreement on behalf of the Contractor.

Escrow Agent - Officer of the select banking institution or other bonded document storage facility authorized to receive and release bid documentation.

Escrow Agreement Information

A copy of the Escrow Agreement will be mailed to the Bidder with the notice of award for informational purposes. The Bidder and Department will sign the actual Escrow Agreement at the time the bid documentation is delivered to the escrow agent.

Failure to Provide Bid Documentation

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

Submittal of Bid Documentation

(A) Appointment – Email specs@ncdot.gov or call 919.707.6900 to schedule an appointment.

(B) Delivery - A representative of the Bidder shall deliver the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation to the Department, in a container suitable for sealing, within 10 days after the notice of award is received by him. Bid documentation will be considered a certified copy if the Bidder includes a letter to the Department from a chief officer of the company stating that the enclosed documentation is an *EXACT* copy of the original documentation. The letter shall be signed by a chief officer of the company, have the person's name and title typed below the signature, and the signature shall be notarized at the bottom of the letter.

(C) Packaging – The container shall be no larger than 15.5 inches in length by 12 inches wide by 11 inches high and shall be water resistant. The container shall be clearly marked on the face and the back of the container with the following information: Bid Documentation, Bidder's Name, Bidder's Address, Date of Escrow Submittal, Contract Number, TIP Number if applicable, and County.

Affidavit

In addition to the bid documentation, an affidavit signed under oath by an individual authorized by the Bidder to execute the bid shall be included. The affidavit shall list each bid document with sufficient specificity so a comparison may be made between the list and the bid documentation to ensure that all of the bid documentation listed in the affidavit has been enclosed. The affidavit shall attest that the affiant has personally examined the bid documentation, that the affidavit lists all of the documents used by the Bidder to determine the bid for this project, and that all such bid documentation has been included.

Verification

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

Confidentiality of Bid Documentation

The bid documentation and affidavit in escrow are, and will remain, the property of the Bidder. The Department has no interest in, or right to, the bid documentation and affidavit other than to verify the contents and legibility of the bid documentation unless the Contractor gives written notice of intent to file a claim, files a written claim, files a written and verified claim, or initiates

litigation against the Department. In the event of such written notice of intent to file a claim, filing of a written claim, filing a written and verified claim, or initiation of litigation against the Department, or receipt of a letter from the Contractor authorizing release, the bid documentation and affidavit may become the property of the Department for use in considering any claim or in litigation as the Department may deem appropriate.

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

Duration and Use

The bid documentation and affidavit shall remain in escrow until 60 calendar days from the time the Contractor receives the final estimate; or until such time as the Contractor:

(A) Gives written notice of intent to file a claim,
(B) Files a written claim,
(C) Files a written and verified claim,
(D) Initiates litigation against the Department related to the contract; or
(E) Authorizes in writing its release.

Upon the giving of written notice of intent to file a claim, filing a written claim, filing a written and verified claim, or the initiation of litigation by the Contractor against the Department, or receipt of a letter from the Contractor authorizing release, the Department may obtain the release and custody of the bid documentation.

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

Release of Bid Documentation to the Contractor

If the bid documentation remains in escrow 60 calendar days after the time the Contractor receives the final estimate and the Contractor has not filed a written claim, filed a written and verified claim, or has not initiated litigation against the Department related to the contract, the Department will instruct the escrow agent to release the sealed container to the Contractor.

The Contractor will be notified by certified letter from the escrow agent that the bid documentation will be released to the Contractor. The Contractor or his representative shall retrieve the bid documentation from the escrow agent within 30 days of the receipt of the certified letter. If the Contractor does not receive the documents within 30 days of the receipt of the certified letter, the Department will contact the Contractor to determine final dispersion of the bid documentation.

Payment

The cost of the escrow will be borne by the Department. There will be no separate payment for all costs of compilation of the data, container, or verification of the bid documentation. Payment at the various contract unit or lump sum prices in the contract will be full compensation for all such costs.

TWELVE MONTH GUARANTEE:
(7-15-03) 108 SP1 G145

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

(B) Where items of equipment or material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply for that particular piece of equipment or material. The Department's first remedy shall be through the manufacturer although the Contractor is responsible for invoking the warranted repair work with the manufacturer. The Contractor's responsibility shall be limited to the term of the manufacturer's guarantee. NCDOT would be afforded the same warranty as provided by the Manufacturer.

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

Appropriate provisions of the payment and/or performance bonds shall cover this guarantee for the project.

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

GIFTS FROM VENDORS AND CONTRACTORS:
(12-15-09) 107-1 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:

(A) Have a contract with a governmental agency; or
(B) Have performed under such a contract within the past year; or
(C) 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 *N.C.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.

EROSION AND SEDIMENT CONTROL/STORMWATER CERTIFICATION:

(1-16-07) (Rev 9-18-12) 105-16, 225-2, 16 SP1 G180

General

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

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

(A) *Certified Supervisor* - Provide a certified Erosion and Sediment Control/Stormwater Supervisor to manage the Contractor and subcontractor operations, insure compliance with Federal, State and Local ordinances and regulations, and manage the Quality Control Program.

(B) *Certified Foreman* - Provide a certified, trained foreman for each construction operation that increases the potential for soil erosion or the possible sedimentation and turbidity of surface waters.

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

(D) *Certified Designer* - Provide a certified designer for the design of the erosion and sediment control/stormwater component of reclamation plans and, if applicable, for the design of the project erosion and sediment control/stormwater plan.

Roles and Responsibilities

(A) *Certified Erosion and Sediment Control/Stormwater Supervisor* - The Certified Supervisor shall be Level II and responsible for ensuring the erosion and sediment control/stormwater plan is adequately implemented and maintained on the project and for conducting the quality control program. The Certified Supervisor shall be on the project

within 24 hours notice from initial exposure of an erodible surface to the project's final acceptance. Perform the following duties:

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

(a) Oversee the work of subcontractors so that appropriate erosion and sediment control/stormwater preventive measures are conformed to at each stage of the work.
(b) Prepare the required National Pollutant Discharge Elimination System (NPDES) Inspection Record and submit to the Engineer.
(c) Attend all weekly or monthly construction meetings to discuss the findings of the NPDES inspection and other related issues.
(d) Implement the erosion and sediment control/stormwater site plans requested.
(e) Provide any needed erosion and sediment control/stormwater practices for the Contractor's temporary work not shown on the plans, such as, but not limited to work platforms, temporary construction, pumping operations, plant and storage yards, and cofferdams.
(f) Acquire applicable permits and comply with requirements for borrow pits, dewatering, and any temporary work conducted by the Contractor in jurisdictional areas.
(g) Conduct all erosion and sediment control/stormwater work in a timely and workmanlike manner.
(h) Fully perform and install erosion and sediment control/stormwater work prior to any suspension of the work.
(i) Coordinate with Department, Federal, State and Local Regulatory agencies on resolution of erosion and sediment control/stormwater issues due to the Contractor's operations.
(j) Ensure that proper cleanup occurs from vehicle tracking on paved surfaces or any location where sediment leaves the Right-of-Way.
(k) Have available a set of erosion and sediment control/stormwater plans that are initialed and include the installation date of Best Management Practices. These practices shall include temporary and permanent groundcover and be properly updated to reflect necessary plan and field changes for use and review by Department personnel as well as regulatory agencies.

(2) Requirements set forth under the NPDES Permit - The Department's NPDES Stormwater permit (NCS000250) outlines certain objectives and management measures pertaining to construction activities. The permit references *NCG010000, General Permit to Discharge Stormwater* under the NPDES, and states that the Department shall incorporate the applicable requirements into its delegated Erosion and Sediment Control Program for construction activities disturbing one or more acres of land. The Department further incorporates these

requirements on all contracted bridge and culvert work at jurisdictional waters, regardless of size. Some of the requirements are, but are not limited to:

(a) Control project site waste to prevent contamination of surface or ground waters of the state, i.e. from equipment operation/maintenance, construction materials, concrete washout, chemicals, litter, fuels, lubricants, coolants, hydraulic fluids, any other petroleum products, and sanitary waste.
(b) Inspect erosion and sediment control/stormwater devices and stormwater discharge outfalls at least once every 7 calendar days, twice weekly for construction related *Federal Clean Water Act, Section 303(d)* impaired streams with turbidity violations, and within 24 hours after a significant rainfall event of 0.5 inch that occurs within a 24 hour period.
(c) Maintain an onsite rain gauge or use the Department's Multi-Sensor Precipitation Estimate website to maintain a daily record of rainfall amounts and dates.
(d) Maintain erosion and sediment control/stormwater inspection records for review by Department and Regulatory personnel upon request.
(e) Implement approved reclamation plans on all borrow pits, waste sites and staging areas.
(f) Maintain a log of turbidity test results as outlined in the Department's Procedure for Monitoring Borrow Pit Discharge.
(g) Provide secondary containment for bulk storage of liquid materials.
(h) Provide training for employees concerning general erosion and sediment control/stormwater awareness, the Department's NPDES Stormwater Permit NCS000250 requirements, and the applicable requirements of the *General Permit, NCG010000.*
(i) Report violations of the NPDES permit to the Engineer immediately who will notify the Division of Water Quality Regional Office within 24 hours of becoming aware of the violation.

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

(a) Follow permit requirements related to the Contractor and subcontractors' construction activities.
(b) Ensure that all operators and subcontractors on site have the proper erosion and sediment control/stormwater certification.
(c) Notify the Engineer when the required certified erosion and sediment control/stormwater personnel are not available on the job site when needed.
(d) Conduct the inspections required by the NPDES permit.
(e) Take corrective actions in the proper timeframe as required by the NPDES permit for problem areas identified during the NPDES inspections.

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

(g) Use flocculants approved by state regulatory authorities where appropriate and where required for turbidity and sedimentation reduction.

(h) Ensure proper installation and maintenance of temporary erosion and sediment control devices.

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

(j) The Contractor's quality control and inspection procedures shall be subject to review by the Engineer. Maintain NPDES inspection records and make records available at all times for verification by the Engineer.

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

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

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

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

(C) *Certified Installers* - Provide at least one onsite, Level I Certified Installer for each of the following erosion and sediment control/stormwater crew:

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

If a Level I *Certified Installer* is not onsite, the Contractor may substitute a Level II Foreman for a Level I Installer, provided the Level II Foreman is not tasked to another crew requiring Level II Foreman oversight.

(D) *Certified Designer* - Include the certification number of the Level III-B Certified Designer on the erosion and sediment control/stormwater component of all reclamation plans and if applicable, the certification number of the Level III-A Certified Designer on the design of the project erosion and sediment control/stormwater plan.

Preconstruction Meeting

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

Ethical Responsibility

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

Revocation or Suspension of Certification

Upon recommendation of the Chief Engineer to the certification entity, certification for *Supervisor*, *Certified Foremen*, *Certified Installers* and *Certified Designer* may be revoked or suspended with the issuance of an *Immediate Corrective Action (ICA), Notice of Violation (NOV),* or C*ease and Desist Order* for erosion and sediment control/stormwater related issues.

The Chief Engineer may recommend suspension or permanent revocation of certification due to the following:

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

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

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

Chief Engineer
1536 Mail Service Center
Raleigh, NC 27699-1536

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

The Chief Engineer will hear the appeal and make a decision within 7 days of hearing the appeal. Decision of the Chief Engineer will be final and will be made in writing to the certificant.

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

Measurement and Payment

Certified Erosion and Sediment Control/Stormwater Supervisor, Certified Foremen, Certified Installers and *Certified Designer* will be incidental to the project for which no direct compensation will be made.

PROCEDURE FOR MONITORING BORROW PIT DISCHARGE:

(2-20-07) (Rev. 3-19-13) 105-16, 230, 801 SP1 G181

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

If during any operating day, the downstream water quality exceeds the standard, the Contractor shall do all of the following:

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

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

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

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

During the Environmental Assessment required by Article 230-4 of the *2012 Standard Specifications*, the Contractor shall define the point at which the discharge enters into the State's surface waters and the appropriate sampling locations. Sampling locations shall include points upstream and downstream from the point at which the discharge enters these waters. Upstream sampling location shall be located so that it is not influenced by backwater conditions and represents natural background conditions. Downstream sampling location shall be located at the point where complete mixing of the discharge and receiving water has occurred.

The discharge shall be closely monitored when water from the dewatering activities is introduced into jurisdictional wetlands. Any time visible sedimentation (deposition of sediment) on the wetland surface is observed, the dewatering activity will be suspended until turbidity levels in the stilling basin can be reduced to a level where sediment deposition does not occur. Staining of wetland surfaces from suspended clay particles, occurring after evaporation or infiltration, does not constitute sedimentation. No activities shall occur in wetlands that adversely affect the functioning of a wetland. Visible sedimentation will be considered an indication of possible adverse impacts on wetland use.

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

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

The Contractor may use cation exchange capacity (CEC) values from proposed site borings to plan and develop the bid for the project. CEC values exceeding 15 milliequivalents per

100 grams of soil may indicate a high potential for turbidity and should be avoided when dewatering into surface water is proposed.

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

EMPLOYMENT:
(11-15-11) (Rev. 1-17-12) 108, 102 SP1 G184

Revise the *2012 Standard Specifications* as follows:

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

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

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

STATE HIGHWAY ADMINISTRATOR TITLE CHANGE:
(9-18-12) SP1 G185

Revise the *2012 Standard Specifications* as follows:

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

NOTES TO CONTRACTOR:

1) All construction equipment and personnel shall avoid all marked sea turtle nests. During turtle nesting season (May 1 to November 15), use the minimum number and the lowest wattage lights that are necessary for construction. During turtle nesting season, portable construction lighting shall be amber-colored LED lights with a predominant wavelength of approximately 650 nanometers. During turtle nesting season, utilize directional shields on all portable construction lights, and avoid directly illuminating the turtle nesting beach at night. During turtle nesting season, all portable construction lights shall be mounted as low to the ground as possible and all lights shall be turned off when not needed.
2) In order to obtain fresh water for construction activities on this project the Contractor will be allowed to construct a well within the Department's existing Right of Way and the location must be approved by the Engineer. The well shall be properly sealed in accordance with Section 205 of the *Standard Specifications* when its use is no longer required. No separate measurement or payment will be made for this work as it is considered incidental to the various items in the contract.
3) All construction equipment and personnel shall avoid all Piping Plover designated bird closure areas within the Seashore and Refuge.
4) The Contractor's attention is directed to the fact that Pea Island National Wildlife Refuge staff shall be allowed access to and use of all existing Refuge facilities and storage buildings during construction.
5) All areas where Undercut is preformed shall be backfilled with Select Granular Material, Class III. Payment for the backfill will be at the contract unit price per cubic yard for "Select Granular Material Class III".

PROJECT SPECIAL PROVISIONS

ROADWAY

CLEARING AND GRUBBING - METHOD II:

(9-17-02) (Rev. 1-17-12) 200 SP2 R02A

Perform clearing on this project to the limits established by Method "II" shown on Standard Drawing No. 200.02 of the *2012 Roadway Standard Drawings*.

TEMPORARY DETOURS:

(8-15-00) (Rev. 4-15-08) 1101 SP2 R30 B

Construct the temporary detours required on this project in accordance with the typical sections in the plans or as directed by the Engineer.

After the detours have served their purpose, remove the portions deemed unsuitable for use as a permanent part of the project as directed by the Engineer. Salvage and stockpile the aggregate base course removed from the detours at locations within the right of way, as directed by the Engineer, for removal by State Forces. Place pavement and earth material removed from the detour in embankments or dispose of in waste areas furnished by the Contractor.

Pipe culverts removed from the detours remain the property of the Contractor. Pipe culverts that are removed will be measured and will be paid at the contract unit price per linear foot for *Pipe Removal*. Payment for the construction of the detours will be made at the contract unit prices for the various items involved.

No direct payment will be made for removing the aggregate base course, earth material and pavement, as the cost of same shall be included in the lump sum price bid for *Grading*. Such prices and payments will be full compensation for the work of removing, salvaging, and stockpiling aggregate base course; removing pipe culverts; and for placing earth material and pavement in embankments or disposing of earth material and pavement in waste areas.

SUPPLEMENTAL UNCLASSIFIED EXCAVATION:

(11-19-13) 225 SPI

Description

Perform excavation not directly associated with the construction of the project; including, but not limited to, Survey Lines "—L—", "—Det—", "—Access—", "—X1—", "—X2—", "—X3—", "—X4—", "—X5—", in accordance with Articles 225-3, 225-5, 225-6, and 225-7 of the *Standard Specifications* and as directed by the Engineer.

Construction Methods

Supplemental unclassified excavation shall be performed when wind, over wash or other events deposit material within or adjacent to travelways that are open to the public, create a safety hazard, or as directed by the Engineer. All efforts shall be taken to retain the excavated material within the project limits. The excavated material shall be used for, but not limited to, the flattening of existing slopes, wedging pavement drop offs, leveling pads for construction staging and equipment, and creating protective berms and stockpiles.

In extraordinary circumstances or catastrophic events, the Department reserves the right to perform this supplemental borrow excavation with state forces or other contracting methods.

Measurement and Payment

Supplemental Unclassified Excavation will be measured in accordance with Article 225-7 of the *Standard Specifications*.

Payment will be made under:

Pay Item	Pay Unit
Supplemental Unclassified Excavation	Cubic Yard

SUPPLEMENTAL BORROW EXCAVATION:

(11-19-13) 230 SPI

Description

Perform borrow excavation not directly associated with the construction of the project; including, but not limited to, Survey Lines "—L—", "—Det—", "—Access—", "—X1—", "—X2—", "—X3—", "—X4—", "—X5—", in accordance with Section 230 of the *Standard Specifications* and as directed by the Engineer.

Construction Methods

Supplemental borrow excavation shall be performed when wind-blown sand, over wash or other events removes earthen material from within or adjacent to travelways that are open to the public, create a safety hazard, or as directed by the Engineer.

In extraordinary circumstances or catastrophic events, the Department reserves the right to perform this supplemental excavation with state forces or other contracting methods.

Measurement and Payment

Supplemental Borrow Excavation will be measured in accordance with Article 230-5 of the *Standard Specifications*.

Payment will be made under:

Pay Item	Pay Unit
Supplemental Borrow Excavation	Cubic Yard

GROUND MOUNTED SIGN SUPPORT MODIFICATION:

(11-19-13) 903 SPI

The current "Signing and Pavement Marking Plans" call for 3-Lb. Steel U-Channel Supports to be used for ground-mounted signs. The Contractor is hereby notified that where 3-Lb Steel U-Channel Supports are called for in the plans, he shall instead provide "Wood Supports". Wood supports shall be in accordance with Section 903 of the *Standard Specifications*. All other requirements of the "Signing and Pavement Marking Plans" shall remain in effect. *Supports, Wood* will be measured and paid in linear feet in accordance with Section 903 of the *Standard Specifications*.

SHOULDER AND FILL SLOPE MATERIAL:

(5-21-02) 235, 560 SP2 R45 A

Description

Perform the required shoulder and slope construction for this project in accordance with the applicable requirements of Section 560 and Section 235 of the *2012 Standard Specifications*.

Measurement and Payment

Where the material has been obtained from an authorized stockpile or from a borrow source and *Borrow Excavation* is not included in the contract, no direct payment will be made for this work, as the cost of this work will be part of the work being paid at the contract lump sum price for *Grading*. If *Borrow Excavation* is included in this contract and the material has been obtained from an authorized stockpile or from a borrow source, measurement and payment will be as provided in Section 230 of the *2012 Standard Specifications* for *Borrow Excavation*.

SANDBAG REMOVAL:

Description

Remove sandbag material and any associated fabric from the areas indicated on the plans and dispose of in accordance with the *Standard Specifications* and all applicable ordinances and regulations and as directed by the Engineer.

Construction Methods

Existing sandbags shall be opened on site, emptied of sand and the bag material shall be properly disposed of. Remove and properly dispose of any underlying fabric, geotextile or other associated material. Sand contained in existing sandbags shall not be removed from the site but shall be placed back in the area currently occupied by existing sandbags, then graded and shaped to a condition satisfactory to the Engineer.

Measurement and Payment

Sandbag removal shall be paid for at the contract lump sum price bid for *Remove Existing Sandbags*. Such price and payment shall be full compensation for all work covered by this provision including, but not limited to, emptying sandbags of sand, removal of other associated materials, disposal of materials, placing of sand, grading and shaping of area and any incidentals necessary to satisfactorily accomplish the work of *Remove Existing Sandbags*.

Payment will be made under:

Remove Existing Sandbags.....Lump Sum

SELECT GRANULAR MATERIAL:
(3-16-10) (Rev. 1-17-12) 265 SP2 R80

Revise the *2012 Standard Specifications* as follows:

Page 2-28, Article 265-2 MATERIALS, add the following:

Use only Class III select material for select granular material.

Page 2-28, Article 265-4 MEASUREMENT AND PAYMENT, lines 13-30, replace all occurrences of *Select Granular Material* with *Select Granular Material, Class III.*

Page 2-28, Article 265-4 MEASUREMENT AND PAYMENT, after line 31, delete the pay item and replace with the following:

Payment will be made under:

Pay Item	Pay Unit
Select Granular Material, Class III	Cubic Yard

PIPE INSTALLATION:
(11-20-12) 300 SP3 R01

Revise the *2012 Standard Specifications* as follows:

Page 3-1, Article 300-2, Materials, line 23-24, replace sentence with:

Provide foundation conditioning geotextile in accordance with Section 1056 for Type 4 geotextile.

ASPHALT PAVEMENTS - SUPERPAVE:
(6-19-12) (Rev. 10-15-13) 605, 609, 610, 650 SP6 R01

Revise the *2012 Standard Specifications* as follows:

Page 6-3, Article 605-7 APPLICATION RATES AND TEMPERATURES, replace this article, including Table 601-1, with the following:

Apply tack coat uniformly across the existing surface at target application rates shown in Table 605-1.

TABLE 605-1
APPLICATION RATES FOR TACK COAT

Existing Surface	Target Rate (gal/sy)
	Emulsified Asphalt
New Asphalt	0.04 ± 0.01
Oxidized or Milled Asphalt	0.06 ± 0.01
Concrete	0.08 ± 0.01

Apply tack coat at a temperature within the ranges shown in Table 605-2. Tack coat shall not be overheated during storage, transport or at application.

TABLE 605-2
APPLICATION TEMPERATURE FOR TACK COAT

Asphalt Material	Temperature Range
Asphalt Binder, Grade PG 64-22	350 - 400°F
Emulsified Asphalt, Grade RS-1H	130 - 160°F
Emulsified Asphalt, Grade CRS-1	130 - 160°F
Emulsified Asphalt, Grade CRS-1H	130 - 160°F
Emulsified Asphalt, Grade HFMS-1	130 - 160°F
Emulsified Asphalt, Grade CRS-2	130 - 160°F

Page 6-7, Article 609-3 FIELD VERIFICATION OF MIXTURE AND JOB MIX FORMULA ADJUSTMENTS, lines 35-37, delete the second sentence of the second paragraph.

Page 6-18, Article 610-1 DESCRIPTION, lines 40-41, delete the last sentence of the last paragraph.

Page 6-19, Subarticle 610-3(A) Mix Design-General, line 5, add the following as the first paragraph:

Warm mix asphalt (WMA) is allowed for use at the Contractor's option in accordance with the NCDOT Approved Products List for WMA Technologies available at:

https://connect.ncdot.gov/resources/Materials/MaterialsResources/WMA%20Approved%20Lists.pdf

Page 6-21, Subarticle 610-3(C) Job Mix Formula (JMF), replace Table 610-1 with the following:

TABLE 610-1
DESIGN MIXING TEMPERATURE AT THE ASPHALT PLANT[A]

Binder Grade	HMA JMF Temperature	WMA JMF Temperature Range
PG 64-22	300°F	225 - 275°F
PG 70-22	315°F	240 - 290°F
PG 76-22	335°F	260 - 310°F

A. The mix temperature, when checked in the truck at the roadway, shall be within plus 15° and minus 25° of the temperature specified on the JMF.

Page 6-21, Subarticle 610-3(C) Job Mix Formula (JMF), lines 4-6, delete first sentence of the second paragraph. Line 7, in the second sentence of the second paragraph, replace "275°F" with "275°F or greater."

Page 6-22, Article 610-4 WEATHER, TEMPERATURE AND SEASONAL LIMITATIONS FOR PRODUCING AND PLACING ASPHALT MIXTURES, lines 15-17, replace the second sentence of the first paragraph with the following:

Do not place asphalt material when the air or surface temperatures, measured at the location of the paving operation away from artificial heat, do not meet Table 610-5.

Page 6-23, Article 610-4 WEATHER, TEMPERATURE AND SEASONAL LIMITATIONS FOR PRODUCING AND PLACING ASPHALT MIXTURES, replace Table 610-5 with the following:

TABLE 610-5
PLACEMENT TEMPERATURES FOR ASPHALT

Asphalt Concrete Mix Type	Minimum Surface and Air Temperature
B25.0B, C	35°F
I19.0B, C, D	35°F
SF9.5A, S9.5B	40°F
S9.5C, S12.5C	45°F
S9.5D, S12.5D	50°F

Page 6-26, Article 610-7 HAULING OF ASPHALT MIXTURE, lines 22-23, in the fourth sentence of the first paragraph replace "so as to overlap the top of the truck bed and" with "to".

Page 6-41, Subrticle 650-3(B) Mix Design Criteria, replace Table 650-1 with the following:

TABLE 650-1
OGAFC GRADATION CRITERIA

Grading Requirements	Total Percent Passing		
Sieve Size (mm)	*Type FC-1*	*Type FC-1 Modified*	*Type FC-2 Modified*
19.0	-	-	100
12.5	100	100	**80** - 100
9.50	75 - 100	75 - 100	55 - **80**
4.75	25 - 45	25 - 45	15 - **30**
2.36	5 - 15	5 - 15	5 - **15**
0.075	1.0 - 3.0	1.0 - 3.0	2.0 - 4.0

ASPHALT PLANT MIXTURES:

Place asphalt concrete base course material in trench sections with asphalt pavement spreaders made for the purpose or with other equipment approved by the Engineer.

PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:
(11-21-00) 620 SP6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the *2012 Standard Specifications.*

The base price index for asphalt binder for plant mix is **$ 572.81** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **October 1, 2013**.

FINAL SURFACE TESTING NOT REQUIRED:
(5-18-04) (Rev. 5-15-12) 610 SP6 R45

Final surface testing is not required on this project.

GUARDRAIL ANCHOR UNITS, TYPE 350:
(4-20-04) (Rev. 8-16-11) 862 SP8 R65

Description

Furnish and install guardrail anchor units in accordance with the details in the plans, the applicable requirements of Section 862 of the *2012 Standard Specifications*, and at locations shown in the plans.

Materials

The Contractor may at his option, furnish any one of the guardrail anchor units or approved equal.

Guardrail anchor unit (ET-Plus) as manufactured by:

Trinity Industries, Inc.
2525 N. Stemmons Freeway
Dallas, Texas 75207
Telephone: 800-644-7976

The guardrail anchor unit (SKT 350) as manufactured by:

Road Systems, Inc.
3616 Old Howard County Airport
Big Spring, Texas 79720
Telephone: 915-263-2435

Prior to installation the Contractor shall submit to the Engineer:

(A) FHWA acceptance letter for each guardrail anchor unit certifying it meets the requirements of NCHRP Report 350, Test Level 3, in accordance with Article 106-2 of the *2012 Standard Specifications.*

(B) Certified working drawings and assembling instructions from the manufacturer for each guardrail anchor unit in accordance with Article 105-2 of the *2012 Standard Specifications*.

No modifications shall be made to the guardrail anchor unit without the express written permission from the manufacturer. Perform installation in accordance with the details in the plans, and details and assembling instructions furnished by the manufacturer.

Construction Methods

Guardrail end delineation is required on all approach and trailing end sections for both temporary and permanent installations. Guardrail end delineation consists of yellow reflective sheeting applied to the entire end section of the guardrail in accordance with Article 1088-3 of the *2012 Standard Specifications* and is incidental to the cost of the guardrail anchor unit.

Measurement and Payment

Measurement and payment will be made in accordance with Article 862-6 of the *2012 Standard Specifications*.

Payment will be made under:

Pay Item	Pay Unit
Guardrail Anchor Units, Type 350	Each

REMOVE AND RESET EXISTING GATE:

Description

Remove and reset existing gate to the locations indicated in the plans or where directed.

Construction Methods

Reset the gate in a condition that is equal to or better than before the gate is removed. Replace any of the gate components unnecessarily damaged by the Contractor's forces. Fill any void created by gate removal.

Measurement and Payment

Remove and Reset Existing Gate will be measured and paid for in units of each for the number of gates that have been acceptably removed and reset. Such price includes, but is not limited to, removing, hauling and re-erecting the existing gate; and furnishing and installing any gate components unnecessarily damaged by the Contractor's forces.
Payment will be made under:

Pay Item	Pay Unit
Remove and Reset Existing Gate	Each

MODIFIED CONCRETE FLUME WITH CONCRETE OUTLET:

(3-19-96)(Rev. 6-17-08) 825 SP8 R10

At locations shown in the plans, construct concrete flumes, concrete curb, and apron in accordance with the details in the plans. Use materials meeting the requirements of Section 825 of the *2012 Standard Specifications* except that the concrete must be Class B or of higher compressive strength.

Each concrete flume, concrete curb, and apron completed and accepted will be paid at the contract unit price per each for *Modified Concrete Flume*. Such price and payment will be full compensation for all materials, labor, equipment, tools, removing and disposing of the temporary slope drains, and any other incidentals necessary to complete the work satisfactorily.

The concrete curb and ditch outside the pay limits of the apron will be measured and paid in accordance with Section 846 and 850 of the *2012 Standard Specifications*.

Payment will be made under:

Pay Item	Pay Unit
Modified Concrete Flume	Each

MATERIALS:

(2-21-12) (Rev. 10-15-13) 1000, 1005, 1050, 1074, 1078, 1080, 1081, 1084, 1087, 1092 SP10 R01

Revise the *2012 Standard Specifications* as follows:

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

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

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

TABLE 1000-1
REQUIREMENTS FOR CONCRETE

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

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

All fencing material and accessories shall meet Section 106.

Page 10-23, Table 1005-1, AGGREGATE GRADATION-COARSE AGGREGATE, replace with the following:

TABLE 1005-1
AGGREGATE GRADATION - COARSE AGGREGATE

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

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

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

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

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

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

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

(B) At least 3 panels prepared as specified in 5.5.10 of AASHTO M 300, Bullet Hole Immersion Test.

(C) At least 3 panels of 4"x6"x1/4" for the Elcometer Adhesion Pull Off Test, ASTM D4541.

(D) A certified test report from an approved independent testing laboratory for the Salt Fog Resistance Test, Cyclic Weathering Resistance Test, and Bullet Hole Immersion Test as specified in AASHTO M 300.

(E) A certified test report from an approved independent testing laboratory that the product has been tested for slip coefficient and meets AASHTO M253, Class B.

Page 10-162, Subarticle 1081-1(A) Classifications, lines 4-7, delete the second and third sentences of the description for Type 3A.

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

For epoxy resin systems used for embedding dowel bars, threaded rods, rebar, anchor bolts and other fixtures in hardened concrete, the manufacturer shall submit test results showing that the bonding system will obtain 125% of the specified required yield strength of the fixture. Furnish certification that, for the particular bolt grade, diameter and embedment depth required, the anchor system will not fail by adhesive failure and that there is no movement of the anchor bolt. For certification and anchorage, use 3,000 psi as the minimum Portland cement concrete compressive strength used in this test. Use adhesives that meet Section 1081.

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

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

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

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

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

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

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

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

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

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

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

TABLE 1092-3 MINIMUM COEFFICIENT OF RETROREFLECTION FOR NC GRADE A (Candelas Per Lux Per Square Meter)								
Observation Angle, degrees	**Entrance Angle, degrees**	**White**	**Yellow**	**Green**	**Red**	**Blue**	**Fluorescent Yellow Green**	**Fluorescent Yellow**
0.2	-4.0	525	395	52	95	30	420	315
0.2	30.0	215	162	22	43	10	170	130
0.5	-4.0	310	230	31	56	18	245	185
0.5	30.0	135	100	14	27	6	110	81
1.0	-4.0	**120**	60	8	16	3.6	64	48
1.0	30.0	45	34	4.5	9	2	36	27

SELECT MATERIAL, CLASS III, TYPE 3:
(1-17-12) 1016, 1044 SP10 R05

Revise the *2012 Standard Specifications* as follows:

Page 10-39, Article 1016-3, CLASS III, add the following after line 14:

Type 3 Select Material

Type 3 select material is a natural or manufactured fine aggregate material meeting the following gradation requirements and as described in Sections 1005 and 1006:

Percentage of Total by Weight Passing							
3/8"	#4	#8	#16	#30	#50	#100	#200
100	95-100	65-100	35-95	15-75	5-35	0-25	0-8

Page 10-39, Article 1016-3, CLASS III, line 15, replace "either type" with "Type 1, Type 2 or Type 3".

Page 10-62, Article 1044-1, line 36, delete the sentence and replace with the following:

Subdrain fine aggregate shall meet Class III select material, Type 1 or Type 3.

Page 10-63, Article 1044-2, line 2, delete the sentence and replace with the following:

Subdrain coarse aggregate shall meet Class V select material.

SHOULDER AND SLOPE BORROW:

(3-19-13) 1019 SP10 R10

Use soil in accordance with Section 1019 of the *2012 Standard Specifications*. Use soil consisting of loose, friable, sandy material with a PI greater than 6 and less than 25 and a pH ranging from 5.5 to 7.0.

Soil with a pH ranging from 4.0 to 5.5 will be accepted without further testing if additional limestone is provided in accordance with the application rates shown in Table 1019-1A. Soil type is identified during the soil analysis. Soils with a pH above 7.0 require acidic amendments to be added. Submit proposed acidic amendments to the Engineer for review and approval. Soils with a pH below 4.0 or that do not meet the PI requirements shall not be used.

TABLE 1019-1A
ADDITIONAL LIMESTONE APPLICATION RATE TO RAISE pH

pH TEST RESULT	Sandy Soils Additional Rate (lbs. / Acre)	Silt Loam Soils Additional Rate (lbs. / Acre)	Clay Loam Soils Additional Rate (lbs. / Acre)
4.0 - 4.4	1,000	4,000	6,000
4.5 - 4.9	500	3,000	5,000
5.0 - 5.4	NA	2,000	4,000

Note: Limestone application rates shown in this table are in addition to the standard rate of 4000 lbs. / acre required for seeding and mulching.

No direct payment will be made for providing additional lime or acidic amendments for Ph adjustment.

TEMPORARY SHORING:

(2-20-07) (Rev. 5-21-13) SP11 R02

Description

Temporary shoring includes cantilever, braced and anchored shoring and temporary mechanically stabilized earth (MSE) walls. Temporary shoring does not include trench boxes. At the Contractor's option, use any type of temporary shoring unless noted otherwise in the plans or as directed. Design and construct temporary shoring based on actual elevations and shoring dimensions in accordance with the contract and accepted submittals. Construct temporary shoring at locations shown in the plans and as directed. Temporary shoring is required to maintain traffic when a 2:1 (H:V) slope from the top of an embankment or bottom of an excavation will intersect the existing ground line less than 5 ft from the edge of pavement of an open travelway. This provision does not apply to pipe, inlet or utility installation unless noted otherwise in the plans.

Positive protection includes concrete barrier and temporary guardrail. Provide positive protection for temporary shoring at locations shown in the plans and as directed. Positive

protection is required if temporary shoring is located in the clear zone in accordance with the *AASHTO Roadside Design Guide.*

(A) Cantilever and Braced Shoring

Cantilever shoring consists of steel sheet piles or H-piles with timber lagging. Braced shoring consists of sheet piles or H-piles with timber lagging and bracing such as beams, plates, walers, struts, rakers, etc. Define "piles" as sheet piles or H-piles.

(B) Anchored Shoring

Anchored shoring consists of sheet piles with walers or H-piles with timber lagging anchored with ground or helical anchors. Driven anchors may be accepted at the discretion of the Engineer. A ground anchor consists of a grouted steel bar or multi-strand tendon with an anchorage. A helical anchor consists of a lead section with a central steel shaft and at least one helix steel plate followed by extensions with only central shafts (no helixes) and an anchorage. Anchorages consist of steel bearing plates with washers and hex nuts for bars or steel wedge plates and wedges for strands. Use a prequalified Anchored Wall Contractor to install ground anchors. Define "anchors" as ground, helical or driven anchors.

(C) Temporary MSE Walls

Temporary MSE walls include temporary geosynthetic and wire walls. Define "temporary wall" as a temporary MSE wall. Define "reinforcement" as geotextile, geogrid, welded wire grid or metallic strip reinforcement.

Temporary geosynthetic walls consist of geotextile or geogrid reinforcement wrapped behind welded wire facing. Define "temporary geotextile wall" as a temporary geosynthetic wall with geotextile reinforcement and "temporary geogrid wall" as a temporary geosynthetic wall with geogrid reinforcement.

Temporary wire walls consist of welded wire grid or metallic strip reinforcement connected to welded wire facing. Define "Wire Wall Vendor" as the vendor supplying the temporary wire wall.

(D) Embedment

Define "embedment" for cantilever, braced and anchored shoring as the pile depth below the grade in front of shoring. Define "embedment" for temporary walls as the wall height below the grade in front of walls.

(E) Positive Protection

Define "unanchored or anchored portable concrete barrier" as portable concrete barrier (PCB) that meets Standard Drawing No. 1170.01 of the *2012 Roadway Standard Drawings*. Define "concrete barrier" as unanchored or anchored PCB or an approved equal. Define "temporary guardrail" as temporary steel beam guardrail that meets Standard Drawing No. 862.02 of the *2012 Roadway Standard Drawings*.

Materials

Refer to the *2012 Standard Specifications*.

Item	Section
Anchor Pins	1056-2
Concrete Barrier Materials	1170-2
Flowable Fill, Excavatable	1000-6
Geotextiles	1056
Neat Cement Grout	1003
Portland Cement Concrete	1000
Select Material	1016
Steel Beam Guardrail Materials	862-2
Steel Plates	1072-2
Steel Sheet Piles and H-Piles	1084
Untreated Timber	1082-2
Welded Wire Reinforcement	1070-3
Wire Staples	1060-8(D)

Provide Type 6 material certifications for shoring materials in accordance with Article 106-3 of the *2012 Standard Specifications*. Use Class IV select material (standard size No. ABC) for temporary guardrail. Use nonshrink neat cement grout or Class A concrete that meets Article 450-2 of the *2012 Standard Specifications* for drilled-in piles. Use untreated timber with a thickness of at least 3" and a bending stress of at least 1,000 psi for timber lagging. Provide steel bracing that meets ASTM A36.

(A) Shoring Backfill

Use Class II, Type 1, Class III, Class V or Class VI select material or material that meets AASHTO M 145 for soil classification A-2-4 with a maximum PI of 6 for shoring backfill except do not use A-2-4 soil for backfill around culverts.

(B) Anchors

Store anchor materials on blocking a minimum of 12" above the ground and protect it at all times from damage; and when placing in the work make sure it is free from dirt, dust, loose mill scale, loose rust, paint, oil or other foreign materials. Load, transport, unload and store anchor materials so materials are kept clean and free of damage. Bent, damaged or defective materials will be rejected.

(1) Ground Anchors

Use high-strength deformed steel bars that meet AASHTO M 275 or seven-wire strands that meet ASTM A886 or Article 1070-5 of the *2012 Standard Specifications*. Splice bars in accordance with Article 1070-9 of the *2012 Standard Specifications*. Do not splice strands. Use bondbreakers, spacers and centralizers that meet Article 6.3.5 of the *AASHTO LRFD Bridge Construction Specifications*.

(2) Helical Anchors

Use helical anchors with an ICC Evaluation Service, Inc. (ICC-ES) report. Helical anchors without an ICC-ES report may be approved at the discretion of the Engineer. Provide couplers, thread bar adapters and bolts recommended by the Anchor Manufacturer to connect helical anchors together and to piles.

(3) Anchorages

Provide steel plates for bearing plates and steel washers, hex nuts, wedge plates and wedges recommended by the Anchor Manufacturer.

(C) Temporary Walls

(1) Welded Wire Facing

Use welded wire reinforcement for welded wire facing, struts and wires. For temporary wire walls, provide welded wire facing supplied by the Wire Wall Vendor or a manufacturer approved or licensed by the vendor. For temporary wire walls with separate reinforcement and facing components, provide connectors (e.g., bars, clamps, plates, etc.) and fasteners (e.g., bolts, nuts, washers, etc.) required by the Wire Wall Vendor.

(2) Geotextiles

Provide Type 2 geotextile for separation and retention geotextiles. Provide Type 5 geotextile for geotextile reinforcement with ultimate tensile strengths in accordance with the accepted submittals.

(3) Geogrid Reinforcement

Handle and store geogrids in accordance with Article 1056-2 of the *2012 Standard Specifications*. Define "machine direction" (MD) and "cross-machine direction" (CD) for geogrids in accordance with ASTM D4439.

Use geogrids with a roll width of at least 4 ft and an "approved" or "approved for provisional use" status code. The list of approved geogrids is available from: connect.ncdot.gov/resources/Materials/Pages/SoilsLaboratory.aspx

Provide geogrids for geogrid reinforcement with design strengths in accordance with the accepted submittals. Geogrids are typically approved for ultimate tensile strengths in the MD and CD or short-term design strengths for a 3-year design life in the MD based on material type. Define material type from the website above for shoring backfill as follows:

Material Type	Shoring Backfill
Borrow	A-2-4 Soil
Fine Aggregate	Class II, Type 1 or Class III Select Material
Coarse Aggregate	Class V or VI Select Material

(4) Welded Wire Grid and Metallic Strip Reinforcement

Provide welded wire grid and metallic strip reinforcement supplied by the Wire Wall Vendor or a manufacturer approved or licensed by the vendor. Use welded wire grid reinforcement ("mesh", "mats" and "ladders") that meet Article 1070-3 of the *2012 Standard Specifications* and metallic strip reinforcement ("straps") that meet ASTM A572 or A1011.

Preconstruction Requirements

(A) Concrete Barrier

Define "clear distance" behind concrete barrier as the horizontal distance between the barrier and edge of pavement. The minimum required clear distance for concrete barrier is shown in the plans. At the Contractor's option or if the minimum required clear distance is not available, set concrete barrier next to and up against traffic side of temporary shoring except for barrier above temporary walls. Concrete barrier with the minimum required clear distance is required above temporary walls.

(B) Temporary Guardrail

Define "clear distance" behind temporary guardrail as the horizontal distance between guardrail posts and temporary shoring. At the Contractor's option or if clear distance for cantilever, braced and anchored shoring is less than 4 ft, attach guardrail to traffic side of shoring as shown in the plans. Place ABC in clear distance and around guardrail posts instead of pavement. Do not use temporary guardrail above temporary walls.

(C) Temporary Shoring Designs

Before beginning temporary shoring design, survey existing ground elevations in the vicinity of shoring locations to determine actual design heights (H). Submit 8 copies of working drawings and 3 copies of design calculations and a PDF copy of each for temporary shoring designs in accordance with Article 105-2 of the *2012 Standard Specifications*. Submit working drawings showing plan views, shoring profiles, typical sections and details of temporary shoring design and construction sequence. Do not begin shoring construction until a design submittal is accepted.

Have cantilever and braced shoring designed, detailed and sealed by an engineer licensed in the state of North Carolina. Use a prequalified Anchored Wall Design Consultant to design anchored shoring. Provide anchored shoring designs sealed by a Design Engineer approved as a Geotechnical Engineer (key person) for an Anchored Wall Design Consultant. Include details in anchored shoring working drawings of anchor locations and lock-off loads, unit grout/ground bond strengths for ground anchors or minimum installation torque and torsional strength rating for helical anchors and if necessary, obstructions extending through shoring or interfering with anchors. Include details in the anchored shoring construction sequence of pile and anchor installation, excavation and anchor testing.

Use a prequalified MSE Wall Design Consultant to design temporary walls. Provide temporary wall designs sealed by a Design Engineer approved as a Geotechnical Engineer (key person) for the MSE Wall Design Consultant. Include details in temporary wall working drawings of geotextile and reinforcement types, locations and directions and obstructions extending through walls or interfering with reinforcement.

(1) Soil Parameters

Design temporary shoring for the assumed soil parameters and groundwater elevations shown in the plans. Assume the following soil parameters for shoring backfill:

(a) Unit weight (γ) = 120 lb/cf;

(b)

Friction Angle (ϕ)	**Shoring Backfill**
30°	A-2-4 Soil
34°	Class II, Type 1 or Class III Select Material
38°	Class V or VI Select Material

(c) Cohesion (c) = 0 lb/sf.

(2) Traffic Surcharge

Design temporary shoring for a traffic surcharge of 250 lb/sf if traffic will be above and within H of shoring. This traffic surcharge does not apply to construction traffic. Design temporary shoring for any construction surcharge if construction traffic will be above and within H of shoring. For LRFD shoring designs, apply traffic (live load) surcharge in accordance with Figure C11.5.5-3 of the *AASHTO LRFD Bridge Design Specifications*.

(3) Cantilever, Braced and Anchored Shoring Designs

Use shoring backfill for fill sections and voids between cantilever, braced and anchored shoring and the critical failure surface. Use concrete or grout for embedded portions of drilled-in H-piles. Do not use drilled-in sheet piles.

Define "top of shoring" for cantilever, braced and anchored shoring as where the grade intersects the back of sheet piles or H-piles and timber lagging. Design cantilever, braced and anchored shoring for a traffic impact load of 2,000 lb/ft applied 18" above top of shoring if concrete barrier is above and next to shoring or temporary guardrail is above and attached to shoring. For anchored shoring designs, apply traffic impact load as horizontal load (P_{HI}) in accordance with Figure 3.11.6.3-2(a) of the AASHTO LRFD specifications.

Extend cantilever, braced and anchored shoring at least 32" above top of shoring if shoring is designed for traffic impact. Otherwise, extend shoring at least 6" above top of shoring.

Design cantilever, braced and anchored shoring for a maximum deflection of 3" if the horizontal distance to the closest edge of pavement or structure is less than H. Otherwise, design shoring for a maximum deflection of 6". Design cantilever and braced shoring in accordance with the plans and *AASHTO Guide Design Specifications for Bridge Temporary Works*.

Design anchored shoring in accordance with the plans and Article 11.9 of the *AASHTO LRFD Bridge Design Specifications*. Use a resistance factor of 0.80 for tensile resistance of anchors with bars, strands or shafts. Extend the unbonded length for ground anchors and the shallowest helix for helical anchors at least 5 ft behind the critical failure surface. Do not extend anchors beyond right-of-way or easement limits. If existing or future obstructions such as foundations, guardrail posts, pavements, pipes, inlets or utilities will interfere with anchors, maintain a clearance of at least 6" between obstructions and anchors.

(4) Temporary Wall Designs

Use shoring backfill in the reinforced zone of temporary walls. Separation geotextiles are required between shoring backfill and backfill, natural ground or culverts along the sides of the reinforced zone perpendicular to the wall face. For Class V or VI select material in the reinforced zone, separation geotextiles are also required between shoring backfill and backfill or natural ground on top of and at the back of the reinforced zone.

Design temporary walls in accordance with the plans and Article 11.10 of the *AASHTO LRFD Bridge Design Specifications*. Embed temporary walls at least 18" except for walls on structures or rock as determined by the Engineer. Use a uniform reinforcement length throughout the wall height of at least 0.7H or 6 ft, whichever is greater. Extend the reinforced zone at least 6" beyond end of reinforcement. Do not locate the reinforced zone outside right-of-way or easement limits.

Use the simplified method for determining maximum reinforcement loads in accordance with the AASHTO LRFD specifications. For geotextile reinforcement, use geotextile properties approved by the Department or default values in accordance with the AASHTO LRFD specifications. For geogrid reinforcement, use approved geogrid properties available from the website shown elsewhere in this provision. If the website does not list a short-term design strength for an approved geogrid, use a short-term design strength equal to the ultimate tensile strength divided by 3.5 for the geogrid reinforcement. Use geosynthetic properties for the direction reinforcement will be installed, a 3-year design life and shoring backfill to be used in the reinforced zone.

Do not use more than 4 different reinforcement strengths for each temporary geosynthetic wall. Design temporary geotextile walls for a reinforcement coverage ratio (R_c) of 1.0 and temporary geogrid walls for an R_c of at least 0.8. For geogrid reinforcement with an R_c of less than 1.0, use a maximum horizontal clearance between geogrids of 3 ft and stagger reinforcement so geogrids are centered over gaps in the reinforcement layer below.

For temporary geosynthetic walls, use "L" shaped welded wire facing with 18" to 24" long legs. Locate geotextile or geogrid reinforcement so reinforcement layers are at the same level as the horizontal legs of welded wire facing. Use vertical reinforcement spacing equal to facing height. Wrap geotextile or geogrid reinforcement behind welded wire facing and extend reinforcement at least 3 ft back behind facing into shoring backfill.

For temporary wire walls with separate reinforcement and facing components, attach welded wire grid or metallic strip reinforcement to welded wire facing with a connection approved by the Department. For temporary geogrid and wire walls, retain shoring backfill at welded wire facing with retention geotextiles and extend geotextiles at least 3 ft back behind facing into backfill.

(D) Preconstruction Meeting

The Engineer may require a shoring preconstruction meeting to discuss the construction, inspection and testing of the temporary shoring. If required, schedule this meeting after all shoring submittals have been accepted. The Resident, District or Bridge Maintenance Engineer, Bridge or Roadway Construction Engineer, Geotechnical Operations Engineer, Contractor and Shoring Contractor Superintendent will attend this preconstruction meeting.

Construction Methods

Control drainage during construction in the vicinity of shoring. Direct run off away from shoring and shoring backfill. Contain and maintain backfill and protect material from erosion.

Install positive protection in accordance with the contract and accepted submittals. Use PCB in accordance with Section 1170 of the *2012 Standard Specifications* and Standard Drawing No. 1170.01 of the *2012 Roadway Standard Drawings*. Use temporary guardrail in accordance with Section 862 of the *2012 Standard Specifications* and Standard Drawing No. 862.01, 862.02 and 862.03 of the *2012 Roadway Standard Drawings*.

(A) Tolerances

Construct shoring with the following tolerances:

(1) Horizontal wires of welded wire facing are level in all directions,

(2) Shoring location is within 6" of horizontal and vertical alignment shown in the accepted submittals, and

(3) Shoring plumbness (batter) is not negative and within 2° of vertical.

(B) Cantilever, Braced and Anchored Shoring Installation

If overexcavation behind cantilever, braced or anchored shoring is shown in the accepted submittals, excavate before installing piles. Otherwise, install piles before excavating for shoring. Install cantilever, braced or anchored shoring in accordance with the construction sequence shown in the accepted submittals. Remove piles and if applicable, timber lagging when shoring is no longer needed.

(1) Pile Installation

Install piles with the minimum required embedment and extension in accordance with Subarticles 450-3(D) and 450-3(E) of the *2012 Standard Specifications* except that a pile driving equipment data form is not required. Piles may be installed with a vibratory hammer as approved by the Engineer.

Do not splice sheet piles. Use pile excavation to install drilled-in H-piles. After filling holes with concrete or grout to the elevations shown in the accepted submittals, remove any fluids and fill remaining portions of holes with flowable fill. Cure concrete or grout at least 7 days before excavating.

Notify the Engineer if refusal is reached before pile excavation or driven piles attain the minimum required embedment. When this occurs, a revised design submittal may be required.

(2) Excavation

Excavate in front of piles from the top down in accordance with the accepted submittals. For H-piles with timber lagging and braced and anchored shoring, excavate in staged horizontal lifts with a maximum height of 5 ft. Remove flowable fill and material in between H-piles as needed to install timber lagging. Position lagging with at least 3" of contact in the horizontal direction between the lagging and pile flanges. Do not excavate the next lift until timber lagging for the current lift is installed and if applicable, bracing and anchors for the current lift are accepted. Backfill behind cantilever, braced or anchored shoring with shoring backfill.

(3) Anchor Installation

If applicable, install foundations located behind anchored shoring before installing anchors. Fabricate and install ground anchors in accordance with the accepted submittals, Articles 6.4 and 6.5 of the *AASHTO LRFD Bridge Construction Specifications* and the following unless otherwise approved:

(a) Materials in accordance with this provision are required instead of materials conforming to Articles 6.4 and 6.5.3 of the AASHTO LRFD Specifications,

(b) Encapsulation-protected ground anchors in accordance with Article 6.4.1.2 of the AASHTO LRFD specifications are not required, and

(c) Corrosion protection for unbonded lengths of ground anchors and anchorage covers are not required.

Install helical anchors in accordance with the accepted submittals and Anchor Manufacturer's instructions. Measure torque during installation and do not exceed the torsional strength rating of the helical anchor. Attain the minimum required installation torque and penetration before terminating anchor installation. When replacing a helical anchor, embed last helix of the replacement anchor at least 3 helix plate diameters past the location of the first helix of the previous anchor.

(4) Anchor Testing

Proof test and lock-off anchors in accordance with the accepted submittals and Article 6.5.5 of the *AASHTO LRFD Bridge Construction Specifications* except for the acceptance criteria in Article 6.5.5.5. For the AASHTO LRFD specifications, "ground anchor" refers to a ground or helical anchor and "tendon" refers to a bar, strand or shaft.

(a) Anchor Acceptance

Anchor acceptance is based in part on the following criteria.

(i) For ground and helical anchors, total movement is less than 0.04" between the 1 and 10 minute readings or less than 0.08" between the 6 and 60 minute readings.

(ii) For ground anchors, total movement at maximum test load exceeds 80% of the theoretical elastic elongation of the unbonded length.

(b) Anchor Test Results

Submit 2 copies of anchor test records including movement versus load plots for each load increment within 24 hours of completing each row of anchors. The Engineer will review the test records to determine if the anchors are acceptable.

If the Engineer determines an anchor is unacceptable, revise the anchor design or installation methods. Submit a revised anchored shoring design for acceptance and provide an acceptable anchor with the revised design or installation methods. If required, replace the anchor or provide additional anchors with the revised design or installation methods.

(C) Temporary Wall Installation

Excavate as necessary for temporary walls in accordance with the plans and accepted submittals. If applicable, install foundations located in the reinforced zone before placing shoring backfill or reinforcement unless otherwise approved. Notify the Engineer when foundation excavation is complete. Do not place shoring backfill or reinforcement until excavation dimensions and foundation material are approved.

Erect welded wire facing so the wall position is as shown in the plans and accepted submittals. Set welded wire facing adjacent to each other in the horizontal and vertical direction to completely cover the wall face with facing. Stagger welded wire facing to create a running bond by centering facing over joints in the row below.

Wrap geotextile reinforcement and retention geotextiles behind welded wire facing as shown in the plans and accepted submittals and cover geotextiles with at least 3" of shoring backfill. Overlap adjacent geotextile reinforcement and retention and separation geotextiles at least 18" with seams oriented perpendicular to the wall face. Hold geotextiles in place with wire staples or anchor pins as needed.

Place reinforcement within 3" of locations shown in the plans and accepted submittals and in slight tension free of kinks, folds, wrinkles or creases. Install reinforcement with the direction shown in the plans and accepted submittals. For temporary wire walls with separate reinforcement and facing components, attach welded wire grid or metallic strip reinforcement to welded wire facing as shown in the accepted submittals. Do not splice or overlap reinforcement so seams are parallel to the wall face. Contact the Engineer when unanticipated existing or future obstructions such as foundations, pavements, pipes, inlets or utilities will interfere with reinforcement.

Place shoring backfill in the reinforced zone in 8" to 10" thick lifts. Compact A-2-4 soil and Class II, Type 1 and Class III select material in accordance with Subarticle 235-3(C) of the *2012 Standard Specifications*. Use only hand operated compaction equipment to compact backfill within 3 ft of welded wire facing. At a distance greater than 3 ft, compact shoring backfill with at least 4 passes of an 8 ton to 10 ton vibratory roller in a direction parallel to the wall face. Smooth wheeled or rubber tired rollers are also acceptable for compacting backfill. Do not use sheepsfoot, grid rollers or other types of compaction equipment with feet. Do not displace or damage reinforcement when placing and compacting shoring backfill. End dumping directly on geotextile or geogrid reinforcement is not permitted. Do not operate heavy equipment on reinforcement until it is covered with at least 8" of shoring backfill. Replace any damaged reinforcement to the satisfaction of the Engineer.

Backfill for temporary walls outside the reinforced zone in accordance with Article 410-8 of the *2012 Standard Specifications*. Bench temporary walls into the sides of excavations where applicable. For temporary geosynthetic walls with top of wall within 5 ft of finished grade, remove top facing and incorporate top reinforcement layer into fill when placing fill in front of wall. Temporary walls remain in place permanently unless otherwise required.

Measurement and Payment

Temporary Shoring will be measured and paid in square feet. Temporary walls will be measured as the square feet of exposed wall face area. Cantilever, braced or anchored shoring will be measured as the square feet of exposed shoring face area with the shoring height equal to the difference between the top and bottom of shoring elevations. Define "top of shoring" as where the grade intersects the back of sheet piles or H-piles and timber lagging. Define "bottom of shoring" as where the grade intersects front of sheet piles or H-piles and timber lagging. No measurement will be made for any embedment, shoring extension above top of shoring or pavement thickness above temporary walls.

The contract unit price for *Temporary Shoring* will be full compensation for providing shoring designs, submittals and materials, excavating, backfilling, hauling and removing excavated materials and supplying all labor, tools, equipment and incidentals necessary to construct temporary shoring.

No payment will be made for temporary shoring not shown in the plans or required by the Engineer including shoring for OSHA reasons or the Contractor's convenience. No value engineering proposals will be accepted based solely on revising or eliminating shoring locations shown in the plans or estimated quantities shown in the bid item sheets as a result of actual field measurements or site conditions.

PCB will be measured and paid in accordance with Section 1170 of the *2012 Standard Specifications*. No additional payment will be made for anchoring PCB for temporary shoring. Costs for anchoring PCB will be incidental to temporary shoring.

Temporary guardrail will be measured and paid for in accordance with Section 862 of the *2012 Standard Specifications*.

Payment will be made under:

Pay Item	**Pay Unit**
Temporary Shoring	Square Foot

TRUCK MOUNTED CHANGEABLE MESSAGE SIGNS:

(8-21-12) 1101.02 SP11 R10

Revise the *2012 Roadway Standard Drawings* as follows:

Drawing No. 1101.02, Sheet 12, TEMPORARY LANE CLOSURES, replace General Note #11 with the following:

11- TRUCK MOUNTED CHANGEABLE MESSAGE SIGNS (TMCMS) USED ON SHADOW VEHICLES FOR "IN LANE" ACTIVITIES SHALL BE A MINIMUM OF 43" X 73". THE DISPLAY PANEL SHALL HAVE FULL MATRIX CAPABILITY WITH THE CAPABILITY TO PROVIDE 2 MESSAGE LINES WITH 7 CHARACTERS PER LINE WITH A MINIMUM CHARACTER HEIGHT OF 18". FOR ADDITIONAL MESSAGING, CONTACT THE WORK ZONE TRAFFIC CONTROL SECTION.

12- TMCMS USED FOR ADVANCED WARNING ON VEHICLES LOCATED ON THE SHOULDER MAY BE SMALLER THAN 43" X 73". THE DISPLAY PANEL SHALL HAVE THE CAPABILITY TO PROVIDE 2 MESSAGE LINES WITH 7 CHARACTERS PER LINE WITH A MINIMUM CHARACTER HEIGHT OF 18". FOR ADDITIONAL MESSAGING, CONTACT THE WORK ZONE TRAFFIC CONTROL SECTION.

Drawing No. 1101.02, Sheet 13, TEMPORARY LANE CLOSURES, replace General Note #12 with the following:

12- TRUCK MOUNTED CHANGEABLE MESSAGE SIGNS (TMCMS) USED ON SHADOW VEHICLES FOR "IN LANE" ACTIVITIES SHALL BE A MINIMUM OF 43" X 73". THE DISPLAY PANEL SHALL HAVE FULL MATRIX CAPABILITY WITH THE CAPABILITY TO PROVIDE 2 MESSAGE LINES WITH 7 CHARACTERS PER LINE WITH A MINIMUM CHARACTER HEIGHT OF 18". FOR ADDITIONAL MESSAGING, CONTACT THE WORK ZONE TRAFFIC CONTROL SECTION.

13- TMCMS USED FOR ADVANCED WARNING ON VEHICLES LOCATED ON THE SHOULDER MAY BE SMALLER THAN 43" X 73". THE DISPLAY PANEL SHALL HAVE THE CAPABILITY TO PROVIDE 2 MESSAGE LINES WITH 7 CHARACTERS PER LINE WITH A MINIMUM CHARACTER HEIGHT OF 18". FOR ADDITIONAL MESSAGING, CONTACT THE WORK ZONE TRAFFIC CONTROL SECTION.

60

PROJECT SPECIAL PROVISIONS

GEOTECHNICAL

STANDARD SHORING: **(1-17-12)**

Description

Standard shoring includes standard temporary shoring and standard temporary mechanically stabilized earth (MSE) walls. At the Contractor's option, use standard shoring as noted in the plans or as directed. When using standard shoring, a temporary shoring design submittal is not required. Construct standard shoring based on actual elevations and shoring dimensions in accordance with the contract and Standard Drawing No. 1801.01 or 1801.02.

Define "standard temporary shoring" as cantilever shoring that meets the standard temporary shoring drawing (Standard Drawing No. 1801.01). Define "standard temporary wall" as a temporary MSE wall with geotextile or geogrid reinforcement that meets the standard temporary wall drawing (Standard Drawing No. 1801.02). Define "standard temporary geotextile wall" as a standard temporary wall with geotextile reinforcement and "standard temporary geogrid wall" as a standard temporary wall with geogrid reinforcement. Define "geosynthetics" as geotextiles or geogrids.

Provide positive protection for standard shoring at locations shown in the plans and as directed. See *Temporary Shoring* provision for positive protection types and definitions.

Materials

Refer to the *Standard Specifications*.

Item	Section
Anchor Pins	1056-2
Concrete Barrier Materials	1170-2
Flowable Fill, Excavatable	1000-6
Geotextiles	1056
Neat Cement Grout	1003
Portland Cement Concrete	1000
Select Material	1016
Steel Beam Guardrail Materials	862-2
Steel Sheet Piles and H-Piles	1084
Untreated Timber	1082-2
Welded Wire Reinforcement	1070-3
Wire Staples	1060-8(D)

Provide Type 6 material certifications for shoring materials. Use Class IV select material (standard size No. ABC) for temporary guardrail.

For drilled-in H-piles, use nonshrink neat cement grout or Class A concrete that meets Article 1000-4 of the *Standard Specifications* except as modified herein. Provide concrete with a slump of 6" to 8". Use an approved high-range water reducer to achieve this slump.

Based on actual shoring height, positive protection, groundwater elevation, slope or surcharge case and traffic impact at each standard temporary shoring location, use sheet piles with the

minimum required section modulus or H-piles with the sizes shown in Standard Drawing No. 1801.01. Use untreated timber with a thickness of at least 3" and a bending stress of at least 1,000 psi for timber lagging.

(A) Shoring Backfill

Use Class II, Type 1, Class III, Class V or Class VI select material or material that meets AASHTO M 145 for soil classification A-2-4 with a maximum PI of 6 for shoring backfill except do not use the following:

(1) A-2-4 soil for backfill around culverts,

(2) A-2-4 soil in the reinforced zone of standard temporary walls with a back slope and

(3) Class VI select material in the reinforced zone of standard temporary geotextile walls.

(B) Standard Temporary Walls

Use welded wire reinforcement for welded wire facing, struts and wires with the dimensions and minimum wire sizes shown in Standard Drawing No. 1801.02. Provide Type 2 geotextile for separation and retention geotextiles. Define "machine direction" (MD) and "cross-machine direction" (CD) for geosynthetics in accordance with ASTM D4439. Do not use more than 4 different reinforcement strengths for each standard temporary wall.

(1) Geotextile Reinforcement

Provide Type 5 geotextile for geotextile reinforcement with a mass per unit area of at least 8 oz/sy in accordance with ASTM D5261. Based on actual wall height, groundwater elevation, slope or surcharge case and shoring backfill type in the reinforced zone at each standard temporary geotextile wall location, provide geotextile reinforcement with wide width tensile strengths at ultimate in the MD as shown in Standard Drawing No. 1801.02. Also provide geotextile reinforcement with wide width tensile strengths at ultimate in the CD as shown in Standard Drawing No. 1801.02 if reinforcement is installed with the MD parallel to the wall face.

(2) Geogrid Reinforcement

Handle and store geogrids in accordance with Article 1056-2 of the *Standard Specifications*. Based on actual wall height, groundwater elevation, slope or surcharge case and shoring backfill type in the reinforced zone at each standard temporary geogrid wall location, provide geogrids for geogrid reinforcement with short-term design strengths in the MD as shown in Standard Drawing No. 1801.02. Also provide geogrids for geogrid reinforcement with short-term design strengths in the CD as shown in Standard Drawing No. 1801.02 if reinforcement is installed with the MD parallel to the wall face.

Use geogrids with a roll width of at least 4 ft and an "approved" or "approved for provisional use" status code. Geogrids are approved for short-term design strengths for a 3-year design life in the MD and CD based on material type. The

list of approved geogrids with short-term design strengths is available from: www.ncdot.org/doh/operations/materials/soils/gep.html

Define material type from the website above for shoring backfill as follows:

Material Type	Shoring Backfill
Borrow	A-2-4 Soil
Fine Aggregate	Class II, Type 1 or Class III Select Material
Coarse Aggregate	Class V or VI Select Material

If an approved geogrid does not list a short-term design strength in the MD for the shoring backfill used, do not use the geogrid for geogrid reinforcement. If an approved geogrid does not list a short-term design strength in the CD for the shoring backfill used, do not install the geogrid with the MD parallel to the wall face.

Preconstruction Requirements

(A) Concrete Barrier

Define "clear distance" behind concrete barrier as the horizontal distance between the barrier and edge of pavement. The minimum required clear distance for concrete barrier is shown in the plans. At the Contractor's option or if the minimum required clear distance is not available, set concrete barrier next to and up against traffic side of standard shoring except for barrier above standard temporary walls. Concrete barrier with the minimum required clear distance is required above standard temporary walls.

(B) Temporary Guardrail

Define "clear distance" behind temporary guardrail as the horizontal distance between guardrail posts and standard shoring. At the Contractor's option or if clear distance for standard temporary shoring is less than 4 ft, attach guardrail to traffic side of shoring as shown in the plans. Place ABC in clear distance and around guardrail posts instead of pavement. Do not use temporary guardrail above standard temporary walls.

(C) Standard Shoring Selection Forms

Before beginning standard shoring construction, survey existing ground elevations in the vicinity of standard shoring locations to determine actual shoring or wall heights (H). Submit a standard shoring selection form for each location at least 7 days before starting standard shoring construction. Standard shoring selection forms are available from: www.ncdot.org/doh/preconstruct/highway/geotech/formdet/

(D) Preconstruction Meeting

The Engineer may require a shoring preconstruction meeting to discuss the construction and inspection of the standard shoring. If required, schedule this meeting after all standard shoring selection forms have been submitted. The Resident, District or Bridge Maintenance Engineer, Bridge or Roadway Construction Engineer, Geotechnical Operations Engineer, Contractor and Shoring Contractor Superintendent will attend this preconstruction meeting.

Construction Methods

63

Construct standard shoring in accordance with the *Temporary Shoring* provision.

(A) Standard Temporary Shoring Installation

Based on actual shoring height, positive protection, groundwater elevation, slope or surcharge case and traffic impact at each standard temporary shoring location, install piles with the minimum required embedment and extension for each shoring section in accordance with Standard Drawing No. 1801.01. For concrete barrier above and next to standard temporary shoring and temporary guardrail above and attached to standard temporary shoring, use "surcharge case with traffic impact" in accordance with Standard Drawing No. 1801.01. Otherwise, use "slope or surcharge case with no traffic impact" in accordance with Standard Drawing No. 1801.01. If refusal is reached before driven piles attain the minimum required embedment, use drilled-in H-piles with timber lagging for standard temporary shoring.

(B) Standard Temporary Walls Installation

Based on actual wall height, groundwater elevation, slope or surcharge case, geotextile or geogrid reinforcement and shoring backfill type in the reinforced zone at each standard temporary wall location, construct walls with the minimum required reinforcement length and number of reinforcement layers for each wall section in accordance with Standard Drawing No. 1801.02. For standard temporary walls with pile foundations in the reinforced zone, drive piles through reinforcement after constructing temporary walls.

For standard temporary walls with interior angles less than 90°, wrap geosynthetics at acute corners as directed by the Engineer. Place geosynthetics as shown in Standard Drawing No. 1801.02. Place separation geotextiles between shoring backfill and backfill, natural ground or culverts along the sides of the reinforced zone perpendicular to the wall face. For Class V or VI select material in the reinforced zone, place separation geotextiles between shoring backfill and backfill or natural ground on top of and at the back of the reinforced zone.

Measurement and Payment

Standard shoring will be measured and paid in accordance with the *Temporary Shoring* provision.

PROJECT SPECIAL PROVISIONS
Utilities by Others

General:

The following utility companies have facilities that will be in conflict with the construction of this project:

A. Cape Hatteras EMC (Power)
B. CenturyLink (Telephone)

The conflicting facilities of these concerns will be adjusted prior to the date of availability, unless otherwise noted and are therefore listed in these special provisions for the benefit of the Contractor. All utility work listed herein will be done by the utility owners. All utilities are shown on the plans from the best available information.

The Contractor's attention is directed to Article 105.8 of the Standard Specifications.

Utilities Requiring Adjustment:

A. Cape Hatteras EMC

1. All work will be completed by March 1, 2014
See Utility Conflict Plans by others. The contact person is
Mr. George Price at 252-475-0178.
georgep@chec.coop.

B. CenturyLink

1. All work will be completed by March 1, 2014
See Utility Conflict Plans by others. The contact person is
Mr. Rod Medlin at 252-413-7711.
Rod.M.Medlin@centurylink.com.

Project Special Provisions
Erosion Control

STABILIZATION REQUIREMENTS:

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit effective August 3, 2011 issued by the North Carolina Department of Environment and Natural Resources Division of Water Quality. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity:

- Slopes between 2:1 and 3:1, with a slope length of 10 ft. or less
- Slopes 3:1 or flatter, with a slope of length of 50 ft. or less
- Slopes 4:1 or flatter

The stabilization timeframe for High Quality Water (HQW) Zones shall be 7 calendar days with no exceptions for slope grades or lengths. High Quality Water Zones (HQW) Zones are defined by North Carolina Administrative Code 15A NCAC 04A.0105 (25). Temporary and permanent ground cover stabilization shall be achieved in accordance with the provisions in this contract and as directed.

SEEDING AND MULCHING: (East)

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

All Roadway Areas

March 1 - August 31		**September 1 - February 28**	
50#	Tall Fescue	50#	Tall Fescue
50#	Bahiagrass	50#	Bahiagrass
10#	Centipede	10#	Centipede
25#	Bermudagrass (hulled)	35#	Bermudagrass (unhulled)
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Waste and Borrow Locations

March 1 – August 31		**September 1 - February 28**	
75#	Tall Fescue	75#	Tall Fescue
50#	Bahiagrass	50#	Bahiagrass
25#	Bermudagrass (hulled)	35#	Bermudagrass (unhulled)
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Approved Tall Fescue Cultivars

2nd Millennium	Duster	Magellan	Rendition
Avenger	Endeavor	Masterpiece	Scorpion
Barlexas	Escalade	Matador	Shelby
Barlexas II	Falcon II, III, IV & V	Matador GT	Signia
Barrera	Fidelity	Millennium	Silverstar
Barrington	Finesse II	Montauk	Southern Choice II
Biltmore	Firebird	Mustang 3	Stetson
Bingo	Focus	Olympic Gold	Tarheel
Bravo	Grande II	Padre	Titan Ltd
Cayenne	Greenkeeper	Paraiso	Titanium
Chapel Hill	Greystone	Picasso	Tomahawk
Chesapeake	Inferno	Piedmont	Tacer
Constitution	Justice	Pure Gold	Trooper
Chipper	Jaguar 3	Prospect	Turbo
Coronado	Kalahari	Quest	Ultimate
Coyote	Kentucky 31	Rebel Exeda	Watchdog
Davinci	Kitty Hawk	Rebel Sentry	Wolfpack
Dynasty	Kitty Hawk 2000	Regiment II	
Dominion	Lexington	Rembrandt	

On cut and fill slopes 2:1 or steeper Centipede shall be applied at the rate of 5 pounds per acre and add 20# of Sericea Lespedeza from January 1 - December 31.

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.

Native Grass Seeding and Mulching **(East)**

Native Grass Seeding and Mulching shall be performed on the disturbed areas of wetlands and riparian areas, and adjacent to Stream Relocation construction within a 50 foot zone on both sides of the stream or depression, measured from top of stream bank or center of depression. The stream bank of the stream relocation shall be seeded by a method that does not alter the typical cross section of the stream bank. Native Grass Seeding and Mulching shall also be performed in the permanent soil reinforcement mat section of preformed scour holes, and in other areas as directed.

The kinds of seed and fertilizer, and the rates of application of seed, fertilizer, and limestone, shall be as stated below. During periods of overlapping dates, the kind of seed to be used shall be determined. All rates are in pounds per acre.

March 1 - August 31		**September 1 - February 28**	
18#	Creeping Red Fescue	18#	Creeping Red Fescue
6#	Indiangrass	6#	Indiangrass

8#	Little Bluestem	8#	Little Bluestem
4#	Switchgrass	4#	Switchgrass
25#	Browntop Millet	35#	Rye Grain
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Approved Creeping Red Fescue Cultivars:

Aberdeen	Boreal	Epic	Cindy Lou

Fertilizer shall be 10-20-20 analysis. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as a 10-20-20 analysis and as directed.

Native Grass Seeding and Mulching shall be performed in accordance with Section 1660 of the *Standard Specifications* and vegetative cover sufficient to restrain erosion shall be installed immediately following grade establishment.

Measurement and Payment

Native Grass *Seeding and Mulching* will be measured and paid for in accordance with Article 1660-8 of the *Standard Specifications*.

All areas seeded and mulched shall be tacked with asphalt. Crimping of straw in lieu of asphalt tack shall not be allowed on this project.

CRIMPING STRAW MULCH:

Crimping shall be required on this project adjacent to any section of roadway where traffic is to be maintained or allowed during construction. In areas within six feet of the edge of pavement, straw is to be applied and then crimped. After the crimping operation is complete, an additional application of straw shall be applied and immediately tacked with a sufficient amount of undiluted emulsified asphalt.

Straw mulch shall be of sufficient length and quality to withstand the crimping operation.

Crimping equipment including power source shall be subject to the approval of the Engineer providing that maximum spacing of crimper blades shall not exceed 8".

TEMPORARY SEEDING:

Fertilizer shall be the same analysis as specified for *Seeding and Mulching* and applied at the rate of 400 pounds and seeded at the rate of 50 pounds per acre. Sweet Sudan Grass, German Millet or Browntop Millet shall be used in summer months and Rye Grain during the remainder of the year. The Engineer will determine the exact dates for using each kind of seed.

FERTILIZER TOPDRESSING:

Fertilizer used for topdressing on all roadway areas except slopes 2:1 and steeper shall be 10-20-20 grade and shall be applied at the rate of 500 pounds per acre. A different analysis of fertilizer may be used provided the 1-2-2 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as 10-20-20 analysis and as directed.

Fertilizer used for topdressing on slopes 2:1 and steeper and waste and borrow areas shall be 16-8-8 grade and shall be applied at the rate of 500 pounds per acre. A different analysis of fertilizer may be used provided the 2-1-1 ratio is maintained and the rate of application adjusted to provide the same amount of plant food as 16-8-8 analysis and as directed.

SUPPLEMENTAL SEEDING:

The kinds of seed and proportions shall be the same as specified for *Seeding and Mulching*, with the exception that no centipede seed will be used in the seed mix for supplemental seeding. The rate of application for supplemental seeding may vary from 25# to 75# per acre. The actual rate per acre will be determined prior to the time of topdressing and the Contractor will be notified in writing of the rate per acre, total quantity needed, and areas on which to apply the supplemental seed. Minimum tillage equipment, consisting of a sod seeder shall be used for incorporating seed into the soil as to prevent disturbance of existing vegetation. A clodbuster (ball and chain) may be used where degree of slope prevents the use of a sod seeder.

MOWING:

The minimum mowing height on this project shall be 4 inches.

RESPONSE FOR EROSION CONTROL:

Description

Furnish the labor, materials, tools and equipment necessary to move personnel, equipment, and supplies to the project necessary for the pursuit of any or all of the following work as shown herein, by an approved subcontractor.

Section	Erosion Control Item	Unit
1605	Temporary Silt Fence	LF
1606	Special Sediment Control Fence	LF/TON
1615	Temporary Mulching	ACR
1620	Seed - Temporary Seeding	LB
1620	Fertilizer - Temporary Seeding	TN
1631	Matting for Erosion Control	SY

SP	Coir Fiber Mat	SY
1640	Coir Fiber Baffles	LF
SP	Permanent Soil Reinforcement Mat	SY
1660	Seeding and Mulching	ACR
1661	Seed - Repair Seeding	LB
1661	Fertilizer - Repair Seeding	TON
1662	Seed - Supplemental Seeding	LB
1665	Fertilizer Topdressing	TON
SP	Safety/Highly Visible Fencing	LF
SP	Response for Erosion Control	EA

Construction Methods

Provide an approved subcontractor who performs an erosion control action as described in the NPDES Inspection Form SPPP30. Each erosion control action may include one or more of the above work items.

Measurement and Payment

Response for Erosion Control will be measured and paid for by counting the actual number of times the subcontractor moves onto the project, including borrow and waste sites, and satisfactorily completes an erosion control action described in Form 1675. The provisions of Article 104-5 of the *Standard Specifications* will not apply to this item of work.

Payment will be made under:

Pay Item	**Pay Unit**
Response for Erosion Control	Each

MINIMIZE REMOVAL OF VEGETATION:

The Contractor shall minimize removal of vegetation at stream banks and disturbed areas within the project limits as directed.

STOCKPILE AREAS:

The Contractor shall install and maintain erosion control devices sufficient to contain sediment around any erodible material stockpile areas as directed.

ACCESS AND HAUL ROADS:

At the end of each working day, the Contractor shall install or re-establish temporary diversions or earth berms across access/haul roads to direct runoff into sediment devices. Silt fence sections that are temporarily removed shall be reinstalled across access/haul roads at the end of each working day.

WASTE AND BORROW SOURCES:

Payment for temporary erosion control measures, except those made necessary by the Contractor's own negligence or for his own convenience, will be paid for at the appropriate contract unit price for the devices or measures utilized in borrow sources and waste areas.

No additional payment will be made for erosion control devices or permanent seeding and mulching in any commercial borrow or waste pit. All erosion and sediment control practices that may be required on a commercial borrow or waste site will be done at the Contractor's expense.

All offsite Staging Areas, Borrow and Waste sites shall be in accordance with "Borrow and Waste Site Reclamation Procedures for Contracted Projects" located at:

http://www.ncdot.gov/doh/operations/dp_chief_eng/roadside/fieldops/downloads/Files/ContractedReclamationProcedures.pdf

All forms and documents referenced in the "Borrow and Waste Site Reclamation Procedures for Contracted Projects" shall be included with the reclamation plans for offsite staging areas, and borrow and waste sites.

SAFETY FENCE AND JURISDICTIONAL FLAGGING:

Description

Safety Fence shall consist of furnishing materials, installing and maintaining polyethylene or polypropylene fence along the outside riparian buffer, wetland, or water boundary, or other boundaries located within the construction corridor to mark the areas that have been approved to infringe within the buffer, wetland, endangered vegetation, culturally sensitive areas or water. The fence shall be installed prior to any land disturbing activities.

Interior boundaries for jurisdictional areas noted above shall be delineated by stakes and highly visible flagging.

Jurisdictional boundaries at staging areas, waste sites, or borrow pits, whether considered outside or interior boundaries shall be delineated by stakes and highly visible flagging.

Materials

(A) Safety Fencing

Polyethylene or polypropylene fence shall be a highly visible preconstructed safety fence approved by the Engineer. The fence material shall have an ultraviolet coating.

Either wood posts or steel posts may be used. Wood posts shall be hardwood with a wedge or pencil tip at one end, and shall be at least 5 ft. in length with a minimum nominal 2" x 2" cross section. Steel posts shall be at least 5 ft. in length, and have a minimum weight of 0.85 lb/ft of length.

(B) Boundary Flagging

Wooden stakes shall be 4 feet in length with a minimum nominal 3/4" x 1-3/4" cross section. The flagging shall be at least 1" in width. The flagging material shall be vinyl and shall be orange in color and highly visible.

Construction Methods

No additional clearing and grubbing is anticipated for the installation of this fence. The fence shall be erected to conform to the general contour of the ground.

(A) Safety Fencing

Posts shall be set at a maximum spacing of 10 ft., maintained in a vertical position and hand set or set with a post driver. If hand set, all backfill material shall be thoroughly tamped. Wood posts may be sharpened to a dull point if power driven. Posts damaged by power driving shall be removed and replaced prior to final acceptance. The tops of all wood posts shall be cut at a 30-degree angle. The wood posts may, at the option of the Contractor, be cut at this angle either before or after the posts are erected.

The fence geotextile shall be attached to the wood posts with one 2" galvanized wire staple across each cable or to the steel posts with wire or other acceptable means.

Place construction stakes to establish the location of the safety fence in accordance with Article 105-9 or Article 801-1 of the *Standard Specifications.* No direct pay will be made for the staking of the safety fence. All stakeouts for safety fence shall be considered incidental to the work being paid for as "Construction Surveying", except that where there is no pay item for construction surveying, all safety fence stakeout will be performed by state forces.

The Contractor shall be required to maintain the safety fence in a satisfactory condition for the duration of the project as determined by the Engineer.

(B) Boundary Flagging

Boundary flagging delineation of interior boundaries shall consist of wooden stakes on 25 feet maximum intervals with highly visible orange flagging attached. Stakes shall be installed a minimum of 6" into the ground. Interior boundaries may be staked on a tangent that runs parallel to buffer but must not encroach on the buffer at any location. Interior boundaries of hand clearing shall be identified with a different colored flagging to distinguish it from mechanized clearing.

Boundary flagging delineation of interior boundaries will be placed in accordance with Article 105-9 or Article 801-1 of the *Standard Specifications*. No direct pay will be made for delineation of the interior boundaries. This delineation will be considered incidental to the work being paid for as *Construction Surveying,* except that where there is no pay item or construction surveying the cost of boundary flagging delineation shall be included in the unit prices bid for the various items in the contract. Installation for delineation of all jurisdictional boundaries at staging areas, waste sites, or borrow pits shall consist of wooden stakes on 25 feet maximum intervals with highly visible orange flagging attached. Stakes shall be installed a minimum of 6" into the ground. Additional flagging may be placed on overhanging vegetation to enhance visibility but does not substitute for installation of stakes.

Installation of boundary flagging for delineation of all jurisdictional boundaries at staging areas, waste sites, or borrow pits shall be performed in accordance with Subarticle 230-4(B)(3)(d) or Subarticle 802-2(F) of the *Standard Specifications*. No direct pay will be made for this delineation, as the cost of same shall be included in the unit prices bid for the various items in the contract.

The Contractor shall be required to maintain alternative stakes and highly visible flagging in a satisfactory condition for the duration of the project as determined by the Engineer.

Measurement and Payment

Safety Fence will be measured and paid as the actual number of linear feet of polyethylene or polypropylene fence installed in place and accepted. Such payment will be full compensation including but not limited to furnishing and installing fence geotextile with necessary posts and post bracing, staples, tie wires, tools, equipment and incidentals necessary to complete this work.

Payment will be made under:

Pay Item	**Pay Unit**
Safety Fence	Linear Foot

SILT FENCE COIR FIBER WATTLE BREAK:

Description

Silt Fence Coir Fiber Wattle Breaks are tubular products consisting of coir fibers (coconut fibers) encased in coir fiber netting and used in conjunction with Temporary Silt Fence at toe of fills to intercept runoff. Silt Fence Coir Fiber Wattle Breaks are to be placed at locations shown on the plans or as directed. Installation shall follow the detail provided in the plans and as directed. Work includes furnishing materials, installation, maintenance and removing Silt Fence Coir Fiber Wattle Breaks.

Materials

Coir Fiber Wattle shall meet the following specifications:

100% Coir (Coconut) Fibers	
Minimum Diameter	12 in.
Minimum Length	10 ft.
Minimum Density	3.5 lb/ft^3 +/- 10%
Net Material	Coir Fiber
Net Openings	2 in. x 2 in.
Net Strength	90 lbs.
Minimum Weight	2.6 lbs./ft. +/- 10%

Anchors: Stakes shall be used as anchors.

Wooden Stakes:

Provide hardwood stakes a minimum of 2-ft. long with a 2 in. x 2 in. nominal square cross section. One end of the stake must be sharpened or beveled to facilitate driving down into the underlying soil.

Provide staples made of 0.125" diameter new steel wire formed into a *u* shape not less than 12" in length with a throat of 1" in width.

Construction Methods

A trench shall be excavated the entire length of the coir fiber wattle with a depth of 1 to 2 inches for the wattle to be placed. Silt Fence Coir Fiber Wattle Breaks shall be secured to the soil by wire staples approximately every 1 linear foot and at the end of each wattle. A minimum of 4 stakes shall be installed on the downslope side of the wattle with a maximum spacing of 2 linear feet, and according to the detail. Install a minimum of 2 stakes on the upslope side of the Silt Fence Coir Fiber Wattle Break according to the detail provided in the plans. Stakes shall be driven into the ground a minimum of 10 in. with no more than 2 in. projecting from the top of the wattle. Drive stakes at an angle according to the detail provided in the plans.

Install Temporary Silt Fence in accordance with section 1605 of the Standard Specifications and overlap each downslope side of silt fence wattle break by 6 in.

The Contractor shall maintain the Silt Fence Coir Fiber Wattle Breaks until the project is accepted or until the Silt Fence Coir Fiber Wattle Breaks are removed, and shall remove and dispose of silt accumulations at the Silt Fence Coir Fiber Wattle Breaks when so directed in accordance with the requirements of Section 1630 of the *Standard Specifications*.

Measurement and Payment

Silt Fence Coir Fiber Wattle Break will be measured and paid for by the actual number of linear feet of Silt Fence Coir Fiber Wattle Breaks which are installed and accepted. Such price and payment will be full compensation for all work covered by this section, including, but not limited to, furnishing all materials, labor, equipment and incidentals necessary to install the *Silt Fence Coir Fiber Wattle Break.*

Payment will be made under:

Pay Item	Pay Unit
Coir Fiber Wattle	Linear Foot

COIR FIBER WATTLE:

Description

Coir Fiber Wattles are tubular products consisting of coir fibers (coconut fibers) encased in coir fiber netting. Coir Fiber Wattles are used on slopes or channels to intercept runoff and act as a velocity break. Coir Fiber Wattles are to be placed at locations shown on the plans or as directed. Installation shall follow the detail provided in the plans and as directed. Work includes furnishing materials, installation of coir fiber wattles, matting installation, and removing wattles.

Materials

Coir Fiber Wattle shall meet the following specifications:

100% Coir (Coconut) Fibers	
Minimum Diameter	12 in.
Minimum Density	3.5 lb/ft^3 +/- 10%
Net Material	Coir Fiber
Net Openings	2 in. x 2 in.
Net Strength	90 lbs.
Minimum Weight	2.6 lbs./ft. +/- 10%

Anchors: Stakes shall be used as anchors.

Wooden Stakes:

Provide hardwood stakes a minimum of 2-ft. long with a 2 in. x 2 in. nominal square cross section. One end of the stake must be sharpened or beveled to facilitate driving down into the underlying soil.

Matting shall meet the requirements of Article 1060-8 of the *Standard Specifications*, or shall meet specifications provided elsewhere in this contract.

Provide staples made of 0.125" diameter new steel wire formed into a *u* shape not less than 12" in length with a throat of 1" in width.

Construction Methods

Coir Fiber Wattles shall be secured to the soil by wire staples approximately every 1 linear foot and at the end of each section of wattle. A minimum of 4 stakes shall be installed on the downstream side of the wattle with a maximum spacing of 2 linear feet along the wattle, and according to the detail. Install a minimum of 2 stakes on the upstream side of the wattle according to the detail provided in the plans. Stakes shall be driven into the ground a minimum of 10 in. with no more than 2 in. projecting from the top of the wattle. Drive stakes at an angle according to the detail provided in the plans.

Only install coir fiber wattle(s) to a height in ditch so flow will not wash around wattle and scour ditch slopes and according to the detail provided in the plans and as directed. Overlap adjoining sections of wattles a minimum of 6 in.

Installation of matting shall be in accordance with the detail provided in the plans, and in accordance with Article 1631-3 of the *Standard Specifications*, or in accordance with specifications provided elsewhere in this contract.
The Contractor shall maintain the coir fiber wattles until the project is accepted or until the wattles are removed, and shall remove and dispose of silt accumulations at the wattles when so directed in accordance with the requirements of Section 1630 of the *Standard Specifications*.

Measurement and Payment

Coir Fiber Wattles will be measured and paid for by the actual number of linear feet of wattles which are installed and accepted. Such price and payment will be full compensation for all work covered by this section, including, but not limited to, furnishing all materials, labor, equipment and incidentals necessary to install the *Coir Fiber Wattles*.

Matting will be measured and paid for in accordance with Article 1631-4 of the *Standard Specifications*, or in accordance with specifications provided elsewhere in this contract.

Payment will be made under:

Pay Item	Pay Unit
Coir Fiber Wattle	Linear Foot

REINFORCED TEMPORARY SILT FENCE:

Reinforced Temporary Silt Fence shall be installed on this project as shown on the erosion control plans and as directed. Installation shall follow the detail provided in the plans and as directed. Install Reinforced Temporary Silt Fence in accordance with section 1605 of the *Standard Specifications*. Steel post spacing shall be a maximum of 6 ft. Install woven wire backing in accordance with section 1605 of the *Standard Specifications*.

Reinforced Temporary Silt Fence will be measured and paid for in accordance with Article 1605-5 of the *Standard Specifications*.

77

STV

Special Provisions

Pea Island on NC 12 – Long Term Improvements

TIP No. B-2500A
Dare County
STV Project No. 2515501

Prepared for:
North Carolina Department of Transportation
Structures Management Unit
1000 Birch Ridge Road
Raleigh, NC 27610

STV/Ralph Whitehead Associates
Consulting Engineers
NC License No. F-0991
1000 West Morehead Street
Charlotte, North Carolina 28208
Phone (704) 372-1885
Fax (704) 372-3393

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Structures Special Provisions

Table of Contents

		Page #
Maintenance and Protection of Traffic Beneath Proposed Structure	8-13-04	3
Construction, Maintenance and Removal of Temporary Access At Station 3144+80-L-	11-17-06	4
Bridge Deck Rideability and Grooving	9-30-11	5
Thermal Sprayed Coatings (Metallization)	9-30-11	8
Concrete Wearing Surface	9-30-11	12
Elastomeric Concrete	9-27-12	14
Foam Joint Seals	9-27-12	17
Modular Expansion Joint Seals	9-30-11	21
Securing of Vessels	10-12-01	24
Falsework and Formwork	4-5-12	25
Submittal of Working Drawings	2-10-12	31
Crane Safety	8-15-05	37
Grout for Structures	9-30-11	38
Epoxy Resin Injection	SPECIAL	40
F.I.B. 72" Prestressed Concrete Girders	SPECIAL	44
Stainless Steel Reinforcing	SPECIAL	45
Mass Concrete	SPECIAL	47
Concrete Shrinkage Control for Precast Cap	SPECIAL	49
Corrosion Protection of Bridge	SPECIAL	50
Removal of Existing Structure	SPECIAL	51
Concrete Moment Slab	SPECIAL	53
Concrete Sheet Pile Wall	SPECIAL	54
36" Prestressed Concrete Piles	SPECIAL	55
Dowels in Prestressed Piles	SPECIAL	55a

NORTH CAROLINA PROFESSIONAL SEAL 19766 ENGINEER E. KELLY

11/13/13

Seal applies to the structure Special Provisions above.

Geotechnical Special Provisions

Table of Contents

Pile Jetting	SPECIAL	56
Reinforced Bridge Approach Fills	SPECIAL	58

MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE (8-13-04)

1.0 GENERAL

Maintain traffic on NC 12 over Pea Island Inlet as shown in Traffic Control Plans and as directed by the Engineer.

Provide a minimum temporary vertical clearance of 15'-6" at all times during construction.

Submit plans and calculations for review and approval for protecting traffic and bracing girders, as described herein, before beginning work at this location. Have the drawings and design calculations prepared, signed, and sealed by a North Carolina Registered Professional Engineer. The approval of the Engineer will not relieve the Contractor of the responsibility for the safety of the method or equipment.

2.0 PROTECTION OF TRAFFIC

Protect traffic from any operation that affords the opportunity for construction materials, equipment, tools, etc. to be dropped into the path of traffic beneath the structure. Based on Contractor means and methods determine and clearly define all dead and live loads for this system, which, at a minimum, shall be installed between beams or girders over any travelway or shoulder area where traffic is maintained. Install the protective system before beginning any construction operations over traffic. In addition, for these same areas, keep the overhang falsework in place until after the rails have been poured.

3.0 BRACING GIRDERS

Brace girders to resist wind forces, weight of forms and other temporary loads, especially those eccentric to the vertical axis of the member during all stages of erection and construction. Before casting of intermediate diaphragms, decks, or connecting steel diaphragms do not allow the horizontal movement of girders to exceed ½ inch.

4.0 BASIS OF PAYMENT

Payment at the contract unit prices for the various pay items will be full compensation for the above work.

CONSTRUCTION, MAINTENANCE AND REMOVAL OF TEMPORARY ACCESS AT STATION 3144+80-L- (11-17-06)

1.0 GENERAL

Construct, maintain, and remove the temporary access required to provide the working area necessary for construction of the new bridge, construction of the temporary detour structure, or for the removal of an existing bridge, as applicable. Temporary access may include other methods than those outlined in this Special Provision; however, all types of temporary access are required to meet the requirements of all permits, the Standard Specifications, and this Special Provision.

2.0 TEMPORARY WORK BRIDGE

Construction of a temporary work bridge is permitted. The temporary work bridge shall have a minimum span length of 20 feet. Submit details of the temporary work bridge to the Engineer prior to constructing the work bridge to ensure conformance with the plans and all permits. Completely remove the temporary bridge prior to final acceptance or as otherwise required by the permits.

3.0 BASIS OF PAYMENT

The lump sum price bid for "Construction, Maintenance and Removal of Temporary Access" will be full compensation for the above work, or other methods of access, including all material, work bridge components, equipment, tools, labor, disposal, and incidentals necessary to complete the work.

BRIDGE DECK RIDEABILITY – INTERNATIONAL ROUGHNESS INDEX (IRI)

(SPECIAL)

1.0 General

Perform the smoothness acceptance testing, diamond grinding, transverse grooving and all other related work associated with obtaining satisfactory rideability and surface texture of the bridge deck surface.

Use an inertial profiler(s) with line laser technology to perform this work. Contractor shall maintain responsibility for all costs relating to the procurement, handling, and maintenance of these devices.

2.0 Testing Requirements

Perform smoothness acceptance testing using an inertial profiler of the longitudinal profile of the finished bridge deck in the presence of the Engineer. Submit a proposed plan of action including but not limited to transition distances to begin and end testing, preparing start and stop markers for the profiler, handling of joints and blockouts, preparing segments to be tested, bridge deck preparation and cleaning and schedule for profiler testing for entire bridge deck surface to the Engineer. Produce International Roughness Index (IRI) and Mean Roughness Index (MRI) values for measuring smoothness.

Prior to smoothness testing, placement of the bridge deck and barrier rail within the section to be tested shall be complete, with the exception of blockouts required for the installation of joints. Do not install joints until the Engineer determines that the rideability requirements herein have been met. Joint locations shall be temporarily bridged sufficiently to facilitate operation of the profiler and corrective equipment across the joint including but not limited to filling joints with temporary material which is flush with surface on both sides and reasonably consolidated. Use a 10-ft stationary straightedge or other equipment furnished by the Contractor to ensure the joint locations are flush. Remove all obstructions from the bridge deck and sweep the surface clean of debris prior to profiler testing.

Use testing and recording software to produce electronic inertial road profiles in a format compatible with the latest version of FHWA's ProVAL (Profile Viewing and Analysis) software.

The inertial profiler shall be calibrated and verified in accordance with AASHTO M 328. Provide equipment calibration documentation and operator training certification that the inertial profiler system meets AASHTO M 328 to the Engineer before the first day the inertial profiler is used on the project.

Configure the profiler to record the elevation profile of the bridge deck 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 2".

Use personnel with proper training and experience to collect, record and evaluate IRI data.

Provide a competent operator, trained in the operation of the inertial profiler. Operation of the inertial profiling system shall conform to AASHTO R 57.

Provide the user selected inertial profiler settings to the Engineer for the project records. Certification of the inertial profiling system shall conform to AASHTO R 56.

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

Traffic control and all associated activities included in the bridge deck smoothness testing of the bridge deck surface will be the responsibility of the Contractor.

Operate the profiler at any speed as per the manufacturer's recommendations, however, the speed shall be constant to within ± 3 mph of the intended speed and any required acceleration shall be gradual. 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 the direction of the final traffic pattern. 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. Define a "wheel path" as 3 feet from the edge of the travel lane. 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 shall be sufficient to obtain the intended operating speed and to slow down after testing is completed.

The evaluation of the profiles will be performed on a section basis. A section is defined as the length from expansion joint to expansion joint for each travel lane of the finished bridge deck surface.

Perform all smoothness testing in the presence of the Engineer. Perform smoothness tests on the finished surface of the completed project or at the completion of a major stage of construction as approved by the Engineer. Coordinate with and receive authorization from the 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.

Areas excluded from testing by the profiler shall be tested by the Contractor and the Engineer using a 10-ft stationary straightedge furnished by the Contractor. Any location on the bridge deck selected by the Department shall be tested as well as all transverse joints. Apply the straightedge parallel to the centerline of the surface. Do not exceed 1/8" variation of the surface being tested from the edge of the straightedge between any 2 contact points. Correct areas found to exceed this tolerance with corrective measures approved by the Engineer. Provide the work and materials required in the correction of defective work at no cost to the Department.

When corrections to the bridge deck surface are required, the method of correction shall be diamond grinding. See "Diamond Grinding" herein. Where corrections are made after the initial smoothness testing, the bridge deck will be retested by the Contractor to verify that corrections have produced the acceptable ride surface.

3. Reporting Requirements

After testing, transfer the profile data from the profiler portable computer's hard drive to a write once storage media (DVD-R or CD-R) or electronic media (flash drive) approved by the Engineer. Label the disk or electronic media with the Project number, Route, file number, date, and termini of the profile data. Submit the electronic data on the approved media to the Engineer immediately after testing and this media will not be returned to the Contractor.

Submit documentation and electronic data of the evaluation for each section to the Engineer within 10 days after completion of the smoothness testing. Submit the electronic files compatible with ProVAL and the evaluation in tabular form with each section occupying a row. Include each row with the beginning and ending station for the section, the length of the section, the original IRI values from each wheel path, and the MRI value for the section. Each continuous run for a section will occupy a separate table and each table will have a header that includes the following: the project contract number, county, the roadway number or designation, a lane designation, the dates of the smoothness runs, and the beginning and ending station of the continuous run. Summarize each table at the bottom.

IRI and MRI numbers recorded in inches per mile will be established from expansion joint to expansion joint for each travel lane of the finished bridge deck surface designated by the Contract.

4. Acceptance Criteria

The bridge deck smoothness acceptance criteria shall be an MRI, the average IRI from both wheel paths, of 130 in/mile or less.

5. Localized Roughness

Areas of localized roughness shall be identified through the "Smoothness Assurance Module" provided in the ProVAL software. Use the "Smoothness Assurance Module" to optimize repair strategies by analyzing the measurements from profiles collected using inertial profilers. The ride quality threshold for localized roughness shall be 300 in/mile at the continuous short interval

of 25 ft. Submit a continuous roughness report to identify sections outside the threshold and identify all localized roughness areas.
The Department will review the localized roughness data and determine the areas that require any corrective action. Re-profile the corrected area to ensure that the corrective action was successful. If the corrective action is not successful, the Department will assess a penalty or require additional corrective action.

Corrective work for localized roughness shall be either diamond grinding or another method approved by the Engineer. Any corrective action performed shall not reduce the integrity or durability of the bridge deck that is to remain in place. Notify the Engineer 5 days prior to commencement of the corrective action.

Localized roughness correction work shall be for the entire traffic lane width. Bridge deck cross slope shall be maintained through corrective areas.

6. Diamond Grinding

If the deck does not meet the smoothness acceptance testing requirements, diamond grinding is required to make corrections. Diamond grind the full width of all lanes in the direction of travel.

Submit grinding equipment specifications to the Engineer for approval before any grinding is performed. Use a grinding machine with diamond tipped saw blades gang mounted on a power driven self-propelled machine capable of removing a minimum of 3 ft of width with each pass. Multiple passes may be needed to achieve the required depth of removal. In addition, hand grinding may be required to remove vertical steps between passes.

The ground surface shall consist of between 50 and 60 grooves per foot of width. The grooves shall be between 0.09" and 0.15" in width and 0.0625" in depth. The area between the grooves shall be between 0.06" and 0.13" in width. The final concrete texture shall be uniform.

Construct and operate the grinding machine such that it will not cause strain or damage to the deck surface, excessive ravels, aggregate fractures, spalls, or disturbance of transverse joints. Longitudinally grind the deck parallel to the roadway centerline.

Continuously remove all slurry or other debris resulting from the grinding operations by vacuum pick-up or other approved methods. Prevent the slurry from flowing into floor drains, onto the ground or into the body of water under the bridge. Dispose of all residues in accordance with Section 802 of the *2012 Standard Specifications*.

In completing all corrective work on the deck surface to satisfy the rideability criteria stated herein, limit grinding such that the final reinforcement cover is not less than the plan cover minus 1/2". In cases where this cannot be achieved, other corrective work may be required as directed by the Engineer.

If corrective action is required on an area equal to or greater than of 50% of the joint to joint section, then corrective action will be required on the entire section at no cost to the Department.

7. Grooving Bridge Floors

After the concrete surface profile has been accepted by the Engineer, the concrete blockouts poured, and the joints installed, groove the bridge deck in accordance with Subarticle 420-14(B) of the *2012 Standard Specifications*. On joint to joint sections which have been completely diamond ground, grooving will not be required.

8.0 Basis of Payment

No separate payment will be made for the profiler testing or diamond grinding of the bridge deck. The cost of testing procedure, equipment, grinding operation, and removal and disposal of slurry resulting from the grinding operation is considered incidental to the contract bid price for "Reinforced Concrete Deck Slab".

THERMAL SPRAYED COATINGS (METALLIZATION) (9-30-11)

1.0 DESCRIPTION

Apply a thermal sprayed coating (TSC) and sealer to metal surfaces as specified herein when called for on the plans or by other Special Provisions, or when otherwise approved by the Engineer in accordance with the SSPC-CS 23.00/AWS C2.23/NACE No. 12 Specification. Only Arc Sprayed application methods are used to apply TSC coatings, the Engineer must approve other methods of application.

2.0 QUALIFICATIONS

Only use NCDOT approved TSC Contractors meeting the following requirements:

1. The capability of blast cleaning steel surfaces to SSPC SP-5 and SP-10 Finishes.

2. Employ Spray Operator(s) qualified in accordance with AWS C.16/C2.16M2002 and Quality Control Inspector(s) who have documented training in the applicable test procedures of ASTM D-3276 and SSPC-CS 23.00.

A summary of the contractor's related work experience and the documents verifying each Spray Operator's and Quality Control Inspector's qualifications are submitted to the Engineer before any work is performed.

3.0 MATERIALS

Provide wire in accordance with the metallizing equipment manufacturer's recommendations. Use the wire alloy specified on the plans which meets the requirements in Annex **C** of the SSPC-CS 23.00 Specification. Have the contractor provide a certified analysis (NCDOT Type 2 Certification) for each lot of wire material.

Apply an approved sealer to all metallized surfaces in accordance with Section 9 of SSPC-CS 23. The sealer must either meet SSPC Paint 27 or is an alternate approved by the Engineer.

4.0 SURFACE PREPARATION AND TSC APPLICATION

Grind flame cut edges to remove the carbonized surface prior to blasting. Bevel all flame cut edges in accordance with Article 442-10(D) regardless of included angle. Blast clean surfaces to be metallized with grit or mineral abrasive in accordance with Steel Structures Painting Council SSPC SP-5/10(as specified) to impart an angular surface profile of 2.5 - 4.0 mils. Surface preparation hold times are in accordance with Section 7.32 of SSPC-CS 23. If flash rusting occurs prior to metallizing, blast clean the metal surface again. Apply the thermal sprayed coating only when the surface temperature of the steel is at least 5°F above the dew point.

At the beginning of each work period or shift, conduct bend tests in accordance with Section 6.5 of SSPC-CS 23.00. Any disbonding or delamination of the coating that

exposes the substrate requires corrective action, additional testing, and the Engineer's approval before resuming the metallizing process.

Apply TSC with the alloy to the thickness specified on the plans or as provided in the table below. All spot results (the average of 3 to 5 readings) must meet the minimum requirement. No additional tolerance (as allowed by SSPC PA-2) is permitted. (For Steel Beams: For pieces with less than 200 ft^2 measure 2 spots/surface per piece and for pieces greater than 200 ft^2 add 1 additional spots/surface for each 500 ft^2).

APPLICATION	THICKNESS	ALLOY	SEAL COAT
Pot Bearings	8 mil	85/15 Zinc (W-Zn-Al-2)	0.5 mil
Armored Joint Angles	8 mil	85/15 Zinc (W-Zn-Al-2)	0.5 mil
Modular Joints	8 mil	99.99% Zn (W-Zn-1)	0.5 mil
Expansion Joint Seals	8 mil	99.99% Zn (W-Zn-1)	0.5 mil
Optional Disc Bearings	8 mil	85/15 Zinc (W-Zn-Al-2)	0.5 mil

When noted on the plans or as specified in the above chart, apply the sealer to all metallized surfaces in accordance with the manufacturer's recommendations and these provisions. Apply the seal coat only when the air temperature is above 40°F and the surface temperature of the steel is at least 5°F above the dew point. If the sealer is not applied within eight hours after the final application of TSC, the applicator verifies acceptable TSC surfaces and obtains approval from the Engineer before applying the sealer.

5.0 INSPECTION FREQUENCY

The TSC Contractor must conduct the following tests at the specified frequency and the results documented in a format approved by the Engineer.

TEST/STANDARD	LOCATION	FREQUENCY	SPECIFICATION
Ambient Conditions	Site	Each Process	5°F above the dew point
Abrasive Properties	Site	Each Day	Size, angularity, cleanliness
Surface Cleanliness SSPC Vis 1	All Surfaces	Visual All Surfaces	SSPC-SP-10 Atmospheric Service SSPC-SP - 5 Immersion Service
Surface Profile ASTM D-4417 Method C	Random Surfaces	3 per 500 ft^2	2.5 - 4.0 mils
Bend Test SSPC-CS 23.00	Site	5 per shift	Pass Visual

Thickness SSPC PA-2R SSPC-CS 23.00	Each Surface	Use the method in PA-2 Appendix 3 for Girders and Appendix 4 for frames and miscellaneous steel. See Note 1.	Zn - 8 mils minimum Al - 8 mils minimum Zn Al - 8 mils minimum Areas with more than twice the minimum thickness are inspected for compliance to the adhesion and cut testing requirements of this specification.
Adhesion ASTM 4541	Random Surfaces Splice Areas	1 set of 3 per 500 ft^2	Zn > 500 psi Al > 1000 psi Zn Al > 750 psi
Cut Test - SSPC-CS 23.00	Random Surfaces	3 sets of 3 per 500 ft^2	No peeling or delamination
Job Reference Std. SSPC-CS 23.00	Site	1 per job	Meets all the above requirements

6.0 REPAIRS

All Repairs are to be performed in accordance with the procedures below, depending on whether the repair surface is hidden or exposed. As an exception to the following, field welded splices on joint angles and field welding bearing plates to girders may be repaired in accordance with the procedures for hidden surfaces.

For hidden surfaces (including but not limited to interior girders, interior faces of exterior girders, and below-grade sections of piles):

1. Welding of metallized surfaces may be performed only if specifically permitted by the Engineer. Remove metallizing at the location of field welds by blast cleaning (SSPC SP-6 finish), or hand (SSPC SP-2 finish) or power tool cleaning (SSPC SP-3 finish) just prior to welding. Clean sufficiently to prevent contamination of the weld. All repairs to welded connections are metallized in accordance with SSPC CS 23.00.

2. Minor areas less than or equal to 0.1 ft^2 exposing the substrate are metallized in accordance with SSPC CS 23.00 or painted in accordance with ASTM A780, "Repair of Damaged and Uncoated Areas of Hot Dip Galvanized Coatings."

3. Large areas greater than 0.1 ft^2 exposing the substrate are metallized in accordance with SSPC CS 23.00.

4. Damaged (burnished) areas not exposing the substrate with less than the specified coating thickness are metallized in accordance with SSPC CS 23.00 or painted in accordance with ASTM A780, "Repair of Damaged and Uncoated Areas of Hot Dip Galvanized Coatings."

5. Damaged (burnished) areas not exposing the substrate with more than the specified coating thickness are not repaired.

6. Defective coating is repaired by either method 2 or 3 depending on the area of the defect.

For Exposed Surfaces (including but not limited to exterior faces of exterior girders and above-grade sections of piles):

1. Welding of metallized surfaces may be performed only if specifically permitted by the Engineer. Remove metallization at the location of field welds by blast cleaning (SSPC SP-6 finish), or hand (SSPC SP-2 finish) or power tool cleaning (SSPC SP-3 finish) just prior to welding. Clean sufficiently to prevent contamination of the weld. All repairs to welded connections are metallized in accordance with SSPC CS 23.00.

2. All areas exposing the substrate are metallized in accordance with SSPC CS 23.00

3. Defective coating is repaired by either method 2 or 3 depending on the area of the defect.

7.0 TWELVE MONTH OBSERVATION PERIOD

The contractor maintains responsibility for the coating system for a twelve (12) month observation period beginning upon the satisfactory completion of all the work required in the plans or as directed by the engineer. The contractor must guarantee the coating system under the payment and performance bond (refer to Article 109-10). To successfully complete the observation period, the coating system must meet the following requirements after twelve (12) months service:

- No visible rust, contamination or application defect is observed in any coated area.
- Painted surfaces have a uniform color and gloss.
- Surfaces have an adhesion of no less than 500 psi when tested in accordance with ASTM D-4541.

8.0 BASIS OF PAYMENT

The contract price bid for the bridge component to which the coating is applied will be full compensation for the thermal sprayed coating.

CONCRETE WEARING SURFACE (9-30-11)

1.0 GENERAL

This Special Provision governs materials, forming, and all other related work in the construction of a reinforced concrete wearing surface in accordance with applicable parts of the Standard Specifications, the details shown on the plans, and as outlined in these Special Provisions.

2.0 MATERIALS

Unless otherwise noted on the plans, use class AA concrete and a coarse aggregate gradation of 78M. The Class AA concrete shall contain fly ash or ground granulated blast furnace slag at the substitution rate specified in Article 1024-1 and in accordance with Articles 1024-5 and 1024-6 of the Standard Specifications. Place the wearing surface according to the grades, thicknesses and cross sections shown on the plans.

3.0 PREPARATION OF SURFACE

Prepare all surfaces to be overlayed using the equipment specified herein and prior to placing the stainless reinforcing steel. Additionally, clean the surface within 48 hours prior to placing the overlay unless otherwise approved.

Thoroughly soak the cleaned surface for at least 12 hours prior to placing the concrete wearing surface. While soaking the surface, cover it with a layer of white opaque polyethylene film that is at least 4 mils thick. Immediately prior to placing the concrete wearing surface, remove standing water from the surface.

4.0 EQUIPMENT

Prior to beginning any work, obtain approval for all equipment to be used for deck preparation, placing, finishing, and curing the concrete wearing surface.

For surface preparation, use sandblasting or pressure washing equipment capable of removing all foreign matter. If using high pressure water blast, a minimum nozzle pressure of 3000 psi is required.

5.0 PLACING AND FINISHING

Follow the placing, finishing, and curing requirements of Article 420-14 (A) and (B). Construction Joints other than those shown on the plans are not permitted.

6.0 LIMITATIONS OF OPERATIONS

The requirements of Article 420-20 will apply to placing vehicles and construction equipment on the finished concrete wearing surface.

Use insulation that meets the requirements of Article 420-7(C), and if required, place it on the concrete wearing surface as soon as the initial set permits.

7.0 METHOD OF MEASUREMENT

The quantity of concrete wearing surface to be paid for is the actual number of square feet of concrete wearing surface as provided on the plans.

8.0 BASIS OF PAYMENT

The quantity for which payment is made will be that quantity shown in square feet on the plans. Where the plans have been revised, the quantity to be paid for will be the quantity shown on the revised plans.

The unit bid per square foot will be full compensation for all work covered by this Special Provision and applicable parts of the Standard Specifications, but not limited to furnishing and placing concrete, stainless reinforcing steel, joint filler and sealer, deck drains, bridge scuppers, and any other material; erecting and removing all forms, curing concrete, protecting concrete in wind, rain, low humidity, high temperatures or other unfavorable weather.

Payment will be made under:

Item	Unit
Concrete Wearing Surface	Square Foot

ELASTOMERIC CONCRETE (9-27-12)

1.0 DESCRIPTION

Elastomeric concrete is a mixture of a two-part polymer consisting of polyurethane and/or epoxy and kiln-dried aggregate. Provide an elastomeric concrete and binder system that is preapproved. Use the concrete in the blocked out areas on both sides of the bridge deck joints as indicated on the plans.

2.0 MATERIALS

Provide materials that comply with the following minimum requirements at 14 days (or at the end of the specified curing time).

ELASTOMERIC CONCRETE PROPERTIES	TEST METHOD	MINIMUM REQUIREMENT
Compressive Strength, psi	ASTM D695	2000
5% Deflection Resilience	ASTM D695	95
Splitting Tensile Strength, psi	ASTM D3967	625
Bond Strength to Concrete, psi	ASTM D882 (D882M)	450
Durometer Hardness	ASTM D2240	50

BINDER PROPERTIES (without aggregate)	TEST METHOD	MINIMUM REQUIREMENT
Tensile Strength, psi	ASTM D638	1000
Ultimate Elongation	ASTM D638	150%
Tear Resistance, lb/in	ASTM D624	200

In addition to the requirements above, the elastomeric concrete must be resistant to water, chemical, UV and ozone exposure and withstand temperature extremes. Elastomeric concrete systems requiring preheated aggregates are not allowed.

3.0 PREQUALIFICATION

Manufacturers of elastomeric concrete materials shall submit samples (including aggregate, primer and binder materials) and a Type 3 certification in accordance with Article 106-3 of the Standard Specifications for prequalification to:

North Carolina Department of Transportation
Materials and Tests Unit
1801 Blue Ridge Road

Raleigh, NC 27607

Prequalification will be determined for the system. Individual components will not be evaluated, nor will individual components of previously evaluated systems be deemed prequalified for use.

The submitted binder (a minimum volume of 1 gallon) and corresponding aggregate samples will be evaluated for compliance with the Materials requirements specified above. Systems satisfying all of the Materials requirements will be prequalified for a one year period. Before the end of this period new product samples shall be resubmitted for prequalification evaluation.

If, at any time, any formulation or component modifications are made to a prequalified system that system will no longer be approved for use.

4.0 INSTALLATION

The elastomeric concrete shall not be placed until the reinforced concrete deck slab has cured for seven full days and reached a minimum strength of 3000 psi.

Provide a manufacturer's representative at the bridge site during the installation of the elastomeric concrete to ensure that all steps being performed comply with all manufacturer installation requirements including, but not limited to weather conditions (ambient temperature, relative humidity, precipitation, wind, etc), concrete deck surface preparation, binder and aggregate mixing, primer application, elastomeric concrete placement, curing conditions and minimum curing time before joint exposure to traffic. Do not place elastomeric concrete if the ambient air or surface temperature is below 45□F.

Prepare the concrete surface within 48 hours prior to placing the elastomeric concrete. Before placing the elastomeric concrete, all concrete surfaces shall be thoroughly cleaned and dry. Sandblast the concrete surface in the blockout and clear the surface of all loose debris. Do not place the elastomeric concrete until the surface preparation is completed and approved.

Prepare and apply a primer, as per manufacturer's recommendations, to all concrete faces to
be in contact with elastomeric concrete, and to areas specified by the manufacturer.

Prepare, batch, and place the elastomeric concrete in accordance with the manufacturer's instructions. Place the elastomeric concrete in the areas specified on the plans while the primer is still tacky and within 2 hours after applying the primer. Trowel the elastomeric concrete to a smooth finish.

The joint opening in the elastomeric concrete shall match the formed opening in the concrete deck prior to sawing the joint.

5.0 FIELD SAMPLING

Provide additional production material to allow freshly mixed elastomeric concrete to be sampled for acceptance. A minimum of six 2 inch cube molds and three 3x6 inch cylinders will be taken by the Department for each day's production. Compression, splitting tensile, and durometer hardness testing will be performed by the Department to determine acceptance. Materials failing to meet the requirements listed above are subject to removal and replacement at no cost to the Department.

6.0 BASIS OF PAYMENT

No separate payment will be made for elastomeric concrete. The lump sum contract price bid for "Foam Joint Seals" will be full compensation for furnishing and placing the Elastomeric Concrete.

FOAM JOINT SEALS (9-27-12)

1.0 SEALS

Use preformed seals compatible with concrete and resistant to abrasion, oxidation, oils, gasoline, salt and other materials that are spilled on or applied to the surface. Use a resilient, UV stable, preformed, impermeable, flexible, expansion joint seal. The joint seal shall consist of low-density, closed cell, cross-linked polyethylene non-extrudable, foam. The joint seal shall contain no EVA (Ethylene Vinyl Acetate). Cell generation shall be achieved by being physically blown using nitrogen. No chemical blowing agents shall be used in the cell generation process.

Use seals manufactured with grooves 1/8"± wide by 1/8"± deep and spaced between 1/4" and 1/2" apart along the bond surface running the length of the joint. Use seals with a depth that meets the manufacturer's recommendation, but is not less than 70% of the uncompressed width. Provide a seal designed so that, when compressed, the center portion of the top does not extend upward above the original height of the seal by more than 1/4". Provide a seal that has a working range of 30% tension and 60% compression and meets the requirements given below.

TEST	TEST METHOD	REQUIREMENT
Tensile strength	ASTM D3575-08, Suffix T	110 – 130 psi
Compression Set	ASTM D1056 Suffix B, 2 hr recovery	10% - 16%
Water Absorption	ASTM D3575	< 0.03 lb/ft^2
Elongation at Break	ASTM D3575	180% - 210%
Tear Strength	ASTM D624 (D3575-08, Suffix G)	14 – 20 pli
Density	ASTM D3575-08, Suffix W, Method A	1.8 – 2.2 lb/ft^3
Toxicity	ISO-10993.5	Pass (not cytotoxic)

Have the top of the joint seal clearly shop marked. Inspect the joint seals upon receipt to ensure that the marks are clearly visible before installation.

2.0 BONDING ADHESIVE

Use a two component, 100% solid, modified epoxy adhesive supplied by the joint seal manufacturer that meets the requirements given below.

TEST	TEST METHOD	REQUIREMENT
Tensile strength	ASTM D638	3000 psi (min.)
Compressive strength	ASTM D695	7000 psi (min.)
Hardness	Shore D Scale	75-85 psi

Water Absorption	ASTM D570	0.25% by weight max.
Elongation to Break	ASTM D638	5% (max.)
Bond Strength	ASTM C882	2000 psi (min.)

Use an adhesive that is workable to 40°F. When installing in ambient air or surface temperatures below 40°F or for application on moist, difficult to dry concrete surfaces, use an adhesive specified by the manufacturer of the joint seal.

3.0 SAWING THE JOINT

The joint opening shall be initially formed to the width shown on the plans including the blockout for the elastomeric concrete.

The elastomeric concrete shall have sufficient time to cure such that no damage can occur to the elastomeric concrete prior to sawing to the final width and depth as specified in the plans.

When sawing the joint to receive the foam seal, always use a rigid guide to control the saw in the desired direction. To control the saw and to produce a straight line as indicated on the plans, anchor and positively connect a template or a track to the bridge deck. Do not saw the joint by visual means such as a chalk line. Fill the holes used for holding the template or track to the deck with an approved, flowable non-shrink, non-metallic grout.

Saw cut to the desired width and depth in one or two passes of the saw by placing and spacing two metal blades on the saw shaft to the desired width for the joint opening.

The desired depth is the depth of the seal plus 1/4" above the top of the seal plus approximately 1" below the bottom of the seal. An irregular bottom of sawed joint is permitted as indicated on the plans. Grind exposed corners on saw cut edges to a 1/4" chamfer.

Saw cut a straight joint, centered over the formed opening and to the desired width specified in the plans. Prevent any chipping or damage to the sawed edges of the joint.

Remove any staining or deposited material resulting from sawing with a wet blade to the satisfaction of the Engineer.

4.0 PREPARATION OF SAWED JOINT FOR SEAL INSTALLATION

The elastomeric concrete shall cure a minimum of 24 hours prior to seal installation.

After sawing the joint, the Engineer will thoroughly inspect the sawed joint opening for spalls, popouts, cracks, etc. All necessary repairs will be made by the Contractor prior to blast cleaning and installing the seal.

Clean the joints by sandblasting with clean dry sand immediately before placing the bonding agent. Sandblast the joint opening to provide a firm, clean joint surface free of curing compound, loose material and any foreign matter. Sandblast the joint opening without causing pitting or uneven surfaces. The aggregate in the elastomeric concrete may be exposed after sandblasting.

After blasting, either brush the surface with clean brushes made of hair, bristle or fiber, blow the surface with compressed air, or vacuum the surface until all traces of blast products and abrasives are removed from the surface, pockets, and corners.

If nozzle blasting is used to clean the joint opening, use compressed air that does not contain detrimental amounts of water or oil.

Examine the blast cleaned surface and remove any traces of oil, grease or smudge deposited in the cleaning operations.

Bond the seal to the blast cleaned surface on the same day the surface is blast cleaned.

5.0 SEAL INSTALLATION

Install the joint seal according to the manufacturer's procedures and recommendations and as recommended below. Do not install the joint seal if the ambient air or surface temperature is below 45□F. Have a manufacturer's certified trained factory representative present during the installation of the first seal of the project.

Before installing the joint seal, check the uninstalled seal length to insure the seal is the same length as the deck opening. When the joint seal requires splicing, use the heat welding method by placing the joint material ends against a teflon heating iron of 425- 475°F for 7 - 10 seconds, then pressing the ends together tightly. Do not test the welding until the material has completely cooled.

Begin installation by protecting the top edges of the concrete deck adjacent to the vertical walls of the joint as a means to minimize clean up. After opening both cans of the bonding agent, stir each can using separate stirring rods for each component to prevent premature curing of the bonding agent. Pour the two components, at the specified mixing ratio, into a clean mixing bucket. Mix the components with a low speed drill (400 rpm max.) until a uniform gray color is achieved without visible marbling. Apply bonding agent to both sides of the elastomeric concrete as well as both sides of the joint seal, making certain to completely fill the grooves with epoxy. With gloved hands, compress the joint seal and with the help of a blunt probe, push the seal into the joint opening until the seal is recessed approximately 1/4" below the surface. When pushing down on the joint seal, apply pressure only in a downward direction. Do not push the joint seal into the joint opening at an angle that would stretch the material. Seals that are stretched during installation shall be removed and rejected. Once work on placing a seal begins, do not stop until it is completed. Clean the excess epoxy from the top of the joint seal immediately with a trowel. Do not use solvents or any cleaners to remove the excess epoxy from the top of the seal. Remove

the protective cover at the joint edges and check for any excess epoxy on the surface. Remove excess epoxy with a trowel, the use of solvents or any cleaners will not be allowed.

The installed system shall be watertight and will be monitored until final inspection and approval. Do not place pavement markings on top of foam joint seals.

6.0 BASIS OF PAYMENT

Payment for all foam joint seals will be at the lump sum contract price bid for "Foam Joint Seals". Prices and payment will be full compensation for furnishing all material, including elastomeric concrete, labor, tools and equipment necessary for installing these units in place and accepted.

MODULAR EXPANSION JOINT SEALS (9-30-11)

1.0 GENERAL

Furnish and install modular expansion joint seals within the limits indicated on the plans.

Obtain modular expansion joint seals from Fabricators that are AISC certified in Category I.

Use a modular expansion joint seal that is a waterproof system such as WABOMODULAR as manufactured by Watson Bowman and Acme Corporation of Amherst New York, BROWN/MAURER as manufactured by the D. S. Brown Company of North Baltimore, Ohio or an approved equal. Do not use aluminum components in the modular expansion joint. Use a modular expansion joint seal consisting of three or more transverse rails holding two or more elastomeric seals in place and a support mechanism that ensures the rails maintain parallel and equidistant spacing. Do not use bolts to connect the rails to the support mechanism.

Provide an elastomeric component for each modular expansion joint seal that is one continuous unit for the entire length of the joint. Do not field splice the elastomeric component. Only vulcanized shop splicing of the elastomeric component is permitted. Provide an elastomeric component that is clearly shop marked to indicate the top side and joint location of the elastomeric component. On skewed bridges, or under unsymmetrical conditions, clearly mark the left side of the elastomeric component also. Left is defined as being on the left when facing in the direction of increasing station. Inspect the seals upon receipt to ensure that the marks are clearly visible upon installation.

Provide modular expansion joint seals capable of handling a total movement measured parallel to the centerline of the roadway as shown on plans. Limit clear distance between centerbeams, and edgebeams and centerbeams, to 3½". Limit centerbeam spans to approximately 48".

2.0 DRAWING AND SPECIFICATION SUBMITTAL

Submit Shop Drawings for Fabrication and Installation Procedure and Revised Contract Plan Sheets, showing revised details of the Structure contract plans.

A. Shop Fabrication and Installation Procedure Drawings

The deck slab is detailed in the contract plans with a required full depth transverse construction joint separating the main slab pour from the blockout area for the modular joint assembly. Position the modular joint assembly in the blockout area only after the main slab pours adjacent to the blockout area have been made and the girder rotation, deflection, and longitudinal movement due to slab pours have occurred.

Detail the method of positioning and securing the modular assembly in the blockout prior to the closure pour on the working drawings.

Submit two complete sets of working drawings for review. Submit these drawings well in advance of the scheduled installation time for the modular expansion joint seals. Include material requirements and installation procedures and specifications in the drawings.

After the drawings have been reviewed and, if necessary, corrections have been made, submit nine additional sets of the working drawings.

B. Revised Contract Plan Sheets

Concurrent with the submission of the working drawings, submit two sets of revised Structure plans for review. In the revised plans, include necessary changes in dimensions, reinforcing steel, and concrete blockouts to accommodate modular expansion joint seals. Have a North Carolina Registered Professional Engineer prepare and seal the revised plans. No adjustment will be made in the contract price for any bid item due to revisions necessary to accommodate the modular expansion joint seals. This cost is included in the lump sum price bid for furnishing and installing the modular expansion joint seal.

After the revised plans have been reviewed and, if necessary, corrections have been made, submit one 22" x 34" reproducible set of revised structure contract plans.

3.0 FABRICATION AND INSTALLATION

Protect the components of the modular expansion joint seal in the following manner. Upon completion of any shop fabrication, commercially blast clean (SP-6) all steel components, excluding stainless steel parts. Metallize to a minimum thickness of 8 mils on these surfaces. Metallize in accordance with the Special Provision for "Thermal Sprayed Coatings (Metallization)". Repair abraded or damaged coated surfaces anytime after applying the coating as specified for repair of galvanizing in the Standard Specifications. As an alternative to Metallizing, galvanizing in accordance with the Standard Specifications is permitted.

Install the modular expansion joint seals according to the procedures and recommendations of the manufacturer, except as amended in the next paragraph.

Limit modular expansion joint seal splices to crown points, abrupt changes in deck slab cross slope, lane lines, or as necessary for proper installation and alignment. All splice locations and details must be shown on the submitted working drawings and are subject to the Engineer's approval. For shop splices, full penetration welds are required for centerbeam splices. For shop splices, partial penetration welds are not allowed for centerbeam splices, except at barrier rail upturns or sidewalk upturns. For field splices, partial penetration welds are not allowed for centerbeam splices. Show and submit for approval all splice locations on the working drawings. For location of lane markings at the modular expansion joint seals, see the Structure plans.

When indicated on the plans, provide special snowplow protection, such as a snowplow blade guide or steel ribs, to prevent the blade from entering the joint recess.

If the Engineer deems any aspects of the modular expansion joint seals unacceptable, make necessary corrections.

A. Watertight Integrity Test

Upon completion of each modular expansion joint seal, perform a water test on the top surface to detect any leakage. Cover the roadway section of the joint from curb to curb, or barrier rail to barrier rail, with water, either ponded or flowing, not less than 1 inch above the roadway surface at all points. Block sidewalk sections and secure an unnozzled water hose delivering approximately 1 gallon of water per minute to the inside face of the bridge railing, trained in a downward position about 6 inches above the sidewalk, such that there is continuous flow of water across the sidewalk and down the curb face of the joint.

Maintain the ponding or flowing of water on the roadway and continuous flow across sidewalks and curbs for a period of 5 hours. At the conclusion of the test, the underside of the joint is closely examined for leakage. The modular expansion joint seal is considered watertight if no obvious wetness is visible on the Engineer's finger after touching a number of underdeck areas. Damp concrete that does not impart wetness to the finger is not considered a sign of leakage.

If the joint system leaks, locate the place(s) of leakage and take any repair measures necessary to stop the leakage at no additional cost to the Department. Use repair measures recommended by the manufacturer and approved by the Engineer prior to beginning corrective work.

If measures to eliminate leakage are taken, perform a subsequent water integrity test subject to the same conditions as the original test. Subsequent tests carry the same responsibility as the original test and are performed at no additional cost to the Department.

4.0 BASIS OF PAYMENT

Basis of payment for all modular expansion joint seals will be at the lump sum contract price for "Modular Expansion Joint Seals" which price and payment will be full compensation for furnishing all material, including steel accessory plates for sidewalks, medians and rails, labor, tools, and incidentals necessary for installing the modular expansion joint seals in place and including all materials, labor, tools and incidentals for performing the original watertight integrity test.

SECURING OF VESSELS **(10-12-01)**

Secure vessels in accordance with Section 107 of the Standard Specifications and the following provision.

When utilizing barges, tugboats or other vessels, take all necessary precautions to ensure that such vessels are securely anchored or moored when not in active operation. Take all necessary measures to ensure that the vessels are operated in a manner that avoids damage to or unnecessary contact with bridges and other highway structures and attachments. If severe weather conditions are anticipated, or should be anticipated through reasonable monitoring of weather forecasts, take additional measures to protect bridges and other highway structures and attachments from extreme conditions. The Contractor is strictly liable for damages to any bridge or other highway structure or attachment caused by a vessel owned or controlled by the Contractor. The Contractor is also liable to third parties for property damages and loss of revenue caused by vessels under the Contractor's control.

FALSEWORK AND FORMWORK (4-5-12)

1.0 DESCRIPTION

Use this Special Provision as a guide to develop temporary works submittals required by the Standard Specifications or other provisions; no additional submittals are required herein. Such temporary works include, but are not limited to, falsework and formwork.

Falsework is any temporary construction used to support the permanent structure until it becomes self-supporting. Formwork is the temporary structure or mold used to retain plastic or fluid concrete in its designated shape until it hardens. Access scaffolding is a temporary structure that functions as a work platform that supports construction personnel, materials, and tools, but is not intended to support the structure. Scaffolding systems that are used to temporarily support permanent structures (as opposed to functioning as work platforms) are considered to be falsework under the definitions given. Shoring is a component of falsework such as horizontal, vertical, or inclined support members. Where the term "temporary works" is used, it includes all of the temporary facilities used in bridge construction that do not become part of the permanent structure.

Design and construct safe and adequate temporary works that will support all loads imposed and provide the necessary rigidity to achieve the lines and grades shown on the plans in the final structure.

2.0 MATERIALS

Select materials suitable for temporary works; however, select materials that also ensure the safety and quality required by the design assumptions. The Engineer has authority to reject material on the basis of its condition, inappropriate use, safety, or nonconformance with the plans. Clearly identify allowable loads or stresses for all materials or manufactured devices on the plans. Revise the plan and notify the Engineer if any change to materials or material strengths is required.

3.0 DESIGN REQUIREMENTS

A. Working Drawings

Provide working drawings for items as specified in the contract, or as required by the Engineer, with design calculations and supporting data in sufficient detail to permit a structural and safety review of the proposed design of the temporary work.

On the drawings, show all information necessary to allow the design of any component to be checked independently as determined by the Engineer.

When concrete placement is involved, include data such as the drawings of proposed sequence, rate of placement, direction of placement, and location of all construction joints. Submit the number of copies as called for by the contract.

When required, have the drawings and calculations prepared under the guidance of, and sealed by, a North Carolina Registered Professional Engineer who is knowledgeable in temporary works design.

If requested by the Engineer, submit with the working drawings manufacturer's catalog data listing the weight of all construction equipment that will be supported on the temporary work. Show anticipated total settlements and/or deflections of falsework and forms on the working drawings. Include falsework footing settlements, joint take-up, and deflection of beams or girders.

As an option for the Contractor, overhang falsework hangers may be uniformly spaced, at a maximum of 36 inches, provided the following conditions are met:

Member Type (PCG)	Member Depth, (inches)	Max. Overhang Width, (inches)	Max. Slab Edge Thickness, (inches)	Max. Screed Wheel Weight, (lbs.)	Bracket Min. Vertical Leg Extension, (inches)
II	36	39	14	2000	26
III	45	42	14	2000	35
IV	54	45	14	2000	44
MBT	63	51	12	2000	50
MBT	72	55	12	1700	48
F.I.B. 72"	72	55	12	1700	48

Overhang width is measured from the centerline of the girder to the edge of the deck slab.

For Type II, III & IV prestressed concrete girders (PCG), 45-degree cast-in-place half hangers and rods must have a minimum safe working load of 6,000 lbs.

For MBT and F.I.B. 72" prestressed concrete girders, 45-degree angle holes for falsework hanger rods shall be cast through the girder top flange and located, measuring along the top of the member, 1'-2 ½" from the edge of the top flange. Hanger hardware and rods must have a minimum safe working load of 6,000 lbs.

The overhang bracket provided for the diagonal leg shall have a minimum safe working load of 3,750 lbs. The vertical leg of the bracket shall extend to the point that the heel bears on the girder bottom flange, no closer than 4 inches from the bottom of the member. However, for 72-inch members, the heel of the bracket shall bear on the web, near the bottom flange transition.

Provide adequate overhang falsework and determine the appropriate adjustments for deck geometry, equipment, casting procedures and casting conditions.

If the optional overhang falsework spacing is used, indicate this on the falsework submittal and advise the girder producer of the proposed details. Failure to notify the Engineer of hanger type and hanger spacing on prestressed concrete girder casting drawings may delay the approval of those drawings.

Falsework hangers that support concentrated loads and are installed at the edge of thin top flange concrete girders (such as bulb tee girders) shall be spaced so as not to exceed 75% of the manufacturer's stated safe working load. Use of dual leg hangers (such as Meadow Burke HF-42 and HF-43) are not allowed on concrete girders with thin top flanges. Design the falsework and forms supporting deck slabs and overhangs on girder bridges so that there will be no differential settlement between the girders and the deck forms during placement of deck concrete.

When staged construction of the bridge deck is required, detail falsework and forms for screed and fluid concrete loads to be independent of any previous deck pour components when the mid-span girder deflection due to deck weight is greater than ¾".

Note on the working drawings any anchorages, connectors, inserts, steel sleeves or other such devices used as part of the falsework or formwork that remains in the permanent structure. If the plan notes indicate that the structure contains the necessary corrosion protection required for a Corrosive Site, epoxy coat, galvanize or metalize these devices. Electroplating will not be allowed. Any coating required by the Engineer will be considered incidental to the various pay items requiring temporary works.

Design falsework and formwork requiring submittals in accordance with the 1995 AASHTO *Guide Design Specifications for Bridge Temporary Works* except as noted herein.

1. Wind Loads

   Table 2.2 of Article 2.2.5.1 is modified to include wind velocities up to 110 mph. In addition, Table 2.2A is included to provide the maximum wind speeds by county in North Carolina.

Table 2.2 - Wind Pressure Values

Height Zone feet above ground	Pressure, lb/ft^2 for Indicated Wind Velocity, mph				
	70	80	90	100	110
0 to 30	15	20	25	30	35
30 to 50	20	25	30	35	40
50 to 100	25	30	35	40	45
over 100	30	35	40	45	50

2. Time of Removal

   The following requirements replace those of Article 3.4.8.2.

   Do not remove forms until the concrete has attained strengths required in Article 420-16 of the Standard Specifications and these Special Provisions.

   Do not remove forms until the concrete has sufficient strength to prevent damage to the surface.

Table 2.2A - Steady State Maximum Wind Speeds by Counties in North Carolina

COUNTY	25 YR (mph)	COUNTY	25 YR (mph)	COUNTY	25 YR (mph)
Alamance	70	Franklin	70	Pamlico	100
Alexander	70	Gaston	70	Pasquotank	100
Alleghany	70	Gates	90	Pender	100
Anson	70	Graham	80	Perquimans	100
Ashe	70	Granville	70	Person	70
Avery	70	Greene	80	Pitt	90
Beaufort	100	Guilford	70	Polk	80
Bertie	90	Halifax	80	Randolph	70
Bladen	90	Harnett	70	Richmond	70
Brunswick	100	Haywood	80	Robeson	80
Buncombe	80	Henderson	80	Rockingham	70
Burke	70	Hertford	90	Rowan	70
Cabarrus	70	Hoke	70	Rutherford	70
Caldwell	70	Hyde	110	Sampson	90
Camden	100	Iredell	70	Scotland	70
Carteret	110	Jackson	80	Stanley	70
Caswell	70	Johnston	80	Stokes	70
Catawba	70	Jones	100	Surry	70
Cherokee	80	Lee	70	Swain	80
Chatham	70	Lenoir	90	Transylvania	80
Chowan	90	Lincoln	70	Tyrell	100
Clay	80	Macon	80	Union	70
Cleveland	70	Madison	80	Vance	70
Columbus	90	Martin	90	Wake	70
Craven	100	McDowell	70	Warren	70
Cumberland	80	Mecklenburg	70	Washington	100
Currituck	100	Mitchell	70	Watauga	70
Dare	110	Montgomery	70	Wayne	80
Davidson	70	Moore	70	Wilkes	70
Davie	70	Nash	80	Wilson	80
Duplin	90	New Hanover	100	Yadkin	70
Durham	70	Northampton	80	Yancey	70
Edgecombe	80	Onslow	100		
Forsyth	70	Orange	70		

B. Review and Approval

The Engineer is responsible for the review and approval of temporary works' drawings.

Submit the working drawings sufficiently in advance of proposed use to allow for their review, revision (if needed), and approval without delay to the work.

The time period for review of the working drawings does not begin until complete drawings and design calculations, when required, are received by the Engineer.

Do not start construction of any temporary work for which working drawings are required until the drawings have been approved. Such approval does not relieve the Contractor of the responsibility for the accuracy and adequacy of the working drawings.

4.0 CONSTRUCTION REQUIREMENTS

All requirements of Section 420 of the Standard Specifications apply.

Construct temporary works in conformance with the approved working drawings. Ensure that the quality of materials and workmanship employed is consistent with that assumed in the design of the temporary works. Do not weld falsework members to any portion of the permanent structure unless approved. Show any welding to the permanent structure on the approved construction drawings.

Provide tell-tales attached to the forms and extending to the ground, or other means, for accurate measurement of falsework settlement. Make sure that the anticipated compressive settlement and/or deflection of falsework does not exceed 1 inch. For cast-in-place concrete structures, make sure that the calculated deflection of falsework flexural members does not exceed 1/240 of their span regardless of whether or not the deflection is compensated by camber strips.

A. Maintenance and Inspection

Inspect and maintain the temporary work in an acceptable condition throughout the period of its use. Certify that the manufactured devices have been maintained in a condition to allow them to safely carry their rated loads. Clearly mark each piece so that its capacity can be readily determined at the job site.

Perform an in-depth inspection of an applicable portion(s) of the temporary works, in the presence of the Engineer, not more than 24 hours prior to the beginning of each concrete placement. Inspect other temporary works at least once a month to ensure that they are functioning properly. Have a North Carolina Registered Professional Engineer inspect the cofferdams, shoring, sheathing, support of excavation structures, and support systems for load tests prior to loading.

B. Foundations

Determine the safe bearing capacity of the foundation material on which the supports for temporary works rest. If required by the Engineer, conduct load tests to verify proposed bearing capacity values that are marginal or in other high-risk situations.

The use of the foundation support values shown on the contract plans of the permanent structure is permitted if the foundations are on the same level and on the same soil as those of the permanent structure.

Allow for adequate site drainage or soil protection to prevent soil saturation and washout of the soil supporting the temporary works supports.

If piles are used, the estimation of capacities and later confirmation during construction using standard procedures based on the driving characteristics of the pile is permitted. If preferred, use load tests to confirm the estimated capacities; or, if required by the Engineer conduct load tests to verify bearing capacity values that are marginal or in other high risk situations.

The Engineer reviews and approves the proposed pile and soil bearing capacities.

5.0 REMOVAL

Unless otherwise permitted, remove and keep all temporary works upon completion of the work. Do not disturb or otherwise damage the finished work.

Remove temporary works in conformance with the contract documents. Remove them in such a manner as to permit the structure to uniformly and gradually take the stresses due to its own weight.

6.0 METHOD OF MEASUREMENT

Unless otherwise specified, temporary works will not be directly measured.

7.0 BASIS OF PAYMENT

Payment at the contract unit prices for the various pay items requiring temporary works will be full compensation for the above falsework and formwork.

SUBMITTAL OF WORKING DRAWINGS **(2-10-12)**

1.0 GENERAL

Submit working drawings in accordance with Article 105-2 of the *Standard Specifications* and this provision. For this provision, "submittals" refers to only those listed in this provision. The list of submittals contained herein does not represent a list of required submittals for the project. Submittals are only necessary for those items as required by the contract. Make submittals that are not specifically noted in this provision directly to the Resident Engineer. Either the Structure Design Unit or the Geotechnical Engineering Unit or both units will jointly review submittals.

If a submittal contains variations from plan details or specifications or significantly affects project cost, field construction or operations, discuss the submittal with and submit all copies to the Resident Engineer. State the reason for the proposed variation in the submittal. To minimize review time, make sure all submittals are complete when initially submitted. Provide a contact name and information with each submittal. Direct any questions regarding submittal requirements to the Resident Engineer, Structure Design Unit contacts or the Geotechnical Engineering Unit contacts noted below.

In order to facilitate in-plant inspection by NCDOT and approval of working drawings, provide the name, address and telephone number of the facility where fabrication will actually be done if different than shown on the title block of the submitted working drawings. This includes, but is not limited to, precast concrete items, prestressed concrete items and fabricated steel or aluminum items.

2.0 ADDRESSES AND CONTACTS

For submittals to the Structure Design Unit, use the following addresses:

Via US mail:

Mr. G. R. Perfetti, P. E.
State Bridge Design Engineer
North Carolina Department
of Transportation
Structure Design Unit
1581 Mail Service Center
Raleigh, NC 27699-1581

Attention: Mr. P. D. Lambert, P. E.

Via other delivery service:

Mr. G. R. Perfetti, P. E.
State Bridge Design Engineer
North Carolina Department
of Transportation
Structure Design Unit
1000 Birch Ridge Drive
Raleigh, NC 27610

Attention: Mr. P. D. Lambert, P. E.

Submittals may also be made via email.

Send submittals to:

plambert@ncdot.gov (Paul Lambert)

Send an additional e-copy of the submittal to the following address:

jgaither@ncdot.gov (James Gaither)

jlbolden@ncdot.gov (James Bolden)

For submittals to the Geotechnical Engineering Unit, use the following addresses:

For projects in Divisions 1-7, use the following Eastern Regional Office address:

Via US mail:

Mr. K. J. Kim, Ph. D., P. E.
Eastern Regional Geotechnical Manager
North Carolina Department of Transportation
Geotechnical Engineering Unit
Eastern Regional Office
1570 Mail Service Center
Raleigh, NC 27699-1570

Via other delivery service:

Mr. K. J. Kim, Ph. D., P. E.
Eastern Regional Geotechnical Manager
North Carolina Department of Transportation
Geotechnical Engineering Unit
Eastern Regional Office
3301 Jones Sausage Road, Suite 100
Garner, NC 27529

For projects in Divisions 8-14, use the following Western Regional Office address:

Via US mail:

Mr. John Pilipchuk, L. G., P. E.
Western Regional Geotechnical Manager
North Carolina Department of Transportation
Geotechnical Engineering Unit
Western Regional Office
5253 Z Max Boulevard
Harrisburg, NC 28075

Via other delivery service:

Mr. John Pilipchuk, L. G., P. E.
Western Region Geotechnical Manager
North Carolina Department of Transportation
Geotechnical Engineering Unit
Western Regional Office
5253 Z Max Boulevard
Harrisburg, NC 28075

The status of the review of structure-related submittals sent to the Structure Design Unit can be viewed from the Unit's web site, via the "Contractor Submittal" link.

Direct any questions concerning submittal review status, review comments or drawing markups to the following contacts:

Primary Structures Contact: Paul Lambert (919) 707 – 6407
(919) 250 – 4082 facsimile
plambert@ncdot.gov

Secondary Structures Contacts: James Gaither (919) 707 – 6409
James Bolden (919) 707 – 6408

Eastern Regional Geotechnical Contact (Divisions 1-7):
K. J. Kim (919) 662 – 4710
(919) 662 – 3095 facsimile
kkim@ncdot.gov

Western Regional Geotechnical Contact (Divisions 8-14):
John Pilipchuk (704) 455 – 8902
(704) 455 – 8912 facsimile
jpilipchuk@ncdot.gov

3.0 SUBMITTAL COPIES

Furnish one complete copy of each submittal, including all attachments, to the Resident Engineer. At the same time, submit the number of hard copies shown below of the same complete submittal directly to the Structure Design Unit and/or the Geotechnical Engineering Unit.

The first table below covers "Structure Submittals". The Resident Engineer will receive review comments and drawing markups for these submittals from the Structure Design Unit. The second table in this section covers "Geotechnical Submittals". The Resident Engineer will receive review comments and drawing markups for these submittals from the Geotechnical Engineering Unit.

Unless otherwise required, submit one set of supporting calculations to either the Structure Design Unit or the Geotechnical Engineering Unit unless both units require submittal copies in which case submit a set of supporting calculations to each unit. Provide additional copies of any submittal as directed.

STRUCTURE SUBMITTALS

Submittal	Copies Required by Structure Design Unit	Copies Required by Geotechnical Engineering Unit	Contract Reference Requiring Submittal [1]
Arch Culvert Falsework	5	0	Plan Note, SN Sheet & "Falsework and Formwork"
Box Culvert Falsework [7]	5	0	Plan Note, SN Sheet & "Falsework and Formwork"
Cofferdams	6	2	Article 410-4
Foam Joint Seals [6]	9	0	"Foam Joint Seals"
Expansion Joint Seals (hold down plate type with base angle)	9	0	"Expansion Joint Seals"
Expansion Joint Seals (modular)	2, then 9	0	"Modular Expansion Joint Seals"

Expansion Joint Seals (strip seals)	9	0	"Strip Seals"
Falsework & Forms [2] (substructure)	8	0	Article 420-3 & "Falsework and Formwork"
Falsework & Forms (superstructure)	8	0	Article 420-3 & "Falsework and Formwork"
Girder Erection over Railroad	5	0	Railroad Provisions
Maintenance and Protection of Traffic Beneath Proposed Structure	8	0	"Maintenance and Protection of Traffic Beneath Proposed Structure at Station ___"
Metal Bridge Railing	8	0	Plan Note
Metal Stay-in-Place Forms	8	0	Article 420-3
Metalwork for Elastomeric Bearings [4,5]	7	0	Article 1072-8
Miscellaneous Metalwork [4,5]	7	0	Article 1072-8
Optional Disc Bearings [4]	8	0	"Optional Disc Bearings"
Overhead and Digital Message Signs (DMS) (metalwork and foundations)	13	0	Applicable Provisions
Placement of Equipment on Structures (cranes, etc.)	7	0	Article 420-20
Pot Bearings [4]	8	0	"Pot Bearings"
Precast Concrete Box Culverts	2, then 1 reproducible	0	"Optional Precast Reinforced Concrete Box Culvert at Station ___"
Prestressed Concrete Cored Slab (detensioning sequences) [3]	6	0	Article 1078-11
Prestressed Concrete Deck Panels	6 and 1 reproducible	0	Article 420-3
Prestressed Concrete Girder (strand elongation and detensioning sequences)	6	0	Articles 1078-8 and 1078-11
Removal of Existing Structure over Railroad	5	0	Railroad Provisions

Revised Bridge Deck Plans (adaptation to prestressed deck panels)	2, then 1 reproducible	0	Article 420-3
Revised Bridge Deck Plans (adaptation to modular expansion joint seals)	2, then 1 reproducible	0	"Modular Expansion Joint Seals"
Sound Barrier Wall (precast items)	10	0	Article 1077-2 & "Sound Barrier Wall"
Sound Barrier Wall Steel Fabrication Plans [5]	7	0	Article 1072-8 & "Sound Barrier Wall"
Structural Steel [4]	2, then 7	0	Article 1072-8
Temporary Detour Structures	10	2	Article 400-3 & "Construction, Maintenance and Removal of Temporary Structure at Station ____"
TFE Expansion Bearings [4]	8	0	Article 1072-8

FOOTNOTES

1. References are provided to help locate the part of the contract where the submittals are required. References in quotes refer to the provision by that name. Articles refer to the *Standard Specifications*.
2. Submittals for these items are necessary only when required by a note on plans.
3. Submittals for these items may not be required. A list of pre-approved sequences is available from the producer or the Materials & Tests Unit.
4. The fabricator may submit these items directly to the Structure Design Unit.
5. The two sets of preliminary submittals required by Article 1072-8 of the *Standard Specifications* are not required for these items.
6. Submittals for Fabrication Drawings are not required. Submittals for Catalogue Cuts of Proposed Material are required. See Section 5.A of the referenced provision.
7. Submittals are necessary only when the top slab thickness is 18" or greater.

GEOTECHNICAL SUBMITTALS

Submittal	Copies Required by Geotechnical Engineering Unit	Copies Required by Structure Design Unit	Contract Reference Requiring Submittal [1]
Drilled Pier Construction Plans [2]	1	0	Subarticle 411-3(A)
Crosshole Sonic Logging (CSL) Reports [2]	1	0	Subarticle 411-5(A)(2)
Pile Driving Equipment Data Forms [2,3]	1	0	Subarticle 450-3(D)(2)
Pile Driving Analyzer (PDA) Reports [2]	1	0	Subarticle 450-3(F)(3)
Retaining Walls [4]	8 drawings, 2 calculations	2 drawings	Applicable Provisions
Temporary Shoring [4]	5 drawings, 2 calculations	2 drawings	"Temporary Shoring" & "Temporary Soil Nail Walls"

FOOTNOTES

1. References are provided to help locate the part of the contract where the submittals are required. References in quotes refer to the provision by that name. Subarticles refer to the *Standard Specifications*.

2. Submit one hard copy of submittal to the Resident or Bridge Maintenance Engineer. Submit a second copy of submittal electronically (PDF via email) or by facsimile, US mail or other delivery service to the appropriate Geotechnical Engineering Unit regional office. Electronic submission is preferred.

3. The Pile Driving Equipment Data Form is available from:
   www.ncdot.org/doh/preconstruct/highway/geotech/formdet/
   See second page of form for submittal instructions.

4. Electronic copy of submittal is required. See referenced provision.

CRANE SAFETY (8-15-05)

Comply with the manufacturer specifications and limitations applicable to the operation of any and all cranes and derricks. Prime contractors, sub-contractors, and fully operated rental companies shall comply with the current Occupational Safety and Health Administration regulations (OSHA).

Submit all items listed below to the Engineer prior to beginning crane operations involving critical lifts. A critical lift is defined as any lift that exceeds 75 percent of the manufacturer's crane chart capacity for the radius at which the load will be lifted or requires the use of more than one crane. Changes in personnel or equipment must be reported to the Engineer and all applicable items listed below must be updated and submitted prior to continuing with crane operations.

1.0 CRANE SAFETY SUBMITTAL LIST

Competent Person: Provide the name and qualifications of the "Competent Person" responsible for crane safety and lifting operations. The named competent person will have the responsibility and authority to stop any work activity due to safety concerns.

Riggers: Provide the qualifications and experience of the persons responsible for rigging operations. Qualifications and experience should include, but not be limited to, weight calculations, center of gravity determinations, selection and inspection of sling and rigging equipment, and safe rigging practices.

Crane Inspections: Inspection records for all cranes shall be current and readily accessible for review upon request.

Certifications: **By July 1, 2006**, crane operators performing critical lifts shall be certified by NC CCO (National Commission for the Certification of Crane Operators), or satisfactorily complete the Carolinas AGC's Professional Crane Operator's Proficiency Program. Other approved nationally accredited programs will be considered upon request. All crane operators shall also have a current CDL medical card. Submit a list of anticipated critical lifts and corresponding crane operator(s). Include current certification for the type of crane operated (small hydraulic, large hydraulic, small lattice, large lattice) and medical evaluations for each operator.

GROUT FOR STRUCTURES (9-30-11)

1.0 DESCRIPTION

This special provision addresses grout for use in pile blockouts, grout pockets, shear keys, dowel holes and recesses for structures. This provision does not apply to grout placed in post-tensioning ducts for bridge beams, girders, or decks. Mix and place grout in accordance with the manufacturer's recommendations, the applicable sections of the Standard Specifications and this provision.

2.0 MATERIAL REQUIREMENTS

Use a Department approved pre-packaged, non-shrink, non-metallic grout. Contact the Materials and Tests Unit for a list of approved pre-packaged grouts and consult the manufacturer to determine if the pre-packaged grout selected is suitable for the required application.

When using an approved pre-packaged grout, a grout mix design submittal is not required. The grout shall be free of soluble chlorides and contain less than one percent soluble sulfate. Supply water in compliance with Article 1024-4 of the Standard Specifications.

Aggregate may be added to the mix only where recommended or permitted by the manufacturer and Engineer. The quantity and gradation of the aggregate shall be in accordance with the manufacturer's recommendations.

Admixtures, if approved by the Department, shall be used in accordance with the manufacturer's recommendations. The manufacture date shall be clearly stamped on each container. Admixtures with an expired shelf life shall not be used.

The Engineer reserves the right to reject material based on unsatisfactory performance.

Initial setting time shall not be less than 10 minutes when tested in accordance with ASTM C266.

Test the expansion and shrinkage of the grout in accordance with ASTM C1090. The grout shall expand no more than 0.2% and shall exhibit no shrinkage. Furnish a Type 4 material certification showing results of tests conducted to determine the properties listed in the Standard Specifications and to assure the material is non-shrink.

Unless required elsewhere in the contract the compressive strength at 3 days shall be at least 5000 psi. Compressive strength in the laboratory shall be determined in accordance with ASTM C109 except the test mix shall contain only water and the dry manufactured material. Compressive strength in the field will be determined by molding and testing 4" x 8" cylinders in accordance with AASHTO T22. Construction loading and traffic loading shall not be allowed until the 3 day compressive strength is achieved.

When tested in accordance with ASTM C666, Procedure A, the durability factor of the grout shall not be less than 80.

3.0 SAMPLING AND PLACEMENT

Place and maintain components in final position until grout placement is complete and accepted. Concrete surfaces to receive grout shall be free of defective concrete, laitance, oil, grease and other foreign matter. Saturate concrete surfaces with clean water and remove excess water prior to placing grout.

Do not place grout if the grout temperature is less than 50°F or more than 90°F or if the air temperature measured at the location of the grouting operation in the shade away from artificial heat is below 45°F.

Provide grout at a rate that permits proper handling, placing and finishing in accordance with the manufacturer's recommendations unless directed otherwise by the Engineer. Use grout free of any lumps and undispersed cement. Agitate grout continuously before placement.

Control grout delivery so the interval between placing batches in the same component does not exceed 20 minutes.

The Engineer will determine the locations to sample grout and the number and type of samples collected for field and laboratory testing. The compressive strength of the grout will be considered the average compressive strength test results of 3 cube or 2 cylinder specimens at 28 days.

4.0 BASIS OF PAYMENT

No separate payment will be made for "Grout for Structures". The cost of the material, equipment, labor, placement, and any incidentals necessary to complete the work shall be considered incidental to the structure item requiring grout.

EPOXY RESIN INJECTION (SPECIAL)

1.0 GENERAL

For repairing cracks, an approved applicator is required to perform the epoxy resin injection. Make certain the supervisor and the workmen have completed an instruction program in the methods of restoring concrete structures utilizing the epoxy injection process and have a record of satisfactory performance on similar projects.

The applicator furnishes all materials, tools, equipment, appliances, labor and supervision required when repairing cracks with the injection of an epoxy resin adhesive.

2.0 SCOPE OF WORK

Use Epoxy Resin Injection to repair all cracks that may form in the bent caps, pier walls and footings of the new structure that may develop during the construction phase of the project. Repair all cracks 5 mils (125 µm) wide or greater or as directed by the engineer.

3.0 COOPERATION

Cooperate and coordinate with the Technical Representative of the epoxy resin manufacturer for satisfactory performance of the work.

Have the Technical Representative present when the job begins and until the Engineer is assured that his service is no longer needed.

The expense of having this representative on the job is the Contractor's responsibility and no direct payment will be made for this expense.

4.0 TESTING

The North Carolina Department of Transportation Materials and Tests Unit will obtain cores from the repaired concrete for testing. If the failure plane is located at the repaired crack, a minimum compressive strength of 3000 psi is required of these cores.

5.0 MATERIAL PROPERTIES

Provide a two-component structural epoxy adhesive for injection into cracks or other voids. Provide modified epoxy resin (Component "A") that conforms to the following requirements:

	Test Method	Specification Requirements
Viscosity @ 40 ± 3°F, cps	Brookfield RVT Spindle No. 4 @ 20 rpm	6000 - 8000
Viscosity @ 77 ± 3°F, cps	Brookfield RVT Spindle No. 2 @ 20 rpm	400 - 700
Epoxide Equivalent Weight	ASTM D1652	152 - 168
Ash Content, %	ASTM D482	1 max.

Provide the amine curing agent (Component "B") used with the epoxy resin that meets the following requirements:

	Test Method	Specification Requirements
Viscosity @ 40 ± 3°F, cps	Brookfield RVT Spindle No. 2 @ 20 rpm	700 - 1400
Viscosity @ 77 ± 3°F, cps	Brookfield RVT Spindle No. 2 @ 20 rpm	105 - 240
Amine Value, mg KOH/g	ASTM D664*	490 - 560
Ash Content, %	ASTM D482	1 max.
* Method modified to use perchloric acid in acetic acid.		

Certify that the Uncured Adhesive, when mixed in the mix ratio that the material supplier specifies, has the following properties:

Pot Life (60 gram mass)
@ 77 ± 3°F - 15 minutes minimum
@ 100 ± 3°F - 5 minutes minimum

Certify that the Adhesive, when cured for 7 days at 77 ± 3°F unless otherwise specified, has the following properties:

	Test Method	Specification Requirements
Ultimate Tensile Strength	ASTM D638	7000 psi (min.)
Tensile Elongation at Break	ASTM D638	4% max.
Flexural Strength	ASTM D790	10,000 psi (min.)
Flexural Modulus	ASTM D790	3.5×10^5 psi
Compressive Yield Strength	ASTM D695	11,000 psi (min.)
Compressive Modulus	ASTM D695	$2.0 - 3.5 \times 10^5$ psi
Heat Deflection Temperature Cured 28 days @ 77 ± 3°F	ASTM D648*	125°F min. 135°F min.
Slant Shear Strength, 5000 psi (34.5 MPa) compressive strength concrete	AASHTO T237	
Cured 3 days @ 40°F wet concrete		3500 psi (min.)
Cured 7 days @ 40°F wet concrete		4000 psi (min.)
Cured 1 day @ 77°F dry concrete		5000 psi (min.)
* Cure test specimens so that the peak exothermic temperature of the adhesive does not exceed 77°F.		

Use an epoxy bonding agent, as specified for epoxy mortar, as the surface seal (used to confine the epoxy resin during injection).

6.0 EQUIPMENT FOR INJECTION

Use portable positive displacement type pumps with interlock to provide positive ratio control of exact proportions of the two components at the nozzle to meter and mix the two injection adhesive components and inject the mixed adhesive into the crack. Use electric or air powered pumps that provide in-line metering and mixing.

Use injection equipment with automatic pressure control capable of discharging the mixed adhesive at any pre-set pressure up to 200 ± 5 psi and equipped with a manual pressure control override.

Use equipment capable of maintaining the volume ratio for the injection adhesive as prescribed by the manufacturer. A tolerance of ± 5% by volume at any discharge pressure up to 200 psi is permitted.

Provide injection equipment with sensors on both the Component A and B reservoirs that automatically stop the machine when only one component is being pumped to the mixing head.

7.0 PREPARATION

Follow these steps prior to injecting the epoxy resin:

1.0 Remove all dirt, dust, grease, oil, efflorescence and other foreign matter detrimental to the bond of the epoxy injection surface seal system from the surfaces adjacent to the cracks or other areas of application. Acids and corrosives are not permitted.

2.0 Provide entry ports along the crack at intervals not less than the thickness of the concrete at that location.

3.0 Apply surface seal material to the face of the crack between the entry ports. For through cracks, apply surface seal to both faces.

4.0 Allow enough time for the surface seal material to gain adequate strength before proceeding with the injection.

8.0 EPOXY INJECTION

Begin epoxy adhesive injection in vertical cracks at the lower entry port and continue until the epoxy adhesive appears at the next higher entry port adjacent to the entry port being pumped.

Begin epoxy adhesive injection in horizontal cracks at one end of the crack and continue as long as the injection equipment meter indicates adhesive is being dispensed or until adhesive shows at the next entry port.

When epoxy adhesive appears at the next adjacent port, stop the current injection and transfer the epoxy injection to the next adjacent port where epoxy adhesive appeared.

Perform epoxy adhesive injection continuously until cracks are completely filled.

If port to port travel of epoxy adhesive is not indicated, immediately stop the work and notify the Engineer.

9.0 FINISHING

When cracks are completely filled, allow the epoxy adhesive to cure for sufficient time to allow the removal of the surface seal without any draining or runback of epoxy material from the cracks.

Remove the surface seal material and injection adhesive runs or spills from concrete surfaces.

Finish the face of the crack flush to the adjacent concrete, removing any indentations or protrusions caused by the placement of entry ports.

10.0 BASIS OF PAYMENT

No separate Payment for will be made for epoxy resin injection. The cost of this work shall be considered incidental to the construction of the cast-in-place substructure units.

F.I.B. 72" PRESTRESSED CONCRETE GIRDERS **SPECIAL**

The Contractor shall provide 72" F.I.B. (Florida I-Beam) Girders as detailed in the contract plans. The girders shall be in accordance with the Standard Specifications.

Measurement and Payment shall be for the actual number of linear feet of prestressed concrete girders.

Payment will be made under:

Item	Unit
F.I.B. 72" Prestressed Concrete Girder	Linear Feet

STAINLESS STEEL REINFORCING **(SPECIAL)**

1.0 GENERAL

Prior to shipping, ensure that all chains and steel bands will not come into direct contact with the stainless steel reinforcement bars. Place wood or other soft materials (i.e., thick cardboard) under the tie-downs. Alternatively, use nylon or polypropylene straps to secure the stainless steel reinforcement bars.

When bundles of reinforcement steel and stainless steel reinforcement bars must be shipped one on top of the other, load the stainless steel reinforcement bars on top. Use wooden spacers to separate the two materials.

Do not use carbon steel tools, chains, slings, etc. when fabricating or handling stainless steel reinforcement bars. Only use nylon or polypropylene slings. Protect stainless steel from contamination during construction operations including any cutting, grinding, or welding above or in the vicinity of stainless steel.

Store steel reinforcement on blocking at least 12" above the ground; protect the steel at all times from damage; and when placing in the work, ensure it is free from dirt, dust, loose mill scale, loose rust, paint, oil or other foreign materials.

The Department requires submittal of a written plan detailing the conformance of operations of all stainless steel reinforcing producers, fabricators and transporters to these provisions. This plan shall be submitted 60 days prior to any stainless steel production. The Department reserves the right to inspect all production and fabrication facilities prior to and during production to ensure this plan is followed and contamination of stainless steel is avoided. Failure to comply with this plan may result in rejection of stainless steel reinforcing.

2.0 DEFORMED STEEL BAR REINFORCEMENT FOR STRUCTURES

Supply deformed steel bar reinforcement conforming to ASTM A955-12 EL, Grade 75. Any alloy with a UNS Designation listed in Table 2 of ASTM 955, meeting the requirements of this specification, shall be used. The UNS Designated Alloy selected by the contractor shall be used throughout the bridge; mixing of alloys will not be permitted.

Bend and cut during fabrication with tolerances in accordance with the Manual of Standard Practice published by the Concrete Reinforcing Steel Institute. Bend the bars cold to the details shown in the plans.

All steel and iron products furnished as domestic products shall be melted cast, formed, shaped, drawn, extruded, forged, fabricated, produced, or otherwise processed and manufactured in the United States. Raw materials including pig iron and processed pelletized and reduced iron ore used in manufacturing domestic steel products may be imported; however, all manufacturing processes to produce the products, including coatings, shall occur in the United States.

Before each steel or iron product is incorporated into this project or included for partial payment on a monthly estimate, the Contractor shall furnish the Resident Engineer a notarized certification certifying that the product conforms to the above. The Engineer will forward a copy of each certification to the Materials and Tests Unit.

Control of Material: In accordance with 106-1(B), Mill Test Reports shall be provided for the Project and shall:

1. Be from the supplying mill verifying that the stainless reinforcement provided has been sampled and tested and the test results meet the Contract requirements;
2. Include a copy of the chemical analysis of the steel provided, with the UNS designation, the heat lot identification and the source of the metal if obtained as ingots from another mill;
3. Include a copy of tensile strength, yield strength and elongation tests on each of the sizes of stainless steel reinforcement provided;
4. Permit positive determination that the reinforcement provided is that which the test results cover; and
5. Include a statement certifying that the materials meet NCDOT Standard Specification 106-1(B) regarding material being melted and manufactured in the United States.

Bars which exhibit active corrosion shall be evaluated. Bars which have damage exceeding two percent of the surface area in any 1 foot length shall be replaced.

Do not weld stainless steel bar reinforcement.

3.0 REINFORCING STEEL BAR SUPPORTS

Place all stainless steel reinforcement on bar chairs that are stainless steel.

Fabricate stainless steel metal chairs and continuous metal stainless steel supports from stainless steel conforming to the same requirements and UNS designations as stainless steel bar reinforcement being supported. Stainless steel chairs used above steel beams shall have plastic-coated feet. Make all wire bar supports of smooth cold drawn industrial quality basic wire having a minimum tensile strength of 65,000 psi. When the legs of the bar supports are in contact with the forms, ensure that the entire leg of the bar support is stainless steel wire or a minimum thickness of 1/4" stainless steel at points of contact with the forms. Use stainless steel wire meeting ASTM A493 except having a minimum chromium content of 16% and a minimum tensile strength of 95,000 psi. Ensure that wire sizes, height tolerance, and leg spacing for wire bar supports are in accordance with the Manual of Standard Practice published by the Concrete Reinforcing Steel Institute.

Tie wire used to tie stainless steel reinforcement shall be stainless steel 16 gauge wire fabricated from stainless steel conforming to the same requirements and UNS designations as stainless steel bar reinforcement as listed in Section 2, dead soft annealed, annealed at size.

4.0 MEASUREMENT AND PAYMENT

Measurement and payment will be as described in section 425-6 of the Standard Specification and will be full compensation for all work and materials as detailed in section 425-1 of the in-place and accepted reinforcement.

Item	Unit
Stainless Steel Reinforcing	Pounds
Spiral Stainless Steel Reinforcing	Pounds

MASS CONCRETE **SPECIAL**

This special provision applies to end bent caps and bents 4 to 92 bent caps (includes precast caps) and footings on this project.

The Contractor shall provide an analysis of the anticipated thermal developments in the mass concrete elements using his proposed mix design, casting procedures, and materials. Additionally, the Contractor shall describe the measures and procedures he intends to use to limit the temperature differential to 35°F or less between the interior and exterior of the designated mass concrete elements during curing. The maximum concrete temperature shall not exceed 160°F. The proposed plan to control the temperature differential shall be submitted to the Department for review and comments at the time approval is requested for the mass concrete mix design.

Maintenance of the specified thermal differential may be accomplished through a combination of the following:

A. Selection of concrete ingredients to minimize the heat generated by hydration of the cement.

B. Cooling component materials to reduce the temperature of the concrete while in its plastic state.

C. Controlling the rate of placing concrete.

D. Insulating the surface of the concrete to prevent heat loss.

E. Providing supplemental heat at the surface of the concrete to prevent heat loss.

F. Other acceptable methods which may be developed by the Contractor.

Mass concrete shall be Class AA, vibrated, air-entrained, and shall contain an approved set-retarding, water-reducing admixture, and 30% fly ash and 5%microsilica by weight of the total cementitious material. The total cementitious material shall not exceed 690lbs. per cubic yard of concrete. The maximum water-cementitious material ratio shall be 0.366 for rounded aggregate and 0.410 for angular aggregate. The slump of the concrete shall not exceed three inches. The Contractor shall submit compressive strength results, the average of at least three cylinders made in the laboratory, of his proposed mix design. These cylinders shall show a minimum strength of 5000 psi at 28 days.

Minimum compressive strength at 28 days of field placed concrete shall be 4500 psi.

The Contractor shall meet the temperature monitoring requirements listed below for all concrete components on the plans which are five feet thick or greater and for other components noted on the plans. At the discretion of the Engineer, all temperature monitoring requirements may be waived provided the Contractor has proven to the satisfaction of the Engineer that he can limit the temperature differential to 35°F or less between the interior and exterior of the concrete component.

The Contractor shall provide and install a minimum of six temperature sensing devices in each mass concrete pour to monitor temperature differentials between the interior and exterior of the pour unless otherwise directed by the Engineer. These devices shall be accurate within ±2°F within the temperature range of 40°F to 180°F. One temperature sensing probe shall be placed near the center of mass of the pour, and another temperature sensing probe shall be placed at approximately two inches clear from the surface of the concrete furthest from the center of mass. The Engineer shall approve the locations of the other temperature sensing probes.

The monitoring devices shall be read and readings recorded at one-hour intervals, beginning when casting is complete and continuing until the maximum temperature is reached and two consecutive readings indicate a temperature differential decrease between the interior and exterior of the element. At the option of the Contractor, an approved strip-chart recorder furnished by the Contractor may record the temperature. If monitoring indicates the 35°F differential has been exceeded, the Contractor shall make the necessary revisions to the approved plan to reduce the differential on any remaining placements to 35°F or less. The Department must approve any revisions to the plan prior to implementation.

Fly ash and microsilica used in the mass concrete mix shall meet the requirements of Articles 1024-5 and 1024-7 of the Standard Specifications. Portland Cement shall meet the requirements of AASHTO M85 for Portland Cement Type II. The temperature of mass concrete at the time of placement shall not be less that 40°F or more than 75°F.

The placement of the mass concrete shall be continuous until the work is completed and the resulting structures shall be monolithic and homogeneous.

The entire cost of this work shall be included in the unit contract price bid for Class AA Concrete.

CONCRETE SHRINKAGE CONTROL FOR PRECAST CAP **SPECIAL**

1.0 GENERAL

When using the precast cap option for bent caps, concrete poured on site into the void of the precast cap shall be proportioned to keep concrete shrinkage at or below 0.03% by volume. This may be accomplished by incorporation of shrinkage reducing admixtures, incorporation of water reducing agents, reduction of water to cement ratio, substitution of cementitious materials or by other means available to the contractor. The contractor is strongly cautioned against using a shrinkage compensating cement (Types K, M, S and G) due to its expansive properties and its effect upon the precast cap may be detrimental.

2.0 CONCRETE MIX DESIGN SUBMITTALS AND TESTING

Concrete poured on site for precast caps shall meet or exceed the applicable provisions of the Standard Specification for the class of concrete specified on the plans.

Calcium chloride shall not be used in concrete regardless of its effect on concrete shrinkage.

Concrete poured on site for precast caps shall be tested for shrinkage by an independent laboratory certified for performing this type of work. Testing and measurement shall be in accordance with ASTM C 157 "Standard Test Method for Length Change of Hardened Hydraulic-Cement Mortar and Concrete". The contractor shall supply the testing facility with 5 prismatic samples cast with the concrete proposed for use in the on-site pour of the precast cap, to the dimensions detailed in ASTM C 157. Submit results for each sample of the shrinkage test shall be submitted to the Engineer for review and approval at least 40 days before use.

3.0 BASIS OF PAYMENT

No separate payment will be made for Concrete Shrinkage Control for Precast Cap. The cost of all work and expenses associated with this provision will be paid for at the various prices for the cast-in-place bent cap as detailed on the plans.

CORROSION PROTECTION OF BRIDGE **SPECIAL**

1.0 GENERAL

Corrosion protection for the bridge shall be in accordance with the plans, the applicable section of the Standard Specifications and this special provision.

2.0 PORTLAND CEMENT CONCRETE COMPOSITION AND DESIGN

Use calcium nitrite [$Ca(NO_2)_2$] corrosion inhibitor and substitute fly ash and silica fume for a portion of the Portland cement. Calcium nitrite shall be used in all precast members and all cast-in-place members containing mild reinforcing steel or epoxy coated reinforcing steel. Elimination of calcium nitrite is allowable if stainless steel is substituted entirely for epoxy coated or mild reinforcing steel.

Apply the following rates of pozzolans at the locations shown:

	$Ca(NO_2)_2$ (gal/yd^3)	Silica Fume	Fly Ash[2]	Granulated Blast Furnace Slag (GGBFS)[2]
Deck Slab	4.0	-	25%[1]	40%[1]
End Diaphragms	4.0	-	25%[1]	40%[1]
Bent Diaphragms	4.0	-	25%[1]	40%[1]
Parapets	4.0	-	25%[1]	40%[1]
All Prestressed Concrete Girders	4.0	-	25%[1]	40%[1]
All Bent Caps		-	25%[1]	40%[1]
All Pier Walls		5%[1]	25%[1]	40%[1]
All Footings		5%[1]	25%[1]	40%[1]

[1] The rate of substitution shall be 1.0 lb. of pozzolan per 1.0 lb. of cement.
[2] The contractor has the option of substituting fly ash Class F or GGBFS at the rates shown in the table above.

3.0 PAYMENT

No separate payment will be made for corrosion protection of the bridge. The cost of furnishing and incorporating the corrosion protection of the bridge is considered incidental to the various pay items.

REMOVAL OF EXISTING STRUCTURE **(SPECIAL)**

1.0 GENERAL

The contractor shall remove the existing structure on NC-12 over the new Pea Island Inlet in accordance with section 402 of the Standard Specifications and this special provision. The existing structure for removal contains:

5-Span Mabey Truss Bridge, 684' overall length
12 Concrete Pile Footing
34 H-Piles
48-24" Ø Pipe Piles

Scour Protection Stone, 300-400lb (total approximate quantity = 3,320 Tons)
Steel Sheet Piling

Traffic shall be maintained in accordance with the traffic control plans.

All components of the Mabey Truss superstructure including but not limited to truss panels, floor beams, stringers, floor panels, bearings and any incidental components and hardware will remain the property of the department. Superstructure components shall be inventoried, crated and delivered to the Bridge Maintenance Yard at 14183 NC Hwy 94N, Creswell, NC 27928. Delivery shall be coordinated with the Engineer.

All other bridge components shall become the property of the contractor.

The contractor shall submit a removal plan to the engineer for approval. This plan shall indicate the sequence of operations, resources, time frames, staging areas and stockpile locations.

The Mabey Truss Bridge shall be disassembled in such a manner so as not to damage the superstructure components. The concrete bent caps over the inlet shall be removed using non-shattering methods; other concrete bent caps may be removed using shattering methods. Steel piles shall be completely removed in accordance with all permits. The contractor shall take care not to allow and debris or materials to fall into the inlet.

Steel sheet piles that are installed and subsequently removed to accommodate construction of the proposed bridge will not be counted as part of the linear footage of Steel Sheet Piling Removal. This will be the case even for piles that are installed in place of existing steel sheet piles. Steel sheet piles shall be completely removed in accordance with all permits.

The contractor's attention is brought to the fact that sandbags were used to stabilize/support the roadway embankment for the existing NC-12 roadway. Sandbag removal is a Roadway quantity and pay item. See Roadway plans for details.

2.0 MEASUREMENT AND PAYMENT

Removal of Existing Structure Payment shall be paid for at the contract lump sum price bid.

The lump sum price bid for Removal of Existing Structure will be full compensation for furnishing all material, labor, tools, and equipment necessary for removing and disposing of the material as described in this provision.

Item	Unit
Removal of Existing Structure	Lump Sum

CONCRETE MOMENT SLAB (1-17-12)

1.0 GENERAL

Construct concrete moment slabs to resist traffic impact above retaining walls. Construct concrete parapet with moment slab in accordance with the contract and accepted submittals.

2.0 MATERIALS

Refer to Division 10 of the *Standard Specifications*.

Item	Section
Barrier Delineators	1088-2
Portland Cement Concrete	1000
Reinforcing Steel	1070

Use Class AA concrete for concrete moment slabs. Provide epoxy coated reinforcing steel that meets Article 1070-7 of the *Standard Specifications* for concrete parapet.

3.0 CONSTRUCTION METHODS

Construct concrete moment slab in accordance with the plans and accepted submittals. Construct cast-in-place reinforced concrete moment slabs in accordance with Section 420 of the *Standard Specifications* and concrete parapet in accordance with Subarticle 460-3(C) of the *Standard Specifications*. Do not remove forms until concrete attains a compressive strength of at least 2,400 psi.

4.0 MEASUREMENT AND PAYMENT

Concrete Moment Slab will be measured and paid in linear feet. Concrete parapet and 2 Bar Metal Rail will be paid for separately and are not covered by this special provision. Moment slab will be measured as the length of moment slab along the outside face of parapet above the moment slab. The contract unit price for *Concrete Moment Slab* will be full compensation for submittals, labor, tools, equipment, moment slab materials, excavating, backfilling, hauling and removing excavated materials and supplying any incidentals necessary to construct concrete moment slab.

Payment will be made under:

Item	Unit
Concrete Moment Slab	Linear Foot

CONCRETE SHEET PILE WALL **SPECIAL**

1.0 GENERAL

Concrete sheet pile walls shall be constructed in accordance with section 452 of the Standard Specifications and as modified herein.

Concrete sheet piles shall be of Class AA concrete and fabricated in accordance with section 420 of the Standard Specifications.

Axial alignment shall be within 1/8"/ft of vertical.

2.0 MEASUREMENT AND PAYMENT

Concrete Sheet Pile Wall, including coping, will be measured and paid for as the number of linear feet of wall as measured along the exposed face of the concrete sheet piles that is completed and accepted.

36" PRESTRESSED CONCRETE PILES **(SPECIAL)**

36" Prestressed Concrete Piles shall be in accordance with the contract plans and Section 450 of the Standard Specifications.

Payment will be made under:

36 Inch Prestressed Concrete Piles .....Lin. Ft.

DOWELS IN PRESTRESSED PILES SPECIAL

1.0 GENERAL

This provision applies to reinforcing dowels that are installed in the top of piles as detailed and noted on the plans. Dowels will be cast into piles or installed after driving. If the dowels are installed after driving, mechanical butt splices or adhesive anchoring systems may be used. Mechanical butt splices shall meet the requirements of section 1070-9 of the Standard Specifications. Adhesive anchoring systems shall meet the requirements of section 1081 of the Standard Specifications. Bars inserted into the formed hollow core of the top of pile that are encapsulated within spiral reinforcement are not subject to this provision.

2.0 INSTALLATION METHOD

A) Install mechanical butt splices per section 425-5 of the Standard Specifications.
B) Install adhesively anchor dowels into pile per section 420-13 of the Standard Specifications.
C) Dowels cast into pile – this option may require specialized equipment and/or reinforcing bars modified from those shown on the plans. Before piles are cast, the contractor shall submit to the Engineer for approval his method for driving piles with the dowels cast in the top of pile. This submittal shall include all machinery, tools, materials and equipment necessary to drive the piles with dowels cast in the top of pile.

3.0 ADHESIVELY ANCHORED DOWEL TESTING REQUIREMENTS

Dowels installed after driving will be tested for level 2 field testing. Dowels will be tested on a per footing basis and shall be located on a single pile where possible. Prior to testing, hollow core reinforcing steel shall be installed and pile voids shall be poured with concrete up to the top of the pile. No other pile dowels are to be installed in the footing until test dowels have been installed, tested and approved. The contractor shall devise a method for testing dowels per the conditions noted above by either constructing a test frame above the hooked hollow core bars, by use of mechanical couplers or by use of any sound methodology to accomplish load testing of the dowel bars. The contractor may eliminate the hooks on the dowel bars to be tested if a mechanical end anchorage is installed in lieu of the hooks. The end anchorage shall be a manufactured device approved for use in the proposed configuration. The contractor may temporarily extend the dowels to a vertical height above the reinforcing steel projecting from the pile to facilitate testing. See sketch below for clarification of anticipated concept.

ANTICIPATED TESTING / END ANCHORAGE

The contractor shall submit to the engineer for approval plans, procedures and sequencing for installation of adhesively anchored dowel bars and testing of the dowel bars. The contractor shall also include in this submittal all machinery, tools, adhesives, rigging, end anchors (if applicable) and equipment necessary to install and test adhesively anchored dowels.

Mechanical couplers and embedment anchors shall be manufactured specifically for achieving development of reinforcing steel and be proportioned to develop 120% of the yield strength of the bar and be on the approved product list.

4.0 Basis of Payment

No separate payment will be made for Dowels for Prestressed Piles. The cost of furnishing all materials and equipment necessary to perform the work stated herein shall be included in the pay item for Prestressed Concrete Piles.

PILE JETTING: (SPECIAL)

NORTH CAROLINA PROFESSIONAL SEAL 032672 ENGINEER MICHAEL D. VALIQUETTE 6/10/13

Description

This provision covers jetting for square concrete pile and concrete sheet pile installation. Jetting may be used to assist with installation of concrete piles and concrete sheet piles to the elevations noted on the contract plans. Perform jetting in accordance with the project's permit requirements. Pile jetting consists of pumping pressurized water or water and air mixtures through pipes with jet nozzles in close proximity to the pile face or pile tip to aide in pile installation to the required elevations.

Contain jetting spoils within NCDOT easements. Dispose of jetting spoils within the project limits as directed by the Engineer and in accordance with the project's permit requirements unless directed otherwise. If directed by the Engineer, dispose of jetting spoils at an off-site location in accordance with Section 802 of the NCDOT Standard Specifications and the project's permit requirements. Jetting spoils consist of all materials and fluids produced by jetting operations.

Conduct pile jetting in a manner that will protect the traveling public from jetting spoils, flying debris, or pavement undermining.

Obtain water for jetting from locations as shown in the permit drawings unless otherwise approved by the Engineer. Use water intake screens with openings no larger than 0.04 inch (1 millimeter) in size at all intake locations. Limit intake water velocity to no more than 0.5 ft/sec as measured at a distance of 3.3 feet (1 meter) from the intake.

Submittals

Submit proposed jetting procedures, equipment, intake structure and screen drawings, spoil containment, procedures to prevent undermining of open travel ways, and spoil disposal plan for review and acceptance by the Engineer. Submit contingency action plans for repair of open travel ways should pavement undermining occur.

Construction Methods

Do not jet below the elevations noted on the plans unless approved by the Engineer. Do not jet temporary work bridge piles.

Use jet pumps, supply lines, jet pipes, and jet nozzles that provide adequate pressure and volume of water or water and air mixture to freely erode the soil. Minimize jetting effort when installing concrete piles and concrete sheet piles.

Use a minimum of two external jet pipès. Do not extend the jet nozzles below the tip of the concrete piles and concrete sheet piles without approval of the Engineer. When jetting and driving concrete piles and concrete sheet piles simultaneously, position the jet nozzles a minimum of 3 feet above the advancing pile tip or as approved by the Engineer. The Engineer may increase the jet nozzle to pile tip distance requirement for simultaneous jetting and driving if

excessive pile tensile stresses are observed. Mark all jet pipes and piles at 1-ft increments to aid in determining penetration depths.

For square concrete piles, the required pile driving resistance will be determined after completely withdrawing the jets. After jetting piles, drive square concrete piles to the required driving resistance and to a minimum of 5 feet below the final jet elevation unless pile refusal is met per the pile driving criteria. Restrike, at no cost to the Department, previously accepted square concrete piles to re-verify bearing if jetting occurs within 15 feet of the completed pile location.

Measurement and Payment

There will be no separate payment for pile jetting, spoil containment, protection of adjacent travel ways, or repair of adjacent travel ways damaged by jetting for either square concrete pile or concrete sheet pile, or restiking of previously accepted square concrete piles due to jetting within 15 feet of completed pile locations. All costs associated with jetting, spoil containment, protection of adjacent travel ways, and repair of adjacent travel ways damaged by jetting are incidental to the cost of the pile. No payment for jetting spoil disposal will be made if the Engineer directs the spoil to be disposed of within the project limits.

If the Engineer requires off-site jetting spoil disposal, measurement and payment for off-site disposal of jetting spoils will be accordance this provision. The quantity of *Off-site Jetting Spoil Disposal* to be measured for payment will be the actual quantity of *Off-site Jetting Spoil Disposal* in cubic yards as measured at the disposal site in its final location. The quantity of *Off-site Jetting Spoil Disposal* measured as provided above will be paid for at the contract unit price per cubic yard for *Off-site Jetting Spoil Disposal.* Seeding and mulching, fertilizer top dressing and establishing erosion control measures for waste or disposal areas will be measured and paid at the contract unit prices for the items established in the contract. The unit bid price for *Off-site Jetting Spoil Disposal* shall include all costs to meet the requirements of Section 802 of the NCDOT Standard Specifications except as otherwise provided above.

Payment for *Off-site Jetting Spoil Disposal* for will be made:

Pay Item	**Pay Unit**
Off-site Jetting Spoil Disposal	Cubic Yard

NORTH CAROLINA PROFESSIONAL SEAL 032672 ENGINEER MICHAEL D. VALIQUETTE 7/22/13

REINFORCED APPROACH FILLS **(Special)**

Description

Construct reinforced approach fills in accordance with the contract. Reinforced approach fills consist of reinforcing fabric, galvanized welded wire forms, common borrow backfill, and filter fabric.

Materials

(A) Certifications, Storage and Handling

Provide Type 7 Contractor's Certifications in accordance with Article 106-3 of the *Standard Specifications* for all reinforced approach fill materials used with the exception of reinforcing fabrics. Furnish Type 2 Typical Certified Mill Test Reports in accordance with Article 106-3 of the *Standard Specifications* for all seam strengths and reinforcing fabric properties. Provide minimum average roll values (MARV) in accordance with ASTM D4759 for test reports. For testing reinforcing fabric, a lot is defined as a single day's production.

Load, transport, unload and store materials such that they are kept clean and free of damage. Identify, store and handle all geotextile fabrics in accordance with ASTM D4873. Fabrics with defects, flaws, deterioration or damage will be rejected. Do not leave fabrics uncovered for more than 7 days.

(B) Reinforced Approach Fill Backfill

Use backfill material meeting the project's requirements for common borrow.

(D) Galvanized Welded Wire Form

Use welded wire reinforcement forms that meet the requirements of AASHTO M55 or M221. Use wire gauges, strut sizes and welded wire components as shown on the plans. Galvanize welded wire forms in accordance with the requirements of Article 1076 of the *Standard Specifications*.

(E) Geotextile Fabrics

Use geotextile fabrics that meet the requirements of Article 1056 of the *Standard Specifications* except as listed below.

(a) Reinforcing Fabric

The reinforcement direction (RD) is defined as the direction perpendicular to the approach fill face and the cross-reinforcement direction (CRD) is defined as the direction parallel to the approach fill face.

Use woven polyester or polypropylene fabric that meets the following properties:

Property	Test Method	Requirement (MARV)
Wide Width Tensile Strength @ Ultimate (RD)	ASTM D4595	400 lb/in min
Wide Width Tensile Strength @ Ultimate (CRD)	ASTM D4595	100 lb/in min
Elongation (RD &CRD)	ASTM D4632	<50%
UV Resistance after 500 hrs	ASTM D4355	50 %
Apparent Opening Size (AOS), US Sieve	ASTM D4751	30 min – 70 max
Permittivity	ASTM D4491	0.20 sec^{-1}

Use reinforcing fabric wide width tensile strengths and lengths in the RD as shown on the plans.

(b) Filter Fabric

Use filter fabric at locations shown on the plans that meet the requirements of Type 1 Geotextile as shown in Table 1056-1 of the *Standard Specifications*.

Construction Methods

Control drainage during construction in the vicinity of reinforced approach fills. Collect and direct run off away from reinforced approach backfill.

The Engineer may require a reinforced approach fill preconstruction meeting to discuss the construction and inspection of the reinforced approach fills. If required, conduct the meeting with the Site Superintendent, the Resident, the Bridge Construction Engineer and the Geotechnical Operations Engineer before beginning reinforced approach fill construction.

Perform all necessary clearing and grubbing in accordance with Section 200 of the *Standard Specifications*. Excavate as necessary as shown on the plans or accepted submittals. Notify the Engineer when foundation excavation is complete. Do not place backfill or first reinforcement layer until obtaining approval of the excavation depth and foundation material.

If applicable, install foundations located within the reinforced zone in accordance with the plans or accepted submittals.

Erect and maintain facings and forms as shown on the plans or accepted submittals. Stagger vertical joints of facings and forms to create a running bond when possible unless shown otherwise on the plans or accepted submittals.

Revised 11-8-13

Place facings and forms as near to vertical as possible with no negative batter. Construct reinforced approach fills with a vertical and horizontal tolerance of 3" when measured with a 10 ft straight edge and an overall vertical plumbness (batter) and horizontal alignment of less than 6".

Place reinforcement at locations and elevations shown on the plans or accepted submittals and in slight tension free of kinks, folds, wrinkles or creases. Repair or replace any damaged reinforcement. Contact the Engineer when existing or future structures such as foundations, pavements, pipes, inlets or utilities will interfere with reinforcement. To avoid structures, deflect, skew and modify reinforcement.

Do not splice reinforcement in the reinforcement direction (RD), i.e., parallel to the reinforced approach fill face. Seams are allowed in the cross-reinforcement direction (CRD). Bond or sew adjacent reinforcing fabric together or overlap fabric a minimum of 18" with seams oriented perpendicular to the reinforced approach fill face.

Place backfill in 8 to 10 inch thick lifts and compact in accordance with Subarticle 235-4(C) of the *Standard Specifications*. Use only hand operated compaction equipment within 3 ft of the reinforced approach fill face. Do not damage reinforcement when placing and compacting backfill. End dumping directly on the reinforcement is not permitted. Do not operate heavy equipment on reinforcement until it is covered with at least 10" of backfill. Do not use sheepsfoot, grid rollers or other types of compaction equipment with feet.

Cover reinforcing fabric with at least 3" of backfill.

Measurement and Payment

Reinforced Approach Fills will be measured and paid for at the contract unit price per square foot of vertical formed approach fill face at locations shown on the plans or required by the Engineer. The top of reinforced approach fills will be measured as the top of the trimmed wire facing formwork prior to construction of approach slabs or moment slabs. The bottom of the reinforced approach fill will be Elevation 1.0 as shown on the plans. Such price and payment will be full compensation for furnishing all labor, tools, equipment, excavating, backfilling, hauling, and removing excavated materials, geotextile fabrics, galvanized wire facings, and miscellaneous materials and all incidentals necessary to install the reinforced approach fills and complete the work as described in this provision.

Common borrow used within and in front of reinforced approach fills will be considered incidental to *Grading* per Article 226 of the *Standard Specifications*.

Payment will be made under:

Pay Item	Pay Unit
Reinforced Approach Fills	Square Foot

PROJECT SPECIAL PROVISION

(10-18-95) (Rev. 10-15-13) Z-1

PERMITS

The Contractor's attention is directed to the following permits, which have been issued to the Department of Transportation by the authority granting the permit.

PERMIT	AUTHORITY GRANTING THE PERMIT
Dredge and Fill and/or Work in Navigable Waters (404)	U. S. Army Corps of Engineers
Water Quality (401)	Division of Environmental Management, DENR State of North Carolina
State Dredge and Fill and/or CAMA	Division of Coastal Management, DENR State of North Carolina
Special Use Permit	U. S. Department of the Interior

The Contractor shall comply with all applicable permit conditions during construction of this project. Those conditions marked by * are the responsibility of the Department and the Contractor has no responsibility in accomplishing those conditions.

Agents of the permitting authority will periodically inspect the project for adherence to the permits.

The Contractor's attention is also directed to Articles 107-10 and 107-13 of the *2012 Standard Specifications* and the following:

Should the Contractor propose to utilize construction methods (such as temporary structures or fill in waters and/or wetlands for haul roads, work platforms, cofferdams, etc.) not specifically identified in the permit (individual, general, or nationwide) authorizing the project it shall be the Contractor's responsibility to coordinate with the Engineer to determine what, if any, additional permit action is required. The Contractor shall also be responsible for initiating the request for the authorization of such construction method by the permitting agency. The request shall be submitted through the Engineer. The Contractor shall not utilize the construction method until it is approved by the permitting agency. The request normally takes approximately 60 days to process; however, no extensions of time or additional compensation will be granted for delays resulting from the Contractor's request for approval of construction methods not specifically identified in the permit.

Where construction moratoriums are contained in a permit condition which restricts the Contractor's activities to certain times of the year, those moratoriums will apply only to the portions of the work taking place in the waters or wetlands provided that activities outside those areas is done in such a manner as to not affect the waters or wetlands.

U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. SAW-2013-01039 County: Dare U.S.G.S. Quad: Pea Island, NC

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Property Owner: Richard Hancock
Environmental Management Director,
PDEA
Address: N.C. Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina
27699-1598

Agent: _____
Address: _____

Size and location of property (water body, road name/number, town, etc.): **The project area is located within the existing NCDOT NC Highway 12 easement and will also include generally a 5 foot wide temporary construction easement obtained from the Pea Island National Wildlife Refuge. The project starts approximately 5.5 miles south of the southern terminus of the Bonner Bridge (at the southern end of the of the Refuge's south pond) and continues approximately 2.7 miles to the south. The project is adjacent to the Pamlico Sound. This portion of the project is considered Phase IIA of the overall TIP project B-2500 Latitude: Start 35.691655 End 35.651892 Longitude: Start -75.485098, End -75.477053**

Description of projects area and activity: **Applicant proposes to permanently impact 0.22 acres of jurisdictional wetlands and temporarily impact 0.90 acres of wetlands and 0.28 acres of open waters associated with the replacement of an existing three span temporary bridge over "New Inlet" with a permanent 2.1 mile long bridge. A temporary detour road is being constructed so two way traffic may be maintained on the highway system while NC Highway 12 is being modified. Approximately 1.75 miles of the detour road will remain following bridge construction to provide access to to an existing parking lot and boat access area located on PINWR property. The project is also authorized to temporarily impact (hand clear) 0.42 acres of wetlands for road and bridge construction purposes (typically the installation and maintenance of soil and erosion measures). NOTE - This permit is only authorizing section 404 discharges associated with the construction of the temporary soundbound detour road. Any bridge construction activities occuring completely on high ground is not associated with this authorization. NOTE - SEE ADDITIONAL SPECIAL CONDITIONS**

Applicable Law: ☒ Section 404 (Clean Water Act, 33 USC 1344)
☐ Section 10 (Rivers and Harbors Act, 33 USC 403)
Authorization: Regional General Permit Number or Nationwide Permit Number: **NWP 14**

SEE ATTACHED NATIONWIDE AND SPECIAL CONDITIONS.

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached conditions and your submitted application and attached information dated August 27, 2013. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide permit's expiration, modification or revocation, unless discretionary authority bas been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Quality (telephone (919) 733-1786) to determine Section 401 requirements.

For activities occurring within the twenty coastal counties subject to regulation under the Coastal Area Management Act (CAMA), prior to beginning work you must contact the N.C. Division of Coastal Management.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact **Tracey Wheeler** at **(910) 251-4627**.

Corps Regulatory Official Tracey L Wheeler Date: **October 24, 2013**

Expiration Date of Verification: **March 18, 2017**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the attached customer Satisfaction Survey or visit http://per2.nwp.usace.army.mil/survey.html to complete the survey online.

Copy Furnished:

Determination of Jurisdiction:

A. ☐ Based on preliminary information, there appear to be waters of the US including wetlands within the above described project area. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).

B. ☐ There are Navigable Waters of the United States within the above described project area subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

C. ☐ There are waters of the US and/or wetlands within the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

D. ☒ The jurisdictional areas within the above described project area have been identified under a previous action. Please reference jurisdictional determination issued **January 22, 2013**. Action ID **SAW-2013-00107**.

Basis For Determination

The site exhibits wetland criteria as defined in the 1987 Corps Wetland Delineation Manual and appropriate Regional Supplement.

Remarks. *See above referenced file.*

Attention USDA Program Participants

This delineation/determination has been conducted to identify the limits of Corps' Clean Water Act jurisdiction for the particular site identified in this request. The delineation/determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA Program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

F. Appeals Information (This iuformation applies only to approved jurisdictional determinations as indicated in B aud C above).

This correspondence constitutes an approved jurisdictional determination for the above described site. If you object to this determination, you may request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet and request for appeal (RFA) form. If you request to appeal this determination you must submit a completed RFA form to the following address:

US Army Corps of Engineers
South Atlantic Division
Attn: Jason Steele, Review Officer
60 Forsyth Street SW, Room 10M15

ADDITIONAL SPECIAL CONDITIONS

Action I.D. # SAW-2013-01039 – NCDOT, NC Highway 12, TIP # B-2500, Phase II A, Dare County, NC

a) All work authorized by this permit must be performed in strict compliance with the attached plans dated/submitted August 27, 2013, which is a part of this permit. Any modification to these plans must be approved by the US Army Corps of Engineers (USACE) prior to implementation.

b) The permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project, and shall provide each or its contractors and/or agents associated with the construction or maintenance of this project with a copy of this permit, and any authorized modifications. A copy of this permit, and any authorized modifications, including all conditions, shall be available at the project site during construction and maintenance of this project.

c) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands. This permit does not authorize temporary placement or double handling of excavated or fill material within waters or wetlands outside the permitted area. This prohibition applies to all borrow and fill activities connected with this project.

d) The Permittee shall schedule an onsite preconstruction meeting between its representatives, the contractor's representatives and the appropriate Corps of Engineers Project Manager prior to undertaking any work within jurisdictional waters and wetlands to ensure that there is a mutual understanding of all terms and conditions contained within the Department of the Army permit. The Permittee shall notify the Corps of Engineers Project Manager a minimum of thirty (30) days in advance of the scheduled meeting in order to provide that individual with ample opportunity to schedule and participate in the required meeting.

e) The permittee shall remove all sediment and erosion control measures placed in wetlands or waters, and shall restore natural grades in those areas, prior to project completion.

f) Violation of these conditions or violation of Section 404 of the Clean Water Act of Section 10 of the Rivers and Harbors Act must be reported in writing to the Wilmington District U.S. Army Corps of Engineers within 24 hours of the permitee's discovery of the violation.

g) A representative of the Corps of Engineers will periodically and randomly inspect the work for compliance with these conditions. Deviations from these procedures may result in an administrative financial penalty and/or directive to cease work until the problem is

resolved to the satisfaction of the Corps.

h) This permit only authorizes work on Phase II A of TIP B-2500. Construction on subsequent phases of TIP B-2500 shall not commence until approval has been obtained by the US Army Corps of Engineers (the Corps) in accordance with this permit authorization through an approved modification or a separate permit authorization.

i) The Permittee shall fully implement the Programmatic Agreement between the Permittee, the North Carolina State Historic Preservation Officer, the Advisory Council on Historic Preservation, and the Federal Highway Administration, signed in November 2010, which is incorporated herein by reference.

j) Except as authorized by this permit or any USACE approved modification to this permit, no excavation, fill, or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, within waters or wetlands, or shall any activities take place that cause the degradation of waters or wetlands. There shall be no excavation from, waste disposal into, or degradation of, jurisdictional wetlands or waters associated with this permit without appropriate modification of this permit, including appropriate compensatory mitigation. This prohibition applies to all borrow and fill activities connected with this project. In addition, except as specified in the plans attached to this permit, no excavation, fill or mechanized land-clearing activities shall take place at any time in the construction or maintenance of this project, in such a manner as to impair normal flows and circulation patterns within, into, or out of waters or wetlands or to reduce the reach of waters or wetlands.

k). The Permittee shall fully implement the compensatory mitigation plan, entitled Final Wetland Mitigation Plan NC 12 Replacement of Herbert C. Bonner Bridge (Bridge No. 11) over Oregon Inlet, dated January 30, 2013 for the unavoidable impacts to 0.22 acres of wetlands. Activities prescribed by this plan shall be initiated prior to, or concurrently with, commencement of any construction activities within jurisdictional areas authorized by this permit. The permittee shall rehabilitate 50 acres of wetlands in accordance with the plan with the following conditions:

1) The permittee, North Carolina Department of Transportation, is the party responsible for the implementation, performance and long term management of the compensatory mitigation project.

2) Any changes or modifications to your mitigation plan shall be approved by the Corps.

3) The permittee shall maintain the entire mitigation site in its natural condition, as altered by the work in the mitigation plan, in perpetuity. Prohibited activities within the mitigation site specifically include, but are not limited to: Filling; grading; excavating; earth movement of any kind; construction of roads, walkways, buildings, signs, or any other structure; any activity that may alter the drainage patterns on the property; the destruction, cutting, removal, mowing, or other alteration of vegetation

on the property; disposal or storage of any garbage, trash, debris or other waste material; graze or water animals, or use for any agricultural or horticultural purpose; or any other activity which would result in the property being adversely impacted or destroyed, except as specifically authorized by this permit.

4) In accordance with the mitigation plan, the permittee will identify the proposed preservation mechanism to be used to maintain the entire mitigation site in perpetuity, subject to the approval of the Wilmington District. The District considers preservation of property for compensatory mitigation purposes to consist of maintaining the property in its natural condition, or, if restoration, creation, or enhancement work has been performed on the property, in its mitigated condition. There are several preservation mechanisms that may be used to preserve mitigation property, including, conservation easements, restrictive covenants, and conservation declaration of restrictions. Fee conveyance to an acceptable conservation organization may also be acceptable. The permittee shall not sell or otherwise convey any interest in the mitigation property used to satisfy the mitigation requirements for this permit to any third party, without prior written approval from the Wilmington District Corps of Engineers.

5) All mitigation areas shall be monitored for a minimum of 5 years or until deemed successful by the Corps in accordance with the monitoring requirements included in the mitigation plan.

Atlanta, Georgia 30303-8801
Phone: (404) 562-5137

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 CFR part 331.5, and that it has been received by the Division Office within 60 days of the date of the NAP. Should you decide to submit an RFA form, it must be received at the above address by N/A.
It is not necessary to submit an RFA form to the Division Office if you do not object to the determination in this correspondence.

Corps Regulatory Official: _____

Date: _____ Expiration Date: _____

Copy furnished: _____

Action ID Number: SAW-2013-01039 **County:** Dare

Permittee: N.C. Department of Transportation

Date Permit Issued: October 24, 2013

Project Manager: Tracey Wheeler

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

US ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
Attn: Tracey Wheeler
Washington Regulatory Field Office
2407 West 5th Street
Washington, North Carolina 27889

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

_____ _____

Signature of Permittee **Date**

NATIONWIDE PERMIT 14
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS
FEDERAL REGISTER
AUTHORIZED MARCH 19, 2012

Linear Transportation Projects. Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

* Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 31.) (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

NATIONWIDE PERMIT CONDITIONS

The following General Conditions must be followed in order for any authorization by a NWP to be valid:

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.

* (c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.noaa.gov/fisheries.html respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

* (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA

section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

(2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of

the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____

(Transferee)

_____

(Date)

* 30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

* 31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the

vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, the extent that aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific

conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

FURTHER INFORMATION

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.
2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.
3. NWPs do not grant any property rights or exclusive privileges.
4. NWPs do not authorize any injury to the property or rights of others.
5. NWPs do not authorize interference with any existing or proposed Federal project.

DEFINITIONS

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence

of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or

flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through

which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent

mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line, which is defined at 33 CFR 328.3(d).

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States. If a jurisdictional wetland is adjacent – meaning bordering, contiguous, or neighboring – to a waterbody determined to be a water of the United States under 33 CFR 328.3(a)(1)-(6), that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.

Final Regional Conditions 2012

NOTICE ABOUT WEB LINKS IN THIS DOCUMENT:
The web links (both internal to our District and any external links to collaborating agencies) in this document are valid at the time of publication. However, the Wilmington District Regulatory Program web page addresses, as with other agency web sites, may change over the timeframe of the five-year Nationwide Permit renewal cycle, in response to policy mandates or technology advances. While we will make every effort to check on the integrity of our web links and provide re-direct pages whenever possible, we ask that you report any broken links to us so we can keep the page information current and usable. We apologize in advanced for any broken links that you may encounter, and we ask that you navigate from the regulatory home page (wetlands and stream permits) of the Wilmington District Corps of Engineers, to the "Permits" section of our web site to find links for pages that cannot be found by clicking directly on the listed web link in this document.

Final 2012 Regional Conditions for Nationwide Permits (NWP) in the Wilmington District

1.0 Excluded Waters

The Corps has identified waters that will be excluded from the use of all NWP's during certain timeframes. These waters are:

1.1 Anadromous Fish Spawning Areas

Waters of the United States identified by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are excluded during the period between February 15 and June 30, without prior written approval from NCDMF or NCWRC and the Corps.

1.2 Trout Waters Moratorium

Waters of the United States in the twenty-five designated trout counties of North Carolina are excluded during the period between October 15 and April 15 without prior written approval from the NCWRC. (See Section 2.7 for a list of the twenty-five trout counties).

1.3 Sturgeon Spawning Areas as Designated by the National Marine Fisheries Service (NMFS)

Waters of the United States designated as sturgeon spawning areas are excluded during the period between February 1 and June 30, without prior written approval from the NMFS.

*** 2.0 Waters Requiring Additional Notification**

The Corps has identified waters that will be subject to additional notification requirements for activities authorized by all NWP's. These waters are:

*** 2.1 Western NC Counties that Drain to Designated Critical Habitat**

For proposed activities within Waters of the U.S. that require a Pre-Construction Notification pursuant to General Condition 31 (PCN) and are located in the sixteen counties listed below, applicants must provide a copy of the PCN to the US Fish and Wildlife Service, 160 Zillicoa Street, Asheville, North Carolina 28801. This PCN must be sent concurrently to the US Fish and Wildlife Service and the Corps Asheville Regulatory Field Office. Please see General Condition 18 for specific notification requirements related to Federally Endangered Species and the following website for information on the location of designated critical habitat.

Counties with tributaries that drain to designated critical habitat that require notification to the Asheville US Fish and Wildlife Service: Avery, Cherokee, Forsyth, Graham, Haywood, Henderson, Jackson, Macon Mecklenburg, Mitchell, Stokes, Surry, Swain, Transylvania, Union and Yancey.

Website and office addresses for Endangered Species Act Information:

The Wilmington District has developed the following website for applicants which provides guidelines on how to review linked websites and maps in order to fulfill NWP general condition 18 requirements: http://www.saw.usace.army.mil/wetlands/ESA

Applicants who do not have internet access may contact the appropriate US Fish and Wildlife Service offices listed below or the US Army Corps of Engineers at (910) 251- 4633:

US Fish and Wildlife Service
Asheville Field Office
160 Zillicoa Street
Asheville, NC 28801
Telephone: (828) 258-3939

Asheville US Fish and Wildlife Service Office counties: All counties west of and including Anson, Stanly, Davidson, Forsyth and Stokes Counties

US Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
Telephone: (919) 856-4520

Raleigh US Fish and Wildlife Service Office counties: all counties east of and including Richmond, Montgomery, Randolph, Guilford, and Rockingham Counties.

*** 2.2 Special Designation Waters**

Prior to the use of any NWP in any of the following identified waters and contiguous wetlands in North Carolina, applicants must comply with Nationwide Permit General Condition 31 (PCN). The North Carolina waters and contiguous wetlands that require additional notification requirements are:

"Outstanding Resource Waters" (ORW) or "High Quality Waters" (HQW) as designated by the North Carolina Environmental Management Commission; "Inland Primary Nursery Areas" (IPNA) as designated by the NCWRC; "Contiguous Wetlands" as defined by the North Carolina Environmental Management Commission; or "Primary Nursery Areas" (PNA) as designated by the North Carolina Marine Fisheries Commission.

2.3 Coastal Area Management Act (CAMA) Areas of Environmental Concern

Non-federal applicants for any NWP in a designated "Area of Environmental Concern" (AEC) in the twenty (20) counties of Eastern North Carolina covered by the North Carolina Coastal Area Management Act (CAMA) must also obtain the required CAMA permit. Development activities for non-federal projects may not commence until a copy of the approved CAMA permit is furnished to the appropriate Wilmington District Regulatory Field Office (Wilmington Field Office – 69 Darlington Avenue, Wilmington, NC 28403 or Washington Field Office – 2407 West 5th Street, Washington, NC 27889).

*** 2.4 Barrier Islands**

Prior to the use of any NWP on a barrier island of North Carolina, applicants must comply with Nationwide Permit General Condition 31 (PCN).

*** 2.5 Mountain or Piedmont Bogs**

Prior to the use of any NWP in a Bog classified by the North Carolina Wetland Assessment Methodology (NCWAM), applicants shall comply with Nationwide Permit General Condition 31 (PCN). The latest version of NCWAM is located on the NC DWQ web site at: http://portal.ncdenr.org/web/wq/swp/ws/pdu/ncwam .

*** 2.6 Animal Waste Facilities**

Prior to use of any NWP for construction of animal waste facilities in waters of the US, including wetlands, applicants shall comply with Nationwide Permit General Condition 31 (PCN).

*** 2.7 Trout Waters**

Prior to any discharge of dredge or fill material into streams or waterbodies within the twenty-five (25) designated trout counties of North Carolina, the applicant shall comply with Nationwide Permit General Condition 31 (PCN). The applicant shall also provide a copy of the notification to the appropriate NCWRC office to facilitate the determination of any potential

impacts to designated Trout Waters. Notification to the Corps of Engineers will include a statement with the name of the NCWRC biologist contacted, the date of the notification, the location of work, a delineation of wetlands, a discussion of alternatives to working in the mountain trout waters, why alternatives were not selected, and a plan to provide compensatory mitigation for all unavoidable adverse impacts to mountain trout waters.

NCWRC and NC Trout Counties

Western Piedmont Region Coordinator	Alleghany	Caldwell	Watauga
20830 Great Smoky Mtn. Expressway	Ashe	Mitchell	Wilkes
Waynesville, NC 28786	Avery	Stokes	
Telephone: (828) 452-2546	Burke	Surry	

Mountain Region Coordinator	Buncombe	Henderson	Polk
20830 Great Smoky Mtn. Expressway	Cherokee	Jackson	Rutherford
Waynesville, NC 28786	Clay	Macon	Swain
Telephone: (828) 452-2546	Graham	Madison	Transylvania
Fax: (828) 452-7772	Haywood	McDowell	Yancey

3.0 List of Corps Regional Conditions for All Nationwide Permits

The following conditions apply to all Nationwide Permits in the Wilmington District:

3.1 Limitation of Loss of Perennial Stream Bed

NWPs may not be used for activities that may result in the loss or degradation of greater than 300 total linear feet of perennial, intermittent or ephemeral stream, unless the District Commander has waived the 300 linear foot limit for ephemeral and intermittent streams on a case-by-case basis and he determines that the proposed activity will result in minimal individual and cumulative adverse impacts to the aquatic environment. Loss of stream includes the linear feet of stream bed that is filled, excavated, or flooded by the proposed activity. Waivers for the loss of ephemeral and intermittent streams must be in writing and documented by appropriate/accepted stream quality assessments*. This waiver only applies to the 300 linear feet threshold for NWPs.

*NOTE: Applicants should utilize the most current methodology prescribed by Wilmington District to assess stream function and quality. Information can be found at:

http://www.saw.usace.army.mil/wetlands/permits/nwp/nwp2012 (see "Quick Links")

3.2 Mitigation for Loss of Stream Bed

For any NWP that results in a loss of more than 150 linear feet of perennial and/or ephemeral/intermittent stream, the applicant shall provide a mitigation proposal to compensate for more than minimal individual and cumulative adverse impacts to the aquatic environment. For stream losses less than 150 linear feet, that require a PCN, the District Commander may determine, on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effect on the aquatic environment.

3.3 Pre-construction Notification for Loss of Streambed Exceeding 150 Feet.

Prior to use of any NWP for any activity which impacts more than 150 total linear feet of perennial stream or ephemeral/ intermittent stream, the applicant must comply with Nationwide Permit General Condition 31 (PCN). This applies to NWPs that do not have specific notification requirements. If a NWP has specific notification requirements, the requirements of the NWP should be followed.

3.4 Restriction on Use of Live Concrete

For all NWPs which allow the use of concrete as a building material, live or fresh concrete, including bags of uncured concrete, may not come into contact with the water in or entering into waters of the US. Water inside coffer dams or casings that has been in contact with wet concrete shall only be returned to waters of the US when it is no longer poses a threat to aquatic organisms.

3.5 Requirements for Using Riprap for Bank Stabilization

For all NWPs that allow for the use of riprap material for bank stabilization, the following measures shall be applied:

3.5.1. Filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters.

3.5.2. The placement of riprap shall be limited to the areas depicted on submitted work plan drawings.

3.5.3. The riprap material shall be clean and free from loose dirt or any pollutant except in trace quantities that would not have an adverse environmental effect.

3.5.4. It shall be of a size sufficient to prevent its movement from the authorized alignment by natural forces under normal conditions.

3.5.5. The riprap material shall consist of clean rock or masonry material such as, but not limited to, granite, marl, or broken concrete.

3.5.6. A waiver from the specifications in this Regional Condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this Regional condition would result in greater adverse impacts to the aquatic environment.

3.6 Safe Passage Requirements for Culvert Placement

For all NWPs that involve the construction/installation of culverts, measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gage data, if available. In the absence of such data, bankfull flow can be used as a comparable level.

In the twenty (20) counties of North Carolina designated as coastal counties by the Coastal Area Management Act (CAMA): All pipes/culverts must be sufficiently sized to allow for the burial of the bottom of the pipe/culvert at least one foot below normal bed elevation when they are placed within the Public Trust Area of Environmental Concern (AEC) and/or the Estuarine Waters AEC as designated by CAMA, and/or all streams appearing as blue lines on United States Geological Survey (USGS) 7.5-minute quadrangle maps.

In all other counties: Culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter or less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain the existing channel slope. The bottom of the culvert must be placed at a

depth below the natural stream bottom to provide for passage during drought or low flow conditions.

Culverts are to be designed and constructed in a manner that minimizes destabilization and head cutting. Destabilizing the channel and head cutting upstream should be considered and appropriate actions incorporated in the design and placement of the culvert.

A waiver from the depth specifications in this condition may be requested in writing. The waiver will be issued if it can be demonstrated that the proposal would result in the least impacts to the aquatic environment.

All counties: Culverts placed within riparian and/or riverine wetlands must be installed in a manner that does not restrict the flow and circulation patterns of waters of the United States. Culverts placed across wetland fills purely for the purposes of equalizing surface water do not have to be buried.

3.7 Notification to NCDENR Shellfish Sanitation Section

Applicants shall notify the NCDENR Shellfish Sanitation Section prior to dredging in or removing sediment from an area closed to shell fishing where the effluent may be released to an area open for shell fishing or swimming in order to avoid contamination from the disposal area and cause a temporary shellfish closure to be made. Such notification shall also be provided to the appropriate Corps of Engineers Regulatory Field Office. Any disposal of sand to the ocean beach should occur between November 1 and April 30 when recreational usage is low. Only clean sand should be used and no dredged sand from closed shell fishing areas may be used. If beach disposal were to occur at times other than stated above or if sand from a closed shell fishing area is to be used, a swimming advisory shall be posted, and a press release shall be issued by the permittee.

3.8 Preservation of Submerged Aquatic Vegetation

Adverse impacts to Submerged Aquatic Vegetation (SAV) are not authorized by any NWP within any of the twenty coastal counties defined by North Carolina's Coastal Area Management Act of 1974 (CAMA).

3.9 Sedimentation and Erosion Control Structures and Measures

3.9.1. All PCNs will identify and describe sedimentation and erosion control structures and measures proposed for placement in waters of the US. The structures and measures should be depicted on maps, surveys or drawings showing location and impacts to jurisdictional wetlands and streams.

4.0 Additional Regional Conditions for Specific Nationwide Permits

4.1 NWP #14 - Linear Transportation Crossings

4.1.1. If appropriate, applicants shall employ natural channel design (see definition below and NOTE below) to the maximum extent practicable for stream relocations. In the event it is not appropriate to employ natural channel design, any stream relocation shall be considered a permanent impact and the applicant shall provide a mitigation plan to compensate for the loss of aquatic function associated with the proposed activity.

Natural Channel Design: A geomorphologic approach to stream restoration based on an understanding of valley type, general watershed conditions, dimension, pattern, profile, hydrology and sediment transport of natural, stable channels (reference condition) and applying this understanding to the reconstruction of a stable channel.
NOTE: For projects located within the Coastal Plain ecoregion of North Carolina and within headwater areas across the state, applicants should reference the following links for more information regarding appropriate stream design:

http://www.saw.usace.army.mil/wetlands/permits/nwp

4.1.2. Bank-full flows (or less) shall be accommodated through maintenance of the existing bank-full channel cross sectional area. Additional culverts at such crossings shall be allowed only to receive flows exceeding bank-full.

4.1.3. Where adjacent floodplain is available, flows exceeding bank-full should be accommodated by installing culverts at the floodplain elevation.

4.1.4. This NWP authorizes only upland to upland crossings and cannot be used in combination with Nationwide Permit 18 to create an upland within waters of the United States, including wetlands.

4.1.5. This NWP cannot be used for private projects located in tidal waters or tidal wetlands.

4.1.6. Excavation of existing stream channels shall be limited to the minimum necessary to construct or install the proposed culvert. The final width of the impacted streams at the culvert inlet and outlet should be no greater than the original stream width. A waiver from this condition may be requested in writing. The waiver will be issued if it can be demonstrated that it is not

practicable to limit the final width of the culvert to that of the impacted stream at the culvert inlet and outlet and the proposed design would result in less impacts to the aquatic environment.

NCDENR
North Carolina Department of Environment and Natural Resources
Division of Water Resources
Water Quality Programs

Pat McCrory
Governor

Thomas A. Reeder
Director

John E. Skvarla, III
Secretary

September 9, 2013
Dare County
NCDWR Project No. 20130144v.3
Bridge Over New Inlet on NC 12
TIP/State Project No. B-2500A

APPROVAL of 401 WATER QUALITY CERTIFICATION with ADDITIONAL CONDITIONS

Dr. Greg Thorpe, PhD., Manager
Planning and Environmental Branch
North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, North Carolina, 27699-1598

Dear Dr. Thorpe:

This approval is issued in response to your recent request for modification of B-2500A, the replacement of the temporary bridge over the New Inlet on NC 12 with a permanent bridge dated received August 30, 2013. This approval addresses updated impacts and a change from General Permit 198200031(GP 31) to a Nationwide 14 (NW14) issued by the USACE. **Please note that this certification replaces the previous 401 Water Quality Certification issued on April 15, 2013 (DWR No. 20130144v.1).**

You have our approval, in accordance with the conditions listed below, for the following impacts for the purpose of replacing the existing temporary bridge over the New Inlet on NC 12 with a permanent bridge in Dare County:

Transportation Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1650
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6492
Internet: www.ncwaterquality.org

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Wetland Impacts in the Pasquotank River Basin

Site	Location	Permanent Fill (ac)	Temporary Fill (ac)	Excavation (ac)	Mechanized Clearing (ac)	Hand Clearing (ac)	Total Wetland Impact (ac)	Impacts Requiring Mitigation (ac)
1	-L- 3078+90 to 3082+59	--	0.10	--	--	0.02	0.12	0.00
2	-L-3088+86 to 3092+69	0.02	0.07	--	--	0.03	0.12	0.02
3	-L- 3107+55 to 3115+62	0.18	0.15	--	--	0.06	0.39	0.18
4	-L- 3128+60 to 3123+06	0.01	0.03	--	--	0.02	0.06	0.01
5	-L- 3143+54 to 3136+31	<0.01	0.02	--	--	0.01	0.03	0.01
6	-L- 3139+49 to 3140+49	--	0.03	--	--	<0.01	0.03	0.00
7	-L- 3159+81 to 3163+48	--	0.02	--	--	<0.01	0.02	0.00
8	-L- 3163+62 to 3167+76	--	--	--	--	--	0.00	0.00
9	-L- 3166+66 to 3166+94	<0.01	--	--	--	<0.01	0.00	0.00
10	-L- 3170+97 to 3173+74	--	--	--	--	--	0.00	0.00
11	-L- 3177+49 to 3181+18	--	<0.01	--	--	<0.01	0.00	0.00
12	-L- 3191+04 to 3197+22	--	0.23	--	--	0.04	0.27	0.00
13	-L-3200+13 to 3205+63	--	0.22	--	--	0.04	0.26	0.00
14	-L- 3206+52 to 3210+71	--	0.02	--	--	0.02	0.04	0.00
15	-L- 3097+22 to 3097+32	--	--	--	--	0.14	0.14	0.00
16	-L- 3136+15 to 3136+48	--	--	--	--	--	0.00	0.00
Total		**0.22**	**0.90**	**0.00**	**0.00**	**0.40**	**1.52**	**0.22***

Total Wetland Impact for Project: 1.55 acres

* Total impacts requiring mitigation are below the threshold; no mitigation required

Open Water Impacts in the Pasquotank River Basin

Site	Location	Permanent Fill in Open Waters (ac)	Temporary Fill in Open Waters (ac)	Total Fill in Open Waters (ac)
1	-L- 3078+90 to 3082+59	--	0.01	0.01
7	-L- 3159+81 to 3163+48	--	0.03	0.03
8	-L- 3163+62 to 3167+76	--	0.10	0.10
10	-L- 3170+97 to 3173+74	0.04	0.04	0.08
11	-L- 3177+49 to 3181+18	--	0.05	0.05
15	-L- 3097+22 to 3097+32	--	0.02	0.02
16	-L- 3136+15 to 3136+48	--	0.03	0.03
TOTAL		**0.04**	**0.28**	**0.32**

Total Open Water Impact for Project: 0.28 acres.

The project shall be constructed in accordance with your application dated received February 13, 2013, additional information received April 2, 2013, and the request for modification received August 30, 2013. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 3886. This certification corresponds to Nationwide 14 issued by the Corps of Engineers. In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit.

This approval is valid solely for the purpose and design described in your application and all subsequent information provided (unless modified below). Should your project change, you must notify the NCDWR and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). For this approval to remain valid, you must adhere to the conditions listed in the attached certification(s) and any additional conditions listed below.

Conditions of Certification:

Project Specific Conditions

1. No construction or other land disturbing activities shall begin until after the final environmental document, at this time believed to be a Record of Decision (ROD), has been published in the North Carolina Department of Administration's Environmental Bulletin and adopted by the NCDWR.

2. Mitigation

    a. Currently, as proposed, total permanent impacts do not require in-kind or in-lieu fee mitigation as they are below the threshold requiring mitigation. However, should future impacts for this project meet or exceed one acre of jurisdictional wetlands or 150 linear feet of jurisdictional stream, mitigation may be required.
    b. Once the temporary road is removed, areas of temporary impact shall be restored to pre-impact conditions as close as possible. Elevations shall be determined based on adjacent wetland areas, and appropriate vegetation shall be established.
    c. Visual vegetation monitoring of the temporary roadbed will be required for survival and aerial coverage of vegetation. Visual monitoring shall be for a minimum of one year after completion of restoration. Vegetation monitoring will not cease prior to approval from the NCDWR. Since the restoration will occur on federally owned lands, the NCDWR will not agree to cease monitoring until the Pea Island National Wildlife Refuge representative(s) agrees that the restoration is satisfactory.

3. Jetting

    a. The use of jetting to install bridge bents, remove the temporary bridge, and any other activity shall be kept to a minimum.
    b. All jetting occurring within the New Inlet shall take place at ebb tide.
    c. All jetting spoils shall be confined to the 100 foot transportation easement within the Pea Island National Wildlife Refuge unless otherwise allowed by the Refuge. Spoils shall not be deposited within wetlands or other jurisdictional areas.
    d. Pipes and hoses used for jetting intake placed in wetland and other jurisdictional areas shall be placed by hand.
    e. In order to prevent the intake of larval fish species into jetting intake hoses and pipes, a screen of sufficient size shall be placed on intake hoses. The size of the screen necessary shall be coordinated with the NCDMF.

4. No impacts from utility relocations are authorized with this certification. If impacts from utility relocations are found to be necessary, the NCDWR shall be notified as a modification may be required.

5. Strict adherence to the most recent version of NCDOT's Best Management Practices For Bridge Demolition and Removal approved by the US Army Corps of Engineers is a condition of the 401 Water Quality Certification.

6. All bridge construction shall be performed from the existing bridge, temporary work bridges, temporary causeways, or floating or sunken barges. If work conditions require barges, they shall be floated into position and then sunk. The barges shall not be sunk and then dragged into position. Under no circumstances should barges be dragged along the bottom of the surface water.

7. NCDOT shall be in compliance with the NCS00250 issued to the NCDOT, including the applicable requirements of the NCGO1000. Please note the extra protections for the special or threatened waters.

8. Adherence to *The Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters* will be required throughout construction.

General Conditions

9. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills.

10. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S.

* 11. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.

12. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.

13. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.

14. The permittee and its authorized agents shall conduct its activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act) and any other appropriate requirements of State and Federal law. If the NCDWR determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, the NCDWR may reevaluate and modify this certification.

15. The outside wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.

16. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.

17. Native riparian vegetation must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction.

18. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.

19. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:

    a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual.*
    b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual.* The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
    c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual.*
    d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

20. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.

21. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the Division Engineer and the on-site project manager.

22. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery.

*23. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT Division Engineer shall complete and return the enclosed "Certification of Completion Form" to notify NCDWR when all work included in the 401 Certification has been completed.

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission.
The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919)-431-3000, Facsimile: (919)-431-3100

A copy of the petition must also be served on DENR as follows:

Mr. Lacy Presnell, General Counsel
Department of Environment and Natural Resources
1601 Mail Service Center

This letter completes the review of the Division of Water Resources under Section 401 of the Clean Water Act. If you have any questions, please contact David Wainwright at (919)807-6405or David.Wainwright@ncdenr.gov.

Sincerely,

Thomas A. Reeder
Director

cc: Clay Willis, Division 1 Environmental Officer
Tracey Wheeler, US Army Corps of Engineers, Washington Field Office (electronic copy only)
Mike Bryant, Pea Island National Wildlife Refuge Manager
Dennis Stewart, Pea Island National Wildlife Refuge Biologist
Chris Militscher, Environmental Protection Agency (electronic copy only)
Gary Jordan, US Fish and Wildlife Service (electronic copy only)
Travis Wilson, NC Wildlife Resources Commission (electronic copy only)
Cathy Brittingham, Division of Coastal Management (electronic copy only)
Garcy Ward, NCDWR Washington Regional Office (electronic copy only)
File Copy

Water Quality Certification No. 3886

GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR U.S. ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT NUMBER 14 (LINEAR TRANSPORTATION PROJECTS) AND REGIONAL GENERAL PERMIT 198200031 (WORK ASSOCIATED WITH BRIDGE CONSTRUCTION, MAINTENANCE OR REPAIR CONDUCTED BY NCDOT OR OTHER GOVERNMENT AGENCIES) AND RIPARIAN AREA PROTECTION RULES (BUFFER RULES)

Water Quality Certification Number 3886 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Division of Water Quality (DWQ) Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to waters and adjacent wetland areas or to wetland areas that are not a part of the surface tributary system to interstate waters or navigable waters of the United States (as described in 33 CFR 330 Appendix A (B) (14) of the Corps of Engineers regulations (Nationwide Permit No. 14 and Regional General Permit 198200031) and for the Riparian Area Protection Rules (Buffer Rules) in 15A NCAC 02B .0200.

The State of North Carolina certifies that the specified category of activity will not violate applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

* Any proposed fill or modification of wetlands and/or waters, including streams, under this General Certification requires application to, and written approval from the Division of Water Quality except for the single family lot exemption described below.

Activities meeting any one (1) of the following thresholds or circumstances require *written approval* for a 401 Water Quality Certification from the Division of Water Quality (the "Division"):

a) Any temporary or permanent impacts to wetlands, open waters and/or streams, including stream relocations, except for construction of a driveway to a single family lot as long as the driveway involves *less than 25 feet* of temporary and/or permanent stream channel impacts, including any in-stream stabilization needed for the crossing; or
b) Any impact associated with a high density project (as defined in Item (A)(iv) of the ***401 Stormwater Requirements***) that is not subject to either a state stormwater program (such as, but not limited to, Coastal Counties, HQW, ORW or state-implemented Phase II NPDES) or a certified community's stormwater program; or
c) Any impact associated with a Notice of Violation or an enforcement action for violation(s) of DWQ Wetland Rules (15A NCAC 02H .0500), Isolated Wetland Rules (15A NCAC 02H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 02B .0200); or
* d) Any impacts to streams and/or buffers in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman, Jordan or Goose Creek Watersheds (or any other basin or watershed with Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless* the activities are listed as "EXEMPT" from these rules or a Buffer Authorization Certificate is issued through N.C. Division of Coastal Management (DCM) delegation for "ALLOWABLE" activities.

* In accordance with North Carolina General Statute 143-215.3D(e), written approval for a 401 Water Quality General Certification must include the appropriate fee. If a project also requires a CAMA Permit, then one payment to both agencies shall be submitted and will be the higher of the two fees.

Activities included in this General Certification that do not meet one of the thresholds listed above do not require written approval from the Division as long as they comply with

Water Quality Certification No. 3886

the Conditions of Certification listed below. If any of these Conditions cannot be met, then written approval from the Division is required.

Conditions of Certification:

1. No Impacts Beyond those Authorized in the Written Approval or Beyond the Threshold of Use of this Certification

   No waste, spoil, solids, or fill of any kind shall occur in wetlands, waters, or riparian areas beyond the footprint of the impacts depicted in the Pre-Construction Notification, as authorized in the written approval from the Division or beyond the thresholds established for use of this Certification without written authorization, including incidental impacts. All construction activities, including the design, installation, operation, and maintenance of sediment and erosion control Best Management Practices shall be performed so that no violations of state water quality standards, statutes, or rules occur. Approved plans and specifications for this project are incorporated by reference and are enforceable parts of this permit.

2. Standard Erosion and Sediment Control Practices

   Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices and if applicable, comply with the specific conditions and requirements of the NPDES Construction Stormwater Permit issued to the site:

   a. Design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*. The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.

   b. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*.

   c. Reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

   d. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

   e. If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality (HQW), or Outstanding Resource (ORW) waters, then the sedimentation and erosion control designs must comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds*.

Water Quality Certification No. 3886

3. No Sediment and Erosion Control Measures in Wetlands or Waters

   Sediment and erosion control measures shall not be placed in wetlands or waters. Exceptions to this condition require application submittal to and written approval by the Division. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, then design and placement of temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands, stream beds, or banks, adjacent to or upstream and downstream of the above structures. All sediment and erosion control devices shall be removed and the natural grade restored within two (2) months of the date that the Division of Land Resources (DLR) or locally delegated program has released the specific area within the project.

4. Construction Stormwater Permit NCG010000

   An NPDES Construction Stormwater Permit is required for construction projects that disturb one (1) or more acres of land. This Permit allows stormwater to be discharged during land disturbing construction activities as stipulated in the conditions of the permit. If your project is covered by this permit, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. A copy of the general permit (NCG010000), inspection log sheets, and other information may be found at http://portal.ncdenr.org/web/wq/ws/su/npdessw#tab-w .

   The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to construction activities within the most recent version of their individual NPDES (NCS000250) stormwater permit.

5. Construction Moratoriums and Coordination

   If activities must occur during periods of high biological activity (i.e. sea turtle nesting, fish spawning, or bird nesting), then biological monitoring may be required at the request of other state or federal agencies and coordinated with these activities.

   All moratoriums on construction activities established by the NC Wildlife Resources Commission (WRC), US Fish and Wildlife Service (USFWS), NC Division of Marine Fisheries (DMF), or National Marine Fisheries Service (NMFS) to lessen impacts on trout, anadromous fish, larval/post-larval fishes and crustaceans, or other aquatic species of concern shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium.

   Work within the twenty-five (25) designated trout counties or identified state or federal endangered or threatened species habitat shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel.

6. Work in the Dry

   All work in or adjacent to stream waters shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the NC Sediment and Erosion Control Manual, or the NC DOT Construction and Maintenance Activities Manual, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water. Exceptions to this condition require application submittal to and written approval by the Division.

Water Quality Certification No. 3886

7. Riparian Area Protection (Buffer) Rules

   Activities located in the protected riparian areas (whether jurisdictional wetlands or not), within the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman, Jordan, or Goose Creek Watersheds (or any other basin or watershed with buffer rules) shall be limited to "uses" identified within and constructed in accordance with 15A NCAC 02B .0233, .0259, .0243, .0250, .0267 and .0605, and shall be located, designed, constructed, and maintained to have minimal disturbance to protect water quality to the maximum extent practicable through the use of best management practices. All buffer rule requirements, including diffuse flow requirements, must be met.

8. If concrete is used during the construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state due to the potential for elevated pH and possible aquatic life/ fish kills.

9. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices*. Exceptions to this condition require written approval by the Division.

* 10. Compensatory Mitigation

   In accordance with 15A NCAC 02H .0506 (h), compensatory mitigation may be required for losses of equal to or greater than 150 linear feet of streams (intermittent and perennial) and/or equal to or greater than one (1) acre of wetlands. For linear public transportation projects, impacts equal to or exceeding 150 linear feet per stream shall require mitigation.

   Buffer mitigation may be required for any project with Buffer Rules in effect at the time of application for activities classified as "Allowable with Mitigation" or "Prohibited" within the Table of Uses.

   A determination of buffer, wetland, and stream mitigation requirements shall be made for any General Water Quality Certification for this Nationwide and/or Regional General Permit. Design and monitoring protocols shall follow the US Army Corps of Engineers Wilmington District *Stream Mitigation Guidelines* (April 2003) or its subsequent updates. Compensatory mitigation plans shall be submitted to the Division for written approval as required in those protocols. The mitigation plan must be implemented and/or constructed before any impacts occur on site. Alternatively, the Division will accept payment into an in-lieu fee program or a mitigation bank. In these cases, proof of payment shall be provided to the Division before any impacts occur on site.

Water Quality Certification No. 3886

11. Relocated stream designs should include the same dimensions, patterns, and profiles as the existing channel (or a stable reference reach if the existing channel is unstable), to the maximum extent practical. The new channel should be constructed in the dry and water shall not be turned into the new channel until the banks are stabilized. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30-foot wide wooded and an adjacent 20-foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. A transitional phase incorporating appropriate erosion control matting materials and seedling establishment is allowable, however matting that incorporates plastic mesh and/or plastic twine shall not be used in wetlands, riparian buffers or floodplains as recommended by the North Carolina Sediment and Erosion Control Manual. Rip-rap, A-Jacks, concrete, gabions or other hard structures may be allowed if it is necessary to maintain the physical integrity of the stream; however, the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage. Please note that if the stream relocation is conducted as a stream restoration as defined in the US Army Corps of Engineers Wilmington District, April 2003 *Stream Mitigation Guidelines* (or its subsequent updates), the restored length may be used as compensatory mitigation for the impacts resulting from the relocation.

12. Stormwater Management Plan Requirements

    All applications shall address stormwater management throughout the entire project area per the 401 Stormwater Requirements, referenced herein as "**Attachment A**" at the end of this Certification.

13. Placement of Culverts and Other Structures in Waters and Wetlands

    Culverts required for this project shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. Existing stream dimensions (including the cross section dimensions, pattern, and longitudinal profile) must be maintained above and below locations of each culvert.

    Placement of culverts and other structures in waters and streams must be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life.

    When topographic constraints indicate culvert slopes of greater than 5%, culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/ connectivity has been provided when possible (rock ladders, crossvanes, etc). Notification to the Division including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations shall be provided to the Division 60 days prior to the installation of the culvert.

    When bedrock is present in culvert locations, culvert burial is not required provided that there is sufficient documentation of the presence of bedrock. Notification to the Division including supporting documentation such as, but not limited to, a location map of the culvert, geotechnical reports, photographs, etc shall be provided to the Division a minimum of 60 days prior to the installation of the culvert. If bedrock is discovered during construction, then the Division shall be notified by phone or email within 24 hours of discovery.

    If other site-specific topographic constraints preclude the ability to bury the culverts as described above and/or it can be demonstrated that burying the culvert would result in destabilization of the channel, then exceptions to this condition require application submittal to, and written approval by, the Division of Water Quality, regardless of the total impacts to streams or wetlands from the project.

Water Quality Certification No. 3886

Installation of culverts in wetlands must ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. Additionally, when roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges must be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native, woody vegetation and other soft stream bank stabilization techniques must be used where practicable instead of riprap or other bank hardening methods.

14. All temporary fill and culverts shall be removed and the impacted area returned to natural conditions within 60 days of the determination that the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross sectional dimensions, plan form pattern, and longitudinal bed and bed profile, and the various sites shall be stabilized with natural woody vegetation (except for the approved maintenance areas) and restored to prevent erosion.

15. All temporary pipes/ culverts/ riprap pads etc, shall be installed in all streams as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* so as not to restrict stream flow or cause dis-equilibrium during use of this General Certification.

16. Any riprap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall buried and/or "keyed in" such that the original stream elevation and streambank contours are restored and maintained. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area.

17. Any rip-rap used for stream stabilization shall be of a size and density so as not to be able to be carried off by wave, current action, or stream flows and consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures.

18. A one-time application of fertilizer to re-establish vegetation is allowed in disturbed areas including riparian buffers, but is restricted to no closer than 10 feet from top of bank of streams. Any fertilizer application must comply with all other Federal, State and Local regulations.

19. If this Water Quality Certification is used to access building sites, then all lots owned by the applicant must be buildable without additional impacts to streams or wetlands. The applicant is required to provide evidence that the lots are buildable without requiring additional impacts to wetlands, waters, or buffers if required to do so in writing by the Division. For road construction purposes, this Certification shall only be utilized from natural high ground to natural high ground.

20. Deed notifications or similar mechanisms shall be placed on all retained jurisdictional wetlands, waters, and protective buffers within the project boundaries in order to assure compliance for future wetland, water, and buffer impact. These mechanisms shall be put in place at the time of recording of the property or of individual lots, whichever is appropriate. A sample deed notification can be downloaded from the 401/Wetlands Unit web site at http://portal.ncdenr.org/web/wq/swp/ws/401/certsandpermits/apply/forms. The text of the sample deed notification may be modified as appropriate to suit to a specific project. Documentation of deed notifications shall be provided to the Division upon request.

Water Quality Certification No. 3886

* 21. If an environmental document is required under the National or State Environmental Policy Act (NEPA or SEPA), then this General Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse.

22. In the twenty (20) coastal counties, the appropriate DWQ Regional Office must be contacted to determine if Coastal Stormwater Regulations will be required.

23. This General Certification does not relieve the applicant of the responsibility to obtain all other required Federal, State, or Local approvals.

24. The applicant/permittee and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law. If the Division determines that such standards or laws are not being met, including failure to sustain a designated or achieved use, or that State or Federal law is being violated, or that further conditions are necessary to assure compliance, then the Division may reevaluate and modify this General Water Quality Certification.

* 25. When written authorization is required for use of this certification, upon completion of all permitted impacts included within the approval and any subsequent modifications, the applicant shall be required to return the certificate of completion attached to the approval. One copy of the certificate shall be sent to the DWQ Central Office in Raleigh at 1650 Mail Service Center, Raleigh, NC, 27699-1650.

26. Additional site-specific conditions, including monitoring and/or modeling requirements, may be added to the written approval letter for projects proposed under this Water Quality Certification in order to ensure compliance with all applicable water quality and effluent standards.

27. This certification grants permission to the director, an authorized representative of the Director, or DENR staff, upon the presentation of proper credentials, to enter the property during normal business hours.

This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide and/or Regional General Permit. The conditions in effect on the date of issuance of Certification for a specific project shall remain in effect for the life of the project, regardless of the expiration date of this Certification.

Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of this General Certification for the project and may also result in criminal and/or civil penalties.

The Director of the North Carolina Division of Water Quality may require submission of a formal application for Individual Certification for any project in this category of activity if it is determined that the project is likely to have a significant adverse effect upon water quality, including state or federally listed endangered or threatened aquatic species, or degrade the waters so that existing uses of the wetland or downstream waters are precluded.

Water Quality Certification No. 3886

Public hearings may be held for specific applications or group of applications prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Quality.

Effective date: March 19, 2012

DIVISION OF WATER QUALITY

By

Matt Martin for

Charles Wakild, P.E.

Director

History Note: Water Quality Certification (WQC) Number 3886 issued March 12, 2012 replaces WQC Number 3820 issued April 6, 2010; WQC Number 3627 issued March 2007; WQC Number 3404 issued March 2003; WQC Number 3375 issued March 18, 2002; WQC Number 3289 issued June 1, 2000; WQC Number 3103 issued February 11, 1997; WQC Number 2732 issued May 1, 1992; WQC Number 2666 issued January 21, 1992; WQC Number 2177 issued November 5, 1987. This WQC is rescinded when the Corps of Engineers reauthorizes any of the corresponding Nationwide and/or Regional General Permits or when deemed appropriate by the Director of the Division of Water Quality.

Water Quality Certification No. 3886

Attachment A: 401 Stormwater Requirements

The requirements listed below shall be implemented in order to comply with Condition 12 of this General Certification. For the North Carolina Department of Transportation, compliance with NCDOT's Individual NPDES permit NCS000250 shall serve to satisfy the 401 and Isolated Wetland Stormwater Requirements.[1]

A. **Design and Implementation Requirements.** All projects, regardless of project area, amount of built-upon area or amount of jurisdictional impact, shall meet the following stormwater design requirements:

i. **Non-Erosive Discharge to Streams and Wetlands.** Stormwater conveyances that discharge to streams and wetlands must discharge at a non-erosive velocity prior to entering the stream or wetland during the peak flow from the ten-year storm.[2]

ii. **Vegetated Setbacks.** A 30-foot wide vegetated setback must be maintained adjacent to streams, rivers and tidal waters in areas that are not subject to a state Riparian Area Protection Rule or other more stringent vegetated setback requirements. The width of the setback shall be measured horizontally from the normal pool elevation of impounded structures, the top-of-bank of streams and rivers, and the mean high waterline of tidal waters, perpendicular to shoreline. Vegetated setback and filters required by state rules or local governments may be met concurrently with this requirement and may contain coastal, isolated or 404 jurisdictional wetlands. Non-jurisdictional portions of the vegetated setback may be cleared and graded, but must be planted with and maintained in grass or other vegetative or plant material.[3]

iii. **Construction and Operation.** The stormwater management plan must be constructed and operational before any permanent building or other structure is occupied or utilized at the site. The stormwater management plan, including drainage patterns, must be maintained in perpetuity.[4]

iv. **Coordination with Other Stormwater Programs.** Projects that are subject to another Division of Water Quality (DWQ) stormwater program, including (but not limited to) the 20 Coastal Counties, HQW, ORW or state-implemented Phase II NPDES, or a Certified Community's stormwater management program, must be constructed and maintained in compliance with the approved stormwater management plan.[5]

v. **Stormwater Design Requirements for Projects Not Covered Under Item (iv).** Projects that are not subject to another DWQ stormwater program or a Certified Community's stormwater program shall meet all of the following requirements:

a. **Low Density.** A site is low density if all the following requirements are met:

1. The development has a built upon area of twenty-four percent (24%) or less, considering both current and future development. When determining the amount of built upon area, coastal wetlands shall be included; however, ponds, lakes and rivers as specified in North Carolina's Schedule of Classifications shall be excluded. If a portion of project has a density greater than 24%, the higher density area must be located in an upland area and away from surface waters and drainageways to the maximum extent practicable.[6]

2. All stormwater runoff from the built upon areas is transported primarily via vegetated conveyances designed in accordance with the most recent version of the *NC DWQ Stormwater Best Management Practices Manual*. Alternative designs may be approved if the applicant can show that the design provides

equal or better water quality protection than the practices specified in the manual. The project must not include a stormwater collection system (such as piped conveyances) as defined in 15A NCAC 02B .0202(60).[7]

b. **High Density.** Projects that do not meet the Low Density requirements shall meet the following requirements:

1. Stormwater runoff from the entire site must be treated by structural stormwater controls (BMPs) that are designed to remove eighty-five percent (85%) of the average annual amount of Total Suspended Solids (TSS). Stormwater runoff that drains directly to Nutrient Sensitive Waters (NSW) must also be treated to remove thirty percent (30%) of Total Nitrogen (TN) and Total Phosphorus (TP).[8]

2. All BMPs must be designed in accordance with the version of the *NC DWQ Stormwater Best Management Practices Manual* that is in place on the date of stormwater management plan submittal. Alternative designs may be approved if the applicant can show that the design provides equal or better water quality protection than the practices specified in the manual.[9]

3. DWQ may add specific stormwater management requirements on a case-by-case basis in order to ensure that a proposed activity will not violate water quality standards.[10]

4. DWQ may approve Low Impact Developments (LIDs) that meet the guidance set forth in the *Low Impact Development: A Guidebook for North Carolina.*[11]

5. Proposed new development undertaken by a local government solely as a public road project shall follow the requirements of the NC DOT BMP Toolbox rather than Items (1)-(4) above.[12]

B. **Submittal Requirements.** The submittal requirements listed below apply only to projects that require written authorization as indicated in the applicable General Certification as well as projects that require an Isolated Wetlands Permit. **Any required documentation shall be sent to the Wetlands, Buffers and Stormwater Compliance and Permitting Unit at 1650 Mail Service Center, Raleigh, NC 27699-1650.**

i. **Projects that are Subject to Another DWQ Stormwater Program:** If the project is subject to another DWQ stormwater program, such as the 20 Coastal Counties, HQW, ORW or state-implemented Phase II NPDES, then the applicant shall submit a copy of the stormwater approval letter before any impacts occur on site.[13]

ii. **Projects that are Subject to a Certified Community's Stormwater Program.** If the project is subject to a certified local government's stormwater program, then the applicant shall submit one set of approved stormwater management plan details and calculations with documentation of the local government's approval before any impacts occur on site.[5]

iii. **Projects Not Covered Under Items (i) or (ii).** If the project is not subject to another DWQ Stormwater Program or a Certified Community's stormwater program, then it shall be reviewed and approved by the DWQ through the Water Quality Certification authorization process.

a. **Low Density.** For low density projects, the applicant shall submit two copies of the DWQ Low Density Supplement Form with all required items.[13]

b. **High Density.** For high density projects, the applicant shall submit two copies of a DWQ BMP Supplement Form and all required items at the specified scales for each BMP that is proposed.[13]

iv. **Phasing.** Stormwater management plans may be phased on a case-by-case basis, with the submittal of a final stormwater management plan per Items (i)-(iii) above required for the current phase and a conceptual stormwater management plan for the future phase(s). The stormwater management plan for each future phase must be approved by the appropriate entity before construction of that phase is commenced. The approved stormwater management plan for each future phase must be constructed and operational before any permanent building or other structure associated with that phase is occupied.[14]

v. **Stormwater Management Plan Modifications.** The stormwater management plan may not be modified without prior written authorization from the entity that approved the plan. If the project is within a Certified Community, then the applicant shall submit one set of approved stormwater management plan details and calculations with documentation of the local government's approval for record-keeping purposes. If the project is subject to DWQ review, then the applicant shall submit two copies of the appropriate Supplement Forms per Item (iii) above for any BMPs that have been modified for DWQ's review and approval.[15]

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1 The stormwater requirement for 401 applications is codified in 15A NCAC 02H .0506(b)(5) and (c)(5).

2 Non erosive discharge rates are required in SL 2008-211§2(b)(1). The 10-year design storm standard is codified in 15A NCAC 02H .1008(f)(2) and .1008(g)(1).

3 30-foot vegetated setbacks are required in SL 2006-246§9(d), SL 2008-211§2(b), 15A NCAC 02H .1006(2)(c) and .1007(1)(a).

4 Construction and maintenance of the stormwater plan is necessary to satisfy 15A NCAC 02H .0506(b)(5).

5 Conveys application procedure to streamline the permitting process and reduce any unnecessary duplication in the review of stormwater management plans.

6 Low density built upon area thresholds are set in SL 2006-246§9(c) and SL 2008-211§2(b).

7 The requirement for low density development to use vegetated conveyances is codified in SL 2006-246§9(c), SL 2008-211§2(b), 15A NCAC 02H .1006(2)(b) and .1007(1)(a). The Stormwater BMP Manual is also referenced in 15A NCAC 02B .0265(3)(a) and .0277(4)(e).

8 85% TSS removal is required in SL 2006-246§9(d), SL 2008-211§2(b), 15A NCAC 02H .1006(2)(c), 15A NCAC 02H .1007(1)(a). The 30% TN and TP removal requirements for NSW waters are set forth in 15A NCAC 02B .0232, 15A NCAC 02B .0257(a)(1), 15A NCAC 02B .0265(3)(a) and 15A NCAC 02B .0277(4).

9 The Stormwater BMP Manual is also referenced in 15A NCAC 02B .0265(3)(a) and .0277(4)(e).

10 The requirement for DWQ to ensure that water quality standards are protected before issuing a 401 certification is codified in 15A NCAC 02H .0506.

11 The LID Toolbox is also referenced in 15A NCAC 02B .0277(4)(g).

12 The term "public road project" is defined in15A NCAC 02B .0265(3)(a).

13 Conveys application procedure to streamline the permitting process.

14 Phased development is addressed as a "common plan of development" in 15A NCAC 02H .1003(3).

15 Procedures for modifying stormwater plans are set forth in 15A NCAC 02H .1011.

~~Addendum No. 1~~ ~~New 11-1-13~~

Permit Class
NEW

Permit Number
106-12

STATE OF NORTH CAROLINA
Department of Environment and Natural Resources
and
Coastal Resources Commission

Permit

for

X Major Development in an Area of Environmental Concern pursuant to NCGS 113A-118

X Excavation and/or filling pursuant to NCGS 113-229

Issued to **N.C. Department of Transportation, 1598 Mail Service Center, Raleigh, NC 27699-1598**

Authorizing development in Dare County at Oregon Inlet, Herbert C. Bonner Bridge on NC Highway 12, as requested in the permittee's application dated 6/21/12, including the attached AEC Hazard Notice dated received on 7/17/12, and the attached workplan drawings (81) as described in Condition No. 1 below.

This permit, issued on **September 19, 2012**, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

TIP No. B-2500, Phase I, Bridge Replacement

1) All work authorized by this permit shall be carried out in accordance with the following attached workplan drawings, except as modified herein:

Wetlands and Streams Impacts Drawings (41): 25 dated 5/23/12; 8 dated 5/24/12; 2 dated 6/13/12; 2 dated 6/5/12; 2 dated 5/31/12; 1 dated 7/11/12; and 1 dated 6/4/12.

Roadway Design Drawings (40): 29 dated 6/1/12; 4 dated 6/5/12; 4 dated 6/13/12; 2 dated 11/5/09; and 1 dated 9/27/06.

(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. An appeal requires resolution prior to work initiation or continuance as the case may be.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

No expiration date, pursuant to GS 136-44.7B

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DENR and the Chairman of the Coastal Resources Commission.

Braxton C. Davis, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.

E. L. Lush for Gregory T. Thorpe, PhD
Signature of Permittee

ADDITIONAL CONDITIONS

NOTE: The North Carolina Department of Transportation (NCDOT) project TIP No. B-2500 authorized by this permit extends for approximately 15 miles from the southern end of Bodie Island to the community of Rodanthe. This permit only authorizes construction of Phase I of the TIP No. B-2500 project. Prior to initiating any construction on the remaining phases of this project, the permittee must receive additional authorization from the N.C. Division of Coastal Management (DCM).

2) In accordance with T15A:07H.0306(k), the authorized structures shall be relocated or dismantled when they become imminently threatened by changes in shoreline configuration. The structures shall be relocated or dismantled within two years of the time when they become imminently threatened, and in any case upon their collapse or subsidence. However, if natural shoreline recovery or beach re-nourishment takes place within two years of the time the structures become imminently threatened, so that the structures are no longer imminently threatened, then they need not be relocated or dismantled at that time. This condition shall not affect the permit holder's right to seek authorization of temporary protective measures allowed under Rule T15A:07H.0308(a)(2).

3) Unless specifically altered herein, any mitigative measures or environmental commitments specifically made by the permittee in the CAMA permit application, the NEPA/404 Merger Process, and/or the Record of Decision document dated December 20, 2010 shall be implemented, regardless of whether or not such commitments are addressed by individual conditions of this permit.

4) The temporary placement and double handling of any excavated or fill material within waters or vegetated wetlands is not authorized, with the exception of that fill necessary for the jetting operation and the construction of the temporary work trestle. This condition also applies to the materials stored on work platforms and removal of the existing bridge, culvert, roadway asphalt, and associated materials.

5) No excavation or filling shall take place at any time in any vegetated wetlands or surrounding waters outside of the alignment of the areas indicated on the attached workplan drawings, without permit modification.

6) Material excavated from the project site may be used in fill areas associated with the project once properly dewatered. Otherwise, the material shall be removed from the site and taken to a high ground location.

7) All excavated materials shall be confined above normal high water and landward of regularly or irregularly flooded wetlands behind adequate dikes or other retaining structures to prevent spillover of solids into any wetlands or surrounding waters.

8) All fill material shall be clean and free of any pollutants except in trace quantities.

9) Live concrete shall not be allowed to contact waters of the State or water that will enter waters of the State.

10) Construction staging areas shall be located only in upland areas, and not in wetlands or waters of the State.

ADDITIONAL CONDITIONS

11) All construction access shall be through the use of the existing bridge, authorized temporary work trestles and platforms, the partially constructed new bridge, existing high ground areas, and/or barges.

12) Barges used for construction and demolition access shall be removed immediately when they are no longer needed for construction and demolition.

13) Dredging in any manner, including "kicking" with boat propellers is not authorized, without permit modification.

14) All reasonable efforts shall be made to contain all debris and excess materials associated with the removal of the existing and construction of the new bridge, temporary work trestle, and other existing structures, with the intent that materials/debris do not enter wetlands or Waters of the State, even temporarily, with the exception of any materials that may be utilized by the N.C. Division of Marine Fisheries (DMF) for artificial reef construction.

15) The temporary work trestle and the temporary extension and reconstruction of the existing roadway that leads to the emergency ferry landing on the south side of Oregon Inlet for barge access, including the work trestle/dock, shall be removed in their entirety and disposed of at an approved high ground location within 90 days after the structure(s) is no longer needed.

16) The placement of riprap shall be limited to the areas indicated on the attached workplan drawings. The riprap material shall be free from loose dirt or any pollutant except in trace quantities.

Installation and Removal of Piles

17) The installation and removal of the piles for the new bridge, existing bridge, temporary work trestles and platforms, and pipe piles at the casting yard, shall be accomplished by jetting, pile driving and/or the use of a vibratory hammer, as specified in the permit application. Should the permittee and/or its contractor desire to utilize another type of pile installation, such as drilled shaft construction, additional authorization from DCM shall be required.

18) In accordance with commitments made by the permittee in the permit application, a primary and secondary containment system shall be used to capture as much of the jetting water as possible and allow for re-use of the water within the jetting operation for bridge bents 47 through 78. Excess spoil shall be disposed of according to the NCDOT borrow/waste procedures at an approved off-site location.

19) All reasonable efforts shall be made to contain jetting spoils and keep them from entering wetlands or areas containing submerged aquatic vegetation.

20) Pilings in open water from the existing bridge and the temporary work trestles shall be removed in their entirety, except that in the event that a bridge piling breaks during removal and cannot be removed in its entirety, DCM shall be notified to determine an appropriate course of action. Existing bridge pilings in SAV areas and wetlands shall be cut off at the mudline.

ADDITIONAL CONDITIONS

Demolition of Existing Bridge and Associated Structures

21) As proposed in the permit application package for the proposed project, the permittee shall coordinate with and provide the N.C. Division of Marine Fisheries with suitable bridge demolition material that will be placed at four existing artificial reef sites in the Atlantic Ocean.

22) The permittee shall remove any scour protection devices (gabion mats, sand bags, A-jacks, etc.) that are exposed on the bed of Oregon Inlet at the time of construction, with the exception of those protecting the substructure of the existing bridge that will remain in place as a fishing pier. If the permittee desires to leave any exposed scour protection devices in place other than those associated with the approved fishing pier, then additional coordination with DCM shall be required. In addition, if any scour protection devices or other remnant structures become exposed in the future, the permittee shall coordinate with DCM and other appropriate resource agencies to determine if removal is necessary.

Retaining Walls for Abutment Fill Slope and Side Slope Protection

23) The retaining walls for abutment fill slope and side slope protection shall be structurally tight so as to prevent seepage of fill materials through the structure.

24) The retaining walls for abutment fill slope and side slope protection shall be in place prior to any backfilling activities.

25) All backfill material shall be obtained from a high ground source. No unconfined backfill shall be discharged into Waters of the State.

Utility Impacts

NOTE: The construction of the new bridge will also require the relocation of electric, telephone, and water utility lines with associated hand and mechanized clearing, including the relocation of an electric riser pole. Wetland and stream impacts resulting from the utility relocations have been included in the total wetland and stream impacts for this project.

26) Any relocation of utility lines that is not already depicted on the attached work plan drawings shall require approval by DCM, either under the authority of this permit, or by the utility company obtaining separate authorization.

NOTE: Plans and specifications for the relocation and/or replacement of potable water supply lines must be submitted to the Division of Environmental Health, Public Water Supply Plan Review Section for approval prior to construction.

ADDITIONAL CONDITIONS

Historical and Cultural Resource Protection

NOTE: A Programmatic Agreement dated 11/15/10 exists between the Federal Highway Administration, the Advisory Council on Historic Preservation, NCDOT, and the N.C. State Historic Preservation Office (SHPO) for the project and is included as Appendix D in the Record of Decision dated December 20, 2010.

Compensatory Mitigation for Impacts to Wetlands, Submerged Aquatic Vegetation and Waters of the State

NOTE: This project will permanently impact approximately 0.48 acres of 404 wetlands (0.38 acres due to fill, 0.02 acres due to excavation, and 0.08 acres due to mechanized clearing) and approximately 0.03 acres of CAMA Coastal Wetlands (0.02 acres due to fill and 0.01 acres due to mechanized clearing). This project will temporarily impact approximately 0.31 acres of 404 wetlands (0.05 acres due to fill and 0.26 acres due to hand clearing) and approximately 1.04 acres of CAMA Coastal Wetlands due to fill. This project will permanently impact approximately 1 acre of surface waters and will temporarily impact approximately 3.43 acres of surface waters. This project will permanently impact approximately 2.66 acres of SAV areas due to shading and will temporarily impact approximately 2.42 acres of SAV areas due to shading. The casting yard for this project will temporarily impact approximately 0.01 acres of surface waters.

27) Except as specified by conditions of this permit, wetland mitigation shall be carried out as described in the document titled "Revised Draft Wetland Mitigation Plan NC 12 Replacement of Herbert C. Bonner Bridge (Bridge No. 11) over Oregon Inlet" dated May 17, 2012.

NOTE: The permittee is strongly encouraged to coordinate with the N.C. Natural Heritage Program and the National Park Service (NPS) throughout implementation of the compensatory wetland mitigation within the Bodie Island Lighthouse Pond Significant Natural Heritage Area. The permittee should adhere to any recommendations regarding protection of state and federally listed species within the Bodie Island Lighthouse Pond Significant Natural Heritage Area.

28) DCM does not consider the SAV mitigation plan submitted with the permit application to be a final mitigation plan. Therefore, prior to initiating construction within any area containing SAV's, the permittee shall submit a final SAV mitigation plan to DCM, as well as other appropriate resource agencies. Approval of this plan shall be obtained from DCM prior to initiating construction activities in these SAV areas. The plan shall identify the location for the SAV mitigation site and the location of any SAV donor beds.

ADDITIONAL CONDITIONS

NOTE: The permittee is encouraged to incorporate the following considerations into the final SAV mitigation plan: a) utilize multiple locations to allow more chance for success; b) include openings of at least 5 feet for every 100 feet of structure length if breakwaters are utilized to allow fish to continue to use these areas; c) determine if any breakwaters or other structures will need to be removed after success criteria are met; d) develop a monitoring plan for the SAV mitigation site after any breakwaters or other structures are removed to determine long-term success; and e) define success criteria to include a higher percentage of SAV coverage 5 years after any breakwaters or other structures are removed

29) Any subsequent changes to the wetland and submerged aquatic vegetation mitigation plans authorized by this permit may require additional authorization from DCM.

30) An as-built report for the SAV mitigation site shall be submitted to DCM within 90 days after the mitigation site has been constructed.

31) Annual monitoring reports for the submerged aquatic vegetation mitigation site shall be provided to DCM for a minimum of five years after mitigation site construction, and for 5 years after the removal of any breakwaters or other structures. Annual monitoring reports shall include an evaluation of data, and an assessment of whether success criteria are being met. Progress reports shall also be provided upon request.

NOTE: This permit does not convey or imply approval of the suitability of any excess submerged aquatic vegetation mitigation credits generated by this project as compensatory mitigation for any particular future projects. The use of any portion of excess submerged aquatic vegetation mitigation credits generated by this project as compensatory mitigation for future projects shall be approved on a case-by-case basis during the permit review and/or consistency process.

32) Due to the possibility that compaction from jetting containment structures, shading under the work trestle, trenching of electric lines, mechanized clearing, and/or other site alterations might prevent the temporary Coastal Wetland and SAV impact areas from re-attaining pre-project functions, the permittee shall provide an annual update on the Coastal Wetland and SAV areas temporarily impacted by this project. This annual update shall consist of photographs and a brief written report on the progress of these temporarily impacted areas in re-attaining their pre-project functions. Within three years after project completion, the permittee shall hold an agency field meeting with DCM to determine if the Coastal Wetland and SAV areas temporarily impacted by this project have re-attained pre-project functions. If at the end of three years DCM determines that the Coastal Wetland and SAV areas temporarily impacted by the project have not re-attained pre-project functions, DCM will determine whether compensatory mitigation shall be required.

33) There shall be no clearing or grubbing of wetlands outside of the areas indicated on the attached workplan drawings without prior approval from DCM.

34) Construction mats shall be utilized to support equipment within wetland areas to minimize temporary wetland impacts during utility relocations as specified on the attached workplan drawings. These mats shall be removed immediately following project completion.

ADDITIONAL CONDITIONS

Threatened and Endangered Species Protection

35) In accordance with commitments made by the permittee, the discretionary measures for the piping plover and three species of sea turtles that are described in the permit application that include the terms and conditions outlined in the July 10, 2008 United States Fish and Wildlife Service (USFWS) Biological and Conference Opinions shall be implemented.

36) In accordance with commitments made by the permittee, all conditions outlined in the USFWS Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters shall be implemented.

Sedimentation and Erosion Control

37) Appropriate sedimentation and erosion control devices, measures, or structures shall be implemented to ensure that eroded materials do not enter adjacent wetlands, watercourses, and property (e.g. silt fence, diversion swales or berms, etc.).

38) This project shall conform to all requirements of the N.C. Sedimentation Pollution Control Act and NCDOT's Memorandum of Agreement with the Division of Land Resources.

Stormwater Management

NOTE: The N.C. Division of Water Quality (DWQ) confirmed in a letter dated 7/19/12 (SW7120514) that the subject project is excluded from State Stormwater permitting requirements as set forth in Section 2(d)(1) of Session Law 2008-211, effective October 1, 2008, and the stormwater rules under Title 15A NCAC 2H .1000, as amended.

General

39) The permittee shall exercise all available precautions in the day-to-day operations of the facility to prevent waste from entering the adjacent waters and wetlands.

40) If it is determined that additional permanent and/or temporary impacts are necessary that are not shown on the attached workplan drawings or described in the authorized permit application, a permit modification and/or additional authorization from DCM shall be required. In addition, any changes in the approved plan may also require a permit modification and/or additional authorization from DCM. The permittee shall contact a representative of DCM prior to commencement of any such activity for this determination and any permit modification.

ADDITIONAL CONDITIONS

41) In accordance with the commitments made by the permittee, no permanent lighting shall be installed on the portion of the existing bridge to be retained as a fishing pier.

42) The permittee and/or his contractor shall meet on site with a DCM representative prior to project initiation.

43) Development authorized by this permit shall only be conducted on lands owned by the NCDOT and/or its Right-of-Ways and/or easements.

44) Nothing in this permit authorizes any activity that has not received approval from NPS and USFWS for work within the Cape Hatteras National Seashore and Pea Island National Wildlife Refuge. The proposed work shall not commence until the permittee has been issued Special Use Permits from the NPS and the USFWS, and a copy of the Special Use Permits are received by DCM.

45) The N.C. Division of Water Quality (DWQ) authorized the proposed project on 9/7/12 (DWQ Project No. 20120629) under Individual Water Quality Certification No. 003939. Any violation of the Certification approved by DWQ shall be considered a violation of this CAMA permit.

NOTE: The U.S. Army Corps of Engineers is reviewing this project as an Individual Permit (Action ID No. SAW-1993-03077).

NOTE: This permit does not eliminate the need to obtain any additional state, federal or local permits, approvals or authorizations that may be required, including any necessary for the casting yard, aerial spraying of herbicides at the approved wetland mitigation site, and/or disposal of suitable material on artificial reefs.

Addendum No. 1 **R-60** **New 11-1-13**

Permit Class
MODIFICATION/MAJOR

Permit Number
106-12

STATE OF NORTH CAROLINA
Department of Environment and Natural Resources
and
Coastal Resources Commission

Permit

for

X Major Development in an Area of Environmental Concern pursuant to NCGS 113A-118

X Excavation and/or filling pursuant to NCGS 113-229

Issued to **N.C. Department of Transportation, 1598 Mail Service Center, Raleigh, NC 27699-1598**

Authorizing development in Dare County at Pea Island Breach Site on NC Highway 12, as requested in the permittee's application dated 2/13/13, including the attached AEC Hazard Notice dated 2/13/13, and the attached workplan drawings (124) as described in Condition No. 1 below.

This permit, issued on **April 26, 2013**, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

1) Unless specifically altered herein, all work authorized by this Major Modification shall be carried out in accordance with the following attached workplan drawings:

CAMA Coastal Wetland and Oceanfront Setback Drawings (17): 7 dated 12/11/12; 1 dated 2/11/12; and 9 dated as received on 3/25/13.

Wetland Impacts Drawings (55): 54 dated 2/11/13; and 1 dated 2/12/13.

Roadway Design Drawings (31): 18 dated 10/16/12; 9 dated 11/20/12; and 4 dated 11/8/12.

Utility Impact Drawings (21): 11 dated as received on 3/25/13; and 10 dated 5/14/12.

(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. An appeal requires resolution prior to work initiation or continuance as the case may be.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

No expiration date, pursuant to GS 136-44.7B

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DENR and the Chairman of the Coastal Resources Commission.

Braxton C. Davis, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.

Signature of Permittee

ADDITIONAL CONDITIONS

NOTE: This Major Modification authorizes construction of TIP No. B-2500A, construction of a new bridge approximately 2.1 miles in length and related approaches over the Pea Island Breach Site.

2) As proposed, the authorized project would result in the loss of motor vehicle access to a public boat ramp and public parking lot near the Pea Island Breach Site. The permittee shall continue to discuss opportunities for replacing these lost public access facilities with the Pea Island National Wildlife Refuge (PINWR), the N.C. Division of Coastal Management (DCM), and the N.C. Division of Marine Fisheries (DMF). The construction of any new public access facility shall require additional authorization from DCM.

3) Unless specifically altered herein, any mitigative measures or environmental commitments specifically made by the permittee in the CAMA permit application, the signed Section 404/NEPA Merger Project Agreements, the Record of Decision document dated December 20, 2010, and/or the final environmental document, shall be implemented, regardless of whether or not such commitments are addressed by individual conditions of this Major Modification.

4) No vegetated wetlands or Waters of the State shall be excavated, without permit modification.

5) No fill material shall be placed at any time in any vegetated wetlands or surrounding waters outside of the alignment of the areas indicated on the attached workplan drawings, without permit modification.

6) All fill material shall be clean and free of any pollutants except in trace quantities.

7) Live concrete shall not be allowed to contact waters of the State or water that will enter waters of the State.

8) Construction staging areas shall be located only in upland areas, and not in wetlands or waters of the State.

9) All construction access shall be through the use of the existing bridge, authorized temporary work bridges, temporary detour roadway, the partially constructed new bridge, and/or existing high ground areas.

10) The temporary placement and double handling of any fill material within waters or vegetated wetlands is not authorized, with the exception of that fill necessary for the construction of the temporary work bridges, temporary detour roadway, and associated materials. This condition also applies to the removal of the existing temporary bridge, roadway asphalt, sheet piling, riprap, sandbags and associated fabric, and associated materials.

11) All temporary fill shall be placed on geo-textile fabric to facilitate the total removal upon completion of the project.

12) All temporary structures and all remnant existing structures shall be removed in their entirety and disposed of at an approved high ground location as soon as practicable. This condition applies to the temporary work bridges, temporary detour roadway, temporary culverts and associated riprap, and temporary sheet piling. This condition also applies to the remnant existing temporary bridge, roadway asphalt, sandbags and associated fabric, sheet piling, riprap, and associated materials.

ADDITIONAL CONDITIONS

13) After the fill material associated with the temporary detour roadway is removed, disturbed areas associated with the temporary detour roadway shall be restored to their pre-existing contours and elevations.

14) The placement of riprap shall be limited to the areas indicated on the attached workplan drawings. The riprap material shall be free from loose dirt or any pollutant except in trace quantities.

Installation and Removal of Bridge Piles and Steel Sheet Piling

15) The installation and removal of the piles for the new bridge, existing bridge, temporary work bridges, and temporary steel sheet piling, shall be accomplished by jetting, pile driving and/or the use of a vibratory hammer, as specified in the permit application. Should the permittee and/or its contractor desire to utilize another type of pile installation, such as drilled shaft construction, additional authorization from DCM shall be required.

NOTE: The jetting operation will require the use of pumping and water intake stations at three designated locations as depicted on the attached workplan drawings: (1) Wetland Site 10, between Station 3170 and Station 3173, in the permanent easement at the Pea Island Inlet; (2) Wetland Site 15, Station 3097; and (3) Wetland Site 16, Station 3136, at the Refuge boat ramp temporary easement.

16) The permittee shall coordinate with DMF and the National Marine Fisheries Service (NMFS) to identify and implement practicable methods to minimize impacts to fish species from the water intakes during jetting.

17) In accordance with commitments made by the permittee in the permit application, all jetting that occurs within the Pea Island Breach Site will occur at ebb tide.

18) In accordance with commitments made by the permittee in the permit application, jetting spoil shall be confined to the existing transportation easement, and/or used by the U.S. Fish and Wildlife Service (USFWS) on PINWR, and/or disposed of at an approved upland disposal site.

19) All reasonable efforts shall be made to contain jetting spoils and keep them from entering wetlands or areas containing submerged aquatic vegetation.

20) Pilings from the existing temporary bridge and the temporary work bridges shall be removed in their entirety, except that in the event that a bridge piling breaks during removal and cannot be removed in its entirety, DCM shall be notified to determine an appropriate course of action.

ADDITIONAL CONDITIONS

Retaining Walls for Abutment Fill Slope and Side Slope Protection

21) The retaining walls for abutment fill slope and side slope protection shall be structurally tight so as to prevent seepage of fill materials through the structure.

22) The retaining walls for abutment fill slope and side slope protection shall be in place prior to any backfilling activities.

23) All backfill material shall be obtained from a high ground source. No unconfined backfill shall be discharged into Waters of the State.

Utility Impacts

NOTE: The authorized project also includes the abandonment of existing underground telephone cables inside the project construction limits, and the installation of new underground telephone fiber optic and copper cables inside the Cape Hatteras Electric Membership Corporation (EMC) power easement.

24) Telephone utility lines shall be installed using a horizontal directional bore drilling method. Entry and exit points of this activity, including disposal of material from the drilling activity, shall be outside of all wetlands and Waters of the State.

25) The relocation of telephone utility lines shall not result in any permanent or temporary impacts to wetlands or Waters of the State, without permit modification.

26) Any relocation of utility lines that is not already depicted on the attached work plan drawings shall require approval by DCM, either under the authority of this Major Modification, or by the utility company obtaining separate authorization.

Historical and Cultural Resource Protection

NOTE: A Programmatic Agreement dated 11/15/10 exists between the Federal Highway Administration, the Advisory Council on Historic Preservation, the N.C. Department of Transportation (NCDOT), and the N.C. State Historic Preservation Office (SHPO) for the project and is included as Appendix D in the Record of Decision dated December 20, 2010.

ADDITIONAL CONDITIONS

Impacts to Wetlands and Waters of the State

NOTE: This project will permanently impact approximately 0.01 acres of CAMA Coastal Wetlands due to fill. This project will temporarily impact approximately 1.04 acres of 404 wetlands (0.79 acres due to fill, and 0.25 acres due to hand clearing) and will temporarily impact approximately 0.50 acres of CAMA Coastal Wetlands (0.33 acres due to fill and 0.17 acres due to hand clearing). This project will permanently impact approximately 0.04 acres of surface waters, and will temporarily impact approximately 0.28 acres of surface waters.

27) There shall be no clearing of wetlands outside of the areas indicated on the attached workplan drawings without prior approval from DCM.

28) Wetland areas to be temporarily impacted by clearing shall not be grubbed, without additional authorization from the Division.

29) Construction mats shall be utilized to support equipment within wetland areas to minimize temporary wetland impacts as specified on the workplan drawings. These mats shall be removed immediately following project completion.

30) The permittee shall minimize the need to cross wetlands to the maximum extent practicable.

31) Due to the possibility that compaction due to temporary roadway fill, jetting intake pumps and pipes, hand clearing, and/or other site alterations might prevent the temporary Coastal Wetland impact areas from re-attaining pre-project functions, the permittee shall provide an annual update on the Coastal Wetland areas temporarily impacted by this project. This annual update shall consist of photographs and a brief written report on the progress of these temporarily impacted areas in re-attaining their pre-project functions. Within three years after project completion, the permittee shall hold an agency field meeting with DCM to determine if the Coastal Wetland areas temporarily impacted by this project have re-attained pre-project functions. If at the end of three years DCM determines that the Coastal Wetland areas temporarily impacted by the project have not re-attained pre-project functions, DCM will determine whether compensatory mitigation shall be required.

Threatened and Endangered Species Protection

32) The permittee shall include the N.C. Wildlife Resources Commission (WRC) when it works with the DMF, NMFS, National Park Service (NPS) and USFWS to determine other areas near project construction where night lighting would need to be avoided or limited, as committed to by the permittee in Project Commitment #11of the Environmental Assessment dated February 12, 2013.

33) In accordance with commitments made by the permittee, the discretionary measures for the piping plover and three species of sea turtles that include the terms and conditions outlined in the July 10, 2008 USFWS Biological and Conference Opinions shall be implemented.

ADDITIONAL CONDITIONS

34) In accordance with commitments made by the permittee, all conditions outlined in the USFWS Guidelines for Avoiding Impacts to the West Indian Manatee: Precautionary Measures for Construction Activities in North Carolina Waters shall be implemented.

Sedimentation and Erosion Control

35) Appropriate sedimentation and erosion control devices, measures, or structures shall be implemented to ensure that eroded materials do not enter adjacent wetlands, watercourses and properties (e.g. silt fence, diversion swales or berms, etc.).

36) This project shall conform to all requirements of the N.C. Sedimentation Pollution Control Act and NCDOT's Memorandum of Agreement with the N.C. Division of Energy, Minerals, and Land Resources.

37) In order to protect water quality, runoff from construction shall not visibly increase the amount of suspended sediments in adjacent waters.

Stormwater Management

NOTE: The N.C. Division of Water Quality (DWQ) confirmed in a letter dated 4/17/13 (SW7130210) that the subject project is excluded from State Stormwater permitting requirements as set forth in Section 2(d)(1) of Session Law 2008-211, effective October 1, 2008, and the stormwater rules under Title 15A NCAC 2H .1000, as amended.

General

38) If it is determined that additional permanent and/or temporary impacts are necessary that are not shown on the attached workplan drawings or described in the authorized permit application, a permit modification and/or additional authorization from DCM shall be required. In addition, any changes in the approved plan may also require a permit modification and/or additional authorization from DCM. The permittee shall contact a representative of DCM prior to commencement of any such activity for this determination and any permit modification.

39) The permittee shall exercise all available precautions in the day-to-day operations of the facility to prevent waste from entering the adjacent waters and wetlands.

40) The permittee and/or his contractor shall contact the DCM Transportation Project Field Representative in Elizabeth City at (252) 264-3901 to request a pre-construction conference prior to project initiation.

41) Nothing in this Major Modification authorizes any activity that has not received approval from NPS and/or the USFWS for work within the Cape Hatteras National Seashore and/or PINWR. The proposed work shall not commence until the permittee has been issued Special Use Permit(s) from the NPS and the USFWS, if required, and a copy of the Special Use Permit(s) are received by DCM.

ADDITIONAL CONDITIONS

42) The permittee shall install and maintain at his expense any signal lights or signals prescribed by the U.S. Coast Guard, through regulation or otherwise, on the authorized facilities.

43) The permittee shall undertake measures to ensure that the jetting intake structures and associated equipment do not pose a hazard to navigation.

44) Development authorized by this Major Modification shall only be conducted on lands owned by the NCDOT and/or its right-of-ways and/or easements.

45) DWQ authorized the proposed project on 4/15/13 (DWQ Project No. 20130144 v.1) under General Water Quality Certification No. 3886. Any violation of the Certification approved by DWQ shall be considered a violation of this Major Modification.

NOTE: This Major Modification does not eliminate the need to obtain any additional state, federal or local permits, approvals or authorizations that may be required.

46) This Major Modification shall be attached to the original of Permit No. 106-12, which was issued on 9/19/12, and copies of both documents shall be readily available on site when a Division representative inspects the project for compliance.

47) All conditions and stipulations of the active permit remain in force under this Major Modification unless altered herein.

Addendum No. 1 **R-67** **New 11-1-13**

Permit Class
MODIFICATION/MAJOR

Permit Number
106-12

STATE OF NORTH CAROLINA
Department of Environment and Natural Resources
and
Coastal Resources Commission

Permit

for

X Major Development in an Area of Environmental Concern pursuant to NCGS 113A-118

X Excavation and/or filling pursuant to NCGS 113-229

Issued to **N.C. Department of Transportation, 1598 Mail Service Center, Raleigh, NC 27699-1598**

Authorizing development in Dare County at Pea Island Breach Site on NC Highway 12,

as requested in the permittee's application dated 8/27/13, including the attached AEC Hazard Notice dated 8/27/13, and the attached workplan drawings (105): 96 dated 8/11/13, and 9 dated as received on 9/5/13.

This permit, issued on 10/17/13, is subject to compliance with the application (where consistent with the permit), all applicable regulations, special conditions and notes set forth below. Any violation of these terms may be subject to fines, imprisonment or civil action; or may cause the permit to be null and void.

1) Unless specifically altered herein, this Major Modification authorizes the following: retention of approximately 1.2 miles of a previously authorized temporary detour road as a permanent paved public boating access to the Pamlico Sound on Pea Island National Wildlife Refuge; construction of traffic lanes for southbound and northbound traffic to connect with the public boating access; and updated workplan drawings for the entire project.

2) Nothing in this Major Modification authorizes any activity that has not received approval from the National Park Service (NPS) and/or the United States Fish and Wildlife Service (USFWS) for work within the Cape Hatteras National Seashore and/or Pea Island National Wildlife Refuge (PINWR). The proposed work shall not commence until the permittee has been issued Special Use Permit(s) from the NPS and the USFWS, if required, and a copy of the Special Use Permit(s) are received by the N.C. Division of Coastal Management (DCM).

(See attached sheets for Additional Conditions)

This permit action may be appealed by the permittee or other qualified persons within twenty (20) days of the issuing date. An appeal requires resolution prior to work initiation or continuance as the case may be.

This permit must be accessible on-site to Department personnel when the project is inspected for compliance.

Any maintenance work or project modification not covered hereunder requires further Division approval.

All work must cease when the permit expires on

No expiration date, pursuant to GS 136-44.7B

In issuing this permit, the State of North Carolina agrees that your project is consistent with the North Carolina Coastal Management Program.

Signed by the authority of the Secretary of DENR and the Chairman of the Coastal Resources Commission.

Douglas V. Hoggard for

Braxton C. Davis, Director
Division of Coastal Management

This permit and its conditions are hereby accepted.

E. D. Luck for Richard W. Hancock

Signature of Permittee

ADDITIONAL CONDITIONS

3) Development authorized by this Major Modification shall only be conducted on lands owned by the NCDOT and/or its right-of-ways and/or easements.

4) Prior to the initiation of construction within the Ocean Hazard Area of Environmental Concern (AEC), a representative of the N.C. Division of Coastal Management (DCM) shall approve the first line of stable, natural vegetation and the corresponding setbacks. All development authorized by this Major Modification shall be located landward of the appropriate setback lines. These setback determinations shall replace those done at the time the permit application was processed and approved. Construction shall begin within sixty days of this determination or the measurement is void and shall be re-established. In the case of a major shoreline change within that period, a new setback determination shall be required before construction begins.

5) In accordance with 15A NCAC 07H .0306(k), the authorized structures shall be relocated or dismantled when they become imminently threatened by changes in shoreline configuration. The structure(s) shall be relocated or dismantled within two years of the time when it becomes imminently threatened, and in any case upon its collapse or subsidence. However, if natural shoreline recovery or beach re-nourishment takes place within two years of the time the structure becomes imminently threatened, so that the structure is no longer imminently threatened, then it need not be relocated or dismantled at that time. This condition shall not affect the permit holder's right to seek authorization of temporary protective measures allowed under Rule 15A NCAC 07H.0308(a)(2).

Impacts to Wetlands and Waters of the State and Compensatory Mitigation

NOTE: This project will permanently impact approximately 0.15 acres of CAMA Coastal Wetlands and approximately 0.07 acres of 404 wetlands due to fill. This project will temporarily impact approximately 0.87 acres of 404 wetlands (0.68 acres due to fill, and 0.19 acres due to hand clearing) and will temporarily impact approximately 0.43 acres of CAMA Coastal Wetlands (0.22 acres due to fill and 0.21 acres due to hand clearing). This project will permanently impact approximately 0.04 acres of surface waters, and will temporarily impact approximately 0.28 acres of surface waters.

6) Wetland mitigation shall be carried out as described in the document titled "Final Wetland Mitigation Plan NC 12 Replacement of Herbert C. Bonner Bridge (Bridge No. 11) over Oregon Inlet" dated January 30, 2013.

General

7) If it is determined that additional permanent and/or temporary impacts are necessary that are not shown on the attached workplan drawings or described in the authorized permit application, a permit modification and/or additional authorization from DCM shall be required. In addition, any changes in the approved plan may also require a permit modification and/or additional authorization from DCM. The permittee shall contact a representative of DCM prior to commencement of any such activity for this determination and any permit modification.

ADDITIONAL CONDITIONS

8) Due to the possibility that compaction due to temporary roadway fill, jetting intake pumps and pipes, hand clearing, and/or other site alterations might prevent the temporary Coastal Wetland impact areas from re-attaining pre-project functions, the permittee shall provide an annual update on the Coastal Wetland areas temporarily impacted by this project. This annual update shall consist of photographs and a brief written report on the progress of these temporarily impacted areas in re-attaining their pre-project functions. Within three years after project completion, the permittee shall hold an agency field meeting with DCM to determine if the Coastal Wetland areas temporarily impacted by this project have re-attained pre-project functions. If at the end of three years DCM determines that the Coastal Wetland areas temporarily impacted by the project have not re-attained pre-project functions, DCM will determine whether compensatory mitigation shall be required.

9) DWR authorized the proposed project on 9/9/13 (DWR Project No. 20130144 v.3). Any violation of the Certification approved by DWR shall be considered a violation of this Major Modification.

NOTE: This Major Modification does not eliminate the need to obtain any additional state, federal or local permits, approvals or authorizations that may be required.

10) This Major Modification shall be attached to the original of Permit No. 106-12, which was issued on 9/19/12, as well as the Major Modification which was issued on 4/26/13, and copies of all documents shall be readily available on site when a Division representative inspects the project for compliance.

11) All conditions and stipulations of the active permit remain in force under this Major Modification unless altered herein.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726

GUIDELINES FOR AVOIDING IMPACTS TO THE WEST INDIAN MANATEE
Precautionary Measures for Construction Activities in North Carolina Waters

The West Indian manatee (*Trichechus manatus*), also known as the Florida manatee, is a Federally-listed endangered aquatic mammal protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) and the Marine Mammal Protection Act of 1972, as amended (16 U.S.C 1461 *et seq.*). The manatee is also listed as endangered under the North Carolina Endangered Species Act of 1987 (Article 25 of Chapter 113 of the General Statutes). The U.S. Fish and Wildlife Service (Service) is the lead Federal agency responsible for the protection and recovery of the West Indian manatee under the provisions of the Endangered Species Act.

Adult manatees average 10 feet long and weigh about 2,200 pounds, although some individuals have been recorded at lengths greater than 13 feet and weighing as much as 3,500 pounds. Manatees are commonly found in fresh, brackish, or marine water habitats, including shallow coastal bays, lagoons, estuaries, and inland rivers of varying salinity extremes. Manatees spend much of their time underwater or partly submerged, making them difficult to detect even in shallow water. While the manatee's principal stronghold in the United States is Florida, the species is considered a seasonal inhabitant of North Carolina with most occurrences reported from June through October.

To protect manatees in North Carolina, the Service's Raleigh Field Office has prepared precautionary measures for general construction activities in waters used by the species. Implementation of these measure will allow in-water projects which do not require blasting to proceed without adverse impacts to manatees. In addition, inclusion of these guidelines as conservation measures in a Biological Assessment or Biological Evaluation, or as part of the determination of impacts on the manatee in an environmental document prepared pursuant to the National Environmental Policy Act, will expedite the Service's review of the document for the fulfillment of requirements under Section 7 of the Endangered Species Act. These measures include:

1. The project manager and/or contractor will inform all personnel associated with the project that manatees may be present in the project area, and the need to avoid any harm to these endangered mammals. The project manager will ensure that all construction personnel know the general appearance of the species and their habit of moving about completely or partially submerged in shallow water. All construction personnel will be informed that they are responsible for observing water-related activities for the presence of manatees.

2. The project manager and/or the contractor will advise all construction personnel that

there are civil and criminal penalties for harming, harassing, or killing manatees which are protected under the Marine Mammal Protection Act and the Endangered Species Act.

3. If a manatee is seen within 100 yards of the active construction and/or dredging operation or vessel movement, all appropriate precautions will be implemented to ensure protection of the manatee. These precautions will include the immediate shutdown of moving equipment if a manatee comes within 50 feet of the operational area of the equipment. Activities will not resume until the manatee has departed the project area on its own volition (i.e., it may not be herded or harassed from the area).

4. Any collision with and/or injury to a manatee will be reported immediately. The report must be made to the U.S. Fish and Wildlife Service (ph. 919.856.4520 ext. 16), the National Marine Fisheries Service (ph. 252.728.8762), and the North Carolina Wildlife Resources Commission (ph. 252.448.1546).

5. A sign will be posted in all vessels associated with the project where it is clearly visible to the vessel operator. The sign should state:

> CAUTION: The endangered manatee may occur in these waters during the warmer months, primarily from June through October. Idle speed is required if operating this vessel in shallow water during these months. All equipment must be shut down if a manatee comes within 50 feet of the vessel or operating equipment. A collision with and/or injury to the manatee must be reported immediately to the U.S. Fish and Wildlife Service (919-856-4520 ext. 16), the National Marine Fisheries Service (252.728.8762), and the North Carolina Wildlife Resources Commission (252.448.1546).

6. The contractor will maintain a log detailing sightings, collisions, and/or injuries to manatees during project activities. Upon completion of the action, the project manager will prepare a report which summarizes all information on manatees encountered and submit the report to the Service's Raleigh Field Office.

7. All vessels associated with the construction project will operate at "no wake/idle" speeds at all times while in water where the draft of the vessel provides less than a four foot clearance from the bottom. All vessels will follow routes of deep water whenever possible.

8. If siltation barriers must be placed in shallow water, these barriers will be: (a) made of material in which manatees cannot become entangled; (b) secured in a manner that they cannot break free and entangle manatees; and, (c) regularly monitored to ensure that manatees have not become entangled. Barriers will be placed in a manner to allow manatees entry to or exit from essential habitat.

Prepared by (rev. 06/2003):
U.S. Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, North Carolina 27636-3726
919/856-4520

Figure 1. The whole body of the West Indian manatee may be visible in clear water; but in the dark and muddy waters of coastal North Carolina, one normally sees only a small part of the head when the manatee raises its nose to breathe.

Illustration used with the permission of the North Carolina State Museum of Natural Sciences. Source: Clark, M. K. 1987. Endangered, Threatened, and Rare Fauna of North Carolina: Part I. A re-evaluation of the mammals. Occasional Papers of the North Carolina Biological Survey 1987-3. North Carolina State Museum of Natural Sciences. Raleigh, NC. pp. 52.

United States Department of the Interior

UNITED STATES FISH AND WILDLIFE SERVICE
Alligator River National Wildlife Refuge
100 Conservation Way
Post Office Box 1969
Manteo, NC 27954
Phone: (252) 473.1132 FAX: (252) 473.1668

September 16, 2013

RECEIVED
Division of Highways
SEP 17 2013
Preconstruction
Project Development and
Environmental Analysis Branch

Richard W. Hancock, PE
N. C. Department of Transportation
1548 Mail Service Center
Raleigh, NC 27699-1548

Dear Mr. Hancock:

The attached Special Use Permit is in reference to the B2500 Phase IIa bridge replacement project at New Inlet on Pea Island National Wildlife Refuge. This permit has been closely coordinated with Mr. Victor Barbour. Until today the plan was to issue the permit with Mr. Jerry Jennings name on it, but I was advised this morning that you would be the project contact.

Please sign at the two places indicated and return a signed copy to me as soon as possible. If you have questions, please contact Dennis Stewart, Refuge Biologist at (252) 473-1131 xt 231 or dennis_stewart@fws.gov.

Sincerely,

Mike Bryant

Mike Bryant
Project Leader
Coastal North Carolina National Wildlife Refuges Complex

United States Department of the Interior
U.S. Fish and Wildlife Service

National Wildlife Refuge System General Special Use Application and Permit

OMB Control Number 1018-0102
Expiration Date: 06/30/2014

Name of Refuge: Pea Island

Address: P. O. Box 1969 Manteo, NC 27954

Attn: (Refuge Official): Mike Bryant

Phone #: (252) 473-1131 E-mail: mike_bryant@fws.gov

Application

(To be filled out by applicant. Note: Not all information is required for each use. See instructions at the end of the notice.)

1) ◉ New ◯ Renewal ◯ Modification ◯ Other

Applicant Information

2) Full Name: Richard W. Hancock, PE

3) Organization: NC Department of Transportation

4) Address: 1548 Mail Service Center

5) City/State/Zip: Raleigh, NC 27699-1548

6) Phone #: 919-707-6000

7) Fax #:

8) E-mail: rwhancock@ncdot.gov

9) Assistants/Subcontractors/Subpermittees: (List full names, addresses and phone #'s and specifically describe services provided if subcontractors are used.)

All work will be done under the provisions of a general private contractor. The general contractor will award subcontracts as specified in the general document or as needed to fulfill the terms and conditions of the contract/permits.

Activity Information

10) Activity type: ◯ Event ◯ Wood Cutting ◯ Group Visit ◯ Cabin/Subsistence Cabin ◯ Educational Activity
◉ Other B2500 Phase IIa Bridge construction for NC 12 at the Pea Island (New) Inlet

11) Describe Activity: (Specifically identify timing, frequency, and how the event is expected to proceed.)

NCDOT has planned construction of a new 2.1 mile long bridge on NC 12 at the "Pea Island Inlet" site. No new right-of-way is proposed but temporary construction easements are required. Total project length is 2.7 miles. The new bridge will be a two-lane section and will have 98 spans. Drainage systems will include open scuppers on bridge spans, grate inlets and pipe systems for ramps/end spans, and roadside ditches for approach pavement. Temporary easements will be necessary for NC 12 safety, construction, and erosion/sediment control. Total amount of Refuge land temporarily impacted is about 3.84 acres. This includes temporary easements at existing parking areas for staging, slope stabilization, and access for pumping stations to provide water for jetting activities. Work at night and use of welders/torches may be necessary during construction. The Permittee and Refuge Manager shall meet as needed to establish procedures for approval other activities that may arise.

12) Activity/site occupancy timeline: (Specifically identify beginning and ending dates, site occupation timeline, hours, clean-up and other major events.)

The project time line calls for a contract award date during the fall of 2013 with contractor mobilization and construction beginning soon thereafter. The project will take 3-4 years to complete.

OMB Control Number 1018-0102
Expiration Date: 06/30/2014

(Depending on the activity for which you are requesting a permit, we may ask you for the following activity information. Please contact the specific refuge where the activity is being conducted to determine what activity information is required.)

13) Expected number of participants:

Children 0 Adults _____ Total _____

14) Grade level of educational group:

Grade _____ ◉ N/A

15) Will staff time/assistance be required?

◉ Yes ○ No ○ N/A

16a) Plan of Operation required? ○ Yes ○ No ◉ N/A

16b) Plan of Operation attached? ○ Yes ◉ No

17) Location: (Specifically identify location; GPS location preferred.)

Pea Island National Wildlife Refuge, Dare County, North Carolina; "Pea Island (New) Inlet" 35.684120 -75.484016

18a) Is map of location(s) required?

○ Yes ○ No ◉ N/A

18b) Is map of location(s) attached?

○ Yes ◉ No

Insurance Coverage/Certifications/Permits

19a) Is insurance required?

○ Yes ○ No ◉ N/A

19b) Insurance: (Provided carrier, type and policy number)

_____

20) Other licenses/certifications/permits required: (Specifically identify licenses, certifications, and permits.)

Clean Water Act Section 404; NC Coastal Area Management Act, Endangered Species Act compliance; Section 106 Historic Resources compliance.

Logistics and Transportation

21) Does activity require personnel to stay overnight onsite? ◉ Yes ○ No

22) Personnel involved:

Contractor will have people working day and night in crew shifts.

23) Specifically describe **all** equipment/gear and materials used:

Any and all equipment normally associated with bridge construction over water and land, including welders and cutting torches.

24) Transportation description(s) and license number(s) to access refuge(s): [Provide description of and specific auto license/boat/plane registration number(s).]

Standard NCDOT and contractor vehicles including transport trucks for supplies and materials.

25) Specifically describe onsite work and/or living accommodations:

Construction crews will likely be working 24 hours per day and 7 days per week.

26) Specifically describe onsite hazardous material storage or other onsite material storage space:

The NCDOT contract will require strict compliance with all OSHA as well as all other health and safety standards.

27) Signature of Applicant J. Vicky Bunkow Date of Application: September 16, 2013

Sign, date, and print this form and return it to the refuge for processing.
Do not fill out information below this page.

PRINT FORM

OMB Control Number 1018-0102
Expiration Date: 06/30/2014

For Official Use Only **(This section to be filled out by refuge personnel only.)**

Special Use Permit

Permit #: 2013-003

1) Date: September 16, 2013

2) ◉ Permit Approved ○ Permit Denied

3) Station #: 41630

4) Additional special conditions required: (Special conditions may include activity reports, before and after photographs, and other conditions.)
◉ Yes ○ No ○ N/A

Additional sheets attached:
◉ Yes ○ No

5) Other licenses/permits required:
◉ Yes ○ No ○ N/A

Verification of other licenses/permits, type:

Corps of Engineers, NC Division of Coastal Management, NC Division of Water Quality

6) Insurance/certifications required:
○ Yes ○ No ◉ N/A

Verification of insurance/certification, type:

7) Record of Payments: ◉ Exempt ○ Partial ○ Full

Amount of payment: N/A

Record of partial payment: N/A

8) Bond posted: ○ Yes ◉ No

This permit is issued by the U.S. Fish and Wildlife Service and accepted by the applicant signed below, subject to the terms, covenants, obligations, and reservations, expressed or implied herein, and to the notice, conditions, and requirements included or attached. A copy of this permit should be kept on hand so that it may be shown at any time to any refuge staff.

Permit approved and issued by **(Signature and title):**

Michael R. Bryant Date: September 16, 2013

Permit accepted by **(Signature of applicant):**

J. Vick Balou Date: 9/27/13

OMB Control Number 1018-0102
Expiration Date: 06/30/2014

Notice

In accordance with the Privacy Act (5 U.S. C. 552a) and the Paperwork Reduction Act (44 U.S. C. 3501), please note the following information:

1. The issuance of a permit and collection of fees on lands of the National Wildlife Refuge System are authorized by the National Wildlife Refuge System Administration Act (16 U.S. C. 668dd-ee) as amended, and the Refuge Recreation Act (16 U.S. C. 460k-460k-4).

2. The information that you provide is voluntary; however submission of requested information is required to evaluate the qualifications, determine eligibility, and document permit applicants under the above Acts. It is our policy not to use your name for any other purpose. The information is maintained in accordance with the Privacy Act. All information you provide will be considered in reviewing this application. False, fictitious, or fraudulent statements or representations made in the application may be grounds for revocation of the Special Use Permit and may be punishable by fine or imprisonment (18 U.S.C. 1001). Failure to provide all required information is sufficient cause for the U.S. Fish and Wildlife Service to deny a permit.

3. No Members of Congress or Resident Commissioner shall participate in any part of this contract or to any benefit that may arise from it, but this provision shall not pertain to this contract if made with a corporation for its general benefit.

4. The Permittee agrees to be bound by the equal opportunity "nondiscrimination in employment" clause of Executive Order 11246.

5. Routine use disclosures may also be made: (a) to the U.S. Department of Justice when related to litigation or anticipated litigation; (b) of information indicating a violation or potential violation of a statute, rule, order, or license to appropriate Federal, State, local or foreign agencies responsible for investigating or prosecuting the violation or for enforcing or implementing the statute, rule, regulations, order, or license; (c) from the record of the individual in response to an inquiry from a Congressional office made at the request of the individual (42 FR 19083; April 11,1977); and (d) to provide addresses obtained from the Internal Revenue Service to debt collection agencies for purposes of locating a debtor to collect or compromise a Federal Claim against the debtor, or to consumer reporting agencies to prepare a commercial credit report for use by the Department (48 FR 54716; December 6, 1983).

6. An agency may not conduct or sponsor and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. This information collection has been approved by OMB and assigned control number 1018-0102. The public reporting burden for this information collection varies based on the specific refuge use being requested. The relevant public reporting burden for the General Use Special Use Permit Application form is estimated to average 30 minutes per response, including time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Comments on this form should be mailed to the Information Collection Clearance Officer, U.S. Fish and Wildlife Service, 4401 N. Fairfax Drive, MS 2042-PDM, Arlington, Virginia, 22203.

General Conditions and Requirements

1. Responsibility of Permittee: The permittee, by operating on the premises, shall be considered to have accepted these premises with all facilities, fixtures, or improvements in their existing condition as of the date of this permit. At the end of the period specified or upon earlier termination, the permittee shall give up the premises in as good order and condition as when received except for reasonable wear, tear, or damage occurring without fault or negligence. The permittee will fully repay the Service for any and all damage directly or indirectly resulting from negligence or failure on his/her part, and/or the part of anyone of his/her associates, to use reasonable care.

2. Operating Rules and Laws: The permittee shall keep the premises in a neat and orderly condition at all times, and shall comply with all municipal, county, and State laws applicable to the operations under the permit as well as all Federal laws, rules, and regulations governing national wildlife refuges and the area described in this permit. The permittee shall comply with all instructions applicable to this permit issued by the refuge official in

OMB Control Number 1018-0102
Expiration Date: 06/30/2014

charge. The permittee shall take all reasonable precautions to prevent the escape of fires and to suppress fires and shall render all reasonable assistance in the suppression of refuge fires.

3. Use Limitations: The permittee's use of the described premises is limited to the purposes herein specified and does not, unless provided for in this permit, allow him/her to restrict other authorized entry onto his/her area; and permits the Service to carry on whatever activities are necessary for: (1) protection and maintenance of the premises and adjacent lands administered by the Service; and (2) the management of wildlife and fish using the premises and other Service lands.

4. Transfer of Privileges: This permit is not transferable, and no privileges herein mentioned may be sublet or made available to any person or interest not mentioned in this permit. No interest hereunder may accrue through lien or be transferred to a third party without the approval of the Regional Director of the Service and the permit shall not be used for speculative purposes.

5. Compliance: The Service's failure to require strict compliance with any of this permit's terms, conditions, and requirements shall not constitute a waiver or be considered as a giving up of the Service's right to thereafter enforce any of the permit's terms or conditions.

6. Conditions of Permit not Fulfilled: If the permittee fails to fulfill any of the conditions and requirements set forth herein, all money paid under this permit shall be retained by the Government to be used to satisfy as much of the permittee's obligation as possible.

7. Payments: All payment shall be made on or before the due date to the local representative of the Service by a postal money order or check made payable to the U.S. Fish and Wildlife Service.

8. Termination Policy: At the termination of this permit the permittee shall immediately give up possession to the Service representative, reserving, however, the rights specified in paragraph 11. If he/she fails to do so, he/she will pay the government, as liquidated damages, an amount double the rate specified in this permit for the entire time possession is withheld. Upon yielding possession, the permittee will still be allowed to reenter as needed to remove his/her property as stated in paragraph 11. The acceptance of any fee for the liquidated damages or any other act of administration relating to the continued tenancy is not to be considered as an affirmation of the permittee's action nor shall it operate as a waiver of the Government's right to terminate or cancel the permit for the breach of any specified condition or requirement.

9. Revocation Policy: This permit may be revoked by the Regional Director of the Service without notice for noncompliance with the terms hereof or for violation of general and/or specific laws or regulations governing national wildlife refuges or for nonuse. It is at all times subject to discretionary revocation by the Director of the Service. Upon such revocation the Service, by and through any authorized representative, may take possession of the said premises for its own and sole use, and/or may enter and possess the premises as the agent of the permittee and for his/her account.

10. ~~Damages: The United States shall not be responsible for any loss or damage to property including, but not limited to, growing crops, animals, and machinery or injury to the permittee or his/her relatives, or to the officers, agents, employees, or any other who are on the premises from instructions or by the sufferance of wildlife or employees or representatives of the Government carrying out their official responsibilities. The permittee agrees to save the United States or any of its agencies harmless from any and all claims for damages or losses that may arise to be incident to the flooding of the premises resulting from any associated Government river and harbor, flood control, reclamation, or Tennessee Valley Authority activity.~~

NB 9/27/13

MRB 10-17-13

11. Removal of Permittee's Property: Upon the expiration or termination of this permit, if all rental charges and/or damage claims due to the Government have been paid, the permittee may, within a reasonable period as stated in the permit or as determined by the refuge official in charge, but not to exceed 60 days, remove all structures, machinery, and/or equipment, etc. from the premises for which he/she is responsible. Within this period the permittee must also remove any other of his/her property including his/her acknowledged share of products or crops grown, cut, harvested, stored, or stacked on the premises. Upon failure to remove any of the above items within the aforesaid period, they shall become the property of the United States.

Alligator River National Wildlife Refuge
Pea Island National Wildlife Refuge

CONDITIONS FOR SPECIAL USE PERMITS & AUTHORIZED ACTIVITIES
SUP 2013-003

1. The Permittee or authorized person, and all officers, agents, employees, representatives, and clients of the Permittee or authorized person, shall comply with all Refuge, Federal, State, and local regulations and conditions that apply to the special use activity. Failure to comply with any applicable regulation or condition, and all Federal laws, rules, and regulations governing National Wildlife Refuges and the area described in the Special Use Permit (Permit) or authorizing documents may result in revocation of the Permit or authorized activity and/or criminal prosecution.

2. While engaged in a special use activity on the Refuge, the Permittee or authorized person, and his/her officers, agents, employees, or representatives, shall be in possession of a **copy** of the Permit or authorizing documents (including all attachments that contain conditions) and shall, upon request by an authorized Refuge official or by any authorized local, state, or federal law enforcement officer, display the **copy** authorizing their presence and activity on the Refuge and shall furnish any other licenses and identification documents as may be requested.

3. Entry on the Refuge during nighttime hours (i.e., ½-hour after sunset to ½-hour before sunrise) is prohibited, **unless authorized in writing by the Refuge Manager**.

4. It is unlawful to disturb, destroy, injure, collect, or take any wildlife, plant, natural object, mineral, cultural or historical feature, or public property on the Refuge, **unless authorized in writing by the Refuge Manager**.

5. Wildlife shall not be harmed or harassed and disturbance shall be kept to a minimum, this includes all snakes (poisonous and non-poisonous snakes), **unless authorized in writing by the Refuge Manager**.

6. The Refuge Manager should be contacted **immediately** at ***(252) 473-1131*** upon discovery of any **wildfire**, or any leak, spill, or break in a pipeline, power line, canal, or dike, or any other accident or incident that has the potential to have an adverse impact on the soil, wildlife, or plants in the area. Any unusual wildlife sightings or suspected illegal activities should be reported to the Refuge Manager.

7. Any accident that results in a personal injury **(i.e., an accident that requires professional medical treatment)** shall be reported to the Refuge Manager within 24 hours of the accident.

8. All **locked** Refuge gates shall be closed and locked upon entering and leaving Refuge property. Refuge gates should be left the way they are found (i.e., open, closed, either locked or unlocked as the case may be).

9. Vehicle travel shall only be on designated roads or routes of travel, **unless authorized in writing by the Refuge Manager**. Vehicles, boats, trailers, and other equipment shall be parked in such a manner that **roads and trails, including canoe trails and navigable waters, are not to be blocked**. Roads and trails need to be accessible to other Refuge visitors and to Refuge staff, cooperative farmers, fire trucks, emergency vehicles, maintenance equipment, and law enforcement patrols.

10. Vehicles with catalytic converters shall be restricted to paved roads, recently maintained gravel or dirt roads, or bare soil areas because of the high fire potential. Vehicles with catalytic converters shall not be parked over high vegetation or other fire hazardous materials.

11. Refuge gate or building keys **shall not be loaned** to other agencies, companies, or persons. If there is a need for access by other persons, please have them contact the Refuge Manager. All Refuge keys shall be returned to the Refuge Manager, or a designated staff member, within 10 calendar days, after expiration or termination of the Permit or authorized activity.

12. All dogs (or any other pet) must be confined or on a leash while on the Refuge, **unless authorized in writing by the Refuge Manager**. Leashed pets must be under the immediate control of the Permittee or authorized person, or the leash must be secured to a stationary object. The leash shall not be in excess of 10 feet in length.

13. Possession or use of firearms, air guns, bows and arrows, cross bows, spears, or gigs; or illegal knives, weapons, or devices; or explosives of any type is prohibited on the Refuge when engaged in a special use activity, **unless authorized in writing by the Refuge Manager**.

14. Littering is prohibited. **All** materials brought into the Refuge shall be removed and properly disposed. Drink cans, bottles, candy wrappers, toilet paper, and other garbage and refuse shall not be left on the Refuge.

15. The Refuge Manager shall be contacted **before** any surface work is done. This includes mowing, road or trail improvements, digging, clearing or trimming of brush or vegetation, installation of structures, etc.

16. The use of herbicides and pesticides on Refuge property is prohibited, **unless authorized in writing by the Refuge Manager**. Unrestricted, over-the-counter-type, insect repellents may be used on or near the body and clothing to repel biting or stinging insects.

17. No permanent or semi-permanent markings shall be made on any Refuge building, structure, gate, post, sign, fence, tree, vegetation, or soil by either marking, painting, cutting, scratching, blazing, mowing, digging, or other destructive method, **unless authorized in writing by the Refuge Manager**. When needed, only temporary, removable markers (e.g., flagging tape, survey stakes, metal/paper/plastic tags, etc.) shall be used to mark site locations, plots, etc. Safety signs, informational signs, and any other signs required by law or regulation for the special use activity being

conducted, shall be posted as required, **but only with prior authorization by the Refuge Manager**. All markers and signs shall be removed upon conclusion of the special use activity or upon expiration or termination of the Permit.

18. The use or possession of traps, snares, or other passive (i.e., unattended) collection devices, which are used to collect wildlife, is prohibited, **unless authorized in writing by the Refuge Manager**. Each individual trap, snare, or passive collection device shall have a weather-resistant, permanent tag attached with the Permittee's, authorized person's, and/or organization's name legibly marked on the tag **or** shall have the Permittee's, authorized person's, and/or organization's name legibly marked, imprinted, or engraved on the trap, snare, or device.

19. No permanent or semi-permanent fences, buildings, shelters, docks, piers, or other structures or facilities may be erected, built, or placed on the Refuge, **unless authorized in writing by the Refuge Manager**. No machinery, equipment, supplies, or materials may be placed or stored on the refuge, **unless authorized in writing by the Refuge Manager**.

20. All open fires are prohibited, **unless authorized in writing by the Refuge Manager**. Leaving an **authorized** open fire unattended or not completely extinguished is prohibited. Setting on fire or causing to be set on fire any timber, brush, grass, or other inflammable material, including camp or cooking fires, is prohibited, **unless authorized in writing by the Refuge Manager**. The use of cutting torches, arc welders, or any other open flame/sparking devices (which are required to conduct the special use activity) shall be exercised with caution and **only with prior authorization from the Refuge Manager or Refuge Fire Management Officer**. When use of these devices is necessary, the operator(s) shall have **immediate access to appropriate fire control equipment** (e.g., fire extinguishers, shovels, etc.) and **immediate communication access to local emergency services** (e.g., cellular telephone, two-way radio, etc.). Tobacco smokers shall practice caution when smoking; shall completely extinguish all matches, cigars, cigarettes, and pipes; and shall dispose of same in a proper container (e.g., a vehicle ash tray).

SPECIAL CONDITIONS FOR BRIDGE CONSTRUCTION OVER PEA ISLAND (NEW) INLET
PROJECT B-2500 PHASE IIa
N. C. HIGHWAY 12TRANSPORTATION MAMANGEMENT PLAN
Pea Island National Wildlife Refuge
Attachment to Special Use Permit 2013-003

1. Special Use Permit # 2013-003 is issued for the expressed and sole purpose of establishing temporary easements adjacent to the existing N. C. Highway 12 (NC 12) right-of-way (ROW) as a temporary measure to facilitate construction of a new bridge to replace the existing temporary bridge over the Pea Island Inlet in the vicinity of the historic New Inlet.

2. This permit does not authorize any activity other than the use of refuge lands for the expressed purposes stated in SUP# 2013-003. It is the permittee's responsibility to obtain any and all other necessary local, state, or federal approvals prior to commencing work activities. All other permits, approvals, or agreements, written or verbal, whether from individuals or local, state, or federal agencies or other entities shall be coordinated by NCDOT so as to not in any way interfere with implementation of the terms and provisions of SUP # 2013-003.

3. The effective dates of this permit include the period from September 16, 2013 through December 31, 2017. If it should become necessary to extend the effective period, a request for extension should be submitted no less than 5 days in advance. The Refuge Manager or designee shall be notified no less than 3 days prior to commencement of activities on the Refuge.

4. Activities authorized through this permit include reasonable and prudent work within the existing North Carolina Department of Transportation (NCDOT) ROW for the existing NC Highway 12 and those areas identified in pre-construction drawings as temporary easement areas for the purpose of maintaining safe traffic flow while preparing for and construction of a concrete replacement bridge to replace the temporary steel bridge. Care shall be taken so as to avoid harm to wildlife and fisheries resources, including their habitats.

5. Temporary work outside of the existing NC 12 ROW as described in project plans reviewed by the Refuge Manager is authorized to the extent necessary to complete construction of the replacement bridge and restoration of NC 12 in a safe and effective manner. This authorization is conditional upon full restoration of affected areas is completed to the satisfaction of the Refuge Manager or designee. Prior consultation with the Refuge Manager or designee is required for any additional temporary work outside of the existing ROW and not shown on the pre-construction drawings.

6. Special Use Permit 2013-003 is limited to the specific request for sufficient temporary easement for bridge construction at the "Pea Island Inlet" site

7. FHWA and NCDOT are asking for a temporary easement to perform such tasks related to overall construction such as erecting erosion control structures, placing temporary shoring, staging areas, and pipe placement. These actions would all be temporary in nature. FHWA asserts that this "easement" would be a temporary occupancy and thus not a "use" of the Refuge requiring approval under Section 4(f) of the Department of Transportation Act of 1966. FHWA cites the 4(f) implementing regulations at 23 C.F.R. 774.13(d), which set forth the criteria for a temporary occupancy.

a. Duration must be temporary, i.e., less than the time needed for construction of the project, and there should be no change in the ownership of the land;

b. Scope of the work must be minor, i.e., both the nature and magnitude of the changes to the Section 4(f) property are minimal;

c. There are no anticipated permanent adverse physical impacts except as shown in Exhibit 1 attached to this permit, nor will there be interference with the protected activities, features, or attributes of the property, on either a temporary or permanent basis;

d. The land being used must be fully restored, i.e., the property must be returned to a condition which is at least as good as that which existed prior to the project; and

e. There must be documented agreement of the official(s) with jurisdiction over the Section 4(f) resource regarding the above conditions.

8. Special Use Permit 2013-003 does not convey any kind of recordable property interest.

9. Special Use Permit 2013-003 shall be invalidated in the event of failure by NCDOT or FHWA to satisfactorily complete the environmental administrative record for compliance with full disclosure and permitting requirements.

10. In the event of bird or turtle nesting activity within or adjacent to the project area as determined by the Refuge Manager NCDOT shall work with the contractor and incorporate remedial measures as recommended by USFWS to minimize or eliminate lighting, noise, or construction and associated activities. NCDOT shall be responsible for monitoring nesting activity as determined necessary by the Refuge Manager.

11. Any and all temporary easement, staging, or other work areas on the Refuge shall be sloped, contoured, and re-vegetated to pre-work conditions or to the satisfaction of the Refuge Manager.

12. Upon completion of construction, NCDOT shall address the issue of public access in the vicinity of New Inlet through the following measures:
    a. The existing parking lot on the east side of the NC Highway 12 and closest to Pea Island (New) Inlet shall be fully removed along with all construction materials, including concrete, asphalt, contaminated soils, and any other material not naturally belonging on the site. A replacement parking lot shall be constructed and the kiosk shall be relocated/reconstructed at a new site near the northern terminus of the Phase IIb bridge. The site will be selected by the Refuge Manager with input from NCDOT upon completion of the Phase IIb Bridge.

    b. The existing parking lot (New Inlet Parking Lot) and primitive boat access point on the west side of NC Highway 12 shall be fully restored upon completion of construction and an access drive similar to the one for the parking lot at the Bonner Bridge shall be constructed from the southern terminus of the new bridge to the New Inlet Parking Lot within the existing easement to the greatest extent possible. In order to minimize wetland impacts while providing safe ingress and egress from the boat access drive, NCDOT will be allowed to construct a turnaround on the east side of the existing easement, as well as a small area outside the easement on the west side of the existing easement, as depicted

on Exhibit 1. Upon project completion, the maintenance of the driveway and turnaround will be the responsibility of USFWS.

13. Permittee is responsible for removing any and all construction debris, materials, and equipment from the Refuge to the satisfaction of the Refuge Manager.

14. At the discretion of the Refuge Manager, a determination of failure to comply with all terms and provisions of SUP # 2013-003 shall result in revocation of the permit and removal of all fill and complete restoration of areas covered by temporary construction easements. Upon revocation or expiration of SUP # 2013-003, all debris, materials, vehicles, equipment, or other construction related items deemed by the Refuge Manager to be an un-natural addition to the refuge shall be removed within 30 days from receipt of notice of revocation or expiration of the permit.

15. Upon discovery of new ecological or biological information regarding fish, wildlife, or their habitats that could be affected by this project, the Refuge Manager retains the authority to amend this permit to protect natural resources in the interests of achieving the refuge system mission or the purpose for establishing the refuge.

FISH HOOK
TURN-AROUND
12
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT B-2500A
ACCESS TURN-AROUND
DATE 08-15-2013

EXHIBIT 1A

NAD 83
NSRS 2007
100' EXISTING R/W
EAST R/W
EAST R/W
EAST R/W
EAST R/W
30' POWER LINE EASEMENT
3085
FISH HOOK
TURN-AROUND
3080
12
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT: B-2500A
ACCESS TURN-AROUND
DATE: 08-15-2013

EXHIBIT 1B

U.S. Department of Homeland Security
United States Coast Guard

Commander
United States Coast Guard
Fifth Coast Guard District

431 Crawford Street
Portsmouth, Va. 23704-5004
Staff Symbol: dpb
Phone: (757) 398-6557
Fax: (757) 398-6334
Email: James.L.Rousseau2@uscg.mil

16593
1 MAY 2013

Mr. Gregory J. Thorpe, Ph.D.
Manager, Project D & E Analysis Unit
State of North Carolina Department of Transportation
1598 Mail Service Center
Raleigh, NC 27699-1598

Dear Dr. Thorpe:

Review of your proposed bridge project is complete. Based on the documentation provided and that four comments were received and resolved to Public Notice 5-1292 from the NC State Clearing House and the NC Division of Coastal Management it is determined that a formal Coast Guard bridge permit will not be required for the proposed replacement of the temporary bridge with a new bridge over the New Inlet or Pea Island Breach between Whalebone and Rodanthe near Oregon Inlet, Dare County, NC.

The project will be placed in our Advance Approval category as per Title 33 Code of Federal Regulations Part 115.70. This Advance Approval determination is for the location and proposed replacement of the temporary bridge with a new bridge across the New Inlet or Pea Island Breach and **is valid for five years from the date of this letter**. If the replacement does not commence within this time period, you must contact this office for reaffirmation of this authorization.

Future bridge projects along the same waterway will have to be independently evaluated before they may be considered for Advance Approval. The fact that a Coast Guard bridge permit is not required does not relieve you of the responsibility for compliance with the requirements of any other Federal, State, or local agency who may have jurisdiction over any aspect of the project. Although the project will not require a bridge permit, other areas of Coast Guard jurisdiction apply. The following must be met:

a. At no time during the bridgework will the waterway be closed to navigation without the prior notification and approval of the Coast Guard.

b. This office should be notified as soon as possible to commencement and completion of bridgework so that appropriate announcements may be prepared for our Local Notice to Mariners publication.

c. The lowest portion of the superstructure of the bridge across the waterway should clear the 100-year flood height elevation, if feasible.

The National Ocean Service (NOS) of the National Oceanic and Atmosphere Administration (NOAA) is responsible for maintaining the charts of U.S. waters; therefore, they must be notified of this proposed work. You must notify our office and the NOS upon completion of the activity approved in this letter. Your notification of completion must include as-built drawings, which

16593
1 MAY 2013

certifies the location and clearance of the bridge that was constructed. This information will be sent to the following address:

Ms. Allison Wittrock
National Ocean Service
N/CS26, Room 7317
1315 East-West Highway
Silver Spring, MD 20910-3282

If you have any further questions, please contact Jim Rousseau at the above-listed address or telephone number.

Sincerely,

Waverly W. Gregory, Jr.

WAVERLY W. GREGORY, JR.
Bridge Program Manager
By direction of the Commander
Fifth Coast Guard District

Copy: Sector North Carolina, Waterways Management
Ms. Allison Wittrock, NOS

VICINITY MAP

VICINITY MAP

NCDOT

DIVISION OF HIGHWAYS

DARE COUNTY

PROJECT: B-2500A

NC HWY 12 OVER PEA ISLAND BREACH

SHEET 1 OF 59 2/11/2013

5000′ 0′ 5000′

GRAPHIC SCALE

PEA ISLAND, NC QUAD MAP

LOCATION MAP

NCDOT

DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT: B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH

SHEET 2 OF 59 **2/11/2013**

WETLAND PERMIT IMPACT SUMMARY

Site No.	Station (From/To)	Structure Size / Type	WETLAND IMPACTS: Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	SURFACE WATER IMPACTS: Permanent SW impacts (ac)	Temp. SW impacts (ac)	Natural Stream Design (ft)
1	-L- 3078+90 to 3082+59			0.10			0.02		0.01	
2	-L- 3088+86 to 3092+69		0.02	0.07			0.03			
3	-L- 3107+55 to 3115+62		0.18	0.15			0.06			
4	-L- 3128+60 to 3132+06		0.01	0.03			0.02			
5	-L- 3134+54 to 3136+31		<0.01	0.02			0.01			
6	-L- 3139+49 to 3140+49			0.03			<0.01			
7	-L- 3159+81 to 3163+48			0.02			<0.01		0.03	
8	-L- 3163+62 to 3167+76								0.10	
9	-L- 3166+66 to 3166+94	Bent #67	<0.01				<0.01			
10	-L- 3170+97 to 3173+74	Bent #71, #72, & #73						0.04	0.04	
		* Temp. Work Bridge 1								
		** Temp. Work Bridge 2								
		*** Remove Exist Bridge								
		Jetting Intake Pipe								
11	-L- 3177+49 to 3181+18			<0.01			<0.01		0.05	
		**** Temp. Work Bridge 2								
12	-L- 3191+04 to 3197+22			0.23			0.04			
13	-L- 3200+13 to 3205+63			0.22			0.04			
14	-L- 3206+52 to 3210+71			0.02			0.02			
15	-L- 3097+22 to 3097+32	Jetting Intake Pipe					0.14		0.02	
16	-L- 3136+15 to 3136+48	Jetting Intake Pipe							0.03	
TOTALS:			0.22	0.90			0.40	0.04	0.28	

Notes:
* Temp. Work Bridge #1 (16 Bents @ 40 SF = 640 SF Total Impact)
** Temp. Work Bridge #2 (25 Bents @ 40 SF = 1,000 SF Total Impact)
*** Remove Exist. Bridge (6 Footings @ 130 SF = 780 SF Total Impact)
**** Site 11 Temp. Work Bridge #2 (2 Bents @ 20 SF = 40 SF Total Impact)

CAMA Wetland Impacts by Site:
Site 1: 0.04 ac Temporary Fill, <0.01 ac Hand Clearing
Site 3: 0.13 Permanent Fill, 0.11 ac Temporary Fill, 0.05 ac Hand Clearing
Site 4: 0.01 Permanent Fill, 0.03 ac Temporary Fill, 0.02 ac Hand Clearing
Site 5: <0.01 Permanent Fill, 0.02 ac Temporary Fill, 0.01 ac Hand Clearing
Site 7: 0.02 ac Temporary Fill, <0.01 ac Hand Clearing
Site 9: (bridge bent) <0.01 ac Permanent Fill, 0.01 ac Hand Clearing
Site 15: 0.11 ac Hand Clearing
Total CAMA Impacts:
Permanent Fill in Wetlands: 0.15 ac
Temporary Fill in Wetlands: 0.22 ac
Hand Clearing in Wetlands: 0.21 ac
Erosion Control Measures Impacts
0.08 acre of Temporary Fill in Wetlands in the Hand Clearing areas for erosion control measures.

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

DARE COUNTY
B-2500A

SHEET 3 OF 59 9/5/2013

Addendum No. 1

R-92

New 11-1-13

PROJECT: B-2500A

CONTRACT:

See Sheet 1-A For Index of Sheets
See Sheet 1-B For Standard Symbology Sheet

VICINITY MAP N.T.S.

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

DARE COUNTY

LOCATION: PHASE II, NC 12 LONG-TERM IMPROVEMENTS AT PEA ISLAND

TYPE OF WORK: GRADING, PAVING, DRAINAGE & STRUCTURE

WETLAND & SURFACE WATER IMPACTS

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	B-2500A	1	

STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION
32635.1.6		P.E.
32635.2.2	BRNHF-0012(55)	UTIL.
32635.3.6	BRNHF-0012(55)	CONST.

NAD 83 NSRS 2007

Permit Drawing
Sheet 4 of 59

GRAPHIC SCALES

50 25 0 50 100
PLANS

50 25 0 50 100
PROFILE (HORIZONTAL)

10 5 0 10 20
PROFILE (VERTICAL)

DESIGN DATA

ADT 2012 = 7,300
ADT 2032 = 10,900
DHV = N/A
D = N/A
T = 6%
V = 60 MPH
FUNC. CLASSIFICATION: COLLECTOR
T = 1% TTST+5% DUALS
REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY TIP PROJECT B-2500A = 0.366 MILES
LENGTH OF STRUCTURE TIP PROJECT B-2500A = 2.114 MILES
TOTAL LENGTH OF TIP PROJECT B-2500A = 2.480 MILES

NCDOT CONTACT: GARY LOVERING, PE
Project Engineer, Roadway Design

PLANS PREPARED FOR THE NCDOT BY:
STV/RALPH WHITEHEAD ASSOCIATES, INC.
1000 West Morehead St., Ste. 200, Charlotte NC, 28208
NC License Number F-0991

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N/A

LETTING DATE: SEPTEMBER 17, 2013

JOHN N. JOHNSON, PE
PROJECT ENGINEER

SEAN C. STEPHENS, EI
PROJECT DESIGNER

HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
P.E.
SIGNATURE:

ROADWAY DESIGN ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
P.E.
SIGNATURE:

STATE OF NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

PERMIT DRAWINGS
8/12/13

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
4
R/W SHEET NO.
ROADWAY DESIGN
HYDRAULICS
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
NAD 83 NSRS 2007
SITE 1
SEE FIGURE SITE 1
UNITED STATES OF AMERICA
MATCHLINE -L- STA 3087+00 (SHEET 5)
CONT. ON PSH 06
Permit Drawing
Sheet 5 of 59
GRAPHIC SCALE
-L-
PROPOSED GRADE
EXISTING GROUND
BEGIN TIP PROJECT B-2500A
-L- STA. 3076+40.00
ELEV = 2.83'
PI = 3077+30.00
EL = 3.24
VC = 180
K = 335
PI = 3079+20.00
EL = 3.26
VC = 200
K = 614
PI = 3084+31.00
EL = 3.26
VC = 70
K = 137
PI = 3086+70.00
EL = 4.48
VC = 40.8
K = 137
(-)0.2111%
(+)0.3259%
(+)0.00002%
(+)0.5108%
3075
3080
3085
3074
3075
3076
3077
3078
3079
3080
3081
3082
3083
3084
3085
3086
3087
50
40
30
20
10
0
8/11/2013

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
STV / Ralph Whitehead Associates, Inc.
1600 Harris Bank Drive, Ste. 200
Charlotte, NC 28226
NC License Number F-0891
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
NAD 83 NSRS 2007
SITE 1
SEE FIGURE SITE 1
UNITED STATES OF AMERICA
MATCHLINE -L- STA 3087+00 (SHEET 5)
Permit Drawing
Sheet 6 of 59
GRAPHIC SCALE
-L-
PROPOSED GRADE
EXISTING GROUND
BEGIN TIP PROJECT B-2500A
-L- STA. 3076+40.00
ELEV = 2.83'
PI = 3077+30.00
EL = 2.64'
VC = 180'
K = 335
(-)0.2811%
(+)0.3259%
PI = 3079+20.00
EL = 3.25'
VC = 200'
K = 614
(+)0.1000%
PI = 3084+33.00
EL = 7.26'
VC = 70'
K = 137
(+)0.5108%
PI = 3086+70.00
EL = 4.48'
VC = 408'
K = 137
3074
3075
3076
3077
3078
3079
3080
3081
3082
3083
3084
3085
3086
3087
8/11/2013

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
4
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1000 West Hargett St., Ste. 200
Raleigh, NC 27603
NC License Number F-0991
NAD 83 NSRS 2007
SITE 1
TEMPORARY SLOPE STAKES
TEMPORARY IMPACTS IN SURFACE WATER
TEMPORARY FILL IN WETLAND
HAND CLEARING
PERMANENT SLOPE STAKES
PERMANENT SLOPE STAKES
HAND CLEARING
TEMPORARY FILL IN WETLAND
3080
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
40'
0'
40'
GRAPHIC SCALE
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT: B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
Permit Drawing
Sheet 7 of 59

SHEET NO. X-1
PROJ. REFERENCE NO. B-2500A
0 2.5 5
Permit Drawing
Sheet 8 of 59
SITE 1
SITE 1
SITE 1
3082+50.00
3082+00.00
3081+50.00
DET 3082+49.28
DET 3081+98.85
DET 3081+48.51
TEMP. PCB
TEMP. SLOPE
TEMP. S.S. 2.90
S.S. 2.58
S.S. 2.30
S.S. 2.73
S.S. 2.41
S.S. 2.06
S.S. 2.57
EXRW
WLB
EXCAVATION LIMITS
0.025
0.040
2.26
2.61
2.69
2.77
3.26
3.84
3.70
3.52
6:1
3:1
0.90

8/11/2013 R:\Hydraulics\FEATTS_Environmental\Drawings\Sheets\NCI2FEA_Hyd_Prm_Detail.dgn

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
5
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
STV / Ralph Whitehead Associates, Inc.
1000 Westgate Drive, Suite 200
Charlotte, NC 28273
NC License Number F-0891
MATCHLINE THIS SHEET
SITE 15
SITE 2
SITE 15
NAD 83
CORS96
UNITED STATES OF AMERICA
SEE FIGURE SITE 2
3090
3095
MATCHLINE -L- STA 3087+00 (SHEET 4)
MATCHLINE -L- STA 3100+00 (SHEET 6)
NOTE: BEFORE INTAKE PIPE LOCATION
MATCHLINE THIS SHEET
GRAPHIC SCALE
100
0
100
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
Permit Drawing
Sheet 10 of 59
-L-
PROPOSED GRADE
BRIDGE
PI = 3092+66.00
EL = 2470'
VC = 530'
K = 152
(+)3.4983%
(+)0.0000%
1428
BEGIN BRIDGE
-L- STA. 3089+00.00
PI = 3086+70.00
EL = 448'
VC = 400'
K = 137
(+)3.4983%
EXISTING GROUND
50
40
30
20
10
0
3087
3088
3089
3090
3091
3092
3093
3094
3095
3096
3097
3098
3099
3100
8/11/2013

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
5
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1000 Jones Franklin Rd. Suite 200
Raleigh, NC 27606
NC License Number F-0991
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
NAD 83 NSRS 2007
SITE 2
50' POWER LINE EASEMENT
HAND CLEARING
TEMPORARY FILL IN WETLAND
PERMANENT FILL IN WETLAND
TEMPORARY SLOPE STAKES
PERMANENT SLOPE STAKES
WLB
HC
T
F
E
GRAPHIC SCALE
30'
0'
30'
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT: B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
Permit Drawing
Sheet 11 of 59

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-2500A	X-2

Permit Drawing
Sheet 12 of 59

6/23/99

8/11/2003
R:\Hydraulics\PERMITS.Environmental\Drawings\Sheets\NC12FEA_Hyd.Prm.L.XFL.Site 2.dgn
stephens

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
6
RW SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV/Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 200
Charlotte, NC 28208
NC License Number F-0991
SITE 3
SEE FIGURE (SITE)
3110
3105
NAD 83
NSRS 2007
MATCHLINE -L- STA 3113+00 (SHEET 7)
MATCHLINE -L- STA 3100+00 (SHEET 5)
UNITED STATES OF AMERICA
50' POWER LINE EASEMENT
CONT. ON PSH 07
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
100' 0' 100'
Permit Drawing
Sheet 13 of 59
-L-
PI = 3111+34.00
EL = 24.70'
VC = 180'
K = 800'
(+)0.0000%
(+)0.5002%
BRIDGE
PROPOSED GRADE
EXISTING GROUND
3100 3101 3102 3103 3104 3105 3106 3107 3108 3109 3110 3111 3112 3113
50 40 30 20 10 0
8/11/2013

8/11/2013 R:\Hydraulics\PERMITS\Environmental\Drawings\Sheets\MCIDFEA_Hyd_Prm_psh06A.dgn

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
6
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 230
Charlotte, NC 28208
NC License Number F-0991
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
NAD 83 NSRS 2007
MATCHLINE -L- STA 3111+50 (SHEET 6)
SITE 3
(SHEET 1 OF 2)
3110
HAND CLEARING
PERMANENT FILL IN WETLAND
PERMANENT SLOPE STAKES
TEMPORARY SLOPE STAKES
TEMPORARY FILL IN WETLAND
TEMPORARY SLOPE STAKES
PERMANENT SLOPE STAKES
GRAPHIC SCALE
30' 0' 30'
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT:B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
Permit Drawing
Sheet 15 of 59
8/11/2013
R:\Hydraulics\PERMITS\Environmental\Drawings\Sheets\WCI2PEA_Hyd_Prm_B2500_Site 3A.dgn

SITE 3
(SHEET 2 OF 2)
50' POWER LINE EASEMENT
50' POWER LINE EASEMENT
3115
HAND CLEARING
TEMPORARY SLOPE STAKES
PERMANENT SLOPE STAKES
TEMPORARY FILL IN WETLAND
PERMANENT FILL IN WETLAND
WLB
MATCHLINE -L- STA 3111+50 (SHEET 6)
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
NAD 83 NSRS 2007
STV / Ralph Whitehead Associates, Inc.
1000 West Harrison St., Ste. 300
Charlotte, NC 28203
NC License Number F-0891
PROJECT REFERENCE NO. B-2500A
SHEET NO. 6
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
SEALED WETLAND PERMIT PLANS
NORTH CAROLINA PROFESSIONAL SEAL 036826 ENGINEER
JOHN C. BRIDGERS
NORTH CAROLINA PROFESSIONAL SEAL 036826 ENGINEER
RITA A. PERSICO
30' 0' 30'
GRAPHIC SCALE
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT: B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
Permit Drawing
Sheet 19 of 59
8/11/2013
R:\Hydraulics\PERMITS_Environmental\Drawings\Sheets\NCI2PEA_Hyd_Prm_B2500_Site 3.dgn

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-2500A	X-3

Permit Drawing
Sheet 17 of 59

8/23/99

8/12/2013
R:\Highways\PERMITS_Environmental\Drawings\Sheets\NC12MEA_Hyd_Prm_L_XPL.dgn
stephesc

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
7
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
STV / Ralph Whitehead Associates, Inc.
1000 Westgate Drive, Suite 200
Charlotte, NC 28205
NC License Number F-0891
NAD 83
NSRS 2007
UNITED STATES OF AMERICA
MATCHLINE -L- STA 3126+00 (SHEET 8)
MATCHLINE -L- STA 3113+00 (SHEET 6)
SITE 3
SEE FIGURE SITE 3
CONT. ON PSH 06
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
Permit Drawing
Sheet 18 of 59
GRAPHIC SCALE
-L-
PI = 3121+00.00
EL = 27.60'
VC = 180'
K = 225
(+)0.30022%
(-)0.49912%
BRIDGE
PROPOSED GRADE
EXISTING GROUND
3113
3114
3115
3116
3117
3118
3119
3120
3121
3122
3123
3124
3125
3126
50
40
30
20
10
0

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
7
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1000 Jackson Street, Suite 200
Charlotte, NC 28202
NC License Number F-0991
NAD 83
NSRS 2007
MATCHLINE -L- STA 3126+00 (SHEET 8)
MATCHLINE -L- STA 3113+00 (SHEET 6)
UNITED STATES OF AMERICA
SITE 3
SEE FIGURE SITE 3
CONT. ON PSH 16
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
Permit Drawing Sheet 19 of 59
GRAPHIC SCALE
-L-
PI = 3121+00.00
EL = 27.60'
VC = 180'
K = 225
(+)0.30022%
(-)0.49917%
BRIDGE
PROPOSED GRADE
EXISTING GROUND
3113
3114
3115
3116
3117
3118
3119
3120
3121
3122
3123
3124
3125
3126
8/11/2013

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
8
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
STV/Ralph Whitehead Associates, Inc.
1000 West Hanes Mill Rd., Ste. 200
Winston-Salem, NC 27105
NC License Number F-0991
NAD 83
NSRS 2007
SITE 5
SITE 4
3135
3130
SEE FIGURE SITE 5
SEE FIGURE SITE 4
REMOVE
UNITED STATES OF AMERICA
MATCHLINE -L- STA 3139+00 (SHEET 9)
MATCHLINE -L- STA 3126+00 (SHEET 7)
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
100'
0'
100'
Permit Drawing
Sheet 20 of 59
-L-
PROPOSED GRADE
BRIDGE
EXISTING GROUND
PI = 3128+81.00
EL = 24.70'
VC = 180'
K = 361
(-0.49972)
(+0.00000%)
3126
3127
3128
3129
3130
3131
3132
3133
3134
3135
3136
3137
3138
3139
50
40
30
20
10
0

PROJECT REFERENCE NO.
B-2500A
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
SHEET NO.
8
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1000 Westgate Drive, Suite 252
Charlotte, NC 28208
NC License Number F-0991
NAD 83 / NSRS 2007
SITE 4
SITE 5
SEE FIGURE SITE 4
SEE FIGURE SITE 5
3130
3135
UNITED STATES OF AMERICA
MATCHLINE -L- STA 3126+00 (SHEET 7)
MATCHLINE -L- STA 3139+00 (SHEET 9)
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
Permit Drawing
Sheet 21 of 59
-L-
PROPOSED GRADE
BRIDGE
EXISTING GROUND
PI = 3126+81.00
EL = 247.0'
VC = 180'
K = 361
3126
3127
3128
3129
3130
3131
3132
3133
3134
3135
3136
3137
3138
3139
3140

8/11/2013 R:\Hydraulics\PERMIT S_Environmental\Drawings\Sheets\NC12PEA_Hyd_Prm_Sht08_Site 4.dgn

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-2500A	X-4

Permit Drawing
Sheet 23 of 59

-L-

8/23/99

8/11/2013
R:\Highways\PERMITS_Environmental\Drawings\Sheets\NC12P6A_Hyd_Prm_L_XPL.dgn
etesnac

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
8
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
STV/Ralph Whitehead Associates, Inc.
1000 Corporate Pointe, Suite 200
Charlotte, NC 28226
NC License Number: F-0891
MAD 83 NSRS 2007
SITE 5
3135
REMOVE
TEMPORARY FILL IN WETLAND
PERMANENT FILL IN WETLAND
HAND CLEARING
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT:B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
30' 0' 30'
GRAPHIC SCALE
Permit Drawing
Sheet 24 of 59
8/11/2013

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-2500A	X-5

Permit Drawing
Sheet 25 of 59

8/25/99

8/11/2003
R:\Highways\PERMITS_Environmental\Drawings\Sheets\NC12FEA_Hyd_Frm_L_XPL.dgn
stephesc

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
9
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
STV/Ralph Whitehead Associates, Inc.
1000 Westgate Drive, Suite 200
Raleigh, NC 27609
NC License Number: F-0991
Permit Drawing
Sheet 28 of 59
MATCHLINE -L- STA 3152+00 (SHEET 10)
MATCHLINE -L- STA 3139+00 (SHEET 8)
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
100'
0'
100'
UNITED STATES OF AMERICA
UNITED STATES OF AMERICA
SITE 6
SITE 5
SITE 4
3140
3145
3150
-L-
PI = 3146+39.00
EL = 24.70'
VC = 180'
K = 600
(+)0.000%
(+)0.300%
BRIDGE
PROPOSED GRADE
EXISTING GROUND
3139
3140
3141
3142
3143
3144
3145
3146
3147
3148
3149
3150
3151
3152
50
40
30
20
10
0
8/11/2013
R:\Hydraulics\PERMITS_Environmental\Drawings\Sheets\NCIZPEA_Hyd_Prm_B2500A.dgn

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
9
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
STV/ Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 200
Charlotte, NC 28208
NC License Number F-0991
Permit Drawing
Sheet 27 of 59
MATCHLINE -L- STA 3152+00 (SHEET 10)
MATCHLINE -L- STA 3139+00 (SHEET 8)
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
UNITED STATES OF AMERICA
SITE 6
SEE FIGURE SITE 6
-L-
PI = 3146+39.00
EL = 24.70'
VC = 180'
K = 600
(-)0.0000%
(+)0.300%
BRIDGE
PROPOSED GRADE
EXISTING GROUND
3139
3140
3141
3142
3143
3144
3145
3146
3147
3148
3149
3150
3151
3152
8/11/2013

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
9
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1000 West Hunstead St., Ste. 300
Raleigh, NC 27603-1085
NC License Number F-0991
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
50' POWER LINE EASEMENT
TAX 2007
TEMPORARY SLOPE STAKES
TEMPORARY FILL IN WETLAND
HAND CLEARING
SITE 6
3140
BST
EXIST R/W
PERMANENT SLOPE STAKES
POWER LINE EASEMENT
GRAPHIC SCALE
30'
0'
30'
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT: B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
Permit Drawing
Sheet 28 of 59

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-2500A	X-6

Permit Drawing
Sheet 29 of 59

8/23/99

8/11/2003
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stephens

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
10
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1905 Maybank Hwy., Ste. 200
Charleston, SC 29412
NC License Number F-0991
NAD 83 / NSRS 2007
UNITED STATES OF AMERICA
3160
3155
SITE 7
SITE 8
SEE FIGURE SITE 8
SEE FIGURE SITE 7
MATCHLINE -L- STA 3165+00 (SHEET 11)
MATCHLINE -L- STA 3152+00 (SHEET 9)
Permit Drawing
Sheet 30 of 59
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
0'
100'
-L-
PI = 3161+55.00
EL = 29.25
VC = 187
K = 904
(+)0.3001%
(+)0.4993%
BRIDGE
PROPOSED GRADE
EXISTING GROUND
3152
3153
3154
3155
3156
3157
3158
3159
3160
3161
3162
3163
3164
3165
50
40
30
20
10
0

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
10
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1600 Wilkinson Blvd., Suite 200
Charlotte, NC 28203
NC License Number F-0991
Permit Drawing
Sheet 31 of 59
MATCHLINE -L- STA 3165+00 (SHEET 11)
MATCHLINE -L- STA 3152+00 (SHEET 9)
SITE 7
SITE 8
SEE FIGURE SITE 8
SEE FIGURE SITE 7
CONT ON PG 11
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES CLEARING HAND
NAD 83 / NSRS 2007
UNITED STATES OF AMERICA
3160
3155
GRAPHIC SCALE
100'
0'
100'
-L-
PI = 3161+55.00
EL = 29.25
VC = 187
K = 904
(+)0.300%
(+)0.4993%
BRIDGE
PROPOSED GRADE
EXISTING GROUND
50
40
30
20
10
0
3152
3153
3154
3155
3156
3157
3158
3159
3160
3161
3162
3163
3164
3165
8/11/2013
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PROJECT REFERENCE NO.
B-2500A
SHEET NO.
10
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV/ Ralph Whitehead Associates, Inc.
1000 Westgate Drive, Ste. 204
Charlotte, NC 28205
NC License Number F-0991
NAD 83 NSRS 2007
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
TEMPORARY SLOPE STAKES
TEMPORARY IMPACTS IN SURFACE WATER
TEMPORARY IMPACTS IN SURFACE WATER
TEMPORARY FILL IN WETLAND
HAND CLEARING
TEMPORARY SLOPE STAKES
TEMPORARY IMPACTS IN SURFACE WATER
SITE 7
3160
OF SANDBAGS
30'
0'
30'
GRAPHIC SCALE
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT: B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
6/11/2013
Permit Drawing
Sheet 32 of 59
8/11/2013

PROJ. REFERENCE NO.	SHEET NO.
B-2500A	X-7

Permit Drawing
Sheet 33 of 59

8/11/2013 R:\Hydraulics\PERMITS_Environmental\Drawings\Shea\NCI2PEA_Hyd_Prm_Sht14.dgn

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
11
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
Permit Drawing
Sheet 35 of 59
MATCHLINE -L- STA 3178+00 (SHEET 12)
MATCHLINE -L- STA 3165+00 (SHEET 10)
SITE 8
SITE 9
SITE 10
SITE 11
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
TEMPORARY WORK BRIDGE
REMOVE TEMPORARY BRIDGE (CURRENTLY CARRYING TRAFFIC)
GRAPHIC SCALE
NAD 83 NGRS 2007
UNITED STATES OF AMERICA
-L-
PROPOSED GRADE
BRIDGE
EXISTING GROUND
PI = 3169+60.00
EL = 32.77
VC = 180
K = 361
PI = 3177+30.00
EL = 32.77
VC = 180
K = 231
(+0.49931%)
(+0.00000%)
(-0.07796%)
3165
3166
3167
3168
3169
3170
3171
3172
3173
3174
3175
3176
3177
3178
8/11/2013

NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT:B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
PROJECT REFERENCE NO. B-2500A
SHEET NO. 11
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV/Ralph Whitehead Associates, Inc.
1000 West Hillsborough St., Ste. 200
Raleigh, NC 27603-3529
NC License Number F-0991
GRAPHIC SCALE
0' 30' 30'
NAD 83 NSRS 2007
SITE 8 & 9
SITE 9
SITE 8
50' POWER LINE EASEMENT
EXIST R/W
FIBER OPTICS SPLICE BOX
TEMPORARY SLOPE STAKES
2 ROWS OF SANDBAGS
HAND CLEARING
FILL IN WETLAND
30' BST
TEMPORARY IMPACTS IN SURFACE WATER
TEMPORARY WORK BRIDGE #2
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
TEMPORARY WORK BRIDGE
Permit Drawing Sheet 36 of 59
8/11/2013

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-2500A	X-8

Permit Drawing
Sheet 37 of 59

8/23/99

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stephens

SITE 10
TEMPORARY IMPACTS IN SURFACE WATER
IMPACTS IN SURFACE WATER
TEMPORARY WORK BRIDGE #1
TEMPORARY WORK BRIDGE #2
NOTE: JETTING INTAKE PIPE LOCATIONS TO BE DETERMINED WITHIN EXISTING EASEMENT
UNITED STATES OF AMERICA
CONC
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
TEMPORARY WORK BRIDGE
REMOVE TEMPORARY WORK BRIDGE (CARRYING TRAFFIC)
NAD 83 NSRS 2007
GRAPHIC SCALE
30' 0' 30'
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT:B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
Permit Drawing
Sheet 38 of 59
STV/Ralph Whitehead Associates, Inc.
1000 Navy Avenue, Suite 300
Norfolk, VA 23518
NC License Number F-0891
PROJECT REFERENCE NO.
B-2500A
SHEET NO.
11
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
SEAL 31187
DARE COUNTY
B/11/2013
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PROJECT REFERENCE NO.
B-2500A
SHEET NO.
12
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
NC License Number F-0991
Permit Drawing
Sheet 39 of 59
MATCHLINE -L- STA 3191+00 (SHEET 13)
MATCHLINE -L- STA 3178+00 (SHEET 11)
LEGEND
DENOTES IMPACTS IN COASTAL WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
NAD 83 NSRS 2007
UNITED STATES OF AMERICA
SITE 11
SEE FIGURE SITE 11
-L-
PROPOSED GRADE
BRIDGE
EXISTING GROUND
PI = 3182+70.00
EL = 28.56'
VC = 1867'
K = 375
(-0.77%)
(-0.30%)
3178
3179
3180
3181
3182
3183
3184
3185
3186
3187
3188
3189
3190
3191
50
40
30
20
10
0

PRELIMINARY PLANS
NOT FOR CONSTRUCTION
PROJECT REFERENCE NO.
B-2500A
SHEET NO.
12
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
STV / Ralph Whitehead Associates, Inc.
MATCHLINE -L- STA 3178+00 (SHEET 11)
MATCHLINE -L- STA 3191+00 (SHEET 13)
NAD 83
NSRS 2007
UNITED STATES OF AMERICA
SITE 11
SEE FIGURE SITE 11
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER WITH TEMPORARY FILL
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
Permit Drawing
Sheet 40 of 59
-L-
PROPOSED GRADE
BRIDGE
EXISTING GROUND
PI = 3182+70.00
EL = 28.56'
VC = 180'
K = 375
(-0.77%)
(-0.30%)
3178
3179
3180
3181
3182
3183
3184
3185
3186
3187
3188
3189
3190
3191

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
12
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV/Ralph Whitehead Associates, Inc.
1000 Westgate, NC 28206
NC License Number F-0891
NAD 83 NSRS 2007
TEMPORARY SLOPE STAKES
TEMPORARY IMPACTS IN SURFACE WATER
TEMPORARY FILL IN WETLAND
HAND CLEARING
GRAPHIC SCALE
30' 0' 30'
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT:B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
Permit Drawing
Sheet 41 of 59
SITE 11
3180
2 ROWS OF SANDBAGS
MTL
EXIST R/W
TEMPORARY IMPACTS IN SURFACE WATER
TEMPORARY WORK BRIDGE #2
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
TEMPORARY WORK BRIDGE
ER LINE EASEMENT

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-2500A	X-9

Permit Drawing
Sheet 42 of 59

8/23/99

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PROJECT REFERENCE NO.
B-2500A
R/W SHEET NO.
SHEET NO.
13
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
STV / Ralph Whitehead Associates, Inc.
1600 Harris Bank Bldg., Ste. 230
Charlotte, NC 28202
NC License Number C-0891
NAD 83 / NSRS 2007
MATCHLINE -L- STA 3204+00 (SHEET 14)
MATCHLINE -L- STA 3191+00 (SHEET 12)
SITE 13
SITE 12
SEE FIGURE SITE 13
SEE FIGURE SITE 12
50' PWER LINE EASEMENT
UNITED STATES OF AMERICA
3200
3195
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
100'
0'
100'
Permit Drawing
Sheet 43 of 59
-L-
END BRIDGE
-L- STA. 3200+60.00
PI = 3202+64.00
EL = 627'
VC = 400'
K = 138
(-13.5000%)
(-0.4482%)
PI = 3197+70.00
EL = 2406'
VC = 494'
K = 151
(-0.3000%)
(-13.5000%)
PROPOSED GRADE
BRIDGE
EXISTING GROUND
3191
3192
3193
3194
3195
3196
3197
3198
3199
3200
3201
3202
3203
3204
50
40
30
20
10
0
8/11/2013

8/11/2013 R:\Hydraulics\FERRITS_Environmental\Drawings\Sheets\NCI2FEA_Hyd_Prm_Sht13A.dgn

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
13
ROADWAY DESIGN ENGINEER
RW SHEET NO.
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV/Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 230
Charlotte, NC 28208
NC License Number: C-0910
NAD 83 / NSRS 2007
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
SITE 12
3195
HAND CLEARING
TEMPORARY FILL IN WETLAND
TEMPORARY SLOPE STAKES
50' POWER LINE EASEMENT
EXIST R/W
30' BST
GRAPHIC SCALE
50' 0' 50'
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT: B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
Permit Drawing
Sheet 45 of 59

0 2.5 5	PROJ. REFERENCE NO.	SHEET NO.
	B-2500A	X-10

Permit Drawing
Sheet 45 of 59

-L-

8/23/99

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PROJECT REFERENCE NO.
B-2500A
SHEET NO.
14
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
STV/Ralph Whitehead Associates, Inc.
1000 Westgate Mall Drive, Suite 200
Charlotte, NC 28262
NC License Number F-0991
NAD 83
NSRS 2007
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
Permit Drawing
Sheet 48 of 59
GRAPHIC SCALE
UNITED STATES OF AMERICA
SITE 13
SITE 14
SEE FIGURE SITE 13
SEE FIGURE SITE 14
CONSTRUCTION LIMITS
50' POWER LINE EASEMENT
3205
3210
3215
-L-
END TIP PROJECT B-2500A
-L- STA. 3207+37.00
ELEV = 465'
PROPOSED GRADE
EXISTING GROUND
(-)0.44822
MATCHLINE -L- STA 3204+00 (SHEET 13)
3204
3205
3206
3207
3208
3209
3210
3211
3212
3213
3214
3215
3216
3217

SITE 13
3200
3205
50' POWER-LINE EASEMENT
HAND CLEARING
TEMPORARY FILL IN WETLAND
TEMPORARY SLOPE STAKES
EXIST R/W
EXIST R/W
EXIST R/W
NAD 83 NSRS 2007
STV/Ralph Whitehead Associates, Inc.
1000 West Morehead St., Ste. 200
Charlotte, NC 28208
NC License Number F-0891
PROJECT REFERENCE NO.
B-2500A
SHEET NO.
14
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER 036963 RALPH E. PERRY, JR.
NORTH CAROLINA PROFESSIONAL SEAL ENGINEER 036963 RALPH C. MOORE
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
50' 0' 50'
GRAPHIC SCALE
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT:B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
Permit Drawing
Sheet 49 of 59
8/11/2013
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	B-2500A	X-11

Permit Drawing
Sheet 50 of 59

-L-

8/23/99

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PROJECT REFERENCE NO.
B-2500A
SHEET NO.
14
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
STV/Ralph Whitehead Associates, Inc.
1000 West Hopewell St., Ste. 200
Charlotte, NC 28203
NC License Number F-0891
NAD 83 / NSRS 2007
3210
SITE 14
50' POWER LINE EASEMENT
HAND CLEARING
TEMPORARY SLOPE STAKES
TEMPORARY FILL IN WETLAND
E
HC
T
GRAPHIC SCALE
30'
0'
30'
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT:B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
Permit Drawing
Sheet 51 of 59
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
8/11/2013

PROJ. REFERENCE NO.	SHEET NO.
B-2500A	X-12

0 2.5 5

Permit Drawing
Sheet 52 of 59

8/23/99

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stephens

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PROJECT REFERENCE NO.
B-2500A
SHEET NO.
5
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
STV / Ralph Whitehead Associates, Inc.
MATCHLINE THIS SHEET
MATCHLINE -L- STA 3100+00 (SHEET 6)
MATCHLINE -L- STA 3087+00 (SHEET 4)
SITE 15
SITE 2
SEE PLAN VIEW SITE 2
UNITED STATES OF AMERICA
NAD 83
CORS96
GRAPHIC SCALE
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES PERMANENT FILL IN WETLAND
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
Permit Drawing
Sheet 54 of 59
-L-
PROPOSED GRADE
BRIDGE
EXISTING GROUND
BEGIN BRIDGE
-L- STA. 3089+00.00
PI = 3086+70.00
EL = 449'
VC = 408'
K = 137
PI = 3092+85.00
EL = 2470'
VC = 550'
K = 152
(+)3.49837%
(+)0.00000%
1428
3087
3088
3089
3090
3091
3092
3093
3094
3095
3096
3097
3098
3099
3100

PROJECT REFERENCE NO.
B-2500A
SHEET NO.
5
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY WETLANDS PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1000 West Cornwallis Dr., Ste. 300
Greensboro, NC 27408
NC License Number F-0991
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
NAD 83 NSRS 2007
MATCHLINE
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT: B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2012
30'
0'
30'
GRAPHIC SCALE
Permit Drawing
Sheet 55 of 59
SITE 15
(SHEET 1 OF 2)
HAND CLEARING
WLB
E
50' POWER
NOTE:
JETTING INTAKE
PIPE LOCATION
T FO T
8/11/2013

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PROJECT REFERENCE NO.
B-2500A
SHEET NO.
8
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1000 West Morehead St. Ste. 200
Charlotte, NC 28208
NC Corporate License No. C-0891
NAD 83
NSRS 2007
SITE 16
SITE 6
SITE 5
SEE FIGURE SITE 16
3140
3135
UNITED STATES OF AMERICA
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
GRAPHIC SCALE
Permit Drawing
Sheet 57 of 59
-L-
PROPOSED GRADE
BRIDGE
BRI
3132
3133
3134
3135
3136
3137
3138
3139
3140
3141
3142
3143
3144
3145
8/11/2013

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PROJECT REFERENCE NO.
B-2500A
SHEET NO.
9
R/W SHEET NO.
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
NOT FOR CONSTRUCTION
STV / Ralph Whitehead Associates, Inc.
1000 Wind University Blvd., Ste. 200
Raleigh, NC 27609
NC License Number F-0891
NAD 83 / NSRS 2007
3140
50' POWER LINE EASEMENT
BST
SITE 6
SITE 16
SITE 16
EXIST R/W
EXIST R/W
TEMPORARY SLOPE STAKES
PERMANENT SLOPE STAKES
PERMANENT SLOPE STAKES
TEMPORARY IMPACTS IN SURFACE WATER
NOTES:
1) JETTING INTAKE PIPE LOCATION
2) EXISTING BOAT ACCESS
LEGEND
DENOTES IMPACTS IN SURFACE WATER
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES TEMPORARY FILL IN WETLAND
DENOTES HAND CLEARING
NCDOT
DIVISION OF HIGHWAYS
DARE COUNTY
PROJECT:B-2500A
NC HWY 12 OVER
PEA ISLAND BREACH
8/11/2013
GRAPHIC SCALE
30' 0' 30'
Permit Drawing
Sheet 59 of 59
8/11/2013

STANDARD SPECIAL PROVISION
AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS

(5-20-08) Z-2

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

(h) Amounts Encumbered. – Transportation project appropriations may be encumbered in the amount of allotments made to the Department of Transportation by the Director for the estimated payments for transportation project contract work to be performed in the appropriation fiscal year. The allotments shall be multiyear allotments and shall be based on estimated revenues and shall be subject to the maximum contract authority contained in *General Statute 143C-6-11(c)*. Payment for transportation project work performed pursuant to contract in any fiscal year other than the current fiscal year is subject to appropriations by the General Assembly. Transportation project contracts shall contain a schedule of estimated completion progress, and any acceleration of this progress shall be subject to the approval of the Department of Transportation provided funds are available. The State reserves the right to terminate or suspend any transportation project contract, and any transportation project contract shall be so terminated or suspended if funds will not be available for payment of the work to be performed during that fiscal year pursuant to the contract. In the event of termination of any contract, the contractor shall be given a written notice of termination at least 60 days before completion of scheduled work for which funds are available. In the event of termination, the contractor shall be paid for the work already performed in accordance with the contract specifications.

Payment will be made on any contract terminated pursuant to the special provision in accordance with Subarticle 108-13(E) of the *2012 Standard Specifications*.

STANDARD SPECIAL PROVISION
NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY

(5-17-11) Z-3

Seed shall be sampled and tested by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory. When said samples are collected, the vendor shall supply an independent laboratory report for each lot to be tested. Results from seed so sampled shall be final. Seed not meeting the specifications shall be rejected by the Department of Transportation and shall not be delivered to North Carolina Department of Transportation warehouses. If seed has been delivered it shall be available for pickup and replacement at the supplier's expense.

Any re-labeling required by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory, that would cause the label to reflect as otherwise specified herein shall be rejected by the North Carolina Department of Transportation.

Seed shall be free from seeds of the noxious weeds Johnsongrass, Balloonvine, Jimsonweed, Witchweed, Itchgrass, Serrated Tussock, Showy Crotalaria, Smooth Crotalaria, Sicklepod, Sandbur, Wild Onion, and Wild Garlic. Seed shall not be labeled with the above weed species on the seed analysis label. Tolerances as applied by the Association of Official Seed Analysts will NOT be allowed for the above noxious weeds except for Wild Onion and Wild Garlic.

Tolerances established by the Association of Official Seed Analysts will generally be recognized. However, for the purpose of figuring pure live seed, the found pure seed and found germination percentages as reported by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory will be used. Allowances, as established by the NCDOT, will be recognized for minimum pure live seed as listed on the following pages.

The specifications for restricted noxious weed seed refers to the number per pound as follows:

Restricted Noxious **Weed**	Limitations per Lb. Of Seed	Restricted Noxious **Weed**	Limitations per Lb. of Seed
Blessed Thistle	4 seeds	Cornflower (Ragged Robin)	27 seeds
Cocklebur	4 seeds	Texas Panicum	27 seeds
Spurred Anoda	4 seeds	Bracted Plantain	54 seeds
Velvetleaf	4 seeds	Buckhorn Plantain	54 seeds
Morning-glory	8 seeds	Broadleaf Dock	54 seeds
Corn Cockle	10 seeds	Curly Dock	54 seeds
Wild Radish	12 seeds	Dodder	54 seeds
Purple Nutsedge	27 seeds	Giant Foxtail	54 seeds
Yellow Nutsedge	27 seeds	Horsenettle	54 seeds
Canada Thistle	27 seeds	Quackgrass	54 seeds
Field Bindweed	27 seeds	Wild Mustard	54 seeds
Hedge Bindweed	27 seeds		

Seed of Pensacola Bahiagrass shall not contain more than 7% inert matter, Kentucky Bluegrass, Centipede and Fine or Hard Fescue shall not contain more than 5% inert matter whereas a maximum of 2% inert matter will be allowed on all other kinds of seed. In addition, all seed shall not contain more than 2% other crop seed nor more than 1% total weed seed. The germination rate as tested by the North Carolina Department of Agriculture shall not fall below 70%, which includes both dormant and hard seed. Seed shall be labeled with not more than 7%, 5% or 2% inert matter (according to above specifications), 2% other crop seed and 1% total weed seed.

Exceptions may be made for minimum pure live seed allowances when cases of seed variety shortages are verified. Pure live seed percentages will be applied in a verified shortage situation. Those purchase orders of deficient seed lots will be credited with the percentage that the seed is deficient.

FURTHER SPECIFICATIONS FOR EACH SEED GROUP ARE GIVEN BELOW:

Minimum 85% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 83% pure live seed will not be approved.

Sericea Lespedeza
Oats (seeds)

Minimum 80% pure live seed; maximum 1% total weed seed; maximum 2% total other crop; maximum 144 restricted noxious weed seed per pound. Seed less than 78% pure live seed will not be approved.

Tall Fescue (all approved varieties)
Kobe Lespedeza
Korean Lespedeza
Weeping Lovegrass
Carpetgrass
Bermudagrass
Browntop Millet
German Millet – Strain R
Clover – Red/White/Crimson

Minimum 78% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 76% pure live seed will not be approved.

Common or Sweet Sundangrass

Minimum 76% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 74% pure live seed will not be approved.

Rye (grain; all varieties)
Kentucky Bluegrass (all approved varieties)
Hard Fescue (all approved varieties)
Shrub (bicolor) Lespedeza

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 noxious weed seed per pound. Seed less than 70% pure live seed will not be approved.

Centipedegrass
Crownvetch
Pensacola Bahiagrass
Creeping Red Fescue
Japanese Millet
Reed Canary Grass
Zoysia

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 5% inert matter; maximum 144 restricted noxious weed seed per pound.

Barnyard Grass
Big Bluestem
Little Bluestem
Bristly Locust
Birdsfoot Trefoil
Indiangrass
Orchardgrass
Switchgrass
Yellow Blossom Sweet Clover

STANDARD SPECIAL PROVISION

ERRATA

(1-17-12) (Rev. 10-15-13) Z-4

Revise the *2012 Standard Specifications* as follows:

Division 2

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

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

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

Division 4

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

Division 6

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

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

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

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

Division 8

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

Division 10

Page 10-74, Table 1056-1 Geotextile Requirements, replace "50%" for the UV Stability (Retained Strength) of Type 5 geotextiles with "70%".

Division 12

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

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

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

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

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

Division 15

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

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

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

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

Division 17

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

Revise the *2012 Roadway Standard Drawings* as follows:

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

STANDARD SPECIAL PROVISION

PLANT AND PEST QUARANTINES
(Imported Fire Ant, Gypsy Moth, Witchweed, And Other Noxious Weeds)

(3-18-03) (Rev. 10-15-13) Z-04a

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.gov/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.

STANDARD SPECIAL PROVISION

AWARD OF CONTRACT

(6-28-77) Z-6

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

STANDARD SPECIAL PROVISION

MINORITY AND FEMALE EMPLOYMENT REQUIREMENTS

Z-7

NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (*EXECUTIVE NUMBER 11246*)

1. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, see as shown on the attached sheet entitled "Employment Goals for Minority and Female participation".

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in *41 CFR Part 60-4* shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in *41 CFR 60-4.3(a)*, and its effort to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project or the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the executive Order and the regulations *in 41 CFR Part 60-4*. Compliance with the goals will be measured against the total work hours performed.

2. As used in this Notice and in the contract resulting from this solicitation, the "covered area" is the county or counties shown on the cover sheet of the proposal form and contract.

EMPLOYMENT GOALS FOR MINORITY AND FEMALE PARTICIPATION

Economic Areas

Area 023 29.7%
Bertie County
Camden County
Chowan County
Gates County
Hertford County
Pasquotank County
Perquimans County

Area 024 31.7%
Beaufort County
Carteret County
Craven County
Dare County
Edgecombe County
Green County
Halifax County
Hyde County
Jones County
Lenoir County
Martin County
Nash County
Northampton County
Pamlico County
Pitt County
Tyrrell County
Washington County
Wayne County
Wilson County

Area 025 23.5%
Columbus County
Duplin County
Onslow County
Pender County

Area 026 33.5%
Bladen County
Hoke County
Richmond County
Robeson County
Sampson County
Scotland County

Area 027 24.7%
Chatham County
Franklin County
Granville County
Harnett County
Johnston County
Lee County
Person County
Vance County
Warren County

Area 028 15.5%
Alleghany County
Ashe County
Caswell County
Davie County
Montgomery County
Moore County
Rockingham County
Surry County
Watauga County
Wilkes County

Area 029 15.7%
Alexander County
Anson County
Burke County
Cabarrus County
Caldwell County
Catawba County
Cleveland County
Iredell County
Lincoln County
Polk County
Rowan County
Rutherford County
Stanly County

Area 0480 8.5%
Buncombe County
Madison County

Area 030 6.3%
Avery County
Cherokee County
Clay County
Graham County
Haywood County
Henderson County
Jackson County
McDowell County
Macon County
Mitchell County
Swain County
Transylvania County
Yancey County

SMSA Areas

Area 5720 26.6%
Currituck County

Area 9200 20.7%
Brunswick County
New Hanover County

Area 2560 24.2%
Cumberland County

Area 6640 22.8%
Durham County
Orange County
Wake County

Area 1300 16.2%
Alamance County

Area 3120 16.4%
Davidson County
Forsyth County
Guilford County
Randolph County
Stokes County
Yadkin County

Area 1520 18.3%
Gaston County
Mecklenburg County
Union County

Goals for Female

Participation in Each Trade

(Statewide) 6.9%

STANDARD SPECIAL PROVISION

REQUIRED CONTRACT PROVISIONS FEDERAL - AID CONSTRUCTION CONTRACTS

FHWA - 1273 Electronic Version - May 1, 2012 Z-8

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

   The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

   Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

   Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).
2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.
4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are

incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.
b. The contractor will accept as its operating policy the following statement:
"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.
3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
   a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
   b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
   c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.
   d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
   e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.
4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.
   a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.
   b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.
   c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.
5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:
   a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
   b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
   c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
   d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.
6. **Training and Promotion:**
   a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.
   b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).
   c The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
   d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:
   a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.
   b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
   c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.
   d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.
8. **Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.
9. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.
   a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.
   b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.
10. **Assurance Required by 49 CFR 26.13(b):**
   a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.
   b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.
11. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.
   a. The records kept by the contractor shall document the following:
      (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
      (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
      (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;
   b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. **Minimum wages**
   a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the

Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. **Withholding.** The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. **Payrolls and basic records**

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the

payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/ wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. **Apprentices and trainees**

a. Apprentices (programs of the USDOL). Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL). Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT). Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
6. **Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
7. **Contract termination:** debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
8. **Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
9. **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
10. **Certification of eligibility.**
    a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
    b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
    c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.
3. **Withholding for unpaid wages and liquidated damages.** The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.
4. **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).
    a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees

from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:
(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.
4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.
5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.
2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. **Instructions for Certification – First Tier Participants:**
   a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
   b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
   c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
   d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
   e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
   f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
   g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.
   h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.
   i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
   j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

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2. **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**
   a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
      (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
      (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
      (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and
      (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
   b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.
2. **Instructions for Certification - Lower Tier Participants:**
   (Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)
   a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
   b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.
g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.
h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion–Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
   a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
   b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.
3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

STANDARD SPECIAL PROVISION

ON-THE-JOB TRAINING

(10-16-07) (Rev. 5-21-13) Z-10

Description

The North Carolina Department of Transportation will administer a custom version of the Federal On-the-Job Training (OJT) Program, commonly referred to as the Alternate OJT Program. All contractors (existing and newcomers) will be automatically placed in the Alternate Program. Standard OJT requirements typically associated with individual projects will no longer be applied at the project level. Instead, these requirements will be applicable on an annual basis for each contractor administered by the OJT Program Manager.

On the Job Training shall meet the requirements of 23 CFR 230.107 (b), 23 USC – Section 140, this provision and the On-the-Job Training Program Manual.

The Alternate OJT Program will allow a contractor to train employees on Federal, State and privately funded projects located in North Carolina. However, priority shall be given to training employees on NCDOT Federal-Aid funded projects.

Minorities and Women

Developing, training and upgrading of minorities and women toward journeyman level status is a primary objective of this special training provision. Accordingly, the Contractor shall make every effort to enroll minority and women as trainees to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

Assigning Training Goals

The Department, through the OJT Program Manager, will assign training goals for a calendar year based on the contractors' past three years' activity and the contractors' anticipated upcoming year's activity with the Department. At the beginning of each year, all contractors eligible will be contacted by the Department to determine the number of trainees that will be assigned for the upcoming calendar year. At that time the Contractor shall enter into an agreement with the Department to provide a self-imposed on-the-job training program for the calendar year. This agreement will include a specific number of annual training goals agreed to by both parties. The number of training assignments may range from 1 to 15 per contractor per calendar year. The Contractor shall sign an agreement to fulfill their annual goal for the year. A sample agreement is available at www.ncbowd.com/section/on-the-job-training.

Training Classifications

The Contractor shall provide on-the-job training aimed at developing full journeyman level workers in the construction craft/operator positions. Preference shall be given to providing training in the following skilled work classifications:

Equipment Operators	Office Engineers
Truck Drivers	Estimators
Carpenters	Iron / Reinforcing Steel Workers
Concrete Finishers	Mechanics
Pipe Layers	Welders

The Department has established common training classifications and their respective training requirements that may be used by the contractors. However, the classifications established are not all-inclusive. Where the training is oriented toward construction applications, training will be allowed in lower-level management positions such as office engineers and estimators. Contractors shall submit new classifications for specific job functions that their employees are performing. The Department will review and recommend for acceptance to FHWA the new classifications proposed by contractors, if applicable. New classifications shall meet the following requirements:

Proposed training classifications are reasonable and realistic based on the job skill classification needs, and

The number of training hours specified in the training classification is consistent with common practices and provides enough time for the trainee to obtain journeyman level status.

The Contractor may allow trainees to be trained by a subcontractor provided that the Contractor retains primary responsibility for meeting the training and this provision is made applicable to the subcontract. However, only the Contractor will receive credit towards the annual goal for the trainee.

Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journeyman level status or in which they have been employed as a journeyman.

Records and Reports

The Contractor shall maintain enrollment, monthly and completion reports documenting company compliance under these contract documents. These documents and any other information as requested shall be submitted to the OJT Program Manager.

Upon completion and graduation of the program, the Contractor shall provide each trainee with a certification Certificate showing the type and length of training satisfactorily completed.

Trainee Interviews

All trainees enrolled in the program will receive an initial and Trainee/Post graduate interview conducted by the OJT program staff.

Trainee Wages

Contractors shall compensate trainees on a graduating pay scale based upon a percentage of the prevailing minimum journeyman wages (Davis-Bacon Act). Minimum pay shall be as follows:

60 percent	of the journeyman wage for the first half of the training period
75 percent	of the journeyman wage for the third quarter of the training period
90 percent	of the journeyman wage for the last quarter of the training period

In no instance shall a trainee be paid less than the local minimum wage. The Contractor shall adhere to the minimum hourly wage rate that will satisfy both the NC Department of Labor (NCDOL) and the Department.

Achieving or Failing to Meet Training Goals

The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and who receives training for at least 50 percent of the specific program requirement. Trainees will be allowed to be transferred between projects if required by the Contractor's scheduled workload to meet training goals.

If a contractor fails to attain their training assignments for the calendar year, they may be taken off the NCDOT's Bidders List.

Measurement and Payment

No compensation will be made for providing required training in accordance with these contract documents.

STANDARD SPECIAL PROVISION
MINIMUM WAGES
GENERAL DECISION NC130069 01/04/2013 NC69

Z-69

Date: January 4, 2013

General Decision Number: NC130069 01/04/2013 NC69

Superseded General Decision Numbers: NC20120069

State: North Carolina

Construction Type: HEAVY

COUNTIES:

Beaufort	Dare	Pamlico
Bertie	Gates	Pasquotank
Camden	Hertford	Perquimans
Carteret	Hyde	Tyrrell
Chowan	Jones	Washington
Craven	Martin	

HEAVY CONSTRUCTION PROJECTS

Modification Number	Publication Date
0	01/04/2013

SUNC2011-050 08/26/2011

	Rates	Fringes
CARPENTER (Form Work Only)	15.47	1.50
CEMENT MASON/CONCRETE FINISHER	13.10	1.32
LABORER		
Common or General	9.63	0.33
Pipelayer	12.86	1.73
OPERATOR		
Backhoe/Excavator/Trackhoe	14.50	2.39
TRUCK DRIVER	12.02	0.00

Welders – Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rates.

0000/9999: weighted union wage rates will be published annually each January.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

County : Dare

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
			ROADWAY ITEMS			
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0043000000-N	226	GRADING	Lump Sum	L.S.	
0004	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUBBING	1 ACR		
0005	0036000000-E	225	UNDERCUT EXCAVATION	2,652 CY		
0006	0194000000-E	SP	SELECT GRANULAR MATERIAL, CLASS III	3,150 CY		
0007	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	500 SY		
0008	0199000000-E	SP	TEMPORARY SHORING	6,480 SF		
0010	0248000000-N	SP	GENERIC GRADING ITEM REMOVE EXISTING SANDBAGS	Lump Sum	L.S.	
0011	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	60 TON		
0012	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	180 SY		
0013	0335100000-E	305	12" DRAINAGE PIPE	268 LF		
0014	0335200000-E	305	15" DRAINAGE PIPE	92 LF		
0015	0354000000-E	310	****" RC PIPE CULVERTS, CLASS ***** (15", V)	180 LF		
0016	0995000000-E	340	PIPE REMOVAL	338 LF		
0017	1220000000-E	545	INCIDENTAL STONE BASE	50 TON		
0018	1330000000-E	607	INCIDENTAL MILLING	960 SY		
0019	1489000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0B	11,920 TON		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0020	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	8,160 TON		
0021	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	1,015 TON		
0022	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	150 TON		
0023	2022000000-E	815	SUBDRAIN EXCAVATION	224 CY		
0024	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	1,000 SY		
0025	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	168 CY		
0026	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	1,000 LF		
0027	2070000000-N	815	SUBDRAIN PIPE OUTLET	2 EA		
0028	2077000000-E	815	6" OUTLET PIPE	12 LF		
0029	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	6 EA		
0030	2363000000-N	840	FRAME WITH TWO GRATES, STD 840.***** (840.33)	6 EA		
0031	2556000000-E	846	SHOULDER BERM GUTTER	388 LF		
0032	3030000000-E	862	STEEL BM GUARDRAIL	312.5 LF		
0033	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	5 EA		
0034	3215000000-N	862	GUARDRAIL ANCHOR UNITS, TYPE III	4 EA		
0035	3270000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE 350	4 EA		
0036	3360000000-E	863	REMOVE EXISTING GUARDRAIL	1,121 LF		
0037	3578000000-N	SP	GENERIC FENCING ITEM REMOVE & RESET EXISTING GATE	1 EA		
0038	3642000000-E	876	RIP RAP, CLASS A	20 TON		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0039	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	365 SY		
0040	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (D)	39 SF		
0041	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (E)	77 SF		
0042	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (MILEMARKER)	18 SF		
0044	4078000000-E	903	SUPPORTS, 2-LB STEEL U-CHANNEL	6 EA		
0045	4096000000-N	904	SIGN ERECTION, TYPE D	5 EA		
0046	4102000000-N	904	SIGN ERECTION, TYPE E	15 EA		
0047	4114000000-N	904	SIGN ERECTION, MILEMARKERS	6 EA		
0048	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	154 SF		
0049	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	96 SF		
0050	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	288 SF		
0051	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	2 EA		
0052	4430000000-N	1130	DRUMS	350 EA		
0053	4445000000-E	1145	BARRICADES (TYPE III)	400 LF		
0054	4455000000-N	1150	FLAGGER	200 DAY		
0055	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	8 EA		
0056	4470000000-N	1160	RESET TEMPORARY CRASH CUSHION	3 EA		
0057	4480000000-N	1165	TMA	2 EA		
0058	4485000000-E	1170	PORTABLE CONCRETE BARRIER	15,043 LF		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0059	4507000000-E	1170	WATER FILLED BARRIER	2,327 LF		
0060	4508000000-E	1170	RESET WATER FILLED BARRIER	360 LF		
0061	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	15,074 LF		
0062	4686000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	16,318 LF		
0063	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	152 LF		
0064	4697000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 120 MILS)	103 LF		
0065	4710000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	27 LF		
0066	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	3 EA		
0067	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	113,201 LF		
0068	4847000000-E	1205	POLYUREA PAVEMENT MARKING LINES (4", **********) (HIGHLY REFLECTIVE ELEMENTS)	49,650 LF		
0069	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	7,131 LF		
0070	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	259 EA		
0071	6000000000-E	1605	TEMPORARY SILT FENCE	20,000 LF		
0072	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	200 TON		
0073	6012000000-E	1610	SEDIMENT CONTROL STONE	200 TON		
0074	6015000000-E	1615	TEMPORARY MULCHING	5 ACR		
0075	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	150 LB		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0076	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	0.5 TON		
0077	6024000000-E	1622	TEMPORARY SLOPE DRAINS	500 LF		
0078	6029000000-E	SP	SAFETY FENCE	1,000 LF		
0079	6030000000-E	1630	SILT EXCAVATION	300 CY		
0080	6036000000-E	1631	MATTING FOR EROSION CONTROL	6,000 SY		
0081	6042000000-E	1632	1/4" HARDWARE CLOTH	200 LF		
0082	6071012000-E	SP	COIR FIBER WATTLE	1,200 LF		
0083	6084000000-E	1660	SEEDING & MULCHING	5 ACR		
0084	6087000000-E	1660	MOWING	2.5 ACR		
0085	6090000000-E	1661	SEED FOR REPAIR SEEDING	100 LB		
0086	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.5 TON		
0087	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	175 LB		
0088	6108000000-E	1665	FERTILIZER TOPDRESSING	5 TON		
0089	6114500000-N	1667	SPECIALIZED HAND MOWING	10 MHR		
0090	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	50 EA		
0125	0234000000-E	SP	GENERIC GRADING ITEM SUPPLEMENTAL BORROW EXCAVATION	6,000 CY		
0126	0234000000-E	SP	GENERIC GRADING ITEM SUPPLEMENTAL UNCLASSIFIED EXCAVATION	2,500 CY		
0127	4082000000-E	903	SUPPORTS, WOOD	321 LF		
0128	2570000000-N	SP	MODIFIED CONCRETE FLUME	1 EA		

County : Dare

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
			STRUCTURE ITEMS			
0091	8017000000-N	SP	CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP ACCESS AT STA ********** (3144+80.00-L-)	Lump Sum	L.S.	
0092	8021000000-N	SP	REMOVAL OF EXISTING STRUCTURE AT STATION ********** (3144+80.00-L-)	Lump Sum	L.S.	
0093	8084000000-N	410	FOUNDATION EXCAVATION FOR END BENT ** AT STATION ********** (1, 3144+80.00-L-)	Lump Sum	L.S.	
0094	8084000000-N	410	FOUNDATION EXCAVATION FOR END BENT ** AT STATION ********** (2, 3144+80.00-L-)	Lump Sum	L.S.	
0095	8112730000-N	450	PDA TESTING	37 EA		
0096	8121000000-N	412	UNCLASSIFIED STRUCTURE EXCAVATION AT STATION ******** (3144+80.00-L-)	Lump Sum	L.S.	
0097	8147000000-E	420	REINFORCED CONCRETE DECK SLAB	455,040 SF		
0098	8156000000-E	SP	CONCRETE WEARING SURFACE	19,200 SF		
0099	8161000000-E	420	GROOVING BRIDGE FLOORS	413,563 SF		
0100	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ********** (3144+80.00-L-)	Lump Sum	L.S.	
0101	8393000000-N	450	PILE REDRIVES	214 EA		
0102	8475000000-E	460	TWO BAR METAL RAIL	23,080 LF		
0103	8517000000-E	460	1'-***"X *****" CONCRETE PARAPET (1'-2" X 3'-0")	23,124.3 LF		
0104	8657000000-N	430	ELASTOMERIC BEARINGS	Lump Sum	L.S.	
0105	8692000000-N	SP	FOAM JOINT SEALS	Lump Sum	L.S.	
0106	8713000000-N	SP	MODULAR EXPANSION JOINT SEALS	Lump Sum	L.S.	

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0107	8763000000-E	430	3'-0" X 2'-0" PRESTRESSED CONC CORED SLABS	7,153.13 LF		
0108	8867000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE MOMENT SLAB	709 LF		
0109	8867000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE SHEET PILE WALL	920.62 LF		
0110	8867000000-E	SP	GENERIC STRUCTURE ITEM FIB 72" PRESTRESSED CONCRETE GIRDERS	42,420.8 LF		
0111	8881000000-E	SP	GENERIC STRUCTURE ITEM OFFSITE JETTING SPOIL DISPOSAL	25,000 CY		
0112	8892000000-E	SP	GENERIC STRUCTURE ITEM REINFORCED APPROACH FILL	4,800 SF		
0113	8990000000-N	SP	CONTRACT TIME	5,000 DOL		
			******* BEGIN SCHEDULE IA ******* ******* (2 ALTERNATES) *******			
0114 IA1	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ********** (4 THRU 94, 3144+80.00-L-)	Lump Sum	L.S.	
0115 IA1	8175000000-E	420	CLASS AA CONCRETE (BRIDGE)	14,939.5 CY		
0116 IA1	8353000000-E	450	30" PRESTRESSED CONCRETE PILES	89,980 LF		
0117 IA1	8889000000-E	SP	GENERIC STRUCTURE ITEM SPIRAL STAINLESS REINFORCING STEEL	91,418 LB		
0118 IA1	8889000000-E	SP	GENERIC STRUCTURE ITEM STAINLESS STEEL REINFORCING	3,554,107 LB		
			*** OR ***			
0119 IA2	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ********** (4 THRU 94, 3144+80.00-L-)	Lump Sum	L.S.	
0120 IA2	8175000000-E	420	CLASS AA CONCRETE (BRIDGE)	16,884.1 CY		
0121 IA2	8353000000-E	450	30" PRESTRESSED CONCRETE PILES	12,400 LF		

County : Dare

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0122 IA2	8867000000-E	SP	GENERIC STRUCTURE ITEM 36" PRESTRESSED CONCRETE PILES	68,960 LF		
0123 IA2	8889000000-E	SP	GENERIC STRUCTURE ITEM SPIRAL STAINLESS REINFORCING STEEL	97,088 LB		
0124 IA2	8889000000-E	SP	GENERIC STRUCTURE ITEM STAINLESS STEEL REINFORCING	3,882,235 LB		

***** END SCHEDULE IA *****

0829/Nov14/Q9149325.45/D609343042000/E126 Total Amount Of Bid For Entire Project :

Vendor 1 of 10: PARSONS CONSTRUCTION GROUP INC. (12240)
Call Order 001 (Proposal: C203171)

Bid Information

County: DARE

Address: 1200 Woodruff Rd
Suite A-3
Greenville , SC , 29607

Signature Check: Garry_Higdem_12240

Time Bid Received: November 19, 2013 01:56 PM

Amendment Count: 2

Bid Checksum: 2744868E

Bid Total: $83,656,262.97 √

Items Total: $83,656,262.97

Time Total: $0.00

Bidding Errors:
None.

DBE Goal Set 1.0
DBE Goal Met 1.0

Vendor 1 of 10: PARSONS CONSTRUCTION GROUP INC. (12240)
Call Order 001 (Proposal: C203171)

Bid Bond Information

Projects:		**Bond Maximum:**	
Counties:		**State of Incorporation:**	
Bond ID:	SNC13379324	**Agency Execution Date:**	11/18/2013 4
Paid by Check:	No	**Surety Name:**	surety2000
Bond Percent:	5%	**Bond Agency Name:**	Fidelity And Deposit Company of Maryland, Zurich Ameri

Vendor 12240's Bid Information for Call 001, Letting L131119, 11/19/13

Parsons Transportation Group, Inc. (12240)
Call Order 001 (Proposal ID C203171)

LIST OF DBE PARTICIPANTS

VENDOR NUMBER	DBE NAME ADDRESS	WORK CODE	TYPE OF WORK	CERT TYPE	AMOUNT	
8454 MB	RONALD SMITH DBA ENTERPRISE REB 150 PRESCOTT RD , YEMASSEE, SC 29945			Sub	1,007,436.27	Committed
				TOTAL:	$1,007,436.27 1.20%	

Vendor 12240's Bid Information for Call 001, Letting L131119, 11/19/13

Parsons Transportation Group, Inc. (12240)
Call Order 001 (Proposal ID C203171)

Miscelleneous Data Info - Contractor Responses:
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NON-COLLUSION AND DEBARMENT CERTIFICATION

Explanation of the prospective bidder that is unable to certify to any of the statements in this certification:

Explanation:
NOT ANSWERED
NOT ANSWERED
NOT ANSWERED
NOT ANSWERED

AWARD LIMITS ON MULTIPLE PROJECTS

By answering YES to this statement, the bidder acknowleges that they are using the award limits on multiple projects. No

It is the desire of the Bidder to be awarded contracts, the value of which will not exceed a total of NOT ANSWERED for those projects indicated herein, for which bids will be opened on (MM/DD/YY)

The Award Limits shall apply to the following projects:

Contract Number	County
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	

Bid Bond Data Info - Contractor Responses:
==========

BondID: SNC13379324
Surety Registry Agency: surety2000
Verified?: Yes

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      Surety Agency: Fidelity And Deposit Company of Maryland, Zurich America
Bond Execution Date: 11/18/2013 4
        Bond Amount:   $4,182,813.15 (Five Percent of Bid)
```

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
Section 0001	ROADWAY ITEMS					
	Alt Group					
0001	0000100000-N MOBILIZATION	LUMP	LUMP		3,990,000.00	
0002	0000400000-N CONSTRUCTION SURVEYING	LUMP	LUMP		500,000.00	
0003	0043000000-N GRADING	LUMP	LUMP		1,400,000.00	
0004	0050000000-E SUPPLEMENTARY CLEARING & GRUB-BING	1.000 ACR	9,000.00000		9,000.00	
0005	0036000000-E UNDERCUT EXCAVATION	2,652.000 CY	15.00000		39,780.00	
0006	0194000000-E SELECT GRANULAR MATERIAL, CLASS III	3,150.000 CY	20.00000		63,000.00	
0007	0196000000-E GEOTEXTILE FOR SOIL STABILIZA-TION	500.000 SY	2.80000		1,400.00	
0008	0199000000-E TEMPORARY SHORING	6,480.000 SF	19.00000		123,120.00	
0010	0248000000-N GENERIC GRADING ITEM REMOVE EXISTING SANDBAGS	LUMP	LUMP		35,000.00	
0011	0318000000-E FOUNDATION CONDITIONING MATE- RIAL, MINOR STRUCTURES	60.000 TON	50.00000		3,000.00	
0012	0320000000-E FOUNDATION CONDITIONING GEO-TEXTILE	180.000 SY	5.00000		900.00	

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0013	0335100000-E 12" DRAINAGE PIPE	268.000 LF	35.00000		9,380.00	
0014	0335200000-E 15" DRAINAGE PIPE	92.000 LF	38.00000		3,496.00	
0015	0354000000-E ***" RC PIPE CULVERTS, CLASS ***** (15", V)	180.000 LF	55.00000		9,900.00	
0016	0995000000-E PIPE REMOVAL	338.000 LF	9.00000		3,042.00	
0017	1220000000-E INCIDENTAL STONE BASE	50.000 TON	45.00000		2,250.00	
0018	1330000000-E INCIDENTAL MILLING	960.000 SY	14.00000		13,440.00	
0019	1489000000-E ASPHALT CONC BASE COURSE, TYPE B25.0B	11,920.000 TON	50.00000		596,000.00	
0020	1519000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5B	8,160.000 TON	55.00000		448,800.00	
0021	1575000000-E ASPHALT BINDER FOR PLANT MIX	1,015.000 TON	700.00000		710,500.00	
0022	1693000000-E ASPHALT PLANT MIX, PAVEMENT REPAIR	150.000 TON	270.00000		40,500.00	
0023	2022000000-E SUBDRAIN EXCAVATION	224.000 CY	18.00000		4,032.00	
0024	2026000000-E GEOTEXTILE FOR SUBSURFACE DRAINS	1,000.000 SY	4.00000		4,000.00	

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0025	2036000000-E SUBDRAIN COARSE AGGREGATE	168.000 CY	65.00000		10,920.00	
0026	2044000000-E 6" PERFORATED SUBDRAIN PIPE	1,000.000 LF	8.00000		8,000.00	
0027	2070000000-N SUBDRAIN PIPE OUTLET	2.000 EA	350.00000		700.00	
0028	2077000000-E 6" OUTLET PIPE	12.000 LF	22.00000		264.00	
0029	2286000000-N MASONRY DRAINAGE STRUCTURES	6.000 EA	1,100.00000		6,600.00	
0030	2363000000-N FRAME WITH TWO GRATES, STD 840.***** (840.33)	6.000 EA	620.00000		3,720.00	
0031	2556000000-E SHOULDER BERM GUTTER	388.000 LF	25.00000		9,700.00	
0032	3030000000-E STEEL BM GUARDRAIL	312.500 LF	18.00000		5,625.00	
0033	3150000000-N ADDITIONAL GUARDRAIL POSTS	5.000 EA	50.00000		250.00	
0034	3215000000-N GUARDRAIL ANCHOR UNITS, TYPE III	4.000 EA	1,600.00000		6,400.00	
0035	3270000000-N GUARDRAIL ANCHOR UNITS, TYPE 350	4.000 EA	2,300.00000		9,200.00	
0036	3360000000-E REMOVE EXISTING GUARDRAIL	1,121.000 LF	2.20000		2,466.20	

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0037	3578000000-N GENERIC FENCING ITEM REMOVE & RESET EXISTING GATE	1.000 EA	1,600.00000		1,600.00	
0038	3642000000-E RIP RAP, CLASS A	20.000 TON	85.00000		1,700.00	
0039	3656000000-E GEOTEXTILE FOR DRAINAGE	365.000 SY	5.00000		1,825.00	
0040	4025000000-E CONTRACTOR FURNISHED, TYPE ***SIGN (D)	39.000 SF	16.00000		624.00	
0041	4025000000-E CONTRACTOR FURNISHED, TYPE ***SIGN (E)	77.000 SF	16.00000		1,232.00	
0042	4025000000-E CONTRACTOR FURNISHED, TYPE ***SIGN (MILEMARKER)	18.000 SF	16.00000		288.00	
0044	4078000000-E SUPPORTS, 2-LB STEEL U-CHANNEL	6.000 EA	45.00000		270.00	
0045	4096000000-N SIGN ERECTION, TYPE D	5.000 EA	130.00000		650.00	
0046	4102000000-N SIGN ERECTION, TYPE E	15.000 EA	90.00000		1,350.00	
0047	4114000000-N SIGN ERECTION, MILEMARKERS	6.000 EA	80.00000		480.00	
0048	4400000000-E WORK ZONE SIGNS (STATIONARY)	154.000 SF	8.00000		1,232.00	
0049	4405000000-E WORK ZONE SIGNS (PORTABLE)	96.000 SF	10.00000		960.00	

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0050	4410000000-E WORK ZONE SIGNS (BARRICADE MOUNTED)	288.000 SF	7.00000		2,016.00	
0051	4420000000-N PORTABLE CHANGEABLE MESSAGE SIGN	2.000 EA	25,000.00000		50,000.00	
0052	4430000000-N DRUMS	350.000 EA	65.00000		22,750.00	
0053	4445000000-E BARRICADES (TYPE III)	400.000 LF	21.00000		8,400.00	
0054	4455000000-N FLAGGER	200.000 DAY	170.00000		34,000.00	
0055	4465000000-N TEMPORARY CRASH CUSHIONS	8.000 EA	6,000.00000		48,000.00	
0056	4470000000-N RESET TEMPORARY CRASH CUSHION	3.000 EA	2,800.00000		8,400.00	
0057	4480000000-N TMA	2.000 EA	32,000.00000		64,000.00	
0058	4485000000-E PORTABLE CONCRETE BARRIER	15,043.000 LF	28.00000		421,204.00	
0059	4507000000-E WATER FILLED BARRIER	2,327.000 LF	65.00000		151,255.00	
0060	4508000000-E RESET WATER FILLED BARRIER	360.000 LF	27.00000		9,720.00	
0061	4685000000-E THERMOPLASTIC PAVEMENT MARKINGLINES (4", 90 MILS)	15,074.000 LF	0.70000		10,551.80	

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0062	4686000000-E THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	16,318.000 LF	0.75000		12,238.50	
0063	4695000000-E THERMOPLASTIC PAVEMENT MARKINGLINES (8", 90 MILS)	152.000 LF	3.30000		501.60	
0064	4697000000-E THERMOPLASTIC PAVEMENT MARKINGLINES (8", 120 MILS)	103.000 LF	3.30000		339.90	
0065	4710000000-E THERMOPLASTIC PAVEMENT MARKINGLINES (24", 120 MILS)	27.000 LF	11.00000		297.00	
0066	4725000000-E THERMOPLASTIC PAVEMENT MARKINGSYMBOL (90 MILS)	3.000 EA	165.00000		495.00	
0067	4810000000-E PAINT PAVEMENT MARKING LINES (4")	113,201.000 LF	0.28000		31,696.28	
0068	4847000000-E POLYUREA PAVEMENT MARKING LINES (4", **********) (HIGHLY REFLECTIVE ELEMENTS)	49,650.000 LF	0.90000		44,685.00	
0069	4850000000-E REMOVAL OF PAVEMENT MARKING LINES (4")	7,131.000 LF	0.95000		6,774.45	
0070	4900000000-N PERMANENT RAISED PAVEMENT MARKERS	259.000 EA	6.60000		1,709.40	
0071	6000000000-E TEMPORARY SILT FENCE	20,000.000 LF	2.70000		54,000.00	
0072	6006000000-E STONE FOR EROSION CONTROL, CLASS A	200.000 TON	50.00000		10,000.00	

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0073	6012000000-E SEDIMENT CONTROL STONE	200.000 TON	34.00000		6,800.00	
0074	6015000000-E TEMPORARY MULCHING	5.000 ACR	640.00000		3,200.00	
0075	6018000000-E SEED FOR TEMPORARY SEEDING	150.000 LB	3.80000		570.00	
0076	6021000000-E FERTILIZER FOR TEMPORARY SEED-ING	0.500 TON	1,200.00000		600.00	
0077	6024000000-E TEMPORARY SLOPE DRAINS	500.000 LF	11.00000		5,500.00	
0078	6029000000-E SAFETY FENCE	1,000.000 LF	2.50000		2,500.00	
0079	6030000000-E SILT EXCAVATION	300.000 CY	6.00000		1,800.00	
0080	6036000000-E MATTING FOR EROSION CONTROL	6,000.000 SY	1.80000		10,800.00	
0081	6042000000-E 1/4" HARDWARE CLOTH	200.000 LF	4.20000		840.00	
0082	6071012000-E COIR FIBER WATTLE	1,200.000 LF	6.00000		7,200.00	
0083	6084000000-E SEEDING & MULCHING	5.000 ACR	1,800.00000		9,000.00	
0084	6087000000-E MOWING	2.500 ACR	110.00000		275.00	

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0085	6090000000-E SEED FOR REPAIR SEEDING	100.000 LB	8.00000		800.00	
0086	6093000000-E FERTILIZER FOR REPAIR SEEDING	0.500 TON	1,400.00000		700.00	
0087	6096000000-E SEED FOR SUPPLEMENTAL SEEDING	175.000 LB	3.50000		612.50	
0088	6108000000-E FERTILIZER TOPDRESSING	5.000 TON	1,100.00000		5,500.00	
0089	6114500000-N SPECIALIZED HAND MOWING	10.000 MHR	110.00000		1,100.00	
0090	6117000000-N RESPONSE FOR EROSION CONTROL	50.000 EA	227.00000		11,350.00	
0125	0234000000-E GENERIC GRADING ITEM SUPPLEMENTAL BORROW EXCAVATION	6,000.000 CY	21.00000		126,000.00	
0126	0234000000-E GENERIC GRADING ITEM SUPPLEMENTAL UNCLASSIFIED EXCAVATION	2,500.000 CY	11.00000		27,500.00	
0127	4082000000-E SUPPORTS, WOOD	321.000 LF	5.50000		1,765.50	
0128	2570000000-N MODIFIED CONCRETE FLUME	1.000 EA	680.00000		680.00	
	Section 0001 Total				9,304,723.13	

Section 0004 STRUCTURE ITEMS

Alt Group

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0091	8017000000-N CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP ACCESS AT STA ********** (3144+80.00-L-)	LUMP	LUMP		95,000.00	
0092	8021000000-N REMOVAL OF EXISTING STRUCTURE AT STATION ********** (3144+80.00-L-)	LUMP	LUMP		366,000.00	
0093	8084000000-N FOUNDATION EXCAVATION FOR END BENT ** AT STATION ********** (1, 3144+80.00-L-)	LUMP	LUMP		200.00	
0094	8084000000-N FOUNDATION EXCAVATION FOR END BENT ** AT STATION ********** (2, 3144+80.00-L-)	LUMP	LUMP		200.00	
0095	8112730000-N PDA TESTING	37.000 EA	8,400.00000		310,800.00	
0096	8121000000-N UNCLASSIFIED STRUCTURE EXCAVA-TION AT STATION ******** (3144+80.00-L-)	LUMP	LUMP		500.00	
0097	8147000000-E REINFORCED CONCRETE DECK SLAB	455,040.000 SF	53.00000		24,117,120.00	
0098	8156000000-E CONCRETE WEARING SURFACE	19,200.000 SF	12.00000		230,400.00	
0099	8161000000-E GROOVING BRIDGE FLOORS	413,563.000 SF	0.28000		115,797.64	
0100	8210000000-N BRIDGE APPROACH SLABS, STATION********** (3144+80.00-L-)	LUMP	LUMP		65,000.00	

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0101	8393000000-N PILE REDRIVES	214.000 EA	670.00000		143,380.00	
0102	8475000000-E TWO BAR METAL RAIL	23,080.000 LF	75.00000		1,731,000.00	
0103	8517000000-E 1'-**"X ***** " CONCRETE PARA- PET (1'-2" X 3'-0")	23,124.300 LF	64.00000		1,479,955.20	
0104	8657000000-N ELASTOMERIC BEARINGS	LUMP	LUMP		375,000.00	
0105	8692000000-N FOAM JOINT SEALS	LUMP	LUMP		61,500.00	
0106	8713000000-N MODULAR EXPANSION JOINT SEALS	LUMP	LUMP		543,400.00	
0107	8763000000-E 3'-0" X 2'-0" PRESTRESSED CONCCORED SLABS	7,153.130 LF	140.00000		1,001,438.20	
0108	8867000000-E GENERIC STRUCTURE ITEM CONCRETE MOMENT SLAB	709.000 LF	180.00000		127,620.00	
0109	8867000000-E GENERIC STRUCTURE ITEM CONCRETE SHEET PILE WALL	920.620 LF	1,400.00000		1,288,868.00	
0110	8867000000-E GENERIC STRUCTURE ITEM FIB 72" PRESTRESSED CONCRETE GIRDERS	42,420.800 LF	216.00000		9,162,892.80	
0111	8881000000-E GENERIC STRUCTURE ITEM OFFSITE JETTING SPOIL DISPOSAL	25,000.000 CY	0.01000		250.00	

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0112	8892000000-E GENERIC STRUCTURE ITEM REINFORCED APPROACH FILL	4,800.000 SF	11.00000		52,800.00	
0113	8990000000-N CONTRACT TIME	5,000.000 DOL	800.00000		4,000,000.00	
0114 IA1	8091000000-N FOUNDATION EXCAVATION FOR BENT** AT STATION ********** (4 THRU 94, 3144+80.00-L-)	LUMP	LUMP		10,000.00	
0115 IA1	8175000000-E CLASS AA CONCRETE (BRIDGE)	14,939.500 CY	452.00000		6,752,654.00	
0116 IA1	8353000000-E 30" PRESTRESSED CONCRETE PILES	89,980.000 LF	126.00000		11,337,480.00	
0117 IA1	8889000000-E GENERIC STRUCTURE ITEM SPIRAL STAINLESS REINFORCING STEEL	91,418.000 LB	3.50000		319,963.00	
0118 IA1	8889000000-E GENERIC STRUCTURE ITEM STAINLESS STEEL REINFORCING	3,554,107.000 LB	3.00000		10,662,321.00	
0119 IA2	8091000000-N FOUNDATION EXCAVATION FOR BENT** AT STATION ********** (4 THRU 94, 3144+80.00-L-)	LUMP	LUMP			
0120 IA2	8175000000-E CLASS AA CONCRETE (BRIDGE)	16,884.100 CY				
0121 IA2	8353000000-E 30" PRESTRESSED CONCRETE PILES	12,400.000 LF				
0122 IA2	8867000000-E GENERIC STRUCTURE ITEM 36" PRESTRESSED CONCRETE PILES	68,960.000 LF				

Contract ID: C203171 Project(s): BRNHF-0012(55)
Letting Date: 11-19-13 Call Order: 001
Bidder: 12240 - Parsons Transportation Group, Inc.

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0123 IA2	8889000000-E GENERIC STRUCTURE ITEM SPIRAL STAINLESS REINFORCING STEEL	97,088.000 LB				
0124 IA2	8889000000-E GENERIC STRUCTURE ITEM STAINLESS STEEL REINFORCING	3,882,235.000 LB				
	Section 0004 Total				74,351,539.84	
	Bid Total				83,656,262.97	

NON-COLLUSION AND DEBARMENT CERTIFICATION

The bidder certifies that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor. In addition, submitting this electronic bid constitutes the bidder's certification of Status under penalty of perjury under the laws of the United States and in accordance with the Debarment Certification on file with the Department.

By submitting this bid, the bidder certifies to the best of his knowledge and belief that he and his principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and

d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective bidder is unable to certify to any of the statements in this certification, the bidder shall submit an explanation in the blanks provided herein. The explanation will not necessarily result in denial of participation in a contract.

Explanation:
NOT ANSWERED
NOT ANSWERED
NOT ANSWERED
NOT ANSWERED

If the prequalified bidder's status changes, he shall immediately submit a new fully executed non-collusion affidavit and debarment certification with an explanation of the change to the Contract Office prior to submitting the bid.

Failure to furnish a certification or an explanation will be grounds for rejection of a bid

AWARD LIMITS ON MULTIPLE PROJECTS

By answering YES to this statement, the bidder acknowleges that they are using the award limits on multiple projects. No

A bidder who desires to bid on more than one project on which bids are to be opened on the same date, and who also desires to avoid receiving an award of more projects than he is equipped to handle, may bid on any number of projects but may limit the total amount of work awarded to him on selected projects by completing the AWARD LIMITS ON MULTIPLE PROJECTS.

The Award Limits on Multiple Projects must be filled in on each project bid for which the Bidder desires protection.

It is the desire of the Bidder to be awarded contracts, the value of which

will not exceed a total of NOT ANSWERED for those

projects indicated herein, for which bids will be opened on (MM/DD/YY)

The Award Limits shall apply to the following projects:

Contract Number	County
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	

It is agreed that if I am (we are) the low Bidder(s) on indicated projects, the total value of which is more than the above stipulated award limits, the Board of Transportation will award me (us) projects from among those indicated that have a total value not to exceed the award limit and will result in the lowest total bids to the Department of Transportation.

PROPOSAL: C203171
LETTING: L131119 CALL: 001
VENDOR: 12240 Parsons Transportation Group, Inc.

LINE NO.	ITEM NO.	ITEM DESC.	UNIT TYPE	SUBCONTRACTOR QUANTITY	SUBCONTRACTOR UNIT PRICE	EXTENDED AMOUNT
DBE SUBCONTRACTOR: 8454 RONALD SMITH DBA ENTERPRISE REBAR						
Will Use Quote: Yes						
0097	8147000000-E	REINF CONCRE	SF	455040.000	1.16800	531486.72
	Partial scope of install rebar.					
0098	8156000000-E	CONCRETE WEA	SF	19200.000	0.19040	3655.68
	Partial scope of install rebar.					
0100	8210000000-N	BRG APPR SLA	LS	1.000	1528.00000	1528.00
	Partial scope of install rebar.					
0103	8517000000-E	1'-**"X*****	LF	23124.300	2.45700	56816.41
	Partial scope of install rebar.					
0108	8867000000-E	GENERIC STRU	LF	709.000	3.32860	2359.98
	Partial scope of install rebar.					
0109	8867000000-E	GENERIC STRU	LF	920.620	1.59450	1467.93
	Partial scope of install rebar.					
0117	8889000000-E	GENERIC STRU	LB	91418.000	0.11250	10284.53
	Partial scope of install rebar.					
0118	8889000000-E	GENERIC STRU	LB	3554107.000	0.11250	399837.04
	Partial scope of install rebar.					

DBE COMMITMENT TOTAL FOR SUBCONTRACTOR: 1,007,436.27 Committed
DBE COMMITMENT TOTAL FOR VENDOR (SubContractor) 1,007,4

TOTAL DBE COMMITMENT FOR VENDOR: Entered: 1.20% or 1007436.27
Required: 1.00% or 836562.63
<GOAL MET>

Contract Item Sheets For C203171

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
			ROADWAY ITEMS			
0001	0000100000-N	800	MOBILIZATION	Lump Sum LS	3,990,000.00	3,990,000.00
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum LS	500,000.00	500,000.00
0003	0043000000-N	226	GRADING	Lump Sum LS	1,400,000.00	1,400,000.00
0004	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUB-BING	1 ACR	9,000.00	9,000.00
0005	0036000000-E	225	UNDERCUT EXCAVATION	2,652 CY	15.00	39,780.00
0006	0194000000-E	SP	SELECT GRANULAR MATERIAL, CLASS III	3,150 CY	20.00	63,000.00
0007	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZA-TION	500 SY	2.80	1,400.00
0008	0199000000-E	SP	TEMPORARY SHORING	6,480 SF	19.00	123,120.00
0010	0248000000-N	SP	GENERIC GRADING ITEM REMOVE EXISTING SANDBAGS	Lump Sum LS	35,000.00	35,000.00
0011	0318000000-E	300	FOUNDATION CONDITIONING MATE-RIAL, MINOR STRUCTURES	60 TON	50.00	3,000.00
0012	0320000000-E	300	FOUNDATION CONDITIONING GEO-TEXTILE	180 SY	5.00	900.00
0013	0335100000-E	305	12" DRAINAGE PIPE	268 LF	35.00	9,380.00
0014	0335200000-E	305	15" DRAINAGE PIPE	92 LF	38.00	3,496.00
0015	0354000000-E	310	***" RC PIPE CULVERTS, CLASS ***** (15", V)	180 LF	55.00	9,900.00
0016	0995000000-E	340	PIPE REMOVAL	338 LF	9.00	3,042.00
0017	1220000000-E	545	INCIDENTAL STONE BASE	50 TON	45.00	2,250.00
0018	1330000000-E	607	INCIDENTAL MILLING	960 SY	14.00	13,440.00
0019	1489000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0B	11,920 TON	50.00	596,000.00

Contract Item Sheets For C203171

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0020	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	8,160 TON	55.00	448,800.00
0021	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	1,015 TON	700.00	710,500.00
0022	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	150 TON	270.00	40,500.00
0023	2022000000-E	815	SUBDRAIN EXCAVATION	224 CY	18.00	4,032.00
0024	2026000000-E	815	GEOTEXTILE FOR SUBSURFACE DRAINS	1,000 SY	4.00	4,000.00
0025	2036000000-E	815	SUBDRAIN COARSE AGGREGATE	168 CY	65.00	10,920.00
0026	2044000000-E	815	6" PERFORATED SUBDRAIN PIPE	1,000 LF	8.00	8,000.00
0027	2070000000-N	815	SUBDRAIN PIPE OUTLET	2 EA	350.00	700.00
0028	2077000000-E	815	6" OUTLET PIPE	12 LF	22.00	264.00
0029	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	6 EA	1,100.00	6,600.00
0030	2363000000-N	840	FRAME WITH TWO GRATES, STD 840.***** (840.33)	6 EA	620.00	3,720.00
0031	2556000000-E	846	SHOULDER BERM GUTTER	388 LF	25.00	9,700.00
0032	3030000000-E	862	STEEL BM GUARDRAIL	312.5 LF	18.00	5,625.00
0033	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	5 EA	50.00	250.00
0034	3215000000-N	862	GUARDRAIL ANCHOR UNITS, TYPE III	4 EA	1,600.00	6,400.00
0035	3270000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE 350	4 EA	2,300.00	9,200.00
0036	3360000000-E	863	REMOVE EXISTING GUARDRAIL	1,121 LF	2.20	2,466.20
0037	3578000000-N	SP	GENERIC FENCING ITEM REMOVE & RESET EXISTING GATE	1 EA	1,600.00	1,600.00
0038	3642000000-E	876	RIP RAP, CLASS A	20 TON	85.00	1,700.00

Contract Item Sheets For C203171

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0039	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	365 SY	5.00	1,825.00
0040	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (D)	39 SF	16.00	624.00
0041	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (E)	77 SF	16.00	1,232.00
0042	4025000000-E	901	CONTRACTOR FURNISHED, TYPE *** SIGN (MILEMARKER)	18 SF	16.00	288.00
0044	4078000000-E	903	SUPPORTS, 2-LB STEEL U-CHANNEL	6 EA	45.00	270.00
0045	4096000000-N	904	SIGN ERECTION, TYPE D	5 EA	130.00	650.00
0046	4102000000-N	904	SIGN ERECTION, TYPE E	15 EA	90.00	1,350.00
0047	4114000000-N	904	SIGN ERECTION, MILEMARKERS	6 EA	80.00	480.00
0048	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	154 SF	8.00	1,232.00
0049	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	96 SF	10.00	960.00
0050	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	288 SF	7.00	2,016.00
0051	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	2 EA	25,000.00	50,000.00
0052	4430000000-N	1130	DRUMS	350 EA	65.00	22,750.00
0053	4445000000-E	1145	BARRICADES (TYPE III)	400 LF	21.00	8,400.00
0054	4455000000-N	1150	FLAGGER	200 DAY	170.00	34,000.00
0055	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	8 EA	6,000.00	48,000.00
0056	4470000000-N	1160	RESET TEMPORARY CRASH CUSHION	3 EA	2,800.00	8,400.00
0057	4480000000-N	1165	TMA	2 EA	32,000.00	64,000.00
0058	4485000000-E	1170	PORTABLE CONCRETE BARRIER	15,043 LF	28.00	421,204.00

Contract Item Sheets For C203171

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0059	4507000000-E	1170	WATER FILLED BARRIER	2,327 LF	65.00	151,255.00
0060	4508000000-E	1170	RESET WATER FILLED BARRIER	360 LF	27.00	9,720.00
0061	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	15,074 LF	0.70	10,551.80
0062	4686000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	16,318 LF	0.75	12,238.50
0063	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	152 LF	3.30	501.60
0064	4697000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 120 MILS)	103 LF	3.30	339.90
0065	4710000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	27 LF	11.00	297.00
0066	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	3 EA	165.00	495.00
0067	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	113,201 LF	0.28	31,696.28
0068	4847000000-E	1205	POLYUREA PAVEMENT MARKING LINES (4", **********) (HIGHLY REFLECTIVE ELEMENTS)	49,650 LF	0.90	44,685.00
0069	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	7,131 LF	0.95	6,774.45
0070	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	259 EA	6.60	1,709.40
0071	6000000000-E	1605	TEMPORARY SILT FENCE	20,000 LF	2.70	54,000.00
0072	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	200 TON	50.00	10,000.00
0073	6012000000-E	1610	SEDIMENT CONTROL STONE	200 TON	34.00	6,800.00
0074	6015000000-E	1615	TEMPORARY MULCHING	5 ACR	640.00	3,200.00
0075	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	150 LB	3.80	570.00
0076	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEED-ING	0.5 TON	1,200.00	600.00

Contract Item Sheets For C203171

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0077	6024000000-E	1622	TEMPORARY SLOPE DRAINS	500 LF	11.00	5,500.00
0078	6029000000-E	SP	SAFETY FENCE	1,000 LF	2.50	2,500.00
0079	6030000000-E	1630	SILT EXCAVATION	300 CY	6.00	1,800.00
0080	6036000000-E	1631	MATTING FOR EROSION CONTROL	6,000 SY	1.80	10,800.00
0081	6042000000-E	1632	1/4" HARDWARE CLOTH	200 LF	4.20	840.00
0082	6071012000-E	SP	COIR FIBER WATTLE	1,200 LF	6.00	7,200.00
0083	6084000000-E	1660	SEEDING & MULCHING	5 ACR	1,800.00	9,000.00
0084	6087000000-E	1660	MOWING	2.5 ACR	110.00	275.00
0085	6090000000-E	1661	SEED FOR REPAIR SEEDING	100 LB	8.00	800.00
0086	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.5 TON	1,400.00	700.00
0087	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	175 LB	3.50	612.50
0088	6108000000-E	1665	FERTILIZER TOPDRESSING	5 TON	1,100.00	5,500.00
0089	6114500000-N	1667	SPECIALIZED HAND MOWING	10 MHR	110.00	1,100.00
0090	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	50 EA	227.00	11,350.00
0125	0234000000-E	SP	GENERIC GRADING ITEM SUPPLEMENTAL BORROW EXCAVATION	6,000 CY	21.00	126,000.00
0126	0234000000-E	SP	GENERIC GRADING ITEM SUPPLEMENTAL UNCLASSIFIED EXCAVATION	2,500 CY	11.00	27,500.00
0127	4082000000-E	903	SUPPORTS, WOOD	321 LF	5.50	1,765.50
0128	2570000000-N	SP	MODIFIED CONCRETE FLUME	1 EA	680.00	680.00

Contract Item Sheets For C203171

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0091	8017000000-N	SP	CONSTRUCTION, MAINTENANCE, & REMOVAL OF TEMP ACCESS AT STA ********** (3144+80.00-L-)	Lump Sum LS	95,000.00	95,000.00
0092	8021000000-N	SP	REMOVAL OF EXISTING STRUCTURE AT STATION ********** (3144+80.00-L-)	Lump Sum LS	366,000.00	366,000.00
0093	8084000000-N	410	FOUNDATION EXCAVATION FOR END BENT ** AT STATION ********** (1, 3144+80.00-L-)	Lump Sum LS	200.00	200.00
0094	8084000000-N	410	FOUNDATION EXCAVATION FOR END BENT ** AT STATION ********** (2, 3144+80.00-L-)	Lump Sum LS	200.00	200.00
0095	8112730000-N	450	PDA TESTING	37 EA	8,400.00	310,800.00
0096	8121000000-N	412	UNCLASSIFIED STRUCTURE EXCAVATION AT STATION ******** (3144+80.00-L-)	Lump Sum LS	500.00	500.00
0097	8147000000-E	420	REINFORCED CONCRETE DECK SLAB	455,040 SF	53.00	24,117,120.00
0098	8156000000-E	SP	CONCRETE WEARING SURFACE	19,200 SF	12.00	230,400.00
0099	8161000000-E	420	GROOVING BRIDGE FLOORS	413,563 SF	0.28	115,797.64
0100	8210000000-N	422	BRIDGE APPROACH SLABS, STATION ********** (3144+80.00-L-)	Lump Sum LS	65,000.00	65,000.00
0101	8393000000-N	450	PILE REDRIVES	214 EA	670.00	143,380.00
0102	8475000000-E	460	TWO BAR METAL RAIL	23,080 LF	75.00	1,731,000.00
0103	8517000000-E	460	1'-**"X *****" CONCRETE PARAPET (1'-2" X 3'-0")	23,124.3 LF	64.00	1,479,955.20
0104	8657000000-N	430	ELASTOMERIC BEARINGS	Lump Sum LS	375,000.00	375,000.00
0105	8692000000-N	SP	FOAM JOINT SEALS	Lump Sum LS	61,500.00	61,500.00
0106	8713000000-N	SP	MODULAR EXPANSION JOINT SEALS	Lump Sum LS	543,400.00	543,400.00
0107	8763000000-E	430	3'-0" X 2'-0" PRESTRESSED CONC CORED SLABS	7,153.13 LF	140.00	1,001,438.20

Contract Item Sheets For C203171

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0108	8867000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE MOMENT SLAB	709 LF	180.00	127,620.00
0109	8867000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE SHEET PILE WALL	920.62 LF	1,400.00	1,288,868.00
0110	8867000000-E	SP	GENERIC STRUCTURE ITEM FIB 72" PRESTRESSED CONCRETE GIRDERS	42,420.8 LF	216.00	9,162,892.80
0111	8881000000-E	SP	GENERIC STRUCTURE ITEM OFFSITE JETTING SPOIL DISPOSAL	25,000 CY	0.01	250.00
0112	8892000000-E	SP	GENERIC STRUCTURE ITEM REINFORCED APPROACH FILL	4,800 SF	11.00	52,800.00
			******* BEGIN SCHEDULE IA ******* ******* (2 ALTERNATES) *******			
0114 IA1	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ********** (4 THRU 94, 3144+80.00-L-)	Lump Sum LS	10,000.00	10,000.00
0115 IA1	8175000000-E	420	CLASS AA CONCRETE (BRIDGE)	14,939.5 CY	452.00	6,752,654.00
0116 IA1	8353000000-E	450	30" PRESTRESSED CONCRETE PILES	89,980 LF	126.00	11,337,480.00
0117 IA1	8889000000-E	SP	GENERIC STRUCTURE ITEM SPIRAL STAINLESS REINFORCING STEEL	91,418 LB	3.50	319,963.00
0118 IA1	8889000000-E	SP	GENERIC STRUCTURE ITEM STAINLESS STEEL REINFORCING	3,554,107 LB	3.00	10,662,321.00
			*** OR ***			
0119 IA2	8091000000-N	410	FOUNDATION EXCAVATION FOR BENT ** AT STATION ********** (4 THRU 94, 3144+80.00-L-)	Lump Sum LS		
0120 IA2	8175000000-E	420	CLASS AA CONCRETE (BRIDGE)	16,884.1 CY		
0121 IA2	8353000000-E	450	30" PRESTRESSED CONCRETE PILES	12,400 LF		
0122 IA2	8867000000-E	SP	GENERIC STRUCTURE ITEM 36" PRESTRESSED CONCRETE PILES	68,960 LF		
0123 IA2	8889000000-E	SP	GENERIC STRUCTURE ITEM SPIRAL STAINLESS REINFORCING STEEL	97,088 LB		

Contract Item Sheets For C203171

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0124 IA2	8889000000-E	SP	GENERIC STRUCTURE ITEM STAINLESS STEEL REINFORCING	3,882,235 LB		

***** END SCHEDULE IA *****

Contract Item Sheets For C203171

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
			STRUCTURE ITEMS			
0113	8990000000-N	SP	CONTRACT TIME	800 DAY(S)		

TOTAL AMOUNT OF BID FOR ENTIRE PROJECT **$79,656,262.97**

1406/Dec02/Q9149325.45/D609343042000/E126

Contract No. C203171

County Dare

Rev. 5-19-11

EXECUTION OF CONTRACT
NON-COLLUSION AFFIDAVIT, DEBARMENT CERTIFICATION AND GIFT BAN CERTIFICATION

CORPORATION

The Contractor being duly sworn, solemnly swears (or affirms) that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this Contract, that the Contractor has not been convicted of violating *N.C.G.S. § 133-24* within the last three years, and that the Contractor intends to do the work with its own bonafide employees or subcontractors and did not bid for the benefit of another contractor.

By submitting this Execution of Contract, Non-Collusion Affidavit and Debarment Certification, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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

SIGNATURE OF CONTRACTOR

Parsons Construction Group Inc.

Full name of Corporation

1200 Woodruff Rd, Suit A-3, Greenville, SC 29607

Address as Prequalified

Attest _____ By _____

~~Secretary~~/Assistant Secretary — ~~President~~/Vice President/~~Assistant Vice President~~

Select appropriate title — *Select appropriate title*

Jeffrey B. Parsons — William R. Phillips

Print or type Signer's name — Print or type Signer's name

CORPORATE SEAL

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

4th day of December 2013.

Patricia L Swygert

Signature of Notary Public

NOTARY SEAL

of Greenville County

State of South Carolina

My Commission Expires: 10/7/2021

Contract No. C203171
County Dare

Rev. 5-19-11

DEBARMENT CERTIFICATION

Conditions for certification:

1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation filed with the Department, or has become erroneous because of changed circumstances.

2. The terms *covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal,* and *voluntarily excluded,* as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.

3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.

4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR* 1273) provided by the Department, without subsequent modification, in all lower tier covered transactions.

5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.

6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Contract No. C203171

County Dare

Rev. 5-19-11

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and

d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

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

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

☐ Check here if an explanation is attached to this certification.

Contract No. **C203171**

County (ies): **Dare**

ACCEPTED BY THE
DEPARTMENT OF TRANSPORTATION

Contract Officer

12/17/13
Date

Execution of Contract and Bonds
Approved as to Form:

Attorney General

Signature Sheet (Bid - Acceptance by Department)

BOND ISSUED IN DUPLICATE

BOND NO. 09121611, 81619253

Contract No. C203171
County DARE

Rev 5-17-11

CONTRACT PAYMENT BOND

Date of Payment Bond Execution	12/4/2013
Name of Principal Contractor	Parsons Construction Group Inc.
Name of Surety:	FIDELITY AND DEPOSIT COMPANY OF MARYLAND, ZURICH AMERICAN INSURANCE COMPANY, FEDERAL INSURANCE COMPANY
Name of Contracting Body:	**North Carolina Department of Transportation**
	Raleigh, North Carolina
Amount of Bond:	$79,656,262.97
Contract ID No.:	C203171
County Name:	DARE

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Contract No. C203171
County DARE

Rev 5-17-11

CONTRACT PAYMENT BOND

Affix Seal of Surety Company

FIDELITY AND DEPOSIT COMPANY OF MARYLAND, ZURICH AMERICAN INSURANCE COMPANY, FEDERAL INSURANCE COMPANY
Print or type Surety Company Name

By Daravy Mady
Print, stamp or type name of Attorney-in-Fact

Signature of Attorney-in-Fact

Signature of Witness

Misty Wright
Print or type Signer's name

707 Wilshire Blvd., Ste 2600
Los Angeles, CA 90017
Address of Attorney-in-Fact

Contract No. C203171
County DARE

Rev 5-17-11

CONTRACT PAYMENT BOND

CORPORATION

SIGNATURE OF CONTRACTOR (Principal)

Parsons Construction Group Inc.

Full name of Corporation

1200 Woodruff Road, Greenville, SC 29607

Address as prequalified

By _____

Signature of ~~President~~, Vice President, ~~Assistant Vice President~~
Select appropriate title

Angelle Roussel, Vice President

Print or type Signer's name

Affix Corporate Seal

Attest _____

Signature of Secretary, ~~Assistant Secretary~~
Select appropriate title

Helen Alarcon, Secretary

Print or type Signer's name

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of **Los Angeles** }

On **December 6, 2013** (Date) before me, **Helen Alarcon, Notary Public** (Here Insert Name and Title of the Officer),

personally appeared **Angelle Roussel** (Name(s) of Signer(s))

,

who proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

HELEN ALARCON
Commission # 2009127
Notary Public - California
Los Angeles County
My Comm. Expires Mar 1, 2017

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Helen Alarcon
Signature of Notary Public

Place Notary Seal Above

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Los Angeles

On DEC 04 2013 before me, B. Aleman, Notary Public, personally appeared Daravy Mady who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(ies), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

NRO1 B. ALEMAN
COMM #1985713
Notary Public - California
Los Angeles County
My Comm. Expires July 21, 2016 NRO1

Signature _____
B. Aleman, Notary Public

(Seal)

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **JAMES M. CARROLL, Vice President,** in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Daravy MADY, of Los Angeles, California,** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND,** this 9th day of August, A.D. 2012.

ATTEST:

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: _____
Assistant Secretary
Eric D. Barnes

_____
Vice President
James M. Carroll

State of Maryland
City of Baltimore

On this 9th day of August, A.D. 2012, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **JAMES M. CARROLL, Vice President, and ERIC D. BARNES, Assistant Secretary,** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

_____
Constance A. Dunn, Notary Public
My Commission Expires: July 14, 2015

POA-F 012-3265Q

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify of revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this ____ day of DEC 04 2013 20____.

Geoffrey Delisio

Geoffrey Delisio, Vice President

Chubb Surety	POWER OF ATTORNEY	Federal Insurance Company Vigilant Insurance Company Pacific Indemnity Company	Attn: Surety Department 15 Mountain View Road Warren, NJ 07059

Know All by These Presents, That **FEDERAL INSURANCE COMPANY**, an Indiana corporation, **VIGILANT INSURANCE COMPANY**, a New York corporation, and **PACIFIC INDEMNITY COMPANY**, a Wisconsin corporation, do each hereby constitute and appoint **B. Aleman, Tracy Aston, KD Conrad, Lisa Crail, Daravy Mady, Kristine Mendez and Edward C. Spector of Los Angeles, California** ----------

each as their true and lawful Attorney- in- Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY**, and **PACIFIC INDEMNITY COMPANY** have each executed and attested these presents and affixed their corporate seals on this **22nd** day of **October, 2012.**

Kenneth C. Wendel, Assistant Secretary

David B. Norris, Jr., Vice President

STATE OF NEW JERSEY
County of Somerset ss.

On this **22nd** day of **October, 2012** before me, a Notary Public of New Jersey, personally came Kenneth C. Wendel, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Kenneth C. Wendel, being by me duly sworn, did depose and say that he is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By- Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that he is acquainted with David B. Norris, Jr., and knows him to be Vice President of said Companies; and that the signature of David B. Norris, Jr., subscribed to said Power of Attorney is in the genuine handwriting of David B. Norris, Jr., and was thereto subscribed by authority of said By- Laws and in deponent's presence.

Notarial Seal

KATHERINE J. ADELAAR NOTARY PUBLIC NEW JERSEY

KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2316685
Commission Expires July 16, 2014

Notary Public

CERTIFICATION

Extract from the By- Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

> "All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys- in- Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, Kenneth C. Wendel, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

(i) the foregoing extract of the By- Laws of the Companies is true and correct,
(ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department; further, Federal and Vigilant are licensed in Puerto Rico and the U.S. Virgin Islands, and Federal is licensed in American Samoa, Guam, and each of the Provinces of Canada except Prince Edward Island; and
(iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this day of DEC 04 2013

FEDERAL INSURANCE COMPANY INDIANA · PACIFIC INDEMNITY COMPANY INCORPORATED JAN. 16, 1925 WISCONSIN · VIGILANT INSURANCE COMPANY NEW YORK

Kenneth C. Wendel, Assistant Secretary

IN THE EVENT YOU WISH TO NOTIFY US OF A CLAIM, VERIFY THE AUTHENTICITY OF THIS BOND OR NOTIFY US OF ANY OTHER MATTER, PLEASE CONTACT US AT ADDRESS LISTED ABOVE, OR BY Telephone (908) 903- 3493 Fax (908) 903- 3656
e-mail: surety@chubb.com

BOND ISSUED IN DUPLICATE

BOND NO. 09121611, 81619253

Contract No. C203171
County DARE

Rev 5-17-11

CONTRACT PERFORMANCE BOND

Date of Performance Bond Execution: 12/4/2013

Name of Principal Contractor: Parsons Construction Group Inc.

Name of Surety: FIDELITY AND DEPOSIT COMPANY OF MARYLAND, ZURICH AMERICAN INSURANCE COMPANY, FEDERAL INSURANCE COMPANY

Name of Contracting Body: **North Carolina Department of Transportation**

Raleigh, North Carolina

Amount of Bond: $79,656,262.97

Contract ID No.: C203171

County Name: DARE

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

Contract No. C203171
County DARE

Rev 5-17-11

CONTRACT PERFORMANCE BOND

Affix Seal of Surety Company

FIDELITY AND DEPOSIT COMPANY OF MARYLAND, ZURICH AMERICAN INSURANCE COMPANY, FEDERAL INSURANCE COMPANY
Print or type Surety Company Name

By Daravy Mady
Print, stamp or type name of Attorney-in-Fact

Signature of Attorney-in-Fact

Signature of Witness

Misty Wright
Print or type Signer's name

707 Wilshire Blvd., Ste 2600
Los Angeles, CA 90017
Address of Attorney-in-Fact

Contract No. C203171
County DARE

Rev 5-17-11

CONTRACT PERFORMANCE BOND

CORPORATION

SIGNATURE OF CONTRACTOR (Principal)

Parsons Construction Group Inc.

Full name of Corporation

1200 Woodruff Road, Greenville, SC 29607

Address as prequalified

By _____

Signature of ~~President~~, Vice President, ~~Assistant Vice President~~
Select appropriate title

Angelle Roussel, Vice President

Print or type Signer's name

Affix Corporate Seal

Attest _____

Signature of Secretary, ~~Assistant Secretary~~
Select appropriate title

Helen Alarcon, Secretary

Print or type Signer's name

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of **Los Angeles** }

On **December 6, 2013** (Date) before me, **Helen Alarcon, Notary Public** (Here Insert Name and Title of the Officer),

personally appeared **Angelle Roussel** (Name(s) of Signer(s))

,

who proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(~~ies~~), and that by ~~his~~/her/~~their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature *Helen Alarcon*
Signature of Notary Public

HELEN ALARCON
Commission # 2009127
Notary Public - California
Los Angeles County
My Comm. Expires Mar 1, 2017

Place Notary Seal Above

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Los Angeles

On DEC 04 2013 before me, B. Aleman, Notary Public, personally appeared Daravy Mady who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that ~~he~~/she/~~they~~ executed the same in ~~his~~/her/~~their~~ authorized capacity(ies), and that by ~~his~~/her/~~their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

NRO1 B. ALEMAN COMM #1985713 Notary Public - California Los Angeles County My Comm. Expires July 21, 2016 NRO1

Signature _____
B. Aleman, Notary Public

(Seal)

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **JAMES M. CARROLL, Vice President,** in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Daravy MADY, of Los Angeles, California,** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings,** and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND,** this 9th day of August, A.D. 2012.

ATTEST:

ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND

By: _____
Assistant Secretary
Eric D. Barnes

_____
Vice President
James M. Carroll

State of Maryland
City of Baltimore

On this 9th day of August, A.D. 2012, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **JAMES M. CARROLL, Vice President, and ERIC D. BARNES, Assistant Secretary,** of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

_____
Constance A. Dunn, Notary Public
My Commission Expires: July 14, 2015

POA-F 012-3265Q

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify of revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this ____ day of DEC 04 2013 20____.

Geoffrey Delisio, Vice President

Chubb Surety	POWER OF ATTORNEY	Federal Insurance Company Vigilant Insurance Company Pacific Indemnity Company	Attn: Surety Department 15 Mountain View Road Warren, NJ 07059

Know All by These Presents, That **FEDERAL INSURANCE COMPANY**, an Indiana corporation, **VIGILANT INSURANCE COMPANY**, a New York corporation, and **PACIFIC INDEMNITY COMPANY**, a Wisconsin corporation, do each hereby constitute and appoint **B. Aleman, Tracy Aston, KD Conrad, Lisa Crail, Daravy Mady, Kristine Mendez and Edward C. Spector of Los Angeles, California** ----------

each as their true and lawful Attorney- in- Fact to execute under such designation in their names and to affix their corporate seals to and deliver for and on their behalf as surety thereon or otherwise, bonds and undertakings and other writings obligatory in the nature thereof (other than bail bonds) given or executed in the course of business, and any instruments amending or altering the same, and consents to the modification or alteration of any instrument referred to in said bonds or obligations.

In Witness Whereof, said **FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY**, and **PACIFIC INDEMNITY COMPANY** have each executed and attested these presents and affixed their corporate seals on this **22nd** day of **October, 2012.**

Kenneth C. Wendel, Assistant Secretary

David B. Norris, Jr., Vice President

STATE OF NEW JERSEY
County of Somerset ss.

On this **22nd** day of **October, 2012** before me, a Notary Public of New Jersey, personally came Kenneth C. Wendel, to me known to be Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY, the companies which executed the foregoing Power of Attorney, and the said Kenneth C. Wendel, being by me duly sworn, did depose and say that he is Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY and knows the corporate seals thereof, that the seals affixed to the foregoing Power of Attorney are such corporate seals and were thereto affixed by authority of the By- Laws of said Companies; and that he signed said Power of Attorney as Assistant Secretary of said Companies by like authority; and that he is acquainted with David B. Norris, Jr., and knows him to be Vice President of said Companies; and that the signature of David B. Norris, Jr., subscribed to said Power of Attorney is in the genuine handwriting of David B. Norris, Jr., and was thereto subscribed by authority of said By- Laws and in deponent's presence.

Notarial Seal

KATHERINE J. ADELAAR NOTARY PUBLIC NEW JERSEY

KATHERINE J. ADELAAR
NOTARY PUBLIC OF NEW JERSEY
No. 2316685
Commission Expires July 16, 2014

Notary Public

CERTIFICATION

Extract from the By- Laws of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY:

> "All powers of attorney for and on behalf of the Company may and shall be executed in the name and on behalf of the Company, either by the Chairman or the President or a Vice President or an Assistant Vice President, jointly with the Secretary or an Assistant Secretary, under their respective designations. The signature of such officers may be engraved, printed or lithographed. The signature of each of the following officers: Chairman, President, any Vice President, any Assistant Vice President, any Secretary, any Assistant Secretary and the seal of the Company may be affixed by facsimile to any power of attorney or to any certificate relating thereto appointing Assistant Secretaries or Attorneys- in- Fact for purposes only of executing and attesting bonds and undertakings and other writings obligatory in the nature thereof, and any such power of attorney or certificate bearing such facsimile signature or facsimile seal shall be valid and binding upon the Company and any such power so executed and certified by such facsimile signature and facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

I, Kenneth C. Wendel, Assistant Secretary of FEDERAL INSURANCE COMPANY, VIGILANT INSURANCE COMPANY, and PACIFIC INDEMNITY COMPANY (the "Companies") do hereby certify that

(i) the foregoing extract of the By- Laws of the Companies is true and correct,
(ii) the Companies are duly licensed and authorized to transact surety business in all 50 of the United States of America and the District of Columbia and are authorized by the U.S. Treasury Department; further, Federal and Vigilant are licensed in Puerto Rico and the U.S. Virgin Islands, and Federal is licensed in American Samoa, Guam, and each of the Provinces of Canada except Prince Edward Island; and
(iii) the foregoing Power of Attorney is true, correct and in full force and effect.

Given under my hand and seals of said Companies at Warren, NJ this day of DEC 04 2013

FEDERAL INSURANCE COMPANY INDIANA · PACIFIC INDEMNITY COMPANY INCORPORATED JAN. 16, 1925 WISCONSIN · VIGILANT INSURANCE COMPANY NEW YORK

Kenneth C. Wendel, Assistant Secretary

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e-mail: surety@chubb.com