

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

PROPOSAL

DATE AND TIME OF BID OPENING: **Apr 15, 2025 AT 02:00 PM**

CONTRACT ID        C205061  
WBS                    17BP.7.R.116

FEDERAL-AID NO.    STATE FUNDED  
COUNTY             GUILFORD  
T.I.P NO.  
MILES                 0.175  
ROUTE NO.            SR-3000  
LOCATION               BRIDGE #400224 OVER SOUTH BUFFALO CREEK ON SR-3000  
                              (MCCONNELL RD).

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. NOTWITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY FEDERAL - AID FUNDED PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING.

**BIDS WILL BE RECEIVED AS SHOWN BELOW:**

**THIS IS A ROADWAY & STRUCTURE PROPOSAL**

**5% BID BOND OR BID DEPOSIT REQUIRED**

---

**PROPOSAL FOR THE CONSTRUCTION OF  
CONTRACT No. C205061 IN GUILFORD COUNTY, NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION,  
RALEIGH, NORTH CAROLINA**

The Bidder has carefully examined the location of the proposed work to be known as Contract No. **C205061** 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 *2024 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 Contract No. **C205061** in **Guilford 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 2024* 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.



*State Contract Officer*

Signed by:

*Ronald Elton Davenport, Jr.*

52C46046381F443...

03/17/2025

**TABLE OF CONTENTS**

**COVER SHEET  
PROPOSAL SHEET**

**PROJECT SPECIAL PROVISIONS**

HAUL ROADS:..... G-1  
CONTRACT TIME AND LIQUIDATED DAMAGES: ..... G-1  
INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES: ..... G-1  
PERMANENT VEGETATION ESTABLISHMENT:..... G-2  
MAJOR CONTRACT ITEMS: ..... G-2  
SPECIALTY ITEMS:..... G-3  
FUEL PRICE ADJUSTMENT:..... G-3  
STEEL PRICE ADJUSTMENT:..... G-5  
SCHEDULE OF ESTIMATED COMPLETION PROGRESS:..... G-16  
MINORITY BUSINESS ENTERPRISE AND WOMEN BUSINESS ENTERPRISE:..... G-16  
RESTRICTIONS ON ITS EQUIPMENT AND SERVICES:..... G-33  
USE OF UNMANNED AIRCRAFT SYSTEM (UAS): ..... G-33  
EQUIPMENT IDLING GUIDELINES:..... G-33  
SUBSURFACE INFORMATION:..... G-34  
MAINTENANCE OF THE PROJECT: ..... G-34  
COOPERATION BETWEEN CONTRACTORS:..... G-35  
TWELVE MONTH GUARANTEE:..... G-35  
OUTSOURCING OUTSIDE THE USA:..... G-36  
EROSION AND SEDIMENT CONTROL/STORMWATER CERTIFICATION: ..... G-36  
PROCEDURE FOR MONITORING BORROW PIT DISCHARGE:..... G-41

ROADWAY.....R-1

**STANDARD SPECIAL PROVISIONS**

AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS .....SSP-1  
NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY .....SSP-2  
ERRATA.....SSP-5  
PLANT AND PEST QUARANTINES .....SSP-7  
MINIMUM WAGES .....SSP-8  
TITLE VI AND NONDISCRIMINATION: .....SSP-9  
ON-THE-JOB TRAINING.....SSP-18

**UNIT PROJECT SPECIAL PROVISIONS**

UTILITY CONSTRUCTION.....UC-1  
UTILITY BY OTHERS.....UBO-1  
EROSION CONTROL ..... EC-1  
STRUCTURE/CULVERTS .....ST-1

**PERMITS** ..... P-1

**PROPOSAL ITEM SHEET**

ITEM SHEET(S)

**PROJECT SPECIAL PROVISIONS****GENERAL****HAUL ROADS:**

(7-16-24)

105

SP1 G04

Revise the *Standard Specifications* as follows:

**Page 1-45, Article 105-15 RESTRICTION OF LOAD LIMITS, line 31,** add the following after second sentence of the second paragraph:

At least 30 days prior to use, the Contractor shall notify the Engineer of any public road proposed for use as a haul road for the project.

**CONTRACT TIME AND LIQUIDATED DAMAGES:**

(4-17-12)(Rev. 5-16-23)

108

SP1 G08 C

The date of availability for this contract is **May 27, 2025**.

The completion date for this contract is **March 14, 2027**.

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:**

(7-1-95) (Rev. 2-21-12)

108

SP1 G13 A

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

The date of availability for this intermediate contract time is **May 27, 2025**.

The completion date for this intermediate contract time is **September 15, 2026**.

The liquidated damages for this intermediate contract time are **Two Thousand Dollars (\$ 2,000.00)** per calendar day.

Upon apparent completion of all the work required to be completed by this intermediate date, a final inspection will be held in accordance with Article 105-17 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 shall 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.

**PERMANENT VEGETATION ESTABLISHMENT:**

(2-16-12)(Rev. 1-16-24)

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 *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 *Standard Specifications*. No additional compensation will be made for maintenance and removal of temporary erosion control items.

**MAJOR CONTRACT ITEMS:**

(2-19-02)(Rev. 1-16-24)

104

SP1 G28

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

| <b>Line #</b> | <b>Description</b>               |
|---------------|----------------------------------|
| 107           | Reinforced Concrete Deck Slab    |
| 113           | 45" Prestressed Concrete Girders |

**SPECIALTY ITEMS:**

(7-1-95)(Rev. 1-16-24)

108-6

SP1 G37

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

| <b>Line #</b> | <b>Description</b>          |
|---------------|-----------------------------|
| 38-43         | Guardrail                   |
| 50            | Long-Life Pavement Markings |
| 51-72         | Utility Construction        |
| 73-96, 98     | Erosion Control             |
| 97            | Reforestation               |
| 101-105       | Drilled Piers               |

**FUEL PRICE ADJUSTMENT:**

(11-15-05)(Rev. 1-16-24)

109-8

SP1 G43

**Page 1-82, Article 109-8, FUEL PRICE ADJUSTMENTS, add the following:**

The base index price for DIESEL #2 FUEL is \$ **2.5616** 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:

| <b>Description</b>                                | <b>Units</b> | <b>Fuel Usage<br/>Factor Diesel</b> |
|---|--------------|-------------------------------------|
| 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                                |
| Sub-Ballast                                       | Gal/Ton      | 0.55                                |
| Erosion Control Stone                             | Gal/Ton      | 0.55                                |
| Rip Rap, Class _____                              | Gal/Ton      | 0.55                                |
| Asphalt Concrete Base Course, Type _____          | Gal/Ton      | 0.90 or 2.90                        |
| Asphalt Concrete Intermediate Course, Type _____  | Gal/Ton      | 0.90 or 2.90                        |
| Asphalt Concrete Surface Course, Type _____       | Gal/Ton      | 0.90 or 2.90                        |
| Open-Graded Asphalt Friction Course               | Gal/Ton      | 0.90 or 2.90                        |
| Permeable Asphalt Drainage Course, Type _____     | Gal/Ton      | 0.90 or 2.90                        |
| Sand Asphalt Surface Course, Type _____           | Gal/Ton      | 0.90 or 2.90                        |
| Ultra-thin Bonded Wearing Course                  | Gal/Ton      | 0.90 or 2.90                        |
| Aggregate for Cement Treated Base Course          | Gal/Ton      | 0.55                                |
| Portland Cement for Cement Treated Base Course    | Gal/Ton      | 0.55                                |
| > 11" Portland Cement Concrete Pavement           | Gal/SY       | 0.327                               |
| Concrete Shoulders Adjacent to > 11" Pavement     | Gal/SY       | 0.327                               |
| 9" to 11" Portland Cement Concrete Pavement       | Gal/SY       | 0.272                               |
| Concrete Shoulders Adjacent to 9" to 11" Pavement | Gal/SY       | 0.272                               |
| < 9" Portland Cement Concrete Pavement            | Gal/SY       | 0.245                               |
| Concrete Shoulders Adjacent to < 9" Pavement      | Gal/SY       | 0.245                               |

For the asphalt items noted in the chart as eligible for fuel adjustments, the bidder may include the *Fuel Usage Factor Adjustment Form* with their bid submission if they elect to use the fuel usage factor. The *Fuel Usage Factor Adjustment Form* is found at the following link:

<https://connect.ncdot.gov/letting/LetCentral/Fuel%20Usage%20Factor%20Adjustment%20Form%20-%20Starting%20Nov%202022%20Lettings.pdf>

Select either 2.90 Gal/Ton fuel factor or 0.90 Gal/Ton fuel factor for each asphalt line item on the *Fuel Usage Factor Adjustment Form*. The selected fuel factor for each asphalt item will remain in effect for the duration of the contract.

Failure to complete the *Fuel Usage Factor Adjustment Form* will result in using 2.90 gallons per ton as the Fuel Usage Factor for Diesel for the asphalt items noted above. The contractor will not be permitted to change the Fuel Usage Factor after the bids are submitted.



**STEEL PRICE ADJUSTMENT:**

(4-19-22)(Rev. 12-20-22)

SP1 G47

**Description and Purpose**

Steel price adjustments will be made to the payments due the Contractor for items as defined herein that are permanently incorporated into the work, when the price of raw steel mill products utilized on the contract have fluctuated. The Department will adjust monthly progress payments up or down as appropriate for cost changes in steel according to this provision.

**Eligible Items**

The list of eligible bid items for steel price adjustment can be found on the Departments website at the following address:

<https://connect.ncdot.gov/letting/LetCentral/Eligible%20Bid%20Items%20for%20Steel%20Price%20Adjustment.xlsx>

Nuts, bolts, anchor bolts, rebar chairs, connecting bands and other miscellaneous hardware associated with these items shall not be included in the price adjustment.

Adjustments will only be made for fluctuations in the material cost of the steel used in the above products as specified in the Product Relationship Table below. The producing mill is defined as the source of steel product before any fabrication has occurred (e.g., coil, plate, rebar, hot rolled shapes, etc.). No adjustment will be made for changes in the cost of fabrication, coating, shipping, storage, etc.

No steel price adjustments will be made for any products manufactured from steel having an adjustment date, as defined by the Product Relationship Table below, prior to the letting date.

**Bid Submittal Requirements**

The successful bidder, within 14 calendar days after the notice of award is received by him, shall provide the completed Form SPA-1 to the Department (State Contract Officer or Division Contract Engineer) along with the payment bonds, performance bonds and contract execution signature sheets in a single submittal. If Form SPA-1 is not included in the same submittal as the payment bonds, performance bonds and contract execution signature sheets, the Contractor will not be eligible for any steel price adjustment for any item in the contract for the life of the contract. Form SPA-1 can be found on the Department's website at the following address:

<https://connect.ncdot.gov/letting/LetCentral/Form%20SPA-1.xlsm>

The Contractor shall provide Form SPA-1 listing the Contract Line Number, (with corresponding Item Number, Item Description, and Category) for the steel products they wish to have an adjustment calculated. Only the contract items corresponding to the list of eligible item numbers for steel price adjustment may be entered on Form SPA-1. The Contractor may choose to have steel price adjustment applied to any, all, or none of the eligible items. However, the Contractor's selection of items for steel price adjustment or non-selection (non-participation)

may not be changed once Form SPA-1 has been received by the Department. Items the Bidder chooses for steel price adjustment must be designated by writing the word “Yes” in the column titled “Option” by each Pay Item chosen for adjustment. Should the bidder elect an eligible steel price item, the entire quantity of the line item will be subject to the price adjustment for the duration of the Contract. The Bidder’s designations on Form SPA-1 must be written in ink or typed and signed by the Bidder (Prime Contractor) to be considered complete. Items not properly designated, designated with “No”, or left blank on the Bidder’s Form SPA-1 will automatically be removed from consideration for adjustment. No steel items will be eligible for steel price adjustment on this Project if the Bidder fails to return Form SPA-1 in accordance with this provision.

### Establishing the Base Price

The Department will use a blend of monthly average prices as reported from the Fastmarkets platform to calculate the monthly adjustment indices (BI and MI). This data is typically available on the first day of the month for the preceding month. The indices will be calculated by the Department for the different categories found on the Product Relationship Table below. For item numbers that include multiple types of steel products, the category listed for that item number will be used for adjusting each steel component.

The bidding index for Category 1 Steel items is **\$ 38.50** per hundredweight.  
 The bidding index for Category 2 Steel items is **\$ 47.50** per hundredweight.  
 The bidding index for Category 3 Steel items is **\$ 60.78** per hundredweight.  
 The bidding index for Category 4 Steel items is **\$ 42.05** per hundredweight.  
 The bidding index for Category 5 Steel items is **\$ 50.69** per hundredweight.  
 The bidding index for Category 6 Steel items is **\$ 52.31** per hundredweight.  
 The bidding index for Category 7 Steel items is **\$ 41.20** per hundredweight.

The bidding index represents a selling price of steel based on Fastmarkets data for the month of **February 2025**.

- MI = Monthly Index. – in Dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill, received on the project, or member cast as defined in the Product Relationship Table.
- BI = Bidding Index. - in Dollars (\$) per hundredweight (CWT). Use the adjustment indices as listed in the proposal.

| <i>Product Relationship Table</i>             |  |                                   |          |
|---|--|-----------------------------------|----------|
| <i>Steel Product (Title)</i>                  | BI, MI*                                  | Adjustment Date for MI            | Category |
| Reinforcing Steel, Bridge Deck, and SIP Forms | Based on one or more Fastmarkets indices | Delivery Date from Producing Mill | 1        |
| Structural Steel and Encasement Pipe          | Based on one or more Fastmarkets indices | Delivery Date from Producing Mill | 2        |
| Steel H-Piles, Soldier Pile Walls             | Based on one or more Fastmarkets indices | Delivery Date from Producing Mill | 3        |
| Guardrail Items and Pipe                      | Based on one or more                     | Material Received Date**          | 4        |

|  |  |                          |   |
|--|--|--------------------------|---|
| Piles  | Fastmarkets indices                      |                          |   |
| Fence Items  | Based on one or more Fastmarkets indices | Material Received Date** | 5 |
| Overhead Sign Assembly, Signal Poles, High Mount Standards   | Based on one or more Fastmarkets indices | Material Received Date** | 6 |
| Prestressed Concrete Members   | Based on one or more Fastmarkets indices | Cast Date of Member      | 7 |
| * BI and MI are in converted units of Dollars per Hundredweight (\$/CWT)   |  |                          |   |
| ** Material Received Date is defined as the date the materials are received on the project site. If a material prepayment is made for a Category 4-6 item, the Adjustment Date to be used will be the date of the prepayment request instead of the Materials Received Date. |  |                          |   |

Submit documentation to the Engineer for all items listed in the Contract for which the Contractor is requesting a steel price adjustment.

### Submittal Requirements

The items in categories 1,2, and 3, shall be specifically stored, labeled, or tagged, recognizable by color marking, and identifiable by Project for inspection and audit verification immediately upon arrival at the fabricator.

Furnish the following documentation for all steel products to be incorporated into the work and documented on Form SPA-2, found on the Departments website at the following address:

<https://connect.ncdot.gov/projects/construction/Construction%20Forms/Form%20SPA-2.xlsx>

Submit all documentation to the Engineer prior to incorporation of the steel into the completed work. The Department will withhold progress payments for the affected contract line item if the documentation is not provided and at the discretion of the Engineer the work is allowed to proceed. Progress payments will be made upon receipt of the delinquent documentation.

#### Step 1 (Form SPA -2)

Utilizing Form SPA-2, submit separate documentation packages for each line item from Form SPA-1 for which the Contractor opted for a steel price adjustment. For line items with multiple components of steel, each component should be listed separately. Label each SPA-2 documentation package with a unique number as described below.

- a. Documentation package number: (Insert the contract line-item) - (Insert sequential package number beginning with "1").

Example: 412 - 1,  
412 - 2,  
424 - 1,  
424 - 2,  
424 - 3, etc.

- b. The steel product quantity in pounds

- i. The following sources should be used, in declining order of precedence, to determine the weight of steel/iron, based on the Engineers decision:
  1. Department established weights of steel/iron by contract pay item per pay unit;
  2. Approved Shop Drawings;
  3. Verified Shipping Documents;
  4. Contract Plans;
  5. Standard Drawing Sheets;
  6. Industry Standards (i.e., AISC Manual of Steel Construction, AWWA Standards, etc.); and
  7. Manufacture's data.
- ii. Any item requiring approved shop drawings shall have the weights of steel calculated and shown on the shop drawings or submitted and certified separately by the fabricator.
- c. The date the steel product, subject to adjustment, was shipped from the producing mill (Categories 1-3), received on the project (Categories 4-6), or casting date (Category 7).

#### Step 2 (Monthly Calculator Spreadsheet)

For each month, upon the incorporation of the steel product into the work, provide the Engineer the following:

- 1) Completed NCDOT Steel Price Adjustment Calculator Spreadsheet, summarizing all the steel submittal packages (Form SPA-2) actually incorporated into the completed work in the given month.
  - a. Contract Number
  - b. Bidding Index Reference Month
  - c. Contract Completion Date or Revised Completion Date
  - d. County, Route, and Project TIP information
  - e. Item Number
  - f. Line-Item Description
  - g. Submittal Number from Form SPA-2
  - h. Adjustment date
  - i. Pounds of Steel
- 2) An affidavit signed by the Contractor stating the documentation provided in the NCDOT Steel Price Adjustment Calculator Spreadsheet is true and accurate.

#### Price Adjustment Conditions

Download the Monthly Steel Adjustment Spreadsheet with the most current reference data from the Department's website each month at the following address:

<https://connect.ncdot.gov/projects/construction/Construction%20Forms/Form%20SPA-3%20NCDOT%20Steel%20Price%20Adjustment%20Calculator.xlsx>

If the monthly Fastmarkets data is not available, the data for the most recent immediately preceding month will be used as the basis for adjustment.

### **Price Adjustment Calculations**

The price adjustment will be determined by comparing the percentage of change in index value listed in the proposal (BI) to the monthly index value (MI). (See included sample examples). Weights and date of shipment must be documented as required herein. The final price adjustment dollar value will be determined by multiplying this percentage increase or decrease in the index by the represented quantity of steel incorporated into the work, and the established bidding index (BI) subject to the limitations herein.

#### **Price increase/decrease will be computed as follows:**

$$\text{SPA} = ((\text{MI} / \text{BI}) - 1) * \text{BI} * (\text{Q} / 100)$$

Where;

SPA = Steel price adjustment in dollars

MI = Monthly Shipping Index. – in Dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill, received on the project, or member cast as defined in the Product Relationship Table.

BI = Bidding Index. - in Dollars (\$) per hundredweight (CWT). Use the adjustment indices as listed in the proposal.

Q = Quantity of steel, product, pounds actually incorporated into the work as documented by the Contractor, or Design Build Team and verified by the Engineer.

Calculations for price adjustment shall be shown separate from the monthly progress estimate and will not be included in the total cost of work for determination of progress or for extension of Contract time in accordance with Subarticle 108-10(B)(1).

Any apparent attempt to unbalance bids in favor of items subject to price adjustment may result in rejection of the bid proposal.

Adjustments will be paid or charged to the Contractor only. Any Contractor receiving an adjustment under this provision shall distribute the proper proportional part of such adjustments to the subcontractor who performed the applicable work.

Delays to the work caused by steel shortages may be justification for a Contract time extension but will not constitute grounds for claims for standby equipment, extended office overhead, or other costs associated with such delays.

If an increase in the steel material price is anticipated to exceed 50% of the original quoted price, the contractor must notify the Department within 7 days prior to purchasing the material. Upon receipt of such notification, the Department will direct the Contractor to either (1) proceed with the work or (2) suspend the work and explore the use of alternate options.

If the decrease in the steel material exceeds 50% of the original quoted price, the contractor may submit to the Department additional market index information specific to the item in question to dispute the decrease. The Department will review this information and determine if the decrease is warranted.

When the steel product adjustment date, as defined in the Product Relationship Table, is after the approved contract completion date, the steel price adjustments will be based on the lesser value of either the MI for the month of the approved contract completion date or the MI for the actual adjustment date.

If the price adjustment is based on estimated material quantities for that time, and a revision to the total material quantity is made in a subsequent or final estimate, an appropriate adjustment will be made to the price adjustment previously calculated. The adjustment will be based on the same indices used to calculate the price adjustment which is being revised. If the adjustment date of the revised material quantity cannot be determined, the adjustment for the quantity in question, will be based on the indices utilized to calculate the steel price adjustment for the last initial documentation package submission, for the steel product subject to adjustment, that was incorporated into the particular item of work, for which quantities are being finalized.

Example: Structural steel for a particular bridge was provided for in three different shipments with each having a different mill shipping date. The quantity of structural steel actually used for the bridge was calculated and a steel price adjustment was made in a progress payment. At the conclusion of the work an error was found in the plans of the final quantity of structural steel used for the bridge. The quantity to be adjusted cannot be directly related to any one of the three mill shipping dates. The steel price adjustment for the quantity in question would be calculated using the indices that were utilized to calculate the steel price adjustment for the quantity of structural steel represented by the last initial structural steel documentation package submission. The package used will be the one with the greatest sequential number.

**Extra Work/Force Account:**

When steel products, as specified herein, are added to the contract as extra work, in accordance with the provisions of Article 104-7 or 104-3, the Engineer will determine and specify in the supplemental agreement, the need for application of steel price adjustments on a case-by-case basis. No steel price adjustments will be made for any products manufactured from steel having an adjustment date prior to the supplemental agreement execution date. Price adjustments will be made as provided herein, except the Bidding Index will be based on the month in which the supplemental agreement pricing was executed.

For work performed on force account basis, reimbursement of actual material costs, along with the specified overhead and profit markup, will be considered to include full compensation for the current cost of steel and no steel price adjustments will be made.

**Examples Form SPA-2**

**Steel Price Adjustment Submission Form**

Contract Number     C203394     Bid Reference Month     January 2019    

Submittal Date     8/31/2019    

Contract Line Item     237    

Line Item Description     APPROX....LBS Structural Steel    

Sequential Submittal Number     2    

| Supplier         | Description of material        | Location information   | Quantity in lbs. | Adjustment Date |
|------------------|--------------------------------|------------------------|------------------|-----------------|
| XYZ mill         | Structural Steel               | Structure 3, Spans A-C | 1,200,000        | May 4, 2020     |
| ABC distributing | Various channel & angle shapes | Structure 3 Spans A-C  | 35,000           | July 14, 2020   |
|                  |                                |                        |                  |                 |
|                  |                                |                        |                  |                 |
|                  |                                |                        |                  |                 |
|                  |                                |                        |                  |                 |
|                  |                                |                        |                  |                 |
|                  |                                |                        |                  |                 |
|                  |                                | Total Pounds of Steel  | 1,235,000        |                 |

- Note: Attach the following supporting documentation to this form.
- Bill of Lading to support the shipping dates
  - Supporting information for weight documentation (e.g., Pay item reference, Shop drawings, shipping documents, Standards Sheets, industry standards, or manufacturer's data)

By providing this data under my signature, I attest to the accuracy of and validity of the data on this form and certify that no deliberate misrepresentation in any manner has occurred.

Printed Name  
\_\_\_\_\_

Signature  
\_\_\_\_\_

**Examples Form SPA-2**  
**Steel Price Adjustment Submission Form**

Contract Number C203394 Bid Reference Month January 2019

Submittal Date August 31, 2019

Contract Line Item 237

Line Item Description SUPPORT, OVRHD SIGN STR -DFEB – STA 36+00

Sequential Submittal Number 2

| Supplier         | Description of material                    | Location information     | Quantity in lbs. | Adjustment Date   |
|------------------|--|--------------------------|------------------|-------------------|
| XYZ mill         | Tubular Steel (Vertical legs)              | <u>-DFEB – STA 36+00</u> | 12000            | December 11, 2021 |
| PDQ Mill         | 4” Tubular steel (Horizontal legs)         | <u>-DFEB – STA 36+00</u> | 5900             | December 11, 2021 |
| ABC distributing | Various channel & angle shapes (see quote) | <u>-DFEB – STA 36+00</u> | 1300             | December 11, 2021 |
|                  | Catwalk assembly                           | <u>-DFEB – STA 36+00</u> | 2000             | December 11, 2021 |
| Nucor            | Flat plate                                 | <u>-DFEB – STA 36+00</u> | 650              | December 11, 2021 |
|                  |  |                          |                  |                   |
|                  |  |                          |                  |                   |
|                  |  | Total Pounds of Steel    | 21,850           |                   |

Note: Attach the following supporting documentation to this form.

- Bill of Lading to support the shipping dates
- Supporting information for weight documentation (e.g., Pay item reference, Shop drawings, shipping documents, Standards Sheets, industry standards, or manufacturer's data)

By providing this data under my signature, I attest to the accuracy of and validity of the data on this form and certify that no deliberate misrepresentation in any manner has occurred.

Printed Name  
 \_\_\_\_\_

Signature  
 \_\_\_\_\_



**Price Adjustment Sample Calculation (increase)**

---

Project bid on September 17, 2019

Line Item 635 "Structural Steel" has a plan quantity of 2,717,000 lbs.

Bidding Index for Structural Steel (Category 2) in the proposal was \$36.12/CWT = BI

450,000 lbs. of Structural Steel for Structure 2 at Station 44+08.60 were shipped to fabricator from the producing mill in same month, May 2021.

Monthly Index for Structural Steel (Category 2) for May 2021 was \$64.89/CWT = MI

The Steel Price Adjustment formula is as follows:

$$\text{SPA} = ((\text{MI} / \text{BI}) - 1) * \text{BI} * (\text{Q} / 100)$$

Where; SPA = Steel price adjustment in dollars

BI = Bidding Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices as listed in the proposal.

MI = Mill Shipping Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill, received on the project, or member cast as defined in the Product Relationship Table.

Q = Quantity of steel product, in pounds (lbs.) actually incorporated into the work as documented by the Contractor, or Design Build Team and verified by the Engineer.

$$\text{BI} = \$36.12 / \text{CWT}$$

$$\text{MI} = \$64.89 / \text{CWT}$$

$$\% \text{ change} = ((\text{MI} / \text{BI}) - 1) = (\$64.89 / \$36.12 - 1) = (1.79651 - 1) = 0.79651162791$$

$$\text{Q} = 450,000 \text{ lbs.}$$

$$\text{SPA} = 0.79651162791 \times \$36.12 \times (450,000 / 100)$$

$$\text{SPA} = 0.79651162791 * \$36.12 * 4,500$$

$$\text{SPA} = \$129,465 \text{ pay adjustment to Contractor for Structural Steel (Structure 2 at Station 44+08.60)}$$

**Price Adjustment Sample Calculation (decrease)**

---

Project bid on December 18, 2018

Line Item 635 Structural Steel has a plan quantity of 2,717,000 lbs.

Bidding Index for Structural Steel (Category 2) in the proposal was \$46.72/CWT = BI

600,000 lbs. of Structural Steel for Structure 1 at Station 22+57.68 were shipped to fabricator from the producing mill in same month, August 2020.

Monthly Index for Structural Steel (Category 2) for August 2020 was \$27.03/CWT = MI

The Steel Price Adjustment formula is as follows:

$$\text{SPA} = ((\text{MI} / \text{BI}) - 1) * \text{BI} * (\text{Q} / 100)$$

Where; SPA = Steel price adjustment in dollars

BI = Bidding Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices as listed in the proposal.

MI = Mill Shipping Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill, received on the project, or member cast as defined in the Product Relationship Table.

Q = Quantity of steel product, in pounds (lbs.) actually incorporated into the work as documented by the Contractor, or Design Build Team and verified by the Engineer.

$$\text{BI} = \$46.72 / \text{CWT}$$

$$\text{MI} = \$27.03 / \text{CWT}$$

$$\% \text{ change} = ((\text{MI} / \text{BI}) - 1) = (\$27.03 / \$46.72 - 1) = (0.57855 - 1) = -0.421446917808$$

$$\text{Q} = 600,000 \text{ lbs.}$$

$$\text{SPA} = -0.421446917808 * \$46.72 * (600,000 / 100)$$

$$\text{SPA} = -0.421446917808 * \$46.72 * 6,000$$

$$\text{SPA} = \$ 118,140.00 \text{ Credit to the Department for Structural Steel (Structure 1 at Station 22+57.68)}$$

**Price Adjustment Sample Calculation (increase)**

---

Project bid on July 16, 2020

Line Item 614 Reinforced Concrete Deck Slab has a plan quantity of 241974 lbs.

Bidding Index Reference Month was May 2020. Bidding Index for Reinforced Concrete Deck Slab (Category 1) in the proposal was \$29.21/CWT = BI

51,621 lbs. of reinforcing steel and 52,311 lbs. of epoxy coated reinforcing steel for Structure 2 at Station 107+45.55 -L- was shipped to fabricator from the producing mill in same month, May 2021.

Monthly Index for Reinforced Concrete Deck Slab (Category 1) for May 2021 was \$43.13/CWT = MI

The Steel Price Adjustment formula is as follows:

$$\text{SPA} = ((\text{MI} / \text{BI}) - 1) * \text{BI} * (\text{Q} / 100)$$

Where; SPA = Steel price adjustment in dollars

BI = Bidding Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices as listed in the proposal.

MI = Mill Shipping Index – in dollars (\$) per hundredweight (CWT). Use the adjustment indices from the month the steel was shipped from the producing mill, received on the project, or member cast as defined in the Product Relationship Table.

Q = Quantity of steel product, in pounds (lbs.) actually incorporated into the work as documented by the Contractor, or Design Build Team and verified by the Engineer.

$$\text{BI} = \$29.21 / \text{CWT}$$

$$\text{MI} = \$43.13 / \text{CWT}$$

$$\% \text{ change} = ((\text{MI} / \text{BI}) - 1) = (\$43.13 / \$29.21 - 1) = (1.47655 - 1) = 0.47654912701$$

$$\text{Q} = 103932 \text{ lbs.}$$

$$\text{SPA} = 0.47654912701 * \$29.21 * (103,932 / 100)$$

$$\text{SPA} = 0.47654912701 * \$29.21 * 1,039.32$$

SPA = \$14,467.33 Pay Adjustment to Contractor for Reinforced Concrete Deck Slab (Category 1) at Station 107+45.55 -L-

**SCHEDULE OF ESTIMATED COMPLETION PROGRESS:**

(7-15-08)(Rev. 7-16-24)

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:

|      | <b><u>Fiscal Year</u></b> | <b><u>Progress (% of Dollar Value)</u></b> |
|------|---------------------------|--|
| 2025 | (7/01/24 - 6/30/25)       | <b>10%</b> of Total Amount Bid             |
| 2026 | (7/01/25 - 6/30/26)       | <b>83%</b> of Total Amount Bid             |
| 2027 | (7/01/26 - 6/30/27)       | <b>7%</b> of Total Amount Bid              |

The Contractor shall also furnish his own progress schedule in accordance with Article 108-2 of the *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.

**MINORITY BUSINESS ENTERPRISE AND WOMEN BUSINESS ENTERPRISE:**

(10-16-07)(Rev. 5-9-24)

102-15(J)

SP1 G66

**Description**

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

**Definitions**

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

*Combined MBE/WBE Goal*: A portion of the total contract, expressed as a percentage that is to be performed by committed MBE/WBE subcontractors.

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

*Contract Goal Requirement* - The approved participation at time of award, but not greater than the advertised Combined MBE/WBE contract goal.

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

*Manufacturer* - A firm that owns (or leases) and operates or maintains a factory or establishment that produces on the premises, the materials or supplies obtained by the Contractor. A firm that

makes minor modifications to the materials, supplies, articles, or equipment is not a manufacturer.

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

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

*Regular Dealer* - A firm that owns (or leases), and operates a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in sufficient quantities, 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, concrete or concrete products, gravel, stone, asphalt and petroleum products need not keep such products in stock, if it owns and operates distribution equipment for the products. Any supplement of regular dealers' own distribution equipment shall be by a long-term operating lease and not on an ad hoc or contract-by-contract basis.

*Distributor* - A firm that engages in the regular sale or lease of the items specified by the contract. A distributor assumes responsibility for the items it purchases once they leave the point of origin (e.g., a manufacturer's facility), making it liable for any loss or damage not covered by the carrier's insurance.

*Replacement / Substitution* - A full or partial reduction in the amount of work subcontracted to a committed (or an approved substitute) MBE/WBE firm.

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

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

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

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

### **Forms and Websites Referenced in this Provision**

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

*DBE-IS Subcontractor Payment Information* - Form for reporting the payments made to all MBE/WBE firms working on the project. This form is for paper bid projects only.  
<https://connect.ncdot.gov/business/Turnpike/Documents/Form%20DBE-IS%20Subcontractor%20Payment%20Information.pdf>

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

*SAF Subcontract Approval Form* - Form required for approval to sublet the contract.  
<https://connect.ncdot.gov/projects/construction/Construction%20Forms/SAF%20Form%20-%20Subcontract%20Approval%20Form%20Revised%2004-19.xlsm>

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

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

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

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

*DBE Regular Dealer/Distributor Affirmation Form* – Form is used to make a preliminary counting determination for each DBE listed as a regular dealer or distributor to assess its eligibility for 60 or 40 percent credit, respectively of the cost of materials or supplies based on its demonstrated capacity and intent to perform as a regular dealer or distributor, as defined in section 49 CFR 26.55 under the contract at issue. A Contractor will submit the completed form with the Letter of Intent.  
<https://connect.ncdot.gov/projects/construction/Construction%20Forms/DBE%20Regular%20Dealer-Distributor%20Affirmation%20Form%20-%20USDOT%202024.pdf>

**Combined MBE/WBE Goal**

The Combined MBE/WBE Goal for this project is **3.0%**

The Combined Goal was established utilizing the following anticipated participation for Minority Business Enterprises and Women Business Enterprises:

(A) Minority Business Enterprises **1.0%**

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

(B) Women Business Enterprises **2.0%**

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

The Bidder is required to submit only participation to meet the Combined MBE/WBE Goal. The Combined Goal may be met by submitting all MBE participation, all WBE participation, or a combination of MBE and WBE participation.

**Directory of Transportation Firms (Directory)**

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

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

### Listing of MBE/WBE Subcontractors

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

#### (A) Electronic Bids

Bidders shall submit a listing of MBE and WBE participation in the appropriate section of the electronic submittal file.

- (1) Submit the names and addresses of MBE and WBE firms identified to participate in the contract. If the bidder uses the updated listing of MBE and WBE firms shown in the electronic submittal file, the bidder may use the dropdown menu to access the name and address of the firms.
- (2) Submit the contract line numbers of work to be performed by each MBE and WBE firm. When no figures or firms are entered, the bidder will be considered to have no MBE or WBE participation.
- (3) The bidder shall be responsible for ensuring that the MBE and WBE are certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that MBE's or WBE's participation will not count towards achieving the Combined MBE/WBE goal.

#### (B) Paper Bids

- (1) *If the Combined MBE/WBE Goal is more than zero,*
  - (a) Bidders, at the time the bid proposal is submitted, shall submit a listing of MBE/WBE participation, including the names and addresses on *Listing of MBE and WBE Subcontractors* contained elsewhere in the contract documents in order for the bid to be considered responsive. Bidders shall indicate the total dollar value of the MBE and WBE participation for the contract.
  - (b) If bidders have no MBE or WBE participation, they shall indicate this on the *Listing of MBE and WBE Subcontractors* by entering the word "None" or the number "0." This form shall be completed in its entirety. **Blank forms will not be deemed to represent zero participation.** Bids submitted that do not have MBE and WBE participation indicated on the



appropriate form will not be read publicly during the opening of bids. The Department will not consider these bids for award and the proposal will be rejected.

- (c) The bidder shall be responsible for ensuring that the MBE/WBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that MBE's or WBE's participation will not count towards achieving the Combined MBE/WBE Goal.
- (2) *If the Combined MBE/WBE Goal is zero, entries on the Listing of MBE and WBE Subcontractors are not required for the zero goal, however any MBE or WBE participation that is achieved during the project shall be reported in accordance with requirements contained elsewhere in the special provision.*

### **MBE or WBE Prime Contractor**

When a certified MBE or WBE firm bids on a contract that contains a Combined MBE/WBE goal, the 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 MBE or WBE bidder on a contract will meet the Combined MBE/WBE Goal by virtue of the work it performs on the contract with its own forces. However, all the work that is performed by the MBE or WBE bidder and any other similarly certified subcontractors will count toward the goal. The MBE or WBE bidder shall list itself along with any MBE or WBE subcontractors, if any, in order to receive credit toward the goal.

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

### **Written Documentation – Letter of Intent**

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

The documentation shall be received in the office of the State Contractor Utilization Engineer or at DBE@ncdot.gov no later than 10:00 a.m. 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 10:00 a.m. on the next official state business day.

If the bidder fails to submit the Letter of Intent from each committed MBE and WBE to be used toward the Combined MBE/WBE Goal, or if the form is incomplete (i.e. both signatures are not present), the MBE/WBE participation will not count toward meeting the Combined MBE/WBE Goal. If the lack of this participation drops the commitment below the Combined MBE/WBE Goal, the Contractor shall submit evidence of good faith efforts for the goal, completed in its entirety, to the State Contractor Utilization Engineer or DBE@ncdot.gov no later than 10:00 a.m. 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 10:00 a.m. on the next official state business day.

### **Banking MBE/WBE Credit**

If the bid of the lowest responsive bidder exceeds \$500,000 and if the committed MBE/WBE participation submitted exceeds the algebraic sum of the Combined MBE /WBE Goal by \$1,000 or more, the excess will be placed on deposit by the Department for future use by the bidder. Separate accounts will be maintained for MBE and WBE participation and these may accumulate for a period not to exceed 24 months.

When the apparent lowest responsive bidder fails to submit sufficient participation by MBE and WBE firms to meet the advertised goal, as part of the good faith effort, the Department will consider allowing the bidder to withdraw funds to meet the Combined MBE/WBE Goal as long as there are adequate funds available from the bidder's MBE and WBE bank accounts.

### **Submission of Good Faith Effort**

If the bidder fails to meet or exceed the Combined MBE/WBE Goal, the apparent lowest responsive bidder shall submit to the Department documentation of adequate good faith efforts made to reach that specific 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](mailto:DBE@ncdot.gov) no later than 10:00 a.m. on the sixth calendar day following opening of bids unless the sixth day falls on an official state holiday. In that situation, it would be due in the office of the State Contractor Utilization Engineer no later than 10:00 a.m. on the next official state business day. If the Contractor cannot send the information electronically, then one complete set and 5 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 MBE/WBE quotations shall be a part of the good faith effort submittal. This documentation may include written subcontractor quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

### **Consideration of Good Faith Effort for Projects with a Combined MBE/WBE Goal More Than Zero**

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

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

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

- (E) Not rejecting MBEs/WBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associates and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
- (F) Making efforts to assist interested MBEs/WBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or bidder.
- (G) Making efforts to assist interested MBEs/WBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (H) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; Federal, State, and local minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of MBEs/WBEs. Contact within 7 days from the bid opening the Business Opportunity and Work Force Development Unit at [BOWD@ncdot.gov](mailto:BOWD@ncdot.gov) to give notification of the bidder's inability to get MBE or WBE quotes.
- (I) Any other evidence that the bidder submits which shows that the bidder has made reasonable good faith efforts to meet the advertised 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 Combined MBE/WBE Goal.
- (2) The bidders' past performance in meeting the contract goal.
- (3) The performance of other bidders in meeting the advertised goal. For example, when the apparent successful bidder fails to meet the 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 advertised goal, but meets or exceeds the average MBE and WBE participation obtained by other bidders, the Department may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made a good faith effort.

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

**Non-Good Faith Appeal**

The State Prequalification 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 Prequalification Engineer. The appeal shall be made within 2 business days of notification of the determination of non-good faith.

**Counting MBE/WBE Participation Toward Meeting the Combined MBE/WBE Goal****(A) Participation**

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

**(B) Joint Checks**

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

**(C) Subcontracts (Non-Trucking)**

A MBE/WBE may enter into subcontracts. Work that a MBE subcontracts to another MBE firm may be counted toward the anticipated MBE participation. The same holds true for work that a WBE subcontracts to another WBE firm. Work that a MBE/WBE subcontracts to a non-MBE/WBE firm does not count toward the contract goal requirement. It should be noted that every effort shall be made by MBE and WBE contractors to subcontract to the same certification (i.e., MBEs to MBEs and WBEs to WBEs), in order to fulfill the MBE or WBE participation breakdown. This, however, may not always be possible due to the limitation of firms in the area. If the MBE or WBE firm shows a good faith effort has been made to reach out to similarly certified firms and there is no interest or availability, and they can get assistance from other certified firms, the Engineer will not hold the prime responsible for meeting the individual MBE or WBE breakdown. If a MBE or WBE contractor or subcontractor subcontracts a significantly greater portion of the work of the contract than would be expected on the basis of standard industry practices, it shall be presumed that the MBE or WBE is not performing a commercially useful function.

**(D) Joint Venture**

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

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

(F) Manufacturer, Regular Dealer, Distributor

A Contractor may count toward its MBE/WBE requirement 40 percent of its expenditures for materials or supplies (including transportation costs) from a MBE/WBE distributor, 60 percent of its expenditures for materials or supplies (including transportation costs) from a MBE/WBE regular dealer and 100 percent of such expenditures obtained from a MBE/WBE manufacturer.

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

- (1) The fees or commissions charged by a MBE/WBE firm for providing a *bona fide* service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, provided the fees or commissions are determined to be reasonable and not excessive as compared with fees and commissions customarily allowed for similar services.
- (2) With respect to materials or supplies purchased from a MBE/WBE, which is neither a manufacturer, regular dealer, nor a distributor count the entire amount of fees or commissions charged that the Department deems to be reasonable, including transportation charges for the delivery of materials or supplies. Do not count any portion of the cost of the materials and supplies themselves.

A Contractor will submit a completed *DBE Regular Dealer/Distributor Affirmation Form* with the Letter of Intent to the State Contractor Utilization Engineer or [DBE@ncdot.gov](mailto:DBE@ncdot.gov). The State Contractor Utilization Engineer will make a preliminary assessment as to whether a MBE/WBE supplier has the demonstrated capacity to perform a commercially useful function (CUF) on a contract-by-contract basis *prior* to its participation.

**Commercially Useful Function****(A) MBE/WBE Utilization**

The Contractor may count toward its contract goal requirement only expenditures to MBEs and WBEs that perform a commercially useful function in the work of a contract. A MBE/WBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by performing, managing, and supervising the work involved. To perform a commercially useful function, the MBE/WBE shall also be responsible with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material and installing (where applicable) and paying for the material itself. To determine whether a MBE/WBE is performing a commercially useful function, the Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is performing and the MBE/WBE credit claimed for its performance of the work, and any other relevant factors. If it is determined that a MBE or WBE is not performing a Commercially Useful Function, the contractor may present evidence to rebut this presumption to the Department.

**(B) MBE/WBE Utilization in Trucking**

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

- (1) The MBE/WBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there shall not be a contrived arrangement for the purpose of meeting the Combined MBE/WBE Goal.
- (2) The MBE/WBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- (3) The MBE/WBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
- (4) The MBE may subcontract the work to another MBE firm, including an owner-operator who is certified as a MBE. The same holds true that a WBE may subcontract the work to another WBE firm, including an owner-operator who is certified as a WBE. When this occurs, the MBE or WBE who subcontracts work receives credit for the total value of the transportation services the subcontracted MBE or WBE provides on the contract. It should be noted that every effort shall be made by MBE and WBE contractors to subcontract to the same certification (i.e., MBEs to MBEs and WBEs to WBEs), in order to fulfill the participation breakdown. This, however, may not always be possible due to the limitation of firms in the area. If the MBE or WBE firm shows a good faith

effort has been made to reach out to similarly certified transportation service providers and there is no interest or availability, and they can get assistance from other certified providers, the Engineer will not hold the prime responsible for meeting the individual MBE or WBE participation breakdown.

- (5) The MBE/WBE may also subcontract the work to a non-MBE/WBE firm, including from an owner-operator. The MBE/WBE who subcontracts the work to a non-MBE/WBE is entitled to credit for the total value of transportation services provided by the non-MBE/WBE subcontractor not to exceed the value of transportation services provided by MBE/WBE-owned trucks on the contract. Additional participation by non-MBE/WBE subcontractors receives credit only for the fee or commission it receives as a result of the subcontract arrangement. The value of services performed under subcontract agreements between the MBE/WBE and the Contractor will not count towards the MBE/WBE contract requirement.
- (6) A MBE/WBE may lease truck(s) from an established equipment leasing business open to the general public. The lease must indicate that the MBE/WBE has exclusive use of and control over the truck. This requirement does not preclude the leased truck from working for others during the term of the lease with the consent of the MBE/WBE, so long as the lease gives the MBE/WBE absolute priority for use of the leased truck. This type of lease may count toward the MBE/WBE's credit as long as the driver is under the MBE/WBE's payroll.
- (7) Subcontracted/leased trucks shall display clearly on the dashboard the name of the MBE/WBE that they are subcontracted/leased to and their own company name if it is not identified on the truck itself. Magnetic door signs are not permitted.

### **MBE/WBE Replacement**

When a Contractor has relied on a commitment to a MBE or WBE subcontractor (or an approved substitute MBE or WBE subcontractor) to meet all or part of a contract goal requirement, the contractor shall not terminate the MBE/WBE subcontractor or any portion of its work for convenience. This includes, but is not limited to, instances in which the Contractor seeks to perform the work of the terminated subcontractor with another MBE/WBE subcontractor, a non-MBE/WBE subcontractor, or with the Contractor's own forces or those of an affiliate.

The Contractor must give notice in writing both by certified mail and email to the MBE/WBE subcontractor, with a copy to the Engineer of its intent to request to terminate a MBE/WBE subcontractor or any portion of its work, and the reason for the request. The Contractor must give the MBE/WBE subcontractor five (5) business days to respond to the Contractor's Notice of Intent to Request Termination and/or Substitution. If the MBE/WBE subcontractor objects to the intended termination/substitution, the MBE/WBE, within five (5) business days must advise the Contractor and the Department of the reasons why the action should not be approved. The five-day notice period shall begin on the next business day after written notice is provided to the MBE/WBE subcontractor.



A committed MBE/WBE subcontractor may only be terminated or any portion of its work after receiving the Department's written approval based upon a finding of good cause for the proposed termination and/or substitution. Good cause does not exist if the Contractor seeks to terminate a MBE/WBE or any portion of its work that it relied upon to obtain the contract so that the Contractor can self-perform the work for which the MBE/WBE was engaged, or so that the Contractor can substitute another MBE/WBE or non-MBE/WBE contractor after contract award. For purposes of this section, good cause shall include the following circumstances:

- (a) The listed MBE/WBE subcontractor fails or refuses to execute a written contract;
- (b) The listed MBE/WBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the MBE/WBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (c) The listed MBE/WBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements;
- (d) The listed MBE/WBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (e) The listed MBE/WBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR parts 180, 215 and 1200 or applicable State law;
- (f) The listed MBE/WBE subcontractor is not a responsible contractor;
- (g) The listed MBE/WBE voluntarily withdraws from the project and provides written notice of withdrawal;
- (h) The listed MBE/WBE is ineligible to receive MBE/WBE credit for the type of work required;
- (i) A MBE/WBE owner dies or becomes disabled with the result that the listed MBE/WBE contractor is unable to complete its work on the contract; and
- (j) Other documented good cause that compels the termination of the MBE/WBE subcontractor.

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

(A) Performance Related Replacement

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

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

- (1) Copies of written notification to MBE/WBEs that their interest is solicited in contracting the work defaulted by the previous MBE/WBE or in subcontracting other items of work in the contract.
  - (2) Efforts to negotiate with MBE/WBEs for specific subbids including, at a minimum:
    - (a) The names, addresses, and telephone numbers of MBE/WBEs who were contacted.
    - (b) A description of the information provided to MBE/WBEs regarding the plans and specifications for portions of the work to be performed.
  - (3) A list of reasons why MBE/WBE quotes were not accepted.
  - (4) Efforts made to assist the MBE/WBEs contacted, if needed, in obtaining bonding or insurance required by the Contractor.
- (B) Decertification Replacement
- (1) When a committed MBE/WBE is decertified by the Department after the SAF (*Subcontract Approval Form*) has been received by the Department, the Department will not require the Contractor to solicit replacement MBE/WBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement but not the overall goal.
    - (i) If the MBE/WBE's ineligibility is caused solely by its having exceeded the size standard during the performance of the contract. The Department may continue to count participation equal to the remaining work performed by the decertified firm which will count toward the contract goal requirement and overall goal.
    - (ii) If the MBE/WBE's ineligibility is caused solely by its acquisition by or merger with a non- MBE/WBE during the performance of the contract. The Department may not continue to count the portion of the decertified firm's performance on the contract remaining toward either the contract goal or the overall goal, even if the Contractor has executed a subcontract with the firm or the Department has executed a prime contract with the MBE/WBE that was later decertified.
  - (2) When a committed MBE/WBE is decertified prior to the Department receiving the SAF (*Subcontract Approval Form*) for the named MBE/WBE firm, the

Contractor shall take all necessary and reasonable steps to replace the MBE/WBE subcontractor with another MBE/WBE subcontractor to perform at least the same amount of work to meet the Combined MBE/WBE goal requirement. If a MBE/WBE firm is not found to do the same amount of work, a good faith effort must be submitted to NCDOT (see A herein for required documentation).

All requests for replacement of a committed MBE/WBE 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.

### **Changes in the Work**

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

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

When the Engineer makes changes that result in an alteration of plans or details of construction, and a portion or all of the work had been expected to be performed by a committed MBE/WBE, the Contractor shall seek participation by MBEs/WBEs unless otherwise approved by the Engineer.

When the Contractor requests changes in the work that result in the reduction or elimination of work that the Contractor committed to be performed by a MBE/WBE, the Contractor shall seek additional participation by MBEs/WBEs equal to the reduced MBE/WBE participation caused by the changes.

### **Reports and Documentation**

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

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

Within 30 calendar days of entering into an agreement with a MBE/WBE for materials, supplies or services, not otherwise documented by the SAF as specified above, the Contractor shall

furnish the Engineer a copy of the agreement. The documentation shall also indicate the percentage (60% or 100%) of expenditures claimed for MBE/WBE credit.

### **Reporting Minority and Women Business Enterprise Participation**

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

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

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

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

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

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

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

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

### **Failure to Meet Contract Requirements**

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

**RESTRICTIONS ON ITS EQUIPMENT AND SERVICES:**

(11-17-20)

SP1 G090

All telecommunications, video or other ITS equipment or services installed or utilized on this project must be in conformance with UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS FOR FEDERAL AWARDS **2 CFR, § 200.216 Prohibition on certain telecommunications and video surveillance services or equipment.**

**USE OF UNMANNED AIRCRAFT SYSTEM (UAS):**

(8-20-19)

SP1 G092

The Contractor shall adhere to all Federal, State and Local regulations and guidelines for the use of Unmanned Aircraft Systems (UAS). This includes but is not limited to US 14 CFR Part 107 *Small UAS Rule*, NC GS 15A-300.2 *Regulation of launch and recovery sites*, NC GS 63-95 *Training required for the operation of unmanned aircraft systems*, NC GS 63-96 *Permit required for commercial operation of unmanned aircraft system*, and NCDOT UAS Policy. The required operator certifications include possessing a current Federal Aviation Administration (FAA) Remote Pilot Certificate, a NC UAS Operator Permit as well as operating a UAS registered with the FAA.

Prior to beginning operations, the Contractor shall complete the NCDOT UAS – Flight Operation Approval Form and submit it to the Engineer for approval. All UAS operations shall be approved by the Engineer prior to beginning the operations.

All contractors or subcontractors operating UAS shall have UAS specific general liability insurance to cover all operations under this contract.

The use of UAS is at the Contractor's discretion. No measurement or payment will be made for the use of UAS. In the event that the Department directs the Contractor to utilize UAS, payment will be in accordance with Article 104-7 Extra Work.

**EQUIPMENT IDLING GUIDELINES:**

(1-19-21)

107

SP1 G096

Exercise reduced fuel consumption and reduced equipment emissions during the construction of all work associated with this contract. Employees engaged in the construction of this project should turn off vehicles when stopped for more than thirty (30) minutes and off-highway equipment should idle no longer than fifteen (15) consecutive minutes.

These guidelines for turning off vehicles and equipment when idling do not apply to:

1. Idling when queuing.
2. Idling to verify the vehicle is in safe operating condition.
3. Idling for testing, servicing, repairing or diagnostic purposes.
4. Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane, mixing concrete, etc.).
5. Idling required to bring the machine system to operating temperature.

6. Emergency vehicles, utility company, construction, and maintenance vehicles where the engines must run to perform needed work.
7. Idling to ensure safe operation of the vehicle.
8. Idling when the propulsion engine is providing auxiliary power for other than heating or air conditioning. (such as hydraulic systems for pavers)
9. When specific traffic, safety, or emergency situations arise.
10. If the ambient temperature is less than 32 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants (e.g. to run the heater).
11. If the ambient temperature is greater than 90 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants of off-highway equipment (e.g. to run the air conditioning) no more than 30 minutes.
12. Diesel powered vehicles may idle for up to 30 minutes to minimize restart problems.

Any vehicle, truck, or equipment in which the primary source of fuel is natural gas or electricity is exempt from the idling limitations set forth in this special provision.

**SUBSURFACE INFORMATION:**

(7-1-95)(Rev. 8-16-22)

450

SP1 G112 B

Subsurface information is available on the structure portion of this project.

**MAINTENANCE OF THE PROJECT:**

(11-20-07)(Rev. 1-16-24)

104-10

SP1 G125

Revise the *Standard Specifications* as follows:

**Page 1-35, Article 104-10 Maintenance of the Project, line 3,** 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 8,** 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 20-22,** 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.

**COOPERATION BETWEEN CONTRACTORS:**

(7-1-95)(Rev. 1-16-24)

105-7

SP1 G133

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

B-5717 (C204712) is located along the proposed off-site detour route. B-5717 is currently under construction and not anticipated to be completed prior to the letting of this project.

I-5955A (C204921) is located along the proposed off-site detour route. I-5955A is currently under construction and not anticipated to be completed prior to the letting of this project.

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

**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.

**OUTSOURCING OUTSIDE THE USA:**

(9-21-04) (Rev. 5-16-06)

SP1 G150

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

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

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

**EROSION AND SEDIMENT CONTROL/STORMWATER CERTIFICATION:**

(1-16-07) (Rev. 10-15-24)

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 and within 24 hours after a rainfall event equal to or greater than 1.0 inch that occurs within a 24 hour period. Additional monitoring may be required at the discretion of Division of Water Resources personnel if the receiving stream is 303(d) listed for turbidity and the project has had documented problems managing turbidity.
  - (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 Certified Designer on the erosion and sediment control/stormwater component of all reclamation plans and if applicable, the certification number of the Level III 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 *Cease 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**

All work described within this provision and the role of 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. 1-16-24)

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 *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 <https://connect.ncdot.gov/resources/roadside/FieldOperationsDocuments/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.

**PROJECT SPECIAL PROVISIONS****ROADWAY****CLEARING AND GRUBBING - METHOD II:**

(9-17-02)(Rev. 3-19-24)

200

SP2 R02A

Perform clearing on this project to the limits established by Method - II shown on Standard Drawing No. 200.02 of the *Roadway Standard Drawings*. Conventional clearing methods may be used except where permit drawings or conditions have been included in the proposal which require certain areas to be cleared by hand methods.

**BURNING RESTRICTIONS:**

(7-1-95)

200, 210, 215

SP2 R05

Open burning is not permitted on any portion of the right-of-way limits established for this project. Do not burn the clearing, grubbing or demolition debris designated for disposal and generated from the project at locations within the project limits, off the project limits or at any waste or borrow sites in this county. Dispose of the clearing, grubbing and demolition debris by means other than burning, according to state or local rules and regulations.

**SHOULDER AND FILL SLOPE MATERIAL:**

(5-21-02)(Rev. 1-16-24)

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 *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 *Standard Specifications* for *Borrow Excavation*.

**MANUFACTURED QUARRY FINES IN EMBANKMENTS:**

(01-17-17)(Rev. 4-16-24)

235

SP02 R72

**Description**

This specification addresses the use of manufactured quarry fines that are not classified as select materials. The specification allows the Contractor an option, with the approval of the Engineer, to use manufactured quarry fines (MQFs) in embankments as a substitute for conventional borrow material. Furnish and place geotextile for subgrade stabilization in accordance with the contract. Geotextile for subgrade stabilization is required to prevent pavement cracking and provide separation between the subgrade and pavement section at embankment locations where



manufactured quarry fines are utilized and as directed by the Engineer.

### **Materials**

Manufactured Quarry Fines.

Site specific approval of MQFs material will be required prior to beginning construction as detailed in the preconstruction requirements of this provision.

The following MQFs are unacceptable:

- (A) Frozen material,
- (B) Material with a maximum dry unit weight of less than 90 pounds per cubic foot when tested in accordance with AASHTO T 99 Method A or C.
- (C) Material with greater than 80% by weight Passing the #200 sieve

Collect and transport MQFs in a manner that will prevent nuisances and hazards to public health and safety. Moisture condition the MQFs as needed and transport in covered trucks to prevent dusting. If MQFs are blended with natural earth material, follow Borrow Criteria in Section 1018 of the *Standard Specifications*.

### **Preconstruction Requirements**

When MQFs are to be used as a substitute for earth borrow material, request written approval from the Engineer at least ninety (90) days in advance of the intent to use MQFs and include the following details:

- (A) Description, purpose and location of project.
- (B) Estimated start and completion dates of project.
- (C) Estimated volume of MQFs to be used on project with specific locations and construction details of the placement.
- (D) The names, address, and contact information for the generator of the MQFs.
- (E) Physical location of the site at which the MQFs were generated.

The Engineer will forward this information to the State Materials Engineer for review and material approval.

### **Construction Methods**

Place MQFs in the core of the embankment section with at least 4 feet of earth cover to the outside limits of the embankments or subgrade.

Construct embankments by placing MQFs in level uniform lifts with no more than a lift of 10 inches and compacted to at least a density of 95 percent as determined by test methods in AASHTO T 99, Determination of Maximum Dry Density and Optimum Moisture Content, Method A or C depending upon particle size of the product. Provide a moisture content at the time of compaction of within 4 percent of optimum but not greater than one percent above optimum as determined by AASHTO T 99, Method A or C.

In embankments where MQFs are incorporated, geotextile for subgrade stabilization shall be used. Refer to Article 505-2 of the *Standard Specifications* for geotextile type and Article 505-3 of the *Standard Specifications* for the geotextile construction methods.

### Measurement and Payment

*Borrow Excavation* will be measured by truck volume and paid in cubic yards in accordance with Article 230-5 of the *Standard Specifications*. As an alternate weigh tickets can be provided and payment made by converting weight to cubic yards based on the verifiable unit weight. Where the pay item for *Borrow Excavation* is not included in the original contract then no separate payment will be made for this item and payment will be included in the lump sum price bid for *Grading*.

*Geotextile for Subgrade Stabilization* will be measured and paid in accordance with Article 505-4 of the *Standard Specifications*. When the pay item for *Geotextile for Subgrade Stabilization* is not included in the original contract then no payment will be made for this item and will be considered incidental to the use of MQFs in embankment.

### **BRIDGE APPROACH FILLS:**

(10-19-10)(Rev. 1-16-24)

422

SP4 R02

### **Description**

Bridge approach fills consist of backfilling behind bridge end bents with select material or aggregate to support all or part of bridge approach slabs. Install outlets and grade bridge approach fills to drain water through and away from approach fills. Install geotextiles to allow for possible future slab jacking and separate approach fills from embankment fills, natural ground and pavement sections as required. For bridge approach fills behind end bents with mechanically stabilized earth (MSE) abutment walls, reinforce bridge approach fills with MSE wall reinforcement connected to end bent caps as required. Construct bridge approach fills in accordance with the contract, accepted submittals and bridge approach fill *Roadway Standard Drawings*.

Define bridge approach fill types as follows:

*Type 1 Approach Fill* – Approach fill for bridge abutment in accordance with *Roadway Standard Drawing* No. 423.01;

*Type 1A Approach Fill* – Alternate approach fill for integral bridge abutment in accordance with *Roadway Standard Drawing* No. 423.02;

*Type 2 Approach Fill* – Approach fill for bridge abutment with MSE wall in accordance with *Roadway Standard Drawing* No. 423.03 and

*Type 2A Approach Fill* – Alternate approach fill for integral bridge abutment with MSE wall in accordance with *Roadway Standard Drawing* No. 423.04.

At the Contractors option, use Type 1A or 2A approach fills instead of Type 1 or 2 approach fills, respectively, for integral bridge abutments. Type 1A and 2A approach fills consists of

constructing an approach fill with a temporary geotextile wall before placing all or a portion of the concrete for the backwall and wing walls of the integral end bent cap. The temporary geotextile wall is designed for a construction surcharge, remains in place and is aligned so the wall face functions as a form for the integral end bent cap backwall and wing walls.

### Materials

Refer to Division 10 of the *Standard Specifications*.

| Item                          | Section |
|-------------------------------|---------|
| Geotextiles                   | 1056    |
| Portland Cement Concrete      | 1000    |
| Select Materials              | 1016    |
| Subsurface Drainage Materials | 1044    |
| Welded Wire Reinforcement     | 1070-3  |

Provide Type 1 geotextile for separation geotextiles, Type 4a geotextile for under bridge approach slabs and Class B concrete for outlet pads. Use Class V or Class VI select material for Type 1 and 1A approach fills and the same aggregate type approved for the reinforced zone in the accepted MSE wall submittal for Type 2 and 2A approach fills. For MSE wall aggregate, reinforcement and connector materials, see the *Mechanically Stabilized Earth Retaining Walls* provision. Provide outlet pipes and fittings for subsurface drainage materials. Provide 1/4" hardware cloth with 1/4 inch openings constructed from 24 gauge wire.

For temporary geotextile walls, use welded wire reinforcement for welded wire facing and Type 5a geotextile for reinforcement geotextiles. Use Type 5a geotextile with lengths as shown in *Roadway Standard Drawing* No. 423.02 or 423.04.

## Construction Methods

Excavate as necessary for approach fills and, if applicable, temporary geotextile walls in accordance with the contract. Ensure limits of approach fills are graded to drain as shown in the bridge approach fill *Roadway Standard Drawings*. For Type 1 and 1A approach fills in embankment fills, place and compact a temporary 1.5:1 (H:V) fill slope in accordance with *Roadway Standard Drawing* No. 423.01 or 423.02 and in accordance with Subarticle 235-3(B) and 235-3(C) of the *Standard Specifications*. Density testing is required within the temporary fill slope and additional more frequent density testing is also required for bridge approach embankments. Wait 3 days before cutting the slope back to complete the approach fill excavation. Use excavated material elsewhere on the project to form embankments, subgrades, or shoulders. If a slope for an approach fill is excavated to flatter than what is required for access or any other reason, that same slope is required for the entire approach fill excavation. Do not backfill overexcavations that extend outside the approach fill limits shown on the *Roadway Standard Drawings* with embankment soils. Instead, expand approach fill limits to include overexcavations.

Notify the Engineer when embankment fill placement and approach fill excavation is complete. Do not place separation geotextiles or aggregate until approach fill dimensions and embankment materials below and outside approach fills are approved.

For Type 2 approach fills, cast MSE wall reinforcement or connectors into end bent cap backwalls within 3 inches of locations shown in the accepted MSE wall submittals. Install MSE wall reinforcement with the orientation, dimensions and number of layers shown in the accepted MSE wall submittals. If a Type 2 approach fill is designed with geogrid reinforcement embedded in an end bent cap, cut geogrids to the required lengths and after securing ends of geogrids in place, reroll and rewrap portions of geogrids not embedded in the cap to protect geogrids from damage. Before placing aggregate over any MSE wall geosynthetic reinforcement, pull reinforcement taut so that it is in tension and free of kinks, folds, wrinkles or creases.

For Type 1 and 1A approach fills, place pipe sleeves in wing walls so water drains towards outlets. Use sleeves that can withstand wing wall loads. Insert outlet pipes into pipe sleeves to direct water towards outlets. Attach hardware cloth in front of the outlet pipe at the wing. Connect outlet pipes and fittings with solvent cement in accordance with Article 815-3 of the *Standard Specifications* and place outlet pads in accordance with *Roadway Standard Drawing* No. 815.03.

Attach separation geotextiles to end bent cap backwalls and wing walls with adhesives, tapes or other approved methods. Overlap adjacent geotextiles of the same type at least 18 inches. Cover select material or aggregate with Type 4a geotextile at an elevation 6 inches below the bridge approach slab. Hold geotextiles in place with wire staples or anchor pins as needed. Contact the Engineer when existing or future obstructions such as foundations, pavements, pipes, inlets or utilities will interfere with geotextiles or MSE wall reinforcement.

For Type 1A and 2A approach fills, install temporary geotextile walls as shown in *Roadway Standard Drawing* No. 423.02 or 423.04. At the Contractor's option, construct the bottom portion of integral end bents before temporary geotextile walls as shown in the plans. Erect and

set welded wire facing for temporary geotextile walls so facing functions as a form for the integral end bent cap backwall. Place welded wire facing adjacent to each other in the horizontal and vertical directions to completely cover the temporary geotextile wall face. Stagger welded wire facing to create a running bond by centering facing over joints in the row below. Wrap reinforcement geotextiles at the wall face in accordance with *Roadway Standard Drawing* No. 423.02 or 423.04 and cover geotextiles with at least 3 inches of select material or aggregate. Place layers of reinforcement geotextiles within 3 inches of locations shown in *Roadway Standard Drawing* No. 423.02 or 423.04. Install reinforcement geotextiles with the direction shown in *Roadway Standard Drawing* No. 423.02 or 423.04. Orient overlapping seams in reinforcement geotextiles perpendicular to the integral end bent cap backwall. Do not overlap reinforcement geotextiles so seams are parallel to the wall face. Before placing select material or aggregate over reinforcement geotextiles, pull geotextiles taut so they are in tension and free of kinks, folds, wrinkles or creases. Temporary geotextile walls are designed for a surcharge pressure in accordance with *Roadway Standard Drawing* No. 423.02 or 423.04. If loads from construction equipment will be more than what the wall is designed for, contact the Engineer before positioning equipment on top of temporary geotextile walls.

Place select material or aggregate in 6 inch to 8 inch thick lifts. Compact fine aggregate for Type 2 and 2A approach fills in accordance with Subarticle 235-3(C) of the *Standard Specifications* except compact fine aggregate to a density of at least 98%. Compact select material for Type 1 and 1A approach fills and coarse aggregate for Type 2 and 2A approach fills with at least 4 passes of a trench roller in a direction parallel to the end bent cap backwall. Do not displace or damage geosynthetics or MSE wall reinforcement when placing and compacting select material or aggregate. End dumping directly on geosynthetics is not permitted. Do not operate heavy equipment on geosynthetics until they are covered with at least 8 inches of select material or aggregate. Replace any damaged geosynthetics to the satisfaction of the Engineer. When approach fills extend beyond bridge approach slabs, wrap Type 4a geotextiles over select material or aggregate and back under approach slabs as shown in *Roadway Standard Drawing* No. 423.03 or 423.04.

### Measurement and Payment

Type 1 and 1A approach fills will be paid for at the contract lump sum price for *Type 1 Bridge Approach Fill, Station \_\_\_\_\_* and Type 2 and 2A approach fills will be paid for at the contract lump sum price for *Type 2 Bridge Approach Fill, Station \_\_\_\_\_*. The lump sum price for each approach fill will be full compensation for providing labor, tools, equipment and approach fill materials, excavating, backfilling, hauling and removing excavated materials, installing wall facing, geotextiles and outlets, compacting backfill and supplying select material, aggregate, geotextiles, pipe sleeves, outlet pipes and pads and any incidentals necessary to construct approach fills behind bridge end bents.

Compensation for the material placed within the temporary 1.5:1 (H:V) fill slopes will be made in accordance with Section 225, 226, or 230 of the *Standard Specifications*. The cost of removal, including excavating, hauling, placement, and compaction of the material elsewhere on or off the project will be included in the contract lump sum price for *Type 1 Bridge Approach Fill, Station \_\_\_\_\_*.

The contract lump sum price for *Type 2 Bridge Approach Fill, Station \_\_\_\_\_* will also be full

compensation for supplying and connecting MSE wall reinforcement to end bent caps but not designing MSE wall reinforcement and connectors. The cost of designing reinforcement and connectors for Type 2 approach fills behind bridge end bents with MSE abutment walls will be incidental to the contract unit price for *MSE Retaining Wall No.* \_\_\_\_\_.

Payment will be made under:

| <b>Pay Item</b>                            | <b>Pay Unit</b> |
|--|-----------------|
| Type 1 Bridge Approach Fill, Station _____ | Lump Sum        |
| Type 2 Bridge Approach Fill, Station _____ | Lump Sum        |

**PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:**

(11-21-00)(Rev. 1-16-24)

620

SP6 R25

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

The base price index for asphalt binder for plant mix is **\$ 564.38** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **March 1, 2025**.

**FINAL SURFACE TESTING NOT REQUIRED:**

(5-18-04) (Rev. 2-16-16)

610

SP6 R45

Final surface testing is not required on this project in accordance with Section 610-13, *Final Surface Testing and Acceptance*.

**ELECTRONIC TICKETING SYSTEM:**

(7-16-24)(Rev. 12-17-24)

1020

SP10 R20

**Description**

At the contractor's option, the use of an electronic ticketing system for reporting individual and cumulative asphalt material deliveries may be utilized on this project. At the preconstruction conference, the contractor shall notify the Engineer if they intend to utilize an electronic ticketing system for reporting individual and cumulative asphalt material deliveries to the project.

**Electronic Ticketing Requirements**

- a. The electronic ticketing system must be fully integrated with the load read-out system at the plant. The system shall be designed so data inputs from scales cannot be altered by either the Contractor or the Department.
- b. Material supplier must test to confirm that ticketing data can be shared from the originating system no less than 30 days prior to project start.

- c. After each truck is loaded, ticket data must be electronically captured, and ticket information uploaded via Application Programming Interface (API) to the Department.
- d. Obtain security token from NCDOT for access to E-Ticketing portal (to send tickets). To request a Security Key, fill out the below E-Ticketing Security Request Form: <https://forms.office.com/g/XnT7QeRtgt>
- e. Obtain API from NCDOT containing the required e-ticketing data fields and format. Download the API from the NCDOT E-ticketing Webpage: <https://connect.ncdot.gov/projects/construction/E-Ticketing/Pages/default.aspx>
- f. Provide all ticket information in real time and daily summaries to the Department's designated web portal. If the project contains locations with limited cellular service, an alternative course of action must be agreed upon.
- g. Electronic ticketing submissions must be sent between the Material Supplier and the Department.
- h. The electronic ticket shall contain the following information:

Date  
Contract Number  
Supplier Name  
Contractor Name  
Material  
JMF  
Gross Weight  
Tare Weight  
Net Weight  
Load Number  
Cumulative Weight  
Truck Number  
Weighmaster Certification  
Weighmaster Expiration  
Weighmaster Name  
Facility Name  
Plant Certification Number  
Ticket Number  
Hauling Firm (optional)  
Voided Ticket Number (if necessary)  
Original Ticket Number (if necessary)  
Supplier Revision (If necessary)

The Contractor/supplier can use the electronic ticketing system of their choice to meet the requirements of this provision.

### **Measurement and Payment**

No measurement or payment will be made for utilizing an electronic ticketing system as the cost of such shall be included in the contract price bid for the material being provided.

**GLASS BEAD GRADATION FOR PAVEMENT MARKINGS:**

(9-17-24)

1087

SP10 R87

Revise the *Standard Specifications* as follows:

**Page 10-187, Subarticle 1087-4(C), Gradation & Roundness, after line 6, delete and replace Table 1087-2 with the following:**

| <b>TABLE 1087-2</b>                      |                               |                |
|--|-------------------------------|----------------|
| <b>GLASS BEAD GRADATION REQUIREMENTS</b> |                               |                |
| <b>Sieve Size</b>                        | <b>Gradation Requirements</b> |                |
|  | <b>Minimum</b>                | <b>Maximum</b> |
| Passing #20                              | 100%                          | --             |
| Retained on #30                          | 5%                            | 15%            |
| Retained on #50                          | 40%                           | 80%            |
| Retained on #80                          | 15%                           | 40%            |
| Passing #80                              | 0%                            | 10%            |
| Retained on #200                         | 0%                            | 5%             |



**STANDARD SPECIAL PROVISION****AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS**

(5-20-08)(Rev. 1-16-24)

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(D) of the *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:

| <b><u>Restricted Noxious Weed</u></b> | <b><u>Limitations per Lb. Of Seed</u></b> | <b><u>Restricted Noxious Weed</u></b> | <b><u>Limitations per Lb. of Seed</u></b> |
|---------------------------------------|---|---------------------------------------|---|
| 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) | Bermudagrass               |
| Kobe Lespedeza                       | Browntop Millet            |
| Korean Lespedeza                     | German Millet – Strain R   |
| Weeping Lovegrass                    | Clover – Red/White/Crimson |
| Carpetgrass                          |                            |

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       | Japanese Millet   |
| Crownvetch           | Reed Canary Grass |
| Pensacola Bahiagrass | Zoysia            |

Creeping Red Fescue

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**

(1-16-24) (Rev. 4-15-25)

Z-4

Revise the *2024 Standard Specifications* as follows:

**Division 3**

**Page 3-5, Article 305-2 MATERIALS, after line 16,** replace " 1032-3(A)(7)" with "1032-3" and add the item "Galvanized Corrugated Steel Pipe" with Section "1032-3".

**Page 3-6, Article 310-2 MATERIALS, after line 9,** add the item "Galvanized Corrugated Steel Pipe" with Section "1032-3".

**Division 6**

**Page 6-31, Article 610-16 MEASUREMENT AND PAYMENT, line 13,** replace "*Hot Mix Asphalt Pavement*" with "*Asphalt Concrete \_\_\_\_\_ Course, Type \_\_\_\_\_*".

**Division 9**

**Page 9-17, Article 904-4 MEASUREMENT AND PAYMENT, prior to line 1,** replace " Sign Erection, Relocate Type (Ground Mounted)" with "Sign Erection, Relocate Type \_\_\_\_ (Ground Mounted)".

**Division 10**

**Page 10-51, Article 1024-4 WATER, prior to line 1,** delete the "unpopulated blank row" in Table 1024-2 between "Time of set, deviation from control" and "Chloride Ion Content, Max.".

**Page 10-170, Subarticle 1081-1(C) Requirements, line 4,** replace "maximum" with "minimum".

**Division 11**

**Page 11-15, Article 1160-4 MEASUREMENT AND PAYMENT, line 24,** replace "Where barrier units are moved more than one" with "Where barrier units are moved more than once".

**Division 15**

**Page 15-10, Article 1515-4 MEASUREMENT AND PAYMENT, lines 11,** replace " All piping" with "All labor, the manhole, other materials, excavation, backfilling, piping".

**Division 16**

**Page 16-14, Article 1633-5 MEASUREMENT AND PAYMENT, line 20-24 and prior to line 25, delete and replace with the following " *Flocculant* will be measured and paid in accordance with Article 1642-5 applied to the temporary rock silt checks."**

**Page 16-3, Article 1609-2 MATERIALS, after line 26, replace "Type 4" with "Type 4a".**

**Page 16-25, Article 1644-2 MATERIALS, after line 22, replace "Type 4" with "Type 4a".**

**STANDARD SPECIAL PROVISION****PLANT AND PEST QUARANTINES**

**(Imported Fire Ant, Guava Root Knot Nematode, Spongy Moth (formerly known as gypsy moth), Witchweed, Cogon Grass, And Any Other Regulated Noxious Weed or Plant Pest)**

(3-18-03)(Rev. 3-18-25)

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, 919-707-3730, or <https://www.ncagr.gov/divisions/plant-industry/plant-protection/plant-industry-plant-pest-quarantines> 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 present a hazard of spreading imported fire ant, guava root knot nematode, spongy moth (formerly known as gypsy moth), witchweed, cogon grass, or other regulated noxious weed or plant pest.

**STANDARD SPECIAL PROVISION**

**MINIMUM WAGES**

(7-21-09)

Z-5

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

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

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

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

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

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

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



**STANDARD SPECIAL PROVISION****TITLE VI AND NONDISCRIMINATION:**

(6-28-77)(Rev 1/16/2024)

Z-6

The North Carolina Department of Transportation is committed to carrying out the U.S. Department of Transportation's policy of ensuring nondiscrimination in the award and administration of contracts.

The provisions of this section related to United States Department of Transportation (US DOT) Order 1050.2A, Title 49 Code of Federal Regulations (CFR) part 21, 23 United States Code (U.S.C.) 140 and 23 CFR part 200 (or 49 CFR 303, 49 U.S.C. 5332 or 49 U.S.C. 47123) are applicable to all North Carolina Department of Transportation (NCDOT) contracts and to all related subcontracts, material supply, engineering, architectural and other service contracts, regardless of dollar amount. Any Federal provision that is specifically required not specifically set forth is hereby incorporated by reference.

**(1) Title VI Assurances (USDOT Order 1050.2A, Appendix A)**

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

**(a) Compliance with Regulations**

The contractor (hereinafter includes consultants) shall comply with the Acts and the Regulations relative to Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration (FHWA), as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

**(b) Nondiscrimination**

The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

**(c) Solicitations for Subcontractors, Including Procurements of Materials and Equipment**

In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Nondiscrimination on the grounds of race, color, or national origin.

**(d) Information and Reports**

The contractor shall provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and shall permit access to its

books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor shall so certify to the Recipient or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

(e) Sanctions for Noncompliance:

In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it and/or the FHWA may determine to be appropriate, including, but not limited to:

- (i) Withholding payments to the contractor under the contract until the contractor complies; and/or
- (ii) Cancelling, terminating, or suspending a contract, in whole or in part.

(f) Incorporation of Provisions

The contractor shall include the provisions of paragraphs (a) through (f) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor shall take action with respect to any subcontract or procurement as the Recipient or the FHWA may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

**(2) Title VI Nondiscrimination Program (23 CFR 200.5(p))**

The North Carolina Department of Transportation (NCDOT) has assured the USDOT that, as a condition to receiving federal financial assistance, NCDOT will comply with Title VI of the Civil Rights Act of 1964 and all requirements imposed by Title 49 CFR part 21 and related nondiscrimination authorities to ensure that no person shall, on the ground of race, color, national origin, limited English proficiency, sex, age, or disability (including religion/creed or income-level, where applicable), be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any programs, activities, or services conducted or funded by NCDOT. Contractors and other organizations under contract or agreement with NCDOT must also comply with Title VI and related authorities, therefore:

- (a) During the performance of this contract or agreement, contractors (e.g., subcontractors, consultants, vendors, prime contractors) are responsible for complying with NCDOT's Title VI Program. Contractors are not required to prepare or submit Title VI Programs. To comply with this section, the prime contractor shall:
  1. Post NCDOT's Notice of Nondiscrimination and the Contractor's own Equal Employment Opportunity (EEO) Policy in conspicuous locations accessible to all employees, applicants and subcontractors on the jobsite.

2. Physically incorporate the required Title VI clauses into all subcontracts on federally-assisted and state-funded NCDOT projects, and ensure inclusion by subcontractors into all lower-tier subcontracts.
  3. Required Solicitation Language. The Contractor shall include the following notification in all solicitations for bids and requests for work or material, regardless of funding source:

“The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. In accordance with other related nondiscrimination authorities, bidders and contractors will also not be discriminated against on the grounds of sex, age, disability, low-income level, creed/religion, or limited English proficiency in consideration for an award.”
  4. Physically incorporate the FHWA-1273, in its entirety, into all subcontracts and subsequent lower tier subcontracts on Federal-aid highway construction contracts only.
  5. Provide language assistance services (i.e., written translation and oral interpretation), free of charge, to LEP employees and applicants. Contact NCDOT OCR for further assistance, if needed.
  6. For assistance with these Title VI requirements, contact the NCDOT Title VI Nondiscrimination Program at 1-800-522-0453.
- (b) Subrecipients (e.g. cities, counties, LGAs, planning organizations) may be required to prepare and submit a Title VI Plan to NCDOT, including Title VI Assurances and/or agreements. Subrecipients must also ensure compliance by their contractors and subrecipients with Title VI. (23 CFR 200.9(b)(7))
- (c) If reviewed or investigated by NCDOT, the contractor or subrecipient agrees to take affirmative action to correct any deficiencies found within a reasonable time period, not to exceed 90 calendar days, unless additional time is granted by NCDOT. (23 CFR 200.9(b)(15))
- (d) The Contractor is responsible for notifying subcontractors of NCDOT’s External Discrimination Complaints Process.
1. Applicability

Title VI and related laws protect participants and beneficiaries (e.g., members of the public and contractors) from discrimination by NCDOT employees, subrecipients and contractors, regardless of funding source.

## 2. Eligibility

Any person—or class of persons—who believes he/she has been subjected to discrimination based on race, color, national origin, Limited English Proficiency (LEP), sex, age, or disability (and religion in the context of employment, aviation, or transit) may file a written complaint. The law also prohibits intimidation or retaliation of any sort.

## 3. Time Limits and Filing Options

Complaints may be filed by the affected individual(s) or a representative and must be filed no later than 180 calendar days after the following:

- (i) The date of the alleged act of discrimination; or
- (ii) The date when the person(s) became aware of the alleged discrimination; or
- (iii) Where there has been a continuing course of conduct, the date on which that conduct was discontinued or the latest instance of the conduct.

Title VI and related discrimination complaints may be submitted to the following entities:

- North Carolina Department of Transportation, Office of Civil Rights, Title VI Program, 1511 Mail Service Center, Raleigh, NC 27699-1511; toll free 1-800-522-0453
- Federal Highway Administration, North Carolina Division Office, 310 New Bern Avenue, Suite 410, Raleigh, NC 27601, 919-747-7010
- US Department of Transportation, Departmental Office of Civil Rights, External Civil Rights Programs Division, 1200 New Jersey Avenue, SE, Washington, DC 20590; 202-366-4070

## 4. Format for Complaints

Complaints must be in writing and signed by the complainant(s) or a representative, and include the complainant's name, address, and telephone number. Complaints received by fax or e-mail will be acknowledged and processed. Allegations received by telephone will be reduced to writing and provided to the complainant for confirmation or revision before processing. Complaints will be accepted in other languages, including Braille.

## 5. Discrimination Complaint Form

Contact NCDOT Civil Rights to receive a full copy of the Discrimination Complaint Form and procedures.

## 6. Complaint Basis

Allegations must be based on issues involving race, color, national origin (LEP), sex, age, disability, or religion (in the context of employment, aviation or transit). "Basis" refers to the complainant's membership in a protected group category.

| <b>TABLE 103-1<br/>COMPLAINT BASIS</b>  |  |  |  |
|---|--|--|--|
| <b>Protected Categories</b>   | <b>Definition</b>  | <b>Examples</b>  | <b>Applicable Nondiscrimination Authorities</b>  |
| Race and Ethnicity  | An individual belonging to one of the accepted racial groups; or the perception, based usually on physical characteristics that a person is a member of a racial group   | Black/African American, Hispanic/Latino, Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, White | Title VI of the Civil Rights Act of 1964; 49 CFR Part 21; 23 CFR 200; 49 U.S.C. 5332(b); 49 U.S.C. 47123. ( <i>Executive Order 13166</i> )   |
| Color   | Color of skin, including shade of skin within a racial group   | Black, White, brown, yellow, etc.  |  |
| National Origin ( <i>Limited English Proficiency</i> )  | Place of birth. Citizenship is not a factor. ( <i>Discrimination based on language or a person's accent is also covered</i> )  | Mexican, Cuban, Japanese, Vietnamese, Chinese  |  |
| Sex   | Gender. The sex of an individual. <i>Note: Sex under this program does not include sexual orientation.</i>   | Women and Men  | 1973 Federal-Aid Highway Act; 49 U.S.C. 5332(b); 49 U.S.C. 47123.  |
| Age   | Persons of any age   | 21-year-old person   | Age Discrimination Act of 1975 49 U.S.C. 5332(b); 49 U.S.C. 47123.   |
| Disability  | Physical or mental impairment, permanent or temporary, or perceived.   | Blind, alcoholic, para-amputee, epileptic, diabetic, arthritic   | Section 504 of the Rehabilitation Act of 1973; Americans with Disabilities Act of 1990   |
| Religion (in the context of employment) ( <i>Religion/ Creed in all aspects of any aviation or transit-related construction</i> ) | An individual belonging to a religious group; or the perception, based on distinguishable characteristics that a person is a member of a religious group. In practice, actions taken as a result of the moral and ethical beliefs as to what is right and wrong, which are sincerely held with the strength of traditional religious views. <i>Note: Does not have to be associated with a recognized religious group or church; if an individual sincerely holds to the belief, it is a protected religious practice.</i> | Muslim, Christian, Sikh, Hindu, etc.   | Title VII of the Civil Rights Act of 1964; 23 CFR 230; FHWA-1273 Required Contract Provisions. ( <i>49 U.S.C. 5332(b); 49 U.S.C. 47123</i> ) |

### (3) Pertinent Nondiscrimination Authorities

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest agrees to comply with the following non-discrimination statutes and authorities, including, but not limited to:

- (a) Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.

- (b) The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- (c) Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- (d) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability) and 49 CFR Part 27;
- (e) The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- (f) Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- (g) The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- (h) Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- (i) The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- (j) Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- (k) Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- (l) Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).
- (m) Title VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000e et seq., Pub. L. 88-352), (prohibits employment discrimination on the basis of race, color, religion, sex, or national origin).

**(4) Additional Title VI Assurances**

*\*\*The following Title VI Assurances (Appendices B, C and D) shall apply, as applicable*

- (a) Clauses for Deeds Transferring United States Property (1050.2A, Appendix B)

The following clauses will be included in deeds effecting or recording the transfer of real property, structures, or improvements thereon, or granting interest therein from the United States pursuant to the provisions of Assurance 4.

NOW, THEREFORE, the U.S. Department of Transportation as authorized by law and upon the condition that the North Carolina Department of Transportation (NCDOT) will accept title to the lands and maintain the project constructed thereon in accordance with the North Carolina General Assembly, the Regulations for the Administration of the Federal-Aid Highway Program, and the policies and procedures prescribed by the Federal Highway Administration of the U.S. Department of Transportation in accordance and in compliance with all requirements imposed by Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. Department of Transportation pertaining to and effectuating the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252; 42 U.S.C. § 2000d to 2000d-4), does hereby remise, release, quitclaim and convey unto the NCDOT all the right, title and interest of the U.S. Department of Transportation in and to said lands described in Exhibit A attached hereto and made a part hereof.

(HABENDUM CLAUSE)

TO HAVE AND TO HOLD said lands and interests therein unto the North Carolina Department of Transportation (NCDOT) and its successors forever, subject, however, to the covenants, conditions, restrictions and reservations herein contained as follows, which will remain in effect for the period during which the real property or structures are used for a purpose for which Federal financial assistance is extended or for another purpose involving the provision of similar services or benefits and will be binding on the NCDOT, its successors and assigns.

The NCDOT, in consideration of the conveyance of said lands and interests in lands, does hereby covenant and agree as a covenant running with the land for itself, its successors and assigns, that (1) no person will on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination with regard to any facility located wholly or in part on, over, or under such lands hereby conveyed [,] [and]\* (2) that the NCDOT will use the lands and interests in lands and interests in lands so conveyed, in compliance with all requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations and Acts may be amended [, and (3) that in the event of breach of any of the above-mentioned nondiscrimination conditions, the Department will have a right to enter or re-enter said lands and facilities on said land, and that above described land and facilities will thereon revert to and vest in and become the absolute property of the U.S. Department of Transportation and its assigns as such interest existed prior to this instruction].\*

(\*Reverter clause and related language to be used only when it is determined that such a clause is necessary in order to make clear the purpose of Title VI.)

(b) Clauses for Transfer of Real Property Acquired or Improved Under the Activity, Facility, or Program (1050.2A, Appendix C)

The following clauses will be included in deeds, licenses, leases, permits, or similar instruments entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(a):

1. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
  - (i.) In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.
2. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. \*
3. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. \*

(\*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

(c) Clauses for Construction/Use/Access to Real Property Acquired Under the Activity, Facility or Program (1050.2A, Appendix D)

The following clauses will be included in deeds, licenses, permits, or similar instruments/ agreements entered into by the North Carolina Department of Transportation (NCDOT) pursuant to the provisions of Assurance 7(b):



1. The (grantee, licensee, permittee, etc., as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree (in the case of deeds and leases add, "as a covenant running with the land") that (1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, (2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, (3) that the (grantee, licensee, lessee, permittee, etc.) will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, set forth in this Assurance.
2. With respect to (licenses, leases, permits, etc.), in the event of breach of any of the above Non-discrimination covenants, the NCDOT will have the right to terminate the (license, permit, etc., as appropriate) and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said (license, permit, etc., as appropriate) had never been made or issued. \*
3. With respect to deeds, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. \*

(\*Reverter clause and related language to be used only when it is determined that such a clause is necessary to make clear the purpose of Title VI.)

**STANDARD SPECIAL PROVISION****ON-THE-JOB TRAINING**

(10-16-07) (Rev. 4-21-15)

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.\

**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.

Project: 17BP.7.R.116

UC-1

County: Guilford

PROJECT SPECIAL PROVISIONS  
Utility Construction

**DAVIS • MARTIN • POWELL**  
**ENGINEERS & SURVEYORS**  
T: 336-886-4821 | F: 336-886-4458 | License: F-0245  
6415 Old Plank Road, High Point, NC 27265 | www.dmp-inc.com



DocuSigned by:  
**RANDY L. MCNEILL** 2/24/2025  
72A2AA0DB89742F...

**DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED**

Where brand names and model numbers are specified in these Special Provisions or in the plans, the cited examples are used only to denote the quality standard of product desired and do not restrict bidders to a specific brand, make, or manufacturer. They are provided to set forth the general style, type, character, and quality of the product desired. Equivalent products will be acceptable.

The utility owner is the City of Greensboro. For work involving Greensboro’s facilities, the Contractor shall contact the City of Greensboro Service Center at (336) 373-2033, the City of Greensboro Water Resources Department Administration at (336) 373-2055, and the City of Greensboro Water and Sewer Inspections Department at (336) 373-2377.

A representative from the City of Greensboro shall witness all tests performed on their water facilities. Test results shall be provided to the City of Greensboro for any tests involving their facilities.

Shutdowns of the City of Greensboro water distribution system shall be coordinated with the City of Greensboro Water Resources Department. Shutdowns will not be allowed between May 1 and October 1 unless otherwise approved by the City of Greensboro Water Resources Department.

The provisions contained within these Utilities Construction Project Special Provisions modify the *Standard Specifications* only for materials used and work performed constructing water or sewer facilities owned by the City of Greensboro.

**Revise the 2024 Standard Specifications as follows:**

**Page 15-15, Sub-article 1530-3 Construction Methods:** Add the following paragraph:

**(E) Abandoning Utility Vault**

Abandon utility vaults in the construction limits by removing the top and walls of the vault down to the spring line or to an elevation of 2 feet below the roadway subgrade, whichever is greater, and filling the vault with approved material.

Project: 17BP.7.R.116

**UC-2**

County: Guilford

Plug connecting utility pipes before filling or removing the vault.

Removed frames and covers, hatches, internal piping, valves, etc. shall become the property of the Contractor for proper disposal.

**Measurement and Payment:**

Payment for abandoning utility vaults shall be per each vault, and paid for at the contract unit price for “Abandon Utility Vault.” Such price and payment will be full compensation for all materials, labor, materials, excavation, backfilling, and any incidentals necessary to complete the work as required.

**Pay Item:**

Abandon Utility Vault

**Pay Unit**

Each

**Plan Sheet UC-3C; 8” Pressure Reducing Valves in Vault.** The Contractor’s attention is directed to this detail:

**8” Pressure Reducing Valves in Vault:**

8” Pressure Reducing Valves in Vault shall be furnished and installed by the Contractor in accordance with the applicable Special Provisions herein, as shown on the Utility Plans, and/or as directed by the Engineer. The 8” Pressure Reducing Valve Vault shall be wired by others.

The pressure reducing valves shall be installed inside an approved precast concrete vault conforming to ASTM C-913. The top slab of the vault shall have a lockable, traffic-rated aluminum access hatch, with the frame cast into the top slab, as shown on the Utility Plans.

Two (2) 8” pressure reducing valves shall be provided, with one being the primary valve and the other one being the secondary valve. The primary valve shall be set to maintain a downstream pressure of 73 psi, and the secondary valve shall be set to maintain a downstream pressure of 68 psi. Pressure settings shall be field adjustable. The pressure reducing valves shall be designed for an incoming working pressure between 130 psi and 115 psi. The pressure reducing valves shall be capable of operating in a submerged condition in up to 8 feet of water.

The pressure reducing valve body and cover shall be ductile-iron body in accordance with ASTM A536 and shall have a fusion-bonded epoxy-coating (interior and exterior) with ANSI/NSF 61 approval. The end-joint connections shall be flanged per ASME/ANSI B16.42, Class 150. The pressure reducing valve shall be rated for a maximum working pressure of 250 psi. The seal disc shall be Buna-N rubber, and the diaphragm shall be nylon reinforced Buna-N rubber. The main valve trim, seat, stem, nut, and spring shall be stainless steel. Internal trim parts shall be stainless steel, bronze, and brass.

**Pressure Reducing Valve**

**Function**

The pressure reducing valves shall automatically throttle to reduce a higher incoming pressure and maintain an accurate and constant lower downstream pressure regardless of changing flow rate and/or inlet pressure. If downstream pressure increases above the pilot spring setting, the valve shall close.

Main Valve

The valve shall be hydraulically operated, single diaphragm-actuated, globe pattern. The valve shall consist of three major components: the body with seat installed, the cover with bearing installed, and the diaphragm assembly. The diaphragm assembly shall be the only moving part and shall form a sealed chamber in the upper portion of the valve, separating operating pressure from line pressure. Packing glands and/or stuffing boxes are not permitted and there shall be no pistons operating the main valve or pilot controls. No fabrication or welding shall be used in the manufacturing process. Y-pattern valves shall not be permitted. Main valve shall comply with NSF/ANSI Standard 61 and certified lead free to NSF/ANSI 372 as a safe drinking water system component.

Main Valve End Connections

End Connections for control valve shall be flanged per ASME/ANSI B16.42, Class 150.

Main Valve Body

No separate chamber(s) shall be allowed between the main valve cover and body. No fabrication or welding shall be used in the manufacturing process.

The valve shall contain a resilient, synthetic rubber disc with a rectangular cross-section contained on three and one-half sides by a disc retainer and forming a tight seal against a single removable seat insert. No O-ring type discs (circular, square, or quad type) shall be permitted as the seating surface. The disc guide shall be of the contoured type to permit smooth transition of flow and shall hold the disc firmly in place. The disc retainer shall be of a sturdy one-piece design capable of withstanding opening and closing shocks. It must have straight edge sides and a radius at the top edge to prevent excessive diaphragm wear as the diaphragm flexes across this surface. No hourglass-shaped disc retainers shall be permitted, and no V-type or slotted type disc guides shall be used.

The diaphragm assembly containing a non-magnetic stainless steel stem; of sufficient diameter to withstand high hydraulic pressures and shall be fully guided at both ends by a bearing in the main valve cover and an integral bearing in the valve seat. The valve seat shall be a solid, one-piece design and shall have a minimum five-degree taper on the seating surface for a positive, drip-tight shut off. No center guides shall be permitted. The stem shall be drilled and tapped in the cover end to receive and affix such accessories as may be deemed necessary. The diaphragm assembly shall be the only moving part and shall form a sealed chamber in the upper portion of the valve, separating the operating pressure from the line pressure. No bolts or cap screws shall be permitted for use in the construction of the diaphragm assembly.

The flexible, non-wicking, FDA approved diaphragm shall consist of nylon fabric bonded with synthetic rubber compatible with the operating fluid. The diaphragm's center hole for the main valve stem must be sealed by the vulcanized process or a rubber grommet sealing the center stem hole from the operating pressure. The diaphragm must withstand a Mullins Burst Test of a minimum of 600 X per layer of nylon fabric and shall be cycled tested 100,000 times to insure longevity. The diaphragm shall not be used as the seating surface. The diaphragm shall be fully supported in the valve body and cover by machined surfaces which support no less than one-half of the total surface area of the diaphragm in either the fully opened or fully closed position. Bellofram type rolling diaphragms shall not be permitted.

Project: 17BP.7.R.116

UC-4

County: Guilford

The main valve seat and stem bearing in the valve cover shall be removable. The cover bearing and seat in the 6" and smaller size valve shall be threaded into the cover and body. The valve seat in the 8" and larger size valves shall be retained by flat head machine screws for ease of maintenance. The lower bearing of the valve stem shall be contained concentrically within the seat and shall be exposed to the flow on all sides to avoid deposits. To ensure proper alignment of the valve stem, the valve body and cover shall be machined with a locating lip. No "pinned" covers to the valve body shall be permitted. Cover bearing, disc retainer and seat shall be made of the same material. All necessary repairs and/or modifications other than replacement of the main valve body shall be possible without removing the valve from the pipeline. The valve shall be designed such that both the cover assembly and internal diaphragm assembly can be disassembled and lifted vertically straight up from the top of a narrow opening/vault. Y-pattern valves shall not be permitted. The seat shall be of the solid one-piece design. Two-piece seats or seat inserts shall not be permitted. Packing glands and/or stuffing boxes shall not be permitted.

#### Pilot Control System

The pressure reducing pilot control shall be a direct-acting, adjustable, spring-loaded, normally open, diaphragm valve designed to permit flow when controlled pressure is less than the spring setting. The pilot control is held open by the force of the compression on the spring above the diaphragm and it closes when the delivery pressure acting on the underside of the diaphragm exceeds the spring setting. The pilot control shall have a second downstream sensing port which can be utilized to install a pressure gauge. Pilot shall comply with NSF/ANSI 61 and certified lead free to NSF/ANSI 372 as a safe drinking water system component.

The pilot control system shall include a strainer, a fixed orifice closing speed and all required control accessories, equipment, control tubing and fittings. No variable orifices shall be permitted. The pilot system shall include isolation ball valves on sizes 4" and larger as standard equipment. A full range of spring settings shall be available in ranges of 0 to 400 psi. Pilot to be manufactured by control valve manufacturer.

#### Factory Assembly and Testing

Each control valve shall be factory assembled and tested. The Quality Management System of the factory shall be certified in accordance with ISO 9001: 2008. For all control valves, the factory assembly shall include the complete main valve, pilot valve(s), and all associated accessories and control equipment. During factory assembly the control valve manufacturer shall make all necessary adjustments and correct any defects. The standard factory tests shall include a valve body and cover leakage test, seat leakage test, and a stroke test. Control valves and pilot valves, in the partially open position, with both ends closed off with blind flanges (valves) and pipe plugs (pilots), shall be subject to an air test. The applied air pressure shall be 90 psi minimum. All air pressure tests shall be applied for a minimum of 15 minutes. No visible leakage is permitted through the valve seat, the pressure boundary walls of the valve body, valve cover, pilot body, pilot cover or the body-cover joint.

#### Warranty

The valve manufacturer shall warrant the valve to be free of defects in material and workmanship for a period of three (3) years from date of shipment provided the valve is installed and used in accordance with all applicable instructions.



**Gate Valves**

Gate valves inside the Pressure Relief Valve Manhole shall meet the requirements of Section 1036-7(A) of the NCDOT Standard Specifications and shall be resilient-seated type gate valves with hand-wheel operators and flanged ends.

**Precast Concrete Vault**

The pressure reducing valve vault shall be an approved precast concrete manhole conforming to ASTM C-913. The precast manhole top slab shall be H-20 rated and shall be installed flush with the ground. Steps shall be cast into the interior wall of the manhole as shown on the plans.

**Access Hatch**

The double-leaf aluminum access hatch shall have a 1/4 inch thick, one-piece, mill finish, extruded aluminum frame, incorporating a continuous concrete anchor. The inside of the frame shall have a door-support ledge on two (2) sides. Both frame and ledge must be supported by a full bed of Class A concrete. The door panels shall be 1/4" aluminum diamond plate, reinforced to withstand a live H-20 uniform load. Doors shall open to 90° and automatically lock with a T-316 stainless steel hold open arms with release handles. For ease of operation, doors shall incorporate enclosed stainless steel compression spring assists. Doors shall close flush with the frame. Hinges and all fastening hardware shall be T-316 stainless steel. Unit shall lock with a T-316 stainless steel slam lock with removable keys and have a non-corrosive handle. Unit shall carry a lifetime guarantee against defects in material and/or workmanship.

**Measurement and Payment:**

The quantity of 8" Pressure Reducing Valves in Vault, furnished and installed in accordance with the plans and Special Provisions herein and accepted, will be measured and paid for at the contract unit price lump sum for "8" Pressure Reducing Valves in Vault". Such price and payment will be full compensation for all materials, labor, installation, excavation, equipment, backfilling, and any incidentals necessary to complete the work as required. The 8" Pressure Reducing Valve Vault shall be wired by others.

**Pay Item:**

8" Pressure Reducing Valves in Vault

**Pay Unit**

Lump Sum

**Plan Sheet UC-3C; 8" Pressure Relief Valve in 7' Diameter Manhole.** The Contractor's attention is directed to this detail:

**8" Pressure Relief Valve in 7' Diameter Manhole with Bypass:**

8" Pressure Relief Valve in 7' Diameter Manhole with Bypass shall be furnished and installed by the Contractor in accordance with the applicable Special Provisions herein, as shown on the Utility Plans, and/or as directed by the Engineer. The 8" Pressure Relief Valve Vault shall be wired by others.

The pressure relief valve shall be installed inside an approved precast concrete vault conforming to ASTM C-913. The top slab of the vault shall have a lockable, traffic-rated aluminum access hatch, with the frame cast into the top slab, as shown on the Utility Plans.

Project: 17BP.7.R.116

UC-6

County: Guilford

The valve shall be pre-set at the factory to open and relieve pressure when system pressure on the inlet side of the valve is 135 psi or higher. The pressure setting shall be field adjustable. The pressure relief valve shall be designed to operate in a submerged condition in up to 8 feet of water.

The pressure relief valve body and cover shall be ductile-iron body in accordance with ASTM A536 and shall have a fusion-bonded epoxy-coating (interior and exterior) with ANSI/NSF 61 approval. The end-joint connections shall be flanged per ASME/ANSI B16.42, Class 150. The pressure reducing valve shall be rated for a maximum working pressure of 250 psi. The seal disc shall be Buna-N rubber, and the diaphragm shall be nylon reinforced Buna-N rubber. The main valve trim, seat, stem, nut, and spring shall be stainless steel. Internal trim parts shall be stainless steel, bronze, and brass.

### **Pressure Relief Valve**

#### Function

The pressure relief valve shall maintain a constant upstream pressure by bypassing or relieving excess pressure and shall maintain close pressure limits without causing surges. Valve will remain closed until the upstream pressure exceeds a pre-determined set point. Valve will be fast opening and modulate to limit the upstream pressure to a pre-determined set point. If upstream pressure decreases below the spring setting, the valve shall close. Valve will be slow closing to prevent surges.

#### Main Valve

The valve shall be hydraulically operated, single diaphragm-actuated, globe pattern. The valve shall consist of three major components: the body with seat installed, the cover with bearing installed, and the diaphragm assembly. The diaphragm assembly shall be the only moving part and shall form a sealed chamber in the upper portion of the valve, separating operating pressure from line pressure. Packing glands and/or stuffing boxes are not permitted and there shall be no pistons operating the main valve or pilot controls. No fabrication or welding shall be used in the manufacturing process. Y-pattern valves shall not be permitted. Main valve shall comply with NSF/ANSI Standard 61 and certified lead free to NSF/ANSI 372 as a safe drinking water system component.

#### Main Valve End Connections

End Connections for control valve shall be flanged per ASME/ANSI B16.42, Class 150.

#### Main Valve Body

No separate chambers shall be allowed between the main valve cover and body. The valve body and cover shall be ductile iron. No fabrication or welding shall be used in the manufacturing process.

The valve shall contain a resilient, synthetic rubber disc with a rectangular cross-section contained on three and one-half sides by a disc retainer and forming a tight seal against a single removable seat insert. No O-ring type discs (circular, square, or quad type) shall be permitted as the seating surface. The disc guide shall be of the contoured type to permit smooth transition of flow and shall hold the disc firmly in place. The disc retainer shall be of a sturdy one-piece design capable of withstanding opening and closing shocks. It must have straight edge sides and a radius at the top edge to prevent excessive diaphragm wear as the diaphragm flexes

across this surface. No hourglass-shaped disc retainers shall be permitted and no V-type or slotted type disc guides shall be used.

The diaphragm assembly containing a non-magnetic stainless-steel stem of sufficient diameter to withstand high hydraulic pressures shall be fully guided at both ends by a bearing in the valve cover and an integral bearing in the valve seat. The seat shall be a solid, one-piece design and shall have a minimum of a five-degree taper on the seating surface for a positive, drip-tight shutoff. No center guides shall be permitted. The stem shall be drilled and tapped in the cover end to receive and affix such accessories as may be deemed necessary. The diaphragm assembly shall be the only moving part and shall form a sealed chamber in the upper portion of the valve separating operating pressure from line pressure. No bolts or cap screws shall be permitted for use in the construction of the diaphragm assembly.

The flexible, non-wicking, FDA approved diaphragm shall consist of nylon fabric bonded with synthetic rubber compatible with the operating fluid. The center hole for the main valve stem must be sealed by the vulcanized process or a rubber grommet sealing the center stem hole from the operating pressure. The diaphragm must withstand a Mullins Burst Test of a minimum of 600 X per layer of nylon fabric and shall be cycle tested 100,000 times to insure longevity. The diaphragm shall not be used as the seating surface. The diaphragm shall be fully supported in the valve body and cover by machined surfaces which support no less than one-half of the total surface area of the diaphragm in either the fully open or fully closed position. Bellofram type rolling diaphragms shall not be permitted.

The main valve seat and stem bearing in the valve cover shall be removable. The cover bearing and seat in the 6" and smaller size valve shall be threaded into the cover and body. The valve seat in the 8" and larger size valves shall be retained by flat head machine screws for ease of maintenance. The lower bearing of the valve stem shall be contained concentrically within the seat and shall be exposed to the flow on all sides to avoid deposits. To ensure proper alignment of the valve stem, the valve body and cover shall be machined with a locating lip. No "pinned" covers to the valve body shall be permitted. Cover bearing, disc retainer and seat shall be made of the same material. All necessary repairs and/or modifications other than replacement of the main valve body shall be possible without removing the valve from the pipeline. The valve shall be designed such that both the cover assembly and internal diaphragm assembly can be disassembled and lifted vertically straight up from the top of a narrow opening/vault. Y-pattern valves shall not be permitted. The seat shall be of the solid one-piece design. Two-piece seats or seat inserts shall not be permitted. Packing glands and/or stuffing boxes shall not be permitted.

#### Pilot Control System

The pressure relief/sustaining pilot shall be a direct-acting, adjustable, spring-loaded, diaphragm valve designed to permit flow when controlling pressure exceeds the adjustable spring setting. The pressure relief pilot control is normally held closed by the force of the compression in the spring above the diaphragm and it opens when the pressure acting on the underside of the diaphragm exceeds the spring setting. Pressure relief pilot control sensing shall be upstream of the pilot system strainer so accurate control may be maintained if the strainer is partially blocked. Pilot shall comply with NSF/ANSI 61 and certified lead free to NSF/ANSI 372 as a safe drinking water system component.

Project: 17BP.7.R.116

**UC-8**

County: Guilford

The pilot control system shall include a strainer, a fixed orifice closing speed and all required control accessories, equipment, control tubing and fittings. No variable orifices shall be permitted. The pilot system shall include isolation ball valves on sizes 4" and larger as standard equipment. A full range of spring settings shall be available in ranges of 0 to 400 psi. Pilots to be manufactured by control valve manufacturer.

#### Factory Assembly and Testing

Each control valve shall be factory assembled and tested. The Quality Management System of the factory shall be certified in accordance with ISO 9001: 2008. For all control valves, the factory assembly shall include the complete main valve, pilot valve(s), and all associated accessories and control equipment. During factory assembly the control valve manufacturer shall make all necessary adjustments and correct any defects. The standard factory tests shall include a valve body and cover leakage test, seat leakage test, and a stroke test. Control valves and pilot valves, in the partially open position, with both ends closed off with blind flanges (valves) and pipe plugs (pilots), shall be subject to an air test. The applied air pressure shall be 90 psi minimum. All air pressure tests shall be applied for a minimum of 15 minutes. No visible leakage is permitted through the valve seat, the pressure boundary walls of the valve body, valve cover, pilot body, pilot cover or the body-cover joint.

#### Warranty

The valve manufacturer shall warrant the valve to be free of defects in material and workmanship for a period of three (3) years from date of shipment provided the valve is installed and used in accordance with all applicable instructions.

#### Gate Valves

Gate valves inside the Pressure Relief Valve Manhole shall meet the requirements of Section 1036-7(A) of the NCDOT Standard Specifications, and shall be resilient-seated type gate valves with hand-wheel operators and flanged ends.

#### Precast Concrete Manhole

The pressure relief valve manhole shall be an approved precast concrete manhole conforming to ASTM C-478. The precast manhole top slab shall be H-20 rated and shall be installed flush with the ground. Steps shall be cast into the interior wall of the manhole as shown on the plans.

#### Access Hatch

The double-leaf aluminum access hatch shall have a 1/4 inch thick, one-piece, mill finish, extruded aluminum frame, incorporating a continuous concrete anchor. The inside of the frame shall have a door-support ledge on two (2) sides. Both frame and ledge must be supported by a full bed of Class A concrete. The door panels shall be 1/4" aluminum diamond plate, reinforced to withstand a live H-20 uniform load. Doors shall open to 90° and automatically lock with a T-316 stainless steel hold open arms with release handles. For ease of operation, doors shall incorporate enclosed stainless steel compression spring assists. Doors shall close flush with the frame. Hinges and all fastening hardware shall be T-316 stainless steel. Unit shall lock with a T-316 stainless steel slam lock with removable keys and have a non-corrosive handle. Unit shall carry a lifetime guarantee against defects in material and/or workmanship.

Project: 17BP.7.R.116

**UC-9**

County: Guilford

**Measurement and Payment:**

The quantity of 8” Pressure Relief Valve in 7’ Dia. MH With Bypass, furnished and installed by the Contractor in accordance with the plans and Special Provisions herein and accepted, will be measured and paid for at the contract unit price lump sum for "8” Pressure Relief Valve in 7’ Dia. MH With Bypass". Such price and payment will be full compensation for all materials, labor, installation, excavation, equipment, backfilling, and incidentals necessary to complete the work as required. The 8” Pressure Relief Valve Vault shall be wired by others.

**Pay Item:**

8” Pressure Relief Valve in 7’ Dia. MH With Bypass

**Pay Unit**

Lump Sum

**Plan Sheet UC-3C; 2” Pitometer Tap in 4’ Diameter Manhole.** The Contractor’s attention is directed to this detail:

**2” Pitometer Tap in 4’ Diameter Manhole:**

2” Pitometer Tap in 4’ Diameter Manhole shall be furnished and installed by the Contractor in accordance with the applicable Special Provisions herein, as shown on the Utility Plans, and/or as directed by the Engineer.

The pitometer tap shall be installed inside an approved precast concrete manhole conforming to ASTM C-478. The vault shall be flush with the ground. All castings shall conform to ASTM A48 Class 25 and shall be coated in conformance with ASTM A74.

**Measurement and Payment:**

The quantity of 2” Pitometer Tap in 4’ Dia. MH, installed in accordance with the plans and Special Provisions herein and accepted, will be measured and paid for at the contract unit price lump sum for "2” Pitometer Tap in 4’ Dia. MH". Such price and payment will be full compensation for all materials including manhole, manhole ring and cover, corporation stop, and tapping saddle, labor, installation, excavation, equipment, backfilling, and incidentals necessary to complete the work as required.

**Pay Item:**

2” Pitometer Tap in 4’ Dia. MH

**Pay Unit**

Lump Sum

**Plan Sheet UC-3C; 8” Flow Meter in Vault.** The Contractor’s attention is directed to this detail:

**8” Flow Meter in Vault:**

8” Flow Meter in Vault shall be furnished and installed by the Contractor in accordance with the applicable Special Provisions herein, as shown on the Utility Plans, and/or as directed by the Engineer. The 8” Flow Meter Vault shall be wired by others.

The Flow Meter shall be furnished and installed inside an approved precast concrete vault conforming to ASTM C-913. The top slab of the vault shall have an aluminum, lockable, traffic-rated access hatch, with the frame cast into the top slab, as shown on the Utility Plans.

Project: 17BP.7.R.116

**UC-10**

County: Guilford

**Electromagnetic Flow Meter****A. Process**

1. Fluid: Potable Drinking Water
2. Flow Minimum and Maximum.: 0 – 2.5 MGD

**B. Performance**

1. Range: 0 – 3 MGD
2. Accuracy:  $\pm 0.5\% \pm 0.005$  fps
3. Process Temperature: 25 to 140 degrees F
4. Ambient Temperature: 0 to 140 degrees F
5. Repeatability:  $\pm 0.2\%$  of range
6. Fluid Conductivity: Minimum Limit: 5  $\mu\text{S}/\text{cm}$
7. Impedance: Minimum Limit: 5  $\mu\text{S}/\text{cm}$
8. Drift: Complete zero stability

**C. Flow Tube**

1. Type: Lined Metal Flow Tube
2. Element: Conical or Elliptical Shaped Electrode
3. Electrode/Liner: Hastelloy C/Hard Rubber. Rated for drinking water service, conforming to NSF/ANSI 61 and NSF/ANSI 372
4. Nominal Line Size: 8 inches
5. Enclosure/Housing: Die-cast, Low-copper Aluminum Alloy; Submersible in 30 feet water for 48 hours; Epoxy paint finish
6. Mounting: Flange End Connections
7. ANSI Class: ANSI Class 150
8. Additional Features: 316 S.S. Grounding Rings/Straps

**D. Transmitter**

1. Type: Pulsed DC Magnetic Flow Transmitter
2. Output: 4-20 mADC direct-acting, galvanically isolated; into 0-1000 ohms
3. Power Supply: 120 VAC  $\pm 10\%$ , 60 Hz  $\pm 3$  Hz
4. Indication/Display: Local LCD; Display Flow in Engineering Units; Provide Totalizer (See below under Notes, Totalizer)
5. Enclosure/Housing: NEMA 4X; Solid state construction
6. Mounting: Wall Mount; 316 S.S. hardware (To be mounted on wall inside existing booster pump station control building, by others)
7. Connections: Electrical Conn.: 3/4-inch NPT
8. Communication: Shielded cable to flow tube
9. Area Classification: Not Applicable
10. Additional Features: Automatic zeroing

**E. Notes**

1. Function: System shall monitor liquid flows, display monitored flow value, and output a signal proportional to monitored flow.
2. Installation: Refer to Contract Drawing Installation Details and manufacturer's recommendations for installation.
3. Calibration: Provide ISO Factory Calibration Certificate.
4. Accuracy shall be:
  - a. Unaffected by changes in fluid velocity, density, pressure, temp. or conductivity (above min. conductivity limits)

Project: 17BP.7.R.116

# UC-11

County: Guilford

- b. Verified by flow test curves. Submit flow test curves for furnished meters with a minimum of 10 equally spaced flow points, using water and a weight or volume tank. A "master meter" used as a reference standard is not acceptable.
- 5. Span Adjustment: Unit shall have pre-calibrated continuous span adjustment over entire range.
- 6. Signal Conditioning: Adjustable signal conditioning damping circuit with response times of 1-25 seconds minimum.
- 7. Low Flow Cutoff: Automatic low flow cutoff circuitry shall stop pulse output and local totalization when flow drops below 0.5% ±0.2% of calibrated upper range value.
- 8. Totalizer shall be:
  - a. 7-digit electromechanical or 8-digit electronic LCD unit, with reset and lithium battery backup.
  - b. Driven by high accuracy, field adjustable scaled pulse output (0.1-10 Hz or greater).
  - c. Integral with transmitter and visible through viewing window, or externally mounted adjacent to transmitter in a separate NEMA 4X enclosure or conduit with viewing window.
- 9. Additional Features: Hot Tap Removable Electrodes
- 10. Spool Piece: Provide a replacement spool piece for each size flow tube where no bypass piping is provided.
- 11. Manufacturer: ABB, Endress+Hauser, Foxboro, Krohne, Rosemount, Siemens, Toshiba, or approved equal.

Electronics shall be remotely mounted inside the Owner’s nearby booster pump station control building, and power/control cables shall be of adequate length (65 feet minimum) to connect from the flow meter vault to the booster pump station control building. The 8” Flow Meter Vault shall be wired by others.

**Measurement and Payment:**

The quantity of 8” Flow Meter in Vault, furnished and installed by the Contractor in accordance with the plans and Special Provisions herein and accepted, will be measured and paid for at the contract unit price lump sum for "8” Flow Meter in Vault". Such price and payment will be full compensation for all materials including electrical equipment, vault, display unit, flow meter and hatch, labor, installation including work to connect meter to display, excavation, equipment, backfilling, and incidentals necessary to complete the work as required. The 8” Flow Meter Vault shall be wired by others.

**Pay Item:**

8” Flow Meter in Vault

**Pay Unit**

Lump Sum

Project: 17BP.7.R.116

**UC-12**

County: Guilford

**Plan Sheet UC-3C; 8" Pump Control Valve in Vault.** The Contractor's attention is directed to this detail:

**8" Pump Control Valve in Vault:**

8" Pump Control Valve in Vault shall be furnished and installed by the Contractor in accordance with the applicable Special Provisions herein, as shown on the Utility Plans, and/or as directed by the Engineer. The 8" Pump Control Valve in Vault shall be wired by others.

The pump control valve shall be a butterfly valve with an electric actuator installed inside an approved precast concrete vault conforming to ASTM C-913. The top slab of the vault shall have a lockable, traffic-rated aluminum access hatch, with the frame cast into the top slab, as shown on the Utility Plans.

**Butterfly Valve:**

A. General:

1. Provide butterfly valves conforming to AWWA C504, ANSI/NSF 61 and 372, and as specified herein.
2. Sizes:
  - a. Flanged: Four-inch through 16-inch diameter.
3. Rated Working Pressure: 150 psig, Class 150B.
4. Maximum Fluid Temperature: 150 degrees F.
5. Valves shall provide drip-tight bi-directional shutoff at rated pressures.
6. Valves shall be capable of being maintained in open or partially open position for manual operation, and for automatic operation. When valve disc is maintained, there shall be no chatter or vibration of disc or operating mechanism.
7. Valve packing shall be replaceable without dismantling valve.
8. Disc shall be offset from shaft to provide uninterrupted 360-degree seat seal.

B. Materials of Construction: Materials of construction shall conform to AWWA C504 and shall be as follows:

1. Body: Cast-iron, ductile iron, or alloy cast-iron.
2. Shaft: Type 316 stainless steel.
3. Discs: Cast-iron or ductile iron.
4. Seats: Buna-N or other synthetic rubber suitable for drinking water service.
5. Seating Surfaces: Type 316 stainless steel.
6. Sleeve Bearings: Nylon.
7. Shaft Seals: Externally adjustable, material same as for seats. For services that are either buried or submerged, self-adjusting V-type chevron, material same as for seats.
8. Tapered Pins for Attachment of Shaft to Disc: Type 316 stainless steel.
9. Internal and external bolting and other hardware; including pins, set screws, studs, bolts, nuts, and washers shall be Type 316 stainless steel.

C. Interior and Exterior Coating:

1. All interior and exterior ferrous metal valve surfaces shall be coated with a minimum of 8 mils of fusion-bonded epoxy paint meeting the requirements of AWWA C550 and be NSF 61 certified.

D. Testing:

1. Test each valve in the manufacturer's shop in accordance with AWWA C504.



Project: 17BP.7.R.116

**UC-13**

County: Guilford

## E. Gear Actuators for Manual Valves:

1. Provide gear actuators conforming to AWWA C540.
2. Gear actuators for valves 20-inch diameter and smaller shall be constructed for 150 psi differential pressure and 16 feet per second port velocity.

**Electric Actuator**

## A. Application Criteria:

1. Ambient Temperature Rating: -20 to +158 degrees F.
2. Ambient Humidity: 100 %.
3. Maximum Differential Pressures Across Closed Valves: 150 psi.
4. Maximum Flows Through Full-Open Valves: N/A.
5. Power Supply: 208-volt, three-phase, 60 Hertz.
6. Control Voltage: 120 VAC, single phase, 60 Hertz.
7. Torques: As determined by valve manufacturer.
8. Duty Cycle: Open/Close, unless otherwise specified.

## B. General:

1. Conform to AWWA C540 and this Section.
2. Provide actuator operable with handwheel or chainwheel, even after disengaging and removing electric motor.
3. Provide valves with electric actuators that are located more than five feet above operating floor with separate control panels installed so that panel controls and indicators are approximately five feet above operating floor, at location approved by ENGINEER. Modify electrical wiring as required for remote location of control panels.
4. Coordinate sizing of each electric actuator with valve manufacturer, who shall furnish valve and associated electric actuator and appurtenances as a unit.
5. Electric actuators shall be suitable for valve orientation as shown.
6. Electrical actuator shall include third party listing and labeling.

## C. Electric Motor:

1. General:
  - a. Provide motors suitable for open/close service, with high torque characteristics and minimum 70 degree C temperature rating.
2. Motor Construction:
  - a. Enclosure: NEMA 6P.
  - b. Insulation: Class H.
  - c. Service Factor: 1.15.
  - d. Provide winding thermostats for overcurrent protection.
  - e. Efficiency: High-efficiency conforming to NEMA MG 1.
  - f. Bearings: Anti-friction with minimum B-10 life of 100,000 hours, lifetime pre-lubricated and sealed.

## D. Actuator Gearing:

1. Housing: Die-cast aluminum or cast-iron.
2. Close-coupled to electric motor.
3. Input Shaft Gearing: Spur or bevel gear assembly.
4. Output Shaft Gearing: Self-locking worm gears with minimum gear backlash to prevent valve disc chatter or vibration.

Project: 17BP.7.R.116

**UC-14**

County: Guilford

5. Gearing shall be of hardened alloy steel or combination of hardened alloy steel and alloy bronze, accurately cut by hobbing machine.
  6. Lubrication: Grease or oil bath.
  7. Bearings: Ball or roller with minimum B-10 life of 100,000 hours, lifetime pre-lubricated and sealed.
  8. Input Shaft: Hardened alloy steel.
  9. Provide mechanical stops adjustable to plus-or-minus five degrees at each end of travel.
- E. Limit Switches:
1. Provide each actuator with “end of travel” limit switches to allow control of desired end position for each direction of travel.
  2. Provide open and close limit switches geared to drive mechanism and in step at all times, whether unit is operated electrically or manually, and whether or not actuator is powered by electric power supply. Friction devices or set-screw arrangements shall not be used to maintain the setting.
  3. Limit switch gearing shall be appropriately lubricated.
  4. Provide driven mechanism totally enclosed to prevent entrance of foreign matter and loss of lubricant.
  5. Provide each limit switch with four auxiliary contacts. Two contacts shall close and two contacts shall open at a desired end position for each direction of travel.
  6. Switches shall be rated five amperes at 120 volts.
- F. Torque Switches:
1. Provide adjustable torque switches with each valve actuator. Torque switches shall operate during complete valve cycle without using auxiliary relays, linkages, latches, or other devices.
  2. Wire torque switches to de-energize valve actuator motor when excessive torque is developed during each direction of travel.
  3. It shall be possible to select the torque switches to control open and close limit positions in each direction of valve travel.
  4. Provide dry contacts (five-amp, 120 VAC) for remote high torque alarm for automatically controlled valves.
- G. Handwheel Operation:
1. Provide actuator with handwheel for manual operation, so connected that operation by motor will not cause handwheel to rotate.
  2. Should electric power be returned to motor while handwheel is in use, unit shall prevent transmission of motor torque to handwheel.
  3. Handwheel shall require no more than 80-pound effort on rim for seating or unseating load, and no more than 60 pounds on running load.
  4. Handwheel shall have an arrow and the word “OPEN” or “CLOSE” indicating required rotation. Handwheel shall operate in clockwise direction to close.
  5. For valves located less than five feet above operating floor, provide handwheels that conform to applicable AWWA standards.
    - a. Material of Construction: Ductile iron or cast aluminum.
    - b. Arrow indicating direction of opening and word “OPEN” shall be cast on trim of handwheel.
    - c. Maximum Handwheel Diameter: 2.5 feet.

Project: 17BP.7.R.116

**UC-15**

County: Guilford

**H. Controls:**

1. Provide the following controls in separate compartment integral with actuator.
2. Enclosure: NEMA 6P.
3. Starter: Combination reversing magnetic starter with circuit breaker and disconnect switch.
4. Control Power Transformer: Provide transformer to transform rated three-phase, 60 Hertz power to 120 volts, single-phase. Transformer shall be complete with grounded and fused secondary and dual primary fuses.
5. Provide "LOCAL/OFF/REMOTE" selector switch. In "LOCAL" position actuator shall be operated by "OPEN/CLOSE/STOP" pushbuttons. In "OFF" position, actuator shall be disabled from local and remote operation. In "REMOTE" position, "open/close/stop" control from remote source shall be enabled.
6. Provide "OPEN/CLOSE/STOP" pushbuttons with hold-to-run or momentary contact selection.
7. Provide "OPEN/CLOSE/STOP" indicating lights and zero-to-100 percent position indication in liquid crystal display window.
8. Motor shall be de-energized when valve is jammed.
9. Provide thermal overload and single-phasing protection of motor.
10. For monitoring of actuator, provide set of single-pole/double-throw (SPDT) dry contacts. Monitor relay shall indicate that actuator is available for remote operation.
11. Actuator circuit boards shall be rated for high temperature service, minimum 130 degrees F.
12. Provide electrical interlocks as shown.

**I. Remote-mounted Control Stations:**

1. Where required by valve location or as indicated, provide remote control panels.
2. Enclosure: NEMA 4X, Type 316 stainless steel.
3. Provide "LOCAL/OFF/REMOTE" selector switch. In "LOCAL" position actuator shall be operated by "OPEN/CLOSE/STOP" pushbuttons. In "OFF" position, actuator shall be disabled from local and remote operation. In "REMOTE" position, "open/close/stop" control from remote source shall be enabled. Provide contact when switch is in "REMOTE" position for remote indication.
4. Provide "OPEN/CLOSE/STOP" pushbuttons with hold-to-run or momentary contact selection.
5. Provide "OPEN/CLOSE/STOP" indicating lights and zero-to-100 percent position indication with liquid crystal display.

**J. Testing:**

1. Test each actuator in manufacturer's shop in conformance with AWWA C540.

**Gate Valves**

Gate valves inside the Pump Control Valve Vault shall meet the requirements of Section 1036-7(A) of the NCDOT Standard Specifications, and shall be resilient-seated type gate valves with hand-wheel operators and flanged ends.

**Precast Concrete Vault**

The pressure reducing valve vault shall be an approved precast concrete manhole conforming to ASTM C-913. The precast manhole top slab shall be H-20 rated and shall be installed flush with the ground. Steps shall be cast into the interior wall of the manhole as shown on the plans.

Project: 17BP.7.R.116

## UC-16

County: Guilford

**Access Hatch**

The double-leaf aluminum access hatch shall have a 1/4 inch thick, one-piece, mill finish, extruded aluminum frame, incorporating a continuous concrete anchor. The inside of the frame shall have a door-support ledge on two (2) sides. Both frame and ledge must be supported by a full bed of Class A concrete. The door panels shall be 1/4" aluminum diamond plate, reinforced to withstand a live H-20 uniform load. Doors shall open to 90° and automatically lock with a T-316 stainless steel hold open arms with release handles. For ease of operation, doors shall incorporate enclosed stainless steel compression spring assists. Doors shall close flush with the frame. Hinges and all fastening hardware shall be T-316 stainless steel. Unit shall lock with a T-316 stainless steel slam lock with removable keys and have a non-corrosive handle. Unit shall carry a lifetime guarantee against defects in material and/or workmanship.

**Measurement and Payment:**

The quantity of 8” Pump Control Valve in Vault, furnished and installed by the Contractor in accordance with the plans and Special Provisions herein and accepted, will be measured and paid for at the contract unit price lump sum for "8” Pump Control Valve in Vault ". Such price and payment will be full compensation for all materials including vault, hatch, pipe, fittings, valves, and control valve actuator, labor, installation, excavation, equipment, backfilling, and any incidentals necessary to complete the work as required. The 8” Pump Control Valve in Vault shall be wired by others.

**Pay Item:**

8” Pump Control Valve in Vault

**Pay Unit**

Lump Sum

PROJECT SPECIAL PROVISIONS  
Utilities by Others



120 N. Boylan Avenue  
Raleigh, NC 27603  
(919) 828-0531  
License Number: F-0115

**General:**

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

- A) AT&T (Communications-Local Service)
- B) AT&T (Communications-Long Distance)
- C) Duke Energy Carolinas (Distribution)
- D) Spectrum Communications (CATV)
- E) Verizon Business (formerly MCI)
- F) U.S. Geological Survey
- G) Centurylink/Lumen Communications

All utility work listed herein has been complete 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 2024 Standard Specifications.

**Utilities Requiring Adjustment:**

Utility relocations are shown on the Utilities by Others Plans.

A. AT&T- Communications (Local Service)

- 1) Contact Person: Mr. Kevin Kimrey, 336-379-5914, [kk1587@att.com](mailto:kk1587@att.com)

B. AT&T- Communications (Long Distance)

- 1) Contact Person: Mr. Levi Kendrick, 706-781-8316, [levi\\_kendrick@windstream.net](mailto:levi_kendrick@windstream.net)

PROJECT SPECIAL PROVISIONS

Utilities by Others

C. Duke Energy Carolinas- Distribution

- 1) Contact for Duke Energy Distribution: Ms. Cindi Ball, 919-278-2529, [Cynthia.Ball@duke-energy.com](mailto:Cynthia.Ball@duke-energy.com)

D. Spectrum Communications (CATV)

- 1) Contact Person for Spectrum Communications: Mr. Roger Stanfield, 336-217-3460, [Roger.stanfield@charter.com](mailto:Roger.stanfield@charter.com)

D. Verizon Business

- 1) Contact person for Verizon Business: Mr. Greg Ross, 336-480-8668, [greg.ross@engineeringassociates.com](mailto:greg.ross@engineeringassociates.com)

F. U.S. Geological Survey

- 1) The U.S. Geological Survey has a Monitoring Station on the right side of the project at approximate station 14+80. This monitoring station was moved to a temporary location inside the City of Greensboro fence on the left side of the project at approximate station 17+00.
- 2) See Utilities By Others Plan Sheet UO-2.
- 3) Contact Person for U.S. Geological Survey: Mr. Doug Walters, 919-571-4069, [dwalters@usgs.gov](mailto:dwalters@usgs.gov)

G. CenturyLink/Lumen

- 1) Centurylink/Lumen has a Fiber Optic Cable lashed to Spectrum CATV facilities throughout the project. Spectrum CATV facilities were relocated as part of Spectrum's relocation effort
- 2) See Utilities by Oher Plan Sheet UO-2 for Spectrum proposed facilities.
- 3) Contact Person for Centurylink/Lumen: Mr. Roger Stanfield with Charter Communications, Mr. Roger Stanfield, 336-217-3460, [Roger.Stanfield@charter.com](mailto:Roger.Stanfield@charter.com)

**Stabilization Requirements:**

(4-30-2019)(Rev. 1-21-25)

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit issued by the North Carolina Department of Environmental Quality Division of Energy, Mineral and Land Resources. Temporary or permanent ground cover stabilization shall occur within the following time frames from the last land-disturbing activity:

- Stabilize perimeter dikes, swales, ditches, and perimeter slopes within 7 calendar days.
- Stabilize high quality water (HQW) zones within 7 calendar days.
- Stabilize slopes steeper than 3:1 within 7 calendar days.
  - If slopes are 10 feet or less in length and are not steeper than 2:1, 14 calendar days are allowed.
- Stabilize slopes 3:1 to 4:1 within 14 calendar days.
  - 7 calendar days for slopes greater than 50 feet in length and with slopes steeper than 4:1.
  - 7 calendar days for perimeter dikes, swales, ditches, perimeter slopes, and HQW Zones.
- Stabilize areas with slopes flatter than 4:1 within 14 calendar days.
  - 7 calendar days for perimeter dikes, swales, ditches, perimeter slopes, and HQW Zones.

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

| <b>March 1 - August 31</b> |                       | <b>September 1 - February 28</b> |                         |
|----------------------------|-----------------------|----------------------------------|-------------------------|
| 50#                        | Tall Fescue           | 50#                              | Tall Fescue             |
| 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**

|       |                       |
|-------|-----------------------|
| 75#   | Tall Fescue           |
| 25#   | Bermudagrass (hulled) |
| 500#  | Fertilizer            |
| 4000# | Limestone             |

**September 1 - February 28**

|       |                         |
|-------|-------------------------|
| 75#   | Tall Fescue             |
| 35#   | Bermudagrass (unhulled) |
| 500#  | Fertilizer              |
| 4000# | Limestone               |

Note: 50# of Bahiagrass may be substituted for either Centipede or Bermudagrass only upon Engineer's request.

## Approved Tall Fescue Cultivars

|                            |                 |                 |                    |
|----------------------------|-----------------|-----------------|--------------------|
| 06 Dust                    | Escalade        | Kalahari        | Serengeti          |
| 2 <sup>nd</sup> Millennium | Essential       | Kitty Hawk 2000 | Shelby             |
| 3 <sup>rd</sup> Millennium | Evergreen 2     | Legitimate      | Shenandoah III     |
| Avenger                    | Faith           | Lexington       | Shenandoah Elite   |
| Bar Fa                     | Falcon IV       | LifeGuard       | Sheridan           |
| Barlexas                   | Falson NG       | LSD             | Sidewinder         |
| Barlexas II                | Falcon V        | Magellan        | Signia             |
| Barrera                    | Fat Cat         | Masterpiece     | Silver Hawk        |
| Barrington                 | Fesnova         | Millennium SRP  | Skyline            |
| Barrobusto                 | Fidelity        | Monet           | Solara             |
| Barvado                    | Finelawn Elite  | Mustang 4       | Southern Choice II |
| Biltmore                   | Finelawn Xpress | Naturally Green | Speedway           |
| Bingo                      | Finesse II      | Ninja 2         | Spyder LS          |
| Bizem                      | Firebird        | Ol' Glory       | Sunset Gold        |
| Black Tail                 | Firecracker LS  | Padre           | Taccoa             |
| Blackwatch                 | Firenza         | Patagonia       | Tahoe II           |
| Blade Runner II            | Five Point      | Pedigree        | Talladega          |
| Bonsai                     | Focus           | Picasso         | Tanzania           |
| Braveheart                 | Forte           | Piedmont        | Temple             |
| Bravo                      | Garrison        | Plantation      | Terrano            |
| Bullseye                   | Gazelle II      | Proseeds 5301   | Thor               |
| Cannavaro                  | GLX Aced        | Prospect        | Thunderstruck      |
| Catalyst                   | Gold Medallion  | Quest           | Titanium LS        |
| Cayenne                    | Grande 3        | RainDance       | Titan LTD          |
| Cezanne RZ                 | Greenbrooks     | Raptor II       | Tracer             |
| Chipper                    | Greenkeeper     | Rebel IV        | Traverse SRP       |
| Cochise IV                 | Gremlin         | Rebel Exeda     | Trio               |
| Constitution               | Greystone       | Rebel Sentry    | Tulsa Time         |
| Corgi                      | Guardian 21     | Regenerate      | Turbo              |
| Corona                     | Guardian 41     | Regiment II     | Turbo RZ           |
| Coyote                     | Hemi            | Rembrandt       | Tuxedo             |
| Cumberland                 | Honky Tonk      | Rendition       | Ultimate           |
| Darlington                 | Hot Rod         | Reunion         | Umbrella           |
| DaVinci                    | Hunter          | Rhambler 2 SRP  | Van Gogh           |
| Desire                     | Inferno         | Riverside       | Venture            |



|          |           |          |             |
|----------|-----------|----------|-------------|
| Diablo   | Integrity | RNP      | Watchdog    |
| Dominion | Jaguar 3  | Rocket   | Wolfpack II |
| Dynamic  | Jamboree  | Saltillo | Xtremegreen |
| Dynasty  | Justice   | Scorpion |             |

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.

**NUTRIENT MANAGEMENT TRAINING REQUIREMENTS:**

(07/17/2014)(rev 05/10/2023)

The person(s) responsible for applying fertilizer or person(s) conducting the application of fertilizer on this project within the Jordan Lake or Falls Lake Watershed shall complete the ‘Urban Only’ or the ‘Ag and Urban’ combined web-based training and obtain a certificate of completion from NCDEQ prior to performing this work. The training and NCDEQ contact information may be found under “Fertilizer Management Training” heading at the following link:

<https://deq.nc.gov/about/divisions/water-resources/water-planning/nonpoint-source-planning/jordan-lake-nutrient-strategy#implementation>

A certificate of completion must be presented by the person(s) responsible for fertilizer application or person(s) conducting the application of fertilizer to the Engineer prior to performing fertilizer application on the project within the limits of the Jordan Lake or Fall Lake Watershed. The certificate must remain on-site with the applicator during all applications of fertilizer.

**NATIVE GRASS SEEDING AND MULCHING:**

**(West)**

Native Grass Seeding and Mulching shall be performed on the disturbed areas of wetlands and riparian areas, and adjacent to Stream Relocation and/or trout stream 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.

**August 1 - June 1**

|     |                     |
|-----|---------------------|
| 18# | Creeping Red Fescue |
| 8#  | Big Bluestem        |
| 6#  | Indiangrass         |

**May 1 – September 1**

|     |                     |
|-----|---------------------|
| 18# | Creeping Red Fescue |
| 8#  | Big Bluestem        |
| 6#  | Indiangrass         |

|       |             |      |                           |
|-------|-------------|------|---------------------------|
| 4#    | Switchgrass | 4#   | Switchgrass               |
| 35#   | Rye Grain   | 25#  | German or Browntop Millet |
| 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.

**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.

**REFORESTATION:****Description**

*Reforestation* will be planted within interchanges and along the outside borders of the road, and in other areas as directed. *Reforestation* is not shown on the plan sheets. See the Reforestation Detail Sheet.

All non-maintained riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated with native woody species.

The entire *Reforestation* operation shall comply with the requirements of Section 1670 of the *Standard Specifications*.

**Materials**

*Reforestation* shall be bare root seedlings 12"-18" tall.

**Construction Methods**

*Reforestation* shall be planted as soon as practical following permanent *Seeding and Mulching*. The seedlings shall be planted in a 16-foot wide swath adjacent to mowing pattern line, or as directed.

Root dip: The roots of reforestation seedlings shall be coated with a slurry of water, and either a fine clay (kaolin) or a superabsorbent that is designated as a bare root dip. The type, mixture ratio, method of application, and the time of application shall be submitted to the Engineer for approval.

With the approval of the Engineer, seedlings may be coated before delivery to the job or at the time of planting, but at no time shall the roots of the seedlings be allowed to dry out. The roots shall be moistened immediately prior to planting.

Seasonal Limitations: *Reforestation* shall be planted from November 15 through March 15.

**Measurement and Payment**

*Reforestation* will be measured and paid for in accordance with Article 1670-17 of the *Standard Specifications*.

**ENVIRONMENTALLY SENSITIVE AREAS:****Description**

This project is located in an *Environmentally Sensitive Area*. This designation requires special procedures to be used for clearing and grubbing, temporary stream crossings, and grading operations within the Environmentally Sensitive Areas identified on the plans and as designated by the Engineer. This also requires special procedures to be used for seeding and mulching and staged seeding within the project.

The Environmentally Sensitive Area shall be defined as a 50-foot buffer zone on both sides of the stream or depression measured from top of streambank or center of depression.

### **Construction Methods**

#### **(A) Clearing and Grubbing**

In areas identified as Environmentally Sensitive Areas, the Contractor may perform clearing operations, but not grubbing operations until immediately prior to beginning grading operations as described in Article 200-1 of the *Standard Specifications*. Only clearing operations (not grubbing) shall be allowed in this buffer zone until immediately prior to beginning grading operations. Erosion control devices shall be installed immediately following the clearing operation.

#### **(B) Grading**

Once grading operations begin in identified Environmentally Sensitive Areas, work shall progress in a continuous manner until complete. All construction within these areas shall progress in a continuous manner such that each phase is complete and areas are permanently stabilized prior to beginning of next phase. Failure on the part of the Contractor to complete any phase of construction in a continuous manner in Environmentally Sensitive Areas will be just cause for the Engineer to direct the suspension of work in accordance with Article 108-7 of the *Standard Specifications*.

#### **(C) Temporary Stream Crossings**

Any crossing of streams within the limits of this project shall be accomplished in accordance with the requirements of Subarticle 107-12 of the *Standard Specifications*.

#### **(D) Seeding and Mulching**

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.

Seeding and mulching shall be performed on the areas disturbed by construction immediately following final grade establishment. No appreciable time shall lapse into the contract time without stabilization of slopes, ditches and other areas within the Environmentally Sensitive Areas.

(E) Stage Seeding

The work covered by this section shall consist of the establishment of a vegetative cover on cut and fill slopes as grading progresses. Seeding and mulching shall be done in stages on cut and fill slopes that are greater than 20 feet in height measured along the slope, or greater than 2 acres in area. Each stage shall not exceed the limits stated above.

Additional payments will not be made for the requirements of this section, as the cost for this work shall be included in the contract unit prices for the work involved.

**MINIMIZE REMOVAL OF VEGETATION:**

The Contractor shall minimize removal of vegetation within project limits to the maximum extent practicable. Vegetation along stream banks and adjacent to other jurisdictional resources outside the construction limits shall only be removed upon approval of Engineer. No additional payment will be made for this minimization work.

**CONSTRUCTION MATERIALS MANAGEMENT**

(3-19-19) (rev. 04-27-20)

**Description**

The requirements set forth shall be adhered to in order to meet the applicable materials handling requirements of the NCG010000 permit. Structural controls installed to manage construction materials stored or used on site shall be shown on the E&SC Plan. Requirements for handling materials on construction sites shall be as follows:

**Polyacrylamides (PAMS) and Flocculants**

Polyacrylamides (PAMS) and flocculants shall be stored in leak-proof containers that are kept under storm-resistant cover or surrounded by secondary containment structures designed to protect adjacent surface waters. PAMS or other flocculants used shall be selected from the NC DWR List of Approved PAMS/Flocculants. The concentration of PAMS and other flocculants used shall not exceed those specified in the NC DWR List of Approved PAMS/Flocculants and in accordance with the manufacturer's instructions. The NC DWR List of Approved PAMS/Flocculants is available at:

[https://files.nc.gov/ncdeq/Water+Quality/Environmental+Sciences/ATU/PAM8\\_30\\_18.pdf](https://files.nc.gov/ncdeq/Water+Quality/Environmental+Sciences/ATU/PAM8_30_18.pdf)

**Equipment Fluids**

Fuels, lubricants, coolants, and hydraulic fluids, and other petroleum products shall be handled and disposed of in a manner so as not to enter surface or ground waters and in accordance with applicable state and federal regulations. Equipment used on the site must be operated and maintained properly to prevent discharge of fluids. Equipment, vehicle, and other wash waters

shall not be discharged into E&SC basins or other E&SC devices. Alternative controls should be provided such that there is no discharge of soaps, solvents, or detergents.

### **Waste Materials**

Construction materials and land clearing waste shall be disposed of in accordance with North Carolina General Statutes, Chapter 130A, Article 9 - Solid Waste Management, and rules governing the disposal of solid waste (15A NCAC 13B). Areas dedicated for managing construction material and land clearing waste shall be at least 50 feet away from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available. Paint and other liquid construction material waste shall not be dumped into storm drains. Paint and other liquid construction waste washouts should be located at least 50 away from storm drain inlets unless there is no alternative. Other options are to install lined washouts or use portable, removable bags or bins. Hazardous or toxic waste shall be managed in accordance with the federal Resource Conservation and Recovery Act (RCRA) and NC Hazardous Waste Rules at 15A NCAC, Subchapter 13A. Litter and sanitary waste shall be managed in a manner to prevent it from entering jurisdictional waters and shall be disposed of offsite.

### **Herbicide, Pesticide, and Rodenticides**

Herbicide, pesticide, and rodenticides shall be stored and applied in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act, North Carolina Pesticide Law of 1971 and labeling restrictions.

### **Concrete Materials**

Concrete materials onsite, including excess concrete, must be controlled and managed to avoid contact with surface waters, wetlands or buffers. No concrete or cement slurry shall be discharged from the site. (Note that discharges from onsite concrete plants require coverage under a separate NPDES permit – NCG140000.) Concrete wash water shall be managed in accordance with the *Concrete Washout Structure* provision. Concrete slurry shall be managed and disposed of in accordance with *NCDOT DGS and HOS DCAR Distribution of Class A Residuals Statewide* (Permit No. WQ0035749). Any hardened concrete residue will be disposed of, or recycled on site, in accordance with state solid waste regulations.

### **Earthen Material Stock Piles**

Earthen material stock piles shall be located at least 50 feet away from storm drain inlets and surface waters unless it can be shown that no other alternatives are reasonably available.

### **Measurement and Payment**

Conditions set within the *Construction Materials Management* provision are incidental to the project for which no direct compensation will be made.

**WASTE AND BORROW SOURCES:**

(2-16-11) (Rev. 3-17-22)

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:

<https://connect.ncdot.gov/resources/roadside/FieldOperationsDocuments/Contract%20Reclamation%20Procedures.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. Posts shall be installed a minimum of 2 ft. into the ground. 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)(5) 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:

| <b>Pay Item</b>                         | <b>Pay Unit</b> |
|---|-----------------|
| Safety Fence                            | Linear Foot     |
| <b><u>CONCRETE WASHOUT:</u></b>         |                 |
| <small>(10-22-15)(Rev. 4-15-25)</small> |                 |

### **Description**

Concrete washouts are impermeable enclosures, above or below grade, to contain concrete wastewater and associated concrete mix from cleaning of ready-mix trucks, drums, pumps, tools or other equipment. Concrete washouts must collect and retain all the concrete washout water and solids, so that this material does not migrate to surface waters or into the ground water. These enclosures are not intended for concrete waste not associated with washout operations.

Acceptable concrete washouts may include constructed earthen structures, above or below ground, or commercially available devices designed specifically to capture concrete wash water.

### **Materials**

Refer to Division 10 of the *Standard Specifications*.

**Item**

Temporary Silt Fence

**Section**

1605

*Safety Fence* shall meet the specifications as provided elsewhere in this contract.

Geomembrane basin liner shall consist of a minimum 10 mil thick polypropylene or polyethylene geomembrane.

**Construction Methods**

Build an enclosed earthen berm or excavate to form an enclosure in accordance with the details and as directed by the Engineer near the project entrance(s) or at location(s) of concrete operations. Structures shall be constructed a minimum of 50 feet from drainage conveyances or jurisdictional streams or wetlands. [Alternate structure designs or plans for management of concrete washout may be submitted for review and approval by the Engineer. Include in the alternate plan the method used to retain, treat and dispose of the concrete washout wastewater generated within the project limits and in accordance with the minimum setback requirements.](#)

Install temporary silt fence around the perimeter of the structure enclosure in accordance with the details and as directed by the Engineer if the structure is not located in an area where existing erosion and sedimentation control devices are capable of containing stormwater runoff.

Post a sign with the words "Concrete Washout" in close proximity of the concrete washout area, so it is clearly visible to site personnel. Install safety fence as directed by the Engineer for visibility to construction traffic.

Install prefabricated concrete washouts, designed specifically to capture concrete wash water, at locations of additional concrete pouring operations. Acceptable systems may include geotextile lined containers, vinyl or plastic containers or roll-off containers, with or without filter bags with a minimum functional holding capacity of 36 cubic feet (1.33 cubic yards). Submit prefabricated concrete washout system for approval by the Engineer prior to installation. Place prefabricated concrete washout devices to a minimum 50 foot setback from drainage conveyances and jurisdictional streams and wetlands. If the minimum setback cannot be achieved, provide secondary containment to prevent accidental release of wastewater from reaching drainage conveyances or streams.

Prefabricated concrete washouts must be clearly and visibly labeled as such, either by the manufacturer on the product itself, or by a sign with the words "Concrete Washout" in close proximity of the concrete washout area so it is clearly visible to site personnel.

**Maintenance and Removal**

Maintain the concrete washout structure(s) to provide adequate holding capacity plus a minimum freeboard of 12 inches. Remove and dispose of hardened concrete and return the structure to a functional condition after reaching 75% capacity. Inspect concrete washout structures for damage to liner or structure to maintain functionality.

Maintain prefabricated concrete washout systems per manufacturer's recommendations. Inspect concrete washout structures for damage to linings or structure and repair or replace as necessary.

Remove the concrete washout structures and sign upon project completion. Grade the area to match the existing topography and permanently seed and mulch area. Dispose of prefabricated concrete washout structures according to state or local waste regulations.

### **Measurement and Payment**

*Concrete Washout Structure* will be measured and paid per each enclosure installed in accordance with the details in the plans. If alternate plans or details are approved, those structures will also be paid for per each approved and installed structure. Such price and payment will be full compensation for all work including, but not limited to, furnishing all materials, labor, equipment, signage, slurry solidification and incidentals necessary to construct, maintain and remove *Concrete Washout Structure* and dispose of residual concrete washout wastewater and concrete solids.

*Prefabricated Concrete Washout* will be measured and paid per each system installed in accordance with the manufacturer's recommendations. Such price and payment will be full compensation for all work including, but not limited to, furnishing all materials, labor, equipment, signage, slurry solidification and incidentals necessary to install, maintain and remove *Prefabricated Concrete Washout*, and dispose of residual concrete washout wastewater and concrete solids.

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

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

*Safety Fence* shall be measured and paid for as provided elsewhere in this contract.

No measurement will be made for over excavation or stockpiling or other items necessary to complete this work.

Payment will be made under:

| <b>Pay Item</b>                | <b>Pay Unit</b> |
|--------------------------------|-----------------|
| Concrete Washout Structure     | Each            |
| Prefabricated Concrete Washout | Each            |

**FLOATING TURBIDITY CURTAIN:****Description**

This work consists of furnishing a *Floating Turbidity Curtain* to deter silt suspension and movement of silt particles during construction. The floating turbidity curtain shall be constructed at locations as directed.

**Materials**

The curtain material shall be made of a tightly woven nylon, plastic or other non-deteriorating material meeting the following specifications:

| <b>Property</b>         | <b>Value</b>               |
|-------------------------|----------------------------|
| Grab tensile strength   | *md-370 lbs *cd-250 lbs    |
| Mullen burst strength   | 480 psi                    |
| Trapezoid tear strength | *md-100 lbs *cd-60 lbs     |
| Apparent opening size   | 70 US standard sieve       |
| Percent open area       | 4% permittivity 0.28 sec-1 |

\*md - machine direction

\*cd - cross machine direction

In the event that more than one width of fabric is required, a 6" overlap of the material shall also be required.

The curtain material shall be supported by a flotation material having over 29 lbs/ft buoyancy. The floating curtain shall have a 5/16" galvanized chain as ballast and dual 5/16" galvanized wire ropes with a heavy vinyl coating as load lines.

**Construction Methods**

The Contractor shall maintain the *Floating Turbidity Curtain* in a satisfactory condition until its removal is requested by the Engineer. The curtain shall extend to the bottom of the jurisdictional resource. Anchor the curtain according to manufacturer recommendations.

**Measurement and Payment**

*Floating Turbidity Curtain* will be measured and paid for as the actual number of square yards of curtain furnished as specified and accepted. Such price and payment will be full compensation for the work as described in this section including but not limited to furnishing all materials, tools, equipment, and all incidentals necessary to complete the work.

Payment will be made under:

**Pay Item**

**Pay Unit**

17BP.7.R.116

EC-15

Guilford County

Floating Turbidity Curtain

Square Yard

# ST-1

Project 17BP.7.R.116

Guilford County

## Project Special Provisions Structure

### Table of Contents

|  |            |       | Page # |
|--|------------|-------|--------|
| Falsework and Formwork                   | (11-30-23) | ..... | ST-2   |
| Submittal of Working Drawings            | (11-30-23) | ..... | ST-9   |
| Crane Safety                             | (6-20-19)  | ..... | ST-15  |
| Grout for Structures                     | (12-1-17)  | ..... | ST-16  |
| Thermal Sprayed Coatings (Metallization) | (12-1-17)  | ..... | ST-17  |
| Asbestos Assessment                      | (11-30-23) | ..... | ST-19  |



2/25/2025 | 4:34 AM PST

# ST-2

## **FALSEWORK AND FORMWORK**

(11-30-23)

### **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.

## ST-3

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.

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. Screenshot 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  |

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 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 1/2" from the edge of the top flange. Hanger hardware and rods must have a minimum safe working load of 6,000 lbs.

For links slabs, the tops of girders directly beneath the link slab shall be free of overhang falsework attachments or other hardware. Submit calculations and working drawings for overhang falsework in the link slab region.



## ST-4

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  $\frac{3}{4}$ ".

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.

# ST-5

Design falsework and formwork requiring submittals in accordance with the current edition of 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<br>feet above ground | Pressure, lb/ft <sup>2</sup> 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 surface damage.

## ST-6

**Table 2.2A - Steady State Maximum Wind Speeds by Counties in North Carolina**

| COUNTY     | 25 YR<br>(mph) | COUNTY      | 25 YR<br>(mph) | COUNTY       | 25 YR<br>(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             |              |                |

## ST-7

### 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. 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.

## ST-8

### 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, *Falsework and Formwork* 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.

# ST-9

## SUBMITTAL OF WORKING DRAWINGS

(11-30-23)

### 1.0 GENERAL

Submit working drawings in accordance with Article 105-2 of the *Standard Specifications* and this Special Provision. For this Special Provision, “submittals” refers to only those listed in this Special 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 Engineer. Either the Structures Management 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 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 Engineer, Structures Management Unit contacts or the Geotechnical Engineering Unit contacts noted below.

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 Structures Management Unit, use the following addresses:

Via Email: [SMU-wdr@ncdot.gov](mailto:SMU-wdr@ncdot.gov) (do not cc SMU Working Drawings staff)

Via US mail:

Mr. B. C. Hanks, P. E.  
State Structures Engineer  
North Carolina Department  
of Transportation  
Structures Management Unit  
1581 Mail Service Center  
Raleigh, NC 27699-1581

Attention: Mr. J. L. Bolden, P. E.

Via other delivery service:

Mr. B. C. Hanks, P. E.  
State Structures Engineer  
North Carolina Department  
of Transportation  
Structures Management Unit  
1000 Birch Ridge Drive  
Raleigh, NC 27610

Attention: Mr. J. L. Bolden, P. E.

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 Email: [EastGeotechnicalSubmittal@ncdot.gov](mailto:EastGeotechnicalSubmittal@ncdot.gov)

## ST-10

Via US mail:

Mr. Thomas Santee, P. E.  
Assistant State Geotechnical  
Engineer – Eastern Region  
North Carolina Department  
of Transportation  
Geotechnical Engineering Unit  
Eastern Regional Office  
1570 Mail Service Center  
Raleigh, NC 27699-1570

Via other delivery service:

Mr. Thomas Santee, P. E.  
Assistant State Geotechnical  
Engineer – Eastern Region  
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 Email: [WestGeotechnicalSubmittal@ncdot.gov](mailto:WestGeotechnicalSubmittal@ncdot.gov)

Via US mail or other delivery service:

Mr. Eric Williams, P. E.  
Assistant State Geotechnical  
Engineer – Western Region  
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 Structures Management Unit can be viewed from the Unit's website, via the "[Drawing Submittal Status](#)" link.

The status of the review of geotechnical-related submittals sent to the Geotechnical Engineering Unit can be viewed from the Unit's website, via the "[Geotechnical Construction Submittals](#)" link.

Direct any questions concerning submittal review status, review comments or drawing markups to the following contacts:

Primary Structures Contact: James Bolden (919) 707 – 6408  
[jlbolden@ncdot.gov](mailto:jlbolden@ncdot.gov)

Secondary Structures Contacts: Emmanuel Omile (919) 707 – 6451  
[eomile@ncdot.gov](mailto:eomile@ncdot.gov)

Madonna Rorie (919) 707 – 6508  
[mrorie@ncdot.gov](mailto:mrorie@ncdot.gov)

Eastern Regional Geotechnical Contact (Divisions 1-7):

Thomas Santee (919) 920 – 8901  
[dthering@ncdot.gov](mailto:dthering@ncdot.gov)

# ST-11

Western Regional Geotechnical Contact (Divisions 8-14):

Eric Williams (704) 455 – 8902

[ewilliams3@ncdot.gov](mailto:ewilliams3@ncdot.gov)

### 3.0 SUBMITTAL COPIES

Furnish one complete copy of each submittal, including all attachments, to the Engineer. At the same time, submit a copy of the same complete submittal directly to the Structures Management Unit and/or the Geotechnical Engineering Unit as specified in the tables below.

The first table below covers “Structure Submittals”. The Engineer will receive review comments and drawing markups for these submittals from the Structures Management Unit. The second table in this section covers “Geotechnical Submittals”. The 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 Structures Management 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<br>Required by<br>Structures<br>Management<br>Unit | Copies<br>Required by<br>Geotechnical<br>Engineering<br>Unit | Contract Reference<br>Requiring Submittal <sup>1</sup> |
|--|---|--|--|
| Arch Culvert Falsework   | Y   | N  | Plan Note, SN Sheet & “Falsework and Formwork”         |
| Box Culvert Falsework <sup>7</sup>                                 | Y   | N  | Plan Note, SN Sheet & “Falsework and Formwork”         |
| Cofferdams   | Y   | Y  | Article 410-4  |
| Foam Joint Seals <sup>6</sup>                                      | Y   | N  | “Foam Joint Seals”                                     |
| Expansion Joint Seals<br>(hold down plate type with base<br>angle) | Y   | N  | “Expansion Joint Seals”                                |
| Expansion Joint Seals<br>(modular)                                 | Y   | N  | “Modular Expansion Joint<br>Seals”                     |
| Expansion Joint Seals<br>(strip seals)                             | Y   | N  | “Strip Seals Expansion<br>Joints”                      |



## ST-12

|  |   |   |  |
|--|---|---|--|
| Falsework & Forms <sup>2</sup><br>(substructure)                           | Y | N | Article 420-3 & “Falsework and Formwork”   |
| Falsework & Forms<br>(superstructure)                                      | Y | N | Article 420-3 & “Falsework and Formwork”   |
| Girder Erection over Railroad  | Y | N | Railroad Provisions  |
| Maintenance and Protection of Traffic Beneath Proposed Structure           | Y | N | “Maintenance and Protection of Traffic Beneath Proposed Structure at Station ____” |
| Metal Bridge Railing   | Y | N | Plan Note  |
| Metal Stay-in-Place Forms  | Y | N | Article 420-3  |
| Metalwork for Elastomeric Bearings <sup>4,5</sup>                          | Y | N | Article 1072-8   |
| Miscellaneous Metalwork <sup>4,5</sup>                                     | Y | N | Article 1072-8   |
| Disc Bearings <sup>4</sup>   | Y | N | “Disc Bearings”  |
| Overhead and Digital Message Signs (DMS) (metalwork and foundations)       | Y | N | Applicable Provisions  |
| Placement of Equipment on Structures (cranes, etc.)                        | Y | N | Article 420-20   |
| Prestressed Concrete Box Beams (detensioning sequences) <sup>3</sup>       | Y | N | Article 1078-11  |
| Precast Concrete Box Culverts  | Y | N | “Optional Precast Reinforced Concrete Box Culvert at Station ____”                 |
| Prestressed Concrete Cored Slab (detensioning sequences) <sup>3</sup>      | Y | N | Article 1078-11  |
| Prestressed Concrete Deck Panels   | Y | N | Article 420-3  |
| Prestressed Concrete Girder (strand elongation and detensioning sequences) | Y | N | Articles 1078-8 and 1078-11  |
| Removal of Existing Structure over Railroad                                | Y | N | Railroad Provisions  |
| Revised Bridge Deck Plans (adaptation to prestressed deck panels)          | Y | N | Article 420-3  |

## ST-13

|   |   |   |   |
|---|---|---|---|
| Revised Bridge Deck Plans<br>(adaptation to modular<br>expansion joint seals) | Y | N | “Modular Expansion Joint<br>Seals”  |
| Sound Barrier Wall (precast<br>items)   | Y | N | Article 1077-2 &<br>“Sound Barrier Wall”  |
| Sound Barrier Wall Steel<br>Fabrication Plans <sup>5</sup>                    | Y | N | Article 1072-8 &<br>“Sound Barrier Wall”  |
| Structural Steel <sup>4</sup>   | Y | N | Article 1072-8<br><br>Article 400-3 &<br>“Construction,<br>Maintenance and Removal<br>of Temporary Structure at<br>Station _____” |
| Temporary Detour Structures   | Y | Y |   |
| TFE Expansion Bearings <sup>4</sup>   | Y | N | 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 Structures Management 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.

# ST-14

| <b><u>GEOTECHNICAL SUBMITTALS</u></b>              |   |  |  |
|--|---|--|--|
| <b>Submittal</b>                                   | <b>Copies Required by Geotechnical Engineering Unit</b> | <b>Copies Required by Structures Management Unit</b> | <b>Contract Reference Requiring Submittal <sup>1</sup></b> |
| Drilled Pier Construction Plans <sup>2</sup>       | Y   | N  | Subarticle 411-3(A)  |
| Crosshole Sonic Logging (CSL) Reports <sup>2</sup> | Y   | N  | Subarticle 411-5(A)(2)                                     |
| Pile Driving Equipment Data Forms <sup>2,3</sup>   | Y   | N  | Subarticle 450-3(D)(2)                                     |
| Pile Driving Analyzer (PDA) Reports <sup>2</sup>   | Y   | N  | Subarticle 450-3(F)(3)                                     |
| Retaining Walls <sup>4</sup>                       | Y; drawings and calculations                            | Y; drawings  | Applicable Provisions                                      |
| Temporary Shoring <sup>4</sup>                     | Y; drawings and calculations                            | Y; 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 Engineer. Submit a second copy of submittal electronically (PDF via email), 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:
4. <https://connect.ncdot.gov/projects/construction/ConstManRefDocs/PILE%20DRIVING%20EQUIPMENT%20DATA%20FORM.pdf>  
See second page of form for submittal instructions.
5. Electronic copy of submittal is required. See referenced provision.

# ST-15

## **CRANE SAFETY**

**(6-20-19)**

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 (OSHA) regulations.

Submit all items listed below to the Engineer prior to beginning crane operations. 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.

### **CRANE SAFETY SUBMITTAL LIST**

- A. **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.
- B. **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.
- C. **Crane Inspections:** Inspection records for all cranes shall be current and readily accessible for review upon request.
- D. **Certifications:** Crane operators shall be certified by the National Commission for the Certification of Crane Operators (NCCCO) or the National Center for Construction Education and Research (NCCER). Other approved nationally accredited programs will be considered upon request. In addition, crane operators shall have a current CDL medical card. Submit a list of crane operator(s) and include current certification for each type of crane operated (small hydraulic, large hydraulic, small lattice, large lattice) and medical evaluations for each operator.

# ST-16

## **GROUT FOR STRUCTURES**

(12-1-17)

### **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, decks, end bent caps, or bent caps. 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**

Unless otherwise noted on the plans, use a Type 3 Grout in accordance with Section 1003 of the Standard Specifications.

Initial setting time shall not be less than 10 minutes when tested in accordance with ASTM C266.

Construction loading and traffic loading shall not be allowed until the 3 day compressive strength is achieved.

### **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.

### **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.

# ST-17

## THERMAL SPRAYED COATINGS (METALLIZATION)

(12-1-2017)

### DESCRIPTION

Apply a thermal sprayed coating (TSC) and sealer to metal surfaces in accordance with the *Thermal Sprayed Coatings (Metallization) Program* and as specified herein when called for on the plans or by other Special Provisions. Use only Arc Sprayed application methods to apply TSC. The Engineer must approve other methods of application.

The *Thermal Sprayed Coatings (Metallization) Program* is available on the Materials and Tests Unit website.

### QUALIFICATIONS

Only use NCDOT approved TSC Contractors meeting the requirements outlined in the *Thermal Sprayed Coatings (Metallization) Program*.

### MATERIALS

Use only materials meeting the requirements of Section 7 of the *Thermal Sprayed Coatings (Metallization) Program*.

### SURFACE PREPARATION AND TSC APPLICATION

Surface preparation of TSC surfaces shall meet the requirements of Section 8 of the *Thermal Sprayed Coatings (Metallization) Program*. Apply TSC with the alloy to the thickness specified on the plans or as required by *Thermal Sprayed Coatings (Metallization) Program*.

### INSPECTION AND TESTING

The TSC Contractor must conduct inspections and tests listed in the *Thermal Sprayed Coatings (Metallization) Program*.

### REPAIRS

Perform all shop repairs in accordance with the procedures outlined in the *Thermal Sprayed Coatings (Metallization) Program*.

Repairs associated with field welding shall be made by removing the existing metallizing by blast or power tool cleaning. Affected areas shall be addressed as follows:

- (A) For Marine Environments, incorporate a minimum surface preparation in accordance with SSPC SP-11 (Power Tool Cleaning to Bare Metal) and require an approved epoxy mastic coating applied in accordance with the manufacturer's recommendation. Apply a minimum of two (2) coats at a rate of 5-7 (WFT) per coat to the affected area.
- (B) For Non-Marine Environments, incorporate a minimum surface preparation in accordance with SSPC SP-11 (Power Tool Cleaning to Bare Metal) and require an approved organic zinc-rich coating applied in accordance with the manufacturer's recommendation. Apply a minimum of two (2) coats at a rate of 5-7 (WFT) per coat to the affected area.

(1) Minor localized areas less than or equal to  $0.1 \text{ ft}^2$  with exposed substrate shall be repaired as outlined above for marine and non-marine environments.

## **ST-18**

- (2) Large localized areas greater than 0.1 ft<sup>2</sup> with exposed substrate shall require the Contractor to submit a detailed repair procedure to the Engineer for review and approval.
- (3) Repair methods for areas where the substrate has not been exposed shall be mutually agreed upon between the Contractor and TSC Contractor as approved by the Engineer.

### **TWELVE MONTH OBSERVATION PERIOD**

All TSC materials applied under the *Thermal Sprayed Coatings (Metallization) Program* shall be evaluated twelve (12) months after project acceptance for defective materials and workmanship.

### **MEASUREMENT AND PAYMENT**

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

# ST-19

## ASBESTOS ASSESSMENT

(11-30-23)

### 1.0 INSPECTION FOR ASBESTOS CONTAINING MATERIAL

Prior to conducting bridge demolition or renovation activities, the Contractor shall thoroughly inspect the bridge or affected components for the presence of asbestos containing material (ACM) using a firm prequalified by NCDOT to perform asbestos surveys. The inspection must be performed by a N.C. accredited asbestos inspector with experience inspecting bridges or other industrial structures. The N.C. accredited asbestos inspector must conduct a thorough inspection, identifying all asbestos-containing material as required by the Environmental Protection Agency National Emission Standards for Hazardous Air Pollutants (NESHAP) Code of Federal Regulations (CFR) 40 CFR, Part 61, Subpart M.

The Contractor shall submit an inspection report to the Engineer, which at a minimum must include information required in 40 CFR 763.85 (a)(4) vi)(A)-(E), as well as a project location map, photos of existing structure, the date of inspection and the name, N.C. accreditation number, and signature of the N.C. accredited asbestos inspector who performed the inspection and completed the report. The cover sheet of the report shall include project identification information. Place the following notes on the cover sheet of the report and check the appropriate box:

ACM was found  
 ACM was not found

### 2.0 REMOVAL AND DISPOSAL OF ASBESTOS CONTAINING MATERIAL

If ACM is found, notify the Engineer. Compensation for removal and disposal of ACM is considered extra work in accordance with Article 104-7 of the Standard Specifications.

An Asbestos Removal Permit must be obtained from the Health Hazards Control Unit (HHCU) of the N.C. Department of Health & Human Services, Division of Public Health, if more than 35 cubic feet, 160 square feet, or 260 linear feet of regulated ACM (RACM) is to be removed from a structure and this work must be completed by a contractor prequalified by NCDOT to perform asbestos abatement. RACM is defined in 40 CFR, Part 61, Subpart M. Note: 40 CFR 763.85 (a)(4) vi)(D) defines ACM as surfacing, TSI and Miscellaneous which does not meet the NESHAP RACM.

### 3.0 DEMOLITION NOTIFICATION

Even if no ACM is found (or if quantities are less than those required for a permit), a Demolition Notification (DHHS-3768) must be submitted to the HHCU. Notifications and Asbestos Permit applications require an original signature and must be submitted to the HHCU 10 working days prior to beginning demolition activities. The 10 working day period starts based on the post-marked date or date of hand delivery. Demolition that does not begin as originally notified requires submission of a separate revision form HHCU 3768-R to HHCU. Reference the North Carolina Administrative Code, Chapter 10A, Subchapter 41C, Article .0605 for directives on revision submissions.



## ST-20

### Contact Information

Health Hazards Control Unit (HHCU)  
N.C. Department of Health and Human Services  
1912 Mail Service Center  
Raleigh, NC 27699-1912  
Telephone: (919) 707-5950  
Fax: (919) 870-4808

#### 4.0 SPECIAL CONSIDERATIONS

Buncombe, Forsyth, and Mecklenburg counties also have asbestos permitting and NESHAP requirements must be followed. For projects involving permitted RACM removals, both the applicable county and the state (HHCU) must be notified.

For demolitions with no RACM, only the local environmental agencies must be notified. Contact information is as follows:

#### Buncombe County

WNC Regional Air Pollution Control Agency  
49 Mt. Carmel Road  
Asheville, NC 28806  
(828) 250-6777

#### Forsyth County

Environmental Affairs Department  
537 N. Spruce Street  
Winston-Salem, NC 27101  
(336) 703-2440

#### Mecklenburg County

Land Use and Environmental Services Agency  
Mecklenburg Air Quality  
700 N. Tryon Street  
Charlotte, NC 28202  
(704) 336-5430

#### 5.0 ADDITIONAL INFORMATION

Additional information may be found on N.C. asbestos rules, regulations, procedures and N.C. accredited inspectors, as well as associated forms for demolition notifications and asbestos permit applications at the N.C. Asbestos Hazard Management Program website:

<https://epi.dph.ncdhhs.gov/asbestos/ahmp.html>

## ST-21

### 6.0 MEASUREMENT AND PAYMENT

*Asbestos Assessment* Payment will be at the lump sum contract unit price and will be full compensation for all asbestos inspections, reports, permitting and notifications.

Payment will be made under:

**Pay Item**

Asbestos Assessment

**Pay Unit**

Lump Sum

**PROJECT SPECIAL PROVISION**

(10-18-95) (Rev. 10-15-24)

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.

| <b><u>PERMIT</u></b>                                  | <b><u>AUTHORITY GRANTING THE PERMIT</u></b>                 |
|---|---|
| Dredge and Fill and/or Work in Navigable Waters (404) | U. S. Army Corps of Engineers                               |
| Water Quality (401)                                   | Division of Water Resources, DEQ<br>State of North Carolina |
| Buffer Certification                                  | Division of Water Resources, DEQ<br>State of North Carolina |

The Contractor shall comply with all applicable permit conditions during construction of this project.

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 *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 restricted waters, wetlands or buffer zones, provided that activities outside those areas is done in such a manner as to not affect the restricted waters, wetlands or buffer zones.**



STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION

JOSH STEIN  
GOVERNOR

J.R. "JOEY" HOPKINS  
SECRETARY

March 17, 2025

MEMORANDUM TO: Division Construction Unit  
Contract Standards and Development Unit

FROM: Daniel R. Dagenhart, Division 7 Bridge Program Manager  
Division Project Development Unit

SUBJECT: Environmental Permits for the Replacement of Bridge No. 224 over  
South Buffalo Creek on SR 3000 (McConnell Road) in Guilford County,  
Division 7, **17BP.7.R.116**.

Please find enclosed the following permits for this project:

| Agency  | Permit Type  | Permit Expiration |
|---|--|-------------------|
| US Army Corps of Engineers<br>Section 404 Clean Water Act Permit          | Nationwide Permit 3  | March 14, 2026    |
| NC Division of Water Resources<br>Section 401 Water Quality Certification | Individual Water Quality Certification                     | March 14, 2026    |
| NC Division of Water Resources<br>Riparian Buffer Rules                   | Jordan Lake Water Supply Watershed<br>Buffer Certification | March 17, 2030    |

Work is authorized by the above referenced permits provided it is accomplished in strict accordance with the permitted plans.

The Division Environmental Office must be consulted if any deviation from the permit(s) is required.

The General Conditions and Certifications for Nationwide and Regional Permits can be referenced at: [https://xfer.services.ncdot.gov/pdea/Permlssued/General\\_Conditions\\_and\\_Certifications/](https://xfer.services.ncdot.gov/pdea/Permlssued/General_Conditions_and_Certifications/)

JOSH STEIN  
*Governor*

D. REID WILSON  
*Secretary*

RICHARD E. ROGERS, JR.  
*Director*



NORTH CAROLINA  
*Environmental Quality*

March 17, 2025

Mr. Daniel Dagenhart  
NCDOT, Division 7  
1598 Mail Service Center  
Raleigh, NC 27699  
[drdagenhart@ncdot.gov](mailto:drdagenhart@ncdot.gov)

Subject: 401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS for the proposed replacement of Bridge 224 on SR 3000 over South Buffalo Creek, Guilford County. NCDWR Project No. 20191197.V2 WBS# 17BP.7.R.116

Dear Mr. Dagenhart,

Attached hereto is a copy of Certification No. 007546 issued to the NCDOT dated March 17, 2025.

If we can be of further assistance, do not hesitate to contact us.

Sincerely,

Signed by:

*Susan Locklear*

375CAE2BB9F540C...

Richard E. Rogers, Jr. Director  
Division of Water Resources

Electronic copy only distribution:

Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office  
Brian Ketner, NCDOT, Division 7  
Chris Rivenbark, RK&K

**401 Water Quality Certification Pursuant to Section 401 of the Federal Clean Water Act with ADDITIONAL CONDITIONS.**

**THIS CERTIFICATION** 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 Resources (NCDWR) Regulations in 15 NCAC 2H .0500 and 0.267. This certification authorizes the NCDOT to impact 110 linear feet of jurisdictional streams and 0.010 acres of jurisdictional wetlands in Guilford County. The project shall be constructed pursuant to the application dated received February 12, 2025. The authorized impacts are as described below:

**Wetland Impacts in the Cape Fear River Basin**

| Site          | Hand Clearing<br>(acreage) | Total Wetland Impact<br>(acreage) |
|---------------|----------------------------|-----------------------------------|
| Site 1        | 0.010                      | 0.010                             |
| <b>Totals</b> | <b>0.010</b>               | <b>0.010</b>                      |

**Total Wetland Impacts: 0.010 acres.**

**Stream Impacts in the Cape Fear River Basin**

| Site          | Temporary Impacts in<br>Perennial Stream Due to<br>Dewatering<br>(linear ft) | Temporary Impacts in<br>Perennial Stream Due to<br>Causeway<br>(linear ft) | Permanent Fill in<br>Perennial Stream Due to<br>Bank Stabilization<br>(linear ft) | Total Stream<br>Impact<br>(linear ft) |
|---------------|--|--|---|---------------------------------------|
| S1            |  |  | 70  | 70                                    |
| S2            | 10   |  |   | 10                                    |
| S3            |  | 30   |   | 30                                    |
| <b>Totals</b> | <b>10</b>  | <b>30</b>  | <b>70</b>   | <b>110</b>                            |

**Total Stream Impacts: 110 linear feet.**

The application provides adequate assurance that the discharge of fill material into the waters of the Cape Fear River Basin in conjunction with the proposed development will not result in a violation of applicable Water Quality Standards and discharge guidelines. Therefore, the State of North Carolina certifies that this activity will not violate the applicable portions of Sections 301, 302, 303, 306, 307 of PL 92-500 and PL 95-217 if conducted in accordance with the application and conditions hereinafter set forth.

This approval is only valid for the purpose and design that you submitted in your application dated received February 12, 2025. A 401 Water Quality Certification was previously issued for this project on September 25, 2019. Should your project change, you are required to 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 any additional wetland impacts, or stream impacts, for this project (now or in the future) exceed one acre or 150 linear feet, respectively, additional compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7).

For this approval to remain valid, you are required to comply with all the conditions listed below. In addition, you should obtain all other federal, state or local permits before proceeding with your project including (but not limited



to) Sediment and Erosion control, Coastal Stormwater, Non-discharge and Water Supply watershed regulations. This Certification shall expire on the same day as the expiration date of the corresponding Corps of Engineers Permit.

This Water Quality Certification neither grants nor affirms any property right, license, or privilege in any lands or waters, or any right of use in any waters. This Water Quality Certification does not authorize any person to interfere with the riparian rights, littoral rights, or water use rights of any other person and does not create any prescriptive right or any right of priority regarding any usage of water. This Water Quality Certification shall not be interposed as a defense in any action respecting the determination of riparian or littoral rights or other rights to water use. No consumptive user is deemed by virtue of this Water Quality Certification to possess any prescriptive or other right of priority with respect to any other consumptive user regardless of the quantity of the withdrawal or the date on which the withdrawal was initiated or expanded. Upon the presentation of proper credentials, the Division may inspect the property.

## Condition(s) of Certification:

### Project Specific Conditions

1. As a condition of this 401 Water Quality Certification, the bridge demolition and construction must be accomplished in strict compliance with the most recent version of NCDOT's Best Management Practices for Construction and Maintenance Activities. [15A NCAC 02H .0507(d)(2) and 15A NCAC 02H .0506(b)(5)].
2. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed. [15A NCAC 02H.0506(b)(2)]
3. The stream channel shall be excavated no deeper than the natural bed material of the stream, to the maximum extent practicable. Efforts must be made to minimize impacts to the stream banks, as well as to vegetation responsible for maintaining the stream bank stability. Any applicable riparian buffer impact for access to stream channel shall be temporary and be revegetated with native riparian species. [15A NCAC 02H.0506(b)(2)]
4. No drill slurry or water that has been in contact with uncured concrete shall be allowed to enter surface waters. This water shall be captured, treated, and disposed of properly. [15A NCAC 02H .0506(b)(3)].
5. The post-construction removal of any temporary bridge structures must return the project site to its preconstruction contours and elevations. The impacted areas shall be revegetated with appropriate native species. [15A NCAC 02H .0506(b)(2)]
6. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited without prior written approval from the NCDWR first. [15A NCAC 02H.0506(b)(2)].

### General Conditions

1. 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. [15A NCAC 02B.0200]
2. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers. [15A NCAC 02H.0506(b)(2)]
3. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions. [15A NCAC 02H.0506(b)(2)]



4. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage. [15A NCAC 02H.0506(b)(2)]
5. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
6. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water. [15A NCAC 02H.0506(b)(3) and (c)(3)]
7. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream. [15A NCAC 02H.0506(b)(3)]
8. 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. [15A NCAC 02H.0506(b)(3)]
9. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification. [15A NCAC 02H.0506(b)(3)]
10. Discharging hydroseed mixtures and washing out hydro seeders and other equipment in or adjacent to surface waters is prohibited. [15A NCAC 02H.0506(b)(3)]
11. 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. [15A NCAC 02B.0200]
12. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification. [15A NCAC 02H.0506(b)(2)]
13. 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. [15A NCAC 02H .0507(c) and 15A NCAC 02H .0506 (b)(2) and (c)(2)]
14. The outside buffer, 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. [15A NCAC 02H.0501 and .0502]
15. 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.
16. The Permittee shall report any violations of this certification to the Division of Water Resources within 24 hours of discovery. [15A NCAC 02B.0506(b)(2)]
17. Upon completion of the project (including any impacts at associated borrow or waste sites), NCDOT project engineer (or appointee) shall complete and return the enclosed "Certification of Completion Form" to notify the NCDWR when all work included in the 401 Certification has been completed. [15A NCAC 02H.0502(f)]





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. [15A NCAC 02H.0506(b)(3) and (c)(3)]
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 [15A NCAC 02H.0506(b)(3) and (c)(3)]:
  - 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. [15A NCAC 02H.0506(b)(3) and (c)(3)]
21. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sediment and Pollution Control Act of 1973). Regardless of applicability of the Sediment and Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur. [15A NCAC 02H .0506(b)(3) and (c)(3) and 15A NCAC 02B .0200]
22. Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual*, or for linear transportation projects, the *NC DOT Sediment and Erosion Control Manual*. All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.
23. For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

This Certification shall become null and void unless the above conditions are made conditions of the Federal 404 and/or Coastal Area Management Act Permit. This Certification shall expire upon the expiration of the 404 or CAMA permit. Please be aware that impacting waters without first applying for and securing the issuance of a 401 Water Quality Certification violates Title 15A of the North Carolina Administrative Code (NCAC) 2H .0500. Title 15A NCAC 2H .0500 requires certifications pursuant to Section 401 of the Clean Water Act whenever construction or operation of facilities will result in a discharge into navigable waters, including wetlands, as described in 33 Code of Federal Regulations (CFR) Part 323. It also states any person desiring issuance of the State certification or coverage under a general certification required by Section 401 of the Federal Water Pollution Control Act shall file with the Director of the North Carolina Division of Water Quality. Violations of any condition herein set forth may result in revocation of this Certification and may result in criminal and/or civil penalties. Pursuant to G.S. 143-215.6A, these violations and any future violations are subject to a civil penalty assessment of up to a maximum of \$25,000.00 per day for each violation.



This approval and its conditions are final and binding unless contested [G.S. 143-215.5]. Please be aware that impacting waters without first applying for and securing the issuance of a 401 Water Quality Certification violates Title 15A of the North Carolina Administrative Code (NCAC) 2H .0500. Title 15A NCAC 2H .0500 requires certifications pursuant to Section 401 of the Clean Water Act whenever construction or operation of facilities will result in a discharge into navigable waters, including wetlands, as described in 33 Code of Federal Regulations (CFR) Part 323. It also states any person desiring issuance of the State certification or coverage under a general certification required by Section 401 of the Federal Water Pollution Control Act shall file with the Director of the North Carolina Division of Water Quality. Pursuant to G.S. 143-215.6A, these violations and any future violations are subject to a civil penalty assessment of up to a maximum of \$25,000.00 per day for each violation.

This Certification can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) within sixty (60) calendar days. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at <http://www.ncoah.com/> or by calling the OAH Clerk's Office at (919) 431-3000.


A party filing a Petition must serve a copy of the Petition on:

Dan Hirschman, General Counsel  
Department of Environmental Quality  
1601 Mail Service Center  
Raleigh, NC 27699-1601

If the party filing the Petition is not the permittee, then the party must also serve the recipient of the Certification in accordance with N.C.G.S 150B-23(a).

This the 17<sup>th</sup> day of March, 2025

DIVISION OF WATER RESOURCES

Signed by:  
  
375CAE2BB9F540C...  
Richard E. Rogers, Jr., Director

WQC No. 007546



JOSH STEIN  
Governor  
D. REID WILSON  
Secretary  
RICHARD E. ROGERS, JR.  
Director



March 17, 2025  
Guilford County  
NCDWR Project No. 20191197.V2  
NCDOT TIP Project 17BP.7.R.116  
Replace Bridge 224 on SR 3000 over  
South Buffalo Creek

**APPROVAL of Jordan Lake Water Supply Riparian Buffer Impacts with Additional Conditions**

South Buffalo Creek in the Cape Fear (CPF02); Index No. 16-11-14-2; Water Supply (WS-V, NSW)

Dear Mr. Dagenhart,

You have our approval for the impacts listed below for the purpose described in your application dated February 12, 2025 received by the Division of Water Resources. These impacts are covered by Jordan Lake Water Supply Watershed Riparian Buffer Protection Rules and the Conditions listed below. Please note that you should get any other federal, state or local permits before proceeding with your project, including those required by (but not limited to) Sediment and Erosion Control, Non-Discharge, and Water Supply Watershed regulations.

The following impacts are hereby approved, provided that, all the conditions listed below, and all the conditions of the Jordan Lake Supply Watershed Riparian Buffer Rules are met. No other impacts are approved, including incidental impacts. (15A NCAC 02B .0267).

| <b>Jordan Lake Water Supply Watershed Riparian Buffer Impacts</b> |                                  |                                  |
|---|----------------------------------|----------------------------------|
| <b>Site</b>   | <b>Zone 1 Impact<br/>(sq ft)</b> | <b>Zone 2 Impact<br/>(sq ft)</b> |
| S1  | 6,034                            | 1,924                            |
| <b>Totals</b>   | 6,034                            | 1,924                            |

**Total Buffer Impact for Project: 7,958 square feet.**

The project shall be constructed in accordance with your application dated February 12, 2025. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 7466. This certification corresponds to the Nationwide Permit 3 issued by the Corps of Engineers. This approval is also valid for the Jordan Lake Riparian Buffer Rules (15A NCAC 2B.0267).

This approval is for the purpose and design described in your application. The plans and specifications for this project are incorporated by reference as part of this Authorization Certificate. If you change your project, you must notify the Division and you may be required to submit a new application package. If the property is sold, the new owner must be given a copy of this Authorization Certificate and is responsible for complying with all conditions. 15A NCAC 02B .0611(b)(2). The permittee shall report any

noncompliance with the conditions of this Authorization Certificate and/or any violation of state regulated riparian buffer rules (15A NCAC 02B .0267).

If you are unable to comply with any of the conditions below, you must notify Ryan Conchilla with the Transportation Permitting Branch at [Ryan.Conchilla@deq.nc.gov](mailto:Ryan.Conchilla@deq.nc.gov) within 24 hours (or the next business day if a weekend or holiday) from the time the permittee becomes aware of the circumstances.

**Additional Conditions:**

1. All stormwater runoff shall be directed as sheetflow through stream buffers at non-erosive velocities, unless otherwise approved by this Certification. (15A NCAC 02B .0267)
2. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular NCDOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated with native woody species before the next growing season following completion of construction. (15A NCAC 02B .0267)

This approval and its conditions are final and binding unless contested. [G.S. 143-215.5]

This Authorization Certificate can be contested as provided in Chapter 150B of the North Carolina General Statutes by filing a Petition for a Contested Case Hearing (Petition) with the North Carolina Office of Administrative Hearings (OAH) **within sixty (60) calendar days**. Requirements for filing a Petition are set forth in Chapter 150B of the North Carolina General Statutes and Title 26 of the North Carolina Administrative Code. Additional information regarding requirements for filing a Petition and Petition forms may be accessed at <http://www.ncoah.com/> or by calling the OAH Clerk's Office at (919) 431-3000.

One (1) copy of the Petition must also be served to the North Carolina Department of Environmental Quality:

Dan Hirschman, General Counsel  
Department of Environmental Quality  
1601 Mail Service Center  
Raleigh, NC 27699-1601




# P-11

DocuSign Envelope ID: A8696FC2-EB24-4D3A-8B81-3AD83146ADB7

**This Authorization shall expire five (5) years from the date of this letter.**

This letter completes the review of the Division under the Jordan Lake Water Supply Watershed Riparian Buffer Protection Rules as described in 15A NCAC 02B. 0267. Please contact Ryan Conchilla at [Ryan.Conchilla@deq.nc.gov](mailto:Ryan.Conchilla@deq.nc.gov) if you have any questions or concerns.

Sincerely,  
Signed by:

  
375CA52BB9F540C  
Richard E. Rogers, Director  
Division of Water Resources

Cc:

Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office  
Brian Ketner, NCDOT Division 7  
Chris Rivenbark, RK&K

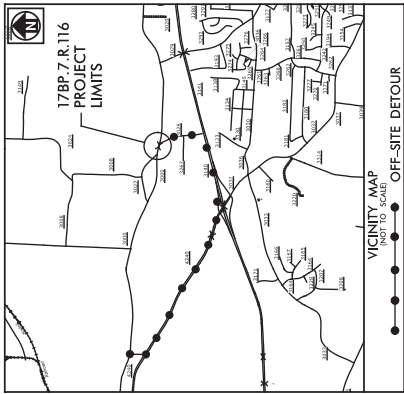


North Carolina Department of Environmental Quality | Division of Water Resources  
512 North Salisbury Street | 1617 Mail Service Center | Raleigh, North Carolina 27699-1617  
919.707.9000

STATE OF NORTH CAROLINA  
DIVISION OF HIGHWAYS  
**GUILFORD COUNTY**

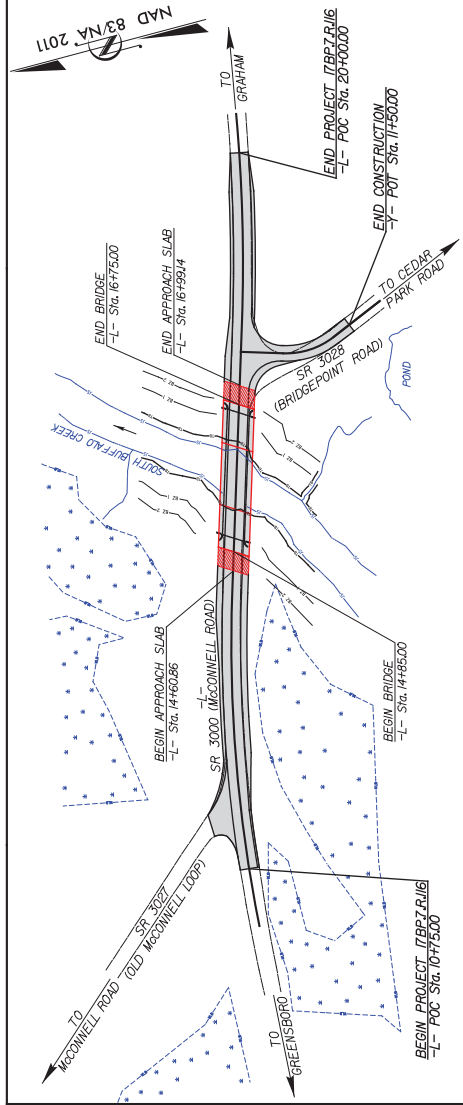
LOCATION: BRIDGE NO. 224 OVER SOUTH BUFFALO CREEK ON SR 3000 (McCONNELL ROAD)  
TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE

**WETLAND AND SURFACE WATER IMPACTS PERMIT**



|                     |              |
|---------------------|--------------|
| STATE PERMIT NUMBER | 17BP.7.R.116 |
| DATE                | 1            |
| PROJECT NUMBER      |              |
| PROJECT NAME        |              |
| PROJECT LOCATION    |              |
| PROJECT DESCRIPTION |              |
| PROJECT STATUS      |              |
| PROJECT OWNER       |              |
| PROJECT CONTACT     |              |
| PROJECT PHONE       |              |
| PROJECT FAX         |              |
| PROJECT E-MAIL      |              |
| PROJECT WEBSITE     |              |

PERMIT DRAWING  
SHEET 1 OF 7



DOCUMENT NOT CONSIDERED FINAL  
UNLESS ALL SIGNATURES COMPLETED

**PLANS PREPARED BY:**  
M MOTT  
MOTT  
MACDONALD  
LICENSE NO. F-4669

HR  
HR ENGINEERING, INC. 44th Carolina  
555 GARDNER ST. SUITE 100 RALEIGH, NC 27601  
N.C.B.E.L.S. License Number: F-7116

ROADWAY DESIGN ENGINEER  
P.E.

HYDRAULICS ENGINEER  
SIGNATURE: \_\_\_\_\_  
P.E.

Prepared in the Office of Matt Macdonald for  
**DIVISION 7**  
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
200 STANDARD SPECIFICATIONS

LETTING DATE: \_\_\_\_\_

NGDOT CONTACT: \_\_\_\_\_

TIM JORDAN, PE  
PROJECT MANAGER

JAMES RICE, PE  
HYDRAULICS ENGINEER

TIM POWERS, PE  
PROGRAM MANAGER

**PROJECT LENGTH**

|                              |   |             |
|------------------------------|---|-------------|
| LENGTH ROADWAY TIP PROJECT   | = | 0.165 MILES |
| LENGTH STRUCTURE TIP PROJECT | = | 0.036 MILES |
| TOTAL LENGTH TIP PROJECT     | = | 0.201 MILES |

**DESIGN DATA**

|                   |   |           |
|-------------------|---|-----------|
| ADT 2013          | = | 4100      |
| ADT 2025          | = | 8200      |
| V                 | = | 45 MPH    |
| SUB REGIONAL TIER |   | COLLECTOR |



**CONTRACT: TIP PROJECT: 17BP.7.R.116**

## WETLAND AND SURFACE WATER IMPACTS PERMIT

**PROJECT REFERENCE**  
 70072110 - CONFORM 224

**DESIGNER**  
 MCM ENGINEERS

**DATE**  
 11/19/2017

**PROJECT LOCATION**  
 15+00 TO 20+00

**SCALE**  
 1" = 100'

**VERTICAL SCALE**  
 1" = 10'

**HORIZONTAL SCALE**  
 1" = 100'

**DATE**  
 11/19/2017

**PROJECT NO.**  
 70072110 - CONFORM 224

**DESIGNER**  
 MCM ENGINEERS

**DATE**  
 11/19/2017

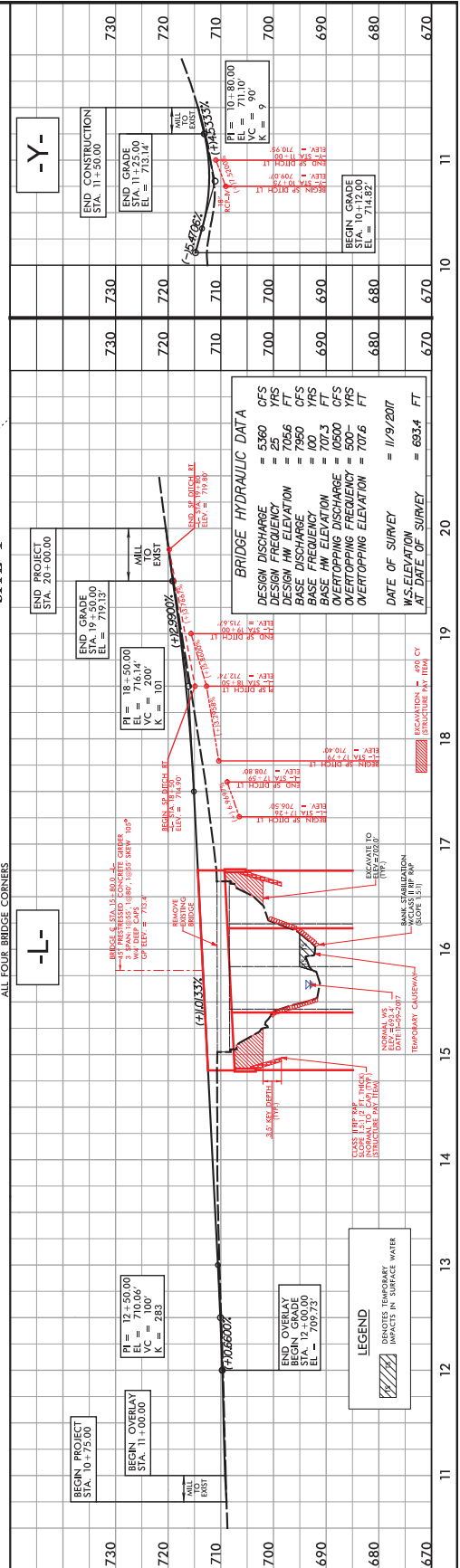
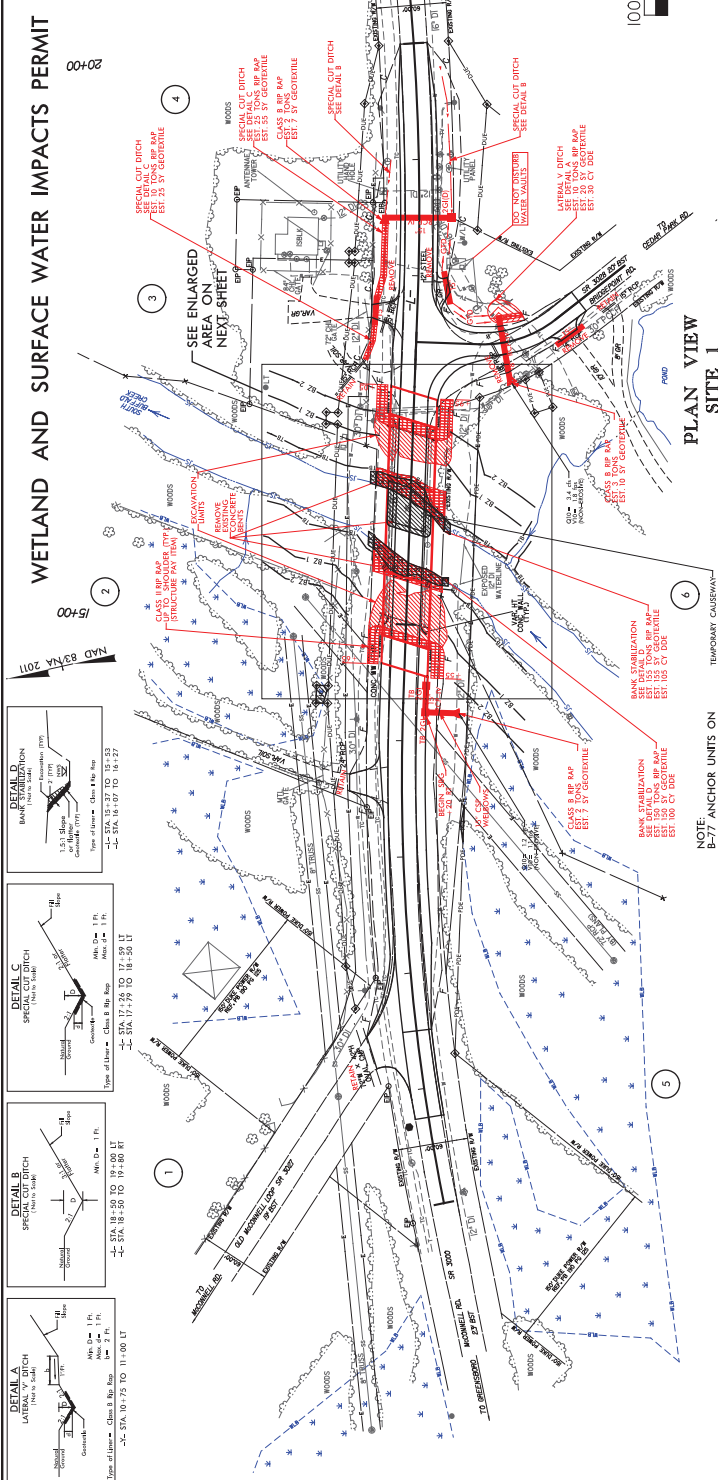
**PROJECT LOCATION**  
 15+00 TO 20+00

**SCALE**  
 1" = 100'

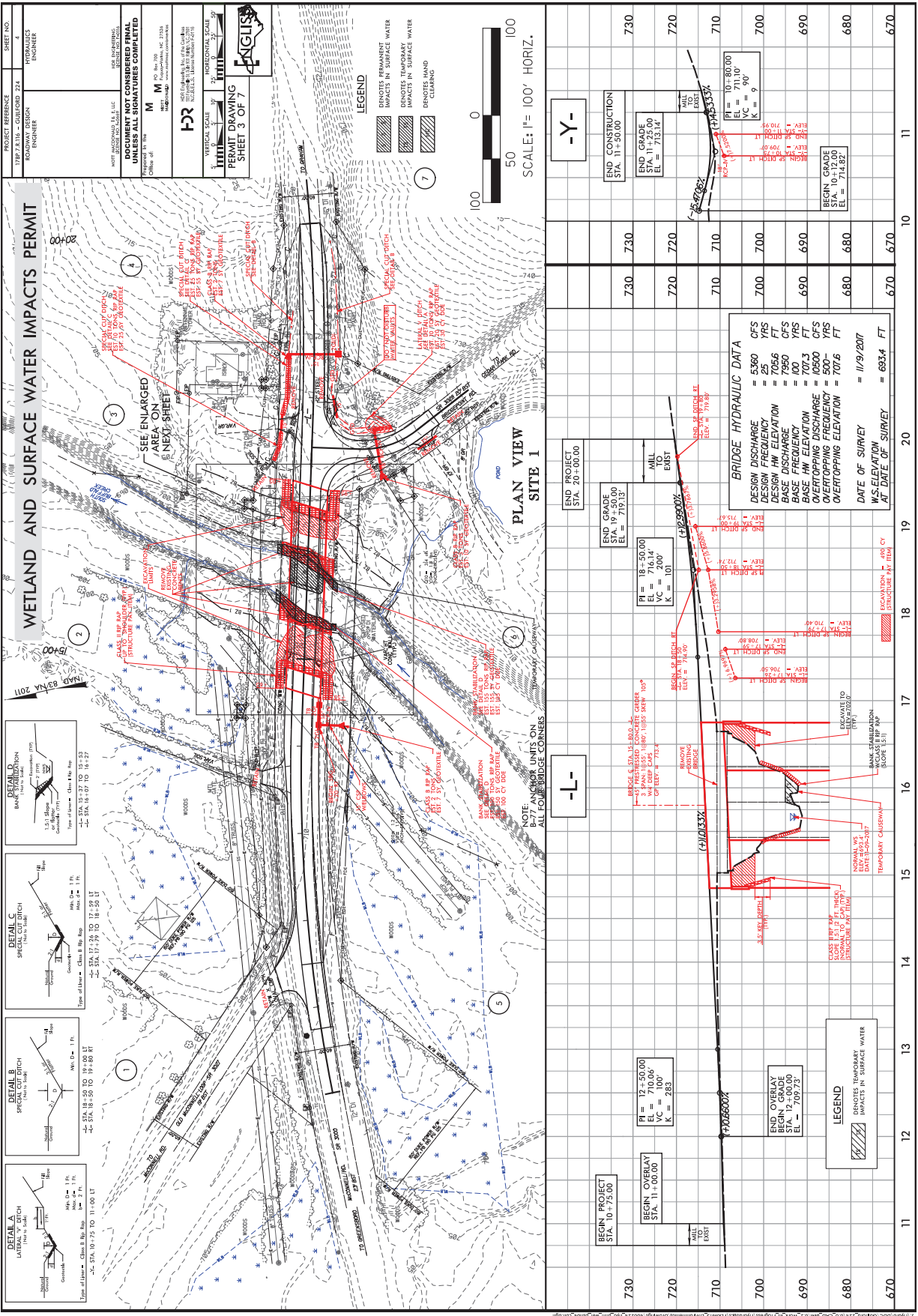
**VERTICAL SCALE**  
 1" = 10'

**HORIZONTAL SCALE**  
 1" = 100'

**DATE**  
 11/19/2017



7/17/2018 10:48 AM 7/17/2018 10:48 AM  
 C:\Users\jmc\Documents\Projects\70072110\70072110.dwg



WETLAND AND SURFACE WATER IMPACTS PERMIT

DETAIL A  
LATERAL V DITCH  
TYPE OF DITCH - Class B Rip Rap  
Max. Dia = 1 FT.  
Min. Dia = 6 IN.  
Slope = 2:1  
Type of Inlet - Class B Rip Rap  
Type of Outlet - Class B Rip Rap  
Slope = 2:1  
Type of Structure - Class B Rip Rap  
Type of Foundation - Class B Rip Rap  
Type of Material - Class B Rip Rap  
Type of Construction - Class B Rip Rap  
Type of Location - Class B Rip Rap  
Type of Use - Class B Rip Rap  
Type of Maintenance - Class B Rip Rap

DETAIL B  
SPECIAL CUT DITCH  
TYPE OF DITCH - Class B Rip Rap  
Max. Dia = 1 FT.  
Min. Dia = 6 IN.  
Slope = 2:1  
Type of Inlet - Class B Rip Rap  
Type of Outlet - Class B Rip Rap  
Slope = 2:1  
Type of Structure - Class B Rip Rap  
Type of Foundation - Class B Rip Rap  
Type of Construction - Class B Rip Rap  
Type of Location - Class B Rip Rap  
Type of Use - Class B Rip Rap  
Type of Maintenance - Class B Rip Rap

DETAIL C  
SPECIAL CUT DITCH  
TYPE OF DITCH - Class B Rip Rap  
Max. Dia = 1 FT.  
Min. Dia = 6 IN.  
Slope = 2:1  
Type of Inlet - Class B Rip Rap  
Type of Outlet - Class B Rip Rap  
Slope = 2:1  
Type of Structure - Class B Rip Rap  
Type of Foundation - Class B Rip Rap  
Type of Construction - Class B Rip Rap  
Type of Location - Class B Rip Rap  
Type of Use - Class B Rip Rap  
Type of Maintenance - Class B Rip Rap

DETAIL D  
SPECIAL CUT DITCH  
TYPE OF DITCH - Class B Rip Rap  
Max. Dia = 1 FT.  
Min. Dia = 6 IN.  
Slope = 2:1  
Type of Inlet - Class B Rip Rap  
Type of Outlet - Class B Rip Rap  
Slope = 2:1  
Type of Structure - Class B Rip Rap  
Type of Foundation - Class B Rip Rap  
Type of Construction - Class B Rip Rap  
Type of Location - Class B Rip Rap  
Type of Use - Class B Rip Rap  
Type of Maintenance - Class B Rip Rap

PLAN VIEW  
SITE 1

LEGEND

LEGEND

LEGEND

| Station | Elevation | Notes   |
|---------|-----------|---|
| 11      | 730       | BEGIN PROJECT STA. 10+75.00   |
| 12      | 730       | BEGIN OVERLAY STA. 11+00.00<br>PI = 12+50.00<br>EL = 709.75<br>VC = 100'<br>K = 283 |
| 13      | 730       | END GRADE STA. 11+50.00<br>EL = 713.14<br>VC = 200'<br>K = 101                      |
| 14      | 730       | END PROJECT STA. 12+00.00   |
| 15      | 710       | BEGIN BRIDGE STA. 12+50.00<br>PI = 19+80.00<br>EL = 711.00<br>VC = 970'<br>K = 9    |
| 16      | 710       | END BRIDGE STA. 13+47.00<br>EL = 709.75   |
| 17      | 710       | BEGIN GRADE STA. 14+00.00<br>EL = 714.92  |
| 18      | 710       | END GRADE STA. 14+50.00<br>EL = 713.14  |
| 19      | 710       | END CONSTRUCTION STA. 15+00.00  |

BRIDGE HYDRAULIC DATA

|                       |             |
|-----------------------|-------------|
| DESIGN DISCHARGE      | = 5360 CFS  |
| DESIGN FREQ           | = 25 YRS    |
| DESIGN HW ELEVATION   | = 705.6 FT  |
| BASE DISCHARGE        | = 7950 CFS  |
| BASE FREQ             | = 10 YRS    |
| BASE HW ELEVATION     | = 707.3 FT  |
| OVERTOPPING DISCHARGE | = 10500 CFS |
| OVERTOPPING FREQ      | = 500 YRS   |
| OVERTOPPING ELEVATION | = 707.6 FT  |

DATE OF SURVEY = 11/19/2017  
W.S. ELEVATION AT DATE OF SURVEY = 693.4 FT

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

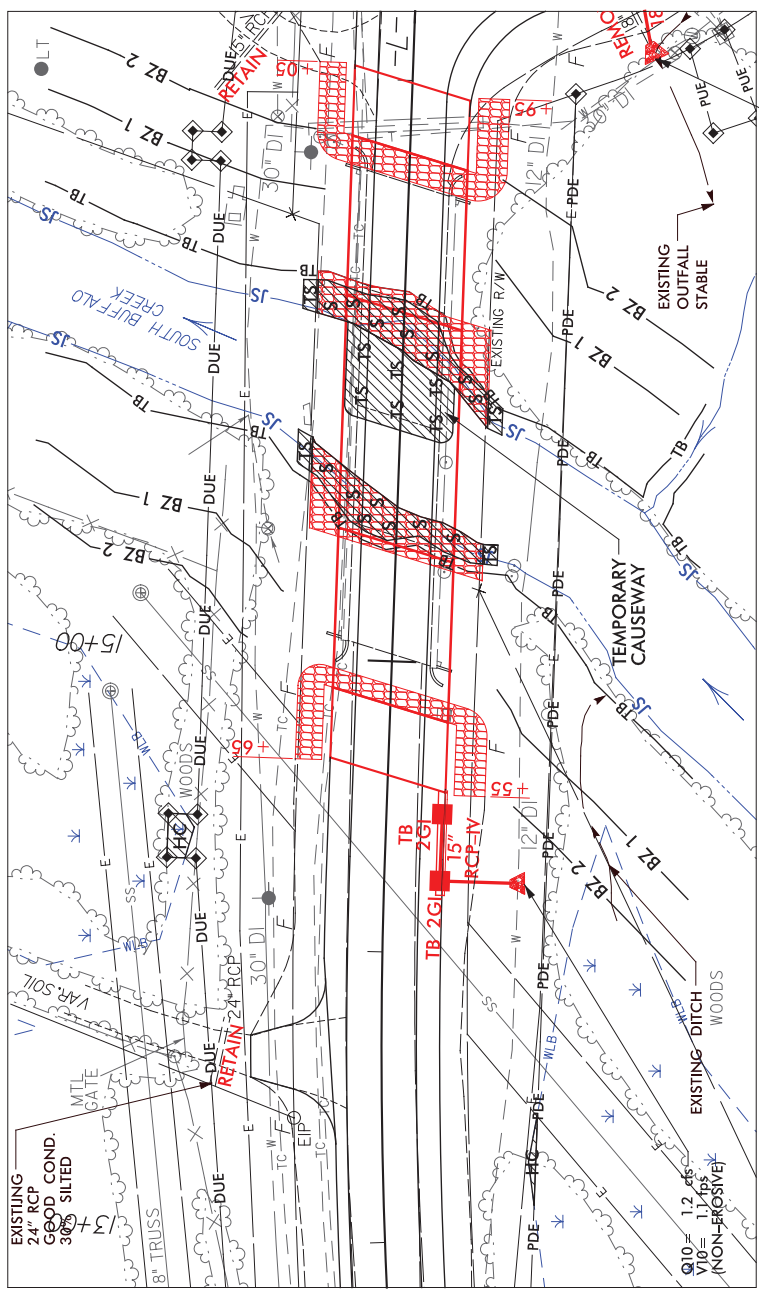
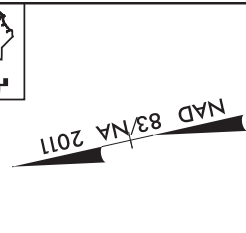
NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.

NOTE: ALL DIMENSIONS ON ALL CURVES CORRESPOND TO THE CENTERLINE OF THE ROAD.



|   |                                      |
|---|--------------------------------------|
| PROJECT REFERENCE<br>71072310 - GOLFPOD 224   | SHEET NO.<br>1                       |
| DESIGNED BY<br>ROBERTSON ENGINEERING  | PROPOSED BY<br>ROBERTSON ENGINEERING |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED<br>PROJECT NO. 2019-0001<br>OFFICE OF<br>M M PC Box 700<br>10000 Highway 100<br>Houston, Texas 77036<br>281.461.1000<br>www.mmpc.com |                                      |
| PERMIT DRAWING<br>SHEET 4 OF 7  |                                      |

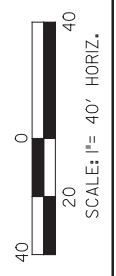


DETAIL SHEET FOR  
SITE 1

- LEGEND**
- DENOTES PERMANENT IMPACTS IN SURFACE WATER
  - DENOTES TEMPORARY IMPACTS IN SURFACE WATER
  - DENOTES HAND CLEANING

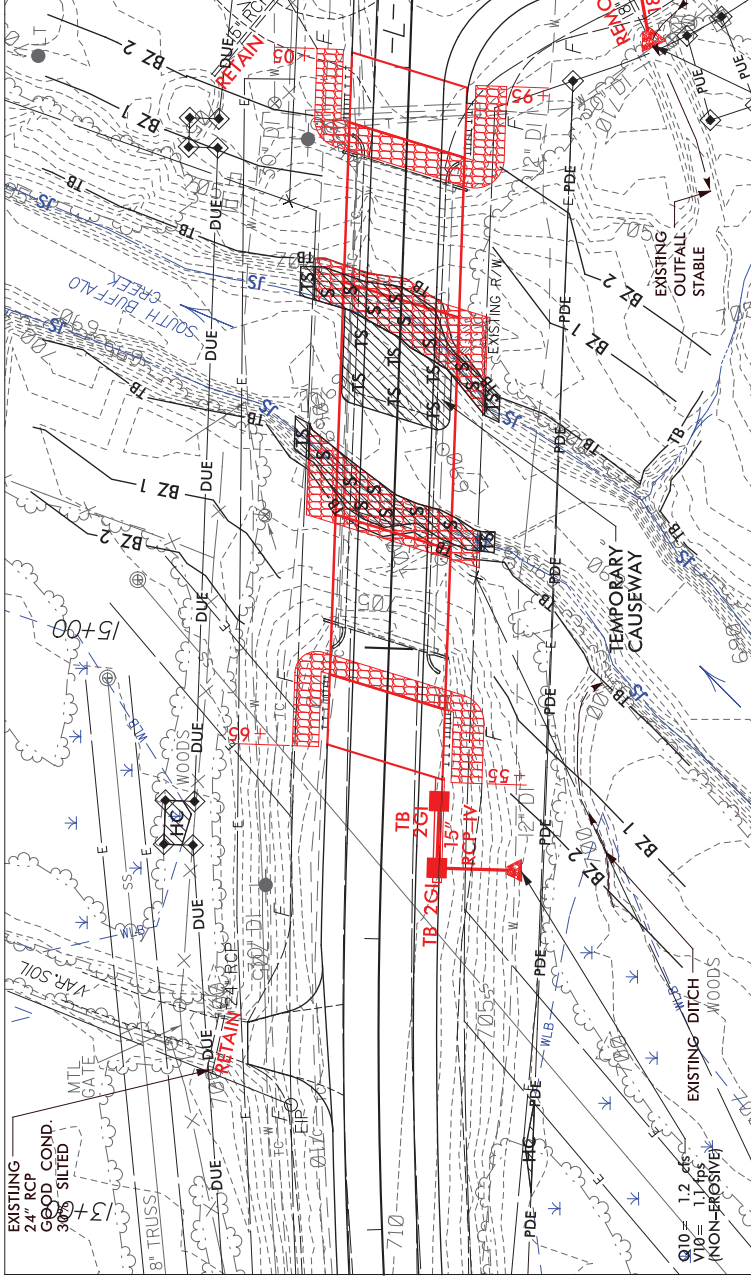
Q10 = 3.4 cfs  
V10 = 1.8 fps  
(NON-EROSIVE)

Q10 = 1.2 cfs  
V10 = 1.1 fps  
(NON-EROSIVE)



|   |                                   |
|---|-----------------------------------|
| PROJECT REFERENCE<br>71077211E - GOLFPOD 224                                | SHEET NO.<br>1                    |
| DESIGNED BY<br>ROBERTSON ENGINEER   | PROPOSED BY<br>ROBERTSON ENGINEER |
| DATE<br>12/15/2011  | SCALE<br>AS SHOWN                 |
| PROJECT LOCATION<br>15000 WOODS LANE, SUITE 111<br>GOLFPOD 224, GOLFPOD 224 | PROJECT NO.<br>71077211E          |
| DOCUMENT NOT CONSIDERED FINAL<br>UNLESS ALL SIGNATURES COMPLETED            | DATE OF PERMIT<br>12/15/2011      |
| Office of<br>M M P O Box 700<br>HARRISBURG, PENNSYLVANIA 17110              | PROJECT NO.<br>71077211E          |
| FOR<br>PERMIT DRAWING<br>SHEET 3 OF 7                                       | DATE<br>12/15/2011                |

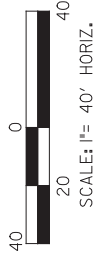
NAD 83/NA 2011



DETAIL SHEET FOR  
SITE 1

Q10 = 3.4 cfs  
V10 = 1.8 fps  
(NON-EROSIVE)

Q10 = 1.2 cfs  
V10 = 1.1 fps  
(NON-EROSIVE)

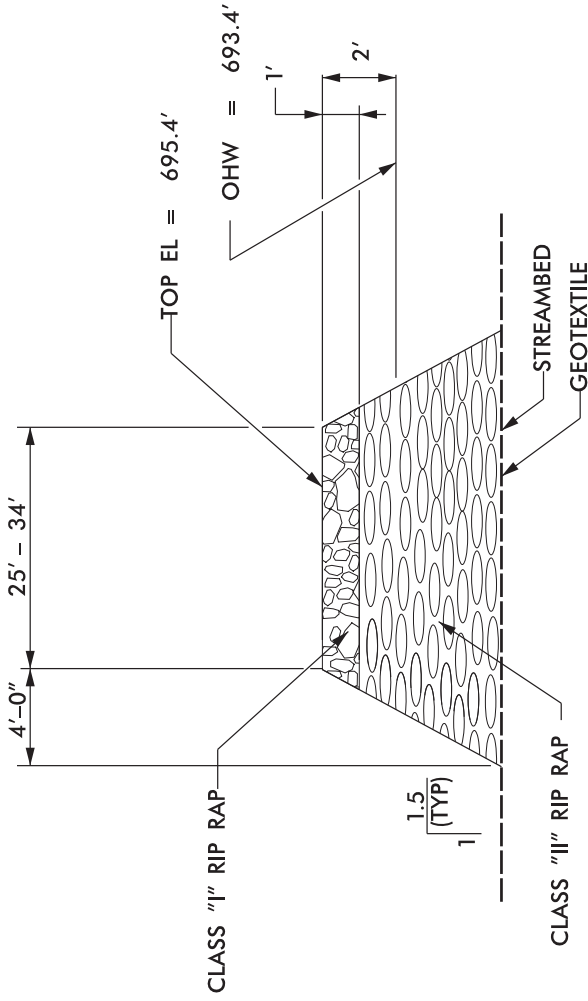


LEGEND

- DENOTES PERMANENT IMPACTS IN SURFACE WATER
- DENOTES TEMPORARY IMPACTS IN SURFACE WATER
- DENOTES HAND CLEANING

DETAIL OF CAUSEWAY  
FOR PROPOSED BRIDGE

-L- 16+00 FOR EXISTING INTERIOR  
BENT REMOVAL



VOLUME OF CLASS "II" RIP RAP  
BELOW OHW: 35 CY

N. C. DEPT. OF TRANSPORTATION  
DIVISION OF HIGHWAYS  
GUILFORD COUNTY  
PROJECT: 17BP.7.R.116  
BRIDGE NO. 224  
OVER SOUTH BUFFALO CREEK  
ON SR 5000  
SHEET 6 OF 7



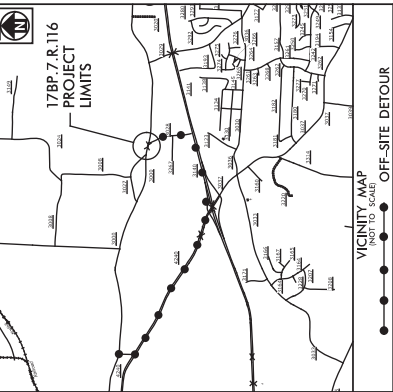
7/17/2019  
RHS ENGINEERING, INC.  
J:\Projects\2017\17BP.7.R.116\Drawings\17BP.7.R.116\17BP.7.R.116.dwg

| WETLAND PERMIT IMPACT SUMMARY |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|-------------------------------|--------------------|-----------------------|---------------------------------|-----------------------------|-----------------------------|--------------------------------------|--------------------------------|---------------------------|-----------------------|---|-------------------------------------|----------------------------|--|
| Site No.                      | Station (From/To)  | Structure Size / Type | WETLAND IMPACTS                 |                             |                             |                                      | SURFACE WATER 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) | Permanent SW impacts (ac) | Temp. SW impacts (ac) | Existing Channel Impacts Permanent (ft) | Existing Channel Impacts Temp. (ft) | Natural Stream Design (ft) |  |
| 1                             | -L- 15+42 to 16+24 | BANK STABILIZATION    |                                 |                             |                             |                                      |                                |                           | 0.03                  | < 0.01                                  | 70                                  | 10                         |  |
| 1                             | -L- 15+80 to 16+32 | TEMPORARY CAUSEWAY    |                                 |                             |                             |                                      |                                | <0.01                     |                       | 0.02                                    |                                     |                            |  |
| 1                             | -L- 13+10 to 13+42 | ROADWAY EASEMENT      |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
|                               |                    |                       |                                 |                             |                             |                                      |                                |                           |                       |   |                                     |                            |  |
| TOTALS*:                      |                    |                       |                                 |                             |                             |                                      |                                | < 0.01                    | 0.03                  | 70                                      | 10                                  |                            |  |

\*Rounded totals are sum of actual impacts

NOTES: Bank Stabilization Temp. SW impacts = 0.0045 ac. Hand Clearing in Wetlands = 0.004 ac.

NC DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 JULY 11, 2019  
 GUILFORD COUNTY  
 BRIDGE #224  
 17BP.7.R.116  
 SHEET 7 OF 7



STATE OF NORTH CAROLINA  
 DIVISION OF HIGHWAYS  
**GUILFORD COUNTY**

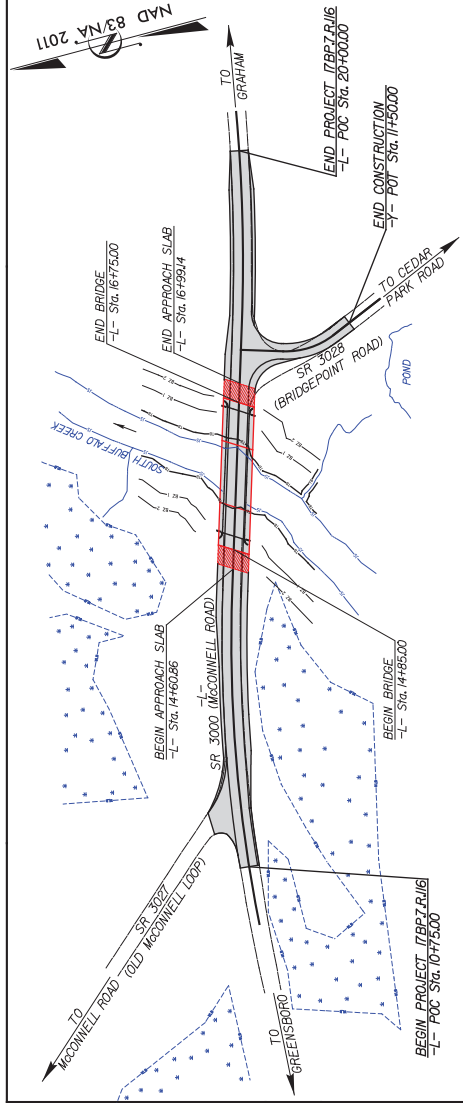
LOCATION: BRIDGE NO. 224 OVER SOUTH BUFFALO CREEK ON SR 3000 (McCONNELL ROAD)  
 TYPE OF WORK: GRADING, PAVING, DRAINAGE AND STRUCTURE

**BUFFER IMPACTS PERMIT**

|                      |              |
|----------------------|--------------|
| STATE PROJECT NUMBER | 17BP.7.R.116 |
| STATE PROJECT NO.    |              |
| PROJECT DESCRIPTION  |              |
| DATE                 |              |
| SCALE                |              |
| DESIGNER             |              |
| CHECKED BY           |              |
| DATE                 |              |



BUFFER DRAWING  
 SHEET 1 OF 6



DOCUMENT NOT CONSIDERED FINAL  
 UNLESS ALL SIGNATURES COMPLETED

**PLANS PREPARED BY:**  
**M M**  
 MOTT  
 MACDONALD  
 LICENSE NO. F-3669

**HDR**  
 HDR Engineering, Inc. 44th Carolina  
 555 Parkville S.W. 100 Raleigh, NC 27601  
 N.C.B.E.L.S. License Number: F-2116

**ROADWAY DESIGN ENGINEER**  
 P.E.  
**HYDRAULICS ENGINEER**  
 P.E.

Prepared in the Office of Mott MacDonald for  
**DIVISION 7**  
 NORTH CAROLINA DEPARTMENT OF TRANSPORTATION  
 200 STANDARD SPECIFICATIONS

LETTING DATE:  
 TIM JORDAN, PE  
 PROJECT MANAGER  
 JAMES RICE, PE  
 HYDRAULICS MANAGER  
 TIM POWERS, PE  
 PROGRAM MANAGER

**PROJECT LENGTH**

|                              |   |             |
|------------------------------|---|-------------|
| LENGTH ROADWAY TIP PROJECT   | = | 0.165 MILES |
| LENGTH STRUCTURE TIP PROJECT | = | 0.036 MILES |
| TOTAL LENGTH TIP PROJECT     | = | 0.201 MILES |

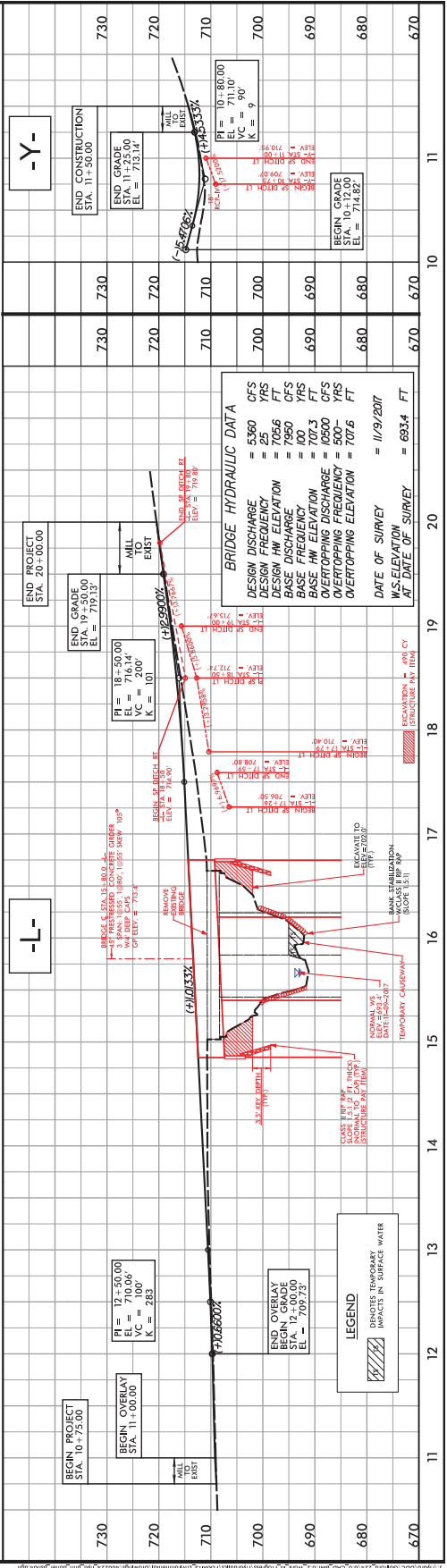
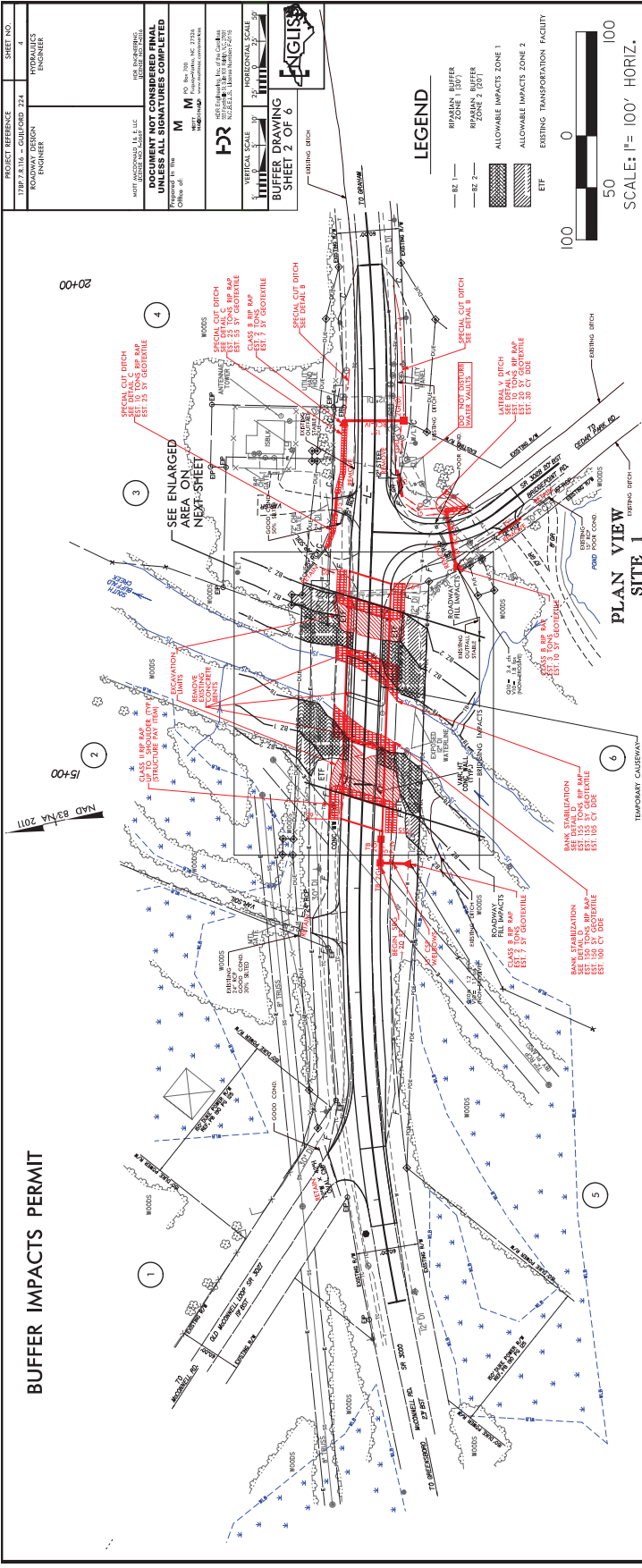
**DESIGN DATA**

|                   |   |           |
|-------------------|---|-----------|
| ADT 2013          | = | 4100      |
| ADT 2025          | = | 8200      |
| V                 | = | 45 MPH    |
| SUB REGIONAL TIER |   | COLLECTOR |



**CONTRACT: TIP PROJECT: 17BP.7.R.116**

**BUFFER IMPACTS PERMIT**

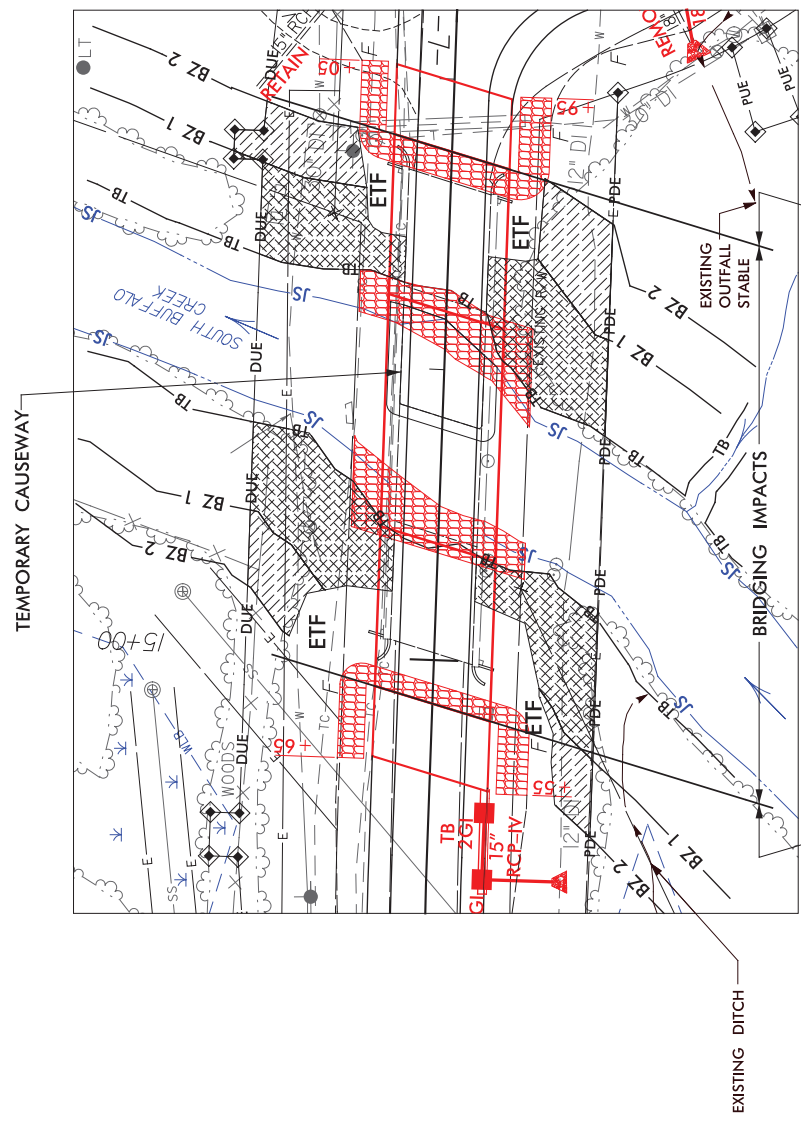


7172019  
 11/19/2017 09:02:47 AM  
 C:\Users\jgarcia\Documents\Projects\1172019\1172019.dwg  
 11/19/2017 09:02:47 AM  
 C:\Users\jgarcia\Documents\Projects\1172019\1172019.dwg



|  |                         |
|--|-------------------------|
| PROJECT REFERENCE<br>71P72318 - GOLFPORT 224   | SHEET NO.               |
| DESIGNED BY<br>ENGINEER  | PROPOSED BY<br>ENGINEER |
| DOCUMENT NOT CONSIDERED FINAL<br>UNTIL ALL SIGNATURES COMPLETED<br>Prepared by: M M<br>Office of: M M<br>Date: 11/14/2019<br>Project No: 22424<br>Drawing No: 71P72318-01-0001 |                         |
| H&R<br>1000 Lakeside Dr. Suite 400<br>Lake Bluff, IL 60044<br>(847) 433-8800<br>www.handr.com  |                         |
| BUFFER DRAWING<br>SHEET 4 OF 6   |                         |

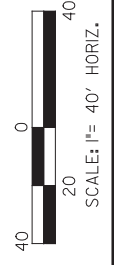
NAD 83/NA 2011



DETAIL SHEET FOR SITE 1

LEGEND

- BZ 1 — RIPARIAN BUFFER ZONE 1 (30')
- BZ 2 — RIPARIAN BUFFER ZONE 2 (20')
- ▨ ALLOWABLE IMPACTS ZONE 1
- ▨ ALLOWABLE IMPACTS ZONE 2
- ETF EXISTING TRANSPORTATION FACILITY

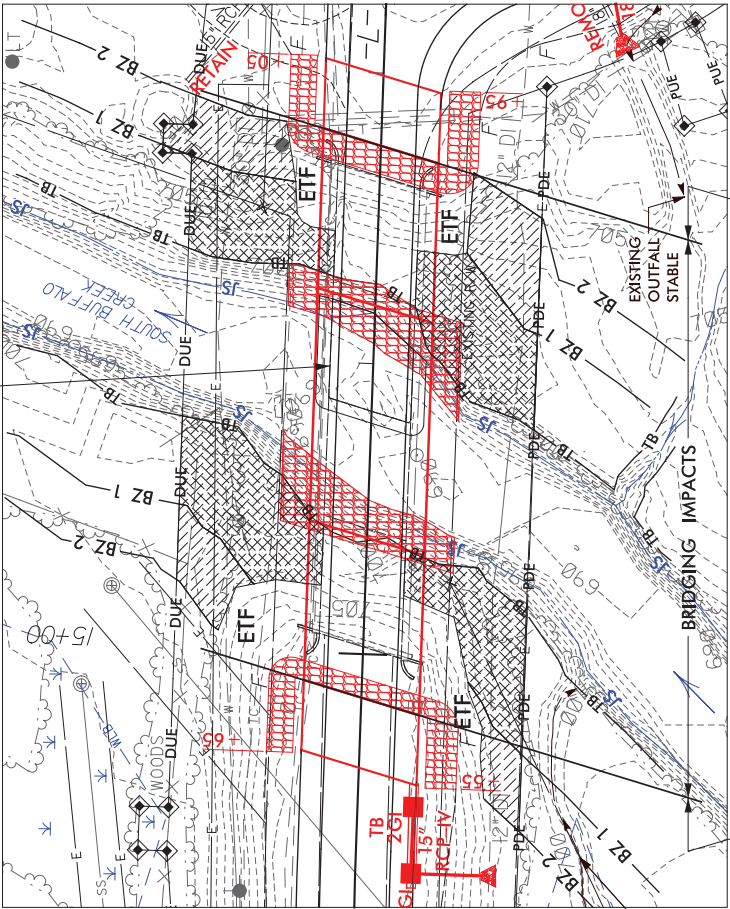


7/11/2019  
 H&R ENGINEERING, INC.  
 J:\Vhgc\DDC\Gulfport\224\2\Work\In Progress\h&r\buffer\FRM1TS\_Environmental\Drawings\400224\_hld\_prm\_buffer\_psh&adgn



|  |                       |
|--|-----------------------|
| PROJECT REFERENCE<br>71P7211E - GOLFPORT 224   | SHEET NO.<br>ENGINEER |
| PROPOSED DESIGN<br>ENGINEER  | PROFESSOR<br>ENGINEER |
| DOCUMENT NOT CONSIDERED FINAL<br>UNTIL ALL SIGNATURES COMPLETED<br>PROJECT NO. 202<br>OFFICE OF<br>M M<br>1000 WOODS LANE, SUITE 114<br>WESTPORT, MISSISSIPPI 39291<br>PHONE: 601-922-1111<br>FAX: 601-922-1112<br>WWW.HDR.COM |                       |
| FDR<br>6000 Highway 100, 4th Floor<br>Gulfport, Mississippi 39208<br>PHONE: 601-833-1100<br>FAX: 601-833-1101<br>WWW.HDR.COM   |                       |
| BUFFER DRAWING<br>SHEET 3 OF 6   |                       |

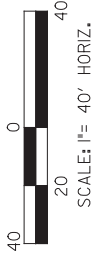
NAD 83/NA 2011



DETAIL SHEET FOR  
SITE 1

LEGEND

- BZ 1 — RIPARIAN BUFFER ZONE 1 (30')
- BZ 2 — RIPARIAN BUFFER ZONE 2 (20')
- [Cross-hatch pattern] ALLOWABLE IMPACTS ZONE 1
- [Diagonal hatch pattern] ALLOWABLE IMPACTS ZONE 2
- ETF EXISTING TRANSPORTATION FACILITY



**BUFFER IMPACTS SUMMARY**

| SITE NO.      | STRUCTURE SIZE / TYPE | STATION (FROM/TO)            | TYPE          |        |           |                           | IMPACT ALLOWABLE          |                          |                           |                           | MITIGABLE                |                           |                           | BUFFER REPLACEMENT       |  |  |
|---------------|-----------------------|------------------------------|---------------|--------|-----------|---------------------------|---------------------------|--------------------------|---------------------------|---------------------------|--------------------------|---------------------------|---------------------------|--------------------------|--|--|
|               |                       |                              | ROAD CROSSING | BRIDGE | UTILITIES | ZONE 1 (ft <sup>2</sup> ) | ZONE 2 (ft <sup>2</sup> ) | TOTAL (ft <sup>2</sup> ) | ZONE 1 (ft <sup>2</sup> ) | ZONE 2 (ft <sup>2</sup> ) | TOTAL (ft <sup>2</sup> ) | ZONE 1 (ft <sup>2</sup> ) | ZONE 2 (ft <sup>2</sup> ) |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           | TOTAL (ft <sup>2</sup> ) |  |  |
| 1             | SPAN 1 @90'; 33" PCBB | -L- FROM STA. 14+97 TO 16+13 |               | X      |           | 6028                      | 1586                      | 7614                     |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              | X             |        |           | 6                         | 338                       | 344                      |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
|               |                       |                              |               |        |           |                           |                           |                          |                           |                           |                          |                           |                           |                          |  |  |
| <b>TOTAL:</b> |                       |                              |               |        |           | 6034                      | 1924                      | 7958                     |                           |                           |                          |                           |                           |                          |  |  |

N.C. DEPT. OF TRANSPORTATION  
 DIVISION OF HIGHWAYS  
 GUILFORD COUNTY  
 PROJECT: 17BP.7.R116  
 BRIDGE NO. 224  
 7/11/2019  
 SHEET 6 OF 6

County: GUILFORD

| Line #               | Item Number  | Sec # | Description  | Quantity  | Unit Cost | Amount |
|----------------------|--------------|-------|--|-----------|-----------|--------|
| <b>ROADWAY ITEMS</b> |              |       |  |           |           |        |
| 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 &<br>GRUBBING   | 1<br>ACR  |           |        |
| 0005                 | 0057000000-E | 226   | UNDERCUT EXCAVATION  | 250<br>CY |           |        |
| 0006                 | 0134000000-E | 240   | DRAINAGE DITCH EXCAVATION  | 235<br>CY |           |        |
| 0007                 | 0195000000-E | 265   | SELECT GRANULAR MATERIAL   | 200<br>CY |           |        |
| 0008                 | 0196000000-E | 270   | GEOTEXTILE FOR SOIL<br>STABILIZATION   | 200<br>SY |           |        |
| 0009                 | 0248000000-N | SP    | GENERIC GRADING ITEM<br>TYPE 1 BRIDGE APPROACH FILL,<br>STATION 15+80.00 -L- | Lump Sum  | L.S.      |        |
| 0010                 | 0318000000-E | 300   | FOUNDATION CONDITIONING<br>MATERIAL, MINOR STRUCTURES                        | 67<br>TON |           |        |
| 0011                 | 0321000000-E | 300   | FOUNDATION CONDITIONING<br>GEOTEXTILE  | 337<br>SY |           |        |
| 0012                 | 0343000000-E | 310   | 15" SIDE DRAIN PIPE  | 72<br>LF  |           |        |
| 0013                 | 0448200000-E | 310   | 15" RC PIPE CULVERTS, CLASS IV   | 80<br>LF  |           |        |
| 0014                 | 0448300000-E | 310   | 18" RC PIPE CULVERTS, CLASS IV   | 52<br>LF  |           |        |
| 0015                 | 0582000000-E | 310   | 15" CS PIPE CULVERTS, 0.064" THICK   | 24<br>LF  |           |        |
| 0016                 | 0636000000-E | 310   | *** CS PIPE ELBOWS, ***** THICK<br>(15", 0.064")                             | 2<br>EA   |           |        |
| 0017                 | 0995000000-E | 340   | PIPE REMOVAL   | 102<br>LF |           |        |

County: GUILFORD

| Line # | Item Number  | Sec # | Description                                   | Quantity   | Unit Cost | Amount |
|--------|--------------|-------|---|------------|-----------|--------|
| 0018   | 1099500000-E | 505   | SHALLOW UNDERCUT                              | 100<br>CY  |           |        |
| 0019   | 1099700000-E | 505   | CLASS IV SUBGRADE STABILIZATION               | 200<br>TON |           |        |
| 0020   | 1112000000-E | 505   | GEOTEXTILE FOR SUBGRADE STABILIZATION         | 300<br>SY  |           |        |
| 0021   | 1220000000-E | 545   | INCIDENTAL STONE BASE                         | 65<br>TON  |           |        |
| 0022   | 1330000000-E | 607   | INCIDENTAL MILLING                            | 760<br>SY  |           |        |
| 0023   | 1491000000-E | 610   | ASPHALT CONC BASE COURSE, TYPE B25.0C         | 850<br>TON |           |        |
| 0024   | 1503000000-E | 610   | ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C | 500<br>TON |           |        |
| 0025   | 1519000000-E | 610   | ASPHALT CONC SURFACE COURSE, TYPE S9.5B       | 460<br>TON |           |        |
| 0026   | 1575000000-E | 620   | ASPHALT BINDER FOR PLANT MIX                  | 95<br>TON  |           |        |
| 0027   | 1693000000-E | 654   | ASPHALT PLANT MIX, PAVEMENT REPAIR            | 50<br>TON  |           |        |
| 0028   | 2022000000-E | 815   | SUBDRAIN EXCAVATION                           | 44.8<br>CY |           |        |
| 0029   | 2026000000-E | 815   | GEOTEXTILE FOR SUBSURFACE DRAINS              | 200<br>SY  |           |        |
| 0030   | 2036000000-E | 815   | SUBDRAIN COARSE AGGREGATE                     | 33.6<br>CY |           |        |
| 0031   | 2044000000-E | 815   | 6" PERFORATED SUBDRAIN PIPE                   | 200<br>LF  |           |        |
| 0032   | 2070000000-N | 815   | SUBDRAIN PIPE OUTLET                          | 1<br>EA    |           |        |
| 0033   | 2077000000-E | 815   | 6" OUTLET PIPE                                | 6<br>LF    |           |        |
| 0034   | 2286000000-N | 840   | MASONRY DRAINAGE STRUCTURES                   | 3<br>EA    |           |        |

County: GUILFORD

| Line # | Item Number  | Sec # | Description   | Quantity    | Unit Cost | Amount |
|--------|--------------|-------|---|-------------|-----------|--------|
| 0035   | 2365000000-N | 840   | FRAME WITH TWO GRATES, STD<br>840.22                  | 1<br>EA     |           |        |
| 0036   | 2367000000-N | 840   | FRAME WITH TWO GRATES, STD<br>840.29                  | 2<br>EA     |           |        |
| 0037   | 2556000000-E | 846   | SHOULDER BERM GUTTER                                  | 40<br>LF    |           |        |
| 0038   | 3030000000-E | 862   | STEEL BEAM GUARDRAIL                                  | 325<br>LF   |           |        |
| 0039   | 3045000000-E | 862   | STEEL BEAM GUARDRAIL, SHOP<br>CURVED                  | 87.5<br>LF  |           |        |
| 0040   | 3150000000-N | 862   | ADDITIONAL GUARDRAIL POSTS                            | 5<br>EA     |           |        |
| 0041   | 3195000000-N | 862   | GUARDRAIL END UNITS, TYPE AT-1                        | 3<br>EA     |           |        |
| 0042   | 3215000000-N | 862   | GUARDRAIL ANCHOR UNITS, TYPE III                      | 4<br>EA     |           |        |
| 0043   | 3287000000-N | 862   | GUARDRAIL END UNITS, TYPE TL-3                        | 1<br>EA     |           |        |
| 0044   | 3635000000-E | 876   | RIP RAP, CLASS II                                     | 305<br>TON  |           |        |
| 0045   | 3649000000-E | 876   | RIP RAP, CLASS B                                      | 52<br>TON   |           |        |
| 0046   | 3656000000-E | 876   | GEOTEXTILE FOR DRAINAGE                               | 619<br>SY   |           |        |
| 0047   | 4400000000-E | 1110  | WORK ZONE SIGNS (STATIONARY)                          | 964<br>SF   |           |        |
| 0048   | 4410000000-E | 1110  | WORK ZONE SIGNS (BARRICADE<br>MOUNTED)                | 154<br>SF   |           |        |
| 0049   | 4445000000-E | 1145  | BARRICADES (TYPE III)                                 | 112<br>LF   |           |        |
| 0050   | 4685000000-E | 1205  | THERMOPLASTIC PAVEMENT<br>MARKING LINES (4", 90 MILS) | 4,209<br>LF |           |        |
| 0051   | 5325800000-E | 1510  | 8" WATER LINE   | 78<br>LF    |           |        |

County: GUILFORD

| Line # | Item Number  | Sec # | Description   | Quantity     | Unit Cost | Amount |
|--------|--------------|-------|---|--------------|-----------|--------|
| 0052   | 5326200000-E | 1510  | 12" WATER LINE  | 431<br>LF    |           |        |
| 0053   | 5328000000-E | 1510  | 30" WATER LINE  | 200<br>LF    |           |        |
| 0054   | 5329000000-E | 1510  | DUCTILE IRON WATER PIPE FITTINGS                      | 17,730<br>LB |           |        |
| 0055   | 5546000000-E | 1515  | 8" VALVE  | 5<br>EA      |           |        |
| 0056   | 5558000000-E | 1515  | 12" VALVE   | 3<br>EA      |           |        |
| 0057   | 5672000000-N | 1515  | RELOCATE FIRE HYDRANT                                 | 1<br>EA      |           |        |
| 0058   | 5673000000-E | 1515  | FIRE HYDRANT LEG                                      | 5<br>LF      |           |        |
| 0059   | 5679200000-E | 1515  | 16" LINE STOP   | 1<br>EA      |           |        |
| 0060   | 5679800000-E | 1515  | 30" LINE STOP   | 1<br>EA      |           |        |
| 0061   | 5804000000-E | 1530  | ABANDON 12" UTILITY PIPE                              | 498<br>LF    |           |        |
| 0062   | 5810000000-E | 1530  | ABANDON 16" UTILITY PIPE                              | 150<br>LF    |           |        |
| 0063   | 5814000000-E | 1530  | ABANDON 30" UTILITY PIPE                              | 145<br>LF    |           |        |
| 0064   | 5816000000-N | 1530  | ABANDON UTILITY MANHOLE                               | 3<br>EA      |           |        |
| 0065   | 5835000000-E | 1540  | *** ENCASEMENT PIPE<br>(48")                          | 60<br>LF     |           |        |
| 0066   | 5872600000-E | 1550  | DIRECTIONAL DRILLING OF ***<br>(12")                  | 295<br>LF    |           |        |
| 0067   | 5882000000-N | SP    | GENERIC UTILITY ITEM<br>ABANDON UTILITY VAULT         | 2<br>EA      |           |        |
| 0068   | 5912000000-N | SP    | GENERIC UTILITY ITEM<br>2" PITOMETER TAP IN 4' DIA MH | Lump Sum     | L.S.      |        |

County: GUILFORD

| Line # | Item Number  | Sec # | Description  | Quantity    | Unit Cost | Amount |
|--------|--------------|-------|--|-------------|-----------|--------|
| 0069   | 5912000000-N | SP    | GENERIC UTILITY ITEM<br>8" FLOW METER IN VAULT                               | Lump Sum    | L.S.      |        |
| 0070   | 5912000000-N | SP    | GENERIC UTILITY ITEM<br>8" PRESSURE REDUCING VALVES IN<br>VAULT              | Lump Sum    | L.S.      |        |
| 0071   | 5912000000-N | SP    | GENERIC UTILITY ITEM<br>8" PRESSURE RELIEF VALVE IN 7' DIA<br>MH WITH BYPASS | Lump Sum    | L.S.      |        |
| 0072   | 5912000000-N | SP    | GENERIC UTILITY ITEM<br>8" PUMP CONTROL VALVE IN VAULT                       | Lump Sum    | L.S.      |        |
| 0073   | 6000000000-E | 1605  | TEMPORARY SILT FENCE   | 1,185<br>LF |           |        |
| 0074   | 6006000000-E | 1610  | STONE FOR EROSION CONTROL,<br>CLASS A  | 100<br>TON  |           |        |
| 0075   | 6009000000-E | 1610  | STONE FOR EROSION CONTROL,<br>CLASS B  | 145<br>TON  |           |        |
| 0076   | 6012000000-E | 1610  | SEDIMENT CONTROL STONE   | 105<br>TON  |           |        |
| 0077   | 6015000000-E | 1615  | TEMPORARY MULCHING   | 0.5<br>ACR  |           |        |
| 0078   | 6018000000-E | 1620  | SEED FOR TEMPORARY SEEDING   | 100<br>LB   |           |        |
| 0079   | 6021000000-E | 1620  | FERTILIZER FOR TEMPORARY<br>SEEDING  | 0.5<br>TON  |           |        |
| 0080   | 6024000000-E | 1622  | TEMPORARY SLOPE DRAINS   | 200<br>LF   |           |        |
| 0081   | 6029000000-E | SP    | SAFETY FENCE   | 260<br>LF   |           |        |
| 0082   | 6030000000-E | 1630  | SILT EXCAVATION  | 220<br>CY   |           |        |
| 0083   | 6036000000-E | 1631  | MATTING FOR EROSION CONTROL  | 6,930<br>SY |           |        |
| 0084   | 6037000000-E | 1629  | COIR FIBER MAT   | 100<br>SY   |           |        |
| 0085   | 6042000000-E | 1632  | 1/4" HARDWARE CLOTH  | 240<br>LF   |           |        |

County: GUILFORD

| Line #                 | Item Number  | Sec # | Description   | Quantity    | Unit Cost | Amount |
|------------------------|--------------|-------|---|-------------|-----------|--------|
| 0086                   | 6048000000-E | SP    | FLOATING TURBIDITY CURTAIN  | 315<br>SY   |           |        |
| 0087                   | 6071002000-E | 1642  | FLOCCULANT  | 25<br>LB    |           |        |
| 0088                   | 6084000000-E | 1660  | SEEDING & MULCHING  | 0.5<br>ACR  |           |        |
| 0089                   | 6087000000-E | 1660  | MOWING  | 0.5<br>ACR  |           |        |
| 0090                   | 6090000000-E | 1661  | SEED FOR REPAIR SEEDING   | 50<br>LB    |           |        |
| 0091                   | 6093000000-E | 1661  | FERTILIZER FOR REPAIR SEEDING                                       | 0.25<br>TON |           |        |
| 0092                   | 6096000000-E | 1662  | SEED FOR SUPPLEMENTAL SEEDING                                       | 50<br>LB    |           |        |
| 0093                   | 6108000000-E | 1665  | FERTILIZER TOPDRESSING  | 0.25<br>TON |           |        |
| 0094                   | 6114500000-N | 1667  | SPECIALIZED HAND MOWING   | 10<br>MHR   |           |        |
| 0095                   | 6117000000-N | 1675  | RESPONSE FOR EROSION CONTROL  | 13<br>EA    |           |        |
| 0096                   | 6117500000-N | SP    | CONCRETE WASHOUT STRUCTURE  | 1<br>EA     |           |        |
| 0097                   | 6123000000-E | 1670  | REFORESTATION   | 0.1<br>ACR  |           |        |
| 0098                   | 6132000000-N | SP    | GENERIC EROSION CONTROL ITEM<br>PREFABRICATED CONCRETE<br>WASHOUT   | 3<br>EA     |           |        |
| <b>STRUCTURE ITEMS</b> |              |       |   |             |           |        |
| 0099                   | 8035000000-N | 402   | REMOVAL OF EXISTING STRUCTURE<br>AT STATION *****<br>(15+80.00 -L-) | Lump Sum    | L.S.      |        |
| 0100                   | 8065000000-N | SP    | ASBESTOS ASSESSMENT   | Lump Sum    | L.S.      |        |
| 0101                   | 8105540000-E | 411   | 3'-6" DIA DRILLED PIERS IN SOIL                                     | 43.5<br>LF  |           |        |



County: GUILFORD

| Line # | Item Number  | Sec # | Description   | Quantity      | Unit Cost | Amount |
|--------|--------------|-------|---|---------------|-----------|--------|
| 0102   | 8105640000-E | 411   | 3'-6" DIA DRILLED PIERS NOT IN SOIL                                     | 25.5<br>LF    |           |        |
| 0103   | 8111400000-E | 411   | PERMANENT STEEL CASING FOR 3'-6"<br>DIA DRILLED PIER                    | 66.9<br>LF    |           |        |
| 0104   | 8113000000-N | 411   | SID INSPECTIONS   | 2<br>EA       |           |        |
| 0105   | 8115000000-N | 411   | CSL TESTING   | 2<br>EA       |           |        |
| 0106   | 8121000000-N | 412   | UNCLASSIFIED STRUCTURE<br>EXCAVATION AT STATION *****<br>(15+80.00 -L-) | Lump Sum      | L.S.      |        |
| 0107   | 8147000000-E | 420   | REINFORCED CONCRETE DECK SLAB   | 8,217.5<br>SF |           |        |
| 0108   | 8161000000-E | 420   | GROOVING BRIDGE FLOORS  | 8,739<br>SF   |           |        |
| 0109   | 8182000000-E | 420   | CLASS A CONCRETE (BRIDGE)   | 133.4<br>CY   |           |        |
| 0110   | 8210000000-N | 422   | BRIDGE APPROACH SLABS, STATION<br>*****<br>(15+80.00 -L-)               | Lump Sum      | L.S.      |        |
| 0111   | 8217000000-E | 425   | REINFORCING STEEL (BRIDGE)  | 26,571<br>LB  |           |        |
| 0112   | 8238000000-E | 425   | SPIRAL COLUMN REINFORCING<br>STEEL (BRIDGE)                             | 2,624<br>LB   |           |        |
| 0113   | 8262000000-E | 430   | 45" PRESTRESSED CONCRETE<br>GIRDERS                                     | 934.38<br>LF  |           |        |
| 0114   | 8328200000-E | 450   | PILE DRIVING EQUIPMENT SETUP<br>FOR *** STEEL PILES<br>(HP 12 X 53)     | 14<br>EA      |           |        |
| 0115   | 8364000000-E | 450   | HP 12 X 53 STEEL PILES  | 280<br>LF     |           |        |
| 0116   | 8475000000-E | 460   | TWO BAR METAL RAIL  | 360.93<br>LF  |           |        |
| 0117   | 8517000000-E | 460   | 1'**** X ***** CONCRETE PARAPET<br>(1'-2" X 2'-6")                      | 376.6<br>LF   |           |        |
| 0118   | 8608000000-E | 876   | RIP RAP CLASS II (2'-0" THICK)  | 315<br>TON    |           |        |

County: GUILFORD

| Line # | Item Number  | Sec # | Description             | Quantity  | Unit Cost | Amount |
|--------|--------------|-------|-------------------------|-----------|-----------|--------|
| 0119   | 8622000000-E | 876   | GEOTEXTILE FOR DRAINAGE | 355<br>SY |           |        |
| 0120   | 8657000000-N | 430   | ELASTOMERIC BEARINGS    | Lump Sum  | L.S.      |        |

1239/Mar12/Q91111.21/D553138582000/E120

Total Amount Of Bid For Entire Project :