

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

PROPOSAL

DATE AND TIME OF BID OPENING: **OCTOBER 16, 2018 AT 2:00 PM**

CONTRACT ID C204216
WBS 45832.3.1

FEDERAL-AID NO. STATE FUNDED
COUNTY MACON
T.I.P. NO. U-5604
MILES 0.491
ROUTE NO. US 441
LOCATION US-441 BUS/WAYAH ST INTERSECTIONS FROM WOMACK ST TO DEPOT ST
IN FRANKLIN.

TYPE OF WORK GRADING, DRAINAGE, PAVING, SIGNALS, AND RETAINING WALLS.

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 PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

**PROPOSAL FOR THE CONSTRUCTION OF
CONTRACT No. C204216 IN MACON COUNTY, NORTH CAROLINA**

Date _____ 20 _____

**DEPARTMENT OF TRANSPORTATION,
RALEIGH, NORTH CAROLINA**

The Bidder has carefully examined the location of the proposed work to be known as Contract No. C204216 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 2018 Standard Specifications for Roads and Structures* by the dates(s) specified in the Project Special Provisions and in accordance with the requirements of the Engineer, and at the unit or lump sum prices, as the case may be, for the various items given on the sheets contained herein.

The Bidder shall provide and furnish all the materials, machinery, implements, appliances and tools, and perform the work and required labor to construct and complete State Highway Contract No. C204216 in Macon 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 2018* 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

DocuSigned by:

Ronald E. Davenport, Jr.

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PROJECT SPECIAL PROVISIONS**GENERAL****CONTRACT TIME AND LIQUIDATED DAMAGES:**

(4-17-12)

108

SP1 G07 C

The date of availability for this contract is **November 26, 2018**.

The completion date for this contract is **February 28, 2021**.

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 **November 26, 2018**.

The completion date for this intermediate contract time is **September 1, 2020**.

The liquidated damages for this intermediate contract time are **One Thousand Five Hundred Dollars (\$ 1,500.00)** 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.

INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES:

(2-20-07)

108

SP1 G14 A

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

DAY AND TIME RESTRICTIONS

**Monday thru Friday
From 6:30 AM to 8:30 AM & from 2:30 PM to 5:30 PM**

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

HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS

1. For **any unexpected occurrence** that creates unusually high traffic volumes, as directed by the Engineer.
2. For **New Year's Day**, between the hours of **6:30 AM** December 31st and **5:30 PM** January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until **5:30 PM** the following Tuesday.
3. For **Easter**, between the hours of **6:30 AM** Thursday and **5:30 PM** Monday.
4. For **Memorial Day**, between the hours of **6:30 AM** Friday and **5:30 PM** Tuesday.
5. For **Independence Day**, between the hours of **6:30 AM** the day before Independence Day and **5:30 PM** the day after Independence Day.

If **Independence Day** is on a Friday, Saturday, Sunday or Monday, then between the hours of **6:30 AM** the Thursday before Independence Day and **5:30 PM** the Tuesday after Independence Day.
6. For **Labor Day**, between the hours of **6:30 AM** Friday and **5:30 PM** Tuesday.
7. For **Thanksgiving Day**, between the hours of **6:30 AM** Tuesday and **5:30 PM** Monday.
8. For **Christmas**, between the hours of **6:30 AM** the Friday before the week of Christmas Day and **5:30 PM** the following Tuesday after the week of Christmas Day.
9. For **the Gem Show** that occurs Mother's Day Weekend and the last weekend of July, between the hours of **6:30 AM** Friday and **5:30 PM** Monday.
10. For **Pumpkinfest** that occurs the third Saturday of October, between the hours of **6:30 AM** Friday and **5:30 PM** Monday.

11. For **any Franklin High School events** that create unusually high traffic volumes, as directed by the Engineer.

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

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

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

The liquidated damages are **One Thousand Dollars (\$ 1,000.00)** per hour.

INTERMEDIATE CONTRACT TIME NUMBER 3 AND LIQUIDATED DAMAGES:

(2-20-07) (Rev. 6-18-13)

108

SP1 G14 H

The Contractor shall complete the work required of **Area 1, Phase I, Step #2 thru Phase III, Step #3** as shown on Sheet **TMP-3A** and shall place and maintain traffic on same.

The date of availability for this intermediate contract time is **June 1, 2019**.

The completion date for this intermediate contract time is **August 24, 2019**.

The liquidated damages are **One Thousand Dollars (\$ 1,000.00)** per calendar day.

INTERMEDIATE CONTRACT TIME NUMBER 4 AND LIQUIDATED DAMAGES:

(2-20-07) (Rev. 6-18-13)

108

SP1 G14 F

The Contractor shall complete the work required of **Area 1, Phase I, Step #2 thru Phase II, Step #1** as shown on Sheet **TMP-3A** and shall place and maintain traffic on same.

The time of availability for this intermediate contract time is the **Friday at 9:00 PM** that the Contractor elects to begin the work.

The completion time for this intermediate contract time is the following **Monday at 6:30 AM** after the time of availability.

The liquidated damages are **One Thousand Dollars (\$ 1,000.00)** per hour.

INTERMEDIATE CONTRACT TIME NUMBER 5 AND LIQUIDATED DAMAGES:

(2-20-07) (Rev. 6-18-13)

108

SP1 G14 H

The Contractor shall complete the work required of **Area 2, Phase II, Step #1 thru Phase III, Step #3** as shown on Sheet **TMP-3A** and shall place and maintain traffic on same.

The date of availability for this intermediate contract time is **June 1, 2020**.

The completion date for this intermediate contract time is **August 24, 2020**.

The liquidated damages are **One Thousand Dollars (\$ 1,000.00)** per calendar day.

INTERMEDIATE CONTRACT TIME NUMBER 6 AND LIQUIDATED DAMAGES:

(2-20-07) (Rev. 6-18-13)

108

SP1 G14 H

The Contractor shall complete the work required of **Area 3, Phase II, Step #1 thru Phase III, Step #3** as shown on Sheet **TMP-3A** and shall place and maintain traffic on same.

The date of availability for this intermediate contract time is **June 1, 2019**.

The completion date for this intermediate contract time is **August 24, 2019**.

The liquidated damages are **One Thousand Dollars (\$ 1,000.00)** per calendar day.

PERMANENT VEGETATION ESTABLISHMENT:

(2-16-12) (Rev. 10-15-13)

104

SP1 G16

Establish a permanent stand of the vegetation mixture shown in the contract. During the period between initial vegetation planting and final project acceptance, perform all work necessary to establish permanent vegetation on all erodible areas within the project limits, as well as, in borrow and waste pits. This work shall include erosion control device maintenance and installation, repair seeding and mulching, supplemental seeding and mulching, mowing, and fertilizer topdressing, as directed. All work shall be performed in accordance with the applicable section of the *2018 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 *2018 Standard Specifications*. No additional compensation will be made for maintenance and removal of temporary erosion control items.

CONSTRUCTION MORATORIUM:

(1-19-16)

SP1 G18C

No tree cutting will be allowed from April 15 through October 15 of any year.

MAJOR CONTRACT ITEMS:

(2-19-02)

104

SP1 G28

The following listed items are the major contract items for this contract (see Article 104-5 of the 2018 *Standard Specifications*):

Line #	Description
101 —	8" Sanitary Gravity Sewer
138 —	Aggregate Base Course
147 —	Soldier Pile Retaining Walls
	OR
101 —	8" Sanitary Gravity Sewer
143 —	Asphalt Concrete Base Course, Type B25.0 C
144 —	Asphalt Concrete Intermediate Course, Type I19.0 C
147 —	Soldier Pile Retaining Walls

SPECIALTY ITEMS:

(7-1-95)(Rev. 1-17-12)

108-6

SP1 G37

Items listed below will be the specialty items for this contract (see Article 108-6 of the 2018 *Standard Specifications*).

Line #	Description
53	Fencing
57 - 63	Signing
72 - 78	Long-Life Pavement Markings
84	Permanent Pavement Markers
87 - 88	Lighting
89 - 111	Utility Construction
112 - 135	Erosion Control
136	Signals/ITS System

SPECIAL REQUIREMENTS FOR WORK IN NATIONAL FOREST:

(7-1-95)

107-13

SP1 G40

In addition to other requirements in this proposal with respect to clearing, erosion control, protection of environment, etc., comply with the following requirements:

- (A) Comply with the portions of these Special Requirements, entitled "Fire Plan," "Clearing Plan," and "Landscape and Erosion Control Plan." Note the fact that merchantable timber within Forest Service Property will become the property of the Contractor.
- (B) Comply with the following recommendations of the State Fish and Game Department and Forest Service for wildlife and fish management:

- (1) Take all necessary precautions to avoid damage to fish habitat and exercise every reasonable precaution to prevent muddying or silting live streams.
 - (2) Do not deposit material removed from the roadway or channel changes in live streams or into the streams or stream channel where it would be washed away by high stream flows.
 - (3) Do not haul materials, including logs, brush, and debris, by fording live streams. Instead, provide temporary bridges or other structures for this purpose.
- (C) Dispose of waste material resulting from slides during construction and surplus material at locations approved by the Forest Supervisor. Submit a plan showing the proposed method of disposal at the time approval is requested.
- (D) Treat sections of existing road to be abandoned as a result of the proposed new construction, as designated by the Forest Supervisor, to restore them to their natural state. The necessary treatment will be determined during a joint review between the Forest Service and the State and may include ripping of roadbed, removal of drainage structure, and opening drainage channels. Plans and specifications as mutually deemed appropriate to accomplish the objective will become a part of this stipulation.
- (E) Permanently monument the right of way prior to completion of construction in accordance with State requirements for such right of way, but in any event the minimum requirements will be to place permanent monuments at the intersection of right of way with all property lines, section lines, and at intervals of not more than 1,000 feet along the right-of-way limits.
- (F) Re-establish or restore public land monuments disturbed or destroyed by construction, reconstruction, or maintenance according to instructions of the Bureau of Land Management, Department of the Interior. Do not damage, destroy, or obliterate other land monuments and property corners or witness markers without the prior permission of the Regional Forester. Relocate or re-establish these land monuments, property corners, and witness markers in accordance with standards satisfactory to the Regional Forester.

Fire Protection Plan

During the period of construction, perform both independently and in cooperation with the Forest Service everything that is reasonable and practical to prevent and suppress forest fires on the easement area and in its immediate vicinity. Include provisions in all subcontracts for the construction of the road requiring subcontractors and their respective employees to do likewise. The contractors and subcontractors, shall conform to, but not be limited to, the following Fire Plan:

- (A) Take immediate independent or cooperative action to control and extinguish any fire, regardless of cause, within the easement area and its vicinity.
- (B) Maintain at readily available sites one or more boxes of firefighting tools to be furnished by the Forest Service for forest fire fighting purposes only.

- (C) Perform debris burning only in the center of the right of way, and only after a strip 20 feet wide around each pile is cleared to mineral soil.
- (D) Keep fires compact by throwing in the larger material as it burns. If piles are too close together or burn hot, light every second or third pile; allow these to cool down before firing the others. On slopes start burning at the top and work down. Confine fires to piles at all times.
- (E) Do not leave fires unattended.
- (F) Discontinue burning upon notification by the District Forest Ranger or his representative that fire danger is such that there is abnormal risk.
- (G) Whenever a fire escapes, notify the District Ranger immediately even if the fire is suppressed without Forest Service assistance.
- (H) The contractor or subcontractor responsible will bear the costs, including Forest Service direct costs and value of resources damages, incurred by the Forest Service in controlling and extinguishing any fire on or threatening National Forest lands which they or their employees caused with or without negligence in connection with construction operations.
- (I) Contact the District Ranger 24 hours in advance of burning.

Clearing Plan

Conform to the following clearing plan:

- (A) Dispose of unmerchantable materials including tops, branches, etc., by piling and burning as directed by the Forest Service or used in brush barriers. Alternate methods of disposal, including any of the following methods or combinations of methods (lop and scatter, chip, remove, pile only), shall be approved in advance by the Forest Service.
- (B) The maximum clearing and grubbing limits are to be as shown on the plans except that cutting of hazard trees outside these limits may be done with approval. Confine construction machinery within the clearing limits.

Landscape and Erosion Control Plan

The erosion control plan will be designed and implemented to prevent visible sediment, as defined by NC DEQ regulations, from reaching any defined stream channel.

Conform to, but not be limited to, the following Landscape and Erosion Control Plan.

- (A) Prevent visible sediment from entering any stream channel. If an erosion control practice must be sited in a channel, it shall stop further down-channel transport of visible sediment.
- (B) Bear responsibility for the prevention and control of soil erosion and gully on the right of way and lands adjacent thereto resulting from the construction of maintenance of the

road. Revegetate with grass (not Love Grass) or herbaceous plants all ground where the soil has been exposed. Accomplish revegetation within 20 working days following final grading.

- (C) Round the ends of cut sections and the tops of back slopes.
- (D) Vegetate all front and back slopes by liming, fertilizing, mulching and seeding; including any waste area. Mulch critical areas if they are to be exposed greater than 5 working days of probable inclement weather during seasons when seeding is impracticable. Critical areas include all bare soils within 100 feet (slope distance) of perennial and intermittent streams. Mulch these as soon as practical and after final seeding.
- (E) Maintain all erosion control practices in a timely manner to prevent visible sediment from entering any stream channel, until such time that the final revegetation stabilizes the site and prevents erosion and off-site movement of sediment.

FUEL PRICE ADJUSTMENT:

(11-15-05) (Rev. 2-18-14)

109-8

SP1 G43

Revise the *2018 Standard Specifications* as follows:

Page 1-87, Article 109-8, Fuel Price Adjustments, add the following:

The base index price for DIESEL #2 FUEL is \$ **2.2450** per gallon. Where any of the following are included as pay items in the contract, they will be eligible for fuel price adjustment.

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

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

SCHEDULE OF ESTIMATED COMPLETION PROGRESS:

(7-15-08) (Rev. 6-19-18)

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:

<u>Fiscal Year</u>	<u>Progress (% of Dollar Value)</u>	
2019	(7/01/18 - 6/30/19)	45% of Total Amount Bid
2020	(7/01/19 - 6/30/20)	50% of Total Amount Bid
2021	(7/01/20 - 6/30/21)	5% of Total Amount Bid

The Contractor shall also furnish his own progress schedule in accordance with Article 108-2 of the *2018 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. 5-15-18)

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

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

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

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

WBE 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.
<http://connect.ncdot.gov/projects/construction/Construction%20Forms/DBE%20MBE%20WBE%20Replacement%20Request%20Form.pdf>

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

JC-1 Joint Check Notification Form - Form and procedures for joint check notification. The form acts as a written joint check agreement among the parties providing full and prompt disclosure of the expected use of joint checks.

<http://connect.ncdot.gov/projects/construction/Construction%20Forms/Joint%20Check%20Notification%20Form.pdf>

Letter of Intent - Form signed by the Contractor and the MBE/WBE subcontractor, manufacturer or regular dealer that affirms that a portion of said contract is going to be performed by the signed MBE/WBE for the 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>

Combined MBE/WBE Goal

The Combined MBE/WBE Goal for this project is **5.0 %**

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

(A) **Minority Business Enterprises 2.0 %**

- (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 3.0 %**

- (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 Expedite, the bidding software of Bid Express[®].

- (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 Expedite, 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 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 (2nd and 3rd 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 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 Contractual Services Engineer will notify the contractor verbally and in writing of non-good faith. A contractor may appeal a determination of non-good faith made by the Goal Compliance Committee. If a contractor wishes to appeal the determination made by the Committee, they shall provide written notification to the State Contractual Services Engineer or at DBE@ncdot.gov. The appeal shall be made within 2 business days of notification of the determination of non-good faith.

Counting 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 actually performed by the MBE/WBE and the actual payments to MBE/WBE firms by the Contractor.

(B) Joint Checks

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

(C) Subcontracts (Non-Trucking)

A MBE/WBE may enter into subcontracts. Work that a MBE subcontracts to another MBE firm may be counted toward the 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.

(E) Suppliers

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

(F) Manufacturers and Regular Dealers

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

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

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

The Contractor may count toward its contract goal requirement only expenditures to MBEs and WBEs that perform a commercially useful function in the work of a contract. A MBE/WBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the MBE/WBE shall also be responsible with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material and installing (where applicable) and paying for the material itself. To determine whether a MBE/WBE is performing a commercially useful function, the Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the MBE/WBE credit claimed for its performance of the work, and any other relevant factors. 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 firm (or an approved substitute MBE or WBE firm) to meet all or part of a contract goal requirement, the contractor shall not terminate the MBE/WBE for convenience. This includes, but is not limited to, instances in which the Contractor seeks to perform the work of the terminated subcontractor with another MBE/WBE subcontractor, a non-MBE/WBE subcontractor, or with the Contractor's own forces or those of an affiliate. A MBE/WBE may only be terminated after receiving the Engineer's written approval based upon a finding of good cause for the proposed termination. The prime contractor must give the MBE/WBE firm 5 days to respond to the prime contractor's notice of intent to terminate and advise the prime contractor and the Department of the reasons, if any, why the firm objects to the proposed termination of its subcontract and why the Department should not approve the action.

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

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

(A) Performance Related Replacement

When a committed MBE/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 MBEs/WBEs submitted at the time of bid to cover the same amount of work as the MBE/WBE that was terminated.

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

- (1) Copies of written notification to MBEs/WBEs that their interest is solicited in contracting the work defaulted by the previous MBE/WBE or in subcontracting other items of work in the contract.
- (2) Efforts to negotiate with MBEs/WBEs for specific subbids including, at a minimum:
 - (a) The names, addresses, and telephone numbers of MBEs/WBEs who were contacted.
 - (b) A description of the information provided to MBEs/WBEs regarding the plans and specifications for portions of the work to be performed.
- (3) A list of reasons why MBE/WBE quotes were not accepted.
- (4) Efforts made to assist the MBEs/WBEs contacted, if needed, in obtaining bonding or insurance required by the Contractor.

(B) Decertification Replacement

- (1) When a committed MBE/WBE is decertified by the Department after the SAF (*Subcontract Approval Form*) has been received by the Department, the Department will not require the Contractor to solicit replacement MBE/WBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement.
- (2) When a committed MBE/WBE is decertified prior to the Department receiving the SAF (*Subcontract Approval Form*) for the named MBE/WBE firm, the Contractor shall take all necessary and reasonable steps to replace the MBE/WBE subcontractor with another similarly certified MBE/WBE subcontractor to perform at least the same amount of work to meet the 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).

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 *2018 Standard Specifications* may be cause to disqualify the Contractor.

CONTRACTOR'S LICENSE REQUIREMENTS:

(7-1-95)

102-14

SP1 G88

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

SUBSURFACE INFORMATION:

(7-1-95)

450

SP1 G112 B

Subsurface information is available on the roadway portion of this project only.

MAINTENANCE OF THE PROJECT:

(11-20-07) (Rev. 1-17-12)

104-10

SP1 G125

Revise the *2018 Standard Specifications* as follows:

Page 1-39, Article 104-10 Maintenance of the Project, line 25, add the following after the first sentence of the first paragraph:

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

Page 1-39, Article 104-10 Maintenance of the Project, line 30, add the following as the last sentence of the first paragraph:

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

Page 1-39, Article 104-10 Maintenance of the Project, lines 42-44, replace the last sentence of the last paragraph with the following:

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

COOPERATION BETWEEN CONTRACTORS:

(7-1-95)

105-7

SP1 G133

The Contractor's attention is directed to Article 105-7 of the *2018 Standard Specifications*.

2018CPT.14.12.10561, etc. (C204191) is currently under construction and will not be completed prior to the letting of this project. Maps #1, #2, and #6 thru #10 are located in the vicinity of this project.

R-5734A/17BP.14.R.154 (C204130) is anticipated for a September 18, 2018 Letting and is located in the vicinity 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 11-22-16)

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 of 0.5 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-B Certified Designer on the erosion and sediment control/stormwater component of all reclamation plans and if applicable, the certification number of the Level III-A Certified Designer on the design of the project erosion and sediment control/stormwater plan.

Preconstruction Meeting

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

Ethical Responsibility

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

Revocation or Suspension of Certification

Upon recommendation of the Chief Engineer to the certification entity, certification for *Supervisor, Certified Foremen, Certified Installers* and *Certified Designer* may be revoked or suspended with the issuance of an *Immediate Corrective Action (ICA), Notice of Violation (NOV)*, or *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

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

PROCEDURE FOR MONITORING BORROW PIT DISCHARGE:

(2-20-07) (Rev. 3-19-13)

105-16, 230, 801

SP1 G181

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

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

- (A) Either cease discharge or modify the discharge volume or turbidity levels to bring the downstream turbidity levels into compliance, or
- (B) Evaluate the upstream conditions to determine if the exceedance of the standard is due to natural background conditions. If the background turbidity measurements exceed the standard, operation of the pit and discharge can continue as long as the stream turbidity levels are not increased due to the discharge.
- (C) Measure and record the turbidity test results (time, date and sampler) at all defined sampling locations 30 minutes after startup and at a minimum, one additional sampling of all sampling locations during that 24-hour period in which the borrow pit is discharging.
- (D) Notify DWQ within 24 hours of any stream turbidity standard exceedances that are not brought into compliance.

During the Environmental Assessment required by Article 230-4 of the *2018 Standard Specifications*, the Contractor shall define the point at which the discharge enters into the State's surface waters and the appropriate sampling locations. Sampling locations shall include points upstream and downstream from the point at which the discharge enters these waters. Upstream sampling location shall be located so that it is not influenced by backwater conditions and represents natural background conditions. Downstream sampling location shall be located at the point where complete mixing of the discharge and receiving water has occurred.

The discharge shall be closely monitored when water from the dewatering activities is introduced into jurisdictional wetlands. Any time visible sedimentation (deposition of sediment) on the wetland surface is observed, the dewatering activity will be suspended until turbidity levels in the stilling basin can be reduced to a level where sediment deposition does not occur. Staining of

wetland surfaces from suspended clay particles, occurring after evaporation or infiltration, does not constitute sedimentation. No activities shall occur in wetlands that adversely affect the functioning of a wetland. Visible sedimentation will be considered an indication of possible adverse impacts on wetland use.

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

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

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

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

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

(9-17-02) (Rev.8-18-15)

200

SP2 R02A

Perform clearing on this project to the limits established by Method "II" shown on Standard Drawing No. 200.02 of the *2018 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.

TEMPORARY DETOURS:

(8-15-00) (Rev. 4-21-15)

1101

SP2 R30A

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

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

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

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

SHOULDER AND FILL SLOPE MATERIAL:

(5-21-02)

235, 560

SP2 R45 A

Description

Perform the required shoulder and slope construction for this project in accordance with the applicable requirements of Section 560 and Section 235 of the *2018 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 *2018 Standard Specifications for Borrow Excavation*.

FLOWABLE FILL:

(9-17-02) (Rev 1-17-12)

300, 340, 1000, 1530, 1540, 1550

SP3 R30

Description

This work consists of all work necessary to place flowable fill in accordance with these provisions, the plans, and as directed.

Materials

Refer to Division 10 of the *2018 Standard Specifications*.

Item

Flowable Fill

Section

1000-6

Construction Methods

Discharge flowable fill material directly from the truck into the space to be filled, or by other approved methods. The mix may be placed full depth or in lifts as site conditions dictate. The Contractor shall provide a method to plug the ends of the existing pipe in order to contain the flowable fill.

Measurement and Payment

At locations where flowable fill is called for on the plans and a pay item for flowable fill is included in the contract, *Flowable Fill* will be measured in cubic yards and paid as the actual number of cubic yards that have been satisfactorily placed and accepted. Such price and payment will be full compensation for all work covered by this provision including, but not limited to, the mix design, furnishing, hauling, placing and containing the flowable fill.

Payment will be made under:

Pay Item

Flowable Fill

Pay Unit

Cubic Yard

AGGREGATE SUBGRADE:

(5-15-18)

505

SP5 R8

Revise the *2018 Standard Specifications* as follows:

Page 5-8, Article 505-1 DESCRIPTION, lines 4-6, replace the paragraph with the following:

Construct aggregate subgrades in accordance with the contract. Install geotextile for soil stabilization and place Class IV subgrade stabilization at locations shown in the plans and as directed.

Undercut natural soil materials if necessary to construct aggregate subgrades. Define “subbase” as the portion of the roadbed below the Class IV subgrade stabilization. For Type 2 aggregate subgrades, undercut subbases as needed. The types of aggregate subgrade with thickness and compaction requirements for each are as shown below.

Type 1 – A 6 to 24 inch thick aggregate subgrade with Class IV subgrade stabilization compacted to 92% of AASHTO T 180 as modified by the Department or to the highest density that can be reasonably obtained.

Type 2 – An 8 inch thick aggregate subgrade on a proof rolled subbase with Class IV subgrade stabilization compacted to 97% of AASHTO T 180 as modified by the Department.

Page 5-8, Article 505-3 CONSTRUCTION METHODS, line 12, insert the following after the first sentence of the first paragraph:

For Type 2 aggregate subgrades, proof roll subbases in accordance with Section 260 before installing geotextile for soil stabilization.

Page 5-8, Article 505-3 CONSTRUCTION METHODS, lines 16-17, replace the last sentence of the first paragraph with the following:

Compact ABC as required for the type of aggregate subgrade constructed.

Page 5-8, Article 505-4 MEASUREMENT AND PAYMENT, line 26, insert the following after the last sentence of the first paragraph:

Undercut Excavation of natural soil materials from subbases for Type 2 aggregate subgrades will be measured and paid in accordance with Article 225-7 or 226-3. No measurement will be made for any undercut excavation of fill materials from subbases.

PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:

(11-21-00)

620

SP6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the *2018 Standard Specifications*.

The base price index for asphalt binder for plant mix is **\$ 561.11** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **September 1, 2018**.

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*.

#57 STONE:

7-18-06

SPI 10 -01(Rev)

Description

The Contractor shall place #57 stone in accordance with the plans, the following provision, and as directed by the Engineer.

Materials

Item	Section
# 57 Stone	1005

Construction Methods

The stone shall be placed and compacted as directed by the Engineer.

Measurement and Payment

#57 Stone will be measured and paid in tons that are completed and accepted. The stone will be measured by being weighed in trucks on certified platform scales or other certified weighing devices. The price and payment will be full compensation for furnishing, hauling, placing, and all incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
#57 Stone	Ton

RETAINING WALL ALUMINUM PICKET FENCE:**Description**

Construct retaining wall aluminum picket fence in accordance with the Plans and this provision.

Materials

See detail in the Plans for material requirements

Construction Methods

Construct the retaining wall aluminum picket fence in accordance with the detail in the Plans, the *Standard Specifications* and as directed by the Engineer.

Measurement and Payment

Retaining Wall Aluminum Picket Fence will be measured and paid for per linear foot of fence that has been satisfactorily completed and accepted. Such price and payment shall be full compensation for all labor, materials and incidentals to complete the work.

Payment will be made under:

Pay Item

Retaining Wall Aluminum Picket Fence

Pay Unit

Linear Foot

STANDARD SPECIAL PROVISION
AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS

(5-20-08)

Z-2

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

(h) Amounts Encumbered. – Transportation project appropriations may be encumbered in the amount of allotments made to the Department of Transportation by the Director for the estimated payments for transportation project contract work to be performed in the appropriation fiscal year. The allotments shall be multiyear allotments and shall be based on estimated revenues and shall be subject to the maximum contract authority contained in *General Statute 143C-6-11(c)*. Payment for transportation project work performed pursuant to contract in any fiscal year other than the current fiscal year is subject to appropriations by the General Assembly. Transportation project contracts shall contain a schedule of estimated completion progress, and any acceleration of this progress shall be subject to the approval of the Department of Transportation provided funds are available. The State reserves the right to terminate or suspend any transportation project contract, and any transportation project contract shall be so terminated or suspended if funds will not be available for payment of the work to be performed during that fiscal year pursuant to the contract. In the event of termination of any contract, the contractor shall be given a written notice of termination at least 60 days before completion of scheduled work for which funds are available. In the event of termination, the contractor shall be paid for the work already performed in accordance with the contract specifications.

Payment will be made on any contract terminated pursuant to the special provision in accordance with Subarticle 108-13(D) of the *2018 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:

<u>Restricted Noxious Weed</u>	<u>Limitations per Lb. Of Seed</u>	<u>Restricted Noxious Weed</u>	<u>Limitations per Lb. of Seed</u>
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

(10-16-18)

Z-4

Revise the *2018 Standard Specifications* as follows:

Division 7

Page 7-27, Article 725-1 MEASUREMENT AND PAYMENT, line 4, replace article number “725-1” with “724-4”.

Page 7-28, Article 725-1 MEASUREMENT AND PAYMENT, line 10, replace article number “725-1” with “725-3”.

Division 10

Page 10-162, Article 1080-50 PAINT FOR VERTICAL MARKERS, line 1, replace article number “1080-50” with “1080-10”.

Page 10-162, Article 1080-61 EPOXY RESIN FOR REINFORCING STEEL, line 5, replace article number “1080-61” with “1080-11”.

Page 10-162, Article 1080-72 ABRASIVE MATERIALS FOR BLAST CLEANING STEEL, line 22, replace article number “1080-72” with “1080-12”.

Page 10-163, Article 1080-83 FIELD PERFORMANCE AND SERVICES, line 25, replace article number “1080-83” with “1080-13”.

Division 17

Page 17-15, Article 1715-4 MEASUREMENT AND PAYMENT, lines 42-44, replace the second sentence with the following:

An example is an installation of a single 1.25 inch HDPE conduit would be paid as:

Directional Drill (1)(1.25") Linear Foot

STANDARD SPECIAL PROVISION**PLANT AND PEST QUARANTINES****(Imported Fire Ant, Gypsy Moth, Witchweed, Emerald Ash Borer, And Other Noxious Weeds)**

(3-18-03) (Rev. 12-20-16)

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 <http://www.ncagr.gov/plantindustry/> to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include

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

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 6/19/2018)

Z-6

Revise the *2018 Standard Specifications* as follows:

Replace Article 103-4(B) with the following:

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.

**TABLE 103-1
COMPLAINT BASIS**

Protected Categories	Definition	Examples	Applicable Nondiscrimination Authorities
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

<p>Religion (in the context of employment) <i>(Religion/ Creed in all aspects of any aviation or transit-related construction)</i></p>	<p>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. 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.</p>	<p>Muslim, Christian, Sikh, Hindu, etc.</p>	<p>Title VII of the Civil Rights Act of 1964; 23 CFR 230; FHWA-1273 Required Contract Provisions. (49 U.S.C. 5332(b); 49 U.S.C. 47123)</p>
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(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.

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SEGMENTAL GRAVITY RETAINING WALLS**(5-16-17)****1.0 GENERAL**

Construct segmental gravity retaining walls consisting of segmental retaining wall (SRW) units supported by aggregate footings. Provide cast-in-place concrete slope protection as required. If the plans do not include Standard Detail No. 453.02 or 453.03 or if required by a note on the plans, design and construct segmental gravity retaining walls based on actual elevations, wall dimensions and batter in accordance with the contract and accepted submittals. Otherwise, construct segmental gravity retaining walls based on actual elevations, wall dimensions and batter in accordance with the contract, accepted submittals and Standard Detail No. 453.02 or 453.03.

Define "block wall" as a segmental gravity retaining wall and "standard block wall" as a block wall that meets a standard segmental gravity retaining wall drawing (Standard Detail No. 453.02 or 453.03). Define "blocks" as SRW units, "cap blocks" as SRW cap units and "Block Vendor" as the vendor licensing the block producer. Define "slope protection" as cast-in-place concrete slope protection.

2.0 MATERIALS

Refer to the *Standard Specifications*.

Item	Section
Geotextiles, Type 2	1056
Joint Materials	1028
Portland Cement Concrete, Class B	1000
Segmental Retaining Wall Units	1040-4
Select Material	1016
Subsurface Drainage Materials	815-2

Provide Type 2 geotextile for separation geotextiles. Use Class VI select material for No. 57 stone and Class B concrete for slope protection. Provide PVC pipes, fittings, outlet pipes and concrete pads for subsurface drainage materials. For PVC pipes behind block walls, use pipes with perforations that meet AASHTO M 278.

Provide cap blocks that meet the material requirements for blocks. Use blocks from producers approved by the Department and licensed by the Block Vendor. Notify the Engineer of the name and NCDOT ID number of the SRW unit production facility before beginning block production. Unless required otherwise in the plans, provide blocks with a depth (front to back) of at least 12" and cap blocks with a depth of at least 8".

Use approved SRW units for standard block walls. Blocks for standard block walls are approved for either 2 ft or 4 ft maximum design heights with the design height as shown in Standard Detail No. 453.02 or 453.03. The list of approved SRW units with maximum design heights is available from:

connect.ncdot.gov/resources/Geological/Pages/Products.aspx

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Do not mix blocks from different Block Vendors on the same block wall. Damaged blocks with excessive discoloration, chips or cracks as determined by the Engineer will be rejected.

Provide adhesives recommended by the Block Vendor. Store adhesives in accordance with the manufacturer's instructions. Load, transport, unload and store block wall materials so materials are kept clean and free of damage.

3.0 PRECONSTRUCTION REQUIREMENTS**A. Block Wall Surveys**

The plans typically show a plan view, typical sections, details, notes and an elevation or profile view (wall envelope) for each block wall. Before beginning block wall design or construction, survey existing ground elevations along wall face locations and other elevations in the vicinity of block wall locations as needed. For proposed slopes above or below block walls, survey existing ground elevations to at least 10 ft beyond slope stake points. Based on these elevations, finished grades and actual block wall dimensions, details and batter, submit wall envelopes for acceptance. Use accepted wall envelopes for design, if required, and construction.

B. Block Wall Designs

If the plans do not include Standard Detail No. 453.02 or 453.03 or if required by a note on the plans, submit 11 copies of working drawings and 3 copies of design calculations and a PDF copy of each for block wall designs at least 30 days before starting block wall construction. Do not begin block wall construction until a design submittal is accepted.

Design block walls in accordance with the plans and Article 11.11 of the *AASHTO LRFD Bridge Design Specifications* unless otherwise required. Neglect material above top of footing for stability computations. Design block walls for the wall batter required by the Block Vendor and clearances shown in the plans. Do not locate blocks or footings outside right-of-way or easement limits.

Use No. 57 stone for aggregate footings beneath blocks. Use 10" thick footings that are continuous at steps and extend at least 6" in front of and at least 9" behind bottom row of blocks. Unless required otherwise in the plans, embed bottom of footings at least 18" below bottom of walls shown in the plans. When noted in the plans, locate a 4" diameter continuous perforated PVC drain pipe in the No. 57 stone in back of footings.

Fill block core spaces with No. 57 stone and between and behind blocks with No. 57 stone for a horizontal distance of at least 12" so stone is continuous in all directions. Assume a unit weight of 100 lb/cf for No. 57 stone. Separation geotextiles are required between No. 57 stone and backfill or natural ground and between stone and overlying fill or pavement section except when concrete pavement, full depth asphalt or cement treated base is placed directly on stone.

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Use cap blocks at top of walls. Step top of walls as shown in the plans and double stack cap blocks at steps so cap blocks are continuous at steps. Extend top of walls 4" to 12" above where finished grade intersects back of blocks or cap blocks. When single faced precast concrete barrier is required in front of and against block walls, fill voids between barrier and wall faces with Class V select material.

Submit working drawings and design calculations for acceptance in accordance with Article 105-2 of the *Standard Specifications*. Submit working drawings showing plan views, wall profiles with required resistances, typical sections, No. 57 stone and geotextile locations and details of footings, blocks, cap blocks, etc. If necessary, include details on working drawings for slope protection and obstructions extending through walls or interfering with footings. Submit design calculations for each wall section with different geometry or material parameters. When designing block walls with computer software, a hand calculation is required for the tallest wall section. Provide block wall designs sealed by an engineer licensed in the state of North Carolina.

4.0 CONSTRUCTION METHODS

Control drainage during construction in the vicinity of block walls. Direct run off away from block walls, No. 57 stone and backfill. Contain and maintain stone and backfill and protect material from erosion.

Excavate as necessary for block walls in accordance with the plans and accepted submittals. Notify the Engineer when foundation excavation is complete. Do not place No. 57 stone for footings until excavation dimensions and foundation material are approved.

Construct aggregate footings at elevations and with dimensions shown in the plans and accepted submittals. If a drain is required, install wall drainage systems consisting of drains and outlet components as shown in the plans and accepted submittals and in accordance with Section 815 of the *Standard Specifications*. Compact No. 57 stone for footings with a vibratory compactor to the satisfaction of the Engineer.

Stack blocks with no negative wall batter (wall face leaning forward) so the final wall position is as shown in the plans and accepted submittals. Place blocks with a maximum vertical joint width of 3/8". Stagger blocks to create a running bond by centering blocks over joints in the row below as shown in the plans and accepted submittals. Construct block walls with the following tolerances:

- A. Blocks are level from front to back and between blocks when checked with a 4 ft long level,
- B. Final wall face is within 2" of horizontal and vertical alignment shown in the plans and accepted submittals, and
- C. Wall batter is within 2° of batter required by the Block Vendor.

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Overlap adjacent separation geotextiles at least 18" at seams and hold geotextiles in place with wire staples or anchor pins as needed. Place No. 57 stone between and behind blocks in 8" to 10" thick lifts. Compact stone with hand operated compaction equipment to the satisfaction of the Engineer. Backfill for block walls behind No. 57 stone in accordance with Article 410-8 of the *Standard Specifications*.

Set cap blocks with a 1/2" to 1-1/2" overhang as shown in the plans and accepted submittals. Place cap blocks using adhesive in accordance with the manufacturer's instructions. Do not place cap blocks if surfaces caps will be attached to are wet or frozen or the air temperature measured at the wall location in the shade away from artificial heat is below 40°F. Before applying adhesive, clean surfaces cap blocks will adhere to and ensure surfaces are dry and free of oil, grease, dust and debris.

Pave slopes above and behind block walls with slope protection as shown in the plans and accepted submittals and in accordance with Article 462-3 of the *Standard Specifications*. Construct slope protection joints at a spacing of 10 ft. Make 1/2" thick expansion joints that meet Article 420-10 of the *Standard Specifications* for every third joint and 1/2" deep grooved contraction joints that meet Subarticle 825-10(B) for the remaining joints.

5.0 MEASUREMENT AND PAYMENT

Segmental Gravity Retaining Walls will be measured and paid in square feet. Block walls will be measured as the square feet of wall face area with the pay height equal to the difference between top of wall and top of footing elevations. Define "top of wall" as top of cap blocks.

The contract unit price for *Segmental Gravity Retaining Walls* will be full compensation for providing designs, if required, submittals, labor, tools, equipment and block wall materials, excavating, backfilling, hauling and removing excavated materials and supplying footings, blocks, select material, wall drainage systems, geotextiles, cap blocks, slope protection and any incidentals necessary to construct block walls.

The contract unit price for *Segmental Gravity Retaining Walls* does not include the cost for ditches, fences, handrails, barrier or guardrail associated with block walls as these items will be paid for elsewhere in the contract.

Where it is necessary to provide backfill material behind No. 57 stone from sources other than excavated areas or borrow sources used in connection with other work in the contract, payment for furnishing and hauling such backfill material will be paid as extra work in accordance with Article 104-7 of the *Standard Specifications*. Placing and compacting such backfill material is not considered extra work but is incidental to the work being performed.

Payment will be made under:

Pay Item
Segmental Gravity Retaining Walls

Pay Unit
Square Foot

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SOLDIER PILE RETAINING WALLS**(5-16-17)****1.0 GENERAL**

Construct soldier pile retaining walls consisting of driven or drilled-in steel H-piles with either precast concrete panels in between piles or a cast-in-place reinforced concrete face attached to front of piles unless required otherwise in the plans. Timber lagging is typically used for temporary support of excavations during construction. Provide cast-in-place reinforced concrete coping as required. Design and construct soldier pile retaining walls based on actual elevations and wall dimensions in accordance with the contract and accepted submittals. Use a prequalified Cantilever Wall Contractor to construct soldier pile retaining walls. Define “soldier pile wall” as a soldier pile retaining wall. Define “panel” as a precast concrete panel and “concrete facing” as a cast-in-place reinforced concrete face. Define “pile” as a steel H-pile and “coping” as cast-in-place concrete coping.

2.0 MATERIALS

Refer to the *Standard Specifications*.

Item	Section
Flowable Fill, Excavatable	1000-6
Geosynthetics	1056
Joint Materials	1028
Masonry	1040
Grout, Type 1	1003
Portland Cement Concrete	1000
Reinforcing Steel	1070
Retaining Wall Panels	1077
Select Material	1016
Shoulder Drain Materials	816-2
Steel H-Piles	1084-1
Untreated Timber	1082-2
Welded Stud Shear Connectors	1072-6

Provide Type 2 geotextile for separation geotextiles and Class VI select material (standard size No. 57 stone) for leveling pads and backfilling. Use Class A concrete for concrete facing and coping and Class A concrete that meets Article 450-2 of the *Standard Specifications* or grout for drilled-in piles. Use untreated timber with a thickness of at least 3" and a bending stress of at least 1,000 psi for timber lagging.

Unless required otherwise in the contract, produce panels with a smooth flat final finish that meets Article 1077-11 of the *Standard Specifications*. When noted in the plans, produce panels with an exposed aggregate finish that meets Article 1077-12 of the *Standard Specifications*. Produce panels within 1/4" of the panel dimensions shown in the accepted submittals. Damaged panels with excessive discoloration, chips or cracks as determined by the Engineer will be rejected.

For soldier pile walls with panels, galvanize piles in accordance with Section 1076 of the

Standard Specifications. When noted in the plans, paint galvanized piles in accordance with Article 442-12 of the *Standard Specifications*. Apply the following system to paint galvanized piles gray with waterborne paints that meet Article 1080-11 of the *Standard Specifications*. For painting galvanized piles other colors, contact the Materials and Tests (M&T) Unit for an appropriate paint system.

GRAY PAINT SYSTEM FOR GALVANIZED PILES			
Coat	Color	Dry/Wet Film Thickness (Mils)	
		Min.	Max.
Intermediate	Brown	3.0 DFT	5.0 DFT
Stripe	White	4.0 WFT	7.0 WFT
Topcoat	Gray	2.0 DFT	4.0 DFT
Total		5.0 DFT	9.0 DFT

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

3.0 PRECONSTRUCTION REQUIREMENTS

A. Soldier Pile Wall Surveys

The Retaining Wall Plans show a plan view, typical sections, details, notes and an elevation or profile view (wall envelope) for each soldier pile wall. Before beginning soldier pile wall design, survey existing ground elevations shown in the plans and other elevations in the vicinity of soldier pile wall locations as needed. For proposed slopes above or below soldier pile walls, survey existing ground elevations to at least 10 ft beyond slope stake points. Based on these elevations, finished grades and actual soldier pile wall dimensions and details, submit revised wall envelopes for acceptance. Use accepted wall envelopes for design.

B. Soldier Pile Wall Designs

For soldier pile wall designs, submit 11 copies of working drawings and 3 copies of design calculations and a PDF copy of each at least 30 days before the preconstruction meeting. Do not begin soldier pile wall construction until a design submittal is accepted.

Use a prequalified Cantilever Wall Design Consultant to design soldier pile walls. Provide designs sealed by a Design Engineer approved as a Geotechnical Engineer (key person) for the Cantilever Wall Design Consultant.

Design soldier pile walls in accordance with the plans and Article 11.8 of the *AASHTO LRFD Bridge Design Specifications* unless otherwise required. Design soldier pile

walls for seismic if walls are located in seismic zone 2 based on Figure 2-1 of the *Structure Design Manual*. Design soldier pile walls for a maximum deflection of 2" or 1.5% of H, whichever is less, with H as shown in the plans.

When noted in the plans, design soldier pile walls for a live load (traffic) surcharge of 250 lb/sf in accordance with Article 11.5.6 of the AASHTO LRFD specifications. For steel beam guardrail with 8 ft posts above soldier pile walls, analyze walls for a horizontal load (P_{H1}) of 300 lb/ft of wall in accordance with Figure 3.11.6.3-2(a) of the AASHTO LRFD specifications. For concrete barrier rail above soldier pile walls, analyze walls for a P_{H1} of 500 lb/ft of wall in accordance with Figure 3.11.6.3-2(a).

When a rock mass shear strength (S_m) is noted in the plans, analyze piles using the equation shown in Figure 3.11.5.6-2 of the AASHTO LRFD specifications to calculate the passive resistance of the rock ($\overline{P_p}$). Use a maximum H-pile spacing of 10 ft. At the Contractor's option, use driven or drilled-in piles for soldier pile walls with concrete facing unless otherwise required. For soldier pile walls with panels, use drilled-in piles unless noted otherwise in the plans. Use concrete or grout for embedded portions of drilled-in piles. Install drilled-in piles by excavating holes with diameters that will result in at least 3" of clearance all around piles.

Provide temporary support of excavations for excavations more than 4 ft deep and timber lagging in accordance with the *AASHTO Guide Design Specifications for Bridge Temporary Works*. At the Contractor's option and when noted in the plans, provide temporary slopes instead of temporary support of excavations. Do not extend temporary slopes outside right-of-way or easement limits. Except for fill sections or when using temporary slopes, backfill voids behind panels, lagging and piles with No. 57 stone. Place separation geotextile between No. 57 stone and overlying fill or pavement sections except when concrete pavement, full depth asphalt or cement treated base is placed directly on stone.

At the Contractor's option, use panels or concrete facing unless required otherwise in the plans. Design panels and concrete facing in accordance with the plans and Section 5 of the *AASHTO LRFD Bridge Design Specifications*. Provide reinforcing steel of sufficient density to satisfy Article 5.7.3.4 of the AASHTO LRFD specifications. Use panels or concrete facing with the dimensions shown in the plans and attach facing to front of H-piles with welded stud shear connectors.

Use No. 57 stone for aggregate leveling pads. Use 6" thick leveling pads beneath panels and concrete facing. Unless required otherwise in the plans, embed top of leveling pads at least 12" below bottom of walls shown in the plans.

Provide wall drainage systems consisting of geocomposite sheet drains, an aggregate shoulder drain and outlet components. Place sheet drains with a horizontal spacing of no more than 10 ft and center drains between adjacent piles. Attach sheet drains to front of timber lagging or back of panels or concrete facing and connect drains to aggregate leveling pads. Locate a continuous aggregate shoulder drain along the base of panels or concrete facing in front of piles and leveling pads. Provide aggregate

shoulder drains and outlet components in accordance with Standard Drawing No. 816.02 of the *Roadway Standard Drawings*.

Unless required otherwise in the plans, use cast-in-place reinforced concrete coping at top of soldier pile walls with panels. Use coping dimensions shown in the plans and at the Contractor's option, connect coping to panels with dowels or extend coping down back of panels. When concrete barrier rail is required above soldier pile walls, use concrete barrier rail with moment slab as shown in the plans.

Submit working drawings and design calculations for acceptance in accordance with Article 105-2 of the *Standard Specifications*. Submit working drawings showing plan views, wall profiles with pile locations, typical sections and details of piles, drainage, temporary support, leveling pads, panels and concrete facing. If necessary, include details on working drawings for coping, concrete barrier rail with moment slab and obstructions extending through walls or interfering with piles, barriers or moment slabs. Submit design calculations including deflection calculations for each wall section with different surcharge loads, geometry or material parameters. Include analysis of temporary conditions in design calculations. When designing soldier pile walls with computer software, a hand calculation is required for the tallest wall section.

C. Soldier Pile Wall Construction Plan

Submit 4 copies and a PDF copy of a soldier pile wall construction plan at least 30 days before the preconstruction meeting. Do not begin soldier pile wall construction until the construction plan submittal is accepted. Provide project specific information in the soldier pile wall construction plan including a detailed construction sequence. For driven piles, submit proposed pile driving methods and equipment in accordance with Subarticle 450-3(D)(2) of the *Standard Specifications*. For drilled-in piles, submit installation details including drilling equipment and methods for stabilizing and filling holes. Provide details in the construction plan of excavations including temporary support and any other information shown in the plans or requested by the Engineer.

If alternate construction procedures are proposed or necessary, a revised soldier pile wall construction plan submittal may be required. If the work deviates from the accepted submittal without prior approval, the Engineer may suspend soldier pile wall construction until a revised plan is accepted.

D. Preconstruction Meeting

Before starting soldier pile wall construction, hold a preconstruction meeting to discuss the construction and inspection of the soldier pile walls. If this meeting occurs before all soldier pile wall submittals have been accepted, additional preconstruction meetings may be required before beginning construction of soldier pile walls without accepted submittals. The Resident or Bridge Maintenance Engineer, Bridge Construction Engineer, Geotechnical Operations Engineer, Contractor and Cantilever Wall Contractor Superintendent will attend preconstruction meetings.

4.0 CONSTRUCTION METHODS

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Control drainage during construction in the vicinity of soldier pile walls. Direct run off away from soldier pile walls and areas above and behind walls. Contain and maintain No. 57 stone and backfill and protect material from erosion.

Notify the Engineer before blasting in the vicinity of soldier pile walls. Perform blasting in accordance with the contract. Unless required otherwise in the plans, install foundations located behind soldier pile walls before beginning wall construction if the horizontal distance to the closest foundation is less than the height of the tallest wall section.

Install soldier pile walls in accordance with the accepted submittals and as directed. Do not excavate behind soldier pile walls unless a temporary slope is shown in the accepted submittals. If overexcavation occurs and is not approved, repair walls with an approved method and a revised soldier pile wall design or construction plan may be required.

A. Piles

If a temporary slope is shown in the accepted submittals, excavate the slope before installing piles. Otherwise, install piles before excavating for soldier pile walls. Weld stud shear connectors to piles in accordance with Article 1072-6 of the *Standard Specifications*.

Install piles within 1" of horizontal and vertical alignment shown in the accepted submittals and with no negative batter (piles leaning forward). Minimize alignment variations between piles for soldier pile walls with concrete facing since variations can result in thicker concrete facing in some locations in order to provide the minimum required facing thickness elsewhere. Locate piles so the minimum required concrete facing thickness, if applicable, and roadway clearances are maintained for variable pile alignments.

Install piles to the required elevations in accordance with Subarticles 450-3(D) and 450-3(E) of the *Standard Specifications*. Piles may be installed with a vibratory hammer as approved by the Engineer. Do not splice piles. If necessary, cut off piles at elevations shown in the accepted submittals along a plane normal to the pile axis.

Use pile excavation to install drilled-in piles. If overexcavation occurs, fill to required elevations with No. 57 stone before setting piles. After filling holes with concrete or grout to the elevations shown in the accepted submittals, remove any fluids and fill remaining portions of holes with flowable fill. Cure concrete or grout at least 7 days before excavating.

Notify the Engineer if refusal is reached before pile excavation or driven piles attain the required penetration. When this occurs, a revised soldier pile wall design or construction plan submittal may be required. When a minimum pile penetration into rock is noted in the plans, rock is as determined by the Engineer.

B. Excavation

If a temporary slope is shown in the accepted submittals, excavate the slope as shown.

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Otherwise, excavate in front of piles from the top down in accordance with the accepted submittals. Excavate in staged horizontal lifts with a maximum height of 5 ft. Use timber lagging or an alternate approved method for temporary support of excavations in accordance with the accepted submittals.

Install temporary support within 24 hours of excavating each lift unless otherwise approved. The installation may be delayed if it can be demonstrated that delays will not adversely affect excavation stability. If excavation faces will be exposed for more than 24 hours, use polyethylene sheets anchored at top and bottom of lifts to protect excavation faces from changes in moisture content.

If an excavation becomes unstable at any time, suspend soldier pile wall construction and temporarily stabilize the excavation by immediately placing an earth berm up against the unstable excavation face. When this occurs, repair walls with an approved method and a revised soldier pile wall design or construction plan may be required.

Remove flowable fill and material in between piles as necessary to install timber lagging. Position lagging with at least 3" of contact in the horizontal direction between the lagging and pile flanges. Do not excavate the next lift until temporary support for the current lift is accepted.

C. Wall Drainage Systems

Install wall drainage systems as shown in the accepted submittals and in accordance with Section 816 of the *Standard Specifications*. Place geocomposite sheet drains with the geotextile side facing away from wall faces. Secure sheet drains so drains are in continuous contact with surfaces to which they are attached and allow for full flow the entire height of soldier pile walls. Discontinuous sheet drains are not allowed. If splices are needed, overlap sheet drains at least 12" so flow is not impeded. Connect sheet drains to aggregate leveling pads by embedding drain ends at least 4" into No. 57 stone.

D. Leveling Pads, Panels, Coping and Concrete Facing

Construct aggregate leveling pads at elevations and with dimensions shown in the accepted submittals. Compact leveling pads with a vibratory compactor to the satisfaction of the Engineer.

Set panels against pile flanges as shown in the accepted submittals. Position panels with at least 2" of contact in the horizontal direction between the panels and pile flanges. If contact cannot be maintained, remove panels, fill gaps with joint filler and reset panels. Securely support panels until enough No. 57 stone or backfill is placed to hold panels in place.

Construct coping as shown in the accepted submittals and Subarticle 452-3(C) of the *Standard Specifications*. When single faced precast concrete barrier is required in front of and against soldier pile walls, stop coping just above barrier so coping does not interfere with placing barrier up against wall faces. If the gap between a single faced

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barrier and wall face is wider than 2", fill gap with Class V select material (standard size No. 78M stone). Otherwise, fill gap with backer rod and seal joint between barrier and soldier pile wall with silicone sealant.

Construct concrete facing in accordance with the accepted submittals and Section 420 of the *Standard Specifications*. Do not remove forms until concrete attains a compressive strength of at least 2,400 psi. Unless required otherwise in the plans, provide a Class 2 surface finish for concrete facing that meets Subarticle 420-17(F) of the *Standard Specifications*. Construct concrete facing joints at a spacing of 10 ft to 12 ft unless required otherwise in the plans. Make 1/2" thick expansion joints that meet Article 420-10 of the *Standard Specifications* for every third joint and 1/2" deep grooved contraction or sawed joints that meet Subarticle 825-10(B) or 825-10(E) respectively for the remaining joints. Stop reinforcing steel for concrete facing 2" on either side of expansion joints.

If a brick veneer is required, construct brick masonry in accordance with Section 830 of the *Standard Specifications*. Anchor brick veneers to soldier pile walls with approved brick to concrete type anchors in accordance with the manufacturer's instructions. Space anchors no more than 16" apart in the vertical direction and no more than 32" apart in the horizontal direction with each row of anchors staggered 16" from the row above and below.

Seal joints above and behind soldier pile walls between coping or concrete facing and concrete slope protection with silicone sealant.

E. Backfill

For fill sections or if a temporary slope is shown in the accepted submittals, backfill behind piles, panels and concrete facing in accordance with Article 410-8 of the *Standard Specifications*. Otherwise, backfill voids behind panels, lagging and piles with No. 57 stone as shown in the accepted submittals. Ensure all voids between panels and lagging and between piles, lagging and excavation faces are filled with No. 57 stone. Compact stone to the satisfaction of the Engineer. When separation geotextiles are required, overlap adjacent geotextiles at least 18" and hold separation geotextiles in place with wire staples or anchor pins as needed.

F. Pile Coatings

For soldier pile walls with panels, clean exposed galvanized or painted surfaces of piles with a 2,500 psi pressure washer after wall construction is complete. Repair galvanized surfaces that are exposed and damaged in accordance with Article 1076-7 of the *Standard Specifications*. Repair painted surfaces that are exposed and damaged by applying 4.0 to 7.0 mils wet film thickness of a topcoat to damaged areas with brushes or rollers. Use the same paint for damaged areas that was used for the topcoat when painting piles initially. Feather or taper topcoats in damaged areas to be level with surrounding areas.

5.0 MEASUREMENT AND PAYMENT

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Soldier Pile Retaining Walls will be measured and paid in square feet. Soldier pile walls will be measured as the square feet of wall face area with the pay height equal to the difference between top of wall and top of leveling pad elevations. Define “top of wall” as top of coping or top of panels or concrete facing for soldier pile walls without coping.

The contract unit price for *Soldier Pile Retaining Walls* will be full compensation for providing designs, submittals, labor, tools, equipment and soldier pile wall materials, installing piles, excavating, backfilling, hauling and removing excavated materials and supplying temporary support of excavations, wall drainage systems, leveling pads, panels, concrete facing, No. 57 stone, geotextiles and any incidentals necessary to construct soldier pile walls. The contract unit price for *Soldier Pile Retaining Walls* will also be full compensation for coping, pile coatings, backer rod and silicone sealant, No. 78M stone and brick veneers, if required. No additional payment will be made and no extension of completion date or time will be allowed for repairing overexcavations or unstable excavations or thicker concrete facing.

The contract unit price for *Soldier Pile Retaining Walls* does not include the cost for ditches, fences, handrails, barrier or guardrail associated with soldier pile walls as these items will be paid for elsewhere in the contract.

Where it is necessary to provide backfill material behind soldier pile walls from sources other than excavated areas or borrow sources used in connection with other work in the contract, payment for furnishing and hauling such backfill material will be paid as extra work in accordance with Article 104-7 of the *Standard Specifications*. Placing and compacting such backfill material is not considered extra work but is incidental to the work being performed.

Payment will be made under:

Pay Item

Soldier Pile Retaining Walls

Pay Unit

Square Foot



DocuSigned by:
Jeremy R Hamm
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U-5604

GT-3.1

Macon County

SIMULATED STONE FORM LINER FINISH**(SPECIAL)****1.0 GENERAL**

The work covered by this special provision consists of constructing textured surfaces on formed reinforced concrete surfaces as indicated on the Plans and in this Special Provision. The Contractor shall furnish all materials, labor, equipment, and incidentals necessary for the construction of architectural concrete surface treatment using simulated stone masonry form liners (molds) and a compatible concrete coloring system.

The architectural concrete surface treatment should match the appearance (stone size and shape, stone color, and stone texture, pattern, and relief) of natural stone and rock, in the project vicinity, or as directed by the Engineer. Grout pattern joints (mortar joints) and bed thickness should re-create the appearance and color of natural stone on the cast-in-place and/or precast concrete panels for the Cast-in-Place Gravity Walls as indicated in the Plans, this Special Provision, or as directed by the Engineer.

2.0 SUBMITTALS

Shop Drawings - The Contractor shall submit for review and acceptance, plan and elevation views and details showing overall simulated stone pattern, joint locations, form tie locations, and end, edge or other special conditions. The drawings should include typical cross sections of applicable surfaces, joints, corners, stone relief, stone size, pitch/working line, mortar joint and bed depths. If necessary, the Contractor shall revise the shop drawings until the proposed form liner patterns and arrangement have been accepted by the Engineer. Shop drawings should be of sufficient scale to show the detail of all stone and joints patterns. The size of the sheets used for the shop drawings shall be 22" x 34" (560mm x 864mm).

The form liner shall be patterned such that long continuous horizontal or vertical lines do not occur on the finished exposed surface. The line pattern shall be random in nature and shall conceal construction joint lines. Special attention should be given to details for wrapping form liners around corners.

Shop drawings shall be reviewed and accepted prior to fabrication of form liners.

Sample Panels – After the shop drawings have been reviewed and accepted by the Engineer, the Contractor shall construct 24" x 24" (610mm x 610mm) transportable sample panel(s) at the project site. The materials used in construction of the sample panel(s) shall comply with section 420 of the Standard Specifications. The sample panel(s) shall be constructed using approved form liners. Sample panels will be required for each different form liner pattern that is to be used on the project. Any sample panel that is not accepted by the Engineer is to be removed from the project site and a new sample panel produced at no additional expense to the Department.

Architectural surface treatments and patterns of the finished work shall achieve the same final effect as demonstrated on the accepted sample panel(s). Upon acceptance by the

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Engineer, the sample panel(s) shall be used as the quality standard for the project. After the acceptance of the completed structure, the Contractor shall dispose of the sample panels as directed by the Engineer.

3.0 MATERIAL REQUIREMENTS

Form Liner – The form liner shall be a high quality, re-useable product manufactured of high strength urethane rubber or other approved material which attaches easily to the form work system, and shall not compress more than ¼” (6mm) when concrete is poured at a rate of 10 vertical feet (3 vertical meters) per hour. The form liners shall be removable without causing deterioration of the surface or underlying concrete.

The Contractor is required to use the same source of form liner for all required elements. The architectural concrete surface treatment should match the appearance (stone size and shape, stone texture, pattern and relief) of dry stacked natural stone to resemble a pattern similar to the #1203 New England Drystack by Custom Rock, as shown below.



All texture is to be in addition to the nominal thickness of each element within tolerances. Relief of any texture is not to exceed a maximum depth of 2 inch.

The form liners are to be patterned as referenced above and as directed by the Engineer.

The Contractor may choose one of the following manufactures, or an approved equal, to supply the stone-textured surface treatment as specified above. One form liner pattern will be used on this project.

Hunt Valley Distributors, LLC
3705 Crondall Lane
Owings Mills, MD 21117
410.356.9677

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Custom Rock International
1156 Homer Street
St. Paul, Minnesota 55116
800.637.2447

Fitzgerald Prime Form and Construction Supply Company
1341 East Pomona Street
Santa Ana, California 92705
714.547.6710
Fax 714.547.7958

Greenstreak Plastics
3400 Tree Court Industrial Boulevard
St. Louis, Missouri 63112
314.225.9400 / 800.325.9504
Fax 800.551.5145

Symons Corporation
200 East Touhy Avenue
Des Plaines, Illinois 60018
847.296.3200
Fax 847.635.9287

Form Release Agent – Form release agent shall be a nonstaining petroleum distillate free from water, asphaltic, and other insoluble residue, or an equivalent product. Form release agents shall be compatible with the color system applied and any special surface finish.

Form Ties - Form ties shall be set back a minimum of 2” (51 mm) from the finished concrete surface. The ties shall be designed so that all material in the device to a depth of at least 2” (51mm) back of the concrete face (bottom of simulated mortar groove) can be disengaged and removed without spalling or damaging the concrete. The Contractor shall submit the type of form ties to the Engineer for approval.

Concrete color system/stain – The final coloration of the wall is to be dark gray in color and is to be approved by the Engineer prior to application.

Color stains shall be a special penetrating stain mix as provided by the manufacturer and shall be in multiple colors of gray, brown, white, and black to achieve a full, natural color variation in the finished surface. The stain shall create a surface finish that is breathable (allowing water vapor transmission), and that resists deterioration from water, acid, alkali, fungi, sunlight, or weathering. Stain mix shall meet the requirements for mildew resistance of Federal Test Method Standard 144, Method 6271, and requirements for weathering resistance of 1.000 hours accelerated exposure measures by Weatherometer in accordance with ASTM G 26. Color samples must be submitted for approval. Concrete stains shall be supplied by one of the following or as approved by the Engineer.

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Sherwin Williams
H & C Shield Plus
101 Prospect Ave., NW
Cleveland, OH 44115

Canyon Tone Stain
United Coatings
E 1901 Cataldo
Green Acres, Washington 90016

Cementrate Acrylic Stain
Fosroc, Inc.
55 Skyline Drive
Plainview, New York 11803

Hydroshield Stain
Robson-Downes Associates, Inc.
Oxford, Maryland 21654

Quality Standards - Manufacturer of simulated stone masonry form liners and custom coloring system shall have at least five years experience making stone masonry molds and color stains to create formed concrete surfaces to match natural stone shapes, surface textures and colors. The Contractor shall schedule

A pre-installation conference with manufacturer representative and the Engineer to assure understanding of simulated stone masonry form liner use, color application, requirements for construction of sample panel(s), and to coordinate the work. The Contractor shall be required to disclose their source of simulated stone masonry manufacturer and final coloration contractor at the Preconstruction Conference.

4.0 CONSTRUCTION

Simulated Stone Form Liner System and Surface Finish

The Contractor shall demonstrate his workmanship by first constructing a sample panel of the simulated stone masonry form liner pattern and coloration. The sample panel shall be constructed on site a minimum of six weeks prior to the construction of the walls. The sample panel shall measure 3' height by 5' length by 8" thick and shall be unreinforced, vertically cast, and of concrete construction to determine the surface texture resulting from the use of form liners. Sample panels shall be cast, finished, and stained until approved by the Engineer. The approved sample panel shall remain on site as the basis for comparison for work constructed on the project. The architectural surface treatment and pattern of the finished work shall achieve the same final effect as demonstrated on the approved sample panel. Upon completion of all work, the panel shall be removed from the site.

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The simulated stone form liners are to be capable of withstanding anticipated concrete pour pressures without leakage or without causing physical or visual defects. The simulated stone form liners are to be removable without causing concrete surface deterioration or weakness in the substrate. Form release agents, form stripping methods, patching materials, as well as related construction are to be in accordance with the manufacturer's recommendations or as directed by the Engineer.

Linear butt joints shall be carefully blended into the approved pattern and finished off the final concrete surface. No visible vertical or horizontal seams or conspicuous form marks created by butt joining will be permitted.

The Contractor shall submit the type of form ties to be used in this construction to the Engineer for approval prior to use. Form tie holes shall be finished in accordance with standard concreting practices and shall be acceptable to the Engineer. All patching material shall exactly match the color and appearance of the poured concrete surface.

Concrete surfaces shall be clean, free of laitance, dirt, dust, grease, efflorescence, paint, or other foreign material, following manufacturer's specifications for surface preparation prior to application of color stain. The surface area shall also be free of blemishes, discolorations, surface voids, and unnatural form marks. The Contractor is advised that sandblasting will not be allowed for cleaning concrete surfaces. Pressure washing for removal of laitance shall be used.

The contractor shall provide a Color Application Artist who is trained in the special techniques to achieve realistic surface appearances, if requested by the Engineer. To avoid contaminating or damaging the wall surfaces, color stain application shall be scheduled when all concrete work is completed, the concrete has cured a minimum of 28 days, the surface has been determined to be acceptable for coloring, and after adjacent earthwork is complete. The Contractor is to coordinate coloring applications without interference from other work. The Contractor is required to apply coloring to an appropriate test area of 50 square feet and as designated by the Engineer, which will serve as a quality standard for the remaining surface to be colored. Upon approval of the test area by the Engineer, the remaining surfaces may be colored. Stains shall be applied when ambient air temperatures are in accordance with manufacturer's specifications or as directed by the Engineer. The number of coats of stain applied shall be in accordance with manufacturer's specifications or as directed by the Engineer. Treated surfaces located adjacent to exposed soil or pavement shall be temporarily covered to prevent dirt or soil splatter from rain.

Following the completion of all work, repairs of any damage made by other construction operations shall be made to the form lined and colored surfaces as directed by the Engineer.

Experience and Qualifications - The Contractor shall have a minimum of three consecutive years experience in architectural concrete surface treatment construction on similar types of projects. The Contractor shall furnish to the Engineer 5 references who

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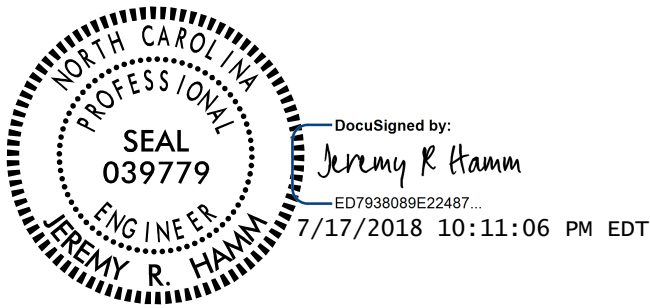
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were responsible for supervision of similar projects and will testify to the successful completion of these projects. Include name, address, telephone number, and specific type of application.

5.0 MEASUREMENT AND PAYMENT

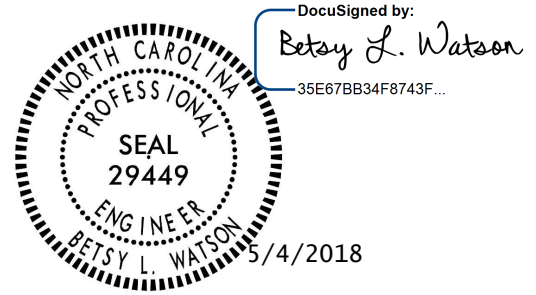
This work will not be measured for payment, but shall be included in the per square foot or linear foot bid price for the pertinent walls as shown on plans. Payment will include the furnishing and use of all form liners, coloring stains, the construction, finishing, and removal of all sample panels, and all equipment, materials, labor, and incidentals necessary to complete the work in conformance with the Contract Documents.



TIP # U-5604

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DISPOSAL OF FLASHER SYSTEM

The work covered by this special provision consists of removal and disposal of a flasher system. The system includes the sign and the sign post, utility service pole, electric meter and base, circuit breaker panel and breaker(s), control devices such as relays, wire, cable, conduit, flasher units, and all other devices and equipment in the system.

All material shall be removed and disposed according to the State and Local codes, regulations, and ordinances and shall be in accordance with the Section 907 of the NCDOT Standard Specifications for Roads and Structures.

Compensation:

Disposal of a Flasher System as described above shall be paid for at the contract lump sum price for each Flasher System.

Payment will be made under:

Disposal of Flasher System Lump Sum

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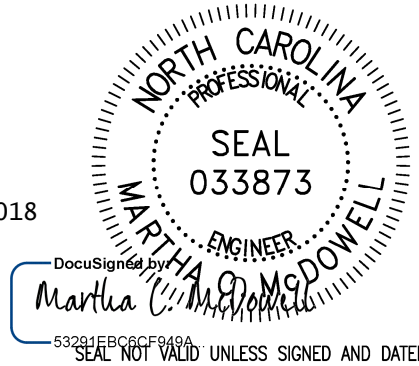
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PROJECT SPECIAL PROVISIONS
Utility Construction



Stantec Consulting Services Inc.
301 N. Main St., Suite 2452
Winston-Salem, NC 27101
Firm License No.: F - 0672

8/6/2018



DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED

Utility Owner:

Town of Franklin
95 E. Main St.
Franklin, NC 28734

Revise the 2018 Standard Specifications as follows:

Page 10-61, Sub-article 1034-1 Clay Pipe, strike this sub-article in its entirety. No vitrified clay pipe shall be included in this project.

Page 10-61, Sub-article 1034-2 Plastic Pipe (B) PVC Force Main Sewer Pipe, add the following sentences:

PVC force main piping shall have a green exterior color. Under no circumstances shall pipe with a blue exterior color be accepted.

Where PVC pipe is installed in iron pipe size (IPS), an IPS gasket shall be furnished with each fitting to insure compatibility.

Page 10-61, Sub-article 1034-3 Concrete Sewer Pipe, strike this sub-article in its entirety. No concrete sewer pipe shall be included in this project.

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Page 10-61, Sub-article 1034-4 Ductile Iron Pipe, (A) Gravity Flow Sewer Pipe, add the following sentences to Sub-article (A).**Pipe Lining:**

The standard of quality is Protecto 401™ Ceramic Epoxy. The material shall be an amine cured novolac epoxy containing at least 20% by volume of ceramic quartz pigment. Any request for substitution must be accompanied by a successful history of lining pipe and fittings for sewer service, a test report verifying the following properties, and a certification of the test results.

After surface preparation and within 12 hours of surface preparation, the interior of the pipe shall receive 40 mils nominal dry film thickness. No lining shall take place when the substrate or ambient temperature is below 40°F. The surface also must be dry and dust free.

Pipe Handling:

Lined pipe and fittings must be handled only from the outside of the pipe and fittings. No forks, chains, straps, hooks, etc. shall be placed inside the pipe and fittings for lifting, positioning, or laying. The pipe shall not be dropped or unloaded by rolling. Care should be taken not to let the pipe strike sharp objects while swinging or being off loaded

Page 10-62, Sub-article 1036-1 General, add the following sentences:

All materials in contact with potable water shall be in conformance with Section 1417 of the Safe Drinking Water Act.

All permanent PVC water lines to be incorporated into the project and to be taken over by the Town of Franklin shall be installed with a copper tracer wire.

Page 10-63, Sub-article 1036-6 Fire Hydrants, replace with the following:

Fire hydrants shall comply with all of the applicable requirements of the AWWA C-502, latest revision, for dry-barrel fire hydrants and with these specifications. Hydrants shall be of the traffic model type incorporating a break-away flange arrangement which will permit the upper section of the hydrant barrel to separate from the lower section upon impact. Each hydrant shall include an automatic system designed to lubricate the entire length of the threaded part of the valve stem each time the hydrant is operated. It shall be further equipped with "O"-ring seals to ensure that threads on the valve stem do not come into contact with water at any time.

Hydrants shall open counterclockwise with a compression base valve opening against and closing with pressure and be capable of withstanding 250 psi working pressures and 500 psi hydrostatic test pressures, unless otherwise specified. The pentagonal operating nut shall be 1-1/2" from the point to the flat. Hydrants shall be equipped with one (1) 4-1/2" pumper nozzle and two (2) 2-1/2" hose nozzles, all with National Standard Threads

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per Appendix A of AWWA C-502, and chained nozzle caps. Nozzles shall be reverse threaded into the fire hydrant barrel.

Unless otherwise indicated on the plans approved by the Town, all hydrants shall have 6" mechanical joint bottom connections. For hydrants connected to 6" water mains, the hydrant shall have a 4½" main valve opening. For hydrants connected to water mains 8" and larger, the hydrant shall have a 5¼" main valve opening. The hydrant main valve shall be of the full compression design, opening against and closing with pressure. The valve seat ring shall thread into a bronze sub-seat, and all gaskets sealing the seat ring shall be a bronze-to-bronze surface.

All iron parts within fire hydrants shall be ductile iron.

The bury length (distance from ground line to insert of the hydrant inlet) shall be 4'-0" unless ground conditions shown on the Town approved plans warrant a deeper bury.

Drain valves shall be all bronze and allow complete draining of all residual water from the hydrant barrel.

All bolting and fasteners below ground shall be stainless steel.

The operating machine shall utilize two (2) "O"-ring seals between the revolving nut and bronze-sheathed upper section of the valve rod. The top of the rod shall also be fitted with a travel stop nut to limit downward travel of the rod. All-weather grease shall be used to provide permanent lubrication. A thermoplastic thrust washer shall be used to reduce friction in the thrust collar while opening the hydrant.

The hydrant inlet shall be mechanical joint. Joint restraint shall be accomplished for mechanical joint by use of mechanical joint gripper glands or ¾"Ø galvanized threaded rods.

Following installation and testing all hydrants shall be painted with two (2) 6-mil coats of epoxy paint.

Summary Public Fire Hydrants:

- Yellow Paint for the "Body" of the hydrant
- Hydrant connections shall be National Standard Thread
- Black "Out of Use" disk (no bag) installed immediately upon fire hydrant installation
- 1 to 4 inches from bottom of breakaway flange to final

grade

Hydrants accepted by the Town of Franklin are as follows:

- Super Centurion 250, A-423 5 ¼" manufactured by Mueller Company

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Page 10-63, Sub-article 1036-7 (A), replace the first sentence with the following:

All gate valves shall be designed for a minimum working pressure of 200 psi unless otherwise specified.

Use iron body gate valves which conform to ANSI/AWWA C509 for resilient seat-type valves.

Page 15-1, Sub-article 1500-2 Cooperation with the Utility Owner, paragraph 2, add the following sentence:

The water utility owner is the Town of Franklin. The Town Engineer is Nathanael Moore and he can be reached at 336-524-2516. The Public Works Director is Jay Gibson, Public Works Director and he can be reached by phone at (828) 369-5228.

Page 15-2, Sub-article 1500-9, paragraph 2, sentence 2, replace in its entirety with the following sentences:

Interruptions in water service for all distribution system mains shall be limited to a maximum of 4 hours unless otherwise specifically approved by the Town of Franklin City Engineer. Interruptions in water service for all water services shall be limited to a maximum of 6 hours unless otherwise specifically approved by the Town of Franklin City Engineer.

Page 15-2, Sub-article 1500-9, add the following paragraphs:

All existing water and sewer services which are to be modified, reconnected, relocated, or removed shall be done to the satisfaction of the utility owner's representatives. The Contractor shall coordinate field review by the utility owner's representatives through the Town of Franklin's City Engineer.

All proposed water and sewer services which are to be installed shall be done to the satisfaction of the utility owner's representatives. The Contractor shall coordinate field review by the utility owner's representatives through the Town of Franklin's City Engineer.

Page 15-5, Sub-article 1510-2, Materials, add the following sentences:

All water lines that will belong to the of Town of Franklin that are 6" in diameter or larger shall be ductile iron PC 350.

Page 15-8, Sub-article 1515-3 Construction Methods (B), add the following paragraph:

All water meters incorporated into the project shall conform to the Town of Franklin Standards and shall be purchased from the Town of Franklin's meter inventory and installed by the Contractor.

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Page 15-8, Sub-article 1515-3 (B) Meters, add the following to line 29:

Meter box shall be standard rectangular meter box design. Meter box shall be sized to accept a 5/8" water meter, specifically MB-6 or Dexor Plastics DX1015-24 CIR. Meter box and associated installations shall be in accordance with Town of Franklin Standard Details W-14.

Page 15-10, Sub-article 1520-2, Materials, add the following paragraph:

All sanitary sewer cleanouts shall be provided and installed as specified in the plans and shall be either Sch 40 PVC or PC 350 ductile iron pipe.

Page 15-11, Sub-article 1520-3, replace Line 2 with the following:

No vitrified clay pipe material shall be included in this project.

Page 15-11, Sub-article 1520-3(A)(2) Testing, replace in entirety with the following:

Testing for sanitary sewer pipe and appurtenances shall be in accordance with Town of Franklin Specifications Section 02730, Part 3.02.

Page 15-15, Sub-article 1525-3 Construction Methods (A), Cast-In-Place Concrete, Brick and Block Masonry, Line 9, delete the second and last sentences in entirety:


No brick or block masonry manholes shall be included in this project.

Page 15-16, Sub-article 1530-3 Construction Methods (B), Abandoning Manholes, Line 5, replace with the following:

Abandon utility manholes in the construction limits by removing the top of the manhole to the manhole spring line or to an elevation of 3 feet below the roadway subgrade, whichever is greater and filling the manhole barrel with approved material.

PROJECT SPECIAL PROVISIONS

Utilities by Others

 <p>Michael Baker INTERNATIONAL</p>	<p>Michael Baker Engineering, Inc. 8000 Regency Parkway, Suite 600 Cary, North Carolina 27518 Phone: 919-463-5488 Fax: 919-463-5490</p>
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General:

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

- A) Duke Energy – Power (Distribution)
- B) Frontier – Communications
- C) BalsamWest Fibernet – Communications
- D) Morris Broadband – Communications
- E) Toccoa Natural Gas - Gas

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

The Contractor’s attention is directed to Article 105-8 of the 2018 Standard Specifications.

Utilities Requiring Adjustment:

Utility relocations are shown on the Utilities by Others Plans.

- A) Duke Energy – Power (Distribution)
 - 1) Duke Energy will install new utility poles and aerial lines within the project limits.
 - 2) Duke Energy will install a temporary aerial line to service Parcel 23 during wall construction at -L- STA: 39+20.
 - 3) Duke Energy’s relocation work will be completed by December 21, 2018.
 - 4) Contact person for Duke Energy is Kenny Blanchard at (864) 457-1195 Ext. 7237 or kenny.blanchard@duke-energy.com.

PROJECT SPECIAL PROVISIONS

Utilities by Others

B) Frontier – Communications

- 1) Frontier will follow Duke Energy's pole line, install buried cables and abandon existing facilities within the project limits.
- 2) Frontier's relocation work will be completed by April 12, 2019.
- 3) Contact person for Frontier is Tina Rutherford at (828) 631-4058 or tina.rutherford@ftr.com.

C) BalsamWest Fibernet – Communications

- 1) BalsamWest Fibernet will lower their existing line in place at from L- STA: 17+75 – 21+50, Right.
- 2) BalsamWest Fibernet will install buried cables and abandon existing facilities within the project limits.
- 3) BalsamWest Fibernet's relocation work will be completed by November 16, 2018.
- 4) Contact person for BalsamWest Fibernet is Danny Haynes at (828) 399-9760 or dhaines@balsamwest.net.

D) Morris Broadband – Communications

- 1) Morris Broadband will follow Duke Energy's pole line within the project limits.
- 2) Morris Broadband's relocation work will be completed by January 18, 2019.
- 3) Contact person for Morris Broadband is Chris McCall at (828) 697-3600 Ext. 646 or chris.mccall@morris.com.

E) Toccoa Natural Gas – Gas

- 1) Toccoa Natural Gas will lower their existing line in place at L- STA: 32+00.
- 2) Toccoa Natural Gas will install 2" and 4" Plastic mains and abandon their existing facilities within the project limits.
- 3) Toccoa Natural Gas's relocation work will be completed by October 5, 2018.
- 4) Contact person for Toccoa Natural Gas is Rance Fleming at (828) 349-1222 or rfleming@cityoftoccoa.com.

CLEAN WATER DIVERSION:**Description**

This work consists of installing, maintaining, and removing any and all material required for the construction of clean water diversions. The clean water diversions shall be used to direct water flowing from offsite around/away from specific area(s) of construction.

Materials

Refer to Division 10

Item	Section
Geotextile for Soil Stabilization, Type 4	1056

Construction Methods

The Contractor shall install the clean water diversions in accordance with the details in the plans and at locations indicated in the plans, and as directed. Upon installation, the excavated material shall be immediately stabilized as provided in Section 1620 of the *Standard Specifications*. Other stabilization methods may be utilized with prior approval from the Engineer.

Line clean water diversion with geotextile unrolled in the direction of flow and lay smoothly but loosely on soil surface without creases. Bury top of slope geotextile edge in a trench at least 5" deep and tamp securely. Make vertical overlaps a minimum of 18" with upstream geotextile overlapping the downstream geotextile.

Secure geotextile with eleven gauge wire staples shaped into a *u* shape with a length of not less than 6" and a throat not less than 1" in width. Place staples along outer edges and throughout the geotextile a maximum of 3 ft. horizontally and vertically.

Measurement and Payment

Silt Excavation will be measured and paid for in accordance with Article 1630-4 of the *Standard Specifications*.

Geotextile for Soil Stabilization will be measured and paid for in accordance with Article 270-4 of the *Standard Specifications*.

Stabilization of the excavated material will be paid for as *Temporary Seeding* as provided in Section 1620 of the *Standard Specifications*.

Such price and payment shall be considered full compensation for all work covered by this section including all materials, construction, maintenance, and removal of the clean water diversions.

CONCRETE WASHOUT STRUCTURE:

(12-01-15)

Description

Concrete washout structures are enclosures above or below grade to contain concrete waste water and associated concrete mix from washing out ready-mix trucks, drums, pumps, 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 wash out operations.

The concrete washout structure may include constructed devices above or below ground and or commercially available devices designed specifically to capture concrete waste water.

Materials

Item	Section
Temporary Silt Fence	1605

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

Geomembrane basin liner shall meet the following minimum physical properties for low permeability; it shall consist of a polypropylene or polyethylene 10 mil thick geomembrane. If the minimum setback dimensions can be achieved the liner is not required. (5 feet above groundwater, 50 feet from top of bank of perennial stream, other surface water body, or wetland.)

Construction Methods

Build an enclosed earthen berm or excavate to form an enclosure in accordance with the details and as directed.

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

Post a sign with the words "Concrete Washout" in close proximity of the concrete washout area, so it is clearly visible to site personnel.

The construction details for the above grade and below grade concrete washout structures can be found on the following web page link:

http://www.ncdot.gov/doh/operations/dp_chief_eng/roadside/soil_water/details/

Alternate details for accommodating concrete washout may be submitted for review and approval.

The alternate details shall include the method used to retain and dispose of the concrete waste water within the project limits and in accordance with the minimum setback requirements. (5 feet above groundwater, 50 feet from top of bank of perennial stream, other surface water body, or wetland.)

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 and maintain for effectiveness.

Remove the concrete washout structures and sign upon project completion. Grade the earth material to match the existing contours and permanently seed and mulch area.

Measurement and Payment

Concrete Washout Structure will be paid for per each enclosure installed in accordance with the details. If alternate details are approved then those details will also be paid for per each approved and installed device.

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

No measurement will be made for other items or for over excavation or stockpiling.

Payment will be made under:

Pay Item	Pay Unit
Concrete Washout Structure	Each

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.

PERMANENT SOIL REINFORCEMENT MAT:**Description**

This work consists of furnishing and placing *Permanent Soil Reinforcement Mat*, of the type specified, over previously prepared areas as directed.

Materials

The product shall be a permanent erosion control reinforcement mat and shall be constructed of synthetic or a combination of coconut and synthetic fibers evenly distributed throughout the mat between a bottom UV stabilized netting and a heavy duty UV stabilized top net. The matting shall be stitched together with UV stabilized polypropylene thread to form a permanent three-dimensional structure. The mat shall have the following minimum physical properties:

Property	Test Method	Value	Unit
Light Penetration	ASTM D6567	9	%
Thickness	ASTM D6525	0.40	in
Mass Per Unit Area	ASTM D6566	0.55	lb/sy
Tensile Strength	ASTM D6818	385	lb/ft
Elongation (Maximum)	ASTM D6818	49	%
Resiliency	ASTM D1777	>70	%
UV Stability *	ASTM D4355	≥80	%
Porosity (Permanent Net)	ECTC Guidelines	≥85	%
Maximum Permissible Shear Stress (Vegetated)	Performance Bench Test	≥8.0	lb/ft ²
Maximum Allowable Velocity (Vegetated)	Performance Bench Test	≥16.0	ft/s

*ASTM D1682 Tensile Strength and % strength retention of material after 1000 hours of exposure.

Submit a certification (Type 1, 2, or 3) from the manufacturer showing:

- (A) the chemical and physical properties of the mat used, and
- (B) conformance of the mat with this specification.

Construction Methods

Matting shall be installed in accordance with Subarticle 1631-3(B) of the *Standard Specifications*.

All areas to be protected with the mat shall be brought to final grade and seeded in accordance with Section 1660 of the *Standard Specifications*. The surface of the soil shall be smooth, firm, stable and free of rocks, clods, roots or other obstructions that would prevent the mat from lying

in direct contact with the soil surface. Areas where the mat is to be placed will not need to be mulched.

Measurement and Payment

Permanent Soil Reinforcement Mat will be measured and paid for as the actual number of square yards measured along the surface of the ground over which Permanent Soil Reinforcement Mat is installed and accepted. Overlaps will not be included in the measurement, and will be considered as incidental to the work. Such payment shall be full compensation for furnishing and installing the mat, including overlaps, and for all required maintenance.

Payment will be made under:

Pay Item

Permanent Soil Reinforcement Mat

Pay Unit

Square Yard

RESPONSE FOR EROSION CONTROL:**Description**

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

Section	Erosion Control Item	Unit
1605	Temporary Silt Fence	LF
1606	Special Sediment Control Fence	LF/TON
1615	Temporary Mulching	ACR
1620	Seed - Temporary Seeding	LB
1620	Fertilizer - Temporary Seeding	TN
1631	Matting for Erosion Control	SY
SP	Coir Fiber Mat	SY
1640	Coir Fiber Baffles	LF
SP	Permanent Soil Reinforcement Mat	SY
1660	Seeding and Mulching	ACR
1661	Seed - Repair Seeding	LB
1661	Fertilizer - Repair Seeding	TON
1662	Seed - Supplemental Seeding	LB
1665	Fertilizer Topdressing	TON
SP	Safety/Highly Visible Fencing	LF
SP	Response for Erosion Control	EA

Construction Methods

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

Measurement and Payment

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

Payment will be made under:

Pay Item

Response for Erosion Control

Pay Unit

Each

STABILIZATION REQUIREMENTS:

(3-11-2016)

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit effective August 1, 2016 issued by the North Carolina Department of Environmental Quality Division of Water Resources. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity:

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

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

SEEDING AND MULCHING:

(WestEd)

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.

Shoulder and Median Areas

August 1 - June 1

20#	Kentucky Bluegrass
75#	Hard Fescue
25#	Rye Grain
500#	Fertilizer
4000#	Limestone

May 1 - September 1

20#	Kentucky Bluegrass
75#	Hard Fescue
10#	German or Browntop Millet
500#	Fertilizer
4000#	Limestone

Areas Beyond the Mowing Pattern, Waste and Borrow Areas:

August 1 - June 1

100#	Tall Fescue
15#	Kentucky Bluegrass
30#	Hard Fescue
25#	Rye Grain
500#	Fertilizer
4000#	Limestone

May 1 - September 1

100#	Tall Fescue
15#	Kentucky Bluegrass
30#	Hard Fescue
10#	German or Browntop Millet
500#	Fertilizer
4000#	Limestone

Approved Tall Fescue Cultivars

06 Dust	Escalade	Justice	Serengeti
2 nd Millennium	Essential	Kalahari	Shelby
3 rd Millennium	Evergreen 2	Kitty Hawk 2000	Sheridan
Apache III	Falcon IV	Legitimate	Signia
Avenger	Falcon NG	Lexington	Silver Hawk
Barlexas	Falcon V	LSD	Sliverstar
Barlexas II	Faith	Magellan	Shenandoah Elite
Bar Fa	Fat Cat	Matador	Sidewinder
Barrera	Festnova	Millennium SRP	Skyline
Barrington	Fidelity	Monet	Solara
Barrobusto	Finelawn Elite	Mustang 4	Southern Choice II
Barvado	Finelawn Xpress	Ninja 2	Speedway
Biltmore	Finesse II	Ol' Glory	Spyder LS
Bingo	Firebird	Olympic Gold	Sunset Gold
Bizem	Firecracker LS	Padre	Taccoa
Blackwatch	Firenza	Patagonia	Tanzania
Blade Runner II	Five Point	Pedigree	Trio
Bonsai	Focus	Picasso	Tahoe II
Braveheart	Forte	Piedmont	Talladega
Bravo	Garrison	Plantation	Tarheel
Bullseye	Gazelle II	Proseeds 5301	Terrano
Cannavaro	Gold Medallion	Prospect	Titan Ltd
Catalyst	Grande 3	Pure Gold	Titanium LS
Cayenne	Greenbrooks	Quest	Tracer
Cessane Rz	Greenkeeper	Raptor II	Traverse SRP
Chipper	Gremlin	Rebel Exeda	Tulsa Time
Cochise IV	Greystone	Rebel Sentry	Turbo
Constitution	Guardian 21	Rebel IV	Turbo RZ
Corgi	Guardian 41	Regiment II	Tuxedo RZ
Corona	Hemi	Regenerate	Ultimate
Coyote	Honky Tonk	Rendition	Venture
Darlington	Hot Rod	Rhambler 2 SRP	Umbrella
Davinci	Hunter	Rembrandt	Van Gogh
Desire	Inferno	Reunion	Watchdog
Dominion	Innovator	Riverside	Wolfpack II
Dynamic	Integrity	RNP	Xtremegreen
Dynasty	Jaguar 3	Rocket	
Endeavor	Jamboree	Scorpion	

Approved Kentucky Bluegrass Cultivars:

4-Season	Blue Velvet	Gladstone	Quantum Leap
Alexa II	Blueberry	Granite	Rambo
America	Boomerang	Hampton	Rhapsody

Apollo	Brilliant	Harmonie	Rhythm
Arcadia	Cabernet	Impact	Rita
Aries	Champagne	Jefferson	Royce
Armada	Champlain	Juliet	Rubicon
Arrow	Chicago II	Jump Start	Rugby II
Arrowhead	Corsair	Keeneland	Shiraz
Aura	Courtyard	Langara	Showcase
Avid	Delight	Liberator	Skye
Award	Diva	Madison	Solar Eclipse
Awesome	Dynamo	Mercury	Sonoma
Bandera	Eagleton	Midnight	Sorbonne
Barduke	Emblem	Midnight II	Starburst
Barnique	Empire	Moon Shadow	Sudden Impact
Baroness	Envicta	Moonlight SLT	Total Eclipse
Barrister	Everest	Mystere	Touche
Barvette HGT	Everglade	Nu Destiny	Tsunami
Bedazzled	Excursion	NuChicago	Unique
Belissimo	Freedom II	NuGlade	Valor
Bewitched	Freedom III	Odyssey	Voyager II
Beyond	Front Page	Perfection	Washington
Blacksburg II	Futurity	Pinot	Zinfandel
Blackstone	Gaelic	Princeton 105	
Blue Note	Ginney II	Prosperity	

Approved Hard Fescue Cultivars:

Aurora II	Eureka II	Oxford	Scaldis II
Aurora Gold	Firefly	Reliant II	Spartan II
Berkshire	Granite	Reliant IV	Stonehenge
Bighorn GT	Heron	Rescue 911	
Chariot	Nordic	Rhino	

On cut and fill slopes 2:1 or steeper add 20# Sericea Lespedeza and 15# Crown Vetch January 1 - December 31.

The Crown Vetch Seed should be double inoculated if applied with a hand seeder. Four times the normal rate of inoculant should be used if applied with a hydroseeder. If a fertilizer-seed slurry is used, the required limestone should also be included to prevent fertilizer acidity from killing the inoculant bacteria. Caution should be used to keep the inoculant below 80° F to prevent harm to the bacteria. The rates and grades of fertilizer and limestone shall be the same as specified for *Seeding and Mulching*.

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. 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 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*, and the rate of application 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 six inches.

TEMPORARY ROCK SILT CHECK TYPE A WITH EXCELSIOR MATTING AND POLYACRYLAMIDE (PAM):**Description**

Temporary Rock Silt Checks Type A with Excelsior Matting and Polyacrylamide (PAM) are devices utilized in temporary and permanent ditches to reduce runoff velocity and incorporate PAM into the construction runoff to increase settling of sediment particles and reduce turbidity of runoff. Temporary Rock Silt Checks Type A with Excelsior Matting and PAM are to be placed at locations shown on the plans or as directed. Installation shall follow the detail provided in the plans and as directed. Work includes furnishing materials, installation of Temporary Rock Silt Checks Type A, matting installation, PAM application, and removing Temporary Rock Silt Checks Type A with Excelsior Matting and PAM.

Materials

Structural stone shall be class B stone that meets the requirements of Section 1042 of the *Standard Specifications* for Stone for Erosion Control, Class B.

Sediment control stone shall be #5 or #57 stone, which meets the requirements of Section 1005 of the *Standard Specifications* for these stone sizes.

Matting shall meet the requirements of Excelsior Matting in Subarticle 1060-8(B) of the *Standard Specifications*, or shall meet specifications provided elsewhere in this contract.

Polyacrylamide (PAM) shall be applied in powder form and shall be anionic or neutrally charged. Soil samples shall be obtained in areas where the Temporary Rock Silt Checks Type A with Excelsior Matting and PAM will be placed, and from offsite material used to construct the roadway, and analyzed for the appropriate PAM flocculant to be utilized with each Temporary Rock Silt Check Type A. The PAM product used shall be listed on the North Carolina Department of Environmental Quality Division of Water Resources web site as an approved PAM product for use in North Carolina.

Construction Methods

Temporary Rock Silt Checks Type A shall be installed in accordance with Subarticle 1633-3(A) of the *Standard Specifications*, Roadway Standard Drawing No. 1633.01 and the detail provided in the plans.

Installation of matting shall be in accordance with the detail provided in the plans, and anchored by placing Class B stone on top of the matting at the upper and lower ends.

Apply PAM at a rate of 4 ounces over the center portion of the Temporary Rock Silt Checks Type A and matting where the water is going to flow over. PAM applications shall be done during construction activities and after every rainfall event that is equal to or exceeds 0.50 in.

The Contractor shall maintain the Temporary Rock Silt Checks Type A with Excelsior Matting and PAM until the project is accepted or until the Temporary Rock Silt Checks Type A with Excelsior Matting and PAM are removed, and shall remove and dispose of silt accumulations at the Temporary Rock Silt Checks Type A with Excelsior Matting and PAM when so directed in accordance with the requirements of Section 1630 of the *Standard Specifications*.

Measurement and Payment

Temporary Rock Silt Checks Type A will be measured and paid for in accordance with Article 1633-5 of the *Standard Specifications*, or in accordance with specifications provided elsewhere in this contract.

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

Polyacrylamide(PAM) will be measured and paid for by the actual weight in pounds of PAM applied to the Temporary Rock Silt Checks Type A. Such price and payment will be full compensation for all work covered by this section, including, but not limited to, furnishing all materials, labor, equipment and incidentals necessary to apply the *Polyacrylamide(PAM)*.

Payment will be made under:

Pay Item	Pay Unit
Polyacrylamide(PAM)	Pound

SILT FENCE COIR FIBER WATTLE BREAK:

(8-21-12)

1605,1630

Description

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

Materials

Coir fiber wattle shall meet the following specifications:

100% Coir (Coconut) Fibers	
Minimum Diameter	12"
Minimum Length	10 ft
Minimum Density	3.5 lb/cf \pm 10%
Net Material	Coir Fiber
Net Openings	2" x 2"
Net Strength	90 lb.
Minimum Weight	2.6 lb/ft \pm 10%

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

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

Construction Methods

Excavate a trench the entire length of each wattle with a depth of 1" to 2" for the wattle to be placed. Secure silt fence coir fiber wattle breaks to the soil by wire staples approximately every linear foot and at the end of each wattle. Install at least 4 stakes on the downslope side of the wattle with a maximum spacing of 2 linear feet and according to the detail. Install at least 2 stakes on the upslope side of the silt fence coir fiber wattle break according to the detail provided in the plans. Drive stakes into the ground at least 10" with no more than 2" projecting from the top of the wattle. Drive stakes at an angle according to the detail provided in the plans.

Install temporary silt fence in accordance with Section 1605 of the *Standard Specifications* and overlap each downslope side of silt fence wattle break by 6".

Maintain the silt fence coir fiber wattle breaks until the project is accepted or until the silt fence coir fiber wattle breaks are removed, and remove and dispose of silt accumulations at the silt fence coir fiber wattle breaks when so directed in accordance with Section 1630 of the *Standard Specifications*.

Measurement and Payment

Coir Fiber Wattle will be measured and paid as the actual number of linear feet of wattles installed and accepted. Such price and payment will be full compensation for all work covered by this provision, including, but not limited to, furnishing all materials, labor, equipment and incidentals necessary to install the silt fence coir fiber wattle break.

Payment will be made under:

Pay Item
Coir Fiber Wattle

Pay Unit
Linear Foot

STOCKPILE AREAS:

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

ACCESS AND HAUL ROADS:

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

WASTE AND BORROW SOURCES:

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

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

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

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

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

County : Macon

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0001010000-N	200	SELECT TREE REMOVAL	1 EA		
0004	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUB-BING	1 ACR		
0005	0057000000-E	226	UNDERCUT EXCAVATION	2,000 CY		
0006	0134000000-E	240	DRAINAGE DITCH EXCAVATION	20 CY		
0007	0141000000-E	240	BERM DITCH CONSTRUCTION	430 LF		
0008	0195000000-E	265	SELECT GRANULAR MATERIAL	2,000 CY		
0009	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	3,300 SY		
0010	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	1,015 TON		
0011	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	3,705 SY		
0012	0335200000-E	305	15" DRAINAGE PIPE	188 LF		
0013	0366000000-E	310	15" RC PIPE CULVERTS, CLASS III	3,128 LF		
0014	0372000000-E	310	18" RC PIPE CULVERTS, CLASS III	900 LF		
0015	0378000000-E	310	24" RC PIPE CULVERTS, CLASS III	52 LF		
0016	0384000000-E	310	30" RC PIPE CULVERTS, CLASS III	112 LF		
0017	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	60 LF		
0018	0576000000-E	310	*** CS PIPE CULVERTS, ***** THICK (48", 0.109")	32 LF		

County : Macon

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0019	0582000000-E	310	15" CS PIPE CULVERTS, 0.064" THICK	348	LF	
0020	0588000000-E	310	18" CS PIPE CULVERTS, 0.064" THICK	154	LF	
0021	0600000000-E	310	30" CS PIPE CULVERTS, 0.079" THICK	28	LF	
0022	0995000000-E	340	PIPE REMOVAL	630	LF	
0023	1077000000-E	SP	#57 STONE	100	TON	
0024	1099500000-E	505	SHALLOW UNDERCUT	500	CY	
0025	1099700000-E	505	CLASS IV SUBGRADE STABILIZATION	1,000	TON	
0026	1220000000-E	545	INCIDENTAL STONE BASE	500	TON	
0027	1330000000-E	607	INCIDENTAL MILLING	2,360	SY	
0028	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	100	TON	
0029	1869000000-E	710	***** PORT CEM CONC PAVEMENT, MISCELLANEOUS (WITHOUT DOWELS) (12")	1,220	SY	
0030	2275000000-E	SP	FLOWABLE FILL	10	CY	
0031	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	96	EA	
0032	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	66.3	LF	
0033	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	12	EA	
0034	2365000000-N	840	FRAME WITH TWO GRATES, STD 840.22	1	EA	
0035	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	3	EA	

County : Macon

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0036	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	29 EA		
0037	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	31 EA		
0038	2396000000-N	840	FRAME WITH COVER, STD 840.54	5 EA		
0039	2407000000-N	840	STEEL FRAME WITH TWO GRATES, STD 840.37	16 EA		
0040	2451000000-N	852	CONCRETE TRANSITIONAL SECTION FOR DROP INLET	12 EA		
0041	2535000000-E	846	***X *** CONCRETE CURB (8" X 12")	190 LF		
0042	2535000000-E	846	***X *** CONCRETE CURB (8" X 18")	580 LF		
0043	2542000000-E	846	1'-6" CONCRETE CURB & GUTTER	1,190 LF		
0044	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	5,920 LF		
0045	2591000000-E	848	4" CONCRETE SIDEWALK	2,270 SY		
0046	2605000000-N	848	CONCRETE CURB RAMPS	34 EA		
0047	2612000000-E	848	6" CONCRETE DRIVEWAY	230 SY		
0048	2619000000-E	850	4" CONCRETE PAVED DITCH	190 SY		
0049	2655000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (KEYED IN)	960 SY		
0050	2830000000-N	858	ADJUSTMENT OF MANHOLES	4 EA		
0051	2845000000-N	858	ADJUSTMENT OF METER BOXES OR VALVE BOXES	5 EA		
0052	2905000000-N	859	CONVERT EXISTING DROP INLET TO JUNCTION BOX	3 EA		

County : Macon

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0053	3575000000-E	SP	GENERIC FENCING ITEM RETAINING WALL ALUMINUM PICKET FENCE	745 LF		
0054	3642000000-E	876	RIP RAP, CLASS A	17 TON		
0055	3649000000-E	876	RIP RAP, CLASS B	27 TON		
0056	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	128 SY		
0057	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	1,715 LF		
0058	4096000000-N	904	SIGN ERECTION, TYPE D	15 EA		
0059	4102000000-N	904	SIGN ERECTION, TYPE E	131 EA		
0060	4108000000-N	904	SIGN ERECTION, TYPE F	12 EA		
0061	4116100000-N	904	SIGN ERECTION, RELOCATE TYPE **** (GROUND MOUNTED) (B)	5 EA		
0062	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U- CHANNEL	40 EA		
0063	4370000000-N	SP	GENERIC SIGNING ITEM DISPOSAL OF FLASHER SYSTEM	Lump Sum	L.S.	
0064	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	485 SF		
0065	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	192 SF		
0066	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	373 SF		
0067	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	6 EA		
0068	4430000000-N	1130	DRUMS	188 EA		
0069	4435000000-N	1135	CONES	82 EA		
0070	4445000000-E	1145	BARRICADES (TYPE III)	392 LF		
0071	4510000000-N	1190	LAW ENFORCEMENT	20 HR		

County : Macon

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0072	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	4,780	LF	
0073	4686000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	4,605	LF	
0074	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	680	LF	
0075	4697000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 120 MILS)	270	LF	
0076	4710000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	1,255	LF	
0077	4721000000-E	1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)	10	EA	
0078	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	87	EA	
0079	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	18,022	LF	
0080	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	957	LF	
0081	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	2,195	LF	
0082	4840000000-N	1205	PAINT PAVEMENT MARKING CHARACTER	4	EA	
0083	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	88	EA	
0084	4900000000-N	1251	PERMANENT RAISED PAVEMENT MARKERS	132	EA	
0085	4915000000-E	1264	7' U-CHANNEL POSTS	11	EA	
0086	4957000000-N	1264	OBJECT MARKERS (TYPE **) (1)	13	EA	
0087	5160000000-E	1409	ELECTRICAL DUCT, TYPE JA, SIZE ***** (2" HDPE)	1,229	LF	

County : Macon

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0088	5240000000-N	1411	ELECTRICAL JUNCTION BOXES ***** (STANDARD SIZE)	18	EA	
0089	5325600000-E	1510	6" WATER LINE	339	LF	
0090	5325800000-E	1510	8" WATER LINE	238	LF	
0091	5326000000-E	1510	10" WATER LINE	435	LF	
0092	5326200000-E	1510	12" WATER LINE	763	LF	
0093	5329000000-E	1510	DUCTILE IRON WATER PIPE FITTINGS	13,270	LB	
0094	5540000000-E	1515	6" VALVE	1	EA	
0095	5546000000-E	1515	8" VALVE	1	EA	
0096	5552000000-E	1515	10" VALVE	4	EA	
0097	5558000000-E	1515	12" VALVE	4	EA	
0098	5571000000-E	1515	*** TAPPING SLEEVE & VALVE (1")	12	EA	
0099	5648000000-N	1515	RELOCATE WATER METER	3	EA	
0100	5666000000-N	1515	FIRE HYDRANT	4	EA	
0101	5691300000-E	1520	8" SANITARY GRAVITY SEWER	2,804	LF	
0102	5768000000-N	1520	SANITARY SEWER CLEAN-OUT	3	EA	
0103	5768500000-E	1520	SEWER SERVICE LINE	114	LF	
0104	5775000000-E	1525	4' DIA UTILITY MANHOLE	19	EA	
0105	5781000000-E	1525	UTILITY MANHOLE WALL 4' DIA	35	LF	
0106	5800000000-E	1530	ABANDON 6" UTILITY PIPE	1,852	LF	
0107	5801000000-E	1530	ABANDON 8" UTILITY PIPE	1,252	LF	

County : Macon

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0108	5802000000-E	1530	ABANDON 10" UTILITY PIPE	506		LF
0109	5804000000-E	1530	ABANDON 12" UTILITY PIPE	342		LF
0110	5815500000-N	1530	REMOVE FIRE HYDRANT	3		EA
0111	5816000000-N	1530	ABANDON UTILITY MANHOLE	8		EA
0112	6000000000-E	1605	TEMPORARY SILT FENCE	6,005		LF
0113	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	505		TON
0114	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	610		TON
0115	6012000000-E	1610	SEDIMENT CONTROL STONE	925		TON
0116	6015000000-E	1615	TEMPORARY MULCHING	6.5		ACR
0117	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	400		LB
0118	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEED- ING	2		TON
0119	6024000000-E	1622	TEMPORARY SLOPE DRAINS	200		LF
0120	6030000000-E	1630	SILT EXCAVATION	1,630		CY
0121	6036000000-E	1631	MATTING FOR EROSION CONTROL	1,900		SY
0122	6038000000-E	SP	PERMANENT SOIL REINFORCEMENT MAT	1,200		SY
0123	6042000000-E	1632	1/4" HARDWARE CLOTH	2,940		LF
0124	6071012000-E	SP	COIR FIBER WATTLE	330		LF
0125	6071020000-E	SP	POLYACRYLAMIDE (PAM)	130		LB
0126	6071030000-E	1640	COIR FIBER BAFFLE	305		LF
0127	6084000000-E	1660	SEEDING & MULCHING	8		ACR

County : Macon

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0128	6087000000-E	1660	MOWING	6	ACR	
0129	6090000000-E	1661	SEED FOR REPAIR SEEDING	100	LB	
0130	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.25	TON	
0131	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	150	LB	
0132	6108000000-E	1665	FERTILIZER TOPDRESSING	4	TON	
0133	6114500000-N	1667	SPECIALIZED HAND MOWING	10	MHR	
0134	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	25	EA	
0135	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	5	EA	
0136	7948000000-N	1757	TRAFFIC SIGNAL REMOVAL	1	EA	

***** BEGIN SCHEDULE AA *****
 ***** (2 ALTERNATES) *****

0137	0043000000-N	226	GRADING	Lump Sum	L.S.	
AA1						
0138	1121000000-E	520	AGGREGATE BASE COURSE	8,900	TON	
AA1						
0139	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	2,920	TON	
AA1						
0140	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	2,930	TON	
AA1						
0141	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	320	TON	
AA1						

*** OR ***

0142	0043000000-N	226	GRADING	Lump Sum	L.S.	
AA2						
0143	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	4,790	TON	
AA2						
0144	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	3,270	TON	
AA2						

County : Macon

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0145 AA2	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	2,590 TON		
0146 AA2	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	530 TON		

***** END SCHEDULE AA *****

WALL ITEMS

0147	8802014000-E	SP	SOLDIER PILE RETAINING WALLS	2,560 SF		
0148	8802030000-E	454	SEGMENTAL GRAVITY RETAINING WALLS	1,690 SF		

1123/Sep13/Q144585.05/D547618216000/E148

Total Amount Of Bid For Entire Project :