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

CONTRACT AND

CONTRACT BONDS

FOR CONTRACT NO. C204159

WBS

2018CPT.10.07.10601.1, 2018CPT.10.07.10601.2, 2018CPT.10.07.20601.1, 2018CPT.10.07.20601.10, 2018CPT.10.07.20601.11, 2018CPT.10.07.20601.12, 2018CPT.10.07.20601.2, 2018CPT.10.07.20601.3, 2018CPT.10.07.20601.4, 2018CPT.10.07.20601.5, 2018CPT.10.07.20601.6, 2018CPT.10.07.20601.7, 2018CPT.10.07.20601.8, 2018CPT.10.07.20601.9 STATE FUNDED

COUNTY OFMECKLENBURGTHIS IS THEROADWAY CONTRACTROUTE NUMBERNC 51LOCATION7 SECTIONS OF NC-51 AND 11 SECTIONS OF SECONDARY ROADS.

CONTRACTORTHE LANE CONSTRUCTION CORPORATIONADDRESS90 FIELDSTONE COURTCHESHIRE, CT 06410

BIDS OPENEDAPRIL 17, 2018CONTRACT EXECUTION5/9/2018

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

PROPOSAL

DATE AND TIME OF BID OPENING: APRIL 17, 2018 AT 2:00 PM

CONTRACT ID C204159

WBS 2018CPT.10.07.10601.1, 2018CPT.10.07.10601.2, 2018CPT.10.07.20601.1, 2018CPT.10.07.20601.10, 2018CPT.10.07.20601.11, 2018CPT.10.07.20601.12, 2018CPT.10.07.20601.2, 2018CPT.10.07.20601.3, 2018CPT.10.07.20601.4, 2018CPT.10.07.20601.5, 2018CPT.10.07.20601.6, 2018CPT.10.07.20601.7, 2018CPT.10.07.20601.8, 2018CPT.10.07.20601.9

FEDERAL-AID NO.	STATE FUNDED
COUNTY	MECKLENBURG
T.I.P. NO.	
MILES	22.830
ROUTE NO.	NC 51
LOCATION	7 SECTIONS OF NC-51 AND 11 SECTIONS OF SECONDARY ROADS.

TYPE OF WORK MILLING, RESURFACING, AND SHOULDER RECONSTRUCTION.

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 <u>ROADWAY</u> PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

PROPOSAL FOR THE CONSTRUCTION OF

CONTRACT No. C204159 IN MECKLENBURG COUNTY, NORTH CAROLINA

Date

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DEPARTMENT OF TRANSPORTATION,

RALEIGH, NORTH CAROLINA

The Bidder has carefully examined the location of the proposed work to be known as Contract No. C204159 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. C204159 in Mecklenburg 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. 3/19/2018 -81B6038A47A442

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PROJECT SPECIAL PROVISIONS

GENERAL

CONTRACT TIME AND LIQUIDATED DAMAGES:

(7-1-95) (Rev. 12-18-07)

The date of availability for this contract is **June 1, 2018**.

The completion date for this contract is **September 3, 2019**.

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 **One Thousand Five Hundred Dollars (\$ 1,500.00**) per calendar day.

INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES: (2-20-07) 108 SPI 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 **the following Maps** during the following time restrictions:

DAY AND TIME RESTRICTIONS

<u>Maps #1 thru #7, #9, #17, & #18</u> Monday thru Friday 6:00 a.m. to 8:00 p.m.

Maps #8, # 10 thru #16, & #19 thru #23 Monday thru Friday 6:00 a.m. to 9:00 a.m. 4:00 p.m. to 8:00 p.m.

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

HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS

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

SP1 G10 A

108

- For New Year's Day, between the hours of 6:00 a.m. December 31st and 8:00 p.m. January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until 8:00 p.m. the following Tuesday.
- 3. For **Easter**, between the hours of **6:00 a.m.** Thursday and **8:00 p.m.** Monday.
- 4. For **Memorial Day**, between the hours of **6:00 a.m.** Friday and **8:00 p.m.** Tuesday.
- 5. For **Independence Day**, between the hours of **6:00 a.m.** the day before Independence Day and **8:00 p.m.** the day after Independence Day.

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

- 6. For Labor Day, between the hours of 6:00 a.m. Friday and 8:00 p.m. Tuesday.
- 7. For **Thanksgiving**, between the hours of **6:00 a.m.** Tuesday and **8:00 p.m.** Monday.
- 8. For **Christmas**, between the hours of **6:00 a.m.** the Friday before the week of Christmas Day and **8:00 p.m.** the following Tuesday after the week of Christmas Day.
- 9. For Spring and Fall Events occurring at Charlotte Motor Speedway and/or Z Max Dragway between the hours of 6:00 a.m. the Wednesday before the first race and 8:00 p.m. the Tuesday after the last race.
- 10. For any event at Bank of America Stadium, occurring in Charlotte, between three (3) hours before the start and three (3) hours after the end of the Event.
- 11. For any event at Spectrum Center, occurring in Charlotte, between three (3) hours before the start and three (3) hours after the end of the Event.
- 12. For any event at BB&T BallPark, occurring in Charlotte, between three (3) hours before the start and three (3) hours after the end of the Event.
- 13. For any event at the US National Whitewater Center, occurring at Charlotte between three (3) hours before the start and three (3) hours after the end of the Event.
- 14. For any event at Metrolina Expo, occurring at Charlotte between three (3) hours before the start and three (3) hours after the end of the Event.
- 15. For any event at Bojangles Coliseum/Ovens Auditorium, occurring at Charlotte between three (3) hours before the start and three (3) hours after the end of the Event.

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.

PROSECUTION OF WORK:

(7-1-95) (Rev. 8-21-12)

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

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In the event that the Contractor's operations are suspended in violation of the above provisions, the sum of **\$ 1,500.00** will be charged the Contractor for each and every calendar day that such suspension takes place. The said amount is hereby agreed upon as liquidated damages due to extra engineering and maintenance costs and due to increased public hazard resulting from a suspension of the work. Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to failure to complete the work on time.

RAILROAD GRADE CROSSING:

(7-1-95) (Rev. 1-15-13)

Provide at least 2 weeks advance notice to the railroad's local Roadmaster or Track Supervisor when the use of slow-moving or stopped equipment is required over at-grade railroad crossings.

107-9

MAJOR CONTRACT ITEMS:

(2-19-02)

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

104

Line # Description

- 14 Asphalt Concrete Surface Course, Type S9.5 C
- 17 Patching Existing Pavement

SP1 G15R

SP1 G28

SP1 G17R

C204159 2018CPT.10.07.10601.1, etc. G-4

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
28 thru 35, 42 thru 43	Long-Life Pavement Markings
44	Permanent Pavement Markers
46 thru 50	Erosion Control

FUEL PRICE ADJUSTMENT:

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

109-8

SP1 G43

Revise the 2018 Standard Specifications as follows:

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

The base index price for DIESEL #2 FUEL is **\$ 2.0070** 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. 5-16-17)

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:

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Fiscal Year		Progress (% of Dollar Value)	
2018	(7/01/17 - 6/30/18)	10% of Total Amount Bid	
2019	(7/01/18 - 6/30/19)	83% of Total Amount Bid	
2020	(7/01/19 - 6/30/20)	7% 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. 1-17-17)	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 <u>not</u> be used to meet either the MBE or WBE goal. No submittal of a Letter of Intent is required, unless the additional participation is used for banking purposes.

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

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

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

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

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

SP1 G58

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

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

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

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

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

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

Forms and Websites Referenced in this Provision

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

DBE-IS *Subcontractor Payment Information* - Form for reporting the payments made to all MBE/WBE firms working on the project. This form is for paper bid projects only. 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%20Notif ication%20Form.pdf

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

http://connect.ncdot.gov/letting/LetCentral/Letter%20of%20Intent%20to%20Perform%20as%20 a%20Subcontractor.pdf

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

MBE and WBE Goal

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

- (A) Minority Business Enterprises 4.0 %
 - (1) *If the MBE goal is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that MBEs participate in at least the percent of the contract as set forth above as the MBE goal.
 - (2) *If the MBE goal is zero*, the Contractor shall make an effort to recruit and use MBEs during the performance of the contract. Any MBE participation obtained shall be reported to the Department.
- (B) Women Business Enterprises **5.0** %
 - (1) *If the WBE goal is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that WBEs participate in at least the percent of the contract as set forth above as the WBE goal.
 - (2) *If the WBE goal is zero*, the Contractor shall make an effort to recruit and use WBEs during the performance of the contract. Any WBE participation obtained shall be reported to the Department.

Directory of Transportation Firms (Directory)

Real-time information is available about firms doing business with the Department and firms that are certified through NCUCP in the Directory of Transportation Firms. Only firms identified in the Directory as MBE and WBE certified shall be used to meet the MBE and WBE goals respectively. The Directory can be found at the following link. https://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 MBE goal and the WBE goal will be considered committed, even though the listing shall include both committed MBE/WBE subcontractors and additional MBE/WBE subcontractors. Any additional MBE/WBE subcontractor participation above the goal for which letters of intent are received 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 either the MBE or WBE goal.

(B) Paper Bids

- (1) If either the MBE or 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. <u>Blank</u> <u>forms will not be deemed to represent zero participation.</u> 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 corresponding goal.
- (2) If either the MBE or WBE goal is zero, entries on the Listing of MBE and WBE Subcontractors are not required for the zero goal, however any MBE or WBE participation that is achieved during the project shall be reported in accordance with requirements contained elsewhere in the special provision.

MBE or WBE Prime Contractor

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

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

MBE/WBE prime contractors shall also follow Sections A and B listed under *Listing of MBE and 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 MBE and WBE goals of the contract, indicating the bidder's commitment to use the MBE/WBE in the contract. This documentation shall be submitted on the Department's form titled *Letter of Intent*.

The documentation shall be received in the office of the 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 MBE and WBE goals, or if the form is incomplete (i.e. both signatures are not present), the MBE/WBE participation will not count toward meeting the MBE/WBE goal. If the lack of this participation drops the commitment below either the MBE or WBE goal, the Contractor shall submit evidence of good faith efforts for the goal not met, completed in its entirety, to the 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 by Letter of Intent exceeds the algebraic sum of the MBE or 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 firms to meet the contract goal, as part of the good faith effort, the Department will consider allowing the bidder to withdraw funds to meet the MBE goal as long as there are adequate funds available from the bidder's MBE bank account.

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

Submission of Good Faith Effort

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

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 9 copies of this information shall be received under the same time constraints above.

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

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

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

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

(A) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising, written notices, use of verifiable electronic means through the use of the NCDOT Directory of Transportation Firms) the interest of all certified MBEs/WBEs 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 MBE and WBE goals will be achieved.
 - (1) Where appropriate, break out contract work items into economically feasible units to facilitate MBE/WBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
 - (2) Negotiate with subcontractors to assume part of the responsibility to meet the contract MBE/WBE goals when the work to be sublet includes potential for MBE/WBE participation (2nd and 3rd tier subcontractors).
- (C) Providing interested 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 contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using MBEs/WBEs is not in itself sufficient reason for a bidder's failure to meet the contract MBE or WBE goals, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidding contractors are not, however, required to accept higher quotes from MBEs/WBEs if the price difference is excessive or unreasonable.
- (E) Not rejecting MBEs/WBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associates and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
- (F) Making efforts to assist interested MBEs/WBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or bidder.
- (G) Making efforts to assist interested MBEs/WBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

- (H) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; Federal, State, and local minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of MBEs/WBEs. Contact within 7 days from the bid opening the Business Opportunity and Work Force Development Unit at DBE@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 MBE and WBE goal.

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

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

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

Non-Good Faith Appeal

The State Contractual Services Engineer will notify the contractor verbally and in writing of nongood 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 MBE/WBE Goals

(A) Participation

The total dollar value of the participation by a committed MBE/WBE will be counted toward the contract goal requirements. The total dollar value of participation by

a committed MBE/WBE will be based upon the value of work actually performed by the MBE/WBE and the actual payments to MBE/WBE firms by the Contractor.

(B) Joint Checks

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

(C) Subcontracts (Non-Trucking)

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

(D) Joint Venture

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

(E) Suppliers

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

(F) Manufacturers and Regular Dealers

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

(1) The fees or commissions charged by a MBE/WBE firm for providing a *bona fide* service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, provided the fees or commissions are determined to be

reasonable and not excessive as compared with fees and commissions customarily allowed for similar services.

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

Commercially Useful Function

(A) MBE/WBE Utilization

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

(B) MBE/WBE Utilization in Trucking

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

- (1) The MBE/WBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there shall not be a contrived arrangement for the purpose of meeting the MBE or WBE goal.
- (2) The MBE/WBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- (3) The MBE/WBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
- (4) The MBE may subcontract the work to another MBE firm, including an owner-operator who is certified as a MBE. The same holds true that a WBE

may subcontract the work to another WBE firm, including an owner-operator who is certified as a WBE. When this occurs, the MBE or WBE who subcontracts work receives credit for the total value of the transportation services the subcontracted MBE or WBE provides on the contract. It should be noted that every effort shall be made by MBE and WBE contractors to subcontract to the same certification (i.e., MBEs to MBEs and WBEs to WBEs), in order to fulfill the goal requirement. This, however, may not always be possible due to the limitation of firms in the area. If the MBE or WBE firm shows a good faith effort has been made to reach out to similarly certified transportation service providers and there is no interest or availability, and they can get assistance from other certified providers, the Engineer will not hold the prime liable for meeting the goal.

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

MBE/WBE Replacement

When a Contractor has relied on a commitment to a MBE or WBE firm (or an approved substitute MBE or WBE firm) to meet all or part of a contract goal requirement, the contractor shall not terminate the MBE/WBE for convenience. This includes, but is not limited to, instances in which the Contractor seeks to perform the work of the terminated subcontractor with another MBE/WBE subcontractor, a non-MBE/WBE subcontractor, or with the Contractor's own forces or those of an affiliate. A MBE/WBE may only be terminated after receiving the Engineer's written approval based upon a finding of good cause for the termination. The prime contractor must give the MBE/WBE firm five (5) calendar days to respond to the prime contractor's notice of termination 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 is terminated for good cause as stated above, an additional MBE that was submitted at the time of bid may be used to fulfill the MBE commitment. The same holds true if a committed WBE is terminated for good cause, an additional WBE that was submitted at the time of bid may be used to fulfill the WBE goal. A good faith effort will only be required for removing a committed MBE/WBE if there were no additional MBEs/WBEs submitted at the time of bid to cover the same amount of work as the MBE/WBE that was terminated.

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

- (1) Copies of written notification to MBEs/WBEs that their interest is solicited in contracting the work defaulted by the previous MBE/WBE or in subcontracting other items of work in the contract.
- (2) Efforts to negotiate with MBEs/WBEs for specific subbids including, at a minimum:
 - (a) The names, addresses, and telephone numbers of MBEs/WBEs who were contacted.
 - (b) A description of the information provided to MBEs/WBEs regarding the plans and specifications for portions of the work to be performed.
- (3) A list of reasons why MBE/WBE quotes were not accepted.
- (4) Efforts made to assist the MBEs/WBEs contacted, if needed, in obtaining bonding or insurance required by the Contractor.
- (B) Decertification Replacement
 - (1) When a committed MBE/WBE is decertified by the Department after the SAF (*Subcontract Approval Form*) has been received by the Department, the Department will not require the Contractor to solicit replacement MBE/WBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement.
 - (2) When a committed MBE/WBE is decertified prior to the Department receiving the SAF (*Subcontract Approval Form*) for the named MBE/WBE firm, the Contractor

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

Changes in the Work

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

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

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

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

Reports and Documentation

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

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

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

Reporting Minority and Women Business Enterprise Participation

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

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

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

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

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

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.

U-5762 (Intersection Improvements at NC-160 and Hamilton Road) is located adjacent to Map #20 and anticipated for a March 21, 2018 Division Let.

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.

OUTSOURCING OUTSIDE THE USA:

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

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

SP1 G150

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 <u>http://www.ncdot.gov/doh/operations/dp_chief_eng/roadside/fieldops/downloads/</u><u>Files/TurbidityReductionOptionSheet.pdf</u> 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

SHOULDER RECONSTRUCTION PER SHOULDER MILE: (1-18-00) (Rev. 8-21-12) 560

SP1 R07BR

Description

This work consists of reconstructing each shoulder (including median shoulders as applicable) in accordance with Standard Drawing No. 560.01 and 560.02 of the 2018 Roadway Standard Drawings except that the rate of slope and width will be as shown on typical section, or to the existing shoulder point, whichever is nearer, as long as the desired typical is achieved, and when completed, seeding and mulching. This work shall be performed immediately after the resurfacing operations are complete as directed by the Engineer.

Materials

The Contractor shall furnish all earth material necessary for the construction of the shoulders in accordance with Section 1019 of the *2018 Standard Specifications*. All soil is subject to test and acceptance or rejection by the Engineer.

The Contractor will have the option of using Aggregate Shoulder Borrow (ASB) which meets the following gradation on maps **#1**, **#2**, **#3**, **#4**.

Sieve	Percent Passing	
1 1/2"	100	
1/2"	55 - 95	
#4	35 - 74	

Construction Methods

Obtain material from within the project limits or approved borrow source. Prior to adding borrow material, the existing shoulder shall be scarified to provide the proper bond and shall be compacted to the satisfaction of the Engineer.

Any excess material generated by the shoulder reconstruction shall be disposed of by the Contractor in an approved disposal site.

Measurement and Payment

Shoulder Reconstruction will be measured and paid as the actual number of miles of shoulders that have been reconstructed. Measurement will be made along the surface of each shoulder to the nearest 0.01 of a mile. Such price will include disposing of any excess material in an approved disposal site, **seeding and mulching** and for all labor, tools, equipment, and incidentals necessary to complete the work. Where ASB is used, seeding and mulching will not be required.

Borrow Excavation will be paid in accordance with Section 230 of the 2018 Standard Specifications for earth material furnished by the Contractor. The requirements of Article 104-5

of the 2018 Standard Specifications pertaining to revised contract prices for overrunning minor items will not apply to the item of *Borrow Excavation*. If ASB is used for borrow, a unit weight of 140 pounds per cubic foot will be used to convert the weight of ASB to cubic yards.

Incidental Stone Base will be measured and paid as provided in Article 545-6 of the 2018 Standard Specifications. If ASB is used for Incidental Stone Base, payment will be made for borrow as referenced above.

Payment will be made under:

Pay Item	Pay Unit
Shoulder Reconstruction	Shoulder Mile
Borrow Excavation	Cubic Yard

INCIDENTAL STONE BASE:

(7-1-95) (Rev.8-21-12)

545

SP5 R28R

Description

Place incidental stone base on driveways, mailboxes, etc. immediately after paving and do not have the paving operations exceed stone base placement by more than one week without written permission of the Engineer.

Materials and Construction

Provide and place incidental stone base in accordance with Section 545 of the 2018 Standard Specifications.

Measurement and Payment

Incidental Stone Base will be measured and paid in accordance with Article 545-6 of the 2018 Standard Specifications.

SHOULDER WEDGE:

(9-20-11) (Rev. 8-21-12)

610

SP6 R03R

Revise the 2018 Standard Specifications as follows:

Page 6-21, Article 610-8, SPREADING AND FINISHING, add the following after line 39:

Attach a device, mounted on screed of paving equipment, capable of constructing a shoulder wedge with an angle of 30 degrees plus or minus 4 degrees along the outside edge of the roadway, measured from the horizontal plane in place after final compaction on the final surface course. Use an approved mechanical device which will form the asphalt mixture to produce a wedge with uniform texture, shape and density while automatically adjusting to varying heights.

Payment for use of this device will be incidental to the other pay items in the contract.

545

PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:

(11-21-00)

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

620

The base price index for asphalt binder for plant mix is **\$ 429.00** per ton.

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

FINAL SURFACE TESTING NOT REQUIRED:

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

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

ASPHALT SURFACE TREATMENT AGGREGATE TYPE AND APPLICATION RATES:

(02-13-15) (Rev	(02-13-15) (Rev 01-1-18) 660				SP06 R05	
MAP #	TYPE OF SEAL	LAYER	AGGREGATE TYPE	AGGREGATE TARGET RATES ^A (LBS/SY)	EMULSION TARGET RATES ^{B,C,D} (GAL/SY)	
1,9,10,11, 12,13,14, 19	Mat Coat	1	#67	25	0.35	

A. Aggregate Target Rates have +/- 2.0 lbs/sy tolerance limit.

B. Emulsion Target Rates have +/- 0.05 gal/sy tolerance limit.

C. Grades of emulsion shall be CRS-2L or CRS-2P.

D. Application temperatures shall be 160-170°F.

Contractor shall adjust aggregate and emulsion rates as necessary based on the existing surface, roadway conditions, weather conditions, and as directed by the Engineer. When the Engineer requires aggregate to be applied at rates above the tolerance limit, the additional aggregate above the limit will be paid in accordance with Article 104-7 of the *Standard Specifications*.

RESURFACING EXISTING BRIDGES (with Milling):

(3-20-12) (Rev. 8-21-12)

SP6 R61BR

The Contractor's attention is directed to the fact that he will be required to mill and resurface the bridges on this project if directed by the Engineer.

Place the surface so as to follow a grade line set by the Engineer with the minimum thickness as shown on the sketch herein or as directed by the Engineer. State Forces will make all necessary repairs to the bridge floors prior to the time that the Contractor places the proposed surfacing. Give the Engineer at least 15 days' notice prior to the expected time to begin operations so that State Forces will have sufficient time to complete their work.

SP6 R25

SP6 R45

At all bridges that are not to be resurfaced, mill a taper into existing pavement for a length of 25 feet per inch of final surface. A temporary asphalt wedge will be required immediately after milling to ensure smooth travel if the final layer of surface course is not placed on the same day as milling.

ASPHALT CONCRETE PLANT MIX PAVEMENTS:

(2-20-18)

610, 1012

SP6 R65

Revise the 2018 Standard Specifications as follows:

Page 6-17, Table 610-1, MIXING TEMPERATURE AT THE ASPHALT PLANT, replace with the following:

TABLE 610-1			
MIXING TEMPERATURE AT THE ASPHALT PLANT			
Binder Grade	JMF Temperature		
PG 58-28; PG 64-22	250 - 290°F		
PG 76-22	300 - 325°F		

Page 6-17, Subarticle 610-3(C), Job Mix Formula (JMF), lines 38-39, delete the fourth paragraph.

Page 6-18, Subarticle 610-3(C), Job Mix Formula (JMF), line 12, replace "SF9.5A" with "S9.5B".

Page 6-18, Table 610-3, MIX DESIGN CRITERIA, replace with the following:

	TABLE 610-3 MIX DESIGN CRITERIA								
Mix Type	Design ESALs millions ^A	Binder PG Grade ^B	Compaction Levels Gmm @		Max. Rut Depth	Volumetric Properties			
						VMA	VTM	VFA	%Gmm
			Nini	Ndes	(mm)	% Min.	%	MinMax.	@ Nini
S4.75A	< 1	64 - 22	6	50	11.5	16.0	4.0 - 6.0	65 - 80	≤ 91.5
S9.5B	0 - 3	64 - 22	6	50	9.5	16.0	3.0 - 5.0	70 - 80	≤91.5
S9.5C	3 - 30	64 - 22	7	65	6.5	15.5	3.0 - 5.0	65 - 78	≤ 90.5
S9.5D	> 30	76 - 22	8	100	4.5	15.5	3.0 - 5.0	65 - 78	≤ 90.0
I19.0C	ALL	64 - 22	7	65	-	13.5	3.0 - 5.0	65 - 78	≤ 90.5
B25.0C	ALL	64 - 22	7	65	-	12.5	3.0 - 5.0	65 - 78	≤ 90.5
	Design Parameter					Design Criteria			
All Mix	Dust to Binder Ratio (P _{0.075} / P _{be})					0.6 - 1.4 ^C			
Types	Tensile Strength Ratio (TSR) ^D				85% Min. ^E				

A. Based on 20 year design traffic.

B. Volumetric Properties based on specimens compacted to N_{des} as modified by the Department.

C. Dust to Binder Ratio $(P_{0.075} / P_{be})$ for Type S4.75A is 1.0 - 2.0.

D. NCDOT-T-283 (No Freeze-Thaw cycle required).

E. TSR for Type S4.75A & B25.0C mixes is 80% minimum.

Page 6-19, Table 610-5, BINDER GRADE REQUIREMENTS (BASED ON RBR%), replace with the following:

Mix	Гуре	%RBR≤20%	$21\% \leq \% RBR \leq 30\%$	%RBR > 30%
S4.7 S9.5B, I19.0C,	S9.5C,	PG 64-22	PG 64-22 ^A	PG 58-28
S9.5D,	OGFC	PG 76-22 ^B	n/a	n/a

Page 6-20, Table 610-6, PLACEMENT TEMPERATURES FOR ASPHALT, replace with the following:

TABLE 610-6 PLACEMENT TEMPERATURES FOR ASPHALT						
Asphalt Concrete Mix Type	Asphalt Concrete Mix Type Minimum Surface and Air Temperature					
B25.0C	35°F					
I19.0C	35°F					
S4.75A, S9.5B, S9.5C	40°F ^A					
S9.5D	50°F					

A. If the mix contains any amount of RAS, The virgin binder shall be PG 58-28.

Page 6-23, Table 610-7, DENSITY REQUIREMENTS, replace with the following:

TABLE 610-7 DENSITY REQUIREMENTS				
Mix Type	Minimum % G _{mm} (Maximum Specific Gravity)			
S4.75A	85.0 ^A			
S9.5B	90.0			
S9.5C, S9.5D, I19.0C, B25.0C	92.0			

A. Compaction to the above specified density will be required when the S4.75A mix is applied at a rate of 100 lbs/sy or higher.

Page 6-32, Article 610-16 MEASUREMENT AND PAYMENT, replace with the following:

Pay Item	Pay Unit
Asphalt Concrete Base Course, Type B25.0C	Ton
Asphalt Concrete Intermediate Course, Type I19.0C	Ton
Asphalt Concrete Surface Course, Type S4.75A	Ton
Asphalt Concrete Surface Course, Type S9.5B	Ton
Asphalt Concrete Surface Course, Type S9.5C	Ton
Asphalt Concrete Surface Course, Type S9.5D	Ton

Page 10-30, Table 1012-1, AGGREGATE CONSENSUS PROPERTIES, replace with the	
following:	

Міх Туре	Coarse Aggregate Angularity ^B	Fine Aggregate Angularity % Minimum	Sand Equivalent % Minimum	Flat and Elongated 5 : 1 Ratio % Maximum
Test Method	ASTM D5821	AASHTO T 304	AASHTO T 176	ASTM D4791
S4.75A; S9.5B	75 / -	40	40	-
\$9.5C; 119.0C; B25.0C	95 / 90	45	45	10
\$9.5D	100 / 100	45	50	10
OGFC	100 / 100	45	45	10
UBWC	100 / 85	45	45	10

A. Requirements apply to the design aggregate blend.

B. 95 / 90 denotes that 95% of the coarse aggregate has one fractured face and 90% has 2 or more fractured faces.

610

PAVING INTERSECTIONS:

(7-1-95) (Rev. 8-21-12)

Condition, prime, and surface all unpaved intersections back from the edge of the pavement on the main line of the project a minimum distance of 50 feet. The pavement placed in the intersections shall be of the same material and thickness placed on the mainline of the project.

Resurface all paved intersections back to the ends of the radii, or as directed by the Engineer.

Widen the pavement on curves as directed by the Engineer.

PAVING DRIVEWAYS AND MAILBOX TURNOUTS:

Condition, prime, and surface all driveway and mailbox turnouts as directed by the Engineer. Place pavement on driveway and mailbox turnouts of the same material as used on the main line and in depths directed by the Engineer. Widen the pavement on curves as directed by the Engineer.

TRENCHING FOR BASE COURSE:

(7-1-95) (Rev.1-19-16)

Perform all trenching necessary to place the asphalt concrete base course widening in accordance with the typical sections, at locations shown on the sketch maps, and as directed by the Engineer.

610

Perform the trenching for the base course on the same day that the base course is to be placed. If the base course cannot be placed on the same day the trench section is excavated, backfill the trench with earth material and compact it to the satisfaction of the Engineer. Once the trench is open, perform backfilling and re-opening of the trench at no cost to the Department.

SP6 R67BR

SP6 R70BR

SP6 R79AR

The Contractor will be restricted to widening one side of the project at a time unless otherwise permitted by the Engineer. In widening, operate equipment and conduct operations in the same direction as the flow of traffic.

Compact the asphalt concrete base course in the widened areas using means and methods acceptable to the Engineer. Density testing will be performed in accordance with Section 10.3.4 of the QMS Manual.

Place the excavated material from trenching operation on the adjacent shoulder area as directed by the Engineer. Cut adequate weep holes in the excavated material to provide for adequate drainage as directed by the Engineer. Remove all excavated material from all drives to provide ingress and egress to abutting properties and from in front of mailboxes and paper boxes. Saw a neat edge and remove all asphalt and/or concrete driveways, and existing asphalt widening, as directed by the Engineer, to the width of the widening and dispose of any excavated concrete or asphalt materials. Properly reconnect driveways.

Upon completion of the paving operation, backfill the trench to the satisfaction of the Engineer. Properly dispose of any excess material remaining after this operation.

No direct payment will be made for trenching, sawing, and removal of driveways, depositing material on shoulder area, backfilling trench, or removal of spoil material, as the cost of this work shall be included in the bid unit price per ton for Asphalt Concrete Base Course, Type .

ASPHALT CONCRETE SURFACE COURSE, TYPE xxx (Leveling Course):

(7-1-95) (Rev. 8-21-12)

SP6 R85R

Place a leveling course of Asphalt Concrete Surface Course, Type ____ at locations shown on the sketch maps and as directed by the Engineer. The rate of this leveling course is not established but will be determined by allowing the screed to drag the high points of the section. It is anticipated that some map numbers will be leveled from beginning to end while others may only require a leveling course for short sections.

The Asphalt Concrete Surface Course, Type __ (Leveling Course) shall meet the requirements of Section 610 of the 2018 Standard Specifications except payment will be made at the contract unit price per ton for Asphalt Concrete Surface Course, Type (Leveling Course).

PATCHING EXISTING PAVEMENT:

(1-15-02) (Rev. 3-11-18)

610

SP6 R88R

Description

The Contractor's attention is directed to the fact that there are areas of existing pavement on this project that will require repair prior to resurfacing. Patch the areas that, in the opinion of the Engineer, need repairing. The areas to be patched will be delineated by the Engineer prior to the Contractor performing repairs.

Materials

The patching consists of Asphalt Concrete Base Course, Asphalt Concrete Intermediate Course, Asphalt Concrete Surface Course, or a combination of base, binder and surface course.

Construction Methods

Remove existing pavement at locations directed by the Engineer in accordance with Section 250 of the 2018 Standard Specifications.

Place Asphalt Concrete Base Course, in lifts not exceeding 5.5 inches. Utilize compaction equipment suitable for compacting patches as small as 3.5 feet by 6 feet on each lift. Use an approved compaction pattern to achieve proper compaction. If patched pavement is to be open to traffic for more than 48 hours prior to overlay, use Asphalt Surface Course in the top 1.5 inches of the patch.

Schedule operations so that all areas where pavement has been removed will be repaired on the same day of the pavement removal and all lanes of traffic restored.

Measurement and Payment

Patching Existing Pavement will be measured and paid as the actual number of tons of asphalt plant mix complete in place that has been used to make completed and accepted repairs. The asphalt plant mixed material will be measured by being weighed in trucks on certified platform scales or other certified weighing devices. The above price and payment will be full compensation for all work covered by this provision, including but not limited to removal and disposal of all types of pavement; furnishing and applying tack coat; furnishing, placing, and compacting of asphalt plant mix; furnishing of asphalt binder for the asphalt plant mix; and furnishing scales.

Any provisions included in the contract that provides for adjustments in compensation due to variations in the price of asphalt binder will not be applicable to payment for the work covered by this provision.

Payment will be made under:

Pay Item	Pay Unit
Patching Existing Pavement	Ton

ADJUSTMENT OF MANHOLES, METER BOXES, AND VALVE BOXES:

(7-1-95) (Rev. 8-21-12)

The Contractor's attention is directed to Article 858-3 of the 2018 Standard Specifications. Cast iron or steel fittings will not be permitted for the adjustment of manholes, meter boxes, and valve boxes on this project.

HIGH STRENGTH CONCRETE FOR DRIVEWAYS:

(11-21-00) (Rev. 1-17-12)

Use high early strength concrete for all driveways shown in the plans and as directed by the Engineer. Provide high early strength concrete that meets the requirements of Article 1000-5 of the 2018 Standard Specifications.

Measurement and payment will be in accordance with Section 848 of the 2018 Standard Specifications.

SP10 R02

SP8 R97R

C204159 2018CPT.10.07.10601.1, etc. **R-9**

EROSION AND STORMWATER CONTROL FOR SHOULDER CONSTRUCTION AND RECONSTRUCTION:

(11-16-10) (Rev. 8-21-12)

105-16, 225-2, Division 16

SP16 R03R

Land disturbing operations associated with shoulder construction/reconstruction may require erosion and sediment control/stormwater measure installation. National Pollutant Discharge Elimination System (NPDES) inspection and reporting may be required.

Erosion control measures shall be installed per the erosion control detail in any area where the vegetated buffer between the disturbed area and surface waters (streams, wetlands, or open waters) or drainage inlet is less than 10 feet. The Engineer may reduce the vegetated buffer threshold for this requirement to a value between 5 and 10 feet. Erosion control measures shall be spot checked every 14 days until permanent vegetative establishment.

In areas where shoulder construction/reconstruction includes disturbance or grading on the front slope or to the toe of fill, relocating ditch line or backslope, or removing vegetation from the ditch line or swale, NPDES inspection and monitoring are required every 14 days or within 24 hours of a rainfall event of 0.5 inch or greater. Maintain daily rainfall records. Install erosion control measures per detail.

In areas where the vegetated buffer is less than 10 feet between the disturbed area and waters of the State classified as High Quality Water (HQW), Outstanding Resource Water (ORW), Critical Areas, or Unique Wetlands, NPDES inspection and monitoring are required every 14 days or within 24 hours of a rainfall event of 0.5" or greater. The Engineer may reduce the vegetated buffer threshold for this requirement to a value between 5 and 10 feet. The plans or provisions will indicate the presence of these water classifications. Maintain daily rainfall records. Install erosion control measures per detail.

Land disturbances hardened with aggregate materials receiving sheet flow are considered non-erodible.

Sites that require lengthy sections of silt fence may substitute with rapid permanent seeding and mulching as directed by the Engineer.

NPDES documentation shall be performed by a Level II Erosion and Sediment Control/Stormwater certificate holder.

Materials used for erosion control will be measured and paid as stated in the contract.

Z-2

<u>STANDARD SPECIAL PROVISION</u> <u>AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS</u>

(5-20-08)

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)

Seed shall be sampled and tested by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory. When said samples are collected, the vendor shall supply an independent laboratory report for each lot to be tested. Results from seed so sampled shall be final. Seed not meeting the specifications shall be rejected by the Department of Transportation and shall not be delivered to North Carolina Department of Transportation warehouses. If seed has been delivered it shall be available for pickup and replacement at the supplier's expense.

Any re-labeling required by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory, that would cause the label to reflect as otherwise specified herein shall be rejected by the North Carolina Department of Transportation.

Seed shall be free from seeds of the noxious weeds Johnsongrass, Balloonvine, Jimsonweed, Witchweed, Itchgrass, Serrated Tussock, Showy Crotalaria, Smooth Crotalaria, Sicklepod, Sandbur, Wild Onion, and Wild Garlic. Seed shall not be labeled with the above weed species on the seed analysis label. Tolerances as applied by the Association of Official Seed Analysts will NOT be allowed for the above noxious weeds except for Wild Onion and Wild Garlic.

Tolerances established by the Association of Official Seed Analysts will generally be recognized. However, for the purpose of figuring pure live seed, the found pure seed and found germination percentages as reported by the North Carolina Department of Agriculture and Consumer Services, Seed Testing Laboratory will be used. Allowances, as established by the NCDOT, will be recognized for minimum pure live seed as listed on the following pages.

The specifications for restricted noxious weed seed refers to the number per pound as follows:

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

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not contain more than 2% other crop seed nor more than 1% total weed seed. The germination rate as tested by the North Carolina Department of Agriculture shall not fall below 70%, which includes both dormant and hard seed. Seed shall be labeled with not more than 7%, 5% or 2% inert matter (according to above specifications), 2% other crop seed and 1% total weed seed.

Exceptions may be made for minimum pure live seed allowances when cases of seed variety shortages are verified. Pure live seed percentages will be applied in a verified shortage situation. Those purchase orders of deficient seed lots will be credited with the percentage that the seed is deficient.

FURTHER SPECIFICATIONS FOR EACH SEED GROUP ARE GIVEN BELOW:

Minimum 85% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 83% pure live seed will not be approved.

Sericea Lespedeza Oats (seeds)

Minimum 80% pure live seed; maximum 1% total weed seed; maximum 2% total other crop; maximum 144 restricted noxious weed seed per pound. Seed less than 78% pure live seed will not be approved.

Tall Fescue (all approved varieties) Kobe Lespedeza Korean Lespedeza Weeping Lovegrass Carpetgrass Bermudagrass Browntop Millet German Millet – Strain R Clover – Red/White/Crimson

Minimum 78% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 76% pure live seed will not be approved.

Common or Sweet Sundangrass

Minimum 76% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 restricted noxious weed seed per pound. Seed less than 74% pure live seed will not be approved.

Rye (grain; all varieties) Kentucky Bluegrass (all approved varieties) Hard Fescue (all approved varieties) Shrub (bicolor) Lespedeza

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 144 noxious weed seed per pound. Seed less than 70% pure live seed will not be approved.

Centipedegrass Crownvetch Pensacola Bahiagrass Creeping Red Fescue Japanese Millet Reed Canary Grass Zoysia Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 5% inert matter; maximum 144 restricted noxious weed seed per pound.

Barnyard Grass Big Bluestem Little Bluestem Bristly Locust Birdsfoot Trefoil Indiangrass Orchardgrass Switchgrass Yellow Blossom Sweet Clover

ERRATA

(2-12-18)

Revise the 2018 Standard Specifications as follows:

Division 7

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

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

Division 10

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

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

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

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

Z-4

PLANT AND PEST QUARANTINES

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

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

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.

Z-04a

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.

ON-THE-JOB TRAINING

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

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.

Z-10

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.

PM-1



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12/8/2017

THERMOPLASTIC PAVEMENT MARKING MATERIAL (HRM):

1-26-2017 (Rev 1-16-18)

This work shall consist of applying NCDOT approved thermoplastic pavement marking material with highly reflective media on asphalt pavements in accordance with Section 1205 of the *2018 Standard Specifications*.

Page 12-13, Article 1205-10 MEASUREMENT AND PAYMENT, add the following:

Thermoplastic Pavement Marking Lines, ", mils (Highly Reflective Media) will be measured and paid as the actual number of linear feet of pavement marking lines that have been satisfactorily place and accepted. The quantity of solid lines will be the summation of the linear feet of solid line measured end-to-end of the line. The quantity of skip or broken lines will be the summation of the linear feet derived by multiplying the nominal length of a line by the number of marking lines satisfactorily placed.

Payment will be made under:

Pay Item Thermoplastic Pavement Marking Lines, ", mils (Highly Reflective Media) **Pay Unit** Linear Foot

TC-1 WORK ZONE TRAFFIC CONTROL GENERAL REOUIREMENTS

TEMPORARY TRAFFIC CONTROL (TTC):

(7-16-13) (Rev. 1-16-18)

Maintain traffic in accordance with Divisions 10, 11 and 12 of the 2018 Standard Specifications and the following provisions:

Install Work Zone Advance Warning Signs in accordance with the detail drawing provided in these plans prior to beginning any other work. Use a lane closure or slow moving operation to complete the work, as necessary, unless otherwise indicated. Refer to Standard Drawing No. 1101.02, 1101.11, 1110.01, 1110.02, 1130.01 1135.01 and 1180.01 of the *2018 Roadway Standard Drawings*. Use a moving operation only if the minimum speed maintained at all times is 3 mph with no stops that narrow or close a lane of travel. If the moving operation is progressing slower than 3 mph at any time, install a lane closure. Maintain the existing traffic pattern at all times, except in the immediate work zone where lane closures are allowed as determined by the Engineer.

Refer to attached details and Standard Drawing No. 1101.02, 1101.03, 1101.04, 1101.05, 1101.11, 1110.01, 1110.02, 1115.01, 1130.01, 1135.01, 1145.01, 1150.01, 1165.01, and 1180.01 of the 2018 *Roadway Standard Drawings* when closing a lane of travel in a stationary work zone such as pavement patching resurfacing, or pavement marking removal. Properly ballasted cones and skinny drums may be used instead of drums. However, drums are required for the upstream taper portion of lane closures in all applications. The stationary work zone shall be a maximum of 1 mile in length at any given time on 2 Lane, 2 Way facilities unless otherwise approved by the Engineer. A pilot vehicle operation may be used in conjunction with flaggers and the appropriate pilot vehicle warning signing as directed by the Engineer. During periods of construction inactivity, return the traffic pattern to the existing alignment and remove or cover any work zone signs. When covering work zone signs, use an opaque material that prevents reading of the sign at night by a driver using high beam headlights. Use material, which does not damage the sign sheeting. Replace any obliterated markings as required by other sections of the 2018 Standard Specifications and the Engineer.

When personnel and/or equipment are working on the shoulder adjacent to and within 5 feet of an open travel lane, close the nearest open travel lane using Standard Drawing No. 1101.02 of the 2018 Roadway Standard Drawings. When personnel and/or equipment are working within a lane of travel of an undivided facility, close the lane according to the traffic control plans, 2018 Roadway Standard Drawings or as directed by the Engineer. Conduct the work so that all personnel and/or equipment remain within the closed travel lane. Do not work simultaneously, on both sides of an open travel way, within the same location, on a two-lane, two-way road. Perform work only when weather and visibility conditions allow safe operations as directed by the Engineer.

When utilizing a slow-moving operation for such items as pavement marking and marker placement, the operation shall consist of the vehicles and devices as shown on Roadway Standard Drawing No. 1101.02, sheet 11 or 12 of the *2018 Roadway Standard Drawings*. Traffic cones may be used when necessary to provide additional protection of wet pavement markings. Ballast all traffic cones so they will not be blown over by traffic.

RWZ-1

PAVING OPERATIONS:

1) Paving Lift Requirements and Time Limitations:

For paving lifts of 2.0 inches or less, bring all newly resurfaced lanes to the same station and elevation within 72 hours. If not brought up to the same station and elevation within 72 hours, the Contractor shall place portable "UNEVEN PAVEMENT" signs in advance of the uneven pavement and spaced every 1/2 mile along the section of uneven pavement. Once mitigated, all portable "UNEVEN PAVEMENT" signs shall be removed. No additional compensation will be made for these signs or any other type of portable warning signs as these are included in the "Temporary Traffic Control" contract pay item.

For paving lifts greater than 2 inches, bring all newly resurfaced lanes to the same station and elevation by the end of each work day unless the Contractor utilizes the notched wedge paving methods as described below.

Failure to comply with the following requirements will result in a suspension of all other operations until all lanes of traffic are brought to the same station and elevation:

- 1. During paving operations, any paving lift greater than 2 inches for asphalt surface course mixes shall be mitigated by having an approved wedge apparatus on the paver that shapes the edge 1 inch vertically and the remaining at a maximum slope steepness of 2:1. For intermediate and base course mixes, use an approved wedge device that shapes the edge with a maximum slope steepness of 2:1. The maximum paving lift allowed to use this method is 3 inches.
- 2. At the end of the work day, the Contractor shall place portable "UNEVEN PAVEMENT" signs in advance of the uneven pavement and spaced every 1/2 mile along the section of uneven pavement. Once mitigated, all portable "UNEVEN PAVEMENT" signs shall be removed. No additional compensation will be made for these signs or any other type of portable warning signs as these are included in the "Temporary Traffic Control" contract pay item.
- 3. In the next day's paving operation and not to exceed 72 hours, the Contractor shall bring up the adjacent lane to the same station and elevation before any further paving takes place on the project.

2) Asphalt Surface Treatments (AST)

For AST Operations, there is no drop-off condition to be signed. Stationary "LOOSE GRAVEL" and "UNMARKED PAVEMENT" signs shall replace "LOW/SOFT SHOULDER" signs. For placement and spacing of these signs, see the Signing Detail Sheet. All other advance warning signs are to be portable mounted. These signs are included as part of the temporary traffic control (Lump Sum) item.

3) Fine Milling/Microsurfacing (Depths less than 1")

For fine milling operations less than 1 inch, paving is not required in the same work period. The paving of the fine milled area is to be conducted within the next work period and not to exceed 72 hours. No advance warning signs are necessary for these conditions unless the paving operations exceed 72 hours. If this occurs, install portable "UNMARKED PAVEMENT" signs. These signs are incidental to the other items of work included in the temporary traffic control (Lump Sum) item.

4) Shoulder Drop-Off Requirements

Whenever paving operations create an edge of pavement drop-off greater than 2 inches, within 72 hours, the Contractor shall backfill at a 6:1 slope from the edge and finished elevation of the pavement that has an edge of pavement drop-off as follows:

- (A) Drop-off that exceeds 2 inches on roadways with posted speed limits of 45 mph or greater.
- (B) Drop-off that exceeds 3 inches on roadways with posted speed limits less than 45 mph.

Backfill the edge of pavement drop-off with suitable compacted material, as approved by the Engineer. The material, equipment and labor associated with this operation will be at no expense to the Department. This work is not considered part of shoulder reconstruction.

PROJECT REOUIREMENTS:

Failure to comply with the following requirements will result in a suspension of all other operations:

- 1. Before working on ANY MAP, the Contractor shall submit a written construction sequence for traffic control and construction lighting for ALL MAPS to the Engineer at the first preconstruction meeting and the sequence must be approved before closing a lane of traffic. The Contractor and Engineer will coordinate with the Traffic Management Unit at 919-814-5000 or Traffic Services for additional traffic control guidance, as necessary.
- 2. Obtain written approval of the Engineer before working in more than one location or setting up additional lane closures. The maximum length of any one lane closure is 1 mile unless otherwise directed by the Engineer.
- 3. If Lane Closure Restrictions apply, see Special Provision, "Intermediate Contract Times and Liquidated Damages".
- 4. Contractor shall mill and pave lanes in an order such that water shall not accumulate.
- 5. Traffic Control for the milling and/or paving of ramps is to be done according to Standard Drawing Number 1101.02, Sheets 9 & 10, unless otherwise approved to be closed by the Engineer. If approved, Contractor will provide plans and devices for the detour at no additional cost to the department.

6. If milled areas are not paved back within 72 hours, the Contractor is to furnish and install portable signs to warn drivers of the conditions. These are to include, but not limited to "Rough Road" (W8-8), "Uneven Lanes" (W8-11), and "Grooved Pavement" (W8-15) w/ Motorcycle Plaque mounted below. These are to be dual indicated on Multi-Lane Roadways with speed limits 45 mph and greater where lateral clearance can be obtained within the median areas. These portable signs are incidental to the other items of work included in the temporary traffic control (Lump Sum) pay item.

WORK ZONE SIGNING:

Description

Install advance/general warning work zone signs according to the Detail Drawing provided in these plans prior to beginning of work. Install and maintain signing in accordance with the attached drawings and Divisions 11 and 12 of the *2018 Standard Specifications*.

(A) Installation

All stationary Advance/General warning work zone signs require notification to existing Utility owners per Article 105-8 of the *2018 Standard Specifications* and Special Provision SP1 G115 within 3 to 12 full working days prior to installation.

Install Advance/General warning work zone signs before beginning work on a particular map. If signs are installed more than 7 calendar days prior to the beginning of work on a particular map, cover the signs until the work begins. Install each work zone Advance/General warning sign separately and not on the same post or stand with any other sign except where an advisory speed plate or directional arrow is used.

All stationary signing is to be installed as shown on the detail drawing(s) unless otherwise directed by the Engineer. The signs as shown on the detail drawing(s) are all that are required for a contractor to begin a resurfacing contract. Any additional signs requested by the Engineer shall be installed within 7 business days of the start of contract work. All sign locations are to be verified by the Engineer prior to installation. Once the signs have been installed and accepted, any sign relocations requested by the Department will be compensated in accordance with Article 104-7. Any additional signs other than the ones shown in the drawing will be compensated in accordance with Article 104-7.

No stationary -Y- Line advance warning signage is required unless there is more than 1,000 feet of resurfacing along the -Y- line. Whenever work proceeds through an intersection, portable signs shall be used for traffic control. There will be no direct compensation for any portable signing.

If there is a period of construction inactivity longer than 14 calendar days, remove or cover advance/general warning work zone signs. Uncover advance/general warning work zone signs no more than 7 calendar days before work resumes. All other operations may be suspended upon failure to comply with the above requirements. Such suspended operations would not be resumed until the above requirements are fulfilled.

(B) Sign Removal

Once Maps on the Project are substantially complete, it is acceptable practice to remove the Stationary Work Zone Signs in lieu of waiting until all of the Maps are completed on the Project. A Map is substantially complete when the resurfacing operations are finished and the shoulders are brought up to the same elevation as the proposed pavement and when pavement markings (paint) are installed along the centerline and edge lines. The final pavement markings (ex. Thermoplastic/Polyurea) or pavement markers (Raised/Snowplowable) don not have to be installed for Maps to be considered substantially complete. Final pavement marking/markers are installed with portable signing according to Roadway Standard Drawing 1101.02, sheet 11 or 12. Any remaining punch list items requiring traffic control are compensated in the contract pay item for *Temporary Traffic Control*.

Stationary Work Zone Sign removal is a condition of final project acceptance.

(C) Lane Closure Work Zone Signs

Install any required lane closure signing needed during the life of the project in accordance with the Standard Drawing No. 1101.02, 1101.11 and 1110.02 of the 2018 Roadway Standard Drawings. Any required portable signs for lane closures are compensated in the contract pay item for Temporary Traffic Control.

MEASUREMENT AND PAYMENT:

Temporary traffic control work, including, but not limited to installation and removal of portable signs, cones, drums, skinny drums, flaggers, AFAD's, changeable message boards, truck mounted attenuators, flashing arrow boards, and pilot vehicles will be paid at the contract lump sum price for *Temporary Traffic Control*. The *Temporary Traffic Control* pay item does not include work zone advance or general warning signs. Partial payments for *Temporary Traffic Control* will be made as follows: The cumulative total of the lump sum price for temporary traffic control will be equal to the percent complete (project) as calculated for each partial pay estimate. Additional flashing arrow boards and message boards beyond those shown in the contract, detail drawings or *Roadway Standard Drawings* required by the Engineer will be paid as extra work in accordance with Article 104-7 of the *Standard Specifications*.

The work of satisfactorily installing and removing work zone advance and/or general warning signs, including, but not limited to, furnishing, locating, installing, covering, uncovering and removing stationary signs will be measured for each required sign and paid at the contract price for *Work Zone Advance/General Warning Signing (SF)*. Payment for *Work Zone Advance/General Warning Signing* will be limited to a maximum of 90% of the total installed quantity. The remaining 10% will be paid once all signs have been removed.

The Lump Sum price for *Temporary Traffic Control* will include the work of 4 flaggers per operation per map being utilized at the same time on any day. If a pilot vehicle is used for an operation, the Lump Sum Price for *Temporary Traffic Control* will include the work of five (5) flaggers. The operator of a pilot vehicle will be considered one of the five flaggers.

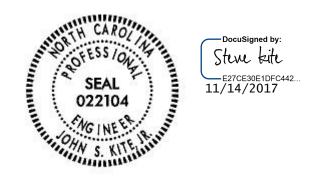
TC-6

Any additional flagging beyond the "included" amount covered in the *Temporary Traffic Control* pay item will be considered supplemental flagging and compensated at a rate of \$20.00 per hour for each additional flagger as approved by the Engineer.

Payment will be made under:

Pay Item

Temporary Traffic Control Work Zone Advance/General Warning Signing **Pay Unit** Lump Sum Square Foot



TC-7

RESURFACING OPERATIONS:

(7-15-14)

Coordinate the installation of items required by the contract documents and resurfacing operations such that these operations are completed in the order as agreed upon with the Engineer at the first pre-construction meeting. Refer to the Provisions, Typicals and Details unless otherwise directed by the Engineer.

Notify the Engineer 15 consecutive calendar days before resurfacing a bridge or its approaches. Patch and make repairs to bridge surface and its approaches before resurfacing occurs. Coordinate all operations on the bridge and its approaches with the Engineer.

Notify the Engineer 48 hours before resurfacing the areas of existing pavement that require patching. Patch these areas before resurfacing occurs. Allow full depth asphalt patching to cool to the point of supporting traffic without displacement or rutting before reopening closed lane. Coordinate the resurfacing operations of the patched areas with the Engineer.

Notify the Engineer 48 hours before milling or resurfacing will interfere with the existing Signal Loops. Loops may need to be placed in milled surface before resurfacing occurs. Coordinate all signal loop operations with the Engineer.

For partial or wheel track milling operations on two-way, two-lane facilities, mill and pave back by the end of each work day. For Partial or wheel track milling operation on multi-lane facilities, the lane being milled may be left closed and paved back within 72 hours.

The following options are available during Resurfacing and milling operations on two-way, two-lane facilities when the entire roadway or entire lane is to be milled:

- (A) Mill a single lane and pave back by the end of each work day.
- (B) Mill the entire width of roadway and pave back within 72 hours.

The following options are available during Resurfacing and milling operations on multi-lane facilities when all lanes or a single lane in one direction are to be milled:

- (A) Mill a single lane and pave back by the end of each work day.
- (B) Mill the entire width of pavement for all lanes to be milled in any direction daily and pave back within 72 hours.

Slope the pavement at the beginning and ending of the daily milling operation as directed by the Engineer. Sweep and remove all milled material from the roadway as soon as the daily milling operation is completed. Continue milling operations until the particular section of roadway being milled is complete. Remove any existing pavement adjacent to the milled area that has been damaged and replace with patch material as directed by the Engineer.

Operate equipment and conduct operations in the same direction as the flow of traffic. Maintain vehicular access in accordance with Article 1101-05 of the *2018 Standard Specifications* using suitable backfill material approved by the Engineer.

Provide appropriate lighting in accordance with Section 1413 of the 2018 Standard Specifications.

Milled Rumble Strips:

When utilized, milled rumble strips shall be installed in accordance with the 2018 Standard Specifications and the 2018 Roadway Standard Drawing 665.01.

PAVEMENT MARKINGS AND MARKERS:

(7-15-14)

Markings: All Facilities

Pavement markings shall be installed in accordance with Standard Drawings 1205.01 through 1205.13 of the 2018 Roadway Standard Drawings and Section 1205 of the 2018 Standard Specifications with the exception of the 15 day edge line replacement requirement for two-lane, two-way roadways as described in Subarticle 1205-3(D) of the 2018 Standard Specifications. For all two-lane, two-way facilities, edge lines can be replaced within 30 calendar days after they have been obliterated.

Type 3 Cold Applied Plastic may be used in lieu of Type 2 Cold Applied Plastic. If Type 3 Cold Applied Plastic is used, it shall be paid for using the Type 2 Cold Applied Plastic pay item.

Unless otherwise specified, Heated-in-Place Thermoplastic may be used in lieu of Extruded Thermoplastic for stop bars, symbols, characters and diagonals. If Heated-in-Place Thermoplastic is used, it shall be paid for using the Extruded Thermoplastic pay item.

Unless otherwise specified, Heated-in-Place Thermoplastic may be used in lieu of Cold Applied Plastic for stop bars, symbols, characters and diagonals on asphalt or concrete roadways. If Heated-in-Place Thermoplastic is used, it shall be paid for using the Cold Applied Plastic pay item.

Markers: All Facilities

Remove existing pavement markers in preparation for paving. Repair any pavement damage due to existing pavement marker removal prior to the end of the work day. Dispose of existing pavement markers as directed by the Engineer. No direct payment will be made for this work as it will be incidental to the paving operation.

Install permanent pavement markers within 60 calendar days after completing the resurfacing on each map. Pavement markers shall be installed in accordance with Standard Drawing 1205.12 and Standard Drawings 1250.01 through 1253.01 of the *2018 Roadway Standard Drawings* and Sections 1250 through 1253 of the *2018 Standard Specifications*.

Markings and Markers: All Facilities

Review and record the existing pavement markings and markers before resurfacing. Re-establish the new pavement markings and markers using the record of existing markings in conjunction with the 2018 Roadway Standard Drawings unless otherwise directed by the engineer. Have existing or proposed "passing zones" reviewed by the engineer before installation. Submit the record of the existing pavement markings seven calendar days before the obliteration of any pavement markings.

Mainline pavement shall not be left milled, unmarked or uneven at the end of a paving season. If the Contractor begins any map and does not complete within the seasonal restrictions, including placement of final pavement markings or permanent markers, the Contractor shall be responsible for, at his expense, Paint in accordance with Article 1205-08 and Temporary Markers in accordance with Section 1251 of the *2018 Standard Specifications*.

STABILIZATION REQUIREMENTS:

(3-11-16)

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

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

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

SEEDING AND MULCHING:

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	May 1 - S	eptember 1
20#	Kentucky Bluegrass	20#	Kentucky Bluegrass
75#	Hard Fescue	75#	Hard Fescue
25#	Rye Grain	10#	German or Browntop Millet
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Areas Beyond the Mowing Pattern, Waste and Borrow Areas:

August 1 -	June 1	May 1 - September 1		
100#	Tall Fescue	100#	Tall Fescue	
15#	Kentucky Bluegrass	15#	Kentucky Bluegrass	
30#	Hard Fescue	30#	Hard Fescue	
25#	Rye Grain	10#	German or Browntop Millet	
500#	Fertilizer	500#	Fertilizer	
4000#	Limestone	4000#	Limestone	

(West)

EC-2

Approved Tall Fescue Cultivars

06 Dust	Escalade	Justice	Scorpion
2 nd Millennium	Essential	Kalahari	Serengeti
3 rd Millennium	Evergreen 2	1 minut	Shelby
Apache III	Falcon IV	Kitty Hawk 2000	Sheridan
Avenger	Falcon NG	Legitimate	Signia
Barlexas	Falcon V	Lexington	Silver Hawk
Barlexas II	Faith	LSD	Sliverstar
Bar Fa	Fat Cat	Magellan	Shenandoah Elite
Barrera	Festnova	Matador	Sidewinder
Barrington	Fidelity	Millennium SRP	Skyline
Barrobusto	Finelawn Elite	Monet	Solara
Barvado	Finelawn Xpress	Mustang 4	Southern Choice II
Biltmore	Finesse II	Ninja 2	Speedway
Bingo	Firebird	Ol' Glory	Spyder LS
Bizem	Firecracker LS	Olympic Gold	Sunset Gold
Blackwatch	Firenza	Padre	Taccoa
Blade Runner II	Five Point	Patagonia	Tanzania
Bonsai	Focus	Pedigree	Trio
Braveheart	Forte	Picasso	Tahoe II
Bravo	Garrison	Piedmont	Talladega
Bullseye	Gazelle II	Plantation	Tarheel
Cannavaro	Gold Medallion	Proseeds 5301	Terrano
Catalyst	Grande 3	Prospect	Titan ltd
Cayenne	Greenbrooks	Pure Gold	Titanium LS
Cessane Rz	Greenkeeper	Quest	Tracer
Chipper	Gremlin	Raptor II	Traverse SRP
Cochise IV	Greystone	Rebel Exeda	Tulsa Time
Constitution	Guardian 21	Rebel Sentry	Turbo
Corgi	Guardian 41	Rebel IV	Turbo RZ
Corona	Hemi	Regiment II	Tuxedo RZ
Coyote	Honky Tonk	Regenerate	Ultimate
Darlington	Hot Rod	Rendition	Venture
Davinci	Hunter	Rhambler 2 SRP	Umbrella
Desire	Inferno	Rembrandt	Van Gogh
Dominion	Innovator	Reunion	Watchdog
Dynamic	Integrity	Riverside	Wolfpack II
Dynasty	Jaguar 3	RNP	Xtremegreen
Endeavor	Jamboree	Rocket	

EC-3

Approved Kentucky Bluegrass Cultivars:

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

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 January 1 - December 31.

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

WATTLES WITH POLYACRYLAMIDE (PAM):

(10-19-10) (Rev. 1-17-12)

1060,1630,1631

Description

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

Materials

Wattle shall meet the following specifications:

Stakes shall be used as anchors.

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

Matting shall meet the requirements of Article 1060-8 of the 2018 Standard Specifications, or shall meet specifications provided elsewhere in this contract.

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

Polyacrylamide (PAM) shall be applied in powder form and shall be anionic or neutrally charged. Soil samples shall be obtained in areas where the wattles will be placed, and from offsite material used to construct the roadway, and analyzed for the appropriate PAM flocculant to be utilized with each wattle. The PAM product used shall be listed on the North Carolina Department of Environment and Natural Resources (NCDENR) Division of Water Quality (DWQ) web site as an approved PAM product for use in North Carolina.

Construction Methods

Wattles shall be secured to the soil by wire staples approximately every 1 linear foot and at the end of each section of wattle. A minimum of 4 stakes shall be installed on the downstream side of the wattle with a maximum spacing of 2 linear feet along the wattle, and according to the detail.

EC-5

Install a minimum of 2 stakes on the upstream side of the wattle according to the detail provided in the plans. Stakes shall be driven into the ground a minimum of 10 inches with no more than 2 inches projecting from the top of the wattle. Drive stakes at an angle according to the detail provided in the plans.

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

Installation of matting shall be in accordance with the detail provided in the plans, and in accordance with Article 1631-3 of the *2018 Standard Specifications*, or in accordance with specifications provided elsewhere in this contract.

Apply PAM over the lower center portion of the wattle where the water is going to flow over at a rate of 2 ounces per wattle, and 1 ounce of PAM on matting on each side of the wattle. PAM applications shall be done during construction activities after every rainfall event that is equal to or exceeds 0.50 inch.

The Contractor shall maintain the wattles until the project is accepted or until the wattles are removed, and shall remove and dispose of silt accumulations at the wattles when so directed in accordance with the requirements of Section 1630 of the *2018 Standard Specifications*.

Measurement and Payment

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

Matting will be measured and paid for in accordance with Article 1631-4 of the 2018 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 wattles. 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 Polyacrylamide (PAM) Wattle **Pay Unit** Pound Linear Foot Mar 15, 2018 2:48 pm

Page 1 of 4

	ounty : Mecklenburg				Fage 101	
	Item Number	Sec #	Description	Quantity	Unit Cost	Amoun
			ROADWAY ITEMS			
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0106000000-Е	230	BORROW EXCAVATION	3,829 CY		
0003	1220000000-Е	545	INCIDENTAL STONE BASE	540 TON		
0004	1245000000-Е	SP	SHOULDER RECONSTRUCTION	52.18 SMI		
0005	1297000000-Е		MILLING ASPHALT PAVEMENT, ***" DEPTH (1")	1,689 SY		
0006	1297000000-Е	607	MILLING ASPHALT PAVEMENT, ***" DEPTH (1-1/2")	6,257 SY		
0007	1297000000-Е	607		157,387 SY		
0008	1308000000-Е	607	MILLING ASPHALT PAVEMENT, ***" TO ******" (0" TO 1-1/2")	2,404 SY		
0009	1308000000-Е	607	MILLING ASPHALT PAVEMENT, ***" TO ******" (0" TO 2")	4,781 SY		
0010	133000000-Е	607	INCIDENTAL MILLING	12,427 SY		
0011	1491000000-Е	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	330 TON		
0012	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	671 TON		
0013	1520000000-E	SP	ASPHALT CONC SURFACE COURSE, TYPE S9.5B (LEVELING COURSE)	220 TON		
0014	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	41,254 TON		
0015	1524000000-Е	SP	ASPHALT CONC SURFACE COURSE, TYPE S9.5C (LEVELING COURSE)	199 TON		
0016	1575000000-Е	620	ASPHALT BINDER FOR PLANT MIX	2,554 TON		

County : Mecklenburg

Line	Item Number Sec	Description	Quantity	Unit Cost	Amount
#	#	-	-		

0017	170400000-Е	SP	PATCHING EXISTING PAVEMENT	6,530 TON	
0018	1775500000-E	660	ASPHALT SURFACE TREATMENT, MAT COAT, #*** STONE (67)	144,476 SY	
0019	1838000000-E	660	EMULSION FOR ASPHALT SURFACE TREATMENT	51,017 GAL	
0020	260000000-N	848	RETROFIT EXISTING CURB RAMPS	29 EA	
0021	2605000000-N	848	CONCRETE CURB RAMPS	2 EA	
0022	261200000-Е	848	6" CONCRETE DRIVEWAY	476 SY	
0023	283000000-N	858	ADJUSTMENT OF MANHOLES	62 EA	
0024	2845000000-N	858	ADJUSTMENT OF METER BOXES OR VALVE BOXES	48 EA	
0025	4413000000-Е	SP	WORK ZONE ADVANCE/GENERAL WARNING SIGNING	1,790 SF	
0026	4457000000-N	SP	TEMPORARY TRAFFIC CONTROL	Lump Sum	L.S.
0027	451000000-N	1190	LAW ENFORCEMENT	760 HR	
0028	4686000000-Е	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	147 LF	
0029	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	1,979 LF	
0030	4697000000-Е	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 120 MILS)	7,130 LF	
0031	470000000-Е	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	1,152 LF	
0032	471000000-Е	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	1,416 LF	
0033	472100000-Е	1205	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)	74 EA	

Page 3 of 4

County : Mecklenburg

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0034	4725000000-Е	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	230 EA		
0035	4770000000-Е	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (II)	2,160 LF		
0036	4810000000-Е	1205	PAINT PAVEMENT MARKING LINES (4")	74,700 LF		
0037	4820000000-Е	1205	PAINT PAVEMENT MARKING LINES (8")	4,764 LF		
0038	4835000000-Е	1205	PAINT PAVEMENT MARKING LINES (24")	787 LF		
0039	4840000000-N	1205	PAINT PAVEMENT MARKING CHARAC- TER	32 EA		
0040	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	182 EA		
0041	485000000-Е	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	1,880 LF		
0042	489000000-Е	SP	GENERIC PAVEMENT MARKING ITEM THERMO PVT MKG LINES, 4", 120 MILS (HIGHLY REFLECTIVE MEDIA)	189,191 LF		
0043	489000000-Е	SP	GENERIC PAVEMENT MARKING ITEM THERMO PVT MKG LINES, 4", 90 M ILS (HIGHLY REFLECTIVE MEDIA)	178,130 LF		
	4905000000-N		SNOWPLOWABLE PAVEMENT MARKERS	1,282 EA		
0045	5255000000-N		PORTABLE LIGHTING	Lump Sum	L.S.	
0046	600000000-Е	1605	TEMPORARY SILT FENCE	2,283 LF		
0047	6009000000-Е	1610	STONE FOR EROSION CONTROL, CLASS B	311 TON		
0048	6012000000-Е	1610	SEDIMENT CONTROL STONE	152 TON		
0049	6071010000-E		WATTLE	456 LF		

Mar 15, 2018 2:48 pm County : Mecklenburg			ITEMIZED PROPOSAL FOR CONTRACT NO. C204159			Page 4 of 4
Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0050	607102000-Е	SP	POLYACRYLAMIDE (PAM)	17		
0050	0071020000-E	3F	FOETACKTEAMIDE (FAM)	LB		

1448/Mar15/Q908242.18/D168556630000/E50

Total Amount Of Bid For Entire Project :

MBE GOAL SET: 4.00% MBE GOAL OBT: 5.68% WBE GOAL SET: 5.00% WBE GOAL OBT: 7.39%

Vendor 1 of 4: THE LANE CONSTRUCTION CORPORATION (3317) Call Order 005 (Proposal: C204159)

Bid Information

Proposal County:	MECKLENBURG
Vendor Address:	PO BOX 32487 Charlotte , NC , 28232
Signature Check:	David_J_Rankin_3317
Time Bid Received:	April 17, 2018 10:43 AM
Amendment Count:	0

 Bid Checksum:
 F5761C87

 Bid Total:
 \$6,032,945.27

 Items Total:
 \$6,032,945.27

 Time Total:
 \$0.00

Bidding Errors:

None.

Vendor 1 of 4: THE LANE CONSTRUCTION CORPORATION (3317) Call Order 005 (Proposal: C204159)

Bid Bond Information

Projects:		Bond Maximum:	
Counties:		State of Incorporation:	
Bond ID:	43UC-SCRA-8E54-WMG9	Agency Execution Date:	3/27/2018
Paid by Check:	No	Surety Name:	SurePathNetwork
Bond Percent:	5%	Bond Agency Name:	Liberty Mutual Insurance Company

Bidder 1 of 4 Vendor 3317's Bid Information for Call 005, Letting L180417, 04/17/18 The Lane Construction Corporation (3317) Call Order 005 (Proposal ID C204159) LIST OF MBE PARTICIPANTS VENDOR DBE NAME WORK CFRT NUMBER ADDRESS CODE TYPE OF WORK TYPE AMOUNT COMMITTED 15868 JAMES L TURNER CONSTRUCTION, IN Sub 177,790.00 4516 COBB ROAD , LIBERTY, NC 27298 COMMITTED 2273 CHAMBERS EXPRESS TRUCKING INC Sub 82,500.00 2132 BLUE BONNETT LANE , MATTHEWS, NC 28105 11238 BKP TRUCKING LLC Sub 82,500.00 COMMITTED 13904 HAVEN RIDGE LN , CHARLOTTE, NC 28215 TOTAL: \$342,790.00 5.68% Vendor 3317's Bid Information for Call 005, Letting L180417, 04/17/18 The Lane Construction Corporation (3317) Call Order 005 (Proposal ID C204159) LIST OF WBE PARTICIPANTS VENDOR DBE NAME WORK CFRT NUMBER ADDRESS CODE TYPE OF WORK TYPE AMOUNT _____ 5796 A1 PAVEMENT MARKING LLC Sub 445,922.02 COMMITTED 238 N BIVENS RD , MONROE, NC 28110 TOTAL: \$445,922.02 7.39% Vendor 3317's Bid Information for Call 005, Letting L180417, 04/17/18 The Lane Construction Corporation (3317) Call Order 005 (Proposal ID C204159) Miscelleneous Data Info - Contractor Responses: _____ NON-COLLUSION AND DEBARMENT CERTIFICATION Explanation of the prospective bidder that is unable to certify to any of the

statements in this certification:

Explanation: NOT ANSWERED NOT ANSWERED NOT ANSWERED NOT ANSWERED

AWARD LIMITS ON MULTIPLE PROJECTS

By answering YES to this statement, the bidder acknowleges that they are using the award limits on multiple projects. No

It is the desire of the Bidder to be awarded contracts, the value of which will not exceed a total of NOT ANSWERED for those

Bidder 1 of 4

projects indicated herein, for which bids will be opened on

The Award Limits shall apply to the following projects:

Contract NumberCountyNOT ANSWEREDNOT ANSWEREDNOT ANSWEREDNOT ANSWEREDNOT ANSWEREDNOT ANSWEREDNOT ANSWEREDNOT ANSWERED

Bid Bond Data Info - Contractor Responses:

BondID: 43UC-SCRA-8E54-WMG9 Surety Registry Agency: SurePathNetwork Verified?: Yes Surety Agency: Liberty Mutual Insurance Company Bond Execution Date: 3/27/2018 Bond Amount: \$301,647.26 (Five Percent of Bid) (MM/DD/YY)

Letti	Dept act ID: C204159 ng Date: 04-17-18 Call Or r: 3317 - The Lane Constru	der: 005	STATE FUNDED	Date: 03-20-18 /ised:
+	•	Approx.	Unit Price	+ Bid Amount
No.	Description	Quantity and Units	 Dollars Cts	Dollars Ct
Sectio	on 0001 ROADWAY ITEM Alt Group	IS		+
+ 0001 	0000100000-N MOBILIZATIO N 			300,000.00
	0106000000-E BORROW EXCAVATION 	 3,829.000 CY	 40.00000 	153,160.00
	1220000000-E INCIDENTAL STONE BASE 	 540.000 TON	40.00000 	21,600.00
	1245000000-E SHOULDER RECONSTRUCTION 	 52.180 SMI	 1,855.00000 	96,793.90
0005	1297000000-E MILLING ASPHALT PAVEMENT, ***"DEPTH (1")	 1,689.000 SY	 2.60000 	4,391.40
0006	1297000000-E MILLING ASPHALT PAVEMENT, ***"DEPTH (1-1/2")	 6,257.000 SY	 3.00000 	18,771.00
0007	1297000000-E MILLING ASPHALT PAVEMENT, ***"DEPTH (2")	 157,387.000 SY	 2.00000 	314,774.00
0008	1308000000-E MILLING ASPHALT PAVEMENT, ***"TO ******" (0" TO 1-1/2")		 2.75000 	6,611.00
0009	1308000000-E MILLING ASPHALT PAVEMENT, ***"TO ******" (0" TO 2")		 2.75000 	13,147.75
•	1330000000-E INCIDENTAL MILLING 	 12,427.000 SY	 6.00000 	74,562.00
0011	1491000000-E ASPHALT CONC BASE COURSE, TYPE B25.0C	 330.000 TON	 74.25000 	24,502.50
, +			 	+

Check: F5761C87 Page 1

act ID: C204159 ng Date: 04-17-18 Call Ord	Project(s): der: 005	N Rev STATE FUNDED	Date: 03-20-18 vised:
 Item Description	Approx. Ouantity	Unit Price	Bid Amount
	and Units	Dollars Cts	Dollars Ct
1519000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5B		 41.00000 	27,511.00
1520000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5B (LEVELING COURSE)	· 	 45.00000 	9,900.00
1523000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5C		 41.00000 	1,691,414.00
1524000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5C (LEVELING COURSE)		 42.00000 	8,358.00
1575000000-E ASPHALT BINDER FOR PLANT MIX 		 525.00000 	1,340,850.00
170400000-E PATCHING EXISTING PAVEMENT 	 6,530.000 TON	 105.00000 	685,650.00
1775500000-E ASPHALT SURFACE TREATMENT, MATCOAT, #*** STONE (67)		 1.00000 	144,476.00
		 2.10000 	 107,135.70
2600000000-N RETROFIT EXISTING CURB RAMPS 	· ·	 750.00000 	21,750.00
2605000000-N CONCRETE CURB RAMPS 		 1,750.00000 	3,500.00
DRIVEWAY	476.000	 90.00000 	42,840.00
	act ID: C204159 ng Date: 04-17-18 Call Ord r: 3317 - The Lane Construct Item Description 1519000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5B 152000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5B (LEVELING COURSE) 1523000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5C 1524000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5C (LEVELING COURSE) 1575000000-E ASPHALT SUNDER FOR PLANT MIX 1704000000-E PATCHING EXISTING PAVEMENT 1775500000-E ASPHALT SURFACE TREATMENT, ATCOAT, #*** STONE (67) 1838000000-E EMULSION FOR ASPHALT SURFACE TREATMENT 260000000-N CONCRETE CURB RAMPS 2612000000-E 6" CONCRETE DRIVEWAY	Dept of Transportation act ID: C204159 Project(s): ng Date: 04-17-18 Call Order: 005 r: 3317 - The Lane Construction Corporation i Item Approx. I Ltem Approx. Description Quantity I Standard Corporation Quantity I Standard Corporation Quantity I Conc SURFACE COURSE, 671.000 ITYPE S9.5B ITON I CONC SURFACE COURSE, 1052000000-E I CONC SURFACE COURSE, 1000 I CONC SURFACE COURSE, 11523000000-E I CONC SURFACE COURSE, 11524000000-E I CONC SURFACE COURSE, 1199.000 I TYPE S9.5C ITON I 1524000000-E ASPHALT I CONC SURFACE COURSE, 199.000 I TYPE S9.5C ITON I 1524000000-E ASPHALT I COURSE) ITON I 1524000000-E ASPHALT I COURSE) ITON I 1524000000-E ASPHALT I 2000000-E ASPHALT I 2000000-E ASPHA	Dept of Transportation Ret Project(s): STATE FUNDED act ID: C204159 Project(s): STATE FUNDED and Date: 04-17-18 Call Order: 005 STATE FUNDED r: 3317 - The Lane Construction Corporation Unit Price I Item Approx. Unit Price Description Quantity

Lettin	Dept o act ID: C204159 ng Date: 04-17-18 Call Oro r: 3317 - The Lane Construc	der: 005	STATE FUNDED	Date: 03-20-18 vised:
+ Line No.	 Item Description	Approx.	Unit Price 	Bid Amount
Ì	l	and Units	Dollars Cts	Dollars Ct
	2830000000-N ADJUSTMENT OF MANHOLES 	 62.000 EA	 950.00000 	58,900.00
0024	2845000000-N ADJUSTMENT OF METER BOXES OR VALVE BOXES		 850.00000 	40,800.00
0025	4413000000-E WORK ZONE ADVANCE/GENERAL WARNING SIGNING	 1,790.000 SF	 14.50000 	25,955.00
	4457000000-N TEMPORARY TRAFFIC CONTROL 	 LUMP 		232,000.00
	451000000-N LAW ENFORCEMENT 	 760.000 HR	 59.05000 	44,878.00
0028	4686000000-E THERMOPLAST IC PAVEMENT MARKING LINES (4", 120 MILS)		 2.00000 	294.00
0029	4695000000-E THERMOPLAST IC PAVEMENT MARKINGLINES (8", 90 MILS)	•	 2.00000 	3,958.00
0030	4697000000-E THERMOPLAST IC PAVEMENT MARKINGLINES (8", 120 MILS)	7,130.000	 2.75000 	19,607.50
0031	4700000000-E THERMOPLAST IC PAVEMENT MARKINGLINES (12", 90 MILS)		 5.00000 	5,760.00
0032	4710000000-E THERMOPLAST IC PAVEMENT MARKINGLINES (24", 120 MILS)	1,416.000	 12.00000 	16,992.00
0033 	472100000-E THERMOPLAST IC PAVEMENT MARKINGCHARACTER (120 MILS)		 135.00000 	9,990.00

Letti	Dept o act ID: C204159 ng Date: 04-17-18 Call Oro r: 3317 - The Lane Construc	of I der:	005	STATE FUNDED	Date: 03-20-18 vised:
+ Line No.	Item Description		Approx. Quantity	Unit Price	
0034	 4725000000-E THERMOPLAST IC PAVEMENT MARKINGSYMBOL (90 MILS)		and Units 230.000 	Dollars Cts 155.00000	+
0035 	4770000000-E COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (II)	 LF	2,160.000 	6.00000	12,960.00
0036	4810000000-E PAINT PAVEMENT MARKING LINES (4")	 LF	 74,700.000	0.24000	17,928.00
0037	4820000000-E PAINT PAVEMENT MARKING LINES (8")	 LF	 4,764.000 	0.50000	2,382.00
0038	4835000000-E PAINT PAVEMENT MARKING LINES (24")	 LF	 787.000 	5.00000	 3,935.00
	4840000000-N PAINT PAVEMENT MARKING CHARAC-TER	 EA	 32.000 	55.00000	 1,760.00
	4845000000-N PAINT PAVEMENT MARKING SYMBOL 	 EA	 182.000 	65.00000	 11,830.00
0041	4850000000-E REMOVAL OF PAVEMENT MARKING LINES (4")		 1,880.000 	2.00000	3,760.00 3,760.00
0042 	489000000-E GENERIC PAVEMENT MARKING ITEM THERMO PVT MKG LINES, 4", 120 MILS (HIGHLY REFLECTIVE MEDIA)		 189,191.000 	0.72000	136,217.52
0043 	4890000000-E GENERIC PAVEMENT MARKING ITEM THERMO PVT MKG LINES, 4", 90 MILS (HIGHLY REFLECTIVE MEDIA)		 178,130.000 	0.65000	115,784.50

Lettir	Dept o act ID: C204159 ng Date: 04-17-18 Call Oro r: 3317 - The Lane Construc	der: 005	n Rev STATE FUNDED	Date: 03-20-18 vised:
Line No.	•	Approx. Quantity	Unit Price	Bid Amount
		and Units	Dollars Cts	Dollars Ct
	4905000000-N SNOWPLOWABL E PAVEMENT MARKERS 	 1,282.000 EA	 36.75000 	47,113.50
	5255000000-N PORTABLE LIGHTING 	 LUMP 	 LUMP 	25,000.00
	600000000-E TEMPORARY SILT FENCE 	 2,283.000 LF	 4.00000 	9,132.00
0047	6009000000-E STONE FOR EROSION CONTROL, CLASS B	 311.000 TON	 70.00000 	21,770.00
	6012000000-E SEDIMENT CONTROL STONE 	 152.000 TON	 80.00000 	12,160.00
 0049 	•	 456.000 LF	 10.00000 	4,560.00
	6071020000-E POLYACRYLAM IDE (PAM) 	 17.000 LB	 10.00000 	 170.00
 +	 Section 0001 Total			6,032,945.27 +
 +	 Bid Total		 	 6,032,945.27 +

NON-COLLUSION AND DEBARMENT CERTIFICATION

The bidder certifies that neither he, nor any official, agent or employee of the bidder has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this bid, and that the bidder intends to do the work with its own bonafide employees or subcontractors and is not bidding for the benefit of another contractor. In addition, submitting this electronic bid constitutes the bidder's certification of Status under penalty of perjury under the laws of the United States and in accordance with the Debarment Certification on file with the Department.

By submitting this bid, the bidder certifies to the best of his knowledge and belief that he and his principals:

- Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

Where the prospective bidder is unable to certify to any of the statements in this certification, the bidder shall submit an explanation in the blanks provided herein. The explanation will not necessarily result in denial of participation in a contract.

Explanation: NOT ANSWERED NOT ANSWERED NOT ANSWERED NOT ANSWERED

If the prequalified bidder's status changes, he shall immediately submit a new fully executed non-collusion affidavit and debarment certification with an explanation of the change to the Contract Office prior to submitting the bid.

Failure to furnish a certification or an explanation will be grounds for rejection of a bid

By answering YES to this statement, the bidder acknowleges that they are using the award limits on multiple projects. No

A bidder who desires to bid on more than one project on which bids are to be opened on the same date, and who also desires to avoid receiving an award of more projects than he is equipped to handle, may bid on any number of projects but may limit the total amount of work awarded to him on selected projects by completing the AWARD LIMITS ON MULTIPLE PROJECTS.

The Award Limits on Multiple Projects must be filled in on each project bid for which the Bidder desires protection.

It is the desire of the Bidder to be awarded contracts, the value of which

will not exceed a total of NOT ANSWERED for those

projects indicated herein, for which bids will be opened on (MM/DD/YY)

The Award Limits shall apply to the following projects:

Contract NumberCountyNOTANSWEREDNOTANSWEREDNOTANSWEREDNOTANSWEREDNOTANSWEREDNOTANSWEREDNOTANSWERED

It is agreed that if I am (we are) the low Bidder(s) on indicated projects, the total value of which is more than the above stipulated award limits, the Board of Transportation will award me (us) projects from among those indicated that have a total value not to exceed the award limit and will result in the lowest total bids to the Department of Transportation.

NORTH CAI	ROLINA STATE D MBE COMMIT	EPARTN MENT I	MENT OF TRANSPO ITEMS	RTATION	DATE:03-20-18 PAGE: 8
PROPOSAL: C204159 LETTING: L180417 VENDOR: 3317 The	CAL e Lane Constru	ction	Corporation		
LINE ITEM NO. NO.	ITEM DESC.	UNIT TYPE	SUBCONTRACTOR QUANTITY	SUBCONTRACTOR UNIT PRICE	. EXTENDED AMOUNT
MBE SUBCONTRACTOR Will Use Quote: Ye	: 15868 JAMES				
0001 0000100000-N	MOBILIZATION	LS	1.000	10000.00000	10000.00
Partial Item (r	mobilization f	or cor	ncrete subcontr	actor)	
0020 260000000-N 0021 2605000000-N	RETROFIT EXT	ΕA	29.000	750.00000	21750.00
0021 260500000-N	CONCRETE CUR	ΕA	2.000	1750.00000	3500.00
UUZZ Z6IZUUUUUU-E	6" CONCRETE	SI	4/6.000	90.00000	42840.00
0023 283000000-N	ADJ MANHOLES	ΕA	62.000	950.00000	58900.00
0024 284500000-N					
MBE COMMITM	ENT TOTAL FOR	SUBCON	NTRACTOR:		177,790.00
MBE SUBCONTRACTOR Will Use Quote: Ye		S EXPI	RESS TRUCKING I	NC	
0014 1523000000-E Partial Item (1			10000.000 s); Portion of		82500.00
MBE COMMITM	ENT TOTAL FOR	SUBCON	NTRACTOR:		82,500.00
MBE SUBCONTRACTOR Will Use Quote: Ye		UCKINO	G LLC		
0014 1523000000-E Partial Item (1			10000.000 s);Portion of Q		82500.00
MBE COMMITM	ENT TOTAL FOR	SUBCON	NTRACTOR:		82,500.00
TOTAL MBE COMMITM	ENT FOR VENDOR		Entered: Required:		

Required: 4.00% or 241317.81 <GOAL MET>

	NORTH CAR	OLINA STATE DI WBE COMMITI		MENT OF TRANSPO ITEMS		DATE:03-20-18 PAGE: 9
LETTI	DSAL: C204159 ING: L180417 DR: 3317 The	CAL Lane Construe				
				SUBCONTRACTOR QUANTITY		
	SUBCONTRACTOR: Use Quote: Ye:		MENT N	MARKING LLC		
0028	4686000000-E	THERMO PVT M	LF	147.000	2.00000	294.00
0029	4695000000-E	THERMO PVT M	LF	1979.000	2.00000	3958.00
0030	4697000000-E				2.75000	
0031	470000000-E	12"WIDE THER	LF	1152.000	5.00000	5760.00
0032	471000000-E	24"WIDE THER	LF	1416.000	12.00000	16992.00
0033	4721000000-E	THERMO PVT M		74.000		
0034	4725000000-E	THERMO PVT S	ΕA	230.000	155.00000	35650.00
0035	4770000000-E	4" COLD APPL	LF	2160.000	6.00000	12960.00
0036	481000000-E	PAINT PVMT M	LF	74700.000	0.24000	
0037	482000000-E	PAINT PVMT M	LF	4764.000	0.50000	2382.00
0038	4835000000-E	PAINT PVT MK	LF	787.000	5.00000	3935.00
0039	484000000-N	PAINT PVT MK			55.00000	
0040	4845000000-N	PAINT PVT MK	ΕA	182.000	65.00000	11830.00
0041	485000000-E	LINE REMOVAL	LF	1880.000	2.00000	3760.00
0042	489000000-E	GENERIC PAVE	LF	189191.000	0.72000	136217.52
0043	489000000-E	GENERIC PAVE	LF	178130.000	0.65000	115784.50
0044	4905000000-N	SNOWPLB PVMT	ΕA	1282.000	36.75000	47113.50

WBE COMMITMENT TOTAL FOR SUBCONTRACTOR:

445,922.02

 TOTAL WBE COMMITMENT FOR VENDOR:
 Entered:
 7.39% or
 445922.02

 Required:
 5.00% or
 301647.26
 <GOAL MET>

THIS PROPOSAL CONTAINS THE FOLLOWING ERRORS/WARNINGS (IF ANY)

This Bid contains 0 amendment files

Electronic Bid Submission

By submitting this bid electronically, I hereby acknowledge that all requirements included in the hard copy proposal, addendum, amendments, plans, standard specifications, supplemental specifications and special provisions are part of the bid and contract. Further, I acknowledge that I have read, understand, accept, acknowledge and agree to comply with all statements in this electronic bid.

I Hereby certify that I have the authority to submit this bid.

Apr 30, 2018 12:23 pm

North Carolina Department Of Transportation Contract Item Sheets For C204159

Page: 1 of 4

	•	age	•

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
			ROADWAY ITEMS			
0001	0000100000-N	800	MOBILIZATION	Lump Sum LS	300,000.00	300,000.00
0002	0106000000-E	230	BORROW EXCAVATION	3,829 CY	40.00	153,160.00
0003	1220000000-E	545	INCIDENTAL STONE BASE	540 TON	40.00	21,600.00
0004	1245000000-E	SP	SHOULDER RECONSTRUCTION	52.18 SMI	1,855.00	96,793.90
0005	1297000000-E	607	MILLING ASPHALT PAVEMENT, ***" DEPTH (1")	1,689 SY	2.60	4,391.40
0006	1297000000-E	607	MILLING ASPHALT PAVEMENT, ***" DEPTH (1-1/2")	6,257 SY	3.00	18,771.00
0007	1297000000-E	607	MILLING ASPHALT PAVEMENT, ***" DEPTH (2")	157,387 SY	2.00	314,774.00
0008	1308000000-E	607	MILLING ASPHALT PAVEMENT, ***" TO *****" (0" TO 1-1/2")	2,404 SY	2.75	6,611.00
0009	1308000000-E	607	MILLING ASPHALT PAVEMENT, ***" TO ******" (0" TO 2")	4,781 SY	2.75	13,147.75
0010	1330000000-E	607	INCIDENTAL MILLING	12,427 SY	6.00	74,562.00
0011	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	330 TON	74.25	24,502.50
0012	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	671 TON	41.00	27,511.00
0013	1520000000-E	SP	ASPHALT CONC SURFACE COURSE, TYPE S9.5B (LEVELING COURSE)	220 TON	45.00	9,900.00
0014	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	41,254 TON	41.00	1,691,414.00
0015	1524000000-E	SP	ASPHALT CONC SURFACE COURSE, TYPE S9.5C (LEVELING COURSE)	199 TON	42.00	8,358.00
0016	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	2,554 TON	525.00	1,340,850.00
0017	1704000000-E	SP	PATCHING EXISTING PAVEMENT	6,530 TON	105.00	685,650.00

North Carolina Department Of Transportation Contract Item Sheets For C204159

Amoun Bic	Unit Bid Price	Quantity Unit	Description	Sec #	ItemNumber	Line #
144,476.00	1.00	144,476	ASPHALT SURFACE TREATMENT, MAT	660	1775500000-E	0018
		SY	COAT, #*** STONE (67)			
107,135.70	2.10	51,017 GAL	EMULSION FOR ASPHALT SURFACE TREATMENT	660	1838000000-E	0019
21,750.00	750.00	29 EA	RETROFIT EXISTING CURB RAMPS	848	2600000000-N	0020
3,500.00	1,750.00	2 EA	CONCRETE CURB RAMPS	848	2605000000-N	0021
42,840.00	90.00	476 SY	6" CONCRETE DRIVEWAY	848	2612000000-E	0022
58,900.00	950.00	62 EA	ADJUSTMENT OF MANHOLES	858	2830000000-N	0023
40,800.00	850.00	48 EA	ADJUSTMENT OF METER BOXES OR VALVE BOXES	858	2845000000-N	0024
25,955.00	14.50	1,790 SF	WORK ZONE ADVANCE/GENERAL WARNING SIGNING	SP	4413000000-E	0025
232,000.00	232,000.00	Lump Sum LS	TEMPORARY TRAFFIC CONTROL	SP	4457000000-N	0026
44,878.00	59.05	760 HR	LAW ENFORCEMENT	1190	4510000000-N	0027
294.00	2.00	147 LF	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	1205	4686000000-E	0028
3,958.00	2.00	1,979 LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	1205	4695000000-E	0029
19,607.50	2.75	7,130 LF	THERMOPLASTIC PAVEMENT MARKING LINES (8", 120 MILS)	1205	4697000000-E	0030
5,760.00	5.00	1,152 LF	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	1205	4700000000-E	0031
16,992.00	12.00	1,416 LF	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	1205	4710000000-E	0032
9,990.00	135.00	74 EA	THERMOPLASTIC PAVEMENT MARKING CHARACTER (120 MILS)	1205	4721000000-E	0033
35,650.00	155.00	230 EA	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	1205	4725000000-E	0034

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Apr 30, 2018 12:23 pm			-	North Carolina Department Of Transportation Contract Item Sheets For C204159		
Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0035	4770000000-E	1205	COLD APPLIED PLASTIC PAVEMENT MARKING LINES, TYPE ** (4") (II)	2,160 LF	6.00	12,960.00
0036	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	74,700 LF	0.24	17,928.00
0037	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	4,764 LF	0.50	2,382.00
0038	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	787 LF	5.00	3,935.00
0039	4840000000-N	1205	PAINT PAVEMENT MARKING CHARAC- TER	32 EA	55.00	1,760.00
0040	4845000000-N	1205	PAINT PAVEMENT MARKING SYMBOL	182 EA	65.00	11,830.00
0041	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	1,880 LF	2.00	3,760.00
0042	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM THERMO PVT MKG LINES, 4", 120 MILS (HIGHLY REFLECTIVE MEDIA)	189,191 LF	0.72	136,217.52
0043	4890000000-E	SP	GENERIC PAVEMENT MARKING ITEM THERMO PVT MKG LINES, 4", 90 M ILS (HIGHLY REFLECTIVE MEDIA)	178,130 LF	0.65	115,784.50
0044	4905000000-N	1253	SNOWPLOWABLE PAVEMENT MARKERS	1,282 EA	36.75	47,113.50
0045	5255000000-N	1413	PORTABLE LIGHTING	Lump Sum LS	25,000.00	25,000.00
0046	6000000000-E	1605	TEMPORARY SILT FENCE	2,283 LF	4.00	9,132.00
0047	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	311 TON	70.00	21,770.00
0048	6012000000-E	1610	SEDIMENT CONTROL STONE	152 TON	80.00	12,160.00
0049	6071010000-E	SP	WATTLE	456 LF	10.00	4,560.00

Apr 30, 2018 12:23 pm		North Carolina Department Of Transportation				Page: 4 of 4	
Contract Item Sheets For C204159							
Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid	
0050	6071020000-E	SP	POLYACRYLAMIDE (PAM)	17 LB	10.00	170.00	
			TOTAL AMOUNT OF BID F			\$6,032,945.27	

C204159

Contract No.

EXECUTION OF CONTRACT NON-COLLUSION, DEBARMENT AND GIFT BAN CERTIFICATION

CORPORATION

The Contractor declares (or certifies, verifies, or states) under penalty of perjury under the laws of the United States that neither he, nor any official, agent or employee has entered into any agreement, participated in any collusion, or otherwise taken any action which is in restraint of free competitive bidding in connection with this Contract, that the Contractor has not been convicted of violating N.C.G.S. § 133-24 within the last three years, and that the Contractor intends to do the work with its own bonafide employees or subcontractors and did not bid for the benefit of another contractor.

By submitting this Execution of Contract, Non-Collusion and Debarment Certification, the Contractor is certifying his status under penalty of perjury under the laws of the United States in accordance with the Debarment Certification attached, provided that the Debarment Certification also includes any required statements concerning exceptions that are applicable.

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

SIGNATURE OF CONTRACTOR

The Lane Construction Corporation

Full name of Corporation

90 Fieldstone Court, Cheshire CT 06410

Address as Prequalified Attest By Secretary District etary/Assistant anager Select appropriate title

Tresident Vice President Assistant Vice President

Print or type Signer's name

Print or type Signer's name

CORPORATE SEAL

(annual)

DEBARMENT CERTIFICATION

Conditions for certification:

- 1. The prequalified bidder shall provide immediate written notice to the Department if at any time the bidder learns that his certification was erroneous when he submitted his debarment certification or explanation filed with the Department, or has become erroneous because of changed circumstances.
- 2. The terms covered transaction, debarred, suspended, ineligible, lower tier covered transaction, participant, person, primary covered transaction, principal, proposal, and voluntarily excluded, as used in this provision, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. A copy of the Federal Rules requiring this certification and detailing the definitions and coverages may be obtained from the Contract Officer of the Department.
- 3. The prequalified bidder agrees by submitting this form, that he will not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in NCDOT contracts, unless authorized by the Department.
- 4. For Federal Aid projects, the prequalified bidder further agrees that by submitting this form he will include the Federal-Aid Provision titled *Required Contract Provisions Federal-Aid Construction Contract (Form FHWA PR* 1273) provided by the Department, without subsequent modification, in all lower tier covered transactions.
- 5. The prequalified bidder may rely upon a certification of a participant in a lower tier covered transaction that he is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless he knows that the certification is erroneous. The bidder may decide the method and frequency by which he will determine the eligibility of his subcontractors.
- 6. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this provision. The knowledge and information of a participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
- 7. Except as authorized in paragraph 6 herein, the Department may terminate any contract if the bidder knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available by the Federal Government.

Contract No C204159 County Mecklenburg

1.0

DEBARMENT CERTIFICATION

The prequalified bidder certifies to the best of his knowledge and belief, that he and his principals:

- a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;
- c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and
- d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- e. Will submit a revised Debarment Certification immediately if his status changes and will show in his bid proposal an explanation for the change in status.

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

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

Check here if an explanation is attached to this certification.

Contract No. <u>C204159</u>

County (ies): Mecklenburg

ACCEPTED BY THE DEPARTMENT OF TRANSPORTATION

-DocuSigned by:

Contract Officer

5/9/2018

Date

Execution of Contract and Bonds Approved as to Form:

DocuSigned by: Homas H. Moore 653FUDDC93E48E. Attorney General

5/9/2018

Date

Signature Sheet (Bid - Acceptance by Department)

Mecklenburg

Contract No. County

Bond No. 012207310 (Liberty) 860882 (NUFIC) 09254339 (F&D) 47SUR300016010055 (Berkshire)

CONTRACT PAYMENT BOND

Date of Payment Bond Execution	April 27, 2018		
Name of Principal Contractor	The Lane Construction Corporation		
Name of Surety:	Liberty Mutual Insurance Company and National Union Fire Insurance Company of Pittsburgh, PA and Fidelity and Deposit Company of Maryland and Berkshire Hathaway Specialty Insurance Company		
Name of Contracting Body:	North Carolina Department of Transportation		
	Raleigh, North Carolina		
Amount of Bond:	Six Million Thirty Two Thousand Nine Hundred Forty Five and 27/100		
Contract ID No.:	C204159		
County Name:	Mecklenburg County		

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the principal shall promptly make payment to all persons supplying labor and material in the prosecution of the work provided for in said contract, and any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

C204159

al of Surety Company

of Witness

fer Overkamp

a fi tu

Mecklenburg

Contract No.

County

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10 201

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ANTI- SO

 Rev 5-17-11

CONTRACT PAYMENT BOND

Liberty Mutual Insurance Company and National Union Fire Insurance Company of Pittsburgh, PA and Fidelity and Deposit Company of Maryland and Berkshire Hathaway Specialty Insurance Company

Print or type Surety Company Name

By Theresan E. Rowedder

Print, stamp or type name of Attorney-in-Fact

Signature of Atlorney-in-Fact

53 State Street, Suite 2201, Boston, MA 02109

Address of Attorney-in-Fact

C204159

Mecklenburg

Contract No. County

Rev 5-17-11

CONTRACT PAYMENT BOND

CORPORATION

SIGNATURE OF CONTRACTOR (Principal)

The Lane Construction Corporaton

Full name of Corporation

90 Fieldstone Court, Cheshire CT 06410

Address as prequalified

By Signature of President, Vice President, Assistant Vice President

Select appropriate title

ROBERT E. ALGER, PRESIDENT

Print or type Signer's name



Affix Corporate Seal

Attest

Signature of Secretary, Assistant Secretary Select appropriate title

> Vincent J. Caiola Vice President, Treasurer & Secretary

Print or type Signer's name

Contract No.	C204159	Rev 5-17-11			
County	Mecklenburg				
		Bond No. 012207310 (Liberty)			
		860882 (NUFIC)			
		09254339 (F&D)			
	CONTR	47SUR30001601005	5 (Berkshire)		
Date of Performance Bond Execution:		April 27, 2018			
Name of Principal Contractor:		The Lane Construction Corporation			
Name of Surety:		Liberty Mutual Insurance Company and National Union Fire Insurance Company of and Fidelity and Deposit Company of Maryland and Berkshire Hathaway Specialty			
Name of Contracting Body:		North Carolina Department of Transportation			
		Raleigh, North Carolina	,		
Amount of Bond: Contract ID No.:		Six Million Thirty Two Thousand Nine Hundred Forty Five and 27/100			
		C204159			
County Name:		Mecklenburg County			

KNOW ALL MEN BY THESE PRESENTS, That we, the PRINCIPAL CONTRACTOR (hereafter, PRINCIPAL) and SURETY above named, are held and firmly bound unto the above named Contracting Body, hereinafter called the Contracting Body, in the penal sum of the amount stated above for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that whereas the principal entered into a certain contract with the Contracting Body, numbered as shown above and hereto attached:

NOW THEREFORE, if the principal shall well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term of said contract and any extensions thereof that may be granted by the Contracting Body, with or without notice to the Surety, and during the life of any guaranty required under the contract, and shall also well and truly perform and fulfill all the undertakings, covenants, terms, conditions, and agreements of any and all duly authorized modifications of said contract that may hereafter be made, notice of which modifications to the surety being hereby waived, then this obligation to be void; otherwise to remain in full force and virtue.

IN WITNESS WHEREOF, the above-bound parties have executed this instrument under their several seals on the date indicated above, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative, pursuant to authority of its governing body.

C204159

Mecklenburg

Contract No. County Rev 5-17-11

CONTRACT PERFORMANCE BOND

ffix Seal of Surety Company IONAL 3 3 ure of Witness er Overkamp ør type Signer's name 111111 717

Liberty Mutual Insurance Company and National Union Fire Insurance Company of Pittsburgh, PA and Fidelity and Deposit Company of Maryland and Berkshire Hathaway Specialty Insurance Company

Print or type Surety Company Name

By Theresan E. Rowedder

Print, stamp or type name of Attorney-in-Fact

Signature of Attorney-in-Fact

53 State Street, Suite 2201, Boston, MA 02109

Address of Attorney-in-Fact

C204159

Mecklenburg

Contract No. County

CONTRACT PERFORMANCE BOND

CORPORATION

SIGNATURE OF CONTRACTOR (Principal)

The Lane Construction Corporation

Full name of Corporation

90 Fieldstone Court, Cheshire CT 06410

Address as prequalified

Ву

Signature of President, Vice President, Assistant Vice President Select appropriate title

ROBERT E. ALGER, PRESIDENT

Print or type Signer's name

Affix Corporate Seal



Attest

Signature of Steretary, Assistant Secretary

Select appropriate title

Vincent J. Caiola Vice President, Treasurer & Secretary

Print or type Signer's name

sistant Vice President R, PRESIDENT

Rev 5-17-11

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND. This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated. Certificate No 7963374 Liberty Mutual Insurance Company The Ohio Casualty Insurance Company West American Insurance Company POWER OF ATTORNEY KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty insurance Company is a corporation duly organized under the laws of the State of New Hampshire, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint. Maria Chaves; Jean Correia; Jane Gilson; Mark P. Herendeen; Bryan Huft; Theresan E. Rowedder; Kevin A. White state of MA all of the city of Boston each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons. IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seats of the Companies have been affixed thereto this 14th day of December 2017 61 INSU The Ohio Casualty Insurance Company SPURA Liberty Mutual Insurance Company 919 1912 1991 West American Insurance Company Sugar guarantees WTUAN lang Bv: David M. Carey, Assistant Secretary STATE OF PENNSYLVANIA SS COUNTY OF MONTGOMERY 2017, before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of Liberty Mutual Insurance On this 14th day of December Company, The Ohio Casualty Company, and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes interest rate or residual value therein contained by signing on behalf of the corporations by himself as a duly authorized officer. IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at King of Prussla, Pennsylvania, on the day and year first above written GA PAS **COMMONWEALTH OF PENNSYLVANIA** Notarial Seat Teresa Pastella, Notary Public OF Feresa Pastella, Notary Public Upper Merion Twp., Montgomery County My Commission Expires March 28, 2021 Member, Pennsylvania Association of Notaries ARY PUR This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of The Ohio Casualty insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company which resolutions are now in full force and effect reading as follows: ARTICLE IV - OFFICERS - Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so rate. executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority. currency ARTICLE XIII - Execution of Contracts - SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary. Certificate of Designation - The President of the Company, acting pursuant to the Bylaws of the Company, authorizes David M. Carey, Assistant Secretary to appoint such attorneys-infact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations Authorization - By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and binding upon the Company with the same force and effect as though manually affixed. I. Renee C. Llewellyn, the undersigned, Assistant Secretary, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, and West American Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked. IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 27th day of NSUZ INSUN 1912 1991

LMS 12873 022017

Not valid for mortgage, note, loan, letter of credit,

Stant Secretary

POWER OF ATTORNEY ATTORNE American Home Assurance Company Power No. National Union Fire Insurance Company of Pittsburgh, PA. Principal Bond Office: 175 Water Street, New York, NY 10038 ORBEY POWER OF ATTORNEY . POWER O KNOW ALL MEN BY THESE PRESENTS: ATTOSLAF That American Home Assurance Company, a New York comoration. Fire Insurance Company of Pittsburgh, PA:, a Pennsyl corporation, does each hereby appoint POWER POWER OF ATTORNET - POWER OF ATTORN ---Mark P. Herendeen, Jean Correia, Maria Chaves, Jane Gilson, Theresan E. Rowedder: of Boston, Massachusents its true and lawful Attorney(s)-in-Fact, with fall authority to execute on its behalf bonds, undertakings, recognizances and other contracts of inde writings obligatory in the nature thereof, issued in the course of its business, and to bind the respective company thereby IN WITNESS WHEREOF, American Home Assurance Company and National Union Fire Insurance Company of Pittsburgh, PA, have each executed these presents this 3rd day of January, 2018 Michael Yang, Vice President STATE OF NEW YORK COUNTY OF NEW YORK | 55. On this 3rd day of January, 2018 before me came the above named officer of American Home Assurance Company and National Union Fire Insurance Company of Piltshurgh, PA., to me personally known to be the ey Pathic - State of New individual and officer described herein, and acknowledged that he executed the **林、116月112507**5 Coulded in Bross County foregoing insturment and affixed the scals of said corporations thereto by the Pa authority of his office. Hy Commission Expires Acril 18, 2021 CERTIFICATE Exerpts of Resolutions adopted by the Boards of Directors of American Home Assurance Company and National Union Fire Insurance Company of Pittsburg PA. on May 18, 1976: R OF ATTORNEY - FOWER OF ATTORNEY - POWER OF ATTORNE "RESOLVED, that the Chairman of the Board, the President, or any Vice President be, and hereby is, authorized to appoint Attorneys-in-Fact to represent and act for and on behalf of the Company to execute bonds, undertakings, recognizances and other contracts of indemity and writings obligatory in the nature thereof, and to attach thereto the corporate seal of the Company, in the transaction of its surety business; "RESOLVED, that the signatures and attestations of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signatures or facsimile seal shall be valid and binding upon the Company when so affixed with respect to any bond, andertaking, recognizance and other contract of indemnity and writing obligatory in the nature thereof. *RESOLVED, that any such Attorney-in-Fact delivering a socretarial certification that the foregoing resolutions still be in effect may insert in such certification the date thereof, said date to be not later than the date of delivery thereof by such Attorney-in-Fact." I, Martin Bogue, Assistant Secretary of American Home Assurance Company and of National Union Fire Insurance Company of Pittsburgh, PA, do hereby certify that the foregoing excepts of Resolutions adopted by the Boards of Directors of these corporations, and the Powers of Anomey issued pursuant thereto, are true and correct, and that both the Resolutions and the Powers of Attorney, are in full force and effect. ITNESS WHEREOF, I have hereunto set my hand and affixed the facsimile seal of each corporation 65166(4496)

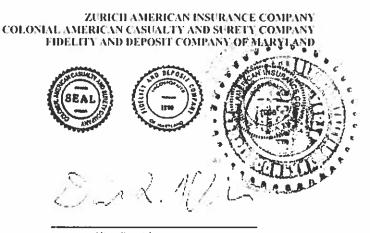
ZURICH AMERICAN INSURANCE COMPANY COLONIAL AMERICAN CASUALTY AND SURETY COMPANY FIDELITY AND DEPOSIT COMPANY OF MARYLAND POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **DAVID MCVICKER, Vice President,** in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint Kevin A. WHITE, Mark P. HERENDEEN, Jean CORREIA, Maria CHAVES, Theresan E. ROWEDDER, Bryan HUFT and Jane GILSON, all of Boston, Massachusetts, EACH its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: any and all bonds and undertakings, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURLITY COMPANY at its office in Owings Mills, Maryland, and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland, and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY of the softward officers in Owings Mills, Maryland, and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY of the Softward at its office in Owings Mills, Maryland, and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY of the Softward at its office in Owings Mills, Maryland, in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND, this 5th day of December, A.D. 2017.

ATTEST:



Vice President David McVicker

Assistant Secretary Dawn E. Brown

State of Maryland

By:

County of Baltimore

On this 5th day of December, A.D. 2017, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, DAVID MCVICKER, Vice President, and DAWN E. BROWN, Assistant Secretary, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly swora, deposeth and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written

Contract & Due



Constance A. Dunn, Notary Public My Commission Expires July 9, 2019

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, <u>Attorneys-in-Fact</u>. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify of revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONX WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this the day of ________, 20 18.



Michael Bond, Vice President

TO REPORT A CLAIM WITH REGARD TO A SURETY BOND, PLEASE SUBMIT ALL REQUIRED INFORMATION TO:

Zurich American Insurance Co. Attn: Surety Claims 1299 Zurich Way Schaumburg, IL 60196-1056



Power Of Attorney

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY NATIONAL INDEMNITY COMPANY / NATIONAL LIABILITY & FIRE INSURANCE COMPANY

Know all men by these presents, that BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 100 Federal Street, 20th Floor, Boston, Massachusetts 02110, NATIONAL INDEMNITY COMPANY, a corporation existing under and by virtue of the laws of the State of Nebraska and having an office at 3024 harney Street, Omaha, Nebraska 68131 and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, a corporation existing under and by virtue of the laws of the State of Connecticut and having an office at 100 First Stamford Place, Stamford, Connecticut 06902 (hereinafter collectively the "Companies"), pursuant to and by the authority granted as set forth herein, do hereby name, constitute and appoint: Maria Chaves, Jean Correia, Theresan E. Rowedder, Jane Gilson, Mark P. Herendeen, One Federal Street, 20th Floor of the city of Boston State of Massachusetts, their true and lawful attorney(s)-in-fact to make, execute, seal, acknowledge, and deliver, for and on their behalf as surety and as their act and deed, any and all undertakings, bonds, or other such writings obligatory in the nature thereof, in pursuance of these presents, the execution of which shall be as binding upon the Companies as if it has been duly signed and executed by their regularly elected officers in their own proper persons. This authority for the Attorney-in-Fact shall be limited to the execution of the attached bond(s) or other such writings obligatory in the nature thereof.

In witness whereof, this Power of Attorney has been subscribed by an authorized officer of the Companies, and the corporate seals of the Companies have been affixed hereto this date of April 12, 2018. This Power of Attorney is made and executed pursuant to and by authority of the Bylaws, Resolutions of the Board of Directors, and other Authorizations of BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, which are in full force and effect, each reading as appears on the back page of this Power of Attorney, respectively.

BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY.

David Fields, Executive Vice President



NATIONAL INDEMNITY COMPANY, NATIONAL LIABILITY & FIRE INSURANCE COMPANY,

By:



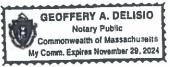
NOTARY

By:

State of Massachusetts, County of Suffolk, ss:

On April 12, 2018 before me appeared David Fields, Executive Vice President of BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY and Vice President of NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, who being duly sworn, says that his capacity is as designated above for such Companies; that he knows the corporate seals of the Companies; that the seals affixed to the foregoing instrument are such corporate seals; that they were affixed by order of the board of directors or other governing body of said Companies pursuant to its Bylaws, Resolutions and other Authorizations, and that he signed said instrument in that capacity of said Companies.

[Notary Seal]



By Dilinio

Notary Public

I, Ralph Tortorella, the undersigned, Officer of BERKSHIRE HATHAWAY SPECIALTY INSURANCE COMPANY, NATIONAL INDEMNITY COMPANY and NATIONAL LIABILITY & FIRE INSURANCE COMPANY, do hereby certify that the above and foregoing is a true and correct copy of the Power of Attorney executed by said Companies which is in full force and effect and has not been revoked. IN TESTIMONY WHEREOF, see hereunto affixed the seals of said Companies this April 27, 2018.

