

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HIGHWAY DIVISION 10

## PROPOSAL

**DATE AND TIME OF BID OPENING:** Wednesday March 5, 2025 AT 2:00 P.M.

**CONTRACT ID:** DJ00550

**WBS ELEMENT NO.:** 49291.3.5

**FEDERAL AID NO.:** 0049040

**COUNTY:** Mecklenburg

**TIP NO.:** HS-2010E

**MILES:** 0.08

**LOCATION:** Intersection of S. Tryon St. (NC-49) and General Dr. and Intersection  
of S. Tryon St. (NC-49) and Nevada Blvd. (SR-1347)

**TYPE OF WORK:** Grading, Drainage, Milling, Paving, Concrete Monolithic Islands,  
Concrete Curb and Gutter, Thermoplastic Pavement Markings, and  
Signal

**AVAILABILITY DATE:** April 7, 2025

**COMPLETION DATE:** January 3, 2026

**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.

THIS IS A ROADWAY PROJECT.

BID BONDS ARE REQUIRED.

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NAME OF BIDDER

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ADDRESS OF BIDDER

This proposal contains addendum 1, issued February 19, 2025

**PROPOSAL FOR THE CONSTRUCTION OF  
CONTRACT No. **DJ00550** IN **MECKLENBURG COUNTY**, NORTH CAROLINA**

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

The Bidder has carefully examined the location of the proposed work to be known as Contract No. **DJ00550**; 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 be bound upon his execution of the bid and subsequent award to him by the Department of Transportation in accordance with this proposal to provide the necessary contract payment bond and contract performance bond within fourteen days after the written notice of award is received by him. The undersigned Bidder further agrees to provide all necessary machinery, tools, labor, and other means of construction; and to do all the work and to furnish all materials, except as otherwise noted, necessary to perform and complete the said contract in accordance with *the 2024 Standard Specifications for Roads and Structures* by the dates(s) specified in the Project Special Provisions and in accordance with the requirements of the Engineer, and at the unit or lump sum prices, as the case may be, for the various items given on the sheets contained herein.

The Bidder shall provide and furnish all the materials, machinery, implements, appliances and tools, and perform the work and required labor to construct and complete State Highway Contract No. **DJ00550** 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 2024* with all amendments and supplements thereto, is by reference incorporated into and made a part of this contract; that, except as herein modified, all the construction and work included in this contract is to be done in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Engineer.

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

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.

## **INSTRUCTIONS TO BIDDERS**

**PLEASE READ ALL INSTRUCTIONS CAREFULLY  
BEFORE PREPARING AND SUBMITTING YOUR BID.**

**All bids shall be prepared and submitted in accordance with the following requirements. Failure to comply with any requirement may cause the bid to be considered irregular and may be grounds for rejection of the bid.**

For preparing and submitting the bid electronically, refer to Article 102-8(B) of the *Standard Specifications*.

Bidders that bid electronically on Raleigh Central-Let projects will need a separate Digital Signature from the approved electronic bidding provider for Division Contracts.

### **ELECTRONIC ON-LINE BID:**

1. Download entire proposal from Connect NCDOT website. Download the electronic submittal file from the approved electronic bidding provider website.
2. In accordance with Article 102-3 of the Standard Specifications, registration on the Interested Parties List is required unless SP1 G02 Interested Parties List Not Required provision is included in the proposal.
3. Prepare and submit the electronic submittal file using the approved electronic bidding provider software.
4. Electronic bidding software necessary for electronic bid preparation may be downloaded from the Bid Express website following the directions at: <https://connect.ncdot.gov/letting/Pages/Electronic-Bidding.aspx>.
5. Questions should be emailed 7 calendar days prior to the bid opening to **Jason Brooks** at **jcbrooks@ncdot.gov**. Contact with any other NCDOT personnel concerning this project is strictly prohibited, unless otherwise noted, and may result in bids being considered non-responsive.

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## PROJECT SPECIAL PROVISIONS (GENERAL)

All work and materials shall be in accordance with the provisions of the General Guidelines of this contract, the Project Special Provisions, the North Carolina Department of Transportation *2024 Standard Specifications for Roads and Structure*, the North Carolina Department of Transportation *2024 Roadway Standards Drawings*, the current edition of the *Manual on Uniform Traffic Control Devices (MUTCD)*.

The Contractor shall keep himself/herself fully informed of all Federal, State and local laws, ordinances, and regulations, and shall comply with the provisions of Section 107 of the *Standard Specifications*.

### CONTRACT TIME AND LIQUIDATED DAMAGES:

(8-15-00) (Rev. 12-18-07)

108

SP1 G07 A

The date of availability for this contract is **April 7, 2025**, except that work in jurisdictional waters and wetlands shall not begin until a meeting between the DOT, Regulatory Agencies, and the Contractor is held as stipulated in the permits contained elsewhere in this proposal. This delay in availability has been considered in determining the contract time for this project.

The completion date for this contract is **January 3, 2026**.

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 **Seven Hundred Dollars (\$700.00)** per calendar day. These liquidated damages will not be cumulative with any liquidated damages which may become chargeable under Intermediate Contract Time Number 1.

### INTERMEDIATE CONTRACT TIME #1 AND LIQUIDATED DAMAGES:

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

108

SP1 G13 A

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

The date of availability for this intermediate contract time is not before **April 7, 2025**.

The completion date for this intermediate contract time is **July 4, 2025**.

The liquidated damages for this intermediate contract time are **Seven Hundred Dollars (\$700.00)** per calendar day.

Upon apparent completion of all the work required to be completed by this intermediate date, a final inspection will be held in accordance with Article 105-17 and upon acceptance, the Department will assume responsibility for the maintenance of all work except *Planting*,

*Reforestation and/or Permanent Vegetation Establishment.* The Contractor will be responsible for and shall make corrections of all damages to the completed roadway caused by his planting operations, whether occurring prior to or after placing traffic through the project.

**INTERMEDIATE CONTRACT TIME #2 AND LIQUIDATED DAMAGES:**

(6-18-13)

108

SP1 G14 L

The Contractor shall complete the work required **for Phase 1** as shown on Sheet **TCP-1** and shall place and maintain traffic on same.

The date of availability for this intermediate contract time is **April 7, 2025**.

The completion date for this intermediate contract time is **July 4, 2025**.

The liquidated damages are **Seven Hundred Dollars (\$700.00)** per calendar day.

**INTERMEDIATE CONTRACT TIME #3 AND LIQUIDATED DAMAGES:**

(6-18-13)

108

SP1 G14 L

The Contractor shall complete the work required **for Phase 2** as shown on Sheet **TCP-2** and shall place and maintain traffic on same.

The date of availability for this intermediate contract time is **at the completion of ICT #2**.

The completion date for this intermediate contract time is **July 4, 2025**.

The liquidated damages are **Seven Hundred Dollars (\$700.00)** per calendar day.

**INTERMEDIATE CONTRACT TIME #4 AND LIQUIDATED DAMAGES:**

(9-21-21)

108

SP1 G14 M

For each curb ramp location on a continuous pedestrian facility, the Contractor shall complete all work required of that curb ramp location as shown in the plans.

The date of availability for each individual intermediate contract time is the date when the Contractor elects to sever the existing continuous pedestrian facility.

The completion date for each individual intermediate contract time is the date which is **seven (7)** consecutive calendar days after and including the date of availability.

For each curb ramp location on a continuous pedestrian facility, the liquidated damages are **Two Hundred and Fifty Dollars (\$ 250.00)** per calendar day.

**INTERMEDIATE CONTRACT TIME #5 AND LIQUIDATED DAMAGES:**

(2-20-07)

108

SP1 G14 A

The Contractor shall complete the required work of installing, maintaining and removing the traffic control devices for lane closures and restoring traffic to its normal pattern. The Contractor shall not close or narrow a lane of traffic on **NC 49 (South Tryon St), General Drive, or SR 1347 (Nevada Blvd.)** during the following time restrictions:

## DAY AND TIME RESTRICTIONS

**Monday thru Sunday  
6:00 A.M. to 7:00 P.M.**

In addition, the Contractor shall not close or narrow a lane of traffic on **NC 49 (South Tryon St) General Drive, or SR 1347 (Nevada Blvd.)** 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

- For any **occurrence** that creates unusually high traffic volumes, as directed by the Engineer.
- For **New Year's Day**, between the hours of 6:00 a.m. December 31st and 9:00 a.m. January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until 9:00 a.m. the following Tuesday.
- For **Easter**, between the hours of 6:00 a.m. Thursday and 9:00 a.m. Monday.
- For **Memorial Day**, between the hours of 6:00 a.m. Friday and 9:00 a.m. Tuesday.
- For **Independence Day**, between the hours of 6:00 a.m. the day before Independence Day and 9:00 a.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 9:00 a.m. the Tuesday after Independence Day.

- For **Labor Day**, between the hours of 6:00 a.m. Friday and 9:00 a.m. Tuesday.
- For **Thanksgiving Day**, between the hours of 6:00 a.m. Wednesday and 9:00 a.m. Monday.
- For **Christmas**, between the hours of 6:00 a.m. the Friday before the week of Christmas Day and 9:00 a.m. the following Tuesday after the week of Christmas Day.

Holidays and holiday weekends shall include New Year's, Easter, Memorial Day, Independence Day, Labor Day, Thanksgiving, and Christmas. The Contractor shall schedule his work so that lane closures are not 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 herein and place traffic in a 2-lane, 2-way pattern.

**The liquidated damages are SEVEN HUNDRED DOLLARS per hour or any portion thereof.**



**HAUL ROADS:**

(7-16-24)

105

SP1 G04

Revise the *Standard Specifications* as follows:

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

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

**BUILD AMERICA, BUY AMERICA (BABA):**

(11-15-22)(Rev. 7-16-24)

106

SP1 G05

Revise the *Standard Specifications* as follows:

**Page 1-48, Article 106-1 GENERAL REQUIREMENTS,** add the following after line 49:

**(C) Build America, Buy America (BABA)**

All manufactured products and construction materials permanently incorporated into any project must meet requirements of the Build America, Buy America (BABA) Act of the Infrastructure Investment and Jobs Act (IIJA). Before any material or product shown on the Department's Build America, Buy America (BABA) List is included for payment on a monthly estimate, the Contractor shall furnish the Engineer with a notarized certification certifying that the items conform to the BABA Act. The Department's Build America Buy America (BABA) List can be found on the Department's website below.

<https://connect.ncdot.gov/letting/LetCentral/NCDOT%20BABA%20Materials%20List.pdf>

Each purchase order issued by the Contractor or a subcontractor for items on the BABA List to be permanently incorporated into any project shall contain in bold print a statement advising the supplier that the manufactured products and construction materials must be produced in the United States of America. The Contractor and all affected subcontractors shall maintain a separate file for BABA List items so that verification of the Contractor's efforts to purchase items produced in the United States can readily be verified by an authorized representative of the Department or the Federal Highway Administration (FHWA).

**BOND REQUIREMENTS:**

(6-1-16)(Rev. 1-16-24)

102-8, 102-10

SPD 01-420A

A Bid Bond is required in accordance with Article 102-10 of the *Standard Specifications* for Roads and Structures.

Contract Payment and Performance Bonds are required in accordance with Article 103-7 of the *Standard Specifications*.

### **BASIS OF PAYMENT AND CLAIMS:**

The quantity of unit or lump sum prices and payment will be full compensation for all work, including, but not limited to supervision, labor, transportation, fuels, lubricants, repair parts, equipment, machinery and tools, materials necessary for the prosecution and completion of the work. The quantities contained herein are estimated only and the quantity to be paid for shall be the actual quantities which were used on the project.

The Contractor may submit a request for partial payment on a monthly basis, or other interval as approved by the Engineer. All invoices for payment shall be completely and legibly filled out with all appropriate information supplied and shall be signed by an authorized representative of the Contractor.

Payment to the Contractor will be made only for the actual quantities of the various items that are completed and accepted in accordance with the terms of the contract. Unless otherwise specified, all contract pay items will be produced, placed and paid in accordance with the Standard Specifications. In no case will the total amount paid to the contractor exceed the total contract quote by more than ten percent without prior written request from the Division Engineer to Fiscal Section.

### **CLAIMS FOR ADDITIONAL COMPENSATION OR EXTENSION OF TIME:**

The Contractor's attention is directed to the fact that Article 104-5 pertaining to revised contract unit prices will not apply to this contract. Any claims for additional compensation and/or extension of the completion date shall be submitted to the Division Engineer with detailed justification with the final invoice. The failure to submit the claim(s) with the final invoice may be a bar to recovery. Please be advised that General Statute 136-29 of the Road and Highway Laws of North Carolina provides that a contractor who has not received the amount he claims he is due under the contract may submit a written verified claim to the State Highway Administrator within sixty (60) days after receipt of the final statement. The mailing address for the State Highway Administrator is: N. C. Department of Transportation, 1536 Mail Service Center, Raleigh, NC 27699-1536.

### **PAYMENT AND RETAINAGE:**

The Contractor may submit a request for partial payment on a monthly basis, or other interval as approved by the Engineer. The amount of partial payments will be based on the work accomplished and accepted as the last day of the approved pay period. All requests for payment shall be made on the form furnished to the Contractor by the Department of Transportation. The form shall be completely and legibly filled out with all appropriate information supplied and shall be signed by an authorized representative of the Contractor. Disadvantaged Business Enterprise (DBE) participation shall be listed in the appropriate spaces on all requests for payment. If there is no participation the word "None" or the figure "0" shall be entered. An amount equal to five percent (5%) of the total amount due on the partial pay estimate may be deducted and retained until after the final inspection. One hundred percent (100%) payment shall be made after successful completion of the work as verified by the final inspection.

**EXTENSION OF CONTRACT TIME:**

Failure on the part of the Contractor to furnish bonds or certifications, or to satisfy preliminary requirements necessary to issue the purchase order will not constitute grounds for extension of the contract time. If the Contractor has fulfilled all preliminary requirements for the issuance of a purchase order, and the purchase order authorization is not available by the date of availability, the Contractor shall be granted an extension equal to the number of calendar days the purchase order authorization is delayed after the date of availability.

**NOTIFICATION OF OPERATIONS:**

The Contractor shall notify the Engineer 48 hours in advance of beginning work on this project. The Contractor shall give the Engineer sufficient notice of all operations for any sampling, inspection or acceptance testing required.

**NIGHT OPERATIONS:**

Verification of any city or county permits, required for night work, shall be provided to the Engineer if the contractor wants to work at night. Also, before the contractor begins his operations during night hours, he shall submit in writing, a full and complete plan for traffic control and construction lighting which shall be approved by the engineer prior to construction.

All traffic control devices used outside of closure areas shall meet the requirements for night use as set forth in the North Carolina Department of Transportation Standard Specifications for Roads and Structures, North Carolina Department of Transportation Roadway Standard Drawings, and the current Manual of Uniform Traffic Control Devices (MUTCD).

**DRIVEWAYS AND PRIVATE PROPERTY:**

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

The Contractor shall not perform work for private citizens or agencies in conjunction with this project or within the project limits of this contract. Any driveway paved by a Contractor which ties into an NCDOT system road being paved by the Contractor must be paved either prior to the road paving project or after its completion.

**ENGINEERING CONTROL:**

Engineering control, construction surveying and project inspection will be provided by the North Carolina Department of Transportation.

The Contractor shall give a minimum of a (2) two working day notice of any stakeout request. The survey party work day is defined as Monday-Friday from 8:00 A.M. to 4:00 P.M. Construction stakeout request shall be made by submitting a Survey Request Form to the

Engineer and the NCDOT Survey Party Chief. Contact information will be provided at the Preconstruction meeting.

The Contractor shall take necessary precautions to protect survey stakes provided by the NCDOT survey party in accordance with Section 105-9 of the *Standard Specifications*. Any necessary re-staking due to damage by the contractor or subcontractors will be provided and a re-staking fee of \$110.00 per hour will be charged.

#### **PERMANENT VEGETATION ESTABLISHMENT:**

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

104

SP1 G16

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

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

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

#### **NO MAJOR CONTRACT ITEMS:**

(2-19-02) (Rev. 8-21-07)

104

SP1 G31

None of the items included in this contract will be major items.

**NO SPECIALTY ITEMS:**

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

108-6

SP1 G34

None of the items included in this contract will be specialty items (see Article 108-6 of the *Standard Specifications*).

**FUEL AND ASPHALT PRICE ADJUSTMENT:**

(1-3-12)

SP1 G42

No fuel price adjustments will be made on this project.

**SCHEDULE OF ESTIMATED COMPLETION PROGRESS:**

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

108-2

SP1 G58

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

	<b><u>Fiscal Year</u></b>	<b><u>Progress (% of Dollar Value)</u></b>
2025	(7/01/24 - 6/30/25)	90% of Total Amount Bid
2026	(7/01/25 - 6/30/26)	10% of Total Amount Bid

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

**DISADVANTAGED BUSINESS ENTERPRISE (DIVISIONS):**

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

102-15(J)

SP1 G62

**Description**

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

**Definitions**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

3.

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

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

*Letter of Intent* - Form signed by the Contractor and the DBE subcontractor, manufacturer or regular dealer that affirms that a portion of said contract is going to be performed by the signed DBE for the estimated amount (based on quantities and unit prices) listed at the time of bid.

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

*Listing of DBE Subcontractors Form* - Form for entering DBE subcontractors on a project that will meet this DBE goal. This form is for paper bids only.

[http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/08%20DBE%20Subcontractors%20\(Federal\).docx](http://connect.ncdot.gov/municipalities/Bid%20Proposals%20for%20LGA%20Content/08%20DBE%20Subcontractors%20(Federal).docx)

*Subcontractor Quote Comparison Sheet* - Spreadsheet for showing all subcontractor quotes in the work areas where DBEs quoted on the project. This sheet is submitted with good faith effort packages.

<http://connect.ncdot.gov/business/SmallBusiness/Documents/DBE%20Subcontractor%20Quote%20Comparison%20Example.xls>

## **DBE Goal**

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

Disadvantaged Business Enterprises **3.0 %**

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

## **Directory of Transportation Firms (Directory)**

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

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

#### **(A) Electronic Bids**

Bidders shall submit a listing of DBE participation in the appropriate section of the electronic submittal file.

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

#### **(B) Paper Bids**

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



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

### **DBE Prime Contractor**

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

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

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

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

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

The documentation shall be received in the office of the Engineer no later than 2:00 p.m. of the fifth calendar day following opening of bids, unless the fifth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the 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 DBE to be used toward the DBE goal, or if the form is incomplete (i.e. both signatures are not present), the DBE participation will not count toward meeting the DBE goal. If the lack of this participation drops the commitment below the DBE goal, the Contractor shall submit evidence of good faith efforts, completed in its entirety, to the Engineer no later than 2:00 p.m. on the eighth calendar day following opening of bids, unless the eighth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 10:00 a.m. on the next official state business day.

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

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

One complete set and 3 copies of this information shall be received in the office of the Engineer no later than 2:00 p.m. of the fifth calendar day following opening of bids, unless the fifth day falls on Saturday, Sunday or an official state holiday. In that situation, it is due in the office of the Engineer no later than 10:00 a.m. on the next official state business day.

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

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

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

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

- (A) Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising, written notices, use of verifiable electronic means through the use of the NCDOT Directory of Transportation Firms) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within at least 10 days prior to bid opening to allow the DBEs to respond to the solicitation. Solicitation shall provide the opportunity to DBEs within the Division and surrounding Divisions where the project is located. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
- (B) Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved.
  - (1) Where appropriate, break out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
  - (2) Negotiate with subcontractors to assume part of the responsibility to meet the contract DBE goal when the work to be sublet includes potential for DBE participation (2<sup>nd</sup> and 3<sup>rd</sup> tier subcontractors).

- (C) Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (D) (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.
- (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidding contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- (E) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associates and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
- (F) Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or bidder.
- (G) Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (H) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; Federal, State, and local minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs. Contact within 7 days from the bid opening the Business Opportunity and Work Force Development Unit at BOWD@ncdot.gov to give notification of the bidder's inability to get DBE quotes.
- (I) Any other evidence that the bidder submits which shows that the bidder has made reasonable good faith efforts to meet the DBE goal.

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

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

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

### **Non-Good Faith Appeal**

The Engineer will notify the contractor verbally and in writing of non-good faith. A contractor may appeal a determination of non-good faith made by the Goal Compliance Committee. If a contractor wishes to appeal the determination made by the Committee, they shall provide written notification to the Engineer. The appeal shall be made within 2 business days of notification of the determination of non-good faith.

### **Counting DBE Participation Toward Meeting DBE Goal**

#### **(A) Participation**

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

#### **(B) Joint Checks**

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

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

A DBE may enter into subcontracts. Work that a DBE subcontracts to another DBE firm may be counted toward the contract goal requirement. Work that a DBE subcontracts to a non-DBE firm does not count toward the contract goal requirement. If a DBE contractor or subcontractor subcontracts a significantly greater portion of the

work of the contract than would be expected on the basis of standard industry practices, it shall be presumed that the DBE is not performing a commercially useful function. The DBE may present evidence to rebut this presumption to the Department. The Department's decision on the rebuttal of this presumption is subject to review by the Federal Highway Administration but is not administratively appealable to USDOT.

(D) Joint Venture

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

(E) Suppliers

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

(F) Manufacturers and Regular Dealers

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

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

### **Commercially Useful Function**

(A) DBE Utilization

The Contractor may count toward its contract goal requirement only expenditures to DBEs that perform a commercially useful function in the work of a contract. A DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. To perform a commercially useful function, the DBE shall also be responsible with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the

material and installing (where applicable) and paying for the material itself. To determine whether a DBE is performing a commercially useful function, the Department will evaluate the amount of work subcontracted, industry practices, whether the amount the firm is to be paid under the contract is commensurate with the work it is actually performing and the DBE credit claimed for its performance of the work, and any other relevant factors.

(B) DBE Utilization in Trucking

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

- (1) The DBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there shall not be a contrived arrangement for the purpose of meeting DBE goals.
- (2) The DBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- (3) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
- (4) The DBE may subcontract the work to another DBE firm, including an owner-operator who is certified as a DBE. The DBE who subcontracts work to another DBE receives credit for the total value of the transportation services the subcontracted DBE provides on the contract.
- (5) The DBE may also subcontract the work to a non-DBE firm, including from an owner-operator. The DBE who subcontracts the work to a non-DBE is entitled to credit for the total value of transportation services provided by the non-DBE subcontractor not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE subcontractors receives credit only for the fee or commission it receives as a result of the subcontract arrangement. The value of services performed under subcontract agreements between the DBE and the Contractor will not count towards the DBE contract requirement.
- (6) A DBE may lease truck(s) from an established equipment leasing business open to the general public. The lease must indicate that the DBE has exclusive use of and control over the truck. This requirement does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. This type of lease may count toward the DBE's credit as long as the driver is under the DBE's payroll.
- (7) Subcontracted/leased trucks shall display clearly on the dashboard the name of the DBE that they are subcontracted/leased to and their own company name if it is not identified on the truck itself. Magnetic door signs are not permitted.

## **DBE Replacement**

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

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

A committed DBE subcontractor may only be terminated after receiving the Department's written approval based upon a finding of good cause for the proposed termination and/or substitution. For purposes of this section, good cause shall include the following circumstances:

- (a) The listed DBE subcontractor fails or refuses to execute a written contract;
- (b) The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (c) The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements;
- (d) The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (e) The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR Parts 180, 215 and 1,200 or applicable state law;
- (f) The listed DBE subcontractor is not a responsible contractor;
- (g) The listed DBE voluntarily withdraws from the project and provides written notice of withdrawal;
- (h) The listed DBE is ineligible to receive DBE credit for the type of work required;
- (i) A DBE owner dies or becomes disabled with the result that the listed DBE contractor is unable to complete its work on the contract;
- (j) Other documented good cause that compels the termination of the DBE subcontractor. Provided, that good cause does not exist if the prime contractor seeks to terminate a DBE it relied upon to obtain the contract so that the prime contractor can self-perform the work for which the DBE contractor was engaged or so that the prime contractor can substitute another DBE or non-DBE contractor after contract award.

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

(A) Performance Related Replacement

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

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

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

(B) Decertification Replacement

- (1) When a committed DBE is decertified by the Department after the SAF (*Subcontract Approval Form*) has been received by the Department, the Department will not require the Contractor to solicit replacement DBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement.
- (2) When a committed DBE is decertified prior to the Department receiving the SAF (*Subcontract Approval Form*) for the named DBE firm, the Contractor shall take all necessary and reasonable steps to replace the DBE subcontractor with another DBE subcontractor to perform at least the same amount of work to meet the DBE goal requirement. If a DBE firm is not found to do the same amount of work, a good faith effort must be submitted to NCDOT (see A herein for required documentation).
- (3) Exception: If the DBE's ineligibility is caused solely by its having exceeded the size standard during the performance of the contract, the Department will not require the Contractor to solicit replacement DBE participation equal to the



remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement and overall goal.

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

### **Changes in the Work**

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

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

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

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

### **Reports and Documentation**

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

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

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

### **Reporting Disadvantaged Business Enterprise Participation**

The Contractor shall provide the Engineer with an accounting of payments made to all DBE firms, including material suppliers and contractors at all levels (prime, subcontractor,

or second tier subcontractor). This accounting shall be furnished to the Engineer for any given month by the end of the following month. Failure to submit this information accordingly may result in the following action:

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

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

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

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

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

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

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

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

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

### **BIDS OVER LIMIT:**

(08-01-16)

SPD 01-400

In accordance with GS 136-28.1(b), if the total bid amount of the contract exceeds \$5.0 million, the bid will not be considered for award.

### **CERTIFICATION FOR FEDERAL-AID CONTRACTS:**

(3-21-90)

SP1 G85

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

- (A) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of

any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

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

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

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

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

(8-20-19)

SP1 G092

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

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

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

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

**CONTRACTOR'S LICENSE REQUIREMENTS:**

(7-1-95)

102-14

SP1 G88

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

**RESTRICTIONS ON ITS EQUIPMENT AND SERVICES:**

(11-17-20)

SP01 G090

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

**EQUIPMENT IDLING GUIDELINES:**

(1-19-21)

107

SP1 G096

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

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

1. Idling when queuing.
2. Idling to verify the vehicle is in safe operating condition.
3. Idling for testing, servicing, repairing or diagnostic purposes.
4. Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane, mixing concrete, etc.).
5. Idling required to bring the machine system to operating temperature.
6. Emergency vehicles, utility company, construction, and maintenance vehicles where the engines must run to perform needed work.
7. Idling to ensure safe operation of the vehicle.
8. Idling when the propulsion engine is providing auxiliary power for other than heating or air conditioning. (such as hydraulic systems for pavers)
9. When specific traffic, safety, or emergency situations arise.
10. If the ambient temperature is less than 32 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants (e.g. to run the heater).
11. If the ambient temperature is greater than 90 degrees Fahrenheit. Limited idling to provide for the safety of vehicle occupants of off-highway equipment (e.g. to run the air conditioning) no more than 30 minutes.
12. Diesel powered vehicles may idle for up to 30 minutes to minimize restart problems.

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

**U.S. DEPARTMENT OF TRANSPORTATION HOTLINE:**

(11-22-94)

108-5

SP1 G100

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

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

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

**UTILITY CONFLICTS:**

It shall be the responsibility of the Contractor to contact all affected utility owners and determine the precise locations of all utilities prior to beginning construction. Utility owners shall be contacted a minimum of 48 hours prior to the commencement of operations. Special care shall be used in working around or near existing utilities, protecting them when necessary to provide uninterrupted service. In the event that any utility service is interrupted, the Contractor shall notify the utility owner immediately and shall cooperate with the owner, or his representative, in the restoration of service in the shortest time possible. Existing fire hydrants shall be kept accessible to fire departments at all times.

The Contractor shall adhere to all applicable regulations and follow accepted safety procedures when working in the vicinity of utilities in order to insure the safety of construction personnel and the public. Utilities damaged by the Contractor due to his negligence will be repaired at the Contractor's expense.

**TWELVE MONTH GUARANTEE:**

(7-15-03)

108

SP1 G145

- (A) The Contractor shall guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to the Department. The Contractor will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of the Department, and/or for use in excess of the design.
- (B) Where items of equipment or material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply for that particular piece of equipment or material. The Department's first remedy shall be through the manufacturer although the Contractor is responsible for invoking the warranted repair work with the manufacturer. The Contractor's responsibility shall be limited to the term of the manufacturer's guarantee. NCDOT would be afforded the same warranty as provided by the Manufacturer.

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

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

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

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

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

105-16, 225-2, 16

SP1 G180

#### **General**

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

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

- (A) *Certified Supervisor* - Provide a certified Erosion and Sediment Control/Stormwater Supervisor to manage the Contractor and subcontractor operations, insure compliance with Federal, State and Local ordinances and regulations, and manage the Quality Control Program.
- (B) *Certified Foreman* - Provide a certified, trained foreman for each construction operation that increases the potential for soil erosion or the possible sedimentation and turbidity of surface waters.
- (C) *Certified Installer* - Provide a certified installer to install or direct the installation for erosion or sediment/stormwater control practices.
- (D) *Certified Designer* - Provide a certified designer for the design of the erosion and sediment control/stormwater component of reclamation plans and, if applicable, for the design of the project erosion and sediment control/stormwater plan.

#### **Roles and Responsibilities**

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

for conducting the quality control program. The Certified Supervisor shall be on the project within 24 hours notice from initial exposure of an erodible surface to the project's final acceptance. Perform the following duties:

- (1) Manage Operations - Coordinate and schedule the work of subcontractors so that erosion and sediment control/stormwater measures are fully executed for each operation and in a timely manner over the duration of the contract.
  - (a) Oversee the work of subcontractors so that appropriate erosion and sediment control/stormwater preventive measures are conformed to at each stage of the work.
  - (b) Prepare the required National Pollutant Discharge Elimination System (NPDES) Inspection Record and submit to the Engineer.
  - (c) Attend all weekly or monthly construction meetings to discuss the findings of the NPDES inspection and other related issues.
  - (d) Implement the erosion and sediment control/stormwater site plans requested.
  - (e) Provide any needed erosion and sediment control/stormwater practices for the Contractor's temporary work not shown on the plans, such as, but not limited to work platforms, temporary construction, pumping operations, plant and storage yards, and cofferdams.
  - (f) Acquire applicable permits and comply with requirements for borrow pits, dewatering, and any temporary work conducted by the Contractor in jurisdictional areas.
  - (g) Conduct all erosion and sediment control/stormwater work in a timely and workmanlike manner.
  - (h) Fully perform and install erosion and sediment control/stormwater work prior to any suspension of the work.
  - (i) Coordinate with Department, Federal, State and Local Regulatory agencies on resolution of erosion and sediment control/stormwater issues due to the Contractor's operations.
  - (j) Ensure that proper cleanup occurs from vehicle tracking on paved surfaces or any location where sediment leaves the Right-of-Way.
  - (k) Have available a set of erosion and sediment control/stormwater plans that are initialed and include the installation date of Best Management Practices. These practices shall include temporary and permanent groundcover and be properly updated to reflect necessary plan and field changes for use and review by Department personnel as well as regulatory agencies.
- (2) Requirements set forth under the NPDES Permit - The Department's NPDES Stormwater permit (NCS000250) outlines certain objectives and management measures pertaining to construction activities. The permit references *NCG010000, General Permit to Discharge Stormwater* under the NPDES, and states that the Department shall incorporate the applicable requirements into its delegated Erosion and Sediment Control Program for construction activities disturbing one or more acres of land. The Department further incorporates these requirements on all contracted bridge and culvert work at jurisdictional waters, regardless of size. Some of the requirements are, but are not limited to:

- (a) Control project site waste to prevent contamination of surface or ground waters of the state, i.e. from equipment operation/maintenance, construction materials, concrete washout, chemicals, litter, fuels, lubricants, coolants, hydraulic fluids, any other petroleum products, and sanitary waste.
  - (b) Inspect erosion and sediment control/stormwater devices and stormwater discharge outfalls at least once every 7 calendar days and within 24 hours after a rainfall event equal to or greater than 1.0 inch that occurs within a 24 hour period. Additional monitoring may be required at the discretion of Division of Water Resources personnel if the receiving stream is 303(d) listed for turbidity and the project has had documented problems managing turbidity.
  - (c) Maintain an onsite rain gauge or use the Department's Multi-Sensor Precipitation Estimate website to maintain a daily record of rainfall amounts and dates.
  - (d) Maintain erosion and sediment control/stormwater inspection records for review by Department and Regulatory personnel upon request.
  - (e) Implement approved reclamation plans on all borrow pits, waste sites and staging areas.
  - (f) Maintain a log of turbidity test results as outlined in the Department's Procedure for Monitoring Borrow Pit Discharge.
  - (g) Provide secondary containment for bulk storage of liquid materials.
  - (h) Provide training for employees concerning general erosion and sediment control/stormwater awareness, the Department's NPDES Stormwater Permit NCS000250 requirements, and the applicable requirements of the *General Permit, NCG010000*.
  - (i) Report violations of the NPDES permit to the Engineer immediately who will notify the Division of Water Quality Regional Office within 24 hours of becoming aware of the violation.
- (3) Quality Control Program - Maintain a quality control program to control erosion, prevent sedimentation and follow provisions/conditions of permits. The quality control program shall:
- (a) Follow permit requirements related to the Contractor and subcontractors' construction activities.
  - (b) Ensure that all operators and subcontractors on site have the proper erosion and sediment control/stormwater certification.
  - (c) Notify the Engineer when the required certified erosion and sediment control/stormwater personnel are not available on the job site when needed.
  - (d) Conduct the inspections required by the NPDES permit.
  - (e) Take corrective actions in the proper timeframe as required by the NPDES permit for problem areas identified during the NPDES inspections.
  - (f) Incorporate erosion control into the work in a timely manner and stabilize disturbed areas with mulch/seed or vegetative cover on a section-by-section basis.
  - (g) Use flocculants approved by state regulatory authorities where appropriate and where required for turbidity and sedimentation reduction.



- (h) Ensure proper installation and maintenance of temporary erosion and sediment control devices.
- (i) Remove temporary erosion or sediment control devices when they are no longer necessary as agreed upon by the Engineer.
- (j) The Contractor's quality control and inspection procedures shall be subject to review by the Engineer. Maintain NPDES inspection records and make records available at all times for verification by the Engineer.

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

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

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

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

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

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

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

(D) *Certified Designer* - Include the certification number of the Level III Certified Designer on the erosion and sediment control/stormwater component of all reclamation plans and

if applicable, the certification number of the Level III Certified Designer on the design of the project erosion and sediment control/stormwater plan.

### **Preconstruction Meeting**

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

### **Ethical Responsibility**

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

### **Revocation or Suspension of Certification**

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

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

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

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

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

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

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

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

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

### **Measurement and Payment**

All work described within this provision and the role of Certified Erosion and Sediment Control/Stormwater Supervisor, Certified Foremen, Certified Installers and Certified Designer will be incidental to the project for which no direct compensation will be made.

### **PROCEDURE FOR MONITORING BORROW PIT DISCHARGE:**

(2-20-07) (Rev. 1-16-24)

105-16, 230, 801

SP1 G181

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

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

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

During the Environmental Assessment required by Article 230-4 of the *Standard Specifications*, the Contractor shall define the point at which the discharge enters into the State's surface waters

and the appropriate sampling locations. Sampling locations shall include points upstream and downstream from the point at which the discharge enters these waters. Upstream sampling location shall be located so that it is not influenced by backwater conditions and represents natural background conditions. Downstream sampling location shall be located at the point where complete mixing of the discharge and receiving water has occurred.

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

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

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

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

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

## **PROJECT SPECIAL PROVISIONS (ROADWAY)**

### **SCOPE OF WORK:**

This contract is for Grading, Drainage, Milling, Paving, Concrete Monolithic Islands, Curb and Gutter, Thermoplastic Pavement Markings, and Signal at the Intersection of South Tryon St. (NC-49) and General Dr. and Intersection Of South Tryon St. (NC-49) and Nevada Blvd. (SR-1347) in Mecklenburg County. The Contractor shall furnish all labor and materials for the project in accordance with the *2024 Standard Specifications* and/or Special Provisions herein.

### **NOTES TO CONTRACTOR:**

The contractors attention is directed to the signal poles at the intersection of S. Tryon St. (NC-49) and General Dr. The signal poles and guy assemblies will be installed by Duke Energy through the agreement between Duke Energy and the City of Charlotte (CDOT) prior to commencement of this contract.

### **GRADING:**

The Contractor is to grade this project to the typical sections and details shown. **Grading shall be comprehensive grading as defined in Section 226 of the Standard Specifications**, and shall include excavation for paved shoulder construction, cutting and removal of paved driveways which intersect the roadway, reshaping, grading and compacting roadway shoulders and ditches, pavement removal, removal of existing concrete curb & gutter, sidewalk and concrete driveways. Contractor will restore all driveways to original or better condition. Any borrow will be incidental to comprehensive grading but undercut will be measured and paid for as **Undercut Excavation (CY)**, see **226-1** of the Specifications. It shall be the Contractor's responsibility to dispose of any waste material or to furnish any borrow material needed. No material may be wasted or removed from the project unless approved by the Engineer.

The Contractor shall shape, compact, and grade the ditches and shoulders to the lines, grades, and typical sections established by the plans or as directed by the Engineer. Roadway ditches shall be cleaned, reshaped and maintained until final acceptance of the project. The Contractor shall grade the roadway ditches so that the continuous drainage at driveway at driveway pipes shall be maintained. However, it shall not be the Contractor's responsibility to remove existing internal obstructions from driveway pipes.

The Contractor shall excavate only that portion of shoulder area to which Asphalt Concrete Base Course can be placed during the same day's operations. No open excavation adjacent to the roadway is permitted after working hours. The excavated area shall be uniformly graded, well compacted, and free of debris and loose material. Areas which the Contractor excavates but is unable to place Asphalt Concrete Base Course for shall be backfilled and made safe at the end of the work day. The contractor shall provide "weep" cuts at intervals to prevent water retention between the pavement and excavation windrow in the event of rain.

The Contractor shall remove any portion of paved driveways which are in conflict with the shoulder widening. A straight uniform edge shall be established for removal of the pavement by sawing or cutting the pavement prior to removal. Driveways which equal or exceed the

pavement design of the shoulder widening and have a compatible surface grade may be left in place at the discretion of the Engineer.

The Contractor shall extend the excavation around the radii of intersecting streets to form a uniform transition. In sections which do not begin or end at an intersection, the Contractor shall excavate and pave a minimum 50 foot transition taper at the beginning and end of the widened section. Access shall be maintained to all driveways within the project limits at all times. The Contractor shall restore all unpaved driveways to conditions acceptable to the Department of Transportation. Stone shall be placed in unpaved driveways as directed by the Engineer or his representative. Payment for stone for driveways shall be made under the item "Incidental Stone Base."

Paved driveways or driveway pipes damaged by the Contractor's equipment or operations shall be replaced, repaired or otherwise restored to original condition and state of repair by the Contractor within 15 calendar days of notification by the Engineer. The contractor is advised to make a detailed investigation of the original state of such features prior to commencing operations.

**Grading will be as specified under section 226-3 of the Standard Specifications.**

**BORROW EXCAVATION (PIPE INSTALLATION):**

Borrow excavation used for the purpose of Grading is considered incidental to Lump Sum Grading and will be covered by Section 226 of the NCDOT Standard Specifications for Roads and Structures.

Any Borrow excavation to be paid for is to replace unsuitable material, as determined by the Engineer, during pipe installation.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Borrow Excavation.....	CY

**SHOULDER WEDGE:**

(9-20-11)(Rev. 1-16-24)

610

SP6 R03R

Revise the *Standard Specifications* as follows:

**Page 6-21, Article 610-8, SPREADING AND FINISHING**, add the following after line 40:

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.

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

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

620

SP6 R25

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

The base price index for asphalt binder for plant mix is \$ **558.75** per ton.

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

**FINAL SURFACE TESTING NOT REQUIRED:**

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

610

SP6 R45

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

**TRENCHING FOR BASE COURSE:**

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

610

SP6 R79AR

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.

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.

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 B25.0C*.

### **5" MONOLITHIC CONCRETE ISLAND (SURFACE MOUNTED):**

The Contractor shall construct a 5 inch monolithic island (surface mounted) in accordance with Section 852 of the Standard Specifications, Roadway Standard Drawing 852.01, the contract, and plans. Class B concrete of a currently approved North Carolina Department of Transportation mix design shall be used. Concrete shall be given a sidewalk finish with brooming done transverse to the direction of traffic.

The island shall be anchored to the existing pavement surface with 40d spikes driven into the surface and staggered on 2 foot centers. The Contractor shall place ½" expansion joints at 30 foot intervals with joints 1 inch deep at 10 foot intervals between the expansion joints. The top ½" of expansion joints and the full depth of grooved joints shall be filled and sealed with a North Carolina Department of Transportation approved joint sealer.

**The Contractor shall form openings in the island in accordance with 904.50 Sheet 2 of 2 of the NCDOT Roadway Standard Drawings and as directed by the Engineer to accommodate sign posts.**

All concrete shall be formed and placed in accordance with Section 420 of the Standard Specifications. No concrete shall be placed until the forms and concrete have been approved by the Engineer or his representative. The temperature of the concrete and air temperature will be in accordance with the Standard Specifications. The Contractor shall cure the concrete in accordance with Section 420-15 of the Standard Specifications.

The contract unit bid price per square yard will include all incidentals associated with performing this work.

Payment will be made under:

#### **Pay Item**

5" Monolithic Concrete Island (Surface Mounted)

#### **Pay Unit**

Square Yard

### **ADJUSTMENT OF MANHOLES, METER BOXES, AND VALVE BOXES:**

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

858

SP8 R97R

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

### **TRAFFIC CONTROL:**

(DDC 2024)

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



Install Work Zone Advance Warning Signs in accordance with the 2024 *Roadway Standard Drawings* for work zones in place overnight. Refer to Standard Drawing No. 1101.01, 1110.01 and 1110.02 of the 2024 *Roadway Standard Drawings*.

Use a lane closure (refer to the *Roadway Standard Drawings* Nos. 1101.02, 1101.11, 1110.02, 1130.01 and details for the Advance Work Zone signing in contract) or a slow-moving operation as shown in details of this contract. 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 the *Roadway Standard Drawings* Nos. 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, 1170.01 and 1180.01 when closing a lane of travel in a stationary work zone such as pavement patching, resurfacing, or pavement marking removal. Properly ballasted cones may be used instead of drums for lane closures during daylight hours. However, drums are required for the upstream taper portion of lane closures in all applications. The stationary work zone shall be a maximum of 3 miles in length at any given time unless otherwise directed 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 *Standard Specifications* and the Engineer.

Standard Drawing 1101.03 Sheet 1 of 9, General Note #7 shall be removed and replaced with the following:

CMS should be positioned 14 days before closure and remain for at least 14 days after closure begins, or as directed by the engineer.

When personnel and equipment are working on the shoulder adjacent to an undivided facility and within 5 feet of an open travel lane, close the nearest open travel lane using the *Roadway Standard Drawings* No. 1101.02 unless the work area is protected by barrier or guardrail. When personnel and equipment are working on the shoulder, adjacent to a divided facility and within 10 feet of an open travel lane, close the nearest open travel lane using the *Roadway Standard Drawings* No. 1101.02 unless the work area is protected by barrier or guardrail. When personnel and equipment are working within a lane of travel of an undivided or divided facility, close the lane according to the traffic control plans, *Roadway Standard Drawings* or as directed by the Engineer. Conduct the work so that all personnel and 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. The Contractor shall not close more than one lane at a time without written permission from the Engineer. Do not perform work involving heavy equipment within 15 feet of the edge of travel way when work is being performed behind a lane closure on the opposite side of the travel way. Perform work only when weather and visibility conditions allow safe operations as directed by the Engineer.

Do not exceed a difference of 2 inches in elevation between open lanes of traffic for nominal lifts of 1.5 inches. Install advance warning UNEVEN LANES signs (W8-11 at 48" X 48") 500 feet in advance and a minimum of once every half mile throughout the uneven area.

Backfill at a 6:1 slope up to the edge and elevation of existing pavement in areas adjacent to an open travel lane 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 limit less than 45 mph.

Backfill the unacceptable drop-off with suitable compacted material, as approved by the Engineer, at no expense to the Department. This work is not considered part of shoulder reconstruction.

When utilizing a slow-moving operation for such items as pavement marking placement, pavement marker installation and pesticide spraying, the slow moving operation caravan shall consist, as a minimum, of the vehicles and devices shown on the Moving Operation Caravan Detail(s) herein. 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.

Submit a written sequence of operation for all maps to the Engineer at the first pre-construction meeting for approval by the Engineer. Approved sequence cannot be altered without written permission of 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.

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.

During a resurfacing only operation, bring all newly resurfaced lanes to the same elevation within 72 hours.

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 operations on multi-lane facilities, the lane being milled may be left closed and paved back within 72 hours.

The following options are acceptable 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 the entire width of pavement for all lanes to be milled in any direction daily and pave back within 72 hours.
- (B) Mill a single lane and pave back by the end of each work day.
- (C) Mill a single lane, leave a lane closure in and pave back within 72 hours.

When resurfacing facilities with ramps, resurface the ramp and gore area of the ramp as directed by the Engineer. A transverse joint shall be placed on the ramp at the terminal point of the gore. Newly resurfaced lanes on the main roadway and the ramp shall be at the same elevation where traffic merges.

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.

Maintain vehicular access in accordance with Section 1101-14 of the *Standard Specifications* using suitable backfill material approved by the Engineer.

Operate equipment and conduct operations in the same direction as the flow of traffic. Do not cross medians with equipment, except at properly designated interchanges.

Review and record the existing pavement markings and markers prior to resurfacing. Use the record of existing pavement markings and markers in conjunction with the *Roadway Standard Drawings* to reestablish the proposed pavement markings and markers unless otherwise directed by the Engineer.

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

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.

Payment will be made for the traffic control items that have been included in the contract. No direct payment will be made for providing other traffic control as required herein, as the cost of same will be considered incidental to the work being paid for under those various traffic control items that have been included. Where the Contractor maintains traffic as required herein but no specific pay items have been included in the contract, all associated costs will be considered incidental to the work being paid for under the various items in the contract.

**ELECTRONIC TICKETING SYSTEM:**

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

1020

SP10 R20

**Description**

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

**Electronic Ticketing Requirements**

- a. The electronic ticketing system must be fully integrated with the load read-out system at the plant. The system shall be designed so data inputs from scales cannot be altered by either the Contractor or the Department.
4.
  - b. Material supplier must test to confirm that ticketing data can be shared from the originating system no less than 30 days prior to project start.
5.
  - c. After each truck is loaded, ticket data must be electronically captured, and ticket information uploaded via Application Programming Interface (API) to the Department.
6.
  - d. Obtain security token from NCDOT for access to E-Ticketing portal (to send tickets). To request a Security Key, fill out the below E-Ticketing Security Request Form: <https://forms.office.com/g/XnT7QeRtgt>
7.
  - e. Obtain API from NCDOT containing the required e-ticketing data fields and format. Download the API from the NCDOT E-ticketing Webpage: <https://connect.ncdot.gov/projects/construction/E-Ticketing/Pages/default.aspx>
8.
  - f. Provide all ticket information in real time and daily summaries to the Department's designated web portal. If the project contains locations with limited cellular service, an alternative course of action must be agreed upon.
9.
  - g. Electronic ticketing submissions must be sent between the Material Supplier and the Department.
10.
  - h. The electronic ticket shall contain the following information:

Date  
 Time  
 Contract Number  
 Supplier Name  
 Contractor Name  
 Material  
 JMF  
 Gross Weight  
 Tare Weight  
 Net Weight

Load Number  
 Cumulative Weight  
 Truck Number  
 Weighmaster Certification  
 Weighmaster Expiration  
 Weighmaster Name  
 Facility Name  
 Plant Certification Number  
 Ticket Number  
 Hauling Firm (optional)  
 Voided Ticket Number (if necessary)  
 Original Ticket Number (if necessary)  
 Supplier Revision (If necessary)

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

### **Measurement and Payment**

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

### **CONES:**

(3-19-24)

1135

SP11 R35

Revise the *Standard Specifications* as follows:

**Page 11-11, Article 1135-3 CONSTRUCTION METHODS, lines 19-20,** delete the third sentence of the first paragraph, “Do not use cones in the upstream taper of lane or shoulder closures for multi-lane roadways.”.

### **ADA COMPLIANT PEDESTRIAN TRAFFIC CONTROL DEVICES:**

(10/31/2017) (Rev. 6/3/2022)

### **Description**

Furnish, install, and maintain all ADA compliant pedestrian traffic control devices for existing pedestrian facilities that are disrupted, closed, or relocated by planned work activities.

The ADA compliant pedestrian traffic control devices used to either close, redirect, divert or detour pedestrian traffic are Pedestrian Channelizing Devices, Audible Warning Devices and Temporary Curb Ramps.

### **Construction Methods**

The ADA compliant pedestrian traffic control devices involved in the closing or redirecting of pedestrians as designated on the Transportation Management Plan (TMP) shall be manufactured and assembled in accordance with the requirements of the Americans with Disabilities Act (ADA) and be on the NCDOT approved products list.

Pedestrian Channelizing Devices shall be manufactured and assembled to be connected as to eliminate any gaps that allow pedestrians to stray from the channelizing path. Any Pedestrian Channelizing Devices used to close or block a pedestrian facility shall have a “SIDEWALK CLOSED” sign affixed to it and any audible warning devices, if designated on the TMP.

Audible Warning Devices shall be manufactured to include a locator tone activated by a motion sensor and have the ability to program a message for a duration of at least 1 minute. The motion sensor shall have the ability to detect pedestrians a minimum of 10’ away. The voice module may be automatic or it may be push button activated. If push button activated, it shall be mounted at a height of approximately 3.5 feet, but no more than 4 feet, above the pedestrian facility.

Temporary Curb Ramps shall be manufactured and assembled to meet all of the requirements for persons with walking disabilities, including wheelchair confinement, according to the ADA regulations. All detectable warning features are to be included with these installations.

### **Measurement and Payment**

*Pedestrian Channelizing Devices* will be measured and paid as the maximum number of linear feet of *Pedestrian Channelizing Devices* furnished, acceptably placed, and in use at any one time during the life of the project.

No direct payment will be made for any sign affixed to a pedestrian channelizing device. Signs mounted to pedestrian channelizing devices will be considered incidental to the device.

*Audible Warning Devices* will be measured and paid as the maximum number of *Audible Warning Devices* furnished, acceptably installed, and in use at any one time during the life of the project.

Relocation, replacement, repair, maintenance, or disposal of *Pedestrian Channelizing Devices* and *Audible Warning Devices* will be incidental to the pay item.

*Temporary Curb Ramps* will be measured and paid as the actual number of *Temporary Curb Ramps* furnished, acceptably installed, and in use. *Temporary Curb Ramps* will be paid for each time a curb ramp is moved from one location on the project to another location on the project.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Pedestrian Channelizing Devices	Linear Foot
Audible Warning Devices	Each
Temporary Curb Ramps	Each

### **STABILIZATION REQUIREMENTS:**

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

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit issued by the North Carolina Department of

Environmental Quality Division of Energy, Mineral and Land Resources. Temporary or permanent ground cover stabilization shall occur within the following time frames from the last land-disturbing activity:

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

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

### **SEEDING AND MULCHING:**

**(West)**

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

#### Shoulder and Median Areas

##### **August 1 - June 1**

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

##### **May 1 - September 1**

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

#### Areas Beyond the Mowing Pattern, Waste and Borrow Areas:

##### **August 1 - June 1**

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

##### **May 1 - September 1**

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

Approved Tall Fescue Cultivars

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

Approved Kentucky Bluegrass Cultivars:

4-Season	Blue Coat	Granite	Prosperity
Alexa II	Blue Note	Hampton	Quantum Leap
America	Blue Velvet	Harmonie	Rambo
Apollo	Boomerang	Impact	Rhapsody
Aramintha	Cabernet	Jackrabbit	Rhythm



Arcadia	Champagne	Jefferson	Royce
Aries	Champlain	Juliet	Rubicon
Armada	Chicago II	Keeneland	Rugby II
Arrow	Corsair	Langara	Rush
Arrowhead	Courtyard	Legend	Shariz
Aura	Dauntless	Liberator	Showcase
Avid	Delight	Lunar	Skye
Award	Diva	Madison	Solar Eclipse
Awesome	Dynamo	Mazama	Sonoma
Bandera	Eagleton	Mercury	Sorbonne
Barduke	Emblem	Merlot	Starburst
Barnique	Empire	Midnight	Sudden Impact
Baron	Envicta	Midnight II	Thermal Blue
Baroness	Everest	Moon Shadow	Total Eclipse
Barrister	Everglade	Mystere	Touche
Barvette HGT	Excursion	Nu Destiny	Tsunami
Bedazzled	Freedom II	NuChicago	Valor
Belissimo	Freedom III	NuGlade	Washington
Bewitched	Front Page	Oasis	Zedor
Beyond	Futurity	Odyssey	Zinfandel
Blackjack	Gaelic	Perfection	
Bluebank	Ginney II	Pinot	
Blueberry	Gladstone	Princeton 105	

Approved Hard Fescue Cultivars:

Aurora Gold	Firefly	Nordic	Rhino
Azay Blue	Gladiator	Oxford	Scaldis II
Beacon	Granite	Predator	Spartan II
Berkshire	Heron	Quatro	Stonehenge
Beudin	Jetty	Reliant II	Sword
Blueray	Minimus	Reliant IV	Warwick
Chariot	Miser	Rescue 911	
Eureka II	Nancock	Resolute	

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.

**TEMPORARY SEEDING:**

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

**FERTILIZER TOPDRESSING:**

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

**SUPPLEMENTAL SEEDING:**

The kinds of seed and proportions shall be the same as specified for *Seeding and Mulching*, and the rate of application may vary from 25# to 75# per acre. The actual rate per acre will be determined prior to the time of topdressing and the Contractor will be notified in writing of the rate per acre, total quantity needed, and areas on which to apply the supplemental seed. Minimum tillage equipment, consisting of a sod seeder shall be used for incorporating seed into the soil as to prevent disturbance of existing vegetation. A clodbuster (ball and chain) may be used where degree of slope prevents the use of a sod seeder.

**MOWING:**

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

**STOCKPILE AREAS:**

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

**ACCESS AND HAUL ROADS:**

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

**MINIMIZE REMOVAL OF VEGETATION:**

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

**SAFETY FENCE AND JURISDICTIONAL FLAGGING:****Description**

*Safety Fence* shall consist of furnishing materials, installing and maintaining polyethylene or polypropylene fence along the outside riparian buffer, wetland, or water boundary, or other boundaries located within the construction corridor to mark the areas that have been approved to

infringe within the buffer, wetland, endangered vegetation, culturally sensitive areas or water. The fence shall be installed prior to any land disturbing activities.

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

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

## **Materials**

### **(A) Safety Fencing**

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

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

### **(B) Boundary Flagging**

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

## **Construction Methods**

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

### **(A) Safety Fencing**

Posts shall be set at a maximum spacing of 10 ft., maintained in a vertical position and hand set or set with a post driver. Posts shall be installed a minimum of 2 ft. into the ground. If hand set, all backfill material shall be thoroughly tamped. Wood posts may be sharpened to a dull point if power driven. Posts damaged by power driving shall be removed and replaced prior to final acceptance. The tops of all wood posts shall be cut at a 30-degree angle. The wood posts may, at the option of the Contractor, be cut at this angle either before or after the posts are erected.

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

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

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

(B) Boundary Flagging

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

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

Installation of boundary flagging for delineation of all jurisdictional boundaries at staging areas, waste sites, or borrow pits shall be performed in accordance with Subarticle 230-4(B)(5) or Subarticle 802-2(F) of the *Standard Specifications*. No direct pay will be made for this delineation, as the cost of same shall be included in the unit prices bid for the various items in the contract.

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

**Measurement and Payment**

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

Payment will be made under:

**Pay Item**

Safety Fence

**Pay Unit**

Linear Foot

**LAWN TYPE APPEARANCE:**

All areas adjacent to lawns must be hand finished as directed to give a lawn type appearance. Remove all trash, debris, and stones  $\frac{3}{4}$ " and larger in diameter or other obstructions that could

interfere with providing a smooth lawn type appearance. These areas shall be reseeded to match their original vegetative conditions, unless directed otherwise by the Field Operations Engineer.

### **WASTE AND BORROW SOURCES:**

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

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

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

[http://www.ncdot.gov/doh/operations/dp\\_chief\\_eng/roadside/fieldops/downloads/Files/ContractedReclamationProcedures.pdf](http://www.ncdot.gov/doh/operations/dp_chief_eng/roadside/fieldops/downloads/Files/ContractedReclamationProcedures.pdf)

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

### **WATTLE DEVICES:**

(1-1-24)

1642

SP16 R01

**Page 16-23, Subarticle 1642-2(B) Wattle, lines 10-12, delete and replace with the following:**

#### **(B) Wattle and Wattle Barrier**

Wattles shall meet Table 1642-1.

<b>TABLE Error! No text of specified style in document.-1 100% CURLED WOOD (EXCELSIOR) FIBERS - WATTLE</b>	
<b>Property</b>	<b>Property Value</b>
Minimum Diameter	12 inches
Minimum Density	2.5 pcf +/- 10%
Net Material	Synthetic
Net Openings	1 inch x 1 inch
Net Configuration	Totally Encased
Minimum Weight	20 lb +/- 10% per 10 foot length

Coir Fiber Wattles shall meet Table 1642-2.

<b>TABLE Error! No text of specified style in document.-2 100% COIR (COCONUT) FIBERS WATTLE</b>	
<b>Property</b>	<b>Property Value</b>
Minimum Diameter	12 inches
Minimum Density	3.5 pcf +/- 10%
Net Material	Coir Fiber
Net Openings	2 inch x 2 inch
Net Strength	90 lb
Minimum Weight	2.6 pcf +/- 10%

Wattle Barriers shall meet Table 1642-3.

<b>TABLE Error! No text of specified style in document.-3 100% CURLED WOOD (EXCELSIOR) FIBERS – WATTLE BARRIER</b>	
<b>Property</b>	<b>Property Value</b>
Minimum Diameter	18 inches
Minimum Density	2.9 pcf +/- 10%
Net Material	Synthetic
Net Openings	1 inch x 1 inch
Net Configuration	Totally Encased
Minimum Weight	5 pcf +/- 10%

Coir Fiber Wattle Barriers shall meet Table 1642-4.

<b>TABLE Error! No text of specified style in document.-4 100% COIR (COCONUT) FIBERS WATTLE BARRIER</b>	
<b>Property</b>	<b>Property Value</b>
Minimum Diameter	18 inches
Minimum Density	5 pcf +/- 10%
Net Material	Coir Fiber
Net Openings	2 inch x 2 inch
Net Strength	90 lb
Minimum Weight	10 pcf +/- 10%

**Pages 16-24 & 16-25, Article 1642-5 MEASUREMENT AND PAYMENT**, lines 42-47 & lines 1-2, delete and replace with the following:

*Wattle* 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 *Wattle*.

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

*Wattle Barrier* will be measured and paid as the actual number of linear feet of wattle barrier installed and accepted. Such price and payment will be full compensation for all work covered by this provision, including, but not limited to, furnishing all materials, labor, equipment and incidentals necessary to install the *Wattle Barrier*.

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

**Page 16-25, Article 1642-5 MEASUREMENT AND PAYMENT**, after line 9, delete and replace “\_\_\_ Wattle Check” with “Wattle”.

**Page 16-25, Article 1642-5 MEASUREMENT AND PAYMENT**, after line 9, delete and replace “\_\_\_ Wattle Barrier” with “Wattle Barrier”.

**Page 16-25, Article 1642-5 MEASUREMENT AND PAYMENT**, after line 9, add the following:

<b>Pay Item</b>	<b>Pay Unit</b>
Coir Fiber Wattle	Linear Foot
Coir Fiber Wattle Barrier	Linear Foot

### **TACK FOR MULCH FOR EROSION CONTROL:**

(07-19-22)

#### **Description**

This work consists of supplying and installing of an approved material for binding mulch for erosion control in accordance with Section 1060-5, Section 1615 and Section 1660 of the *Standard Specifications*. This provision defines acceptable materials and rates for tacking material for holding mulch in place.

#### **Materials**

##### **(a) Emulsified Asphalt**

Asphalt emulsion tack shall conform to the requirements of AASHTO M 140, Specification for Emulsified Asphalt. The emulsified asphalt may be rapid setting, medium setting, or slow setting. Apply emulsified asphalt tackifier at a rate of 0.10 gallons per square yard (approximately 484 gallons per acre).

##### **(b) Cellulose Hydromulch**

Cellulose hydromulch products shall be non-toxic, weed-free, prepackaged cellulose fiber (pulp) material containing no more than 3% ash or other inert materials. Cellulose hydromulches may contain dyes or binders specifically formulated to enhance the adhesive qualities of the hydromulch. Apply cellulose hydromulches at a rate of 1000 pounds (dry weight) per acre.

Wood fiber or wood fiber blend hydromulches may be substituted for cellulose hydromulch at the same application rate.

##### **(c) Other tackifiers**

Other approved materials, specifically designed and manufactured for application as a straw mulch tacking agent, may be used at the manufacturer's recommended rate.

### **Construction Methods**

Apply the Tack for Mulch for Erosion Control uniformly across straw mulch per Section 1615 and Section 1660 of the *Standard Specifications*.

### **Payment**

*Tack for Mulch for Erosion Control* is incidental to the application of *Temporary Mulching*, Section 1615-4, and *Seeding and Mulching*, Section 1660-8, and no additional payment will be made.

### **CONCRETE WASHOUT STRUCTURE:**

(8-17-23)

### **Description**

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

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

### **Materials**

<b>Item</b>	<b>Section</b>
Temporary Silt Fence	1605

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

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

### **Construction Methods**

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

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



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

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

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

### **Maintenance and Removal**

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

Inspect concrete washout structures for damage and maintain for effectiveness.

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

### **Measurement and Payment**

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

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

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

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

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Concrete Washout Structure	Each

### **AASHTO TYPE 4/NCDOT STANDARD BEAD - DOUBLE DROPPED GLASS BEADS:**

(12-07-21) (Rev. 01-12-22)

#### **Description**

This work will consist of applying NCDOT approved standard glass beads along with the application of AASHTO Type IV glass beads on extruded thermoplastic and polyurea pavement markings. Use NCDOT standard glass beads that are on the NCDOT Approved Products List and conform to Sections 1087 and 1205 of the *Standard Specifications*. Except for gradation requirements, AASHTO Type IV glass beads shall meet the same *Standard*

*Specifications* and shall contain 80% true spheres. An independent lab test is required for both categories of glass beads before application.

### Application

This combination of glass beads shall be applied concurrently. Two separate passes over the pavement marking binder are not allowed. Extruded thermoplastic shall contain intermixed glass beads conforming to *Standard Specifications*. Glass beads should be applied at the manufacturer's rate to meet the retroreflectivity requirements below within 30 days after final application.

MINIMUM REFLECTOMETER REQUIREMENTS FOR AASHTO Type IV/NCDOT Standard Glass Beads		
Item	Color	Reflectivity
AASHTO Type IV/NCDOT Standard Glass Beads	White	450 mcd/lux/m <sup>2</sup>
	Yellow	350 mcd/lux/m <sup>2</sup>

### Measurement and Payment

No separate measurement or payment will be made for meeting the requirements of this Special Provision. All costs for this work shall be included in the contract unit price bid for the extruded thermoplastic and polyurea pavement markings item(s) in the contract.

### **GLASS BEAD GRADATION FOR PAVEMENT MARKINGS:**

(9-17-24)

1087

SP10 R87

Revise the *Standard Specifications* as follows:

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

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

**CONSTRUCTION MATERIALS MANAGEMENT**

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

**Description**

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

**Polyacrylamides (PAMS) and Flocculants**

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

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

**Equipment Fluids**

Fuels, lubricants, coolants, and hydraulic fluids, and other petroleum products shall be handled and disposed of in a manner so as not to enter surface or ground waters and in accordance with applicable state and federal regulations. Equipment used on the site must be operated and maintained properly to prevent discharge of fluids. Equipment, vehicle, and other wash waters shall not be discharged into E&SC basins or other E&SC devices. Alternative controls should be provided such that there is no discharge of soaps, solvents, or detergents.

**Waste Materials**

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

**Herbicide, Pesticide, and Rodenticides**

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

### **Concrete Materials**

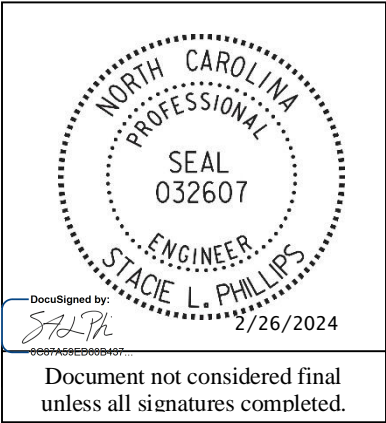
Concrete materials onsite, including excess concrete, must be controlled and managed to avoid contact with surface waters, wetlands or buffers. No concrete or cement slurry shall be discharged from the site. (Note that discharges from onsite concrete plants require coverage under a separate NPDES permit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

### **Earthen Material Stock Piles**

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

### **Measurement and Payment**

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



Signals and Intelligent Transportation Systems  
Project Special Provisions  
(Version 24.0)

Prepared By: IZV/SLP  
22-Feb-24

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**1. 2024 STANDARD SPECIFICATIONS FOR ROADS & STRUCTURES**

*The 2024 Standard Specifications are revised as follows:*

**1.1. JUNCTION BOXES (1098-6)**

Page 10-220, add following sub-Sections to end of 1098-6:

(D) CDOT Traffic Signal Type 1 Junction Box

Provide standard size junction boxes and covers with nominal dimensions of 13"(l) x 24"(w) x 12"(d). Emboss lid with "TRAFFIC SIGNAL".

(E) CDOT Type 2 Junction Box/Handhole (UH-1)

Provide stackable junction boxes and covers with nominal dimensions of 17"(l) x 30"(w) x 30"(d). Emboss lid with "CDOT Fiber Optic" unless otherwise indicated on the plans.

(F) CDOT Type 3 Junction Box

Provide stackable junction boxes and covers with nominal dimensions of 24"(l) x 36"(w) x 24"(d). Emboss lid with "Traffic Signal" unless otherwise indicated on the plans.

**1.2. LEAD-IN CABLE (1098-10)**

Page 10-222, add following to end of 1098-10:

Furnish lead-in cable with four conductors meeting the following, in addition to the above requirements:

(A) The conductor insulation colors shall be white, black, red, black

(B) Ensure conductors are provided in separate pairs (white/black, red/black) within the cable

**1.3. JUNCTION BOXES (1716)**

Page 17-16, make the following changes:

Revise paragraph beginning on line 1 by replacing all instances of "standard size" with "CDOT Type 1".

Revise paragraph beginning on line 7 by replacing all instances of "oversized" with "CDOT ITS Type UH-1".

Page 17-16, add sentence before Line 9:

Install CDOT Type 3 junction boxes beside each new signal cabinet foundation for access into cabinet and at all new underground fiber splice locations. At signal cabinets with fiber optic

communication cable, a separate junction box shall be provided for the fiber-optic cable that enters the cabinet.

#### **1.4. RISER ASSEMBLIES (1722)**

Page 17-18, add the following to the end of 1722-1:

When called for on the Plans, furnish and install riser assemblies for signal and lead-in cable that consist of Sch. 80 PVC conduit, Sch. 80 PVC weatherheads, galvanized pole attachment fittings and all necessary hardware.

Page 17-19, in sub-section Materials (1722-2), add the following paragraph after line 4:

Use only Schedule 80 PVC conduit and weatherheads for signal and lead-in cable unless otherwise approved by the Engineer.

Page 17-19, replace line 14 with the following:

Use separate 2 inch riser with weatherhead for electrical service.

#### **1.5. LEAD-IN CABLE (1726)**

Page 17-21, add the following sentence after line 28:

Furnish all lead-in cable with four conductors in two pairs of two conductors.

#### **1.6. SIGNS INSTALLED FOR SIGNALS (1745)**

Page 17-35, in Description (1745-1), add the following sentence:

The contractor will provide all signs and hardware, posts and accessories for the installation of the signs.

Page 17-36, in Measurement and Payment (1745-4), replace the sentence starting in line 16 with:

*Sign for Signals* will be measured and paid for as the actual number of signs for signals, regardless of mounting method, installed and accepted. Removal of existing signs for signals with associated hardware, including but not limited to the signs, cable hangers, rigid sign mounting brackets, u-channel posts and wood posts, will be considered incidental to the installation of the new signs for signals.

#### **1.7. SIGNAL CABINET FOUNDATIONS (1750)**

Page 17-37, in sub-section Materials (1750-2), replace entire sub-section with the following:

Refer to Division 10.

<b>Item</b>	<b>Section</b>
Portland Cement Concrete	1000-3

Use 3600 psi Class B concrete and 2% maximum calcium chloride.

This cabinet foundation should be dimensioned to accept the correct sized signal cabinet as directed by the engineer.

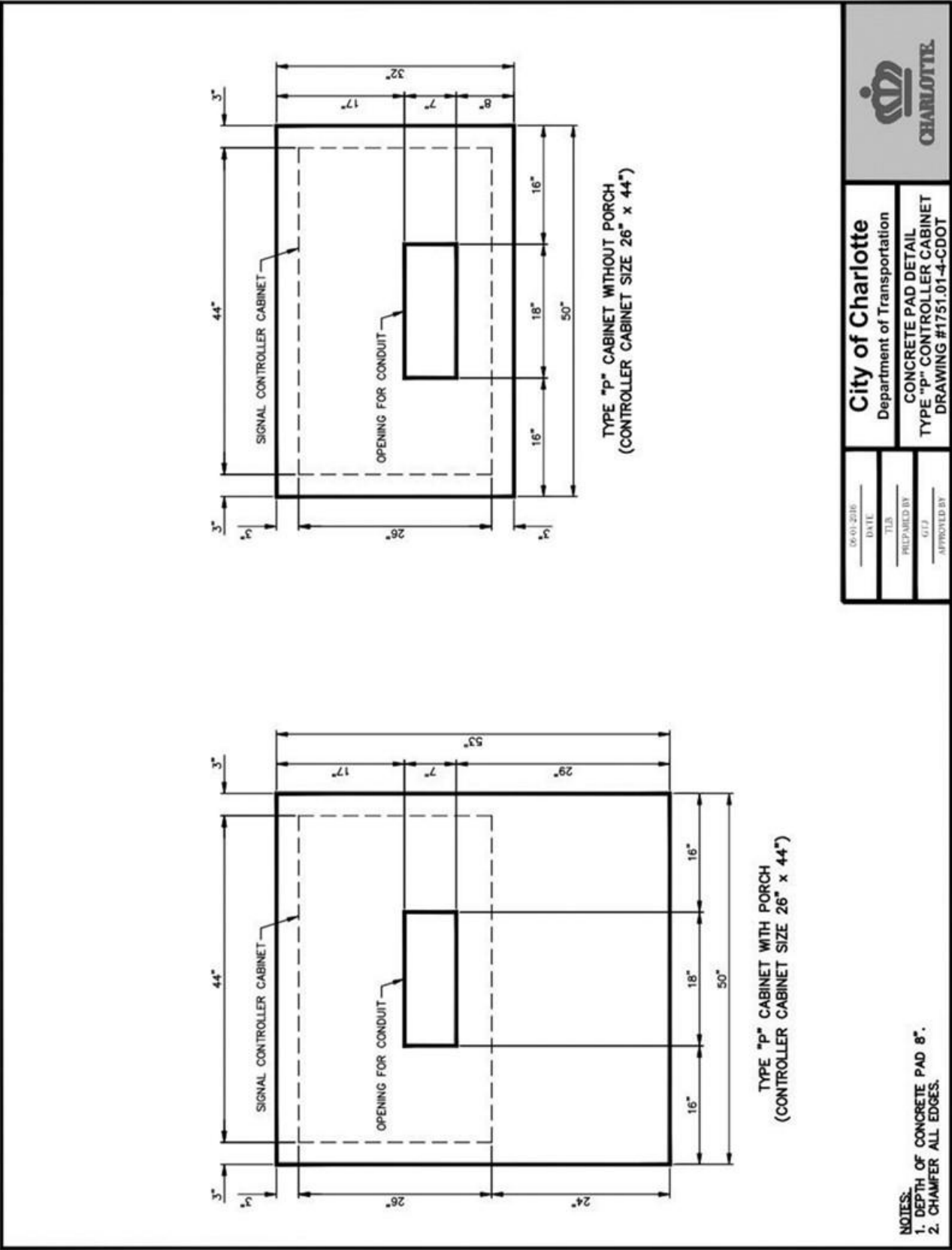
Page 17-38, in sub-section Construction Methods (1750-3), add the following after line 11:

(K) All 90 degree elbows shall be a sweeping radius not standard 90.

(L) Conduits shall be stubbed 4 inches above the ground or slab, turned up flush with and follow the vertical alignment of utility poles, capped without glue prior to placing concrete near them, and all joints cleaned and glued.

(M) See CDOT Supplemental Drawings Type "P" 1751.01-4-CDOT (below). Install foundation with technician pad (referred to as porch on CDOT supplemental drawings).

(N) Install foundations a minimum of 2 feet from adjacent sidewalk unless otherwise agreed upon with the Engineer.



Page 17-38, in sub-section Measurement and Payment (1750-4), add the following paragraph after line 14:

No payment will be made for the repair and/or replacement of streets, sidewalks, roads, drives, fences, lawns, shrubbery, water mains, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewage and drainage facilities, and any other property damaged during the unit installation.

### **1.8. CONTROLLERS WITH CABINETS (1751)**

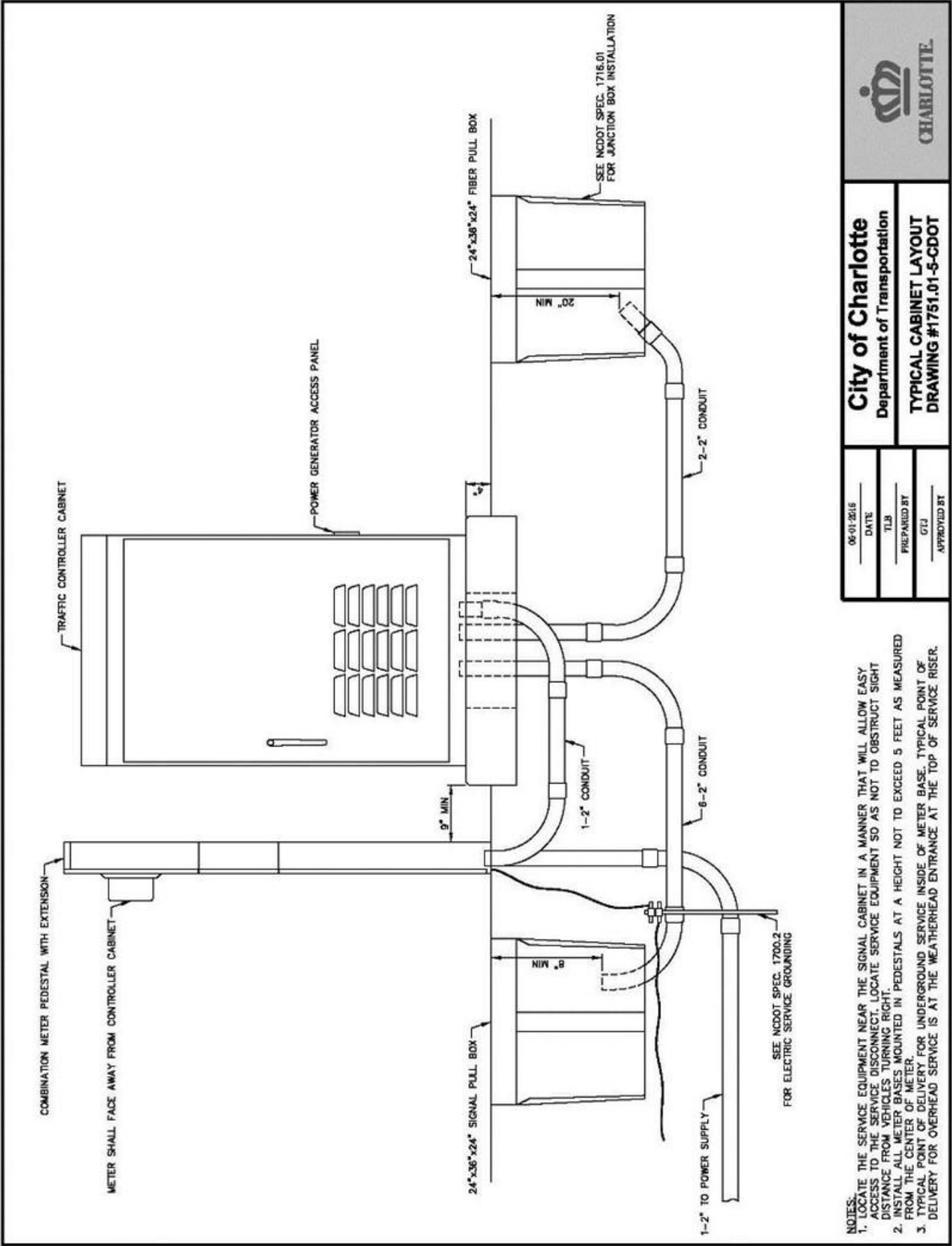
Page 17-38, in sub-section Description (1751-1), replace paragraph starting on line 19 with the following:

Furnish and install controllers with cabinets and all necessary hardware. Furnish all foundation mounting hardware, detector sensor cards, external electrical service disconnects, cabinet keys, malfunction management units, surge protection, grounding systems, AC/CD isolator cards and all necessary hardware.

Page 17-38, in sub-section Materials (1751-2), replace the paragraph starting on line 25 with the following:

Refer to Controllers with Cabinets section of these Project Special Provisions.

Provide one (1) electrical meter service and disconnect combination panel as a standalone pedestal with grounding grid. This shall be in accordance with drawing 1751.01-5-CDOT (below). This item includes all material necessary to install an electrical service including, combination panel, conduits, disconnect, wire, breakers, attachment structure, grounding hardware and all other incidentals. New services should be mounted on a pedestal unless approved prior by the Engineer.



Combination pedestals shall:

- (A) Be no larger than 60" (H) x 14" (W) x 12" (D), installed (subtract total height from embedment for direct bury)
- (B) Be listed on Duke Energy's Meter Equipment Group approved list or have written approval for use from Duke Energy's Meter Engineering division.
- (C) Be capable of pad-mount or direct bury installation as applicable.
- (D) Have no externally visible conduits.
- (E) Feature a bypass lever in the meter socket.
- (F) Feature a factory-installed fifth terminal in the meter socket.
- (G) Feature breakers and breaker knockouts only, no receptacles.

Install a minimum of three grounding rods in accordance with NCDOT Standard Drawing 1700.02 ensuring existing underground facilities are not damaged and test grounding system with approved method ensuring resistance is less than 20 Ohms. All underground bond of grounding electrodes and conductors shall be made using irreversible compression ground connectors. Unless the irreversible compression connectors are designed for use with more than one conductor, only one conductor shall be placed under each irreversible compression ground connector.

Page 17-39, in sub-section Construction Methods (1751-2(A)), add following after line 6:

Install a combination panel with pedestal extension for all new power service.

Ensure all connections are made using a hydraulic, power or ratcheting type crimper with appropriate dies. Use of handheld pliers for crimping is prohibited. For ease of inspection, the top of ground rods shall be no more than 6 inches below finished grade and shall remain exposed until electrical inspection is complete. Detectable burial tape shall be placed directly above all grounding electrodes and conductors and shall be buried at a typical depth of 12"-18. Locate the service equipment near the signal cabinet in a manner that will allow easy access to the service disconnect and does not obstruct motorist sight distance.

For overhead service installations, supply & install wire between the meter pedestal and point-of-service under this special provision. Conduit and riser from meter pedestal to pole are separate pay items.

Page 17-39, in sub-section Measurement and Payment (1751-4), replace paragraph beginning on line 41 with the following:

No measurement will be made of detector cards, conflict monitors, malfunction management units, external electrical service disconnect, grounding systems, modems, meter bases, cabinet riser and workshop as these will be incidental to furnishing and installing controllers with cabinets.

No measurement will be made of all labor and material required in the repair and/or replacement of streets, sidewalks, roads, drives, fences, lawns, shrubbery, water mains, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewage and drainage facilities, and any other property damaged during the installation.

## 2. SIGNAL HEADS

### 2.1. MATERIALS

#### A. General:

Fabricate vehicle signal head housings and end caps from die-cast aluminum. Fabricate 12-inch and 16-inch pedestrian signal head housings and end caps from die-cast aluminum. Provide visor mounting screws, door latches, and hinge pins fabricated from stainless steel. Provide interior screws, fasteners, and metal parts fabricated from stainless steel.

Fabricate tunnel and traditional visors from sheet aluminum.

Paint all surfaces inside and outside of signal housings and doors. Paint outside surfaces of tunnel and traditional visors, wire outlet bodies, wire entrance fitting brackets and end caps when supplied as components of messenger cable mounting assemblies, pole and pedestal mounting assemblies, and pedestrian pushbutton housings. Have electrostatically-applied, fused-polyester paint in highway yellow (Federal Standard 595C, Color Chip Number 13538) a minimum of 2.5 to 3.5 mils thick. Do not apply paint to the latching hardware, rigid vehicle signal head mounting brackets for mast-arm attachments, messenger cable hanger components or balance adjuster components.

Have the interior surfaces of tunnel and traditional visors painted an alkyd urea black synthetic baking enamel with a minimum gloss reflectance and meeting the requirements of MIL-E-10169, "Enamel Heat Resisting, Instrument Black."

Where required, provide polycarbonate signal heads and visors that comply with the provisions pertaining to the aluminum signal heads listed on the QPL with the following exceptions:

Fabricate signal head housings, end caps, and visors from virgin polycarbonate material. Provide UV stabilized polycarbonate plastic with a minimum thickness of  $0.1 \pm 0.01$  inches that is highway yellow (Federal Standard 595C, Color Chip 13538). Ensure the color is incorporated into the plastic material before molding the signal head housings and end caps. Ensure the plastic formulation provides the following physical properties in the assembly (tests may be performed on separately molded specimens):

Test	Required	Method
Specific Gravity	1.17 minimum	ASTM D 792
Flammability	Self-extinguishing	ASTM D 635
Tensile Strength, yield, PSI	8500 minimum	ASTM D 638
Izod impact strength, ft-lb/in [notched, 1/8 inch]	12 minimum	ASTM D 256

For pole mounting, provide side of pole mounting assemblies with framework and all other hardware necessary to make complete, watertight connections of the signal heads to the poles and pedestals. Fabricate the mounting assemblies and frames from aluminum with all necessary hardware, screws, washers, etc. to be stainless steel. Provide mounting fittings that match the positive locking device on the signal head with the serrations integrally cast into the brackets. Provide upper and lower pole plates that have a 1 ¼-inch vertical conduit entrance hubs with the hubs capped on the lower plate and 1 ½-inch horizontal hubs. Ensure that the assemblies provide rigid attachments to poles and pedestals so as to allow no twisting or swaying of the signal heads.



Ensure that all raceways are free of sharp edges and protrusions, and can accommodate a minimum of ten Number 14 AWG conductors.

For pedestal mounting, provide a post-top slipfitter mounting assembly that matches the positive locking device on the signal head with serrations integrally cast into the slipfitter. Provide stainless steel hardware, screws, washers, etc. Provide a minimum of six 3/8 X 3/4-inch long square head bolts for attachment to pedestal. Provide a center post for multi-way slipfitters.

For light emitting diode (LED) traffic signal modules, provide the following requirements for inclusion on the Department's Qualified Products List for traffic signal equipment.

1. Sample submittal,
2. Third-party independent laboratory testing results for each submitted module with evidence of testing and conformance with all of the Design Qualification Testing specified in section 6.4 of each of the following Institute of Transportation Engineers (ITE) specifications:
  - Vehicle Traffic Control Signal Heads – Light Emitting Diode (LED) Circular Signal Supplement
  - Vehicle Traffic Control Signal Heads – Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement
  - Pedestrian Traffic Control Signal Indications –Light Emitting Diode (LED) Signal Modules.

(Note: The Department currently recognizes two approved independent testing laboratories. They are Intertek ETL Semko and Light Metrics, Incorporated with Garwood Laboratories. Independent laboratory tests from other laboratories may be considered as part of the QPL submittal at the discretion of the Department,

3. Evidence of conformance with the requirements of these specifications,
4. A manufacturer's warranty statement in accordance with the required warranty, and
5. Submittal of manufacturer's design and production documentation for the model, including but not limited to, electrical schematics, electronic component values, proprietary part numbers, bill of materials, and production electrical and photometric test parameters.
6. Evidence of approval of the product to bear the Intertek ETL Verified product label for LED traffic signal modules.

Ensure LED traffic signal modules meet the performance requirements for the minimum period of 15 years, provide a written warranty against defects in materials and workmanship for the modules for a period of 15 years after installation of the modules. During the warranty period, the manufacturer must provide new replacement modules within 45 days of receipt of modules that have failed at no cost to the State. Repaired or refurbished modules may not be used to fulfill the manufacturer's warranty obligations. Provide manufacturer's warranty documentation to the Department during evaluation of product for inclusion on Qualified Products List (QPL).

## **B. Vehicle Signal Heads:**

Comply with the ITE standard "Vehicle Traffic Control Signal Heads". Provide housings with provisions for attaching backplates.

Provide visors that are 10 inches in length for 12-inch vehicle signal heads.

Provide a termination block with one empty terminal for field wiring for each indication plus one empty terminal for the neutral conductor. Have all signal sections wired to the termination block.

Provide barriers between the terminals that have terminal screws with a minimum Number 8 thread size and that will accommodate and secure spade lugs sized for a Number 10 terminal screw.

Mount termination blocks in the yellow signal head sections on all in-line vehicle signal heads. Mount the termination block in the red section on five-section vehicle signal heads.

Furnish vehicle signal head interconnecting brackets. Provide one-piece aluminum brackets less than 4.5 inches in height and with no threaded pipe connections. Provide hand holes on the bottom of the brackets to aid in installing wires to the signal heads. Lower brackets that carry no wires and are used only for connecting the bottom signal sections together may be flat in construction.

For messenger cable mounting, provide messenger cable hangers, wire outlet bodies, balance adjusters, bottom caps, wire entrance fitting brackets, and all other hardware necessary to make complete, watertight connections of the vehicle signal heads to the messenger cable. Fabricate messenger cable hanger components, wire outlet bodies and balance adjuster components from stainless steel or malleable iron galvanized in accordance with ASTM A153 (Class A) or ASTM A123. Provide serrated rings made of aluminum. Provide messenger cable hangers with U-bolt clamps. Fabricate washers, screws, hex-head bolts and associated nuts, clevis pins, cotter pins, U-bolt clamps and nuts from stainless steel.

For mast-arm mounting, provide rigid vehicle signal head mounting brackets and all other hardware necessary to make complete, watertight connections of the vehicle signal heads to the mast arms and to provide a means for vertically adjusting the vehicle signal heads to proper alignment. Fabricate the mounting assemblies from aluminum, and provide serrated rings made of aluminum. Provide stainless steel cable attachment assemblies to secure the brackets to the mast arms. Ensure all fastening hardware and fasteners are fabricated from stainless steel.

Provide LED vehicular traffic signal modules (hereafter referred to as modules) that consist of an assembly that uses LEDs as the light source in lieu of an incandescent lamp for use in traffic signal sections. Use LEDs that are aluminum indium gallium phosphorus (AlInGaP) technology for red and yellow indications and indium gallium nitride (InGaN) for green indications. Install the ultra bright type LEDs that are rated for 100,000 hours of continuous operation from -40°F to +165°F. Design modules to have a minimum useful life of 15 years and to meet all parameters of this specification during this period of useful life.

For the modules, provide spade terminals crimped to the lead wires and sized for a #10 screw connection to the existing terminal block in a standard signal head. Do not provide other types of crimped terminals with a spade adapter.

Ensure the power supply is integral to the module assembly. On the back of the module, permanently mark the date of manufacture (month & year) or some other method of identifying date of manufacture.

Tint the red, yellow and green lenses to correspond with the wavelength (chromaticity) of the LED. Transparent tinting films are unacceptable. Provide a lens that is integral to the unit with a smooth outer surface.

### **1. LED Circular Signal Modules:**

Provide modules in the following configurations: 12-inch circular sections. All makes and models of LED modules purchased for use on the State Highway System shall appear on the current NCDOT Traffic Signal Qualified Products List (QPL).

Provide the manufacturer's model number and the product number (assigned by the Department) for each module that appears on the 2024 or most recent Qualified Products List. In addition, provide manufacturer's certification in accordance with Article 106-3 of the *Standard Specifications*, that

each module meets or exceeds the ITE “Vehicle Traffic Control Signal Heads – Light Emitting Diode (LED) Circular Signal Supplement” dated June 27, 2005 (hereafter referred to as VTCSH Circular Supplement) and other requirements stated in this specification.

Provide modules that meet the following requirements when tested under the procedures outlined in the VTCSH Circular Supplement:

Module Type	Max. Wattage at 165° F	Nominal Wattage at 77° F
12-inch red circular	17	11
8-inch red circular	13	8
12-inch green circular	15	15
8-inch green circular	12	12

For yellow circular signal modules, provide modules tested under the procedures outlined in the VTCSH Circular Supplement to ensure power required at 77° F is 22 Watts or less for the 12-inch circular module.

Note: Use a wattmeter having an accuracy of  $\pm 1\%$  to measure the nominal wattage and maximum wattage of a circular traffic signal module. Power may also be derived from voltage, current and power factor measurements.

## 2. LED Arrow Signal Modules

Provide 12-inch omnidirectional arrow signal modules. All makes and models of LED modules purchased for use on the State Highway System shall appear on the current NCDOT Traffic Signal Qualified Products List (QPL).

Provide the manufacturer’s model number and the product number (assigned by the Department) for each module that appears on the 2024 or most recent Qualified Products List. In addition, provide manufacturer’s certification in accordance with Article 106-3 of the *Standard Specifications*, that each module meets or exceeds the requirements for 12-inch omnidirectional modules specified in the ITE “Vehicle Traffic Control Signal Heads – Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement” dated July 1, 2007 (hereafter referred to as VTCSH Arrow Supplement) and other requirements stated in this specification.

Provide modules that meet the following requirements when tested under the procedures outlined in the VTCSH Arrow Supplement:

Module Type	Max. Wattage at 165° F	Nominal Wattage at 77° F
12-inch red arrow	12	9
12-inch green arrow	11	11

For yellow arrow signal modules, provide modules tested under the procedures outlined in the VTCSH Arrow Supplement to ensure power required at 77° F is 12 Watts or less.

Note: Use a wattmeter having an accuracy of  $\pm 1\%$  to measure the nominal wattage and maximum wattage of an arrow traffic signal module. Power may also be derived from voltage, current and power factor measurements.

## C. Pedestrian Signal Heads:

Provide pedestrian signal heads with international symbols that meet the MUTCD. Do not provide letter indications.

Comply with the ITE standard for “Pedestrian Traffic Control Signal Indications” and the following sections of the ITE standard for “Vehicle Traffic Control Signal Heads” in effect on the date of advertisement:

- Section 3.00 - “Physical and Mechanical Requirements”
- Section 4.01 - “Housing, Door, and Visor: General”
- Section 4.04 - “Housing, Door, and Visor: Materials and Fabrication”
- Section 7.00 - “Exterior Finish”

Provide a double-row termination block with three empty terminals and number 10 screws for field wiring. Provide barriers between the terminals that accommodate a spade lug sized for number 10 terminal screws. Mount the termination block in the hand section. Wire all signal sections to the terminal block.

Where required by the plans, provide 16-inch pedestrian signal heads with traditional three-sided, rectangular visors, 6 inches long. Where required by the plans, provide 12-inch pedestrian signal heads with traditional three-sided, rectangular visors, 8 inches long.

Provide 2-inch diameter pedestrian push-buttons with weather-tight housings fabricated from die-cast aluminum and threading in compliance with the NEC for rigid metal conduit. Provide a weep hole in the housing bottom and ensure that the unit is vandal resistant.

Provide push-button housings that are suitable for mounting on flat or curved surfaces and that will accept 1/2-inch conduit installed in the top. Provide units that have a heavy duty push-button assembly with a sturdy, momentary, normally-open switch. Have contacts that are electrically insulated from the housing and push-button. Ensure that the push-buttons are rated for a minimum of 5 mA at 24 volts DC and 250 mA at 12 volts AC.

Provide standard R10-3 signs with mounting hardware that comply with the MUTCD in effect on the date of advertisement. Provide R10-3E signs for countdown pedestrian heads and R10-3B for non-countdown pedestrian heads.

Design the LED pedestrian traffic signal modules (hereafter referred to as modules) for installation into standard pedestrian traffic signal sections that do not contain the incandescent signal section reflector, lens, eggcrate visor, gasket, or socket. Provide modules that consist of an assembly that uses LEDs as the light source in lieu of an incandescent lamp. Use LEDs that are of the latest aluminum indium gallium phosphorus (AlInGaP) technology for the Portland Orange hand and countdown displays. Use LEDs that are of the latest indium gallium nitride (InGaN) technology for the Lunar White walking man displays. Install the ultra-bright type LEDs that are rated for 100,000 hours of continuous operation from -40°F to +165°F. Design modules to have a minimum useful life of 60 months and to meet all parameters of this specification during this period of useful life.

Design all modules to operate using a standard 3 - wire field installation. Provide spade terminals crimped to the lead wires and sized for a #10 screw connection to the existing terminal block in a standard pedestrian signal housing. Do not provide other types of crimped terminals with a spade adapter.

Ensure the power supply is integral to the module assembly. On the back of the module, permanently mark the date of manufacture (month & year) or some other method of identifying date of manufacture.

Provide modules in the following configuration: 16-inch displays which have the solid hand/walking man overlay on the left and the countdown on the right, and 12-inch displays which have the solid hand/walking man module as an overlay. All makes and models of LED modules

purchased for use on the State Highway System shall appear on the current NCDOT Traffic Signal Qualified Products List (QPL).

Provide the manufacturer's model number and the product number (assigned by the Department) for each module that appears on the 2024 or most recent Qualified Products List. In addition, provide manufacturer's certification in accordance with Article 106-3 of the *Standard Specifications*, that each module meets or exceeds the ITE "Pedestrian Traffic Control Signal Indicators - Light Emitting Diode (LED) Signal Modules" dated August 04, 2010 (hereafter referred to as PTCSI Pedestrian Standard) and other requirements stated in this specification.

Provide modules that meet the following requirements when tested under the procedures outlined in the PTCSI Pedestrian Standard:

Module Type	Max. Wattage at 165° F	Nominal Wattage at 77° F
Hand Indication	16	13
Walking Man Indication	12	9
Countdown Indication	16	13

Note: Use a wattmeter having an accuracy of  $\pm 1\%$  to measure the nominal wattage and maximum wattage of a circular traffic signal module. Power may also be derived from voltage, current and power factor measurements.

Provide module lens that is hard coated or otherwise made to comply with the material exposure and weathering effects requirements of the Society of Automotive Engineers (SAE) J576. Ensure all exposed components of the module are suitable for prolonged exposure to the environment, without appreciable degradation that would interfere with function or appearance.

Ensure the countdown display continuously monitors the traffic controller to automatically learn the pedestrian phase time and update for subsequent changes to the pedestrian phase time.

Ensure the countdown display begins normal operation upon the completion of the preemption sequence and no more than one pedestrian clearance cycle.

### 3. CONTROLLERS WITH CABINETS

#### 3.1. MATERIALS – TYPE 2070LX CONTROLLERS

Furnish model 2070LX controller units that conform to CALTRANS *Transportation Electrical Equipment Specifications* (TEES) (dated March 12, 2009, plus Errata 1 dated January 21, 2010 and Errata 2 dated December 5, 2014) except as required herein.

The City of Charlotte Department of Transportation (CDOT) will provide software and program controller database. Contractor shall give the controller to the CDOT two weeks prior to burn-in.

CDOT will program controller with EOS software and program the controller database specific to each location. CDOT will return the controller, fully programmed to the Contractor. The Contractor will be responsible for integration into the cabinet and field installation.

Provide model 2070LX controllers with Linux kernel 2.6.18 or higher and device drivers, composed of the unit chassis and at a minimum the following modules and assemblies:

- MODEL 2070-1C, CPU Module, Single Board, with 8Mb Datakey (blue in color)
- MODEL 2070-2E+, Field I/O Module (FI/O)
  - Note: Configure the Field I/O Module to disable both the External WDT Shunt/Toggle Switch and SP3 (SP3 active indicator is "off")

- MODEL 2070-3B, Front Panel Module (FP), Display B (8x40)
- MODEL 2070-4A, Power Supply Module, 10 AMP

Provide a Board Support Package (BSP) to the state and to any specified applications software manufacturer when requested by the state to facilitate the porting of application software.

### 3.2.MATERIALS – GENERAL CABINETS

Provide a moisture resistant coating on all circuit boards.

Provide one 20 mm diameter radial lead UL-recognized metal oxide varistor (MOV) between each load switch field terminal and equipment ground. Electrical performance is outlined below.

PROPERTIES OF MOV SURGE PROTECTOR	
Maximum Continuous Applied Voltage at 185° F	150 VAC (RMS) 200 VDC
Maximum Peak 8x20µs Current at 185° F	6500 A
Maximum Energy Rating at 185° F	80 J
Voltage Range 1 mA DC Test at 77° F	212-268 V
Max. Clamping Voltage 8x20µs, 100A at 77° F	395 V
Typical Capacitance (1 MHz) at 77° F	1600 pF

Provide a power line surge protector that is a two-stage device that will allow connection of the radio frequency interference filter between the stages of the device. Ensure that a maximum continuous current is at least 10A at 120V. Ensure that the device can withstand a minimum of 20 peak surge current occurrences at 20,000A for an 8x20 microsecond waveform. Provide a maximum clamp voltage of 395V at 20,000A with a nominal series inductance of 200µH. Ensure that the voltage does not exceed 395V. Provide devices that comply with the following:

Frequency (Hz)	Minimum Insertion Loss (dB)
60	0
10,000	30
50,000	55
100,000	50
500,000	50
2,000,000	60
5,000,000	40
10,000,000	20
20,000,000	25

**3.3. MATERIALS – NEMA TS-2 TYPE 1 CABINETS****A. NEMA TS-2 Type 1 Cabinets General:**

Comply with the *NEMA Standards Publication TS-2* (NEMA TS-2) except as otherwise stated herein.

Furnish unpainted, natural, aluminum cabinet shells that comply with Section 7 of NEMA TS-2. Ensure all non-aluminum hardware on the cabinet is stainless steel or a Department approved non-corrosive alternate. Provide a roof with a slope from front to back at a minimum ratio of 1 inch drop per 2 feet. Ensure that each exterior cabinet plane surface is constructed of a single sheet of aluminum and is seamless.

Ensure all components are arranged for easy access during servicing. When modular in construction, provide guides and positive connection devices to insure proper pin alignment and connection.

Provide a moisture resistant coating on all circuit boards.

**B. NEMA TS-2 Type 1 Cabinet Physical Requirements:**

Provide a handle and three point latching mechanism designed to be disassembled using hand tools. Provide a shaft connecting the latching plate to the door handle by passing through the door within a bushing, bearing, or equivalent device. Provide a latching plate at least 3/16 inch thick and that mates securely with the lock bolt. Provide a lock bolt with a flat end (no bevel) and that has at least 1/4 inch of length in contact with the latching plate.

Ensure that the handle and lock are positioned so that the lock does not lie in the path of the rotating handle as the door is unlatched and that the handle points down in the latched position.

Provide continuous welds made from the inside wherever possible. On the exterior, provide smooth and flush joints. Ensure that no screws, bolts, or rivets protrude to outside of cabinet shell.

Provide a main door opening that encompasses the full frontal area of the cabinet shell exclusive of the area reserved for plenums and flanges. Provide a rear door in base-mounted cabinets, unless otherwise specified. Ensure that the rear door complies with all requirements for the front door, except as follows:

- \* Hinge the rear door on the left side as viewed from the rear of the cabinet shell facing the door.
- \* No police compartment is required on a rear door.

Ensure that the cabinet shell is sturdy and does not exhibit noticeable flexing, bending or distortion under normal conditions except that a minor amount of flexing is permitted in the main door and rear door only when the cabinet is open. In such case, the flexing must not result in permanent deformation of the door or damage to components mounted on the door. Ensure that pedestal-mounted cabinets have sufficient framing around the slipfitter attachment so that no noticeable flexing will occur at or about this point.

Provide NEMA TS-2, Type 1 cabinets with 2 shelves. Ensure top shelf has an unobstructed depth of at least 12 inches for base-mounted cabinets. Ensure top shelf has an unobstructed shelf depth of at least 13 inches for pole-mounted cabinets. Locate the top shelf at least 12 inches below the top of the door opening. Provide a lower shelf for mounting detector racks, its associated BIU, and other auxiliary equipment. Locate the lower shelf at least 10 inches below the top shelf, and provide at least 13 inches of unobstructed shelf depth. Secure card racks and associated BIU connector housings to the shelf by a removable means. Place the rack so that the front of the rack is

not obscured by any object and so that backpanel terminals are not obscured even when the rack is fully utilized.

Provide a back panel hinged at the bottom for access during service.

Provide a minimum 12 x 14 inch plastic envelope or container located in the cabinet so that it is convenient for service personnel.

Furnish two sets of non-fading cabinet wiring diagrams and schematics in a paper envelope or container and placed in the plastic envelope or container.

Do not locate permanently mounted equipment in such a way that will restrict access to terminals.

### **C. NEMA TS-2 Type 1 Cabinet Electrical Requirements:**

Provide a neutral that is not connected to the earth ground or the logic ground anywhere within the cabinet. Ensure the earth ground bus and the neutral ground bus each have ten compression type terminals each of which can accommodate wires ranging from number 14 through number 4.

Provide surge suppression in the cabinet and ensure that all devices operate over the temperature range of -40 to 185 degrees F.

Provide a loop surge suppresser for each set of loop terminals in the cabinet. Use terminal mount or stud mount devices for terminating the loop surge suppresser. Ensure that the device can withstand a minimum of 25 peak surge current occurrences at 100A in differential and common modes for a 10x700 microsecond waveform. Ensure that the maximum breakover voltage is 170V and the maximum on-state clamping voltage is 30V. Provide a maximum response time less than 5 nanoseconds and an off-state leakage current less than 10  $\mu$ A. Ensure that a nominal capacitance less than 220pf for both differential and common modes.

Provide surge suppression on each communications line entering or leaving a cabinet. Ensure that the communications surge suppresser can withstand at least 80 occurrences of an 8x20 microsecond waveform at 2000A, or a 10x700 microsecond waveform at 400A. Provide a maximum clamping voltage suited to the equipment protected. Provide a maximum response time less than 1 nanosecond with a nominal capacitance less than 1500pf and a series resistance less than 15  $\Omega$ .

Furnish a fluorescent fixture as required by NEMA TS-2 Specifications with a second lighting fixture mounted under the bottom shelf to light the terminals. Ensure that the second fixture is a fluorescent lighting fixture that complies with NEMA TS-2 Specifications or is a flexible gooseneck fixture containing a protected incandescent reflector bulb of at least 25 Watts. Furnish all bulbs. Ensure that the lamps are door switch actuated.

Provide connector type harnesses for all equipment installed in the cabinet, including detector racks. Furnish a harness with connectors to adapt the NEMA TS-2, Type 2 controller "A" connector to the NEMA TS-2, Type 1 "A" connector furnished with the cabinet assembly.

Tag all conductors that are likely to be disconnected from time to time with non-fading, permanent sleeve labels at the ends of the conductors.

In cabinets that are not base mounted, have no terminals closer than 4 inches to the bottom of the cabinet.

Fasten all wiring and harness supports to the cabinet with screws or other removable mechanical means. Do not use adhesives.

Provide harnesses in the cabinet for non-permanently mounted equipment that are long enough to allow the equipment to be relocated in an upright position to the roof of the cabinet or to be located to the ground 1 foot below cabinet level.



Do not locate terminals on the underside of shelves or at other places where they are not readily visible and accessible, or where they may be a hazard to personnel. Provide a clear plastic guard for exposed 120 volt AC terminals on the power panel and the rear of terminal facilities accessible from the rear door.

Provide compression type earth grounds with 10 position terminal buses sized for four Number 14 AWG wires. Provide screw-type terminals for signal feed, detector lead-in, NEMA I/Os, backpanels, and interconnect terminals. Provide screw terminals for all other devices not defined by NEMA TS-2 Specifications. Ensure that wiring by the manufacturer is terminated either on double terminal strips with crimped-on lugs or soldered to rear terminals.

Ensure that upon leaving any cabinet or malfunction management unit (MMU) initiated flashing operation, the controller reverts to its programmed start-up operation through the use of the START UP FLASH CALL feature. Do not require special controller software to implement the return from flash in the start up mode of operation. Wire one of the output relays of the MMU to apply a logic ground to the STOP TIME input for rings 1 and 2 when the MMU initiates flashing operation because of a sensed failure. Ensure that the MMU is interlocked within the cabinet control circuitry as to prevent normal signal operation with the MMU disconnected. Ensure that the 24Vdc supply to the load switches is disconnected when cabinet flashing operation is initialized. Provide a momentary pushbutton, or equivalent method, to apply 24Vdc to the load switches during cabinet flash for troubleshooting purposes.

Unless otherwise required, provide switches that are heavy-duty toggle switches.

Provide a technician panel mounted on the inside of the door with an EQUIPMENT POWER (ON/OFF) switch and an AUTO/FLASH switch. Ensure switches are protected against accidental activation by a flip-up switch guard that does not affect switch position when closed. Provide an EQUIPMENT POWER (ON/OFF) toggle switch that connects or disconnects protected equipment power to all devices in the cabinet and does not affect AC power to the flasher. Provide an AUTO/FLASH toggle switch which immediately places the intersection into flashing operation, disconnects the STOP TIME input generated by the MMU, and applies a logic ground to the LOCAL FLASH STATUS input of the MMU. When placed in the AUTO position, ensure that this switch causes the return of the intersection to normal operation at the programmed start up phases and intervals via the START-UP FLASH CALL feature of the controller unit. Provide a DETECTOR CHANNEL CALL three position detector test switch (on, normal, momentary on) installed for every detector channel in the detector racks. Provide four pedestrian detector test switches (on normal, momentary on) to the 4 pedestrian detector inputs of BIU no. 1. The switches may be installed on the door or on the non-door hinge side of the cabinet at the front of the cabinet.

Provide a police compartment constructed such that neither water nor dust will enter the interior of the cabinet through the police compartment, even when the police compartment door is open. Provide a rigid enclosure over the terminals of its components. Do not use flexible guards. Provide a SIGNAL POWER (ON/OFF) switch, an AUTO/FLASH switch, and an AUTO/MANUAL switch. Provide a locking jack for an optional manual push-button. Provide a SIGNAL POWER (ON/OFF) toggle switch which, when in the "OFF" position, disconnects AC power to the field terminals, applies logic ground to the LOCAL FLASH STATUS input of the MMU, and disconnects the STOP TIME input generated by the MMU. Ensure that a means to prevent recognition of red failure by the malfunction management unit is used and the switch does not affect power to equipment in the cabinet. When the SIGNAL POWER switch is switched to the "ON" position, ensure controller reverts to the programmed start-up phases and intervals via the START-UP FLASH CALL feature of the controller unit. Provide an AUTO/FLASH toggle switch that immediately places the intersection into flashing operation, and

applies logic ground to the MMU LOCAL FLASH STATUS input. When placed in the AUTO position, ensure this switch allows the return of the intersection to normal operation at the programmed start-up phases and intervals via THE START-UP FLASH CALL feature of the controller unit. Provide an AUTO/MANUAL toggle switch that selects between normal operation (in the AUTO position) and manually controlled operation (in the MANUAL position). When in the MANUAL position, ensure that a logic ground is applied to the Manual Control Enable input of the controller. Ensure that only when a logic ground signal is applied to Manual Control Enable, the optional manual push-button can be used to advance the phases by applying and removing a logic ground signal to the Interval Advance input.

Provide one flash transfer relay and flasher for each corresponding socket. Provide 2 spare terminals for each flasher circuit output. Provide 1 MMU and 1 cabinet DC power supply (shelf mounted) with all necessary harnesses wired to the appropriate cabinet/back panel termination points. Terminate unused MMU inputs. Provide BIUs with sockets and terminal facilities. BIUs 3 and 4 may be mounted in a rack separate from the back panel.

Provide a minimum of 2 sets of loop terminals and a single earth ground terminal between the 2 sets of loop wire terminals for each slot in each detector rack provided.

In cabinets with less than 16 loadbay positions, provide flash transfer relay circuits for load switches used to implement pedestrian signals that are brought out to separate terminals but not connected for flashing operation when pedestrian signals are assigned to the load switch channel. Ensure that the flash circuit inputs and outputs are available for easy connection to allow conversion of a pedestrian movement load switch for use as an overlap (vehicle phase) movement load switch. Provide a reserved flash transfer relay circuit for four vehicle movements and all necessary flash transfer relay input and output wiring and flash circuit wiring that can be made available at each pedestrian load switch position.

Comply with the applicable tables for the type of cabinet furnished:

NC 49 @ General

TS-23

Mecklenburg County

## TS-2 Type 1 Cabinet Configurations

CABINET CONFIGURATION	LOAD SWITCH SOCKETS	FLASH RELAY SOCKET S	FLASHER SOCKETS	BIU'S REQUIRED (BACK PANEL/ DETECTOR)	DETECTOR RACK TYPE/ QUANTITY	TS-2 CABINET TYPE*
NC-1	4	2	1	1/1	1/1	4**
NC-2	8	4	1	1/1	2/1	5
NC-3	12	6	1	2/1	2/1	6
NC-3A	12	6	1	2/2	2/2	6
NC-3B	12	6	1	2/2	2/1 1/1	6
NC-4	12	6	1	†3/1	2/1	6
NC-4A	12	6	1	†3/2	2/2	6
NC-4B	12	6	1	†3/2	2/1 1/1	6
NC-5	12	6	1	‡4/1	2/1	6
NC-5A	12	6	1	‡4/2	2/2	6
NC-5B	12	6	1	‡4/2	2/1 1/1	6
NC-6	16	6	1	2/2	2/2	6
NC-6A	16	6	1	2/2	2/1 1/1	6
NC-7	16	6	1	†3/2	2/2	6
NC-7A	16	6	1	†3/2	2/1 1/1	6
NC-8	16	6	1	‡4/2	2/2	6
NC-8A	16	6	1	‡4/2	2/1 1/1	6

\*See NEMA TS-2-1998, Table 7-1 for actual dimensions.

\*\*Type 5 cabinet may be substituted for four position base mount cabinet.

† BIU 3 required along with BIU 1, BIU 2, and detector BIU(s).

‡ BIU 3 and BIU 4 required along with BIU 1, BIU 2, and detector BIU(s).

NC 49 @ General

TS-24

Mecklenburg County

## 8-Position Loadbay Cabinet Phase Assignments

PHASE /OL NUMBER	MALFUNCTION MANAGEMENT UNIT CHANNEL ASSIGNMENT	ASSIGNED TO LOAD SWITCH POSITION NUMBER	ASSIGNED TO FLASH RELAY NUMBER	ASSIGNED TO FLASHER CIRCUIT/	PROGRAM FLASH COLOR
1	1	1	1	1	R
2	2	2	1	2	Y
3	3	3	2	1	R
4	4	4	2	2	R
2 PED-O/LA †	5	5	†3	†1	D
4 PED O/L .B†	6	6	†3	†2	D
O/L C	7	7	4	1	R
O/L D	8	8	4	2	R

† Prepare this load switch position for the pedestrian movement indicated. Wire pedestrian signals to flash dark. Make flash circuitry for this load switch position available and accessible at a separate terminal to allow connection to the load switch and field terminal circuit for a vehicle movement at a later date if desired.

NC 49 @ General

TS-25

Mecklenburg County

**12-Position Loadbay Cabinet Phase Assignments**

PHASE /OL NUMBER	MALFUNCTION MANAGEMENT UNIT CHANNEL ASSIGNMENT	ASSIGNED TO LOAD SWITCH POSITION NUMBER	ASSIGNED TO FLASH RELAY NUMBER	ASSIGNED TO FLASHER CIRCUIT/	PROGRAM FLASH COLOR
1	1	1	1	1	R
2	2	2	1	2	Y
3	3	3	2	1	R
4	4	4	2	2	R
5	5	5	3	2	R
6	6	6	3	1	Y
7	7	7	4	2	R
8	8	8	4	1	R
2 PED or O/L A†	9	9	†5	†1	D
4 PED or O/L B†	10	10	†5	†2	D
6 PED or O/C†	11	11	†6	†1	D
8 PED or O/L D†	12	12	†6	†2	D

† Prepare this load switch position for the pedestrian movement indicated. Wire pedestrian signals to flash dark. Make flash circuitry for this load switch position available and accessible at a separate terminal to allow connection to the load switch and field terminal circuit for a vehicle movement at a later date.

**16 Position Loadbay Cabinet Phase Assignments**

PHASE /OL NUMBER	MALFUNCTION MANAGEMENT UNIT CHANNEL ASSIGNMENT	ASSIGNED TO LOAD SWITCH POSITION NUMBER	ASSIGNED TO FLASH RELAY NUMBER	ASSIGNED TO FLASHER CIRCUIT/	PROGRAM FLASH COLOR
1	1	1	1	1	R
2	2	2	1	2	Y
3	3	3	2	1	R
4	4	4	2	2	R
5	5	5	3	2	R
6	6	6	3	1	Y
7	7	7	4	2	R
8	8	8	4	1	R
2 PED	9	9	-	-	D
4 PED	10	10	-	-	D
6 PED	11	11	-	-	D
8 PED	12	12	-	-	D
O/L A	13	13	5	1	R
O/L B	14	14	5	2	R
O/L C	15	15	6	1	R
O/L D	16	16	6	2	R

Provide flasher circuits and flash transfer relay outputs and inputs that are brought out to terminals which provide a convenient means of changing flash color and flash circuit at each load switch position. Ensure that changing flash color of a given phase or overlap involves no more than moving three wires. Ensure that the selected phase or overlap flash color load switch output is easily movable to connect to the normally open flash transfer relay input assigned to the phase or overlap. Ensure that the common output of the flash transfer relay circuit assigned to the phase or overlap is easily movable to the selected field terminal (input) of the phase or overlap flash color. Ensure that the non-flashed load switch output is easily moved to provide power directly to the phase or overlap field terminal for that color.

In cabinets requiring a Type 1 detector rack, route to and terminate on a conveniently located terminal block on the back panel or elsewhere in the cabinet, the eight unused detector BIU Vehicle Call inputs. Tie the 8 unused detector BIU Detector Status inputs to the logic ground.

Provide detector racks and associated detector rack BIUs that are removable and replaceable from the cabinet either as a complete assembly or separately. Ensure that disconnection and reconnection of these units is through quick disconnect type connectors.

**3.4. MATERIALS – NEMA TS-2 DETECTOR CARDS AND RACKS**

Furnish NEMA TS-2 multi-channel detector cards and racks.

Provide cards that sequentially scan each of its channels. Provide channels with a minimum of eight sensitivity levels.

On a multi-channel detector, ensure that it is possible to turn a channel off and disable its operation from the front panel.

Ensure that detector units meet the requirements of NEMA TS-2 Specifications except as follows:

- Class 2 vehicle output is maintained for a minimum of 4 minutes, and
- Class 3 vehicle output is maintained for a minimum of 30 minutes, maximum 120 minutes.

Where required, furnish detector cards equipped with required timing features. Provide a delay that is settable in one second increments (maximum) over the range of zero to thirty seconds. Provide an extend that is settable in 1/4 second increments (maximum) over the range of 0 to 15 seconds. Provide cards that can set both delay and extend timing for the same channel. If both timings are set, ensure that the delay operates first. After the delay condition has been satisfied, ensure that the extend timer operates normally and that it is not necessary to satisfy the delay timing for an actuation arriving during the extend portion.

Ensure that two-channel detector cards operate normally with the same loop connected to both channels.

Provide lightning and surge protection that is incorporated into the design of the detector. Ensure that each channel operates properly when used with the loop detector surge protector.

In addition to NEMA TS-2 Specifications, ensure that each channel is capable of tuning to and operating on any loop system inductance within the range of 50 to 2,000  $\mu$ h. Ensure that the channel will operate properly even on a loop system that has a single-point short to earth ground.

## **4. STANDOFF BRACKET ASSEMBLY**

### **4.1. DESCRIPTION**

Provide conduit standoff bracket on signal poles when required by utility company.

### **4.2. MATERIALS**

Provide Aluminum 24" H-Bar, 1/2" 4-way bar, Conduit Standoff Bracket and T-Slot, to mount 2" conduits with adjustability. Pole mounting hardware must mount on 3 5/8" centers using 5/8" through bolts and 1/2" lag bolts. Conduit Straps must include T-Slot shapes to secure conduit to standoff bracket with two 1/2" x 1 1/4" hex head bolts, lock washers and hex nuts. The standoff bracket H-bar shall hold the conduits a minimum of 6" from the pole and shall be able to hold up to six 2" Schedule 80 PVC risers, four in front and two in back of the bracket for ITS and signal cables.

Example: Hubbell Power Systems, Inc. Part #BASOCL6-24FW and part #CSTK2

### **4.3. CONSTRUCTION**

There should be two standoff brackets for each 10' section of riser. Standoff brackets must be installed at 3' from the ground and at 5' intervals to the top of the riser (four brackets required for 20' riser).

### **4.4. MEASUREMENT AND PAYMENT**

*Standoff Bracket Assembly* will be measured and paid as the actual number of standoff bracket assemblies (one assembly per pole) furnished, installed, and accepted. Schedule 80 PVC Risers will be paid separately under the Riser Assemblies section of the Standard Specifications.

No payment will be made of pole attachment fittings as these will be incidental to furnishing and installing standoff brackets.

Payment will be made under:

Pay Item	Pay Unit
Standoff Bracket Assembly	Each

5. RISER ASSEMBLIES

5.1. DESCRIPTION

Furnish and install riser assemblies with Sch. 80 PVC conduit, Sch. 80 PVC weatherheads, galvanized pole attachment fittings and all necessary hardware.

5.2. MATERIAL

Materials are as set out in **NCDOT Standard Specification 1722** with the addition of: Use only Schedule 80 PVC conduit and weatherheads unless otherwise approved by the Engineer.

5.3. CONSTRUCTION METHODS

Construction methods are as set out in **NCDOT Standard Specification 1722**.

5.4. MEASUREMENT AND PAYMENT

Measurement and payment are as set out in **NCDOT Standard Specification 1722**.

6. APS PEDESTRIAN PUSHBUTTON DETECTOR, SIGN & 3-WIRE CONTROL BOARD

6.1. DESCRIPTION

This item includes the labor, equipment, and any necessary hardware to supply and install one APS Pedestrian Pushbutton Detector & Sign and 3-wire control board. Installation should be in compliance with Section 1705-3 (C) of the NCDOT Standard Specifications.

6.2. MEASUREMENT

APS Pedestrian Pushbutton Detector & Sign and 3-wire control board will be measured and paid as the actual number of APS Detectors & Signs and control boards installed and accepted. A Sign, control board and corresponding detector shall be considered one unit.

6.3. PAYMENT

Payment will be made under:

Supply & Install APS Pedestrian Pushbutton Detector, Sign & 3-Wire Control Board	EA
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7. LED BLANKOUT SIGN (1747 MODIFIED)

7.1. DESCRIPTION

Furnish and install Light Emitting Diode (LED) blankout signs with all necessary hardware as set forth in the plans and specifications. Fabricate the signs with the ability to display messages as detailed in the plans. Fabricate the sign to be 28 inches wide, 38 inches high and approximately 8 inches deep.

Blankout signs shall feature:



- Black external housing
- A hot-swappable modular controller
- A one-piece, self-contained display face and door module that can be removed from the housing in less than thirty minutes
- A photosensor capable of automatically reducing the light intensity on each display by 25% based on ambient light
- Manual dimming control capable of manually dimming the display to 25%
- The ability to simultaneously dim the display via the manual control and automatic photosensor
- Up to two display messages each. They shall be capable of displaying [OFF], [SIGN 1], [SIGN 2] as shown in the plans.

For dual-message blankout signs shown in the plans as “NO TURN ON RED” AND “RIGHT TURN [YIELD SYMBOL] TO [PEDESTRIAN SYMBOL]”, configure the displays as shown below.



**Pictures 1 & 2- Dual message blankout sign with hood**

Example:

Blankout signs manufactured by Orange Traffic meet these specifications.

## **7.2. MATERIAL**

Materials are as set out in **NCDOT Standard Specification 1747**.

## **7.3. CONSTRUCTION METHODS**

Construction methods are as set out in **NCDOT Standard Specification 1747**.

7.4. MEASUREMENT AND PAYMENT

Measurement and payment are as set out in NCDOT Standard Specification 1747.

8. PEDESTAL POLE ASSEMBLY UNIT

8.1. DESCRIPTION

Furnish and install one (1) self-auguring pole foundation, one (1) break-away transformer base and one (1) 15’ pole.

8.2. MATERIALS

Furnish one (1) self-auguring pole foundation, one (1) break-away transformer base and one (1) 15’ pole and base collar. The pole shall be a Schedule 40, 6061-T6 spun aluminum pole, threaded at one end to NPT #8 specifications. The unit includes an acorn-style pole cap. The transformer base shall be a square, aluminum base, 15” high and forged to accept a bolt circle corresponding to the bolt circle of the foundation anchor.

The neck shall be NP #8 threaded and come equipped with a set screw to secure the pole to the base. A grounding lug shall be included with the base. A pole and base collar must be included in the assembly unit. The foundation anchor shall be galvanized and be recommended by the manufacturer as appropriate for use with the pole and pedestal base. An access hole for installing conduit and a grounding wire into the foundation shaft is required. The top plate of the foundation shall have a bolt circle to match the transformer base. All the hot-dipped galvanized hardware (bolts, nuts, washers and shims) required for the installation of this assembly are a part of this unit. A 10’ long, 5/8” copper clad ground rod, connected to the ground lug in the transformer base by the required length of #6 AWG solid copper ground wire is also a part of this unit.

Examples:

- Pelco 4-inch Diameter PB-5100 Pole 15’ length
- Pelco PB-5335-1S-GL Square Base
- Pelco PB-5401 Acorn Type Cap
- Pelco PB-5325-PNC (pole & base collar)
- Pelco PB-5372-GLV Foundation Anchor or equivalent as approved by the Engineer.

8.3. CONSTRUCTION

Comply with Section 143-3(B) of the NCDOT Standard Specifications for the construction and installation of pedestal poles.

8.4. MEASUREMENT AND PAYMENT

*Pedestal Pole Assembly Unit* will be measured and paid as the actual number furnished, installed, and accepted.

Included in this unit is all labor and material required to repair and/or replace streets, sidewalks, roads, drives, fences, lawns, shrubbery, water mains, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewerage and drainage facilities, and any other property damaged during the unit construction.

Payment will be made under:

Pay Item	Pay Unit
Pedestal Pole Assembly Unit	Each

9. ADHESIVE FIBER WARNING SIGN ASSEMBLY UNIT

9.1. DESCRIPTION

Furnish and install one (1) adhesive backed reflective vinyl sign.

9.2. MATERIALS

Furnish adhesive backed reflective vinyl sign, printed with “WARNING FIBER OPTIC CABLE - before digging in this area call” and with “Charlotte DOT 704-336-2050” added.

Example:

REPNET Inc., sign No. SD-5956R.

9.3. CONSTRUCTION

Install adhesive backed reflective vinyl sign such that the sign should be mounted 5' above ground level on a cable riser guard as shown on the construction sheets.

9.4. MEASUREMENT AND PAYMENT

Adhesive Fiber Warning Assembly Unit will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

Pay Item	Pay Unit
Adhesive Fiber Warning Assembly Unit	Each

10. FIBER CURB MARKER ASSEMBLY

10.1. DESCRIPTION

Furnish and install one circular 2.5-inch diameter, plastic, permanent curb marker, in place, as shown on the construction drawings.

10.2. MATERIALS

The marker is to have an orange background, with a printed message of “CDOT Fiber Optic Cable - 811 Know what’s below. Call before you dig.” in black letters.

Example: das Manufacturing Inc., P.N.# 2.5 CDOT-811 with#RS-222-5 adhesive.

10.3. CONSTRUCTION METHODS

Install one circular 2.5-inch diameter, plastic, permanent curb marker, in place, as shown on the construction drawings. The marker is to be installed in accordance with the manufacturer’s directions, utilizing a manufacturer supplied or approved adhesive.

10.4. MEASUREMENT AND PAYMENT

Fiber Curb Marker Assembly Unit will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

Fiber Curb Marker Assembly Unit..... EA

**11. ROCK DRILLING ADDER UNIT****11.1. DESCRIPTION**

Consists of one (1) linear foot of directional boring measured parallel to the surface of the ground, in rock.

**11.2. CONSTRUCTION**

This unit will be specified only when the Contractor has attempted to find a bore path around the rock to the satisfaction of the Engineer and when field conditions at the site show the existence of rock at the depth required by the specifications, which cannot be directionally bored without the use of a rock drilling head ("Railhead" or equivalent). This unit is an "ADDER" to the Directional Drilling method described in Section 1715-3(D) of the Standard Specifications.

**11.3. MEASUREMENT AND PAYMENT**

*Rock Drilling Adder Unit* will be measured and paid as the linear feet number installed and accepted.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Rock Drilling Adder Unit	Linear Foot

**12. SOLID ROCK DRILLING ADDER UNIT****12.1. DESCRIPTION**

Consists of one (1) linear foot of directional boring measured parallel to the surface of the ground, in rock.

**12.2. CONSTRUCTION**

This unit will be specified only when the Contractor has performed the requirements of the Rock Drilling Adder Unit above without success and additional rock drilling equipment ("Mud Motor" or equivalent) is needed to complete the bore. This unit must be specified by the Engineer and is an "ADDER" to the Directional Drilling method described in Section 1715-3(D) of the Standard Specifications.

**12.3. MEASUREMENT AND PAYMENT**

*Solid Rock Drilling Adder Unit* will be measured and paid as the linear feet number installed and accepted.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Solid Rock Drilling Adder Unit	Linear Foot

**13. CABLE RISER GUARD UNIT****13.1. DESCRIPTION**

Furnish and install one (1) cable steel riser guard.

**13.2. MATERIALS**

Furnish 2-inch inside diameter by 8 feet cable steel riser guard with two (2) riser guard straps and four (4) lag screws. All pole line hardware to be hot dipped galvanized steel.

**13.3. CONSTRUCTION**

Install steel riser guard as shown in the Plans.

**13.4. MEASUREMENT AND PAYMENT**

*Cable Riser Guard Unit* will be measured and paid as the linear feet number installed and accepted.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Cable Riser Guard Unit	Each

**14. CAMERA ASSEMBLY INSTALLATION UNIT****14.1. DESCRIPTION**

Furnish and install one (1) Camera Assembly unit.

**14.2. MATERIALS**

The camera assembly includes camera, enclosure, High PoE midspan with patch cable, dome camera mounting arm, flexible non-metallic conduit, any other materials necessary to mount the camera per the manufacturer's specifications. This unit also includes all associated hardware, including stainless steel banding with screw clamps for attaching the pole adapter bracket to the pole, ¾-inch outdoor liquid-tight flexible non-metallic conduit, and (2) ¾-inch NPT plugs when installing on a metal camera pole. The cable between the Ethernet switch and the PoE midspan, will be a 1 meter long shielded, outdoor-rated CAT5es cable pre-terminated with male RJ45 gold-plated connectors with snagless boots, eight (8) 24 AWG conductors and tested to a minimum of 350 MHz. The camera must be compatible with the Genetec camera control software. This unit is not considered complete until the camera is fully functioning from the camera control panel. The camera shall be provided to CDOT for programming prior to installation.

The Camera must be ONVIF Profiles S & G compliant and meet or exceed the following requirements:

1. Image Sensor: 1/2.8" Progressive Scan CMOS
2. Lens: 4.25-170mm, auto iris and autofocus
  - a. Horizontal angle of view: 65.1°-2.00° (1080p)
  - b. Vertical angle of view: 39.1°-1.18° (1080p)
3. Day and Night: Automatic removable infrared-cut filter
4. Minimum Illumination/Light Sensitivity (lux):
  - a. Color: .1 lux at 30 IRE F1.6
  - b. B/W: .002 lux at 30 IRE F1.6
  - c. Color: .15 lux at 50 IRE F1.6
  - d. B/W: .003 lux at 50 IRE F1.6
5. Shutter Time: Electronic shutter with speed range from
  - a. 1/11000 second to 1/3 second with 50 Hz
  - b. 1/11000 second to 1/3 second with 60 Hz

6. Pan/Tilt/Zoom: 40x optical zoom, 12x digital zoom, total 480x zoom, E-flip, 256 preset positions, tour recording (max 10, max duration 16 minutes each), guard tour (max 100), control queue, on-screen directional indicator, adjustable zoom speed
7. Pan: 360° endless, 0.05°-450°/s
8. Tilt: 220°, 0.05°-450°/s
9. Power: Axis High PoE 60 W SPF midspan 1–port: 100–240 V AC, max 74 W Camera consumption: typical 16 W, max 60 W
10. Connectors: RJ45 for 10BASE-T/100BASE-TX PoE, RJ45 Push-pull Connector (IP66) included
11. Operating conditions: With 60 W midspan: -50°C to 50°C (-58 °F to 122 °F)
12. Warranty: Minimum 3-year manufacturer warranty

The Video must meet or exceed the following requirements:

1. Video compression: H.264 (MPEG-4 Part 10/AVC) Baseline
  - a. Main and High Profiles Motion JPEG H.265 (MPEG-H Part 2/HEVC)
  - b. Motion JPEG
2. Resolution: HDTV 1080p 1920x1080 to 320x180
3. Frame rate: Up to 50/60 fps (50/60 Hz) in HDTV 1080p
4. Video streaming: Multiple, individually configurable streams in H.264 and Motion JPEG
5. Image settings: Manual shutter time, Compression, Color, Brightness, Sharpness, White balance, Exposure control, Exposure zones, Fine tuning of behavior at low light, Rotation: 0°, 180°, Text and image overlay, 32 individual 3D privacy masks, Image freeze on PTZ, Defogging, Backlight compensation, Wide dynamic range (WDR): up to 120 dB depending on scene

The Network and Security must meet or exceed the following requirements:

1. Security: Password protection, IP address filtering, HTTPS encryption, IEEE 802.1X network access control, Digest authentication, User access log, Centralized Certificate Management, Brute force delay protection
2. Network: IPv4, IPv6, QoS Layer 3 DiffServ

Examples:

AXIS Q6075-E PTZ Dome Network Camera

AXIS High PoE Midspan, Model T8154

AXIS Wall and Pole Mount, Model T91L61

#### **14.3. CONSTRUCTION**

Install camera assembly that includes camera, enclosure, High PoE midspan with patch cable, dome camera mounting arm, flexible non-metallic conduit, any other materials necessary to mount the camera per the manufacturer's specifications. This unit also includes all associated hardware, including stainless steel banding with screw clamps for attaching the pole adapter bracket to the pole, ¾-inch outdoor liquid-tight flexible non-metallic conduit, and (2) ¾-inch NPT plugs when installing on a metal camera pole. The cable between the Ethernet switch and the PoE midspan, will be a 1 meter long shielded, outdoor-rated CAT5es cable pre-terminated with male RJ45 gold-plated connectors with snagless boots, eight (8) 24 AWG conductors and tested to a minimum of 350 MHz. The camera must be compatible with the Genetec camera control software. This unit is not considered complete until the camera is fully functioning from the camera control panel. The camera shall be provided to CDOT for programming prior to installation.

This unit is not considered complete until the camera is fully functioning from the camera control panel. The camera shall be provided to CDOT for programming prior to installation.

All to be installed in accordance with drawing Camera Connection Details in the plans.

**14.4. MEASUREMENT AND PAYMENT**

*Camera Assembly Installation Unit* will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

Pay Item	Pay Unit
Camera Assembly Installation Unit	Each

**15. FIBER OPTIC JUMPER ASSEMBLY UNIT**

**15.1. DESCRIPTION**

Furnish and install fiber-optics jumper cables.

**15.2. MATERIALS**

Consists of all material necessary to install a duplex single fiber, single mode fiber jumper with a 3mm jacket. The length (in meters) of the jumper shall be indicated in the parentheses.

The fiber jumper shall be routed between patch panels or equipment in a splice cabinet, traffic control box (TCB), camera control box (CCB) or traffic management center (TMC). The jumper connections are shown in the splice details.

Options designated by the following suffixes apply:

- SC/ST – SC connector and ST connector.
- ST/LC – ST connector and LC connector.
- ST/ST – ST connectors on both ends.

**15.3. CONSTRUCTION**

Install fiber-optics jumper cables at locations shown in the Plans.

**15.4. MEASUREMENT AND PAYMENT**

*Fiber Optic Jumper Assembly Unit* will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

Pay Item	Pay Unit
Fiber Optic Jumper Assembly Unit (1)ST/LC	Each

**16. ETHERNET EDGE SWITCH**

**16.1. DESCRIPTION**

Furnish and install a managed Ethernet edge switch as specified below that is fully compatible, interoperable, and completely interchangeable and functional within the existing City of Charlotte traffic signal communications network.

For reference, the existing ethernet edge switches being used by the City of Charlotte are Cisco - IE-3200 switches with 8 ports.

## **16.2. MATERIALS**

Consists of all labor and materials necessary to securely mount one (1) industrial (ruggedized) Ethernet switch in an existing traffic control box. The mounting method must be approved by the Engineer before installation. The unit will be an industrially hardened, fully managed Ethernet switch with a minimum operating temperature range of -40 to 158 degrees F. The unit will have a minimum of eight (8) copper 10/100/1000 Ethernet ports.

TS-35/7.5 DIN rail mount for mounting the unit and the power supply.

The unit must be fully compatible and support interoperability with the traffic control network core Cisco 6807 switch. The fiber jumpers routed between the patch panel stub and the transceiver are not part of this unit.

The Ethernet switch will meet the following specifications:

- IEEE 1588 PTP v2.
- NEMA TS-2 Compliant.
- Customized Industrial Automation Smartport configuration templates.
- DIN-rail, wall, and 19" rack mount options.
- Small Form-factor Pluggable (SFP) options for 100Base-LX, 100Base-FX, 1000Base-SX, 1000Base-LX, and 1000Base-ZX deployments.
- Common Industrial Protocol (CIP) management support.
- Swappable SD flash memory for easy switch replacement.
- Supported by Cisco Prime/DNA Center.

The Ethernet switch will support the following protocol/security features sets:

- Virtual Local Area Networks (VLANs)/Quality of Service (QoS).
- Resilient Ethernet Protocol support for fast convergence (50ms).
- IGMPv3 snooping
- IGMP Filtering
- IEEE 802.1d
- IEEE 802.1x.
- Port Based Access Control Lists for Layer 2 Interfaces.
- MAC Address Filtering.
- Secure Shell (SSH) v2 Protocol.
- SNMPv3.
- TACACS+ and RADIUS authentication.
- MAC address notification.
- DHCP snooping.
- DHCP Interface Tracker (Option 82).
- Port Security.
- Support for up to 512 ACLs with two Profiles:
- Security (384 security ACL entries and 128 QoS Policies).
- QoS (128 Security ACL entries and 384 QoS Policies).
- Configurable up to 8000 MAC addresses
- Configurable up to 255 IGMP groups.



- Configurable maximum transmission unit (MTU) of up to 9000 bytes, with a maximum Ethernet frame size of 9018 bytes (jumbo frames) for bridging on Gigabit Ethernet ports, and up to 1998 bytes for bridging of Multiprotocol Label Switching (MPLS) tagged frames on both 10/100 and 10/100/1000 ports.

Options designated by the following suffixes apply:

- 8-Eight (8) copper 10/100/1000 Ethernet ports

Example Model:

Cisco IE-3200-8T2S-E with Mean Well NDR-120-24 5 Amp power supply

Note: SD Card for Cisco IE3200 will be owner furnished.

### 16.3. CONSTRUCTION

Ensure that the edge switch is UL listed.

Verify that network/field/data patch cords meet all ANSI/EIA/TIA requirements for Category 5E and Category 6 four-pair unshielded twisted pair cabling with stranded conductors and RJ45 connectors.

Contact the NCDOT and City of Charlotte (CDOT) a minimum of 5 days prior to installation for the most current edge switch IP Address, VLAN, subnet mask, default gateway and configuration files.

### 16.4. MEASUREMENT AND PAYMENT

*Ethernet edge switch* will be measured and paid as the actual number of Ethernet edge switches furnished, installed, and accepted.

No separate measurement will be made for Ethernet patch cable, power cord, mounting hardware, nuts, bolts, brackets, or edge switch programming as these will be considered incidental to furnishing and installing the edge switch.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Ethernet Edge Switch	Each

## 17. ETHERNET SMALL FORM-FACTOR PLUGGABLE PORT

### 17.1. DESCRIPTION

Furnish and install one (1) fiber optic Ethernet Small Form-Factor Pluggable (SFP) port that plugs into the Fast Ethernet port or slot on the Ethernet switch.

### 17.2. MATERIALS

Consists of all labor and material necessary to securely install one (1) fiber optic Ethernet Small Form-Factor Pluggable (SFP) port that plugs into the Fast Ethernet port or slot on the Ethernet switch. The port shall be compatible with IEEE 802.3ah Draft 3.0 and with standard as specified in IEEE 802.3. The connectors shall be dual LC connectors. The SFP furnished shall be a "hot swappable", ruggedized, industrial rated transceiver with an operating temperature range of -40 to 85 degrees C and be of the same manufacturer as the Ethernet switch.

Options designated by the following suffixes apply:

**LX-R** A 1310nm, single-mode, Fast Ethernet, ruggedized, 100Base-~~T~~-LX10 SFP transceiver with an operating range of 10km and industrial rated with an operating temperature range of -40to 85 degrees C.

Example Model: Cisco GLC-FE-100LX-RGD

**GLX-R** A 1310nm, single-mode, ruggedized, Gigabit 1000Base-LX/LH SFP transceiver with an operating range of 10km and industrial rated with an operating temperature range of -40 to 85 degrees C.

Example Model: Cisco GLC-LX-SM-RGD

**17.3. CONSTRUCTION**

Install and connect Ethernet Small Form-Factor Pluggable (SFP) port into the Fast Ethernet port or slot on the Ethernet switch as shown in the Plans.

**17.4. MEASUREMENT AND PAYMENT**

*Ethernet small form-factor pluggable port* will be measured and paid as the actual number of SFPs furnished, installed, and accepted.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Ethernet small form-factor pluggable port (SFP) (GLX-R)	Each

**18. FIBER OPTIC SPLICING ASSEMBLY UNIT**

**18.1. DESCRIPTION**

Consists of all labor and materials necessary to Fusion Splice one (1) glass fiber in any cable in accordance with the associated detail drawings.

**18.2. CONSTRUCTION**

The labor shall include initial measurement, minimizing the attenuation to no more than 0.1db, splicing and stowing the spliced fiber in a fiber organizer. A heat-shrink splice protector is to be applied to each completed fusion splice. The labor and material for the fiber organizer is part of the splice closure unit. Note that cables are not to be cut and unused fibers and buffer tubes are to be expressed through and not cut/spliced as noted in the plans.

**18.3. MEASUREMENT AND PAYMENT**

*Fiber optic splicing assembly unit* will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Fiber Optic Splicing Assembly Unit	Each

**19. AERIAL FIBER OPTIC CLOSURE ASSEMBLY UNIT**

**19.1. DESCRIPTION**

Furnish and install a aerial fiber optic splice closure with associated aerial hanger assembly in accordance with the manufacturer’s installation instructions.

**19.2. MATERIALS**

Furnish a 6.5"x17" or 9.5"x19" aerial fiber optic splice closure with associated aerial hanger assembly.

Material, equipment, and hardware furnished under this section shall be pre-approved on the Department's QPL.

The below table should be used to identify splice enclosure design.

Example:

COYOTE 8006988 – Dome Express 6.5" x 17" (Loose Tube) Splice Case with (2) 8003701 grommets included,

COYOTE 8003664 – Grommet for adding 6F Drop (up to 4 drop cables),

COYOTE 8004035 – 1 aerial hanger bracket kit,

COYOTE 8003701 – grommets for adding cables (as needed), and

COYOTE 80809958 (X2) – 2 additional single fusion 24 count splice trays.

Prefix	None	L	G	H1	H2	G1/G2	T
<b>Cables For Mid-Entry Splice</b>	COYOTE Dome Express 6.5" x 17" (Loose Tube) Splice Case (2) <b>8003701</b> Included <b>8006988</b>	COYOTE Dome 9.5" x 19" Closure Splice Case (2) 8003692 Included (2) 8003693 Included <b>COYD919B-000</b>	COYOTE Grommet for adding 6F Drop (Up to 4 cables) <b>8003664</b>	Aerial Hanger <b>8004035</b>	Aerial Hanger <b>8004337</b>	COYOTE Grommet for adding cables: 6F to 144F <b>8003701</b> For 192F & 288F Use <b>8003693</b>	Additional single fusion 24 Count splice trays needed <b>80809958</b>
24 Fiber	<b>X</b>		<b>X</b>	<b>X</b>		<b>X</b>	<b>1</b>
36 Fiber	<b>X</b>		<b>X</b>	<b>X</b>		<b>X</b>	<b>1</b>
48 Fiber	<b>X</b>		<b>X</b>	<b>X</b>		<b>X</b>	<b>2</b>
72 Fiber	<b>X</b>		<b>X</b>	<b>X</b>		<b>X</b>	<b>3</b>
96 Fiber	<b>X</b>		<b>X</b>	<b>X</b>		<b>X</b>	<b>4</b>
144 Fiber		<b>X</b>	<b>X</b>		<b>X</b>	<b>X</b>	<b>6</b>

**19.3. CONSTRUCTION**

Install aerial fiber optic splice closure unit in accordance with the manufacturer's installation instructions and perform termination and splicing, and test in compliance with all requirements of Section 1731-3 of the Standard Specifications.

Armored cables are to be bonded together and secured to one bolt on the bulkhead and a ground lug attached to that bolt on the exterior side of the bulkhead. This closure is to be equipped with enough splice trays to accommodate the number of splices in parenthesis. The number of splices in each tray shall not exceed the manufacturer's recommendation. At buffer tube entry points into the

splice tray each buffer tube is to be wrapped with felt tape and secured with tie wraps. Fiber cables are to be labeled on the outside of the splice case with the “From” destination and the “To” destination noted on a cable marker tag and secured to the cables. For mid-entry applications, all buffer tubes shall be unwrapped and secured separately in the storage basket. For mid-entry applications, remove 180 inches of outer sheathing and armored jacket and for all other applications remove 90 inches of outer sheathing and armored jacket.

NCDOT and CDOT reserves the right to open any splice enclosure at any time during construction to inspect the workmanship and/or take photos for records.

**19.4. MEASUREMENT AND PAYMENT**

*Aerial Fiber Optic Closure Assembly Unit (48)* will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

Pay Item	Pay Unit
Aerial Fiber Optic Closure Assembly Unit (48)	Each

**20. POLE GROUND ASSEMBLY UNIT**

**20.1. DESCRIPTION**

Furnish and install, using #6 AWG bare copper ground wire, a pole ground assembly.

**20.2. MATERIALS**

Furnish, using #6 AWG bare copper ground wire, a pole ground assembly.

This unit also includes all material required in the repair and/or replacement of streets, sidewalks, roads, drives, fences, lawns, shrubbery, water mains, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewerage and drainage facilities, and any other property damaged during the unit installation. The following items will be required.

- (1) 5/8” by 10’ copper clad steel ground rod
- (1) ground rod clamp
- #6 AWG bare copper ground wire and ground wire staples as required

**20.3. CONSTRUCTION**

Construct, using #6 AWG bare copper ground wire, a pole ground assembly.

This unit also includes all labor required in the repair and/or replacement of streets, sidewalks, roads, drives, fences, lawns, shrubbery, water mains, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewerage and drainage facilities, and any other property damaged during the unit installation.

Staples on ground wire should be about 18-inches apart. Ground wire should clear all hardware by 2-inches minimum and be stapled to maintain this position. The ground rod should be driven 24 inches from the pole with the ground wire and top of the rod at a minimum 24-inch depth.

**20.4. MEASUREMENT AND PAYMENT**

*Pole Ground Assembly Unit* will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

Pay Item	Pay Unit
----------	----------

Pole Ground Assembly Unit                      Each

**21. FIBER OPTIC CABLE SPLICE-SLACK STOW UNIT**

**21.1. DESCRIPTION**

Consists of all labor and material necessary to install an in-span cable splice-slack storage system.

**21.2. MATERIALS**

The ONLY materials covered under this unit are the fiber cable and the stainless steel cable straps. The labor and material for the storage rack and associated hardware are NOT a part of this unit and will be paid separately.

**21.3. CONSTRUCTION**

The two fiber cables to be spliced will be formed together at one pole with a sufficient combined tail to allow for splicing to occur on the ground and for a minimum length of fifty (50) feet (or as otherwise directed by the Engineer) to remain after completion of the splice. Stainless steel cable straps, placed every three (3) feet, should be used to secure the combined tail and the finished splice to the strand carrying the fiber optic cable. Care should be taken when forming the one bend necessary that the fiber cable is not subjected to a bend radius of less than twenty (20) times the diameter of the cable. The fiber optic splice case, organizer and splices are NOT a part of this unit and will be paid separately.

**21.4. MEASUREMENT AND PAYMENT**

*Fiber Optic Cable Splice-Slack Stow Unit* will be measured and paid as the linear feet furnished, installed, and accepted.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Fiber Optic Cable Splice-Slack Stow Unit	Linear Feet

**22. CATEGORY 6 ETHERNET SERVICE CABLE**

**22.1. DESCRIPTION**

Furnish and install outdoor rated category 6E Ethernet Cable Assembly in conduit.

**22.2. MATERIALS**

Furnish one (1) 300 foot of outdoor rated category 6E Ethernet Cable Assembly in conduit. The cable shall be terminated on both ends with RJ-45 gold-plated connectors with snagless boots. The pin configuration shall follow the TIA-EIA-568B standard. The cable shall be (CMX) Rated, designed for Outdoor, UV and moisture resistant use. The cable shall be Aluminum foil Shielded (STP) with 4 twisted pairs of 23 AWG wire at 600MHz, along with a drain wire and shall support speeds of s10/100/1000Mbps.

**22.3. CONSTRUCTION**

The cable shall be terminated on both ends with RJ-45 gold-plated connectors with snagless boots. The pin configuration shall follow the TIA-EIA-568B standard. The cable shall be (CMX) Rated, designed for Outdoor, UV and moisture resistant use. The cable shall be Aluminum foil

Shielded (STP) with 4 twisted pairs of 23 AWG wire at 600MHz, along with a drain wire and shall support speeds of 10/100/1000Mbps.

The cable shall be routed between the power injector (PoE) located within the traffic control box and the circuit board inside of the Camera mounting arm.

#### **22.4. MEASUREMENT AND PAYMENT**

*Category 6 Ethernet Service Cable* will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Category 6 Ethernet Service Cable	Each

### **23. ELECTRONIC BALL MARKER**

#### **23.1. DESCRIPTION**

Furnish and install one electronic ball marker in equipment pull boxes and splice boxes below finish grade.

#### **23.2. MATERIALS**

Ensure that the electronic ball marker is a device specifically manufactured to electronically mark and locate underground facilities. Ensure that the electronic ball marker includes circuitry and an antenna encased in a waterproof polyethylene shell. Ensure that the outer shell is impervious to minerals, chemicals, and temperature extremes normally found underground plant environments. Ensure that the electronic box marker does not require batteries or active components to operate. Ensure that electronic ball markers used to mark fiber optic cable applications are orange in color and operate at 101.4 kHz. When excited by a marker locator, ensure that the electronic ball marker's passive circuits produce an RF field to direct the marker locator to its position. Ensure that the electronic ball marker has a minimum operating range of 5 feet from the marker locator.

Example:

Greenlee Omnimarker #0163-0001-1, 4" Ball Marker, or equivalent to be approved by the Engineer.

#### **23.3. CONSTRUCTION**

The electronic ball marker shall be placed inside the pull box or splice box to mark the location as noted in the plans.

#### **23.4. MEASUREMENT AND PAYMENT**

*Electronic Ball Marker* will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Electronic Ball Marker	Each

**24. FIBER OPTIC PATCH PANEL UNIT****24.1. DESCRIPTION**

Furnish and install one (1) field-terminated fiber optic cable patch panel.

**24.2. MATERIALS**

Furnish one (1) field-terminated fiber optic cable patch panel- 6 fiber with ports in the housing and should precisely match the number of fibers in the fiber stub.

The patch panel shall be equipped with enough ST-type connector ports to accommodate all fibers in the stub and each port shall have a factory-installed fiber jumper of one meter in length. The unit shall be placed on a traffic control box shelf, but not permanently secured. This unit includes the required number of single fusion splices to splice each fiber of the fiber optic stub to the jumpers of the patch panel. The attenuation loss for the complete assembly shall not exceed 1.5db. The position number associated with each port shall be stenciled, at the factory, on the face of the housing. The fiber optic drop cable shall be paid for under the Fiber optic cable stub unit.

Example:

Multilink FWM-1X-SP wall-mount enclosure, Part # ML-33-006-B-SM6-T9-001-00-00.

**24.3. CONSTRUCTION**

Install the patch panel in a location convenient to the Ethernet switch, as directed by the City of Charlotte, to facilitate installation SMFO jumpers between them.

**24.4. MEASUREMENT AND PAYMENT**

*Fiber Optic Patch Panel Unit* will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Fiber Optic Patch Panel Unit	Each

**25. UNDERGROUND FIBER OPTIC CABLE STUB UNIT****25.1. DESCRIPTION**

Furnish and install one (1) foot of fiber optic cable for a 6 fiber field-terminated patch panel with 6 ports in the associated patch panel unit.

**25.2. MATERIALS**

Furnish one (1) foot of fiber optic cable for a 6 fiber field-terminated patch panel with 6 ports in the associated patch panel unit. The fiber cable shall be riser-rated, single-mode, indoor/outdoor, gel-free, all dielectric cable with flame retardant UV-resistant outer jacket, and an attenuation loss not exceeding 0.4db/km @ 1310nm. The attenuation loss for the complete assembly shall not exceed 1.5db. Also, included is the placing of a CDOT-provided cable identification tag at each handhole or pull box. The fiber optic patch panel shall be paid for under the Fiber Optic Patch Panel Unit.

Example:

Corning FREEDM® LST™ Cables, Part # 006ESF-T4101D20 (6 fiber, single mode, Gel-free Cable, indoor/outdoor riser, with markings every 4 feet, performance rated for SMFO with no additional special requirements)

**25.3. CONSTRUCTION**

Comply with the requirements of Article 1730-3 of the Standard Specifications.

Verify the length of drop cable needed, including slack, to reach from termination point to termination point.

Splice the free end of the drop cable assembly into the fiber-optic trunk cable in a splice enclosure external to the cabinet.

**25.4. MEASUREMENT AND PAYMENT**

*Underground Fiber Optic Cable Stub Unit (6 Fiber)* will be measured and paid as the linear feet furnished, installed, and accepted.

Payment will be made under:

**Pay Item****Pay Unit**

Underground Fiber Optic Cable Stub Unit (6 Fiber)

Linear Foot

**26. ACCESS TO THE TRAFFIC SIGNAL CONTROLLER CABINET/BOX****26.1. DESCRIPTION**

Install the cable into existing traffic signal controller cabinet/Box (TCB) through a CDOT provided conduit entrance/access.

**26.2. CONSTRUCTION**

The Contractor shall contact CDOT to make sure CDOT has created a spare conduit entrance/access. It is the Contractor's responsibility to ensure a spare conduit entrance has been created by CDOT before the cable and conduit are routed to the TCB. At locations shown on the plans the Contractor shall connect the new or existing conduit/riser/handhole to the existing TCB where the CDOT provided spare conduit terminates. If the terminus of the CDOT created conduit entrance to the TCB is not marked, it is the Contractors responsibility to locate the entrance terminus and ensure it is usable. This unit also includes all labor and material required to repair and/or replacement of street, sidewalks, roads, drives, lawns, shrubbery, watermain, pipes, pipelines and contents, underground power and telecommunications facilities, buried sewerage and drainage facilities, and any other property damaged during the unit installation.

**26.3. MEASUREMENT AND PAYMENT**

*Access to the traffic signal controller cabinet/box* will be measured and paid as the actual number furnished, installed, and accepted.

Payment will be made under:

**Pay Item****Pay Unit**

Access to the traffic signal controller cabinet/box

Each

**27. FIBER OPTIC CABLE-SLACK STOW REARRANGEMENT UNIT****27.1. DESCRIPTION**

Rearrange aerial storage racks and associated hardware and furnish any materials required to complete the work.



**27.2. CONSTRUCTION**

Rearrange one (1) aluminum, 10" diameter, aerial storage rack and associated hardware.

**27.3. MEASUREMENT AND PAYMENT**

*Fiber Optic Cable-Slack Stow Rearrangement Unit* will be measured and paid as the actual number rearrange and accepted.

The cable to be stowed is NOT a part of this unit.

Payment will be made under:

**Pay Item**

**Pay Unit**

Fiber Optic Cable-Slack Stow Rearrangement Unit

Each

H. Project Commitments (as of 10/30/2024)

**TIP No. HS-2010E**

**Project Name: Signal Installation at NC 49 and General Dr. and Directional Crossover at  
NC 49 and Nevada Blvd.**

**County: Mecklenburg.**

**Federal Aid Project No. 0049040**

**WBS No. 49291.3.5**

Division 10

The contractor shall complete the required work of installing, maintaining, and removing the traffic control devices for lane closures and restoring traffic to its normal pattern. The Contractor shall not close or narrow a lane of traffic on NC 49 during the

Following time restrictions:

Monday thru Friday

6:00 a.m. to 9:00 a.m.

4:00 p.m. to 6:00 p.m.

Mr. Donald Harward, DDC Engineer (704) 983-4400

**COMMITMENTS FROM PERMITTING**

No permits were required for this project's construction.

## **STANDARD SPECIAL PROVISIONS**

### **AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS**

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

Z-2

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

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

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

### **NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY**

(5-17-11)

Z-3

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

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

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

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

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

<u>Restricted Noxious Weed</u>	<u>Limitations per Lb. Of Seed</u>	<u>Restricted Noxious Weed</u>	<u>Limitations per Lb. of Seed</u>
Blessed Thistle	4 seeds	Cornflower (Ragged Robin)	27 seeds
Cocklebur	4 seeds	Texas Panicum	27 seeds
Spurred Anoda	4 seeds	Bracted Plantain	54 seeds
Velvetleaf	4 seeds	Buckhorn Plantain	54 seeds
Morning-glory	8 seeds	Broadleaf Dock	54 seeds
Corn Cockle	10 seeds	Curly Dock	54 seeds
Wild Radish	12 seeds	Dodder	54 seeds
Purple Nutsedge	27 seeds	Giant Foxtail	54 seeds
Yellow Nutsedge	27 seeds	Horsenettle	54 seeds
Canada Thistle	27 seeds	Quackgrass	54 seeds
Field Bindweed	27 seeds	Wild Mustard	54 seeds
Hedge Bindweed	27 seeds		

Seed of Pensacola Bahiagrass shall not contain more than 7% inert matter, Kentucky Bluegrass, Centipede and Fine or Hard Fescue shall not contain more than 5% inert matter whereas a maximum of 2% inert matter will be allowed on all other kinds of seed. In addition, all seed shall not contain more than 2% other crop seed nor more than 1% total weed seed. The germination rate as tested by the North Carolina Department of Agriculture shall not fall below 70%, which includes both dormant and hard seed. Seed shall be labeled with not more than 7%, 5% or 2% inert matter (according to above specifications), 2% other crop seed and 1% total weed seed.

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

#### FURTHER SPECIFICATIONS FOR EACH SEED GROUP ARE GIVEN BELOW:

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

Sericea Lespedeza  
Oats (seeds)

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

Tall Fescue (all approved varieties)

Bermudagrass

Kobe Lespedeza  
 Korean Lespedeza  
 Weeping Lovegrass  
 Carpetgrass

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.

Centipede grass  
 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**

(1-16-24)

Z-4

Revise the *2024 Standard Specifications* as follows:

**Division 3**

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

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

**Division 9**

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

**Division 10**

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

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

**Division 11**

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

**Division 15**

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

**Division 16**

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

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

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

**PLANT AND PEST QUARANTINES:****(Imported Fire Ant, Gypsy Moth, Witchweed, Emerald Ash Borer, Guava Root Knot Nematode, And Other Noxious Weeds)**

(3-18-03) (Rev. 5-21-19)

Z-04a

**Within Quarantined Area**

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

**Originating in a Quarantined County**

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

**Contact**

Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-707-3730, or <https://www.ncagr.gov/plantindustry/Plant/quaran/table2.htm> 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, guava root knot nematode, or other noxious

**TITLE VI AND NONDISCRIMINATION:**

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

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

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

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

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

**(a) Compliance with Regulations**

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

**(b) Nondiscrimination**

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

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

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

**(d) Information and Reports**

The contractor shall provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the FHWA to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the



information, the contractor shall so certify to the Recipient or the FHWA, as appropriate, and shall set forth what efforts it has made to obtain the information.

(e) Sanctions for Noncompliance:

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

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

(f) Incorporation of Provisions

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

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

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

- (a) During the performance of this contract or agreement, contractors (e.g., subcontractors, consultants, vendors, prime contractors) are responsible for complying with NCDOT's Title VI Program. Contractors are not required to prepare or submit Title VI Programs. To comply with this section, the prime contractor shall:
  1. Post NCDOT's Notice of Nondiscrimination and the Contractor's own Equal Employment Opportunity (EEO) Policy in conspicuous locations accessible to all employees, applicants and subcontractors on the jobsite.
  2. Physically incorporate the required Title VI clauses into all subcontracts on federally-assisted and state-funded NCDOT projects, and ensure inclusion by subcontractors into all lower-tier subcontracts.
  3. Required Solicitation Language. The Contractor shall include the following notification in all solicitations for bids and requests for work or material, regardless of funding source:

“The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. In accordance with other related nondiscrimination authorities, bidders and contractors will also not be discriminated against on the grounds of sex, age, disability, low-income level, creed/religion, or limited English proficiency in consideration for an award.”

4. Physically incorporate the FHWA-1273, in its entirety, into all subcontracts and subsequent lower tier subcontracts on Federal-aid highway construction contracts only.
  5. Provide language assistance services (i.e., written translation and oral interpretation), free of charge, to LEP employees and applicants. Contact NCDOT OCR for further assistance, if needed.
  6. For assistance with these Title VI requirements, contact the NCDOT Title VI Nondiscrimination Program at 1-800-522-0453.
- (b) Subrecipients (e.g. cities, counties, LGAs, planning organizations) may be required to prepare and submit a Title VI Plan to NCDOT, including Title VI Assurances and/or agreements. Subrecipients must also ensure compliance by their contractors and subrecipients with Title VI. (23 CFR 200.9(b)(7))
- (c) If reviewed or investigated by NCDOT, the contractor or subrecipient agrees to take affirmative action to correct any deficiencies found within a reasonable time period, not to exceed 90 calendar days, unless additional time is granted by NCDOT. (23 CFR 200.9(b)(15))
- (d) The Contractor is responsible for notifying subcontractors of NCDOT’s External Discrimination Complaints Process.
1. Applicability
 

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

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

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

    - (i) The date of the alleged act of discrimination; or
    - (ii) The date when the person(s) became aware of the alleged discrimination; or

- (iii) Where there has been a continuing course of conduct, the date on which that conduct was discontinued or the latest instance of the conduct.

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

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

#### 4. Format for Complaints

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

#### 5. Discrimination Complaint Form

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

#### 6. Complaint Basis

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

**TABLE 103-1  
COMPLAINT BASIS**

Protected Categories	Definition	Examples	Applicable Nondiscrimination Authorities
Race and Ethnicity	An individual belonging to one of the accepted racial groups; or the perception, based usually on physical characteristics that a person is a member of a racial group	Black/African American, Hispanic/Latino, Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, White	Title VI of the Civil Rights Act of 1964; 49 CFR Part 21; 23 CFR 200; 49 U.S.C. 5332(b); 49 U.S.C. 47123. ( <i>Executive Order 13166</i> )
Color	Color of skin, including shade of skin within a racial group	Black, White, brown, yellow, etc.	
National Origin ( <i>Limited English Proficiency</i> )	Place of birth. Citizenship is not a factor. ( <i>Discrimination based on language or a person's accent is also covered</i> )	Mexican, Cuban, Japanese, Vietnamese, Chinese	
Sex	Gender. The sex of an individual. <i>Note:</i> Sex under this program does not include sexual orientation.	Women and Men	1973 Federal-Aid Highway Act; 49 U.S.C. 5332(b); 49 U.S.C. 47123.

Age	Persons of any age	21-year-old person	Age Discrimination Act of 1975 49 U.S.C. 5332(b); 49 U.S.C. 47123.
Disability	Physical or mental impairment, permanent or temporary, or perceived.	Blind, alcoholic, para-amputee, epileptic, diabetic, arthritic	Section 504 of the Rehabilitation Act of 1973; Americans with Disabilities Act of 1990
Religion (in the context of employment) <i>(Religion/ Creed in all aspects of any aviation or transit-related construction)</i>	An individual belonging to a religious group; or the perception, based on distinguishable characteristics that a person is a member of a religious group. In practice, actions taken as a result of the moral and ethical beliefs as to what is right and wrong, which are sincerely held with the strength of traditional religious views. <b>Note:</b> Does not have to be associated with a recognized religious group or church; if an individual sincerely holds to the belief, it is a protected religious practice.	Muslim, Christian, Sikh, Hindu, etc.	Title VII of the Civil Rights Act of 1964; 23 CFR 230; FHWA-1273 Required Contract Provisions. <i>(49 U.S.C. 5332(b); 49 U.S.C. 47123)</i>

### (3) Pertinent Nondiscrimination Authorities

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

- (a) Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- (b) The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- (c) Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- (d) Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability) and 49 CFR Part 27;
- (e) The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- (f) Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- (g) The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- (h) Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities

- (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- (i) The Federal Aviation Administration's Nondiscrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
  - (j) Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Nondiscrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
  - (k) Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
  - (l) Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).
  - (m) Title VII of the Civil Rights Act of 1964 (42 U.S.C. § 2000e et seq., Pub. L. 88-352), (prohibits employment discrimination on the basis of race, color, religion, sex, or national origin).

**(4) Additional Title VI Assurances**

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

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

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

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

(HABENDUM CLAUSE)

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

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

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

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

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

1. The (grantee, lessee, permittee, etc. as appropriate) for himself/herself, his/her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree [in the case of deeds and leases add "as a covenant running with the land"] that:
  - (i.) In the event facilities are constructed, maintained, or otherwise operated on the property described in this (deed, license, lease, permit, etc.) for a purpose for which a U.S. Department of Transportation activity, facility, or program is extended or for another purpose involving the provision of similar services or benefits, the (grantee, licensee, lessee, permittee, etc.) will maintain and operate such facilities and services in compliance with all requirements imposed by the Acts and Regulations (as may be amended) such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities.

2. With respect to licenses, leases, permits, etc., in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to terminate the (lease, license, permit, etc.) and to enter, re-enter, and repossess said lands and facilities thereon, and hold the same as if the (lease, license, permit, etc.) had never been made or issued. \*
3. With respect to a deed, in the event of breach of any of the above Nondiscrimination covenants, the NCDOT will have the right to enter or re-enter the lands and facilities thereon, and the above described lands and facilities will there upon revert to and vest in and become the absolute property of the NCDOT and its assigns. \*

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

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

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

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

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

**MINORITY AND FEMALE EMPLOYMENT REQUIREMENTS:**

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1. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, see as shown on the attached sheet entitled "Employment Goals for Minority and Female participation".

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in *41 CFR Part 60-4* shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in *41 CFR 60-4.3(a)*, and its effort to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project or the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the executive Order and the regulations in *41 CFR Part 60-4*. Compliance with the goals will be measured against the total work hours performed.

2. As used in this Notice and in the contract resulting from this solicitation, the "covered area" is the county or counties shown on the cover sheet of the proposal form and contract.

### **EMPLOYMENT GOALS FOR MINORITY AND FEMALE PARTICIPATION**

#### Economic Areas

**Area 023 29.7%**

Bertie County  
Camden County  
Chowan County  
Gates County  
Hertford County  
Pasquotank County  
Perquimans County

**Area 024 31.7%**

Beaufort County  
Carteret County  
Craven County  
Dare County  
Edgecombe County  
Green County  
Halifax County  
Hyde County

**Area 026 33.5%**

Bladen County  
Hoke County  
Richmond County  
Robeson County  
Sampson County  
Scotland County

**Area 027 24.7%**

Chatham County  
Franklin County  
Granville County  
Harnett County  
Johnston County  
Lee County  
Person County  
Vance County  
Warren County

**Area 029 15.7%**

Alexander County  
Anson County  
Burke County  
Cabarrus County  
Caldwell County  
Catawba County  
Cleveland County  
Iredell County  
Lincoln County  
Polk County  
Rowan County  
Rutherford County  
Stanly County

**Area 0480 8.5%**

Buncombe County  
Madison County



Jones County  
 Lenoir County  
 Martin County  
 Nash County  
 Northampton County  
 Pamlico County  
 Pitt County  
 Tyrrell County  
 Washington County  
 Wayne County  
 Wilson County

**Area 025 23.5%**

Columbus County  
 Duplin County  
 Onslow County  
 Pender County

**Area 028 15.5%**

Alleghany County  
 Ashe County  
 Caswell County  
 Davie County  
 Montgomery County  
 Moore County  
 Rockingham County  
 Surry County  
 Watauga County  
 Wilkes County

**Area 030 6.3%**

Avery County  
 Cherokee County  
 Clay County  
 Graham County  
 Haywood County  
 Henderson County  
 Jackson County  
 McDowell County  
 Macon County  
 Mitchell County  
 Swain County  
 Transylvania County  
 Yancey County

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**SMSA Areas**

**Area 5720 26.6%**

Currituck County

**Area 9200 20.7%**

Brunswick County  
 New Hanover County

**Area 2560 24.2%**

Cumberland County

**Area 6640 22.8%**

Durham County  
 Orange County  
 Wake County

**Area 1300 16.2%**

Alamance County

**Area 3120 16.4%**

Davidson County  
 Forsyth County  
 Guilford County  
 Randolph County  
 Stokes County  
 Yadkin County

**Area 1520 18.3%**

Gaston County  
 Mecklenburg County  
 Union County

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**Goals for Female**

**Participation in Each Trade**

(Statewide) 6.9%

## **REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS**

- (B)** General
- (C)** Nondiscrimination
- (D)** Non-segregated Facilities
- (E)** Davis-Bacon and Related Act Provisions
- (F)** Contract Work Hours and Safety Standards Act Provisions
- (G)** Subletting or Assigning the Contract
- (H)** Safety: Accident Prevention
- (I)** False Statements Concerning Highway Projects
- (J)** Implementation of Clean Air Act and Federal Water Pollution Control Act
- (K)** Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion
- (L)** Certification Regarding Use of Contract Funds for Lobbying
- (M)** Use of United States-Flag Vessels:

### **ATTACHMENTS**

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

### **(1) GENERAL**

- Form FHWA-1273 must be physically incorporated in each construction contract funded under title 23, United States Code, as required in 23 CFR 633.102(b) (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services). 23 CFR 633.102(e).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider. 23 CFR 633.102(e).

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services) in accordance with 23 CFR 633.102. The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in solicitation-for-bids or request-for-proposals documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract). 23 CFR 633.102(b).

- Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work

performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract. 23 CFR 633.102(d).

- A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

- Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

### **(2) NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)**

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), and related regulations including 49 CFR Parts 21, 26, and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR Part 230, Subpart A, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

• **Equal Employment Opportunity:** Equal Employment Opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140, shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR Part 35 and 29 CFR Part 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

- The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract. 23 CFR 230.409 (g)(4) & (5).

- The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, sexual orientation, gender identity, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

- **EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

- **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action or are substantially involved in such action, will be made fully cognizant of and will implement the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

- Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer or other knowledgeable company official.

- All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

- All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

- Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

- The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

- **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

- The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

- In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

- The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

- **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

- The contractor will conduct periodic inspections of project sites to ensure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

- The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

- The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

- The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action

within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

## **6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs (i.e., apprenticeship and on-the-job training programs for the geographical area of contract performance). In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. 23 CFR 230.409. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

**(C)** The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

**(D)** The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability.

**(E)** The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

**(F)** In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide

sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established thereunder. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, sexual orientation, gender identity, national origin, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors, suppliers, and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

## **10. Assurances Required:**

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women.

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

### III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of more than \$10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, the contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location under the contractor's control where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

### IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway

Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

#### 1. Minimum wages (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act ([29 CFR part 3](#))), the full amount of basic hourly wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act ([40 U.S.C. 3141\(2\)\(B\)](#)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH-1321) must be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in [29 CFR part 1](#), a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is used in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken will be sent by the contracting officer by email to [DBAconformance@dol.gov](mailto:DBAconformance@dol.gov). The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer will, by email to [DBAconformance@dol.gov](mailto:DBAconformance@dol.gov), refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division

under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

d. *Fringe benefits not expressed as an hourly rate.*

Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided*, That the Secretary of Labor has found, upon the written request of the contractor, in accordance with the criteria set forth in § 5.28, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

## 2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

### 3. Records and certified payrolls (29 CFR 5.5)

*a. Basic record requirements (1) Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

*(2) Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

*(3) Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in [40 U.S.C. 3141\(2\)\(B\)](#) of the Davis-Bacon Act, the contractor must maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

*(4) Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

*b. Certified payroll requirements (1) Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting

agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

*(2) Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (e.g., the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH-347 or in any other format desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division website at <https://www.dol.gov/sites/dolgov/files/WHDL/legacy/files/wh347.pdf> or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

*(3) Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in [29 CFR part 3](#); and

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

*(4) Use of Optional Form WH-347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.



(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under [18 U.S.C. 1001](#) and [31 U.S.C. 3729](#).

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under [29 CFR part 6](#) any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address

of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

#### 4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeymen on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeymen under this part must be in conformity with



the equal employment opportunity requirements of Executive Order 11246, as amended, and [29 CFR part 30](#).

c. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. 23 CFR 230.111(e)(2). The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeyworkers shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract as provided in 29 CFR 5.5.

**6. Subcontracts.** The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract as provided in 29 CFR 5.5.

**9. Disputes concerning labor standards.** As provided in 29 CFR 5.5, disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.** a. By entering into this contract, the contractor certifies that neither it nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of [40 U.S.C. 3144\(b\)](#) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, [18 U.S.C. 1001](#).

**11. Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#);

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#); or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or [29 CFR part 1](#) or [3](#).

## V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), the following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchpersons and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek. 29 CFR 5.5.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph 1. of this section the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages and interest from the date of the underpayment. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or

mechanic, including watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)\* for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph 1. of this section.

\* \$31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

### 3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

- (1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;
- (2) A contracting agency for its procurement costs;
- (3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;
- (4) A contractor's assignee(s);
- (5) A contractor's successor(s); or
- (6) A claim asserted under the Prompt Payment Act, [31 U.S.C. 3901–3907](#).

4. **Subcontracts.** The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the

event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. **Anti-retaliation.** It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

- a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;
- b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;
- c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or
- d. Informing any other person about their rights under CWHSSA or this part.

## VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” in paragraph 1 of Section VI refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions: (based on longstanding interpretation)

- (1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
- (2) the prime contractor remains responsible for the quality of the work of the leased employees;

- (3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
- (4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), the contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. Pursuant to 23 CFR 635.116(c), the contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

## **VII. SAFETY: ACCIDENT PREVENTION**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR Part 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract. 23 CFR 635.108.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and

health standards (29 CFR Part 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704). 29 CFR 1926.10.

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

## **VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR Part 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 11, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

**IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT** (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of \$150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

**X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200. 2 CFR 180.220 and 1200.220.

**1. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction. 2 CFR 180.320.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default. 2 CFR 180.325.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances. 2 CFR 180.345 and 180.350.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900-180.1020, and 1200. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction. 2 CFR 180.330.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 180.300.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>). 2 CFR 180.300, 180.320, and 180.325.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default. 2 CFR 180.325.

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## 2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.335;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property, 2 CFR 180.800;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification, 2 CFR 180.700 and 180.800; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

\* \* \* \* \*

## 3. Instructions for Certification – Lower Tier Participants:

(Applicable to all subcontracts, purchase orders, and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances. 2 CFR 180.365.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180, Subpart I, 180.900 – 180.1020, and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a recipient or subrecipient of Federal funds and a participant (such as the prime or general contractor). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a recipient or subrecipient of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated. 2 CFR 1200.220 and 1200.332.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold. 2 CFR 180.220 and 1200.220.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the System for Award Management website (<https://www.sam.gov/>), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily

excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment. 2 CFR 180.325.

\* \* \* \* \*

#### **4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:**

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal.

\* \* \* \* \*

#### **XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000. 49 CFR Part 20, App. A.

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

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

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or

**ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS** (23 CFR 633, Subpart B, Appendix B)  
This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

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

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

#### **XII. USE OF UNITED STATES-FLAG VESSELS:**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.



1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

**ON-THE-JOB TRAINING:**

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

Z-10

**Description**

The North Carolina Department of Transportation will administer a custom version of the Federal On-the-Job Training (OJT) Program, commonly referred to as the Alternate OJT Program. All contractors (existing and newcomers) will be automatically placed in the Alternate Program. Standard OJT requirements typically associated with individual projects will no longer be applied at the project level. Instead, these requirements will be applicable on an annual basis for each contractor administered by the OJT Program Manager.

On the Job Training shall meet the requirements of 23 CFR 230.107 (b), 23 USC – Section 140, this provision and the On-the-Job Training Program Manual.

The Alternate OJT Program will allow a contractor to train employees on Federal, State and privately funded projects located in North Carolina. However, priority shall be given to training employees on NCDOT Federal-Aid funded projects.

**Minorities and Women**

Developing, training and upgrading of minorities and women toward journeyman level status is a primary objective of this special training provision. Accordingly, the Contractor shall make every effort to enroll minority and women as trainees to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

**Assigning Training Goals**

The Department, through the OJT Program Manager, will assign training goals for a calendar year based on the contractors' past three years' activity and the contractors' anticipated upcoming year's activity with the Department. At the beginning of each year, all contractors eligible will be contacted by the Department to determine the number of trainees that will be assigned for the upcoming calendar year. At that time the Contractor shall enter into an agreement with the Department to provide a self-imposed on-the-job training program for the calendar year. This agreement will include a specific number of annual training goals agreed to by both parties. The number of training assignments may range from 1 to 15 per contractor per calendar year. The Contractor shall sign an agreement to fulfill their annual goal for the year.\



## **Training Classifications**

The Contractor shall provide on-the-job training aimed at developing full journeyman level workers in the construction craft/operator positions. Preference shall be given to providing training in the following skilled work classifications:

Equipment Operators	Office Engineers
Truck Drivers	Estimators
Carpenters	Iron / Reinforcing Steel Workers
Concrete Finishers	Mechanics
Pipe Layers	Welders

The Department has established common training classifications and their respective training requirements that may be used by the contractors. However, the classifications established are not all-inclusive. Where the training is oriented toward construction applications, training will be allowed in lower-level management positions such as office engineers and estimators. Contractors shall submit new classifications for specific job functions that their employees are performing. The Department will review and recommend for acceptance to FHWA the new classifications proposed by contractors, if applicable. New classifications shall meet the following requirements:

Proposed training classifications are reasonable and realistic based on the job skill classification needs, and

The number of training hours specified in the training classification is consistent with common practices and provides enough time for the trainee to obtain journeyman level status.

The Contractor may allow trainees to be trained by a subcontractor provided that the Contractor retains primary responsibility for meeting the training and this provision is made applicable to the subcontract. However, only the Contractor will receive credit towards the annual goal for the trainee.

Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journeyman level status or in which they have been employed as a journeyman.

## **Records and Reports**

The Contractor shall maintain enrollment, monthly and completion reports documenting company compliance under these contract documents. These documents and any other information as requested shall be submitted to the OJT Program Manager.

Upon completion and graduation of the program, the Contractor shall provide each trainee with a certification Certificate showing the type and length of training satisfactorily completed.

**Trainee Interviews**

All trainees enrolled in the program will receive an initial and Trainee/Post graduate interview conducted by the OJT program staff.

**Trainee Wages**

Contractors shall compensate trainees on a graduating pay scale based upon a percentage of the prevailing minimum journeyman wages (Davis-Bacon Act). Minimum pay shall be as follows:

60 percent	of the journeyman wage for the first half of the training period
75 percent	of the journeyman wage for the third quarter of the training period
90 percent	of the journeyman wage for the last quarter of the training period

In no instance shall a trainee be paid less than the local minimum wage. The Contractor shall adhere to the minimum hourly wage rate that will satisfy both the NC Department of Labor (NCDOL) and the Department.

**Achieving or Failing to Meet Training Goals**

The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and who receives training for at least 50 percent of the specific program requirement. Trainees will be allowed to be transferred between projects if required by the Contractor's scheduled workload to meet training goals.

If a contractor fails to attain their training assignments for the calendar year, they may be taken off the NCDOT's Bidders List.

**Measurement and Payment**

No compensation will be made for providing required training in accordance with these contract documents.

**MINIMUM WAGES****GENERAL DECISION NC20250088 01/03/2025 NC88**

Z-088

Date: January 3, 2025

General Decision Number: NC20250088 01/03/2025 NC88

Superseded General Decision Numbers: NC20240088

State: North Carolina

Construction Type: HIGHWAY

**COUNTIES:**

Alamance	Forsyth	Randolph
Anson	Gaston	Rockingham
Cabarrus	Guilford	Stokes
Chatham	Mecklenburg	Union
Davie	Orange	Yadkin
Durham	Person	

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects & railroad construction; bascule, suspension & spandrel arch bridges designed for commercial navigation, bridges involving marine construction; and other major bridges).

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(1).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	Executive Order 14026 generally applies to the contract.  The contractor must pay all covered workers at least \$17.75 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	Executive Order 13658 generally applies to the contract.  The contractor must pay all covered workers at least \$13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2025.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at <http://www.dol.gov/whd/govcontracts>.

Modification Number  
0

Publication Date  
01/03/2025

SUNC2014-003 11/14/2014

	Rates	Fringes
BLASTER	18.64	
CARPENTER	13.68 **	.05
CEMENT MASON/CONCRETE FINISHER	13.93 **	
ELECTRICIAN		
Electrician	18.79	2.72

	Rates	Fringes
Telecommunications Technician	15.19 **	1.25
IRONWORKER	13.30 **	
LABORER		
Asphalt Raker and Spreader	12.78 **	
Asphalt Screed/Jackman	14.50 **	
Carpenter Tender	12.51 **	.27
Cement Mason/Concrete Finisher Tender	11.04 **	
Common or General	10.40 **	.01
Guardrail/Fence Installer	13.22 **	
Pipelayers	12.43 **	
Traffic Signal/Lighting Installer	15.65 **	.24
PAINTER		
Bridge	23.77	
POWER EQUIPMENT OPERATORS		
Asphalt Broom Tractor	10.00 **	
Bulldozer Fine	16.13 **	
Bulldozer Rough	14.36 **	
Concrete Grinder/Groover	17.92	
Crane Boom Trucks	18.19	
Crane Other	19.83	
Crane Rough/All-Terrain	19.10	
Drill Operator Rock	14.28 **	
Drill Operator Structure	20.89	
Excavator Fine	16.95	
Excavator Rough	13.63 **	
Grader/Blade Fine	19.84	
Grader/Blade Rough	15.47 **	
Loader 2 Cubic Yards or Less	13.31 **	
Loader Greater Than 2 Cubic Yards	16.19 **	
Material Transfer Vehicle (Shuttle Buggy)	15.44 **	
Mechanic	17.51	
Milling Machine	15.22 **	
Off-Road Hauler/Water Tanker	11.83 **	
Oiler/Greaser	14.16 **	
Pavement Marking Equipment	12.05 **	
Paver Asphalt	15.97 **	
Paver Concrete	18.20	
Roller Asphalt Breakdown	12.79 **	
Roller Asphalt Finish	13.76 **	
Roller Other	12.08 **	
Scraper Finish	12.65 **	
Scraper Rough	11.50 **	
Slip Form Machine	19.60	
Tack Truck/Distributor Operator	14.82 **	
TRUCK DRIVER		
GVWR of 26,000 Lbs or Less	11.45 **	
GVWR of 26,001 Lbs or Greater	13.57 **	.03

Welders – Receive rate prescribed for craft performing operation to which welding is incidental.

\*\* Workers in this classification may be entitled to a higher minimum wage under Executive Order 14026 (\$17.75) or 13658 (\$13.30). Please see the Note at the top of the wage determination for more information. Please also note that the minimum wage requirements of

Executive Order 14026 are not currently being enforced as to any contract or subcontract to which the states of Texas, Louisiana, or Mississippi, including their agencies, are a party.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at <http://www.dol.gov/agencies/whd/government-contracts>.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(iii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

#### Union Rate Identifiers

A four-letter identifier beginning with characters other than "SU", "UAVG", "SA", or "SC" denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

#### Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

#### Survey Rate Identifiers

The "SU" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

"SU" wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

#### State Adopted Rate Identifiers

The "SA" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R. 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the "SA" identifier took effect under state law in the state from which the rates were adopted.

#### WAGE DETERMINATION APPEALS PROCESS

- 1) Has there been an initial decision in the matter? This can be:
  - a) a survey underlying a wage determination
  - b) an existing published wage determination
  - c) an initial WHD letter setting forth a position on a wage determination matter
  - d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to [davisbaconinfo@dol.gov](mailto:davisbaconinfo@dol.gov) or by mail to:

Branch of Wage Surveys  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, D.C. 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to [BCWD-Office@dol.gov](mailto:BCWD-Office@dol.gov) or by mail to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, D.C. 20210

- 2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via mail to [dba.reconsideration@dol.gov](mailto:dba.reconsideration@dol.gov) or by mail to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, D.C. 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

- 3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, D.C. 20210

END OF GENERAL DECISION

County: MECKLENBURG

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0043000000-N	226	GRADING	Lump Sum	L.S.	
0003	0057000000-E	226	UNDERCUT EXCAVATION	50 CY		
0004	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	150 SY		
0005	0234000000-E	SP	GENERIC GRADING ITEM BORROW EXCAVATION (PIPE INSTALLATION)	10 CY		
0006	1297000000-E	607	MILLING ASPHALT PAVEMENT, **** DEPTH (1.5" DEPTH)	830 SY		
0007	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	95 TON		
0008	1503000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0C	76 TON		
0009	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	136 TON		
0010	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	17 TON		
0011	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	20 TON		
0012	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	2 EA		
0013	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	0.3 LF		
0014	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (TYPE F)	1 EA		
0015	2396000000-N	840	FRAME WITH COVER, STD 840.54	1 EA		
0016	2542000000-E	846	1'-6" CONCRETE CURB & GUTTER	300 LF		



County: MECKLENBURG

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0017	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	250 LF		
0018	2605000000-N	848	CONCRETE CURB RAMPS	8 EA		
0019	2647000000-E	852	5" MONOLITHIC CONCRETE ISLANDS (SURFACE MOUNTED)	290 SY		
0020	2830000000-N	858	ADJUSTMENT OF MANHOLES	1 EA		
0021	2845000000-N	858	ADJUSTMENT OF METER BOXES OR VALVE BOXES	1 EA		
0022	3642000000-E	876	RIP RAP, CLASS A	10 TON		
0023	3649000000-E	876	RIP RAP, CLASS B	10 TON		
0024	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	200 LF		
0025	4102000000-N	904	SIGN ERECTION, TYPE E	9 EA		
0026	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	208 SF		
0027	4420000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN	3 EA		
0028	4447000000-E	SP	PEDESTRIAN CHANNELIZING DEVICES	460 LF		
0029	4457000000-N	SP	TEMPORARY TRAFFIC CONTROL	Lump Sum	L.S.	
0030	4510000000-N	1190	LAW ENFORCEMENT	16 HR		
0031	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM AUDIBLE WARNING DEVICES	4 EA		
0032	4600000000-N	SP	GENERIC TRAFFIC CONTROL ITEM TEMPORARY CURB RAMP	8 EA		
0033	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	1,200 LF		

County: MECKLENBURG

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0034	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	1,250 LF		
0035	4700000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (12", 90 MILS)	85 LF		
0036	4709000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 90 MILS)	200 LF		
0037	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	3 EA		
0038	4905100000-N	1253	NON-CAST IRON SNOWPLOWABLE PAVEMENT MARKER	10 EA		
0039	5255000000-N	1413	PORTABLE LIGHTING	Lump Sum	L.S.	
0040	6000000000-E	1605	TEMPORARY SILT FENCE	270 LF		
0041	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	10 TON		
0042	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	10 TON		
0043	6012000000-E	1610	SEDIMENT CONTROL STONE	5 TON		
0044	6029000000-E	SP	SAFETY FENCE	40 LF		
0045	6030000000-E	1630	SILT EXCAVATION	10 CY		
0046	6042000000-E	1632	1/4" HARDWARE CLOTH	35 LF		
0047	6084000000-E	1660	SEEDING & MULCHING	0.25 ACR		
0048	6087000000-E	1660	MOWING	0.25 ACR		
0049	6090000000-E	1661	SEED FOR REPAIR SEEDING	125 LB		
0050	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.5 TON		

County: MECKLENBURG

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0051	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	250 LB		
0052	6108000000-E	1665	FERTILIZER TOPDRESSING	0.5 TON		
0053	6114500000-N	1667	SPECIALIZED HAND MOWING	4 MHR		
0054	6117000000-N	1675	RESPONSE FOR EROSION CONTROL	5 EA		
0055	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	1 EA		
0056	7048500000-E	1705	PEDESTRIAN SIGNAL HEAD (16", 1 SECTION W/COUNTDOWN)	8 EA		
0057	7060000000-E	1705	SIGNAL CABLE	2,990 LF		
0058	7120000000-E	1705	VEHICLE SIGNAL HEAD (12", 3 SECTION)	8 EA		
0059	7132000000-E	1705	VEHICLE SIGNAL HEAD (12", 4 SECTION)	4 EA		
0060	7229000000-N	SP	APS DETECTOR STATION	8 EA		
0061	7230000000-N	SP	CENTRAL CONTROL UNIT APS DETECTOR STATION	1 EA		
0062	7252000000-E	1710	MESSENGER CABLE (1/4")	413 LF		
0063	7279000000-E	1715	TRACER WIRE	1,460 LF		
0064	7288000000-E	1715	PAVED TRENCHING (***** (2 CONDUITS, 2 INCH)	45 LF		
0065	7300000000-E	1715	UNPAVED TRENCHING (***** (2 CONDUITS, 2 INCH)	750 LF		
0066	7301000000-E	1715	DIRECTIONAL DRILL (***** (2 CONDUITS, 2 INCH)	696 LF		
0067	7324000000-N	1716	JUNCTION BOX (STANDARD SIZE)	11 EA		

County: MECKLENBURG

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0068	7348000000-N	1716	JUNCTION BOX (OVER-SIZED, HEAVY DUTY)	1 EA		
0069	7420000000-E	1722	2" RISER WITH WEATHERHEAD	3 EA		
0070	7444000000-E	1725	INDUCTIVE LOOP SAWCUT	2,165 LF		
0071	7456100000-E	1726	LEAD-IN CABLE (14-2)	5,870 LF		
0072	7636000000-N	1745	SIGN FOR SIGNALS	21 EA		
0073	7642200000-N	1743	TYPE II PEDESTAL WITH FOUNDATION	8 EA		
0074	7675000000-N	1747	LED BLANKOUT SIGN	1 EA		
0075	7684000000-N	1750	SIGNAL CABINET FOUNDATION	1 EA		
0076	7696000000-N	1751	CONTROLLERS WITH CABINET (*****) (TYPE 2070LX, NEMA TS-2, TYPE P, BASE MOUNTED)	1 EA		
0077	7852000000-N	1751	DETECTOR CARD (NEMA TS-2)	7 EA		
0078	7901000000-N	1753	CABINET BASE EXTENDER	7 EA		
0079	7980000000-N	SP	GENERIC SIGNAL ITEM ACCESS TO THE TRAFFIC SIGNAL CONTROLLER CABINET/BOX	1 EA		
0080	7980000000-N	SP	GENERIC SIGNAL ITEM ADHESIVE FIBER WARNING SIGN ASSEMBLY UNIT	1 EA		
0081	7980000000-N	SP	GENERIC SIGNAL ITEM AERIAL FIBER OPTIC CLOSURE ASSEMBLY UNIT	1 EA		
0082	7980000000-N	SP	GENERIC SIGNAL ITEM CABLE RISER GUARD UNIT	2 EA		
0083	7980000000-N	SP	GENERIC SIGNAL ITEM CAMERA ASSEMBLY INSTALLATION UNIT	1 EA		

County: MECKLENBURG

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0084	7980000000-N	SP	GENERIC SIGNAL ITEM CATEGORY 6 ETHERNET SERVICE CABLE	1 EA		
0085	7980000000-N	SP	GENERIC SIGNAL ITEM ELECTRONIC BALL MARKER	3 EA		
0086	7980000000-N	SP	GENERIC SIGNAL ITEM ETHERNET SMALL FORM-FACTOR PLUGGABLE PORT (SFP) (GLX-R)	2 EA		
0087	7980000000-N	SP	GENERIC SIGNAL ITEM ETHERNET SWITCH UNIT MODULE - CISCO	1 EA		
0088	7980000000-N	SP	GENERIC SIGNAL ITEM EXISTING SLACK STORAGE REARRANGEMENT UNIT	1 EA		
0089	7980000000-N	SP	GENERIC SIGNAL ITEM FIBER CURB MARKER ASSEMBLY UNIT	50 EA		
0090	7980000000-N	SP	GENERIC SIGNAL ITEM FIBER OPTIC CABLE SPICE-SLACK STOW UNIT	50 EA		
0091	7980000000-N	SP	GENERIC SIGNAL ITEM FIBER OPTIC JUMPER ASSEMBLY UNIT -(1)ST/LC	2 EA		
0092	7980000000-N	SP	GENERIC SIGNAL ITEM FIBER OPTIC PATCH PANEL UNIT	1 EA		
0093	7980000000-N	SP	GENERIC SIGNAL ITEM FIBER OPTIC SPLICING ASSEMBLY UNIT	4 EA		
0094	7980000000-N	SP	GENERIC SIGNAL ITEM PEDESTAL POLE ASSEMBLY UNIT (15 FT)	1 EA		
0095	7980000000-N	SP	GENERIC SIGNAL ITEM PLACING NEW CONDUIT OR CABLE IN EXISTING HANDHOLE UNIT	1 EA		
0096	7980000000-N	SP	GENERIC SIGNAL ITEM POLE GROUND ASSEMBLY UNIT	1 EA		
0097	7980000000-N	SP	GENERIC SIGNAL ITEM STANDOFF BRACKET ASSEMBLY	7 EA		
0098	7990000000-E	SP	GENERIC SIGNAL ITEM ROCK DRILLING ADDER UNIT)	35 LF		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0099	7990000000-E	SP	GENERIC SIGNAL ITEM SOLID ROCK DRILLING ADDER UNIT	35 LF		
0100	7990000000-E	SP	GENERIC SIGNAL ITEM UNDERGROUND FIBER OPTIC CABLE STUB UNIT (6 FIBER)	902 LF		