

STATE OF NORTH CAROLINA  
DEPARTMENT OF TRANSPORTATION  
HIGHWAY DIVISION 13

## PROPOSAL

DATE AND TIME OF BID OPENING: MAY 3, 2023 AT 2:00 PM

CONTRACT ID: DM00303

WBS ELEMENT NO.: 49282

FEDERAL AID NO.: STATE FUNDED

COUNTY: MITCHELL

TIP NO.: N/A

MILES: N/A

ROUTE NO.: N/A

LOCATION: BRIDGE NUMBER 240 OVER NORTH TOE RIVER AND CSX  
RAILROAD IN THE TOWN OF SPRUCE PINE

★ TYPE OF WORK: PEDESTRIAN BRIDGE PRESERVATION ★

### 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 STRUCTURE PROJECT.

BID BONDS ARE REQUIRED.

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NAME OF BIDDER

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ADDRESS OF BIDDER

**PROPOSAL FOR THE CONSTRUCTION OF  
CONTRACT No. DM00303 IN MITCHELL COUNTY, NORTH CAROLINA**

Date \_\_\_\_\_ 20 \_\_\_\_\_

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

The Bidder has carefully examined the location of the proposed work to be known as Contract No. **DM00303**; has carefully examined the plans and specifications, which are acknowledged to be part of the proposal, the special provisions, the proposal, the form of contract, and the forms of contract payment bond and contract performance bond; and thoroughly understands the stipulations, requirements and provisions. The undersigned bidder agrees to bound upon his execution of the bid and subsequent award to him by the 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 2018 Standard Specifications for Roads and Structures* by the dates(s) specified in the Project Special Provisions and in accordance with the requirements of the Engineer, and at the unit or lump sum prices, as the case may be, for the various items given on the sheets contained herein.

The Bidder shall provide and furnish all the materials, machinery, implements, appliances and tools, and perform the work and required labor to construct and complete State Highway Contract No. **DM00303** in **Mitchell County**, for the unit or lump sum prices, as the case may be, bid by the Bidder in his bid and according to the proposal, plans, and specifications prepared by said Department, which proposal, plans, and specifications show the details covering this project, and hereby become a part of this contract.

The published volume entitled *North Carolina Department of Transportation, Raleigh, Standard Specifications for Roads and Structures, January 2018* with all amendments and supplements thereto, is by reference incorporated into and made a part of this contract; that, except as herein modified, all the construction and work included in this contract is to be done in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Engineer.

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

## TABLE OF CONTENTS

### PROJECT SPECIAL PROVISIONS

DIVISION LET CONTRACT PREQUALIFICATION: .....	G-1
CONTRACTOR PREQUALIFICATION: .....	G-1
INTERESTED PARTIES LIST:.....	G-2
BOND REQUIREMENTS: .....	G-2
CONTRACT TIME AND LIQUIDATED DAMAGES: .....	G-2
INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES: .....	G-3
INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES: .....	G-3
PROSECUTION OF WORK:.....	G-4
NO MAJOR CONTRACT ITEMS: .....	G-4
NO SPECIALTY ITEMS: .....	G-5
SCHEDULE OF ESTIMATED COMPLETION PROGRESS:.....	G-5
MINORITY BUSINESS ENTERPRISE AND WOMEN BUSINESS ENTERPRISE (DIVISIONS):.....	G-5
RESTRICTIONS ON ITS EQUIPMENT AND SERVICES:.....	G-21
USE OF UNMANNED AIRCRAFT SYSTEM (UAS): .....	G-21
EQUIPMENT IDLING GUIDELINES:.....	G-21
ELECTRONIC BIDDING:.....	G-22
AWARD LIMITS: .....	G-22
TWELVE MONTH GUARANTEE:.....	G-23
OUTSOURCING OUTSIDE THE USA:.....	G-23
EROSION AND SEDIMENT CONTROL/STORMWATER CERTIFICATION: .....	G-24
PROCEDURE FOR MONITORING BORROW PIT DISCHARGE:.....	G-29
ROADWAY .....	R-1

### STANDARD SPECIAL PROVISIONS

AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS .....	SSP-1
NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY .....	SSP-2
ERRATA.....	SSP-5
PLANT AND PEST QUARANTINES .....	SSP-14
MINIMUM WAGES .....	SSP-15
TITLE VI AND NONDISCRIMINATION.....	SSP-16
ON-THE-JOB TRAINING.....	SSP-25

### UNIT PROJECT SPECIAL PROVISIONS

TRAFFIC CONTROL .....	TC-1
EROSION CONTROL .....	EC-1
STRUCTURES.....	BP-1

## **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 *2018 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. If the *Interested Parties List* provision SP01 G02 is part of the proposal prior to submitting a bid on a project, the bidder shall sign up on the *Interested Parties List* in conformance with Interested Parties List provision SP01 G02.
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 Connect NCDOT website at: <https://connect.ncdot.gov/letting/Pages/Electronic-Bidding.aspx> or from the approved electronic bidding provider website.

**PROJECT SPECIAL PROVISIONS****GENERAL****DIVISION LET CONTRACT PREQUALIFICATION:**

(07-01-14)(12-1-16)

SPD 01-410

Any firm that wishes to bid as a prime contractor shall be prequalified as a Bidder or PO Prime Contractor prior to submitting a bid. Information regarding prequalification can be found at: <https://connect.ncdot.gov/business/Prequal/Pages/default.aspx>.

Prior to performing the work, the prime contractor and/or subcontractor(s) shall be prequalified in the work code(s) which are identified as work items in the prime contractor's construction progress schedule that they will complete themselves. Any contractor identified as working outside their expertise may be considered in default of contract.

**CONTRACTOR PREQUALIFICATION:**

(10-18-22)

102

SP1 G01

Revise the *2018 Standard Specifications* as follows:

**Page 1-10, Subarticle 102-2(A) Bidder Prequalification**, lines 30-31, delete and replace the first sentence with the following:

Prospective bidders shall obtain prequalification approval at least two business days prior to any letting in which they intend to submit a bid. It is recommended that the prospective bidder file all required statements and documents with the State Prequalifications Engineer no less than 4 weeks before a given letting.

**Page 1-11, Subarticle 102-2(B) Purchase Order Bidder Prequalification**, lines 16-18, delete and replace the first sentence with the following:

Prospective bidders shall obtain prequalification approval at least two business days prior to any letting in which they intend to submit a bid. It is recommended that the applicant file all required statements and documents with the State Prequalifications Engineer no less than 4 weeks before a given bid opening for their bid to be considered.

**Page 1-11, Article 102-3(C) Subcontractor Prequalification**, lines 44-45, delete and replace the first sentence with the following:

The subcontractor shall file all required statements and documents with the State Prequalifications Engineer no less than 4 weeks before beginning work.

**Page 1-12, Article 102-3(E) Renewal and Requalification**, lines 38-40, delete and replace the first sentence with the following:

It is recommended that the renewing or requalifying firm file all required statements and

documents with the State Prequalifications Engineer no less than 4 weeks before a given letting for their bid to be considered.

**INTERESTED PARTIES LIST:**

(6-21-22)(Rev. 7-19-22)

102

SP1 G02

Revise the *2018 Standard Specifications* as follows:

**Page 1-12, Article 102-3 PROPOSALS AND PLAN HOLDER LISTS**, lines 45-49, delete and replace with the following:

**102-3 PROPOSALS AND INTERESTED PARTIES LIST**

On Department projects advertised, the prospective bidder shall sign up on the *Interested Parties List* no later than one business day prior to the Letting day of that project, for which he intends to submit a bid. There is no cost for signing up on the *Interested Parties List* that can be found on the Department's website at [connect.ncdot.gov/letting](http://connect.ncdot.gov/letting).

**Page 1-12, Article 102-3 PROPOSALS AND PLAN HOLDER LISTS**, lines 1-3, delete and replace the first sentence of the second paragraph with the following:

The proposal will state the location of the contemplated construction and show a schedule of contract items with the approximate quantity of each of these items for which bid prices are invited.

**Page 1-14, Article 102-8 PREPARATION AND SUBMISSION OF BIDS**, lines 30-31, delete and replace the first paragraph with the following:

Prior to submitting a bid on a project, the bidder shall sign up on the *Interested Parties List* in conformance with Article 102-3. The bidder shall submit a unit or lump sum price for every item in the proposal other than items that are authorized alternates to those items for which a bid price has been submitted.

**BOND REQUIREMENTS:**

(06-01-16)

102-8, 102-10

SPD 01-420A

A Bid Bond is required in accordance with Article 102-10 of the *2018 Standard Specifications for Roads and Structures*.

Contract Payment and Performance Bonds are required in accordance with Article 103-7 of the *2018 Standard Specifications for Roads and Structures*.

**CONTRACT TIME AND LIQUIDATED DAMAGES:**

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

108

SP1 G10 A

The date of availability for this contract is **June 12, 2023**.

The completion date for this contract is **November 15, 2024**.

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.

**INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES:**

(05-03-23)

SPD

The Contractor shall complete the required contract work during the following time restrictions:

**DAY AND TIME RESTRICTIONS**

**7:00 AM to 9:00 PM Monday - Saturday**

The Contractor **shall not** complete any required contract work on days the Town of Spruce Pine has events scheduled to be held at Riverside Park or other Town of Spruce Pine events as defined by the Engineer. The following is the Town of Spruce Pine events website:

<https://www.discoversprucepinenc.com/festivals-events>

The time of availability for this intermediate contract time will be **the time the Contractor begins work activities for the day.**

The completion time for this intermediate contract time will be the time **the Contractor ends work activities for the day.**

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

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

(2-20-07)

108

SP1 G14 B

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

**HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS**

1. For **unexpected occurrence** that creates unusually high traffic volumes, as directed by the Engineer.
2. For **New Year's Day**, between the hours of **3:00 PM** December 31st and **7:00 AM** January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until **7:00 AM** the following Tuesday.
3. For **Easter**, between the hours of **3:00 PM** Thursday and **7:00 AM** Monday.

4. For **Memorial Day**, between the hours of **3:00 PM** Friday and **7:00 AM** Tuesday.
5. For **Independence Day**, between the hours of **3:00 PM** the day before Independence Day and **7:00 AM** the day after Independence Day.

If **Independence Day** is on a Friday, Saturday, Sunday or Monday, then between the hours of **3:00 PM** the Thursday before Independence Day and **7:00 AM** the Tuesday after Independence Day.

6. For **Labor Day**, between the hours of **3:00 PM** Friday and **7:00 AM** Tuesday.
7. For **Thanksgiving Day**, between the hours of **3:00 PM** Tuesday and **7:00 AM** Monday.
8. For **Christmas**, between the hours of **3:00 PM** the Friday before the week of Christmas Day and **7:00 AM** 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 the existing traffic pattern.

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

**PROSECUTION OF WORK:**

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

108

SP1 G15R

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

In the event that the Contractor's operations are suspended in violation of the above provisions, the sum of **\$700.00** will be charged the Contractor for each and every calendar day that such suspension takes place. The said amount is hereby agreed upon as liquidated damages due to extra engineering and maintenance costs and due to increased public hazard resulting from a suspension of the work. Liquidated damages chargeable due to suspension of the work will be additional to any liquidated damages that may become chargeable due to failure to complete the work on time.

**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)

108-6

SP1 G34

None of the items included in this contract will be specialty items (see Article 108-6 of the *2018 Standard Specifications*).

**SCHEDULE OF ESTIMATED COMPLETION PROGRESS:**

(7-15-08) (Rev. 7-19-22)

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>
2023	(7/01/22 - 6/30/23) 4% of Total Amount Bid
2024	(7/01/23 - 6/30/24) 70% of Total Amount Bid
2025	(7/01/24 - 6/30/25) 26% of Total Amount Bid

The Contractor shall also furnish his own progress schedule in accordance with Article 108-2 of the *2018 Standard Specifications*. Any acceleration of the progress as shown by the Contractor's progress schedule over the progress as shown above shall be subject to the approval of the Engineer.

**MINORITY BUSINESS ENTERPRISE AND WOMEN BUSINESS ENTERPRISE (DIVISIONS):**

(10-16-07)(Rev. 8-17-21)

102-15(J)

SP1 G67

**Description**

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

**Definitions**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

### **Combined MBE/WBE Goal**

The Combined MBE/WBE Goal for this project is **0.0 %**

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

(A) Minority Business Enterprises **0.0 %**

- (1) *If the anticipated MBE participation is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that MBEs participate in at least the percent of the contract as set forth above.
  - (2) *If the anticipated MBE participation is zero*, the Contractor shall make an effort to recruit and use MBEs during the performance of the contract. Any MBE participation obtained shall be reported to the Department.
- (B) Women Business Enterprises **0.0 %**
- (1) *If the anticipated WBE participation is more than zero*, the Contractor shall exercise all necessary and reasonable steps to ensure that WBEs participate in at least the percent of the contract as set forth above.
  - (2) *If the anticipated WBE participation is zero*, the Contractor shall make an effort to recruit and use WBEs during the performance of the contract. Any WBE participation obtained shall be reported to the Department.

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

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

Real-time information is available about firms doing business with the Department and firms that are certified through NCUCP in the Directory of Transportation Firms. Only firms identified in the Directory as MBE and WBE certified shall be used to meet the Combined MBE / WBE goal. The Directory can be found at the following link.

<https://www.ebs.nc.gov/VendorDirectory/default.html>

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

### **Listing of MBE/WBE Subcontractors**

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

## (A) Electronic Bids

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

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

## (B) Paper Bids

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

- (2) *If the Combined MBE/WBE Goal is zero, entries on the Listing of MBE and WBE Subcontractors are not required for the zero goal, however any MBE or WBE participation that is achieved during the project shall be reported in accordance with requirements contained elsewhere in the special provision.*

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

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

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

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

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

The documentation shall be received in the office of the 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 MBE and WBE to be used toward the Combined MBE/WBE goal, or if the form is incomplete (i.e. both signatures are not present), the MBE/WBE participation will not count toward meeting the Combined MBE/WBE goal. If the lack of this participation drops the commitment below the Combined MBE/WBE goal, the Contractor shall submit evidence of good faith efforts for the goal not met, completed in its entirety, to the Engineer no later than 2:00 p.m. of 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.

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

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

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

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

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

One complete set and **three (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 MBE/WBE quotations shall be a part of the good faith effort submittal. This documentation may include written subcontractor quotations, telephone log notations of verbal quotations, or other types of quotation documentation.

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

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

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

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

- (B) Selecting portions of the work to be performed by MBEs/WBEs in order to increase the likelihood that the Combined MBE/WBE goal will be achieved.
  - (1) Where appropriate, break out contract work items into economically feasible units to facilitate MBE/WBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
  - (2) Negotiate with subcontractors to assume part of the responsibility to meet the advertised goal when the work to be sublet includes potential for MBE/WBE participation (2<sup>nd</sup> and 3<sup>rd</sup> tier subcontractors).
- (C) Providing interested certified MBEs/WBEs that are also prequalified subcontractors with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.
- (D)
  - (1) Negotiating in good faith with interested MBEs/WBEs. It is the bidder's responsibility to make a portion of the work available to MBE/WBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available MBE/WBE subcontractors and suppliers, so as to facilitate MBE/WBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of MBEs/WBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for MBEs/WBEs to perform the work.
  - (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including MBE/WBE subcontractors, and would take a firm's price and capabilities as well as the advertised goal into consideration. However, the fact that there may be some additional costs involved in finding and using MBEs/WBEs is not in itself sufficient reason for a bidder's failure to meet the advertised goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Bidding contractors are not, however, required to accept higher quotes from MBEs/WBEs if the price difference is excessive or unreasonable.
- (E) Not rejecting MBEs/WBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The bidder's standing within its industry, membership in specific groups, organizations, or associates and political or social affiliations (for example, union vs. non-union employee status) are not legitimate causes for the rejection or non-solicitation of bids in the bidder's efforts to meet the project goal.
- (F) Making efforts to assist interested MBEs/WBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or bidder.



- (G) Making efforts to assist interested MBEs/WBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- (H) Effectively using the services of available minority/women community organizations; minority/women contractors' groups; Federal, State, and local minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of MBEs/WBEs. Contact within 7 days from the bid opening the Business Opportunity and Work Force Development Unit at [BOWD@ncdot.gov](mailto:BOWD@ncdot.gov) to give notification of the bidder's inability to get MBE or WBE quotes.
- (I) Any other evidence that the bidder submits which shows that the bidder has made reasonable good faith efforts to meet the advertised goal.

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

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

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

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

The 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 MBE/WBE Participation Toward Meeting the Combined MBE/WBE Goal**

## (A) Participation

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

## (B) Joint Checks

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

## (C) Subcontracts (Non-Trucking)

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

## (D) Joint Venture

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

## (E) Suppliers

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

(F) Manufacturers and Regular Dealers

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

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

**Commercially Useful Function**

(A) MBE/WBE Utilization

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

(B) MBE/WBE Utilization in Trucking

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

- (1) The MBE/WBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there shall not be a contrived arrangement for the purpose of meeting the Combined MBE/WBE goal.
- (2) The MBE/WBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
- (3) The MBE/WBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
- (4) The MBE may subcontract the work to another MBE firm, including an owner-operator who is certified as a MBE. The same holds true that a WBE may subcontract the work to another WBE firm, including an owner-operator who is certified as a WBE. When this occurs, the MBE or WBE who subcontracts work receives credit for the total value of the transportation services the subcontracted MBE or WBE provides on the contract. It should be noted that every effort shall be made by MBE and WBE contractors to subcontract to the same certification (i.e., MBEs to MBEs and WBEs to WBEs), in order to fulfill the participation breakdown. This, however, may not always be possible due to the limitation of firms in the area. If the MBE or WBE firm shows a good faith effort has been made to reach out to similarly certified transportation service providers and there is no interest or availability, and they can get assistance from other certified providers, the Engineer will not hold the prime responsible for meeting the individual MBE or WBE participation breakdown.
- (5) The MBE/WBE may also subcontract the work to a non-MBE/WBE firm, including from an owner-operator. The MBE/WBE who subcontracts the work to a non-MBE/WBE is entitled to credit for the total value of transportation services provided by the non-MBE/WBE subcontractor not to exceed the value of transportation services provided by MBE/WBE-owned trucks on the contract. Additional participation by non-MBE/WBE subcontractors receives credit only for the fee or commission it receives as a result of the subcontract arrangement. The value of services performed under subcontract agreements between the MBE/WBE and the Contractor will not count towards the MBE/WBE contract requirement.
- (6) A MBE/WBE may lease truck(s) from an established equipment leasing business open to the general public. The lease must indicate that the MBE/WBE has exclusive use of and control over the truck. This requirement does not preclude the leased truck from working for others during the term of the lease with the consent of the MBE/WBE, so long as the lease gives the MBE/WBE absolute priority for use of the leased truck. This type of lease may count toward the MBE/WBE's credit as long as the driver is under the MBE/WBE's payroll.

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

### **MBE/WBE Replacement**

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

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

A committed MBE/WBE subcontractor may only be terminated 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 MBE/WBE subcontractor fails or refuses to execute a written contract;
- (b) The listed MBE/WBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the MBE/WBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor;
- (c) The listed MBE/WBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements;
- (d) The listed MBE/WBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness;
- (e) The listed MBE/WBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR Parts 180, 215 and 1,200 or applicable state law;
- (f) The listed MBE/WBE subcontractor is not a responsible contractor;
- (g) The listed MBE/WBE voluntarily withdraws from the project and provides written notice of withdrawal;
- (h) The listed MBE/WBE is ineligible to receive MBE/WBE credit for the type of work required;
- (i) A MBE/WBE owner dies or becomes disabled with the result that the listed MBE/WBE contractor is unable to complete its work on the contract;

- (j) Other documented good cause that compels the termination of the MBE/WBE subcontractor. Provided, that good cause does not exist if the prime contractor seeks to terminate a MBE/WBE it relied upon to obtain the contract so that the prime contractor can self-perform the work for which the MBE/WBE contractor was engaged or so that the prime contractor can substitute another MBE/WBE or non-MBE/WBE contractor after contract award.

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

(A) Performance Related Replacement

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

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

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

(B) Decertification Replacement

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

- (2) When a committed MBE/WBE is decertified prior to the Department receiving the SAF (*Subcontract Approval Form*) for the named MBE/WBE firm, the Contractor shall take all necessary and reasonable steps to replace the MBE/WBE subcontractor with another MBE/WBE subcontractor to perform at least the same amount of work to meet the Combined MBE/WBE goal requirement. If a MBE/WBE firm is not found to do the same amount of work, a good faith effort must be submitted to NCDOT (see A herein for required documentation).
- (3) Exception: If the MBE/WBE'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 MBE/WBE participation equal to the remaining work to be performed by the decertified firm. The participation equal to the remaining work performed by the decertified firm will count toward the contract goal requirement and overall goal.

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

### **Changes in the Work**

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

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

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

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

### **Reports and Documentation**

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

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

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

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

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

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

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

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

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

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

At any time, the Engineer can request written verification of subcontractor payments. The Contractor shall report the accounting of payments through the Department's DBE Payment Tracking System.

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



Failure to meet contract requirements in accordance with Subarticle 102-15(J) of the *2018 Standard Specifications* may be cause to disqualify the Contractor.

**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.**

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

(8-20-19)

SP1 G092

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

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

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

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

**EQUIPMENT IDLING GUIDELINES:**

(1-19-21)

107

SP1 G096

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

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

1. Idling when queuing.
2. Idling to verify the vehicle is in safe operating condition.
3. Idling for testing, servicing, repairing or diagnostic purposes.

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

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

### **ELECTRONIC BIDDING:**

(2-19-19)

101, 102, 103

SP1 G140

Revise the *2018 Standard Specifications* as follows:

**Page 1-4, Article 101-3, DEFINITIONS, BID (OR PROPOSAL) *Electronic Bid*, line 1,** replace “Bid Express®” with “the approved electronic bidding provider”.

**Page 1-15, Subarticle 102-8(B), *Electronic Bids*, lines 39-40,** replace “to Bid Express®” with “via the approved electronic bidding provider”.

**Page 1-15, Subarticle 102-8(B)(1), *Electronic Bids*, line 41,** delete “from Bid Express®”

**Page 1-17, Subarticle 102-9(C)(2), *Electronic Bids*, line 21,** replace “Bid Express® miscellaneous folder within the .ebs” with “electronic submittal”.

**Page 1-29, Subarticle 103-4(C)(2), *Electronic Bids*, line 32,** replace “.ebs miscellaneous data file of Expedite” with “electronic submittal file”

### **AWARD LIMITS:**

(4-19-22)

103

SP1 G141

Revise the *2018 Standard Specifications* as follows:

**Page 1-29, Subarticle 103-4(C), *Award Limits*, line 4-8,** delete and replace the first sentence in the first paragraph with the following:

A bidder who desires to bid on more than one project on which bids are to be opened in the same letting and who desires to avoid receiving an award of more projects than he is equipped to handle,

may bid on any number of projects but may limit the total amount of work awarded to him on selected projects by completing the form Award Limits on Multiple Projects for each project subject to the award limit.

**TWELVE MONTH GUARANTEE:**

(7-15-03)

108

SP1 G145

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

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

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

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

**OUTSOURCING OUTSIDE THE USA:**

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

SP1 G150

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

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

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

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

(1-16-07) (Rev 12-15-20)

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**

*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. 4-5-19)

105-16, 230, 801

SP1 G181

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

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

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

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

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

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

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

The Contractor shall use the *NCDOT Turbidity Reduction Options for Borrow Pits Matrix*, available at <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****WORK ZONE INSTALLER:**

(7-20-21)(Rev. 8-16-22)

1101, 1150

SP11 R04

Provide the service of at least one qualified work zone installer during the setup, installation, and removal of temporary traffic control within the highway right of way. The qualified work zone installer shall serve as crew leader and shall be on site and directing the installation and removal of temporary traffic control. If multiple temporary traffic control installations or removals are occurring simultaneously, then each shall have a qualified work zone installer.

The work zone installer shall be qualified by an NCDOT approved training agency or other NCDOT approved training provider in the safe and competent set up of temporary traffic control. For a complete listing of approved training agencies, see the Work Zone Safety Training webpage.

A work zone supervisor, in accordance with Article 1101-13 of the *Standard Specifications*, may fulfill the role of the work zone installer during the setup, installation, and removal of temporary traffic control within the highway right of way provided they are on site and directing the installation and removal of temporary traffic control.

All other individuals participating in the setup, installation, and removal of temporary traffic control within the highway right of way shall be certified as a qualified flagger in accordance with Article 1150-3 of the *Standard Specifications*, even if flagging is not being performed as part of the traffic control.

Provide the name and contact information of all qualified work zone installers to the Engineer prior to or at the preconstruction conference. Additionally, provide a qualification statement that all other individuals participating in the setup, installation, and removal of temporary traffic control are qualified flaggers that have been properly trained through an NCDOT approved training agency or other NCDOT approved training provider.

All certification records for qualified work zone installers and flaggers shall be uploaded by the approved training agency or other NCDOT approved training provider to the Department's Work Zone Education Verification App (WZ-EVA) prior to the qualified work zone installer or flagger performing any traffic control duties on the project. For more information about WZ-EVA, see the Work Zone Safety Training webpage.

**PORTLAND CEMENT CONCRETE PRODUCTION AND DELIVERY:**

(9-15-20)

1000, 1014, 1024

SP10 R01

Revise the 2018 *Standard Specifications* as follows:**Page 10-6, Table 1000-1, REQUIREMENTS FOR CONCRETE**, replace with the following:

Class of Concrete	Min. Compressive Strength at 28 days	Maximum Water-Cement Ratio				Consistency Maximum Slump		Cement Content			
		Air-Entrained Concrete		Non-Air-Entrained Concrete		Vibrated	Non-Vibrated	Vibrated		Non-Vibrated	
		Rounded Aggregate	Angular Aggregate	Rounded Aggregate	Angular Aggregate			Min.	Max.	Min.	Max.
		<i>Units</i>	<i>psi</i>					<i>inch</i>	<i>inch</i>	<i>lb/cy</i>	<i>lb/cy</i>
AA	4500	0.381	0.426	---	---	3.5 <sup>A</sup>	---	639	715	---	---
AA Slip Form	4500	0.381	0.426	---	---	1.5	---	639	715	---	---
Drilled Pier	4500	---	---	0.450	0.450	---	5 - 7 dry 7 - 9 wet	---	---	640	800
A	3000	0.488	0.532	0.550	0.594	3.5 <sup>A</sup>	4.0	564	---	602	---
B	2500	0.488	0.567	0.559	0.630	1.5 machine placed 2.5 <sup>A</sup> hand placed	4.0	508	---	545	---
Sand Light-weight	4500	---	0.420	---	---	4.0 <sup>A</sup>	---	715	---	---	---
Latex Modified	3000 (at 7 days)	0.400	0.400	---	---	6.0	---	658	---	---	---
Flowable Fill excavatable	150 max. (at 56 days)	as needed	as needed	as needed	as needed	---	Flowable	---	---	40	100
Flowable Fill non-excavatable	125	as needed	as needed	as needed	as needed	---	Flowable	---	---	100	as needed
Pavement	4500 Design, field 650 flexural, design only	0.559	0.559	---	---	1.5 slip form 3.0 hand placed	---	526	---	---	---
Precast	See Table 1077-1	as needed	as needed	---	---	6.0	as needed	as needed	as needed	as needed	as needed
Prestressed	per contract	See Table 1078-1	See Table 1078-1	---	---	8.0	---	564	as needed	---	---

- A. The slump may be increased to 6 inches, provided the increase in slump is achieved by adding a chemical admixture conforming to Section 1024-3. In no case shall the water-cement ratio on the approved design be exceeded. Concrete exhibiting segregation and/or excessive bleeding will be rejected. Utilizing an Admixture to modify slump does not relinquish the contractor's responsibility to ensure the final product quality and overall configuration meets design specifications. Caution should be taken when placing these modified mixes on steep grades to prevent unintended changes to the set slope.

**MATERIALS FOR PORTLAND CEMENT CONCRETE:**

(9-15-20)

1000, 1024

SP10 R24

Revise the *2018 Standard Specifications* as follows:

**Page 10-52, Article 1024-4, WATER, lines 3-6,** delete and replace with the following:

Test water from wells at all locations. Test public water supplies from all out of state locations and in the following counties: Beaufort, Bertie, Brunswick, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Hyde, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrell and Washington unless the Engineer waives the testing requirements.

**Page 10-52, Table 1024-2, PHYSICAL PROPERTIES OF WATER,** replace with the following:

Property	Requirement	Test Method
Compression Strength, minimum percent of control at 3 and 7 days	90%	ASTM C1602
Time of set, deviation from control	From 1:00 hr. earlier to 1:30 hr. later	ASTM C1602
pH	4.5 to 8.5	ASTM D1293 *
Chloride Ion Content, Max.	250 ppm	ASTM D512 *
Total Solids Content (Residue), Max.	1,000 ppm	SM 2540B *
Resistivity, Min.	0.500 kohm-cm	ASTM D1125 *

\*Denotes an alternate method is acceptable. Test method used shall be referenced in the test report.

**MATERIAL AND EQUIPMENT STORAGE & PARKING OF PERSONAL VEHICLES:**

11-17-21(Rev. 8-16-22)

1101

SP11 R03

Revise the *2018 Standard Specifications* as follows:

**Page 11-2, Article 1101-8 MATERIAL AND EQUIPMENT STORAGE, line 35-38,** delete and replace with the following:

When work is not in progress, keep all personnel, equipment, machinery, tools, construction debris, materials and supplies away from active travel lanes that meets Table 1101-1.

<b>TABLE 1101-1</b>	
<b>MATERIAL AND EQUIPMENT STORAGE FROM ACTIVE TRAVEL LANES</b>	
Posted Speed Limit (mph)	Distance (ft)
40 or less	$\geq 18$
45-50	$\geq 28$
55	$\geq 32$
60 or higher	$\geq 40$

When vehicles, equipment and materials are protected by concrete barrier or guardrail, they shall be offset at least 5 feet from the barrier or guardrail.

**Page 11-2, Article 1101-9 PARKING OF PERSONAL VEHICLES, line 40-41,** delete and replace with the following:

Provide staging areas for personal vehicle parking in accordance with Article 1101-8 or as directed by the Engineer before use.

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

(5-20-08)

Z-2

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

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

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

**STANDARD SPECIAL PROVISION**  
**NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY**

(5-17-11)

Z-3

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

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

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

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

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

<b><u>Restricted Noxious Weed</u></b>	<b><u>Limitations per Lb. Of Seed</u></b>	<b><u>Restricted Noxious Weed</u></b>	<b><u>Limitations per Lb. of Seed</u></b>
Blessed Thistle	4 seeds	Cornflower (Ragged Robin)	27 seeds
Cocklebur	4 seeds	Texas Panicum	27 seeds
Spurred Anoda	4 seeds	Bracted Plantain	54 seeds
Velvetleaf	4 seeds	Buckhorn Plantain	54 seeds
Morning-glory	8 seeds	Broadleaf Dock	54 seeds
Corn Cockle	10 seeds	Curly Dock	54 seeds
Wild Radish	12 seeds	Dodder	54 seeds
Purple Nutsedge	27 seeds	Giant Foxtail	54 seeds
Yellow Nutsedge	27 seeds	Horsenettle	54 seeds
Canada Thistle	27 seeds	Quackgrass	54 seeds
Field Bindweed	27 seeds	Wild Mustard	54 seeds
Hedge Bindweed	27 seeds		



Seed of Pensacola Bahiagrass shall not contain more than 7% inert matter, Kentucky Bluegrass, Centipede and Fine or Hard Fescue shall not contain more than 5% inert matter whereas a maximum of 2% inert matter will be allowed on all other kinds of seed. In addition, all seed shall not contain more than 2% other crop seed nor more than 1% total weed seed. The germination rate as tested by the North Carolina Department of Agriculture shall not fall below 70%, which includes both dormant and hard seed. Seed shall be labeled with not more than 7%, 5% or 2% inert matter (according to above specifications), 2% other crop seed and 1% total weed seed.

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

**FURTHER SPECIFICATIONS FOR EACH SEED GROUP ARE GIVEN BELOW:**

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

Sericea Lespedeza  
Oats (seeds)

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

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

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

Common or Sweet Sundangrass

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

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

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

Centipedegrass  
Crownvetch  
Pensacola Bahiagrass  
Creeping Red Fescue

Japanese Millet  
Reed Canary Grass  
Zoysia

Minimum 70% pure live seed; maximum 1% total weed seed; maximum 2% total other crop seed; maximum 5% inert matter; maximum 144 restricted noxious weed seed per pound.

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

**STANDARD SPECIAL PROVISION****ERRATA**

(10-16-18) (Rev. 4-18-23)

Z-4

Revise the *2018 Standard Specifications* as follows:

**Division 1**

**Page 1-1, Article 101-2 Abbreviations, line 13**, replace " American National Standards Institute, Inc." with "American National Standards Institute".

**Page 1-1, Article 101-2 Abbreviations, line 32**, replace "Equivalent Single Axis Load" with "Equivalent Single Axle Load".

**Page 1-16, Subarticle 102-9(A) General, line 26**, replace "10 U.S.C. 2304(g)" with "10 U.S.C. 3205".

**Page 1-43, Article 104-13 RECYCLED PRODUCTS OR SOLID WASTE MATERIALS, line 4**, replace "104-13(B)(2)" with "104-13(B)".

**Page 1-52, Article 106-1 RECYCLED PRODUCTS OR SOLID WASTE MATERIALS, line 25**, replace "13 NCAC 7CF.0101(a)(99)" with "29 CFR 1910.1200".

**Page 1-79, Article 109-1 MEASUREMENT AND PAYMENT, Test Method prior to line 34**, replace "AASHTO M 32" with "AASHTO M 336".

**Division 2**

**Page 2-5, Article 210-2 CONSTRUCTION METHODS, line 21**, replace " NCGS §§ 130A-444 to -452" with "NCGS §§ 130A-444 to -453".

**Page 2-13, Article 225-2 EROSION CONTROL REQUIREMENTS, line 17**, replace "the Sedimentation and Pollution Control Act" with "Article 107-12".

**Page 2-20, Subarticle 230-4(B)(3) Reclamation Plan, line 12**, replace " Department's borrow and waste site reclamation procedures for contracted projects" with "Department's *Borrow Waste and Staging Site Reclamation Procedures for Contract Projects*".

**Page 2-25, Subarticle 235-3(E) Surcharges and Waiting Periods, line 21 and 27**, delete "Department's Materials and Tests Unit."

**Page 2-27, Article 240-4 MEASUREMENT AND PAYMENT, line 23**, replace "Section 225" with "Article 225-7".

**Page 2-30, Article 275-4 MEASUREMENT AND PAYMENT, line 33**, replace "Section 815" with "Article 815-4".

**Division 4**

**Page 4-18, Subarticle 411-5(C)(3) Coring, line 11**, replace “in accordance with ASTM D5079” with “with methods acceptable to the Engineer”.

**Page 4-50, Article 430-2 MATERIALS, prior to line 15**, replace Section “1080-9” with “1080-7”.

**Page 4-53, Article 440-2 MATERIALS, prior to line 6**, replace Section “1080-9” with “1080-7”.

**Page 4-58, Article 442-2 MATERIALS, prior to line 15**, replace Section “1080-6” with “1080-12”.

**Page 4-59, Subarticle 442-7(A) Blast Cleaning, line 36**, replace Article “1080-6” with “1080-12”.

**Page 4-76, Article 454-2 MATERIALS, prior to line 24**, replace Section “815-2” with “1044”.

**Page 4-79, Article 455-2 MATERIALS, prior to line 21**, replace Section “815” with “1044”.

**Page 4-80, Subarticle 455-3(B) Precast Gravity Wall Designs, line 23 and lines 25-26**, replace “AASHTO LRFD specifications” with “*AASHTO LRFD Bridge Design Specifications*”.

**Page 4-84, Article 458-5 MEASUREMENT AND PAYMENT, line 31**, replace article number “454-1” with “458-1”.

**Division 6**

**Page 6-7, Article 609-1 DESCRIPTION, line 29**, replace article number “609-10” with “609-9”.

**Page 6-10, Subarticle 609-6(C) Control Charts, line 17**, replace Section number “7021” with “7.20.1”.

**Page 6-13, Article 609-9 QUALITY ASSURANCE, line 31**, replace Section number “7.60” with “7.6”.

**Page 6-26, Subarticle 610-13(A)(1) Acceptance for New Construction, line 31**, replace Table number “610-7” with “610-8”.

**Page 6-29, Subarticle 610-13(B) North Carolina Hearne Straightedge, line 32**, replace Table number “610-8” with “610-9”.

**Page 6-31, Article 610-14 DENSITY ACCEPTANCE, Specified Density prior to line 30 and line 32**, replace Table number “610-6” with “610-7”.

**Page 6-37, Article 650-5 CONSTRUCTION METHODS, line 10,** replace Section number “9.5(E)” with “9.5.1(E)”.

**Page 6-44, Subarticle 660-8(B) Asphalt Mat and Seal, line 40,** replace Subarticle number “660-8(A)” with “660-8(C)”.

**Page 6-44, Subarticle 660-8(B) Asphalt Mat and Seal, line 42,** replace Subarticle number “660-8(C)” with “660-8(A)”.

#### **Division 7**

**Page 7-11, Subarticle 700-15(E) Compressive Strength, line 5,** replace “AASHTO T 23” with “AASHTO R 100”.

**Page 7-24, Article 723-4 Very High Early Strength Concrete for Concrete Pavement Repair, line 4,** replace “AASHTO T126” with “AASHTO R 39”.

**Page 7-24, Article 723-5 MEASUREMENT AND PAYMENT, line 34,** replace "Section 225" with “Article 225-7”.

**Page 7-24, Article 723-5 MEASUREMENT AND PAYMENT, line 36,** replace "Section 270" with “Article 270-4”.

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

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

#### **Division 8**

**Page 8-11, Article 815-1 MATERIALS, after line 35,** replace “1080-12” with “1080-10”.

**Page 8-13, Article 816-1 MATERIALS, after line 28,** replace “1080-12” with “1080-10”.

**Page 8-17, Article 825-1 Description, line 5,** delete “853” and “855”.

#### **Division 10**

**Page 10-2, Subarticle 1000-3(B) Air Entrainment, line 33,** replace “Chase” with “Chace”.

**Page 10-4, Subarticle 1000-4(A) Composition and Design, after line 17,** replace “T23” with “R100”.

**Page 10-4, Subarticle 1000-4(B) Air Entrainment, line 31 and 33,** replace “Chase” with “Chace”.

**Page 10-4, Subarticle 1000-4(C) Strength of Concrete, line 39 and 41,** replace “T 23” with “R 100”.

**Page 10-15, Subarticle 1000-11(B) Mixing Time for Central Mixed Concrete, after line 35,** replace “T 23” with “R 100”.

**Page 10-22, Article 1003-3 COMPOSITION AND DESIGN, line 9,** replace “Engineer” with “engineer”.

**Page 10-23, Article 1003-4 GROUT REQUIREMENTS, line 16 and 18,** replace “T 23” with “R 100”.

**Page 10-26, Article 1005-4 TESTING, after line 26,** replace “1014-2€(6)” with “1014-2€(6)” in C. of Table 1005-1 footnote and replace “Lightweight<sup>B</sup>” with “Lightweight<sup>C</sup>”.

**Page 10-29, Subarticle 1012-1(B)(4) Flat and Elongated Pieces, line 44,** delete “SF9.5A”

**Page 10-36, Subarticle 1012-2(E) Toughness (Resistance to Abrasion), line 31,** replace “course” with “coarse”.

**Page 10-37, Article 1012-4, LIGHTWEIGHT AGGREGATE, line 4,** replace Table number “1012-8” with “1012-5”.

**Page 10-48, Subarticle 1020-10(A) Mineral Fibers, line 27,** replace “Table 1012-5” with “Table 1020-2”.

**Page 10-52, Article 1024-5 FLY ASH, line 12,** replace “Table 2” with “Table 3”.

**Page 10-60, Subarticle 1032-6(F) Joint Materials, line 15,** replace “AASHTO M 198” with “ASTM C990” and delete “Type B”.

**Page 10-61, Article 1034-3 CONCRETE SEWER PIPE, line 33,** replace “AASHTO M 198” with “ASTM C990” and delete “Type A or B”.

**Page 10-64, Article 1040-1 BRICK, line 12,** replace “ASTM C62” with “ASTM C62 or ASTM C216”.

**Page 10-67, Article 1044-7 CORRUGATED PLASTIC PIPE AND FITTINGS, line 24,** replace “AASHTO M 294 for heavy duty tubing” with “Article 1032-7 and AASHTO M 252”.

**Page 10-69, Subarticle 1046-3(D) Offset Blocks, before line 1,** replace “WIRE DIAMETER” with “COMPOSITE OFFSET BLOCKS” as the title of Table 1046-1 and replace “NCHRP Report 350” with “MASH” in Table 1046-1.

**Page 10-80, Article 1060-2 FERTILIZER, line 18,** replace “North Carolina Fertilizer Law” with “North Carolina Commercial Fertilizer Law”.

**Page 10-83, Article 1060-9 WATER, line 9,** replace “15 NCAC 2B.0200” with “15A NCAC 02B.0200”.

**Page 10-86, Article 1070-3 COLD DRAWN STEEL WIRE AND WIRE REINFORCEMENT, line 23 and 25,** replace “M 32” and “M 55” with “M 336”.

**Page 10-87, Article 1070-6 DOWELS AND TIE BARS FOR PORTLAND CEMENT CONCRETE PAVEMENT, line 17,** replace “AASHTO M 32” with “AASHTO M 336”.

**Page 10-88, Subarticle 1070-7(D) Handling, Storage and Transportation, line 40,** replace “Section” with “Subarticle”.

**Page 10-89, Article 1070-8 SPIRAL COLUMN REINFORCING STEEL, line 21,** replace “AASHTO M 32” with “AASHTO M 336”.

**Page 10-91, Article 1072-3 BEARING PLATE ASSEMBLIES, line 44,** replace “Article 1080-9” with “Article 1080-7”.

**Page 10-92, Subarticle 1072-5(A) General, after line 30,** replace “SAMPLING REQUIREMENTS FOR HIGH STRENGTH BOLTS, NUTS AND WASHERS” with “SAMPLING REQUIREMENTS FOR HIGH STRENGTH BOLTS, NUTS AND WASHERS TO INCLUDE DIRECT TENSION INDICATORS” as the title of Table 1072-1.

**Page 10-95, Subarticle 1072-5(D)(7)(a) Mill Test Report(s), line 18,** replace title with “Mill Test Report(s) (MTR)”.

**Page 10-95, Subarticle 1072-5(D)(7)(b) Manufacturer Certified Test Report(s), line 24,** replace title with “Manufacturer Certified Test Report(s) (MCTR)”.

**Page 10-96, Subarticle 1072-5(D)(7)(c) Distributor Certified Test Report(s), line 1,** replace title with “Distributor Certified Test Report(s) (DCTR)”.

**Page 10-98, Subarticle 1072-5(F) Galvanized High Strength Bolts, Nuts and Washers, line 11,** replace “Article 1080-9” with “Article 1080-7”.

**Page 10-98, Subarticle 1072-5(F) Galvanized High Strength Bolts, Nuts and Washers, line 11,** replace “Article 1080-9” with “Article 1080-7”.

**Page 10-111, Subarticle 1072-18(B) General, line 24,** replace “Structural Welding Code-Reinforcing Steel” with “Structural Welding Code-Steel Reinforcing Bars”.

**Page 10-117, Article 1074-1 WELDING, lines 21-22,** replace “Structural Welding Code-Reinforcing Steel” with “Structural Welding Code-Steel Reinforcing Bars”.

**Page 10-119, Article 1074-7(B) Gray Iron Castings, line 16,** replace “M306” with “AASHTO M 306”.

**Page 10-121, Article 1076-7, REPAIR OF GALVANIZING, line 8,** replace article number “1080-9” with “1080-7”.

**Page 10-125, Subarticle 1077-5(B) Testing, line 31,** replace “T 23” with “R 100”.

**Page 10-136, Subarticle 1077-5(J)(2) Mixing Time for Central Mixed Concrete, after line 17,** replace “T23” with “R100”.

**Page 10-131, Subarticle 1078-4(A) Composition and Design, after line 23, in Table 1078-2** replace “T 23” with “R 100”.

**Page 10-153, Subarticle 1079-1 PREFORMED BEARING PADS, line 8,** replace “MIL-C882-D” with “MIL-C-882-E”.

**Page 10-154, Subarticle 1079-2(A) General, line 6,** delete “and 1079-2(E)”.

**Page 10-156, Article 1080-5 SELF-CURING INORGANIC ZINC PAINT, line 8,** replace “AASHTO M 252” with “AASHTO M 300”.

**Page 10-156, Article 1080-5 SELF-CURING INORGANIC ZINC PAINT, line 20,** replace “AASHTO M 253” with “AASHTO M 300”.

**Page 10-156, Subarticle 1080-9(A) Composition, line 40,** replace “Tables 1080-7 through 1080-14” with “Tables 1080-1 through 1080-3”.

**Page 10-157, Subarticle 1080-9(B) Properties, line 5,** replace “Tables 1080-7 through 1080-14” with “Tables 1080-1 through 1080-3”.

**Page 10-157, Subarticle 1080-9(B) Properties, line 35,** replace “Materials and Tests Standards CLS-P-1.0” with “*Structural Steel Shop Coatings Program*”.

**Page 10-159, Subarticle 1080-9(E) Color Variation, Table 1080-1,** replace “ASTM D1159” with “ASTM D1199”.

**Page 10-159, Subarticle 1080-9(E) Color Variation, Table 1080-1,** replace “NCDOT M&T P-10” with “ASTM D6280”.

**Page 10-161, Subarticle 1080-9(E) Color Variation, Table 1080-3,** replace “ASTM D13278” and “ASTM D3278”.

**Page 10-161, Subarticle 1080-9(E) Color Variation, Table 1080-3,** replace “NCDOT M&T P-10” and “Structural Steel Shop Coatings Program”.

**Page 10-161, Subarticle 1080-9(E) Color Variation, Table 1080-3,** add Test Method “ASTM D4400” for the Leneta Sag Test property in Table 1080-3.

**Page 10-161, Subarticle 1080-9(E) Color Variation, Table 1080-3,** add Test Method “ASTM D523” for the Gloss, Specular property in Table 1080-3.



**Page 10-161, Subarticle 1080-9(E) Color Variation, Table 1080-3,** replace Test Method “ASTM” with “ASTM E70” for the pH property in Table 1080-3.

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

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

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

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

**Page 10-166, Subarticle 1081-1(E) Prequalification, line 24,** replace “Value Management Unit” with “Product Evaluation Program”.

**Page 10-168, Subarticle 1081-3(A) Physical Requirements, after line 25,** replace “Subarticle 1081-4(B)” with “Subarticle 1081-3(B)” in Table 1081-2.

**Page 10-168, Subarticle 1087-2(A) Paint Composition, lines 19-20,** replace “Federal Specification TTP 1952F” with “Federal Specification TT-P-1952”.

**Page 10-200, Subarticle 1090-1(C) Anchor Bolts, line 38,** replace ASTM number “A325” with “F3125”.

**Page 10-202, Subarticle 1091-3(F) Solid Wall HDPE Conduit, line 5,** replace “, Table 1091-1, 1091-2 and 1091-3” with “and Table 1091-1”.

**Page 10-208, Subarticle 1094-1(A) Breakaway or Simple Steel Beam Sign Supports, line 19,** replace ASTM number “A325” with “F3125”.

**Page 10-209, Subarticle 1094-1(D) Steel Square Tube Posts, line 10,** replace ASTM number “A123” with “A653”.

**Page 10-209, Subarticle 1094-1(E) Wood Supports, line 17,** replace “Article 1082-2 and 1082-3” with “Section 1082”.

**Page 10-212, Subarticle 1098-1(H) Electrical Service, line 21,** replace “NEMA Type 3R” with “NEMA 3R”.

**Page 10-212, Subarticle 1098-1(H) Electrical Service, line 36,** replace “UL Standard 231” with “UL Standard UL-231”.

**Page 10-212, Subarticle 1098-1(H) Electrical Service, line 37,** replace “UL Standard 67” with “UL Standard UL-67”.

**Page 10-224, Subarticle 1098-14(H)(1) Type I – Pedestrian Pushbutton Post, line 3,** replace ASTM number “325” with “F3125”.

**Page 10-224, Article 1098-16 CABINET BASE ADAPTER/EXTENDER, line 33,** replace Section number “6.7” with “6.8”.

#### **Division 14**

**Page 14-11, Subarticle 1401-2(B) Lowering Device, line 36,** replace Military Specification “MIL-W-83420E” with “MIL-DTL-83420”.

**Page 14-22, Article 1412-2 MATERIALS, line 29,** replace UL Standard “1572” with “1598”.

#### **Division 15**

**Page 15-6, Subarticle 1510-3(B) Testing and Sterilization, line 40,** replace Section number “4.4.3” with “4.4”.

**Page 15-14, Article 1525-2 MATERIALS, line 9,** replace “AASHTO M 198” with “ASTM C990”.

**Page 15-14, Article 1525-2 MATERIALS, lines 17-18,** delete “in the Grout Production and Delivery provision”.

**Page 15-19, Article 1550-2 MATERIALS, line 16,** replace “*AASHTO LRFD Bridge Design Specifications*” with “*AASHTO LRFD Bridge Construction Specifications*”.

#### **Division 16**

**Page 16-9, Article 1630-3 MEASUREMENT AND PAYMENT, line 7,** replace "Section 225" with “Article 225-7”.

**Page 16-9, Article 1630-3 MEASUREMENT AND PAYMENT, line 8,** replace "Section 230" with “Article 230-5”.

**Page 16-16, Article 1637-5 MEASUREMENT AND PAYMENT, line 17,** replace "Section 310" with “Article 310-6”.

#### **Division 17**

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

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

Directional Drill (1)(1.25") Linear Foot

**Page 17-15, Subarticle 1715-3(E) Bore and Jack, line 5,** replace article number “1540-4” with “1550-4”.

**Page 17-15, Subarticle 1715-3(E) Bore and Jack, lines 10 & 11,** replace "*NCDOT Policies and Procedures for Accommodating Utilities on Highway Rights of Way*" with "*NCDOT Utilities Accommodations Manual*".

**STANDARD SPECIAL PROVISION****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 weeds.

**STANDARD SPECIAL PROVISION****MINIMUM WAGES**

(7-21-09)

Z-5

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

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

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

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

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

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

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

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

(6-28-77)(Rev 6/19/2018)

Z-6

Revise the *2018 Standard Specifications* as follows:

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

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

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

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

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

(a) **Compliance with Regulations**

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

(b) **Nondiscrimination**

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

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

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

(d) **Information and Reports**

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

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

(e) Sanctions for Noncompliance:

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

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

(f) Incorporation of Provisions

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

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

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

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

3. Required Solicitation Language. The Contractor shall include the following notification in all solicitations for bids and requests for work or material, regardless of funding source:

“The North Carolina Department of Transportation, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 U.S.C. §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award. In accordance with other related nondiscrimination authorities, bidders and contractors will also not be discriminated against on the grounds of sex, age, disability, low-income level, creed/religion, or limited English proficiency in consideration for an award.”
  4. Physically incorporate the FHWA-1273, in its entirety, into all subcontracts and subsequent lower tier subcontracts on Federal-aid highway construction contracts only.
  5. Provide language assistance services (i.e., written translation and oral interpretation), free of charge, to LEP employees and applicants. Contact NCDOT OCR for further assistance, if needed.
  6. For assistance with these Title VI requirements, contact the NCDOT Title VI Nondiscrimination Program at 1-800-522-0453.
- (b) Subrecipients (e.g. cities, counties, LGAs, planning organizations) may be required to prepare and submit a Title VI Plan to NCDOT, including Title VI Assurances and/or agreements. Subrecipients must also ensure compliance by their contractors and subrecipients with Title VI. (23 CFR 200.9(b)(7))
- (c) If reviewed or investigated by NCDOT, the contractor or subrecipient agrees to take affirmative action to correct any deficiencies found within a reasonable time period, not to exceed 90 calendar days, unless additional time is granted by NCDOT. (23 CFR 200.9(b)(15))
- (d) The Contractor is responsible for notifying subcontractors of NCDOT’s External Discrimination Complaints Process.
1. Applicability  
Title VI and related laws protect participants and beneficiaries (e.g., members of the public and contractors) from discrimination by NCDOT employees, subrecipients and contractors, regardless of funding source.
  2. Eligibility  
Any person—or class of persons—who believes he/she has been subjected to discrimination based on race, color, national origin, Limited English Proficiency (LEP), sex, age, or disability (and religion in the context of employment, aviation, or transit) may file a written complaint. The law also prohibits intimidation or retaliation of any sort.
  3. Time Limits and Filing Options  
Complaints may be filed by the affected individual(s) or a representative and must be filed no later than 180 calendar days after the following:
    - (i) The date of the alleged act of discrimination; or



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

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

- North Carolina Department of Transportation, Office of Civil Rights, Title VI Program, 1511 Mail Service Center, Raleigh, NC 27699-1511; toll free 1-800-522-0453
  - Federal Highway Administration, North Carolina Division Office, 310 New Bern Avenue, Suite 410, Raleigh, NC 27601, 919-747-7010
  - US Department of Transportation, Departmental Office of Civil Rights, External Civil Rights Programs Division, 1200 New Jersey Avenue, SE, Washington, DC 20590; 202-366-4070
4. Format for Complaints  
Complaints must be in writing and signed by the complainant(s) or a representative, and include the complainant's name, address, and telephone number. Complaints received by fax or e-mail will be acknowledged and processed. Allegations received by telephone will be reduced to writing and provided to the complainant for confirmation or revision before processing. Complaints will be accepted in other languages, including Braille.
5. Discrimination Complaint Form  
Contact NCDOT Civil Rights to receive a full copy of the Discrimination Complaint Form and procedures.
6. Complaint Basis  
Allegations must be based on issues involving race, color, national origin (LEP), sex, age, disability, or religion (in the context of employment, aviation or transit). "Basis" refers to the complainant's membership in a protected group category.

**TABLE 103-1  
COMPLAINT BASIS**

Protected Categories	Definition	Examples	Applicable Nondiscrimination Authorities
Race and Ethnicity	An individual belonging to one of the accepted racial groups; or the perception, based usually on physical characteristics that a person is a member of a racial group	Black/African American, Hispanic/Latino, Asian, American Indian/Alaska Native, Native Hawaiian/Pacific Islander, White	Title VI of the Civil Rights Act of 1964; 49 CFR Part 21; 23 CFR 200; 49 U.S.C. 5332(b); 49 U.S.C. 47123. ( <i>Executive Order 13166</i> )
Color	Color of skin, including shade of skin within a racial group	Black, White, brown, yellow, etc.	
National Origin ( <i>Limited English Proficiency</i> )	Place of birth. Citizenship is not a factor. ( <i>Discrimination based on language or a person's accent is also covered</i> )	Mexican, Cuban, Japanese, Vietnamese, Chinese	
Sex	Gender. The sex of an individual.	Women and Men	1973 Federal-Aid Highway Act; 49 U.S.C. 5332(b); 49 U.S.C. 47123.

	<i>Note:</i> Sex under this program does not include sexual orientation.		
Age	Persons of any age	21-year-old person	Age Discrimination Act of 1975 49 U.S.C. 5332(b); 49 U.S.C. 47123.
Disability	Physical or mental impairment, permanent or temporary, or perceived.	Blind, alcoholic, para-amputee, epileptic, diabetic, arthritic	Section 504 of the Rehabilitation Act of 1973; Americans with Disabilities Act of 1990
Religion (in the context of employment) <i>(Religion/ Creed in all aspects of any aviation or transit-related construction)</i>	An individual belonging to a religious group; or the perception, based on distinguishable characteristics that a person is a member of a religious group. In practice, actions taken as a result of the moral and ethical beliefs as to what is right and wrong, which are sincerely held with the strength of traditional religious views. <i>Note:</i> 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.)

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

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

Z-10

**Description**

The North Carolina Department of Transportation will administer a custom version of the Federal On-the-Job Training (OJT) Program, commonly referred to as the Alternate OJT Program. All contractors (existing and newcomers) will be automatically placed in the Alternate Program. Standard OJT requirements typically associated with individual projects will no longer be applied at the project level. Instead, these requirements will be applicable on an annual basis for each contractor administered by the OJT Program Manager.

On the Job Training shall meet the requirements of 23 CFR 230.107 (b), 23 USC – Section 140, this provision and the On-the-Job Training Program Manual.

The Alternate OJT Program will allow a contractor to train employees on Federal, State and privately funded projects located in North Carolina. However, priority shall be given to training employees on NCDOT Federal-Aid funded projects.

**Minorities and Women**

Developing, training and upgrading of minorities and women toward journeyman level status is a primary objective of this special training provision. Accordingly, the Contractor shall make every effort to enroll minority and women as trainees to the extent that such persons are available within a reasonable area of recruitment. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

**Assigning Training Goals**

The Department, through the OJT Program Manager, will assign training goals for a calendar year based on the contractors' past three years' activity and the contractors' anticipated upcoming year's activity with the Department. At the beginning of each year, all contractors eligible will be contacted by the Department to determine the number of trainees that will be assigned for the upcoming calendar year. At that time the Contractor shall enter into an agreement with the Department to provide a self-imposed on-the-job training program for the calendar year. This agreement will include a specific number of annual training goals agreed to by both parties. The number of training assignments may range from 1 to 15 per contractor per calendar year. The Contractor shall sign an agreement to fulfill their annual goal for the year.\

### Training Classifications

The Contractor shall provide on-the-job training aimed at developing full journeyman level workers in the construction craft/operator positions. Preference shall be given to providing training in the following skilled work classifications:

Equipment Operators	Office Engineers
Truck Drivers	Estimators
Carpenters	Iron / Reinforcing Steel Workers
Concrete Finishers	Mechanics
Pipe Layers	Welders

The Department has established common training classifications and their respective training requirements that may be used by the contractors. However, the classifications established are not all-inclusive. Where the training is oriented toward construction applications, training will be allowed in lower-level management positions such as office engineers and estimators. Contractors shall submit new classifications for specific job functions that their employees are performing. The Department will review and recommend for acceptance to FHWA the new classifications proposed by contractors, if applicable. New classifications shall meet the following requirements:

Proposed training classifications are reasonable and realistic based on the job skill classification needs, and

The number of training hours specified in the training classification is consistent with common practices and provides enough time for the trainee to obtain journeyman level status.

The Contractor may allow trainees to be trained by a subcontractor provided that the Contractor retains primary responsibility for meeting the training and this provision is made applicable to the subcontract. However, only the Contractor will receive credit towards the annual goal for the trainee.

Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training. The number of trainees shall be distributed among the work classifications on the basis of the contractor's needs and the availability of journeymen in the various classifications within a reasonable area of recruitment.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journeyman level status or in which they have been employed as a journeyman.



**Records and Reports**

The Contractor shall maintain enrollment, monthly and completion reports documenting company compliance under these contract documents. These documents and any other information as requested shall be submitted to the OJT Program Manager.

Upon completion and graduation of the program, the Contractor shall provide each trainee with a certification Certificate showing the type and length of training satisfactorily completed.

**Trainee Interviews**

All trainees enrolled in the program will receive an initial and Trainee/Post graduate interview conducted by the OJT program staff.

**Trainee Wages**

Contractors shall compensate trainees on a graduating pay scale based upon a percentage of the prevailing minimum journeyman wages (Davis-Bacon Act). Minimum pay shall be as follows:

60 percent	of the journeyman wage for the first half of the training period
75 percent	of the journeyman wage for the third quarter of the training period
90 percent	of the journeyman wage for the last quarter of the training period

In no instance shall a trainee be paid less than the local minimum wage. The Contractor shall adhere to the minimum hourly wage rate that will satisfy both the NC Department of Labor (NCDOL) and the Department.

**Achieving or Failing to Meet Training Goals**

The Contractor will be credited for each trainee employed by him on the contract work who is currently enrolled or becomes enrolled in an approved program and who receives training for at least 50 percent of the specific program requirement. Trainees will be allowed to be transferred between projects if required by the Contractor's scheduled workload to meet training goals.

If a contractor fails to attain their training assignments for the calendar year, they may be taken off the NCDOT's Bidders List.

**Measurement and Payment**

No compensation will be made for providing required training in accordance with these contract documents.

**WORK ZONE TRAFFIC CONTROL GENERAL REQUIREMENTS****TEMPORARY TRAFFIC CONTROL (TTC):**

(05-03-23)

SPD

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

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

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

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

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

**PROJECT REQUIREMENTS:**

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

1. Before beginning work, the Contractor shall submit a written construction sequence for traffic control and construction lighting to the Engineer at the first pre- construction meeting and the sequence must be approved before closing a lane of traffic. The Contractor and Engineer will coordinate with the Traffic Management Unit at 919- 814-5000 or Traffic Services for additional traffic control guidance, as necessary.
2. If Lane Closure Restrictions apply, see Special Provision, “Intermediate Contract Times and Liquidated Damages”.

**MEASUREMENT AND PAYMENT:**

Temporary traffic control work, including, but not limited to installation and removal of portable signs, cones, drums, skinny drums, flaggers, AFAD’s, changeable message boards, truck mounted attenuators, flashing arrow boards, and pedestrian traffic control devices will be paid at the contract lump sum price for *Temporary Traffic Control*. Partial payments for *Temporary Traffic Control* will be made as follows: The cumulative total of the lump sum price for temporary traffic control will be equal to the percent complete (project) as calculated for each partial pay estimate.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Temporary Traffic Control	Lump Sum

**ADA COMPLIANT PEDESTRIAN TRAFFIC CONTROL DEVICES:**

(05-03-23)

1105

SPD

**Description**

Furnish, install, and maintain all ADA compliant pedestrian traffic control devices for existing sidewalks that are disrupted, closed, or relocated by planned work activities as designated on the Transportation Management Plan (TMP) or as directed. 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*.

**Materials**

The ADA compliant pedestrian traffic control devices required for the closing or redirecting of pedestrians shall be manufactured and assembled in accordance with the requirements of the Americans with Disabilities Act (ADA) and are included on the NCDOT approved products list.

<https://apps.ncdot.gov/vendor/ApprovedProducts/>

**Construction Methods**

*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. *Pedestrian Channelizing Devices* used to close or block a sidewalk shall have a "SIDEWALK CLOSED" sign affixed to it. *Audible Warning Devices* shall be affixed to *Pedestrian Channelizing Devices* when designated on the TMP and as directed.

*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 push button activated. If push button activated, it shall be at the appropriate height to meet the ADA regulations.

*Temporary Curb Ramps* shall be manufactured and assembled to meet all the requirements for persons with walking disabilities, including wheelchair confinement, according to the ADA regulations and Roadway Standard Drawing 848.05. All detectable warning features are to be included with these installations.

**Measurement and Payment**

Payment for *Pedestrian Channelizing Devices*, *Audible Warning Devices*, and *Temporary Curb Ramps* will be considered included in the lump sum payment for *Temporary Traffic Control*.

**PROJECT SPECIAL PROVISIONS**

**EROSION CONTROL**

**STABILIZATION REQUIREMENTS:**

(3-11-16) (Rev. 4-30-19)

S-4

Stabilization for this project shall comply with the time frame guidelines as specified by the NCG-010000 general construction permit effective April 1, 2019 issued by the North Carolina Department of Environmental Quality Division of Water Resources. Temporary or permanent ground cover stabilization shall occur within 7 calendar days from the last land-disturbing activity, with the following exceptions in which temporary or permanent ground cover shall be provided in 14 calendar days from the last land-disturbing activity:

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

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

**SEEDING AND MULCHING:**

**(WestEd)**

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

Shoulder and Median Areas

**August 1 - June 1**

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

**May 1 - September 1**

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

Areas Beyond the Mowing Pattern, Waste and Borrow Areas:

**August 1 - June 1**

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

**May 1 - September 1**

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

## Approved Tall Fescue Cultivars

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

## Approved Kentucky Bluegrass Cultivars:

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

## Approved Hard Fescue Cultivars:

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

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

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

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

**CONCRETE WASHOUT STRUCTURE:**

(12-10-20)

**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 to containing any loss of sediment.

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

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

<https://connect.ncdot.gov/resources/roadside/SoilWaterDocuments/ConcreteWashoutStructurede tail.pdf>

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.

Payment for required temporary silt fence and safety fence shall be considered included in payment for *Concrete Washout Structure*.

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

### **SAFETY FENCE AND JURISDICTIONAL FLAGGING:**

#### **Description**

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

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

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

### **Materials**

#### (A) Safety Fencing

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

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

#### (B) Boundary Flagging

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

### **Construction Methods**

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

#### (A) Safety Fencing

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

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

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

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

## (B) Boundary Flagging

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

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

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

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

**Measurement and Payment**

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

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Safety Fence	Linear Foot

**NATIVE GRASS SEEDING AND MULCHING:****(WEST)**

Native Grass Seeding and Mulching shall be performed on the disturbed areas of wetlands and riparian areas, and adjacent to Stream Relocation and/or trout stream construction within a 50 foot zone on both sides of the stream or depression, measured from top of stream bank or center of depression. The stream bank of the stream relocation shall be seeded by a method that does not alter the typical cross section of the stream bank. Native Grass Seeding and Mulching shall also

be performed in the permanent soil reinforcement mat section of preformed scour holes, and in other areas as directed.

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

**August 1 - June 1**

18# Creeping Red Fescue  
 8# Big Bluestem  
 6# Indiangrass  
 4# Switchgrass  
 35# Rye Grain  
 500# Fertilizer  
 4000# Limestone

**May 1 – September 1**

18# Creeping Red Fescue  
 8# Big Bluestem  
 6# Indiangrass  
 4# Switchgrass  
 25# German or Browntop Millet  
 500# Fertilizer  
 4000# Limestone

## Approved Creeping Red Fescue Cultivars:

Aberdeen

Boreal

Epic

Cindy Lou

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

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

**Measurement and Payment**

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

**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.

**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 ¾" 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.

**STOCKPILE AREAS:**

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

**ACCESS AND HAUL ROADS:**

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

**WASTE AND BORROW SOURCES:**

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

No additional payment will be made for erosion control devices or permanent seeding and mulching in any commercial borrow or waste pit. All erosion and sediment control practices that may be required on a commercial borrow or waste site will be done at the Contractor's expense. All offsite Staging Areas, Borrow and Waste sites shall be in accordance with "Borrow and Waste Site Reclamation Procedures for Contracted Projects" located at:

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

**MOWING:**

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

**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.

**CONSTRUCTION MATERIALS MANAGEMENT:**

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

**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%20Quality/Environmental%20Sciences/ATU/ApprovedPAMS\\_4\\_1\\_2017.pdf](https://files.nc.gov/ncdeq/Water%20Quality/Environmental%20Sciences/ATU/ApprovedPAMS_4_1_2017.pdf)

**Equipment Fluids**

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

**Waste Materials**

Construction materials and land clearing waste shall be disposed of in accordance with North Carolina General Statutes, Chapter 130A, Article 9 - Solid Waste Management, and rules governing the disposal of solid waste (15A NCAC 13B). Areas dedicated for managing

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

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

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

### **Concrete Materials**

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

### **Earthen Material Stockpiles**

Earthen material stockpiles 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.

**Project Special Provisions  
Structures  
Table of Contents**

<b>Special Provision</b>		<b>Page</b>
Scope of Work		BP-3
Field Measuring	(SPECIAL)	BP-3
Temporary Shoring	(SPECIAL)	BP-4
Painting Existing Structure	(02-11-19)	BP-6
New Rail	(SPECIAL)	BP-19
Treated Timber	(SPECIAL)	BP-21
Concrete Encasement	(SPECIAL)	BP-21
Concrete Underpinning	(SPECIAL)	BP-22
Concrete Repairs Abutment 2	(SPECIAL)	BP-23
Steel Replacement or Repair	(SPECIAL)	BP-24
Epoxy Coating and Debris Removal	(SPECIAL)	BP-25
Silane Treatment of Concrete Substructure	(SPECIAL)	BP-26
Anti-Slip Deck Plating	(SPECIAL)	BP-31
Falsework and Formwork	(02-14-22)	BP-32
Submittal of Working Drawings	(02-14-22)	BP-38
Crane Safety	(06-20-19)	BP-44
Grout for Structures	(12-1-17)	BP-45
Special Provisions for Protection of Railroad Interest	(SPECIAL)	BP-46
CSXT Special Provisions	(SPECIAL)	BP-48
CSXT Insurance Requirements for Public Projects	(SPECIAL)	BP-54



NCDOT Project: 49282

## BP-2

Mitchell County

CSX Transportation Construction Submission Criteria

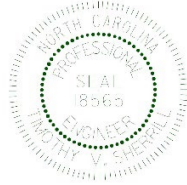
(SPECIAL) BP-56

Construction Requirements

(SPECIAL) BP-69

Temporary Right-of-Entry Agreement

(SPECIAL) BP-74



DocuSigned by:

*Timothy M. Sherrell*

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08/23/2022

**STRUCTURE PROJECT SPECIAL PROVISIONS****SCOPE OF WORK**

This work shall consist of furnishing all labor, equipment, and materials to repair, clean, and paint structural steel; repair concrete substructure; remove and replace timber decking; remove and replace bridge railing; and remove and replace stairs and as indicated in the plans. Work includes: portable lighting; substructure repair using concrete; application of silane to concrete substructure; epoxy coating of the tops of bent cap concrete; structural steel repair and replacement; removal, containment, and disposal of the existing structural steel paint system; preparation of the surface to be painted and application of the new structural steel paint system; removal and placement of timber decking; placement of anti-slip deck plating; removal and placement of railing; disposal of demolition and waste material; seeding and mulching all grassed areas disturbed; and all incidental items necessary to complete the project as specified and shown on the plans. No separate measurement or payment will be made for seeding, mulching, or any measures required to control erosion or prevent off-site sedimentation. The cost of this work shall be included in the lump sum price bid for Mobilization

Work will be performed on the existing bridge at the following location in Mitchell County:

- 1.) Bridge #600240 – Pedestrian Bridge Over Riverside Dr, North Toe River, CSX Railroad

The contractor shall provide all necessary access; underdeck platforms, scaffolding, ladders, etc.; provide all traffic control; provide all staging areas, material storage, waste disposal; provide environmental controls to limit loss of materials from sawing equipment, and chipping equipment; and all else necessary to complete the work.

The contractor shall be responsible for fulfilling all requirements of the NCDOT Standard Specifications for Roads and Structures dated January 2018, except as otherwise specified herein.

**FIELD MEASURING****(SPECIAL)****DESCRIPTION**

For Bridge Number 600240, the Contractor shall field survey and measure the dimensions, geometry, and configuration of the existing bridge, as required, to ensure that the repair, replacement, and new steel, as well as new rails and associated components and hardware as designed and detailed in the plans will fit as intended. All such survey and measurement shall be done before preparation of the shop drawings and before performing work at the bridge.

**CONSTRUCTION METHODS**

For repair, replacement, and new steel members, as well as new rails and associated components and hardware, dimensions are based on Routine Bridge Inspection Report dated May 9, 2008. Existing dimensions and geometries may vary across the bridge due to changes in the structure since the inspection and due to construction variances across the bridge. The Contractor shall submit shop drawings that shall include but not be limited to the following:

1. Repair steel, replacement steel, new steel, and associated hardware to be installed at locations indicated on the plans.
2. New rails, posts, associated components, and hardware to be installed at locations indicated on the plans.

All field measurements affecting elements to be included in the shop plans and working drawings shall be performed by or under the direct supervision of the Contractor who is responsible for preparing the shop plans or working drawings.

**MEASUREMENT AND PAYMENT**

*Field Measuring* will not be measured for payment. All costs associated with furnishing and installing materials, labor, tools, access, and incidentals necessary to complete the work shall be incidental to the Lump Sum price bid for the Field Measuring.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Field Measuring	Lump Sum

**TEMPORARY SHORING**

**(SPECIAL)**

**DESCRIPTION**

Furnish any design calculations and drawings required for temporary shoring necessary for excavations, for temporary support of the structure, or for other situations when performing work required in the plans and special provisions; furnish members and materials for temporary shoring and any other materials necessary; erect, maintain, remove, and dispose of temporary shoring required. Construct temporary shoring in accordance with the contract.

**EXCAVATION SHORING**

Excavate trenches and pits for the installation of utilities or for other work indicated on the plans that are safe for the workers and roadway users and that protect the roadway and other property from damage. Provide appropriate groundwater and surface water controls to stabilize the excavation and foundation and to provide a clean working area.

Provide any necessary shielding or shoring to protect workers.

Provide shielding or shoring as required under Section 1550 of the NCDOT Standard Specifications or as required elsewhere in the contract.

Provide shoring of excavations less than one horizontal to one vertical from existing or proposed pavement to prevent failure or weakening of the roadbed. Provide plans and designs demonstrating the methods and techniques proposed and their adequacy. Provide engineered shoring systems as required for the actual conditions.

Provide shoring of excavations less than one horizontal to one vertical from existing structures and buildings, on or off the right of way, to prevent foundation damage. Provide plans and designs demonstrating the methods and techniques proposed and their adequacy. Provide engineered shoring systems as required for the actual conditions.

**TEMPORARY SHORING OF STRUCTURES**

Furnish any design calculations and drawings required; furnish members and deck materials for structures and any other materials necessary; erect, maintain, remove, and dispose of temporary structures required for the maintenance of pedestrian, highway, and other traffic. Construct temporary structures in accordance with the contract.

Use materials for temporary structures that conform to Division 10 of the NCDOT Standard Specifications or previously used materials conforming to the contract. Obtain approval for the use of salvaged materials and materials not covered by Division 10 before their use. Unless otherwise specified, untreated timber is allowed.

Provide temporary structures of such carrying capacity, dimensions, grades, and alignment as required by the contract or as directed. Design temporary structures carrying highway and pedestrian traffic in accordance with the *AASHTO LRFD Bridge Design Specifications*. Ensure an engineer licensed by the State of North Carolina designs, details, and seals drawings for the temporary structure. Construct the temporary structure in accordance with this design. Indicate in the plans, the specifications for the materials used in the temporary structure.

For all Contractor designs, submit design calculations and detail drawings of the structure in accordance with Subarticle 400-3(B) of the NCDOT Standard Specifications for review and comment. Do not perform any work until the detail drawings are accepted. Acceptance of such drawings does not relieve the Contractor of any responsibility for safely and continuously maintaining traffic.

Construct and maintain temporary structures to adequately and safely carry traffic during the entire period for which they are required.

Remove and dispose of the temporary structures after they are no longer required, in accordance with Article 402-2 of the NCDOT Standard Specifications.

Upon removal of the temporary structure, all material furnished by the Contractor for use in this structure shall remain the property of the Contractor unless otherwise provided in the contract.

Unless otherwise specified in the contract, remove temporary piling to the streambed level or to one foot below existing ground.

**BASIS OF PAYMENT**

The price and payment below will be full compensation for all work required to provide *Temporary Shoring* including, but not limited to, those items contained in this special provision. The work covered by this section will be paid at the contract lump sum price for *Temporary Shoring*.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Temporary Shoring	Lump Sum

**PAINTING EXISTING STRUCTURE****(2-11-19)****DESCRIPTION**

This work shall consist of furnishing all labor, equipment, and materials necessary to clean and paint the structural steel of the existing bridge. Work includes: removal, containment, and disposal of the existing paint system; preparation of the surface to be painted and applying the new paint system; a containment enclosure; and any incidentals necessary to complete the project as specified and shown on the plans.

**TWELVE-MONTH OBSERVATION PERIOD**

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

- (A) No visible rust, contamination or application defect is observed in any coated area.
- (B) Painted surfaces have a uniform color and gloss.
- (C) Painted surfaces have an adhesion that meets an ASTM D3359, 3A rating.

Final acceptance is made only after the paint system meets the above requirements.

**SUBMITTALS**

Submit all of the following to the Engineer for review and approval before scheduling the pre-construction meeting. Allow at least two (2) weeks for the review process.

- (A) The existing paint systems include toxic substances such as red lead oxide, which are considered hazardous if improperly removed. The contractor shall be currently Society for Protective Coatings (SSPC) Quality Program (QP) 2, Category A certified, and have successfully completed lead paint removal and field painting on similar structures within 18 months prior to this bid. Lead abatement work completed within the 18 month period shall have been completed in accordance with contract specifications, free of citation from safety or environmental agencies. Lead abatement work shall include, but not be limited to: abrasive blasting; waste handling, storage, and disposal; worker safety during lead abatement activities (fall protection, personal protective equipment (PPE), etc.); and containment. This requirement is in addition to the contractor pre-qualification requirements covered by Article 102-2 of the *Standard Specifications*.

The apparent low bidder shall submit a list of projects for which QP 2 work was performed within the last 18 months including owner contact information and submit to the Engineer a "Lead Abatement Affidavit". See link for form: <https://www.ncdot.gov/initiatives-policies/Transportation/bridges/Documents/leadabatementaffidavit.pdf>.

- (B) Work schedule which shall be kept up to date, with a copy of the revised schedule being provided to the Engineer in a timely manner.

- (C) Containment system plans and design calculations in accordance with SSPC Guide 6, Class 2A and other project requirements, signed and sealed by a Professional Engineer licensed by the State of North Carolina.
- (D) Bridge wash water sampling and disposal plan.
- (E) Subcontractor identification.
- (F) Lighting plan for night work in accordance with Section 1413 of the *Standard Specifications*.
- (G) Traffic control plan with NCDOT certified supervisors, flaggers, and traffic control devices.
- (H) Health and safety plan addressing at least the required topics as specified by the SSPC QP 1 and QP 2 program and including hazard communication, respiratory health, emergency procedures, and local hospital and treatment facilities with directions and phone numbers, disciplinary criteria for workers who violate the plan and accident investigation. The plan shall address the following: hazardous materials, personal protective equipment, general health and safety, occupational health and environmental controls, fire protection and prevention, signs signals, and barricades, materials handling, storage, use, and disposal, hand and power tools, welding and cutting, electrical, scaffolds, fall protection, cranes, derricks, hoists, elevators, and conveyors, ladders, toxic and hazardous substances, airless injection and high pressure water jet (HPWJ).
- (I) Provide the Engineer a letter of certification that all employees performing work on the project have blood lead levels that are below the Occupational Safety and Health Administration (OSHA) action level.
- (J) Provide the Engineer with Competent Person qualifications and summary of work experience.
- (K) Environmental Compliance Plan.
- (L) Quality Control Plan (Project Specific) with quality control qualifications and summary of work experience.
- (M) Bridge and Public Protection Plan (Overspray, Utilities, etc. - Project/Task Specific).
- (N) Abrasive Blast Media:
  - (1) Product Data Sheet.
  - (2) Blast Media Test Reports in accordance with Article 1080-12 of the *Standard Specification*.
- (O) Coating Material:
  - (1) Paint Topcoat Color: Aerospace Materials Specification (AMS) Standard 595A Color #37038
  - (2) NCDOT HICAMS Test Reports (testing performed by NCDOT Materials and Tests Unit).
  - (3) Product Data Sheets.
  - (4) Material Safety Data Sheets.
  - (5) Product Specific Repair Procedures.
  - (6) Acceptance letters from paint manufacturer's for work practices that conflict with special provisions and/or paint manufactures product data sheets.

**PRE-CONSTRUCTION MEETING**

Submittals shall be reviewed and approved by the Engineer prior to scheduling the pre-construction meeting. Allow no less than two (2) weeks for a review process. When requesting a pre-construction meeting, contact the Engineer at least seven (7) working days in advance of the desired pre-construction date. The contractor's project supervisor, Competent Person, quality control personnel and certified traffic control supervisor shall be in attendance at the pre-construction meeting in order for the Contractor and NCDOT team to establish responsibilities for various personnel during project duration and to establish realistic timeframes for problem escalation.

**CONTAINMENT SYSTEM**

Prior to performing any construction or painting operations on the structure, the Contractor shall furnish the Engineer with plans and design calculations for a sufficiently designed containment system, which will provide access for any repairs on structural steel members, cleaning and surface preparations for structural steel members, and coating operations for structural steel members of the bridge. The containment system shall not be installed, and no work shall begin, until the Engineer has reviewed and approved, in writing, the submitted containment system plans and design calculations. Containment system plans and design calculations shall be prepared, sealed, and signed by a Professional Engineer licensed by the State of North Carolina. Allow a minimum of two (2) weeks for review of the containment plans and calculations.

The containment system shall meet or exceed the requirements of Class 2A containment in accordance with SSPC Guide 6. The Contractor shall determine the required capacity of the containment system, which, at a minimum, shall include loads due to wind, repair materials and repair operations, equipment, and tools; however, the capacity shall not be less than that required by Federal or State regulations. Design steel members to meet the requirements of the *American Institute of Steel Construction Manual*. Design timber members in accordance with the *National Design Specification for Stress-Grade Lumber and Its Fastenings* of the National Forest Products Association. The containment system shall be constructed of materials capable of withstanding damage from any of the work required on this project and shall provide a two (2) hour resistance to fire.

In the containment system plans, describe how debris is contained and collected. Describe the type of tarpaulin, bracing materials, and the maximum designed wind load. Design wind loads shall be in accordance with the Falsework and Formwork special provision. Describe the dust collection system and how a negative pressure of 0.03 inches of water column is maintained inside the enclosure, while blasting operations are being conducted. Describe how the airflow inside the containment structure is designed to meet all applicable OSHA Standards. Describe how water run-off from rain will be routed by or through the enclosure. Describe how wash water will be contained and paint chips separated. Describe what physical containment will be provided during painting application to protect the public and areas not to be painted.

Drilling holes in the superstructure for the purpose of attaching the containment system is prohibited.

The Contractor will be responsible for certifying the containment system has been constructed in accordance with the approved plans.

The containment system shall be cleaned after each workday.

Upon completion of work, remove all anchorages in the substructure and repair the substructure at no additional cost to the Department.

Protect non-metallic parts of bearings from blasting and painting (i.e.: Pot Bearings, Elastomeric Pads, and Disc Bearings).

#### **WASH WATER SAMPLING AND DISPOSAL PLAN**

All wash water shall be collected and sampled prior to disposal. Representative sampling and testing methodology shall conform to North Carolina Administrative Code 15A NCAC 02B.0103, "Analytical Procedures". Wash water shall be tested for pollutants listed in 15A NCAC 02B.0211(3), 15A NCAC 02T.0505(b)(1) and 15A NCAC 2T.0905(h). Depending on the test results, wash water disposal methods shall be described in the disposal plan. Wash water shall be disposed of in accordance with all current Federal and State regulations. See link for NCDOT Guidelines for Managing Bridge Wash Water: <https://www.ncdot.gov/initiatives-policies/Transportation/bridges/Documents/WashWater.pdf>

#### **WASTE HANDLING OF PAINT AND ABRASIVES**

Comply with all Federal, State, and local regulations. Failure to comply with the regulations could result in fines and loss of qualified status with NCDOT.

Comply with the Resource Conservation and Recovery Act (RCRA - 40 CFR 261 - 265) and the Occupational Safety and Health Act (OSHA - 29 CFR 1910 - 1926) regulations for employee training, and for the handling, storage, labeling, recordkeeping, reporting, inspections, and disposal of all hazardous waste generated during paint removal.

A summary of Generator Requirements is available at the above NCDOT web link, which cites the specific regulations for each Generator category. Quantities of waste by weight and dates of waste generation shall be recorded. Waste stored at the project site shall be properly labeled. All waste, hazardous or non-hazardous, requires numbered shipping manifests.

The North Carolina Department of Environmental Quality (NCDEQ) have adopted RCRA as the North Carolina Hazardous Waste Management Rules and are responsible for enforcement. The *Hazardous Waste Generator Compliance Manual* is published by the Compliance Branch of the Division of Waste Management of NCDEQ, and can be found at: <https://files.nc.gov/ncdeq/Waste%20Management/DWM/HW/Compliance/Generator%20Compliance%20Manual.pdf>

Immediately after award of the contract, arrange for waste containers, sampling, testing, transportation, and disposal of all waste. No work shall begin until the Contractor furnishes the Engineer with a written waste disposal plan. Any alternative method for handling waste shall be pre-approved by the Engineer. Use an approved waste management company from the following link: <https://www.ebs.nc.gov/VendorDirectory/results.html?sap-params=cD0xJTIwJmN1cnJlbnRfc2VhcmNoX3BhZ2U9d2Mmc2VsZWNOaW9uX2Zpcm1fbmFtZT0mc2VsZWNOaW9uX2NlcnQ9JnNlbGVjdGlvb19maXJtdHlwZT0meXNjX2Zpcm10eXB1PSZzZWx1Y3Rpb25fd29ya2xvY2F0aW9uPSZzZWx1Y3Rpb25fYWR>



[kcnN0YXRIPSZ5c2NfYWRkcnN0YXRIPSZzZWxlY3Rpb25fYWRkcmNvdW50eT0meXNjX2FkZHJjb3VudHk9JnNlbGVjdGlvb193a2NvZG9MDAzMDQwJnlzY193a2NvZG9MDAzMDQwJTlwQ09OVEFNSU5BVEVEJTIwTUFURVJJQUxTJTIwUkVNT1ZBTCZzZWxlY3Rpb25fZGZlZy0meXNjX2Rpc2M9JnNlbGVjdGlvb19uYWljcz0meXNjX25haWNzPSZzZWxlY3Rpb25fY3R5cGU9MA%3d%3d](https://ncdenr.s3.amazonaws.com/s3fs-public/document-library/Lead%20Disposal.pdf)

All removed paint and spent abrasive media shall be tested for lead following the SW-846 Toxicity Characteristic Leaching Procedure (TCLP) Method 1311 Extraction, as required in 40 CFR 261, Appendix 11, to determine whether it shall be disposed of as hazardous waste. Furnish the Engineer certified test reports showing TCLP results of the paint chips stored on site, with disposal in accordance with “Flowchart on Lead Waste Identification and Disposal” at:

<https://ncdenr.s3.amazonaws.com/s3fs-public/document-library/Lead%20Disposal.pdf>

All sampling shall be done in presence of the Engineer’s representative.

The Competent Person shall obtain composite samples from each barrel of the wash water and waste generated by collecting two or more portions taken at regularly spaced intervals during accumulation. Composite the portions into one sample for testing purposes. Acquire samples after 10% or before 90% of the barrel has accumulated. The intent is to provide samples that are representative of widely separated portions, but not the beginning and end of wash water or waste accumulation.

Perform sampling by passing a receptacle completely through the discharge stream or by completely diverting the discharge into a sample container. If discharge of the wash water or waste is too rapid to divert the complete discharge stream, discharge into a container or transportation unit sufficiently large to accommodate the flow and then accomplish the sampling in the same manner as described above.

Comply with the NCDEQ *Hazardous Waste Compliance Generator Manual*. Record quantities of waste by weight and dates of waste generation. Until test results are received, store all waste, and label as “NCDOT Bridge Paint Removal Waste - Pending Analysis” and include the date generated and contact information for the Engineer. Store waste containers in an enclosed, sealed, and secured storage container protected from traffic from all directions. Obtain approval for the protection plan for these containers from the Engineer. If adequate protection cannot be obtained by use of existing guardrail, provide the necessary supplies and equipment to maintain adequate protection. Once test results are received and characterized, label waste as either “Hazardous Waste - Pending Disposal” or “Paint Waste - Pending Disposal”.

Once the waste has been collected, and the quantities determined, prepare the appropriate shipping documents and manifests and present them to the Engineer. The Engineer will verify the type and quantity of waste and obtain a Provisional Environmental Protection Agency (EPA) ID number from:

Melodi Deaver  
Division of Waste Management/Hazardous Waste Section  
North Carolina Department of Environmental Quality  
1646 Mail Service Center  
Raleigh, NC 27699  
Phone: (919) 707-8204, Email: [melodi.deaver@ncdenr.gov](mailto:melodi.deaver@ncdenr.gov)

At the time of shipping, the Engineer will sign, date, and add the ID number in the appropriate section on the manifest. The maximum on-site storage time for collected waste shall be 90 calendar days. All waste whether hazardous or non-hazardous will require numbered shipping manifests. The cost for waste disposal (including lab and Provisional EPA ID number) is included in the bid price for this contract. Note NC Hazardous Waste Management Rules (15A NCAC 13A) for more information. Provisional EPA ID numbers may be obtained at: <https://deq.nc.gov/about/divisions/waste-management/hw/provisional-notification>

Testing labs shall be certified in accordance with North Carolina State Laboratory Public Health Environmental Sciences. List of certified laboratories may be obtained at: <https://slphreporting.ncpublichealth.com/Certification/CertifiedLaboratory.asp>

All test results shall be documented on the lab analysis as follows:

(A) For leachable lead:

(1) Soils/Solid/Liquid- EPA 1311/200.7/6010

Area sampling will be performed for the first two (2) days at each bridge location. The area sample will be located within five (5) feet of the containment and where the highest probability of leakage will occur (access door, etc.). Results from the area sampling will be given to the Engineer within 72 hours of sampling (excluding weekends). If the results of the samples exceed  $20 \mu\text{g}/\text{m}^3$  corrective measures shall be taken and monitoring shall be continued until two (2) consecutive sample results are less than  $20 \mu\text{g}/\text{m}^3$ .

Time Weighted Average (TWA) may suspend the work if there are visible emissions outside the containment enclosure or pump monitoring results exceeding the level of  $30 \mu\text{g}/\text{m}^3$ .

Where schools, housing and/or buildings are within 500 feet of the containment, the Contractor shall perform initial Total Suspended Monitoring (TSP) Lead monitoring for the first ten (10) days of the project during abrasive blasting, vacuuming and containment removal. Additional monitoring will be required during abrasive blasting two (2) days per month thereafter. Results of the TSP monitoring at any location shall not exceed  $1.5 \mu\text{g}/\text{m}^3$ .

## **EQUIPMENT MOBILIZATION**

The equipment used in any travel lanes and paved shoulder shall be mobile equipment on wheels that has the ability to move on/off the roadway in less than 30 minutes. All work conducted in travel lanes shall be from truck or trailer supported platforms and all equipment shall be self-propelled or attached to a tow vehicle at all times.

**QUALITY CONTROL INSPECTOR**

Provide a quality control (QC) inspector in accordance with the SSPC QP guidelines to ensure that all processes, preparation, blasting, and coating application are in accordance with the requirements of the contract. The inspector shall have written authority to perform QC duties to include continuous improvement of all QC internal procedures. The presence of the engineer or inspector at the work site shall in no way lessen the contractor's responsibility for conformity with the contract.

**QUALITY ASSURANCE INSPECTOR**

The quality assurance inspector which may be a Department employee or a designated representative of the Department shall observe, document, assess, and report that the Contractor is complying with all of the requirements of the contract. Inspectors employed by the Department are authorized to inspect all work performed and materials furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. The inspector is not authorized to alter or waive the requirements of the contract. Each stage in preparing the structure to be coated which includes but not limited to washing, blasting, coating testing and inspection shall be inspected and approved by the Engineer or an authorized representative.

**SUBLETTING OF CONTRACT**

Only contractors certified to meet SSPC QP 2, Category A, and have successfully completed lead paint removal and field painting on all similar structures within 18 months prior to this bid are qualified for this work. Work is only sublet by approval of the Engineer.

**PREPARATION OF SURFACES**

Before any other surface preparation is conducted, all surfaces shall be power washed to remove dust, salts, dirt, and other contaminants. All wash water shall be contained, collected, and tested in accordance with the requirements of NCDOT Guidelines for Managing Bridge Wash Water. Obtain approval of the Engineer and allow all cleaned surfaces to dry to the touch and without standing water before beginning surface preparation or painting activities.

Surface preparation is done with materials meeting Article 1080-12 of the *2 Standard Specifications*. No silica sand or other silica materials are permitted for use. The profile shall be between 1.0 and 3.0 mils when measured on a smooth steel surface. Conduct and document at least two (2) tests per beam/girder and two (2) tests per span of diaphragms/cross bracing.

Spread tarpaulins over all pavements and surfaces underneath equipment used for abrasive blasting as well as equipment and containers used to collect abrasive media. This requirement will be enforced during activity and inactivity of equipment.

Before the Contractor departs from the work site at the end of the workday, collect all debris generated during surface preparation and all dust collector hoses, tarps or other appurtenances containing blasting residue in approved containers.

Clean a 3" x 3" area at each structure to demonstrate the specified finish, and the inspector will preserve this area by covering it with tape, plastic, or some other suitable means so that it can be retained as the Dry Film Thickness (DFT) gauge adjustment standard. An acceptable alternative is

for the Contractor to provide a steel plate with similar properties and geometry as the substrate to be measured.

The contractor and or quality assurance representative shall notify the Engineer of any area of corroded steel that has lost more than 50% of its original thickness.

All parts of the bridges not to be painted and the travelling public shall be protected from overspray. Submit a plan to protect all parts of bridge that are not required to be painted and a plan to protect the traveling public and surrounding environment while applying all coats of paint to a structure.

Ensure that chloride levels on the surfaces are  $7 \mu\text{g}/\text{cm}^2$  or lower using an acceptable sample method in accordance with SSPC Guide 15. The frequency of testing shall be two (2) tests per span after all surface preparation has been completed and immediately prior to painting. Select test areas representing the greatest amount of corrosion in the span as determined by the Engineers' representative. Additional testing may be required if significant amounts of chloride are detected.

All weld splatter, slag or other surface defects resulting in a raised surface above the final paint layer shall be removed prior to application of primer coat.

#### **PAINTING OF STEEL**

Paint System 1, as specified in these special provisions and Article 442-8 of the *Standard Specifications*, is to be used for this work. System 1 is an inorganic zinc primer, two coats acrylic paint, and one stripe coat of acrylic paint over blast-cleaned surfaces in accordance with SSPC-SP-10 (Near White Blast). Perform all mixing operations over an impervious surface with provisions to prevent runoff to grade of any spilled material. The contractor is responsible for reporting quantities of thinner purchased as well the amounts used. No container with thinner shall be left uncovered, when not in use.

Apply 2" stripe coat, by brush or roller only, to all exposed edges of steel including fasteners before applying the finish coat. Locate the edge or corner in the approximate center of the paint stripe.

Any area where newly applied paint fails to meet the specifications shall be repaired or replaced by the Contractor, at no additional cost to the Department. The Engineer approves all repair processes before the repair is made. Repaired areas shall meet the *Standard Specifications*. The Contractor applies an additional finish coat of paint to areas where the tape adhesion test is conducted.

#### **MATERIALS**

Only paint suppliers that have a NCDOT qualified inorganic zinc primer may furnish paints for this project. All paints applied to a structure shall be from the same supplier. Before any paints are applied the Contractor shall provide the Engineer a manufacturer's certification that each batch of paint meets the requirements of the applicable Section 1080 of the *Standard Specifications*.

The inspector randomly collects a one pint sample of each paint product used on the project. Additional samples may be collected as needed to verify compliance to the specifications.

Do not expose paint materials to rain, excessive condensation, long periods of direct sunlight, or temperatures above  $110^{\circ}\text{F}$  or below  $40^{\circ}\text{F}$ . In addition, the Contractor shall place a device that records

the high, low, and current temperatures inside the storage location. Follow the manufacturer's storage requirements if more restrictive than the above requirements.

### **INSPECTION**

Surface Preparation for System 1 shall be in accordance with SSPC SP-10. Any area(s) not meeting the requirements of SSPC SP-10 shall be remediated prior to application of coating. Surface inspection is considered ready for inspection when all blast abrasive, residue and dust is removed from surfaces to be coated.

#### **(A) Quality Assurance Inspection**

The Contractor furnishes all necessary OSHA approved apparatus such as ladders, scaffolds and platforms as required for the inspector to have reasonable and safe access to all parts of the work. The contractor illuminates the surfaces to be inspected to a minimum of 50-foot candles of light. All access points shall be illuminated to a minimum of 20-foot candles of light.

NCDOT reserves the right for ongoing Quality Assurance (QA) inspection to include but not limited to surface contamination testing, adhesion pull testing, and DFT readings as necessary to assure quality.

Inform the Engineer and the Division Safety Engineer of all scheduled and unannounced inspections from SSPC, OSHA, EPA and/or others that come on site. Furnish the Engineer a copy of all inspection reports except for reports performed by a third party and or consultant on behalf of the Contractor.

#### **(B) Inspection Instruments**

At a minimum, furnish the following calibrated instruments and conduct the following quality control tests:

- (1) Sling Psychrometer - ASTM E337 - bulb type
- (2) Surface Temperature Thermometer
- (3) Wind Speed Indicator
- (4) Tape Profile Tester - ASTM D4417 Method C
- (5) Surface Condition Standards - SSPC VIS-1 and VIS-3
- (6) Wet Film Thickness Gage - ASTM D4414
- (7) Dry Film Thickness Gage - SSPC-PA2 Modified
- (8) Solvent Rub Test Kit - ASTM D4752
- (9) Adhesion Test Kit - ASTM D3359 Method A (Tape Test)
- (10) Adhesion Pull test - ASTM D4541
- (11) Surface Contamination Analysis Kit or (Chloride Level Test Kit) SSPC Technology Guide

**(C) Quality Control**

Maintain a daily quality control record in accordance with Subarticle 442-12(D) of the *Standard Specifications* and make such records available at the job site for review by the inspector and submit to the Engineer as directed. In addition to the information required on Form M&T-610, submit all Dry Film Thickness (DFT) readings on a form equivalent to Form M&T-611. These forms can be found at:

<https://connect.ncdot.gov/resources/Materials/Pages/Materials-Manual-by-Material.aspx?Order=MM-03-02>

- (1) Measure DFT at each spot on the attached diagram and at the required number of locations as specified below:
  - (a) For span members less than 45 feet; three (3) random locations along each girder in each span.
  - (b) For span members greater than 45 feet; add one additional location for each additional ten (10) feet in span length.

DFT measurements for the prime coat shall not be taken for record until the zinc primer has cured in accordance with ASTM D4752 (MEK Rub Test) with no less than a four (4) resistance rating.

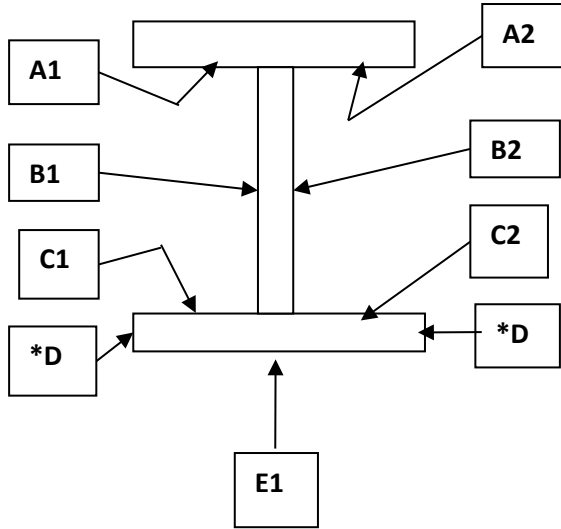
Stiffeners and other attachments to beams and or plate girders shall be measured at no less than five (5) random spots per span. Also, dry film thickness is measured at no less than six (6) random spots per span on diaphragms/cross frames.

Each spot is an average of three (3) to five (5) individual gage readings as defined in SSPC PA-2. No spot average shall be less than 80% of minimum DFT for each layer applied; this does not apply to stripe coat application. Spot readings that are non-conforming shall be re-assessed by performing additional spot measurements not to exceed one-foot intervals on both sides of the low areas until acceptable spot averages are obtained. These non-conforming areas shall be corrected by the Contractor prior to applying successive coats.

**Less than 36" in height and/or bottom flanges less than 16" in width.**

**7 Spot Areas**

**21 Individual DFT Readings**

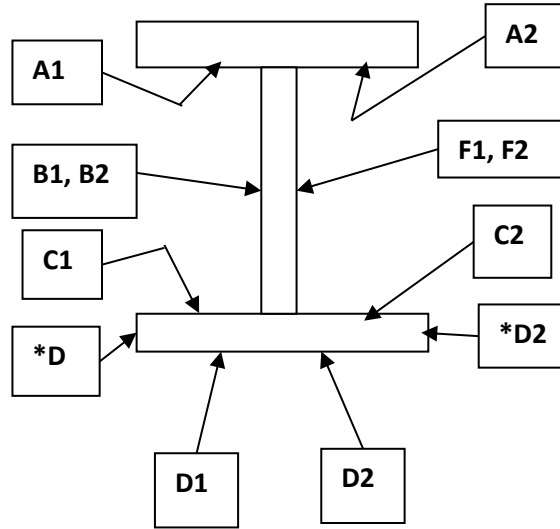


**\*D areas are only included when flange thickness is one inch (1") or greater.**

**36" in height or greater and/or bottom flanges greater than 16" in width.**

**10 Spot Areas**

**30 Individual DFT Readings**



**\*D areas are only included when flange thickness is one inch (1") or greater.**

- (2) Two (2) random adhesion tests (1 test = 3 dollies) per span are conducted on interior surfaces in accordance with ASTM D4541 (Adhesion Pull Test) after the prime coat has been properly cured in accordance with ASTM D4752 (MEK Rub Test) with no less than a four (4) resistance rating, and will be touched up by the Contractor. The required minimum average adhesion is 400 psi.
- (3) Cure of the intermediate and stripe coats shall be accessed by using the thumb test in accordance with ASTM D1640 (Curing Formation Test) prior to the application of any successive layers of paint.
- (4) One random Cut Tape adhesion test per span is conducted in accordance with ASTM D3359 (X-Cut Tape Test) on interior surface after the finish coat is cured. Repair areas shall be properly tapered and touched up by the Contractor.

**SAFETY AND ENVIRONMENTAL COMPLIANCE PLANS**

Personnel access boundaries are delineated for each work site using signs, tape, cones, or other approved means. Submit copies of safety and environmental compliance plans that comply with SSPC QP 2 Certification requirements.

**HEALTH AND SAFETY RESPONSIBILITIES**

This project may involve toxic metals such as arsenic, lead, cadmium, and hexavalent chromium. It is the contractor's responsibility to test for toxic metals and if found, comply with the OSHA regulations, which may include medical testing.

Ensure a "Competent Person" as defined in OSHA 29 CFR 1926.62; one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them; is on site during all surface preparation activities and monitors the effectiveness of containment, dust collection systems and waste sampling. Before any work begins, provide a written summary of the Competent Person's safety training.

Comply with Subarticle 442-14(B) of the *Standard Specifications*.

Comply with Subarticle 442-14(D) of the *Standard Specifications*. Ensure employee blood sampling test results are less than 50 micrograms per deciliter. Remove employees with a blood sampling test of 50 or more micrograms per deciliter from work activities involving any lead exposure.

An employee who has been removed with a blood level of 50 micrograms per deciliter or more shall have two (2) consecutive blood sampling tests spaced one week apart indicating that the employee's blood lead level is at or below 40 micrograms per deciliter before returning to work activities involving any lead exposure.

All OSHA recordable accidents that occur during the project duration are to be reported to the Engineer within twenty-four (24) hours of occurrence. In addition, for accidents that involve civilians or property damage that occurs within the work zone the Division Safety Engineer shall be notified immediately.

Prior to blasting operations, the Contractor shall have an operational OSHA approved hand wash station at each bridge location and a decontamination trailer at each bridge or between bridges unless the work is on the roadway, or the Contractor shall show reason why it is not feasible to do so and provide an alternative site as approved by the Engineer. The Contractor shall assure that all employees whose airborne exposure to lead is above the Permissible Exposure Limit (PEL) shall shower at the end of their work shift.

**STORAGE OF PAINT AND EQUIPMENT**

Provide a location for materials, equipment, and waste storage. Spread tarpaulins over all pavements and surfaces underneath equipment used for abrasive recycling and other waste handling equipment or containers. All land and or lease agreements that involve private property shall disclose to the property owner that heavy metals may be present on the Contractor's equipment. Prior to storing the Contractor's equipment on private property, provide a notarized written consent signed by the land



owner received by the Engineer at least forty-eight (48) hours before using property. All storage of paint, solvents, and other materials applied to structures shall be stored in accordance with Subarticle 442-9(C) of the *Standard Specifications* or the manufacturers’ requirements. The more restrictive requirements will apply.

**UTILITIES**

Protect all utility lines or mains that may be supported on, under, or adjacent to bridge work sites from damage and paint overspray.

**MEASUREMENT AND PAYMENT**

The cost of inspection, surface preparation, and repainting the existing structure is included in the lump sum price bid for *Cleaning and Repainting of Bridge #\_\_\_*. This price is full compensation for furnishing all inspection equipment, all paint, cleaning abrasives, cleaning solvents and all other materials; preparing and cleaning surfaces to be painted; applying paint in the field; protecting work area, traffic, and property; and furnishing blast cleaning equipment, paint spraying equipment, brushes, rollers, any other hand or power tools and any other equipment.

*Pollution Control* will be paid at the contract lump sum price which will be full compensation for all collection, handling, storage, air monitoring, and disposal of debris and wash water, all personal protective equipment, and all personal hygiene requirements, and all equipment, material and labor necessary for the daily collection of the blast debris into specified containers; and any measures necessary to ensure conformance to all safety and environmental regulations as directed by the Engineer.

*Painting Containment for Bridge #\_\_\_* will be paid at the lump sum contract price and will be full compensation for the design, materials, installation, maintenance, and removal of the containment system.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Cleaning and Repainting of Bridge #___	Lump Sum
Pollution Control	Lump Sum
Painting Containment for Bridge #___	Lump Sum

**SCOPE OF WORK**

**Bridge #240:** This bridge was built in 1940 and carries a pedestrian path over a town park, the North Toe River, and CSX railroad.

The existing superstructure consists of:

- 9 continuous spans of 2 lines of C10x15.3 steel channels spaced at 6’-6” and floor beams of C5x 6.7 steel channels
- 2 simple spans of 3 lines of S15x42.9 or S18x54.7 steel beams spaced at 3’-3”

- 1 simple span of bowstring deck truss with various steel angle sizes from 4" x 3" to 2.5" x 2.5"

Existing substructure steel consists of:

- 7 trestle-type, 4-legged bents made with various sizes of steel angle
- 5 trestle-type, 2-legged bents made with various sizes of steel angle, I-beams, and flat lattice

The bridge has an overall length of 408'-1" with a timber deck and a deck width of 6'-6". The existing paint system is aluminum over red lead, and the estimated area to be cleaned and painted is **10,020** sq. ft.

## **NEW RAIL**

**(SPECIAL)**

### **DESCRIPTION**

The Contractor shall remove the existing railing, fabricate, furnish, and install new metal galvanized rail in accordance with the plans and Standard Specifications or as directed by the Engineer. The Contractor shall field verify necessary dimensions and existing conditions and shall submit shop drawings to the Engineer for review and approval of the proposed railing prior to purchasing, fabrication, or installation.

### **SCOPE OF WORK**

The Contractor shall remove the existing railing. After completion of steel repairs, new steel installation, and painting of all structural steel, install new rail as indicated on the plans.

The contractor shall be responsible to field verify dimensions, geometry, and location of all elements of the new rail system.

New rails, posts, and other components shall be new and shall be minimum grades as indicated on the plans.

All bolts shall meet ASTM A325.

All nuts shall meet ASTM A194.

All flat washers shall meet ASTM F436.

Direct tension indicator washers shall meet ASTM F959 and Article 1072-5

All bolts, nuts, washers, and direct tension indicators shall be provided and galvanized in accordance with Subarticle 1072-5 of the 2018 Standard Specifications.

Tension on the ASTM A325 bolts shall be calibrated using in accordance with Article 440-8 of the 2018 Standard Specifications.

Submit shop drawings to the Engineer for review and approval of the proposed railing prior to purchasing, fabrication, or installation.

Rails, posts, and other new rail components shall be and fabricated to lengths, sizes, and configurations as indicated on the plans and field verified by the Contractor. Rails, posts, and other new rail components shall be predrilled to appropriate sizes to accept bolts, as shown on plans.

Members and components shall be shop welded, as shown on the plans, in accordance with Standard Specifications.

After fabrication, all members shall be galvanized in accordance with Section 1076 of the Standard Specifications. Any field cutting, drilling, or other operations that damage the galvanizing shall be repaired as per Section 1076 of the Standard Specifications.

Upon delivery at the job site, all materials shall be checked to ensure that no damages occurred during shipping or handling. Materials shall be stored in such a manner to ensure proper ventilation and drainage, and to protect against damage, weather, vandalism, and theft.

The contractor shall provide laborers and supervisors who are thoroughly familiar with the type of construction involved and materials and techniques specified.

The Contractor shall supply and install a rail system that shall include all components (rails, posts, hardware, and others) required, as shown on the plans.

Repair, in accordance with the Standard Specifications and to the Engineer’s satisfaction, any portion of the new rail and the structure that is damaged from construction operations. No extra payment will be provided for these repairs.

**ALTERNATE RAIL DESIGN**

Connection and spacing of rail posts to bridge channels shall be as indicated. However, contractor may propose an alternate post and rail design. Alternate rail design shall meet AASHTO geometry, dimension, loading, and other appropriate design requirements. Alternate post and rail design and calculations shall be sealed and signed by a Professional Engineer registered in North Carolina and shall be submitted for review. No installation, fabrication, or ordering of materials shall be performed until the alternate rail design has been approved by NCDOT.

Allowable materials for alternate rail design are galvanized steel, stainless steel, aluminum, or combination of those three. Appropriate measures shall be taken for any dis-similar metals issues that could arise from an alternate design.

Contractor shall submit one bid price for the New Rail, either as required on the plans and in this special provision, or as an alternate rail design that is approved by NCDOT.

**MEASUREMENT AND PAYMENT**

*New Rail* will be measured and paid in units of linear feet furnished, installed, and accepted by the Engineer. These prices and payments will be full compensation for all removal and disposal of existing railing system; materials, fabrication and installation of new rails, posts, hardware, and other components necessary for the new rail system; labor; access; equipment; tools; and incidentals necessary to satisfactorily complete the work.

Payment will be made under:

**Pay Item**

**Pay Unit**

New Rail

Linear Feet

**TREATED TIMBER**

**(SPECIAL)**

**DESCRIPTION**

Provide new treated timber as indicated on the plans. Treated timber shall be used for all members, as indicated; such members shall include, but are not limited to: nailers, stringers, flooring, and stair treads.

Treated timber shall meet all requirements for bridges as indicated in Section 1082 of the NCDOT Standard Specifications.

**MEASUREMENT AND PAYMENT**

Payment will be made at the price bid for *Treated Timber* as shown in the contract plans. The price per 1000-board-feet will be full compensation for all materials, equipment, tools, labor, and incidentals necessary to complete the work of providing and installing the Treated Timber.

Payment will be made under:

**Pay Item**  
Treated Timber

**Pay Unit**  
MBF

**CONCRETE ENCASEMENT**

**(SPECIAL)**

**DESCRIPTION**

This work shall consist of installation of concrete encasement repairs around bridge substructure structural steel legs at the existing foundations at locations shown on the plans and as determined by the Engineer.

**SCOPE OF WORK**

After completion and painting of existing structural steel, excavate by Unclassified Excavation, as necessary, to install Concrete Encasement Repair 1, 2, or 3, as indicated on the plans. After excavation, clean the existing foundation concrete by power washing with potable water. Provide and install adhesively anchored bars as indicated on the plans and in accordance with Subarticle 420-13 of the NCDOT Standard Specifications. Provide and place reinforcing steel as indicated on the plans. Provide and place concrete as indicated on the plans. Any damage to the structural steel paint, either before or after placement of the concrete encasement, shall be properly repaired by the Contractor at no additional cost to the Department. After completion of the concrete encasement, the excavated area shall be backfilled with excavated soil accordance with section 235 of the NCDOT Standard Specifications. Backfill shall be graded to match the existing and surrounding ground in accordance with section 235 of the NCDOT Standard Specifications

**MEASUREMENT AND PAYMENT**

Concrete Encasement will be measured and paid in units of cubic yard of concrete. The price per cubic yard will be full compensation for all cleaning and preparation of the existing concrete footing, providing and installing adhesively anchored reinforcing bars, providing and placing reinforcing bars, providing and placing concrete, as well as all materials, equipment, tools, labor, and incidentals necessary to complete the work. Unclassified Excavation will be paid for as part of the contract unit price bid for “Unclassified Excavation”. Payment for backfilling and grading of the excavated areas shall be incidental to the costs of other pay items.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Concrete Encasement	Cubic Yard

**CONCRETE UNDERPINNING**

**(SPECIAL)**

**DESCRIPTION**

This work shall consist of installation of Concrete Underpinning at Bent 1 as shown on the plans.

**SCOPE OF WORK**

Install Concrete Underpinning in phases as indicated on the plans. For each phase:

- Excavate by Unclassified Excavation, as necessary, to install concrete underpinning and attain soil bearing, as indicated on the plans.
- After excavation, chip or otherwise remove the bottom of the existing foundation concrete to sound concrete and such that the bottom of the existing concrete is sloped upward toward the excavation, as indicated on the plans.
- Clean the existing foundation concrete by power washing with potable water.
- Provide and install adhesively anchored bars as indicated on the plans and in accordance with Subarticle 420-13 of the NCDOT Standard Specifications.
- Provide and place reinforcing steel and concrete, as indicated on the plans.
- Complete each phase before proceeding to the next phase.

After completion of all phases of the concrete underpinning, the excavated area shall be backfilled with excavated soil accordance with section 235 of the NCDOT Standard Specifications. Backfill shall be graded to match the existing and surrounding ground in accordance with section 235 of the NCDOT Standard Specifications

**MEASUREMENT AND PAYMENT**

Concrete Underpinning will be measured and paid in units of cubic yard of concrete. The price per cubic yard will be full compensation for preparation and cleaning of concrete prior to placement of concrete; providing and placing adhesively anchored reinforcing bars; providing and placing reinforcing bars; providing and placing concrete; as well as all materials, equipment, tools, labor,

and incidentals necessary to complete the work. Unclassified Excavation will be paid for as part of the contract unit price bid for “Unclassified Excavation”. Payment for backfilling and grading of the excavated areas shall be incidental to the costs of other pay items.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Concrete Underpinning	Cubic Yard

**CONCRETE REPAIRS ABUTMENT 2**

**(SPECIAL)**

**DESCRIPTION**

This work shall consist of installation of Concrete Repairs Abutment 2 as indicated on the plans.

**SCOPE OF WORK**

Install Concrete Repairs Abutment 2 as indicated on the plans:

- Temporarily support the bridge and abutment as necessary as per the Temporary Shoring special provisions.
- Excavate by Unclassified Excavation, as necessary, to install concrete repairs.
- Demolish existing abutment.
- Provide and install adhesively anchored dowels as per Subarticle 420-13 of the Standard Specifications. Adhesively anchored dowels shall be tested to 5000 pounds tension.
- Provide and place reinforcing steel and bearing anchor bolts.
- Provide and place new elastomeric bearing pads.
- Place new concrete.
- After placing new concrete for the abutment, backfill as necessary, and place concrete and self-leveling joint seal (meeting Subarticles 1028-3 and 1028-4 of the Standard Specifications) for the sidewalk on the north side of Abutment 2.

After completion of all phases Concrete Repairs Abutment 2, the excavated area shall be backfilled with excavated soil accordance with section 235 of the NCDOT Standard Specifications. Backfill shall be graded to match the existing and surrounding ground in accordance with section 235 of the NCDOT Standard Specifications

**MEASUREMENT AND PAYMENT**

Concrete Repairs Abutment 2 will be measured and paid in units of cubic yard of concrete. The price per cubic yard will be full compensation for providing, installing, and testing adhesively anchored dowels; providing and placing reinforcing bars; providing and placing concrete for abutment and sidewalk; providing and placing self-leveling joint seal; providing and placing new plain elastomeric bearing pads; as well as all materials, equipment, tools, labor, and incidentals necessary to complete the work. Unclassified Excavation will be paid for as part of the contract unit price bid for “Unclassified Excavation”. Payment for backfilling and grading of the excavated areas shall be incidental to the costs of other pay items.

Payment will be made under:

**Pay Item**  
Concrete Repairs Abutment 2

**Pay Unit**  
Cubic Yard

**STEEL REPLACEMENT OR REPAIR**

**(SPECIAL)**

**DESCRIPTION**

Add new structural steel members, replace damaged steel members, and add new steel members for structural steel repairs, as indicated on plan sheets.

After the existing structural steel is cleaned and primed, perform repairs with new steel members and replace or add new structural steel members. Remove appropriate members by cutting or removal of existing rivets or bolts. Install new or repair members as indicated on the plans.

New, replacement, and repair steel members shall be new and shall be minimum ASTM A36 grade steel.

All new steel or repair members shall be shop primed with an organic zinc primer.

All bolts shall meet ASTM A325.

All nuts shall meet ASTM A194.

All flat washers shall meet ASTM F436.

Direct tension indicator washers shall meet ASTM F959 and Article 1072-5

All bolts, nuts, washers, and direct tension indicators shall be provided and galvanized in accordance with Subarticle 1072-5 of the 2018 Standard Specifications.

Tension on the ASTM A325 bolts shall be calibrated using in accordance with Article 440-8 of the 2018 Standard Specifications.

After new structural steel members are in place, damaged steel members are replaced, and new steel members are added for structural steel repairs, painting of all structural steel shall be completed in accordance with the *Painting Existing Structure* project special provision.

**FIELD ALTERATIONS**

Since this repair involves working with an existing structure where the dimensions may vary throughout the structure, the contractor should expect and shall be prepared to make alterations in the field. This includes, but not limited to, having qualified personnel on hand to perform necessary alterations and having extra material on hand (or the ability to procure extra material in a timely manner). All such alterations shall be brought to the attention of the Engineer and agreed upon prior to alteration.

**BASIS OF PAYMENT**

Payment will be made at the contract price bid per pounds structural steel used for *Steel Replacement or Repair*. Such payment will be full compensation for all materials (including hardware, but not necessarily limited to steel, bolts, nuts, washers, and direct tension indicators), equipment, tools, labor, welding, miscellaneous steel, and incidentals necessary to complete the work.

Payment will be made under:

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Steel Replacement or Repair	LBS

**EPOXY COATING AND DEBRIS REMOVAL**

**(SPECIAL)**

**GENERAL**

This work applies to all bents and end bents of all bridges throughout the project as noted in the plans. Pressure wash, clean and epoxy coat top of all bent and end bent caps under open joints and at the expansion joints of steel girder spans after painting of all girders is concluded.

Debris removal from the top of bent caps shall be incidental to epoxy coating the top of bent caps.

Use a Type 4A flexible and moisture insensitive epoxy coating in accordance with Section 1081 of the *Standard Specifications*. Provide a Type 3 material certification in accordance with Article 106-3 showing the proposed epoxy meets Type 4A requirements.

**SURFACES**

Apply the epoxy protective coating to the top surface area, including chamfer area of bent caps under open joints and expansion joints of the steel girder spans, excluding areas under elastomeric bearings.

Thoroughly clean all dust, dirt, grease, oil, laitance, and other objectionable material from the concrete surfaces to be coated. Air blast all surfaces immediately before applying the protective coating.

Use only cleaning agents preapproved by the Engineer.

**APPLICATION**

Apply epoxy protective coating only when the air temperature is at least 40°F and rising, but less than 95°F and the surface temperature of the area to be coated is at least 40°F. Remove any excess or free-standing water from the surfaces before applying the coating. Apply one coat of epoxy protective coating at a rate such that it covers between 100 and 200 sf/gal.

Under certain combinations of circumstances, the cured epoxy protective coating may develop an oily condition on the surface due to amine blush. This condition is not detrimental to the applied system.

Apply the coating so the entire designated surface of the concrete is covered and all pores are filled. To provide a uniform appearance, use the exact same material on all visible surfaces.

**BASIS OF PAYMENT**

*Epoxy Coating* will be measured and paid for by the contract unit price per square foot and shall be full compensation for furnishing all material, labor, tools, and equipment necessary for cleaning



and coating the tops of bent caps. Debris removal from the top of bent caps shall be incidental to epoxy coating the top of bent caps.

**Pay Item****Pay Unit**

Epoxy Coating

Square Feet

**SILANE TREATMENT OF CONCRETE SUBSTRUCTURE****(SPECIAL)****DESCRIPTION**

This work consists of preparation of bridge concrete substructure surfaces and the furnishing and application of alkylalkoxysilane (silane) penetrant sealers, with 100% solids, to seal bridge concrete substructure surfaces and cracks. Prepare the bridge concrete substructure surfaces and apply the silane bridge concrete substructure sealer in accordance with this special provision and as indicated on the plans, or as approved by the Engineer.

Work includes: bridge concrete substructure surface preparation, placement of silane penetrant sealer, appropriate removal and disposal of excess and waste material, and any incidentals necessary to complete the project, as specified or as indicated on the plans.

**SUBMITTALS**

Submit for approval the following requested items and any other relevant documents:

- (A) A safety data sheet (SDS) for each shipment of the silane materials.
- (B) Silane material information and manufacturer's written preparation and application instructions.
- (C) Certification from an independent testing laboratory that the materials meet the requirements of these provisions. Do not incorporate these materials into the project until the Engineer has accepted and approved the certification for the material.
- (D) The dates of manufacture of the silane materials, their lot numbers and date of shelf-life expiration for each lot number.
- (E) A table indicating the likely cure time, in minutes, to allow vehicular traffic on the bridge where the concrete substructure surface has been treated. Provide time for the allowable ambient temperature range, in increments of 10° F.
- (F) A work plan for each structure that includes estimated times for surface preparation and silane application.

**MATERIAL DELIVERY AND STORAGE**

Store at the site sufficient quantities of silane materials to perform the entire application.

Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Ensure that each container is clearly marked by the manufacturer with the following information:

- (A) Manufacturer's name and address.
- (B) Product name.
- (C) Date of manufacture.
- (D) Expiration date.
- (E) Lot identification number.

(F) Container serial number.

Provide the Engineer a certification from the manufacturer, confirming that the silane materials meet the requirements of this special provision. Do not incorporate these materials into the project until the Engineer has accepted and approved the certification for the material. Submit such certification for each lot of material delivered to the project. In each certification, identify the serial or lot numbers of the containers certified.

The Engineer may require samples from each lot or container of materials delivered to the project or from containers at the point of use. When samples are required, furnish samples in accordance with the Engineer’s instructions.

Store silane materials in unopened containers in a clean, dry area between 40° F and 90° F. Store containers in a manner that prevents leakage or spillage.

**MANUFACTURER’S REPRESENTATIVE**

Provide a manufacturer’s representative on site for the duration of the surface preparation and silane application work, to provide expert assistance on surface preparation, storage, mixing, application, clean-up, and disposal of materials.

**MATERIALS**

Provide silane from a single manufacturer, and provide silane that conforms to requirements indicated in Table 1, below.

**Table 1  
SILANE PROPERTIES**

<b>Property</b>	<b>Test Method</b>	<b>Requirement</b>
Silane Content		100%
VOC content	EPA method 24	Less than 350 g/l
Surface Appearance after Application		Unchanged
Flash Point	ASTM D3278	140° F, minimum
Resistance to Chloride Ion Penetration	AASHTO T259 and T260	Less than: 0.52 pounds/yd <sup>3</sup> (criteria of 1.5) at 1/2 inch level; 0.00 pounds/yd <sup>3</sup> (criteria of 0.75) at 1 inch level
Water absorption test	ASTM C 642	0.50% maximum/48 hours; 1.5% maximum/50 days
Scaling resistance	ASTM C 672	(non-air-entrained concrete) 0 rating “No Scaling” (100 cycles)
NCHRP 244		
Water weight gain	Series II - cube test	85% reduction, minimum
Absorbed chloride		87% reduction, minimum

Absorbed chloride	Series IV - Southern climate	95% reduction, minimum
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**SURFACE PREPARATION**

Prepare the bridge concrete substructure surfaces for application of the silane in order to remove all existing grease, slurry, oils, paint, dirt, striping, curing compound, rust, membrane, weak surface mortar, or any other contaminants that could interfere with the proper adhesion, penetration, and the curing of the silane material.

Prepare a final surface that adheres to the following requirements:

- (A) For areas to receive silane treatment, clean by sandblasting or shotblasting. Select the size of shot or sand, and travel speed of the equipment to provide a uniformly clean surface with a uniform profile. Do not expose cleaned surfaces to vehicular traffic unless approved by the Engineer. If the bridge concrete substructure surfaces become contaminated before placing the silane treatment, shotblast or abrasive sandblast the contaminated areas to the satisfaction of the Engineer, at no additional cost.
- (B) Power washing of the bridge concrete substructure may be allowed as approved by the Engineer, but the concrete barrier shall be allowed to dry a minimum of 48 hours prior to application of the silane treatment.
- (C) Prior to silane application, protect cracks on the bridge concrete substructure from materials that can interfere with the penetration and the curing of the silane material. Just prior to placement of the silane, remove, by magnets and oil-free compressed air and vacuuming, any loose particles, such that no excess particles remain.
- (D) Prior to silane application, the bridge concrete substructure shall be completely dry.
- (E) The silane manufacturer may suggest cleaning and preparation methods other than those detailed by this special provision. Such alternative methods must be submitted to and approved by the Engineer prior to implementation.

**SILANE APPLICATION**

**(A) Test Area**

- (1) Test a small area of the surface (minimum 2 ft. by 2 ft.) before general application to ensure desired performance results, aesthetics, and application rates and to verify application technique. Allow 5–7 days for the product to react fully before evaluating.
- (2) Application rates may vary depending on field conditions and the substrate to be treated.
- (3) Conduct at least one absorption test in the test area, using a Rilem Tube Test. Acceptable results are no loss of water in the Rilem tube over a period of 20 minutes. Adjust application to achieve required repellent performance.
- (4) The manufacturer’s representative shall assist the Contractor in determining the application rates. Use test applications on actual surfaces to determine accurate application rates. Extremely porous surfaces may require two (2) coats of silane.
- (5) Do not begin production application of silane until Engineer has approved the test area, including approval of aesthetics, color, texture, and appearance.

**(B) Application**

Immediately before placing silane, all exposed surfaces shall be completely dry and blown clean with oil-free compressed air to remove any loose dust and debris. Apply silane as soon as practical after the exposed surfaces have been properly prepared and conditions are satisfactory:

- (1) Stir material thoroughly before and during application.
- (2) Apply silane using low-pressure pumping equipment with a wet fan type spray nozzle. Rollers with a 1" nap or brushes are permitted. On vertical surfaces, apply the silane in a flooding application from the bottom upward, in accordance with manufacturer's instructions.
- (3) Maintain operating pressures in sprayers used for application of the silane sealer material sufficiently low, so that atomization or misting of the material does not occur.
- (4) Apply even distribution of silane. Take care when applying the silane, so that running or ponding does not occur.
- (5) Apply silane in a single application to the substructure surface with enough material to saturate the surface. Remove excess material with a roller or brush and dispose of excess material appropriately. If a second coat is required, it should be applied "wet on wet" before first coat dries.
- (6) Application of sealant by spray methods will not be permitted when wind speeds are 20 mph or more, or if in the opinion of the Engineer, unsatisfactory results will be obtained. Other application methods or rescheduling will be required.
- (7) Avoid application with hand pump sprayers. For small areas of silane application, the use of hand pump sprayers must be approved by the Engineer.
- (8) Contractor shall protect from overspray all pedestrians, vehicles, plants and vegetation, and other areas not receiving silane application. Damages that occur due to overspray shall be the responsibility of the Contractor.
- (9) Allow product to penetrate the bridge concrete substructure and dry, as required by the manufacturer, prior to opening to traffic.

**LIMITATIONS OF OPERATIONS**

- (1) Prior to application of any silane sealer, cure concrete or concrete repairs for a minimum of 28 days or as required by the silane manufacturer.
- (2) Do not use silane material after the shelf life date.
- (3) Do not return unused material in opened containers to storage for later use. Either apply such material to appropriate areas on substructure surfaces or remove and appropriately dispose of it at offsite locations provided by the Contractor.
- (4) Pick up and store all blast media and contaminants in a vacuum unit. Do not create dust during the blasting operation that will obstruct the view of motorists in roadways adjacent, above, below, or surrounding the silane treatment area. Store, handle, and dispose of blast media and contaminants in accordance with all applicable local, state, and federal requirements.

- (5) Use other necessary protective measures to prevent leakage of silane beyond the concrete barrier rail, to protect waterways, bridge components, pedestrians, vehicles, roadway, vegetation, and any other items or areas below or near the bridge.
- (6) Application of sealant by spray methods will not be permitted during windy conditions, if in the opinion of the Engineer, unsatisfactory results will be obtained. Other application methods or rescheduling will be required.
- (7) Avoid application with hand pump sprayers. For small areas of silane application, the use of hand pump sprayers might be allowed, but must be approved by the Engineer.
- (8) Protect traffic from rebound, dust, overspray, and construction activities. Provide appropriate shielding, as required and/or directed by the Engineer. Damages that occur due to the Contractor's operations shall be the responsibility of the Contractor.
- (9) The Contractor shall provide suitable coverings (e.g., heavy-duty drop cloths) as needed to protect all exposed areas not to receive surface preparation and silane treatment.
- (10) Clean and/or repair all damage or defacement resulting from Contractor's operations to the Engineer's satisfaction at no additional cost to the Department.
- (11) The equipment used for silane application must be clean of foreign materials and approved by the Engineer before use.
- (12) The surface to receive the treatment shall be dry for at least 48 hours before treatment and shall be free from sand, surface dust and dirt, oil, grease, chemical films, and other contaminants prior to application of the silane.
- (13) The surface, air, and material temperatures shall be between 40°F and 90°F during application.
- (14) Do not apply silane materials during cold, hot, or wet weather conditions or when adverse weather conditions are forecasted within 12 hours of the completion of the silane application. Correct any coating damaged by rain or moisture by an additional application or as required by the silane manufacturer.
- (15) Protect prepared surfaces from precipitation and heavy dew during and after the application of the silane.
- (16) Conduct the work in a continuous operation, with the silane application as soon as practical following surface preparation.
- (17) Apply silane during the lowest temperature period of the day, typically between 1:00 a.m. and 9:00 a.m., when the cracks are open to the greatest extent.
- (18) Clean up, dispose of any surplus material, and restore any disturbed areas unless otherwise directed.
- (19) 100% Silane is a combustible liquid; take appropriate precautions during handling, storage, and operations. **KEEP AWAY FROM OPEN FLAME.**
- (20) Work crews should wear appropriate personal protection equipment and follow manufacturer's recommendations when applying silane. Refer to the SDS and all applicable local, state, and federal laws, and rules and regulations of authorities having jurisdiction over the project, for specific guidance for personal and environmental protection and safety requirements.

**MEASUREMENT AND PAYMENT**

*Surface Preparation for Concrete Substructure* will be measured and paid for at the contract unit price per square foot and will be full compensation for the shotblasting, sandblasting, or other necessary surface preparation and handwork to prepare the entire bridge concrete substructure and removal and disposal of all blast media and waste material generated.

*Silane Substructure Treatment* will be measured and paid for at the contract unit price per square foot and will be full compensation for bridge concrete substructure and crack preparation; for furnishing and applying the silane substructure treatment; removal and disposal of excess and waste material generated; for protection of waterways, bridge, and other nearby surfaces, vehicles, and pedestrians; and for all labor, tools, and incidentals necessary to complete the work.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Surface Preparation for Concrete Substructure	Square Foot
Silane Substructure Treatment	Square Foot

**ANTI-SLIP DECK PLATING**

**(SPECIAL)**

**DESCRIPTION**

This work shall consist of providing and installing fiber-reinforced polymer anti-slip deck plating on each timber deck board of the sloped Span K of pedestrian bridge 600240.

Single fiber-reinforced polymer anti-slip deck plates shall:

- be a minimum width of 4” and a maximum width of 7”
- be a minimum 0.125” thick with beveled edges
- have a 20/30 abrasive grit top surface finish

Length of anti-slip deck plating across the width of the bridge deck shall be 72”.

Anti-slip deck plating shall be centered within the width of each timber deck board and shall be centered between bridge rails.

Anti-slip deck plates shall be installed with minimum #8 stainless steel truss head or pan head screws, 1.25” long. Screws shall be evenly spaced a maximum of 12” on-center along the exterior edges of the anti-slip deck plates and shall be no closer than 1” to the edge of the anti-slip deck plate. If the anti-slip deck plate manufacturer requires differing and additional installation requirements, the stricter and additional installation requirements shall apply.

Contractor shall submit proposed anti-slip deck plating for review and approval. No anti-slip deck plating material may be ordered, fabricated, or installed prior to approval from the Engineer.

**MEASUREMENT AND PAYMENT**

The quantity of anti-slip deck plating (material and associated hardware and other materials necessary for installation) to cover the limits indicated above for a single bridge deck board shall be considered a single unit of each.

Anti-Slip Deck Plating will be measured and paid in units of each. The price per each will be full compensation for all materials, equipment, tools, labor, and incidentals necessary to complete the work.

Payment will be made under:

<b>Pay Item</b>	<b>Pay Unit</b>
Anti-Slip Deck Plating	Each

**FALSEWORK AND FORMWORK**

**(2-14-22)**

**1.0 DESCRIPTION**

Use this Special Provision as a guide to develop temporary works submittals required by the Standard Specifications or other provisions; no additional submittals are required herein. Such temporary works include, but are not limited to, falsework and formwork.

Falsework is any temporary construction used to support the permanent structure until it becomes self-supporting. Formwork is the temporary structure or mold used to retain plastic or fluid concrete in its designated shape until it hardens. Access scaffolding is a temporary structure that functions as a work platform that supports construction personnel, materials, and tools, but is not intended to support the structure. Scaffolding systems that are used to temporarily support permanent structures (as opposed to functioning as work platforms) are considered to be falsework under the definitions given. Shoring is a component of falsework such as horizontal, vertical, or inclined support members. Where the term “temporary works” is used, it includes all of the temporary facilities used in bridge construction that do not become part of the permanent structure.

Design and construct safe and adequate temporary works that will support all loads imposed and provide the necessary rigidity to achieve the lines and grades shown on the plans in the final structure.

**2.0 MATERIALS**

Select materials suitable for temporary works; however, select materials that also ensure the safety and quality required by the design assumptions. The Engineer has authority to reject material on the basis of its condition, inappropriate use, safety, or nonconformance with the plans. Clearly identify allowable loads or stresses for all materials or manufactured devices on the plans. Revise the plan and notify the Engineer if any change to materials or material strengths is required.

**3.0 DESIGN REQUIREMENTS**

**A. Working Drawings**

Provide working drawings for items as specified in the contract, or as required by the Engineer, with design calculations and supporting data in sufficient detail to permit a structural and safety review of the proposed design of the temporary work.

On the drawings, show all information necessary to allow the design of any component to be checked independently as determined by the Engineer.

When concrete placement is involved, include data such as the drawings of proposed sequence, rate of placement, direction of placement, and location of all construction joints.

When required, have the drawings and calculations prepared under the guidance of, and sealed by, a North Carolina Registered Professional Engineer who is knowledgeable in temporary works design.

If requested by the Engineer, submit with the working drawings manufacturer’s catalog data listing the weight of all construction equipment that will be supported on the temporary work. Show anticipated total settlements and/or deflections of falsework and forms on the working drawings. Include falsework footing settlements, joint take-up, and deflection of beams or girders.

As an option for the Contractor, overhang falsework hangers may be uniformly spaced, at a maximum of 36 inches, provided the following conditions are met:

Member Type (PCG)	Member Depth, (inches)	Max. Overhang Width, (inches)	Max. Slab Edge Thickness, (inches)	Max. Screed Wheel Weight, (lbs.)	Bracket Min. Vertical Leg Extension, (inches)
II	36	39	14	2000	26
III	45	42	14	2000	35
IV	54	45	14	2000	44
MBT	63	51	12	2000	50
MBT	72	55	12	1700	48

Overhang width is measured from the centerline of the girder to the edge of the deck slab. For Type II, III & IV prestressed concrete girders (PCG), 45-degree cast-in-place half hangers and rods must have a minimum safe working load of 6,000 lbs.

For MBT prestressed concrete girders, 45-degree angle holes for falsework hanger rods shall be cast through the girder top flange and located, measuring along the top of the member, 1’-2 ½” from the edge of the top flange. Hanger hardware and rods must have a minimum safe working load of 6,000 lbs.



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

The overhang bracket provided for the diagonal leg shall have a minimum safe working load of 3,750 lbs. The vertical leg of the bracket shall extend to the point that the heel bears on the girder bottom flange, no closer than 4 inches from the bottom of the member. However, for 72-inch members, the heel of the bracket shall bear on the web, near the bottom flange transition.

Provide adequate overhang falsework and determine the appropriate adjustments for deck geometry, equipment, casting procedures and casting conditions.

If the optional overhang falsework spacing is used, indicate this on the falsework submittal and advise the girder producer of the proposed details. Failure to notify the Engineer of hanger type and hanger spacing on prestressed concrete girder casting drawings may delay the approval of those drawings.

Falsework hangers that support concentrated loads and are installed at the edge of thin top flange concrete girders (such as bulb tee girders) shall be spaced so as not to exceed 75% of the manufacturer's stated safe working load. Use of dual leg hangers (such as Meadow Burke HF-42 and HF-43) are not allowed on concrete girders with thin top flanges. Design the falsework and forms supporting deck slabs and overhangs on girder bridges so that there will be no differential settlement between the girders and the deck forms during placement of deck concrete.

When staged construction of the bridge deck is required, detail falsework and forms for screed and fluid concrete loads to be independent of any previous deck pour components when the mid-span girder deflection due to deck weight is greater than  $\frac{3}{4}$ ".

Note on the working drawings any anchorages, connectors, inserts, steel sleeves or other such devices used as part of the falsework or formwork that remains in the permanent structure. If the plan notes indicate that the structure contains the necessary corrosion protection required for a Corrosive Site, epoxy coat, galvanize or metalize these devices. Electroplating will not be allowed. Any coating required by the Engineer will be considered incidental to the various pay items requiring temporary works.

Design falsework and formwork requiring submittals in accordance with the 1995 AASHTO *Guide Design Specifications for Bridge Temporary Works* except as noted herein.

#### 1. Wind Loads

Table 2.2 of Article 2.2.5.1 is modified to include wind velocities up to 110 mph. In addition, Table 2.2A is included to provide the maximum wind speeds by county in North Carolina.

#### **Table 2.2 - Wind Pressure Values**

Height Zone feet above ground	Pressure, lb/ft <sup>2</sup> for Indicated Wind Velocity, mph				
	70	80	90	100	110
0 to 30	15	20	25	30	35
30 to 50	20	25	30	35	40
50 to 100	25	30	35	40	45
over 100	30	35	40	45	50

## 2. Time of Removal

The following requirements replace those of Article 3.4.8.2.

Do not remove forms until the concrete has attained strengths required in Article 420-16 of the Standard Specifications and these Special Provisions.

Do not remove forms until the concrete has sufficient strength to prevent damage to the surface.

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

COUNTY	25 YR (mph)	COUNTY	25 YR (mph)	COUNTY	25 YR (mph)
Alamance	70	Franklin	70	Pamlico	100
Alexander	70	Gaston	70	Pasquotank	100
Alleghany	70	Gates	90	Pender	100
Anson	70	Graham	80	Perquimans	100
Ashe	70	Granville	70	Person	70
Avery	70	Greene	80	Pitt	90
Beaufort	100	Guilford	70	Polk	80
Bertie	90	Halifax	80	Randolph	70
Bladen	90	Harnett	70	Richmond	70
Brunswick	100	Haywood	80	Robeson	80
Buncombe	80	Henderson	80	Rockingham	70
Burke	70	Hertford	90	Rowan	70
Cabarrus	70	Hoke	70	Rutherford	70
Caldwell	70	Hyde	110	Sampson	90
Camden	100	Iredell	70	Scotland	70
Carteret	110	Jackson	80	Stanley	70
Caswell	70	Johnston	80	Stokes	70
Catawba	70	Jones	100	Surry	70
Cherokee	80	Lee	70	Swain	80
Chatham	70	Lenoir	90	Transylvania	80
Chowan	90	Lincoln	70	Tyrell	100
Clay	80	Macon	80	Union	70
Cleveland	70	Madison	80	Vance	70
Columbus	90	Martin	90	Wake	70
Craven	100	McDowell	70	Warren	70
Cumberland	80	Mecklenburg	70	Washington	100
Currituck	100	Mitchell	70	Watauga	70
Dare	110	Montgomery	70	Wayne	80
Davidson	70	Moore	70	Wilkes	70
Davie	70	Nash	80	Wilson	80
Duplin	90	New Hanover	100	Yadkin	70
Durham	70	Northampton	80	Yancey	70
Edgecombe	80	Onslow	100		
Forsyth	70	Orange	70		

## B. Review and Approval

The Engineer is responsible for the review and approval of temporary works' drawings.

Submit the working drawings sufficiently in advance of proposed use to allow for their review, revision (if needed), and approval without delay to the work.

The time period for review of the working drawings does not begin until complete drawings and design calculations, when required, are received by the Engineer.

Do not start construction of any temporary work for which working drawings are required until the drawings have been approved. Such approval does not relieve the Contractor of the responsibility for the accuracy and adequacy of the working drawings.

## 4.0 CONSTRUCTION REQUIREMENTS

All requirements of Section 420 of the Standard Specifications apply.

Construct temporary works in conformance with the approved working drawings. Ensure that the quality of materials and workmanship employed is consistent with that assumed in the design of the temporary works. Do not weld falsework members to any portion of the permanent structure unless approved. Show any welding to the permanent structure on the approved construction drawings.

Provide tell-tales attached to the forms and extending to the ground, or other means, for accurate measurement of falsework settlement. Make sure that the anticipated compressive settlement and/or deflection of falsework does not exceed 1 inch. For cast-in-place concrete structures, make sure that the calculated deflection of falsework flexural members does not exceed 1/240 of their span regardless of whether or not the deflection is compensated by camber strips.

### A. Maintenance and Inspection

Inspect and maintain the temporary work in an acceptable condition throughout the period of its use. Certify that the manufactured devices have been maintained in a condition to allow them to safely carry their rated loads. Clearly mark each piece so that its capacity can be readily determined at the job site.

Perform an in-depth inspection of an applicable portion(s) of the temporary works, in the presence of the Engineer, not more than 24 hours prior to the beginning of each concrete placement. Inspect other temporary works at least once a month to ensure that they are functioning properly. Have a North Carolina Registered Professional Engineer inspect the cofferdams, shoring, sheathing, support of excavation structures, and support systems for load tests prior to loading.

## B. Foundations

Determine the safe bearing capacity of the foundation material on which the supports for temporary works rest. If required by the Engineer, conduct load tests to verify proposed bearing capacity values that are marginal or in other high-risk situations.

The use of the foundation support values shown on the contract plans of the permanent structure is permitted if the foundations are on the same level and on the same soil as those of the permanent structure.

Allow for adequate site drainage or soil protection to prevent soil saturation and washout of the soil supporting the temporary works supports.

If piles are used, the estimation of capacities and later confirmation during construction using standard procedures based on the driving characteristics of the pile is permitted. If preferred, use load tests to confirm the estimated capacities; or, if required by the Engineer conduct load tests to verify bearing capacity values that are marginal or in other high risk situations.

The Engineer reviews and approves the proposed pile and soil bearing capacities.

## 5.0 REMOVAL

Unless otherwise permitted, remove and keep all temporary works upon completion of the work. Do not disturb or otherwise damage the finished work.

Remove temporary works in conformance with the contract documents. Remove them in such a manner as to permit the structure to uniformly and gradually take the stresses due to its own weight.

## 6.0 METHOD OF MEASUREMENT

Unless otherwise specified, temporary works will not be directly measured.

## 7.0 BASIS OF PAYMENT

Payment at the contract unit prices for the various pay items requiring temporary works will be full compensation for the above falsework and formwork.

## **SUBMITTAL OF WORKING DRAWINGS**

(2-14-22)

### 1.0 GENERAL

Submit working drawings in accordance with Article 105-2 of the *Standard Specifications* and this provision. For this provision, “submittals” refers to only those listed in this provision. The list of submittals contained herein does not represent a list of required submittals for the project. Submittals are only necessary for those items as required by the contract. Make submittals that are not specifically noted in this provision directly to the Engineer. Either the Structures

Management Unit or the Geotechnical Engineering Unit or both units will jointly review submittals.

If a submittal contains variations from plan details or specifications or significantly affects project cost, field construction or operations, discuss the submittal with and submit all copies to the Engineer. State the reason for the proposed variation in the submittal. To minimize review time, make sure all submittals are complete when initially submitted. Provide a contact name and information with each submittal. Direct any questions regarding submittal requirements to the Engineer, Structures Management Unit contacts or the Geotechnical Engineering Unit contacts noted below.

To facilitate in-plant inspection by NCDOT and approval of working drawings, provide the name, address and telephone number of the facility where fabrication will actually be done if different than shown on the title block of the submitted working drawings. This includes, but is not limited to, precast concrete items, prestressed concrete items and fabricated steel or aluminum items.

**2.0 ADDRESSES AND CONTACTS**

For submittals to the Structures Management Unit, use the following addresses:

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

Via US mail:

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

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

Via other delivery service:

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

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

For submittals to the Geotechnical Engineering Unit, use the following addresses:

For projects in Divisions 1-7, use the following Eastern Regional Office addresses:

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

Via US mail:

Mr. David Hering, L.G., P. E.  
 Assistant State Geotechnical  
 Engineer – Eastern Region  
 North Carolina Department  
 of Transportation  
 Geotechnical Engineering Unit

Via other delivery service:

Mr. David Hering, L.G., P. E.  
 Assistant State Geotechnical  
 Engineer – Eastern Region  
 North Carolina Department  
 of Transportation  
 Geotechnical Engineering Unit

Eastern Regional Office  
1570 Mail Service Center  
Raleigh, NC 27699-1570

Eastern Regional Office  
3301 Jones Sausage Road, Suite 100  
Garner, NC 27529

For projects in Divisions 8-14, use the following Western Regional Office addresses:

Via Email: [WestGeotechnicalSubmittal@ncdot.gov](mailto:WestGeotechnicalSubmittal@ncdot.gov)

Via US mail or other delivery service:

Mr. Eric Williams, P. E.  
Assistant State Geotechnical  
Engineer – Western Region  
North Carolina Department  
of Transportation  
Geotechnical Engineering Unit  
Western Regional Office  
5253 Z Max Boulevard  
Harrisburg, NC 28075

The status of the review of structure-related submittals sent to the Structures Management Unit can be viewed from the Unit’s website, via the “[Drawing Submittal Status](#)” link.

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

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

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

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

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

Eastern Regional Geotechnical Contact (Divisions 1-7):  
David Hering (919) 662 – 4710  
[dthering@ncdot.gov](mailto:dthering@ncdot.gov)

Western Regional Geotechnical Contact (Divisions 8-14):  
Eric Williams (704) 455 – 8902  
[ewilliams3@ncdot.gov](mailto:ewilliams3@ncdot.gov)

**3.0 SUBMITTAL COPIES**

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

The first table below covers “Structure Submittals.” The Engineer will receive review comments and drawing markups for these submittals from the Structures Management Unit. The second table in this section covers “Geotechnical Submittals.” The Engineer will receive review comments and drawing markups for these submittals from the Geotechnical Engineering Unit.

Unless otherwise required, submit one set of supporting calculations to either the Structures Management Unit or the Geotechnical Engineering Unit unless both units require submittal copies in which case submit a set of supporting calculations to each unit. Provide additional copies of any submittal as directed.

**STRUCTURE SUBMITTALS**

Submittal	Submittal Required by Structures Management Unit?	Submittal Required by Geotechnical Engineering Unit?	Contract Reference Requiring Submittal <sup>1</sup>
Arch Culvert Falsework	Y	N	Plan Note, SN Sheet & “Falsework and Formwork”
Box Culvert Falsework <sup>7</sup>	Y	N	Plan Note, SN Sheet & “Falsework and Formwork”
Cofferdams	Y	Y	Article 410-4
Foam Joint Seals <sup>6</sup>	Y	N	“Foam Joint Seals”
Expansion Joint Seals (hold down plate type with base angle)	Y	N	“Expansion Joint Seals”
Expansion Joint Seals (modular)	Y	N	“Modular Expansion Joint Seals”
Expansion Joint Seals (strip seals)	Y	N	“Strip Seal Expansion Joints”
Falsework & Forms <sup>2</sup> (substructure)	Y	N	Article 420-3 & “Falsework and Formwork”
Falsework & Forms (superstructure)	Y	N	Article 420-3 & “Falsework and Formwork”



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

Sound Barrier Wall (precast items)	Y	N	Article 1077-2 & “Sound Barrier Wall”
Sound Barrier Wall Steel Fabrication Plans <sup>5</sup>	Y	N	Article 1072-8 & “Sound Barrier Wall”
Structural Steel <sup>4</sup>	Y	N	Article 1072-8
Temporary Detour Structures	Y	Y	Article 400-3 & “Construction, Maintenance and Removal of Temporary Structure at Station _____”
TFE Expansion Bearings <sup>4</sup>	Y	N	Article 1072-8

**FOOTNOTES**

- References are provided to help locate the part of the contract where the submittals are required. References in quotes refer to the provision by that name. Articles refer to the *Standard Specifications*.
- Submittals for these items are necessary only when required by a note on plans.
- Submittals for these items may not be required. A list of pre-approved sequences is available from the producer or the Materials & Tests Unit.
- The fabricator may submit these items directly to the Structures Management Unit.
- The two sets of preliminary submittals required by Article 1072-8 of the *Standard Specifications* are not required for these items.
- Submittals for Fabrication Drawings are not required. Submittals for Catalogue Cuts of Proposed Material are required. See Section 5.A of the referenced provision.
- Submittals are necessary only when the top slab thickness is 18” or greater.

**GEOTECHNICAL SUBMITTALS**

<b>Submittal</b>	<b>Submittals Required by Geotechnical Engineering Unit</b>	<b>Submittals Required by Structures Management Unit</b>	<b>Contract Reference Requiring Submittal <sup>1</sup></b>
Drilled Pier Construction Plans <sup>2</sup>	Y	N	Subarticle 411-3(A)
Crosshole Sonic Logging (CSL) Reports <sup>2</sup>	Y	N	Subarticle 411-5(A)(2)

Pile Driving Equipment Data Forms <sup>2,3</sup>	Y	N	Subarticle 450-3(D)(2)
Pile Driving Analyzer (PDA) Reports <sup>2</sup>	Y	N	Subarticle 450-3(F)(3)
Retaining Walls <sup>4</sup>	Y; drawings and calculations	Y; drawings	Applicable Provisions
Temporary Shoring <sup>4</sup>	Y; drawings and calculations	Y; drawings	“Temporary Shoring” & “Temporary Soil Nail Walls”

**FOOTNOTES**

1. References are provided to help locate the part of the contract where the submittals are required. References in quotes refer to the provision by that name. Subarticles refer to the *Standard Specifications*.
2. Submit one hard copy of submittal to the Engineer. Submit a second copy of submittal electronically (PDF via email), US mail or other delivery service to the appropriate Geotechnical Engineering Unit regional office. Electronic submission is preferred.
3. The Pile Driving Equipment Data Form is available from:  
[https://connect.ncdot.gov/resources/Geological/Pages/Geotech\\_Forms\\_Details.aspx](https://connect.ncdot.gov/resources/Geological/Pages/Geotech_Forms_Details.aspx)  
 See second page of form for submittal instructions.
4. Electronic copy of submittal is required. See referenced provision.

**CRANE SAFETY**

**(6-20-19)**

Comply with the manufacturer specifications and limitations applicable to the operation of any and all cranes and derricks. Prime contractors, sub-contractors, and fully operated rental companies shall comply with the current Occupational Safety and Health Administration (OSHA) regulations.

Submit all items listed below to the Engineer prior to beginning crane operations. Changes in personnel or equipment must be reported to the Engineer and all applicable items listed below must be updated and submitted prior to continuing with crane operations.

**CRANE SAFETY SUBMITTAL LIST**

- A. **Competent Person:** Provide the name and qualifications of the “Competent Person” responsible for crane safety and lifting operations. The named competent person will have the responsibility and authority to stop any work activity due to safety concerns.
- B. **Riggers:** Provide the qualifications and experience of the persons responsible for rigging operations. Qualifications and experience should include, but not be limited to, weight

calculations, center of gravity determinations, selection and inspection of sling and rigging equipment, and safe rigging practices.

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

## **GROUT FOR STRUCTURES**

**(12-1-17)**

### **DESCRIPTION**

This special provision addresses grout for use in pile blockouts, grout pockets, shear keys, dowel holes and recesses for structures. This provision does not apply to grout placed in post-tensioning ducts for bridge beams, girders, decks, end bent caps, or bent caps. Mix and place grout in accordance with the manufacturer's recommendations, the applicable sections of the Standard Specifications and this provision.

### **MATERIAL REQUIREMENTS**

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

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

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

### **SAMPLING AND PLACEMENT**

Place and maintain components in final position until grout placement is complete and accepted. Concrete surfaces to receive grout shall be free of defective concrete, laitance, oil, grease, and other foreign matter. Saturate concrete surfaces with clean water and remove excess water prior to placing grout.

### **BASIS OF PAYMENT**

No separate payment will be made for "Grout for Structures". The cost of the material, equipment, labor, placement, and any incidentals necessary to complete the work shall be considered incidental to the structure item requiring grout.

**SPECIAL PROVISIONS FOR PROTECTION OF RAILROAD INTEREST**

Under the terms of these provisions, the North Carolina Department of Transportation shall hereinafter be called “Sponsor”, and CSX Transportation, Inc. shall hereinafter be called “Railroad”.

The attached **CSXT Special Provisions, CSXT Construction Submission Criteria, CSXT Insurance Requirements for Public Projects, and CSX Transportation, Inc. Temporary Right of Entry Agreement** for this project, as may be modified herein compared to those found in the CSX Transportation *Public Projects Information Manual For Construction and Improvement Projects That May Involve the Railroad* to be project-specific, and the attached project-specific Construction Requirements shall serve as the basis for the Railroad provisions of this contract. The following additional statements are to be included as addenda to the attached provisions:

- Requirements throughout these provisions placed on “Agency or its Contractor” shall be the sole responsibility of the Contractor unless specifically stated otherwise elsewhere within these provisions. All contractor costs for railroad coordination shall be considered incidental to the other pay items.
- Unless noted elsewhere in these provisions, all contact with Railroad should be addressed to the below individual who shall be considered the CSXT Representative.

Doug Barber  
CE&I Lead  
AECOM  
(704) 295-2431 (Direct)  
(919) 791-9777 (Mobile)  
[Doug.Barber@aecom.com](mailto:Doug.Barber@aecom.com)

- The Engineer shall be considered the Agency Representative.
- All required work plan submissions for each phase of the project shall be forwarded to and accepted in writing by the Railroad prior to proceeding with the work of that phase. Up to thirty (30) days will be required to review each submission. Up to an additional thirty (30) days will be required to review each subsequent submission returned not marked “Conforms As Noted”.
- The Contractor shall be responsible to have painted on the structures the DOT Number 244186R assigned to the existing Locust Street pedestrian bridge over the CSXT Z-183.27. These numbers shall be affixed at a location on either side of the CSXT tracks or property and in a manner such that it can be readily discerned and visible from track level. The font size of the DOT # numbers and letter should be at least four inches (4”) tall and shall be black on a light-colored background or white on a dark-colored background of the grade separation component.
- CSXT Special Provisions Section VI.A – The following paragraph shall be added as the second paragraph:

The Department will bear all railroad costs incidental to such crossings including flagging and services performed by Railroad personnel. Written approval from the Engineer is required prior to use of the crossings. The Contractor shall sequence construction to minimize the duration the crossing(s) remain in-place. The Contractor shall reimburse the Department for any costs of the flagging for the crossing outside of the duration approved by the Engineer. Cost of the installation, maintenance and removal of the temporary crossing(s) incurred by the Contractor will be considered incidental to the other pay items.

- CSXT Special Provisions Section XII.C – Flagging requests should be made to [FLAGGING@aecom.com](mailto:FLAGGING@aecom.com). Termination or cancellation of flagger requires ten (10) days' written notice to avoid incurring costs.
- CSXT Special Provisions Section XII.D – The following paragraph shall be added as the second paragraph:

Should violations of Railroad policy or unscheduled, unauthorized work by the Contractor result in additional full time flagging being required by the Railroad, the additional cost of such flagging above normal flagging cost shall be deducted from the final payment to the Contractor as provided in Article 109-9 of the Standard Specifications. Neither Department nor Railroad will be liable for damages resulting from unscheduled or unauthorized work.

- CSXT Special Provisions Section XII.E – Include the following sentence at the end of the paragraph:

The Contractor shall reimburse the Department for any costs of the flagging which is required for work for the benefit of the Contractor.

- CSXT Insurance Requirements for Public Projects Section I.4.d – The Project Description and Designation on the Declarations shall read:

Spruce Pine, Mitchell County, North Carolina, Rehabilitation of Locust Street Pedestrian Bridge over CSXT, Southern West Zone, Blue Ridge Subdivision, DOT No. 244186R, CSXT OP No. NC1011

- CSXT Insurance Requirements for Public Projects Section II.1 – Insurance documents shall be submitted to the Sponsor at the following address:

NCDOT Rail Division  
Engineering & Safety Branch  
C/O State Railroad Agent  
1556 Mail Service Center  
Raleigh, NC 27699-1556

- The Contractor shall not commence any work on railroad rights-of-way until a fully executed copy of the attached CSX Transportation Inc. Temporary Right of Entry Agreement has been received and all other requirements of these provisions for commencement of work have

been completed.

- The Contractor will be responsible to obtain from CSXT any easements required by CSXT for the performance of the work based on the Contractor’s proposed site access plan and means and methods. Construction shall not commence until such time that the easements have been recorded and receipt of the associated fees have been acknowledged by CSXT.
- Construction shall not commence until such time that a license agreement between CSXT and the Town of Spruce Pine for the existing overhead bridge is in place and receipt of the associated fees have been acknowledged by CSXT.
- Train Data

<b>Bridge</b>	<b>Milepost</b>	<b>Crossing #</b>	<b>Trains/ Day</b>	<b>Speed</b>	<b>No. of Tracks</b>
600240	Z-183.27	244186R	2	20	2

**CSXT SPECIAL PROVISIONS  
(Date Issued: April 2022)**

DEFINITIONS:

As used in these Special Provisions, all capitalized terms shall have the meanings ascribed to them by the Agreement, and the following terms shall have the meanings ascribed to them below:

“CSXT” shall mean CSX Transportation, Inc., its successors and assigns.

“CSXT Representative” shall mean the authorized representative of CSX Transportation, Inc.

“Agreement” shall mean the Agreement to which this Exhibit C is made a part thereof and as may be amended from time to time.

“Agency” shall mean the **North Carolina Department of Transportation**.

“Agency Representative” shall mean the authorized representative of **North Carolina Department of Transportation**.

“Contractor” shall have the meaning ascribed to such term by the Agreement.

“Work” shall mean the Project as described in the Agreement.

**I. AUTHORITY OF CSXT ENGINEER**

The CSXT Representative shall have final authority in all matters affecting the safe maintenance of CSXT operations and CSXT property, and his or her approval shall be obtained by the Agency or its Contractor for methods of construction to avoid interference with CSXT operations and CSXT property and all other matters contemplated by the Agreement and these Special Provisions.

## II. INTERFERENCE WITH CSXT OPERATIONS

- A. Agency or its Contractor shall arrange and conduct its work so that there will be no interference with CSXT operations, including, but not limited to: train, signal, telephone and telegraphic services, or damage to CSXT's property, or to poles, wires, and other facilities of tenants on CSXT's Property or right-of-way. Agency or its Contractor shall store materials so as to prevent trespassers from causing damage to trains, or CSXT Property. Whenever Work is likely to affect the operations or safety of trains, the method of doing such Work shall first be submitted to the CSXT Representative for approval, but such approval shall not relieve Agency or its Contractor from liability in connection with such Work.
- B. If conditions arising from or in connection with the Project require that immediate and unusual provisions be made to protect train operation or CSXT's property, Agency or its Contractor shall make such provision. If the CSXT Representative determines that such provision is insufficient, CSXT may, at the expense of Agency or its Contractor, require or provide such provision as may be deemed necessary, or cause the Work to cease immediately.
- C. Should work activities be required within CSXT property or right-of-way, the Contractor shall request CSXT to locate any buried utilities or facilities (air lines, wells, etc.). A written request shall be delivered to the CSXT Representative at least five (5) days in advance. The traditional "One Call" utility locate services are not responsible for locating any CSXT undergrade utilities or facilities.

## III. INSURANCE

The Contractor shall not be permitted to work on, or have potential to foul, CSXT property or right-of-way until CSXT has acknowledged written acceptance of the insurance coverages for the proposed project. See CSXT INSURANCE REQUIREMENTS FOR PUBLIC PROJECTS following these CSXT SPECIAL PROVISIONS.

## IV. NOTICE OF STARTING WORK

Agency or its Contractor shall not commence any work on CSXT Property or rights-of-way until it has complied with the following conditions:

- A. Notify CSXT in writing of the date that it intends to commence Work on the Project. Such notice must be received by CSXT at least ten (10) business days in advance of the date Agency or its Contractor proposes to begin Work on CSXT property. The notice must refer to this Agreement by date. If flagging service is required, such notice shall be submitted at least thirty (30) business days in advance of the date scheduled to commence the Work.
- B. Obtain authorization, through the Notice to Proceed, from the CSX Representative to begin Work on CSX property. Once authorization is given, Agency or Contractor



shall provide a detailed schedule to include means and methods for review, comment, and/or approval prior to commencement of work. CSXT will in turn provide direction regarding specific conditions with which it must comply.

- C. Obtain from CSXT the names, addresses and telephone numbers of CSXT's personnel who must receive notice under provisions in the Agreement. Where more than one individual is designated, the area of responsibility of each shall be specified.

#### V. WORK FOR THE BENEFIT OF THE CONTRACTOR

- A. No temporary or permanent changes to wire lines or other facilities (other than third party fiber optic cable transmission systems) on CSXT property that are considered necessary to the Work are anticipated or shown on the Plans. If any such changes are, or become, necessary in the opinion of CSXT or Agency, such changes will be covered by appropriate revisions to the Plans and by preparation of a force account estimate. Such force account estimate may be initiated by either CSXT or Agency, but must be approved by both CSXT and Agency. Agency or Contractor shall be responsible for arranging for the relocation of the third party fiber optic cable transmission systems, at no cost or expense to CSXT.
- B. Should Agency or Contractor desire any changes in addition to the above, then it shall make separate arrangements with CSXT for such changes to be accomplished at the Agency or Contractor's expense.

#### VI. HAUL ACROSS RAILROAD

- A. If Agency or Contractor desires access across CSXT property or tracks at other than an existing and open public road crossing in or incident to construction of the Project, the Agency or Contractor must first obtain the permission of CSXT and shall execute a license agreement or right of entry satisfactory to CSXT, wherein Agency or Contractor agrees to bear all costs and liabilities related to such access.
  - 1. Temporary construction haul roads across CSXT tracks will require a separate application and payment to CSXT Property Services. Agreement extensions require additional payment. Actual cost is variable and project specific. Additional information can be found at this URL: <https://www.csx.com/index.cfm/customers/value-added-services/property-real-estate/permitting-utility-installations-and-rights-of-entry/>.
- B. Agency and Contractor shall not cross CSXT's property and tracks with vehicles or equipment of any kind or character, except at such crossing or crossings as may be permitted pursuant to this section.

#### VII. COOPERATION AND DELAYS

- A. Agency or Contractor shall arrange a schedule with CSXT for accomplishing stage construction involving work by CSXT. In arranging its schedule, Agency or

Contractor shall ascertain, from CSXT, the lead time required for assembling crews and materials and shall make due allowance therefor.

- B. Agency or Contractor may not charge any costs or submit any claims against CSXT for hindrance or delay caused by railroad traffic; work done by CSXT or other delay incident to or necessary for safe maintenance of railroad traffic; or for any delays due to compliance with these Special Provisions.
- C. Agency and Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.
- D. Agency and Contractor understand and agree that CSXT does not assume any responsibility for work performed by others in connection with the Project. Agency and Contractor further understand and agree that they shall have no claim whatsoever against CSXT for any inconvenience, delay or additional cost incurred by Agency or Contractor on account of operations by others.

#### VIII. STORAGE OF MATERIALS AND EQUIPMENT

Agency and Contractor shall not store their materials or equipment on CSXT's property or where they may potentially interfere with CSXT's operations, unless Agency or Contractor has received CSXT Representative's prior written permission. Agency and Contractor understand and agree that CSXT will not be liable for any damage to such materials and equipment from any cause and that CSXT may move, or require Agency or Contractor to move, such material and equipment at Agency's or Contractor's sole expense. To minimize the possibility of damage to the railroad tracks resulting from the unauthorized use of equipment, all grading or other construction equipment that is left parked near the tracks unattended by watchmen shall be immobilized to the extent feasible so that it cannot be moved by unauthorized persons.

#### IX. CONSTRUCTION PROCEDURES

- A. General
  - 1. Construction work on CSXT property shall be subject to CSXT's inspection and approval.
  - 2. Construction work on CSXT property shall be in accord with CSXT's Construction Submission Criteria, latest edition and CSXT's written outline of specific conditions and with these Special Provisions.
  - 3. Contractor shall observe the terms and rules of the CSXT Safe Way manual, which Agency and Contractor shall be required to obtain from CSXT, and in accord with any other instructions furnished by CSXT or CSXT's Representative. Failure to comply with the terms of the agreement and CSXT

rules can result in mandatory railroad worker protective training for the Agency, Contractor and its subcontractors.

**B. Blasting**

1. Agency or Contractor shall obtain CSXT Representative's and Agency Representative's prior written approval for use of explosives on or adjacent to CSXT property. If permission for use of explosives is granted, Agency or Contractor must comply with the following:
  - a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of Agency or Contractor.
  - b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
  - c. No blasting shall be done without the presence of an authorized representative of CSXT. At least thirty (30) days' advance written notice to CSXT Representative is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.
  - d. Agency or Contractor must have at the Project site adequate equipment, labor and materials, and allow sufficient time, to (i) clean up (at Agency's expense) debris resulting from the blasting without any delay to trains; and (ii) correct (at Agency's expense) any track misalignment or other damage to CSXT's property resulting from the blasting, as directed by CSXT Representative, without delay to trains. If Agency's or Contractor's actions result in delay of any trains, including Amtrak passenger trains, Agency shall bear the entire cost thereof.
  - e. Agency and Contractor shall not store explosives on CSXT property.
2. CSXT Representative will:
  - a. Determine the approximate location of trains and advise Agency or Contractor of the approximate amount of time available for the blasting operation and clean-up.
  - b. Have the authority to order discontinuance of blasting if, in his or her opinion, blasting is too hazardous or is not in accord with these Special Provisions.

**X. ENVIRONMENTAL**

- A. Should soil excavation within CSXT property be anticipated and said soils cannot remain on CSXT property during and after construction, then CSXT Environmental must be contacted at least thirty (30) days in advance of the work in order to schedule sampling, classification and disposition of material. Excavated material is prohibited from being removed from CSXT property, or rights-of-way, without expressed written direction from CSXT. Should final disposition require disposal of excavated material, CSXT shall have sole discretion of means and location of said disposal. The project sponsor or Agency will bear all costs associated with sampling, staging and subsequent disposal if deemed necessary. Contractor will be required to obtain all disposal tickets / documentation and provide the information to the CSXT Representative. CSXT will not bear any costs associated with this work.
- B. Any waste materials generated by the Project, including but not limited to washing with cleaning solvents, blasting, scraping, brushing and painting operations, shall be the responsibility of the Agency or its Contractor and shall be contained, collected and properly disposed of by the Agency or its Contractor. Agency and its Contractor agree to fully comply with all federal, state, and local environmental laws, regulations, statutes and ordinances at all times.

#### XI. MAINTENANCE OF DITCHES ADJACENT TO CSXT TRACKS

Agency or Contractor shall maintain all ditches and drainage structures free of silt or other obstructions that may result from their operations. In addition, Agency or Contractor shall maintain all CSXT property or right-of-way impacted by project operations including but not limited to; access or haul roads, staging areas, parking lots in a manner that provides CSXT free and clear access to facilities, materials while providing acceptable driving surfaces free of drainage impacts or reduced CSXT capacity. Agency or Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including either (1) silt fence; (2) hay or straw barrier; (3) berm or temporary ditches; (4) sediment basin; (5) aggregate checks; and (6) channel lining. All such maintenance and repair of damages due to Agency's or Contractor's operations shall be performed at Agency's expense.

#### XII. TRACK PROTECTION / INSPECTION SERVICE

- A. CSXT has sole authority to determine the need for track protection required to protect its operations and property. In general, track protection will be required whenever Agency or Contractor or their equipment are, or are likely to be, working within fifty (50) feet of live track or other track clearances specified by CSXT, or over tracks.
- B. Agency shall reimburse CSXT directly for all costs of track protection that is required on account of construction within CSXT property shown in the Plans, or that is covered by an approved plan revision, supplemental agreement or change order.
- C. Agency or Contractor shall give a minimum of thirty (30) days' advance written notice to CSXT Representative for anticipated need for track protection. No work

shall be undertaken until the flag person(s) is/are at the job site. If it is necessary for CSXT to advertise a flagging job for bid, it may take up to ninety (90) days to obtain this service and CSXT shall not be liable for the cost of delays attributable to obtaining such service.

- D. CSXT shall have the right to assign an individual to the site of the Project to perform inspection service whenever, in the opinion of CSXT Representative, such inspection may be necessary. Agency shall reimburse CSXT for the costs incurred by CSXT for such inspection service. Inspection service shall not relieve Agency or Contractor from liability.
- E. CSXT shall render invoices for, and Agency shall pay for, the actual pay rate of the flagpersons and inspectors used, plus standard additives, whether that amount is above or below the rate provided in the Estimate. If the rate of pay that is to be used for inspector or flagging service is changed before the work is started or during the progress of the work, whether by law or agreement between CSXT and its employees, or if the tax rates on labor are changed, bills will be rendered by CSXT and paid by Agency using the new rates. Agency and Contractor shall perform their operations that require track protection or inspection service in such a manner and sequence that the cost of such will be as economical as possible.

### XIII. UTILITY FACILITIES ON CSXT PROPERTY

Agency shall arrange, upon approval from CSXT, to have any utility facilities on or over CSXT Property changed as may be necessary to provide clearances for the proposed trackage.

### XIV. CLEAN-UP

Agency or Contractor, upon completion of the Project, shall remove and dispose from CSXT's Property any temporary construction work, any temporary erosion control measures used to control drainage, all machinery, equipment, surplus materials, falsework, rubbish, or temporary buildings belonging to Agency or Contractor. Agency or Contractor, upon completion of the Project, shall leave CSXT Property in neat condition, satisfactory to the CSXT Representative.

### XV. FAILURE TO COMPLY

If Agency or Contractor violate or fail to comply with any of the requirements of these Special Provisions, (a) CSXT may require Agency and/or Contractor to vacate CSXT Property; and (b) CSXT may withhold monies due Agency and/or Contractor; (c) CSXT may require Agency to withhold monies due Contractor; and (d) CSXT may cure such failure and the Agency shall reimburse CSXT for the cost of curing such failure.

## **CSXT INSURANCE REQUIREMENTS FOR PUBLIC PROJECTS (Last Revised April 2022)**

**I. Insurance Policies:**

Agency and Contractor, if and to the extent that either is performing work on or about CSXT's property, shall procure and maintain the following insurance policies:

1. Commercial General Liability coverage at their sole cost and expense with limits of not less than \$5,000,000 in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured. The policy shall include endorsement ISO CG 24 17 evidencing that coverage is provided for work within 50 feet of a railroad. If such endorsement is not included, railroad protective liability insurance must be provided as described in item 4 below.
2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than \$1,000,000, which insurance must contain a waiver of subrogation against CSXT and its affiliates (if permitted by state law).
3. Commercial automobile liability insurance with limits of not less than \$1,000,000 combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured. The policy shall include endorsement ISO CA 20 70 evidencing that coverage is provided for work within 50 feet of a railroad. If such endorsement is not included, railroad protective liability insurance must be provided as described in item 4 below.
4. Railroad protective liability insurance with limits of not less than \$5,000,000 combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of \$10,000,000, which insurance shall satisfy the following additional requirements:
  - a. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance - Insurance Services Office (ISO) Form CG 00 35.
  - b. CSX Transportation must be the named insured on the Railroad Protective Insurance Policy.
  - c. Name and Address of Contractor and Agency must appear on the Declarations page.
  - d. Description of operations must appear on the Declarations page and must match the Project description.
  - e. Authorized endorsements must include the Pollution Exclusion Amendment - CG 28 31, unless using form CG 00 35 version 96 and later.
  - f. Authorized endorsements may include:
    - (i). Broad Form Nuclear Exclusion - IL 00 21
    - (ii) 30-day Advance Notice of Non-renewal or cancellation

- (iii) Required State Cancellation Endorsement
- (iv) Quick Reference or Index - CL/IL 240

g. Authorized endorsements may not include:

- (i) A Pollution Exclusion Endorsement except CG 28 31
- (ii) A Punitive or Exemplary Damages Exclusion
- (iii) A “Common Policy Conditions” Endorsement
- (iv) Any endorsement that is not named in Section 4 (e) or (f) above.
- (v) Policies that contain any type of deductible

- 5. All insurance companies must be A. M. Best rated A- and Class VII or better.
- 6. The CSX OP number or CSX contract number, as applicable, must appear on each Declarations page and/or certificates of insurance.
- 7. Such additional or different insurance as CSXT may require.

II. Additional Terms

- 1. Contractor must submit the original Railroad Protective Liability policy, Certificates of Insurance and all notices and correspondence regarding the insurance policies to:

Insurance Department  
CSX Transportation, Inc.  
500 Water Street, C-907  
Jacksonville, FL 32202

OR

[insurancedocuments@csx.com](mailto:insurancedocuments@csx.com) and [Doug. Barber@aecom.com](mailto:Doug.Barber@aecom.com) and [Victoria.Plunkey@aecom.com](mailto:Victoria.Plunkey@aecom.com)

- 2. Neither Agency nor Contractor may begin work on the Project until it has received CSXT’s written approval of the required insurance.

**CSX TRANSPORTATION CONSTRUCTION SUBMISSION CRITERIA  
(Date Issued: April 2022)**

INTRODUCTION

SECTION I: Definitions

SECTION II: Construction Submissions

SECTION III: Hoisting Operations

## SECTION IV: Demolition Procedure

## SECTION V: Erection Procedure

## SECTION VI: Temporary Excavation and Shoring

## SECTION VII: Track Monitoring

## INTRODUCTION

The intent of this document is to guide outside agencies and their Contractors when performing work on, over, or with potential to impact CSXT property (ROW). Work plans shall be submitted for review to the designated CSXT Engineering Representative for all work which presents the potential to affect CSXT property or operations; this document shall serve as a guide in preparing these work plans. All work shall be performed in a manner that does not adversely impact CSXT operations or safety; as such, the requirements of this document shall be strictly adhered to, in addition to all other applicable standards associated with the construction. Applicable standards include, but are not limited to, CSXT Standards and Special Provisions, CSXT Insurance Requirements, CSXT Pipeline Occupancy Criteria, as well as the governing local, county, state and federal requirements. It shall be noted that this document and all other CSXT standards are subject to change without notice, and future revisions will be made available at the CSXT website: [www.csx.com](http://www.csx.com).

## I. DEFINITIONS

1. Agency – The project sponsor (i.e., State DOT, Local Agencies, Private Developer, etc.)
2. AREMA – American Railway Engineering and Maintenance-of-Way Association – the North American railroad industry standards group. The use of this term shall be in specific reference to the AREMA Manual for Railway Engineering.
3. Construction Submission – The Agency or its representative shall submit six (6) sets of plans, supporting calculations, and detailed means and methods procedures for the specific proposed activity. All plans, specifications, and supporting calculations shall be signed/sealed by a Professional Engineer as defined below.
4. Controlled Demolition – Removal of an existing structure or subcomponents in a manner that positively prevents any debris or material from falling, impacting, or otherwise affecting CSXT employees, equipment or property. Provisions shall be made to ensure that there is no impairment of railroad operations or CSXT’s ability to access its property at all times.
5. Contractor – The Agency’s representative retained to perform the project work.
6. Engineer – CSXT Engineering Representative or a GEC authorized to act on the behalf of CSXT.
7. Flagman – A qualified CSXT employee with the sole responsibility to direct or restrict movement of trains, at or through a specific location, to provide protection for workers.
8. GEC – General Engineering Consultant who has been authorized to act on the behalf of CSXT.



9. Horizontal Clearance – Distance measured perpendicularly from centerline of any track to the nearest obstruction at any elevation between TOR and the maximum vertical clearance of the track.
10. Professional Engineer – An engineer who is licensed in State or Commonwealth in which the project is to occur. All plans, specifications, and supporting calculations shall be prepared by the Licensed Professional Engineer and shall bear his/her seal and signature.
11. Potential to Foul – Work having the possibility of impacting CSXT property or operations; defined as one or more of the following:
  - a. Any activity where access onto CSXT property is required.
  - b. Any activity where work is being performed on CSXT ROW.
  - c. Any excavation work adjacent to CSXT tracks or facilities, within the Theoretical Railroad Live Load Influence Zone, or where the active earth pressure zone extends within the CSXT property limits.
  - d. The use of any equipment where, if tipped and laid flat in any direction (360 degrees) about its center pin, can encroach within twenty five feet (25'-0") of the nearest track centerline. This is based upon the proposed location of the equipment during use, and may be a function of the equipment boom length. Note that hoisting equipment with the potential to foul must satisfy the 150% factor of safety requirement for lifting capacities.
  - e. Any work where the scatter of debris, or other materials has the potential to encroach within twenty five feet (25'-0") of the nearest track centerline.
  - f. Any work where significant vibration forces may be induced upon the track structure or existing structures located under, over, or adjacent to the track structure.
  - g. Any other work which poses the potential to disrupt rail operations, threaten the safety of railroad employees, or otherwise negatively impact railroad property, as determined by CSXT.
12. ROW – Right of Way; Refers to CSXT Right-of-Way as well as all CSXT property and facilities. This includes all aerial space within the property limits, and any underground facilities.
13. Submission Review Period - a minimum of thirty (30) days in advance of start of work. Up to thirty (30) days will be required for the initial review response. Up to an additional thirty (30) days may be required to review any/all subsequent submissions or resubmission.
14. Theoretical Railroad Live Load Influence Zone – A 1 horizontal to 1 vertical theoretical slope line starting at bottom corner of tie.
15. TOR – Top of Rail. This is the base point for clearance measurements. It refers to the crown (top) of the steel rail; the point where train wheels bear on the steel rails.
16. Track Structure – All load bearing elements which support the train. This includes, but is not

limited to, the rail, ties, appurtenances, ballast, sub-ballast, embankment, retaining walls, and bridge structures.

17. Vertical Clearance – Distance measured from TOR to the lowest obstruction within six feet (6'-0") of the track centerline, in either direction.

## II. GENERAL SUBMISSION REQUIREMENTS

- A. A construction work plan is required to be submitted by the Agency or its Contractor, for review and acceptance, prior to accessing or performing any work with Potential to Foul.
- B. The Agency or its representative shall submit six (6) sets of plans, specifications, supporting calculations, and detailed means and methods procedures for the specific proposed work activity.
- C. Construction submissions shall include all information relevant to the work activity, and shall clearly and concisely explain the nature of the work, how it is being performed, and what measures are being taken to ensure that railroad property and operations are continuously maintained.
- D. All construction plans shall include a map of the work site, depicting the CSXT tracks, the CSXT right of way, proposed means of access, proposed locations for equipment and material staging (dimensioned from nearest track centerline), as well as all other relevant project information. An elevation drawing may also be necessary in order to depict clearances or other components of the work.
- E. Please note that CSXT will not provide pricing to individual contractors involved in bidding projects. Bidding contractors shall request information from the agency and not CSXT.
- F. The Contractor shall install a geotextile fabric ballast protection system to prevent construction or demolition debris and fines from fouling ballast. The geotextile ballast protection system shall be installed and maintained by the Contractor to the satisfaction of the Engineer.
- G. The Engineer shall be kept aware of the construction schedule. The Contractor shall provide timely communication to the Engineer when scheduling the work such that the Engineer may be present during the work. The Contractor's schedule shall not dictate the work plan review schedule, and flagging shall not be scheduled prior to receipt of an accepted work plan.
- H. At any time during construction activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances that may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.
- I. Blasting will not be permitted to demolish a structure over or within CSXT's right-of-way. When blasting off of CSXT property but with Potential to Foul, vibration monitoring, track settlement surveying, and/or other protective measures may be required as determined by the Engineer.
- J. Blasting is not permitted adjacent to CSXT right-of-way without written approval from the Chief Engineer, CSXT.

- K. Mechanical and chemical means of rock removal must be explored before blasting is considered. If written permission for the use of explosives is granted, the Agency or Contractor must submit a work plan satisfying the following requirements:
1. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Agency or Contractor.
  2. Electronic detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
  3. No blasting shall be done without the presence of an authorized representative of CSXT. Advance notice to the Engineer is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.
  4. Agency or Contractor must have at the project site adequate equipment, labor and materials, and allow sufficient time, to clean up debris resulting from the blasting and correct any misalignment of tracks or other damage to CSXT property resulting from the blasting. Any corrective measures required must be performed as directed by the Engineer at the Agency's or Contractor's expense without any delay to trains. If Agency's or Contractor's actions result in the delay of any trains including passenger trains, the Agency or Contractor shall bear the entire cost thereof.
  5. The Agency or Contractor may not store explosives on CSXT property.
  6. At any time during blasting activities, the Engineer may require revisions to the previously approved procedures to address weather, site conditions or other circumstances that may create a potential hazard to rail operations or CSXT facilities. Such revisions may require immediate interruption or termination of ongoing activities until such time the issue is resolved to the Engineer's satisfaction. CSXT and its GEC shall not be responsible for any additional costs or time claims associated with such revisions.

### III. HOISTING OPERATIONS

- A. All proposed hoisting operations with Potential to Foul shall be submitted in accordance with the following:
1. A plan view drawing shall depict the work site, the CSXT track(s), the proposed location(s) of the lifting equipment, as well as the proposed locations for picking, any intermediate staging, and setting the load(s). All locations shall be dimensioned from centerline of the nearest track. Crane locations shall also be dimensioned from a stationary point at the work site for field confirmation.
  2. Computations showing the anticipated weight of all picks. Computations shall be made based upon the field-verified plans of the existing structure. Pick weights shall account for the weight of concrete rubble or other materials attached to the component being removed; this includes the weight of subsequent rigging devices/components. Rigging components shall be sized for the subsequent pick weight.
  3. All lifting equipment, rigging devices, and other load bearing elements shall have a rated (safe

lifting) capacity that is greater than or equal to 150% of the load it is carrying, as a factor of safety. Supporting calculations shall be furnished to verify the minimum capacity requirement is maintained for the duration of the hoisting operation.

4. Dynamic hoisting operations are prohibited when carrying a load with the Potential to Foul. Cranes or other lifting equipment shall remain stationary during lifting. (i.e., no moving picks).
5. For lifting equipment, the manufacturer's capacity charts, including crane, counterweight, maximum boom angle, and boom nomenclature is to be submitted.
6. A schematic rigging diagram must be provided to clearly call out each rigging component from crane hook to the material being hoisted. Copies of catalog or information sheets shall be provided to verify rigging weights and capacities.
7. For built-up rigging devices, the contractor shall submit the following:
  - i. Details of the device, calling out material types, sizes, connections and other properties.
  - ii. Load test certification documents and/or design computations bearing the seal and signature of a Professional Engineer. Load test shall be performed in the configuration of its intended use as part of the subject demolition procedure.
  - iii. Copies of the latest inspection reports of the rigging device. The device shall be inspected within one (1) calendar year of the proposed date for use.
8. A detail shall be provided showing the crane outrigger setup, including dimensions from adjacent slopes or facilities. The detail shall indicate requirements for bearing surface preparation, including material requirements and compaction efforts. As a minimum, outriggers and/or tracks shall bear on mats, positioned on level material with adequate bearing capacity.
9. A complete written narrative that describes the sequence of events, indicating the order of lifts and any repositioning or re-hitching of the crane(s).

#### IV. DEMOLITION PROCEDURE

- A. The Agency or its Contractor shall submit a detailed procedure for a controlled demolition of any structure on, over, or adjacent to the ROW. The controlled demolition procedure must be approved by the Engineer prior to beginning work on the project.
- B. Existing Condition of structure being demolished:
  1. The Contractor shall submit as-built plans for the structure(s) being demolished.
  2. If as-built plans are unavailable, the Contractor shall perform an investigation of the structure, including any foundations, substructures, etc. The field measurements are to be made under the supervision of the Professional Engineer submitting the demolition procedure. Findings shall be submitted as part of the demolition means and methods submittal for review by the Engineer.

3. Any proposed method for temporary stabilization of the structure during the demolition shall be based on the existing plans or investigative findings, and submitted as part of the demolition means and methods for review by the Engineer.
- C. Demolition work plans shall include a schematic plan depicting the proposed locations of the following, at various stages of the demolition:
1. All cranes and equipment, calling out the operating radii.
  2. All proposed access and staging locations with all dimensions referenced from the center line of the nearest track.
  3. Proposed locations for stockpiling material or locations for truck loading.
  4. The location, with relevant dimensions, of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions.
  5. Note that no crane or equipment may be set on the CSXT rails or track structure and no material may be dropped on CSXT property.
- D. Demolition submittal shall also include the following information:
1. All hoisting details, as dictated by Section III of this document.
  2. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical subtasks (i.e., torch/saw cutting various portions of the superstructure or substructure, dismantling splices, installing temporary bracing, etc.) shall be furnished so that the potential impact(s) to CSXT operations may be assessed and eliminated or minimized.
  3. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.
  4. Design and supporting calculations shall be prepared, signed, and sealed by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review. A guardrail will be required to be installed in a track in the proximity of temporary bents or shoring towers, when located within twelve feet (12'-0") from the centerline of the track. The guardrail will be installed by CSXT forces, at the expense of the Agency or its contractor.
- E. Girders or girder systems shall be stable at all times during demolition. Temporary bracing shall be provided at the piers, abutments, or other locations to resist overturning and/or buckling of the member(s). The agency shall submit a design and details of the proposed temporary bracing system, for review by the Engineer. Lateral wind forces for the temporary conditions shall be considered in accordance with AREMA, Chapter 8, Section 28.6.2. The minimum lateral wind pressure shall be fifteen pounds per square foot (15 psf).
- F. Existing, obsolete, bridge piers shall be removed to a minimum of three feet (3'-0") below the

finished grade, final ditch line invert, or as directed by the Engineer.

G. A minimum quantity of twenty five (25) tons of CSXT approved granite track ballast may be required to be furnished and stockpiled on site by the Contractor, or as directed by the Engineer.

H. The use of acetylene gas is prohibited for use on or over CSXT property. Torch cutting shall be performed utilizing other materials such as propane.

I. CSXT's tracks, signals, structures, and other facilities shall be protected from damage during demolition of existing structure or replacement of deck slab.

J. Demolition Debris Shield

1. On-track or ground-level debris shields (such as crane mats) are prohibited for use by CSXT.
2. Demolition Debris Shield shall be installed prior to the demolition of the bridge deck or other relevant portions of the structure. The demolition debris shield shall be erected from the underside of the bridge over the track area to catch all falling debris. The debris shield shall not be the primary means of debris containment.
  - i. The demolition debris shield design and supporting calculations, all signed/sealed by a Professional Engineer, shall be submitted for review and acceptance.
  - ii. The demolition debris shield shall have a minimum design load of 50 pounds per square foot (50 psf) plus the weight of the equipment, debris, personnel, and all other loads.
  - iii. The Contractor shall verify the maximum particle size and quantity of the demolition debris generated during the procedure does not exceed the shield design loads. Shield design shall account for loads induced by particle impact; however the demolition procedure shall be such that impact forces are minimized. The debris shield shall not be the primary means of debris containment.
  - iv. The Contractor shall include installation/removal means and methods for the demolition debris shield as part of the proposed Controlled Demolition procedure submission.
  - v. The demolition debris shield shall provide twenty three feet (23'-0") minimum vertical clearance, or maintain the existing vertical clearance if the existing clearance is less than twenty three feet (23'-0").
  - vi. Horizontal clearance to the centerline of the track should not be reduced unless approved by the Engineer.
  - vii. The Contractor shall clean the demolition debris shield daily or more frequently as dictated either by the approved design parameters or as directed by the Engineer.

K. Vertical Demolition Debris Shield

1. This type of shield may be required for substructure removals in close proximity to CSXT track and other facilities, as determined by the Engineer.
2. The Agency or its Contractor shall submit detailed plans with detailed calculations, prepared, signed, and sealed by a Professional Engineer, of the protection shield.

#### V. ERECTION PROCEDURE

- A. The Agency or its Contractor shall submit a detailed procedure for erection of a structure with Potential to Foul. The erection procedure must be approved by the Engineer prior to beginning work on the project.
- B. Erection work plans shall include a schematic plan depicting the following, at all stages of the construction:
  1. All proposed locations of all cranes and equipment, calling out the operating radii.
  2. All proposed access and staging locations with all dimensions referenced from the center line of the nearest track.
  3. All proposed locations for stockpiling material or locations for truck loading.
  4. The location, with relevant dimensions, of all tracks, other railroad facilities; wires, poles, adjacent structures, or buried utilities that could be affected, showing that the proposed lifts are clear of these obstructions.
- C. No crane or equipment may be set on the CSXT rails or track structure and no material may be dropped on CSXT property.
- D. For erection of a structure over the tracks, the following information shall be submitted for review and acceptance by the Engineer, at least thirty (30) days prior to erection:
  1. As-built beam seat elevations – field surveyed upon completion of pier/abutment construction.
  2. Current Top of Rail (TOR) elevations – field measured at the time of as-built elevation collection.
  3. Computations verifying the anticipated minimum vertical clearance in the final condition which accounts for all deflection and camber, based upon the current TOR and as-built beam seat elevations. The anticipated minimum vertical clearance shall be greater than or equal to that which is indicated by the approved plans. Vertical clearance (see definitions) is measured from TOR to the lowest point on the overhead structure at any point within six feet (6'-0") from centerline of the track. Calculations shall be signed and sealed by a Professional Engineer.
- E. Girders or girder systems shall be stable at all times during erection. No crane may unhook prior to stabilizing the beam or girder.

1. Lateral wind forces for the temporary conditions shall be considered in accordance with AREMA, Chapter 8, Section 28.6.2. The minimum lateral wind pressure shall be fifteen pounds per square foot (15 psf).
2. Temporary bracing shall be provided at the piers, abutments, or other locations to resist overturning and/or buckling of the member(s). The agency shall submit a design and details of the proposed temporary bracing system, for review by the Engineer.
3. Temporary bracing shall not be removed until sufficient lateral bracing or diaphragm members have been installed to establish a stable condition. Supporting calculations, furnished by the Professional Engineer, shall confirm the stable condition.

F. Erection procedure submissions shall also include the following information:

1. All hoisting details, as dictated by Section III of this document.
2. A time schedule for each of the various stages must be shown as well as a schedule for the entire lifting procedure. The proposed time frames for all critical subtasks (i.e., performing aerial splices, installing temporary bracing, installation of diaphragm members, etc.) shall be furnished so that the potential impact(s) to CSXT operations may be assessed and eliminated or minimized.
3. The names and experience of the key Contractor personnel involved in the operation shall be included in the Contractor's means and methods submission.
4. A guardrail will be required to be installed in a track in the proximity of temporary bents or shoring towers, when located within twelve feet (12'-0") from the centerline of the track. The guardrail will be installed by CSXT forces, at the expense of the Agency or its Contractor.
5. Design and supporting calculations prepared by the Professional Engineer for items including the temporary support of components or intermediate stages shall be submitted for review.

## VI. TEMPORARY EXCAVATION AND SHORING

- A. The Agency or its Contractor shall submit a detailed design and procedure for the installation of a sheeting/shoring system adjacent to the tracks. Shoring protection shall be provided when excavating with Potential to Foul, or as otherwise determined by CSXT. Shoring shall be provided in accordance with the AREMA, except as noted below.
- B. Shoring may not be required if all of the following conditions are satisfied:
  1. The excavation does not encroach within the Theoretical Live Load Influence Zone. Please refer to Figure 1.
  2. The track structure is situated on level ground, or in a cut section, and on stable soil.
  3. The excavation does not adversely impact the stability of a CSXT facility (i.e., signal bungalow, drainage facility, undergrade bridge, building, etc), or the stability of any structure on, over, or adjacent to CSXT property with potential to foul.



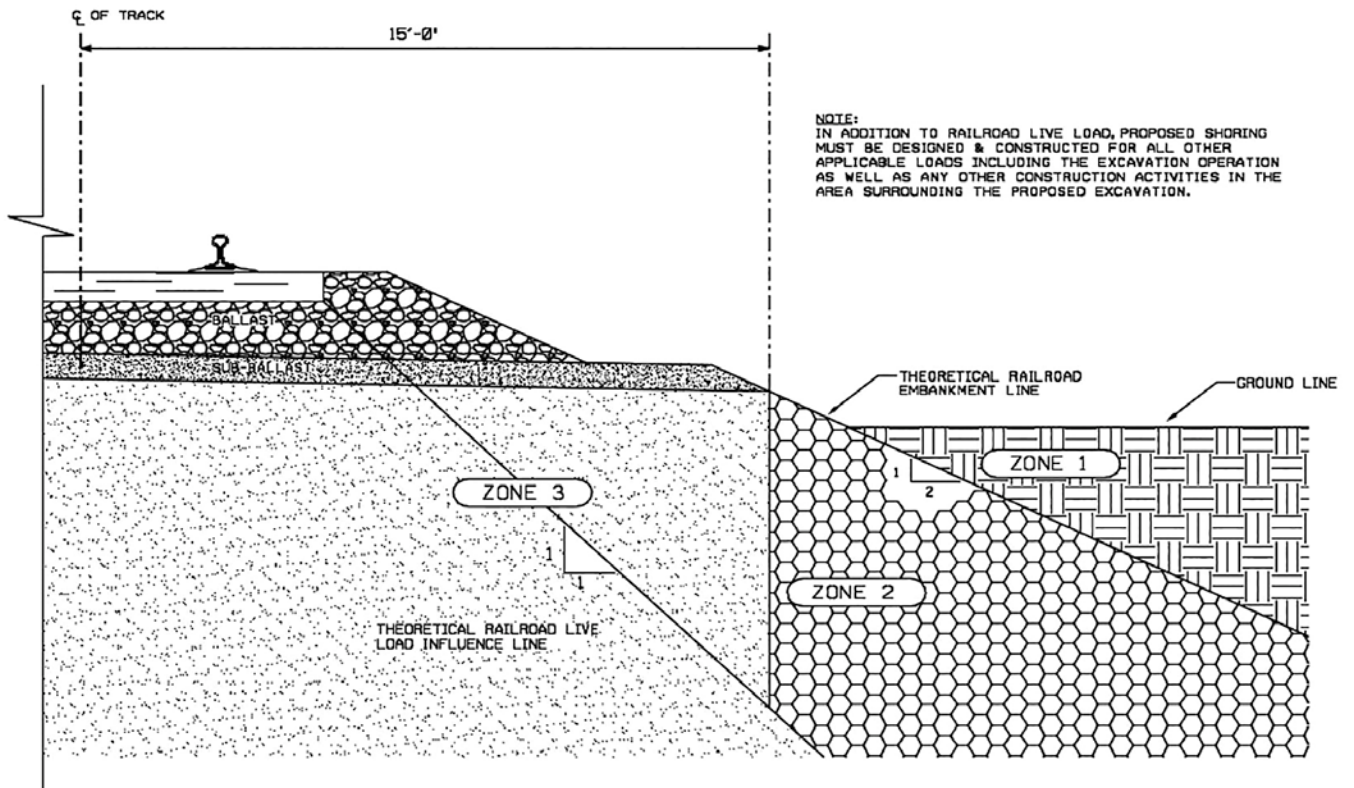
4. Shoring is not required by any governing federal, state, local or other construction code.
- C. Shoring is required when excavating the toe of an embankment. Excavation of any embankment which supports an active CSXT track structure without shoring will not be permitted.
  - D. Trench boxes are not an acceptable means of shoring. Trench boxes are prohibited for use on CSXT property or within the Theoretical Railroad Live Load Influence Zone.
  - E. Shoring shall be a cofferdam-type, which completely encloses the excavation. However, where justified by site or work conditions, partial cofferdams with open sides away from the track may be permissible, as determined by the Engineer.
  - F. Cofferdams shall be constructed using interlocking steel sheet piles, or when approved by the Engineer, steel soldier piles with timber lagging. Wales and struts shall be included when dictated by the design.
  - G. The use of tiebacks can be permissible for temporary shoring systems, when conditions warrant. Tiebacks shall have a minimum clear cover of 6'-0", measured from the bottom of the rail. Upon completion of the work, tiebacks shall be grouted, cut off, and remain in place.
  - H. All shoring systems on, or adjacent to CSXT right-of-way, shall be equipped with railings or other fall protection, compliant with the governing federal, state or local requirements. Area around pits shall be graded to eliminate all potential tripping hazards.
  - I. Interlocking steel sheet piles shall be used for shoring systems qualifying one or more of the following conditions:
    1. Within 18'-0" of the nearest track centerline
    2. Within the live load influence zone
    3. Within slopes supporting the track structure
    4. As otherwise deemed necessary by the Engineer.
  - J. Sheet piles qualifying for one or more of the requirements listed in Section VI.I (above) of this document shall not be removed. Sheet piles shall be left in place and cut off a minimum of 3'-0" below the finished grade, the ditch line invert, or as otherwise directed by the Engineer. The ground shall be backfilled and compacted immediately after sheet pile is cut off.
  - K. The following design considerations shall be considered when preparing the shoring design package:
    1. Shoring shall be designed to resist a vertical live load surcharge of 1,880 lbs. per square foot, in addition to active earth pressure. The surcharge shall be assumed to act on a continuous strip, eight feet six inches (8'-6") wide. Lateral pressures due to surcharge shall be computed using the strip load formula shown in AREMA Manual for Railway Engineering, Chapter 8, Part 20.

2. Allowable stresses in materials shall be in accordance with AREMA Chapter 7, 8, and 15.3.
  3. A minimum horizontal clearance of ten feet (10'-0") from centerline of the track to face of nearest point of shoring shall be maintained, provided a twelve feet (12'-0") roadbed is maintained with a temporary walkway and handrail system.
  4. For temporary shoring systems with Potential to Foul, piles shall be plumb under full dead load. Maximum deflection at the top of wall, under full live load, shall be as follows:
    - i. One-half (1/2) inch for walls within twelve feet (12'-0") of track centerline (Measured from centerline of the nearest track to the nearest point of the supporting structure).
    - ii. One (1) inch for walls located greater than twelve feet (12'-0") from track centerline
- L. Shoring work plans shall be submitted in accordance with Section II of this document, as well as the following additional requirements:
1. The work plan shall include detailed drawings of the shoring systems calling out the sizes of all structural members, details of all connections. Both plan and elevation drawings shall be provided, calling out dimensions from the face of shoring relative to the nearest track centerline. The elevation drawing shall also show the height of shoring, and track elevation in relation to bottom of excavation.
  2. Full design calculations for the shoring system shall be furnished.
  3. A procedure for cutting off the sheet pile, backfilling and restoring the embankment.

## VII. TRACK MONITORING

- A. When work being performed has the potential to disrupt the track structure, a work plan must be submitted detailing a track monitoring program which will serve to monitor and detect both horizontal and vertical movement of the CSXT track and roadbed.
- B. The program shall specify the survey locations, the distance between the location points, and frequency of monitoring before, during, and after construction. CSXT reserves to the right to modify the survey locations and monitoring frequency as necessary during the project.
- C. The survey data shall be collected in accordance with the approved frequency and immediately furnished to the Engineer for analysis.
- D. If any movement has occurred as determined by the Engineer, CSXT will be immediately notified. CSXT, at its sole discretion, shall have the right to immediately require all contractor operations to be ceased, have the excavated area immediately backfilled and/or determine what corrective action is required. Any corrective action required by CSXT or performed by CSXT including the monitoring of corrective action of the contractor will be at project expense.

FIGURE 1: Theoretical Live Load Influence Zone



**NORMAL REQUIREMENTS FOR SHORING ADJACENT TO TRACK**



**ZONE 1** - EXCAVATIONS ABOVE AND OUTSIDE OF THE THEORETICAL RAILROAD EMBANKMENT LINE - DO NOT NORMALLY REQUIRE SHORING TO PROTECT RAILROAD ROADBED, SHORING MAY BE REQUIRED FOR OTHER REASONS.



**ZONE 2** - EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 2 REQUIRE SHORING, BUT THE SHORING MAY NORMALLY BE PULLED AFTER THE EXCAVATION HAS BEEN BACKFILLED.



**ZONE 3** - EXCAVATIONS WHOSE BOTTOMS EXTEND INTO ZONE 3 WILL NORMALLY REQUIRE THE SHORING TO BE LEFT IN PLACE AND CUT-OFF 3' BELOW BASE OF RAIL. SHORING MUST BE DESIGNED FOR COOPER E88 LIVE LOAD

**CONSTRUCTION REQUIREMENTS**

When performing work on, over, or adjacent to CSX Transportation ("CSXT") right-of-way or operations, the North Carolina Department of Transportation ("NCDOT") selected contractor ("Contractor") must abide by the current CSXT Special Provisions, CSXT Construction Submission Criteria, and the following additional requirements.

1. All construction related correspondence shall be directed electronically to AECOM, acting as the Construction Monitoring Representative ("CMR") on behalf of CSXT, with the following contact and address:

Doug Barber  
6000 Fairview Road  
Suite 200  
Charlotte, NC 28210  
[Doug.Barber@aecom.com](mailto:Doug.Barber@aecom.com)  
Telephone: (704) 295-2431

All email correspondence with CSXT/AECOM should use the subject line "(Subject of Transmission) - NC1011 - Spruce Pine, NC - Locust Street Pedestrian Bridge - BROH - 49282 - 244186R - Southern West Zone - Blue Ridge Sub - Z-183.27 - Task 1186.2".

Failure to use this subject line may result in delayed project handling.

2. Prior to construction, NCDOT or Contractor shall provide an electronic copy of the entire and complete set of Final Approved-For-Construction Plans for the subject project to the CMR. Any subsequent revisions or addendums to the Final Approved-For-Construction Plans shall also be provided.
3. Prior to any construction activities on, over, under or adjacent to CSXT, the Contractor shall have a pre-construction meeting with CSXT's designated representative and the CMR to discuss potential On-Track Safety issues during project construction activities.
4. Construction procedures for all work in the vicinity of CSXT property, that has the potential of affecting CSXT property or operations, shall be submitted electronically to the CMR. Prior to the work being performed, the Contractor shall obtain written acceptance of the submitted construction procedures from CSXT or their representative before proceeding with construction.

Up to thirty (30) days will be required to review all construction submissions. Up to an additional thirty (30) days will be required to review any subsequent submissions returned not approved with requests for additional information. Work will not be permitted to commence until the Contractor has provided CSXT with a satisfactory plan for the associated work, detailing how the work will be undertaken without impacting scheduling, performance or safety related issues.

***NOTE: All construction work shall be performed in accordance with the construction procedure reviewed and accepted by CSXT or the CMR. Revisions to Contractor submissions may not be field approved. Any deviation(s) from a previously accepted plan including equipment substitutions will require a formal resubmission of the procedure for review and acceptance prior to performing any work.***

The Contractor shall submit, as separate submittals, the following construction procedures and documents, and any additional construction procedures determined to be necessary by the CSXT or the CMR.

- a. Means and Methods – The Contractor shall develop separate detailed submissions for each work items presenting the potential to impact CSXT property or operations. The work items requiring

submissions should be coordinated with the CMR prior to their development and submission. Each submission shall:

- i. Indicate the progression of work with specific times when tasks will be performed during the project.
- ii. Provide a listing of the anticipated equipment to be used, a marked-up plan with relevant dimensions detailing the location of all equipment to be used, and a contingency plan of action should a primary piece of equipment malfunction.
- iii. Include a detailed narrative discussing the project level coordination of specific work operations and project safety issues between the NCDOT, Contractor, CSXT, and the CMR.
- iv. If determined by CSXT or the CMR to be necessary, include a walkthrough at which time CSXT and/or the CMR will be present.

Anticipated means and methods submissions include, but are not limited to, crane and equipment operations, demolition plans, erection plans and temporary works.

- b. Demolition Procedures, Demolition Debris Shields, and Erection Procedures are required to be submitted to CSXT or the CMR in accordance with the CSXT Construction Submission Criteria.
  - c. Temporary Work Platform and Containment System – Removed paint and debris may not be deposited on the CSXT right-of-way at any time during cleaning and painting operations. Vacuum type systems for paint removal operations to prevent paint and debris deposits are required in lieu of a containment system over the track(s). The Contractor shall submit a containment system for work over CSXT for acceptance by the railroad if the following CSXT horizontal and vertical clearance standards can be maintained. Any temporary containment system shall not encroach horizontally within eighteen feet (18'-0") measured perpendicularly from the centerline of the nearest track. Any containment system must also maintain the existing vertical clearance over all tracks or a minimum of twenty-three feet (23'-0") measured from top of high rail to the lowest point of structure in the clearance area which extends six feet (6'-0") to both sides from centerline of track. The temporary work platform and containment system shall include written installation and removal procedures along with plans and associated details of the proposed system. Engineering calculations that support the proposed temporary work platform and containment system are to be signed and sealed by a Professional Engineer licensed in the state in which the work is being performed. The design of the system shall also be in accordance with OSHA and fully comply with all federal, state, and local environmental laws, regulations, statutes and ordinances at all times.
  - d. Construction Schedule – Within 30 days of the pre-construction meeting, Contractor shall submit a detailed construction schedule for the duration of the project clearly indicating the time periods while working on and around CSXT right-of-way. As the work progresses, this schedule shall be updated and resubmitted as necessary to reflect changes in work sequence, duration and method, etc.
  - e. Emergency Action Plan – Submit an emergency action plan indicating the location of the site, contact numbers, access to the site, instructions for emergency response and location of the nearest hospitals (including map and directions from project site). This plan should cover all items required in the event of an emergency at the site including fire suppression. Coordinate the Emergency Action Plan with the safety related discussion of the Means and Methods submission discussed above. The plan should also include a method to provide this information to each project worker for each day on site.
  - f. COVID Action Plan – Submit an action plan indicating how operations will be handled in the event a team member(s) is infected with COVID-19. This plan shall include details regarding COVID-19 handling, reporting and quarantining guidelines.
5. Ballast Protection – A ballast protection system may be required at the sole discretion of CSXT depending on the contractor's proposed methods to perform the work. The system shall use non-woven geotextile filter fabric and be placed over the entire track structure to keep the ballast clean.

The ballast protection system shall extend along the track structure a minimum of twenty-five feet (25'-0") beyond the limits of work being performed, or greater as determined by CSXT. Additional extents of ballast protection may be required, as determined by the CMR, to ensure protection of the CSXT ballast. The filter fabric shall be sufficiently overlapped and securely fastened to avoid a tripping hazard. The geotextile ballast protection shall be kept clean and maintained during the life of the project to prevent all contaminants from entering the ballast.

6. Submit all necessary insurance information in accordance with the current CSXT Insurance Requirements for approval. The Certificate of Insurance shall be prepared in keeping with the sample included in Exhibit A of this document. The complete original policies should be submitted to [insurancedocuments@csx.com](mailto:insurancedocuments@csx.com) with a copy to the CMR.

The insurance policies will be required to be in place and approved prior to any work commencing on or that could potentially impact CSXT right-of-way. The NCDOT or Contractor shall maintain the necessary insurance coverage throughout the life of the project. Failure to maintain insurance coverage will result in the stoppage of work at no additional cost to CSXT.

As information for use in obtaining the required CSXT insurance, please note that CSXT operates approximately two (2) total freight trains per day at a maximum authorized speed of twenty (20) miles per hour (mph) at the project location.

7. **CSXT Emergency Number:** The CSXT telephone number for emergencies is 800-232-0144. Reference the CSXT Milepost Z-183.27 and DOT# 244186R when calling.
8. No stormwater or construction generated water may discharge onto the CSXT right-of-way at any time during construction.
9. The Contractor must not use CSXT right-of-way for storage of materials or equipment during construction. The CSXT right-of-way must remain clear for railroad use at all times. Equipment may not be positioned to block the railroad access road, track area, or any part of the CSXT right-of-way without prior CSXT approval.
10. No temporary or permanent reductions to the existing horizontal and vertical clearances shall be permitted without prior CSXT approval. All Contractor work shall be performed in strict compliance with CSXT clearance requirements.
11. The Contractor will be required to abide by the provisions of the NCDOT/CSXT Construction Agreement. Periodically, throughout the project duration, the Contractor will be required to meet, discuss, and, if necessary, take immediate action at the discretion of CSXT personnel and/or the CMR to comply with provisions of that agreement and these specifications.
12. The Contractor shall not remove any existing CSXT owned material (including, but not limited to, soil, stone, bridge and retaining wall elements, communications and signals device components, and drainage facilities) from CSXT right-of-way without prior authorization from CSXT. In the event that such material cannot be relocated within CSXT's right-of-way in a manner satisfactory to CSXT, the material shall be properly tested by CSXT for contamination and disposed of in accordance with the CSX disposal policy. All costs associated with testing, coordination and/or disposal will be charged to the project. Initial environmental related requests should be made with the CMR at least thirty (30) days in advance.
13. This project will require use of CSXT Flagmen or Third-Party Field Construction Inspectors (FCI) to protect train operations from project activity in the area of the tracks. While CSXT cannot guarantee the availability of Flagmen or FCIs at all requested times, every accommodation will be extended to the Contractor when forces are available. To request flagging, the Contractor shall submit weekly Flagging Request Forms to [FLAGGING@aecom.com](mailto:FLAGGING@aecom.com) by 5 PM on Monday for work scheduled for the following week. Incomplete or late submissions will not be considered.

14. All crane and equipment operations that could potentially impact CSXT right-of-way must be coordinated with the CSXT Flagman.
15. The Contractor or the NCDOT shall be responsible to have painted on the structure the DOT Number assigned to the grade separation. This number shall be affixed at a location on either side of the CSXT tracks or property and in a manner such that it can be readily discerned and visible from track level. The font size of the DOT # numbers and letter should be at least four inches (4") tall and shall be black on a light-colored background or white on a dark-colored background of the grade separation component.
16. Prior to entering CSXT right-of-way or performing any work that could potentially impact CSXT operations, the Contractor must enter into a fully executed Temporary Right of Entry Agreement with CSXT.
17. Contractor access will be limited to the immediate project area only. The CSXT right-of-way may not be used for contractor access to the project site and no temporary at-grade crossings will be allowed.
18. NCDOT and Contractor agree to fully comply with all federal, state, and local environmental laws, regulations, statutes, and ordinances at all times.
19. Temporary reductions in vertical and horizontal clearances are not permitted.





**CSX Transportation, Inc.  
Temporary Right of Entry Agreement**

**THIS AGREEMENT**, made as of \_\_\_\_\_, 20\_\_, by and between CSX TRANSPORTATION, INC., a Virginia corporation, whose mailing address is 500 Water Street, Jacksonville, Florida 32202, (hereinafter "CSXT") and named Contractor, (\*\*\*\*\*), whose mailing address is (\*\*\*\*\*), (\*\*\*\*\*), (hereinafter "Licensee").

W I T N E S S E T H:

**WHEREAS**, Licensee has submitted a written application to CSXT requesting permission to enter CSXT's property located within the Southern West Zone, Blue Ridge Subdivision, at DOT#: 244186R, MP Z-183.27, Locust Street Pedestrian Path in Spruce Pine, Mitchell County, North Carolina (hereinafter "**Property**"), for the Preservation and Repair of Locust Street Pedestrian Bridge (State Bridge 600240) over CSXT on behalf of the North Carolina Department of Transportation ("**Department**"), on and over the CSXT right of way, (hereinafter "**Project**").

**WHEREAS**, CSXT is willing to grant to Licensee the limited right and permission to enter upon the Property for the limited purpose of performing the Project.

**NOW THEREFORE**, CSXT hereby grants to Licensee the right and permission to enter upon the Property for the purpose of performing said Project, subject to the terms and conditions set forth below:

- 1. **PROJECT:** The Project shall be performed at the entire cost and expense of the Department per the fully executed Construction Agreement between the Department and CSXT for this project, dated \_\_\_\_\_, in accordance with good and sound engineering practices, to the satisfaction of CSXT's Division Engineer or his or her duly authorized representative (hereinafter "Division Engineer") and in a manner to avoid accidents, damages, unnecessary delays to, or interference with train traffic of CSXT. Prior to entry, Licensee shall notify the Division Engineer's representative and arrange for flagging protection in accordance to Sections 5 and 6 of this Agreement. Licensee shall not dig in the ballast line or within the tracks loading influence area, or otherwise disturb the track structure. Licensee and Licensee's employees, agents, contractors (hereinafter "Contractors") and other representatives (hereinafter collectively, "Agents") shall maintain in their possession a copy of this Agreement at all times during their occupation of the Property. Licensee and Agents also further agree to abide by the Special Provisions included as Attachment B to this Agreement.
- 2. **INDEMNITY:**
  - 2.1 Licensee and its Contractors hereby assume risk of and shall indemnify, defend, protect, and save CSXT and CSXT's Affiliates harmless with respect to any and all attorneys' fees, liability, claims, demands, payments, suits, actions, recoveries, penalties, costs, legal expenses, judgments, settlements, and damages of every nature, degree, and kind (including direct, indirect, consequential, incidental, and punitive damages) for:
    - 2.1.1 Personal injury, including, but not limited to bodily injury to or death of any person or persons whomsoever, including the agents, servants, Affiliates or employees of the parties, or the Contractors;
    - 2.1.2 The loss or damage to any property whatsoever, including property owned or in the care, custody, or control of the parties hereto or their respective Affiliates;

## BP-75

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

- 2.1.3 Any environmental damage and any related remediation brought or recovered against CSXT or any of its Affiliates; and
- 2.1.4 Any and all other losses or damages; arising directly or indirectly from the presence of Licensee or its Agents on or about the Property, whether or not attributable in whole or part to the negligence, gross negligence, or intentional misconduct of CSXT or its Affiliates.

2.2 The parties waive any and all right or opportunity to contest the enforceability of this Section and agree that, in the event this Section, or any part of this Section, is found unenforceable by the final, unappealable judgment of a court of competent jurisdiction, this Section shall be construed so as to be enforceable to the maximum extent permitted by applicable law. In the event that such court of competent jurisdiction finds that Florida statutory construction contract indemnity monetary limits apply to this Agreement with respect to Licensee's/Contractors' indemnification of CSXT and its Affiliates for liability caused in whole or in part by any act, omission, or default by CSXT or its Affiliates, the parties hereto agree that such limit shall be equal to the limits (exclusive of deductibles) of the applicable insurance required by Sections 3 and 4 of this Agreement. The parties acknowledge and agree that this monetary limit, if required, bears a commercially reasonable relationship to this Agreement, in so far as, among other factors, the parties have taken into account the availability and cost of insurance and other risk transference devices, the scope of the Project, the risks associated with the Project, and the compensation and any other benefits exchanged between the parties in connection with this Agreement.

- 2.2.1 Licensee shall comply, and shall require its Contractors to comply, with any federal, State, or local laws, statutes, codes, ordinances, rules, and regulations applicable to its presence or performance of any activity on the Property. Licensee and its Contractors shall indemnify, defend, and hold CSXT and its Affiliates harmless with respect to any fines, penalties, liabilities, or other consequences for its failure to so comply.
- 2.2.2 For the purpose of this Agreement, the term "Affiliates" includes all entities, directly or indirectly owned or controlled by, or under common control of a party or its respective officers, directors, employees, and agents, and in the case of CSXT, includes CSX Corporation, CSXT and their Affiliates and their respective officers, directors, employees, and agents.
- 2.2.3 The provisions of this Section shall survive the termination or expiration of this Agreement.

- 3. **GENERAL LIABILITY INSURANCE:** Licensee shall or shall require its Contractor to procure and maintain insurance in compliance with CSXT's insurance requirements attached to this Agreement as Attachment A. Neither the Department nor its Contractor shall commence work on the Project until such policy or policies have been submitted to and approved by CSXT's Risk Management Department.
- 4. **RAILROAD PROTECTIVE LIABILITY INSURANCE:** Licensee shall or shall require its Contractor to procure and maintain Railroad Protective Liability insurance in compliance with CSXT's requirements attached to this Agreement as Attachment A.
- 5. **PRIOR NOTIFICATION:** Licensee or Licensee's Agents shall notify CSXT's General Engineering Consultant (GEC) Representative at least ten (10) days prior to requiring entry on the Property and shall abide by the instructions of the Division Engineer, or his or her authorized representative. CSXT's GEC Representative, AECOM, can be contacted at [FLAGGING@aecom.com](mailto:FLAGGING@aecom.com) to schedule flagging services.
- 6. **CLEARANCES:** Neither Licensee nor Agents shall perform any Project or place or operate any equipment of Licensee or Agents at a distance closer than fifty (50) feet from the center of any track, without the prior approval of the Division Engineer. The Division Engineer may require protective services or such other

## BP-76

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

services as deemed necessary or appropriate. Equipment shall be moved across CSXT's track(s) only at a public crossing unless prior arrangements have been made with the Division Engineer and a Private Crossing Agreement is fully executed and in place. Licensee and Agents shall take all precautions necessary to avoid interference with or damage to CSXT's property and signal and communication facilities during their performance of the Project.

7. **PROTECTIVE SERVICES:** If protective services, such as flagging protection, are required by CSXT, Licensee shall make arrangements with CSXT's GEC Representative to furnish such personnel, flagman, or watchman, that in CSXT's opinion may be necessary to protect the facilities and traffic of CSXT during the performance of the Project.
8. **PAYMENT FOR PROTECTIVE SERVICES:** Payment shall be made by the Department in accordance with the fully executed Construction Agreement between the Department and CSXT for this project.
9. **ENVIRONMENTAL:** **This Agreement does not include and expressly excludes the performance of any site investigation activities designed to determine environmental conditions on, about, or beneath the Property.** Precluded activities include performing soil borings for purposes other than geotechnical investigation; obtaining soil, sediment, groundwater, and surface water samples; and conducting field or laboratory analyses of any soil, sediment, groundwater, or surface water samples obtained from CSXT property to identify chemical composition or environmental condition. *If any type of environmental investigation is desired, a separate right of entry agreement issued through CSXT's Environmental Department must be secured.*
10. **CLAIMS:** Licensee shall, or shall require Agents, to promptly notify the Division Engineer of any loss, damage, injury, or death arising out of or in connection with the Project.
11. **REMEDIATION:** It is understood and agreed that, upon completion of the Project, the Property shall be left in a condition satisfactory to the Division Engineer or his or her duly authorized representative.
12. **SAFETY:**
  - 12.1 All personnel entering the Property must comply with CSXT safety rules and requirements to include, without exception, the wearing of hard hats and approved safety shoes and safety glasses with side shields. Anyone not in compliance with these rules and regulations will be asked to leave the Property.
  - 12.2 Before performing any work authorized by this Agreement, Licensee, at its sole cost and expense, shall obtain all necessary permit(s) (including but not limited to zoning, building, construction, health, safety, or environmental matters), letter(s), or certificate(s) of approval. Licensee expressly agrees and warrants that it shall conform and limit its activities to the terms of such permit(s), approval(s), and authorization(s) and shall comply with all applicable ordinances, rules, regulations, requirements, and laws of any governmental authority (State, federal or local) having jurisdiction over Licensee's activities, including the location, contact, excavation, and protection regulations of the Occupational Safety and Health Act (OSHA) (29 C.F.R. § 1926.651(b), et al.), and State "One Call"-*"Call Before You Dig"* requirements.
13. **TERM:** This Right-of-Entry Agreement and the permission conferred and the license granted by it does not constitute a grant of permanent easement and shall terminate upon completion of the Project or at midnight, [REDACTED], whichever occurs first, unless extended in writing by CSXT. In the event Licensee fails to comply with the terms and provisions of this Agreement, Licensee agrees to pay and agrees that CSXT shall be entitled to recover the costs and expenses incurred by CSXT, including legal fees and expenses, to enforce the terms of this Agreement.

## BP-77

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

14. **SEVERABILITY:** The parties agree that if any part, term, or provision of this Agreement is held to be illegal, unenforceable, or in conflict with any applicable federal, State, or local law or regulation, such part, term, or provision shall be severable, with the remainder of this Agreement remaining valid and enforceable. If any provision or any part of a provision of this Agreement shall be finally determined to be superseded, invalid, illegal, or otherwise unenforceable pursuant to any applicable law, ordinance, rule, or regulation, such determination shall not impair or otherwise affect the validity, legality, or enforceability of the remaining provision or parts of the provision of this Agreement, which shall remain in full force and effect as if the unenforceable provision or part were deleted.
15. **ENTIRE AGREEMENT:** This Agreement embodies the entire understanding of the parties, may not be waived or modified except in a writing signed by authorized representatives of both parties, and supersedes all prior or contemporaneous written or oral understandings, agreements, or negotiations regarding its subject matter.
16. **NOTICES:** All notices, consents, and approvals required or permitted by this Agreement shall be in writing and shall be deemed delivered; upon personal delivery, upon the expiration of three (3) business days following mailing by U.S. first class mail, or upon the next business day following mailing by a nationally recognized overnight carrier, to the Licensee at the address above, and to CSXT at the address shown on Page 1, or at such other addresses as either party may designate by delivery of prior notice to the other party.
17. **TERMINATION:** CSXT shall have the right at any time and at its sole discretion to terminate this Agreement upon notice to Licensee.
18. **WAIVER:** If either party fails to enforce its respective rights under this Agreement or fails to insist upon the performance of the other party's obligations hereunder, such failure shall not be construed as a permanent waiver of any rights or obligations in this Agreement.
19. **GOVERNING LAW; VENUE:** This Agreement shall be governed by and construed under the laws of the State of North Carolina, without regard to the choice of law provisions thereof. Venue for any action arising from, or brought to enforce, this Agreement, shall vest exclusively in the state or federal courts located in Duval County, Florida, and the parties agree to submit to the personal jurisdiction of any state or federal court located in Duval County, Florida.
20. **NO ASSIGNMENT:** Notwithstanding anything to the contrary contained in this Agreement, Licensee shall not permit the Agents to enter the Property without first requiring the Agents to agree in writing to comply with all of the terms of this Agreement. Notwithstanding the foregoing, Licensee shall continue to be responsible for ensuring that the Agents comply with all of the terms and conditions of this Agreement and shall indemnify and hold CSXT harmless for any damages described in Section 2 above caused in whole or in part by such subcontractor. Assignment of this Agreement to any party other than the Agents in accordance with this Section shall not be permitted except upon the prior written consent of CSXT, which consent may be granted or withheld at CSXT's sole discretion. This Agreement shall be binding upon the parties and their respective successors and assigns.

*[Signatures appear on following page]*

**BP-78**

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

**BY SIGNING THIS AGREEMENT**, I certify that there have been no changes made to the content of this Agreement since its approval by the CSXT Legal Department on August 12, 2022.

**IN WITNESS WHEREOF**, the parties hereto have caused this Agreement to be executed as of the day and year first above written.

**CSX TRANSPORTATION, INC.**

By: \_\_\_\_\_

Name: Michael Liebelt  
Title: Project Manager II, Public Projects

(\*\*\*\*\*):

By: \_\_\_\_\_

Print/Type Name: \_\_\_\_\_  
Print/Type Title: \_\_\_\_\_

Who, by the execution hereof, affirms that he/she has the authority to do so and to bind (\*\*\*\*\*) to the terms and conditions of this Agreement.

# BP-79

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

## Attachment A

### INSURANCE REQUIREMENTS

#### II. Insurance Policies:

Department and its Contractor, if and to the extent that either is performing work on or about CSXT's property, shall procure and maintain the following insurance policies:

1. Commercial General Liability coverage at their sole cost and expense with limits of not less than Five Million Dollars (\$5,000,000) in combined single limits for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured. The policy shall include endorsement ISO CG 24 17 evidencing that coverage is provided for work within fifty (50) feet of a railroad. If such endorsement is not included, railroad protective liability insurance must be provided as described in Item 4 below.
2. Statutory Worker's Compensation and Employers Liability Insurance with limits of not less than One Million Dollars (\$1,000,000), which insurance must contain a waiver of subrogation against CSXT and its affiliates (if permitted by state law).
3. Commercial automobile liability insurance with limits of not less than One Million Dollars (\$1,000,000) combined single limit for bodily injury and/or property damage per occurrence, and such policies shall name CSXT as an additional named insured. The policy shall include endorsement ISO CA 20 70 evidencing that coverage is provided for work within fifty (50) feet of a railroad. If such endorsement is not included, railroad protective liability insurance must be provided as described in Item 4 below.
4. Railroad protective liability insurance with limits of not less than Five Million Dollars (\$5,000,000) combined single limit for bodily injury and/or property damage per occurrence and an aggregate annual limit of Ten Million Dollars (\$10,000,000), which insurance shall satisfy the following additional requirements:
  - a. The Railroad Protective Insurance Policy must be on the ISO/RIMA Form of Railroad Protective Insurance - Insurance Services Office (ISO) Form CG 00 35.
  - b. CSX Transportation must be the named insured on the Railroad Protective Insurance Policy.
  - c. Name and Address of Contractor and Department must appear on the Declarations page.
  - d. Description of operations must appear on the Declarations page and must match the Project description.
  - e. Authorized endorsements must include the Pollution Exclusion Amendment - CG 28 31, unless using form CG 00 35 version 96 and later.
  - f. Authorized endorsements may include:
    - (i). Broad Form Nuclear Exclusion - IL 00 21
    - (ii) 30-day Advance Notice of Non-renewal or cancellation
    - (iii) Required State Cancellation Endorsement
    - (iv) Quick Reference or Index - CL/IL 240

## **BP-80**

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

g. Authorized endorsements may not include:

- (i) A Pollution Exclusion Endorsement except CG 28 31
  - (ii) A Punitive or Exemplary Damages Exclusion
  - (iii) A "Common Policy Conditions" Endorsement
  - (iv) Any endorsement that is not named in Section 4 (e) or (f) above.
  - (v) Policies that contain any type of deductible
5. All insurance companies must be A.M. Best rated A- and Class VII or better.
  6. The CSX OP number or CSX contract number, as applicable, must appear on each Declarations page and/or certificates of insurance.
  7. Such additional or different insurance as CSXT may require.

## II. Additional Terms

1. Contractor must submit the original Railroad Protective Liability policy, Certificates of Insurance, and all notices and correspondence regarding the insurance policies to:

Insurance Department  
CSX Transportation, Inc.  
500 Water Street, 14<sup>th</sup> Floor  
Jacksonville, FL 32202

OR

[insurancedocuments@csx.com](mailto:insurancedocuments@csx.com) and [Doug.Barber@aecom.com](mailto:Doug.Barber@aecom.com) and  
[Victoria.Plunkey@aecom.com](mailto:Victoria.Plunkey@aecom.com)

2. Neither Department nor its Contractor may begin work on the Project until it has received CSXT's written approval of the required insurance.

# BP-81

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

## Attachment B

### SPECIAL PROVISIONS

#### DEFINITIONS:

As used in these Special Provisions, all capitalized terms shall have the meanings ascribed to them by the Agreement, and the following terms shall have the meanings ascribed to them below:

“CSXT” shall mean CSX Transportation, Inc., its successors and assigns.

“CSXT Representative” shall mean the authorized representative of CSX Transportation, Inc.

“Agreement” shall mean the Agreement between CSXT and Department dated as of \_\_\_\_\_, 20\_\_\_\_, amended from time to time.

“Department” shall mean the North Carolina Department of Transportation.

“Department Representative” shall mean the authorized representative of the North Carolina Department of Transportation.

“Contractor” shall mean the Licensee identified in the CSX Transportation, Inc. Temporary Right of Entry Agreement to which these provisions are attached.

“Work” shall mean the Project as described in the Agreement.

#### II. AUTHORITY OF CSXT ENGINEER

The CSXT Representative shall have final authority in all matters affecting the safe maintenance of CSXT operations and CSXT property, and his or her approval shall be obtained by the Department or its Contractor for methods of construction to avoid interference with CSXT operations and CSXT property and all other matters contemplated by the Agreement and these Special Provisions.

#### II. INTERFERENCE WITH CSXT OPERATIONS

- A. Department or its Contractor shall arrange and conduct its work so that there will be no interference with CSXT operations, including, but not limited to train, signal, telephone, and telegraphic services, or damage to CSXT’s property, or to poles, wires, and other facilities of tenants on CSXT’s Property or right-of-way. Department or its Contractor shall store materials so as to prevent trespassers from causing damage to trains, or CSXT Property. Whenever Work is likely to affect the operations or safety of trains, the method of doing such Work shall first be submitted to the CSXT Representative for approval, but such approval shall not relieve Department or its Contractor from liability in connection with such Work.
- B. If conditions arising from or in connection with the Project require that immediate and unusual provisions be made to protect train operation or CSXT’s property, Department or its Contractor shall make such provision. If the CSXT Representative determines that such provision is insufficient, CSXT may, at the expense of Department or its Contractor, require or provide such provision as may be deemed necessary, or cause the Work to cease immediately.



## **BP-82**

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

- C. Should work activities be required within CSXT property or right-of-way, the Contractor shall request CSXT to locate any buried utilities or facilities (air lines, wells, etc.). A written request shall be delivered to the CSXT Representative at least five (5) days in advance. The traditional “One Call” utility locate services are not responsible for locating any CSXT undergrade utilities or facilities.

### III. INSURANCE

The Contractor shall not be permitted to work on, or have potential to foul, CSXT property or right-of-way until CSXT has acknowledged written acceptance of the insurance coverages for the proposed project. See CSXT INSURANCE REQUIREMENTS following these CSXT SPECIAL PROVISIONS.

### IV. NOTICE OF STARTING WORK

Department or its Contractor shall not commence any work on CSXT Property or rights-of-way until it has complied with the following conditions:

- A. Notify CSXT in writing of the date that it intends to commence Work on the Project. Such notice must be received by CSXT at least ten (10) business days in advance of the date Department or its Contractor proposes to begin Work on CSXT property. The notice must refer to this Agreement by date. If flagging service is required, such notice shall be submitted at least thirty (30) business days in advance of the date scheduled to commence the Work.
- B. Obtain authorization, through the Notice to Proceed, from the CSXT Representative to begin Work on CSXT property. Once authorization is given, Department or its Contractor shall provide a detailed schedule to include means and methods for review, comment and/or approval prior to commencement of work. CSXT will in turn provide direction regarding specific conditions with which it must comply.
- C. Obtain from CSXT the names, addresses, and telephone numbers of CSXT’s personnel who must receive notice under provisions in the Agreement. Where more than one individual is designated, the area of responsibility of each shall be specified.

### V. WORK FOR THE BENEFIT OF THE CONTRACTOR

- A. No temporary or permanent changes to wire lines or other facilities (other than third party fiber optic cable transmission systems) on CSXT property that are considered necessary to the Work are anticipated or shown on the Plans. If any such changes are, or become, necessary in the opinion of CSXT or Department, such changes will be covered by appropriate revisions to the Plans and by preparation of a force account estimate. Such force account estimate may be initiated by either CSXT or Department but must be approved by both CSXT and Department. Department or its Contractor shall be responsible for arranging for the relocation of the third-party fiber optic cable transmission systems, at no cost or expense to CSXT.
- B. Should Department or its Contractor desire any changes in addition to the above, then it shall make separate arrangements with CSXT for such changes to be accomplished at the Department or its Contractor’s expense.

## **BP-83**

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

### VI. HAUL ACROSS RAILROAD

- A. If Department or its Contractor desires access across CSXT property or tracks at other than an existing and open public road crossing in or incident to construction of the Project, the Department or its Contractor must first obtain the permission of CSXT and shall execute a license agreement or right of entry satisfactory to CSXT, wherein Department or its Contractor agrees to bear all costs and liabilities related to such access.
  1. Temporary construction haul roads across CSXT tracks will require a separate application and payment to CSXT Property Services. Agreement extensions require additional payment. Actual cost is variable and project specific. Additional information can be found at this URL: <https://www.csx.com/index.cfm/customers/value-added-services/property-real-estate/permitting-utility-installations-and-rights-of-entry/>.
- B. Department and its Contractor shall not cross CSXT's property and tracks with vehicles or equipment of any kind or character, except at such crossing or crossings as may be permitted pursuant to this section.

### VII. COOPERATION AND DELAYS

- A. Department or its Contractor shall arrange a schedule with CSXT for accomplishing stage construction involving work by CSXT. In arranging its schedule, Department or its Contractor shall ascertain, from CSXT, the lead time required for assembling crews and materials and shall make due allowance therefor.
- B. Department or its Contractor may not charge any costs or submit any claims against CSXT for hindrance or delay caused by railroad traffic; work done by CSXT or other delay incident to or necessary for safe maintenance of railroad traffic; or for any delays due to compliance with these Special Provisions.
- C. Department and its Contractor shall cooperate with others participating in the construction of the Project to the end that all work may be carried on to the best advantage.
- D. Department and its Contractor understand and agree that CSXT does not assume any responsibility for work performed by others in connection with the Project. Department and its Contractor further understand and agree that they shall have no claim whatsoever against CSXT for any inconvenience, delay or additional cost incurred by Department or its Contractor on account of operations by others.

### VIII. STORAGE OF MATERIALS AND EQUIPMENT

Department and its Contractor shall not store their materials or equipment on CSXT's property or where they may potentially interfere with CSXT's operations, unless Department or its Contractor has received CSXT Representative's prior written permission. Department and its Contractor understand and agree that CSXT will not be liable for any damage to such materials and equipment from any cause and that CSXT may move, or require Department or its Contractor to move, such material and equipment at Department's or its Contractor's sole expense. To minimize the possibility of damage to the railroad tracks resulting from the unauthorized use of equipment, all grading or other construction equipment that is left parked near the tracks unattended by watchmen shall be immobilized to the extent feasible so that it cannot be moved by unauthorized persons.

# BP-84

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

## IX. CONSTRUCTION PROCEDURES

### A. General

1. Construction work on CSXT property shall be subject to CSXT's inspection and approval.
2. Construction work on CSXT property shall be in accord with CSXT's Construction Submission Criteria, latest edition and CSXT's written outline of specific conditions and with these Special Provisions.
3. Contractor shall observe the terms and rules of the CSXT Safe Way manual, which Department and its Contractor shall be required to obtain from CSXT, and in accord with any other instructions furnished by CSXT or CSXT's Representative. Failure to comply with the terms of the agreement and CSXT rules can result in mandatory railroad worker protective training for the Department, Contractor, and its subcontractors.

### B. Blasting

1. Department or its Contractor shall obtain CSXT Representative's and Department Representative's prior written approval for use of explosives on or adjacent to CSXT property. If permission for use of explosives is granted, Department or its Contractor must comply with the following:
  - a. Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of Department or its Contractor.
  - b. Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way train radios.
  - c. No blasting shall be done without the presence of an authorized representative of CSXT. At least thirty (30) days' advance written notice to CSXT Representative is required to arrange for the presence of an authorized CSXT representative and any flagging that CSXT may require.
  - d. Department or its Contractor must have at the Project site adequate equipment, labor, and materials, and allow sufficient time, to (i) clean up (at Department's expense) debris resulting from the blasting without any delay to trains; and (ii) correct (at Department's expense) any track misalignment or other damage to CSXT's property resulting from the blasting, as directed by CSXT Representative, without delay to trains. If Department's or its Contractor's actions result in delay of any trains, including Amtrak passenger trains, Department shall bear the entire cost thereof.
  - e. Department and its Contractor shall not store explosives on CSXT property.
2. CSXT Representative will:
  - a. Determine the approximate location of trains and advise Department or its Contractor of the approximate amount of time available for the blasting operation and clean-up.

## **BP-85**

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

- b. Have the authority to order discontinuance of blasting if, in his or her opinion, blasting is too hazardous or is not in accord with these Special Provisions.

### **X. ENVIRONMENTAL**

- D. Should soil excavation within CSXT property be anticipated and said soils cannot remain on CSXT property during and after construction, then CSXT Environmental must be contacted at least thirty (30) days in advance of the work in order to schedule sampling, classification, and disposition of material. Excavated material is prohibited from being removed from CSXT property, or rights-of-way, without expressed written direction from CSXT. Should final disposition require disposal of excavated material, CSXT shall have sole discretion of means and location of said disposal. The project sponsor or Department will bear all costs associated with sampling, staging, and subsequent disposal if deemed necessary. Contractor will be required to obtain all disposal tickets / documentation and provide the information to the CSXT Representative. CSXT will not bear any costs associated with this work.
- E. Any waste materials generated by the Project, including but not limited to washing with cleaning solvents, blasting, scraping, brushing, and painting operations, shall be the responsibility of the Department or its Contractor and shall be contained, collected, and properly disposed of by the Department or its Contractor. Department and its Contractor agree to fully comply with all federal, State, and local environmental laws, regulations, statutes, and ordinances at all times.

### **XI. MAINTENANCE OF DITCHES ADJACENT TO CSXT TRACKS**

Department or its Contractor shall maintain all ditches and drainage structures free of silt or other obstructions that may result from their operations. In addition, Department or its Contractor shall maintain all CSXT property or right-of-way impacted by project operations including but not limited to; access or haul roads, staging areas, parking lots in a manner that provides CSXT free and clear access to facilities, and materials while providing acceptable driving surfaces free of drainage impacts or reduced CSXT capacity. Department or its Contractor shall provide erosion control measures during construction and use methods that accord with applicable state standard specifications for road and bridge construction, including either (1) silt fence; (2) hay or straw barrier; (3) berm or temporary ditches; (4) sediment basin; (5) aggregate checks; and (6) channel lining. All such maintenance and repair of damages due to Department's or its Contractor's operations shall be performed at Department's expense.

### **XII. TRACK PROTECTION / INSPECTION SERVICE**

- A. CSXT has sole authority to determine the need for track protection required to protect its operations and property. In general, track protection will be required whenever Department or its Contractor or their equipment are, or are likely to be, working within fifty (50) feet of live track or other track clearances specified by CSXT, or over tracks.
- B. Department shall reimburse CSXT directly for all costs of track protection that is required on account of construction within CSXT property shown in the Plans, or that is covered by an approved plan revision, supplemental agreement, or change order.
- C. Department or its Contractor shall give a minimum of thirty (30) days' advance written notice to CSXT Representative for anticipated need for track protection. No work shall be undertaken until the flag person(s) is/are at the job site. If it is necessary for CSXT to advertise a flagging job for

## **BP-86**

Spruce Pine, Mitchell County, North Carolina  
Preservation and Repair of Locust Street Pedestrian Bridge State Bridge 600240) over CSXT  
Southern West Zone, Blue Ridge Subdivision  
DOT No. 244186R, CSXT OP No. NC1011; State #49282

bid, it may take up to ninety (90) days to obtain this service and CSXT shall not be liable for the cost of delays attributable to obtaining such service.

- D. CSXT shall have the right to assign an individual to the site of the Project to perform inspection service whenever, in the opinion of CSXT Representative, such inspection may be necessary. Department shall reimburse CSXT for the costs incurred by CSXT for such inspection service. Inspection service shall not relieve Department or its Contractor from liability.
- E. CSXT shall render invoices for, and Department shall pay for, the actual pay rate of the flagpersons and inspectors used, plus standard additives, whether that amount is above or below the rate provided in the Estimate. If the rate of pay that is to be used for inspector or flagging service is changed before the work is started or during the progress of the work, whether by law or agreement between CSXT and its employees, or if the tax rates on labor are changed, bills will be rendered by CSXT and paid by Department using the new rates. Department and its Contractor shall perform their operations that require track protection or inspection service in such a manner and sequence that the cost of such will be as economical as possible.

### XIII. UTILITY FACILITIES ON CSXT PROPERTY

Department shall arrange, upon approval from CSXT, to have any utility facilities on or over CSXT Property changed as may be necessary to provide clearances for the proposed trackage.

### XIV. CLEAN-UP

Department or its Contractor, upon completion of the Project, shall remove and dispose from CSXT's Property any temporary construction work, any temporary erosion control measures used to control drainage, all machinery, equipment, surplus materials, falsework, rubbish, or temporary buildings belonging to Department or its Contractor. Department or its Contractor, upon completion of the Project, shall leave CSXT Property in neat condition, satisfactory to the CSXT Representative.

### XV. FAILURE TO COMPLY

If Department or its Contractor violate or fail to comply with any of the requirements of these Special Provisions, (a) CSXT may require Department and/or its Contractor to vacate CSXT Property; and (b) CSXT may withhold monies due Department and/or its Contractor; (c) CSXT may require Department to withhold monies due its Contractor; and (d) CSXT may cure such failure and the Department shall reimburse CSXT for the cost of curing such failure.

County: MITCHELL

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
<b>ROADWAY ITEMS</b>						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0022000000-E	225	UNCLASSIFIED EXCAVATION	80 CY		
0003	4457000000-N	SP	TEMPORARY TRAFFIC CONTROL	Lump Sum	L.S.	
0004	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	1 EA		
<b>STRUCTURE ITEMS</b>						
0005	8182000000-E	420	CLASS A CONCRETE (BRIDGE)	3 CY		
0006	8217000000-E	425	REINFORCING STEEL (BRIDGE)	25 LB		
0007	8860000000-N	SP	GENERIC STRUCTURE ITEM CLEANING AND PAINTING OF BRIDGE #240	Lump Sum	L.S.	
0008	8860000000-N	SP	GENERIC STRUCTURE ITEM FIELD MEASURING	Lump Sum	L.S.	
0009	8860000000-N	SP	GENERIC STRUCTURE ITEM PAINTING CONTAINMENT FOR BRIDGE #240	Lump Sum	L.S.	
0010	8860000000-N	SP	GENERIC STRUCTURE ITEM POLLUTION CONTROL	Lump Sum	L.S.	
0011	8860000000-N	SP	GENERIC STRUCTURE ITEM TEMPORARY SHORING	Lump Sum	L.S.	
0012	8867000000-E	SP	GENERIC STRUCTURE ITEM NEW RAIL	809.21 LF		
0013	8869000000-E	SP	GENERIC STRUCTURE ITEM TREATED TIMBER	11.9 MBF		
0014	8881000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE ENCASEMENT	8 CY		
0015	8881000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE REPAIRS ABUTMENT 2	2 CY		

County: MITCHELL

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0016	8881000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE UNDERPINNING	5.1 CY		
0017	8889000000-E	SP	GENERIC STRUCTURE ITEM STEEL REPLACEMENT OR REPAIR	5,839.2 LB		
0018	8892000000-E	SP	GENERIC STRUCTURE ITEM EPOXY COATING	68 SF		
0019	8892000000-E	SP	GENERIC STRUCTURE ITEM SILANE SUBSTRUCTURE TREATMENT	630 SF		
0020	8892000000-E	SP	GENERIC STRUCTURE ITEM SURFACE PREPARATION FOR CONCRETE SUBSTRUCTURE	630 SF		
0021	8897000000-N	SP	GENERIC STRUCTURE ITEM ANTI-SLIP DECK PLATING	72 EA		

0918/Mar31/Q8191.41/D160136600000/E21

Total Amount Of Bid For Entire Project :