

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
HIGHWAY DIVISION 12

PROPOSAL

DATE AND TIME OF BID OPENING: May 12, 2026 AT 2:00 PM

CONTRACT ID: DL00383

WBS ELEMENT NO.: BP12.C004.3

FEDERAL AID NO.: STATE FUNDED

COUNTY: GASTON COUNTY

TIP NO.: NONE

MILES: 0.037

ROUTE NO.: SR 1446 (BESS TOWN RD.)

LOCATION: CULVERT #350312 ON SR1446

***TYPE OF WORK: GRADING, DRAINAGE, PAVING, & CULVERT ***

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 BOND IS REQUIRED.

NAME OF BIDDER

ADDRESS OF BIDDER

**PROPOSAL FOR THE CONSTRUCTION OF
CONTRACT No. DL00383 IN GASTON COUNTY, NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION,
RALEIGH, NORTH CAROLINA**

The Bidder has carefully examined the location of the proposed work to be known as Contract No. **DL00383**; 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 *2024 Standard Specifications for Roads and Structures* by the dates(s) specified in the Project Special Provisions and in accordance with the requirements of the Engineer, and at the unit or lump sum prices, as the case may be, for the various items given on the sheets contained herein.

The Bidder shall provide and furnish all the materials, machinery, implements, appliances and tools, and perform the work and required labor to construct and complete Contract No. **DL00383** in **Gaston County**, for the unit or lump sum prices, as the case may be, bid by the Bidder in his bid and according to the proposal, plans, and specifications prepared by said Department, which proposal, plans, and specifications show the details covering this project, and hereby become a part of this contract.

The published volume entitled *North Carolina Department of Transportation, Raleigh, Standard Specifications for Roads and Structures, January 2024* with all amendments and supplements thereto, is by reference incorporated into and made a part of this contract; that, except as herein modified, all the construction and work included in this contract is to be done in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Engineer.

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

The quantities shown in the itemized proposal for the project are considered to be approximate only and are given as the basis for comparison of bids. The Department of Transportation may increase or decrease the quantity of any item or portion of the work as may be deemed necessary or expedient.

An increase or decrease in the quantity of an item will not be regarded as sufficient ground for an increase or decrease in the unit prices, nor in the time allowed for the completion of the work, except as provided for the contract.

Accompanying this bid is a bid bond secured by a corporate surety, or certified check payable to the order of the Department of Transportation, for five percent of the total bid price, which deposit is to be forfeited as liquidated damages in case this bid is accepted and the Bidder shall fail to provide the required payment and performance bonds with the Department of Transportation, under the condition of this proposal, within 14 calendar days after the written notice of award is received by him, as provided in the *Standard Specifications*; otherwise said deposit will be returned to the Bidder.

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PROPOSAL ITEM SHEET**INSTRUCTIONS TO BIDDERS**

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

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

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

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

ELECTRONIC ON-LINE BID:

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

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

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

SPD 01-410

Any prospective bidder that wishes to bid as a prime contractor on this project shall be prequalified as a “Bidder” or “PO Prime Contractor”.

Prospective bidders shall obtain prequalification approval at least two (2) 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 four (4) weeks before a given letting. A bid shall not be opened unless all prequalification requirements have been met by the bidder and have been found acceptable by the Engineer.

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

BOND REQUIREMENTS:

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

102-8, 102-10

SPD 01-420A

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

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

HAUL ROADS:

(7-16-24)

105

SP1 G04

Revise the *Standard Specifications* as follows:

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

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

CONTRACT TIME AND LIQUIDATED DAMAGES:

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

108

SP1 G08 C

The date of availability for this contract is **June 15, 2026**

The completion date for this contract is **April 15, 2027**.

Except where otherwise provided by the contract, observation periods required by the contract will not be a part of the work to be completed by the completion date and/or intermediate contract times stated in the contract. The acceptable completion of the observation periods that extend beyond the final completion date shall be a part of the work covered by the performance and payment bonds.

The liquidated damages for this contract are **Two Hundred Dollars (\$ 200.00)** per calendar day. These liquidated damages will not be cumulative with any liquidated damages which may become chargeable under Intermediate Contract Time Number 1.

INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES:

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

108

SP1 G13 A

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

The date of availability for this intermediate contract time is **June 15, 2026**.

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

The liquidated damages for this intermediate contract time are **Six Hundred Dollars (\$ 600.00)** per calendar day.

Upon apparent completion of all the work required to be completed by this intermediate date, a final inspection will be held in accordance with Article 105-17 and upon acceptance, the Department will assume responsibility for the maintenance of all work except *Planting, Reforestation* and/or *Permanent Vegetation Establishment*. The Contractor will be responsible for and shall make corrections of all damages to the completed roadway caused by his planting operations, whether occurring prior to or after placing traffic through the project.

PERMANENT VEGETATION ESTABLISHMENT:

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

104

SP1 G16

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

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

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

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.

SPECIALTY ITEMS:

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

108-6

SP1 G37

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

Line #	Description
13 - 14	Fence
25 - 51	Erosion Control

FUEL PRICE ADJUSTMENT:

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

109-8

SP1 G43

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

The base index price for DIESEL #2 FUEL is \$ **4.1435** per gallon. Where any of the following are included as pay items in the contract, they will be eligible for fuel price adjustment.

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

Description	Units	Fuel Usage Factor Diesel
Unclassified Excavation	Gal/CY	0.29
Borrow Excavation	Gal/CY	0.29
Class IV Subgrade Stabilization	Gal/Ton	0.55
Aggregate Base Course	Gal/Ton	0.55
Sub-Ballast	Gal/Ton	0.55
Erosion Control Stone	Gal/Ton	0.55
Rip Rap, Class _____	Gal/Ton	0.55
Asphalt Concrete Base Course, Type _____	Gal/Ton	0.90 or 2.90
Asphalt Concrete Intermediate Course, Type _____	Gal/Ton	0.90 or 2.90
Asphalt Concrete Surface Course, Type _____	Gal/Ton	0.90 or 2.90
Open-Graded Asphalt Friction Course	Gal/Ton	0.90 or 2.90
Permeable Asphalt Drainage Course, Type _____	Gal/Ton	0.90 or 2.90
Sand Asphalt Surface Course, Type _____	Gal/Ton	0.90 or 2.90
Ultra-thin Bonded Wearing Course	Gal/Ton	0.90 or 2.90
Aggregate for Cement Treated Base Course	Gal/Ton	0.55
Portland Cement for Cement Treated Base Course	Gal/Ton	0.55
> 11" Portland Cement Concrete Pavement	Gal/SY	0.327
Concrete Shoulders Adjacent to > 11" Pavement	Gal/SY	0.327
9" to 11" Portland Cement Concrete Pavement	Gal/SY	0.272
Concrete Shoulders Adjacent to 9" to 11" Pavement	Gal/SY	0.272
< 9" Portland Cement Concrete Pavement	Gal/SY	0.245
Concrete Shoulders Adjacent to < 9" Pavement	Gal/SY	0.245

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

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

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

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

SCHEDULE OF ESTIMATED COMPLETION PROGRESS:

(7-15-08)(Rev. 6-17-25)

108-2

SP1 G58

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

	<u>Fiscal Year</u>	<u>Progress (% of Dollar Value)</u>
2026	(7/01/25 - 6/30/26)	5% of Total Amount Bid
2027	(7/01/26 - 6/30/27)	95% of Total Amount Bid

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

MINORITY BUSINESS ENTERPRISE AND WOMEN BUSINESS ENTERPRISE (DIVISIONS):

(10-16-07)(Rev. 10-21-25)

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 owns (or leases) and operates or maintains a factory or establishment that produces on the premises, the materials or supplies obtained by the Contractor. A firm that makes minor modifications to the materials, supplies, articles, or equipment is not a manufacturer.

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

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

Regular Dealer - A firm that owns (or leases), and operates a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in sufficient quantities, and regularly sold to the public in the usual course of business. A regular dealer engages in, as its principal business and in its own name, the purchase and sale or lease of the products in question. A regular dealer in such bulk items as steel, concrete or concrete products, gravel, stone, asphalt and petroleum products need not keep such products in stock, if it owns and operates distribution equipment for the products. Any supplement of regular dealers' own distribution equipment shall be by a long-term operating lease and not on an ad hoc or contract-by-contract basis.

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

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

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

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

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

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

Forms and Websites Referenced in this Provision

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

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

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

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

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

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

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

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

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

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

Combined MBE/WBE Goal

There is NO MBE/WBE Goal for this project.

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 9 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 (2nd and 3rd tier subcontractors).
- (C) Providing interested certified MBEs/WBEs that are also prequalified subcontractors with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

- (D) (1) Negotiating in good faith with interested MBEs/WBEs. It is the bidder's responsibility to make a portion of the work available to MBE/WBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available MBE/WBE subcontractors and suppliers, so as to facilitate MBE/WBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of MBEs/WBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for MBEs/WBEs to perform the work.
- (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including MBE/WBE subcontractors, and would take a firm's price and capabilities as well as the advertised goal into consideration. However, the fact that there may be some additional costs involved in finding and using MBEs/WBEs is not in itself sufficient reason for a bidder's failure to meet the 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 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 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) Manufacturer, Regular Dealer, Distributor

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

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

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

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

Commercially Useful Function

(A) MBE/WBE Utilization

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

(B) MBE/WBE Utilization in Trucking

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

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

MBE or WBE provides on the contract. It should be noted that every effort shall be made by MBE and WBE contractors to subcontract to the same certification (i.e., MBEs to MBEs and WBEs to WBEs), in order to fulfill the participation breakdown. This, however, may not always be possible due to the limitation of firms in the area. If the MBE or WBE firm shows a good faith effort has been made to reach out to similarly certified transportation service providers and there is no interest or availability, and they can get assistance from other certified providers, the Engineer will not hold the prime responsible for meeting the individual MBE or WBE participation breakdown.

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

MBE/WBE Replacement

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

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

day notice period shall begin on the next business day after written notice is provided to the MBE/WBE subcontractor.

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

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

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

(A) Performance Related Replacement

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

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

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

amount of work to meet the Combined MBE/WBE goal requirement. If a MBE/WBE firm is not found to do the same amount of work, a good faith effort must be submitted to NCDOT (see A herein for required documentation).

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

Changes in the Work

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

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

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

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

Reports and Documentation

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

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

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

Reporting Minority and Women Business Enterprise Participation

The Contractor shall provide the Engineer with an accounting of payments made to all MBE 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 *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)(Rev. 3-17-26)

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, NC GS 15A-300, American Security Drone Act of 2023 (ASDA), Office of Management and Budget (OMB) Memorandum M-26-02, all FAA rules, regulations and policies and all NCDOT UAS Policies. The required operator certifications include possessing a current Federal Aviation Administration (FAA) Remote Pilot Certificate, as well as operating a UAS registered with the FAA.

All UAS operations shall be approved by the Engineer prior to beginning the operations.

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

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

EQUIPMENT IDLING GUIDELINES:

(1-19-21)

107

SP1 G096

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

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

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

12. Diesel powered vehicles may idle for up to 30 minutes to minimize restart problems.

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

SUBSURFACE INFORMATION:

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

450

SP1 G112 B

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

MAINTENANCE OF THE PROJECT:

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

104-10

SP1 G125

Revise the *Standard Specifications* as follows:

Page 1-35, Article 104-10 Maintenance of the Project, line 3, add the following after the first sentence of the first paragraph:

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

Page 1-35, Article 104-10 MAINTENANCE OF THE PROJECT, line 8, add the following as the last sentence of the first paragraph:

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

Page 1-35, Article 104-10 MAINTENANCE OF THE PROJECT, lines 20-22, replace the last sentence of the last paragraph with the following:

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

TWELVE MONTH GUARANTEE:

(7-15-03)

108

SP1 G145

- (A) The Contractor shall guarantee materials and workmanship against latent and patent defects arising from faulty materials, faulty workmanship or negligence for a period of twelve months following the date of final acceptance of the work for maintenance and shall replace such defective materials and workmanship without cost to the Department. The Contractor will not be responsible for damage due to faulty design, normal wear and tear, for negligence on the part of the Department, and/or for use in excess of the design.

- (B) Where items of equipment or material carry a manufacturer's guarantee for any period in excess of twelve months, then the manufacturer's guarantee shall apply for that particular piece of equipment or material. The Department's first remedy shall be through the manufacturer although the Contractor is responsible for invoking the warranted repair work with the manufacturer. The Contractor's responsibility shall be limited to the term of the manufacturer's guarantee. NCDOT would be afforded the same warranty as provided by the Manufacturer.

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

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

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

EROSION AND SEDIMENT CONTROL/STORMWATER CERTIFICATION:

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

105-16, 225-2, 16

SP1 G180

General

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

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

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

- (D) *Certified Designer* - Provide a certified designer for the design of the erosion and sediment control/stormwater component of reclamation plans and, if applicable, for the design of the project erosion and sediment control/stormwater plan.

Roles and Responsibilities

- (A) *Certified Erosion and Sediment Control/Stormwater Supervisor* - The Certified Supervisor shall be Level II and responsible for ensuring the erosion and sediment control/stormwater plan is adequately implemented and maintained on the project and for conducting the quality control program. The Certified Supervisor shall be on the project within 24 hours notice from initial exposure of an erodible surface to the project's final acceptance. Perform the following duties:
- (1) **Manage Operations** - Coordinate and schedule the work of subcontractors so that erosion and sediment control/stormwater measures are fully executed for each operation and in a timely manner over the duration of the contract.
 - (a) Oversee the work of subcontractors so that appropriate erosion and sediment control/stormwater preventive measures are conformed to at each stage of the work.
 - (b) Prepare the required National Pollutant Discharge Elimination System (NPDES) Inspection Record and submit to the Engineer.
 - (c) Attend all weekly or monthly construction meetings to discuss the findings of the NPDES inspection and other related issues.
 - (d) Implement the erosion and sediment control/stormwater site plans requested.
 - (e) Provide any needed erosion and sediment control/stormwater practices for the Contractor's temporary work not shown on the plans, such as, but not limited to work platforms, temporary construction, pumping operations, plant and storage yards, and cofferdams.
 - (f) Acquire applicable permits and comply with requirements for borrow pits, dewatering, and any temporary work conducted by the Contractor in jurisdictional areas.
 - (g) Conduct all erosion and sediment control/stormwater work in a timely and workmanlike manner.
 - (h) Fully perform and install erosion and sediment control/stormwater work prior to any suspension of the work.
 - (i) Coordinate with Department, Federal, State and Local Regulatory agencies on resolution of erosion and sediment control/stormwater issues due to the Contractor's operations.
 - (j) Ensure that proper cleanup occurs from vehicle tracking on paved surfaces or any location where sediment leaves the Right-of-Way.
 - (k) Have available a set of erosion and sediment control/stormwater plans that are initialed and include the installation date of Best Management Practices. These practices shall include temporary and permanent groundcover and be properly updated to reflect necessary plan and field changes for use and review by Department personnel as well as regulatory agencies.

- (2) Requirements set forth under the NPDES Permit - The Department's NPDES Stormwater permit (NCS000250) outlines certain objectives and management measures pertaining to construction activities. The permit references *NCG010000, General Permit to Discharge Stormwater* under the NPDES, and states that the Department shall incorporate the applicable requirements into its delegated Erosion and Sediment Control Program for construction activities disturbing one or more acres of land. The Department further incorporates these requirements on all contracted bridge and culvert work at jurisdictional waters, regardless of size. Some of the requirements are, but are not limited to:
- (a) Control project site waste to prevent contamination of surface or ground waters of the state, i.e. from equipment operation/maintenance, construction materials, concrete washout, chemicals, litter, fuels, lubricants, coolants, hydraulic fluids, any other petroleum products, and sanitary waste.
 - (b) Inspect erosion and sediment control/stormwater devices and stormwater discharge outfalls at least once every 7 calendar days and within 24 hours after a rainfall event equal to or greater than 1.0 inch that occurs within a 24 hour period. Additional monitoring may be required at the discretion of Division of Water Resources personnel if the receiving stream is 303(d) listed for turbidity and the project has had documented problems managing turbidity.
 - (c) Maintain an onsite rain gauge or use the Department's Multi-Sensor Precipitation Estimate website to maintain a daily record of rainfall amounts and dates.
 - (d) Maintain erosion and sediment control/stormwater inspection records for review by Department and Regulatory personnel upon request.
 - (e) Implement approved reclamation plans on all borrow pits, waste sites and staging areas.
 - (f) Maintain a log of turbidity test results as outlined in the Department's Procedure for Monitoring Borrow Pit Discharge.
 - (g) Provide secondary containment for bulk storage of liquid materials.
 - (h) Provide training for employees concerning general erosion and sediment control/stormwater awareness, the Department's NPDES Stormwater Permit NCS000250 requirements, and the applicable requirements of the *General Permit, NCG010000*.
 - (i) Report violations of the NPDES permit to the Engineer immediately who will notify the Division of Water Quality Regional Office within 24 hours of becoming aware of the violation.
- (3) Quality Control Program - Maintain a quality control program to control erosion, prevent sedimentation and follow provisions/conditions of permits. The quality control program shall:
- (a) Follow permit requirements related to the Contractor and subcontractors' construction activities.
 - (b) Ensure that all operators and subcontractors on site have the proper erosion and sediment control/stormwater certification.

- (c) Notify the Engineer when the required certified erosion and sediment control/stormwater personnel are not available on the job site when needed.
 - (d) Conduct the inspections required by the NPDES permit.
 - (e) Take corrective actions in the proper timeframe as required by the NPDES permit for problem areas identified during the NPDES inspections.
 - (f) Incorporate erosion control into the work in a timely manner and stabilize disturbed areas with mulch/seed or vegetative cover on a section-by-section basis.
 - (g) Use flocculants approved by state regulatory authorities where appropriate and where required for turbidity and sedimentation reduction.
 - (h) Ensure proper installation and maintenance of temporary erosion and sediment control devices.
 - (i) Remove temporary erosion or sediment control devices when they are no longer necessary as agreed upon by the Engineer.
 - (j) The Contractor's quality control and inspection procedures shall be subject to review by the Engineer. Maintain NPDES inspection records and make records available at all times for verification by the Engineer.
- (B) *Certified Foreman* - At least one Certified Foreman shall be onsite for each type of work listed herein during the respective construction activities to control erosion, prevent sedimentation and follow permit provisions:
- (1) Foreman in charge of grading activities
 - (2) Foreman in charge of bridge or culvert construction over jurisdictional areas
 - (3) Foreman in charge of utility activities
- The Contractor may request to use the same person as the Level II Supervisor and Level II Foreman. This person shall be onsite whenever construction activities as described above are taking place. This request shall be approved by the Engineer prior to work beginning.
- The Contractor may request to name a single Level II Foreman to oversee multiple construction activities on small bridge or culvert replacement projects. This request shall be approved by the Engineer prior to work beginning.
- (C) *Certified Installers* - Provide at least one onsite, Level I Certified Installer for each of the following erosion and sediment control/stormwater crew:
- (1) Seeding and Mulching
 - (2) Temporary Seeding
 - (3) Temporary Mulching
 - (4) Sodding
 - (5) Silt fence or other perimeter erosion/sediment control device installations
 - (6) Erosion control blanket installation
 - (7) Hydraulic tackifier installation
 - (8) Turbidity curtain installation
 - (9) Rock ditch check/sediment dam installation
 - (10) Ditch liner/matting installation
 - (11) Inlet protection

- (12) Riprap placement
- (13) Stormwater BMP installations (such as but not limited to level spreaders, retention/detention devices)
- (14) Pipe installations within jurisdictional areas

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

- (D) *Certified Designer* - Include the certification number of the Level III Certified Designer on the erosion and sediment control/stormwater component of all reclamation plans and if applicable, the certification number of the Level III Certified Designer on the design of the project erosion and sediment control/stormwater plan.

Preconstruction Meeting

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

Ethical Responsibility

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

Revocation or Suspension of Certification

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

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

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

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

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

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

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

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

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

Measurement and Payment

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

PROCEDURE FOR MONITORING BORROW PIT DISCHARGE:

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

105-16, 230, 801

SP1 G181

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

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

- (A) Either cease discharge or modify the discharge volume or turbidity levels to bring the downstream turbidity levels into compliance, or
- (B) Evaluate the upstream conditions to determine if the exceedance of the standard is due to natural background conditions. If the background turbidity measurements exceed the standard, operation of the pit and discharge can continue as long as the stream turbidity levels are not increased due to the discharge.

- (C) Measure and record the turbidity test results (time, date and sampler) at all defined sampling locations 30 minutes after startup and at a minimum, one additional sampling of all sampling locations during that 24-hour period in which the borrow pit is discharging.
- (D) Notify DWQ within 24 hours of any stream turbidity standard exceedances that are not brought into compliance.

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

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

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

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

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

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

NOTES TO CONTRACTOR:

(8-19-25)

SP1 G999A

Riparian Area Restoration

- Replant riparian areas with native, fast-growing tree and shrub species such as American sycamore (*Platanus occidentalis*), river birch (*Betula nigra*), silky dogwood (*Cornus amomum*), and black willow (*Salix nigra*) where vegetation has been removed. Riparian plantings will not occur in utility, drainage, and construction easements. If excess property is available outside normal maintenance limits at bridge locations, riparian plantings will be installed where safety requirements allow.

Tree Clearing and/or Structure Removal Reporting

- For each project involving tree clearing or structure removal, submit final numbers of tree clearing and/or number of structures demolished and the date(s) that these activities actually occurred. This will ensure accurate payments and submittal to USFWS in the required annual report. Numbers must be reported using the link to the PBO Reporting Requirement Form on the Biological Surveys Group (BSG) Connect site here <https://forms.cloud.microsoft/g/iiEeEtHFU4>.

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

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

200

SP2 R02A

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

BURNING RESTRICTIONS:

(7-1-95)

200, 210, 215

SP2 R05

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

SHOULDER AND FILL SLOPE MATERIAL:

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

235, 560

SP2 R45 A

Description

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

Measurement and Payment

Where the material has been obtained from an authorized stockpile or from a borrow source and *Borrow Excavation* is not included in the contract, no direct payment will be made for this work, as the cost of this work will be part of the work being paid at the contract lump sum price for *Grading*. If *Borrow Excavation* is included in this contract and the material has been obtained from an authorized stockpile or from a borrow source, measurement and payment will be as provided in Section 230 of the *Standard Specifications* for *Borrow Excavation*.

CORRUGATED ALUMINUM ALLOY CULVERT PIPE:

(9-21-21)(Rev. 1-16-24)

305, 310

SP3 R34

Revise the *Standard Specifications* as follows:

Page 3-5, Article 305-2, MATERIALS, add the following after line 16:

Item	Section
Waterborne Paint	1080-9
Hot Bitumen	1081-3

Page 3-5, Article 305-3, CONSTRUCTION METHODS, add the following after line 26:

Coating must be applied to the aluminum when in contact with concrete. Immediately prior to coating, aluminum surfaces to be coated shall be cleaned by a method that will remove all dirt, oil, grease, chips, and other foreign substances. Aluminum to be coated shall be given one coat of suitable quality coating such as:

Approved waterborne paint (Section 1080-9)
Approved Hot Bitumen (Section 1081-3)

Other coating materials may be submitted to the Engineer for approval.

Page 3-7, Article 310-6, MEASUREMENT AND PAYMENT, lines 10-11, delete the fourth sentence and replace with the following:

Select bedding and backfill material and coating will be included in the cost of the installed pipe.

CORRUGATED ALUMINUM ALLOY PIPE ARCH CULVERT:

(9-17-24)

310

SP3 R36

Revise the *Standard Specifications* as follows:

Page 3-7, Article 310-6, MEASUREMENT AND PAYMENT, lines 16, delete “ ___ ” C.A.A. Pipe Arch Culvert, ___ ” Thick” and replace with “ ___ ” x ___ ” C.A.A. Pipe Arch Culvert, ___ ” Thick”.

Page 3-7, Article 310-6, MEASUREMENT AND PAYMENT, lines 16, delete “ ___ ” x ___ ” x ___ ” C.A.A. Pipe Arch Tees, ___ ” Thick” and replace with “ ___ ” x ___ ” x ___ ” x ___ ” C.A.A. Pipe Arch Tees, ___ ” Thick”.

Page 3-7, Article 310-6, MEASUREMENT AND PAYMENT, lines 16, delete ___ ” C.A.A. Pipe Arch Elbows, ___ ” Thick” and replace with “ ___ ” x ___ ” C.A.A. Pipe Arch Elbows, ___ ” Thick”.

GEOTEXTILE FOR SUBGRADE STABILIZATION:

(5-15-18)(Rev. 4-16-24)

505, 1056

SP5 R9

Description

Provide geotextile for subgrade stabilization in accordance with the contract. Geotextile for subgrade stabilization is required for subgrades to prevent pavement cracking at locations shown in the plans and as directed by the Engineer.

Materials

Refer to Article 505-2 of the *Standard Specifications*.

Construction Methods

Refer to Article 505-3 of the *Standard Specifications*.

Measurement and Payment

Geotextile for Subgrade Stabilization will be measured and paid in accordance with Article 505-4 of the *Standard Specifications*.

PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:

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

620

SP6 R25

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

The base price index for asphalt binder for plant mix is **\$ 685.00** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **April 1, 2026**.

DELETION OF FINAL SURFACE TESTING REQUIREMENTS:

(1-20-25)

610

SP6 R045A

Revise the *Standard Specifications* as follows:

Pages 6-24 to 6-30, Article 610-13 FINAL SURFACE TESTING AND ACCEPTANCE, delete Article 610-13 in its entirety.

TEMPORARY WOVEN WIRE FENCE:

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

866

SP8 R85

Description

Construct a temporary woven wire fence, posts, gates, and barbed wire at locations shown on the plans.

Materials

Use only fabric and posts that have been approved by the Engineer. Materials shall meet the requirements of Article 866-2 of the *Standard Specifications*.

Construction Methods

Construct the fence in accordance with Subarticle 866-3(C) and the *Roadway Standard Drawing* 866.02. The fence shall be maintained with fabric taut and securely fastened to the posts at all

times. Barbed wire shall be installed along the top of the posts and at any ditch locations as determined by the Engineer.

If at any point during the project the fence is no longer needed, as determined by the Engineer, it will become the property of the Contractor and shall be removed and disposed of by him.

Measurement and Payment

Temporary ___" Woven Wire Fence, Complete with Posts will be measured and paid as the actual number of linear feet of fence constructed and accepted, measured in place from center of end post to center of end post. Such price and payment will be full compensation for all materials, labor, fence maintenance, and incidentals including fence, posts, gates, and barbed wire necessary to satisfactorily complete the work including disassembly and disposal if needed.

Payment will be made under:

Pay Item	Pay Unit
Temporary ___" Woven Wire Fence, Complete with Posts	Linear Foot

ELECTRONIC TICKETING SYSTEM:

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

1020

SP10 R20

Description

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

Electronic Ticketing Requirements

- a. The electronic ticketing system must be fully integrated with the load read-out system at the plant. The system shall be designed so data inputs from scales cannot be altered by either the Contractor or the Department.
- b. Material supplier must test to confirm that ticketing data can be shared from the originating system no less than 30 days prior to project start.
- c. After each truck is loaded, ticket data must be electronically captured, and ticket information uploaded via Application Programming Interface (API) to the Department.
- d. Obtain security token from NCDOT for access to E-Ticketing portal (to send tickets). To request a Security Key, fill out the below E-Ticketing Security Request Form: <https://forms.office.com/g/XnT7QeRtgt>
- e. Obtain API from NCDOT containing the required e-ticketing data fields and format. Download the API from the NCDOT E-ticketing Webpage: <https://connect.ncdot.gov/projects/construction/E-Ticketing/Pages/default.aspx>

- f. Provide all ticket information in real time and daily summaries to the Department's designated web portal. If the project contains locations with limited cellular service, an alternative course of action must be agreed upon.
- g. Electronic ticketing submissions must be sent between the Material Supplier and the Department.
- h. The electronic ticket shall contain the following information:

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

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

Measurement and Payment

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

TIMBER AND LUMBER:

(4-21-26)

235, 866, 1046, 1050, 1082, 1084, 1089, 1540

SP10 R82

Page 2-23, Article 235-2 MATERIALS, line 26, add the following as the third sentence of the fourth paragraph.

Use pressure treated wood bases meeting the requirements of Section 1082.

Page 8-45, Article 866-2 MATERIALS, line 26, replace “1076-7” with “1050-8”.

Page 10-73, Subarticle 1046-3(C) Treated Timber Posts, line 8, replace “treated southern pine” with “pressure treated southern pine”.

Page 10-76, Subarticle 1050-2(A) General, line 3, replace “Use treated southern pine meeting Articles 1082-2 and 1082-3” with “Use pressure treated southern pine meeting Articles 1082-2 and 1082-3”.

Page 10-76, Subarticle 1050-2(A) General, lines 15-16, replace “All round posts” with “All round wood posts and braces”.

Page 10-76, Subarticle 1050-2(A) General, lines 19-20, delete the last sentence of the third paragraph and replace with the following:

The pieces shall show at least 3 annual rings per inch and shall be at least 30% summerwood. All timber and lumber shall conform to the material characteristics detailed in the Southern Pine Inspection Bureau (SPIB) grading rules for the designated grade and may bear the mark of an American Lumber Standards Committee (ALSC) accredited agency.

Page 10-177, Article 1082-1 GENERAL, lines 32-33, delete the first sentence of the first paragraph and replace with the following:

Use southern pine timber and lumber graded in accordance with the current grading rules of the SPIB and manufactured by a Department pre-approved producer/supplier. All timber and lumber shall conform to the material characteristics detailed in the SPIB grading rules for No. 1 Dense or Select Structural (Sel Str.) and bear the mark of an ALSC-accredited agency.

Page 10-177 and 10-178, Article 1082-1 GENERAL, lines 38-42 and line 1, delete the second through fourth sentence of the second paragraph and replace with the following:

Use approved inspection companies listed on the Department’s pre-approved producer/suppliers list. The inspection agency must perform inspections of preservative treated materials in accordance with AWPAs Standard M2. Each item shall bear the brand, hammer mark, ink stamp or tag of the inspection agency to indicate it has been inspected. In lieu of commercial inspection, materials in Section 1082 manufactured by a facility that is audited by an ALSC-accredited agency and bearing the quality mark of that agency shall be acceptable for use. In addition, the Supplier must furnish Type 4 – Certified Test Reports and Type 6 – Supplier’s Certifications in accordance with Article 106-3. Type 6 – Supplier’s Certifications are required for each producer/supplier to include any chain of custody changes from the mill to the Department.

Page 10-178, Article 1082-2 UNTREATED TIMBER AND LUMBER, line 7, replace “Dense” with “Grade No. 1 Dense MC19”.

Page 10-178, Subarticle 1082-3(A) General, line 13, replace “lumber” with “timber and lumber” and replace “will not” with “with”.

Page 10-178, Subarticle 1082-3(B) Bridges, Fender Systems and Piles, lines 22 and 24, replace “Grade No. 1 Dense” with “Grade No. 1 Dense or Select Structural (Sel Str.)”.

Page 10-178, Subarticle 1082-3(B) Bridges, Fender Systems and Piles, lines 24-27, delete the third and fourth sentence of the first paragraph and replace with the following:

Timbers for bridges or fender systems that are 5 inches and thicker along the least dimension shall conform to Grade No. 1 Dense or Select Structural (Sel Str.).

Page 10-178, Subarticle 1082-3(B) Bridges, Fender Systems and Piles, line 28, delete and replace the second paragraph with the following:

Timber for piles shall be southern pine and meet the requirements of ASTM D25.

Page 10-178, Subarticle 1082-3(C) Guardrail Posts, Blockouts and related components, lines 33-34, replace “Southern Pine, conforming to Grade No. 1. Rough lumber will be acceptable.” with “southern pine, conforming to Grade No. 1 Dense.”.

Page 10-178, Subarticle 1082-3(D) Fence Posts and Braces, lines 37-39, delete the first paragraph and replace with the following:

Sawn fence posts and braces shall be southern pine, S4S, and conform to Grade No. 1 Dense.

Page 10-178, Subarticle 1082-3(E) Sign Posts and Battens, lines 42-44, delete the first and second sentence of the first paragraph and replace with the following:

Lumber or timbers for sign posts shall conform to Structural Light Framing, Grade No. 1 Dense.

Page 10-178, Subarticle 1082-3(E) Sign Posts and Battens, line 46, delete the first sentence of the second paragraph.

Page 10-179, Subarticle 1082-3(F) Poles, lines 2-3, delete the first sentence of the first paragraph and replace with the following:

Timber for poles shall be either treated southern pine or coastal douglas-fir and meet the requirements of ANSI O5.1.

Page 10-179, Subarticle 1082-4(A) General, line 8, replace “AASHTO M 133 or AWWA Standards” with “AASHTO M 133 and AWWA Standards”.

Page 10-179, Subarticle 1082-4(A) General, lines 14-15, delete the third paragraph.

Page 10-179, Subarticle 1082-4(A) General, line 19, replace “”areas include” with “areas including, but not limited to,”.

Page 10-179, Subarticle 1082-4(B) Timber Preservatives, line 24, replace “AASHTO M 133 or AWP Standards U1” with “AASHTO M 133 and AWP Standards U1”.

Page 10-179, Subarticle 1082-4(C) Bridges, Fender Systems and Piles, lines 27-28, replace “AASHTO M-133 or AWP Standard U1” with “AASHTO M 133 and AWP Standard U1”.

Page 10-179, Subarticle 1082-4(D) Guardrail Posts, Blockouts and Related Components, lines 32-33, replace “AASHTO M-133 or AWP Standard U1” with “AASHTO M 133 and AWP Standard U1”.

Page 10-179, Subarticle 1082-4(E) Fence Posts and Braces, lines 36 and 38, replace “AASHTO M-133 or AWP Standard U1” with “AASHTO M 133 and AWP Standard U1”.

Page 10-179, Subarticle 1082-4(E) Fence Posts and Braces, line 39, replace “except require retention of preservative as below” with “Commodity Specification B. Posts, UC4A”.

Page 10-180, Subarticle 1082-4(F) Sign Posts and Battens, line 2, replace “AASHTO M-133 or AWP Standard U1” with “AASHTO M 133 and AWP Standard U1”.

Page 10-180, Subarticle 1082-4(G) Poles, line 9, replace “AASHTO M-133 or AWP Standard U1” with “AASHTO M 133 and AWP Standard U1”.

Page 10-180, Subarticle 1084-1(A) Treated Timber Pile, line 16-17, delete and replace the first paragraph with the following:

Treated timber piles shall meet the requirements of Section 1082.

Page 10-195, Subarticle 1089-2(A)(1) Work Zone Signs (Stationary), line 44, add the following sentence to the second paragraph:

Pressure treat wood posts in accordance with Section 1082.

Page 15-18, Article 1540-2 MATERIALS, line 8, replace “1082-3” with “1082”.

GLASS BEAD GRADATION FOR PAVEMENT MARKINGS:

(9-17-24)

1087

SP10 R87

Revise the *Standard Specifications* as follows:

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

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

WORK ZONE INSTALLER:

(7-20-21)(Rev. 4-21-26)

1101

SP11 R04

Page 11-4, Article 1101-14 WORK ZONE INSTALLER, lines 25-26, delete the first sentence of the first paragraph and replace with the following:

When temporary traffic control consists of more than flagging operations, the Contractor shall 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.

CONES:

(3-19-24)

1135

SP11 R35

Revise the *Standard Specifications* as follows:

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

FLAGGERS:

(12-17-24)(Rev. 12-23-25)

1150

SP11 R50

Revise Section 1150 of the *Standard Specification* as follows:

Page 11-13, Article 1150-1, DESCRIPTION, add the following after line 31:

Alternatively, at the discretion of the Contractor, the Contractor may furnish, install, place in operation, repair, maintain, relocate, and remove remotely controlled Automated Flagging Assistance Devices (AFAD) or Temporary Portable Traffic Signal units (PTS units) to assist,

supplement, or replace human flaggers for one-lane, two-way traffic maintenance during construction in accordance with this provision and the *Standard Specifications*.

For the purpose of this provision, an "approach" refers to a single lane of traffic moving in one direction toward a point of control or work zone. Flaggers, AFAD and PTS units are only used to control one lane of approaching traffic in a specific direction.

Page 11-13, Article 1150-2, MATERIALS, add the following after line 34:

Provide documentation to the Engineer that the AFAD or PTS units meets or exceeds the requirements of this special provision and is on the NCDOT APL or ITS and Signals QPL.

(A) Automated Flagging Assistance Devices (AFAD)

(1) AFAD General

Cover the automated gate arm with Department approved Type VII, VIII or IX retroreflective sheeting of vertical alternating red and white stripes at 16 inch intervals measured horizontally. When the gate arm is in the down position the minimum vertical aspect of the arm and sheeting shall be 4 inches. The retroreflectorized sheeting shall be on both sides of the gate arm. With the AFAD parked or positioned 2 feet outside or in a location deemed acceptable for the lane being controlled, the gate arm shall reach at least to the center of the lane but shall not exceed the width of the lane being controlled.

Design the system to be fail-safe. Provide a conflict monitor, malfunction monitoring unit, or similar device that monitors for malfunctions and prevents the display of conflicting indications. This system shall be electronic and operated by remote control.

(2) AFAD Type I System: RED/YELLOW

Provide a Red/Yellow AFAD with at least one set of CIRCULAR RED and CIRCULAR YELLOW lenses in a vertical configuration that are 12 inches in diameter. The bottom of the housing (including brackets) shall be at least 7 feet (2.1 meters) above the pavement.

This system is required to have yellow 12 inch aluminum or polycarbonate vehicle signal heads with 10 inch tunnel visors, backplates, and Light Emitting Diode (LED) modules. Provide signal heads, backplates, and LED modules listed on the ITS and Signals QPL available on the Department's website.

Provide an automated gate arm on the AFAD that descends to a down position across the approaching lane of traffic when the steady CIRCULAR RED lens is illuminated and then ascends to an upright position when the flashing CIRCULAR YELLOW lens is illuminated. The automated gate arm is to be designed such that if a motorist pulls underneath the gate arm while lowering, no damage to the vehicle occurs.

A STOP HERE ON RED (R10-6 or R10-6a) sign shall be installed on the right-hand side of the approach at the point at which drivers are expected to stop when the steady CIRCULAR RED lens is illuminated.

To stop traffic, the AFAD shall transition from the flashing CIRCULAR YELLOW lens by initiating a minimum 5 second steadily illuminated CIRCULAR YELLOW lens followed by the CIRCULAR RED lens.

Once the CIRCULAR RED lens is displayed, the system is to have a minimum 2 second delay between the time the steady CIRCULAR RED is displayed and the time the gate arm begins to lower. The maximum delay between CIRCULAR RED and the time the gate arm lowers is 4 seconds. To permit stopped road users to proceed, the AFAD shall display the flashing CIRCULAR YELLOW lens and the gate arm shall be placed in the upright position.

Ensure the system monitors for a lack of yellow or red signal voltage, total loss of indication in any direction, presence of multiple indications on any approach and low power conditions.

Additional sets of CIRCULAR RED and CIRCULAR YELLOW lenses located over the roadway or on the left side of the approach and operated in unison with the primary set, may be used to improve visibility of the AFAD. If the set of lenses is located over any portion of the roadway that can be used by motor vehicles, the bottom of the housing (including brackets) shall be at least 15 feet (4.6 meters) above the pavement.

(3) AFAD Type II System: STOP/SLOW

Provide STOP/SLOW signs that are octagonal in shape, made of rigid material, and at least 36 inch x 36 inch in size. Letters shall be a minimum of 8 inches high. The STOP face shall have a red background with white letters and border.

The SLOW face shall be diamond shaped, orange, or yellow background with black letters and border. Cover both faces in a Department approved Type VII, VIII or IX retroreflective sheeting. The minimum mounting height for the sign faces shall be 7 feet above the pavement to the bottom of the sign.

The AFAD's STOP/SLOW signs shall be supplemented with active conspicuity devices by incorporating a stop beacon (red lens) and a warning beacon (yellow lens). The stop beacon shall be no more than 24 inches above the STOP face. Mount the warning beacon no more than 24 inches above or beside of the SLOW face. Except for the mounting locations, the beacons shall conform to the provisions of Chapter 4L of the MUTCD and have 12 inch signal lenses.

Strobe/flashing lights are an acceptable alternative to flashing beacons. If utilized, they shall be either white or red flashing lights located within the STOP face and white or yellow flashing lights within the SLOW face and conform to the provisions of Chapter 6D of the MUTCD. If used, the lens diameter shall be a minimum of 5 inches with a minimum height of 6 inches. Equip strobes/flashing lights for both dual and quad flash patterns.

Type B warning lights shall not be used in lieu of the beacons or the strobe lights.

The faces of the AFADs STOP/SLOW sign may include louvers. If louvers are used, design the louvers such that the aspect of the sign face to approaching traffic is a full sign face at a distance of 50 feet or greater.

A WAIT ON STOP (R1-7) sign and a GO ON SLOW (R1-8) sign shall be displayed to traffic approaching the AFAD. Position signs on the same support structure as the AFAD. Both signs shall have black legends and borders on white Type III sheeting backgrounds. Each of these signs shall be rectangular in shape and be at least 24 inch x 30 inch size with letters at least 6 inches high.

Provide an automated gate arm on the AFAD that descends to a down position across the approaching lane of traffic when the STOP face is displayed and then ascends to an upright position when the SLOW face is displayed.

The automated gate arm is to be designed such that if a motorist pulls underneath the gate arm while lowering, no damage to the vehicle occurs.

A STOP HERE ON RED (R10-6 or R10-6a) sign shall be installed on the right-hand side of the approach at the point at which drivers are expected to stop when the STOP face is displayed.

When approaching motorists are to proceed, display the SLOW face and the warning beacon or strobes are to flash on the AFAD. When approaching motorists are will be stopped, display the STOP face and the stop beacon or strobes are to flash on the AFAD.

To stop traffic, the AFAD will transition from the SLOW face to the STOP face by initiating a minimum 5 second change cycle. First, the warning beacon is to be steadily illuminated for the change cycle. If strobes are used in lieu of a warning beacon, they are to be placed in the quad flash pattern. At the end of the change cycle, the STOP face is to be displayed with the stop beacon flashing and the warning beacon or strobes are to stop flashing. Once the STOP face is displayed, the system is to have a minimum 2 second delay between the time the STOP face is displayed and the time the gate arm begins to lower. The maximum delay between the time the STOP face is displayed and the time the gate arm lowers is 4 seconds.

To permit stopped road users to proceed, the gate arm shall be placed in the upright position and the AFAD shall display the SLOW face and the warning beacon or strobes are to flash in the dual flash pattern.

Do not flash the stop beacon when the SLOW face is displayed, and do not flash the warning beacon when the STOP face is displayed.

(B) Portable Traffic Signals (PTS) Units

Provide PTS units with at least one set of CIRCULAR RED, CIRCULAR YELLOW, and CIRCULAR GREEN lenses in a vertical configuration that are 12 inch diameter aluminum or polycarbonate vehicle signal heads with 10 inch tunnel visors, backplates, and Light

Emitting Diode (LED) modules. All signal heads, tunnel visors, and backplates shall be yellow in color.

The bottom of the housing (including brackets) shall be at least 7 feet above the pavement for single set units. Additional signal heads on units with more than one signal head shall be capable of extending over the travel lane.

Communication Requirements

All PTS units within the signal set up systems shall maintain communication at all times by either hardwire cable or wireless radio link communication. If the hardwire cable communication is utilized the communication cable shall be deployed in a manner that will not intrude in the direct work area of the project or obstruct vehicular and pedestrian traffic. Utilize radio communication with 900MHz frequency band and frequency hopping capability. The radio link communication system shall have a minimum range of 1 mile.

Fault Mode Requirements

Revert PTS units to a flashing red mode upon system default unless otherwise specified by the Engineer. Equip the PTS units with a remote monitoring system. Where cell communication availability exists, the remote monitoring system shall adhere to the remote monitoring system section of this provision.

Remote Monitoring System

The remote monitoring system (RMS) shall be capable of reporting signal location, battery voltage / battery history and system default. Provide a password protected website viewable from any computer with internet capability for the RMS. In the event of a system default, the RMS shall provide specific information concerning the cause of the system default (i.e. red lamp on signal number 1). Equip the RMS with a mechanism capable of immediately contacting a minimum of three previously designated individuals via text messaging and/or email upon a default.

The running program operating the PTS units shall be always available and viewable through the RMS website. Maintain a history of the RMS operating system in each signal including operating hours and events and the location of the PTS units.

Trailer / Cart

The AFAD and PTS units may be mounted on either a trailer or a moveable cart system.

Finish all exterior metal surfaces with Federal orange enamel per AMS-STD-595, color chip ID# 13538 or 12473 respectively with a minimum paint thickness of 2.5 mils (64 microns).

Design and test the AFAD or PTS units trailer / cart to withstand an 80 MPH wind load while in the operational position. Provide independent certification that the assembly meets the design wind load.

Equip the AFAD or PTS units with leveling jacks capable of stabilizing the unit in a horizontal position when located on slopes 6:1 or flatter.

Equip trailers in compliance with North Carolina Law governing motor vehicles and include a 12-volt trailer lighting system complying with *Federal Motor Carrier Safety Regulations 393*, safety chains and a minimum 2 inch ball hitch.

Provide a minimum 4 inch wide strip of fluorescent conspicuity sheeting retroreflective sheeting to the frame of the trailer. Apply the sheeting to all sides of the trailer. The sheeting shall meet the ASTM requirements of Type VII, VIII or IX.

Power System

Design the systems to operate both with and without an external power source. Furnish transmitters, generators, batteries, controls and all other components necessary to operate the device.

Provide equipment that is solar powered and supplemented with a battery backup system that includes a minimum 110/120 VAC powered on-board charging system capable of powering the unit for 7 continuous days with no solar power. Each unit shall also be capable of being powered by standard 110/120 VAC power sources, if applicable.

Locate batteries and electronic controls in a locked, weather and vandal resistant housings.

Page 11-14, Article 1150-3, CONSTRUCTION METHODS, add the following after line 11:

Flaggers shall have a path to escape an errant approaching vehicle at all times, unimpeded by barrier, guardrail, guiderail, parked vehicles, construction materials, slopes steeper than 2:1, or any other obstruction at all times. If an unimpeded path cannot be maintained, the Contractor shall use AFAD or PTS units in lieu of a flagger.

Provide documentation to the Engineer prior to deploying the device that the AFAD or PTS units operator(s) are qualified flagger(s) that have been properly trained through an NCDOT approved training agency or other NCDOT approved training provider and that the qualified flagger(s) have received manufacturer training to operate that specific device. This training shall include proper installation, remote control operation, central control systems and maintenance of the AFAD or PTS units. The training shall take place off the project site where training conditions are removed from live traffic. The documentation shall include the names of the authorized trainer, the trainees, the device on which they have been trained and the date of the training. Provide updated documentation to the Engineer prior to deploying any additional operators.

Install advance warning signs and operate AFADs in accordance with the attached detail drawings in this provision.

Install advance warning signs and operate PTS units in accordance with *NCDOT Roadway Standard Drawings* No. 1101.02, Sheet 17.

AFAD and PTS units shall only be used in situations where there is only one lane of approaching traffic in the direction to be controlled. **At no time shall an AFAD unit controlling traffic through the work area be placed in an autonomous mode and/or left unattended.**

Signal timing and operation of PTS units shall be field verified and accepted by the Engineer before use.

Do not use AFAD or PTS units in locations where queueing from the AFAD or PTS units will extend to within 150 feet of a signalized intersection or railroad crossing. Do not use AFAD and PTS units as a substitute for or a replacement for a continuously operating temporary traffic control signal as described in Section 6F.84 of the MUTCD.

If used at night, illuminate each AFAD or PTS units as described in Section 6D of the MUTCD.

Provide a complete AFAD or PTS units that is capable of being relocated as traffic conditions demand.

If AFADs or PTS units become inoperative, be prepared at all times to replace the unit with the same type and model of AFAD or PTS units, revert to human flagging operations or terminate all construction activities requiring the use of the AFAD or PTS units until the AFAD or PTS units become operative or qualified human flaggers are available.

When the work requiring the AFAD or PTS units is not pursued for 30 minutes or longer, power off each AFAD or PTS units. Remove the AFAD or PTS units from the travel lane and relocated to a minimum of 5 feet from the edge line. AFAD gate arms shall be in the upright position. Remove all traffic control devices from the road, place two cones by each AFAD or PTS units and all signs associated with the lane closure operation shall be removed or laid down. At the end of each workday, remove all AFADs or PTS units from the roadway and shoulder areas.

Ensure the system's wireless communication links continuously monitor and verify proper transmission and reception of data used to monitor and control each AFAD or PTS units. Ensure ambient mobile or other radio transmissions or adverse weather conditions do not affect the system.

In the event of a loss of communications, immediately display the flashing RED or STOP indication on all AFAD or PTS units.

AFAD Specific Construction Methods

The flagger/operator controlling the AFAD units shall be on the project site at all times. If multiple AFAD units are used, one AFAD unit shall be the Main AFAD unit and all other units shall be remote AFAD units. Ensure that each device meets the physical display and operational characteristics as specified in the MUTCD.

Multiple AFAD units may be controlled with **one** flagger/operator when the AFAD units meet each of the following requirements:

- (1) AFAD units are spaced no greater than the manufacturer's recommendations.

(2) Both AFAD units can be seen at the same time from the flagger/operator's position, or the AFAD is operating on its own secure network with malfunction detection and notification to the flagger/operator.

(3) The flagger/operator has an unobstructed view of approaching traffic in both directions from the flagger/operator position or the AFAD is operating on its own secure network, with cameras that provide the flagger/operator an unobstructed view of approaching traffic from both directions. The flagger/operator may control the AFAD units from a pilot vehicle.

If any of the above requirements are not met, flagger/operator control each AFAD unit.

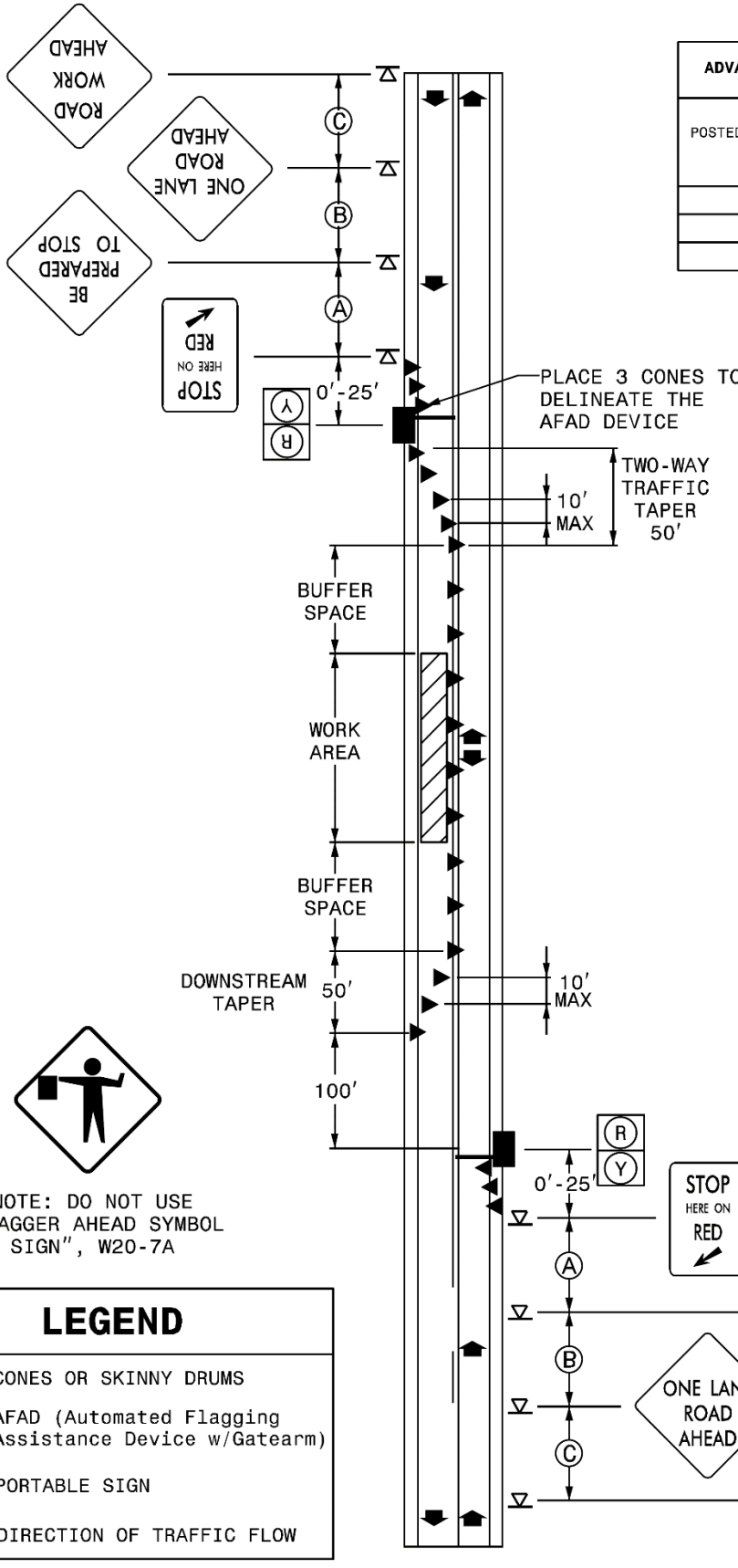
AFAD operators may either control traffic at side streets or driveways between the AFAD units or operate the pilot car while operating the AFAD system if approved by the Engineer. AFAD units must continue to be within clear sight of the operator during these work activities.

Page 11-14, Article 1150-4, MEASUREMENT AND PAYMENT, add the following after line 24:

Each AFAD or PTS unit will be measured and paid for as *Flaggers* paid by day in accordance with Article 1150-4 of the *Standard Specifications*. Where the pay item for *Flaggers* is not included in the original contract then no separate payment will be made for this item and payment will be included in the lump sum price bid for *Temporary Traffic Control* found elsewhere in this contract. Each approach controlled by AFAD or PTS units will be measured and paid as one flagger, irrespective of the number of devices used. If multiple PTS units are required to control a single approach, these units will collectively be considered as replacing one flagger.

No separate measurement or payment will be made for AFAD or PTS unit operators, as the cost of such including their training and operational costs shall be included in the unit or lump sum price for *Flaggers* or *Temporary Traffic Control*. Such price and payment also includes the relocation, maintenance, and removal during repair periods of AFAD or PTS units as well as the signal controller, communication, vehicle detection system, traffic signal software of PTS units and any other incidentals necessary to complete the work.

Red/Yellow Lens AFAD (TYPE I)



ADVANCE WARNING SIGN SPACING CHART			
POSTED SPEED LIMIT (MPH)	RECOMMENDED DISTANCE BETWEEN SIGNS FEET (+/-) SEE NOTE #1		
	(A)	(B)	(C)
≤ 35	200	200	200
40-50	350	350	350
55	500	500	500

DESIGN SPEED (MPH)	BUFFER SPACE (FEET)
30	85
35	120
40	155
45	195
50	240
55	290
60	345
65	405
70	470
75	540
80	615

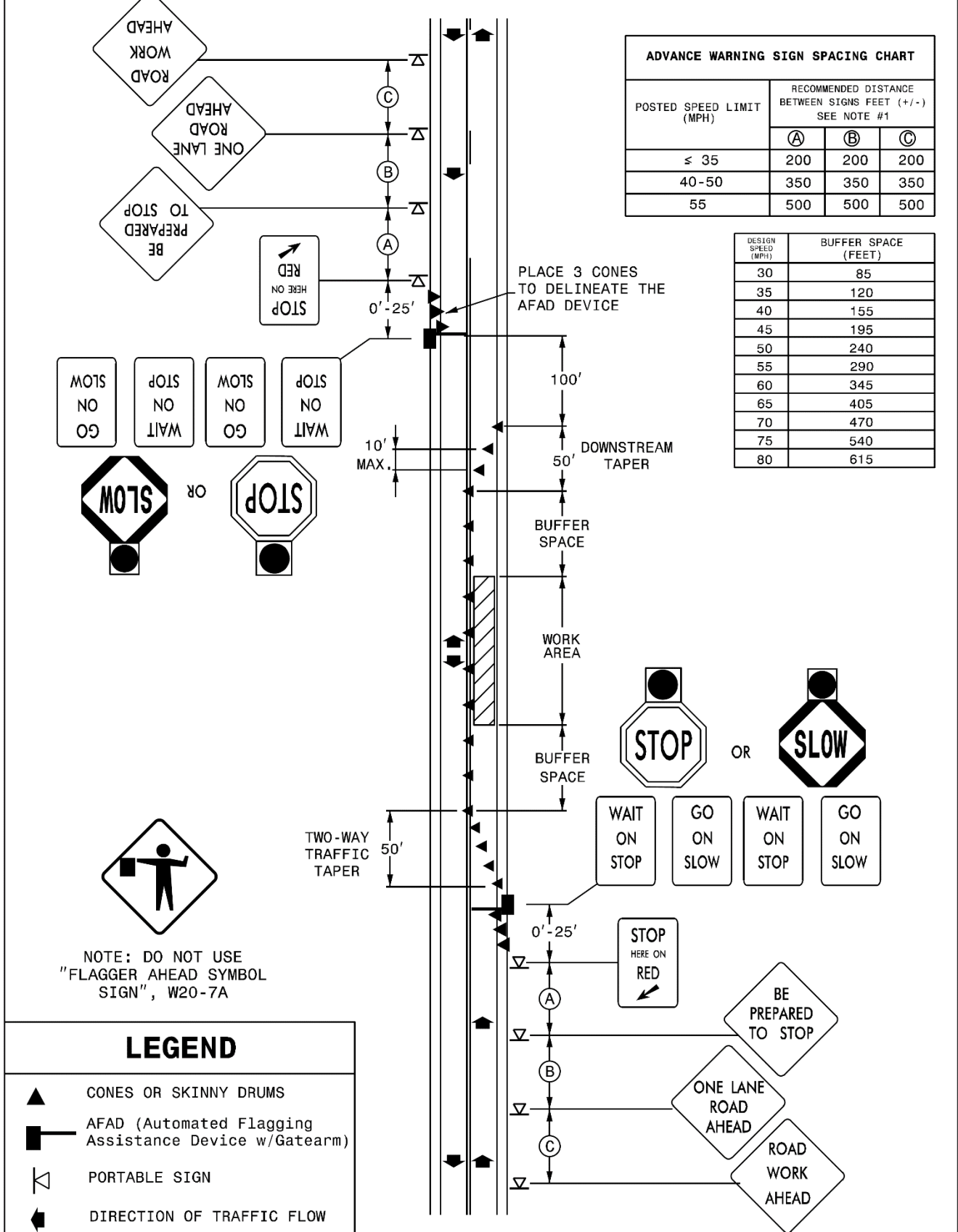
NOTE: DO NOT USE "FLAGGER AHEAD SYMBOL SIGN", W20-7A

LEGEND	
	CONES OR SKINNY DRUMS
	AFAD (Automated Flagging Assistance Device w/Gatearm)
	PORTABLE SIGN
	DIRECTION OF TRAFFIC FLOW

Stop/Slow AFAD (TYPE II)

ADVANCE WARNING SIGN SPACING CHART			
POSTED SPEED LIMIT (MPH)	RECOMMENDED DISTANCE BETWEEN SIGNS FEET (+/-) SEE NOTE #1		
	(A)	(B)	(C)
≤ 35	200	200	200
40-50	350	350	350
55	500	500	500

DESIGN SPEED (MPH)	BUFFER SPACE (FEET)
30	85
35	120
40	155
45	195
50	240
55	290
60	345
65	405
70	470
75	540
80	615



NOTE: DO NOT USE "FLAGGER AHEAD SYMBOL SIGN", W20-7A

LEGEND

- ▲ CONES OR SKINNY DRUMS
- AFAD (Automated Flagging Assistance Device w/Gatearm)
- ▽ PORTABLE SIGN
- ← DIRECTION OF TRAFFIC FLOW

STANDARD SPECIAL PROVISION
AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS

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

Z-2

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

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

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

STANDARD SPECIAL PROVISION
NCDOT GENERAL SEED SPECIFICATION FOR SEED QUALITY

(5-17-11)

Z-3

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

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

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

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

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

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

Seed of Pensacola Bahiagrass shall not contain more than 7% inert matter, Kentucky Bluegrass, Centipede and Fine or Hard Fescue shall not contain more than 5% inert matter whereas a maximum of 2% inert matter will be allowed on all other kinds of seed. In addition, all seed shall

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

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

FURTHER SPECIFICATIONS FOR EACH SEED GROUP ARE GIVEN BELOW:

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

Sericea Lespedeza
Oats (seeds)

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

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

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

Common or Sweet Sundangrass

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

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

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

Centipede grass	Japanese Millet
Crownvetch	Reed Canary Grass
Pensacola Bahiagrass	Zoysia
Creeping Red Fescue	

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

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

STANDARD SPECIAL PROVISION
ERRATA

(1-16-24)(Rev. 5-19-26)

Z-4

Revise the *2024 Standard Specifications* as follows:

Division 1

Page 1-1, Article 101-2 ABBREVIATIONS, line 25, replace "American Wood-Preservers' Association" with "American Wood Protection Association".

Page 1-18, Article 102-10 BID BOND OR BID DEPOSIT, line 26, replace " Subarticle 102-8(A)(8)(b)" with "Subarticle 102-8(A)(12)(b)".

Page 1-36, Subarticle 104-12(B) Evaluation of Proposals, line 21, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-36, Subarticle 104-12(D) Preliminary Review, line 37, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-37, Subarticle 104-12(E) Final Proposal, line 3, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-37, Subarticle 104-12(F) Design-Build VEPs, line 36, replace "Design-Build Unit" with "Alternative Delivery Unit".

Page 1-38, Subarticle 104-12(G) Modifications, line 1, replace "Design-Build Unit" with "Alternative Delivery Unit".

Division 3

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

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

Division 6

Page 6-15, Article 610-1 DESCRIPTION, line 20, replace "The work includes" with "The work includes, but is not limited to,".

Page 6-15, Article 610-1 DESCRIPTION, line 22, replace "applying the tack coat as specified." with "applying the tack coat in accordance with Section 605.".

Page 6-30, Article 610-14 DENSITY ACCEPTANCE, line 39, replace "QC process." with "QC process in accordance with Section 609.".

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

Page 6-50, Subarticle 661-4(A) Equipment, lines 4-7, replace the first two sentences of the seventh paragraph with the following:

When an erected fixed stringline is utilized for longitudinal profile and cross slope control furnish and erect the necessary guide line for the equipment.

Division 7

Page 7-18, Subarticle 710-10(A) General, lines 7-8, delete "for *Surface Testing Concrete Pavement*" from the last paragraph.

Division 8

Page 8-27, Article 846-1 DESCRIPTION, line 8, delete "4 inch" from the first paragraph.

Division 9

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

Division 10

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

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

Division 11

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

Division 15

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

Division 16

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

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

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

Page 16-27, Article 1644-5 MEASUREMENT AND PAYMENT, line 31, replace "Article 1630-4" with "Article 1630-3".

Division 17

Page 17-15, Article 1715-4 MEASUREMENT AND PAYMENT, line 23, delete and replace "1.25" with "1-1/4".

Page 17-15, Article 1715-4 MEASUREMENT AND PAYMENT, line 24, delete and replace "(1.25" with " , 1-1/4".

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

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

Z-04a

Within Quarantined Area

This project may be within a county regulated for plant and/or pests. If the project or any part of the Contractor's operations is located within a quarantined area, thoroughly clean all equipment prior to moving out of the quarantined area. Comply with federal/state regulations by obtaining a certificate or limited permit for any regulated article moving from the quarantined area.

Originating in a Quarantined County

Obtain a certificate or limited permit issued by the N.C. Department of Agriculture/United States Department of Agriculture. Have the certificate or limited permit accompany the article when it arrives at the project site.

Contact

Contact the N.C. Department of Agriculture/United States Department of Agriculture at 1-800-206-9333, 919-707-3730, or <https://www.ncagr.gov/divisions/plant-industry/plant-protection/plant-industry-plant-pest-quarantines> to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include

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

STANDARD SPECIAL PROVISION**MINIMUM WAGES**

(7-21-09)

Z-5

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

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

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

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

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

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

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

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

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

Z-6

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

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

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

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

(a) Compliance with Regulations

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

(b) Nondiscrimination

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

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

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

(d) Information and Reports

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

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

(e) Sanctions for Noncompliance:

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

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

(f) Incorporation of Provisions

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

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

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

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

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

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

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

2. Eligibility

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

3. Time Limits and Filing Options

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

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

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

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

4. Format for Complaints

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

5. Discrimination Complaint Form

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

6. Complaint Basis

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

**TABLE 103-1
COMPLAINT BASIS**

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

(3) Pertinent Nondiscrimination Authorities

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

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

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

(4) Additional Title VI Assurances

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

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

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

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

(HABENDUM CLAUSE)

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

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

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

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

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

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

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

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

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

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

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

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

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

Z-10

Description

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

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

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

Minorities and Women

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

Assigning Training Goals

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

Training Classifications

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

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

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

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

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

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

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

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

Records and Reports

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

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

Trainee Interviews

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

Trainee Wages

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

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

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

Achieving or Failing to Meet Training Goals


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

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

Measurement and Payment

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

PROJECT SPECIAL PROVISIONS
Utilities by Others



1598 Westbrook Plaza Dr, Suite 202
Winston-Salem, NC 27103
Voice: (336) 705-8844
www.telics.com

General:

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

- A) Spectrum – Communications/CATV
- B) AT&T – Communications

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

The Contractor’s attention is directed to Article 105-8 of the 2024 Standard Specifications.

Utilities Requiring Adjustment:

Utility relocations are shown on the Utilities by Others Plans.

- A) Spectrum Communications/CATV – Communications/CATV
 - 1) Contact person for Spectrum Communications/CATV is Neal Barker (828) 406-4515, neal.barker@charter.com.
- B) AT&T – Communications
 - 2) Contact person for AT&T is Rick Painter (678) 488-1143, rick.painter@sourceonecorp.com.

**Project Special Provisions
Erosion Control**

STABILIZATION REQUIREMENTS:

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

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

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

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

SEEDING AND MULCHING:

(West)

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

Shoulder and Median Areas

August 1 - June 1

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

May 1 - September 1

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

Areas Beyond the Mowing Pattern, Waste and Borrow Areas:

August 1 - June 1

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

May 1 - September 1

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

Approved Tall Fescue Cultivars

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

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

Approved Kentucky Bluegrass Cultivars:

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

Approved Hard Fescue Cultivars:

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

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

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

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		May 1 – September 1	
18#	Creeping Red Fescue	18#	Creeping Red Fescue
8#	Big Bluestem	8#	Big Bluestem
6#	Indiangrass	6#	Indiangrass
4#	Switchgrass	4#	Switchgrass
35#	Rye Grain	25#	German or Browntop Millet
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Approved Creeping Red Fescue Cultivars:

- | | | | |
|----------|--------|------|-----------|
| Aberdeen | Boreal | Epic | Cindy Lou |
|----------|--------|------|-----------|

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

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*.

TEMPORARY SEEDING:

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

FERTILIZER TOPDRESSING:

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

SUPPLEMENTAL SEEDING:

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

MOWING:

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

MINIMIZE REMOVAL OF VEGETATION:

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

CONSTRUCTION MATERIALS MANAGEMENT

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

Description

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

Polyacrylamides (PAMS) and Flocculants

Polyacrylamides (PAMS) and flocculants shall be stored in leak-proof containers that are kept

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

https://files.nc.gov/ncdeq/Water+Quality/Environmental+Sciences/ATU/PAM8_30_18.pdf

Equipment Fluids

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

Waste Materials

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

Herbicide, Pesticide, and Rodenticides

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

Concrete Materials

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

in accordance with state solid waste regulations.

Earthen Material Stock Piles

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

Measurement and Payment

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

WASTE AND BORROW SOURCES:

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

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

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

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

<https://connect.ncdot.gov/resources/roadside/FieldOperationsDocuments/Contract%20Reclamation%20Procedures.pdf>

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

SAFETY FENCE AND JURISDICTIONAL FLAGGING:

Description

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

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

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

Materials**(A) Safety Fencing**

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

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

(B) Boundary Flagging

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

Construction Methods

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

(A) Safety Fencing

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

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

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

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

(B) Boundary Flagging

Boundary flagging delineation of interior boundaries shall consist of wooden stakes on 25 feet maximum intervals with highly visible orange flagging attached. Stakes shall be installed a minimum of 6" into the ground. Interior boundaries may be staked on a tangent that runs parallel to buffer but

must not encroach on the buffer at any location. Interior boundaries of hand clearing shall be identified with a different colored flagging to distinguish it from mechanized clearing.

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

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

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

Measurement and Payment

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

Payment will be made under:

Pay Item	Pay Unit
Safety Fence	Linear Foot

PERMANENT SOIL REINFORCEMENT MAT:

9-1-2011 (Rev. 8-20-24)

Description

This work consists of furnishing and placing permanent soil reinforcement mat (PSRM), of the type specified, over previously prepared areas at locations shown on the plans and as directed by the Engineer.

Materials

The product shall be a permanent soil reinforcement mat constructed of synthetic stabilized, non-biodegradable synthetic fibers processed to form a rigid permanent three-dimensional structure to promote soil stability in combination with vegetation under hydraulic stresses. Organic

11/12/25

biodegradable fibers (such as straw, coir, excelsior or blends thereof) may also incorporated into the PSRM, evenly distributed throughout the mat. PSRMs utilizing organic fibers shall have a bottom and top UV stabilized netting stitched together with UV stabilized thread to retain the organic fibers. All PSRMs shall meet the following minimum physical properties:

Property	Test Method	Value	Unit
Thickness	ASTM D6525	≥0.25	in
Tensile Strength (MD)	ASTM D6818	225	lbs/ft
Tensile Strength (TD)	ASTM D6818	175	lbs/ft
Vegetation Establishment (Min)	ASTM D7322	250	%
UV Stability ¹	ASTM D4355	≥80	%

¹ASTM D4355 Tensile Strength and % strength retention of material after 1,000 hours of exposure.

PSRM shall also meet the minimum performance values by type as shown in the table below:

Property	Test Method	Type 1	Type 2	Type 3	Type 4	Type 5	Unit
Maximum Permissible Shear Stress (Unvegetated)	ASTM 6460	2.25	2.5	3.0	3.25	N/A	lb/ft ²
Maximum Permissible Shear Stress (Vegetated)	ASTM 6460	6.0	8.0	10.0	12.0	16.0	lb/ft ²
Maximum Allowable Velocity (Vegetated)	ASTM 6460	8.0	12	16.0	20.0	24.0	ft/s

Staples shall be used as anchors. Provide staples to meet Article 1060-8 of the *Standard Specifications*.

Construction Methods

All areas to be protected with the PSRM shall be brought to final grade and prepared in accordance with Section 1660 of the *Standard Specifications*. The surface of the soil shall be smooth, firm, stable and free of rocks, clods, roots or other obstructions that would prevent the mat from lying in direct contact with the soil surface. Preserve the required line, grade and cross section of the area covered. Unroll the PSRM in the direction of the flow of water and apply without stretching so that it will lie smoothly but loosely on the soil surface. Bury the up-channel or top of slope end of each piece of PSRM in a narrow trench at least 6 inches deep and tamp firmly. Where one roll of matting ends and a second-roll begins, overlap the end of the upper roll over the beginning of the second roll so there is a 6 inch overlap. Install staple checks 4 inches on center and every 30 feet longitudinally in the matting or as directed by the Engineer. Fold over and bury matting to the full depth of the trench, close and tamp firmly. Overlap matting at least 4 inches where 2 or more widths of matting are laid side by side.

Place staples across matting at ends, junctions and check trenches approximately 10 inches apart. Place staples along the outer edges and down the center of each strip of matting 3 feet apart. Place staples along all lapped edges 10 inches apart. Install product with netting and biodegradable fibers on the top side if present. Trenching and stapling shall fit individual cut or fill slope conditions and

conform to manufacturer's installation recommendations for the type specified. Any conflict between the manufacturer's installation recommendations and this special provision will be resolved by the more stringent measures being required.

Apply all soil amendments and one-half of the seed in accordance with Section 1660 of the Standard Specifications of the types at the rates specified in the contract prior to installation of the PSRM. For PSRMs that do not contain biodegradable fibers, apply 3/4 inch to 1 inch loose, friable topsoil uniformly over the PSRM and gently work to incorporate into the structure of the PSRM completely filling the voids until the level of soil is at the top of the PSRM. Apply the remainder of the seed and gently work into the surface of the topsoil in-fill and mulch. For all other PSRMs, apply 3/4 inch to 1 inch of loose, friable topsoil uniformly over the PSRM and gently work to create a suitable seed bed. Apply the remainder of the seed and gently work into the surface of the topsoil. At the sole discretion of the Engineer, topsoil may be omitted for PSRMs containing biodegradable fibers. All seed should be applied prior to installation of PSRM if topsoil is omitted and will not need to be mulched.

Measurement and Payment

Permanent Soil Reinforcement Mat, Type __ will be measured and paid for as the actual number of square yards measured along the surface of the ground over which permanent soil reinforcement mat of the specified type is installed and accepted. Overlaps will not be included in the measurement and will be considered as incidental to the work. Such price and payment shall be full compensation for all work covered by this provision, including, but not limited to, furnishing all materials, labor, equipment and incidentals necessary to apply topsoil and install the PSRM.

Payment will be made under:

Pay Item	Pay Unit
Permanent Soil Reinforcement Mat, Type __	Square Yard

IMPERVIOUS DIKE:

(9-9-11)(Rev. 11-15-22)

Description

This work consists of furnishing, installing, maintaining, pumping and removing an *Impervious Dike* for the purpose of diverting normal stream flow around the construction site. The Contractor shall construct an impervious dike in such a manner approved by the Engineer. The impervious dike shall not permit seepage of water into the construction site or contribute to siltation of the stream. The impervious dike shall be constructed of an acceptable material in the locations noted on the plans or as directed by the Engineer.

Materials

Acceptable materials shall include but not be limited to sheet piles, sandbags, and/or the placement of an acceptable size stone lined with polypropylene or other impervious geotextile.

Earth material shall not be used to construct an impervious dike when it is in direct contact with the stream unless vegetation can be established before contact with the stream takes place.

Construction Methods

Where impervious dikes are shown on the plans and used to dewater or lower the water elevation, construct in accordance with Article 410-4 and 410-5.

Measurement and Payment

Impervious Dike will be measured and paid as the actual number of linear feet of impervious dike(s) constructed, measured in place from end to end of each separate installation that has been completed and accepted by the Engineer. Such price and payment will be full compensation for all work including but not limited to furnishing materials, construction, maintenance, pumping and removal of the impervious dike.

Payment will be made under:

Pay Item	Pay Unit
Impervious Dike	Linear Foot

CONCRETE WASHOUT: (10-22-15)(Rev. 4-15-25)

Description

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

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

Materials

Refer to Division 10 of the *Standard Specifications*.

Item	Section
Temporary Silt Fence	1605

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

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

Construction Methods

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

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

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

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

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

Maintenance and Removal

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

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

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

Measurement and Payment

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

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

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

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

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

Payment will be made under:

Pay Item	Pay Unit
Concrete Washout Structure	Each
Prefabricated Concrete Washout	Each

COIR FIBER MAT:

(9-16-25)	1629	SP16 R05
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Revise the *Standard Specifications* as follows:

Page 16-9, Article 1629-2 MATERIALS, lines 22-24, delete and replace the last paragraph with the following:

Provide #3 or #4 uncoated reinforcing steel anchors, 24 inches in length, bent into a U-shape with a 4-inch diameter bend and a 4-inch straight leg extending from the bend to catch and secure the coir fiber mat.

**Project Special Provisions
Structures**

Falsework and Formwork (11-30-23) ST-2
Submittal of Working Drawings (1-31-25) ST-8
Crane Safety (12-05-25) ST-14
Grout for Structures (12-1-17) ST-15
Corrugated Steel Pipe Arch Culvert (SPECIAL) ST-16
Culvert Excavation (SPECIAL) ST-16



**PROJECT SPECIAL
PROVISIONS - STRUCTURES**

FALSEWORK AND FORMWORK**(11-30-23)****GENERAL**

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.

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.

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. Screenshot Wheel Weight, (lbs.)	Bracket Min. Vertical Leg Extension, (inches)
II	36	39	14	2000	26
III	45	42	14	2000	35
IV	54	45	14	2000	44
MBT	63	51	12	2000	50
MBT	72	55	12	1700	48

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

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

For link slabs, the top 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 current edition of *AASHTO Guide Design Specifications for Bridge Temporary Works* except as noted herein.

(1) Wind Loads

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

Table 2.2 - Wind Pressure Values

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

(2) Time of Removal

The following requirements replace those of Article 3.4.8.2.

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

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

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.

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.

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.

MEASUREMENT AND PAYMENT

Unless otherwise specified, *Falsework and Formwork* will not be directly measured.

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**(1-31-25)****GENERAL**

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

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

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

ADDRESSES AND CONTACTS

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

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

Via US mail:

Mr. D. N. Snoke, 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. D. N. Snoke, 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 (Eastern Regional Office):

Via Email: EastGeotechnicalSubmittal@ncdot.gov

Via US mail:

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

Via other delivery service:

Mr. Thomas Santee, P. E.
Assistant State Geotechnical
Engineer – Eastern Region
North Carolina Department
of Transportation
Geotechnical Engineering Unit
Eastern Regional Office
3301 Jones Sausage Road, Suite 100
Garner, NC 27529

For projects in Divisions 8-14 (Western Regional Office):

Via Email: 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

Secondary Structures Contacts: Madonna Rorie (919) 707 – 6508
mlrorie@ncdot.gov

Eastern Regional Geotechnical Contact (Divisions 1-7):
Thomas Santee (984) 920-8901
EastGeotechnicalSubmittal@ncdot.gov

Western Regional Geotechnical Contact (Divisions 8-14):
Eric Williams (980)258-6400
WestGeotechnicalSubmittal@ncdot.gov

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 ¹
Arch Culvert Falsework	Y	N	Plan Note, SN Sheet & “Falsework and Formwork”
Box Culvert Falsework ⁷	Y	N	Plan Note, SN Sheet & “Falsework and Formwork”
Cofferdams	Y	Y	Article 410-4
Foam Joint Seals ⁶	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 ² (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 ^{4,5}	Y	N	Article 1072-8
Miscellaneous Metalwork ^{4,5}	Y	N	Article 1072-8
Disc Bearings ⁴	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) ³	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) ³	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 ⁵	Y	N	Article 1072-8 & “Sound Barrier Wall”
Structural Steel ⁴	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 ⁴	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

Submittal	Submittals Required by Geotechnical Engineering Unit	Submittals Required by Structures Management Unit	Contract Reference Requiring Submittal ¹
Drilled Pier Construction Plans ²	Y	N	Subarticle 411-3(A)
Crosshole Sonic Logging (CSL) Reports ²	Y	N	Subarticle 411-5(A)(2)
Pile Driving Equipment Data Forms ^{2,3}	Y	N	Subarticle 450-3(D)(2)
Pile Driving Analyzer (PDA) Reports ²	Y	N	Subarticle 450-3(F)(3)

Retaining Walls ⁴	Y; drawings and calculations	Y; drawings	Applicable Provisions
Temporary Shoring ⁴	Y; drawings and calculations	Y; drawings	“Temporary Shoring” & “Temporary Soil Nail Walls”

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. Subarticles refer to the *Standard Specifications*.
- 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.
- The Pile Driving Equipment Data Form is available from:
<https://connect.ncdot.gov/projects/construction/ConstManRefDocs/PILE%20DRIVING%20EQUIPMENT%20DATA%20FORM.pdf>
See second page of form for submittal instructions.
- Electronic copy of submittal is required. See referenced provision.

CRANE SAFETY**(12-5-25)****GENERAL**

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

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.

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.

Crane Inspections: Inspection records for all cranes shall be current and readily accessible for review upon request.

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.

MEASUREMENT AND PAYMENT

No direct payment will be made for providing information, certifications and documentation required for *Crane Safety*.

GROUT FOR STRUCTURES

(12-01-17)

GENERAL

This Special Provision addresses grout for use in pile blockouts, grout pockets, shear keys, dowel holes and recesses for structures. This Special 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 Special Provision.

MATERIAL REQUIREMENT

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.

MEASUREMENT AND 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.

CORRUGATED STEEL PIPE ARCH CULVERT**(SPECIAL)**

The work covered by this special provision consists of furnishing all labor, equipment, materials, and incidentals to install the corrugated steel pipe arch culvert, including sills, headwalls and wingwalls, as indicated on the plans and in accordance with the Standard Specifications and as directed by the Engineer.

Design of the corrugated steel pipe arch culvert shall be the responsibility of the Contractor and shall comply with the latest AASHTO design specifications and requirements. The Contractor shall submit, fourteen (14) days prior to commencing work at the site, two sets of detailed plans and design calculations, including Load and Resistance Factor Ratings (LRFR) summary, that have been checked and sealed by a North Carolina Registered Professional Engineer.

Construction loads that exceed highway load limits are not allowed on the structure without approval from the Engineer. Live load traffic is not allowed on the structure until the structure has been backfilled and paved.

Payment shall be made under:

Pay Item	Pay Unit
Corrugated Steel Pipe Arch Culvert	Lump Sum

CULVERT EXCAVATION**(SPECIAL)****GENERAL**

Excavate all material necessary for the construction of the Corrugated Steel Pipe Arch Culvert as shown on the plans or as directed by the Engineer. Excavate, blast, drain and divert water, bail, pump, brace, shore, provide sheeting, cribbing, cofferdams, culvert foundation conditioning, subsurface drainage and drawings; backfill, haul and dispose of materials. The removal of the existing corrugated metal pipe culvert and supporting structures shall be incidental to the culvert excavation.

MATERIAL REQUIREMENT

Refer to Section 10 of the Standard Specifications.

Item	Section
Select Materials	1016
Subsurface Drainage Materials	1044

Use Class V or VI select material for foundation conditioning material.

FOUNDATION EXCAVATION

Notify the Engineer a sufficient time before beginning the excavation so measurements may be taken of the undisturbed ground. Do not disturb the existing ground at the culvert site without permission by the Engineer.

Where necessary for safety, slope, shore, brace or protect by cofferdams the foundation openings in accordance with State and local safety standards. Perform foundation excavation and related work in such a sequence that no portion of the culvert will be endangered by subsequent operations. Protect completed portions of a culvert from blasting.

Remove and dispose of boulder, vegetative matter and any other objectionable material.

Notify the Engineer after excavation for the steel arch culvert. Do not place any steel arch culvert sections until obtaining approval of the excavation depth, the character of the foundation material and permission to proceed.

Take special care not to disturb the bottom of the excavation until immediately before placing foundation conditioning material.

CONDITIONING CULVERT FOUNDATION

Excavate below the bottom of the steel arch culvert to a depth as directed by the Engineer and replace the excavated material with foundation conditioning material.

When the foundation material beneath a portion of the steel arch culvert is rock or incompressible material and softer material is beneath the remainder of the steel arch culvert, excavate the rock material within the neat lines of the steel arch culvert to a depth of 12 inches below the bottom of the steel arch culvert and backfill with foundation conditioning material.

UTILIZATION OF EXCAVATED MATERIAL

Use suitable excavated material in accordance with Article 410-7.

BACKFILLING AND FILLING

As soon as practical after completing the steel arch culvert, place the backfill and redirect the stream through the culvert. Use approved material for backfill that is free from large or frozen lumps, wood or other undesirable material. Where there is not an adequate quantity of suitable

backfill material available from culvert excavation, provide suitable backfill material compensated in accordance with Subarticle 410-10(C).

Eliminate any excavated slope adjacent to backfill areas by stepping or serrating to prevent wedge action.

Place and compact all portions of the backfill that become a part of roadway typical sections or their foundations in accordance with Subarticles 235-3(B) and 235-3(C). Place all other portions of the backfill in layers not more than 10 inches in depth of loose measure and compact to a density comparable to the adjacent undisturbed material. Refill all excavated spaces not filled with permanent work with earth up to ground surface existing before the excavation.

Place backfill or embankment material simultaneously to approximately the same elevation on both sides of the culvert.

MEASUREMENT AND PAYMENT

The prices and payments below will be full compensation for all items required to complete culvert excavation including, but not limited to, those items in Article 414-1.

Foundation Conditioning Material will be measured and paid in tons of material that is placed within the established limits. The number of tons of material is determined by weighing the material in trucks in accordance with Article 106-7. No deduction will be made for any moisture contained in the material at the time of weighing. Such price and payment will be full compensation for all excavation made below the steel arch culvert in addition to furnishing, hauling and placing foundation conditioning material.

Culvert Excavation will be paid at the contract lump sum price. No measurement for payment will be made for this pay item, and no adjustment in the contract lump sum price will be made unless the size, length, elevation or location of the culvert is revised. If the size, length, elevation or location of the culvert is revised, such revision will be an alteration of plans or details of construction in accordance with Article 104-3.

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

Payment shall be made under:

Pay Item	Pay Unit
Culvert Excavation	Lump Sum
Foundation Conditioning Material	Ton

PROJECT SPECIAL PROVISION

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

Z-1a

PERMITS

The Contractor's attention is directed to the following permits, which have been applied for by the Department of Transportation to the authority granting the permit. Copies of the permits will be furnished to the Contractor when received by the Department.

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

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

Agents of the permitting authority will periodically inspect the project for adherence to the permits.

The Contractor's attention is also directed to Articles 107-10 and 107-13 of the *Standard Specifications* and the following:

Should the Contractor propose to utilize construction methods (such as temporary structures or fill in waters and/or wetlands for haul roads, work platforms, cofferdams, etc.) not specifically identified in the permit (individual, general, or nationwide) authorizing the project it shall be the Contractor's responsibility to coordinate with the Engineer to determine what, if any, additional permit action is required. The Contractor shall also be responsible for initiating the request for the authorization of such construction method by the permitting agency. The request shall be submitted through the Engineer. The Contractor shall not utilize the construction method until it is approved by the permitting agency. The request normally takes approximately 60 days to process; however, no extensions of time or additional compensation will be granted for delays resulting from the Contractor's request for approval of construction methods not specifically identified in the permit.

Where construction moratoriums are contained in a permit condition which restricts the Contractor's activities to certain times of the year, those moratoriums will apply only to the portions of the work taking place in the restricted waters, wetlands or buffer zones provided that activities outside those areas is done in such a manner as to not affect the waters, wetlands or buffer zones.

DECISION DOCUMENT NATIONWIDE PERMIT 3

This document discusses the factors considered by the Corps of Engineers (Corps) during the issuance process for this Nationwide Permit (NWP). This document contains: (1) the public interest review required by Corps regulations at 33 CFR 320.4(a)(1) and (2); (2) a discussion of the environmental considerations necessary to comply with the National Environmental Policy Act; and (3) the impact analysis specified in Subparts C through F of the 404(b)(1) Guidelines (40 CFR Part 230). This evaluation of the NWP includes a discussion of compliance with applicable laws, consideration of public comments, an alternatives analysis, and a general assessment of individual and cumulative environmental effects, including the general potential effects on each of the public interest factors specified at 33 CFR 320.4(a).

1.0 Text of the Nationwide Permit

Maintenance. (a) The repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. This NWP also authorizes the removal of previously authorized structures or fills. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project. This NWP also authorizes the removal of accumulated sediment and debris within, and in the immediate vicinity of, the structure or fill. This NWP also authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

(b) This NWP also authorizes the removal of accumulated sediments and debris outside the immediate vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.). The removal of sediment is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot

extend farther than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization.

(c) This NWP also authorizes temporary structures, fills, and work, including the use of temporary mats, necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges of dredged or fill material, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. After conducting the maintenance activity, temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

(d) This NWP does not authorize maintenance dredging for the primary purpose of navigation. This NWP does not authorize beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 32). The pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Authorities: Section 10 of the Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act (Sections 10 and 404))

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

1.1 Requirements

General conditions of the NWPs are in the Federal Register notice announcing the issuance of this NWP. Pre-construction notification requirements, additional conditions, limitations, and restrictions are in 33 CFR part 330.

1.2 Statutory Authorities

- Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403)
- Section 404 of the Clean Water Act (33 U.S.C. 1344)

1.3 Compliance with Related Laws (33 CFR 320.3)

1.3.1 General

Nationwide permits are a type of general permit designed to authorize certain activities that have no more than minimal individual and cumulative adverse environmental effects and generally comply with the related laws cited in 33 CFR 320.3. Activities that result in more than minimal individual and cumulative adverse environmental effects cannot be authorized by NWPs. Individual review of each activity authorized by an NWP will not normally be performed, except when pre-construction notification to the Corps is required or when an applicant requests verification that an activity complies with an NWP. Potential adverse impacts and compliance with the laws cited in 33 CFR 320.3 are controlled by the terms and conditions of each NWP, regional and case-specific conditions, and the review process that is undertaken prior to the issuance of NWPs.

The evaluation of this NWP, and related documentation, considers compliance with each of the following laws, where applicable: Section 10 of the Rivers and Harbors Act of 1899; Sections 401, 402, and 404 of the Clean Water Act; Section 307(c) of the Coastal Zone Management Act of 1972, as amended; Section 302 of the Marine Protection, Research and Sanctuaries Act of 1972, as amended; the National Environmental Policy Act of 1969; the Fish and Wildlife Act of 1956; the Migratory Marine Game-Fish Act; the Fish and Wildlife Coordination Act, the Federal Power Act of 1920, as amended; the National Historic Preservation Act of 1966; the Interstate Land Sales Full Disclosure Act; the Endangered Species Act; the Deepwater Port Act of 1974; the Marine Mammal Protection Act of 1972; Section 7(a) of the Wild and Scenic Rivers Act; the Ocean Thermal Energy Act of 1980; the National Fishing Enhancement Act of 1984; the Magnuson-Stevens Fishery and Conservation and Management Act, the Bald and Golden Eagle Protection Act; and the Migratory Bird Treaty Act. In addition, compliance of the NWP with other Federal requirements, such as Executive Orders and Federal regulations addressing issues such as floodplains, essential fish habitat, and critical resource waters is considered.

1.3.2 Terms and Conditions

Many NWPs have pre-construction notification requirements that trigger case-by-case review of certain activities. Two NWP general conditions require case-by-case review of all activities that might affect federally-listed endangered or threatened

species (or species proposed for listing) or designated critical habitat (or critical habitat proposed for such designation) or historic properties (i.e., general conditions 18 and 20, respectively). General condition 16 restricts the use of NWP for activities that are located in federally-designated wild and scenic rivers. None of the NWP the construction of authorize artificial reefs. If a proposed activity will impact a Corps federally authorized Civil Works project, general condition 31 requires that a review by the appropriate Corps office. General condition 28 addresses the use of an NWP with other NWP to authorize a single and complete project, to ensure that the acreage limits of each of the NWP used to authorize that project are not exceeded.

In some cases, activities authorized by an NWP may require other federal, state, or local authorizations. Examples of such cases include, but are not limited to: activities that are in marine sanctuaries or affect marine sanctuaries or marine mammals; the ownership, construction, location, and operation of ocean thermal conversion facilities or deep water ports beyond the territorial seas; activities that may result in discharges into waters of the United States and require Clean Water Act section 401 water quality certification; or activities in a state operating under a coastal zone management program approved by the Secretary of Commerce under the Coastal Zone Management Act. In such cases, a provision of the NWP states that an NWP does not obviate the need to obtain other authorizations required by law. [33 CFR 330.4(b)(2)]

Additional safeguards include provisions that allow the Chief of Engineers, division engineers, and/or district engineers to: assert discretionary authority and require an individual permit for a specific activity; modify NWP for specific activities by adding special conditions on a case-by-case basis; add conditions on a regional or nationwide basis to certain NWP; or take action to suspend or revoke an NWP or NWP authorization for activities within a region or state. Regional conditions are imposed to protect important regional resources and concerns. [33 CFR 330.4(e) and 330.5]

1.3.3 Review Process

The analyses in this document and the coordination that was undertaken prior to the issuance of the NWP fulfill the requirements of the National Environmental Policy Act (NEPA), the Fish and Wildlife Coordination Act, and other acts promulgated to protect the quality of the environment.

All NWP that authorize activities that may result in discharges into waters of the United States require compliance with the water quality certification requirements of section 401 of the Clean Water Act. Nationwide permits that authorize activities within, or affecting land or water uses within a state that has a federally-approved coastal zone management program, must also be certified as consistent with the state's program, unless a presumption of concurrence occurs. The procedures to

ensure that the NWP's comply with these laws are described in 33 CFR 330.4(c) and (d), respectively.

2.0 Purpose and Need for the Proposed Action

The proposed action is the issuance of this NWP to authorize discharges of dredged or fill material into waters of the United States under section 404 of the Clean Water Act and structures and work in navigable waters of the United States under section 10 of the Rivers and Harbors Act of 1899 for maintenance activities that result in no more than minimal individual and cumulative adverse environmental effects. This proposed action is needed for effective implementation of the Corps' Regulatory Program, by authorizing with little, if any, delay or paperwork this category of activities, when those activities have no more than minimal individual and cumulative adverse environmental effects. This NWP also provides an incentive to project proponents to reduce impacts to jurisdictional waters and wetlands to receive the required authorization under section 404 of the Clean Water Act and section 10 of the Rivers and Harbors Act of 1899 in less time than it takes to obtain individual permits for those activities. Issuing an NWP to authorize activities that have no more than minimal adverse environmental effects instead of processing individual permit applications for these activities reduces regulatory burdens on the public, provides environmental benefits through avoidance and minimization of impacts to jurisdictional waters and wetlands in exchange for an expedited DA authorization for regulated activities. The issuance of this NWP also allows the Corps to allocate more of its resources towards evaluating proposed activities requiring Department of the Army authorization under that have the potential to cause more substantial adverse environmental effects.

3.0 Alternatives

This evaluation includes an analysis of alternatives based on the text of NEPA, which requires consideration of a reasonable range of alternatives to the proposed agency action that are technically and economically feasible, and meet the purpose and need of the proposal. The alternatives identified below are based on an analysis of the reasonably foreseeable potential environmental impacts and socio-economic impacts to the Corps, federal, tribal, and state resource agencies, the general public, and prospective permittees.

3.1 No Action Alternative (Do Not Reissue the Nationwide Permit)

The no action alternative would be to allow this NWP to continue to authorize activities until it expires on March 14, 2026, and not reissue the NWP. After the NWP expires, under the no action alternative activities that were authorized by this

NWP would require individual permits, unless Corps districts issued regional general permits to authorize a similar category of activities that the NWP authorized.

3.2 Reissue the Nationwide Permit With Modifications

This alternative consists of reissuing the NWP with modifications while considering additional changes to the NWP after evaluating the comments received in response to the proposal to reissue this NWP. This alternative includes changes to the terms and conditions of this NWP, including quantitative limits for this NWP, pre-construction notification thresholds and requirements, and other provisions of this NWP. Under this alternative, division and district engineers have the authority under 33 CFR 330.5(c) and (d) to modify, suspend, or revoke NWP authorizations on a regional or case-by-case basis to ensure that the NWP authorizes only those activities that result in no more than minimal individual and cumulative adverse environmental effects.

In the proposed rule published in the June 18, 2025, issue of the Federal Register (90 FR 26100), the Corps requested comments on the proposed reissuance of this NWP. The Corps did not propose any changes to this NWP.

Since the Corps' NWP program began in 1977, the Corps has continuously strived to develop NWPs that only authorize activities that result in no more than minimal individual and cumulative adverse environmental effects. Every five years the Corps reevaluates the NWPs during the reissuance process, and may modify an NWP to address concerns for the aquatic environment. Utilizing collected data and institutional knowledge concerning activities authorized by the Corps regulatory program, the Corps reevaluates the potential impacts of activities authorized by NWPs. The Corps also uses substantive public comments on proposed NWPs to assess the expected impacts.

3.3 Reissue the Nationwide Permit Without Modifications

This alternative consists of reissuing the NWP without any modifications before it expires on March 14, 2026. Under this alternative, division and district engineers have the authority under 33 CFR 330.5(c) and (d) to modify, suspend, or revoke NWP authorizations on a regional or case-by-case basis to ensure that the NWP authorizes only those activities that result in no more than minimal individual and cumulative adverse environmental effects.

4.0 Environmental Consequences

4.1 General Evaluation Criteria

NWPs can only authorize activities that have no more than minimal individual and cumulative adverse environmental impacts (see 33 U.S.C. 1344(e), 33 CFR 322.2(f), and 33 CFR 323.2(h)). This environmental assessment contains a general evaluation of the reasonably foreseeable effects of the individual activities authorized by this NWP and the reasonably foreseeable cumulative effects of the activities authorized by this NWP during the 5-year period it is anticipated to be in effect. In the assessment of these reasonably foreseeable individual and cumulative effects, the terms and limits of the NWP, pre-construction notification requirements, and the NWP general conditions are considered. The NWP general conditions include mitigation measures that avoid, minimize, rectify, and reduce individual and cumulative adverse environmental effects. For a specific activity authorized by the NWP, the district engineer may require compensatory mitigation and/or other forms of mitigation to ensure that the individual and cumulative adverse environmental effects caused by that NWP activity are no more than minimal.

The environmental effects of a proposed action are evaluated by assessing the direct and indirect effects that the action would likely have on the current environmental setting (Canter 1996). Effects are changes in ecosystem structure and functions over time (Spaling and Smit 1993) that are caused by anthropogenic and natural disturbances. How an ecosystem responds to disturbances is dependent on context, connections at various scales (e.g., local, regional, global) between ecosystems and ecosystem components, and the ecosystem's current structure and functions (Walker and Salt 2006). Disturbances to ecosystems are not always harmful, and disturbances may be an important component of the ecosystem's dynamics (Wallington et al. 2005) that help maintain its structure and function, as well as the ecological services it provides. Some ecosystems require management by people to maintain or enhance their structure and functions (Comberti et al. 2015), as well as their resilience to disturbances (Lui et al. 2007) and other drivers of change.

Ecosystems are heterogeneous, open systems that interact with other ecosystems that occur in a landscape (Wallington et al. 2005) or a seascape. Ecosystems are subjected to multiple categories of disturbances over a variety of spatial (e.g., local, regional, global) and temporal scales (Foley et al. 2015, Elmqvist et al. 2003). A disturbance is an anthropogenic or natural event that alters or disrupts the structure and functions of an ecosystem, often to a substantial degree (Clewell and Aronson 2013). Disturbances are often caused by external influences, such as human activities (e.g., land use changes) and storms (Clewell and Aronson 2013). Activities authorized by this NWP are likely to act as disturbances that might temporarily or permanently change the structure and functions of aquatic ecosystems. When evaluating the potential environmental consequences of the issuance of this NWP on the current environmental setting, the direct and indirect impacts caused by activities authorized by this NWP should not be considered in isolation from the

direct and indirect impacts on aquatic ecosystem structure and functions caused by other human activities, including activities not subject to the Corps' permitting authorities, because it is the collective impacts (i.e., cumulative impacts) of NWP activities and other categories of human activities that could alter the structure and functions of aquatic ecosystems.

For this environmental assessment, the proposed action is the issuance of this NWP. Because this environmental assessment is prepared for an NWP that may be used to authorize discharges of dredged or fill material into waters of the United States and/or structures and work in navigable waters of the United States across the country, it is a general, national scale assessment that takes into consideration the quantity and quality of waters and wetlands described with available national-scale information summarized in Appendix A of this document to describe the current environmental setting. Because the decision by Corps Headquarters on whether to issue an NWP is made in advance of that NWP going into effect and becoming available for use by project proponents to provide DA authorization for their activities, this environmental assessment does not identify or characterize any specific sites at which this NWP may be used during the five year period it is in effect. This environmental assessment also does not address the degree to which specific waters and wetlands on a project site may perform ecological functions and services that may be directly or indirectly affected by the activities authorized by the NWP, because that information is not available at the geographic scale of this environmental assessment. In addition, the specific functions and services performed by waters and wetlands, and the degree to which they perform those functions and services, varies substantially among individual waters and wetlands, and may also vary over time (e.g., seasonally).

The decision on whether to issue an NWP is based on a general assessment of the reasonably foreseeable direct, indirect, and cumulative impacts on waters and wetlands across the country during the five-year period it is anticipated to be in effect. As such, this assessment must be speculative or predictive in general terms. Because the NWP authorizes activities across the United States and its territories, activities eligible for NWP authorization may be constructed in a wide variety of environmental settings, and affect waters and wetlands of varying quality, from severely degraded (i.e., performing ecological functions and services to a low degree, or not performing one or more ecological functions and services) to performing some or all ecological functions and services to a moderate or high degree. NWP activities may result in permanent or temporary losses of aquatic ecosystems and the functions and services they provide, or partial or complete losses of aquatic ecosystems and the functions and services they provide. Therefore, it is difficult to predict all of the reasonably foreseeable direct and indirect impacts that may be caused by each activity authorized by an NWP. For example, the NWP that authorizes 25 cubic yard discharges of dredged or fill material into various types of waters of the United States may be used to fulfill a variety of project purposes, and the direct and indirect environmental effects caused by those

discharges may vary as a result of the characteristics of that activity and the environmental characteristics of the site and landscape or seascape setting in which the activity takes place. Therefore, some NWP activities require pre-construction notification for certain activities to provide district engineers the opportunity to review proposed activities on a case-by-case basis, consider the current environmental setting including the functions and services that may be performed by the affected waters and wetlands, and determine whether the NWP activity will result in no more than minimal individual and cumulative adverse environmental effects.

The Corps expects that the convenience and time savings associated with the use of this NWP will encourage applicants to design their projects to fall within the scope of the NWP rather than request individual permits for activities which could result in greater adverse impacts to the aquatic environment. The avoidance and minimization encouraged by the issuance of this NWP, as well as other mitigation measures that may be required for specific activities authorized by this NWP, is likely to help reduce cumulative effects to the Nation's wetlands, streams, and other aquatic resources caused by activities authorized by this NWP during the five year period it is anticipated to be in effect.

After this NWP is issued, division engineers prepare supplemental documentation to address whether regional conditions, regional suspensions, or regional revocations of this NWP are necessary to help ensure that the activities authorized by this NWP within a particular geographic area (e.g., watershed, seascape, county, state) result in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.5(c)). In addition, when reviewing PCNs, district engineers may add conditions to specific NWP activities to ensure that those activities will result in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.5(d)).

In a specific watershed or other geographic region, division or district engineers may make a preliminary determination that the cumulative adverse environmental effects of activities authorized by this NWP during the five year period may be becoming more than minimal. In such circumstances, division and district engineers will conduct more detailed assessments to determine whether additional regional conditions or suspension or revocation of the NWP is appropriate to ensure that activities with more than minimal cumulative adverse environmental effects are not being authorized by the NWP. Division and district engineers have the authority to require individual permits in watersheds or other geographic areas where the cumulative adverse environmental effects are determined to be more than minimal, or to add conditions to the NWP either on a case-by-case or regional basis to require mitigation measures to ensure that the cumulative adverse environmental effects of these activities are no more than minimal. When a division or district engineer determines, using local or regional information, that a watershed or other geographic region is subject to more than minimal cumulative adverse

environmental effects due to the use of this NWP, he or she will use the revocation and modification procedure at 33 CFR 330.5. In reaching the final decision, the division or district engineer will compile information on the cumulative adverse effects and amend the supplemental documentation that was prepared in accordance with 33 CFR 330.5(c)(1)(iii).

4.2 Impact Analysis

This NWP authorizes structures and work in navigable waters of the United States, as well as discharges of dredged or fill material into all waters of the United States, for the repair, rehabilitation, or replacement of any currently serviceable structure or fill. This NWP authorizes minor deviations in the structure's configuration or filled area, to account for changes in materials, construction techniques, or current construction codes or safety standards. This NWP also authorizes the removal of accumulated sediments in the vicinity of existing structures, as well as the placement of new or additional rip rap to protect the structure. See section 1.0 of this document for a more complete description of the activities authorized by this NWP, as well as limitations on those activities. The general conditions that apply to this NWP also impose further limitations on authorized activities.

Pre-construction notification is required for certain activities authorized by this NWP. The pre-construction notification requirement allows district engineers to review proposed activities on a case-by-case basis to ensure that the individual and cumulative adverse environmental effects of those activities are no more than minimal. If the district engineer determines that the adverse environmental effects of a particular project are more than minimal after considering mitigation, then discretionary authority will be asserted and the applicant will be notified that another form of DA authorization, such as a regional general permit or individual permit, is required (see 33 CFR 330.4(e) and 330.5).

The potential impacts of activities authorized by this NWP on the Corps' public interest review factors listed in 33 CFR 320.4(a)(1) are discussed in more detail in Appendix B of this document. The potential impacts on the aquatic environment that could be caused by discharges of dredged or fill material into waters of the United States authorized by this NWP are discussed, in general terms, in the Clean Water Act section 404(b)(1) Guidelines analysis in Appendix C of this document.

In this environmental assessment, the analysis of environmental consequences is a qualitative analysis because of the paucity of quantitative data at a national scale on the quantity of aquatic ecosystems within the current environmental setting, as well as the paucity of data relating to the specific ecosystem functions and services performed by those aquatic ecosystems and the degree to which those aquatic ecosystem functions and services are performed. In addition, there is a lack of quantitative data at a national scale concerning the various human activities and

natural factors that may directly or indirectly affect aquatic ecosystems and the functions and services they provide. As discussed throughout this environmental assessment, the activities authorized by this NWP are just one category among many categories of human activities that directly and indirectly affect waters and wetlands and the ecological functions and services those waters and wetlands provide. This environmental assessment focuses on the potential impacts on waters and wetlands that are reasonably foreseeable and would occur after this NWP is issued and goes into effect.

The terms of this NWP, including any acreage limits or any other quantitative limits in the text of the NWP, the protections provided by the NWP general conditions, plus any regional conditions imposed by division engineers and activity-specific conditions imposed by district engineers, will help ensure that the activities authorized by this NWP will result in no more than minimal individual and cumulative adverse environmental effects. An additional safeguard in the NWP Program is the ability of district engineers to exercise discretionary authority and require project proponents to obtain individual permits for proposed activities whenever a district engineer determines that a proposed activity will result in more than minimal individual or cumulative adverse environmental effects after considering any mitigation proposed by the project proponent (see 33 CFR 330.1(e)(3)).

In high value waters, division and district engineers can: 1) prohibit the use of the NWP in those waters and require an individual permit or regional general permit; 2) add regional conditions to the NWP to ensure that the individual and cumulative adverse environmental effects are no more than minimal; or 3) for those NWP activities that require pre-construction notification, add special conditions to NWP authorizations, such as compensatory mitigation requirements, to ensure that the adverse environmental effects are no more than minimal. NWPs can authorize activities in high value waters as long as the individual and cumulative adverse environmental effects are no more than minimal.

Corps divisions and districts also monitor the use of this NWP and the authorized impacts identified in NWP verification letters. At a later time, if warranted, a division engineer may add regional conditions to further restrict or prohibit the use of this NWP to ensure that it does not authorize activities that result in more than minimal cumulative adverse environmental effects in a particular geographic region (e.g., a watershed, landscape unit, or seascape unit). To the extent practicable, division and district engineers will use data stored within automated information systems and institutional knowledge about the typical adverse effects of activities authorized by this NWP, as well as substantive public comments, to assess the individual and cumulative adverse environmental effects caused by regulated activities authorized by this NWP.

4.2.1 Individual impacts

The individual environmental impacts are the reasonably foreseeable direct and indirect impacts to ecosystems caused by a specific activity authorized by this NWP (i.e., discharges of dredged or fill material into waters of the United States and/or structures and work in navigable waters of the United States) at a project site. Activities authorized by this NWP are likely to be disturbances that have the potential to temporarily or permanently change the structure and functions of aquatic ecosystems, including the degree to which those aquatic ecosystems perform ecosystem services. The types of activities generally considered to be “discharges of dredged or fill material into waters of the United States” and “structures and work in navigable waters of the United States” are discussed below.

This NWP authorizes discharges of dredged or fill material into waters of the United States. The Corps’ regulations define “dredged material” as “material that is excavated or dredged from waters of the United States.” [33 CFR 323.2(c)] The term “discharge of dredged material” means “any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States.” [33 CFR 323.2(d)(1)] The term “discharge of dredged material” includes, but is not limited to, (1) the addition of dredged material to a specified discharge site located in waters of the United States; (2) the runoff or overflow from a contained land or water disposal area; and (3) any addition, including redeposit other than incidental fallback, of dredged material, including excavated material, into waters of the United States which is incidental to any activity, including mechanized land clearing, ditching, channelization, or other excavation. [33 CFR 323.2(d)(1)]

Under 33 CFR 323.2(d)(2), the term “discharge of dredged material” does not include any of the following:

- (1) discharges of pollutants into waters of the United States resulting from the onshore subsequent processing of dredged material that is extracted for any commercial use (other than fill). These discharges are subject to section 402 of the Clean Water Act even though the extraction and deposit of such material may require a permit from the Corps or applicable State section 404 program.
- (2) Activities that involve only the cutting or removing of vegetation above the ground (e.g., mowing, rotary cutting, and chainsawing) where the activity neither substantially disturbs the root system nor involves mechanized pushing, dragging, or other similar activities that redeposit excavated soil material.
- (3) Incidental fallback.

The term “fill material” is defined at 33 CFR 323.2(e)(1) as meaning “material placed in waters of the United States where the material has the effect of: (1) replacing any portion of a water of the United States with dry land; or (2) changing the bottom elevation of any portion of a water of the United States. Examples of fill material include: “rock, sand, soil, clay, plastics, construction debris, wood chips, overburden from mining or other excavation activities, and materials used to create any structure or infrastructure in the waters of the United States.” [33 CFR 323.2(e)(2)] “Fill material” does not include trash or garbage (see 33 CFR 323.2(e)(3)). Discharges of trash or garbage may be regulated under section 402 of the Clean Water Act or other federal, state, or local laws and regulations.

The Corps’ regulations define the term “discharge of fill material” as meaning “the addition of fill material into waters of the United States.” [33 CFR 323.2(f)] Examples of discharges of fill material provided in section 323.2(f) include, but are not limited to, the following activities: (1) the placement of fill that is necessary for the construction of any structure or infrastructure in a water of the United States; (2) the building of any structure, infrastructure, or impoundment requiring rock, sand, dirt, or other material for its construction; (3) site-development fills for recreational, industrial, commercial, residential, or other uses; (4) causeways or road fills; (5) dams and dikes; (6) artificial islands; (7) property protection and/or reclamation devices such as riprap, groins, seawalls, breakwaters, and revetments; (8) beach nourishment; (9) levees; (10) fill for structures such as sewage treatment facilities, intake and outfall pipes associated with power plants and subaqueous utility lines; (11) placement of fill material for construction or maintenance of any liner, berm, or other infrastructure associated with solid waste landfills; (12) placement of overburden, slurry, or tailings or similar mining-related materials; and (13) artificial reefs. Under 33 CFR 323.2(f), the term “discharge of fill material” does not include plowing, cultivating, seeding and harvesting for the production of food, fiber, and forest products.

Discharges of dredged or fill material into a water or wetland subject to the Corps’ jurisdiction under section 404 of the Clean Water Act may result in the complete or partial loss of wetland area, stream bed, or area of another type of aquatic ecosystem. That complete or partial loss of aquatic ecosystem area may result in a complete or partial loss of aquatic ecosystem functions and services, or changes in the types of ecosystem functions or services being performed at that site. The direct effects to waters and wetlands caused by activities authorized by this NWP may change those waters and wetlands to components of the built environment or uplands, convert an aquatic resource type to another aquatic resource type, or alter the functions and services provided by those waters and wetlands. The direct effects to waters and wetlands caused by activities authorized by this NWP may be permanent or temporary.

The indirect effects to waters and wetlands caused by activities authorized by this NWP may also convert an aquatic ecosystem type to another aquatic ecosystem

type. The indirect effects to waters and wetlands caused by activities authorized by this NWP may be permanent or temporary. The contribution of activities authorized by this NWP to cumulative or aggregate effects to waters and wetlands is also dependent on the degree or magnitude to which the potentially affected aquatic resources perform ecological functions and services. Nearly all waters and wetlands have been directly and indirectly affected by human activities over time (e.g., Halpern et al. 2008 for oceans, Lotze et al. 2006 for estuaries, Zedler and Kercher 2005 for wetlands, Allan 2004 for streams), including land uses in areas that drain to these aquatic ecosystems.

This NWP authorizes structures and work in navigable waters of the United States. Structures and work in navigable waters of the United States may alter the ecological functions and services performed by those navigable waters. The Corps' regulations for section 10 of the Rivers and Harbors Act of 1899 in 33 CFR part 322 define the term "structure" as including, "without limitation, any pier, boat dock, boat ramp, wharf, dolphin, weir, boom, breakwater, bulkhead, revetment, riprap, jetty, artificial island, artificial reef, permanent mooring structure, power transmission line, permanently moored floating vessel, piling, aid to navigation, or any other obstacle or obstruction." [33 CFR 322.2(b)] The Corps' section 10 regulations define the term "work" as including, "without limitation, any dredging or disposal of dredged material, excavation, filling, or other modification of a navigable water of the United States." [33 CFR 322.2(c)] Under this NWP, the section 10 authorization applies to discharges of dredged or fill material into waters of the United States that are also navigable waters under section 10 of the Rivers and Harbors Act of 1899.

Structures and work in navigable waters of the United States do not typically result in losses of navigable waters, but they may change the ecological functions and services performed by those waters. Examples of exceptions would include fills in navigable waters to create fast land along the shoreline, or artificial islands. Structures and work in navigable waters may alter the physical, chemical, and biological characteristics of those waters, but they generally do not result in a loss in the quantity of navigable waters. Structures and work in navigable waters may alter the ecological functions and services provided by those waters. Those alterations will vary, depending on the characteristics of the specific activity authorized by this NWP and the current environmental setting in which the NWP activity may occur. The current environmental setting will vary from site to site, and from region to region, across the country.

As discussed above, the individual impacts of activities authorized by this NWP include the direct and indirect effects caused by discharges of dredged or fill material into waters of the United States and structures and work in navigable waters of the United States at a specific site. Whether the individual adverse environmental effects of an NWP activity are no more than minimal are dependent on activity-specific and site-specific factors. The activity-specific factors include the size and configuration of the NWP, the timing of the NWP activity, the extent that

aquatic resource functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), whether any best management practices or other mitigation measures are being used to reduce direct and indirect impacts, and how the project proponent conducts the NWP activity (e.g., what equipment is used to conduct the discharge dredged or fill material or to install structures or do work in navigable waters). The site-specific factors include the current environmental setting in the vicinity of the NWP activity, the type of resource(s) that will be affected by the NWP activity, the functions provided by the aquatic ecosystems that will be affected by the NWP activity, the degree or magnitude to which the aquatic ecosystems perform those functions, and the importance of the aquatic ecosystem functions to the region (e.g., watershed or ecoregion).

Discharges of dredged or fill material into waters of the United States and structures and work in navigable waters of the United States are anthropogenic disturbances that can affect the structure and functions of aquatic ecosystems, including the degree to which those functions are performed, but they are just two categories of anthropogenic disturbances among many categories of anthropogenic and natural disturbances that can affect the structure and functions of aquatic ecosystems. Many of the categories of human activities and natural factors that can affect the structure and functions of aquatic ecosystems are identified in Appendix A.0 of this environmental assessment.

Among the various regions and individual sites in the United States and its territories where this NWP may be used for activities that require DA authorization, there is substantial variability in the current environmental setting. As discussed in Appendix A.0, the current environmental setting is the result of direct and indirect alterations of aquatic and terrestrial ecosystems by various human activities and natural disturbances that have occurred over time (e.g., Ellis et al. 2021, Evans and Davis 2018, Clewell and Aronson 2013). The types of ecological functions and services provided by aquatic ecosystems vary considerably by region and by specific aquatic ecosystems, with some aquatic ecosystems performing ecological functions and services to a high degree, and other aquatic ecosystems performing ecological functions and services to a lesser degree. Given the geographic scope in which this NWP can be used to authorize activities under section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act of 1899 (i.e., the United States and its territories), the wide variability in aquatic ecosystem structure and functions from site to site and from region to region, and the limited quantitative data available at a national scale on functions and services provided by various types of aquatic ecosystems, the analysis of potential environmental consequences of the issuance of this NWP is a qualitative analysis. In addition, if this NWP is issued, it will be issued before many specific sites for proposed NWP activities are identified. Therefore, the impact analysis in this environmental assessment is a general, qualitative analysis and cannot consider site-specific characteristics associated with a particular NWP activity.

The individual activities authorized by this NWP are likely to affect, to some degree, the ecological functions and services provided by waters and wetlands. In addition, individual activities authorized by this NWP may indirectly affect non-aquatic ecosystems, such as upland forests and grasslands, as well as cultural or production ecosystems (e.g., parks or agricultural areas) that are cultural ecosystems that are managed by people. The severity of potential impacts to aquatic ecosystems caused by activities authorized by this NWP is dependent on a variety of factors. Impacts to aquatic ecosystems caused by activities authorized by this NWP may result in a partial, total, or no loss of aquatic ecosystem functions and services, depending on the specific characteristics of the NWP activity and the environmental setting in which the NWP activity occurs. In addition, the duration of those impacts may vary by activity, with some NWP activities causing permanent impacts, some NWP activities causing temporary impacts, and other NWP activities causing both permanent and temporary impacts. In addition, the duration of permanent or temporary impacts caused by an NWP activity may also be influenced by the resilience and resistance of the affected aquatic ecosystems to disturbances caused by the NWP activity.

The impacts of individual activities authorized by this NWP are also likely to vary by the biotic and abiotic characteristics of the site and the surrounding area. Some NWP activities may result in losses of most or all aquatic ecosystem functions and services at the site of an NWP activity. For example, an NWP activity may convert an aquatic ecosystem or a part of an aquatic ecosystem to dry land or a building or other type of engineered feature, and eliminate all or most of the aquatic ecosystem functions and services that were provided by that site. Some NWP activities may cause losses of some ecosystem functions and services while retaining or enhancing other ecosystem functions and services at the project site (e.g., an NWP activity that converts an aquatic ecosystem to a different type of aquatic or terrestrial ecosystem that provides some ecological functions and services). Some NWP activities may result in no long-term changes in ecological functions and services performed by the affected waters and wetlands because the NWP activity caused only temporary impacts and either the site recovered or was restored after that NWP activity was completed.

When determining whether a proposed NWP activity will cause no more than minimal individual and cumulative adverse environmental effects, the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider the cumulative adverse environmental effects caused by activities authorized by the NWP and whether those cumulative adverse environmental effects are no more than minimal. The district engineer will also consider site specific factors, such as the environmental setting in the vicinity of the NWP activity, the type of ecosystem that will be affected by the NWP activity, the functions provided by the aquatic ecosystems that will be affected by the NWP activity, the degree or magnitude to which the aquatic ecosystems perform those

functions, the extent that aquatic ecosystem functions will be lost as a result of the NWP activity (e.g., partial or complete loss), the duration of the adverse effects (temporary or permanent), the importance of the aquatic ecosystem functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional or condition assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse environmental effects determination. These criteria are listed in the NWP's in Section D, "District Engineer's Decision." The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

For a proposed NWP activity that may result in more than minimal individual adverse environmental effects, the district engineer will provide the applicant the opportunity to submit a mitigation proposal to reduce the adverse environmental effects so that they are no more than minimal (33 CFR 330.1(e)(3)). If the applicant cannot or will not submit an acceptable mitigation proposal to reduce the adverse environmental effects of the proposed NWP activity so that they are no more than minimal, the district engineer will exercise discretionary authority and require an individual permit for that activity (33 CFR 330.1(d)).

Additional conditions can be placed on NWP authorizations on a regional or activity-specific basis by division or district engineers to comply with applicable laws (e.g., section 7 of the Endangered Species Act and section 106 of the National Historic Preservation Act) and ensure that the authorized activities have no more than minimal individual and cumulative adverse environmental effects. Regional conditions added to this NWP by division engineers will be used to account for differences in aquatic ecosystem functions, services, and values across the country, ensure that the NWP authorizes only those activities with no more than minimal individual and cumulative adverse environmental effects. Regional conditions also allow each Corps district to prioritize its workload based on where its efforts will best serve to protect the aquatic environment and other relevant public interest review factors. Regional conditions can restrict or prohibit the use of an NWP in certain waters (e.g., high value waters or specific types of wetlands or waters. Specific NWP's can also be revoked on a geographic or watershed basis where the individual and cumulative adverse environmental effects resulting from the use of those NWP's are more than minimal.

Under 33 CFR 330.4(f)(2), for an NWP activity proposed by a non-federal permittee, the district engineer will review the pre-construction notification to determine if ESA section 7 consultation is required for that activity. If the district engineer determines that the proposed NWP activity may affect listed species or designated critical habitat, ESA section 7 consultation will be conducted with the U.S. Fish and Wildlife Service (U.S. FWS) or National Marine Fisheries Service (NMFS) depending on which species the district engineer determined may be affected by the proposed NWP activity. During the ESA section 7 consultation process the U.S. FWS or

NMFS will evaluate the effects of the action caused by the proposed NWP activity, the status of the species and critical habitat, and the consequences of other activities that are caused by the proposed action but that are not part of the action that are reasonably certain to occur within the action area. For formal ESA section 7 consultations, the U.S. FWS or NMFS will formulate their opinion as to whether the proposed NWP activity is likely to jeopardize the continued existence of listed species (or species proposed for listing) or result in the destruction or adverse modification of critical habitat (or critical habitat proposed for such designation) (see 50 CFR 402.14(g)). The ESA section 7 consultation requirements may also be fulfilled through informal consultation, when the U.S. FWS or NMFS provide their written concurrence that a proposed NWP activity is not likely to adversely affect endangered or threatened species or their designated critical habitat (see 50 CFR 402.13(c)).

4.2.2 Cumulative impacts

The activities authorized by this NWP must result in no more than minimal cumulative adverse environmental effects (see 33 USC 1344(e)(1); also see 33 CFR 322.2(f)(1) and 33 CFR 323.2(h)(1)). The cumulative impacts caused by the issuance of this NWP are the collective impacts on the environment across the country that are directly or indirectly caused by the use of this NWP to authorize discharges of dredged or fill material into waters of the United States under section 404 of the Clean Water Act and structures and work in navigable waters of the United States under section 10 of the Rivers and Harbors Act of 1899 during the period it is anticipated to be in effect (i.e., five years or less). The cumulative impacts to the current environmental setting that are anticipated to be caused by activities authorized by this NWP during the next five years are evaluated against the current environmental setting to determine whether those cumulative impacts will be no more than minimal (for the purposes of general permit authorization) and will not have a reasonably foreseeable significant impact on the quality of the human environment, for the purposes of the National Environmental Policy Act.

The evaluation of cumulative impacts on the current environmental setting also needs to take into account activities authorized by other forms of DA authorization that will occur during the five year period this NWP is in effect, because activities authorized by standard individual permits, letters of permission, other NWPs, regional general permits, and programmatic general permits are also likely to cause direct and indirect environmental effects, including effects on aquatic ecosystems.

The evaluation of cumulative impacts on the current environmental setting must also take into account the direct and indirect environmental impacts caused by activities conducted by other federal, non-federal, and private entities across the country that do not require DA authorization and are likely to occur concurrently with the activities authorized by this NWP during the five-year period it is likely to be in effect. Examples of the activities that can alter the structure and functions of aquatic

ecosystems and are not subject to the Corps' permitting authorities include changes in upland land use, discharges of pollutants regulated under section 402 of the Clean Water Act, non-point sources of pollution, harvesting species that inhabit waters and wetlands, and species introductions. Additional examples of activities not regulated by the Corps that directly and indirectly affect the structure and functions of aquatic ecosystems and the services they may perform are provided in Table 4-12.

The activities authorized by this NWP, activities authorized by other forms of DA authorization (e.g., individual permits, regional general permits), and the activities conducted by other federal, non-federal, and private entities across the country that do not require Department of the Army authorization will interact with each other and may cause changes to the current environmental setting, including the structure and functions of aquatic ecosystems, and the ecosystem services they may provide. As discussed further in this section, those interactions may be additive, synergistic, or antagonistic. The assessment of cumulative impacts, especially at the large geographic scale covered by this environmental assessment (i.e., the United States and its territories, where the NWP can be used) is a difficult task for numerous reasons, such as: (1) the complexities of aquatic ecosystems and the landscapes and seascapes they are located in are complex and our limited understanding of those systems (Harris and Heathwaite 2012); (2) the multitude of contributors to cumulative impacts; (3) the various ways in which the contributors to cumulative impacts can interact with each other; and (4) the challenges in determining whether a change in ecosystem structure and functions is caused by a specific activity or type of activity.

Based on reported use of this NWP during the period of February 22, 2022 to February 21, 2024, the Corps estimates that this NWP will be used approximately 3,890 times per year on a national basis, resulting in impacts to approximately 1,080 acres of waters of the United States, including jurisdictional wetlands. The text of this NWP requires the permittee to submit a pre-construction notification to the district engineer prior to commencing an activity authorized by paragraph (b) of this NWP .

Based on reported use of this NWP during that time period, the Corps estimates that one percent of NWP 3 verifications will require compensatory mitigation to offset the authorized impacts to waters of the United States and ensure that the authorized activities result in only minimal adverse effects on the aquatic environment. The verified activities that do not require compensatory mitigation will have been determined by Corps district engineers to result in no more than minimal individual and cumulative adverse effects on the aquatic environment without compensatory mitigation. During the period of 2026 to 2031, the Corps expects little change to the percentage of NWP 3 verifications requiring compensatory mitigation, because there have been no substantial changes in the mitigation general condition or the NWP regulations for determining when compensatory mitigation may be

required for NWP activities. The Corps estimates that approximately 8 acres of compensatory mitigation will be required each year to offset authorized impacts. The demand for these types of activities could increase or decrease during the five year period this NWP is anticipated to be in effect.

Based on these annual estimates, the Corps estimates that approximately 19,450 activities could be authorized until this NWP expires, resulting in impacts to approximately 5,400 acres of waters of the United States, including jurisdictional wetlands. Approximately 40 acres of compensatory mitigation would be required to offset those impacts. During the period this NWP is in effect, the individual and cumulative impacts on the aquatic environment caused by activities authorized by this NWP are expected to result in only minor changes to the current environmental setting at the scale at which this NWP is issued (i.e., the United States and its territories), which is described in Appendix A of this document. Division engineers have the authority to modify, suspend, or revoke this NWP in a particular geographic region (e.g., a Corps district, state, watershed, or seascape) if they believe those discharges of dredged or fill material into waters of the United States are likely to result in more than minimal individual and cumulative adverse environmental effects in the identified geographic region (see 33 CFR 330.5(c)). District engineers have the authority to modify, suspend, or revoke this NWP on a case-by-case basis if they determine those discharges of dredged or fill material into waters of the United States are likely to result in more than minimal individual and cumulative adverse environmental effects on the project site (see 33 CFR 330.5(d))

Cumulative impacts result from the accumulation of direct and indirect impacts caused by multiple activities in a particular geographic area that persist over time (MacDonald 2000). Substantial changes in ecosystem structure and function are usually the result of the cumulative impacts of multiple disturbances (Hughes et al. 2013, Levin and Mollmann 2015, Scheffer and Carpenter 2003) and other drivers of ecosystem change.

Human activities that disturb ecosystems may interact with each other and cause larger impacts than expected, and natural variation in those ecosystems may also affect the severity of cumulative impacts (Clarke Murray et al. 2014). Disturbances are anthropogenic and natural events that change the structure and/or functions of an ecosystem, usually in a substantial manner (Clewel and Aronson 2013). Those changes may be temporary or permanent, depending on the ecological resilience of the ecosystem and whether thresholds are crossed (Suding and Hobbs 2008).

Cumulative impacts have also been defined as being produced by the interactions of multiple activities within a landscape, such as a watershed or ecoregion (Gosselink and Lee 1989). Cumulative impacts can also occur at a continental scale (Gosselink and Lee 1989). In coastal areas and ocean waters, the counterpart to a landscape unit for evaluating cumulative impacts would be a seascape. A seascape

consists of marine and estuarine waters and their adjacent coastal lands (Pungetti et al. 2012). Since cumulative impacts occur at a broad geographic scale, it is usually difficult to clearly establish cause-and-effect relationships between the numerous activities that contribute to cumulative impacts and the ecosystems' responses to those multiple activities (Gosselink and Lee 1989). In a watershed or other type of ecological system, at any point in time there are numerous activities that overlap in space and time, which makes it difficult to establish precise causal linkages between specific activities, their impacts, and ecological outcomes (Harris and Heathwaite 2012).

All ecosystems are subjected to multiple disturbances that cause cumulative impacts to those ecosystems (Hodgson et al. 2019, Hodgson and Halpern 2018, Suding and Hobbs 2009). Cumulative impacts to aquatic ecosystems and other ecosystems include all human activities that can affect those ecosystems, and extend well beyond the activities authorized by this NWP. Cumulative impacts to aquatic ecosystems are caused by a variety of human activities (see Appendix A.3 for a discussion and list of those activities). Natural disturbances may also contribute to cumulative impacts to aquatic ecosystems and other ecosystems, because they have the potential to change ecosystem structure and functions. Cumulative impacts have gained a substantial human component because of the numerous activities conducted by people as they interact with their environment (Crain et al. 2008).

Contributors to cumulative impacts are not limited to activities that are regulated by a single agency, but they also include activities that are not regulated by that agency (Gosselink et al. 1990). Therefore, cumulative impact assessment should consider the impacts of multiple projects that occur in a region, as well as other human activities that are not considered "projects" per se, such as on-going agricultural activities, forestry activities, urbanization, and fossil fuel consumption (Spaling 1994) that are not subjected to environmental review by any entity (Hunsicker et al. 2016) but are likely to directly or indirectly affect ecosystem structure and functions. Some "non-project" contributors to cumulative impacts may be identified in a cumulative impact analysis but there may be other non-project contributors to cumulative impacts that cannot be identified (Spaling 1994) by the entity conducting the cumulative impact assessment.

Disturbances from various anthropogenic sources interact with each other to cause additional indirect or higher order effects to ecosystems (Hodgson and Halpern 2018). Therefore, when assessing cumulative impacts, it is important to consider not only the multitude of human activities and natural disturbances that contribute to cumulative impacts to aquatic ecosystems and other ecosystems, but how those disturbances interact with each other. There are a number of different ways in which impacts caused by human activities and natural disturbances can interact with each other and potentially change the structure and functions of ecosystems, which presents additional challenges to assessing cumulative impacts and where or not

they are more than minimal or significant. Because of the complexity of ecological systems and potential higher order interactions among disturbances that are likely to affect ecosystem components, it is difficult to predict how cumulative impacts will change ecosystem structure and functions (Crain et al. 2008). There is substantial uncertainty in determining the severity of cumulative impacts because we do not fully understand how various disturbances interact with each other, and with ecosystem components, over space and time (Clarke Murray et al. 2014), and how those interactions control or influence ecological processes (Groffman et al. 2006).

Interactions among human and natural disturbances to ecosystems may be additive, synergistic, or antagonistic (Côté et al. 2016, Kelly et al. 2014, Crain et al. 2008). Under an additive interaction, an ecosystem's response to two or more disturbances is the sum of those disturbances (Côté et al. 2016). Under a synergistic interaction, an ecosystem's response to two or more disturbances is greater than the response from each disturbance (Côté et al. 2016). That is, for synergistic interactions the collective effects are more severe than they would be if they were simply added together. Under an antagonistic interaction, an ecosystem's response to two or more disturbances is smaller than the response from each disturbance (Côté et al. 2016). In other words, for antagonistic interactions the collective effects are less than they would be if they were added together. As the number of anthropogenic and natural disturbances affecting an ecosystem increases, the likelihood of more complex interactions among those disturbances increases (Crain et al. 2008). When there are multiple disturbances acting on an ecosystem at the same time, it is difficult to identify which types of disturbance interactions are occurring (Côté et al. 2016).

Many cumulative impact assessment methods assume additive interactions between disturbances and ecosystem components, but broader ecological studies show that synergistic and antagonistic interactions among disturbances are common (Korpinen and Andersen 2016). Some cumulative impact assessments assume that synergistic interactions are the most common form of disturbance interaction, and more consideration needs to be given to antagonistic and additive interactions (Côté et al. 2016). Assuming that all or most interactions among disturbances are synergistic interactions can lead to a false conclusion that ecosystem structure and functions have become more degraded than they actually have been. To avoid such false conclusions, it is important to consider antagonistic and additive disturbance interactions (Côté et al. 2016) when evaluating cumulative impacts and whether it is necessary to respond to those types of cumulative impacts. Côté and others (2016) recommend that natural resource managers consider that synergistic, antagonistic, and additive interactions among disturbances are equally likely to occur. In watersheds, cross-scale interactions between patterns and processes, multiple disturbances or stressors, and the organisms that inhabit those watersheds, as well as our limited understanding of these complex, adaptive, nonlinear systems (Harris and Heathwaite 2012) produces unavoidable uncertainty that poses challenges to making management decisions,

including decisions regarding actions to respond to cumulative impacts.

For activities authorized by this NWP, the contribution of those activities to cumulative impacts on the structure and functions of jurisdictional waters and wetlands is dependent in part on how the disturbances cause by NWP activities interact with the disturbances caused by other human activities and natural events that occur during the period this NWP is in effect. Those interactions may be additive, synergistic, and/or antagonistic. Cross-scale interactions among ecosystems and disturbances are also likely to occur over geographic scales such as landscapes, watersheds, and seascapes, to further complicate the evaluation of cumulative impacts. The specific types of interactions that occur among NWP activities and other anthropogenic disturbances may vary by aquatic ecosystem types and geographic regions. The interactions that occur may also depend on the degree to which the affected jurisdictional waters and wetlands perform ecological functions and services, the categories of human activities and natural disturbances that affect the structure and function of jurisdictional waters and wetlands in that region, and other factors. The complexity of aquatic ecosystems, the potential types of interactions among the various causes of disturbance that can occur, and other factors make it difficult to predict how aquatic ecosystems in a particular region will respond to the cumulative impacts of the activities authorized by this NWP, activities authorized by other forms of DA authorization, and other activities that are not subject to the Corps' permitting authorities. Because of this uncertainty, a monitoring and reactive approach to addressing cumulative impacts through the division and district engineer's authority to modify, suspend, or revoke NWP authorization on a regional or activity-specific basis is likely to be the most effective approach for ensuring in a particular region that this NWP authorizes only those activities that have no more than minimal cumulative adverse environmental effects.

All ecosystems are subject to disturbances, and it is the type, magnitude, and frequency of disturbances that causes an ecosystem to either: (1) maintain its structure and functions, (2) improve its structure and functions, or (3) exhibit a decline in its structure and functions (Spaling 1994). All ecosystems have some capacity to assimilate various amounts of disturbances without degrading ecosystem structure or functions (Spaling 1994). Potential ecosystem responses to multiple disturbances should take into account ecosystem dynamics, because ecosystems are not static and they are constantly changing in response to anthropogenic and natural drivers of environmental change as well as their internal processes that influence species composition and abundance (Clewell and Aronson 2013). Cumulative impact assessment should consider how aquatic ecosystems and other ecosystems respond to multiple and overlapping disturbances, and whether those ecosystems will continue to maintain their structure and functions or change their structure and functions to one or more alternative states.

Ecosystems are complex adaptive systems that self-organize in response to changes in environmental and biological drivers at various scales (Levin 1999),

including human activities. Complexity imposes basic limits on what people can know and predict, so it is necessary to learn to expect surprises as ecosystems change (Harris and Heathwaite 2012). Ecosystem complexity is due to variability in the physical environment, stochastic variations in ecological processes, and differences in how anthropogenic and natural disturbances affect those ecosystems (Clewell and Aronson 2013). Ecosystem complexity poses challenges in attempting to predict when, and whether, cumulative impacts will alter the structure and functions of the ecosystems being assessed. Other factors, including ecological resilience and potential ecological thresholds may also influence how ecosystems respond to various disturbances.

Ecological science has altered its understanding of how ecosystems change over time, from static models based on equilibrium and predictable behavior to complex, dynamic models that are based on non-equilibrium and unpredictable behavior that accounts for the complexity and non-linearity of ecosystem dynamics (Wallington et al. 2005). Some ecosystems may exhibit gradual, continuous overall responses to multiple disturbances, while other ecosystems exhibit more complex dynamics, expressing little or no change in structure and functions in response to multiple disturbances until a threshold is reached where those ecosystems undergo abrupt, discontinuous (i.e., non-linear) changes in structure and functions (Wallington et al. 2005, Scheffer et al. 2001). Non-linear threshold dynamics in ecosystems are more difficult to predict than linear ecosystem responses to disturbances (Foley et al. 2015). Most ecosystems exhibit complex dynamics, especially as human activities have had increasing cumulative impacts on these systems (Suding and Hobbs 2009) over time.

Most ecosystems can tolerate disturbances and continue to provide ecological functions and services until they reach an ecological threshold that when crossed, causes the ecosystem to change to an alternative state with a substantially different structure and functions (Selkoe et al. 2015, Hunsicker et al. 2016, Suding and Hobbs 2009, Groffman et al. 2006, Scheffer et al. 2001). An ecological threshold is a point where a small change in environmental conditions caused by one or more disturbances results in an ecosystem undergoing a large, non-linear change in its structure and function (Kelly et al. 2015, Suding and Hobbs 2009, Groffman et al. 2006). Abrupt changes in ecosystem structure and function caused by crossing a threshold may occur when human activities reduce the resilience of those ecosystems (Folke et al. 2004). For many ecosystems it generally takes a substantial amount of collective disturbances (i.e., cumulative impacts) to cause an ecosystem to cross a threshold and abruptly change to a different structure and functions (Scheffer et al. 2001, Selkoe et al. 2015). However, some ecosystems may have a lower capacity to absorb disturbances and resist change because they are currently near an ecological threshold where a small amount of additional disturbance may cause the ecosystem to change to a different structure and functions (Selkoe et al. 2015).

Non-linear ecosystem dynamics and thresholds apply to a wide variety of ecosystems, but not all ecosystems (Foley et al. 2015, Groffman et al. 2006, Suding and Hobbs 2009). Threshold dynamics in ecosystems are strongly influenced by human activities (Suding and Hobbs 2009). Non-linear ecosystem dynamics and threshold responses are common in marine ecosystems (Hunsicker et al. 2016). Numerous aquatic ecosystems (e.g., lakes, coral reefs, oyster reefs, fish communities) can shift between alternative states instead of exhibiting gradual responses to disturbances and changing environmental conditions (Scheffer et al. 2001). Ecological thresholds associated with shifts to alternative states have also been observed in terrestrial ecosystems (Groffman et al. 2006). Ecological thresholds are more difficult to identify in terrestrial ecosystems because those ecosystems change more slowly (Groffman et al. 2006). It is also more challenging to identify thresholds in ecosystems that respond more slowly to disturbances, and to develop effective management responses when those ecosystems change to an alternative state (Hughes et al. 2013).

Resilience is the ability of ecosystems to withstand or absorb disturbance while maintaining their basic structure and functions (Suding and Hobbs 2009, Walker and Salt 2006, Folke et al. 2004). An ecosystem with greater resilience can absorb more disturbances than an ecosystem with lower resilience (Kelly et al. 2014). Resilience is linked to non-linear dynamics, where an ecosystem can absorb disturbances to some degree before approaching an ecological threshold where an additional amount of disturbance causes that ecosystem to abruptly change to a different structure and functions (Kelly et al. 2014). Loss of resilience can increase an ecosystem's susceptibility to changing to a different structure and functions, and some changes to alternative states may be irreversible (Folke et al. 2004). Human activities can affect the resilience of ecosystems by changing their biotic composition and how those ecosystems respond to disturbances (Suding and Hobbs 2009). Examples of human activities that can reduce the resilience of ecosystems, and the ability of those ecosystems to sustain their structure and functions after being subjected to disturbances, include land use changes, pollution, resource exploitation, changes in disturbance regimes, and changes in environmental conditions (Folke et al. 2004). Activities authorized by this NWP may also contribute to decreases in aquatic ecosystem resilience, but those contributions are likely to be insignificant because of the wide variety of potential disturbances outside of the Corps' jurisdictional authority to which ecosystems are exposed.

Aquatic ecosystems may exhibit linear or non-linear ecosystem dynamics in response to direct and indirect impacts caused by activities authorized by this NWP and other anthropogenic and natural disturbances. Therefore, there is uncertainty in how these aquatic ecosystems will respond to activities authorized by this NWP and other disturbances. Depending on the degree to which aquatic ecosystems are resilient to disturbances caused by activities authorized by this NWP and to other anthropogenic and natural disturbances, some aquatic ecosystems in a watershed

or other region may exhibit little or no change in structure and functions during the period this NWP is in effect. Under these circumstances, the use of this NWP during the period it is in effect could be considered as resulting in no more than minimal cumulative adverse environmental effects. There may be waterbodies, watersheds, or other regions where jurisdictional waters and wetlands are at or near ecological thresholds that where additional disturbances, including disturbances caused by activities authorized by this NWP, may cause those aquatic ecosystems to shift to an alternative state with substantially different structure and functions. In those situations, division and district engineers will determine whether activities authorized by this NWP were responsible for the substantial changes in structure and functions of the aquatic ecosystems in that region, and may take action to modify, suspend, or revoke the NWP in that region or modify, suspend, or revoke the NWP authorization for specific activities in that region.

Current environmental laws (e.g., the Clean Water Act, the National Environmental Policy Act) were passed in the late 1960s and early 1970s, before ecological science began to understand that many ecosystems exhibit non-linear responses to disturbances (Kelly et al. 2014). Therefore, those environmental laws assume that ecosystems exhibit linear responses to disturbances. Activities authorized by this NWP during the period it is in effect may, or may not, alter the structure, functions, and dynamics of aquatic ecosystems, and the responses of those ecosystems to multiple disturbances may be linear or non-linear. In most cases, our current understanding of aquatic ecosystems or other ecosystems is not sufficient for predicting how they are likely to respond to single disturbances or multiple disturbances (Clarke Murray et al. 2014, Kelly et al. 2014, Suding and Hobbs 2009, Cocklin et al. 1992).

Cumulative impacts are evaluated against the current environmental setting, and the current environmental setting is the product of environmental change (Cocklin et al. 1992) that has occurred over many years over broad geographic areas (e.g., landscapes, seascapes) as a result of a variety of human activities and natural disturbances. For a particular ecosystem, its response to cumulative impacts may be dependent on the current condition of that ecosystem (Clarke Murray et al. 2014), which may not be well understood with currently available information. Ecological thresholds can provide useful, science-based targets for environmental regulation (Kelly et al. 2014), including the evaluation of the cumulative impacts to ecosystems caused by multiple human activities and natural disturbances. However, because of ecosystem complexity and dynamics, our incomplete understanding of these ecosystems, incomplete information about the current functions and services provided by these ecosystems, whether a particular ecosystem is near an ecological threshold where it might be more susceptible to transforming to an alternative state, incomplete information about other concurrent activities that might affect ecosystem structure and functions, and other information gaps make it difficult to predict whether or not the cumulative use of this NWP during the five year period it is in effect may, or may not, cause no more than

minimal adverse cumulative effects.

Because this NWP authorizes activities across the United States and its territories, for the issuance of this NWP, the analysis of cumulative impacts would be the accumulation of impacts caused by activities authorized by this NWP during the period it is in effect (i.e., no more than five years), and how those accumulated impacts could affect the current environmental setting within the United States and its territories. The effects of those accumulated impacts on ecosystem structure and functions are also dependent on how the impacts authorized by this NWP interact (i.e., synergistically, antagonistically, or additively) with impacts caused by other federal, non-federal, and private actions that occur during the period this NWP is in effect, because the activities conducted under this NWP cannot be isolated from those federal, non-federal, and private actions, or from activities that are authorized by other forms of DA authorization, such as individual permits and regional general permits. During the five year period this NWP is in effect, it is the collective impacts of all of these activities that may alter the structure and functions of the ecosystems being evaluated for cumulative impacts.

Cumulative impact analysis can utilize either a stressor-based approach or an effects-based approach (e.g., Duinker et al. 2013, Dubé 2003, Cocklin et al. 1992). A stressor-based approach evaluates the cumulative effects caused by a specific type of disturbance or cause of environmental change (Cocklin et al. 1992). A stressor-based approach to cumulative impact assessment does not take into account other potential anthropogenic or natural disturbances that may also cause changes in ecosystem structure and functions (Duinker et al. 2013, Noble 2010). A stressor-based approach to cumulative impact assessment is unlikely to be effective in identifying and implementing management actions that could reduce or reverse those cumulative impacts because it might not identify all of the primary drivers of change in aquatic ecosystem structure and functions. With respect to the activities authorized by this NWP, under a stressor-based approach to cumulative impact analysis, those NWP activities might not be a substantial driver of changes in aquatic ecosystem structure and functions in a waterbody, watershed, or other geographic region.

In contrast to a stressor-based approach, an effects-based approach to cumulative impact analysis uses a broader definition of “cumulative impact” and thus takes into account the various categories of human activities (including NWP activities) and natural disturbances that contribute to cumulative environmental change. An effects-based approach to cumulative impact assessment is likely to be more robust than a stressor-based approach (Duinker et al. 2013, Duinker and Greig 2006). The complexity associated with the various categories of anthropogenic and natural disturbances that affect aquatic ecosystems and how they interact with each other present challenges with decision-making and management of cumulative impacts for a particular category of anthropogenic disturbance, such as activities authorized by this NWP. Those challenges arise because other anthropogenic disturbances,

not activities authorized by this NWP, may be the primary drivers of substantial changes in ecosystem structure and functions in the areas where this NWP can be used to authorize activities regulated by the Corps. An effects-based approach to cumulative impact analysis may help point managers and decision-makers to broader courses of actions to respond to cumulative impacts and help support the sustainability of ecosystems in a region and their ability to provide ecological functions and services (e.g., Duinker and Greig 2006, Gosselink et al. 1990).

Because of the numerous categories of anthropogenic activities that contribute to cumulative effects to aquatic ecosystems, and the fact that activities authorized by this NWP do not occur in isolation from those other human activities, a stressor-based approach is not appropriate for an environmental assessment to determine whether the issuance of this NWP might cause more than minimal cumulative adverse environmental effects in the United States and its territories. In other words, during the period this NWP is in effect it is the interactions among: (1) the current environmental setting (i.e., the environmental baseline); (2) activities authorized by this NWP; (3) activities authorized by other forms of DA authorization; and (4) federal, non-federal, and private activities that the Corps does not have the authority to regulate (see Appendix A.3 of this document) that have substantial influence on cumulative impacts that may, or may not, change the structure and functions of aquatic ecosystems within the geographic scope of the cumulative impact analysis. Therefore, this environmental assessment takes an effects-based approach to evaluating cumulative impacts of the proposed action and its alternatives.

There are a number of ecological considerations that should be taken into consideration when evaluating cumulative impacts, including the cumulative impacts of one category of activities (e.g., activities authorized by this NWP), that can alter or disrupt ecological processes and affect the structure and functions of jurisdictional waters and wetlands and other aquatic ecosystems and the services they provide. Those ecological considerations include: (1) the difficulties of establishing cause-and-effect relationships between a specific category of anthropogenic or natural disturbance and changes in ecosystem structure and functions; (2) evaluating how various types of anthropogenic and natural disturbances interact with each other; (3) ecosystem dynamics; (4) and ecological thresholds in ecosystems that exhibit non-linear dynamics. Cumulative effects analysis should take into account the complexity, uncertainty, and natural variation of ecosystems (Clarke Murray et al. 2014). Another challenge with cumulative impact assessment in practice is that there are currently substantial gaps in our ecological understanding of how multiple anthropogenic and natural disturbances interact with each other to cause changes to ecosystems and the ecological functions and services they provide (Hodgson et al. 2019, Côté et al. 2016, Clarke Murray et al. 2014).

When the capacity of a waterbody to perform ecological functions decreases substantially, it is usually difficult to identify one specific activity that is responsible

for that degradation, because that degradation is usually the result of multiple anthropogenic disturbances that caused cumulative environmental change in that waterbody (Dubé 2003). When considering cumulative impacts to aquatic ecosystems caused by a specific category of anthropogenic disturbances, firmly establishing a cause-and-effect relationship between that disturbance category and subsequent environmental change is difficult because of the complexity of these ecosystems, their dynamic nature, and the many categories of human activities and natural disturbances that can affect their structure and function (e.g., Korpinen and Andersen 2016, Clarke Murray et al. 2014, Cocklin et al. 1992). Establishing a decisive cause-and-effect relationship between the use of the NWP in a region and substantial changes in the structure and functions of aquatic ecosystems in that region is difficult because of the greater likelihood that those substantial changes were caused by a combination of human activities and natural disturbances that affect the structure and function of those aquatic ecosystems. NWP activities occur concurrently with other human activities and natural disturbances, and the collective disturbances caused by human activities are the causes of cumulative change in aquatic ecosystems. Slowly-occurring changes to ecosystem structure and functions can also make it difficult to identify cause-and-effect linkages between disturbances and changes in ecosystem structure and function, making decision-making for regulatory and resource agencies more challenging (Hughes et al. 2013, Kelly et al. 2015).

Attempting to manage cumulative effects requires an understanding all of the various anthropogenic and natural disturbances that can affect the ecosystem(s) being evaluated, not just the disturbances caused by a specific category of activities (Noble 2010). Therefore, all of those human activities and natural disturbances should be considered when assessing cumulative effects and determining whether there are appropriate management actions that could be required under the Corps' permitting authorities (and any other applicable federal, tribal, state, and local regulatory authorities) to address substantial cumulative adverse environmental effects. Because of the variety of human activities and natural disturbances that contribute to cumulative environmental change, resource managers should also understand that cumulative impacts are likely to continue to occur even if one particular of category of activities (e.g., the activities authorized by this NWP) is prohibited from occurring in that region for the foreseeable future.

Ecological thresholds can guide decision-making for regulatory programs (Kelly et al. 2014) for ecosystems with non-linear dynamics. However, it is difficult to predict where these thresholds are, and ecosystems may exhibit little change before a threshold is reached (Scheffer et al. 2009). If an ecological threshold exists, it may be difficult to identify because many thresholds are not known to exist until after an ecosystem has changed to an alternative state, especially if the ecosystem has resisted change after being exposed to multiple disturbances (Selkoe et al. 2015). Ecological thresholds are less useful for decision-making for ecosystems that have linear dynamics, because they change gradually in response to multiple

disturbances over time, with no discernable threshold. Thresholds may be a critical tool for evaluating the significance of cumulative impacts (Duinker et al. 2013). Identifying ecological thresholds requires gathering sufficient information to better understand ecosystem dynamics and reduce uncertainty about where ecological thresholds may occur and under what circumstances they may be reached (Kelly et al. 2014) and cause the ecosystem to exhibit a substantial change in structure and functions. In addition, ecological thresholds are likely to change as ecosystems change over time, and it may be difficult to predict where an ecological threshold will exist in the future (Standish et al. 2014). Another factor to consider regarding the use of ecological thresholds in decision-making is that slower transitions to alternative states (i.e., substantial changes in ecosystem structure and functions) can be more difficult to identify and manage than sudden transitions to alternative states (Hughes et al. 2013). In some ecosystems, these transitions can take decades, centuries, or longer to occur (Hughes et al. 2013). Therefore, the utility of ecological thresholds in decision-making by Corps divisions and districts, as well as natural resource managers, is dependent on how quickly these transitions shifts are likely to occur in a particular ecosystem.

Implementing an approach to use ecological thresholds to make decisions regarding cumulative environmental change and shifts to alternative states has a number of challenges, such as the difficulty of identifying useful thresholds and the possibility that some for ecosystems it might not be possible to identify practical thresholds (Duinker and Greig 2006). The identification of ecological thresholds is also complicated by the complexity of interactions between ecosystems, geography, local environmental factors, and large-scale environmental factors, and how ecosystems respond to disturbance (Standish et al. 2014). In addition, thresholds are likely to vary by specific ecosystems, with individual ecosystems having different thresholds, depending on site-specific and regional characteristics, including the types of disturbances a particular ecosystem is subjected (Groffman et al. 2006). Because of the difficulty in identifying thresholds in advance of an ecosystem shifting to a substantially different structure and functions, the most certain way to identify thresholds in ecosystems is to observe when a change to a substantially different structure and functions occurs (Kelly et al. 2014, Selkoe et al. 2015).

For jurisdictional waters and wetlands that exhibit non-linear responses to multiple disturbances, including disturbances caused by NWP activities, the “more than minimal cumulative adverse environmental effects” threshold could be interpreted as the occurrence of a substantial change in structure and functions after an ecological threshold is crossed. In other words, cumulative effects caused by activities authorized by this NWP during the period it is in effect would be no more than minimal if the aquatic ecosystems within the regional spatial scale at which cumulative effects are assessed (e.g., a waterbody, watershed, county, state, or Corps district) exhibit little or no change in aquatic ecosystem structure and functions during that time period.

For jurisdictional waters and wetlands that exhibit linear (additive or gradual) responses to multiple disturbances, including disturbances caused by NWP activities, the “more than minimal cumulative adverse environmental effects” threshold is more difficult to define ecologically because each disturbance causes an incremental change in the structure and function of that aquatic ecosystem. For jurisdictional waters and wetlands that exhibit linear responses to multiple disturbances, division and district engineers would have to exercise their judgment as to when the “more than minimal cumulative adverse environmental effects” threshold is exceeded in a particular region.

Because of differences between non-linear and linear responses by ecosystems to cumulative impacts, and other variables such as aquatic ecosystem resilience, the degree to which aquatic ecosystems have been affected by past human activities and natural disturbances, and gaps in understanding how aquatic ecosystems respond to multiple, interacting disturbances, a reactive approach by division and district engineers to address the potential cumulative adverse environmental effects caused by activities authorized by this NWP during the period it is in effect is warranted. If division and district engineers observe that jurisdictional waters and wetlands in a region are undergoing substantial changes in structure and function, they can take actions under 33 CFR 330.5(c) and (d) to modify, suspend, or revoke that NWP in that geographic area.

Cumulative impact analysis involves uncertainty because of our limited understanding of ecosystems, including aquatic ecosystems, and how various human activities and natural disturbances affect the structure and function of those ecosystems (Clarke Murray et al. 2014). An additional challenge to assessing cumulative impacts is the difficulty of quantifying the response of an ecosystem to a specific disturbance, including the degree to which that disturbance affects the structure and functions of that ecosystem (Clarke Murray et al. 2014). Furthermore, if ecosystem response to a particular disturbance is difficult to quantify, then it is likely to be even more difficult to quantify how an ecosystem responds to the cumulative impacts of multiple disturbances and other drivers of ecosystem change. These factors point to the challenges and difficulties in quantifying cumulative impacts and determining whether or not they are likely to have a reasonably foreseeable significant impact on the quality of the human environment.

The use of thresholds for determining the significance or severity of cumulative impacts should focus on the use of ecological thresholds, rather than regulatory thresholds, because regulatory thresholds are typically not based on ecological concepts (Duinker et al. 2013), such as ecosystems dynamics in response to multiple disturbances and other drivers. In addition, some regulatory thresholds, especially qualitative thresholds (e.g., an environmental change that is “no more than minimal”), are subjective, and present challenges in defining that regulatory threshold and how to apply it to decision-making. Compared to regulatory thresholds, one advantage that ecological thresholds have as an environmental

decision-making tool is that ecological thresholds are not arbitrary because they are based on observable biophysical ecosystem responses (Kelly et al. 2015).

This qualitative assessment of cumulative impacts that may be caused by the issuance of this NWP is necessary because of the lack of data concerning: (1) the quantity of aquatic ecosystems across the country, (2) the degree to which those aquatic ecosystems perform various ecological functions and services, (3) the numbers, types, and impacts of federal, non-federal, and private actions across the country that may affect the structure and functions of aquatic ecosystems, (4) what types of interactions are likely to occur among the various anthropogenic disturbances to aquatic ecosystems, (5) the degree to which those aquatic ecosystems are resilient to disturbances, and (6) other data gaps. These data limitations make it difficult to conclude, with any confidence, that the issuance of this NWP is likely to cause more than minimal cumulative adverse environmental effects to aquatic ecosystems in the United States and its territories. However, because of the “no more than minimal cumulative adverse effects” is much lower than the threshold for requiring an environmental impact statement under NEPA, the issuance of this NWP will not have a reasonably foreseeable significant impact on the quality of the human environment.

Because the activities authorized by this NWP constitute only a small proportion of the categories of human activities across the country that directly and indirectly affect ocean waters, estuarine waters, lakes, wetlands, streams, and other aquatic resources, the activities authorized by this NWP during the period it is anticipated to be in effect are likely to result in only a minor incremental change to the jurisdictional waters and wetlands in the affected environment (i.e., the current environmental setting in the United States and its territories), and the ecological functions and services those waters and wetlands provide. Division and district engineers will monitor the use of this NWP on a regional and activity-specific basis, and under their authorities in 33 CFR 330.5(c) and (d), will modify, suspend, or revoke NWP authorizations in situations where those activities will result in more than minimal cumulative adverse environmental effects in a waterbody, watershed, or other geographic region.

If, during the period the NWP is in effect, Corps Headquarters determines that this NWP is resulting in more than minimal cumulative adverse environmental effects across the country, it will take action under 33 CFR 330.5(b) to modify, suspend, or revoke this NWP. At a regional scale, division and district engineers will take actions under 33 CFR 330.5(c) and (d) respectively, to modify, suspend, or revoke this NWP when they determine that the use of this NWP in a region or for a specific activity will result in more than minimal cumulative adverse environmental effects.

4.3 Impact Analysis for Alternatives to the Proposed Action

4.3.1 No Action Alternative (Do Not Reissue the Nationwide Permit)

The no action alternative would not achieve one of the goals of the Corps' Nationwide Permit Program, which is to regulate with little, if any, delay or paperwork certain activities having minimal impacts (33 CFR 330.1(b)). The no action alternative would also reduce the Corps' ability to pursue the current level of review for other activities that have greater adverse effects on the aquatic environment, including activities that require standard individual permits as a result of division or district engineers exercising their discretionary authority under the NWP program. The no action alternative would also reduce the Corps' ability to conduct compliance actions.

If this NWP is not available, substantial additional resources would be required for the Corps to evaluate these minor activities through the standard individual permit process, and for the public and federal, tribal, and state resource agencies to review and comment on the large number of public notices for these activities. In a considerable majority of cases, when the Corps publishes public notices for proposed activities that result in no more than minimal adverse environmental effects, the Corps typically does not receive responses to these public notices from either the public or federal, tribal, and state resource agencies. Therefore, processing standard individual permits for these minimal impact activities is not likely to result in substantive changes to those activities. Another important benefit of the NWP program that would not be achieved through the no action alternative is the incentive for project proponents to design their projects so that those activities meet the terms and conditions of an NWP. The Corps believes the NWPs have significantly reduced adverse effects to the aquatic environment because most applicants modify their activities that require DA authorization to comply with the NWPs and avoid the longer permit application review times and larger costs typically associated with the individual permit process.

If the NWPs are allowed to expire without being reissued, and if project proponents seek individual permits for activities that require DA authorization, those standard individual permits may result in larger amounts of permanent and temporary impacts to waters of the United States because standard individual permits do not have any acreage limits or other quantitative limits. Therefore, the no action alternative could have more severe adverse environmental impacts than the other two alternatives.

Under the no action alternative, district engineers may issue regional general permits or programmatic general permits to authorize similar categories of activities that would have no more than minimal adverse environmental effects that could have been authorized by this NWP. However, those regional general permits or programmatic general permits may have different quantitative limits, different restrictions, and other permit conditions, and those quantitative limits, restrictions, and permit conditions may result in the authorization of activities that have greater,

similar, or lesser adverse environmental effects than the activities that would have been authorized by this NWP. Under the no action alternative, there may be differences in consistency in implementation of the Corps Regulatory Program among Corps districts. District engineers can tailor their regional general permits and programmatic general permits to effectively address the specific categories of aquatic resources found in their geographic areas of responsibility, the specific categories of activities that occur in those geographic areas, and the ecological functions and services those categories of aquatic resources provide. The environmental consequences of this aspect of the no action alternative are more difficult to predict because of the potential variability of regional general permits and programmatic general permits among Corps districts across the country when such general permits are available to authorize a similar category of activities as this NWP authorizes.

If this NWP is not reissued, districts would have to draft, propose, and issue regional general permits or programmatic general permits through the public notice and comment process and prepare applicable environmental documentation to support their decisions on whether to issue those regional general permits or programmatic general permits. It would take a substantial amount of time to issue those regional general permits and programmatic general permits, and in the interim proposed activities would have to be authorized through the individual permit process.

4.3.2 Reissue the Nationwide Permit With Modifications

This NWP was developed to authorize discharges of dredged or fill material into waters of the United States and structures and work in navigable waters of the United States for maintenance activities that have no more than minimal individual and cumulative adverse environmental effects. The Corps has considered changes to the terms and conditions of this NWP suggested by comments received in response to the proposed rule, as well as modifying or adding NWP general conditions, as discussed in Appendix E of this document and the preamble of the Federal Register notice announcing the reissuance of this NWP.

Changing the terms and conditions of this NWP would likely result in changes in the number of activities authorized by this NWP, and the environmental impacts of the authorized activities. The environmental consequences of changing the terms and conditions of this NWP may vary, depending on whether modifications for the reissued NWP are more restrictive, less restrictive, or is similarly restrictive compared to previously issued versions of this NWP. The environmental consequences of changing the terms and conditions of this NWP are also dependent on the application of existing tools used to ensure that activities authorized by this NWP will only have no more than minimal adverse environmental effects. Those tools include the quantitative limits of the NWP, the pre-construction notification process, the availability of mitigation measures to minimize the adverse

environmental effects caused by activities authorized by this NWP, and the ability of division and district engineers to modify, suspend, or revoke this NWP on a regional or case-by-case basis.

Changing the national terms and conditions of this NWP may change the incentives for project proponents to reduce their proposed impacts to jurisdictional waters and wetlands to qualify for NWP authorization, and receive the required DA authorization for regulated activities in less time than it would take to receive individual permits for those activities. Under the individual permit process, the project proponent may request authorization for activities that have greater impacts on jurisdictional waters and wetlands, and may result in larger losses of aquatic resource functions and services.

The environmental consequences of division engineers exercising their discretionary authority to modify, suspend, or revoke this NWP on a regional basis may be a reduction in the number of activities that could be authorized by this NWP in a region or more NWP activities requiring pre-construction notification through regional changes in the PCN requirements for this NWP. The environmental consequences are likely to include reduced losses of waters of the United States because regional conditions can only further condition or restrict the applicability of an NWP (see 33 CFR 330.1(d)). The modification, suspension, or revocation of this NWP on a regional basis by division engineers may also reduce the number of activities authorized by this NWP, which may increase the number of activities that require standard individual permits. If more activities require standard individual permits, permitted losses of jurisdictional waters and wetlands may increase because standard individual permits have no quantitative limits.

An environmental consequence of regional conditions added to this NWP by division engineers is the enhanced ability to address differences in aquatic resource functions, services, and values among different regions across the nation. Corps divisions may add regional conditions to the NWPs to enhance protection of the aquatic environment in a region (e.g., a Corps district, state, or watershed) and address regional concerns regarding jurisdictional waters and wetlands and other resources (e.g., listed species or cultural resources) that may be affected or impacted by the activities authorized by this NWP. Division engineers can also revoke an NWP in a region if the use of that NWP results in more than minimal adverse environmental effects, especially in high value or rare waters or wetlands. When an NWP is issued or reissued by the Corps, division engineers issue supplemental documents that evaluate potential impacts of the NWP at a regional level, and assess cumulative impacts caused by this NWP on a regional basis during the period this NWP is in effect. [33 CFR 330.5(c)]

An environmental consequence of district engineers modify, suspending, or revoking this NWP on a case-by-case basis is the ability of district engineers to address site-specific conditions, including the degree to which aquatic resources on

the project site provide ecological functions and services. Activity-specific modifications may also address site-specific resources (e.g., listed species or cultural resources) that may be affected by NWP activities. The environmental consequences of modification of this NWP on an activity-specific basis by district engineers may be further reductions in losses of waters of the United States for specific activities authorized by NWP because of mitigation required by district engineers during their reviews of PCNs to ensure that those activities result in no more than minimal individual and cumulative adverse environmental effects (see 33 CFR 330.1(e)(3)). Examples of mitigation that may be required by district engineers include permit conditions requiring compensatory mitigation to offset losses of waters of the United States or conditions added to the NWP authorization to prohibit the permittee from conducting the activity during specific times of the year to protect spawning fish and shellfish. If a proposed NWP activity will result in more than minimal adverse environmental effects, then the district engineer will exercise discretionary authority and require an individual permit. The individual permit review process requires a project-specific alternatives analysis, including the consideration of off-site alternatives, and a public interest review.

4.3.3 Reissue the Nationwide Permit Without Modifications

Retaining the current terms and conditions of this NWP would likely result in little or no changes in the number of activities authorized by this NWP, and the environmental impacts of authorized activities. Project proponents would likely continue to design their project to qualify for NWP authorization. Retaining the current national terms and conditions of this NWP would likely continue to provide incentives for project proponents to reduce their proposed impacts to jurisdictional waters and wetlands to qualify for NWP authorization, and receive the required DA authorization for regulated activities in less time than it would take to receive individual permits for those activities. Under this alternative, for those activities that require individual permits project proponents may request authorization for activities that have greater impacts on jurisdictional waters and wetlands, and may result in larger losses of aquatic resource functions and services.

Under this alternative, the environmental consequences of division engineers exercising their discretionary authority to modify, suspend, or revoke this NWP on a regional basis would be similar to the environmental consequences discussed in section 4.3.2 of this document for the alternative identified in section 3.2 of this document. Corps divisions may add regional conditions to the NWPs to enhance protection of the aquatic environment in a region (e.g., a Corps district, state, or watershed) and address regional concerns regarding jurisdictional waters and wetlands and other resources (e.g., listed species or cultural resources) that may be affected or impacted by the activities authorized by this NWP. Division engineers can also revoke an NWP in a region if the use of that NWP results in more than minimal adverse environmental effects, especially in high value or rare waters or wetlands. When an NWP is issued or reissued by the Corps, division engineers

issue supplemental documents that evaluate potential impacts of the NWP at a regional level, and assess cumulative impacts caused by this NWP on a regional basis during the period this NWP is in effect. [33 CFR 330.5(c)]

Under this alternative, the ability of district engineers to modify, suspended, or revoke this NWP on a case-by-case to address site-specific conditions, including the degree to which aquatic resources on the project site provide ecological functions and services, is likely to have environmental consequences similar to the environmental consequences of the alternative identified in section 3.2 of this document. Activity-specific modifications under this alternative may also address site-specific resources (e.g., listed species or cultural resources) that may be affected by NWP activities. Activity-specific modifications may also include mitigation requirements similar to the potential mitigation requirements discussed in section 4.3.2 of this document.

The reissuance of this NWP adopts the alternative identified in section 3.3 of this document. The Corps has considered the comments received in response to the proposed rule, and made changes to the NWPs, general conditions, and definitions to address those comments. Division engineers may add regional conditions to this NWP to help ensure that the use of the NWPs in a particular geographic area will result in no more than minimal individual and cumulative adverse environmental effects. District engineers may also add regional conditions to this NWP to help ensure compliance with other applicable laws, such as section 7 of the Endangered Species Act, section 106 of the National Historic Preservation Act, and the essential fish habitat provisions of the Magnuson-Stevens Fishery Conservation and Management Act. Division engineers may also add regional conditions to this NWP to fulfill the Corps' tribal trust responsibilities.

5.0 Determinations

5.1 Finding of No Significant Impact

Based on the information in this document, the Corps has determined that the discharges of dredged or fill material into waters of the United States and the structures and work in navigable waters of the United States authorized by the issuance of this NWP will not have a reasonably foreseeable significant impact on the quality of the human environment. During the period this NWP will be in effect, the activities authorized by this NWP will result in only minor changes to the current environmental setting described in Appendix A.0 of this environmental assessment. Therefore, the preparation of an environmental impact statement is not required for the issuance of this NWP.

5.2 Public Interest Determination

In Appendix B of this document, and in accordance with the requirements of 33 CFR 320.4, the Corps has determined, based on the information in this document, that the issuance of this NWP to authorize discharges of dredged or fill material into waters of the United States and structures and work in navigable waters of the United States for maintenance activities is not contrary to the public interest.

5.3 Section 404(b)(1) Guidelines Compliance

In Appendix C of this document, this NWP has been evaluated for compliance with the 404(b)(1) Guidelines, including Subparts C through G. Based on the information in this document, the Corps has determined that the discharges authorized by this NWP comply with the 404(b)(1) Guidelines, with the inclusion of appropriate and practicable conditions, including mitigation measures required by the NWP general conditions, that minimize adverse effects on affected aquatic ecosystems. The discharges of dredged or fill material into waters of the United States authorized by this NWP will result in only minor changes to the current environmental setting described in Appendix A.0 of this document, and will have no more than minimal individual and cumulative adverse effects on the aquatic environment during the period this NWP is in effect.

5.4 Section 176(c) of the Clean Air Act General Conformity Rule Review

This issuance of this NWP has been analyzed for conformity applicability pursuant to regulations implementing section 176(c) of the Clean Air Act. It has been determined that the activities authorized by this permit will not exceed de minimis levels of direct emissions of a criteria pollutant or its precursors and are exempted by 40 CFR 93.153. Any later indirect emissions are generally not within the Corps continuing program responsibility and generally cannot be practicably controlled by the Corps. For these reasons, a conformity determination is not required for this NWP.

FOR THE COMMANDER

Dated: 05 JAN 20



Jason E. Kelly
Major General, U.S. Army
Deputy Commanding General for
Civil and Emergency Operations

STATE OF NORTH CAROLINA
DEPARTMENT OF ENVIRONMENTAL QUALITY
DIVISION OF WATER RESOURCES

WATER QUALITY GENERAL CERTIFICATION NO. 8562

GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR US ARMY CORPS OF ENGINEERS
NATIONWIDE PERMIT NUMBER 3 (MAINTENANCE)

Water Quality General Certification Number 8562 is issued in conformity with the requirements of Section 401, Public Laws 92-500 and 95-217 of the United States and subject to the North Carolina Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to surface waters and wetland areas as described in the corresponding Nationwide Permit issued pursuant to 33 CFR 330 of the US Army Corps of Engineers regulations.

The State of North Carolina certifies that the specified category of activity will comply with water quality requirements and applicable portions of Sections 301, 302, 303, 306 and 307 of the Public Laws 92-500 and 95-217 if conducted in accordance with the conditions hereinafter set forth.

Effective date: March 15, 2026

Signed this day: December 15, 2025

By

DocuSigned by:
Richard E. Rogers, Jr.
B2B16AD426A64B6...

Richard E. Rogers, Jr.
Director

GENERAL CERTIFICATION COVERAGE:

Activities authorized by Coastal Area Management Act (CAMA) General Permits that are eligible for US Army Corps of Engineers Nationwide Permit 3 qualify for coverage under this General Certification as long as they comply with all of the Activity Specific and General Conditions of this Certification listed below.

All other activities that are eligible for US Army Corps of Engineers Nationwide Permit 3 qualify for coverage under this General Certification unless they meet one of the thresholds listed below. Activities meeting any one (1) of the thresholds or circumstances listed below are not eligible for coverage under this General Certification and therefore require an Individual 401 Water Quality Certification from the Division of Water Resources (DWR).

- a) If any of the conditions of this General Certification cannot be met; or
- b) Total permanent impacts to streams greater than or equal to 300 linear feet; or
- c) Total permanent impacts to wetlands equal to or greater than one-half (1/2) acre; or
- d) Total permanent impacts to open waters equal to or greater than one-half (1/2) acre; or
- e) Any project proposing to satisfy compensatory mitigation through Permittee Responsible Mitigation; or
- f) Any high-density project, as determined by the density thresholds and criteria specified in 15A NCAC 02H .1017(4) which triggers all of the following thresholds:
 - i. Proposes to disturb one acre or more of land (including a project that disturbs less than one acre of land that is part of a larger common plan of development or sale); and
 - ii. Has permanent wetland, stream, or open water impacts; and
 - iii. Is proposing new built-upon area; and
 - iv. Is not subject to a stormwater management plan review and approval under a state stormwater program¹ or a state-approved local government stormwater program², or has vested rights, exemptions, or other legacy rights or exemptions from state or locally-implemented stormwater programs or propose to satisfy state or locally-implemented stormwater programs through use of community in-lieu fee programs

For the purposes of the thresholds above (a-f), the Permittee shall account for all impacts from the Single and Complete Project (e.g. impacts from dedicated borrow and waste sites, impacts from associated infrastructure/utilities) as determined by the US Army Corps of Engineers, and all secondary indirect impacts resulting from the proposed activities.

Activities listed under Section I of this General Certification must receive a Certificate of Coverage from DWR prior to initiation of any activities covered by this General Certification.

¹ e.g. Coastal Counties, HQW, ORW, or state-implemented Phase II NPDES

² e.g. Delegated Phase II NPDES, Water Supply Watershed, Nutrient-Sensitive Waters, or Universal Stormwater Management Program

I. NOTIFICATION AND REQUIREMENTS FOR CERTIFICATE OF COVERAGE:

Activities listed in this Section must obtain a Certificate of Coverage from DWR prior to initiation of any activities covered by this General Certification.

If the activity is authorized or proposed for authorization by a Coastal Area Management Act (CAMA) Major Permit, then skip to k) in this list.

- a) Total temporary and permanent new impacts and/or additions to existing structures to streams greater than or equal to 150 linear feet including any topographic/slope stabilization or in-stream stabilization needed for stream crossings; or
- b) Total temporary and permanent new impacts and/or additions to existing structures to wetlands equal to or greater than one-tenth (1/10) acre; or
- c) Total temporary and permanent new impacts and/or additions to existing structures to open waters and/or ditches subject to Section 404 of the Clean Water Act (CWA) equal to or greater than one-tenth (1/10) acre; or
- d) Any impacts to streams or wetlands from excavation or dredging other than excavation that is conducted as preparation for installing permanent fill or structures; or
- e) Any stream restoration or relocation **except for**:
 - i. Stream relocations that are conducted for the purpose of proper culvert installation, alignment, protection, repair or maintenance where the relocation length is equal to or less than 50 linear feet in length and the relocated stream is designed and installed based on current natural channel techniques; or
 - ii. Repairs to previously authorized restoration or relocation projects using the same authorized design; or
- f) Complete dewatering and drawdowns to a sediment layer related to pond/dam maintenance or removal unless the dewatering activity has been designed to ensure no discharge of sediment will occur into downstream waters AND has been covered by a Sediment and Erosion Control Plan Approval from the Division of Energy, Mineral, and Land Resources (DEMLR) or a delegated local program; or
- g) Any sediment and erosion control measures installed in wetlands or waters beyond the footprint of temporary and/or permanent wetland and/or waters impacts covered by this General Certification; or
- h) Any impacts to SAV or significant shellfish resources as identified by the Division of Marine Fisheries (DMF); or
- i) Any permanent impacts to Unique Wetlands (UWL) [15A NCAC 02B .0231]; or
- j) Any impacts to streams and/or open waters that are subject to state regulated riparian buffers in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman Lake, Jordan Lake or Goose Creek Watersheds (or any other basin or watershed with State Regulated Riparian Area Protection Rules [15A NCAC 02B .0714; 15A NCAC 02B .0734; 15A NCAC 02B .0614; 15A NCAC 02B .0724; 15A NCAC 02B .0267; 15A NCAC 02B .0607] in effect at the time of application) *unless*:
 - i. The activities are listed as “EXEMPT” or “DEEMED ALLOWABLE” from these rules; or

- ii. A Buffer Authorization Certificate is issued by the NC Division of Coastal Management (DCM); or
 - iii. A Buffer Authorization Certificate, Certificate with Exception, or Minor Variance is issued by a delegated or designated local government implementing a state riparian buffer program pursuant to 143-215.23; or
 - iv. Site access, equipment storage, and work is done solely from or in the water, avoiding all land disturbance in or near the buffer; or
- k) Activities authorized or proposed for authorization by a Coastal Area Management Act (CAMA) Major Permit **except for** projects that are covered by any one of the following criteria:
- i. Boat Ramps and associated necessary infrastructure (i.e. roads and parking lots) that comply with all of the following:
 - A. Excavation or fill of wetlands and/or open water area is less than 500 square feet total; and
 - B. Excavation or fill of coastal wetlands (as defined in 15A NCAC 07H .0205) is equal to or less than 100 square feet;
 - ii. Living shorelines/marsh sills that comply with all of the following:
 - A. the landward edge of the sill does not extend waterward of the normal high water or normal water line more than 30 feet or five feet waterward of the existing wetlands whichever distance is greater; and
 - B. the activity will not involve the excavation or fill of any Submerged Aquatic Vegetation (SAV); and
 - C. the activity will not involve the excavation or fill of significant shellfish resources (as identified by the Division of Marine Fisheries); and
 - D. the activity does not result in any fill landward of the toe of the sill alignment; or
 - iii. All other shoreline protection measures not covered by item ii above that comply with all of the following:
 - A. tie into existing bulkheads, land, or other shoreline protection measures or do not extend waterward of the normal high water or normal water line more than 10 feet; and
 - B. the activity will not involve the excavation or fill of any Submerged Aquatic Vegetation (SAV); and
 - C. the activity will not involve the excavation or fill of significant shellfish resources (as identified by the Division of Marine Fisheries); and
 - D. Excavation or fill of wetlands and/or open water area is less than 500 square feet total; and
 - E. Excavation or fill of coastal wetlands (as defined in 15A NCAC 07H .0205) is equal to or less than 100 square feet;
 - iv. Piers and docks designed to accommodate up to, but not exceeding, 10 vessels that comply with all of the following:
 - A. the water depth is equal to or greater than two feet of water at normal low water level or normal water level (whichever is applicable); and

- B. they are not located within Outstanding Resource Waters (ORW) as defined in 15A NCAC 02B .0225;
- v. Any other projects that involve only shading of waters or wetlands that are not covered by item (iv) above;
- vi. Maintenance dredging to restore the documented historical dimensions of the dredged channel of less than 0.5 acres of open water or non-vegetated wetlands, that comply with all of the following:
 - A. the activity will not involve the excavation or fill of any Submerged Aquatic Vegetation (SAV); and
 - B. the activity will not involve the excavation or fill of significant shellfish resources (as identified by the Division of Marine Fisheries); and
- vii. Utility lines as long as all impacts are temporary;
- viii. New development (impacts shall include the entire project, including but not limited to: boat ramps, bulkheads or other shoreline stabilization measures) that comply with all of the following:
 - A. Excavation or fill of non-coastal wetlands and/or open water area is less than 1/10 acre total; and
 - B. Excavation or fill within a Coastal Shoreline Area of Environmental Concern (AEC) is no more than 2,000 square feet

For the purposes of the thresholds above (a-k), the Permittee shall account for all impacts from the Single and Complete Project (e.g. impacts from dedicated borrow and waste sites, impacts from associated infrastructure/utilities) as determined by the US Army Corps of Engineers, and all secondary indirect impacts resulting from the proposed activities.

A note: In accordance with 15A NCAC 02H .0506(c) and Session Law 2017-10, compensatory mitigation is required for losses from the entire single and complete project of greater than or equal to 300 linear feet of perennial streams and/or greater than or equal to 0.10 acre of wetlands, whether a Certificate of Coverage or an Individual is required.

II. ACTIVITY SPECIFIC CONDITIONS

1. Disturbed streambanks shall be stabilized at the end of each working day to ensure downstream water quality standards are maintained throughout construction. Streambanks shall be permanently stabilized with native riparian vegetation when practical. Temporary vegetation utilized for immediate stabilization and erosion control shall consist of native vegetation or annual vegetation such that it will not compete with permanent vegetation. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
2. All bulkhead backfill material shall be obtained from a high ground source and confined landward of the permitted bulkhead and shall consist of clean, earthen material free of any pollutants except in trace quantities. Metal products, organic materials concrete, bricks, or other non-earthen debris shall not be used. *Citation: 15A NCAC 02H .0506(b)*

3. The proposed bulkhead is a maximum of two (2) feet waterward of existing bulkhead, mean high water, normal high water or normal water level. (if necessary: along the most waterward alignment) *Citation: 15A NCAC 02H .0501 and .0502 and 15A NCAC 02H .0506 (b)(1)-(3)*
4. For living shorelines, the sills shall have at least one ten-foot opening every 100 feet and may be staggered or overlapped or left open as long as the five-foot separation between sections is maintained. Overlapping sections shall not overlap more than 10 feet. *Citation: 15A NCAC 02H .0506(b)(1) and (3); 15A NCAC 02H .0507(c)*
5. For living shorelines, the permittee shall employ all sedimentation and erosion control measures necessary to prevent an increase in sedimentation and turbidity within waters and wetlands outside the permitted area. This shall include, but is not limited to, the immediate installation of silt fencing, turbidity curtains or similar appropriate devices around all areas subject to soil disturbance. Additionally, the project must remain in full compliance with all aspects of the Sedimentation Pollution Control Act and the Mining Act of 1971. *Citation: 15A NCAC 02H .0506(b)(1) and (3); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200*

If this Water Quality Certification is used for performing maintenance dredging on canals or boat basins, then the following Activity Specific Conditions shall apply to those impacts.

6. When performing maintenance dredging on canals or boat basins they shall not be dredged beyond their original depth and width. The area shall not be dredged to a depth deeper than the receiving water. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
7. All dredge and/or fill material shall be placed on high ground and the effluent water from the dredge spoil shall not be released into open shellfish waters unless Shellfish Sanitation (252-515-5656, ext. 0) and the DWR Washington (252-946-6481) or Wilmington (910-796-7215) Regional Office, as applicable, are notified and provide approval prior to the release. *Citation: 15A NCAC 02B .0221; 15A NCAC 02H .0507(c)*
8. The terminal end of the pipeline from the dredge into the retention area shall be positioned at a maximum distance from spillways to allow adequate settling of suspended solids and a sufficient distance from any part of the dike so as to preclude dike erosion by the pipeline discharge. Effluent shall be released waterward of emergent marsh or tidal flats when located within these systems. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
9. A water control structure shall be installed at the intake end of the effluent leading from the retention area in order to ensure maximum settling of suspended solids and control of discharge volumes. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
10. The flow from any diked retention area shall be contained by pipe, metal or wooden trough, or similar device to a point waterward of any emergent vegetation along the shoreline unless it can be clearly shown by the permittee that a different design will result in less environmental impact. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*

11. Sufficient freeboard shall be maintained within the diked disposal area during the dredging operation to assure the integrity of the dike structure and the containment of the dredged material. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
12. Hydraulic dredging which utilize an upland diked disposal basin with a return pipe for the return water shall utilize the "two basin" design. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
13. The appropriate turbidity water quality standard shall not be exceeded or be above natural background conditions as stipulated in 15A NCAC 02B .0211(21) or 02B .0220(19). *Citation: 15A NCAC 02H .0507(c); 15A NCAC 02B .0200*
14. Disposal area dikes shall be stabilized with vegetative cover within one (1) day after construction to minimize erosion. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*

If this Water Quality Certification is used for utility-related impacts, then the following Activity Specific Conditions shall apply to those impacts.

15. Any construction corridor that is parallel to a stream or open water shall not be closer than 10 feet to the top of bank or ordinary high-water mark. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
16. Where there are temporary or permanent impacts from stream crossings, underground utility lines shall cross the stream channel at a near-perpendicular direction (i.e., between 75 degrees and 105 degrees to the stream bank). Utility line replacements within existing easements or alignments may follow the existing alignments. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
17. Construction corridors in wetlands and/or across stream channels shall be minimized to the maximum extent practicable and shall not exceed 40 feet wide.

For construction corridors in wetlands and across stream channels, stumps shall be grubbed only as needed to install the utility line, and remaining stumps shall be cut off at grade level. The general stripping of topsoil within wetlands along the construction corridor is prohibited. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*

18. Permanent maintained access corridors in wetlands and across stream channels shall be restricted to the minimum width practicable and shall not exceed 30 feet wide for underground utilities. For parallel adjacent lines with less than 20 feet between them, the permanent maintained corridor shall be restricted to the minimum width practicable not to exceed 15 feet from the edge of the outer most lines. Parallel adjacent lines with 20 feet or more between them shall be treated as individual lines with the access corridor the minimum width practicable, not to exceed 30 feet wide for each line. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*

19. For all utility lines constructed within wetlands, an anti-seep collar shall be placed at the downstream (utility line gradient) wetland boundary and every 150 feet up the gradient until the utility exits the wetland. Anti-seep collars may be constructed with class B concrete, compacted clay, PVC pipe, or metal collars. Wetland crossings that are directionally drilled, and perpendicular wetland crossings that are open cut and less than 150 feet long do not require anti-seep collars. The compacted clay shall have a specific infiltration of 1×10^{-5} cm/sec or less. A section and plan view diagram is attached for the anti-seep collars.

The following specifications shall apply to class B concrete:

- i. Minimum cement content, sacks per cubic yard with rounded coarse aggregate 5.0
- ii. Minimum cement content, sacks per cubic yard with angular coarse aggregate 5.5
- iii. Maximum water-cement ratio gallons per sack 6.8
- iv. Slump range 2" to 4"
- v. Minimum strength - 28-day psi 2,500

Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

20. The permittee shall restore wetland contours to pre-construction conditions. Any excess material will be removed to a high ground disposal area.

The mixing of topsoil and subsoils within the wetlands along utility corridors shall be minimized to the greatest extent practical. During excavation, the soils shall be placed on fabric to minimize impacts whenever possible. Topsoil excavated from utility trenches will be piled separately from subsoils and will be backfilled into the trench only after the subsoils have been placed and compacted. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*

III. GENERAL CONDITIONS

1. For all activities that require a Certificate of Coverage under Section I of this General Certification: The Certificate of Coverage is issued specifically for the plans, specifications, and associated application materials for the proposed project approved by DWR by the issuance of the Certificate of Coverage. Any final construction plans for a project must include or reference the application and plans submitted to the DWR. The Permittee must evaluate all other acquired permits to ensure that they are consistent with the plans submitted to the DWR, and all relative impacts are accounted for and shown on the final construction plans. Any modifications or additional impacts to streams and/or wetlands within the project require the permittee to notify the DWR and may require submission of a new application package with the appropriate fee to redetermine eligibility under this General Certification. *Citation: 15A NCAC 02H .0506(b)(2) and (3); 15A NCAC 02H .0507(c)*

2. If the property is sold, the Permittee shall provide the new owner with a copy of this General Certification and all plans and specifications incorporated by reference for all activities that require a Certificate of Coverage under Section I of this General Certification. The Permittee may transfer a certificate of coverage issued under this General Certification to the new owner by submitting a letter to the Division with the following statement: *“At the time the property is transferred, the terms and conditions of this 401 Individual Water Quality General Certification, including the responsibility to ensure compliance, are binding on the new owner(s) of the property.”* The letter shall be signed and dated by both the transferee and the new owner. *Citation: 15A NCAC 02H .0507(d)(2)*
3. For all projects that include multiple parcels and/or lots, including transportation and/or utility-related projects installed as infrastructure for multiple parcels and/or lots, deed notifications or similar mechanisms shall be placed on all lots/parcels that include jurisdictional wetlands, streams, open waters, and state-regulated riparian buffers within the overall project boundaries. These mechanisms shall be put in place at the time of recording of the property or individual parcels, whichever is appropriate. *Citation: 15A NCAC 02H .0502(a); 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
4. The Permittee shall allow the Director, or an authorized representative (including an authorized contractor acting as a representative of the Director), upon the presentation of credentials and other documents as may be required by law, to: *Citation: 15A NCAC 02H .0502(e); 15A NCAC 02H .0507(c)*
 - a. Enter, at reasonable times, upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this certificate;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this certificate;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this certificate; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring certificate compliance or as otherwise authorized by the Clean Water Act, any substances or parameters at any location
5. In accordance with 15A NCAC 02H .0506(c) and Session Law 2017-10, compensatory mitigation is required for losses from the entire single and complete project of greater than or equal to 300 linear feet of perennial streams and/or greater than or equal to 0.10 acre of wetlands. For linear publicly owned and maintained transportation projects that have not been determined to be part of a larger common plan of development, the stream mitigation threshold is applied per perennial stream. The Compensatory Mitigation Responsibility Transfer (CMRT) Form(s) attached to the Certificate of Coverage or Individual Certificate issued for a specific project, shall be completed and provided to DWR prior to **any** impacts occurring. If the Mitigation Provider specified in the CMRT Form(s) changes after issuance of the Certificate of Coverage with MRT Form, then the Permittee shall request a revised CMRT Form from DWR prior to conducting any impacts. *Citation: 15A NCAC 02H .0506(c); 15A NCAC 02H .0507(c)*

6. For High Density Development projects subject to a State, or State approved Local Government Delegated Program, the Permittee shall secure an *approved* stormwater management plan (SMP) from the appropriate agency **before any** impacts authorized in this Certification occur. Before any permanent building or other permanent structure is occupied at the site the permanent stormwater management control measures or devices for the building and/or structures shall be constructed and operational. If any Erosion and Sediment Control devices share locations with any of the Stormwater Control Measures, the area must be restored to the approved stormwater design condition within 30 days of close-out of the Erosion and Sediment Control Plan. *Citation: 15A NCAC 02H .0506(b)(2) and (3); 15A NCAC 02H .0507(c)*
7. For phased projects with conceptual future phases, when final design plans are completed, the Permittee shall ensure that final designs shall reflect all appropriate avoidance and minimization of impacts to wetlands, streams, and other surface waters. For projects that have been issued a Certificate of Coverage under this General Certification, the Permittee shall submit a request for a modified Certificate of Coverage if the impacts from the final design differ from those identified in the existing Certificate of Coverage. No construction activities (including temporary impacts) shall begin at such impact locations until a new Certificate of Coverage has been secured. *Citation: 15A NCAC 02H .0506(b)(2) and (3); 15A NCAC 02H .0507(c)*
8. All wetlands, streams, and surface waters located within the limits of disturbance and within 50 feet of the limits of disturbance/construction area on the project site shall be clearly marked (example- orange fabric fencing) prior to any land disturbing activities. The marking/fencing shall be maintained until the project or project phase is completed. Impacts to areas within the marked area/fencing are prohibited unless otherwise authorized by this certification. *Citation: 15A NCAC 02H .0506(b)(2); 15A NCAC 02H .0507(c)*
9. When requested by DWR, the Permittee and/or authorized agent shall schedule a pre-construction meeting with DWR, shall contact the appropriate DWR Regional Office upon project commencement of construction, shall submit a Certificate of Completion and/or shall provide as-built documentation. *Citation: 15A NCAC 02H .0502(e); 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*

10. For projects that include draining a pond or lake, appropriate erosion and sediment control measures shall be utilized while draining the pond or lake to ensure limited impact to downstream waters as well as to native aquatic species. Such measures shall also be utilized to avoid any sediment release into downstream waters as a result of pond draining. The permittee shall observe any natural channel re-establishment, or utilize natural channel construction techniques, to ensure that the jurisdictional stream channel above and below the drained pond remain stable, and that no additional impacts occur within the natural stream channel as a result of draining the pond. The Permittee shall consult with NCWRC prior to the relocation or release of any aquatic species during pond draining or dam removal activities. During pond or lake refill, sufficient flow shall be continually released to the receiving stream to ensure aquatic life survival and maintenance of biological integrity. *Citation: 15A NCAC 02H .0506(b)(2); 15A NCAC 02H .0507(c)*
11. The permittee shall report to the appropriate DWR Regional Office any noncompliance with, and/or any violation of, stream or wetland standards [15A NCAC 02B .0200], including but not limited to sediment impacts to streams or wetlands. Information shall be provided orally within 24 hours (or the next business day if a weekend or holiday) from the time the permittee became aware of the non-compliance circumstances. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
12. A copy of this General Certification, and when applicable, the Certificate of Coverage, shall be retained on site during the construction and maintenance of this project, or with the project manager, and be available for inspection at all times. The Permittee shall require its contractors and/or agents to comply with the terms and conditions of this permit in the construction and maintenance of this project and shall provide each of its contractors and/or agents associated with the construction or maintenance of this project with a copy of this General Certification. If the Permittee becomes aware of any inability to comply with any of the conditions of this General Certification, they must notify the appropriate Regional Office within 24 hours (or the next business day if a weekend or holiday) from the time the Permittee becomes aware of the circumstances. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
13. No additional temporary or permanent impacts from waste, spoil, solids, fill, excavation, or staging of equipment, shall occur in wetlands or waters beyond the footprint of the impacts (including temporary impacts) identified in a Certificate of Coverage; or for projects that do not require a Certificate of Coverage; beyond the thresholds established for use of this General Certification. *Citation: 15A NCAC 02H .0506; 15A NCAC 02H .0507(c)*
14. All activities shall be in compliance with any applicable State Regulated Riparian Buffer Rules in Chapter 2B of Title 15A in the North Carolina Administrative Code. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*

15. When applicable, all construction activities shall be performed and maintained in full compliance with G.S. Chapter 113A Article 4 (Sedimentation Pollution Control Act of 1973). Regardless of applicability of the Sedimentation Pollution Control Act, all projects shall incorporate appropriate Best Management Practices for the control of sediment and erosion so that no violations of state water quality standards, statutes, or rules occur.

Design, installation, operation, and maintenance of all sediment and erosion control measures shall be equal to or exceed the requirements specified in the most recent version of the *North Carolina Erosion and Sediment Control Planning and Design Manual*, or the *North Carolina Department of Transportation Erosion and Sediment Control Design and Construction Manual*.

Appropriate measures should be installed prior to any land clearing activities to protect wetlands, streams, and/or buffers from turbidity and/or sedimentation. These measures should be routinely inspected and properly maintained, and excavated materials should be contained outside wetland, stream, and/or buffer boundaries.

For installation of bridges that involve driving or drilling activities within stream channels, open waters, or along streambanks turbidity curtains shall be installed within the surface water.

All devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) sites, including contractor-owned or leased borrow pits associated with the project. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

For borrow pit sites, the erosion and sediment control measures shall be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual*. Reclamation measures and implementation shall comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality Waters (HQW), or Outstanding Resource Waters (ORW), then the sedimentation and erosion control designs shall comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds*. Citation: 15A NCAC 02H .0506(b)(2); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231

16. Sediment and Erosion Control Measures (S&EC) in wetlands or waters should be avoided to the maximum extent possible and any S&EC occurring in wetlands or waters shall be restored to pre-existing conditions upon completion of the project. The Permittee shall utilize sediment and erosion control measures that avoid and minimize the need for the placement of silt fence along streams at the normal water level. Where measures are placed within authorized impact areas then placement of such measures shall not be conducted in a manner that results in a loss of function of any wetlands, streambeds, or streambanks. Any erosion control measures, including silt fence, installed within wetlands shall be removed from wetlands and the natural grade restored and revegetated within two (2) months of the date the appropriate sediment and erosion control program has released the specific area within the project to ensure wetland standards are maintained upon completion of the project. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231*
17. Erosion control matting shall not be placed within a stream bed. Erosion control matting that incorporates plastic mesh and/or plastic twine shall not be used along streambanks or within wetlands. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
18. If the project is covered by NPDES Construction Stormwater Permit Number NCG010000 or NPDES Construction Stormwater Permit Number NCG250000, full compliance with permit conditions including the erosion and sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. *15A NCAC 02H .0506(b) and (c); 15A NCAC 02H .0507(c)*
19. The North Carolina Department of Transportation (NCDOT) shall maintain full compliance with the conditions related to construction activities and post construction stormwater design, construction and maintenance, within the most recent version of their Individual NPDES Stormwater Permit Number NCS000250. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231*
20. For projects impacting waters classified by the NC Environmental Management Commission as High Quality Waters (HQW), including Water Supply I or II (WSI, WSII) and/or as Outstanding Resources Waters (ORW) post construction stormwater shall be managed in accordance with 15A NCAC 02B .0224(d) or .0225 as applicable.

21. All work in or adjacent to streams, ponds, lakes, and reservoirs shall be conducted so that the work area is isolated from surface waters. Approved best management practices from the most current version of the DEMLR [NC Erosion and Sediment Control Planning and Design Manual](#), or the *NC Department of Transportation Best Management Practices For Construction and Maintenance Activities Manual*, such as sandbags, rock berms, cofferdams, pump-arounds, and other diversion structures shall be used to minimize excavation in flowing water. Water that comes in contact with the work area shall be treated through an appropriate sediment/erosion control measure (sediment basin, filter bag, etc) prior to discharging to a surface water. All temporarily disturbed areas for the purpose of isolation/dewatering shall be restored to original grade, including each stream's original cross-sectional dimensions, planform pattern, and longitudinal bed profile. All temporarily impacted sites shall be restored and stabilized with native vegetation as practicable. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200*
22. For all activities that require a Certificate of Coverage under Section I of this General Certification: *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 04B .0125*

The Permittee shall allow NCWRC and/or DMF to implement pre-construction species surveys and relocations. The Permittee shall adhere to NCWRC and/or DMF recommended moratoria. If NCWRC and/or DMF provides recommended design modifications to protect federally/state listed aquatic species, the permittee shall implement these to the degree possible. If the recommended conditions cannot be met, a project proponent may apply for coverage under an individual 401 water quality certification.

For all other activities:

Work within a designated trout watershed as identified by the Wilmington District of the US Army Corps of Engineers or work within identified state or federal endangered or threatened species habitat shall be coordinated with NCWRC and/or DMF prior to initiating of project activities.

The Permittee shall adhere to NCWRC and/or DMF recommended moratoria. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium. If activities must occur during periods of high biological activity of aquatic species (e.g. sea turtle nesting, fish spawning, or bird nesting) all biological surveys, relocations, and/or monitoring requested by the state agency must be conducted.

23. Culverts shall be designed and installed in such a manner that the original stream profiles are not altered and allows for aquatic life movement during low flows. The dimension, pattern, and profile of the stream above and below a pipe or culvert shall not be modified by widening the stream channel or by reducing the depth of the stream in connection with the construction activity. The width, height, and gradient of a proposed culvert shall be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. If the width of the culvert is wider than the stream channel, the culvert shall include multiple boxes/pipes, baffles, benches and/or sills to maintain the natural width of the stream channel. If multiple culverts/pipes/barrels are used, low flows shall be accommodated in one culvert/pipe and additional culverts/pipes shall be installed such that they receive only flows above bankfull.

Placement of culverts and other structures in streams shall also meet one of the following requirements:

- a. For structures less than 72" in diameter/width and in area where topographic constraints dictate culvert slopes will be greater than 2.5%, culverts shall be installed "at grade" such that low flow conditions in the stream are maintained provided that all alternative options for flattening the slope have been investigated and aquatic life movement/connectivity has been provided when possible (e.g. rock ladders, cross-vanes, sills, baffles etc.); or
- b. When bedrock is present in culvert locations, culvert burial is not required, provided that there is documentation of the presence of bedrock.
- c. For all other culverts:
 - i. Culverts with a diameter greater than 48 inches shall be below the elevation of the streambed by one foot
 - ii. Culverts with diameter less than or equal to 48 inches shall be below the streambed by 20% of the culvert diameter

If a culvert outlet is submerged within a pool or scour hole and designed to provide for aquatic passage, then culvert burial into the streambed is not required.

Documentation such as a location map of the culvert, culvert profile drawings, slope calculations, geotechnical reports, photographs, etc. shall be provided to DWR upon written request.

For culvert replacements within the same location/footprint, and of similar length, culverts shall be designed and installed to meet the above requirements of this Condition unless prohibited by existing conditions on site, such as existing infrastructure or topographic constraints.

Installation of culverts in wetlands shall ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. When roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges shall be provided to maintain the natural hydrology of the system as well as prevent constriction of the floodway that may result in destabilization of streams or wetlands.

The establishment of native woody vegetation and other soft stream bank stabilization techniques shall be used where practicable instead of rip-rap or other bank hardening methods. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*

24. Bridge piles and bents shall be constructed using driven piles (hammer or vibratory) or drilled shaft construction methods. More specifically, jetting or other methods of pile driving are prohibited under this General Certification. *15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200*
25. Unless already approved by an NPDES permit, bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means to the maximum extent practicable (e.g. grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. This condition may be waived with prior written approval from the NCDWR. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*
26. Application of fertilizer to establish planted/seeded vegetation within disturbed riparian areas and/or wetlands shall be conducted at agronomic rates and shall comply with all other Federal, State and Local regulations. Fertilizer application shall be accomplished in a manner that minimizes the risk of contact between the fertilizer and surface waters. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0231*
27. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in, or adjacent to, surface waters is prohibited. *Citation: 15A NCAC 02H.0506(b)*
28. If concrete is used during construction (including bulkhead components, such as deadman anchors, tie-back systems and concrete caps), then all necessary measures shall be taken to isolate the concrete from waters of the state by maintaining a dry work area to prevent direct contact between curing concrete and surface waters. Drill slurry and water that inadvertently contacts uncured concrete shall not be discharged to waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to surface waters due to the potential for elevated pH and possible aquatic life and fish kills. Any water that contacts uncured concrete shall be captured, treated, and disposed of properly. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200; 15A NCAC 02B .0231*

29. All temporary pipes, culverts, rip-rap pads etc. in streams shall be installed so as not to restrict stream flow or installed in such a manner that restricts aquatic life movement during low flow conditions. All temporary pipes and/or culverts shall be installed as outlined in the most recent edition of the *North Carolina Erosion and Sediment Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* or the *North Carolina Department of Transportation Best Management Practices for Construction and Maintenance Activities*. Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)
30. All temporary fill and temporary culverts shall be removed, and the impacted area shall be returned to natural conditions, within 60 calendar days after the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross-sectional dimensions, planform pattern, and longitudinal bed profile. All temporarily impacted sites shall be restored and stabilized with native vegetation when practicable. For all areas where wetlands are impacted by temporary roads constructed by temporary fill material, the Permittee shall remove the fill material and conduct activities necessary to restore preconstruction hydrology by addressing soil compaction. When temporary fill has been added to wetlands, or heavy equipment has been placed within a wetland, the Permittee shall ensure restoration of preconstruction soil conditions when restoring wetland areas. Upon restoration of the wetland, the Permittee shall inspect the area quarterly for a minimum of two years to document successful restoration. The Permittee shall provide documentation of inspections to DWR when requested. The monitoring requirement can be relieved with review and written approval by DWR. If the area is not restored to preconstruction conditions the impacts shall be considered permanent, and the Permittee shall request a modified Certificate of Coverage from DWR. With prior written approval from DWR, removal of temporary fill and temporary culverts and restoration of the impacted area may be postponed to accommodate moratorium periods. Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)
31. Demolition of existing structures, such as culvert or bridge removal, shall be conducted to ensure water quality standards are maintained. NCDOT activities shall adhere to NCDOT's *Best Management Practices for Construction and Maintenance Activities*. Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200
32. Any rip-rap or other armoring materials required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the construction activity covered by this General Certification. All rip-rap or other non-natural armoring material placed in streams shall be placed such that the original streambed elevation and streambank contours are restored, and that the finished elevation of the rip rap shall not exceed that of the original stream bed. All rip-rap or other armoring materials shall consist of clean rock or masonry material free of debris or toxic pollutants. Placement of rip-rap or other armoring materials shall not result in destabilization of the stream bed or banks upstream or downstream of the area or be installed in a manner that precludes aquatic life passage. Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)

33. Any rip-rap or other non-natural armoring material (i.e. gabion baskets, revetments, bulkheads, seawalls, retaining walls) used for stream or shoreline stabilization shall be of a size and density to prevent movement by wave, current action, or stream flows, and shall consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap or other armoring materials shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures. Any rip-rap or other armoring materials placed in the streambed shall be such that the finished elevation of the rip rap or other armoring materials shall not exceed that of the original stream bed. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0201*
34. Rip-rap groins proposed in accordance with 15A NCAC 07H .1401 (NC Division of Coastal Management General Permit for construction of Wooden and Rip-rap Groins in Estuarine and Public Trust Waters) shall meet all the specific conditions for design and construction specified in 15A NCAC 07H .1405. *Citation: 15A NCAC 02H .0507(c); 15A NCAC 07H .1400*
35. All mechanized equipment operated near surface waters shall be inspected and maintained regularly to prevent contamination of surface waters from fuels, lubricants, hydraulic fluids, or other toxic materials. Construction shall be staged in order to minimize the exposure of equipment to surface waters to the maximum extent practicable. Fueling, lubrication, and general equipment maintenance shall be performed in a manner to prevent, to the maximum extent practicable, contamination of surface waters by fuels and oils. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0200*
36. Heavy equipment working in wetlands shall be placed on mats or non-impact equipment shall be used to ensure no disturbance and/or compaction of soil from equipment except within the footprint of the impacts covered by this Certification. Heavy equipment necessary for in stream activities shall be operated from the banks to the maximum extent practical and in no cases shall cause unstable stream banks or a violation of water quality standards. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC 02B .0231*
37. In accordance with G.S. 143-215.85(b), the Permittee shall report any petroleum spill of 25 gallons or more; any spill regardless of amount that causes a sheen on surface waters; any petroleum spill regardless of amount occurring within 100 feet of surface waters; and any petroleum spill less than 25 gallons that cannot be cleaned up within 24 hours. *Citation: 15A NCAC 02H .0507(c); N.C.G.S 143-215.85(b)*
38. For all dam removal projects meeting the definition under G.S. 143-215.25 and requirements under G.S. 143-215.27 of a professionally supervised dam removal, the applicant shall provide documentation that any sediment that may be released has similar or lower level of contamination than sediment sampled from downstream of the dam in accordance with Session Law 2017-145. *Citation: 15A NCAC 02H .0502; 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c); 15A NCAC02B .0200; S.L. 2017-145;*

39. The Permittee and their authorized agents shall conduct all activities in a manner consistent with State water quality standards (including any requirements resulting from compliance with §303(d) of the Clean Water Act), and any other appropriate requirements of State and Federal Law. *Citation: 15A NCAC 02H .0506(b); 15A NCAC 02H .0507(c)*

IV. DEFINITIONS

Temporary Impacts: Any impact that temporarily disturbs a stream, wetland, or open water and returns the disturbed area to pre-construction conditions, form and function or improved form and function within a duration that will ensure minimal disturbance to ecological function, including biological transport, migration, and reproduction.

Permanent Impacts: Any impact that modifies the form or function of a stream, wetland, or open water in a permanent manner, or for a duration that is sufficiently long to disrupt natural processes within the surface water. Examples include culverts, fill, riprap, streambank or shoreline stabilization, dredging, relocations, restoration. Permanent impacts may (1) improve the function of surface waters, such as stream and wetland restorations, (2) be neutral to the function of the surface waters, or (3) cause a reduction or loss of function of surface waters.

Secondary Indirect Impacts – Effects that are caused by the activity and are later in time or farther removed in distance but are still reasonably foreseeable. Secondary indirect impacts may (1) improve the function of surface waters, such as stream and wetland restorations, (2) be neutral to the function of the surface waters, or (3) cause a reduction or loss of function of surface waters.

Stream Restoration - the process of converting an unstable, altered, or degraded stream corridor, including adjacent riparian zone and flood-prone areas, to its natural or referenced stable conditions considering recent and future watershed conditions. This process also includes restoring the geomorphic dimension, pattern, and profile as well as biological and chemical integrity, including transport of water and sediment produced by the stream's watershed in order to achieve dynamic equilibrium. 'Reference' or 'reference reach' means a stable stream that is in dynamic equilibrium with its valley and contributing watershed. A reference reach can be used to develop natural channel design criteria for stream restoration projects.

Stream Relocation - Stream relocation is when a stream is moved laterally to a new location to allow a project, or part of a project, to be constructed in the stream's former location. For permitting purposes, stream relocations may be considered a loss of function pursuant to 15A NCAC 2H .0506(c) depending on the documented condition and location of the existing stream and the proposed design and success of the relocated stream.

V. ADMINISTRATIVE PROVISIONS

In accordance with 15A NCAC 02H .0506(b), the Director of the North Carolina Division of Water Resources may require submission of an application for an Individual Certification for any project if, based on the unique characteristics of the project, it is determined by the Director that the conditions in this general certification will not ensure that the proposed activity will comply with state water quality standards, which includes designated uses, numeric criteria, narrative criteria and the state's antidegradation policy.

This General Certification does not relieve the permittee of the responsibility to obtain all other required Federal, State, or Local approvals before proceeding with the project, including those required by, but not limited to, Sediment and Erosion Control, Non-Discharge, Water Supply Watershed, Division of Coastal Management and Trout Buffer regulations.

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

This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide Permit. The conditions in effect on the date of issuance of Certification for a specific project shall remain in effect for the life of the project, regardless of the expiration date of this General Certification. For purposes of this paragraph for projects that do not require issuance of a certificate of coverage, the date of issuance shall be deemed to be the date that activities covered by this General Certification were initiated. This General Certification is rescinded when the US Army Corps of Engineers reauthorizes the corresponding Nationwide Permit or when deemed appropriate by the Director of the Division of Water Resources, consistent with the provisions of 15A NCAC 2H .0507.

Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of any Certificate of Coverage issued under this General Certification for the project and may also result in criminal and/or civil penalties.



North Carolina Department of Transportation
 Highway Stormwater Program
 STORMWATER MANAGEMENT PLAN
 FOR NCDOT PROJECTS



(Version 3.02, Released April 23, 2024)

WBS Element: BP12-C004 TIP/Proj No: 350312 County(ies): Gaston Page 1 of 2

General Project Information

WBS Element:	BP12-C004	TIP Number:	350312	Contractor / Designer:	Rusty Lassiter (TGS Engineers)	Project Type:	Other	Date:	12/13/2024
NCDOT Contact:	Joshua White, PE	Address:	1710 E. Marion Street Shelby, NC 28151-0047	Address:	706 Hillsborough Street Raleigh, NC 27603	Phone:	980-552-4218	Phone:	919-773-8887 (Ext. 121)
		Phone:	980-552-4218	City/Town:	Bessemer	Email:	jwhite5@ncdot.gov	Email:	rlassiter@tgsengineers.com
River Basin(s):	Catawba	County(ies):	CAMA County?	County(ies):	Gaston				
Wetlands within Project Limits?	No								

Project Description

Project Length (lin. miles or feet):	0.037 miles	Surrounding Land Use:	Rural; Pasture; Piedmont
Project Built-Upon Area (ac.)	0.1	Proposed Project	Existing Site
Typical Cross Section Description:	Two 10' lanes with 3.0' grassed shoulders		Two 8' paved lanes with 5.0' grassed shoulders

Annual Avg Daily Traffic (veh/hr/day): Design/Future: 660 Year: 2050 Existing: 515 Year: 2025

General Project Narrative: The proposed project replaces 3 @ 84in structural plate pipes under SR 1446 (Bess Town Road) in Gaston County. The replacement structure will be a 2 @ 12ft-6in x 7ft-11in structural plate pipe arches and backfilled with native stone. The proposed pipes will be replaced on existing alignment and consist of two 10-foot lanes with 3-foot shoulders.

Quality Impacts

- >Project minimum measures include:
- >4:1 fill slopes are utilized
- >Providing adequate ground cover
- >Stabilizing embankments
- >Maintaining normal stream flow as existing



North Carolina Department of Transportation
 Highway Stormwater Program
 STORMWATER MANAGEMENT PLAN
 FOR NCDOT PROJECTS



(Version 3.02; Released April 23, 2024)

WBS Element: BP12-C004

TIP/Proj No.: 350312

County(ies): Gaston

Page 2 of 2

General Project Information

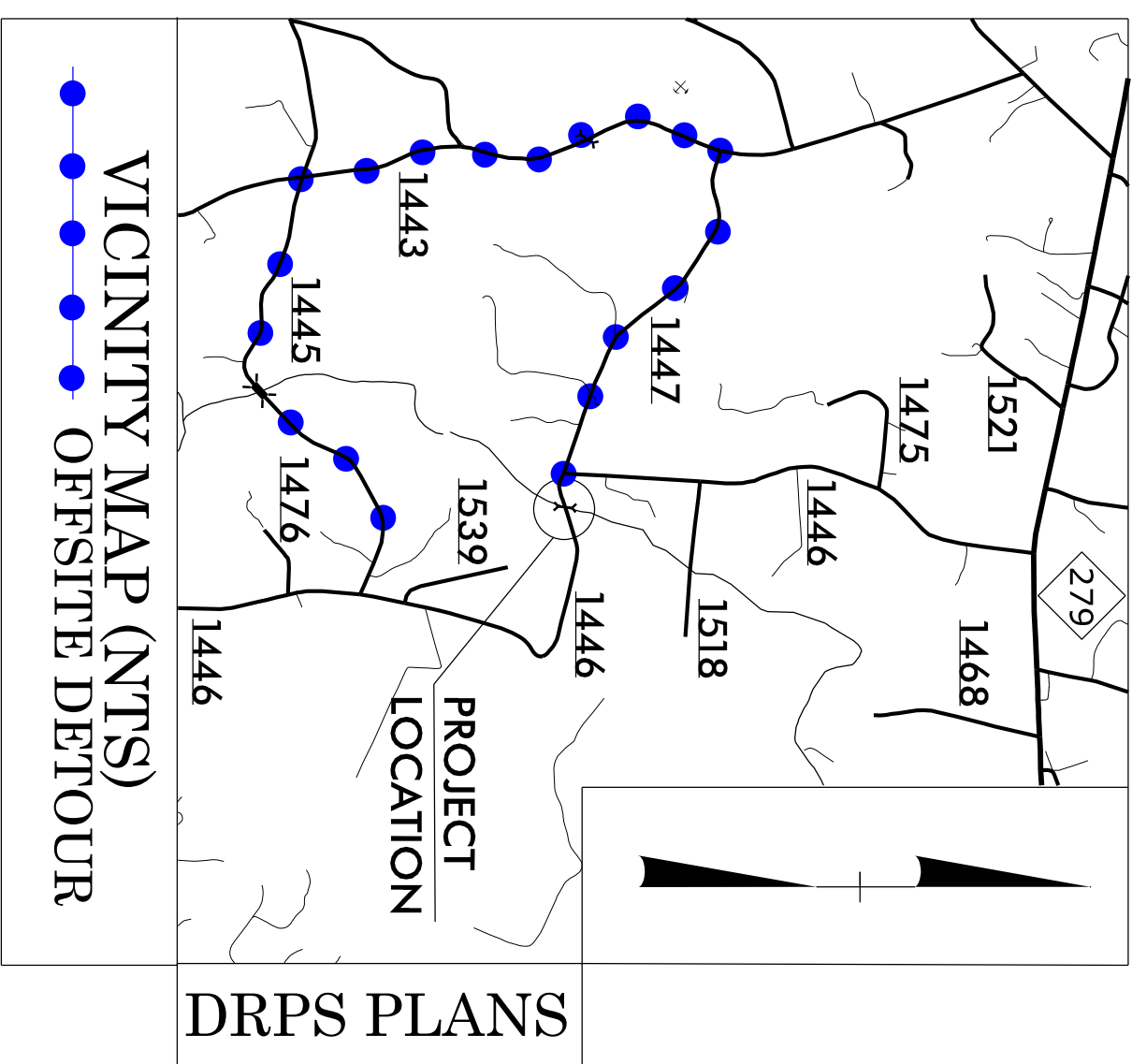
Waterbody Information

Surface Water Body (1):	UT to Long Creek	NCDWR Stream Index No.:	11-129-16-(4)
NCDWR Surface Water Classification for Water Body		Primary Classification:	Class C
		Supplemental Classification:	
Other Stream Classification:			
Impairments:			
Aquatic T&E Species?		Comments:	
NRTR Stream ID:	SA		
Project Includes Bridge Spanning Water Body?	No	Deck Drains Discharge Over Buffer?	N/A
Deck Drains Discharge Over Water Body?	N/A	(If yes, provide justification in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)			
Surface Water Body (2):		NCDWR Stream Index No.:	
NCDWR Surface Water Classification for Water Body		Primary Classification:	
		Supplemental Classification:	
Other Stream Classification:			
Impairments:			
Aquatic T&E Species?		Comments:	
NRTR Stream ID:			
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?	
Deck Drains Discharge Over Water Body?		(If yes, provide justification in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)			
Surface Water Body (3):		NCDWR Stream Index No.:	
NCDWR Surface Water Classification for Water Body		Primary Classification:	
		Supplemental Classification:	
Other Stream Classification:			
Impairments:			
Aquatic T&E Species?		Comments:	
NRTR Stream ID:			
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?	
Deck Drains Discharge Over Water Body?		(If yes, provide justification in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)			
Surface Water Body (3):		NCDWR Stream Index No.:	
NCDWR Surface Water Classification for Water Body		Primary Classification:	
		Supplemental Classification:	
Other Stream Classification:			
Impairments:			
Aquatic T&E Species?		Comments:	
NRTR Stream ID:			
Project Includes Bridge Spanning Water Body?		Deck Drains Discharge Over Buffer?	
Deck Drains Discharge Over Water Body?		(If yes, provide justification in the General Project Narrative)	
(If yes, provide justification in the General Project Narrative)			

TIP PROJECT: BP12-C004

CONTRACT:

See Sheet 1A For Index of Sheets



STATE OF NORTH CAROLINA DIVISION OF HIGHWAYS

GASTON COUNTY

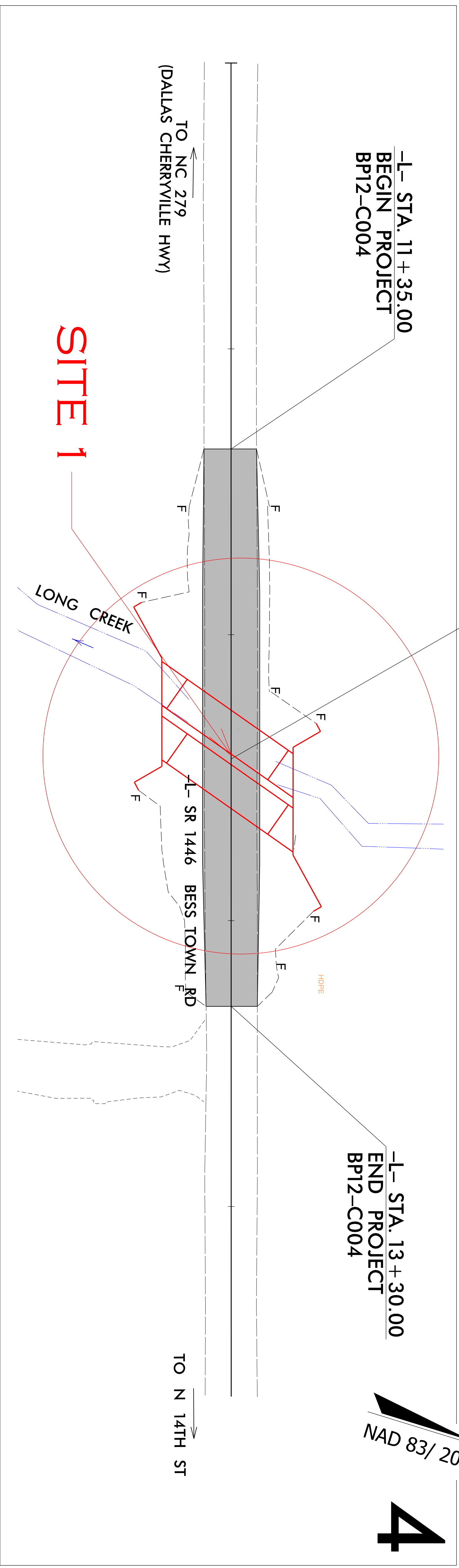
LOCATION: *REPLACE STRUCTURE #350312 OVER UT TO LONG CREEK
ON SR 1446 (BESS TOWN RD)*

TYPE OF WORK: *GRADING, DRAINAGE, AND PAVING*

WETLAND AND SURFACE WATER IMPACTS PERMIT

PERMIT DRAWING
SHEET 1 OF 5

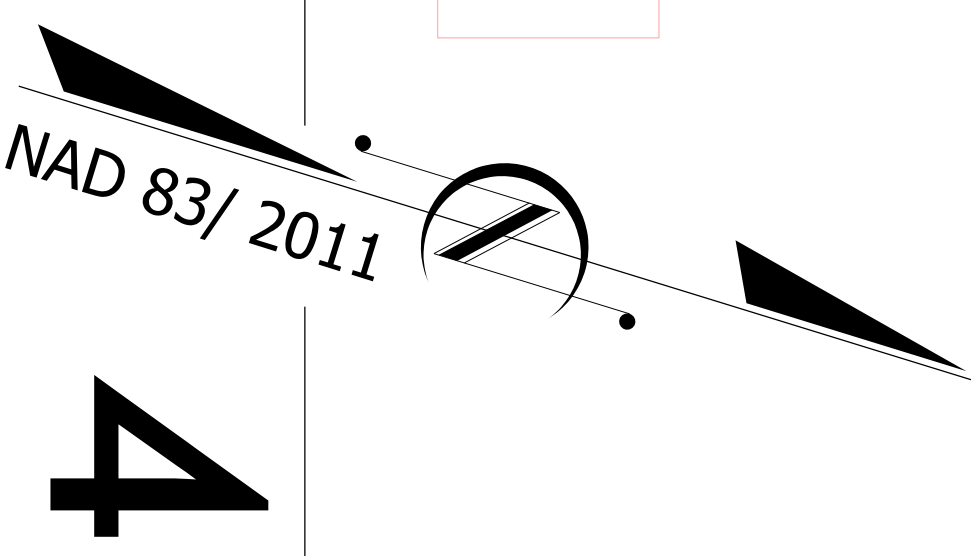
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	BP12-C004	1	
	STATE PROJ. NO.		
	F.A. PROJ. NO.		
	DESCRIPTION		
	BP12-C004	PE	
	BP12-C004	R/W	
	BP12-C004	UTIL.	
	BP12-C004	CONST.	



-L- STA. 11 + 35.00
BEGIN PROJECT
BP12-C004

-L- STA. 12 + 44
2 @ 12'-6" X 7' -11" SPPA

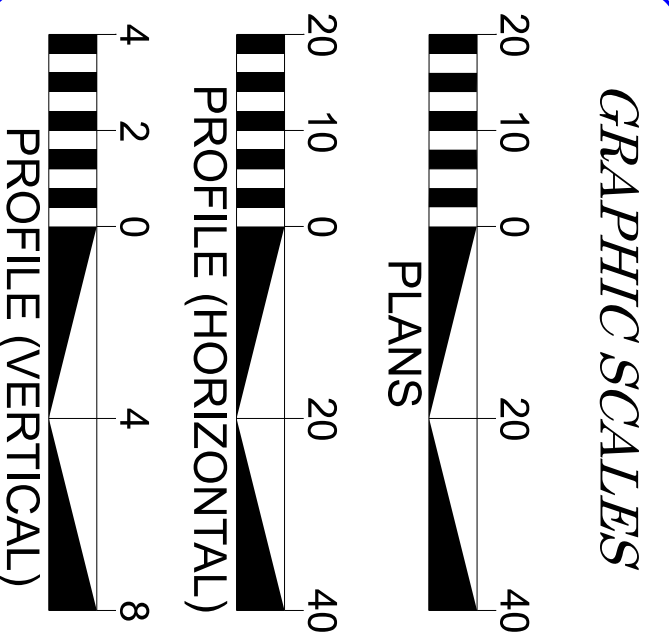
-L- STA. 13 + 30.00
END PROJECT
BP12-C004



THIS IS NOT A CONTROLLED ACCESS PROJECT.

CLEARING ON THIS PROJECT SHALL BE PERFORMED TO THE LIMITS ESTABLISHED BY METHOD II

THIS PROJECT IS NOT WITHIN ANY MUNICIPAL BOUNDARIES



DESIGN DATA

ADT 2025 = 515
ADT 2050 = 660 %*
V = 50 MPH
* TTST = 3% DUAL = 3%

FUNC CLASS =
LOCAL RURAL
SUB REGIONAL TIER

PROJECT LENGTH

LENGTH OF ROADWAY PROJECT BP12-C004 = 0.037 MILES

TOTAL LENGTH OF PROJECT BP12-C004 = 0.037 MILES

TGS ENGINEERS,
201 W. MARION ST.,
SHELBY, NC 28150
PH (704) 476-0003
CORP. LICENSE NO.: C-0275

NORTH CAROLINA DEPARTMENT
OF TRANSPORTATION
DIVISION 12
1710 W. MARION ST
SHELBY, NC 28150

2024 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE:
TBD

LETTING DATE:
TBD

JIMMY L. TERRY, PE
PROJECT ENGINEER

AUSTIN R. TURNER, PE
PROJECT DESIGN ENGINEER

JOSHUA B. WHITE PE, PLS
NCDOT CONTRACT

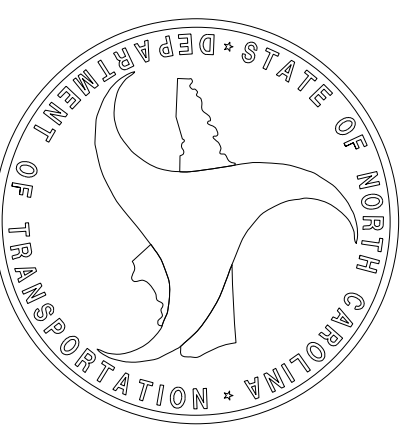
HYDRAULICS ENGINEER

SIGNATURE: _____ P.E.

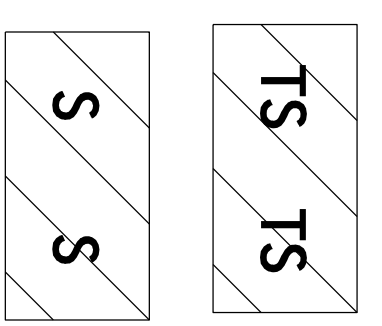
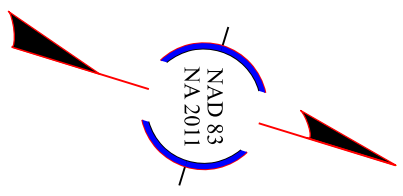
ROADWAY DESIGN ENGINEER

SIGNATURE: _____ P.E.

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
UNLESS ALL SIGNATURES COMPLETED

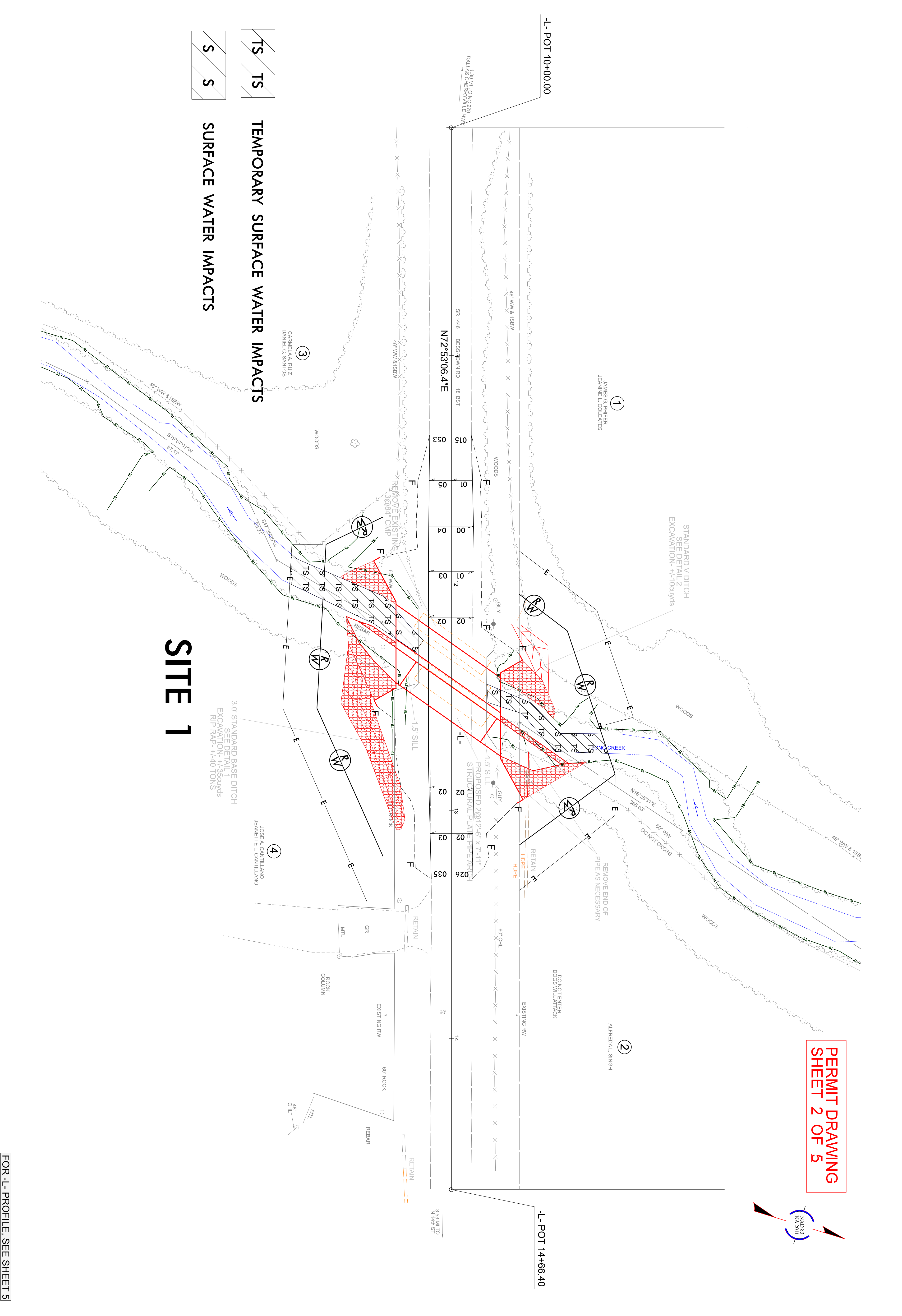


PERMIT DRAWING
SHEET 2 OF 5



TEMPORARY SURFACE WATER IMPACTS
SURFACE WATER IMPACTS

SITE 1



FOR L-PROFILE, SEE SHEET 5

BP12-C004
3RD | 004
NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
GASTON COUNTY

ROADWAY DESIGN UNIT
ENGINEER

DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETE

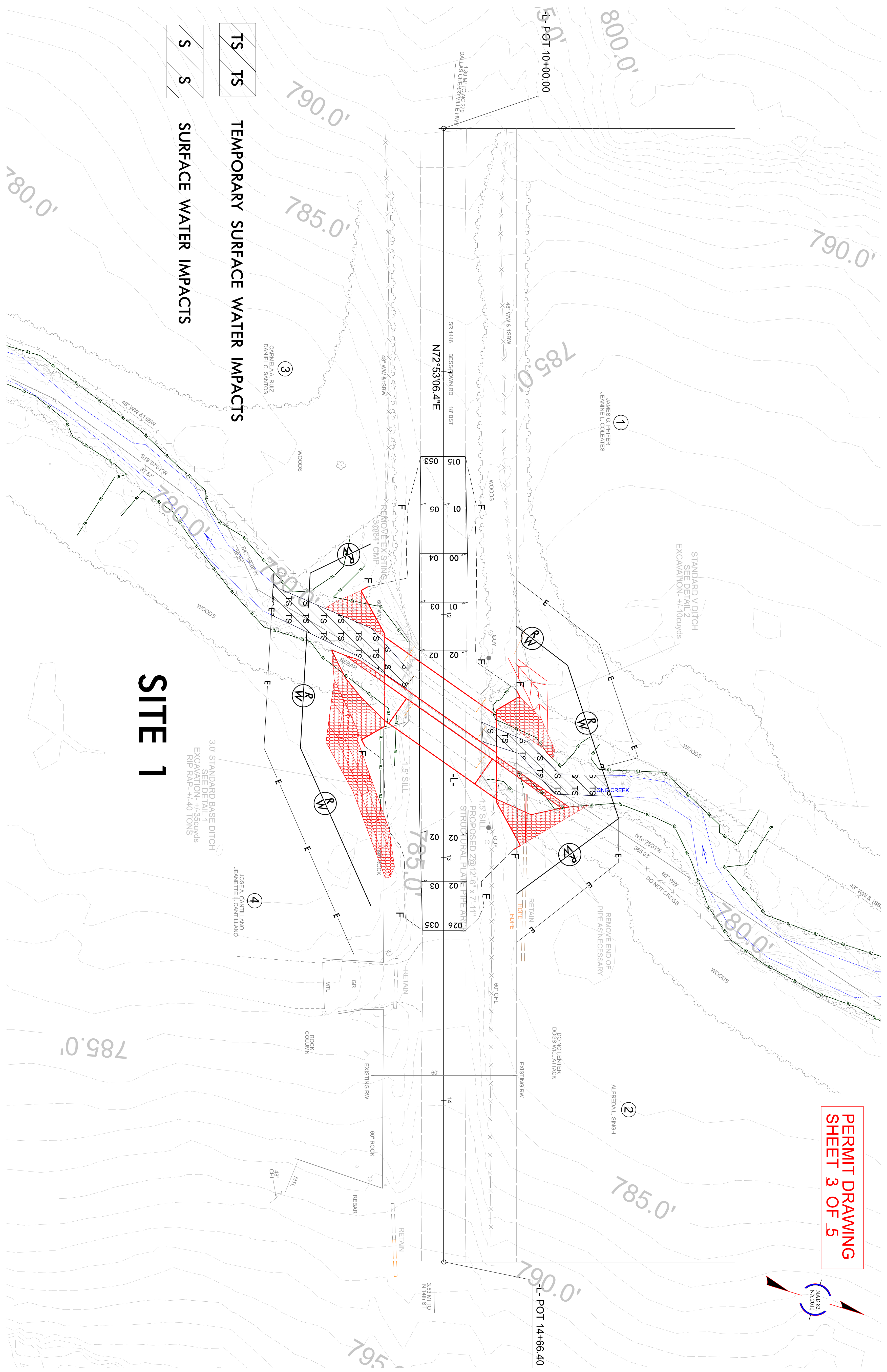
HYDRAULICS
ENGINEER

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PREPARED BY

TCS
200 W. HARRIS ST. SUITE 200
MARTIN, NC 28650
COMM: 704.225.2275

REVISIONS



TS TS
 TS TS
 SURFACE WATER IMPACTS
 TEMPORARY SURFACE WATER IMPACTS

SITE 1

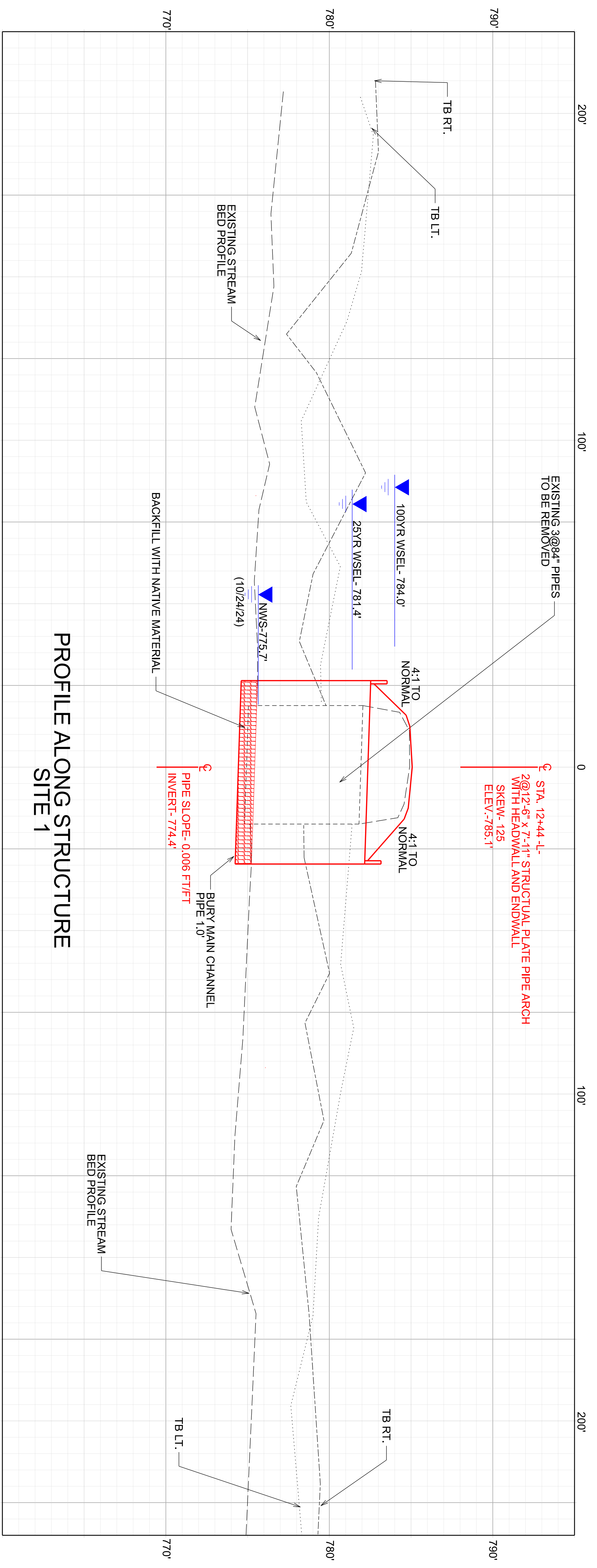
**PERMIT DRAWING
 SHEET 3 OF 5**

FOR L-PROFILE, SEE SHEET 5

REVISIONS

<p>BP12-C004 3RD 004</p> <p>NORTH CAROLINA DEPARTMENT OF TRANSPORTATION GASTON COUNTY</p> <p>ROADWAY DESIGN UNIT ENGINEER</p> <p>DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETE</p> <p>HYDRAULICS ENGINEER</p> <p>PREPARED BY TCS 200 W. HARRIS ST. CHARLOTTE, NC 28202 COMM. LICENSE NO. 16011, 16022, 16023</p>
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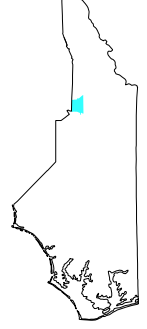
PROFILE ALONG STRUCTURE SITE 1

PERMIT DRAWING SHEET 4 OF 5

BP12-C004

3RD | 005

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION GASTON COUNTY



ROADWAY DESIGN UNIT ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETE

HYDRAULICS ENGINEER

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETE

PREPARED BY

TCS 200 W. HARRIS ST. SUITE 200 HARRISVILLE, NC 28046-1225 COMM. LICENSE NO. 15811-029275

REVISIONS

FOR L-PLAN, SEE SHEET 4

County: GASTON

ITEMIZED PROPOSAL FOR CONTRACT NO. DL00383

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
ROADWAY ITEMS						
0001	0000100000-N	800	MOBILIZATION	Lump Sum	L.S.	
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum	L.S.	
0003	0043000000-N	226	GRADING	Lump Sum	L.S.	
0004	0050000000-E	226	SUPPLEMENTARY CLEARING & GRUBBING	1 ACR		
0005	0057000000-E	226	UNDERCUT EXCAVATION	50 CY		
0006	0134000000-E	240	DRAINAGE DITCH EXCAVATION	45 CY		
0007	0195000000-E	265	SELECT GRANULAR MATERIAL	50 CY		
0008	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	100 SY		
0009	1220000000-E	545	INCIDENTAL STONE BASE	25 TON		
0010	1491000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0C	120 TON		
0011	1523000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5C	75 TON		
0012	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	10 TON		
0013	3563000000-E	SP	TEMP *** WOVEN WIRE FENCE, COMPLETE W/POSTS 48"	100 LF		
0014	3563000000-E	SP	TEMP *** WOVEN WIRE FENCE, COMPLETE W/POSTS 60"	60 LF		
0015	3628000000-E	876	RIP RAP, CLASS I	90 TON		
0016	3649000000-E	876	RIP RAP, CLASS B (48")	40 TON		
0017	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	190 SY		

County: GASTON

ITEMIZED PROPOSAL FOR CONTRACT NO. DL00383

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0018	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	290 SF		
0019	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	96 SF		
0020	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	94 SF		
0021	4435000000-N	1135	CONES	25 EA		
0022	4445000000-E	1145	BARRICADES (TYPE III)	64 LF		
0023	4455000000-N	1150	FLAGGER	4 DAY		
0024	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	1,560 LF		
0025	6000000000-E	1605	TEMPORARY SILT FENCE	750 LF		
0026	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	65 TON		
0027	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	160 TON		
0028	6012000000-E	1610	SEDIMENT CONTROL STONE	55 TON		
0029	6015000000-E	1615	TEMPORARY MULCHING	0.5 ACR		
0030	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	100 LB		
0031	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	0.5 TON		
0032	6024000000-E	1622	TEMPORARY SLOPE DRAINS	200 LF		
0033	6029000000-E	SP	SAFETY FENCE	660 LF		
0034	6030000000-E	1630	SILT EXCAVATION	250 CY		

County: GASTON

ITEMIZED PROPOSAL FOR CONTRACT NO. DL00383

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0035	6036000000-E	1631	MATTING FOR EROSION CONTROL	1,000 SY		
0036	6037000000-E	1629	COIR FIBER MAT	100 SY		
0037	6038000000-E	SP	PERMANENT SOIL REINFORCEMENT MAT (TYPE 2)	15 SY		
0038	6042000000-E	1632	1/4" HARDWARE CLOTH	55 LF		
0039	6070000000-N	1639	SPECIAL STILLING BASINS	8 EA		
0040	6071002000-E	1642	FLOCCULANT	20 LB		
0041	6084000000-E	1660	SEEDING & MULCHING	0.5 ACR		
0042	6087000000-E	1660	MOWING	0.25 ACR		
0043	6090000000-E	1661	SEED FOR REPAIR SEEDING	50 LB		
0044	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	0.5 TON		
0045	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	50 LB		
0046	6108000000-E	1665	FERTILIZER TOPDRESSING	0.5 TON		
0047	6111000000-E	SP	IMPERVIOUS DIKE	180 LF		
0048	6114500000-N	1667	SPECIALIZED HAND MOWING	10 MHR		
0049	6117000000-N	1675	RESPONSE FOR EROSION CONTROL	13 EA		
0050	6117500000-N	SP	CONCRETE WASHOUT STRUCTURE	1 EA		
0051	6132000000-N	SP	GENERIC EROSION CONTROL ITEM PREFABRICATED CONCRETE WASHOUT	3 EA		

County: GASTON

ITEMIZED PROPOSAL FOR CONTRACT NO. DL00383

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
CULVERT ITEMS						
0052	8804000000-N	SP	GENERIC CULVERT ITEM CORRUGATED STEEL PIPE ARCH CULVERT	Lump Sum	L.S.	
0053	8804000000-N	SP	GENERIC CULVERT ITEM CULVERT EXCAVATION	Lump Sum	L.S.	
0054	8818000000-E	SP	GENERIC CULVERT ITEM FOUNDATION CONDITIONING MATERIAL	118 TON		
1129/Apr01/Q6959.75/D245937502000/E54			Total Amount Of Bid For Entire Project :			