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

C203128

CONTRACT AND
CONTRACT BONDS

FOR CONTRACT NO. C203128

WBS	54000.3.STR01T4A STATE FUNDED
T.I.P NO.	U-4716A, U-4716B, U-4716C
COUNTY OF	DURHAM, WAKE
THIS IS THE	RAIL CONTRACT
ROUTE NUMBER	LENGTH 4.203 MILES
LOCATION	CLEGG PASSING SIDING & HOPSON RD GRADE SEPARATION AND CLOSING OF AT-GRADE RR CROSSINGS.

CONTRACTOR	FSC II LLC DBA FRED SMITH COMPANY
ADDRESS	6105 CHAPEL HILL RD
	RALEIGH, NC 27607

BIDS OPENED NOVEMBER 20, 2012
CONTRACT EXECUTION DEC 10 2012

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

PROPOSAL

DATE AND TIME OF BID OPENING: **NOVEMBER 20, 2012 AT 2:00 PM**

CONTRACT ID	C203128
WBS	54000.3.STR01T4A
FEDERAL-AID NO.	STATE FUNDED
COUNTY	DURHAM, WAKE
T.I.P. NO.	U-4716A, U-4716B, U-4716C
MILES	4.203
ROUTE NO.	
LOCATION	CLEGG PASSING SIDING & HOPSON RD GRADE SEPARATION AND CLOSING OF AT-GRADE RR CROSSINGS.
TYPE OF WORK	GRADING, DRAINAGE, PAVING, STRUCTURE & TRACKBED.

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. NOT WITHSTANDING THESE LIMITATIONS ON BIDDING, THE BIDDER WHO IS AWARDED ANY PROJECT SHALL COMPLY WITH CHAPTER 87 OF THE GENERAL STATUTES OF NORTH CAROLINA FOR LICENSING REQUIREMENTS WITHIN 60 CALENDAR DAYS OF BID OPENING, REGARDLESS OF FUNDING SOURCES.

BIDS WILL BE RECEIVED AS SHOWN BELOW:

THIS IS A RAIL PROPOSAL

5% BID BOND OR BID DEPOSIT REQUIRED

PROPOSAL FOR THE CONSTRUCTION OF

CONTRACT No. C203128 IN DURHAM/WAKE COUNTIES, NORTH CAROLINA

Date_____ 20____

DEPARTMENT OF TRANSPORTATION,

RALEIGH, NORTH CAROLINA

The Bidder has carefully examined the location of the proposed work to be known as Contract No. **C203128**; has carefully examined the plans and specifications, which are acknowledged to be part of the proposal, the special provisions, the proposal, the form of contract, and the forms of contract payment bond and contract performance bond; and thoroughly understands the stipulations, requirements and provisions. The undersigned bidder agrees to bound upon his execution of the bid and subsequent award to him by the Board of Transportation in accordance with this proposal to provide the necessary contract payment bond and contract performance bond within fourteen days after the written notice of award is received by him. The undersigned Bidder further agrees to provide all necessary machinery, tools, labor, and other means of construction; and to do all the work and to furnish all materials, except as otherwise noted, necessary to perform and complete the said contract in accordance with *the 2012 Standard Specifications for Roads and Structures* by the dates(s) specified in the Project Special Provisions and in accordance with the requirements of the Engineer, and at the unit or lump sum prices, as the case may be, for the various items given on the sheets contained herein.

The Bidder shall provide and furnish all the materials, machinery, implements, appliances and tools, and perform the work and required labor to construct and complete State Highway Contract No. **C203128** in **Durham/Wake Counties**, 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.

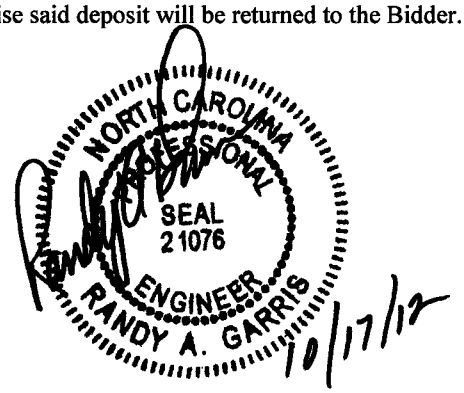
The published volume entitled *North Carolina Department of Transportation, Raleigh, Standard Specifications for Roads and Structures, January 2012* with all amendments and supplements thereto, is by reference incorporated into and made a part of this contract; that, except as herein modified, all the construction and work included in this contract is to be done in accordance with the specifications contained in said volume, and amendments and supplements thereto, under the direction of the Engineer.

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

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

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

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



State Contract Officer

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PROJECT SPECIAL PROVISIONS

GENERAL

CONTRACT TIME AND LIQUIDATED DAMAGES:
(8-15-00) (Rev. 12-18-07) 108 SP1 G07 A

The date of availability for this contract is **December 31, 2012**, except that work in jurisdictional waters and wetlands shall not begin until a meeting between the DOT, Regulatory Agencies, and the Contractor is held as stipulated in the permits contained elsewhere in this proposal. This delay in availability has been considered in determining the contract time for this project.

The completion date for this contract is **December 28, 2015**.

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 **December 31, 2012**.

The completion date for this intermediate contract time is **July 1, 2015**.

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

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

INTERMEDIATE CONTRACT TIME NUMBER 2 AND LIQUIDATED DAMAGES:

The Contractor shall complete all work required of installation and maintenance of erosion control, seeding and mulching, clearing and grubbing, undercutting, installation of ditches and pipe necessary for positive drainage, grading and compaction of rail bed, placement and compaction of subblast, construction of turnout laydown areas, and signal cabinet pads, removal of existing track, ballast, sub ballast and excavation in existing roadbed in accordance with plans and details. The station limits for this intermediate contract time are as follows:

From	To	Remarks
3242+00 -MAIN-	3311+00 -SIDING-	Signal Cabinet Pad Lt. of Station 3264+00; construction of turnout laydown area.
3348+00 -MAIN-	3352+00 -MAIN-	Access Road; Signal Cabinet Pad Rt. of Station 3348+60, Grade to provide positive drainage.
3357+50 -MAIN-	3372+50 -MAIN-	Removal of siding track, ballast, sub ballast, existing rail bed.
3433+00 -MAIN-	3442+21 -MAIN-	Signal Cabinet Pad Rt. Station 3440+00; construction of turnout laydown area.

The date of availability for this intermediate contract time is the date the Contractor elects to begin this work.

The completion date for this intermediate contract time is **August 1, 2013.**

The liquidated damages are **One Thousand Five Hundred Dollars ($1,500.00)** per calendar day.

INTERMEDIATE CONTRACT TIME NUMBER 3 AND LIQUIDATED DAMAGES:

The Contractor shall complete all work required including but not limited to installation and maintenance of erosion control, seeding and mulching, clearing and grubbing, undercutting, installation of ditches and pipe necessary for positive drainage, grading and compaction of rail bed, placement and compaction of sub ballast, construction of turnout laydown areas, and signal cabinet pads, removal of existing track, ballast, sub ballast and excavation in existing roadbed and construction of the structure in accordance with the plans and details. The Contractor shall not remove the erosion control devices. The Contractor shall leave the North Carolina Railroad property in a finished and clean condition.

The date of availability for this intermediate contract time is **December 31, 2012.**

The completion date for this intermediate contract time is **August 31, 2014.**

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

INTERMEDIATE CONTRACT TIME NUMBER 4 AND LIQUIDATED DAMAGES:
(2-20-07) 108 SPI G14 A

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

DAY AND TIME RESTRICTIONS

Monday through Sunday
from 6:00 A.M. to 9:00 A.M.
and
from 4:00 P.M. to 7:00 P.M.

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

HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS

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

2. For **New Year's Day**, between the hours of **6:00 a.m.** December 31st and **7:00 p.m.** January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until **7:00 p.m.** the following Tuesday.

3. For **Easter**, between the hours of **6:00 a.m.** Thursday and **7:00 p.m.** Monday.

4. For **Memorial Day**, between the hours of **6:00 a.m.** Friday and **7:00 p.m.** Tuesday.

5. For **Independence Day**, between the hours of **6:00 a.m.** the day before Independence Day and **7:00 p.m.** the day after Independence Day.

   If **Independence Day** is on a Friday, Saturday, Sunday or Monday, then between the hours of **6:00 a.m.** the Thursday before Independence Day and **7:00 p.m.** the Tuesday after Independence Day.

6. For **Labor Day**, between the hours of **6:00 a.m.** Friday and **7:00 p.m.** Tuesday.

7. For **Thanksgiving Day**, between the hours of **6:00 a.m.** Tuesday and **7:00 p.m.** Monday.

8. For **Christmas**, between the hours of **6:00 a.m.** the Friday before the week of Christmas Day and **7:00 p.m.** the following Tuesday after the week of Christmas Day.

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

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

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

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

INTERMEDIATE CONTRACT TIME NUMBER 5 AND LIQUIDATED DAMAGES:
(2-20-07) 108 SP1 G14 A

The Contractor shall complete the required work of installing, maintaining, and removing the traffic control devices for lane closures and restoring traffic to **a four-lane, two-way** traffic pattern. The Contractor shall not close or narrow a lane of traffic on **NC 54 (Miami Boulevard)** during the following time restrictions:

DAY AND TIME RESTRICTIONS

Monday through Sunday
from 6:00 A.M. to 9:00 A.M.
and
from 4:00 P.M. to 7:00 P.M.

In addition, the Contractor shall not close or narrow a lane of traffic on **NC 54 (Miami Boulevard)**, detain and/or alter the traffic flow on or during holidays, holiday weekends, special events, or any other time when traffic is unusually heavy, including the following schedules:

HOLIDAY AND HOLIDAY WEEKEND LANE CLOSURE RESTRICTIONS

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

2. For **New Year's Day**, between the hours of **6:00 a.m.** December 31st and **7:00 p.m.** January 2nd. If New Year's Day is on a Friday, Saturday, Sunday or Monday, then until **7:00 p.m.** the following Tuesday.

3. For **Easter**, between the hours of **6:00 a.m.** Thursday and **7:00 p.m.** Monday.

4. For **Memorial Day**, between the hours of **6:00 a.m.** Friday and **7:00 p.m.** Tuesday.

5. For **Independence Day**, between the hours of **6:00 a.m.** the day before Independence Day and **7:00 p.m.** the day after Independence Day.

   If **Independence Day** is on a Friday, Saturday, Sunday or Monday, then between the hours of **6:00 a.m.** the Thursday before Independence Day and **7:00 p.m.** the Tuesday after Independence Day.

6. For **Labor Day**, between the hours of **6:00 a.m.** Friday and **7:00 p.m.** Tuesday.

7. For **Thanksgiving Day**, between the hours of **6:00 a.m.** Tuesday and **7:00 p.m.** Monday.

8. For **Christmas**, between the hours of **6:00 a.m.** the Friday before the week of Christmas Day and **7:00 p.m.** the following Tuesday after the week of Christmas Day.

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

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

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

The liquidated damages are **Two Thousand Dollars ($2,000.00)** per hour.

INTERMEDIATE CONTRACT TIME NUMBER 6 AND LIQUIDATED DAMAGES:
(2-20-07) 108 SP1 G14 D

The Contractor shall complete the required work of installing, maintaining and removing the traffic control devices for road closures and restoring traffic to **a two-lane, two-way** traffic pattern. The Contractor shall not close **Hopson Road** during the following time restrictions:

DAY AND TIME RESTRICTIONS

Monday through Sunday
from 5:00 A.M. to 9:00 P.M.

The time of availability for this intermediate contract time will be the time the Contractor begins to install traffic control devices required for road closures according to the time restrictions stated herein.

The completion time for this intermediate contract time will be the time the Contractor is required to complete the removal of traffic control devices required for the road closures according to the time restrictions stated herein and restore traffic to **a two-lane, two way** traffic pattern.

The liquidated damages are **Two Thousand Dollars ($2,000.00)** per hour.

INTERMEDIATE CONTRACT TIME NUMBER 7 AND LIQUIDATED DAMAGES:
(2-20-07) 108 SP1 G14 H

For U-4716B, the Contractor shall complete the work required of **Phase II, Step 1** as shown on Sheet **TMP-3** and shall place and maintain traffic on same.

The date of availability for this intermediate contract time **will be** the date the Contractor elects to begin the work.

The completion date for this intermediate contract time **will be** the date which is **thirty (30) consecutive calendar days** after and including the date the Contractor begins this work.

The liquidated damages are **Two Thousand Dollars ($2,000.00)** per calendar day.

MANDATORY PRE-BID CONFERENCE (Prequalifying To Bid):
(7-18-06) SPI 1-14

Because of the unusual nature of work involved, and in order for all prospective bidders to have an extensive knowledge of the project, all prospective bidders shall attend a mandatory pre-bid conference on Tuesday November 6, 2012 at 10:00 am.

Structures Management Large Conference Room
NCDOT Structures Management Unit
Century Center Building A
1000 Birch Ridge Drive
Raleigh, NC 27610
(919) 707-6400

The pre-bid conference will include a thorough discussion of the plans, contract pay items, special provisions, etc.

Only bidders who have attended and properly registered at the above scheduled pre-bid conference will be considered prequalified to bid on this project. A bid received from a bidder who has not attended and properly registered at the above scheduled pre-bid conference will not be considered for award.

Attendance at the pre-bid conference will not meet the requirements of proper registration unless the individual attending has registered at the pre-bid conference in accordance with the following:

(A) The individual has signed his name on the official roster no later than thirty (30) minutes after the beginning of the conference.

(B) The individual has written in the name and address of the company he or she represents.

(C) Only one company has been shown as being represented by the individual attending.

(D) The individual attending is an officer or permanent employee of the company they are representing.

Attendance at any prior pre-bid conference will not meet the requirement of this provision.

PERMANENT VEGETATION ESTABLISHMENT:
(2-16-12) 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 80% coverage of permanent vegetation 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 *2012 Standard Specifications.*

Once the Engineer has determined that 80% coverage of permanent vegetation has been established, 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 *2012 Standard Specifications.* No additional compensation will be made for maintenance and removal of temporary erosion control items.

RAILROAD COORDINATION:

The Contractor's attention is directed to the "Construction Phasing" plans and the Intermediate Contract Times (ICT) Special Provisions. Norfolk Southern Railway (NSR) requires twelve (12) weeks advance notice of the Contractor's anticipated completion of ICT #2 for NSR to mobilize and begin track construction.

NSR requires four (4) weeks advance notice of construction which requires an NSR action for Contractor to complete work. This includes, but is not limited to, removal of existing track.

NSR requires four (4) weeks advance notice of the Contractor's anticipated completion of ICT #3, which includes the bridge over Hopson Road and associated railroad roadbed grading for NSR to complete track construction and shift train operations onto proposed siding track. From the completion of ICT #3, it is anticipated NSR will require a minimum of seven (7) weeks and a maximum of twenty (20) weeks to move train operations to the new structure, allowing the contractor to complete closure of the existing grade crossings. Duration of this work is dependent on how much roadbed has been completed, accepted and provided to the NSR for track construction prior to the completion of ICT #3.

All notices to the railroad shall be given to the Engineer.

PROGRESS SCHEDULE **(SPECIAL)**

The Contractor shall prepare and submit for review and approval a Progress Schedule as set forth in Section 108 of the Standard Specification, the Railroad Coordination Special Provision, and as amended herein.

The schedule shall include activity descriptions with beginning and ending dates, partial completion (in percentage or time format). Railroad roadbed activities should include beginning and ending stations of roadbed section. The schedule shall include activities or milestones indicating when NSR flagmen and construction forces should be mobilized to the site.

In addition to those requirements listed above and in Section 108 of the Standard Specifications, the Contractor shall include the following activities or milestones in the schedules, where applicable:

- Beginning and ending dates for each phase or section of railroad roadbed work Expected beginning and ending dates for each phase of track work required to be performed by NSR, based on the durations indicated in the Railroad Coordination Special Provision or as coordinated with the Engineer and Railroad Engineer
- Dates when flagging for railroad protection is required and expected type of flagging required, as coordinated with the Engineer and Railroad Engineer
- Dates (and durations, if temporary) for closures of at-grade crossings
- Completion dates for highway projects and railroad roadbed projects if separate completion dates are anticipated/required
- Anticipated dates for removal of erosion control devices

The Contractor shall continue to submit to the Engineer a schedule on a monthly basis until the work is substantially complete. If no changes are required to the schedule dates, the Contractor should resubmit the previous month's schedule with a revised submittal date and updated percent partial completion.

DELAY IN RIGHT OF ENTRY:

(7-1-95) 108 SP1 G22 A

The Contractor will not be allowed right of entry to the parcels listed below before **February 1, 2013** unless otherwise permitted by the Engineer.

Project	Parcel No.	Property Owner
U-4716B	001	William E. Green, Jr.
U-4716B	003	Keystone Crossing, LLC
U-4716B	004	Faye B. Proctor
U-4716B	006	Donald W. Cleg
U-4716B	008	Research Triangle LTD
U-4716B	011	CRP/WF Creekstone LLC
U-4716B	012	Leon R. Obriant
U-4716B	015	Dan Ryan Builders

MAJOR CONTRACT ITEMS:

(2-19-02) 104 SP1 G28

The following listed items are the major contract items for this contract (see Article 104-5 of the *2012 Standard Specifications*):

Line #	Description
7	Borrow Excavation
90	Sub ballast

SPECIALTY ITEMS:

(7-1-95)(Rev. 1-17-12) 108-6 SP1 G37

Items listed below will be the specialty items for this contract (see Article 108-6 of the *2012 Standard Specifications*).

Line #	Description
75 thru 82	Guardrail
91 thru 95	Signing
111 thru 115	Long-Life Pavement Markings
121	Permanent Pavement Markers
122 thru 148	Utility Construction
149 thru 175	Erosion Control
176 thru 177	Reforestation
180 thru 183	Drilled Piers

FUEL PRICE ADJUSTMENT:
(11-15-05) (Rev. 1-17-12) 109-8 SP1 G43

Revise the *2012 Standard Specifications* as follows:

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

The base index price for DIESEL #2 FUEL is **$3.3405** per gallon. Where any of the following are included as pay items in the contract, they will be eligible for fuel price adjustment.

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

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

SCHEDULE OF ESTIMATED COMPLETION PROGRESS:
(7-15-08) (Rev. 6-19-12) 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:

	Fiscal Year	Progress (% of Dollar Value)
2013	(7/01/12 - 6/30/13)	29% of Total Amount Bid
2014	(7/01/13 - 6/30/14)	45% of Total Amount Bid
2015	(7/01/14 - 6/30/15)	26% of Total Amount Bid

The Contractor shall also furnish his own progress schedule in accordance with Article 108-2 of the *2012 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.

SPECIAL NOTICE TO BIDDERS:
(11-20-12) SPI 19-4

This project involves constructing new railroad roadbed on existing Railroad Right of Ways. The North Carolina Department of Transportation will be administering the project and the work will be constructed in accordance with the *January 2012 NCDOT Standard Specification for Roads and Structures*. The *Standard Specifications for Roads and Structures, January 2012 of the North Carolina Department of Transportation*, hereinafter referred to as the *Standard Specifications*, shall apply to the articles of the Project Special Provisions. Portions of the work will be done in accordance with Norfolk Southern, Standard Specifications for Materials and Construction, January 2012 and North Carolina Railroad Company's, FORM NCR 103, SPECIFICATIONS FOR PIPELINE OCCUPANCY OF NORTH CAROLINA RAILROAD COMPANY, Revised January 2009 and FORM NCR 102, SPECIFIC REQUIREMENTS OF NORTH CAROLINA RAILROAD COMPANY FOR WORK ON ITS RIGHT OF WAY, September 1, 2003. These Project Special Provisions sections of the proposal have been written to be in accordance with these documents.

The construction will be taking place in existing Railroad Right of Way owned by North Carolina Railroad Company adjacent to existing tracks that are operated and maintained by Norfolk Southern Corporation. Safety in the Right of Way will be top priority and Norfolk Southern's safety and security policies shall be followed for all employees working within the Right of Way. The safety and security policies and guidelines are further defined in the special provisions.

All work adjacent to the live tracks shall be coordinated with the Norfolk Southern Railway (NSR) Roadway Worker In Charge, as defined later in this document. As a result of safety requirements for passing trains, there will be intermittent delays requiring all equipment within 25' of the operating tracks to stop work until authorized to proceed by the Railroad. This will result in intermittent delays to the contractor's operations. The contractor needs to account for this in preparing his bid. The contractor shall have no claims whatsoever against the Railroad or the Department for any delays or additional cost incurred for the delays or any changes to the information above after the date of receipt.

PREQUALIFICATION OF RAIL ROAD GRADING CONTRACTORS (PIP):
(11-20-12) SPI 19-5

Contractors desiring to perform work on this project shall be prequalified in accordance with Article 102-2 of the *2012 Standard Specifications*. Due to this job being on NCRR right of way and working within close proximity of active rail tracks for both freight and passenger trains, all prime contractors must be prequalified to do work covered by **work code 5090**. All bidders shall be prequalified for work code 5090 within 10 calendar days of bid opening, in order to be awarded the contract.

The following criteria may be used to help prequalify contractors for this project:

(A) Within the last 5 years, the applicant must have been a prime contractor on at least two (2) Interstate or US Route Improvement Projects (i.e. widening, resurfacing), or a prime contractor on two (2) railroad roadbed projects parallel and adjacent to active main track on a Class I Railroad. NCDOT may also consider comparable experience on heavily travelled state routes and airport runway projects.

(B) The above projects must have been at least $4 million in project cost.

(C) Within the last 5 years the applicant must have had at least one project (does not have to be one of the 2 above) that was within or over railroad right of way and involved a rail flagger.

PROTECTION OF RAILROAD INTEREST:
(11-20-12) SPI 19-6

KEY STAKEHOLDERS AND ROLES FOR THE JOB

The following defines the roles of key stakeholders and persons with authority on the job

TERMS	DEFINITIONS
Owner, Company	North Carolina Railroad Company (NCRR). They own the right of way, facilities, tracks, structures, etc., that Norfolk Southern Railway and others operate on.
Owner's Engineer/Representative	North Carolina Railroad Company's engineer or their authorized representative for the project.
Operating Railroad, Railroad, Railway, Railway Company	Norfolk Southern Railway (NSR) operates and Railroad Company maintains the track facilities and signals.
Railroad Engineer	NSR Engineers or their authorized representatives.
RWIC/flagman	Roadway Worker In Charge. This is NSR's onsite representative responsible for obtaining track time for work activities adjacent to the tracks and safety within the Railroad right of way. He/She may be in charge of multiple Railroad flagmen assigned to a project if more than one is required or he may be the flagman for the project.
NCDOT, Department, Department of Transportation,	The North Carolina Department of Transportation is administering the contracts and performing the inspection on the projects for compliance. Also, referred to as the Department or NCDOT.
Engineer, Department's Engineer	NCDOT's Division Engineer, Division Construction Engineer (DCE), Resident Engineer (RE), Assistant Resident Engineer, the authorized representative for NCDOT.
Inspector, Department's Inspector	The authorized inspector for NCDOT.
Standard Specifications, Specifications	NCDOT Standard Specifications for Road and Structures, January 2012.
NCDOT Rail, Rail Division	The North Carolina Department of Transportation, Rail Division. They are a branch of the Department of Transportation responsible for schedule review, reviewing change orders; assisting in answering requests for information (RFI), and working with the owners, operating rail and the Department, and the FRA for compliance and project closeout.
NSR Specifications 2012	Norfolk Southern Standard Specifications for Materials and Construction - January 2012.

TERMS	DEFINITIONS
NCRR Specifications	This includes the following documents: North Carolina Railroad - NCR101 – Specifications for Wire, Conduit and Cable Occupations of North Carolina Railroad Company, NCR102 – Specifications for Pipeline Occupancy of North Carolina Railroad Company, NCR103 – Specific Requirements of North Carolina Railroad Company for Work on its Right of Way.

AUTHORITY OF RAILROAD ENGINEER AND DEPARTMENT ENGINEER

The authorized representative of the Operating Railroad Company, hereinafter referred to as Railroad Engineer, shall have final authority in all matters affecting the safe maintenance of Railroad traffic of the Operating Railroad Company including the adequacy of the foundations and structures supporting the Railroad tracks.

The authorized representative of the North Carolina Department of Transportation, hereinafter referred to as the Engineer, shall have authority over all other matters as prescribed herein including Project Specifications, Special Provisions, and the plans.

SAFETY GUIDELINES FOR PERSONNELWORKING ON COMPANY CORRIDOR

All contractor and subcontractor personnel working on NCRR right of way and on or adjacent to NSR operated tracks shall attend and pass a Roadway Worker Training course for NSR prior to beginning work on the Railroad right of way and shall attend the class annually. Contractor and subcontractor personnel shall adhere to the following Norfolk Southern Railway safety guidelines:

(A) The Contractor and all personnel must follow all applicable railroad and governmental rules, with particular attention paid to railroad operating rules, Railroad rules for the conduct of contractors, Railroad rules for the operation of moving vehicles, and Federal Railway Administration roadway worker rules.

(B) No one shall be allowed within 25' of the centerline of the nearest track without the specific authorization of the RWIC/flagman.

(C) The Contractor shall require that its employees or employees of any subcontractors wear the following while on or about the Railroad right of way:
- (1) Appropriate head protection.
- (2) Appropriate eye protection.
- (3) Appropriate hearing protection.
- (4) Appropriate respiratory protection.
- (5) Appropriate high visibility reflective safety vests are required for work inside active intermodal facilities, public rights of way, or other locations as required by the Railroad and the MUTCD.

(6) Suitable protective clothing and footwear. Working in shorts is prohibited. Shirts must cover shoulders, back and abdomen. Working in tennis or jogging shoes, sandals, boots with high heels, cowboy and other slip-on type boots is prohibited. Hard sole, lace up footwear, zippered boots or boots cinched up with straps which fit snugly about the ankle are adequate. Safety steel toe boots are required.

(7) All protective equipment must be in good condition and properly fitted.

(D) The Contractor shall observe the safety provisions of applicable laws and building and construction codes shall be observed. Machinery and equipment and other hazards shall be guarded in accordance with the safety provisions of the most recent edition of the Manual of Accident Prevention in Construction, published by the Associated General Contractors of America, to the extent that such provisions are consistent with applicable law or regulation.

(E) The Contractor shall permit only qualified personnel to perform welding. Proper clothing, gloves and shields must be worn for body and eye protection. All welding equipment must be properly tested and in good working order. All welding equipment and cutting torches being used within 25 feet of the track must be shut off and work stopped when train is passing.

(F) Anyone working on Railroad Right-of-Way found to be under the influence of alcohol or other intoxicant, narcotic or hallucinogenic drug, or in possession of such intoxicant or drug, shall be dismissed from the property by the Contractor and not allowed to return.

(G) When anyone working on Railroad right of way is injured, the Contractor shall arrange for emergency medical assistance, if needed, and the Contractor shall notify Railroad Engineer and the Department's Engineer of such incident by the quickest method of communication available.

(H) The Contractor shall not permit the use of defective or improvised tools and equipment for the work.

(I) At the direction of the Railroad Engineer and the Department's Engineer, the Contractor shall work with local emergency response personnel to develop action plans to respond to emergency situations.

(J) The Contractor is responsible for maintaining emergency site access(es) for local emergency response personnel.

(K) The Contractor must promptly notify Railroad Engineer and the Department's Engineer of any safety incident or injury involving any person(s) on the project site.

(L) The Contractor shall hold daily safety briefings involving all personnel working on site per railroad safety rules. Personnel arriving onsite after the safety briefing shall be briefed before proceeding with their work. The Contractor and all personnel shall hold additional safety briefings during the day as conditions or work changes.

(M) The Contractor is responsible for obtaining eRailSafe certification for itself and its employees working on Railroad right of way upon award of Contract. The Contractor shall follow all eRailSafe requirements and escort all subcontractors or non-certified employees on site. Information about requirements and responsibilities to become eRailSafe can be found at: http://www.e-railsafe.com/

(N) The Contractor and all personnel are responsible for obtaining FRA and NSR approved Roadway Worker Certification through an NSR-approved trainer.

(O) All persons working near track while train is passing are to lookout for dragging bands, chains and protruding or shifted cargo.

(P) No one is allowed to cross tracks without specific authorization from the flagman.

(Q) No steel tape or chain will be allowed to cross or touch rails without permission.

GUIDELINES FOR EQUIPMENT WORKING ON COMPANY'S CORRIDOR

The following applies to all equipment being operated within the Railroad right of way:

(A) The Contractor's actions shall not interfere with normal train operations. The Contractor shall provide a weekly schedule of activities that may affect train operations or require flagging protection.

(B) NSR will provide service outages only when absolutely required for construction activities as determined by the Railroad Engineer. No claim by the Contractor against NSR and the Department will be allowed for delays caused by NSR's operations.

(C) When working on or near operating tracks to be kept in service, NSR may provide a schedule of allowable work periods. Allowable work periods may change due to the variances in train operations. If the Contractor fails to comply with the schedules and performs its work in a manner that causes delay to NSR train operations, it shall be liable for any delays and shall reimburse NSR upon receipt of bills therefore. If at any time the Contractor is required to work longer than a normal 8 hour day to prevent disruption to NSR's train operations, then the Contractor shall do so at no expense to the Railroad and the Department.

(D) At locations where a flagman is deemed necessary by the Railroad Engineer for the safety of Railroad's property and operations, the Contractor will observe the directions given by the RWIC/flagman. The Contractor will assure that it officers, agents, suppliers, subcontractors and employees observe the directives given by the RWIC/flagman. It is distinctly understood, however, that no direction or failure to give direction by the RWIC/flagman will relieve the Contractor from any of its indemnification commitments in the contract.

(E) No one shall be allowed within 25' of the centerline of the nearest track without the specific authorization of the RWIC/flagman.

(F) No one shall be allowed to cross the tracks without specific authorization of the RWIC/flagman.

(G) All persons working near the track while a train is passing are to look for dragging bands, chains and protruding or shifted cargo. If any of these are observed, they must notify the RWIC/flagman immediately.

(H) No one shall be allowed to pass between, over or under rail cars.

(I) No steel or metallic chain or measuring tape shall be allowed to cross or touch rails without permission of the RWIC/flagman.

(J) No construction materials shall be placed on tracks without approval of the Railroad Engineer.

(K) When working on tracks, switches shall be lined away from the work area and switch points spiked down or clamped or rail ends mismatched to prevent cars or engines from entering the work area.

(L) No crane or boom equipment will be allowed to set up to work or park within boom distance plus 15' of centerline of track without specific permission from railroad official and flagman.

(M) No crane or boom equipment will be allowed to foul track or lift a load over the track without flagman protection and track time.

(N) All employees will stay with their machines when crane or boom equipment is pointed toward track.

(O) All cranes and boom equipment under load will stop work while train is passing (including pile driving).

(P) Swinging loads must be secured to prevent movement while train is passing no loads will be suspended above a moving train.

(Q) No equipment will be allowed within 25' of centerline of track without specific authorization of the flagman.

(R) Trucks, tractors or any equipment will not touch ballast line without specific permission from flagman.

(S) No equipment or load movement within 25' or above a standing train or railroad equipment without specific authorization of the flagman.

(T) All operating equipment within 25' of track must halt operations when a train is passing. All other operating equipment may be halted by the flagman if the flagman views the operation to be dangerous to the passing train.

(U) All equipment, loads and cables are prohibited from touching the rails.

(V) While clearing and grubbing, no vegetation will be removed from railroad embankment with heavy equipment without specific permission from the Railroad Engineer and flagman.

(W) The Contractor is responsible for the ingress and egress of its plant, equipment, materials and labor to and from the construction site in accordance with the following:

(1) No movement that may endanger the safe normal Railroad operations shall be made without the approval of the RWIC/flagman as to route and time of use.

(2) No movement of the Contractor's plant equipment, materials and labor to and from the site shall be made without the approval of the RWIC/flagman.

(X) Railroad regulations concerning the movement of vehicles on Railroad property shall be followed by the Contractor, its subcontractors and all of the respective personnel, including, without limitation, weight restrictions for roadways.

(Y) Use of access routes shall not cause the fouling of turnouts, flangeways, equipment, and drainage facilities with gravel, mud, waste materials, or timbers used for crossing tracks. Such routes shall be planned in such a way to minimize the risk of damage to Railroad facilities and must be approved by the Railroad Engineer.

(Z) No equipment or materials will be parked or stored on Company's corridor unless specific authorization is granted from the Railroad Engineer.

(AA) All unattended equipment that is left parked on Company's corridor shall be effectively immobilized so that it cannot be moved by unauthorized persons.

(BB) All cranes and boom equipment will be turned away from track after each work day or whenever unattended by an operator.

FAILURE TO COMPLY WITH SAFETY REQUIREMENTS

Failure to comply with any safety requirements within the railroad right of way may result in the removal of the individual or individuals responsible for violation of policies. Depending upon the severity of the violation as determined by the Railroad Engineer, RWIC/flagman or the Department's Engineer, the individual or individuals implicated must leave the RR right of way within 1 hour of notification of the violation. Depending on the severity of the violation, the individual or individuals who were involved in the incident may be able to return to the job the following day. That determination will be made by the RWIC and the Departments representative on site. The individual or individuals will be notified if they are allowed to return the following day by the close of business the day of the occurrence. If they are not allowed to return the next day, the contractor may file an appeal to the Department's Engineer requesting

the individual or individuals accused of the violation be allowed to return to the job. The Resident Engineer will then notify the Railroad of the appeal and a meeting will be held to determine if the individual or individuals will or will not be allowed to return to the job. The individual or individuals alleged to have committed the violation will not be allowed on the project until after the Railroad Engineer and Department Engineer have reviewed the appeal and made a determination if the individual or individuals may return. If a person is allowed return to the site after the appeal process and a second violation of policies occurs, that will be grounds for permanent removal of the individual from the worksite. This does not only apply to individuals, but may apply to entire crews as well depending on the circumstances and severity of the violation of policy. The contractor shall have no claims whatsoever against the Railroad or the Department for any delays or additional cost incurred as a result of safety violations and removal of the individual or individuals from the job.

FEDERAL RAILROAD ADMINISTRATION (FRA) SAFETY REQUIREMENTS

In addition to NSR safety guidelines above, the Contractor will be required to adhere to the safety requirements of the Federal Railroad Administration and comply with Title 49, Volume 4, Chapter 2, Part 213 and 214 of the Code of Federal Regulations. This information can be found at the following link:

http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&sid=ef344d8e404793fcb6650641e75f7e43&rgn=div5&view=text&node=49:4.1.1.1.8&idno=49

The FRA may conduct inspections on this project and fines can be levied against both the individual cited and the contractor for violations of these policies. The contractor shall have no claims whatsoever against the Railroad or the Department for any delays or additional cost incurred as a result of violations and fines for noncompliance with the above FRA guidelines.

RAILROAD INSURANCE: SPECIAL PROVISIONS FOR PROTECTION OF RAILWAY INTEREST

State Project: U4716A/C County: Wake and Durham

(A) In addition to any other forms of insurance or bonds required under the terms of the contract and specifications, the Prime Contractor will be required to provide coverage conforming to the requirements of the Federal-Aid Policy Guide outlined under 23 CFR 646A for all work to be performed on Company's corridor by carrying insurance of the following kinds and amounts:

(1) CONTRACTOR'S COMMERCIAL GENERAL LIABILITY INSURANCE: The Contractor shall furnish an original and one copy of the certificate of insurance and one certified copy of the policy to the Department as evidence that, with respect to the operations he performs on railroad right of way, he carries regular Commercial General Liability Insurance having a combined single limit of not less than $2,000,000 per occurrence for all loss, damage, cost and expense, including attorneys' fees, arising out of bodily injury liability and property damage liability during the policy period. Said policy shall include explosion, collapse, and underground hazard (XCU) coverage, shall be endorsed to name Company and Railroad specified in item A.2.c. below as an additional insured, and shall include a severability of interests provision.

(2) RAILROAD PROTECTIVE LIABILITY INSURANCE:
The Contractor shall furnish to the Department an original and one duplicate of the Railroad Protective Liability Insurance having a combined single limit of not less than $2,000,000 each occurrence and $6,000,000 in the aggregate applying separately to each annual period. If the project involves track over which passenger trains operate, the insurance limits required are not less than a combined single limit of $5,000,000 each occurrence and $10,000,000 in the aggregate applying separately to each annual period. Said policy shall provide coverage for all loss, damage or expense arising from bodily injury and property damage liability, and physical damage to property attributed to acts or omissions at the job site.

The standards for the Railroad Protective Liability Insurance are as follows:

(a) The insurer must be rated A- or better by A.M. Best Company, Inc.

(b) The policy must be written using one of the following combinations of Insurance Services Office ("ISO") Railroad Protective Liability Insurance Form Numbers:
  (1) CG 00 35 01 96 and CG 28 31 10 93; or
  (2) CG 00 35 07 98 and CG 28 31 07 98; or
  (3) CG 00 35 10 01; or
  (4) CG 00 35 12 04

(c) The named insured on each policy as required to be issued to each Company and to Railroad shall read: (NOTE: The below insured is to be treated separately as an insured on each railroad protective policy for a total of (2) two separate policies being issued.)

North Carolina Railroad Company
2809 Highwoods Blvd, Suite 100
Raleigh, NC 27604-1000
Attn: Property Department;

and

Norfolk Southern Railway Company
Three Commercial Place
Norfolk, Virginia 23510-2191
Attn: Risk Management

(d) The description of operations must appear on the Declarations, must match the project description in this agreement, and must include the appropriate Department project and contract identification numbers.

The Description and Designation shall read:
Clegg Passing Siding and Hopson Road Grade Separation
North Carolina Department of Transportation - Rail Division

(e) The job location must appear on the Declarations and must include the city, state, and appropriate highway name/number.

(f) The name and address of the prime contractor must appear on the Declarations.

(g) The name and address of the Department must be identified on the Declarations as the "Involved Governmental Authority or Other Contracting Party."

(h) Other endorsements/forms that will be accepted are:
  (1) Broad Form Nuclear Exclusion – Form IL 00 21
  (2) 30-day Advance Notice of Non-renewal or cancellation
  (3) 60-day written notice be given the Department prior to cancellation or change
  (4) Quick Reference or Index Form CL/IL 240

(i) Endorsements/forms that are NOT acceptable are:
  (1) Any Pollution Exclusion Endorsement except CG 28 31
  (2) Any Punitive or Exemplary Damages Exclusion
  (3) Known injury or Damage Exclusion form CG 00 59
  (4) Any Common Policy Conditions form
  (5) Any other endorsement/form not specifically authorized in item no. 2.h above.

(B) If any part of the work is sublet, similar insurance, and evidence thereof as specified in A.1 above, shall be provided by or on behalf of the subcontractor to cover its operations on Railroad's right of way. As an alternative, the Prime Contractor may provide insurance for the subcontractor by means of separate and individual policies.

(C) Prior to entry on Company's corridor, the original and one duplicate copy of the Railroad Protective Liability Insurance Policy shall be submitted by the Prime Contractor to the Department at the address below for its review and transmittal to the Company and Railroad. In addition, certificates of insurance evidencing the Prime Contractor's and any subcontractors' Commercial General Liability Insurance shall be issued to the Department, Company and Railroad at the addresses below, and one certified copy of the Prime Contractor and any Subcontractor's policy is to be forwarded to the Department for its review and transmittal to the Company and Railroad. All policies and certificates of insurance shall state that the insurance coverage will not be suspended, voided, canceled, or reduced in coverage or limits without (30) days advance written notice to the Department, Company and Railroad. The Railroad will not permit any work on Company's corridor until the Company and Railroad has reviewed and approved the evidence of insurance required herein.

DEPARTMENT:
Engineering & Safety Branch
C/O State Railroad Agent
1556 Mail Service Center
Raleigh, NC 27699-1556

RAILROAD:
NCDOT Rail Division Risk Management
Norfolk Southern Railway Company
Three Commercial Place
Norfolk, Virginia 23510-2191

COMPANY:
North Carolina Railroad Company
2809 Highwoods Blvd.
Suite 100
Raleigh, NC 27604

(D) The insurance required herein shall not limit the obligations of Department or its Contractors under the terms of this agreement.

(E) The insurance amounts specified are minimum amounts and that the Contractor may carry insurance in larger amounts if he so desires. As to "aggregate limits", if the insurer establishes loss reserves equal to or in excess of the aggregate limit specified in any of the required insurance policies, the Contractor shall immediately notify the Department and shall cease all operations until the aggregate limit is reinstated. If the insurer establishes loss reserves equal to or in excess of one/half of the aggregate limit, the Contractor shall arrange to restore the aggregate limit to at least the minimum amount stated in these requirements. Any insurance policies and certificates taken out and furnished due to these requirements shall be approved by the Department, Company and Railroad as to form and amount prior to beginning work on Company's corridor.

(F) All insurance herein before specified shall be carried until the final inspection and acceptance of the project by the Department, Company and Railroad, or acceptance of that portion of the project within Company's corridor. At this point, no work or any other activities by the Contractor shall take place in Company's corridor without written permission from the Department, Company and Railroad.

FAILURE TO COMPLY

In the event the Contractor violates or fails to comply with any of the requirements of these Special Provisions:
(1) The Railroad Engineer may require that the Contractor vacate Company's corridor.
(2) The Engineer may withhold all monies due the Contractor on monthly statements.

Any such orders shall remain in effect until the Contractor has remedied the situation to the satisfaction of the Railroad Engineer and the Engineer.

PAYMENT FOR COST OF COMPLIANCE

No separate payment will be made for any extra cost incurred on account of compliance with these special provisions. All such cost shall be included in prices bid for other items of the work as specified in the payment items.

RAILROAD SITE DATA

The following information is provided as a convenience to the Contractor. This information is subject to change and the Contractor should contact the Railroad to verify the accuracy. Since this information is shown as a convenience to the Contractor but is subject to change, the Contractor shall have no claims whatsoever against either the Railroad or the Department of Transportation for any delays or additional costs incurred based on changes in this information.

Number of tracks	-	1 Main Track, 1 Siding Track
Number of trains per day	-	12
Type of Trains per day	-	6 Passenger and 6 Freight
Maximum speed of trains	-	79 mph

NOTICE OF STARTING WORK

The contractor shall not commence any work on Company's corridor until the contractor has complied with the following conditions:

(A) Give the Company and Railroad written notice, with copy to the Engineer who has been designated to be in charge of the work, at least ten days in advance of the date the contractor proposes to begin work on Company's corridor/NCRR right of way. Notice to be given to:

Mr. Rick Meredith, PE
Norfolk Southern Corporation
1200 Peachtree Street NE
Building Box 142
Atlanta, Georgia 30309

Mr. Scott Saylor
North Carolina Railroad Company
2809 Highwoods Blvd
Suite 100
Raleigh, NC 27604

(B) Obtained written authorization from both Norfolk Sothern Railway and North Carolina Railroad Company to begin work on Railroad right-of-way, such authorization to include an outline of specific conditions with which the contractor must comply.

(C) Obtained written approval from the Railroad of Railroad Protective Insurance Liability coverage as required by the provisions for Railroad Insurance above. The Railroad does not accept notation of Railroad protective insurance on a certificate of liability insurance form or Binders as Railroad must have the full original countersigned policy. The policy will be reviewed for compliance prior to written approval. Due to the number of projects system-wide, it typically takes a minimum of 30-45 days for Railroad to review.

(D) Furnish a schedule for all work within the Railroad right-of-way as required. Obtain written authorization from the Railroad to begin work on Company's right of way, such authorization to include an outline of specific conditions with which he must comply.

(E) Obtain Railroad's Flagging Services as required.

(F) The contractor must execute and deliver to NCRR and NSR a standard construction right of entry agreement approved by NCRR and NSR together.

The Railroad's written authorization to proceed with the work shall include the names, addresses, and telephone numbers of the Railroad's representatives who are to be notified as hereinafter required. Where more than one representative is designated, the area of responsibility of each representative shall be specified.

INTERFERENCE WITH RAILROAD OPERATIONS

The Contractor shall so arrange and conduct his work that there will be no interference with Railroad operations, including train, signal, telephone and telegraphic services, or damage to the property of the Company or Railroad or to poles, wires, and other facilities of tenants on the right of way of the Company. Whenever work is liable to affect the operations or safety of trains, the method of doing such work shall first be submitted to the Railroad Engineer for approval, but such approval shall not relieve the Contractor from liability. Any work to be performed by the Contractor which requires flagging service or inspection service (watchman) shall be deferred by the Contractor until the flagging protection or inspection service required by the Railroad is available at the job site.

Whenever work within Company's corridor is of such a nature that impediment to Railroad operations such as use of runaround tracks or necessity for reduced speed is unavoidable, the Contractor shall schedule and conduct his operations so that such impediment is reduced to the absolute minimum.

Should conditions arising from, or in connection with the work, require that immediate and unusual provisions be made to protect operations and property of the Company and Railroad, the Contractor shall make such provisions. If in the judgment of the Railroad Engineer, or in his absence, the Railroad's Division Engineer, such provision is insufficient, either may require or provide such provisions as he deems necessary. In any event, such unusual provisions shall be at the Contractor's expense and without cost to the Department, Company, or Railroad.

TRACK CLEARANCES

(A) Before undertaking any work within railroad right-of-way, or before placing any obstruction over any track, the Contractor shall:
- (1) Notify the RWIC/Track Supervisor at least 72 hours in advance of the work.
- (2) Receive assurance from the Railroad Engineer that arrangements have been made for flagging service as may be necessary.
- (3) Receive permission from the RWIC/Track Supervisor to proceed with the work.
- (4) Ascertain that the Engineer has received copies of notice to the Railroad and of the Railroad's response thereto.

(B) The minimum track clearances to be maintained by the Contractor during construction are as follows:
- (1) Horizontal clearance measured from centerline of track to falsework:
  13'-0" on tangent track
  14'-0" on curved track
- (2) Vertical clearance from top of rail to falsework: 22'-0"

CONSTRUCTION PROCEDURES

(A) General

Construction work and operations by the Contractor on Company's property shall be:

- (1) Subject to the inspection and approval of the NSR and NCDOT.
- (2) In accordance with all of the Railroad's written specific conditions.

(3) In accordance with the Railroad's general rules, regulations and requirements including those relating to safety, fall protection and personal protective equipment.

(4) In accordance with these Special Provisions.

(B) Excavation

The subgrade of an operated track shall be maintained with edge of berm at least 7'-0" from centerline of track and not more than 45" below top of rail. Contractor will not be required to make existing section meet this specification if substandard, in which case existing section will be maintained.

(C) Excavation for Structures

The Contractor will be required to take special precaution and care in connection with excavating and shoring pits, and in driving piles or sheeting, for footings adjacent to tracks to provide adequate lateral support for the tracks and the loads which they carry, without disturbance of track alignment and surface, and to avoid obstructing track clearances with working equipment, tools or other material. All plans and calculations for shoring shall be prepared and signed by a North Carolina Registered Professional Engineer. The Professional Engineer will be responsible for the accuracy for all controlling dimensions as well as the selection of soil design values which will accurately reflect the actual field conditions. The procedure for doing such work, including need of and plans for shoring, shall first be reviewed by the Department Engineer then reviewed and approved by the Railroad Engineer, but such approval shall not relieve the Contractor from liability.

Additionally, a walkway with handrail protection may be required as noted in the section for Trainman's walkways herein.

(D) Demolition, Erection, Hoisting

(1) Railroad tracks and other Company corridor or railroad property must be protected from damage during the procedure.

(2) The Contractor is required to submit a plan showing the location of cranes, horizontally and vertically, operating radii, with delivery or disposal locations shown. The location of all tracks and other railroad facilities as well as all obstructions such as wire lines, poles, adjacent structures, etc. must also be shown.

(3) Crane rating sheets showing cranes to be adequate for 150 percent of the actual weight of the pick. A complete set of crane charts, including crane, counterweight, and boom nomenclature is to be submitted.

(4) Plans and computations showing the weight of the pick must be submitted. Calculations shall be made from plans of the existing and/or proposed structure showing complete and sufficient details with supporting data for the demolition or erection of the structure. If plans do not exist, lifting weights must be calculated from field measurements. The field measurements are to be made under the supervision of the North Carolina Registered Professional Engineer submitting the procedure and calculations.

(5) A data sheet must be submitted listing the types, size, and arrangements of all rigging and connection equipment.
(6) A complete procedure is to be submitted, including the order of lifts, time required for each lift, and any repositioning or re-hitching of the crane or cranes.
(7) All erection or demolition plans, procedures, data sheets, etc. submitted must be prepared, signed and sealed by a North Carolina Registered Professional Engineer.
(8) The Railroad's engineer must be present at the site during the entire demolition and erection procedure period.
(9) All procedures, plans and calculations shall first be approved by the Engineer and the Railroad Engineer, but such approval does not relieve the Contractor from liability.

(E) Blasting

The Contractor shall obtain advance approval of the Railroad Engineer and the Engineer for use of explosives on or adjacent to Company corridor. The request for permission to use explosives shall include a detailed blasting plan. If permission for use of explosives is granted, the Contractor will be required to comply with the following:

(1) Blasting shall be done with light charges under the direct supervision of a responsible officer or employee of the Contractor and a licensed blaster.
(2) Electric detonating fuses shall not be used because of the possibility of premature explosions resulting from operation of two-way radios.
(3) No blasting shall be done without the presence of an authorized representative of the Railroad. At least 72 hours advance notice to the person designated in the Railroad's notice of authorization to proceed will be required to arrange for the presence of an authorized Railroad representative and such flagging as the Railroad may require.
(4) Have at the job site adequate equipment, labor and materials and allow sufficient time to clean up debris resulting from the blasting without delay to trains, as well as correcting at his expense any track misalignment or other damage to Company corridor resulting from the blasting as directed by the Railway's authorized representative. It his actions result in delay of trains, the Contractor shall bear the entire cost thereof.

The Railroad representative/engineer will:

(1) Determine the approximate location of trains and advise the Contractor the approximate amount of time available for the blasting operation and clean-up.
(2) Have the authority to order discontinuance of blasting if, in his opinion, blasting is too hazardous or is not in accordance with these special provisions.

(F) Maintenance of Railroad Facilities

The Contractor will be required to maintain all ditches and drainage structures free of silt or other obstructions that may result from construction operations and provide and maintain any erosion control measures as required. The Contractor will promptly repair eroded areas within Company's corridor and repair any other damage to the property of the Company or its tenants.

All such maintenance and repair of damages due to the Contractor's operations shall be done at the Contractor's expense.

(G) Storage of Materials and Equipment

Materials and equipment shall not be stored where they will interfere with railroad operations, nor on the corridor of the Company without first having obtained permission from the Railroad Engineer. Such permission will be with the understanding that neither the Company nor Railroad will be liable for damage to such material and equipment from any cause and that the Railroad Engineer may move or require the Contractor to move, at the Contractor's expense, such material and equipment.

All grading or construction machinery that is left idle or parked near the track unattended by a watchman shall be effectively immobilized so that it cannot be moved by unauthorized persons. The contractor shall protect, defend, indemnify and save Company and Railroad, and any associated, controlled or affiliated corporation, harmless from and against all losses, costs, expenses, claim or liability for loss or damage to property or the loss of life or personal injury, arising out of or incident to the contractor's failure to immobilize grading or construction machinery.

(H) Cleanup

During construction of the project, the contractor shall furnish garbage disposal containers and dispose of all trash appropriately. The contractor shall clean the construction site periodically as requested by the Department's Engineer or the Railroad Engineer of all waste, rubbish and unused construction material. The removal of waste and debris shall be the responsibility of the Contractor. Unused construction materials shall be stockpiled in an orderly fashion at a location that will not interfere with train operations and the construction progress. If the contractor does not clean the construction site after receiving notification, other forces may be used to clean the site of waste and rubbish. If other forces are used, monies will be deducted from the contractor for the cost of the cleanup.

Upon completion of the work, the Contractor shall remove from within the limits of the Company's right of way, all machinery, equipment, surplus materials, falsework, rubbish or temporary buildings of the Contractor, and leave said right of way in a neat condition satisfactory to the Chief Engineer of the Railroad or his authorized representative and satisfactory to the Company's authorized representative. Cleanup also includes removal, replacement or cleaning of soiled or contaminated ballast in the construction area.

DAMAGES

The contractor shall assume all liability for any and all damages to his work, employees, servants, equipment and materials caused by railroad traffic.

Any cost incurred by the Company of Railroad for repairing damages to its corridor or to property of its tenants, caused by or resulting from the operations of the Contractor, shall be paid directly to the Company or Railroad by the Contractor.

CONTRACTOR FURNISHED TWO WAY RADIOS

The Contractor shall furnish a minimum of 3 push to talk, two way radios that operate on a frequency unique to the project and separate from NSR frequencies. The operational frequency should not be the same as the frequency on adjacent jobs unless directed by the Railroad Engineer. The radios will be used for communication between the RWIC/flagman or the Railroad's designated contact and the Contractor's Superintendent or designated contact on the job for safety. The Contractor will need to maintain at least 3 working radios at all time during the project. Project conditions and the contactors work may require the need for more than 3 radios on the project. It shall be the Contractors responsibility to furnish the number of radios required by NSR to maintain safety on the project. Failure on the part of the contractor to have working radios on site, can result in suspension of the work until the requirements of provision is met. The will be no direct payment for the cost of furnishing the radios. The cost will be included in other items of work in the contract.

The Contractor will need to submit information about the radios prior to use for approval by the Railroad.

The contractor shall have no claims whatsoever against the Railroad or the Department for any delays or additional cost incurred as a result of failure to have the required number of working radios on site each day.

FLAGGING SERVICES

All work to be performed by the Contractor within the Railroad Right of Way shall require a flagman be present. Any work to be performed by the contractor requiring flagging service shall be deferred by the contractor until the flagging protection required by the railroad is available at the job site. It will take approximately 30 days from the date the railroad receives notification of award from the NCDOT to provide flagging protection for this project.

(A) When Required

Under the terms of the agreement between the Department and the Railroad, the Railroad has sole authority to determine the need for flagging required to protect its operations. In general, the requirements of such services will be whenever the Contractor's personnel or equipment are or are likely to be, working on the Railroad's right-of-way, or across, over, adjacent to, or under a track, or when such work has disturbed or is likely to disturb a railroad structure or the railroad roadbed or surface and alignment of any track to such extent that the movement of trains must be controlled by flagging.

Normally, the Railroad will assign one flagman to a project; but in some cases, more than one may be necessary, such as yard limits where three (3) flagmen may be required. The Railroad Engineer will determine how many flagmen are required for the job. However,

if the Contractor works within distances that violates instructions given by the Railroad's authorized representative or performs work that has not been scheduled with the Railroad's authorized representative, a flagman or flagmen may be required full time until the project has been completed. Any additional cost for additional flagging as a result of the Contractor violating the instruction of the RWIC/flagman will be the contractor's responsibility and shall be deducted from the contractor's monies.

(B) Scheduling and Notification

(1) The Contractor's work requiring railroad flagging services shall be scheduled in advance and updated weekly to insure flagman coverage for the work to be performed. Flagging services will be provided by the Railroad for work required by the contract to complete the project. The contractor's work schedule shall be during normal daylight hours for safety concerns. Nighttime operations are not permitted without prior written approval from the Railroad Engineer and the Department's Engineer and shall be only be considered on a case by case basis.

(2) Not later than the time that approval is initially requested to begin work on Company corridor, the Contractor shall furnish to the Company, Railroad and the Department a schedule for all work required to complete the portion of the project within Company corridor and arrange for a job site meeting between the Contractor, the Department, and the Railroad's authorized representative. Flagman or Flagmen may not be provided until the job site meeting has been conducted and the Contractor's work scheduled.

(3) The Contractor, through the Engineer, will be required to give the Railroad representative at least 10 working days of advance written notice of intent to begin work within Company corridor in accordance with this special provision. Once begun, when such work is then suspended at any time, or for any reason, the Contractor, through the Engineer, will be required to give the Railroad representative at least 3 working days of advance notice before resuming work on Railroad right of way. Such notices shall include sufficient details of the proposed work to enable the Railroad representative to determine if flagging will be required. If such notice is in writing, the Contractor shall furnish the Engineer a copy; if notice is given verbally, it shall be confirmed in writing with copy to the Engineer.

(4) If flagging is required, no work shall be undertaken until the flagman, or flagmen are present at the job site. It may take up to 30 days to obtain flagging initially from the Railroad. When flagging begins, the flagman is usually assigned by the Railroad to work at the project site on a continual basis until no longer needed and cannot be called for on a spot basis. If flagging becomes unnecessary and is suspended, it may take up to 30 days to again obtain from the Railroad. Due to Railroad labor agreements, it is necessary to give 5 working days' notice before flagging service may be discontinued and responsibility for payment stopped.

(5) If, after the flagman is assigned to the project site, an emergency arises that requires the flagman's presence elsewhere, then the Contractor shall delay work on Railroad right of way until such time as the flagman is again available. Any additional costs resulting from such delay shall be borne by the Contractor and not the Company, Department or Railroad.

(C) Payment

The Department will be responsible for paying the Railroad directly for any and all costs of flagging which may be required to accomplish the construction.

Any additional cost for additional flagging as a result of work that is determined to be for the benefit of the Contractor will be the contractor's responsibility and shall be deducted from the Contractor's monies.

(1) The estimated cost of flagging service is the current rate per day based on a 10-hour work day. This cost includes the base pay for each flagman, overhead, and a per diem charge for travel expenses, meals and lodging. The charge by the Railroad will be the actual cost based on the rate of pay for the Railroad's employees who are available for flagging service at the time the service is required.

(2) Work by a flagman in excess of 8 hours per day or 40 hours per week, but not more than 12 hours a day will result in overtime pay at 1½ times the appropriate rate. Work by a flagman in excess of 12 hours per day will result in overtime pay at 2 times the appropriate rate. If work is performed on a holiday, the flagging rate is 2½ times the normal rate.

(3) Railroad work involved in preparing and handling bills will also be charged to the Department. Charges to the Department by the Railroad shall be in accordance with applicable provisions of the Federal-Aid Policy Guide, Title 23 Subchapter B, Part 140I and Subchapter G, Part 646B issued by the Federal Highway Administration on December 9, 1991, including all current amendments. Flagging costs are subject to change. The above estimates of flagging costs are provided for information only and are not binding in any way.

(D) Verification

The Railroad flagman assigned to the project will be responsible for notifying the Department Engineer upon arrival at the job site on the first day (or as soon thereafter as possible) that flagging services begin and on the last day that he performs such services for each separate period that services are provided. The Department Engineer will document such notification and general flagging times for verification purposes in the project records. When requested, the Department Engineer will also sign the flagman's diary showing daily time spent and activity at the project site. Also if requested, the flagman will cooperate with the Department by submitting daily timesheets or signing the Department Engineer's diary showing daily time spent at the project site.

Railroad's flagman will electronically enter flagging time via Railroad's electronic billing system. Any complaints concerning flagman or flagmen must be resolved in a timely manner. If need for flagman or flagmen is questioned, please contact Railroad's System Engineer of Public Improvements at (404) 529-1641. All verbal complaints must be

confirmed in writing by the Contractor within 5 working days with copy to the Department Engineer. Address all written correspondence to:

Office of Chief Engineer-Bridges & Structures
Attn: System Engineer of Public Improvements
Norfolk Southern Corporation
1200 Peachtree St. NE
Internal Box 142
Atlanta, GA 30309

HAUL ACROSS RAILROAD

Where the plans show or imply that materials of any nature must be hauled across the Railroad, unless the plans clearly show that the Department has included arrangements for such haul in its agreement with the Railroad, the Contractor will be required to make all necessary arrangements with the Railroad regarding means of transporting such materials across the Railroad. The Contractor will be required to bear all costs incidental to such crossings whether services are performed by the contractor's own forces or by Railroad personnel.

If the Contractor desires to haul across the Railroad for his convenience, the contractor shall make all of the necessary arrangements with the Railroad and the Company for a temporary crossing and shall bear all cost associated with construction and removal of the temporary crossing. The crossing shall only be used at times approved by the Engineer. The project will not be considered complete until all temporary crossing have been removed by the Contractor, unless directed by the Railroad or Company to leave the crossing installed. The Contractor shall be required to execute the Railroad and Company's standard private grade crossing agreement for each crossing installed. The Contractor shall have no claims whatsoever against the Railroad or the Department for denying any temporary crossing for the convenience of the Contractor.

No crossing may be established for use of the Contractor for transporting materials or equipment across the tracks of the Company unless specific authority for its installation, maintenance, necessary watching and flagging thereof and removal, all at the expense of the Contractor, is first obtained from the Railroad Engineer. The approval process for a temporary private crossing agreement executed between the Contractor and Railroad normally takes 90 days.

WORK FOR THE BENEFIT OF THE CONTRACTOR

All temporary or permanent changes in wire lines or other facilities which are considered necessary to the project are shown on the plans; included in the force account agreement between the Department, Company and the Railroad or will be covered by appropriate revisions to same which will be initiated and approved by the Department, Company and/or the Railroad.

Should the Contractor desire any changes in addition to the above, then the Contractor shall make separate arrangements with the Railroad for same to be accomplished at the

Contractor's expense. The Contractor shall notify the Department of agreements between the Railroad the and the Contractor for any work for the benefit of the Contractor.

COOPERATION AND DELAYS

It shall be the Contractor's responsibility to arrange a schedule with the Railroad for accomplishing stage construction of work to be done by Railroad crews. In arranging the schedule the contractor shall ascertain, from the Railroad, the lead time required for assembling crews and materials and shall make due allowance therefore. The Contractor shall cooperate with others in the construction of the project to the end that all work may be accomplished to the best advantage.

The Contractor shall insure that all work required to be completed by his forces prior to Railroad's crews schedule move in date is completed. Delays by the Contractor in meeting the schedule can result in delays in rescheduling Railroad crews and result in delays to the project. The Contractor shall have no claims whatsoever against the Railroad or the Department for delays as a result of rescheduling Railroad crews due the Contractor failing to meet his schedule.

No charge or claim of the Contractor against either the Department, Company or the Railroad will be allowed for hindrance or delay on account of railway traffic; any work done by the Railroad or other delays incident to or necessary for safe maintenance of railway traffic or for any delays due to compliance with these special provisions.

The Contractor's attention is called to the fact that neither the Department, Company nor Railroad assumes any responsibility for any work performed by others in connection with the construction of the project, and the Contractor shall have no claim whatsoever against the Department, Company or Railroad for any inconvenience, delay, or additional cost incurred by him on account of such operations by others.

TRAINMAN'S WALKWAYS

In areas along any existing tracks, on the side opposite of the track from where the work will be done; existing trainman walkways will be maintained at a distance not less than 10' from the centerline for the existing track. If the trainman's walkway does not exist, it will not be built or maintained unless shown on the plans. In areas of new construction along turnouts/switches, signals and derails, trainman walkways will be constructed and maintained not less than 10' from the centerline of the track. The trainman's walkway will extend from the point of switch through the derail. The trainman's walkway is an unobstructed continuous space suitable for the trainman to walk along the side of trains. Any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while the Railway's protective service is provided shall be removed before the close of each work day. If there is any excavation near the walkway, a handrail, with 10'-0" minimum clearance from centerline of track, shall be placed.

DISADVANTAGED BUSINESS ENTERPRISE FOR RAILROAD PIEDMONT IMPROVEMENT PLAN (PIP):

(11-20-12) 102-15(J) SP1 G64

Description

The purpose of this Special Provision is to promote the solicitation and use of disadvantaged minority and woman-owned businesses in the rail PIP projects let by the Department of Transportation.

Definitions

Aspirational Goal - The portion of the total contract, expressed as a percentage, that is foreseeable to be performed by DBE subcontractors.

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

Pledged DBE Subcontractor - Any DBE submitted at the time of bid that is being used to meet the DBE aspirational goal.

Pledged DBE Goal - The DBE participation at time of award, as determined by the amount of pledged DBE participation submitted.

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

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

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

North Carolina Unified Certification Program (NCUCP) - A program that provides comprehensive services and information to applicants for DBE certification, such that an applicant is required to apply only once for a DBE certification that will be honored by all recipients of USDOT funds in the state.

Forms and Websites Referenced in this Provision

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

DBE-IS *Subcontractor Payment Information* - Form for reporting the payments made to all DBE firms working on the project. This form is for paper bid projects only. http://www.ncdot.org/doh/forms/files/DBE-IS.xls

RF-1 *DBE Replacement Request Form* - Form for replacing a committed DBE. https://apps.dot.state.nc.us/_includes/download/external.html?pdf=http%3A//www.ncdot.gov/doh/forms/files/RF-1.pdf

SAF *Subcontract Approval Form* - Form required for approval to sublet the contract. http://www.ncdot.org/doh/operations/dp_chief_eng/constructionunit/saf.xls

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. https://apps.dot.state.nc.us/_includes/download/external.html?pdf=http%3A//www.ncdot.gov/doh/forms/files/JC-1.pdf

Letter of Intent - Form signed by the Contractor and the DBE subcontractor, manufacturer or regular dealer that affirms that a portion of said contract is going to be performed by the signed DBE for the amount listed at the time of bid. http://www.ncdot.org/doh/preconstruct/ps/contracts/letterofintent.pdf

Listing of DBE Subcontractors Form - Form for entering DBE subcontractors on a project that will meet this DBE goal. This form is for paper bids only. http://www.ncdot.gov/doh/preconstruct/ps/word/MISC2.doc

Aspirational DBE Goal

In line with the federal aspirational goal, the following DBE aspirational goal for participation by Disadvantaged Business Enterprises is established for this contract:

Disadvantaged Business Enterprises **10.0 %**

Even though the goal is aspirational, the expectation is that the Contractor shall exercise all reasonable steps to achieve the goal. Such steps include, but are not limited to:

(A) Clearly defining and disseminating information to DBEs on portions of the work that is available on the project so DBEs are provided an equitable opportunity to participate on the PIP contracts let by the Department.

(B) Solicit through reasonable and available means to try and achieve the aspirational goal.

(C) Providing adequate information and arranging a location for the review of plans, specifications and requirements of the contract.

(D) Providing assistance to DBEs in overcoming barriers such as the inability to obtain bonding, lines of credit, insurance, materials, equipment or related assistance or services.

Directory of Transportation Firms (Directory)

Real-time information is available about firms doing business with the Department and firms that are DBE certified through the NC UCP in the NCDOT Directory of Transportation Firms. Only firms identified in the Directory as DBE certified shall be used to meet the aspirational DBE goal of the project. The Directory can be found at the following link:
https://partner.ncdot.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 the work.

Listing of DBE Subcontractors

At the time of bid, bidders shall submit all the DBE participation that they anticipate to use during the life of the contract. Since the Rail DBE program is race and gender-neutral, all participation up to and over the 10% aspirational goal will be used toward the Department's race and gender-neutral goal for rail projects. Only those firms with current DBE certification at the time of bid opening will be acceptable for listing in the bidder's submittal of DBE participation. The bidder shall indicate the following required information:

(A) Electronic Bids

Bidders shall submit a listing of DBE participation in the appropriate section of Expedite, the bidding software of Bid Express®.

(1) Submit the names and addresses of DBE firms identified to participate in the contract. If the bidder uses the updated listing of DBE firms shown in Expedite, the bidder may use the dropdown menu to access the name and address of the DBE firm.

(2) Submit the contract line numbers of work to be performed by each DBE firm. When no figures or firms are entered, the bidder will be considered to have no DBE participation.

(3) The bidder shall be responsible for ensuring that the DBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that DBE's participation will not count towards achieving the aspirational DBE goal.

(B) Paper Bids

(1) Bidders, at the time the bid proposal is submitted, shall submit a listing of DBE participation, including the names and addresses on the Listing of DBE Subcontractors form.

(2) The bidder shall be responsible for ensuring that the DBE is certified at the time of bid by checking the Directory of Transportation Firms. If the firm is not certified at the time of the bid-letting, that DBE's participation will not count towards achieving the aspirational DBE goal.

DBE Prime Contractor

When a certified DBE firm bids on a rail PIP contract that contains an aspirational DBE goal, the DBE firm by virtue of the work it performs on the contract with its own forces, will meet the DBE aspirational goal. The DBE bidder shall list itself along with any other DBE subcontractors on the Listing of DBE Subcontractor form and the amount of work by each.

Written Documentation – Letter of Intent

The bidder shall submit written documentation for each DBE that will be used on the project to meet the aspirational goal of the contract, indicating the bidder's intent to use the DBE in the contract. This documentation shall be submitted on the Department's form titled *Letter of Intent.* The purpose of this documentation is to make the DBE aware that their quote is being used on the project. The documentation is not intended to take the place of a formal contract between the Contractor and the DBE subcontractor.

A hard or electronic copy of the Letter(s) of Intent shall be received in the office of the State Contractor Utilization Engineer or at DBE@ncdot.gov no later than 12:00 noon of the sixth calendar day following opening of bids, unless the sixth day falls on an official state holiday. In that situation, it is due in the office of the State Contractor Utilization Engineer no later than 12:00 noon on the next official state business day.

Submission of Good Faith Effort

While the lowest responsible and responsive bidder will not be denied award of the contracted based on failing to meet the advertised aspirational goal, the Department expects that the bidder will put forth a good faith effort to meet it. If the bidder fails to meet or exceed the aspirational DBE goal, the apparent lowest responsive bidder shall submit Affidavit A - Listing of Good Faith Efforts. A hard or electronic copy of the Affidavit shall be received in the office of the State Contractor Utilization Engineer or at DBE@ncdot.gov no later than 12:00 noon of the sixth calendar day following opening of bids, unless the sixth day falls on an official state holiday. In that situation, it is due in the office of the State Contractor Utilization Engineer no later than 12:00 noon on the next official state business day.

Counting DBE Participation Toward Meeting the DBE Aspirational Goal

(A) Participation

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

(B) Joint Checks

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

(C) Subcontracts (Non-Trucking)

A DBE may enter into subcontracts. Work that a DBE subcontracts to another DBE firm may be counted toward the aspirational goal. Work that a DBE subcontracts to a non-DBE firm does not count toward the aspirational goal of the contract.

(D) Joint Venture

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

(E) Suppliers

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

(F) Other

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

(1) The fees or commissions charged by a DBE firm for providing a *bona fide* service, such as professional, technical, consultant, or managerial services, or for providing bonds or insurance specifically required for the performance of a DOT-assisted contract, provided the fees or commissions are determined to be reasonable and not excessive as compared with fees and commissions customarily allowed for similar services.

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

Commercially Useful Function

Even though the goal on the rail PIP project is aspirational, there is still a requirement that the DBEs performing on the project will perform a commercially useful function in the work of

a contract. The Contractor may only count/report towards the aspirational goal only expenditures to DBEs that perform a commercially useful function.

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

(B) DBE Utilization in Trucking

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

(1) The DBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract, and there shall not be a contrived arrangement for the purpose of meeting the aspirational DBE goal.

(2) The DBE shall itself own and operate at least one fully licensed, insured, and operational truck used on the contract.

(3) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.

(4) The DBE may subcontract the work to another DBE firm, including an owner-operator who is certified as a DBE. The DBE who subcontracts work to another DBE receives credit for the total value of the transportation services the subcontracted DBE provides on the contract.

(5) The DBE may also subcontract the work to a non-DBE firm, including from an owner-operator. The DBE who subcontracts the work to a non-DBE is entitled to credit for the total value of transportation services provided by the non-DBE subcontractor not to exceed the value of transportation services provided by DBE-owned trucks on the contract. Additional participation by non-DBE subcontractors receives credit only for the fee or commission it receives as a result of the subcontract arrangement. The value of services performed under subcontract agreements between the DBE and the Contractor will not count towards the DBE credit for the project.

(6) A DBE may lease truck(s) from an established equipment leasing business open to the general public. The lease must indicate that the DBE has exclusive use of

and control over the truck. This requirement does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. This type of lease may count toward the DBE's credit as long as the driver is under the DBE's payroll.

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

Changes in the Work and Replacement of Pledged DBEs

Throughout the contract there may be changes made by the Engineer or Contractor that result in the reduction or elimination of work that was proposed to be performed by a DBE. Since the goals are aspirational, the Contractor will not be required to seek additional participation elsewhere on the project, but there is an expectation that there will be a continued effort to get DBEs on the job.

If the Engineer or Contractor makes changes that result in additional work to be performed by a DBE based on the Contractor's pledged DBE submittal, the Department has an expectation that the DBE shall participated in the additional work to the same extent as the DBE participated in the original work unless there is a viable reason.

If a DBE cannot perform the work for any reason, there is not a requirement to replace the DBE with another, but there is an expectation by the Department that the Contractor will continue to seek additional DBE participation opportunities on the project. The Department also requires the use of the *DBE Replacement Request Form* (RF-1) for tracking purposes.

Reporting Disadvantaged Business Enterprise Participation

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

(A) Withholding of money due in the next partial pay estimate; or

(B) Removal of an approved contractor from the prequalified bidders' list or the removal of other entities from the approved subcontractors list.

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

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

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

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

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

(A) Electronic Bids Reporting

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

(B) Paper Bids Reporting

The Contractor shall report the accounting of payments on the Department's DBE-IS *(Subcontractor Payment Information)* with each invoice. Invoices will not be processed for payment until the DBE-IS is received.

ARRA AND OERI CONTRACT PROVISIONS AND REPORTING REQUIREMENT CERTIFICATION:

(11-20-12) SP1 G70

By submission of a proposal or bid, the Contractor agrees to comply with the following provisions. Failure to comply with any or all of the provisions herein may be cause for the contracting agency to issue a cancellation notice to a Contractor.

The Contractor is hereby notified that this project will be financed with American Recovery and Reinvestment Act of 2009 (ARRA) Funds. The Contractor shall assure that all subcontractors and other contracts for services for ARRA funded projects shall have the mandated provisions of this directive in their contracts. Pursuant to Title XV, Section 1512 of the ARRA, the Department will require that the Contractor provide reports and other employment information as evidence to document the number of jobs created and retained by this contract from the Contractor's own workforce and any subcontractors. Additionally, the North Carolina Office of Economic Recovery & Investment (hereinafter, "OERI") has mandated certain procedural and reporting directives that will be followed. Additional provisions have been added to address OERI directives. No direct payment will be made for providing said reports as the cost for same is included in the various items in the contract.

The Contractor agrees that all data submitted to NCDOT and FRA in compliance with the Recovery Act requirements shall be accurate, objective, and of the highest integrity.

Posting with the Local Employment Security Commission

In addition to any other job postings the Contractor normally uses, OERI requires that the Contractor post with the local Employment Security Commission Office, all positions for which he intends to hire workers as a result of being awarded this contract. Labor and semi-skilled

positions must be posted for at least 48 hours before the hiring decision. All other positions must be posted a minimum of five days before the hiring decision. The selected Contractor and any subcontractors shall report the new hires in the manner prescribed by the Employment Security Commission and the OERI. The NC ESC website can be found at www.ncesc.com.

Required Contract Provision to Implement ARRA Section 902

Section 902 of the American Recovery and Reinvestment Act (ARRA) of 2009 requires that each contract awarded using ARRA funds must include a provision that provides the U.S. Comptroller General and his representatives with the authority to:

(1) Examine any records of the Contractor or any of its subcontractors, or any State or local agency administering such contract, that directly pertain to, and involve transactions relating to, the contract or subcontract; and

(2) Interview any officer or employee of the Contractor or any of its subcontractors, or of any State or local government agency administering the contract, regarding such transactions.

Accordingly, the Comptroller General and his representatives will have the authority and rights as provided under Section 902 of the ARRA with respect to this contract, which is funded with recovery funds made available under the ARRA. Section 902 further states that nothing in this section shall be interpreted to limit or restrict in any way any existing authority of the Comptroller General.

Authority of the Inspector General

Section 1515(a) of the ARRA provides authority for any representatives of the Inspector General to examine any records or interview any employee or officers working on this contract. The Contractor is advised that representatives of the Inspector General have the authority to examine any record and interview any employee or officer of the Contractor, its subcontractors or other firms working on this contract. Section 1515(b) further provides that nothing in this section shall be interpreted to limit or restrict in any way any existing authority of the Inspector General.

Office of State Budget and Management Access to Records

OERI requires that the Contractor and subcontractor agree to allow the Office of State Budget and Management internal auditors and state agency internal auditors access to records and employees pertaining to the performance of any contract awarded by a public agency.

Buy American Provision

Section 1605 of the ARRA requires that iron, steel and manufactured goods used in public buildings or public works projects must be manufactured in the United States. The Contractor agrees to abide by this provision and shall maintain records of such purchases for inspection by authorized agents of the State of North Carolina and federal agencies.

Wage Rate Provision (applies to all construction, alteration or repair projects)

Section 1606 of the ARRA requires that all laborers and mechanics employed by Contractors and subcontractors with funds from the ARRA shall be paid wages at rates not less than the prevailing wage rate under the Davis-Bacon Act. The Contractor agrees that by the submission of a proposal/bid in response to a solicitation funded in whole or in part with recovery funds, continuous compliance will be maintained with the Davis-Bacon Act. This applies to all construction contracts that exceed $2,000.

Labor Provisions

As provided by 49 U.S.C. 24405(b), persons conducting rail operations over rail infrastructure constructed or improved in whole or in part with funds provided through the ARRA agreement shall be considered a "rail carrier," as defined by 49 U.S.C. 10102(5), for the purposes of Title 49, United States Code, and any other statute that adopts that definition or in which that definition applies, including the Railroad Retirement Act of 1974 (45 U.S.C. 231 et seq.), the Railway Labor Act (43 45 U.S. C. 151 et seq.), and the Railroad Unemployment Insurance Act (45 U.S.C. 351 et seq.).

Availability and Use of Funds

Contractors understand and acknowledge that any and all payment of funds, or the continuation thereof, is contingent upon funds provided solely by ARRA or required state matching funds. Pursuant to Section 1604 of ARRA, Contractors agree not to undertake or make progress toward any activity using recovery funds that will lead to the development of such activity as casinos or other gambling establishments, aquariums, zoos, golf courses, swimming pools or any other activity specifically prohibited by the Recovery Act. Also, funds are not to be used for travel beyond the service area. Further, Contractor understands that ARRA funding is considered "one-time" funding.

Outsourcing outside the USA without Specific Prior Approval Provision

Contractor agrees not to use any recovery funds from a contract or any other performance agreement awarded by the State of North Carolina, its agencies, or political subdivisions for outsourcing outside of the United States, without specific prior written approval from the agency issuing the contract.

Federal, State and Local Tax Obligations

By submission of a proposal, Contractors and subcontractors assert and self-certify that all Federal, State and local tax obligations have been or will be satisfied prior to receiving recovery funds.

Anti-Discrimination and Equal Opportunity

Pursuant to Section 1.7 of the guidance memorandum issued by the United States Office of Management and Budget on April 3, 2009, recovery funds must be distributed in accordance

with all anti-discrimination and equal opportunity statutes, regulations, and Executive Orders pertaining to the expenditure of funds.

Reports of Fraud or Waste

Contractors must report to the Inspector General any suspected incidence of waste, fraud and abuse related to ARRA funds, and should notify FRA regional offices of any problems encountered as they occur. Notification can be made by phone at (919) 733-1433, or electronically at http://www.ncrecovery.gov/reportFraud/reportFraud.aspx. Additional information can be found on the NC Recovery website (www.ncrecovery.gov) by clicking "Reporting of Waste and Fraud".

False Claims Act

Contractors and subcontractors awarded funds made available under the Recovery Act shall promptly report to the Inspector General any credible evidence that a principal, employee, agency, Contractor, subcontractor or other person has submitted a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving Recovery Act funds.

Whistleblower Provisions

Contractors understand and acknowledge that Article 14 of Chapter 124, NCGS 126-84 through 126-88 (applies to the State and state employees), Article 21 of Chapter 95, NCGS 95-240 through 85-245 (applies to anyone, including state employees), and Section 1553 of the Recovery Act (applies to anyone receiving federal funds), provide protection to State, Federal and contract employees.

Contractors or Agencies cannot discharge, demote, or otherwise discriminate against an employee as a reprisal for disclosing, including a disclosure made in the ordinary course of an employee's duties, to the Recovery Accountability and Transparency Board, an Inspector General, the Comptroller General, a member of Congress, a State or Federal regulatory or law enforcement agency, a person with supervisory authority over the employee (or such other person working for the employer who has the authority to investigate, discover or terminate misconduct), a court or grand jury, the head of a Federal agency or their representative, information that the employee reasonably believes is evidence of:

(A) gross mismanagement of an agency contract or grant relating to covered funds;

(B) a gross waste of covered funds;

(C) a substantial and specific danger to public health or safety related to the implementation or use of covered funds;

(D) an abuse of authority related to the implementation or use of covered funds; or

(E) a violation of law, rule, or regulation related to an agency contract (including the competition for or negotiation of a contract) or grant, awarded or issued relating to covered funds.*

* covered funds: "any contract, grant, or other payment received by any non-federal employer if a) the Federal Government provides any portion of the money or property that is provided, requested or demanded; and b) at least some of the funds are appropriated or otherwise made available by this Act" 1553 (g)(2).

Contractor agrees to post notice of the rights and remedies as required by the ARRA.

Emblems

The Contractor agrees to use signs and materials at all fixed project locations at the most publicly accessible location announcing that the project or equipment was funded by the U.S. Department of Transportation, Federal Railroad Administration, with funds provided through the American Recovery and Reinvestment Act as directed by NCDOT. This provision is to be included in any subagreements, leases, third party contracts, or other similar documents used in connection with its Recovery Act Project.

Contractor Responsibilities and Reporting Requirements under ARRA

Contractors are required to complete projects or activities which are funded under the ARRA and to report on use of the funds provided through this award as directed. Information from these reports will be made available to the public. The reporting responsibility should be passed down from the Contractor to the subcontractor in order to ensure that the necessary information is provided within the specified deadline.

Contractors are not responsible for reporting ARRA requirements directly to FRA. The Contractor shall report the required data by way of NCDOT-supplied forms (either Microsoft Excel forms and in the approved version of Excel or editable pdf forms, as provided by NCDOT). The responsibilities for reporting are as follows:

(A) General

(1) Obtaining a Data Universal Numbering System (D-U-N-S) number or the Contractor may use their name and zip code of their Headquarters. For more information, visit http://fedgov.dnb.com/webform (for US and International locations) or call 866-705-5711. The toll free number is for US locations only. Registrants will be asked for their entity name, address, city, state, country, postal code, highest ranking individual's name and title, line of business, # of employees and legal structure (i.e.: corporation, non-profit, etc.) and socio economic data (veteran owned, women owned, etc.). If they use the web-form, there is a mailing address area, SIC code and annual revenue data lines but these are optional.

(2) Expenditure amount (amount of payment).

(3) Expenditure description (what was exchanged for the payment).

(4) A brief description of the types of jobs created and jobs retained. "Jobs or positions created" means those new positions created and filled, or previously existing unfilled positions that are filled, as a result of Recovery Act funding. ''Jobs or positions retained'' means those previously existing filled positions that are retained as a result of Recovery Act funding. A job cannot be reported as both created and retained. Note that contractors will describe jobs created and retained, but will not need to determine which were created versus which were retained.

(5) An estimate of the number of jobs created and jobs retained. At a minimum, this estimate shall include any new positions created and any existing filled positions that were retained to support or carry out Recovery Act projects. The number shall be expressed as ''full-time equivalent'' (FTE), reported monthly as all hours worked divided by the total number of hours in a full-time schedule.

(6) Percent complete and DBE payment data shall be submitted on a monthly basis, and is due to the NCDOT-Rail Division within 5 days of the end of each month.

(B) ARRA Section 1512

Contractor shall complete Form FHWA-1589 for each month and submit it to the NCDOT-Rail Division within 7 days after the end of the month. This data will be required until the contract is complete.

(1) Contractors will need to report the number of direct on-site job hours associated with the ARRA funds awarded as of the end of the reporting period.

(a) Contractors will not be expected to estimate indirect employment data (such as the employment needed to make "off the shelf" parts that the Contractor purchases).

(b) The Contractor shall report direct labor (for example, construction workers building a maintenance facility, or transit agency workers doing preventive maintenance) for the prime as well as all subcontractors.

(c) The Contractor shall report direct labor for suppliers when the quantity or value of purchases passes a threshold where there is likely an identifiable employment impact for the vendor. NCDOT will provide detailed guidance and assistance in this calculation.

(d) USDOT economists will compute the number of indirect jobs and induced jobs (for example, jobs at suppliers or in unrelated industries as a result of the money flowing through the economy.)

(2) Contractors and consultants shall provide the required information for their own workforce as well as the workforce of all subcontractors that were active on their ARRA funded project(s) for the reporting month.

(3) The requirement for monthly reporting of employment data is included in all ARRA funded contracts to ensure transparency throughout the delivery of the project. As such, specific requirements have been developed for reporting this monthly data. All Contractors awarded projects shall attend a training session in Raleigh, North Carolina to discuss reporting requirements and procedures.

The Contractor hereby agrees to comply with the Contract Provisions and Reporting Requirements as indicated in the American Recovery and Reinvestment Act of 2009 and any amendments thereto. The Contractor also agrees to comply with any additional reporting requirements that may be requested by NCDOT, FRA, USDOT, the Inspector General (IG), the Government Accountability Office (GAO), or other entities, for example Congressional committees or individual members of Congress. The Contractor hereby agrees to inspections or audits that may occur at any time from the any of the above referenced federal or state agencies. Contractors are requested to provide a copy of any such reports to NCDOT on any responses to such requests for information or as a result of an inspection or audit.

CERTIFICATION FOR FEDERAL-AID CONTRACTS:
(3-21-90) SP1 G85

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

(A) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

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

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

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

U.S. DEPARTMENT OF TRANSPORTATION HOTLINE:
(11-22-94) 108-5 SP1 G100

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

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

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

SUBSURFACE INFORMATION:
(7-1-95) 450 SP1 G112 D

Subsurface information is available on the **railway** and structure portions of this project.

LOCATING EXISTING UNDERGROUND UTILITIES:
(3-20-12) 105 SP1 G115

Revise the *2012 Standard Specifications* as follows:

Page 1-43, Article 105-8, line 28, after the first sentence, add the following:

Identify excavation locations by means of pre-marking with white paint, flags, or stakes or provide a specific written description of the location in the locate request.

BID DOCUMENTATION:
(1-1-02) (Rev. 9-18-12) 103 SP1 G142

General

The successful Bidder (Contractor) shall submit the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation used to prepare the bid for this contract to the Department within 10 days after receipt of notice of award of contract. Such documentation shall be placed in escrow with a banking institution or other bonded document storage facility selected by the Department.

The Department will not execute the contract until the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation has been received by the Department.

Terms

Bid Documentation - Bid Documentation shall mean all written information, working papers, computer printouts, electronic media, charts, and all other data compilations which contain or reflect information, data, and calculations used by the Bidder in the preparation of the bid. The term *bid documentation* includes, but is not limited to, contractor equipment rates, contractor overhead rates, labor rates, efficiency or productivity factors, arithmetical calculations, and

quotations from subcontractors and material suppliers to the extent that such rates and quotations were used by the Bidder in formulating and determining the bid. The term *bid documentation* also includes any manuals, which are standard to the industry used by the Bidder in determining the bid. Such manuals may be included in the bid documentation by reference. Such reference shall include the name and date of the publication and the publisher. *Bid Documentation* does not include bid documents provided by the Department for use by the Bidder in bidding on this project.

Contractor's Representative - Officer of the Contractor's company; if not an officer, the Contractor shall supply a letter signed and notarized by an officer of the Contractor's company, granting permission for the representative to sign the escrow agreement on behalf of the Contractor.

Escrow Agent - Officer of the select banking institution or other bonded document storage facility authorized to receive and release bid documentation.

Escrow Agreement Information

A copy of the Escrow Agreement will be mailed to the Bidder with the notice of award for informational purposes. The Bidder and Department will sign the actual Escrow Agreement at the time the bid documentation is delivered to the escrow agent.

Failure to Provide Bid Documentation

The Bidder's failure to provide the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation within 10 days after the notice of award is received by him may be just cause for rescinding the award of the contract and may result in the removal of the Bidder from the Department's list of qualified bidders for a period of up to 180 days. Award may then be made to the next lowest responsible bidder or the work may be readvertised and constructed under the contract or otherwise, as the Department may decide.

Submittal of Bid Documentation

(A) Appointment – Email specs@ncdot.gov or call 919.707.6900 to schedule an appointment.

(B) Delivery - A representative of the Bidder shall deliver the original, unaltered bid documentation or a certified copy of the original, unaltered bid documentation to the Department, in a container suitable for sealing, within 10 days after the notice of award is received by him. Bid documentation will be considered a certified copy if the Bidder includes a letter to the Department from a chief officer of the company stating that the enclosed documentation is an *EXACT* copy of the original documentation. The letter shall be signed by a chief officer of the company, have the person's name and title typed below the signature, and the signature shall be notarized at the bottom of the letter.

(C) Packaging – The container shall be no larger than 15.5 inches in length by 12 inches wide by 11 inches high and shall be water resistant. The container shall be clearly marked on the face and the back of the container with the following information: Bid Documentation, Bidder's Name, Bidder's Address, Date of Escrow Submittal, Contract Number, TIP Number if applicable, and County.

Affidavit

In addition to the bid documentation, an affidavit signed under oath by an individual authorized by the Bidder to execute the bid shall be included. The affidavit shall list each bid document with sufficient specificity so a comparison may be made between the list and the bid documentation to ensure that all of the bid documentation listed in the affidavit has been enclosed. The affidavit shall attest that the affiant has personally examined the bid documentation, that the affidavit lists all of the documents used by the Bidder to determine the bid for this project, and that all such bid documentation has been included.

Verification

Upon delivery of the bid documentation, the Department's Contract Officer and the Bidder's representative will verify the accuracy and completeness of the bid documentation compared to the affidavit. Should a discrepancy exist, the Bidder's representative shall immediately furnish the Department's Contract Officer with any other needed bid documentation. The Department's Contract Officer upon determining that the bid documentation is complete will, in the presence of the Bidder's representative, immediately place the complete bid documentation and affidavit in the container and seal it. Both parties will deliver the sealed container to the escrow agent for placement in a safety deposit box, vault, or other secure accommodation.

Confidentiality of Bid Documentation

The bid documentation and affidavit in escrow are, and will remain, the property of the Bidder. The Department has no interest in, or right to, the bid documentation and affidavit other than to verify the contents and legibility of the bid documentation unless the Contractor gives written notice of intent to file a claim, files a written claim, files a written and verified claim, or initiates litigation against the Department. In the event of such written notice of intent to file a claim, filing of a written claim, filing a written and verified claim, or initiation of litigation against the Department, or receipt of a letter from the Contractor authorizing release, the bid documentation and affidavit may become the property of the Department for use in considering any claim or in litigation as the Department may deem appropriate.

Any portion or portions of the bid documentation designated by the Bidder as a *trade secret* at the time the bid documentation is delivered to the Department's Contract Officer shall be protected from disclosure as provided by *G.S. 132-1.2.*

Duration and Use

The bid documentation and affidavit shall remain in escrow until 60 calendar days from the time the Contractor receives the final estimate; or until such time as the Contractor:

(A) Gives written notice of intent to file a claim,
(B) Files a written claim,
(C) Files a written and verified claim,
(D) Initiates litigation against the Department related to the contract; or
(E) Authorizes in writing its release.

Upon the giving of written notice of intent to file a claim, filing a written claim, filing a written and verified claim, or the initiation of litigation by the Contractor against the Department, or receipt of a letter from the Contractor authorizing release, the Department may obtain the release and custody of the bid documentation.

The Bidder certifies and agrees that the sealed container placed in escrow contains all of the bid documentation used to determine the bid and that no other bid documentation shall be relevant or material in litigation over claims brought by the Contractor arising out of this contract.

Release of Bid Documentation to the Contractor

If the bid documentation remains in escrow 60 calendar days after the time the Contractor receives the final estimate and the Contractor has not filed a written claim, filed a written and verified claim, or has not initiated litigation against the Department related to the contract, the Department will instruct the escrow agent to release the sealed container to the Contractor.

The Contractor will be notified by certified letter from the escrow agent that the bid documentation will be released to the Contractor. The Contractor or his representative shall retrieve the bid documentation from the escrow agent within 30 days of the receipt of the certified letter. If the Contractor does not receive the documents within 30 days of the receipt of the certified letter, the Department will contact the Contractor to determine final dispersion of the bid documentation.

Payment

The cost of the escrow will be borne by the Department. There will be no separate payment for all costs of compilation of the data, container, or verification of the bid documentation. Payment at the various contract unit or lump sum prices in the contract will be full compensation for all such costs.

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.

GIFTS FROM VENDORS AND CONTRACTORS:

(12-15-09) 107-1 SP1 G152

By Executive Order 24, issued by Governor Perdue, and *N.C.G.S.§ 133-32,* it is unlawful for any vendor or contractor (i.e. architect, bidder, contractor, construction manager, design professional, engineer, landlord, offeror, seller, subcontractor, supplier, or vendor), to make gifts or to give favors to any State employee of the Governor's Cabinet Agencies (i.e. Administration, Commerce, Correction, Crime Control and Public Safety, Cultural Resources, Environment and Natural Resources, Health and Human Services, Juvenile Justice and Delinquency Prevention, Revenue, Transportation, and the Office of the Governor). This prohibition covers those vendors and contractors who:

(A) Have a contract with a governmental agency; or
(B) Have performed under such a contract within the past year; or
(C) Anticipate bidding on such a contract in the future.

For additional information regarding the specific requirements and exemptions, vendors and contractors are encouraged to review Executive Order 24 and *N.C.G.S. § 133-32.*

Executive Order 24 also encouraged and invited other State Agencies to implement the requirements and prohibitions of the Executive Order to their agencies. Vendors and contractors should contact other State Agencies to determine if those agencies have adopted Executive Order 24.

EROSION AND SEDIMENT CONTROL/STORMWATER CERTIFICATION:

(1-16-07) (Rev 9-18-12) 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, twice weekly for construction related *Federal Clean Water Act, Section 303(d)* impaired streams with turbidity violations, and within 24 hours after a significant rainfall event of 0.5 inch that occurs within a 24 hour period.

(c) Maintain an onsite rain gauge or use the Department's Multi-Sensor Precipitation Estimate website to maintain a daily record of rainfall amounts and dates.

(d) Maintain erosion and sediment control/stormwater inspection records for review by Department and Regulatory personnel upon request.

(e) Implement approved reclamation plans on all borrow pits, waste sites and staging areas.

(f) Maintain a log of turbidity test results as outlined in the Department's Procedure for Monitoring Borrow Pit Discharge.

(g) Provide secondary containment for bulk storage of liquid materials.

(h) Provide training for employees concerning general erosion and sediment control/stormwater awareness, the Department's NPDES Stormwater Permit NCS000250 requirements, and the applicable requirements of the *General Permit, NCG010000.*

(i) Report violations of the NPDES permit to the Engineer immediately who will notify the Division of Water Quality Regional Office within 24 hours of becoming aware of the violation.

(3) Quality Control Program - Maintain a quality control program to control erosion, prevent sedimentation and follow provisions/conditions of permits. The quality control program shall:

(a) Follow permit requirements related to the Contractor and subcontractors' construction activities.

(b) Ensure that all operators and subcontractors on site have the proper erosion and sediment control/stormwater certification.

(c) Notify the Engineer when the required certified erosion and sediment control/stormwater personnel are not available on the job site when needed.

(d) Conduct the inspections required by the NPDES permit.

(e) Take corrective actions in the proper timeframe as required by the NPDES permit for problem areas identified during the NPDES inspections.

(f) Incorporate erosion control into the work in a timely manner and stabilize disturbed areas with mulch/seed or vegetative cover on a section-by-section basis.

(g) Use flocculants approved by state regulatory authorities where appropriate and where required for turbidity and sedimentation reduction.

(h) Ensure proper installation and maintenance of temporary erosion and sediment control devices.

(i) Remove temporary erosion or sediment control devices when they are no longer necessary as agreed upon by the Engineer.

(j) The Contractor's quality control and inspection procedures shall be subject to review by the Engineer. Maintain NPDES inspection records and make records available at all times for verification by the Engineer.

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

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

The Contractor may request to use the same person as the Level II Supervisor and Level II Foreman. This person shall be onsite whenever construction activities as

described above are taking place. This request shall be approved by the Engineer prior to work beginning.

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

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

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

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

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

Preconstruction Meeting

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

Ethical Responsibility

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

Revocation or Suspension of Certification

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

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

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

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

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

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

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

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

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

Measurement and Payment

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

SUPPLEMENTAL CONTRACTOR EROSION CONTROL RESPONSIBILITIES:

The NCDOT Contractor shall be required to install and maintain erosion control devices and provide temporary and eventual permanent stabilization to disturbed areas until the final completion of the project contract as directed. In addition, the Contractor shall adhere to the requirements of the Erosion and Sediment Control/Stormwater Certification provided elsewhere in this contract until completion of the project. After the Contractor has completed the bulk of the grading work, erosion control responsibilities and work will continue to be required and not limited to, monitoring erosion control devices on a weekly basis and after each rainfall that equals or exceeds 0.5 inches, NPDES documentation, installation and maintenance of additional erosion control devices, providing temporary groundcover, and establishment of permanent vegetation on disturbed slopes.

Payment for installation and maintenance of temporary erosion control measures and providing temporary and permanent stabilization will be paid for at the appropriate contract unit price for the work. Mobilization payment for this work shall be paid as described in the section below. No additional payment shall be made for these supplemental responsibilities and work.

SUPPLEMENTAL RESPONSE FOR EROSION CONTROL:

Description

Furnish the labor, materials, tools and equipment necessary to move personnel, equipment, and supplies to the project necessary for the pursuit of any or all of the erosion control responsibilities of the Contractor. This provision will only be applicable after the Contractor has completed all of his work, with the exception of maintenance and removal of erosion control, and has demobilized his work force while waiting for NSR to complete track construction. Payment will only be made for occurrences where the contractor mobilizes men and equipment to perform necessary erosion control measures as required by the Engineer.

Construction Methods

Contractor shall perform an erosion control action as described but not limited to the NPDES Inspection Form SPPP30. Each erosion control action may include one or more of the work items on the form, or a separate action that is the primary responsibility of the Contractor.

Measurement and Payment

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

Payment will be made under:

Pay Item	Pay Unit
Supplemental Response for Erosion Control	Each

PROCEDURE FOR MONITORING BORROW PIT DISCHARGE:

(2-20-07) 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 *2012 Standard Specifications*, the Contractor shall define the point at which the discharge enters into the State's surface waters and the appropriate sampling locations. Sampling locations shall include points upstream and downstream from the point at which the discharge enters these waters. Upstream sampling location shall be located so that it is not influenced by backwater conditions and represents natural background conditions. Downstream sampling location shall be located at the point where complete mixing of the discharge and receiving water has occurred.

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

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

Contractor's test results, an immediate test shall be performed jointly with the results superseding the previous test results of both the Department and the Contractor.

The Contractor shall use the *NCDOT Turbidity Reduction Options for Borrow Pits Matrix,* available at http://www.ncdot.org/doh/preconstruct/ps/contracts/letting.html 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.

EMPLOYMENT:
(11-15-11) (Rev. 1-17-12) 108, 102 SP1 G184

Revise the *2012 Standard Specifications* as follows:

Page 1-20, Subarticle 102-15(O), delete and replace with the following:

(O) Failure to restrict a former Department employee as prohibited by Article 108-5.

Page 1-65, Article 108-5 Character of Workmen, Methods, and Equipment, line 32, delete all of line 32, the first sentence of the second paragraph and the first word of the second sentence of the second paragraph.

STATE HIGHWAY ADMINISTRATOR TITLE CHANGE:
(9-18-12) SP1 G185

Revise the *2012 Standard Specifications* as follows:

Replace all references to "State Highway Administrator" with "Chief Engineer".

PROJECT SPECIAL PROVISIONS

ROADWAY

CLEARING AND GRUBBING - METHOD III:

(4-6-06) (Rev. 1-17-12) 200 SP2 R02B

Perform clearing on this project to the limits established by Method "III" shown on Standard Drawing No. 200.03 of the *2012 Roadway Standard Drawings*.

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) 235, 560 SP2 R45 B

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 *2012 Standard Specifications*.

Measurement and Payment

When the Contractor elects to obtain material from an area located beneath a proposed fill sections which does not require excavation for any reason other than to generate acceptable shoulder and fill slope material, the work of performing the excavation will be considered incidental to the item of *Borrow Excavation* or *Shoulder Borrow*. If there is no pay item for *Borrow* or *Shoulder Borrow* in the contract, this work will be considered incidental to *Unclassified Excavation*. Stockpile the excavated material in a manner to facilitate measurement by the Engineer. Fill the void created by the excavation of the shoulder and fill slope material with suitable material. Payment for material used from the stockpile will be made at the contract unit price for *Borrow Excavation* or *Shoulder Borrow*. If there is no pay item for *Borrow Excavation* or *Shoulder Borrow*, then the material will be paid for at the contract unit price for *Unclassified Excavation*. The material used to fill the void created by the excavation of the shoulder and fill slope material will be made at the contract unit price for *Unclassified Excavation*, *Borrow Excavation*, or *Shoulder Borrow*, depending on the source of the material.

Material generated from undercut excavation, unclassified excavation or clearing and grubbing operations that is placed directly on shoulders or slope areas, will not be measured separately for payment, as payment for the work requiring the excavation will be considered adequate compensation for depositing and grading the material on the shoulders or slopes.

When undercut excavation is performed at the direction of the Engineer and the material excavated is found to be suitable for use as shoulder and fill slope material, and there is no area on the project currently prepared to receive the material generated by the undercut operation, the Contractor may construct a stockpile for use as borrow at a later date. Payment for the material used from the stockpile will be made at the contract unit price for *Borrow Excavation* or *Shoulder Borrow*.

When shoulder material is obtained from borrow sources or from stockpiled material, payment for the work of shoulder construction will be made at the contract unit price per cubic yard for *Borrow Excavation* or *Shoulder Borrow* in accordance with the applicable provisions of Section 230 or Section 560 of the *2012 Standard Specifications*.

PIPE INSTALLATION:
(11-20-12) 300 SP3 R01

Revise the *2012 Standard Specifications* as follows:

Page 3-1, Article 300-2, Materials, line 23-24, replace sentence with:

Provide foundation conditioning geotextile in accordance with Section 1056 for Type 4 geotextile.

FLOWABLE FILL:
(9-17-02) (Rev 1-17-12) 300, 340, 450, 1000, 1530, 1540, 1550 SP3 R30

Description

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

Materials

Refer to Division 10 of the *2012 Standard Specifications*.

Item	Section
Flowable Fill	1000-6

Construction Methods

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

Measurement and Payment

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

Payment will be made under:

Pay Item	Pay Unit
Flowable Fill	Cubic Yard

ASPHALT PAVEMENTS - SUPERPAVE:
(6-19-12) 605 SP6 R01

Revise the *2012 Standard Specifications* as follows:

Page 6-3, Article 605-7 APPLICATION RATES AND TEMPERATURES, replace this article, including Table 601-1, with the following:

Apply tack coat uniformly across the existing surface at target application rates shown in Table 605-1.

TABLE 605-1
APPLICATION RATES FOR TACK COAT

Existing Surface	Target Rate (gal/sy)
	Emulsified Asphalt
New Asphalt	0.04 ± 0.01
Oxidized or Milled Asphalt	0.06 ± 0.01
Concrete	0.08 ± 0.01

Apply tack coat at a temperature within the ranges shown in Table 605-2. Tack coat shall not be overheated during storage, transport or at application.

TABLE 605-2
APPLICATION TEMPERATURE FOR TACK COAT

Asphalt Material	Temperature Range
Asphalt Binder, Grade PG 64-22	350 - 400°F
Emulsified Asphalt, Grade RS-1H	130 - 160°F
Emulsified Asphalt, Grade CRS-1	130 - 160°F
Emulsified Asphalt, Grade CRS-1H	130 - 160°F
Emulsified Asphalt, Grade HFMS-1	130 - 160°F
Emulsified Asphalt, Grade CRS-2	130 - 160°F

Page 6-18, Article 610-1 DESCRIPTION, lines 40-41, delete the last sentence of the last paragraph.

Page 6-19, Subarticle 610-3(A) Mix Design-General, line 5, add the following as the first paragraph:

Warm mix asphalt (WMA) is allowed for use at the Contractor's option in accordance with the NCDOT Approved Products List for WMA Technologies available at:
http://www.ncdot.org/doh/operations/materials/pdf/wma.pdf.

ASPHALT BINDER CONTENT OF ASPHALT PLANT MIXES:

(11-21-00) (Rev. 7-17-12) 609 SP6 R15

The approximate asphalt binder content of the asphalt concrete plant mixtures used on this project will be as follows:

Asphalt Concrete Base Course	Type B 25.0__	4.4%
Asphalt Concrete Intermediate Course	Type I 19.0__	4.8%
Asphalt Concrete Surface Course	Type S 4.75A	6.8%
Asphalt Concrete Surface Course	Type SA-1	6.8%
Asphalt Concrete Surface Course	Type SF 9.5A	6.7%
Asphalt Concrete Surface Course	Type S 9.5__	6.0%
Asphalt Concrete Surface Course	Type S 12.5__	5.6%

The actual asphalt binder content will be established during construction by the Engineer within the limits established in the *2012 Standard Specifications.*

ASPHALT PLANT MIXTURES:

(7-1-95) 609 SP6 R20

Place asphalt concrete base course material in trench sections with asphalt pavement spreaders made for the purpose or with other equipment approved by the Engineer.

PRICE ADJUSTMENT - ASPHALT BINDER FOR PLANT MIX:

(11-21-00) 620 SP6 R25

Price adjustments for asphalt binder for plant mix will be made in accordance with Section 620 of the *2012 Standard Specifications.*

The base price index for asphalt binder for plant mix is **$563.33** per ton.

This base price index represents an average of F.O.B. selling prices of asphalt binder at supplier's terminals on **October 1, 2012.**

FINAL SURFACE TESTING NOT REQUIRED:

(5-18-04) (Rev. 5-15-12) 610 SP6 R45

Final surface testing is not required on this project.

GUARDRAIL ANCHOR UNITS, TYPE 350:

(4-20-04) (Rev. 8-16-11) 862 SP8 R65

Description

Furnish and install guardrail anchor units in accordance with the details in the plans, the applicable requirements of Section 862 of the *2012 Standard Specifications*, and at locations shown in the plans.

Materials

The Contractor may at his option, furnish any one of the guardrail anchor units or approved equal.

Guardrail anchor unit (ET-Plus) as manufactured by:

Trinity Industries, Inc.
2525 N. Stemmons Freeway
Dallas, Texas 75207
Telephone: 800-644-7976

The guardrail anchor unit (SKT 350) as manufactured by:

Road Systems, Inc.
3616 Old Howard County Airport
Big Spring, Texas 79720
Telephone: 915-263-2435

Prior to installation the Contractor shall submit to the Engineer:

(A) FHWA acceptance letter for each guardrail anchor unit certifying it meets the requirements of NCHRP Report 350, Test Level 3, in accordance with Article 106-2 of the *2012 Standard Specifications*.

(B) Certified working drawings and assembling instructions from the manufacturer for each guardrail anchor unit in accordance with Article 105-2 of the *2012 Standard Specifications*.

No modifications shall be made to the guardrail anchor unit without the express written permission from the manufacturer. Perform installation in accordance with the details in the plans, and details and assembling instructions furnished by the manufacturer.

Construction Methods

Guardrail end delineation is required on all approach and trailing end sections for both temporary and permanent installations. Guardrail end delineation consists of yellow reflective sheeting applied to the entire end section of the guardrail in accordance with Article 1088-3 of the *2012 Standard Specifications* and is incidental to the cost of the guardrail anchor unit.

Measurement and Payment

Measurement and payment will be made in accordance with Article 862-6 of the *2012 Standard Specifications*.

Payment will be made under:

Pay Item	**Pay Unit**
Guardrail Anchor Units, Type 350	Each

MATERIALS:
(2-21-12) (Rev. 11-20-12) 1005, 1080, 1081, 1092 SP10 R01

Revise the *2012 Standard Specifications* as follows:

Page 10-5, Table 1000-1, REQUIREMENTS FOR CONCRETE, replace with the following:

TABLE 1000-1
REQUIREMENTS FOR CONCRETE

Class of Concrete	Min. Comp. Strength at 28 days	Maximum Water-Cement Ratio				Consistency Max. Slump		Cement Content			
		Air-Entrained Concrete		Non Air-Entrained Concrete		Vibrated	Non-Vibrated	Vibrated		Non- Vibrated	
		Rounded Aggregate	Angular Aggregate	Rounded Aggregate	Angular Aggregate			Min.	Max.	Min.	Max.
Units	*psi*					*inch*	*inch*	*lb/cy*	*lb/cy*	*lb/cy*	*lb/cy*
AA	4,500	0.381	0.426	-	-	3.5	-	639	715	-	-
AA Slip Form	4,500	0.381	0.426	-	-	1.5	-	639	715	-	-
Drilled Pier	4,500	-	-	0.450	0.450	-	5-7 dry 7-9 wet	-	-	640	800
A	3,000	0.488	0.532	0.550	0.594	3.5	4	564	-	602	-
B	2,500	0.488	0.567	0.559	0.630	2.5	4	508	-	545	-
B Slip Formed	2,500	0.488	0.567	-	-	1.5	-	508	-	-	-
Sand Light-weight	4,500	-	0.420	-	-	4	-	715	-	-	-
Latex Modified	3,000 7 day	0.400	0.400	-	-	6	-	658	-	-	-
Flowable Fill excavatable	150 max. at 56 days	as needed	as needed	as needed	as needed	-	Flow-able	-	-	40	100
Flowable Fill non-excavatable	125	as needed	as needed	as needed	as needed	-	Flow-able	-	-	100	as needed
Pavement	4,500 design, field 650 flexural, design only	0.559	0.559	-	-	1.5 slip form 3.0 hand place	-	526	-	-	-
Precast	See Table 1077-1	as needed	as needed	-	-	6	as needed	as needed	as needed	as needed	as needed
Prestress	per contract	See Table 1078-1	See Table 1078-1	-	-	8	-	564	as needed	-	-

Page 10-23, Table 1005-1, AGGREGATE GRADATION-COARSE AGGREGATE, replace with the following:

TABLE 1005-1
AGGREGATE GRADATION - COARSE AGGREGATE

Std. Size #	Percentage of Total by Weight Passing										Remarks
	2"	1 1/2"	1"	3/4"	1/2"	3/8"	#4	#8	#10	#16	#40	#200	
4	100	90-100	20-55	0-15	-	0-5	-	-	-	-	-	A	Asphalt Plant Mix
467M	100	95-100	-	35-70	-	0-30	0-5	-	-	-	-	A	Asphalt Plant Mix
5	-	90-100	90-100	20-55	0-10	0-5	-	-	-	-	-	A	AST, Sediment Control Stone
57	-	100	95-100	-	25-60	-	0-10	0-5	-	-	-	A	AST, Str. Concrete, Shoulder Drain, Sediment Control Stone
57M	-	100	95-100	-	25-45	-	0-10	0-5	-	-	-	A	AST, Concrete Pavement
6M	-	-	100	90-100	20-55	0-20	0-8	-	-	-	-	A	AST
67	-	-	100	90-100	-	20-55	0-10	0-5	-	-	-	A	AST, Str. Concrete, Asphalt Plant Mix
78M	-	-	-	100	98-100	75-100	20-45	0-15	-	-	-	A	Asphalt Plant Mix, AST, Str. Conc, Weep Hole Drains
14M	-	-	-	-	-	100	35-70	5-20	-	0-8	-	A	Asphalt Plant Mix, AST, Weep Hole Drains, Str. Concrete
9	-	-	-	-	-	100	85-100	10-40	-	0-10	-	A	AST
ABC	-	100	75-97	-	55-80	-	35-55	-	25-45	-	14-30	4-12[B]	Aggregate Base Course, Aggregate Stabilization
ABC (M)	-	100	75-100	-	45-79	-	20-40	-	0-25	-	-	0-12[B]	Maintenance Stabilization
Light-weight[C]	-	-	-	-	100	80-100	5-40	0-20	-	0-10	-	0-2.5	AST

A. See Subarticle 1005-4(A).
B. See Subarticle 1005-4(B).
C. For Lightweight Aggregate used in Structural Concrete, see Subarticle 1014-2(E)(6).

Page 10-126, Table 1078-1, REQUIREMENTS FOR CONCRETE, replace with the following:

TABLE 1078-1
REQUIREMENTS FOR CONCRETE

Property	28 Day Design Compressive Strength 6,000 psi or less	28 Day Design Compressive Strength greater than 6,000 psi
Maximum Water/Cementitious Material Ratio	0.45	0.40
Maximum Slump without HRWR	3.5"	3.5"
Maximum Slump with HRWR	8"	8"
Air Content (upon discharge into forms)	5 + 2%	5 + 2%

Page 10-151, Article 1080-4 Inspection and Sampling, lines 18-22, replace (B), (C) and (D) with the following:

(B) At least 3 panels prepared as specified in 5.5.10 of AASHTO M 300, Bullet Hole Immersion Test.

(C) At least 3 panels of 4"x6"x1/4" for the Elcometer Adhesion Pull Off Test, ASTM D4541.

(D) A certified test report from an approved independent testing laboratory for the Salt Fog Resistance Test, Cyclic Weathering Resistance Test, and Bullet Hole Immersion Test as specified in AASHTO M 300.

(E) A certified test report from an approved independent testing laboratory that the product has been tested for slip coefficient and meets AASHTO M253, Class B.

Page 10-162, Subarticle 1081-1(A) Classifications, lines 4-7, delete the second and third sentences of the description for Type 3A.

Page 10-162, Subarticle 1081-1(B) Requirements, lines 26-30, replace the second paragraph with the following:

For epoxy resin systems used for embedding dowel bars, threaded rods, rebar, anchor bolts and other fixtures in hardened concrete, the manufacturer shall submit test results showing that the bonding system will obtain 125% of the specified required yield strength of the fixture. Furnish certification that, for the particular bolt grade, diameter and embedment depth required, the anchor system will not fail by adhesive failure and that there is no movement of the anchor bolt. For certification and anchorage, use 3,000 psi as the minimum Portland cement concrete compressive strength used in this test. Use adhesives that meet Section 1081.

List the properties of the adhesive on the container and include density, minimum and maximum temperature application, setting time, shelf life, pot life, shear strength and compressive strength.

Page 10-169, Subarticle 1081-3(G) Anchor Bolt Adhesives, delete this subarticle.

Page 10-204, Subarticle 1092-2(A) Performance and Test Requirements, replace **Table 1092-3 Minimum Coefficient of Retroreflection for NC Grade A** with the following:

TABLE 1092-3
MINIMUM COEFFICIENT OF RETROREFLECTION FOR NC GRADE A
(Candelas Per Lux Per Square Meter)

Observation Angle, degrees	Entrance Angle, degrees	White	Yellow	Green	Red	Blue	Fluorescent Yellow Green	Fluorescent Yellow
0.2	-4.0	525	395	52	95	30	420	315
0.2	30.0	215	162	22	43	10	170	130
0.5	-4.0	310	230	31	56	18	245	185
0.5	30.0	135	100	14	27	6	110	81
1.0	-4.0	**120**	60	8	16	3.6	64	48
1.0	30.0	45	34	4.5	9	2	36	27

SELECT MATERIAL, CLASS III, TYPE 3:
(1-17-12) 1016, 1044 SP10 R05

Revise the *2012 Standard Specifications* as follows:

Page 10-39, Article 1016-3, CLASS III, add the following after line 14:

Type 3 Select Material

Type 3 select material is a natural or manufactured fine aggregate material meeting the following gradation requirements and as described in Sections 1005 and 1006:

Percentage of Total by Weight Passing							
3/8"	#4	#8	#16	#30	#50	#100	#200
100	95-100	65-100	35-95	15-75	5-35	0-25	0-8

Page 10-39, Article 1016-3, CLASS III, line 15, replace "either type" with "Type 1, Type 2 or Type 3".

Page 10-62, Article 1044-1, line 36, delete the sentence and replace with the following:

Subdrain fine aggregate shall meet Class III select material, Type 1 or Type 3.

Page 10-63, Article 1044-2, line 2, delete the sentence and replace with the following:

Subdrain coarse aggregate shall meet Class V select material.

TRUCK MOUNTED CHANGEABLE MESSAGE SIGNS:
(8-21-12) 1101.02 SP11 R10

Revise the *2012 Roadway Standard Drawings* as follows:

Drawing No. 1101.02, Sheet 12, TEMPORARY LANE CLOSURES, replace General Note #11 with the following:

11- TRUCK MOUNTED CHANGEABLE MESSAGE SIGNS (TMCMS) USED ON SHADOW VEHICLES FOR "IN LANE" ACTIVITIES SHALL BE A MINIMUM OF 43" X 73". THE DISPLAY PANEL SHALL HAVE FULL MATRIX CAPABILITY WITH THE CAPABILITY TO PROVIDE 2 MESSAGE LINES WITH 7 CHARACTERS PER LINE WITH A MINIMUM CHARACTER HEIGHT OF 18". FOR ADDITIONAL MESSAGING, CONTACT THE WORK ZONE TRAFFIC CONTROL SECTION.

12- TMCMS USED FOR ADVANCED WARNING ON VEHICLES LOCATED ON THE SHOULDER MAY BE SMALLER THAN 43" X 73". THE DISPLAY PANEL SHALL HAVE THE CAPABILITY TO PROVIDE 2 MESSAGE LINES WITH 7 CHARACTERS PER LINE WITH A MINIMUM CHARACTER HEIGHT OF 18". FOR ADDITIONAL MESSAGING, CONTACT THE WORK ZONE TRAFFIC CONTROL SECTION.

Drawing No. 1101.02, Sheet 13, TEMPORARY LANE CLOSURES, replace General Note #12 with the following:

12- TRUCK MOUNTED CHANGEABLE MESSAGE SIGNS (TMCMS) USED ON SHADOW VEHICLES FOR "IN LANE" ACTIVITIES SHALL BE A MINIMUM OF 43" X 73". THE DISPLAY PANEL SHALL HAVE FULL MATRIX CAPABILITY WITH THE CAPABILITY TO PROVIDE 2 MESSAGE LINES WITH 7 CHARACTERS PER LINE WITH A MINIMUM CHARACTER HEIGHT OF 18". FOR ADDITIONAL MESSAGING, CONTACT THE WORK ZONE TRAFFIC CONTROL SECTION.

13- TMCMS USED FOR ADVANCED WARNING ON VEHICLES LOCATED ON THE SHOULDER MAY BE SMALLER THAN 43" X 73". THE DISPLAY PANEL SHALL HAVE THE CAPABILITY TO PROVIDE 2 MESSAGE LINES WITH 7 CHARACTERS PER LINE WITH A MINIMUM CHARACTER HEIGHT OF 18". FOR ADDITIONAL MESSAGING, CONTACT THE WORK ZONE TRAFFIC CONTROL SECTION.

PERMANENT SEEDING AND MULCHING:
(7-1-95) 1660 SP16 R02

The Department desires that permanent seeding and mulching be established on this project as soon as practical after slopes or portions of slopes have been graded. As an incentive to obtain an early stand of vegetation on this project, the Contractor's attention is called to the following:

For all permanent seeding and mulching that is satisfactorily completed in accordance with the requirements of Section 1660 in the *2012 Standard Specifications* and within the following percentages of elapsed contract times, an additional payment will be made to the Contractor as an incentive additive. The incentive additive will be determined by multiplying the number of

acres of seeding and mulching satisfactorily completed times the contract unit bid price per acre for Seeding and Mulching times the appropriate percentage additive.

Percentage of Elapsed Contract Time	Percentage Additive
0% - 30%	30%
30.01% - 50%	15%

Percentage of elapsed contract time is defined as the number of calendar days from the date of availability of the contract to the date the permanent seeding and mulching is acceptably completed divided by the total original contract time.

NOTE TO CONTRACTOR:

The Contractor's attention is drawn to the fact that "Shallow Undercut" shall be performed in accordance with Section 505 of the *Standard Specifications* at locations directed by the Engineer except that shallow undercut areas shall be backfilled with common "Borrow Excavation" material. Payment for "*Borrow Excavation*" used for backfill will be in accordance with Section 230 of the *Standard Specifications.*

RAILROAD SPECIAL PROVISONS FOR ROADBED

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RAILROAD ROADBED

The Standard Specifications for Roads and Structures, January 2012 of the North Carolina Department of Transportation, hereinafter referred to as the Standard Specifications, shall apply to the articles of the Project Special Provisions.

CLEARING AND GRUBBING - METHOD III:

(9-17-02) (Rev. 1-17-12) 200 SP2
R02A

Perform clearing on this project to the limits established by Method "III" shown on Standard Drawing No. 200.03 of the *2012 Roadway Standard Drawings.*

The work shall be performed in accordance with Section 200, "Clearing and Grubbing", of the Standard Specifications, except that grubbing will be performed on all cleared excavation and embankment areas and will include all stumps, roots and other embedded debris. All debris from the clearing and grubbing operations, including stumps and roots, shall be disposed of at an existing public disposal site currently permitted by NCDENR.

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.

OWNERSHIP OF MATERIALS

All salvaged material originally furnished by the Department's Contractor shall remain the property of the Contractor, and he shall give consideration to this when making his bid. All salvaged track materials owned by the Department's Contractor shall be disposed of by the Contractor, and the construction area shall be left in a neat and orderly condition.

All salvaged track material either existing or furnished by NSR is and shall remain the property of the NSR except as noted in the track to be removed section of the special provisions.

EXCAVATION

This work shall be performed in accordance with Section 225, "ROADWAY EXCAVATION" of the Standard Specifications. The applicable typical roadbed template will be maintained throughout the railway portion of the project.

All waste excavated within the Railroad Right of Way, excluding concrete and asphalt materials, shall be placed at locations approved by the Engineer within the existing Railroad Right of Way. The waste material shall not be used inside the 2:1 slope on embankments, but can be placed outside of the 2:1 slope to flatten the slopes.

36" WELDED STEEL PIPE (Special)

330-1 DESCRIPTION

This work shall consist of furnishing and installing 36"welded steel pipe by trenchless methods as shown in the contract, plans and as directed. The thickness of the wall shall be 0.532 inches.

330-2 MATERIALS

Refer to Division 10.

Item	Section
Welded Steel Pipe	1032-5

Use suppliers of metal pipe culverts, fittings and all other accessories covered by this section that meet the Department's Brand Certification program requirements for metal pipe culverts and are listed on the Materials and Tests Unit's pre-approved list for suppliers of metal pipe culvert. The pre-approved list is available on the Department's website

330-3 PIPE INSTALLATION

Replace section 330-3 of the 2012 Standard Specifications with the following:

The pipe shall be installed by dry boring and jacking under the tracks as shown in the plans. The pipe shall be carefully dry bored true to the line and grade given. The bore shall be held to a minimum to insure that there will be no settlement. All voids around the outside of the pipe shall be completely filled to the satisfaction of the Engineer.

The Contractor shall submit to the Railroad Engineer and the NCDOT Engineer a complete plan and schedule for pipe installation 2 weeks prior to the expected commencement of work. The submission shall include complete details of the sheeting, shoring and bracing for the protection of Railroad roadbed, materials and equipment pertinent to the operation. The Contractor shall

not proceed with the pipe installation until he has received acceptance of the plan and schedule from the Railroad Engineer and the NCDOT Engineer.

Conduct a pre-construction meeting in the presence of the Railroad Engineer and the Engineer at least 48 hours before the beginning of the pipe installation to discuss the method of installation to assure the pipe is installed true to line and grade. The methods that will be used to insure there is no settlement of the pipe or the railroad roadbed section above the pipe.

All work shall be done with a RWIC/flagman on site and the work shall be performed during allowable work periods. Work shall stop when a train is passing. The Contractor shall have no claim against the Railroad or the Department for any delays caused by NSR's train operations.

The boring operation shall be progressed on a 24-hour basis without stoppage (except for adding lengths of pipe) until the leading edge of the pipe has reached the receiving pit. The installation shall be carried on without interruption, insofar as practicable, to prevent the pipe from becoming firmly set in the embankment.

The front of the pipe shall be provided with mechanical arrangements or devices that will positively prevent the auger from leading the pipe so that no unsupported excavation is ahead of the pipe.

The auger and cutting head arrangement shall be removable from within the pipe in the event an obstruction is encountered. If the obstruction cannot be removed without excavation in advance of the pipe, the pipe shall be abandoned in place and immediately filled with grout. A new installation procedure and revised plans must be submitted to, and approved by, the Engineering Representative before work can resume.

The over-cut by the cutting head shall not exceed the outside diameter of the pipe by more than 1/2 inch. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe by more than 1 inch, the voids shall be pressure grouted.

When boring and jacking pipe 36 inches and larger in diameter and the boring is halted within a distance less than 20 feet to the centerline of track, the heading shall be shored and braced if the track is active.

Any pipe damaged during the operation shall be removed and replaced by the Contractor at his expense.

The pits or trenches excavated to facilitate the pipe installation shall be backfilled immediately after the installation has been completed.

330-4 MEASUREMENT AND PAYMENT

36" Welded Steel Pipe, 0.532" Thick, Grade B in Soil will be measured and paid as the actual number of linear feet of pipe measured along the flow line to the nearest foot, which has been installed in soil.

36" Welded Steel Pipe, 0.532" Thick, Grade B Not in Soil will be measured and paid as the actual number of linear feet of pipe measured along the flow line to the nearest foot which has been installed in non-soil, as observed and confirmed by the Engineer. Non-soil is defined as all material other than soil. The Contractor shall request and obtain the Engineer's observation and confirmation of the limits of the installation not in soil before and during the installation of the pipe or portion of the pipe not in soil.

Failure of the Contractor to request and obtain the Engineer's observation and confirmation of the limits of the pipe not in soil before and during the installation will result in the payment at the unit price for *36" Welded Steel Pipe, 0.532" Thick, Grade B in Soil.*

Such payment will include, but is not limited to, furnishing all labor, tools, equipment, materials and incidentals, miscellaneous grading or excavation necessary to complete the work. Installations that become damaged or are abandoned will be replaced at no cost to the Department.

Payment will be made under:

Pay Item	**Pay Unit**
36" Welded Steel Pipe, 0.532" Thick, Grade B in Soil	Linear Foot
36" Welded Steel Pipe, 0.532" Thick, Grade B Not in Soil	Linear Foot

36" WELDED STEEL PIPE, OPEN CUT **(Special)**
Station 3391+10

330-1 DESCRIPTION

This work shall consist of furnishing and installing 36"welded steel pipe, grade B, by Open Cut as shown in the contract, plans and as directed by the Engineer. The thickness of the wall shall be 0.532 inches. The pipe shall extend the proposed 36" WSP that is to be installed trenchless in accordance with the plans and specs at this location.

330-2 MATERIALS

Refer to Division 10.

Item	**Section**
Welded Steel Pipe	1032-5

Use suppliers of metal pipe culverts, fittings and all other accessories covered by this section that meet the Department's Brand Certification program requirements for metal pipe culverts and are listed on the Materials and Tests Unit's pre-approved list for suppliers of metal pipe culvert. The pre-approved list is available on the Department's website

Construction Methods

Install the pipe in accordance with the applicable requirements of Section 300 of the *Standard Specifications* and as directed by the Engineer.

Measurement and Payment

36" Welded Steel Pipe, 0.532" Thick, Grade B, Open Cut, will be measured and paid as the actual number of linear feet of pipe that has been incorporated into the completed and accepted work. Measurement of pipe will be made by counting the number of joints used and multiplying by the length of the joint to obtain the number of linear feet of pipe installed and accepted. Measurements of partial joints will be made along the longest length of the partial joint to the nearest 0.1 ft. Select bedding and backfill material will be included in the cost of the installed pipe.

Payment will be made under:

Pay Item	**Pay Unit**
36" Welded Steel Pipe, 0.532" Thick, Grade B, Open Cut	Linear Foot

42" WELDED STEEL PIPE **(Special)**

330-1 DESCRIPTION

This work shall consist of furnishing and installing 42"welded steel pipe by trenchless methods as shown in the contract, plans and as directed. The thickness of the wall shall be 0.625 inches.

330-2 MATERIALS

Refer to Division 10.

Item	**Section**
Welded Steel Pipe	1032-5

Use suppliers of metal pipe culverts, fittings and all other accessories covered by this section that meet the Department's Brand Certification program requirements for metal pipe culverts and are listed on the Materials and Tests Unit's pre-approved list for suppliers of metal pipe culvert. The pre-approved list is available on the Department's website

330-3 PIPE INSTALLATION

Replace section 330-3 of the 2012 Standard Specifications with the following:

The pipe shall be installed by dry boring and jacking under the tracks as shown in the plans. The pipe shall be carefully dry bored true to the line and grade given. The bore shall be held to a minimum to insure that there will be no settlement. All voids around the outside of the pipe shall be completely filled to the satisfaction of the Engineer.

The Contractor shall submit to the Railroad Engineer and the NCDOT Engineer a complete plan and schedule for pipe installation 2 weeks prior to the expected commencement of work. The submission shall include complete details of the sheeting, shoring and bracing for the protection of Railroad roadbed, materials and equipment pertinent to the operation. The Contractor shall not proceed with the pipe installation until he has received acceptance of the plan and schedule from the Railroad Engineer and the NCDOT Engineer.

Conduct a pre-construction meeting in the presence of the Railroad Engineer and the Engineer at least 48 hours before the beginning of the pipe installation to discuss the method of installation to assure the pipe is installed true to line and grade. The methods that will be used to insure there is no settlement of the pipe or the railroad roadbed section above the pipe.

All work shall be done with a RWIC/flagman on site and the work shall be performed during allowable work periods. Work shall stop when a train is passing. The Contractor shall have no claim against the Railroad or the Department for any delays caused by NSR's train operations.

The boring operation shall be progressed on a 24-hour basis without stoppage (except for adding lengths of pipe) until the leading edge of the pipe has reached the receiving pit. The installation shall be carried on without interruption, insofar as practicable, to prevent the pipe from becoming firmly set in the embankment.

The front of the pipe shall be provided with mechanical arrangements or devices that will positively prevent the auger from leading the pipe so that no unsupported excavation is ahead of the pipe.

The auger and cutting head arrangement shall be removable from within the pipe in the event an obstruction is encountered. If the obstruction cannot be removed without excavation in advance of the pipe, the pipe shall be abandoned in place and immediately filled with grout. A new installation procedure and revised plans must be submitted to, and approved by, the Engineering Representative before work can resume.
The over-cut by the cutting head shall not exceed the outside diameter of the pipe by more than 1/2 inch. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe by more than 1 inch, the voids shall be pressure grouted.

When boring and jacking pipe 36 inches and larger in diameter and the boring is halted within a distance less than 20 feet to the centerline of track, the heading shall be shored and braced if the track is active.

Any pipe damaged during the operation shall be removed and replaced by the Contractor at his expense.

The pits or trenches excavated to facilitate the pipe installation shall be backfilled immediately after the installation has been completed.

330-4 MEASUREMENT AND PAYMENT

42" Welded Steel Pipe, 0.625" Thick, Grade B in Soil will be measured and paid as the actual number of linear feet of pipe measured along the flow line to the nearest foot, which has been installed in soil.

42" Welded Steel Pipe, 0.625" Thick, Grade B Not in Soil will be measured and paid as the actual number of linear feet of pipe measured along the flow line to the nearest foot which has been installed in non-soil, as observed and confirmed by the Engineer. Non-soil is defined as all material other than soil. The Contractor shall request and obtain the Engineer's observation and confirmation of the limits of the installation not in soil before and during the installation of the pipe or portion of the pipe not in soil.

Failure of the Contractor to request and obtain the Engineer's observation and confirmation of the limits of the pipe not in soil before and during the installation will result in the payment at the unit price for *42" Welded Steel Pipe, 0.625" Thick, Grade B in Soil.*

Such payment will include, but is not limited to, furnishing all labor, tools, equipment, materials and incidentals, miscellaneous grading or excavation necessary to complete the work. Installations that become damaged or are abandoned will be replaced at no cost to the Department.

Payment will be made under:

Pay Item	**Pay Unit**
42" Welded Steel Pipe, 0.625" Thick, Grade B in Soil	Linear Foot
42" Welded Steel Pipe, 0.625" Thick, Grade B Not in Soil	Linear Foot

48" WELDED STEEL PIPE **(Special)**

330-1 DESCRIPTION

This work shall consist of furnishing and installing 48"welded steel pipe by trenchless methods as shown in the contract, plans and as directed. The thickness of the wall shall be 0.688 inches.

330-2 MATERIALS

Refer to Division 10.

Item	**Section**
Welded Steel Pipe	1032-5

Use suppliers of metal pipe culverts, fittings and all other accessories covered by this section that meet the Department's Brand Certification program requirements for metal pipe culverts and are listed on the Materials and Tests Unit's pre-approved list for suppliers of metal pipe culvert. The pre-approved list is available on the Department's website

330-3 PIPE INSTALLATION

Replace section 330-3 of the 2012 Standard Specifications with the following:

The pipe shall be installed by dry boring and jacking under the tracks as shown in the plans. The pipe shall be carefully dry bored true to the line and grade given. The bore shall be held to a minimum to insure that there will be no settlement. All voids around the outside of the pipe shall be completely filled to the satisfaction of the Engineer.

The Contractor shall submit to the Railroad Engineer and the NCDOT Engineer a complete plan and schedule for pipe installation 2 weeks prior to the expected commencement of work. The submission shall include complete details of the sheeting, shoring and bracing for the protection of Railroad roadbed, materials and equipment pertinent to the operation. The Contractor shall not proceed with the pipe installation until he has received acceptance of the plan and schedule from the Railroad Engineer and the NCDOT Engineer.

Conduct a pre-construction meeting in the presence of the Railroad Engineer and the Engineer at least 48 hours before the beginning of the pipe installation to discuss the method of installation to assure the pipe is installed true to line and grade. The methods that will be used to insure there is no settlement of the pipe or the railroad roadbed section above the pipe.

All work shall be done with a RWIC/flagman on site and the work shall be performed during allowable work periods. Work shall stop when a train is passing. The Contractor shall have no claim against the Railroad or the Department for any delays caused by NSR's train operations.

The boring operation shall be progressed on a 24-hour basis without stoppage (except for adding lengths of pipe) until the leading edge of the pipe has reached the receiving pit. The installation shall be carried on without interruption, insofar as practicable, to prevent the pipe from becoming firmly set in the embankment.

The front of the pipe shall be provided with mechanical arrangements or devices that will positively prevent the auger from leading the pipe so that no unsupported excavation is ahead of the pipe.

The auger and cutting head arrangement shall be removable from within the pipe in the event an obstruction is encountered. If the obstruction cannot be removed without excavation in advance of the pipe, the pipe shall be abandoned in place and immediately filled with grout. A new installation procedure and revised plans must be submitted to, and approved by, the Engineering Representative before work can resume.
The over-cut by the cutting head shall not exceed the outside diameter of the pipe by more than 1/2 inch. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe by more than 1 inch, the voids shall be pressure grouted.

When boring and jacking pipe 36 inches and larger in diameter and the boring is halted within a distance less than 20 feet to the centerline of track, the heading shall be shored and braced if the track is active.

Any pipe damaged during the operation shall be removed and replaced by the Contractor at his expense.

The pits or trenches excavated to facilitate the pipe installation shall be backfilled immediately after the installation has been completed.

330-4 MEASUREMENT AND PAYMENT

48" Welded Steel Pipe, 0.688" Thick, Grade B in Soil will be measured and paid as the actual number of linear feet of pipe measured along the flow line to the nearest foot, which has been installed in soil.

48" Welded Steel Pipe, 0.688" Thick, Grade B Not in Soil will be measured and paid as the actual number of linear feet of pipe measured along the flow line to the nearest foot which has been installed in non-soil, as observed and confirmed by the Engineer. Non-soil is defined as all material other than soil. The Contractor shall request and obtain the Engineer's observation and confirmation of the limits of the installation not in soil before and during the installation of the pipe or portion of the pipe not in soil.

Failure of the Contractor to request and obtain the Engineer's observation and confirmation of the limits of the pipe not in soil before and during the installation will result in the payment at the unit price for *48" Welded Steel Pipe, 0.688" Thick, Grade B in Soil.*

Such payment will include, but is not limited to, furnishing all labor, tools, equipment, materials and incidentals, miscellaneous grading or excavation necessary to complete the work. Installations that become damaged or are abandoned will be replaced at no cost to the Department.

Payment will be made under:

Pay Item	**Pay Unit**
48" Welded Steel Pipe, 0.688" Thick, Grade B in Soil	Linear Foot
48" Welded Steel Pipe, 0.688" Thick, Grade B Not in Soil	Linear Foot

48" WELDED STEEL PIPE, OPEN CUT **(Special)**
Station 3336+62

330-1 DESCRIPTION

This work shall consist of furnishing and installing 48"welded steel pipe, grade B, by Open Cut as shown in the contract, plans and as directed by the Engineer. The thickness of the wall shall be 0.688 inches. The pipe shall extend the proposed 48" WSP that is to be installed trenchless in accordance with the plans and specs at this location.

330-2 MATERIALS

Refer to Division 10.

Item	Section
Welded Steel Pipe	1032-5

Use suppliers of metal pipe culverts, fittings and all other accessories covered by this section that meet the Department's Brand Certification program requirements for metal pipe culverts and are listed on the Materials and Tests Unit's pre-approved list for suppliers of metal pipe culvert. The pre-approved list is available on the Department's website

Construction Methods

Install the pipe in accordance with the applicable requirements of Section 300 of the *Standard Specifications* and as directed by the Engineer.

Measurement and Payment

48" Welded Steel Pipe, 0.688" Thick, Grade B, Open Cut, will be measured and paid as the actual number of linear feet of pipe that has been incorporated into the completed and accepted work. Measurement of pipe will be made by counting the number of joints used and multiplying by the length of the joint to obtain the number of linear feet of pipe installed and accepted. Measurements of partial joints will be made along the longest length of the partial joint to the nearest 0.1 ft. Select bedding and backfill material will be included in the cost of the installed pipe.

Payment will be made under:

Pay Item	Pay Unit
48" Welded Steel Pipe, 0.688" Thick, Grade B, Open Cut	Linear Foot

54"WELDED STEEL PIPE **(Special)**

330-1 DESCRIPTION

This work shall consist of furnishing and installing 54"welded steel pipe by trenchless methods as shown in the contract, plans and as directed. The thickness of the wall shall be 0.781 inches.

330-2 MATERIALS

Refer to Division 10.

Item	Section
Welded Steel Pipe	1032-5

Use suppliers of metal pipe culverts, fittings and all other accessories covered by this section that meet the Department's Brand Certification program requirements for metal pipe culverts and are listed on the Materials and Tests Unit's pre-approved list for suppliers of metal pipe culvert. The pre-approved list is available on the Department's website

330-3 PIPE INSTALLATION

Replace section 330-3 of the 2012 Standard Specifications with the following:

The pipe shall be installed by dry boring and jacking under the tracks as shown in the plans. The pipe shall be carefully dry bored true to the line and grade given. The bore shall be held to a minimum to insure that there will be no settlement. All voids around the outside of the pipe shall be completely filled to the satisfaction of the Engineer.

The Contractor shall submit to the Railroad Engineer and the NCDOT Engineer a complete plan and schedule for pipe installation 2 weeks prior to the expected commencement of work. The submission shall include complete details of the sheeting, shoring and bracing for the protection of Railroad roadbed, materials and equipment pertinent to the operation. The Contractor shall not proceed with the pipe installation until he has received acceptance of the plan and schedule from the Railroad Engineer and the NCDOT Engineer.

Conduct a pre-construction meeting in the presence of the Railroad Engineer and the Engineer at least 48 hours before the beginning of the pipe installation to discuss the method of installation to assure the pipe is installed true to line and grade. The methods that will be used to insure there is no settlement of the pipe or the railroad roadbed section above the pipe.

All work shall be done with a RWIC/flagman on site and the work shall be performed during allowable work periods. Work shall stop when a train is passing. The Contractor shall have no claim against the Railroad or the Department for any delays caused by NSR's train operations.

The boring operation shall be progressed on a 24-hour basis without stoppage (except for adding lengths of pipe) until the leading edge of the pipe has reached the receiving pit. The installation shall be carried on without interruption, insofar as practicable, to prevent the pipe from becoming firmly set in the embankment.

The front of the pipe shall be provided with mechanical arrangements or devices that will positively prevent the auger from leading the pipe so that no unsupported excavation is ahead of the pipe.

The auger and cutting head arrangement shall be removable from within the pipe in the event an obstruction is encountered. If the obstruction cannot be removed without excavation in advance of the pipe, the pipe shall be abandoned in place and immediately filled with grout. A new installation procedure and revised plans must be submitted to, and approved by, the Engineering Representative before work can resume.
The over-cut by the cutting head shall not exceed the outside diameter of the pipe by more than 1/2 inch. If voids should develop or if the bored hole diameter is greater than the outside diameter of the pipe by more than 1 inch, the voids shall be pressure grouted.

When boring and jacking pipe 36 inches and larger in diameter and the boring is halted within a distance less than 20 feet to the centerline of track, the heading shall be shored and braced if the track is active.

Any pipe damaged during the operation shall be removed and replaced by the Contractor at his expense.

The pits or trenches excavated to facilitate the pipe installation shall be backfilled immediately after the installation has been completed.

330-4 MEASUREMENT AND PAYMENT

54" Welded Steel Pipe, 0.781" Thick, Grade B in Soil will be measured and paid as the actual number of linear feet of pipe measured along the flow line to the nearest foot, which has been installed in soil.

54" Welded Steel Pipe, 0.781" Thick, Grade B Not in Soil will be measured and paid as the actual number of linear feet of pipe measured along the flow line to the nearest foot which has been installed in non-soil, as observed and confirmed by the Engineer. Non-soil is defined as all material other than soil. The Contractor shall request and obtain the Engineer's observation and confirmation of the limits of the installation not in soil before and during the installation of the pipe or portion of the pipe not in soil.

Failure of the Contractor to request and obtain the Engineer's observation and confirmation of the limits of the pipe not in soil before and during the installation will result in the payment at the unit price for *54" Welded Steel Pipe, 0.781" Thick, Grade B in Soil.*

Such payment will include, but is not limited to, furnishing all labor, tools, equipment, materials and incidentals, miscellaneous grading or excavation necessary to complete the work. Installations that become damaged or are abandoned will be replaced at no cost to the Department.

Payment will be made under:

Pay Item	**Pay Unit**
54" Welded Steel Pipe, 0.781" Thick, Grade B in Soil	Linear Foot
54" Welded Steel Pipe, 0.781" Thick, Grade B Not in Soil	Linear Foot

54" WELDED STEEL PIPE, OPEN CUT **(Special)**
Station 3434+41

330-1 DESCRIPTION

This work shall consist of furnishing and installing 54"welded steel pipe, grade B, by Open Cut as shown in the contract, plans and as directed by the Engineer. The thickness of the wall shall be 0.781 inches. The pipe shall extend the proposed 54" WSP that is to be installed trenchless in accordance with the plans and specs at this location.

330-2 MATERIALS

Refer to Division 10.

Item	Section
Welded Steel Pipe	1032-5

Use suppliers of metal pipe culverts, fittings and all other accessories covered by this section that meet the Department's Brand Certification program requirements for metal pipe culverts and are listed on the Materials and Tests Unit's pre-approved list for suppliers of metal pipe culvert. The pre-approved list is available on the Department's website

Construction Methods

Install the pipe in accordance with the applicable requirements of Section 300 of the *Standard Specifications* and as directed by the Engineer.

Measurement and Payment

54" Welded Steel Pipe, 0..781" Thick, Grade B, Open Cut, will be measured and paid as the actual number of linear feet of pipe that has been incorporated into the completed and accepted work. Measurement of pipe will be made by counting the number of joints used and multiplying by the length of the joint to obtain the number of linear feet of pipe installed and accepted. Measurements of partial joints will be made along the longest length of the partial joint to the nearest 0.1 ft. Select bedding and backfill material will be included in the cost of the installed pipe.

Payment will be made under:

Pay Item	Pay Unit
54" Welded Steel Pipe, 0.781" Thick, Grade B, Open Cut	Linear Foot

PIPE COLLARS UNDER RAILROAD **(Special)**

Description

Furnish the materials to construct pipe collars to join pipes of dissimilar materials at locations shown on the plans in accordance with the detail drawing in the plans for Pipe Collars.

Materials

The #5 reinforcing steel shall be grade 60 steel in accordance with section 1070 of the Standard Specifications.

The concrete shall be class AA in accordance with section 1000 of the Standard Specifications.

Construction Methods

The pipe collars shall be used at locations shown on the plans. The collar shall overlap each pipe by 2 feet and shall have a minimum cover of 12 inches at any location around the pipe. The reinforcing steel shall be placed 6 inches from the outside portion of the larger pipe at locations shown on the detail drawing for pipe collars.

Measurement and Payment

Pipe Collars Under RailRoad, will be paid per each for each pipe collar that has been incorporated into the completed work.

The above prices and payments will be full compensation for all work covered by this provision including but not limited to the excavation, constructing and setting forms, furnishing concrete, furnishing and placing reinforcing steel, and any incidentals necessary to complete the work as shown on the plans.

Pay Item	**Pay Unit**
Pipe Collars Under Railroad	EA

REMOVE EXISTING HEADWALLS **(Special)**

Description

The contractor shall remove existing headwalls at locations shown on the plans.

Construction Methods

The contractor shall remove and dispose of existing headwalls at locations shown on the plans after the pipes they are attached to are abandoned and filled with flowable fill in accordance with the Standard Specifications. Car

Measurement and Payment

Remove Existing Headwalls will be paid for in accordance with Section 225, Unclassified Excavation, of the Standard Specifications.

Pay Item	**Pay Unit**
Unclassified Excavation	Cubic Yard (CY)

RAILROAD TRACK TO BE REMOVED **(Special)**

The Department's Contractor shall remove the existing Clegg siding track as shown in the plans and dispose of the materials appropriately in accordance with local regulations.

Description

Furnish the labor, materials, tools and equipment necessary to remove the existing track which includes the rail, crossties, tie plates, anchors, spikes and disposal of the materials.

Ownership of Material

All salvaged material from the removal of the existing Clegg siding track shall remain the property of the Department's Contractor except for the wooden cross ties. The cross ties will remain the property of NSR and shall be removed and neatly stacked at a location directed by the Railroad Engineer. The contractor shall give consideration to the salvage value of the materials when making his bid.

Measurement and Payment

The quantity of "Railroad Track to be Removed", which is to be paid for, will be the actual number of track feet of track which is acceptably removed, measured between the rails along the center line of the track prior to the track being removed.

Payment will be made under:

Pay Item	**Pay Unit**
Railroad Track to be Removed	TF

REGRADE EXISTING RAILROAD ROADBED **(Special)**

Description

The contractor shall remove 4" of the existing sub-ballast on the existing railroad roadbed as shown in the plans and add new sub-ballast as needed to bring the area to finished grade for sub-ballast as shown in the detail drawing in the plans.

The work shall be done in accordance with Section 225 of the Standard Specifications. The contractor shall exercise care in removing the existing sub-ballast so as not to disturb the remaining sub-ballast. Once the 4" of sub-ballast is removed, the contractor will need to wet and roll the existing sub-ballast to seal off the remaining sub-ballast before adding the sub-ballast needed to bring the new sub-ballast to the grade and typical required for this area.

MEASUREMENT AND PAYMENT

Payment for removal of the 4" of existing sub-ballast and wetting and rolling the existing sub-ballast will be measured and paid for as unclassified excavation in accordance with Section 225 of the Standard Specifications. The unit price for unclassified excavation shall be full compensation for removing, disposing or utilization of the existing sub-ballast, wetting the remaining sub-ballast and rolling the remaining sub-ballast to seal it off.

The additional sub-ballast needed to bring the roadbed to final grade will be measured and paid at the contract unit price per ton for sub-ballast in accordance with the Contract Special Provisions for sub-ballast.

Pay Item	**Pay Unit**
Unclassified Excavation	Cubic yards
Sub-ballast	Tons

EMBANKMENT **(Special)**

This work shall be performed in accordance with Section 235,"EMBANKMENTS", of the Standard Specifications including the following:

All earth fills shall be made in uniform layers of not more than 6 inches thick after compaction. Rock may be placed in compacted layers of not more than 24 inches thick. Each fully compacted layer shall extend the full width of the cross section. Each layer shall be free from mud, snow, ice, or excessive (standing) water before a subsequent layer is placed.

Sandy or rocky material shall be spread in full width layers to form drainage planes from the center through the edge of the embankment. Pockets of open materials surrounded by more impervious material shall be avoided.

The fills shall be formed with suitable materials from on-site cuts and/or necessary suitable material from borrow pits. Organic material such as brush, stumps, roots and trees or other perishable items shall not be placed in embankments. Coal or organic shale shall not be included in the embankment. Bituminous material shall not be used in railroad embankment. In fill sections, after stripping the topsoil and organic material, the entire area which the embankment is to be placed shall be plowed and scarified for a minimum depth of 6 inches.

The initial lift and all future fill layers shall be compacted to 95 percent of maximum density per Standard Proctor in accordance with ASTM D698-T and AASHTO T 99, or 90 percent of maximum density per Modified Proctor in accordance with ASTM D-1557AASHTO T180, except that a minimum of the top **2 feet of fill shall be compacted to 100 percent Standard Proctor.** The top 12 inches of the subgrade in all cut sections that will be cut to subgrade elevation shall be plowed, scarified and compacted to 100 percent Standard Proctor.

The Contractor shall notify the Engineer of when fill layers are ready for compaction testing. Successive layers shall not be placed prior to an acceptable density being obtained on each layer. The moisture content of the soil shall be controlled as necessary to obtain the specified densities based upon the optimum moisture content for each material. Water shall be added to the soil when, in the opinion of the Engineer, additional moisture may be necessary to obtain the specified density. Soil that is too wet shall be allowed to dry or be worked by plowing, disking, harrowing, or other means to dry the material to a workable

moisture content.

In the event a specified density is not obtained, the Engineer may order additional rolling, watering, or drying of the soil as necessary to obtain the specified density. Fill layers not meeting a specified density after additional working shall be removed and new material shall be placed and compacted to the specified density at no cost to the Department.

The Contractor may be restricted from using partial or completed roadbed as construction haul roads. Any embankment or roadbed that is damaged by hauling activities shall be repaired by the Contractor at no cost to the Department.

DITCHING **(Special)**

Description

The contractor shall clean out the existing ditch from approximate Station 3280+00 +/- and Station 3300+00 +/- Left, as shown on the plans.

Construction Methods

The contractor shall remove all of the silt and vegetation necessary for the ditch to drain properly. Also, any existing rills need to be filled, stabilized and maintained until acceptance of the project.

Measurement and Payment

Ditching Station 3280+00 +/- and Station 3300+00 +/- left will be paid at the contract unit price of per linear foot. The price for ditching will be full compensation for labor, tools, equipment disposing of the material removed from the ditch, and filling any rills in the sidewalls of the ditch.

Payment will be made under:

Pay Item	**Pay Unit**
Ditching	Linear Foot (LF)

BITUMINOUS COATED CORRUGATED METAL PIPE (BCCMP) **(Special)**

DESCRIPTION

Furnish and install drainage pipe at locations and size called for in the contract documents. The work includes construction of joints and connections to other pipes, endwalls and drainage structures.

MATERIALS

Corrugated Steel Pipe

Corrugated steel culvert pipe and pipe arch shall meet ASTM A760, Type 1 pipe.

Corrugations shall be annular riveted with a profile of 2-2/3 inches x ½ inch unless otherwise specified.

Bituminous coating shall be applied to the inner and outer surfaces of the pipe and conform to the requirements of AASHTO M 190, Type A.

Coupling bands shall be one or two piece annular corrugated, made from galvanized steel and fully bituminous coated, with a minimum width of 24 inches. Bands may be one gage lighter that the pipe gage. Bands shall be made of steel sheet conforming to ASTM Specification A 525 and AASHTO Designation M 218. Dimple band couplers shall not be used.

Coupling bands shall be fastened using a minimum of three (3) ½ inch diameter galvanized bolts. Culverts 48 inches and larger require 24 inch wide bands with a minimum of four (4) ½ inch diameter rods and "silo" type lugs.

Acceptance
Acceptance of corrugated steel culvert pipe and its accessories will be based on, but not limited to, visual inspections, classification requirements and check samples taken from material delivered to the project and conformance to the annual Brand Registration. Culvert pipe materials not meeting the above requirements will be rejected, unless written approval is obtained from the State Materials Engineer.

310-3 PIPE INSTALLATION

Install pipe, pipe tees and elbows according to Section 300 of NCDOT Standard Specifications including the following:
BCCMP with a diameter of 42 inches or larger shall be field strutted (if not manufacturer strutted). Ties and struts shall be removed by the Contractor upon completion of the embankment.

Where BCCMP has to be cut to achieve the proper length, such cutting shall be done with an abrasive saw so as to prevent damage to the pipe coating. Flame cutting shall not be permitted. Damage to the shop coating by this or any other work shall be field repaired by the Contractor by using asphalt paint. Repairs shall be at no cost to the Department or the Railroad.

310-6 MEASUREMENT AND PAYMENT

Pipe will be measured and paid as the actual number of linear feet of pipe that has been incorporated into the completed and accepted work. Measurement of pipe will be made by counting the number of joints used and multiplying by the length of the joint to obtain the number of linear feet of pipe installed and accepted. Measurements of partial joints will be made along the longest length of the partial joint to the nearest 0.1 ft. Select bedding and backfill material will be included in the cost of the installed pipe.

Payment will be made under:

Pay Item	**Pay Unit**
__" B.C.C.M.P. Pipe Culverts, __" Thick	Linear Foot

GEOGRID FOR SOIL STABILIZATION **(Special)**

Description. This work shall consist of furnishing and placing geogrid in accordance with these specifications.

Reference Documents. The latest edition of the test standards and specifications mentioned below shall be used. Substitution of standards will require the prior written approval of the Engineer.

Material. Geogrid reinforcement design requirements shall be as described in section 7.0 below. Geogrid reinforcement shall consist of a regular network of integrally connected polymer tensile elements with aperture geometry sufficient to permit significant mechanical interlock with the surrounding soil, aggregate, or other material. The structure of the geogrid reinforcements shall be dimensionally stable and able to retain its geometry under construction stresses and shall have high resistance to damage during construction, to ultraviolet degradation, and to all forms of chemical and biological degradation encountered in the soil being reinforced.

Geogrid Reinforcement. Geogrids shall provide the following Engineering properties.

Property	**Secondary Strength Orientation†**	**Primary Strength Orientation†**
Allowable Long-term Tension Load @ 5% strain, (lb/ft)	191	316

†-Primary and secondary strength orientations of the geogrid will be the orientations in which the strength is highest and lowest, respectively.

Allowable long-term tension load is load at a given strain level divided by a reduction factor (RF) where $RF = RF_{ID} \times RF_{CR} \times RF_{D}$. The allowable long term tension loads at 5% strain shown in the table above are based on the following reduction factors:

RF_{ID}=1.1; RF_{CR}=3.5; RF_{D}=1.1

The individual reduction factors shall be documented in accordance with the site conditions, design calculations, and specifications. The reinforcement manufacturer shall certify and document the individual reduction factors as follows:

Installation Damage Reduction Factor (RF_{ID}): The reduction factor for installation damage, RF_{ID}, shall be documented by field and laboratory test results and literature review, as described in ASTM D 5818 for the reinforced backfill specified or for more severe soils. Samples subjected to installation damage shall be tested for tensile strength and deformation characteristics in accordance with ASTM D 4595 (modified for geogrid testing). Recommended values for reduction factors for installation damage (RF_{ID}) for various soils

shall also be documented. The minimum installation damage reduction factor, RF_{ID}, shall be 1.1, regardless of product specific test results.

Creep Reduction Factor (RF_{CR}): Laboratory test results documenting creep performance over a range of load levels, for a minimum duration of 10,000 hours based on tension creep test (ASTM D 5262) shall be required. Creep test samples shall be of sufficient width to be representative of overall product creep response (fiber creep testing will not be accepted).

The creep-limiting strength, T_I, shall be based on extrapolating the 10,000 hours (or longer duration) tension creep tests to a 75-year design life. The creep extrapolation method shall be based on methods described in FHWA NHI-00-43, *"Mechanically Stabilized Earth Walls and Reinforced Soil Slopes"* - Appendix "B". Laboratory test results and extrapolation methodology shall be documented.

The reduction factor for creep, RF_{CR}, is defined as the ratio of the average lot specific tensile strength @ 5 % strain, T_{ULTLOT}, to the creep-limiting strength, T_I. The average lot specific tensile strength @ 5 % strain, T_{ULTLOT}, for the lot of material used for creep testing, T_{ULTLOT}, shall be determined from wide width tensile test, ASTM D 4595, (modified for geogrid testing). For calculating allowable long-term tensile load at 5% strain, the minimum creep reduction factor, RF_{CR}, shall be 3.5, regardless of the product specific test results.

Durability Reduction Factor (RF_D): The total reduction factor for durability, RF_D, shall be defined as the combined effects of chemical and biological degradation. Laboratory test results, extrapolation techniques, and a comprehensive literature review shall document the reduction factor for durability for all material components in accordance with FHWA NHI-00-044, *"Corrosion/Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes"*. The minimum durability reduction factor, RF_D, shall be 1.1, regardless of product specific test results.

Certification. Prior to construction the Contractor shall submit to the Engineer a Certification Package prepared by the geogrid reinforcement manufacturer. The Contractor shall allow 15 calendar days from the day the submittals are received by the Engineer for review and acceptance. The Certification shall state that the furnished geogrid reinforcement is in full compliance with the design requirements as stated in this document and the design drawings and is fit for use in long-term critical soil reinforcement applications. The submittal shall certify the following value for each geogrid reinforcement used on the project:

1. The allowable long-term tensile load @ 5% strain and @ failure for geogrid reinforcements.

The manufacturer shall also provide written certification that the material is capable of withstanding direct exposure to sunlight for 120 days with no measurable deterioration as measured per ASTM D 4355. The Contractor's submittal package

shall include, but not be limited to, actual test results for tension, creep, durability, construction damage, joint strength, pullout and quality control. A person having the legal authority to bond the manufacturer shall attest to the certificate. Any tests required shall be performed at no additional cost to the Department. If in the opinion of the Engineer, the required documentation is not provided for individual reduction factors (RF), default values for these design parameters shall be used in accordance with this specification.

The submittal shall certify the following values and document for each geogrid soil reinforcement used on the project:

Tensile Strength @ 5% strain: The tensile strength at 5 % strain, shall be determined from wide width tensile tests (ASTM D 4595) or rib tensile test for geogrids (ASTM D 6637). Geogrid samples tested in accordance with ASTM D 4595 shall have at least two geogrid apertures and a minimum gage length of 4 inches. All geogrid strength tests (ASTM D 4595 and ASTM D 6637) shall be conducted at a strain rate of 10% per minute based on actual gage length necessary to meet the testing sample dimension requirements. Laboratory test results documenting the tensile strength at 5% strain in the reinforcement direction shall be based on the minimum average roll values (MARV) for the product.

Manufacturing Quality Control. The Contractor shall provide to the Engineer a manufacturing quality control certificate and conformance testing results for all geosynthetic soil reinforcement delivered to the site. Sampling and conformance testing shall be in accordance with ASTM D 4354. Geosynthetic product acceptance shall be based on ASTM D 4759.

Geogrid samples tested in accordance with ASTM D 4595 shall have at least two geogrid apertures and a minimum gage length of 4 inches. All geogrid strength tests (ASTM D 4595 and ASTM D 6637) shall be conducted at a strain rate of 10% per minute based on actual gage length necessary to meet the testing sample dimension requirements. Conformance testing of the applicable index testing shown in the table below shall be provided for all geogrid reinforcement. The quality control certificate shall include roll numbers and identification, sampling procedures, and results of the conformance testing with a description of test methods used. The geogrid manufacturer shall have a manufacturing quality control program that includes QC testing no less frequently than each 200,000 sf (20,000sm) of production.

Type	Property	Test Method	Criteria
Polypropylene (PP)	UV Oxidation Resistance	ASTM D 4355	Minimum 70% strength retained after 500 hrs. in weatherometer
	Melt Flow Rate	ASTM D 1238	≤ 12 g/10 min
Polyethylene	UV Oxidation Resistance	ASTM D 4355	Minimum 70% strength retained after 500 hrs. in weatherometer

(HPDE)	Melt Flow Rate	ASTM D 1238	< 0.4 g/10 min
	Specific Gravity	ASTM D 792	1.2 Average
Polyester (PET)	Hydrolysis Resistance	Intrinsic Viscosity Method (ASTM D 4603 and GRI Test Method GG8) with Correlationor Determine Directly Using Gel Permeation Chromatography	Miimum Number Average Molecular Weight of 25,000
	Hydrolysis Resistance	Geotechnical Research Institute (GRI) GG7	Maximum Carboxyl End Group (CEG) Content of 30

Delivery, Storage and Handling: The Contractor shall be responsible for storage, handling and installation of all geogrids in accordance with specifications and the manufacturer's recommendations.

Contractor shall deliver sufficient materials to the site to prevent interruption of the work. Contractor shall inspect all materials upon delivery. Contractor shall notify the Engineer, and vice versa, of any damage. Damaged-materials shall be returned and replaced at no cost to the Department. Contractor shall prevent mud, wet cement, epoxy, and similar materials which may affix themselves to the grid, from coming into contact with the geogrid material. Rolled geogrid material shall be laid flat or stood on edge for storage. Geogrid shall be kept covered with protective wrapping until ready for use.

Geogrid shall be handled carefully with approved handling devices in strict conformance with the manufacturer's recommendations. Products shall not be dropped or rolled off trucks, nor shall products be otherwise dragged, rolled, or skidded.

Installation: All areas immediately beneath the installation area for the geogrid shall be properly prepared as specified within these provisions, and/or as directed by the Engineer. Geogrid reinforcement shall be placed to lay flat and pulled tight prior to backfilling. After a layer of geogrid has been placed, suitable means, such as pins or small piles of rocks, shall be used to hold geogrid in position until the subsequent soil layer can be placed. Under no circumstances shall a track-type vehicle be allowed on the geogrid before at least 6 inches of stone has been placed. Turning of tracked vehicles shall be kept to a minimum to prevent tracks from displacing the fill and the geogrid.

Geogrid Placement: The geogrid shall be installed in accordance with the manufacturer's recommendations. The primary strength orientation of the geogrid/geotextile shall be placed perpendicular to the alignment. Horizontal coverage of less than 100 percent shall not be allowed unless specifically detailed on the plans. Minimum geogrid overlap of 3 feet shall be used.

Measurement and Payment: *Geogrid for Soil Stabilization,* will be measured as the actual area that has been stabilized and will be paid at the contract unit price per square yard. Geogrid overlaps and wasted or unusable scraps of geogrid are an incidental item. Such price and payment will be full compensation for all materials, labor, equipment and other incidentals necessary to deliver, properly store, and install the geogrid as required.

Payment will be made under:

Pay Item	**Pay Unit**
Geogrid for Soil Stabilization	square yard

SUB-BALLAST **(Special)**

Description

The Contractor will furnish and place sub-ballast as shown in the plans. The sub-ballast shall be placed after the subgrade has been graded, compacted and accepted.

Materials

The sub-ballast shall be composed of crusher-run, meeting the following requirements and the gradation shown in Table 1:

- Sub ballast shall be produced from sound rock meeting the gradations shown in the table 1 (AASHTO T 27 and T 11, AASHTO T 88 as modified for Base Course and Stabilizer).
- The material shall be free from organics and deleterious material (AASHTO T 112).
- The material shall not have a Liquid Limit (LL) in excess of 25 (AASHTO T 89) or a Plasticity Index (PI) in excess of 6 (AASHTO T 90).
- The material shall have a percentage of wear (LA Abrasion, AASHTO T 96) no greater than 50 percent.
- The material shall meet NCDOT's soundness requirements (AASHTO T 104).

	Percent Passing Standard Sieve Size by Weight					
Sieve Size	2"	1"	3/8"	#10	#40	#200
Sub-ballast	100	90-100	50-84	26-50	12-30	5-12

Table 1 **Sub-ballast**

Construction Methods

After the subgrade has been finished to proper grade and cross-section, the sub-ballast shall be placed on the subgrade with a mechanical spreader capable of placing the material in a uniform loose depth and without segregation, except for areas inaccessible

to a mechanical spreader. The aggregate material may be placed by other methods approved by the Engineer. The sub-ballast section shall be constructed in two layers of equal thickness. Each layer of sub-ballast shall be fully compacted in lifts not to exceed 6" in thickness after compaction. Each layer of sub-ballast shall be compacted to a density of 100% of the Standard Proctor determined by AASHTO T 180 and maintained to the required cross-section during compaction. Moisture content shall be maintained within 2% +/- of optimum moisture to obtain the desired density. Water shall be added to the material if necessary to obtain the desired density. If the material is to wet to obtain the desired density, the material shall be worked by discing, harrowing or other means to dry the material to a workable moisture content.

Measurement and Payment

The quantity for *Sub-Ballast* to be paid for will be the actual number of tons of sub-ballast which has been used to construct the track roadbed sections, measured as provided for in Article 520-11 of the Standard Specifications. Such price and payment will be full compensation for all furnishing, weighing, hauling, and placing of sub-ballast and for any other work necessary for the construction of the track roadbed section.

Pay Item	**Pay Unit**
Sub-ballast	Ton

MAINTENANCE OF TRACK ROADBED

(Special)

The Contractor shall be responsible for the maintenance of the track roadbed during the construction period. Ditches and temporary pipes shall be provided and maintained as may be necessary to satisfactorily drain the sub-grade. Where previously approved sub-grade is damaged by natural causes, by hauling equipment or other traffic the Contractor shall restore the sub-grade to the required lines, grades and typical sections and to the required density at no additional cost to the Department. There will be no direct payment for maintenance of the track roadbed. All cost associated with maintaining the track roadbed will be incidental to other items of work.

RIGHT OF WAY GATE (Special)

DESCRIPTION

Furnish and erect right of way gates in conformity with the details shown in the plans and at the locations shown in the plans.

MATERIALS

Item Section

2" OD steel pipe, schedule 80
3 ½" OD steel pipe, schedule 80

4" OD steel pipe, schedule 80
Fittings and Accessories as shown

Use Class B concrete for anchors. Instead of Class B concrete, pre-mixed commercially bagged dry concrete mix may be used if the concrete meets the minimum strength requirements for Class B concrete when mixed with the quantity of water shown on the instructions printed on the bag.

CONSTRUCTION METHODS

Setting Posts and Braces

Set posts in concrete anchors to maintain the position and alignment of the post as shown in the details in the plans. Forms are not required for the concrete. Trowel the top of the concrete to a smooth finish and slope to drain away from the post. The concrete anchors require at least a 3 day curing period before any load is placed on the post.

Fabrication

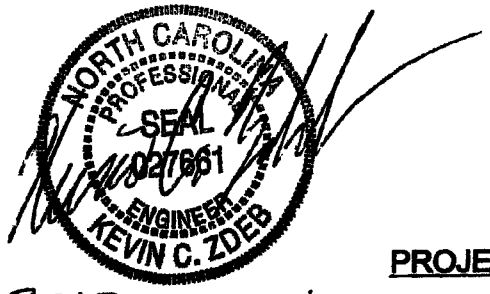
The gate shall be fabricated and painted yellow as shown on the details in the plans. The welding will be done by a certified welder.

866-4 MEASUREMENT AND PAYMENT

Right of Way Gate, will be measured and paid each for the number of gates actually erected on the project.

The above prices and payments will be full compensation for all work covered by this provision including but not limited to furnishing concrete, steel pipe, hardware and all other materials; fabrication, painting and erection of the right of way gates; and incidentals necessary to complete the work as shown on the plans.

Pay Item	**Pay Unit**
Right of Way Gate	Each



2012-OCT-16

Project: *TIP U-4716A/C & U-4716B*
Counties: Durham/Wake

PROJECT SPECIAL PROVISIONS
Utility Construction

All proposed utility construction shall meet the applicable requirements (including, but not limited to: Division 15; Section 1034; and Section 1036) of the NC Department of Transportation's "Standard Specifications for Roads and Structures" dated January 2012.

Division 15 of the Standard Specifications is revised as follows:

Page 15-1, Paragraph 2 of Article 1500-2

Provide access for Department personnel and the owner's representatives to all phases of construction. Notify Department personnel and the utility owner two weeks before commencement of any work and one week before service interruption. Keep utility owner's representatives informed of work progress and provide opportunity for inspection of construction and testing. *There multiple water and sewer lines on this project that belong to different utility companies and are listed below with their contact person.*

1. *The Town of Cary (TC) has water and sanitary sewer force main utilities. The contact person for The Town of Cary Utilities Department is Mr. Glen Harrell, and he can be reached by phone at 919-460-4933.*
2. *The City of Durham (CD) has water utilities. The contact person for The City of Durham Utilities Department is Mr. Eric Halstead, and he can be reached by phone at 919-560-4326 x30259.*
3. *Durham County (DC) has gravity sanitary sewer and force main utilities. The contact person for Durham County Utilities Department is Mr. Ted Credle, and he can be reached by phone at 919-544-8280.*

Any work on these utility lines, especially the operation of any valves, must be coordinated through the Engineer and the utility owner before initiating said work.

Page 15-2, Paragraph 3 of Article 1500-7

Provide As-Built plans of the installed utility. The plans shall include notations of the size and type of material installed, coordinates of utility controls, and horizontal and vertical locations of the piping. Provide 2 copies to the Utility Owner and 2 copies to the Engineer. *Provide the Utility Owner with 2 copies of surveyed As-Builts of the utility system constructed.*

Page 15-9, Add Sub-note H to the end of Article 1515-3

(H) Sanitary Sewer Valve Box

Install an approved valve box on the existing sewer valve and set flush to the proposed pavement elevation.

Page 15-9, Add Pay Item, Sanitary Sewer Valve Box, to Article 1515-4
Sanitary Sewer Valve Box will be measured and paid per each for protecting and servicing the existing sewer valve.

Pay Item	**Pay Unit**
Sanitary Sewer Valve Box	Each

Page 15-16, Paragraph 2 of Sub-note D of Article 1530-3
Removed hydrants become the property of the Contractor for proper disposal. *Removed hydrants from the Town of Cary water system shall be returned to the Town of Cary. Contractor shall coordinate with the Town of Cary to determine a designated drop off location.*

Division 10 of the Standard Specifications is revised as follows:

Page 10-57, Line 44 under Article 1034-4-B
safety of 2. *All joint restraint products that include the means of restraint within the joint gasket shall be prohibited. All restrained joint pipe shall be of the boltless restrained joint type as assembled with a steel flexible ring that locks into position inside the bell of the connecting pipe. The locking rings shall be one-piece construction.*

Page 10-59, Line 7 under Article 1036-5
working pressure rating of 200 psi and a factor of safety of 2. *All joint restraint products that include the means of restraint within the joint gasket shall be prohibited. All restrained joint pipe shall be of the boltless restrained joint type as assembled with a steel flexible ring that locks into position inside the bell of the connecting pipe. The locking rings shall be one-piece construction.*

UTILITY OWNER PREFERRED PRODUCT LIST

CITY OF DURHAM - WATER

1. Hydrant: AMERICAN, model: Mark-73; or MUELLER, model: Centurion A421; or Kennedy, model: K81-A; or approved equal.
2. Hydrant Extension: AMERICAN; or MUELLER; or KENNEDY; or approved equal.
3. Gate Valve: AMERICAN; or CLOW; or MUELLER; or KENNEDY; or WATEROUS; or approved equal.
4. Water Meter: NEPTUNE E-Coder; or approved equal.
5. Meter Copper Setter: FORD, 5/8" model: VHH71-12W-44-336; FORD, 1" model: VHH74-12W-44-336; or approved equals.
6. Meter Box: MID STATES PLASTICS, model: MSBCF1118-12; or approved equal.
7. Meter Box Lid: CARSON, model: 65-45-12; or approved equal.
8. Corporation Stop: FORD, 3/4" model: F-1000-3-G; FORD, 1" model: F-1000-4-G; or approved equals.

TOWN OF CARY - WATER

1. Hydrant: MUELLER, model: Centurion A421; CLOW, model: Medallion; AMERICAN, model: Darling MK-73-2; M&H, model: 129; or approved equal.
2. Water Meter Box: FORD, Long Yokebox model: LYBB 111-444-TP; or approved equal.

County: Durham/Wake
Project : U-4716 AC & U-4716 B

PROJECT SPECIAL PROVISIONS
Utility

UTILITIES BY OTHERS:

General:

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

A) Duke Power Company
B) Level 3
C) Frontier
D) Verizon Business
E) Fibertech
F) Time Warner Cable

The utility conflicts 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 performed by the utility owner. All utilities are shown on the plans from the best available information.

The Contractor's attention is directed to Article 105-8 of the Standard Specifications for Roads and Structures.

Utilities Requiring Adjustments:

A) Duke Power Company
Gary Von Cannon
(336) 632-3848
Gary.Voncannon@duke-energy.com

1. See "Utilities By Others Plans" for utility conflicts.
2. Duke Energy will complete their two duct bank installations through the railroad right of way at the Hopson Road Structure by April 1, 2013.

B) Level 3
Mr. Daniel Miller
(919) 710-8896
daniel.miller@level3.com

1. See "Utilities By Others Plans" for utility conflicts

2. Level 3 will complete their duct bank installation through the railroad right of way at the Hopson Road Structure by April 1, 2013.

C) Frontier
Marcus Dickinson
(919) 560-2917
Marcus.dickinson@frontier.com

1. See "Utilities By Others Plans" for utility conflicts.

2. Frontier will complete their two duct bank installations through the railroad right of way at the Hopson Road Structure by April 1, 2013.

3. They will complete their relocation work along the proposed Church Street Extension by March 1, 2013.

D) Verizon Business
Eric Crane
(919) 326-5604
Eric.crane@verizonbusiness.com

1. See "Utilities By Others Plans" for utility conflicts

2. Verizon Business will complete their duct bank installation through the railroad right of way at the Hopson Road Structure by April 1, 2013.

E) Fibertech
Bob Enright
(585) 734-0617
Renright@fibertech.com

1. See "Utilities By Others Plans" for utility conflicts

2. Fibertech will complete their relocation work through the railroad right of way at the Hopson Road Structure by April 1, 2013.

F) Time Warner Cable
Joseph Fahey
(919) 573-7660
Joseph.Fahey@twcable.com

1. See "Utilities By Others Plans" for utility conflicts

2. Time Warner Cable will adjust their existing cable line as needed for and will require 4 weeks notice and 2 weeks to complete the work at the Church Street crossing closure. (U-4716B UO-2).

3. Time Warner will complete their relocation work along the new Church Street Extension area (U-4716B UO-3 & 4) by March 1, 2013.

G) PSNC Energy
Reid Crane
(919) 367-2713
wcrane@scana.com

1. See "Utilities By Others Plans" for utility conflicts

2. PSNC Energy will adjust their existing gas line as needed and will require 4 weeks notice and 2 weeks to complete the work at –L- Sta. 11+75. (U-4716B UO-3).

U-4716A/B/C **Project Special Provisions** **Wake / Durham County**
Erosion Control

STABILIZATION REQUIREMENTS:

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

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

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

SEEDING AND MULCHING: (East)

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.

All Roadway Areas

March 1 - August 31		**September 1 - February 28**	
50#	Tall Fescue	50#	Tall Fescue
10#	Centipede	10#	Centipede
25#	Bermudagrass (hulled)	35#	Bermudagrass (unhulled)
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Waste and Borrow Locations

March 1 – August 31		**September 1 - February 28**	
75#	Tall Fescue	75#	Tall Fescue
25#	Bermudagrass (hulled)	35#	Bermudagrass (unhulled)
500#	Fertilizer	500#	Fertilizer
4000#	Limestone	4000#	Limestone

Note: 50# of Bahiagrass may be substituted for either Centipede or Bermudagrass only upon Engineer's request.

Approved Tall Fescue Cultivars

2nd Millennium	Duster	Magellan	Rendition
Avenger	Endeavor	Masterpiece	Scorpion
Barlexas	Escalade	Matador	Shelby
Barlexas II	Falcon II, III, IV & V	Matador GT	Signia
Barrera	Fidelity	Millennium	Silverstar
Barrington	Finesse II	Montauk	Southern Choice II
Biltmore	Firebird	Mustang 3	Stetson
Bingo	Focus	Olympic Gold	Tarheel
Bravo	Grande II	Padre	Titan Ltd
Cayenne	Greenkeeper	Paraiso	Titanium
Chapel Hill	Greystone	Picasso	Tomahawk
Chesapeake	Inferno	Piedmont	Tacer
Constitution	Justice	Pure Gold	Trooper
Chipper	Jaguar 3	Prospect	Turbo
Coronado	Kalahari	Quest	Ultimate
Coyote	Kentucky 31	Rebel Exeda	Watchdog
Davinci	Kitty Hawk	Rebel Sentry	Wolfpack
Dynasty	Kitty Hawk 2000	Regiment II	
Dominion	Lexington	Rembrandt	

On cut and fill slopes 2:1 or steeper Centipede shall be applied at the rate of 5 pounds per acre and add 20# of Sericea Lespedeza from 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 **(East)**

Native Grass Seeding and Mulching shall be performed on the disturbed areas of wetlands and riparian areas, and adjacent to Stream Relocation 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.

March 1 - August 31		**September 1 - February 28**	
18#	Creeping Red Fescue	18#	Creeping Red Fescue
6#	Indiangrass	6#	Indiangrass
8#	Little Bluestem	8#	Little Bluestem
4#	Switchgrass	4#	Switchgrass

25#	Browntop Millet	35#	Rye Grain
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. Sweet Sudan Grass, 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 on all roadway areas except slopes 2:1 and steeper shall be 10-20-20 grade and shall be applied at the rate of 500 pounds per acre. 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 10-20-20 analysis and as directed.

Fertilizer used for topdressing on slopes 2:1 and steeper and waste and borrow areas 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*, with the exception that no centipede seed will be used in the seed mix for supplemental seeding. The rate of application for supplemental seeding 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 4 inches.

LAWN TYPE APPEARANCE:

All areas adjacent to lawns must be hand finished as directed to give a lawn type appearance. Remove all trash, debris, and stones ¾" and larger in diameter or other obstructions that could interfere with providing a smooth lawn type appearance. These areas shall be reseeded to match their original vegetative conditions, unless directed otherwise by the Field Operations Engineer.

REFORESTATION:

Description

Reforestation will be planted in areas of pavement of removal and in other areas as directed. *Reforestation* is not shown on the plan sheets. See the Reforestation Detail Sheet.

All non-maintained riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated with native woody species.

The entire *Reforestation* operation shall comply with the requirements of Section 1670 of the *Standard Specifications*.

Materials

Reforestation shall be bare root seedlings 12"-18" tall.

Construction Methods

Reforestation shall be shall be planted as soon as practical following permanent S*eeding and Mulching*. The seedlings shall be planted in a 16-foot wide swath adjacent to mowing pattern line, or as directed.

Root dip: The roots of reforestation seedlings shall be coated with a slurry of water, and either a fine clay (kaolin) or a superabsorbent that is designated as a bare root dip. The type, mixture ratio, method of application, and the time of application shall be submitted to the Engineer for approval.

With the approval of the Engineer, seedlings may be coated before delivery to the job or at the time of planting, but at no time shall the roots of the seedlings be allowed to dry out. The roots shall be moistened immediately prior to planting.

Seasonal Limitations: *Reforestation* shall be planted from November 15 through March 15.

Measurement and Payment

Reforestation will be measured and paid for in accordance with Article 1670-17 of the *Standard Specifications*.

RESPONSE FOR EROSION CONTROL:

Description

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

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

Construction Methods

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

Measurement and Payment 105

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

Payment will be made under:

Pay Item	Pay Unit
Response for Erosion Control	Each

ENVIRONMENTALLY SENSITIVE AREAS:

Description

This project is located in an *Environmentally Sensitive Area*. This designation requires special procedures to be used for clearing and grubbing, temporary stream crossings, and grading operations within the Environmentally Sensitive Areas identified on the plans and as designated by the Engineer. This also requires special procedures to be used for seeding and mulching and staged seeding within the project.

The Environmentally Sensitive Area shall be defined as a 50-foot buffer zone on both sides of the stream or depression measured from top of streambank or center of depression.

Construction Methods

(A) Clearing and Grubbing

In areas identified as Environmentally Sensitive Areas, the Contractor may perform clearing operations, but not grubbing operations until immediately prior to beginning grading operations as described in Article 200-1 of the *Standard Specifications*. Only clearing operations (not grubbing) shall be allowed in this buffer zone until immediately prior to beginning grading operations. Erosion control devices shall be installed immediately following the clearing operation.

(B) Grading

Once grading operations begin in identified Environmentally Sensitive Areas, work shall progress in a continuous manner until complete. All construction within these areas shall progress in a continuous manner such that each phase is complete and areas are permanently stabilized prior to beginning of next phase. Failure on the part of the Contractor to complete any phase of construction in a continuous manner in Environmentally Sensitive Areas will be just cause for the Engineer to direct the suspension of work in accordance with Article 108-7 of the *Standard Specifications*.

(C) Temporary Stream Crossings

Any crossing of streams within the limits of this project shall be accomplished in accordance with the requirements of Subarticle 107-13(B) of the *Standard Specifications*.

(D) Seeding and Mulching

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.

Seeding and mulching shall be performed on the areas disturbed by construction immediately following final grade establishment. No appreciable time shall lapse into the contract time without stabilization of slopes, ditches and other areas within the Environmentally Sensitive Areas.

(E) Stage Seeding

The work covered by this section shall consist of the establishment of a vegetative cover on cut and fill slopes as grading progresses. Seeding and mulching shall be done in stages on cut and fill slopes that are greater than 20 feet in height measured along the slope, or greater than 2 acres in area. Each stage shall not exceed the limits stated above.

Additional payments will not be made for the requirements of this section, as the cost for this work shall be included in the contract unit prices for the work involved.

MINIMIZE REMOVAL OF VEGETATION:

The Contractor shall minimize removal of vegetation at stream banks and disturbed areas within the project limits as directed.

STOCKPILE AREAS:

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

ACCESS AND HAUL ROADS:

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

WASTE AND BORROW SOURCES:

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

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

TEMPORARY DIVERSION:

This work consists of installation, maintenance, and cleanout of *Temporary Diversions* in accordance with Section 1630 of the *Standard Specifications*. The quantity of excavation for installation and cleanout will be measured and paid for as *Silt Excavation* in accordance with Article 1630-4 of the *Standard Specifications*.

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. 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)(3)(d) 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

SKIMMER BASIN WITH BAFFLES:

Description

Provide a skimmer basin to remove sediment from construction site runoff at locations shown in the erosion control plans. See the Skimmer Basin with Baffles Detail sheet provided in the erosion control plans. Work includes constructing sediment basin, installation of temporary slope drain pipe and coir fiber baffles, furnishing, installation and cleanout of Faircloth Skimmers or other approved equivalent device, providing and placing stone pad on bottom of basin underneath skimmer device, providing and placing a geotextile emergency spillway liner, providing coir fiber mat stabilization for the skimmer outlet, disposing of excess materials, removing temporary slope drain, coir fiber baffles, geotextile liner and skimmer device, backfilling basin area with suitable material and providing proper drainage when basin area is abandoned.

Materials

Item	Section
Stone for Erosion Control, Class B	1042
Geotextile for Soil Stabilization, Type 4	1056
Fertilizer for Temporary Seeding	1060-2

Seed for Temporary Seeding	1060-4
Seeding and Mulching	1060-4
Matting for Erosion Control	1060-8
Staples	1060-8
Coir Fiber Mat	1060-14
Temporary Slope Drain	1622-2
Coir Fiber Baffle	1640

Provide appropriately sized Faircloth skimmer or other approved equivalent device.

Provide Schedule 40 PVC pipe with a length of 6 ft. to attach to the skimmer and the coupling connection to serve as the arm pipe. For skimmer sizes of 2.5 in. and smaller, the arm pipe diameter shall be 1.5 inches. For skimmer sizes of 3 in. and larger, refer to manufacturer recommendation.

Provide 4" diameter Schedule 40 PVC pipe to attach to coupling connection of Faircloth skimmer to serve as the barrel pipe through the earthen dam.

Anchors: Staples, stakes, or reinforcement bars shall be used as anchors.

Wooden Stakes:

Provide hardwood stakes 12"- 24" long with a 2" x 2" nominal square cross section. One end of the stake must be sharpened or beveled to facilitate driving through the coir fiber mat and down into the underlying soil. The other end of the stake needs to have a 1"- 2" long head at the top with a 1"- 2" notch following to catch and secure the coir fiber mat.

Steel Reinforcement Bars:

Provide uncoated #10 steel reinforcement bars 24" nominal length. The bars shall have a 4" diameter bend at one end with a 4" straight section at the tip to catch and secure the coir fiber mat.

Staples:

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

Construction Methods

Excavate basin according to the erosion control plans with basin surface free of obstructions, debris, and pockets of low-density material. Install temporary slope drain pipe and construct the emergency spillway according to the Skimmer Basin with Baffles Detail sheet in the erosion control plans. Temporary slope drain pipe at inlet of basin may be replaced by geotextile as directed. Construct the coir fiber baffles according to *Roadway Standard Drawings* No. 1640.01 and Section 1640 of the *Standard Specifications*.

Install Faircloth skimmer or other approved equivalent device according to manufacturer recommendations. Install 4" Schedule 40 PVC pipe into dam on the lower side of basin 1 ft. from the bottom of the basin and according to the detail, and attach the 6 ft. arm pipe to the coupling connection and Faircloth skimmer according to manufacturer recommendations. Attach the rope included with the skimmer to the tee between the vent socket and the tube inlet, and the other end to a wooden stake or metal post. Clean out skimmer device when it becomes clogged with sediment and/or debris and is unable to float at the top of water in skimmer basin. Take appropriate measures to avoid ice accumulation in the skimmer device. Construct a stone pad of Class B stone directly underneath the skimmer device at bottom of basin. The pad shall be a minimum of 12" in height, and shall have a minimum cross sectional area of 4 ft. by 4 ft.

Line emergency spillway with geotextile unrolled in the direction of flow and lay smoothly but loosely on soil surface without creases. Bury edges of geotextile in a trench at least 5" deep and tamp firmly. If geotextile for the emergency spillway is not one continuous piece of material, make horizontal overlaps a minimum of 18" with upstream geotextile overlapping the downstream geotextile. Secure geotextile with eleven gauge wire staples shaped into a *u* shape with a length of not less than 12" and a throat not less than 1" in width. Place staples along outer edges and throughout the geotextile a maximum of 3 ft. horizontally and vertically. Geotextile shall be placed to the bottom and across the entire width of the basin according to the Skimmer Basin with Baffles detail.

At the skimmer outlet, provide a smooth soil surface free from stones, clods, or debris that will prevent contact of the coir fiber matting with the soil. Unroll the matting and apply without stretching such that it will lie smoothly but loosely on the soil surface. Wooden stakes, reinforcement bars, or staples may be used as anchors in accordance with the details in the plans and as directed. Place anchors across the matting at the ends approximately 1 ft. apart. Place anchors along the outer edges and down the center of the matting 3 ft. apart.

All bare side slope sections of the skimmer basin shall be seeded with a temporary or permanent seed mix as directed and in accordance with Articles 1620-3, 1620-4, 1620-5, 1660-4, 1660-5 and 1660-7 of the *Standard Specifications*. Straw or excelsior matting shall be installed on all bare side slope sections immediately upon the completion of seeding and in accordance with Article 1631-3 of the *Standard Specifications*.

Measurement and Payment

Silt Excavation will be measured and paid for in accordance with Article 1630-4 of the *Standard Specifications*, as calculated from the typical section throughout the length of the basin as shown on the final approved plans.

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

Coir Fiber Baffles will be measured and paid for in accordance with Article 1640-4 of the *Standard Specifications*.

__" *Skimmer* will be measured in units of each. __" *Skimmer* will be measured and paid for as the maximum number of each size skimmer acceptably installed and in use at any one time during the life of the project. Barrel and arm pipe, cleanout, relocation and reinstallation of __" *Skimmer* is considered incidental to the measurement of the quantity of __" *Skimmer* and no separate payment will be made. No separate payment shall be made if __" *Skimmer*, barrel and/or arm pipe(s) are damaged by ice accumulation.

Coir Fiber Mat will be measured and paid for as the actual number of square yards measured along the surface of the ground over which coir fiber mat is installed and accepted.

Temporary Slope Drain will be measured and paid for in accordance with Article 1622-4 of the *Standard Specifications*.

Stone for Erosion Control, Class __ will be measured and paid for in accordance with Article 1610-4 of the *Standard Specifications*.

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

Seed for Temporary Seeding will be measured and paid for in accordance with Article 1620-6 of the *Standard Specifications*.

Fertilizer for Temporary Seeding will be measured and paid for in accordance with Article 1620-6 of the *Standard Specifications*.

Matting for Erosion Control will be measured and paid for in accordance with Article 1631-4 of the *Standard Specifications*.

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

Payment will be made under:

Pay Item	**Pay Unit**
__" Skimmer	Each
Coir Fiber Mat	Square Yard

SILT FENCE COIR FIBER WATTLE BREAK:

Description

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

Materials

Coir Fiber Wattle shall meet the following specifications:

100% Coir (Coconut) Fibers	
Minimum Diameter	12 in.
Minimum Length	10 ft.
Minimum Density	3.5 lb/ft^3 +/- 10%
Net Material	Coir Fiber
Net Openings	2 in. x 2 in.
Net Strength	90 lbs.
Minimum Weight	2.6 lbs./ft. +/- 10%

Anchors: Stakes shall be used as anchors.

Wooden Stakes:

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

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

Construction Methods

A trench shall be excavated the entire length of the coir fiber wattle with a depth of 1 to 2 inches for the wattle to be placed. Silt Fence Coir Fiber Wattle Breaks shall be secured to the soil by wire staples approximately every 1 linear foot and at the end of each wattle. A minimum of 4 stakes shall be installed on the downslope side of the wattle with a maximum spacing of 2 linear feet, and according to the detail. Install a minimum of 2 stakes on the upslope side of the Silt Fence Coir Fiber Wattle Break according to the detail provided in the plans. Stakes shall be driven into the ground a minimum of 10 in. with no more than 2 in. projecting from the top of the wattle. Drive stakes at an angle according to the detail provided in the plans.

Install Temporary Silt Fence in accordance with section 1605 of the Standard Specifications and overlap each downslope side of silt fence wattle break by 6 in.

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

Measurement and Payment

Silt Fence Coir Fiber Wattle Break will be measured and paid for by the actual number of linear feet of Silt Fence Coir Fiber Wattle Breaks which are installed and accepted. Such price and

payment will be full compensation for all work covered by this section, including, but not limited to, furnishing all materials, labor, equipment and incidentals necessary to install the *Silt Fence Coir Fiber Wattle Break.*

Payment will be made under:

Pay Item	**Pay Unit**
Coir Fiber Wattle	Linear Foot

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

Description

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

Materials

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

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

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

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

Construction Methods

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

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

Apply PAM at a rate of 3.5 ounces over the center portion of the Temporary Rock Silt Checks Type A and matting where the water is going to flow over. PAM applications shall be done during construction activities and after every rainfall event that is equal to or exceeds 0.50 in.

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

Measurement and Payment

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

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

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

Payment will be made under:

Pay Item	Pay Unit
Polyacrylamide(PAM)	Pound

CLEAN WATER DIVERSION:

Description

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

Materials

Refer to Division 10

Item	Section
Geotextile for Soil Stabilization, Type 4	1056

Construction Methods

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

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

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

Measurement and Payment

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

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

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

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

COIR FIBER MAT:

Description

Furnish material, install and maintain coir fiber mat in locations shown on the plans or in locations as directed. Work includes providing all materials, excavating and backfilling, and placing and securing coir fiber mat with stakes, steel reinforcement bars or staples as directed.

Materials

Item	**Section**
Coir Fiber Mat	1060-14

Anchors: Stakes, reinforcement bars, or staples shall be used as anchors.

Wooden Stakes:

Provide hardwood stakes 12"- 24" long with a 2" x 2" nominal square cross section. One end of the stake must be sharpened or beveled to facilitate driving through the coir fiber mat and down into the underlying soil. The other end of the stake needs to have a 1"- 2" long head at the top with a 1"- 2" notch following to catch and secure the coir fiber mat.

Steel Reinforcement Bars:

Provide uncoated #10 steel reinforcement bars 24" nominal length. The bars shall have a 4" diameter bend at one end with a 4" straight section at the tip to catch and secure the coir fiber mat.

Staples:

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

Construction Methods

Place the coir fiber mat immediately upon final grading. Provide a smooth soil surface free from stones, clods, or debris that will prevent the contact of the mat with the soil. Unroll the mat and apply without stretching such that it will lie smoothly but loosely on the soil surface.

For stream relocation applications, take care to preserve the required line, grade, and cross section of the area covered. Bury the top slope end of each piece of mat in a narrow trench at least 6 in. deep and tamp firmly. Where one roll of matting ends and a second roll begins, overlap the end of the upper roll over the buried end of the second roll so there is a 6 in. overlap. Construct check trenches at least 12 in. deep every 50 ft. longitudinally along the edges of the mat or as directed. Fold over and bury mat to the full depth of the trench, close and tamp firmly. Overlap mat at least 6 in. where 2 or more widths of mat are installed side by side.

Place anchors across the mat at the ends approximately 1 ft. apart. Place anchors along the outer edges and down the center of the mat 3 ft. apart.

Adjustments in the trenching or anchoring requirements to fit individual site conditions may be required.

Measurement and Payment

Coir Fiber Mat will be measured and paid for as the actual number of square yards measured along the surface of the ground over which coir fiber mat is installed and accepted.

No measurement will be made for anchor items.

Payment will be made under:

Pay Unit

Pay Item

Coir Fiber Mat Square Yard

COIR FIBER WATTLES WITH POLYACRYLAMIDE (PAM):

Description

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

Materials

Coir Fiber Wattle shall meet the following specifications:

100% Coir (Coconut) Fibers	
Minimum Diameter	12 in.
Minimum Density	3.5 lb/ft^3 +/- 10%
Net Material	Coir Fiber
Net Openings	2 in. x 2 in.
Net Strength	90 lbs.
Minimum Weight	2.6 lbs./ft. +/- 10%

Anchors: Stakes shall be used as anchors.

Wooden Stakes:

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

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

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

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

Construction Methods

Coir Fiber Wattles shall be secured to the soil by wire staples approximately every 1 linear foot and at the end of each section of wattle. A minimum of 4 stakes shall be installed on the downstream side of the wattle with a maximum spacing of 2 linear feet along the wattle, and according to the detail. Install a minimum of 2 stakes on the upstream side of the wattle according to the detail provided in the plans. Stakes shall be driven into the ground a minimum of 10 in. with no more than 2 in. projecting from the top of the wattle. Drive stakes at an angle according to the detail provided in the plans.

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

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

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

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

Measurement and Payment

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

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

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

Payment will be made under:

Pay Item	Pay Unit
Polyacrylamide(PAM)	Pound
Coir Fiber Wattle	Linear Foot

PERMANENT SOIL REINFORCEMENT MAT:

Description

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

Materials

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

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

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

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

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

Construction Methods

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

All areas to be protected with the mat shall be brought to final grade and seeded in accordance with Section 1660 of the *Standard Specifications*. The surface of the soil shall be smooth, firm, stable and free of rocks, clods, roots or other obstructions that would prevent the mat from lying in direct contact with the soil surface. Areas where the mat is to be placed will not need to be mulched.

Measurement and Payment

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

Payment will be made under:

Pay Item	Pay Unit
Permanent Soil Reinforcement Mat	Square Yard

STREAMBANK REFORESTATION:

Description

Streambank Reforestation will be planted in areas designated in the contract documents and as directed. See the Streambank Reforestation Detail Sheets.

The entire *Streambank Reforestation* operation shall comply with the requirements of Section 1670 of the *Standard Specifications*.

Materials

Item	Section
Coir Fiber Mat	1060-14

Live Stakes:

Type I Streambank Reforestation shall be live stakes, planted along both streambanks. Live stakes shall be ½"- 2" in diameter. Stakes shall also be 2 ft. - 3 ft. in length.

Live staking plant material shall consist of a random mix made up of 50% Black Willow (*Salix nigra*) and 50% Silky Dogwood (*Cornus amomum*). Other species may be substituted upon approval of the Engineer. All plant material shall be harvested locally (within the same physiographic ecoregion and plant hardiness zone) or purchased from a local nursery, with the approval of the Engineer. All live stakes shall be dormant at time of acquisition and planting.

Staples, stakes, or reinforcement bars shall be used as anchors and shall meet the following requirements:

Wooden Stakes:

Provide hardwood stakes 12"- 24" long with a 2" x 2" nominal square cross section. One end of the stake must be sharpened or beveled to facilitate driving through the coir fiber

mat and down into the underlying soil. The other end of the stake needs to have a 1"- 2" long head at the top with a 1"- 2" notch following to catch and secure the coir fiber mat.

Steel Reinforcement Bars:

Provide uncoated #10 steel reinforcement bars 24" nominal length. The bars shall have a 4" diameter bend at one end with a 4" straight section at the tip to catch and secure the coir fiber mat.

Staples:

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

Bare Root Seedlings:

Type II Streambank Reforestation shall be bare root seedlings 12"-18" tall.

Construction Methods

Coir fiber matting shall be installed on the streambanks where live staking is to be planted as shown on the Streambank Reforestation Detail Sheets and in locations as directed. Work includes providing all materials, excavating and backfilling, and placing and securing coir fiber mat.

Provide a smooth soil surface free from stones, clods, or debris that will prevent the contact of the matting with the soil. Place the matting immediately upon final grading and permanent seeding. Take care to preserve the required line, grade, and cross section of the area covered.

Unroll the matting and apply without stretching such that it will lie smoothly but loosely on the soil surface. Bury the top slope end of each piece of matting in a narrow trench at least 6" deep and tamp firmly. Where one roll of matting ends and a second roll begins, overlap the end of the upper roll over the buried end of the second roll so there is a 6" overlap. Construct check trenches at least 12" deep every 50 ft. longitudinally along the edges of the matting, or as directed. Fold over and bury matting to the full depth of the trench, close and tamp firmly. Overlap matting at least 6" where 2 or more widths of matting are installed side by side.

Wooden stakes, reinforcement bars, or staples may be used as anchors in accordance with the Streambank Reforestation Detail Sheets and as directed. Place anchors across the matting at ends, junctions, and check trenches approximately 1 ft. apart. Place anchors down the center of each strip of matting 3 ft. apart. Place anchors along all lapped edges 1 ft. apart. Refer to the Streambank Reforestation Detail Sheets for anchoring pattern. The Engineer may require adjustments in the trenching or anchoring requirements to fit individual site conditions.

During preparation of the live stakes, the basal ends shall be cleanly cut at an angle to facilitate easy insertion into the soil, while the tops shall be cut square or blunt for tamping. All limbs shall be removed from the sides of the live cutting prior to installation.

Live stakes shall be installed within 48 hours of cutting. Outside storage locations should be continually shaded and protected from wind and direct sunlight. Live cut plant material shall remain moist at all times before planting.

Stakes shall be spaced approximately 4 ft. on center. Live stakes shall be installed according to the configuration presented on the Streambank Reforestation Detail Sheets.

Tamp live stakes perpendicularly into the finished bank slope with a dead blow hammer, with buds oriented in an upward direction. Stakes should be tamped until approximately ¾ of the stake length is within the ground. The area around each live stake shall be compacted by foot after the live stake has been installed.

1"- 2" shall be cut cleanly off of the top of each live stake with loppers at an angle of approximately 15 degrees following installation. Any stakes that are split or damaged during installation shall be removed and replaced.

The bare root seedlings shall be planted as soon as practical following permanent *Seeding and Mulching*. The seedlings shall be planted from top of bank out, along both sides of the stream, as designated on the plans.

Root dip: The roots of reforestation seedlings shall be coated with a slurry of water, and either a fine clay (kaolin) or a superabsorbent that is designated as a bare root dip. The type, mixture ratio, method of application, and the time of application shall be submitted to the Engineer for approval.

With the approval of the Engineer, seedlings may be coated before delivery to the job or at the time of planting, but at no time shall the roots of the seedlings be allowed to dry out. The roots shall be moistened immediately prior to planting.

Seasonal Limitations: Streambank reforestation shall be planted from November 15 through March 15.

Measurement and Payment

Streambank Reforestation will be measured and paid for as the actual number of acres of land measured along the surface of the ground, which has been acceptably planted in accordance with this section.

Payment will be made under:

Pay Item	**Pay Unit**
Streambank Reforestation	Acre

New 11-9-12

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JORDAN LAKE WATERSHED NUTRIENT MANAGEMENT TRAINING REQUIREMENTS:

The person(s) responsible for applying fertilizer or person(s) conducting the application of fertilizer on this project within the Jordan Lake Watershed shall complete the following web-based training prior to performing this work:

http://portal.ncdenr.org/web/jordanlake/fertilizer-management

The cost of the training is $10.00 and the training shall be paid for and completed at the expense of the Contractor and no direct payment will be made in this contract. A certificate of completion must be presented by the person(s) responsible for fertilizer application or person(s) conducting the application of fertilizer prior to performing fertilizer application on the project within the limits of the Jordan Lake Watershed.

PROJECT SPECIAL PROVISIONS

STRUCTURE

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TERMS AND DEFINITIONS (SPECIAL)

Unless noted otherwise, the following terms and their associated definitions are applicable throughout these Project Special Provisions:

Terms	Definitions
Railway, Railway Company, Railroad, Railroad Company	Norfolk Southern Corporation
Railroad Engineer	The authorized representative of the Railway.
AREMA	American Railway Engineering and Maintenance-of-Way Association.
NCDOT, Department, Department of Transportation	North Carolina Department of Transportation.
Standard Specifications, Specifications	NCDOT Standard Specifications for Roads and Structures, January 2012.
Engineer, Department's Engineer Project Engineer, Highway Engineer	The authorized representative of the NCDOT.
Inspector, Department's Inspector	The authorized inspector of the NCDOT.

MAINTENANCE AND PROTECTION OF TRAFFIC BENEATH PROPOSED STRUCTURE AT STATION 3315+52.15 –MAIN– (8-13-04)

1.0 GENERAL

Maintain traffic on SR 1978 (Hopson Road) as shown in Traffic Control Plans and as directed by the Engineer.

Provide a minimum temporary vertical clearance of 15'-0" at all times during construction.

Submit plans and calculations for review and approval for protecting traffic and bracing girders, as described herein, at the above station before beginning work at this location. Have the drawings and design calculations prepared, signed, and sealed by a North Carolina Registered Professional Engineer. The approval of the Engineer will not relieve the Contractor of the responsibility for the safety of the method or equipment.

2.0 PROTECTION OF TRAFFIC

Protect traffic from any operation that affords the opportunity for construction materials, equipment, tools, etc. to be dropped into the path of traffic beneath the structure. Based on Contractor means and methods determine and clearly define all dead and live loads for this system, which, at a minimum, shall be installed between beams or girders over any travelway or shoulder area where traffic is maintained. Install the protective system before beginning any construction operations over traffic. In addition, for these same areas, keep the overhang falsework in place until after the rails have been poured.

3.0 BRACING GIRDERS

Brace girders to resist wind forces, weight of forms and other temporary loads, especially those eccentric to the vertical axis of the member during all stages of erection and construction. Before casting of intermediate diaphragms, decks, or connecting steel diaphragms do not allow the horizontal movement of girders to exceed ½ inch.

4.0 BASIS OF PAYMENT

Payment at the contract unit prices for the various pay items will be full compensation for the above work.

FALSEWORK AND FORMWORK (4-5-12)

1.0 DESCRIPTION

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

Falsework is any temporary construction used to support the permanent structure until it becomes self-supporting. Formwork is the temporary structure or mold used to retain plastic or fluid concrete in its

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

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

2.0 MATERIALS

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

3.0 DESIGN REQUIREMENTS

A. Working Drawings

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

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

When concrete placement is involved, include data such as the drawings of proposed sequence, rate of placement, direction of placement, and location of all construction joints. Submit the number of copies as called for by the contract.

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

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

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

Member Type (PCG)	Member Depth, (inches)	Max. Overhang Width, (inches)	Max. Slab Edge Thickness, (inches)	Max. Screed Wheel Weight, (lbs.)	Bracket Min. Vertical Leg Extension, (inches)
II	36	39	14	2000	26

III	45	42	14	2000	35
IV	54	45	14	2000	44
MBT	63	51	12	2000	50
MBT	72	55	12	1700	48

Overhang width is measured from the centerline of the girder to the edge of the deck slab.

For Type II, III & IV prestressed concrete girders (PCG), 45-degree cast-in-place half hangers and rods must have a minimum safe working load of 6,000 lbs.

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

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 ¾".

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

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

1. Wind Loads

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

Table 2.2 - Wind Pressure Values

Height Zone feet above ground	Pressure, lb/ft^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 damage to the surface.

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

COUNTY	25 YR (mph)	COUNTY	25 YR (mph)	COUNTY	25 YR (mph)
Alamance	70	Franklin	70	Pamlico	100
Alexander	70	Gaston	70	Pasquotank	100
Alleghany	70	Gates	90	Pender	100
Anson	70	Graham	80	Perquimans	100
Ashe	70	Granville	70	Person	70
Avery	70	Greene	80	Pitt	90
Beaufort	100	Guilford	70	Polk	80
Bertie	90	Halifax	80	Randolph	70
Bladen	90	Harnett	70	Richmond	70
Brunswick	100	Haywood	80	Robeson	80
Buncombe	80	Henderson	80	Rockingham	70
Burke	70	Hertford	90	Rowan	70
Cabarrus	70	Hoke	70	Rutherford	70
Caldwell	70	Hyde	110	Sampson	90

Camden	100	Iredell	70	Scotland	70
Carteret	110	Jackson	80	Stanley	70
Caswell	70	Johnston	80	Stokes	70
Catawba	70	Jones	100	Surry	70
Cherokee	80	Lee	70	Swain	80
Chatham	70	Lenoir	90	Transylvania	80
Chowan	90	Lincoln	70	Tyrell	100
Clay	80	Macon	80	Union	70
Cleveland	70	Madison	80	Vance	70
Columbus	90	Martin	90	Wake	70
Craven	100	McDowell	70	Warren	70
Cumberland	80	Mecklenburg	70	Washington	100
Currituck	100	Mitchell	70	Watauga	70
Dare	110	Montgomery	70	Wayne	80
Davidson	70	Moore	70	Wilkes	70
Davie	70	Nash	80	Wilson	80
Duplin	90	New Hanover	100	Yadkin	70
Durham	70	Northampton	80	Yancey	70
Edgecombe	80	Onslow	100		
Forsyth	70	Orange	70		

B. Review and Approval

The Engineer is responsible for the review and approval of temporary works' drawings. Submit the working drawings sufficiently in advance of proposed use to allow for their review, revision (if needed), and approval without delay to the work.

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

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

4.0 CONSTRUCTION REQUIREMENTS

All requirements of Section 420 of the Standard Specifications apply.

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

Provide tell-tales attached to the forms and extending to the ground, or other means, for accurate measurement of falsework settlement. Make sure that the anticipated compressive settlement and/or

deflection of falsework does not exceed 1 inch. For cast-in-place concrete structures, make sure that the calculated deflection of falsework flexural members does not exceed 1/240 of their span regardless of whether or not the deflection is compensated by camber strips.

C. 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.

D. Foundations

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

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

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

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

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

5.0 REMOVAL

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

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

6.0 METHOD OF MEASUREMENT

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

7.0 BASIS OF PAYMENT

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

SUBMITTAL OF WORKING DRAWINGS (2-10-12)

1.0 GENERAL

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

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

2.0 ADDRESSES AND CONTACTS

For submittals to the Structure Design Unit, use the following addresses:

Via US mail:

Mr. G. R. Perfetti, P. E.
State Bridge Design Engineer
North Carolina Department
of Transportation
Structure Design Unit
1581 Mail Service Center
Raleigh, NC 27699-1581

Attention: Mr. P. D. Lambert, P. E.

Via other delivery service:

Mr. G. R. Perfetti, P. E.
State Bridge Design Engineer
North Carolina Department
of Transportation
Structure Design Unit
1000 Birch Ridge Drive
Raleigh, NC 27610

Attention: Mr. P. D. Lambert, P. E.

Submittals may also be made via email.

Send submittals to:

plambert@ncdot.gov (Paul Lambert)

Send an additional e-copy of the submittal to the following address:

jgaither@ncdot.gov (James Gaither)

jlbolden@ncdot.gov (James Bolden)

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

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

Via US mail:

Mr. K. J. Kim, Ph. D., P. E.
Eastern Regional Geotechnical Manager
North Carolina Department of Transportation
Geotechnical Engineering Unit
Eastern Regional Office
1570 Mail Service Center
Raleigh, NC 27699-1570

Via other delivery service:

Mr. K. J. Kim, Ph. D., P. E.
Eastern Regional Geotechnical Manager
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, use the following Western Regional Office address:

Via US mail:

Mr. John Pilipchuk, L. G., P. E.
Western Regional Geotechnical Manager
North Carolina Department of Transportation
Geotechnical Engineering Unit
Western Regional Office
5253 Z Max Boulevard
Harrisburg, NC 28075

Via other delivery service:

Mr. John Pilipchuk, L. G., P. E.
Western Region Geotechnical Manager
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 Structure Design Unit can be viewed from the Unit's web site, via the "Contractor Submittal" link.

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

Primary Structures Contact:	Paul Lambert (919) 250 – 4082 facsimile plambert@ncdot.gov	(919) 707 – 6407
Secondary Structures Contacts:	James Gaither James Bolden	(919) 707 – 6409 (919) 707 – 6408

Eastern Regional Geotechnical Contact (Divisions 1-7):

K. J. Kim (919) 662 – 4710
(919) 662 – 3095 facsimile
kkim@ncdot.gov

Western Regional Geotechnical Contact (Divisions 8-14):

John Pilipchuk (704) 455 – 8902
(704) 455 – 8912 facsimile
jpilipchuk@ncdot.gov

3.0 SUBMITTAL COPIES

Furnish one complete copy of each submittal, including all attachments, to the Resident Engineer. At the same time, submit the number of hard copies shown below of the same complete submittal directly to the Structure Design Unit and/or the Geotechnical Engineering Unit.

The first table below covers "Structure Submittals". The Resident Engineer will receive review comments and drawing markups for these submittals from the Structure Design Unit. The second table in this section covers "Geotechnical Submittals". The Resident 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 Structure Design 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.

Working Drawing Submittal	Copies Required by Structure Design Unit	Copies Required by Geotechnical Unit	Contract Reference Requiring Submittal
Arch Culvert Falsework	5	0	Plan Note & SN Sheet
Box Culvert Falsework[2]	5	0	Plan Note & SN Sheet
Cofferdams[4]	6	1	Articles 410-5 &420-8
Expansion Joint Seals (hold down plate type with base angle)	9	0	Expansion Joint Seals
Expansion Joint Seals (modular)	2, then 9	0	Modular Expansion Joint Seals
Expansion Joint Seal (strip	9	0	Strip Seals

seals)			
Falsework & Forms (superstructure)	8	0	Article 420-3
Falsework & Forms[2] (substructure)	8	0	Article 420-3
Mechanically Stablized Earth Retaining Walls[4]	7	1	MSE Retaining Walls
Metal Bridge Railing	8	0	Plan Note
Metal Stay-in-Place Forms	8	0	Article 420-3
Metalwork for Elastomeric Bearings	7	0	Article 1072-10
Miscellaneous Metalwork[5,6]	7	0	Article 1072-10
Overhead Sign Assemblies	13	0	Article 903-3©
Pile Points	7	1	Article 450-8(D) & Steel Pile Points
Placement of Equipment on Structures (cranes, etc.)	7	0	Article 420-20
Precast Concrete Box Culverts	2, then 1 reproducilble	0	(Optional) Precast Reinforced Concrete Box Culvert at Station ____
Precast Retaining Wall Panels	10	0	Article 1077-2
Pot Bearings[5]	8	0	Pot Bearings
Prestressed Concrete Deck Panels	6 and 1 reproducible	0	Article 420-3
Proprietary Retaining Walls[4]	9	0	Applicable Project Special Provisions
Prestressed Concrete Girder (strand elongation and detensioning sequences)	6	0	Articles 1078-8 amd 1078-11
Prestressed Concrete Cored Slab (detensioning sequences)[3]	6	0	Article 1078-11

Revised Bridge Deck Plans (adaptation to metal stay-in-place forms)	2, then 1 reproducilble	0	Article 420-3
Revised Bridge Deck Plans(adaptation to modular expansion joint seals)	2, then 1 reproducilble	0	Modular Expansion Joint Seals
Soil Nail Retaining Retaining Walls[4]	4	1	Applicable Project Special Provisions
Sound Barrier Wall Steel Fabrication Plans[6]	7	0	Article 1072-10 & Sound Barrier Wall
Sound Barrier Wall Casting Plans	10	0	Article 1077-2 & Sound Barrier Wall
Structural Steel[5]	2, then 7	0	Article 1072-10
TFE Expansion Bearings[5]	8	0	Article 1072-10
Temporary Detour Structures[4]	10	1	Article 400-3 & Construction and Removal of Temporary Structure at Station ____
Temporary Shoring[4]	6	1	Article 410-4 & Temporary Shoring for Maintenance of Traffic
Temporary Fabric for Wire Walls[8]	0	2	Applicable Project Special Provisions
Permanent Anchored Tieback Retaining Walls[4]	4	1	Applicable Project Special Provisions
Evazote Joint Seals[7]	9	0	Applicable Project Special Provisions
Optional Disc Bearings[5]	8	0	Optional Disc Bearings
Removal of Existing Struture over Railroad	5	0	Railroad Special Provisions
Drilled Pier Construction Sequence[8]	0	1	Article 411-3
Pile Hammers[8]	0	1	Article 450-6
Cross Hole Sonic Logging	0	1	Article 411-5

(CSL) Reports[8]			
Pile Driving Analyzer (PDA) Reports[8]	0	1	Article 450-1

FOOTNOTES

1. References are provided to help locate the part of the contract where the working drawing submittals are required. References in quotes refer to the Project Special Provision by that name. Articles refer to the Standard Specifications.

2. Submittals for these items are necessary only when plan notes require them.

3. Submittals for these items may not be required. A list of pre-approved sequences is available from the producer or the Materials and Tests Unit.

4. These submittals are reviewed by the Structure Design Unit and the Geotechnical Engineering Unit. If NCDOT Shoring Standards are used, working drawings need not be submitted, but the Shoring Selection Form should be forwarded to the Geotechnical Engineering Unit.

5. The fabricator may submit these items directly to the Structure Design Unit.

6. The two sets of preliminary submittals required by Article 1072-10 of the Standard Specifications are not required for these items.

7. Submittals for Fabrication Drawings are not required. Submission of Catalogue Cuts of Proposed ·Material is required. See Section 5.A of the Project Special Provision.

8. Submittals for these items are reviewed by the Geotechnical Engineering Unit only and correspondence regarding these items should be directed to and will come from the Geotechnical Engineering Unit.

CRANE SAFETY (8-15-05)

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 regulations (OSHA).

Submit all items listed below to the Engineer prior to beginning crane operations involving critical lifts. A critical lift is defined as any lift that exceeds 75 percent of the manufacturer's crane chart capacity for the radius at which the load will be lifted or requires the use of more than one crane. Changes in personnel or equipment must be reported to the Engineer and all applicable items listed below must be updated and submitted prior to continuing with crane operations.

CRANE SAFETY SUBMITTAL LIST

A. **Competent Person:** Provide the name and qualifications of the "Competent Person" responsible for crane safety and lifting operations. The named competent person will have the responsibility and authority to stop any work activity due to safety concerns.

B. **Riggers:** Provide the qualifications and experience of the persons responsible for rigging operations. Qualifications and experience should include, but not be limited to, weight calculations, center of gravity determinations, selection and inspection of sling and rigging equipment, and safe rigging practices.

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

D. **Certifications:** **By July 1, 2006**, crane operators performing critical lifts shall be certified by NC CCO (National Commission for the Certification of Crane Operators), or satisfactorily complete the Carolinas AGC's Professional Crane Operator's Proficiency Program. Other approved nationally accredited programs will be considered upon request. All crane operators shall also have a current CDL medical card. Submit a list of anticipated critical lifts and corresponding crane operator(s). Include current certification for the type of crane operated (small hydraulic, large hydraulic, small lattice, large lattice) and medical evaluations for each operator.

GROUT FOR STRUCTURES 9-30-11

1.0 DESCRIPTION

This special provision addresses grout for use in pile blockouts, grout pockets, shear keys, dowel holes and recesses for structures. This provision does not apply to grout placed in post-tensioning ducts for bridge beams, girders, or decks. Mix and place grout in accordance with the manufacturer's recommendations, the applicable sections of the Standard Specifications and this provision.

2.0 MATERIAL REQUIREMENTS

Use a Department approved pre-packaged, non-shrink, non-metallic grout. Contact the Materials and Tests Unit for a list of approved pre-packaged grouts and consult the manufacturer to determine if the pre-packaged grout selected is suitable for the required application.

When using an approved pre-packaged grout, a grout mix design submittal is not required.

The grout shall be free of soluble chlorides and contain less than one percent soluble sulfate. Supply water in compliance with Article 1024-4 of the Standard Specifications.

Aggregate may be added to the mix only where recommended or permitted by the manufacturer and Engineer. The quantity and gradation of the aggregate shall be in accordance with the manufacturer's recommendations.

Admixtures, if approved by the Department, shall be used in accordance with the manufacturer's recommendations. The manufacture date shall be clearly stamped on each container. Admixtures with an expired shelf life shall not be used.

The Engineer reserves the right to reject material based on unsatisfactory performance.

Initial setting time shall not be less than 10 minutes when tested in accordance with ASTM C266.

Test the expansion and shrinkage of the grout in accordance with ASTM C1090. The grout shall expand no more than 0.2% and shall exhibit no shrinkage. Furnish a Type 4 material certification showing results of tests conducted to determine the properties listed in the Standard Specifications and to assure the material is non-shrink.

Unless required elsewhere in the contract the compressive strength at 3 days shall be at least 5000 psi. Compressive strength in the laboratory shall be determined in accordance with ASTM C109 except the test mix shall contain only water and the dry manufactured material. Compressive strength in the field will be determined by molding and testing 4" x 8" cylinders in accordance with AASHTO T22. Construction loading and traffic loading shall not be allowed until the 3 day compressive strength is achieved.

When tested in accordance with ASTM C666, Procedure A, the durability factor of the grout shall not be less than 80.

3.0 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.

Do not place grout if the grout temperature is less than 50°F or more than 90°F or if the air temperature measured at the location of the grouting operation in the shade away from artificial heat is below 45°F.

Provide grout at a rate that permits proper handling, placing and finishing in accordance with the manufacturer's recommendations unless directed otherwise by the Engineer. Use grout free of any lumps and undispersed cement. Agitate grout continuously before placement.

Control grout delivery so the interval between placing batches in the same component does not exceed 20 minutes.

The Engineer will determine the locations to sample grout and the number and type of samples collected for field and laboratory testing. The compressive strength of the grout will be considered the average compressive strength test results of 3 cube or 2 cylinder specimens at 28 days.

4.0 BASIS OF PAYMENT

No separate payment will be made for "Grout for Structures". The cost of the material, equipment, labor, placement, and any incidentals necessary to complete the work shall be considered incidental to the structure item requiring grout.

WATERPROOFING (SPECIAL)

Waterproof the top surface of the bridge deck and all construction joints which will be covered by fill with a cold

liquid-applied elastomeric membrane to the limits shown in the contract plans. Waterproofing membrane shall be a two coat, rapid cure, seamless, cold liquid spray applied membrane such as the "Eliminator" system manufactured by Stirling Lloyd Products, Inc., or the "Bridge Deck Membrane" system manufactured by Bridge Preservation L.L.C (R.J. Watson, Inc.) or approved equal. Apply waterproofing in strict accordance with manufacturer's recommendations. Immediately prior to application of membrane, clean the surfaces to be waterproofed per the manufacturer's recommendations. Membrane protection is not required, i.e., ballast may be placed directly on top of the fully cured membrane waterproofing.

The entire cost of the waterproofing complete in place shall be included in the unit contract price bid for "Waterproofing".

PORTLAND CEMENT (SPECIAL)

Portland Cement shall meet the requirements of the Standard Specifications for the type specified for the work. In addition, in order to minimize alkali content, the total percentage of sodium oxide (Na_2O) present plus 0.658 times the total percentage of potassium oxide (K_20) present shall not exceed 0.60 percent. The Contractor shall furnish the Engineer with two (2) copies of certified mill test reports from the manufacturer stating that all cement meets the above requirements.

Flyash may be substituted for cement in the amounts shown in Section 1024-1 of the Standard Specifications provided that the minimum cement requirement as shown on the Plans has been satisfied. In no case shall the substitution of flyash or other admixtures approved by the Engineer be in lieu of the minimum cement requirements.

FINE AND COARSE AGGREGRATE (SPECIAL)

The fine and coarse aggregates used in all concrete on the railway structure shall be non-reactive in accordance with the "Method of Test for Potential Reactivity of Aggregates (Chemical Method)", ASTM Designation C289-81. The Contractor shall furnish the Engineer two (2) copies of the above test reports certifying that the fine and coarse aggregates are non-reactive and will not cause an alkali reaction.

WATERSTOPS (SPECIAL)

Waterstops shall be made of an approved flexible polyvinyl-chloride plastic conforming to U.S. Corps of Engineers Specification CRD-C-572-74 or rubber conforming to U.S. Corps of Engineers Specification CRD-C-513-75. Waterstops shall be made in the shape and of the material specified on the Plans. The material shall form a continuous waterstop across the slab and up the parapets of bridge decks, abutment wings, or other locations as shown on the Plans. Waterstops shall be fabricated in continuous units without splices, using material of the longest length available. Where bonded joints are necessary, like materials shall be bonded together by experienced men in accordance with the manufacturer's instructions. The entire cost of the waterstop complete in place shall be included in the unit contract price bid for "Reinforced Concrete Deck Slab."

ELASTOMERIC FLASHING (SPECIAL)

The elastomeric flashing at the expansion joint between deck slabs shall be a continuous sheet of synthetic rubber 1/16" thick by 10" wide or equal based on polychloroprene having properties specified by the following test data:

Tensile Strength, ASTM D-412-80	2,000 psi minimum
Elongation, ASTM D-412-80	300% minimum
Hardness, ASTM D-2240-81	60 ± 10
Water Absorption, ASTM D-471-79	10% maximum

The adhesive for use with the flashing shall be as recommended by the manufacturer of the synthetic rubber furnished and shall be applied according to the manufacturer's instructions.

The entire cost of the elastomeric flashing, complete in place, shall be included in the unit contract price bid for "Reinforced Concrete Deck Slab."

RUBBER JOINT COMPOUNDS (SPECIAL)

Expansion joints shall be sealed with a two component elastomeric polymer type cold-applied synthetic joint sealer, manufactured with Thiokol polysulfide liquid polymers. The material shall be grey polysulfide rubber base caulking compound conforming to Specification ANSI A-116.1. Pouring type compound shall be used for horizontal joints and non-sag type for other joints. The mixing and application of the joint sealing compound shall be performed with the equipment recommended and in strict accordance with the manufacturer's instructions. The entire cost of rubber joint compounds shall be included in the unit contract price bid for "Reinforced Concrete Deck Slab."

STRUCTURE DRAINAGE SYSTEM (SPECIAL)

Materials

Ductile iron pipe (D.I.P) collector system shall be as detailed and specified on the Plans. Perforated pipe drains behind the abutments shall be corrugated steel pipe as detailed on the Plans. French drain material behind abutments shall be No. 467M crushed stone or gravel conforming to Table 1005-1, Aggregate Gradation.

Installation

Deck drains shall be located as shown on the Plans. The D.I.P. collector system shall be installed as detailed and specified on the Plans.

Perforated pipe drains behind the abutments shall be laid with perforations turned down and bedded on a layer of compacted impervious clay. The perforations shall be kept open and free from the clay bedding course, asphalt coating, or other material. The French drain material shall be placed concurrently with the backfill and shall be kept separate with a thin timber slide or burlap bag. Perforated pipe behind abutments and outfall pipes shall be laid on a grade of at least one percent (1%) and shall be located as shown on the Plans.

Grades of pipe drains shall be set by the Engineer. Copies of shop drawings showing details of the drainage system shall be submitted by the Contractor to the Engineer for approval. The drainage system must be approved prior to fabrication.

Basis of Payment

Payment for the "Structure Drainage System" will be made at the contract lump sum price bid, which price and payment shall be full compensation for furnishing all materials and labor to install the drainage system complete, including ductile iron pipe, deck drains, fittings, excavation, perforated pipe drains, French drain material, other backfill and outfall pipes.

BACKFILLING AROUND STRUCTURES (SPECIAL)

Backfill material behind abutments (except No. 467M crushed stone or gravel for French drains over perforated drain pipes) shall be Type A Aggregate Base Course (ABC) in accordance with the Standard Specifications. Placing and compacting shall be as provided for in Section 410-8 of the Standard Specifications.

Backfill around structures, except as specified above, shall be suitable material available from the excavations. In the event material excavated is not approved for use as backfill by the Engineer, the Contractor will be required to furnish and haul to the structure site the necessary suitable backfill material. Placing and compacting shall be as provided in Section 410-8 of the Standard Specifications.

Disposal of surplus excavated material shall be as specified in Section 410-1 of the Standard Specifications.

Payment for furnishing ABC backfill material and any suitable material to replace excavated material and for placing and compacting all backfill material shall be included in the contract unit price for the several other pay items.

SELF-LUBRICATING EXPANSION BEARING ASSEMBLIES (SPECIAL)

Description

The self-lubricating expansion bearing assemblies each consist of an oilless self-lubricating copper alloy plate, a sole plate, a sliding plate with keeper bars, a masonry plate, any necessary fill plates, a bearing pad, an anchor bolt assembly which includes anchor bolts, nuts, and washers, pipe sleeves, a closure plate, grout, various sizes of standard pipe, and any other necessary material as detailed on the Plans. These bearing assemblies are located at the expansion ends of applicable spans as shown on the Plans.

Requirements

Use self-lubricating copper alloy bearing plates that are an approved article of standard production by an established manufacturer of such equipment installed in accordance with the manufacturer's recommendations and conforming to the following requirements:

- Copper alloy conforming to AASHTO M107 Alloy 911 or AASHTO M108 Alloy 510.

- Lubricant of the solid type and consisting of graphite, metallic substances having lubricating properties and a lubricating binder. Do not use materials without lubricating qualities or that promote chemical or electrolytic reactions. Use lubricant that is integrally molded and compressed into the lubrication recesses to form a dense, non-plastic lubricant.
- Recesses arranged in a geometric pattern so that successive rows overlap in the direction of motion and the distance between extremities of recesses is closer in the direction of motion than that perpendicular to motion. Lubricate the entire bearing area of all surfaces that have provision for motion by means of these lubricant filled recesses. Provide a total area of these recesses between 25% and 35% of the total bearing area of the plate.
- Furnish bearing plates in sizes specified on the drawings. Machine finish the bearing surfaces and make sure that the surface roughness does not exceed 125 micro inches (3.18 microns) when measured in accordance with ASA Standard B46.1-1955. Also finish the bearing surfaces of the opposing steel plates as above. Align the tool marks in the direction of motion. Finish the bearing surfaces so that all machine surfaces are flat within 0.0005 inch per inch of length and width.
- For mating curved surfaces of steel and copper alloy, the maximum positive tolerance for the concave surface is 0.010 inch and the maximum negative tolerance for the convex surface is 0.010 inch.
- The coefficient of friction between the copper alloy self-lubricating plates and the steel plates in contact with them does not exceed 0.10 when subjected to the designed unit loading and at twice the designed unit loading.

Basis of Payment

Payment for the bearing assemblies will be at the contract lump sum price bid for "Self-lubricating Expansion Bearing Assemblies." Such lump sum price will be full compensation for all materials, tools, equipment, labor and incidentals necessary to furnish and install the self-lubricating bearing assemblies.

Payment for the Fixed Bearing Assemblies as shown on the Plans will be included in the lump sum price bid for "Structural Steel."

CONDUIT IN PARAPETS (SPECIAL)

Conduit in the parapets shall be 4" diameter PVC conduit conforming to applicable Underwriters Laboratory specifications and shall be located as shown on the Plans. Provisions shall be made for expansion between the deck slab and abutment backwalls and between deck slabs at expansion joints. Couplings shall be provided behind backwalls for connection to the 4" diameter rigid pipe. If non-PVC fittings, couplings, or other incidental items are required, they must be fully compatible with PVC conduit. Details and material data shall be submitted by the Contractor to the Engineer for approval by the Railway Company of all materials required for this work. The entire cost of furnishing and installing all conduit, expansion fittings, couplings and incidental items required for this work shall be included in the unit contract price bid for "Concrete Parapet".

CONCRETE PARAPET (SPECIAL)

Concrete Parapet shall be as shown on the plans and shall comply with Section 460 of the Standard Specifications.

Form grooved contraction joints by a tool specifically constructed for this purpose or by sawing with an approved concrete saw. Groove contraction joints to the depth shown in the plans and to a width between ¼" and ½",

unless otherwise shown in the plans. If formed by a tool, make a radius of 1/8" at the corners of the adjacent concrete.

The quantity of concrete parapet to be paid for will be measured and paid as the number of linear feet of concrete parapet provided in the plans. Full compensation for the work shall include, but is not limited to, falsework and formwork, concrete, reinforcing steel, admixtures, all other materials and placing, finishing and curing the concrete. The quantity of concrete parapet as measured above will be paid for at the contract unit price per linear foot for "Concrete Parapet".

METAL RAIL (ALUMINUM) (SPECIAL)

The Metal Handrail shall be as shown on the Plans. The quantity of handrail to be paid for will be the actual number of linear feet of handrail measured continuously along the top bar of the rail from end to end which has been completed and accepted. Full compensation for the work shall include, but is not limited to, furnishing posts, rails, fittings and all other materials and fabricating and erecting the metal rail. The quantity of metal rail as measured above will be paid for at the contract unit price per linear foot for "Metal Rail (Aluminum)".

STRUCTURAL STEEL (SPECIAL)

I. STRUCTURAL STEEL

A. Scope

This Special Provision shall cover the furnishing, fabrication, preparation, assembly, welding, painting, and erection of all structural steel shown on the Plans.

B. General Specifications

1. Except as otherwise specified hereinafter, the current AREMA Specifications, Chapter 15, Steel Structures, apply to all work under this section.

C. Structural Steel

1. Fracture Critical Members

a. All fracture critical members are identified on the Plans.

b. All fracture critical members will be fabricated in accordance with the Fracture Control Plan stated in the AREMA Specifications, Chapter 15, Section 1.14.

c. Fabricator shall be certified under the AISC Quality Certification Program as follows:

Welded Plate Girders Category III

Rolled Beam Bridges Category I.

d. Structural steel shall meet the current requirements of the ASTM Specifications for Structural Steel, Designation A-709, Grade 50, S84-F2, S91, S93.

S84-F2	(Fracture Critical – Charpy Test Zone 2)
S91	(Fine Austenitic Grain Size)
S93	(Limitation on Weld Repairs)

Except as noted in the AREMA Fracture Control Plan.

2. Non-Fracture Critical Members

a. All primary members or components requiring improved notch toughness are identified on the Plans.

b. Fabricator shall be certified under the AISC Quality Certification Program as follows:

Welded Plate Girders	Category III
Rolled Beam Bridges	Category I

c. Structural steel shapes and plates used as primary members or components shall meet the current requirements of the ASTM Specifications for Structural Steel, Designation A-709, Grade 50, S83-T2, S91.

S83-T2	(Non-Fracture Critical – Charpy Test Zone 2)
S91	(Fine Austenitic Grain Size)

3. Other Structural Steel

a. It is preferred that the Fabricator be certified under the AISC Quality Certification Program, Category I.

b. All structural steel shall meet the current requirements of the Specification for ASTM Designation A-709, Grade 50, unless specified otherwise in this Special Provision or on the Plans.

D. Other Materials

1. High strength bolts shall meet the current requirements of the ASTM Specifications for High Strength Bolts for Structural Steel Joints, Designation A 325.

2. Anchor bolts shall be threaded rods with heavy hex nut meeting the current requirements of ASTM specification for fasteners, Designation A-449.

3. Welding electrodes for arc welding shall meet the current requirements of the Specifications for mild steel arc-welding electrodes Series E70, AWS 5.1, Low Hydrogen Classification for SMAW and AWS 5.17 for SAW.

4. Preformed fabric bearing pads shall be Shock Pad Style No. 15175 as manufactured by Alert Manufacturing and Supply Company, Chicago, Illinois, or FABREEKA Pads as manufactured by Fabreeka Products Company, 1190 Adams Street, Boston, Massachusetts, or SORBTREX Pads as manufactured by Voss Engineering, Inc., Chicago, Illinois, or approved equal.

E. Welding Processes

Only submerged arc welding (SAW) or shielded metal arc welding (SMAW) may be used. No other process will be allowed.

F. Bolted Connections

Permanent bolted connections using High Strength Bolts shall be installed and tightened using the Turn-of-the-Nut Method.

G. Paint

All steel preparation and painting shall be in accordance with the Special Provision PAINTING STRUCTURAL STEEL.

H. Shop Drawings

1. The Contractor's attention is called to the requirements for shop drawings, Chapter 15, Article 1.1.3 Shop Drawings, AREMA Specifications.

2. The Contractor's shall furnish three (3) complete sets of detailed shop drawings to the Company for approval prior to starting fabrication. Unchecked drawings shall not be submitted for approval. After approval of shop drawings, the Contractor shall supply the Company with one set of reproducibles of the approved drawings.

3. The rejection of or the procedure for the correction of shop drawings will not be considered as cause for delay.

4. Approval by the Engineer of the shop drawings shall not relieve the Contractor from furnishing material of proper dimensions, quantity, and quality, nor will such approval relieve the Contractor from the responsibility for errors of any sort in the shop drawings.

5. Original drawings or photographic reproducibles on mylar, or equivalent film, shall be furnished at the completion of the Contract in accordance with Chapter 15, Article 1.1.3, AREMA Specifications. Reproducibles made by the diazo process are not acceptable. The plans shall be sent to:

Chief Engineer – Bridges & Structures
Norfolk Southern Corporation
99 Spring Street, SW, Box 142
Atlanta, GA 30303

II. SHOP INSPECTION & TESTING

1. The Company may arrange for inspection by an independent inspection firm under a separate contract. This inspection will be in addition to the Fabricator's Quality Control Program.

2. The Fabricator shall notify the Company and it's inspector of the scheduled date for beginning fabrication and shall not begin fabrication until the Company's Inspector is present.

3. The Fabricator shall furnish copies of certified mill inspection reports to the Company for all structural steel requiring improved notch toughness.

4. The Fabricator shall meet the requirements of the AREMA Fracture Control Plan described in Chapter 15, Section 1.14 for all members and components designated as fracture critical.

5. Welding Inspection shall verify that all welds and welding procedures meet the requirements of the American Welding Society (A.W.S.) Bridge Welding Code, D1.5, current edition.

6. All welds shall be inspected visually and by use of nondestructive testing. All nondestructive testing shall be performed by the Fabricator and witnessed by the Company's Inspector.

7. Witnessing of weld inspection shall be done in a timely manner without disruption of normal shop operations. Copies of all weld inspections and nondestructive testing reports shall be furnished to the Company.

8. The Fabricator shall perform the following weld inspection and testing:

   (a) All transverse tension groove welds in FCM members, when allowed by the Engineer, shall be RT and UT tested 100%. In non-FCM components of FCM's all transverse groove welds shall be RT or UT tested 100%.

   (b) All flange to web welds shall be tested on both sides as follows:

      1. Top flange to web welds will be UT tested 100% over 10% of the length from each end and the remaining length of weld will be UT tested 10%.

      2. Bottom flange to web welds will be UT 100%.

   (c) All flange to web fillet welds, when allowed by the Engineer, are to be magnetic particle tested 100%.

   Ten percent (10%) of all welds not mentioned above shall be magnetic particle tested.

III. MEASUREMENT AND PAYMENT

Payment will be made at the contract lump sum price for the bid item "Approx. 585,411 Lbs. Structural Steel" and shall constitute full payment for all costs of plant, superintendent, labor, material, and equipment necessary to furnish, fabricate, shop paint, and shop assemble and deliver all the structural steel required for the project in accordance with the Plans, Specifications, and Special Provisions, including furnishing the fabric bearing pads, the fixed bearing assemblies and anchor bolts.

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PAINTING STRUCTURAL STEEL **(SPECIAL)**

Plans and Specifications

This work consists of furnishing all labor, material, plant and equipment, and performing all operations in connection with Shop Painting (prime coat, wash coat, and top coat applied in the fabricators plant or unless otherwise specified by the Railway). All painting shall be in accordance with AREMA Specifications, Chapter 15, Section 3.4, and recommendations of the Steel Painting Council Specifications with the following specific requirements.

The paint thickness will be measured according to "SSPC-PA2" Method for Measurement of Dry Paint Thickness with Magnetic Gages.

In addition to the requirements specified herein, all structural steel shall receive a stripe coat of paint per the Standard Specifications.

Surface Preparation

The surface preparation shall be in accordance with Steel Structures Painting Council Specifications SP 10 (NEAR WHITE BLAST) latest revision and Visual Standard NACE No. 2. Average surface profile to be 2 mils.

Application: The paint shall be applied in accordance with SSPC Specifications for Paint Application – PA1.

The Prime Coat shall be applied in the shop promptly after blast cleaning, but in no case shall the Prime Coat be applied more than 8 hours after blast cleaning or after visible or detrimental rusting occurs.

Steel shall be cleaned by washing or other mechanical means to remove all residue (loose zinc dust and foreign matter) prior to applying Wash and Top Coat.

Surfaces damaged during shipment and handling shall be repaired using the same paint system as applied in the shop except that the Prime Coat shall be repaired using an ***Organic Zinc Primer*** when the Prime Coat is repaired in the field.

Welded Areas and Faying (Contact) Surfaces

No paint shall be applied to areas to be welded in the field. No acrylic paint (wash or top coat) shall be applied to any faying surfaces.

Paint Systems

The fabricator will be given the option of using one of the following paint systems ***(Prime Coat, Intermediate and Top Coats shall be applied in the fabricator's plant unless otherwise specified by the Railway)***. If the Intermediate Coat and Top Coat are applied in the field, the steel shall be solvent wiped to remove all grease

and oil and a ***"High Pressure Power Washing" with clean water (3500 psi minimum)*** shall be used to clean all mud and dirt off prior to applying the touch-up Primer or Intermediate and Top Coats. The Chief Engineer Bridges and Structures is to be notified of the fabricator's choice. Priming of the contact surfaces with ***Inorganic Zinc-Rich Primer*** is required.

If approved or further specified by the Railway, the Wash Coat and Top Coat shall be applied in the shop. Intermediate Coat color shall be White and Stripe Coat color shall be Light Gray. Top Coat color shall be Light Gray, Paint Code: 26306 (Federal Standard 595B).

SYSTEM #1 (DAVIS-FROST)

Prime Coat: P-139 LOW V.O.C. Inorganic Zinc Primer applied at 4.0 – 5.0 mils Dry Film Thickness.

Intermediate Coat: W-112 Water Guard Metal Primer applied at 3.0 – 4.0 mils Dry Film Thickness.

Finish (Top) Coat: W-195 Water-Tuff DTM Finish applied at 3.0 – 4.0 mils Dry Film Thickness.

Touch Up Primer: P-281 (3 component) Epoxy Zinc-Rich Primer applied at 4.0 – 5.0 mils Dry Film Thickness.

Suggested Supplier: Davis-Frost, Inc.
P.O. Box 11405
Lynchburg, VA 24506
Telephone: (804) 846-5277

SYSTEM #2 (ELITE)

Prime coat: Elite 1312 Inorganic Zinc Rich Primer applied at 4.0 – 5.0 mils Dry Film Thickness.

Intermediate Coat: Elite 156 Exterior Acrylic Latex applied at 3.0 – 4.0 mils Dry Film Thickness.

Finish (Top) Coat: Elite 156 Exterior Acrylic Latex applied at 3.0 – 4.0 mils Dry Film Thickness.

Touch Up Primer: Elite 305 Organic Zinc-Rich Primer applied at 4.0 – 5.0 mils Dry Film Thickness.

Suggested Supplier: Elite Coatings Company, Inc.
P.O. Box 130
Gordon, GA 31031
Telephone: (912) 628-2111

SYSTEM #3 (DEVOE)

Prime Coat: Cata-Coat 301 Inorganic Zinc-Rich Primer applied at 4.0 – 5.0 mils Dry Film Thickness.

Intermediate Coat: DEVRAN 646 Water Based Epoxy primer applied at 3.0 – 4.0 mils Dry Film Thickness.

Finish (Top) Coat: DEVFLEX 604-S-9903 Water Based Gloss Enamel applied at 3.0 – 4.0 mils Dry Film Thickness.

Touch Up Primer: Cata-Coat 303H Organic Zinc-Rich Epoxy applied at 4.0 – 5.0 mils Dry Film Thickness.

Suggested Supplier: Devoe Coatings Company
1519 West Liberty Avenue
Pittsburgh, PA 15226
Telephone: (412) 561-8930
Attn: Joe Basile

SYSTEM #4 (SHERWIN-WILLIAMS)

Prime Coat: ZINC CLAD II HS-(B69VZ1 B69VZ3 B69D11) Inorganic Zinc-Rich Primer applied at 4.0 – 5.0 mils Dry Film Thickness

Intermediate Coat: B66 Series DTM ACRYLIC GLOSS applied at 3.0 – 4.0 mils Dry Film Thickness.

Finish (Top) Coat: B66 Series DTM ACRYLIC GLOSS applied at 3.0 – 4.0 mils Dry Film Thickness.

Touch Up Primer: ZINC CLAD IV-(B69 A8/B69 V8) applied at 4.0 – 5.0 mils Dry Film Thickness.

Suggested Supplier: The Sherwin-Williams Company
765 North Avenue, NE
Atlanta, GA 30306
Telephone: (404) 873-6723

SYSTEM #5 (VALSPAR)

Prime Coat: Valspar MZ-7 Inorganic Zinc-Rich Primer applied at 4.0 – 5.0 mils Dry Film Thickness.

Intermediate Coat: #61 Series Water-Acrylic Lo Sheen applied at 3.0 – 4.0 mils Dry Film Thickness.

Finish (Top) Coat: #61 Series Water-Acrylic Lo Sheen applied at 3.0 – 4.0 mils Dry Film Thickness.

Touch Up Primer: MZ-4 Epoxy Zinc-Rich Primer applied at 4.0 – 5.0 mils Dry Film Thickness.

Suggested Supplier: Corrosion Specialties, Inc.
3897 Stephens Court
P.O. Box 146
Tucker, GA 30085-0146
Telephone: (404) 938-7263
Attn: Andy Steinmann

SYSTEM #6 (AMERON)

Prime Coat: Amercoat 21-5 Inorganic Zinc-Rich Primer applied at 4.0 – 5.0 mils Dry Film Thickness.

Intermediate Coat: Amercoat 148 Waterborne Acrylic primer applied at 3.0 – 4.0 mils Dry Film Thickness.

Finish (Top) Coat: Amercoat 220 Waterborne Acrylic applied at 3.0 – 4.0 mils Dry Film Thickness.

Touch Up Primer: Amercoat 68HS Zinc-Rich Primer applied at 4.0 – 5.0 mils Dry Film Thickness.

Suggested Supplier: Ameron Protective Coatings Division
11605 Vimy Ridge Road
Little Rock, AK 72209
Telephone: 1-800-283-6627

Post-Painting Requirements

a) Steel shall be cleaned by washing or other mechanical means to remove all residue (loose zinc dust and foreign matter) prior to applying Wash and Top Coat. An ***"M.E.K. Rub Test"*** shall be used to assure proper cure of the inorganic zinc primer prior to applying the next coat.

b) **The Intermediate Coat may have to be thinned to prevent gassing.**

Painting Materials Requirements

a) Packaging and Shipping.

All paint shall be received at the point of use in original containers and carefully stored. All paint to be used shall be freshly mixed and shall be ordered only a sufficient length of time in advance of its use to insure an adequate supply being on hand at all times so as not to delay the work.

Paint shipped to the job shall arrive in sealed containers clearly marked with the type of paint and specifications controlling its manufacture.

There shall be no modification of the paint except upon, and in accordance with, express written stipulation by an authorized representative of the paint manufacturer and with specific approval of the Engineer.

b) Storage.

Paint in storage at the shop or in the field shall have the position of the containers reversed at least once a week to prevent settlement and separation of the pigment from the vehicle. There shall be suitable devices maintained at the point of storage and used for agitation and thorough mixing of the paint prior to its use on this work.

c) Sample Panel.

If directed by the Engineer, a sample panel shall be made up. The panel shall be used as a basis of comparison of the work on this contract. The panel shall be of size designated by the Engineer and shall be prepared and painted in all respects in the same manner as the work will be done.

Workmanship

a) Weather Conditions.

Paint shall not be applied when the temperature of the air is less than 40 degrees F, the surface of the metal is not dry, the relative humidity is above 85%, or when, in the opinion of the Engineer, conditions are otherwise unsatisfactory for such work. Paint shall not be applied upon damp or frosted surfaces. Material painted under cover in damp or cold weather shall remain under cover until dry or until weather conditions permit its exposure in the open. Painting shall not be done when the metal is hot enough to cause the paint to blister and produce a porous paint film.

b) Application.

Paint shall be applied in accordance with SSPC Specifications for Paint Application-PA1 and in accordance with manufacturer's recommendations.

All blast cleaned steel surfaces shall be primed before completion of the work day.

Steel shall be cleaned by washing, brushing or other mechanical means of all residue (loose foreign matter) prior to applying the finish coat (Top Coat)

c) Removal of Unsatisfactory Paint.

If the Prime Coat "mud-cracks", the Top Coat wrinkles or shows evidence of having been applied under unfavorable conditions, or if the workmanship is poor, the Engineer may order it removed and the metal thoroughly cleaned and repainted. Any "Blushing" of the Acrylic Top Coat shall be corrected by solvent wiping and/or recoating before final acceptance by the Railway Company.

d) Thinning.

No thinner shall be used if the paint can be applied in a neat workmanlike manner without thinning. If the paint is too thick to spray, only the manufacturer's specified thinner (in hot weather, acrylic paint shall be thinned with M.I.B.K. to reduce the chances of "Blushing" occurring) may be added to the paint up to 25% by volume or as otherwise specified by the manufacturer. Thinning shall not relieve the contractor from applying the specified coating Dry Film Thickness.

e) Paint Touch-Up.

After erection, all damaged areas shall be cleaned of mud and dirt by ***High Pressure Power Washing with clean water (3500 psi minimum)***; grease and oil by ***solvent wiping***; and rusted areas shall be cleaned by ***sand blasting*** or ***power tool cleaning*** with non-woven abrasives prior to touch-up or Top coating. The paint used for touch-up shall be the same system used in the shop. The contractor and/or fabricator shall be responsible for cleaning all damaged surfaces and applying all field touch-up coatings in accordance with all manufacturer's recommendations. The Zinc Primer shall be touched up with only ***Organic Zinc Primer*** when applied in the field.

f) Warranty.

The fabricator and/or contractor will be required to guarantee his work against defective workmanship or the use of defective materials for a period of one (1) year from completion of the contract.

g) Handling Shop Primed Steel.

Only nylon web slings or padded lifting points shall be used to move shop primed steel to prevent damage to the coating.

Air Quality Requirements

Abrasive blasting operations shall be conducted in full compliance with all current ***National primary and secondary ambient air quality standards 40 CFR 50*** (for Particulate matter – 40 CFR 50.6; Lead – 40 CFR 50.12; and nuisance dust). Abrasive blasting operations shall also be compliant with any and all local state and air quality requirements.

Environmental Protection Statement

"All collection, containment, disposal and transportation for disposal must be compliant with all applicable State, Federal and Local air pollution, water pollution, solid waste and hazardous waste regulations, ordinances or statutes."

Compensation

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All work covered by this section except for shop painting will be paid for at the contract lump sum price for "Painting of Structural Steel." Payment at the contract lump sum price for "Approx. 585,411 Lbs. Structural Steel" will be full compensation for the work of shop painting.

The above prices and payments will be full compensation for all work including but not limited to furnishing all paint, cleaning abrasives, cleaning solvents, and all other materials; protecting the work; protecting traffic and property; preparing and cleaning surfaces to be painted; applying paint in the shop and field; and furnishing blast cleaning equipment, paint spraying equipment, brushes, rollers, and any other hand or power tools, and any other equipment.

PROJECT SPECIAL PROVISION

(10-18-95) Z-1

PERMITS

The Contractor's attention is directed to the following permits, which have been issued to the Department of Transportation by the authority granting the permit.

PERMIT	AUTHORITY GRANTING THE PERMIT
Dredge and Fill and/or Work in Navigable Waters (404)	U. S. Army Corps of Engineers
Water Quality (401)	Division of Environmental Management, DENR State of North Carolina
Buffer Certification	Division of Environmental Management, DENR State of North Carolina

The Contractor shall comply with all applicable permit conditions during construction of this project. Those conditions marked by * are the responsibility of the department and the Contractor has no responsibility in accomplishing those conditions.

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 *2012 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 waters or wetlands provided that activities outside those areas is done in such a manner as to not affect the waters or wetlands.

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U.S. ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT

Action Id. **SAW-2012-00430** County: **Wake** U.S.G.S. Quad: **NC-CARY**

GENERAL PERMIT (REGIONAL AND NATIONWIDE) VERIFICATION

Property Owner: NC Dept. of Transportation, Rail Div.
Marc Hamel
Address: 1553 Mail Service Center
Raleigh, NC, 27699-1533
Telephone: 919.707.4705

Agent: Atkins North America Inc.
Elizabeth Scherrer
Address: 1616 East Millbrook Road, Suite 310
Raleigh, NC, 27607-4968
919.431.5296

Size and location of property (water body, road name/number, town, etc.): **Existing RR corridor west of NC 54 from McCrimmon Parkway to I-40, south of Research Triangle Park, NC.. Latitude 35.868 Longitude -78.8467**

Description of projects area and activity: **Improvements to existing RR west of NC 54 from McCrimmon Parkway to I-40, south of Research Triangle Park, NC.**

Applicable Law: ☒ Section 404 (Clean Water Act, 33 USC 1344)
☐ Section 10 (Rivers and Harbors Act, 33 USC 403)
Authorization: Regional General Permit Number or Nationwide Permit Number: **NWP 14 Linear Transportation Projects.**

SEE ATTACHED NATIONWIDE AND SPECIAL CONDITIONS.

Your work is authorized by the above referenced permit provided it is accomplished in strict accordance with the attached conditions and your submitted application and attached information dated 8/31/2012. Any violation of the attached conditions or deviation from your submitted plans may subject the permittee to a stop work order, a restoration order and/or appropriate legal action.

This verification will remain valid until the expiration date identified below unless the nationwide authorization is modified, suspended or revoked. If, prior to the expiration date identified below, the nationwide permit authorization is reissued and/or modified, this verification will remain valid until the expiration date identified below, provided it complies with all requirements of the modified nationwide permit. If the nationwide permit authorization expires or is suspended, revoked, or is modified, such that the activity would no longer comply with the terms and conditions of the nationwide permit, activities which have commenced (i.e., are under construction) or are under contract to commence in reliance upon the nationwide permit, will remain authorized provided the activity is completed within twelve months of the date of the nationwide permit's expiration, modification or revocation, unless discretionary authority has been exercised on a case-by-case basis to modify, suspend or revoke the authorization.

Activities subject to Section 404 (as indicated above) may also require an individual Section 401 Water Quality Certification. You should contact the NC Division of Water Quality (telephone (919) 733-1786) to determine Section 401 requirements.

This Department of the Army verification does not relieve the permittee of the responsibility to obtain any other required Federal, State or local approvals/permits.

If there are any questions regarding this verification, any of the conditions of the Permit, or the Corps of Engineers regulatory program, please contact Eric Alsmeyer at 919-554-4884 x23.

Corps Regulatory Official _____

Date: **9/17/2012** Expiration Date of Verification: **9/17/2014**

The Wilmington District is committed to providing the highest level of support to the public. To help us ensure we continue to do so, please complete the attached customer Satisfaction Survey or visit http://per2.nwp.usace.army.mil/survey.html to complete the survey online.

Copy Furnished: Atkins/E. Scherrer

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Action Id. SAW-2012-00430 Date: 9/17/2012

Determination of Jurisdiction:

A. ☐ Based on preliminary information, there appear to be waters of the US including wetlands within the above described project area. This preliminary determination is not an appealable action under the Regulatory Program Administrative Appeal Process (Reference 33 CFR Part 331).

B. ☐ There are Navigable Waters of the United States within the above described project area subject to the permit requirements of Section 10 of the Rivers and Harbors Act and Section 404 of the Clean Water Act. Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

C. ☐ There are waters of the US and/or wetlands within the above described project area subject to the permit requirements of Section 404 of the Clean Water Act (CWA)(33 USC § 1344). Unless there is a change in the law or our published regulations, this determination may be relied upon for a period not to exceed five years from the date of this notification.

D. ☒ The jurisdictional areas within the above described project area have been identified under a previous action. Please reference jurisdictional determination issued **3/9/2012**. Action ID **SAW-2012-00430**.

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Action ID Number: SAW-2012-00430 **County:** Wake

Permittee: NC Department of Transportation, Rail Division

Date Permit Issued: 9/17/2012

Project Manager: Eric Alsmeyer

***Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:**

US ARMY CORPS OF ENGINEERS
WILMINGTON DISTRICT
Attn: Eric Alsmeyer
US Army Corps of Engineers, Wilmington District
Raleigh Regulatory Field Office
3331 Heritage Trade Drive, Suite 105
Wake Forest, NC 27587

Please note that your permitted activity is subject to a compliance inspection by a U. S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit has been completed in accordance with the terms and condition of the said permit, and required mitigation was completed in accordance with the permit conditions.

_____ _____

Signature of Permittee **Date**

NATIONWIDE PERMIT 14
DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS
FINAL NOTICE OF ISSUANCE AND MODIFICATION OF NATIONWIDE PERMITS
FEDERAL REGISTER
AUTHORIZED MARCH 19, 2012

Linear Transportation Projects. Activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. For linear transportation projects in non-tidal waters, the discharge cannot cause the loss of greater than 1/2-acre of waters of the United States. For linear transportation projects in tidal waters, the discharge cannot cause the loss of greater than 1/3-acre of waters of the United States. Any stream channel modification, including bank stabilization, is limited to the minimum necessary to construct or protect the linear transportation project; such modifications must be in the immediate vicinity of the project.

This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, 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. 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.

This NWP cannot be used to authorize non-linear features commonly associated with transportation projects, such as vehicle maintenance or storage buildings, parking lots, train stations, or aircraft hangars.

* Notification: The permittee must submit a pre-construction notification to the district engineer prior to commencing the activity if: (1) the loss of waters of the United States exceeds 1/10-acre; or (2) there is a discharge in a special aquatic site, including wetlands. (See general condition 31.) (Sections 10 and 404)

Note: Some discharges for the construction of farm roads or forest roads, or temporary roads for moving mining equipment, may qualify for an exemption under Section 404(f) of the Clean Water Act (see 33 CFR 323.4).

NATIONWIDE PERMIT CONDITIONS

The following General Conditions must be followed in order for any authorization by a NWP to be valid:

1. Navigation. (a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. All permanent and temporary crossings of waterbodies shall be suitably culverted, bridged, or otherwise designed and constructed to maintain low flows to sustain the movement of those aquatic species.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48, or is a shellfish seeding or habitat restoration activity authorized by NWP 27.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act).

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities).

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA-approved state or local floodplain management requirements.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety and compliance with applicable NWP general conditions, as well as any activity-specific conditions added by the district engineer to an NWP authorization.

15. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.

16. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency responsible for the designated Wild and Scenic River or study river (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service).

17. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights.

18. Endangered Species. (a) No activity is authorized under any NWP which is likely to directly or indirectly jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will directly or indirectly destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address ESA compliance for the NWP activity, or whether additional ESA consultation is necessary.

* (c) Non-federal permittees must submit a pre-construction notification to the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that might be affected by the proposed work or that utilize the designated critical habitat that might be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, The Endangered Species Act prohibits any person subject to the jurisdiction of the United States to take a listed species, where "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The word "harm" in the definition of "take" means an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.

(f) Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide web pages at http://www.fws.gov/ or http://www.fws.gov/ipac and http://www.noaa.gov/fisheries.html respectively.

19. Migratory Birds and Bald and Golden Eagles. The permittee is responsible for obtaining any "take" permits required under the U.S. Fish and Wildlife Service's regulations governing compliance with the Migratory Bird Treaty Act or the Bald and Golden Eagle Protection Act. The permittee should contact the appropriate local office of the U.S. Fish and Wildlife Service to determine if such "take" permits are required for a particular activity.

20. Historic Properties. (a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements. The district engineer will review the documentation and determine whether it is sufficient to address section 106 compliance for the NWP activity, or whether additional section 106 consultation is necessary.

* (c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed on, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). When reviewing pre-construction notifications, district engineers will comply with the current procedures for addressing the requirements of Section 106 of the National Historic Preservation Act. The district engineer shall make a reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties on which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR §800.3(a)). If NHPA

section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed. If the non-Federal applicant has not heard back from the Corps within 45 days, the applicant must still wait for notification from the Corps.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties.

21. Discovery of Previously Unknown Remains and Artifacts. If you discover any previously unknown historic, cultural or archeological remains and artifacts while accomplishing the activity authorized by this permit, you must immediately notify the district engineer of what you have found, and to the maximum extent practicable, avoid construction activities that may affect the remains and artifacts until the required coordination has been completed. The district engineer will initiate the Federal, Tribal and state coordination required to determine if the items or remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

22. Designated Critical Resource Waters. Critical resource waters include, NOAA-managed marine sanctuaries and marine monuments, and National Estuarine Research Reserves. The district engineer may designate, after notice and opportunity for public comment, additional waters officially designated by a state as having particular environmental or ecological significance, such as outstanding national resource waters or state natural heritage sites. The district engineer may also designate additional critical resource waters after notice and opportunity for public comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, 50, 51, and 52 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 31, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal.

23. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating for resource losses) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10-acre and require pre-construction notification, unless the district engineer determines in writing that either some other form of mitigation would be more environmentally appropriate or the adverse effects of the proposed activity are minimal, and provides a project-specific waiver of this requirement. For wetland losses of 1/10-acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Compensatory mitigation projects provided to offset losses of aquatic resources must comply with the applicable provisions of 33 CFR part 332.

(1) The prospective permittee is responsible for proposing an appropriate compensatory mitigation option if compensatory mitigation is necessary to ensure that the activity results in minimal adverse effects on the aquatic environment.

(2) Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(3) If permittee-responsible mitigation is the proposed option, the prospective permittee is responsible for submitting a mitigation plan. A conceptual or detailed mitigation plan may be used by the district engineer to make the decision on the NWP verification request, but a final mitigation plan that addresses the applicable requirements of 33 CFR 332.4(c)(2) – (14) must be approved by the district engineer before the permittee begins work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation (see 33 CFR 332.3(k)(3)).

(4) If mitigation bank or in-lieu fee program credits are the proposed option, the mitigation plan only needs to address the baseline conditions at the impact site and the number of credits to be provided.

(5) Compensatory mitigation requirements (e.g., resource type and amount to be provided as compensatory mitigation, site protection, ecological performance standards, monitoring requirements) may be addressed through conditions added to the NWP authorization, instead of components of a compensatory mitigation plan.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream rehabilitation, enhancement, or preservation, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2-acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2-acre of waters of

the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the restoration or establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. If it is not possible to establish a riparian area on both sides of a stream, or if the waterbody is a lake or coastal waters, then restoring or establishing a riparian area along a single bank or shoreline may be sufficient. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

(g) Permittees may propose the use of mitigation banks, in-lieu fee programs, or separate permittee-responsible mitigation. For activities resulting in the loss of marine or estuarine resources, permittee-responsible compensatory mitigation may be environmentally preferable if there are no mitigation banks or in-lieu fee programs in the area that have marine or estuarine credits available for sale or transfer to the permittee. For permittee-responsible mitigation, the special conditions of the NWP verification must clearly indicate the party or parties responsible for the implementation and performance of the compensatory mitigation project, and, if required, its long-term management.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level.

24. Safety of Impoundment Structures. To ensure that all impoundment structures are safely designed, the district engineer may require non-Federal applicants to demonstrate that the structures comply with established state dam safety criteria or have been designed by qualified persons. The district engineer may also require documentation that the design has been independently reviewed by similarly qualified persons, and appropriate modifications made to ensure safety.

25. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality.

26. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements.

27. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination.

28. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre.

29. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature:

"When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."

_____

(Transferee)

_____

(Date)

* 30. Compliance Certification. Each permittee who receives an NWP verification letter from the Corps must provide a signed certification documenting completion of the authorized activity and any required compensatory mitigation. The success of any required permittee-responsible mitigation, including the achievement of ecological performance standards, will be addressed separately by the district engineer. The Corps will provide the permittee the certification document with the NWP verification letter. The certification document will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general, regional, or activity-specific conditions;

(b) A statement that the implementation of any required compensatory mitigation was completed in accordance with the permit conditions. If credits from a mitigation bank or in-lieu fee program are used to satisfy the compensatory mitigation requirements, the certification must include the documentation required by 33 CFR 332.3(l)(3) to confirm that the permittee secured the appropriate number and resource type of credits; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

* 31. Pre-Construction Notification. (a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

(2) 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;

(2) Location of the proposed project;

(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

(4) The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

(5) If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

(4) Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.

D. District Engineer's Decision

1. In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. For a linear project, this determination will include an evaluation of the individual crossings to determine whether they individually satisfy the terms and conditions of the NWP(s), as well as the cumulative effects caused by all of the crossings authorized by NWP. If an applicant requests a waiver of the 300 linear foot limit on impacts to intermittent or ephemeral streams or of an otherwise applicable limit, as provided for in NWPs 13, 21, 29, 36, 39, 40, 42, 43, 44, 50, 51 or 52, the district engineer will only grant the waiver upon a written determination that the NWP activity will result in minimal adverse effects. When making minimal effects determinations the district engineer will consider the direct and indirect effects caused by the NWP activity. The district engineer will also consider site specific factors, such as the environmental setting in the

vicinity of the NWP activity, the type of resource that will be affected by the NWP activity, the functions provided by the aquatic resources that will be affected by the NWP activity, the degree or magnitude to which the aquatic resources perform those functions, 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), the importance of the aquatic resource functions to the region (e.g., watershed or ecoregion), and mitigation required by the district engineer. If an appropriate functional assessment method is available and practicable to use, that assessment method may be used by the district engineer to assist in the minimal adverse effects determination. The district engineer may add case-specific special conditions to the NWP authorization to address site-specific environmental concerns.

2. If the proposed activity requires a PCN and will result in a loss of greater than 1/10-acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any activity-specific conditions in the NWP verification the district engineer deems necessary. Conditions for compensatory mitigation requirements must comply with the appropriate provisions at 33 CFR 332.3(k). The district engineer must approve the final mitigation plan before the permittee commences work in waters of the United States, unless the district engineer determines that prior approval of the final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the proposed compensatory mitigation plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP, including any activity-specific conditions added to the NWP authorization by the district engineer.

3. If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (a) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (b) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (c) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period, with activity-specific

conditions that state the mitigation requirements. The authorization will include the necessary conceptual or detailed mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan or has determined that prior approval of a final mitigation plan is not practicable or not necessary to ensure timely completion of the required compensatory mitigation.

FURTHER INFORMATION

1. District Engineers have authority to determine if an activity complies with the terms and conditions of an NWP.

2. NWPs do not obviate the need to obtain other federal, state, or local permits, approvals, or authorizations required by law.

3. NWPs do not grant any property rights or exclusive privileges.

4. NWPs do not authorize any injury to the property or rights of others.

5. NWPs do not authorize interference with any existing or proposed Federal project.

DEFINITIONS

Best management practices (BMPs): Policies, practices, procedures, or structures implemented to mitigate the adverse environmental effects on surface water quality resulting from development. BMPs are categorized as structural or non-structural.

Compensatory mitigation: The restoration (re-establishment or rehabilitation), establishment (creation), enhancement, and/or in certain circumstances preservation of aquatic resources for the purposes of offsetting unavoidable adverse impacts which remain after all appropriate and practicable avoidance and minimization has been achieved.

Currently serviceable: Useable as is or with some maintenance, but not so degraded as to essentially require reconstruction.

Direct effects: Effects that are caused by the activity and occur at the same time and place.

Discharge: The term "discharge" means any discharge of dredged or fill material.

Enhancement: The manipulation of the physical, chemical, or biological characteristics of an aquatic resource to heighten, intensify, or improve a specific aquatic resource function(s). Enhancement results in the gain of selected aquatic resource function(s), but may also lead to a decline in other aquatic resource function(s). Enhancement does not result in a gain in aquatic resource area.

Ephemeral stream: An ephemeral stream has flowing water only during, and for a short duration after, precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round. Groundwater is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.

Establishment (creation): The manipulation of the physical, chemical, or biological characteristics present to develop an aquatic resource that did not previously exist at an upland site. Establishment results in a gain in aquatic resource area.

High Tide Line: The line of intersection of the land with the water's surface at the maximum height reached by a rising tide. The high tide line may be determined, in the absence

of actual data, by a line of oil or scum along shore objects, a more or less continuous deposit of fine shell or debris on the foreshore or berm, other physical markings or characteristics, vegetation lines, tidal gages, or other suitable means that delineate the general height reached by a rising tide. The line encompasses spring high tides and other high tides that occur with periodic frequency but does not include storm surges in which there is a departure from the normal or predicted reach of the tide due to the piling up of water against a coast by strong winds such as those accompanying a hurricane or other intense storm.

Historic Property: Any prehistoric or historic district, site (including archaeological site), building, structure, or other object included in, or eligible for inclusion in, the National Register of Historic Places maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria (36 CFR part 60).

Independent utility: A test to determine what constitutes a single and complete non-linear project in the Corps regulatory program. A project is considered to have independent utility if it would be constructed absent the construction of other projects in the project area. Portions of a multi-phase project that depend upon other phases of the project do not have independent utility. Phases of a project that would be constructed even if the other phases were not built can be considered as separate single and complete projects with independent utility.

Indirect effects: Effects that are caused by the activity and are later in time or farther removed in distance, but are still reasonably foreseeable.

Intermittent stream: An intermittent stream has flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow.

Loss of waters of the United States: Waters of the United States that are permanently adversely affected by filling, flooding, excavation, or drainage because of the regulated activity. Permanent adverse effects include permanent discharges of dredged or fill material that change an aquatic area to dry land, increase the bottom elevation of a waterbody, or change the use of a waterbody. The acreage of loss of waters of the United States is a threshold measurement of the impact to jurisdictional waters for determining whether a project may qualify for an NWP; it is not a net threshold that is calculated after considering compensatory mitigation that may be used to offset losses of aquatic functions and services. The loss of stream bed includes the linear feet of stream bed that is filled or excavated. Waters of the United States temporarily filled, flooded, excavated, or drained, but restored to pre-construction contours and elevations after construction, are not included in the measurement of loss of waters of the United States. Impacts resulting from activities eligible for exemptions under Section 404(f) of the Clean Water Act are not considered when calculating the loss of waters of the United States.

Non-tidal wetland: A non-tidal wetland is a wetland that is not subject to the ebb and flow of tidal waters. The definition of a wetland can be found at 33 CFR 328.3(b). Non-tidal wetlands contiguous to tidal waters are located landward of the high tide line (i.e., spring high tide line).

Open water: For purposes of the NWPs, an open water is any area that in a year with normal patterns of precipitation has water flowing or standing above ground to the extent that an ordinary high water mark can be determined. Aquatic vegetation within the area of standing or

flowing water is either non-emergent, sparse, or absent. Vegetated shallows are considered to be open waters. Examples of "open waters" include rivers, streams, lakes, and ponds.

Ordinary High Water Mark: An ordinary high water mark is a line on the shore established by the fluctuations of water and indicated by physical characteristics, or by other appropriate means that consider the characteristics of the surrounding areas (see 33 CFR 328.3(e)).

Perennial stream: A perennial stream has flowing water year-round during a typical year. The water table is located above the stream bed for most of the year. Groundwater is the primary source of water for stream flow. Runoff from rainfall is a supplemental source of water for stream flow.

Practicable: Available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.

Pre-construction notification: A request submitted by the project proponent to the Corps for confirmation that a particular activity is authorized by nationwide permit. The request may be a permit application, letter, or similar document that includes information about the proposed work and its anticipated environmental effects. Pre-construction notification may be required by the terms and conditions of a nationwide permit, or by regional conditions. A pre-construction notification may be voluntarily submitted in cases where pre-construction notification is not required and the project proponent wants confirmation that the activity is authorized by nationwide permit.

Preservation: The removal of a threat to, or preventing the decline of, aquatic resources by an action in or near those aquatic resources. This term includes activities commonly associated with the protection and maintenance of aquatic resources through the implementation of appropriate legal and physical mechanisms. Preservation does not result in a gain of aquatic resource area or functions.

Re-establishment: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former aquatic resource. Re-establishment results in rebuilding a former aquatic resource and results in a gain in aquatic resource area and functions.

Rehabilitation: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of repairing natural/historic functions to a degraded aquatic resource. Rehabilitation results in a gain in aquatic resource function, but does not result in a gain in aquatic resource area.

Restoration: The manipulation of the physical, chemical, or biological characteristics of a site with the goal of returning natural/historic functions to a former or degraded aquatic resource. For the purpose of tracking net gains in aquatic resource area, restoration is divided into two categories: re-establishment and rehabilitation.

Riffle and pool complex: Riffle and pool complexes are special aquatic sites under the 404(b)(1) Guidelines. Riffle and pool complexes sometimes characterize steep gradient sections of streams. Such stream sections are recognizable by their hydraulic characteristics. The rapid movement of water over a course substrate in riffles results in a rough flow, a turbulent surface, and high dissolved oxygen levels in the water. Pools are deeper areas associated with riffles. A slower stream velocity, a streaming flow, a smooth surface, and a finer substrate characterize pools.

Riparian areas: Riparian areas are lands adjacent to streams, lakes, and estuarine-marine shorelines. Riparian areas are transitional between terrestrial and aquatic ecosystems, through

which surface and subsurface hydrology connects riverine, lacustrine, estuarine, and marine waters with their adjacent wetlands, non-wetland waters, or uplands. Riparian areas provide a variety of ecological functions and services and help improve or maintain local water quality. (See general condition 23.)

Shellfish seeding: The placement of shellfish seed and/or suitable substrate to increase shellfish production. Shellfish seed consists of immature individual shellfish or individual shellfish attached to shells or shell fragments (i.e., spat on shell). Suitable substrate may consist of shellfish shells, shell fragments, or other appropriate materials placed into waters for shellfish habitat.

Single and complete linear project: A linear project is a project constructed for the purpose of getting people, goods, or services from a point of origin to a terminal point, which often involves multiple crossings of one or more waterbodies at separate and distant locations. The term "single and complete project" is defined as that portion of the total linear project proposed or accomplished by one owner/developer or partnership or other association of owners/developers that includes all crossings of a single water of the United States (i.e., a single waterbody) at a specific location. For linear projects crossing a single or multiple waterbodies several times at separate and distant locations, each crossing is considered a single and complete project for purposes of NWP authorization. However, individual channels in a braided stream or river, or individual arms of a large, irregularly shaped wetland or lake, etc., are not separate waterbodies, and crossings of such features cannot be considered separately.

Single and complete non-linear project: For non-linear projects, the term "single and complete project" is defined at 33 CFR 330.2(i) as the total project proposed or accomplished by one owner/developer or partnership or other association of owners/developers. A single and complete non-linear project must have independent utility (see definition of "independent utility"). Single and complete non-linear projects may not be "piecemealed" to avoid the limits in an NWP authorization.

Stormwater management: Stormwater management is the mechanism for controlling stormwater runoff for the purposes of reducing downstream erosion, water quality degradation, and flooding and mitigating the adverse effects of changes in land use on the aquatic environment.

Stormwater management facilities: Stormwater management facilities are those facilities, including but not limited to, stormwater retention and detention ponds and best management practices, which retain water for a period of time to control runoff and/or improve the quality (i.e., by reducing the concentration of nutrients, sediments, hazardous substances and other pollutants) of stormwater runoff.

Stream bed: The substrate of the stream channel between the ordinary high water marks. The substrate may be bedrock or inorganic particles that range in size from clay to boulders. Wetlands contiguous to the stream bed, but outside of the ordinary high water marks, are not considered part of the stream bed.

Stream channelization: The manipulation of a stream's course, condition, capacity, or location that causes more than minimal interruption of normal stream processes. A channelized stream remains a water of the United States.

Structure: An object that is arranged in a definite pattern of organization. Examples of structures include, 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 manmade obstacle or obstruction.

Tidal wetland: A tidal wetland is a wetland (i.e., water of the United States) that is inundated by tidal waters. The definitions of a wetland and tidal waters can be found at 33 CFR 328.3(b) and 33 CFR 328.3(f), respectively. Tidal waters rise and fall in a predictable and measurable rhythm or cycle due to the gravitational pulls of the moon and sun. Tidal waters end where the rise and fall of the water surface can no longer be practically measured in a predictable rhythm due to masking by other waters, wind, or other effects. Tidal wetlands are located channelward of the high tide line, which is defined at 33 CFR 328.3(d).

Vegetated shallows: Vegetated shallows are special aquatic sites under the 404(b)(1) Guidelines. They are areas that are permanently inundated and under normal circumstances have rooted aquatic vegetation, such as seagrasses in marine and estuarine systems and a variety of vascular rooted plants in freshwater systems.

Waterbody: For purposes of the NWPs, a waterbody is a jurisdictional water of the United States. If a jurisdictional wetland is adjacent – meaning bordering, contiguous, or neighboring – to a waterbody determined to be a water of the United States under 33 CFR 328.3(a)(1)-(6), that waterbody and its adjacent wetlands are considered together as a single aquatic unit (see 33 CFR 328.4(c)(2)). Examples of "waterbodies" include streams, rivers, lakes, ponds, and wetlands.

Final Regional Conditions 2012

NOTICE ABOUT WEB LINKS IN THIS DOCUMENT:
The web links (both internal to our District and any external links to collaborating agencies) in this document are valid at the time of publication. However, the Wilmington District Regulatory Program web page addresses, as with other agency web sites, may change over the timeframe of the five-year Nationwide Permit renewal cycle, in response to policy mandates or technology advances. While we will make every effort to check on the integrity of our web links and provide re-direct pages whenever possible, we ask that you report any broken links to us so we can keep the page information current and usable. We apologize in advanced for any broken links that you may encounter, and we ask that you navigate from the regulatory home page (wetlands and stream permits) of the Wilmington District Corps of Engineers, to the "Permits" section of our web site to find links for pages that cannot be found by clicking directly on the listed web link in this document.

Final 2012 Regional Conditions for Nationwide Permits (NWP) in the Wilmington District

1.0 Excluded Waters

The Corps has identified waters that will be excluded from the use of all NWP's during certain timeframes. These waters are:

1.1 Anadromous Fish Spawning Areas

Waters of the United States identified by either the North Carolina Division of Marine Fisheries (NCDMF) or the North Carolina Wildlife Resources Commission (NCWRC) as anadromous fish spawning areas are excluded during the period between February 15 and June 30, without prior written approval from NCDMF or NCWRC and the Corps.

1.2 Trout Waters Moratorium

Waters of the United States in the twenty-five designated trout counties of North Carolina are excluded during the period between October 15 and April 15 without prior written approval from the NCWRC. (See Section 2.7 for a list of the twenty-five trout counties).

1.3 Sturgeon Spawning Areas as Designated by the National Marine Fisheries Service (NMFS)

Waters of the United States designated as sturgeon spawning areas are excluded during the period between February 1 and June 30, without prior written approval from the NMFS.

*** 2.0 Waters Requiring Additional Notification**

The Corps has identified waters that will be subject to additional notification requirements for activities authorized by all NWP's. These waters are:

*** 2.1 Western NC Counties that Drain to Designated Critical Habitat**

For proposed activities within Waters of the U.S. that require a Pre-Construction Notification pursuant to General Condition 31 (PCN) and are located in the sixteen counties listed below, applicants must provide a copy of the PCN to the US Fish and Wildlife Service, 160 Zillicoa Street, Asheville, North Carolina 28801. This PCN must be sent concurrently to the US Fish and Wildlife Service and the Corps Asheville Regulatory Field Office. Please see General Condition 18 for specific notification requirements related to Federally Endangered Species and the following website for information on the location of designated critical habitat.

Counties with tributaries that drain to designated critical habitat that require notification to the Asheville US Fish and Wildlife Service: Avery, Cherokee, Forsyth, Graham, Haywood, Henderson, Jackson, Macon Mecklenburg, Mitchell, Stokes, Surry, Swain, Transylvania, Union and Yancey.

Website and office addresses for Endangered Species Act Information:

The Wilmington District has developed the following website for applicants which provides guidelines on how to review linked websites and maps in order to fulfill NWP general condition 18 requirements: http://www.saw.usace.army.mil/wetlands/ESA

Applicants who do not have internet access may contact the appropriate US Fish and Wildlife Service offices listed below or the US Army Corps of Engineers at (910) 251- 4633:

US Fish and Wildlife Service
Asheville Field Office
160 Zillicoa Street
Asheville, NC 28801
Telephone: (828) 258-3939

Asheville US Fish and Wildlife Service Office counties: All counties west of and including Anson, Stanly, Davidson, Forsyth and Stokes Counties

US Fish and Wildlife Service
Raleigh Field Office
Post Office Box 33726
Raleigh, NC 27636-3726
Telephone: (919) 856-4520

Raleigh US Fish and Wildlife Service Office counties: all counties east of and including Richmond, Montgomery, Randolph, Guilford, and Rockingham Counties.

* **2.2 Special Designation Waters**

Prior to the use of any NWP in any of the following identified waters and contiguous wetlands in North Carolina, applicants must comply with Nationwide Permit General Condition 31 (PCN). The North Carolina waters and contiguous wetlands that require additional notification requirements are:

"Outstanding Resource Waters" (ORW) or "High Quality Waters" (HQW) as designated by the North Carolina Environmental Management Commission; "Inland Primary Nursery Areas" (IPNA) as designated by the NCWRC; "Contiguous Wetlands" as defined by the North Carolina Environmental Management Commission; or "Primary Nursery Areas" (PNA) as designated by the North Carolina Marine Fisheries Commission.

2.3 Coastal Area Management Act (CAMA) Areas of Environmental Concern

Non-federal applicants for any NWP in a designated "Area of Environmental Concern" (AEC) in the twenty (20) counties of Eastern North Carolina covered by the North Carolina Coastal Area Management Act (CAMA) must also obtain the required CAMA permit. Development activities for non-federal projects may not commence until a copy of the approved CAMA permit is furnished to the appropriate Wilmington District Regulatory Field Office (Wilmington Field Office – 69 Darlington Avenue, Wilmington, NC 28403 or Washington Field Office – 2407 West 5th Street, Washington, NC 27889).

* **2.4 Barrier Islands**

Prior to the use of any NWP on a barrier island of North Carolina, applicants must comply with Nationwide Permit General Condition 31 (PCN).

* **2.5 Mountain or Piedmont Bogs**

Prior to the use of any NWP in a Bog classified by the North Carolina Wetland Assessment Methodology (NCWAM), applicants shall comply with Nationwide Permit General Condition 31 (PCN). The latest version of NCWAM is located on the NC DWQ web site at: http://portal.ncdenr.org/web/wq/swp/ws/pdu/ncwam .

* **2.6 Animal Waste Facilities**

Prior to use of any NWP for construction of animal waste facilities in waters of the US, including wetlands, applicants shall comply with Nationwide Permit General Condition 31 (PCN).

* **2.7 Trout Waters**

Prior to any discharge of dredge or fill material into streams or waterbodies within the twenty-five (25) designated trout counties of North Carolina, the applicant shall comply with Nationwide Permit General Condition 31 (PCN). The applicant shall also provide a copy of the notification to the appropriate NCWRC office to facilitate the determination of any potential

impacts to designated Trout Waters. Notification to the Corps of Engineers will include a statement with the name of the NCWRC biologist contacted, the date of the notification, the location of work, a delineation of wetlands, a discussion of alternatives to working in the mountain trout waters, why alternatives were not selected, and a plan to provide compensatory mitigation for all unavoidable adverse impacts to mountain trout waters.

NCWRC and NC Trout Counties

Western Piedmont Region Coordinator	Alleghany	Caldwell	Watauga
20830 Great Smoky Mtn. Expressway	Ashe	Mitchell	Wilkes
Waynesville, NC 28786	Avery	Stokes	
Telephone: (828) 452-2546	Burke	Surry	

Mountain Region Coordinator	Buncombe	Henderson	Polk
20830 Great Smoky Mtn. Expressway	Cherokee	Jackson	Rutherford
Waynesville, NC 28786	Clay	Macon	Swain
Telephone: (828) 452-2546	Graham	Madison	Transylvania
Fax: (828) 452-7772	Haywood	McDowell	Yancey

3.0 List of Corps Regional Conditions for All Nationwide Permits

The following conditions apply to all Nationwide Permits in the Wilmington District:

3.1 Limitation of Loss of Perennial Stream Bed

NWPs may not be used for activities that may result in the loss or degradation of greater than 300 total linear feet of perennial, intermittent or ephemeral stream, unless the District Commander has waived the 300 linear foot limit for ephemeral and intermittent streams on a case-by-case basis and he determines that the proposed activity will result in minimal individual and cumulative adverse impacts to the aquatic environment. Loss of stream includes the linear feet of stream bed that is filled, excavated, or flooded by the proposed activity. Waivers for the loss of ephemeral and intermittent streams must be in writing and documented by appropriate/accepted stream quality assessments*. This waiver only applies to the 300 linear feet threshold for NWPs.

*NOTE: Applicants should utilize the most current methodology prescribed by Wilmington District to assess stream function and quality. Information can be found at:

http://www.saw.usace.army.mil/wetlands/permits/nwp/nwp2012 (see "Quick Links")

3.2 Mitigation for Loss of Stream Bed

For any NWP that results in a loss of more than 150 linear feet of perennial and/or ephemeral/intermittent stream, the applicant shall provide a mitigation proposal to compensate for more than minimal individual and cumulative adverse impacts to the aquatic environment. For stream losses less than 150 linear feet, that require a PCN, the District Commander may determine, on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effect on the aquatic environment.

3.3 Pre-construction Notification for Loss of Streambed Exceeding 150 Feet.

Prior to use of any NWP for any activity which impacts more than 150 total linear feet of perennial stream or ephemeral/ intermittent stream, the applicant must comply with Nationwide Permit General Condition 31 (PCN). This applies to NWPs that do not have specific notification requirements. If a NWP has specific notification requirements, the requirements of the NWP should be followed.

3.4 Restriction on Use of Live Concrete

For all NWPs which allow the use of concrete as a building material, live or fresh concrete, including bags of uncured concrete, may not come into contact with the water in or entering into waters of the US. Water inside coffer dams or casings that has been in contact with wet concrete shall only be returned to waters of the US when it is no longer poses a threat to aquatic organisms.

3.5 Requirements for Using Riprap for Bank Stabilization

For all NWPs that allow for the use of riprap material for bank stabilization, the following measures shall be applied:

3.5.1. Filter cloth must be placed underneath the riprap as an additional requirement of its use in North Carolina waters.

3.5.2. The placement of riprap shall be limited to the areas depicted on submitted work plan drawings.

3.5.3. The riprap material shall be clean and free from loose dirt or any pollutant except in trace quantities that would not have an adverse environmental effect.

3.5.4. It shall be of a size sufficient to prevent its movement from the authorized alignment by natural forces under normal conditions.

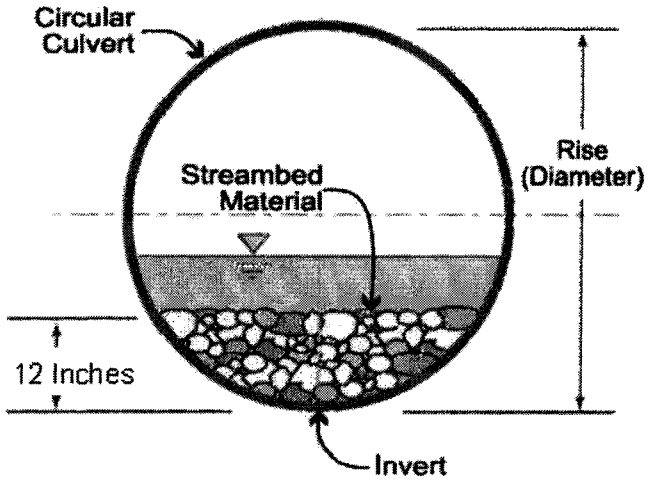
3.5.5. The riprap material shall consist of clean rock or masonry material such as, but not limited to, granite, marl, or broken concrete.

3.5.6. A waiver from the specifications in this Regional Condition may be requested in writing. The waiver will only be issued if it can be demonstrated that the impacts of complying with this Regional condition would result in greater adverse impacts to the aquatic environment.

3.6 Safe Passage Requirements for Culvert Placement

For all NWPs that involve the construction/installation of culverts, measures will be included in the construction/installation that will promote the safe passage of fish and other aquatic organisms. The dimension, pattern, and profile of the stream above and below a pipe or culvert should 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 should be such as to pass the average historical low flow and spring flow without adversely altering flow velocity. Spring flow should be determined from gage data, if available. In the absence of such data, bankfull flow can be used as a comparable level.

In the twenty (20) counties of North Carolina designated as coastal counties by the Coastal Area Management Act (CAMA): All pipes/culverts must be sufficiently sized to allow for the burial of the bottom of the pipe/culvert at least one foot below normal bed elevation when they are placed within the Public Trust Area of Environmental Concern (AEC) and/or the Estuarine Waters AEC as designated by CAMA, and/or all streams appearing as blue lines on United States Geological Survey (USGS) 7.5-minute quadrangle maps.



In all other counties: Culverts greater than 48 inches in diameter will be buried at least one foot below the bed of the stream. Culverts 48 inches in diameter or less shall be buried or placed on the stream bed as practicable and appropriate to maintain aquatic passage, and every effort shall be made to maintain the existing channel slope. The bottom of the culvert must be placed at a

depth below the natural stream bottom to provide for passage during drought or low flow conditions.

Culverts are to be designed and constructed in a manner that minimizes destabilization and head cutting. Destabilizing the channel and head cutting upstream should be considered and appropriate actions incorporated in the design and placement of the culvert.

A waiver from the depth specifications in this condition may be requested in writing. The waiver will be issued if it can be demonstrated that the proposal would result in the least impacts to the aquatic environment.

All counties: Culverts placed within riparian and/or riverine wetlands must be installed in a manner that does not restrict the flow and circulation patterns of waters of the United States. Culverts placed across wetland fills purely for the purposes of equalizing surface water do not have to be buried.

3.7 Notification to NCDENR Shellfish Sanitation Section

Applicants shall notify the NCDENR Shellfish Sanitation Section prior to dredging in or removing sediment from an area closed to shell fishing where the effluent may be released to an area open for shell fishing or swimming in order to avoid contamination from the disposal area and cause a temporary shellfish closure to be made. Such notification shall also be provided to the appropriate Corps of Engineers Regulatory Field Office. Any disposal of sand to the ocean beach should occur between November 1 and April 30 when recreational usage is low. Only clean sand should be used and no dredged sand from closed shell fishing areas may be used. If beach disposal were to occur at times other than stated above or if sand from a closed shell fishing area is to be used, a swimming advisory shall be posted, and a press release shall be issued by the permittee.

3.8 Preservation of Submerged Aquatic Vegetation

Adverse impacts to Submerged Aquatic Vegetation (SAV) are not authorized by any NWP within any of the twenty coastal counties defined by North Carolina's Coastal Area Management Act of 1974 (CAMA).

3.9 Sedimentation and Erosion Control Structures and Measures

3.9.1. All PCNs will identify and describe sedimentation and erosion control structures and measures proposed for placement in waters of the US. The structures and measures should be depicted on maps, surveys or drawings showing location and impacts to jurisdictional wetlands and streams.

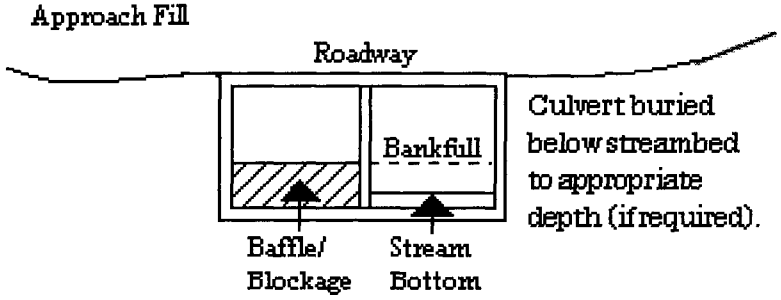
4.5 NWP #14 - Linear Transportation Crossings

4.5.1. If appropriate, applicants shall employ natural channel design (see definition below and NOTE below) to the maximum extent practicable for stream relocations. In the event it is not appropriate to employ natural channel design, any stream relocation shall be considered a permanent impact and the applicant shall provide a mitigation plan to compensate for the loss of aquatic function associated with the proposed activity.

Natural Channel Design: A geomorphologic approach to stream restoration based on an understanding of valley type, general watershed conditions, dimension, pattern, profile, hydrology and sediment transport of natural, stable channels (reference condition) and applying this understanding to the reconstruction of a stable channel.

NOTE: Applicants should reference the "Mitigation" section of the Wilmington District web site for more information regarding appropriate stream design. For projects located within the Coastal Plain ecoregion of North Carolina and within headwater areas across the state, use the specific guidance on coastal plain stream restoration.

4.5.2. Bank-full flows (or less) shall be accommodated through maintenance of the existing bank-full channel cross sectional area. Additional culverts at such crossings shall be allowed only to receive flows exceeding bank-full.



4.5.3. Where adjacent floodplain is available, flows exceeding bank-full should be accommodated by installing culverts at the floodplain elevation.

4.5.4. This NWP authorizes only upland to upland crossings and cannot be used in combination with Nationwide Permit 18 to create an upland within waters of the United States, including wetlands.

4.5.5. This NWP cannot be used for private projects located in tidal waters or tidal wetlands.

4.5.6. Excavation of existing stream channels shall be limited to the minimum necessary to construct or install the proposed culvert. The final width of the impacted streams at the culvert inlet and outlet should be no greater than the original stream width. A waiver from this condition may be requested in writing. The waiver will be issued if it can be demonstrated that it is not practicable to limit the final width of the culvert to that of the impacted stream at the culvert inlet and outlet and the proposed design would result in less impacts to the aquatic environment.

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North Carolina Department of Environment and Natural Resources
Division of Water Quality
Charles Wakild, P.E
Director

Beverly Eaves Perdue
Governor

Dee Freeman
Secretary

September 13, 2012
Wake & Durham Counties
DWQ Project No. 20120377ver.2
TIP No. U-4716

MODIFICATION of APPROVAL of 401 WATER QUALITY CERTIFICATION and JORDAN & NEUSE BUFFER AUTHORIZATIONS, with ADDITIONAL CONDITIONS

Mr. Marc Hamel
NCDOT Rail Division
1553 Mail Service Center
Raleigh, NC 27699-1553

Dear Mr. Hamel:

You have our approval, in accordance with the conditions listed below, for the following revised impacts for the purpose of the Clegg Passing Siding and Hopson Road Grade Separation project in Wake and Durham Counties:

Revised Stream Impacts in the Neuse River & Jordan Lake Basins

Site	Permanent Fill in Intermittent Stream (linear ft)	Temporary Impact in Intermittent Stream (linear ft)	Permanent Fill in Perennial Stream (linear ft)	Temporary Impact in Perennial Stream (linear ft)	Total Stream Impact (linear ft)
1	47	0	0	0	47
2	0	0	103	15	118
4	65	30	0	0	95
Total	**112**	**30**	**103**	**15**	**260**

Total Revised Stream Impact for Project: 260 linear feet.

Note: ***Site 2 is Jordan Lake Basin. Sites 1, 3, and 4 are Neuse River Basin.***

Revised Wetland Impacts in the Neuse River Basin

Site	Permanent Fill (ac)	Excavation (ac)	Mechanized Clearing (ac)	Total Wetland Impact (ac)
1	0.02	0.02	0.01	0.05
3	0.01	0.01	0	0.02
Total	**0.03**	**0.03**	**0.01**	**0.07**

Total Revised Wetland Impact for Project: 0.07 acres.

SEP 20 2012
NCDOT Rail Division

Transportation and Permitting Unit
1650 Mail Service Center, Raleigh, North Carolina 27699-1617
Location: 512 N. Salisbury St. Raleigh, North Carolina 27604
Phone: 919-807-6300 \ FAX: 919-807-6492
Internet: www.ncwaterquality.org

An Equal Opportunity \ Affirmative Action Employer

One NorthCarolina Naturally

Revised Neuse & Jordan Riparian Buffer Impacts

Site	Zone 1 Impact (sq ft)	*minus* Wetlands in Zone 1 (sq ft)	= Zone 1 Buffers (not wetlands) (sq ft)	Zone 1 Buffer Mitigation Required (using 3:1 ratio)	Zone 2 Impact (sq ft)	*minus* Wetlands in Zone 2 (sq ft)	= Zone 2 Buffers (not wetlands) (sq ft)	Zone 2 Buffer Mitigation Required (using 1.5:1 ratio)
1	4377	0	4377	N/A	2933	0	2933	N/A
2	9228	0	9228	27684	6291	0	6291	9437
4	7240	0	7240	N/A	4500	0	4500	N/A
Totals	**20845**	**0**	**20845**	**27684**	**13724**	**0**	**13724**	**9437**

* n/a = Total for Site is less than 1/3 acre and 150 linear feet of impact, no mitigation required

Total Revised Buffer Impact for Project: 34569 square feet.

The project shall be constructed in accordance with your application dated received April 18, 2012 and modification requests received July 30, 2012 and September 5, 2012. After reviewing your application, we have decided that these impacts are covered by General Water Quality Certification Number 3886. This certification corresponds to the Nationwide Permit 14 issued by the Corps of Engineers. This approval is also valid for the Neuse Riparian Buffer Rules (15A NCAC 2B.0233) and Jordan Lake Riparian Buffer Rules (15A NCAC 2B.0267). In addition, you should acquire any other federal, state or local permits before you proceed with your project including (but not limited to) Sediment and Erosion Control, Non-Discharge and Water Supply Watershed regulations. This approval will expire with the accompanying 404 permit. **This certification replaces the one issued April 23, 2012.**

This approval is valid solely for the purpose and design described in your application (unless modified below). Should your project change, you must notify the NCDWQ and submit a new application. If the property is sold, the new owner must be given a copy of this Certification and approval letter, and is thereby responsible for complying with all the conditions. If total wetland fills for this project (now or in the future) exceed one acre, or of total impacts to streams (now or in the future) exceed 150 linear feet, compensatory mitigation may be required as described in 15A NCAC 2H .0506 (h) (6) and (7). Additional buffer impacts may require compensatory mitigation as described in 15A NCAC 2B.0242(9). And 15A NCAC 2B.0268. For this approval to remain valid, you must adhere to the conditions listed in the attached certification and any additional conditions listed below.

Conditions of Certification:

* 1. Compensatory mitigation for impacts to 9228 square feet of protected riparian buffers in Zone 1 and 6291 square feet of protected riparian buffers in Zone 2 shall be required. We understand that you have chosen to perform compensatory mitigation for impacts to protected buffers through use of the North Carolina Ecosystem Enhancement Program (EEP). Mitigation for unavoidable impacts to Jordan Riparian Buffers shall be provided in the Jordan lake Basin and done in accordance with 15A NCAC 2B.0267. EEP has indicated in a letter dated August 30, 2012 that they will assume responsibility for satisfying the compensatory mitigation requirements for the above-referenced project, in accordance with the Tri-Party MOA signed on July 22, 2003 and the Dual-Party MOA signed on April 12, 2004.

2. Unless otherwise approved in this certification, placement of culverts and other structures in open waters and streams, shall be placed below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than 48 inches, to allow low flow passage of water and aquatic life. Design and placement of culverts and other structures including temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands or streambeds or banks, adjacent to or upstream and down stream of the above structures. The applicant is required to provide evidence that the equilibrium is being maintained if requested in writing by NCDWQ. If this condition is unable to be met due to bedrock or other limiting features encountered during construction, please contact NCDWQ for guidance on how to proceed and to determine whether or not a permit modification will be required.

3. Riprap shall not be placed in the active thalweg channel or placed in the streambed in a manner that precludes aquatic life passage. Bioengineering boulders or structures should be properly designed, sized and installed.

4. For any streams being impacted due to site dewatering activities, the site shall be graded to its preconstruction contours and revegetated with appropriate native species.

5. All stormwater runoff shall be directed as sheetflow through stream buffers at nonerosive velocities, unless otherwise approved by this certification.

6. All riparian buffers impacted by the placement of temporary fill or clearing activities shall be restored to the preconstruction contours and revegetated. Maintained buffers shall be permanently revegetated with non-woody species by the end of the growing season following completion of construction. For the purpose of this condition, maintained buffer areas are defined as areas within the transportation corridor that will be subject to regular NCDOT maintenance activities including mowing. The area with non-maintained buffers shall be permanently revegetated with native woody species before the next growing season following completion of construction.

7. Pursuant to 15A NCAC 2B.0233(6), sediment and erosion control devices shall not be placed in Zone 1 of any Neuse Buffer without prior approval by NCDWQ. At this time, NCDWQ has approved no sediment and erosion control devices in Zone 1, outside of the approved project impacts, anywhere on this project. Moreover, sediment and erosion control devices shall be allowed in Zone 2 of the buffers provided that Zone 1 is not compromised and that discharge is released as diffuse flow.

8. If concrete is used during construction, a dry work area shall be maintained to prevent direct contact between curing concrete and stream water. 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.

9. During the construction of the project, no staging of equipment of any kind is permitted in waters of the U.S., or protected riparian buffers.

10. The dimension, pattern and profile of the stream above and below the crossing shall not be modified. Disturbed floodplains and streams shall be restored to natural geomorphic conditions.

11. The use of rip-rap above the Normal High Water Mark shall be minimized. Any rip-rap placed for stream stabilization shall be placed in stream channels in such a manner that it does not impede aquatic life passage.

12. All work in or adjacent to stream waters shall be conducted in a dry work area. Approved BMP measures from the most current version of NCDOT Construction and Maintenance Activities manual such as sandbags, rock berms, cofferdams and other diversion structures shall be used to prevent excavation in flowing water.

13. Heavy equipment shall be operated from the banks rather than in the stream channel in order to minimize sedimentation and reduce the introduction of other pollutants into the stream.

14. All mechanized equipment operated near surface waters must be regularly inspected and maintained to prevent contamination of stream waters from fuels, lubricants, hydraulic fluids, or other toxic materials.

15. No rock, sand or other materials shall be dredged from the stream channel except where authorized by this certification.

16. Discharging hydroseed mixtures and washing out hydroseeders and other equipment in or adjacent to surface waters is prohibited.

17. The permittee and its authorized agents shall conduct its 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. If NCDWQ determines that such standards or laws are not being met (including the failure to sustain a designated or achieved use) or that State or federal law is being violated, or that further conditions are necessary to assure compliance, NCDWQ may reevaluate and modify this certification.

18. All fill slopes located in jurisdictional wetlands shall be placed at slopes no flatter than 3:1, unless otherwise authorized by this certification..

19. A copy of this Water Quality Certification shall be maintained on the construction site at all times. In addition, the Water Quality Certification and all subsequent modifications, if any, shall be maintained with the on-site project manager.

20. The outside buffer, wetland or water boundary located within the construction corridor approved by this authorization shall be clearly marked by highly visible fencing prior to any land disturbing activities. Impacts to areas within the fencing are prohibited unless otherwise authorized by this certification.

21. The issuance of this certification does not exempt the Permittee from complying with any and all statutes, rules, regulations, or ordinances that may be imposed by other government agencies (i.e. local, state, and federal) having jurisdiction, including but not limited to applicable buffer rules, stormwater management rules, soil erosion and sedimentation control requirements, etc.

22. The Permittee shall report any violations of this certification to the Division of Water Quality within 24 hours of discovery.

* 23. Upon completion of the project (including any impacts at associated borrow or waste sites), the NCDOT project manager shall complete and return the enclosed "Certification of Completion Form" to notify NCDWQ when all work included in the 401 Certification has been completed.

24. Native riparian vegetation (i.e., trees and shrubs native to your geographic region) must be reestablished in the riparian areas within the construction limits of the project by the end of the growing season following completion of construction.

25. There shall be no excavation from, or waste disposal into, jurisdictional wetlands or waters associated with this permit without appropriate modification. Should waste or borrow sites, or access roads to waste or borrow sites, be located in wetlands or streams, compensatory mitigation will be required since that is a direct impact from road construction activities.

26. Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices in order to protect surface waters standards:

a. The erosion and sediment control measures for the project must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Sediment and Erosion Control Planning and Design Manual.*
b. The design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal, or exceed, the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual.* The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.
c. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual.*
d. The reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act.

27. Sediment and erosion control measures shall not be placed in wetlands or waters unless otherwise approved by this Certification.

* 28. The Permittee shall ensure that the final design drawings adhere to the permit and to the permit drawings submitted for approval.

If you wish to contest any statement in the attached Certification you must file a petition for an administrative hearing. You may obtain the petition form from the office of Administrative hearings. You must file the petition with the office of Administrative Hearings within sixty (60) days of receipt of this notice. A petition is considered filed when it is received in the office of Administrative Hearings during normal office hours. The Office of Administrative Hearings accepts filings Monday through Friday between the hours of 8:00am and 5:00pm, except for official state holidays. The original and one (1) copy of the petition must be filed with the Office of Administrative Hearings.

The petition may be faxed-provided the original and one copy of the document is received by the Office of Administrative Hearings within five (5) business days following the faxed transmission.
The mailing address for the Office of Administrative Hearings is:

Office of Administrative Hearings
6714 Mail Service Center
Raleigh, NC 27699-6714
Telephone: (919)-733-2698, Facsimile: (919)-733-3478

A copy of the petition must also be served on DENR as follows:

Ms. Mary Penny Thompson, General Counsel
Department of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

This letter completes the review of the Division of Water Quality under Section 401 of the Clean Water Act. If you have any questions, please contact Rob Ridings at 919-807-6403.

Sincerely,



for Charles Wakild
Director

Cc: Eric Alsmeyer, US Army Corps of Engineers, Raleigh Field Office
Beth Harmon, Ecosystem Enhancement Program
Chris Murray, NCDOT Division 5 Environmental Officer
Elizabeth Scherrer, Atkins North America, Inc.
File Copy

P-36

NCDWQ Project No.: _____ **County:** _____

Applicant: _____

Project Name: _____

Date of Issuance of 401 Water Quality Certification: _____

Certificate of Completion

Upon completion of all work approved within the 401 Water Quality Certification or applicable Buffer Rules, and any subsequent modifications, the applicant is required to return this certificate to the 401 Transportation Permitting Unit, North Carolina Division of Water Quality, 1650 Mail Service Center, Raleigh, NC, 27699-1650. This form may be returned to NCDWQ by the applicant, the applicant's authorized agent, **or** the project engineer. It is not necessary to send certificates from all of these.

Applicant's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date: _____

Agent's Certification

I, _____, hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature: _____ Date:_____

Engineer's Certification

_____ Partial _____ Final

I, _____, as a duly registered Professional Engineer in the State of North Carolina, having been authorized to observe (periodically, weekly, full time) the construction of the project,for the Permittee hereby state that, to the best of my abilities, due care and diligence was used in the observation of the construction such that the construction was observed to be built within substantial compliance and intent of the 401 Water Quality Certification and Buffer Rules, the approved plans and specifications, and other supporting materials.

Signature _____ Registration No. _____

Date _____

Water Quality Certification No. 3886

GENERAL CERTIFICATION FOR PROJECTS ELIGIBLE FOR U.S. ARMY CORPS OF ENGINEERS NATIONWIDE PERMIT NUMBER 14 (LINEAR TRANSPORTATION PROJECTS) AND REGIONAL GENERAL PERMIT 198200031 (WORK ASSOCIATED WITH BRIDGE CONSTRUCTION, MAINTENANCE OR REPAIR CONDUCTED BY NCDOT OR OTHER GOVERNMENT AGENCIES) AND RIPARIAN AREA PROTECTION RULES (BUFFER RULES)

Water Quality Certification Number 3886 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 Division of Water Quality (DWQ) Regulations in 15A NCAC 02H .0500 and 15A NCAC 02B .0200 for the discharge of fill material to waters and adjacent wetland areas or to wetland areas that are not a part of the surface tributary system to interstate waters or navigable waters of the United States (as described in 33 CFR 330 Appendix A (B) (14) of the Corps of Engineers regulations (Nationwide Permit No. 14 and Regional General Permit 198200031) and for the Riparian Area Protection Rules (Buffer Rules) in 15A NCAC 02B .0200.

The State of North Carolina certifies that the specified category of activity will not violate 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.

* Any proposed fill or modification of wetlands and/or waters, including streams, under this General Certification requires application to, and written approval from the Division of Water Quality except for the single family lot exemption described below.

Activities meeting any one (1) of the following thresholds or circumstances require *written approval* for a 401 Water Quality Certification from the Division of Water Quality (the "Division"):

a) Any temporary or permanent impacts to wetlands, open waters and/or streams, including stream relocations, except for construction of a driveway to a single family lot as long as the driveway involves *less than 25 feet* of temporary and/or permanent stream channel impacts, including any in-stream stabilization needed for the crossing; or

b) Any impact associated with a high density project (as defined in Item (A)(iv) of the ***401 Stormwater Requirements***) that is not subject to either a state stormwater program (such as, but not limited to, Coastal Counties, HQW, ORW or state-implemented Phase II NPDES) or a certified community's stormwater program; or

c) Any impact associated with a Notice of Violation or an enforcement action for violation(s) of DWQ Wetland Rules (15A NCAC 02H .0500), Isolated Wetland Rules (15A NCAC 02H .1300), DWQ Surface Water or Wetland Standards, or Riparian Buffer Rules (15A NCAC 02B .0200); or

* d) Any impacts to streams and/or buffers in the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman, Jordan or Goose Creek Watersheds (or any other basin or watershed with Riparian Area Protection Rules [Buffer Rules] in effect at the time of application) *unless* the activities are listed as "EXEMPT" from these rules or a Buffer Authorization Certificate is issued through N.C. Division of Coastal Management (DCM) delegation for "ALLOWABLE" activities.

* In accordance with North Carolina General Statute 143-215.3D(e), written approval for a 401 Water Quality General Certification must include the appropriate fee. If a project also requires a CAMA Permit, then one payment to both agencies shall be submitted and will be the higher of the two fees.

Activities included in this General Certification that do not meet one of the thresholds listed above do not require written approval from the Division as long as they comply with

Water Quality Certification No. 3886

the Conditions of Certification listed below. If any of these Conditions cannot be met, then written approval from the Division is required.

Conditions of Certification:

1. No Impacts Beyond those Authorized in the Written Approval or Beyond the Threshold of Use of this Certification

   No waste, spoil, solids, or fill of any kind shall occur in wetlands, waters, or riparian areas beyond the footprint of the impacts depicted in the Pre-Construction Notification, as authorized in the written approval from the Division or beyond the thresholds established for use of this Certification without written authorization, including incidental impacts. All construction activities, including the design, installation, operation, and maintenance of sediment and erosion control Best Management Practices shall be performed so that no violations of state water quality standards, statutes, or rules occur. Approved plans and specifications for this project are incorporated by reference and are enforceable parts of this permit.

2. Standard Erosion and Sediment Control Practices

   Erosion and sediment control practices must be in full compliance with all specifications governing the proper design, installation and operation and maintenance of such Best Management Practices and if applicable, comply with the specific conditions and requirements of the NPDES Construction Stormwater Permit issued to the site:

   a. Design, installation, operation, and maintenance of the sediment and erosion control measures must be such that they equal or exceed the requirements specified in the most recent version of the *North Carolina Sediment and Erosion Control Manual.* The devices shall be maintained on all construction sites, borrow sites, and waste pile (spoil) projects, including contractor-owned or leased borrow pits associated with the project.

   b. For borrow pit sites, the erosion and sediment control measures must be designed, installed, operated, and maintained in accordance with the most recent version of the *North Carolina Surface Mining Manual.*

   c. Reclamation measures and implementation must comply with the reclamation in accordance with the requirements of the Sedimentation Pollution Control Act and the Mining Act of 1971.

   d. Sufficient materials required for stabilization and/or repair of erosion control measures and stormwater routing and treatment shall be on site at all times.

   e. If the project occurs in waters or watersheds classified as Primary Nursery Areas (PNAs), SA, WS-I, WS-II, High Quality (HQW), or Outstanding Resource (ORW) waters, then the sedimentation and erosion control designs must comply with the requirements set forth in 15A NCAC 04B .0124, *Design Standards in Sensitive Watersheds.*

Water Quality Certification No. 3886

3. No Sediment and Erosion Control Measures in Wetlands or Waters

   Sediment and erosion control measures shall not be placed in wetlands or waters. Exceptions to this condition require application submittal to and written approval by the Division. If placement of sediment and erosion control devices in wetlands and waters is unavoidable, then design and placement of temporary erosion control measures shall not be conducted in a manner that may result in dis-equilibrium of wetlands, stream beds, or banks, adjacent to or upstream and downstream of the above structures. All sediment and erosion control devices shall be removed and the natural grade restored within two (2) months of the date that the Division of Land Resources (DLR) or locally delegated program has released the specific area within the project.

4. Construction Stormwater Permit NCG010000

   An NPDES Construction Stormwater Permit is required for construction projects that disturb one (1) or more acres of land. This Permit allows stormwater to be discharged during land disturbing construction activities as stipulated in the conditions of the permit. If your project is covered by this permit, full compliance with permit conditions including the erosion & sedimentation control plan, inspections and maintenance, self-monitoring, record keeping and reporting requirements is required. A copy of the general permit (NCG010000), inspection log sheets, and other information may be found at http://portal.ncdenr.org/web/wq/ws/su/npdessw#tab-w .

   The North Carolina Department of Transportation (NCDOT) shall be required to be in full compliance with the conditions related to construction activities within the most recent version of their individual NPDES (NCS000250) stormwater permit.

5. Construction Moratoriums and Coordination

   If activities must occur during periods of high biological activity (i.e. sea turtle nesting, fish spawning, or bird nesting), then biological monitoring may be required at the request of other state or federal agencies and coordinated with these activities.

   All moratoriums on construction activities established by the NC Wildlife Resources Commission (WRC), US Fish and Wildlife Service (USFWS), NC Division of Marine Fisheries (DMF), or National Marine Fisheries Service (NMFS) to lessen impacts on trout, anadromous fish, larval/post-larval fishes and crustaceans, or other aquatic species of concern shall be implemented. Exceptions to this condition require written approval by the resource agency responsible for the given moratorium.

   Work within the twenty-five (25) designated trout counties or identified state or federal endangered or threatened species habitat shall be coordinated with the appropriate WRC, USFWS, NMFS, and/or DMF personnel.

6. Work in the Dry

   All work in or adjacent to stream waters shall be conducted so that the flowing stream does not come in contact with the disturbed area. Approved best management practices from the most current version of the NC Sediment and Erosion Control Manual, or the NC DOT Construction and Maintenance Activities Manual, such as sandbags, rock berms, cofferdams, and other diversion structures shall be used to minimize excavation in flowing water. Exceptions to this condition require application submittal to and written approval by the Division.

7. Riparian Area Protection (Buffer) Rules

   Activities located in the protected riparian areas (whether jurisdictional wetlands or not), within the Neuse, Tar-Pamlico, or Catawba River Basins or in the Randleman, Jordan, or Goose Creek Watersheds (or any other basin or watershed with buffer rules) shall be limited to "uses" identified within and constructed in accordance with 15A NCAC 02B .0233, .0259, .0243, .0250, .0267 and .0605, and shall be located, designed, constructed, and maintained to have minimal disturbance to protect water quality to the maximum extent practicable through the use of best management practices. All buffer rule requirements, including diffuse flow requirements, must be met.

8. If concrete is used during the construction, then all necessary measures shall be taken to prevent direct contact between uncured or curing concrete and waters of the state. Water that inadvertently contacts uncured concrete shall not be discharged to waters of the state due to the potential for elevated pH and possible aquatic life/ fish kills.

9. Bridge deck drains shall not discharge directly into the stream. Stormwater shall be directed across the bridge and pre-treated through site-appropriate means (grassed swales, pre-formed scour holes, vegetated buffers, etc.) before entering the stream. Please refer to the most current version of *Stormwater Best Management Practices*. Exceptions to this condition require written approval by the Division.

10. Compensatory Mitigation

    In accordance with 15A NCAC 02H .0506 (h), compensatory mitigation may be required for losses of equal to or greater than 150 linear feet of streams (intermittent and perennial) and/or equal to or greater than one (1) acre of wetlands. For linear public transportation projects, impacts equal to or exceeding 150 linear feet per stream shall require mitigation.

    Buffer mitigation may be required for any project with Buffer Rules in effect at the time of application for activities classified as "Allowable with Mitigation" or "Prohibited" within the Table of Uses.

    A determination of buffer, wetland, and stream mitigation requirements shall be made for any General Water Quality Certification for this Nationwide and/or Regional General Permit. Design and monitoring protocols shall follow the US Army Corps of Engineers Wilmington District *Stream Mitigation Guidelines* (April 2003) or its subsequent updates. Compensatory mitigation plans shall be submitted to the Division for written approval as required in those protocols. The mitigation plan must be implemented and/or constructed before any impacts occur on site. Alternatively, the Division will accept payment into an in-lieu fee program or a mitigation bank. In these cases, proof of payment shall be provided to the Division before any impacts occur on site.

11. Relocated stream designs should include the same dimensions, patterns, and profiles as the existing channel (or a stable reference reach if the existing channel is unstable), to the maximum extent practical. The new channel should be constructed in the dry and water shall not be turned into the new channel until the banks are stabilized. Vegetation used for bank stabilization shall be limited to native woody species, and should include establishment of a 30-foot wide wooded and an adjacent 20-foot wide vegetated buffer on both sides of the relocated channel to the maximum extent practical. A transitional phase incorporating appropriate erosion control matting materials and seedling establishment is allowable, however matting that incorporates plastic mesh and/or plastic twine shall not be used in wetlands, riparian buffers or floodplains as recommended by the North Carolina Sediment and Erosion Control Manual. Rip-rap, A-Jacks, concrete, gabions or other hard structures may be allowed if it is necessary to maintain the physical integrity of the stream; however, the applicant must provide written justification and any calculations used to determine the extent of rip-rap coverage. Please note that if the stream relocation is conducted as a stream restoration as defined in the US Army Corps of Engineers Wilmington District, April 2003 *Stream Mitigation Guidelines* (or its subsequent updates), the restored length may be used as compensatory mitigation for the impacts resulting from the relocation.

12. Stormwater Management Plan Requirements

    All applications shall address stormwater management throughout the entire project area per the 401 Stormwater Requirements, referenced herein as "**Attachment A**" at the end of this Certification.

13. Placement of Culverts and Other Structures in Waters and Wetlands

    Culverts required for this project shall be designed and installed in such a manner that the original stream profiles are not altered and allow for aquatic life movement during low flows. Existing stream dimensions (including the cross section dimensions, pattern, and longitudinal profile) must be maintained above and below locations of each culvert.

    Placement of culverts and other structures in waters and streams must be below the elevation of the streambed by one foot for all culverts with a diameter greater than 48 inches, and 20 percent of the culvert diameter for culverts having a diameter less than or equal to 48 inches, to allow low flow passage of water and aquatic life.

    When topographic constraints indicate culvert slopes of greater than 5%, culvert burial is not required, provided that all alternative options for flattening the slope have been investigated and aquatic life movement/ connectivity has been provided when possible (rock ladders, crossvanes, etc). Notification to the Division including supporting documentation to include a location map of the culvert, culvert profile drawings, and slope calculations shall be provided to the Division 60 days prior to the installation of the culvert.

    When bedrock is present in culvert locations, culvert burial is not required provided that there is sufficient documentation of the presence of bedrock. Notification to the Division including supporting documentation such as, but not limited to, a location map of the culvert, geotechnical reports, photographs, etc shall be provided to the Division a minimum of 60 days prior to the installation of the culvert. If bedrock is discovered during construction, then the Division shall be notified by phone or email within 24 hours of discovery.

    If other site-specific topographic constraints preclude the ability to bury the culverts as described above and/or it can be demonstrated that burying the culvert would result in destabilization of the channel, then exceptions to this condition require application submittal to, and written approval by, the Division of Water Quality, regardless of the total impacts to streams or wetlands from the project.

Installation of culverts in wetlands must ensure continuity of water movement and be designed to adequately accommodate high water or flood conditions. Additionally, when roadways, causeways, or other fill projects are constructed across FEMA-designated floodways or wetlands, openings such as culverts or bridges must 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 must be used where practicable instead of riprap or other bank hardening methods.

14. All temporary fill and culverts shall be removed and the impacted area returned to natural conditions within 60 days of the determination that the temporary impact is no longer necessary. The impacted areas shall be restored to original grade, including each stream's original cross sectional dimensions, plan form pattern, and longitudinal bed and bed profile, and the various sites shall be stabilized with natural woody vegetation (except for the approved maintenance areas) and restored to prevent erosion.

15. All temporary pipes/ culverts/ riprap pads etc, shall be installed in all streams as outlined in the most recent edition of the *North Carolina Sediment and Erosion Control Planning and Design Manual* or the *North Carolina Surface Mining Manual* so as not to restrict stream flow or cause dis-equilibrium during use of this General Certification.

16. Any riprap required for proper culvert placement, stream stabilization, or restoration of temporarily disturbed areas shall be restricted to the area directly impacted by the approved construction activity. All rip-rap shall buried and/or "keyed in" such that the original stream elevation and streambank contours are restored and maintained. Placement of rip-rap or other approved materials shall not result in de-stabilization of the stream bed or banks upstream or downstream of the area.

17. Any rip-rap used for stream stabilization shall be of a size and density so as not to be able to be carried off by wave, current action, or stream flows and consist of clean rock or masonry material free of debris or toxic pollutants. Rip-rap shall not be installed in the streambed except in specific areas required for velocity control and to ensure structural integrity of bank stabilization measures.

18. A one-time application of fertilizer to re-establish vegetation is allowed in disturbed areas including riparian buffers, but is restricted to no closer than 10 feet from top of bank of streams. Any fertilizer application must comply with all other Federal, State and Local regulations.

19. If this Water Quality Certification is used to access building sites, then all lots owned by the applicant must be buildable without additional impacts to streams or wetlands. The applicant is required to provide evidence that the lots are buildable without requiring additional impacts to wetlands, waters, or buffers if required to do so in writing by the Division. For road construction purposes, this Certification shall only be utilized from natural high ground to natural high ground.

20. Deed notifications or similar mechanisms shall be placed on all retained jurisdictional wetlands, waters, and protective buffers within the project boundaries in order to assure compliance for future wetland, water, and buffer impact. These mechanisms shall be put in place at the time of recording of the property or of individual lots, whichever is appropriate. A sample deed notification can be downloaded from the 401/Wetlands Unit web site at http://portal.ncdenr.org/web/wq/swp/ws/401/certsandpermits/apply/forms. The text of the sample deed notification may be modified as appropriate to suit to a specific project. Documentation of deed notifications shall be provided to the Division upon request.

Water Quality Certification No. 3886

* 21. If an environmental document is required under the National or State Environmental Policy Act (NEPA or SEPA), then this General Certification is not valid until a Finding of No Significant Impact (FONSI) or Record of Decision (ROD) is issued by the State Clearinghouse.

22. In the twenty (20) coastal counties, the appropriate DWQ Regional Office must be contacted to determine if Coastal Stormwater Regulations will be required.

23. This General Certification does not relieve the applicant of the responsibility to obtain all other required Federal, State, or Local approvals.

24. The applicant/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. If the Division determines that such standards or laws are not being met, including failure to sustain a designated or achieved use, or that State or Federal law is being violated, or that further conditions are necessary to assure compliance, then the Division may reevaluate and modify this General Water Quality Certification.

* 25. When written authorization is required for use of this certification, upon completion of all permitted impacts included within the approval and any subsequent modifications, the applicant shall be required to return the certificate of completion attached to the approval. One copy of the certificate shall be sent to the DWQ Central Office in Raleigh at 1650 Mail Service Center, Raleigh, NC, 27699-1650.

26. Additional site-specific conditions, including monitoring and/or modeling requirements, may be added to the written approval letter for projects proposed under this Water Quality Certification in order to ensure compliance with all applicable water quality and effluent standards.

27. This certification grants permission to the director, an authorized representative of the Director, or DENR staff, upon the presentation of proper credentials, to enter the property during normal business hours.

This General Certification shall expire on the same day as the expiration date of the corresponding Nationwide and/or Regional General 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 Certification.

Non-compliance with or violation of the conditions herein set forth by a specific project may result in revocation of this General Certification for the project and may also result in criminal and/or civil penalties.

The Director of the North Carolina Division of Water Quality may require submission of a formal application for Individual Certification for any project in this category of activity if it is determined that the project is likely to have a significant adverse effect upon water quality, including state or federally listed endangered or threatened aquatic species, or degrade the waters so that existing uses of the wetland or downstream waters are precluded.

Water Quality Certification No. 3886

Public hearings may be held for specific applications or group of applications prior to a Certification decision if deemed in the public's best interest by the Director of the North Carolina Division of Water Quality.

Effective date: March 19, 2012

DIVISION OF WATER QUALITY

By

Charles Wakild, P.E.

Director

History Note: Water Quality Certification (WQC) Number 3886 issued March 12, 2012 replaces WQC Number 3820 issued April 6, 2010; WQC Number 3627 issued March 2007; WQC Number 3404 issued March 2003; WQC Number 3375 issued March 18, 2002; WQC Number 3289 issued June 1, 2000; WQC Number 3103 issued February 11, 1997; WQC Number 2732 issued May 1, 1992; WQC Number 2666 issued January 21, 1992; WQC Number 2177 issued November 5, 1987. This WQC is rescinded when the Corps of Engineers reauthorizes any of the corresponding Nationwide and/or Regional General Permits or when deemed appropriate by the Director of the Division of Water Quality.

Water Quality Certification No. 3886

Attachment A: 401 Stormwater Requirements

The requirements listed below shall be implemented in order to comply with Condition 12 of this General Certification. For the North Carolina Department of Transportation, compliance with NCDOT's Individual NPDES permit NCS000250 shall serve to satisfy the 401 and Isolated Wetland Stormwater Requirements.[1]

A. **Design and Implementation Requirements.** All projects, regardless of project area, amount of built-upon area or amount of jurisdictional impact, shall meet the following stormwater design requirements:

i. **Non-Erosive Discharge to Streams and Wetlands.** Stormwater conveyances that discharge to streams and wetlands must discharge at a non-erosive velocity prior to entering the stream or wetland during the peak flow from the ten-year storm.[2]

ii. **Vegetated Setbacks.** A 30-foot wide vegetated setback must be maintained adjacent to streams, rivers and tidal waters in areas that are not subject to a state Riparian Area Protection Rule or other more stringent vegetated setback requirements. The width of the setback shall be measured horizontally from the normal pool elevation of impounded structures, the top-of-bank of streams and rivers, and the mean high waterline of tidal waters, perpendicular to shoreline. Vegetated setback and filters required by state rules or local governments may be met concurrently with this requirement and may contain coastal, isolated or 404 jurisdictional wetlands. Non-jurisdictional portions of the vegetated setback may be cleared and graded, but must be planted with and maintained in grass or other vegetative or plant material.[3]

iii. **Construction and Operation.** The stormwater management plan must be constructed and operational before any permanent building or other structure is occupied or utilized at the site. The stormwater management plan, including drainage patterns, must be maintained in perpetuity.[4]

iv. **Coordination with Other Stormwater Programs.** Projects that are subject to another Division of Water Quality (DWQ) stormwater program, including (but not limited to) the 20 Coastal Counties, HQW, ORW or state-implemented Phase II NPDES, or a Certified Community's stormwater management program, must be constructed and maintained in compliance with the approved stormwater management plan.[5]

v. **Stormwater Design Requirements for Projects Not Covered Under Item (iv).** Projects that are not subject to another DWQ stormwater program or a Certified Community's stormwater program shall meet all of the following requirements:

a. **Low Density.** A site is low density if all the following requirements are met:

1. The development has a built upon area of twenty-four percent (24%) or less, considering both current and future development. When determining the amount of built upon area, coastal wetlands shall be included; however, ponds, lakes and rivers as specified in North Carolina's Schedule of Classifications shall be excluded. If a portion of project has a density greater than 24%, the higher density area must be located in an upland area and away from surface waters and drainageways to the maximum extent practicable.[6]

2. All stormwater runoff from the built upon areas is transported primarily via vegetated conveyances designed in accordance with the most recent version of the *NC DWQ Stormwater Best Management Practices Manual.* Alternative designs may be approved if the applicant can show that the design provides

equal or better water quality protection than the practices specified in the manual. The project must not include a stormwater collection system (such as piped conveyances) as defined in 15A NCAC 02B .0202(60).[7]

b. **High Density.** Projects that do not meet the Low Density requirements shall meet the following requirements:

1. Stormwater runoff from the entire site must be treated by structural stormwater controls (BMPs) that are designed to remove eighty-five percent (85%) of the average annual amount of Total Suspended Solids (TSS). Stormwater runoff that drains directly to Nutrient Sensitive Waters (NSW) must also be treated to remove thirty percent (30%) of Total Nitrogen (TN) and Total Phosphorus (TP).[8]

2. All BMPs must be designed in accordance with the version of the *NC DWQ Stormwater Best Management Practices Manual* that is in place on the date of stormwater management plan submittal. Alternative designs may be approved if the applicant can show that the design provides equal or better water quality protection than the practices specified in the manual.[9]

3. DWQ may add specific stormwater management requirements on a case-by-case basis in order to ensure that a proposed activity will not violate water quality standards.[10]

4. DWQ may approve Low Impact Developments (LIDs) that meet the guidance set forth in the *Low Impact Development: A Guidebook for North Carolina.*[11]

5. Proposed new development undertaken by a local government solely as a public road project shall follow the requirements of the NC DOT BMP Toolbox rather than Items (1)-(4) above.[12]

B. **Submittal Requirements.** The submittal requirements listed below apply only to projects that require written authorization as indicated in the applicable General Certification as well as projects that require an Isolated Wetlands Permit. **Any required documentation shall be sent to the Wetlands, Buffers and Stormwater Compliance and Permitting Unit at 1650 Mail Service Center, Raleigh, NC 27699-1650.**

i. **Projects that are Subject to Another DWQ Stormwater Program:** If the project is subject to another DWQ stormwater program, such as the 20 Coastal Counties, HQW, ORW or state-implemented Phase II NPDES, then the applicant shall submit a copy of the stormwater approval letter before any impacts occur on site.[13]

ii. **Projects that are Subject to a Certified Community's Stormwater Program.** If the project is subject to a certified local government's stormwater program, then the applicant shall submit one set of approved stormwater management plan details and calculations with documentation of the local government's approval before any impacts occur on site.[5]

iii. **Projects Not Covered Under Items (i) or (ii).** If the project is not subject to another DWQ Stormwater Program or a Certified Community's stormwater program, then it shall be reviewed and approved by the DWQ through the Water Quality Certification authorization process.

a. **Low Density.** For low density projects, the applicant shall submit two copies of the DWQ Low Density Supplement Form with all required items.[13]

b. **High Density.** For high density projects, the applicant shall submit two copies of a DWQ BMP Supplement Form and all required items at the specified scales for each BMP that is proposed.[13]

iv. **Phasing.** Stormwater management plans may be phased on a case-by-case basis, with the submittal of a final stormwater management plan per Items (i)-(iii) above required for the current phase and a conceptual stormwater management plan for the future phase(s). The stormwater management plan for each future phase must be approved by the appropriate entity before construction of that phase is commenced. The approved stormwater management plan for each future phase must be constructed and operational before any permanent building or other structure associated with that phase is occupied.[14]

v. **Stormwater Management Plan Modifications.** The stormwater management plan may not be modified without prior written authorization from the entity that approved the plan. If the project is within a Certified Community, then the applicant shall submit one set of approved stormwater management plan details and calculations with documentation of the local government's approval for record-keeping purposes. If the project is subject to DWQ review, then the applicant shall submit two copies of the appropriate Supplement Forms per Item (iii) above for any BMPs that have been modified for DWQ's review and approval.[15]

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[1] The stormwater requirement for 401 applications is codified in 15A NCAC 02H .0506(b)(5) and (c)(5).

[2] Non erosive discharge rates are required in SL 2008-211§2(b)(1). The 10-year design storm standard is codified in 15A NCAC 02H .1008(f)(2) and .1008(g)(1).

[3] 30-foot vegetated setbacks are required in SL 2006-246§9(d), SL 2008-211§2(b), 15A NCAC 02H .1006(2)(c) and .1007(1)(a).

[4] Construction and maintenance of the stormwater plan is necessary to satisfy 15A NCAC 02H .0506(b)(5).

[5] Conveys application procedure to streamline the permitting process and reduce any unnecessary duplication in the review of stormwater management plans.

[6] Low density built upon area thresholds are set in SL 2006-246§9(c) and SL 2008-211§2(b).

[7] The requirement for low density development to use vegetated conveyances is codified in SL 2006-246§9(c), SL 2008-211§2(b), 15A NCAC 02H .1006(2)(b) and .1007(1)(a). The Stormwater BMP Manual is also referenced in 15A NCAC 02B .0265(3)(a) and .0277(4)(e).

[8] 85% TSS removal is required in SL 2006-246§9(d), SL 2008-211§2(b), 15A NCAC 02H .1006(2)(c), 15A NCAC 02H .1007(1)(a). The 30% TN and TP removal requirements for NSW waters are set forth in 15A NCAC 02B .0232, 15A NCAC 02B .0257(a)(1), 15A NCAC 02B .0265(3)(a) and 15A NCAC 02B .0277(4).

[9] The Stormwater BMP Manual is also referenced in 15A NCAC 02B .0265(3)(a) and .0277(4)(e).

[10] The requirement for DWQ to ensure that water quality standards are protected before issuing a 401 certification is codified in 15A NCAC 02H .0506.

[11] The LID Toolbox is also referenced in 15A NCAC 02B .0277(4)(g).

[12] The term "public road project" is defined in15A NCAC 02B .0265(3)(a).

[13] Conveys application procedure to streamline the permitting process.

[14] Phased development is addressed as a "common plan of development" in 15A NCAC 02H .1003(3).

[15] Procedures for modifying stormwater plans are set forth in 15A NCAC 02H .1011.

CONTRACT: 54000.1.STR01T1B TIP PROJECT: U-4716A/C

NCDOT
RAIL DIVISION

DURHAM AND WAKE COUNTIES

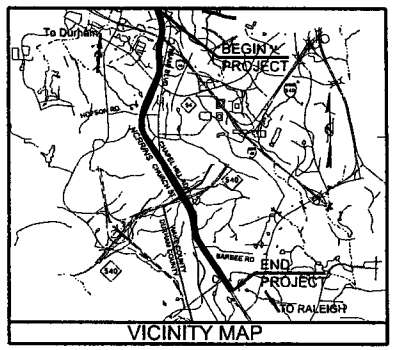
STATE	STATE PROJECT REFERENCE NO	SHEET NO	TOTAL SHEETS
N.C.	U-4716A/C	1	

STATE PROJ. NO.	F. A. PROJ. NO.	DESCRIPTION
39080.1.1	STP-1978(2)	

PROJECT TITLE: CLEGG PASSING SIDING AND HOPSON ROAD GRADE SEPARATION

LOCATION: CP "NELSON" (MP H-63.2) TO CP "CLEGG" (MP H-67.0) ON THE NCRR/NS H-LINE

TYPE OF WORK: TRACK REALIGNMENT, NEW SIDING TRACK, AND GRADE SEPARATION STRUCTURE



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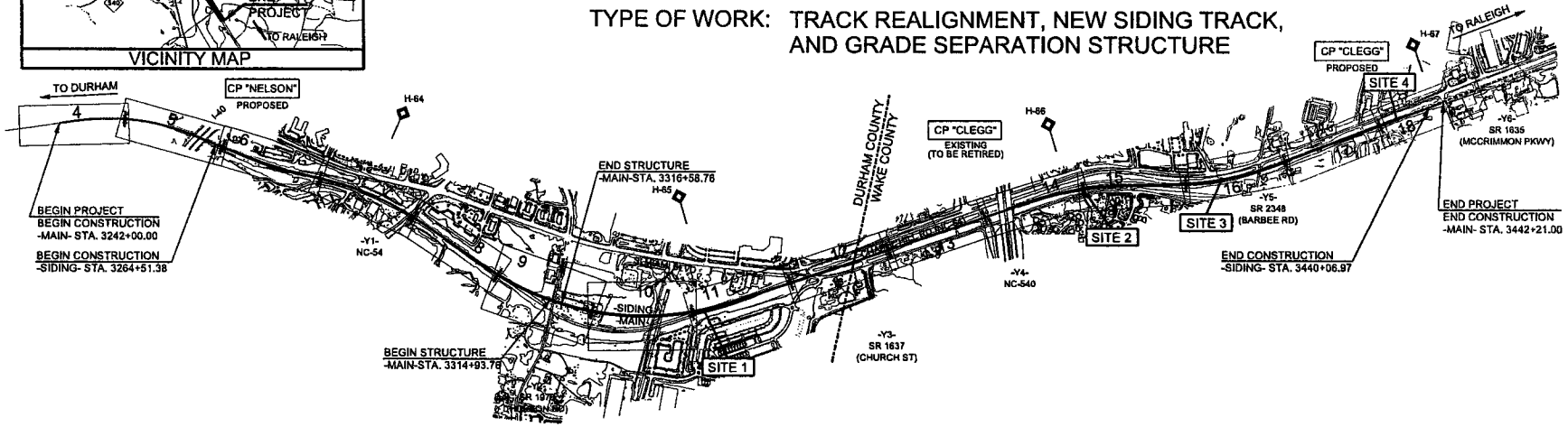

WETLAND & STREAM IMPACTS

PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION

GRAPHIC SCALES

PLANS 50 0 50 100

PROFILE (HORIZONTAL) 50 0 50 100

PROFILE (VERTICAL) 5 0 5 10

PROJECT LENGTH

LENGTH OF RAIL TIP PROJECT	3.77 mi.
LENGTH OF STRUCTURES TIP PROJECT	165 ft.

Prepared in the Office of:
HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

2012 STANDARD SPECIFICATIONS

RIGHT OF WAY DATE: N/A

LETTING DATE: OCTOBER 16, 2012

ROBERT BURNETT, P.E.
RAIL PROJECT ENGINEER
COREY VERNIER, P.E.
RAIL PROJECT DESIGN ENGINEER
PHILLIP ROGERS, P.E.
ROADWAY PROJECT ENGINEER
JAMES BYRD, P.E.
HYDRAULICS PROJECT ENGINEER
JASON ORTHNER, P.E.
NCDOT PROJECT MANAGER

RAIL ENGINEER
SIGNATURE: P.E.

HYDRAULICS ENGINEER
SIGNATURE: P.E.

NC DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
ENGINEERING AND SAFETY BRANCH
CAPITAL YARD
1556 MAIL SERVICE CENTER
RALEIGH, NC 27699-1556

P - 48

Rev 11-9-12



NO.	BY	DATE	REVISION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

PREPARED BY:
HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	USGS QUAD MAP		
LOCATION	CP "NELSON" TO CP "CLEGG"	MILE POST	H-63.2 TO H-67.0
DGN BY	RAC	RAILROAD	NS/NCRR
DRN BY	RAC	VAL SEC	V-24 / 16-17
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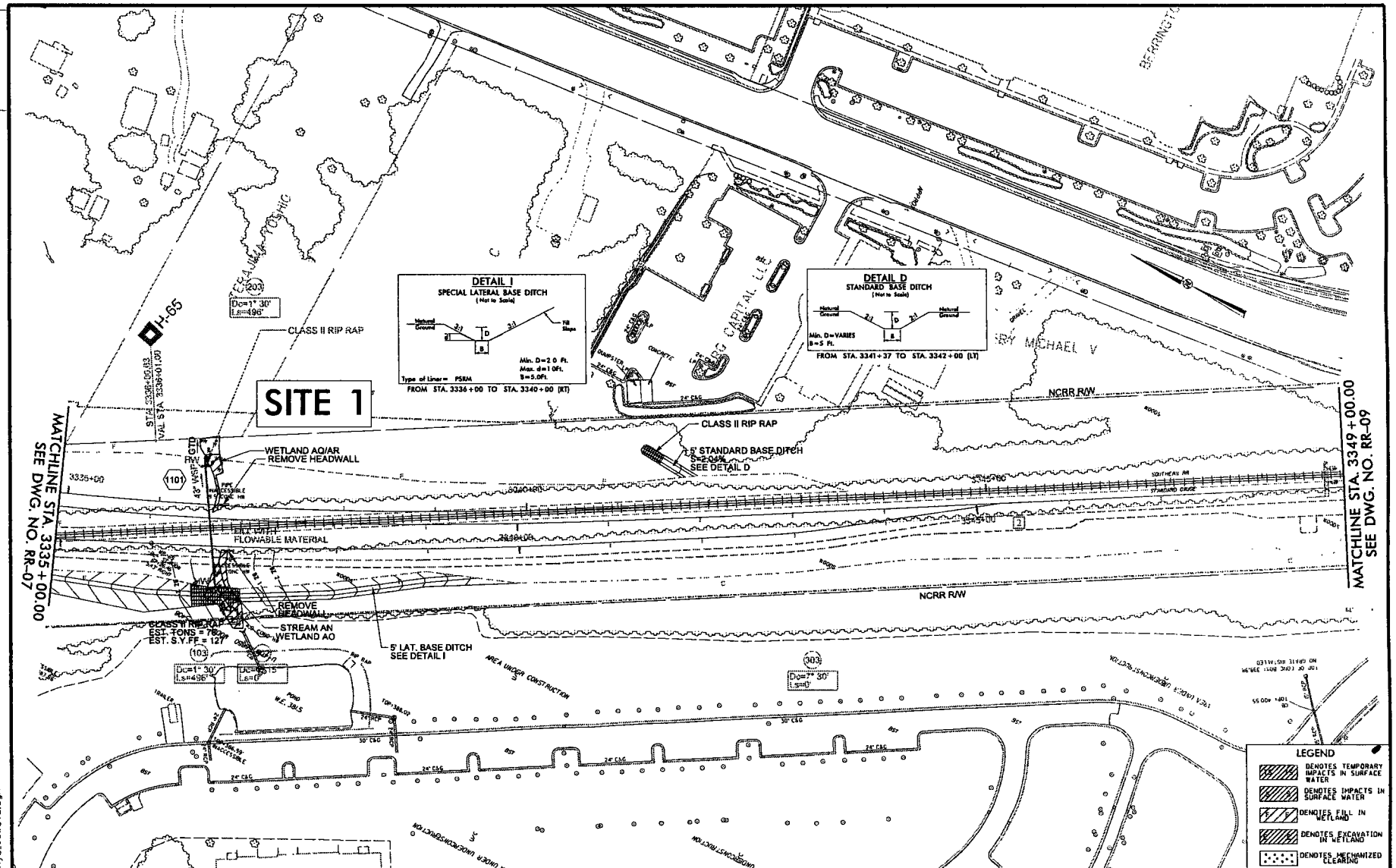

NO.	BY	DATE	REVISION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

PREPARED BY: HNTB
HNTB NORTH CAROLINA, P.C.
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Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	WETLAND AND STREAM IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"	MILE POST	H-63.2 TO H-67.0
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DRN BY	RAC	VAL SEC	V-24 / 16-17
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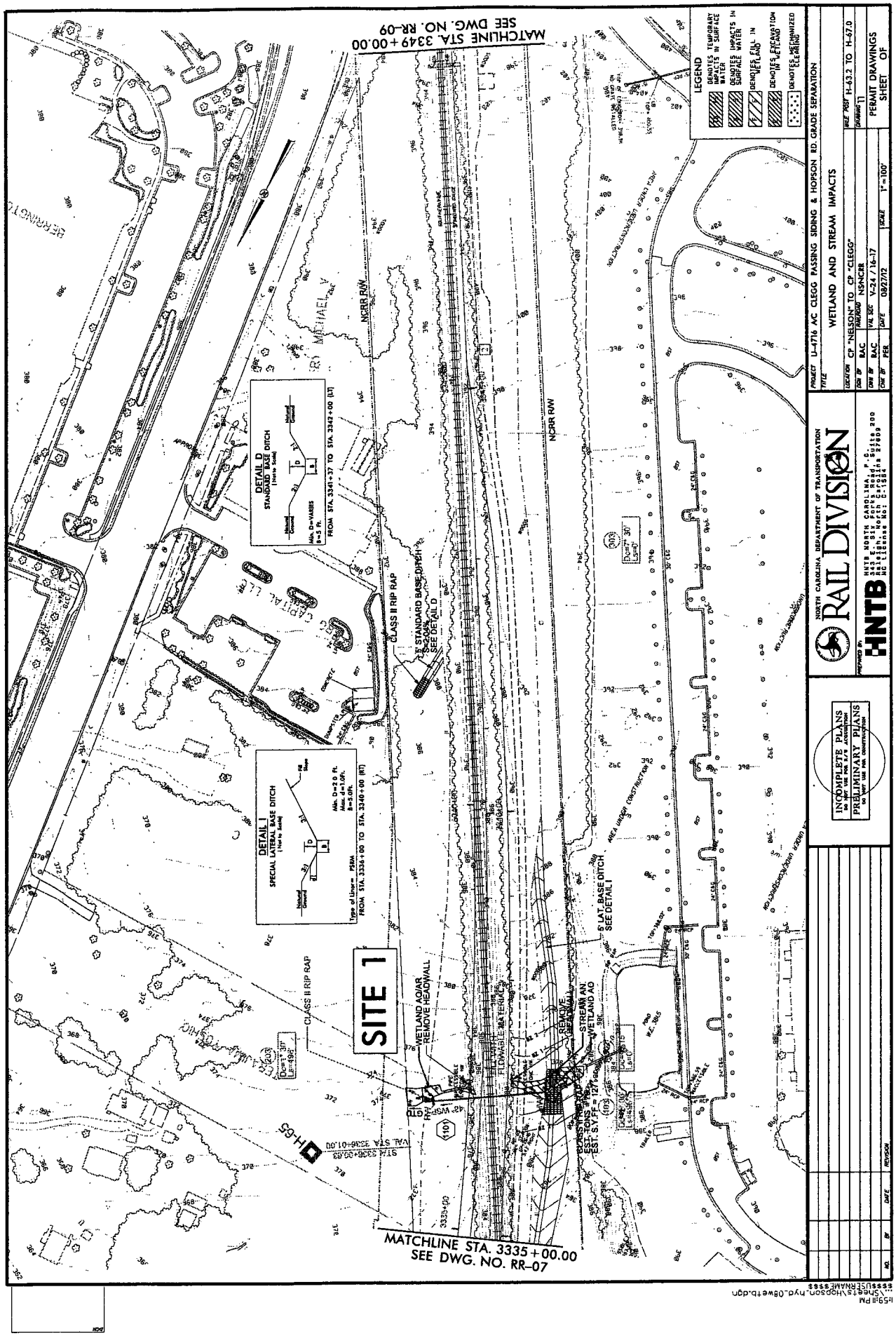
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DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PROJECT U-4716 AC CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION
TITLE WETLAND AND STREAM IMPACTS
LOCATION CP "NELSON" TO CP "CLEGG"
DES BY RAC
DRN BY RAC
CHK BY PER
RAILROAD NSNCRR
VAL SEC V-24 / 16-17
DATE 08/27/12
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WBS POST H-43.2 TO H-47.0
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PERMIT DRAWINGS
SHEET OF
PREPARED BY:
HNTB
HNTB NORTH CAROLINA, P.C.
343 Wade Avenue, Suite 200
Raleigh, North Carolina 27605
NC License No: C-1554
INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION
DETAIL D
STANDARD BASE DITCH
FROM STA. 3341+37 TO STA. 3342+00 (LT)
DETAIL I
SPECIAL LATERAL BASE DITCH
FROM STA. 3336+00 TO STA. 3340+00 (RT)
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NCRR R/W
CLASS II RIP RAP
WETLAND AQVAR
REMOVE HEADWALL
STREAM AN
WETLAND AD
REMOVE
FLOWABLE MATERIAL
EXCAVATION
EST. S.Y.
MATCHLINE STA. 3335+00.00
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H-65
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CAPITAL LEE DR
MICHAEL LN
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AREA UNDER CONSTRUCTION
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36" CMP
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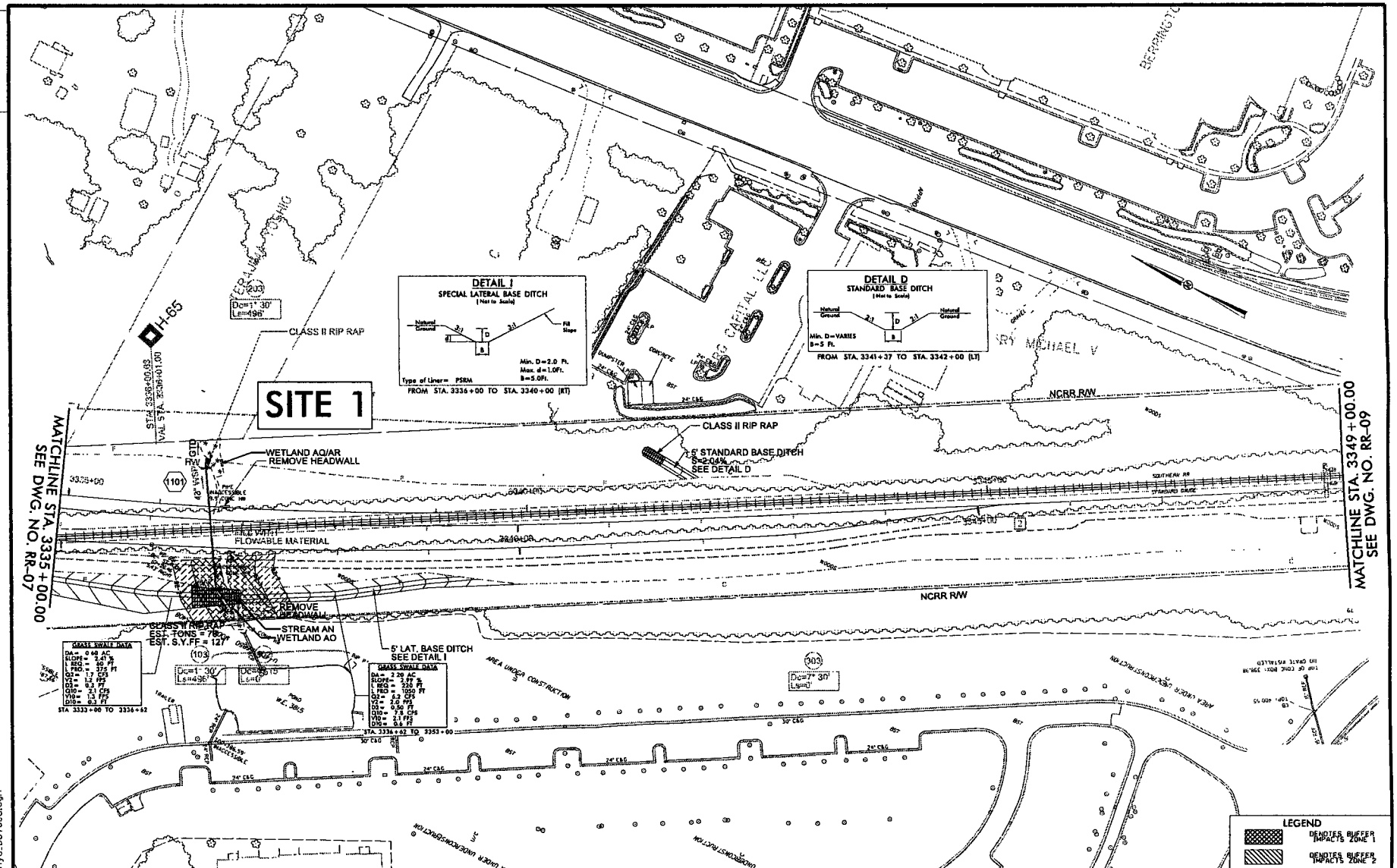

NO.	BY	DATE	REVISION

INCOMPLETE PLANS
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PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

PREPARED BY:
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Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	STREAM BUFFER IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"	MILE POST	H-63.2 TO H-67.0
DSN BY	RAC	RAILROAD	NS/NCRR
DRN BY	RAC	VAL SEC	V-24 / 16-17
CHK BY	PER	DATE	08/27/12
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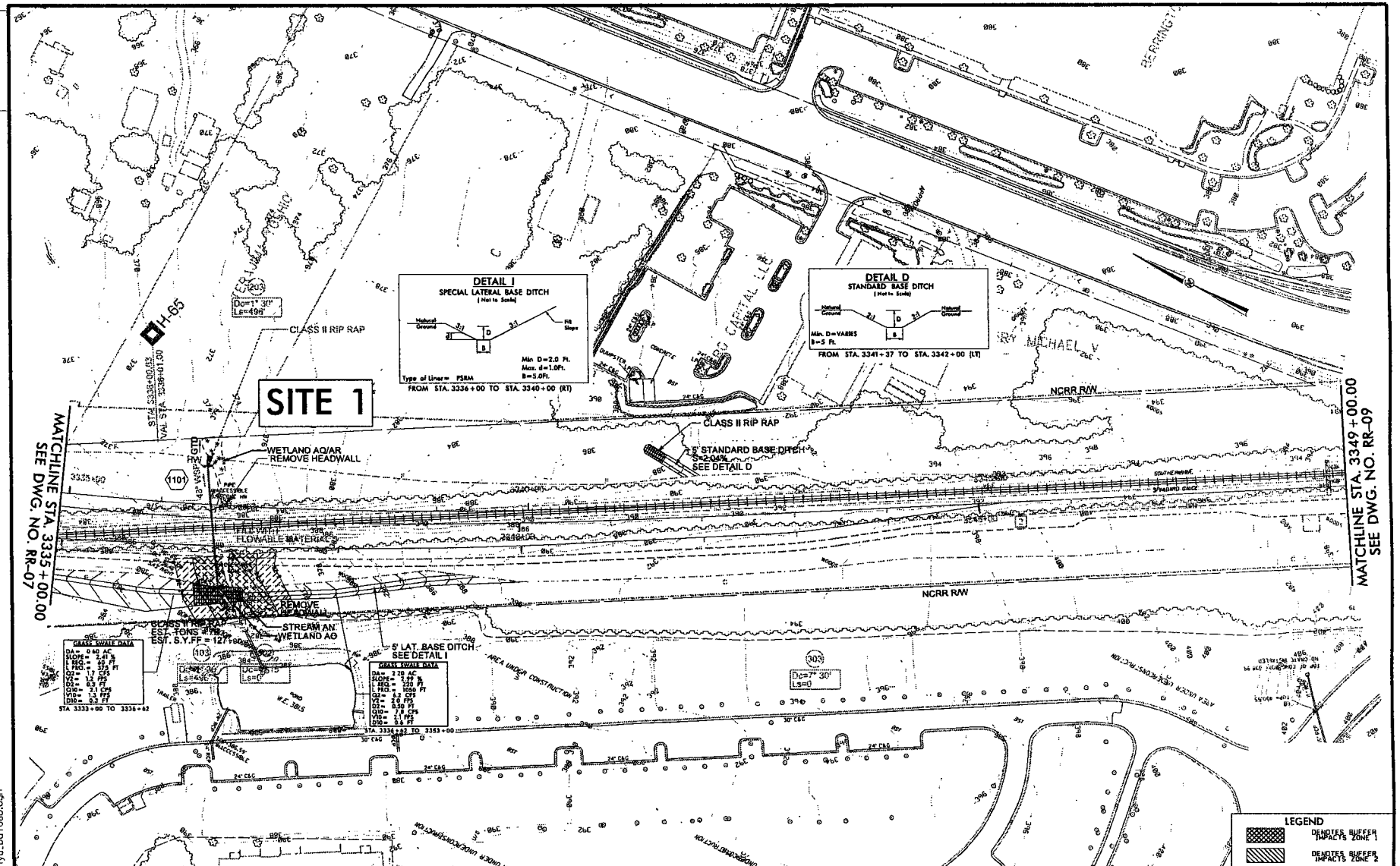

NO.	BY	DATE	REVISION

INCOMPLETE PLANS
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PRELIMINARY PLANS
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PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	STREAM BUFFER IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"	MILE POST	H-63.2 TO H-67.0
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DRN BY	RAC	VAL SEC	V-24 / 16-17
CHK BY	PER	DATE	08/27/12
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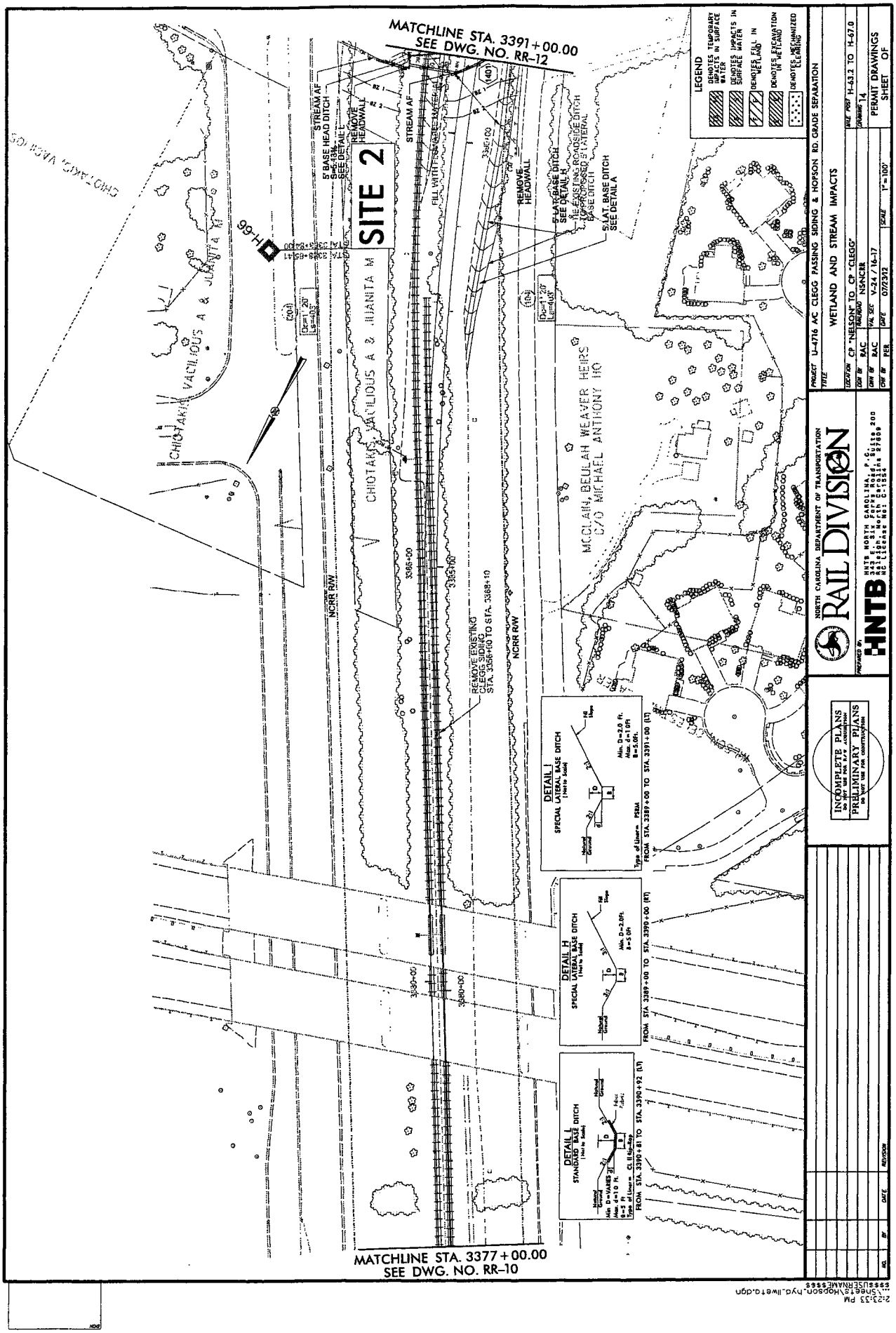
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C/O MICHAEL ANTHONY HO
NCRR R/W
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REMOVE HEADWALL
STREAM AF
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5' LAT. BASE DITCH SEE DETAIL H
5' LAT. BASE DITCH SEE DETAIL A
TIE EXISTING ROADSIDE DITCH TO PROPOSED 5' LATERAL BASE DITCH
FILL WITH FOR SEE NOTES
DETAIL I
SPECIAL LATERAL BASE DITCH
DETAIL H
SPECIAL LATERAL BASE DITCH
DETAIL I
STANDARD BASE DITCH
MATCHLINE STA. 3377+00.00
SEE DWG. NO. RR-10
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DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PROJECT U-4716 AC CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION
TITLE WETLAND AND STREAM IMPACTS
LOCATION CP "NELSON" TO CP "CLEGG"
MILE POST H-63.2 TO H-67.0
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DWN BY RAC VAL. SEC V-24 / 16-17
CHK BY PER DATE 07/23/12 SCALE 1"=100'
PERMIT DRAWINGS SHEET OF
PREPARED BY HNTB NORTH CAROLINA, P.C. 343 East Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License No: C-1554
INCOMPLETE PLANS
PRELIMINARY PLANS
NOT TO BE USED FOR CONSTRUCTION
NO. BY DATE REVISION
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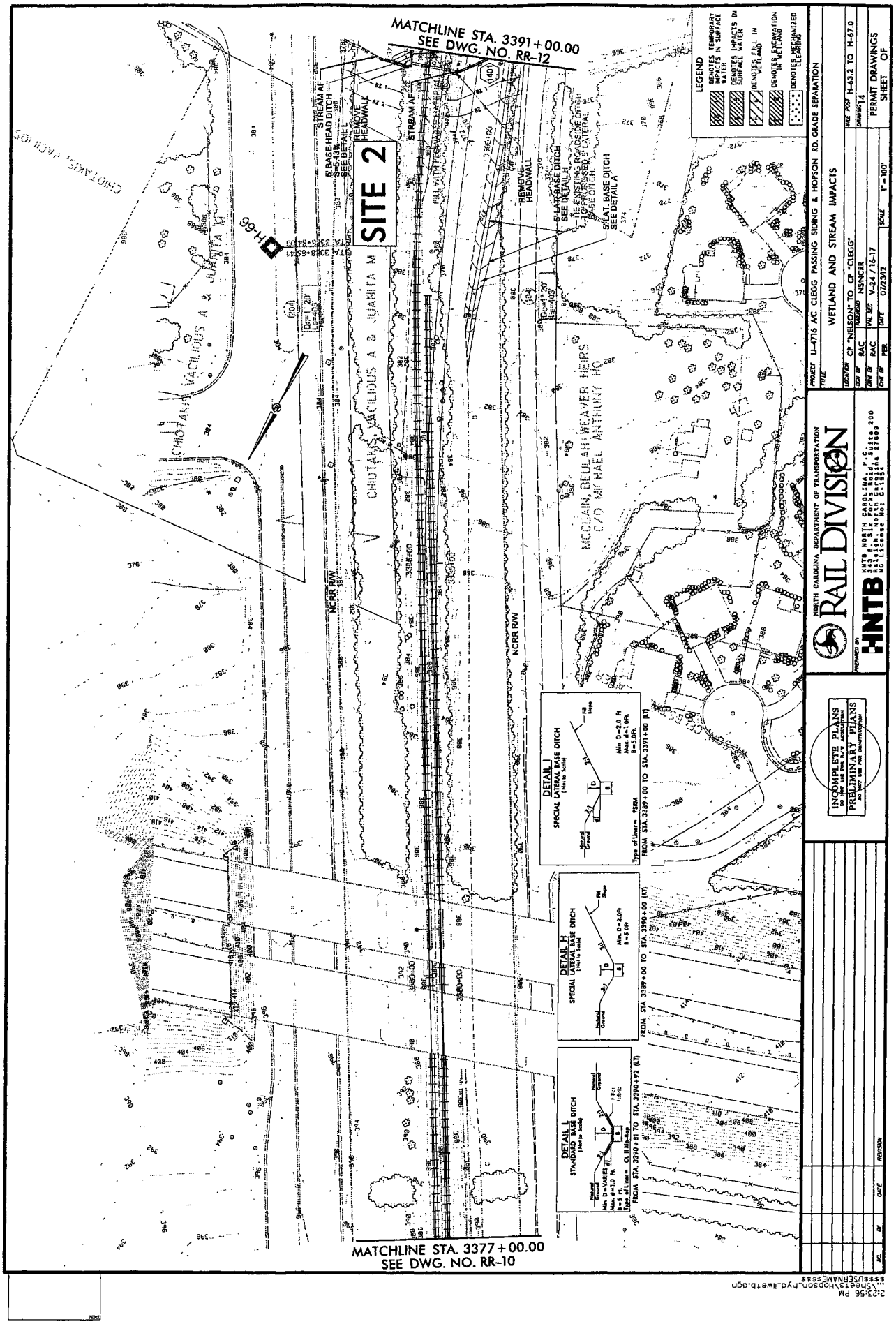
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SEE DWG. NO. RR-12
SITE 2
STREAM AF
5' BASE HEAD DITCH
REMOVE HEADWALL
5' LAT. BASE DITCH SEE DETAIL H
5' LAT. BASE DITCH SEE DETAIL A
CHIOTAKIS, VACILIOUS A & JUANITA M
MCCLAIN, BEULAH WEAVER HEIRS C/O MICHAEL ANTHONY HO
NCRR R/W
DETAIL I
SPECIAL LATERAL BASE DITCH
DETAIL H
SPECIAL LATERAL BASE DITCH
DETAIL L
STANDARD BASE DITCH
MATCHLINE STA. 3377+00.00
SEE DWG. NO. RR-10
LEGEND
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
HNTB
INCOMPLETE PLANS
PRELIMINARY PLANS
PROJECT U-4716 AC CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION
TITLE WETLAND AND STREAM IMPACTS
LOCATION CP "NELSON" TO CP "CLEGG"
DRN BY RAC
CHK BY PER
PREPARED BY NSNCRR
VAL SEC V-24 / 16-17
DATE 07/23/12
SCALE 1"=100'
MILE POST H-63.2 TO H-67.0
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SHEET OF
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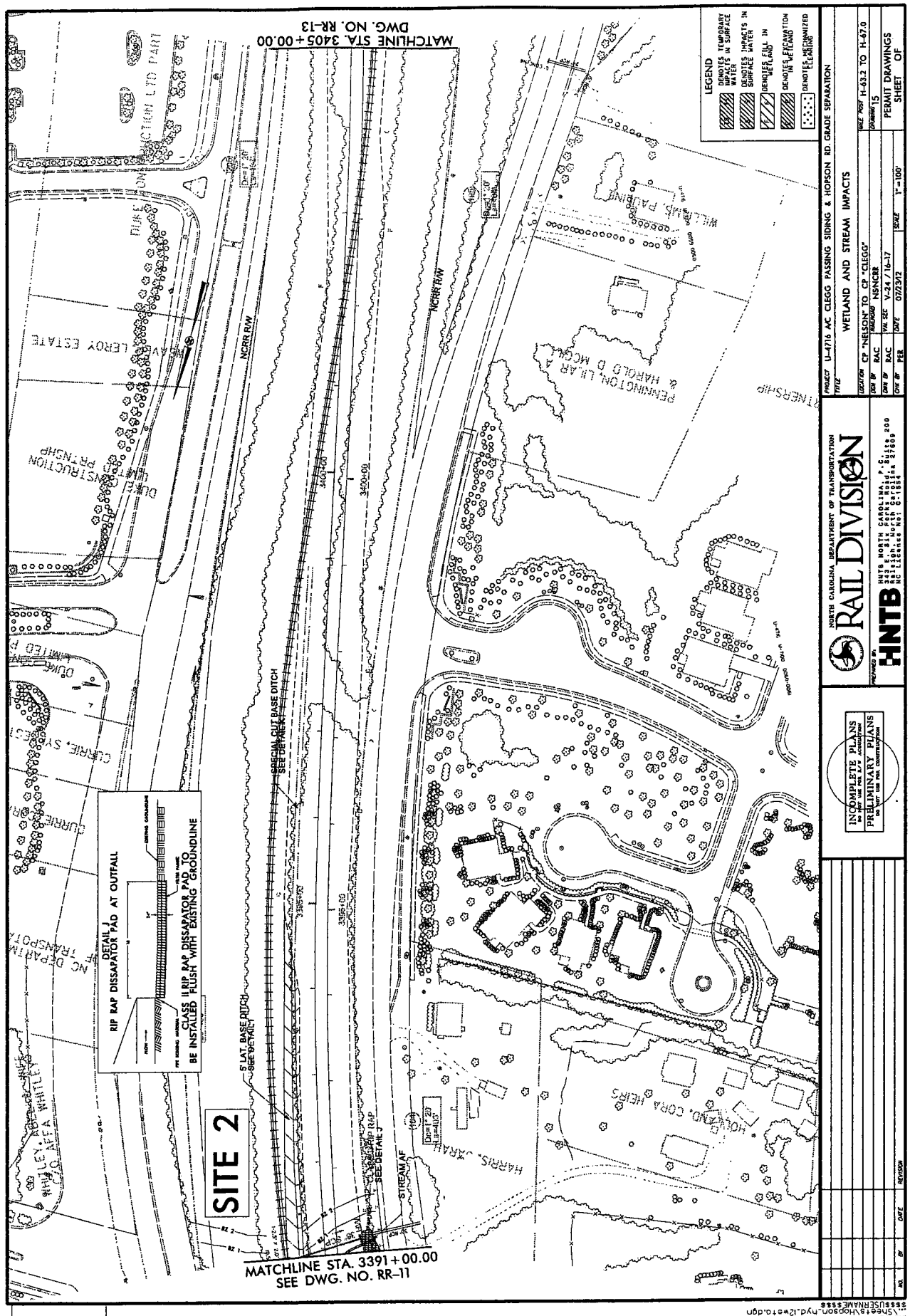
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DWG. NO. RR-13
MATCHLINE STA. 3391+00.00
SEE DWG. NO. RR-11
SITE 2
NCRR R/W
LEGEND
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
DETAIL J
RIP RAP DISSAPATOR PAD AT OUTFALL
CLASS II RIP RAP DISSAPATOR PAD TO BE INSTALLED FLUSH WITH EXISTING GROUNDLINE
SPECIAL CUT BASE DITCH
SEE DETAIL K
5' LAT. BASE DITCH
SEE DETAIL K
CLASS II RIP RAP
SEE DETAIL J
STREAM A-F
INCOMPLETE PLANS
PRELIMINARY PLANS
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PREPARED BY:
HNTB
HNTB NORTH CAROLINA, P.C.
PROJECT U-4716 AC CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION
TITLE WETLAND AND STREAM IMPACTS
LOCATION CP "NELSON" TO CP "CLEGG"
DESIGNED BY RAC
DRAWN BY RAC
CHK BY PER
RAILROAD NSNCRR
VAL SEC V-24 / 16-17
DATE 07/23/12
SCALE 1"=100'
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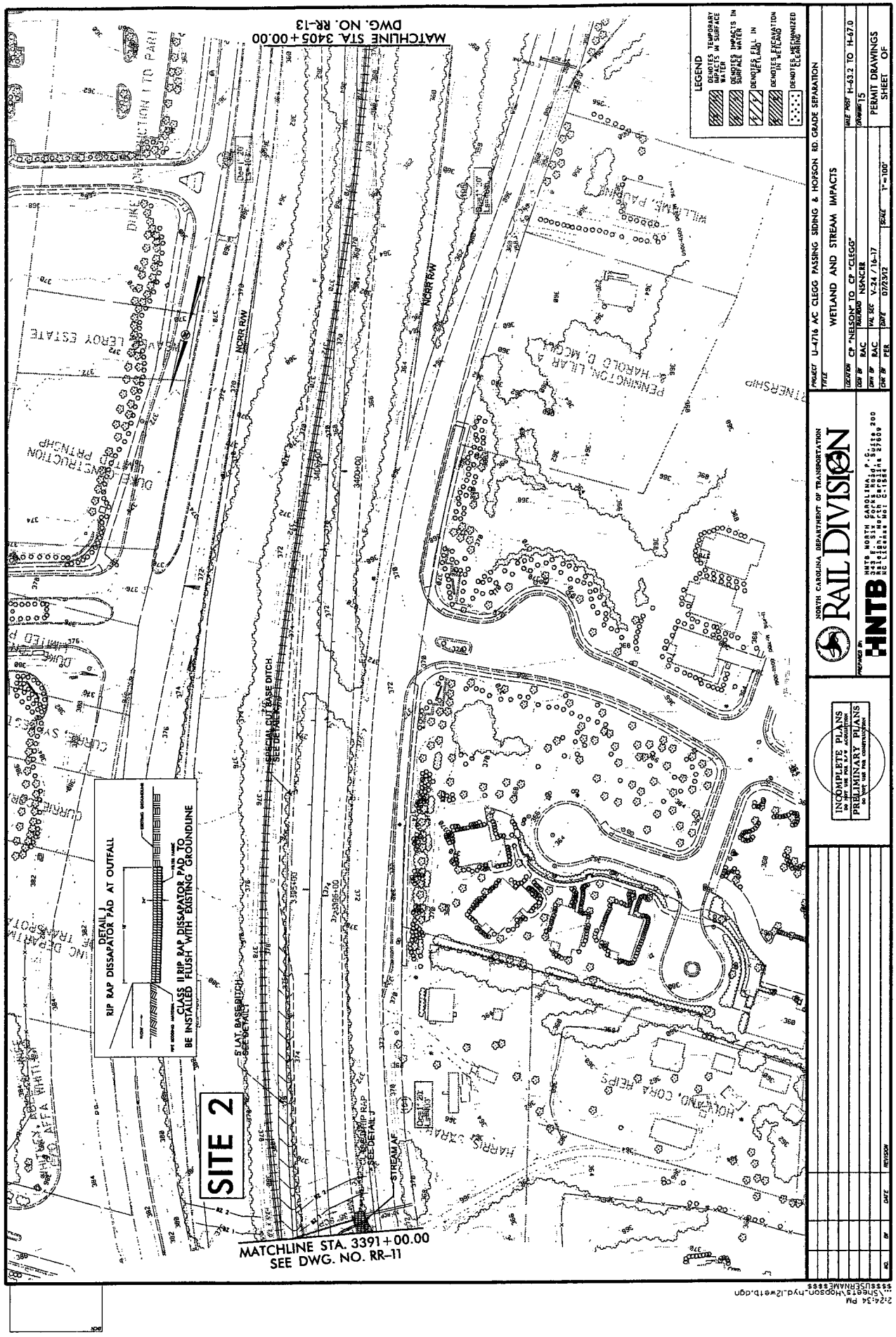
SHEET OF


SITE 2
MATCHLINE STA. 3405+00.00
DWG. NO. RR-13
MATCHLINE STA. 3391+00.00
SEE DWG. NO. RR-11
NCRR R/W
SPECIAL CUT BASE DITCH
SEE DETAIL
STREAM A
RIP RAP DISSAPATOR PAD AT OUTFALL
DETAIL
CLASS II RIP RAP DISSAPATOR PAD TO BE INSTALLED FLUSH WITH EXISTING GROUNDLINE
LEGEND
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PROJECT U-4716 AC CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION
TITLE WETLAND AND STREAM IMPACTS
LOCATION CP "NELSON" TO CP "CLEGG"
DESIGN BY RAC
DRAWN BY RAC
CHK BY PER
RAILROAD NS-NCER
FIELD BOOK V-24 / 16-17
DATE 07/23/12
SCALE 1"=100'
MILE POST H-63.2 TO H-67.0
DRAWING 15
PERMIT DRAWINGS
SHEET OF
PREPARED BY HNTB NORTH CAROLINA, P.C. 343 East Six Forks Road, Suite 200 Raleigh, North Carolina 27609 NC License Number C-1554
INCOMPLETE PLANS
PRELIMINARY PLANS
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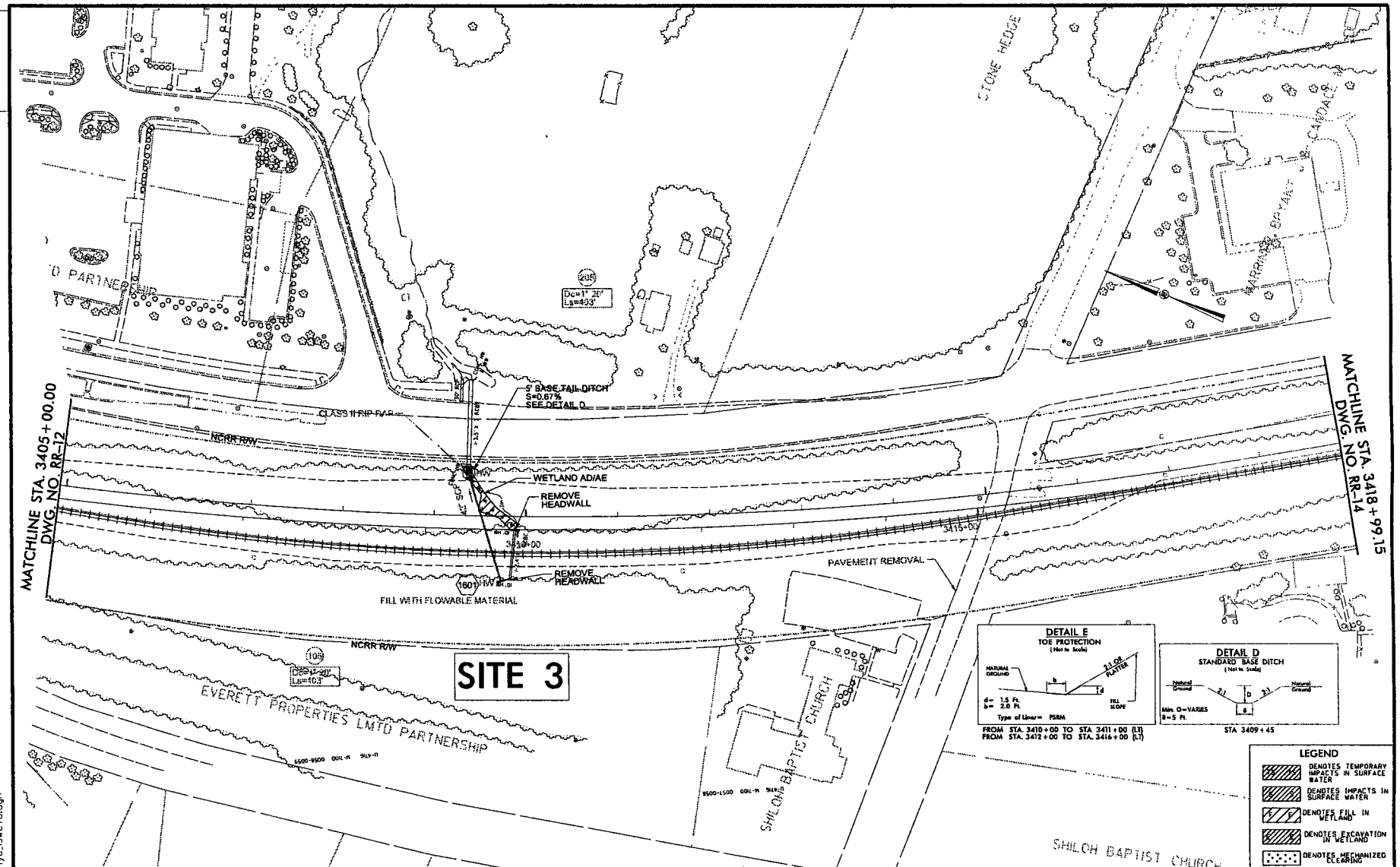

NO.	BY	DATE	REVISION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

PREPARED BY:
HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	WETLAND AND STREAM IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"	MILE POST	H-63.2 TO H-67.0
DGN BY	RAC	RAILROAD	NS/NCRR
DWN BY	RAC	VAL SEC	V-24 / 16-17
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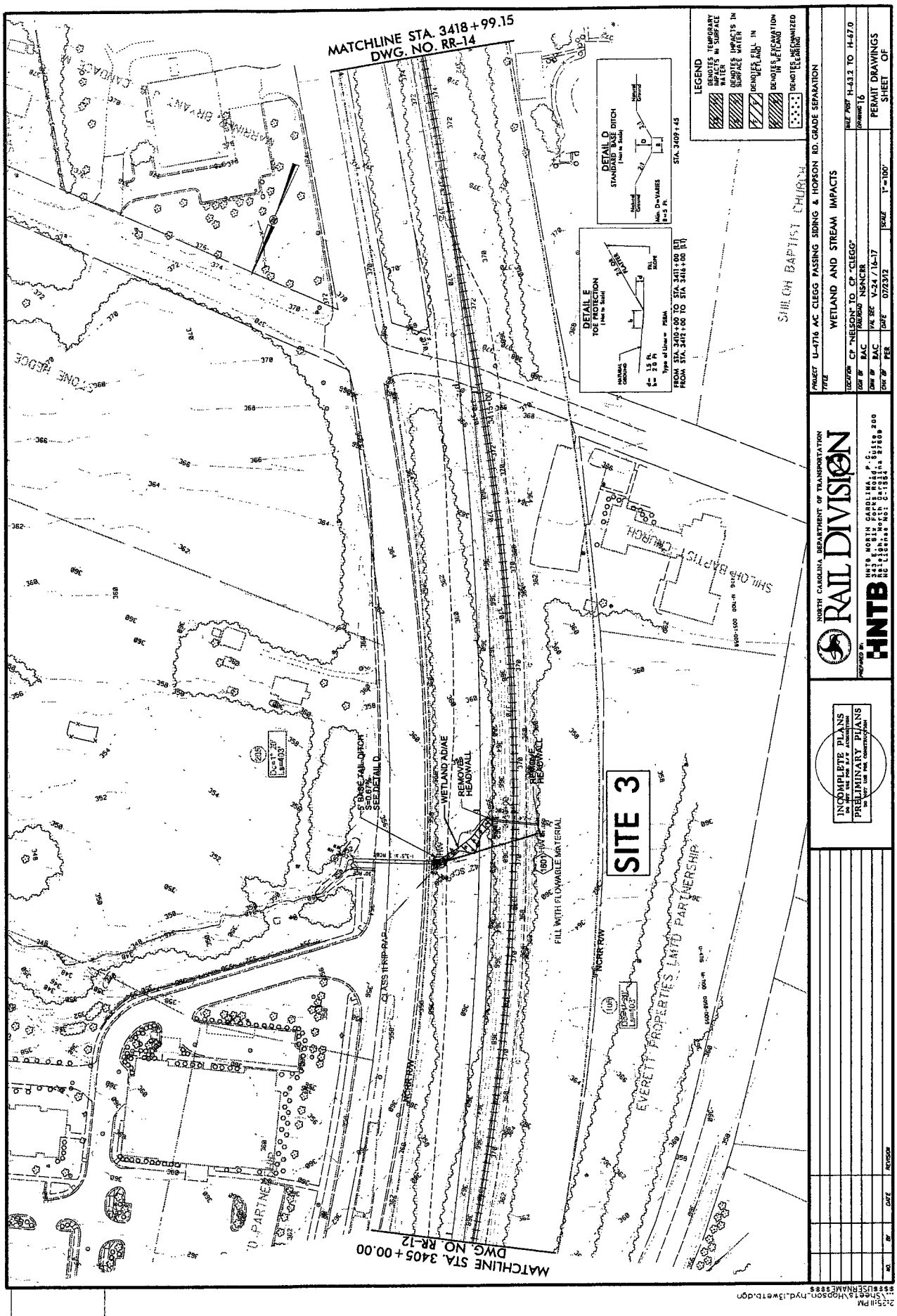
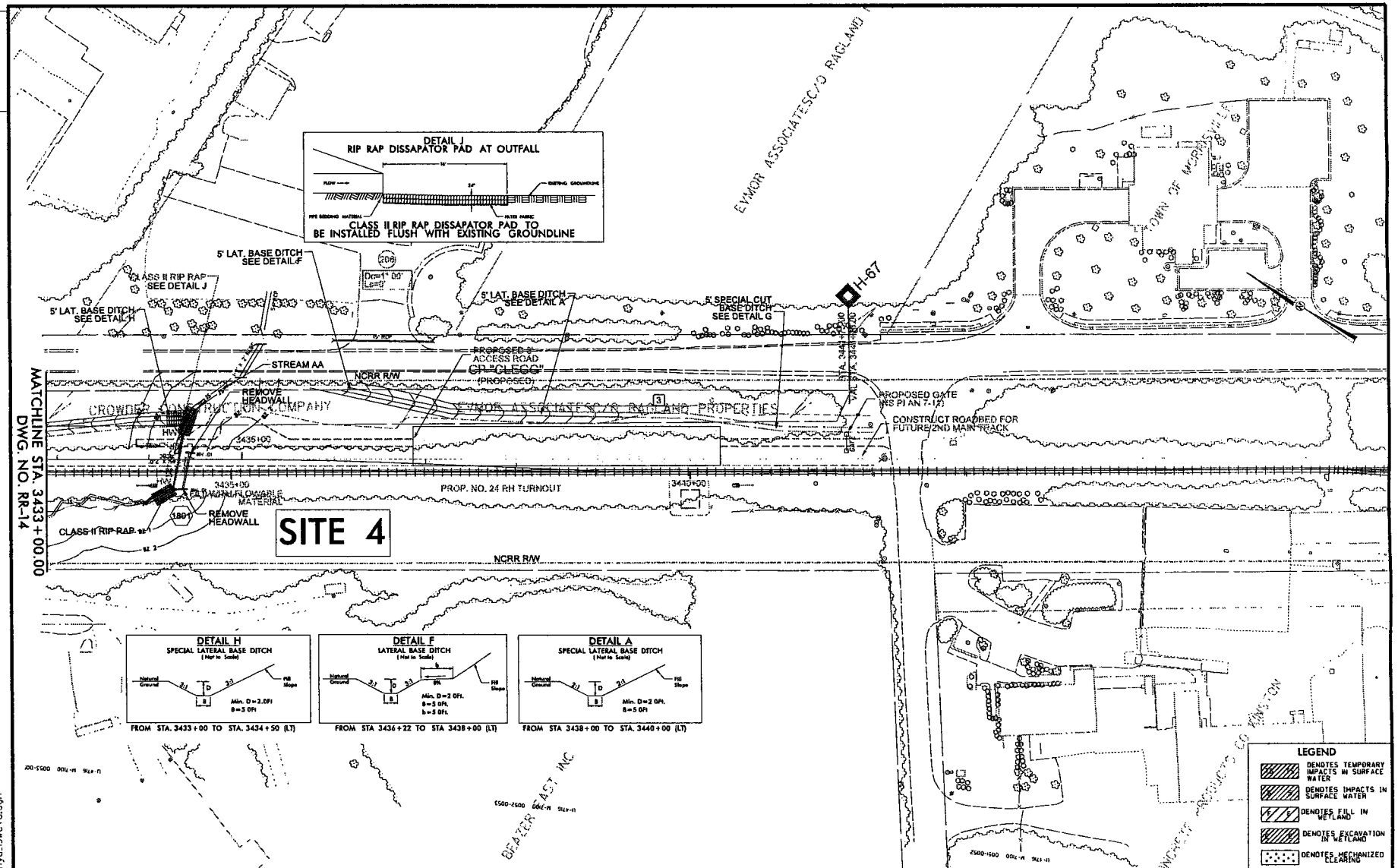

MATCHLINE STA. 3418+99.15
DWG. NO. RR-14
MATCHLINE STA. 3405+00.00
DWG. NO. RR-12
SITE 3
WETLAND ADJACENT
REMOVE HEADWALL
FILL WITH FLOWABLE MATERIAL
EVERETT PROPERTIES LAND PARTNERSHIP
SHILOH BAPTIST CHURCH
DETAIL D
STANDARD BASE DITCH
DETAIL E
TOE PROTECTION
LEGEND
DENOTES TEMPORARY IMPACTS to SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PROJECT U-4716 AC CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION
TITLE WETLAND AND STREAM IMPACTS
LOCATION CP "NELSON" TO CP "CLEGG"
RAILROAD NS/NCRR
DRAWING 16
PERMIT DRAWINGS
SHEET OF
PREPARED BY
HNTB
INCOMPLETE PLANS
PRELIMINARY PLANS

WETLAND CROSS SECTION
34+00.00
SITE 3
WAKE AND DURHAM COUNTIES
PROJECT: U-4716A/C
CLEGG PASSING SIDING AND
HOPSON ROAD GRADE SEPARATION
PERMIT DRAWINGS
SHEET OF
PROJ. REFERENCE NO.
U-4716 A/C
SHEET NO.
SCALE
1"=10' HORIZONTAL
1"=10' VERTICAL
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
WETLANDS
PROP. MAIN
EXISTING MAIN
CLOSED
CLOSED
CLOSED



NO.	BY	DATE	REVISION

INCOMPLETE PLANS
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

PREPARED BY: HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	WETLAND AND STREAM IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"	MILE POST	H-63.2 TO H-67.0
DGN BY	RAC	RAILROAD	NS/NCRR
DWN BY	RAC	VAL SEC	V-24 / 16-17
CHK BY	PER	DATE	07/23/12
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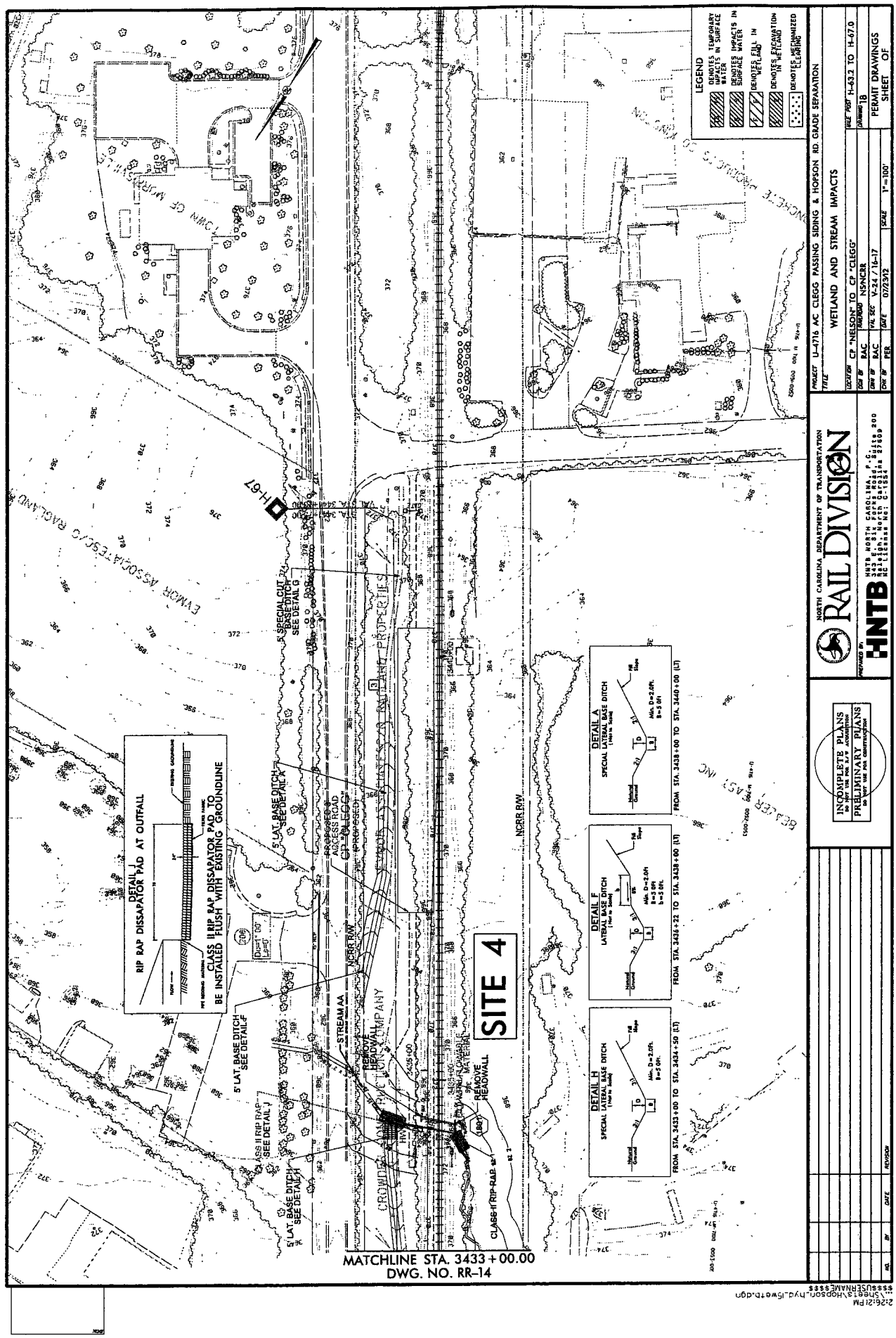
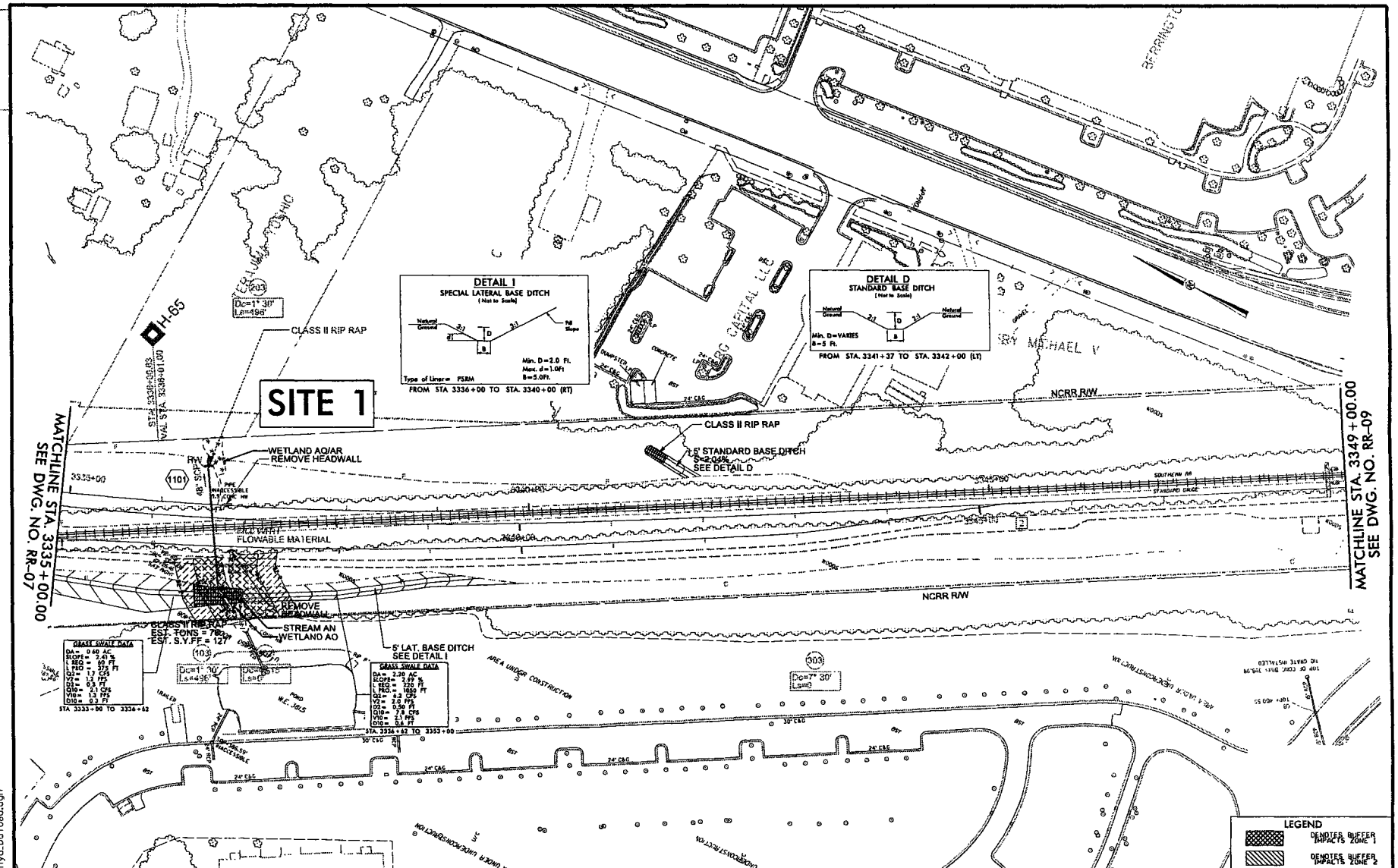

SITE 4
MATCHLINE STA. 3433+00.00
DWG. NO. RR-14
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PREPARED BY:
HNTB
NORTH CAROLINA, P.C.
INCOMPLETE PLANS
PRELIMINARY PLANS
PROJECT U-4716 AC CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION
TITLE WETLAND AND STREAM IMPACTS
LOCATION CP "NELSON" TO CP "CLEGG"
RAILROAD NSNCRR
MILE POST H-43.2 TO H-47.0
DRAWING 1B
DES BY RAC
DRN BY RAC
CHK BY PER
DATE 07/2012
SCALE 1"=100'
PERMIT DRAWINGS
SHEET OF
LEGEND
DENOTES TEMPORARY IMPACTS IN SURFACE WATER
DENOTES IMPACTS IN SURFACE WATER
DENOTES FILL IN WETLAND
DENOTES EXCAVATION IN WETLAND
DENOTES MECHANIZED CLEARING
RIP RAP DISSAPATOR PAD AT OUTFALL
DETAIL J
CLASS II RIP RAP DISSAPATOR PAD TO BE INSTALLED FLUSH WITH EXISTING GROUNDLINE
DETAIL A
SPECIAL LATERAL BASE DITCH
FROM STA. 3438+00 TO STA. 3440+00 (LT)
DETAIL F
LATERAL BASE DITCH
FROM STA. 3436+22 TO STA. 3438+00 (LT)
DETAIL H
SPECIAL LATERAL BASE DITCH
FROM STA. 3433+00 TO STA. 3434+50 (LT)
5' LAT. BASE DITCH SEE DETAIL A
5' LAT. BASE DITCH SEE DETAIL F
5' LAT. BASE DITCH SEE DETAIL H
CLASS II RIP-RAP
REMOVE HEADWALL
REMOVE BRIDGE
STREAM AA
PROPOSED ACCESS ROAD "C" CP CLEGG
NCRR R/W
NCRR R/W
CROWDER CONSTRUCTION COMPANY
STAGING AREA
EXISTING PROPERTIES
EXISTING PROPERTIES
EXISTING PROPERTIES



NO.	BY	DATE	REVISION

INCOMPLETE PLANS
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PRELIMINARY PLANS
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

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HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	STREAM BUFFER IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"	MILE POST	H-63.2 TO H-67.0
DGN BY	RAC	RAILROAD	NS/NCRR
DWN BY	RAC	VAL SEC	V-24 / 16-17
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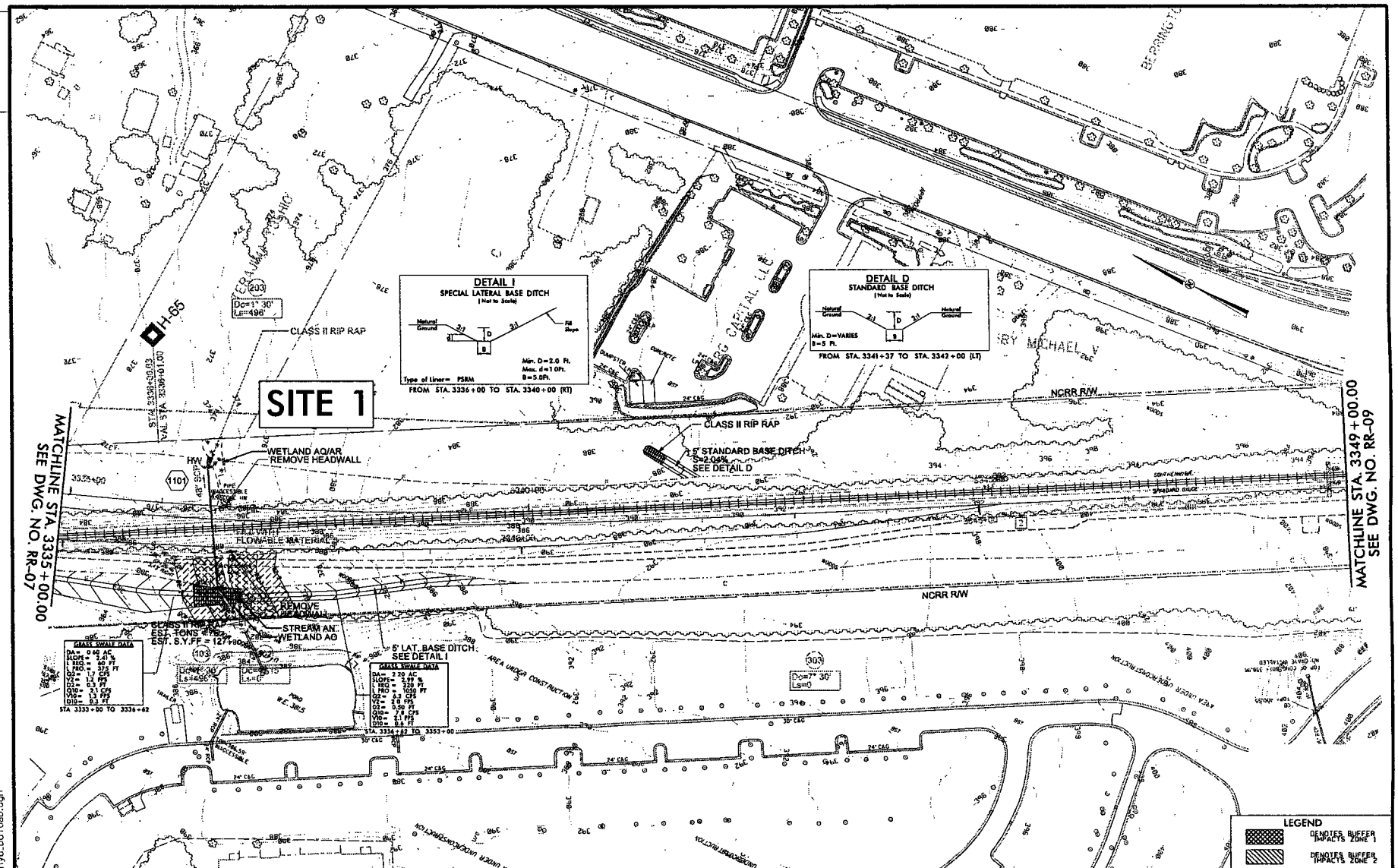

NO.	BY	DATE	REVISION

INCOMPLETE PLANS
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PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

PREPARED BY:
HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	STREAM BUFFER IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"	MILE POST	H-63.2 TO H-67.0
DGN BY	RAC	RAILROAD	NS/NCRR
DRAWING	11		
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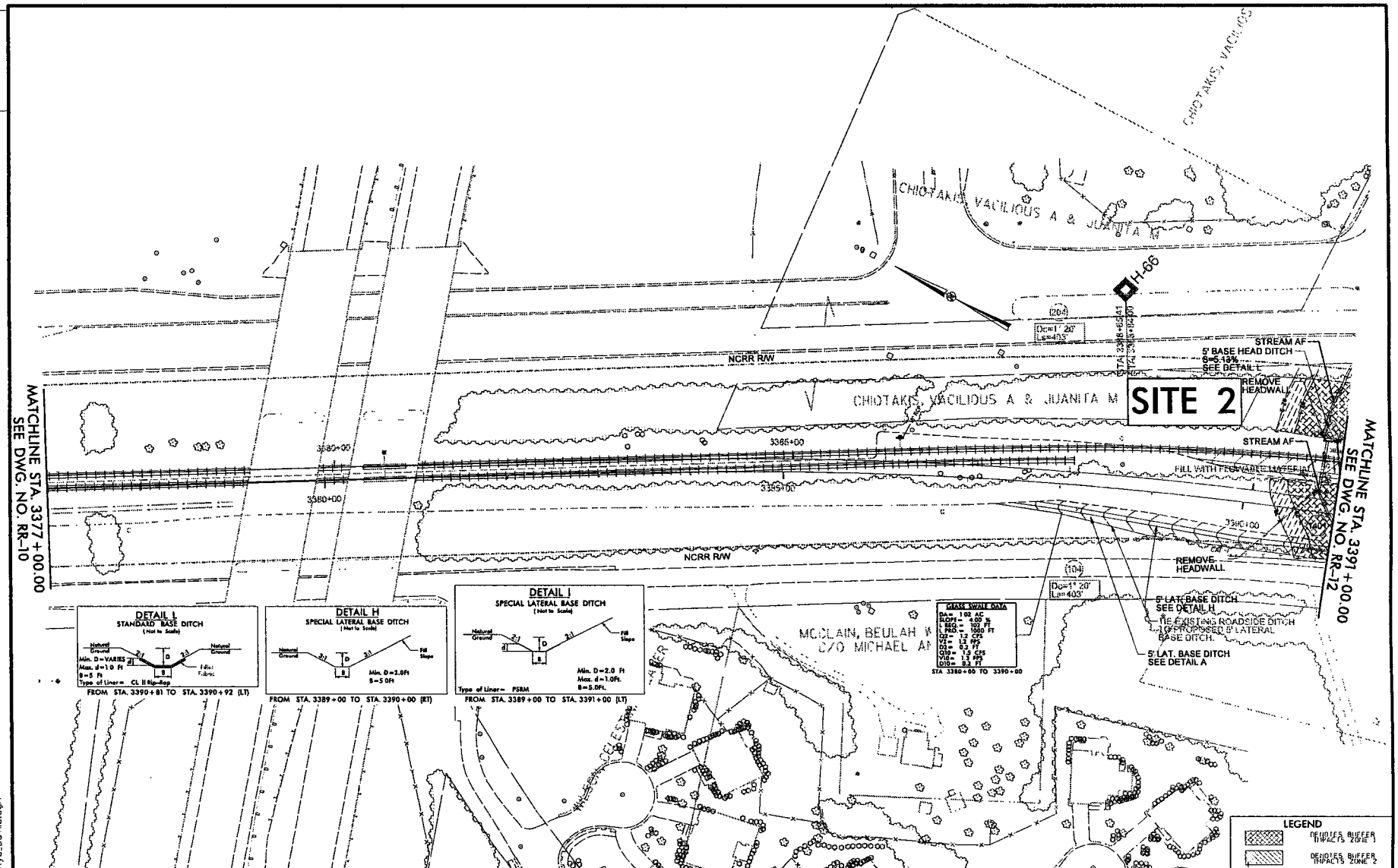

NO.	BY	DATE	REVISION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

PREPARED BY: HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	STREAM BUFFER IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"		MILE POST H-63.2 TO H-67.0
DGN BY	RAC	RAILROAD NS/NCRR	DRAWING 14
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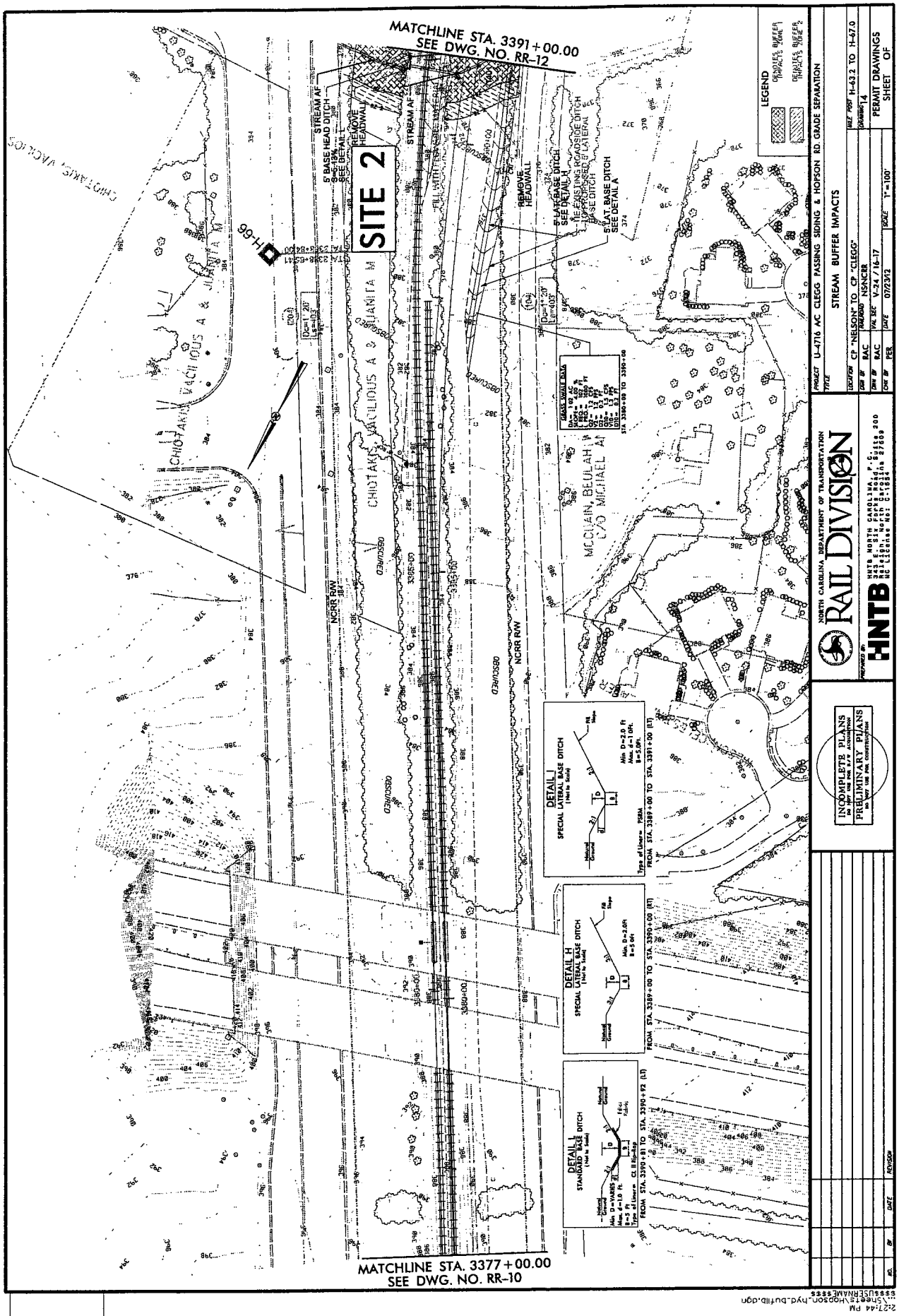
MATCHLINE STA. 3391+00.00
SEE DWG. NO. RR-12
SITE 2
STREAM AF
5' BASE HEAD DITCH
REMOVE HEADWALL
5' LAT. BASE DITCH
SEE DETAIL H
5' LAT. BASE DITCH
SEE DETAIL A
CHIOTAKIS, VACILIOUS A & JUANITA M
MCCLAIN, BEULAH M
C/O MICHAEL A
NCRR R/W
OBSCURED
DETAIL I
SPECIAL LATERAL BASE DITCH
DETAIL H
SPECIAL LATERAL BASE DITCH
DETAIL L
STANDARD BASE DITCH
MATCHLINE STA. 3377+00.00
SEE DWG. NO. RR-10
LEGEND
DENOTES BUFFER IMPACTS ZONE 1
DENOTES BUFFER IMPACTS ZONE 2
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
HNTB
INCOMPLETE PLANS
PRELIMINARY PLANS
PROJECT U-4716 AC CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION
TITLE STREAM BUFFER IMPACTS
LOCATION CP "NELSON" TO CP "CLEGG"
DRN BY RAC
CHK BY PER
RAILROAD NS/NCRR
VAL SEC V-24 / 16-17
DATE 07/23/12
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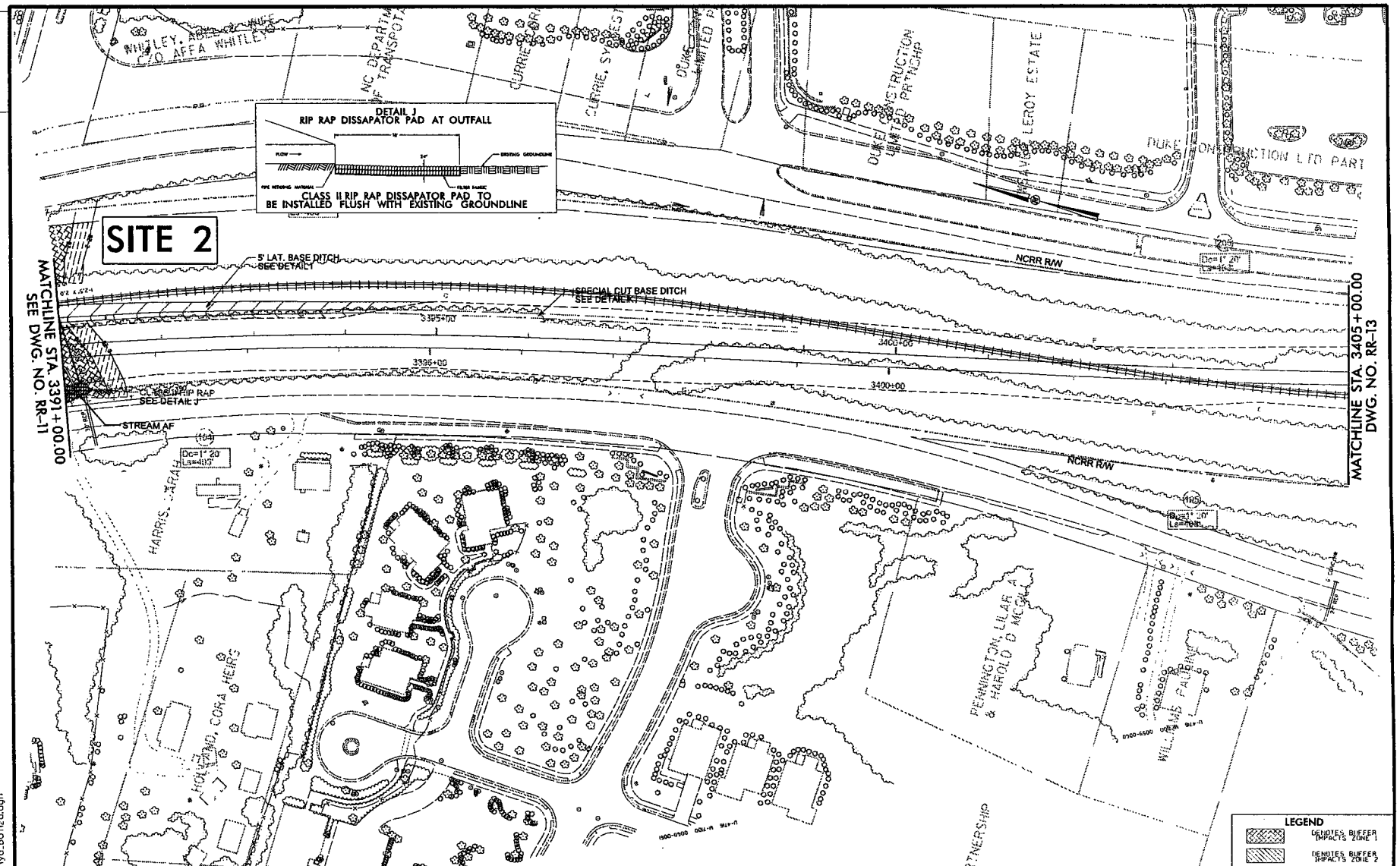
MILE POST H-63.2 TO H-67.0
DRAWING 14
PERMIT DRAWINGS
SHEET OF
NO. BY DATE REVISION



NO.	BY	DATE	REVISION

INCOMPLETE PLANS
DO NOT USE FOR R/W ACQUISITION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

PREPARED BY: HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	STREAM BUFFER IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"	MILE POST	H-63.2 TO H-67.0
DGN BY	RAC	RAILROAD	NS/NCRR
DWN BY	RAC	VAL SEC	V-24 / 16-17
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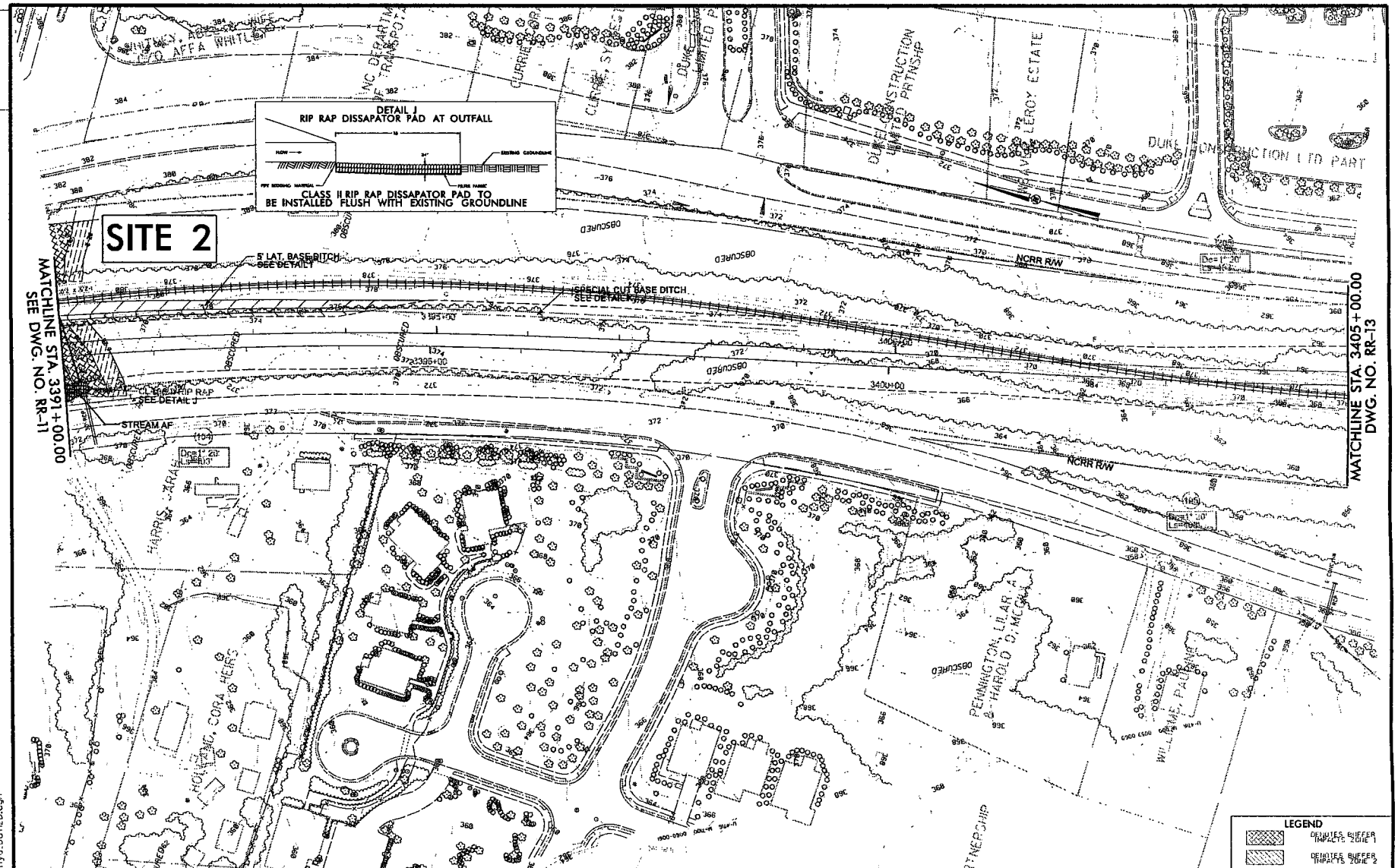

NO.	BY	DATE	REVISION

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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

PREPARED BY: HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
NC License No: C-1554

PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	STREAM BUFFER IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"		MILE POST H-63.2 TO H-67.0
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DWN BY	RAC	VAL SEC V-24 / 16-17	PERMIT DRAWINGS
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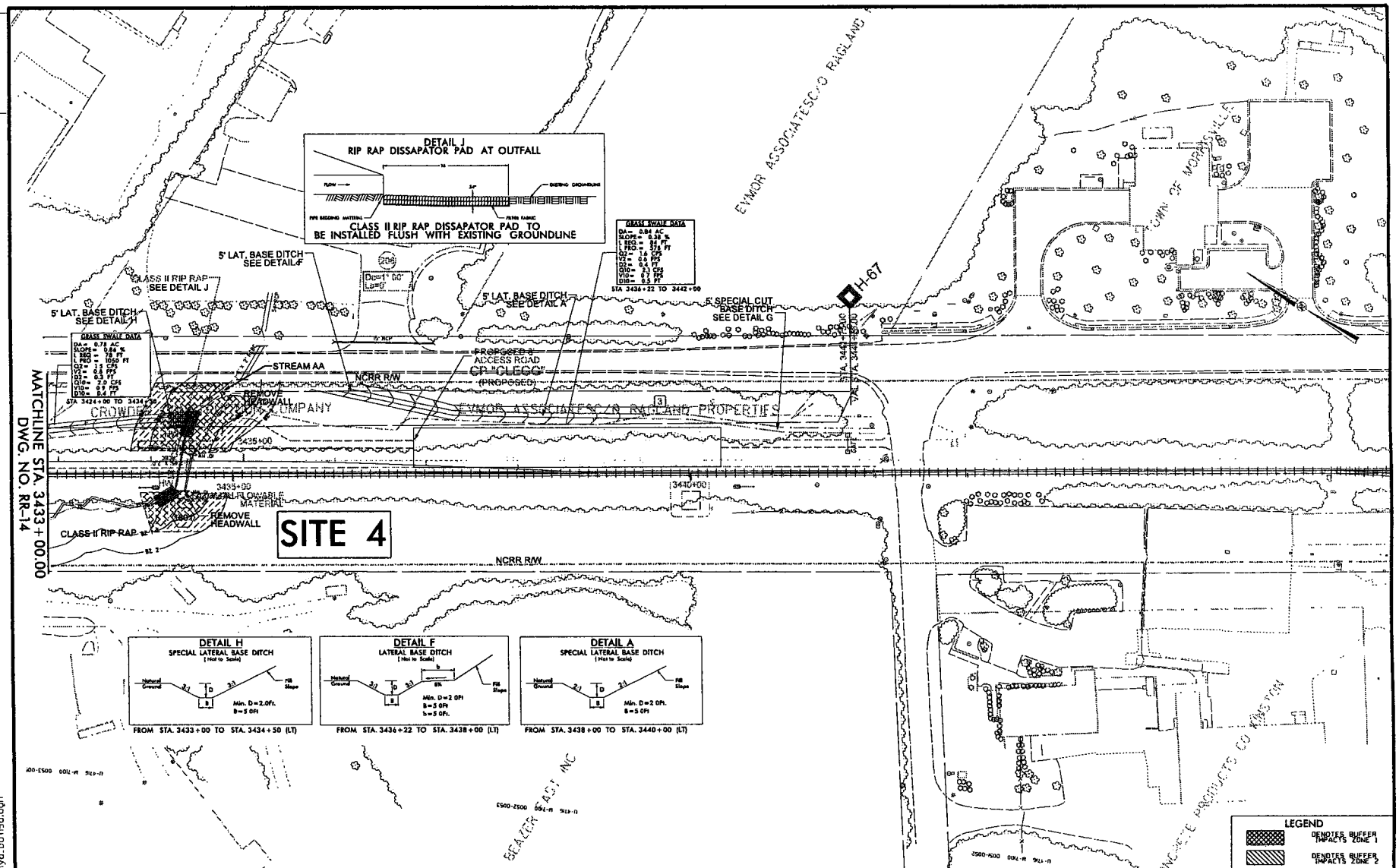

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PROJECT	U-4716 A/C CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION		
TITLE	STREAM BUFFER IMPACTS		
LOCATION	CP "NELSON" TO CP "CLEGG"	MILE POST	H-63.2 TO H-67.0
DGN BY	RAC	RAILROAD	NS/NCRR
DWN BY	RAC	VAL SEC	V-24 / 16-17
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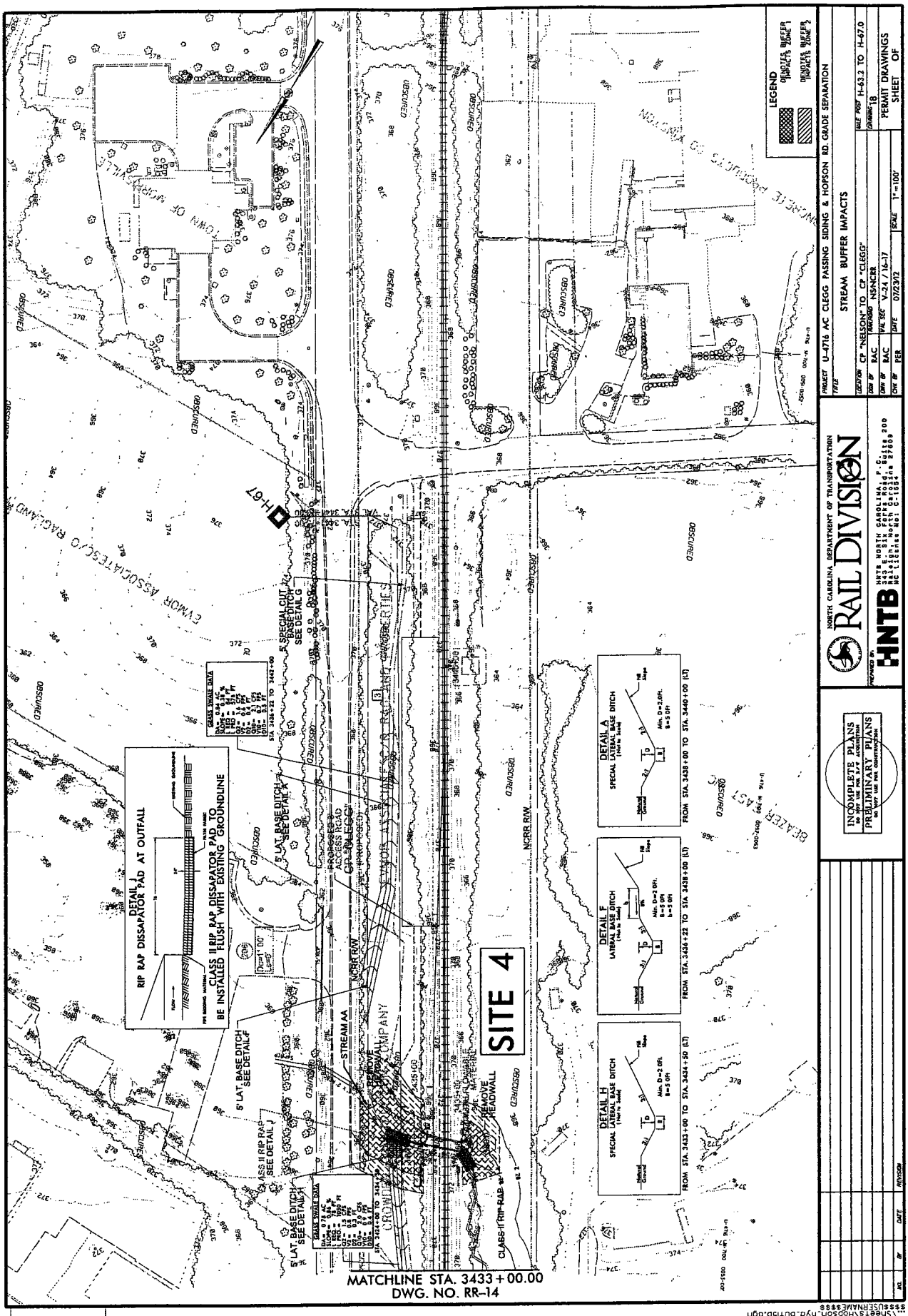
SITE 4
MATCHLINE STA. 3433+00.00
DWG. NO. RR-14
LEGEND
DENOTES BUFFER IMPACTS ZONE 1
DENOTES BUFFER IMPACTS ZONE 2
DETAIL A
SPECIAL LATERAL BASE DITCH
FROM STA. 3438+00 TO STA. 3440+00 (LT)
DETAIL F
LATERAL BASE DITCH
FROM STA. 3436+22 TO STA. 3438+00 (LT)
DETAIL H
SPECIAL LATERAL BASE DITCH
FROM STA. 3433+00 TO STA. 3434+50 (LT)
RIP RAP DISSAPATOR PAD AT OUTFALL
CLASS II RIP RAP DISSAPATOR PAD TO BE INSTALLED FLUSH WITH EXISTING GROUNDLINE
5' LAT. BASE DITCH SEE DETAIL A
5' LAT. BASE DITCH SEE DETAIL F
5' LAT. BASE DITCH SEE DETAIL H
CLASS II RIP RAP SEE DETAIL J
CLASS II RIP RAP
REMOVE HEADWALL
NCRR R/W
STREAM AA
PROPOSED ACCESS ROAD SR 1164 (CLEGG RD.)
EXISTING RAILROAD TRACK
EXISTING GROUNDLINE
PIPE BEDDING MATERIAL
FLOW
DESCRIBED
H67
EVANS ASSOCIATES/D RAGLAND
BLAZER ESTATES
CROWN COMPANY
TOWN OF WILLIAMSTON
INCOMPLETE PLANS
PRELIMINARY PLANS
NOT TO BE USED FOR CONSTRUCTION
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION
PREPARED BY:
HNTB
HNTB NORTH CAROLINA, P.C.
343 E. Six Forks Road, Suite 200
Raleigh, North Carolina 27609
PROJECT U-4716 AC CLEGG PASSING SIDING & HOPSON RD. GRADE SEPARATION
TITLE STREAM BUFFER IMPACTS
LOCATION CP "NELSON" TO CP "CLEGG"
DES BY RAC MANAGED N5NCRR
DRN BY RAC VAL 386' V-24 / 16-17
CHK BY PER DATE 07/23/12
SCALE 1"=100'
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PERMIT DRAWINGS
DRAWING TB
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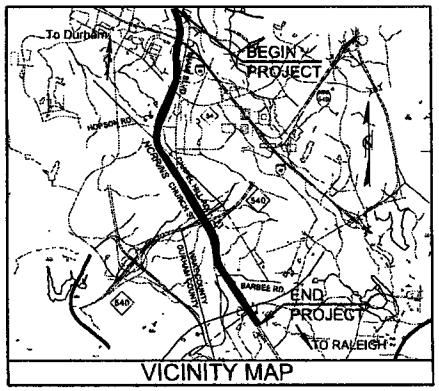
TIP PROJECT: U-4716A/C

STATE	STATE PROJECT REFERENCE NO	SHEET NO.	TOTAL SHEETS
N.C.	U-4716A/C	UC-1	

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

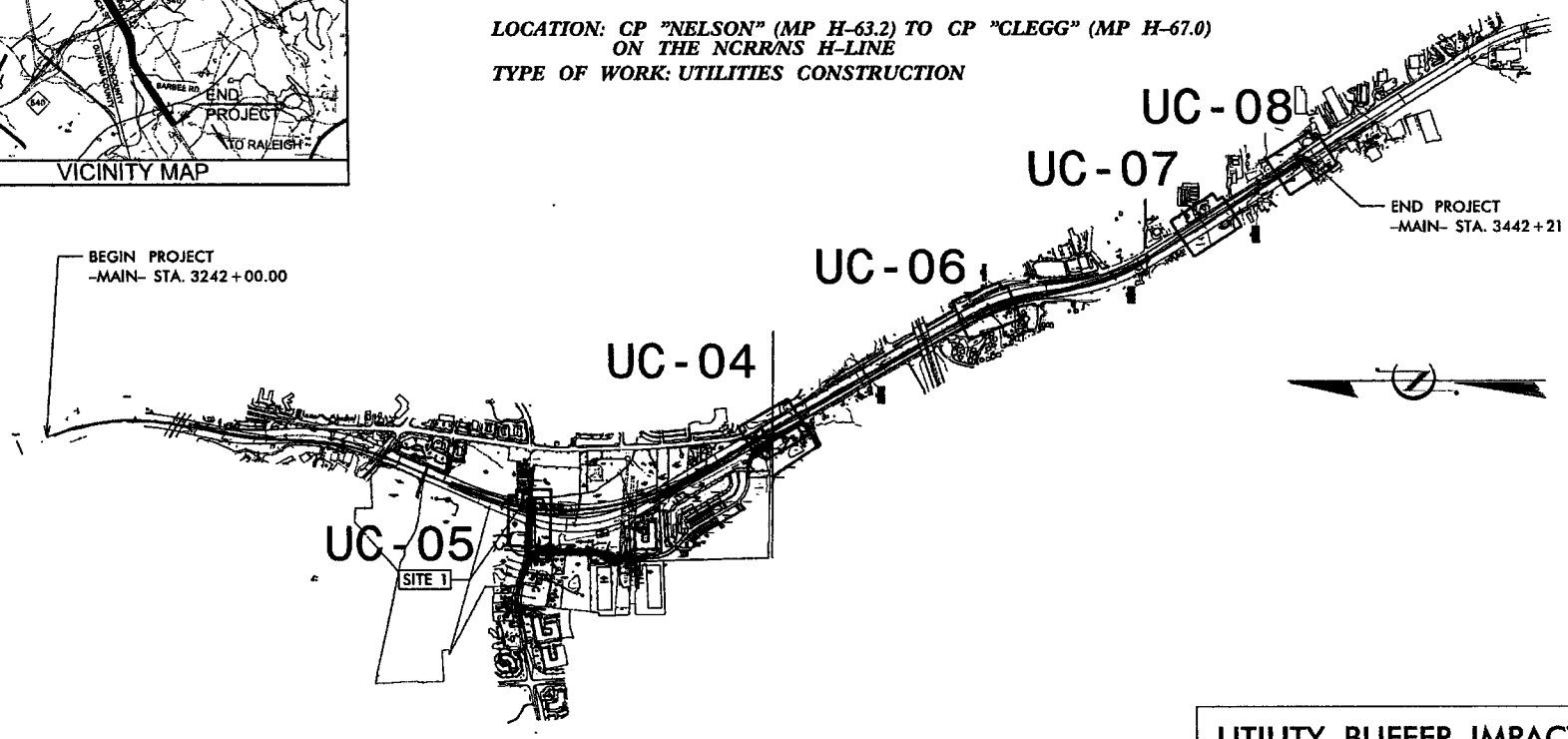
WAKE & DURHAM COUNTIES



VICINITY MAP

LOCATION: CP "NELSON" (MP H-63.2) TO CP "CLEGG" (MP H-67.0) ON THE NCRR/NS H-LINE

TYPE OF WORK: UTILITIES CONSTRUCTION



UTILITY BUFFER IMPACTS

GRAPHIC SCALES

PLANS: 30 15 0 30 60

PROFILE (HORIZONTAL): 10 5 0 10 20

PROFILE (VERTICAL): 10 5 0 10 20

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
UC-1	TITLE SHEET
UC-2	SYMBOLOGY SHEET
UC-3	GENERAL NOTES SHEET
UC-4 TO UC-8	PLAN SHEETS
UC-9 TO UC-12	WATER PROFILES
UC-13 TO UC-14	SEWER PROFILES
UC-15 TO UC-19	DETAILS

UTILITY OWNERS ON THIS PROJECT:

WATER - CITY OF DURHAM
TOWN OF CARY

SEWER - DURHAM COUNTY

UTILITY DESIGN ENGINEER

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

UTILITY DESIGN BY:
MA Engineering CONSULTANTS, INC.
556 East Chatham Street Suite 170 Cary, NC 27511
Phone: 919.297.0220 Fax: 919.297.0221

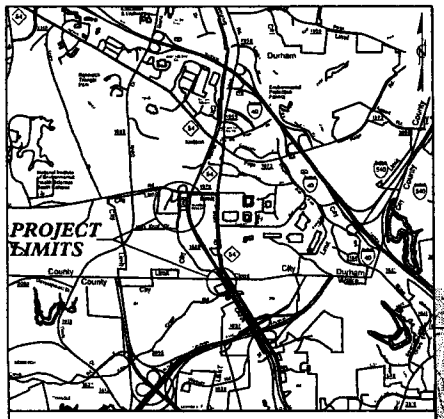
Prepared for:
ENGINEERING & SAFETY BRANCH
MAIL: 1556 MAIL SERVICE CENTER RALEIGH, NC 27699-1556
DELIVERY: 860 CAPITAL BOULEVARD RALEIGH, NC 27603
PHONE: (919) 715-8803
FAX: (919) 715-8804

P-71

New 11-9-12

CONTRACT: WBS–40325.1.3 TIP PROJECT: U–4716

See Sheet 1-A For Index of Sheets



STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE & DURHAM COUNTIES

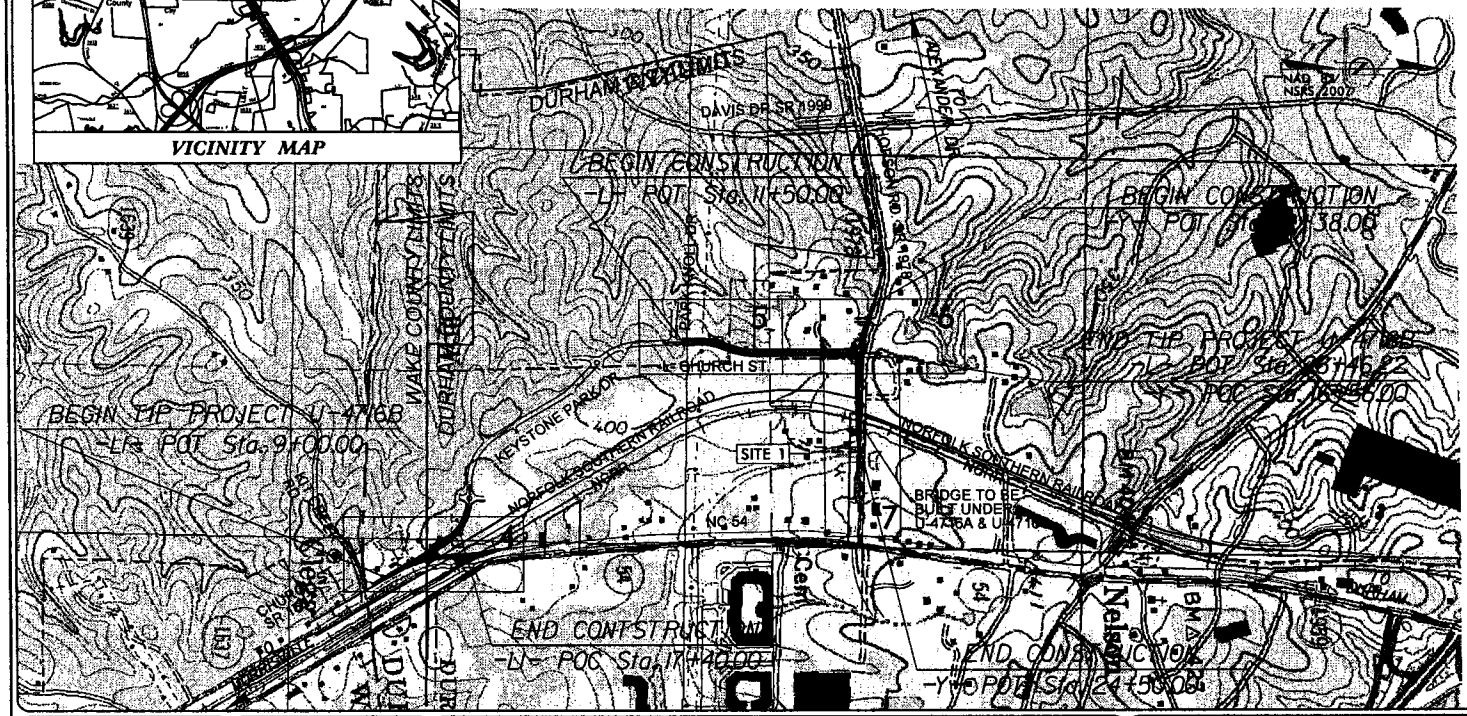
FINAL PLANS

LOCATION: HOPSON RD. AND CHURCH ST. EXTENSION IN DURHAM

TYPE OF WORK: GRADING, PAVING, & DRAINAGE

N.C.	U-4716B	1
		P.E.
		ROW
		P.E.
		RR
		CON

BUFFER IMPACTS



INCOMPLETE PLANS
PRELIMINARY PLANS

GRAPHIC SCALES

PLANS 50 25 0 50 100

PROFILE (HORIZONTAL) 50 25 0 50 100

PROFILE (VERTICAL) 10 5 0 10 20

DESIGN DATA

ADT 2010 = 1,500
ADT 2030 = 8,700

V = 40 MPH

LENGTH ROADWAY	= 0.44
LENGTH STRUCTURE	= 0.00
TOTAL LENGTH	= 0.44

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

Prepared in the Office of:
GIBSON ENGINEERS, PC
PO BOX 700
FUQUAY VARINA, N.C. 27526
PHONE 919-552-2353
FAX 919-552-2254
GIBSON ENGINEERS, PC

Prepared for:
ENGINEERING & SAFETY BRANCH
MAIL: 1556 MAIL SERVICE CENTER RALEIGH, NC 27699-1556
DELIVERY: 693 CAPITAL BOULEVARD RALEIGH, NC 27603
PHONE: (919) 715-8803
FAX: (919) 715-8804

2006 STANDARD SPECIFICATIONS

LETTING DATE: OCT 16, 2012

GLENDA M. GIBSON, PE
PROJECT ENGINEER

MICHAEL PEKAREK, PE
PROJECT DESIGN ENGINEER

HYDRAULICS ENGINEER

SIGNATURE P.E.

ROADWAY DESIGN ENGINEER

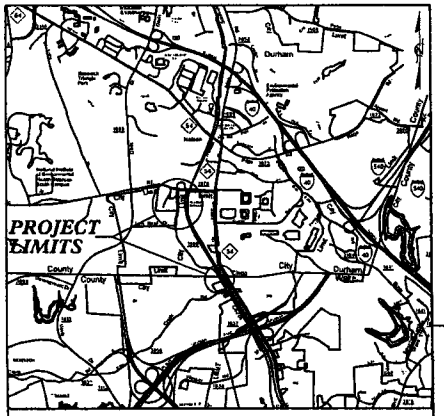
SIGNATURE P.E.

P-72

New 11-9-12

CONTRACT: WBS-40325.1.3 TIP PROJECT: U-4716

See Sheet 1-A For Index of Sheets



VICINITY MAP

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

WAKE & DURHAM COUNTIES

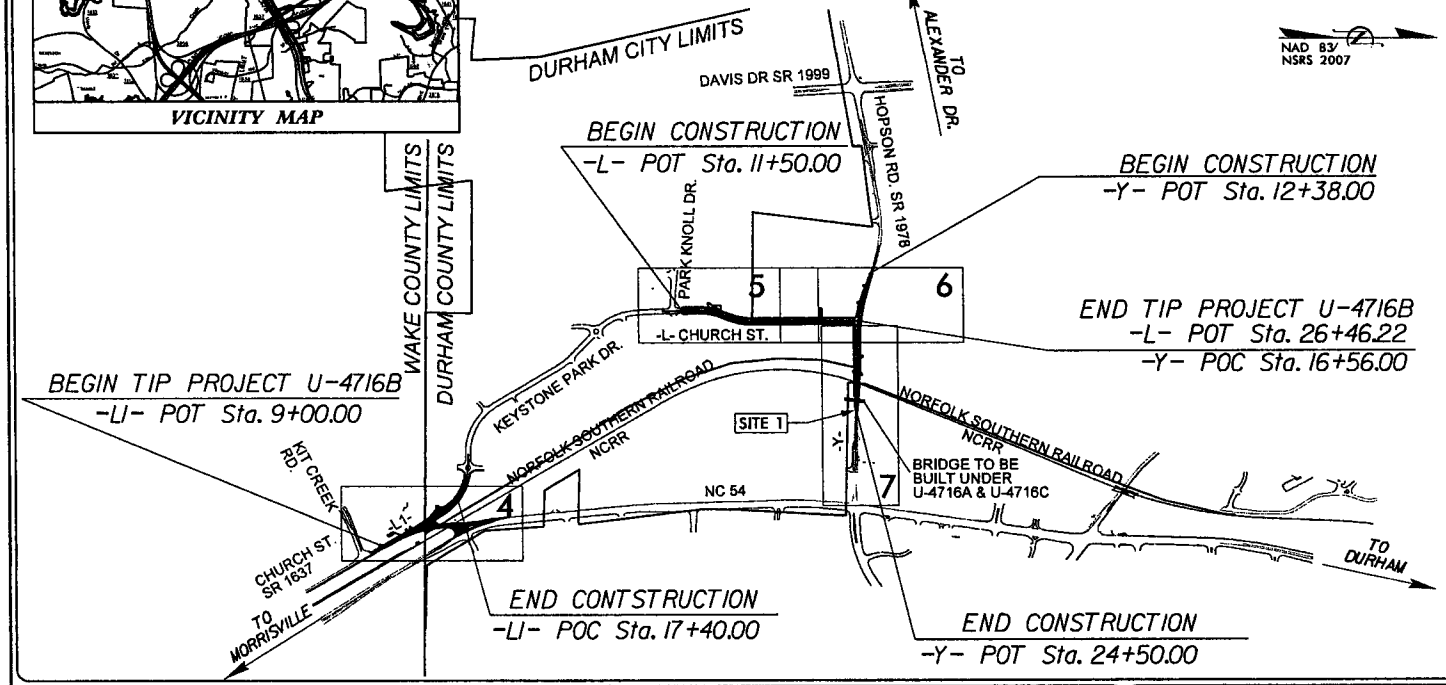
FINAL PLANS

LOCATION: HOPSON RD. AND CHURCH ST. EXTENSION IN DURHAM

TYPE OF WORK: GRADING, PAVING, & DRAINAGE

N.C.	U-4716B	1	
			P.E.
			ROW
			P.E.
			P.E.
			CONS

BUFFER IMPACTS



INCOMPLETE PLANS
DO NOT USE FOR CONSTRUCTION
PRELIMINARY PLANS
DO NOT USE FOR CONSTRUCTION

GRAPHIC SCALES

PLANS 50 25 0 50 100

PROFILE (HORIZONTAL) 50 25 0 50 100

PROFILE (VERTICAL) 10 5 0 10 20

DESIGN DATA

ADT 2010 = 1,500
ADT 2030 = 8,700
V = 40 MPH

LENGTH ROADWAY =	0.44
LENGTH STRUCTURE =	0.00
TOTAL LENGTH =	0.44

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
RAIL DIVISION

Prepared in the Office of:
GIBSON ENGINEERS, PC
PO BOX 700
FUQUAY VARINA, N.C. 27526
PHONE 919-552-2253
FAX 919-552-2254
GIBSON ENGINEERS, PC

Prepared for:
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RALEIGH, NC 27603
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FAX: (919) 715-8804

2006 STANDARD SPECIFICATIONS

LETTING DATE: OCT 16, 2012

GLENDA M. GIBSON, PE
PROJECT ENGINEER

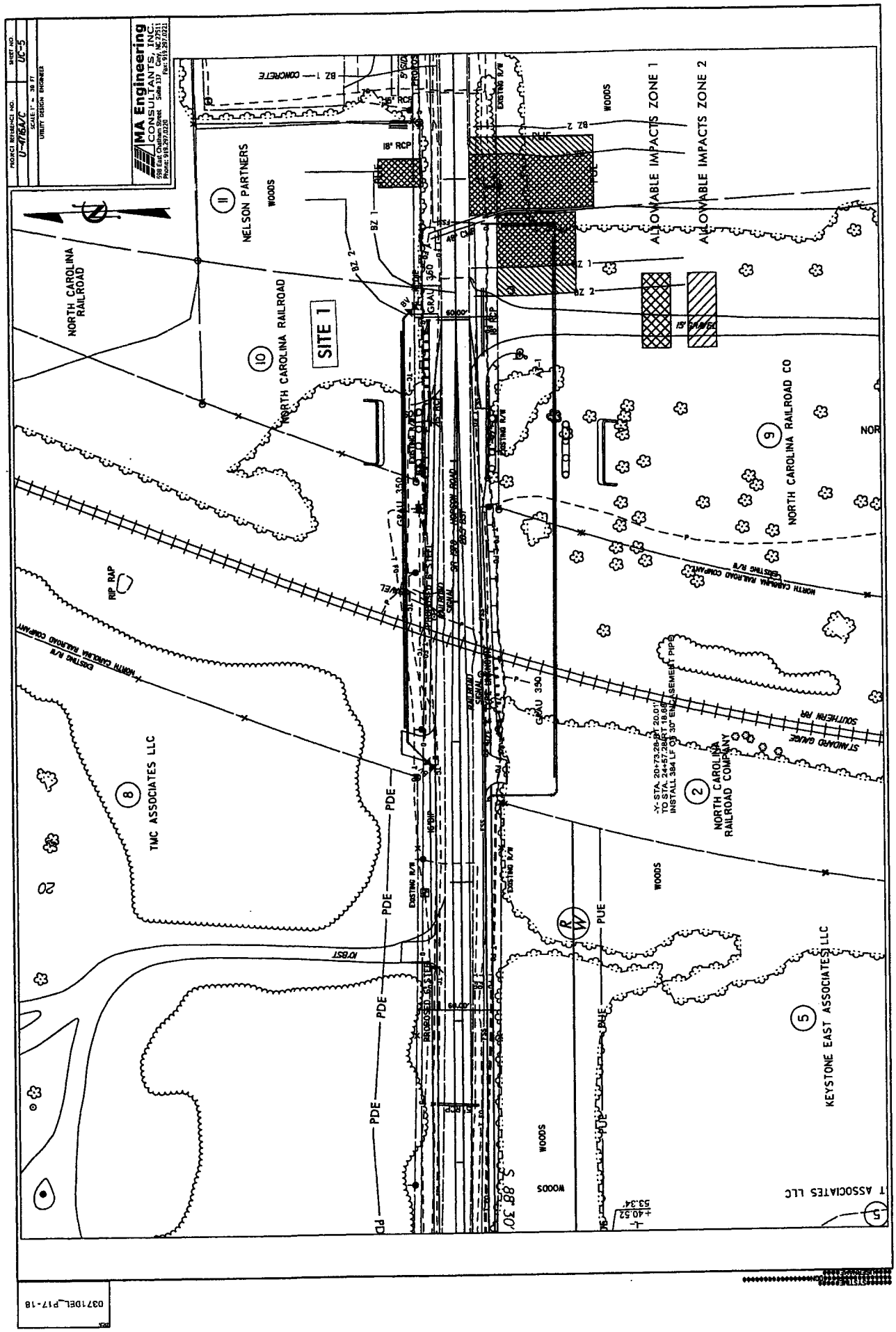
MICHAEL PEKAREK, PE
PROJECT DESIGN ENGINEER

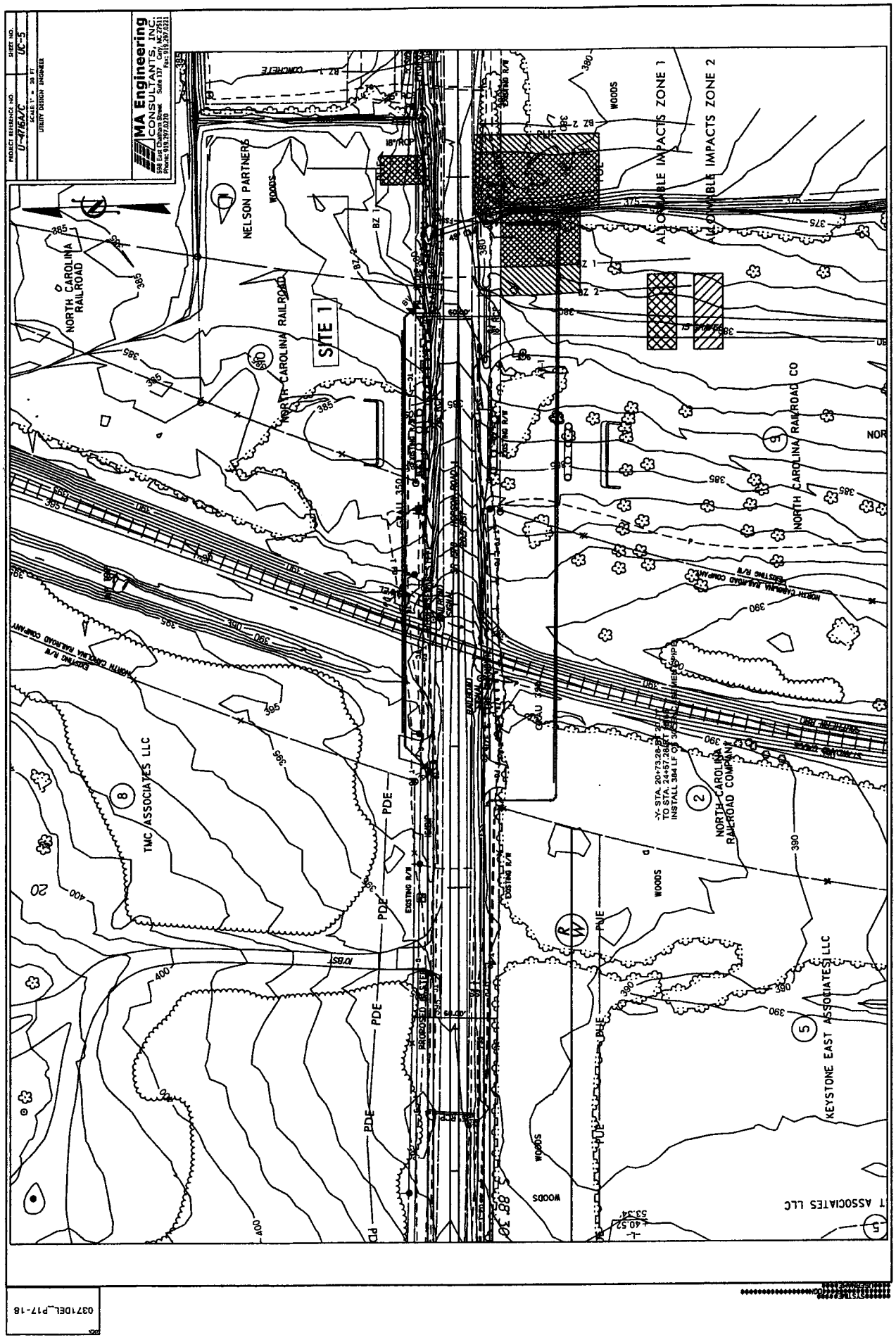
HYDRAULICS ENGINEER
SIGNATURE P.E.

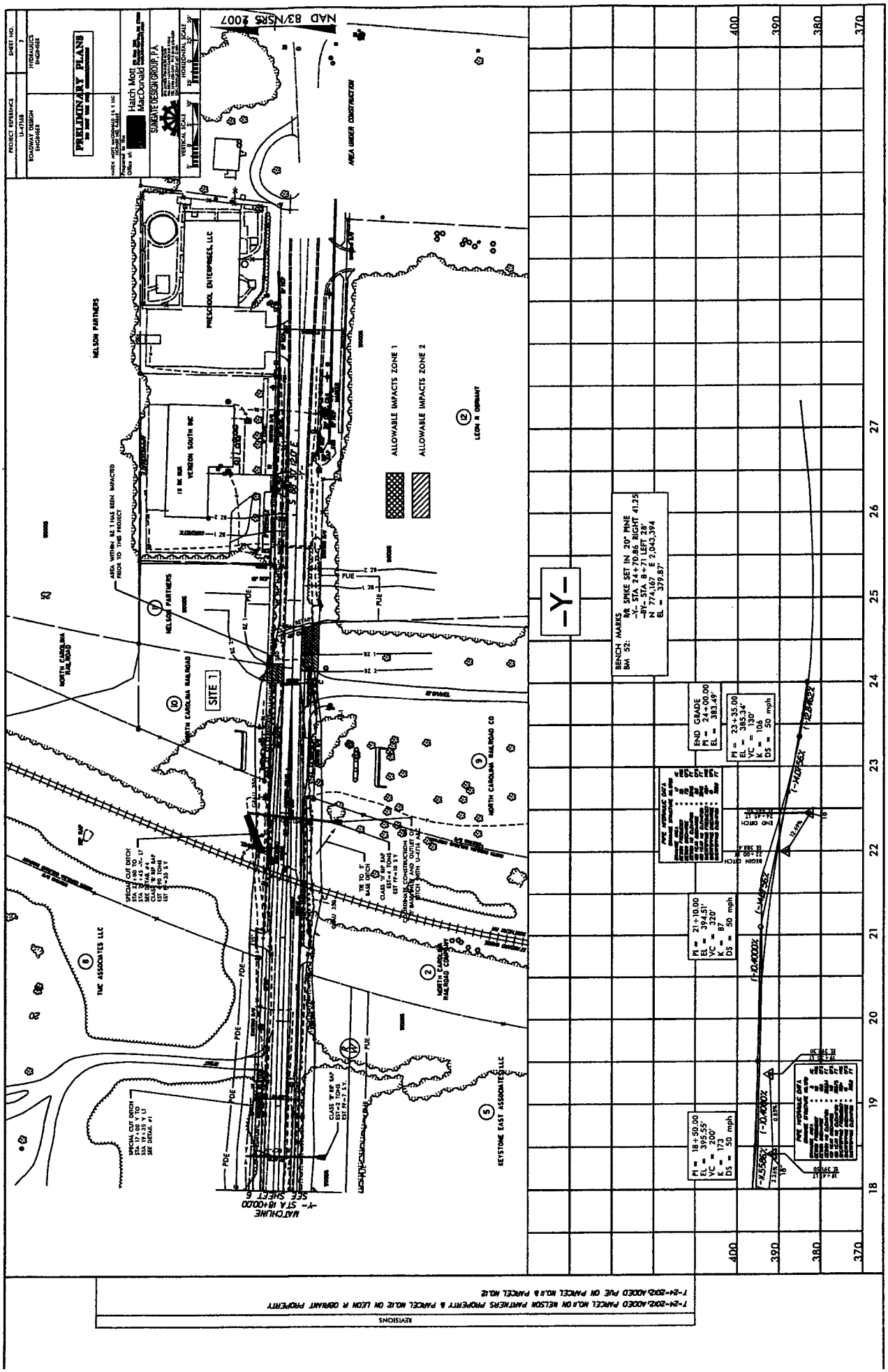
ROADWAY DESIGN ENGINEER
SIGNATURE P.E.

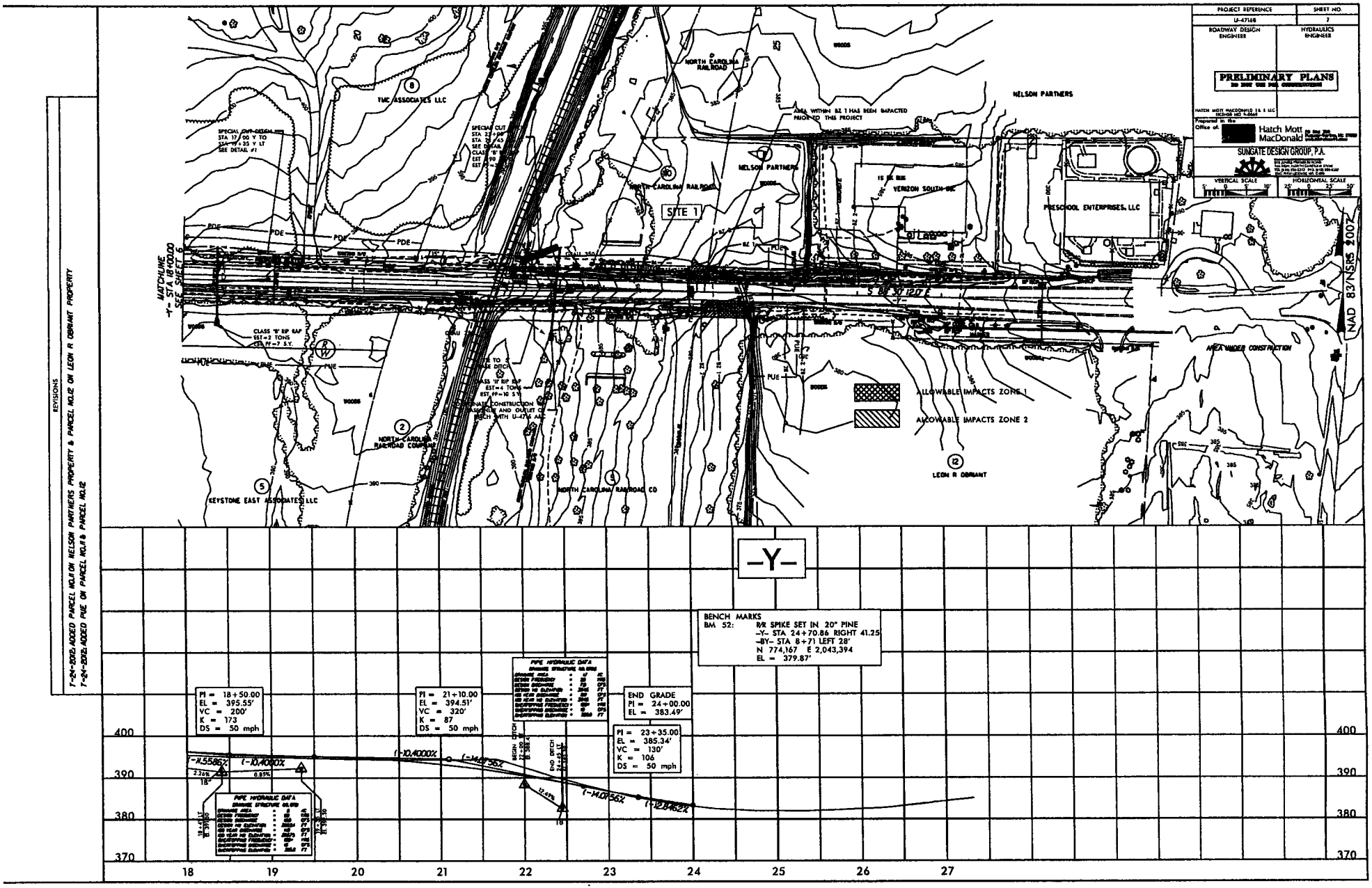
P-73

New 11-9-12


MA Engineering
CONSULTANTS, INC.
598 East Chatham Street Suite 137 Cary, NC 27511
Phone: 919.297.0220 Fax: 919.297.0221
PROJECT REFERENCE NO. U-4716A/C
SHEET NO. UC-5
SCALE: 1" = 30 FT
UTILITY DESIGN ENGINEER
NORTH CAROLINA RAILROAD
NELSON PARTNERS
WOODS
SITE 1
NORTH CAROLINA RAILROAD
ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
NORTH CAROLINA RAILROAD CO
RIP RAP
TMC ASSOCIATES LLC
NORTH CAROLINA RAILROAD COMPANY
KEYSTONE EAST ASSOCIATES LLC
PDE
PUE
EXISTING R/W
NORTH CAROLINA RAILROAD COMPANY
SOUTHERN RR
STANDARD GAUGE
GRAU 350
GRAU 360
18" RCP
15' GRAVEL
S 88° 30'
D371DEL_P17-18


MA Engineering CONSULTANTS, INC.
NORTH CAROLINA RAILROAD
NELSON PARTNERS
SITE 1
ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
NORTH CAROLINA RAILROAD CO
TMC ASSOCIATES LLC
NORTH CAROLINA RAILROAD COMPANY
KEYSTONE EAST ASSOCIATES LLC
WOODS
PDE
PUE
EXISTING R/W
0371DEL_P17-18


PRELIMINARY PLANS
NAD 83/NSRS 2007
NELSON PARTNERS
PRESCHOOL ENTERPRISES, LLC
ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
LEON R OBRIANT
NORTH CAROLINA RAILROAD
SITE 1
TMC ASSOCIATES LLC
KEYSTONE EAST ASSOCIATES LLC
BENCH MARKS
BM 52:
-Y-
REVISIONS


PROJECT REFERENCE
U-4716B
SHEET NO.
7
ROADWAY DESIGN ENGINEER
HYDRAULICS ENGINEER
PRELIMINARY PLANS
Hatch Mott MacDonald
SUNGATE DESIGN GROUP, P.A.
VERTICAL SCALE
HORIZONTAL SCALE
NAD 83/NSRS 2007
REVISIONS
7-24-2012: ADDED PARCEL NO.11 ON NELSON PARTNERS PROPERTY & PARCEL NO.12 ON LEON R OBRIANT PROPERTY
7-24-2012: ADDED PUE ON PARCEL NO.11 & PARCEL NO.12
TMC ASSOCIATES LLC
NORTH CAROLINA RAILROAD
NELSON PARTNERS
AREA WITHIN BZ 1 HAS BEEN IMPACTED PRIOR TO THIS PROJECT
SITE 1
VERIZON SOUTH INC
PRESCHOOL ENTERPRISES, LLC
MATCHLINE -Y- STA 18+00.00 SEE SHEET 6
CLASS 'B' RIP RAP EST=2 TONS
CLASS 'H' RIP RAP EST=4 TONS
NORTH CAROLINA RAILROAD COMPANY
KEYSTONE EAST ASSOCIATES LLC
NORTH CAROLINA RAILROAD CO
LEON R OBRIANT
AREA UNDER CONSTRUCTION
ALLOWABLE IMPACTS ZONE 1
ALLOWABLE IMPACTS ZONE 2
-Y-
BENCH MARKS
BM 52: R/R SPIKE SET IN 20" PINE
-Y- STA 24+70.86 RIGHT 41.25
-BY- STA 8+71 LEFT 28'
N 774,167 E 2,043,394
EL = 379.87'
PI = 18+50.00
EL = 395.55'
VC = 200'
K = 173
DS = 50 mph
PI = 21+10.00
EL = 394.51'
VC = 320'
K = 87
DS = 50 mph
END GRADE
PI = 24+00.00
EL = 383.49'
PI = 23+35.00
EL = 385.34'
VC = 130'
K = 106
DS = 50 mph
PIPE HYDRAULIC DATA
(-11.5586%)
(-10.4000%)
(-14.0756%)
(-12.8462%)
400
390
380
370
18
19
20
21
22
23
24
25
26
27

WETLAND PERMIT IMPACT SUMMARY

			WETLAND IMPACTS					SURFACE WATER IMPACTS				
Site No.	Station (From/To)	Structure Size / Type	Permanent Fill In Wetlands (ac)	Temp. Fill In Wetlands (ac)	Excavation in Wetlands (ac)	Mechanized Clearing in Wetlands (ac)	Hand Clearing in Wetlands (ac)	Permanent SW impacts (ac)	Temp. SW impacts (ac)	Existing Channel Impacts Permanent (ft)	Existing Channel Impacts Temp. (ft)	Natural Stream Design (ft)
1	3336+80	48" SCP	0.02	-	0.02	0.01	-	0.01	-	47	-	-
2	3391+00	36" SCP	-	-	-	-	-	0.01	0.01	103	15	-
3	3410+00	42" SCP	0.01	-	0.01	-	-	-	-	-	-	-
4	3434+50	54" SCP	-	-	-	-	-	0.01	0.01	65	30	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-
TOTALS:			0.03	0.00	0.02	0.01	0.00	0.02	0.01	215	45	0

SCP - STEEL CASING PIPE

NC DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
CLEGG PASSING SIDING &
HOPSON RD GRADE SEPARATION
U-4716 A/C

SHEET OF 7/23/2012

P- 78

New 11-9-12

BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	48" SCP	3336+62	X			4377	2933	7309					
2*	36" SCP	3391+00	X			9228	6291	15519					
4	54" SCP	3434+32	X			7240	4500	11740					
TOTAL:						20845	13724	34569	0	0	0		

SCP - STEEL CASING PIPE

*Site 2 is located withing the Jordan Lake watershed of the Cape Fear River Basin.

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

CLEGG PASSING SIDING &
HOPSON RD GRADE SEPARATION
U-4716 A/C

7/23/2012
SHEET OF

Rev. May 2006

P-79

New 11-9-12

WETLANDS IN BUFFER IMPACTS SUMMARY

SITE NO.	STATION (FROM/TO)		WETLANDS IN BUFFERS ZONE 1 (ft^2)	WETLANDS IN BUFFERS ZONE 2 (ft^2)
1	3336+62		1316.358	-
TOTAL:			1316.358	0

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

CLEGG PASSING SIDING &
HOPSON RD GRADE SEPARATION
U-4716 A/C

7/23/2012
SHEET OF

Rev. Jan 2009

P-80

New 11-9-12

BUFFER IMPACTS SUMMARY

			IMPACT									BUFFER REPLACEMENT	
			TYPE			ALLOWABLE			MITIGABLE				
SITE NO.	STRUCTURE SIZE / TYPE	STATION (FROM/TO)	ROAD CROSSING	BRIDGE	PARALLEL IMPACT	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)	TOTAL (ft^2)	ZONE 1 (ft^2)	ZONE 2 (ft^2)
1	Existing 48" CMP	24+05 - 24+66 -Y-	X			1259.0	852.0	2111.0					
TOTAL:						1259.0	852.0	2111.0	0.0	0.0	0.0		

N.C. DEPT. OF TRANSPORTATION
DIVISION OF HIGHWAYS

DURHAM COUNTY
PROJECT: 40325.1.3 (U-4716B)

8/15/2012
SHEET OF

Rev. May 2006

PS1

New 11-9-12

North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released September 2011)

Project/TIP No.: U-4716A/C **County(ies):** Wake Durham

General Project Information

Project No.:	U-4716A/C		**Project Type:** Roadway Relocation		**Date:** 7/23/2012
NCDOT Contact:	Marshall Clawson		**Contractor / Designer:**	HNTB Corporation	
	Address: 120 Birch Ridge Drive Raleigh, NC 27610			**Address:** 343 E. Six Forks Road, Suite 200 Raleigh, NC 27609	
	Phone: 919-707-6713			**Phone:** 919-424-0437	
	Email: mclawson@ncdot.gov			**Email:** jabyrd@HNTB.com	
City/Town:	Raleigh		**County(ies):**	Wake	Durham
River Basin(s):	Neuse	Cape Fear	**CAMA County?**	No	No
Primary Receiving Water:	Unnamed Trib to Stirrup Iron Creek		**NCDWQ Stream Index No.:**	27-33-4-1	
NCDWQ Surface Water Classification for Primary Receiving Water		**Primary:**	Class C		
		Supplemental:	Nutrient Sensitive Waters (NSW)		
Other Stream Classification:	None				
303(d) Impairments:	None				
Buffer Rules in Effect	Neuse & Jordan Lake				

Project Description

Project Length (lin. Miles or feet):	3.80	**Surrounding Land Use:**	Commercial / Business / Residential

	Proposed Project	**Existing Site**
Project Built-Upon Area (ac.)	106.26 ac.	106.26 ac.
Typical Cross Section Description:	Double track rail line	
Average Daily Traffic (veh/hr/day):	Design/Future: N/A	Existing: N/A

General Project Narrative:

Project U-4716 A/C consists of a rail realignment and a grade separation at Hopson Road in Durham County, as well as double tracking from west of Interstate 40 in Durham County to west of McCrimmon Parkway in Wake County. The project is located in both the Neuse and Cape Fear River basins and is subject to buffer rules from the Neuse and Jordan Lake Watersheds.

References

P- 82

New 11-9-12

North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released September 2011)

Project/TIP No.: U-4716A/C **County(ies):** Wake Durham

Project Environmental Summary

Surface Water Impacts

Sheet No.	Station (From / To)	Feature Impacted	Water / Wetland / Buffer Type	Receiving Surface Water Name	NRTR Map ID	NCDWQ Stream Index	NCDWQ Surface Water Classification	303(d) Impairments	Type of Impact	Existing SCM	Proposed SCM
11	3336+35 3337+54	Stream	Intermittent	UT to Stirrup Iron Cr.		27-33-4-2	C; NSW		Culvert	N/A	Swale
15	3390+26 3391+67	Stream	Perennial	UT to Kitt Cr.		16-41-1-17-2-(0.3)	WS-V; NSW		Culvert	N/A	Swale
18	3433+89 3435+41	Stream	Intermittent	UT to Stirrup Iron Cr.		27-33-4-2	C; NSW		Culvert	N/A	Swale

* List all stream and surface water impact locations regardless of jurisdiction or size.
Equalizer Pipes to be noted as a minimization of impacts.
All proposed SCMs listed must also be listed under Swales, Preformed Sour Holes and other Energy Dissipators, or Other Stormwater Control Measures.

Description of Minimization of Impacts or Mitigation

References

North Carolina Department of Transportation
Highway Stormwater Program
STORMWATER MANAGEMENT PLAN
FOR LINEAR ROADWAY PROJECTS

(Version 1.2; Released September 2011)

Project/TIP No.: U-4716A/C **County(ies):** Wake Durham

Swales

Sheet No.	Station (From / To)	Stream Crossing Station	Base Width (ft)	Front Slope (H:V)	Back Slope (H:V)	Drainage Area (ac)	Recommended Treatment Length (ft)	Actual Length (ft)	Longitudinal Slope (%)	Q2 (cfs)	V2 (fps)	Q10 (cfs)	V10 (fps)	Rock Checks Used
11	3333+00 3336+62	3336+62	5.0	3:1	3:1	0.60	60	136	2.41%	1.7	1.2	2.1	1.3	No
11	3353+00 3336+62	3336+62	5.0	3:1	3:1	2.20	220	252	2.99%	6.2	2.0	7.8	2.1	No
15	3380+00 3390+00	3391+00	5.0	3:1	3:1	1.02	102	102	4.00%	1.2	1.1	1.6	1.3	No
15	3390+00 3391+00	3391+00	5.0	2:1	2:1	1.12	112		1.19%	1.3	0.9	1.8	1.0	No
18	3424+00 3434+50	3434+76	5.0	3:1	3:1	0.78	78	150	0.86%	1.5	0.8	2.0	0.9	No
18	3442+00 3436+22	3434+76	5.0	3:1	3:1	0.84	84	125	0.38%	1.6	0.6	2.1	0.7	No
							0							
							0							
							0							
							0							
							0							
							0							
							0							
							0							
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							0							
							0							

☐ YES ☑ NO Have minimum design criteria, as presented in the NCDOT Best Management Practices Toolbox, Version 1 (March 2008), been met and verified? If No, provide further explanantion of why design criteria was not met.

Additional Comments

Due to existing site constraints, we are unable to construct the proposed swale from 3390+00 - 3391+00 with 3:1 side slopes. The majority of the runoff from this drainage area (1.02 acres) is being treated upstream in the swale from 3380+00 - 3390+00 and meets design criteria. The actual swale lenghts listed above are based on the proposed length of the swale and may not equal the difference between the "From/To" stations. All above velocity computations are based on excavated channels that are not maintained with dence weeds (Manning's 'n' coefficient = 0.07).

New 11-9-12

STANDARD SPECIAL PROVISION
AVAILABILITY OF FUNDS – TERMINATION OF CONTRACTS

(5-20-08) Z-2

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

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

Payment will be made on any contract terminated pursuant to the special provision in accordance with Subarticle 108-13(E) of the *2012 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:

Restricted Noxious **Weed**	Limitations per Lb. Of Seed	Restricted Noxious **Weed**	Limitations per Lb. of Seed
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)
Kobe Lespedeza
Korean Lespedeza
Weeping Lovegrass
Carpetgrass
Bermudagrass
Browntop Millet
German Millet – Strain R
Clover – Red/White/Crimson

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

Common or Sweet Sundangrass

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

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

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

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

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

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

STANDARD SPECIAL PROVISION

ERRATA

(1-17-12) (Rev. 9-18-12) Z-4

Revise the *2012 Standard Specifications* as follows:

Division 2

Page 2-7, line 31, Article 215-2 Construction Methods, replace "Article 107-26" with "Article 107-25".

Page 2-17, Article 226-3, Measurement and Payment, line 2, delete "pipe culverts,".

Page 2-20, Subarticle 230-4(B), Contractor Furnished Sources, change references as follows: Line 1, replace "(4) Buffer Zone" with "(c) Buffer Zone"; **Line 12,** replace "(5) Evaluation for Potential Wetlands and Endangered Species" with "(d) Evaluation for Potential Wetlands and Endangered Species"; and **Line 33,** replace "(6) Approval" with "(4) Approval".

Division 4

Page 4-77, line 27, Subarticle 452-3(C) Concrete Coping, replace "sheet pile" with "reinforcement".

Division 6

Page 6-7, line 31, Article 609-3 Field Verification of Mixture and Job Mix Formula Adjustments, replace "30" with "45".

Page 6-10, line 42, Subarticle 609-6(C)(2), replace "Subarticle 609-6(E)" with "Subarticle 609-6(D)".

Page 6-11, Table 609-1 Control Limits, replace "Max. Spec. Limit" for the Target Source of $P_{0.075}/P_{be}$ Ratio with "1.0".

Page 6-40, Article 650-2 Materials, replace "Subarticle 1012-1(F)" with "Subarticle 1012-1(E)"

Division 10

Page 10-74, Table 1056-1 Geotextile Requirements, replace "50%" for the UV Stability (Retained Strength) of Type 5 geotextiles with "70%".

Division 12

Page 12-7, Table 1205-3, add "FOR THERMOPLASTIC" to the end of the title.

Page 12-8, Subarticle 1205-5(B), line 13, replace "Table 1205-2" with "Table 1205-4".

Page 12-8, Table 1205-4 and 1205-5, replace "THERMOPLASTIC" in the title of these tables with "POLYUREA".

Page 12-9, Subarticle 1205-6(B), line 21, replace "Table 1205-4" with "Table 1205-6".

Page 12-11, Subarticle 1205-8(C), line 25, replace "Table 1205-5" with "Table 1205-7".

Division 15

Page 15-6, Subarticle 1510-3(B), after line 21, replace the allowable leakage formula with the following: $W = LD\sqrt{P} \div 148,000$

Page 15-6, Subarticle 1510-3(B), line 32, delete "may be performed concurrently or" and replace with "shall be performed".

Page 15-17, Subarticle 1540-3(E), line 27, delete "Type 1".

Division 17

Page 17-26, line 42, Subarticle 1731-3(D) Termination and Splicing within Interconnect Center, delete this subarticle.

Revise the *2012 Roadway Standard Drawings* as follows:

1633.01 Sheet 1 of 1, English Standard Drawing for Matting Installation, replace "1633.01" with "1631.01".

STANDARD SPECIAL PROVISION

PLANT AND PEST QUARANTINES
(Imported Fire Ant, Gypsy Moth, Witchweed, And Other Noxious Weeds)

(3-18-03) 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, 919-733-6932, or *http://www.ncagr.com/plantind/* to determine those specific project sites located in the quarantined area or for any regulated article used on this project originating in a quarantined county.

Regulated Articles Include

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

STANDARD SPECIAL PROVISION

AWARD OF CONTRACT

(6-28-77) Z-6

"The North Carolina Department of Transportation, in accordance with the provisions of *Title VI of the Civil Rights Act of 1964* (78 Stat. 252) and the Regulations of the Department of Transportation (*49 C.F.R., Part 21*), issued pursuant to such act, hereby notifies all bidders that it will affirmatively insure that the contract entered into pursuant to this advertisement will be awarded to the lowest responsible bidder without discrimination on the ground of race, color, or national origin".

STANDARD SPECIAL PROVISION

MINORITY AND FEMALE EMPLOYMENT REQUIREMENTS

Z-7

NOTICE OF REQUIREMENTS FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (*EXECUTIVE NUMBER 11246*)

1. The goals and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, see as shown on the attached sheet entitled "Employment Goals for Minority and Female participation".

These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs construction work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The Contractor's compliance with the Executive Order and the regulations in *41 CFR Part 60-4* shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in *41 CFR 60-4.3(a)*, and its effort to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project or the sole purpose of meeting the Contractor's goals shall be a violation of the contract, the executive Order and the regulations *in 41 CFR Part 60-4*. Compliance with the goals will be measured against the total work hours performed.

2. As used in this Notice and in the contract resulting from this solicitation, the "covered area" is the county or counties shown on the cover sheet of the proposal form and contract.

EMPLOYMENT GOALS FOR MINORITY AND FEMALE PARTICIPATION

Economic Areas

Area 023 29.7%
Bertie County
Camden County
Chowan County
Gates County
Hertford County
Pasquotank County
Perquimans County

Area 024 31.7%
Beaufort County
Carteret County
Craven County
Dare County
Edgecombe County
Green County
Halifax County
Hyde County
Jones County
Lenoir County
Martin County
Nash County
Northampton County
Pamlico County
Pitt County
Tyrrell County
Washington County
Wayne County
Wilson County

Area 025 23.5%
Columbus County
Duplin County
Onslow County
Pender County

Area 026 33.5%
Bladen County
Hoke County
Richmond County
Robeson County
Sampson County
Scotland County

Area 027 24.7%
Chatham County
Franklin County
Granville County
Harnett County
Johnston County
Lee County
Person County
Vance County
Warren County

Area 028 15.5%
Alleghany County
Ashe County
Caswell County
Davie County
Montgomery County
Moore County
Rockingham County
Surry County
Watauga County
Wilkes County

Area 029 15.7%
Alexander County
Anson County
Burke County
Cabarrus County
Caldwell County
Catawba County
Cleveland County
Iredell County
Lincoln County
Polk County
Rowan County
Rutherford County
Stanly County

Area 0480 8.5%
Buncombe County
Madison County

Area 030 6.3%
Avery County
Cherokee County
Clay County
Graham County
Haywood County
Henderson County
Jackson County
McDowell County
Macon County
Mitchell County
Swain County
Transylvania County
Yancey County

SMSA Areas

Area 5720 26.6%
Currituck County

Area 9200 20.7%
Brunswick County
New Hanover County

Area 2560 24.2%
Cumberland County

Area 6640 22.8%
Durham County
Orange County
Wake County

Area 1300 16.2%
Alamance County

Area 3120 16.4%
Davidson County
Forsyth County
Guilford County
Randolph County
Stokes County
Yadkin County

Area 1520 18.3%
Gaston County
Mecklenburg County
Union County

Goals for Female

Participation in Each Trade

(Statewide) 6.9%

STANDARD SPECIAL PROVISION

REQUIRED CONTRACT PROVISIONS FEDERAL - AID CONSTRUCTION CONTRACTS

FHWA - 1273 Electronic Version - May 1, 2012 Z-8

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

   The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

   Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

   Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).
2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.
3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.
4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. **Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are

incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.
b. The contractor will accept as its operating policy the following statement:
"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. **EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.
3. **Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:
   a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.
   b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.
   c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.
   d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.
   e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.
4. **Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.
   a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.
   b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.
   c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.
5. **Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:
   a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.
   b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.
   c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.
   d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.
6. **Training and Promotion:**
   a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.
   b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).
   c The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.
   d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. **Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:
   a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.
   b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.
   c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.
   d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.
8. **Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.
9. **Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.
   a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.
   b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.
10. **Assurance Required by 49 CFR 26.13(b):**
   a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.
   b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.
11. **Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.
   a. The records kept by the contractor shall document the following:
      (1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;
      (2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and
      (3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;
   b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. **Minimum wages**
   a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the

Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. **Withholding.** The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. **Payrolls and basic records**

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the

payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/ wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency.

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. **Apprentices and trainees**

a. Apprentices (programs of the USDOL). Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL). Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT). Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. **Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.
6. **Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.
7. **Contract termination:** debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.
8. **Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.
9. **Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.
10. **Certification of eligibility.**
    a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
    b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).
    c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. **Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.
2. **Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.
3. **Withholding for unpaid wages and liquidated damages.** The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.
4. **Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).
    a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees

from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:
(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.
3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.
4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.
5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.
2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).
3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. **Instructions for Certification – First Tier Participants:**
   a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.
   b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.
   c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.
   d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
   e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
   f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.
   g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.
   h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.
   i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
   j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. **Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**
   a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:
      (1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;
      (2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
      (3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and
      (4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
   b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**
   (Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)
   a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.
   b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.
d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).
e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.
f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.
g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.
h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.
2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:
   a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
   b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.
3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

STANDARD SPECIAL PROVISION

ON-THE-JOB TRAINING

(10-16-07) (Rev. 7-21-09) 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. A sample agreement is available at www.ncdot.org/business/ocs/ojt/.

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.

STANDARD SPECIAL PROVISION
MINIMUM WAGES
GENERAL DECISION NC120093 01/06/2012 NC93

Z-93

Date: January 6, 2012

General Decision Number: NC120093 01/06/2012 NC93

Superseded General Decision Numbers: NC20100130

State: North Carolina

Construction Type: HIGHWAY

COUNTIES:

Chatham	Greene	Person
Durham	Nash	Pitt
Edgecombe	Orange	Wayne

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, railroad construction, bascule, suspension and spandrel arch bridges designed for commercial navigation, bridges involving marine construction, and other major bridges).

Modification Number	Publication Date
0	01/06/2012

SUNC2011-074 09/16/2011

	Rates	Fringes
CARPENTER (Form Work Only)	13.31	
CEMENT MASON/CONCRETE FINISHER	14.02	
IRONWORKER (Reinforcing)	14.88	
LABORER		
Asphalt, Asphalt Distributor, Raker, and Spreader		
Chatham, Durham, Edgecombe, Greene, Nash, Pitt, and Wayne Counties	12.20	
Asphalt, Asphalt Raker, and Spreader		
Orange and Person Counties	12.97	
Common or General		
Chatham, Orange, and Person Counties	10.85	
Durham County	10.93	
Edgecombe and Nash Counties	10.88	
Greene and Pitt Counties	9.30	
Wayne County	9.63	
Concrete Saw	13.52	
Landscape	8.67	
Luteman	12.73	
Mason Tender (Cement/Concrete)	11.43	
Pipelayer	12.07	
Traffic Control (Cone Setter)	11.15	
Traffic Control (Flagger)	9.89	

	Rates	Fringes
POWER EQUIPMENT OPERATORS		
Backhoe/Excavator/Trackhoe		
Chatham, Orange, and Person Counties	14.99	
Durham County	15.24	
Remaining Counties	15.70	
Broom/Sweeper	13.97	
Bulldozer		
Chatham, Durham, Orange, and Person Counties	15.45	
Remaining Counties	15.63	
Crane	20.14	
Curb Machine	14.43	
Distributor	15.65	
Drill	18.28	
Grader/Blade	17.68	
Loader		
Chatham, Durham, Orange, and Person Counties	15.07	
Remaining Counties	14.40	
Mechanic	18.61	
Milling Machine	14.38	
Oiler	14.72	
Paver	15.24	
Roller		
Chatham, Orange, and Person Counties	13.11	
Durham County	13.07	
Remaining Counties	13.10	
Scraper	14.35	
Screed	15.12	
Tractor	14.47	
TRUCK DRIVER		
Distributor	16.75	
Dump Truck	12.50	
Flatbed Truck	15.02	
Lowboy Truck		
Chatham, Durham, Orange, and Person Counties	15.39	
Remaining Counties	15.27	
Off the Road Truck	13.78	
Single Axle Truck	12.13	
Tack Truck	16.51	
Water Truck	13.39	

Welders – Receive rate prescribed for craft performing operation to which welding is incidental.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR 5.5(a)(1)(ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters , PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rate.

Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U. S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

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U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

STANDARD SPECIAL PROVISION
MINIMUM WAGES
GENERAL DECISION NC120094 01/06/2012 NC94

Z-94

Date: January 6, 2012

General Decision Number: NC120094 01/06/2012 NC94

Superseded General Decision Numbers: NC20100132

State: North Carolina

Construction Type: HIGHWAY

COUNTIES:

Franklin	Johnston	Wake

HIGHWAY CONSTRUCTION PROJECTS (excluding tunnels, building structures in rest area projects, railroad construction, bascule, suspension and spandrel arch bridges designed for commercial navigation, bridges involving marine construction, and other major bridges).

Modification Number	Publication Date
0	01/06/2012

SUNC2011-075 09/16/2011

	Rates	Fringes
CARPENTER (Form Work Only)		
Franklin and Johnston Counties	13.40	
Wake County	12.78	
CEMENT MASON/CONCRETE FINISHER	14.52	
IRONWORKER (Reinforcing)	14.88	
LABORER		
Asphalt, Asphalt Distributor, Raker, and Spreader	12.97	
Common or General		
Franklin County	10.64	
Johnston County	10.80	
Wake County	10.61	
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Landscape	8.54	
Luteman	12.73	
Mason Tender (Cement/Concrete)	11.43	
Pipelayer	12.07	
Traffic Control (Cone Setter)	12.29	
Traffic Control (Flagger)	9.89	
POWER EQUIPMENT OPERATORS		
Backhoe/Excavator/Trackhoe		
Franklin and Johnston Counties	15.44	
Wake County	15.12	
Broom/Sweeper	13.97	
Bulldozer	15.63	
Crane	19.92	
Curb Machine	14.43	
Distributor	15.65	
Drill	18.28	
Grader/Blade	15.73	
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U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, D.C. 20210

4.) All decisions by the Administrative Review Board are final.

END OF GENERAL DECISION

County : Durham, Wake

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	0001000000-E	200	CLEARING & GRUBBING .. ACRE(S)	Lump Sum	L.S.	
0004	0008000000-E	200	SUPPLEMENTARY CLEARING & GRUBBING	5 ACR		
0005	0022000000-E	225	UNCLASSIFIED EXCAVATION	46,800 CY		
0006	0036000000-E	225	UNDERCUT EXCAVATION	3,140 CY		
0007	0106000000-E	230	BORROW EXCAVATION	201,680 CY		
0008	0134000000-E	240	DRAINAGE DITCH EXCAVATION	13,964 CY		
0009	0141000000-E	240	BERM DITCH CONSTRUCTION	260 LF		
0010	0156000000-E	250	REMOVAL OF EXISTING ASPHALT PAVEMENT	4,950 SY		
0011	0195000000-E	265	SELECT GRANULAR MATERIAL	2,000 CY		
0012	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	5,800 SY		
0013	0241000000-E	SP	GENERIC GRADING ITEM GEOGRID FOR SOIL STABILIZATION	8,350 SY		
0014	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	320 TON		
0015	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	1,000 SY		
0016	0335200000-E	305	15" DRAINAGE PIPE	340 LF		
0017	0335300000-E	305	18" DRAINAGE PIPE	60 LF		
0018	0335500000-E	305	30" DRAINAGE PIPE	16 LF		

County : Durham, Wake

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0019	0366000000-E	310	15" RC PIPE CULVERTS, CLASS III	64 LF		
002C	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	692 LF		
0021	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	344 LF		
0022	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	148 LF		
0023	0448500000-E	310	30" RC PIPE CULVERTS, CLASS IV	340 LF		
0024	0582000000-E	310	15" CS PIPE CULVERTS, 0.064" THICK	32 LF		
002E	0594000000-E	310	24" CS PIPE CULVERTS, 0.064" THICK	20 LF		
0026	0636000000-E	310	** CS PIPE ELBOWS, ***** THICK (15", 0.064")	1 EA		
0027	0636000000-E	310	** CS PIPE ELBOWS, ***** THICK (24", 0.064")	1 EA		
0028	0973100000-E	330	** WELDED STEEL PIPE, **** THICK, GRADE B IN SOIL (18", 0.5")	52 LF		
0029	0973300000-E	330	** WELDED STEEL PIPE, **** THICK, GRADE B NOT IN SOIL (18", 0.5")	52 LF		
003C	0986000000-E	SP	GENERIC PIPE ITEM 18" BCCMP PIPE CULVERTS, 0.079" THICK	100 LF		
0031	0986000000-E	SP	GENERIC PIPE ITEM 36" BCCMP PIPE CULVERTS, 0.109" THICK	341 LF		
0032	0986000000-E	SP	GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.532" THICK, GRADE B IN SOIL	91 LF		
0033	0986000000-E	SP	GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.532" THICK, GRADE B NOT IN SOIL	91 LF		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0034	0986000000-E	SP	GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.532" THICK, GRADE B OPEN CUT	60 LF		
0035	0986000000-E	SP	GENERIC PIPE ITEM 42" BCCMP PIPE CULVERTS, 0.138" THICK	38 LF		
0036	0986000000-E	SP	GENERIC PIPE ITEM 42" WELDED STEEL PIPE, 0.625" THICK, GRADE B IN SOIL	59 LF		
0037	0986000000-E	SP	GENERIC PIPE ITEM 42" WELDED STEEL PIPE, 0.625" THICK, GRADE B NOT IN SOIL	59 LF		
0038	0986000000-E	SP	GENERIC PIPE ITEM 48" WELDED STEEL PIPE, 0.688" THICK, GRADE B IN SOIL	37 LF		
0039	0986000000-E	SP	GENERIC PIPE ITEM 48" WELDED STEEL PIPE, 0.688" THICK, GRADE B NOT IN SOIL	37 LF		
0040	0986000000-E	SP	GENERIC PIPE ITEM 48" WELDED STEEL PIPE, 0.688" THICK, GRADE B OPEN CUT	60 LF		
0041	0986000000-E	SP	GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.781" THICK, GRADE B IN SOIL	20 LF		
0042	0986000000-E	SP	GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.781" THICK, GRADE B NOT IN SOIL	20 LF		
0043	0986000000-E	SP	GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.781" THICK, GRADE B OPEN CUT	21 LF		
0044	0995000000-E	340	PIPE REMOVAL	668 LF		
0045	0996000000-N	350	PIPE CLEAN-OUT	2 EA		
0046	1011000000-N	500	FINE GRADING	Lump Sum	L.S.	
0047	1099500000-E	505	SHALLOW UNDERCUT	2,450 CY		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0048	1121000000-E	520	AGGREGATE BASE COURSE	430 TON		
0049	1220000000-E	545	INCIDENTAL STONE BASE	500 TON		
005C	1264000000-E	SP	DITCHING	2,200 LF		
0051	1275000000-E	600	PRIME COAT	52 GAL		
0052	1330000000-E	607	INCIDENTAL MILLING	240 SY		
0053	1489000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0B	2,985 TON		
0054	1498000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B	2,810 TON		
005E	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	2,290 TON		
005E	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	406 TON		
0057	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	130 TON		
005E	2000000000-N	806	RIGHT OF WAY MARKERS	18 EA		
005S	2209000000-E	838	ENDWALLS	52 CY		
006C	2220000000-E	838	REINFORCED ENDWALLS	10 CY		
0061	2275000000-E	SP	FLOWABLE FILL	58 CY		
0062	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	22 EA		
0063	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	6 LF		
0064	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	2 EA		
006E	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	1 EA		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0066	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	10 EA		
0067	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	8 EA		
0068	2396000000-N	840	FRAME WITH COVER, STD 840.54	1 EA		
0069	2473000000-N	SP	GENERIC DRAINAGE ITEM PIPE COLLARS UNDER RAILROAD	2 EA		
007C	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	3,430 LF		
0071	2591000000-E	848	4" CONCRETE SIDEWALK	1,920 SY		
0072	2612000000-E	848	6" CONCRETE DRIVEWAY	140 SY		
0073	2619000000-E	850	4" CONCRETE PAVED DITCH	50 SY		
0074	2724000000-E	857	PRECAST REINFORCED CONCRETE BARRIER, SINGLE FACED	50 LF		
0075	3030000000-E	862	STEEL BM GUARDRAIL	425 LF		
0076	3045000000-E	862	STEEL BM GUARDRAIL, SHOP CURVED	50 LF		
0077	3105000000-N	862	STEEL BM GUARDRAIL TERMINAL SECTIONS	2 EA		
0078	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	10 EA		
0079	3195000000-N	862	GUARDRAIL ANCHOR UNITS, TYPE AT-1	1 EA		
008C	3210000000-N	862	GUARDRAIL ANCHOR UNITS, TYPE CAT-1	1 EA		
0081	3270000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE 350	4 EA		
0082	3317000000-N	862	GUARDRAIL ANCHOR UNITS, TYPE B-77	2 EA		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0083	3578000000-N	SP	GENERIC FENCING ITEM RIGHT OF WAY GATE	3 EA		
0084	3628000000-E	876	RIP RAP, CLASS I	89 TON		
0085	3635000000-E	876	RIP RAP, CLASS II	669 TON		
0086	3649000000-E	876	RIP RAP, CLASS B	97 TON		
0087	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	18,476 SY		
0088	3691000000-N	SP	GENERIC EROSION CONTROL ITEM SUPPLEMENTAL RESPONSE FOR EROSION CONTROL	10 EA		
0089	3832000000-E	SP	RAILROAD TRACK TO BE REMOVED	3,210 TF		
009C	3885000000-E	SP	GENERIC TRACKWORK ITEM SUB-BALLAST	41,600 TON		
0091	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	225 LF		
0092	4096000000-N	904	SIGN ERECTION, TYPE D	3 EA		
0093	4102000000-N	904	SIGN ERECTION, TYPE E	17 EA		
0094	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	19 EA		
0095	4238000000-N	907	DISPOSAL OF SIGN, D, E OR F	1 EA		
0096	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	543 SF		
0097	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	320 SF		
0098	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	122 SF		
0099	4415000000-N	1115	FLASHING ARROW BOARD	1 EA		
010C	4422000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)	15 DAY		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0101	4430000000-N	1130	DRUMS	106 EA		
0102	4435000000-N	1135	CONES	100 EA		
0103	4445000000-E	1145	BARRICADES (TYPE III)	248 LF		
0104	4455000000-N	1150	FLAGGER	81 DAY		
0105	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	4 EA		
0106	4470000000-N	1160	RESET TEMPORARY CRASH CUSHION	1 EA		
0107	4480000000-N	1165	TMA	1 EA		
0108	4485000000-E	1170	PORTABLE CONCRETE BARRIER	398 LF		
0109	4507000000-E	1170	WATER FILLED BARRIER	104 LF		
0110	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	90 EA		
0111	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	3,180 LF		
0112	4686000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	9,162 LF		
0113	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	165 LF		
0114	4710000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	24 LF		
0115	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	14 EA		
0116	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	26,012 LF		
0117	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	330 LF		
0118	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	18 LF		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0119	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	300 LF		
0120	4870000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (24")	18 LF		
0121	4905000000-N	1253	SNOWPLOWABLE PAVEMENT MARKERS	90 EA		
0122	5326200000-E	1510	12" WATER LINE	1,156 LF		
0123	5326600000-E	1510	16" WATER LINE	399 LF		
0124	5558000000-E	1515	12" VALVE	1 EA		
0125	5558600000-E	1515	16" VALVE	2 EA		
0126	5572200000-E	1515	12" TAPPING VALVE	4 EA		
0127	5643100000-E	1515	3/4" WATER METER	1 EA		
0128	5648000000-N	1515	RELOCATE WATER METER	4 EA		
0129	5649000000-N	1515	RECONNECT WATER METER	2 EA		
0130	5666000000-E	1515	FIRE HYDRANT	1 EA		
0131	5672000000-N	1515	RELOCATE FIRE HYDRANT	6 EA		
0132	5709000000-E	1520	** FORCE MAIN SEWER (18")	572 LF		
0133	5709400000-E	1520	8" FORCE MAIN SEWER	373 LF		
0134	5801000000-E	1530	ABANDON 8" UTILITY PIPE	371 LF		
0135	5804000000-E	1530	ABANDON 12" UTILITY PIPE	1,043 LF		
0136	5810000000-E	1530	ABANDON 16" UTILITY PIPE	385 LF		
0137	5811000000-E	1530	ABANDON 18" UTILITY PIPE	470 LF		
0138	5812000000-E	1530	ABANDON 20" UTILITY PIPE	60 LF		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0139	5815000000-N	1530	REMOVE WATER METER	1 EA		
0140	5815500000-N	1530	REMOVE FIRE HYDRANT	1 EA		
0141	5828000000-N	1530	REMOVE UTILITY MANHOLE	2 EA		
0142	5835900000-E	1540	20" ENCASEMENT PIPE	170 LF		
0143	5836200000-E	1540	30" ENCASEMENT PIPE	703 LF		
0144	5872100000-E	1550	TRENCHLESS INSTALLATION OF 20" IN SOIL	85 LF		
0145	5872110000-E	1550	TRENCHLESS INSTALLATION OF 20" NOT IN SOIL	85 LF		
0146	5872300000-E	1550	TRENCHLESS INSTALLATION OF 30" IN SOIL	95 LF		
0147	5872310000-E	1550	TRENCHLESS INSTALLATION OF 30" NOT IN SOIL	95 LF		
0148	5882000000-N	SP	GENERIC UTILITY ITEM SANITARY SEWER VALVE BOX	1 EA		
0149	6000000000-E	1605	TEMPORARY SILT FENCE	34,030 LF		
0150	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	2,105 TON		
0151	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	6,350 TON		
0152	6012000000-E	1610	SEDIMENT CONTROL STONE	2,745 TON		
0153	6015000000-E	1615	TEMPORARY MULCHING	167 ACR		
0154	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	3,450 LB		
0155	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	16 TON		
0156	6024000000-E	1622	TEMPORARY SLOPE DRAINS	6,110 LF		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0157	6029000000-E	SP	SAFETY FENCE	1,400 LF		
0158	6030000000-E	1630	SILT EXCAVATION	18,940 CY		
0159	6036000000-E	1631	MATTING FOR EROSION CONTROL	81,280 SY		
016C	6037000000-E	SP	COIR FIBER MAT	380 SY		
0161	6038000000-E	SP	PERMANENT SOIL REINFORCEMENT MAT	3,590 SY		
0162	6042000000-E	1632	1/4" HARDWARE CLOTH	750 LF		
0163	6071012000-E	SP	COIR FIBER WATTLE	6,710 LF		
0164	6071020000-E	SP	POLYACRYLAMIDE (PAM)	4,800 LB		
0165	6071030000-E	1640	COIR FIBER BAFFLE	6,900 LF		
0166	6071050000-E	SP	** SKIMMER (1-1/2")	26 EA		
0167	6071050000-E	SP	** SKIMMER (2-1/2")	1 EA		
0168	6084000000-E	1660	SEEDING & MULCHING	106.5 ACR		
0169	6087000000-E	1660	MOWING	117 ACR		
017C	6090000000-E	1661	SEED FOR REPAIR SEEDING	1,750 LB		
0171	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	5.25 TON		
0172	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	2,550 LB		
0173	6108000000-E	1665	FERTILIZER TOPDRESSING	76 TON		
0174	6114500000-N	1667	SPECIALIZED HAND MOWING	35 MHR		
0175	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	175 EA		
0176	6123000000-E	1670	REFORESTATION	0.2 ACR		

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0177	6126000000-E	SP	STREAMBANK REFORESTATION	0.27 ACR		
			STRUCTURE ITEMS			
017E	8096000000-E	450	PILE EXCAVATION IN SOIL	925 LF		
017F	8097000000-E	450	PILE EXCAVATION NOT IN SOIL	250 LF		
018C	8108000000-E	411	**'-*** DIA DRILLED PIERS (5'-0")	375 LF		
0181	8111000000-E	411	PERMANENT STEEL CASING FOR **'-*** DIA DRILLED PIER (5'-0")	80.1 LF		
0182	8113000000-N	411	SID INSPECTIONS	12 EA		
0183	8115000000-N	411	CSL TESTING	12 EA		
0184	8147000000-E	420	REINFORCED CONCRETE DECK SLAB	6,276.1 SF		
018E	8175000000-E	420	CLASS AA CONCRETE (BRIDGE)	350.3 CY		
018E	8217000000-E	425	REINFORCING STEEL (BRIDGE)	126,915 LB		
0187	8280000000-E	440	APPROX ..... LBS STRUCTURAL STEEL	585,411 LS		
018E	8294000000-N	442	PAINTING OF STRUCTURAL STEEL	Lump Sum	L.S.	
018F	8384000000-E	450	HP14X73 STEEL PILES	1,000 LF		
019C	8453000000-E	454	METHOD B DAMPPROOFING	233.8 SY		
0191	8531000000-E	462	4" SLOPE PROTECTION	348.1 SY		
0192	8741000000-N	SP	STRUCTURE DRAINAGE SYSTEM AT STA********** (3315+52.15-MAIN-)	Lump Sum	L.S.	

County : Durham, Wake

Line #	Item Number	Sec #	Description	Quantity	Unit Cost	Amount
0193	8860000000-N	SP	GENERIC STRUCTURE ITEM SELF-LUBRICATING BEARING ASSEMBLIES	Lump Sum	L.S.	
0194	8867000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE PARAPET	324.3 LF		
0195	8867000000-E	SP	GENERIC STRUCTURE ITEM METAL RAIL (ALUMINUM)	386.3 LF		
0196	8893000000-E	SP	GENERIC STRUCTURE ITEM WATERPROOFING	743 SY		

Vendor 1 of 10: FSC II LLC DBA FRED SMITH COMPANY (5072)
Call Order 006 (Proposal: C203128)

Bid Information

County: WAKE
Address: 6105 Chapel Hill Road
Raleigh , NC , 27607
Signature Check: Thomas_T_Johnson_Jr_5072
Time Bid Received: November 20, 2012 01:57 PM
Amendment Count: 0

Bid Checksum: B9C6501C
Bid Total: $10,900,447.15
Items Total: $10,900,447.15
Time Total: $0.00

Bidding Errors:
None.

DBE GOAL SET 10.0

DBE GOAL MET 10.0

Vendor 1 of 10: FSC II LLC DBA FRED SMITH COMPANY (5072)
Call Order 006 (Proposal: C203128)

Bid Bond Information

Projects:		**Bond Maximum:**	
Counties:		**State of Incorporation:**	
Bond ID:	SNC12812803	**Agency Execution Date:**	11/12/2012 11
Paid by Check:	No	**Surety Name:**	surety2000
Bond Percent:	5%	**Bond Agency Name:**	Western Surety Company

Vendor 5072's Bid Information for Call 006, Letting L121120, 11/20/12

FSC II LLC dba Fred Smith Company (5072)
Call Order 006 (Proposal ID C203128)

LIST OF DBE PARTICIPANTS

VENDOR NUMBER	DBE NAME / ADDRESS	WORK CODE	TYPE OF WORK	CERT TYPE	AMOUNT	
9210 MBE	AUSTIN TRUCKING, LLC P.O. BOX 606 , CLAYTON, NC 27528			Sub	966,125.71	Committed
4898 WBE	BULLINGTON CONSTRUCTION INC 417 FOXGLOVE LANE , INDIAN TRAIL, NC 28079			Sub	19,147.50	Committed
3230 WBE	HIATT & MASON ENTERPRISES, INC POST OFFICE BOX 1378 , MOUNT AIRY, NC 27030			Sub	24,736.31	Committed
4761 WBE	TRAFFIC CONTROL SAFETY SERVICES POST OFFICE BOX 24511 , WINSTON-SALEM, NC 27114			Sub	37,541.24	Committed
4247 WBE	SEAL BROTHERS CONTRACTING LLC 131 W. CLEVE STREET , MOUNT AIRY, NC 27030			Sub	50,220.00	Committed
				TOTAL:	$1,097,770.76 10.07%	

Vendor 5072's Bid Information for Call 006, Letting L121120, 11/20/12

FSC II LLC dba Fred Smith Company (5072)
Call Order 006 (Proposal ID C203128)

Miscelleneous Data Info - Contractor Responses:

NON-COLLUSION AND DEBARMENT CERTIFICATION

Explanation of the prospective bidder that is unable to certify to any of the statements in this certification:

Explanation:
NOT ANSWERED
NOT ANSWERED
NOT ANSWERED
NOT ANSWERED

AWARD LIMITS ON MULTIPLE PROJECTS

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

It is the desire of the Bidder to be awarded contracts, the value of which will not exceed a total of NOT ANSWERED for those projects indicated herein, for which bids will be opened on (MM/DD/YY)

The Award Limits shall apply to the following projects:

Contract Number	County
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	

```
Bid Bond Data Info - Contractor Responses:
==========================================

               BondID: SNC12812803
Surety Registry Agency: surety2000
            Verified?: Yes
         Surety Agency: Western Surety Company
   Bond Execution Date: 11/12/2012 11
          Bond Amount:     $545,022.36 (Five Percent of Bid)
```

Contract ID: C203128 Project(s): STATE FUNDED
Letting Date: 11-20-12 Call Order: 006
Bidder: 5072 - FSC II LLC dba Fred Smith Company

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
Section 0001	ROADWAY ITEMS					
	Alt Group					
0001	0000100000-N MOBILIZATION	LUMP	LUMP		545,000.00	
0002	0000400000-N CONSTRUCTION SURVEYING	LUMP	LUMP		65,000.00	
0003	0001000000-E CLEARING & GRUBBING .. ACRE(S)	LUMP	LUMP		1,064,000.00	
0004	0008000000-E SUPPLEMENTARY CLEARING & GRUB-BING	5.000 ACR	2,500.00000		12,500.00	
0005	0022000000-E UNCLASSIFIED EXCAVATION	46,800.000 CY	8.50000		397,800.00	
0006	0036000000-E UNDERCUT EXCAVATION	3,140.000 CY	12.00000		37,680.00	
0007	0106000000-E BORROW EXCAVATION	201,680.000 CY	7.00000		1,411,760.00	
0008	0134000000-E DRAINAGE DITCH EXCAVATION	13,964.000 CY	8.50000		118,694.00	
0009	0141000000-E BERM DITCH CONSTRUCTION	260.000 LF	7.50000		1,950.00	
0010	0156000000-E REMOVAL OF EXISTING ASPHALT PAVEMENT	4,950.000 SY	5.00000		24,750.00	
0011	0195000000-E SELECT GRANULAR MATERIAL	2,000.000 CY	15.00000		30,000.00	

Contract ID: C203128 Project(s): STATE FUNDED
Letting Date: 11-20-12 Call Order: 006
Bidder: 5072 - FSC II LLC dba Fred Smith Company

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0012	0196000000-E GEOTEXTILE FOR SOIL STABILIZA-TION	5,800.000 SY	1.75000		10,150.00	
0013	0241000000-E GENERIC GRADING ITEM GEOGRID FOR SOIL STABILIZATION	8,350.000 SY	2.25000		18,787.50	
0014	0318000000-E FOUNDATION CONDITIONING MATE- RIAL, MINOR STRUCTURES	320.000 TON	30.00000		9,600.00	
0015	0320000000-E FOUNDATION CONDITIONING GEO-TEXTILE	1,000.000 SY	1.75000		1,750.00	
0016	0335200000-E 15" DRAINAGE PIPE	340.000 LF	35.00000		11,900.00	
0017	0335300000-E 18" DRAINAGE PIPE	60.000 LF	40.00000		2,400.00	
0018	0335500000-E 30" DRAINAGE PIPE	16.000 LF	60.00000		960.00	
0019	0366000000-E 15" RC PIPE CULVERTS, CLASS III	64.000 LF	37.00000		2,368.00	
0020	0448200000-E 15" RC PIPE CULVERTS, CLASS IV	692.000 LF	30.00000		20,760.00	
0021	0448300000-E 18" RC PIPE CULVERTS, CLASS IV	344.000 LF	34.00000		11,696.00	
0022	0448400000-E 24" RC PIPE CULVERTS, CLASS IV	148.000 LF	40.00000		5,920.00	
0023	0448500000-E 30" RC PIPE CULVERTS, CLASS IV	340.000 LF	50.00000		17,000.00	

Contract ID: C203128 Project(s): STATE FUNDED
Letting Date: 11-20-12 Call Order: 006
Bidder: 5072 - FSC II LLC dba Fred Smith Company

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0024	0582000000-E 15" CS PIPE CULVERTS, 0.064" THICK	32.000 LF	56.00000		1,792.00	
0025	0594000000-E 24" CS PIPE CULVERTS, 0.064" THICK	20.000 LF	63.00000		1,260.00	
0026	0636000000-E ** CS PIPE ELBOWS, ***** THICK (15", 0.064")	1.000 EA	400.00000		400.00	
0027	0636000000-E ** CS PIPE ELBOWS, ***** THICK (24", 0.064")	1.000 EA	500.00000		500.00	
0028	0973100000-E ** WELDED STEEL PIPE, **** THICK, GRADE B IN SOIL (18", 0.5")	52.000 LF	159.00000		8,268.00	
0029	0973300000-E ** WELDED STEEL PIPE, **** THICK, GRADE B NOT IN SOIL (18", 0.5")	52.000 LF	159.00000		8,268.00	
0030	0986000000-E GENERIC PIPE ITEM 18" BCCMP PIPE CULVERTS, 0.079" THICK	100.000 LF	55.00000		5,500.00	
0031	0986000000-E GENERIC PIPE ITEM 36" BCCMP PIPE CULVERTS, 0.109" THICK	341.000 LF	58.00000		19,778.00	
0032	0986000000-E GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.532" THICK, GRADE B IN SOIL	91.000 LF	279.00000		25,389.00	
0033	0986000000-E GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.532" THICK, GRADE B NOT IN SOIL	91.000 LF	279.00000		25,389.00	

Contract ID: C203128 Project(s): STATE FUNDED
Letting Date: 11-20-12 Call Order: 006
Bidder: 5072 - FSC II LLC dba Fred Smith Company

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0034	0986000000-E GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.532" THICK, GRADE B OPEN CUT	60.000 LF	165.00000		9,900.00	
0035	0986000000-E GENERIC PIPE ITEM 42" BCCMP PIPE CULVERTS, 0.138" THICK	38.000 LF	64.00000		2,432.00	
0036	0986000000-E GENERIC PIPE ITEM 42" WELDED STEEL PIPE, 0.625" THICK, GRADE B IN SOIL	59.000 LF	359.00000		21,181.00	
0037	0986000000-E GENERIC PIPE ITEM 42" WELDED STEEL PIPE, 0.625" THICK, GRADE B NOT IN SOIL	59.000 LF	359.00000		21,181.00	
0038	0986000000-E GENERIC PIPE ITEM 48" WELDED STEEL PIPE, 0.688" THICK, GRADE B IN SOIL	37.000 LF	419.00000		15,503.00	
0039	0986000000-E GENERIC PIPE ITEM 48" WELDED STEEL PIPE, 0.688" THICK, GRADE B NOT IN SOIL	37.000 LF	419.00000		15,503.00	
0040	0986000000-E GENERIC PIPE ITEM 48" WELDED STEEL PIPE, 0.688" THICK, GRADE B OPEN CUT	60.000 LF	305.00000		18,300.00	
0041	0986000000-E GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.781" THICK, GRADE B IN SOIL	20.000 LF	529.00000		10,580.00	
0042	0986000000-E GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.781" THICK, GRADE B NOT IN SOIL	20.000 LF	529.00000		10,580.00	

Contract ID: C203128 Project(s): STATE FUNDED
Letting Date: 11-20-12 Call Order: 006
Bidder: 5072 - FSC II LLC dba Fred Smith Company

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0043	0986000000-E GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.781" THICK, GRADE B OPEN CUT	21.000 LF	375.00000		7,875.00	
0044	0995000000-E PIPE REMOVAL	668.000 LF	12.00000		8,016.00	
0045	0996000000-N PIPE CLEAN-OUT	2.000 EA	1,200.00000		2,400.00	
0046	1011000000-N FINE GRADING	LUMP	LUMP		800,000.00	
0047	1099500000-E SHALLOW UNDERCUT	2,450.000 CY	13.00000		31,850.00	
0048	1121000000-E AGGREGATE BASE COURSE	430.000 TON	22.00000		9,460.00	
0049	1220000000-E INCIDENTAL STONE BASE	500.000 TON	24.00000		12,000.00	
0050	1264000000-E DITCHING	2,200.000 LF	3.00000		6,600.00	
0051	1275000000-E PRIME COAT	52.000 GAL	5.00000		260.00	
0052	1330000000-E INCIDENTAL MILLING	240.000 SY	45.00000		10,800.00	
0053	1489000000-E ASPHALT CONC BASE COURSE, TYPE B25.0B	2,985.000 TON	41.00000		122,385.00	

Contract ID: C203128 Project(s): STATE FUNDED
Letting Date: 11-20-12 Call Order: 006
Bidder: 5072 - FSC II LLC dba Fred Smith Company

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0054	1498000000-E ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B	2,810.000 TON	41.00000		115,210.00	
0055	1519000000-E ASPHALT CONC SURFACE COURSE, TYPE S9.5B	2,290.000 TON	35.00000		80,150.00	
0056	1575000000-E ASPHALT BINDER FOR PLANT MIX	406.000 TON	610.00000		247,660.00	
0057	1693000000-E ASPHALT PLANT MIX, PAVEMENT REPAIR	130.000 TON	140.00000		18,200.00	
0058	2000000000-N RIGHT OF WAY MARKERS	18.000 EA	200.00000		3,600.00	
0059	2209000000-E ENDWALLS	52.000 CY	1,100.00000		57,200.00	
0060	2220000000-E REINFORCED ENDWALLS	10.000 CY	1,700.00000		17,000.00	
0061	2275000000-E FLOWABLE FILL	58.000 CY	150.00000		8,700.00	
0062	2286000000-N MASONRY DRAINAGE STRUCTURES	22.000 EA	1,250.00000		27,500.00	
0063	2308000000-E MASONRY DRAINAGE STRUCTURES	6.000 LF	300.00000		1,800.00	
0064	2364000000-N FRAME WITH TWO GRATES, STD 840.16	2.000 EA	350.00000		700.00	
0065	2374000000-N FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	1.000 EA	450.00000		450.00	

Contract ID: C203128 Project(s): STATE FUNDED
Letting Date: 11-20-12 Call Order: 006
Bidder: 5072 - FSC II LLC dba Fred Smith Company

Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0066	2374000000-N FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	10.000 EA	450.00000		4,500.00	
0067	2374000000-N FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	8.000 EA	450.00000		3,600.00	
0068	2396000000-N FRAME WITH COVER, STD 840.54	1.000 EA	250.00000		250.00	
0069	2473000000-N GENERIC DRAINAGE ITEM PIPE COLLARS UNDER RAILROAD	2.000 EA	2,000.00000		4,000.00	
0070	2549000000-E 2'-6" CONCRETE CURB & GUTTER	3,430.000 LF	11.00000		37,730.00	
0071	2591000000-E 4" CONCRETE SIDEWALK	1,920.000 SY	23.00000		44,160.00	
0072	2612000000-E 6" CONCRETE DRIVEWAY	140.000 SY	26.00000		3,640.00	
0073	2619000000-E 4" CONCRETE PAVED DITCH	50.000 SY	24.00000		1,200.00	
0074	2724000000-E PRECAST REINFORCED CONCRETE BARRIER, SINGLE FACED	50.000 LF	105.00000		5,250.00	
0075	3030000000-E STEEL BM GUARDRAIL	425.000 LF	15.50000		6,587.50	
0076	3045000000-E STEEL BM GUARDRAIL, SHOP CURVED	50.000 LF	17.00000		850.00	
0077	3105000000-N STEEL BM GUARDRAIL TERMINAL SECTIONS	2.000 EA	55.00000		110.00	

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0078	3150000000-N ADDITIONAL GUARDRAIL POSTS	10.000 EA	35.00000		350.00	
0079	3195000000-N GUARDRAIL ANCHOR UNITS, TYPE AT-1	1.000 EA	475.00000		475.00	
0080	3210000000-N GUARDRAIL ANCHOR UNITS, TYPE CAT-1	1.000 EA	475.00000		475.00	
0081	3270000000-N GUARDRAIL ANCHOR UNITS, TYPE 350	4.000 EA	1,850.00000		7,400.00	
0082	3317000000-N GUARDRAIL ANCHOR UNITS, TYPE B-77	2.000 EA	1,450.00000		2,900.00	
0083	3578000000-N GENERIC FENCING ITEM RIGHT OF WAY GATE	3.000 EA	1,000.00000		3,000.00	
0084	3628000000-E RIP RAP, CLASS I	89.000 TON	45.00000		4,005.00	
0085	3635000000-E RIP RAP, CLASS II	669.000 TON	47.00000		31,443.00	
0086	3649000000-E RIP RAP, CLASS B	97.000 TON	40.00000		3,880.00	
0087	3656000000-E GEOTEXTILE FOR DRAINAGE	18,476.000 SY	1.00000		18,476.00	
0088	3691000000-N GENERIC EROSION CONTROL ITEM SUPPLEMENTAL RESPONSE FOR ERO- SION CONTROL	10.000 EA	1,320.00000		13,200.00	

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Letting Date: 11-20-12 Call Order: 006
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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0089	3832000000-E RAILROAD TRACK TO BE REMOVED	3,210.000 TF	0.01000		32.10	
0090	3885000000-E GENERIC TRACKWORK ITEM SUB-BALLAST	41,600.000 TON	14.00000		582,400.00	
0091	4072000000-E SUPPORTS, 3-LB STEEL U-CHANNEL	225.000 LF	4.95000		1,113.75	
0092	4096000000-N SIGN ERECTION, TYPE D	3.000 EA	88.00000		264.00	
0093	4102000000-N SIGN ERECTION, TYPE E	17.000 EA	55.00000		935.00	
0094	4155000000-N DISPOSAL OF SIGN SYSTEM, U- CHANNEL	19.000 EA	1.00000		19.00	
0095	4238000000-N DISPOSAL OF SIGN, D, E OR F	1.000 EA	1.00000		1.00	
0096	4400000000-E WORK ZONE SIGNS (STATIONARY)	543.000 SF	5.00000		2,715.00	
0097	4405000000-E WORK ZONE SIGNS (PORTABLE)	320.000 SF	15.00000		4,800.00	
0098	4410000000-E WORK ZONE SIGNS (BARRICADE MOUNTED)	122.000 SF	7.00000		854.00	
0099	4415000000-N FLASHING ARROW BOARD	1.000 EA	1,500.00000		1,500.00	
0100	4422000000-N PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)	15.000 DAY	50.00000		750.00	

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0101	4430000000-N DRUMS	106.000 EA	60.00000		6,360.00	
0102	4435000000-N CONES	100.000 EA	16.00000		1,600.00	
0103	4445000000-E BARRICADES (TYPE III)	248.000 LF	16.50000		4,092.00	
0104	4455000000-N FLAGGER	81.000 DAY	300.00000		24,300.00	
0105	4465000000-N TEMPORARY CRASH CUSHIONS	4.000 EA	5,000.00000		20,000.00	
0106	4470000000-N RESET TEMPORARY CRASH CUSHION	1.000 EA	1,000.00000		1,000.00	
0107	4480000000-N TMA	1.000 EA	2,000.00000		2,000.00	
0108	4485000000-E PORTABLE CONCRETE BARRIER	398.000 LF	25.00000		9,950.00	
0109	4507000000-E WATER FILLED BARRIER	104.000 LF	90.00000		9,360.00	
0110	4650000000-N TEMPORARY RAISED PAVEMENT MARKERS	90.000 EA	5.00000		450.00	
0111	4685000000-E THERMOPLAST IC PAVEMENT MARKINGLINES (4", 90 MILS)	3,180.000 LF	0.75000		2,385.00	
0112	4686000000-E THERMOPLAST IC PAVEMENT MARKING LINES (4", 120 MILS)	9,162.000 LF	0.85000		7,787.70	

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0113	4695000000-E THERMOPLASTIC PAVEMENT MARKINGLINES (8", 90 MILS)	165.000 LF	3.00000		495.00	
0114	4710000000-E THERMOPLASTIC PAVEMENT MARKINGLINES (24", 120 MILS)	24.000 LF	20.00000		480.00	
0115	4725000000-E THERMOPLASTIC PAVEMENT MARKINGSYMBOL (90 MILS)	14.000 EA	125.00000		1,750.00	
0116	4810000000-E PAINT PAVEMENT MARKING LINES (4")	26,012.000 LF	0.20000		5,202.40	
0117	4820000000-E PAINT PAVEMENT MARKING LINES (8")	330.000 LF	1.00000		330.00	
0118	4835000000-E PAINT PAVEMENT MARKING LINES (24")	18.000 LF	3.00000		54.00	
0119	4850000000-E REMOVAL OF PAVEMENT MARKING LINES (4")	300.000 LF	1.00000		300.00	
0120	4870000000-E REMOVAL OF PAVEMENT MARKING LINES (24")	18.000 LF	2.00000		36.00	
0121	4905000000-N SNOWPLOWABLE PAVEMENT MARKERS	90.000 EA	30.00000		2,700.00	
0122	5326200000-E 12" WATER LINE	1,156.000 LF	97.00000		112,132.00	
0123	5326600000-E 16" WATER LINE	399.000 LF	140.00000		55,860.00	
0124	5558000000-E 12" VALVE	1.000 EA	1,900.00000		1,900.00	

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0125	5558600000-E 16" VALVE	2.000 EA	6,500.00000		13,000.00	
0126	5572200000-E 12" TAPPING VALVE	4.000 EA	7,600.00000		30,400.00	
0127	5643100000-E 3/4" WATER METER	1.000 EA	1,100.00000		1,100.00	
0128	5648000000-N RELOCATE WATER METER	4.000 EA	1,100.00000		4,400.00	
0129	5649000000-N RECONNECT WATER METER	2.000 EA	700.00000		1,400.00	
0130	5666000000-E FIRE HYDRANT	1.000 EA	4,000.00000		4,000.00	
0131	5672000000-N RELOCATE FIRE HYDRANT	6.000 EA	1,500.00000		9,000.00	
0132	5709000000-E **" FORCE MAIN SEWER (18")	572.000 LF	160.00000		91,520.00	
0133	5709400000-E 8" FORCE MAIN SEWER	373.000 LF	75.00000		27,975.00	
0134	5801000000-E ABANDON 8" UTILITY PIPE	371.000 LF	7.00000		2,597.00	
0135	5804000000-E ABANDON 12" UTILITY PIPE	1,043.000 LF	11.00000		11,473.00	
0136	5810000000-E ABANDON 16" UTILITY PIPE	385.000 LF	16.20000		6,237.00	

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0137	5811000000-E ABANDON 18" UTILITY PIPE	470.000 LF	16.50000		7,755.00	
0138	5812000000-E ABANDON 20" UTILITY PIPE	60.000 LF	26.00000		1,560.00	
0139	5815000000-N REMOVE WATER METER	1.000 EA	400.00000		400.00	
0140	5815500000-N REMOVE FIRE HYDRANT	1.000 EA	650.00000		650.00	
0141	5828000000-N REMOVE UTILITY MANHOLE	2.000 EA	1,100.00000		2,200.00	
0142	5835900000-E 20" ENCASEMENT PIPE	170.000 LF	68.00000		11,560.00	
0143	5836200000-E 30" ENCASEMENT PIPE	703.000 LF	131.00000		92,093.00	
0144	5872100000-E TRENCHLESS INSTALLATION OF 20"IN SOIL	85.000 LF	159.00000		13,515.00	
0145	5872110000-E TRENCHLESS INSTALLATION OF 20"NOT IN SOIL	85.000 LF	399.00000		33,915.00	
0146	5872300000-E TRENCHLESS INSTALLATION OF 30"IN SOIL	95.000 LF	229.00000		21,755.00	
0147	5872310000-E TRENCHLESS INSTALLATION OF 30"NOT IN SOIL	95.000 LF	679.00000		64,505.00	
0148	5882000000-N GENERIC UTILITY ITEM SANITARY SEWER VALVE BOX	1.000 EA	300.00000		300.00	

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0149	6000000000-E TEMPORARY SILT FENCE	34,030.000 LF	1.70000		57,851.00	
0150	6006000000-E STONE FOR EROSION CONTROL, CLASS A	2,105.000 TON	15.00000		31,575.00	
0151	6009000000-E STONE FOR EROSION CONTROL, CLASS B	6,350.000 TON	15.00000		95,250.00	
0152	6012000000-E SEDIMENT CONTROL STONE	2,745.000 TON	13.00000		35,685.00	
0153	6015000000-E TEMPORARY MULCHING	167.000 ACR	300.00000		50,100.00	
0154	6018000000-E SEED FOR TEMPORARY SEEDING	3,450.000 LB	3.00000		10,350.00	
0155	6021000000-E FERTILIZER FOR TEMPORARY SEED-ING	16.000 TON	650.00000		10,400.00	
0156	6024000000-E TEMPORARY SLOPE DRAINS	6,110.000 LF	14.00000		85,540.00	
0157	6029000000-E SAFETY FENCE	1,400.000 LF	1.50000		2,100.00	
0158	6030000000-E SILT EXCAVATION	18,940.000 CY	0.50000		9,470.00	
0159	6036000000-E MATTING FOR EROSION CONTROL	81,280.000 SY	1.09000		88,595.20	
0160	6037000000-E COIR FIBER MAT	380.000 SY	5.00000		1,900.00	

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0161	6038000000-E PERMANENT SOIL REINFORCEMENT MAT	3,590.000 SY	4.50000		16,155.00	
0162	6042000000-E 1/4" HARDWARE CLOTH	750.000 LF	3.00000		2,250.00	
0163	6071012000-E COIR FIBER WATTLE	6,710.000 LF	6.50000		43,615.00	
0164	6071020000-E POLYACRYLAMIDE (PAM)	4,800.000 LB	4.00000		19,200.00	
0165	6071030000-E COIR FIBER BAFFLE	6,900.000 LF	3.95000		27,255.00	
0166	6071050000-E **" SKIMMER (1-1/2")	26.000 EA	850.00000		22,100.00	
0167	6071050000-E **" SKIMMER (2-1/2")	1.000 EA	1,150.00000		1,150.00	
0168	6084000000-E SEEDING & MULCHING	106.500 ACR	1,000.00000		106,500.00	
0169	6087000000-E MOWING	117.000 ACR	40.00000		4,680.00	
0170	6090000000-E SEED FOR REPAIR SEEDING	1,750.000 LB	3.50000		6,125.00	
0171	6093000000-E FERTILIZER FOR REPAIR SEEDING	5.250 TON	700.00000		3,675.00	
0172	6096000000-E SEED FOR SUPPLEMENTAL SEEDING	2,550.000 LB	2.90000		7,395.00	

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0173	6108000000-E FERTILIZER TOPDRESSING	76.000 TON	250.00000		19,000.00	
0174	6114500000-N SPECIALIZED HAND MOWING	35.000 MHR	35.00000		1,225.00	
0175	6117000000-N RESPONSE FOR EROSION CONTROL	175.000 EA	50.00000		8,750.00	
0176	6123000000-E REFORESTATION	0.200 ACR	5,000.00000		1,000.00	
0177	6126000000-E STREAMBANK REFORESTATION	0.270 ACR	7,000.00000		1,890.00	
	Section 0001 Total				7,921,426.15	

Section 0004 STRUCTURE ITEMS

Alt Group

0178	8096000000-E PILE EXCAVATION IN SOIL	925.000 LF	200.00000		185,000.00	
0179	8097000000-E PILE EXCAVATION NOT IN SOIL	250.000 LF	200.00000		50,000.00	
0180	8108000000-E **'-**" DIA DRILLED PIERS (5'-0")	375.000 LF	950.00000		356,250.00	
0181	8111000000-E PERMANENT STEEL CASING FOR **'-**" DIA DRILLED PIER (5'-0")	80.100 LF	220.00000		17,622.00	
0182	8113000000-N SID INSPECTIONS	12.000 EA	750.00000		9,000.00	

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0183	8115000000-N CSL TESTING	12.000 EA	1,200.00000		14,400.00	
0184	8147000000-E REINFORCED CONCRETE DECK SLAB	6,276.100 SF	31.00000		194,559.10	
0185	8175000000-E CLASS AA CONCRETE (BRIDGE)	350.300 CY	650.00000		227,695.00	
0186	8217000000-E REINFORCING STEEL (BRIDGE)	126,915.000 LB	1.30000		164,989.50	
0187	8280000000-E APPROX ..... LBS STRUCTURALSTEEL	LUMP	LUMP		1,238,000.00	
0188	8294000000-N PAINTING OF STRUCTURAL STEEL	LUMP	LUMP		35,000.00	
0189	8384000000-E HP14X73 STEEL PILES	1,000.000 LF	50.00000		50,000.00	
0190	8453000000-E METHOD B DAMPPROOFING	233.800 SY	30.00000		7,014.00	
0191	8531000000-E 4" SLOPE PROTECTION	348.100 SY	75.00000		26,107.50	
0192	8741000000-N STRUCTURE DRAINAGE SYSTEM AT STA********** (3315+52.15-MAIN-)	LUMP	LUMP		175,000.00	
0193	8860000000-N GENERIC STRUCTURE ITEM SELF-LUBRICATING BEARING ASSEMBLIES	LUMP	LUMP		115,000.00	

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Line No.	Item Description	Approx. Quantity and Units	Unit Price Dollars	Unit Price Cts	Bid Amount Dollars	Bid Amount Ct
0194	8867000000-E GENERIC STRUCTURE ITEM CONCRETE PARAPET	324.300 LF	88.00000		28,538.40	
0195	8867000000-E GENERIC STRUCTURE ITEM METAL RAIL (ALUMINUM)	386.300 LF	85.00000		32,835.50	
0196	8893000000-E GENERIC STRUCTURE ITEM WATERPROOFING	743.000 SY	70.00000		52,010.00	
	Section 0004 Total				2,979,021.00	
	Bid Total				10,900,447.15	

NON-COLLUSION AND DEBARMENT CERTIFICATION

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

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

a. Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

b. Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records; making false statements; or receiving stolen property;

c. Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph b. of this certification; and

d. Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

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

Explanation:
NOT ANSWERED
NOT ANSWERED
NOT ANSWERED
NOT ANSWERED

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

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

AWARD LIMITS ON MULTIPLE PROJECTS

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

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

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

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

will not exceed a total of NOT ANSWERED for those

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

The Award Limits shall apply to the following projects:

Contract Number	County
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	
NOT ANSWERED	

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

PROPOSAL: C203128
LETTING: L121120 CALL: 006
VENDOR: 5072 FSC II LLC dba Fred Smith Company

LINE NO.	ITEM NO.	ITEM DESC.	UNIT TYPE	SUBCONTRACTOR QUANTITY	SUBCONTRACTOR UNIT PRICE	EXTENDED AMOUNT
DBE SUBCONTRACTOR: 9210 AUSTIN TRUCKING, LLC Will Use Quote: Yes						
0005	0022000000-E	UNCLASSIFIED	CY	14406.000	6.71000	96664.26
0007	0106000000-E	BORROW EXCAV	CY	126000.000	4.50000	567000.00
0053	1489000000-E	ASP CONC BAS Asphalt haul	TON	2985.000	6.13000	18298.05
0054	1498000000-E	ASP CONC INT Asphalt Haul	TON	2810.000	5.89000	16550.90
0090	3885000000-E	GENERIC TRAC Sub Ballast Haul	TON	41600.000	3.25000	135200.00
0008	0134000000-E	DRAINAGE DIT	CY	12000.000	6.70000	80400.00
0047	1099500000-E	SHALLOW UNDE Haul material	CY	1450.000	5.63000	8163.50
0150	6006000000-E	EROS CONTRL Aggregate Haul	TON	2105.000	3.75000	7893.75
0151	6009000000-E	EROS CONTRL Aggregate Haul	TON	6350.000	3.75000	23812.50
0152	6012000000-E	SEDIMENT CON Aggregate Haul	TON	2745.000	3.25000	8921.25
0085	3635000000-E	RIP RAP, CLA Aggregate Haul	TON	669.000	4.25000	2843.25
0084	3628000000-E	RIP RAP, CLA Aggregate Haul	TON	89.000	4.25000	378.25
		DBE COMMITMENT TOTAL FOR SUBCONTRACTOR:				966,125.71 Committed
		DBE COMMITMENT TOTAL FOR VENDOR (SubContractor)				966,125
DBE SUBCONTRACTOR: 4898 BULLINGTON CONSTRUCTION INC Will Use Quote: Yes						
0075	3030000000-E	STL BM GUARD	LF	425.000	15.50000	6587.50
0076	3045000000-E	SBGR SHOP CU	LF	50.000	17.00000	850.00
0077	3105000000-N	SBGR TERM SE	EA	2.000	55.00000	110.00
0078	3150000000-N	ADDIT GUARDR	EA	10.000	35.00000	350.00
0079	3195000000-N	GR ANCHOR TY	EA	1.000	475.00000	475.00
0080	3210000000-N	GR ANCHOR TY	EA	1.000	475.00000	475.00
0081	3270000000-N	GR ANCHOR TY	EA	4.000	1850.00000	7400.00
0082	3317000000-N	GR ANCHOR TY	EA	2.000	1450.00000	2900.00
		DBE COMMITMENT TOTAL FOR SUBCONTRACTOR:				19,147.50 Committed
		DBE COMMITMENT TOTAL FOR VENDOR (SubContractor)				19,147.
DBE SUBCONTRACTOR: 3230 HIATT & MASON ENTERPRISES, INC Will Use Quote: Yes						

LINE NO.	ITEM NO.	ITEM DESC.	UNIT TYPE	SUBCONTRACTOR QUANTITY	SUBCONTRACTOR UNIT PRICE	EXTENDED AMOUNT
0184	8147000000-E	REINF CONCRE	SF	6276.100	1.87000	11736.31
	Install metal decking and rebar					
0186	8217000000-E	REINF STEEL	LB	100000.000	0.13000	13000.00

DBE COMMITMENT TOTAL FOR SUBCONTRACTOR: 24,736.31 Committed
DBE COMMITMENT TOTAL FOR VENDOR (SubContractor) 24,736.

DBE SUBCONTRACTOR: 4761 TRAFFIC CONTROL SAFETY SERVICES, INC.
Will Use Quote: Yes

0091	4072000000-E	SUPPORT, 3-L	LF	225.000	4.95000	1113.75
0092	4096000000-N	SIGN ERECTIO	EA	3.000	88.00000	264.00
0093	4102000000-N	SIGN ERECTIO	EA	17.000	55.00000	935.00
0096	4400000000-E	WORK ZONE SI	SF	543.000	3.93000	2133.99
0098	4410000000-E	WORK ZONE SI	SF	122.000	6.50000	793.00
0105	4465000000-N	TEMPORARY CR	EA	4.000	5000.00000	20000.00
0106	4470000000-N	RESET CRASH	EA	1.000	1000.00000	1000.00
0108	4485000000-E	PORT CONC BA	LF	398.000	19.25000	7661.50
0109	4507000000-E	WATER FILLED	LF	104.000	35.00000	3640.00

DBE COMMITMENT TOTAL FOR SUBCONTRACTOR: 37,541.24 Committed
DBE COMMITMENT TOTAL FOR VENDOR (SubContractor) 37,541.

DBE SUBCONTRACTOR: 4247 SEAL BROTHERS CONTRACTING LLC
Will Use Quote: Yes

0149	6000000000-E	TEMPORARY SI	LF	31000.000	1.62000	50220.00

DBE COMMITMENT TOTAL FOR SUBCONTRACTOR: 50,220.00 Committed
DBE COMMITMENT TOTAL FOR VENDOR (SubContractor) 50,220.

TOTAL DBE COMMITMENT FOR VENDOR: Entered: 10.07% or 1097770.76
Required: 10.00% or 1090044.72
<GOAL MET>

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
			ROADWAY ITEMS			
0001	0000100000-N	800	MOBILIZATION	Lump Sum LS	545,000.00	545,000.00
0002	0000400000-N	801	CONSTRUCTION SURVEYING	Lump Sum LS	65,000.00	65,000.00
0003	0001000000-E	200	CLEARING & GRUBBING .. ACRE(S)	Lump Sum LS	1,064,000.00	1,064,000.00
0004	0008000000-E	200	SUPPLEMENTARY CLEARING & GRUBBING	5 ACR	2,500.00	12,500.00
0005	0022000000-E	225	UNCLASSIFIED EXCAVATION	46,800 CY	8.50	397,800.00
0006	0036000000-E	225	UNDERCUT EXCAVATION	3,140 CY	12.00	37,680.00
0007	0106000000-E	230	BORROW EXCAVATION	201,680 CY	7.00	1,411,760.00
0008	0134000000-E	240	DRAINAGE DITCH EXCAVATION	13,964 CY	8.50	118,694.00
0009	0141000000-E	240	BERM DITCH CONSTRUCTION	260 LF	7.50	1,950.00
0010	0156000000-E	250	REMOVAL OF EXISTING ASPHALT PAVEMENT	4,950 SY	5.00	24,750.00
0011	0195000000-E	265	SELECT GRANULAR MATERIAL	2,000 CY	15.00	30,000.00
0012	0196000000-E	270	GEOTEXTILE FOR SOIL STABILIZATION	5,800 SY	1.75	10,150.00
0013	0241000000-E	SP	GENERIC GRADING ITEM GEOGRID FOR SOIL STABILIZATION	8,350 SY	2.25	18,787.50
0014	0318000000-E	300	FOUNDATION CONDITIONING MATERIAL, MINOR STRUCTURES	320 TON	30.00	9,600.00
0015	0320000000-E	300	FOUNDATION CONDITIONING GEOTEXTILE	1,000 SY	1.75	1,750.00
0016	0335200000-E	305	15" DRAINAGE PIPE	340 LF	35.00	11,900.00
0017	0335300000-E	305	18" DRAINAGE PIPE	60 LF	40.00	2,400.00
0018	0335500000-E	305	30" DRAINAGE PIPE	16 LF	60.00	960.00
0019	0366000000-E	310	15" RC PIPE CULVERTS, CLASS III	64 LF	37.00	2,368.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0020	0448200000-E	310	15" RC PIPE CULVERTS, CLASS IV	692 LF	30.00	20,760.00
0021	0448300000-E	310	18" RC PIPE CULVERTS, CLASS IV	344 LF	34.00	11,696.00
0022	0448400000-E	310	24" RC PIPE CULVERTS, CLASS IV	148 LF	40.00	5,920.00
0023	0448500000-E	310	30" RC PIPE CULVERTS, CLASS IV	340 LF	50.00	17,000.00
0024	0582000000-E	310	15" CS PIPE CULVERTS, 0.064" THICK	32 LF	56.00	1,792.00
0025	0594000000-E	310	24" CS PIPE CULVERTS, 0.064" THICK	20 LF	63.00	1,260.00
0026	0636000000-E	310	** CS PIPE ELBOWS, ***** THICK (15", 0.064")	1 EA	400.00	400.00
0027	0636000000-E	310	** CS PIPE ELBOWS, ***** THICK (24", 0.064")	1 EA	500.00	500.00
0028	0973100000-E	330	** WELDED STEEL PIPE, ***** THICK, GRADE B IN SOIL (18", 0.5")	52 LF	159.00	8,268.00
0029	0973300000-E	330	** WELDED STEEL PIPE, ***** THICK, GRADE B NOT IN SOIL (18", 0.5")	52 LF	159.00	8,268.00
0030	0986000000-E	SP	GENERIC PIPE ITEM 18" BCCMP PIPE CULVERTS, 0.079" THICK	100 LF	55.00	5,500.00
0031	0986000000-E	SP	GENERIC PIPE ITEM 36" BCCMP PIPE CULVERTS, 0.109" THICK	341 LF	58.00	19,778.00
0032	0986000000-E	SP	GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.532" THICK, GRADE B IN SOIL	91 LF	279.00	25,389.00
0033	0986000000-E	SP	GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.532" THICK, GRADE B NOT IN SOIL	91 LF	279.00	25,389.00
0034	0986000000-E	SP	GENERIC PIPE ITEM 36" WELDED STEEL PIPE, 0.532" THICK, GRADE B OPEN CUT	60 LF	165.00	9,900.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0035	0986000000-E	SP	GENERIC PIPE ITEM 42" BCCMP PIPE CULVERTS, 0.138" THICK	38 LF	64.00	2,432.00
0036	0986000000-E	SP	GENERIC PIPE ITEM 42" WELDED STEEL PIPE, 0.625" THICK, GRADE B IN SOIL	59 LF	359.00	21,181.00
0037	0986000000-E	SP	GENERIC PIPE ITEM 42" WELDED STEEL PIPE, 0.625" THICK, GRADE B NOT IN SOIL	59 LF	359.00	21,181.00
0038	0986000000-E	SP	GENERIC PIPE ITEM 48" WELDED STEEL PIPE, 0.688" THICK, GRADE B IN SOIL	37 LF	419.00	15,503.00
0039	0986000000-E	SP	GENERIC PIPE ITEM 48" WELDED STEEL PIPE, 0.688" THICK, GRADE B NOT IN SOIL	37 LF	419.00	15,503.00
0040	0986000000-E	SP	GENERIC PIPE ITEM 48" WELDED STEEL PIPE, 0.688" THICK, GRADE B OPEN CUT	60 LF	305.00	18,300.00
0041	0986000000-E	SP	GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.781" THICK, GRADE B IN SOIL	20 LF	529.00	10,580.00
0042	0986000000-E	SP	GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.781" THICK, GRADE B NOT IN SOIL	20 LF	529.00	10,580.00
0043	0986000000-E	SP	GENERIC PIPE ITEM 54" WELDED STEEL PIPE, 0.781" THICK, GRADE B OPEN CUT	21 LF	375.00	7,875.00
0044	0995000000-E	340	PIPE REMOVAL	668 LF	12.00	8,016.00
0045	0996000000-N	350	PIPE CLEAN-OUT	2 EA	1,200.00	2,400.00
0046	1011000000-N	500	FINE GRADING	Lump Sum LS	800,000.00	800,000.00
0047	1099500000-E	505	SHALLOW UNDERCUT	2,450 CY	13.00	31,850.00
0048	1121000000-E	520	AGGREGATE BASE COURSE	430 TON	22.00	9,460.00
0049	1220000000-E	545	INCIDENTAL STONE BASE	500 TON	24.00	12,000.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0050	1264000000-E	SP	DITCHING	2,200 LF	3.00	6,600.00
0051	1275000000-E	600	PRIME COAT	52 GAL	5.00	260.00
0052	1330000000-E	607	INCIDENTAL MILLING	240 SY	45.00	10,800.00
0053	1489000000-E	610	ASPHALT CONC BASE COURSE, TYPE B25.0B	2,985 TON	41.00	122,385.00
0054	1498000000-E	610	ASPHALT CONC INTERMEDIATE COURSE, TYPE I19.0B	2,810 TON	41.00	115,210.00
0055	1519000000-E	610	ASPHALT CONC SURFACE COURSE, TYPE S9.5B	2,290 TON	35.00	80,150.00
0056	1575000000-E	620	ASPHALT BINDER FOR PLANT MIX	406 TON	610.00	247,660.00
0057	1693000000-E	654	ASPHALT PLANT MIX, PAVEMENT REPAIR	130 TON	140.00	18,200.00
0058	2000000000-N	806	RIGHT OF WAY MARKERS	18 EA	200.00	3,600.00
0059	2209000000-E	838	ENDWALLS	52 CY	1,100.00	57,200.00
0060	2220000000-E	838	REINFORCED ENDWALLS	10 CY	1,700.00	17,000.00
0061	2275000000-E	SP	FLOWABLE FILL	58 CY	150.00	8,700.00
0062	2286000000-N	840	MASONRY DRAINAGE STRUCTURES	22 EA	1,250.00	27,500.00
0063	2308000000-E	840	MASONRY DRAINAGE STRUCTURES	6 LF	300.00	1,800.00
0064	2364000000-N	840	FRAME WITH TWO GRATES, STD 840.16	2 EA	350.00	700.00
0065	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (E)	1 EA	450.00	450.00
0066	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (F)	10 EA	450.00	4,500.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0067	2374000000-N	840	FRAME WITH GRATE & HOOD, STD 840.03, TYPE ** (G)	8 EA	450.00	3,600.00
0068	2396000000-N	840	FRAME WITH COVER, STD 840.54	1 EA	250.00	250.00
0069	2473000000-N	SP	GENERIC DRAINAGE ITEM PIPE COLLARS UNDER RAILROAD	2 EA	2,000.00	4,000.00
0070	2549000000-E	846	2'-6" CONCRETE CURB & GUTTER	3,430 LF	11.00	37,730.00
0071	2591000000-E	848	4" CONCRETE SIDEWALK	1,920 SY	23.00	44,160.00
0072	2612000000-E	848	6" CONCRETE DRIVEWAY	140 SY	26.00	3,640.00
0073	2619000000-E	850	4" CONCRETE PAVED DITCH	50 SY	24.00	1,200.00
0074	2724000000-E	857	PRECAST REINFORCED CONCRETE BARRIER, SINGLE FACED	50 LF	105.00	5,250.00
0075	3030000000-E	862	STEEL BM GUARDRAIL	425 LF	15.50	6,587.50
0076	3045000000-E	862	STEEL BM GUARDRAIL, SHOP CURVED	50 LF	17.00	850.00
0077	3105000000-N	862	STEEL BM GUARDRAIL TERMINAL SECTIONS	2 EA	55.00	110.00
0078	3150000000-N	862	ADDITIONAL GUARDRAIL POSTS	10 EA	35.00	350.00
0079	3195000000-N	862	GUARDRAIL ANCHOR UNITS, TYPE AT-1	1 EA	475.00	475.00
0080	3210000000-N	862	GUARDRAIL ANCHOR UNITS, TYPE CAT-1	1 EA	475.00	475.00
0081	3270000000-N	SP	GUARDRAIL ANCHOR UNITS, TYPE 350	4 EA	1,850.00	7,400.00
0082	3317000000-N	862	GUARDRAIL ANCHOR UNITS, TYPE B-77	2 EA	1,450.00	2,900.00
0083	3578000000-N	SP	GENERIC FENCING ITEM RIGHT OF WAY GATE	3 EA	1,000.00	3,000.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0084	3628000000-E	876	RIP RAP, CLASS I	89 TON	45.00	4,005.00
0085	3635000000-E	876	RIP RAP, CLASS II	669 TON	47.00	31,443.00
0086	3649000000-E	876	RIP RAP, CLASS B	97 TON	40.00	3,880.00
0087	3656000000-E	876	GEOTEXTILE FOR DRAINAGE	18,476 SY	1.00	18,476.00
0088	3691000000-N	SP	GENERIC EROSION CONTROL ITEM SUPPLEMENTAL RESPONSE FOR EROSION CONTROL	10 EA	1,320.00	13,200.00
0089	3832000000-E	SP	RAILROAD TRACK TO BE REMOVED	3,210 TF	0.01	32.10
0090	3885000000-E	SP	GENERIC TRACKWORK ITEM SUB-BALLAST	41,600 TON	14.00	582,400.00
0091	4072000000-E	903	SUPPORTS, 3-LB STEEL U-CHANNEL	225 LF	4.95	1,113.75
0092	4096000000-N	904	SIGN ERECTION, TYPE D	3 EA	88.00	264.00
0093	4102000000-N	904	SIGN ERECTION, TYPE E	17 EA	55.00	935.00
0094	4155000000-N	907	DISPOSAL OF SIGN SYSTEM, U-CHANNEL	19 EA	1.00	19.00
0095	4238000000-N	907	DISPOSAL OF SIGN, D, E OR F	1 EA	1.00	1.00
0096	4400000000-E	1110	WORK ZONE SIGNS (STATIONARY)	543 SF	5.00	2,715.00
0097	4405000000-E	1110	WORK ZONE SIGNS (PORTABLE)	320 SF	15.00	4,800.00
0098	4410000000-E	1110	WORK ZONE SIGNS (BARRICADE MOUNTED)	122 SF	7.00	854.00
0099	4415000000-N	1115	FLASHING ARROW BOARD	1 EA	1,500.00	1,500.00
0100	4422000000-N	1120	PORTABLE CHANGEABLE MESSAGE SIGN (SHORT TERM)	15 DAY	50.00	750.00
0101	4430000000-N	1130	DRUMS	106 EA	60.00	6,360.00
0102	4435000000-N	1135	CONES	100 EA	16.00	1,600.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0103	4445000000-E	1145	BARRICADES (TYPE III)	248 LF	16.50	4,092.00
0104	4455000000-N	1150	FLAGGER	81 DAY	300.00	24,300.00
0105	4465000000-N	1160	TEMPORARY CRASH CUSHIONS	4 EA	5,000.00	20,000.00
0106	4470000000-N	1160	RESET TEMPORARY CRASH CUSHION	1 EA	1,000.00	1,000.00
0107	4480000000-N	1165	TMA	1 EA	2,000.00	2,000.00
0108	4485000000-E	1170	PORTABLE CONCRETE BARRIER	398 LF	25.00	9,950.00
0109	4507000000-E	1170	WATER FILLED BARRIER	104 LF	90.00	9,360.00
0110	4650000000-N	1251	TEMPORARY RAISED PAVEMENT MARKERS	90 EA	5.00	450.00
0111	4685000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 90 MILS)	3,180 LF	0.75	2,385.00
0112	4686000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (4", 120 MILS)	9,162 LF	0.85	7,787.70
0113	4695000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (8", 90 MILS)	165 LF	3.00	495.00
0114	4710000000-E	1205	THERMOPLASTIC PAVEMENT MARKING LINES (24", 120 MILS)	24 LF	20.00	480.00
0115	4725000000-E	1205	THERMOPLASTIC PAVEMENT MARKING SYMBOL (90 MILS)	14 EA	125.00	1,750.00
0116	4810000000-E	1205	PAINT PAVEMENT MARKING LINES (4")	26,012 LF	0.20	5,202.40
0117	4820000000-E	1205	PAINT PAVEMENT MARKING LINES (8")	330 LF	1.00	330.00
0118	4835000000-E	1205	PAINT PAVEMENT MARKING LINES (24")	18 LF	3.00	54.00
0119	4850000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (4")	300 LF	1.00	300.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0120	4870000000-E	1205	REMOVAL OF PAVEMENT MARKING LINES (24")	18 LF	2.00	36.00
0121	4905000000-N	1253	SNOWPLOWABLE PAVEMENT MARKERS	90 EA	30.00	2,700.00
0122	5326200000-E	1510	12" WATER LINE	1,156 LF	97.00	112,132.00
0123	5326600000-E	1510	16" WATER LINE	399 LF	140.00	55,860.00
0124	5558000000-E	1515	12" VALVE	1 EA	1,900.00	1,900.00
0125	5558600000-E	1515	16" VALVE	2 EA	6,500.00	13,000.00
0126	5572200000-E	1515	12" TAPPING VALVE	4 EA	7,600.00	30,400.00
0127	5643100000-E	1515	3/4" WATER METER	1 EA	1,100.00	1,100.00
0128	5648000000-N	1515	RELOCATE WATER METER	4 EA	1,100.00	4,400.00
0129	5649000000-N	1515	RECONNECT WATER METER	2 EA	700.00	1,400.00
0130	5666000000-E	1515	FIRE HYDRANT	1 EA	4,000.00	4,000.00
0131	5672000000-N	1515	RELOCATE FIRE HYDRANT	6 EA	1,500.00	9,000.00
0132	5709000000-E	1520	** FORCE MAIN SEWER (18")	572 LF	160.00	91,520.00
0133	5709400000-E	1520	8" FORCE MAIN SEWER	373 LF	75.00	27,975.00
0134	5801000000-E	1530	ABANDON 8" UTILITY PIPE	371 LF	7.00	2,597.00
0135	5804000000-E	1530	ABANDON 12" UTILITY PIPE	1,043 LF	11.00	11,473.00
0136	5810000000-E	1530	ABANDON 16" UTILITY PIPE	385 LF	16.20	6,237.00
0137	5811000000-E	1530	ABANDON 18" UTILITY PIPE	470 LF	16.50	7,755.00
0138	5812000000-E	1530	ABANDON 20" UTILITY PIPE	60 LF	26.00	1,560.00
0139	5815000000-N	1530	REMOVE WATER MÈTER	1 EA	400.00	400.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0140	5815500000-N	1530	REMOVE FIRE HYDRANT	1 EA	650.00	650.00
0141	5828000000-N	1530	REMOVE UTILITY MANHOLE	2 EA	1,100.00	2,200.00
0142	5835900000-E	1540	20" ENCASEMENT PIPE	170 LF	68.00	11,560.00
0143	5836200000-E	1540	30" ENCASEMENT PIPE	703 LF	131.00	92,093.00
0144	5872100000-E	1550	TRENCHLESS INSTALLATION OF 20" IN SOIL	85 LF	159.00	13,515.00
0145	5872110000-E	1550	TRENCHLESS INSTALLATION OF 20" NOT IN SOIL	85 LF	399.00	33,915.00
0146	5872300000-E	1550	TRENCHLESS INSTALLATION OF 30" IN SOIL	95 LF	229.00	21,755.00
0147	5872310000-E	1550	TRENCHLESS INSTALLATION OF 30" NOT IN SOIL	95 LF	679.00	64,505.00
0148	5882000000-N	SP	GENERIC UTILITY ITEM SANITARY SEWER VALVE BOX	1 EA	300.00	300.00
0149	6000000000-E	1605	TEMPORARY SILT FENCE	34,030 LF	1.70	57,851.00
0150	6006000000-E	1610	STONE FOR EROSION CONTROL, CLASS A	2,105 TON	15.00	31,575.00
0151	6009000000-E	1610	STONE FOR EROSION CONTROL, CLASS B	6,350 TON	15.00	95,250.00
0152	6012000000-E	1610	SEDIMENT CONTROL STONE	2,745 TON	13.00	35,685.00
0153	6015000000-E	1615	TEMPORARY MULCHING	167 ACR	300.00	50,100.00
0154	6018000000-E	1620	SEED FOR TEMPORARY SEEDING	3,450 LB	3.00	10,350.00
0155	6021000000-E	1620	FERTILIZER FOR TEMPORARY SEEDING	16 TON	650.00	10,400.00
0156	6024000000-E	1622	TEMPORARY SLOPE DRAINS	6,110 LF	14.00	85,540.00
0157	6029000000-E	SP	SAFETY FENCE	1,400 LF	1.50	2,100.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0158	6030000000-E	1630	SILT EXCAVATION	18,940 CY	0.50	9,470.00
0159	6036000000-E	1631	MATTING FOR EROSION CONTROL	81,280 SY	1.09	88,595.20
0160	6037000000-E	SP	COIR FIBER MAT	380 SY	5.00	1,900.00
0161	6038000000-E	SP	PERMANENT SOIL REINFORCEMENT MAT	3,590 SY	4.50	16,155.00
0162	6042000000-E	1632	1/4" HARDWARE CLOTH	750 LF	3.00	2,250.00
0163	6071012000-E	SP	COIR FIBER WATTLE	6,710 LF	6.50	43,615.00
0164	6071020000-E	SP	POLYACRYLAMIDE (PAM)	4,800 LB	4.00	19,200.00
0165	6071030000-E	1640	COIR FIBER BAFFLE	6,900 LF	3.95	27,255.00
0166	6071050000-E	SP	** SKIMMER (1-1/2")	26 EA	850.00	22,100.00
0167	6071050000-E	SP	** SKIMMER (2-1/2")	1 EA	1,150.00	1,150.00
0168	6084000000-E	1660	SEEDING & MULCHING	106.5 ACR	1,000.00	106,500.00
0169	6087000000-E	1660	MOWING	117 ACR	40.00	4,680.00
0170	6090000000-E	1661	SEED FOR REPAIR SEEDING	1,750 LB	3.50	6,125.00
0171	6093000000-E	1661	FERTILIZER FOR REPAIR SEEDING	5.25 TON	700.00	3,675.00
0172	6096000000-E	1662	SEED FOR SUPPLEMENTAL SEEDING	2,550 LB	2.90	7,395.00
0173	6108000000-E	1665	FERTILIZER TOPDRESSING	76 TON	250.00	19,000.00
0174	6114500000-N	1667	SPECIALIZED HAND MOWING	35 MHR	35.00	1,225.00
0175	6117000000-N	SP	RESPONSE FOR EROSION CONTROL	175 EA	50.00	8,750.00
0176	6123000000-E	1670	REFORESTATION	0.2 ACR	5,000.00	1,000.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0177	6126000000-E	SP	STREAMBANK REFORESTATION	0.27 ACR	7,000.00	1,890.00

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0178	8096000000-E	450	PILE EXCAVATION IN SOIL	925 LF	200.00	185,000.00
0179	8097000000-E	450	PILE EXCAVATION NOT IN SOIL	250 LF	200.00	50,000.00
0180	8108000000-E	411	**'-**" DIA DRILLED PIERS (5'-0")	375 LF	950.00	356,250.00
0181	8111000000-E	411	PERMANENT STEEL CASING FOR **'-**" DIA DRILLED PIER (5'-0")	80.1 LF	220.00	17,622.00
0182	8113000000-N	411	SID INSPECTIONS	12 EA	750.00	9,000.00
0183	8115000000-N	411	CSL TESTING	12 EA	1,200.00	14,400.00
0184	8147000000-E	420	REINFORCED CONCRETE DECK SLAB	6,276.1 SF	31.00	194,559.10
0185	8175000000-E	420	CLASS AA CONCRETE (BRIDGE)	350.3 CY	650.00	227,695.00
0186	8217000000-E	425	REINFORCING STEEL (BRIDGE)	126,915 LB	1.30	164,989.50
0187	8280000000-E	440	APPROX ..... LBS STRUCTURAL STEEL	585,411 LS	1,238,000.00	1,238,000.00
0188	8294000000-N	442	PAINTING OF STRUCTURAL STEEL	Lump Sum LS	35,000.00	35,000.00
0189	8384000000-E	450	HP14X73 STEEL PILES	1,000 LF	50.00	50,000.00
0190	8453000000-E	454	METHOD B DAMPPROOFING	233.8 SY	30.00	7,014.00
0191	8531000000-E	462	4" SLOPE PROTECTION	348.1 SY	75.00	26,107.50
0192	8741000000-N	SP	STRUCTURE DRAINAGE SYSTEM AT STA********** (3315+52.15-MAIN-)	Lump Sum LS	175,000.00	175,000.00
0193	8860000000-N	SP	GENERIC STRUCTURE ITEM SELF-LUBRICATING BEARING ASSEM BLIES	Lump Sum LS	115,000.00	115,000.00
0194	8867000000-E	SP	GENERIC STRUCTURE ITEM CONCRETE PARAPET	324.3 LF	88.00	28,538.40
0195	8867000000-E	SP	GENERIC STRUCTURE ITEM METAL RAIL (ALUMINUM)	386.3 LF	85.00	32,835.50

Contract Item Sheets For C203128

Line #	ItemNumber	Sec #	Description	Quantity Unit	Unit Bid Price	Amount Bid
0196	8893000000-E	SP	GENERIC STRUCTURE ITEM WATERPROOFING	743 SY	70.00	52,010.00
			TOTAL AMOUNT OF BID FOR ENTIRE PROJECT			**$10,900,447.15**

1157/Nov30/Q1333105.32/D766712982000/E196



Contract No. C203128

County WAKE/DURHAM

Rev. 5-19-11

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

LIMITED LIABILITY COMPANY

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

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

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

SIGNATURE OF CONTRACTOR

FSC II, LLC dba Fred Smith Company
Full Name of Firm

6105 Chapel Hill Road, Raleigh, NC 27607
Address as Prequalified

Signature of Witness

Signature of ~~Member~~/Manager/Authorized Agent
Select appropriate title

Adam Kingsley
Print or type Signer's name

Jason M. Williams
Print or type Signer's Name

AFFIDAVIT MUST BE NOTARIZED

Subscribed and sworn to before me this the

3 day of December 2012

Earlane Bass
Signature of Notary Public

of Wake County

State of North Carolina

My Commission Expires: 8/30/2016

NOTARY SEAL

Earlane Bass
NOTARY PUBLIC - NORTH CAROLINA
Wake County
My Commission Expires 08/30/16

Contract No. **C203128**

County (ies): **Durham, Wake**

ACCEPTED BY THE
DEPARTMENT OF TRANSPORTATION

Contract Officer

12/10/12
Date

Execution of Contract and Bonds
Approved as to Form:

Attorney General

Contract No. C203128
County Durham, Wake

Rev 5-17-11

CONTRACT PAYMENT BOND

Date of Payment Bond Execution	December 3, 2012
Name of Principal Contractor	FSC II, LLC dba Fred Smith Company
Name of Surety:	Western Surety Company and Liberty Mutual Insurance Company
Name of Contracting Body:	**North Carolina Department of Transportation**
	Raleigh, North Carolina
Amount of Bond:	$10,900,447.15
Contract ID No.:	C203128
County Name:	Durham, Wake

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

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

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

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

Contract No. C203128

County Durham, Wake

Rev 5-17-11

CONTRACT PAYMENT BOND

Affix Seal of Surety Company

Western Surety Company and Liberty Mutual Insurance Company

Print or type Surety Company Name

By Renee Ellis

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

Signature of Attorney-in-Fact

Signature of Witness

Billie Jo Sanders

Print or type Signer's name

2601 Bell Road, Montgomery, Alabama 36117

Address of Attorney-in-Fact

Contract No. C203128

County Durham, Wake

Rev 5-17-11

CONTRACT PAYMENT BOND

LIMITED LIABILITY COMPANY

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor FSC II, LLC dba Fred Smith Company

Full name of Firm

6105 Chapel Hill Road, Raleigh, NC 27607

Address as prequalified

By: Jason M. Williams

Signature of ~~Member, Manager~~, Authorized Agent

Select appropriate title

Jason M. Williams

Print or type Signer's name

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Thomas J Gentile, Billie Jo Sanders, Renee Ellis, Paul B Scott Jr., David J Durden, Individually

of Montgomery, AL, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 2nd day of October, 2012.

WESTERN SURETY COMPANY

Paul T. Bruflat, Vice President

State of South Dakota
County of Minnehaha } ss

On this 2nd day of October, 2012, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
June 23, 2015

J. MOHR
NOTARY PUBLIC
SOUTH DAKOTA

J. Mohr, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 3rd day of December, 2012

WESTERN SURETY COMPANY

L. Nelson, Assistant Secretary

Form F4280-7-2012

Authorizing By-Law

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND. 5494005

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. _____

American Fire and Casualty Company
The Ohio Casualty Insurance Company
West American Insurance Company

Liberty Mutual Insurance Company
Peerless Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of Ohio, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, that Peerless Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, **BILLIE JO SANDERS; DAVID J. DURDEN; PAUL B. SCOTT JR; RENEE ELLIS; THOMAS J. GENTILE** .....

.....

all of the city of **MONTGOMERY**, state of **AL** each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this **30th** day of **July**, **2012**.

American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
Peerless Insurance Company
West American Insurance Company

By: _____
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss
COUNTY OF KING

On this **30th** day of **July**, **2012**, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, Peerless Insurance Company and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.

K.D. RILEY COMM. EXP. NOTARY PUBLIC 12-09-2013 STATE OF WASHINGTON

By: _____
KD Riley , Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, West American Insurance Company and Peerless Insurance Company, which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorney-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and biding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, West American Insurance Company and Peerless Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 3rd day of December, 20 12.

By: _____
David M. Carey, Assistant Secretary

POA - AFCC, LMIC, OCIC, PIC & WAIC
LMS_12873_041012

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.

Contract No. C203128
County Durham, Wake

Rev 5-17-11

CONTRACT PERFORMANCE BOND

Date of Performance Bond Execution:	December 3, 2012
Name of Principal Contractor:	FSC II, LLC dba Fred Smith Company
Name of Surety:	Western Surety Company and Liberty Mutual Insurance Company
Name of Contracting Body:	**North Carolina Department of Transportation**
	Raleigh, North Carolina
Amount of Bond:	$10,900,447.15
Contract ID No.:	C203128
County Name:	Durham, Wake

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

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

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

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

Contract No. C203128

County Durham, Wake

Rev 5-17-11

CONTRACT PERFORMANCE BOND

Affix Seal of Surety Company

Western Surety Company and Liberty Mutual Insurance Company

Print or type Surety Company Name

By Renee Ellis

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

Signature of Attorney-in-Fact

Signature of Witness

Billie Jo Sanders

Print or type Signer's name

2601 Bell Road, Montgomery, Alabama 36117

Address of Attorney-in-Fact

Contract No. C203128

County Durham, Wake

Rev 5-17-11

CONTRACT PERFORMANCE BOND

LIMITED LIABILITY COMPANY

SIGNATURE OF CONTRACTOR (Principal)

Name of Contractor FSC II, LLC dba Fred Smith Company

Full name of Firm

6105 Chapel Hill Road, Raleigh, NC 27607

Address as prequalified

By: Jason M. Williams

Signature of ~~Member, Manager~~, Authorized Agent

Select appropriate title

Jason M. Williams

Print or type Signer's name

Western Surety Company

POWER OF ATTORNEY APPOINTING INDIVIDUAL ATTORNEY-IN-FACT

Know All Men By These Presents, That WESTERN SURETY COMPANY, a South Dakota corporation, is a duly organized and existing corporation having its principal office in the City of Sioux Falls, and State of South Dakota, and that it does by virtue of the signature and seal herein affixed hereby make, constitute and appoint

Thomas J Gentile, Billie Jo Sanders, Renee Ellis, Paul B Scott Jr., David J Durden, Individually

of Montgomery, AL, its true and lawful Attorney(s)-in-Fact with full power and authority hereby conferred to sign, seal and execute for and on its behalf bonds, undertakings and other obligatory instruments of similar nature

- In Unlimited Amounts -

and to bind it thereby as fully and to the same extent as if such instruments were signed by a duly authorized officer of the corporation and all the acts of said Attorney, pursuant to the authority hereby given, are hereby ratified and confirmed.

This Power of Attorney is made and executed pursuant to and by authority of the By-Law printed on the reverse hereof, duly adopted, as indicated, by the shareholders of the corporation.

In Witness Whereof, WESTERN SURETY COMPANY has caused these presents to be signed by its Vice President and its corporate seal to be hereto affixed on this 2nd day of October, 2012.

WESTERN SURETY COMPANY

Paul T. Bruflat, Vice President

State of South Dakota
County of Minnehaha } ss

On this 2nd day of October, 2012, before me personally came Paul T. Bruflat, to me known, who, being by me duly sworn, did depose and say: that he resides in the City of Sioux Falls, State of South Dakota; that he is the Vice President of WESTERN SURETY COMPANY described in and which executed the above instrument; that he knows the seal of said corporation; that the seal affixed to the said instrument is such corporate seal; that it was so affixed pursuant to authority given by the Board of Directors of said corporation and that he signed his name thereto pursuant to like authority, and acknowledges same to be the act and deed of said corporation.

My commission expires
June 23, 2015

J. MOHR
NOTARY PUBLIC
SOUTH DAKOTA

J. Mohr, Notary Public

CERTIFICATE

I, L. Nelson, Assistant Secretary of WESTERN SURETY COMPANY do hereby certify that the Power of Attorney hereinabove set forth is still in force, and further certify that the By-Law of the corporation printed on the reverse hereof is still in force. In testimony whereof I have hereunto subscribed my name and affixed the seal of the said corporation this 3rd day of December, 2012

WESTERN SURETY COMPANY

L. Nelson, Assistant Secretary

Form F4280-7-2012

Authorizing By-Law

ADOPTED BY THE SHAREHOLDERS OF WESTERN SURETY COMPANY

This Power of Attorney is made and executed pursuant to and by authority of the following By-Law duly adopted by the shareholders of the Company.

Section 7. All bonds, policies, undertakings, Powers of Attorney, or other obligations of the corporation shall be executed in the corporate name of the Company by the President, Secretary, and Assistant Secretary, Treasurer, or any Vice President, or by such other officers as the Board of Directors may authorize. The President, any Vice President, Secretary, any Assistant Secretary, or the Treasurer may appoint Attorneys in Fact or agents who shall have authority to issue bonds, policies, or undertakings in the name of the Company. The corporate seal is not necessary for the validity of any bonds, policies, undertakings, Powers of Attorney or other obligations of the corporation. The signature of any such officer and the corporate seal may be printed by facsimile.

THIS POWER OF ATTORNEY IS NOT VALID UNLESS IT IS PRINTED ON RED BACKGROUND. 5494003

This Power of Attorney limits the acts of those named herein, and they have no authority to bind the Company except in the manner and to the extent herein stated.

Certificate No. _____

American Fire and Casualty Company
The Ohio Casualty Insurance Company
West American Insurance Company

Liberty Mutual Insurance Company
Peerless Insurance Company

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That American Fire & Casualty Company and The Ohio Casualty Insurance Company are corporations duly organized under the laws of the State of Ohio, that Liberty Mutual Insurance Company is a corporation duly organized under the laws of the State of Massachusetts, that Peerless Insurance Company is a corporation duly organized under the laws of the State of New Hampshire, and West American Insurance Company is a corporation duly organized under the laws of the State of Indiana (herein collectively called the "Companies"), pursuant to and by authority herein set forth, does hereby name, constitute and appoint, **BILLIE JO SANDERS; DAVID J. DURDEN; PAUL B. SCOTT JR; RENEE ELLIS; THOMAS J. GENTILE** .....

.....

all of the city of **MONTGOMERY**, state of **AL** each individually if there be more than one named, its true and lawful attorney-in-fact to make, execute, seal, acknowledge and deliver, for and on its behalf as surety and as its act and deed, any and all undertakings, bonds, recognizances and other surety obligations, in pursuance of these presents and shall be as binding upon the Companies as if they have been duly signed by the president and attested by the secretary of the Companies in their own proper persons.

IN WITNESS WHEREOF, this Power of Attorney has been subscribed by an authorized officer or official of the Companies and the corporate seals of the Companies have been affixed thereto this **30th** day of **July**, **2012**.

American Fire and Casualty Company
The Ohio Casualty Insurance Company
Liberty Mutual Insurance Company
Peerless Insurance Company
West American Insurance Company

By: _____
Gregory W. Davenport, Assistant Secretary

STATE OF WASHINGTON ss
COUNTY OF KING

On this **30th** day of **July**, **2012**, before me personally appeared Gregory W. Davenport, who acknowledged himself to be the Assistant Secretary of American Fire and Casualty Company, Liberty Mutual Insurance Company, The Ohio Casualty Company, Peerless Insurance Company and West American Insurance Company, and that he, as such, being authorized so to do, execute the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my notarial seal at Seattle, Washington, on the day and year first above written.

K D RILEY COMM. EXP. NOTARY PUBLIC 12-09-2013 STATE OF WASHINGTON

By: _____
KD Riley , Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, West American Insurance Company and Peerless Insurance Company, which resolutions are now in full force and effect reading as follows:

ARTICLE IV – OFFICERS – Section 12. Power of Attorney. Any officer or other official of the Corporation authorized for that purpose in writing by the Chairman or the President, and subject to such limitation as the Chairman or the President may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Corporation to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact, subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Corporation by their signature and execution of any such instruments and to attach thereto the seal of the Corporation. When so executed, such instruments shall be as binding as if signed by the President and attested to by the Secretary. Any power or authority granted to any representative or attorney-in-fact under the provisions of this article may be revoked at any time by the Board, the Chairman, the President or by the officer or officers granting such power or authority.

ARTICLE XIII – Execution of Contracts – SECTION 5. Surety Bonds and Undertakings. Any officer of the Company authorized for that purpose in writing by the chairman or the president, and subject to such limitations as the chairman or the president may prescribe, shall appoint such attorneys-in-fact, as may be necessary to act in behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations. Such attorneys-in-fact subject to the limitations set forth in their respective powers of attorney, shall have full power to bind the Company by their signature and execution of any such instruments and to attach thereto the seal of the Company. When so executed such instruments shall be as binding as if signed by the president and attested by the secretary.

Certificate of Designation – The President of the Company, acting pursuant to the Bylaws of the Company, authorizes Gregory W. Davenport, Assistant Secretary to appoint such attorney-in-fact as may be necessary to act on behalf of the Company to make, execute, seal, acknowledge and deliver as surety any and all undertakings, bonds, recognizances and other surety obligations.

Authorization – By unanimous consent of the Company's Board of Directors, the Company consents that facsimile or mechanically reproduced signature of any assistant secretary of the Company, wherever appearing upon a certified copy of any power of attorney issued by the Company in connection with surety bonds, shall be valid and biding upon the Company with the same force and effect as though manually affixed.

I, David M. Carey, the undersigned, Assistant Secretary, of American Fire and Casualty Company, The Ohio Casualty Insurance Company, Liberty Mutual Insurance Company, West American Insurance Company and Peerless Insurance Company do hereby certify that the original power of attorney of which the foregoing is a full, true and correct copy of the Power of Attorney executed by said Companies, is in full force and effect and has not been revoked.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seals of said Companies this 3rd day of December, 20 12.

By: _____
David M. Carey, Assistant Secretary

POA - AFCC, LMIC, OCIC, PIC & WAIC
LMS_12873_041012

Not valid for mortgage, note, loan, letter of credit, bank deposit, currency rate, interest rate or residual value guarantees.

To confirm the validity of this Power of Attorney call 1-610-832-8240 between 9:00 am and 4:30 pm EST on any business day.