



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION

BEVERLY EAVES PERDUE
GOVERNOR

EUGENE A. CONTI, JR.
SECRETARY

September 13, 2011

MEMO TO: Jay Bennett, Jonathan Bivens, Stuart Bourne, Ken Cates, Joe Coleman, Judith Corley-Lay, Ron Hancock, Berry Jenkins, Ben Lanier, Don Lee, David Moyer, Gerhard Pilcher, Ian Scott, Lamar Sylvester, Michael Taylor, Kevin Thomas, Brian Webb, and Dennis Wofford

FROM: R. A. Garris, PE
Contract Officer

SUBJECT: AGC/Roadway Subcommittee Meeting Minutes

The subject committee met on August 18 at 9:30 a.m. in the Riverwood Conference Room at the Century Center with the following in attendance:

Jay Bennett	Ron Hancock	Natalie Roskam
Jonathan Bivens	David Harris	Lamar Sylvester
Stuart Bourne	Berry Jenkins	Michael Taylor
Scott Capps	Ben Lanier	Kevin Thomas
Ken Cates	Don Lee	Brian Webb
Randy Garris	Vladimir Mitchev	Dennis Wofford

1. NORTH CAROLINA'S CONSTRUCTION GENERAL PERMIT – NCG01

Mr. Jenkins reviewed the new construction general permit (see Attachments #1 and #2). He highlighted the exception of turbidity testing for the next five years and the more stringent timeline for an early stand of vegetation.

Mr. Harris stated that the permit applies to new designs beginning with the January 2012 letting. Previously designed projects will be grandfathered. The committee discussed how to clarify which permit is used on each project, and a note in the plans or a provision was suggested. Mr. Harris predicts an expanded use of seeding and mulching and new soil stabilization products. Mr. Jenkins noted that the new permit has flexibility for extenuating circumstances.

Mr. Bivens suggested adding notes in the plans to explain which areas require temporary seed or permanent seed. Mr. Harris responded that time periods within the project may determine which ground cover operation is needed.

Training resources from Dr. McLaughlin of NCSU are available on the AGC website. Dr. McLaughlin has been evaluating soil treatments, basins, effluents, and turbidity testing.

Mr. Harris noted the 20 acre rule is still in effect. If projects seem to need further than 20 acres, then the Department needs to apply for an exception in advance of the project letting.

The 7-day seeding requirement was discussed as it relates to DBE participation and coordination of seeding work. Mr. Hancock affirmed that the new permit will not change the DBE program. Mr. Bivens noted that the 7-day seeding requirement begins after work is completed in the area.

Mr. Harris has proposed a research project for monitoring turbidity to find technology that is inexpensive, available, and reliable. Mr. Bivens complimented the agencies for seeing turbidity as a false standard and using early seeding as the solution for erosion control. He noted that Divisions handle payment for seeding and mulching differently with some saving money by limiting seeding and mulching. Mr. Taylor disagreed with the Department's policy to not pay for seeding and mulching beyond the 20 acre limit.

2. PERMANENT VEGETATION ESTABLISHMENT PROVISION

Mr. Hancock stated that the Department's maintenance crew is responsible for maintaining vegetation after the project is completed. Reconditioning efforts by the Department have been needed after projects have closed to create a permanent stand of vegetation.

The proposed provision makes establishing permanent vegetation a requirement before closing out the project. If there is less than 70% vegetation after the work has been completed for six months, liquidated damages will be charged daily. Mr. Bivens disagreed with the liquidated damages because the contractor does not control the seed, the matting placement, or the weather.

Mr. Webb requested "damage" be replaced with "disturbed." Mr. Webb requested that the pay item for Silt Excavation be listed in the provision.

Mr. Hancock will consider possible incentives for early vegetation establishment.

3. WORK ZONE SUPERVISOR TRAINING

Mr. Hancock reviewed the work zone supervisor training course requirements. The trainer requirements are under development, but a professional engineers license is not required. There were concerns about the amount of design training being required in the course. Discussion centered on the liability of the training outline as listed and Mr. Hancock suggested addressing concerns by changing the title from "Minimum Course Outline" to "Suggested Course Outline."

One question discussed was when are work zone supervisor required to be on the job site. The current provision states work zone supervisors need to be available to answer questions about the project. For larger Design Build projects, the provision states that the supervisor shall be on site. Divisions are expected to have at least one work zone supervisor in each office.

Mr. Capps asked who would be responsible for tracking compliance with the work zone supervisor requirement.

4. SUBLETTING

Mr. Sylvester highlighted proposed changes in Article 108-6 Subletting of Contract. Three changes in the provision are as follows: the prime contractor shall submit sublet work within 30 days of the availability date or prior to 20% expiration of the contract time, the prime contractor shall perform 35% of the project without including the purchase of materials for work subcontracted to others, **and** the prime contractor shall perform all of at least one major contract item except for hauling of materials. Mr. Taylor thought performing at least one major contract item and 35% of the project may be too stringent. Bridge contracts may be difficult to bid as prime if the bridge is subcontracted. Mr. Bivens gave an example of a project where his company self-performed the majority of the work but would not have met the proposed requirements. One suggestion was to require a percentage of a major item be performed by the prime. Mr. Hancock noted that unusual projects could qualify for an exception.

Mr. Garris reported that major items are the larger contract items that add up to approximately 30% and specialty items are tagged in the master pay item list as traditionally subcontracted work.

Mr. Jenkins requested that the AGC members provide feedback on the proposed changes.

5. DIVISION WEBSITES

Mr. Garris stated that the Division 8 website will be the template for all Division websites to help potential bidders find information about current projects. Mr. Bivens appreciates having a common link for division let projects, plans, addendum, and prebid information.

6. 2012 STANDARD SPECIFICATIONS AND ROADWAY STANDARD DRAWINGS

Mr. Garris distributed the list of major changes to the 2012 *Standard Specifications*. He noted that the list of major changes, the *Standard Specifications* and the *Roadway Standard Drawings* are available on the website. The standards will remain drafts until approved by the Board. The books will be available for order on November 1.

The next meeting will be held on Thursday, October 20, at 9:30 am in the Riverwood Conference Room at the Century Center, Building B.

CC: Victor Barbour, PE
Andy Gay, PE

Major Elements of DWQ Construction General Permit

This document contains the major elements of the recently-revised North Carolina Division of Water Quality (DWQ) Construction General Permit (NCCG01) with emphasis placed on those elements that differ from the previous permit (expiration on August 2, 2011). Since the summary list below cannot contain details of every change, the complete Permit should be used to assure full implementation. See: <http://portal.ncdenr.org/web/wq/ws/su/construction>

1) Ground Stabilization*		
Site Area Description	Stabilization Time Frame	Stabilization Time Frame Exceptions
<ul style="list-style-type: none"> Perimeter dikes, swales, ditches and slopes 	7 days	None
<ul style="list-style-type: none"> High Quality Water (HQW) Zones 	7 days	None
<ul style="list-style-type: none"> Slopes steeper than 3:1 	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
<ul style="list-style-type: none"> Slopes 3:1 or flatter 	14 days	7-days for slopes greater than 50 feet in length
<ul style="list-style-type: none"> All other areas with slopes flatter than 4:1 	14 days	None (except for perimeters and HQW Zones)

* "Extensions of time may be approved by the permitting authority based on weather or other site-specific conditions that make compliance impracticable." (Section II B(2)(b))

The major change in the Permit from the previous one is the shorter times to apply ground stabilization such as mulch, wheat straw, or grasses. The NC laws and rules relating to the Sediment Act require, in most places, ground stabilization within 21 days. Based on the new EPA requirements and 9-months' work with a permit advisory group, CTAG, the Division and EPA-developed permit, now contains requirements for ground cover within 14, and in some places, 7 days.

<p>2) Building Wastes Handling</p> <ul style="list-style-type: none"> No paint or liquid wastes in stream or storm drains Dedicated areas for demolition, construction and other wastes must be located 50' from storm drains and streams unless no reasonable alternatives available. Earthen-material stockpiles must be located 50' from storm drains and streams unless no reasonable alternatives available. Concrete materials must be controlled to avoid contact with surface waters, wetlands, or buffers.
<p>3) Discharges to Federally-listed Waters</p> <ul style="list-style-type: none"> Requirements are the same as in previous permit. The permit allows reduction from the 20 acre minimum if the Director of DWQ determines that other BMPs provide equivalent protection.

Major Elements of DWQ Construction General Permit- Continued

<p>4) Inspections</p> <ul style="list-style-type: none"> • Same weekly inspection requirements • Same rain gauge & inspections after 0.5" rain event • Inspections are only required during "normal business hours" • Inspection reports must be available on-site during business hours unless a site-specific exemption is approved. • Records must be kept for 3 years and available upon request. • Electronically-available records may be substituted under certain conditions.
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<p>5) Implementation of New Permit Conditions</p> <ul style="list-style-type: none"> • Projects permitted under the previous permit can continue to follow the previously-permitted conditions. • Complete applications received prior to August 3, 2011 can follow conditions of approved application. • Applications received after August 2, 2011 must comply with new permit conditions. 	<p>6) Conditions in Erosion & Sedimentation Control Plans*</p> <p>Designation on the plans where the 7 and 14-day ground stabilization requirements of the NPDES permit apply</p> <p>Designation on the plans where basins that comply with the surface-withdrawal requirements of the NPDES permit are located.</p> <p>7) Building Wastes Handling</p> <ul style="list-style-type: none"> • No paint or liquid wastes in stream or storm drains • Dedicated areas for demolition, construction and other wastes located 50' from storm drains and streams unless no reasonable alternatives are available. • Earthen-material stockpiles located 50' from storm drains unless no reasonable alternatives available. • Concrete materials must be controlled to avoid contact with surface waters, wetlands, or buffers. <p>8) Sediment Basins</p> <ul style="list-style-type: none"> • Outlet structures must withdraw from basin surface unless drainage area is less than 1 acre. • Use only DWQ-approved flocculants.
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* In order for the E&SC Plan to satisfy the conditions of the Construction General permit, it must identify areas where the ground stabilization requirements apply and the location of the basins where the surface-withdrawal requirements apply.



North Carolina Division of Water Quality NPDES Stormwater Discharge Permit for Construction Activities



Cover Sheet for NCG010000

Revised August 2, 2011

What is this permit?

This is your **General Stormwater Permit for Construction Activities**, developed to meet federal National Pollutant Discharge Elimination System (NPDES) requirements. It is separate from your Erosion and Sedimentation Control (E&SC) Plan, which has been a North Carolina requirement for over 35 years.

Federal regulations adopted by the U.S. Environmental Protection Agency (EPA) and North Carolina Division of Water Quality (DWQ) require an NPDES permit for your project. The EPA has delegated DWQ authority to administer the NPDES program in North Carolina. Two divisions of the Department of Environment and Natural Resources are responsible for different parts of the federal permitting requirements.

The E&SC plan approved by the Division of Land Resources (or a delegated local program) contains the core erosion control requirements for your project. The NPDES General Permit issued by DWQ contains additional requirements related to a broader range of water quality issues. **These permits are related, but separate. Both contain conditions your project site must meet.**

Are there new requirements in this permit?

This General Permit reflects changes made in the federal regulations effective February 1, 2010, that regulate discharges from construction sites. The federal regulations resulted from litigation decisions that mandated construction activities over a certain size must contain additional specifications to reduce the amount of wastes and sediment loading that reach the nation's waters.

The Division of Water Quality and the Division of Land Resources established the Construction General Permit Technical Advisory Group (CTAG) to guide the development of this NPDES permit. A draft permit was available for public review in May 2011, and the final permit became effective on August 3, 2011.

The most notable change in the new permit is a requirement that ground stabilization, such as wheat straw application, be applied within 14 days from the last land-disturbing activity. For steep slopes, that area must be stabilized within 7 days. Please see page 2 of this document for details.

What does this permit require me to do?

You should read and become familiar with the provisions of this permit. Below is a list of the major requirements, with indications where those differ from the previous Construction General Permit.

EROSION AND SEDIMENT CONTROL PLAN

You must implement the Erosion and Sedimentation Control Plan approved for your project by the Division of Land Resources or by an approved local program. Adherence to that E&SC Plan is an enforceable component of the Stormwater Permit. **Your E&SC plan will identify**

areas where the more stringent 7 and 14 day ground stabilization requirements apply. See "New Ground Stabilization Requirements" on page 2.

MONITORING & INSPECTIONS

- ▶ You must keep a rain gauge on site.
- ▶ Dedicated demolition and other waste areas and earthen material stockpiles must be located at least 50' from storm drains or streams unless no alternative is feasible (new requirement).
- ▶ You must inspect all E&SC measures at least once a week

and within 24 hours after any storm event greater than a half inch (during a 24-hour period). You must take immediate corrective action for any device failure.

▶ You must inspect all outlets where stormwater runoff leaves your site and evaluate the effect on nearby streams or wetlands. Corrective action must be taken if sediment is deposited off site or into a stream or wetland, or causes a visible increase in turbidity (cloudiness) of any waterbody.

▶ You must keep records of these inspections and any correc-

(continued on reverse side)

Permit Requirements (continued)

tive actions taken.

OPERATION & MAINTENANCE

You must provide the operation and maintenance necessary to maintain optimal performance of stormwater controls. This means **take corrective action** if erosion and sediment control facilities are not operating properly! Operation and maintenance includes, but is not limited to:

- ◆ Regularly cleaning out sedimentation basins.
- ◆ Stabilizing eroded banks or spillway structures.
- ◆ Repairing/clearing out inlets and outlets.
- ◆ Repairing piping, seepage and mechanical damage.
- ◆ Repairing silt fence damage.

REPORTING

Regular inspections are a chance

to check impacts to nearby waters. **If you observe sediment that has deposited in a stream or wetland, you must notify the Division of Water Quality regional office** within 24 hours and provide **written notice within 5 days** (see # 3 on page 6 of the General Permit). Please send a copy of this correspondence to the Division of Land Resources (DLR).

NON-COMPLIANCE & FINES

Take compliance seriously! Projects that violate Stormwater Permit conditions and/or have unauthorized water quality impacts are subject to fines. **Civil penalties of up to \$25,000.00 per day for each violation may be assessed.**

Who inspects me for what?






DWQ coordinates with DLR's

Land Quality Section to ensure compliance with state rules and regulations governing construction activities. That means your project is subject to enforcement by both divisions. In general, Land Quality staff will inspect your site on a regular basis. DWQ staff may also do inspections. The inspections may be routine in nature, or, the result of public complaints.

Do I need to submit a Notice of Intent to have coverage under this permit?

No. Once your E&SC Plan is approved, your site is automatically covered under this permit. You do not need to submit a Notice of Intent for a Certificate of Coverage.

NEW STABILIZATION TIMEFRAMES

Site Area Description	Stabilization	Timeframe Exceptions
 Perimeter dikes, swales, ditches and slopes	7 days	None
 High Quality Water (HQW) Zones	7 days	None
 Slopes steeper than 3:1	7 days	If slopes are 10' or less in length and are not steeper than 2:1, 14 days are allowed.
 Slopes 3:1 or flatter	14 days	7 days for slopes greater than 50' in length.
 All other areas with slopes flatter than 4:1	14 days	None, except for perimeters and HQW Zones.

Do you need more information?



NC Stormwater Permitting

<http://portal.ncdenr.org/web/wa/ws/su>

NCG01 Permit Information

<http://portal.ncdenr.org/web/wa/ws/su/construction>

Map of Regional Offices

<http://portal.ncdenr.org/web/wa/home>

Still have questions? Call the DWQ Regional Office nearest your project's location:

Asheville Office	(828) 296-4500	Washington Office	(252) 946-6481
Fayetteville Office	(910) 433-3300	Wilmington Office	(910) 796-7215
Mooresville Office	(704) 663-1699	Winston-Salem Office	(336) 771-5000
Raleigh Office	(919) 791-4200	Central Office	(919) 807-6300

Permanent Vegetation Establishment

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 a 70% 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, fertilizer topdressing, reclamation of eroded soil and grading to the plan typical sections, and furnishing and placing additional soil or stone material needed to complete the work.

Once the Engineer has determined that a 70% 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 damages to the project caused 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 the reclamation of eroded soils and grading will be incidental to various contract items. Payment for *Response for Erosion Control, Repair Seeding and Mulching, Supplemental Seeding and Mulching, Fertilizer Topdressing*, and any additional *Borrow Excavation or Stone for Erosion Control* will be made at contract unit prices for the affected items. Payment for the maintenance and removal of temporary erosion control measures is incidental to the various pay items in the contract. No additional compensation will be made for maintenance and removal of temporary erosion control items.

CONTRACT TIME AND LIQUIDATED DAMAGES:

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

SP1G10

The date of availability for this contract is **April 1, 2011**.

The completion date for this contract is **December 27, 2012**.

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.

INTERMEDIATE CONTRACT TIME NUMBER 1 AND LIQUIDATED DAMAGES:

(7-1-95) (Rev.5-16-06)

SP1 G13

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 April 1, 2011.

The completion date for this intermediate contract time is June 30, 2012.

The liquidated damages for this intermediate contract time are One Thousand Dollars (\$1,000.00) 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 that covered under *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 operations, whether occurring prior to or after placing traffic through the project.

Work Zone Supervisor Minimum course outline

Traffic Control Standards

- FHWA Safety & Mobility Rule
- MUTCD
- NCHRP 350 crash requirements
- AASHTO's Roadside Design Guide
- Highway Capacity Manual
- ANSI visibility standards
- Retro-reflectivity standards
- NCDOT Specifications and Standard Drawings for Roads and Structures

Human factors considerations in work zone setup.

Traffic control devices

- Work zone components / areas
- Classifications of work zones / durations

Construction staging and constructability issues

Plan reading / interpretation

Volume to capacity ratios / demand vs. lane capacity

Positive protection & length of need

Pedestrian access and ADA issues

Nighttime construction considerations

Legal aspects of temporary traffic control

- Plan changes
- Documentation & record keeping

Supervisory skills / Tail gate meetings / Training responsibilities

108-6 SUBLETTING OF CONTRACT

The Contractor shall not sublet, sell, transfer, assign, or otherwise dispose of the contract or any portion thereof; or of his right, title, or interest therein; without written consent of the Engineer. All requests to sublet work shall be submitted within 30 days of the availability date or prior to expiration of 20% of the contract time, whichever is greater unless otherwise approved by the engineer.

In case such consent is given, the sublet work shall be performed by the subcontractor unless otherwise approved in writing by the Engineer. Failure of the Contractor to comply with these Specifications will be just cause for the work to be considered unauthorized in accordance with Article 105-12. A firm that has been disqualified due to its failure to maintain satisfactory progress under the requirements of Article 108-8 will not be approved as a subcontractor until the firm demonstrates the ability to perform the work in a satisfactory manner. When directed by the Engineer, the Contractor shall submit a certified copy of the actual subcontract agreement executed between the Contractor and subcontractor prior to written consent being issued by the Engineer. In case such consent is given, the Contractor will be permitted to sublet a portion thereof, but shall perform with his own organization, work amounting to not less than 40 percent of the total original contract amount, except:

- (A) Any items designated in the contract as specialty items may be performed by subcontract and the cost of any such special items so performed by subcontract will be deducted from the total amount bid before computing the amount of work required to be performed by the Contractor with his own organization, and
- (B) Any other items sublet to Disadvantaged Business Enterprise (DBE), Minority Business (MB) or Women's Business (WB), up to the value of the contract DBE, MB or WB goal, will be deducted from the total amount bid before computing the amount of work required to be performed by the Contractor with his own organization.

In any event, the Contractor shall perform with his own organization work amounting to not less than 35% of the difference between the total amount bid and the value of specialty items that have been sublet. Purchasing materials for subcontractors is not considered part of the work. If the Contractor sublets items of work but elects to purchase material, for the subcontractor, the value of the material purchase will be included in the dollar amount considered to be sublet.

The Contractor shall perform all of the work associated with at least one major contract item, except work associated with hauling of materials.

Extra work performed in accordance with Article 104-7 will not be considered in the computation of work required to be performed by the Contractor.

An assignment by operations of law or assignment for the benefit of creditors, or the bankruptcy of the Contractor, shall not vest any right in this contract in the Trustee in bankruptcy, the Contractor's creditors, or the agent of the creditors.

A subcontractor shall not sublet, sell, transfer, assign, or otherwise dispose of his contract with a contractor or any portion thereof; or of his right, title, or interest therein; without written consent of the Engineer. When directed by the Engineer, the contractor shall submit a certified copy of the actual subcontract agreement executed between the subcontractor and the second tier subcontractor. In the event of an assignment by operations of law or the bankruptcy of the subcontractor, the contractor shall have the right, power, and authority, in its discretion, without violating the contract or releasing the Surety, to terminate the subcontract. An assignment by operations of law or assignment for the benefit of creditors or the bankruptcy of the subcontractor shall not vest any right in this contract in the Trustee in bankruptcy, nor the subcontractor's creditors or agents of the creditors.

Neither the Contractor, nor any subcontractor, shall enter into any written or oral equipment lease or rental agreement, materials purchase agreement, and/or labor agreement that circumvents the requirements of this article.

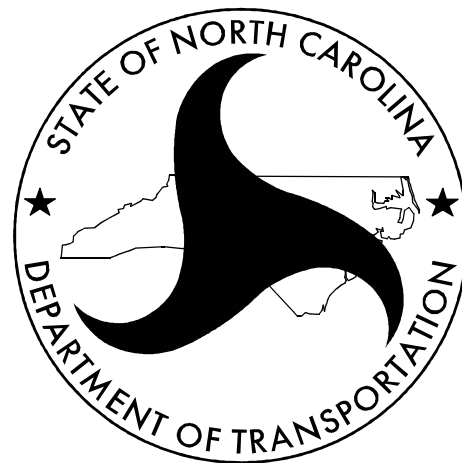
If the Contractor or a subcontractor enter into a lease or rental agreement for equipment based upon payment for a unit of work, such agreement will be considered subletting of the contract unless the lease or rental agreement is with a commercial equipment company, manufacturer, and/or commercial leasing agency and such firm has been approved by the Engineer. An equipment lease or rental agreement that is based upon unit prices per unit of time will not be considered subletting of the contract.

The approval of any subcontract will not release the Contractor of his liability under the contract and bonds, nor will the subcontractor or the second tier subcontractor have any claim against the Department by reason of the approval of the subcontract. The State Highway Administrator will review and consider subcontractor claims for additional time or compensation provided such claims are submitted by the contractor in accordance with Article 107-25 and General Statute 136-29.

Failure of the Contractor to comply with any of the requirements of this article may be justification for disqualifying the Contractor from further bidding in accordance with the requirements of Article 102-16.

2012 Standard Specifications

Major Changes and Revisions



Prepared by
Contract Standards and Development Unit
Division of Highways
N.C. Department of Transportation

August 2011

2012 STANDARD SPECIFICATIONS

REVISION HIGHLIGHTS

OVERALL - ENTIRE BOOK

- The *2012 Standard Specifications* article and subarticle numbering is consecutive and blank subarticles are eliminated. Please note that references numbers may have changed in this publication. Sections and articles referenced in this document refer to the *2012 Standard Specifications*.
- The book has line numbers for easy reference.
- Table and figure numbers are designated as the section number hyphenated with a sequential reference number.
- Where applicable, statements regarding payment or compensation have been moved to the Measurement and Payment article within each section.
- Standard test methods have been updated were applicable.

For questions or comments, contact:
specs@ncdot.gov
or
Natalie Roskam, PE
Specification Engineer
(919) 707-6916

2012 STANDARD SPECIFICATIONS

REVISION HIGHLIGHTS

ARTICLE	DIVISION 1 – GENERAL REQUIREMENTS
101-2	Updates abbreviations used in the book. Adds a table of unit abbreviations and symbols used throughout the book.
101-3	Adds the definition for Standard Drawings. Modifies the definition of Supplemental Specifications to include Department published manuals referenced in the <i>Standard Specifications</i> .
102-2(B)	Adds subarticle for Purchase Order Contractor Prequalification.
102-9	Adds the Gift Ban Certification requirements.
102-14	Clarifies the licensing requirements for Contractors under the Rejection of Bids article and separated the requirements between State funded projects and Federal Aid projects.
102-15	Adds that when there is a failure to make prompt payments, it is justification to disqualify a Contractor.
103-2	Defines procedure in the case of bid omission for Mobilization and for Federally funded projects.
104-3,104-4, 104-7, 108-10(B)(4)	Adds references to the Contractor Claim Submittal Form.
104-7	Clarifies that extra work performed without the Engineer’s consent will not be compensated.
106-3	Modifies Type 6 and Type 7 material certification requirements to remove the reference to Type 3 material certifications.
107	Removes the article on Use of Explosives. This information is now in the new Section 220 Blasting.
107-1	Adds gift ban requirements.
107-16	The liability insurance article was expanded to explain Contractor responsibility and specific insurance requirements.
107-24	Adds the last paragraph to clarify that receipt of claim records does not construe admission of liability.

ARTICLE	DIVISION 1 – GENERAL REQUIREMENTS
107-25	Adds the requirements for Contaminant Removal Reports, Underground Storage Tank Closure Reports, Certification of Remediation, and specific monitoring devices. Adds references to the applicable regulations and agency requirements.
108-2	Adds a list of requirements to be included in the progress schedule and major milestones. The progress schedule requires a cash curve which highlights the major milestones and work activities. A written report detailing the sequence of work, obtaining permits, working with subcontractors or outside entities, etc. is required.
109-4(B)	Under the subarticle on Prompt Payments, additional retainage above 3% to 10% is allowed if a mutual agreement is executed.
109-10	Under the article on Documents Required for the Processing of the Final Estimate, the last sentence was added to allow the Department to proceed with the final estimate even if the Contractor is nonresponsive.

ARTICLE	DIVISION 2 – EARTHWORK
200-4	Adds the requirement to clear 3 feet on either side of a bridge site.
200-8	Clarifies that if the Contractor requests and is approved for additional clearing, the seeding and mulching needed will be at no expense to the Department. Cutting and disposing of damaged plants and trees is incidental to clearing and grubbing.
210-2, 215-2	Adds the requirements for contaminant removal, underground storage tank removal or closure, and remediation. Adds references to the applicable regulations and agency requirements.
220	Adds section for Blasting.
225-1, 225-7	Adds the requirement for the construction of false sumps.
235-2	Adds specific soil classifications and requirements for embankments.
235-3	Adds the requirement to not place rock or broken pavement in embankment areas where piles or drilled piers will be built.
235-5	Adds paragraph regarding repairs to embankments stating that there will be no compensation from the Department for damage caused by the Contractor and that payment at contract unit price will be made for damage caused by nature.

ARTICLE	DIVISION 2 – EARTHWORK
265-4	Modifies the measurement and payment for Select Granular Material. Select granular material will be paid as Select Granular Material unless the material is obtained from the same source as the borrow material and the contract includes a pay item for Borrow Excavation. When this occurs, Select Granular Material will be paid at the lower bid price per cubic yard for either Borrow Excavation or Select Granular Material.
275	Adds section for Rock Plating.

ARTICLE	DIVISION 3 – PIPE CULVERTS
300-6	Allows the Department to perform forensic tests on pipe. Defines rigid pipe to include concrete and steel pipe. Geotextile wrap is required for rigid pipes 42 inches or larger. Defined flexible pipes as corrugated HDPE and PVC pipe.
300-7	Requires bedding material beneath the pipe. Allows excavatable flowable fill for backfill when approved by the Engineer.
300-8	Defined the pipe inspection of the Engineer and when a pipe may be replaced or repaired.
300-9	Adds pay item for Foundation Conditioning Geotextile.
305	Adds section for Drainage Pipe.
310-6	Updates pay items.
320	Removes section on Corrugated Steel and Aluminum Alloy Structural Plate Pipe and Pipe Arch.
340-2	Material requirements for mix designs was removed as this information is covered by Division 10. Adds the Division 10 reference for flowable fill.

ARTICLE	DIVISION 4 – MAJOR STRUCTURES
Division 4	Adds the <i>LFRD Bridge Design Specifications</i> to the specifications.
402-2	Adds a requirement to not drop components of bridges being removed into the body of water.
402-3	Adds pay item for removal of multiple structures at one station.

ARTICLE	DIVISION 4 – MAJOR STRUCTURES
410	Moves the article for Subsurface Drainage at Weep Holes to Article 414-8. Removes article on Substructure Scour Protection.
411	Adds section for Drilled Piers and Crosshole Sonic Logging.
412-4	Removes the Unclassified Structure Excavation pay item paid in cubic yard.
414-8	Adds the Subsurface Drainage at Weep Holes article from Section 410 of the <i>2006 Standard Specifications</i> .
420-13	Adds installation of adhesive anchors. Adds two levels of field testing. The level of field inspection to be used will be indicated in the plans. Anchor or dowels that fail the field test will be removed and replaced.
420-20	Adds limits for when a screed may be rolled across a newly placed bridge deck.
442-3	Deletes reference to weep hole drain now covered in Article 414-8.
425-5	Simplifies the splice requirements for reinforcement to use the manufacturer's recommendations.
440-8	Removes the Turn of Nut Tightening procedures.
442	Updates the paint system submittal requirements, quality control, surface preparation, paint system requirements, paint application conditions, storage conditions, mixing paint requirements, thinning paint requirements, stripe coat instructions, paint certifications, and preparation for painting galvanized surfaces.
442-12	Adds article for Preparation for Painting Galvanized Surfaces.
450	Changes the section title from Bearing Piles to Piles. Revises the section to LRFD and adds composite piles, predrilling, spudding, pile excavation and PDA testing requirements.
452	Revises the Sheet Pile Retaining Walls.
453	Removes section on Gravity Retaining Walls.

ARTICLE	DIVISION 5 – SUBGRADE, BASES, AND SHOULDERS
501	Removes calendar restrictions on applying lime.
505	Adds section for Aggregate Subgrade.
520-5	Modifies the time limits for adding sand seal over a base course.
520-8, 540-8	Modifies base course tolerance for applications under concrete to 1/4".
530	Removes section on Soil Type Base Course.
542	Adds aggregate for soil cement base.
542-3	Removes calendar limits for construction of soil-cement base.
545-2	Adds recycled concrete to incidental stone base.

ARTICLE	DIVISION 6 – ASPHALT PAVEMENTS
Division 6	Many of the quality control values and requirements are referenced to the Department's <i>HMA/QMS Manual</i> .
607-3	Adds the option of using a temporary bridge steel plate over utilities during milling operations.
607-5	Modifies and clarifies when to use the pay item of incidental milling.
609, 610	Removes the 4.75 mm mix.
609-3	Adds the field verification instructions for warm mix asphalt.
609-6	Corrective actions are triggered by moving average values instead of warning limits.
610	Adds warm mix asphalt requirements. Adds reclaimed asphalt shingle requirements and modifies reclaimed asphalt pavement requirements. Removes redundant sections that are covered by the Department's <i>HMA/QMS Manual</i> .
610-8	Expands use of MTV to Interstate and US routes that have four or more lanes and are median divided.
610-13	Modifies the final surface testing to include the Inertial Profiler testing and Hearne straightedge option.

ARTICLE	DIVISION 6 – ASPHALT PAVEMENTS
610-14	Changes pay factor formula for density deficiency to go to a 70% reduction in pay.
657-3	Modifies the temperature range and minimum application thickness for the application of hot applied joint sealer.
660-11	Adds price adjustment for slurry seal.

ARTICLE	DIVISION 7 – CONCRETE PAVEMENTS AND SHOULDERS
700-4	Modifies grading tolerance to $\pm 1/4$ " from established grade on mainline lanes.
700-5	Changes strength requirement for allowing construction equipment or hauling equipment on concrete pavement until it has attained a compressive strength of 3,500 psi.
700-11(G)	Adds subarticle on Verification of Dowel Bar Alignment.
700-13	Changes strength requirement for allowing traffic and heavy equipment on concrete pavement to a minimum compressive strength of 3,500 psi.
710-3,710-4	Modifies concrete requirements to 650 psi flexural and 4,500 psi compressive strength.
710-7	Modifies final surface testing to require Inertial Profiler.
710-10(B)	Changes the pay factor for concrete thickness to a formula.
710-10(C)	Modifies pay factor formula for compressive strength and adds pay factor formula for flexural strength.
725-2	Modifies requirements for the field office. Only Department representatives will have unattended access to the field office.

ARTICLE	DIVISION 8 – INCIDENTALS
801-2(D), 806	Adds control-of-access markers.
801-3(E)	Increases the rates for Supplemental Surveying Office Calculations to \$60/hr and Supplemental Surveying to \$110/hr.

ARTICLE	DIVISION 8 – INCIDENTALS
802-2	References the Department’s website for reclamation procedures.
806	Adds material requirements for right-of-way and control-of-access markers.
815	Adds subsurface drain and other requirements from the subsurface drainage provision.
815-4	Removes Subdrain Wyes, Tees and Elbows pay item.
848	Changes the reference from “wheelchair” to “curb ramps.”
858-3	Adds the requirement of a ramp with a tapered slope on manholes or other structures in the roadway.
859-4	Adds additional pay items for converting existing catch basins to junction boxes, drop inlets to catch basins, drop inlets to junction box, junction box to drop inlet and junction box to catch basin.

ARTICLE	DIVISION 9 – SIGNING
901-3	Adds Type C signs. Removes the Department inspection procedures.
901-3(A)	Adds requirements to ship multi-panel signs intact, assembled and ready to be installed.
901-4	Adds subarticle on sign quality.
904-4	Removes pay item for erecting walkway signs.

ARTICLE	DIVISION 10 – MATERIALS
1000-2, 1000-7, 1002-2, 1024-1	Adds Type IT blended cement.
1000-3	Adds the requirement to submit new mix design for any change and additional requirements for major changes. Updates Table 1000-1 Requirements for Concrete.
1000-12	Adds article for Volumetric Mixed Concrete.

ARTICLE	DIVISION 10 – MATERIALS
1002	Adds section for Shotcrete.
1003	Adds section for Grout.
1005-1	Table 1005-1, adds size 9 and Lightweight.
1006, 1008, 1010	References <i>Aggregate QC/QA Program Manual</i> and removes redundant information. Removes soil type base course requirements.
1012-1	Modifies RAP and RAS requirements.
1019	Adds section for Shoulder and Slope Material.
1020	Modifies requirements for Emulsions and Residue.
1024-4	Modifies requirement for water testing in the specified counties.
1032	Removes Corrugated Steel and Aluminum Alloy Structural Plate Pipe and Pipe Arch and Vitrified Clay Culvert Pipe.
1032-6	Removes Plain Concrete Culvert Pipe.
1032-8	Adds article for PVC Profile Wall Drain Pipe.
1034	Removes Acrylonitrile Butadiene Styrene (ABS) Pipe.
1040-4	Adds article for Segmental Retaining Wall Units.
1040-9	Removes the article of Cement Grout because of the new Section 1003.
1042-2	Modifies test requirements for Rip Rap.
1043	Adds section for Aggregate from Crushed Concrete.
1044-2	Adds article for Subdrain Course Aggregate.
1050-1(B)	Adds Table 1050-1 for Wire Diameter.
1050-6	Adds requirements for glare screen to the Chain Link Fabric article.
1054	Moves right-of-way marker material requirements to Section 806. Changes the name of the section to “Drains.” Removes the article for synthetic roving. Moves the article for the grout for concrete roadway traffic barrier to Section 1003.

ARTICLE	DIVISION 10 – MATERIALS
1056	Renames “Engineering Fabrics” to “Geosynthetics.” Modifies the geotextile requirements and adds geocomposites.
1060-10	Adds geophyte material requirements.
1060-14	Adds coir fiber mat material requirements.
1060-15	Adds special stilling basin material requirements.
1072	Removes articles for Structural Steel of Foreign Origin and Fabrication of Structural Steel Outside Continental Limits of United States.
1072-18	Adds requirement for commercially blast cleaning steel before welding. All field welds require approval for welding procedure specifications.
1072-21	Adds limits for placement of steel beams and girders for shipping.
1076-2	Adds article for Inspection Notification for galvanizing.
1076-7	Adds requirements for repair of galvanizing.
1077-5	Adds requirements for precast wall units to Table 1077-1.
1077-7	Adds requirements for steel and macrosynthetic fiber reinforcement.
1077-12	Adds article for exposed aggregate finish for precast concrete panels.
1077-16	Adds article for incidental precast items.
1078-1	Adds subarticles for prestressed concrete members producer qualification and working drawing submittals.
1078-12	Modifies requirements for handling vertical cracks in prestressed concrete. All members, except those defined as unacceptable, which exhibit vertical cracks before detensioning shall receive a 7 day water cure.
1078-15	Modifies final finish requirements to include finish for prestressed concrete members.
1079-2	Removes natural rubber elastomer table and dimensional tolerances of elastomer bearings.
1080	Modifies test methods for paint.

ARTICLE	DIVISION 10 – MATERIALS
1081	Modifies test and prequalification requirements for epoxies and hot bitumen. Adds subarticle for anchor bolt adhesive.
1082	Modifies the AWWA standard classifications.
1086-2	Adds subarticle on Epoxy Adhesives for permanent raised pavement markers.
1087-4, 1087-7	Adds arsenic restrictions for glass beads.
1089	Changes work zone sign designations from Types to Grades.
1089-6	Changes “Flashing Arrow Panels” to “Flashing Arrow Boards.”
1089-9	Changes “Truck Mounted Impact Attenuators” to “Truck Mounted Attenuators.”
1090	Removes subarticle for anchor bolt adhesive.
1091	Adds section for Electrical Materials.
1092	Removes article for Very High Bond Tape. Added Retroreflective Sheeting.
1093	Moves section for Retroreflective Sheeting to Section 1092.
1097	Removes section for Sign Lighting Systems.
1098	Moves articles for Conduit to Section 1091.
1098-6	Removes article for Wood Poles. Added article for Pole Line Hardware.
1098-10	Modifies the requirements for single mode fiber optic cable.
1098-14	Adds several subarticles to subdivide Pedestals.
1098-18	Adds article for Spread Spectrum Wireless Radio.

ARTICLE	DIVISION 11 – WORK ZONE TRAFFIC CONTROL
1101-1	The adds the requirements of 23 CFR 630 Subparts J and K and defines the components of the Transportation Management Plan (TMP): Temporary Traffic Control Plan (TTC), Transportation Operations Plan (TO), and Public Information Plan (PI).

ARTICLE	DIVISION 11 – WORK ZONE TRAFFIC CONTROL
1101-13	Modifies the requirements of the Traffic Control Supervisor.
1101-15	Adds article for Pedestrian Access.
1105-6	Adds pay item for lump sum Temporary Traffic Control.
1115	Changes from “Flashing Arrow Panels, Type C” to “Flashing Arrow Boards.”
1120-3	Adds requirements for messages and phases on portable changeable message signs.
1130-3	Adds spacing of drums equal in feet to the speed limit in the taper and twice the speed limit in the tangent sections.
1135-3	Adds requirements for cones in daytime and nighttime applications.
1150-3	Flagger qualification requirements.
1170	Replaces “Portable Concrete Barrier” to “Positive Protection.” Added water-filled barriers.
1180-3	Adds spacing requirements for skinny drums.

ARTICLE	DIVISION 12 – PAVEMENT MARKINGS, MARKERS AND DELINEATION
1205-3	In Table 1205-1, Interstates and other “control-of-access” roadways shall have all pavement markings completed by the end of the workday if the roadway is to be opened to traffic. Adds requirements for interim and temporary paint markings. Changes the observation period for paint from 180 days to 12 months.
1205-4(C)	Adds paint requirements for arrows: the stem of straight arrows shall be completed in one pass, the stem of turn arrows in no more than 2 passes, and the arrow head in no more than 3 passes.
1205-9	Changes the observation period for paint from 180 days to 12 months.
1205-10	Adds that Paint Pavement Marking Symbols will be paid for each 15 mil application.
1250-3(E)	A certified pavement marking technician shall be present while pavement markings are being placed.

ARTICLE	DIVISION 14 – LIGHTING
1400-2(C)	Branch circuits in light standards shall use UL Type SO cable.
1400-4(I)	Replaces article for “Concrete Foundation” with “Base Protection.” Adds requirement for a protective metal shroud on median mounted lights.
1400-5	A calibrated MegOhmMeter shall be presented at the pre-lighting work meeting. Adds requirements for inspections including Contractor supplying the Engineer with a Certificate of Inspection from the Office of State Fire Marshall.
1400-6	Adds the requirement for the Burn-In Test.
1400-11	A Pre-Lighting-Work meeting is to be scheduled by the Contractor prior to beginning lighting system work.
1400-13	Adds article for Contractor Meg Circuit Data Form.
1400-14	Adds article for Lighting System Inspection Checklist.
1401-2(A)	Modifies requirements for High Mount Lighting including providing certified drawings by a professional engineer.
1402	Removes section on High Mount Foundations.
1403	Changes the definition of high mount luminaries to greater than 60 feet instead of 75 feet.
1404	Changes the definition of light standards to less than 55 feet instead of 75 feet.
1405-2, 1407-2, 1408-2, 1409-2, 1410-2, 1411-2, 1412-2	Adds material requirements referenced from Division 10.

ARTICLE	DIVISION 15 – UTILITY CONSTRUCTION
1525-3	Manholes should be flush plus or minus one quarter inch for driveways, sidewalks, and parking lots instead of plus or minus one half inch.

ARTICLE	DIVISION 16 – EROSION CONTROL AND ROADSIDE DEVELOPMENT
1606	Adds section for Special Sediment Control Fence.
1607	Adds section for Gravel Construction Entrance.
1631-3	Removes synthetic roving from this section.
1636	Adds section for Temporary Stream Crossing.
1637-3	For Riser Basin, adds requirements for skimmer, coir fiber baffles and stone energy dissipater.
1639	Adds section for Special Stilling Basin.
1640	Adds section for Coir Fiber Baffle.
1660, 1665	Removes reference to liquid fertilizer.
1667	Adds section for Specialized Hand Mowing.
1670-4(D), 1670-9(F)	Adds article for Geophytes.

ARTICLE	DIVISION 17 – SIGNALS AND INTELLIGENT TRANSPORTATION SYSTEMS
1700-3	Adds requirement for IMSA certified Level II traffic qualified signal technician and maintenance (testing) on all Traffic Signal Conflict Monitors every 12 months for the life of the project. Adds requirements for modifying and testing existing electrical services to meet the grounding requirements of NEC.
1705-3	Adds vehicle signal heads mounting dimension requirements. Adds articles for Optically-Programmed Vehicle Signal Sections, Louvers, and Modify Existing Vehicle Signal Heads.
1710-3	Adds reference to the <i>Metal Pole Standard Drawing</i> Sheet M6.
1715-3	Adds article for Conduit Entering Cabinet Foundations.
1715-4	Adds pay item for Unpaved Trenching for Temporary Lead-In.

ARTICLE	DIVISION 17 – SIGNALS AND INTELLIGENT TRANSPORTATION SYSTEMS
1716-3	Adds the requirement to provide coordinate information for junction boxes to the Engineer in a spreadsheet provided by the Department.
1720-3	Ensures wood poles are of sufficient length to maintain the minimum required clearances above the roadway, obstructions, and affected railroad tracks.
1722-2, 1730-2	Adds material requirements referenced from Division 10.
1772-3	Adds riser requirements.
1736	Adds section for Spread Spectrum Radio.
1743	Modifies the section for “Signal Pedestals” to “Pedestals.”
1746	Adds section for Relocate Existing Sign.
1747	Adds section for LED Blankout Sign.
1752	Adds section for Modify Cabinet Foundations.
1757	Adds section for Removal of Existing Traffic Signals.