



**Town of Holden Beach
Board of Commissioners
Special Meeting**

**Friday, January 5, 2024
6:30 PM**

**Holden Beach Town Hall
Public Assembly**



**TOWN OF HOLDEN BEACH
BOARD OF COMMISSIONERS' SPECIAL MEETING
HOLDEN BEACH TOWN HALL – PUBLIC ASSEMBLY
FRIDAY, JANUARY 5, 2024 – 6:30 P.M.**

1. Call to Order
2. Public Comment
3. Discussion and Possible Action on New Board of Commissioners' Rules and Procedures –
Commissioners Thomas and Paarfus (Separate Packet)
4. Discussion and Possible Action on Election of Executive Secretary – Commissioners Thomas and
Paarfus
5. Discussion and Possible Action on Agenda Topic Cover Sheet – Commissioners Thomas and
Paarfus (Page 1)
6. Discussion and Possible Action on Additional Board of Commissioners' Meetings –
Commissioners Thomas and Paarfus (Pages 2 – 3)
7. Discussion and Possible Action on Block Q Contract – Commissioners Thomas and Paarfus
(Pages 4 – 38)
8. Adjournment

* Visit <https://www.facebook.com/holdenbeachtownhall/> to watch the livestream of the meeting. Public comments can be submitted to heather@hbtownhall.com prior to 12:00 p.m. on January 5, 2024.



Town of Holden Beach
AGENDA TOPIC COVER SHEET

TO: Holden Beach BOC

FROM:

MEETING DATE:

DATE SUBMITTED:

ISSUE/ACTION REQUESTED:

BACKGROUND/PURPOSE OF REQUEST:

FISCAL IMPACT: (circle one)

BUDGET AMENDMENT REQUIRED: YES/NO

CAPITAL PROJECT ORDINANCE REQUIRED: YES/NO

PRE-AUDIT CERTIFICATION REQUIRED: YES/NO

REVIEWED BY FINANCE DIRECTOR: YES/NO

CONTRACTS/AGREEMENTS: (circle One)

REVIEWED BY TOWN ATTORNEY: (YES/NO)

ADVISORY BOARD RECOMMENDATION:

TOWN ADMINISTRATOR'S RECOMMENDATION:

FINANCE RECOMMENDATION:

ATTACHMENT

Proposed Meeting Calendar

January – Orientation, Training, Budget Kick-Off

- January 5 – 6:30 PM - Special Meeting – Rules of Procedure, Meeting Calendar
- January 9-10 - New Commissioner Staff Orientation Sessions
- January 18-19 – New Commissioner Training Sessions (Wilmington)
- January 23 – 5:00 PM - BOC Meeting
- January 30 - 10:00 AM - Budget Meeting - Kick-off & Planning

February – Review Current Budgets & Status

- February 2 – 10:00 AM - Budget Meeting - Water Sewer
- February 6 – 10:00 AM - Budget Meeting - Parks and Recreation
- February 8 – 10:00 AM - Budget Meeting - Admin/Finance and Inspections
- February 13 – 10:00 AM - Budget Meeting – Police and Public Works
- February 20 – 5:00 PM - Regular BOC Meeting
- February 27 – 10:00 AM - Budget Meeting - CIP and Projects
- February 29 – 10:00 AM - Budget Meeting Goal Setting/Priorities
- February Special Meeting – TBD – Pier Plan

March – Department Input & Budget Requests

- March 5 – 10:00 AM - Budget Meeting – Water Sewer
- March 7 – 10:00 AM - Budget Meeting – Parks and Recreation
- March 12 – 10:00 AM - Budget Meeting – Admin/Finance, Police and Inspections
- March 14 – 10:00 AM - Budget Meeting – Public Works
- March 18 - 10:00 AM - Budget Meeting – CIP and Projects
- March 19 – 5:00 PM - Regular BOC Meeting
- March 20 – 2:00 PM - Special Meeting – Pier Plan

April – Budget Preparation

- April 2 – 10:00 AM - Budget Meeting – Canal Fund
- April 4 – 10:00 AM - Budget Meeting – Canal Fund
- April 9 – 10:00 AM - Budget Meeting - Canal Fund
- April 11 – 10:00 AM - Budget Meeting – General Fund Revenue & Tax Rate
- April 16 – 10:00 AM - Budget Meeting – BPART Fund Revenue
- April 16 – 5:00 PM - Regular BOC Meeting
- April 18 – TBD (Morning) - Listening Session
- April 30 – 10:00 AM - Budget Meeting – Expense Summary

May – Resolve Budget to Arrive at Budget Message

- May 2 – 10:00 AM - Budget Meeting – Budget Revisions
- May 7 – 10:00 AM - Budget Meeting – Budget Revisions
- May 9 – 10:00 AM - Budget Meeting – Draft Budget
- May 14 – 10:00 AM - Budget Meeting - Draft Budget
- May 16 – 10:00 AM - Budget Meeting - Public Presentation/Input on Draft Budget
- May 21 – 5:00 PM - Regular BOC Meeting
- May 23 – 10:00 AM - Budget Meeting – Draft Budget Message
- May 28 – 10:00 AM - Budget Meeting – Draft Budget Message
- May 31 (NLT June 1) Budget Message Released

June – Public Input and Budget Tweaks

- June 3 – 10:00 AM - Budget Meeting - Revisions
- June 7 – 10:00 AM - Budget Meeting - Revisions
- June 11 – 10:00 AM - Budget Meeting - Revisions
- June 13 – 10:00 AM - Budget Meeting – Revisions
- June 18 – 5:00 PM - Regular BOC Meeting
- June 18 – 4:45 PM - Budget Public Hearing as part of BOC Mtg
- June 20 – 10:00 AM - Budget Meeting – Final Changes
- June 25 – 10:00 AM - Budget Meeting - Final Changes
- June 27 – 10:00 AM - Budget Meeting - Final Changes
- June 30 – Must adopt Budget NLT

Department Budget meeting expectations:

- Provide a detailed presentation of budget line items including
 - Last year spend
 - This year YTD spend and FY Outlook
 - Next year’s Budget proposal with priorities identified

Heather Finnell

From: Rick Paarfus <rpaarfus@ec.rr.com>
Sent: Tuesday, January 2, 2024 5:07 PM
To: Heather Finnell
Cc: tracey thomas; David Hewett
Subject: Block Q Paving Contract Recommendation
Attachments: 1-02-24 Discussion with NCDEQ Dan Sams.docx; 15ANCAC02H.1000All-20130301-DWQ-SPU.pdf; Block Q Plans DOC160.pdf

Heather,

Please include this email and the attachments in the meeting packet for the 1-5-24 BOC Special Meeting.

The purpose of this e-mail is to strongly recommend that the Town not execute the Block Q paving contract or to cancel this contract immediately if it has been executed.

Please see the attached summary of my conversation with NCDEQ and Section .1000 of the NC Administrative Code titled STORMWATER MANAGEMENT. Contrary to previous assertions, it appears that there are in fact options for permeable pavements that could be used to avoid dedicating valuable real estate to storm water filtration features. I recognize that this permeable pavement will cost more than impervious asphalt and will have to be engineered, however some of the additional cost will be offset by not doing the storm water feature site work and not relocating utilities. I also believe that eliminating the current stormwater features also removes a potential water hazard for small children.

Referring to sheet C0 of the attached bid drawings the total site area is 77,674 square feet (hard to read due to poor resolution). I assume this is the same area as defined by the limits of disturbance on sheet C2 of the bid drawings. Based on some rough calculations, I think 10-11% of the site is dedicated to storm water management as a consequence of using impervious paving. This also looks to be the equivalent of forty vehicle parking spaces. Car parking is important because one of the reasons Block Q was purchased was to meet parking requirements of the Corps Storm Damage Reduction study the Town is currently paying for. Should more parking be needed at this site, a higher percentage of the site area will need to be allocated to storm water management if impervious pavement is used again.

In summary, I believe permeable pavement provides a superior solution for efficient land use of this high value property compared to the current impervious pavement called for in the bid documents. I recommend that the Block Q paving contract not be executed or canceled if it has been executed.

Respectfully,

Rick Paarfus

Commissioner, Town of Holden Beach

Summary of my Conversation with Dan Sams of North Carolina Environmental Quality, Wilmington Regional Office On 1-2-2024.

I spoke with Mr. Sams concerning the Block Q paving contract. I explained that we were paving with asphalt and using stormwater filtration features to handle the storm water runoff from these surfaces. I expressed my concern about using so much of this valuable real estate for stormwater management and asked him if permeable pavement such as porous asphalt or porous concrete could be an option for this project. Mr. Sams stated that it could be used provided that it was a properly engineered solution designed by a Professional Engineer. I also asked if compacted gravel as addressed in 15A NCAC 02H .1002 (26) was considered impervious because it was proof rolled. He said that compacted gravel was considered impervious when crush and run gravel is used as it gets very dense. He did say that there is a design for using gravel in their stormwater design manual, but this too would have to be designed by a Professional Engineer. I also noted that it was my understanding that porous asphalt/concrete could cost 2-3 times what regular asphalt costs.

Post conversation note: I believe the stormwater design manual can be found at the following link: <https://www.deq.nc.gov/about/divisions/energy-mineral-and-land-resources/stormwater/stormwater-program/stormwater-design-manual>

Rick Paarfus

SECTION .1000 - STORMWATER MANAGEMENT

15A NCAC 02H .1001 STORMWATER MANAGEMENT POLICY

The rules in this Section set forth the requirements for application and issuance of permits for stormwater management systems in accordance with G.S. 143-215.1(d) and 15A NCAC 2H .0200. These requirements to control pollutants associated with stormwater runoff apply to development of land for residential, commercial, industrial, or institutional use but do not apply to land management activities associated with agriculture or silviculture unless specifically addressed in special supplemental classifications and management strategies adopted by the Commission.

*History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.3(a)(1);
Eff. January 1, 1988;
Amended Eff. September 1, 1995.*

15A NCAC 02H .1002 DEFINITIONS

The definition of any word or phrase in this Section shall be the same as given in Article 21, Chapter 143 of the General Statutes of North Carolina, as amended. Other words and phrases used in this Section are defined as follows:

- (1) "Built-upon Area" means that portion of a development project that is covered by impervious or partially impervious surface including, but not limited to, buildings; pavement and gravel areas such as roads, parking lots, and paths; and recreation facilities such as tennis courts "Built upon area" does not include a wooden slatted deck, the water area of a swimming pool, or pervious or partially pervious paving material to the extent that the paving material absorbs water or allows water to infiltrate through the paving material.
- (2) "CAMA Major Development Permits" mean those permits or revised permits required by the Coastal Resources Commission according to 15A NCAC 7J Sections .0100 and .0200.
- (3) "Certificate of Stormwater Compliance" means the approval for activities that meet the requirements for coverage under a stormwater general permit for development activities that are regulated by this Section.
- (4) "Coastal Counties" include Beaufort, Bertie, Brunswick, Camden, Carteret, Chowan, Craven, Currituck, Dare, Gates, Hertford, Hyde, New Hanover, Onslow, Pamlico, Pasquotank, Pender, Perquimans, Tyrrell, and Washington.
- (5) "Curb Outlet System" means curb and gutter installed in a development which meets low density criteria [Rule .1003(d)(1) of this Section] with breaks in the curb or other outlets used to convey stormwater runoff to grassed swales or vegetated or natural areas and designed in accordance with Rule .1008(g) of this Section.
- (6) "Development" means any land disturbing activity that increases the amount of built-upon area or that otherwise decreases the infiltration of precipitation into the soil.
- (7) "Drainage Area or Watershed" means the entire area contributing surface runoff to a single point.
- (8) "Forebay" means a device located at the head of a wet detention pond to capture incoming sediment before it reaches the main portion of the pond. The forebay is typically an excavated settling basin or a section separated by a low weir.
- (9) "General Permit" means a "permit" issued under G.S. 143-215.1(b)(3) and (4) authorizing a category of similar activities or discharges.
- (10) "Infiltration Systems" mean stormwater control systems designed to allow runoff to pass or move (infiltrate/exfiltrate) into the soil.
- (11) "Notice of Intent" means a written notification to the Division that an activity or discharge is intended to be covered by a general permit and takes the place of "application" used with individual permits.
- (12) "Off-site Stormwater Systems" mean stormwater management systems that are located outside the boundaries of the specific project in question, but designed to control stormwater drainage from that project and other potential development sites. These systems shall designate responsible parties for operation and maintenance and may be owned and operated as a duly licensed utility or by a local government.
- (13) "On-site Stormwater Systems" mean the systems necessary to control stormwater within an individual development project and located within the project boundaries.

- (14) "Redevelopment" means any land disturbing activity that does not result in a net increase in built-upon area and that provides greater or equal stormwater control than the previous development (stormwater controls shall not be allowed where otherwise prohibited).
- (15) "Seasonal High Water Table" means the highest level that groundwater, at atmospheric pressure, reaches in the soil in most years. The seasonal high water table is usually detected by the mottling of the soil that results from mineral leaching.
- (16) "Sedimentation/Erosion Control Plan" means any plan, amended plan or revision to an approved plan submitted to the Division of Energy, Mineral, and Land Resources or delegated authority in accordance with G.S. 113A-57.
- (17) "Stormwater" is defined in G.S. 143, Article 21.
- (18) "Stormwater Collection System" means any conduit, pipe, channel, curb or gutter for the primary purpose of transporting (not treating) runoff. A stormwater collection system does not include vegetated swales, swales stabilized with armoring or alternative methods where natural topography or other physical constraints prevents the use of vegetated swales (subject to case-by-case review), curb outlet systems, or pipes used to carry drainage underneath built-upon surfaces that are associated with development controlled by the provisions of Rule .1003(d)(1) in this Section.
- (19) "10 Year Storm" means the surface runoff resulting from a rainfall of an intensity expected to be equaled or exceeded, on the average, once in 10 years, and of a duration which will produce the maximum peak rate of runoff, for the watershed of interest under average antecedent wetness conditions.
- (20) "Water Dependent Structures" means a structure for which the use requires access or proximity to or siting within surface waters to fulfill its basic purpose, such as boat ramps, boat houses, docks, and bulkheads. Ancillary facilities such as restaurants, outlets for boat supplies, parking lots and boat storage areas are not water dependent uses.
- (21) "Wet Detention Pond" means a structure that provides for the storage and control of runoff and includes a designed and maintained permanent pool volume.
- (22) "Vegetative Buffer" means an area of natural or established vegetation directly adjacent to surface waters through which stormwater runoff flows in a diffuse manner to protect surface waters from degradation due to development activities. The width of the buffer is measured horizontally from the normal pool elevation of impounded structures, from the bank of each side of streams or rivers, and from the mean high water line of tidal waters, perpendicular to the shoreline.
- (23) "Vegetative Filter" means an area of natural or planted vegetation through which stormwater runoff flows in a diffuse manner so that runoff does not become channelized and which provides for control of stormwater runoff through infiltration of runoff and filtering of pollutants. The defined length of the filter shall be provided for in the direction of stormwater flow.
- (24) "One-year, 24-hour storm" means a rainfall of an intensity expected to be equaled or exceeded, on average, once in 12 months and with a duration of 24 hours.
- (25) "BMP" means Best Management Practice.
- (26) "Permeable pavement" means paving material that absorbs water or allows water to infiltrate through the paving material. Permeable pavement materials include porous concrete, permeable interlocking concrete pavers, concrete grid pavers, porous asphalt, and any other material with similar characteristics. Compacted gravel shall not be considered permeable pavement.
- (27) "Residential development activities" has the same meaning as in 15A NCAC 02B .0202(54).
- (28) "Vegetative conveyance" means a permanent, designed waterway lined with vegetation that is used to convey stormwater runoff at a non-erosive velocity within or away from a developed area.

History Note: Authority G.S. 143-213; 143-214.1; 143-214.7; 143-215.3(a)(1);
 Eff. January 1, 1988;
 Amended Eff. August 1, 2012 (see S.L. 2012-143, s.1(f)); July 3, 2012; December 1, 1995; September 1, 1995.

15A NCAC 02H .1003 STORMWATER MANAGEMENT: COVERAGE: APPLICATION: FEES

(a) The intent of the Commission is to achieve the water quality protection which low density development near sensitive waters provides. To that end, the Director, by applying the standards in this Section shall cause development to comply with the antidegradation requirements specified in 15A NCAC 2B .0201 by protecting surface waters and highly

productive aquatic resources from the adverse impacts of uncontrolled high density development or the potential failure of stormwater control measures.

(b) To ensure the protection of surface waters of the State in accordance with G.S. 143-214.7, a permit is required in accordance with the provisions of this Section for any development activities which require a CAMA major development permit or a Sedimentation/Erosion Control Plan and which meet any of the following criteria:

- (1) development activities located in the 20 coastal counties as defined in Rule .1002(4) of this Section;
- (2) development activities draining to Outstanding Resource Waters (ORW) as defined in 15A NCAC 2B .0225; or
- (3) development activities within one mile of and draining to High Quality Waters (HQW) as defined in 15A NCAC 2B .0101(e)(5).

Projects under a common plan of development shall be considered as a single project and shall require stormwater management in accordance with this Section. Local governments with delegated Sedimentation/Erosion Control Programs often implement more stringent standards in the form of lower thresholds for land area disturbed. In these situations, the requirements of this Rule apply only to those projects that exceed the state's minimum area of disturbance as outlined in G.S. 113A-57. Specific permitting options, including general permits for some activities, are outlined in Paragraph (d) of this Rule.

(c) Development activity with a CAMA major development permit or a Sedimentation/Erosion Control Plan approved prior to January 1, 1988 are not required to meet the provisions of these Rules unless changes are made to the project which require modifications to these approvals after January 1, 1988.

(d) Projects subject to the permitting requirements of this Section may be permitted under the following stormwater management options:

- (1) **Low Density Projects:** Projects permitted as low density projects must be designed to meet and maintain the applicable low density requirements specified in Rules .1005 through .1007 of this Section. The Division shall review project plans and assure that density levels meet the applicable low density requirements. The permit shall require recorded deed restrictions and protective covenants to ensure development activities maintain the development consistent with the plans and specifications approved by the Division.
- (2) **High Density Projects:** Projects permitted as high density projects must be designed to meet the applicable high density requirements specified in Rules .1005 through .1007 of this Section with stormwater control measures designed, operated and maintained in accordance with the provisions of this Section. The permit shall require recorded deed restrictions and protective covenants to ensure development activities maintain the development consistent with the plans and specifications approved by the Division. Stormwater control measures and operation and maintenance plans developed in accordance with Rule .1008 of this Section must be approved by the Division. In addition, NPDES permits for stormwater point sources may be required according to the provisions of 15A NCAC 2H .0126.
- (3) **Other Projects:** Development may also be permitted on a case-by-case basis if the project:
 - (A) controls runoff through an off-site stormwater system meeting provisions of this Section;
 - (B) is redevelopment which meets the requirements of this Section to the maximum extent practicable;
 - (C) otherwise meets the provisions of this Section and has water dependent structures, public roads and public bridges which minimize built-upon surfaces, divert stormwater away from surface waters as much as possible and employ other best management practices to minimize water quality impacts.
- (4) **Director's Certification:** Projects may be approved on a case-by-case basis if the project is certified by the Director that the site is situated such that water quality standards and uses are not threatened and the developer demonstrates that:
 - (A) the development plans and specifications indicate stormwater control measures which shall be installed in lieu of the requirements of this Rule; or
 - (B) the development is located such a distance from surface waters that impacts from pollutants present in stormwater from the site shall be effectively mitigated.
- (5) **General Permits:** Projects may apply for permit coverage under general permits for specific types of activities. The Division shall develop general permits for these activities in accordance with Rule .1013 of this Section. General Permit coverage shall be available to activities including, but not limited to:
 - (A) construction of bulkheads and boat ramps;

- (B) installation of sewer lines with no proposed built-upon areas;
- (C) construction of an individual single family residence; and
- (D) other activities that, in the opinion of the Director, meet the criteria in Rule .1013 of this Section.

Development designed to meet the requirements in Subparagraphs (d)(1) and (d)(3) of this Paragraph must demonstrate that no areas within the project site are of such high density that stormwater runoff threatens water quality.

(e) Applications: Any person with development activity meeting the criteria of Paragraph (b) of this Rule shall apply for permit coverage through the Division. Previously issued Stormwater Certifications (issued in accordance with stormwater management rules effective prior to September 1, 1995) revoked due to certification violations must apply for permit coverage. Stormwater management permit applications, project plans, supporting information and processing fees shall be submitted to the appropriate Division of Environmental Management regional office. A processing fee, as described in Paragraph (f) of this Rule, must be submitted with each application. Processing fees submitted in the form of a check or money order shall be made payable to N.C. Department of Environment, Health, and Natural Resources. Applications which are incomplete or not accompanied by the processing fee may be returned. Permit applications shall be signed as follows:

- (1) in the case of corporations, by a principal executive officer of at least the level of vice-president, or his authorized representative;
- (2) in the case of a partnership, by a general partner and in the case of a limited partnership, by a general partner;
- (3) in the case of a sole proprietorship, by the proprietor;
- (4) in the case of a municipal, state or other public entity by either a principal executive officer, ranking official or other duly authorized employee.

The signature of the consulting engineer or other agent shall be accepted on the application only if accompanied by a letter of authorization.

(f) Permit Fees:

- (1) For every application for a new or revised permit under this Section, a nonrefundable application processing fee in the amount stated in Subparagraph (f)(2) of this Paragraph shall be submitted at the time of application.
 - (A) Each permit application is incomplete until the application processing fee is received;
 - (B) No processing fee shall be charged for modifications of permits when initiated by the Director;
 - (C) A processing fee of forty dollars (\$40.00) shall be charged for name changes;
 - (D) No processing fee shall be required for name changes associated with the initial transfer of property from the developer to property owner or responsible party. Any subsequent changes in ownership shall be subject to the name change processing fee in Part (C) of this Paragraph.
- (2) Schedule of Fees

Permit Application Processing Fee

	New Applications/ Modifications/ Rate Renewal	Timely Renewals Without Modifications
Low Density	\$225	N/A
High Density	385	225
Other	225	N/A
Director's Certification	350	N/A
General Permits	50	N/A

(g) Supporting Documents and Information. This Paragraph outlines those supporting documents and information that must be submitted with stormwater applications. Additional information may also be applicable or required. The applicant shall attempt to submit all necessary information to describe the site, development and stormwater management practices proposed. The following documents and information shall be submitted with stormwater applications:

- (1) two sets of detailed plans and specifications for the project;

- (2) plans and specifications must be dated and sealed as outlined in Rule .1008(j) of this Section and show the revision number and date;
- (3) general location map showing orientation of the project with relation to at least two references (numbered roads, named streams/rivers, etc.) and showing the receiving water (a USGS map preferable);
- (4) topographic map(s) of the project area showing original and proposed contours and drainage patterns;
- (5) delineation of relevant boundaries including drainage areas, seasonal high water table, wetlands, property/project boundaries and drainage easements;
- (6) existing and proposed built-upon area including roads, parking areas, buildings, etc.;
- (7) technical information showing all final numbers, calculations, assumptions, drawing and procedures associated with the stormwater management measures including but not limited to: built-upon area, runoff coefficients, runoff volume, runoff depth, flow routing, inlet and outlet configuration (where applicable), other applicable information as specified;
- (8) operation and maintenance plan signed by responsible party;
- (9) recorded deed restriction and protective covenants. As an alternative proposed deed restriction and protective covenants and a signed agreement to provide final recorded articles shall be accepted when final documents are not available at the time of submittal.

(h) Permit Issuance and Compliance: Stormwater management permits shall be issued in a manner consistent with the following:

- (1) Stormwater management permits issued for low density projects shall not require permit renewal.
- (2) Stormwater management permits issued for projects that require the construction of engineered stormwater control measures shall be issued for a period of time not to exceed 10 years. Applications for permit renewals shall be submitted 180 days prior to the expiration of a permit and must be accompanied by the processing fee described in Paragraph (f) of this Rule.
- (3) Stormwater management permits shall be issued to the developer or owner and shall cover the entire master plan of the project ("stormwater master plan permit"). The master plan permit shall include specifications for stormwater management measures associated with each individual lot or property within the project.
- (4) Any individual or entity found to be in noncompliance with the provisions of a stormwater management permit or the requirements of this Section is subject to enforcement procedures as set forth in G.S. 143, Article 21.

History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1(d); 143-215.3(a)(1);
Eff. January 1, 1988;
Amended Eff. December 1, 1995; September 1, 1995.

15A NCAC 02H .1004 STATEWIDE STORMWATER GUIDELINES

History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.3(a)(1); 143-215.8A;
Eff. January 1, 1988;
Repealed Eff. September 1, 1995.

15A NCAC 02H .1005 STORMWATER REQUIREMENTS: COASTAL COUNTIES

(a) Requirements for Certain Nonresidential and Residential Development in the Coastal Counties. All nonresidential development activities that occur within the Coastal Counties that will add more than 10,000 square feet of built upon area or that require a Sedimentation and Erosion Control Plan, pursuant to G.S. 113A-57 or a CAMA Major Development Permit, pursuant to G.S. 113A-118 and all residential development activities within the Coastal Counties that require a Sedimentation and Erosion Control Plan, pursuant to G.S. 113A-57 or a CAMA Major Development Permit, pursuant to G.S. 113A-118 shall manage stormwater runoff as provided in Items (1), (2), and (3) below. A development activity or project requires a Sedimentation and Erosion Control Plan if the activity or project disturbs one acre or more of land, including an activity or project that disturbs less than one acre of land that is part of a larger common plan of development. Whether an activity or project that disturbs less than one acre of land is part of a larger

common plan of development shall be determined in a manner consistent with the memorandum referenced as "Guidance Interpreting Phase 2 Stormwater Requirements" from the Director of the DWQ of the DENR to Interested Parties dated 24 July 2006.

- (1) Development Near Outstanding Resource Waters (ORW). Development activities within the Coastal Counties and located within 575 feet of the mean high waterline of areas designated by the Commission as Outstanding Resource Waters (ORW) shall meet the requirements of Rule .1007 of the Section and shall be permitted as follows:

- (A) Low Density Option. Development shall be permitted pursuant to Rule .1003(d)(1) of this Section if the development meets all of the following requirements:
- (i) The development has a built upon area of 12 percent or less. A development project with an overall density at or below the low density threshold, but containing areas with a density greater than the overall project density, shall be considered low density as long as the project meets or exceeds the requirements for low density development and locates the higher density development in upland areas and away from surface waters and drainageways to the maximum extent practicable.
 - (ii) Stormwater runoff from the development is transported primarily by vegetated conveyances. The conveyance system shall not include a stormwater collection system as defined in Rule .1002 of this Section.
 - (iii) The development contains a vegetative buffer in accordance with Paragraph (e) of this Rule.
- (B) High Density Option. Development shall be permitted pursuant to Rule .1003(d)(2) of this Section if the development meets all of the following requirements:
- (i) The development has a built upon area of greater than 12 percent.
 - (ii) The development has no direct outlet channels or pipes to Class SA waters unless permitted in accordance with 15A NCAC 02H .0126.
 - (iii) The development utilizes control systems that are any combination of infiltration systems, bioretention systems, constructed stormwater wetlands, sand filters, rain barrels, cisterns, rain gardens or alternative low impact development (LID) stormwater management systems designed in accordance with Rule .1008 of this Section to control and treat the greater of, runoff from all surfaces generated by one and one-half inches of rainfall, or the difference in the stormwater runoff from all surfaces from the predevelopment and postdevelopment conditions for a one-year, 24-hour storm. Wet detention ponds may be used as a stormwater control system to meet the requirements of this Subparagraph (1)(B)(iii), provided that the stormwater control system fully complies with the requirements of Subparagraph (1)(B). If a wet detention pond is used within one-half mile of Class SA waters, installation of a stormwater best management practice in series with the wet detention pond shall be required to treat the discharge from the wet detention pond. Alternatives as described in Rule .1008(h) of this Section may also be approved if they meet the requirements of Subparagraph (1)(B).
 - (iv) Stormwater runoff from the development that is in excess of the design volume must flow overland through a vegetative filter designed in accordance with Rule .1008 of this Section with a minimum length of 50 feet measured from mean high water of Class SA waters.
 - (v) The development contains a vegetative buffer in accordance with Paragraph (e) of this Rule.
- (C) Stormwater Discharges Prohibited. All development activities, including both low and high density projects, shall prohibit new points of stormwater discharge to Class SA waters or an increase in the volume of stormwater flow through conveyances or increase in capacity of conveyances of existing stormwater conveyance systems that drain to Class SA waters. Any modification or redesign of a stormwater conveyance system within the contributing drainage basin must not increase the net amount or rate of stormwater discharge through existing outfalls to Class SA waters. The following shall not be considered a direct point of stormwater discharge:
- (i) Infiltration of the stormwater runoff from the design storm as described in Subparagraph (1)(B)(iii).

- (ii) Diffuse flow of stormwater at a non-erosive velocity to a vegetated buffer or other natural area, that is capable of providing effective infiltration of the runoff from the design storm as described in Subparagraph (1)(B)(iii). Notwithstanding the other requirements of this Rule, the infiltration mandated in this Subparagraph (1)(C)(ii) does not require a minimum separation from the seasonal high-water table.
 - (iii) The discharge from a wet detention pond that is treated by a secondary stormwater best management practice, provided that both the wet detention pond and the secondary stormwater best management practice meet the requirements of Subparagraph (1)(C).
 - (D) **Limitation on the Density of Development.** Development shall be limited to a built upon area of 25 percent or less.
 - (2) **Development Near Class SA Waters.** Development activities within one-half mile of and draining to those waters classified by the Commission as Class SA waters or within one-half mile of waters classified by the Commission as Class SA waters and draining to unnamed freshwater tributaries to Class SA waters shall meet the requirements of Subparagraphs (1)(A), (B), and (C). The extent of Class SA waters is limited to those waters that are determined to be at least an intermittent stream based on a site stream determination made in accordance with the procedures that are delineated in the Division's "Identification Methods for the Origin of Intermittent and Perennial Streams" prepared pursuant to Session Law 2001-404.
 - (3) **Other Coastal Development.** Development activities within the Coastal Counties except those areas described in Subparagraphs (1) and (2) of this Paragraph shall meet all of the following requirements:
 - (A) **Low-Density Option.** Development shall be permitted pursuant to Rule .1003(d)(1) of this Section if the development meets all of the following requirements:
 - (i) The development has a built upon area of 24 percent or less. A development project with an overall density at or below the low-density threshold, but containing areas with a density greater than the overall project density, shall be considered low density as long as the project meets or exceeds the requirements for low-density development and locates the higher density in upland areas and away from surface waters and drainageways to the maximum extent practicable.
 - (ii) Stormwater runoff from the development is transported primarily by vegetated conveyances. The conveyance system shall not include a stormwater collection system as defined in Rule .1002 of this Section.
 - (iii) The development contains a vegetative buffer in accordance with Paragraph (e) of this Rule.
 - (B) **High-Density Option.** Higher density developments shall be permitted pursuant to Rule .1003(d)(2) of this Section if the development meets all of the following requirements:
 - (i) The development has a built upon area of greater than 24 percent.
 - (ii) The development uses control systems that are any combination of infiltration systems, wet detention ponds, bioretention systems, constructed stormwater wetlands, sand filters, rain barrels, cisterns, rain gardens or alternative stormwater management systems designed in accordance with Rule .1008 of this Section.
 - (iii) Control systems must be designed to store, control, and treat the stormwater runoff from all surfaces generated by one and one-half inch of rainfall.
 - (iv) The development contains a vegetative buffer in accordance with Paragraph (e) of this Rule.
- (b) **Requirements for Limited Residential Development in Coastal Counties.** For residential development activities within the 20 Coastal Counties that are located within one-half mile and draining to Class SA waters, that have a built upon area greater than 12 percent, that will add more than 10,000 square feet of built upon area, and that does not require a Sedimentation and Erosion Control Plan, pursuant to G.S. 113A-57 or a CAMA Major Development Permit, pursuant to G.S. 113A-118, a one-time, nonrenewable stormwater management permit shall be obtained. The permit shall require recorded restrictions or protective covenants to be recorded on the property in the Office of the Register of Deeds in the county where the property is located prior to the issuance of a certificate of occupancy in order to ensure that the plans and specifications approved in the permit are maintained. Under this permit, stormwater runoff shall be managed using any one or combination of the following practices:
- (1) Install rain cisterns or rain barrels designed to collect all rooftop runoff from the first one and one-half inches of rain. Rain barrels and cisterns shall be installed in such a manner as to facilitate the reuse of

the collected rain water on site and shall be installed in such a manner that any overflow from these devices is directed to a vegetated area in a diffuse flow. Construct all uncovered driveways, uncovered parking areas, uncovered walkways, and uncovered patios out of permeable pavement or other pervious materials.

- (2) Direct rooftop runoff from the first one and one-half inches of rain to an appropriately sized and designed rain garden. Construct all uncovered driveways, uncovered parking areas, uncovered walkways, and uncovered patios out of permeable pavement or other pervious materials.
- (3) Install any other stormwater best management practice that meets the requirements of Rule .1008 of this Section to control and treat the stormwater runoff from all built upon areas of the site from the first one and one-half inches of rain.

(c) Requirements for Structural Stormwater Controls. Structural stormwater controls required under this Rule shall meet all of the following requirements:

- (1) Remove an 85 percent average annual amount of Total Suspended Solids.
- (2) For detention ponds, draw down the treatment volume no faster than 48 hours, but no slower than 120 hours.
- (3) Discharge the storage volume at a rate equal to or less than the predevelopment discharge rate for the one-year, 24-hour storm.
- (4) Meet the General Engineering Design Criteria set forth in Rule .1008(c) of this Section.
- (5) For structural stormwater controls that require separation from the seasonal high water table, a minimum separation of two feet is required. Where a separation of two feet from the seasonal high water table is not practicable, the Division may grant relief from the separation requirement pursuant to the Alternative Design Criteria set out in Rule .1008(h) of this Section. No minimum separation from the seasonal high water table is required for a secondary stormwater best management practice that is used in a series with another stormwater best management practice.

(d) Wetlands. Developments regulated by this Rule that have wetlands inside of, or adjacent to, the development must meet the following requirements:

- (1) Areas defined as Coastal Wetlands under 15A NCAC 07H .0205, as measured landward from the normal high waterline, shall not be included in the overall project area to calculate impervious surface density. Wetlands that are not regulated as coastal wetlands pursuant to 15A NCAC 07H .0205 and that are located landward of the normal high waterline may be included in the overall project area to calculate impervious surface density.
- (2) Stormwater runoff from built upon areas that is directed to flow through any wetlands shall flow into and through these wetlands at a non-erosive velocity.

(e) Vegetative Buffer. Developments permitted under Paragraph (a) shall contain a 50 foot wide vegetative buffer, as defined in Rule .1002(22) of this Section, for new development activities and a 30 foot wide vegetative buffer for redevelopment activities. The width of a buffer is measured horizontally from the normal pool elevation of impounded structures, from the bank of each side of streams or rivers, and from the mean high waterline of tidal waters, perpendicular to the shoreline. The vegetative buffer may be cleared or graded, but must be planted with and maintained in grass or any other vegetative or plant material. Furthermore, stormwater control best management practices (BMPs), or stormwater control structures, with the exception of wet detention ponds, may be located within this vegetative buffer. The Division may, on a case-by-case basis, grant a minor variance from the vegetative buffer requirements of this section pursuant to the procedures set out in 15A NCAC 02B .0233(9)(b). Vegetative buffers and filters required by this section and any other buffers or filters required by State water quality or coastal management rules or local government requirements may be met concurrently and may contain, in whole or in part, coastal, isolated, or 404 jurisdictional wetlands that are located landward of the normal waterline.

(f) Exemptions From Vegetative Buffer Requirements. The following activities are exempt from the vegetative buffer requirements of Paragraph (e) of this Rule:

- (1) Development in urban waterfronts that meets the requirements of 15A NCAC 07H .0209(g),
- (2) Development in a new urban waterfront area that meets the requirements of S.L. 2004-117,
- (3) Those activities listed in 15A NCAC 07H .0209(d)(10)(A) through 15A NCAC 07H .0209(d)(10)(H),
- (4) Development of upland marinas that have received or are required to secure a CAMA Major Development Permit.

(g) Compliance with Other Rules. In addition to the requirements specified in this section, activities regulated under this section must also comply with any requirements of any other applicable law or rule.

(h) Exclusions. The requirements of this Rule shall not apply to any of the following:

- (1) Activities of the North Carolina Department of Transportation that are regulated in accordance with the provisions of the Department's National Pollutant Discharge Elimination System (NPDES) Stormwater Permit.
- (2) Development activities that are conducted pursuant to and consistent with one of the following authorizations, or any timely renewal thereof, shall be regulated by those provisions and requirements of this Rule that were effective at the time of the original issuance of the following authorizations:
 - (A) State Stormwater Permit issued under the provisions of this Rule.
 - (B) Stormwater Certification issued pursuant to Rule .1000 of this Section prior to 1 December 1995.
 - (C) A CAMA Major Development Permit.
 - (D) 401 Certification that contains an approved Stormwater Management Plan.
 - (E) A building permit pursuant to G.S. 153A-357 or G.S. 160A-417.
 - (F) A site-specific development plan as defined by G.S. 153A-344.1(b)(5) and G.S. 160A-385.1(b)(5).
 - (G) A phased development plan approved pursuant to G.S. 153A-344.1 or G.S. 160A-385.1 that shows:
 - (i) For the initial or first phase of development, the type and intensity of use for a specific parcel or parcels, including at a minimum, the boundaries of the project and a subdivision plan that has been approved pursuant to G.S. 153A-330 through G.S. 153A-335 or G.S. 160A-371 through G.S. 160A-376.
 - (ii) For any subsequent phase of development, sufficient detail so that implementation of the requirements of this section to that phase of development would require a material change in that phase of the plan.
 - (H) A vested right to the development pursuant to common law.
- (3) Redevelopment activities that result in no net increase in built upon area and provide stormwater control equal to the previous development.
- (4) Development activities for which a complete Stormwater Permit Application has been accepted by the Division prior to October 1, 2008, shall be regulated by the provisions and requirements of this Rule that were effective at the time that this application was accepted as complete by the Division. For purposes of this Rule, a Stormwater Permit Application is deemed accepted as complete by the Division when the application is assigned a permit number in the Division's Basinwide Information Management System.
- (5) Development activities for which only a minor modification of a State Stormwater Permit is required shall be regulated by the provisions and requirements of this Rule that were effective at the time of the original issuance of the State Stormwater Permit. For purposes of this Rule, a minor modification of a State Stormwater Permit is defined as a modification that does not increase the net area of built upon area within the project site or does not increase the overall size of the stormwater controls that have been previously approved for that development activity.
- (6) Municipalities designated as a National Pollutant Discharge Elimination System (NPDES) Phase 2 municipality located within the 20 Coastal Counties until such time as the NPDES Phase 2 Stormwater Permit expires and is subject to renewal. Upon renewal of the NPDES Phase 2 Stormwater Permits for municipalities located within the 20 Coastal Counties, the Department shall review the permits to determine whether the permits should be amended to include the provisions of this Rule.

History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1; 143-215.3(a);
 Eff. September 1, 1995;
 This Rule is superseded by S.L. 2008-211 Eff. October 1, 2008;
 Amended Eff. March 1, 2013; July 3, 2012.

15A NCAC 02H .1006 STORMWATER REQUIREMENTS: HIGH QUALITY WATERS

All development activities which require a stormwater management permit under Rule .1003 of this Section and are within one mile of and draining to waters classified as High Quality Waters (HQW) shall manage stormwater runoff in accordance with the provisions outlined in this Rule. More stringent stormwater management measures may be required on a case-by-case basis where it is determined that additional measures are required to protect water quality and maintain existing and anticipated uses of these waters.

- (1) All waters classified as WS-I or WS-II (15A NCAC 2B .0212 and .0214) and all waters located in the coastal counties (Rule .1005 of this Section) are excluded from the requirements of this Rule since they already have requirements for stormwater management.
- (2) Low Density Option: Development shall be permitted pursuant to Rule .1003(c)(1) of this Section if the development has:
 - (a) built-upon area of 12 percent or less or proposes single family residential development on lots of one acre or greater;
 - (b) stormwater runoff transported primarily by vegetated conveyances; conveyance system shall not include a discrete stormwater collection system as defined in Rule .1002 of this Section;
 - (c) a 30 foot wide vegetative buffer.
- (3) High Density Option: Higher density developments shall be permitted pursuant to Rule .1003(c)(2) of this Section if stormwater control systems meet the following criteria:
 - (a) control systems must be wet detention ponds or alternative stormwater management systems designed in accordance with Rule .1008 of this Section;
 - (b) control systems must be designed to control runoff from all surfaces generated by one inch of rainfall.

*History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1; 143-215.3(a);
Eff. September 1, 1995;
Amended Eff. December 1, 1995.*

15A NCAC 02H .1007 STORMWATER REQUIREMENTS: OUTSTANDING RESOURCE WATERS

All development activities which require a stormwater management permit under Rule .1003 of this Section and which drain to waters classified as Outstanding Resource Waters (ORW) shall manage stormwater runoff in accordance with the provisions of this Rule. Water quality conditions shall clearly maintain and protect the outstanding resource values of waters classified as Outstanding Resource Waters (ORW). Stormwater management strategies to protect resource values of waters classified as ORW shall be developed on a site specific basis during the proceedings to classify these waters as ORW. The requirements of this Rule serve as the minimum conditions that must be met by development activities. More stringent stormwater management measures may be required on a case-by-case basis where it is determined that additional measures are required to protect water quality and maintain existing and anticipated uses of these waters.

- (1) Freshwater ORWs: Development activities which require a stormwater management permit under Rule .1003 of this Section and which drain to freshwaters classified as ORW shall manage stormwater runoff as follows:
 - (a) Low Density Option: Development shall be permitted pursuant to Rule .1003(d)(1) of this Section if the development has:
 - (i) built-upon area of 12 percent or less or proposes single family residential development on lots of one acre or greater;
 - (ii) stormwater runoff transported primarily by vegetated conveyances; conveyance system shall not include a discrete stormwater collection system as defined in Rule .1002 of this Section; and
 - (iii) a 30 foot wide vegetative buffer.
 - (b) High Density Option: Higher density developments shall be permitted pursuant to Rule .1003(d)(2) of this Section if stormwater control systems meet the following criteria:
 - (i) control systems must be wet detention ponds or alternative stormwater management systems designed in accordance with Rule .1008 of this Section; and
 - (ii) control systems must be designed to control runoff from all surfaces generated by one inch of rainfall.
- (2) Saltwater ORWs: Development activities which require a stormwater management permit under Rule .1003 of this Section and which drain to saltwaters classified as ORW shall manage stormwater runoff as follows:
 - (a) Within 575 feet of the mean high water line of designated ORW areas, development activities shall comply with the low density option as specified in Rule .1005(2)(a) of this Section.
 - (b) Projects draining to saltwaters classified as ORW that impact the Areas of Environmental Concern (AEC), determined pursuant to G.S. 113A-113, shall delineate the ORW AEC on the

project plans and conform to low density requirements as specified in Rule .1005(2)(a) of this Section within the ORW AEC.

- (c) After the Commission has received a request to classify Class SA waters as ORW and given permission to the Director to schedule a public hearing to consider reclassification and until such time as specific stormwater design criteria become effective, only development which meets the requirements of Rule .1003(d)(3)(A), (B) and (C) and Rule .1005(2)(a) of this Section shall be approved within 575 feet of the mean high water line of these waters.

History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1; 143-215.3(a); Eff. September 1, 1995.

15A NCAC 02H .1008 DESIGN OF STORMWATER MANAGEMENT MEASURES

(a) Structural Stormwater Control Options. Stormwater control measures which may be approved pursuant to this Rule and which shall not be considered innovative include:

- (1) Stormwater infiltration systems including infiltration basins/ponds, swales, and vegetative filters;
- (2) Wet detention ponds; and
- (3) Devices approved in accordance with Paragraph (h) of this Rule.

All stormwater management structures are subject to the requirements of Paragraph (c) of this Rule.

(b) Innovative Systems. Innovative measures for controlling stormwater which are not well established through actual experience may be approved on a demonstration basis under the following conditions:

- (1) There is a reasonable expectation that the control measures will be successful;
- (2) The projects are not located near High Quality Waters (HQW);
- (3) Monitoring requirements are included to verify the performance of the control measures; and
- (4) Alternatives are available if the control measures fail and shall be required when the Director determines that the system has failed.

(c) General Engineering Design Criteria For All Projects.

- (1) The size of the system must take into account the runoff at the ultimate built-out potential from all surfaces draining to the system, including any off-site drainage. The storage volume of the system shall be calculated to provide for the most conservative protection using runoff calculation methods described on pages A.1 and A.2 in "Controlling Urban Runoff: A Practical Manual For Planning And Designing Urban BMPs" which is hereby incorporated by reference not including amendments. This document is available through the Metropolitan Washington (D.C.) Council of Governments at a cost of forty dollars (\$40.00). This method is also described in the Division's document "An Overview of Wet Detention Basin Design." Other engineering methods may be approved if these methods are shown to provide for equivalent protection;
- (2) All side slopes being stabilized with vegetative cover shall be no steeper than 3:1 (horizontal to vertical);
- (3) All stormwater management structures shall be located in recorded drainage easements for the purposes of operation and maintenance and shall have recorded access easements to the nearest public right-of-way. These easements shall be granted in favor of the party responsible for operating and maintaining the stormwater management structures;
- (4) Vegetative filters designed in accordance with Paragraph (f) of this Rule are required from the overflow of all infiltration systems and discharge of all stormwater wet detention ponds. These filters shall be at least 30 feet in length, except where a minimum length of 50 feet is required in accordance with Rule .1005(2)(b)(iii) of this Section;
- (5) Stormwater controls shall be designed in accordance with the provisions of this Section. Other designs may be acceptable if these designs are shown by the applicant, to the satisfaction of the Director, to provide equivalent protection;
- (6) In accordance with the Antidegradation Policy as defined in 15A NCAC 2B .0201, additional control measures may be required on a case-by-case basis to maintain and protect, for existing and anticipated uses, waters with quality higher than the standards; and
- (7) Stormwater control measures used for sedimentation and erosion control during the construction phase must be cleaned out and returned to their designed state.

(d) **Infiltration System Requirements.** Infiltration systems may be designed to provide infiltration of the entire design rainfall volume required for a site or a series of successive systems may be utilized. Infiltration may also be used to pretreat runoff prior to disposal in a wet detention ponds. The following are general requirements:

- (1) Infiltration systems shall be a minimum of 30 feet from surface waters and 50 feet from Class SA waters;
- (2) Infiltration systems shall be a minimum distance of 100 feet from water supply wells;
- (3) The bottom of infiltration systems shall be a minimum of two feet above the seasonal high water table;
- (4) Infiltration systems must be designed such that runoff in excess of the design volume by-passes the system and does not flush pollutants through the system;
- (5) Infiltration systems must be designed to completely draw down the design storage volume to the seasonal high water table under seasonal high water conditions within five days and a hydrogeologic evaluation may be required to determine whether the system can draw down in five days;
- (6) Soils must have a minimum hydraulic conductivity of 0.52 inches per hour to be suitable for infiltration;
- (7) Infiltration systems must not be sited on or in fill material, unless approved on a case-by-case basis under Paragraph (h) of this Rule;
- (8) Infiltration systems may be required on a case-by-case basis to have an observation well to provide ready inspection of the system;
- (9) If runoff is directed to infiltration systems during construction of the project, the system must be restored to design specifications after the project is complete and the entire drainage area is stabilized.

(e) **Wet Detention Pond Requirements.** These practices may be used as a primary treatment device or as a secondary device following an infiltration system. Wet detention ponds shall be designed for a specific pollutant removal. Specific requirements for these systems are as follows:

- (1) The design storage volume shall be above the permanent pool;
- (2) The discharge rate from these systems following the one inch rainfall design storm shall be such that the draw down to the permanent pool level occurs within five days, but not in less than two days;
- (3) The design permanent pool level mean depth shall be a minimum of three feet and shall be designed with a surface area sufficient to remove 85 percent of total suspended solids. The design for 85 percent total suspended solids removal shall be based on "Methodology for Analysis of Detention Basins for Control of Urban Runoff Quality" which is hereby incorporated by reference not including subsequent amendments. This document is available from the U.S. Environmental Protection Agency (Document number EPA440/5-87-001) at no cost;
- (4) The inlet structure must be designed to minimize turbulence using baffles or other appropriate design features and shall be located in a manner that avoids short circuiting in the pond;
- (5) Pretreatment of the runoff by the use of vegetative filters may be used to minimize sedimentation and eutrophication of the detention pond;
- (6) Wet detention ponds shall be designed with a forebay to enhance sedimentation at the inlet to the pond;
- (7) The basin side slopes for the storage volume above the permanent pool shall be stabilized with vegetation down to the permanent pool level and shall be designed in accordance with Subparagraph (c)(2) of this Rule;
- (8) The pond shall be designed with side slopes no steeper than 3:1 (horizontal to vertical);
- (9) The pond shall be designed to provide for a vegetative shelf around the perimeter of the basin. This shelf shall be gently sloped (6:1 or flatter) and shall consist of native vegetation;
- (10) The pond shall be designed to account for sufficient sediment storage to allow for the proper operation of the facility between scheduled cleanout periods.

(f) **Vegetative Filter Requirements.** Vegetative filters shall be used as a non-structural method for providing additional infiltration, filtering of pollutants and minimizing stormwater impacts. Requirements for these filters are as follows:

- (1) A distribution device such as a swale shall be used to provide even distribution of runoff across the width of the vegetative filter;
- (2) The slope and length of the vegetative filter shall be designed, constructed and maintained so as to provide a non-erosive velocity of flow through the filter for the 10 year storm and shall have a slope of five percent or less, where practicable; and
- (3) Vegetation in the filter may be natural vegetation, grasses or artificially planted wetland vegetation appropriate for the site characteristics.

(g) Curb Outlet Systems. Projects that meet the low density provisions of Rules .1005 through .1007 of this Section may use curb and gutter with outlets to convey the stormwater to grassed swales or vegetated areas prior to the runoff discharging to vegetative filters or wetlands. Requirements for these curb outlet systems are as follows:

- (1) The curb outlets shall be located such that the swale or vegetated area can carry the peak flow from the 10 year storm and the velocity of the flow shall be non-erosive;
- (2) The longitudinal slope of the swale or vegetated area shall not exceed five percent, where practicable;
- (3) The side slopes of the swale or vegetated area shall be no steeper than 5:1 (horizontal to vertical). Where this is not practical due to physical constraints, devices to slow the rate of runoff and encourage infiltration to reduce pollutant delivery shall be provided;
- (4) The minimum length of the swale or vegetated area shall be 100 feet; and
- (5) In sensitive areas, practices such as check dams, rock or wooden, may be required to increase detention time within the swale or vegetated area.

(h) Alternative Design Criteria. In addition to the control measures outlined in Paragraphs (b), (d), (e), (f) and (g) of this Rule, stormwater management systems consisting of other control options or series of control options may be approved by the Director on a case-by-case basis. This approval shall only be given in cases where the applicant can demonstrate that the Alternative Design Criteria shall provide equal or better stormwater control, equal or better protection of waters of the state, and result in no increased potential for nuisance conditions. The criteria for approval shall be that the stormwater management system shall provide for 85 percent average annual removal of Total Suspended Solids and that the discharge rate from the system meets one of the following:

- (1) the discharge rate following the one-inch design storm shall be such that the runoff volume draws down to the pre-storm design stage within five days, but not less than two days; or
- (2) the post development discharge rate shall be no larger than predevelopment discharge rate for the one year 24 hour storm.

(i) Operation and maintenance plans. Prior to approval of the development by the Division an operation and maintenance plan or manual shall be provided by the developer for stormwater systems, indicating the operation and maintenance actions that shall be taken, specific quantitative criteria used for determining when those actions shall be taken, and who is responsible for those actions. The plan must clearly indicate the steps that shall be taken and who shall be responsible for restoring a stormwater system to design specifications if a failure occurs and must include an acknowledgment by the responsible party. Development must be maintained consistent with the requirements in these plans and the original plans and any modifications to these plans must be approved by the Division.

(j) System Design. Stormwater systems must be designed by an individual who meets any North Carolina occupational licensing requirements for the type of system proposed. Upon completion of construction, the designer for the type of stormwater system installed must certify that the system was inspected during construction, was constructed in substantial conformity with plans and specifications approved by the Division and complies with the requirements of this Section prior to issuance of the certificate of occupancy.

*History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1; 143-215.3(a);
Eff. September 1, 1995.*

15A NCAC 02H .1009 STAFF REVIEW AND PERMIT PREPARATION

(a) The staff of the permitting agency shall conduct a review of plans, specifications and other project data accompanying the application and shall determine if the application and required information are complete. The staff shall acknowledge receipt of a complete application.

(b) If the application is not complete with all required information, the application may be returned to the applicant. The staff shall advise the applicant by mail:

- (1) how the application or accompanying supporting information may be modified to make them acceptable or complete; and
- (2) that the 90 day processing period required in G.S. 143-215.1 begins upon receipt of corrected or complete application with required supporting information.

(c) If an application is accepted and later found to be incomplete, the applicant shall be advised how the application or accompanying supporting information may be modified to make them acceptable or complete, and that if all required information is not submitted within 30 days that the project shall be returned as incomplete.

*History Note: Authority G.S. 143-215.1; 143-215.3(a);
Eff. September 1, 1995.*

15A NCAC 02H .1010 FINAL ACTION ON PERMIT APPLICATIONS TO THE DIVISION

(a) The Director shall take final action on all applications not later than 90 days following receipt of a complete application and with required information. All permits or renewals of permits and decisions denying permits or renewals shall be in writing.

(b) The Director is authorized to:

- (1) issue a permit containing such conditions as are necessary to effectuate the purposes of G.S. 143, Article 21;
- (2) issue permit containing time schedules for achieving compliance with applicable water quality standards and other legally applicable requirements;
- (3) deny a permit application where necessary to effectuate:
 - (A) the purposes of G.S. 143, Article 21;
 - (B) the purposes of G.S. 143-215.67(a);
 - (C) rules on coastal waste treatment, disposal, found in Section .0400 of this Subchapter;
 - (D) rules on "subsurface disposal systems," found in 15A NCAC 18A .1900. Copies of these Rules are available from the Division of Environmental Health, P.O. Box 29535, Raleigh, North Carolina 27626-0535; and
 - (E) rules on groundwater quality standards found in Subchapter 2L of this Chapter.
- (4) hold public meetings when necessary to obtain additional information needed to complete the review of the application. The application will be considered as incomplete until the close of the meeting record.

(c) If a permit is denied, the letter of denial shall state the reason(s) for denial and any reasonable measures which the applicant may take to make the application approvable.

(d) Permits shall be issued or renewed for a period of time deemed reasonable by the Director.

History Note: Authority G.S. 143-215.1; 143-215.3(a);
Eff. September 1, 1995.

15A NCAC 02H .1011 MODIFICATION AND REVOCATION OF PERMITS

Any permit issued by the Division pursuant to these Rules is subject to revocation, or modification upon 60 days notice by the Director in whole or part for good cause including but not limited to:

- (1) violation of any terms or conditions of the permit;
- (2) obtaining a permit by misrepresentation or failure to disclose fully all relevant facts;
- (3) refusal of the permittee to allow authorized employees of the Department of Environment, Health, and Natural Resources upon presentation of credentials:
 - (a) to enter upon permittee's premises on which a system is located in which any records are required to be kept under terms and conditions of the permit;
 - (b) to have access to any copy and records required to be kept under terms and conditions of the permit;
 - (c) to inspect any monitoring equipment or method required in the permit; or
 - (d) to sample any discharge of pollutants;
- (4) failure to pay the annual fee for administering and compliance monitoring.

History Note: Authority G.S. 143-215.1; 143-215.3(a);
Eff. September 1, 1995.

15A NCAC 02H .1012 DELEGATION OF AUTHORITY

For permits issued by the Division, the Director is authorized to delegate any or all of the functions contained in these Rules except the following:

- (1) denial of a permit application;
- (2) revocation of a permit not requested by the permittee; or

- (3) modification of a permit not requested by the permittee.

History Note: Authority G.S. 143-215.3(a);
Eff. September 1, 1995.

15A NCAC 02H .1013 GENERAL PERMITS

- (a) In accordance with the provisions of G.S. 143.215.1(b)(3) and (4), general permits may be developed by the Division and issued by the Director for categories of activities covered in this Section. All activities in the State that received a "Certificate of Coverage" for that category from the Division shall be deemed covered under that general permit. Each of the general permits shall be issued individually under G.S. 143-215.1, using all procedural requirements specified for state permits including application and public notice. Activities covered under general permits, developed in accordance with this Rule, shall be subject to the same standards and limits, management practices, enforcement authorities, and rights and privileges as specified in the general permit. Procedural requirements for application and permit approval, unless specifically designated as applicable to individuals proposed to be covered under the general permits, apply only to the issuance of the general permits. After issuance of the general permit by the Director, activities in the applicable categories may request coverage under the general permit, and the Director or his designee shall grant appropriate certification. General permits may be written to regulate categories of other activities that all: involve the same or substantially similar operations; have similar characteristics; require the same limitations or operating conditions; require the same or similar monitoring; and in the opinion of the Director are more appropriately controlled by a general permit.
- (b) No provision in any general permit issued under this Rule shall be interpreted to allow the permittee to violate state water quality standards or other applicable environmental standards.
- (c) For a general permit to apply to an activity, a Notice of Intent to be covered by the general permit must be submitted to the Division using forms provided by the Division and, as appropriate, following the application procedures specified in this Section. If all requirements are met, coverage under the general permit may be granted. If all requirements are not met, a long form application and full application review procedure shall be required.
- (d) General permits may be modified and reissued by the Division as necessary. Activities covered by general permits need not submit new Notices of Intent or renewal requests unless so directed by the Division. If the Division chooses not to renew a general permit, all facilities covered under that general permit shall be notified to submit applications for individual permits.
- (e) All previous state water quality permits issued to a facility which can be covered by a general permit, whether for construction or operation, are revoked upon request of the permittee, termination of the individual permit and issuance of the Certification of Coverage.
- (f) Anyone engaged in activities covered by the general permit rules but not permitted in accordance with this Section shall be considered in violation in G.S. 143-215.1.
- (g) Any individual covered or considering coverage under a general permit may choose to pursue an individual permit for any activity covered by this Section.
- (h) The Director may require any person, otherwise eligible for coverage under a general permit, to apply for an individual permit by notifying that person that an application is required. Notification shall consist of a written description of the reason(s) for the decision, appropriate permit application forms and application instructions, a statement establishing the required date for submission of the application, and a statement informing the person that coverage by the general permit shall automatically terminate upon issuance of the individual permit. Reasons for requiring application for an individual permit may be:
- (1) the activity is a significant contributor of pollutants;
 - (2) conditions at the permitted site change, altering the constituents or characteristics of the site such that the activity no longer qualifies for coverage under a general permit;
 - (3) noncompliance with the general permit;
 - (4) noncompliance with Commission Rules;
 - (5) a change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the activity; or
 - (6) a determination that the water of the stream receiving stormwater runoff from the site is not meeting applicable water quality standards.
- (i) Any interested person may petition the Director to take an action under Paragraph (h) of this Rule to require an individual permit.

(j) General permits may be modified, terminated, or revoked and reissued in accordance with the authority and requirements of Rules .1010 and .1011 of this Section.

History Note: Authority G.S. 143-215.1; 143-215.3(a);
Eff. September 1, 1995.

15A NCAC 02H .1014-.1019 RESERVED FOR FUTURE CODIFICATION

15A NCAC 02H .1014 STORMWATER MANAGEMENT FOR URBANIZING AREAS

(a) Stormwater discharges subject to National Pollutant Discharge Elimination System (NPDES) permitting are addressed in Section .0100 entitled "Point Source Discharges to the Surface Waters," which incorporates, supplements and elaborates on the federal rules for stormwater NPDES discharges.

(b) Other stormwater control requirements are addressed in this Section but may also be addressed in sections dedicated to particular water classifications or circumstances. Projects located in urbanizing areas, which are not subject to NPDES permitting, must obtain permits in accordance with Rules .1014 through .1017 of this Section. For post-construction requirements, a program will be deemed compliant for the areas that satisfy Rule .1017(a)(9) of this Section.

History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1; 143-215.3(a)(1);
Eff. July 3, 2012.

15A NCAC 02H .1015 URBANIZING AREA DEFINITIONS

The definition of any word or phrase for Urbanizing Areas shall be as follows:

- (1) The definitions set out in 40 Code of Federal Regulations § 122.2 and § 122.26(b) (1 July 2003 Edition).
- (2) The definitions set out in G.S. 143-212 and G.S. 143-213.
- (3) The definitions set out in 15A NCAC 02H .0103.
- (4) The definitions set out in Rule .1002 of this Section, except for the definitions of "Development" and "Redevelopment", which are defined below.
- (5) "One-year, 24-hour storm" means a rainfall of an intensity expected to be equaled or exceeded, on average, once in 12 months and with a duration of 24 hours.
- (6) "BMP" means Best Management Practice.
- (7) "Development" means any land-disturbing activity that increases the amount of built-upon area or that otherwise decreases the infiltration of precipitation into the soil.
- (8) "Division" means the Division of Water Quality in the Department.
- (9) "Planning jurisdiction" means the territorial jurisdiction within which a municipality exercises the powers authorized by G.S. 160A-19, or a county may exercise the powers authorized by G.S. 153A-18.
- (10) "Public entity" means the United States; the State; a city, village, township, county, school district, public college or university, or single-purpose governmental agency; or any other governing body that is created by federal or State law.
- (11) "Redevelopment" means any land-disturbing activity that does not result in a net increase in built-upon area and that provides greater or equal stormwater control than the previous development.
- (12) "Regulated entity" means any public entity that must obtain a Phase II National Pollutant Discharge Elimination System (NPDES) permit for stormwater management for its municipal separate storm sewer system (MS4).
- (13) "Sensitive receiving waters" means any of the following:
- (14) Waters that are classified as high quality, outstanding resource, shellfish, trout, or nutrient-sensitive waters in accordance with subsections (d) and (e) of 15A NCAC 02B .0101.
- (15) Waters that are occupied by or designated as critical habitat for aquatic animal species that are listed as threatened or endangered by the United States Fish and Wildlife Service or the National Marine Fisheries Service under the provisions of the Endangered Species Act of 1973 (Pub. L. No. 93-205; 87 Stat. 884; 16 U.S.C. §§ 1531, et seq.), as amended.
- (16) Waters for which the designated use, as described by the classification system set out in subsections (c), (d), and (e) of 15A NCAC 02B .0101, have been determined to be impaired in accordance with the requirements of subsection (d) of 33 U.S.C. § 1313.
- (17) "Significant contributor of pollutants" means a municipal separate storm sewer system (MS4) or a discharge that contributes to the pollutant loading of a water body or that destabilizes the physical

structure of a water body such that the contribution to pollutant loading or the destabilization may reasonably be expected to adversely affect the quality and uses of the water body. Uses of a water body shall be determined pursuant to 15A NCAC 02B .0211 through 15A NCAC 02B .0222 and 15A NCAC 02B .0300, et seq.

- (18) "Total maximum daily load (TMDL) implementation plan" means a written, quantitative plan and analysis for attaining and maintaining water quality standards in all seasons for a specific water body and pollutant.

History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1; 143-215.3(a)(1);
Eff. July 3, 2012.

15A NCAC 02H .1016 DEVELOPMENT IN URBANIZING AREAS

(a) Development in Unincorporated Areas of Counties.

- (1) Development that cumulatively disturbs one acre or more of land located in the unincorporated area of a county shall comply with the standards set forth in Rule .1018 of this Section beginning 1 July 2007 if the development is located in:

- (A) An area that is designated as an urbanized area under the most recent federal decennial census.
- (B) The unincorporated area of a county outside of a municipality designated as an urbanized area under the most recent federal decennial census that extends:
- (i) One mile beyond the corporate limits of a municipality with a population of less than 10,000 individuals.
 - (ii) Two miles beyond the corporate limits of a municipality with a population of 10,000 or more individuals but less than 25,000 individuals.
 - (iii) Three miles beyond the corporate limits of a municipality with a population of 25,000 or more individuals.
- (C) An area delineated pursuant to Item (2) of this Paragraph.
- (D) A county that contains an area that is designated as an urbanized area under the most recent federal decennial census in which the unduplicated sum of: (i) the area that is designated as an urbanized area under the most recent federal decennial census; (ii) the area described in Subparagraph (1)(B) of this Paragraph; (iii) the area delineated pursuant to Item (2) of this Paragraph; (iv) the jurisdiction of a regulated entity designated pursuant to Paragraph (c) of this Rule; (v) the area that is regulated by a Phase II National Pollutant Discharge Elimination System (NPDES) permit for stormwater management required pursuant to 15A NCAC 02H .0151(b); and (vi) areas in the county that are subject to any of the stormwater management programs administered by the Division equal or exceed 75 percent of the total geographic area of the county. For purposes of this subdivision, the stormwater programs administered by the Division are:
- (i) Water Supply Watershed I (WS-I) – 15A NCAC 02B .0212;
 - (ii) Water Supply Watershed II (WS-II) – 15A NCAC 02B .0214;
 - (iii) Water Supply Watershed III (WS-III) – 15A NCAC 02B .0215;
 - (iv) Water Supply Watershed IV (WS-IV) – 15A NCAC 02B .0216;
 - (v) High Quality Waters (HQW) – Rule .1006 of this Section;
 - (vi) Outstanding Resource Waters (ORW) – Rule .1007 of this Section;
 - (vii) The Coastal Stormwater Program – Rule .1005 of this Section;
 - (viii) The Neuse River Basin Nutrient Sensitive Waters (NSW) Management Strategy – 15A NCAC 02B .0235;
 - (ix) The Tar-Pamlico River Basin Nutrient Sensitive (NSW) Management Strategy – 15A NCAC 02B .0258;
 - (x) The Randleman Lake Water Supply Watershed Nutrient Management Strategy – 15A NCAC 02B .0251; and
 - (xi) Other Environmental Management Commission Nutrient Sensitive Waters (NSW) Classifications – 15A NCAC 02B .0223.
- (E) A county that contains an area that is designated as an urbanized area under the 1990 or 2000 federal decennial census and that has an actual population growth rate that exceeded the State population growth rate for the period 1995 through 2004.

- (2) **Delineation Process.** The Commission shall delineate regulated coverage areas as follows:
- (A) **Schedule:** The Commission shall implement the delineation process in accordance with the schedule for review and revision of basinwide water quality management plans as provided in G.S. 143-215.8B(c).
 - (B) **Potential candidate coverage areas.** A potential candidate coverage area is the unincorporated area of a county that is outside a municipality designated as a regulated entity pursuant to Items (2) and (3) of Paragraph (c) that:
 - (i) Extends one mile beyond the corporate limits of a municipality with a population of less than 10,000 individuals;
 - (ii) Extends two miles beyond the corporate limits of a municipality with a population of 10,000 or more individuals but less than 25,000 individuals; and
 - (iii) Extends three miles beyond the corporate limits of a municipality with a population of 25,000 or more individuals.
 - (C) **Identification of candidate coverage areas.** The Commission shall identify an area within a potential candidate coverage area described in Subparagraph (2)(B) of this Paragraph as a candidate coverage area if the discharge of stormwater within or from the unincorporated area has the potential to adversely impact water quality. An adverse impact on water quality includes any activity that violates water quality standards, including, but not limited to, any activity that impairs designated uses or that has a significant biological or habitat impact.
 - (D) **Notice and comment on candidacy.** The Commission shall notify each public entity that is located in whole or in part in a candidate coverage area. After notification of each public entity, the Commission shall publish a map of the unincorporated areas within the river basin that have been identified as candidates for delineation as regulated coverage areas. The Commission shall accept public comment on the proposed delineation of a candidate coverage area as a regulated coverage area for a period of not less than 30 days.
 - (E) **Delineation of regulated coverage areas.** After review of public comment, the Commission shall delineate regulated coverage areas. The Commission shall delineate a candidate coverage area as a regulated coverage area only if the Commission determines that the discharge of stormwater within or from the candidate coverage area either:
 - (i) Adversely impacts water quality.
 - (ii) Results in a significant contribution of pollutants to sensitive receiving waters, taking into account the effectiveness of other applicable water quality protection programs. To determine the effectiveness of other applicable water quality protection programs, the Commission shall consider the water quality of the receiving waters and whether the waters support the uses set out in Paragraphs (c), (d), and (e) of 15A NCAC 02B .0101 (Procedures for Assignment of Water Quality Standards – General Procedures) and the specific classification of the waters set out in 15A NCAC 02B .0300, et seq. (Assignment of Stream Classifications).
 - (F) **Notice of delineation.** The Commission shall provide written notice to each public entity that is located in whole or in part in a candidate coverage area of its delineation determination. The notice shall state the basis for the determination.
- (3) Except as provided in this Item (3) of this Paragraph and Paragraph (d) of this Rule, the Commission shall administer and enforce the standards for development in the regulated coverage areas. To the extent authorized by law, where the development is located in a municipal planning jurisdiction, the municipality shall administer and enforce the standards. A public entity may request that the Commission delegate administration and enforcement of the stormwater management program to the public entity as provided in Paragraph (d) of this Rule.
- (b) **Development in Non-Phase II Incorporated Areas in Certain Counties.** Development that cumulatively disturbs one acre or more of land located in the incorporated areas of a county described in Subparagraphs (2)(D) and (E) of Paragraph (a), that are not designated as an urbanized area under the most recent federal decennial census, shall comply with the standards set forth in Rule .1018 of this Section beginning 1 July 2007. The Commission shall administer and enforce the standards for development unless the public entity requests that the Commission delegate administration and enforcement of the stormwater management program to the public entity as provided in Paragraph (d) of this Rule.
- (c) **Designation of Regulated Entities.** A public entity that owns or operates a municipal separate storm sewer system (MS4) may be designated as a regulated entity through federal designation, through a State designation process, or under a total maximum daily load (TMDL) implementation plan as provided in this section.

- (1) Federal designation. A public entity that owns or operates a municipal separate storm sewer system (MS4) may be designated as a regulated entity pursuant to 40 Code of Federal Regulations § 122.32 (1 July 2003 Edition).
- (2) State designation process. The Commission shall designate a public entity that owns or operates a municipal separate storm sewer system (MS4) as a regulated entity as follows:
 - (A) Designation schedule. The Commission shall implement the designation process in accordance with the schedule for review and revision of basinwide water quality management plans as provided in G.S. 143-215.8B(c).
 - (B) Identification of candidate regulated entities. The Commission shall identify a public entity as a candidate for designation as a regulated entity if the municipal separate storm sewer system (MS4) either:
 - (i) Discharges stormwater that has the potential to adversely impact water quality. An adverse impact on water quality includes any activity that causes or contributes to a violation of water quality standards, including, but not limited to, any activity that impairs designated uses or that has a significant biological or habitat impact.
 - (ii) Serves a public entity that has not been designated pursuant to Item (1) of this Paragraph and that has either a population of more than 10,000 or more than 4,000 housing units and either a population density of 1,000 people per square mile or more or more than 400 housing units per square mile.
 - (C) Notice and comment on candidacy. The Commission shall notify each public entity identified as a candidate for designation as a regulated entity. After notification of each public entity, the Commission shall publish a list of all public entities within a river basin that have been identified as candidates for designation. The Commission shall accept public comment on the proposed designation of a public entity as a regulated entity for a period of not less than 30 days.
 - (D) Designation of regulated entities. After review of the public comment, the Commission shall make a determination on designation for each of the candidate public entities. The Commission shall designate a candidate public entity that owns or operates a municipal separate storm sewer system (MS4) as a regulated public entity only if the Commission determines either that:
 - (i) The public entity has an actual population growth rate that exceeds 1.3 times the State population growth rate for the previous 10 years.
 - (ii) The public entity has a projected population growth rate that exceeds 1.3 times the projected State population growth rate for the next 10 years.
 - (iii) The public entity has an actual population increase that exceeds 15 percent of its previous population for the previous two years.
 - (iv) The municipal separate storm sewer system (MS4) discharges stormwater that adversely impacts water quality.
 - (v) The municipal separate storm sewer system (MS4) discharges stormwater that results in a significant contribution of pollutants to receiving waters, taking into account the effectiveness of other applicable water quality protection programs. To determine the effectiveness of other applicable water quality protection programs, the Commission shall consider the water quality of the receiving waters and whether the waters support the uses set out in Paragraphs (c), (d), and (e) of 15A NCAC 02B .0101 (Procedures for Assignment of Water Quality Standards – General Procedures) and the specific classification of the waters set out in 15A NCAC 02B .0300, et seq. (Assignment of Stream Classifications).
 - (E) Notice of designation. The Commission shall provide written notice to each public entity of its designation determination. For a public entity designated as a regulated entity, the notice shall state the basis for the designation and the date on which an application for a Phase II National Pollutant Discharge Elimination System (NPDES) permit for stormwater management must be submitted to the Commission.
 - (F) Application schedule. A public entity that has been designated as a regulated entity pursuant to this subdivision must submit its application for a Phase II National Pollutant Discharge Elimination System (NPDES) permit for stormwater management within 18 months of the date of notification.

- (3) Designation under a total maximum daily load (TMDL) implementation plan. The Commission shall designate an owner or operator of a small municipal separate storm sewer system (MS4) as a regulated entity if the municipal separate storm sewer system (MS4) is specifically listed by name as a source of pollutants for urban stormwater in a total maximum daily load (TMDL) implementation plan developed in accordance with subsections (d) and (e) of 33 U.S.C. § 1313. The Commission shall provide written notice to each public entity of its designation determination. For a public entity designated as a regulated entity, the notice shall state the basis for the designation and the date on which an application for a Phase II National Pollutant Discharge Elimination System (NPDES) permit for stormwater management must be submitted to the Commission. A public entity that has been designated as a regulated entity pursuant to this subdivision must submit its application for a Phase II National Pollutant Discharge Elimination System (NPDES) permit for stormwater management within 18 months of the date of notification.

(d) Delegation. A public entity that does not administer a Phase II National Pollutant Discharge Elimination System (NPDES) permit for stormwater management throughout the entirety of its planning jurisdiction and whose planning jurisdiction includes a regulated coverage area under Paragraphs (a) and (b) of this Rule may submit a stormwater management program for its regulated coverage area or a portion of its regulated coverage area to the Commission for approval pursuant to G.S. 143-214.7(c). An ordinance or regulation adopted by a public entity shall at least meet and may exceed the minimum requirements of Rule .1018 of this Section. Two or more public entities are authorized to establish a joint program and to enter into any agreements that are necessary for the proper administration and enforcement of the program. The resolution, memorandum of agreement, or other document that establishes any joint program must be duly recorded in the minutes of the governing body of each public entity participating in the program, and a certified copy of each resolution must be filed with the Commission. The Commission shall review each proposed program submitted to it to determine whether the submission is complete. Within 90 days after the receipt of a complete submission, the Commission shall notify the public entity submitting the program that it has been approved, approved with modifications, or disapproved. The Commission shall only approve a program upon determining that its standards equal or exceed those of Rule .1018 of this Section. If the Commission determines that any public entity is failing to administer or enforce an approved stormwater management program, it shall notify the public entity in writing and shall specify the deficiencies of administration and enforcement. If the public entity has not taken corrective action within 30 days of receipt of notification from the Commission, the Commission shall assume administration and enforcement of the program until such time as the public entity indicates its willingness and ability to resume administration and enforcement of the program.

History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1; 143-215.3(a)(1);
Eff. July 3, 2012.

15A NCAC 02H .1017 POST-CONSTRUCTION PRACTICES

(a) Requirements for Post-Construction Practices.

- (1) Permittees, delegated programs, and regulated entities must require stormwater controls for a project that disturbs one acre or more of land, including a project that disturbs less than one acre of land that is part of a larger common plan of development or sale. Whether an activity or project that disturbs less than one acre of land is part of a larger common plan of development shall be determined in a manner consistent with the memorandum referenced as "Guidance Interpreting Phase 2 Stormwater Requirements" from the Director of the DWQ of the DENR to Interested Parties dated 24 July 2006. The stormwater controls shall be appropriate to the project's level of density as follows:
- (A) **Low Density Option.** A project that is located within any of the coastal counties is a low density project if it meets the low density requirements of Rule .1005 of this Section. A project that is not located within any of the coastal counties is a low density project if it contains no more than 24 percent built-upon area or no more than two dwelling units per acre. Low density projects must use vegetated conveyances to the maximum extent practicable to transport stormwater runoff from the project. On-site stormwater treatment devices such as infiltration areas, bioretention areas, and level spreaders may also be used as added controls for stormwater runoff. A project with an overall density at or below the low density thresholds, but containing areas with a density greater than the overall project density, may be considered low density as long as the project meets or exceeds the requirements of this Subparagraph (1)(A) and locates the higher density development in upland areas and away from surface waters and drainageways to the maximum extent practicable.

- (B) High Density Option. A project that is located within any of the coastal counties is a high density project if it meets the high density requirements of Rule .1005 of this Section. A project that is not located within any of the coastal counties is a high density project if it contains more than 24 percent built-upon area or more than two dwelling units per acre. High density projects must use structural stormwater management systems that will control and treat runoff from the first one inch of rain. The structural stormwater management system must also meet the following design standards:
- (i) Draw down the treatment volume no faster than 48 hours, but no slower than 120 hours.
 - (ii) Discharge the storage volume at a rate equal to or less than the predevelopment discharge rate for the one-year, 24-hour storm.
 - (iii) Remove an 85 percent average annual amount of Total Suspended Solids.
 - (iv) Meet the General Engineering Design Criteria set out in Rule .1008(c) of this Section.
 - (v) Wet detention ponds designed in accordance with the requirements of Item (6) of this Paragraph may be used for projects draining to Class SA waters.
- (2) Permittees, delegated programs, and regulated entities must require built-upon areas to be located at least 30 feet landward of all perennial and intermittent surface waters. For purposes of Paragraph (a), a surface water shall be present if the feature is shown on either the most recent version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). Relief from this requirement may be allowed when surface waters are not present in accordance with the provisions of 15A NCAC 02B .0233(3)(a). In addition, an exception to this requirement may be pursued in accordance with Paragraph (c) of this Rule.
- (3) Permittees, delegated programs, and regulated entities must implement or require a fecal coliform reduction program that controls, to the maximum extent practicable, the sources of fecal coliform. At a minimum, the program shall include the development and implementation of an oversight program to ensure proper operation and maintenance of on-site wastewater treatment systems for domestic wastewater. For municipalities, this program may be coordinated with local county health departments.
- (4) Permittees, delegated programs, and regulated entities must impose or require recorded restrictions and protective covenants to be recorded on the property in the Office of the Register of Deeds in the county where the property is located prior to the issuance of a certificate of occupancy in order to ensure that development activities will maintain the project consistent with approved plans.
- (5) Permittees, delegated programs, and regulated entities must implement or require an operation and maintenance plan that ensures the adequate long-term operation of the structural best management practices (BMP) required by the program. The operation and maintenance plan must require the owner of each structural BMP to submit a maintenance inspection report on each structural BMP annually to the local program.
- (6) For areas draining to Class SA waters, permittees, delegated programs, and regulated entities must:
- (A) Use BMPs that result in the highest degree of fecal coliform die-off and control to the maximum extent practicable sources of fecal coliform while still incorporating the stormwater controls required by the project's density level.
 - (B) Implement a program to control the sources of fecal coliform to the maximum extent practicable, including a pet waste management component, which may be achieved by revising an existing litter ordinance, and an on-site domestic wastewater treatment systems component to ensure proper operation and maintenance of such systems, which may be coordinated with local county health departments.
 - (C) Meet the requirements of Rule .1005(a)(2) of this Section.
- (7) For areas draining to Trout Waters, permittees, delegated programs, and regulated entities must:
- (A) Use BMPs that avoid a sustained increase in the receiving water temperature, while still incorporating the stormwater controls required for the project's density level.
 - (B) Allow on-site stormwater treatment devices such as infiltration areas, bioretention areas, and level spreaders as added controls.

- (8) For areas draining to Nutrient Sensitive Waters, permittees, delegated programs, and regulated entities must:
- (A) Use BMPs that reduce nutrient loading, while still incorporating the stormwater controls required for the project's density level. In areas where the Department has approved a Nutrient Sensitive Water Urban Stormwater Management Program, the provisions of that program fulfill the nutrient loading reduction requirement. Nutrient Sensitive Water Urban Stormwater Management Program requirements are found in 15A NCAC 02B .0200.
 - (B) Implement a nutrient application management program for both inorganic fertilizer and organic nutrients to reduce nutrients entering waters of the State.
- (9) For post-construction requirements, a program will be deemed compliant for the areas where it is implementing any of the following programs:
- (A) Water Supply Watershed I (WS-I) – 15A NCAC 02B .0212;
 - (B) Water Supply Watershed II (WS-II) – 15A NCAC 02B .0214;
 - (C) Water Supply Watershed III (WS-III) – 15A NCAC 02B .0215;
 - (D) Water Supply Watershed IV (WS-IV) – 15A NCAC 02B .0216;
 - (E) Freshwater High Quality Waters (HQW) – Rule .1006 of this Section;
 - (F) Freshwater Outstanding Resource Waters (ORW) – Rule .1007 of this Section;
 - (G) The Neuse River Basin Nutrient Sensitive Waters (NSW) Management Strategy – 15A NCAC 02B .0235;
 - (H) The Tar-Pamlico River Basin Nutrient Sensitive (NSW) Management Strategy – 15A NCAC 02B .0258; or
 - (I) The Randleman Lake Water Supply Watershed Nutrient Management Strategy – 15A NCAC 02B .0251.
- (10) In order to fulfill the post-construction minimum measure program requirement, a permittee, delegated program, or regulated entity may use the Department's model ordinance, design its own post-construction practices based on the Department's guidance on scientific and engineering standards for BMPs, incorporate the post-construction model practices described in this act, or develop its own comprehensive watershed plan that is determined by the Department to meet the post-construction stormwater management measure required by 40 Code of Federal Regulations § 122.34(b)(5) (1 July 2003 Edition).
- (11) Nothing in this Paragraph (a) shall limit, expand, or alter the requirement that a discharge fully comply with all applicable State or federal water quality standards.
- (b) Exclusions from Post-Construction Practices. The post-construction practices required by Paragraph (a) of this act shall not apply to any of the following:
- (1) Development in an area where the requirements of Paragraph (a) of this act are applicable that is conducted pursuant to one of the following authorizations, provided that the authorization was obtained prior to the effective date of the post-construction stormwater control requirements in the area and the authorization is valid, unexpired, unrevoked, and not otherwise terminated:
 - (A) A building permit pursuant to G.S. 153A-357 or G.S. 160A-417;
 - (B) A site-specific development plan as defined by G.S. 153A-344.1(b)(5) and G.S. 160A-385.1(b)(5);
 - (C) A phased development plan approved pursuant to G.S. 153A-344.1 for a project located in the unincorporated area of a county that is subject to the requirements of Paragraph (a), if the Commission is responsible for implementation of the requirements of Paragraph (a), that shows:
 - (i) For the initial or first phase of development, the type and intensity of use for a specific parcel or parcels, including at a minimum, the boundaries of the project and a subdivision plan that has been approved pursuant to G.S. 153A-330 through G.S. 153A-335.
 - (ii) For any subsequent phase of development, sufficient detail so that implementation of the requirements of Paragraph (a) to that phase of development would require a material change in that phase of the plan.
 - (D) A vested right to the development under G.S. 153A-344(b), 153A-344.1, 160A-385(b), or 160A-385.1 issued by a local government that implements Paragraph (a); or
 - (E) A vested right to the development pursuant to common law.
 - (2) Redevelopment as defined in Rule .1015 of this Section.

(c) Exceptions. The Department or an appropriate local authority, pursuant to Article 18 of G.S. 153A or Article 19 of G.S. 160A, may grant exceptions from the 30-foot landward location of built-upon area requirement as well as the deed restrictions and protective covenants requirement as follows:

- (1) An exception may be granted if the application meets all of the following criteria:
 - (A) Unnecessary hardships would result from strict application of the act;
 - (B) The hardships result from conditions that are peculiar to the property, such as the location, size, or topography of the property;
 - (C) The hardships did not result from actions taken by the petitioner; and
 - (D) The requested exception is consistent with the spirit, purpose, and intent of this act; will protect water quality; will secure public safety and welfare; and will preserve substantial justice. Merely proving that the exception would permit a greater profit from the property shall not be considered adequate justification for an exception.
- (2) Notwithstanding Item (1) of this Paragraph, exceptions shall be granted in any of the following instances:
 - (A) When there is a lack of practical alternatives for a road crossing, railroad crossing, bridge, airport facility, or utility crossing as long as it is located, designed, constructed, and maintained to minimize disturbance, provide maximum nutrient removal, protect against erosion and sedimentation, have the least adverse effects on aquatic life and habitat, and protect water quality to the maximum extent practicable through the use of BMPs.
 - (B) When there is a lack of practical alternatives for a stormwater management facility; a stormwater management pond; or a utility, including, but not limited to, water, sewer, or gas construction and maintenance corridor, as long as it is located 15 feet landward of all perennial and intermittent surface waters and as long as it is located, designed, constructed, and maintained to minimize disturbance, provide maximum nutrient removal, protect against erosion and sedimentation, have the least adverse effects on aquatic life and habitat, and protect water quality to the maximum extent practicable through the use of BMPs.
 - (C) A lack of practical alternatives may be shown by demonstrating that, considering the potential for a reduction in size, configuration, or density of the proposed activity and all alternative designs, the basic project purpose cannot be practically accomplished in a manner which would avoid or result in less adverse impact to surface waters.
- (3) Reasonable and appropriate conditions and safeguards may be imposed upon any exception granted.
- (4) Local authorities must document the exception procedure and submit an annual report to the Department on all exception proceedings.
- (5) Appeals of the Department's exception decisions must be filed with the Office of Administrative Hearings, under G.S. 150B-23. Appeals of a local authority's exception decisions must be made to the appropriate Board of Adjustment or other appropriate local governing body, under G.S. 160A-388 or G.S. 153A-345.

History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1; 143-215.3(a)(1);
Eff. July 3, 2012.

15A NCAC 02H .1020 UNIVERSAL STORMWATER MANAGEMENT PROGRAM

(a) Adoption of the Universal Stormwater Management Program (USMP) shall be made at the option of a local government by adopting an ordinance that complies with the requirements of this Rule and the requirements of 15A NCAC 02B .0104(f). The Environmental Management Commission shall approve local ordinances if it determines that the requirements of the local ordinance equal or exceed the provisions of this Rule. A model ordinance for the Universal Stormwater Management Program shall be available from the Division of Water Quality (DWQ). Administration and implementation of the USMP shall be the responsibility of the adopting local government within its jurisdiction. Local governments located within one of the 20 Coastal Counties may elect to have the Division of Water Quality administer and implement the Universal Stormwater Management Program, either whole or in part, within their jurisdiction following their adoption of the program. Adoption of the USMP may not satisfy water quality requirements associated with the protection of threatened or endangered species or those requirements associated with a Total Maximum Daily Load (TMDL). The requirements of the USMP shall supercede and replace all other existing post-construction stormwater requirements within that jurisdiction, as specified in Paragraph (b) of this Rule.

(b) With the exceptions noted in Paragraph (c) of this Rule, the requirements specified in this Rule shall replace the following DWQ stormwater control requirements:

- (1) Water Supply (WS) Watershed II (WS II) (15A NCAC 02B .0214(3)(b)(i));
- (2) WS Watershed II Critical Area (WS II CA) (15A NCAC 02B .0214(3)(b)(ii));
- (3) WS Watershed III (WS III) (15A NCAC 02B .0215(3)(b)(i));
- (4) WS Watershed III Critical Area (WS III CA) (15A NCAC 02B .0215(3)(b)(ii));
- (5) WS Watershed IV (WS IV) (15A NCAC 02B .0216(3)(b)(i));
- (6) WS Watershed IV Critical Area (WS IV CA) (15A NCAC 02B .0216(3)(b)(ii));
- (7) High Quality Waters (HQW) for Freshwaters (15A NCAC 02H .1006);
- (8) High Quality Waters (HQW) for Saltwaters (15A NCAC 02H .1006);
- (9) Outstanding Resource Waters (ORW) for Freshwaters (15A NCAC 02H .1007);
- (10) Outstanding Resource Waters (ORW) for Saltwaters (15A NCAC 02H .1007);
- (11) Shellfishing (SA) (15A NCAC 02H .1005(2));
- (12) Post-Construction Requirements of the Phase 2 Program (S.L. 2006-246);
- (13) Coastal Counties Stormwater Requirements in 15A NCAC 02H .1005(3);
- (14) Stormwater Controls for 401 Certifications under 15A NCAC 02H .0500;
- (15) Catawba Buffer Rules (15A NCAC 02B .0243 and 02B .0244); and
- (16) Urban Stormwater Management Requirements of the Randleman Lake Water Supply Watershed Rules (15A NCAC 02B .0251).

(c) As mandated in 15A NCAC 02H .0506(b)(5) and (c)(5), the Division Director may review and require amendments to proposed stormwater control plans submitted under the provisions of the 401 Certification process in order to ensure that the proposed activity will not violate water quality standards. Adoption of the Universal Stormwater Management Program does not affect the requirements specified in 15A NCAC 02B .0214(3)(b)(i)(I), 02B .0214(3)(b)(ii)(C) and (D), 15A NCAC 02B .0215(3)(b)(i)(I), 02B .0215(3)(b)(ii)(C) and (D), and 15A NCAC 02B .0216(3)(b)(ii)(C) and (D). The Catawba Buffer Rules shall be superceded in those areas where the buffers are contained within the jurisdiction of another stormwater program listed in Paragraph (b) of this Rule and the requirements of that program are replaced by the USMP. For the watershed that drains to Lake James, which is not contained within the jurisdiction of another stormwater program, the Catawba Buffer Rules shall be superceded if the USMP is implemented in the entire area within five miles of the normal pool elevation of Lake James. The implementation of the USMP shall supercede the Urban Stormwater Management Requirements of the Randleman Lake Water Supply Watershed in 15A NCAC 02B .0251, but USMP implementation does not affect the Randleman Lake Water Supply Watershed; Protection and Maintenance of Riparian Areas requirements specified in 15A NCAC 02B .0250.

(d) Coastal Counties Requirements. All development activities located in one of the 20 Coastal Counties that disturb 10,000 square feet or more of land, including projects that disturb less than 10,000 square feet of land that are part of a larger common plan of development or sale, shall control the runoff from the first one and one half inch of rainfall to the level specified in Paragraph (f) of this Rule. In addition, all impervious surfaces, except for roads, paths, and water dependent structures, shall be located at least 30 feet landward of all perennial and intermittent surface waters. In addition to the other requirements specified in this Paragraph, all development activities that are located within 575 feet of waters designated by the Environmental Management Commission as shellfishing waters shall be limited to a maximum impervious surface density of 36 percent. Redevelopment activities that meet the provisions of 15A NCAC 02H .1002(14) shall not be required to comply with the requirements of this Paragraph.

(e) Non-Coastal Counties Requirements. All residential development activity that is located in one of the 80 Non-Coastal Counties that disturbs one acre or more of land, including residential development that disturbs less than one acre of land that is part of a larger common plan of development or sale, and all non-residential development activity that is located in one of the 80 Non-Coastal Counties that disturbs $\frac{1}{2}$ acre or more of land, including non-residential development that disturbs less than $\frac{1}{2}$ acre of land that is part of a larger common plan of development or sale, shall control the runoff from the first one inch of rainfall as specified in Paragraph (f) of this Rule. Except as allowed in this Paragraph, no new impervious or partially pervious surfaces, except for roads, paths, and water dependent structures, shall be allowed within the one percent Annual Chance Floodplain as delineated by the North Carolina Floodplain Mapping Program in the Division of Emergency Management. For perennial and intermittent streams that do not have a floodplain delineated by the Floodplain Mapping Program, all development activities subject to this Rule shall be located at least 30 feet landward of all perennial and intermittent surface waters. In addition to the other requirements specified in this Paragraph, all development activities that are located within the area designated by the Environmental Management Commission as a Critical Area of a Water Supply Watershed shall be limited to a maximum impervious surface density of 36 percent. Redevelopment of residential structures within the one percent Annual Chance Floodplain that meets the provisions of 15A NCAC 02H .1002(14) is allowed. Redevelopment of non-residential structures within the one percent Annual Chance Floodplain that meets the provisions of 15A NCAC 02H .1002(14) is allowed provided that less than $\frac{1}{2}$ acre is disturbed during the redevelopment activity. Redevelopment activities outside of the one percent

Annual Chance Floodplain that meet the provisions of 15A NCAC 02H .1002(14) shall not be required to comply with the requirements of this Paragraph.

(f) Structural stormwater controls required under Paragraphs (d) and (e) shall meet the following criteria:

- (1) Remove an 85 percent average annual amount of Total Suspended Solids.
- (2) For detention ponds draw down the treatment volume no faster than 48 hours, but no slower than 120 hours.
- (3) Discharge the storage volume at a rate equal or less than the pre-development discharge rate for the 1-year, 24-hour storm.
- (4) Meet the General Engineering Design Criteria set forth in 15A NCAC 02H .1008(c).

(g) For the purposes of this Rule, a surface water shall be present if the feature is shown on either the most recent complete version of the soil survey map prepared by the Natural Resources Conservation Service of the United States Department of Agriculture or the most recent version of the 1:24,000 scale (7.5 minute) quadrangle topographic maps prepared by the United States Geologic Survey (USGS). Relief from this requirement shall be allowed when surface waters are not present in accordance with the provisions of 15A NCAC 02B .0233 (3)(a).

(h) Local governments that implement the Universal Stormwater Management Program shall require recorded deed restrictions and protective covenants that ensure development activities will maintain the project consistent with approved plans.

(i) Local governments that implement the Universal Stormwater Management Program shall require an operation and maintenance plan that ensures the operation of the structural stormwater control measures required by the program. The operation and maintenance plan shall require the owner of each structural control to submit a maintenance inspection report on each structural stormwater control measure annually to the local program.

(j) In addition to the other measures required in this Rule, all development activities located in one of the 20 Coastal Counties that disturb 10,000 square feet or more of land within ½ mile and draining to SA waters shall:

- (1) Use stormwater control measures that result in fecal coliform die off and that control to the maximum extent practicable sources of fecal coliform while incorporating the requirements specified in Paragraph (f) of this Rule.
- (2) Prohibit new points of stormwater discharge to SA waters or expansion (increase in the volume of stormwater flow through conveyances or increase in capacity of conveyances) of existing stormwater conveyance systems that drain to SA waters. Any modification or redesign of a stormwater conveyance system within the contributing drainage basin must not increase the net amount or rate of stormwater discharge through existing outfalls to SA waters. Diffuse flow of stormwater at a non-erosive velocity to a vegetated buffer or other natural area capable of providing effective infiltration of the runoff from the 1-year, 24-hour storm shall not be considered a direct point of stormwater discharge. Consideration shall be given to soil type, slope, vegetation, and existing hydrology when evaluating infiltration effectiveness.

(k) In addition to the other measures required in this Rule, development activities draining to trout (Tr) waters shall use stormwater control measures that avoid an increase in the receiving water temperature, while still incorporating the requirements specified in Paragraph (f) of this Rule.

(l) The Division, upon determination that a local government is failing to implement or enforce the approved local stormwater program, shall notify the local government in writing of the local program inadequacies. If the local government has not corrected the deficiencies within 90 days of receipt of written notification from the Division, then the Division shall implement and enforce the provisions of this Rule.

(m) Development activities conducted within a jurisdiction where the USMP has been implemented may take credit for the nutrient reductions achieved by utilizing diffuse flow in the one percent Annual Chance Floodplain to comply with the nutrient loading limits specified within NSW Rules where the one percent Annual Chance Floodplain exceeds the 50-foot Riparian Buffers. Development activities occurring where the USMP has been implemented but there is no delineated one percent Annual Chance Floodplain may take credit for the nutrient reductions achieved by utilizing diffuse flow into a vegetated filter strip that exceeds the 50-foot Riparian Buffer by at least 30 feet and has a slope of five degrees, or less.

(n) The following special provisions of the Universal Stormwater Management Program apply only to federal facilities and Department of Defense (DoD) installations. Federal facilities and DoD installations may adopt the Universal Stormwater Management Program within their boundaries by submitting a letter to the Chairman of the Environmental Management Commission that states that the facility in question has adopted controls that comply with the requirements of this Rule and with the requirements of 15A NCAC 02B .0104(f). In lieu of the protective covenants and deed restrictions required in Paragraph (h) of this Rule, federal facilities and DoD installations that choose to adopt the USMP within their boundaries shall incorporate specific restrictions and conditions into base master plans, or other appropriate

instruments, to ensure that development activities regulated under this Rule will be maintained in a manner consistent with the approved plans.

(o) Implementation of this Universal Stormwater Management Program does not affect any other rule or requirement not specifically cited in this Rule.

*History Note: Authority G.S. 143-214.1; 143-214.7; 143-215.1; 143-215.3(a);
Eff. January 1, 2007.*

BLOCK Q PARKING IMPROVEMENTS HOLDEN BEACH, NC



DRAWING INDEX:

CIVIL

- C1 SITE PLAN
- C2 EXISTING CONDITIONS
- C3 GRADING PLAN
- C4 SURFACE AREA MAP
- C5 DETAILS
- C6 DETAILS



PINNACLE ARCHITECTURE
PROFESSIONAL ASSOCIATION

701 EAST BAY STREET, SUITE 307
CHARLESTON, SOUTH CAROLINA 29401
PH: 803.733.1462 FAX: 803.733.3124

COVER
G001

SITE PLAN

BLOCK 0 - PARKING IMPROVEMENTS
TOWN OF HOLDEN BEACH, NC
HOLDEN BEACH, NC

PINNACLE ARCHITECTURE
PROFESSIONAL ASSOCIATION
101 EAST BAY STREET, SUITE 202
CHARLOTTE, NORTH CAROLINA 28202
PHONE: 704.375.3443 FAX: 704.375.3314




DATE: 10/29/23
DRAWN BY: [unintelligible]
PROJECT: [unintelligible]

REVISION SCHEDULE

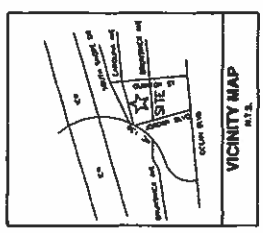
00

NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.



1400 104th STREET, SUITE 400
WILMINGTON, NC 28405
PHONE: 910.343.3617
FAX: 910.343.3617

SCALE: 1" = 20'

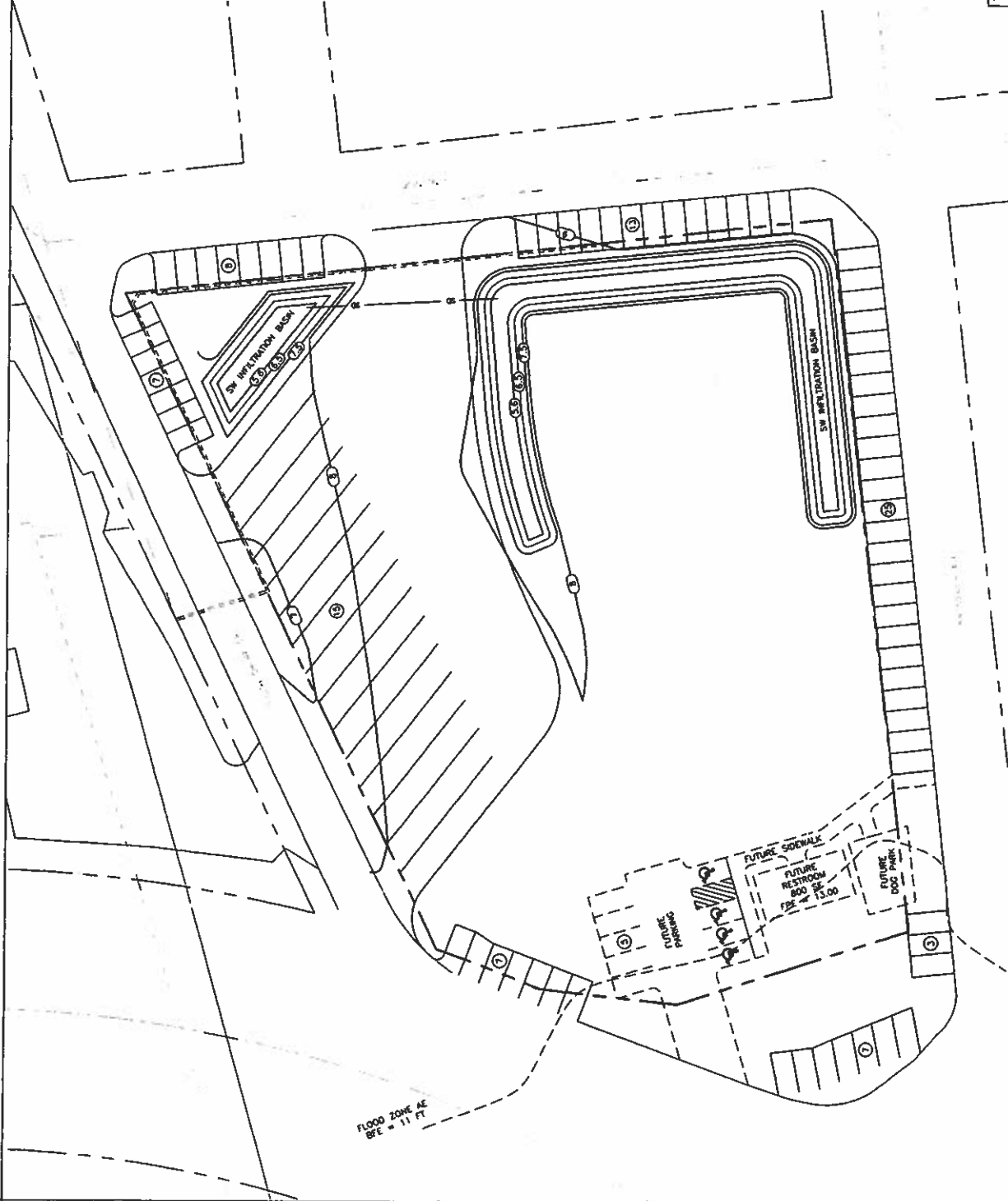


DATE DATA

DATE:	10/29/23
PROJECT:	BLOCK 0 - PARKING IMPROVEMENTS
CLIENT:	TOWN OF HOLDEN BEACH, NC
DESIGNER:	NORRIS & TUNSTALL
SCALE:	1" = 20'

LEGEND

[Symbol]	PROPERTY LINE
[Symbol]	BOUNDARY OF LOT
[Symbol]	EXISTING LOT
[Symbol]	PROPOSED PARKING



REVISION SCHEDULE

C1

EXISTING CONDITIONS
BLOCK Q - PARKING IMPROVEMENTS
TOWN OF HOLDEN BEACH, NC
HOLDEN BEACH, NC

DATE: 04/20/14
DRAWN BY: [unintelligible]
CHECKED BY: [unintelligible]
PROJECT: [unintelligible]



PINNACLE ARCHITECTURE PROFESSIONAL ASSOCIATION
P.O. BOX 187, 140 TEAM ROAD, SUITE 202
MILLSBORO, NORTH CAROLINA 28450
TEL: (754) 887-1871 FAX: (754) 887-1873
101 EAST BAY STREET, SUITE 202
CHARLESTON, SOUTH CAROLINA 29401
TEL: (803) 737-1540 FAX: (803) 737-1534

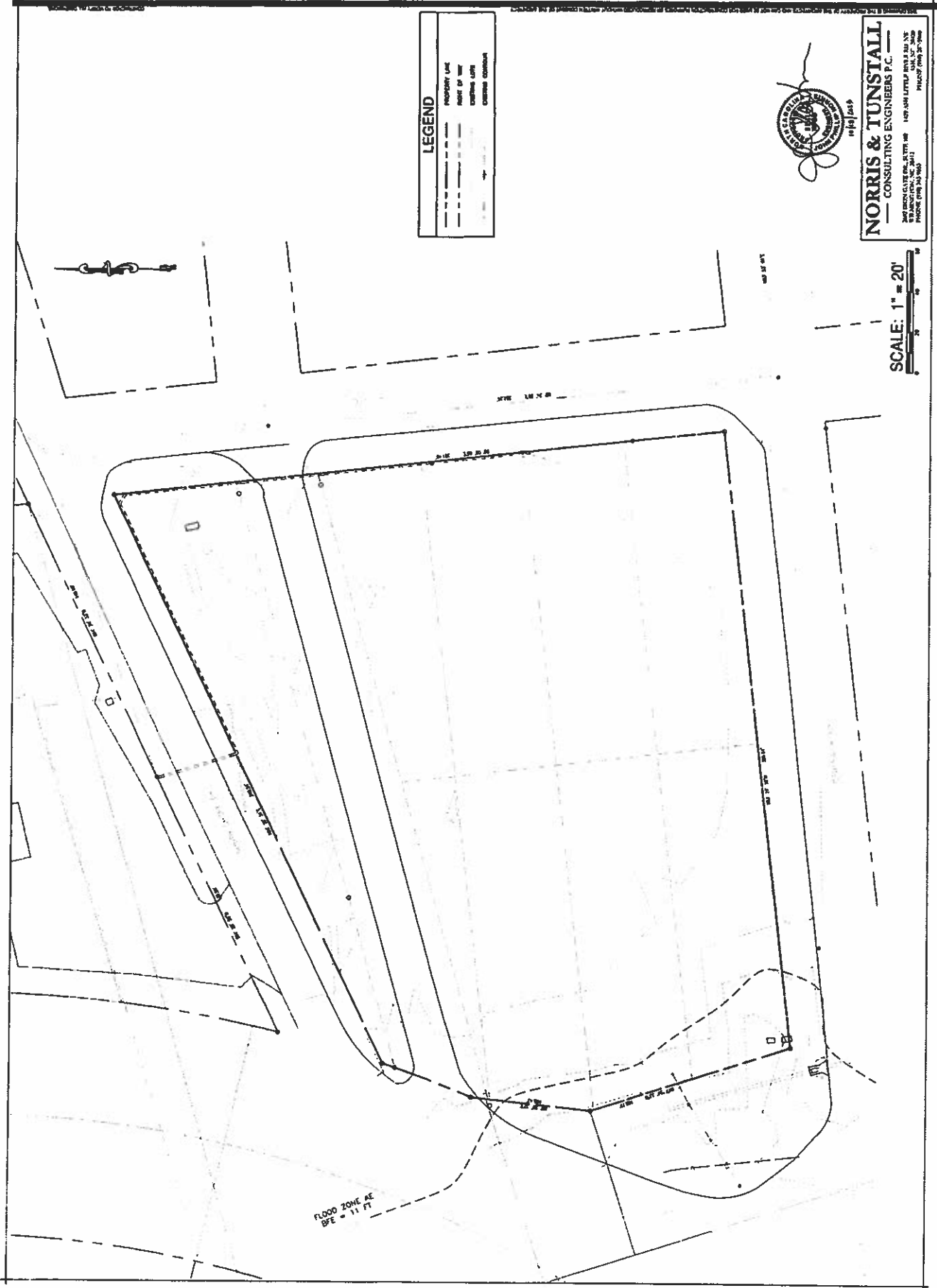
NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.

1010 1/2 ST. N. SUITE 100
WILMINGTON, NC 28401
PHONE: (910) 343-7000
FAX: (910) 343-7001

SCALE: 1" = 20'

LEGEND

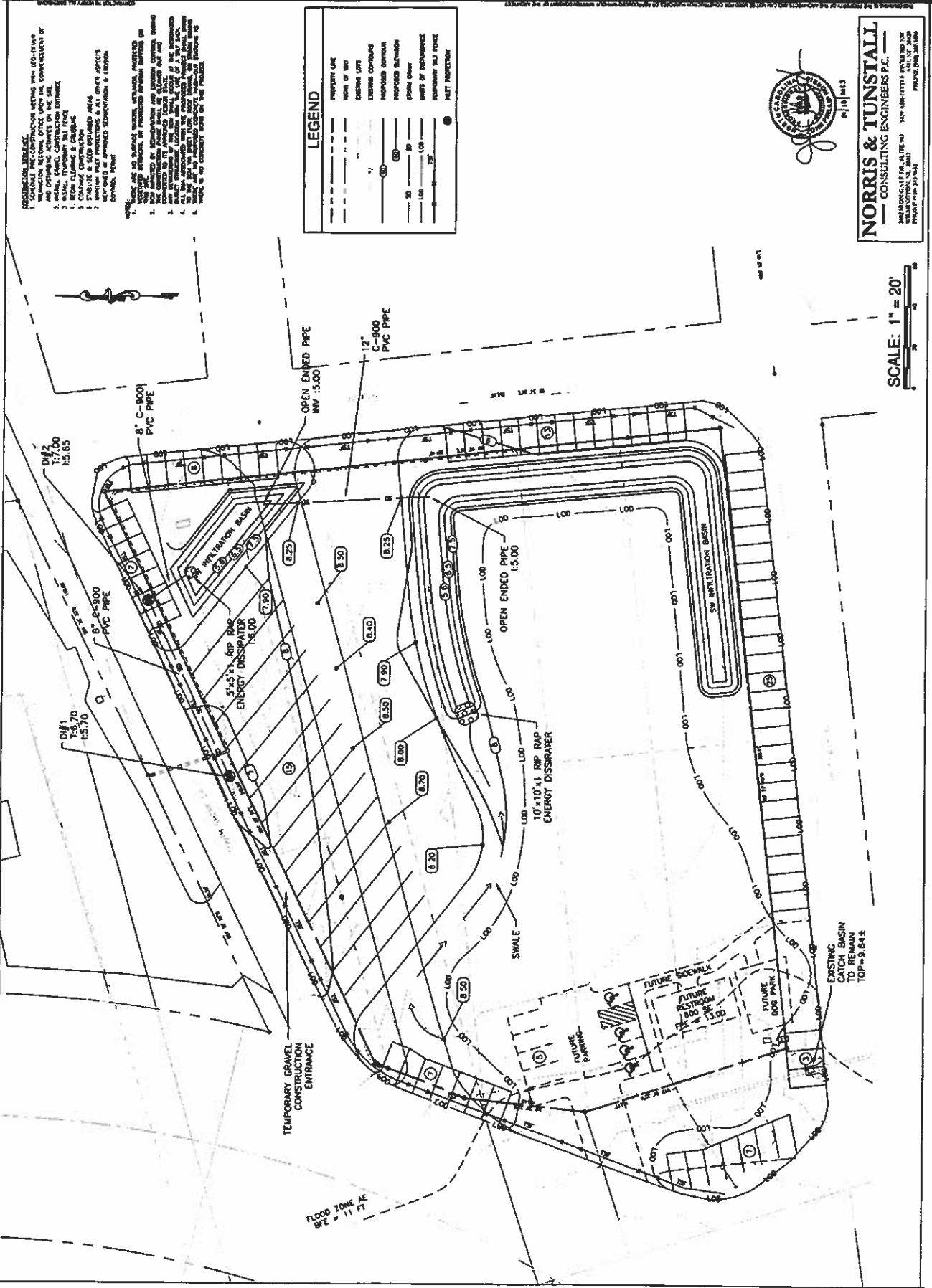
--- (dashed line)	PROPERTY LINE
--- (dotted line)	BOUNDARY LINE
--- (long dashed line)	EXISTING CURB
--- (short dashed line)	EXISTING DRIVE
--- (dash-dot line)	EXISTING SIDEWALK
--- (solid line)	EXISTING DRIVE
--- (solid line)	EXISTING SIDEWALK
--- (solid line)	EXISTING DRIVE
--- (solid line)	EXISTING SIDEWALK
--- (solid line)	EXISTING DRIVE
--- (solid line)	EXISTING SIDEWALK



FLOOD ZONE AE
DFE = 11 FT

NORRIS & TUNSTALL
 CONSULTING ENGINEERS P.C.
 1000 W. 10TH ST., SUITE 300
 WILMINGTON, NC 28401
 PHONE: 910-799-1111
 FAX: 910-799-1112

SCALE: 1" = 20'



LEGEND

PROPERTY LINE	---
BOUNDARY LINE	---
EXISTING CURB	---
PROPOSED CURB	---
PROPOSED ELEVATION	---
SPAWN POINT	---
LEVELS OF INTERFERENCE	---
TRANSITION AND POINT	---
PILET INDICATOR	●

- CONSTRUCTION NOTES:**
1. ALL UTILITIES TO BE MAINTAINED AND PROTECTED BY THE CONTRACTOR.
 2. ALL UTILITIES TO BE MAINTAINED AND PROTECTED BY THE CONTRACTOR.
 3. ALL UTILITIES TO BE MAINTAINED AND PROTECTED BY THE CONTRACTOR.
 4. ALL UTILITIES TO BE MAINTAINED AND PROTECTED BY THE CONTRACTOR.
 5. ALL UTILITIES TO BE MAINTAINED AND PROTECTED BY THE CONTRACTOR.
 6. ALL UTILITIES TO BE MAINTAINED AND PROTECTED BY THE CONTRACTOR.
 7. ALL UTILITIES TO BE MAINTAINED AND PROTECTED BY THE CONTRACTOR.
 8. ALL UTILITIES TO BE MAINTAINED AND PROTECTED BY THE CONTRACTOR.
 9. ALL UTILITIES TO BE MAINTAINED AND PROTECTED BY THE CONTRACTOR.
 10. ALL UTILITIES TO BE MAINTAINED AND PROTECTED BY THE CONTRACTOR.

C2.1

REVISION SCHEDULE

BLOCK 0 - PARKING IMPROVEMENTS
TOWN OF HOLDEN BEACH, NC
DRAINAGE AREA MAP

DATE: 10/19/23
DRAWN BY: [unintelligible]
PROJECT: [unintelligible]



PINNACLE ARCHITECTURE
PROFESSIONAL ASSOCIATION
701 EAST BAY STREET, SUITE 202
CRALESTER, NORTH CAROLINA 28598
TEL: 919.779.5540 FAX: 919.779.5319

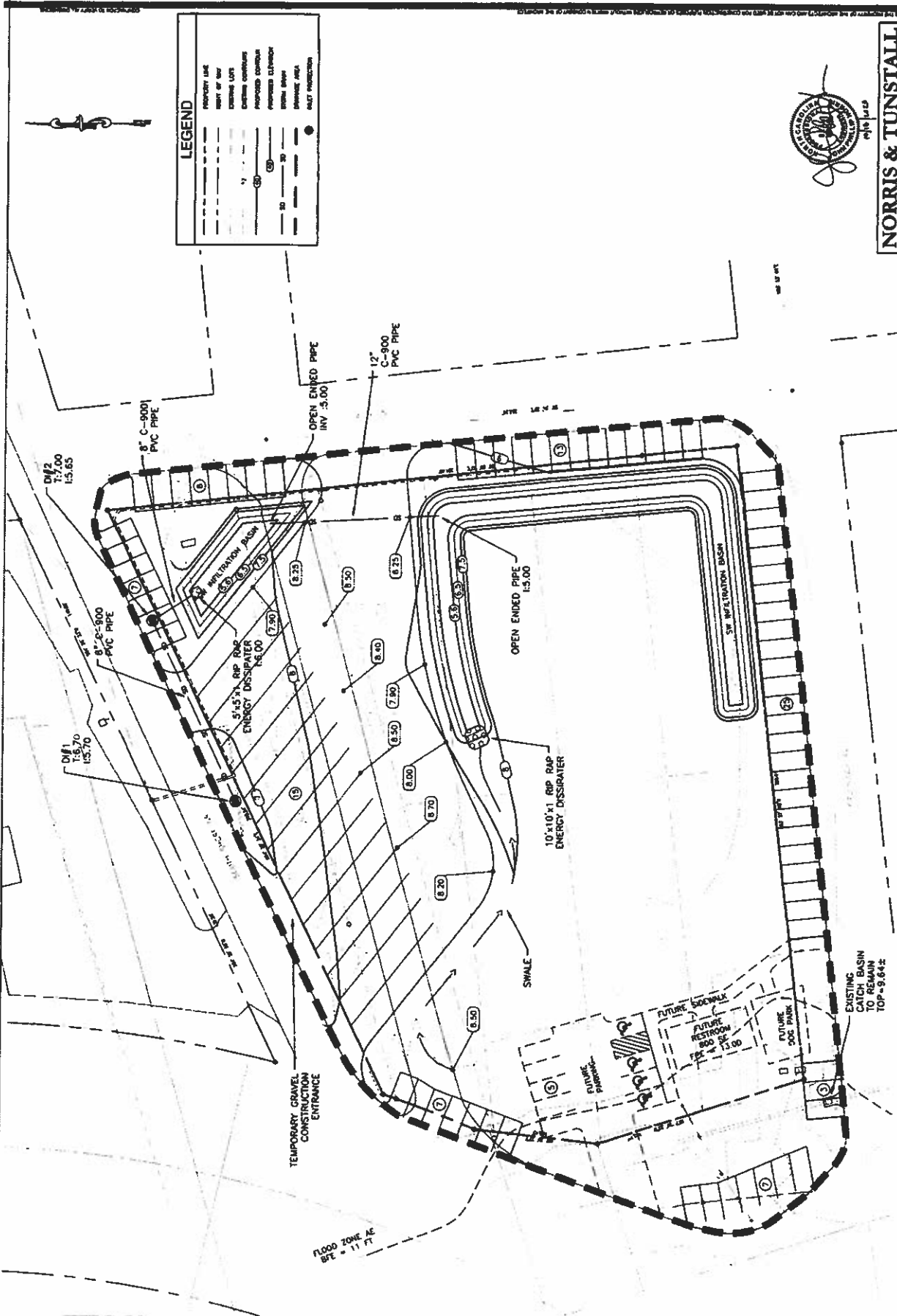
NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.

2400 WILKINSON DRIVE, SUITE 400 | 1030 WILKINSON DRIVE, SUITE 200
WILMINGTON, NC 28401 | WILMINGTON, NC 28401
TEL: 910.342.2200 | FAX: 910.342.2200
WWW.NORRISANDTUNSTALL.COM

SCALE: 1" = 20'

LEGEND

[Symbol]	PROPERTY LINE
[Symbol]	ADJUTANT OF SUR
[Symbol]	EXISTING LOT
[Symbol]	EXISTING CURBLINE
[Symbol]	PROPOSED CURBLINE
[Symbol]	PROPOSED CLEARANCE
[Symbol]	EXISTING DRIVE
[Symbol]	PROPOSED DRIVE
[Symbol]	EXISTING SIDEWALK
[Symbol]	PROPOSED SIDEWALK
[Symbol]	PROPOSED DRIVEWAY



1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION.

TEMPORARY PAVEMENT DAMAGE REPAIRS

1. ALL PAVED AREAS SHALL BE MAINTAINED AT ALL TIMES TO PREVENT DAMAGE TO THE PAVEMENT SURFACE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION.

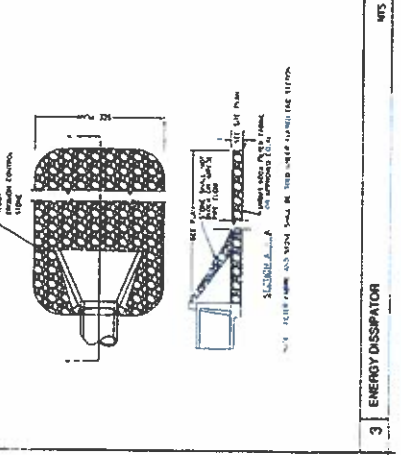
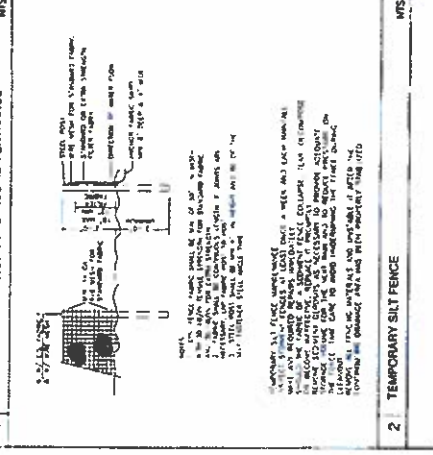
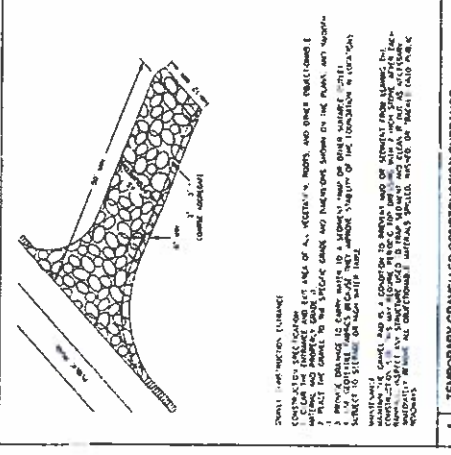
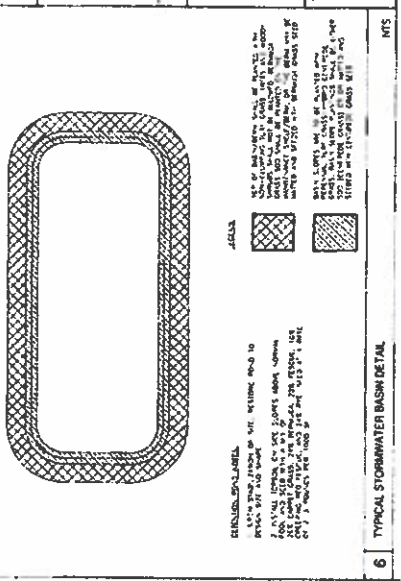
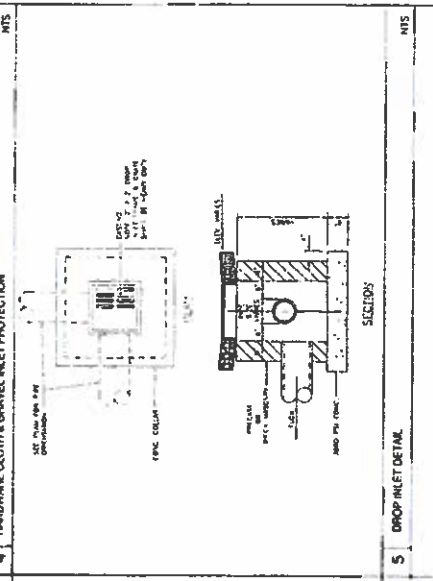
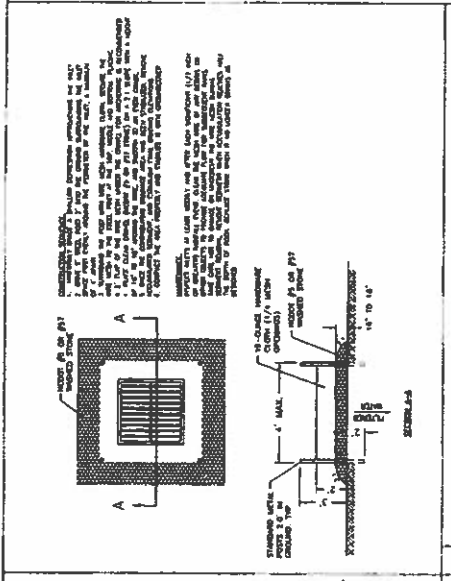
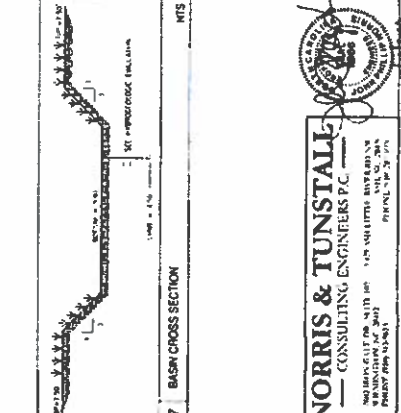
ITEM	DESCRIPTION	QUANTITY	UNIT	PRICE
1	TEMPORARY PAVEMENT DAMAGE REPAIRS			
2	TEMPORARY PAVEMENT DAMAGE REPAIRS			
3	TEMPORARY PAVEMENT DAMAGE REPAIRS			

TEMPORARY PAVEMENT REPAIRS RECOMMENDATIONS FOR SUMMER

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE TOWN OF HOLDEN BEACH AND THE NORTH CAROLINA DEPARTMENT OF TRANSPORTATION AND PUBLIC SAFETY (NCDOT) PRIOR TO THE START OF CONSTRUCTION.



NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
100 WILMINGTON AVENUE
WILMINGTON, NC 28401
PHONE: 704.343.1300



NORRIS & TUNSTALL
CONSULTING ENGINEERS P.C.
200 BANKERS BUILDING, SUITE 400
100 SOUTH BROADWAY
CHARLOTTE, NORTH CAROLINA 28202
TEL: (704) 375-4444 FAX: (704) 375-4433

SECTION B: SELF-INSPECTION, RECORDKEEPING AND REPORTING

1. SELF-INSPECTION

The contractor shall perform a self-inspection of the work shown on the drawings and specifications before the work is completed. The contractor shall submit a self-inspection report to the Engineer at the time of the final payment application. The self-inspection report shall include the following information:

- (a) A list of all work items shown on the drawings and specifications that have been completed.
- (b) A list of all work items shown on the drawings and specifications that have not been completed, and the reason for the delay.
- (c) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the drawings and specifications.
- (d) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the specifications.
- (e) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the contract documents.

2. RECORDKEEPING

The contractor shall maintain accurate and complete records of the work shown on the drawings and specifications. The records shall include the following information:

- (a) A list of all work items shown on the drawings and specifications that have been completed.
- (b) A list of all work items shown on the drawings and specifications that have not been completed, and the reason for the delay.
- (c) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the drawings and specifications.
- (d) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the specifications.
- (e) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the contract documents.

3. REPORTING

The contractor shall submit a report to the Engineer at the time of the final payment application. The report shall include the following information:

- (a) A list of all work items shown on the drawings and specifications that have been completed.
- (b) A list of all work items shown on the drawings and specifications that have not been completed, and the reason for the delay.
- (c) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the drawings and specifications.
- (d) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the specifications.
- (e) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the contract documents.

SECTION C: GROUND STABILIZATION AND MATERIALS HANDLING

1. GENERAL

The contractor shall stabilize the ground and handle the materials in accordance with the drawings and specifications. The contractor shall submit a report to the Engineer at the time of the final payment application. The report shall include the following information:

- (a) A list of all work items shown on the drawings and specifications that have been completed.
- (b) A list of all work items shown on the drawings and specifications that have not been completed, and the reason for the delay.
- (c) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the drawings and specifications.
- (d) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the specifications.
- (e) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the contract documents.

2. MATERIALS HANDLING

The contractor shall handle the materials in accordance with the drawings and specifications. The contractor shall submit a report to the Engineer at the time of the final payment application. The report shall include the following information:

- (a) A list of all work items shown on the drawings and specifications that have been completed.
- (b) A list of all work items shown on the drawings and specifications that have not been completed, and the reason for the delay.
- (c) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the drawings and specifications.
- (d) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the specifications.
- (e) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the contract documents.

3. GROUND STABILIZATION

The contractor shall stabilize the ground in accordance with the drawings and specifications. The contractor shall submit a report to the Engineer at the time of the final payment application. The report shall include the following information:

- (a) A list of all work items shown on the drawings and specifications that have been completed.
- (b) A list of all work items shown on the drawings and specifications that have not been completed, and the reason for the delay.
- (c) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the drawings and specifications.
- (d) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the specifications.
- (e) A list of all work items shown on the drawings and specifications that have been completed, but are not in accordance with the contract documents.

