

# NC COASTAL RESOURCES COMMISSION

February 7-8, 2017

Hilton Double Tree

Atlantic Beach, NC

The State Government Ethics Act mandates that at the beginning of any meeting the Chair remind all the members of their duty to avoid conflicts of interest and inquire as to whether any member knows of any conflict of interest or potential conflict with respect to matters to come before the Commission. If any member knows of a conflict of interest or potential conflict, please state so at this time.

## **Tuesday, February 7<sup>th</sup>**

**3:00 COASTAL RESOURCES ADVISORY COUNCIL MEETING** (Hatteras/Pamlico Rm) Greg “rudi” Rudolph, Chair

**5:00 RECESS**

## **Wednesday, February 8<sup>th</sup>**

**9:00 COMMISSION CALL TO ORDER\*** (Cape Lookout/Cape Fear/Atlantic Rm) Frank Gorham, Chair

- Roll Call
- Chair’s Comments
- Approval of November 30 – December 1, 2016 Meeting Minutes Frank Gorham, Chair
- Executive Secretary’s Report Braxton Davis
- CRAC Report Greg “rudi” Rudolph, Chair

**10:00 VARIANCES**

- Thexton - (*CRC-VR-16-11*), Topsail Beach, Oceanfront setback & repair/replace Debbie Wilson, Christine Goebel, Esq.
- Ennis - (*CRC-VR-16-12*), Topsail Beach, Oceanfront setback & repair/replace Debbie Wilson, Christine Goebel, Esq.

**11:15 ACTION ITEMS**

- Fiscal Analysis Approval –15A NCAC 7H .2200 Free Standing Moorings - Osprey Poles (*CRC-17-01*) Jonathan Howell
- Fiscal Analysis Approval - 15A NCAC 7H .1300 Development Line Procedures - Mean High Water, Easements and Other Lines (*CRC-17-02*) Mike Lopazanski
- Periodic Review of Existing Rules – 7H, 7I, 7J, 7K, 7M (*CRC-17-03*) Mike Lopazanski
- Gates County LUP Certification (*CRC-17-04*) Charlan Owens
- Oak Island LUP Certification (*CRC-17-05*) Mike Christenbury

**11:45 COASTAL RESERVES**

- Research Overview Brandon Puckett

**12:15 PUBLIC INPUT AND COMMENT** Frank Gorham, Chair

**12:30 LUNCH**

**1:30 PUBLIC HEARING**

- 15A NCAC 7L Planning & Management Grants Mike Lopazanski

**1:45 COASTAL PROGRAM IMPLEMENTATION**

- CAMA Permit Application Requirements – Plans, Drawings & Surveys Doug Huggett

**2:30 BEACH AND INLET MANAGEMENT**

- Sediment Criteria – Sampling Methodology (*CRC-16-44*) Jonathan Howell
- Flood Insurance Rate Maps (FIRMs) Work Group Update? Greg “rudi” Rudolph Spencer Rogers



**3:15 COASTAL PLANNING**

- Planning & Management Grant Program Priorities (*CRC-17-06*)
- Hyde County Drainage Project Update

Mike Christenbury  
David Moye

**4:00 OLD/NEW BUSINESS**

- Riggings Annual Report (*CRC-17-07*)
- Commission Discussion

Frank Gorham, Chair  
Mary Lucasse, Esq.

**4:30 ADJOURN**

Executive Order 34 mandates that in transacting Commission business, each person appointed by the governor shall act always in the best interest of the public without regard for his or her financial interests. To this end, each appointee must recuse himself or herself from voting on any matter on which the appointee has a financial interest. Commissioners having a question about a conflict of interest or potential conflict should consult with the Chairman or legal counsel.

*\* Times indicated are only for guidance and will change. The Commission will proceed through the agenda until completed.*



N.C. Division of Coastal Management  
[www.nccoastalmanagement.net](http://www.nccoastalmanagement.net)

Next Meeting: April 26-27, 2017; Manteo



**NC COASTAL RESOURCES COMMISSION (CRC)**

**November 30 – December 1, 2016**

**Hilton DoubleTree  
Atlantic Beach, NC**

**Present CRC Members**

Frank Gorham, Chair  
Renee Cahoon, Vice-Chair  
Neal Andrew, Second Vice-Chair

Larry Baldwin  
Rick Catlin  
Denise Gibbs  
Marc Hairston  
Greg Lewis

Phil Norris  
Russell Rhodes  
Jamin Simmons  
Bill White

**Present CRAC Members**

Rudi Rudolph, Chair  
Spencer Rogers, Co-Vice Chair  
Bobby Outten, Co-Vice Chair  
John Brodman  
Jett Ferebee  
Mike Moore  
David Moyer  
Kris Noble  
Kathleen Riely  
Dave Weaver  
Lee Wynns

**Present from the Office of the Attorney General**

Mary Lucasse

**Present from the Department of Environmental Quality, Office of the General Counsel**

Christine A. Goebel

**CALL TO ORDER/ROLL CALL**

Frank Gorham called the meeting to order reminding the Commissioners of the need to state any conflicts due to Executive Order Number One and also the State Government Ethics Act. The State Government Ethics Act mandates that at the beginning of each meeting the Chair remind all members of their duty to avoid conflicts of interest and inquire as to whether any member knows of any conflict of interest or potential conflict with respect to matters to come before the Commission. If any member knows of a conflict of interest or a potential conflict of interest, please state so when the roll is called.

Angela Willis called the roll. John Snipes was absent. No conflicts were reported. Based upon this roll call Chairman Gorham declared a quorum.



## **VARIANCES**

**Water's Edge Homeowners' Association, Inc. (CRC VR 16-10)**

**Christine Goebel, Assistant General Counsel/Stephen Coggins, Rountree Losee, LLP.**

Jason Dail, DCM Field Representative, gave an overview of the site. Christy Goebel was present and represents staff. Stephen Coggins is present and represents petitioner.

Ms. Goebel stated, Petitioner owns common-area piers which extend from the subdivision property on the Atlantic Intracoastal Waterway (AIWW) in Pender County. The subdivision developer built nine slips on the AIWW in 2004 which extend into the waterbody to the AIWW channel setback and have depths which ranged from -1.91 to -3.92' NGVD '29. In 2008, petitioner started the CAMA permit process seeking to dredge the slips, but halted the process once objections were raised concerning impacts to SAV and SAV habitat by DCM, DWQ, DMF, and WRC. In May 2015, petitioner again sought a CAMA permit in order to dredge SAV and SAV habitat. Water depths at this site now ranged from -0.82' to -3.0 normal low water. After the same resource agencies raised concerns similar to those noted in 2008, DCM denied petitioner's permit application as noted in the denial letter. Petitioner now seeks a variance from the Commission's rules which require dredging avoid significant adverse impacts upon SAV and require navigation channels and boat basins to avoid beds of SAV. Ms. Goebel stated staff and petitioner agree on the third variance factor, but disagree on the other three variance criteria which must be met in order to grant the variance request. Stephen Coggins represented petitioner and reviewed the stipulated facts which he contends supports the granting of the variance request.

**Renee Cahoon made a motion to support Petitioner's position that unnecessary hardships will result from strict application of the rules, standards or orders issued by the Commission. Phil Norris seconded the motion. The motion passed with nine votes in favor (Rhodes, Norris, Catlin, Baldwin, Gorham, White, Hairston, Gibbs, Simmons) and three opposed (Andrew, Cahoon, Lewis).**

**Renee Cahoon made a motion to support Petitioner's position that hardships result from conditions peculiar to the Petitioner's property. Bill White seconded the motion. The motion passed with nine votes in favor (Rhodes, Norris, Catlin, Baldwin, Gorham, White, Hairston, Gibbs, Simmons) and three votes opposed (Andrew, Cahoon, Lewis).**

**Renee Cahoon made a motion that Petitioner has shown that hardships do not result from actions taken by the Petitioner. Russell Rhodes seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin, Baldwin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons, Lewis).**

**Renee Cahoon made a motion to support Petitioner's position that the variance request is consistent with the spirit, purpose and intent of the Commission's rules, standards or orders; will secure the public safety and welfare; and will preserve substantial justice. Larry Baldwin seconded the motion. The motion passed with nine votes in favor (Rhodes, Norris, Catlin, Baldwin, Gorham, White, Hairston, Gibbs, Simmons) and three votes opposed (Andrew, Cahoon, Lewis).**

**Frank Gorham made a motion that the variance and permit issued in conformance with the variance be conditioned to limit dredging so that it does not exceed -3.92 feet NLW based on the information provided in Stipulated Fact No. 30 as to the depth around piers 1-9 in 2003. Rick Catlin seconded the motion. The motion passed with ten votes in favor (Rhodes, Norris,**



**Catlin, Baldwin, Gorham, White, Hairston, Gibbs, Simmons, Lewis) and two opposed (Andrew, Cahoon).**

**Greg Lewis made a motion to require an after-built sealed survey tied to a benchmark. Renee Cahoon seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin, Baldwin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons, Lewis).**

**This variance request was granted.**

#### **ACTION ITEMS**

##### **Public Comments & Adoption 15A NCAC 7H .0306 General Use Standards for Ocean Hazard Areas – Grandfathering Provision (CRC 16-38)**

###### **Tancred Miller**

Tancred Miller stated this rule amendment will allow commercial and multi-family oceanfront structures up to 10,000 square feet to rebuild subject to five conditions. The fiscal analysis found that there was a potential fiscal benefit to these property owners. Comments were accepted for 60 days and a public hearing was held on September 14, 2016. Two individuals spoke at the public hearing and 25 comments were received and are included in the materials for your review. Three comments were in support of the rule amendment and 24 were opposed. These rule amendments would become effective on February 1, 2017.

**Renee Cahoon made a motion to adopt amendments to 15A NCAC 07H .0306. Larry Baldwin seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin, Baldwin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons)(Lewis absent for vote).**

##### **Fiscal Analysis Approval – 15A NCAC 7H .0308, 7H .1704, and 7H .1705 – Temporary Erosion Control Structures (CRC 16-39)**

###### **Tancred Miller**

Tancred Miller stated these amendments came out of legislation directing the CRC to make specific changes to the sandbag rules. The CRC adopted temporary rules, but missed the legislative deadline for the amendments to become effective. DCM brought the sandbag rules back to the CRC with additional changes based on recommendations from the CRAC and other stakeholders. The fiscal analysis found that there is a net benefit to permittees and NCDOT as a result of delaying the removal requirement. The draft analysis has been approved by the Department and we have been working with OSBM to obtain approval. Staff is requesting the CRC's approval of the fiscal analysis subject to final certification by OSBM.

**Phil Norris made a motion to approve the fiscal analysis for 15A NCAC 7H .0308, 7H .1704, and 7H .1705 for public hearing. Renee Cahoon seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin, Baldwin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons)(Lewis absent for vote).**

##### **New Hanover County Comprehensive Land Use Plan Certification (CRC 16-40)**

###### **Mike Christenbury**

Mike Christenbury stated New Hanover is seeking certification of the 2016 New Hanover County Comprehensive Land Use Plan. New Hanover County is located in southeast North Carolina and is home to the City of Wilmington as well as Wrightsville Beach, Carolina Beach, and Kure Beach. New Hanover County has experienced a high level of population growth since 1940 and expects that growth to continue. Currently the County's population is approximately 214,000 and expected



to grow about 57% within the next 25 years. In 2013, the County began the process to update and create a new comprehensive plan for the unincorporated areas of New Hanover County. This plan will replace the 2006 Wilmington/New Hanover County Joint Land Use Plan and is the first plan solely for the unincorporated areas of New Hanover County. The County utilized a large and diverse stakeholder group for citizen input. New Hanover County held a duly advertised public hearing and voted unanimously by resolution to approve the 2016 comprehensive plan. DCM staff has reviewed the plan and has determined that it meets the CRC's 7B guidelines and is consistent with state and federal law and there are no conflicts. DCM staff recommends certification of the 2016 comprehensive plan.

**Neal Andrew made a motion to certify the 2016 New Hanover County Comprehensive Land Use Plan. Russell Rhodes seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin, Baldwin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons)(Lewis absent for vote).**

**Fiscal Analysis Approval – 15A NCAC 7L Planning and Management Grant Program & Local Government Input (CRC 16-41)**

**Rachel Love-Adrick**

Rachel Love-Adrick stated the fiscal analysis has been reviewed and approved by the Department and OSBM. In 2015, the Commission amended the 7B and 7L rules. These amendments focused on separating the land use provisions from the planning and management grant program rules. The next step in the comprehensive review of the land use plan program is an assessment of the grants to local governments for planning related projects. The intent of these amendments is to shift the emphasis of the grants from primarily funding local land use plans to funding projects in support of the goals of CAMA and the management topics as outlined by the land use planning rules, to provide flexibility in the types of projects eligible for funding, and to allow for the designation of priority management topics on an annual basis. The fiscal analysis found no direct impacts to property owners as these amendments affect the procedures for granting funds to local governments, however changes to the types of projects eligible for funding may have an indirect impact on private property owners. No impact was found to NCDOT as they are not eligible for funding under this grant program. Due to budget restrictions from 2008-2015, the Division was unable to make funding available for this grant program. In 2016, we revived the grant program and allocated \$75,000 in federal funds to award five grants. While future funding of the planning and management grant program is dependent upon availability of funds in any given fiscal year, for this analysis we assumed \$75,000 in federal funds would continue to be available and these funds would be spent in support of the Coastal Management program regardless of the rule change. The proposed amendments benefit local governments by modifying the distribution of funds among local governments and aligning the eligible projects with priorities that are relevant to the coastal areas. The Department and OSBM have approved the fiscal analysis. Staff requests approval of additional changes to the rule language to clarify the priorities for funding the projects and for approval to send the fiscal analysis for public hearing.

**Renee Cahoon made a motion to approve the fiscal analysis for the 7L Planning and Management Grant Program. Neal Andrew seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin, Baldwin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons)(Lewis absent for vote).**

**Renee Cahoon made a motion to approve the additional rule amendments to 7L as presented. Russell Rhodes seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin,**



Baldwin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons)(Lewis absent for vote).

### **BEACH AND INLET MANAGEMENT**

#### **Draft USACE and DEQ Dredging MOA**

##### **Greg "Rudi" Rudolph/Todd Roessler, Esq.**

Rudi Rudolph stated we have been working on a deep draft Memorandum of Agreement (MOA) between the local communities, the Corps of Engineers, and the State. We are also preparing a White Paper to explain the goals of the MOA. In summary, the goal of the MOA is to put in place a long-term agreement so if the State has additional funding or local governments have additional funding to augment the Corps' funding, that money can be used to put the sand where it should go. The General Assembly established a deep draft navigation fund two years ago but did not fund it. We are hoping that in the future that they will endow it. This could be a vehicle for funding and allowing us to move forward with the MOA. The White Paper is done and it has been circulated to all the parties. The Port Authority is a stakeholder, but they are not a signee on the MOA.

### **CHAIR COMMENTS**

Chairman Gorham asked Commissioner Catlin to be the CRC's liaison to the General Assembly and assist the CRC to communicate with legislators. Commissioner Catlin agreed to serve in this role.

### **MINUTES**

**Neal Andrew made a motion to approve the minutes of the September Coastal Resources Commission meeting. Phil Norris seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons)(Lewis absent for vote)(Baldwin absent for vote).**

### **EXECUTIVE SECRETARY'S REPORT**

Braxton Davis, DCM Director, gave the following report:

#### **Hurricane Matthew**

I'd like to begin by making a few comments regarding Hurricane Matthew, which impacted the state October 8-10. While our beach communities escaped major damage, extreme flooding was experienced by our inland communities. DCM's District Managers will be providing an overview of the impacts in their areas with the exception of the Morehead City District which fortunately saw little damage. We will also be hearing from Bill Rich, Hyde County Manager and Earl Pugh Jr., Hyde County Commission Chair about the flooding impacts in Hyde County. We have offered the CRC Commissioners an opportunity to discuss impacts. I'd like to acknowledge Staff's efforts in providing updates and other information during and after the storm. In particular, Cathy Brittingham provided critical information from the State Emergency Operations Center, while our District Managers relayed information from the field to our Public Information Officer Sarah Young. Staff provided data and responded to numerous requests from the Department and Governor's Office as part of the storm response efforts. Field staff also provided essential information that was used by the Division and Department in making the determination to activate the CRC's Emergency General Permit that will assist property owners in recovering after tropical storms. The CRC's Emergency Permit rules at 7H .2500 speed up the authorization process for rebuilding structures that meet current CRC rules, and waive the \$200 permit fees. In addition to allowing the rebuilding of docks, piers, bulkheads and similar structures damaged by Hurricane Matthew, the Emergency Permit can be used for maintenance dredging of channels that shoaled in during the storm, and for beach



bulldozing to rebuild dunes to protect roads and other infrastructure. The Emergency Permit is available in all 20 coastal counties at a DCM District Office. To date staff have issued approximately 50 of these emergency general permits.

### **Regulatory**

On the regulatory side permit actions appear to be slowing down as the year comes to a close. The most notable major permit action since your last meeting involved the issuance of a major permit to the Town of Ocean Isle Beach for the construction of a terminal groin adjacent to Shallotte Inlet. This is the second terminal groin permit issued pursuant to the terminal groin legislation passed by the legislature in 2011. You may recall that a third party hearing request was granted appealing a permit issued to Sunset Beach West filed by the Southern Environmental Law Center as well as a similar appeal filed by a private citizen. On September 28, 2016, Administrative Law Judge Morrison issued an order staying the two consolidated contested cases challenging the CAMA Permit issuance until the resolution of the associated case between the Town and the developer in Brunswick Superior Court pertaining to the ownership dispute of part of the site. The parties are to update the Judge Morrison on the status of the related trial every 90 days, and the permit is stayed during the interim. It is believed the Town and developer are in the early discovery phase of the trial at this time. The Central East Coast Chapter of ASBPA is hosting a coastal permitting workshop in Wilmington, NC, Jan. 10-11, 2017. The event will bring together representative from federal and state permitting and resource agencies, coastal engineering and environmental permitting practitioners, and beach nourishment and navigation project sponsors to discuss what is working well and what can be improved with the permitting of coastal projects in the region. DCM Staff will be making a presentation on CAMA permit procedures and requirements as they relate to the permitting of nourishment and navigational projects. In addition, representatives are expected from multiple regulatory branches of the USACE Districts within the region, representatives from U.S. Fish and Wildlife Service, NOAA National Marine Fisheries, the Bureau of Ocean Energy Management (BOEM), other state permitting agencies, USACE Environmental Resource Section staff, and coastal consultants from North Carolina and South Carolina. Please let us know if you would like more information on this conference, or contact Ken Willson of CB&I in Wilmington.

### **Coastal Reserves**

#### *NCNERR Management Plan Update*

Staff are continuing to work on the management plan update for the N.C. National Estuarine Research Reserve. NOAA is reviewing initial draft chapters of the plan as they are completed to ensure that all required elements are included per the National Estuarine Research Reserve System (NERRS) management plan guidelines. Approximately half the chapters have been reviewed or are under review. The Reserve will then seek input on the full draft plan from the LACs, N.C. Coastal Resources Commission (CRC), and the N.C. Department of Environmental Quality. Following that input, NOAA will review the final draft management plan for content and compliance with the NERRS management plan guidelines. A 30-day public comment period and three public meetings will be held on the final draft management plan prior to the plan's final publication. Staff are planning to review the full initial draft plan with the Local Advisor Committees (LACs) at their spring 2017 meetings and will share the plan and LAC comments on the plan with the CRC at their April 2017 meeting.

#### *Periodic Rules Review*

The Coastal Reserve's rules, 07O, are scheduled to be reviewed by the Rules Review Commission in June 2017 as part of the Periodic Review and Expiration of Existing Rules process (G.S. 150B-21.3A). Staff classified each rule citation in 07O as necessary with substantive public interest,



necessary without substantive public interest, or unnecessary per G.S. 150B-21.3A (c)(1). Staff then revised the initial draft classification based on input from the LACs. The Commission supported the revised initial draft classification at your July 2016 meeting. The Department of Environmental Quality approved revised initial draft classification and the classification was available for public comment from September 12, 2016 through November 21, 2016. The Division has received one comment supporting the Division's rule classification report. Staff will next compile a report for submittal to the Rules Review Commission responding to comments received. The LACs will have the opportunity to review the draft report in January 2017 prior to presentation of the report to the CRC at its February 2017 meeting.

#### *LAC Meetings*

Fall 2016 meetings of the LACs are underway. A number of the committees met in November and the Currituck Banks, Kitty Hawk Woods, and Buxton Woods Reserves' committees will meet December 15-16, 2016. Details are available on the Reserve's event calendar.

#### **Policy & Planning**

The Division Planning Staff have completed the 2016 Public Beach and Coastal Waterfront Access Program grant process and the Governor's Office has announced awards of more than \$1 million to 12 local governments for projects to improve public access to coastal beaches and waters for the 2016-17 fiscal year. The awards range from \$40,000 - \$135,000 and include projects such as ADA compatible facilities, public restrooms, kayak launches, fishing pier and parking improvements. The Division expects to solicit access project application for FY 2017 in mid-January. Planning Staff worked with the Coastal Reserve's Coastal Training Program to offer two free workshops in Wilmington and Plymouth to share information with local governments about grant opportunities to acquire land and make improvements to beach and waterfront access, parks, and boating facilities. The workshops were well received as they provided information to coastal communities on the range of funding resources available, how to leverage funds from multiple grant sources, and how to effectively navigate the various grant application processes.

#### **Staffing News**

Since your last meeting, we are very happy to announce that on November 16<sup>th</sup>, assistant Major Permits Coordinator Courtney Spears and her husband Eric welcomed a baby girl, Fiona, to their family. Mother and child are doing well. Once Courtney comes back from maternity leave, she will transition into a new position as a field representative in the Wilmington Regional office. The process for hiring a replacement assistant major permit coordinator is ongoing. The Division is also moving ahead with the creation of the Beach and Inlet Management Project Coordinator position. You will recall that this year, the legislature allocated funding from the Shallow Draft Navigation Channel Dredging and Aquatic Weed fund to support this position. The paperwork is currently moving through the Office of State Personnel and we expect the position to be posted by the end of the year.

#### **Elizabeth City Office**

The Elizabeth City office of the Divisions of Coastal Management and Marine Fisheries at 1367 U.S. 17 South has been closed for facility repairs and will remain so for an undetermined amount of time. DCM staff have been relocated to 401 South Griffin Street for at least the next six months. Staff have recently moved in to the new space and we are in the process of hooking up utilities, phone and internet service. In the meantime, members of the public seeking a CAMA permit or fishing license may go to the Department of Environmental Quality's Washington Regional Office at 943 Washington Square Mall in Washington or call 252-946-6481.



## **CRAC REPORT**

Rudi Rudolph stated the Advisory Council focused its meeting on the way the boards and councils were reorganized by the General Assembly. The CRAC was reduced from 45 members to 20. The 45-member group had very prescriptive membership criteria with regional influences and areas of expertise. The current 20-member CRAC group was set up as an at-large membership appointed by the CRC. Parallel to that there was a great CRAC guidebook created by staff that contained great information but has become obsolete. The CRAC had an organizational meeting and discussed the expertise needed and the role of the CRAC. The CRAC will provide the CRC with recommendations based on these discussions.

## **COASTAL ISSUES**

### **Overview of Hurricane Matthew Impacts**

DCM District Managers Frank Jennings, Jonathan Howell, and Debbie Wilson gave an overview of impacts from Hurricane Matthew from each district. Commissioner Russell Rhodes provided a video of impacts in the Kinston, Lenoir County area and Hyde County representatives provided a video of impacts to their local area. *(Presentations and PowerPoints available from DCM)*

### **Preliminary Flood Insurance Rate Maps (FIRMs) for Coastal NC – Purpose, Process and Results**

Rudi Rudolph stated the NFIP is a federal program that provides affordable insurance if you are in the floodplain. The way you determine whether you are in the floodplain is by reference to FIRMs. These maps depict the special flood hazard area for a “100-year storm”. On the riverine side it is a little easier because historical discharges of the rivers can be looked at. On the coast it isn’t rain, it’s about the storms also. The 100-year storm level has two constituents the surge and waves counted together result in the base flood elevation (BFE). The last FIRMs became effective about 10 years ago. The new maps use computer models and are used to determine the designations. If you are on the dry-side of the floodplain, then you are in a “X-Zone.” If you are on the wet-side of the floodplain, then you are either in the “A-Zone” (wave height 3 feet or less) or you are in the “V-Zone” (wave height 3 feet or more). The new FIRMs have been released and a statutory 90-day appeal period will begin in January 2017. These preliminary maps will become effective within 18-24 months. In the 20 CAMA counties, these maps show a drop in V-Zones due to oceanfront dunes. There is an increase in A-Zones in the south and a decrease in the north. On the oceanfront this is basically a function of FEMA’s designation of the primary frontal dune. The primary frontal dune is the back edge of the dune. FEMA’s policy is that the landward edge of that dune is the demarcation of the V-Zone. FEMA took 24 historical hurricanes, 22 extratropical storms and nor’easters and developed 675 synthetic “modeled” storms. All of these storms were plugged into the model and created the 100-year event applied to the creeks and sounds. One of the resulting questions is whether risk is quantified appropriately from these maps? Also, we should consider whether the new maps are in conflict with policies of the CRC and CAMA. Is the 100- year storm the correct measure to use for risk? Out of the 29,000 structures damaged in Hurricane Sandy, 31 percent were outside of the floodplain. A problem with big storms is that approximately 30 percent of the locations damaged are outside the floodplain and don’t have insurance. Where is the money coming from to replace and repair damaged structures outside the floodplain and who will pay for these costs? FEMA estimates that 66 – 80 percent of the flood losses are outside of the floodplain. Roughly 30 percent of the actual claims are out of the flood hazard area.

Spencer Rogers stated the flood insurance program was based on observations of repeated flooding in riverine areas and Congress created the flood insurance program as an incentive to use FEMA standards. There have been a number of improvements over the years. In the 1970s they added



waves from the ocean. In the 1980s and 90s there were complaints from North Carolina about some of the dune erosion issues so those were added. In 2014, two legislative changes impacted the way insurance premiums were rated on older buildings and this has become a significant complicating financial issue for older buildings. In many areas of the new maps, there are inconsistent shifts in the floodplain. There are many areas along the coast that are getting better flood maps. The problem is that some of the new maps do not fit with what we have observed in coastal hazards over the years. If you look at the hazard risk, most people will think that the highest risk on most of the barrier islands is on the oceanfront. As you get farther away from the ocean the risk should go down including on the sound side. That is not what these preliminary maps show. They show the lowest risk on the oceanfront and the highest risk on the bays and sounds. The effective and preliminary maps are becoming less realistic and are not moving in the right direction. This is a significant problem because if the next set of maps come through and go back up then there will be some extremely damaging flood insurance premiums that will hit property owners that build to these new maps. The maps are required by law to be used for insurance purposes and regulatory purposes. One of my proposed actions is to encourage FEMA to develop more accurate mapping models. Back in the 1980s, the Assistant Secretary of DENR called FEMA in with the first set of flood maps that were going to make oceanfront X-Zones in front of a hotel and said that people are laughing at your maps. The next set of maps were just as bad, but the North Carolina flood mapping program came in in the 1990s and criticized FEMA's maps and it led to modeling changes. The other conclusion is that the ocean hazard area could be used in the flood standards. An ad hoc coastal construction committee could be formed with the NC Building Code Council, the NC Flood Mapping Program, and the CRC. Chairman Gorham suggested the Commission convene a task force to discuss these issues.

**Greg Lewis made a motion to form a subcommittee appointed by the CRC Chair and DCM Director along with the appropriate people and organizations to discuss flood insurance rate maps and related issues. Renee Cahoon seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin, Baldwin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons, Lewis).**

#### **CRC RULE DEVELOPMENT**

**Amendments to 15A NCAC 7J .1300 Development Line Procedures: Mean High Water, Easements and Other Lines (CRC 16-42)**

**Ken Richardson**

Ken Richardson stated the development line became effective April 1, 2016. The CRC saw its first development line requests at the previous meeting. Carolina Beach was the first to receive an approved development line and Oak Island received a conditional approval and has made the adjustments requested by the Commission. We learned a few lessons from these first two. The current rule states that in no case shall the development line be created or established oceanward of the mean high water line. Clarification is needed on the mean high water line and whether it is a pre-project line or areas where there have been multiple projects. There are also perpetual easements that are not addressed in the rules. DCM staff recommends that these clarifications be added to the rules to address the mean high water line or other lines that should limit the oceanward limit of development.

**Neal Andrew made a motion to approve the amendments to 15A NCAC 7H .0306 and 7J .1301 as presented for public hearing. Renee Cahoon seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin, Baldwin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons, Lewis).**



**Amendments to 15A NCAC 7H .2200 Free Standing Moorings – Osprey Poles (CRC 16-43)**  
**Jonathan Howell**

Jonathan Howell stated amendments are proposed for the General Permit for free standing moorings. A couple of times per year DCM receives a request for the permitting an osprey pole. In the past we have handled this through this General Permit, but it continues to come up and it causes problems because it would technically require a Major Permit. These amendments would allow the poles to be included under the General Permit. The specific conditions under this General Permit have not been updated since 1996 and there are additional changes needed to ensure consistency with the rules under other General Permits related to docking and mooring facilities.

**Neal Andrew made a motion to approve the draft amendments to 15A NCAC 7H .2200, General Permit for construction of free standing moorings in estuarine waters and public trust areas and ocean hazard areas, for public hearing. A limitation on the size of the platform, maximum of 3 feet by 3 feet, should be added to the draft language. Rick Catlin seconded the motion. The motion passed unanimously (Rhodes, Norris, Catlin, Baldwin, Andrew, Cahoon, Gorham, White, Hairston, Gibbs, Simmons, Lewis).**

**Sediment Criteria – Sampling Methodology (CRC 16-44)**  
**Ken Richardson**

*This agenda item was postponed to a future agenda.*

**PUBLIC INPUT AND COMMENT**

Penny Hooper, NC Sierra Club, spoke in favor of proactive actions to address sea level rise and climate change.

**OLD/NEW BUSINESS**

Mary Lucasse, CRC Counsel, updated the Commission on active cases. An Amicus Brief was filed on behalf of the CRC for the Nies v. Town of Emerald Isle. This case has been set for argument in front of the NC Supreme Court on January 10, 2017. In another case, that involving a variance issued by the CRC to the Riggings Homeowners Association (HOA), the CRC is expecting an annual update from the HOA on December 11, 2016 and the CRC will be updated once that report is received.

With no further business, the CRC adjourned.  
Respectfully submitted,



Braxton Davis, Executive Secretary



Angela Willis, Recording Secretary






ROY COOPER  
Governor

WILLIAM G. ROSS, JR.  
Acting Secretary

TO: The Coastal Resources Commission

FROM: Christine A. Goebel, Assistant General Counsel 

DATE: January 25, 2017 (for the February 8, 2017 CRC Meeting)

RE: **Variance Request by Andrew & Deborah Thexton (CRC-VR-16-11)**

Petitioners Andrew & Deborah Thexton purchased an oceanfront lot in 2016 located at 1117 Ocean Boulevard in Topsail Beach. As part of a voluntary FEMA mitigation program for homes that have made repetitive loss claims, Pender County contacted Petitioners about participating in a program where the cost to elevate their structure within its existing footprint would be covered 100% by FEMA though Petitioners and future owners would have to agree to keep flood coverage on the elevated structure. Petitioners agreed to participate, and so the consultant hired by Pender County to manage several similar claims, along with Pender County's Planning Director, acted as agents for Petitioners and applied for a CAMA permit on their behalf. DCM denied the CAMA permit as the existing location of the structure does not meet the applicable 60-foot ocean erosion setback on the site. Additionally, the work proposed exceeded 50% of the value of the house structure, and so was not "repair" and was "replacement" under the Commission's rules and CAMA statute. Petitioners now seek a variance from the oceanfront erosion setback in order to elevate the existing house within the same footprint and largely within the setback.

The following additional information is attached to this memorandum:

Attachment A: Relevant Rules  
 Attachment B: Stipulated Facts  
 Attachment C: Petitioner's Positions and Staff's Responses to Variance Criteria  
 Attachment D: Petitioner's Variance Request Materials  
 Attachment E: Stipulated Exhibits including powerpoint

cc(w/enc.): Andrew & Deborah Thexton, Petitioners, electronically  
 Mary Lucasse, Special Deputy AG and CRC Counsel, electronically  
 Kyle Breuer, Pender County Planning Director, electronically



**RELEVANT STATUTES OR RULES****APPENDIX A****§ 113A-103. Definitions.**

As used in this Article:

(5)a. "Development" means any activity in a duly designated area of environmental concern (except as provided in paragraph b of this subdivision) involving, requiring, or consisting of the construction or enlargement of a structure; excavation; dredging; filling; dumping; removal of clay, silt, sand, gravel or minerals; bulkheading, **driving of pilings**; clearing or alteration of land as an adjunct of construction; alteration or removal of sand dunes; alteration of the shore, bank, or bottom of the Atlantic Ocean or any sound, bay, river, creek, stream, lake, or canal; or placement of a floating structure in an area of environmental concern identified in G.S. 113A-113(b)(2) or (b)(5).

b. The following activities including the normal and incidental operations associated therewith shall not be deemed to be development under this section:

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5. Maintenance or repairs (excluding replacement) necessary to repair damage to structures caused by the elements or to prevent damage to imminently threatened structures by the creation of protective sand dunes.

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c. The Commission shall define by rule (and may revise from time to time) certain classes of minor maintenance and improvements which shall be exempted from the permit requirements of this Article, in addition to the exclusions set forth in paragraph b of this subdivision. In developing such rules the Commission shall consider, with regard to the class or classes of units to be exempted:

1. The size of the improved or scope of the maintenance work;
2. The location of the improvement or work in proximity to dunes, waters, marshlands, areas of high seismic activity, areas of unstable soils or geologic formations, and areas enumerated in G.S. 113A-113(b)(3); and
3. Whether or not dredging or filling is involved in the maintenance or improvement.



## SECTION .0300 - OCEAN HAZARD AREAS

### 15A NCAC 07H .0301 OCEAN HAZARD CATEGORIES

The next broad grouping is composed of those AECs that are considered natural hazard areas along the Atlantic Ocean shoreline where, because of their special vulnerability to erosion or other adverse effects of sand, wind, and water, uncontrolled or incompatible development could unreasonably endanger life or property. Ocean hazard areas include beaches, frontal dunes, inlet lands, and other areas in which geologic, vegetative and soil conditions indicate a substantial possibility of excessive erosion or flood damage.

### 15A NCAC 07H .0302 SIGNIFICANCE OF THE OCEAN HAZARD CATEGORY

(a) The primary causes of the hazards peculiar to the Atlantic shoreline are the constant forces exerted by waves, winds, and currents upon the unstable sands that form the shore. During storms, these forces are intensified and can cause significant changes in the bordering landforms and to structures located on them. Ocean hazard area property is in the ownership of a large number of private individuals as well as several public agencies and is used by a vast number of visitors to the coast. Ocean hazard areas are critical, therefore, because of both the severity of the hazards and the intensity of interest in the areas.

(b) The location and form of the various hazard area landforms, in particular the beaches, dunes, and inlets, are in a permanent state of flux, responding to meteorologically induced changes in the wave climate. For this reason, the appropriate location of structures on and near these landforms must be reviewed carefully in order to avoid their loss or damage. As a whole, the same flexible nature of these landforms which presents hazards to development situated immediately on them offers protection to the land, water, and structures located landward of them. The value of each landform lies in the particular role it plays in affording protection to life and property. (The role of each landform is described in detail in Technical Appendix 2 in terms of the physical processes most important to each.) Overall, however, the energy dissipation and sand storage capacities of the landforms are most essential for the maintenance of the landforms' protective function.

### 15A NCAC 07H .0303 MANAGEMENT OBJECTIVE OF OCEAN HAZARD AREAS

(a) The CRC recognizes that absolute safety from the destructive forces indigenous to the Atlantic shoreline is an impossibility for development located adjacent to the coast. The loss of life and property to these forces, however, can be greatly reduced by the proper location and design of structures and by care taken in prevention of damage to natural protective features particularly primary and frontal dunes. Therefore, it is the CRC's objective to provide management policies and standards for ocean hazard areas that serve to eliminate unreasonable danger to life and property and achieve a balance between the financial, safety, and social factors that are involved in hazard area development.

(b) The purpose of these Rules shall be to further the goals set out in G.S. 113A-102(b), with particular attention to minimizing losses to life and property resulting from storms and long-term erosion, preventing encroachment of permanent structures on public beach areas, preserving the natural ecological conditions of the barrier dune and beach systems, and reducing the public costs of inappropriately sited development. Furthermore, it is the objective of the Coastal Resources Commission to protect present common-law and statutory public rights of access to and use of the lands and waters of the coastal area.

### 15A NCAC 07H .0304 AECS WITHIN OCEAN HAZARD AREAS

The ocean hazard AECs contain all of the following areas:

- (1) Ocean Erodible Area. This is the area where there exists a substantial possibility of excessive erosion and significant shoreline fluctuation. The oceanward boundary of this area is the mean low water line. The landward extent of this area is the distance landward from the first line of stable and natural vegetation as defined in 15A NCAC 07H .0305(a)(5) to the recession line established by multiplying the long-term annual erosion rate times 90; provided that, where there has been no long-term erosion or the rate is less than two feet per year, this distance shall be set at 120 feet landward from the first line of stable natural vegetation. For the purposes of this Rule, the erosion rates are the long-term average based on available historical data. The current long-term average



erosion rate data for each segment of the North Carolina coast is depicted on maps entitled “2011 Long-Term Average Annual Shoreline Rate Update” and approved by the Coastal Resources Commission on May 5, 2011 (except as such rates may be varied in individual contested cases or in declaratory or interpretive rulings). In all cases, the rate of shoreline change shall be no less than two feet of erosion per year. The maps are available without cost from any Local Permit Officer or the Division of Coastal Management on the internet at <http://www.ncccoastalmanagement.net>.

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#### **15A NCAC 07H .0305 GENERAL IDENTIFICATION AND DESCRIPTION OF LANDFORMS**

(a) This Paragraph describes natural and man-made features that are found within the ocean hazard area of environmental concern.

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- (5) **Vegetation Line.** The vegetation line refers to the first line of stable and natural vegetation, which shall be used as the reference point for measuring oceanfront setbacks. This line represents the boundary between the normal dry-sand beach, which is subject to constant flux due to waves, tides, storms and wind, and the more stable upland areas. The vegetation line is generally located at or immediately oceanward of the seaward toe of the frontal dune or erosion escarpment. The Division of Coastal Management or Local Permit Officer shall determine the location of the stable and natural vegetation line based on visual observations of plant composition and density. If the vegetation has been planted, it may be considered stable when the majority of the plant stems are from continuous rhizomes rather than planted individual rooted sets. Planted vegetation may be considered natural when the majority of the plants are mature and additional species native to the region have been recruited, providing stem and rhizome densities that are similar to adjacent areas that are naturally occurring. In areas where there is no stable and natural vegetation present, this line may be established by interpolation between the nearest adjacent stable natural vegetation by on-ground observations or by aerial photographic interpretation.
- (6) **Static Vegetation Line.** In areas within the boundaries of a large-scale beach fill project, the vegetation line that existed within one year prior to the onset of project construction shall be defined as the “static vegetation line.” The “onset of project construction” shall be defined as the date sediment placement begins, with the exception of projects completed prior to the effective date of this Rule, in which case the award of the contract date will be considered the onset of construction. A static vegetation line shall be established in coordination with the Division of Coastal Management using on-ground observation and survey or aerial imagery for all areas of oceanfront that undergo a large-scale beach fill project. Once a static vegetation line is established, and after the onset of project construction, this line shall be used as the reference point for measuring oceanfront setbacks in all locations where it is landward of the vegetation line. **In all locations where the vegetation line as defined in this Rule is landward of the static vegetation line, the vegetation line shall be used as the reference point for measuring oceanfront setbacks.** A static vegetation line shall not be established where a static vegetation line is already in place, including those established by the Division of Coastal Management prior to the effective date of this Rule. A record of all static vegetation lines, including those established by the Division of Coastal Management prior to the effective date of this Rule, shall be maintained by the Division of Coastal Management for determining development standards as set forth in Rule .0306 of this Section. Because the impact of Hurricane Floyd (September 1999) caused significant portions of the vegetation line in the Town of Oak Island and the Town of Ocean Isle Beach to be relocated landward of its pre-storm position, the static line for areas landward of the beach fill construction in the Town of Oak Island and the Town of Ocean Isle Beach, the onset of which occurred in 2000, shall be defined by the general trend of the vegetation line established by the Division of Coastal Management from June 1998 aerial orthophotography.
- (7) **Beach Fill.** Beach fill refers to the placement of sediment along the oceanfront shoreline. Sediment used solely to establish or strengthen dunes shall not be considered a beach fill project under this Rule. A “large-scale beach fill project” shall be defined as any volume of sediment greater than 300,000 cubic yards or any storm protection project constructed by the U.S. Army Corps of Engineers.

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# 15A NCAC 07H .0306 GENERAL USE STANDARDS FOR OCEAN HAZARD AREAS

(a) In order to protect life and property, all development not otherwise specifically exempted or allowed by law or elsewhere in the Coastal Resources Commission's rules shall be located according to whichever of the following is applicable:

- (1) The ocean hazard setback for development is measured in a landward direction from the vegetation line, the static vegetation line, or the measurement line, whichever is applicable.

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- (4) The setback distance shall be determined by both the size of development and the shoreline long term erosion rate as defined in Rule .0304 of this Section. "Development size" is defined by total floor area for structures and buildings or total area of footprint for development other than structures and buildings. Total floor area includes the following:
  - (A) The total square footage of heated or air-conditioned living space;
  - (B) The total square footage of parking elevated above ground level; and
  - (C) The total square footage of non-heated or non-air-conditioned areas elevated above ground level, excluding attic space that is not designed to be load-bearing.

Decks, roof-covered porches, and walkways are not included in the total floor area unless they are enclosed with material other than screen mesh or are being converted into an enclosed space with material other than screen mesh.

- (5) With the exception of those types of development defined in 15A NCAC 07H .0309, no development, including any portion of a building or structure, shall extend oceanward of the ocean hazard setback distance. This includes roof overhangs and elevated structural components that are cantilevered, knee braced, or otherwise extended beyond the support of pilings or footings. The ocean hazard setback is established based on the following criteria:

**(A) A building or other structure less than 5,000 square feet requires a minimum setback of 60 feet or 30 times the shoreline erosion rate, whichever is greater;**

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- (6) If a primary dune exists in the AEC on or landward of the lot where the development is proposed the development shall be landward of the crest of the primary dune, the ocean hazard setback, or development line, whichever is farthest from vegetation line, static vegetation line, or measurement line, whichever is applicable. For existing lots, however, where setting the development landward of the crest of the primary dune would preclude any practical use of the lot, development may be located oceanward of the primary dune. In such cases, the development may be located landward of the ocean hazard setback but shall not be located on or oceanward of a frontal dune or the development line. The words "existing lots" in this Rule shall mean a lot or tract of land which, as of June 1, 1979, is specifically described in a recorded plat and cannot be enlarged by combining the lot or tract of land with a contiguous lot(s) or tract(s) of land under the same ownership.
- (7) If no primary dune exists, but a frontal dune does exist in the AEC on or landward of the lot where the development is proposed, the development shall be set landward of the frontal dune, ocean hazard setback, or development line, whichever is farthest from the vegetation line, static vegetation line, or measurement line, whichever is applicable.
- (8) If neither a primary nor frontal dune exists in the AEC on or landward of the lot where development is proposed, the structure shall be landward of the ocean hazard setback or development line, whichever is more restrictive.
- (9) Structural additions or increases in the footprint or total floor area of a building or structure represent expansions to the total floor area and shall meet the setback requirements established in this Rule and 15A NCAC 07H .0309(a). New development landward of the applicable setback may be cosmetically, but shall not be structurally, attached to an existing structure that does not conform with current setback requirements.
- (10) Established common law and statutory public rights of access to and use of public trust lands and waters in ocean hazard areas shall not be eliminated or restricted. Development shall not encroach upon public accessways, nor shall it limit the intended use of the accessways.
- (11) Beach fill as defined in Rule .0305(a)(7) of this Section, represents a temporary response to coastal erosion, and compatible beach fill as defined in 15A NCAC 07H .0312 can be expected to erode at



least as fast as, if not faster than, the pre-project beach. Furthermore, there is no assurance of future funding or beach-compatible sediment for continued beach fill projects and project maintenance. A vegetation line that becomes established oceanward of the pre-project vegetation line in an area that has received beach fill may be more vulnerable to natural hazards along the oceanfront if the beach fill project is not maintained. A development setback measured from the vegetation line may provide less protection from ocean hazards. Therefore, development setbacks in areas that have received large-scale beach fill as defined in 15A NCAC 07H .0305 shall be measured landward from the static vegetation line as defined in this Section, unless a development line has been approved by the Coastal Resources Commission in accordance with 15A NCAC 07J .1300.

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- (f) Development shall comply with the general management objective for ocean hazard areas set forth in 15A NCAC 07H .0303.
- (g) Development shall not interfere with legal access to, or use of, public resources, nor shall such development increase the risk of damage to public trust areas.
- (h) Development proposals shall incorporate measures to avoid or minimize adverse impacts of the project. These measures shall be implemented at the applicant's expense and may include actions that:
  - (1) minimize or avoid adverse impacts by limiting the magnitude or degree of the action;
  - (2) restore the affected environment; or
  - (3) compensate for the adverse impacts by replacing or providing substitute resources.
- (i) Prior to the issuance of any permit for development in the ocean hazard AECs, there shall be a written acknowledgment from the applicant to the Division of Coastal Management that the applicant is aware of the risks associated with development in this hazardous area and the limited suitability of this area for permanent structures. By granting permits, the Coastal Resources Commission does not guarantee the safety of the development and assumes no liability for future damage to the development.
- (j) All relocation of structures requires permit approval. Structures relocated with public funds shall comply with the applicable setback line as well as other applicable AEC rules. Structures including septic tanks and other essential accessories relocated entirely with non-public funds shall be relocated the maximum feasible distance landward of the present location. Septic tanks may not be located oceanward of the primary structure. All relocation of structures shall meet all other applicable local and state rules.
- (k) Permits shall include the condition that any structure shall be relocated or dismantled when it becomes imminently threatened by changes in shoreline configuration as defined in 15A NCAC 07H .0308(a)(2)(B). Any such structure shall be relocated or dismantled within two years of the time when it becomes imminently threatened, and in any case upon its collapse or subsidence. However, if natural shoreline recovery or beach fill takes place within two years of the time the structure becomes imminently threatened, so that the structure is no longer imminently threatened, then it need not be relocated or dismantled at that time. This permit condition shall not affect the permit holder's right to seek authorization of temporary protective measures allowed under 15A NCAC 07H .0308(a)(2).



## 15A NCAC 07J .0210 REPLACEMENT OF EXISTING STRUCTURES

Replacement of structures damaged or destroyed by natural elements, fire or normal deterioration is considered development and requires CAMA permits. Replacement of structures shall be permitted if the replacements is consistent with current CRC rules. Repair of structures damaged by natural elements, fire or normal deterioration is not considered development and shall not require CAMA permits. The CRC shall use the following criteria to determine whether proposed work is considered repair or replacement.

- (1) **NON-WATER DEPENDENT STRUCTURES. Proposed work is considered replacement if the cost to do the work exceeds 50 percent of the market value of an existing structure immediately prior to the time of damage or the time of request.** Market value and costs are determined as follows:
  - (a) Market value of the structure **does not include the value of the land, value resulting from the location of the property, value of accessory structures, or value of other improvements located on the property.** Market value of the structure shall be determined by the Division based upon information provided by the applicant using any of the following methods:
    - (i) appraisal;
    - (ii) replacement cost with depreciation for age of the structure and quality of construction; or
    - (iii) tax assessed value.
  - (b) **The cost to do the work is the cost to return the structure to its pre-damaged condition, using labor and materials obtained at market prices, regardless of the actual cost incurred by the owner to restore the structure. It shall include the costs of construction necessary to comply with local and state building codes and any improvements that the owner chooses to construct.** The cost shall be determined by the Division utilizing any or all of the following:
    - (i) an estimate provided by a North Carolina licensed contractor qualified by license to provide an estimate or bid with respect to the proposed work;
    - (ii) an insurance company's report itemizing the cost, excluding contents and accessory structures; or
    - (iii) an estimate provided by the local building inspections office.



**STIPULATED FACTS****ATTACHMENT B**

1. Petitioners Andrew and Deborah Thexton (“Petitioners”) are the owners of an oceanfront home and lot located at 1117 Ocean Boulevard in the Town of Topsail Beach (“Town”), Pender County, North Carolina (the “Property”). The deed for the sale was recorded on April 1, 2016 when they purchased the property through a deed recorded at Book 4617, Page 1348 of the Pender County Registry, a copy of which is attached as a stipulated exhibit. In connection with the 2016 purchase, Petitioners had a survey of the property done by Charles Riggs, P.L.S., a copy of which is attached.
2. According to the Pender County tax records, the purchase price of the Property by the Petitioners was \$496,000. The total tax value of the Property is \$513,028 and the tax value of the structure is \$67,528, based on a 2011 valuation. A copy of the tax card for the Property is attached as a stipulated exhibit.
3. According to tax records, the Property is a developed lot, and includes a three-bedroom 1,408 square foot single-family residential structure built in 1968, a gravel driveway, decks, and beach access walkway. The Petitioners’ house is served by septic, which is on the northern-landward portion of the Property based on the 1989 Pender County septic permit and a 2016 septic system inspection, copies of which are attached as stipulated exhibits. The inspection shows that it is located 10’ from the landward property line and 9’ from the house.
4. Aerial and site photographs are attached as exhibits which depict the Property, Petitioners’ home and the surrounding lots and homes.
5. The Property is located within the Ocean Erodible Area of Environmental Concern (AEC).
6. In 1989, the US Army Corps of Engineers (“Corps”) released a final EIS for a beach nourishment plan, and a Federal Storm Damage Reduction Project was authorized under the Water Resources Development Act, however no funds were ever appropriated for the project and so not projects pursuant to that plan were undertaken. In 2010, the Town funded a \$10 million “large scale” beach nourishment project which included the beach in front of the Property. Accordingly, a pre-project vegetation line was set as a static line in 2010. Other nourishment has taken place in the Town, but these other projects were smaller scale navigation projects and not “large scale” projects.
7. On or about October 25, 2016, DCM Field Representative Jason Dail flagged the location of the first line of stable and natural vegetation (“FLSNV”) on the Property, as the FLSNV was landward of, and more restrictive than the static line on the Property. Per 15A NCAC 7H .0305(a)(6), the FLSNV is used as the reference line for determining setbacks where it is landward of and more restrictive than the static line on a site.
8. The Commission’s current Average Annual Erosion Rate for the Property is 2 feet per year. Based on the applicable 2 feet per year erosion rate, the applicable Ocean Hazard Setback for



development on this Property, being a structure less than 5,000 square feet, is 60-feet landward of the FLSNV as that term is defined in 15A NCAC 7H .0305(a)(6).

9. Topsail Beach is located on a barrier island that is susceptible to powerful coastal storms that expose properties to wind damage, beach erosion and coastal flooding.

10. The Property is located in flood zone “VE” and the Base Flood Elevation (“BFE”) at the Property is 15.0 feet NAVD.

11. Petitioners’ Property was included on a priority list made by FEMA of repetitive loss structures which FEMA issues on a regular basis to counties, through NC Division of Emergency Management. FEMA, through this Flood Mitigation Assistance Program (FMA), allows for mitigation of repetitive loss properties through acquisition, demolition, relocation, elevation or dry flood-proofing. It is a voluntary program and covers 100% of the costs for the mitigation work, but requires a deed restriction requiring participation in the NFIP program for the life of the structure. A list of the losses for Petitioners’ Property through June 27, 2013 is attached as an exhibit.

12. On July 9, 2015, Pender County issued a RFP for professional services to act a planning and management consultant (and a separate RFP for engineering services) in order to process \$2.9 million dollars of funds for use to elevate six structures and acquire five others within Pender County. A copy of this RFP is attached as a stipulated exhibit.

13. On February 2, 2016, Pender County assigned the consulting contract to Holland Consulting Planners, Inc., including HCP employees J. Reed Whitesell, AICP, as Project Manager, Chip Bartlett, AICP as the FMA Program Administrator, Chis Hilbert, as Program Manager, and Gary Miller, as Inspector (collectively the “Consultant”). A copy of the Work Authorization contract is attached as an exhibit. Copies of Mr. Whitesell’s and Mr. Bartlett’s resumes are attached as exhibits, as is a summary of HCP’s recent work in Hazard Mitigation Planning & Project Management.

14. For Petitioners’ Property, the Consultant worked with the consulting engineer, Bobby L. Joyner, P.E. and President of Appian Consulting Engineers, PA, about what mitigation measures were possible for the Property. A copy of Mr. Joyner’s resume is attached as an exhibit.

15. The engineer recommended the elevation of the structure an additional 2.8 feet, bringing the bottom of the structure from a first-floor elevation of 16.2 feet NAVD to a minimum post-elevation FFE of 19.0 feet NAVD above the applicable BFE. In order to elevate the structure, the structure would be lifted to the prescribed elevation, and using a retrofit of existing pilings and new replacement pilings, a new base will be built, and then the house will be lowered onto the new piling foundation, and the utilities reconnected. The decks will also be elevated and new stairs will be built. The structure would remain within the existing footprint, and would only be moved vertically, though an additional new deck is also proposed to be added. The development size or



the “total floor area” of the structure, as that term is defined by the Commission at 15A NCAC 7H .0306(a)(4) would not be changed or increased. A copy of the scope of work form is attached as an exhibit.

16. The Consultant bid out the work to elevate Petitioners’ property through a competitive, sealed bid process. For Petitioners’ Property, the low bid was for \$89,740 by Goose Creek Construction. A copy of the Consultant’s Final Bid Tabulation Form is attached as an exhibit.

17. Through an affidavit, Ron Akers of Goose Creek Construction states that based on his experience, he would “estimate that the additional turnkey cost to relocate the existing structures versus elevating in place would be approximately \$20,000.00 per property.” A copy of this affidavit is attached as an exhibit.

18. Through an affidavit, the Community Development Manager and Senior Planner at the Consultant, Mr. Reed Whitesell, AICP, states that the purpose of the proposed mitigation through elevation of the structure in the same footprint is “not intended to provide a substantial improvement or increase in existing property value, although the cost sometimes exceeds 50% of the existing structure value.” He also states that based on his expertise and discussions with the Project Engineer and the Contracting Company representatives, it is his understanding that the proposed elevation methodology “is a more cost effective method than moving the structures away from the FLSNV and elevating the structures on new pilings.” Finally, he states that based on his review, moving the structure back on the lot to meet the CAMA setback “might lead to violation of the Town of the Topsail Beach’s zoning requirements, and would significantly limit the owners’ ability to construct additional (non-substantial) improvements to decking and accesses in the future.” A copy of his affidavit is attached.

19. The work proposed by Petitioners falls within the definition of “development” as defined by NCGS § 113A-103(5)a as it includes the “driving of pilings.”

20. The CAMA statute deems activities including “maintenance or repairs (excluding replacement) necessary to repair damage to structure caused by the elements. . .” as not “development” pursuant to NCGS § 113A-103(5)b.(5). The Commission’s rules in 15A NCAC 7J .0210 distinguish between repair and replacement, and for non-water dependent structures, define replacement as when the cost of the proposed work “exceeds 50 percent of the market value of an existing structure immediately prior to the time of damage or the time of the request. Following this definition, “repair” is necessarily work which is 50% or less of the market value before damage/time of request. The Commission’s rule goes on to note that “market value of the structure does not include the value of the land, value resulting from the location of the property, value of accessory structures, or value of other improvements located on the property.” 7J .0210(a)

21. In this case, the cost of the work proposed is \$89,740, which was the low bid by Goose Creek and the currently-listed tax value of the structure was \$67,528, so the cost of the work



proposed clearly “exceeds 50 percent of the market value” of the structure, and is “development” which is “replacement.”

22. Federal FEMA regulations, found at 44 CFR 59.1 define “substantial improvement” as

Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either: (1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specification which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions . . .

In the September 2015 FEMA Hazard Mitigation Assistance Program Digest, it states that “the costs to elevate or floodproof a damaged structure or facility are not included in determining whether the substantial improvement threshold is triggered. See 44 C.F.R. 9.11(d), Minimization Standards.” In contrast, the Commission’s “50% rule” includes the cost of labor and materials, and states that

the cost to do the work is the cost to return the structure to its pre-damaged condition, using labor and materials obtained at market prices, regardless of the actual cost incurred by the owner to restore the structure. It shall include the costs of construction necessary to comply with local and state building codes and any improvements that the owner chooses to construct.

15A NCAC 7J .0210(b).

23. Pursuant to NCGS § 113A-118, the proposed “development” takes place in an AEC, and so requires authorization through the issuance of a CAMA permit.

24. On October 25, 2016, Mr. Jason Dail of DCM, Mr. Bartlett, Mr. Whitesell, and Mr. Miller of the Consultant, Mr. Joyner the Engineer, and Michael Rose, Town Manager of Topsail Beach met on site to discuss the project.

25. Also on October 25, 2016, Mr. Dail flagged the first line of stable and natural vegetation present on the Property. This line was surveyed and is indicated on the site plan (incorrectly labeled) as “staked static vegetation line”, a copy of which is attached as a stipulated exhibit.

26. On December 5, 2016, the Pender County Board of Commissioners approved a Resolution to approve elevation contract awards for structures included in the FY14 FMA Grant project, including the bid from Goose Creek Construction for Petitioners’ Property. A copy of this resolution is attached as an exhibit.



27. On or about November 30, 2016, Petitioners, through their agent Kyle Breuer, the Pender County Planning Director, submitted an application for a CAMA Minor Permit, a copy of which is attached.

28. As part of the CAMA Minor Permit Process, notice of the proposed development was sent to both adjacent riparian owners, the Ennises and Walls. Additionally, notice of the project was posted on site. DCM Received no objections regarding this project. The Ennises are seeking a similar variance from this Commission, and are using the same consultants and agents.

29. On December 18, 2016, DCM denied Petitioners' CAMA Minor Permit application for the elevation of the structure, finding that the proposed work was development within an AEC, but it did not meet the applicable 60' ocean erosion setback landward of the applicable measurement line. Additionally, the proposed work was "replacement" and not "repair" less than 50% of the as described by NCGS § 113A-103(5)b.(5) and 15A NCAC 7J .0210. A copy of the denial letter is attached as an exhibit.

30. Based on the October 25, 2016 location of the FLSNV as staked by Mr. Dail and surveyed by and shown on the Progressive Land Survey, the applicable 60-foot ocean erosion setback line passes through the landward quarter of the house. The distance from the 60-foot setback to the rear property line is approximately 60 feet. The depth of the house (32'), covered back porch (8') and covered oceanfront deck (6') is approximately 46 feet in depth, and so if the house (and porch and deck) were moved landward to meet the setback, there would be approximately 14 feet between the rear of the house and the landward lot line (60' from setback to rear lot line – 46' of house/porch/deck = 14'). In addition, the Town has a street-side setback of 7.5. Petitioners have also proposed the addition of an 8' deep by 36' long uncovered deck (288 sq. ft.).

31. On December 28, 2016, Petitioners filed this variance request, a copy of which is attached, seeking a variance from the applicable 60-foot ocean erosion setback in order to undertake the work as proposed in order to elevate the structure within the existing footprint.

32. On January 16, 2017, Petitioners provided notice of this variance request to the adjacent riparian neighbors. If any comments are received by DCM before the variance hearing, DCM will provide a copy of the comments to the Commission as part of the stipulated facts.

33. Petitioners stipulate that their proposed development is contrary to 15A NCAC 7H .0305 and .3036 which set the ocean erosion setback line, and that their proposed development is not "repair" and is "replacement" as those terms are defined by NCGS § 113A-103(5)b.(5) and 15A NCAC 7J .0210



Stipulated Exhibits:

- A. Deed 4617/1348
- B. Riggs Survey of Thexton
- C. Pender Co. Tax Card for the Property
- D. Thexton Property septic permit and inspection documents
- E. FEMA repetitive loss statement for Thexton Property
- G. Scope of Work with Consultant
- H. Whitesell Resume
- I. Whitesell Affidavit
- J. Bartlett Resume
- K. Engineer Joyner Resume
- L. Engineer Company Description
- M. Scope of Work by Joyner
- N. Low Bid Summary- Goose Creek
- O. 12/5 Pender Resolution on Goose Creek
- P. Ayers of Goose Creek Affidavit
- Q. 2015 FEMA Hazard Mitigation Assistance Guidance excerpt and FEMA Unit 8 excerpt
- R. CAMA Minor Permit Application for Thexton, including site surveys, notice, ocean hazard notice form
- S. CAMA Minor Permit Denial Letter
- T. Powerpoint of site photos



**PETITIONERS' and STAFFS' POSITIONS****ATTACHMENT C**

**I. Will strict application of the applicable development rules, standards, or orders issued by the Commission cause the petitioner unnecessary hardships? If so, the petitioner must identify the hardships.**

**Petitioner's Position: Yes.**

The NFIP-insured property has been affected by enough flooding events to have it considered a Severe Repetitive Loss Property by FEMA. The petitioner has the opportunity to mitigate the structure through grant funding which will bring the structure into compliance with the current floodplain regulations. Funding under these projects reduces overall risk to the population and structures while also reducing reliance on limited funds that may not be available after a disaster.

**Staff's Position: No.**

In this difficult situation, upon review of the stipulated facts and Petitioners' argument, on balance, Staff disagrees that the Petitioners will suffer an unnecessary hardship from strict application of the Commission's oceanfront setback rules. While the narrow scope of the FEMA mitigation plan may help to mitigate flood damage, it fails to address the effects of wind and waves on the Property which are also stated concerns of the Commission through its Ocean Hazard Rules and its Shoreline Erosion Policy Rules.

As the Commission's rules note, the area along the Atlantic Ocean shoreline is a natural hazard area where, "because of their special vulnerability to erosion or other adverse effects of sand, wind, and water, uncontrolled or incompatible development could unreasonably endanger life or property. Ocean hazard areas include beaches, frontal dunes, inlet lands, and other areas in which geologic, vegetative and soil conditions indicate a substantial possibility of excessive erosion or flood damage." 15A NCAC 07H .0301 The Commission's rules further note the significance of Ocean Hazard Areas in that "The primary causes of the hazards peculiar to the Atlantic shoreline are the constant forces exerted by waves, winds, and currents upon the unstable sands that form the shore. During storms, these forces are intensified and can cause significant changes in the bordering landforms and to structures located on them." 15A NCAC 07H .0302.

As noted in these rules, the danger to structures along the Atlantic Ocean shoreline is not only from flooding, but from wind, waves and currents as well. Petitioners' house has experienced repetitive damage from flooding resulting flooding claims, though none has been "substantial damage" as defined by FEMA, so the house has been repaired and not relocated or replaced. Earlier repairs have been less than 50% of the structure's pre-storm value, and so have qualified as "repair" and thus not "development" under CRC rules and so no permit was needed and the oceanfront setback didn't come into play. While from a FEMA perspective, elevating the house within the existing footprint in an attempt to mitigate future flood claims may make sense, even when the cost to elevate the structure exceeds the tax value of the structure itself the overall risk to the structure from erosion is not being addressed. Based on this, Staff questions Petitioners' statement that this mitigation "reduces overall risk to the population and structures while also reducing



reliance on limited funds that may not be available after a disaster." How much risk to structures does this actually reduce when the structure is already within the oceanfront erosion setback and without further nourishment, might eventually be on the dry-sand beach? How much benefit comes from spending \$89,740 to protect a home built in 1968 which is valued at \$67,528, simply by elevating it? These are difficult calculations to make, and Staff has significant concerns that spending money to mitigate only for flood damage misses other noted and significant hazards.

Staff note that this mitigation approach only deals with one of the hazards noted above. If the elevation takes place, the structure will have higher, newer pilings. While this higher and stronger foundation may be able to keep the structure above floodwaters, it does not address the possibility of continued erosion of the vegetation line leading to the house becoming located on the public dry-sand beach. This result is noted in the Commission's Shoreline Erosion policies, specifically, at 15A NCAC 07M.0202(a), which requires that erosion responses do not interfere with the public's use of the dry-sand beach. The policy directs that

The public right to use and enjoy the ocean beaches must be protected. The protected uses include traditional recreational uses (such as walking, swimming, surf-fishing, and sunbathing) as well as commercial fishing and emergency access for beach rescue services. Private property rights to oceanfront properties including the right to protect that property in ways that are consistent with public rights should be protected. (b) Erosion response measures designed to minimize the loss of private and public resources to erosion should be economically, socially, and environmentally justified. Preferred response measures for shoreline erosion shall include but not be limited to AEC rules, land use planning and land classification, establishment of building setback lines, building relocation, subdivision regulations and management of vegetation.

15A NCAC 07M .0202(a).

Finally, it is important to note that even if Topsail Beach had a static line exception, which it does not because it does not have a long-term nourishment program, it wouldn't change the result in this case because the FLSNV on the site is landward of the static line.

In this case, the strict application of oceanfront setbacks should be supported by the Commission, where "replacement" is proposed which does not meet the setback.

**II. Do such hardships result from conditions peculiar to the Petitioner's property, such as location, size, or topography of the property? Explain.**

**Petitioner's Position: Yes.**

The existing house (built in the 1960's) is located on a lot that is susceptible to severe ocean flooding during storm events. Although the Town of Topsail has a very successful beach renourishment program in this area, the structure on property is still vulnerable unless mitigation measures can be taken to protect it.



**Staff's Position: No.**

Staff doesn't believe any hardships alleged by Petitioner result from conditions peculiar to the property, such as location, size or topography. First, Staff believe Petitioners overstate when they describe the Town's "very successful beach renourishment program in this area." Other than occasional small-scale navigation dredging nourishment projects near New Topsail Inlet, there has only been one, town-funded large-scale nourishment project in 2010. While a federal Storm Damage Reduction Project was authorized and the FEIS was released in 1989, the project has not been funded. In addition, the FLSNV is further landward than the static line (which is the FLSNV location in 2010 before the large-scale project was undertaken), so despite large-scale nourishment seven years ago, the vegetation has continued to retreat.

The Property is otherwise a typical oceanfront lot on Topsail Beach, as seen on photographs of the Property and the larger vicinity. Like most oceanfront lots, without long-term nourishment projects and even some with such projects, Petitioners' lot is subject to ocean flooding. As Petitioners' lot is a typical oceanfront lot, Staff believe it has no peculiar conditions which cause any hardship.

**III. Do the hardships result from the actions taken by the Petitioner? Explain.****Petitioner's Position: No.**

The home's location and existing elevation have created the hardship resulting in repeated flood damage to real and personal property.

**Staff's Position: Yes.**

When Petitioners just purchased this non-conforming property in 2016, they decided to voluntarily participate in this flooding hazard mitigation/elevation program. As the goal of this program is to mitigate future flood-related damage by elevation of the home, the consulting engineer chose to elevate the house within the existing footprint and utilize some of the existing piles. Based on an affidavit of the contractor Ron Akers of Goose Creek Construction, it would cost Petitioners an additional \$20,000 out-of-pocket to relocate the house further landward on the lot, in addition to the FEMA funded \$89,740 cost to simply elevate the house. While there is room on the lot to meet the setback without a variance, it would admittedly leave less room for a rear porch and parking, and may interfere with the existing placement of the septic system, though the house could be moved back on the lot a distance less than the setback and still meet local setbacks and have room for septic. The Petitioners however, have not pursued relocating the structure further landward on the lot, citing financial and geographic constraints. Staff does not agree that any hardships do not result from actions taken by the Petitioners.



**IV. Will the variance requested by the petitioner (1) be consistent with the spirit, purpose, and intent of the rules, standards or orders issued by the Commission; (2) secure the public safety and welfare; and (3) preserve substantial justice? Explain.**

**Petitioner's Position: Yes.**

The variance will allow the petitioner to properly mitigate probable subsequent repetitive flood damage to the existing structure. The proposed work does not involve the expansion or upgrades to the existing footprint. Elevation of the structure to the current standards will protect property and residents. The preferred elevation method will actually reduce damage to the dunes and associated vegetation that would certainly occur if the house was moved closer to Ocean Boulevard. In addition, the current and any future owners will be required to maintain flood insurance in perpetuity.

**Staff's Position: No.**

Staff believes that, on balance, the variance requested by Petitioner is inconsistent with the spirit, purpose, and intent of the Commission's ocean erosion setback rules and its shoreline erosion policies, because while the elevation may mitigate flooding damage in the future, staying within the same footprint and not moving the house landward fails to address the other ocean hazards associated with the Atlantic Ocean shoreline and noted in the Commission's rules, as described in section I, above.

The variance may help to secure public safety and welfare by elevating the home within the footprint, hopefully above any future flooding events, but may harm public safety and welfare at the same time by reinforcing the current piling foundation and increasing the likelihood that the house will remain standing on the dry-sand public beach after the vegetation line continues to erode landward unless nourishment steps are taken by Topsail Beach.

The variance does not preserve substantial justice where it would encourage the use of significant FEMA mitigation dollars to elevate a non-conforming structure already located near the ocean hazards of the Atlantic Ocean shoreline but without proposing to move it further away from the ocean hazards.



**ATTACHMENT D:**  
**PETITIONERS' VARIANCE REQUEST MATERIALS**



## CAMA VARIANCE REQUEST FORM

DCM FORM 11

DCM FILE No.:

PETITIONER'S NAME

Andrew & Deborah Thexton

COUNTY WHERE THE DEVELOPMENT IS PROPOSED

Pender County

Pursuant to N.C.G.S. § 113A-120.1 and 15A N.C.A.C. 07J .0700 *et seq.*, the above named Petitioner hereby applies to the Coastal Resources Commission (CRC) for a variance.

## VARIANCE HEARING PROCEDURES

A variance petition will be considered by the CRC at a regularly scheduled meeting, heard in chronological order based upon the date of receipt of a complete petition. 15A N.C.A.C. 07J .0701(e). A complete variance petition, as described below, must be *received* by the Division of Coastal Management (DCM) a minimum of six (6) weeks in advance of the first day of a regularly scheduled CRC meeting to be eligible for consideration by the CRC at that meeting. 15A N.C.A.C. 07J .0701(e). The final set of stipulated facts must be agreed to at least four (4) weeks prior to the first day of a regularly scheduled meeting. 15A N.C.A.C. 07J .0701(e). The dates of CRC meetings can be found at DCM's website: [www.nccoastalmanagement.net](http://www.nccoastalmanagement.net)

If there are controverted facts that are significant in determining the propriety of a variance, or if the Commission determines that more facts are necessary, the facts will be determined in an administrative hearing. 15A N.C.A.C. 07J .0701(b).

## VARIANCE CRITERIA

The petitioner has the burden of convincing the CRC that it meets the following criteria:

- (a) Will strict application of the applicable development rules, standards, or orders issued by the Commission cause the petitioner unnecessary hardships? Explain the hardships.
- (b) Do such hardships result from conditions peculiar to the petitioner's property such as the location, size, or topography of the property? Explain.
- (c) Do the hardships result from actions taken by the petitioner? Explain.
- (d) Will the variance requested by the petitioner (1) be consistent with the spirit, purpose, and intent of the rules, standards or orders issued by the Commission; (2) secure the public safety and welfare; and (3) preserve substantial justice? Explain.

*Please make your written arguments that Petitioner meets these criteria on a separate piece of paper. The Commission notes that there are some opinions of the State Bar which indicate that non-attorneys may not represent others at quasi-judicial proceedings such as a variance hearing before the*




*Commission. These opinions note that the practice of professionals, such as engineers, surveyors or contractors, representing others in quasi-judicial proceedings through written or oral argument, may be considered the practice of law. Before you proceed with this variance request, you may wish to seek the advice of counsel before having a non-lawyer represent your interests through preparation of this Petition.*

**For this variance request to be complete, the petitioner must provide the information listed below. The undersigned petitioner verifies that this variance request is complete and includes:**

- ☒ The name and location of the development as identified on the permit application;
- ☒ A copy of the permit decision for the development in question;
- ☒ A copy of the deed to the property on which the proposed development would be located;
- ☒ A complete description of the proposed development including a site plan;
- ☒ A stipulation that the proposed development is inconsistent with the rule at issue;
- ☒ Proof that notice was sent to adjacent owners and objectors, as required by 15A N.C.A.C. 07J .0701(c)(7);
- N/A ☐ Proof that a variance was sought from the local government per 15A N.C.A.C. 07J .0701(a), if applicable;
- ☒ Petitioner's written reasons and arguments about why the Petitioner meets the four variance criteria, listed above;
- ☒ A draft set of proposed stipulated facts and stipulated exhibits. Please make these verifiable facts free from argument. Arguments or characterizations about the facts should be included in the written responses to the four variance criteria instead of being included in the facts.
- ☒ This form completed, dated, and signed by the Petitioner or Petitioner's Attorney.



Due to the above information and pursuant to statute, the undersigned hereby requests a variance.

✓ <u></u>	✓ <u>12/28/16</u>
Signature of Petitioner or Attorney	Date
<u>ANDREW THEXTON</u>	<u>athexton@modspring.com</u>
Printed Name of Petitioner or Attorney	Email address of Petitioner or Attorney
<u>12766 RIVER RD</u>	<u>(804) 338-2569</u>
Mailing Address	Telephone Number of Petitioner or Attorney
<u>RICHMOND VA 23238</u>	<u>( )</u>
City State Zip	Fax Number of Petitioner or Attorney

#### DELIVERY OF THIS HEARING REQUEST

This variance petition must be received by the Division of Coastal Management at least six (6) weeks before the first day of the regularly scheduled Commission meeting at which it is heard. A copy of this request must also be sent to the Attorney General's Office, Environmental Division, 15A N.C.A.C. 07J .0701(e).

##### Contact Information for DCM:

**By mail, express mail or hand delivery:**  
 Director  
 Division of Coastal Management  
 400 Commerce Avenue  
 Morehead City, NC 28557

**By Fax:**  
 (252) 247-3330

**By Email:**  
 Check DCM website for the email  
 address of the current DCM Director  
[www.nccoastalmanagement.net](http://www.nccoastalmanagement.net)

##### Contact Information for Attorney General's Office:

**By mail:**  
 Environmental Division  
 9001 Mail Service Center  
 Raleigh, NC 27699-9001

**By express mail:**  
 Environmental Division  
 114 W. Edenton Street  
 Raleigh, NC 27603

**By Fax:**  
 (919) 716-6767



**Petitioner: Andrew & Deborah Thexton**

**Variance Criteria:**

- 1) Will strict application of the applicable development rules, standards or orders issued by the Commission cause the petitioner unnecessary hardships? Explain the hardships.**

*Yes; The NFIP-insured property has been affected by enough flooding events to have it considered a Severe Repetitive Loss Property by FEMA. The petitioner has the opportunity to mitigate the structure through grant funding which will bring the structure into compliance with the current floodplain regulations. Funding under these projects reduces overall risk to the population and structures while also reducing reliance on limited funds that may be available after a disaster.*

- 2) Do such hardships result from conditions peculiar to the petitioner's property such as the location, size or topography of the property? Explain.**

*Yes; The existing house (built in the 1960's) is located on a lot that is susceptible to severe ocean flooding during storm events. Although the Town of Topsail Beach has a very successful beach renourishment program in this area, the structure on property is still vulnerable unless mitigation measures can be taken to protect it.*

- 3) Do the hardships result from actions taken by the petitioner?**

*No; The home's location and existing elevation have created the hardship resulting in repeated flood damage to real and personal property.*

- 4) Will the variance requested by the petitioner (1) be consistent with the spirit, purpose and intent of the rules, standards or orders issued by the Commission (2) secure the public safety and welfare, and (3) preserve substantial justice? Explain.**

*Yes; The variance will allow the petitioner to properly mitigate probable subsequent repetitive flood damage to the existing structure. The proposed work does not involve the expansion or upgrades to the existing footprint. Elevation of the structure to the current standards will protect property and residents. The preferred elevation method will actually reduce damage to the dunes and associated vegetation that would certainly occur if the house was moved closer to Ocean Boulevard. In addition, the current and any future owners will be required to maintain flood insurance in perpetuity.*



# NOTICE OF VARIANCE PETITION BY ADJACENT PROPERTY OWNER

January 16, 2017

Wendell Wall  
1613 Jamaica Drive  
Key West, FL 33040

Dear Adjacent Property:

As you have been previously notified, Andrew & Deborah Thexton at 1117 Ocean Blvd, Topsail Beach, NC are proposing to elevate their existing home through a county flood mitigation program in order to bring it into compliance with current floodplain regulations.

This letter is to inform you that the owners have now applied for a variance to the 60' CAMA ocean hazard setback rule in order to elevate their existing structure in place.

The variance petition will be addressed at the next scheduled meeting of the Coastal Resources Commission (CRC) scheduled for Feb 7-8, 2017 at the Hilton Doubletree in Atlantic Beach, NC.

No action is required from you. If you have questions or comments about the proposed project, please contact Kyle Breuer, Pender County Planning Director at 910-259-1202. If you wish to file written comments or objections with the variance petition, you may submit them to:

Jason Dail, DCM Field Representative  
LPO, Town of Topsail Beach  
NC DEQ/DCM  
127 Cardinal Drive Ext.  
Wilmington, NC 28405

Property Owner:

Andrew & Deborah Thexton  
12766 River Road  
Richmond, VA 23238

U.S. Postal Service  
Certified Mail Receipt

ARTICLE NUMBER  
9414 8118 9956 4993 7277 07

**ARTICLE ADDRESS TO:**

Wendall Wall  
1613 Jamaica Dr  
Key West FL 33040-5230

**FEES**

Postage per piece	\$1.81½
Certified Fee	3.30
<b>Total Postage &amp; Fees:</b>	<b>\$5.11½</b>

Postmark  
Here



**ATTACHMENT E:**  
**STIPULATED EXHIBITS INCLUDING POWERPOINT**



**NORTH CAROLINA GENERAL WARRANTY DEED**

Excise Tax: \$ 992.00  
 Parcel I. D. No. 4212-14-8718-0000

Brief Description for the Index: Lot 9 and northeast 1/2 of Lot 10, Block 22, New Topsail Beach

Prepared by: Dan Rizzo, Attorney, PO Box 2676, Surf City, NC 28445  
 Mail/Hold after recording to: Dan Rizzo, Attorney, P.O. Box 2676, Surf City, NC 28445

**THIS DEED**, made this 15th day of March 2016, by and between **ELIZABETH KIRKLAND PETERS and husband, HYMAN WALSTON PETERS AND ROBERT EDWARD KIRKLAND, III and wife, TERESA JONES KIRKLAND AND LELA LEE KIRKLAND KING and husband, DAVID R. KING GRANTORS;** and **ANDREW S. THEXTON and wife, DEBORAH L. THEXTON GRANTEE;** having an address of: 12766 River Road, Richmond, VA 23238

[The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.]

**WITNESSETH**, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot or parcel of land situated in city of Topsail Beach, Topsail Township, Pender County, North Carolina, and more particularly described as follows:

Lot 9 and the northeastern one-half (1/2) of Lot 10 in Block 22 of a subdivision known as New Topsail Beach, North Carolina, shown on a map prepared by J.T. Wells, Surveyor, and recorded in Map Book 3, Page 72 of the Registry of Pender County; for reference see deeds recorded in Book 683, Page 133 and Book 684, Page 148, Pender County Registry.

The property hereinabove described was acquired by Grantor by instrument recorded in Book 1709, Page 237, Pender County Registry, North Carolina.

All or a portion of the property herein conveyed \_\_\_\_ includes or X does not include the primary residence of a Grantor.



**TO HAVE AND TO HOLD** the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever, other than the following exceptions:

Easements and Restrictions of record.

2016 ad valorem taxes.

**IN WITNESS WHEREOF**, the Grantor has duly executed the foregoing as of the day and year first above written.

  
\_\_\_\_\_  
**ELIZABETH KIRKLAND PETERS**

  
\_\_\_\_\_  
**HYMAN WALSTON PETERS**

\_\_\_\_\_  
**ROBERT EDWARD KIRKLAND, III**

\_\_\_\_\_  
**TERESA JONES KIRKLAND**

\_\_\_\_\_  
**LELA LEE KIRKLAND KING**

\_\_\_\_\_  
**DAVID R. KING**



**TO HAVE AND TO HOLD** the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever, other than the following exceptions:

Easements and Restrictions of record.

2016 ad valorem taxes.

**IN WITNESS WHEREOF**, the Grantor has duly executed the foregoing as of the day and year first above written.

\_\_\_\_\_(SEAL)  
**ELIZABETH KIRKLAND PETERS**

\_\_\_\_\_(SEAL)  
**HYMAN WALSTON PETERS**

*Robert Edward Kirkland III* \_\_\_\_\_(SEAL)  
**ROBERT EDWARD KIRKLAND, III**

*Teresa Jones Kirkland* \_\_\_\_\_(SEAL)  
**TERESA JONES KIRKLAND**

\_\_\_\_\_(SEAL)  
**LELA LEE KIRKLAND KING**

\_\_\_\_\_(SEAL)  
**DAVID R. KING**



**TO HAVE AND TO HOLD** the aforesaid lot or parcel of land and all privileges and appurtenances thereto belonging to the Grantee in fee simple.

And the Grantor covenants with the Grantee, that Grantor is seized of the premises in fee simple, has the right to convey the same in fee simple, that title is marketable and free and clear of all encumbrances, and that Grantor will warrant and defend the title against the lawful claims of all persons whomsoever, other than the following exceptions:

Easements and Restrictions of record.

2016 ad valorem taxes.

**IN WITNESS WHEREOF**, the Grantor has duly executed the foregoing as of the day and year first above written.


\_\_\_\_\_(SEAL)  
**ELIZABETH KIRKLAND PETERS**

\_\_\_\_\_(SEAL)  
**HYMAN WALSTON PETERS**

\_\_\_\_\_(SEAL)  
**ROBERT EDWARD KIRKLAND, III**

\_\_\_\_\_(SEAL)  
**TERESA JONES KIRKLAND**

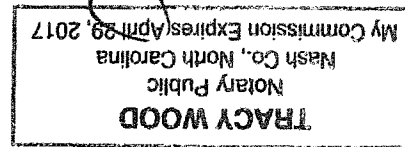
\_\_\_\_\_(SEAL)  
**LELA LEE KIRKLAND KING**

\_\_\_\_\_(SEAL)  
**DAVID R. KING**



State of North CarolinaCounty of Wilson

I, the undersigned a Notary Public of the County and State aforesaid, certify that **ELIZABETH KIRKLAND PETERS and husband, HYMAN WALSTON PETERS** personally came before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein contained. Witness my hand and notarial stamp or seal this 17 day of March, 2016.

My Commission Expires: 4-29-17Tracy Wood  
Notary Public

State of \_\_\_\_\_

County of \_\_\_\_\_

I, the undersigned a Notary Public of the County and State aforesaid, certify that **ROBERT EDWARD KIRKLAND, III and wife, TERESA JONES KIRKLAND** personally came before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein contained. Witness my hand and notarial stamp or seal this \_\_\_\_\_ day of March, 2016.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

State of \_\_\_\_\_

County of \_\_\_\_\_

I, the undersigned a Notary Public of the County and State aforesaid, certify that **LELA LEE KIRKLAND KING and husband, DAVID R. KING** personally came before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein contained. Witness my hand and notarial stamp or seal this \_\_\_\_\_ day of March, 2016.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public



State of \_\_\_\_\_

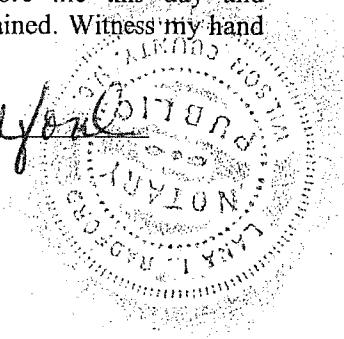
County of \_\_\_\_\_

I, the undersigned a Notary Public of the County and State aforesaid, certify that **ELIZABETH KIRKLAND PETERS and husband, HYMAN WALSTON PETERS** personally came before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein contained. Witness my hand and notarial stamp or seal this \_\_\_\_\_ day of March, 2016.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary PublicState of North CarolinaCounty of Wilson

I, the undersigned a Notary Public of the County and State aforesaid, certify that **ROBERT EDWARD KIRKLAND, III and wife, TERESA JONES KIRKLAND** personally came before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein contained. Witness my hand and notarial stamp or seal this 17 day of March, 2016.

My Commission Expires: 2/5/18Lana L. Radford  
Notary Public

State of \_\_\_\_\_

County of \_\_\_\_\_

I, the undersigned a Notary Public of the County and State aforesaid, certify that **LELA LEE KIRKLAND KING and husband, DAVID R. KING** personally came before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein contained. Witness my hand and notarial stamp or seal this \_\_\_\_\_ day of March, 2016.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public



State of \_\_\_\_\_

County of \_\_\_\_\_

I, the undersigned a Notary Public of the County and State aforesaid, certify that **ELIZABETH KIRKLAND PETERS and husband, HYMAN WALSTON PETERS** personally came before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein contained. Witness my hand and notarial stamp or seal this \_\_\_\_\_ day of March, 2016.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary Public

State of \_\_\_\_\_

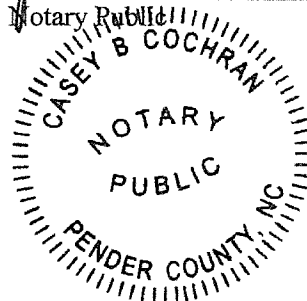
County of \_\_\_\_\_

I, the undersigned a Notary Public of the County and State aforesaid, certify that **ROBERT EDWARD KIRKLAND, III and wife, TERESA JONES KIRKLAND** personally came before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein contained. Witness my hand and notarial stamp or seal this \_\_\_\_\_ day of March, 2016.

My Commission Expires: \_\_\_\_\_

\_\_\_\_\_  
Notary PublicState of NORTH CAROLINACounty of NEW HANOVER

I, the undersigned a Notary Public of the County and State aforesaid, certify that **LELA LEE KIRKLAND KING and husband, DAVID R. KING** personally came before me this day and acknowledged the due execution of the foregoing instrument for the purposes therein contained. Witness my hand and notarial stamp or seal this 18 day of March, 2016.

My Commission Expires: 01/03/2021Casey B. Cochran







OWNERSHIP 03312016 695806 PETERS, ELIZABETH KIRKLAND ETA P O BOX 1207 WILSON, NC 27893 DEED: 1709 237 05182001		PROPERTY DESCRIPTION L9 & N/E 1/2 L10 NEW TOPSAIL B PS 3/72, BLK 22 1117 OCEAN BLVD		TAX SUBDIVISIONS TWP TOPSAIL TOWN OF TOPSAIL BEAC PENDER EMS 564		PIN CARD NO 4212-14-8718-0000 RECORD NUMBER: 06136 ROUTE 61000.0 LISTER: GD 121609 - E REVIEW: DM 072994																																																																		
SCALE 1:147 		TOPO ROLLING STREET EXCELLEN UTILITY ELECTRIC WATER (P) SPTCTANK		ZONING R-1 NOTES: CRT4187 1/4 TO PETERS, HESMER, : L KIRKLAND, R KIRKLAND III		# LAND CLASS SIZE BASERATE*FRNT*DPH*ADJ =ADJ RATE*UNITS=LND-VALUE 1 11LRESD PRI 75F 140D 6000 1.00 0.99 5940 75 445500																																																																		
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DWELLING BEACH COTC-10 B1968 E1975 AVERAGE CONDITION ADJ: 0% BLDG DEPR: 0.60 % DIMENSIONS: A- CU32R44D32L44 B- CD6R44U6L44 C- U32R15CU8R17D8L17 D- R11CU8R18D8L18 # STRUCTURE SKTCH-SF*STHT= AREA RATE*GRDF+HEAT+EXWL*WLHT=ADJRAT* AREA= RPCN* DEPF*CNDF=STR-VALUE <table border="1"> <tr> <td>A 01CSINGLE F</td> <td>1408</td> <td>1.0</td> <td>1408</td> <td>71.03</td> <td>0.9</td> <td>5.35</td> <td>69.28</td> <td>1408</td> <td>97546</td> <td></td> <td></td> <td>97546</td> </tr> <tr> <td>2 BATHS</td> <td></td> <td></td> <td></td> <td>3080</td> <td></td> <td></td> <td></td> <td></td> <td>3080</td> <td></td> <td></td> <td>3080</td> </tr> <tr> <td>B 80CPORCH</td> <td>264</td> <td>0.0</td> <td>264</td> <td>21.44</td> <td>0.95</td> <td></td> <td>20.37</td> <td>264</td> <td>5378</td> <td></td> <td></td> <td>5378</td> </tr> <tr> <td>C 80CPORCH</td> <td>136</td> <td>0.0</td> <td>136</td> <td>24.23</td> <td>0.95</td> <td></td> <td>23.02</td> <td>136</td> <td>3131</td> <td></td> <td></td> <td>3131</td> </tr> <tr> <td>D 35CUNFIN PI</td> <td>144</td> <td></td> <td>144</td> <td>11.00</td> <td></td> <td></td> <td>11.00</td> <td>144</td> <td>1584</td> <td></td> <td></td> <td>1584</td> </tr> </table>								A 01CSINGLE F	1408	1.0	1408	71.03	0.9	5.35	69.28	1408	97546			97546	2 BATHS				3080					3080			3080	B 80CPORCH	264	0.0	264	21.44	0.95		20.37	264	5378			5378	C 80CPORCH	136	0.0	136	24.23	0.95		23.02	136	3131			3131	D 35CUNFIN PI	144		144	11.00			11.00	144	1584			1584
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1117 Ocean Blvd



PENDER COUNTY HEALTH DEPARTMENT  
P.O. Box 1209, Burgaw, NC 28425  
Telephone 919/259-1233

SEPTIC TANK IMPROVEMENTS PERMIT AND CERTIFICATE OF COMPLETION  
Article 11 N.C. General Statutes Chapter 130A  
and

Pender County Rules and Regulations

*Repair*  
Owner/Agent Janet Heesmer Date 20 Jul 1989 Permit# 496233  
Address 1905 Sierra Dr., Wilson 27893  
Location of Site 1117 Ocean Blvd., Topsail Beach

Subdivision \_\_\_\_\_ Lot# \_\_\_\_\_ Section/Block \_\_\_\_\_  
House ☒ Mobile Home ☐ (# Bedrm) \_\_\_\_\_ Business ☐ (# Employees/Members/Seats) \_\_\_\_\_  
SEPTIC TANK SIZE existing Gal. NITRIFICATION FIELD 360 Sq.Ft.  
NUMBER OF LINES 3 LENGTH 30 Ft. DEPTH \_\_\_\_\_ In. BED SYSTEM SIZE 12 X 30

LOCATION OF SYSTEM: See layout sketch or attached plot plan. NO CHANGE IN SEPTIC TANK SYSTEM OR ITS LOCATION WITHOUT PRIOR APPROVAL FROM PENDER COUNTY HEALTH DEPT.

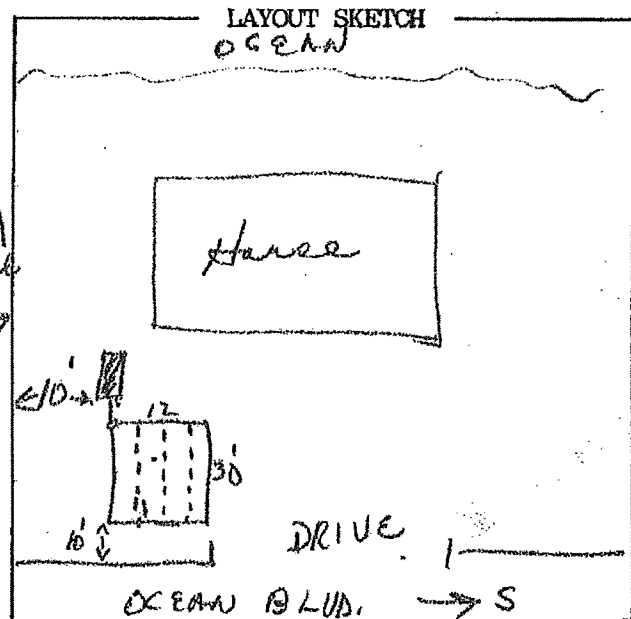
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MINIMUM HORIZONTAL SEPARATION OF SEPTIC SYSTEM TO NEAREST:  
Well: 100 ft. Property Line: 10 ft. Foundation: 5 ft., Ditch or  
Subsurface Tile: 25 ft. (10 ft if upslope).

SPECIAL INSTRUCTIONS OR REQUIREMENTS:

Install new bed system  
on existing tank. Remove  
old distribution line.  
Install new D-box if  
necessary.

*property line*  
*log*



\*\*\*\*\*

This permit does not constitute a warranty or guarantee and satisfactory performance is not assured by the Pender County Health Department.

IMPROVEMENTS PERMIT BY: L. N. Liles, RS PERMIT VALID 36 MONTHS

CERTIFICATE OF COMPLETION BY: Panel C Overstreet DATE: 7-25-89

Installed by: Loe Kewy



## IMPROVEMENTS PERMIT APPLICATION

Pender County Health Department

Environmental Health Section, P.O. Box 1209, Burgaw, NC 28425 436233  
919/259-1233

Date Received

7/20/89

Owner/Agent

Janet Helmer

Phone

328-3007

Address

1905 Sierra Dr. Wilson NC 27893

Directions to property:

Right at Stop Light in Surf City -  
go past town Hall - Emma Archer Church on Rt.  
turn left - to Ocean Blvd - turn Rt. 1117 Ocean

Subdivision

Lot No.

Block/Section

Blvd.

Lot Size

House ☒Mobile Home ☐Business ☐Other ☐

on left

Dwelling - no. of bedrooms

6

; business/other - no. employees, members, seats

on oceanfront

Water supply - Individual ☒ Public ☐Loan: FHA ☐ VA ☐

Contractor

Address

Remarks

Need to repair drain lines

tank 20 yrs old - 1000 gallons

Fees Paid: Evaluation

Permit

Received by:

Blue

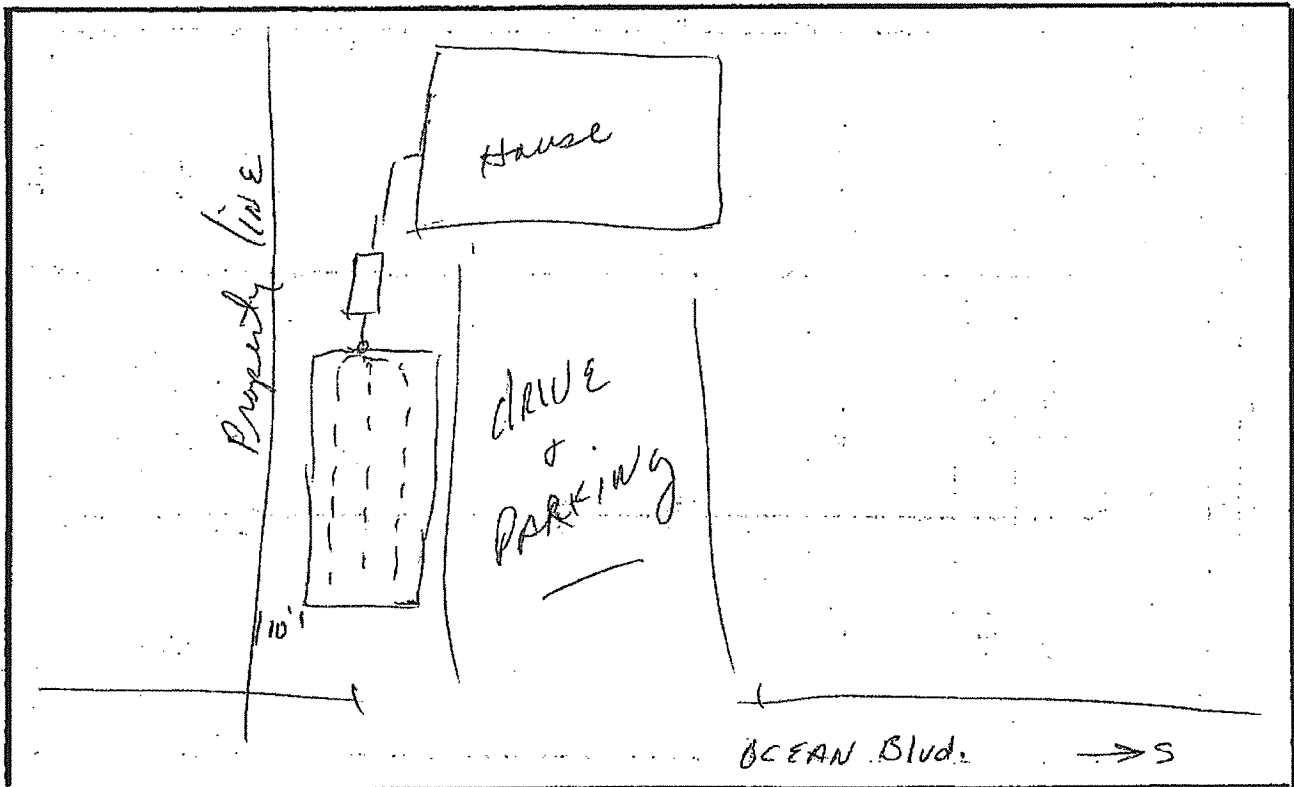
NOTE: Issuance of an Improvements Permit by this office does not necessarily mean that the structure or use of the septic tank system meets county zoning and land use regulations. Contact the Pender County Zoning Officer or Planning Department if you have questions concerning zoning.

Signature of Applicant:

per phone conversation Date: 7/20/89

PCHD EH/103 Rev. July 88

\* Site Layout \*





# Charles R. Fisher Construction Inc.

036

Charles Fisher, Owner

910-262-7861

PO Box 2502, Surf City, NC 28445

## ONSITE WASTEWATER INSPECTION REPORT

No representation, warranties or opinions are hereby given, written or expressed otherwise, as to the future performance of onsite wastewater system described herein. This onsite wastewater system inspection is a presentation of system facts in place on date of inspection.

Address of Property 1117 Ocean Blvd Topsail Beach, NC 28445Current Owner of Record KirklandInspection requested by: Owner of record ☒ Other Name Andrew ThertonCompany (Buyer)

Phone \_\_\_\_\_

Date of Inspection: 2/15/2016N/A Copy of Operations Permit from \_\_\_\_\_ County Environmental Health Attached☒ Operations permit not availableType of water supply: Well ☒ Public Water Community Water

Location of Septic Tank and Septic Tank Details:

9 ft. from house or structureN/A ft. from well if applicable54 ft. from water line if applicable10 ft. from property line12" approximate distance from surface to top of tankAccess riser(s) yes ☒ no Describe: \_\_\_\_\_Tank lids intact ☒ yes noTank has baffle wall ☒ yes noyes Inflow to tank is noted as sufficientno Inflow to tank is noted as insufficient or blockedOutlet has filter yes ☒ noOutlet T is present ☒ yes noEffluent leaves the outlet ☒ yes noRoots present in tank yes ☒ noEvidence of infiltration into tank of surface water yes ☒ noNO Evidence of tank leakage notedN/A Unable to locate tank; System inspection cannot be completed until tank is located.Date tank was last pumped: UnknownPercentage of sludge detected in tank 2' %

Client requesting this inspection has been advised that for a complete inspection to be performed the tank needs to be pumped. Client has declined to have the tank pumped at inspection and hereby acknowledges they have so declined.

Client Signature \_\_\_\_\_ Date \_\_\_\_\_



Does system have pump tank?

\_\_\_yes (if yes, complete blanks below) ☒ no

\_\_\_ feet from house or structure

\_\_\_ feet from well if applicable

\_\_\_ feet from water line if applicable

\_\_\_ feet from property line

\_\_\_ Approximate distance from surface to top of tank

\_\_\_ Access risers in place \_\_\_yes \_\_\_no

\_\_\_ feet from septic tank

Location of control panel: \_\_\_

\_\_\_ Electrical connections are in place and properly grounded

\_\_\_ Alarm working

\_\_\_ Pump working

\_\_\_ Dosing volume correct \_\_\_yes \_\_\_no

\_\_\_ Unable to operate pump due to lack of electricity at site at time of inspection

System requires a subsurface operator \_\_\_yes ☒ no

If yes, Operator Name: \_\_\_

Phone: \_\_\_

Copy of most recent operator report attached

Drainfield:

Located 5 feet from property line2 feet from septic/pump tank

\_\_\_ # of lines located

\_\_\_ length of lines

Type of system: ☒ Conventional \_\_\_Accepted \_\_\_Innovative \_\_\_Experimental \_\_\_Controlled Demonstration  
\_\_\_ Pretreatment; Type of Pretreatment: \_\_\_Brief Description of System Type 12' x 20' Conventional Bed w/ 1000 gal. TankNO Evidence of past or current surfacing at time of inspection

Briefly describe: \_\_\_

NO Large trees or other vegetation noted over drainfieldyes Evidence of traffic over drainfieldBriefly describe: Parking over SystemOther pertinent facts noted during inspection: Recommend pumping tank +installing new sanitary tee w/ FilterInspector Name: Charles R. FisherCertification #: 1983IAddress: P.O. Box 2502 Surf City, NC 28445Phone: 910-262-7861Inspector Signature: Charles R. FisherDate: 2/15/2016



Charles Fisher  
P.O. Box 2502  
Surf City, NC 28445

## Contractors Invoice

TO: Andrew Thexton		WORK PERFORMED AT: 1117 Ocean Blvd Topsail Beach, NC.
DATE 2/15/2016	YOUR WORK ORDER NO.	OUR BID NO.

## DESCRIPTION OF WORK PERFORMED

Septic System

Septic System Inspection

325<sup>00</sup>

Backhoe

150<sup>00</sup>

Total \$ 475<sup>00</sup>

Thank you!  
Charles

Note: Report Attached

All Material is guaranteed to be as specified, and the above work was performed in accordance with the drawings and specifications provided for the above work and was completed in a substantial workmanlike manner for the agreed sum of \_\_\_\_\_

Dollars (\$ \_\_\_\_\_).

This is a ☐ Partial ☐ Full invoice due and payable by: \_\_\_\_\_

in accordance with our ☐ Agreement ☐ Proposal

No. \_\_\_\_\_ Dated \_\_\_\_\_

Month

Day

Year



## NATIONAL FLOOD INSURANCE PROGRAM PROPERTY LOSS HISTORY

01-125624

CURRENT COMPANY/POLICY NUMBER: NFIP SERVICING AGENT/RL00004846

CURRENT PROPERTY ADDRESS:

BLK 22 E S OCEAN BLVD

NEW TOPSAIL BCH, NC 28445-0000

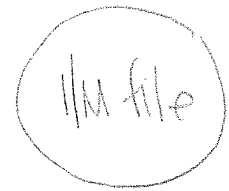
THE INFORMATION PROVIDED BELOW IS THE FLOOD INSURANCE LOSS PAYMENT HISTORY FOR CLAIMS PAID BY THE NATIONAL FLOOD INSURANCE PROGRAM SINCE 1978 FOR THE ABOVE PROPERTY ADDRESS. IF YOU HAVE ANY QUESTIONS ABOUT THIS INFORMATION PLEASE CONTACT THE NFIP AT 866-395-7496.

DATE OF LOSS	BUILDING PAYMENTS	CONTENTS PAYMENTS	TOTAL PAYMENTS
-----	-----	-----	-----
09/16/1999	31556.77	435.48	31992.25
08/27/1998	11484.13	.00	11484.13
09/06/1996	67543.76	8276.55	75820.31
07/12/1996	31462.05	2799.57	34261.62

Loss Payments -  
1117 Ocean Blvd

*Kirkland*





Work Authorization #1 (November 20, 2015 through March 31, 2016)

Contract for Consultant Services

Holland Consulting Planners, Inc. and Pender County

FY14 Flood Mitigation Assistance Project, HCP #5627

#### Background

WHEREAS, Pender County (the County) has received funding for an FY14 Flood Mitigation Assistance (FMA) Elevation and Acquisition Project, and wishes to continue with the initial (preconstruction) phase of the project, including homeowner meetings, surveying, appraisals, and engineering.

#### General Conditions

During completion of the work defined in this Work Authorization, Pender County (the County) and Holland Consulting Planners (the Consultant), agree to abide by all of the terms and conditions outlined in the Contract for Consultant Services for administration of the Pender County FY14-15 Flood Mitigation Assistance Project dated December 14, 2015.

#### Tasks Approved By This Work Authorization

##### *General Administration and Contract Administration Tasks*

- Coordinate homeowner informational process; document citizen concerns and questions; maintain homeowner database.
- Maintain case files.
- Meet with governing body as requested.
- Coordinate project activities with local staff (including financial management).
- Coordinate project activities with designated state agencies; resolve program support and code violation issues.
- Prepare applications for additional Hazard Mitigation and Disaster funds.
- Procurement of Professional Services (Legal/Appraisal/Engineering/Surveying Asbestos Inspections.)

##### *Programmatic Tasks*

- Prepare and distribute project information package to eleven (11) acquisition and elevation applicants
- Prepare a general description of scope of work for elevation/retrofitting and acquisition.
- Hold owners' information meetings and obtain preliminary grant agreements from owners.
- Prepare Administrative Guidelines and administrative forms.
- Prepare financial management guidelines and program budget.
- Initiate surveys and structural feasibility inspections for six (6) units included in the FY14 FMA Elevation Project.
- Initiate legal/appraisal/surveying work for five (5) units included in the FY14 FMA Acquisition Project

#### Fee

For completion of the work items described above, the County agrees to pay the Consultant a not-to-exceed fee of \$30,000. Payment terms, including terms for payment of additional services, shall be in accordance with the Contract for Consultant Services dated December 14, 2015. Hourly rates for the Consultant's personnel are agreed to as follows:



Staff Position	Hourly Rate
<b>Holland Consulting Planners, Inc.</b>	
J. Reed Whitesell, AICP, Project Manager	\$130.00
Chip Bartlett, Program Administrator	\$90.00
Chris Hilbert, Program Manager	\$90.00
Gary Miller, Inspector	\$75.00
Administrative Services	\$60.00

Time Schedule

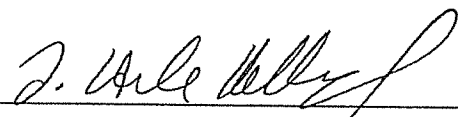
The tasks approved by this Work Authorization shall be completed by March 31, 2016.

The County and the Consultant hereby agree to the full performance of the covenants contained herein.

IN WITNESS HEREOF, they have executed this authorization, this day and year first above written.


HOLLAND CONSULTING PLANNERS, INC.

PENDER COUNTY, NC

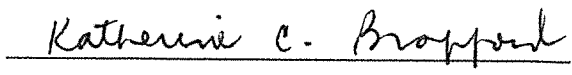
  
T. Dale Holland, President

  
Witness

 2/2/2016  
Kyle M. Breuer, FMA Designated Agent

  
Clerk to the Board

This authorization has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

  
Katherine C. Brapp  
Finance Officer

2-3-2016  
Date

(SEAL)



**Community Development Manager/Senior Planner****PROFESSIONAL AFFILIATIONS:**

American Institute of Certified Planners (AICP)  
American Planning Association (APA)

**EDUCATIONAL BACKGROUND:**

Carleton College, B.A. English, 1975

**RELEVANT PROJECT EXPERIENCE:****Beaufort County, North Carolina**

FY99 NCHFA SFR-Disaster Program  
Hurricane Floyd Repair and Replacement Program  
FY13 Flood Mitigation Assistance Program  
FY13 Flood Mitigation Assistance Program

**Town of Bladenboro, North Carolina**

FY99 NCHFA SFR-Disaster Program  
FY04 NCHFA Urgent Repair Program

**Brunswick County, North Carolina**

FY99 NCHFA SFR-Disaster Project  
Hurricane Floyd Repair and Replacement Program  
FY08 NCHFA-SFR Program  
FY11 NCHFA-SFR Program Housing Inspection  
FY14 NCHFA-SFR Program

**Camden County, North Carolina**

FY07 NCHFA-SFR Program

**City of Charlotte, North Carolina**

Revision of Standard Bid Documents for Single-Family  
Development Programs

**Columbus County, North Carolina**

FY05 Crisis Housing Assistance Repair & Replacement Program

**Craven County, North Carolina**

FY99 NCHFA SFR-Disaster Project  
Hurricane Floyd Repair and Replacement Program  
FY13 Flood Mitigation Assistance Program  
FY14 Flood Mitigation Assistance Program

**Hyde County, North Carolina**

FY08 NCHFA-SFR Program

**Pender County, North Carolina**

FY05 Crisis Housing Assistance Repair & Replacement Program  
FY14 Flood Mitigation Assistance Program

**Sampson County, North Carolina**

FY08 NCHFA-SFR Program

**City of Washington, North Carolina**

FY99 NCHFA SFR- Disaster Recovery Project  
Hurricane Floyd Repair and Replacement Program

**Town of Windsor, North Carolina**

Hurricane Floyd Repair and Replacement Program

Mr. Whitesell earned his B.A. in English from Carleton College in Northfield, Minnesota. His experience includes over forty years in **engineering/planning management**, with two years of experience as controller/general manager for a 40-person engineering/construction supervision firm with offices in four locations. He has worked for Holland Consulting Planners, Inc., since 1989, primarily in **community development** and management of housing related projects, with an emphasis in **hazard mitigation** and **hurricane disaster recovery**. His role as **Community Development Manager** has included such interests as overall project management; preparation of **environmental review records and administrative guidelines/policy development**, and general **project compliance/monitoring coordination** with various local, state, federal and other governing agencies/authorities for over 175 housing and infrastructure projects. Mr. Whitesell also served as Project Manager for development of the Eastern Regional Advisory Committee **Medical Response Plan**, which included **hazard analysis, risk assessment, and development of mechanisms for requesting assistance/supplies** from federal, state, and other agencies for a **28-county region** in North Carolina. He is a member of the **American Institute of Certified Planners**.







## HAZARD MITIGATION PLANNING & PROJECT MANAGEMENT EXPERIENCE

Since 1997, following Hurricane Fran, **Holland Consulting Planners, Inc.**, (HCP) has been at the forefront of North Carolina's hazard mitigation planning and disaster recovery effort, assisting numerous clients in eastern North Carolina with preparation of all hazard mitigation plans, supervision of buyout and retrofitting projects, and management of recovery programs including housing replacement and rehabilitation. HCP has more hands-on flood mitigation and recovery management expertise than any professional consulting firm in North Carolina.

The firm has managed approximately 40 HMGP/HMA elevation and acquisition projects and Crisis Housing Assistance projects (Hurricanes Fran/Bonnie/Floyd/Isabel) and annual Hazard Mitigation Assistance programs. These projects have included preparation of all program assistance policies, contract documents, professional services contracts, homeowner preconstruction and contract administration forms; and complete program management, including comprehensive acquisition and relocation management, elevation and retrofitting or rehab/replacement contract administration, supervision of resident inspection services, and coordination of appraisal, legal, surveying, engineering, and asbestos inspection services. Many of these projects included management of additional funds provided by North Carolina and HUD for utility and floor framing retrofitting and rehabilitation of low-income units.

On an annual basis, HCP provides supervision of the Flood Mitigation Assistance (FMA) acquisition/elevation application process for Beaufort County, Craven County, Hyde County, Pender County, and the Towns of Carolina Beach, Wrightsville Beach, and Windsor (approximately 75 units funded 2008-2016).

Recent experience includes the following:

**1987-2004:** Preparation of Post-Disaster Recovery and Evacuation Plans and Storm Hazard Mitigation Policies, including mapping of flood-prone areas and high wind zones, for over 35 units of government in eastern North Carolina as part of Land Use Plans required by North Carolina Coastal Area Management Act (CAMA) regulations.

**September 1996 – June 1997:** Following Hurricane Fran, assisted North Carolina Division of Emergency Management and several eastern North Carolina communities with preparation of "Urgent Need" HMGP Elevation Applications for submittal to FEMA Region IV.

**October 1997 – December 2003:** Administration of five HMGP elevation and acquisition projects (Hurricane Fran/Bonnie) outlined below, including preparation of all program assistance policies, contract documents, professional services contracts, homeowner preconstruction and contract administration forms; and complete program management, including elevation and retrofitting contract administration, supervision of resident inspection services, and coordination of legal, surveying, engineering, and asbestos inspection services. Projects included management of additional funds provided by North Carolina and HUD for utility and floor framing retrofitting and rehabilitation of low-income units.

1. Beaufort County, NC (Hurricane Fran) – 75 elevated units – completed in December 2001.



## HAZARD MITIGATION PLANNING & PROJECT MANAGEMENT EXPERIENCE

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2. Beaufort County, NC (Hurricane Bonnie) – 25 elevated units – completed in December 2002.
3. Belhaven, NC (Hurricane Fran) – 255 elevated units – completed in February 2003.
4. Craven County, NC (Hurricane Fran) – 7 elevated units – completed in December 2000.
5. Washington, NC (Hurricane Fran) – 40 elevated units/21 acquired units – completed in March 2001.

**January 1998 – present:** Participation in development of NC planning standards for preparation of Hazard Mitigation Plans by local units of government; preparation of Hazard Mitigation Plans for over thirty (30) local units of government, including one of two pilot Regional HMPs within the State of North Carolina. Subsequent preparation of five additional Regional HMPs.

**December 2000 – June 2004:** Administration of HMGP/HFPAR Acquisition Projects and/or NC Crisis Housing Assistance Projects for sixteen local units of government in eastern North Carolina following Hurricane Floyd (September 1999). HCP has managed the acquisition of over 700 flood-damaged structures with HMGP/HFPAR funds, including management of related homeowner and tenant relocation programs. In Greenville, the firm assisted the city staff with the acquisition of over 400 parcels. Additionally, HCP managed the elevation/repair or replacement of an additional 500 residential units through the Crisis Housing Assistance program.

**June 2005 – March 2008:** Administration of five HMGP elevation and acquisition projects (Hurricane Isabel) outlined below, including preparation of all program assistance policies, contract documents, professional services contracts, homeowner preconstruction and contract administration forms; and complete program management, including elevation and retrofitting contract administration, supervision of resident inspection services, and coordination of legal, surveying, engineering, and asbestos inspection services.

1. Beaufort County, NC – 14 elevated units – completed in June 2006.
2. Belhaven, NC – 15 elevated units – completed in June 2006.
3. Edenton, NC – 1 elevated unit; 3 acquisition units – completed in June 2006.
4. Hertford County, NC – 3 acquisition units – completed in December 2007.
5. Hyde County, NC – 4 acquisition units; 26 elevation units – completed in October 2006.

**August 2005 – December 2007:** Management of CDBG Supplemental Assistance Programs for replacement/rehabilitation of homes damaged by Hurricane Isabel in Hyde County, Beaufort County, and Belhaven, NC.

**January 2006 – December 2010:** Management of state-funded Crisis Housing Assistance programs in Pender County and Columbus County, NC, for 2004 tropical storm recovery.

**January 2008 – Present:** Management of annual FMA elevation application/management processes for Beaufort County, Craven County, the Town of Carolina Beach, Pender County, Hyde County, Oak Island, and Wrightsville Beach.





## HAZARD MITIGATION PLANNING & PROJECT MANAGEMENT EXPERIENCE

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**July 2013 – Present:** Management of Hurricane Irene HMGP acquisition/elevation projects for Beaufort County, Craven County, Hyde County, and Pamlico County (65 units).

**March 2015 – Present:** Management of FY13 FMA projects for the Town of Carolina Beach, and Beaufort and Craven Counties (20 units), and FY14 FMA projects for the Town of Carolina Beach, and Beaufort, Craven, and Pender Counties (30 units).



Sworn Affidavit By J. Reed Whitesell, AICP

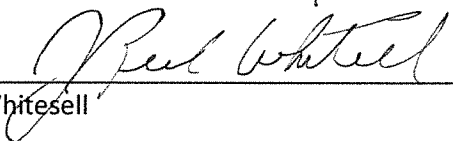
Date: January 26, 2017

Reference: Pender County Flood Mitigation Assistance Program  
Elevation of Properties at 1117 and 1121 Ocean Boulevard, Topsail Beach NC  
Variance Request for Required FLSNV Setback

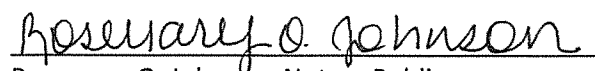
This affidavit made this 26th day of January, 2017, serves to confirm the following facts related to the elevation of the two referenced structures included in the Pender County FY14 FMA Elevation Program. These facts are based on my personal review of all preconstruction and engineering documents related to the proposed elevations, and on my experience in the management of numerous flood mitigation programs in eastern North Carolina since Hurricane Fran in 1996.

1. The purpose of the prescribed mitigation method (elevation) is solely to protect the residential structures and their contents from future flood events through elevation of the structures on the existing footprints to the required freeboard (3.0 ft.) described in the Town of Topsail Beach Flood Damage Prevention Ordinance. FMA-sponsored elevation is not intended to provide a substantial improvement or increase in existing property value, although the cost sometimes exceeds 50% of the existing structure value.
2. Based on extensive discussions with the Project Engineer and the low bidder, it is my clear understanding that the proposed elevation methodology, utilizing a combination of existing and new pilings to elevate the structures to the required freeboard height, is a more cost-efficient method than moving the structures away from the FLSNV and elevating the structures on new pilings. Moreover, my review of the site surveys and my personal on-site inspection of the elevation sites in October 2016, leads me to believe that moving the structures to the required setback for new construction might lead to violation of the Town of Topsail Beach's zoning requirements, and would significantly limit the owners' ability to construct additional (non-substantial) improvements to decking and accesses in the future.

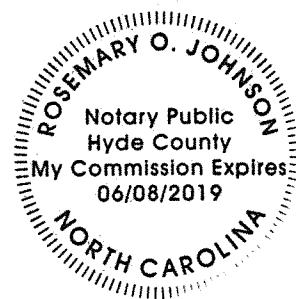
Sworn this 26th day of January, 2017.

  
J. Reed Whitesell

Sworn to, and subscribed by me, this the 26<sup>th</sup> day of January, 2017.

  
Rosemary O. Johnson, Notary Public

My Commission Expires: 6/19/2019





**JOHN B. "CHIP" BARTLETT, JR., AICP****Program Administrator****PROFESSIONAL AFFILIATIONS:**

American Planning Association (APA)  
American Institute of Certified Planners (AICP)

**EDUCATIONAL BACKGROUND:**

B.S. Urban and Regional Planning, 1993  
East Carolina University

Completion of 15 hours of coursework in Law and  
Administration required by the NC Code Officials Qualification  
Board, 1997

Certification in Safe Work Practices for Lead Hazard Reduction,  
2002

Introduction to ARC/GIS 9, 2004

NCHFA-SFR Implementation Workshop, 2007

Community Development Academy, 2003

**RELEVANT PROJECT EXPERIENCE:**

**Town of Ayden, North Carolina**  
Planning Services

**Town of Bladenboro, North Carolina**  
FY99 NCHFA SFR-Disaster Program  
FY04 NCHFA Urgent Repair Program

**Brunswick County, North Carolina**  
FY99 NCHFA SFR-Disaster Project  
Hurricane Floyd Repair and Replacement Program  
FY08 NCHFA-SFR Program  
FY11 NCHFA-SFR Program Housing Inspection  
FY14 NCHFA-SFR Program

**City of Clinton, North Carolina**  
FY09 CDBG Infrastructure (Pugh Road) Program  
FY10 CDBG Contingency (Eliza Lane) Program  
FY12 CDBG Infrastructure Program

**Town of Carolina Beach, North Carolina**  
FY14 Flood Mitigation Assistance Program

**Columbus County, North Carolina**  
FY05 Crisis Housing Assistance Repair & Replacement Program

**Craven County, North Carolina**  
FY99 NCHFA SFR-Disaster Project  
Hurricane Floyd HMGP/SARF Acquisition/Relocation Project  
Hurricane Floyd Repair and Replacement Program  
FY09 CDBG Scattered Site Program  
Hurricane Irene HMGP Elevation/Acquisition Project  
FY12 CDBG Scattered Site Program  
FY12 CDBG Infrastructure Program  
FY13 Flood Mitigation Assistance Program  
FY14 Flood Mitigation Assistance Program

**Pender County, North Carolina**  
FY05 Crisis Housing Assistance Repair & Replacement Program  
FY14 Flood Mitigation Assistance Program

Mr. Bartlett earned his B.S. in **Urban and Regional Planning** from East Carolina University. He has worked for Holland Consulting Planners, Inc., since 1996. His principal focus has been on **community development** and management of housing related projects. Other areas of experience include **land use planning** and **zoning/subdivision regulations**. Mr. Bartlett has experience in preparation of **environmental review records and administrative guidelines/policy development**, and general **project compliance/monitoring coordination/labor standards compliance** with various local, state, federal and other governing agencies/authorities for numerous housing rehabilitation/redevelopment projects. He has also provided **planning services** to the Town of Ayden, and has assisted in the preparation of **land use plans** and **subdivision/zoning regulations** for several municipalities. He is a member of the **American Institute of Certified Planners**.







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 Rocky Mount, NC 27804  
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 bjoyner@appianengineers.com • www.appianengineers.com

## **BOBBY L. JOYNER, P.E.**

### President

#### **Education**

1974 Mathematics  
 1972 Civil Engineering Studies  
 1968 Associate Degree in Mechanical Engineering

#### **Professional Memberships**

Professional Engineer – North Carolina, 1978, Virginia, 1979

#### **Strengths**

Creativity in problem solving, innovative, broad based experience in municipal, Civil and Structural engineering, forensic engineering inspections.

#### **Professional Experience**

##### **PRIOR TO APPIAN**

Experienced in wide range of civil, municipal, and structural projects. Responsible for complete design, contract and construction administration of all public works projects for City of Rocky Mount as Director of Engineering from 1982-1986. Extensive experience in water transmission, sewer collection, and sewerage lift stations, roadway/street design and rebuilding, building design, and hydrological studies and design of large complex drainage systems. As City Engineer, he also established an on-site soils lab to provide staff-based testing and evaluation of soils on City projects. Mr. Joyner as well as staff inspectors were trained in soil testing and evaluation. The lab also provided testing of private development work as it related to projects that would become part of city maintenance. Experience prior to becoming City Engineer was in the capacity of Asst. City Engineer, Traffic Engineer & Staff Engineer.

##### **WITH APPIAN**

Mr. Joyner opened Appian Consulting Engineers, PA in 1986. Since then, he has designed many commercial and residential subdivisions, performed site design for hospitals and schools, industrial sites, and large shopping centers. He also has extensive experience in municipal engineering projects such as water distribution systems, booster pump stations, elevated tanks, sewer rehabilitation and complex potable well/tank systems for industrial and rural school applications. Most recently he was responsible, from conception to completion, for site, grading, drainage, and utility design for a 1.2 million SF Universal Leaf Tobacco Processing Plant located on a 1000-acre site in Nash County, NC and a 1 million SF QVC Distribution Facility in located in Edgecombe County. Mr. Joyner has been employed by various industries to solve drainage problems relating to both large roofs and site related issues in NC and SC.

He has experience in retrofit roofing surveys, design, and inspections and structural investigations, water distribution system modeling and analysis, HEC 1 & HEC 2 Flood studies, levee and floodwall design, flood pumps, and NFIP FEMA Map Amendments.



Mr. Joyner has been involved with the EDA grant process at all stages of project development including assisting with the preparation of pre-application, meeting with EDA and governmental officials in preliminary phases, assisting with the grant application, complete project design and project administration/execution in conformance with EDA regulations.

## STRUCTURAL

Mr. Joyner is the principal structural Engineer for Appian providing design services for bridges, buildings, and municipal infrastructure such as box culverts, deep drainage structures, etc.

**Residential and Commercial Inspections:** Mr. Joyner has conducted in excess of 3000 residential, commercial and industrial inspections in North Carolina and Virginia with an emphasis on cause and effect. Forensic investigations often focus on the structure as a whole which may include air quality testing and the contribution of the HVAC to air quality, structural analysis, exterior grading and drainage plans, partial site topographical surveys, and soils investigation.

**Hurricane Elevation Raisings:** Since 1999, Appian has partnered with Holland Consulting Planners, Wilmington, NC to provide structural inspection and design of foundation systems for more than 200 homes that had been approved for elevating. These homes, approved for Federal assistance, were flooded during a number of Hurricanes. The Counties include Hyde, Pamlico, New Hanover, and Beaufort Counties.

**Expert Witness:** Mr. Joyner is often employed by Insurance Companies and Attorneys to perform inspections and provide expert testimony on cases involving both residential and commercial structures.

## PATENTS

1. Holds 3 U. S. patents from the US Patent Office on the following:
  - A. **Industrial Splash Pad – Patent No. 7,052,212:** The Industrial Splashpad is designed to kill the energy from downspouts serving large roof areas, distribute the flow over a wide ogee spillway, and then deposit the flow nearly parallel to the ground at very low non-erosive velocities. 65 of the prototype pads were first installed at Universal Leaf Tobacco's 1.2 million square foot tobacco processing plant. The splashpad is being manufactured and distributed locally. Manufactured from high density polyethylene, the first units are scheduled to come off line in 2013. A second patent was applied for in the summer of 2012 and involved significant improvements to the original patent. Also, the second patent included unique Splashpads for middle-range roofs (i.e. commercial).
  - B. **Method of Using High Carbon Coal Ash for Treatment of Stormwater Runoff – Patent No. 7,311,844:** Research conducted by Virginia Tech in 2008. Treatment system significantly reduces Nitrogen, Phosphorus, and other constituents from stormwater runoff. Field trials will be underway shortly
  - C. **Method of Using High Carbon Coal Ash for Treatment of Domestic Wastewater – Patent No. 7,455,780:** Research conducted by Virginia Tech in 2008. Tertiary treatment system of domestic waste significantly reduces Nitrogen, Phosphorus, and other constituents and polishes effluent prior to placement in underground nitrification field.
  - D. **Patents Pending:** Two patents pending in stormwater management (information relating to these two pending patents is proprietary).



## OTHER

1. **Book Authored:** Authored a book in 2006 titled *"10 Successful Steps to Successfully Developing a Public Facilities Manual."* Like the manual, the book is sold at trade shows and can be purchased on-line.
2. **MuniSPEC® – A Municipal Public Facilities Manual:** Authored and copyrighted (Registration Number TXu 1-788-389, February 7, 2011) a state-of-the-art Manual of Specifications, Standards and Design that is marketed to municipalities. The manual, a 1,200+ page document, includes Standard Municipal Specifications, 150 to 225 pages of standard Public Works Details, and an extensive design developed by Appian that covers:

### Municipal Design Manual Elements:

- a. Municipal street design Manual (which includes soils evaluation and analysis of traffic loads),
- b. Segmental Retaining Wall Design,
- c. Boardwalk & Footbridge Design,
- d. Water Distribution, Gravity Sewer, Pressure Sewer, and Sanitary Sewer Pump Station Design Manual,
- e. Traffic Calming (design and measures),
- f. Traffic Impact Analysis, and
- g. Stormwater Design: Stormwater design covers hydrological analysis, hydraulic design of surface and subsurface piped systems, BMP design, nutrient management and Low Impact Design (LID) considerations. The stormwater design section provides the minimum design requirements and methods required of a designer when designing systems that will be reviewed and taken over for maintenance by a municipality.

Example problems are provided throughout the entire design section.

The Manual, tailored to the municipality, is offered in hardcopy, searchable CD, or web format. The Manual is marketed nationwide and shown at public works tradeshow annually. Some of our clients include: the City of Wilson, NC, the City of Greenville, the Town of Clayton, NC, Orange Water and Sewer Authority (OWASA), NC; the Town of Wake Forest, NC, Kittrell Water Association, Kittrell, NC, The City of Durham, and others.

In addition, Appian has set up MuniSPEC® as a user-friendly interactive and searchable digital file that uploads to both the web and iPads.

3. **Public Works Details Drawing Base:** Developed a comprehensive in-house library of standard public works details in AutoCAD format. The drawing base is comprised of over 2000 separate details for water, streets, drainage, sewer, traffic calming, BMP's and erosion. Rarely seen in civil/municipal projects, the details we offer are in exploded view and isometric. The details, used extensively by municipalities and private engineering firms across the nation, are available for purchase from Appian. Our catalogue of details also includes a large number of NCDOT standard details in AutoCAD format; drawings generated by our CAD staff directly from NCDOT drawings.
4. **Precasters Catalogues:** As a direct result of our efforts in conveying structures in isometric and exploded view formats, Appian has developed manufacturer's



catalogues (hard copy and CD) for concrete precasting companies and plastic septic tank manufacturers located all over the United States. Some of these catalogues are rendered in color. A unique feature we offer is a standard detail of a specific tank line (e.g. septic, pump, or grease trap) that uses a database to automatically fill in the dimensions, and displays volume, weight, and product number. For grease traps, we provide a separate spreadsheet that computes the average and maximum flow, storage volume and maximum grease volume (based on the uniform plumbing code method). The designer need only select the desired tank size and the drawing instantaneously provides all necessary data for the drawing to be used as a shop drawing or for submittal.

5. **Seminar Speaker:** Mr. Joyner holds/teaches seminars on *How to Develop Your Own Public Facilities Manual* for Public Works Directors and City Engineers; moisture prevention in crawl spaces; and mold detection and prevention in new and existing construction.



## Appian Consulting Engineers, PA

Post Office Box 7966	Bobby L. Joyner, PE, President
154 Roundabout Court	252.972.7703, phone
Rocky Mount, NC 27084	252.972.7638, fax
www.AppianEngineers.com	bjoyner@appianengineers.com

**Appian Consulting Engineers, P.A.** is an engineering design firm structured to serve North Carolina and southeastern Virginia with our office located in Rocky Mount, North Carolina. Appian has been a reliable presence in eastern North Carolina since its inception in 1986 by its owner and President Bobby L. Joyner, PE. Mr. Joyner's experience is extensive in the area of municipal engineering and design as he worked for the City of Rocky Mount for more than 18 years, with the last four years as the Director of Engineering.

Our team's extensive multi-disciplinary experience will ensure that all construction work is performed in conformance with safety requirements, contract requirements, and quality control/ quality assurance practices. Appian will work closely with all parties involved to ensure that a superior construction product is delivered on time and within budget. Hourly rates are attached.

## The Appian Team

The Appian Team will consist of the following personnel providing exceptional expertise:

**Bobby L. Joyner, P.E., President:** Mr. Joyner obtained his Civil Engineering Diploma in 1972 and became a professional engineer in 1978. He has extensive experience in municipal engineering and planning as he worked for the City of Rocky Mount as the Rocky Mount City Engineer (1982-1986) and in the engineering department for more than 18 years. Mr. Joyner has more than three decades of experience in design for FMA, HGMP, SRL, CDBG, municipal, industrial, commercial and residential projects including structural and retrofit design, water system distribution, drainage improvements, sewer rehabilitation and sewage pump station design, pier and bridge design, wave modeling, and flood studies. Mr. Joyner provides forensic studies on both mold and crawl space moisture control in commercial and residential buildings. Recognized as an expert in NC and VA, consultants and attorneys frequently refer their clients to Appian for investigations, design and expert testimony in court cases. In addition to acquiring three patents, he has authored a state of the art *Manual of Specifications, Standards and Design*, which Appian has developed for numerous cities in Virginia and North Carolina. He was involved in *all* of Appian's projects listed below. Mr. Joyner will be the Project Engineer and Inspector (as needed) for the project.

**David C. Revoir, P.E.:** Bringing experience from Maryland State Highway Administration and Greenhorne & O'Mara, Mr. Revoir has a broad range of experience in CDBG, municipal, industrial, commercial and residential projects including water distribution analysis, street design, stormwater modeling, sewer design, and erosion control. Mr. Revoir routinely leads projects through conceptual layout, detailed design, permitting, contract bidding, construction administration and as-built certification. He is adept at providing railroad design, no-net rise flood studies, SWPPP/SPCC Plans, and swimming pool compliance for the Virginia-Graeme Baker Pool and Spa Safety Act. Contributing

"The construction drawings and specifications that your firm produces are **detailed** and **comprehensive** and portray a **thorough understanding** of the construction process. As a matter of fact, the U.S. Department of Commerce Economic Development Administration will be using your firm's specifications and contract documents as **the model** for other engineering firms to follow..."

Milton Cochran, Sr.  
US Department of Commerce  
Economic Development Administration



author for Stormwater Design for the *Manual of Specifications, Standards and Design*, Mr. Revoir is the engineer for Franklin County Stormwater Review. He has extensive experience with stormwater modeling, stormwater BMP design and writing municipal stormwater ordinances. He is a Sustainable Land Development International (SLDI) Associate Member and LEED Accredited Professional (*LEED AP Building Design + Construction*) with the U.S. Green Building Council. Mr. Revoir's responsibility on this project will be that of project manager.



**Michael Gallina, Jr., CAD Manager:** Mr. Gallina has been with Appian for more than 21 years and has extensive experience in creating master plans, site plans, street plans, and profiles, water and sewer lines, grading, and erosion sedimentation control, construction plans, utility plans and staking plans. He has also developed both 3D and isometric details on all our plans to clearly convey the intent of the detail to those in the trenches. As a result, Appian developed catalogues for a number of national precast manufacturers, including: *NC Precast* (Hanson, Needville, TX), *Fralo Plastics* (Syracuse, NY), *Dellinger* (Mecklenburg County, NC), *Mack Industries* (Sharpsburg, NC and Valley City, OH), *Albuquerque Vault* (Albuquerque, NM) and *Ideal Precast* (Raleigh, NC).

Appian will strive to maintain equal participation of *Disadvantaged Business Enterprises (DBEs)* and to utilize DBE's to the maximum extent as possible. Appian will use Small Business Administration (SBA) information and other agencies to determine and develop a list of local DBE's qualified for this project. We are committed to advancing the *Historically Underutilized Business* community.

## Engineering & Project Experience

Appian has extensive experience with many municipalities ranging from small to large projects, involving a full range of engineering services. As you can see below, Appian has been involved in a plethora of similar projects in eastern North Carolina for the past three decades:

### **APPIAN'S FLOOD MITIGATION WORK INCLUDES:**

#### Residential Elevation Raising Projects:

Craven County  
Beaufort County  
Carolina Beach  
Pamlico County  
Hyde County  
Washington, NC  
Belhaven, NC

#### Some of the Most Recent Projects:

#### *Pender/ Onslow County House Raising and Foundation Plans (2013)*

Craven County 2015/16 (FY 13) FMA  
Pamlico County 2015/16 HMGP  
Beaufort County 2014 HMGP  
Beaufort County 2013 HMGP  
Beaufort County 2012 PDM  
Beaufort County FY 2010 SRL Program and Hurricane Irene HMGP  
Beaufort County SRL Program FY 2008  
Beaufort County Isabel HMGP Grant FY 2006



Carolina Beach HMGP 2009 (New Hanover County)  
Hyde County 2012 PDM  
Hyde County 2013 HMGP  
Hyde County 2014 HMGP

**RELATED STRUCTURAL WORK INCLUDES:**

1. Residential & Commercial Forensic Investigations:
  - Mr. Joyner has performed over 2500+ residential structural inspections; many of which related to foundation problems. His charge was to determine cause and provide recommendations and/or design documents for foundation stabilization/repair.
  - Design pre- and post-construction helical piling plans for both residential and commercial buildings throughout NC & VA. This particularly includes HMGP elevation raisings in high wind zones.
  - Mr. Joyner has extensive soils experience having managed and overseen soils testing services while employed with the City of Rocky Mount and as a branch of Appian Consulting Engineers.
2. Examples of other types of foundation design include:
  - Building & Foundation design for Engineered Metal buildings for Industrial, Commercial, Churches, Municipal and Private companies/individuals.
  - Asphalt Batch Plants Foundations
  - Drying Towers Foundations
  - Microwave Antenna Guy foundations (using helical piers)
  - Drying Pits
  - Rail loading facilities (dump pits, push walls, etc.)
  - Conveyor trusses and foundations for same
  - Grain Silo foundations
3. Design, Contract Documents, Specifications & Project Management Examples:
  - Craven County CDBG Contingency Infrastructure
  - Craven County CDBG-CR
  - Craven County Stormwater Ordinance
  - Site Drainage Mitigation Plan 2013 for QVC Distribution warehouse, Florence, SC,
  - Nash County CDBG 2010: Drake Community Center
  - Town of Wake Forest Street Paving Program 2009-2011
  - Town of Wake Forest Street Paving Program 2012/2013
  - City of Rocky Mount Candlewood Road Culvert Replacement 2015
  - City of Rocky Mount Wastewater Treatment Plant Sludge Pumping Station (2 stations) 2013
  - City of Rocky Mount Fleet Maintenance Tire Repair Facility 2013
  - City of Rocky Mount Annexations Infrastructure 2009-2011
  - City of Raleigh WWTP Maintenance Facility 2013
  - City of Henderson CDBG-HD 2007
  - City of Henderson CDBG 2005
4. Related Contract Document Experience: Appian authored & copyrighted a Public Facilities Manual developed specifically for Engineering & Public Works Departments. Some of the municipalities that have our manuals include:
  - City of Wilson Manual of Specifications, Standards and Design 2008 with annual updates
  - Town of Clayton Manual of Specifications, Standards and Design
  - City of Greenville Manual of Specifications, Standards and Design 2010
  - City of Durham Manual of Specifications, Standards and Design 2012
  - Town of Wake Forest Manual of Specifications, Standards, and Design 2000 & 2012 updates
  - OWASA W&S Manual of Specifications, Standards and Design



### **OTHER ARCHITECTURAL/STRUCTURAL ENGINEERING PROJECTS PERFORMED BY APPIAN:**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• ABC Store – Beaufort County</li> <li>• ABC Store – Atlantic Beach</li> <li>• ABC Store – Cape Carteret</li> <li>• Edgemcombe County Farm Bureau (Tarboro)</li> <li>• Sara Lee (Tarboro), 2009</li> <li>• South Rocky Mount Community Center</li> <li>• Smith Creek Wastewater Treatment Plant Maintenance Building 2013 (City of Raleigh)</li> <li>• Edwards Crane Steel Fabrication Complex</li> <li>• QVC Distribution Center High Roof Drainage</li> <li>• Nash Community College Culinary Arts Shelter</li> <li>• Red Oak Volunteer Fire Depart Cast-in-place UG water storage tank</li> </ul> | <ul style="list-style-type: none"> <li>• Performance Small Engine Center</li> <li>• Southside Baptist Church, 2014</li> <li>• Church on the Rise</li> <li>• Golden East Mall Expansion</li> <li>• Terminix Conference Center</li> <li>• Whitakers Business Center Shell Building</li> <li>• OIC for the City of Rocky Mount</li> <li>• Coopers Volunteer Fire Department</li> <li>• Englewood Baptist Church in Roanoke Rapids</li> <li>• Eyemart, Durham, NC</li> <li>• Retaining Wall (NC 98 By Pass)</li> <li>• City of Rocky Mount L&amp;M Stemmary Building (SSMR Roof repair)</li> <li>• Nash Community College Maintenance Facility Expansion.</li> <li>• Sylvan Water Fowl Visitor Center</li> </ul> |
|---|--|

Appian has extensive experience in elevation raising projects; specifically for *Hurricane Isabel* and *Hurricane Irene* though much of the latter has focused on structural inspections, elevation design relating to repairs and recovery. Elevation raising projects have been performed in *Craven County, New Hanover County, Beaufort County, Carolina Beach, Pamlico County, Hyde County, Belhaven and Washington*. In addition, we assisted in repairs, recovery and elevation raisings for projects relating to *Hurricane Fran* and *Floyd* though not through the Severe Repetitive Loss Hazard Mitigation Grant Programs.



Elevation Raising  
Belhaven, NC

### **PROPOSED SCOPE OF SERVICES:**

Obtain elevation certificates from licensed surveyors and determined the final finished floor elevation based on the BFE plus the applicable locally required freeboard.

- Compile an engineering report on each structure and make recommendations to the program administrator as to whether or not the structure could either economically or structurally be elevated. Detailed photographic survey of structure will be made logging locations and types of existing distress observed during the initial inspection.
- Inspect each house (attic framing, interior, exterior and crawl space). If areas of the crawl space are inaccessible, we can send in our "Spiderbot" camera to inspect the inaccessible areas (photo at right).
- Obtain field measurements of the interior, exterior and crawl space of each house. After a comprehensive load analysis (wind and





gravity loads), and using field notes and inspection findings, develop new foundation plans. From the engineered drawings, prepare construction documents which include:

- Existing and proposed foundation plan, foundation and floor framing notes, and construction details (connecting existing wall to the new floor, piling/ floor framing connection, cross bracing, etc.).

**Construction Phase:**

- Appian will provide limited on-site inspection and review of Contractor’s work at the request of the County, including written documentation that the completed foundation and accesses were properly constructed.
- Depending on the conditions exposed during demolition, modify plans as needed to adapt to latent field discoveries. In most cases Appian’s engineers are able to evaluate the soils and render an opinion as to suitability or recommend subgrade improvements necessary to stabilize a weak subgrade. For difficult projects, we call in a Geotechnical Engineer.

Sample plan excerpts from both previous *Beaufort County* and *Carolina Beach* elevation projects are included in this proposal.

**Hurricane Isabel & Irene HMGP Elevation Projects:**

Appian performed a pre-elevation inspection of each structure, provided a technical feasibility analysis for structures requiring design modifications, developed foundation drawings and specifications based on the NC Residential Building Code and provided on-site inspections and review of contractor’s work as needed. Appian engaged in contracts with *Beaufort County, Carolina Beach, Pamlico County, Hyde County, and the Town of Belhaven*, elevating *more than 150 houses* in NC coastal regions.



Elevation Raising  
Carolina Beach HMGP 2009





## Featured Projects & Capabilities

**Ocean Ridge Village:** Appian provided complete structural design for a number of new single family beachfront dwellings in *North Topsail Island* (135 mph wind zone design speed, a finished floor elevation two feet above the 100 BFE, knock out panels, flood vents, deck assemblies isolated from the main structure, corrosion resistant fasteners, and bracing/reinforcing for pilings, tall walls, window jack studs, headers, etc.).



### **City of Rocky Mount Tar River Bikeway**

Appian provided design for the Tar-River Bikeway in Rocky Mount, NC: providing topographical survey, grading plans, HEC-2 studies, no-net rise certification, and design of both a cantilevered aluminum bridge and the iconic timber arch bridge. The timber arch suspension bridge (right) was part of the Tar-River Bikeway project we designed for the City, and was erected in 2001. The bridge has the *World Record for Timber Arch Bridge Span* of 220 feet, which is 40 feet longer than the next longest span. The bridges were part of more than two (2) miles of scenic bike



paths and elevated timber walkways for which Appian provided plans and permitting along the Tar River. This Tar River Greenway Trail runs along its namesake and passes through several city landmarks. Flood studies of the Tar River were required for both structures.

**Craven County CDBG-CR 2008:** Holland Consulting Planners contacted Appian in 2008 to provide a Preliminary Engineering Report (PER) with construction cost estimates for the Community Revitalization Project in James City, NC. The project consists of establishing the existing road right-of-way, 1,420 LF of street paving, 1,200 LF of 6" watermain, 850 LF of 2" sewer forcemain relocation, storm drainage, and rehabilitation by replacement of existing sewer tank effluent pumping (*STEP*) systems. This includes coordination with various governmental agencies including: NCDENR Land Quality, NCDENR Division of Water Quality, NCDENR CAMA, NCDOT, NC Railroad and Norfolk-Southern. Craven County awarded the design, surveying, construction administration, and inspections to Appian.



## Manuals of Specifications, Standards and Design

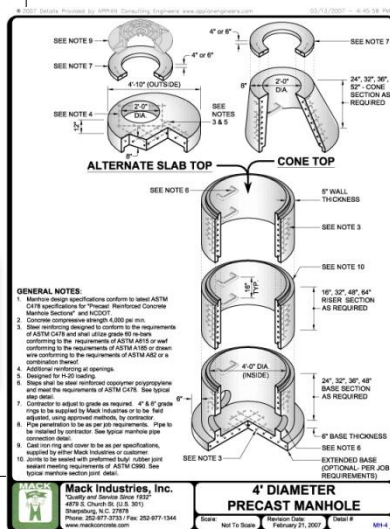
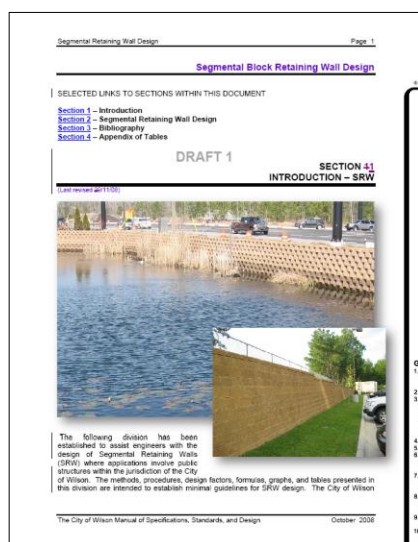
With user-friendly isometric and exploded views of each detail, City staff and Contractors know exactly what's expected... at a glance. Appian has partnered with numerous municipalities to provide the technical expertise to a public facilities manual using our Copyrighted MuniSpec® data base. We provide: standard details and specifications, design modules (streets, water, sewer, storm drainage, flexible pavement, etc.), and policies. The City-specific Manual of Specifications, Standard Details and Design is developed by former city engineers for city engineers and public works officials.

### Typical Features of Manuals we Provide:

1. User friendly
2. Contains latest ASTM, AASHTO and AWWA Specification
3. Searchable (in editable and uneditable versions), iPad friendly version
4. FREE Web Hosting of Manual
5. Isometric and Exploded views on all details
6. Details are hyperlinked to Specs
7. Table of Contents is hyperlinked to text
8. Optional update service.
9. Specifications are detailed in execution and product description
10. Pre-approved product list

"None of the other firms we talked to had a Municipal Manual that was as **comprehensive, detailed** and easily **customized to our needs**. The standard details are great."

Tom Wilson, PE  
Director of Streets  
City of Lynchburg, VA



Municipalities to whom we have provided a copyrighted Manual of Specifications, Standards and Design include:

- Craven County Stormwater
- City of Greenville
- City of Durham (UC)
- City of Wilson
- City of Jacksonville
- Town of Wake Forest
- Town of Clayton
- Franklin County Stormwater
- Orange County Water and Sewer Authority (OWASA), serving Orange County, Carrboro, Chapel Hill and UNC at Chapel Hill

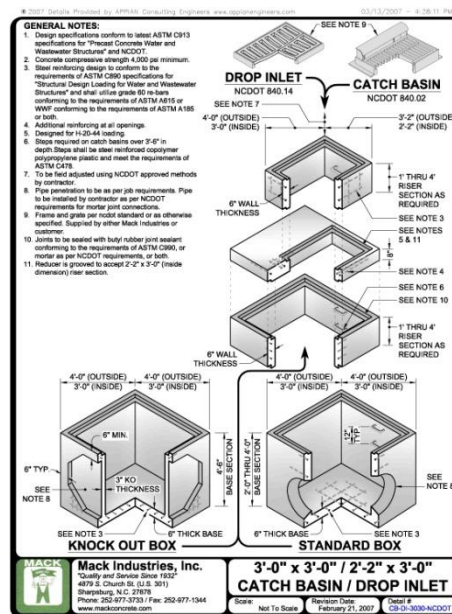


## Details for Pre-Cast Manufacturers

For the past 15 years, Appian has provided isometric and exploded view details on our construction drawings and Public Facilities Manuals; the purpose being to clearly convey the intent of the detail to those in the trenches. Two-dimensional details can often be confusing. As a result of precast manufacturers using our drawings to prepare takeoffs for the contractor, the clarity and simplicity of the details caught the eye of management. Appian was asked to develop catalogues for a number of precasters on a national basis... *order their catalogue and you'll see Appian's name in the border of every detail!*

National Precast Manufacturer Catalogues Include:

- Carolina Precast (Hanson)
- Fralo Plastics/ Roth Global (NY)
- Dellinger (NC)
- Mack Industries (NC, OH)
- NC Pipe (TX)
- Albuquerque Vault Company (NM)
- Ideal Precast (NC)



## Patents and Copyrights

Appian's extraordinary breadth and depth of expertise is demonstrated by the fact that our company president has three (3) patents with the United States Patent Office. The *"Downspout Energy Dissipater Splash Pad with Spillway"* is an industrial sized splash pad on large industrial buildings with large roof areas that has been used on several Appian projects. The *"Method of Treating Stormwater Runoff and Domestic Waste with Coal Ash"* is a "green" BMP that treats stormwater runoff and domestic sewage using recycled high carbon coal ash (research conducted and confirmed by Virginia Tech). Appian has been designing site with recycled coal ash for more than 20 years, saving clients great expense while protecting the environment. Appian also has one patent pending on a design to protect crawl space from mold decay due to crawl space high humidity. Mr. Joyner has also authored a book entitled, *"10 Successful Steps to Successfully Developing a Public Facilities Manual,"* and is in the process of completing his second book, *"Wholehouse Mold Solutions."*

"After 25 years of... construction, I can genuinely say that I have never seen a more **complete, detailed, accurate** and generally professional set of civil documents... Working with your firm has been one of those experiences I will remember for the rest of my career, and will set my future **standard for judging excellence** in civil engineering consultants. It has truly been a pleasure."

Thomas R. Gilcrest  
Director, Design Build Services  
Butler Construction

## Other

Appian is also on the [NCDOT Prequalification Register](#) of Hydraulic Design Studies and is regularly referred to for industrial rail spur design by [CSX Railroad](#).



## Current HMGP Workload

---

### Pamlico County Hurricane Irene HMGP Elevation Projects:

Appian was selected by Pamlico County for the Hurricane Irene Hazard Mitigation Grant Program for the elevation of approximately 44 residential structures in 2014. Design will be completed in the next few months, and construction of all projects will be completed by August 2016.

### Craven County FY 13-14 FMA Elevation Projects:

Craven County recently selected Appian for the Flood Mitigation Assistance (FMA) Program for the elevation of approximately 17 residential structures. Design will be completed in the next several months, and construction of all projects will be completed next year.

## Legal

---

There are no lawsuits, Federal, State or Local tax liens, or any potential claims or liabilities pending against Appian or any of the officers of our firms. *In fact, in the past 29 years of the company's existence, there has never been a lawsuit filed against our firm for any reason.*

Appian carries and maintains professional liability insurance.

## Poised to Proceed

---

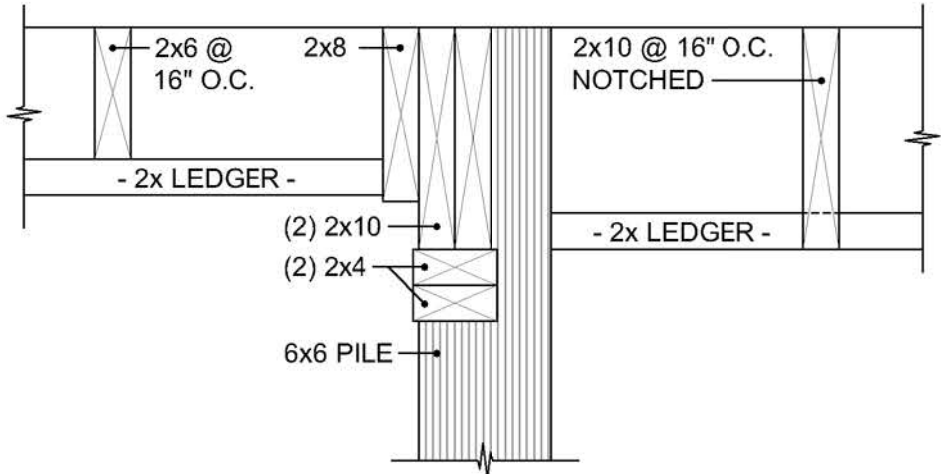
We look forward to serving Pender County on this project.

END OF RFP

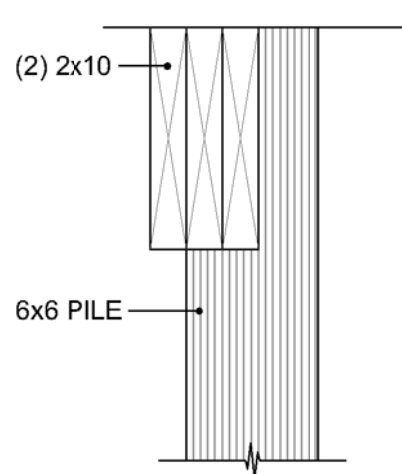




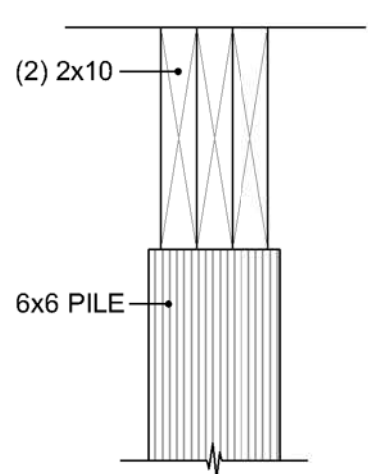
© Copyright 2011 Applan Consulting Engineers, P.A. These drawings have been prepared as instruments of service for a particular site or building improvement and remains the property of the Engineer for use under his supervision. No reproduction or other use is allowed without his permission.



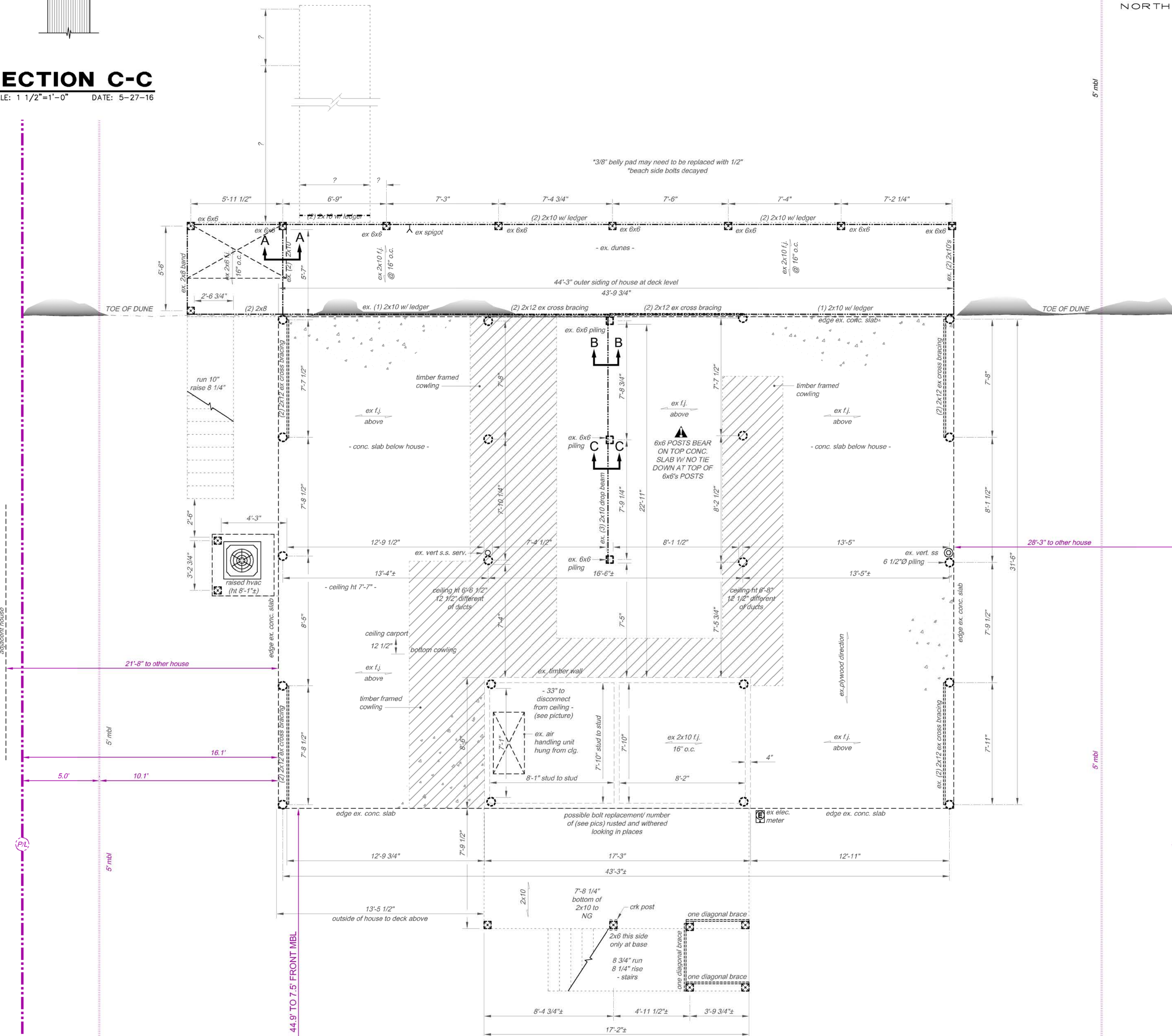
**SECTION A-A**  
SCALE: 1 1/2"=1'-0" DATE: 5-27-16



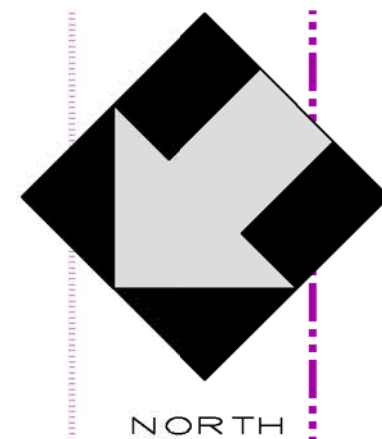
**SECTION B-B**  
SCALE: 1 1/2"=1'-0" DATE: 5-27-16



**SECTION C-C**  
SCALE: 1 1/2"=1'-0" DATE: 5-27-16



**EXISTING PILING PLAN**  
SCALE: 1/4" = 1'-0"



DATE	JUNE, 2016	DESIGN	Bobby Joyner
DATE	N/A	DRAWN BY	Josh Reason
DATE		VER. SCALE	
DATE		NO. Δ	
DATE		BY	
DATE		DESCRIPTION	



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ENVIRONMENTAL SERVICES  
BLN = C0562

154 Roundabout Ct.  
Rocky Mount, N.C. 27804  
Phone: (252) 972-7703  
Fax: (252) 972-7638

www.applanengineers.com  
admin@applanengineers.com

Final Drawings  
Review Purposes ONLY

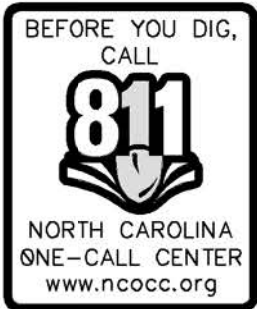


(#3TB) 1117 OCEAN BLVD.  
TOPSAIL BEACH, N.C. - Thexton  
Pender County FMA  
FY14 Elevation Project

16-009

D-0000

3TB-A

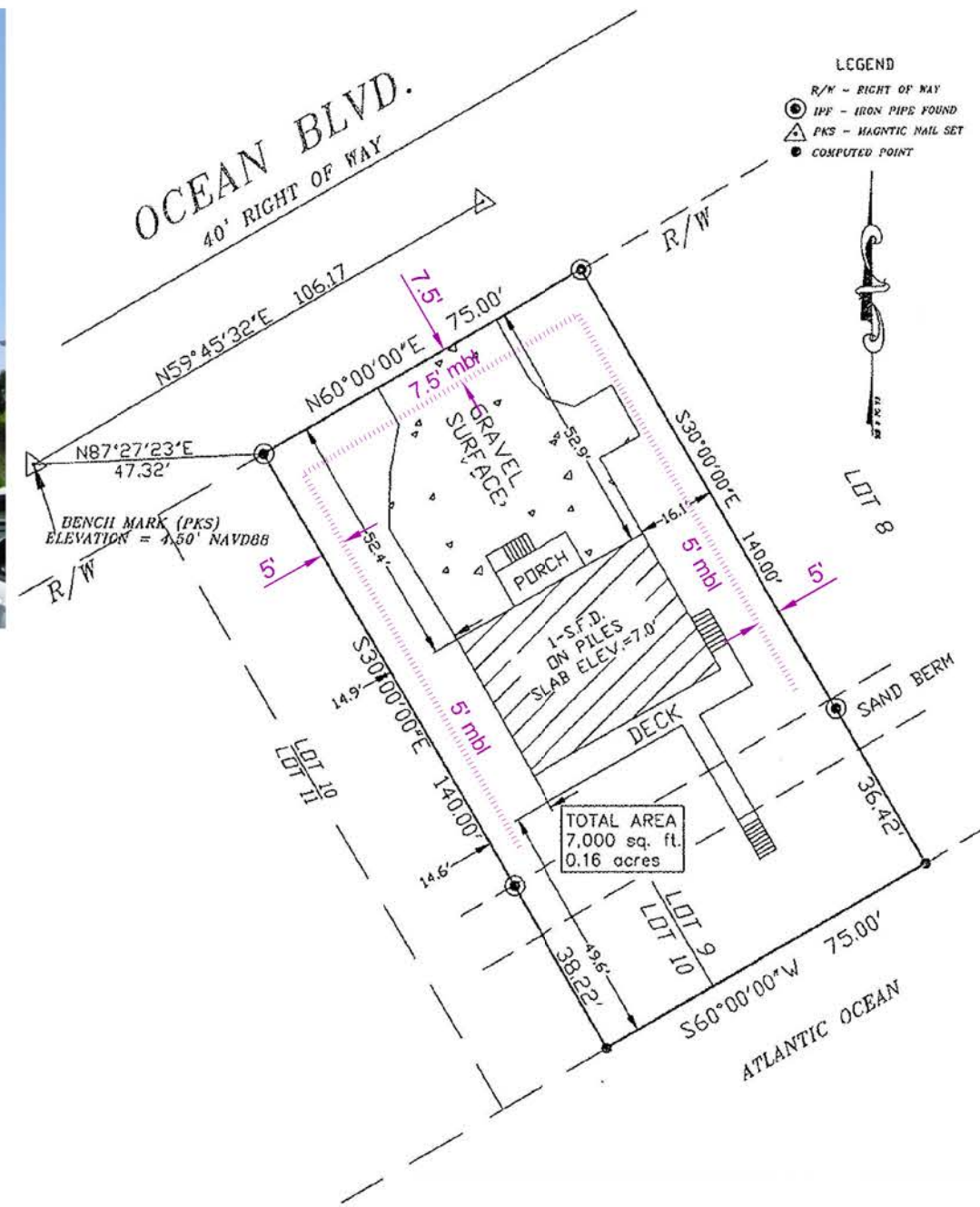


**CONSTRUCTION SAFETY**  
These drawings do not contain the requirements for job safety. All provisions for safety shall be the sole responsibility of the contractor.

**EXISTING CONDITIONS:**  
The contractor shall be responsible for reviewing all existing job conditions. Any adverse existing conditions affecting work shown on these drawings shall be brought to the attention of the engineer for possible clarification or reconciliation.

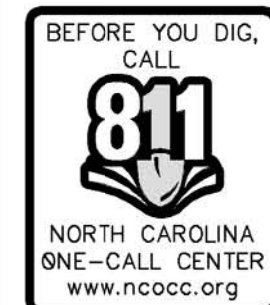
**ADA AND LEGAL DISCLAIMER**  
This document is not represented to comply with all requirements contained in the ADA or other laws. Engineers are not licensed to interpret laws or give advice concerning laws. The owner should have this document reviewed by his attorney to determine legal compliance.





LEGEND

- EXISTING CROSSBRACING
- RODDED CROSS BRACING (OH-17) PERPENDICULAR TO OCEAN WAVE ACTION
- RODDED (RECOMMENDED) (OH-17 OR OH-15) CROSS BRACING PARALLEL TO OCEAN WAVE ACTION
- EXISTING PILES
- EXISTING PILE TO BE REPLACED W/ MIN. 8x8 P.T. PILE
- 3.7 k/1.9 k DENOTES GRAVITY LOAD AND NET UPLIFT FORCE ON PILE/CONNECTOR
- PROPOSED 6x6 P.T. DECK PILE
- EXISTING 6x6 POST (SEE DETAIL S-22-B)
- PRO 8x8 PILE IN GRADE BM
- PRO HELICAL PRE-CONSTRUCTION PIER (LOADS SHOWN ARE UNFACTORED)
- PRO BATTERED HELICAL PIER BRACE
- EXISTING HOUSE ABOVE
- EXISTING DECKING/STEPS ABOVE
- KEY TO NOTES (SEE SHEET 3TB-C)



CONSTRUCTION SAFETY

These drawings do not contain the requirements for job safety. All provisions for safety shall be the sole responsibility of the contractor.

EXISTING CONDITIONS:

The contractor shall be responsible for reviewing all existing job conditions. Any adverse existing conditions affecting work shown on these drawings shall be brought to the attention of the engineer for possible clarification or reconciliation.

ADA AND LEGAL DISCLAIMER

This document is not represented to comply with all requirements contained in the ADA or other laws. Engineers are not licensed to interpret laws or give advice concerning laws, the owner should have this document reviewed by his attorney to determine legal compliance.

NOTES:

- 
- THE LOWEST HABITABLE FLOOR SURFACE OF THIS DWELLING MUST BE ELEVATED TO THE TARGET FREEBOARD HEIGHT SHOWN ON DETAIL S-12 ON SHEET D-2. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE LOWEST FLOOR ELEVATION IN THE HOME AND ENSURING THAT THE HOME WILL BE ELEVATED TO THE TARGET FREEBOARD HEIGHT DEPICTED IN DETAIL S-12. IF A CONFLICT IS DISCOVERED BETWEEN THIS REQUIREMENT AND WHAT IS SHOWN IN THE SCOPE OF WORK OR DEPICTED ON THE SITE SPECIFIC DRAWINGS, DETAIL S-12 SHALL GOVERN. VERIFY PROPOSED TARGET FFE ELEVATION WITH ENGINEER OR INSPECTOR PRIOR TO ELEVATION OF HOUSE.

PILE REPLACEMENT REQUIRED: REMOVE EX. ROUND PILES AND CONNECT NEW 8x8's TO EX. FLOOR BEAMS. THE METHOD OF EXISTING ATTACHMENT WILL NEED TO BE FIELD VERIFIED/ CONFIRMED BY PROJ. INSPECTOR/ ENGINEER. BOLTED CONNECTIONS ARE EXPECTED TO EXIST. PILE NOTCHING SHALL NOT EXCEED 50% OF PILE X-SECTIONAL AREA. IF TIE DOWNS ARE NEEDED USE DETAIL OH-23 AS APPLICABLE.

ADD 5 STEPS (5 TREADS/ 5 RISERS) AT END - COORDINATE W/ OWNER AND INSPECTOR. RISE/ RUN TO MATCH EXISTING STAIR. ORIENT STEPS/ LANDING AS NEEDED TO AVOID INTERFERENCE WITH EX. COND. UNIT.

STORAGE ROOM: REMOVE STORAGE ROOM. REPLACE W/ NEW 8'-6"x17'-0" STORAGE ROOM. SEE DETAIL OH-22 FOR BREAKAWAY WALL CONSTRUCTION. CROSS BRACING TO BE INSTALLED ON EXTERIOR SIDE OF BREAKAWAY WALLS! PROVIDE 2 DOORS.

EXISTING PILE SIZES  
ROUND = 6 1/2"Ø TO 7 1/2"Ø  
SQUARE = 6x6

PROPOSED PILING PLAN

SCALE: 1/4" = 1'-0" 1,406 SF HTD

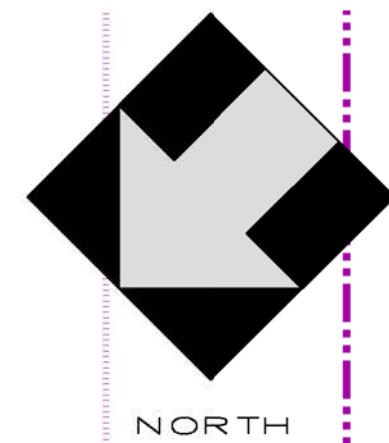
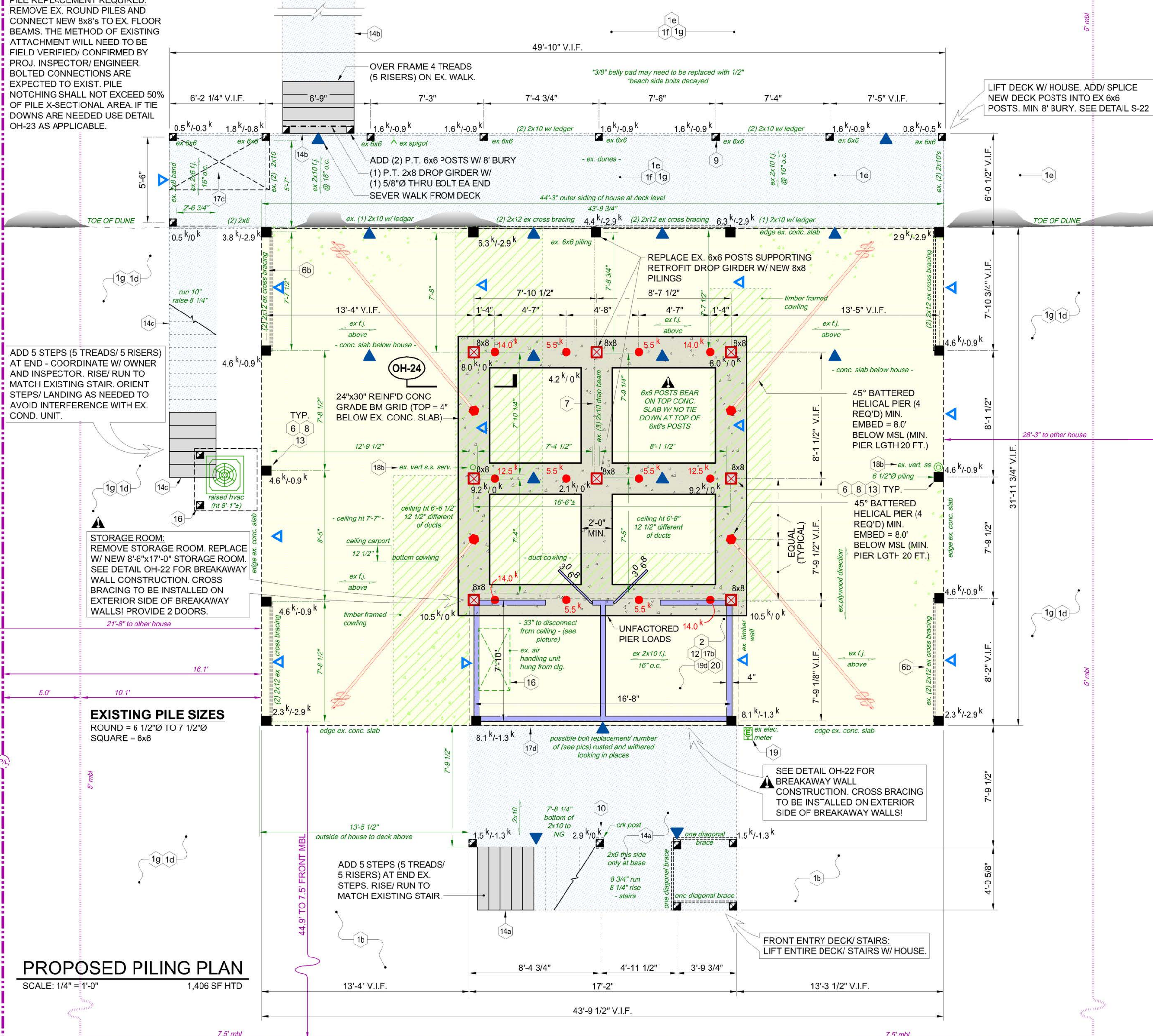
Elevation Notes:

Proposed FFE:	19.0
BFE:	15.0
Existing FFE:	16.2
Lowest Adj. Grade:	4.7

\*Crawl Area Has Ducts!  
(1-Foot Freeboard Provided.)

THIS HOUSE TO BE  
ELEVATED 2.8'

TYP CUT EXISTING 6X6 POST  
NEAR BOTTOM OF DECK.  
PLACE NEW 6X6 PT PILE  
AND SPLICE PER DETAIL



DATE:	FEBRUARY, 2016	DESIGN:	Bobby Joyner
SCALE:	N/A	DRAWN BY:	Mike Gallina
VER. SCALE:	N/A	CHECK:	
NO. Δ:		DATE:	
DATE:		DATE:	

REVISIONS

NO.	DATE	DESCRIPTION
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admin@appianengineers.com

Final Drawings  
Review Purposes ONLY



(#3TB) 1117 OCEAN BLVD.  
TOPSAIL BEACH, N.C. - Thexton  
Pender County FMA  
FY14 Elevation Project

16-009  
D-0000  
3TB-B







Holland Consulting Planners, Inc.  
Final Bid Tabulation Form

Project: <u>Pender Co. FY14 FMA</u>		Bid Opening Date <u>11/22/2016</u>			
Case File #	Occupant/Address	Actual Bid (Tabulated)	Contractor	Recommended Award (X)	Comments
1TB	Barger/1802 Ocean Blvd/Topsail Beach	\$116,282.00	Goose Creek Const.		Next low bidder * (see notes below)
		\$160,483.00	IMEC		
		\$148,000.00	Holland Const.	X	
2TB	Costic/1121 Ocean Blvd/Topsail Beach	\$85,720.00	Goose Creek Const.	X	Low bidder
		\$211,500.00	IMEC		
		\$120,000.00	Holland Const.		
3TB	Thexton/1117 Ocean Blvd/Topsail Beach	\$89,740.00	Goose Creek Const.	X	Low bidder
		\$185,650.00	IMEC		
		\$120,000.00	Holland Const.		
4TB	Hull/1105 Ocean Blvd/Topsail Beach	\$116,076.00	Goose Creek Const.	X	Low bidder
		\$198,100.00	IMEC		
		\$144,000.00	Holland Const.		





Bid Tab  
for Elevation

### REQUEST FOR BOARD ACTION

**DATE OF MEETING:** December 5, 2016

**REQUESTED BY:** Kyle M. Breuer, Director, Planning and Community Development

**SHORT TITLE:** Resolution to Approve Elevation Contract Awards for Structures included the FY14 Flood Mitigation Assistance (FMA) Grant Project.

**BACKGROUND:** The FY14 FMA Elevation Project involves the elevation of (4) four Severe Repetitive Loss (SRL) structures located in Topsail Beach that are currently insured under the National Flood Insurance Program (NFIP).

The program proposes to elevate and retrofit (4) existing structures in place in order to ensure compliance with current FEMA and Local (Town of Topsail Beach) floodplain requirements. Once complete a deed restriction on the property will require that flood insurance be maintained in perpetuity.

A Mandatory Pre-Bid meeting was advertised and held on November 10, 2016. (4) General Contractors and (2) elevation subcontractors were represented at the meeting. Several items were discussed and bid packages were released to those who attended.

A copy of the advertisement, sign-in sheet and meeting agenda are attached.

The Bid Opening was held on Tuesday, November 22<sup>nd</sup> at 11:00 AM. (3) Bids were received for each unit. The award recommendations are as follows:

<u>Address</u>	<u>Contractor</u>	<u>Amount</u>	<u>Notes</u>
* 1121 Ocean Blvd, Topsail Beach	Goose Creek Construction	\$85,720.00	Low Bid
* 1117 Ocean Blvd, Topsail Beach	Goose Creek Construction	\$89,740.00	Low Bid
1105 Ocean Blvd, Topsail Beach	Goose Creek Construction	\$116,076.00	Low Bid
1802 Ocean Blvd, Topsail Beach	Holland Construction	\$148,000.00	2 <sup>nd</sup> Low Bid*

\* See notes on final bid tab (attached)

**SPECIFIC ACTION REQUESTED:** To consider a resolution approving of the Elevation Contract Awards as recommended by Administrative Consultant.



## RESOLUTION

NOW, THEREFORE BE IT RESOLVED by the Pender County Board of Commissioners that:

the Board hereby authorizes the elevation contract awards to the contractors approved by the Pender County Board of Commissioners. All units are included in the FY14 FMA (Elevation) grant. The Chairman/County Manager is authorized to execute any/all documents necessary to implement this resolution.

## AMENDMENTS:

MOVED Piepmeyer SECONDED Williams

APPROVED ✓ DENIED \_\_\_\_\_ UNANIMOUS

YEA VOTES: Brown ✓ McCoy \_\_\_\_\_ Newton ✓ Piepmeyer ✓ Williams ✓

George R. Brown, Jr.  
George R. Brown, Jr. 12/5/2016

Melissa Lang  
ATTEST 12/5/2016





## AFFIDAVIT

Reference: Pender County Flood Mitigation Assistance Program  
 Elevation of Properties at 1117 and 1121 Ocean Boulevard, Topsail Beach, NC  
 Variance Request for Required FLSNV Setback

Ron Ackers DBA Goose Creek Construction being first duly sworn, under oath, and states that the following information is within his personal knowledge and belief:

Based on my experience with elevating homes in coastal areas, I estimate that the additional turnkey cost to relocate the existing structures versus elevating in place would be approximately \$20,000.00 per property.

  
 Ron Akers DBA Goose Creek Construction

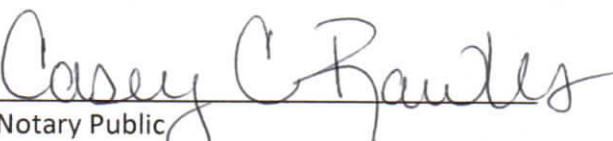
P.O. Box 1654  
 Street

Kitty Hawk, NC 27949  
 City, State, Zip

STATE OF NORTH CAROLINA

COUNTY OF Dare

Subscribed and sworn to before me this 19 day of January, 2017, by Ron Akers.

  
 Notary Public

My Commission Expires: 2/24/2018





# Hazard Mitigation Assistance Program Digest

2015



**FEMA**



## Introduction

FEMA offers three Hazard Mitigation Assistance (HMA) grant programs – the **Hazard Mitigation Grant Program (HGMP)**, the **Pre-Disaster Mitigation (PDM)** program and the **Flood Mitigation Assistance (FMA)** program – to help States, Territories, Indian Tribal governments, local communities, private non-profits and businesses implement cost-effective, long-term mitigation measures for all natural hazards. Supporting this endeavor is most effective when all stakeholders share in a mutual understanding of program purpose, concepts, terminology and procedures. As part of this effort, FEMA has produced this digest of HMA program operational terms and references. The HMA Program Digest is intended to be an easy-to-read, easy-to use, brief summary of the basic HMA program elements.

While the HMA Program Digest is primarily intended for those unfamiliar with the HMA programs, it also may serve as a reference for employees, applicants, and other stakeholders with many years of experience with the programs. Because the digest is not exhaustive, either in topics or in detail, information should be verified with the **FEMA HMA Unified Program Guidance** and FEMA HMA program officials before becoming the basis for decision making.

The HMA Program Digest is available at <http://www.fema.gov/hazard-mitigation-assistance>. Other key sources of HMA program information are the following:

- ♦ [HMA Unified Program Guidance and Addendum to HMA Unified Program Guidance;](#)
- ♦ [44 Code of Federal Regulations;](#)
- ♦ [The Robert T. Stafford Disaster Relief and Emergency Assistance Act, As Amended, 42 U.S.C. 5121 et seq.;](#)
- ♦ [The National Flood Insurance Act of 1968, As Amended, 42 U.S.C. 4001 et seq.](#)



## Substantial Improvement

**Substantial Improvement** means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage” regardless of the actual repair work performed. The term does not, however, include either:

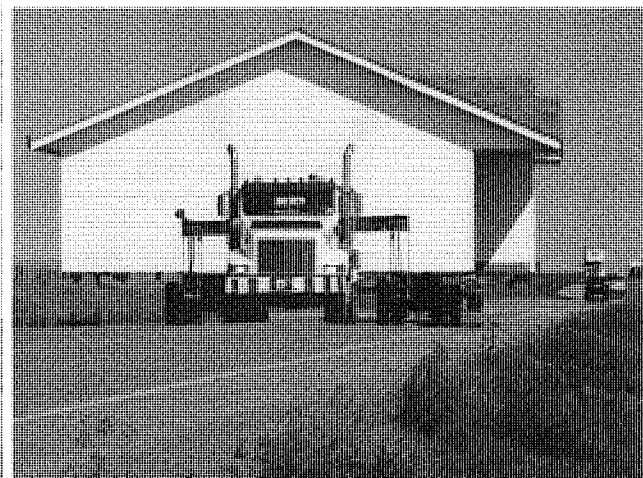
- ♦ Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or
- ♦ Any alteration of a “historic structure,” provided that the alteration will not preclude the structure’s continued designation as a “historic structure”.

HMGP funds cannot be used to fund new construction or substantial improvement in a floodway or new construction in a **coastal high hazard zone**. However, the costs to elevate or floodproof a damaged structure or facility are not included in determining whether the substantial improvement threshold is triggered. For additional information see 44 C.F.R. § 9.11(d), Minimization Standards.

Applicable HMA program(s): FMA, HMGP, PDM.

References: 44 C.F.R. § 9.11(d) and § 59.1; *Hazard Mitigation Assistance Guidance (February 27, 2015)*, E.6.1 (Floodplain Management and the Protection of Wetlands), page 48.





# Hazard Mitigation Assistance Guidance

Hazard Mitigation Grant Program, Pre-Disaster Mitigation  
Program, and Flood Mitigation Assistance Program

*February 27, 2015*



**FEMA**

**Federal Emergency Management Agency**  
**Department of Homeland Security**  
500 C Street, S.W.  
Washington, DC 20472



award eligibility, in addition to any conditions that may be imposed on the award during the EHP review compliance process.

FEMA reviews the completeness of the responses to the questions in the EHP review section of the project subapplication and any supporting documentation. HMA project subapplications must include the required information for each property identified in the subapplication. For example, information needs may include detailed scopes of work, clearly labeled maps, photos of buildings, ages of all buildings and structures, and copies of any coordination letters with other agencies. FEMA utilizes this information to complete and document the EHP compliance review process. A lack of information may delay the identification of outstanding EHP compliance requirements and project implementation. Also, failing to provide the required information by the application deadline may prohibit FEMA from making an award or subaward.

FEMA has developed guidance to assist in completing the EHP information section of a project subapplication, including an eLearning Tool, online training, and information about historic preservation. For links to these EHP resources, see Part IX, C.5. Technical assistance is also available via the toll-free Project Technical Assistance for Environmental & Historic Preservation Helpline (866) 222-3580 or via e-mail at [ehhelpline@fema.dhs.gov](mailto:ehhelpline@fema.dhs.gov).

### E.6.1 Floodplain Management and Protection of Wetlands

As noted in Part III, E.6, all activities funded by HMA programs must conform to 44 CFR Part 9. Proposed actions triggering the 8-Step Decision Making Process for Floodplain Management and Wetlands Considerations (see HMA Job Aid, *8-Step Decision Making Process for Floodplain Management and Wetlands Considerations*) will only be eligible for a grant if the Applicant or subapplicant demonstrates that there is no practicable alternative in accordance with 44 CFR Sections 9.9 through 9.11. HMA funds cannot be used to fund new construction or Substantial Improvements in a floodway or new construction in a Coastal High Hazard Area unless it constitutes a functionally dependent use or facilitates an open space use. However, the costs to elevate or floodproof a damaged structure or facility are not included in determining whether the Substantial Improvement threshold is triggered.

For additional information see 44 CFR Section 9.11(d).

#### DECISION-MAKING FOR CRITICAL ACTION VS. CRITICAL FACILITY

Critical action is an action for which even a slight chance of flooding poses too great of a risk. It may or may not be associated with a critical facility. FEMA is responsible for determining if an action is a critical action. If a critical action is identified, FEMA must evaluate potential harm to the action from the 500-year flood.

Critical facilities are structures and institutions that are deemed by the local community and other jurisdictions as critical to the continuity of the community before, during, and after an event. Although the affected jurisdiction has the primary responsibility for determining what structures and institutions are critical facilities, FEMA reserves the right to make a final determination as needed to support the review and approval of an HMA project application.



# **UNIT 8:**

## **SUBSTANTIAL IMPROVEMENT AND**

## **SUBSTANTIAL DAMAGE**

### In this unit

This unit covers:

- ◆ The substantial improvement rule – how to regulate major additions and other improvements to buildings in the floodplain.
- ◆ The substantial damage rule – how to regulate reconstruction and repairs to buildings that have been severely damaged.
- ◆ Exceptions to the basic rule for some special cases.



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## INTRODUCTION

In previous units we focused on the rules and regulations that prevent or reduce damage from floods to new buildings. But what happens when the owner wishes to make an improvement, such as an addition, to an existing building? What if a building is damaged by a fire, flood or other cause?

***Basic rule: If the cost of improvements or the cost to repair the damage exceeds 50 percent of the market value of the building, it must be brought up to current floodplain management standards.***

That means an existing building must meet the requirements for new construction.

People who own existing buildings that are being substantially improved will be required to make a major investment in them in order to bring them into compliance with the law. They will not be happy. If the buildings have just been damaged, they will be financially strapped and your elected officials will want to help them, not make life harder for them.

For these reasons, it is easy to see that this basic rule can be difficult to administer. It is also the one time when your regulatory program can reduce flood damage to existing buildings. That's why this course devotes this unit to administering the substantial improvements and substantial damage regulations.

*In this course, the term "building" is the same as the term "structure" in the NFIP regulations. Your ordinance may use either term. The terms are reviewed in more detail in Unit 5, Section E.*



## A. SUBSTANTIAL IMPROVEMENT

**44 CFR 59.1. Definitions:** “Substantial improvement” means any reconstruction, rehabilitation, addition or other improvement to a structure, the total cost of which equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement.

This section addresses many clarifications and a few exceptions related to substantial improvements.

### PROJECTS AFFECTED

All building improvement projects worthy of a permit must be considered. These include:

- ◆ Remodeling projects.
- ◆ Rehabilitation projects.
- ◆ Building additions.
- ◆ Repair and reconstruction projects (these are addressed in more detail in Section B on substantial damage)

If your community does not require permits for, say, reroofing, minor maintenance or projects under a certain dollar amount, then such projects are not subject to the substantial improvement requirements. However, if you have a larger project that includes reroofing, etc., then it must include the entire cost of the project.

One problem you may face is a builder trying to sneak through a loophole by applying for a permit for only part of the job and then later applying for another permit to finish the work. If both applications are together worth more than 50% of the value of the building, the combined project should be considered a substantial improvement and subject to the rules.

FEMA requires that the entire improvement project be counted as one. In order to help you enforce this, you may want to count all applications submitted over, say, one year as one project. Check with your attorney on whether your ordinance clearly gives you the authority to do this and be sure to spell it out in the permit papers given to the applicant.

Some communities require that improvements be calculated cumulatively over several years. All improvement and repair projects undertaken over a period of five years, 10 years or the life of the structure are added up. When they total 50 percent, the building must be brought into compliance as if it were new construction.





The Community Rating System credits keeping track of improvements to enforce a cumulative substantial improvement requirement. It also credits using a lower threshold than 50 percent. These credits are found under Activity 430, Section 431.c and d in the *CRS Coordinator's Manual* and the *CRS Application*. See also *CRS Credit for Higher Regulatory Standards* for example regulatory language.

## Post-FIRM buildings

The rules do not address only pre-FIRM buildings—they cover *all* buildings, post-FIRM ones included.

In most cases, a post-FIRM building will be properly elevated or otherwise compliant with regulations for new construction. However, sometimes a map change results in a higher BFE or change in FIRM zone. A substantial improvement to a post-FIRM building may require that the building be elevated to protect it from the new, higher, regulatory BFE.

It should be remembered that all additions to a post-FIRM building must be elevated at least as high as the BFE in effect when the building was built. (You can't allow a compliant building to become noncompliant by allowing additions at grade.) If a new, higher BFE has been adopted since the building was built, additions that are substantial improvements must be elevated to the new BFE.

## THE FORMULA

A project is a substantial improvement if:

$$\frac{\text{Cost of improvement project}}{\text{Market value of the building}} \geq 50 \text{ percent}$$

For example, if a proposed improvement project will cost \$30,000 and the value of the building is \$50,000:

$$\frac{\$30,000}{\$50,000} = 0.6 \text{ (60 percent)}$$

The cost of the project exceeds 50 percent of the building's value, so it is a substantial improvement. The floodplain regulations for new construction apply and the building must meet the post-FIRM construction requirements. If the project is an addition, only the addition has to be elevated (see the examples later in this section).

The formula is based on the cost of the project and the value of the building. These two numbers must be reviewed in detail.



## Project cost

The cost of the project means all structural costs, including

- ◆ all materials
- ◆ labor
- ◆ built-in appliances
- ◆ overhead
- ◆ profit
- ◆ repairs made to damaged parts of the building worked on at the same time

A more detailed list is included in Figure 8-1.

To determine substantial improvement, you need a detailed cost estimate for the project, prepared by a licensed general contractor, professional construction estimator or your office.

Your office must review the estimate submitted by the permit applicant. To verify it, you can use your professional judgment and knowledge of local and regional construction costs, or you can use building code valuation tables published by the major building code groups. These tables can be used for determining estimates for particular replacement items if the type of structure in question is listed in the tables.

There are two exemptions to calculating the cost of an improvement or repair project: 1) improvements to correct code violations and 2) historic buildings. These are explained in more detail later on.

## Market value

In common parlance, market value is the price a willing buyer and seller agree upon. The market value of a structure reflects its original quality, subsequent improvements, physical age of building components and current condition.

However, market value for property can be different than that of the building itself. Market value of developed property varies widely due to the desirability of its location. For example, two houses of similar size, quality and condition will have far different prices if one is on the coast, or in the best school district, or closer to town than the other—but the value of the building materials and labor that went into both houses will be nearly the same.

For the purposes of determining substantial improvement, market value pertains only to the structure in question. It does not pertain to the land, landscaping or detached accessory structures on the property. Any value resulting from the location of the property should be attributed to the value of the land, not the building.



### Items to be included

- All structural elements, including:
  - Spread or continuous foundation footings and pilings
  - Monolithic or other types of concrete slabs
  - Bearing walls, tie beams and trusses
  - Floors and ceilings
  - Attached decks and porches
  - Interior partition walls
  - Exterior wall finishes (brick, stucco, siding) including painting and moldings
  - Windows and doors
  - Reshingling or retiling a roof
  - Hardware
- All interior finishing elements, including:
  - Tiling, linoleum, stone, or carpet over subflooring
  - Bathroom tiling and fixtures
  - Wall finishes (drywall, painting, stucco, plaster, paneling, marble, etc.)
  - Kitchen, utility and bathroom cabinets
  - Built-in bookcases, cabinets, and furniture
  - Hardware
- All utility and service equipment, including:
  - HVAC equipment
  - Plumbing and electrical services
  - Light fixtures and ceiling fans
  - Security systems
  - Built-in kitchen appliances
  - Central vacuum systems
  - Water filtration, conditioning, or recirculation systems
- Cost to demolish storm-damaged building components
- Labor and other costs associated with moving or altering undamaged building components to accommodate improvements or additions
- Overhead and profits

### Items to be excluded

- Plans and specifications
- Survey costs
- Permit fees
- Post-storm debris removal and clean up
- Outside improvements, including:
  - Landscaping
  - Sidewalks
  - Fences
  - Yard lights
  - Swimming pools
  - Screened pool enclosures
  - Detached structures (including garages, sheds and gazebos)
  - Landscape irrigation systems

**Figure 8-1. Items included in calculating cost of the project**



Acceptable estimates of market value can be obtained from these sources:

- ◆ An independent appraisal by a professional appraiser. The appraisal must exclude the value of the land and not use the “income capitalization approach” which bases value on the use of the property, not the structure.
- ◆ Detailed estimates of the structure’s actual cash value—the replacement cost for a building, minus a depreciation percentage based on age and condition. For most situations, the building’s actual cash value should approximate its market value. Your community may prefer to use actual cash value as a substitute for market value, especially where there is not sufficient data or enough comparable sales.
- ◆ Property appraisals used for tax assessment purposes with an adjustment recommended by the tax appraiser to reflect market conditions (adjusted assessed value).
- ◆ The value of buildings taken from NFIP claims data (usually actual cash value).
- ◆ Qualified estimates based on sound professional judgment made by the staff of the local building department or tax assessor’s office.

Some market value estimates are often used only as screening tools (i.e., NFIP claims data and property appraisals for tax assessment purposes) to identify those structures where the substantial improvement ratios are obviously less than or greater than 50 percent (i.e., less than 40 percent or greater than 60 percent). For structures that fall in the 40 percent to 60 percent range, more precise market value estimates are sometimes necessary.



## SUBSTANTIAL IMPROVEMENT EXAMPLES

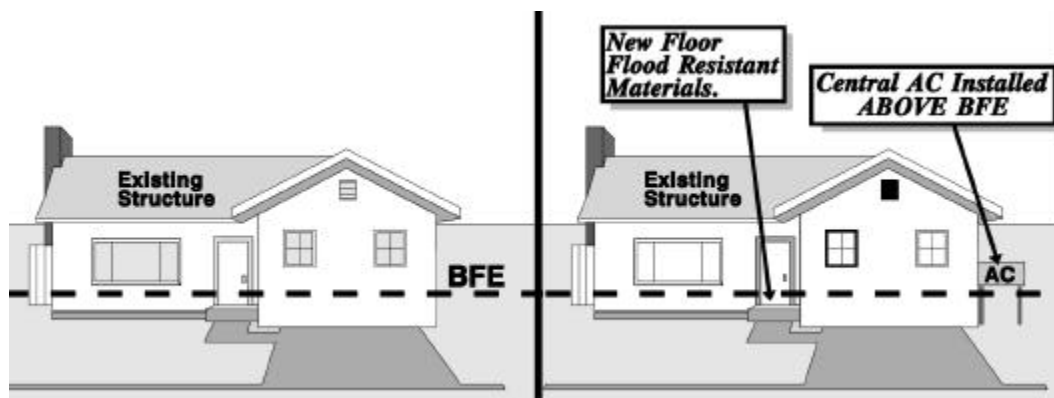
### Example 1. Minor rehabilitation

A rehabilitation is defined as an improvement made to an existing structure which does not affect the external dimensions of the structure.

If the cost of the rehabilitation is less than 50 percent of the structure's market value, the building does not have to be elevated or otherwise protected. However, it is advisable to incorporate methods to reduce flood damage, such as use of flood-resistant materials and installation of electrical, heating and air conditioning units above the BFE.

Figure 8-2 shows a building that had a small rehabilitation project. Central air conditioning was installed and the electrical system was upgraded. The value of the building before the project was \$60,000. The value of the project was \$12,000:

$\$12,000 = 0.2$  (20 percent) The project costs less than 50 percent of the



\$60,000 building, so this is not a substantial improvement.

**Figure 8-2. Minor rehabilitations use flood-resistant methods and materials.**

Neither structure would benefit from post-FIRM flood insurance rates because they are not elevated.

Note: To gauge what happens to flood insurance premiums if a substantially improved building is not brought up to post-FIRM standards, see Figures 7-7 through 7-12.

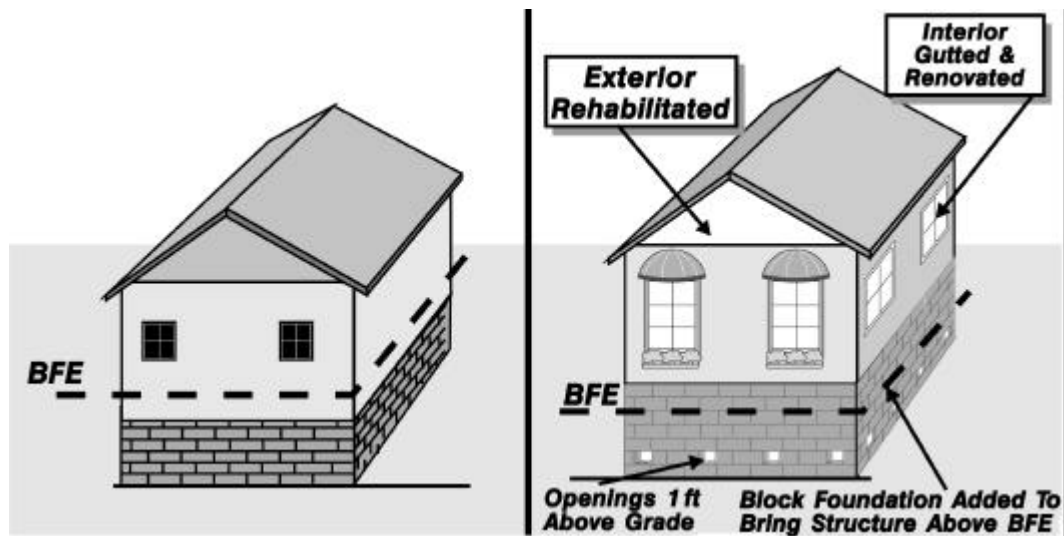


## Example 2. Substantial rehabilitation

If the rehab costs more than 50 percent of the value of the building, your ordinance requires that an existing structure be elevated and/or the basement filled to meet the elevation standard.

Figure 8-3 shows a building that has been allowed to run down. It's market value is \$35,000. To rehab it will require gutting the interior and replacing all wallboard, built-in cabinets, bathroom fixtures and furnace. The interior doors and flooring will be repaired. The house will get new siding and a new roof. The cost of this rehab will be \$25,000:

$\frac{\$25,000}{\$35,000} = 71.4 \text{ percent}$	Because total cost of the project is greater than 50 % the rehab is a substantial improvement
--	---



**Figure 8-3. substantially rehabilitated building elevated above the BFE.**

In A Zones, elevation may be on fill, crawlspace, columns, etc. In V Zones, only pilings, columns or other open foundations are allowed. The new structure would benefit from post-FIRM flood insurance rates.



### Example 3. Lateral addition—residential

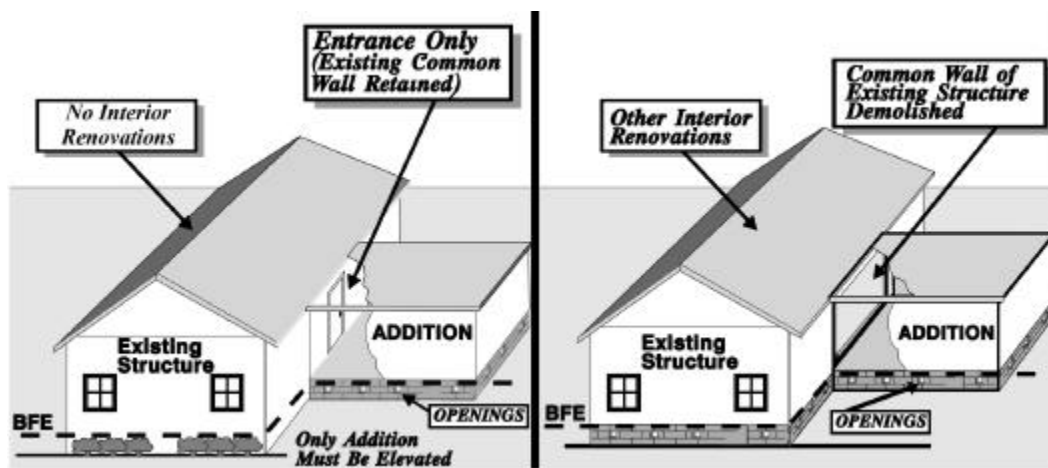
Additions are improvements that increase the square footage of a structure. Commonly, this includes the structural attachment of a bedroom, den, recreational room garage or other type of addition to an existing structure.

When an addition is a substantial improvement, the addition must be elevated or floodproofed, providing that improvements to the *existing* structure are minimal. Figures 8-4 and 8-5 illustrate lateral additions that are compliant.

Depending on the flood zone and details of the project, the existing building may not have to be elevated. The determining factors are the common wall and what improvements are made to the existing structure. If the common wall is demolished as part of the project, then the entire structure must be elevated. If only a doorway is knocked through it and only minimal finishing is done, then only the addition has to be elevated.

In A Zones only, if significant improvements are made to the existing structure (such as a kitchen makeover), both it and the addition must be elevated and otherwise brought into compliance. Some states and many communities require that both the existing structure and lateral additions be elevated in all cases.

In V Zones, the existing structure always has to be elevated, placed on an engineered foundation system, etc., when an addition is proposed that constitutes a substantial improvement. This is due to the “free-of obstruction” standard whereby the lower existing structure would obstruct the storm surge, causing damage to the addition.



**Figure 8-4. Lateral additions to a residential building in an A Zone.**

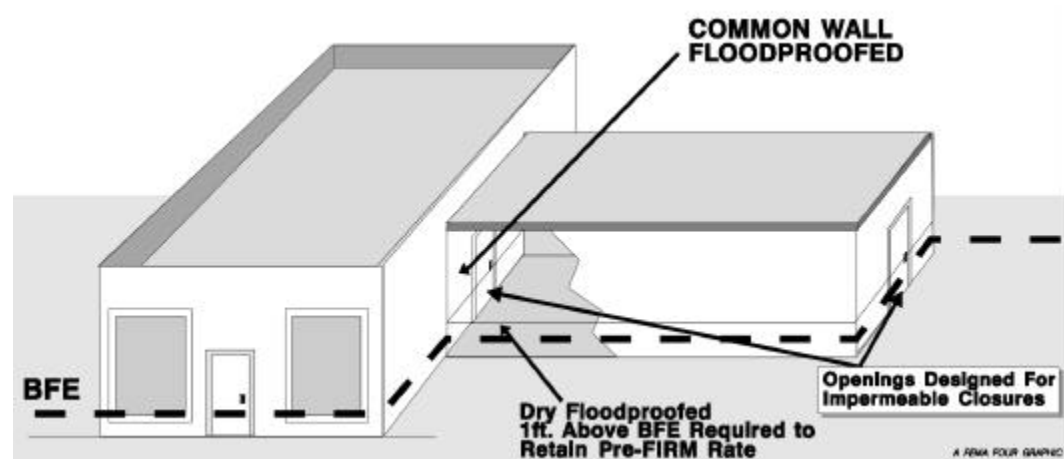
In V Zones, the entire building must be elevated on pilings, columns or other open foundations. The structure on the left would not benefit from post-FIRM flood insurance rates because it was not elevated.



#### Example 4. Lateral addition—nonresidential

A substantial improvement addition to a nonresidential building may be either elevated or floodproofed. Otherwise, all the criteria for residential buildings reviewed in Example 3 must be met.

If floodproofing is used, the builder must ensure that the wall between the addition and the original building is floodproofed. Floodproofing is not allowed as a construction measure in V Zones.



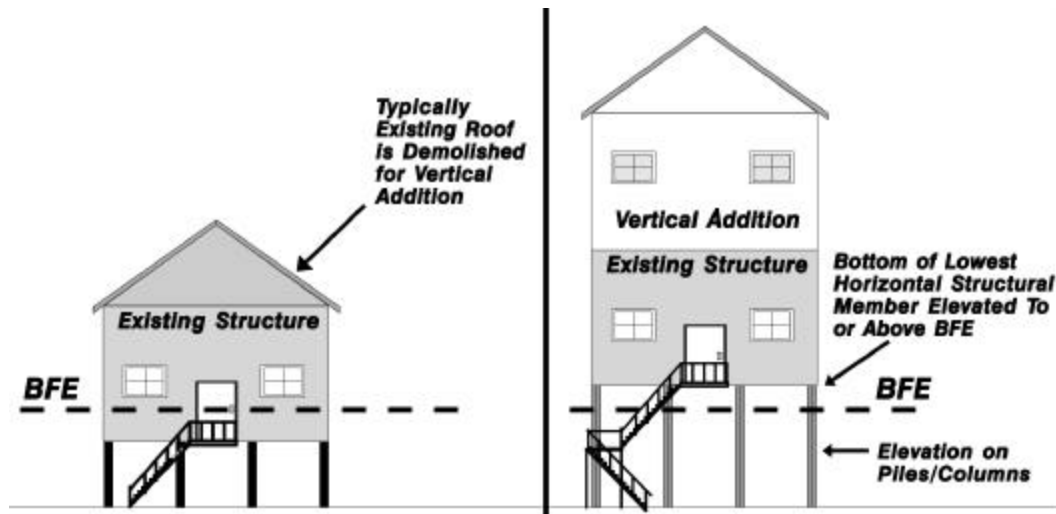
**Figure 8-5. Lateral addition to a nonresidential building in an A Zone.**

This approach is not allowed in V Zones. The structure would *not* benefit from post-FIRM flood insurance rates because the original building was not elevated or floodproofed.



### Example 5. Vertical addition—residential

When the proposed substantial improvement is a full or partial second floor, the entire structure must be elevated (Figure 8-6). In this instance, the existing building provides the foundation for the addition. Failure of the existing building would result in failure of the addition, too.



**Figure 8-6. Vertical addition to a residential building in a V Zone.**

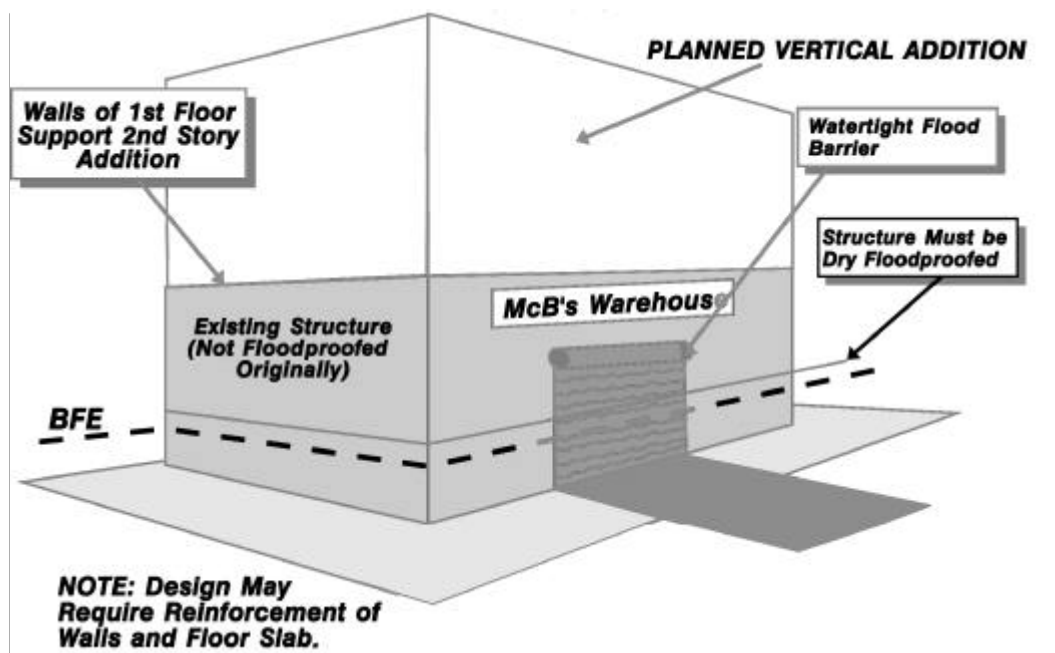
The new structure would benefit from post-FIRM flood insurance rates.



### Example 6. Vertical addition—nonresidential

When the proposed substantial improvement is a full or partial second floor, the entire structure must be elevated or floodproofed (Figure 8-7).

The owner could obtain post-FIRM rates on the building if it is floodproofed to one foot above the BFE and he has a floodproofing certificate signed by a registered engineer. An optional approach is to elevate the entire building and obtain an elevation certificate.



**Figure 8-7. Vertical addition to a nonresidential building in an A Zone.**  
The new floodproofed structure would benefit from post-FIRM flood insurance rates.



### Example 7. Post-FIRM building—minor addition

ALL additions to post-FIRM buildings are defined as new construction and must meet the requirements of your floodplain management ordinance regardless of the size or cost of the addition (Figure 8-8). A small addition to a residential structure must be elevated at least as high as the BFE in effect when the building was built.

If a map revision has taken place and the BFE has increased, only additions that are substantial improvements have to be elevated to the new BFE.

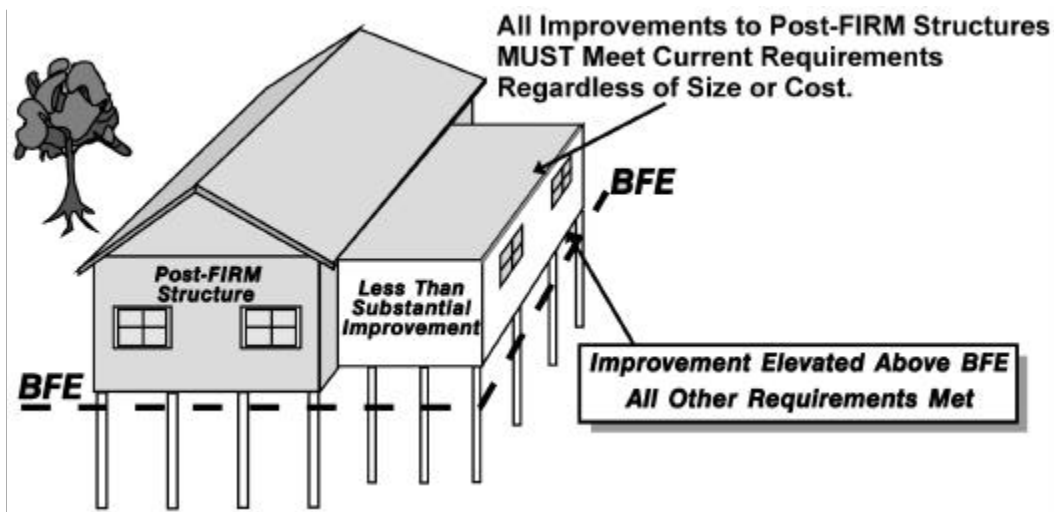


Figure 8-8. Small additions to post-FIRM buildings must be elevated.



### Example 8. Post-FIRM building—substantial improvement

Substantial improvements made to a post-FIRM structure must meet the requirements of the current ordinance. Figure 8-9 shows a lateral addition made after a map revision took place and the BFE was increased.



Figure 8-9. Substantial improvements to post-FIRM buildings must be elevated above the new BFE. Nonresidential buildings may be floodproofed





## LEARNING CHECK #1

1. What is the basic rule on improvements and repairs to existing buildings in the floodplain?
  
2. Mrs. Murphy got a permit two months ago to remodel her living room and kitchen. Now she wants a permit to remodel three bedrooms and two bathrooms. Should you check each of these separately to determine if each project is a substantial improvement?
  
3. What is the substantial improvement formula?
  
4. Which of the following items must be included when calculating the cost of an improvement project?
  - Attached deck
  - Plumbing
  - Permit fees
  - Contractor's overhead and profit
  - Architect's plans
  - Landscaping
  - Built-in bookcases
  
5. What factors are considered when determining market value?
  
6. What are three good sources for obtaining the market value of a house?
  
7. Mr. Jones proposes a \$50,000 addition to his \$80,000 home in the floodplain. Is this a substantial improvement?
  
8. If Mr. Jones' project will be a substantial improvement, what do you need to check to see if the whole house has to be elevated or just the addition?



## B. SUBSTANTIAL DAMAGE

**44 CFR 59.1. Definitions:** *"Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.*

Two key points:

- ◆ The damage can be from any cause—flood, fire, earthquake, wind, rain, or other natural or human-induced hazard.
- ◆ The substantial damage rule applies to all buildings in a flood hazard area, regardless of whether the building was covered by flood insurance.

The formula is essentially the same as for substantial improvements:

$$\frac{\text{Cost to repair}}{\text{Market value of the building}} \geq 50 \text{ percent}$$

Market value is calculated in the same way as for substantial improvements. Use the pre-damage market value.

### COST TO REPAIR

Notice that the formula uses “cost *to* repair,” not “cost *of* repairs.” The cost to repair the structure must be calculated for full repair to the building’s before-damage condition, even if the owner elects to do less. It must also include the cost of any improvements that the owner has opted to include during the repair project.

The total cost to repair includes the same items listed in Figure 8-1. As shown in Example 2 below, properly repairing a flooded building can be more expensive than people realize. The owner may opt not to pay for all of the items needed. The owner may:

- ◆ Do some of the work, such as removing and discarding wallboard.
- ◆ Obtain some of the materials free.
- ◆ Have a volunteer organization, such as the Mennonites, do some of the work.
- ◆ Decide not to do some repairs, such as choosing to nail down warped flooring rather than replace it.



***Basic rule: Substantial damage is determined regardless of the actual cost to the owner. You must figure the true cost of bringing the building back to its pre-damage condition using qualified labor and materials obtained at market prices.***

The permit office and the owner may have serious disagreements over the total list of needed repairs and their cost, as the owner has a great incentive to show less damage than actually occurred in order to avoid the cost of bringing the building into compliance. Here are four things that can help you:

- ◆ Get the cost to repair from an objective third-party or undebatable source, such as:
  - A licensed general contractor.
  - A professional construction estimator.
  - Insurance adjustment papers (exclude damage to contents).
  - Damage assessment field surveys conducted by building inspection, emergency management or tax assessment agencies after a disaster.
  - Your office.

Even if your office does not prepare the cost estimate, it needs to review the estimate submitted by the permit applicant. You can use your professional judgment and knowledge of local and regional construction costs. Or, you can use building code valuation tables published by the major building code groups.

- ◆ Use an objective system that does not rely on varying estimates of market value or different opinions of what needs to be repaired. The Substantial Damage Estimator Program discussed later in this section will do this.
- ◆ Publicize the need for the regulations and the benefits of protecting buildings from future flooding. A well-educated public won't argue as much as one that sees no need for the requirement.
- ◆ Help the owner find financial assistance to meet the extra cost of complying with the code. If there was a disaster declaration, there may be sources of financial assistance as discussed in the next unit. If the owner had flood insurance and the building was substantially damaged by a flood, the new Increased Cost of Compliance coverage will help (see next section).

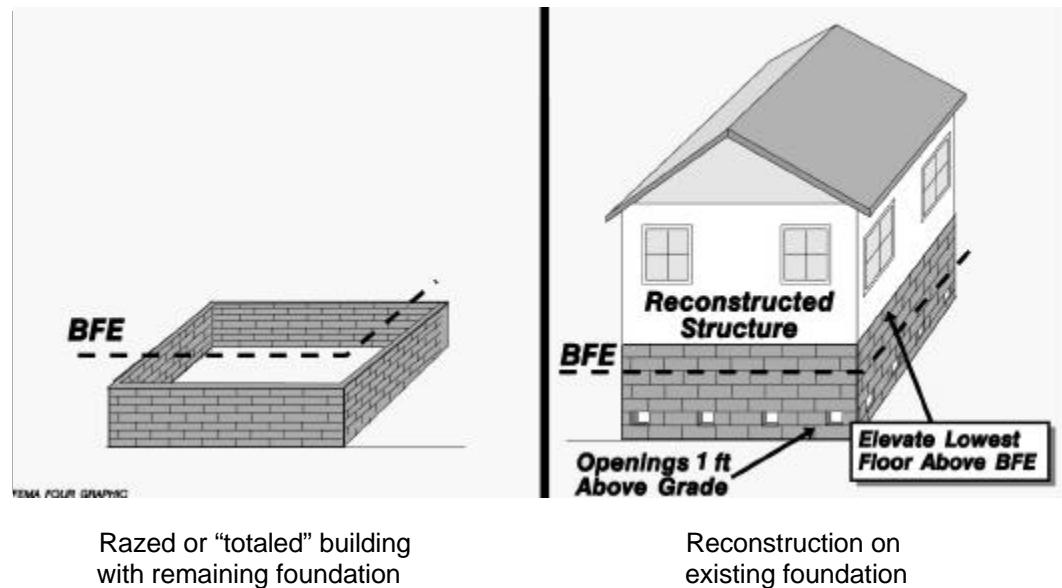


## SUBSTANTIAL DAMAGE EXAMPLES

### Example 1. Reconstruction of a destroyed building

Reconstructions are cases where an entire structure is destroyed, damaged, purposefully demolished or razed, and a new structure is built on the old foundation or slab. The term also applies when an existing structure is moved to a new site.

Reconstructions are, quite simply, “new construction.” They must be treated as new buildings.



**Figure 8-10. A reconstructed house is new construction.**

This example is for A Zones only. A new building in the V Zone must be elevated on piles or columns.



## Example 2. Substantially damaged structure

To determine if a damaged structure meets the threshold for substantial damage, the cost of repairing the structure to its before-damaged condition is compared to the market value of the structure prior to the damage. The estimated cost of the repairs must include all costs necessary to fully repair the structure to its before-damaged condition.

If equal to or greater than 50 percent of that structure's market value before damage, then the structure must be elevated (or floodproofed if it is nonresidential) to or above the level of the base flood, and meet other applicable local ordinance requirements. This is the basic requirement for substantial damage.

Figure 8-11 graphically illustrates the amount of damage that can occur to a building flooded only four feet deep. Even though the structure appears sound and there are no cracks or breaks in the foundation, the total cost of repair can be significant.

The cost of repair after a flood that simply soaked the building will typically include the following structural items:

- Remove all wallboard and insulation.
- Install new wallboard and insulation.
- Tape and paint.
- Remove carpeting and vinyl flooring.
- Dry floor, replace warped flooring.
- Replace cabinets in the kitchen and bathroom.
- Replace built-in appliances.
- Replace hollow-core interior doors.
- Replace furnace and water heater.
- Clean and disinfect duct work.
- Repair porch flooring and front steps.
- Clean and test plumbing (licensed plumber may be required).
- Replace outlets and switches, clean and test wiring (licensed electrician may be required).

Note: See also Figures 7-7 through 7-12 for what happens to flood insurance premiums if a substantially damaged building is granted a variance and is not brought up to post-FIRM standards.





**Figure 8-11. Even slow moving floodwater can cause substantial damage.**

## **SUBSTANTIAL DAMAGE SOFTWARE**

FEMA has developed a software program to help local officials make substantial damage determinations. The software is Windows-based and will work on Microsoft Windows 3.1 and Windows 95. While it is based on Microsoft Access, the software is self-contained and does not require any software in addition to Windows.

The software comes with a manual, *Guide on Estimating Substantial Damage Using the NFIP Residential Substantial Damage Estimator*, FEMA 311. This includes a user's manual and worksheets that allow the calculations to be done manually.

Contact your FEMA Regional Office for a copy of the software package and help in using it. Following a major disaster declaration, training sessions and technical assistance may be available.

## **INCREASED COST OF COMPLIANCE**

On June 1, 1997, the NFIP began offering additional coverage to all holders of structural flood insurance policies. This coverage is called Increased Cost of Compliance or ICC.



The name refers to cases where the local floodplain management ordinance requires elevation or retrofitting of a substantially damaged building. Under ICC, the flood insurance policy will not only pay for repairs to the flooded building, it will pay up to \$15,000 to help cover the additional cost of complying with the ordinance. This is available for any flood insurance claim and, therefore, is not dependent on the community receiving a disaster declaration.

There are some limitations to ICC:

- ◆ It's only available if there was a flood insurance policy on the building before the flood.
- ◆ It covers only damage caused by a flood.
- ◆ Claims are limited to \$15,000 per structure.
- ◆ Claims must be accompanied by a substantial damage determination by the floodplain ordinance administrator.

It should also be mentioned that a portion of the rest of the claim payment may help meet the cost of bringing the building up to code. For example, if there was foundation damage, the regular claim will pay for the cost of repairing or replacing the foundation. The ICC funds would only be needed for the extra costs of raising the foundation higher than it was before.

In certain cases, an ICC claim can be filed if the building is repetitively flooded, sustaining losses of less than 50 percent of the market value each time and if the total cost of the losses is 50 percent or more during a certain period of time, provided the community has language in the flood damage ordinance that implements the substantial damage rule in these cases.

Figure 8-12 has example ordinance language. This language exceeds the minimum NFIP requirements, but would be needed if you wanted to trigger the ICC provision for repetitively damaged buildings.



The Community Rating System credits keeping track of improvements to enforce a cumulative substantial improvement requirement. The 1999 *CRS Coordinator's Manual* credits the ordinance language in Figure 8-12. These credits are found under Activity 430, Section 431.c in the *CRS Coordinator's Manual* and the *CRS Application*.



**Option 1****A. Adopt the Following Definition:**

*“Repetitive Loss” means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.*

**B. And modify the “substantial improvement” definition as follows:**

*“Substantial Improvement” means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “repetitive loss” or “substantial damage”, regardless of the actual repair work performed.*

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**Option 2****Modify the Asubstantial damage@ definition as follows:**

*“Substantial Damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.*

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*NOTE 1: Communities need to make sure that these definitions are tied to the floodplain management requirements for new construction and substantial improvements and to any other requirements of the ordinance, such as the permit requirements, in order to enforce this provision.*

*NOTE 2: An ICC Claim Payment is ONLY made for flood-related damage. The substantial damage part of the definition must still include “damage of any origin” to be compliant with the minimum NFIP Floodplain Management Regulations.*

**Figure 8-12. Sample ordinance language for ICC repetitive loss definitions**

Source: *Interim Guidance for State and Local Officials -- Increased Cost of Compliance Coverage*, FEMA, 1997. This language is only needed to trigger an ICC payment for a repetitive loss. No ordinance changes are needed for the ICC coverage for substantial damage.



## C. EXCEPTIONS

As explained in previous sections, the substantial improvement and substantial damage requirements affect all buildings regardless of the reason for the improvement or the cause of the damage. There are three exceptions to this: exempt activities, historic buildings and projects required by code.

### EXEMPT ACTIVITIES

Certain activities related to making improvements or repairing damaged buildings do not have to be counted toward the cost of the improvement or repairs. These include:

- ◆ Plans and specifications.
- ◆ Surveying.
- ◆ Permit fees.
- ◆ Demolition or emergency repairs made for health or safety reasons or to prevent further damage to the building.
- ◆ Improvements or repairs to items outside the building, such as the driveway, fencing, landscaping and detached structures.

### HISTORIC STRUCTURES

Historic structures are exempted from the substantial improvement requirements subject to the criteria listed below. The exemption can be granted administratively if the current NFIP definitions of substantial improvement and historic structure are included in your ordinance, or they can be granted through a variance procedure.

In either case, they are usually granted subject to conditions.

If the improvements to a historic structure meet the following three criteria and are approved by the community, the building will not have to be elevated or floodproofed. It can also retain its pre-FIRM flood insurance rating status.

**1. The building must be a bona-fide “historic structure.”** Figure 7-13 has the definition that must be followed.

**2. The project must maintain the historic status of the structure.** If the proposed improvements to the structure will result in it being removed from or ineligible for the National Register or federally-certified state or local inventory, then the proposal cannot be granted an exemption from the substantial improvement rule.



The best way to make such determinations is to seek written review and approval of proposed plans by the local historic preservation board, if it is federally-certified, or by the state historic preservation office. If the plans are approved, you can grant the exemption. If not, no exemption can be permitted.

**3. Take all possible flood damage reduction measures.** Even though the exemption to the substantial improvement rule means the building does not have to be elevated to or above BFE, or be renovated with flood-resistant materials that are not historically sensitive, many things can and should be done to reduce the flood damage potential. Examples include:

- ◆ Locating mechanical and electrical equipment above the BFE or flood-proofing it.
- ◆ Elevating the lowest floor of an addition to or above the BFE with the change in floor elevation disguised externally.
- ◆ Building the lowest floor of an addition with flood-resistant materials and providing hydrostatic openings.

## CODE VIOLATIONS

The NFIP definition of substantial improvement includes another exemption:

**44 CFR 59.1 Definitions:** *"Substantial improvement" means .... The term does not, however, include ... Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions*

Note the key words in this exemption: *correct* existing violations, *identified* by the local official, and *minimum* necessary to assure safe conditions. This language was included in order to avoid penalizing property owners *who had no choice* but to make improvements to their buildings or face condemnation or revocation of a business license.

This exemption was intended for *involuntary* improvements or violations that existed before the improvement permit was applied for or before the damage occurred—for example, a restaurant owner who must remodel and enlarge the kitchen in order to meet current local and state health and safety codes.

You can only exempt the items specifically required by code. For example, if a single stair tread was defective and had to be replaced, do not exempt the cost of rebuilding the entire stairway. Similarly, count only replacement in like kind and what is minimally necessary. If the owner chooses to upgrade the quality of a code-required item, the extra cost is not exempt from the formula—it's added to the true cost of the improvement or repairs.



Unfortunately, many property owners and builders pressure local building official to exclude “code violation corrections” from their voluntary improvement proposals. There are “code violations” in all structures built before the current code was enacted. In many cases, those elements must be brought up to code as part of an improvement project.

This is very different from a code violation citation that forces a property owner to correct those violations and make improvements that were otherwise not planned. The building official must know about and document the violations before or at the time the permit is issued.

### Example

A small business in a 40-year old building was damaged by a fire. The building’s pre-fire market value was \$100,000. The insurance adjuster and the permit office concluded that the total cost to repair would be \$45,000.

However, the community’s building code states that whenever an applicant applies for a permit to modify or improve a building, the building must be brought up to code. This building would need the following additional work:

- ◆ Replace unsafe electrical wiring.
- ◆ Install missing fire exit signs, smoke detectors and emergency lighting.
- ◆ Widen the front door and install a ramp to make the business accessible to handicapped and mobility-impaired people.

The total cost of these code requirements would be \$8,000. However, since these were required by the code before the fire occurred, they would not have to be counted toward the cost to repair. Based on the basic formula:

$$\frac{\$45,000}{\$100,000} = 0.45 \text{ or } 45\% \quad \begin{array}{l} \text{The building is not declared} \\ \text{substantially damaged} \end{array}$$

In this example, the building can be repaired without elevating or floodproofing. However, the permit office should strongly recommend incorporating flood protection measures and flood resistant materials in the repair project (as in the example in Figure 8-2).





## LEARNING CHECK #2

1. What is the formula for determining substantial damage?
  
2. What is the basic rule on calculating the cost of the damage?
  
3. A tornado swept through town and substantially damaged 25 buildings in the floodplain. How can you help the property owners comply with the floodplain ordinance's substantial damage regulations?
  
4. Mr. Johnson prepared a list of everything he has to do to repair his flooded home. Which of the following items are counted toward the cost of repairs when determining substantial damage? What is the dollar amount that should be counted?
  - Clearing broken trees and debris away from the house (\$2,500)
  - Replacing the warped flooring (\$3,000)
  - New doors (\$1,000) to replace old ones (worth \$500)
  - Replacing the old kitchen cabinets (valued at \$5,000) with custom hardwood cabinets valued at \$15,000.
  - New wall to wall carpeting (\$1,800)
  - New furniture (\$12,000)
  - New wiring (\$2,000) to bring the building up to current code (This is a standard requirement of the community. The building was not cited as having a code violation.)
  - Permit fee (\$500)
  - Clean out and test the furnace (done free as a public service by the utility company, but otherwise worth \$250 if done by a private contractor)
  - New bushes and replacement fence (\$1,500)
5. What's the best way to determine if a building is "historic" and eligible for exemption from the substantial improvement requirement?





## UNIT LEARNING EXERCISE

1. What kind of projects need a permit so you can check to see if they would be substantial improvements?
  
2. A home was built to post-FIRM standards in 1990. The lowest floor was elevated four feet above grade, to the BFE in effect at that time. In 1995, a new FIRM went into effect. The new BFE is now six feet above grade at that site.
  - a. How high would a small (less than substantial) addition have to be elevated?
  
  - b. How high would a large (substantial) addition have to be elevated?
  
3. Mrs. Murphy bought her property for \$100,000 last year. Is this a good basis for determining its market value?
  
4. Based on tax assessor's records, the market value of 123 Main Street is \$75,000. The owner wants to replace the HVAC and plumbing, remodel the kitchen and both bathrooms and convert his basement to a finished family room. His total cost is \$20,000 for supplies. If a contractor were to do the job, the total cost would be \$45,000. However, since he is a handyman and will do all the work himself, the total cost of his project is \$20,000. What is your response?
  
5. Mrs. Smith wants a new second story that will double the size and value of her house. The floor of the new story will be above the BFE. Will the old first floor have to be elevated?
  
6. The substantial damage regulations only apply if the building was damaged by a flood. True or false?



7. A flooded property owner has a brother who is a plumbing contractor. His brother's repair estimate shows the damage at 48% of the building's value. You think it should be higher. What can you do to prevent an argument over who's numbers are right?
  
8. Mrs. McGillicuddy is on a fixed income. Her home was flooded and substantially damaged. Her flood insurance policy will pay for the repairs. When told that she will also have to elevate her house, she thinks she should apply for a variance due to the financial hardship. What do you tell her?
  
9. Before the flood, Mr. Johnson had been cited by the community for a code violation. The paint on his garage door had been peeling, which was a violation of the local housing maintenance code. Since the flood left mud up to the high water line, he decided to repaint the whole house. Can he claim exemption of the cost of the painting because it had been cited as a code violation?



## ANSWERS TO THE LEARNING CHECKS

### Learning check #1

1. What is the basic rule on improvements and repairs to existing buildings in the floodplain?

*If the cost of improvements or the cost to repair the damage exceeds 50 percent of the market value of the building, it must be brought up to current floodplain management standards.*

2. Mrs. Murphy got a permit two months ago to remodel her living room and kitchen. Now she wants a permit to remodel three bedrooms and two bathrooms. Should you check each of these separately to determine if each project is a substantial improvement?

*No. They should be counted as one project and their total cost combined.*

3. What is the substantial improvement formula?

*A project is a substantial improvement if:*

$$\frac{\text{Cost of improvement project}}{\text{Market value of the building}} \geq 50 \text{ percent}$$

4. Which of the following items must be included when calculating the cost of an improvement project?

- Attached deck    *yes*
- Plumbing    *yes*
- Permit fees    *no*
- Contractor's overhead and profit    *yes*
- Architect's plans    *no*
- Landscaping    *no*
- Built-in bookcases    *yes*

5. What factors are considered when determining market value?

*"The price a willing buyer and seller agree upon." Factors to consider are the building's original quality, subsequent improvements, age and current condition.*

6. What are three good sources for obtaining the market value of a house?

- *An independent appraisal by a professional appraiser.*
- *Detailed estimates of the structure's actual cash value (the replacement cost for a building, minus a depreciation percentage based on age and condition).*



- *Property appraisals used for tax assessment purposes with an adjustment recommended by the tax appraiser to reflect market conditions (adjusted assessed value).*
  - *The value of buildings taken from NFIP claims data (usually actual cash value).*
  - *Qualified estimates based on sound professional judgment made by the staff of the local building department or tax assessor's office.*
7. Mr. Jones proposes a \$50,000 addition to his \$80,000 home in the floodplain. Is this a substantial improvement?
- Yes, 50,000 divided by 80,000 = 0.625, more than 50%*
8. If Mr. Jones' project will be a substantial improvement, what do you need to check to see if the whole house has to be elevated or just the addition?
- Check the extent of work on the common wall and the existing building. If the common wall is demolished as part of the project, the existing building and the addition must be elevated.*



## Learning check #2

1. What is the formula for determining substantial damage?

*A building was substantially damaged if:*

$$\frac{\text{Cost to repair}}{\text{Market value of the building}} \geq 50 \text{ percent}$$

2. What is the basic rule on calculating the cost of the damage?

*Substantial damage is determined regardless of the actual cost to the owner. You must figure the true cost of bringing the building back to its pre-damage condition using qualified labor and materials obtained at market prices.*

3. A tornado swept through town and substantially damaged 25 buildings in the floodplain. How can you help the property owners comply with the floodplain ordinance's substantial damage regulations?

*Help the owner obtain financial assistance. Many programs are available after a disaster declaration.*

4. Mr. Johnson prepared a list of everything he has to do to repair his flooded home. Which of the following items are counted toward the cost of repairs when determining substantial damage? What is the dollar amount that should be counted?

- Clearing broken trees and debris away from the house (\$2,500)    \$0
- Replacing the warped flooring (\$3,000)    \$3,000
- New doors (\$1,000) to replace old ones (worth \$500)    \$1,000
- Replacing the old kitchen cabinets (valued at \$5,000) with custom hardwood cabinets valued at \$15,000.    \$15,000
- New wall to wall carpeting (\$1,800)    \$1,800
- New furniture (\$12,000)    \$0 (*not part of the structure*)
- New wiring (\$2,000) to bring the building up to current code (This is a standard requirement of the community. The building was not cited as having a code violation.)    \$2,000
- Permit fee (\$500)    \$0
- Clean out and test the furnace (done free as a public service by the utility company, but otherwise worth \$250 if done by a private contractor)    \$250
- New bushes and replacement fence (\$1,500)    \$0 (*not part of the structure*)

5. What's the best way to determine if a building is "historic" and eligible for exemption from the substantial improvement requirement?

*See if it's on an approved list of historic structures (see Figure 7-13)*



## Unit Learning Exercise

1. What kind of projects need a permit so you can check to see if they would be substantial improvements?

— *Remodeling projects.*

— *Rehabilitation projects.*

— *Building additions.*

2. A home was built to post-FIRM standards in 1990. The lowest floor was elevated four feet above grade, to the BFE in effect at that time. In 1995, a new FIRM went into effect. The new BFE is now six feet above grade at that site.

- a. How high would a small (less than substantial) addition have to be elevated?

*To at least four feet above grade.*

- b. How high would a large (substantial) addition have to be elevated?

*To at least six feet above grade.*

3. Mrs. Murphy bought her property for \$100,000 last year. Is this a good basis for determining its market value?

*It's a start, but the true market value may be different this year, depending on the local housing market. You also need to subtract the value of the land, landscaping, and detached structures that would have been in the purchase price for the property.*

4. Based on tax assessor's records, the market value of 123 Main Street is \$75,000. The owner wants to replace the HVAC and plumbing, remodel the kitchen and both bathrooms and convert his basement to a finished family room. His total cost is \$20,000 for supplies. If a contractor were to do the job, the total cost would be \$45,000. However, since he is a handyman and will do all the work himself, the total cost of his project is \$20,000. What is your response?

*The total cost of the project must be the true cost, including the cost of labor and donated materials. This project will be a substantial improvement.*

5. Mrs. Smith wants a new second story that will double the size and value of her house. The floor of the new story will be above the BFE. Will the old first floor have to be elevated?

*Yes. The project should be a substantial improvement and the entire building will need to be elevated in this situation.*



6. The substantial damage regulations only apply if the building was damaged by a flood. True or false?

*False, the damage can be from any cause.*

7. A flooded property owner has a brother who is a plumbing contractor. His brother's repair estimate shows the damage at 48% of the building's value. You think it should be higher. What can you do to prevent an argument over who's numbers are right?

*Get the cost to repair from an objective third-party or undebatable source, such as:*

— *A licensed general contractor.*

— *A professional construction estimator.*

— *Insurance adjustment papers (exclude damage to contents).*

— *Damage assessment field surveys conducted by building inspection, emergency management or tax assessment agencies after a disaster.*

8. Mrs. McGillicuddy is on a fixed income. Her home was flooded and substantially damaged. Her flood insurance policy will pay for the repairs. When told that she will also have to elevate her house, she thinks she should apply for a variance due to the financial hardship. What do you tell her?

*Her flood insurance policy has Increased Cost of Compliance coverage that will help pay for the cost of meeting the ordinance's requirement to elevate. Your office may be able to help her find financial assistance to pay for the rest of the cost, if needed.*

9. Before the flood, Mr. Johnson had been cited by the community for a code violation. The paint on his garage door had been peeling, which was a violation of the local housing maintenance code. Since the flood left mud up to the high water line, he decided to repaint the whole house. Can he claim exemption of the cost of the painting because it had been cited as a code violation?

*No. Only exempt the items specifically required by the citation and what is minimally necessary to comply.*

**You are now only two short units from finishing this course. If you think you will be ready in a week, call now for the final examination to be mailed to you.**



Locality \_\_\_\_\_ Permit Number \_\_\_\_\_  
 Ocean Hazard \_\_\_\_\_ Estuarine Shoreline \_\_\_\_\_ ORW Shoreline \_\_\_\_\_ Public Trust Shoreline \_\_\_\_\_ Other \_\_\_\_\_  
 (For official use only)

### GENERAL INFORMATION

#### LAND OWNER

Name: Andrew Thexton  
 Address: 12766 River Rd  
 City: Richmond State: VA Zip: 23238 Phone: 804-338-2569  
 Email: athexton@mindspring.com

#### AUTHORIZED AGENT

Name: Kyle Brever, Planning Director for Pender Co.  
 Address: PO Box 519  
 City: Burgaw State: NC Zip: 28425 Phone: 910-259-1202  
 Email: kbrever@pendercountync.gov

LOCATION OF PROJECT: (Address, street name and/or directions to site. If not oceanfront, what is the name of the adjacent waterbody.) 1117 Ocean Blvd, Topsail Beach, NC

DESCRIPTION OF PROJECT: (List all proposed construction and land disturbance.) Elevation & retrofit existing structure in place from FFE of 16.2' to a FFE of 19'

SIZE OF LOT/PARCEL: 7000 square feet .16 acres

PROPOSED USE: Residential ☒ (Single-family ☒ Multi-family ☐ ) Commercial/Industrial ☐ Other ☐

COMPLETE EITHER (1) OR (2) BELOW (Contact your Local Permit Officer if you are not sure which AEC applies to your property):

(1) OCEAN HAZARD AECs: TOTAL FLOOR AREA OF PROPOSED STRUCTURE: 1408 square feet  
 (includes air conditioned living space, parking elevated above ground level, non-conditioned space elevated above ground level but excluding non-load-bearing attic space)

(2) COASTAL SHORELINE AECs: SIZE OF BUILDING FOOTPRINT AND OTHER IMPERVIOUS OR BUILT UPON SURFACES: \_\_\_\_\_ square feet (includes the area of the roof/drip line of all buildings, driveways, covered decks, concrete or masonry patios, etc. that are within the applicable AEC. Attach your calculations with the project drawing.)

STATE STORMWATER MANAGEMENT PERMIT: Is the project located in an area subject to a State Stormwater Management Permit issued by the NC Division of Water Quality?

YES \_\_\_\_\_ NO ☒

If yes, list the total built upon area/impervious surface allowed for your lot or parcel: \_\_\_\_\_ square feet.



**OTHER PERMITS MAY BE REQUIRED:** The activity you are planning may require permits other than the CAMA minor development permit, including, but not limited to: Drinking Water Well, Septic Tank (or other sanitary waste treatment system), Building, Electrical, Plumbing, Heating and Air Conditioning, Insulation and Energy Conservation, FIA Certification, Sand Dune, Sediment Control, Subdivision Approval, Mobile Home Park Approval, Highway Connection, and others. Check with your Local Permit Officer for more information.

**STATEMENT OF OWNERSHIP:**

I, the undersigned, an applicant for a CAMA minor development permit, being either the owner of property in an AEC or a person authorized to act as an agent for purposes of applying for a CAMA minor development permit, certify that the person listed as landowner on this application has a significant interest in the real property described therein. This interest can be described as: (check one)

☒ an owner or record title, Title is vested in Andrew Thexton, see Deed Book 4617 page 1348 in the Pender County Registry of Deeds.

☐ an owner by virtue of inheritance. Applicant is an heir to the estate of \_\_\_\_\_; probate was in \_\_\_\_\_ County.

☐ if other interest, such as written contract or lease, explain below or use a separate sheet & attach to this application.

**NOTIFICATION OF ADJACENT PROPERTY OWNERS:**

I furthermore certify that the following persons are owners of properties adjoining this property. I affirm that I have given **ACTUAL NOTICE** to each of them concerning my intent to develop this property and to apply for a CAMA permit.

- |     | (Name)              | (Address)                                    |
|-----|---------------------|--|
| (1) | <u>Sam Ennis</u>    | <u>1036 Bayshore Dr, Wilmington NC 28411</u> |
| (2) | <u>Wendall Wall</u> | <u>1613 Jamaica Dr, Key West FL 33040</u>    |
| (3) | _____               | _____  |
| (4) | _____               | _____  |

**ACKNOWLEDGEMENTS:**

I, the undersigned, acknowledge that the land owner is aware that the proposed development is planned for an area which may be susceptible to erosion and/or flooding. I acknowledge that the Local Permit Officer has explained to me the particular hazard problems associated with this lot. This explanation was accompanied by recommendations concerning stabilization and floodproofing techniques.

I furthermore certify that I am authorized to grant, and do in fact grant, permission to Division of Coastal Management staff, the Local Permit Officer and their agents to enter on the aforementioned lands in connection with evaluating information related to this permit application.

This the 22nd day of November, 2016

 Kyle M. Breuer

Landowner or person authorized to act as his/her agent for purpose of filing a CAMA permit application

This the 22nd day of November, 2016









**Pender County Flood Mitigation Project (FMA)**  
**Andrew Thexton**  
**1117 Ocean Blvd, Topsail Beach**

Base Flood Elevation: 15'

Lowest Adjacent Grade: 4.7'

Existing Finished Floor Elevation (FFE): 16.2'

Target Post Elevation Finished Floor Elevation (FFE): 19.0'





PIN: 4212-14-8718-0000

Owner: THEXTON ANDREW S et al  
12766 RIVER RD  
RICHMOND, VA 23238

Deed Ref: 4617/1348

Property  
Address: 1117 OCEAN BLVD

Description: L9 & N/E 1/2 L10 NEW TOPSAIL BCH PB 3/72 BLK 22

Sale Price: \$496,000

Sale Date: 2016-04-01

Plat: 00030072

Account No: 970295

Township: TOPSAIL

Subdivision: NEW TOPSAIL BEACH

Tax Codes: G01 C54 R40

Acres: 0.24

Land Value: \$445,500

Building Value: \$67,528

Total value: \$513,028

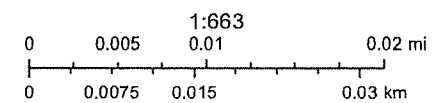
Deferred Value: \$0

Exempt Amount:

PCL Class: R

Heated Sq Feet: 1408:

Pender County



1 inch = 55 feet

December 27, 2016





AGENT AUTHORIZATION FOR CAMA PERMIT APPLICATION

Name of Property Owner Requesting Permit: ANDREW THEXTON  
 Mailing Address: 12766 RIVER RD  
RICHMOND, VA 23238  
 Phone Number: 804 338-2569  
 Email Address: athexton@MudSpring.com

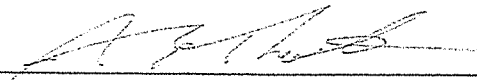
I certify that I have authorized Kyle Breuer, Pender Co. Planning Director  
 Agent / Contractor

to act on my behalf, for the purpose of applying for and obtaining all CAMA permits  
 necessary for the following proposed development: Elevation of my home  
through the Pender Co. Flood Mitigation Program

at my property located at \_\_\_\_\_,  
 in Pender County.

I furthermore certify that I am authorized to grant, and do in fact grant permission to  
 Division of Coastal Management staff, the Local Permit Officer and their agents to enter  
 on the aforementioned lands in connection with evaluating information related to this  
 permit application.

Property Owner Information:

✓   
 Signature

✓ ANDREW THEXTON  
 Print or Type Name

✓ \_\_\_\_\_  
 Title

✓ 11, 17, 2016  
 Date

PROPERTY ADDRESS:  
1117 OCEAN BLVD  
TOPSALE BEACH NC

This certification is valid through 1, 31, 2017



## AEC HAZARD NOTICE

Project Is In An: ☒ Ocean Erodible Area ☐ High Hazard Flood Area ☐ Inlet Hazard AreaProperty Owner: ANDREW THEXTONProperty Address: 1117 OCEAN BLVD, TOPSAIL NC

Date Lot Was Platted: \_\_\_\_\_

This notice is intended to make you, the applicant, aware of the special risks and conditions associated with development in this area, which is subject to natural hazards such as storms, erosion and currents. The rules of the Coastal Resources Commission require that you receive an AEC Hazard Notice and acknowledge that notice in writing before a permit for development can be issued.

The Commission's rules on building standards, oceanfront setbacks and dune alterations are designed to minimize, but not eliminate, property loss from hazards. By granting permits, the Coastal Resources Commission does not guarantee the safety of the development and assumes no liability for future damage to the development. Permits issued in the Ocean Hazard Area of Environmental Concern include the condition that structures be relocated or dismantled if they become imminently threatened by changes in shoreline configuration. The structure(s) must be relocated or dismantled within two (2) years of becoming imminently threatened, and in any case upon its collapse or subsidence.

The best available information, as accepted by the Coastal Resources Commission, indicates that the annual long-term average ocean erosion rate for the area where your property is located is \_\_\_\_\_ feet per year.

The rate was established by careful analysis of aerial photographs of the coastline taken over the past 50 years.

Studies also indicate that the shoreline could move as much as \_\_\_\_\_ feet landward in a major storm.

The flood waters in a major storm are predicted to be about \_\_\_\_\_ feet deep in this area.

Preferred oceanfront protection measures are beach nourishment and relocation of threatened structures. Hard erosion control structures such as bulkheads, seawalls, revetments, groins, jetties and breakwaters are prohibited. Temporary sand bags may be authorized under certain conditions.

The applicant must acknowledge this information and requirements by signing this notice in the space below. Without the proper signature, the application will not be complete.

Andrew Thexton 11/21/16  
Applicant Signature Date

**SPECIAL NOTE:** This hazard notice is required for development in areas subject to sudden and massive storms and erosion. Permits issued for development in this area expire on December 31 of the third year following the year in which the permit was issued. Shortly before work begins on the project site, the Local Permit Officer must be contacted to determine the vegetation line and setback distance at your site. If the property has seen little change since the time of permit issuance, and the proposed development can still meet the setback requirement, the LPO will inform you that you may begin work. Substantial progress on the project must be made within 60 days of this setback determination, or the setback must be remeasured. Also, the occurrence of a major shoreline change as the result of a storm within the 60-day period will necessitate remeasurement of the setback. It is important that you check with the LPO before the permit expires for official approval to continue the work after the permit has expired. Generally, if foundation pilings have been placed and substantial progress is continuing, permit renewal can be authorized. It is unlawful to continue work after permit expiration.

For more information, contact:

Jason Dail  
Local Permit Officer

Address Pender County / Topsail Beach  
Locality (910) 796-7221  
Phone Number

Revised 2/07



Sent via Certified  
Mail - Nov 30, 2016

115

Receipts for  
Certified Mail  
(Staple Here)

11-30-16  
Date  
Wendall Wall  
Adjacent Property Owner  
11013 Tamarac Dr  
Mailing Address  
Key West FL 33040  
City, State, Zip Code

Dear Adjacent Property:

This letter is to inform you that I, Andrew Traxton have applied for a CAMA Minor  
Property Owner

Permit on my property at 1117 Dean Blvd Topsail Beach in Pender  
Property Address

County. As required by CAMA regulations, I have enclosed a copy of my permit application and project  
drawing(s) as notification of my proposed project. No action is required from you or you may sign and return  
the enclosed no objection form. If you have any questions or comments about my proposed project, please

contact me at 910-259-1202 or by mail at the address listed below. If you wish to  
Applicant's Telephone (Agent)

file written comments or objections with the Town of Emerald Isle CAMA Minor Permit Program, you may submit  
them to:

Sincerely,

Andrew Traxton  
Property Owner  
127106 River Rd  
Mailing Address  
Richmond VA 23238  
City, State, Zip Code

Jason Dail, DCM Field Rep  
LPO, Town of Topsail Beach  
NC DEQ / DCM  
127 Cardinal Dr Ext.  
Wilmington, NC 28405

Authorized Agent for owner:  
Kyle Brever, Planning Director  
Pender County  
PO Box 1519  
Burgaw, NC 28425  
910-259-1202

File

Pender County Flood Mitigation Program



Sent via Certified  
Mail - Nov 30, 2016

116

Receipts for  
Certified Mail  
(Staple Here)

11-30-16  
Date SAM ENNIS  
Adjacent Property Owner  
636 Bayside Dr  
Mailing Address Wilmington NC 28411  
City, State, Zip Code

Dear Adjacent Property:

This letter is to inform you that I, Andrew Trexton have applied for a CAMA Minor  
Property Owner

Permit on my property at 1117 Ocean Blvd Topsail Beach in Pender  
Property Address

County. As required by CAMA regulations, I have enclosed a copy of my permit application and project  
drawing(s) as notification of my proposed project. No action is required from you or you may sign and return  
the enclosed no objection form. If you have any questions or comments about my proposed project, please  
contact me at 910-259-1202, or by mail at the address listed below. If you wish to

Applicant's Telephone (Agent)

file written comments or objections with the Town of Emerald Isle CAMA Minor Permit Program, you may submit  
them to:

Sincerely,

Andrew Trexton  
Property Owner  
12766 River Rd  
Mailing Address  
Richmond, VA 23238  
City, State, Zip Code

Jason Dail, DCM Field Rep  
LPO, Town of Topsail Beach  
NC DEQ / DCM  
127 Cardinal Dr Ext.  
Wilmington, NC 28405

Authorized Agent for owner:

Kyle Brewer, Planning Director  
Pender County  
PO Box 1519  
Burgaw, NC 28425  
910-259-1202

File

Pender County Flood Mitigation Program



PENDER COUNTY FLOOD MITIGATION ASSISTANCE PROGRAM (FMA)  
ELEVATION/RETROFITTING INDIVIDUAL UNIT SCOPE OF WORK

Unit #	3TB	Parcel ID	4212-14-8718		
Owner's Name(s)	Andrew Thexton	Telephone	(804) 338-2569	or	N/A
Street Address	1117 Ocean Boulevard	City/State/Zip	Topsail Beach	NC	28445

1. General: All Elevation/Retrofitting work for this unit must be performed in strict accordance with the applicable sections of the General Scope of Elevation Work, the Engineering General Notes & Standard Details, Engineering Drawings #3TB-A/B/C, and the 2012 NC Residential Building Code.
2. Elevation Height: The main structure is to be elevated from the existing FFE of 16.2 feet NAVD to a minimum post-elevation FFE of 19.0 feet NAVD (but no less than 16.0 feet). *Note: This unit has HVAC equipment in the crawlspace. The NC mechanical code requires that there be a minimum of one (1) foot of freeboard below mechanical equipment (which includes ducts). There is a supply/return duct in the crawlspace. The BFE is to be established ultimately based on this criterion.* Please note that the lowest portion of the entire living space (including all unheated storage and enclosed areas) is to be elevated to the minimum FFE shown above. The lowest adjacent grade is 4.7 feet NAVD.
3. Special Elevation Notes:
  - A. *Siding to be Removed*: Remove and replace siding as needed for the installation of new straps connecting the existing floor framing to the new piles. Finish to match the existing. Remove and replace the belly board as needed for the new piling attachment.
  - B. *Access #1*. Front (road side) - Raise the porch floor, roof, and stairway with the house. Add support posts as shown on attached drawings.
  - C. *Access #2*. Rear (ocean side) - Raise the porch floor, roof, and stairway with the house. Add support posts as shown on attached drawings.
  - D. *Access #3*. Detach the ocean side ocean access walkway from the deck.
  - E. *Carport/Garage*. Saw cut the existing slab under the house as needed to allow for new pile placement.
4. Foundation Notes: Construct new timber pile/grade beam foundation as shown on Engineering Drawings #3TB-B/C.
5. Access Notes:
  - A. *Access #1*. Front (road side) - Construct additional steps and platform as needed to extend the access to the ground and include railings, handrails, and pickets.
  - B. *Access #2*. Back (ocean side) - Construct additional steps and platform as needed to extend the access to the ground and include railings, handrails, and pickets.
  - C. *Access #3*. Construct a set of steps from the ocean access walkway to the deck and include handrails and pickets.



6. Utility Retrofitting Notes:

- A. Construct a treated wood platform for the HVAC compressor unit at BFE +1 ft. elevation.
- B. *Electrical Retrofit Note:* Raise the meter base on the exterior wall by the front door to allow for access from the front porch.

7. Garage/Carport Post-Elevation Retrofit Notes:

- A. *Slab Restoration:* After elevation, add compacted fill and concrete as needed to restore the concrete slab.
- B. *Driveway/Sidewalk Restoration:* After elevation, restore the driveway to pre-elevation condition.
- C. Relocate existing receptacles and light switches in new ground level storage room (two light fixtures and two switches) to provide convenient access (at least one foot above BFE).
- D. *Miscellaneous Notes:*
  - i. Construct a new 8'6" x 12' storage room with a dividing wall partition and two exterior doors. Construct with breakaway walls as shown on attached drawings.
  - ii. Contractor is to minimize damage to existing dune vegetation. Dune vegetation exists on the ocean side of the 1<sup>st</sup> floor deck. To minimize damage to dune vegetation, provide sand fencing or barrier. If damaged, re-seed/plant as necessary for dune stabilization in accordance with the applicable provisions of AEC 15A NCAC 07H.0304 and the requirements of the Town of Topsail Beach. Conform to the requirements of the CAMA permit issued by Coastal Management and the Town of Topsail Beach.





Coastal Management  
ENVIRONMENTAL QUALITY

PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

BRAXTON DAVIS

Director

December 18, 2016

**CERTIFIED MAIL – 7011 0110 0000 9947 1782**  
**RETURN RECEIPT REQUESTED**

Andrew Thexton  
12766 River Road  
Richmond, VA 23238

**RE: DENIAL OF CAMA MINOR DEVELOPMENT**  
**PERMIT APPLICATION NUMBER- TB16-16**  
**PROJECT ADDRESS- 1117 Ocean Boulevard, Topsail Beach, NC**

Dear Mr. Thexton:

After reviewing your application in conjunction with the development standards required by the Coastal Area Management Act (CAMA) and our locally adopted Land Use Plan and Ordinances, it is my determination that no permit may be granted for the project which you have proposed.

This decision is based on my findings that your request violates NCGS 113A-120(a)(8) which requires that all applications be denied which are inconsistent with CAMA guidelines. Specifically, the development for which you applied consisted of replacement of a structure within the minimum development setback (measured 60 feet from the First Line of Stable Natural Vegetation (FLSNV), or 30 times the shoreline erosion rate of 2 feet/year, whichever is greater).

Your proposal is inconsistent with 15A NCAC 07J .0210 (1), which states: *“Replacement of structures damaged or destroyed by natural elements, fire or normal deterioration is considered development and requires CAMA permits. Replacement of structures shall be permitted if the replacements is consistent with CRC rules”*, and with 15A NCAC 7H .0306(a)(5), which states that: *“With the exception of those types of development defined in 15A NCAC 07H .0309, no development, including any portion of a building or structure, shall extend oceanward of the ocean hazard setback distance”*.

Should you wish to appeal my decision to the Coastal Resource Commission or request a variance from the Commission, please contact me so I can provide you with the proper forms and any other information you may require. The Division of Coastal Management in Morehead City must receive appeal notices within twenty (20) days of the date of this letter in order to be considered.



Page Two  
Andrew Thexton  
December 18, 2016

Respectfully yours,

Jason Dail, LPO  
127 Cardinal Drive  
Wilmington, NC 28405

cc: Kyle Brewer, Agent, Planning Director for Pender County, PO Box 519, Burgaw, NC 28425





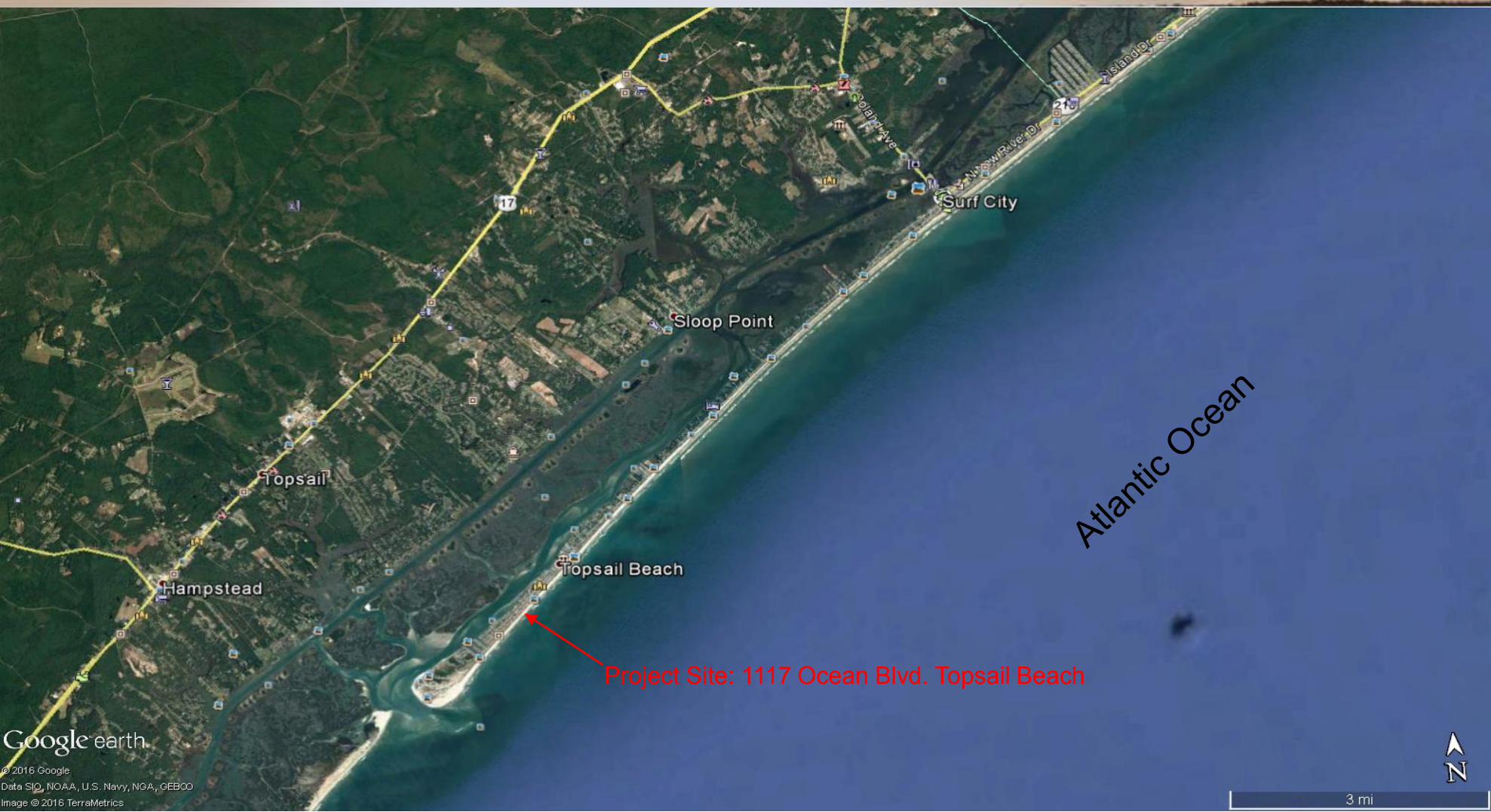
**Andrew & Deborah Thexton Variance Request**  
**1117 Ocean Blvd., Topsail Beach, Pender County**  
**February 8, 2017**

*Department of Environmental Quality*





# Thexton Variance Request





# *Thexton Variance Request*

123



*Department of Environmental Quality*





# Thexton Variance Request

124





# *Thexton Variance Request*

125



*Department of Environmental Quality*





# *Thexton Variance Request*

126



View of Petitioner's property  
looking East

Photo taken by DCM Staff 1/19/17



# *Thexton Variance Request*

127



View of Petitioner's property  
looking West

Photo taken by DCM Staff 1/19/17



# *Thexton Variance Request*

128



View of Petitioner's property  
looking North

Photo taken by DCM Staff 1/19/17





# *Thexton Variance Request*

129



View of Petitioner's property  
looking South

Photo taken by DCM Staff 1/19/17



# *Thexton Variance Request*

130

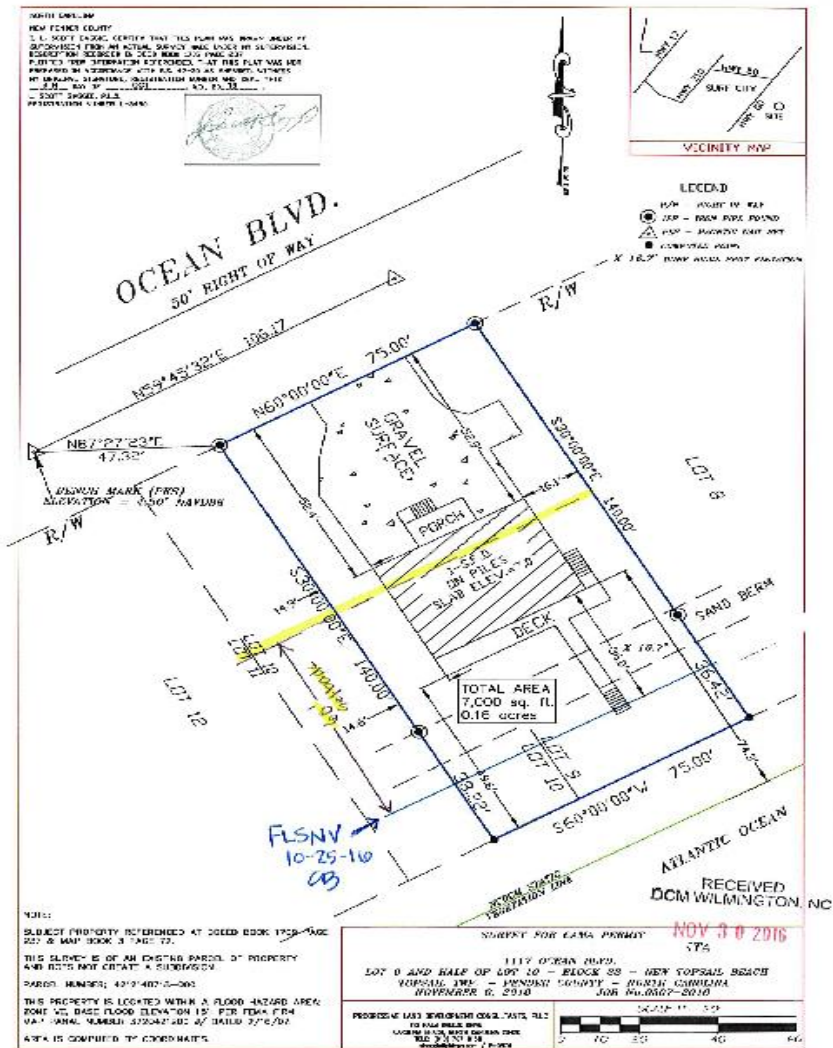


View of Petitioner's Property  
looking Southwest

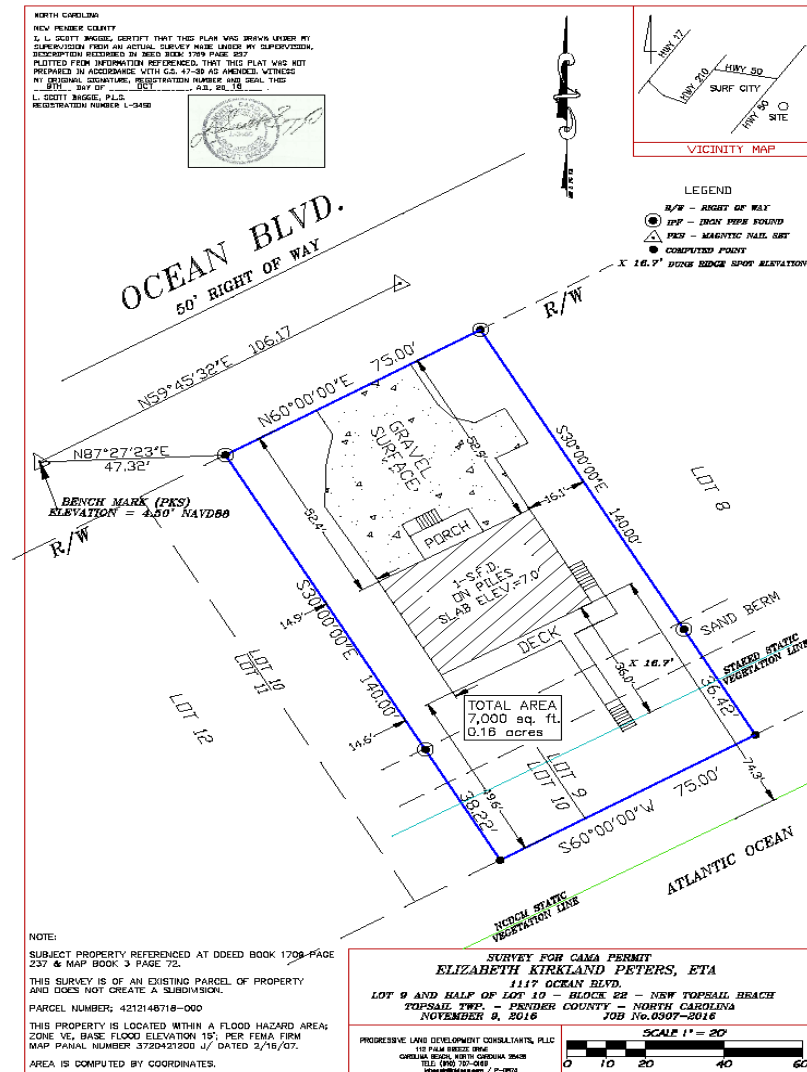
Photo taken by DCM Staff  
1/19/16







PALEW0711#





## **VARIANCE CRITERIA** 15A NCAC 07J.0703 (f)

-to grant a variance, the Commission must affirmatively find each of the following factors listed in G.S. 113A-120.1(a).

- (A) that unnecessary hardships would result from strict application of the development rules, standards, or orders issued by the Commission;
- (B) that such hardships result from conditions peculiar to the petitioner's property such as the location, size, or topography of the property;
- (C) that such hardships did not result from actions taken by the petitioner; and
- (D) that the requested variance is consistent with the spirit, purpose and intent of the Commission's rules, standards or orders; will secure the public safety and welfare; and will preserve substantial justice.








ROY COOPER  
Governor

WILLIAM G. ROSS, JR.  
Acting Secretary

TO: The Coastal Resources Commission

FROM: Christine A. Goebel, Assistant General Counsel 

DATE: January 25, 2017 (for the February 8, 2017 CRC Meeting)

RE: **Variance Request by Sam & Ann Ennis (CRC-VR-16-12)**

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Petitioners Sam & Ann Ennis purchased an oceanfront lot in 2016 located at 1121 Ocean Boulevard in Topsail Beach. As part of a voluntary FEMA mitigation program for homes that have made repetitive loss claims, Pender County contacted Petitioners about participating in a program where the cost to elevate their structure within its existing footprint would be covered 100% by FEMA though Petitioners and future owners would have to agree to keep flood coverage on the elevated structure. Petitioners agreed to participate, and so the consultant hired by Pender County to manage several similar claims, along with Pender County's Planning Director, acted as agents for Petitioners and applied for a CAMA permit on their behalf. DCM denied the CAMA permit as the existing location of the structure does not meet the applicable 60-foot ocean erosion setback on the site. Additionally, the work proposed exceeded 50% of the value of the house structure, and so was not "repair" and was "replacement" under the Commission's rules and CAMA statute. Petitioners now seek a variance from the oceanfront erosion setback in order to elevate the existing house within the same footprint and largely within the setback.

The following additional information is attached to this memorandum:

Attachment A:	Relevant Rules
Attachment B:	Stipulated Facts
Attachment C:	Petitioner's Positions and Staff's Responses to Variance Criteria
Attachment D:	Petitioner's Variance Request Materials
Attachment E:	Stipulated Exhibits including powerpoint

cc(w/enc.): Sam & Ann Ennis, Petitioners, electronically  
 Mary Lucasse, Special Deputy AG and CRC Counsel, electronically  
 Kyle Breuer, Pender County Planning Director, electronically



**RELEVANT STATUTES OR RULES****APPENDIX A****§ 113A-103. Definitions.**

As used in this Article:

(5)a. "Development" means any activity in a duly designated area of environmental concern (except as provided in paragraph b of this subdivision) involving, requiring, or consisting of the construction or enlargement of a structure; excavation; dredging; filling; dumping; removal of clay, silt, sand, gravel or minerals; bulkheading, **driving of pilings**; clearing or alteration of land as an adjunct of construction; alteration or removal of sand dunes; alteration of the shore, bank, or bottom of the Atlantic Ocean or any sound, bay, river, creek, stream, lake, or canal; or placement of a floating structure in an area of environmental concern identified in G.S. 113A-113(b)(2) or (b)(5).

b. The following activities including the normal and incidental operations associated therewith shall not be deemed to be development under this section:

\*\*\*

5. Maintenance or repairs (excluding replacement) necessary to repair damage to structures caused by the elements or to prevent damage to imminently threatened structures by the creation of protective sand dunes.

\*\*\*

c. The Commission shall define by rule (and may revise from time to time) certain classes of minor maintenance and improvements which shall be exempted from the permit requirements of this Article, in addition to the exclusions set forth in paragraph b of this subdivision. In developing such rules the Commission shall consider, with regard to the class or classes of units to be exempted:

1. The size of the improved or scope of the maintenance work;
2. The location of the improvement or work in proximity to dunes, waters, marshlands, areas of high seismic activity, areas of unstable soils or geologic formations, and areas enumerated in G.S. 113A-113(b)(3); and
3. Whether or not dredging or filling is involved in the maintenance or improvement.



## SECTION .0300 - OCEAN HAZARD AREAS

### 15A NCAC 07H .0301 OCEAN HAZARD CATEGORIES

The next broad grouping is composed of those AECs that are considered natural hazard areas along the Atlantic Ocean shoreline where, because of their special vulnerability to erosion or other adverse effects of sand, wind, and water, uncontrolled or incompatible development could unreasonably endanger life or property. Ocean hazard areas include beaches, frontal dunes, inlet lands, and other areas in which geologic, vegetative and soil conditions indicate a substantial possibility of excessive erosion or flood damage.

### 15A NCAC 07H .0302 SIGNIFICANCE OF THE OCEAN HAZARD CATEGORY

(a) The primary causes of the hazards peculiar to the Atlantic shoreline are the constant forces exerted by waves, winds, and currents upon the unstable sands that form the shore. During storms, these forces are intensified and can cause significant changes in the bordering landforms and to structures located on them. Ocean hazard area property is in the ownership of a large number of private individuals as well as several public agencies and is used by a vast number of visitors to the coast. Ocean hazard areas are critical, therefore, because of both the severity of the hazards and the intensity of interest in the areas.

(b) The location and form of the various hazard area landforms, in particular the beaches, dunes, and inlets, are in a permanent state of flux, responding to meteorologically induced changes in the wave climate. For this reason, the appropriate location of structures on and near these landforms must be reviewed carefully in order to avoid their loss or damage. As a whole, the same flexible nature of these landforms which presents hazards to development situated immediately on them offers protection to the land, water, and structures located landward of them. The value of each landform lies in the particular role it plays in affording protection to life and property. (The role of each landform is described in detail in Technical Appendix 2 in terms of the physical processes most important to each.) Overall, however, the energy dissipation and sand storage capacities of the landforms are most essential for the maintenance of the landforms' protective function.

### 15A NCAC 07H .0303 MANAGEMENT OBJECTIVE OF OCEAN HAZARD AREAS

(a) The CRC recognizes that absolute safety from the destructive forces indigenous to the Atlantic shoreline is an impossibility for development located adjacent to the coast. The loss of life and property to these forces, however, can be greatly reduced by the proper location and design of structures and by care taken in prevention of damage to natural protective features particularly primary and frontal dunes. Therefore, it is the CRC's objective to provide management policies and standards for ocean hazard areas that serve to eliminate unreasonable danger to life and property and achieve a balance between the financial, safety, and social factors that are involved in hazard area development.

(b) The purpose of these Rules shall be to further the goals set out in G.S. 113A-102(b), with particular attention to minimizing losses to life and property resulting from storms and long-term erosion, preventing encroachment of permanent structures on public beach areas, preserving the natural ecological conditions of the barrier dune and beach systems, and reducing the public costs of inappropriately sited development. Furthermore, it is the objective of the Coastal Resources Commission to protect present common-law and statutory public rights of access to and use of the lands and waters of the coastal area.

### 15A NCAC 07H .0304 AECS WITHIN OCEAN HAZARD AREAS

The ocean hazard AECs contain all of the following areas:

- (1) Ocean Erodible Area. This is the area where there exists a substantial possibility of excessive erosion and significant shoreline fluctuation. The oceanward boundary of this area is the mean low water line. The landward extent of this area is the distance landward from the first line of stable and natural vegetation as defined in 15A NCAC 07H .0305(a)(5) to the recession line established by multiplying the long-term annual erosion rate times 90; provided that, where there has been no long-term erosion or the rate is less than two feet per year, this distance shall be set at 120 feet landward from the first line of stable natural vegetation. For the purposes of this Rule, the erosion rates are the long-term average based on available historical data. The current long-term average



erosion rate data for each segment of the North Carolina coast is depicted on maps entitled “2011 Long-Term Average Annual Shoreline Rate Update” and approved by the Coastal Resources Commission on May 5, 2011 (except as such rates may be varied in individual contested cases or in declaratory or interpretive rulings). In all cases, the rate of shoreline change shall be no less than two feet of erosion per year. The maps are available without cost from any Local Permit Officer or the Division of Coastal Management on the internet at <http://www.ncccoastalmanagement.net>.

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#### **15A NCAC 07H .0305 GENERAL IDENTIFICATION AND DESCRIPTION OF LANDFORMS**

(a) This Paragraph describes natural and man-made features that are found within the ocean hazard area of environmental concern.

\*\*\*

- (5) **Vegetation Line.** The vegetation line refers to the first line of stable and natural vegetation, which shall be used as the reference point for measuring oceanfront setbacks. This line represents the boundary between the normal dry-sand beach, which is subject to constant flux due to waves, tides, storms and wind, and the more stable upland areas. The vegetation line is generally located at or immediately oceanward of the seaward toe of the frontal dune or erosion escarpment. The Division of Coastal Management or Local Permit Officer shall determine the location of the stable and natural vegetation line based on visual observations of plant composition and density. If the vegetation has been planted, it may be considered stable when the majority of the plant stems are from continuous rhizomes rather than planted individual rooted sets. Planted vegetation may be considered natural when the majority of the plants are mature and additional species native to the region have been recruited, providing stem and rhizome densities that are similar to adjacent areas that are naturally occurring. In areas where there is no stable and natural vegetation present, this line may be established by interpolation between the nearest adjacent stable natural vegetation by on-ground observations or by aerial photographic interpretation.
- (6) **Static Vegetation Line.** In areas within the boundaries of a large-scale beach fill project, the vegetation line that existed within one year prior to the onset of project construction shall be defined as the “static vegetation line.” The “onset of project construction” shall be defined as the date sediment placement begins, with the exception of projects completed prior to the effective date of this Rule, in which case the award of the contract date will be considered the onset of construction. A static vegetation line shall be established in coordination with the Division of Coastal Management using on-ground observation and survey or aerial imagery for all areas of oceanfront that undergo a large-scale beach fill project. Once a static vegetation line is established, and after the onset of project construction, this line shall be used as the reference point for measuring oceanfront setbacks in all locations where it is landward of the vegetation line. **In all locations where the vegetation line as defined in this Rule is landward of the static vegetation line, the vegetation line shall be used as the reference point for measuring oceanfront setbacks.** A static vegetation line shall not be established where a static vegetation line is already in place, including those established by the Division of Coastal Management prior to the effective date of this Rule. A record of all static vegetation lines, including those established by the Division of Coastal Management prior to the effective date of this Rule, shall be maintained by the Division of Coastal Management for determining development standards as set forth in Rule .0306 of this Section. Because the impact of Hurricane Floyd (September 1999) caused significant portions of the vegetation line in the Town of Oak Island and the Town of Ocean Isle Beach to be relocated landward of its pre-storm position, the static line for areas landward of the beach fill construction in the Town of Oak Island and the Town of Ocean Isle Beach, the onset of which occurred in 2000, shall be defined by the general trend of the vegetation line established by the Division of Coastal Management from June 1998 aerial orthophotography.
- (7) **Beach Fill.** Beach fill refers to the placement of sediment along the oceanfront shoreline. Sediment used solely to establish or strengthen dunes shall not be considered a beach fill project under this Rule. A “large-scale beach fill project” shall be defined as any volume of sediment greater than 300,000 cubic yards or any storm protection project constructed by the U.S. Army Corps of Engineers.

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## 15A NCAC 07H .0306 GENERAL USE STANDARDS FOR OCEAN HAZARD AREAS

(a) In order to protect life and property, all development not otherwise specifically exempted or allowed by law or elsewhere in the Coastal Resources Commission's rules shall be located according to whichever of the following is applicable:

- (1) The ocean hazard setback for development is measured in a landward direction from the vegetation line, the static vegetation line, or the measurement line, whichever is applicable.

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- (4) The setback distance shall be determined by both the size of development and the shoreline long term erosion rate as defined in Rule .0304 of this Section. "Development size" is defined by total floor area for structures and buildings or total area of footprint for development other than structures and buildings. Total floor area includes the following:
  - (A) The total square footage of heated or air-conditioned living space;
  - (B) The total square footage of parking elevated above ground level; and
  - (C) The total square footage of non-heated or non-air-conditioned areas elevated above ground level, excluding attic space that is not designed to be load-bearing.

Decks, roof-covered porches, and walkways are not included in the total floor area unless they are enclosed with material other than screen mesh or are being converted into an enclosed space with material other than screen mesh.

- (5) With the exception of those types of development defined in 15A NCAC 07H .0309, no development, including any portion of a building or structure, shall extend oceanward of the ocean hazard setback distance. This includes roof overhangs and elevated structural components that are cantilevered, knee braced, or otherwise extended beyond the support of pilings or footings. The ocean hazard setback is established based on the following criteria:

(A) **A building or other structure less than 5,000 square feet requires a minimum setback of 60 feet or 30 times the shoreline erosion rate, whichever is greater;**

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- (6) If a primary dune exists in the AEC on or landward of the lot where the development is proposed the development shall be landward of the crest of the primary dune, the ocean hazard setback, or development line, whichever is farthest from vegetation line, static vegetation line, or measurement line, whichever is applicable. For existing lots, however, where setting the development landward of the crest of the primary dune would preclude any practical use of the lot, development may be located oceanward of the primary dune. In such cases, the development may be located landward of the ocean hazard setback but shall not be located on or oceanward of a frontal dune or the development line. The words "existing lots" in this Rule shall mean a lot or tract of land which, as of June 1, 1979, is specifically described in a recorded plat and cannot be enlarged by combining the lot or tract of land with a contiguous lot(s) or tract(s) of land under the same ownership.
- (7) If no primary dune exists, but a frontal dune does exist in the AEC on or landward of the lot where the development is proposed, the development shall be set landward of the frontal dune, ocean hazard setback, or development line, whichever is farthest from the vegetation line, static vegetation line, or measurement line, whichever is applicable.
- (8) If neither a primary nor frontal dune exists in the AEC on or landward of the lot where development is proposed, the structure shall be landward of the ocean hazard setback or development line, whichever is more restrictive.
- (9) Structural additions or increases in the footprint or total floor area of a building or structure represent expansions to the total floor area and shall meet the setback requirements established in this Rule and 15A NCAC 07H .0309(a). New development landward of the applicable setback may be cosmetically, but shall not be structurally, attached to an existing structure that does not conform with current setback requirements.
- (10) Established common law and statutory public rights of access to and use of public trust lands and waters in ocean hazard areas shall not be eliminated or restricted. Development shall not encroach upon public accessways, nor shall it limit the intended use of the accessways.
- (11) Beach fill as defined in Rule .0305(a)(7) of this Section, represents a temporary response to coastal erosion, and compatible beach fill as defined in 15A NCAC 07H .0312 can be expected to erode at



least as fast as, if not faster than, the pre-project beach. Furthermore, there is no assurance of future funding or beach-compatible sediment for continued beach fill projects and project maintenance. A vegetation line that becomes established oceanward of the pre-project vegetation line in an area that has received beach fill may be more vulnerable to natural hazards along the oceanfront if the beach fill project is not maintained. A development setback measured from the vegetation line may provide less protection from ocean hazards. Therefore, development setbacks in areas that have received large-scale beach fill as defined in 15A NCAC 07H .0305 shall be measured landward from the static vegetation line as defined in this Section, unless a development line has been approved by the Coastal Resources Commission in accordance with 15A NCAC 07J .1300.

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(f) Development shall comply with the general management objective for ocean hazard areas set forth in 15A NCAC 07H .0303.

(g) Development shall not interfere with legal access to, or use of, public resources, nor shall such development increase the risk of damage to public trust areas.

(h) Development proposals shall incorporate measures to avoid or minimize adverse impacts of the project. These measures shall be implemented at the applicant's expense and may include actions that:

- (1) minimize or avoid adverse impacts by limiting the magnitude or degree of the action;
- (2) restore the affected environment; or
- (3) compensate for the adverse impacts by replacing or providing substitute resources.

(i) Prior to the issuance of any permit for development in the ocean hazard AECs, there shall be a written acknowledgment from the applicant to the Division of Coastal Management that the applicant is aware of the risks associated with development in this hazardous area and the limited suitability of this area for permanent structures. By granting permits, the Coastal Resources Commission does not guarantee the safety of the development and assumes no liability for future damage to the development.

(j) All relocation of structures requires permit approval. Structures relocated with public funds shall comply with the applicable setback line as well as other applicable AEC rules. Structures including septic tanks and other essential accessories relocated entirely with non-public funds shall be relocated the maximum feasible distance landward of the present location. Septic tanks may not be located oceanward of the primary structure. All relocation of structures shall meet all other applicable local and state rules.

(k) Permits shall include the condition that any structure shall be relocated or dismantled when it becomes imminently threatened by changes in shoreline configuration as defined in 15A NCAC 07H .0308(a)(2)(B). Any such structure shall be relocated or dismantled within two years of the time when it becomes imminently threatened, and in any case upon its collapse or subsidence. However, if natural shoreline recovery or beach fill takes place within two years of the time the structure becomes imminently threatened, so that the structure is no longer imminently threatened, then it need not be relocated or dismantled at that time. This permit condition shall not affect the permit holder's right to seek authorization of temporary protective measures allowed under 15A NCAC 07H .0308(a)(2).



## 15A NCAC 07J .0210 REPLACEMENT OF EXISTING STRUCTURES

Replacement of structures damaged or destroyed by natural elements, fire or normal deterioration is considered development and requires CAMA permits. Replacement of structures shall be permitted if the replacements is consistent with current CRC rules. Repair of structures damaged by natural elements, fire or normal deterioration is not considered development and shall not require CAMA permits. The CRC shall use the following criteria to determine whether proposed work is considered repair or replacement.

- (1) **NON-WATER DEPENDENT STRUCTURES. Proposed work is considered replacement if the cost to do the work exceeds 50 percent of the market value of an existing structure immediately prior to the time of damage or the time of request.** Market value and costs are determined as follows:
  - (a) Market value of the structure **does not include the value of the land, value resulting from the location of the property, value of accessory structures, or value of other improvements located on the property.** Market value of the structure shall be determined by the Division based upon information provided by the applicant using any of the following methods:
    - (i) appraisal;
    - (ii) replacement cost with depreciation for age of the structure and quality of construction; or
    - (iii) tax assessed value.
  - (b) **The cost to do the work is the cost to return the structure to its pre-damaged condition, using labor and materials obtained at market prices, regardless of the actual cost incurred by the owner to restore the structure. It shall include the costs of construction necessary to comply with local and state building codes and any improvements that the owner chooses to construct.** The cost shall be determined by the Division utilizing any or all of the following:
    - (i) an estimate provided by a North Carolina licensed contractor qualified by license to provide an estimate or bid with respect to the proposed work;
    - (ii) an insurance company's report itemizing the cost, excluding contents and accessory structures; or
    - (iii) an estimate provided by the local building inspections office.



**STIPULATED FACTS****ATTACHMENT B**

1. Petitioners Sam and Ann Ennis (“Petitioners”) are the owners of an oceanfront home and lot located at 1121 Ocean Boulevard in the Town of Topsail Beach (“Town”), Pender County, North Carolina (the “Property”). The deed for the sale was recorded on March 11, 2016 when they purchased the property though a deed recorded at Book 4616, Page 307 of the Pender County Registry, a copy of which is attached as a stipulated exhibit.
2. According the Pender County tax records, the purchase price of the Property by the Petitioners was \$525,000. The total tax value of the Property is \$505,796 and the tax value of the structure is \$60,296, based on a 2011 valuation. A copy of the tax card for the Property is attached as a stipulated exhibit.
3. According to tax records, the Property is a developed lot, and includes a three-bedroom 1,292 square foot single-family residential structure built in 1958, a gravel driveway, decks, and beach access walkway. The Petitioners’ house is served by septic, which is on the central-landward portion of the Property based on the 1995 Pender County operation permit, a copy of which is attached.
4. Aerial and site photographs are attached as exhibits which depict the Property, Petitioners' home and the surrounding lots and homes.
5. The Property is located within the Ocean Erodible Area of Environmental Concern (AEC).
6. In 1989, the US Army Corps of Engineers (“Corps”) released a final EIS for a beach nourishment plan, and a Federal Storm Damage Reduction Project was authorized under the Water Resources Development Act, however no funds were ever appropriated for the project and so not projects pursuant to that plan were undertaken. In 2010, the Town funded a \$10 million “large scale” beach nourishment project which included the beach in front of the Property. Accordingly, a pre-project vegetation line was set as a static line in 2010. Other nourishment has taken place in the Town, but these other projects were smaller scale navigation projects and not “large scale” projects.
7. On or about October 25, 2016, DCM Field Representative Jason Dail flagged the location of the first line of stable and natural vegetation (“FLSNV”) on the Property, as the FLSNV was landward of, and more restrictive than the static line on the Property. Per 15A NCAC 7H .0305(a)(6), the FLSNV is used as the reference line for determining setbacks where it is landward of and more restrictive than the static line on a site.
8. The Commission’s current Average Annual Erosion Rate for the Property is 2 feet per year. Based on the applicable 2 feet per year erosion rate, the applicable Ocean Hazard Setback for development on this Property, being a structure less than 5,000 square feet, is 60-feet landward of the FLSNV as that term is defined in 15A NCAC 7H .0305(a)(6).



9. Topsail Beach is located on a barrier island that is susceptible to powerful coastal storms that expose properties to wind damage, beach erosion and coastal flooding.
10. The Property is located in flood zone “VE” and the Base Flood Elevation (“BFE”) at the Property is 15.0 feet NAVD.
11. Petitioners’ Property was included on a priority list made by FEMA of repetitive loss structures which FEMA issues on a regular basis to counties, through NC Division of Emergency Management. FEMA, through this Flood Mitigation Assistance Program (FMA), allows for mitigation of repetitive loss properties through acquisition, demolition, relocation, elevation or dry flood-proofing. It is a voluntary program and covers 100% of the costs for the mitigation work, but requires a deed restriction requiring participation in the NFIP program for the life of the structure. A list of the losses for Petitioners’ Property is attached as an exhibit.
12. On July 9, 2015, Pender County issued a RFP for professional services to act as a planning and management consultant (and a separate RFP for engineering services) in order to process \$2.9 million dollars of funds for use to elevate six structures and acquire five others within Pender County. A copy of this RFP is attached as a stipulated exhibit.
13. On February 2, 2016, Pender County assigned the consulting contract to Holland Consulting Planners, Inc., including HCP employees J. Reed Whitesell, AICP, as Project Manager, Chip Bartlett, AICP as the FMA Program Administrator, Chis Hilbert, as Program Manager, and Gary Miller, as Inspector (collectively the “Consultant”). A copy of the Work Authorization contract is attached as an exhibit. Copies of Mr. Whitesell’s and Mr. Bartlett’s resumes are attached as exhibits, as is a summary of HCP’s recent work in Hazard Mitigation Planning & Project Management.
14. For Petitioners’ Property, the Consultant worked with the consulting engineer, Bobby L. Joyner, P.E. and President of Appian Consulting Engineers, PA, about what mitigation measures were possible for the Property. A copy of Mr. Joyner’s resume is attached as an exhibit.
15. The engineer recommended the elevation of the structure an additional 3.9 feet, bringing the bottom of the structure from a first-floor elevation of 14.1 feet NAVD to a minimum post-elevation FFE of 18.0 feet NAVD above the applicable BFE. In order to elevate the structure, the structure would be lifted to the prescribed elevation, and using a retrofit of existing pilings and new replacement pilings, a new base will be built, and then the house will be lowered onto the new piling foundation, and the utilities reconnected. The decks will also be elevated and new stairs will be built. The structure would remain within the existing footprint, and would only be moved vertically. The development size or the “total floor area” of the structure, as that term is defined by the Commission at 15A NCAC 7H .0306(a)(4) would not be changed or increased. A copy of the scope of work form is attached as an exhibit.



16. The Consultant bid out the work to elevate Petitioners' property through a competitive, sealed bid process. For Petitioners' Property, the low bid was for \$85,720 by Goose Creek Construction. A copy of the Consultant's Final Bid Tabulation Form is attached as an exhibit.

17. Through an affidavit, Ron Akers of Goose Creek Construction states that based on his experience, he would "estimate that the additional turnkey cost to relocate the existing structures versus elevating in place would be approximately \$20,000.00 per property." A copy of this affidavit is attached as an exhibit.

18. Through an affidavit, the Community Development Manager and Senior Planner at the Consultant, Mr. Reed Whitesell, AICP, states that the purpose of the proposed mitigation through elevation of the structure in the same footprint is "not intended to provide a substantial improvement or increase in existing property value, although the cost sometimes exceeds 50% of the existing structure value." He also states that based on his expertise and discussions with the Project Engineer and the Contracting Company representatives, it is his understanding that the proposed elevation methodology "is a more cost effective method than moving the structures away from the FLSNV and elevating the structures on new pilings." Finally, he states that based on his review, moving the structure back on the lot to meet the CAMA setback "might lead to violation of the Town of the Topsail Beach's zoning requirements, and would significantly limit the owners' ability to construct additional (non-substantial) improvements to decking and accesses in the future." A copy of his affidavit is attached.

19. The work proposed by Petitioners falls within the definition of "development" as defined by NCGS § 113A-103(5)a as it includes the "driving of pilings."

20. The CAMA statute deems activities including "maintenance or repairs (excluding replacement) necessary to repair damage to structure caused by the elements. . ." as not "development" pursuant to NCGS § 113A-103(5)b.(5). The Commission's rules in 15A NCAC 7J .0210 distinguish between repair and replacement, and for non-water dependent structures, define replacement as when the cost of the proposed work "exceeds 50 percent of the market value of an existing structure immediately prior to the time of damage or the time of the request." Following this definition, "repair" is necessarily work which is 50% or less of the market value before damage/time of request. The Commission's rule goes on to note that "market value of the structure does not include the value of the land, value resulting from the location of the property, value of accessory structures, or value of other improvements located on the property." 7J .0210(a)

21. In this case, the cost of the work proposed is \$85,720 which was the low bid by Goose Creek and the currently-listed tax value of the structure was \$60,296, so the cost of the work proposed clearly "exceeds 50 percent of the market value" of the structure, and is "development" which is "replacement."

22. Federal FEMA regulations, found at 44 CFR 59.1 define "substantial improvement" as



Any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage”, regardless of the actual repair work performed. The term does not, however, include either: (1) Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specification which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions . . .

In the September 2015 FEMA Hazard Mitigation Assistance Program Digest, it states that “the costs to elevate or floodproof a damaged structure or facility are not included in determining whether the substantial improvement threshold is triggered. See 44 C.F.R. 9.11(d), Minimization Standards.” In contrast, the Commission’s “50% rule” includes the cost of labor and materials, and states that

the cost to do the work is the cost to return the structure to its pre-damaged condition, using labor and materials obtained at market prices, regardless of the actual cost incurred by the owner to restore the structure. It shall include the costs of construction necessary to comply with local and state building codes and any improvements that the owner chooses to construct.

15A NCAC 7J .0210(b).

23. Pursuant to NCGS § 113A-118, the proposed “development” takes place in an AEC, and so requires authorization through the issuance of a CAMA permit.

24. On October 25, 2016, Mr. Jason Dail of DCM, Mr. Bartlett, Mr. Whitesell, and Mr. Miller of the Consultant, Mr. Joyner the Engineer, and Michael Rose, Town Manager of Topsail Beach met on site to discuss the project.

25. Also on October 25, 2016, Mr. Dail flagged the first line of stable and natural vegetation present on the Property. This line was surveyed and is indicated on the site plan (incorrectly labeled) as “staked static vegetation line”, a copy of which is attached as a stipulated exhibit.

26. On December 5, 2016, the Pender County Board of Commissioners approved a Resolution to approve elevation contract awards for structures included in the FY14 FMA Grant project, including the bid from Goose Creek Construction for Petitioners’ Property. A copy of this resolution is attached as an exhibit.

27. On or about November 30, 2016, Petitioners, through their agent Kyle Breuer, the Pender County Planning Director, submitted an application for a CAMA Minor Permit, a copy of which is attached.



28. As part of the CAMA Minor Permit Process, notice of the proposed development was sent to both adjacent riparian owners, the Thextons and Walls. Additionally, notice of the project was posted on site. DCM Received no objections regarding this project. The Thextons are seeking a similar variance from this Commission, and are using the same consultants and agents.

29. On December 18, 2016, DCM denied Petitioners' CAMA Minor Permit application for the elevation of the structure, finding that the proposed work was development within an AEC, but it did not meet the applicable 60' ocean erosion setback landward of the applicable measurement line. Additionally, the proposed work was "replacement" and not "repair" less than 50% of the as described by NCGS § 113A-103(5)b.(5) and 15A NCAC 7J .0210. A copy of the denial letter is attached as an exhibit.

30. Based on the October 25, 2016 location of the FLSNV, the applicable 60-foot ocean erosion setback line passes through the landward portion of the house. The distance from the 60-foot setback to the rear property line is approximately 53 feet. The depth of the house and oceanfront deck are approximately 34 feet and 29 feet for a total of 63 feet in depth (the rear porch does not appear to Staff to be structurally attached to the house), and so if the house were moved landward to meet the setback, the rear of the house would extend approximately 10 feet past the landward lot line. It is not clear if the deck could be made structurally separate from the deck in a sound engineering way. The Town has a street-side setback of 7.5 feet.

31. On December 28, 2016, Petitioners filed this variance request, a copy of which is attached, seeking a variance from the applicable 60-foot ocean erosion setback in order to undertake the work as proposed in order to elevate the structure within the existing footprint.

32. On January 16, 2017, Petitioners provided notice of this variance request to the adjacent riparian neighbors. If any comments are received by DCM before the variance hearing, DCM will provide a copy of the comments to the Commission as part of the stipulated facts.

33. Petitioners stipulate that their proposed development is contrary to 15A NCAC 7H .0305 and .3036 which set the ocean erosion setback line, and that their proposed development is not "repair" and is "replacement" as those terms are defined by NCGS § 113A-103(5)b.(5) and 15A NCAC 7J .0210



Stipulated Exhibits:

- A. Deed 4616/307
- B. Pender Co. Tax Card for the Property
- C. Ennis Property septic permit from 1995 (owner at the time was Costic)
- D. FEMA repetitive loss statement for Ennis Property
- E. Pender Co's RFP- for consultant
- F. Scope of Work with Consultant
- G. Whitesell Resume
- H. Whitesell Affidavit
- I. Bartlett Resume
- J. Engineer Joyner Resume
- K. Engineer Company Description
- L. Scope of Work by Joyner
- M. Low Bid Summary- Goose Creek
- N. 12/5 Pender Resolution on Goose Creek
- O. Ayers of Goose Creek Affidavit
- P. 2015 FEMA Hazard Mitigation Assistance Guidance excerpt and FEMA Unit 8 excerpt
- Q. CAMA Minor Permit Application for Ennis, including site surveys, notice, ocean hazard notice form
- R. CAMA Minor Permit Denial Letter
- S. Powerpoint of site photos



**PETITIONERS' and STAFFS' POSITIONS****ATTACHMENT C**

**I. Will strict application of the applicable development rules, standards, or orders issued by the Commission cause the petitioner unnecessary hardships? If so, the petitioner must identify the hardships.**

**Petitioner's Position: Yes.**

The NFIP-insured property has been affected by enough flooding events to have it considered a Severe Repetitive Loss Property by FEMA. The petitioner has the opportunity to mitigate the structure through grant funding which will bring the structure into compliance with the current floodplain regulations. Funding under these projects reduces overall risk to the population and structures while also reducing reliance on limited funds that may not be available after a disaster.

**Staff's Position: No.**

In this difficult situation, upon review of the stipulated facts and Petitioners' argument, on balance, Staff disagrees that the Petitioners will suffer an unnecessary hardship from strict application of the Commission's oceanfront setback rules. While the narrow scope of the FEMA mitigation plan may help to mitigate flood damage, it fails to address the effects of wind and waves on the Property which are also stated concerns of the Commission through its Ocean Hazard Rules and its Shoreline Erosion Policy Rules.

As the Commission's rules note, the area along the Atlantic Ocean shoreline is a natural hazard area where, "because of their special vulnerability to erosion or other adverse effects of sand, wind, and water, uncontrolled or incompatible development could unreasonably endanger life or property. Ocean hazard areas include beaches, frontal dunes, inlet lands, and other areas in which geologic, vegetative and soil conditions indicate a substantial possibility of excessive erosion or flood damage." 15A NCAC 07H .0301 The Commission's rules further note the significance of Ocean Hazard Areas in that "The primary causes of the hazards peculiar to the Atlantic shoreline are the constant forces exerted by waves, winds, and currents upon the unstable sands that form the shore. During storms, these forces are intensified and can cause significant changes in the bordering landforms and to structures located on them." 15A NCAC 07H .0302.

As noted in these rules, the danger to structures along the Atlantic Ocean shoreline is not only from flooding, but from wind, waves and currents as well. Petitioners' house has experienced repetitive damage from flooding resulting flooding claims, though none has been "substantial damage" as defined by FEMA, so the house has been repaired and not relocated or replaced. Earlier repairs have been less than 50% of the structure's pre-storm value, and so have qualified as "repair" and thus not "development" under CRC rules and so no permit was needed and the oceanfront setback didn't come into play. While from a FEMA perspective, elevating the house within the existing footprint in an attempt to mitigate future flood claims may make sense, even when the cost to elevate the structure exceeds the tax value of the structure itself, the overall risk to the structure from erosion is not being addressed. Based on this, Staff questions Petitioners' statement that this mitigation "reduces overall risk to the population and structures while also reducing



reliance on limited funds that may not be available after a disaster." How much risk to structures does this actually reduce when the structure is already within the oceanfront erosion setback and without further nourishment, might eventually be on the dry-sand beach? How much benefit comes from spending \$85,720 to protect a home built in 1958 which is valued at \$60,296, simply by elevating it? These are difficult calculations to make, and Staff has significant concerns that spending money to mitigate only for flood damage misses other noted and significant hazards.

Staff note that this mitigation approach only deals with one of the hazards noted above. If the elevation takes place, the structure will have higher, newer pilings. While this higher and stronger foundation may be able to keep the structure above floodwaters, it does not address the possibility of continued erosion of the vegetation line leading to the house becoming located on the public dry-sand beach. This result is noted in the Commission's Shoreline Erosion policies, specifically, at 15A NCAC 07M.0202(a), which requires that erosion responses do not interfere with the public's use of the dry-sand beach. The policy directs that

The public right to use and enjoy the ocean beaches must be protected. The protected uses include traditional recreational uses (such as walking, swimming, surf-fishing, and sunbathing) as well as commercial fishing and emergency access for beach rescue services. Private property rights to oceanfront properties including the right to protect that property in ways that are consistent with public rights should be protected. (b) Erosion response measures designed to minimize the loss of private and public resources to erosion should be economically, socially, and environmentally justified. Preferred response measures for shoreline erosion shall include but not be limited to AEC rules, land use planning and land classification, establishment of building setback lines, building relocation, subdivision regulations and management of vegetation.

15A NCAC 07M .0202(a).

Finally, it is important to note that even if Topsail Beach had a static line exception, which it does not because it does not have a long-term nourishment program, it wouldn't change the result in this case because the FLSNV on the site is landward of the static line.

In this case, the strict application of oceanfront setbacks should be supported by the Commission, where "replacement" is proposed which does not meet the setback.

**II. Do such hardships result from conditions peculiar to the Petitioner's property, such as location, size, or topography of the property? Explain.**

**Petitioner's Position: Yes.**

The existing house (built in the 1960's) is located on a lot that is susceptible to severe ocean flooding during storm events. Although the Town of Topsail has a very successful beach renourishment program in this area, the structure on property is still vulnerable unless mitigation measures can be taken to protect it.



**Staff's Position: No.**

Staff doesn't believe any hardships alleged by Petitioner result from conditions peculiar to the property, such as location, size or topography. First, Staff believe Petitioners overstate when they describe the Town's "very successful beach renourishment program in this area." Other than occasional small-scale navigation dredging nourishment projects near New Topsail Inlet, there has only been one, town-funded large-scale nourishment project in 2010. While a federal Storm Damage Reduction Project was authorized and the FEIS was released in 1989, the project has not been funded. In addition, the FLSNV is further landward than the static line (which is the FLSNV location in 2010 before the large-scale project was undertaken), so despite large-scale nourishment seven years ago, the vegetation has continued to retreat.

The Property is otherwise a typical oceanfront lot on Topsail Beach, as seen on photographs of the Property and the larger vicinity. Like most oceanfront lots, without long-term nourishment projects and even some with such projects, Petitioners' lot is subject to ocean flooding. As Petitioners' lot is a typical oceanfront lot, Staff believe it has no peculiar conditions which cause any hardship.

**III. Do the hardships result from the actions taken by the Petitioner? Explain.****Petitioner's Position: No.**

The home's location and existing elevation have created the hardship resulting in repeated flood damage to real and personal property.

**Staff's Position: Yes.**

When Petitioners just purchased this non-conforming property in 2016, they decided to voluntarily participate in this flooding hazard mitigation/elevation program. As the goal of this program is to mitigate future flood-related damage by elevation of the home, the consulting engineer chose to elevate the house within the existing footprint and utilize some of the existing piles. Based on an affidavit of the contractor Ron Akers of Goose Creek Construction, it would cost Petitioners an additional \$20,000 out-of-pocket to relocate the house further landward on the lot, in addition to the FEMA funded \$85,720 cost to simply elevate the house. While there is room on the lot to meet the setback without a variance if the existing 29' deep deck were made to be structurally separate from the house, it would admittedly leave less room for a rear porch and parking, and may interfere with the existing placement of the septic system, though the house could be moved back on the lot a distance less than the setback and still meet local setbacks and have room for septic. The Petitioners however, have not pursued relocating the structure further landward on the lot, citing financial and geographic constraints. Staff does not agree that any hardships do not result from actions taken by the Petitioners.



**IV. Will the variance requested by the petitioner (1) be consistent with the spirit, purpose, and intent of the rules, standards or orders issued by the Commission; (2) secure the public safety and welfare; and (3) preserve substantial justice? Explain.**

**Petitioner's Position: Yes.**

The variance will allow the petitioner to properly mitigate probable subsequent repetitive flood damage to the existing structure. The proposed work does not involve the expansion or upgrades to the existing footprint. Elevation of the structure to the current standards will protect property and residents. The preferred elevation method will actually reduce damage to the dunes and associated vegetation that would certainly occur if the house was moved closer to Ocean Boulevard. In addition, the current and any future owners will be required to maintain flood insurance in perpetuity.

**Staff's Position: No.**

Staff believes that, on balance, the variance requested by Petitioner is inconsistent with the spirit, purpose, and intent of the Commission's ocean erosion setback rules and its shoreline erosion policies, because while the elevation may mitigate flooding damage in the future, staying within the same footprint and not moving the house landward fails to address the other ocean hazards associated with the Atlantic Ocean shoreline and noted in the Commission's rules, as described in section I, above.

The variance may help to secure public safety and welfare by elevating the home within the footprint, hopefully above any future flooding events, but may harm public safety and welfare at the same time by reinforcing the current piling foundation and increasing the likelihood that the house will remain standing on the dry-sand public beach after the vegetation line continues to erode landward unless nourishment steps are taken by Topsail Beach.

The variance does not preserve substantial justice where it would be encouraging the use of significant FEMA mitigation dollars to elevate a non-conforming structure already located near the ocean hazards of the Atlantic Ocean shoreline but without proposing to move it further away from the ocean hazards.



**ATTACHMENT D:**  
**PETITIONERS' VARIANCE REQUEST MATERIALS**



## CAMA VARIANCE REQUEST FORM

DCM FORM 11

DCM FILE No.: \_\_\_\_\_

PETITIONER'S NAME

Sam & Ann Ennis

COUNTY WHERE THE DEVELOPMENT IS PROPOSED

Pender County

Pursuant to N.C.G.S. § 113A-120.1 and 15A N.C.A.C. 07J .0700 *et seq.*, the above named Petitioner hereby applies to the Coastal Resources Commission (CRC) for a variance.

## VARIANCE HEARING PROCEDURES

A variance petition will be considered by the CRC at a regularly scheduled meeting, heard in chronological order based upon the date of receipt of a complete petition. 15A N.C.A.C. 07J .0701(e). A complete variance petition, as described below, must be *received* by the Division of Coastal Management (DCM) a minimum of six (6) weeks in advance of the first day of a regularly scheduled CRC meeting to be eligible for consideration by the CRC at that meeting. 15A N.C.A.C. 07J .0701(e). The final set of stipulated facts must be agreed to at least four (4) weeks prior to the first day of a regularly scheduled meeting. 15A N.C.A.C. 07J .0701(e). The dates of CRC meetings can be found at DCM's website: [www.nccoastalmanagement.net](http://www.nccoastalmanagement.net)

If there are controverted facts that are significant in determining the propriety of a variance, or if the Commission determines that more facts are necessary, the facts will be determined in an administrative hearing. 15A N.C.A.C. 07J .0701(b).

## VARIANCE CRITERIA

The petitioner has the burden of convincing the CRC that it meets the following criteria:

- (a) Will strict application of the applicable development rules, standards, or orders issued by the Commission cause the petitioner unnecessary hardships? Explain the hardships.
- (b) Do such hardships result from conditions peculiar to the petitioner's property such as the location, size, or topography of the property? Explain.
- (c) Do the hardships result from actions taken by the petitioner? Explain.
- (d) Will the variance requested by the petitioner (1) be consistent with the spirit, purpose, and intent of the rules, standards or orders issued by the Commission; (2) secure the public safety and welfare; and (3) preserve substantial justice? Explain.

*Please make your written arguments that Petitioner meets these criteria on a separate piece of paper. The Commission notes that there are some opinions of the State Bar which indicate that non-attorneys may not represent others at quasi-judicial proceedings such as a variance hearing before the*



*Commission. These opinions note that the practice of professionals, such as engineers, surveyors or contractors, representing others in quasi-judicial proceedings through written or oral argument, may be considered the practice of law. Before you proceed with this variance request, you may wish to seek the advice of counsel before having a non-lawyer represent your interests through preparation of this Petition.*

**For this variance request to be complete, the petitioner must provide the information listed below. The undersigned petitioner verifies that this variance request is complete and includes:**

- ☒ The name and location of the development as identified on the permit application;
- ☒ A copy of the permit decision for the development in question;
- ☒ A copy of the deed to the property on which the proposed development would be located;
- ☒ A complete description of the proposed development including a site plan;
- ☒ A stipulation that the proposed development is inconsistent with the rule at issue;
- ☒ Proof that notice was sent to adjacent owners and objectors, as required by 15A N.C.A.C. 07J .0701(c)(7);
- ☒ *N/A* Proof that a variance was sought from the local government per 15A N.C.A.C. 07J .0701(a), if applicable;
- ☒ Petitioner's written reasons and arguments about why the Petitioner meets the four variance criteria, listed above;
- ☒ A draft set of proposed stipulated facts and stipulated exhibits. Please make these verifiable facts free from argument. Arguments or characterizations about the facts should be included in the written responses to the four variance criteria instead of being included in the facts.
- ☒ This form completed, dated, and signed by the Petitioner or Petitioner's Attorney.



Due to the above information and pursuant to statute, the undersigned hereby requests a variance.

✓ Ann Ennis / Sam D. Ennis ✓ 12/28/14  
 Signature of Petitioner or Attorney Date ennisann7314@gmail.com  
Sam Ennis / Ann Ennis ennissam@hotmail.com  
 Printed Name of Petitioner or Attorney Email address of Petitioner or Attorney  
436 Bayshore Drive (910) 352-3424 / 231-1895  
 Mailing Address Telephone Number of Petitioner or Attorney  
Wilmington NC 28411 (866) 865-2836  
 City State Zip Fax Number of Petitioner or Attorney

#### DELIVERY OF THIS HEARING REQUEST

This variance petition must be received by the Division of Coastal Management at least six (6) weeks before the first day of the regularly scheduled Commission meeting at which it is heard. A copy of this request must also be sent to the Attorney General's Office, Environmental Division, 15A N.C.A.C. 07J .0701(e).

##### Contact Information for DCM:

**By mail, express mail or hand delivery:**  
 Director  
 Division of Coastal Management  
 400 Commerce Avenue  
 Morehead City, NC 28557

**By Fax:**  
 (252) 247-3330

**By Email:**  
 Check DCM website for the email  
 address of the current DCM Director  
[www.nccoastalmanagement.net](http://www.nccoastalmanagement.net)

##### Contact Information for Attorney General's Office:

**By mail:**  
 Environmental Division  
 9001 Mail Service Center  
 Raleigh, NC 27699-9001

**By express mail:**  
 Environmental Division  
 114 W. Edenton Street  
 Raleigh, NC 27603

**By Fax:**  
 (919) 716-6767



Petitioner: Sam & Ann Ennis

**Variance Criteria:**

- 1) Will strict application of the applicable development rules, standards or orders issued by the Commission cause the petitioner unnecessary hardships? Explain the hardships.**

*Yes; The NFIP-insured property has been affected by enough flooding events to have it considered a Severe Repetitive Loss Property by FEMA. The petitioner has the opportunity to mitigate the structure through grant funding which will bring the structure into compliance with the current floodplain regulations. Funding under these projects reduces overall risk to the population and structures while also reducing reliance on limited funds that may be available after a disaster.*

- 2) Do such hardships result from conditions peculiar to the petitioner's property such as the location, size or topography of the property? Explain.**

*Yes; The existing house (built in the 1960's) is located on a lot that is susceptible to severe ocean flooding during storm events. Although the Town of Topsail Beach has a very successful beach renourishment program in this area, the structure on property is still vulnerable unless mitigation measures can be taken to protect it.*

- 3) Do the hardships result from actions taken by the petitioner?**

*No; The home's location and existing elevation have created the hardship resulting in repeated flood damage to real and personal property.*

- 4) Will the variance requested by the petitioner (1) be consistent with the spirit, purpose and intent of the rules, standards or orders issued by the Commission (2) secure the public safety and welfare, and (3) preserve substantial justice? Explain.**

*Yes; The variance will allow the petitioner to properly mitigate probable subsequent repetitive flood damage to the existing structure. The proposed work does not involve the expansion or upgrades to the existing footprint. Elevation of the structure to the current standards will protect property and residents. The preferred elevation method will actually reduce damage to the dunes and associated vegetation that would certainly occur if the house was moved closer to Ocean Boulevard. In addition, the current and any future owners will be required to maintain flood insurance in perpetuity.*



# NOTICE OF VARIANCE PETITION BY ADJACENT PROPERTY OWNER

January 16, 2017

Jonathan Brandow  
506 Bridgeview Place  
Lemoyne, PA 17043

Dear Adjacent Property:

As you have been previously notified, Sam & Ann Ennis at 1121 Ocean Blvd, Topsail Beach, NC are proposing to elevate their existing home through a county flood mitigation program in order to bring it into compliance with current floodplain regulations.

This letter is to inform you that the owners have now applied for a variance to the 60' CAMA ocean hazard setback rule in order to elevate their existing structure in place.

The variance petition will be addressed at the next scheduled meeting of the Coastal Resources Commission (CRC) scheduled for Feb 7-8, 2017 at the Hilton Doubletree in Atlantic Beach, NC.

No action is required from you. If you have questions or comments about the proposed project, please contact Kyle Breuer, Pender County Planning Director at 910-259-1202. If you wish to file written comments or objections with the variance petition, you may submit them to:

Jason Dail, DCM Field Representative  
LPO, Town of Topsail Beach  
NC DEQ/DCM  
127 Cardinal Drive Ext.  
Wilmington, NC 28405

Property Owner:

Sam & Ann Ennis  
636 Bayshore Drive  
Wilmington, NC 28411

U.S. Postal Service  
Certified Mail Receipt

ARTICLE NUMBER  
9414 8118 9956 4993 7673 07

**ARTICLE ADDRESS TO:**

Jonathan Brandow  
506 Bridgeview Dr  
Lemoyne PA 17043-1379

**FEES**

Postage per piece	\$1.81½
Certified Fee	3.30
<b>Total Postage &amp; Fees:</b>	<b>\$5.11½</b>

Postmark  
Here



**ATTACHMENT E:**  
**STIPULATED EXHIBITS INCLUDING POWERPOINT**



#1121  
Ocean Blvd

BK 4616 PG 307 - 309 (3)

DOC# 20008089

This Document eRecorded:

03/11/2016 10:39:47 AM

Fee: \$26.00 DocType: DEED

Tax: \$1,050.00

Pender County, North Carolina

Sharon Lear Willoughby, Register of Deeds

**NORTH CAROLINA GENERAL WARRANTY DEED**

Excise Tax: \$1,050.00

Parcel Identifier No. 4212-14-7763-0000 Verified by \_\_\_\_\_ County on the \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_  
By: \_\_\_\_\_

Mail/Box to: Dan Rizzo, Attorney at Law, 13775 Highway 50/210, Suite 501, Surf City, NC 28443

This instrument was prepared by: Dan Rizzo, Attorney at Law, 13775 Highway 50/210, Suite 501, Surf City, NC 28443

Brief description for the Index: LOT 11 and 1/2 of Lot 10, New Topsail Beach

THIS DEED made this 2nd day of March, 2016, by and between

**GRANTOR**

Richard J. Costic and wife, Johanna L. Costic  
2077 W. Crown Pointe Boulevard  
Naples, FL 34112

**GRANTEE**

Sam G. Ennis and wife, Ann R. Ennis  
636 B ayshore Drive  
Wilmington, NC 28411

Enter in appropriate block for each Grantor and Grantee: name, mailing address, and, if appropriate, character of entity, e.g. corporation or partnership.

The designation Grantor and Grantee as used herein shall include said parties, their heirs, successors, and assigns, and shall include singular, plural, masculine, feminine or neuter as required by context.

WITNESSETH, that the Grantor, for a valuable consideration paid by the Grantee, the receipt of which is hereby acknowledged, has and by these presents does grant, bargain, sell and convey unto the Grantee in fee simple, all that certain lot, parcel of land or condominium unit situated in the City of Topsail Beach, Topsail Township, Pender County, North Carolina and more particularly described as follows:

See Exhibit "A" attached hereto and made a part hereof.

The property hereinabove described was acquired by Grantor by instrument recorded in Book 624 page 34.  
All or a portion of the property herein conveyed includes or X does not include the primary residence of a Grantor.

A map showing the above described property is recorded in Plat Book 3 page 72.

Page 1 of 2



## Exhibit A

ALL THAT CERTAIN LOT OR PARCEL OF LAND SITUATED IN THE CITY OF TOPSAIL TOWNSHIP, PENDER COUNTY, NORTH CAROLINA AND MORE PARTICULARLY DESCRIBED AS FOLLOWS: TRACT ONE BEING THE SOUTHERN 1/2 OF LOT 10 AND ALL OF LOT 11 IN BLOCK 22, OF A SUBDIVISION KNOWN AS NEW TOPSAIL BEACH, NORTH CAROLINA, SHOWN ON A MAP RECORDED IN MAP BOOK 3 PAGE 72 OF THE REGISTRY OF PENDER COUNTY, THE LAND HEREIN CONVEYED BEING A PORTION OF A TRACT OF LAND CONVEYED BY EVELYN P. EMPIE AND OTHERS TO J.C. ANDERSON AND OTHERS BY DEED RECORDED IN BOOK 277 PAGE 171 OF REGISTRY OF PENDER COUNTY, SEE ALSO BOOK 326 PAGE 298 OF THE PENDER COUNTY REGISTRY. TRACT TWO. BEGINNING AT A POINT IN THE EXACT CENTER OF THE SOUTHEAST SIDE OF LOT NO. 10, BLOCK 22 OF THE PLAT OR MAP HEREINAFTER REFERRED TO; THENCE IS A SOUTHEASTERLY DIRECTION IN A LINE IN EXACT CONTINUATION OF THE CENTER LINE OF LOT NO. 10 TO THE HIGH WATER MARK OF ATLANTIC OCEAN; THENCE ALONG AND WITH HIGH WATER MARK OF ATLANTIC OCEAN IN A NORTHWEST DIRECTION TO A POINT WHICH INTERSECTS THE WESTERN LINE OF LOT NO. 11, IF EXTENDED; THENCE IN A NORTHWESTERN DIRECTION ALONG AND WITH THE WESTERN LINE OF LOT NO. 11, IF EXTENDED, FROM THE HIGH WATER MARK OF ATLANTIC OCEAN TO THE SOUTHWEST CORNER OF SAID LOT NO. 11; THENCE ALONG AND WITH THE SOUTHEAST SIDE OF LOT NO. 11 AND LOT NO. 10, 75 FEET TO THE PLACE AND POINT OF BEGINNING, AND BEING ALL OF THE PROPERTY LYING SOUTHEAST OF THE WESTERN ONE-HALF OF LOT NO. 10 AND LOT NO. 11 TO THE HIGH WATER MARK OF THE ATLANTIC OCEAN. SEE MAP BOOK 3, PAGE 72, OF THE REGISTRY OF PENDER COUNTY. SEE ALSO DEED RECORDED IN BOOK 477, PAGE 439, OF THE PENDER COUNTY REGISTRY. SUBJECT TO RESTRICTIONS, RESERVATIONS, EASEMENTS, COVENANTS, OIL, GAS OR MINERAL RIGHTS OF RECORD, IF ANY.



OWNERSHIP 03312016 970045 ENNIS, SAM G ENNIS, ANN R 636 BAYSHORE DR WILMINGTON, NC DEED: 4616 307 03112016 28411 525000		PROPERTY DESCRIPTION L 11, 1/2 L10 PB 3/72 NEW TOPSA BLK 22 1121 OCEAN BLVD		TAX SUBDIVISIONS TWP TOPSAIL TOWN OF TOPSAIL BEAC PENDER EMS S64		PIN CARD NO 4212-14-7763-0000 RECORD NUMBER: 03870 ROUTE 60900.0 LISTER: GD 121609 - E REVIEW: DM 072994																																																																																																																																									
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1121 Ocean Blvd



PENDER COUNTY HEALTH DEPARTMENT

P.O. Box 1209, Burgaw, NC 28425

Telephone (910) 259-1233

028

Page 1 of

CONSTRUCTION AUTHORIZATION - OPERATION PERMIT

~~SEPTIC TANK IMPROVEMENTS PERMIT AND CERTIFICATE OF COMPLETION~~

Article 11 N.C. General Statutes Chapter 130A

Owner/Agent Richard Costig DATE 10/3/95 Permit # 10395 505452  
 Address 112 Oscar Blvd Topsail Beach, N.C.  
 Location of Site Ocean Blvd 1121 Green House / White Turn  
 Subdivision New Topsail Beach Lot # 11 1/2 10 Section/Block 22  
 House ☒ Mobile Home ☐ (#Bedrm) 5 Business        (#Employees/Members/Seats)         
 SEPTIC TANK SIZE Existing Gal. NITRIFICATION FIELD 450 Sq. Ft.  
 NUMBER OF LINES 3 LENGTH 50 ft. DEPTH 42" to 48" In. BED SYSTEM SIZE 20x30

See layout sketch or attached plot plan.

NO CHANGE IN SEPTIC TANK SYSTEM OR ITS LOCATION WITHOUT PRIOR APPROVAL FROM PENDER COUNTY HEALTH DEPT.

THIS PERMIT IS SUBJECT TO REVOCATION IF SITE PLANS OF INTENDED USE CHANGES.

G.S. 130A-335(f)

MINIMUM HORIZONTAL SEPARATION OF SEPTIC SYSTEM TO NEAREST:

WELL: 100 ft., Property Line: 10 ft., Foundation: 5 ft., Ditch or

Subsurface Tile: 25 ft. (10 ft. if upslope), Any Water Line: 10 ft.

SPECIAL INSTRUCTIONS OR REQUIREMENTS:

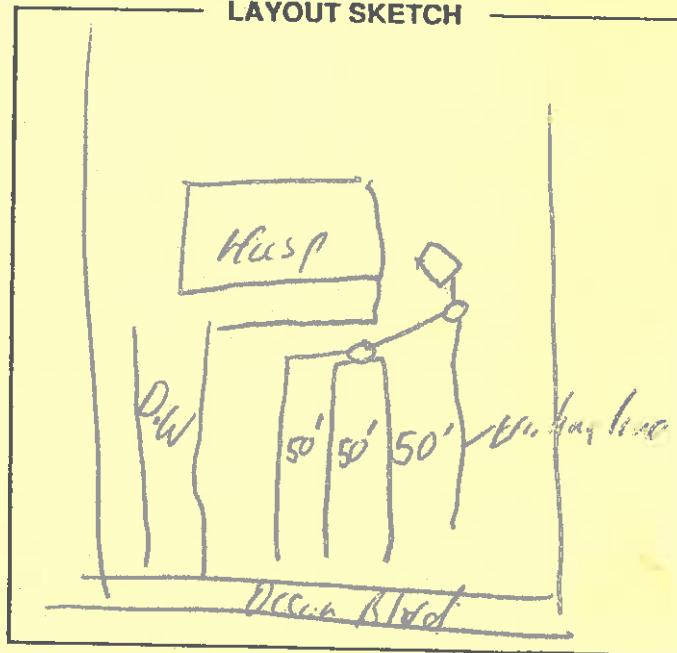
Refrigeration Repair Permit

Maintain 10' ft from

Water Line

If Excavation is not (log with  
Roots leave line tied into D.O.  
Reduce flow with Flow Leveles

LAYOUT SKETCH



This permit does not constitute a warranty or guarantee and satisfactory performance is not assured by the Pender County Health Department.

SIGNED

~~IMPROVEMENTS PERMIT~~ BY: Henry A. Loun

PERMIT VALID 5 YEARS

~~CERTIFICATE OF COMPLETION~~ BY: Janet Overstreet

DATE: 11-21-95

Installed by: Lockamy

PCHD/EH-3 Rev. 05-95

WHITE-APPLICANT\*\*PINK-OFFICE FILE\*\*YELLOW-OWNER\*\*GOLDENROD-BUILDING INSPECTIONS



6/27/13

NATIONAL FLOOD INSURANCE PROGRAM PROPERTY LOSS HISTORY

26/27/13

04-065246

CURRENT COMPANY/POLICY NUMBER: NFIP DIRECT SERVICING AGENT/RL00006463

CURRENT PROPERTY ADDRESS:

# 24

NEW TOPSAIL BCH, NC 28445-8721

THE INFORMATION PROVIDED BELOW IS THE FLOOD INSURANCE LOSS PAYMENT HISTORY FOR CLAIMS PAID BY THE NATIONAL FLOOD INSURANCE PROGRAM SINCE 1978 FOR THE ABOVE PROPERTY ADDRESS. LOSSES OCCURRING WITHIN 180 DAYS PRIOR TO THIS LOSS HISTORY MAY NOT BE INCLUDED IN THIS REPORT. IF YOU HAVE ANY QUESTIONS ABOUT THIS INFORMATION PLEASE CONTACT THE NFIP AT 866-395-7496.

DATE OF LOSS -----	BUILDING PAYMENTS -----	CONTENTS PAYMENTS -----	TOTAL PAYMENTS -----
09/14/2005	1326.96	.00	1326.96
09/16/1999	8135.35	23.75	8159.10
08/26/1998	2556.51	.00	2556.51
09/05/1996	26704.22	2767.34	29471.56
07/12/1996	5447.21	4873.15	10320.36
04/04/1993	1860.00	.00	1860.00
01/01/1987	984.01	.00	984.01
12/04/1986	10372.53	1891.36	12263.89

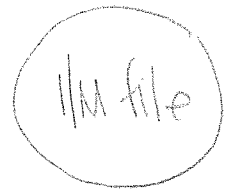
*This document from National Fld. Insur.  
Program issued by FEMA shows  
loss history as on file by FEMA.*

Costic

THE FLOOD MITIGATION ASSISTANCE (FMA) PROGRAM WAS AUTHORIZED BY THE NATIONAL FLOOD INSURANCE REFORM ACT OF 1994 AND AMENDED BY THE BIGGERT-WATERS FLOOD INSURANCE REFORM ACT OF 2012. THE FMA PROGRAM PROVIDES FUNDS ON AN ANNUAL BASIS TO STATES AND LOCAL COMMUNITIES FOR PROJECTS THAT EITHER REDUCE OR ELIMINATE THE LONG-TERM RISK OF FLOOD DAMAGE TO BUILDINGS, HOMES, AS WELL AS OTHER STRUCTURES THAT ARE INSURED UNDER THE NATIONAL FLOOD INSURANCE PROGRAM (NFIP). THE FMA PROGRAM PROVIDES FEDERAL GRANT FUNDS FOR ELIGIBLE MITIGATION ACTIVITIES, SUCH AS ELEVATING AN NFIP-INSURED STRUCTURE. MITIGATED PROPERTIES MAY ALSO QUALIFY FOR REDUCED FLOOD INSURANCE RATES. AS AN INDIVIDUAL, YOU MAY NOT APPLY FOR AN FMA GRANT ON YOUR OWN, BUT YOUR LOCAL COMMUNITY OR COUNTY MAY APPLY FOR A GRANT ON YOUR BEHALF. TO OBTAIN ADDITIONAL INFORMATION ON THE FMA PROGRAM AND OTHER MITIGATION GRANT PROGRAMS, PLEASE CONTACT YOUR LOCAL FLOODPLAIN MANAGER OR STATE HAZARD MITIGATION OFFICER, OR GO TO THE FEMA HAZARD MITIGATION ASSISTANCE WEBPAGE AT [www.fema.gov/hazard-mitigation-assistance](http://www.fema.gov/hazard-mitigation-assistance).

*Loss payments -  
1121 Ocean Blvd*





Work Authorization #1 (November 20, 2015 through March 31, 2016)

Contract for Consultant Services

Holland Consulting Planners, Inc. and Pender County

FY14 Flood Mitigation Assistance Project, HCP #5627

#### Background

WHEREAS, Pender County (the County) has received funding for an FY14 Flood Mitigation Assistance (FMA) Elevation and Acquisition Project, and wishes to continue with the initial (preconstruction) phase of the project, including homeowner meetings, surveying, appraisals, and engineering.

#### General Conditions

During completion of the work defined in this Work Authorization, Pender County (the County) and Holland Consulting Planners (the Consultant), agree to abide by all of the terms and conditions outlined in the Contract for Consultant Services for administration of the Pender County FY14-15 Flood Mitigation Assistance Project dated December 14, 2015.

#### Tasks Approved By This Work Authorization

##### *General Administration and Contract Administration Tasks*

- Coordinate homeowner informational process; document citizen concerns and questions; maintain homeowner database.
- Maintain case files.
- Meet with governing body as requested.
- Coordinate project activities with local staff (including financial management).
- Coordinate project activities with designated state agencies; resolve program support and code violation issues.
- Prepare applications for additional Hazard Mitigation and Disaster funds.
- Procurement of Professional Services (Legal/Appraisal/Engineering/Surveying Asbestos Inspections.)

##### *Programmatic Tasks*

- Prepare and distribute project information package to eleven (11) acquisition and elevation applicants
- Prepare a general description of scope of work for elevation/retrofitting and acquisition.
- Hold owners' information meetings and obtain preliminary grant agreements from owners.
- Prepare Administrative Guidelines and administrative forms.
- Prepare financial management guidelines and program budget.
- Initiate surveys and structural feasibility inspections for six (6) units included in the FY14 FMA Elevation Project.
- Initiate legal/appraisal/surveying work for five (5) units included in the FY14 FMA Acquisition Project

#### Fee

For completion of the work items described above, the County agrees to pay the Consultant a not-to-exceed fee of \$30,000. Payment terms, including terms for payment of additional services, shall be in accordance with the Contract for Consultant Services dated December 14, 2015. Hourly rates for the Consultant's personnel are agreed to as follows:



Staff Position	Hourly Rate
<b>Holland Consulting Planners, Inc.</b>	
J. Reed Whitesell, AICP, Project Manager	\$130.00
Chip Bartlett, Program Administrator	\$90.00
Chris Hilbert, Program Manager	\$90.00
Gary Miller, Inspector	\$75.00
Administrative Services	\$60.00

Time Schedule

The tasks approved by this Work Authorization shall be completed by March 31, 2016.

The County and the Consultant hereby agree to the full performance of the covenants contained herein.

IN WITNESS HEREOF, they have executed this authorization, this day and year first above written.

HOLLAND CONSULTING PLANNERS, INC.

PENDER COUNTY, NC

T. Dale Holland  
T. Dale Holland, President

Witness

Kyle M. Breuer 2/2/2016  
Kyle M. Breuer, FMA Designated Agent

Melissa Pedersen  
Clerk to the Board

This authorization has been pre-audited in the manner required by the Local Government Budget and Fiscal Control Act.

Katherine C. Brapp  
Finance Officer

2-3-2016  
Date

(SEAL)



**Community Development Manager/Senior Planner****PROFESSIONAL AFFILIATIONS:**

American Institute of Certified Planners (AICP)  
American Planning Association (APA)

**EDUCATIONAL BACKGROUND:**

Carleton College, B.A. English, 1975

**RELEVANT PROJECT EXPERIENCE:****Beaufort County, North Carolina**

FY99 NCHFA SFR-Disaster Program  
Hurricane Floyd Repair and Replacement Program  
FY13 Flood Mitigation Assistance Program  
FY13 Flood Mitigation Assistance Program

**Town of Bladenboro, North Carolina**

FY99 NCHFA SFR-Disaster Program  
FY04 NCHFA Urgent Repair Program

**Brunswick County, North Carolina**

FY99 NCHFA SFR-Disaster Project  
Hurricane Floyd Repair and Replacement Program  
FY08 NCHFA-SFR Program  
FY11 NCHFA-SFR Program Housing Inspection  
FY14 NCHFA-SFR Program

**Camden County, North Carolina**

FY07 NCHFA-SFR Program

**City of Charlotte, North Carolina**

Revision of Standard Bid Documents for Single-Family  
Development Programs

**Columbus County, North Carolina**

FY05 Crisis Housing Assistance Repair & Replacement Program

**Craven County, North Carolina**

FY99 NCHFA SFR-Disaster Project  
Hurricane Floyd Repair and Replacement Program  
FY13 Flood Mitigation Assistance Program  
FY14 Flood Mitigation Assistance Program

**Hyde County, North Carolina**

FY08 NCHFA-SFR Program

**Pender County, North Carolina**

FY05 Crisis Housing Assistance Repair & Replacement Program  
FY14 Flood Mitigation Assistance Program

**Sampson County, North Carolina**

FY08 NCHFA-SFR Program

**City of Washington, North Carolina**

FY99 NCHFA SFR- Disaster Recovery Project  
Hurricane Floyd Repair and Replacement Program

**Town of Windsor, North Carolina**

Hurricane Floyd Repair and Replacement Program

Mr. Whitesell earned his B.A. in English from Carleton College in Northfield, Minnesota. His experience includes over forty years in **engineering/planning management**, with two years of experience as controller/general manager for a 40-person engineering/construction supervision firm with offices in four locations. He has worked for Holland Consulting Planners, Inc., since 1989, primarily in **community development** and management of housing related projects, with an emphasis in **hazard mitigation** and **hurricane disaster recovery**. His role as **Community Development Manager** has included such interests as overall project management; preparation of **environmental review records and administrative guidelines/policy development**, and general **project compliance/monitoring coordination** with various local, state, federal and other governing agencies/authorities for over 175 housing and infrastructure projects. Mr. Whitesell also served as Project Manager for development of the Eastern Regional Advisory Committee **Medical Response Plan**, which included **hazard analysis, risk assessment, and development of mechanisms for requesting assistance/supplies** from federal, state, and other agencies for a **28-county region** in North Carolina. He is a member of the **American Institute of Certified Planners**.







## HAZARD MITIGATION PLANNING & PROJECT MANAGEMENT EXPERIENCE

Since 1997, following Hurricane Fran, **Holland Consulting Planners, Inc.**, (HCP) has been at the forefront of North Carolina's hazard mitigation planning and disaster recovery effort, assisting numerous clients in eastern North Carolina with preparation of all hazard mitigation plans, supervision of buyout and retrofitting projects, and management of recovery programs including housing replacement and rehabilitation. HCP has more hands-on flood mitigation and recovery management expertise than any professional consulting firm in North Carolina.

The firm has managed approximately 40 HMGP/HMA elevation and acquisition projects and Crisis Housing Assistance projects (Hurricanes Fran/Bonnie/Floyd/Isabel) and annual Hazard Mitigation Assistance programs. These projects have included preparation of all program assistance policies, contract documents, professional services contracts, homeowner preconstruction and contract administration forms; and complete program management, including comprehensive acquisition and relocation management, elevation and retrofitting or rehab/replacement contract administration, supervision of resident inspection services, and coordination of appraisal, legal, surveying, engineering, and asbestos inspection services. Many of these projects included management of additional funds provided by North Carolina and HUD for utility and floor framing retrofitting and rehabilitation of low-income units.

On an annual basis, HCP provides supervision of the Flood Mitigation Assistance (FMA) acquisition/elevation application process for Beaufort County, Craven County, Hyde County, Pender County, and the Towns of Carolina Beach, Wrightsville Beach, and Windsor (approximately 75 units funded 2008-2016).

Recent experience includes the following:

**1987-2004:** Preparation of Post-Disaster Recovery and Evacuation Plans and Storm Hazard Mitigation Policies, including mapping of flood-prone areas and high wind zones, for over 35 units of government in eastern North Carolina as part of Land Use Plans required by North Carolina Coastal Area Management Act (CAMA) regulations.

**September 1996 – June 1997:** Following Hurricane Fran, assisted North Carolina Division of Emergency Management and several eastern North Carolina communities with preparation of "Urgent Need" HMGP Elevation Applications for submittal to FEMA Region IV.

**October 1997 – December 2003:** Administration of five HMGP elevation and acquisition projects (Hurricane Fran/Bonnie) outlined below, including preparation of all program assistance policies, contract documents, professional services contracts, homeowner preconstruction and contract administration forms; and complete program management, including elevation and retrofitting contract administration, supervision of resident inspection services, and coordination of legal, surveying, engineering, and asbestos inspection services. Projects included management of additional funds provided by North Carolina and HUD for utility and floor framing retrofitting and rehabilitation of low-income units.

1. Beaufort County, NC (Hurricane Fran) – 75 elevated units – completed in December 2001.





## HAZARD MITIGATION PLANNING & PROJECT MANAGEMENT EXPERIENCE

2. Beaufort County, NC (Hurricane Bonnie) – 25 elevated units – completed in December 2002.
3. Belhaven, NC (Hurricane Fran) – 255 elevated units – completed in February 2003.
4. Craven County, NC (Hurricane Fran) – 7 elevated units – completed in December 2000.
5. Washington, NC (Hurricane Fran) – 40 elevated units/21 acquired units – completed in March 2001.

**January 1998 – present:** Participation in development of NC planning standards for preparation of Hazard Mitigation Plans by local units of government; preparation of Hazard Mitigation Plans for over thirty (30) local units of government, including one of two pilot Regional HMPs within the State of North Carolina. Subsequent preparation of five additional Regional HMPs.

**December 2000 – June 2004:** Administration of HMGP/HFPA Acquisition Projects and/or NC Crisis Housing Assistance Projects for sixteen local units of government in eastern North Carolina following Hurricane Floyd (September 1999). HCP has managed the acquisition of over 700 flood-damaged structures with HMGP/HFPA funds, including management of related homeowner and tenant relocation programs. In Greenville, the firm assisted the city staff with the acquisition of over 400 parcels. Additionally, HCP managed the elevation/repair or replacement of an additional 500 residential units through the Crisis Housing Assistance program.

**June 2005 – March 2008:** Administration of five HMGP elevation and acquisition projects (Hurricane Isabel) outlined below, including preparation of all program assistance policies, contract documents, professional services contracts, homeowner preconstruction and contract administration forms; and complete program management, including elevation and retrofitting contract administration, supervision of resident inspection services, and coordination of legal, surveying, engineering, and asbestos inspection services.

1. Beaufort County, NC – 14 elevated units – completed in June 2006.
2. Belhaven, NC – 15 elevated units – completed in June 2006.
3. Edenton, NC – 1 elevated unit; 3 acquisition units – completed in June 2006.
4. Hertford County, NC – 3 acquisition units – completed in December 2007.
5. Hyde County, NC – 4 acquisition units; 26 elevation units – completed in October 2006.

**August 2005 – December 2007:** Management of CDBG Supplemental Assistance Programs for replacement/rehabilitation of homes damaged by Hurricane Isabel in Hyde County, Beaufort County, and Belhaven, NC.

**January 2006 – December 2010:** Management of state-funded Crisis Housing Assistance programs in Pender County and Columbus County, NC, for 2004 tropical storm recovery.

**January 2008 – Present:** Management of annual FMA elevation application/management processes for Beaufort County, Craven County, the Town of Carolina Beach, Pender County, Hyde County, Oak Island, and Wrightsville Beach.





## HAZARD MITIGATION PLANNING & PROJECT MANAGEMENT EXPERIENCE

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**July 2013 – Present:** Management of Hurricane Irene HMGP acquisition/elevation projects for Beaufort County, Craven County, Hyde County, and Pamlico County (65 units).

**March 2015 – Present:** Management of FY13 FMA projects for the Town of Carolina Beach, and Beaufort and Craven Counties (20 units), and FY14 FMA projects for the Town of Carolina Beach, and Beaufort, Craven, and Pender Counties (30 units).



Sworn Affidavit By J. Reed Whitesell, AICP

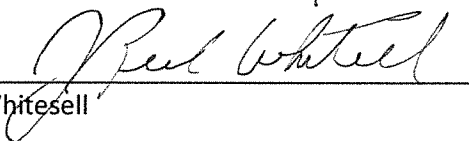
Date: January 26, 2017

Reference: Pender County Flood Mitigation Assistance Program  
Elevation of Properties at 1117 and 1121 Ocean Boulevard, Topsail Beach NC  
Variance Request for Required FLSNV Setback

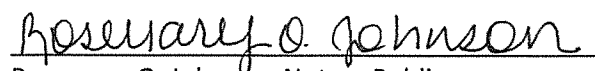
This affidavit made this 26th day of January, 2017, serves to confirm the following facts related to the elevation of the two referenced structures included in the Pender County FY14 FMA Elevation Program. These facts are based on my personal review of all preconstruction and engineering documents related to the proposed elevations, and on my experience in the management of numerous flood mitigation programs in eastern North Carolina since Hurricane Fran in 1996.

1. The purpose of the prescribed mitigation method (elevation) is solely to protect the residential structures and their contents from future flood events through elevation of the structures on the existing footprints to the required freeboard (3.0 ft.) described in the Town of Topsail Beach Flood Damage Prevention Ordinance. FMA-sponsored elevation is not intended to provide a substantial improvement or increase in existing property value, although the cost sometimes exceeds 50% of the existing structure value.
2. Based on extensive discussions with the Project Engineer and the low bidder, it is my clear understanding that the proposed elevation methodology, utilizing a combination of existing and new pilings to elevate the structures to the required freeboard height, is a more cost-efficient method than moving the structures away from the FLSNV and elevating the structures on new pilings. Moreover, my review of the site surveys and my personal on-site inspection of the elevation sites in October 2016, leads me to believe that moving the structures to the required setback for new construction might lead to violation of the Town of Topsail Beach's zoning requirements, and would significantly limit the owners' ability to construct additional (non-substantial) improvements to decking and accesses in the future.

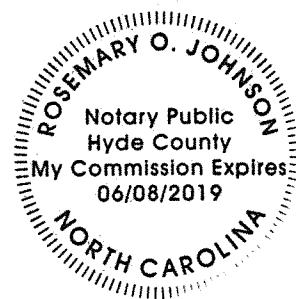
Sworn this 26th day of January, 2017.

  
J. Reed Whitesell

Sworn to, and subscribed by me, this the 26<sup>th</sup> day of January, 2017.

  
Rosemary O. Johnson, Notary Public

My Commission Expires: 6/19/2019





**JOHN B. "CHIP" BARTLETT, JR., AICP****Program Administrator****PROFESSIONAL AFFILIATIONS:**

American Planning Association (APA)  
American Institute of Certified Planners (AICP)

**EDUCATIONAL BACKGROUND:**

B.S. Urban and Regional Planning, 1993  
East Carolina University

Completion of 15 hours of coursework in Law and Administration required by the NC Code Officials Qualification Board, 1997

Certification in Safe Work Practices for Lead Hazard Reduction, 2002

Introduction to ARC/GIS 9, 2004

NCHFA-SFR Implementation Workshop, 2007

Community Development Academy, 2003

**RELEVANT PROJECT EXPERIENCE:**

**Town of Ayden, North Carolina**  
Planning Services

**Town of Bladenboro, North Carolina**  
FY99 NCHFA SFR-Disaster Program  
FY04 NCHFA Urgent Repair Program

**Brunswick County, North Carolina**  
FY99 NCHFA SFR-Disaster Project  
Hurricane Floyd Repair and Replacement Program  
FY08 NCHFA-SFR Program  
FY11 NCHFA-SFR Program Housing Inspection  
FY14 NCHFA-SFR Program

**City of Clinton, North Carolina**  
FY09 CDBG Infrastructure (Pugh Road) Program  
FY10 CDBG Contingency (Eliza Lane) Program  
FY12 CDBG Infrastructure Program

**Town of Carolina Beach, North Carolina**  
FY14 Flood Mitigation Assistance Program

**Columbus County, North Carolina**  
FY05 Crisis Housing Assistance Repair & Replacement Program

**Craven County, North Carolina**  
FY99 NCHFA SFR-Disaster Project  
Hurricane Floyd HMGP/SARF Acquisition/Relocation Project  
Hurricane Floyd Repair and Replacement Program  
FY09 CDBG Scattered Site Program  
Hurricane Irene HMGP Elevation/Acquisition Project  
FY12 CDBG Scattered Site Program  
FY12 CDBG Infrastructure Program  
FY13 Flood Mitigation Assistance Program  
FY14 Flood Mitigation Assistance Program

**Pender County, North Carolina**  
FY05 Crisis Housing Assistance Repair & Replacement Program  
FY14 Flood Mitigation Assistance Program

Mr. Bartlett earned his B.S. in **Urban and Regional Planning** from East Carolina University. He has worked for Holland Consulting Planners, Inc., since 1996. His principal focus has been on **community development** and management of housing related projects. Other areas of experience include **land use planning** and **zoning/subdivision regulations**. Mr. Bartlett has experience in preparation of **environmental review records and administrative guidelines/policy development**, and general **project compliance/monitoring coordination/labor standards compliance** with various local, state, federal and other governing agencies/authorities for numerous housing rehabilitation/redevelopment projects. He has also provided **planning services** to the Town of Ayden, and has assisted in the preparation of **land use plans** and **subdivision/zoning regulations** for several municipalities. He is a member of the **American Institute of Certified Planners**.







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 bjoyner@appianengineers.com • www.appianengineers.com

## **BOBBY L. JOYNER, P.E.**

### President

#### **Education**

1974 Mathematics  
 1972 Civil Engineering Studies  
 1968 Associate Degree in Mechanical Engineering

#### **Professional Memberships**

Professional Engineer – North Carolina, 1978, Virginia, 1979

#### **Strengths**

Creativity in problem solving, innovative, broad based experience in municipal, Civil and Structural engineering, forensic engineering inspections.

#### **Professional Experience**

##### **PRIOR TO APPIAN**

Experienced in wide range of civil, municipal, and structural projects. Responsible for complete design, contract and construction administration of all public works projects for City of Rocky Mount as Director of Engineering from 1982-1986. Extensive experience in water transmission, sewer collection, and sewerage lift stations, roadway/street design and rebuilding, building design, and hydrological studies and design of large complex drainage systems. As City Engineer, he also established an on-site soils lab to provide staff-based testing and evaluation of soils on City projects. Mr. Joyner as well as staff inspectors were trained in soil testing and evaluation. The lab also provided testing of private development work as it related to projects that would become part of city maintenance. Experience prior to becoming City Engineer was in the capacity of Asst. City Engineer, Traffic Engineer & Staff Engineer.

##### **WITH APPIAN**

Mr. Joyner opened Appian Consulting Engineers, PA in 1986. Since then, he has designed many commercial and residential subdivisions, performed site design for hospitals and schools, industrial sites, and large shopping centers. He also has extensive experience in municipal engineering projects such as water distribution systems, booster pump stations, elevated tanks, sewer rehabilitation and complex potable well/tank systems for industrial and rural school applications. Most recently he was responsible, from conception to completion, for site, grading, drainage, and utility design for a 1.2 million SF Universal Leaf Tobacco Processing Plant located on a 1000-acre site in Nash County, NC and a 1 million SF QVC Distribution Facility in located in Edgecombe County. Mr. Joyner has been employed by various industries to solve drainage problems relating to both large roofs and site related issues in NC and SC.

He has experience in retrofit roofing surveys, design, and inspections and structural investigations, water distribution system modeling and analysis, HEC 1 & HEC 2 Flood studies, levee and floodwall design, flood pumps, and NFIP FEMA Map Amendments.



Mr. Joyner has been involved with the EDA grant process at all stages of project development including assisting with the preparation of pre-application, meeting with EDA and governmental officials in preliminary phases, assisting with the grant application, complete project design and project administration/execution in conformance with EDA regulations.

## STRUCTURAL

Mr. Joyner is the principal structural Engineer for Appian providing design services for bridges, buildings, and municipal infrastructure such as box culverts, deep drainage structures, etc.

**Residential and Commercial Inspections:** Mr. Joyner has conducted in excess of 3000 residential, commercial and industrial inspections in North Carolina and Virginia with an emphasis on cause and effect. Forensic investigations often focus on the structure as a whole which may include air quality testing and the contribution of the HVAC to air quality, structural analysis, exterior grading and drainage plans, partial site topographical surveys, and soils investigation.

**Hurricane Elevation Raisings:** Since 1999, Appian has partnered with Holland Consulting Planners, Wilmington, NC to provide structural inspection and design of foundation systems for more than 200 homes that had been approved for elevating. These homes, approved for Federal assistance, were flooded during a number of Hurricanes. The Counties include Hyde, Pamlico, New Hanover, and Beaufort Counties.

**Expert Witness:** Mr. Joyner is often employed by Insurance Companies and Attorneys to perform inspections and provide expert testimony on cases involving both residential and commercial structures.

## PATENTS

1. Holds 3 U. S. patents from the US Patent Office on the following:
  - A. **Industrial Splash Pad – Patent No. 7,052,212:** The Industrial Splashpad is designed to kill the energy from downspouts serving large roof areas, distribute the flow over a wide ogee spillway, and then deposit the flow nearly parallel to the ground at very low non-erosive velocities. 65 of the prototype pads were first installed at Universal Leaf Tobacco's 1.2 million square foot tobacco processing plant. The splashpad is being manufactured and distributed locally. Manufactured from high density polyethylene, the first units are scheduled to come off line in 2013. A second patent was applied for in the summer of 2012 and involved significant improvements to the original patent. Also, the second patent included unique Splashpads for middle-range roofs (i.e. commercial).
  - B. **Method of Using High Carbon Coal Ash for Treatment of Stormwater Runoff – Patent No. 7,311,844:** Research conducted by Virginia Tech in 2008. Treatment system significantly reduces Nitrogen, Phosphorus, and other constituents from stormwater runoff. Field trials will be underway shortly
  - C. **Method of Using High Carbon Coal Ash for Treatment of Domestic Wastewater – Patent No. 7,455,780:** Research conducted by Virginia Tech in 2008. Tertiary treatment system of domestic waste significantly reduces Nitrogen, Phosphorus, and other constituents and polishes effluent prior to placement in underground nitrification field.
  - D. **Patents Pending:** Two patents pending in stormwater management (information relating to these two pending patents is proprietary).



## OTHER

1. **Book Authored:** Authored a book in 2006 titled *"10 Successful Steps to Successfully Developing a Public Facilities Manual."* Like the manual, the book is sold at trade shows and can be purchased on-line.
2. **MuniSPEC® – A Municipal Public Facilities Manual:** Authored and copyrighted (Registration Number TXu 1-788-389, February 7, 2011) a state-of-the-art Manual of Specifications, Standards and Design that is marketed to municipalities. The manual, a 1,200+ page document, includes Standard Municipal Specifications, 150 to 225 pages of standard Public Works Details, and an extensive design developed by Appian that covers:

### Municipal Design Manual Elements:

- a. Municipal street design Manual (which includes soils evaluation and analysis of traffic loads),
- b. Segmental Retaining Wall Design,
- c. Boardwalk & Footbridge Design,
- d. Water Distribution, Gravity Sewer, Pressure Sewer, and Sanitary Sewer Pump Station Design Manual,
- e. Traffic Calming (design and measures),
- f. Traffic Impact Analysis, and
- g. Stormwater Design: Stormwater design covers hydrological analysis, hydraulic design of surface and subsurface piped systems, BMP design, nutrient management and Low Impact Design (LID) considerations. The stormwater design section provides the minimum design requirements and methods required of a designer when designing systems that will be reviewed and taken over for maintenance by a municipality.

Example problems are provided throughout the entire design section.

The Manual, tailored to the municipality, is offered in hardcopy, searchable CD, or web format. The Manual is marketed nationwide and shown at public works tradeshow annually. Some of our clients include: the City of Wilson, NC, the City of Greenville, the Town of Clayton, NC, Orange Water and Sewer Authority (OWASA), NC; the Town of Wake Forest, NC, Kittrell Water Association, Kittrell, NC, The City of Durham, and others.

In addition, Appian has set up MuniSPEC® as a user-friendly interactive and searchable digital file that uploads to both the web and iPads.

3. **Public Works Details Drawing Base:** Developed a comprehensive in-house library of standard public works details in AutoCAD format. The drawing base is comprised of over 2000 separate details for water, streets, drainage, sewer, traffic calming, BMP's and erosion. Rarely seen in civil/municipal projects, the details we offer are in exploded view and isometric. The details, used extensively by municipalities and private engineering firms across the nation, are available for purchase from Appian. Our catalogue of details also includes a large number of NCDOT standard details in AutoCAD format; drawings generated by our CAD staff directly from NCDOT drawings.
4. **Precasters Catalogues:** As a direct result of our efforts in conveying structures in isometric and exploded view formats, Appian has developed manufacturer's



catalogues (hard copy and CD) for concrete precasting companies and plastic septic tank manufacturers located all over the United States. Some of these catalogues are rendered in color. A unique feature we offer is a standard detail of a specific tank line (e.g. septic, pump, or grease trap) that uses a database to automatically fill in the dimensions, and displays volume, weight, and product number. For grease traps, we provide a separate spreadsheet that computes the average and maximum flow, storage volume and maximum grease volume (based on the uniform plumbing code method). The designer need only select the desired tank size and the drawing instantaneously provides all necessary data for the drawing to be used as a shop drawing or for submittal.

5. **Seminar Speaker:** Mr. Joyner holds/teaches seminars on *How to Develop Your Own Public Facilities Manual* for Public Works Directors and City Engineers; moisture prevention in crawl spaces; and mold detection and prevention in new and existing construction.



## Appian Consulting Engineers, PA

Post Office Box 7966	Bobby L. Joyner, PE, President
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Rocky Mount, NC 27084	252.972.7638, fax
www.AppianEngineers.com	bjoyner@appianengineers.com

**Appian Consulting Engineers, P.A.** is an engineering design firm structured to serve North Carolina and southeastern Virginia with our office located in Rocky Mount, North Carolina. Appian has been a reliable presence in eastern North Carolina since its inception in 1986 by its owner and President Bobby L. Joyner, PE. Mr. Joyner's experience is extensive in the area of municipal engineering and design as he worked for the City of Rocky Mount for more than 18 years, with the last four years as the Director of Engineering.

Our team's extensive multi-disciplinary experience will ensure that all construction work is performed in conformance with safety requirements, contract requirements, and quality control/ quality assurance practices. Appian will work closely with all parties involved to ensure that a superior construction product is delivered on time and within budget. Hourly rates are attached.

## The Appian Team

The Appian Team will consist of the following personnel providing exceptional expertise:

**Bobby L. Joyner, P.E., President:** Mr. Joyner obtained his Civil Engineering Diploma in 1972 and became a professional engineer in 1978. He has extensive experience in municipal engineering and planning as he worked for the City of Rocky Mount as the Rocky Mount City Engineer (1982-1986) and in the engineering department for more than 18 years. Mr. Joyner has more than three decades of experience in design for FMA, HGMP, SRL, CDBG, municipal, industrial, commercial and residential projects including structural and retrofit design, water system distribution, drainage improvements, sewer rehabilitation and sewage pump station design, pier and bridge design, wave modeling, and flood studies. Mr. Joyner provides forensic studies on both mold and crawl space moisture control in commercial and residential buildings. Recognized as an expert in NC and VA, consultants and attorneys frequently refer their clients to Appian for investigations, design and expert testimony in court cases. In addition to acquiring three patents, he has authored a state of the art *Manual of Specifications, Standards and Design*, which Appian has developed for numerous cities in Virginia and North Carolina. He was involved in *all* of Appian's projects listed below. Mr. Joyner will be the Project Engineer and Inspector (as needed) for the project.

**David C. Revoir, P.E.:** Bringing experience from Maryland State Highway Administration and Greenhorne & O'Mara, Mr. Revoir has a broad range of experience in CDBG, municipal, industrial, commercial and residential projects including water distribution analysis, street design, stormwater modeling, sewer design, and erosion control. Mr. Revoir routinely leads projects through conceptual layout, detailed design, permitting, contract bidding, construction administration and as-built certification. He is adept at providing railroad design, no-net rise flood studies, SWPPP/SPCC Plans, and swimming pool compliance for the Virginia-Graeme Baker Pool and Spa Safety Act. Contributing

"The construction drawings and specifications that your firm produces are **detailed** and **comprehensive** and portray a **thorough understanding** of the construction process. As a matter of fact, the U.S. Department of Commerce Economic Development Administration will be using your firm's specifications and contract documents as **the model** for other engineering firms to follow..."

Milton Cochran, Sr.  
US Department of Commerce  
Economic Development Administration



author for Stormwater Design for the *Manual of Specifications, Standards and Design*, Mr. Revoir is the engineer for Franklin County Stormwater Review. He has extensive experience with stormwater modeling, stormwater BMP design and writing municipal stormwater ordinances. He is a Sustainable Land Development International (SLDI) Associate Member and LEED Accredited Professional (*LEED AP Building Design + Construction*) with the U.S. Green Building Council. Mr. Revoir's responsibility on this project will be that of project manager.



**Michael Gallina, Jr., CAD Manager:** Mr. Gallina has been with Appian for more than 21 years and has extensive experience in creating master plans, site plans, street plans, and profiles, water and sewer lines, grading, and erosion sedimentation control, construction plans, utility plans and staking plans. He has also developed both 3D and isometric details on all our plans to clearly convey the intent of the detail to those in the trenches. As a result, Appian developed catalogues for a number of national precast manufacturers, including: *NC Precast* (Hanson, Needville, TX), *Fralo Plastics* (Syracuse, NY), *Dellinger* (Mecklenburg County, NC), *Mack Industries* (Sharpsburg, NC and Valley City, OH), *Albuquerque Vault* (Albuquerque, NM) and *Ideal Precast* (Raleigh, NC).

Appian will strive to maintain equal participation of *Disadvantaged Business Enterprises (DBEs)* and to utilize DBE's to the maximum extent as possible. Appian will use Small Business Administration (SBA) information and other agencies to determine and develop a list of local DBE's qualified for this project. We are committed to advancing the *Historically Underutilized Business* community.

## Engineering & Project Experience

Appian has extensive experience with many municipalities ranging from small to large projects, involving a full range of engineering services. As you can see below, Appian has been involved in a plethora of similar projects in eastern North Carolina for the past three decades:

### **APPIAN'S FLOOD MITIGATION WORK INCLUDES:**

#### Residential Elevation Raising Projects:

Craven County  
Beaufort County  
Carolina Beach  
Pamlico County  
Hyde County  
Washington, NC  
Belhaven, NC

#### Some of the Most Recent Projects:

#### *Pender/ Onslow County House Raising and Foundation Plans (2013)*

Craven County 2015/16 (FY 13) FMA  
Pamlico County 2015/16 HMGP  
Beaufort County 2014 HMGP  
Beaufort County 2013 HMGP  
Beaufort County 2012 PDM  
Beaufort County FY 2010 SRL Program and Hurricane Irene HMGP  
Beaufort County SRL Program FY 2008  
Beaufort County Isabel HMGP Grant FY 2006



Carolina Beach HMGP 2009 (New Hanover County)  
Hyde County 2012 PDM  
Hyde County 2013 HMGP  
Hyde County 2014 HMGP

**RELATED STRUCTURAL WORK INCLUDES:**

1. Residential & Commercial Forensic Investigations:
  - Mr. Joyner has performed over 2500+ residential structural inspections; many of which related to foundation problems. His charge was to determine cause and provide recommendations and/or design documents for foundation stabilization/repair.
  - Design pre- and post-construction helical piling plans for both residential and commercial buildings throughout NC & VA. This particularly includes HMGP elevation raisings in high wind zones.
  - Mr. Joyner has extensive soils experience having managed and overseen soils testing services while employed with the City of Rocky Mount and as a branch of Appian Consulting Engineers.
2. Examples of other types of foundation design include:
  - Building & Foundation design for Engineered Metal buildings for Industrial, Commercial, Churches, Municipal and Private companies/individuals.
  - Asphalt Batch Plants Foundations
  - Drying Towers Foundations
  - Microwave Antenna Guy foundations (using helical piers)
  - Drying Pits
  - Rail loading facilities (dump pits, push walls, etc.)
  - Conveyor trusses and foundations for same
  - Grain Silo foundations
3. Design, Contract Documents, Specifications & Project Management Examples:
  - Craven County CDBG Contingency Infrastructure
  - Craven County CDBG-CR
  - Craven County Stormwater Ordinance
  - Site Drainage Mitigation Plan 2013 for QVC Distribution warehouse, Florence, SC,
  - Nash County CDBG 2010: Drake Community Center
  - Town of Wake Forest Street Paving Program 2009-2011
  - Town of Wake Forest Street Paving Program 2012/2013
  - City of Rocky Mount Candlewood Road Culvert Replacement 2015
  - City of Rocky Mount Wastewater Treatment Plant Sludge Pumping Station (2 stations) 2013
  - City of Rocky Mount Fleet Maintenance Tire Repair Facility 2013
  - City of Rocky Mount Annexations Infrastructure 2009-2011
  - City of Raleigh WWTP Maintenance Facility 2013
  - City of Henderson CDBG-HD 2007
  - City of Henderson CDBG 2005
4. Related Contract Document Experience: Appian authored & copyrighted a Public Facilities Manual developed specifically for Engineering & Public Works Departments. Some of the municipalities that have our manuals include:
  - City of Wilson Manual of Specifications, Standards and Design 2008 with annual updates
  - Town of Clayton Manual of Specifications, Standards and Design
  - City of Greenville Manual of Specifications, Standards and Design 2010
  - City of Durham Manual of Specifications, Standards and Design 2012
  - Town of Wake Forest Manual of Specifications, Standards, and Design 2000 & 2012 updates
  - OWASA W&S Manual of Specifications, Standards and Design



## **OTHER ARCHITECTURAL/STRUCTURAL ENGINEERING PROJECTS PERFORMED BY APPIAN:**

- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• ABC Store – Beaufort County</li> <li>• ABC Store – Atlantic Beach</li> <li>• ABC Store – Cape Carteret</li> <li>• Edgemcombe County Farm Bureau (Tarboro)</li> <li>• Sara Lee (Tarboro), 2009</li> <li>• South Rocky Mount Community Center</li> <li>• Smith Creek Wastewater Treatment Plant Maintenance Building 2013 (City of Raleigh)</li> <li>• Edwards Crane Steel Fabrication Complex</li> <li>• QVC Distribution Center High Roof Drainage</li> <li>• Nash Community College Culinary Arts Shelter</li> <li>• Red Oak Volunteer Fire Depart Cast-in-place UG water storage tank</li> </ul> | <ul style="list-style-type: none"> <li>• Performance Small Engine Center</li> <li>• Southside Baptist Church, 2014</li> <li>• Church on the Rise</li> <li>• Golden East Mall Expansion</li> <li>• Terminix Conference Center</li> <li>• Whitakers Business Center Shell Building</li> <li>• OIC for the City of Rocky Mount</li> <li>• Coopers Volunteer Fire Department</li> <li>• Englewood Baptist Church in Roanoke Rapids</li> <li>• Eyemart, Durham, NC</li> <li>• Retaining Wall (NC 98 By Pass)</li> <li>• City of Rocky Mount L&amp;M Stemmary Building (SSMR Roof repair)</li> <li>• Nash Community College Maintenance Facility Expansion.</li> <li>• Sylvan Water Fowl Visitor Center</li> </ul> |
|---|--|

Appian has extensive experience in elevation raising projects; specifically for *Hurricane Isabel* and *Hurricane Irene* though much of the latter has focused on structural inspections, elevation design relating to repairs and recovery. Elevation raising projects have been performed in *Craven County, New Hanover County, Beaufort County, Carolina Beach, Pamlico County, Hyde County, Belhaven and Washington*. In addition, we assisted in repairs, recovery and elevation raisings for projects relating to *Hurricane Fran* and *Floyd* though not through the Severe Repetitive Loss Hazard Mitigation Grant Programs.



Elevation Raising  
Belhaven, NC

## **PROPOSED SCOPE OF SERVICES:**

Obtain elevation certificates from licensed surveyors and determined the final finished floor elevation based on the BFE plus the applicable locally required freeboard.

- Compile an engineering report on each structure and make recommendations to the program administrator as to whether or not the structure could either economically or structurally be elevated. Detailed photographic survey of structure will be made logging locations and types of existing distress observed during the initial inspection.
- Inspect each house (attic framing, interior, exterior and crawl space). If areas of the crawl space are inaccessible, we can send in our "Spiderbot" camera to inspect the inaccessible areas (photo at right).
- Obtain field measurements of the interior, exterior and crawl space of each house. After a comprehensive load analysis (wind and





gravity loads), and using field notes and inspection findings, develop new foundation plans. From the engineered drawings, prepare construction documents which include:

- Existing and proposed foundation plan, foundation and floor framing notes, and construction details (connecting existing wall to the new floor, piling/ floor framing connection, cross bracing, etc.).

**Construction Phase:**

- Appian will provide limited on-site inspection and review of Contractor’s work at the request of the County, including written documentation that the completed foundation and accesses were properly constructed.
- Depending on the conditions exposed during demolition, modify plans as needed to adapt to latent field discoveries. In most cases Appian’s engineers are able to evaluate the soils and render an opinion as to suitability or recommend subgrade improvements necessary to stabilize a weak subgrade. For difficult projects, we call in a Geotechnical Engineer.

Sample plan excerpts from both previous *Beaufort County* and *Carolina Beach* elevation projects are included in this proposal.

**Hurricane Isabel & Irene HMGP Elevation Projects:**

Appian performed a pre-elevation inspection of each structure, provided a technical feasibility analysis for structures requiring design modifications, developed foundation drawings and specifications based on the NC Residential Building Code and provided on-site inspections and review of contractor’s work as needed. Appian engaged in contracts with *Beaufort County, Carolina Beach, Pamlico County, Hyde County, and the Town of Belhaven*, elevating *more than 150 houses* in NC coastal regions.



Elevation Raising  
Carolina Beach HMGP 2009





## Featured Projects & Capabilities

**Ocean Ridge Village:** Appian provided complete structural design for a number of new single family beachfront dwellings in *North Topsail Island* (135 mph wind zone design speed, a finished floor elevation two feet above the 100 BFE, knock out panels, flood vents, deck assemblies isolated from the main structure, corrosion resistant fasteners, and bracing/reinforcing for pilings, tall walls, window jack studs, headers, etc.).



### **City of Rocky Mount Tar River Bikeway**

Appian provided design for the Tar-River Bikeway in Rocky Mount, NC: providing topographical survey, grading plans, HEC-2 studies, no-net rise certification, and design of both a cantilevered aluminum bridge and the iconic timber arch bridge. The timber arch suspension bridge (right) was part of the Tar-River Bikeway project we designed for the City, and was erected in 2001. The bridge has the *World Record for Timber Arch Bridge Span* of 220 feet, which is 40 feet longer than the next longest span. The bridges were part of more than two (2) miles of scenic bike



paths and elevated timber walkways for which Appian provided plans and permitting along the Tar River. This Tar River Greenway Trail runs along its namesake and passes through several city landmarks. Flood studies of the Tar River were required for both structures.

**Craven County CDBG-CR 2008:** Holland Consulting Planners contacted Appian in 2008 to provide a Preliminary Engineering Report (PER) with construction cost estimates for the Community Revitalization Project in James City, NC. The project consists of establishing the existing road right-of-way, 1,420 LF of street paving, 1,200 LF of 6" watermain, 850 LF of 2" sewer forcemain relocation, storm drainage, and rehabilitation by replacement of existing sewer tank effluent pumping (*STEP*) systems. This includes coordination with various governmental agencies including: NCDENR Land Quality, NCDENR Division of Water Quality, NCDENR CAMA, NCDOT, NC Railroad and Norfolk-Southern. Craven County awarded the design, surveying, construction administration, and inspections to Appian.



## Manuals of Specifications, Standards and Design

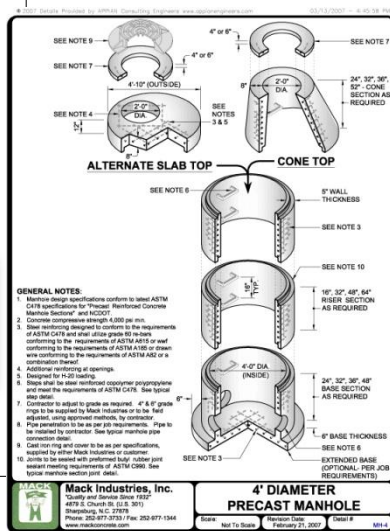
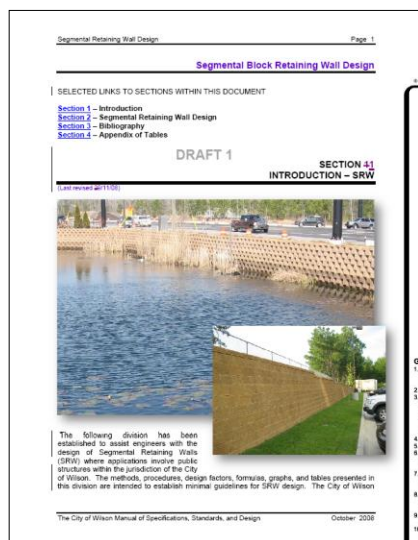
With user-friendly isometric and exploded views of each detail, City staff and Contractors know exactly what's expected... at a glance. Appian has partnered with numerous municipalities to provide the technical expertise to a public facilities manual using our Copyrighted MuniSpec® data base. We provide: standard details and specifications, design modules (streets, water, sewer, storm drainage, flexible pavement, etc.), and policies. The City-specific Manual of Specifications, Standard Details and Design is developed by former city engineers for city engineers and public works officials.

### Typical Features of Manuals we Provide:

1. User friendly
2. Contains latest ASTM, AASHTO and AWWA Specification
3. Searchable (in editable and uneditable versions), iPad friendly version
4. FREE Web Hosting of Manual
5. Isometric and Exploded views on all details
6. Details are hyperlinked to Specs
7. Table of Contents is hyperlinked to text
8. Optional update service.
9. Specifications are detailed in execution and product description
10. Pre-approved product list

"None of the other firms we talked to had a Municipal Manual that was as **comprehensive, detailed** and easily **customized to our needs**. The standard details are great."

Tom Wilson, PE  
Director of Streets  
City of Lynchburg, VA



Municipalities to whom we have provided a copyrighted Manual of Specifications, Standards and Design include:

- Craven County Stormwater
- City of Greenville
- City of Durham (UC)
- City of Wilson
- City of Jacksonville
- Town of Wake Forest
- Town of Clayton
- Franklin County Stormwater
- Orange County Water and Sewer Authority (OWASA), serving Orange County, Carrboro, Chapel Hill and UNC at Chapel Hill

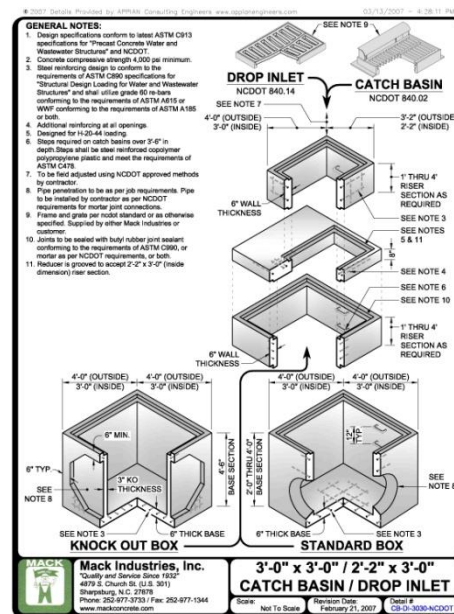


## Details for Pre-Cast Manufacturers

For the past 15 years, Appian has provided isometric and exploded view details on our construction drawings and Public Facilities Manuals; the purpose being to clearly convey the intent of the detail to those in the trenches. Two-dimensional details can often be confusing. As a result of precast manufacturers using our drawings to prepare takeoffs for the contractor, the clarity and simplicity of the details caught the eye of management. Appian was asked to develop catalogues for a number of precasters on a national basis... *order their catalogue and you'll see Appian's name in the border of every detail!*

National Precast Manufacturer Catalogues Include:

- Carolina Precast (Hanson)
- Fralo Plastics/ Roth Global (NY)
- Dellinger (NC)
- Mack Industries (NC, OH)
- NC Pipe (TX)
- Albuquerque Vault Company (NM)
- Ideal Precast (NC)



## Patents and Copyrights

Appian's extraordinary breadth and depth of expertise is demonstrated by the fact that our company president has three (3) patents with the United States Patent Office. The *"Downspout Energy Dissipater Splash Pad with Spillway"* is an industrial sized splash pad on large industrial buildings with large roof areas that has been used on several Appian projects. The *"Method of Treating Stormwater Runoff and Domestic Waste with Coal Ash"* is a "green" BMP that treats stormwater runoff and domestic sewage using recycled high carbon coal ash (research conducted and confirmed by Virginia Tech). Appian has been designing site with recycled coal ash for more than 20 years, saving clients great expense while protecting the environment. Appian also has one patent pending on a design to protect crawl space from mold decay due to crawl space high humidity. Mr. Joyner has also authored a book entitled, *"10 Successful Steps to Successfully Developing a Public Facilities Manual,"* and is in the process of completing his second book, *"Wholehouse Mold Solutions."*

"After 25 years of... construction, I can genuinely say that I have never seen a more **complete, detailed, accurate** and generally professional set of civil documents... Working with your firm has been one of those experiences I will remember for the rest of my career, and will set my future **standard for judging excellence** in civil engineering consultants. It has truly been a pleasure."

Thomas R. Gilcrest  
Director, Design Build Services  
Butler Construction

## Other

Appian is also on the [NCDOT Prequalification Register](#) of Hydraulic Design Studies and is regularly referred to for industrial rail spur design by [CSX Railroad](#).



## Current HMGP Workload

---

### Pamlico County Hurricane Irene HMGP Elevation Projects:

Appian was selected by Pamlico County for the Hurricane Irene Hazard Mitigation Grant Program for the elevation of approximately 44 residential structures in 2014. Design will be completed in the next few months, and construction of all projects will be completed by August 2016.

### Craven County FY 13-14 FMA Elevation Projects:

Craven County recently selected Appian for the Flood Mitigation Assistance (FMA) Program for the elevation of approximately 17 residential structures. Design will be completed in the next several months, and construction of all projects will be completed next year.

## Legal

---

There are no lawsuits, Federal, State or Local tax liens, or any potential claims or liabilities pending against Appian or any of the officers of our firms. *In fact, in the past 29 years of the company's existence, there has never been a lawsuit filed against our firm for any reason.*

Appian carries and maintains professional liability insurance.

## Poised to Proceed

---

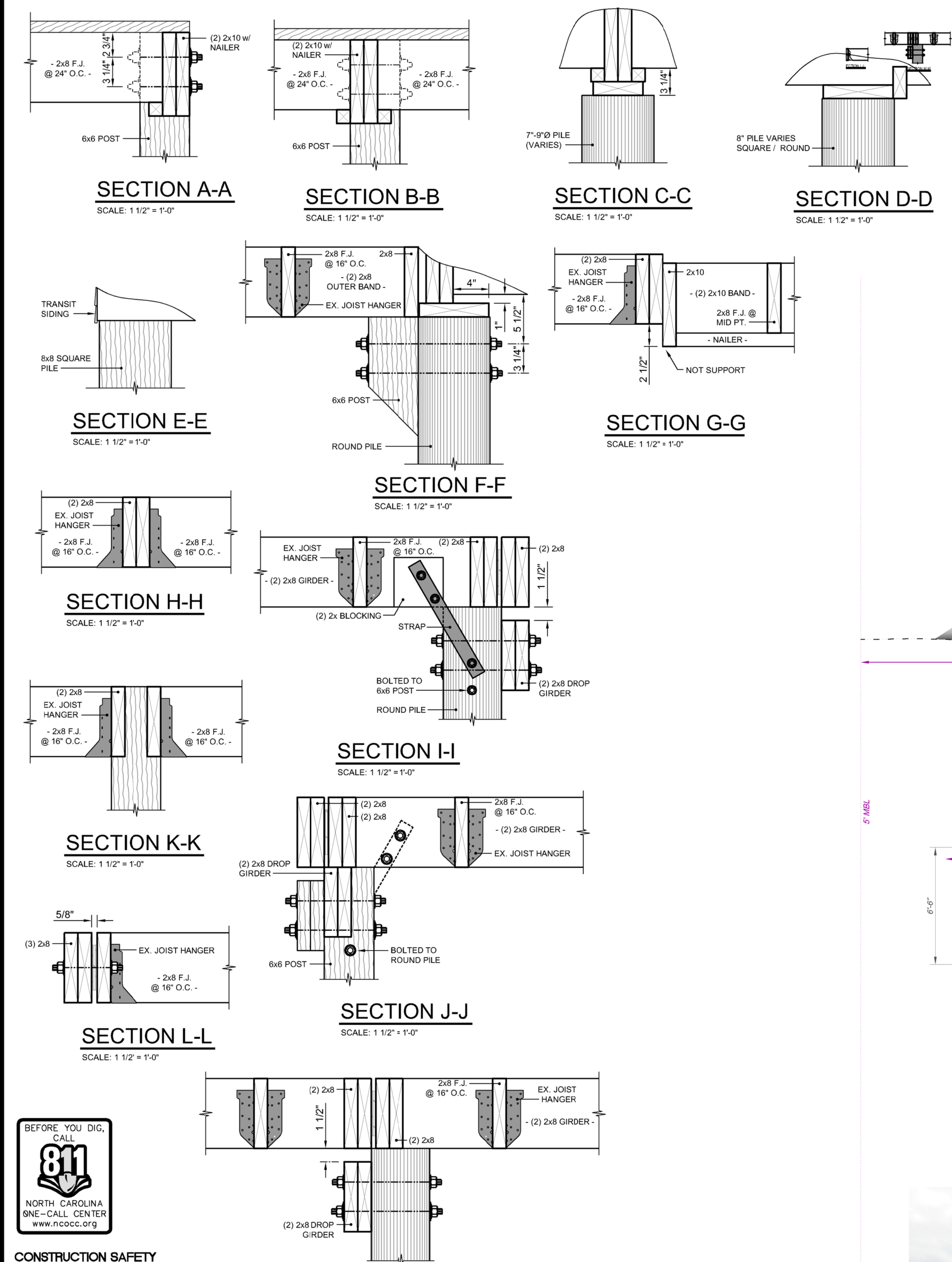
We look forward to serving Pender County on this project.

END OF RFP





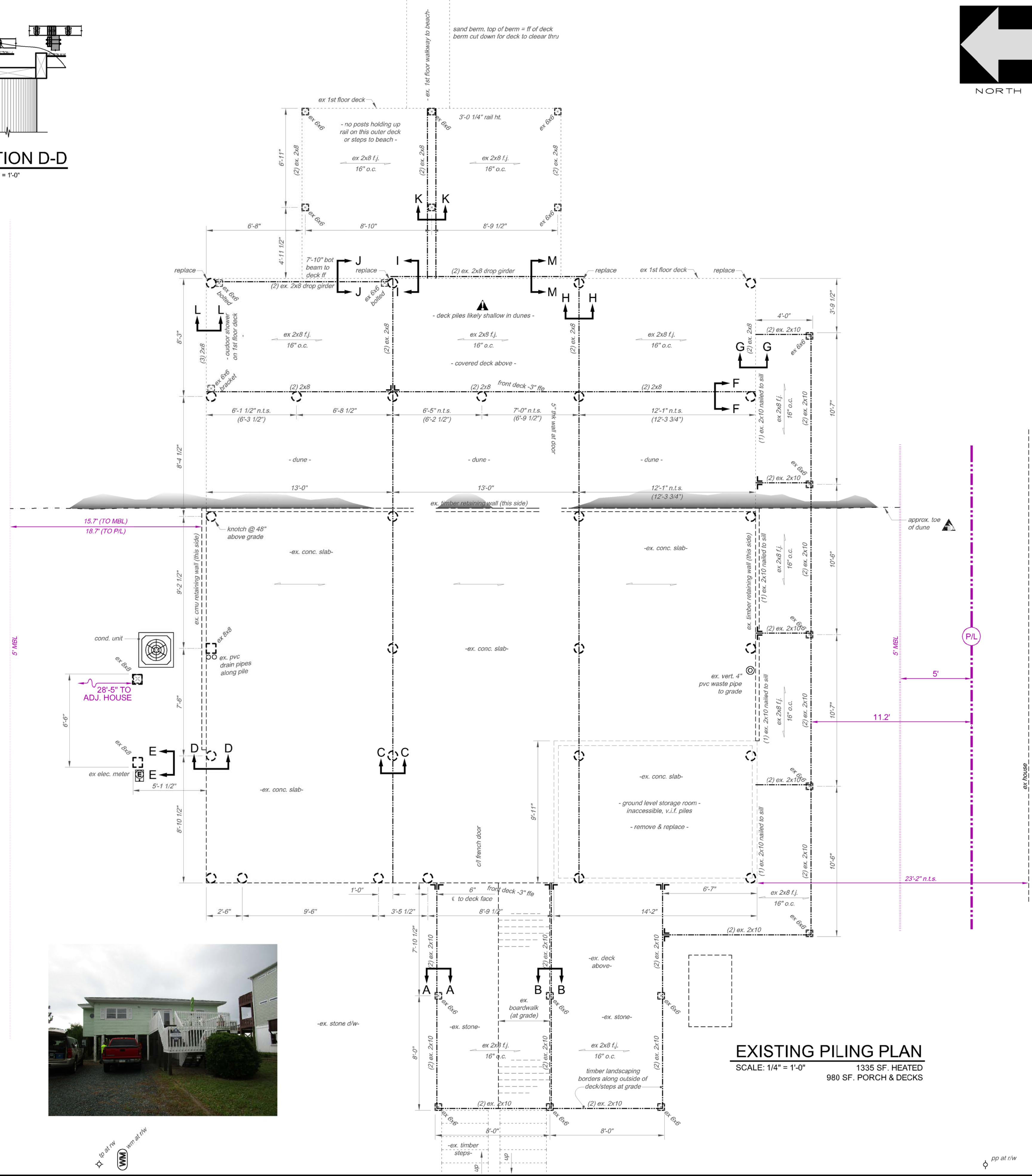
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**CONSTRUCTION SAFETY**  
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**EXISTING CONDITIONS:**  
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**EXISTING PILING PLAN**  
SCALE: 1/4" = 1'-0"  
1335 SF. HEATED  
980 SF. PORCH & DECKS

DATE	September, 2016	DESIGN	Bobby Joyner
DRAWN BY	N/A	JOSS REASON	
VER. SCALE		REVISIONS	
NO.		DATE	
BY		DESCRIPTION	



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Rocky Mount, N.C. 27804  
Phone: (252) 972-7703  
Fax: (252) 972-7638

www.applanengineers.com  
admin@applanengineers.com

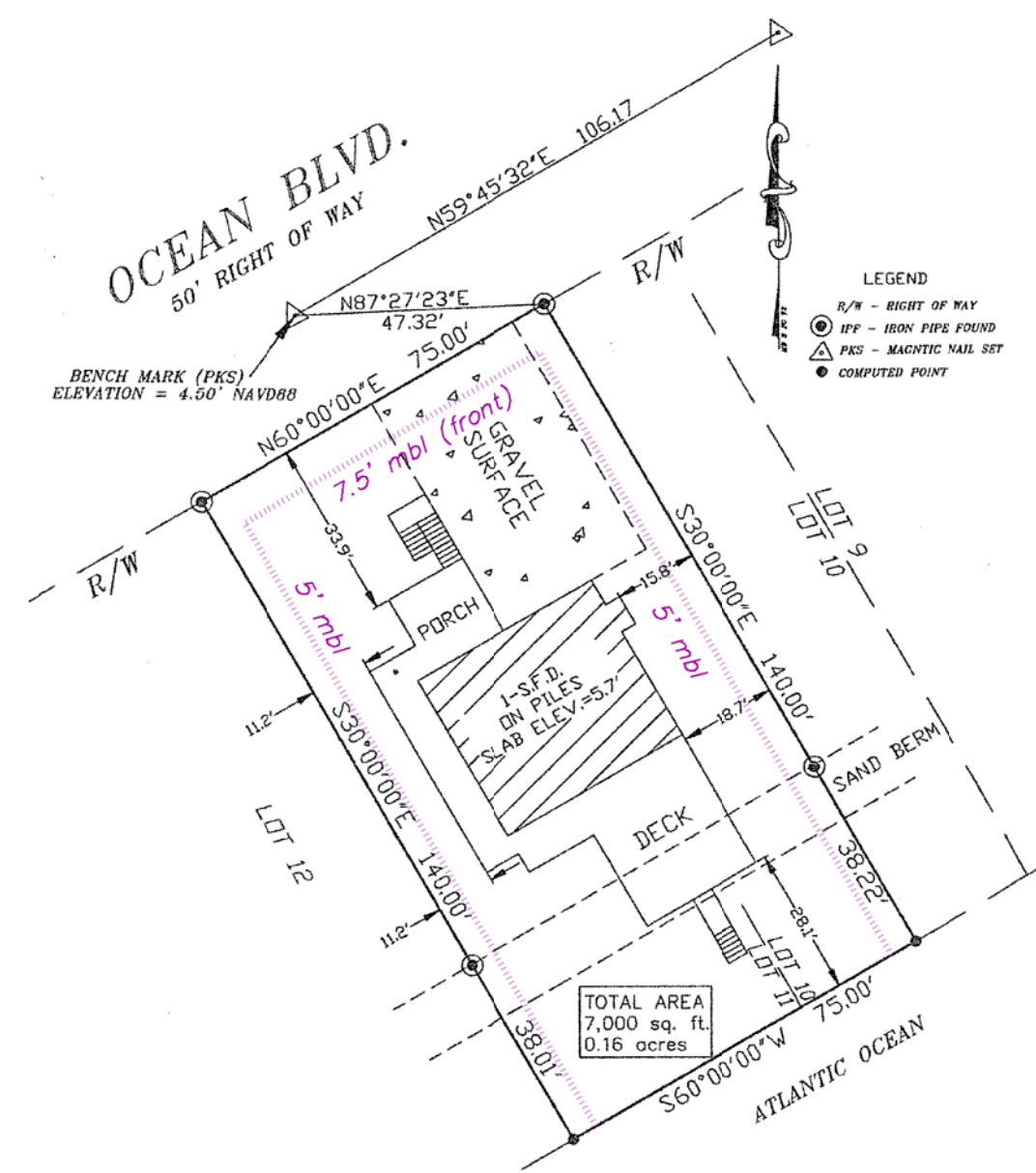
Final Drawings  
Review Purposes ONLY



**(#2TB) 1121 OCEAN BLVD.**  
**TOPSAIL BEACH, N.C. - Costic**  
**Pender County FMA**  
**FY14 Elevation Project**

16-006  
D-0000  
2BT-A

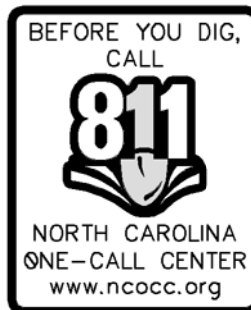




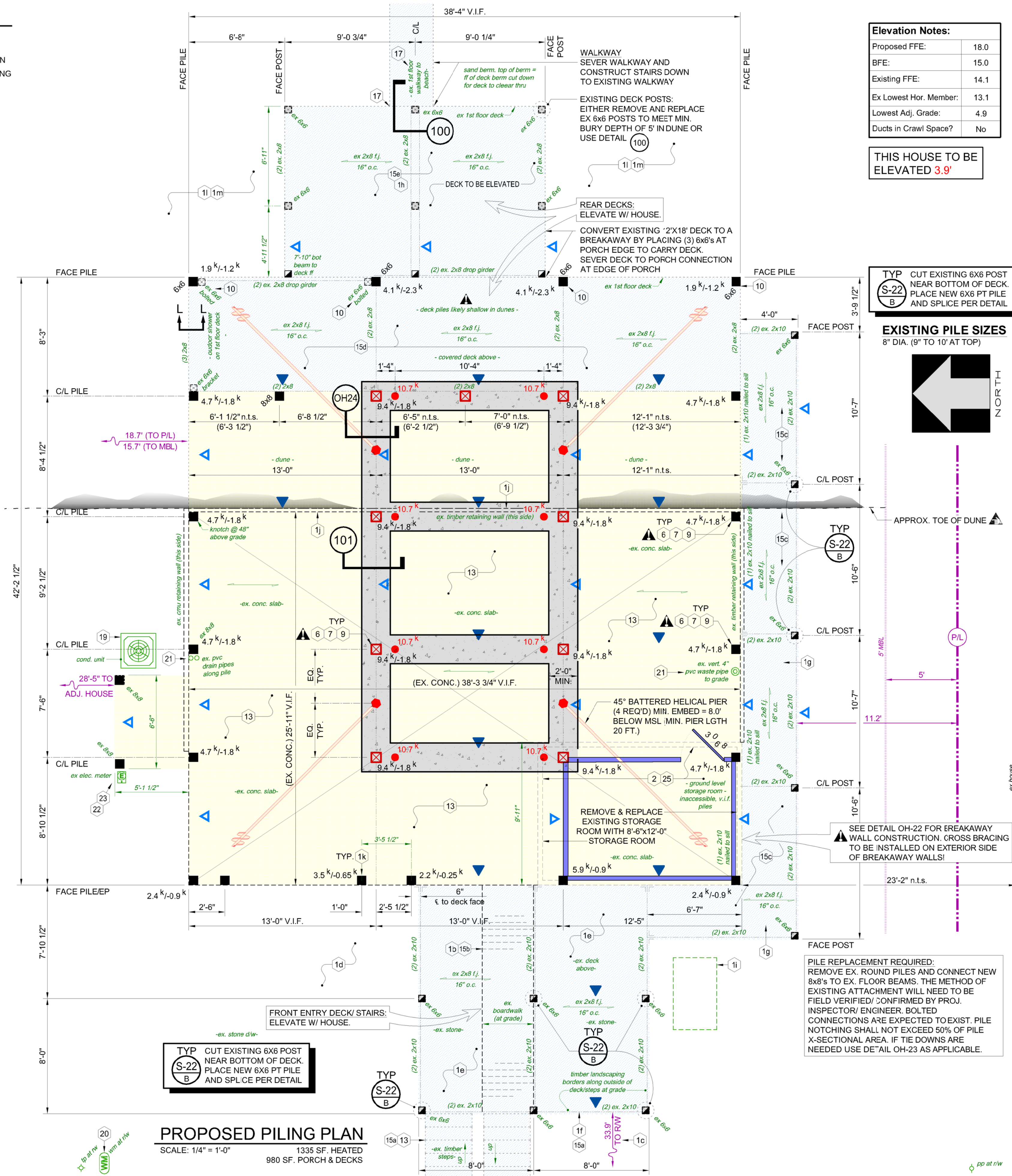
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1. THE LOWEST HABITABLE FLOOR SURFACE OF THIS DWELLING MUST BE ELEVATED TO THE TARGET FREEBOARD HEIGHT SHOWN ON DETAIL 5-12 ON SHEET D-2. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING THE LOWEST FLOOR ELEVATION IN THE HOME AND ENSURING THAT THE HOME WILL BE ELEVATED TO THE TARGET FREEBOARD HEIGHT DEPICTED IN DETAIL 5-12. IF A CONFLICT IS DISCOVERED BETWEEN THIS REQUIREMENT AND WHAT IS SHOWN IN THE SCOPE OF WORK OR DEPICTED ON THE SITE SPECIFIC DRAWINGS, DETAIL 5-12 SHALL GOVERN. VERIFY PROPOSED TARGET FFE ELEVATION WITH ENGINEER OR INSPECTOR PRIOR TO ELEVATION OF HOUSE.

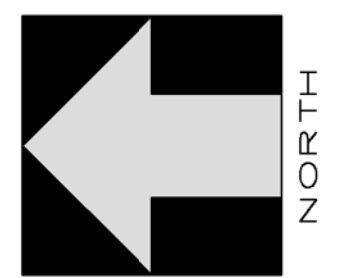


Elevation Notes:	
Proposed FFE:	18.0
BFE:	15.0
Existing FFE:	14.1
Ex Lowest Hor. Member:	13.1
Lowest Adj. Grade:	4.9
Ducts in Crawl Space?	No

THIS HOUSE TO BE  
ELEVATED 3.9'

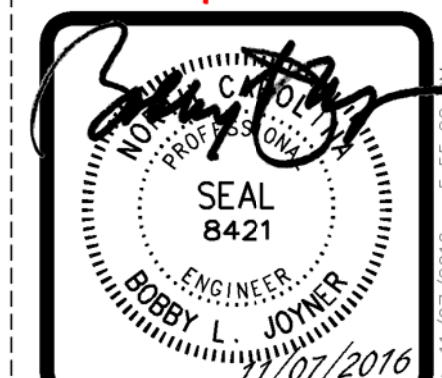
**TYP** CUT EXISTING 6X6 POST  
NEAR BOTTOM OF DECK.  
PLACE NEW 6X6 PT PILE  
AND SPLICE PER DETAIL

**EXISTING PILE SIZES**  
8" DIA. (9" TO 10' AT TOP)



— APPROX. TOE OF DUNE 

Final Drawings  
Review Purposes ONLY



**(#2TB) 1121 OCEAN BLVD.  
TOPSAIL BEACH, N.C. - Costic  
Pender County FMA  
FY14 Elevation Project**

16-009

D-0000

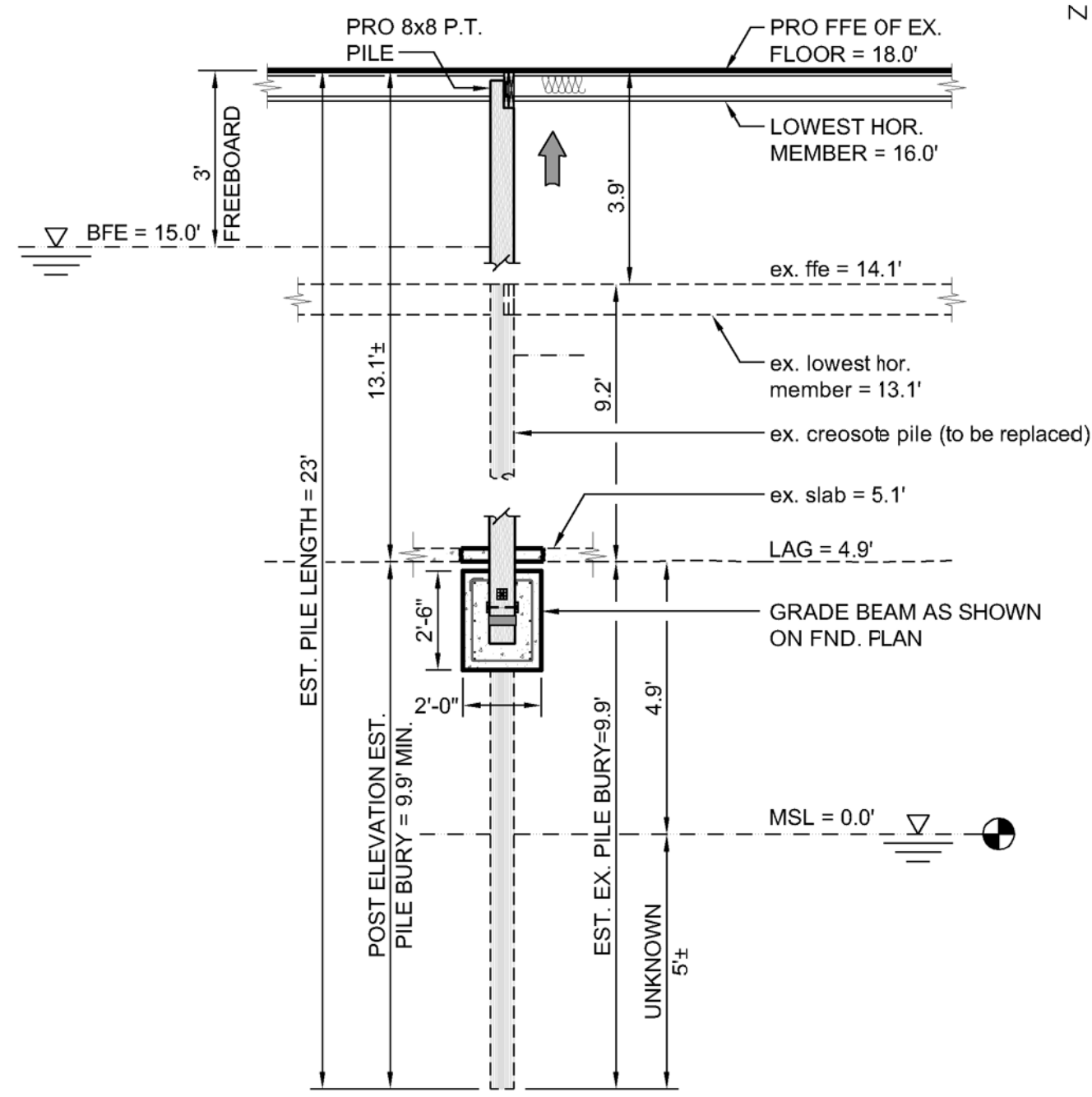
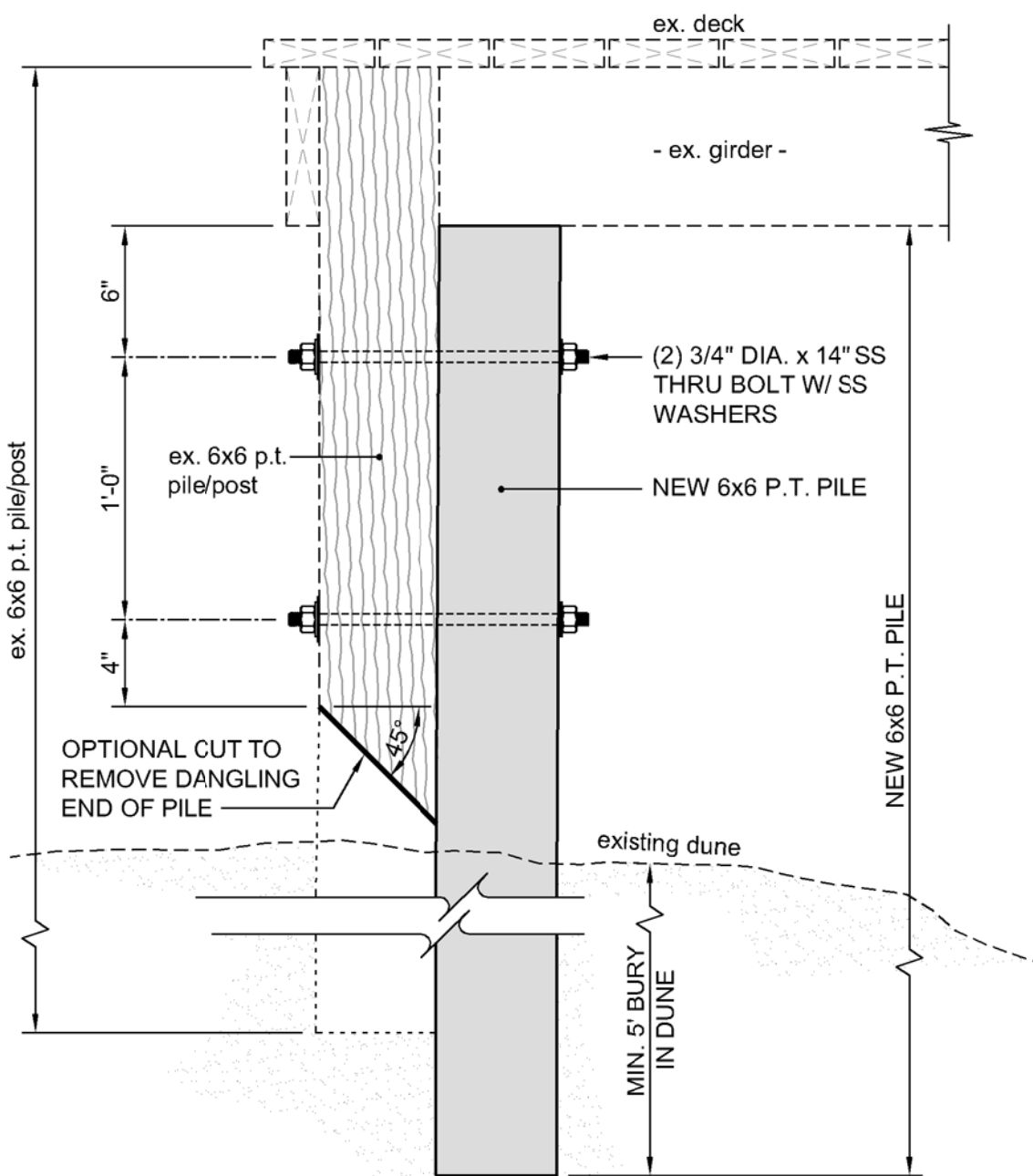
**2TB-B**



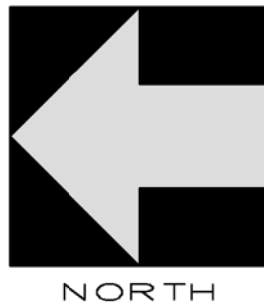
**#2TB, Richard & Johanna Costic, 1121 Ocean Blvd., Topsail Beach, NC**  
(Revised 10/11/16)**SITE NOTES:**

1. Site:
  - a. With the exception of a dune across the front, the lot is flat with a slight slope towards the Ocean Blvd.
  - b. A pressure treated timber boardwalk extends from the concrete slab below the house to the terminal end of a timber stairs serving the upper front deck. The walkway may interfere with construction/placement of helical piers at the piles. Remove as necessary to place piles. Once house has been elevated, replace walkway.
  - c. There is a large shrub in front yard north of the stairway serving the upper deck. If it interferes with construction, remove as needed.
  - d. A 30-foot wide driveway extends from Ocean Blvd to the front of the house. The driveway consists of coarse stone bordered by a pressure treated timber flush curb. If rutted or damaged excessively, add coarse stone as needed and regrade.
  - e. To the west of the underdeck boardwalk, the area below the deck, coarse stone has been placed over the lawn surface and is contained by a pressure treated timber border. Remove as necessary to place piles. Once house has been elevated, replace stone and grade level.
  - f. There is a 16'x16' pressure treated timber deck on the street side of the house. Connecting to this deck, a 4-foot wide timber walkway extends west to the corner of the house and then south along the west side of the house to the front (ocean side) porch where it terminates. The 16'x16' deck and 4' wide walk is to be elevated with house.
  - g. There is an 8'-4" wide by 38'-4" deck/porch on the front of the house. This deck/porch is also to be elevated.
  - h. A 12' x 18' pressure treated deck is attached to the ocean side porch. A walkway over the dune connects to the front of the deck. The deck is to be elevated.
  - i. A horseshoe pit is located due west of the roadside deck. If necessary, remove for construction but store materials at a location on lot designated by owner.
  - j. Beneath the house, a short pressure treated timber sand bulkhead with a timber lattice fence runs in a N-S direction along and in front of the 4th set of piles. Remove bulkhead and fence as needed to permit pier placement. Relocate material to a location on site designated by owner. Owner to replace short bulkhead and fence.
  - k. The exposed portion of many of the piles is painted white. Contractor is not required to paint or repaint any of the piles after elevation.
  - l. Contractor is to minimize damage to existing dune vegetation. Provide sand fencing and seeding as necessary to restore dune stabilization damaged vegetation in accordance with the applicable provisions of AEC 115A NCAC 07H. 0374 and the requirements of the Town of Topsail Beach. Conform to the requirements of the CAMA permit issued by Coastal Management and the Town of Topsail Beach.
  - m. Setbacks/Work Area:
    - i. There is minimal room along the twoside yards for equipment access. See site map.
    - ii. The lot is zoned R-1.
    - iii. The front setback is 7.5 feet. The side yard setback is 5' and the rear setback is limited by the static vegetation line (CAMA). Do not encroach into this zone without a permit!
2. Ground Level Storage Room:
  - a. There is a 10'x14' ground level storage room with a personnel door located at the front right corner of the house at ground level. The room has one octagonal window on the front and lapboard siding. On the day of our visit, the room was locked and inaccessible.
  - b. Remove storage room and dispose of material. If salvageable, retain door and replace in new room. Otherwise, provide a new door.
  - c. Owner to empty room of contents prior to demolition of storage room.
  - d. After the house has been elevated, construct a new 8'-6"x12' storage room full height. Walls are to be constructed as breakaway walls per detail OH15 with the applicable flood vents required to meet FEMA Technical Bulletin 1, Openings in Foundation Walls and Walls of Enclosures (2008 or latest revision).
3. House is located in a V zone. Flooding is primarily due to storm surge.
4. Asbestos report by Atlantic Shores Environmental Services, Ltd, indicates the presence of transite siding on this house. With the method of elevation proposed, other than improving the tie-down straps at the pile to girder connection, the siding should be disturbed very little. Coordinate with a licensed abatement contractor.
5. No inspection was performed to our knowledge by a licensed pest control specialist. However, no visible evidence of termite infestation (active or inactive) was found at the time of our inspection in the accessible areas.
6. The house rests on 9" average diameter crosote piles.
  - a. The piles are apt to be shallow, brittle, and have some degradation such that they cannot or should continue to be used. Pile decay is likely to be found where some piles are currently covered with concrete. Furthermore, the house is to be elevated 3.9 feet which renders the pilings an unacceptable candidate for lifting in place.
  - b. No cross bracing exists on the existing piles. Once the new piles have been placed, place new cross bracing as shown on the plans. When applied, the new cross bracing should provide the necessary lateral bracing of the structure for a 130 mph wind load.
  - c. The perimeter round pilings are proposed to be replaced with 6x6 pressure treated piles.
    - i. Pile replacement along the perimeter will require partial siding and corner board removal and replacement to connect the new piles to the existing band sill. Since the siding is transite, a contract licensed/certified in asbestos removal must be employed to remove and dispose of the transite siding. Replace with siding that has a similar exposure and pattern as that that exists.
    - ii. Some of the plywood belly board will need to be partially removed for access to the bolted connections. Remove as needed. When replaced, replace using stainless steel nails or screws.
  - d. The interior round piles are also to be replaced but cut off at the bottom of a proposed reinforced concrete grade beam with the upper pile being new 6x6 pressure treated piles.
7. Since all of the pile-to-beam connections for the house are covered by a plywood belly board, we could not determine the type or adequacy of the beam to pile connections. This house is proposed to be elevated 3.9 feet. With pilings proposed to be replaced, the connections will need to be verified as to their adequacy.
  - a. From what we did observe, the pilings appear to be notched and bolted to the top of the existing round pilings. Where plated connections exist, replace corroded plates and/or fasteners with new connectors and bolts. See "bolt spacing/strap sizing guide" detail in the plans.
  - b. Where a connection is found to be either corroded or appears to be deficient by either the inspector or Engineer, apply the necessary connector repair. See detail OH23 as well as the "bolt spacing/strap sizing guide" detail in the plans.
  - c. For budget purposes, assume all pile connections are insufficient and will need to be replaced and/or re-bolted with new bolts.
  - d. Note the special provisions in the details as to the type material required for tie-downs. Unless otherwise permitted (see exception in the details), both thin gauge (less than 1/8" thick) and metal plates 1/8" and larger as well as fasteners are to be 316L stainless steel.
8. The existing 6x6 deck and porch posts are to be replaced; being sliced just below the bottom of the deck using detail S-22 as applicable.
9. Many of the pile to beam connections have either severely corroded or are missing altogether. Details have been supplied in the plan set for retrofitting tie-downs to the pile-to-beam joints. See detail OH23. Note the special provisions in the details as to the type material required. Unless otherwise permitted (see exception in the details), both thin gauge (less than 1/8" thick) and metal plates 1/8" and larger as well as fasteners are to be 316L stainless steel. Either the Engineer or the project inspector will designate which piles require a retrofit tie down and which one. For budget purposes, assume all piles will need new tie downs.
10. Some of the pilings, particularly where the pilings support the ocean side of the porch, are severely decayed beyond reuse. In addition, due to the location of the pilings/posts being on top of the dune, some of the pilings/posts supporting the ocean side deck are possibly shallow and, once the house is elevated, may have little to no bury or support. If permitted by the CAMA permit, replace pilings and install new sister 6x6 pilings where shown on the foundation plan and details. See detail 100 and detail S-22, as applicable.
11. Experience has taught that the bury depth on older homes with crosote pilings is suspect and very often buried too shallow by current code and industry standards. Furthermore old crosote piles tend to be brittle and splinter easily so partially embedding them in a concrete grade beam to both effect a shallow bury and to reduce the slenderness ratio was not a viable option. As such, lifting the existing piles in place was not an option; opting instead for replacement as shown on the plans.
12. It is probable that some of the pilings may be partially decayed where they have been covered, near grade, with concrete.
13. The grade beneath the structure has a 26' wide x 38'-4" long slab on grade. Saw cut at pilings as needed to permit placement of piles and the grade beams. Once the house has been lifted backfill and compact fill and then restore concrete slab.
14. No evidence of an UGST was observed. However, contractor is to verify the absence of an UGST before moving on site.
15. Provide conventionally framed pressure treated timber decks or porches (if applicable), stairs, handrails, and pickets per the NC Residential Building Code, HMGP requirements at each of the following locations. Coordinate location, orientation, and configuration with inspector and owner.
  - a. 16'x16' Deck on Street Side:
    - i. Deck is to be elevated with the house.
    - ii. Remove existing steps and landing.
    - iii. Once the house has been elevated, replace steps and landing with a new set of pressure treated timber steps with handrails and pickets with an intermediate turning landing and cross bracing as required/shown on the foundation plan and on sheets P-1 and P-2. Coordinate layout with owner and project inspector to ensure that the new steps terminate at the end of the boardwalk (as before) located below the deck.
    - iv. See foundation plan and detail S-22 for applicable method of splicing in new 6x6 posts/pilings.
    - v. Add cross bracing to deck where noted on the plans.
    - vi. Painting of stairs and landing is not required. Painting to be by owner if they so desire.

- b. At Grade Timber Board Walk Below Street Side Deck:
  - i. Remove all or portions of the at grade timber boardwalk as needed for construction.
  - ii. After the house has been elevated, replace walkway to its original width and alignment.
- c. 4' Perimeter Walk Connecting Street Side Deck to Oceanside Porch:
  - i. The 4' walkway is to be elevated.
  - ii. See foundation plan and detail S-22 for applicable method of splicing in new 6x6 posts/pilings.
  - iii. Add cross bracing to walkway where noted on the plans.
- d. 8'-4" x 38'-4" Deck/Porch (Oceanside):
  - i. Deck/porch is to be elevated with the house.
  - ii. The Oceanside pilings supporting the porch are degraded and in need of replacing. Replace where shown on the foundation plan. See detail 100 or S-22 as applicable.
    - iii. There is an existing outside shower enclosure at the north end of the porch. See water notes regarding plumbing.
    - iv. Ensure that the existing porch posts are strapped to the new pilings with a minimum of 3/4" thick stainless steel strap; bolted to both the existing porch and the new PT piles. Advise owner of the need to verify that his porch beams are strapped or otherwise connected to his existing porch posts.
    - v. Add cross bracing to deck where noted on the plans.
  - iii. 12' x 18' open deck (attached to Oceanside Porch)
    - i. The deck is to be elevated with the house. However, where the deck connects to the front deck, the attachment point of the deck framing is to be modified to render it as "Breakaway" by making the deck self-supporting and removing the double girder now supporting the house side of the open deck. See foundation plans which call for placement of new 6x6 pilings.
    - ii. Separate the walkway connecting the open deck to and across the ocean. Leave walkway in place.
    - iii. Add a new set of pressure treated stairs with handrails and pickets from the elevated open deck down to the existing walkway as required/shown on the foundation plan and on sheets P-1 and P-2. Coordinate layout with owner and project inspector.
    - iv. See foundation plan and detail S-22 for applicable method of splicing in new 6x6 posts/pilings.
    - v. Add cross bracing to deck where noted on the plans.
16. The setbacks are shown on the plans. The new street side stairs and landing should be well within the front setback. However, if necessary, according to Town officials, the stairs may encroach the front setback by as much as 1/4 the setback (i.e. 3.75 feet).
17. The proposed rear steps, connecting the elevated 12'x18' open deck to the walkway to the ocean, is subject to a CAMA minor permit ruling. For budgeting purposes, assume the steps can be added as long as the step structure stays within the shadow of the existing walkway.
18. All new access construction is to meet the applicable provisions of chapter 46 "Coastal and Flood Plain Construction Standards" and Appendix V "Wood Decks."
19. HVAC:
  - a. There is a condensing unit resting on a timber platform located on the north side of the house just east of the Utility Wing.
  - b. Temporarily disconnect unit and store and protect until house has been elevated and the unit is ready to be reconnected.
  - c. Replace the platform with a new pressure treated timber framed platform set to BFE + 1 foot. Once house has been raised, Reconnect unit and restore operation.
20. Water:
  - a. The house is served by public water. A plastic meter box (damaged) is located just inside the north edge of the stone drive. Visibly mark box and avoid damaging box/service any further. If damaged, replace/restore service.
  - b. An exterior shower is located on the north end of the ocean side porch. Shower is enclosed. Disconnect plumbing if it interferes with elevation process and reconnect after house has been elevated. All plumbing to conform to the requirements of the NC Plumbing Code.
21. Sewer:
  - a. House is on public sewer. The line appears to exit the south end of the house and extends towards the street, running somewhat parallel to the south side property line. Field verify service line tank location. Cordon off to protect from damage by equipment. If damaged, repair and restore to operation to satisfaction of Topsail Island Inspection Services.
  - b. A 4" PVC waste line drops down from the floor to grade at the south end of the house just east of the storage building. Disconnect plumbing and reconnect after house has been elevated. All plumbing to conform to the requirements of the NC Plumbing Code.
22. Electrical:
  - a. There is an underground power service connecting to the meter base located at the northeast corner of the Utility Room wing. Prior to elevation, have service located and protect from damage during construction. Disconnect service prior to elevation, raise such that bottom of meter panel box is flush with bottom of floor joists, and then re-establish service once house has been elevated. Service to meet the NC State Electrical Code. Provide access to meter as required by local electric service provider. Coordinate with project inspector and owner.
  - b. A spot light is located on the front of the street-side deck. If the service is accidentally cut during the course of elevation, restore once the house has been elevated.
23. Telephone:
  - a. A telephone service box is connected to the same pile as is the electric meter base. Temporarily disconnect service and have service provider reconnect after the house is elevated.
  - b. There is a telephone pedestal located north of the driveway near the street. Visibly cordon off pedestal and protect pedestal during construction.
24. Contractor shall be responsible for verifying all dimensions prior to pile placement. Dimensions and floor plan shown was developed from field made by measurements by Appian Consulting Engineers. These dimensions must be verified and altered as necessary for the proper placement of proposed framing elements beneath the existing structure. Some adjustments to fit the actual structure footprint will be required.
25. Provide flood vents on new storage room per General Notes Sections 5.0 and 8.0. See Detail S-21.

**101 ELEVATION DIAGRAM**  
SCALE: N.T.S.**100 METHOD OF EXTENDING 6x6 INTO DUNE W/O REMOVING ENTIRE DECK**  
SCALE: 1 1/2" = 1'-0"

\*SEE FND PLAN FOR CROSS-BRACING LOCATIONS



PROJ. SCALE:	DATE:	DESIGN:	BY:	REASON:	DATE:
N/A	September, 2016	Bobby Joyner	JOH	-	-
VER. SCALE:	DRAWN BY:	CHG:	NO. Δ:	DATE:	BY:
N/A	JOH	CHG	NO. Δ:	DATE:	BY:
REVISIONS					
DESCRIPTION:					

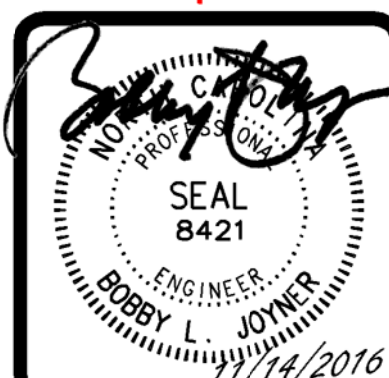


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admin@appianengineers.com

Final Drawings  
Review Purposes ONLY



**(#2TB) 1121 OCEAN BLVD.  
TOPSAIL BEACH, N.C. - Costic  
Pender County FMA  
FY14 Elevation Project**

16-006

D-0000

**2TB-C****CONSTRUCTION SAFETY**

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Holland Consulting Planners, Inc.  
Final Bid Tabulation Form

Project: <u>Pender Co. FY14 FMA</u>		Bid Opening Date <u>11/22/2016</u>			
Case File #	Occupant/Address	Actual Bid (Tabulated)	Contractor	Recommended Award (X)	Comments
1TB	Barger/1802 Ocean Blvd/Topsail Beach	\$116,282.00	Goose Creek Const.		Next low bidder * (see notes below)
		\$160,483.00	IMEC		
		\$148,000.00	Holland Const.	X	
2TB	Costic/1121 Ocean Blvd/Topsail Beach	\$85,720.00	Goose Creek Const.	X	Low bidder
		\$211,500.00	IMEC		
		\$120,000.00	Holland Const.		
3TB	Thexton/1117 Ocean Blvd/Topsail Beach	\$89,740.00	Goose Creek Const.	X	Low bidder
		\$185,650.00	IMEC		
		\$120,000.00	Holland Const.		
4TB	Hull/1105 Ocean Blvd/Topsail Beach	\$116,076.00	Goose Creek Const.	X	Low bidder
		\$198,100.00	IMEC		
		\$144,000.00	Holland Const.		





Bid Tab  
for Elevation

### REQUEST FOR BOARD ACTION

**DATE OF MEETING:** December 5, 2016

**REQUESTED BY:** Kyle M. Breuer, Director, Planning and Community Development

**SHORT TITLE:** Resolution to Approve Elevation Contract Awards for Structures included the FY14 Flood Mitigation Assistance (FMA) Grant Project.

**BACKGROUND:** The FY14 FMA Elevation Project involves the elevation of (4) four Severe Repetitive Loss (SRL) structures located in Topsail Beach that are currently insured under the National Flood Insurance Program (NFIP).

The program proposes to elevate and retrofit (4) existing structures in place in order to ensure compliance with current FEMA and Local (Town of Topsail Beach) floodplain requirements. Once complete a deed restriction on the property will require that flood insurance be maintained in perpetuity.

A Mandatory Pre-Bid meeting was advertised and held on November 10, 2016. (4) General Contractors and (2) elevation subcontractors were represented at the meeting. Several items were discussed and bid packages were released to those who attended.

A copy of the advertisement, sign-in sheet and meeting agenda are attached.

The Bid Opening was held on Tuesday, November 22<sup>nd</sup> at 11:00 AM. (3) Bids were received for each unit. The award recommendations are as follows:

<u>Address</u>	<u>Contractor</u>	<u>Amount</u>	<u>Notes</u>
* 1121 Ocean Blvd, Topsail Beach	Goose Creek Construction	\$85,720.00	Low Bid
* 1117 Ocean Blvd, Topsail Beach	Goose Creek Construction	\$89,740.00	Low Bid
1105 Ocean Blvd, Topsail Beach	Goose Creek Construction	\$116,076.00	Low Bid
1802 Ocean Blvd, Topsail Beach	Holland Construction	\$148,000.00	2 <sup>nd</sup> Low Bid*

\* See notes on final bid tab (attached)

**SPECIFIC ACTION REQUESTED:** To consider a resolution approving of the Elevation Contract Awards as recommended by Administrative Consultant.



## RESOLUTION

NOW, THEREFORE BE IT RESOLVED by the Pender County Board of Commissioners that:

the Board hereby authorizes the elevation contract awards to the contractors approved by the Pender County Board of Commissioners. All units are included in the FY14 FMA (Elevation) grant. The Chairman/County Manager is authorized to execute any/all documents necessary to implement this resolution.

## AMENDMENTS:

MOVED Piepmeyer SECONDED Williams

APPROVED ✓ DENIED \_\_\_\_\_ UNANIMOUS

YEA VOTES: Brown ✓ McCoy \_\_\_\_\_ Newton ✓ Piepmeyer ✓ Williams ✓

George R. Brown, Jr.  
George R. Brown, Jr. 12/5/2016

Melissa Lang  
ATTEST 12/5/2016





## AFFIDAVIT

Reference: Pender County Flood Mitigation Assistance Program  
 Elevation of Properties at 1117 and 1121 Ocean Boulevard, Topsail Beach, NC  
 Variance Request for Required FLSNV Setback

Ron Ackers DBA Goose Creek Construction being first duly sworn, under oath, and states that the following information is within his personal knowledge and belief:

Based on my experience with elevating homes in coastal areas, I estimate that the additional turnkey cost to relocate the existing structures versus elevating in place would be approximately \$20,000.00 per property.

  
 Ron Akers DBA Goose Creek Construction


P.O. Box 1654  
 Street

Kitty Hawk, NC 27949  
 City, State, Zip

STATE OF NORTH CAROLINA

COUNTY OF Dare

Subscribed and sworn to before me this 19 day of January, 2017, by Ron Akers.

  
 Notary Public

My Commission Expires: 2/24/2018





# Hazard Mitigation Assistance Program Digest

2015



**FEMA**



## Introduction

FEMA offers three Hazard Mitigation Assistance (HMA) grant programs – the **Hazard Mitigation Grant Program (HGMP)**, the **Pre-Disaster Mitigation (PDM)** program and the **Flood Mitigation Assistance (FMA)** program – to help States, Territories, Indian Tribal governments, local communities, private non-profits and businesses implement cost-effective, long-term mitigation measures for all natural hazards. Supporting this endeavor is most effective when all stakeholders share in a mutual understanding of program purpose, concepts, terminology and procedures. As part of this effort, FEMA has produced this digest of HMA program operational terms and references. The HMA Program Digest is intended to be an easy-to-read, easy-to use, brief summary of the basic HMA program elements.

While the HMA Program Digest is primarily intended for those unfamiliar with the HMA programs, it also may serve as a reference for employees, applicants, and other stakeholders with many years of experience with the programs. Because the digest is not exhaustive, either in topics or in detail, information should be verified with the **FEMA HMA Unified Program Guidance** and FEMA HMA program officials before becoming the basis for decision making.

The HMA Program Digest is available at <http://www.fema.gov/hazard-mitigation-assistance>. Other key sources of HMA program information are the following:

- ♦ [HMA Unified Program Guidance and Addendum to HMA Unified Program Guidance;](#)
- ♦ [44 Code of Federal Regulations;](#)
- ♦ [The Robert T. Stafford Disaster Relief and Emergency Assistance Act, As Amended, 42 U.S.C. 5121 et seq.;](#)
- ♦ [The National Flood Insurance Act of 1968, As Amended, 42 U.S.C. 4001 et seq.](#)



## Substantial Improvement

**Substantial Improvement** means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “substantial damage” regardless of the actual repair work performed. The term does not, however, include either:

- ♦ Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions, or
- ♦ Any alteration of a “historic structure,” provided that the alteration will not preclude the structure’s continued designation as a “historic structure”.

HMGP funds cannot be used to fund new construction or substantial improvement in a floodway or new construction in a **coastal high hazard zone**. However, the costs to elevate or floodproof a damaged structure or facility are not included in determining whether the substantial improvement threshold is triggered. For additional information see 44 C.F.R. § 9.11(d), Minimization Standards.

Applicable HMA program(s): FMA, HMGP, PDM.

References: 44 C.F.R. § 9.11(d) and § 59.1; *Hazard Mitigation Assistance Guidance (February 27, 2015)*, E.6.1 (Floodplain Management and the Protection of Wetlands), page 48.





# Hazard Mitigation Assistance Guidance

Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance Program

*February 27, 2015*



**FEMA**

**Federal Emergency Management Agency**  
**Department of Homeland Security**  
500 C Street, S.W.  
Washington, DC 20472



award eligibility, in addition to any conditions that may be imposed on the award during the EHP review compliance process.

FEMA reviews the completeness of the responses to the questions in the EHP review section of the project subapplication and any supporting documentation. HMA project subapplications must include the required information for each property identified in the subapplication. For example, information needs may include detailed scopes of work, clearly labeled maps, photos of buildings, ages of all buildings and structures, and copies of any coordination letters with other agencies. FEMA utilizes this information to complete and document the EHP compliance review process. A lack of information may delay the identification of outstanding EHP compliance requirements and project implementation. Also, failing to provide the required information by the application deadline may prohibit FEMA from making an award or subaward.

FEMA has developed guidance to assist in completing the EHP information section of a project subapplication, including an eLearning Tool, online training, and information about historic preservation. For links to these EHP resources, see Part IX, C.5. Technical assistance is also available via the toll-free Project Technical Assistance for Environmental & Historic Preservation Helpline (866) 222-3580 or via e-mail at [ehhelpline@fema.dhs.gov](mailto:ehhelpline@fema.dhs.gov).

### E.6.1 Floodplain Management and Protection of Wetlands

As noted in Part III, E.6, all activities funded by HMA programs must conform to 44 CFR Part 9. Proposed actions triggering the 8-Step Decision Making Process for Floodplain Management and Wetlands Considerations (see HMA Job Aid, *8-Step Decision Making Process for Floodplain Management and Wetlands Considerations*) will only be eligible for a grant if the Applicant or subapplicant demonstrates that there is no practicable alternative in accordance with 44 CFR Sections 9.9 through 9.11. HMA funds cannot be used to fund new construction or Substantial Improvements in a floodway or new construction in a Coastal High Hazard Area unless it constitutes a functionally dependent use or facilitates an open space use. However, the costs to elevate or floodproof a damaged structure or facility are not included in determining whether the Substantial Improvement threshold is triggered.

For additional information see 44 CFR Section 9.11(d).

#### DECISION-MAKING FOR CRITICAL ACTION VS. CRITICAL FACILITY

*Critical action* is an action for which even a slight chance of flooding poses too great of a risk. It may or may not be associated with a critical facility. FEMA is responsible for determining if an action is a critical action. If a critical action is identified, FEMA must evaluate potential harm to the action from the 500-year flood.

*Critical facilities* are structures and institutions that are deemed by the local community and other jurisdictions as critical to the continuity of the community before, during, and after an event. Although the affected jurisdiction has the primary responsibility for determining what structures and institutions are critical facilities, FEMA reserves the right to make a final determination as needed to support the review and approval of an HMA project application.



# **UNIT 8:**

## **SUBSTANTIAL IMPROVEMENT AND**

## **SUBSTANTIAL DAMAGE**

### In this unit

This unit covers:

- ◆ The substantial improvement rule – how to regulate major additions and other improvements to buildings in the floodplain.
- ◆ The substantial damage rule – how to regulate reconstruction and repairs to buildings that have been severely damaged.
- ◆ Exceptions to the basic rule for some special cases.



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## INTRODUCTION

In previous units we focused on the rules and regulations that prevent or reduce damage from floods to new buildings. But what happens when the owner wishes to make an improvement, such as an addition, to an existing building? What if a building is damaged by a fire, flood or other cause?

***Basic rule: If the cost of improvements or the cost to repair the damage exceeds 50 percent of the market value of the building, it must be brought up to current floodplain management standards.***

That means an existing building must meet the requirements for new construction.

People who own existing buildings that are being substantially improved will be required to make a major investment in them in order to bring them into compliance with the law. They will not be happy. If the buildings have just been damaged, they will be financially strapped and your elected officials will want to help them, not make life harder for them.

For these reasons, it is easy to see that this basic rule can be difficult to administer. It is also the one time when your regulatory program can reduce flood damage to existing buildings. That's why this course devotes this unit to administering the substantial improvements and substantial damage regulations.

*In this course, the term "building" is the same as the term "structure" in the NFIP regulations. Your ordinance may use either term. The terms are reviewed in more detail in Unit 5, Section E.*



## A. SUBSTANTIAL IMPROVEMENT

**44 CFR 59.1. Definitions:** “Substantial improvement” means any reconstruction, rehabilitation, addition or other improvement to a structure, the total cost of which equals or exceeds 50 percent of the market value of the structure before the start of construction of the improvement.

This section addresses many clarifications and a few exceptions related to substantial improvements.

### PROJECTS AFFECTED

All building improvement projects worthy of a permit must be considered. These include:

- ◆ Remodeling projects.
- ◆ Rehabilitation projects.
- ◆ Building additions.
- ◆ Repair and reconstruction projects (these are addressed in more detail in Section B on substantial damage)

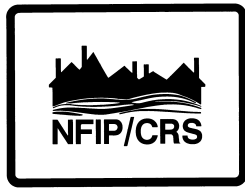
If your community does not require permits for, say, reroofing, minor maintenance or projects under a certain dollar amount, then such projects are not subject to the substantial improvement requirements. However, if you have a larger project that includes reroofing, etc., then it must include the entire cost of the project.

One problem you may face is a builder trying to sneak through a loophole by applying for a permit for only part of the job and then later applying for another permit to finish the work. If both applications are together worth more than 50% of the value of the building, the combined project should be considered a substantial improvement and subject to the rules.

FEMA requires that the entire improvement project be counted as one. In order to help you enforce this, you may want to count all applications submitted over, say, one year as one project. Check with your attorney on whether your ordinance clearly gives you the authority to do this and be sure to spell it out in the permit papers given to the applicant.

Some communities require that improvements be calculated cumulatively over several years. All improvement and repair projects undertaken over a period of five years, 10 years or the life of the structure are added up. When they total 50 percent, the building must be brought into compliance as if it were new construction.





The Community Rating System credits keeping track of improvements to enforce a cumulative substantial improvement requirement. It also credits using a lower threshold than 50 percent. These credits are found under Activity 430, Section 431.c and d in the *CRS Coordinator's Manual* and the *CRS Application*. See also *CRS Credit for Higher Regulatory Standards* for example regulatory language.

## Post-FIRM buildings

The rules do not address only pre-FIRM buildings—they cover *all* buildings, post-FIRM ones included.

In most cases, a post-FIRM building will be properly elevated or otherwise compliant with regulations for new construction. However, sometimes a map change results in a higher BFE or change in FIRM zone. A substantial improvement to a post-FIRM building may require that the building be elevated to protect it from the new, higher, regulatory BFE.

It should be remembered that all additions to a post-FIRM building must be elevated at least as high as the BFE in effect when the building was built. (You can't allow a compliant building to become noncompliant by allowing additions at grade.) If a new, higher BFE has been adopted since the building was built, additions that are substantial improvements must be elevated to the new BFE.

## THE FORMULA

A project is a substantial improvement if:

$$\frac{\text{Cost of improvement project}}{\text{Market value of the building}} \geq 50 \text{ percent}$$

For example, if a proposed improvement project will cost \$30,000 and the value of the building is \$50,000:

$$\frac{\$30,000}{\$50,000} = 0.6 \text{ (60 percent)}$$

The cost of the project exceeds 50 percent of the building's value, so it is a substantial improvement. The floodplain regulations for new construction apply and the building must meet the post-FIRM construction requirements. If the project is an addition, only the addition has to be elevated (see the examples later in this section).

The formula is based on the cost of the project and the value of the building. These two numbers must be reviewed in detail.



## Project cost

The cost of the project means all structural costs, including

- ◆ all materials
- ◆ labor
- ◆ built-in appliances
- ◆ overhead
- ◆ profit
- ◆ repairs made to damaged parts of the building worked on at the same time

A more detailed list is included in Figure 8-1.

To determine substantial improvement, you need a detailed cost estimate for the project, prepared by a licensed general contractor, professional construction estimator or your office.

Your office must review the estimate submitted by the permit applicant. To verify it, you can use your professional judgment and knowledge of local and regional construction costs, or you can use building code valuation tables published by the major building code groups. These tables can be used for determining estimates for particular replacement items if the type of structure in question is listed in the tables.

There are two exemptions to calculating the cost of an improvement or repair project: 1) improvements to correct code violations and 2) historic buildings. These are explained in more detail later on.

## Market value

In common parlance, market value is the price a willing buyer and seller agree upon. The market value of a structure reflects its original quality, subsequent improvements, physical age of building components and current condition.

However, market value for property can be different than that of the building itself. Market value of developed property varies widely due to the desirability of its location. For example, two houses of similar size, quality and condition will have far different prices if one is on the coast, or in the best school district, or closer to town than the other—but the value of the building materials and labor that went into both houses will be nearly the same.

For the purposes of determining substantial improvement, market value pertains only to the structure in question. It does not pertain to the land, landscaping or detached accessory structures on the property. Any value resulting from the location of the property should be attributed to the value of the land, not the building.



### Items to be included

- All structural elements, including:
  - Spread or continuous foundation footings and pilings
  - Monolithic or other types of concrete slabs
  - Bearing walls, tie beams and trusses
  - Floors and ceilings
  - Attached decks and porches
  - Interior partition walls
  - Exterior wall finishes (brick, stucco, siding) including painting and moldings
  - Windows and doors
  - Reshingling or retiling a roof
  - Hardware
- All interior finishing elements, including:
  - Tiling, linoleum, stone, or carpet over subflooring
  - Bathroom tiling and fixtures
  - Wall finishes (drywall, painting, stucco, plaster, paneling, marble, etc.)
  - Kitchen, utility and bathroom cabinets
  - Built-in bookcases, cabinets, and furniture
  - Hardware
- All utility and service equipment, including:
  - HVAC equipment
  - Plumbing and electrical services
  - Light fixtures and ceiling fans
  - Security systems
  - Built-in kitchen appliances
  - Central vacuum systems
  - Water filtration, conditioning, or recirculation systems
- Cost to demolish storm-damaged building components
- Labor and other costs associated with moving or altering undamaged building components to accommodate improvements or additions
- Overhead and profits

### Items to be excluded

- Plans and specifications
- Survey costs
- Permit fees
- Post-storm debris removal and clean up
- Outside improvements, including:
  - Landscaping
  - Sidewalks
  - Fences
  - Yard lights
  - Swimming pools
  - Screened pool enclosures
  - Detached structures (including garages, sheds and gazebos)
  - Landscape irrigation systems

**Figure 8-1. Items included in calculating cost of the project**



Acceptable estimates of market value can be obtained from these sources:

- ◆ An independent appraisal by a professional appraiser. The appraisal must exclude the value of the land and not use the “income capitalization approach” which bases value on the use of the property, not the structure.
- ◆ Detailed estimates of the structure’s actual cash value—the replacement cost for a building, minus a depreciation percentage based on age and condition. For most situations, the building’s actual cash value should approximate its market value. Your community may prefer to use actual cash value as a substitute for market value, especially where there is not sufficient data or enough comparable sales.
- ◆ Property appraisals used for tax assessment purposes with an adjustment recommended by the tax appraiser to reflect market conditions (adjusted assessed value).
- ◆ The value of buildings taken from NFIP claims data (usually actual cash value).
- ◆ Qualified estimates based on sound professional judgment made by the staff of the local building department or tax assessor’s office.

Some market value estimates are often used only as screening tools (i.e., NFIP claims data and property appraisals for tax assessment purposes) to identify those structures where the substantial improvement ratios are obviously less than or greater than 50 percent (i.e., less than 40 percent or greater than 60 percent). For structures that fall in the 40 percent to 60 percent range, more precise market value estimates are sometimes necessary.



## SUBSTANTIAL IMPROVEMENT EXAMPLES

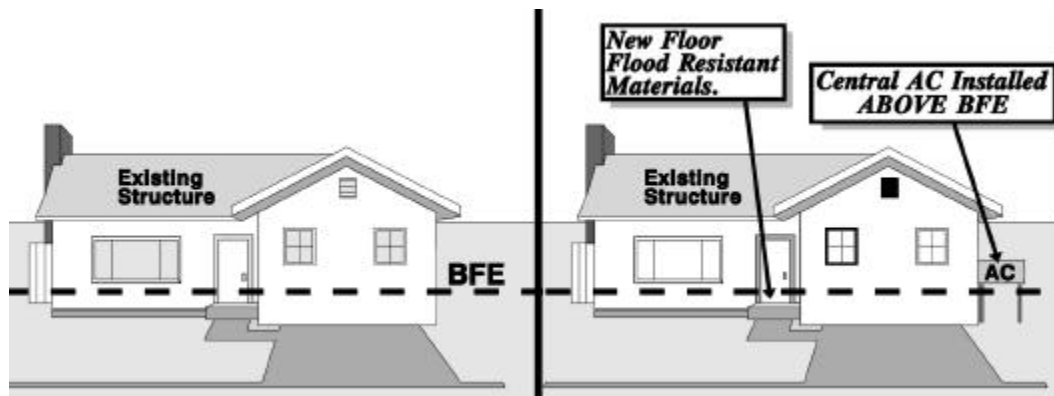
### Example 1. Minor rehabilitation

A rehabilitation is defined as an improvement made to an existing structure which does not affect the external dimensions of the structure.

If the cost of the rehabilitation is less than 50 percent of the structure's market value, the building does not have to be elevated or otherwise protected. However, it is advisable to incorporate methods to reduce flood damage, such as use of flood-resistant materials and installation of electrical, heating and air conditioning units above the BFE.

Figure 8-2 shows a building that had a small rehabilitation project. Central air conditioning was installed and the electrical system was upgraded. The value of the building before the project was \$60,000. The value of the project was \$12,000:

$\$12,000 = 0.2$  (20 percent) The project costs less than 50 percent of the



\$60,000 building, so this is not a substantial improvement.

**Figure 8-2. Minor rehabilitations use flood-resistant methods and materials.**

Neither structure would benefit from post-FIRM flood insurance rates because they are not elevated.

Note: To gauge what happens to flood insurance premiums if a substantially improved building is not brought up to post-FIRM standards, see Figures 7-7 through 7-12.



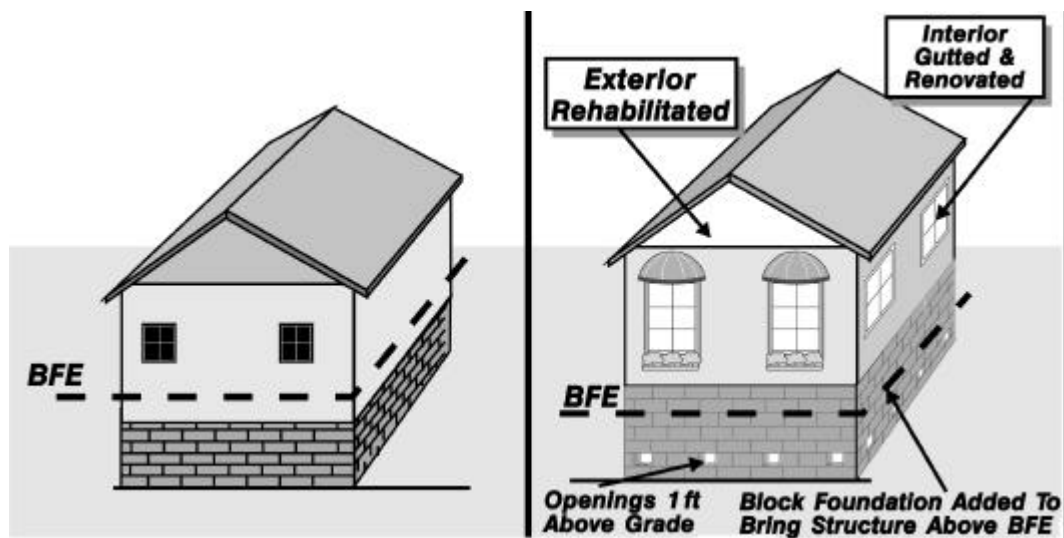
## Example 2. Substantial rehabilitation

If the rehab costs more than 50 percent of the value of the building, your ordinance requires that an existing structure be elevated and/or the basement filled to meet the elevation standard.

Figure 8-3 shows a building that has been allowed to run down. It's market value is \$35,000. To rehab it will require gutting the interior and replacing all wallboard, built-in cabinets, bathroom fixtures and furnace. The interior doors and flooring will be repaired. The house will get new siding and a new roof. The cost of this rehab will be \$25,000:

$$\frac{\$25,000}{\$35,000} = 71.4 \text{ percent}$$

Because total cost of the project is greater than 50 % the rehab is a substantial improvement



**Figure 8-3. substantially rehabilitated building elevated above the BFE.**

In A Zones, elevation may be on fill, crawlspace, columns, etc. In V Zones, only pilings, columns or other open foundations are allowed. The new structure would benefit from post-FIRM flood insurance rates.



### Example 3. Lateral addition—residential

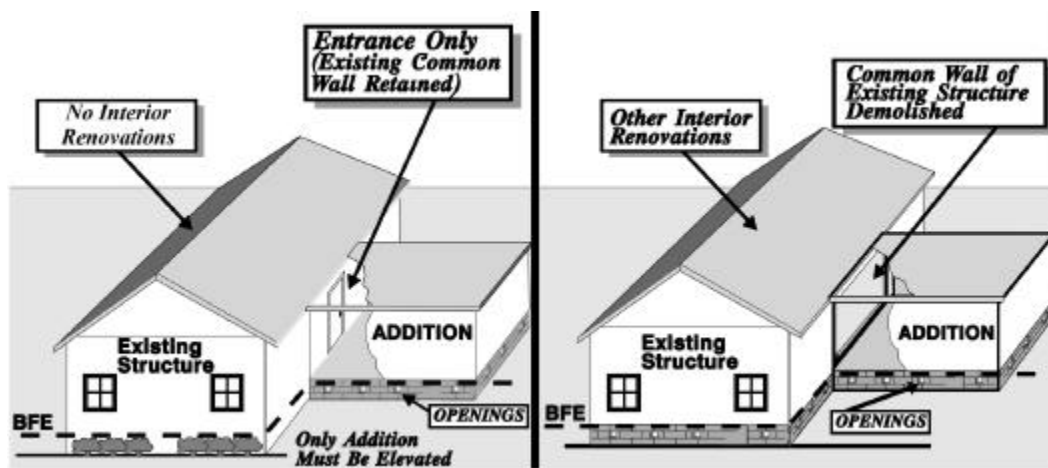
Additions are improvements that increase the square footage of a structure. Commonly, this includes the structural attachment of a bedroom, den, recreational room garage or other type of addition to an existing structure.

When an addition is a substantial improvement, the addition must be elevated or floodproofed, providing that improvements to the *existing* structure are minimal. Figures 8-4 and 8-5 illustrate lateral additions that are compliant.

Depending on the flood zone and details of the project, the existing building may not have to be elevated. The determining factors are the common wall and what improvements are made to the existing structure. If the common wall is demolished as part of the project, then the entire structure must be elevated. If only a doorway is knocked through it and only minimal finishing is done, then only the addition has to be elevated.

In A Zones only, if significant improvements are made to the existing structure (such as a kitchen makeover), both it and the addition must be elevated and otherwise brought into compliance. Some states and many communities require that both the existing structure and lateral additions be elevated in all cases.

In V Zones, the existing structure always has to be elevated, placed on an engineered foundation system, etc., when an addition is proposed that constitutes a substantial improvement. This is due to the “free-of obstruction” standard whereby the lower existing structure would obstruct the storm surge, causing damage to the addition.



**Figure 8-4. Lateral additions to a residential building in an A Zone.**

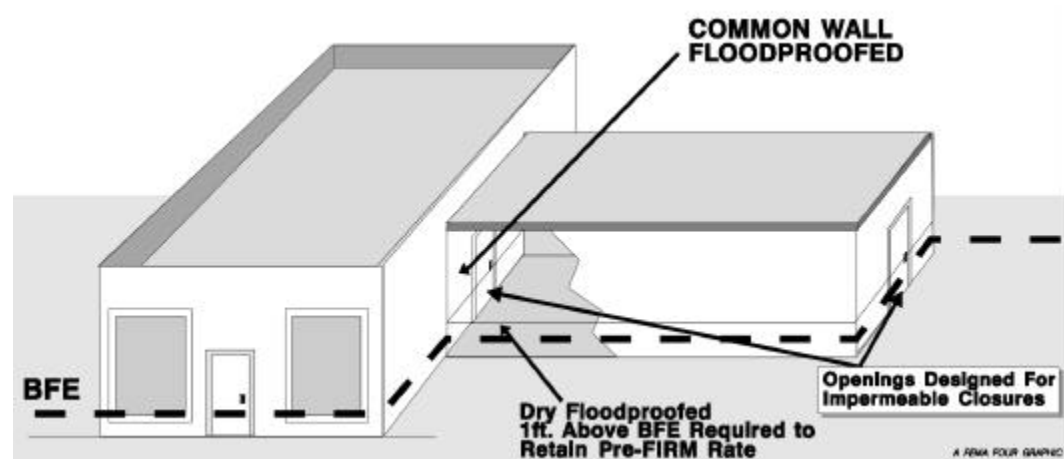
In V Zones, the entire building must be elevated on pilings, columns or other open foundations. The structure on the left would not benefit from post-FIRM flood insurance rates because it was not elevated.



#### Example 4. Lateral addition—nonresidential

A substantial improvement addition to a nonresidential building may be either elevated or floodproofed. Otherwise, all the criteria for residential buildings reviewed in Example 3 must be met.

If floodproofing is used, the builder must ensure that the wall between the addition and the original building is floodproofed. Floodproofing is not allowed as a construction measure in V Zones.



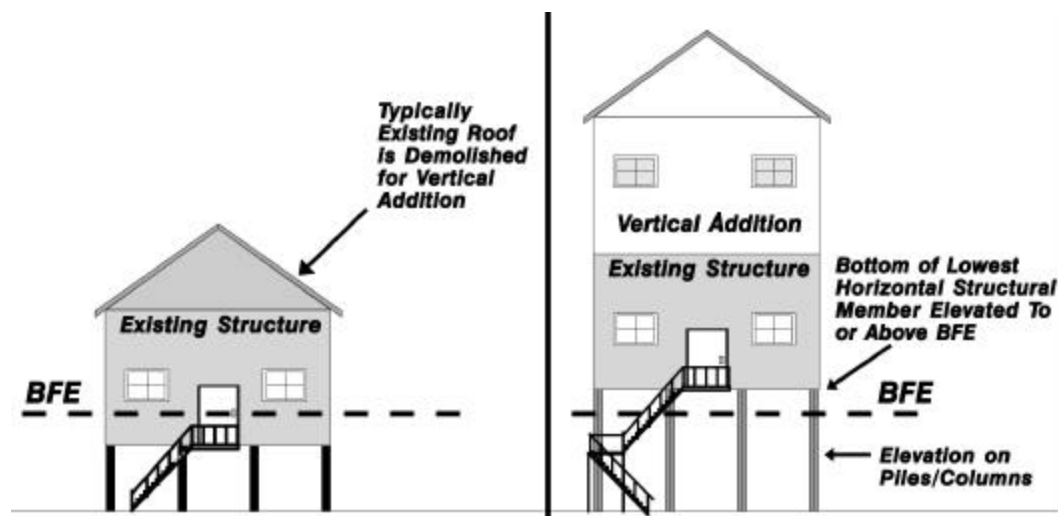
**Figure 8-5. Lateral addition to a nonresidential building in an A Zone.**

This approach is not allowed in V Zones. The structure would *not* benefit from post-FIRM flood insurance rates because the original building was not elevated or floodproofed.



### Example 5. Vertical addition—residential

When the proposed substantial improvement is a full or partial second floor, the entire structure must be elevated (Figure 8-6). In this instance, the existing building provides the foundation for the addition. Failure of the existing building would result in failure of the addition, too.



**Figure 8-6. Vertical addition to a residential building in a V Zone.**

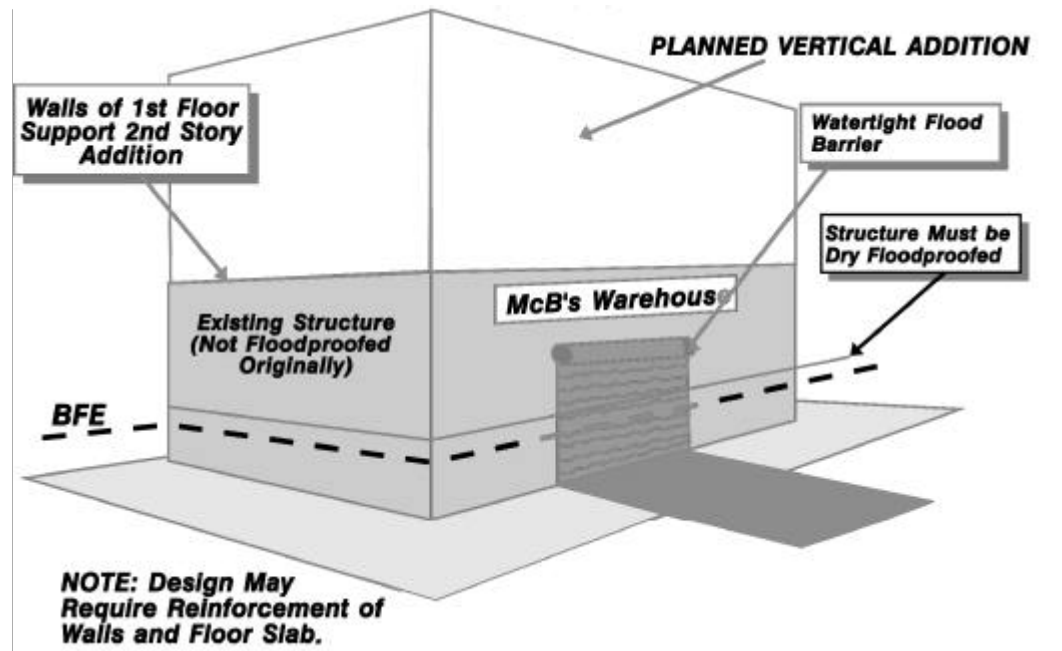
The new structure would benefit from post-FIRM flood insurance rates.



### Example 6. Vertical addition—nonresidential

When the proposed substantial improvement is a full or partial second floor, the entire structure must be elevated or floodproofed (Figure 8-7).

The owner could obtain post-FIRM rates on the building if it is floodproofed to one foot above the BFE and he has a floodproofing certificate signed by a registered engineer. An optional approach is to elevate the entire building and obtain an elevation certificate.



**Figure 8-7. Vertical addition to a nonresidential building in an A Zone.**  
The new floodproofed structure would benefit from post-FIRM flood insurance rates.



### Example 7. Post-FIRM building—minor addition

ALL additions to post-FIRM buildings are defined as new construction and must meet the requirements of your floodplain management ordinance regardless of the size or cost of the addition (Figure 8-8). A small addition to a residential structure must be elevated at least as high as the BFE in effect when the building was built.

If a map revision has taken place and the BFE has increased, only additions that are substantial improvements have to be elevated to the new BFE.

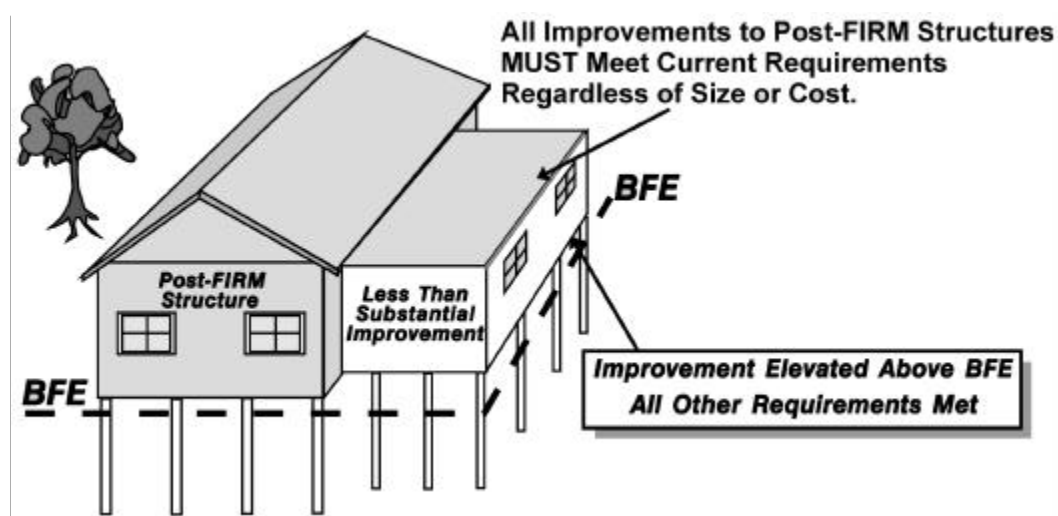
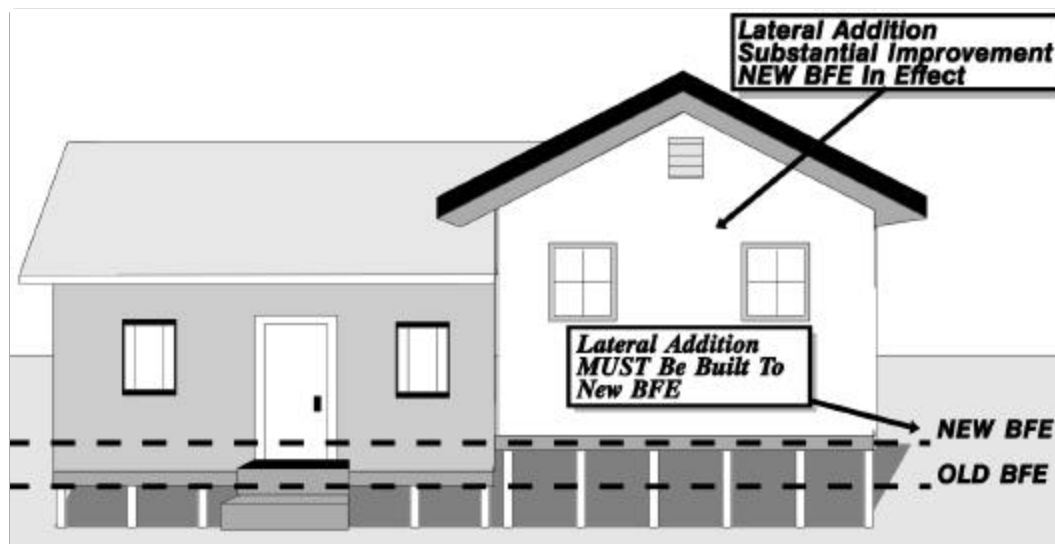


Figure 8-8. Small additions to post-FIRM buildings must be elevated.



### Example 8. Post-FIRM building—substantial improvement

Substantial improvements made to a post-FIRM structure must meet the requirements of the current ordinance. Figure 8-9 shows a lateral addition made after a map revision took place and the BFE was increased.



**Figure 8-9. Substantial improvements to post-FIRM buildings must be elevated above the new BFE. Nonresidential buildings may be floodproofed**





## LEARNING CHECK #1

1. What is the basic rule on improvements and repairs to existing buildings in the floodplain?
2. Mrs. Murphy got a permit two months ago to remodel her living room and kitchen. Now she wants a permit to remodel three bedrooms and two bathrooms. Should you check each of these separately to determine if each project is a substantial improvement?
3. What is the substantial improvement formula?
4. Which of the following items must be included when calculating the cost of an improvement project?
  - Attached deck
  - Plumbing
  - Permit fees
  - Contractor's overhead and profit
  - Architect's plans
  - Landscaping
  - Built-in bookcases
5. What factors are considered when determining market value?
6. What are three good sources for obtaining the market value of a house?
7. Mr. Jones proposes a \$50,000 addition to his \$80,000 home in the floodplain. Is this a substantial improvement?
8. If Mr. Jones' project will be a substantial improvement, what do you need to check to see if the whole house has to be elevated or just the addition?



## B. SUBSTANTIAL DAMAGE

**44 CFR 59.1. Definitions:** *"Substantial damage" means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred.*

Two key points:

- ◆ The damage can be from any cause—flood, fire, earthquake, wind, rain, or other natural or human-induced hazard.
- ◆ The substantial damage rule applies to all buildings in a flood hazard area, regardless of whether the building was covered by flood insurance.

The formula is essentially the same as for substantial improvements:

$$\frac{\text{Cost to repair}}{\text{Market value of the building}} \geq 50 \text{ percent}$$

Market value is calculated in the same way as for substantial improvements. Use the pre-damage market value.

### COST TO REPAIR

Notice that the formula uses “cost *to* repair,” not “cost *of* repairs.” The cost to repair the structure must be calculated for full repair to the building’s before-damage condition, even if the owner elects to do less. It must also include the cost of any improvements that the owner has opted to include during the repair project.

The total cost to repair includes the same items listed in Figure 8-1. As shown in Example 2 below, properly repairing a flooded building can be more expensive than people realize. The owner may opt not to pay for all of the items needed. The owner may:

- ◆ Do some of the work, such as removing and discarding wallboard.
- ◆ Obtain some of the materials free.
- ◆ Have a volunteer organization, such as the Mennonites, do some of the work.
- ◆ Decide not to do some repairs, such as choosing to nail down warped flooring rather than replace it.



***Basic rule: Substantial damage is determined regardless of the actual cost to the owner. You must figure the true cost of bringing the building back to its pre-damage condition using qualified labor and materials obtained at market prices.***

The permit office and the owner may have serious disagreements over the total list of needed repairs and their cost, as the owner has a great incentive to show less damage than actually occurred in order to avoid the cost of bringing the building into compliance. Here are four things that can help you:

- ◆ Get the cost to repair from an objective third-party or undebatable source, such as:
  - A licensed general contractor.
  - A professional construction estimator.
  - Insurance adjustment papers (exclude damage to contents).
  - Damage assessment field surveys conducted by building inspection, emergency management or tax assessment agencies after a disaster.
  - Your office.

Even if your office does not prepare the cost estimate, it needs to review the estimate submitted by the permit applicant. You can use your professional judgment and knowledge of local and regional construction costs. Or, you can use building code valuation tables published by the major building code groups.

- ◆ Use an objective system that does not rely on varying estimates of market value or different opinions of what needs to be repaired. The Substantial Damage Estimator Program discussed later in this section will do this.
- ◆ Publicize the need for the regulations and the benefits of protecting buildings from future flooding. A well-educated public won't argue as much as one that sees no need for the requirement.
- ◆ Help the owner find financial assistance to meet the extra cost of complying with the code. If there was a disaster declaration, there may be sources of financial assistance as discussed in the next unit. If the owner had flood insurance and the building was substantially damaged by a flood, the new Increased Cost of Compliance coverage will help (see next section).

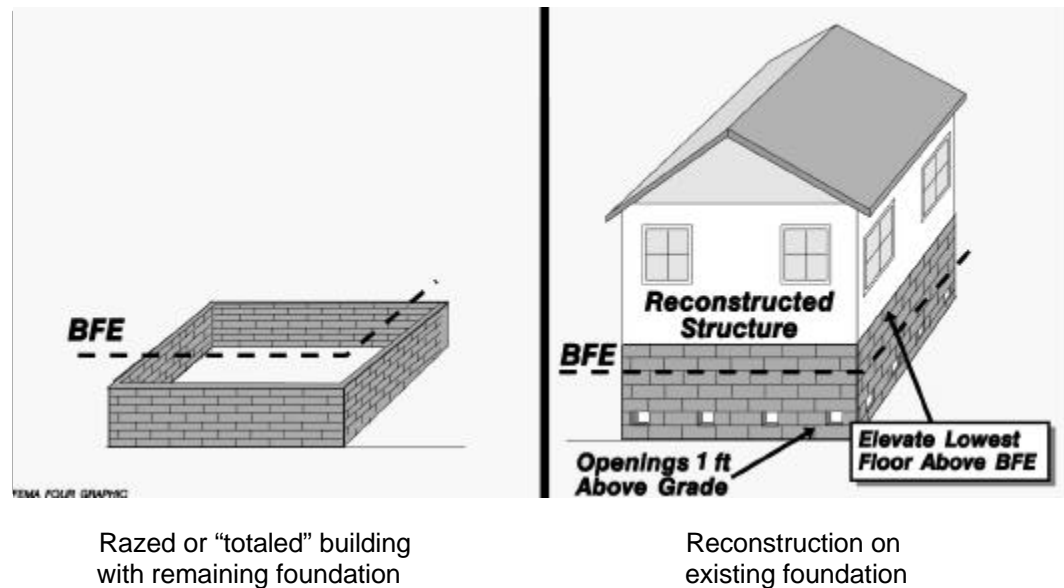


## SUBSTANTIAL DAMAGE EXAMPLES

### Example 1. Reconstruction of a destroyed building

Reconstructions are cases where an entire structure is destroyed, damaged, purposefully demolished or razed, and a new structure is built on the old foundation or slab. The term also applies when an existing structure is moved to a new site.

Reconstructions are, quite simply, “new construction.” They must be treated as new buildings.



**Figure 8-10. A reconstructed house is new construction.**

This example is for A Zones only. A new building in the V Zone must be elevated on piles or columns.



## Example 2. Substantially damaged structure

To determine if a damaged structure meets the threshold for substantial damage, the cost of repairing the structure to its before-damaged condition is compared to the market value of the structure prior to the damage. The estimated cost of the repairs must include all costs necessary to fully repair the structure to its before-damaged condition.

If equal to or greater than 50 percent of that structure's market value before damage, then the structure must be elevated (or floodproofed if it is nonresidential) to or above the level of the base flood, and meet other applicable local ordinance requirements. This is the basic requirement for substantial damage.

Figure 8-11 graphically illustrates the amount of damage that can occur to a building flooded only four feet deep. Even though the structure appears sound and there are no cracks or breaks in the foundation, the total cost of repair can be significant.

The cost of repair after a flood that simply soaked the building will typically include the following structural items:

- Remove all wallboard and insulation.
- Install new wallboard and insulation.
- Tape and paint.
- Remove carpeting and vinyl flooring.
- Dry floor, replace warped flooring.
- Replace cabinets in the kitchen and bathroom.
- Replace built-in appliances.
- Replace hollow-core interior doors.
- Replace furnace and water heater.
- Clean and disinfect duct work.
- Repair porch flooring and front steps.
- Clean and test plumbing (licensed plumber may be required).
- Replace outlets and switches, clean and test wiring (licensed electrician may be required).

Note: See also Figures 7-7 through 7-12 for what happens to flood insurance premiums if a substantially damaged building is granted a variance and is not brought up to post-FIRM standards.





**Figure 8-11. Even slow moving floodwater can cause substantial damage.**

## **SUBSTANTIAL DAMAGE SOFTWARE**

FEMA has developed a software program to help local officials make substantial damage determinations. The software is Windows-based and will work on Microsoft Windows 3.1 and Windows 95. While it is based on Microsoft Access, the software is self-contained and does not require any software in addition to Windows.

The software comes with a manual, *Guide on Estimating Substantial Damage Using the NFIP Residential Substantial Damage Estimator*, FEMA 311. This includes a user's manual and worksheets that allow the calculations to be done manually.

Contact your FEMA Regional Office for a copy of the software package and help in using it. Following a major disaster declaration, training sessions and technical assistance may be available.

## **INCREASED COST OF COMPLIANCE**

On June 1, 1997, the NFIP began offering additional coverage to all holders of structural flood insurance policies. This coverage is called Increased Cost of Compliance or ICC.



The name refers to cases where the local floodplain management ordinance requires elevation or retrofitting of a substantially damaged building. Under ICC, the flood insurance policy will not only pay for repairs to the flooded building, it will pay up to \$15,000 to help cover the additional cost of complying with the ordinance. This is available for any flood insurance claim and, therefore, is not dependent on the community receiving a disaster declaration.

There are some limitations to ICC:

- ◆ It's only available if there was a flood insurance policy on the building before the flood.
- ◆ It covers only damage caused by a flood.
- ◆ Claims are limited to \$15,000 per structure.
- ◆ Claims must be accompanied by a substantial damage determination by the floodplain ordinance administrator.

It should also be mentioned that a portion of the rest of the claim payment may help meet the cost of bringing the building up to code. For example, if there was foundation damage, the regular claim will pay for the cost of repairing or replacing the foundation. The ICC funds would only be needed for the extra costs of raising the foundation higher than it was before.

In certain cases, an ICC claim can be filed if the building is repetitively flooded, sustaining losses of less than 50 percent of the market value each time and if the total cost of the losses is 50 percent or more during a certain period of time, provided the community has language in the flood damage ordinance that implements the substantial damage rule in these cases.

Figure 8-12 has example ordinance language. This language exceeds the minimum NFIP requirements, but would be needed if you wanted to trigger the ICC provision for repetitively damaged buildings.



The Community Rating System credits keeping track of improvements to enforce a cumulative substantial improvement requirement. The 1999 *CRS Coordinator's Manual* credits the ordinance language in Figure 8-12. These credits are found under Activity 430, Section 431.c in the *CRS Coordinator's Manual* and the *CRS Application*.



**Option 1****A. Adopt the Following Definition:**

*“Repetitive Loss” means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.*

**B. And modify the “substantial improvement” definition as follows:**

*“Substantial Improvement” means any reconstruction, rehabilitation, addition, or other improvement of a structure, the cost of which equals or exceeds 50 percent of the market value of the structure before the “start of construction” of the improvement. This term includes structures which have incurred “repetitive loss” or “substantial damage”, regardless of the actual repair work performed.*

---

**Option 2****Modify the Asubstantial damage@ definition as follows:**

*“Substantial Damage” means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before damaged condition would equal or exceed 50 percent of the market value of the structure before the damage occurred. Substantial damage also means flood-related damage sustained by a structure on two separate occasions during a 10-year period for which the cost of repairs at the time of each such flood event, on the average, equals or exceeds 25 percent of the market value of the structure before the damage occurred.*

---

*NOTE 1: Communities need to make sure that these definitions are tied to the floodplain management requirements for new construction and substantial improvements and to any other requirements of the ordinance, such as the permit requirements, in order to enforce this provision.*

*NOTE 2: An ICC Claim Payment is ONLY made for flood-related damage. The substantial damage part of the definition must still include “damage of any origin” to be compliant with the minimum NFIP Floodplain Management Regulations.*

**Figure 8-12. Sample ordinance language for ICC repetitive loss definitions**

Source: *Interim Guidance for State and Local Officials -- Increased Cost of Compliance Coverage*, FEMA, 1997. This language is only needed to trigger an ICC payment for a repetitive loss. No ordinance changes are needed for the ICC coverage for substantial damage.



## C. EXCEPTIONS

As explained in previous sections, the substantial improvement and substantial damage requirements affect all buildings regardless of the reason for the improvement or the cause of the damage. There are three exceptions to this: exempt activities, historic buildings and projects required by code.

### EXEMPT ACTIVITIES

Certain activities related to making improvements or repairing damaged buildings do not have to be counted toward the cost of the improvement or repairs. These include:

- ◆ Plans and specifications.
- ◆ Surveying.
- ◆ Permit fees.
- ◆ Demolition or emergency repairs made for health or safety reasons or to prevent further damage to the building.
- ◆ Improvements or repairs to items outside the building, such as the driveway, fencing, landscaping and detached structures.

### HISTORIC STRUCTURES

Historic structures are exempted from the substantial improvement requirements subject to the criteria listed below. The exemption can be granted administratively if the current NFIP definitions of substantial improvement and historic structure are included in your ordinance, or they can be granted through a variance procedure.

In either case, they are usually granted subject to conditions.

If the improvements to a historic structure meet the following three criteria and are approved by the community, the building will not have to be elevated or floodproofed. It can also retain its pre-FIRM flood insurance rating status.

**1. The building must be a bona-fide “historic structure.”** Figure 7-13 has the definition that must be followed.

**2. The project must maintain the historic status of the structure.** If the proposed improvements to the structure will result in it being removed from or ineligible for the National Register or federally-certified state or local inventory, then the proposal cannot be granted an exemption from the substantial improvement rule.



The best way to make such determinations is to seek written review and approval of proposed plans by the local historic preservation board, if it is federally-certified, or by the state historic preservation office. If the plans are approved, you can grant the exemption. If not, no exemption can be permitted.

**3. Take all possible flood damage reduction measures.** Even though the exemption to the substantial improvement rule means the building does not have to be elevated to or above BFE, or be renovated with flood-resistant materials that are not historically sensitive, many things can and should be done to reduce the flood damage potential. Examples include:

- ◆ Locating mechanical and electrical equipment above the BFE or flood-proofing it.
- ◆ Elevating the lowest floor of an addition to or above the BFE with the change in floor elevation disguised externally.
- ◆ Building the lowest floor of an addition with flood-resistant materials and providing hydrostatic openings.

## CODE VIOLATIONS

The NFIP definition of substantial improvement includes another exemption:

**44 CFR 59.1 Definitions:** *"Substantial improvement" means .... The term does not, however, include ... Any project for improvement of a structure to correct existing violations of state or local health, sanitary, or safety code specifications which have been identified by the local code enforcement official and which are the minimum necessary to assure safe living conditions*

Note the key words in this exemption: *correct* existing violations, *identified* by the local official, and *minimum* necessary to assure safe conditions. This language was included in order to avoid penalizing property owners *who had no choice* but to make improvements to their buildings or face condemnation or revocation of a business license.

This exemption was intended for *involuntary* improvements or violations that existed before the improvement permit was applied for or before the damage occurred—for example, a restaurant owner who must remodel and enlarge the kitchen in order to meet current local and state health and safety codes.

You can only exempt the items specifically required by code. For example, if a single stair tread was defective and had to be replaced, do not exempt the cost of rebuilding the entire stairway. Similarly, count only replacement in like kind and what is minimally necessary. If the owner chooses to upgrade the quality of a code-required item, the extra cost is not exempt from the formula—it's added to the true cost of the improvement or repairs.



Unfortunately, many property owners and builders pressure local building official to exclude “code violation corrections” from their voluntary improvement proposals. There are “code violations” in all structures built before the current code was enacted. In many cases, those elements must be brought up to code as part of an improvement project.

This is very different from a code violation citation that forces a property owner to correct those violations and make improvements that were otherwise not planned. The building official must know about and document the violations before or at the time the permit is issued.

### Example

A small business in a 40-year old building was damaged by a fire. The building’s pre-fire market value was \$100,000. The insurance adjuster and the permit office concluded that the total cost to repair would be \$45,000.

However, the community’s building code states that whenever an applicant applies for a permit to modify or improve a building, the building must be brought up to code. This building would need the following additional work:

- ◆ Replace unsafe electrical wiring.
- ◆ Install missing fire exit signs, smoke detectors and emergency lighting.
- ◆ Widen the front door and install a ramp to make the business accessible to handicapped and mobility-impaired people.

The total cost of these code requirements would be \$8,000. However, since these were required by the code before the fire occurred, they would not have to be counted toward the cost to repair. Based on the basic formula:

$$\frac{\$45,000}{\$100,000} = 0.45 \text{ or } 45\% \quad \begin{array}{l} \text{The building is not declared} \\ \text{substantially damaged} \end{array}$$

In this example, the building can be repaired without elevating or floodproofing. However, the permit office should strongly recommend incorporating flood protection measures and flood resistant materials in the repair project (as in the example in Figure 8-2).





## LEARNING CHECK #2

1. What is the formula for determining substantial damage?
  
2. What is the basic rule on calculating the cost of the damage?
  
3. A tornado swept through town and substantially damaged 25 buildings in the floodplain. How can you help the property owners comply with the floodplain ordinance's substantial damage regulations?
  
4. Mr. Johnson prepared a list of everything he has to do to repair his flooded home. Which of the following items are counted toward the cost of repairs when determining substantial damage? What is the dollar amount that should be counted?
  - Clearing broken trees and debris away from the house (\$2,500)
  - Replacing the warped flooring (\$3,000)
  - New doors (\$1,000) to replace old ones (worth \$500)
  - Replacing the old kitchen cabinets (valued at \$5,000) with custom hardwood cabinets valued at \$15,000.
  - New wall to wall carpeting (\$1,800)
  - New furniture (\$12,000)
  - New wiring (\$2,000) to bring the building up to current code (This is a standard requirement of the community. The building was not cited as having a code violation.)
  - Permit fee (\$500)
  - Clean out and test the furnace (done free as a public service by the utility company, but otherwise worth \$250 if done by a private contractor)
  - New bushes and replacement fence (\$1,500)
5. What's the best way to determine if a building is "historic" and eligible for exemption from the substantial improvement requirement?





## UNIT LEARNING EXERCISE

1. What kind of projects need a permit so you can check to see if they would be substantial improvements?
  
2. A home was built to post-FIRM standards in 1990. The lowest floor was elevated four feet above grade, to the BFE in effect at that time. In 1995, a new FIRM went into effect. The new BFE is now six feet above grade at that site.
  - a. How high would a small (less than substantial) addition have to be elevated?
  
  - b. How high would a large (substantial) addition have to be elevated?
  
3. Mrs. Murphy bought her property for \$100,000 last year. Is this a good basis for determining its market value?
  
4. Based on tax assessor's records, the market value of 123 Main Street is \$75,000. The owner wants to replace the HVAC and plumbing, remodel the kitchen and both bathrooms and convert his basement to a finished family room. His total cost is \$20,000 for supplies. If a contractor were to do the job, the total cost would be \$45,000. However, since he is a handyman and will do all the work himself, the total cost of his project is \$20,000. What is your response?
  
5. Mrs. Smith wants a new second story that will double the size and value of her house. The floor of the new story will be above the BFE. Will the old first floor have to be elevated?
  
6. The substantial damage regulations only apply if the building was damaged by a flood. True or false?



7. A flooded property owner has a brother who is a plumbing contractor. His brother's repair estimate shows the damage at 48% of the building's value. You think it should be higher. What can you do to prevent an argument over who's numbers are right?
8. Mrs. McGillicuddy is on a fixed income. Her home was flooded and substantially damaged. Her flood insurance policy will pay for the repairs. When told that she will also have to elevate her house, she thinks she should apply for a variance due to the financial hardship. What do you tell her?
9. Before the flood, Mr. Johnson had been cited by the community for a code violation. The paint on his garage door had been peeling, which was a violation of the local housing maintenance code. Since the flood left mud up to the high water line, he decided to repaint the whole house. Can he claim exemption of the cost of the painting because it had been cited as a code violation?



## ANSWERS TO THE LEARNING CHECKS

### Learning check #1

1. What is the basic rule on improvements and repairs to existing buildings in the floodplain?

*If the cost of improvements or the cost to repair the damage exceeds 50 percent of the market value of the building, it must be brought up to current floodplain management standards.*

2. Mrs. Murphy got a permit two months ago to remodel her living room and kitchen. Now she wants a permit to remodel three bedrooms and two bathrooms. Should you check each of these separately to determine if each project is a substantial improvement?

*No. They should be counted as one project and their total cost combined.*

3. What is the substantial improvement formula?

*A project is a substantial improvement if:*

$$\frac{\text{Cost of improvement project}}{\text{Market value of the building}} \geq 50 \text{ percent}$$

4. Which of the following items must be included when calculating the cost of an improvement project?

- Attached deck    *yes*
- Plumbing    *yes*
- Permit fees    *no*
- Contractor's overhead and profit    *yes*
- Architect's plans    *no*
- Landscaping    *no*
- Built-in bookcases    *yes*

5. What factors are considered when determining market value?

*"The price a willing buyer and seller agree upon." Factors to consider are the building's original quality, subsequent improvements, age and current condition.*

6. What are three good sources for obtaining the market value of a house?

- *An independent appraisal by a professional appraiser.*
- *Detailed estimates of the structure's actual cash value (the replacement cost for a building, minus a depreciation percentage based on age and condition).*



- *Property appraisals used for tax assessment purposes with an adjustment recommended by the tax appraiser to reflect market conditions (adjusted assessed value).*
  - *The value of buildings taken from NFIP claims data (usually actual cash value).*
  - *Qualified estimates based on sound professional judgment made by the staff of the local building department or tax assessor's office.*
7. Mr. Jones proposes a \$50,000 addition to his \$80,000 home in the floodplain. Is this a substantial improvement?
- Yes, 50,000 divided by 80,000 = 0.625, more than 50%*
8. If Mr. Jones' project will be a substantial improvement, what do you need to check to see if the whole house has to be elevated or just the addition?
- Check the extent of work on the common wall and the existing building. If the common wall is demolished as part of the project, the existing building and the addition must be elevated.*



## Learning check #2

1. What is the formula for determining substantial damage?

*A building was substantially damaged if:*

$$\frac{\text{Cost to repair}}{\text{Market value of the building}} \geq 50 \text{ percent}$$

2. What is the basic rule on calculating the cost of the damage?

*Substantial damage is determined regardless of the actual cost to the owner. You must figure the true cost of bringing the building back to its pre-damage condition using qualified labor and materials obtained at market prices.*

3. A tornado swept through town and substantially damaged 25 buildings in the floodplain. How can you help the property owners comply with the floodplain ordinance's substantial damage regulations?

*Help the owner obtain financial assistance. Many programs are available after a disaster declaration.*

4. Mr. Johnson prepared a list of everything he has to do to repair his flooded home. Which of the following items are counted toward the cost of repairs when determining substantial damage? What is the dollar amount that should be counted?

- Clearing broken trees and debris away from the house (\$2,500)    \$0
- Replacing the warped flooring (\$3,000)    \$3,000
- New doors (\$1,000) to replace old ones (worth \$500)    \$1,000
- Replacing the old kitchen cabinets (valued at \$5,000) with custom hardwood cabinets valued at \$15,000.    \$15,000
- New wall to wall carpeting (\$1,800)    \$1,800
- New furniture (\$12,000)    \$0 (*not part of the structure*)
- New wiring (\$2,000) to bring the building up to current code (This is a standard requirement of the community. The building was not cited as having a code violation.)    \$2,000
- Permit fee (\$500)    \$0
- Clean out and test the furnace (done free as a public service by the utility company, but otherwise worth \$250 if done by a private contractor)    \$250
- New bushes and replacement fence (\$1,500)    \$0 (*not part of the structure*)

5. What's the best way to determine if a building is "historic" and eligible for exemption from the substantial improvement requirement?

*See if it's on an approved list of historic structures (see Figure 7-13)*



## Unit Learning Exercise

1. What kind of projects need a permit so you can check to see if they would be substantial improvements?
  - *Remodeling projects.*
  - *Rehabilitation projects.*
  - *Building additions.*
  
2. A home was built to post-FIRM standards in 1990. The lowest floor was elevated four feet above grade, to the BFE in effect at that time. In 1995, a new FIRM went into effect. The new BFE is now six feet above grade at that site.
  - a. How high would a small (less than substantial) addition have to be elevated?
 

*To at least four feet above grade.*
  - b. How high would a large (substantial) addition have to be elevated?
 

*To at least six feet above grade.*
  
3. Mrs. Murphy bought her property for \$100,000 last year. Is this a good basis for determining its market value?
 

*It's a start, but the true market value may be different this year, depending on the local housing market. You also need to subtract the value of the land, landscaping, and detached structures that would have been in the purchase price for the property.*
  
4. Based on tax assessor's records, the market value of 123 Main Street is \$75,000. The owner wants to replace the HVAC and plumbing, remodel the kitchen and both bathrooms and convert his basement to a finished family room. His total cost is \$20,000 for supplies. If a contractor were to do the job, the total cost would be \$45,000. However, since he is a handyman and will do all the work himself, the total cost of his project is \$20,000. What is your response?
 

*The total cost of the project must be the true cost, including the cost of labor and donated materials. This project will be a substantial improvement.*
  
5. Mrs. Smith wants a new second story that will double the size and value of her house. The floor of the new story will be above the BFE. Will the old first floor have to be elevated?
 

*Yes. The project should be a substantial improvement and the entire building will need to be elevated in this situation.*



6. The substantial damage regulations only apply if the building was damaged by a flood. True or false?

*False, the damage can be from any cause.*

7. A flooded property owner has a brother who is a plumbing contractor. His brother's repair estimate shows the damage at 48% of the building's value. You think it should be higher. What can you do to prevent an argument over who's numbers are right?

*Get the cost to repair from an objective third-party or undebatable source, such as:*

— *A licensed general contractor.*

— *A professional construction estimator.*

— *Insurance adjustment papers (exclude damage to contents).*

— *Damage assessment field surveys conducted by building inspection, emergency management or tax assessment agencies after a disaster.*

8. Mrs. McGillicuddy is on a fixed income. Her home was flooded and substantially damaged. Her flood insurance policy will pay for the repairs. When told that she will also have to elevate her house, she thinks she should apply for a variance due to the financial hardship. What do you tell her?

*Her flood insurance policy has Increased Cost of Compliance coverage that will help pay for the cost of meeting the ordinance's requirement to elevate. Your office may be able to help her find financial assistance to pay for the rest of the cost, if needed.*

9. Before the flood, Mr. Johnson had been cited by the community for a code violation. The paint on his garage door had been peeling, which was a violation of the local housing maintenance code. Since the flood left mud up to the high water line, he decided to repaint the whole house. Can he claim exemption of the cost of the painting because it had been cited as a code violation?

*No. Only exempt the items specifically required by the citation and what is minimally necessary to comply.*

**You are now only two short units from finishing this course. If you think you will be ready in a week, call now for the final examination to be mailed to you.**



Locality Topsail Beach, Pender County Permit Number \_\_\_\_\_

Ocean Hazard ☒ Estuarine Shoreline \_\_\_\_\_ ORW Shoreline \_\_\_\_\_ Public Trust Shoreline \_\_\_\_\_ Other \_\_\_\_\_

(For official use only)

### GENERAL INFORMATION

#### LAND OWNER - MAILING ADDRESS

Name Sam & Ann Ennis

Address 636 Bayshore Drive

City Wilmington State NC Zip 28411 Phone 910-352-3424

Email ennisann7314@gmail.com

#### AUTHORIZED AGENT

Name Kyle Breuer, Planning Director for Pender County

Address PO Box 519

City Burgaw State NC Zip 28425 Phone 910-259-1202

Email kbreuer@pendercountync.gov

LOCATION OF PROJECT: (Address, street name and/or directions to site; name of the adjacent waterbody.)

1121 Ocean Blvd, Topsail Beach, NC - oceanfront / Atlantic

DESCRIPTION OF PROJECT: (List all proposed construction and land disturbance.) Elevation & retrofit

existing structure in place from FFE of 14.1' to a FFE of 18.0'

SIZE OF LOT/PARCEL: 7000 square feet .16 acres

PROPOSED USE: Residential ☒ (Single-family ☒ Multi-family ☐) Commercial/Industrial ☐ Other ☐

COMPLETE EITHER (1) OR (2) BELOW (Contact your Local Permit Officer if you are not sure which AEC applies to your property):

(1) OCEAN HAZARD AECs: TOTAL FLOOR AREA OF PROPOSED STRUCTURE: 1292 square feet (includes air conditioned living space, parking elevated above ground level, non-conditioned space elevated above ground level but excluding non-load-bearing attic space)

(2) COASTAL SHORELINE AECs: SIZE OF BUILDING FOOTPRINT AND OTHER IMPERVIOUS OR BUILT UPON SURFACES: \_\_\_\_\_ square feet (includes the area of the foundation of all buildings, driveways, covered decks, concrete or masonry patios, etc. that are within the applicable AEC. Attach your calculations with the project drawing.)

STATE STORMWATER MANAGEMENT PERMIT: Is the project located in an area subject to a State Stormwater Management Permit issued by the NC Division of Energy, Mineral and Land Resources (DEMLR)?

YES \_\_\_\_\_ NO \_\_\_\_\_ N/A

If yes, list the total built upon area/impervious surface allowed for your lot or parcel: \_\_\_\_\_ square feet.



**OTHER PERMITS MAY BE REQUIRED:** The activity you are planning may require permits other than the CAMA minor development permit, including, but not limited to: Drinking Water Well, Septic Tank (or other sanitary waste treatment system), Building, Electrical, Plumbing, Heating and Air Conditioning, Insulation and Energy Conservation, FIA Certification, Sand Dune, Sediment Control, Subdivision Approval, Mobile Home Park Approval, Highway Connection, and others. Check with your Local Permit Officer for more information.

**STATEMENT OF OWNERSHIP:**

I, the undersigned, an applicant for a CAMA minor development permit, being either the owner of property in an AEC or a person authorized to act as an agent for purposes of applying for a CAMA minor development permit, certify that the person listed as landowner on this application has a significant interest in the real property described therein. This interest can be described as: (check one)

☒ an owner or record title, Title is vested in name of Sam & Ann Ennis,  
see Deed Book 4666 page 307 in the Pender County Registry of Deeds.

☐ an owner by virtue of inheritance. Applicant is an heir to the estate of \_\_\_\_\_  
; probate was in \_\_\_\_\_ County.

☐ if other interest, such as written contract or lease, explain below or use a separate sheet & attach to this application.

**NOTIFICATION OF ADJACENT RIPARIAN PROPERTY OWNERS:**

I furthermore certify that the following persons are owners of properties adjoining this property. I affirm that I have given ACTUAL NOTICE to each of them concerning my intent to develop this property and to apply for a CAMA permit.

	(Name)	(Address)
(1)	<u>Jonathan Brandon</u>	<u>1127 Ocean Blvd / 506 Bridgeview Dr Lemoyne, PA 17043</u>
(2)	<u>Andrew Thexton</u>	<u>1117 Ocean Blvd / 12766 River Rd, Richmond VA 23238</u>
(3)	_____	_____
(4)	_____	_____

**ACKNOWLEDGEMENTS:**

I, the undersigned, acknowledge that the land owner is aware that the proposed development is planned for an area which may be susceptible to erosion and/or flooding. I acknowledge that the Local Permit Officer has explained to me the particular hazard problems associated with this lot. This explanation was accompanied by recommendations concerning stabilization and floodproofing techniques.

I furthermore certify that I am authorized to grant, and do in fact grant, permission to Division of Coastal Management staff, the Local Permit Officer and their agents to enter on the aforementioned lands in connection with evaluating information related to this permit application.

This the 22nd day of November, 20 16

Kyle M. Brewer  
Landowner or person authorized to act as his/her agent for purpose of filing a CAMA permit application

*This application includes: general information (this form), a site drawing as described on the back of this application, the ownership statement, the Ocean Hazard AEC Notice where necessary, a check for \$100.00 made payable to the locality, and any information as may be provided orally by the applicant. The details of the application as described by these sources are incorporated without reference in any permit which may be issued. Deviation from these details will constitute a violation of any permit. Any person developing in an AEC without permit is subject to civil, criminal and administrative action.*

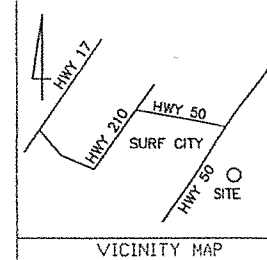


NORTH CAROLINA

NEW PENDER COUNTY

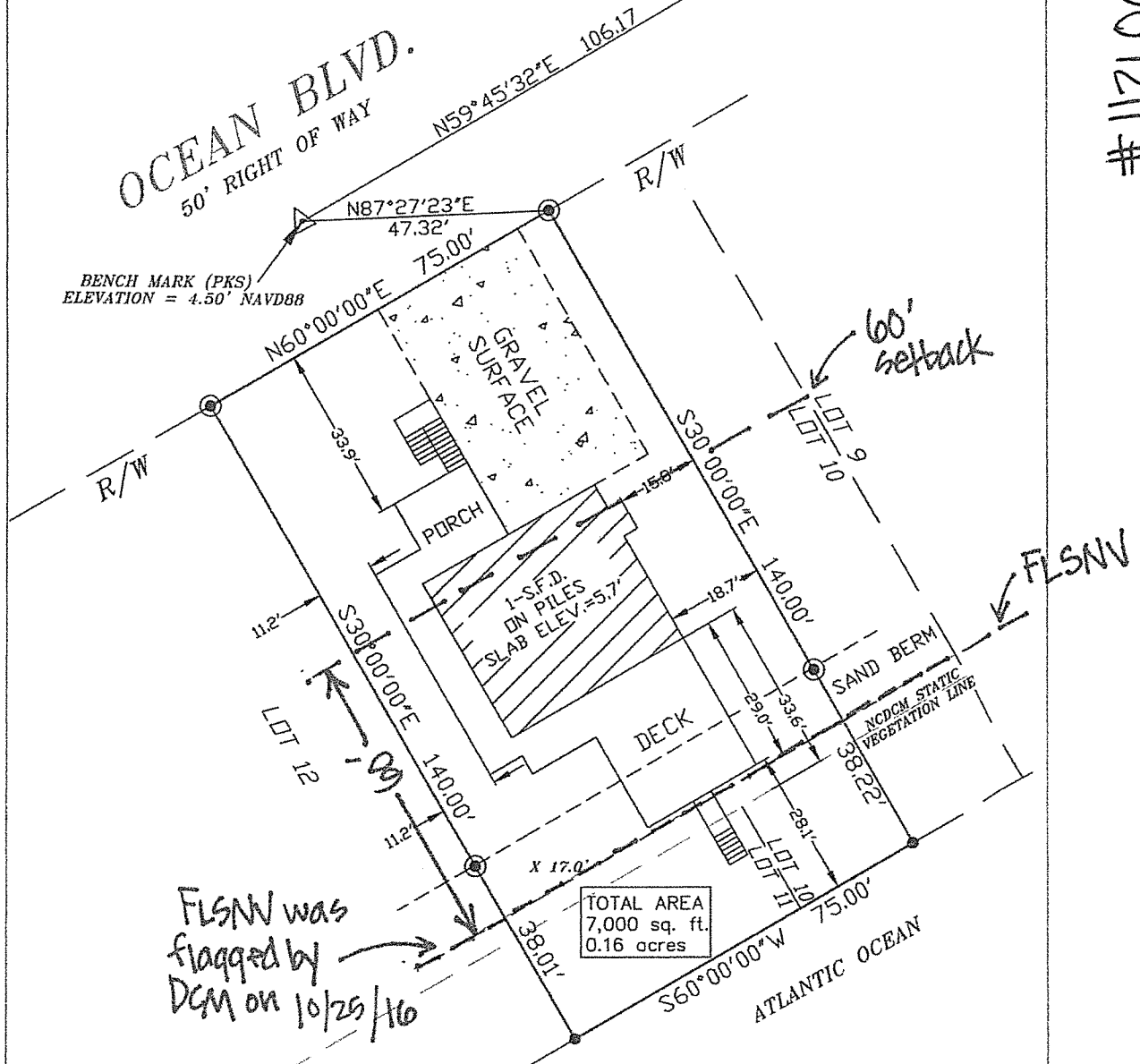
I, L. SCOTT BAGGIE, CERTIFY THAT THIS PLAN WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY SUPERVISION, DESCRIPTION RECORDED IN DEED BOOK 1292 PAGE 2074. PLOTTED FROM INFORMATION REFERENCED, THAT THIS PLAT WAS NOT PREPARED IN ACCORDANCE WITH G.S. 47-30 AS AMENDED. WITNESS MY ORIGINAL SIGNATURE, REGISTRATION NUMBER AND SEAL THIS 9TH DAY OF OCT. A.D. 2016.

L. SCOTT BAGGIE, P.L.S.  
REGISTRATION NUMBER L-3450



## LEGEND

- R/W - RIGHT OF WAY
- IPF - IRON PIPE FOUND
- PKS - MAGNETIC NAIL SET
- COMPUTED POINT
- X 17.0' DUNE RIDGE SPOT ELEVATION



## NOTE:

SUBJECT PROPERTY REFERENCED AT DDEED BOOK 1292 PAGE 2074 & MAP BOOK 3 PAGE 72.

THIS SURVEY IS OF AN EXISTING PARCEL OF PROPERTY AND DOES NOT CREATE A SUBDIVISION.

THIS PROPERTY IS LOCATED WITHIN A FLOOD HAZARD AREA; ZONE VE, BASE FLOOD ELEVATION 15'; PER FEMA FIRM MAP PANAL NUMBER 3720421200 J/ DATED 2/16/07.

AREA IS COMPUTED BY COORDINATES.

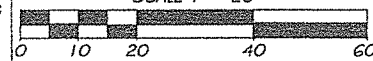
## SURVEY FOR CAMA PERMIT

1121 Ocean Blvd

LOT 11 AND HALF OF LOT 10 - BLOCK 22 - NEW TOPSAIL BEACH  
TOPSAIL TWP. - PENDER COUNTY - NORTH CAROLINA  
NOVEMBER 9, 2016 JOB No.0307-2016

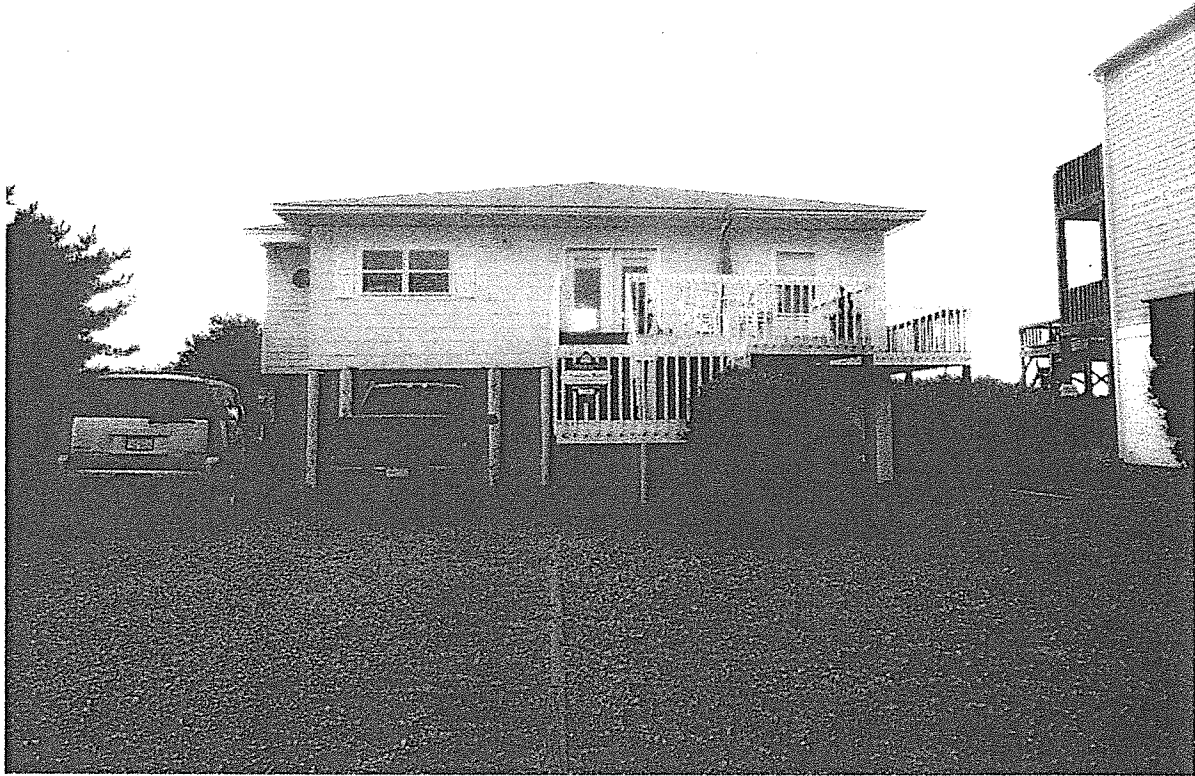
PROGRESSIVE LAND DEVELOPMENT CONSULTANTS, PLLC  
112 PALM BREEZE DRIVE  
CAROLINA BEACH, NORTH CAROLINA 28428  
TEL: (910) 707-0166  
lscott@pldco.com / P-0874

SCALE 1" = 20'



# 1121 Ocean Blvd





**Pender County Flood Mitigation Project (FMA)**

**Sam & Ann Ennis**

**1121 Ocean Blvd, Topsail Beach**

Base Flood Elevation: 15'

Lowest Adjacent Grade: 4.9'

Existing Finished Floor Elevation (FFE): 14.1'

Target Post Elevation Finished Floor Elevation (FFE): 18.0'





PIN: 4212-14-7763-0000

Owner: ENNIS SAM G et al  
636 BAYSHORE DR  
WILMINGTON, NC 28411

Deed Ref: 4616/307

Property  
Address: 1121 OCEAN BLVD

Description: L 11 1/2 L10 PB 3/72 NEW TOPSAIL BEACH BLK 22

Sale Price: \$525,000

Sale Date: 2016-03-11

Plat: 00030072

Account No: 970045

Township: TOPSAIL

Subdivision: NEW TOPSAIL BEACH

Tax Codes: G01 C54 R40

Acres: 0.24

Land Value: \$445,500

Building Value: \$60,296

Total value: \$505,796

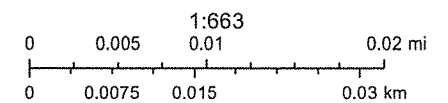
Deferred Value: \$0

Exempt Amount:

PCL Class: R

Heated Sq Feet: 1292

Pender County



1 inch = 55 feet

September 21, 2016





AGENT AUTHORIZATION FOR CAMA PERMIT APPLICATION

Name of Property Owner Requesting Permit: Sam Ennis / Ann Ennis  
 Mailing Address: 636 Bayshore Drive  
Wilmington, NC 28411  
 Phone Number: 910-352-3424  
 Email Address: ennisann7314@gmail.com  
 I certify that I have authorized Kyle Brevet, Pender Co. Planning Director  
 Agent / Contractor

to act on my behalf, for the purpose of applying for and obtaining all CAMA permits

necessary for the following proposed development: Elevation of my home  
through the Pender Co. Flood Mitigation Program

at my property located at 1121 Ocean Blvd, Topsail Beach, NC  
 in Pender County. 28445

I furthermore certify that I am authorized to grant, and do in fact grant permission to  
 Division of Coastal Management staff, the Local Permit Officer and their agents to enter  
 on the aforementioned lands in connection with evaluating information related to this  
 permit application.

Property Owner Information:

✓ Ann Ennis  
 Signature  
 ✓ Ann Ennis  
 Print or Type Name  
 ✓ owner  
 Title  
 ✓ 11, 17, 16  
 Date

This certification is valid through 1, 31, 2017



## AEC HAZARD NOTICE

Project Is In An: ☒ Ocean Erovable Area ☐ High Hazard Flood Area ☐ Inlet Hazard AreaProperty Owner: Ann and Sam EnnisProperty Address: 1121 Ocean Blvd, Topsail Beach, NC 28445

Date Lot Was Platted: \_\_\_\_\_

This notice is intended to make you, the applicant, aware of the special risks and conditions associated with development in this area, which is subject to natural hazards such as storms, erosion and currents. The rules of the Coastal Resources Commission require that you receive an AEC Hazard Notice and acknowledge that notice in writing before a permit for development can be issued.

The Commission's rules on building standards, oceanfront setbacks and dune alterations are designed to minimize, but not eliminate, property loss from hazards. By granting permits, the Coastal Resources Commission does not guarantee the safety of the development and assumes no liability for future damage to the development. Permits issued in the Ocean Hazard Area of Environmental Concern include the condition that structures be relocated or dismantled if they become imminently threatened by changes in shoreline configuration. The structure(s) must be relocated or dismantled within two (2) years of becoming imminently threatened, and in any case upon its collapse or subsidence.

The best available information, as accepted by the Coastal Resources Commission, indicates that the annual long-term average ocean erosion rate for the area where your property is located is \_\_\_\_\_ feet per year.

The rate was established by careful analysis of aerial photographs of the coastline taken over the past 50 years.

Studies also indicate that the shoreline could move as much as \_\_\_\_\_ feet landward in a major storm.

The flood waters in a major storm are predicted to be about \_\_\_\_\_ feet deep in this area.

Preferred oceanfront protection measures are beach nourishment and relocation of threatened structures. Hard erosion control structures such as bulkheads, seawalls, revetments, groins, jetties and breakwaters are prohibited. Temporary sand bags may be authorized under certain conditions.

The applicant must acknowledge this information and requirements by signing this notice in the space below. Without the proper signature, the application will not be complete.

Ann Ennis 12/6/16  
Applicant Signature Date

**SPECIAL NOTE:** This hazard notice is required for development in areas subject to sudden and massive storms and erosion. Permits issued for development in this area expire on December 31 of the third year following the year in which the permit was issued. Shortly before work begins on the project site, the Local Permit Officer must be contacted to determine the vegetation line and setback distance at your site. If the property has seen little change since the time of permit issuance, and the proposed development can still meet the setback requirement, the LPO will inform you that you may begin work. Substantial progress on the project must be made within 60 days of this setback determination, or the setback must be remeasured. Also, the occurrence of a major shoreline change as the result of a storm within the 60-day period will necessitate remeasurement of the setback. It is important that you check with the LPO before the permit expires for official approval to continue the work after the permit has expired. Generally, if foundation pilings have been placed and substantial progress is continuing, permit renewal can be authorized. It is unlawful to continue work after permit expiration.

For more information, contact:

Jason Dail, DGM  
Local Permit Officer  
127 Cardinal Drive Ext, Wilmington  
Address 28405  
Pender Co  
Locality  
(910) 796-7221  
Phone Number



Receipts for  
Certified Mail  
(Staple Here)

Sent via  
Certified Mail -  
Nov 30, 2016 105

11-30-16

Date

Jonathan Brandon

Adjacent Property Owner

506 Bridgeview Drive

Mailing Address

Lemoine, PA 17043

City, State, Zip Code

Dear Adjacent Property:

This letter is to inform you that I, SAM & Ann Ennis have applied for a CAMA Minor  
Property Owner

Permit on my property at 1121 Ocean Blvd in Topsail Beach,  
Property Address

Pender County. As required by CAMA regulations, I have enclosed a copy of my permit application and  
project drawing(s) as notification of my proposed project. No action is required from you or you may sign and return  
the enclosed no objection form. If you have any questions or comments about my proposed project, please  
contact me at 910-254-1202, or by mail at the address listed below. If you wish to  
Applicant's Telephone (Agent)

file written comments or objections with the CAMA Minor Permit Program, you may submit them to:

Jason Dail, DCM Field Representative  
LPO, Town of Topsail Beach  
NC DEQ / DCM  
127 Cardinal Drive Ext.  
Wilmington, NC 28405

SAM & Ann Ennis

Property Owner

636 Bayshore Dr

Mailing Address

Wilmington, NC 28411

City, State, Zip Code



Receipts for  
Certified Mail  
(Staple Here)

Sent via 106  
Certified Mail  
Nov 30, 2016

11-30-16  
Date Andrew Thexton  
Adjacent Property Owner  
12 Tule River Rd  
Mailing Address  
Richmond VA 23236  
City, State, Zip Code

Dear Adjacent Property:

This letter is to inform you that I, SAM & Ann Ennis have applied for a CAMA Minor  
Property Owner

Permit on my property at 1121 Ocean Blvd, Topsail Beach, in Topsail Beach,  
Property Address

Pender County. As required by CAMA regulations, I have enclosed a copy of my permit application and  
project drawing(s) as notification of my proposed project. No action is required from you or you may sign and return  
the enclosed no objection form. If you have any questions or comments about my proposed project, please  
contact me at 910-259-1202, or by mail at the address listed below. If you wish to  
Applicant's Telephone (Agent)

file written comments or objections with the CAMA Minor Permit Program, you may submit them to:

Jason Dail, DCM Field Representative  
LPO, Town of Topsail Beach  
NC DEQ / DCM  
127 Cardinal Drive Ext.  
Wilmington, NC 28405

SAM & Ann Ennis  
Property Owner  
636 Bayshore Drive  
Mailing Address  
Wilmington NC 28411  
City, State, Zip Code



PENDER COUNTY FLOOD MITIGATION ASSISTANCE PROGRAM (FMA)  
ELEVATION/RETROFITTING INDIVIDUAL UNIT SCOPE OF WORK

Unit #	2TB	Parcel ID	4212-14-7763
Owner's Name(s)	SAM & ANN ENNIS	Telephone	(239) 417-1372 or N/A
Street Address	1121 Ocean Boulevard	City/State/Zip	Topsail Beach NC 28445

1. General: All Elevation/Retrofitting work for this unit must be performed in strict accordance with the applicable sections of the General Scope of Elevation Work, the Engineering General Notes & Standard Details, Engineering Drawings #2TB-A/B/C, and the 2012 NC Residential Building Code.
2. Elevation Height: The main structure is to be elevated from the existing FFE of 14.1 feet NAVD to a minimum post-elevation FFE of 18.0 feet NAVD. (No HVAC below finished floor). Please note that the lowest portion of the entire living space (including all unheated storage and enclosed areas) is to be elevated to the minimum FFE shown above. The lowest adjacent grade is 4.9 feet NAVD.
3. Special Elevation Notes:
  - A. *Siding to be Removed:* Transite siding will need to be removed for the attachment of new pilings. Removal and disposal of asbestos containing materials to be performed by a licensed abatement contractor as required by law. Replace removed components with concrete shingles and finish to match the existing siding.
  - B. *Access #1.* Front (road side) - Raise the deck and wraparound walkway with the house. Remove the steps and turning platform.
  - C. *Access #2.* Back (ocean side) - Raise the covered porch and open deck with the house.
  - D. *Carport/Garage.* Saw cut the existing ground level slab as needed for the installation of new pilings.
4. Foundation Notes: Construct new timber pile/grade beam foundation as shown on Engineering Drawings #2TB-B/C.
5. Access Notes:
  - A. *Access #1.* Front (road side) - Construct a new set of steps and turning platforms and include all posts, handrails, railings, and pickets.
  - B. *Access #2.* Back (ocean side) - Construct a new set of steps from the raised deck to the existing beach access walkway and include handrails and pickets.
6. Utility Retrofitting Notes:
  - A. Construct a treated wood platform for the HVAC compressor unit at BFE +1 ft. elevation.
  - B. *Electrical Retrofit Note:* Disconnect underground service. Raise the exterior panel and meter base. Construct a new meter reader's platform and include posts, steps, railings, handrails, and pickets.
  - C. *Plumbing Retrofit Note:* Remove and restore plumbing supply lines to the outside shower.



7. Garage/Carport Post-Elevation Retrofit Notes:

- A. *Slab Restoration:* After pile installation, add compacted fill and concrete as needed to restore the slab.
- B. *Driveway/Sidewalk Restoration:* Restore driveway to pre-elevation condition.
- C. Relocate existing receptacles and light switches in new ground level storage room (one light with a light switch) to provide convenient access (at least one foot above BFE).
- D. *Miscellaneous Notes:* Remove the existing ground level storage room walls and construct a 9' x 12' storage room with breakaway walls as shown on attached drawings.





Coastal Management  
ENVIRONMENTAL QUALITY

PAT MCCRORY

Governor

DONALD R. VAN DER VAART

Secretary

BRAXTON DAVIS

Director

December 18, 2016

**CERTIFIED MAIL – 7011 0110 0000 3789 2389**  
**RETURN RECEIPT REQUESTED**

Sam and Ann Ennis  
636 Bayshore Drive  
Wilmington, NC 28411

**RE: DENIAL OF CAMA MINOR DEVELOPMENT**  
**PERMIT APPLICATION NUMBER- TB16-17**  
**PROJECT ADDRESS- 1121 Ocean Boulevard, Topsail Beach, NC**

Dear Mr. and Mrs. Ennis:

After reviewing your application in conjunction with the development standards required by the Coastal Area Management Act (CAMA) and our locally adopted Land Use Plan and Ordinances, it is my determination that no permit may be granted for the project which you have proposed.

This decision is based on my findings that your request violates NCGS 113A-120(a)(8) which requires that all applications be denied which are inconsistent with CAMA guidelines. Specifically, the development for which you applied consisted of replacement of a structure within the minimum development setback (measured 60 feet from the First Line of Stable Natural Vegetation (FLSNV), or 30 times the shoreline erosion rate of 2 feet/year, whichever is greater).

Your proposal is inconsistent with 15A NCAC 07J .0210 (1), which states: *“Replacement of structures damaged or destroyed by natural elements, fire or normal deterioration is considered development and requires CAMA permits. Replacement of structures shall be permitted if the replacements is consistent with CRC rules”*, and with 15A NCAC 7H .0306(a)(5), which states that: *“With the exception of those types of development defined in 15A NCAC 07H .0309, no development, including any portion of a building or structure, shall extend oceanward of the ocean hazard setback distance”*.

Should you wish to appeal my decision to the Coastal Resource Commission or request a variance from the Commission, please contact me so I can provide you with the proper forms and any other information you may require. The Division of Coastal Management in Morehead City must receive appeal notices within twenty (20) days of the date of this letter in order to be considered.



Page Two  
Sam and Ann Ennis  
December 18, 2016

Respectfully yours,

Jason Dail, LPO  
127 Cardinal Drive  
Wilmington, NC 28405

cc: Kyle Brewer, Agent, Planning Director for Pender County, PO Box 519, Burgaw, NC 28425





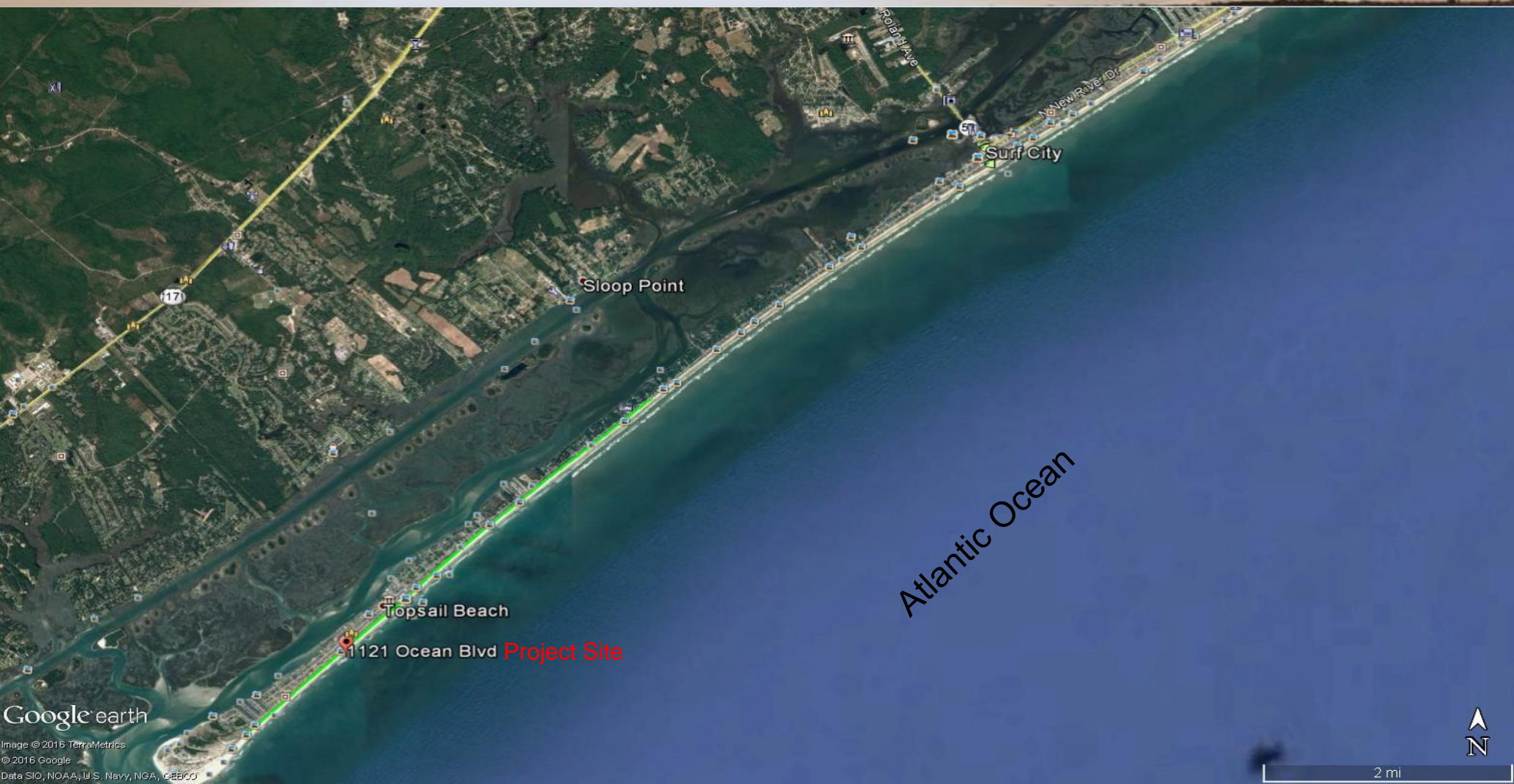
**Sam & Ann Ennis Variance Request**  
**1121 Ocean Blvd., Topsail Beach, Pender County**  
**February 8, 2017**

*Department of Environmental Quality*





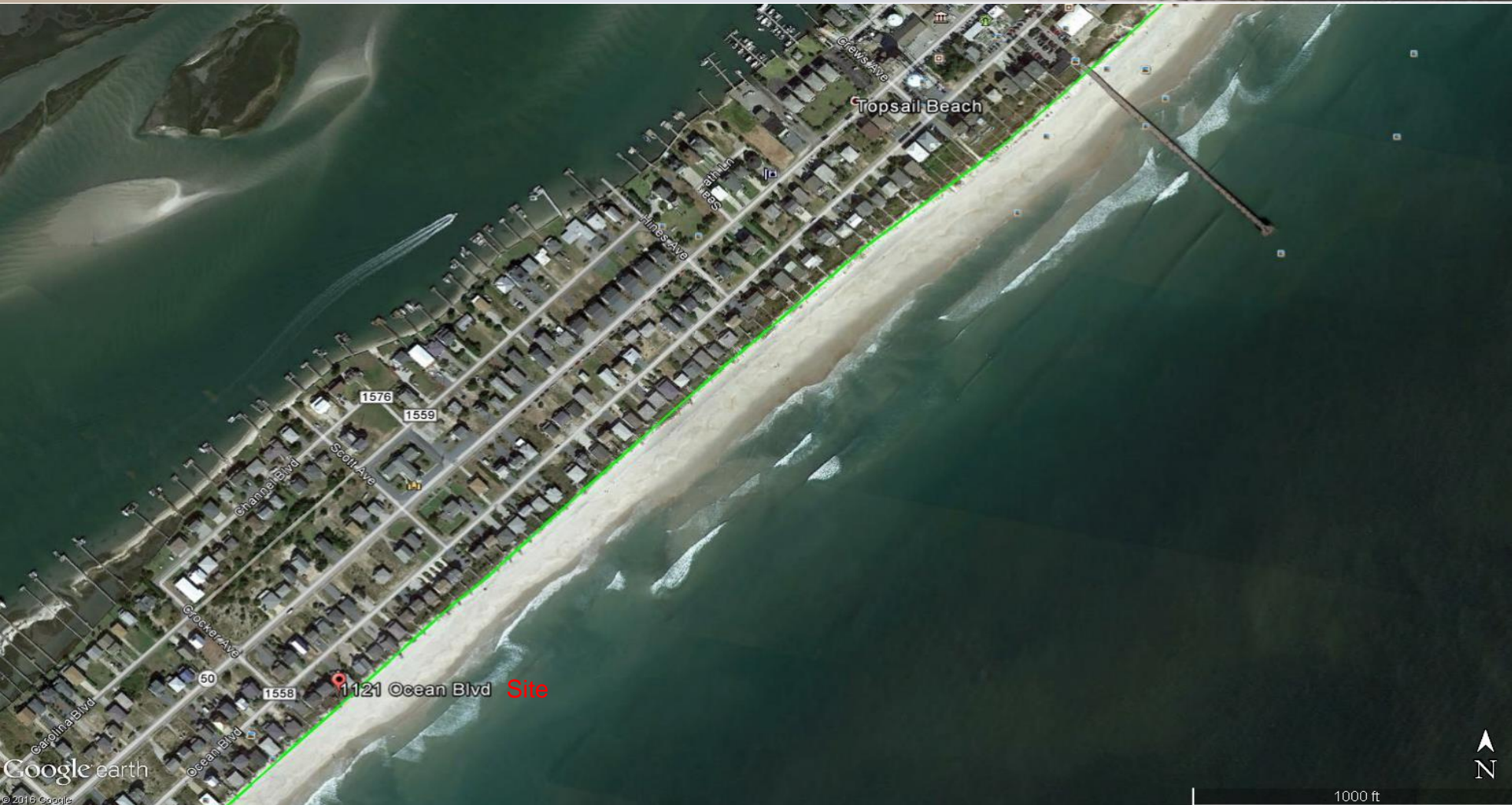
# Ennis Variance Request





# *Ennis Variance Request*

113



*Department of Environmental Quality*





# *Ennis Variance Request*

114



*Department of Environmental Quality*





# *Ennis Variance Request*

115



View of Petitioner's property  
looking East

Photo taken by DCM Staff 1/19/17



# *Ennis Variance Request*

116



View of Petitioner's property  
looking West

Photo taken by DCM Staff 1/19/17





# *Ennis Variance Request*

117



View of Petitioner's property  
looking North

Photo taken by DCM Staff 1/19/17



# *Ennis Variance Request*

118



View of Petitioner's property  
looking South

Photo taken by DCM Staff 1/19/17





# Ennis Variance Request

119



View of Petitioner's property  
looking South

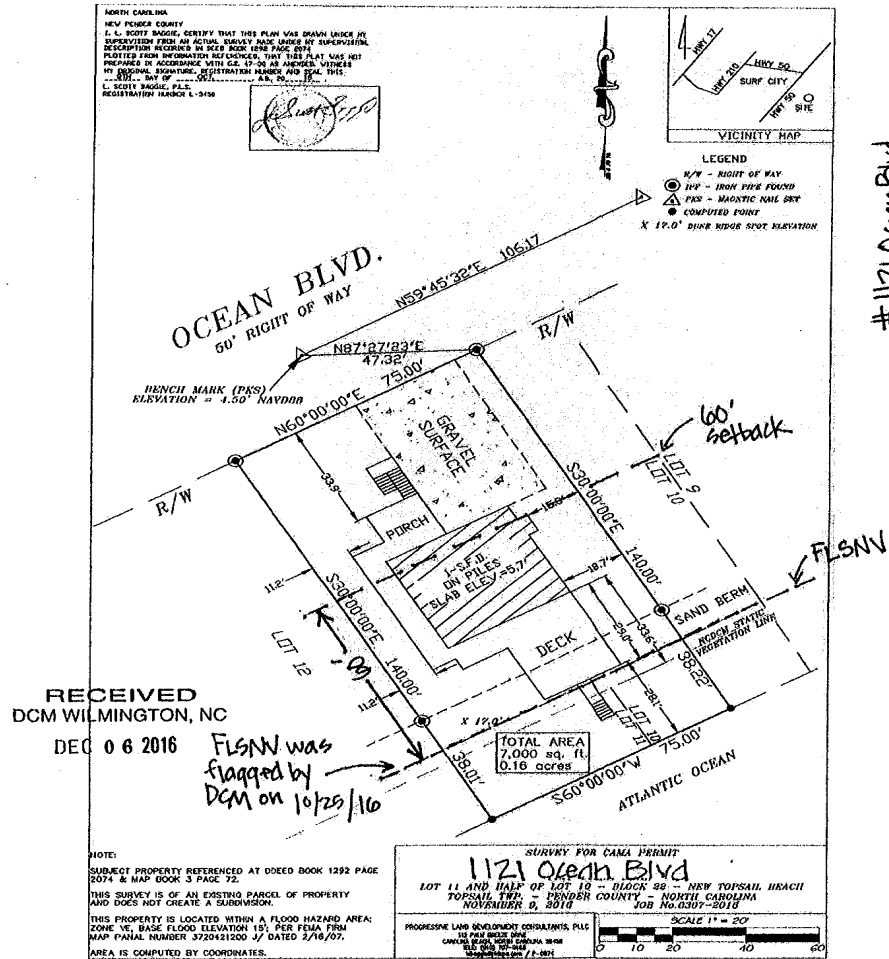
Photo taken by DCM Staff 1/19/17

Approx. FLSNV Staked by  
DCM Staff 10-25-16

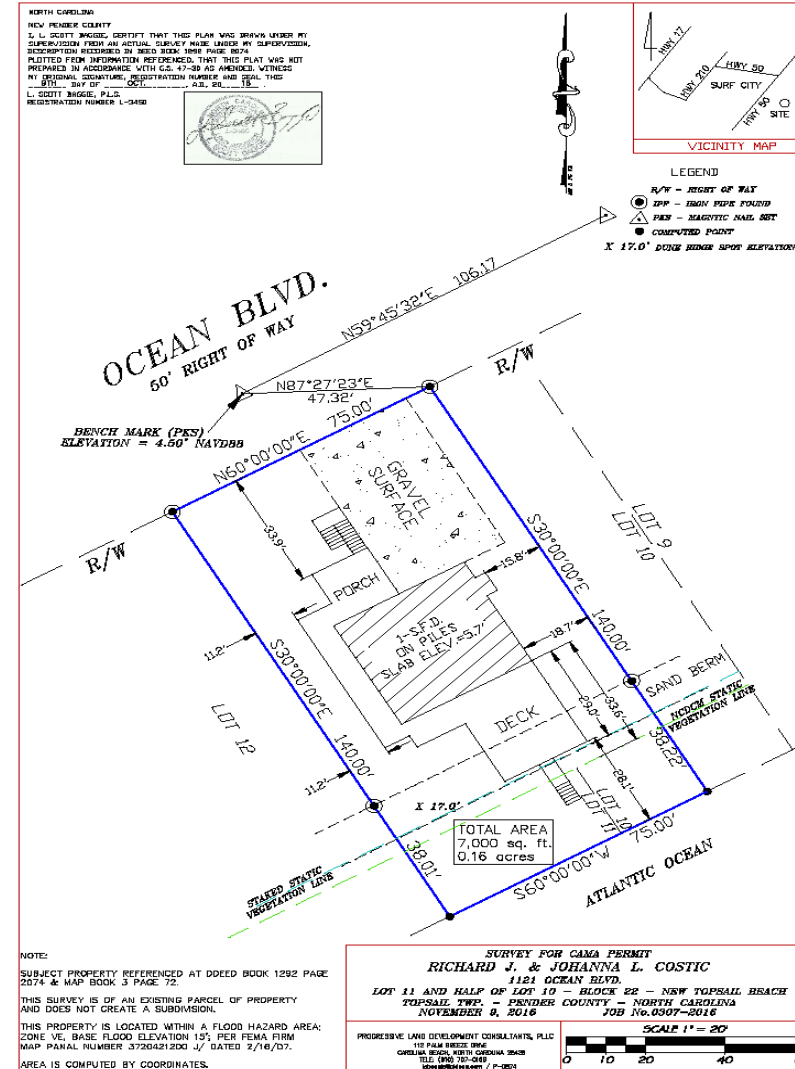


# Ennis Variance Request

120



# 1121 Ocean Blvd





## **VARIANCE CRITERIA** 15A NCAC 07J.0703 (f)

-to grant a variance, the Commission must affirmatively find each of the following factors listed in G.S. 113A-120.1(a).

- (A) that unnecessary hardships would result from strict application of the development rules, standards, or orders issued by the Commission;
- (B) that such hardships result from conditions peculiar to the petitioner's property such as the location, size, or topography of the property;
- (C) that such hardships did not result from actions taken by the petitioner; and
- (D) that the requested variance is consistent with the spirit, purpose and intent of the Commission's rules, standards or orders; will secure the public safety and welfare; and will preserve substantial justice.







ROY COOPER

*Governor*

WILLIAM G. ROSS, JR.

*Acting Secretary*

BRAXTON DAVIS

*Director*

**CRC-17-01**

**January 20, 2017**

**MEMORANDUM**

**TO:** Coastal Resources Commission  
**FROM:** Jonathan Howell  
**SUBJECT:** Approval of Fiscal Analysis for Amendments to 15A NCAC 7H .2200 General Permit for the construction of Freestanding Moorings in Estuarine Waters and Public Trust Areas and Ocean Hazard Areas

The CRC approved several proposed changes to your Freestanding Moorings and Osprey Pole General Permit, and staff has drafted the required fiscal analysis (attached). The Department has approved the fiscal analysis, and it is currently under review at the Office of State Budget and Management (OSBM). OSBM may require more information be included in the fiscal analysis, and receiving their approval of the analysis prior to CRC meeting is unlikely.

DCM's analysis found that this rule action will result in a net financial benefit, primarily to private property owners of approximately \$50 per permit plus the cost of drawings (\$1,000) for a total savings of \$1,050 per year. Assuming an annual maximum savings of \$1,050 the 10-year present value of the benefits of the proposed rule change to property owners is approximately \$7,375, using a 7% discount rate. While the size of that benefit may change prior to final OSBM approval, any such changes are expected to be well below the threshold for being considered substantial which is defined as one million dollars or more in a 12-month period.

The commission has the option of approving the fiscal analysis at your next meeting, subject to changes requested by OSBM, which will allow the rules to proceed to public hearing. Alternatively, the commission can hold your approval until OSBM's approval is secured, and take action at your April meeting. At your upcoming meeting, staff will update the commission on the status with OSBM, and will be prepared to discuss these options with you.

attachment





## **Fiscal Analysis**

Amendment to the General Permit for the construction of Freestanding Moorings in Estuarine Waters and Public Trust Areas and Ocean Hazard Areas

Prepared by

Jonathan Howell  
NC Division of Coastal Management  
(252) 948-3851

January 18, 2017



## Basic Information

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Agency	DEQ, Division of Coastal Management (DCM) Coastal Resources Commission
Citations and Titles	15A NCAC 7H .2201 – Purpose 15A NCAC 7H .2202 – Approval Procedures 15A NCAC 7H .2204 – General Conditions 15A NCAC 7H .2205 – Specific Conditions
Description of the Proposed Rules	Section 7H .2200 defines specific development requirements for the construction of Freestanding Moorings. The proposed rule change amends language in Rules 7H .2201, 7H .2202, 7H .2204 and 7H .2205 to make the General Permit consistent with other rules related to General Permits for dockage as well as incorporates language for the permitting of bird nesting poles. This would also change the title of Section .2200 to reflect the Rule changes in this Section.
Agency Contact	Jonathan Howell District Manager, Washington Regional Office Jonathan.Howell@ncdenr.gov (252) 948-3851
Authority	113A-107; 113A-107(b); 113A-113(b)(6); 113A-118.1; 113A-119.1.
Necessity	The Coastal Resources Commission is proposing to amend its administrative rules to expand this General Permit to include bird nesting poles as well as make this General Permit consistent with General Permit 7H .1200. The proposed rule changes are consistent with G.S. 150B-19.1(b) which requires agencies to identify existing rules that are unnecessary, unduly burdensome, or inconsistent with the principles set forth in 150B-19.1(a) and modify them to reduce regulatory burden.
Impact Summary	State government: Yes Local government: No Substantial impact: No Federal government: No Private entities: Yes



## Summary

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In 1996, the Coastal Resources Commission (CRC) adopted Coastal Area Management Act (CAMA) General Permit 15A NCAC 7H .2200 for the construction of Freestanding Moorings. This General Permit was adopted to allow the public to receive a General Permit for residential moorings in Estuarine Waters.

Since this rule was last updated, the Commission has also adopted a number of rule changes to the General Permit for docking facilities (15A NCAC 07H .1200). These rule changes included requiring a minimum water depth of two feet within a Primary Nursery Area to place a formalized mooring, unless additional agency coordination occurs, limiting the number of slips allowed under a General Permit to two, and limiting docking facilities to 1/4 the width of the waterbody. This proposed rule amendment to 07H .2200 will make it consistent with the conditions presently applied to other permits that provide for the mooring of vessels (07H .1200). Additionally, the Division of Coastal Management (DCM) is approached periodically with requests for permits to construct Osprey Poles to attract ospreys for bird watching. Although the permitting of a single piling for this type of activity is not major development, the request does not fall within the parameter of any existing General Permit the CRC presently offers. Due to this circumstance, applicants have been required to obtain a CAMA Major Permit for this activity. This proposed rule change will alleviate the issue of requiring a Major Permit for an individual pole and provide conditions for the placement of bird nesting poles in Estuarine Waters.

The economic impacts of this proposed rule change are benefits to riparian property owners in terms of both time and fees. To continue to require a Major Permit for bird nesting poles, applicants must pay a fee of \$250 for the Major Permit. The adoption of this rule language would allow the applicant to pay a fee of \$200 for the General Permit for this activity. Applicants will also save the cost of design drawings (up to \$1,000) that often accompany a Major Permit application. Project applicants will also realize a time savings as the proposed amendments will allow these projects to be permitted within a few days under the General Permit process as opposed to 75 days under the Major Permit process. In addition, state and federal agencies will realize a time savings by not having to review these projects under the Major Permit process thereby devoting more time to other project reviews. Over the past 10 years, the Division has been approached about bird nesting poles on average of once per year. These requests are often abandoned due to the time and financial requirements to receive a CAMA Major Permit for a single pole for bird nesting. Based on agency staff experience, it is expected that project applications will increase to at least one per year due to shortened review time and removing the application drawing requirements that accompany a Major Permit. Assuming no change in the permit fee as well as removing the drawing requirements, the financial benefits to private riparian property owners would be approximately \$50 per permit plus the cost of drawings (\$1,000) for a total savings of \$1,050 per year. Assuming an annual maximum savings of \$1,050 the 10-year present value of the benefits of the proposed rule change to property owners is approximately \$7,375, using a 7% discount rate. As mentioned above, there would also be additional time savings from the shortened review process.

These amendments will have no impact on NC Department of Transportation (NC DOT) projects, local governments or the federal government. It is estimated that DCM will see additional fee revenue of \$50 per year from the proposed rule amendments. Assuming an annual increase in permit fees of \$50, the 10-year present value of the benefits of the proposed rule change to property owners is approximately \$351 using a 7% discount rate. DCM and other



state/federal permit review agencies will realize a time-savings benefit by not having to review applications for bird nesting poles under the more rigorous Major Permit process.

While local governments are eligible for the General Permit for Freestanding Moorings, they generally do not request such permits. These amendments therefore are not expected to have fiscal impacts on local governments. However, local governments may propose a bird nesting pole in which case they may also benefit from the decrease in permit fee and the permitting time savings should they apply for such a permit.

The proposed effective date of these amendments is September 1, 2017.

### **Description of Rule Amendment**

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15A NCAC 7H .2201 includes the purpose of the General Permit. This rule allows this General Permit to be used for the construction of bird nesting poles as well as Free Standing Moorings broadening the eligible activities this General Permit encompasses.

15A NCAC 7H .2202 outlines approval procedures of the General Permit. Amendments to this rule include updating standard language to detail at which point a General Permit may be elevated to a Major Permit when comments have been received offering objections to the proposed project.

15A NCAC 7H .2204 outlines General Conditions of the General Permit. Amendments to this rule are limited to defining what a bird nesting pole is and altering the lettering of the rules, as well as removing language regarding transfer or removal of the bird nesting pole or free standing mooring.

Since these rules were last updated, the Division has adopted a number of rule changes to the General Permit for docking facilities (15A NCAC 07H .1200). Proposed amendments to 15A NCAC 7H .2205 include requiring a minimum water depth of two feet within a Primary Nursery Area to place a formalized mooring, unless additional agency coordination occurs, limiting the number of slips allowed under a General Permit to two, and limiting docking facilities to 1/4 the width of the waterbody. This proposed rule change to 07H .2205 (General Conditions) will make it consistent with the conditions presently applied to other permits that provide for the mooring of vessels, as well as provide conditions for the permitting of bird nesting poles.

Based on these proposed rule amendments the title of Section .2200 is amended to reflect these changes.

### **Cost or Neutral Impacts**

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#### Private Property Owners:

The fiscal impact of the proposed rule changes are potential financial benefits to private riparian property owners in terms of both time and fees. Presently, a CAMA Major Permit is required for bird nesting poles and applicants must pay a fee of \$250 for the Major Permit. The adoption of this rule language would allow the applicant to pay a fee of \$200 for the General Permit for this activity resulting in a \$50 savings. Applicants will also save the cost of design drawings (up to \$1,000) that often accompany a Major Permit application. As DCM Staff expect there to be one



permit per year in requests, private riparian property owners will realize a cost savings of \$1,050 per year. Assuming an annual maximum savings of \$1,050 the 10-year present value of the benefits of the proposed rule change to property owners is approximately \$7,375, using a 7% discount rate.

Project applicants will also realize a time savings as the proposed amendments will allow these projects to be permitted within a few days under the General Permit process as opposed to 75 days under the Major Permit process.

#### NC Department of Transportation (NC DOT):

While NC DOT is eligible for the General Permit for Freestanding Moorings, NC DOT generally does not request such permits and therefore pursuant to G.S. 150B-21.4, the proposed amendments to 15A NCAC 7H .2201, 7H .2202, 7H .2204, 7H .2205 and Section .2200 will not affect environmental permitting for the NC DOT. Likewise, while NC DOT is eligible for the General Permit for bird nesting poles, DCM Staff have not seen requests in the past from NC DOT for such a project. However, NC DOT may propose a bird nesting pole as an enhancement to a NCDOT project in the future and if so, may realize a benefit from the decrease in permit fee and permitting time.

#### Local Government:

While local governments are eligible for the General Permit for Freestanding Moorings, they generally do not request such permits. These amendments therefore are not expected to have fiscal impacts on local governments. However, local governments may propose a bird nesting pole in the future in which case they may also benefit from the decrease in permit fee and the permitting time savings.

#### Division of Coastal Management (DCM):

It is estimated that DCM will see additional fee revenue of \$50 per year from the proposed rule amendments. Assuming an annual increase in permit fees of \$50, the 10-year present value of the benefits of the proposed rule change to DCM is approximately \$351 using a 7% discount rate. DCM and other state/federal permit review agencies will realize a time-savings benefit by not having to review applications for bird nesting poles under the more rigorous Major Permit process.

### **Cost/Benefits Summary**

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#### Private Property Owners:

The proposed amended rules for the construction of Free Standing Moorings and Bird Nesting Poles would apply to private riparian property owners. Over the past 10 years, the Division of Coastal Management has reviewed an average of one bird nesting pole permit per year. Expansion of the General Permit is anticipated to result in a shorter application process and a faster review of future projects.

The economic impacts of these proposed rule changes are potential financial benefits to private riparian property owners in terms of both time and fees. Presently, a CAMA Major Permit is required for bird nesting poles and applicants must pay a fee of \$250 for the Major Permit. The



adoption of this rule language would allow the applicant to pay a fee of \$200 for the General Permit for this activity resulting in a \$50 savings. Applicants will also save the cost of design drawings (up to \$1,000) that often accompany a Major Permit application resulting in a total savings of \$1,050 per year. Project applicants will also realize a time savings as the proposed amendments will allow these projects to be permitted within a few days under the General Permit process as opposed to 75 days under the Major Permit process. In addition, state and federal agencies will realize a time savings by not having to review these projects under the Major Permit process thereby devoting more time to other project reviews. The impact is not expected to be substantial.



## APPENDIX A

### SECTION .2200 - GENERAL PERMIT FOR CONSTRUCTION OF FREESTANDING MOORINGS AND BIRD NESTING POLES IN ESTUARINE WATERS AND PUBLIC TRUST AREAS AND OCEAN HAZARD AREAS

#### 15A NCAC 07H .2201 PURPOSE

A general permit pursuant to this Section shall allow the construction of freestanding moorings and bird nesting poles in the estuarine waters and public trust areas AECs according to the procedures provided in 15A NCAC 07J .1100 and according to the rules in this Section. This permit shall not apply to waters adjacent to oceanfront shorelines or to waters and shorelines adjacent to the Ocean Hazard AEC with the exception of those shorelines that feature characteristics of the Estuarine Shoreline AEC. Such features include the presence of wetland vegetation, lower wave energy, and lower erosion rates than the adjacent Ocean Erodible Area.

*History Note: Authority G.S. 113A-107; 113A-118.1;  
Eff. February 1, 1996;  
Amended Eff. April 1, 2003.*

#### 15A NCAC 07H .2202 APPROVAL PROCEDURES

(a) An applicant for a General Permit under this Subchapter shall contact the Division of Coastal Management and request approval for development.

(b) The applicant shall provide:

- (1) information on site location, dimensions of the project area, and his/her name and address;
- (2) a dated plat(s) showing existing and proposed development; and
- (3) evidence ~~confirmation~~ that:
  - (A) a written statement has been obtained and signed by the adjacent riparian property owners indicating that they have no objections to the proposed work; or
  - (B) the adjacent riparian property owners have been notified by certified mail of the proposed work. The notice shall instruct adjacent property owners to provide any comments on the proposed development in writing for consideration by permitting officials to the Division of Coastal Management within 10 days of receipt of the notice, and, indicate that no response shall be interpreted as no objection. DCM staff shall review all comments. If DCM determines that:
    - (i) the comments are relevant to the potential impacts of the proposed project; and
    - (ii) The Division of Coastal Management shall review all the permitting issues raised by the comments and determine, are worthy of more detailed review; based on their relevance to the potential impacts of the proposed project, if the proposed project can be approved by a General Permit. If the Division of Coastal Management determines that the project exceeds the guidelines established by the General Permit Process, DCM shall notify the applicant that he must submit an application for a major development permit. permit shall be required.
  - (c) Approval of individual projects shall be acknowledged in writing by the Division of Coastal Management and the applicant shall be provided a copy of this Section. Construction authorized by this permit shall be completed within 120 days of permit issuance or the general authorization expires and a new permit shall be required to begin or continue construction.

*History Note: Authority G.S. 113A-107; 113A-118.1;  
Eff. February 1, 1996;  
Amended Eff. August 1, 2007.*

#### 07H .2203 PERMIT FEE

The applicant shall pay a permit fee of two hundred dollars (\$200.00). This fee shall be paid by check or money order made payable to the Department.

*History Note: Authority G.S. 113A-107; 113A-118.1; 113A-119; 113A-119.1;*



#### 15A NCAC 07H .2204 GENERAL CONDITIONS

(a) A "freestanding mooring" is any means to attach a ship, boat, vessel, floating structure or other water craft to a stationary underwater device, mooring buoy, buoyed anchor, or piling (as long as the piling is not associated with an existing or proposed pier, dock, or boathouse).

(b) A "bird nesting pole" is any pole or piling erected, with a platform on top, specifically with the purpose of attracting birds for nesting.

(b)(c) Freestanding moorings and bird nesting poles authorized by this permit shall be for the exclusive use of the riparian landowner(s) in whose name the permit is issued, and shall not provide either leased or rented moorings or any other commercial services.

(e)(d) There shall be no unreasonable interference with navigation or use of the waters by the public by the existence of freestanding moorings authorized by this permit.

(d)(e) This general permit may not be applicable to proposed construction when the Department determines that the proposal might significantly affect the quality of the human environment or unnecessarily endanger adjoining properties. In those cases, individual permit applications and review of the proposed project shall be required according to 15A NCAC 7J.

(e)(f) Development carried out under this permit ~~must~~ shall be consistent with all local requirements, AEC Guidelines in 7H .0100 et. seq. and local land use plans current at the time of authorization.

(f)(g) Individuals shall allow authorized representatives of the Department of ~~Environment, Health, and Natural Resources~~ Environmental Quality to make periodic inspections at any time deemed necessary in order to be sure that the activity being performed under the authority of this general permit is in accordance with the terms and conditions prescribed herein.

(g) Freestanding mooring(s) shall not be transferable or assignable. Upon transfer of riparian property ownership, the mooring(s) must be removed by the original permittee unless a new permit is issued to the new riparian owner

History Note: Authority G.S. 113A-107; 113A-118.1;  
Eff. February 1, 1996.

#### 15A NCAC 07H .2205 SPECIFIC CONDITIONS

(a) Freestanding moorings and bird nesting poles may be located up to a maximum of 400 feet from the mean high water line, or the normal water line, whichever is applicable.

(b) Freestanding moorings and bird nesting poles along federally maintained channels ~~must~~ shall meet US Army Corps of Engineers guidelines.

(c) Freestanding moorings in no case shall extend more than ~~4/31/4~~ the width of a natural water body or man-made canal or basin.

(d) Freestanding mooring buoys and piles shall be evaluated based upon the arc of the swing including the vessel to be moored. Moorings and the attached vessel shall not interfere with the access to any riparian property, and shall have a minimum setback of 15 feet from the adjacent property lines extended into the water at the points that they intersect the shoreline. The minimum setbacks provided in ~~the this rule~~ Rule may be waived by the written agreement of the adjacent riparian owner(s), or when two adjoining riparian owners are co-applicants. Should the adjacent property be sold before construction commences, the applicant shall obtain a written agreement with the new owner waiving the minimum setback and submit it to the Division of Coastal Management prior to initiating any development of freestanding moorings. The line of division of areas of riparian access shall be established by drawing a line along the channel or deep water in front of the property, then drawing a line perpendicular to the line of the channel so that it intersects with the shore at the point the upland property line meets the water's edge.

(e) The total number of ~~docking/mooring~~ docking or mooring facilities to be authorized via a CAMA General permit ~~permit, a Certificate of Exemption or any combination of the two~~ may shall not exceed ~~two~~ four per property.

(f) Bird nesting poles shall be limited to one per property. Any proposal to change the location of a previously permitted bird nesting pole shall require additional authorization from the Division of Coastal Management.

(f)(g) Freestanding moorings and bird nesting poles shall not significantly interfere with shellfish franchises or leases. Applicants for authorization to construct freestanding moorings and bird nesting poles shall provide notice of the permit application to the owner of any part of a shellfish franchise or lease over which the proposed installation would extend.



~~(h)~~ Freestanding moorings shall not be constructed in a designated Primary Nursery Area with less than two feet of water at normal low water level or normal water level under the general permit set forth in this Section without prior approval from the Division of Marine Fisheries or the Wildlife Resources Commission.

~~(i)~~ Freestanding moorings located over shellfish beds or submerged aquatic vegetation (as defined by the Marine Fisheries Commission) may be constructed without prior consultation from the Division of Marine Fisheries or the Wildlife Resources Commission if the following two conditions are met:

(1) Water depth at the freestanding mooring location is equal to or greater than two feet of water at normal low water level or normal water level; and

(2) The freestanding mooring is located to minimize the area of submerged aquatic vegetation or shellfish beds under the structure as determined by the Division of Coastal Management.

~~(g)(j)~~ Freestanding moorings and bird nesting poles shall not be established in submerged utility cable/pipe crossing areas or in a manner which that interferes with the operation of an access through any bridge.

~~(h)(k)~~ Freestanding moorings and bird nesting poles shall be marked or colored in compliance with U.S. Coast Guard and N.C. Wildlife Resource Commission requirements and the required marking maintained for the life of the mooring(s). At minimum, permanent reflectors shall be attached to the structure in order to make it more visible during hours of darkness or inclement weather.

~~(i)(l)~~ Freestanding moorings ~~must shall~~ bear the owner's name, vessel State registration numbers or U.S. Customs Documentation numbers. Required identification ~~must shall~~ be legible for the life of the mooring(s).

~~(j)(m)~~ The type of material used to anchor a proposed mooring buoy(s) ~~must shall~~ be non-polluting and of sufficient weight and design to safely anchor the buoy and vessel.

~~(k)~~ If use of any freestanding mooring authorized by this General permit is discontinued for a period of 12 months or more, it must be removed by the permittee.

~~(l)(n)~~ Mooring buoys authorized by this General permit ~~must shall~~ be a minimum 12" in diameter or otherwise be designed to be easily recognized and not present a hazard to navigation.

~~(m)~~ Existing freestanding moorings (i.e. buoys/pilings) may be maintained in place for two years. However, if the mooring(s) deteriorate or are damaged such that replacement is necessary during the two-year period, the mooring(s) then must comply with those guidelines of the Division in place at that time. In any event, existing moorings must comply with these Rules within two years.

~~(o)~~ The platform located at the apex of the bird nesting pole shall not exceed 3' x 3' and shall not have sides.

~~(n)(p)~~ This permit does not relieve the permit holder of the responsibility to ensure that all other State and Federal permit requirements are met prior to implementation of the project.

*History Note: Authority G.S. 113A-107; 113A-118.1;  
Eff. February 1, 1996.*





ROY COOPER

*Governor*

MICHAEL S. REGAN

*Secretary*

BRAXTON DAVIS

*Director*

January 24, 2017

**MEMORANDUM**

**CRC-17-02**

**TO:** Coastal Resources Commission

**FROM:** Ken Richardson, *Shoreline Management Specialist*

**SUBJECT:** Fiscal Analysis Approval - 15A NCAC 7H .1300 Development Line Procedures  
- Mean High Water, Easements and Other Lines

On December 1, 2016, the CRC voted in support of amending Development Line Procedure Rules (15A NCAC 7H .1300) in order to provide clarity that will help petitioners better understand how to delineate their development line, while also making the review process for both the CRC and DCM staff more efficient. The Department has approved the fiscal analysis associated with this rule amendment and it is currently under review at the Office of State Budget and Management (OSBM). It is unknown at this point if OSBM will be able to complete its review of the analysis prior to the upcoming CRC meeting.

DCM's analysis found that these amendments serve only to clarify existing rules and that there are no anticipated cost impacts on local governments, private property owners, NC DOT, or the Division of Coastal Management. As such, these changes are expected to be well below the threshold for being considered substantial which is defined as one million dollars or more in a 12-month period.

The commission has the option of approving the fiscal analysis at your upcoming meeting, subject to changes that may be requested by OSBM, which will allow the rules to proceed to public hearing. Alternatively, the commission can hold your approval until OSBM's approval is secured, and take action at your April meeting. At your upcoming meeting, staff will update the commission on the status with OSBM, and will be prepared to discuss these options with you.

**Attachments:**

- (A) Proposed Amendments 15A NCAC 07H .0306 General Use Standards for Ocean Hazard Areas
- (B) Proposed Amendments 15A NCAC 07J .1300 Development Line Procedures



**ATTACHMENT (A):**

**Fiscal Analysis**

**General Use Standards for Ocean Hazard Areas**  
15A NCAC 07H .0306(a)(3)

**Development Line Procedures**  
15A NCAC 07J .1301(e)(2)

Prepared by

Ken Richardson  
Shoreline Management Specialist  
Policy & Planning Section  
NC Division of Coastal Management  
(252) 808-2808

January 19, 2017



## Basic Information

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Agency	DEQ, Division of Coastal Management (DCM) Coastal Resources Commission (CRC)
Title	PROPOSED AMENDMENTS TO DEVELOPMENT LINE PROCEDURES AND THE GENERAL USE STANDARDS FOR OCEAN HAZARD AREAS
Citation	15A NCAC 07H .0306 AND 15A NCAC 07J .1301
Description of the Proposed Rule	15A NCAC 07J .1300 are procedures for requesting, approving and managing oceanfront Development Lines, and specify information that is to be submitted to the Coastal Resources Commission by the Petitioner. General Use Standards for Ocean Hazard Areas 15A NCAC 07H .0306(a)(3) define the seaward limit where an oceanfront Development Line can be established. The proposed amendments are intended to both clarify how to determine the oceanward limit, and what information is to be submitted to the Coastal Resources Commission.
Agency Contact	Ken Richardson Shoreline Management Specialist Ken.Richardson@ncdenr.gov (252) 808-2808 ext. 225
Authority	G.S. 113A-107; 113A-113; 113A-124
Necessity	The Coastal Resources Commission proposes amendments to the Development Line Procedures and General Use Standards for Coastal Hazard Areas for the purpose of clarifying existing rules.
Impact Summary	State government: No Local government: Minimal Substantial impact: No Federal government: No



## **Summary**

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The North Carolina Coastal Resources Commission (CRC) requires that oceanfront development be set back from a defined reference line that is generally either the oceanward edge of natural vegetation, or a surveyed line for communities that have completed large beach nourishment projects.

A reference line called a Development Line allows a local government to delineate the most oceanward location for new development, and must be approved by the CRC. Development Line Procedures in 15A NCAC 07J .1300 establish the process for requesting, approving and managing oceanfront Development Lines. The CRC is proposing an amendment to 15A NCAC 07J .1301(e)(2) to clarify existing use standards for the Development Lines as to what information is to be submitted by the Petitioner.

Should a local government choose to adopt a Development Line for CRC approval, it is not anticipated that these proposed amendments will require any additional costs to the Petitioner as it is only clarification of existing rules

This proposal will have no impact on Department of Transportation projects or on DCM permit receipts.

The estimated effective date of these rules is September 1, 2017.

## **Description of Proposed Actions**

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Residential and commercial development built adjacent to the ocean shoreline may be vulnerable to erosion and storm surge. Under the NC Coastal Area Management Act (CAMA), hardened erosion protection structures are generally not allowed on the ocean shoreline; therefore, local governments use beach fill (nourishment) as a means to protect oceanfront property from storm damage and to address chronic erosion issues.

While the first line of stable-natural vegetation (FLSNV) has been used as an oceanfront setback measurement line since 1979, the CRC determined that the vegetation on nourished beaches was not “stable and natural” and should not be used for measuring oceanfront setbacks. In 1995 the CRC codified a method of measuring setbacks on nourished beaches that utilizes the surveyed pre-project vegetation line, which became known as the “static line.” The CRC’s static line rule was based on three primary issues: 1) evidence that nourished beaches can have higher erosion rates than natural ones, 2) no assurance that funding for future nourishment projects would be available for maintenance work as the original project erodes away, and 3) structures could be more vulnerable to erosion damage since their siting was tied to an artificially-forced system. The intent of the static line provisions has been to recognize that beach nourishment is an erosion response



necessary to protect existing development but should not be a stimulus for new development on sites that are not otherwise suitable for building. Once a static line is established it does not expire.

Prior to 2009, a community that completed construction of a large-scale beach fill project was required to measure construction setbacks from the static line or the first line of stable-natural vegetation, whichever was more landward. Over time, the Commission found that some communities had demonstrated a long-term commitment to beach nourishment and maintenance of their nourished beaches. Due to this long-term commitment, the vegetation had become stable and migrated oceanward of the static line. In many cases, proposed development on lots within these communities could meet the required setback from the natural vegetation line, but could not be permitted since they did not meet the setback from the static vegetation line.

To recognize local government efforts to address erosion through long-term beach nourishment and offer relief from the Static Vegetation Line requirements, the CRC adopted Static Vegetation Line Exception Procedures in 2009. The procedures require local communities to petition the CRC for an exception to the static line that allows property owners within that community to measure construction setbacks from the first line of stable-natural vegetation instead of the static line, under specific conditions. To qualify for the exception, communities must demonstrate that they have a source of sand and a funding mechanism to continue beach nourishment for at least 30 years. The CRC also requires communities to update this information every five years in order to maintain the exception. Several local governments have applied for and received Static Line Exceptions, and have now had them in place for up to seven years.

In 2015, the CRC adopted oceanfront Development Line rules to serve as an alternative to the Static Vegetation Line Exception in response to local governments growing concerns with difficulties and costs associated with the Static Vegetation Line rules and its exception procedures. Development Line procedures went into effect on April 1, 2016.

Development Line procedures differ from those specified under the Static Vegetation Line Exception in that they require a local government to establish a construction limit (Development Line) that would prevent structures from being sited any farther seaward; include language in local ordinances to define and address the Development Line, and; submit maps and documentation to the CRC for their review and approval. Once a Development Line has been approved by the CRC, a local government can then measure construction setbacks from FLSNV instead of the static vegetation line.

Since April-2016, the CRC has approved two Development Lines submitted by local governments. During the process of reviewing information submitted by local governments, the CRC determined that additional clarification was needed in existing rules to make the review process more efficient while also reducing potential for denial or delay of approval only because insufficient information was submitted.



## DEVELOPMENT LINE AMENDMENTS

The CRC proposing amendments to 15A NCAC 07H .0306(a)(3) and 15A NCAC 07J .1301(e)(2):

1. 15A NCAC 07H .0306(a)(3) under GENERAL USE STANDARDS FOR OCEAN HAZARD AREAS

Defines restrictions on placement of a Development Line. Development Lines shall not be established on publicly-owned lands. Depending on the community and scope of any prior beach nourishment project(s), the boundary separating public and private land ownership can vary. This amendment provides additional clarity.

2. 15A NCAC 07J .1301(e)(2) under Procedures for Requesting a Development Line

Specifies information needed for the Coastal Resources Commission's review and approval. 15A NCAC 07H .0306(a)(3) restricts the placement of a Development Line by stating that in no case shall a Development Line be oceanward of Mean High Water (MHW); however, 15A NCAC 07J .1301(e)(2) does not currently require the MHW line to be submitted, or shown on a map relative to a local government's proposed Development Line. Without the MHW line, the CRC cannot fully review and make a determination.

## **Anticipated Impacts**

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### Local Governments:

These amendments are only intended to add clarity to existing rules, while potentially making the Coastal Resources Commission's review process more efficient, and reducing potential for delay in the CRC approving a local government's proposed Development Line. These proposed amendments will not change the CRC's approach to permitting.

### Private Property Owners:

Privately owned structures cannot be built on publically owned lands; therefore, these amendments do not create additional restrictions on private property owners. There are no anticipated costs to private property owners as a result of these proposed amendments.

### NC Department of Transportation (DOT):

Pursuant to G.S. 150B-21.4, no impacts to NCDOT permitting are anticipated from the proposed amendments to 15A NCAC 07H .0306 and 15A NCAC 07J .1200. The amended rules do not create any new procedures or restrictions that would affect NCDOT permits. Development such as roads,



parking lots, and other public infrastructure such as utilities continue to have a minimum setback factor of sixty feet (60) or thirty (30) times the shoreline erosion rate (whichever is greater) as defined by 07H.0306(a)(2)(I). In the event NCDOT needs to build or maintain a road located within an Ocean Hazard AEC, the proposed amendments will not change the CRC's approach to permitting that activity.

#### Division of Coastal Management:

The Division of Coastal Management's permit review process will not be changed by these amendments and DCM does not anticipate changes in permitting receipts due to the proposed action. Review of Development Line proposals require approximately four hours of staff's time for each community. There would be no increased cost for staff's time as a direct result of the proposed amendments.

#### **Cost/Benefit Summary**

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Because amendments to 15A NCAC 07H .0306 and 15A NCAC 07J .1300 only serve to clarify existing rules, there are no anticipated cost impacts on local governments, private property owners, NC DOT, or the Division of Coastal Management.



## Appendix A

### 15A NCAC 07H .0306 GENERAL USE STANDARDS FOR OCEAN HAZARD AREAS

(a) In order to protect life and property, all development not otherwise specifically exempted or allowed by law or elsewhere in the Coastal Resources Commission's rules shall be located according to whichever of the following is applicable:

- (1) The ocean hazard setback for development is measured in a landward direction from the vegetation line, the static vegetation line, or the measurement line, whichever is applicable.
- (2) In areas with a development line, the ocean hazard setback line shall be set at a distance in accordance with Subparagraphs (a)(3) through (9) of this Rule. In no case shall new development be sited seaward of the development line.
- (3) In no case shall a development line be created or established on state owned lands, or oceanward of the mean high water line or perpetual property easement line, whichever is more restrictive, below the mean high water line.
- (4) The setback distance shall be determined by both the size of development and the shoreline long-term erosion rate as defined in Rule .0304 of this Section. "Development size" is defined by total floor area for structures and buildings or total area of footprint for development other than structures and buildings. Total floor area includes the following:
  - (A) The total square footage of heated or air-conditioned living space;
  - (B) The total square footage of parking elevated above ground level; and
  - (C) The total square footage of non-heated or non-air-conditioned areas elevated above ground level, excluding attic space that is not designed to be load-bearing.

Decks, roof-covered porches, and walkways are not included in the total floor area unless they are enclosed with material other than screen mesh or are being converted into an enclosed space with material other than screen mesh.

- (5) With the exception of those types of development defined in 15A NCAC 07H .0309, no development, including any portion of a building or structure, shall extend oceanward of the ocean hazard setback distance. This includes roof overhangs and elevated structural components that are cantilevered, knee braced, or otherwise extended beyond the support of pilings or footings. The ocean hazard setback is established based on the following criteria:
  - (A) A building or other structure less than 5,000 square feet requires a minimum setback of 60 feet or 30 times the shoreline erosion rate, whichever is greater;
  - (B) A building or other structure greater than or equal to 5,000 square feet but less than 10,000 square feet requires a minimum setback of 120 feet or 60 times the shoreline erosion rate, whichever is greater;
  - (C) A building or other structure greater than or equal to 10,000 square feet but less than 20,000 square feet requires a minimum setback of 130 feet or 65 times the shoreline erosion rate, whichever is greater;
  - (D) A building or other structure greater than or equal to 20,000 square feet but less than 40,000 square feet requires a minimum setback of 140 feet or 70 times the shoreline erosion rate, whichever is greater;
  - (E) A building or other structure greater than or equal to 40,000 square feet but less than 60,000 square feet requires a minimum setback of 150 feet or 75 times the shoreline erosion rate, whichever is greater;
  - (F) A building or other structure greater than or equal to 60,000 square feet but less than 80,000 square feet requires a minimum setback of 160 feet or 80 times the shoreline erosion rate, whichever is greater;
  - (G) A building or other structure greater than or equal to 80,000 square feet but less than 100,000 square feet requires a minimum setback of 170 feet or 85 times the shoreline erosion rate, whichever is greater;
  - (H) A building or other structure greater than or equal to 100,000 square feet requires a minimum setback of 180 feet or 90 times the shoreline erosion rate, whichever is greater;
  - (I) Infrastructure that is linear in nature such as roads, bridges, pedestrian access such as boardwalks and sidewalks, and utilities providing for the transmission of electricity, water,



- telephone, cable television, data, storm water, and sewer requires a minimum setback of 60 feet or 30 times the shoreline erosion rate, whichever is greater;
- (J) Parking lots greater than or equal to 5,000 square feet require a setback of 120 feet or 60 times the shoreline erosion rate, whichever is greater;
  - (K) Notwithstanding any other setback requirement of this Subparagraph, a building or other structure greater than or equal to 5,000 square feet in a community with a static line exception in accordance with 15A NCAC 07J .1200 requires a minimum setback of 120 feet or 60 times the shoreline erosion rate in place at the time of permit issuance, whichever is greater. The setback shall be measured landward from either the static vegetation line, the vegetation line, or measurement line, whichever is farthest landward; and
  - (L) Notwithstanding any other setback requirement of this Subparagraph, replacement of single-family or duplex residential structures with a total floor area greater than 5,000 square feet shall be allowed provided that the structure meets the following criteria:
    - (i) the structure was originally constructed prior to August 11, 2009;
    - (ii) the structure as replaced does not exceed the original footprint or square footage;
    - (iii) it is not possible for the structure to be rebuilt in a location that meets the ocean hazard setback criteria required under Subparagraph (a)(5) of this Rule;
    - (iv) the structure as replaced meets the minimum setback required under Part (a)(5)(A) of this Rule; and
    - (v) the structure is rebuilt as far landward on the lot as feasible.
- (6) If a primary dune exists in the AEC on or landward of the lot where the development is proposed, the development shall be landward of the crest of the primary dune, the ocean hazard setback, or development line, whichever is farthest from vegetation line, static vegetation line, or measurement line, whichever is applicable. For existing lots, however, where setting the development landward of the crest of the primary dune would preclude any practical use of the lot, development may be located oceanward of the primary dune. In such cases, the development may be located landward of the ocean hazard setback but shall not be located on or oceanward of a frontal dune or the development line. The words "existing lots" in this Rule shall mean a lot or tract of land which, as of June 1, 1979, is specifically described in a recorded plat and cannot be enlarged by combining the lot or tract of land with a contiguous lot(s) or tract(s) of land under the same ownership.
  - (7) If no primary dune exists, but a frontal dune does exist in the AEC on or landward of the lot where the development is proposed, the development shall be set landward of the frontal dune, ocean hazard setback, or development line, whichever is farthest from the vegetation line, static vegetation line, or measurement line, whichever is applicable.
  - (8) If neither a primary nor frontal dune exists in the AEC on or landward of the lot where development is proposed, the structure shall be landward of the ocean hazard setback or development line, whichever is more restrictive.
  - (9) Structural additions or increases in the footprint or total floor area of a building or structure represent expansions to the total floor area and shall meet the setback requirements established in this Rule and 15A NCAC 07H .0309(a). New development landward of the applicable setback may be cosmetically, but shall not be structurally, attached to an existing structure that does not conform with current setback requirements.
  - (10) Established common law and statutory public rights of access to and use of public trust lands and waters in ocean hazard areas shall not be eliminated or restricted. Development shall not encroach upon public accessways, nor shall it limit the intended use of the accessways.
  - (11) Beach fill as defined in Rule .0305(a)(7) of this Section, represents a temporary response to coastal erosion, and compatible beach fill as defined in 15A NCAC 07H .0312 can be expected to erode at least as fast as, if not faster than, the pre-project beach. Furthermore, there is no assurance of future funding or beach-compatible sediment for continued beach fill projects and project maintenance. A vegetation line that becomes established oceanward of the pre-project vegetation line in an area that has received beach fill may be more vulnerable to natural hazards along the oceanfront if the beach fill project is not maintained. A development setback measured from the vegetation line may provide less protection from ocean hazards. Therefore, development setbacks in areas that have received large-scale beach fill as defined in 15A NCAC 07H .0305 shall be measured landward from the static vegetation line as defined in this Section, unless a development line has been approved by the Coastal Resources Commission in accordance with 15A NCAC 07J .1300.



- (12) In order to allow for development landward of the large-scale beach fill project that cannot meet the setback requirements from the static vegetation line, but can or has the potential to meet the setback requirements from the vegetation line set forth in Subparagraphs (a)(1) and (a)(5) of this Rule, a local government, group of local governments involved in a regional beach fill project, or qualified owner's association defined in G.S. 47F-1-103(3) that has the authority to approve the locations of structures on lots within the territorial jurisdiction of the association, and has jurisdiction over at least one mile of ocean shoreline, may petition the Coastal Resources Commission for a "static line exception" in accordance with 15A NCAC 07J .1200. The static line exception applies to development of property that lies both within the jurisdictional boundary of the petitioner and the boundaries of the large-scale beach fill project. This static line exception shall also allow development greater than 5,000 square feet to use the setback provisions defined in Part (a)(5)(K) of this Rule in areas that lie within the jurisdictional boundary of the petitioner, as well as the boundaries of the large-scale beach fill project. The procedures for a static line exception request are defined in 15A NCAC 07J .1200. If the request is approved, the Coastal Resources Commission shall allow development setbacks to be measured from a vegetation line that is oceanward of the static vegetation line under the following conditions:
- (A) Development meets all setback requirements from the vegetation line defined in Subparagraphs (a)(1) and (a)(5) of this Rule;
  - (B) Development setbacks are calculated from the shoreline erosion rate in place at the time of permit issuance;
  - (C) No portion of a building or structure, including roof overhangs and elevated portions that are cantilevered, knee braced, or otherwise extended beyond the support of pilings or footings, extends oceanward of the landward-most adjacent building or structure. When the configuration of a lot precludes the placement of a building or structure in line with the landward-most adjacent building or structure, an average line of construction shall be determined by the Division of Coastal Management on a case-by-case basis in order to determine an ocean hazard setback that is landward of the vegetation line, a distance no less than 30 times the shoreline erosion rate or 60 feet, whichever is greater;
  - (D) With the exception of swimming pools, the development defined in Rule .0309(a) of this Section is allowed oceanward of the static vegetation line; and
  - (E) Development is not eligible for the exception defined in Rule .0309(b) of this Section.
- (b) In order to avoid weakening the protective nature of ocean beaches and primary and frontal dunes, no development shall be permitted that involves the removal or relocation of primary or frontal dune sand or vegetation thereon that would adversely affect the integrity of the dune. Other dunes within the ocean hazard area shall not be disturbed unless the development of the property is otherwise impracticable. Any disturbance of these other dunes is allowed only to the extent permitted by 15A NCAC 07H .0308(b).
- (c) Development shall not cause irreversible damage to historic architectural or archaeological resources as documented by the local historic commission, the North Carolina Department of Natural and Cultural Resources, or the National Historical Registry.
- (d) Development shall comply with minimum lot size and set back requirements established by local regulations.
- (e) Mobile homes shall not be placed within the high hazard flood area unless they are within mobile home parks existing as of June 1, 1979.
- (f) Development shall comply with the general management objective for ocean hazard areas set forth in 15A NCAC 07H .0303.
- (g) Development shall not interfere with legal access to, or use of, public resources, nor shall such development increase the risk of damage to public trust areas.
- (h) Development proposals shall incorporate measures to avoid or minimize adverse impacts of the project. These measures shall be implemented at the applicant's expense and may include actions that:
- (1) minimize or avoid adverse impacts by limiting the magnitude or degree of the action;
  - (2) restore the affected environment; or
  - (3) compensate for the adverse impacts by replacing or providing substitute resources.
- (i) Prior to the issuance of any permit for development in the ocean hazard AECs, there shall be a written acknowledgment from the applicant to the Division of Coastal Management that the applicant is aware of the risks associated with development in this hazardous area and the limited suitability of this area for permanent structures. By granting permits, the Coastal Resources Commission does not guarantee the safety of the development and assumes no liability for future damage to the development.



(j) All relocation of structures requires permit approval. Structures relocated with public funds shall comply with the applicable setback line as well as other applicable AEC rules. Structures including septic tanks and other essential accessories relocated entirely with non-public funds shall be relocated the maximum feasible distance landward of the present location. Septic tanks may not be located oceanward of the primary structure. All relocation of structures shall meet all other applicable local and state rules.

(k) Permits shall include the condition that any structure shall be relocated or dismantled when it becomes imminently threatened by changes in shoreline configuration as defined in 15A NCAC 07H .0308(a)(2)(B). Any such structure shall be relocated or dismantled within two years of the time when it becomes imminently threatened, and in any case upon its collapse or subsidence. However, if natural shoreline recovery or beach fill takes place within two years of the time the structure becomes imminently threatened, so that the structure is no longer imminently threatened, then it need not be relocated or dismantled at that time. This permit condition shall not affect the permit holder's right to seek authorization of temporary protective measures allowed under 15A NCAC 07H .0308(a)(2).

*History Note:* Authority G.S. 113A-107; 113A-113(b)(6); 113A-124;  
Eff. September 9, 1977;  
Amended Eff. December 1, 1991; March 1, 1988; September 1, 1986; December 1, 1985;  
RRC Objection due to ambiguity Eff. January 24, 1992;  
Amended Eff. March 1, 1992;  
RRC Objection due to ambiguity Eff. May 21, 1992;  
Amended Eff. February 1, 1993; October 1, 1992; June 19, 1992;  
RRC Objection due to ambiguity Eff. May 18, 1995;  
Amended Eff. August 11, 2009; April 1, 2007; November 1, 2004; June 27, 1995;  
Temporary Amendment Eff. January 3, 2013;  
Amended Eff. April 1, 2016; September 1, 2013.



## SECTION .1300 – DEVELOPMENT LINE PROCEDURES

### 15A NCAC 07J .1301 REQUESTING THE DEVELOPMENT LINE

(a) Any local government, group of local governments involved in a regional beach fill project, or qualified owner's association with territorial jurisdiction over an area that is subject to ocean hazard area setbacks pursuant to 15A NCAC 07H .0305, may petition the Coastal Resources Commission for a development line for the purposes of siting oceanfront development in accordance with the provisions of this Section. A "qualified owner's association" is an owner's association defined in G.S. 47F-1-103(3) that has authority to approve the locations of structures on lots within the territorial jurisdiction of the association and has jurisdiction over at least one mile of ocean shoreline.

(b) A development line request applies to the entire large-scale project area as defined in 15A NCAC 07H .0305(a)(7), and at the petitioner's request may be extended to include the entire oceanfront jurisdiction or legal boundary of the petitioner.

(c) The petitioner shall utilize an adjacent neighbor sight-line approach, resulting in an average line of structures. In areas where the seaward edge of existing development is not linear, the petitioner may determine an average line of construction on a case-by-case basis. In no case shall a development line be established seaward of the most seaward structure within the petitioner's oceanfront jurisdiction.

(d) An existing structure that is oceanward of an approved development line may remain in place until damaged greater than 50 percent in accordance with Rule .0210 of this Subchapter. At that time it may only be replaced landward of the development line, and shall meet the applicable ocean hazard setback requirements as defined in 15A NCAC 07H .0306(a).

(e) A request for a development line or amendment shall be made in writing by the petitioner and submitted to the CRC by sending the written request to the Director of the Division of Coastal Management. A complete request shall include the following:

- (1) A detailed survey of the development line using on-ground observation and survey, or aerial imagery along the oceanfront jurisdiction or legal boundary; any local regulations associated with the development line; a record of local adoption of the development line by the petitioner; and documentation of incorporation of development line into local ordinances or rules and regulations of an owner's association.
- (2) The survey shall include the development line, static vegetation line, mean high water line, and any other information the Coastal Resources Commission deems necessary for a review of the petitioner's proposed development line.
- (3) Surveyed development line spatial data in a geographic information systems (GIS) format referencing North Carolina State Plane North American Datum 83 US Survey Foot, to include Federal Geographic Data Committee (FGDC) compliant metadata.

(f) Once a development line is approved by the Coastal Resources Commission, only the petitioner may request a change or reestablishment of the position of the development line.

(g) A development line request shall be submitted to the Director of the Division of Coastal Management, 400 Commerce Avenue, Morehead City, NC 28557. Written acknowledgement of the receipt of a completed development line request, including notification of the date of the meeting at which the request will be considered by the Coastal Resources Commission, shall be provided to the petitioner by the Division of Coastal Management.

(h) The Coastal Resources Commission shall consider a development line request no later than the second scheduled meeting following the date of receipt of a complete request by the Division of Coastal Management, except when the petitioner and the Division of Coastal Management agree upon a later date.

*History Note:* Authority G.S. 113A-107; 113A-113(b)(6); 113A-124;  
Eff. April 1, 2016.

### 15A NCAC 07J .1302 PROCEDURES FOR APPROVING THE DEVELOPMENT LINE

(a) At the meeting that the development line request is considered by the Coastal Resources Commission, the following shall occur:

- (1) A representative for the petitioner shall orally present the request described in Rule .1301 of this Section. The Chairman of the Coastal Resources Commission may limit the time allowed for oral presentations based upon the number of speakers wishing to present.



- (2) Additional persons may provide written or oral comments relevant to the development line request. The Chairman of the Coastal Resources Commission may limit the time allowed for oral comments based upon the number of speakers wishing to speak.
- (b) The Coastal Resources Commission shall approve a development line request if the request contains the information required and meets the standards set forth in Rule .1301 of this Section.
- (c) The final decision of the Coastal Resources Commission shall be made at the meeting at which the matter is heard or in no case later than the next scheduled meeting. The final decision shall be transmitted to the petitioner by registered mail within 10 business days following the meeting at which the decision is reached.
- (d) The decision to authorize or deny a development line is a final agency decision and is subject to judicial review in accordance with G.S. 113A-123.

*History Note:* Authority G.S. 113A-107; 113A-113(b)(6); 113A-123; 113A-124;  
Eff. April 1, 2016.

### **15A NCAC 07J .1303 LOCAL GOVERNMENTS AND COMMUNITIES WITH DEVELOPMENT LINES**

A list of development lines in place for petitioners and any conditions under which the development lines exist in accordance with 15A NCAC 07J .1300, including the date(s) the development lines were approved, shall be maintained by the Division of Coastal Management. The list of development lines shall be available for inspection at the Division of Coastal Management, 400 Commerce Avenue, Morehead City, NC 28557, during business hours or on the Division's website [nccoastalmanagement.net](http://nccoastalmanagement.net).

*History Note:* Authority G.S. 113A-107; 113A-113(b)(6), 113A-124;  
Eff. April 1, 2016.



**CRC-17-03**

January 24, 2017

**MEMORANDUM**

**TO:** Coastal Resources Commission

**FROM:** Mike Lopazanski

**SUBJECT:** Periodic Review of Existing Rules – 15A NCAC 7H, 7I, 7J, 7K, 7L, 7M

You will recall that in 2013, the General Assembly enacted Session Law 2013-413 which added a “Periodic Review and Expiration of Existing Rules” section to the APA (G.S. § 150B-21.3A). This statute requires agencies to review all of their rules every 10 years under a process and schedule established by the Rules Review Commission. If an agency does not conduct the review, its rules will expire and be removed from the Administrative Code, unless the rule is required to implement or conform to federal law. Prior to 2013, rules did not expire.

**Review Process**

The process requires agencies to review their existing rules and classify them as:

- Necessary with substantive public interest - the agency has received public comment within the last two years; it affects property interest or a person might object to the rule.
- Necessary without substantive public interest – the agency has not received public comment within the last two years or the rules simply provide contact information.
- Unnecessary - the agency determined the rule is obsolete, redundant or otherwise no longer needed.

These classifications must be posted on the Office of Administrative Hearings (OAH) and DEQ web sites. Public comments are to be accepted for a period of at least 60 days and agencies are required to respond to each public comment. After the comment period, agencies may amend the final classifications based on public comments, and send an approved final report and public comments received to the RRC.

The RRC will review the final report and public comments to determine if it agrees with the agency classification of its rules. The RRC may change a classification of a rule to



“necessary with substantive public interest” but does not have the authority to declare a rule as “unnecessary.” The RRC sends a final report to the Joint Legislative Administrative Procedure Oversight Committee (APOC) for consultation. The final determination on an agency’s rules becomes effective when the APOC reviews the report or on the 61<sup>st</sup> day after having received the report from the RRC if the APOC does not meet. The APOC may disagree with the Commission’s determination and recommend to the General Assembly that the agency conduct a review of the rule the following year.

### **Effect of Final Determination**

Rules designated as “necessary without substantive public interest” will remain in the NC Administrative Code and rules designated as “unnecessary” will be removed. Rules designated as “necessary with substantive public interest” must be re-adopted as if they were new rules following the usual rulemaking procedures. If the rules are not re-adopted, they will be removed from the Administrative Code.

### **Schedule for Review of CRC Rules**

The Rules Review Commission develops the schedule for the review of agency rules. The review of the CRC rules began with 15A NCAC 7B Land Use Planning Requirements in 2015 and 15A NCAC 7O NC Coastal Reserve in 2016. The remaining CRC rules are due for review by January 2018.

Staff has classified each rule citation and prepared the initial draft agency determination in the attached report. After review by the Department, the agency determinations will be published on the Office of Administrative Hearings, Rules Review Commission, Department and Division websites for the required 60-day public comment period.

The schedule for the review of the remainder of your rules is as follows:

- Approve the initial determinations at the February 8, 2017 meeting.
- Initiate the required 60-day comment period (February 20 – April 20, 2017).
- Respond to comments and adopt the final determinations at the July or September, 2017 meeting.
- File with OAH before the December 15, 2017 deadline for January 2018 RRC review.

After the RRC review, the report will be submitted to APOC for consultation. Provided the APOC approves the report, the CRC will be able to publish the amended rules for public comment and begin the re-adoption process according a schedule negotiated with the RRC.

Attached is the draft report with 18 rules designated as unnecessary. These rules are old, no longer applicable due to other changes, contain only introductory language, reiterate statute or are generally superfluous. The majority of the rules (207 of 267) are designated as *Necessary With Substantive Public Interest* as they contain a directive, requirement or impose a standard. The remainder (42) have been designated as



*Necessary Without Substantive Public Interest* as they contain management objectives, significance statement, are minor procedures and contact information. If the Commission agrees with these initial determinations, the report will be posted by OAH and DENR for public comments. The Commission will then review any public comments at either the July or September meetings, depending upon comments received, and adopt the report as final.

I will review the details of this process as well as any of the individual rule designations at our upcoming meeting in Atlantic Beach.



G.S. 150B-21.3A Rep ort for 15A NCAC 07A, ORGANIZATION AND DUTIES												
Agency - Coastal Resources Commission												
Comment Period - February 20-April 20, 2017												
Date Submitted to APO - Filled in by RRC staff												
Subchapter	Rule Section	Rule Citation	Rule Name	Date and Last Agency Action on the Rule	Agency Determination [150B-21.3A(c)(1)a]	Implements or Conforms to Federal Regulation [150B-21.3A(e)]	Federal Regulation Citation	Public Comment Received [150B-21.3A(c)(1)]	Agency Determination Following Public Comment [150B-21.3A(c)(1)]	RRC Determination of Public Comments [150B-21.3A(c)(2)]	RRC Final Determination of Status of Rule for Report to APO [150B-21.3A(c)(2)]	OAH Next Steps
SUBCHAPTER 07A - ORGANIZATION AND DUTIES		15A NCAC 07A .0101	DIVISION OF COASTAL MANAGEMENT	Amended Eff. June 1, 2005	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Rep ort for 15A NCAC 07H, STATE GUIDELINES FOR AREAS OF ENVIRONMENTAL CONCERN

Agency - Coastal Resources Commission

Comment Period - February 20 - April 20, 2017

Date Submitted to APO - Filled in by RRC staff

Subchapter	Rule Section	Rule Citation	Rule Name	Date and Last Agency Action on the Rule	Agency Determination [150B-21.3A(c)(1)a]	Implements or Conforms to Federal Regulation [150B-21.3A(e)]	Federal Regulation Citation	Public Comment Received [150B-21.3A(c)(1)]	Agency Determination Following Public Comment [150B-21.3A(c)(1)]	RRC Determination of Public Comments [150B-21.3A(c)(2)]	RRC Final Determination of Status of Rule for Report to APO [150B-21.3A(c)(2)]	OAH Next Steps
	SECTION .0100 - INTRODUCTION AND GENERAL COMMENTS	15A NCAC 07H .0101	INTRODUCTION	Eff. September 9, 1977	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0102	CAMA PROVISIONS FOR AECS	Amended Eff. December 1, 1985	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0103	SELECTION OF PROPOSED AREAS FOR AEC DESIGNATION	Eff. September 9, 1977	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0104	APPLICATION OF EROSION RATE SETBACK FACTORS	Amended Eff. August 1, 2010	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0105	EFFECTIVE DATE OF RULE AMENDMENTS	Eff. December 1, 1982	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0106	GENERAL DEFINITIONS	Amended Eff. February 1, 2011	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0200 – THE ESTUARINE AND OCEAN SYSTEMS	15A NCAC 07H .0201	ESTUARINE AND OCEAN SYSTEM CATEGORIES	Amended Eff August 1, 2000	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0202	SIGNIFICANCE OF THE SYSTEMS APPROACH IN ESTUARIES	Amended Eff. August 1, 1998	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0203	MANAGEMENT OBJECTIVE OF THE ESTUARINE AND OCEAN SYSTEM	Amended Eff. August 1, 2000	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0204	AECS WITHIN THE ESTUARINE AND OCEAN SYSTEM	Amended Eff. August 1, 1998	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0205	COASTAL WETLANDS	Amended Eff. September 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0206	ESTUARINE WATERS	Amended Eff. August 1, 1998	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0207	PUBLIC TRUST AREAS	Amended Eff. February 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0208	USE STANDARDS	Amended Eff. August 1, 2012 (see S.L. 2012-143, s.1.(f))	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0209	COASTAL SHORELINES	Amended Eff. March 1, 2010	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0300 - OCEAN HAZARD AREAS	15A NCAC 07H .0301	OCEAN HAZARD CATEGORIES	Eff. September 9, 1977	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0302	SIGNIFICANCE OF THE OCEAN HAZARD CATEGORY	Amended Eff. October 1, 1992	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0303	MANAGEMENT OBJECTIVE OF OCEAN HAZARD AREAS	Amended Eff. October 1, 1992	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0304	AECS WITHIN OCEAN HAZARD AREAS	Amended Eff. July 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0305	GENERAL IDENTIFICATION AND DESCRIPTION OF LANDFORMS	Amended Eff. April 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0306	GENERAL USE STANDARDS FOR OCEAN HAZARD AREAS	Amended Eff. February 1, 2017	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0308	SPECIFIC USE STANDARDS FOR OCEAN HAZARD AREAS	Amended Eff. May 1, 2013	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0309	USE STANDARDS FOR OCEAN HAZARD AREAS: EXCEPTIONS	Amended Eff. June 1, 2010	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0310	USE STANDARDS FOR INLET HAZARD AREAS	Amended Eff. April 1, 1999	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0311	INSTALLATION AND MAINTENANCE OF SAND FENCING	Eff. August 1, 2002	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0312	TECHNICAL STANDARDS FOR BEACH FILL PROJECTS	Amended Eff. August 1, 2014	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0401	PUBLIC WATER SUPPLY CATEGORIES	Eff. September 9, 1977	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0400 - PUBLIC WATER SUPPLIES	15A NCAC 07H .0402	SIGNIFICANCE	Eff. September 9, 1977	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Rep ort for 15A NCAC 07H, STATE GUIDELINES FOR AREAS OF ENVIRONMENTAL CONCERN												
Agency - Coastal Resources Commission												
Comment Period - February 20 - April 20, 2017												
Date Submitted to APO - Filled in by RRC staff												
Subchapter	Rule Section	Rule Citation	Rule Name	Date and Last Agency Action on the Rule	Agency Determination [150B-21.3A(c)(1)a]	Implements or Conforms to Federal Regulation [150B-21.3A(e)]	Federal Regulation Citation	Public Comment Received [150B-21.3A(c)(1)]	Agency Determination Following Public Comment [150B-21.3A(c)(1)]	RRC Determination of Public Comments [150B-21.3A(c)(2)	RRC Final Determination of Status of Rule for Report to APO [150B-21.3A(c)(2)]	OAH Next Steps
		15A NCAC 07H .0403	MANAGEMENT OBJECTIVE FOR PUBLIC WATER SUPPLIES	Eff. September 9, 1977	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0404	AECS WITHIN PUBLIC WATER SUPPLIES	Amended Eff. May 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0405	SMALL SURFACE WATER SUPPLY WATERSHEDS	Amended Eff. May 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0406	PUBLIC WATER SUPPLY WELL FIELDS	Amended Eff. December 1, 1997	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0500 - NATURAL AND CULTURAL RESOURCE AREAS	15A NCAC 07H .0501	GENERAL	Amended Eff. June 1, 1979	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0502	SIGNIFICANCE	Amended Eff. June 1, 1979	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0503	NOMINATION AND DESIGNATION PROCEDURES	Amended Eff. June 1, 2005	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0504	AECS WITHIN CATEGORY	Amended Eff. December 1, 1991	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0505	COASTAL AREAS THAT SUSTAIN REMNANT SPECIES	Eff. September 9, 1977	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0506	COASTAL COMPLEX NATURAL AREAS	Amended Eff. October 1, 1988	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0507	UNIQUE COASTAL GEOLOGIC FORMATIONS	Amended Eff. March 1, 1988	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0508	USE STANDARDS	Amended Eff. February 1, 1982	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0509	SIGNIFICANT COASTAL ARCHAEOLOGICAL RESOURCES	Amended Eff. October 1, 1988	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0510	SIGNIFICANT COASTAL HISTORIC ARCHITECTURAL RESOURCES	Eff. June 1, 1979	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0600 - DEVELOPMENT STANDARDS APPLICABLE TO ALL AECS	15A NCAC 07H .0601	NO VIOLATION OF ANY RULE	Eff. September 9, 1977	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0602	POLLUTION OF WATERS	Amended Eff. July 1, 1987	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0603	MINIMUM ALTITUDES	Eff. March 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .0604	NOISE POLLUTION	Eff. March 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1100 - GENERAL PERMIT FOR CONSTRUCTION OF BULKHEADS AND RIPRAP REVETMENTS FOR SHORELINE PROTECTION IN ESTUARINE AND PUBLIC TRUST WATERS AND OCEAN HAZARD AREAS	15A NCAC 07H .1101	PURPOSE	Amended Eff. July 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1102	APPROVAL PROCEDURES	Amended Eff. July 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1103	PERMIT FEE	Amended Eff. October 5, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1104	GENERAL CONDITIONS	Amended Eff. July 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1105	SPECIFIC CONDITIONS	Amended Eff. August 1, 2012 (see S.L. 2012-143, s.1.(f))	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Rep ort for 15A NCAC 07H, STATE GUIDELINES FOR AREAS OF ENVIRONMENTAL CONCERN												
Agency - Coastal Resources Commission												
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Subchapter	Rule Section	Rule Citation	Rule Name	Date and Last Agency Action on the Rule	Agency Determination [150B-21.3A(c)(1)a]	Implements or Conforms to Federal Regulation [150B-21.3A(e)]	Federal Regulation Citation	Public Comment Received [150B-21.3A(c)(1)]	Agency Determination Following Public Comment [150B-21.3A(c)(1)]	RRC Determination of Public Comments [150B-21.3A(c)(2)]	RRC Final Determination of Status of Rule for Report to APO [150B-21.3A(c)(2)]	OAH Next Steps
	SECTION .1200 - GENERAL PERMIT FOR CONSTRUCTION OF PIERS AND DOCKING FACILITIES: IN ESTUARINE AND PUBLIC TRUST WATERS AND OCEAN HAZARD AREAS	15A NCAC 07H .1201	PURPOSE	Amended Eff. July 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1202	APPROVAL PROCEDURES	Amended Eff. October 1, 2007	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1203	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1204	GENERAL CONDITIONS	Amended Eff. August 1, 2014	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1205	SPECIFIC CONDITIONS	Amended Eff. August 1, 2014	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1300 - GENERAL PERMIT TO CONSTRUCT BOAT RAMPS ALONG ESTUARINE AND PUBLIC TRUST SHORELINES AND INTO ESTUARINE AND PUBLIC TRUST AREAS	15A NCAC 07H .1301	PURPOSE	Amended Eff. April 1, 2003	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1302	APPROVAL PROCEDURES	Amended Eff. August 1, 2007	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1303	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1304	GENERAL CONDITIONS	Amended Eff. August 1, 1998	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1305	SPECIFIC CONDITIONS	Amended Eff. August 1, 2014	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1400 - GENERAL PERMIT FOR CONSTRUCTION OF GROINS IN ESTUARINE AND PUBLIC TRUST WATERS AND OCEAN HAZARD AREAS	15A NCAC 07H .1401	PURPOSE	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Necessary with substantive public interest	Select One	Necessary with substantive public interest and must be readopted	Select One
		15A NCAC 07H .1402	APPROVAL PROCEDURES	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1403	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1404	GENERAL CONDITIONS	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1405	SPECIFIC CONDITIONS	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1500 - GENERAL PERMIT FOR EXCAVATION WITHIN OR CONNECTING TO EXISTING CANALS, CHANNELS, BASINS, OR DITCHES IN ESTUARINE WATERS, PUBLIC TRUST WATERS, AND COASTAL SHORELINE AECs	15A NCAC 07H .1501	PURPOSE	Amended Eff. July 1, 2015	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1502	APPROVAL PROCEDURES	Amended Eff. July 1, 2015	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



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		15A NCAC 07H .1503	APPLICATION FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1504	GENERAL CONDITIONS	Amended Eff. July 1, 2015	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1505	SPECIFIC CONDITIONS	Amended Eff. July 1, 2015	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1600 - GENERAL PERMIT FOR THE INSTALLATION OF AERIAL AND SUBAQUEOUS UTILITY LINES WITH ATTENDANT STRUCTURES IN COASTAL WETLANDS: ESTUARINE WATERS: PUBLIC TRUST WATERS AND ESTUARINE	15A NCAC 07H .1601	PURPOSE	Amended Eff. August 1, 2000	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1602	APPROVAL PROCEDURES	Amended Eff. January 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1603	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1604	GENERAL CONDITIONS	Amended Eff. August 1, 1998	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1605	SPECIFIC CONDITIONS	Amended Eff. August 1, 1998	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1700 - GENERAL PERMIT FOR EMERGENCY WORK REQUIRING A CAMA AND/OR A DREDGE AND FILL PERMIT	15A NCAC 07H .1701	PURPOSE	Eff. November 1, 1985	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1702	APPROVAL PROCEDURES	Amended Eff. May 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1703	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1704	GENERAL CONDITIONS	Amended Eff. May 1, 2010	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1705	SPECIFIC CONDITIONS	Amended Eff. May 1, 2013	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1800 - GENERAL PERMIT TO ALLOW BEACH BULLDOZING IN THE OCEAN HAZARD AEC	15A NCAC 07H .1801	PURPOSE	Amended Eff. September 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1802	APPROVAL PROCEDURES	Amended Eff. September 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1803	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1804	GENERAL CONDITIONS	Amended Eff. September 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1805	SPECIFIC CONDITIONS	Amended Eff. September 1, 2016	Necessary with substantive public interest	Select One		Select One	Select One	Select One	Select One	Select One
	SECTION .1900 - GENERAL PERMIT TO ALLOW FOR TEMPORARY STRUCTURES WITHIN COASTAL SHORELINES AND OCEAN HAZARD AEC	15A NCAC 07H .1901	PURPOSE	Amended Eff. August 1, 2000	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1902	APPROVAL PROCEDURES	Amended Eff. January 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1903	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .1904	GENERAL CONDITIONS	Amended Eff. August 1, 1998	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



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		15A NCAC 07H .1905	SPECIFIC CONDITIONS	Amended Eff. May 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .2000 - GENERAL PERMIT FOR AUTHORIZING MINOR MODIFICATIONS AND REPAIR TO EXISTING PIER/MOORING FACILITIES IN ESTUARINE AND PUBLIC TRUST WATERS AND OCEAN HAZARD	15A NCAC 07H .2001	PURPOSE	Amended Eff. April 1, 2003	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2002	APPROVAL PROCEDURES	Amended Eff. August 1, 2007	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2003	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2004	GENERAL CONDITIONS	Amended Eff. August 1,1998	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2005	SPECIFIC CONDITIONS	Eff. October 1, 1993	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .2100 - GENERAL PERMIT FOR CONSTRUCTION OF SHEETPILE SILL FOR SHORELINE PROTECTION IN ESTUARINE AND PUBLIC TRUST WATERS AND OCEAN HAZARD AREAS	15A NCAC 07H .2101	PURPOSE	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2102	APPROVAL PROCEDURES	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2103	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2104	GENERAL CONDITIONS	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2105	SPECIFIC CONDITIONS	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .2200 - GENERAL PERMIT FOR CONSTRUCTION OF FREESTANDING MOORINGS IN ESTUARINE WATERS AND PUBLIC TRUST AREAS AND OCEAN HAZARD AREAS	15A NCAC 07H .2201	PURPOSE	Amended Eff. April 1, 2003	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2202	APPROVAL PROCEDURES	Amended Eff. August 1, 2007	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2203	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Necessary with substantive public interest	Select One	Necessary with substantive public interest and must be readopted	Select One
		15A NCAC 07H .2204	GENERAL CONDITIONS	Eff. February 1, 1996	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2205	SPECIFIC CONDITIONS	Eff. February 1, 1996	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Report for 15A NCAC 07H, STATE GUIDELINES FOR AREAS OF ENVIRONMENTAL CONCERN

Agency - Coastal Resources Commission

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	SECTION .2300 - GENERAL PERMIT FOR REPLACEMENT OF EXISTING BRIDGES AND CULVERTS IN ESTUARINE WATERS, ESTUARINE AND PUBLIC TRUST SHORELINES, PUBLIC TRUST AREAS, AND COASTAL WETLANDS	15A NCAC 07H .2301	PURPOSE	Amended Eff. August 1, 2000	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2302	APPROVAL PROCEDURES	Amended Eff. May 1, 2010	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2303	PERMIT FEE	Amended Eff. May 1, 2010	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2304	GENERAL CONDITIONS	Amended Eff. May 1, 2010	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2305	SPECIFIC CONDITIONS	Amended Eff. May 1, 2010	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .2400 - GENERAL PERMIT FOR PLACEMENT OF RIPRAP REVETMENTS FOR WETLAND PROTECTION IN ESTUARINE AND PUBLIC TRUST AREAS	15A NCAC 07H .2401	PURPOSE	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2402	APPROVAL PROCEDURES	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2403	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2404	GENERAL CONDITIONS	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2405	SPECIFIC CONDITIONS	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .2500 - EMERGENCY GENERAL PERMIT, TO BE INITIATED AT THE DISCRETION OF THE SECRETARY OF THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES FOR REPLACEMENT OF STRUCTURES, THE RECONSTRUCTION OF PRIMARY OR FRONTAL DUNE SYSTEMS, AND THE MAINTENANCE EXCAVATION OF EXISTING CANALS, BASINS, CHANNELS, OR DITCHES, DAMAGED, DESTROYED, OR FILLED IN BY HURRICANES OR TROPICAL STORMS, PROVIDED ALL REPLACEMENT, RECONSTRUCTION AND MAINTENANCE	15A NCAC 07H .2501	PURPOSE	Eff. April 1, 2001	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2502	APPROVAL PROCEDURES	Eff. April 1, 2001	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



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		15A NCAC 07H .2503	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2504	GENERAL CONDITIONS	Eff. April 1, 2001	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2505	SPECIFIC CONDITIONS	Amended Eff. September 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .2600 – GENERAL PERMIT FOR CONSTRUCTION OF MITIGATION BANKS AND IN-LIEU FEE MITIGATION PROJECTS	15A NCAC 07H .2601	PURPOSE	Amended Eff. October 1, 2014	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2602	APPROVAL PROCEDURES	Amended Eff. October 1, 2014	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2603	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2604	GENERAL CONDITIONS	Amended Eff. October 1, 2014	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2605	SPECIFIC CONDITIONS	Amended Eff. October 1, 2014	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .2700 – GENERAL PERMIT FOR THE CONSTRUCTION OF RIPRAP SILLS FOR WETLAND ENHANCEMENT IN ESTUARINE AND PUBLIC TRUST	15A NCAC 07H .2701	PURPOSE	Eff. April 1, 2005	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2702	APPROVAL PROCEDURES	Amended Eff. October 1, 2007	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2703	PERMIT FEE	Amended Eff. September 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2704	GENERAL CONDITIONS	Eff. April 1, 2005	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07H .2705	SPECIFIC CONDITIONS	Amended Eff. August 1, 2012 (see S.L. 2012-143, s.1.(f))	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Rep ort for 15A NCAC 07I, SECRETARY'S GRANT CRITERIA AND PROCEDURES FOR LOCAL IMPLEMENTATION AND ENFORCEMENT PROGRAMS UNDER THE COASTAL AREA MANAGEMENT ACT												
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	SECTION .0100 - PURPOSE	15A NCAC 07I .0101	AUTHORITY	Amended Eff. June 1, 2006	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0102	POLICY	Amended Eff. August 1, 1978	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0200 - POLICY AND STANDARDS	15A NCAC 07I .0201	VALUE OF COASTAL RESOURCES	ARRC Objection Lodged March 15, 1990	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0202	MULTI- UNIT PROGRAMS	Eff. December 10, 1977	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0204	LOCAL ORDINANCE REQUIRED	Eff. December 10, 1977	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0205	ACCOUNTABILITY	Amended Eff. May 1, 1990	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0206	FUTURE FUNDING	Amended Eff. June 1, 2006	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0300 - APPLICATION PROCEDURES	15A NCAC 07I .0302	APPLICATION PROCESS	Amended Eff. June 1, 2005	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0305	GRANT ADMINISTRATION	Amended Eff. June 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0306	GRANT CONDITIONS	Amended Eff. May 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0401	PROGRAM COSTS	Amended Eff. July 1, 2013	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0400 - GENERALLY APPLICABLE STANDARDS	15A NCAC 07I .0402	INELIGIBLE ACTIVITIES	Amended Eff. August 1, 1978	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0406	APPLICATION FEES	Amended Eff. July 1, 2013	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0407	GRANT CONSISTENCY	Eff. December 10, 1977	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0501	PURPOSE	Amended Eff. December 1, 1991	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0502	DEFINITIONS	Amended Eff. June 1, 2006	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0503	ADOPTION	Eff. November 1, 1984	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0504	RECORD OF HEARINGS AND COMMENTS	Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0505	CONTENT OF PLAN	Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0506	ALLOCATION OF AUTHORITY	Amended Eff. June 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0507	LOCAL PERMIT OFFICER	Amended Eff. May 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0508	CONSIDERATION OF APPLICATION BY PERMIT OFFICER	Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0509	NOTICE OF CIVIL ACTION	Amended Eff. June 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0510	COMMISSION REVIEW AND ACCEPTANCE OF THE LOCAL PLAN	Amended Eff. October 1, 1988	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0511	COMMITMENT TO ADOPT LOCAL MANAGEMENT PLAN AS ORDINANCE	Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0600 - AMENDMENT OF LOCAL MANAGEMENT PLAN	15A NCAC 07I .0601	NOTICE AND PUBLIC HEARING REQUIREMENT	Amended Eff. December 1, 1991	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07I .0602	COASTAL RESOURCES COMMISSION APPROVAL	Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0700 - FAILURE TO ENFORCE AND ADMINISTER PLAN	15A NCAC 07I .0701	SANCTION FOR VIOLATIONS BY THE LOCAL PERMIT-LETTING AGENCY	Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



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		15A NCAC 07I .0702	WHEN AN ACTION EXCEEDS THE LOCAL AUTHORITY	Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Rep ort for 15A NCAC 07J, PROCEDURES FOR PROCESSING AND ENFORCEMENT OF MAJOR AND MINOR DEVELOPMENT PERMITS, VARIANCE REQUESTS, APPEALS FROM PERMIT DECISIONS, DECLARATORY RULINGS, AND STATIC LINE EXCEPTIONS												
Agency - Coastal Resources Commission												
Comment Period - February 20 - April 20, 2017												
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Subchapter	Rule Section	Rule Citation	Rule Name	Date and Last Agency Action on the Rule	Agency Determination [150B-21.3A(c)(1)a]	Implements or Conforms to Federal Regulation [150B-21.3A(e)]	Federal Regulation Citation	Public Comment Received [150B-21.3A(c)(1)]	Agency Determination Following Public Comment [150B-21.3A(c)(1)]	RRC Determination of Public Comments [150B-21.3A(c)(2)]	RRC Final Determination of Status of Rule for Report to APO [150B-21.3A(c)(2)]	OAH Next Steps
	SECTION .0100 - DEFINITIONS	15A NCAC 07J .0101	STATUTORY DEFINITIONS	Amended Eff. November 1, 1984	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0102	GENERAL DEFINITIONS	Amended Eff. June 1, 2006	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0200 - APPLICATION PROCESS	15A NCAC 07J .0201	PERMIT REQUIRED	Amended Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0202	PERMIT APPLICATIONS	Amended Eff. December 1, 1985	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0203	PREPARATION OF WORK PLATS	Amended Eff. July 1, 1989	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0204	PROCESSING THE APPLICATION	Amended Eff. August 1, 2000	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0206	PUBLIC NOTICE OF THE PROPOSED DEVELOPMENT	Amended Eff. January 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0207	AGENCY REVIEW/COMMENTS: MAJOR DEVELOPMENT/DREDGE AND FILL	Amended Eff. July 1, 1989	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0208	PERMIT CONDITIONS	Amended Eff. March 1, 1985	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0209	ISSUANCE OF PERMITS	Amended Eff. October 1, 1988	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0300 - HEARING PROCEDURE	15A NCAC 07J .0210	REPLACEMENT OF EXISTING STRUCTURES	Amended Eff. August 1, 2007	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0211	NON- CONFORMING DEVELOPMENT	Amended Eff. December 1, 1991	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0301	WHO IS ENTITLED TO A CONTESTED CASE HEARING	Amended Eff. June 1, 2005	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0302	PETITION FOR CONTESTED CASE HEARING	Amended Eff. June 1, 2005	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0303	CONTESTED CASE HEARING PROCEDURES	Amended Eff. January 1, 1989	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0305	BURDEN OF PROOF	Amended Eff. October 1, 1988	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0306	ACTION PENDING FINAL DISPOSITION	Amended Eff. July 1, 1989	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0312	SETTLEMENT	Amended Eff. July 1, 1989	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0401	FINAL DECISION	Amended Eff. October 1, 1988	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0402	CRITERIA FOR GRANT OR DENIAL OF PERMIT APPLICATIONS	Amended Eff. January 1, 1992	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0400 - FINAL APPROVAL AND ENFORCEMENT	15A NCAC 07J .0403	DEVELOPMENT PERIOD/COMMENCEMENT/CONTINUATION	Amended Eff. August 1, 2002	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0404	DEVELOPMENT PERIOD EXTENSION	Amended Eff. August 1, 2002	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0405	PERMIT MODIFICATION	Amended Eff. August 1, 2000	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0406	PERMIT ISSUANCE AND TRANSFER	Amended Eff. August 1, 2000	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0407	PROJECT MAINTENANCE: MAJOR DEVELOPMENT/DREDGE AND FILL	Amended Eff. June 1, 2005	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0409	CIVIL PENALTIES	Amended Eff. February 1, 2008	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0410	RESTORATION/MITIGATION	Eff. July 1, 1985	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0500 - GENERAL PERMITS	15A NCAC 07J .0501	DEVELOPMENT INITIATED PRIOR TO MARCH 1, 1978	Amended Eff. December 1, 1991	Unnecessary	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Rep ort for 15A NCAC 07J, PROCEDURES FOR PROCESSING AND ENFORCEMENT OF MAJOR AND MINOR DEVELOPMENT PERMITS, VARIANCE REQUESTS, APPEALS FROM PERMIT DECISIONS, DECLARATORY RULINGS, AND STATIC LINE EXCEPTIONS												
Agency - Coastal Resources Commission												
Comment Period - February 20 - April 20, 2017												
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Subchapter	Rule Section	Rule Citation	Rule Name	Date and Last Agency Action on the Rule	Agency Determination [150B-21.3A(c)(1)a]	Implements or Conforms to Federal Regulation [150B-21.3A(e)]	Federal Regulation Citation	Public Comment Received [150B-21.3A(c)(1)]	Agency Determination Following Public Comment [150B-21.3A(c)(1)]	RRC Determination of Public Comments [150B-21.3A(c)(2)]	RRC Final Determination of Status of Rule for Report to APO [150B-21.3A(c)(2)]	OAH Next Steps
	SECTION .0600 - DECLARATORY RULINGS AND PETITIONS FOR RULEMAKING	15A NCAC 07J .0601	DECLARATORY RULINGS: GENERALLY	Amended Eff. October 1, 1992	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0602	PROCEDURE FOR REQUESTING DECLARATORY RULINGS	Amended Eff. June 1, 2005	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0603	PROCEDURES: CONSIDERING REQUESTS FOR DECLARATORY RULINGS	Amended Eff. October 1, 1992	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0604	FEDERAL ACTIVITIES	Eff. November 30, 1992	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0605	PETITIONS FOR RULEMAKING	Amended Eff. October 1, 1992	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0700 -- PROCEDURES FOR CONSIDERING VARIANCE PETITIONS	15 NCAC 07J .0701	VARIANCE PETITIONS	Amended Eff. March 1, 2009	Necessary with substantive public interest	Select One		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0702	STAFF REVIEW OF VARIANCE PETITIONS	Amended Eff. July 3, 2008	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .0703	PROCEDURES FOR DECIDING VARIANCE PETITIONS	Amended Eff. March 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1101	PURPOSE	Amended Eff. December 1, 1991	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1100 - GENERAL PERMIT PROCEDURE	15A NCAC 07J .1102	CATEGORIES OF DEVELOPMENT	Eff. September 1, 1983	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1103	DESIGNATION PROCEDURES	Eff. September 1, 1983	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1104	PERMIT MODIFICATION	Eff. September 1, 1983	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1105	APPLICATION PROCEDURES	Eff. September 1, 1983	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1106	PERMIT CONDITIONS	Eff. September 1, 1983	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1107	PERMIT COMPLIANCE	Amended Eff. March 1, 1985	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1108	GENERAL PERMIT REVIEW	Amended Eff. December 1, 1991	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1201	REQUESTING THE STATIC LINE EXCEPTION	Amended Eff. April 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1202	REVIEW OF THE STATIC LINE EXCEPTION REQUEST	Eff. March 23, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1203	PROCEDURES FOR APPROVING THE STATIC LINE EXCEPTION	Eff. March 23, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1204	REVIEW OF THE LARGE-SCALE BEACH-FILL PROJECT AND APPROVED STATIC LINE EXCEPTIONS	Eff. March 23, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1205	REVOCATION AND EXPIRATION OF THE STATIC LINE EXCEPTION	Eff. March 23, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1206	LOCAL GOVERNMENTS AND COMMUNITIES WITH STATIC VEGETATION LINES AND STATIC LINE EXCEPTIONS	Eff. March 23, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1300 -- DEVELOPMENT LINE PROCEDURES	15A NCAC 07J .1301	REQUESTING THE DEVELOPMENT LINE	Eff. April 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1302	PROCEDURES FOR APPROVING THE DEVELOPMENT LINE	Eff. April 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07J .1303	LOCAL GOVERNMENTS AND COMMUNITIES WITH DEVELOPMENT LINES	Eff. April 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Rep ort for 15A NCAC 07K, ACTIVITIES IN AREAS OF ENVIRONMENTAL CONCERN WHICH DO NOT REQUIRE A COASTAL AREA MANAGEMENT ACT PERMIT												
Agency - Coastal Resources Commission												
Comment Period - February 20 - April 20, 2017												
Date Submitted to APO - Filled in by RRC staff												
Subchapter	Rule Section	Rule Citation	Rule Name	Date and Last Agency Action on the Rule	Agency Determination [150B-21.3A(c)(1)a]	Implements or Conforms to Federal Regulation [150B-21.3A(e)]	Federal Regulation Citation	Public Comment Received [150B-21.3A(c)(1)]	Agency Determination Following Public Comment [150B-21.3A(c)(1)]	RRC Determination of Public Comments [150B-21.3A(c)(2)]	RRC Final Determination of Status of Rule for Report to APO [150B-21.3A(c)(2)]	OAH Next Steps
	SECTION .0100 - ACTIVITIES NOT CONSIDERED DEVELOPMENT	15A NCAC 07K .0101	STATUTORY EXCEPTIONS FROM THE DEFINITION OF DEVELOPMENT	Amended Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0103	MAINTENANCE AND REPAIR	Amended Eff. March 1, 1996	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0200 - CLASSES OF MINOR MAINTENANCE AND IMPROVEMENTS WHICH SHALL BE EXEMPTED FROM THE CAMA MAJOR DEVELOPMENT PERMIT REQUIREMENT	15A NCAC 07K .0201	GENERAL GUIDELINES	Amended Eff. November 1, 1984	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0202	EXEMPTION: PROJECTS REQUIRING DREDGE: FILL: STATE FASEMENT	Amended Eff. July 1, 1981	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0204	EXEMPTIONS FOR PROJECTS REQUIRING AIR QUALITY PERMIT	Eff. March 29, 1978	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0205	EXEMPTIONS FOR PROJECTS REQUIRING THE NPDES	Eff. March 29, 1978	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0206	SMALL DITCHES EXEMPTED	Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0207	STRUCTURAL ACCESSWAYS OVER FRONTAL DUNES EXEMPTED	Amended Eff. December 1, 1991	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0208	SINGLE FAMILY RESIDENCES EXEMPTED	Amended Eff. May 1, 2015	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0209	EXEMPTION / ACCESSORY USES / MAINTENANCE REPAIR / REPLACEMENT	Amended Eff. August 1, 2007	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0210	NOMINATION CATEGORIES EXCLUDED: MINOR PERMIT EXEMPTION	Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0211	JOCKEY'S RIDGE AEC	Eff. March 1, 1988	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0212	INSTALLATION AND MAINTENANCE OF SAND FENCING	Eff. August 1, 2002	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0400 - CLASSES OF FEDERAL AGENCY ACTIVITIES EXEMPTED FROM THE PERMIT REQUIREMENT	15A NCAC 07K .0401	MAINTENANCE OF FEDERAL NAVIGATION CHANNELS	Amended Eff. September 6, 1979	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07K .0402	FEDERAL AGENCY ACTIVITIES EXEMPTED	Amended Eff. April 22, 1980	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Rep ort for 15A NCAC 07L, LOCAL PLANNING AND MANAGEMENT GRANTS												
Agency - Coastal Resources Commission												
Comment Period - February 20 - April 20, 2017												
Date Submitted to APO - Filled in by RRC staff												
Subchapter	Rule Section	Rule Citation	Rule Name	Date and Last Agency Action on the Rule	Agency Determination [150B-21.3A(c)(1)a]	Implements or Conforms to Federal Regulation [150B-21.3A(e)]	Federal Regulation Citation	Public Comment Received [150B-21.3A(c)(1)]	Agency Determination Following Public Comment [150B-21.3A(c)(1)]	RRC Determination of Public Comments [150B-21.3A(c)(2)]	RRC Final Determination of Status of Rule for Report to APO [150B-21.3A(c)(2)]	OAH Next Steps
	SECTION .0100 -- PURPOSE AND AUTHORITY	15A NCAC 07L .0101	AUTHORITY	Amended Eff. August 1, 2002	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07L .0102	PURPOSE	Amended Eff. March 1, 2016	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0500 - GENERAL STANDARDS	15A NCAC 07L .0501	ELIGIBLE APPLICANTS	Eff. August 1, 2002	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07L .0503	PRIORITIES FOR FUNDING LAND USE PLANS AND IMPLEMENTATION PROJECTS	Amended Eff. March 1, 2016	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Rep ort for 15A NCAC 07M, GENERAL POLICY GUIDELINES FOR THE COASTAL AREA

Agency - Coastal Resources Commission

Comment Period - February 20 - April 20, 2017

Date Submitted to APO - Filled in by RRC staff

Subchapter	Rule Section	Rule Citation	Rule Name	Date and Last Agency Action on the Rule	Agency Determination [150B-21.3A(c)(1)a]	Implements or Conforms to Federal Regulation [150B-21.3A(e)]	Federal Regulation Citation	Public Comment Received [150B-21.3A(c)(1)]	Agency Determination Following Public Comment [150B-21.3A(c)(1)]	RRC Determination of Public Comments [150B-21.3A(c)(2)	RRC Final Determination of Status of Rule for Report to APO [150B-21.3A(c)(2)]	OAH Next Steps
	SECTION .0100 - PURPOSE AND AUTHORITY	15A NCAC 07M .0102	PURPOSE	Eff. March 1, 1979	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0200 - SHORELINE EROSION POLICIES	15A NCAC 07M .0201	DECLARATION OF GENERAL POLICY	Amended Eff. March 1, 1992	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0202	POLICY STATEMENTS	Amended Eff. May 4, 1995	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0300 - SHOREFRONT ACCESS POLICIES	15A NCAC 07M .0301	DECLARATION OF GENERAL POLICY	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0302	DEFINITIONS	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0303	STANDARDS FOR PUBLIC ACCESS	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0306	LOCAL GOVERNMENT AND STATE INVOLVEMENT IN ACCESS	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0307	ELIGIBILITY, SELECTION CRITERIA AND MATCHING REQUIREMENTS	Amended Eff. February 1, 2009	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0308	PUBLIC INVOLVEMENT/NOTICE	Eff. January 1, 1998	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0309	COMPLIANCE WITH THE NORTH CAROLINA ENVIRONMENTAL POLICY ACT	Amended Eff. January 1, 1998	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0400 - COASTAL ENERGY POLICIES	15A NCAC 07M .0401	DECLARATION OF GENERAL POLICY	Amended Eff. February 1, 2011	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0402	DEFINITIONS	Amended Eff. March 1, 2011	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0403	POLICY STATEMENTS	Amended Eff. February 1, 2011	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0500 - POST-DISASTER POLICIES	15A NCAC 07M .0501	DECLARATION OF GENERAL POLICY	Eff. October 1, 1982	Necessary without substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0502	DEFINITIONS	Eff. October 1, 1982	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0503	POLICY STATEMENTS	Amended Eff. May 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0600 - FLOATING STRUCTURE POLICIES	15A NCAC 07M .0601	DECLARATION OF GENERAL POLICY	Eff. July 1, 1983	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0602	DEFINITIONS	Eff. July 1, 1983	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0603	POLICY STATEMENTS	Eff. July 1, 1983	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0700 - MITIGATION POLICY	15A NCAC 07M .0701	DECLARATION OF GENERAL POLICY	Amended Eff. September 1, 1985	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0702	DEFINITIONS	Eff. January 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0703	MITIGATION CANDIDACY	Amended Eff. September 1, 1985	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0704	POLICY STATEMENTS	Eff. January 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0705	REVIEW PROCEDURES	Amended Eff. November 1, 1984	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0800 - COASTAL WATER QUALITY POLICIES	15A NCAC 07M .0801	DECLARATION OF GENERAL POLICIES	Eff. November 1, 1985	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0802	POLICY STATEMENTS	Amended Eff. October 1, 1988	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .0900 - POLICIES ON USE OF COASTAL AIRSPACE	15A NCAC 07M .0901	DECLARATION OF GENERAL POLICY	Amended Eff. March 1, 1992	Unnecessary	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .0902	POLICY STATEMENTS	Eff. March 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One



G.S. 150B-21.3A Rep ort for 15A NCAC 07M, GENERAL POLICY GUIDELINES FOR THE COASTAL AREA												
Agency - Coastal Resources Commission												
Comment Period - February 20 - April 20, 2017												
Date Submitted to APO - Filled in by RRC staff												
Subchapter	Rule Section	Rule Citation	Rule Name	Date and Last Agency Action on the Rule	Agency Determination [150B-21.3A(c)(1)a]	Implements or Conforms to Federal Regulation [150B-21.3A(e)]	Federal Regulation Citation	Public Comment Received [150B-21.3A(c)(1)]	Agency Determination Following Public Comment [150B-21.3A(c)(1)]	RRC Determination of Public Comments [150B-21.3A(c)(2)]	RRC Final Determination of Status of Rule for Report to APO [150B-21.3A(c)(2)]	OAH Next Steps
	SECTION .1000 - POLICIES ON WATER AND WETLAND BASED TARGET AREAS FOR MILITARY TRAINING ACTIVITIES	15A NCAC 07M .1001	DECLARATION OF GENERAL POLICY	Eff. March 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .1002	POLICY STATEMENTS	Eff. March 1, 1990	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1100 - POLICIES ON BENEFICIAL USE AND AVAILABILITY OF MATERIALS RESULTING FROM THE EXCAVATION OR MAINTENANCE OF NAVIGATIONAL CHANNELS	15A NCAC 07M .1101	DECLARATION OF GENERAL POLICY	Eff. October 1, 1992	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .1102	POLICY STATEMENTS	Eff. October 1, 1992	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
	SECTION .1200 - POLICIES ON OCEAN MINING	15A NCAC 07M .1201	DECLARATION OF GENERAL POLICY	Eff. August 1, 1998	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One
		15A NCAC 07M .1202	POLICY STATEMENTS	Eff. August 1, 1998	Necessary with substantive public interest	No		Select One	Select One	Select One	Select One	Select One





ROY COOPER  
*Governor*

WILLIAM G. ROSS, JR.  
*Interim Secretary*

BRAXTON DAVIS  
*Director*

## MEMORANDUM

**CRC- 17-04**

**To:** Coastal Resources Commission (CRC)  
**From:** Charlan Owens, AICP, Elizabeth City District Planner  
**Date:** January 24, 2017  
**Subject:** Certification of the Gates County Comprehensive Plan

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**Recommendation: CERTIFICATION of the Gates County Comprehensive Plan based on the determination that the document has met the substantive requirements outlined within the 7B Land Use Plan Guidelines and that there are no conflicts evident with either state or federal law or the State's Coastal Management Program.**

### Overview

Gates County is located south of the Virginia state line between Camden, Pasquotank, Perquimans, and Chowan counties to the east and Hertford County and the Chowan River to the west. NC 32 and US 13 are the major north/south roadways through the County and serve as the main connections to the Suffolk, Virginia area. US 158 is the main east/west roadway through the county. The County contains approximately 346 square miles. The comprehensive plan covers the entire county including the Town of Gatesville.

The 2014 population estimate for Gates County indicates a permanent population of 11,864 persons, which is 333 less than the 2010 permanent population of 12,197 persons. The county is classified as a "Tier 1" community by the North Carolina Department of Commerce. Tier 1 communities are considered economically disadvantaged and "distressed" based on economic and demographic characteristics.

Gates County desires to remain a slow paced rural area and seeks to maintain its abundant charm and beauty by protecting its forest resources, agricultural lands, and natural environment systems.

The Gates County Board of Commissioners unanimously adopted the plan at their duly advertised public hearing on December 5, 2016. The public was provided the opportunity to submit written comments on the plan up to thirty (30) days after the date of local adoption (January 4<sup>th</sup>). No written comments or objections were received.

To view the Gates County Comprehensive Plan go to the following link:

<https://deq.nc.gov/about/divisions/coastal-management/coastal-management-land-use-planning/certified-lups/gates-county>

The document file includes plan policies and implementation actions on .pdf pages 110-129 and a future land use map and designation descriptions on .pdf pages 101-106.







ROY COOPER

*Governor*

WILLIAM G. ROSS, JR.

*Acting Secretary*

BRAXTON DAVIS

*Director*

## MEMORANDUM

CRC- 17-05

**To:** Coastal Resources Commission

**From:** Michael Christenbury, Wilmington District Planner

**Date:** January 20, 2017

**Subject:** Certification of the Oak Island Comprehensive Land Use Plan

### Recommendation:

Certification of the 2017 Oak Island Comprehensive Land Use Plan with the determination that the Town has met the substantive requirements outlined in the 15A NCAC 7B Land Use Plan Guidelines and that there are no conflicts with either state or federal law or the State's Coastal Management Program.

### Overview

The Town of Oak Island is seeking certification of the 2017 Oak Island Comprehensive Land Use Plan (LUP). The Town is located in southeast North Carolina, in Brunswick County adjacent to the towns of Caswell Beach and Southport.

The Oak Island Comprehensive Plan was prepared as a guidebook to be utilized by the Town's government officials, staff, citizens, and visitors to guide growth and development within the Town. While the plan contains details about the community's population, history, facilities, amenities, and other area characteristics, it also provides a strong foundation for future development regulations and offers a comprehensive listing of goals, policies, and strategies for implementing those goals and policies. It was a goal of the Town to create a plan which provides a sound framework for managing growth and creating economic stability in a sensible and fiscally responsible manner.

Oak Island held a duly advertised public hearing on January 10, 2017 and voted unanimously by resolution to adopt the 2017 Comprehensive Land Use Plan.

DCM Staff reviewed the plan and has determined that the Town has met the substantive requirements outlined in the CRC's 15A NCAC 7B Land Use Plan Guidelines and that there are no conflicts with either state or federal law or the State's Coastal Management Program. DCM



did not receive any comments from the public, written or otherwise regarding the plan. Staff recommends Certification of the 2017 Oak Island Comprehensive Land Use Plan.

The 2017 Oak Island Comprehensive Land Use Plan may be viewed at:

<http://www.planoakislandnc.net/draft-plan.html>



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## PROPOSED RULES

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These people can get very sick from a germ called Salmonella that reptiles carry. Reptiles include lizards, snakes, alligators, and turtles. Wash hands thoroughly after handling turtles or material that had contact with turtles. Do not allow water or any other substance that had contact with turtles to come in contact with food or areas where food is prepared. Do not bathe turtles or clean their tanks in your kitchen or bathroom and do not have close contact with turtles which could allow direct contamination of the mouth (e.g., kissing, etc.)."

(f) The seller shall keep a record of all purchases, losses, and other dispositions of turtles for at least one year.

Authority G.S. 130A-144.

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### TITLE 15A – DEPARTMENT OF ENVIRONMENTAL QUALITY

*Notice is hereby given in accordance with G.S. 150B-21.2 that the Coastal Resources Commission intends to amend the rules cited as 15A NCAC 07L .0101 and .0503 and repeal the rule cited as 15A NCAC 07L .0102.*

Link to agency website pursuant to G.S. 150B-19.1(c):  
<https://deq.nc.gov/permits-regulations/rules-regulations/proposed-rules>

Proposed Effective Date: July 1, 2017

**Public Hearing:**

**Date:** February 8, 2017

**Time:** 1:30 p.m.

**Location:** DoubleTree by Hilton, 2717 W. Fort Macon Road, Atlantic Beach, NC 28512

**Reason for Proposed Action:** Subchapter 07L establishes the criteria for funding grants to local governments for planning and management projects within the 20 coastal counties. The Coastal Resources Commission (CRC) is proposing amendments to the CAMA Planning & Management Grant Program. These amendments are intended to shift the primary focus of grant funding from local land use plans to a broad variety of local projects that address coastal issues and to allow the Division of Coastal Management to focus on specific issues or areas of Coastal Resources Commission (CRC) interest in awarding grant funds. 15A NCAC 07L .0102 has been deleted as the purpose of the grant has been incorporated into 15A NCAC 07L .0503.

**Comments may be submitted to:** Braxton Davis, NC Division of Coastal Management, 400 Commerce Avenue, Morehead City, NC 28557

**Comment period ends:** March 6, 2017

**Procedure for Subjecting a Proposed Rule to Legislative Review:** If an objection is not resolved prior to the adoption of the

rule, a person may also submit written objections to the Rules Review Commission after the adoption of the Rule. If the Rules Review Commission receives written and signed objections after the adoption of the Rule in accordance with G.S. 150B-21.3(b2) from 10 or more persons clearly requesting review by the legislature and the Rules Review Commission approves the rule, the rule will become effective as provided in G.S. 150B-21.3(b1). The Commission will receive written objections until 5:00 p.m. on the day following the day the Commission approves the rule. The Commission will receive those objections by mail, delivery service, hand delivery, or facsimile transmission. If you have any further questions concerning the submission of objections to the Commission, please call a Commission staff attorney at 919-431-3000.

**Fiscal impact (check all that apply).**

- ☒ State funds affected
- ☐ Environmental permitting of DOT affected
- ☐ Analysis submitted to Board of Transportation
- ☒ Local funds affected
- ☐ Substantial economic impact (≥\$1,000,000)
- ☒ Approved by OSBM
- ☐ No fiscal note required by G.S. 150B-21.4

### CHAPTER 07 - COASTAL MANAGEMENT

#### SUBCHAPTER 07L - LOCAL PLANNING AND MANAGEMENT GRANTS

#### SECTION .0100 – PURPOSE AND AUTHORITY

##### 15A NCAC 07L .0101 AUTHORITY

The rules in this Subchapter are promulgated pursuant to G.S. 113A-112 and G.S. 113A-124 by the Secretary of the Department of ~~Environment and Natural Resources (DENR)~~ Environmental Quality in the Secretary's capacity as executive head of the state agency designated by the Governor to administer state funds and to receive and administer federal funds granted by the National Oceanic and Atmospheric Administration under the Federal Coastal Zone Management Act.

Authority G.S. 113A-112; 113A-124.

##### 15A NCAC 07L .0102 PURPOSE

~~The purpose of the Rules in this Subchapter is to establish the criteria and procedures for funding the Department of Environmental Quality program of grants for local land use plans or comprehensive plans, hereinafter referred to as "the plan", and coastal planning and management projects within North Carolina's coastal area. These funds are made available to assist local governments in developing and implementing plans and management strategies for their coastal resources, as mandated by the CAMA. Funds shall be used in refining and carrying out local land use planning and management programs by local governments within the 20 counties defined by the Coastal Area Management Act in G.S. 113A-103.~~

Authority G.S. 113A-112; 113A-124.



SECTION .0500 - GENERAL STANDARDS

15A NCAC 07L .0503 PRIORITIES FOR FUNDING PLANNING AND MANAGEMENT PROJECTS

(a) In funding local planning and management grants, the Department of Environmental Quality (DEQ) shall follow these general priorities for local planning and management grants: The Department of Environmental Quality (DEQ) program of grants for coastal planning and management projects provides funding to assist local governments in the 20 counties as defined by the Coastal Area Management Act in the refining and implementing of plans and management strategies for their coastal resources. In funding local planning and management grants, DEQ shall select projects that need local attention in order to meet Coastal Resources Commission (CRC) management goals pursuant to 15A NCAC 07B .0702(d)(2) or contained within this Subparagraph. Priority management topics shall be designated on an annual basis following consultation with the CRC and may include, but are not limited to, expanded education and outreach efforts, special planning efforts focused on coastal resources or issues, improvements in intergovernmental coordination, targeted research or studies, and the development of local ordinances directly related to coastal concerns and not in contradiction with state rules. Projects selected for funding shall further the CRC's goals for the designated topics outlined below:

(1) The highest priority, Category I, includes projects mandated by statute, including initial and updated or amended land use plans or comprehensive plans, hereinafter referred to as the plan, local participation in projects initiated by DEQ, and projects DEQ indicates urgently need local attention in order to meet Coastal Resources Commission (CRC) management topics pursuant to 15A NCAC 07B .0702(d)(2). Examples of eligible projects and their associated priority category include:

(A) Those activities designated by DEQ on an annual basis, following consultation with the CRC and local governments, to be necessary to bring local plans into compliance with state rules for land use planning; or

(B) Adopting, amending, or updating plans to reflect changed conditions which may include necessary data collection, public participation, and policy development.

(2) The second priority, Category II, includes projects related to carrying out the explicit goals of the Coastal Area Management Act (CAMA), for which DEQ indicates there is a high priority for local actions or projects which are coastally dependent (water-related) or projects to implement the plan such as public facilities planning or land use regulations preparation. Examples of eligible projects and their associated priority category include:

(A) Adopting or amending ordinances to further secure compliance with state

rules in AECs pursuant to 15A NCAC 07H;

(B) Beach access plans and studies which may include inventory and identification of sites, design of access improvements, acquisition plans and studies, and legal studies necessary to determine the extent of public use rights;

(C) Erosion control plans and studies which may include mapping, erosion rate measurement, design of protection strategies for public lands, cost-benefit analysis, and relocation plans and strategies;

(D) Studies and planning leading to the nomination of new AECs as described in 15A NCAC 07H .0503, or locally significant environmental areas;

(E) Waterfront redevelopment and renewal plans and studies including feasibility studies, site design studies, and plans and studies for improving or enhancing waterfront parks and public areas which may include site design, use studies, and cost analysis;

(F) Preparing, adopting, or amending ordinances necessary to carry out CRC certified plans, state rules, and the state coastal zone management plan which may include regulations related to zoning, subdivision, stormwater management, dune protection beyond AEC standards, sanitation, building, mobile homes, historic preservation, signs, natural area protection, and environmental impact statements.

(3) The third priority, Category III, includes projects related to improving local coastal management and land use management capabilities. Examples of eligible projects and their associated priority category include:

(A) Initial water and sewer plans and studies;

(B) Land use related capital facilities programming;

(C) Base mapping as a management tool;

(D) Other planning, studies, and data acquisition supportive of coastal planning and management which may include public education or involvement on coastal issues; solid waste planning; port planning; and sport and commercial fishing studies;

(E) Enforcement of ordinances adopted to carry out certified plans;

(F) Coordination of local coastal management activities with other local management activities which may



include ~~internal coordination, and city-county coordination; or~~  
(G) ~~Other coastally-related management projects.~~

- (1) Public Access: Maximize public access to the beaches and the public trust waters of the coastal region.
- (2) Land Use Compatibility: Ensure that development and use of resources or preservation of land balance protection of natural resources and fragile areas with economic development, avoids risks to public health, safety, and welfare.
- (3) Infrastructure Carrying Capacity: Ensure that public infrastructure systems are sized, located and managed so the quality and productivity of AECs and other fragile areas are protected or restored.
- (4) Natural Hazards: Conserve and maintain barrier dunes, beaches, flood plains, and other coastal features for their natural storm protection function and their natural resources giving recognition to public health, safety, and welfare issues.
- (5) Habitat Enhancement: Maintain, protect, and where possible enhance coastal habitats; for example, marsh restoration.
- (6) Other Topics or Special Issues: developed areas and working waterfronts, urban waterfront revitalization, economic growth and development, redevelopment and revitalization, recreation and tourism, historic and cultural resources, public trust rights, water use and water quality, stormwater management, erosion control, shoreline protection and management, open space, parks and recreation, storm recovery, farmland preservation and management, historic and cultural resources, stakeholder and citizen participation, and transportation.

(b) ~~In addition,~~ DEQ shall take into consideration the following factors listed in order of importance to establish priorities for individual projects ~~within the general priority categories: projects:~~

- (1) project's contribution towards meeting CRC's prioritized management topics in 15A NCAC 07B .0702(d)(2); and associated management goals pursuant to 15A NCAC 07B .0702(d)(2) or contained in Subparagraph (a)(1) of this Rule;
- (2) the extent to which the project includes measures of environmental protection beyond Areas of Environmental Concern (AEC) standards of Subchapter 15A NCAC 07H;
- (3) applicant's urgency of need;
- (4) past history of applicant's implementation of planning and management grant program activities;
- (5) feasibility of completion of project by the applicant;

- (6) past experience with land use planning and implementation projects as well as present management and administrative capabilities;
- (7) potential applicability of the project to other coastal area municipalities and counties; and
- (8) geographic distribution of applicants.

(c) Matching fund requirements are based on the North Carolina Department of Commerce's Tier designations, as outlined by the Lee Act (G.S. 105-129.3). Local government contributions for ~~land-use-planning and implementation-management~~ projects shall be at least 25 percent of the project costs except for Tier 1 designated counties and their respective municipalities which shall have a local government contribution of at least 10 percent of the project costs. At least one half of the local contribution shall be cash match; the remainder may be in-kind match.

(d) Any local government whose plan is not certified due to failure to meet the criteria listed in 15A NCAC 07B or that has not submitted the most recent Required Periodic Implementation Status Report as described in 15A NCAC 07B, shall not receive further funding under this program until these inconsistencies are corrected.

*Authority G.S. 113A-112; 113A-124.*

## TITLE 25 – OFFICE OF STATE HUMAN RESOURCES

*Notice is hereby given in accordance with G.S. 150B-21.2 that the State Human Resources Commission intends to adopt the rule cited as 25 NCAC 01J .0619 and amend rules cited as 25 NCAC 01H .0630-.0632, .0634, .0635, .0701, .0801, .0902, .1001, .1104, 01J .0603, .0605, .0606, .0610-.0614 and .1101.*

**Link to agency website pursuant to G.S. 150B-19.1(c):**  
<http://oshr.nc.gov/about-oshr/state-hr-commission/proposed-rulemaking>

**Proposed Effective Date:** *June 1, 2017*

**Public Hearing:**

**Date:** *January 24, 2017*

**Time:** *2:00 p.m.*

**Location:** *Learning & Development Center, Coastal Room, 101 W. Peace Street, Raleigh, NC 27603*

**Reason for Proposed Action:** *These amendments are based on recent changes to the statewide Salary Administration Policy, the statewide Performance Management Policy, and HB 495 (S.L. 2015-260).*

**Comments may be submitted to:** *Margaret Duke, 1331 Mail Service Center, Raleigh, NC 27699-1331, phone (919) 807-4869, fax (919) 715-9750, email Margaret.b.duke@nc.gov*

**Comment period ends:** *March 6, 2017*

**Procedure for Subjecting a Proposed Rule to Legislative Review:** If an objection is not resolved prior to the adoption of the rule, a person may also submit written objections to the Rules



November 17, 2016

**MEMORANDUM**

**CRC-16-44**

**TO:** Coastal Resources Commission  
**FROM:** Ken Richardson, *Shoreline Management Specialist*  
**SUBJECT:** Sediment Criteria – Sampling Methodology

**Program Description:**

The Coastal Resources Commission (CRC) adopted 15A NCAC 07H.0312 Technical Standards for Beach Fill Projects with an original effective date of February 1<sup>st</sup> 2007. The rule is often referred to informally as the sediment criteria rule. The CRC adopted these compatibility standards in order to ensure that sand used for beach renourishment closely matches the sand on the existing beach. To determine compatibility, the rule requires that the sediment intended for beach placement, as well as the sand on the existing beach be analyzed for grain size and composition, and that they be within defined ranges of similarity before the project can begin.

The sampling protocol associated with the sediment criteria rules is highly prescriptive with regards to sample design, spacing, transects, numbers of cores, etc. Since its adoption, the Sediment Criteria rule has been amended a number of times to address various implementation issues. Over time, DCM Staff have found the precision required in the rules can limit flexibility in sample design, and can also limit the ability of communities to pursue small projects or respond to nourishment opportunities in a rapid fashion. In some cases, the sampling protocol can also limit applicants' ability to use existing data. For example, during development of the Town of Nags Head project, the Town's contractor was required to take extra core samples over and above what USACE had previously taken during the USACE's work on a possible 50 or 30-year CSDR project.

Even with the detailed sampling required by sampling protocol, an applicant can satisfy the criteria and still have unsuitable sediment placed on the beach (including rock that was missed during the sampling) and argue that they met the sampling standards by following the protocols, and therefore are not in violation of the rules.

Additionally, Staff is concerned that the sampling protocol may eliminate the ability of communities to take advantage of beneficial use projects that present themselves late in the planning process (i.e. too late to be able to hire firm and/or mobilize to take the extra samples required). It also could limit ability to alter the recipient beach at the last moment in response to recent erosion events.



### **Changes under consideration:**

DCM Staff assessment of the sediment criteria information provided by project applicants requires a significant amount of time to review what can be several volumes of technical data. Eliminating the rigid protocol in favor of a simpler process where the project's consultant/engineer designs a sampling protocol that assures sediment compatibility between the beach and borrow area will significantly reduce the amount of effort on the part of DCM regulatory staff in reviewing this aspect of beach nourishment proposals. Staff have been discussing a potential amendment to the rule, which would retain the standards for the various grain sizes, such as the percentage "fines" shall not exceed more than 5% over recipient beach, but use language similar to that in the terminal groin legislation to require the applicant's consultant/engineer to attest to sediment compatibility. For example, *Compatibility with these sediment standards shall be documented by a professional engineer licensed to practice pursuant to Chapter 89C of the General Statutes.*

In this manner, compatibility criteria between the borrow areas and recipient beach would be retained, with the burden and flexibility for establishing the sampling protocol placed on project applicants. Staff can then devote more time to the environmental review components of the project and possibly decrease the time of permit issuance.

Staff will review the history and 10-year performance of this rule for the commission, and would like to engage in a discussion about the potential amendment at the upcoming meeting. The current sediment compatibility rules (15A NCAC 07H.0312 Technical Standards for Beach Fill Projects) are attached for your convenience.

**Attachment A:** 15A NCAC 07H .0312 Technical Standards for Beach Fill Projects



## ATTACHMENT A:

### 15A NCAC 07H .0312 TECHNICAL STANDARDS FOR BEACH FILL PROJECTS

Placement of sediment along the oceanfront shoreline is referred to in this Rule as “beach fill.” Sediment used solely to establish or strengthen dunes or to re-establish state-maintained transportation corridors across a barrier island breach in a disaster area as declared by the Governor is not considered a beach fill project under this Rule. Beach fill projects including beach nourishment, dredged material disposal, habitat restoration, storm protection, and erosion control may be permitted under the following conditions:

- (1) The applicant shall characterize the recipient beach according to the following methodology:
  - (a) Characterization of the recipient beach is not required for the placement of sediment directly from and completely confined to a maintained navigation channel or associated sediment basins within the active nearshore, beach or inlet shoal system;
  - (b) Sediment sampling and analysis shall be used to capture the three-dimensional spatial variability of the sediment characteristics including grain size, sorting and mineralogy within the natural system;
  - (c) Shore-perpendicular topographic and bathymetric surveying of the recipient beach shall be conducted to determine the beach profile. Topographic and bathymetric surveying shall occur along a minimum of five shore-perpendicular transects evenly spaced throughout the entire project area. Each transect shall extend from the frontal dune crest seaward to a depth of 20 feet (6.1 meters) or to the shore-perpendicular distance 2,400 feet (732 meters) seaward of mean low water, whichever is in a more landward position. Transect spacing shall not exceed 5,000 feet (1,524 meters) in the shore-parallel direction. Elevation data for all transects shall be referenced to the North American Vertical Datum of 1988 (NAVD 88) and the North American Datum of 1983 (NAD 83);
  - (d) No fewer than 13 sediment samples shall be taken along each beach profile transect. At least one sample shall be taken from each of the following morphodynamic zones where present: frontal dune, frontal dune toe, mid berm, mean high water (MHW), mid tide (MT), mean low water (MLW), trough, bar crest and at even depth increments from 6 feet (1.8 meters) to 20 feet (6.1 meters) or to a shore-perpendicular distance 2,400 feet (732 meters) seaward of mean low water, whichever is in a more landward position. The total number of samples taken landward of MLW shall equal the total number of samples taken seaward of MLW;
  - (e) For the purpose of this Rule, “sediment grain size categories” are defined as “fine” (less than 0.0625 millimeters), “sand” (greater than or equal to 0.0625 millimeters and less than 2 millimeters), “granular” (greater than or equal to 2 millimeters and less than 4.76 millimeters) and “gravel” (greater than or equal to 4.76 millimeters and less than 76 millimeters). Each sediment sample shall report percentage by weight of each of these four grain size categories;
  - (f) A composite of the simple arithmetic mean for each of the four grain size categories defined in Sub-Item (1)(e) of this Rule shall be calculated for each transect. A grand mean shall be established for each of the four grain size categories by summing the mean for each transect and dividing by the total number of transects. The value that characterizes grain size values for the recipient beach is the grand mean of percentage by weight for each grain size category defined in Sub-Item (1)(e) of this Rule;
  - (g) Percentage by weight calcium carbonate shall be calculated from a composite of all sediment samples along each transect defined in Sub-Item (1)(d) of this Rule. The value that characterizes the carbonate content of the recipient beach is a grand mean calculated by summing the average percentage by weight calcium carbonate for each transect and dividing by the total number of transects. For beaches on which fill activities have taken place prior to the effective date of this Rule, the Division of Coastal Management shall consider visual estimates of shell content as a proxy for carbonate weight percent;
  - (h) The total number of sediments and shell material greater than or equal to three inches (76 millimeters) in diameter, observable on the surface of the beach between mean low water (MLW) and the frontal dune toe, shall be calculated for an area of 50,000 square feet (4,645 square meters) within the beach fill project boundaries. This area is considered a representative sample of the entire project area and referred to as the “background” value;



- (i) Beaches that received sediment prior to the effective date of this Rule shall be characterized in a way that is consistent with Sub-Items (1)(a) through (1)(h) of this Rule and shall use data collected from the recipient beach prior to the addition of beach fill. If such data were not collected or are unavailable, a dataset best reflecting the sediment characteristics of the recipient beach prior to beach fill shall be developed in coordination with the Division of Coastal Management; and
  - (j) All data used to characterize the recipient beach shall be provided in digital and hardcopy format to the Division of Coastal Management upon request.
- (2) The applicant shall characterize the sediment to be placed on the recipient beach according to the following methodology:
  - (a) The characterization of borrow areas including submarine sites, upland sites, and dredged material disposal areas shall be designed to capture the three-dimensional spatial variability of the sediment characteristics including grain size, sorting and mineralogy within the natural system or dredged material disposal area;
  - (b) The characterization of borrow sites shall include sediment characterization data provided by the Division of Coastal Management where available. These data can be found in individual project reports and studies, and shall be provided by the Division of Coastal Management upon request and where available;
  - (c) Seafloor surveys shall measure elevation and capture acoustic imagery of the seafloor. Measurement of seafloor elevation shall cover 100 percent of each submarine borrow site and use survey-grade swath sonar (*e.g.* multibeam or similar technologies) in accordance with current US Army Corps of Engineers standards for navigation and dredging. Seafloor imaging without an elevation component (*e.g.* sidescan sonar or similar technologies) shall also cover 100 percent of each borrow site and be performed in accordance with US Army Corps of Engineers standards for navigation and dredging. Because shallow submarine areas can provide technical challenges and physical limitations for acoustic measurements, seafloor imaging without an elevation component may not be required for water depths less than 10 feet (3 meters). Alternative elevation surveying methods for water depths less than 10 feet (3 meters) may be evaluated on a case-by-case basis by the Division of Coastal Management. Elevation data shall be tide- and motion-corrected and referenced to NAVD 88 and NAD 83. Seafloor imaging data without an elevation component shall be referenced to the NAD 83. All final seafloor survey data shall conform to standards for accuracy, quality control and quality assurance as set forth by the US Army Corps of Engineers (USACE). The current surveying standards for navigation and dredging can be obtained from the Wilmington District of the USACE. For offshore dredged material disposal sites, only one set of imagery without elevation is required. Sonar imaging of the seafloor without elevation is not required for borrow sites completely confined to maintained navigation channels, sediment deposition basins within the active nearshore, beach or inlet shoal system;
  - (d) Geophysical imaging of the seafloor subsurface shall be used to characterize each borrow site and shall use survey grids with a line spacing not to exceed 1,000 feet (305 meters). Offshore dredged material disposal sites shall use a survey grid not to exceed 2,000 feet (610 meters) and only one set of geophysical imaging of the seafloor subsurface is required. Survey grids shall incorporate at least one tie point per survey line. Because shallow submarine areas can pose technical challenges and physical limitations for geophysical techniques, subsurface data may not be required in water depths less than 10 feet (3 meters), and the Division of Coastal Management shall evaluate these areas on a case-by-case basis. Subsurface geophysical imaging shall not be required for borrow sites completely confined to maintained navigation channels, sediment deposition basins within the active nearshore, beach or inlet shoal system, or upland sites. All final subsurface geophysical data shall use accurate sediment velocity models for time-depth conversions and be referenced to NAD 83;
  - (e) Sediment sampling of all borrow sites shall use a vertical sampling device no less than 3 inches (76 millimeters) in diameter. Characterization of each borrow site shall use no fewer than five evenly spaced cores or one core per 23 acres (grid spacing of 1,000 feet or 305 meters), whichever is greater. Characterization of borrow sites completely confined to



maintained navigation channels or sediment deposition basins within the active nearshore, beach or inlet shoal system shall use no fewer than five evenly spaced vertical samples per channel or sediment basin, or sample spacing of no more than 5,000 linear feet (1,524 meters), whichever is greater. Two sets of sampling data (with at least one dredging event in between) from maintained navigation channels or sediment deposition basins within the active nearshore, beach or inlet shoal system may be used to characterize material for subsequent nourishment events from those areas if the sampling results are found to be compatible with Sub-Item (3)(a) of this Rule. In submarine borrow sites other than maintained navigation channels or associated sediment deposition basins within the active nearshore, beach or inlet shoal system where water depths are no greater than 10 feet (3 meters), geophysical data of and below the seafloor are not required, and sediment sample spacing shall be no less than one core per six acres (grid spacing of 500 feet or 152 meters). Vertical sampling shall penetrate to a depth equal to or greater than permitted dredge or excavation depth or expected dredge or excavation depths for pending permit applications. All sediment samples shall be integrated with geophysical data to constrain the surficial, horizontal and vertical extent of lithologic units and determine excavation volumes of compatible sediment as defined in Item (3) of this Rule;

- (f) For offshore dredged material disposal sites, the grid spacing shall not exceed 2,000 feet (610 meters). Characterization of material deposited at offshore dredged material disposal sites after the initial characterization are not required if all of the material deposited complies with Sub-Item (3)(a) of this Rule as demonstrated by at least two sets of sampling data with at least one dredging event in between;
  - (g) Grain size distributions shall be reported for all sub-samples taken within each vertical sample for each of the four grain size categories defined in Sub-Item (1)(e) of this Rule. Weighted averages for each core shall be calculated based on the total number of samples and the thickness of each sampled interval. A simple arithmetic mean of the weighted averages for each grain size category shall be calculated to represent the average grain size values for each borrow site. Vertical samples shall be geo-referenced and digitally imaged using scaled, color-calibrated photography;
  - (h) Percentage by weight of calcium carbonate shall be calculated from a composite sample of each core. A weighted average of calcium carbonate percentage by weight shall be calculated for each borrow site based on the composite sample thickness of each core. Carbonate analysis is not required for sediment confined to maintained navigation channels or associated sediment deposition basins within the active nearshore, beach or inlet shoal system; and
  - (i) All data used to characterize the borrow site shall be provided in digital and hardcopy format to the Division of Coastal Management upon request.
- (3) The Division of Coastal Management shall determine sediment compatibility according to the following criteria:
- (a) Sediment completely confined to the permitted dredge depth of a maintained navigation channel or associated sediment deposition basins within the active nearshore, beach or inlet shoal system is considered compatible if the average percentage by weight of fine-grained (less than 0.0625 millimeters) sediment is less than 10 percent;
  - (b) The average percentage by weight of fine-grained sediment (less than 0.0625 millimeters) in each borrow site shall not exceed the average percentage by weight of fine-grained sediment of the recipient beach characterization plus five percent;
  - (c) The average percentage by weight of granular sediment (greater than or equal to 2 millimeters and less than 4.76 millimeters) in a borrow site shall not exceed the average percentage by weight of coarse-sand sediment of the recipient beach characterization plus 10 percent;
  - (d) The average percentage by weight of gravel (greater than or equal to 4.76 millimeters and less than 76 millimeters) in a borrow site shall not exceed the average percentage by weight of gravel-sized sediment for the recipient beach characterization plus five percent;
  - (e) The average percentage by weight of calcium carbonate in a borrow site shall not exceed the average percentage by weight of calcium carbonate of the recipient beach characterization plus 15 percent; and



- (f) Techniques that take incompatible sediment within a borrow site or combination of sites and make it compatible with that of the recipient beach characterization shall be evaluated on a case-by-case basis by the Division of Coastal Management.
- (4) Excavation and placement of sediment shall conform to the following criteria:
  - (a) Sediment excavation depths for all borrow sites shall not exceed the maximum depth of recovered core at each coring location;
  - (b) In order to protect threatened and endangered species, and to minimize impacts to fish, shellfish and wildlife resources, no excavation or placement of sediment shall occur within the project area during times designated by the Division of Coastal Management in consultation with other State and Federal agencies. The time limitations shall be established during the permitting process and shall be made known prior to permit issuance; and
  - (c) Sediment and shell material with a diameter greater than or equal to three inches (76 millimeters) is considered incompatible if it has been placed on the beach during the beach fill project, is observed between MLW and the frontal dune toe, and is in excess of twice the background value of material of the same size along any 50,000-square-foot (4,645 square meter) section of beach.

*History Note: Authority G.S. 113-229; 113A-102(b)(1); 113A-103(5)(a); 113A-107(a); 113A-113(b)(5) and (6); 113A-118; 113A-124;*  
*Eff. February 1, 2007;*  
*Amended Eff. August 1, 2014; September 1, 2013; April 1, 2008.*





ROY COOPER

*Governor*

WILLIAM G. ROSS, JR.

*Acting Secretary*

BRAXTON DAVIS

*Director*

## MEMORANDUM

CRC- 17-06

**To: Coastal Resources Commission**  
**From: Michael Christenbury, Wilmington District Planner**  
**Date: January 20, 2017**  
**Subject: Planning & Management Grant Program Priorities**

### Overview

Part of the most recent revisions to the CAMA Land Use Planning Program included amendments to the 15A NCAC 7L Planning & Management Grant Program rules, which outline the criteria for land use plan implementation grants to local governments. In the past, heavy emphasis was placed on the development of land use plans. While the development of land use plans will still be an eligible activity under the amended Planning and Management Grant Program, the changes to the rules will allow greater flexibility for the Division of Coastal Management (DCM) to focus on specific issues or areas of interest to the Division and CRC in awarding funding for local projects.

In the coming weeks, DCM will be notifying local governments in the 20-county coastal area that the Division is making grant funding available for Planning and Management projects for the upcoming fiscal year. Local governments will be invited to apply for funding for projects that are anticipated to begin July 1, 2017 and to be completed by June 30, 2018.

For this year's solicitation, DCM Staff recommends that grant funding be prioritized for **Natural Hazards and Storm Recovery projects**. Proposals are expected to further local implementation of the CRC's management goals and planning objectives for the natural hazards management topic [See 15A NCAC 07B.0702(d)(2)(D)(i) and (ii)] and/or to address local issues specific to storm recovery. Projects may include, but are not limited to, expanded education and outreach efforts, special planning efforts focused on coastal resources or issues, improvements in intergovernmental coordination, targeted research or studies, and the development of local ordinances. Proposals for projects not related to the natural hazards and storm recovery topics may be submitted for non-prioritized funding consideration.

### CRC Action

Staff is seeking concurrence from the CRC that grant funding during the FY 2017-2018 grant cycle be prioritized for Natural Hazards and Storm Recovery projects.





STATE OF NORTH CAROLINA  
DEPARTMENT OF JUSTICE

JOSH STEIN  
ATTORNEY GENERAL

9001 MAIL SERVICE CENTER  
RALEIGH, NC 27699-9001

REPLY TO:  
MARY LUCASSE  
ENVIRONMENTAL DIVISION  
mlucasse@ncdoj.gov

MEMORANDUM

**TO:** Coastal Resource Commissioners

**CC:** Ted Sampson, Consultant for The Riggings Homeowners, Inc. via email  
Paul Derek Jarrett, Registered Agent, via US Mail  
Braxton Davis, Director of DCM, via email

**FROM:** Mary Lucasse  
Special Deputy Attorney General and CRC Counsel

**DATE:** January 25, 2017

**RE:** The Riggings HOA 2016 Annual Report (CRC-17-07)

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In the Final Agency Decision issued December 11, 2015 conditionally granting The Riggings Homeowners Inc. (HOA) request for a variance relating to sandbags, the Commission required the HOA to provide an Annual Update on Alternative Solutions to address Erosion at the Riggings. That decision provides factual and procedural information regarding erosion and sandbags at The Riggings. The 2016 Annual Update was submitted on behalf of the HOA by Sampson Contracting, Inc. Division of Coastal Management was asked to provide written comments on the 2016 Annual Update. The purpose of requesting the HOA to provide an annual update was, in part, to allow the Commission to have ongoing discussions with the HOA to proactively consider methods of addressing erosion at the Site (other than sandbags).

**Recommendation:** Following discussion of the 2016 annual Update and DCM's comments, determine whether the Commission would like to request additional information or suggest the HOA take additional steps to proactively consider possible ways to address erosion at the Site.

Attachment A - Final Agency Decision dated December 11, 2015  
Attachment B - The 2016 Annual Update submitted by the HOA  
Attachment C - DCM's comments on the 2016 Annual Update  
Attachment D - Powerpoint of Site Photos



STATE OF NORTH CAROLINA  
COUNTY OF NEW HANOVER

IN THE MATTER OF:  
PETITION FOR VARIANCE  
BY RIGGINGS HOMEOWNERS, INC.

) BEFORE THE NORTH CAROLINA  
) COASTAL RESOURCES COMMISSION  
) **CRC-VR-15-08**  
)  
)  
)

) **FINAL AGENCY DECISION**  
)

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On October 6, 2015, Petitioner, the Homeowners Association for The Riggings condominium development in Kure Beach, New Hanover County, submitted a request seeking a variance from Rule 15A NCAC 7H .1705(a)(7) to allow sandbags to remain on the beach for a period longer than is allowed by the rules of the North Carolina Coastal Resources Commission ("Commission"). The matter was heard on oral arguments and stipulated facts at the regularly scheduled meeting of the Commission on November 17, 2015 in Atlantic Beach, North Carolina pursuant to N.C. Gen. Stat. § 113A-120.1 and 15A NCAC 7J .0700, *et seq.* Assistant Attorney General Christine A. Goebel, Esq. appeared for the Department of Environmental Quality, Division of Coastal Management and William G. Wright, Esq. appeared on behalf of Petitioner.

Upon consideration of the record documents and the arguments of the parties, the Commission adopts the following:

#### **FINDINGS OF FACTS**

1. Petitioner Riggings Homeowners, Inc. ("Riggings HOA" or "Petitioner") is a non-profit corporation organized under the laws of the State of North Carolina. "The Riggings" is also the name of the 48-unit residential condominium project bordering the Atlantic Ocean in Kure Beach, New Hanover County, North Carolina, whose unit owners are members of Riggings HOA.



2. The Riggings was constructed in 1985 near the boundary between the town of Kure Beach and the Fort Fisher State Historic Site. Immediately south of The Riggings is Fort Fisher, a North Carolina State Park, which is also located on the shoreline of the Atlantic Ocean.

3. The Riggings has been threatened by erosion since 1985, and a sandbag revetment has been used to protect it since that time.

4. In the 1920's the Board of County Commissioners of New Hanover County allowed a contractor to remove some of the coquina rock outcropping northeast of Fort Fisher for use in the completion of a section of U.S. Highway 421, a public project.

5. The contractor removed approximately 6,000 cubic yards of rock from a strip approximately 50 to 100 feet wide.

6. An intertidal rock outcrop near Fort Fisher, known as the Fort Fisher Coquina Outcrop Natural Area, was entered on the official North Carolina Registry of Natural Heritage Areas on February 6, 1982.

7. Among other things, coquina rock outcroppings can provide a partial natural barrier against beach erosion.

8. Currently some of these coquina rock outcroppings are within sight of The Riggings, and the southern portion of a large outcropping is situated in front of the northern section of The Riggings.

9. A large part of the rock outcroppings within sight of The Riggings was uncovered during Hurricane Floyd, and its vegetation was uprooted by the storm surge.

10. Since 2000, beach nourishment projects conducted by the U.S. Army Corps of Engineers have covered some coquina rock outcroppings north of The Riggings.



11. The first CAMA permits for sandbags at The Riggings were issued by the Local Permit Officer for the Town of Kure Beach.

12. Since 1992, the CAMA permits for the sandbags have been issued by the Division of Coastal Management ("DCM").

13. In 1994 DCM issued CAMA General Permit No. 13355-D, which authorized repair of the sandbags and the addition of new ones.

14. Permit No. 13355-D was modified in February 1995 to allow the filling of holes in the sandbag revetment with sandbags.

15. The sandbags which were in place when Permit No. 13355-D expired on March 5, 1995, could legally remain in place until May 1, 2000.

16. In order to protect Fort Fisher from the effects of erosion from the Atlantic Ocean, the State of North Carolina erected a permanent revetment from July 1995 to January 1996.

17. At the time the revetment was erected, the general policy of the State of North Carolina did not permit the construction of hardened structures like the Fort Fisher revetment in recognition of the adverse erosion effects such structures can cause to adjacent properties. However, the revetment was constructed under an exception to this policy for the protection of federal and state historic sites, such as Fort Fisher.

18. Initially after the construction of the revetment at Fort Fisher, the rate of erosion of the shoreline in front of The Riggings increased, but since then the rate of erosion has decreased.

19. On May 26, 2000, the Commission granted a variance to the Riggings HOA extending the deadline for removing the sandbag to May 26, 2001. (Stipulated Exhibit 6, pp 164-68)



20. The Carolina / Kure Beach Renourishment Project of 2001 included a large part of Carolina Beach and 98 percent of Kure Beach but fell approximately 1,500 feet short of the Riggings Condominium.

21. The Riggings HOA made various attempts to get the United States Army Corps of Engineers to extend beach nourishment projects to include the shoreline immediately adjacent to The Riggings, but the attempts did not succeed.

22. The Corps of Engineers informed U.S. Representative Mike McIntyre by letter dated February 25, 2000, that the "primary reason that the (beach nourishment) project stops short of the Riggings is due to the intertidal coquina rock outcropping." The letter further states that the "rock outcropping has been declared a natural heritage area by the North Carolina Natural Heritage Program and burying them was not an acceptable alternative."

23. On February 4, 2002, the Commission granted a variance to the Riggings HOA, extending the deadline for removal of the sandbags until May 23, 2003. (Stipulated Exhibit 6, at 158-63)

24. On May 9, 2003, CRC signed an order granting a variance to allow the sandbags to remain in place until May 9, 2005. (Stipulated Exhibit 6, at 152-57)

25. After obtaining estimates for relocating the condominium, Riggings HOA sought financial assistance to relocate certain of the condominium buildings by contacting the North Carolina Division of Emergency Management ("NCDEM"), the Natural Heritage Trust Fund and DCM, and requested the Town of Kure Beach apply for beach access and/or FEMA grants.

26. In July 2004 the Town of Kure Beach was awarded a \$3.6 million FEMA grant to acquire a portion of the property on the ocean-side where some of the buildings comprising The



Riggings are located, once these buildings were relocated across the street. The grant included \$2.7 million dollars from FEMA, with the individual unit owners of The Riggings being required to contribute the remaining \$900,000.

27. In March 2005 Riggings HOA was working with architects and surveyors to finalize plans to rebuild across the street and to remove the current structures. It also had contractors ready to start construction once the planning was complete.

28. In its most recent variance order, dated April 25, 2005, CRC said the sandbags were to be removed "prior to the expiration of the FEMA grant." (Stipulated Exhibit 6, at 145-51)

29. In order to comply with the provisions of the grant, Riggings HOA was required to obtain the unanimous consent of the unit owners. On May 1, 2006, Riggings HOA notified the Town of Kure Beach that twenty-four of the homeowners of The Riggings had voted not to accept the FEMA pre-disaster grant. Although it is not certain why each individual owner voted as he or she did, among the reasons owners may have voted against the grant were:

- a. Each unit owner would have been required to contribute approximately \$125,000 toward the cost of relocation and reconstruction. Some homeowners lacked the financial capability to relocate.
- b. There was no guarantee in the grant contract that the provisions of the grant, particularly the provision regarding the use of the oceanfront property, would not change.
- c. Some owners had been informed by the holders of their mortgages that no relocation of the units could occur without their consent, and some of those lenders had expressed concerns about whether that consent would be given.



30. Subsequently, DCM was notified on June 20, 2006, by the State Hazard Mitigation Officer of NCDEM that the grant had been terminated, notwithstanding its June 30, 2007 expiration date, and had been closed out June 1, 2006.

31. The Carolina / Kure Beach Renourishment Project of 2007 included a large part of Carolina Beach and 98 percent of Kure Beach, but again fell approximately 1,500 feet short of The Riggings.

32. Sometimes sandbags at The Riggings are buried under sand and sometimes they are exposed. This depends on the beach profile, which can change quickly.

33. A former member of the U.S Army Corps of Engineers is on record as stating that the Riggings sandbags have not had any deleterious effect on surrounding property nor have they come into contact with the Atlantic Ocean except during major storm events.

34. Whether the public can walk along the beach without detouring landward around the sandbags depends on the beach profile at the time, but even at high tide the public can get around the sandbags by going between the sandbags and The Riggings buildings closest to the ocean.

35. The Riggings HOA proposes that the sandbags remain in place until such time as their proposed Habitat Enhancement Project, a copy of which is incorporated herein by reference, and/or a renourishment project, either privately or publicly funded, has been completed.

36. Petitioner filed its fifth request for a variance in 2006. In conjunction with resolving two other legal cases, Petitioner and DCM Staff agreed to a set of stipulated facts in 2007, and the variance request was heard at the Commission's January 17, 2008 meeting. The Commission



found against the request of all four variance factors, and denied the variance through a written order dated January 31, 2008 (Stipulated Exhibit 6, at 172-85)

37. On March 7, 2008, a Petition for Judicial Review was timely filed by Petitioners pursuant to N.C. Gen. Stat. § 150B-45. On February 20, 2009, the Honorable Superior Court Judge Jay Hockenbury found that the CRC's denial of the Riggings variance request was i) based on an error of law, ii) was made upon unlawful procedure, iii) was not supported by substantial evidence in the record, and iv) was arbitrary and capricious. The court reversed the Commission's Order and remanded the matter back to Commission pursuant to the instructions contained in his Order. The CRC did not appeal from that Order, and the matter was remanded back to the Commission. (Stipulated Exhibit 6, at 199 - 212)

38. On April 29, 2009, Petitioner's variance request was reheard by the Commission. The Commission agreed with Petition on the second and third variance factors, but disagreed with Petitioner on the first and fourth variance factors. Accordingly, the Commission denied the variance through a May 21, 2009 Final Order. (Stipulated Exhibit 6, at 236-47)

39. On June 17, 2009, Petitioner timely filed a Petition for Judicial Review pursuant to N.C. Gen. Stat. § 113A-123 and § 150B-45, which was heard by Judge Hockenbury on March 12-13, 2012. Following that hearing, Judge Hockenbury entered a June 1, 2012 Order holding in pertinent part the Commission erred in concluding: (1) the Petitioner did not demonstrate strict application of 15A NCAC 7H.1705 would result in unnecessary hardship to the Riggings Property; and (2) that Petitioner did not meet the fourth element of the variance request: that the variance is consistent with the spirit, purpose, and intent of the rules, standards or order; will secure public safety and welfare; will preserve substantial justice and that the Commission's



decision is not supported by substantial evidence and there is substantial evidence to grant the variance. On some other matters, Judge Hockenbury found in the Commission's favor. Judge Hockenbury reversed the Commission's Order and remanded the matter back to Commission for a new hearing, consistent with the mandates and instructions contained within his Order. (Stipulated Exhibit 6, at 260-81)

40. On June 27, 2012, the Commission gave written notice of appeal to the North Carolina Court of Appeals, appealing Judge Hockenbury's June 1, 2012 Order. On June 29, 2012, Petitioner gave written notice of cross-appeal. Following Oral Arguments on April 10, 2013, the majority of the three judge panel of the North Carolina Court of Appeals ruled on August 6, 2013, affirming Judge Hockenbury's ruling. Judge Bryant filed a Dissenting Opinion. (Stipulated Exhibit 1)

41. On September 10, 2013, the Commission filed its Notice of Appeal based on the dissenting opinion of the Court of Appeals panel, and also petitioned the Court for discretionary review as to all other issues resolved adversely to the Commission. On September 24, 2013, The Riggings conditionally petitioned the Court for discretionary review as to the issues resolved adversely to the Riggings. (Stipulated Exhibit 2)

42. On January 24, 2014, the Supreme Court allowed both of the petitions for discretionary review of the Court of Appeals decision and the appeal. (Stipulated Exhibit 3)

43. On December 19, 2104 following oral argument, an equally divided panel of the North Carolina Supreme Court, with Justice Robert Hunter abstaining due to his participation on the panel of the Court of Appeals, affirmed the decision of the Court of Appeals. (Stipulated Exhibit 4)



44. The Petitioner's variance has been remanded back to the Commission, as noted in the April 9, 2015 letter to DCM Staff Counsel and Petitioner's Counsel from Commission Counsel Lucasse. (Stipulated Exhibit 5)

### **STIPULATED EXHIBITS**

Included with the Petition and the Staff Recommendation for the Commission's review were the following Stipulated Exhibits:

1. Decision of the NC Court of Appeals and Dissent, August 6, 2013;
2. CRC's Notice of Appeal and Petition & Riggings' Conditional Petition to the Supreme Court, September 10, 2013;
3. Supreme Court's Order granting both petitions, January 23, 2014;
4. Decision of the NC Supreme Court, December 19, 2014;
5. CRC Counsel's April 9, 2015 letter to DCM Counsel and Riggings' Counsel;
6. The Record on Appeal to the NC Court of Appeals (297 pages);
7. PowerPoint presentation.

### **CONCLUSIONS OF LAW**

1. The Commission has jurisdiction over the parties and the subject matter.
2. All notices for the proceeding were adequate and proper.
3. Petitioner has met the requirements in N.C.G.S. § 113A-120.1(a) and 15 NCAC

07J .0703(f) which must be found before a variance can be granted as set forth below.

**A. Strict application of the rules relating to temporary erosion control structures will cause Petitioner unnecessary hardships.**

The Commission affirmatively finds that strict application of 15A NCAC 7H. 0308(a)(2) and 15A NCAC 7H.1705 would cause Petitioner unnecessary hardship. The rules relating to temporary erosion control structures are designed to allow the temporary use of sandbags to counteract erosion, "but only to the extent necessary to protect property for a short period of time until the threatened structures can be relocated or until the effects of a short-term erosion event is



reversed.” 15A NCAC 7M .0200. Without the variance, Petitioner would not be able to keep the sandbags to protect their condominiums. In its recent variance request, Petitioner requests additional time to develop its proposed Habitat Enhancement Project and/or a renourishment project. In addition, Petitioner states, if a variance is granted and the sandbags are allowed to remain at the Site, this “will permit the residents of the Riggings Condominium time to explore alternative options . . . such as private renourishment of the beach.” (Attachment C to Staff Recommendation at 3)

The Commission, in its May 21, 2009 Final Agency Order, disagreed with Petitioner on this factor, and held that “Petitioner ha[d] not demonstrated that strict application of Rules 15A NCAC 7H .0308(a)(2) and 15A NCAC 7H .1705(a)(7) will result in an unnecessary hardship, as required by N.C.G.S. § 113A-120.1(a)” (CRC’s May 21, 2009 order, p. 6). While acknowledging Petitioner’s hardships from erosion and its resulting use of sandbags since 1985, along with Petitioner’s lack of success in its efforts to relocate the structures or be included in the Corps’ renourishment project, the Commission concluded that another variance from sandbag time limits to allow their continued use on the site for a time-period without an end point would not result in “unnecessary” hardships.

The Superior Court’s June 1, 2012 Order on Judicial Review reversed the Commission, and held that the Commission’s conclusion that “erosion is stable” was not supported by the record, was contradicted by the Stipulated Facts, and held that “even though the rate of erosion has decreased, there still is erosion of the shoreline at The Riggings.” (June 1, 2012 Order, p. 9) The Superior Court also determined that the Commission’s “unnecessary hardship” analysis improperly focused on the Riggings owners and their actions, and not on their property.



The Court of Appeals noted that there was a mutual disagreement of the parties of the meaning of the Stipulated Facts concerning the statements “erosion is stable” and “the rate of erosion is stable” and concluded that erosion was still occurring at the property. (Court of Appeals Decision, p. 16) The Court went on to hold that the Commission improperly based its consideration of this factor on the property owners, and not the property, in its unnecessary hardships analysis. (Id., pp. 18-19)

The 3-3 split at the Supreme Court (with Justice Hunter not participating) upheld the Court of Appeals decision “without precedential value” for the Court of Appeals’ reasoning. Given these appellate decisions and analysis, DCM did not recommend the Commission find against Petitioner on this variance factor.

For the reasons set forth above, the Commission affirmatively finds that strict application of the rule providing for the temporary use of sandbags would cause Petitioner unnecessary hardship in light of Petitioner’s request for time for the residents of the Riggings Condominium time to explore alternative options . . . such as private renourishment of the beach.” For these reasons, the Commission affirmatively finds that Petitioner has met the first factor without which a variance cannot be granted.

**b. Petitioner has demonstrated that the hardship results from conditions peculiar to Petitioner's property.**

The Commission affirmatively finds that Petitioner has demonstrated that the hardship results from conditions peculiar to the property. Specifically, Petitioner's property is located between the Fort Fisher revetment and the intertidal coquina rock outcropping. Based on the physical features adjacent to the Site, in the Commission’s Final Agency Order dated May 21, 2009, the Commission held,



The CRC concludes as a matter of law that Petitioner has demonstrated any hardship which might result from strict application of the time limits for use of sandbags as a temporary erosion measure, if any, would be from conditions peculiar to Petitioner's property such as the location, size, or topography of the property.

(CRC's May 21, 2009 order, pp. 8-9). As the Commission has previously found in Petitioner's favor on this variance factor, DCM recommended that the Commission again find in Petitioner's favor on this variance factor for the same reasons outlined in the Commission's May 21, 2009 Final Agency Order, and as directed by the Superior Court's June 1, 2012 Order on Judicial Review which was upheld by the Court of Appeals and the Supreme Court.

For these reasons, the Commission affirmatively finds that Petitioner has demonstrated that this hardship results from conditions peculiar to the property and has met the second factor required for the grant of its request for a variance.

**c. Petitioner has demonstrated that the hardship does not result from actions taken by Petitioner.**

In the Commission's In the Commission's Final Agency Order dated May 21, 2009, the Commission held,

The CRC concludes as a matter of law that Petitioner has demonstrated any hardship which might result from strict application of the time limits for use of sandbags as a temporary erosion measure, if any, would not result from actions the Petitioner has taken. (SF 20-21, 25-31)

(CRC's May 21, 2009 order, p. 9) As the Commission has previously found in Petitioner's favor on this variance factor, DCM recommended that the Commission again find in Petitioner's favor on this variance factor for the same reasons outlined in the Commission's May 21, 2009 Final Agency Order, and as directed by the Superior Court's June 1, 2012 Order on Judicial Review which was upheld by the Court of Appeals and the Supreme Court.



For these reasons, the Commission affirmatively finds that Petitioner has demonstrated that the hardships do not result from actions taken by Petitioner. Therefore, Petitioner has met the third factor required for the grant of its request for a variance.

- d. Petitioner has demonstrated that the requested variance is consistent with the spirit, purpose and intent of the Commission's rules, will secure public safety and welfare, and will preserve substantial justice.**

In order to receive a variance, Petitioner must demonstrate (a) that the requested variance is consistent with the spirit, purpose and intent of the Commission's rules, (b) that it will secure public safety and welfare, and (c) that it will preserve substantial justice. The principal purpose of the Temporary Erosion Control Structure Rule is to give Petitioner some time, but not an unlimited amount of time, to protect its property from erosion. *See* 15A NCAC 7H .0308(a)(2) and 15A NCAC 7H .1705(a)(7).

The Commission, in its May 21, 2009 Final Agency Order, disagreed with Petitioner on this factor, and held that "The proposed variance is inconsistent with the spirit, purpose, and intent of the CRC's rules because sandbags are intended to be a temporary erosion control structure and this sandbag revetment has been in place for almost 24 years." (May 21, 2009 Final Agency Order, p. 10) The Commission also held that the variance did not preserve public safety and welfare as it was difficult for the public to use this portion of the Public Trust Area because of the sandbags on the beach. (*Id.* p. 10) Finally, the Commission held that a variance would not preserve substantial justice because both the legislature and the Commission's express directive was that sandbags could only be used as a temporary erosion control structure. (*Id.*, p. 10)

The Superior Court's June 1, 2012 Order on Judicial Review reversed the Commission, and held that in addition to the Commission's focus on 15A NCAC 7M.0202(a) which limits



erosion control measures so that they are consistent with and minimize impacts to the public use of the beach, the Commission should give more weight to the factors in N.C.G.S. 113A-102, specifically focusing on minimizing the loss of private resources to erosion and reducing potential debris from the “potential destruction of The Riggings that can harm other structures and/or inhibit public access to the beach. (June 1, 2012 Order, pp. 16-18) The 2-judge majority opinion of the Court of Appeals upheld the Superior Court, but Judge Bryant drafted a separate dissent, questioning the majority’s application of the standard of review and stating that the Commission’s decision on the fourth variance factor was supported by “substantial evidence” as required. (Court of Appeals Dissent, pp. 2-4) The dissent concluded that the majority improperly substituted its own judgement for that of the Commission. (*Id.*)

The 3-3 split at the Supreme Court (with Justice Hunter not participating) resulted in the Court of Appeals decision being upheld “without precedential value.” In light of this appellate history, DCM recommended that the Commission find in Petitioner’s favor on this variance factor as long as reasonable and appropriate conditions and safeguards are included in the final agency decision.

#### **REASONABLE AND APPROPRIATE CONDITIONS AND SAFEGUARDS**

N.C.G.S. 113A-120.1(b) provides, “The Commission may impose reasonable and appropriate conditions and safeguards upon any variance it grants.” The Superior Court noted this provision with approval in its June 1, 2012 Order. (*See* Order at p. 8) In the current request, “The Riggings HOA proposes that the sandbags remain in place until such time as their proposed Habitat Enhancement Project, and/or a renourishment project, either privately or publically funded, has been completed.” (Stipulated Fact 35)



In its recommendation, DCM suggested that the Commission include conditions to safeguard the beach in front of The Riggings. Specifically, Petitioner shall remove any existing visible sandbag debris based on 15A NCAC 7H .0308(a)(G) which requires that "Prior to completing any erosion response project, all exposed remnants of or debris from failed erosion control structures must be removed by the permittee." In addition, Petitioner shall ensure that any new sandbags placed shall be installed in conformance with the Commission's sandbag rules, with the exception of the time limits in .0308(a)(2)(F). Instead, DCM recommended that the Commission place as a condition on its grant of Petitioner's variance request a time limit of up to five (5) years from the date of the variance order for the replacement of any sandbag structures. Finally, DCM requested the Commission require that the HOA submit an annual written update of progress on alternative solutions to the Commission's Executive Secretary. Such a condition would allow the Commission and Staff to follow Petitioner's progress in seeking long-term solutions to address erosion at The Riggings, and could provide an opportunity for the Commission and Staff to suggest other avenues for addressing erosion as Petitioner moves toward achieving its proposed "Habitat Enhancement Project, and/or a renourishment project, either privately or publically funded."

During the hearing on the variance request, Petitioner's counsel agreed that the conditions proposed by DCM be included in any variance granted by the Commission.

For the reasons provided above, which include the conditions proposed by DCM, the Commission affirmatively finds that Petitioner's request to keep the sandbags for a limited period of time is consistent with the spirit, purpose, and intent of the Commission's Temporary Erosion Control Structure Rule, will be protective of public safety and welfare, and will preserve



substantial justice by balancing private property interests with the longstanding right of the public to use the ocean beaches as long as Petitioner meets the conditions included in the variance.

### **ORDER**

THEREFORE, the requested variance from 15A NCAC 7H. 0308(a)(2) and 15A NCAC 7H .1705(a)(7) is GRANTED subject to the following conditions:

1. Petitioner shall remove all exposed remnants of or debris from failed erosion control structures as required by 15A NCAC 7H .0308(a)(G) prior to completing any erosion response project;
2. Petitioner shall ensure that any new sandbags placed shall be installed in conformance with the Commission's sandbag rules, with the exception of the time limits in .0308(a)(2)(F);
3. The temporary sandbags authorized by this variance may only be left in place for a period of five (5) years from the date of this final agency decision (up to December 11, 2020);
4. The Board of the HOA shall submit a detailed annual written update to the Commission including information regarding the steps it has taken and the progress made on finding and implementing alternative solutions to address erosion at The Riggings. This annual update shall be provided on December 11 to the Executive Secretary of the Coastal Resources Commission at the following address:

Division of Coastal Management  
400 Commerce Avenue  
Morehead City, NC 28557



The granting of this variance does not relieve Petitioner of the responsibility to obtain other required permits from the proper permitting authority. This variance is based upon the Findings of Facts set forth above, the stipulated facts and exhibits which make up the record, and the arguments presented. The Commission reserves the right to reconsider the grant of this variance if there is a material change to any of the facts upon which it was granted. .

This the 11<sup>th</sup> day of December 2015.

*Frank D. Gorham III*

---

Frank D. Gorham, III, Chairman  
Coastal Resources Commission



**CERTIFICATE OF SERVICE**

This is to certify that I have this day served the foregoing FINAL AGENCY DECISION  
upon the parties by the methods indicated below:

Riggings Homeowners, Inc.  
Dawn Gual, Registered Agent  
P.O. Box 1124  
Carolina Beach, NC 28428

Certified Mail/ Return Receipt Requested

William G. Wright  
Shipman & Wright, L.L.P.  
575 Military Cutoff Road, Suite 106  
Wilmington, NC 28405

U.S. Mail and Electronically at  
wwright@shipmanlaw.com

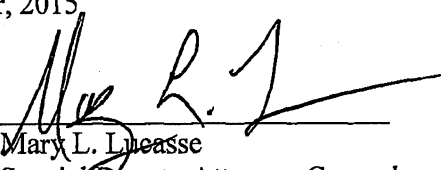
Christine A. Goebel, Esq.  
Assistant Attorney General  
N.C. Department of Justice

Electronically at  
cgoebel@ncdoj.gov

Braxton C. Davis  
Angela Willis  
Division of Coastal Management  
400 Commerce Avenue  
Morehead City, NC 28557

Electronically at  
braxton.davis@ncdenr.gov and  
angela.willis@ncdenr.gov

<sup>14<sup>th</sup> 05</sup>  
This the 11<sup>th</sup> day of December, 2015

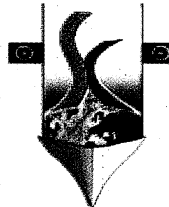
  
Mary L. Lucasse  
Special Deputy Attorney General and Commission Counsel  
N.C. Department of Justice  
P.O. Box 629  
Raleigh, N. C. 27602





**SAMPSON CONTRACTING, INC.**  
**Marine Construction And Environmental Consulting Services**

125 Hunters Trail West, Elizabeth City, North Carolina, 27909 USA  
Tel: 252 548 4292 - Fax: 866 793 4261  
tedsr@sampsoncontracting.com www.sampsoncontracting.com



December 11, 2016

Braxton Davis  
Executive Secretary  
Coastal Resources Commission  
NC Division of Coastal Management  
400 Commerce Avenue  
Morehead City, NC 28557

Re: Annual Update on Alternative Solutions to  
Address Erosion at the Riggings

Dear Mr. Davis:

Our firm has been engaged by Riggings Homeowners, Inc., of Kure Beach, NC, to assist them in complying with the provisions of Paragraph 4 of the Variance Order in the matter of Petition for Variance by Riggings Homeowners, Inc. (CRC-VR-15-08), which was issued on December 11, 2015.

Paragraph 4 directs:

The Board of the HOA shall submit a detailed annual written update to the Commission including information regarding the steps it has taken and the progress made on finding and implementing alternative solutions to address erosion at The Riggings. This annual update shall be provided on December 11 to the Executive Secretary of the Coastal Resources Commission at the following address:

Division of Coastal Management  
400 Commerce Avenue  
Morehead City, NC 28557

Please find enclosed the first of the required annual updates.

Sincerely,

Ted Sampson  
Environmental Consultant

Encl: (1) Annual Update on Alternative Solutions to Address Erosion at the Riggings - 2016





# **SAMPSON CONTRACTING, INC.**

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## **ANNUAL UPDATE ON ALTERNATIVE SOLUTIONS TO ADDRESS EROSION AT THE RIGGINGS 2016**

### **FINDING ALTERNATIVE SOLUTIONS**

Since the issuance of the Coastal Resources Commission's (CRC) Variance Order on December 11, 2015, the major focus of Riggings Homeowners, Inc. has been on the removal of the remnants of, or debris from its failed erosion control structure, in compliance with Paragraph 1 of that Order, and on the construction of a replacement sandbag erosion protection alignment as authorized by that Order. The removal of remnants and debris from the previous sandbag alignment was initiated in April 2016, and completed prior to the initiation of construction on the new sandbag revetment. Construction of the new sandbag revetment commenced in May of 2016, and was completed at the end of June 2016.

During the above activities, a number of steps were initiated to allow the identification of potential alternative solutions. These included:

- Evaluate observations of beach morphology for mechanisms underlying the accelerated erosion of The Riggings' shoreline;
- Evaluate history, significance, and uniqueness of Coquina rock outcroppings on the shoreline in the vicinity of The Riggings; and
- Evaluate effects of beach nourishment to the north of The Riggings on the exposed Coquina outcroppings.

### **Mechanisms Underlying Accelerated Erosion:**

The construction activities from April through June provided the opportunity for daily observation of the response of the beach to wind, wave and storm effects. During this period of time, construction activities were suspended during two nor'easter storm events and the passage of one tropical depression and one tropical storm. The beach elevation and slope changed noticeably on an almost daily basis, and most dramatically in response to the storm events.

In light to moderate northeast winds, little change was noticed to beach elevation or slope, with the exception of when the Kure Beach Coastal Storm Damage Reduction (CSDR) project began to approach completion at the southern terminus in May. At that time there appears to have been enough sand placed into the north-south littoral transport current to bypass the Coquina rock outcropping located immediately to the north of The Riggings property, and this, during the higher portions of the tidal cycle, allowed sand to pass landward of the northern outcropping, allowing the beach in front of The Riggings to begin to build in elevation and at a less steep slope.

When the wind blew strongly out of the northeast, and especially at times of higher lunar tides, or in association with a storm surge, sand which had previously built-up along The Riggings shoreline was quickly stripped away, and lower portions of the rock revetment at Ft. Fisher became visible. During



these occurrences, not only did the level of the beach at The Riggings drop overall, but the slope of the beach became significantly steeper.

At nearly all times of observation, the slope of the beach, from the middle of The Riggings shoreline to the southern extreme of The Riggings property, was steeper than the shoreline to the north, and the southern shoreline was much slower to fill back in than what was noticed to the north. This characteristic of the shoreline is likely related to the absence of Coquina directly offshore of The Riggings, as well as the different bathymetry in this area. With winds out of the northeast, the waves were observed to refract and strike perpendicular to the shoreline in the northern area, but continued running out of the northeast until the beach face was encountered along the southern portion of the shoreline.

Under the condition of winds and waves from the northeast, the refraction of the waves encountering the northern portion of the shoreline serves both to dissipate some of the wave energy, and to reduce the movement of beach sand to the south. On the southern portions of The Riggings shoreline, these conditions allow greater wave energy to strike the beach and move the beach sediments farther south along the beach, and beyond The Riggings property.

Winds out of the east and southeast were not as frequent and more moderate in strength, and the beach elevation and slope did not show significant changes when experiencing such winds. The beach elevation increased somewhat, especially in the southern portion when winds blew moderately from the southeast for several days.

The above observations were corroborated by anecdotal evidence obtained by discussions with a number of Kure Beach residents and former residents who had witnessed changes in the beach over many years. Some of this anecdotal evidence suggested that these changes, while visibly pronounced now in front of The Riggings, were not so pronounced before the construction of the rock revetment at Ft. Fisher. Some of this anecdotal information suggested that these pronounced changes to the beach in front of The Riggings can be explained by the re-nourishment of beach material to the north, while there has been no nourishment for The Riggings portion of the beach.

The absence of nourishment sand being placed along The Riggings shoreline is contributive to the severity of the erosion along this stretch of beach. The Riggings shoreline must face the erosive effect of waves with a significant deficit of sand when compared to the shoreline of Kure Beach that is north of The Riggings.

While the placement of sand along The Riggings shoreline would have some positive effect, it is difficult to estimate the significance of the effect, and the duration over which such positive effect would last. It is possible that any such positive effect could be very short-lived, given the presence of the Coquina outcroppings both to the north and south of the property, and the absence of Coquina outcroppings directly in front of The Riggings, along with the significant increase in depth that exists at the seaward limit of the buried Coquina substrate that runs along The Riggings property.

#### **History, Significance, and Uniqueness of Coquina Rock Outcroppings:**

The location of the Coquina rock outcroppings are depicted in Figure 1 of the June 1993 US Army Corps of Engineers Final Environmental Impact Statement for Beach Erosion Control and Hurricane Wave Protection – Carolina Beach and Vicinity Area South Project New Hanover County, North



Carolina. This Figure shows Coquina rock outcroppings to the north and south of The Riggings shoreline.

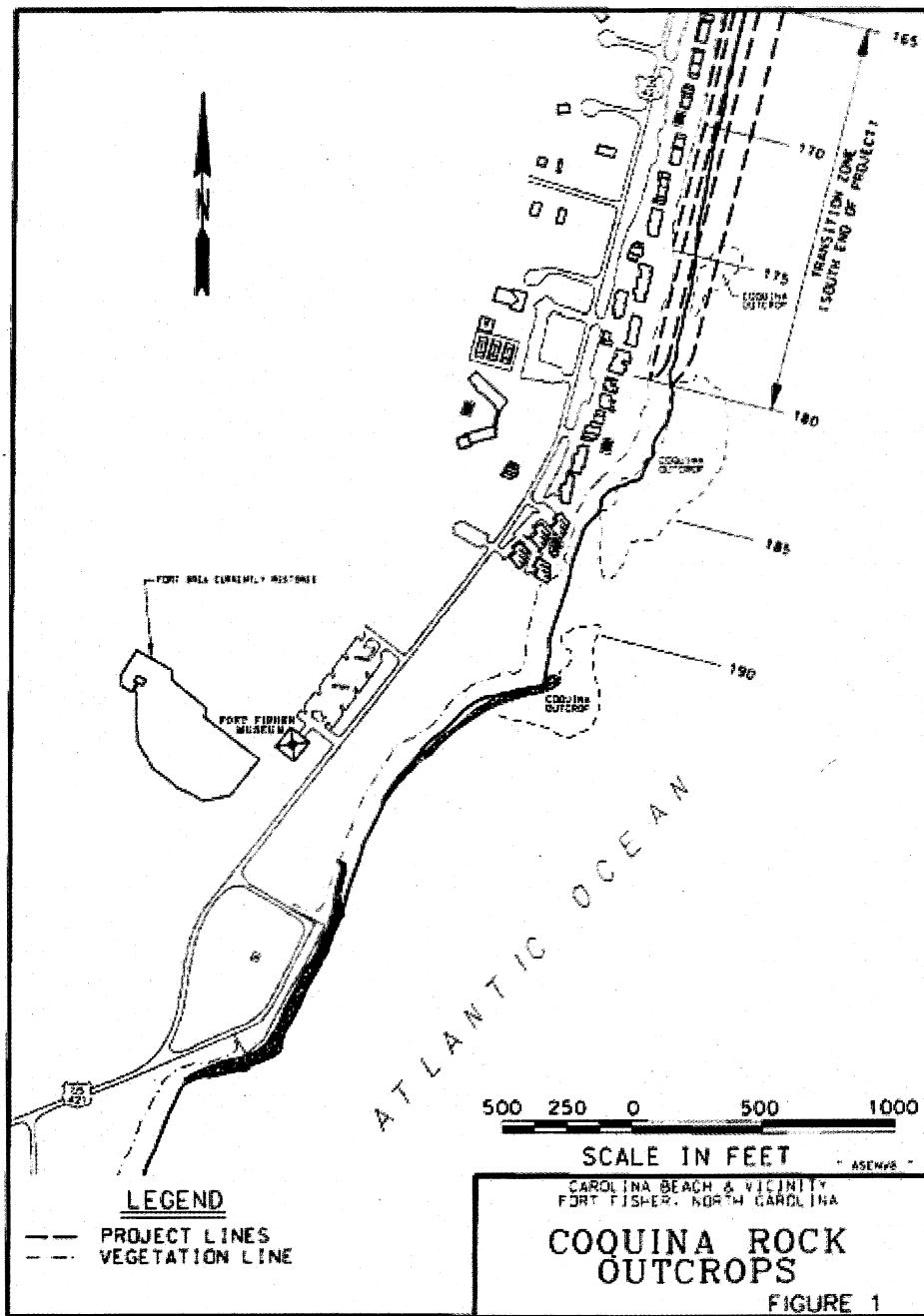


Figure 1 From USACE 1993 Final EIS

In 1931, the Chief of Engineers, United States Army, prepared a Report to address concerns over erosion of historically important land on Ft. Fisher. This was titled: REPORT DATED DECEMBER 29, 1931, FROM THE CHIEF OF ENGINEERS, UNITED STATES ARMY, ON THE STUDIES AND INVESTIGATIONS OF THE BEACH EROSION AT FORT FISHER, N. C. This Report was made by the Beach Erosion Board in cooperation with the North Carolina Department of Conservation and Development.







Examining Plate VII, it appears that the “projecting point of Coquina northeast of the fort” would correspond with the projecting point of Coquina that now exists just to the north of The Riggings shoreline. The estimated amount of material removed of 6,000 cubic yards over a strip that averages 75-ft wide would correspond to the removal of a 7.5-ft depth of Coquina over a length of shoreline of 285-ft. The shoreline fronting The Riggings is approximately 285-ft.

Plate VI of the 1931 US Army Report shows the underwater contours of the shoreline that existed in 1931. In the area between the two Coquina outcroppings, the slope of the shoreline transitions from +5-ft MLW to +1-ft MLW over a distance of approximately 25-ft. Along the shoreline both to the north and south of the outcroppings, this transition between +5-ft MLW and 15-ft MLW occurs over a distance of approximately 70 to 75-ft.

At this point, no documentation has been discovered that definitively locates the area where the Coquina was removed for the construction of US Highway 421. But, the steepness of the beach between the +5-ft MLW and +1-ft MLW contours located between the two outcroppings, which still exist today, along with the approximate correlation of amount of Coquina material removed to the length of The Riggings shoreline, suggests that this was the area where Coquina was removed from the beach substrate.

The statement in Paragraph 24 of the 1931 Report, addressing the removal of the Coquina, links the removal of the Coquina with a reversal of a 3-year cycle of beach accretion to a 5-year period of beach erosion that led to a net erosion of 280-ft. Plate VI shows the mean high water (MHW) line between the two Coquina outcroppings to lie approximately 480-ft to the east of US Highway 421.

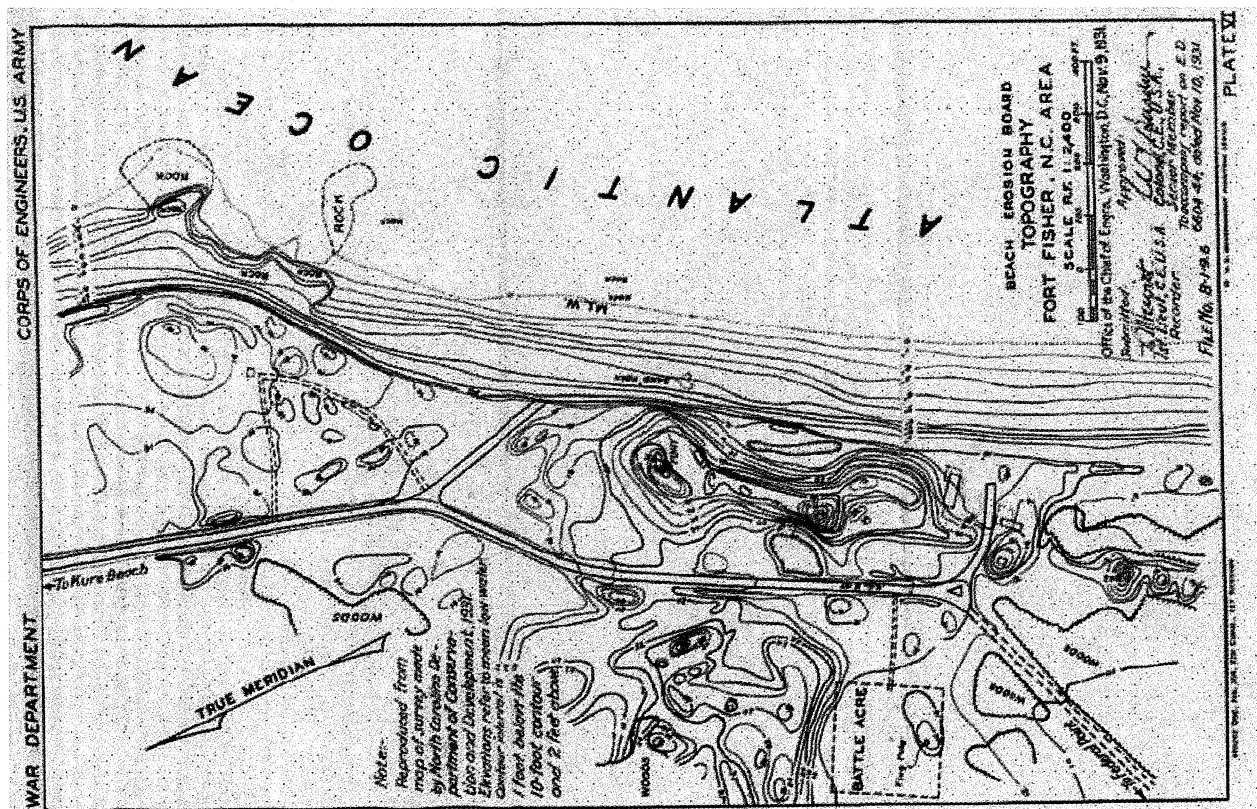


Plate VI of 1931 US Army Report



From Google Earth images, this distance from the center of US Highway 421 to the MHW is shown as approximately 320-ft in February 1993. After the 3,050-ft Beach Erosion Control Project (existing rock revetment for the protection of Fort Fisher) was completed in Spring of 1996, the distance from US Highway 421 had diminished to approximately 280-ft by December of 2002, approximately the same distance that exists today.

This suggests that both the mining of Coquina rock for the construction of US Highway 421 (NC 40 at the time of construction), and the current rock revetment constructed for the protection of Fort Fisher, may have had a cumulative negative impact on the width of the dry sand beach along The Riggings shoreline, contributing to the loss of approximately 200-ft of protective beach.

Spencer Rogers of North Carolina Sea Grant was contacted to discuss the effects of the Coquina rock outcroppings upon the shoreline fronting The Riggings. Rogers suggests that both Coquina rock outcroppings to the north and south of The Riggings are functioning as natural groins. He suggests that, during north-south littoral transport of beach sand, the northern Coquina outcropping traps sand and prevents its deposition along the shoreline in front of The Riggings, until such time as it reaches its maximum trapping capacity, after which the groin trapping effect of the outcropping is exceeded, and sand begins to bypass the outcropping and travel on to the south. Similarly, Rogers suggests that, during south-north littoral transport of beach sand, the southern Coquina outcropping, in conjunction with the rock armored shoreline, traps sand preventing its deposition along the shoreline of The Riggings until its trapping capacity is exceeded.

Rogers presents a reasonable characterization of the effects of the Coquina outcroppings lying to the north and south of The Riggings. With these outcroppings functioning as groins, it must be anticipated that sand that bypasses the outcroppings, as would be the case with groins, would be restricted from direct deposition on the nearshore beach on the down-drift side of each of the outcroppings, and this is observable. What appears to be absent from this groin model of the outcroppings is the expected build-up of a significant amount of sand on the southern side of the north outcropping when the littoral drift is south-north, and the expected build-up of a significant amount of sand on the northern side of the south outcropping when the littoral drift is north-south.

This absence of a significant build-up of sand may be attributable to the two “groins” being located so close together, and because the “groins” do not extent far enough offshore. This could result in the bypassing sand being carried beyond the second, down-drift “groin.” This absence could also be attributed to the bathymetry between the 2 “groins.” The significant nearshore drop in depth that exists between the two “groins” would require the wind-wave regime causing sand bypassing to exist for a long period of time before sand build-up would be observable. The periodic reversal of littoral drift may also be contributing to a limited observable build-up of sand on the interior up-drift side of the two “groins,” along with the frequency of significant wind-wave regimes from the northeast or southeast, which at high tide levels tends to strip accumulated sand from the beach face along The Riggings, carrying the sand past the “groins” on their landward ends.

The Coquina outcroppings to the north and south of The Riggings are sufficiently dissimilar so that their effects on sand transport would not be expected to be identical. The outcropping to the north of The Riggings is of sufficient elevation as to be visible above the water level during all but the higher levels of the tidal cycle, while the outcropping to the south is only visible during the lowest levels of the tidal cycle. This suggests that the north outcropping of Coquina functions in a manner that interferes with the deposition of sand on The Riggings shoreline to a greater extent than does the Coquina outcropping to



the south. In that the nourished beach to the north of The Riggings provides a ready sand source for the littoral transport of beach sand when compared to sand from the south of The Riggings, this suggests that the northern Coquina rock outcropping is having a significant negative effect on the level of beach sand in front of The Riggings.

The Coquina rock outcroppings near The Riggings have been identified as unique hard-bottom habitats along the North Carolina coast. In the May 2003 Natural Area Inventory of New Hanover County, North Carolina, the Fort Fisher Coquina Outcrop is listed as a Stand-alone Site of State significance. These Coquina outcroppings appear to be only one of three that exist along the Atlantic shoreline. Concerns over the negative impacts of the deposition of beach nourishment sand in the vicinity of this habitat resulted in comments from resource agencies on the Environmental Impact Statement for the Beach Erosion Control and Hurricane Wave Protection, Carolina Beach and Vicinity Area South Project, calling for protection of the outcroppings up to, and including total impact avoidance.

While Coquina rock outcroppings in the intertidal area may be rare at the present time, the presence of Coquina rock as a substrate to beach sand is quite extensive. In seeking a water source for the sandbag project at the Riggings, it was found that a hard Coquina substrate underlies most of The Riggings property. This substrate does not appear to be continuous, but was found to exist throughout most of the area landward of the swimming pool at a depth of approximately 10 – 14-ft below the surface. Investigation of existing geological studies revealed that this type of substrate lies below the sand all along Kure Beach and Carolina Beach shorelines, extending at least up to Snow Cut.

These geological studies indicated that the Coquina substrate may lie much closer to the surface in places. This means that in the absence of any storm protection efforts along the Carolina Beach and Kure Beach shoreline, natural erosion would likely, over time, expose additional areas of Coquina rock outcroppings. This is corroborated by the US Fish and Wildlife Service's August 12, 1992 Draft Fish and Wildlife Coordination Act Report for the Area South of Carolina Beach, New Hanover County, North Carolina (beach nourishment project), in which the Service addresses anticipated impacts without the Project, stating:

As sea level rises... Additional coquina rock, farther landward than the present exposed outcroppings, may become exposed in the future, thus maintaining the extent of the intertidal communities. In general, the Service believes that, without the project, invertebrate organisms inhabiting the coquina rocks should continue to do well, and species diversity should remain high.

#### **Effects of Nourishment on Exposed Coquina Outcroppings:**

In response to the Coquina rock outcropping concerns and recommendations raised by the US Fish and Wildlife Service's above document, the USACE, Wilmington District conducted a study to assess the potential impacts of beach nourishment activities on the Coquina rock outcrops. The recommendation of the US Fish and Wildlife Service was that, "Beach nourishment should not extend as far south as the exposed coquina rock outcrops so as to avoid burial of and adverse turbidity impacts to the coquina rock community."

The USACE found:

- Material transport along this stretch of the shoreline is primarily driven by extended northerly wind;



- The Coquina rock outcrops appear to be acting as a natural low-level groin, retaining material to the north during the winter months (prevailing northerly winds), and littoral material fills in naturally up to the elevation of the outcrops;
- Littoral material in excess of the natural groin capacity of the rock outcropping migrates to the beach south of Fort Fisher;
- The northern portions of the rock outcropping are typically buried during the winter months; and
- The outcrops are exposed during the summer months except during major storms.

The USACE proposed to address the concerns for the Area South (Kure Beach) portion of the Project by transitioning the Project fill to a southern terminus, north of the Coquina outcrops. By taking this action, the USACE states:

After project construction and subsequent periodic renourishment, there will be more material on the beach profile, which will be subject to littoral drift. Portions of the landward sides of the northern most outcrops are expected to be covered by the material similar to what is already occurring. The areal extent of this coverage cannot be quantified at this time. Physical monitoring will be conducted during construction to document whether any changes in sand movement observed are the result of natural influences or beach restoration.

In that the USACE's study suggests that sand that accumulates on the north of the Coquina outcroppings bypasses the Coquina, reaching deposition farther south on the Ft. Fisher shoreline once the trapping capacity of this natural groin is exceeded, this suggests that nourishment sand, were it to be deposited along The Riggings shoreline, would similarly be transported south to the Ft. Fisher shoreline. If this were to be borne out, then periodic nourishment of The Riggings shoreline could form part of an alternate permanent solution to address the beach erosion without the use of sandbags.

During, and/or subsequent to the previous nourishment projects in Area South, the USACE pledged to conduct additional studies to assess the impact of the Project on Coquina outcroppings. These will be obtained and reviewed to further assess the potential of seeking nourishment of The Riggings' shoreline.

#### **Initial Evaluation of Alternative Solutions:**

Beach nourishment is normally seen by resource agencies as a preferred approach to providing response to an eroding shoreline when existing development becomes threatened. This preference is largely related to the reduced negative environmental impacts associated with such projects when compared to other possible responses. In the case of The Riggings shoreline, beach nourishment may not be a readily available alternative given the already documented objections of resource agencies to the potential harm that could occur to a unique hard bottom habitat from migrating sand.

Some of the information discovered relating to the ongoing Area South beach nourishment project suggests that nourishment of The Riggings shoreline could possibly be done without significant harm to the Coquina outcroppings and the associated habitat. However, given the expressed concern by virtually all resource agencies, obtaining the necessary permits for this alternative would likely be difficult and problematic.

If beach nourishment of The Riggings shoreline could be achieved, there is an additional concern for whether it could function as successful alternative to the sandbag revetment. The Area South



nourishment project is maintained at fairly frequent intervals of approximately three years. It is possible that a 3-year interval would be insufficient to maintain storm protection along The Riggings shoreline. In that the bathymetry offshore of The Riggings is atypical when compared to the Kure Beach shoreline to the north, sand in front of The Riggings would likely be subjected to greater wave energy. Incoming waves would not encounter a shallow bottom, with concomitant breaking of the waves, until the waves were virtually at the base of a relatively narrow nourished beach.

Complicating the ability to keep nourished sand on the beach face of The Riggings shoreline is the presence of a rock revetment located nearby to the south protecting the Fort Fisher shoreline. While this structure was curved inland at its northern terminus, and does terminate short of The Riggings southern property line, dramatic loss of shoreline at The Riggings did occur after its construction. The erosion mechanisms at work after the construction of this rock revetment are still in play today. They have not allowed a natural, permanent accretion of sand on The Riggings shoreline, and it may be unlikely that these mechanisms would allow artificially placed sand to remain in place.

Still, in that the majority of Kure Beach shoreline receives beach nourishment, and much of the needed work has been done to validate the need for nourishment along this shoreline, and to justify the expenditure of funding for the nourishment, further exploration is warranted into the possibility of including The Riggings shoreline within the existing Area South, Coastal Storm Damage Reduction (CSDR) Project. To this end, a meeting was held with appropriate representation of the Town of Kure Beach, New Hanover County, The USACE and the NC Division of Coastal Management on December 6, 2016.

While a number of other alternatives exist, they virtually all, with the exception of sandbag revetments, are barred by statute and rule as they involve hardened shoreline structures. There is some latitude within the Shoreline Erosion Policies of the CRC Rules. 15A NCAC 07M.0202(g) states:

The State of North Carolina will consider innovative institutional programs and scientific research that will provide for effective management of coastal shorelines. The development of innovative measures that will lessen or slow the effects of erosion while minimizing the adverse impacts on the public beach and on nearby properties is encouraged.

Future efforts to identify an alternative solution to sandbags will explore the possibility of innovative projects that could fall within the ambit of this Policy and receive the support of the NC Division of Coastal Management and the Coastal Resources Commission.

**12/6/16 Meeting on Potential Inclusion of Riggings Shoreline in the Kure Beach CSDR Project:**

Initial review of a limited amount of USACE documentation suggested that The Riggings shoreline had been originally included within the Area South (Kure Beach) portion of the Project. In the USACE's January 13, 2014 Draft Review Plan for Plans & Specifications and Design Documentation for Periodic Maintenance Nourishment: Carolina Beach, North Carolina Coastal Storm Damage Reduction Project, Beach Renourishment Carolina Beach 2014 & Carolina Beach (Area South) 2016, P2#: 113752, Paragraph 2.1 provides the following Project Description:

The Carolina Beach project was originally authorized by Congress in 1962 (House Document Number 418, 87<sup>th</sup> Congress, 2<sup>nd</sup> Session). This original authorization divided the 25,800-foot long project into two separable elements. The Carolina Beach element



called for protecting the 12,800 feet of shoreline within the town limits of Carolina Beach. **The Carolina Beach (Area South) element would protect the adjacent 13,000 feet of shoreline south of Carolina Beach, which would extend to the southern town limits of Kure Beach.** The Carolina Beach (Area South) element was later increased to a total length of 18,000 feet in a Post Authorization Change Report.  
(Bold emphasis added.)

In the USACE's February 23, 2015 Congressional Fact Sheet, PROJECT INFORMATION – Carolina Beach and Vicinity, Carolina Beach and Area South Portions (Coastal Storm Damage Reduction), Area South Portion is described as follows:

The portion of the project includes a dune with a base generally bordering at or near the building line with a crown width of 25 feet at an elevation of 13.5 feet national geodetic vertical datum (NGVD), together with integral construction of a shoreline berm with a crown width of 50 feet at elevation 9.5 feet NGVD **extending about 18,000 feet from the southern limits of Carolina Beach to the northern limits of Fort Fisher**, and Federal participation in the cost of coastal storm damage reduction nourishment for a period not to exceed 50 years from the year of initial placement (FY 1998 to 2047).  
(Bold and underline emphasis added.)

In the USACE's June 1993 FINAL ENVIRONMENTAL IMPACT STATEMENT, Beach Erosion Control and Hurricane Wave Protection, Carolina Beach and Vicinity, Area South Project, New Hanover County, North Carolina, the ABSTRACT describes the Project as follows:

Project construction will cover approximately 3 ½ miles of shoreline between the Town of Carolina Beach to the north **and Fort Fisher Historic Site to the south.**  
(Bold emphasis added.)

In Paragraph 1.00 INTRODUCTION, the Project is described as follows:

The Carolina Beach and Vicinity – Area South project is an erosion control/hurricane wave protection project. It is a separable element of the Carolina Beach and Vicinity project. **The Area South portion of the Carolina Beach and Vicinity project refers to a stretch of beach approximately 3 ½ miles long in New Hanover County, North Carolina (Figure 1).**  
(Bold emphasis added.)

Figure 1, provided below, is at a scale that does not allow accurate discernment of the southern terminus of the Project area. But it does label Fort Fisher State Historic Site as laying immediately to the south of the Project Limits' southern terminus.

Figure 2 of this document, provided below, shows Stations 0+00 to 180+00 as the northern and southern limits of the Area South Project. This Figure shows the Project stopping short of The Riggings, and not extending to the southern limits of the Town of Kure Beach at Fort Fisher. It shows a Transition Zone between Stations 165+00 and 180+00, which appears to conform to the area at, or just north of the Coquina outcropping.



Based on the above information, it appears that the Project was originally intended to extend all the way to the southern limit of the Town of Kure Beach at Fort Fisher, and was subsequently revised to terminate, or transition at, or to the north of the Coquina outcropping, apparently in deference to environmental concerns over the habitat associated with the rock outcropping.

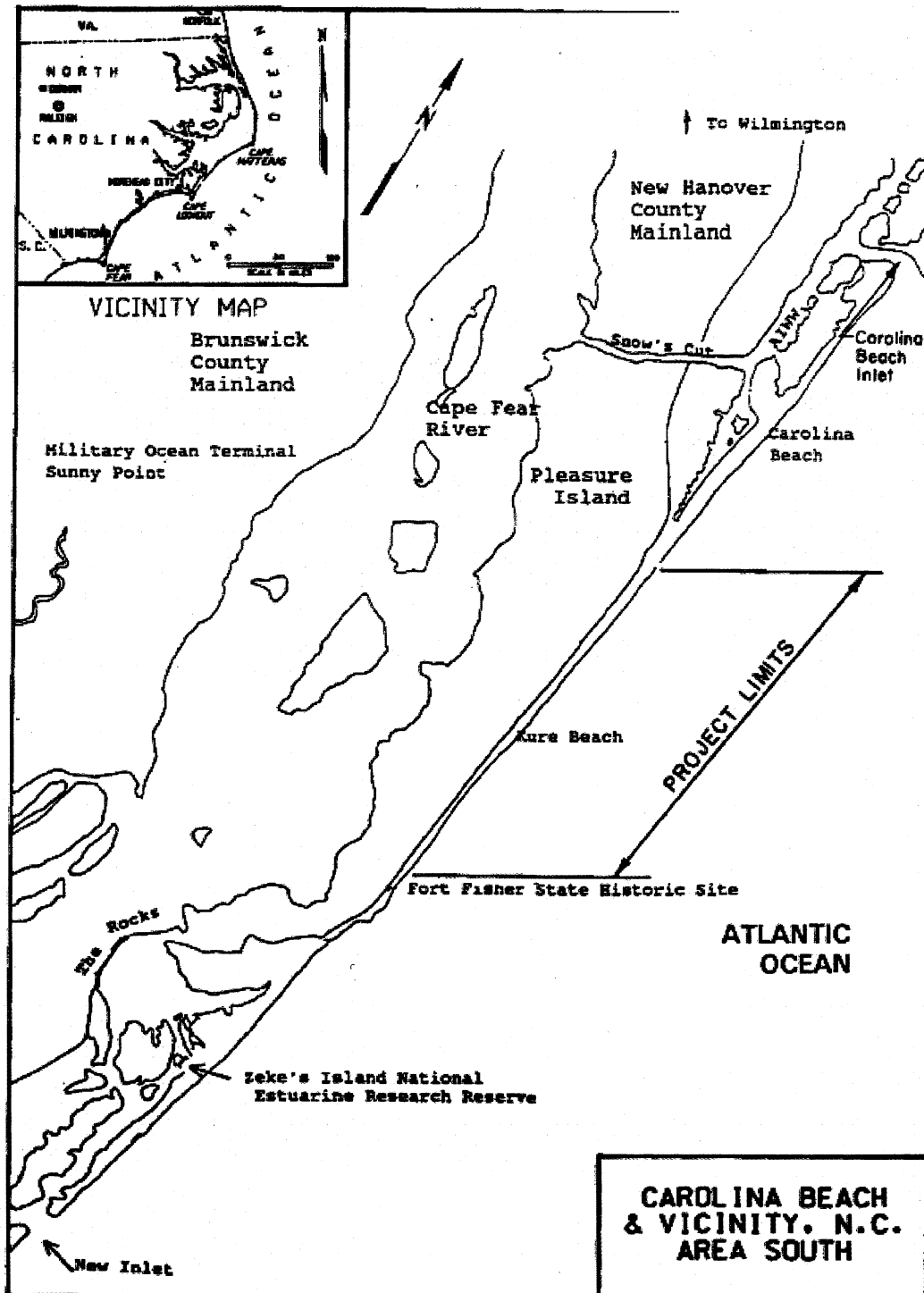
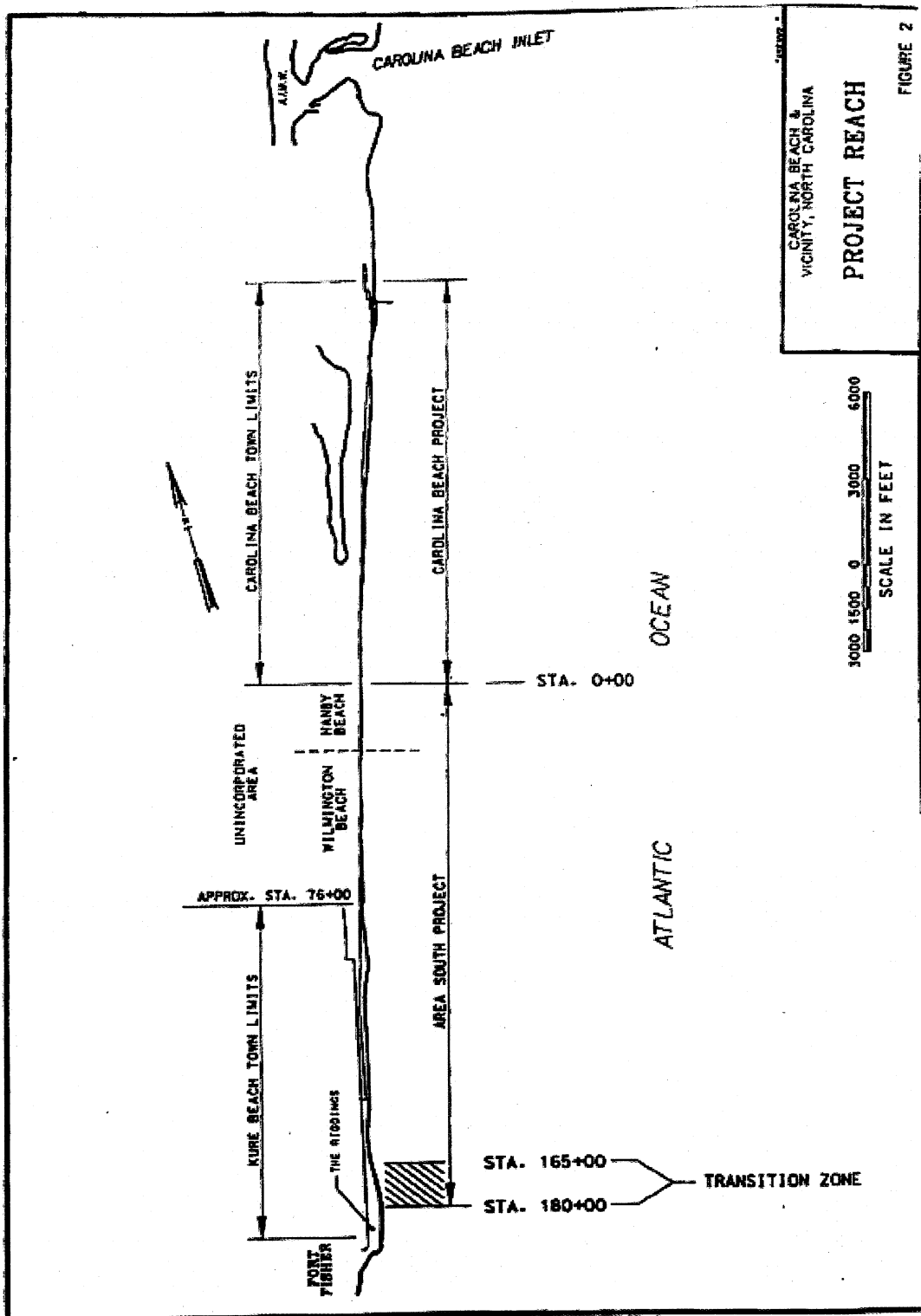


FIGURE 1

USACE June 1993 Final Environmental Impact Statement, Figure 1





USACE June 1993 Final Environmental Impact Statement, Figure 2



In an attempt to clarify the rationale for the current exclusion of The Riggings shoreline from the Area South CSDR Project, and to get a sense of what would be needed to include The Riggings shoreline within the Area South Project, a meeting was organized with representatives of the Town of Kure Beach, New Hanover County, the USACE and the NC Division of Coastal Management.

Representatives attending this meeting are identified below:

- |                  |                                   |   |
|------------------|-----------------------------------|---|
| • Nancy Avery    | Town of Kure Beach                | Town Clerk  |
| • Joseph Whitley | Town of Kure Beach                | Commissioner  |
| • Jim Dugan      | Town of Kure Beach                | Commissioner  |
| • John Batson    | Town of Kure Beach                | Building Inspector  |
| • Layton Bedsole | New Hanover County                | Shore Protection Coordinator                              |
| • Jim Medlock    | USACE                             | Chief, Programs Management<br>Branch, Wilmington District |
| • Debbie Wilson  | NC Division of Coastal Management | Wilmington District Manager                               |
| • Ted Sampson    | SCI, Environmental Consulting     | Env. Consultant to Riggings HOA                           |

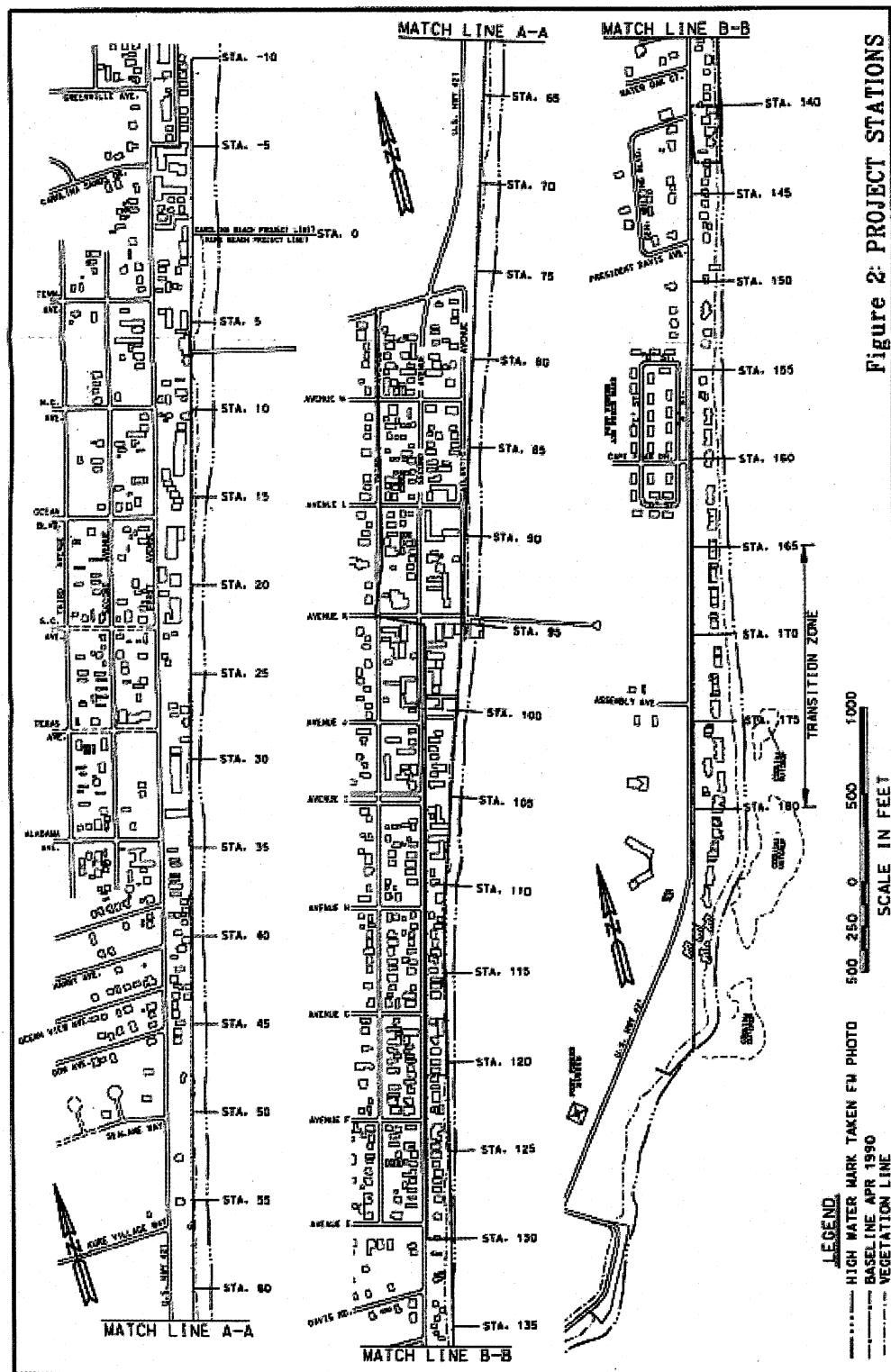
At the beginning of the meeting, it was made clear that the purpose of the meeting was not to initiate a process to have The Riggings shoreline included within the Area South CSDR Project, but rather to explore whether this might be possible and to identify requirements and issues that would need to be addressed should such an initiative be chosen to be pursued by The Riggings HOA. It was also emphasized that this was not a scoping meeting as no reasonable shoreline protection alternative to sandbags had yet been identified by The Riggings HOA. The requirement of Paragraph 4 of the CRC Variance Order was read to the attendees to clarify that this meeting represented an initial effort by The Riggings HOA to find and implement alternative solutions to address erosion at The Riggings.

In the discussions, the premise that The Riggings shoreline was originally included in the Area South Project area, and subsequently excluded due to environmental concerns for the Coquina outcroppings, was quickly questioned by Jim Medlock. He indicated that it was his understanding that The Riggings shoreline had never been included within the Area South Project area, and he supplied the two documents, provided below, that depict the Project Station transects, showing Station 180+00 as the southernmost transect, which, on one of the documents, shows this to be the southern end of the Project Transition Zone.

John Batson displayed a large drawing/photo of the Project that showed transects from the Town records to also end short of the The Riggings shoreline. Copies of this document were not available.

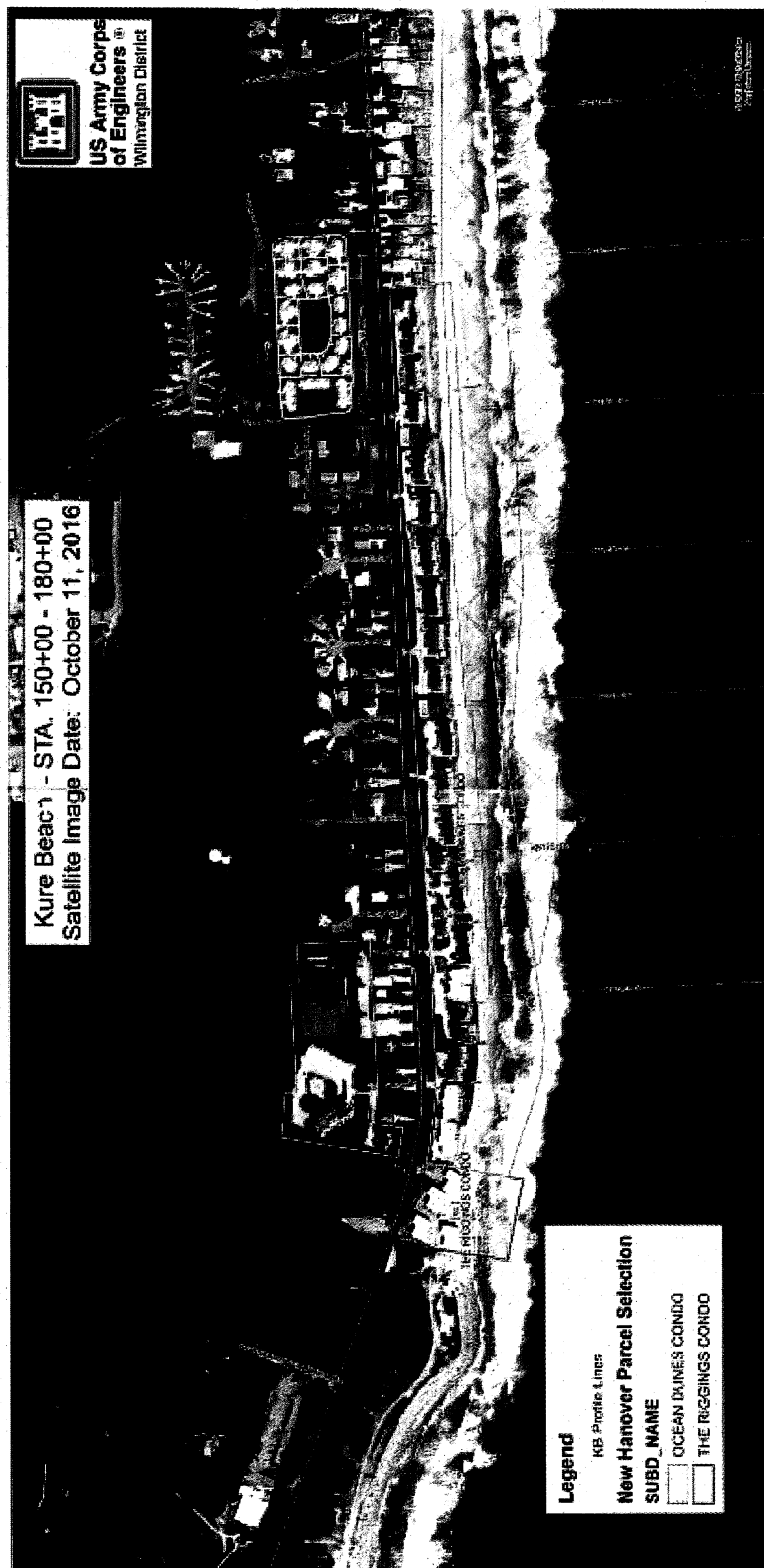
Jim Medlock also had available early bound documents from the USACE that addressed the Area South Project, and the shoreline in the vicinity of The Riggings. He has indicated that he will make copies of these documents available in a digital format, but as of this date they have not been received. Future review of these documents may shed additional light on how The Riggings shoreline came to be





Transect Document 1 Provided by Jim Medlock, USACE





Transect Document 2 Provided by Jim Medlock, USACE



excluded from the Area South CSDR Project. It is difficult to imagine that any portion of shoreline within Kure Beach was in greater need of Coastal Storm Damage Reduction efforts than The Riggings shoreline. It seems logical that The Riggings shoreline would have, or at least should have been included in the original Area South CSDR Project efforts. This can be addressed in the 2017 Annual Update.

Additional discussion took place, based on the premise that The Riggings shoreline had never been included as part of the Area South CSDR Project, to identify the way forward if inclusion within the Project was to be pursued by The Riggings HOA. Jim Medlock indicated that he did not believe that a problem would arise related to the cost/benefit ratio, since already assembled information suggested that inclusion of this additional shoreline would not negatively affect a positive determination. He also indicated that he believed that a new Congressional authorization would have to be obtained, and this would require the assembling of documentation as would be needed for a new Project.

Jim Medlock indicated that a new Project to address The Riggings Shoreline could either be initiated by the Town of Kure Beach, or by the The Riggings HOA. The main issue to be resolved would be how the non-federal funding of the Project would be addressed. If a new Project were to be pursued by The Riggings alone, the provision of the non-federal portion of the study and construction funding could fall solely on The Riggings HOA.

Nancy Avery clarified that it is a common misconception that funding for the beach nourishment comes from the Town's tax base – it does not. At present, funds derived from the occupancy taxes are utilized for construction costs of CSDR projects through New Hanover County. It remains to be seen whether any occupancy tax funds could be applied to a new Project pursued solely by The Riggings HOA.

Layton Bedsloe raised the question of what The Riggings HOA wanted to achieve, and were they looking to have a dry-sand beach. In response it was explained that some owners, perhaps many owners, would like to have a dry-sand beach, but that was not the purpose of considering beach nourishment of The Riggings shoreline. This effort is being driven by a requirement of the Variance Order that authorized shoreline protection through the use of sandbags and the accompanying direction that an alternative solution needs to be pursued to provide shoreline protection without sandbags.

Layton Bedsloe voiced the opinion that the presence of Coquina outcroppings, functioning as natural groins, along with the existence of the rock revetment protecting the Fort Fisher shoreline could limit the success of achieving shoreline protection through nourishment of beach sand. There is little doubt that these features significantly complicate achieving protection of The Riggings shoreline without sandbags, and only with beach nourishment on 3-year intervals.

If a new CSDR Project for the Riggings shoreline were to be pursued by the HOA under the auspices of the Town of Kure Beach, it seems that the funding mechanisms that provided for the non-federal cost sharing of studies and construction for the current Area South Project would be applicable. The hypothetical question was posed of whether this would raise any particular issues or concerns on the part of the Town or the County.

Nancy Avery indicated that she would be concerned with how such an initiative might impact the anticipated continued federal funding of the current Area South Project. Jim Medlock responded that his opinion was that any such action would have no negative effect upon the commitment to fund the current Project.



The specific requirements for what would be needed in support of a request for a new CSDR Project for The Riggings shoreline were not pursued in that further clarification is needed into the circumstances that caused The Riggings shoreline to be excluded from the existing Area South Project. However, this would likely involve obtaining a Congressional Study Authorization, a Corps Feasibility Study, an Environmental Impact Statement, a Corps Preconstruction Engineering and Design, and Congressional Construction Authorization.

**Conclusions:**

Nourishment of The Riggings shoreline to provide a form of shoreline protection, alternative to the use of sandbags, is probably the easiest path forward to obtain a permitted project that is not proscribed by the CAMA statute. However, given the location of The Riggings between Coquina rock outcroppings and the hardened shoreline of Fort Fisher, achieving storm protection from the typical designs for beach nourishment may not provide an acceptable alternative. At the least, an improved design, or more frequent re-nourishment intervals would likely be needed. Even a basic, typical design of a nourishment Project for The Riggings shoreline would face close scrutiny, and perhaps insurmountable opposition on potential impacts to the Coquina outcroppings.

A nourishment Project to achieve storm protection along The Riggings shoreline designed in conjunction with additional efforts to reduce the wave energy, and/or the negative end effects of the natural outcropping “groins” and the Fort Fisher rock revetment could possibly lead to a suitable alternative to sandbag protection. This is not an easy path to follow as it would necessarily involve detailed modeling of this portion of the shoreline, and likely face significant permitting opposition. Follow-on efforts can seek to explore the possibilities of such an approach.

**IMPLEMENTING ALTERNATIVE SOLUTIONS**

Until such time as one or more alternative solutions have been identified that can be seen to have a real potential to provide storm protection, and keep The Riggings structures clear of an imminent threat as is now provided by the sandbag revetment, there is nothing to report. Subsequent Annual Reports can address this requirement in more detail.



Environmental Consultant  
Sampson Contracting, Inc.

December 11, 2016





ROY COOPER  
*Governor*

WILLIAM G. ROSS, JR.  
*Acting Secretary*

To: Coastal Resources Commission

CC: Ted Sampson, Consultant for the Riggings Homeowners, Inc.  
Riggings Homeowners, Inc. c/o Registered Agent Paul Derek Jarrett

From: Christine A. Goebel, Assistant General Counsel

Date: January 25, 2017

Re: DCM Staff Response to Riggings HOA's December 11, 2016 Annual Update

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On December 11, 2016, the Division of Coastal Management ("DCM") received the Annual Update on Alternatives Solutions to address Erosion at the Riggings report ("Update") from The Riggings Homeowners, Inc. ("HOA") through its consultant Ted Sampson of Sampson Contracting, Inc. ("Consultant"). This Update was required as a condition of the December 2015 Order of the Commission granting a variance authorizing the use of sandbags by the HOA for an additional five years. On January 19, 2017, DCM received a letter from CRC Counsel requesting that ahead of the Commission's February 7-8, 2017 meeting, DCM provide a review of the Update through written comments to the Commission. DCM's review and written comments follow, along with a PowerPoint showing site photos including the removal of the old sandbags and installations of new sandbags which took place this past spring.



**DCM STAFF RESPONSE TO THE RIGGINGS' 2016 ANNUAL UPDATE  
ON ALTERNATIVE SOLUTIONS  
TO ADDRESS EROSION AT THE RIGGINGS**

DCM's Staff Response will provide comment to each of the sections of the Update, followed by suggestions for next steps which could be pursued by the HOA and concluding with a PowerPoint of site photos, include some taken in the last year which show the sandbag removal and replacement at the HOA property.

**1. Staff Comments on the Report's examination of Mechanisms Underlying Accelerated Erosion.**

This section is comprised of short-term observations during a 3-month period of time and anecdotal reports of the site conditions by unnamed individuals. While it may constitute background information, it is not clear if these observations are sufficient to support the two concluding paragraphs related to the impacts of possible nourishment at the site, especially because it is not clear if they were made by individuals with the qualifications necessary to make such observations.

**2. History, Significance, and Uniqueness of Coquina Rock Outcroppings.**

The first portion of this section describes documentation of the coquina rock outcroppings in the vicinity of the site. It also discusses how, in a 1931 report of the Corps of Engineers ("Corps"), some amount of coquina rock was removed for use as road material from a site northeast of Fort Fisher, which may or may not have been in front of the Riggings. The estimated amount of material removed was approximately 6,000 cubic yards. The 1931 Corps report notes that the removal of the coquina came after a 3-year period of accretion at the site of the removal followed by a period of 280-foot erosion, and the Update concludes that the likely source of the coquina used was in front of the Riggings. While this is interesting history, any removal of coquina rock around 1926 took place at least 59 years before the construction of the Riggings in 1985, and so its relevance to erosion which took place since 1985 is of limited value in finding alternatives to the use of the sandbags at the site.

The next part of this section summarizes a site evaluation by Spencer Rogers of North Carolina Sea Grant, and his belief that the coquina rock outcroppings on either side of the site act as two groins with the northern outcropping holding back the north to south littoral transport and the southern outcropping holding back the south to north littoral transport, leaving this area of the beach with less sand. DCM does not dispute this assessment of coastal processes at the site, but is also unable to confirm these described trends in littoral sand transport without additional study.

The final part of this section describes earlier sources that take note of these outcroppings. The coquina outcroppings were mentioned in the May 2003 Natural Area Inventory of New Hanover County, North Carolina as a site of significance. This source also notes that additional outcroppings may exist in the Kure Beach area and continue to be buried, though the extent of the coquina rock is unknown.



### **3. Effects of Nourishment on Exposed Coquina Outcroppings.**

This section examines the potential effects of beach nourishment on the coquina rock. It begins by referencing a 1992 report by the US Fish and Wildlife Service's Draft Fish and Wildlife Coordination Act Report for the Area South of Carolina Beach, New Hanover County, North Carolina (federal beach nourishment project), and noting a recommendation that "Beach nourishment should not extend as far south as the exposed coquina rock outcrops so as to avoid burial of and adverse turbidity impacts to the coquina rock community." While this Update notes that the Service suggested it would conduct physical monitoring, the Update states that such monitoring "will be obtained and reviewed to further assess the potential of seeking nourishment of The Riggings' shoreline." However, it is unclear from the Update if the Service undertook this physical monitoring at any time since 1992.

### **4. Initial Evaluation of Alternative Solutions.**

This section begins by noting "the already documented objections of resource agencies due to the potential harm that could occur to a unique hard bottom habitat from migrating sand," but does not list them specifically or attach copies of past objections. The Update then lists some of the unique site characteristics that might dictate the design for a possible nourishment project at the site, including the coquina rock outcroppings and their possible groin-like effects on the site, the high-energy wave action at the site, the bathymetry of the adjacent ocean, and the Fort Fisher revetment. While the Update notes that "innovative measures" might be approved by the Commission as noted in 15A NCAC 7M .0202(g), Staff notes that this provision might be limited by the Commission's rule at 15A NCAC 7M .0202(f) which still prohibits efforts to permanently stabilize the location. Further, the hardened structure ban at N.C.G.S. § 113A-115.1 was enacted after the Commission's "innovative measures" provision, and so may significantly limit measures which may be innovative but also may be banned by statute.

The Update describes a meeting on December 6, 2016, which included representatives from the Town of Kure Beach, DCM District Manager Debbie Wilson, the New Hanover County Shore Protection Coordinator Layton Bedsole, Jim Medlock, Chief of Programs Management Branch for the Corps, and Mr. Sampson. The Update contains Mr. Sampson's characterizations of what different parties stated during the meeting, but does not include a review by or a response from the other parties, which might be helpful to ensure the representations accurately reflect their discussion.

The Update also examines past reports by the Corps to ascertain whether or not the area of the Riggings was included in the initial design of the 1962 50-year federal project, or not. While the Update is unclear on this point, it appears that Mr. Medlock of the Corps indicated to the parties at the meeting that he had documentation, which he sent to the parties December 16, 2016, that confirmed that the site was never within the bounds of the federal project.

Some discussion at the meeting centered around concerns about future funding if the Riggings site was added to the federal project. The parties also discussed who would cover the non-federal share for adding the Riggings to the project and if that would come from the County's nourishment fund (which receives funding from occupancy taxes) or from the Riggings privately. Parties also



raised concerns about whether the unique features of the site would limit the success of nourishment at the site.

## **5. Conclusion**

The Update concludes that nourishment, as an alternative to sandbags, “is probably the easiest path forward to obtain a permitted project that is not proscribed by the CAMA statute” but warns that its location between the coquina rock outcroppings and the Fort Fisher revetment may result in “typical designs of a nourishment project” which may not provide “an acceptable alternative.” The Update also concludes that the nourishment option would require detailed modeling and would “likely face significant permitting opposition.” The Update seems to be discounting the idea of adding the site to the Federal Project as the Federal Project’s design might not be sufficient to protect the Riggings. Staff is unclear what the Update means by “additional efforts to reduce wave energy.” Staff also notes that there was no discussion or evaluation of the relocation of structures.

## **6. DCM Staff Recommendations**

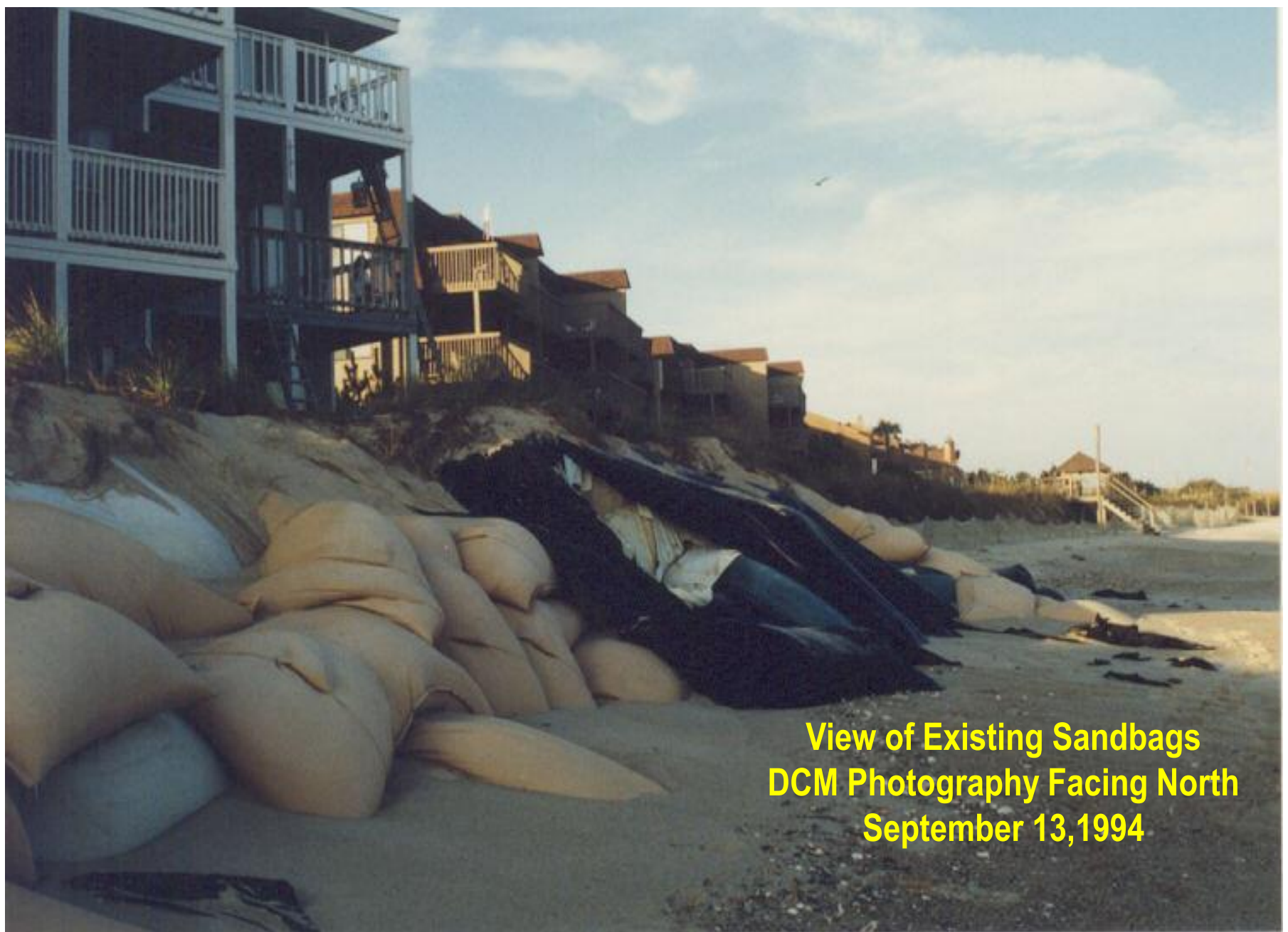
Based on a review of the Report, DCM staff suggest the following as topics for discussion by the Commission or further examination by the Riggings.

- Further study of the site by coastal geologists or engineers, including their suggestions for possible approaches to take at the site.
- Make a formal/official request by the Riggings to the Corps requesting that this area be added.
- Approach relevant resource agencies to solicit their current concerns about possible nourishment along the Riggings beach that may cover the outcroppings and provide their responses to the Commission in the 2017 Annual Update.
- Further investigate the significance of the 1982 designation as the Fort Fisher Coquina Outcrop Natural Area in the North Carolina Registry of Natural Heritage Areas, and the inclusion in the May 2003 Natural Area Inventory of New Hanover County, North Carolina, and inquire whether these designations on their own prohibit inclusion within a nourishment project.
- Examine of the potential for structure relocation or provide information collected on structure relocation.









*Department of Environmental Quality*





View of Existing Sandbags  
Facing South  
DCM Photography  
October 1997





View of Existing Sandbags Facing North  
DCM Photography  
November 1999



View of Existing Sandbags Facing South  
DCM Photography  
April 21, 2003



*Department of Environmental Quality*



View of Existing Sandbags Facing South  
DCM Photography  
October 8, 2006



*Department of Environmental Quality*



View of Existing Sandbags Facing South  
DCM Photography  
December 11, 2007







View of Existing Sandbags Facing North  
DCM Photography  
August 2011





View of Existing Sandbags Facing North  
DCM Photography  
April 2012





View of Existing Sandbags Facing South  
DCM Photography  
October 13, 2015



View of Existing Sandbags Facing North  
DCM Photography  
April 15, 2016



*Department of Environmental Quality*



View of Existing Sandbags Facing North  
DCM Photography  
April 18, 2016





View of Removed Sandbags Facing South  
DCM Photography  
April 28, 2016



*Department of Environmental Quality*



View of Existing New Sandbags Facing North  
DCM Photography  
July 1, 2016



*Department of Environmental Quality*



View of Existing New Sandbags Facing South  
DCM Photography  
July 1, 2016



*Department of Environmental Quality*



**View of Existing New Sandbags Facing South  
DCM Photography  
August 15, 2016**





View of Existing New Sandbags Facing North  
DCM Photography  
August 15, 2016



*Department of Environmental Quality*



**View of Existing New Sandbags Facing South  
Town of Kure Beach LPO Photography  
January 19, 2017**



*Department of Environmental Quality*



**View of Existing New Sandbags Facing North  
Town of Kure Beach LPO Photography  
January 19, 2017**



*Department of Environmental Quality*





ROY COOPER  
*Governor*

WILLIAM G. ROSS, JR.  
*Interim Secretary*

BRAXTON DAVIS  
*Director*

## MEMORANDUM

**TO:** Coastal Resource Commission

**FROM:** Rachel Love-Adrick, District Planner  
Division of Coastal Management

**SUBJECT:** Town of Beaufort Land Use Plan Implementation Status Report

**DATE:** January 17, 2017

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### Overview

The Town of Beaufort Core Land Use Plan was certified by the Coastal Resource Commission on September 28, 2007. The attached implementation status report outlines how the town has used and locally implemented the policies within the plan.

### The following must be included in the report:

- All local, state, federal, and joint actions that have been undertaken successfully to implement its certified CAMA land use plan
- Any actions that have been delayed and the reasons for the delays
- Any unforeseen land use issues that have arisen since certification of the CAMA land use plan
- Consistency of existing land use and development ordinances with current CAMA land use plan policies
- Current policies that create desired land use patterns and protection of natural systems.

### Discussion

The implementation status report does not require approval by the CRC, but must be made available to the public and forwarded to DCM (7L. 0511 Required Implementation Status Reports). Staff has reviewed the report and finds that the town has met the minimum requirements for the report.





# TOWN OF BEAUFORT

## Planning and Inspections Department

701 Front Street, P.O. Box 390  
Beaufort, N.C. 28516  
(252) 728-2142, (252) 728-3982 fax  
www.beaufortnc.org  
November 10, 2016

To: Rachel Love-Adrick  
Division of Coastal Management  
North Carolina Department of Environmental Quality  
400 Commerce Ave  
Morehead City, NC 28557

From: Kyle Garner, AICP, Planning Director  
Town of Beaufort

Subject: Implementation Status Report of 2007 Adopted CAMA Land Use Plan

The Town of Beaufort is submitting the following information as to the status of implementation items recommended in the adopted 2007 CAMA Land Use Plan. The items addressed below were taken from pages 103-105 of the plan and staff commentary/response is shown in ***Bold Italics***.

### **5.4 Implementation Plan and Schedule**

Beaufort has developed the following action plan and schedule to implement the Land Use Plan.

#### **5.4.1 Public Water Access Implementation Actions**

1. **FY05:** Beaufort will undertake improvements to water accesses and recreational facilities. ***In the last few years the Town has implemented improvements to:***
  - ***Gordon Street water access, which includes additional storage for kayaks & canoes as well as improvements to the public dock.***
  - ***Grayden Paul Water Access – has a new dock as well as a new floating dock for transient boaters.***
  - ***The Boardwalk has had renovations made it in the replacement of new decking.***
  - ***Most recently has been working the development of Cedar Street Park that would provide another public open space and water access to kayakers and fisherman. This project is slated for 2018***
  - ***Topsail Park – has had its floating gangway cleaned and repaired and is in the process of the addition of new landscaping in the near future.***
  - ***Harborside Park – Is a partnership project between the NC Maritime Museum and the Town to provide additional water access by way of an overlook on Front Street adjacent to the Watercraft Center. It is anticipated that this project will begin and end in 2017.***



2. **Ongoing:** Review, through the subdivision plat and site plan review and approval process, proposed waterfront land development projects to ensure consistency with the Town's public access goals and policies. ***The Town Planning & Inspections Staff reviews all development permits to include building permits to ensure that they meet compliance with the Town's public water access goals and policies on a daily, weekly basis.***

#### 5.4.2 Land Use Compatibility Implementation Actions

1. **FY 05:** Zoning ordinance amendments regarding residential boat docks and piers and commercial marinas. ***In 2013 the Land Development Ordinance was adopted which made commercial marinas a Special Use and required additional information and impact criteria from an applicant in order to be approved. Residential boat docks also have very strict criteria in the R-8 and other residential districts and are limited in the number permitted.***
2. **FY06:** Comprehensive zoning ordinance update. ***In 2013 the Town adopted a new Land Development Ordinance to replace the last Zoning Ordinance from 1998.***
3. **FY07:** Review, and revise as determined appropriate, the County land use and development regulations to include development principles and techniques that promote land use compatibility as open space subdivision design, clustering, innovative stormwater management design, etc. ***The Town has participated in the development of the Regional Hazard Mitigation Plan which addresses most of these items and meets in a Planners forum regularly to discuss CRS and FEMA related issues and strategies for mitigation.***
4. **Ongoing:** Review the zoning ordinance, subdivision regulations, and other Town land use and development regulations to ensure that residential densities and building intensities are consistent with the Town's land suitability goals and policies. Prepare revisions and updates as determined appropriate. Coordinate the review with the Carteret County Health Department. ***Even though the Land Development Ordinance was adopted in 2013 amendments have already been made to keep up with changes in the State Statutes as well as other revisions needed for clarification or stricter standards.***

#### 5.4.3 Infrastructure Carrying Capacity Implementation Actions

1. **FY 06:** Completion of a comprehensive water system improvements plan. ***Our Public Utilities Department hired Rivers & Associates Engineers to develop this Plan which was developed in 2009 with revisions in 2010 and 2011. It is anticipated that another update will occur in 2017.***
2. **FY 06:** Annexation boundary agreement with the Town of Morehead City. ***This has not happened but was attempted in 2009-2010.***
3. **FY 09:** Completion of sewer system improvements. ***The new Sewer treatment system was finished in 2009-2010 and is operational.***
4. **FY 10:** Completion of water system improvements. ***In 2011 several new water wells were completed which should provide enough water for the next 15 years. The Town is currently looking into a new treatment facility.***
5. **Ongoing:** Utilize the Land Use Plan, zoning ordinance, subdivision ordinance, and utilities extension policies to guide public infrastructure and services to areas where growth and development are desired. ***This is an ongoing process through Capital Improvement Plan discussions as well as large development proposals.***



#### 5.4.4 Natural Hazard Areas Implementation Actions

1. **Ongoing:** The Town will review its zoning ordinance, subdivision ordinance, and flood damage prevention ordinance to determine if more specific locational and density regulations regarding development or redevelopment activities within identified flood hazard areas and storm surge areas are warranted. Issues to be addressed include restrictions on land uses that utilize or store hazardous materials on-site, establishment of riparian buffers, increasing the minimum freeboard height above base flood elevation, etc. ***The Town of Beaufort has increased the freeboard to one foot above BFE plus has updated its Flood Damage Prevention Ordinance in 2015 and will update it again in 2017 as the new FEMA flood maps take effect.***
2. **Ongoing:** The Town will avoid zoning areas susceptible to storm surge for high density residential or intensive nonresidential use. ***The Town through its zoning has discouraged development in areas of potential storm surge.***
3. **Ongoing:** Based upon the availability of federal and state grant funds, land acquisition programs will be utilized in the most hazardous areas to minimize future damage and loss of life. ***To my knowledge I am not aware if the Town has applied nor been received any grant funding for this strategy.***
4. **Ongoing:** If any portion of the Town's public infrastructure is significantly damaged by a major storm, consideration will be given to the feasibility of relocating or modifying the affected facilities to prevent the reoccurrence of storm damage. ***The majority of the Town's critical facilities are located in non-special flood hazard areas and consideration will be given in the future with other infrastructure to limit damage due to storm surge.***
5. **Ongoing:** Coordinate the review and approval of development plans for major subdivisions, multifamily developments, and large public and institutional uses located within identified natural hazard areas with the County Emergency Management Agency. Continue the active enforcement of the State Building Code provisions regarding wind-resistance requirements and participation in the National Flood Insurance Program. ***The Town actively participates in the NFIP as well as the enforcement of the State Building Code. An area of improvement that needs to occur is a better relationship with the County Emergency Management Office when looking at development projects.***

#### 5.4.5 Water Quality Implementation Actions

1. **FY06:** The Town will investigate the feasibility of developing and implementing a stormwater management plan. ***In 2009 the Town received Phase I of a stormwater plan developed by the Wooten Company and has used it to aid in repair and mitigation of stormwater utility. The Town has also enacted a stormwater committee comprised of residents of the community as well as professionals in the field of hydrology to aid recommending improvements that can be implemented.***
2. **FY06:** The Town will prepare and implement a wellhead protection program. ***The Town does have a well head protection program.***



3. **FY07:** The Town will review its zoning ordinance and subdivision regulations to determine if revisions are needed to include additional measures, such as riparian buffers and impervious surface limitations, to control stormwater discharges. ***A stormwater management ordinance will be developed. A stormwater ordinance was adopted in 2008 and in 2010 a new zoning district the RS-5 district was created which restricted the impervious surface on a lot to a maximum of 50% of coverage.***
4. **FY08:** Beaufort will make significant advances in the rehabilitation of its sewer infrastructure to reduce infiltration, thus preventing overflows and reducing the amount of discharge released into Taylor's Creek. ***The Town of Beaufort continues to work on I&I and is addressed in the 2017 CIP as well as in 2007 & 2008 several sewer lines were replaced or slip lined to improve the utility.***
5. **Ongoing:** The Town will continue to require, through its subdivision regulations and technical specifications manual, adequate stormwater drainage systems for new developments. The Town will continue to promote the use of best management practices to minimize the degradation of water quality resulting from stormwater runoff. The Town will continue to coordinate the approval of land development projects with the applicable State agencies. ***This is an ongoing practice that the Town does promote and is looking at developing Low Impact Development standards that could be implemented in the Land Development Ordinance. We also work on a regular basis with state agencies to make sure projects are compliant.***

#### **5.4.6 Areas of Environmental Concern Implementation Actions:**

1. **FY06:** The Town will review its zoning ordinance to determine if revisions are needed to include additional protective measures for AECs. ***The Town of Beaufort has and will continue to review its ordinance to ensure that environmentally sensitive areas are protected through good land planning and development practices.***

#### **5.4.7 Areas of Local Concern Implementation Actions:**

1. **FY05:** The Town will employ a Town Planner to coordinate land development and growth management plans and to oversee the administration of land use regulations. ***A full time Town Planner has been on staff since 2008 and as of October 2016 another planner has been hired.***
2. **FY 08:** The Town will prepare a comprehensive community services/facilities plan. This plan will identify major municipal services and facilities needs and deficiencies, prioritize those needs, and prepare cost estimates and a budgeting plan for the recommended improvements. ***In 2011 a Capital Improvements Plan was developed by Town Staff and has been updated discussed every year since then including a discussion for the 2017-2018 CIP that took place on October 31, 2016.***

If you have any questions or need additional clarification, please e-mail me at [k.garner@beaufortnc.org](mailto:k.garner@beaufortnc.org) or call (252) 728-2142.

Sincerely,

*Kyle Garner*

Kyle Garner, AICP  
Town Planner