

BUILDING TO FLOOD STANDARDS

Hurricane Floyd
Impacts to Oak
Island in 1999.



WHAT IS A FLOOD ZONE?

- Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk the Federal Emergency Management Agency (FEMA).
- Everyone lives in a **flood zone** -- it's just a question of whether you live in a low, moderate, or high-risk area.



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FLOOD ZONES

Oak Island is comprised of **FIVE** flood zones:

- **Zone X:** Areas determined to be outside the 0.02% annual flooding risk
- **Zone Shaded X:** 0.02% annual chance of flooding
- **Zone AE:** Areas with 1% annual chance of flooding (BFE determined)
- **Zone VE:** Areas with 1% annual chance of flooding with velocity hazard, wave action greater than 3 feet (BFE determined)

SPECIAL FLOOD HAZARD AREAS (SFHA)

- These areas are identified on the Flood Insurance Rate Map that have an annual **1% chance** of being equaled or exceeded.



FLOOD INSURANCE

- Buildings in SFHA's with mortgages from federally regulated or insured lenders are required to have flood insurance.
- In high-risk areas, there is at least a 1 in 4 chance of flooding during a 30-year mortgage.
- A lender can require flood insurance, even if it is not federally required.



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BASE FLOOD ELEVATION

- **Base flood elevation (BFEs)** is the elevation of surface water resulting from a flood that has a 1% chance of equaling or exceeding that level in any given year.
- The Town's flood ordinance requires structures to be elevated to BFE plus 1 foot (known as **freeboard**).

BUILDING IN “VE” & “AE” FLOOD ZONES

- Buildings in an AE flood zone must be elevated so that the **finished floor** meets freeboard.
- Building elevations in a VE zone are based on the **first horizontal structural member** of the structure.



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ENCLOSURES UNDER STRUCTURES

- Enclosures are permitted underneath these structures in a SFHA.
 - **VE Zones:** Enclosure walls must be designed to break away
 - **AE Zones:** Flood vents are required
 - Non-conversion agreement required

Can only be used for building access, parking, & storage!

**TOWN OF OAK ISLAND
NONCONVERSION AGREEMENT FOR CERTAIN STRUCTURES IN THE FLOODPLAIN**

Whereas, a permit application has been submitted and a building permit to be issued to construct, improve, or repair the property at _____ in the Town of Oak Island, NC and

Whereas, the permitted building has the lowest floor in an AE zone or horizontal structural member in a VE zone elevated above the base flood elevations plus one foot and the design and construction of the building meets current building codes and flood damage prevention ordinance requirements, and

Whereas, as a condition of a Certificate of Occupancy, the owner must agree to not alter the building at a later date so as to violate the building code or flood damage prevention ordinance requirements,

Now, therefore, the undersigned owner of said property hereby agrees to the following:

1. That enclosures below the lowest floor or horizontal structural member shall be used solely for parking of vehicles, limited storage, or access to the building and will not be used for human habitation without first becoming fully compliant with the Flood damage prevention ordinance in effect at the time of conversion.
2. That all interior walls, ceilings (excluding separation requirements), and floors in enclosures below the lowest floor or horizontal structural member shall be unfinished, except that an enclosure with a maximum footprint of 299 sq. feet used solely for building access can be finished with flood damage-resistance materials and conditioned; enclosure footprint includes stairwell and elevator areas.
3. That mechanical, electrical, or plumbing device shall not be installed below the Base Flood Elevation.
4. That at least two flood openings shall be installed in the walls of enclosures below the lowest floor which permit the automatic entry and exit of floodwater within the enclosure, openings shall be on at least two different walls with the bottoms of the openings no more than one foot above the inside floor or outside grade. The walls below the lowest horizontal structural member in VE zones shall be engineered break away wall design.
5. I understand it is illegal to change or convert an enclosure below the lowest floor or horizontal structural member to a use or dimension different from the use or dimension authorized in the building permit and different from the requirements as set forth in the current Flood Damage Control Regulations, Section 18 Article IV, Oak Island Code of Ordinances
6. That the owner and subsequent owners agree to allow a representative of the Town of Oak Island in the premises to verify compliance with this agreement at least once each year. The Town representative will provide at least 48 hours' notice of such visit.
7. That this Agreement shall be recorded with the deed to the above property so that subsequent owners are made aware of these restrictions.

Signature of Property Owner Date: _____

North Carolina, Brunswick County

I, _____, a Notary Public for Brunswick County, North Carolina, do hereby certify that _____ personally appeared before me this day and acknowledged the due execution of the foregoing instrument.

Witness my hand and official seal this the _____ day of _____, 20____.

My commission expires: _____, 20____.



NON-CONFORMING STRUCTURES

- Structures that do not comply with current Flood Damage Prevention Ordinance
- Maintenance and renovation work cannot equal or exceed 50% of the value of the structure (**substantial improvement**).
- If substantial improvement is proposed then the structure must be brought into compliance.

ELEVATION CERTIFICATES

Elevation Certificates are required when constructing a structure in special flood hazard area.

There are a minimum of 3 elevation certificates required:

- Preliminary Elevation Certificate
- Under Construction Elevation Certificate
- Final Elevation Certificate



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U.S. DEPARTMENT OF HOMELAND SECURITY
Federal Emergency Management Agency
National Flood Insurance Program

OMB No. 1660-0008
Expiration Date: November 30, 2022

ELEVATION CERTIFICATE

Important: Follow the instructions on pages 1-9.

Copy all pages of this Elevation Certificate and all attachments for (1) community official, (2) insurance agent/company, and (3) building owner.

SECTION A – PROPERTY INFORMATION		FOR INSURANCE COMPANY USE			
A1. Building Owner's Name MOCEAN Construction		Policy Number:			
A2. Building Street Address (including Apt., Unit, Suite, and/or Bldg. No.) or P.O. Route and Box No. ████████ Pelican		Company NAIC Number:			
City OAK ISLAND		State North Carolina ZIP Code 28465			
A3. Property Description (Lot and Block Numbers, Tax Parcel Number, Legal Description, etc.) L-27 B-5 S-N-2 PLAT 8/140 - Parcel ID: 249DD025					
A4. Building Use (e.g., Residential, Non-Residential, Addition, Accessory, etc.) <input checked="" type="checkbox"/> Residential					
A5. Latitude/Longitude: Lat. 33.91042 Long. -78.11146 Horizontal Datum: <input type="checkbox"/> NAD 1927 <input checked="" type="checkbox"/> NAD 1983					
A6. Attach at least 2 photographs of the building if the Certificate is being used to obtain flood insurance.					
A7. Building Diagram Number <u>6</u>					
A8. For a building with a crawlspace or enclosure(s): a) Square footage of crawlspace or enclosure(s) <u>484.00</u> sq ft b) Number of permanent flood openings in the crawlspace or enclosure(s) within 1.0 foot above adjacent grade <u>6</u> c) Total net area of flood openings in A8.b <u>1200.00</u> sq in d) Engineered flood openings? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
A9. For a building with an attached garage: a) Square footage of attached garage <u>0.00</u> sq ft b) Number of permanent flood openings in the attached garage within 1.0 foot above adjacent grade <u>0</u> c) Total net area of flood openings in A9.b <u>0.00</u> sq in d) Engineered flood openings? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
SECTION B – FLOOD INSURANCE RATE MAP (FIRM) INFORMATION					
B1. NFIP Community Name & Community Number TOWN OF OAK ISLAND - 370523		B2. County Name Brunswick			
B3. State North Carolina					
B4. Map/Panel Number 3720206500	B5. Suffix K	B6. FIRM Index Date 12-06-2019	B7. FIRM Panel Effective/Revised Date 08-28-2018	B8. Flood Zone(s) AE	B9. Base Flood Elevation(s) (Zone AO, use Base Flood Depth) 10.0'
B10. Indicate the source of the Base Flood Elevation (BFE) data or base flood depth entered in Item B9: <input type="checkbox"/> FIS Profile <input checked="" type="checkbox"/> FIRM <input type="checkbox"/> Community Determined <input type="checkbox"/> Other/Source: _____					
B11. Indicate elevation datum used for BFE in Item B9: <input type="checkbox"/> NGVD 1929 <input checked="" type="checkbox"/> NAVD 1988 <input type="checkbox"/> Other/Source: _____					
B12. Is the building located in a Coastal Barrier Resources System (CBRS) area or Otherwise Protected Area (OPA)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Designation Date: _____ <input type="checkbox"/> CBRS <input type="checkbox"/> OPA					

FEMA Form 086-0-33 (12/19)

Replaces all previous editions.

Form Page 1 of 6

PERMITS

- Any work requiring a permit within a flood zone must be reviewed for compliance with the flood ordinance and a flood permit issued.
 - This permit is issued in conjunction with the building permit.



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CONTACT

QUESTIONS?

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