



AGENDA ITEM COVERSHEET

PREPARED BY: Jeremy Hardison, Planning Director

DEPARTMENT: Planning &
Development

MEETING: Board of Adjustment – 5/2/2023

SUBJECT: Variance to Chapter 30 Flood Damage Prevention, ARTICLE V. - Provisions for Flood Hazard Reduction
Sec. 30-124. - General standards. (d) and Sec 30-125 Specific Standards (d) (4)

PURPOSE:

The applicant, Town of Carolina Beach is requesting a variance to Chapter 30 Flood Damage Prevention ordinance (Attachment 1- Application), specifically to the elevation requirement for plumbing fixtures and relief from the breakaway wall requirement for just the placement of the utility chases for plumbing.

The Town would like to rebuild the current 1-story brick and cinderblock boardwalk bathroom that is located oceanfront at 9 Boardwalk. The proposed bathroom footprint would be approximately 700 sq. ft. It will be a 2-story structure with access off the elevated wooden walkway for beach goers to access (second level) while also providing access to bathrooms off the concrete area of the boardwalk adjacent to businesses (first level). See attachment 2 – Rendering.

BACKGROUND:

The Carolina Beach Boardwalk area has existed for over 100 years. Due to its proximity to the Atlantic Ocean, the Boardwalk is a popular means for the public to view, enjoy and access the public resources of the dry and wet sand beaches, the Atlantic Ocean, and the business district. To provide services to the visiting public 50 years ago the Town built a public bathroom that consisted of three water closets in each men's and women's bathroom constructed on the ground floor for easy access. It was built prior to the town having floodplain development regulations. It is now inadequate to meet the demand with the growing number of visitors the town sees each year. The goal of the new bathroom and for the two-story design is to have one facility that can meet the needs of the beach goers without having to go to the boardwalk and for patrons of the business to have a bathroom directly from the boardwalk. It will also improve accessibility with those with disabilities rather you are on the boardwalk or the beach. In recent years the town has promoted and to be more accommodating to those with disabilities in the area by providing parking, beach crossovers, viewing areas and beach mats that meets the American Disabilities Act (ADA). However, the public bathrooms do not. The design would also increase capacity and to better accommodate the citizens and visitors of the Town.

For the town to rebuild the bathrooms in the same location it first obtained a variance in February from the NC Coastal Resource Commission who governs setbacks for development off the coastal shoreline. When the original bathroom was built the State did not have setback regulations. The area where the

bathrooms are located because the ownership of the Town when the Carolina Beach Building Line Act was passed in 1963. The 1963 Session Law granted the Town title to the land between the building line and the low water mark of the Atlantic Ocean subject to the public trust rights. The 1963 Session Law also provides that all made and constructed land lying East of “the building line” shall be at all times kept open for the purpose of street and highways for the use of the public and further for the development and uses as a public square or park, as the governing authorities of the Town of Carolina Beach by ordinance shall determine....” See attachment 3 A copy of the 1963 Session Law and the Building Line Map (Map Book 8, Page 52). The Site for the proposed bathhouse is located just east/oceanward of the development line/building line, on land subject to the 1963 Act which vested title in this land to the Town

DESCRIPTION OF VARIANCE

The bathrooms are located within a special flood hazard area (SFHA) as determined by the Federal Emergency Management Agency’s (FEMA) Flood Insurance Rate Map (FIRM), Panel 3130 Map # 3720313000, effective August 28, 2018 (Attachment 4 - flood map of the property). The property is designated as a coastal high hazard areas (VE zones) subject to wave actions.

The National Flood Insurance Program (NFIP) variances procedures are designed to help local governments protect their citizens and property from flood damages. Allowing variances to the local floodplain management standards may significantly increase the property’s flood insurance rate and decreased the community’s resilience. Therefore, by implementing the NFIP variance procedures, a community will ensure that alternative actions are taken that protect and encourage safe development in the floodplain.

A variance is an authorization that grants of relief by a community from the terms of a floodplain management regulation. Variances are meant to address unique, site-specific and individual circumstances where the strict application of the ordinance may result in a hardship to a property owner. While the variance is intended to provide relief, it still enables the community to:

- Preserve the purpose and intent of the ordinance;
- Protect the safety, health, and welfare of the public and emergency responders

The authority to grant a variance is delegated to the Board of Adjustment. In some cases, a variance granted for floodplain management purposes can result in a project that does not meet the minimum standards of the NFIP.

The current bathrooms are located in a VE-16 flood zone. The VE means that flooding may result in wave action from storm surge. The 16 number represents the BASE FLOOD ELEVATION (BFE) the height of flooding, including wave height, having a 1 percent chance of being equaled or exceeded in any given year. The BFE is the basis of insurance and floodplain management requirements and are shown on the flood map. The town has adopted added protection to buildings constructed in the floodzone by requiring two feet over the Base Flood Elevation. The added 2 feet above the required elevation is referred to as Freeboard. The property elevation of the grade is 8.3’. The required flood protection level of the building is $16' + 2' = 18'$. (Attachment 5 - Elevation of building)

For a variance request to waive the elevation requirement, the community review board must require the “minimum necessary” actions. For example, the minimum actions necessary for a non-residential structure may include meeting the other provisions in the local floodplain management ordinance.

The Proposed design will meet the following flood requirements

Flood vents	Flood Vents protect buildings during floods by preventing hydrostatic pressure buildup that can destroy walls and foundations. This mitigation technique, allows floodwater to freely flow through an enclosure.
Electrical and Mechanical equipment	Will be elevated above freeboard 18' BFE. To allow the electrical and mechanical system to operate after a flood event without damage to floodwaters.
Utilizing piling construction.	Engineered to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy during conditions of flooding.
First horizontal member will meet freeboard (18' BFE).	Horizontal structural members are obstructions and can transmit the force of wave impacts to rest of the structure. This requirement is to keep the entire building in a V Zone above the anticipated breaking wave height of a base flood storm surge.
Constructed using flood resistant materials	The building will be capable of withstanding direct and prolonged contact with floodwaters without sustaining significant damage.

Variance from

ARTICLE V. - PROVISIONS FOR FLOOD HAZARD REDUCTION

Sec. 30-124. - General standards.

(d) All new plumbing equipment shall be located at or above the RFPE or designed and installed to prevent water from entering or accumulating within the components during the occurrence of the base flood. These include, but are not limited to, water softener units, bath/kitchen fixtures, and water heaters.

The hot water heater will meet flood requirements. The sinks and water closets are proposed to be located below the BFE. The plumbing fixtures and connections will be designed and installed to eliminate infiltration of floodwaters into the sanitary sewage system and discharges from sanitary sewage systems into floodwaters.

Sec. 30-125. - Specific standards.

(d) *Elevated buildings.* Fully enclosed areas, of new construction or substantially improved structures, which are below the regulatory flood protection elevation:

(4) Shall allow, in coastal high hazard areas (Zones VE), either be free of obstruction or constructed with breakaway walls, latticework or insect screening below the regulatory flood protection elevation, provided it is not part of the structural support of the building and is designed to breakaway, under abnormally high tides or wave action, without causing damage to the structural integrity of the building on which they are to be used.

Breakaway wall requirements - For enclosures under the BFE the walls are required to be breakaway. The size, placement, and design of the breakaway walls and flood vents will be such to mitigate the effects of the wave and static forces from a flood event. The location of the breakaway walls will be determined by the location of the utilities chases and typical interior fixtures of a restroom facility.

The Town of Carolina Beach respectfully contends that the proposed two-story bathroom facility meets variance criteria specified in Chapter 30 Flood Damage Prevention Ordinance Sec. 30-95 Variance Procedures . In support, the Town presents the following statements and information, and respectfully requests that the Board of Adjustments issue a variance allowing the Town's requested variance from minimum relief of the plumbing and breakaway wall requirements where the plumbing fixtures will be located.

Variance Criteria

In passing upon variances, the appeal board shall consider all technical evaluations, all relevant factors, all standards specified in other sections of this chapter, and shall consider the following criteria for floodplain variances:

(1) The danger that materials may be swept onto other lands to the injury of others;

Will not have any additional threats to public safety, the new building will be designed to better accommodate flooding than the existing building and will be the minimize possible to afford relief. It will employ flood vents to relieve Hydrostatic forces pressure on the walls to prevent materials from being swept away.

(2) The danger to life and property due to flooding or erosion damage;

The building will be built to be flood resilient. The current building does not meet flood requirements. The facility will be closed to the public when flooding conditions are expected. The federal storm damage reduction project has served the Town well over the last years and continued nourishment of the project will continue to provide storm damage reduction to the Town's infrastructure and development within the Town. The town has a beach management plan approved by the NC Coastal Resources Commission (CRC). The Town must provide a progress report to the CRC every 5 years describing the condition of the project and an update of the requirements that address the funding sources, and construction and maintenance details needed to achieve a design life of shore protection.

(3) The susceptibility of the proposed facility and its contents to flood damage and the effect of such damage on the individual owner;

It will be designed to accommodate water with utilizing water resistant materials. There will not be any finished materials used in the design and a pressure washer will be utilized to clean the facility that will produce large volumes of water that the facility will be designed to withstand.

(4) The importance of the services provided by the proposed facility to the community;

Lack of access to public bathroom facilities is a detriment to those visiting ocean beach. There is potential negative biological impact from failing to provide adequate access to public bathroom facilities. Lack of convenient access to public bathroom facilities creates a significant hardship. The proposed two story bathroom facility will significantly increase the number of stalls and provide direct access to those facilities from the Boardwalk.

The variance requested by the Town will secure the public safety and welfare. The proposed two-story bathroom facility will replace the inadequate, non ADA compliant, existing facilities. The proposed two-story bathroom facility will provide the disabled public the ability to access a bathroom directly from the Boardwalk. As proposed, the two-story bathroom facility is 1) adjacent to a handicap ramp and 2) in close proximity to the location where the Town installs the beach mats. The Town routinely allows organizations supporting those with disabilities to hold special events and camps in this location. Additionally, the two-story bathroom facility will provide adequate access to the general public.

(5) The necessity to the facility of a waterfront location, as defined under article II of this chapter as a functionally dependent facility, where applicable;

The proposed location to rebuild the public bathroom is on the uniquely town-owned public beach within the Town's Central Business District. The bathroom serves Beach patrons and the ocean front boardwalk area that is close proximity to the beach and central business district. The expanded bath house will have more total stalls by having two floors and will enhance public access along the beach and the boardwalk by replacing the existing facilities.

The property upon which the proposed two-story bathroom facility is to be located is unique public property. This property was raised from the tides of the Atlantic Ocean by taxpayer funded beach nourishment efforts first undertaken by the Corps in the mid-1960's, and uniquely was deeded to the Town by the North Carolina General Assembly pursuant to the provisions of the governing 1963 Session Law. The 1963 Session Law balances public and private property rights by recognizing that the Corps' publicly funded beach nourishment project extinguished the common law littoral rights of the impacted oceanfront property owners, by deeding the raised lands to the Town, by requiring the Town to use those raised lands for public street and public park purposes. allowed the Town to improve the property in such a manner to significantly increase public access to all able bodied and disabled individuals to better meet the demand to provide capacity to the boardwalk and beach visitors.

(6) The availability of alternative locations, not subject to flooding or erosion damage, for the proposed use;

The boardwalk area is located in a floodzone and would be impossible to locate a bathroom out of the floodzone in this area to serve the visitors and citizens of the boardwalk and the beach.

(7) The compatibility of the proposed use with existing and anticipated development;

The bathrooms will be at the same location as the existing bathroom facility and is convenient to the boardwalk, the beach mats, and on the town-owned area. The variance would secure the public

safety and welfare and preserve substantial justice. The proposed bath house expansion is designed to increase access to the public beach and boardwalk for all disabled visitors and improve restroom access for the public at large through more stalls, including ADA compliant stalls, and is conveniently located next to and connected to the boardwalk. The Town is committed to improving access for the increasing and anticipated visitors and especially those with disabilities and is keeping with the goals of the Town.

- (8) The relationship of the proposed use to the comprehensive plan and floodplain management program for that area;

The bathrooms are located in the boardwalk commercial area and central recreation district of the town. This area is a pedestrian oriented with street level services. The downtown area and boardwalk are the recreational and social hub of the town, providing a family-friendly experience that has come to define the town for visitors. The appearance of this area was also identified as an opportunity for improvement in the Town's 2020 Land Use Plan with maintaining the pedestrian-scaled environment with active ground floor uses. In the 2023 strategic plan it was listed to expand the public bathroom facilities at the boardwalk for priorities and objectives.

- (9) The safety of access to the property in times of flood for ordinary and emergency vehicles;

The facility will be closed to the public or if flooding is predicted. Once the area is safe for public to access it will be open.

- (10) The expected heights, velocity, duration, rate of rise, and sediment transport of the floodwaters and the effects of wave action, if applicable, expected at the site;

The first horizontal member will be 18' BFE, 9.7 feet from the ground. The building will be built better to be able to withstand velocity occurrence. The beach management plan and the beach storm reduction project has reduced the wave action and impacts of buildings in this area.

- (11) The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities and facilities such as sewer, gas, electrical and water systems, and streets and bridges.

The cost will be minimum as the Fixtures will be designed to accommodate water and the building will be made of flood resistant materials. The electrical and mechanical will be elevated 2 feet above the flood stage. The horizontal member will be located 2 feet above flood stage as well to allow the flow of water. Back flow preventers will be installed to eliminate infiltration of floodwater into the sanitary sewage system.

CONDITIONS (FLOOD DAMAGE PREVENTION ORDINANCE):

Upon consideration of the factors listed under the required findings and the purposes of the Flood Damage Prevention Article, the Board of Adjustment may attach such conditions to the granting of variances, as it deems necessary to further the purposes of this Article:

1. Plumbing fixtures and connections are permitted below the BFE provided that the fixtures and connections are designed and installed to minimize or eliminate infiltration of floodwaters into the sanitary sewage system and discharges from sanitary sewage systems into floodwaters.
2. Anchored to prevent flotation, collapse or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy during conditions of the base flood.
3. Constructed of flood-damage-resistant materials.
4. Install flood vents.
5. Mechanical and electrical systems located above the BFE.
6. Install breakaway walls to the maximum extent possible.

BOARD ACTION:

A variance may only be allowed by the Board of Adjustment when considering all technical evaluations, all relevant factors, when substantial evidence in the official record of the application that supports the 11 criteria for issuing a Variance to the Flood Damage Prevention Ordinance.

ATTACHMENTS

ATTACHMENT #1: Application

ATTACHMENT #2: Rendering

ATTACHMENT #3: A copy of the 1963 Session Law and the Building Line Map (Map Book 8, Page 52)

ATTACHMENT #4: Flood map of the property

ATTACHMENT #5: Elevation of building

ATTACHMENT #6: Site Plan

ATTACHEMNT #7: Presentation