

BEACH HAVEN BOROUGH COMPREHENSIVE MASTER PLAN



April 19, 2018

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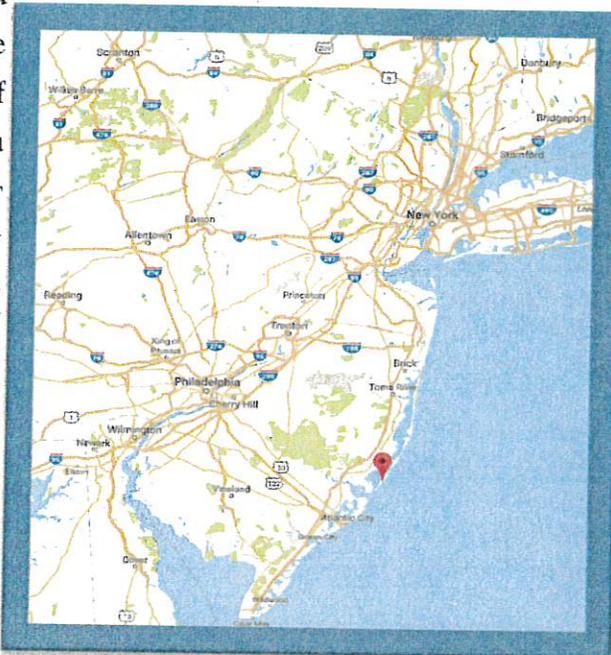
INTRODUCTION, VISION AND STATEMENT OF OBJECTIVES

INTRODUCTION

Beach Haven is a coastal resort community located on Long Beach Island, a barrier island, in southern New Jersey and offers an array of residential housing options, countless retail and dining establishments within a well-defined business district and numerous parks and public access points to the ocean and bayfront all of which make this town a sought after destination for vacationers and a highly desirable area in which to live seasonally or year-round. The flux in population season to season greatly affects the economic, social and physical makeup of the Borough and it is often the year-round residents whom are most affected by these conditions. Assessing the needs and devising strategies to better the community for residents, business owners and vacationers for the present and future is the principal goal of this Master Plan. In addition, the Master Plan committee is devised of a panel of invested stakeholders that understand the importance of a thriving and stable community but also recognize the coastal vulnerabilities this area faces each day and has assumed the responsibility for planning the future with sustainability and resiliency at the forefront.

Known on Long Beach Island as the “Queen City”, Beach Haven is a late 19th-Century beach front resort originally established in 1873 to house wealthy summer residents from Philadelphia. Although some of the major structures, including several hotels and a boardwalk, were lost to storms in the 1940s including the Hurricane of 1944, a portion of the town retains its Victorian and Edwardian character. The Beach Haven Historic District, listed in the New Jersey and the National Register of Historic Places in the early 1980s, encompasses the most intact buildings in the center of town.

At the time of the 2010 United States Census, there were 1,170 people, 531 households, and 301 families residing in the Borough. The population density was 1,196.0 per square mile and there were 2,667 housing units at an average density of 2,726.2 per square mile. The census data also shows that of the 531 households, 15.4% had children under the age of 18 living with them and the average family size was 2.81.



In addition, the data indicates that 17.9% of households had someone living alone who was 65 years of age or older. This information provides the clarification needed to understand the community makeup and provides direction for ways residents can be better served.

The Borough of Beach Haven is unique in that it is accessible via only one (1) causeway which also serves five other municipalities. Increased vehicle and pedestrian traffic are concerns for this small community especially during the prime summer months when many vacationers are using the unfamiliar roads to drive, walk or ride bicycles. The grid-style road network in Beach Haven and the composition of its blocks are conducive for improving the town center. As Beach Haven is considered a fully developed municipality, with the exception of in-fill lots for redevelopment, stakeholders feel this is an ideal time to reevaluate all the Borough has to offer and improve on the existing features of this coastal seaside town.

VISION STATEMENT

The residents of Beach Haven strive to provide a unique and vibrant coastal community and vacation destination that focuses on an exceptional quality of life, a well planned and thriving town center, valued natural resources and recreational offerings that support all of its citizens and visitors.

STATEMENT OF OBJECTIVES

♦ Land Use

To create policies and strategies that implement the Borough's vision for historic preservation and revitalization to meet the demands of the current and future populations.

To promote and encourage creative revitalization of deteriorated and vacant properties within the Business District.

To support revitalization plans within the MC-Marine Commercial District that will enhance economic and pedestrian activity and encourage a longer tourism season. The value of public access to the waterfront and the importance of water-view eateries should be recognized

To protect and maintain the Historic District and continue to support the established preservation methods.

To establish an achievable and sustainable streetscape plan and design standards that are consistent with the influences of the Historic District.

To maintain the use of planning techniques and zoning regulations that preserve the integrity of the existing residential districts and preserve Beach Haven's overall character and small town charm.

◆ Housing Element

Objectives to be determined.

◆ Recreation and Open Space

The Borough should provide adequate sustainable parks, open space, and recreational facilities and land areas which offer access, quality improvements, programs and passive recreation opportunities to compliment the year-round and seasonal population's desire for achievement in personal health, entertainment and effective use of leisure time.

To maintain existing parkland and support the acquisition of additional parcels to be used for open space and recreation.

To encourage continued recreational opportunities through progressive park programs and appropriate events that will support the year-round population and attract interest from the seasonal population.

To encourage eco-tourism by capitalizing on the Little Egg Harbor Bay and potential "Water Trail" to attract kayakers, paddle boarders, etc.

To encourage the revitalization of the existing parks system while specifically enhancing the natural features of each and support the development of park specific improvement plans that are cost effective and achievable within a reasonable time period.

◆ Circulation

To maintain a community-wide circulation system that provides for the safe, convenient and efficient movement of people and goods within and through the Borough by means of transportation and land use planning.

To update existing mapping so as to specifically include Borough Rights-of-Way widths, parking locations including both lots and spaces as well as travel direction and biking lane.

To support and assist the Borough's efforts in maximizing the number of available off-street and on-street parking spaces.

Encourage continuation of walking and biking lanes where appropriate.

◆ Community Facilities

To maximize the utilization of the community facilities as community focal points to promote sound stewardship of taxpayer dollars and increased quality in amenities.

To maintain and support the acquisition of additional parcels to be used for community facilities.

To provide adequate municipal, educational and cultural facilities to meet the needs of Beach Haven residents and vacationers.

To utilize grant and loan programs to improve facilities provided the costs of applying for and administering the funding do not outweigh the benefits.

◆ Historic Preservation Element

To encourage awareness and protection of Beach Haven's cultural and historic heritage.

To respect the Beach Haven Historic District when making Land Use policies and decisions.

◆ Economic Element

Beach Haven should promote economic vitality while protecting and maintaining a coastal lifestyle and balancing business and residential development with environmental protection.

Refine the Borough's niche market of seasonal residents and travelers to also attract "open-collar workers" and their families as year-round residents.

Create a comprehensive and recognizable tourist destination offering a wide array of attractions for visitors.

◆ Utilities Element

To provide safe and dependable utilities to residential and commercial users.

Continue coordination with Local, State and Federal partners to combat storm surge and nuisance flooding.

Utilize Best Available Data and Technology when upgrading existing utility infrastructure including public water, sanitary sewer and stormwater facilities.

◆ Sustainability Element

To protect, maintain and conserve the natural resources of Beach Haven for continued environmental quality and the health of all residents.

To support initiatives or ordinances aimed at water resources at the residential and commercial level.

Promote local production of renewable energy.

To support and apply the best available data related to sea-level-rise and storm surge risks for substantial improvements, new developments and community facilities.

Promote mixed use developments to encourage residents to shop locally and reduce overall vehicle miles.

To research the use of electric vehicles for Borough use.

To encourage provisions of such environmentally friendly features such as rain gardens, porous pavement and natural landscapes with native planting as appropriate.

- ◆ Compatibility with Other Planning Initiatives and Documents

To participate in the Ocean County Master Plan Process.

To participate in the Ocean County All Hazard Mitigation Plan.

To participate in planning initiatives aimed at resiliency, mitigation and shoreline stability.

LAND USE PLAN ELEMENT

PART 1 ANALYSIS OF EXISTING CONDITIONS

Major Trends and Issues

Expansive and clean beaches coupled with the lights and laughter surrounding Fantasy Island Amusement Park plus the charm of the Historic District are just a sampling of the reasons why Beach Haven is coveted by homeowners, seasonal residents and vacationers. This small, yet vibrant, barrier island community on Long Beach Island provides many of the amenities needed for a full time year round resident such as a grade school, post office, restaurants and shops, and a food market but also caters to the vacationer by providing recreational spaces for swimming, playing and relaxing, access to the bay front for fishing, boating and birdwatching as well as a safe, family friendly community that is walkable and easy to navigate for visitors on foot. For these reasons, Beach Haven is increasingly sought after year after year by home purchasers who realize that property here is prime and to purchase in Beach Haven is not only purchasing a piece of real estate, but a coastal lifestyle. That said, this attractive setting has caused real estate prices to soar over the last decade and older houses are being demolished in favor of larger and more luxurious homes that can accommodate multiple families simultaneously. Also, larger tracts of property, especially those that are at least 100 FT in width, are being subdivided to allow for the construction of two homes. More often, the yard spaces are diminished to the least extent allowable and remaining side and rear yard property is covered with impervious pavers, decking and in-ground swimming pools which has caused an increase in the complaints of inadequate drainage.



The current demographics reflect that the composition of the population is changing and that many of the people purchasing these new larger homes are, in fact, second homeowners, who spend considerably less time in the Borough than that of permanent residents. Also, these homeowners seem not to be investors or interested in renting their homes on a weekly basis to vacationers thereby eliminating the opportunity for out of town vacationers to choose a home to stay in while in Beach Haven. Although hotels, motels and bed and breakfast establishments are plentiful here, many whom choose to stay at one of these venues often do so only for the short term. The shift to a more affluent second homeowner population as well as the reduction in weekly and seasonal vacation home renters are impacting the town's business district tremendously.

Second homeowners expect a well defined and curated town center with upscale shopping opportunities and quality restaurant establishments as well as an abundance of family friendly recreational activities when they are in Beach Haven, yet they do not typically spend as much time in the Borough during the off-peak months. Also, the current downtown merchant makeup includes numerous businesses that are oriented towards short-term vacationers and sell such items as beach supplies, souvenirs, and Long Beach Island paraphernalia so with the changing clientele, these businesses, in particular, are suffering.

Lastly, the longstanding summer season which historically lasted from Memorial Day Weekend in May through Labor Day Weekend in September and often ending with Chowderfest in mid- October has also seen a dynamic shift in length as many families with children are subject to longer school schedules and athletic sports commitments that often delay arrival for the season until the end of June and many children need to be back at their home school to fulfill these sports or club obligations by early or mid August. To be economically viable, merchants need a steady flow of patrons that includes not only vacationers but also full time residents utilizing their business instead of seeking the convenience of internet shopping or leaving the island altogether. In addition, recent years have spurred a dramatic increase in the commercial rents for available business along Bay Avenue. These high rents combined with the changing demographic and shorter shopping season for second homeowners and vacationers have left more than twenty storefronts vacant as of the fall of 2016. The Borough's stakeholders are cognizant of all these facts and are working diligently to incorporate strategies which are aimed at redefining the business district and encouraging businesses to launch in Beach Haven.

From an environmental viewpoint, the increase in large scale residential development, increasing sea level rise and recent historic storm events are directly affecting the Borough's shoreline and infrastructure. One of the most problematic issues is the increased occurrence of nuisance flooding throughout the town and also to the north through sections of Long Beach Township along Long Beach Boulevard. Presently in 2016, Beach Haven, on average, experiences a nuisance flooding event that affects Borough roadways and businesses one time every 2 months. This event may span several tide cycles and often inhibits the use of certain roads, especially the main corridor of Bay Avenue and the associated stores within the business district. Not only does the flood event discourage island residents and off island visitors from traveling to Beach Haven, it also can cause property damage to the low lying businesses. Its not uncommon to see a storefront with sandbags protecting its entry points during a rainstorm or a day with storm winds that has the ability to push the bay water eastward. The Borough has been working with its Municipal Engineers and also seeking guidance and recommendations from

the New Jersey Department of Environmental Protection and the United States Army Corps of Engineers for possible solutions to combat this problem. As many other coastal communities are facing similar issues with coastal flooding, Beach Haven understands the effect these events have on local commerce and therefore have authorized a Borough wide drainage study to address existing underdesigned or deteriorated stormwater infrastructure as well as to determine individualized drainage designs and projects that can be incorporated to help alleviate flood conditions in the most impacted areas.

As the shifting demographics and the changing landscape alter the face of Beach Haven, the community is invested in addressing the needs of all of its population including families, retirees, and visitors as well as the needs of permanent residents, second home owners and vacationers through this Comprehensive Master Plan for the future. By addressing current conditions, this plan will provide a blueprint for the town's leaders to use as the community continues to evolve and plans are made for the revitalization of areas such as the business corridor and the municipal parks.

PART 2 DEMOGRAPHICS

As a seasonal barrier island community, Beach Haven's population increases to an estimated 20,000 people in the summer months which includes second homeowners, seasonal and weekly tenants and those on day-trips. As the community continues to see more large scale homes being built, its anticipated that this estimate will increase as the homes can accommodate several families at once. Also, the retired population of Beach Haven or those with flexible work arrangements often leave the Borough for the winter months and reside in the states that offer a warmer climate like Florida. As a result, the town is seeing a decrease in the number of year round residents which directly affects the success of the local businesses. With Beach Haven being located approximately 11 miles and over 20 minutes from the business center on the mainland in Stafford Township, New Jersey, it is critical that the town maintain its local shops and services for residents as traveling to the mainland for daily needs could be burdensome.

Historically since 1930, the Borough's year round population increased decade after decade but since the 1990's, the recorded population has begun to decrease. This can likely be attributed to retirees claiming permanent residency out of state and the increase in the number of seasonal or second homeowners instead of year round residents.

Beach Haven Population Trends								
1930	1940	1950	1960	1970	1980	1990	2000	2010
715	746	1050	1041	1488	1744	1475	1278	1170

Source: Department of Labor, State of New Jersey, 2016

Since 2000, the median home values of single family residences have risen more than 250% from \$281,300 to \$725,000. This can be attributed to the housing boom and subsequent real estate market crash from 2005 through 2007 as well as to the demand increasing for prime real estate in this sought after community. Most often, second homeowners have the financial means to purchase these more expensive properties as they are employed in the larger metropolitan areas surrounding Philadelphia and New York City. The median household income reported in Beach Haven in 2000 was \$48,355 and increased 56% to \$75,917 by 2013 while the reported income in Ocean County increased 32% from \$46,443 to \$61,136 (2000 Census and 2009–2013 American Community Survey).

Local key Economic Indicators (2013, 2014)

	Beach Haven	Ocean County
Value of Specified Owner Occupied Housing Units (2013)	\$725,000	\$268,100
Labor Force—Percent of Population (2014)	44.80%	45.2%
Median Household Income (2013)	\$75,917	\$61,136

(2000 Census and 2009–2013 American Community Survey)

Many of the permanent residents of Beach Haven live on fixed retirement incomes or work locally on the barrier island in service or retail positions which further skews the figures. Since employment in the retail and service industries supports many families on the island, it's important to realize that affordable real estate is critical to keeping the workforce in town. The Borough understands this issue and is in the process of preparing a Housing Element and Action Plan to address affordable housing in the community. By incorporating affordable apartment units, especially as part of a mixed use building, it allows residents to live and work within walking distance of each other in this small town.

Local stakeholders are also taking notice to numerous new second homeowners using their properties on the weekends year round mainly Thursday through Sunday. This population is challenging to document but it is important to note that the Borough may be starting to see a new type of homeowner, a part time year round resident who would contribute to the economy of the community on a more regular basis.

An influx in a part time year round population further solidifies the demand for a refined town center area that includes upscale shopping, restaurants and amenities. In years past, various community organizations have implemented design ideas to establish a more polished and distinguished appearance especially along Bay Avenue but without these minimum standards or details being formally acknowledged by the Governing Body and made part of the Municipal Code, the concepts were abandoned by many leaving the Business District, especially with a main corridor that is not pedestrian friendly, difficult to navigate by vehicle and includes varying building facades, accents and site features that inhibit the feeling of a well-planned and harmonious town center.

PART 3 ESTABLISHED ZONING DISTRICTS

There are ten (10) established zoning districts of the Borough of Beach Haven.

The RA (Single Family Residential) District

The RNA (North Single Family Residential) District

The RSA (South Single Family Residential) District

The RB (Two Family Residential) District

The RC (Multi Family Residential) District

The BD (Business) District

The MC (Marine Commercial) District

The BBO (Bed and Breakfast Overlay) District

The RCB (Multi Family Bay) District

The HP (Historic Preservation) District

The AHO (Affordable Housing Overlay) District

RA –Single Family Residential District

The RA (Single Family Residential) District is the largest Zoning District in Beach Haven and comprised mostly of single family dwellings and each lot should meet the following:

There are several prohibited uses and buildings in the RA District. Uses not listed above, garage apartments, heliports, helistops and landing facilities for aircraft of all kinds are prohibited.

Area and yard requirements:

- Minimum width of fifty (50) feet.
- Minimum area of five thousand (5,000) square feet.
- Front yard setback of not less than fifteen (15) feet.
- Rear yard setback of not less than eight (8) feet.
- Two side yards, one not less than five (5) feet, with a combined side yard total of sixteen (16) feet.
- Accessory buildings must have a setback of not less than five (5) feet from the lot line.
- Minimum lot frontage of fifty (50) feet.

The majority of lots meet this minimum criteria and no changes to the current zoning is warranted.

RNA – North Single Family Residential District

The RNA (North Single Family Residential) District is developed with mostly single family dwellings, Also permitted are public playgrounds, conservation areas and parks, public museums and public libraries, provided that they are not operated for pecuniary profit, customary home occupations conducted only by members of the family residing in a dwelling unit, plus not more than one person not a resident of the dwelling unit, and conducted entirely within the dwelling of accessory building. Professional occupations are permitted provided that the use shall be conducted within the principal building.

Each lot in the RNA District shall meet the following area and yard requirements:

- Minimum width of forty (40) feet, except in the case of new subdivisions, the minimum lot width shall be fifty (50) feet.
- Minimum area of four thousand (4,000) square feet, except in the case of new subdivisions, the minimum lot area shall be five thousand (5,000) square feet.
- Front yard setback of not less than fifteen (15) feet.
- Rear yard setback of not less than eight (8) feet.
- Two side yards, one not less than five (5) feet, with a combined side yard total of sixteen (16) feet.
- Accessory buildings must have a setback of not less than five (5) feet from the lot line.
- Minimum lot frontage of fifty (50) feet.
- Minimum first floor area of seven hundred twenty (720) square feet, exclusive of porches.

The majority of lots meet this minimum criteria and no changes to the current Zoning is warranted.

RSA – South Single Family Residential District

The RSA (Single Family Residential) District allows only for single family residential dwellings with a minimum ground floor area of one thousand five hundred (1,500) square feet for a one (1) story dwelling and eight hundred sixteen (816) square feet for a two (2) story dwelling, exclusive of any porches.

Every lot in the RSA District shall meet the following area and yard requirements:

- Minimum width of one hundred (100) feet.
- Minimum area of fifteen thousand five hundred (15,500) square feet except those lots abutting or adjacent to Little Egg Harbor Bay or Liberty Thoroughfare, which shall have a minimum area of thirty thousand (30,000) square feet.
- Front yard setback of not less than twenty five (25) feet.
- Rear yard setback of not less than thirty five (35) feet, except that those lots abutting or adjacent to Little Egg Harbor Bay or Liberty Thoroughfare shall have a rear yard of not less than fifty (50) feet.

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- Two side yards, one not less than ten (10) feet, with a combined side yard total of twenty five (25) feet.
 - Accessory buildings must have a setback of not less than five (5) feet from the lot line.
 - Minimum lot frontage of fifty (50) feet.
 - All buildings, including accessory buildings, shall not cover more than thirty five (35) percent of the lot.

The majority of lots meet this minimum criteria and no changes to the current Zoning is warranted.

RB – Two Family Residential District

The RB (Two Family Residential) District allows for dwellings to be two (2) family within one (1) building, storage of materials and supplies used in the building trade industry by the occupant of the principal building, such as lumber, forms, masonry materials, etc., provided that the space allotted to such storage shall not exceed twenty five (25%) of the area of the lot, the materials and supplies are appropriately screened from the adjacent residences and from street view by means of a wooden, masonry or evergreen fence and the height of the stored materials and supplies shall not be exceed three (3) feet above the established grade.

The RB (Two Family Residential) District also permits single family dwellings, churches and other houses of worship, Public and parochial schools public playgrounds, conservation areas and parks, public museums and public libraries, customary home occupations and Professional occupations are permitted.

Every lot in the RB District shall meet the following area and yard requirements in the case of single family homes.

- Minimum width of forty (40) feet, except that in the case of new subdivisions, the minimum lot width shall be fifty (50) feet.
- Minimum area of four thousand (4,000) square feet, except that in the case of new subdivisions, the minimum width shall be fifty (50) feet.
- Each single family dwelling unit shall have a floor plan of at least seven hundred twenty (720) square feet of living space, exclusive of porches, except that in the case of new

subdivisions, the minimum ground floor area shall be eight hundred sixteen (816) square feet.

Every lot in the RB District shall meet the following area and yard requirements in the case of two family homes:

- Minimum lot width of sixty (60) feet.
- Minimum lot area of six thousand (6,000) square feet.
- Each dwelling unit of a two family dwelling shall have a floor plan of at least seven hundred twenty (720) square feet of living space, exclusive of porches, except that in the case of new subdivisions, the minimum ground floor area shall be eight hundred sixteen (816) square feet per dwelling unit.
- There shall be provided at least two (2) entrances to each dwelling unit which shall not be a shared entrance with another unit but which can be by or through a vestibule.

In both cases:

- Front yard setback of not less than fifteen (15) feet.
- Rear yard setback of not less than eight (8) feet.
- Two side yards, one not less than five (5) feet, with a combined side yard total of sixteen (16) feet.
- Accessory buildings must have a setback of not less than five (5) feet from the lot line.
- Minimum lot frontage of fifty (50) feet.
- All buildings, including accessory buildings, shall not cover more than thirty five (35) percent of the lot.

The majority of lots meet this minimum criteria and no changes to the current Zoning is warranted.

RC- Multi-Family Residential District

The RC (Multifamily Residential) District encompasses approximately nine (9) blocks east of Beach Avenue and allows for dwellings to be two (2) family within one (1) building, storage of materials and supplies used in the building trade industry by the occupant of the principal building, such as lumber, forms, masonry materials, etc., provided that the space allotted to such storage shall not exceed twenty five (25%) of the area of the lot, the materials and supplies are appropriately screened from the adjacent residences and from street view by means of a wooden, masonry or evergreen fence and the height of the stored materials

and supplies shall not be exceed three (3) feet above the established grade.

The RC (Multifamily Residential) District also permits single family dwellings, as well as churches, Public and parochial schools, public playgrounds, conservation areas and parks, public museums and public libraries, and customary home occupations. Professional occupations are permitted provided that the use shall be conducted within the principal building.

The RC (Multifamily Residential) District also permits motels and hotels (sleeping units without cooking facilities). Each motel and hotel unit shall have a minimum living space of 8.64 square feet per 100 square feet of land, provided that there shall not be more than three units per 10,000 square feet. One additional unit shall be permitted for each 3,333 square feet in addition to the basic 10,000 square feet. Efficiency units (sleeping units with cooking facilities) which must be contained within a hotel or motel site, wherein not more than 40% of the number of units on the site are efficiency units. each unit shall have a minimum living space of 10.80 square feet per 100 square feet of land, provided that there shall be not more than three (3) units per 10,000 square feet in addition to the basic 10,000 square feet.

The majority of lots meet this minimum criteria and no changes to the current Zoning is warranted.

Each lot in the RC District shall meet the following area and yard requirements in the case of single family homes:

- Minimum width of forty (40) feet, except that in the case of new subdivisions, the minimum lot width shall be fifty (50) feet.
- Minimum area of four thousand (4,000) square feet, except that in the case of new subdivisions, the minimum width shall be fifty (50) feet.
- Each single family dwelling unit shall have a floor plan of at least seven hundred twenty (720) square feet of living space, exclusive of porches, except that in the case of new subdivisions, the minimum ground floor area shall be eight hundred sixteen (816) square feet.
- Front yard setback of not less than fifteen (15) feet.
- Rear yard setback of not less than eight (8) feet.

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- Two side yards, one not less than five (5) feet, with a combined side yard total of sixteen (16) feet.
 - Accessory buildings must have a setback of not less than five (5) feet from the lot line.
 - Minimum lot frontage of fifty (50) feet.
 - All buildings, including accessory buildings, shall not cover more than thirty five (35) percent of the lot.

Each lot in the RC District shall meet the following area and yard requirements in the case of two family homes.

- Minimum lot width of sixty (60) feet.
- Minimum lot area of six thousand (6,000) square feet.
- Each dwelling unit of a two family dwelling shall have a floor plan of at least seven hundred twenty (720) square feet of living space, exclusive of porches, except that in the case of new subdivisions, the minimum ground floor area shall be eight hundred sixteen (816) square feet per dwelling unit.
- There shall be provided at least two (2) entrances to each dwelling unit which shall not be a shared entrance with another unit but which can be by or through a vestibule.
- Front yard setback of not less than fifteen (15) feet.
- Rear yard setback of not less than eight (8) feet.
- Two side yards, one not less than five (5) feet, with a combined side yard total of sixteen (16) feet.
- Accessory buildings must have a setback of not less than five (5) feet from the lot line.
- Minimum lot frontage of fifty (50) feet.
- All buildings, including accessory buildings, shall not cover more than thirty five (35) percent of the lot.

Each lot in the RC District shall meet the following area and yard requirements in the case of multifamily homes.

- Minimum side yard of five (5) feet each.
- Minimum rear yard of five (5) feet.
- Minimum front yard setback of fifteen (15) feet.
- Lot coverage shall not exceed 35% for motels/hotels and efficiencies, 30% for apartments and multifamily uses.

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- Parking areas must be provided within the property lines and will be permitted under buildings, provided that the sufficient fire protection is afforded to the spaces above. Parking shall not be provided closer than five (5) feet to any lot line unless curbing, a fence or some such similar device is provided to prevent intrusion or extension of vehicles onto another property.
 - Except for detached dwelling units, a screened planting of a dense evergreen material not less than four (4) feet in height shall be provided between all off-street parking areas and any lot line or street line except where a building intervenes or where the distance between such areas and the lot line or street line is greater than one hundred (100) feet.
 - Off street parking lots shall not be permitted to extend into a public right of way, except for driveways permitting ingress and egress for such parking lot.

BD- Business District

The BD (Business) District is located mainly along Bay Avenue and allows retail shopping facilities or service establishments which supply commodities or perform a service primarily for residents of the surrounding neighborhood, such as grocery stores, delicatessens, meat markets, drugstores, variety stores, antique stores and gift shops, furniture stores, bakery shops, restaurants, luncheonettes, barbershops, beauty shops, clothes cleaning and laundry pickup establishments, banks, real estate offices, business or professional offices. Gasoline stations and public garages may be permitted as conditional uses.

The BD (Business) District also permits mixed use buildings, single family dwellings, churches, Public and parochial schools, public playgrounds, conservation areas and parks, public museums and public libraries, customary home occupations and Professional occupations are permitted.

Each lot in the BD District shall meet the following area and yard requirements in the case of single family homes.

- Minimum width of forty (40) feet, except that in the case of new subdivisions, the minimum lot width shall be fifty (50) feet.
- Minimum area of four thousand (4,000) square feet, except that in the case of new subdivisions, the minimum width shall be fifty (50) feet.
- Each single family dwelling unit shall have a floor plan of at least seven hundred twenty (720) square feet of living space, exclusive of porches, except that in the case of new

subdivisions, the minimum ground floor area shall be eight hundred sixteen (816) square feet.

- Front yard setback of not less than fifteen (15) feet.
- Rear yard setback of not less than eight (8) feet.
- Two side yards, one not less than five (5) feet, with a combined side yard total of sixteen (16) feet.
- Accessory buildings must have a setback of not less than five (5) feet from the lot line.
- Minimum lot frontage of fifty (50) feet.
- All buildings, including accessory buildings, shall not cover more than thirty five (35) percent of the lot.

Each lot in the BD District shall meet the following area and yard requirements in the case of two family homes.

- Minimum lot width of sixty (60) feet.
- Minimum lot area of six thousand (6,000) square feet.
- Each dwelling unit of a two family dwelling shall have a floor plan of at least seven hundred twenty (720) square feet of living space, exclusive of porches, except that in the case of new subdivisions, the minimum ground floor area shall be eight hundred sixteen (816) square feet per dwelling unit.
- There shall be provided at least two (2) entrances to each dwelling unit which shall not be a shared entrance with another unit but which can be by or through a vestibule.
- Front yard setback of not less than fifteen (15) feet.
- Rear yard setback of not less than eight (8) feet.
- Two side yards, one not less than five (5) feet, with a combined side yard total of sixteen (16) feet.
- Accessory buildings must have a setback of not less than five (5) feet from the lot line.
- Minimum lot frontage of fifty (50) feet.
- All buildings, including accessory buildings, shall not cover more than thirty five (35) percent of the lot.

Each lot in the BD District shall meet the following area and yard requirements in the case of multifamily homes.

- Minimum side yard of five (5) feet each.

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- Minimum rear yard of five (5) feet.
 - Minimum front yard setback of fifteen (15) feet.
 - Lot coverage shall not exceed 35% for motels/hotels and efficiencies, 30% for apartments and multifamily uses.
 - Minimum lot area of three thousand six hundred (3,600) square feet.
 - Minimum lot frontage of forty (40) feet.
 - Minimum lot width of forty (40) feet.
 - Minimum side yard. In order to encourage an end product which provides parking, access and architectural continuity even where development occurs piecemeal and with diverse ownership, buildings may be attached and may be built to the interior side line(s) in order to be attached. Attached buildings may include two walls which must be keyed to each other. Where buildings are built to both side lot lines, the site plan shall be accompanied by appropriate documents and plans showing properly located loading space and trash receptacles with permitted access across adjacent properties.
 - Minimum rear yard shall be twenty five (25) feet.
 - Maximum principal building lot coverage of thirty five (35) percent.
 - Maximum accessory building lot coverage of twenty (20) percent.
 - Notwithstanding anything to the contrary stated above, the minimum lot area and minimum lot frontage in the BD District for those lots adjacent to or abutting Bay Avenue from Leeward Avenue to the southern boundary line of the Borough of Beach Haven shall be as follows.
 - ◆ Minimum lot area of four thousand (4,000) square feet.
 - ◆ Minimum lot frontage of forty (40) feet.
 - ◆ All other requirements shall be the same as set forth above.

BBO – Bed and Breakfast Overlay Zone

The BBO (Bed and Breakfast Overlay) District allows for Bed and Breakfast, which is an owner or manager occupied dwelling providing overnight accommodations and morning meals to transients for compensation. The BBO District encompasses portions of the BD (Business) District, the RC (Multifamily Residential) District, the RB (Two Family Residential) District and RNA (North Single Family Residential) Districts. The BBO District begins on the north side of Pearl Street from approximately one hundred (100) feet east of Long Beach Boulevard to Atlantic Avenue and travels north to the mid-block between Third and Fourth Streets. Those uses and buildings permitted in whatever district the bed and breakfast use is located in the overlay zone.

Bed and Breakfast establishments shall contain no more than twelve (12) guest rooms and shall provide meals only to overnight guests. The architectural style of the bed and breakfast shall be developed to maintain and foster the residential character of the neighborhood in which it is situated.

The minimum lot area for a bed and breakfast use in the BBO District shall be five thousand (5,000) square feet and shall have one parking space per bedroom, plus one space for the owner/manager. Each lot shall be a minimum of fifty (50) feet in width and frontage, with a front yard setback of no less than fifteen (15) feet. A rear yard setback of not less than eight (8) feet, while the two (2) side yards shall have a minimum of five (5) feet with a combined total of sixteen (16) feet. All buildings, including accessory buildings shall not cover more than thirty five (35) percent.

MC – Marine Commercial Zone

The Marine Commercial (MC) District allows for marine services such as dockage, boat landings, boat repairs and marine gasoline pumps on docks or bulkheads, boat sales and rentals, marine engine sales and repairs, marine supplies and equipment sales, bait and tackle sales, shipbuilding yards and ways, retail fish markets, wholesale establishments for packing and shipping fish, but not including any process involving heat or cooking. Storage of boats in conjunction with waterfront marine operations is permitted with conditions.

The MC District also allows single family dwellings, churches and other houses of worship, Public and parochial schools public playgrounds, conservation areas and parks, public museums and public libraries, customary home occupations, and Professional occupations are permitted. The MC District also permits dwellings to be two (2) family within one (1) building with conditions.

This area should be promoted as one of the only areas in the Borough that can offer commercial establishments with waterviews or water access. As this District continues to evolve, emphasis should be placed on creating a pedestrian friendly area that offers restaurants, shopping and housing all while allowing for public access to the tidal waters of the Bay. Future plans for development should include outdoor eateries, access to the bay for boats and kayaks/paddleboards, apartments within mixed use buildings or stand alone residential units that maintain public access, public walkways and scenic viewing areas as well as maintenance of marina areas. These plans could expand into neighboring adjacent Zoning Districts where suitable.



Each lot in the MC District shall meet contain a minimum width of fifty (50) feet, a minimum area of six thousand (6,000) square feet. Lots within the MC District shall have a front yard setback of not less than fifteen (15) feet, a rear yard setback of not less than eight (8) feet and two side yards, one not less than five (5) feet, with a combined side yard total of sixteen (16) feet. All accessory buildings must have a setback of not less than five (5) feet from the lot line. A minimum lot frontage of fifty (50) feet, except in the case of where a marina is operated a minimum lot frontage of one hundred (100) feet is required. All buildings, including accessory buildings, shall not cover more than thirty five (35) percent of the lot and every new single family building shall have a minimum first floor area of 816 square feet, exclusive of porches.

Parking

The MC (Marine Commercial) District requires one off street parking space for every three (3) boat slips.

Every lot in the MC District shall meet the following area and yard requirements in the case of single family homes.

- Minimum width of forty (40) feet, except that in the case of new subdivisions, the minimum lot width shall be fifty (50) feet.
- Minimum area of four thousand (4,000) square feet, except that in the case of new subdivisions, the minimum width shall be fifty (50) feet.
- Each single family dwelling unit shall have a floor plan of at least seven hundred twenty (720) square feet of living space, exclusive of porches, except that in the case of new subdivisions, the minimum ground floor area shall be eight hundred sixteen (816) square feet.

RCB – Multifamily/Bay District

The RCB (Multi Family Bay) District allows for single family dwellings, churches and other houses of worship, Public and parochial schools, public playgrounds, conservation areas and parks, public museums and public libraries, customary home occupations and Professional occupations are permitted.

The RCB District also allows for dwellings to be two (2) family within one (1) building.

Historic Preservation Zone

The Historic Preservation District has been established within the Borough of Beach Haven. The HP District encompasses portions of the RA (Single Family Residential) District, the BD (Business) District, the RC (Multifamily Residential) District, the RB (Two Family Residential) District and RNA (North Single Family Residential) Districts. The HP District begins on Chatsworth Avenue from approximately one hundred (100) feet east of Long Beach Boulevard to Atlantic Avenue and travels north to Fifth Street, also encompassing the Bed and Breakfast Overlay (BBO) District. All principal uses and buildings and accessory buildings permitted in the RA (Single Family) District pursuant to the height limits and yard requirements required for such buildings.

Bed and Breakfast establishments are permitted shall apply to those properties located within the Bed and Breakfast Overlay District. All other properties located within the Historic Preservation District shall continue to be required to comply with the restrictions and uses for properties within that particular district.

Affordable Housing Overlay District

As a means to address the need for affordable housing in the community, the Borough recently adopted, through Ordinance 2017-11C, an amendment to the zoning ordinance establishing an Affordable Housing Overlay Zoning District over specific areas of the Borough. These specific areas which consist mainly in the Business District are portions of the Borough that can realistically accommodate affordable housing.

The affordable housing overlay zone will regulate said developments through bulk and design standards. However, the Borough's underlying zoning will still be in effect. The overall purpose is to permit affordable housing developments in the Borough on tax lots that have existing frontage on North Bay Avenue or are deemed suitable for affordable housing. Given the built-out nature of the Borough, an effective affordable housing overlay zone will produce affordable units when suitable opportunities become available through redevelopment or other planning mechanisms. This will allow affordable housing to be approved under local ordinance and regulations without detriment to the existing Borough zoning plan and ordinance. Additionally, the overlay zone will preclude the need for a rezoning on suitable and developable properties along the North Bay Avenue corridor. This creates a realistic opportunity to provide for the development of affordable housing in accordance with the Fair Housing Act (N.J.S.A. 52-27D-301), N.J.A.C. 5:93, and the Housing Plan Element and Fair Share Plan prepared by the Borough to address its affordable housing obligation.

The Affordable Housing Overlay Zone is comprised of the following parcels.

Affordable Housing Overlay Zone Tax Lots				
BLOCK	LOT	CURRENT USE	ADDRESS	OWNER NAME
14	26	15C	2416 SOUTH BAY AVENUE	OCEAN COUNTY SEWRAGE AUTHORITY
14	1	2	2408 SOUTH BAY AVENUE	PUERARI, JOSEPH & LORRAINE
14	2	2	2404 SOUTH BAY AVENUE	MCLAUGHLIN, THOMAS R. & KATHLEEN M.
15	1	2	2318 SOUTH BAY AVENUE	LBI DOAMM LLC
15	3	2	2312 SOUTH BAY AVENUE	WILLIAMS, RICHARD P. & DONNA M.
15	4	4A	2306 SOUTH BAY AVENUE	TROMM, BEVERLY
15	5	4A	2300 SOUTH BAY AVENUE	SHAPIRO, MATTHEW L. & HAILEY A. LLC
16	1	4A	301 MERIVALE AVENUE	NUNZIATO, PAUL & KATHLEEN
16	2	2	2212 SOUTH BAY AVENUE	WALTER, NEILL & CHERYLE A.
16	3	2	2208 SOUTH BAY AVENUE	EISENBERG, ALAN & HANNAH
16	4	2	2204 SOUTH BAY AVENUE	BURKE, ROBERT & NICOLE
16	5	4A	2200 SOUTH BAY AVENUE	KELLEY, A. CURTIS

Affordable Housing Overlay Zone Tax Lots

BLOCK	LOT	CURRENT USE	ADDRESS	OWNER NAME
18	18	2	236 NELSON AVENUE	MASSIMI, R. GINO & PATRICIA
18	1.01	1	NELSON AVENUE	NELSON-BAY CONDOMINIUM
18	1.01	2	232 NELSON AVENUE UNIT 1	O'MALLEY, GERAR & BRIDGET
18	1.01	2	232 NELSON AVENUE UNIT 2	MAYERS, JOSEPH & GAIL
18	21	15C	BAY AVENUE	BOROUGH OF BEACH HAVEN
19	4	2	2301 SOUTH BAY AVENUE	JUELKE, CHARLES V. & BARBARA
19	5	1	232 MERIVALE AVENUE	KROLL, MARITA E. ET AL
19	3	N/A	N/A	N/A
19	2	1	SOUTH BAY AVENUE	2305 SOUTH BAY AVENUE CONOMINI-UMS
19	2	2	2305 SOUTH BAY AVENUE U-A	CAPOLONGO, ANTHONY & JAYNE
19	2	2	2305 SOUTH BAY AVENUE U-B	SOLOMON, LAWRENCE F. & BARRIE C.
19	1	2	2309 SOUTH BAY AVENUE	PERROTTA, THOMAS J. & MARIA
20	4	2	2201 SOUTH BAY AVENUE	KOSOSKY, CHARLES & ADELE
20	3	4A	2205 SOUTH BAY AVENUE	NETTA, JOANN
20	2	1	SOUTH BAY AVENUE	2209 SOUTH BAY AVENUE CONDOMINI-UMS
20	2	2	2209 SOUTH BAY AVENUE U-1	MARINELLI, HAROLD S. & BEVERLY A.
20	2	2	2209 SOUTH BAY AVENUE U-2	ROBERTS, DANIEL & LYNN MARIE
20	1	2	233 MERIVALE AVENUE	CASCUATI, RICHARD R. & PATRICIA A.
116	14	2	322 CORAL STREET	GIARDELLA, FRANK & KATHLEEN
116	17	1, 2	323 Pearl Street	TUORTO, GREGORY & FRANK (U-A), GLIDER, KAREN & MARK (U-B)
116	2	4A	304 S BAY AVE	BERGE, GARY D.
116	16	2	325 PEARL STREET	GCD PARTNERS
116	11	2	329 PEARL ST UNIT B	MITCHELL, BEVERLY B
116	1	2	306 S BAY AVE	HILLMAN, PETER
116	15	2	327 PEARL STREET	CADMUS, JAMES M & SUSANN E
116	12	2	314 CORAL STREET	CLINTON, EDWARD
116	13	2	318 CORAL STREET	KOHLMEIR, EDWARD JR
116	8	2	309 DELAWARE AVE	CREELY, SCOTT A
116	3	2	310 CORAL STREET	BARBARO, JAMES & ELIZABETH
116	11	1, 2	329 PEARL STREET (U-A & B)	KEGLER, SCOTT W & LAUREN M (U-A), MITCHELL, BEVERLY B. (U-B)
116	4	2	312 CORAL STREET	SNYDER, ROBERT & JOAN
116	9	2	335 PEARL STREET	CREELY, SCOTT A
116	10	2	333 PEARL STREET	CRONIN, ROBERT H TRUST
116	6.01	2	328 CORAL STREET	SLOWE, CARRIE ZIPF
116	6.02	4A	330 CORAL STREET	DOUTHITT, KEVIN S & SUSAN I
116	7	2	301 S DELAWARE AVE	DITMARS, JAMES & MARY ANN O
116	11	2	329 PEARL ST UNIT A	KEGLER, SCOTT W & LAUREN M
119	3	1	BAY AVE	KREWSON, MARY LOU
119	2	4A	311 S BAY AVE	KREWSON, MARY LOU
119	4	2	224 CORAL STREET	CONNOR, TIMOTHY C II & TIMOTHY C
119	18	2	226 CORAL STREET	GREENHALGH, RICHARD B & PAULINE E
119	1	4A	229 PEARL STREET	REED JOHNSON LLC
119	17	2	225 PEARL STREET	REDGATE, KEVIN S & SUSANA E
132	1	4A	220 S BAY AVE	TROILO, CAMERON C & OLGA J
132	8	2	200 S BAY AVE	MAHONEY, CLEMENT J III & KATHLEEN T
132	11.02	2	209 S DELAWARE AVE	WENGER, RICHARD & ANNE MARIE ETAL
132	4	2	208 S BAY AVE	SCHULER, KEVIN J
132	11.01	2	207 S DELAWARE AVE	FAIRDEL LLC

Affordable Housing Overlay Zone Tax Lots

BLOCK	LOT	CURRENT USE	ADDRESS	OWNER NAME
132	9	15C	330 AMBER ST.	BOROUGH OF BEACH HAVEN
132	5	2	206 S BAY AVE	GRAPA, CRISTINA
132	6	2	204 S BAY AVE	CARROLL, MATHEW T.
132	2.01	4A	216 S BAY AVE	DONOVAN, TIM & TRACY
132	2.02	2	212 S BAY AVE	LEE, MARK & ELISE
132	3	2	210 S BAY AVENUE	RIORDAN, EDWARD
132	7	2	202 S BAY AVE	LOPEZ, ANGEL R
132	10	2	350 AMBER STREET	MARTIN, WILLIAM E
133	2	15C	300 ENGLSIDE AVENUE	BOROUGH OF BEACH HAVEN
133	1	15F	100 S BAY AVE	VOLUNTEER FIRE CO NO 1
134	5	4A	220 AMBER STREET	NEW JERSEY BELL (TAXES)
134	2	4A	211 S BAY AVE	RUOFF, RONALD & LAUNA
134	6	N/A	N/A	N/A
134	1	4A	213-15 S BAY AVE	RUOFF, RONALD & LAUNA
134	15	N/A	N/A	N/A
134	4	2	224 AMBER STREET	EMIG, ERIC W & DIANA M
134	3	4A	201 S BAY AVE	LENHARD INC
135	2	4A	AMBER STREET	WARK, KEVIN & CINDY
135	16	2	219 AMBER STREET	SMITH, JAMES E, JEAN & THOMAS
135	1	4A	115 S BAY AVE	WARK, KEVIN & CINDY
135	4	2	226 ENGLSIDE AVE	MADDOCK, JANICE L
135	5	2	224 ENGLSIDE AVE	NESMITH, RUSSELL C
135	3	4A	101 S BAY AVE	MADDOCK, JANICE L
135	6	2	216 ENGLSIDE AVE	POUNDS, R & J & GENSCH, W & J
149	10	2	309 (U-D), 311 (U-C), 313 (U-B), 315 (U-A) ENGLSIDE AVENUE	CARRERAS, THOMAS & BARBARA (309), SCALZO, SAMUEL II & DONNA, MARIE (311), MILLER, RAYMOND C. & BONNIE S. (313), & JEROLAMON, BRIAN S. & VOLPE, SALLY (315) (BAY & ENGLSIDE TOWN- HOMES)
149	4	N/A	N/A	N/A
149	6.09	2	333 ENGLSIDE AVE	ZINK, CORT S & JANEANN
149	6.02	15C	PARKING LOT	BEACH HAVEN BOROUGH
149	6.08	1, 2	329 & 331 ENGLSIDE AVE	CARROLL, JOHN E. & LORRAINE R. (329) & RUSSO, PHILLIP, HICKEY, & SHAWN T (331)
149	6.03	2	312 CENTRE STREET	GRAHAM, MELISSA
149	2	4A	14 S BAY AVE	BEACH HAVEN PROPERTIES LLC
149	6.04	2	314 CENTRE STREET	KEEGAN, KENNETH D. & DEIRDERE M
149	6.09	1, 2	333 & 335 ENGLSIDE AVE	ZINK, CORT S & JANEANN (333) & GOTLIB, SHAWN & AIMEE
149	6.03	1, 2	310 & 312 CENTRE STREET	BRESLIN, KEVIN (310) & GRAHAM, MELIS- SA (312)
149	6.04	2	316 CENTRE STREET	FELLER, ROBERT & AIDA
149	6.05	2	320 CENTRE STREET	BEACH DEVELOPMENT LLC
149	6.04	1, 2	314 & 316 CENTRE STREET	KEEGAN, KENNETH D. & DEIRDERE M (314) & FELLER, ROBERT & AIDA (316)
149	6.05	2	318 CENTRE STREET	YEAGER, A DAVID
149	6.06	2	324 CENTRE STREET	COOPER, MERYL
149	6.05	1, 2	318 & 320 CENTRE STREET	RUSSO, MATTHEW C & LARA L (318) & BEACH DEVELPOMENT LLC (320)
149	6.09	2	335 ENGLSIDE AVE	GOTLIB, SHAWN & AIMEE

Affordable Housing Overlay Zone Tax Lots

BLOCK	LOT	CURRENT USE	ADDRESS	OWNER NAME
149	6.03	2	310 CENTRE STREET	BRESLIN, KEVIN
149	11	N/A	N/A	N/A
149	3	N/A	N/A	N/A
149	6.07	2	325 ENGLSIDE AVE	KORNAFEL, RONALD AND AMY
149	9	15F	321 ENGLSIDE AVE	BEACH HAVEN FIRST AID SQUAD
149	6.07	2	327 ENGLSIDE AVE	BLANCHARD, BARRY
149	5	4A	2-10 SOUTH BAY AVE	2-10 SOUTH BAY LTD
149	6.08	2	329 ENGLSIDE AVE	CARROLL, JOHN E & LORRAINE R
149	6.08	2	331 ENGLSIDE AVE	HEILER, ROBERT
149	6.07	1, 2	325 & 327 ENGLSIDE AVE	KORNAFEL, RONALD AND AMY (325) & BLANCHARD, BARRY (327)
149	6.01	4A	308 CENTRE STREET	2 SOUTH BAY
149	6.06	2	322 CENTRE STREET	PETERSEN, GLENN A & KELLIE A
149	6.06	1, 2	322 & 324 CENTRE STREET	GRAHAM, MELISA A (322) & COOPER, MERYL (324)
149	.1	4A	20 S BAY AVE	ROBINSON, JULIUS ESTATE
150	7.01	15C	CENTRE TO DOCK ROAD	BEACH HAVEN BOROUGH
150	7.04	1, 2	321 & 323 CENTRE STREET	KOSTINA S, DAVID & LORRAINE (321) & CENTRE STREET ASSOCIATES LLC (323)
150	1	4A	100 N BAY AVE	PRAM LLC
150	9	N/A	N/A	N/A
150	5	2	304 DOCK ROAD	MILKOVICH, DAVID L
150	6	4A	309 CENTRE STREET	BAXTER, BARRY P
150	4	4A	110 N BAY AVE	MILKOVICH, DAVID L
150	3	4A	108 N BAY AVE	MILKOVICH, DAVID L
150	7.02	1, 2	313 & 315 CENTRE STREET	LAPID, REYNALDO & MARIA (313 & 315)
150	7.03	1, 2	317 & 319 CENTRE STREET	ABBOOD, JAMES & DEBORAH (317) & BOSSI, EDGAR D (319)
150	2	4A	106 N BAY AVE	STEWART, THOMAS J
150	10	N/A	N/A	N/A
151	1.01	4A	120 N BAY AVE	OCEANSIDE2010 LLC
151	2.02	2	306 SECOND ST	WATTS, RICHARD
151	4	2	324 SECOND ST	TALLENT, SUSAN L ETAL
151	3	2	322 SECOND ST	BRAICO, STEPHANIE
151	2.01	4C	302 SECOND ST	MASSA ORGANIZATION LLC
151	8	4A	317 DOCK ROAD	WOODS, THOMAS
151	9	4A	311 DOCK ROAD	GARABO, LOUIS F & PARLYN C
151	10	2	325 DOCK ROAD	WILLIAMS, DONALD E & SHARON K
151	1.02	2	118 NORTH BAY AVE (U-1)	DAUBENSPECK, SAMUEL F & LEAH H (U-1)
151	1.02	2	118 NORTH BAY AVE (U-2)	KNIGHT, W & F (U-2)
151	1.02	2	118 NORTH BAY AVE (U-3)	REDMAN, LAURA K (U-3)
151	1.02	2	118 NORTH BAY AVE (U-4)	SECCI, FILIPPO & MATILDA (U-4)
151	1.02	2	118 NORTH BAY AVE (U-1)	COOK, LAURA (U-5)
151	1.02	4A	118 NORTH BAY AVE (U-1)	FRANZONI, JOHN D
152	3	4A	208 N BAY AVE	PELER, MICHAEL & DOBOZINSKI, K
152	2	1	200 BAY AVE	CONNECTIV REAL ESTATE DEPT
152	1	4A	315 SECOND ST	CONNECTIV REAL ESTATE DEPT
152	5	N/A	N/A	N/A
152	4	4A	210 N BAY AVE	GAMMAL-LEVY LLC
153	16	N/A	N/A	N/A
153	9	4A	206 CENTRE STREET	JOSEPH P HAYES THEATRE INC

Affordable Housing Overlay Zone Tax Lots				
BLOCK	LOT	CURRENT USE	ADDRESS	OWNER NAME
153	17	N/A	N/A	N/A
153	13	N/A	N/A	N/A
153	1	4A	9 S BAY AVE	PATRON MURPHY INC
153	6	4A	218 CENTRE STREET	DAMIANI, PATRICK & MARGARET L
153	2.02	4A	3 S BAY AVE	BAY THIRD PROPERTIES INC
153	15	N/A	N/A	N/A
153	10	N/A	N/A	N/A
153	3	4A	1 S BAY AVE	KELLY, TOM & SAMANTHA C/O KAPLERS
153	12	N/A	N/A	N/A
153	11	N/A	N/A	N/A
153	14	N/A	N/A	N/A
153	18	N/A	N/A	N/A
153	8	4A	210 CENTRE STREET	PETERSON, MARGARET T
153	7	4A	212 CENTRE STREET	XEDDINGS LBI LLC
153	5	4A	220 CENTRE STREET	FARIAS, VINCENT & MICHELE
153	4	N/A	N/A	N/A
153	2.01	N/A	N/A	N/A
154	12	2	207 CENTRE STREET	BEACH HAVEN CENTER LLC
154	10	15D	BEACH AVE	KYNETT UNITED METHODIST CHURCH
154	1	4A	101-05 N BAY AVE	BUCKALEWS INC
154	3	4A	117 N BAY AVE	ROBINSON, JULIUS & CLARA A
154	14	2	211 CENTRE STREET	MARTIN, DAVID M
154	13	4A	209 CENTRE STREET	BEACH HAVEN MEMORIES LLC
154	15	4A	215 CENTRE STREET	MAGNOLIA HOUSE LLC
154	2	4A	115 N BAY AVE	RF HOLDINGS LLC
154	4.01	N/A	N/A	N/A
155	5	4A	213-15 N BAY AVE	ZURBACH, KATHLEEN & JOHN E JR
155	7	2	226 THIRD ST	IMPORTICO, WILLIAM J
155	6	4A	219 N BAY AVE	TURTON REALTY ASSOC LLC
155	3	N/A	N/A	N/A
155	4	4A	211 N BAY AVE	MORIZZO, LOUIS & CAROLE
155	21	2	223 SECOND ST	DANIEL, KATHLEEN T
155	2	4A	207 N BAY AVE	COHEN, MARK A & CRAIG C
155	1	4A	201-03 N BAY AVE	M COHEN & R COHEN PARTNERSHIP
165.02	1	2	310 N BAY AVE	COLLINS, JEANETTE
165.02	3	4A	305 THIRD ST	GORE, BONNIE J
165.02	2	4A	306 N BAY AVE	MC CAFFREY, SEAN V
166.02	1	4A	414 N. BAY AVE.	PEAKE GROUP LTDC/O K LEROUX
166.02	2	4A	412 N BAY AVE	PEAKE GROUP LTDC/O K LEROUX
166.02	3	4A	400 N BAY AVE	DAVIS, KIRK & KRISTY
167	1	4A	510 N BAY AVE	BEACH HAVEN PROJECT NO X LLC
167	4	4A	500 N BAY AVE	9 LIVES GROUP LLC
167	2	N/A	N/A	N/A
167	3	N/A	N/A	N/A
168.02	4	N/A	N/A	N/A
168.02	1	4A	610 N BAY AVE	BUTERICK, S P & WERTH, E B ETAL
168.02	5	4A	600 N BAY AVE	KOSEFF LLC
168.02	3	N/A	N/A	N/A
168.02	2	N/A	N/A	N/A
169	2	N/A	N/A	N/A

Affordable Housing Overlay Zone Tax Lots

BLOCK	LOT	CURRENT USE	ADDRESS	OWNER NAME
169	4	1	226 FOURTH ST	SCHWING, FRED G JR
169	3	2	229 THIRD ST	SAVARESE, PHILIP J
169	1	4A	305 N BAY AVE	SCHWING, FRED G JR
169	17	2	227 THIRD ST	CACACE, TIMOTHY & CARMA
170	1	4A	401 N BAY AVE	FLEET BANK CC#98354
170	3	2	224 FIFTH ST	BUZZELLI, PASQUALE & LANGUILLI, R
170	2	4A	415 N BAY AVE	BRENNAN, JOHN P%GETTY
171	1	4A	501-505 N BAY AVE	GREYHOUND PROPERITIES LLC
171	15	2	225 FIFTH ST	HOFFMAN, R DOUGLAS & BRENDA
171	2	4A	511 N BAY AVE	HAMILTON, JAMES & JUDITH S
171	4	2	224 SIXTH ST	ZELESNIK, JOHN F & MARIAN E
171	3	4A	515 N BAY AVE	CUNNINGHAM, R SCOTT & KAREN L
172	2	4A	615 N BAY AVE	BANKSTON PROPERTY MANAGEMENT LLC
172	1	N/A	N/A	N/A
172	17	2	226 SEVENTH ST	DAVIS, RON & SHARON
185	1	4A	320 EIGHTH ST	BEACH HAVEN FANTASY LLC
185	21	4A	700 N BAY AVE	FLORIMONT, EDMUND J & PHILLIPS G
186	8	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	11	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	6	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	9	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	4	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	3	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	10	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	7	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	13	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	16	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	12	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	2	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	14	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	17	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	19	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	15	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	18	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	1	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	5	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
186	20	4A	806 N BAY AVE	DMM ASSOCIATES C/O C MESANKO
187.01	9	15C	325 TAYLOR AVE.	BOROUGH OF BEACH HAVEN
187.02	1	4A	820 N BAY AVE	BAY VILLAGE, A NJ CORP
187.02	10	4A	309-319 TAYLOR AVE	BAY VILLAGE, A NJ CORP
187.02	3	4A	830 N BAY AVE	BAY VILLAGE INC
187.02	2	N/A	N/A	N/A
187.02	11	N/A	N/A	N/A
189	1	15A	710 N BEACH AVE	BOARD OF ED OF BEACH HAVEN
190	1	4A	811 N BAY AVE	COL CO LLC
190	17	2	231 EIGHTH ST	DURKIN, JAMES J
190	2.02	4A	805 N BAY AVE	805 NORTH BAY LLC
190	2.01	4A	801 N BAY AVE	LOWNSBURY, JEHU H III
190	3	2	228 TAYLOR AVE	BRADDOCK, TIMOTHY P & BEVERLY J
191	5.01	4A	823 N BAY AVE	FARIAS, VINCENT R

Affordable Housing Overlay Zone Tax Lots				
BLOCK	LOT	CURRENT USE	ADDRESS	OWNER NAME
191	4	4A	827 N BAY AVE	LYONS, JOSEPH F & JANICE M
191	1	4A	835 N BAY AVE	DABA COMPANY LLC
202	7	N/A	N/A	N/A
202	3	N/A	N/A	N/A
202	2	N/A	N/A	N/A
202	8	N/A	N/A	N/A
202	1	4A	301-401 NINTH ST	SCHOONERS WHARF LLC
202	10	N/A	N/A	N/A
202	4	N/A	N/A	N/A
204	1	N/A	N/A	N/A
204	2	4A	1106 N BAY AVE	PANZONES BEACH HAVEN LLC
204	1.01	4A	1002 NORTH BAY AVENUE	SCOFIELD, WOODWARD & PHOENIX LLC
204	3	N/A	N/A	N/A
204	4	N/A	N/A	N/A
204	5	2	1114 N BAY AVE	PANZONE, FRANK V JR & JOYCE A
205	1	4A	1200 N BAY AVE	BEACH HAVEN AUTO PARTS
205	2	1	305 TWELFTH ST	BEACH HAVEN AUTO PARTS
206	4	4A	901 N BAY AVE	901 BAY LLC
206	1	4A	907-909 N BAY AVE	KELLEY, A CURTIS
206	3	4A	905 N BAY AVE	ANASTASI REALTY LLC
206	2	N/A	N/A	N/A
207	4	N/A	N/A	N/A
207	1	4A	1001 N BAY AVE	SOUTHLAND CORP 7-11 26514
207	2	4A	1001 N BAY AVE	SOUTHLAND CORP 7-11 26514
207	3	4A	1001 N BAY AVE	SOUTHLAND CORP 7-11 26515
208	1	N/A	N/A	N/A
208	2	2	1111 N BAY AVE	SULLIVAN, DANIEL J & DONNA J
208	18	N/A	N/A	N/A
208	17	1, 2	229 (U-A, B, C, D) ELEVENTH STREET	THOMAS S, PATRICE A (U-A), LA SORDA K, & MCNAMARA C. (U-B), KELLY, MAUREN & COLIN (U-C), & SCHUBERT, DORIS & GLENN C (U-D)
209	1	1	1201 BAY AVE	STACK PROPERTIES
209	2.02	1	1211 N BAY AVE	STACK PROPERTIES LLC
209	2.01	2	1207 N BAY AVE	STACK PROPERTIES LLC

PART 4—EMERGING TRENDS IN LAND USE

Unmanned Aerial Vehicle (UAV) or Drone

With the influx of navigation technology, the Borough should be cognizant of the usage of unmanned aerial vehicles (UAV), commonly referred to as drones and their impacts to the privacy and safety of residents and vacationers. It is understood that drone flying is a hobby for many people and also assists many professionals in their line of work such as real estate agents, news media outlets or photographers. However, the lack of regulation of this UAV's at the Borough level may need to be considered as the use of the UAV with the appropriate agencies, including the Borough, should be required and limitations on flying should be discussed.

Online Transportation Network Companies

Such entities as Uber Technologies, Inc., and Lyft are transportation network companies that connects passengers with drivers who provide transportation in the driver's non-commercial vehicle through websites and mobile apps. Ride-sourcing is becoming more frequent and is used by an expansive demographic including older residents who see a convenience in not having to drive and park. With that in mind, the Borough may want to consider how these services impact local retail stores and restaurants and specifically if their use alleviates the need for a set number of parking spaces. Loading and unloading zones for these vehicles may need to be considered if this ride-sourcing trend continues.

Internet Based Vacation Rental Marketplaces

Internet rental housing sites such as HomeAway, Inc. and Airbnb allow residents to rent their homes as short term lodging which is vital to support the tourism economy of the Borough. As these marketplaces expand, it has been noted that many rentals on the site are merely for one (1) night which, in some instances, has negatively affected the surrounding neighborhoods with daily turnover traffic, new renters each day and at times loud noises due to parties or events. To date, this does not appear to be an issue in Beach Haven but regulation of excessively short term rentals may need to be required.

PART 4 COMMUNITY INVOLVEMENT

The local community has fully supported the development of this Master Plan as a roadmap to the future success of Beach Haven. Numerous meetings were held over the course of approximately 18 months with the Master Plan Committee which was comprised of business owners, residents and government officials to determine practicable and achievable improvements that can be made within the community. The recommendations provided within this Master Plan are thought to be realistic and viable for the long term continued revitalization of the community. The participants in the creation of this comprehensive plan understand the uniqueness of Beach Haven and most have witnessed the growth and regression of its neighborhoods.

Inspiration for this local land use renewal is powered by the existing historical design elements throughout the town, especially poignant in the Historic District, and combined with present day engineering standard and land planning philosophies to achieve a livable, walkable and sustainable coastal community. One in which is bustling during the summer months and successfully supports the needs of the seasonal population but is also a sought after destination in the off season and permanent home to residents that demand a multi-faceted stable community to live.

PART 5 LAND USE RECCOMENDATIONS

Borough-Wide

- The Borough should consider reviewing its current Zoning Ordinances and simplifying the language of each where deemed appropriate.
- In recent years, the Borough has experienced issues and Ordinance violations pertaining to improper use of the Borough's right-of-way adjacent to private property. In particular, trash corrals are to be located within the property lines and not placed in the Borough's right-of-way, which includes the concrete curb and sidewalk area. The location of trash corrals immediately adjacent to the curb, though likely most convenient for residents, creates an unsightly view along the street. Since Ordinances are already in place, it is suggested that educational outreach be conducted either in the form of informational mailings or during community events to advise the public of the proper location for trash corrals and stress their relocation. The Borough may also consider the possibility of requiring that trash corrals be located out of any yard area, by definition.
- Due to the increased construction in the Borough and the increase in the amount of contractors coming into the community, it is important that construction codes, particularly life-safety issues, and land use ordinances are respected. Its recommended that the existing code enforcement staff work closely with the police department to ensure that stop-work orders are respected and that sites are meeting the minimum site maintenance requirements.

Business District

- Floodproofing of commercial buildings should be encouraged and the method should align with the minimum standards set forth by the Federal Emergency Management Agency (FEMA) for base flood elevations.
- The Business Zone should permit three-story mixed use buildings that are comprised of both business/retail and residential apartment units. Final building height should be reviewed and approved by the Land Use Board based on the architectural design of the structure.
- Monetary or Development Incentives should be offered to investors who pursue inclusionary zoning as part of a redevelopment project. An allowable density of 18 residential units per acre could be permitted which would allow for more housing options in the town center and also be financially practical for the developer.
- Workforce housing for essential community workers like police officers, firemen, teachers, nurses, medical personnel as well as hotel and restaurant staff should be prioritized
- Prioritize Residential on-site parking when new homes or developments are established but decrease the required number of spaces for apartments from two (2) spaces to one (1) space.
- To refine the town center area, a new achievable and sustainable Streetscape Plan should be adopted and be incorporated as a general requirement for all site plans within the Business District. (See Part 8 – Comprehensive Streetscape Plan)
- Establish minimum design standards for the exterior facades of buildings within the Business District which should be consistent with the influences of the Historic District.
- An Architectural Review Committee should be established and comprised of members with an interest or background in historical design, architecture or land planning. The committee should be tasked to review all design proposals within the Business District and should consider the proposed streetscape and the predominant exterior architecture of the buildings to ensure that the designs and site fixtures are consistent and harmonious

with the proposed Comprehensive Streetscape Plan of Beach Haven and the predominant architecture of the design area.

Marine Commercial District

As the bayfront areas of the Borough have been arguably underutilized in years past, it is important to provide the public with both physical and visual access of this space. Enhancing views, providing activities and constructing additional accessible access areas with corresponding signage can be achieved by encouraging the recommendations which follow.

- The Borough should fully understand that one of the largest parcels available in the Borough known as Morrison's Marina, remains essentially undeveloped yet is located in a prime area for economic vitality. An Overlay Zone should be established that encourages the development of Mixed Use with mainly restaurants and retail establishments as well as housing incorporated on the parcel, if desired. Equally of importance is the continued operation of a marina and boat slips here as this is one of the only areas available that can accommodate boat docking. The Marina Use is critical to the Borough's tourism economy.
- To support revitalization plans within the district that will enhance economic and pedestrian activity and encourage a longer tourism season.
- Pop-up retail shopping should be encouraged as a way to offer additional business opportunities in a part of town that is attracting people to its bayside views.
- Maintain the existing maritime design aesthetic throughout this district.
- Encourage the construction of waterview eateries.
- Consider an alternative traffic circulation pattern that could accommodate a pedestrian mall on Dock Road.
- Provide public access to the Bayfront

Historic District

- To protect, enhance, rehabilitate historic resources by identifying, evaluating, and designating significant places and ensuring that new growth and development is compatible with the Borough's historic and cultural values.
- Additional review and enhanced discussion regarding this district can be found within the Historic Preservation Element of this plan.

Residential Districts

- Trash corrals should be relocated out of Borough Right-Of-Ways.
- Continue to enforce minimum lot sizes for subdivisions of land
- Encourage attractive exterior elevations for dwellings raised to meet FEMA's Flood Regulations
- The maximum allowable Impervious Coverage should be reduced from 75% to 60% in an effort to mitigate additional runoff from properties. Allowances should be made if using a percentage of pervious surface.

PART 7 RECOMMENDED ORDINANCES

Borough-Wide

- The number of boats and associated trailers parked on streets and within the Borough rights-of-way is becoming increasingly problematic for vehicles to navigate and is unsightly for adjacent residents as the boats and trailers are often left, unmoved, for extensive periods of time. It is recommended that the Borough amend Ordinance 189 as it relates to boat and trailer parking. Boats and associated trailers should not be permitted to park within the Borough streets overnight.

Business District (BD)

- Projecting signs contribute to the streetscape by providing pedestrian-scaled advertising and wayfinding or commercial activities along the street. It is recommended that the Borough amend the Borough Code to require projecting signs be installed at all properties, during time of Site Plan Approval or Site Plan Exemption Review, within the Business District. The sign should be permitted to extend over the right-of-way line. The plane of the sign's message shall be perpendicular to the surface of the building to which it is attached and no portion of the sign may be lower than nine (9) feet when located above a street, sidewalk or other pedestrian way. External illumination should be permitted by a gooseneck fixture or similar equal that is in accordance with the design guideline for the Business District as outlined in this Comprehensive Plan but illumination by any other means should be prohibited. The sign should project a maximum of three feet from the building wall. Any existing sign that does not conform to the code can continue to exist, but if ANY alterations are made to the structure, shape, size (of structure or lettering area), or illumination of that sign, it must be brought into conformity with the code. If a sign is damaged by more than 50% of its replacement cost at the time of damage, a conforming sign may be required as a replacement.
- To encourage increased pedestrian foot traffic and provide the appearance of a well-defined town center, the Borough should consider an amendment to Ordinance Section 167 as it relates to Site Plans and require that all Minor and Major Site Plans, as well as Site Plan Exemption Properties, follow the minimum requirements of the Streetscape Plan that has been made part of this documents.

Marine Commercial District (MC)

- In effort to further define the Marine Commercial District and showcase its influence by the maritime waters, the Zoning Ordinance 212-15 should be amended to require newly constructed buildings and renovation projects to include structures that are visually and architecturally pleasing by varying the height, color, setback, materials, texture, trim and roof shape, and landscape. Facades should be varied and articulated to provide visual interest to the street and pedestrians.
- A Mixed Use Overlay Zone should be established that encourages restaurants and apartments while providing marina/boat docking services.

- Amend Borough Code to include an Ordinance that oversees abandoned homes and which can be defined as a dwelling unit in which has not been legally occupied for a set period of time, such as one (1) year and also is in need of rehabilitation, additional construction in order to obtain a certificate of occupancy, delinquent tax payments or the property has been deemed a nuisance by the Code Enforcement Officer. A nuisance complaint could be filed by any person and more than two (2) complaints could declare a nuisance property. The Ordinance should establish an abandoned properties list via a registration process, criteria for establishing properties defined as abandoned and specific guidelines for the management of these properties by the Borough. Homes should be required to be registered with the Borough each year that the home is vacant and the fees should increase the longer the home remains on the abandoned properties list. Registration of the property should be completed within 30 days from the time in which the property is defined as vacant, 30 days from the time in which the property is purchased or 10 days following receipt of a notice from Beach Haven Code Enforcement Office. This registration should allow the Borough to inspect both the interior and exterior of the property as needed and should designate a key contact person for the property to whom will be responsible for the maintenance and upkeep of the property and also to whom all correspondence will be sent. Violations that extend beyond 30 days should be fined accordingly.
- Over the past 5 years, the Borough has seen an increase in the number of private swimming pools being constructed in residential yards. These pools average 10,000 gallons to 30,000 gallons of water and the filling of these pools places extreme stress on the Borough's water system. It is recommended that the Borough enact an Ordinance that would require that all newly constructed pools or the re-fill of pools, both in-ground and above ground, be done so with the services of a water tank truck.

PART 7 – STREETScape

To support a well-planned and cohesive streetscape design, the following standards should be adhered to on parcels within the Business District.

Bench Seating



Manufacturer/Distributor: Vermont Wood Studios

538 Huckle Hill Road

Vernon, VT 05354

888-390-5571

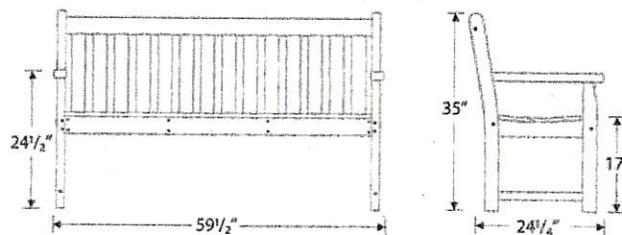
www.vermontwoodstudios.com

Color: Black

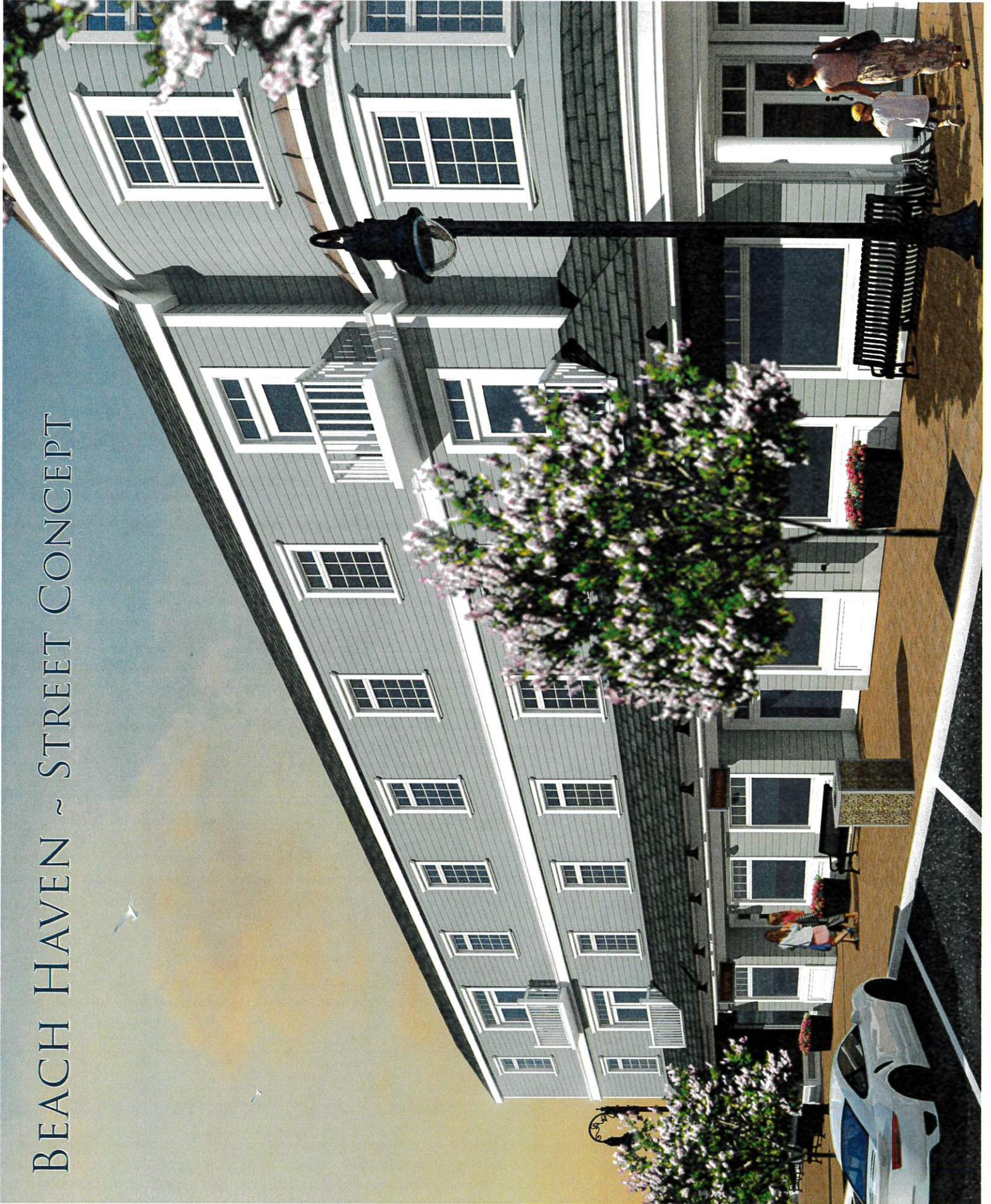
Price: \$579.00 (Spring 2017)

- Made from eco-friendly POLYWOOD® HDPE recycled plastic lumber and maintenance free
- Best All Weather solution, leave outside year round
- Heavy construction- won't blow off over in the park or garden
- Withstands heat, below freezing cold, salt air, and corrosive chemicals
- Premium stainless steel hardware, 18-8 commercial grade with protective xylan coating
- 6 Fade resistant frame colors with UV protection
- No mold, mildew, weathering, cracking or warping
- No painting, staining, waterproofing, stripping or resurfacing
- Great value! This is a product you will never have to replace
- Perfect for both residential and commercial outdoor use
- Made in the USA

TGB60 - Traditional Garden Bench [70 lbs]



BEACH HAVEN ~ STREET CONCEPT



Commercial Self Watering Planters



Color: Black

Price: \$579.00 (Spring 2017)

Styles Permitted:

Model: EPUR-40 Urban Rectangle

Manufacturer/Distributor: Earth Planter

13 Pulaski Street

Auburn, NY 13021

1-877-815-9276

www.earthplanter.com

- Dimensions: 40" L x 22" W x 24"H
- Planting Tray Depth: 12"
- Water Capacity: 23 Gallons
- Product Weight:
 - 38 lbs. (ship weight)
 - 300+ lbs. with water and wet soil
- Soil Capacity: 3.0 Cubic Feet— Pro Mix BX or equivalent soil required
- Top Water Fill Ports: 2 (street and curb side)
- Sidewall Expansion/Contraction: 10-15%
- Planters per Pallet: up to 8
- Watering Cycle: once every 2-3 weeks (average)
- Material: LLDPE, Linear Low-Density Polyethylene. Embedded with UV Inhibitors to protect against sun fade.
- Manufacturing: Rotational Molded for strength & durability
- Colors: Sandstone, Millstone, Gray Granite, Black Granite, Matte Black, Rich Terra Cotta
- Stackable: Yes
- Winterized: Yes
- 100% Made in the USA

Model: EPMV-41 Urban Vase 41



- Dimensions: 31" Top Outside Diameter x 25 3/4" H
- Planting Tray Depth: 13"
- Water Capacity: 18 Gallons
- Product Weight:
 - 23 lbs. (ship weight)
 - 280+ lbs. with water and wet soil
- Soil Capacity: 3.2 Cubic Feet— Pro Mix BX or equivalent soil required
- Planters per Pallet: up to 10
- Watering Cycle: once every 2-3 weeks (mid-summer average)
- Material: LLDPE, Linear Low-Density Polyethylene. Embedded with UV Inhibitors to protect against sun fade.
- Manufacturing: Rotational Molded for strength & durability
- Colors: Sandstone, Millstone, Gray Granite, Blackstone, Rich Terra Cotta
- Stackable: Yes
- Winterized: Yes
- 100% Made in the USA

Model: EPMV-31 Urban Vase



- Dimensions: 41" Top Outside Diameter x 36" H
- Planting Tray Depth: 19"
- Water Capacity: 40 Gallons
- Product Weight:
 - 48 lbs. (ship weight)
 - 550+ lbs. with water and wet soil
- Soil Capacity: 7.3 Cubic Feet -- Pro Mix BX or equivalent soil required
- Planters per Pallet: up to 4
- Watering Cycle: once every 2-3 weeks (mid-summer average)
- Material: LLDPE, Linear Low-Density Polyethylene
Embedded with UV inhibitors to protect against sun fade
- Manufacturing: Rotational Molded for strength & durability
- Colors: Sandstone, Millstone, Gray Granite, Blackstone, Rich Terra Cotta
- Stackable: Yes
- Winterized: Yes
- 100% Made in the USA

Commercial Refuse Containers

Square Top Receptacle with Flat Top Lid

Manufacturer/Distributor: Belson Outdoors
111 North River Road
North Aurora, IL 60542
1-800-323-5664
www.belson.com

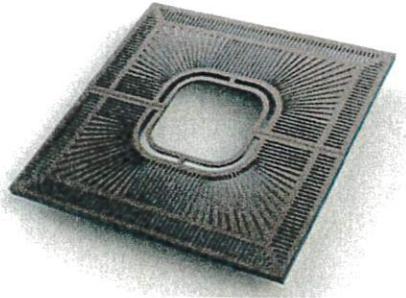


Model TC-SF-22B

Dimensions: 22" Sq. x 36" H

Light Sand Blast Finish in Sand Tan

Street Tree and Ground Grate



Tree Grates

IRONSMITH, INC

41701 Corporate Way #3

Palm Desert ,CA 92260 800-338-4766

Briar Style – Black coated finish

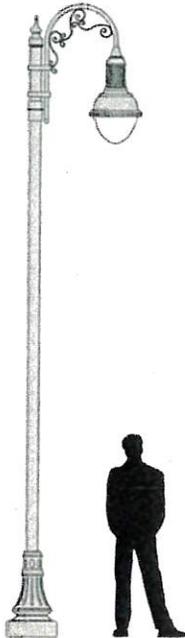
White Crepe Myrtle

'Lagerstroemia indica "Alba



Street Lighting

Manufacturer/Distributor: Architectural Area Lighting
13 Pulaski Street
16555 East Gale Ave.
City of Industry, CA 91745
T 626.968.5666
www.aal.net



Promenade Series Fixture

Head: PRMD
Arm: TRA9
Pole: DB3-4R14

Sidewalk

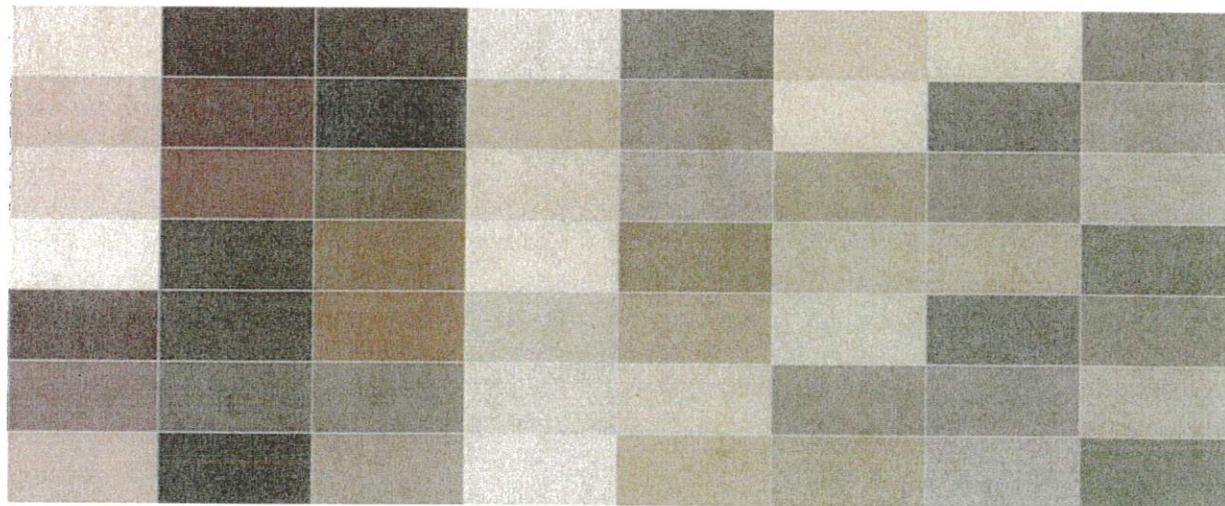
Manufacturer: Glenn Gery Brick
Local Distributor: Clayton Block Company
194 Chestnut Street
Toms River, NJ 08753
Phone: 732 349-3700
www.glengerybrick.com

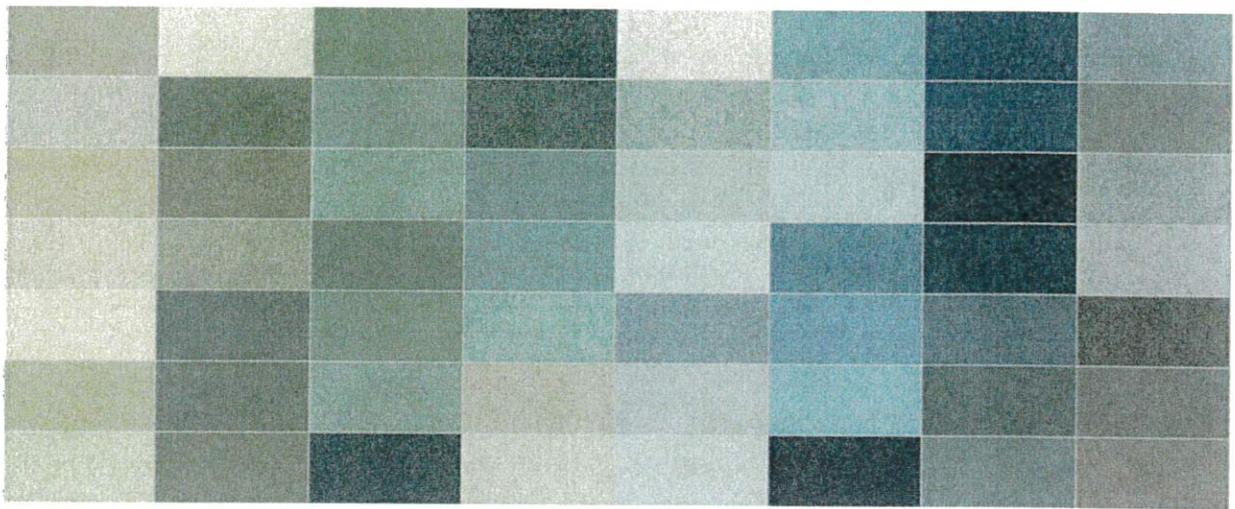


Brick Style: 55D, 53DD 3-5/8" x 7-5/8"
Pattern: Running Block

Building Paint Colors

To complement the existing historic charm of Beach Haven, all building within the Business District that require Minor or Major Site Plan Approval shall be painted in one of the following 191 historical colors that be found within the Historical Collection by Benjamin Moore Paint and Stain.





HOUSING ELEMENT

This component of the plan remains to be finalized as the Borough confers with its Special Counsel in regards to resolving issues concerning Beach Haven's Mount Laurel Fair Share Obligations and the means by which the Borough shall satisfy same. Prior to adoption of the Master Plan in its entirety, this Element will be finalized and will be considered as part of the Public Comment process.

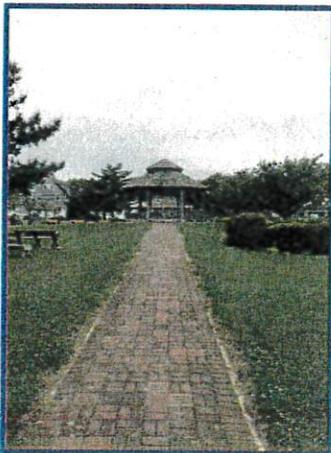
RECREATION AND OPEN SPACE ELEMENT

PART 1 – PARKS

The Borough offers five (5) parks, totaling more than 11 acres, within its municipal boundary limits. Each park has distinct features and attributes that make it different from the rest but the common theme amongst them all are their ideal locations within the community of which they serve. Each park parcel is a generous size given the small land area of Beach Haven and each is situated in a way that captures the views of the bay, historic district or a well-defined and quiet residential neighborhood. Over the years, each park has begun to deteriorate from the elements of the weather, Super-storm Sandy damage, or general aging of the existing amenities and site improvements. A priority goal of the Beach Haven Master Plan Committee was to prioritize the revitalization of the parks system with a well-planned design for each park to be executed as funds are allocated for construction by the Borough.

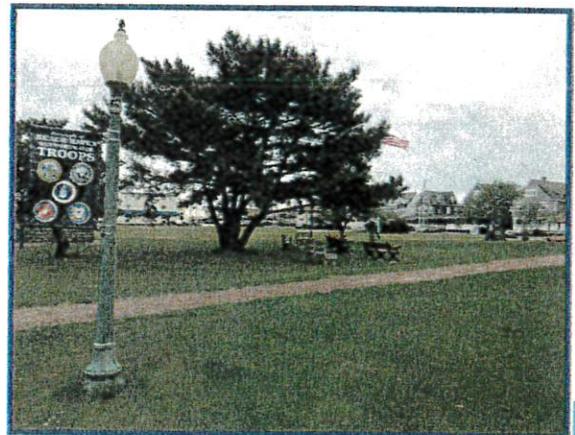
Veterans Memorial Park

Veterans Memorial Park may be considered by some to be the premier park of Beach Haven as it consumes an entire block within the Historic District, is steps from the oceanfront beach and is also rather high in elevation lending itself to serve the community as an informal parking area during tidal flooding events. In addition, this park contains Memorials honoring the Veterans of the United States of America and also is home to the summer concert series which is well attended during the prime season by many residents and vacationers on Long Beach Island. The park is approximately 2.5 acres in size and is bordered by Engleside Avenue, South Atlantic Avenue, Amber Street and South Beach Avenue. The park currently contains general site improvements such as brick paver walkways, large concrete planter areas, benches, a snack stand and the Community Arts Program (CAP) building. Extensive review and analysis of this park space lead the committee to the following recommendations for revitalization of this parcel.



rather high in elevation lending itself to serve the community as an informal parking area during tidal flooding events. In addition, this park contains Memorials honoring the Veterans of the United States of America and also is home to the summer concert series which is well attended during the prime season by many residents and vacationers on Long Beach Island. The park is approximately 2.5 acres in size and is bordered by Engleside Avenue, South Atlantic Avenue, Amber Street and South Beach Avenue. The park currently contains general site improvements such as brick paver walkways, large concrete planter areas, benches,

a snack stand and the Community Arts Program (CAP) building. Extensive review and analysis of this park space lead the committee to the following recommendations for revitalization of this parcel.



- A restroom facility shall be installed near the existing brick entrance columns on Amber Street however its design aesthetic should be reviewed by the Historic Preservation Advisory Committee prior to any construction.
- An area at the eastern end of the property should be delineated to serve as an event-only parking lot. This area will also act as a parking area for municipal vehicles during above-normal tidal flooding events.
- Crepe Myrtle street trees should be installed along the frontages of the park property.



William Butler Park

William Butler Park is known by locals as the best location in town for viewing beautiful sunsets. In recent years, this park has undergone renovations to its infrastructure which include a new rock revetment along the water front, handicap accessible concrete walkways and numerous benches. This site has also been favored by the local environmental volunteer community and as a result, an educational



native garden has been installed featuring native plants and informative signage. The grounds encompass approximately 1.0 acre of upland area offers a tot lot, basketball courts, bathroom facilities, a boat launch and gazebo. While this park is in reasonable condition, the following improvements would be valued by the community residents and likely increase the usage of the area which is important as it lies steps from the business district.

-
- A new pavilion between the two (2) existing gazebos facing the bay will be under construction during Summer 2017.
 - Install an Exercise Hub at the northern side of the park which would consist of a defined area containing a number of pieces of exercise equipment. This park feature would provide an opportunity to exercise and get fit outdoors for free and would create a destination within a park for fitness training and would help to alleviate underutilized spaces. Simple, static equipment would be best for the salt-air environment.
 - New Lighting (typical) should be added within the park.
 - A pet-friendly drinking fountain (typical) should be installed.
 - Emphasis should be placed on ensuring all installed native gardens remain in a condition that can be maintained by Public Works.

Nelson Avenue Park

Nelson Avenue Park is a frequently used area located within a residential neighborhood at the south end of the Borough. Recently, the park underwent improvement to retrofit an existing roller skating rink with (7) seven pickleball courts.

Close proximity to residential homes, an expansive tot lot, bathrooms and an open field are the primary reasons this park is so well utilized, however,



its current design does not meet the demands of the current population. The following improvements should be considered to ensure this parcel is utilized to its fullest potential.

- The Gazebo from Veterans Memorial Park should be relocated to the playground area adjacent to Merivale Avenue.
- A Dog Park should be constructed adjacent to the Pickleball Courts with areas for both large and small dogs. A pet friendly watering feature (typical) should also be added.
- The existing soccer goal should be relocated to Walsh Field.
- Open space should be maintained between the proposed dog park and the existing playground area.
- A misting water feature for children should be constructed within the park limits.
- Consideration should be given for the installation of additional shade features especially around the playground area.

-
- Install an Exercise Hub within the park which would consist of a defined area containing a number of pieces of exercise equipment. This park feature would provide an opportunity to exercise and get fit outdoors for free, could create a destination within a park for fitness training and would help to alleviate underutilized spaces. Simple, static equipment would be best for the salt-air environment.
 - A pet-friendly drinking fountain (typical) should be installed.

Nelson Avenue Annex

The Nelson Avenue Annex area is comprised of the Right-Of-Way between the parcels of property (Block 14, Lot 3 and Block 1, Lot 61) that is used as a pass through by residents to access Holgate by foot or bicycle without having to utilize Bay Avenue/Long Beach Boulevard. With this lot being located steps from Nelson Avenue Park and within a residential neighborhood, its revitalization would successfully support a community garden. With a utility building being located on the next lot and the current state of the annex lot being dirt and unkempt grass, it would be ideal to allow this parcel to be developed with raised garden beds that would be maintained by members of the community while still conserving the access to Holgate. To facilitate this renewal, the following improvements are required.

- Raised garden beds should be created while maintaining a walking path to Holgate.
- Water service to this lot is available from the water main in Nelson Avenue. A lateral should be installed for this lot and irrigation should be provided.

William Butler Park Annex

William Butler Park Annex is located on a prime parcel of property within the downtown Business District and directly across the road from Taylor Avenue Park. As the annual site of Beach Haven's well attended "Chowderfest" in October, all improvements and upgrades to this park must consider this yearly event and its requirements to remain successful. However, the park at all other times is a simple open field with no amenities to serve the public and those patrons shopping downtown. Simple and aesthetically pleasing upgrades to this park should be considered as providing a welcoming gathering space for visitors could impact



the success of business for adjacent merchants. Inspiration from other well-established and historical seaside communities validates that Taylor Avenue Ball Field could support unique seating arrangements and meandering landscaping to sustain this park as a destination for visitors instead of simply an undeveloped grassy area. A destination park within a pedestrian centered area should include the following:

- A 10 FT wide brick sidewalk (typical) should be added adjacent to Sea Gull Drive. The sidewalk area should provide areas for seating and the seating should vary to include Adirondack chairs, benches and swings.
- A Pergola should be constructed over the brick sidewalk area and swings should be included in this pergola design.
- Picnic tables, which are removable during the winter months and major storm events, should also be included at this park location as they provide a place for consuming food and desserts purchased from local merchants.
- A landscaping area with native trees and bushes should be constructed at the corners of Taylor Avenue and Ninth Street with Sea Gull Drive.
- A pet-friendly drinking fountain (typical) should be installed.

Walsh Field

Walsh Field, also known as the Beach Haven Sports Center, encompasses 4.7 acres of land and has been the subject of recent upgrades including refurbished tennis courts adjacent to Pearl Street. This park is underutilized by the local population albeit being located at the end of the Business District and within a residential neighborhood. In past years, many residents and vacationers have used this park to walk and run their dogs as there is a need, locally, for a safe and accessible area for canine pets. Walsh Field also remains the established helicopter landing zone during emergency events therefore, any design plans must remain conscientious of that fact. To further improve the sports and recreational facilities as well as impact other Borough parks, the following enhancements should be made:

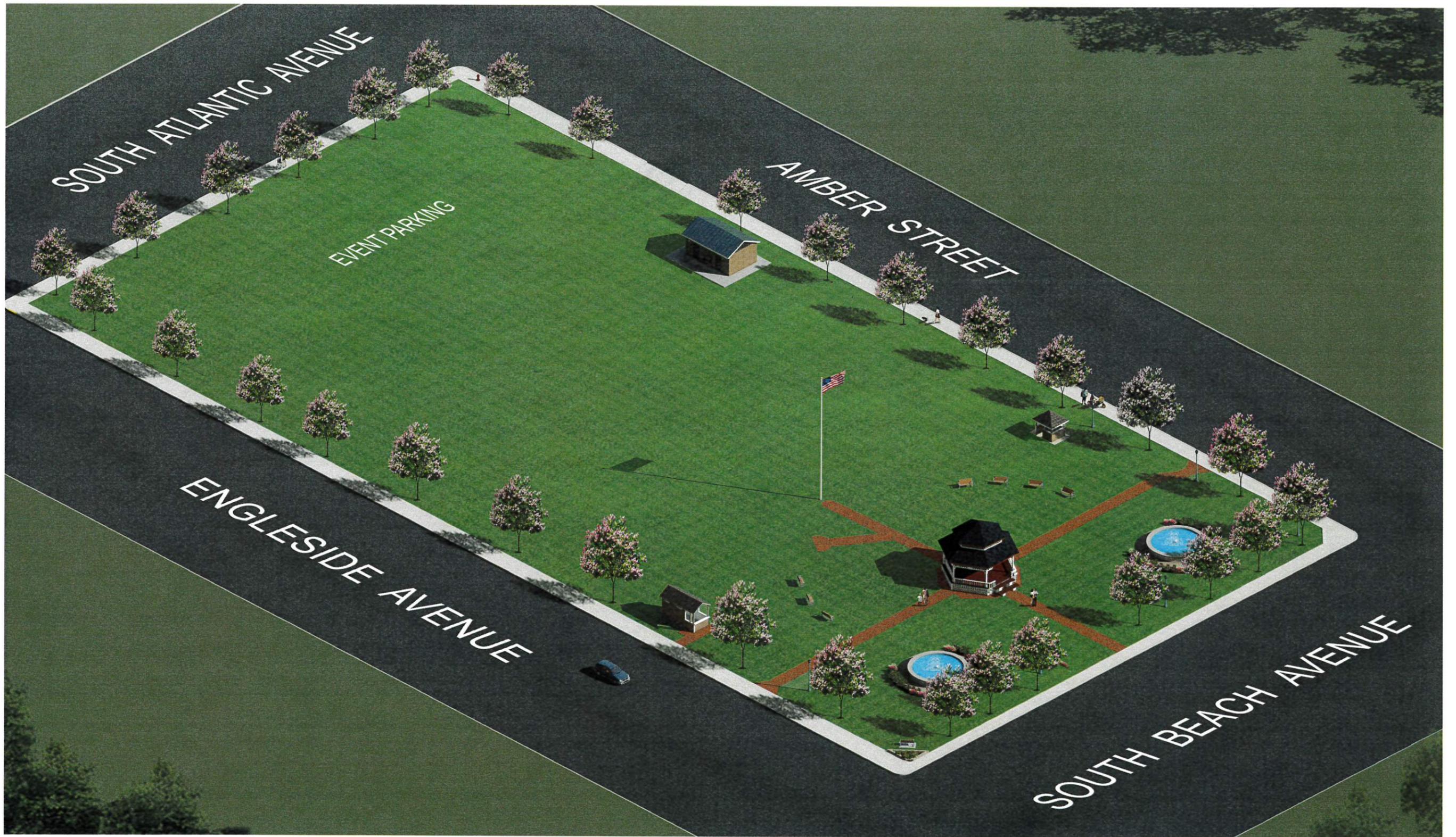


-
- The existing basketball court should be removed and a new basketball court constructed at the west side of the parking lot and adjacent to the tennis courts. The courts should be orientated in a north-south direction to ensure the players are not impacted by the sun's direct rays.
 - All existing greenspace should be regraded and appropriate drainage facilities constructed to control the stormwater onsite. A drainage and stormwater control project should be prioritized as the standing water due to poor drainage negatively impacts the use of these fields.
 - A Bocce Ball Court should be constructed south of the tennis courts
 - The CAP (Community Arts Program) building should be relocated from Veterans Park to Walsh Field and a shade shelter/pavilion (typical) should be constructed. The ticket booth should be removed and the bathroom relocated near the shade shelter. This area should be regraded prior to the start of any construction.
 - A pet-friendly drinking fountain (typical) should be installed.
 - Flea markets, craft shows due to excellent visibility

General Borough-Wide Park Recommendations

- All pathways or sidewalks that are required as part of a park project should be constructed of either Glen-Gery Brick Pavers (typical) or concrete.
- All parks should include a pet-friendly drinking fountain (typical).

PART 2 – RENDERINGS

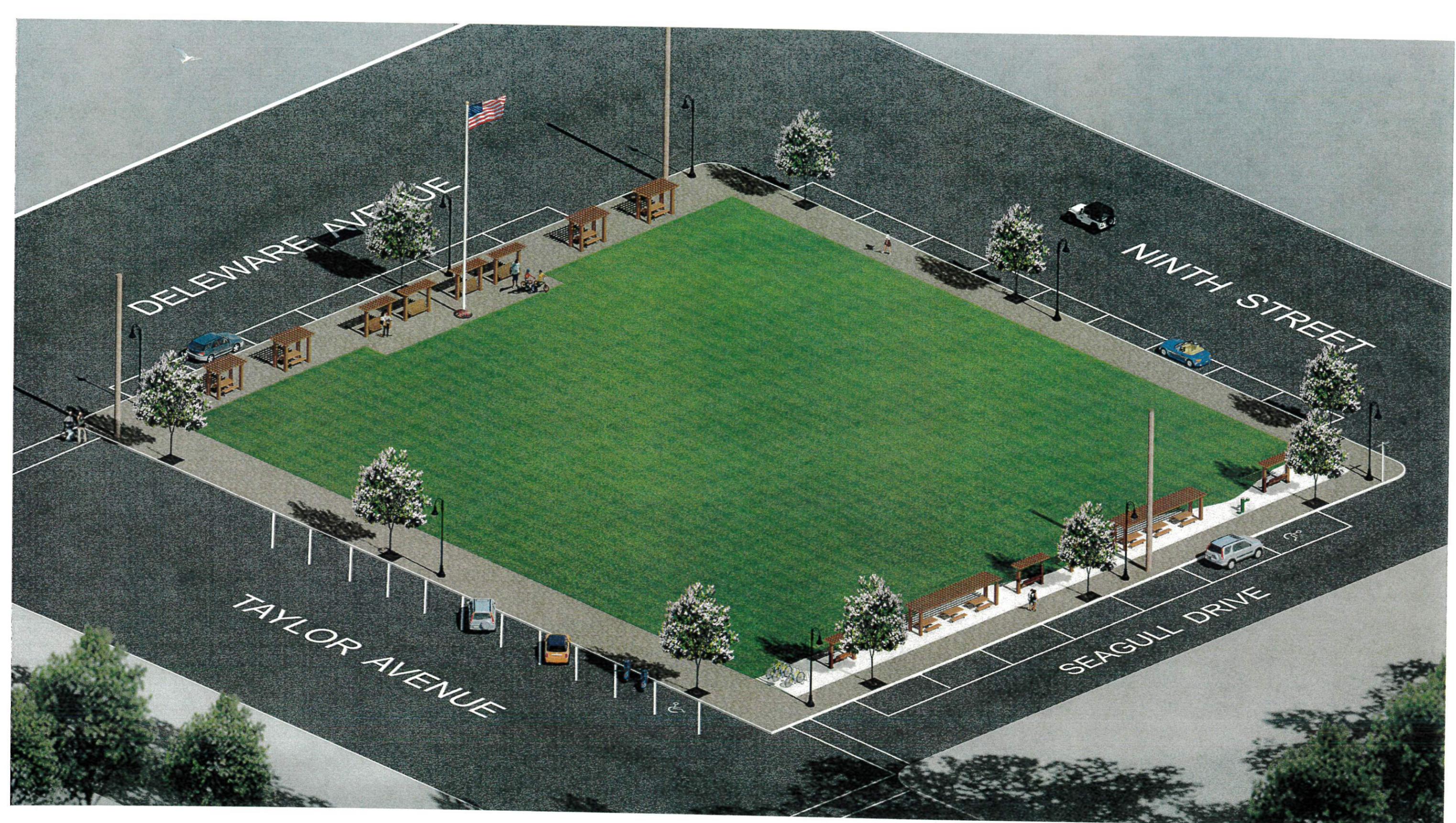


VETERANS MEMORIAL PARK

Borough of Beach Haven ~ Ocean County, New Jersey



Owen, Little & Associates, Inc.

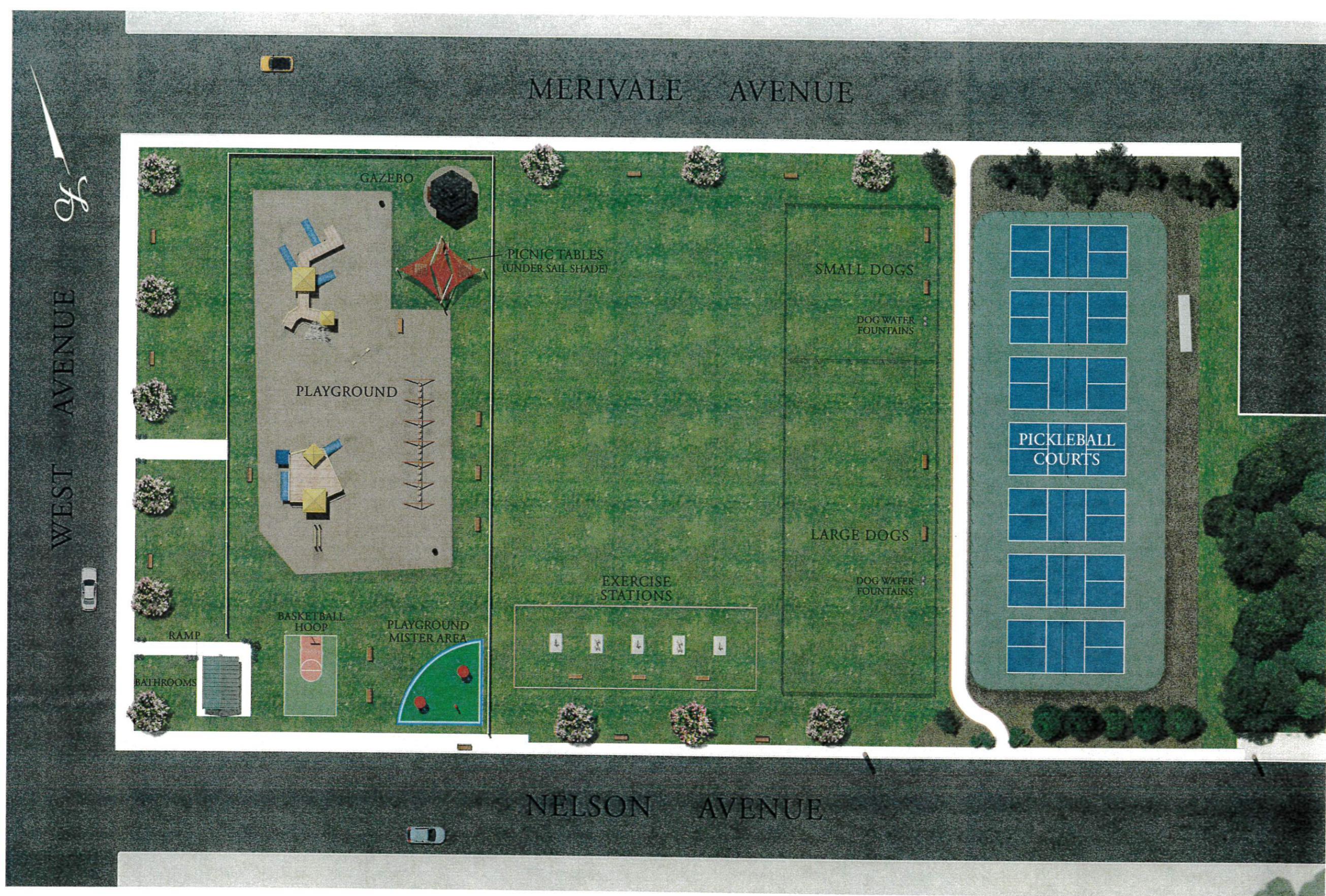


WILLIAM BUTLER PARK ANNEX

Borough of Beach Haven ~ Ocean County, New Jersey



Owen, Little & Associates, Inc.



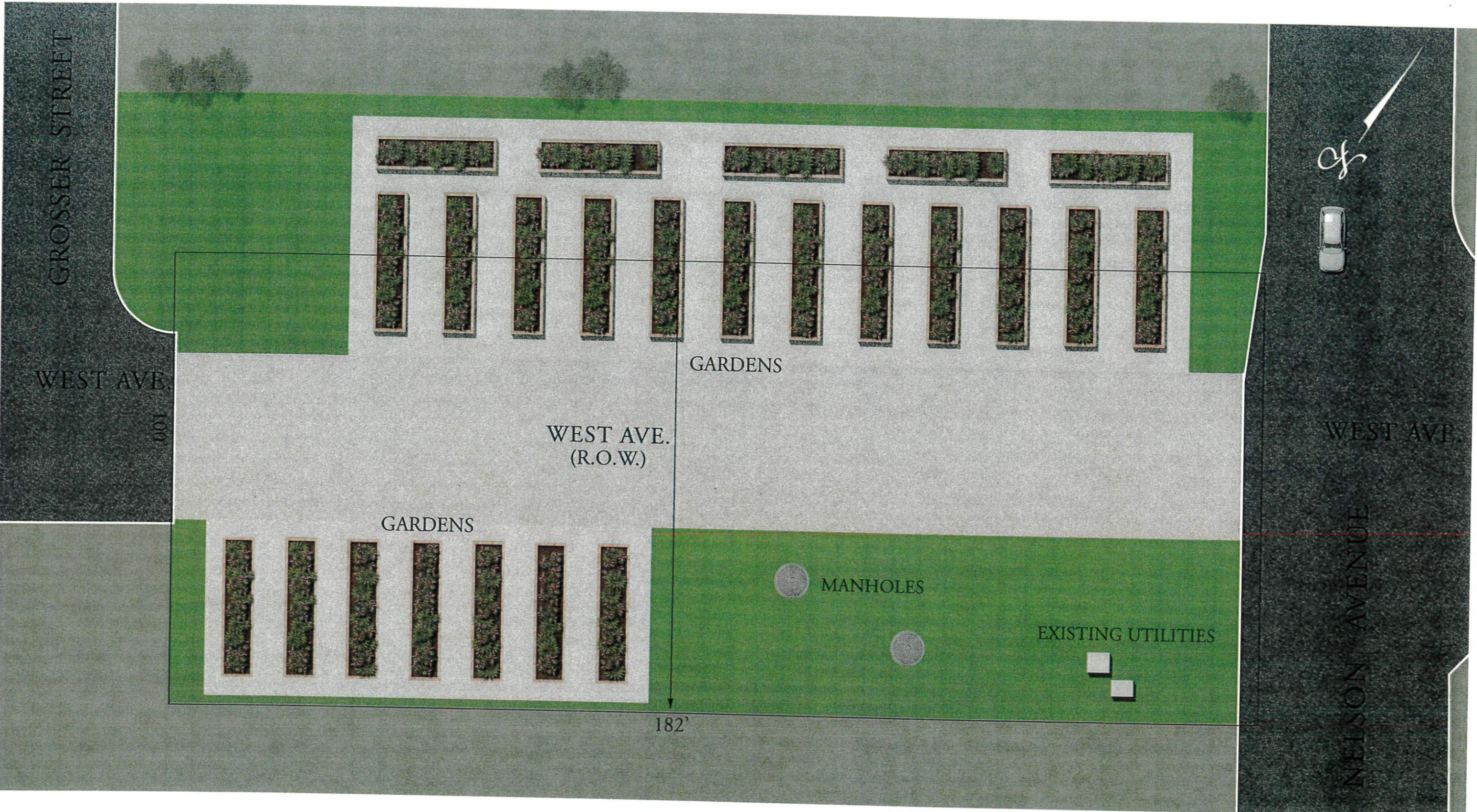
MERIVALE AVENUE

WEST AVENUE

NELSON AVENUE

NELSON AVENUE PARK

Borough of Beach Haven ~ Ocean County, New Jersey



NELSON AVENUE PARK ANNEX

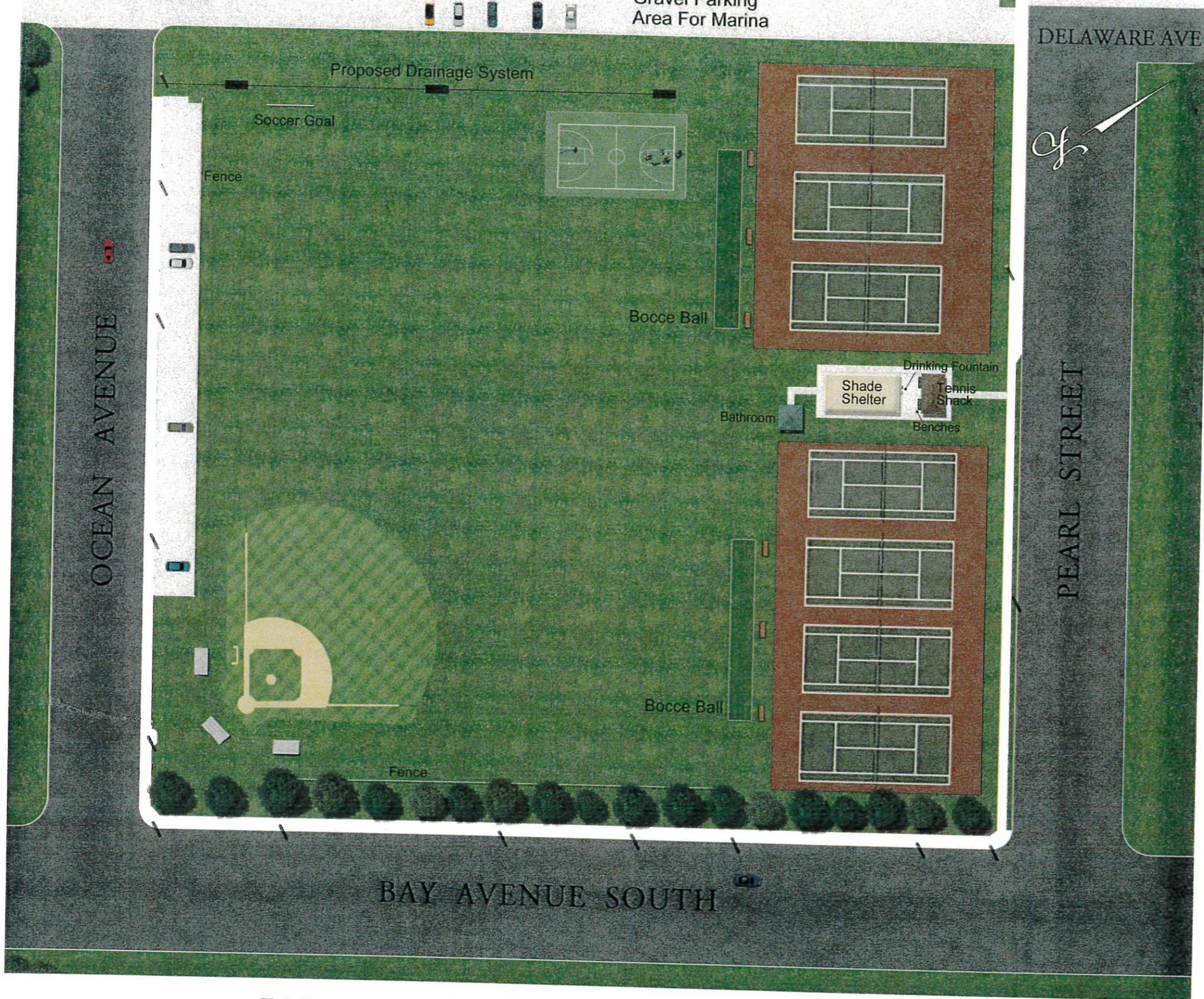
Borough of Beach Haven ~ Ocean County, New Jersey



Owen, Little & Associates, Inc.

Little Egg Harbor Bay

Gravel Parking Area For Marina



WALSH FIELD/SPORTS FIELD

Borough of Beach Haven ~ Ocean County, New Jersey

PART 3- PUBLIC ACCESS PLAN

Introduction

The intent of this document is to provide a comprehensive public access plan for the Borough of Beach Haven which lays out their vision for providing access to tidal waters and shorelines within the municipal boundary. This Municipal Public Access Plan (MPAP) was developed in accordance with the Coastal Zone Management Rules at N.J.A.C. 7:7E-8.11. This MPAP was developed in collaboration with the New Jersey Department of Environmental Protection (NJDEP), and approved by the NJDEP on <date>. The development and implementation of this MPAP supports the policy of local determination of public access locations and facilities, while safeguarding regulatory flexibility and potential funding opportunities for Beach Haven Borough.

Public rights of access to, and use of, the tidal shorelines and waters, including the ocean, bays, and tidal rivers, in New Jersey are founded in the Public Trust Doctrine. First set by the Roman Emperor Justinian around A.D. 500 as part of Roman civil law, the Public Trust Doctrine establishes the public's right to full use of the seashore.

Through various judicial decisions, the right of use upheld by the Public Trust Doctrine has been incorporated into many state constitutions and statutes, allowing the public the right to all lands, water and resources held in the public trust by the state, including those in New Jersey. The NJDEP adopted new rules governing public access on November 5, 2012 that enable municipalities to develop and adopt MPAPs to govern public access within their municipality. This MPAP consists of an inventory of public access locations, and plans to preserve and enhance access based on community needs and State standards.

In 2015, representatives from Beach Haven Borough met with NJDEP staff to begin the public access planning process. This plan was then developed in collaboration with the NJDEP, various departments within Beach Haven Borough and their planning consultant, Owen, Little & Associates, Inc. and was distributed for courtesy review to the Land Use Board and was submitted to the NJDEP on August 26, 2016. Upon receiving approval from the NJDEP on <date>, the MPAP was incorporated into the Recreation/Open Space Element of the Master Plan by resolution on <date>, see Appendix 2. All public access decisions made within Beach Haven Borough after this date will be consistent with this plan.

Authority for Municipal Public Access Plans

The premise of the authorization of MPAPs is that public access to tidal waters is fundamentally linked to local conditions. Municipalities have a better awareness and are more responsive to these conditions than a broader State "one size fits all" mandated public access plan.

The voluntary development of a MPAP by Beach Haven Borough enables the municipality to better plan, implement, maintain, and improve the provision of public access for its residents and visitors. Also, it informs and/or identifies public access requirements associated with any proposed development or redevelopment project. The MPAP was incorporated into the Recreation/Open Space Element of the municipality's Master Plan, in accordance with the Municipal Land Use Law (N.J.S.A 40:55D).

Upon approval of the MPAP by the NJDEP and incorporation into the Master Plan, Beach Haven Borough will be responsible for ensuring that public access to tidal waterways along the municipality's shorelines is provided in accordance with this plan. For each new public access project, Beach Haven Borough will provide NJDEP with a letter confirming its consistency with this MPAP. Any permit issued by the NJDEP will reflect, and ensure that public access requirements are satisfied in accordance with, this plan. Per N.J.A.C. 7:7E -8.11(j)4, Beach Haven Borough is required to submit a progress report on plan implementation to NJDEP within five (5) years from date of plan adoption.

The sections of this plan as indicated below are prescribed by the Coastal Zone Management Rules, N.J.A.C. 7:7E-8.11. See Appendix 1.

I. Municipal Public Access Vision

A. Overview of Municipality

The Borough of Beach Haven is located on Long Beach Island in Southern Ocean County. Long Beach Island is a barrier island community with shoreline along Barnegat Bay Watershed and the Atlantic Ocean. The Borough has a year round population of 1170 (2010 Census), however, the population increases dramatically in the summer months and can reach 20,000 people. With a total area of 2.320 square miles, of which 1.342 square miles is water, the Borough is situated geographically to enjoy the benefits of the associated oceanfront and bayfront shorelines. Beach Haven Borough is void of any major industry or farmland and is considered fully developed with the exception of small infill lots or new lots created by subdivision. Given the dense population during the summer months, maintenance of existing public access locations along the Little Egg Harbor Bay (Barnegat Bay Watershed) and the Atlantic Ocean is paramount.

1. Public Access Description

Public Access in Beach Haven Borough is provided by the municipality and consists of a variety access points and facilities including beach walkways, bathroom facilities, lifeguarded beaches, surfing and fishing beaches as well as parks, playgrounds and docks. The Borough protects and ensures public access through ordinances and beach fees. For example, many of the open spaces or areas that provide access to tidal water are regulated by the New Jersey Department of Environmental Protection's Green Acres Program and additional ordinances are in effect to guide the use of these parcels. Also, the ordinances assist in guiding development of particular parcels unregulated by the Green Acres Program and provide regulation for same. Beach fees are collected for beach users at a daily, weekly or seasonal rate and the type of tag purchased is the decision of the purchaser, not the Borough.

The overall goal of this MPAP is to establish Beach Haven Borough's plan to maintain and enhance all existing public access locations to and along tidal waterways and their shores.

2. Map 1. Beach Haven Borough Tidal Waterways and Lands

Map 1 shows all the tidal waterways within the municipality and all lands held by the municipality.



More specifically, Beach Haven's tidal waterways consist of the Atlantic Ocean to its east and the Barnegat Bay Watershed to its west. In this area of the Barnegat Bay, the waters are delineated into specific bays which can be referenced through NOAA Marine



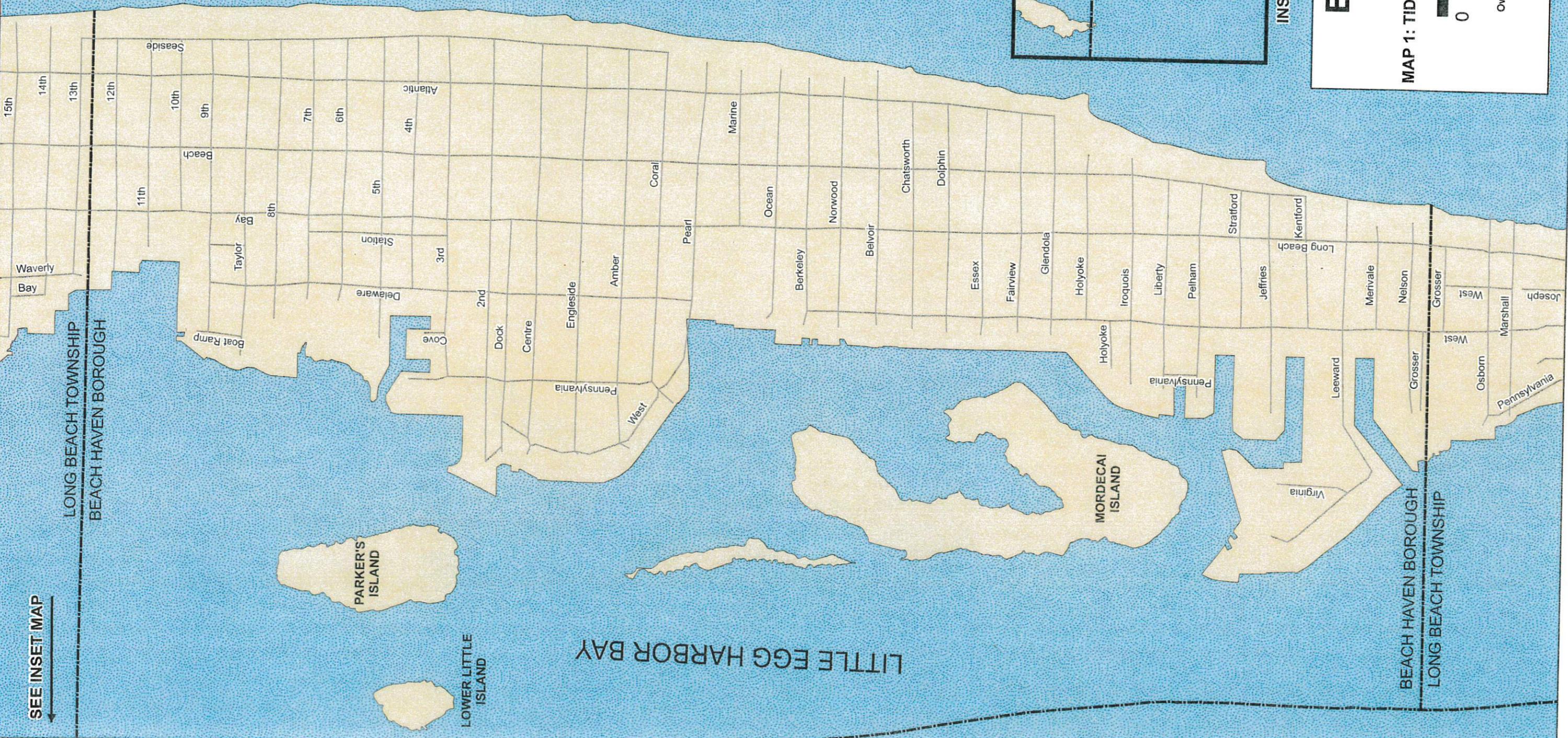
Navigational Charts. The adjacent bay is called specifically the Little Egg Harbor Bay and although the Beach Haven Inlet is farther south and actually adjacent to Holgate (Long Beach Township), a significant portion of the Borough's recreational and economic activities are dependent upon this inlet.

For example, the local, non-profit environmental organization, ReClam the Bay promotes environmental involvement and education about the estuary's water quality and the importance of shellfish. This organization is based out of the municipal dock located at 420 Pelham Avenue and frequently conducts research and restoration projects at Mordecai Island.





ATLANTIC OCEAN



SEE INSET MAP

LONG BEACH TOWNSHIP
BEACH HAVEN BOROUGH

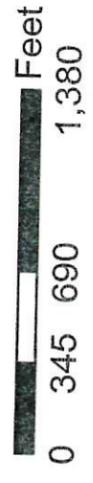
BEACH HAVEN BOROUGH
LONG BEACH TOWNSHIP



INSET MAP (SCALE: 1"=100')

BEACH HAVEN BOROUGH

MAP 1: TIDAL WATERWAYS AND LANDS



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443 Atlantic City Boulevard
Beachwood, NJ 08722
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The Miss Beach Haven, a charter fishing boat, and the Black Pearl Pirate Tour Ship both depend exclusively on access to the tidal waters of the Little Egg Harbor Bay in the spring, summer and fall months for conducting business. These businesses also attract visitors from outside the Borough thereby increasing tourism to the area. A number of other individuals within the Borough whom offer private sailing trips and charter boat trips depend on this access from their home port.



Besides three off-shore islands including Mordecai Island, Parker Island and Little Island, various lagoons also mark the bayfront shorelines of the barrier island where homeowners utilize these tidal waters for recreational water-dependent uses such as motor boating, sailing and kayaking.

*BEACH HAVEN BOROUGH
REPRESENTS A BARRIER
ISLAND COMMUNITY
THAT RELIES HEAVILY ON
THE SURROUNDING
WATERWAYS FOR TOUR-
ISM AND COMMERCE
AND PRIDES ITSELF ON
OFFERING MORE THAN
60 WAYS OF ACCESS TO
THESE DESIRABLE
SHORES*

B. Municipal Public Access Goals and Objectives

1. Goals & Objectives

- a. Participate in programs, both federal and state, that preserve environmentally critical, sensitive or beneficial parcels of land
- b. Promote the continued balance of land uses while ensuring adequate open space and unrestricted access remains.
- c. Maintain and continue to promote a visually pleasing aesthetic along the waterfront areas
- d. Upgrade existing municipal park facilities
- e. Remain motivated to increase and improve public access locations
- f. Utilize native plantings when restoring areas adjacent to tidal water
- g. Remain cognizant of stormwater runoff and its effect on the estuary; consider requiring recharge systems and decreased impervious coverage limits.
- h. Establish an Ordinance that promotes the installation of Public Access signage where appropriate.
- i. Prioritize the reconstruction of vulnerable bulkheads and ensure shoreline stabilization for public safety and access.

In addition to those goals outlined within the Master Plan, Beach Haven Borough establishes the following State required goals specifically for public access.

- J. All existing public access shall be maintained to the maximum extent practicable.
- K. Maintain safe and adequate access locations for fishing in those areas where fishing is safe and appropriate.
- L. Provide clear informative signage for access locations.

Beach Haven's Municipal Public Access Plan embraces and reflects these goals and will help preserve, protect, and enhance the public's ability to access the Public Trust lands which surround the community. The previous goals are compliant with the New Jersey Coastal Zone Management Rules (see N.J.A.C 7:7E-1.1 (c)).

2. Municipal Master Plan Consistency

The goals and objectives provided in this Municipal Public Access Plan have been reviewed and are consistent with the Beach Haven Borough Master Plan. The Borough is currently developing a new Master Plan and goals and objectives related to recreation and public access to the Borough's tidal waterways have been paramount in planning discussions.

Specifically, the draft Recreation and Open Space Element sets the following Goals, Focuses and Priority Actions related to public access:

Goal. The Borough shall provide adequate sustainable park, open space and recreational facilities and land areas which offer access, quality improvements, programs and passive recreation opportunities to compliment the year-round and seasonal population's desire for achievement in personal health, entertainment and effective use of leisure time.

Focus. To maintain existing parkland and support the acquisition of additional parcels to be used for open spaces

Priority Actions

- Encourage acquisition of parcels that promote public access to and utilization of tidal waters
- To maximize the potential of each parcel to serve the community of Beach Haven to the greatest extent practicable

Focus. To encourage continued recreational opportunities through progressive park programs and appropriate events that will support the year-round population and attract interest from the seasonal population.

Priority Actions

- Encourage eco-tourism by capitalizing on the Little Egg Harbor Bay and potential "Water Trail" to attract kayakers, paddleboarders, etc.

Focus. To encourage the revitalization of the existing parks system while specifically enhancing the natural features of each and support the development of park-specific improvement plans that are cost effective and achievable within a reasonable time period.

Priority Actions

- Explore the feasibility and benefits of Park Leasing by non-Borough entities as a means of revitalizing each park consistent with the Borough provided design plans.

II. Public Access

A. Public Access Locations

Map 2, Beach Haven Borough Public Access Locations, identifies an inventory of all public access locations within the Borough, and further describes the type of access provided as well as the shoreline condition. For the purpose of this plan, the access points have been defined as follows.

Physical Access: A location point in which a user can access and physically enter the tidal water for the purposes of swimming, fishing, kayaking or the like.



ATLANTIC OCEAN

SEE INSET MAP

LONG BEACH TOWNSHIP
BEACH HAVEN BOROUGH

BEACH HAVEN BOROUGH
LONG BEACH TOWNSHIP



LEGEND

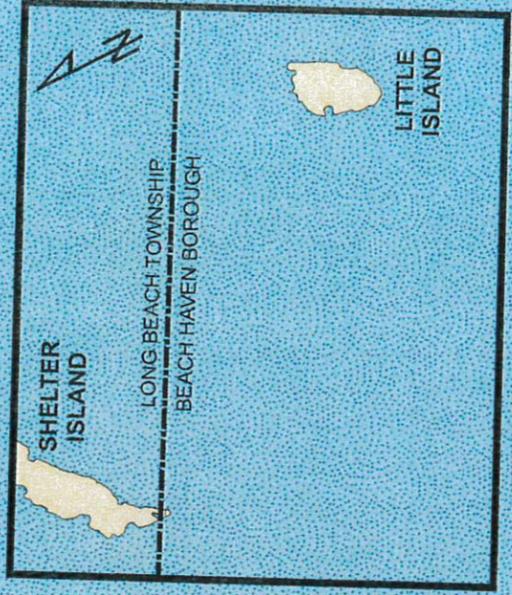
ACCESS POINTS

- PHYSICAL
- VISUAL
- WATER

SHORELINE TYPE

- BEACH/NATURAL SHORE
- BULKHEAD
- ROCK REVETMENT
- WATER

NOTE:
ALL OCEANSIDE ACCESS POINTS
PROVIDE ACCESS TO BEACH



INSET MAP (SCALE: 1"=100')

BEACH HAVEN BOROUGH

MAP 2: PUBLIC ACCESS LOCATIONS



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Beachwood, NJ 08722
(732)244-1090

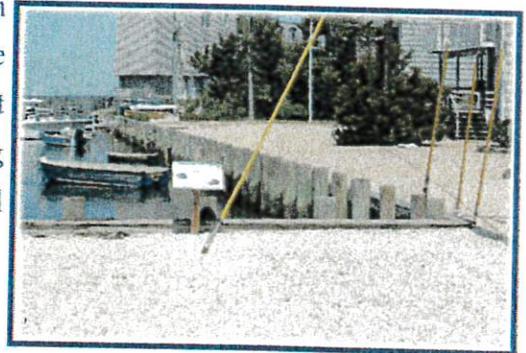
Visual Access: A location point in which a user can not physically access the tidal water but still utilize the water way for fishing, birdwatching, photography or sightseeing. In many cases, these locations may be hindered by bulkheads or permanent barriers to alert vehicles of the street ends and intersecting waterways.

Water Access: A location point which is reserved for islands within the municipal boundary that is accessible only by watercraft.

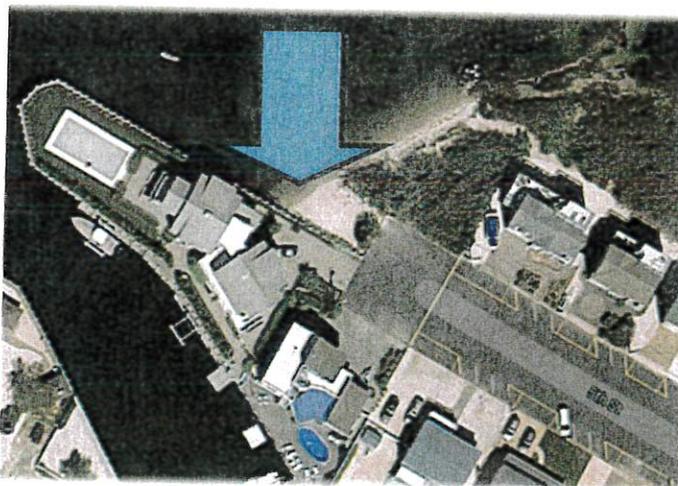
B. Enhanced Public Access Locations

Map 3, Beach Haven Borough's Enhanced Public Access Locations, provides an inventory of the existing public access locations that currently provide access to public trust lands and waters. See Appendix 3 for detailed information.

Beach Haven is unique in that it has several access locations which are open to the public and presented accordingly but are considered to many as hidden gems due to their infrequent use by the general public. One example of this type of access is located on Pearl Street adjacent to the bay where there is a small vehicle parking lot, a maintained crushed shell surface and informational signage associated with Mordecai Island.



Another access point which is available to the public but often under-utilized is located at the bayside of 5th Street and offers on-street parking, though it is not designated for park use. This location is an ideal launch site for kayakers and paddleboards as it has a soft sand ground surface but is barricaded so no motor launches or large vessel launches are possible.



SEE INSET MAP

LONG BEACH TOWNSHIP
BEACH HAVEN BOROUGH

(228)
(16 TRAILER SPACES)



(8)



(10)



(56)



LOWER LITTLE ISLAND

PARKER'S ISLAND



(15)



(12)



LITTLE EGG HARBOR BAY

(5)



(1 HC EACH)



(5)



(11)



(13)



(13)



(8)



(36)



(13)



(13)



(31)



(19)



(20)



(18)



(13)



(31)



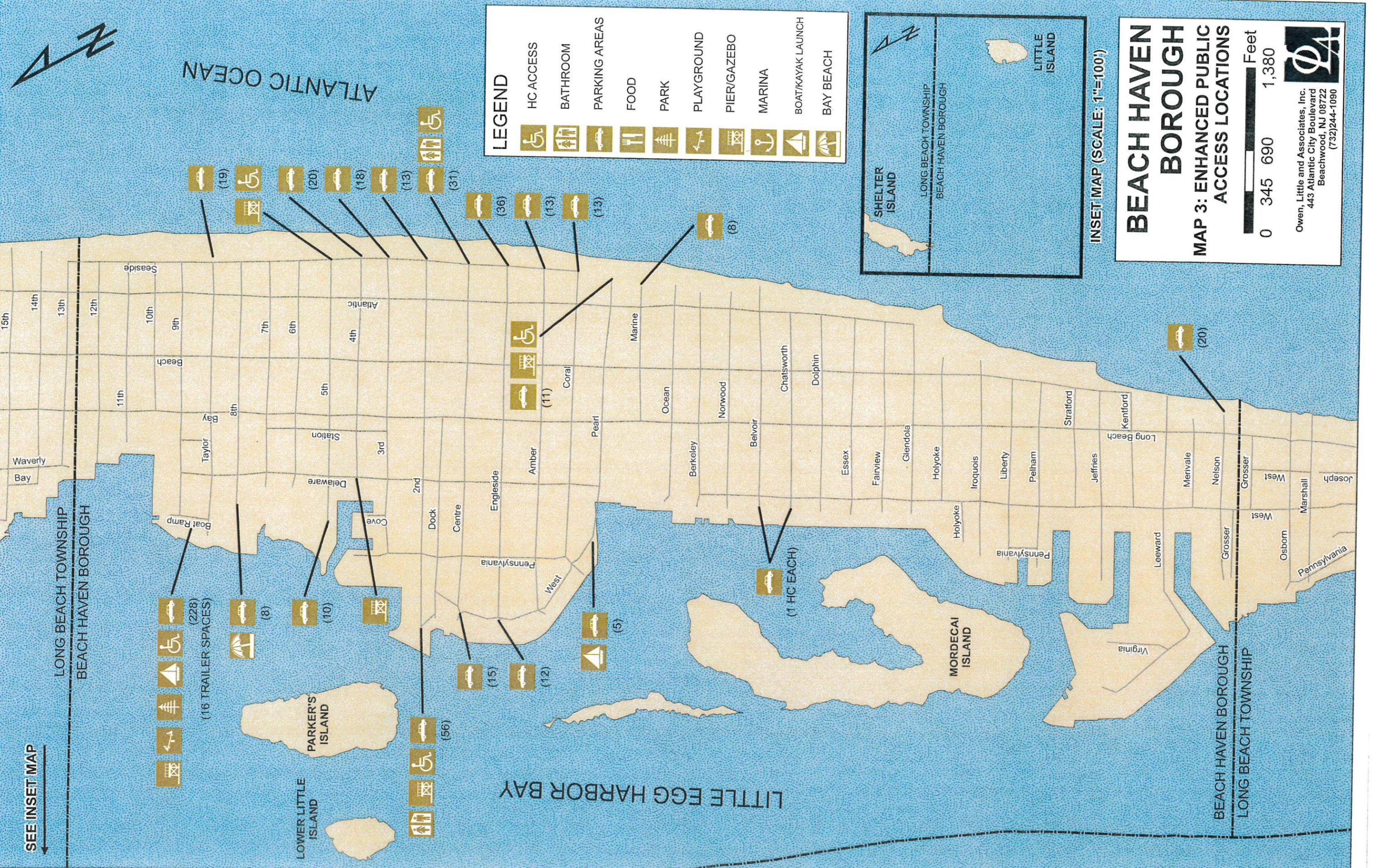
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(20)



BEACH HAVEN BOROUGH
LONG BEACH TOWNSHIP

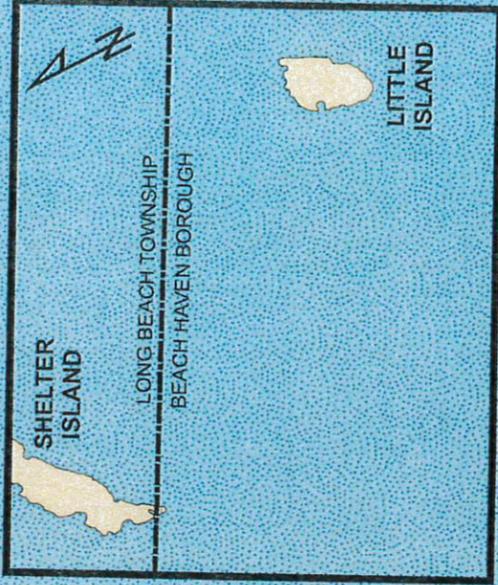


ATLANTIC OCEAN



LEGEND

- HC ACCESS
- BATHROOM
- PARKING AREAS
- FOOD
- PARK
- PLAYGROUND
- PIER/GAZEBO
- MARINA
- BOAT/KAYAK LAUNCH
- BAY BEACH



BEACH HAVEN BOROUGH

MAP 3: ENHANCED PUBLIC ACCESS LOCATIONS

0 345 690 1,380 Feet

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Beachwood, NJ 08722
(732)244-1090



Many of the Borough's ocean front and bay front street ends include gazebos for shade or docks and benches for the enjoyment of the views and may include designated handicap parking stalls.



Each year, the Borough offers 13 boat slips for lease, on a yearly term, at the public dock located on Dock Road. These slips are auctioned off via the website www.govdeals.com and the auction occurs in May.

 **Visit Beach Haven**
May 27 at 1:13pm

Beach Haven has started their annual official auction of public boat slips on Dock Road. If you have any questions, please call the Borough Clerk at 609-492-0111
<https://www.govdeals.com/index.cfm>

Results for 'beach haven' - GovDeals.com
GovDeals is the place to bid on government surplus and unclaimed property including heavy equipment, cars, trucks, buses, airplanes, and so much more.
GOVDEALS.COM

C. Limitations to Public Access

The following limitations to public access currently exist.

The Borough established places of resort, beaches, bathing, and recreation safeguards and equipment for the purposes of public health, recreation and entertainment. Places of resort shall be located at the ocean front, upon all lands owned by the Borough fronting on the Atlantic Ocean, in those portions of a tract of land known as "Beach/Seaside Avenues," together with the lands east of and adjacent hereto in the Borough wherein it has ownership and or control, easement rights or the right to occupy and use the same. Such places of resort shall further include the improved portions of the easterly ends of all public streets running in a generally east and west direction to the mean high water mark of the Atlantic Ocean.

1. Temporary Restrictions

Beach Haven provides 64 access points to its tidal waters and the vast majority of access points are located on bayfront street ends or ocean blocks while other access points are provided via public parks or access easements.

a. Hours

Places of resort shall be kept open from 10:00 am until 5:00 pm during the bathing season from the fourth Saturday in June until Labor Day. The council reserves the right to determine, by resolution, the period during each year when each of the paid bathing beaches shall be opened and closed.

b. Beach Badges

Beach Haven Borough does utilize beach badges, commonly referred to as 'beach tags', to monitor beach access and establish regulation to ensure continued effectiveness of the beach and dune system as a line of defense from coastal storms. More specifically, beach badges are required to be worn from the fourth Saturday in June through Labor Day during the hours of 10:00 am until 5:00 pm. This is typically the time all beaches are also lifeguarded.

Children under the age of 12 do not require a badge nor do adults age of 65 or older however, these adults will be provided a specially designated beach badge by the municipality free of charge.

No beach badge fee will be collected from any person in active military service in any of the Armed Forces of the United States and any persons who are active members of the New Jersey National Guard who have completed Initial Active Duty training, as well as their spouses and children over the age of 12. In addition, no fee is collected from any person who has served in any of the Armed Forces of the United States and who were discharged or released thereof under conditions other than dishonorable and who have served at least 90 days in active duty or have been discharged or released from active duty by reason of a service-incurred injury or disability.

Fees are also not collected from any individual attired in street clothing and not using beaches, bathing or recreational areas for swimming, sunbathing or other recreational purposes.

c. Swimming/Bathing

Bathing in the surf is prohibited during periods of storm, high wind or dangerous conditions. Swim distance is determined by the Beach Patrol Supervisor according to daily ocean and wind conditions. No person is permitted to enter or remain in the surf beyond the northerly or southerly boundaries of bathing districts as designated by red/yellow flag markers posted by lifeguards.

d. Surfing

Surfing is prohibited between the hours of 10:00 am and 5:00 pm when lifeguards are on duty except within any area designated for surfing by the placement of quartered black/white flags on the beach which are placed at the discretion of the lifeguard captain.

All kayaks, canoes, inflatable boats and any type of equipment utilizing paddles or oars, windsurfers, jet skis, boats of any kind and fishing tackle are prohibited in areas designated for surfing while surfers are utilizing said area.

e. Beach Buggies

All motor vehicles must be registered with the Chief of Police prior to utilizing the ocean beach. Only four wheel drive motor vehicles registered to operate on the highways of the United States will be issued permits. This excludes all-terrain vehicles and vehicles designed for sleeping or living such as campers. A fee of \$25 is required at time of application for permit and the permit will expire on December 31st of the year it was issued. No vehicles shall be operated on ocean front between May 15th and September 15th.

f. Jet Skis and Boat Launching

Jet-skis are only permitted to be launched at the public boat ramp located at Bay Avenue and Ninth Street. No launches are permitted at street ends or any other municipal waterfront location.

The following fees are required for use of the Municipal Boat Ramp located at Bay Avenue and Ninth Street.

Daily Fee.....	\$20.00
Weekly Fee.....	\$75.00
Season Fee (Between June 15 and September 15)	\$100.00
Commercial Ramp Pass (Between June 15 and September 15).....	\$250.00

g. Fishing from Beaches

Fishing from beaches or launching or landing any boat from the beach within the protected bathing beach areas or within 50 yards of the boundaries of any such protected bathing beach is prohibited.

h. Horseback Riding

Horseback riding is prohibited at all times on the beach, strand or dune area.

i. Kite Flying

Kite flying is permitted on the beach only before 10:00am and after 5:00pm.

j. Ball Playing and Like Activities

Ball playing, ball throwing, quoits, horsehoes and like activities will be permitted at the discretion of the lifeguard captain, Chief of Police, or their designees. These activities are prohibited from 10:00am to 5:00pm in areas between flags to designate swimming areas. These restrictions are in effect from the fourth Saturday in June until Labor Day.

Additional temporary restrictions may come by way of dangerous or hazardous water conditions when lifeguards determine there is a risk to public safety and therefore prohibit bathing on particular beaches.

As Beach Haven continues its participation in the Long Beach Island Storm Damage Reduction and Beach Replenishment Project, restrictions to public access on the oceanfront may occur but will be minor in nature and only last a few days.



2. Permanent Restrictions

There are no known restrictions to established public access points in Beach Haven Borough.

III. Community Needs Assessment

Beach Haven has performed a community needs assessment. The methods and results are described in the following section.

Analysis of the collected data including interviews with residents and stakeholders, site inspections and deed research indicates that adequate public access is provided to the tidal waters adjacent to Beach Haven Borough. In addition, in the past five (5) years, Beach Haven has initiated and completed numerous bulkhead projects at street ends to ensure shoreline stability and a safe point of access to the waterfront as well as rehabilitated or reconstructed bayside and oceanfront facilities to provide additional services to those utilizing them. In particular, a project was recently completed at Taylor Avenue Park which was significantly impacted by Superstorm Sandy. This project included installation of a rock revetment for shoreline stabilization as well as community led planting and revitalization initiatives. The Borough is always looking for ways to increase and improve public access.

The Borough has embraced a vision of providing increased passive recreational opportunities as well as waterfront access for different age groups at its Borough-owned park facilities. Improvements such as adding playground equipment, park benches and expanding beach areas where appropriate would help improve the local recreational facility offerings. The increase in seasonal population has warranted an expansion of current facilities throughout the community. Unlike other municipalities in the state, Beach Haven is unique in that all recreational facilities can be accessed via different types of pedestrian oriented modes such as cycling or walking. In turn, this maximizes the potential use of the facilities by the local population. Municipal stakeholders feel it is important to continue park and access point rehabilitation projects to avoid a deterioration in the existing infrastructure.

In recent years, especially since the completion of the beach replenishment project, shark fishing has become common along the beaches of Beach Haven. Through a fun recreational activity for fishermen, luring sharks to the shoreline is dangerous for swimmers and surfers. The Borough should consider adopting an Ordinance that regulates where and when shark fishing can be done within the Borough limits.

IV. Implementation Plan

Beach Haven Borough has created an Implementation Plan composed of Priorities, Preservation of Public Access Locations, Signage, Proposed Access Improvements and Facilities, and Municipal Tools for Implementation as described in the following section.

A. Priorities

Beach Haven Borough has developed the following priorities.

1. Maintain Existing Public Access

The Borough Department of Public Works routinely checks access points to ensure that they are free from barriers and remain safe for users however, a Municipal Access Maintenance Plan should be developed. Additional signage may be installed at particular access points to advise the general public of their availability.

a. Tools

A schedule of events promoting activities with the Barnegat Bay and the Atlantic Ocean available throughout Beach Haven Borough and is also available online.

b. Cost and Funding

Funding is appropriated at time of budget each year.

2. Preserving Public Access

The Borough has been consistently seeking cooperation with the Federal Government Office of Homeland Security to potentially purchase the Emergency Operations Center located at 420 Pelham Avenue. This building has housed the Borough Administrative Offices since November 2012 when Superstorm Sandy destroyed the Municipal Building at 300 Engleside Avenue. A municipal building is currently under construction at that site and it is expected that the building will be fully operational by the end of 2017. At this time, the Borough has a 100 year lease agreement with the United States Federal Government in the amount of \$1.00 to utilize the building for Emergency Operations or Essential Services only. The Borough proposes to acquire this building and the associated land for fair market value, based upon a real estate appraisal, and use it in perpetuity as a Nature Interpretive Center with educational classrooms and other uses that incorporate the surrounding waters of the Borough. It is likely that the Not-For-Profit Group, Re-Clam the Bay, would utilize space within this building. The Borough is currently seeking funding opportunities for the acquisition of this building to further enhance public access to the Little Egg Harbor Bay.

The geographic location of Beach Haven on the barrier island makes many oceanfront and bayside pavilions or gazebos sought after wedding ceremony locations for the beautiful sunrise and sunset views. With the demand increasing exponentially for these venues, the Borough is initiating a Gathering Permit Requirement for the use of these locations for a special event such as a wedding. The fee is expected to be minimal but is anticipated that this will relieve the securing of gazebos and pavilions by one party for an entire day and instead will allow several events to occur at set times in the day. Proper signage will be displayed. Any permit fees collected should be put towards maintenance of the Borough's Parks.

a. Tools

1) Completed Projects

a) 2nd Street Bayfront

This area was recently rehabilitated with a new fishing dock, fish filet stations, lighting, 58 space parking lot, ADA compliant bathroom facilities. Thirteen (13) public boat slips are also located onsite and available by public auction.

b) Lifeguard Station at Centre Street

This lifeguard building was reconstructed after Superstorm Sandy and was ready to operate for the public in early summer 2014. Beach badge sales are also conducted from this office.

c) William Butler Park

William Butler Park has received a series of updates in the past two years including new walkways, a rock revetment, the installation of additional park benches and a native vegetative garden that offers educational opportunities explaining the various native plantings and shells found in the area.

2) Proposed Projects

- a) Acquisition of the Emergency Operations Center at 420 Pelham Avenue for use as a Nature Interpretative Center and home for the not-for-profit group, Re-Clam the Bay.
- b) William Butler Park renovations to include exercise equipment and a large pavilion is currently under design hosts weddings and other ceremonies or events.
- c) Bay Beach – The recent Army Corp of Engineers Beach Replenishment was a long awaited necessity to provide storm protection along the oceanfront, however, it left the beaches with a new surf pattern and varying shore breaks which, under certain circumstances, is not conducive for swimming by young children or those who have physical ailments. The Borough should consider designating the 5th Street Street-End as a Bayfront bathing beach.

b. Cost and Funding

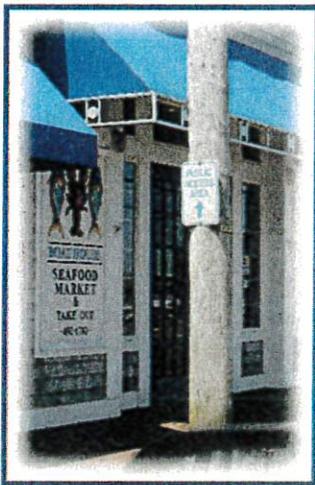
Initial research by the Borough has been completed to locate a suitable funding source for the acquisition of the Emergency Operations Center, however, costs nor applications for funding have been finalized.

2. Proposed Locations and Facilities

No proposed access points are presently proposed.

B. Signage

The Borough provides signage throughout the community at each of its public access points to clearly direct users to the appropriate entrance locations. Examples of the signage is provided below.



C. Municipal Public Access Fund

At this time, Beach Haven Borough does not have a Municipal Public Access Fund in place.

D. Army Corps of Engineers Requirements for Shore Protection Projects

Long Beach Island is an 18-mile barrier island in southern Ocean County, New Jersey. The area regularly suffers damages from coastal storms, hurricanes and nor'easters. The Barnegat Inlet to Little Egg Inlet Coastal Storm Risk Management project, also known as the Long Beach Island beachfill or beach nourishment program, is designed to reduce erosion and property damages associated with these events. It is a joint effort of the Army Corps and the New Jersey Department of Environmental Protection.

A Feasibility Report Completed in September of 1999 recommended beachfill with periodic nourishment to reduce potential hurricane and storm damages for the island. The project involves the construction of a dune with a top elevation 22 feet above sea level with a 300-400 foot wide berm, depending on the location of the beach on the island, at an elevation of 8 feet above sea level.

The Long Beach Island Coastal Storm Damage Reduction project was only partially completed when Hurricane Sandy hit the New Jersey shore. The Army Corps completed the initial construction of the project at Surf City in 2006; Harvey Cedars in 2010; and Brant Beach between 31st and 57th Streets in Long Beach Township in 2012. The Army Corps repaired beaches in Surf City and Harvey Cedars in 2012 after Hurricane Irene, and fully restored the beaches within all three communities after Hurricane Sandy in 2013. The restoration and repair work was funded 100 percent through the Army Corps' Flood Control and Coastal Emergencies program. On December 5, 2014 the U.S. Army Corps of Engineers awarded a contract to the Great Lakes Dredge and Dock Company, for \$128 million to complete initial construction of the Long Beach Island project. This project is a joint effort of the Army Corps and the New Jersey Department of Environmental Protection.

The current construction is funded entirely by the federal government through the 2013 Disaster Relief Appropriations Act (PL113-2), commonly known as the Hurricane Sandy Relief Bill. Following the completion of initial construction, the project is eligible for continued periodic nourishment.

Crews will close no more than 1000 feet of beach as work progresses along the island (closed sections are "rolling" and advance as the beachfill progresses along the island).

Residents and visitors should not have to walk more than several blocks to access an open section of beach. The operation is 24 hours a day and 7 days per week because of the cost associated with mobilizing a dredge to the location.

Great Lakes Dredge & Dock Company completed beachfill operations in Beach Haven the night of June 12/13, 2016.

V. Relationship to the Other Regional and State Plans

Beach Haven Borough's MPAP has been reviewed for consistency and has the following relationship to the New Jersey State Development and Redevelopment Plan, prepared by the New Jersey State Planning Commission and Adopted March 1, 2001.

- Coastal Resource Planning Policy #5 promotes *“well-planned and revitalized coastal communities that sustain economies, are compatible with the natural environment, minimize the risks from natural hazards and provide access to coastal resources for the public use and enjoyment.”*

Beach Haven Borough supports this policy and has initiated a Coastal Vulnerability Assessment Study of its public access points and various critical facilities to ensure community leaders and decision makers have a clear understanding of potential future hazard risk to its access locations and to provide a resource which can be utilized to develop future resiliency projects.

- Coastal Resource Planning Policy #11 seeks to *“promote recreational opportunities and public access, and encourage tourism along the oceanfront, bay front and rivers of the coastal area by protecting public access rights.”*

It is estimated that as many as 20,000 people are within the boundaries of Beach Haven Borough on a given day in the summer months. These people are comprised of year round residents, seasonal residents, day trippers and vacationers and most all seek to enjoy the amenities associated with coastal living. Beach Haven has established a reputation for hosting various programs focusing on its tidal waters such as a Junior Lifeguard program amongst others.

VI. Resolution of Incorporation

Upon approval of this plan by the New Jersey Department of Environmental Protection, Beach Haven Borough will approve a final resolution to incorporate this Municipal Public Access Plan into the Recreation/Open Space Element of the Beach Haven Borough Master Plan. The Final Resolution will mimic the draft Resolution provided in Appendix 2 of this plan.

APPENDIX I

Municipal Public Access Plans

Required Sections per NJAC 8.11 (e)

1. (e) 1 Statement describing overall goal of the MPAP and the administrative mechanisms (for example, conservation restrictions, easements, ordinances) that either are already in place, or that shall be put in place to ensure that the municipality will meet public access goals

2. (e) 2 Statement of Consistency with...Master Plan

3. (e) 3 Public access needs assessment that evaluates:
 - existing access locations and capacities
 - practical limitations (esp. parking and bathrooms)
 - alternatives to address any limitations determined to exist
 - need for additional locations

4. (e) 4 Digital Map and Inventory identifying....
 - tidal waterways within municipality and adjacent lands held by municipality
 - existing and proposed public access ways
 - proposed public access facilities
 - identified facilities compliant with ADA

5. (e) 5 Implementation strategy
 - forms of proposed public access responsive to needs assessment (i)
 - comprehensive list of specific public access projects and initiatives with implementation schedule (ii)
 - proposed tools to implement the plan, including (iii)
 - adoption or amendment of muni ordinances
 - uses of monetary compensation (Public Access Fund), if any
 - proposed modifications to existing plans, ordinances & programs to implement MPAP (iv)
 - proposed compliance with ACOE requirements for shore protection projects [see 8.11(r)] (v)

-
- cost of implementing, constructing and maintaining the access facilities proposed in the plan and specifies how this cost will be funded (vi)
 - implementation schedule (vii)
 - ordinances in place/to be adopted re signage requirements (viii)
 - measures to permanently protect public access per MPAP (ix)
 - examples/models of easements/restrictions for permanent protections (x)
 - draft resolution incorporating DEP-approved MPAP into a MP element (xi)

APPENDIX 2

Model Resolution for Incorporating MPAP into Master Plan

(upon adoption the final resolution will replace this model)

Resolution # _____

Title: A RESOLUTION APPROVING THE MUNICIPAL PUBLIC ACCESS PLAN

WHEREAS, the *Beach Haven Borough* Municipal Public Access Plan (MPAP) was submitted to the Municipal Council and reviewed at the regular meeting of {date}, and

WHEREAS, the governing body has approved the plan as submitted, and

WHEREAS, the governing body recognizes the need to make the MPAP an authorized component of municipal decision-making by incorporating it into the municipal master plan,

NOW, THEREFORE, BE IT RESOLVED by the Municipal Council of *the Borough of Beach Haven*, the "*Beach Haven Borough* Municipal Public Access Plan," a copy of which is attached, is hereby approved.

FURTHER RESOLVED, the Municipal Public Access Plan shall be incorporated into the municipal master plan within the Conservation Element.

FURTHER RESOLVED a copy of the plan shall be sent to the New Jersey Department of Environmental Protection for review and approval in accordance with N.J.A.C.7.7 and 7.7E.

I hereby certify the foregoing to be a resolution adopted by the *Municipal Council of the Borough of Beach Haven* at a meeting held on {date}.

Municipal Clerk

Appendix 3

Public Access Tables

Part A. Beach Haven Borough Ocean Access

Part B. Beach Haven Borough Bay Access

Part C. Beach Haven Borough Island Access

PART A: Borough Of Beach Haven Ocean Access

ID	Signs	Parking	# of Parking Spaces	Street	Badge Req'd	Swim	Fish	Surf	Playg'd	Park	Pier / Gazebo	Boat Launch	Yacht Club	Marina	Food & Drink Super Market	Rest room	Seats	H/C	Shoreline Type (Ocean, Bay, Beach, Bulkhead)	Access Type (Physical, Visual, Water)
1				Twelfth Street	x	x G	x	x									x		Beach	Physical
2				Eleventh Street	x	x	x	x									x		Beach	Physical
3				Tenth Street	x	x	x	x									x		Beach	Physical
4				Ninth Street (Walkover)	x	x	x	x									x		Beach	Physical
5		x	19	Taylor Avenue	x	x G	x	x									x		Beach	Physical
6				Eighth Street	x	x	x	x											Beach	Physical
7				Seventh Street (Walkover)	x	x	x	x											Beach	Physical
8				Sixth Street	x	x	x	x											Beach	Physical
9				Fifth Street (Walkover)	x	x G	x	x			Gazebo						x	x	Beach	Physical
10		x	20	Fourth Street	x	x	x	x											Beach	Physical
11		x	18	Third Street (Walkover)	x	x	x	x									x		Beach	Physical
12		x	13	Second Street	x	x G	x	x											Beach	Physical
13		x	31	Centre Street	x	x G	x	x								x	x	x	Beach	Physical
14		x	36	Engleside Avenue	x	x G	x	x											Beach	Physical
15		x	13	Amber Street	x	x	x	x											Beach	Physical
16		x	13	Coral Street	x	x	x	x									x		Beach	Physical
17		x	11	Pearl Street	x	x G	x	x			Gazebo						x	x	Beach	Physical
18		x	8	Marine Street	x	x	x	x											Beach	Physical
19				Ocean Street	x	x	x	x											Beach	Physical
20				Berkeley Avenue	x	x	x	x									x		Beach	Physical
21				Norwood Avenue	x	x	x	x											Beach	Physical
22				Belvoir Avenue	x	x G	x	x											Beach	Physical
23				Chatsworth Avenue	x	x	x	x											Beach	Physical
24				Dolphin Avenue	x	x	x	x											Beach	Physical
25				Essex Avenue	x	x G	x	x											Beach	Physical
26				Fairview Avenue	x	x	x	x											Beach	Physical
27				Glendola Avenue	x	x	x	x											Beach	Physical
28				Holyoke Avenue	x	x	x	x											Beach	Physical
29				Iroquois Avenue (Walkover)	x	x	x	x									x		Beach	Physical
30				Liberty Avenue (Walkover)	x	x G	x	x											Beach	Physical
31				Peiham Avenue (Walkover)	x	x G	x	x											Beach	Physical
32				Stratford Avenue	x	x	x	x											Beach	Physical
33				Jefferis Avenue (Walkover)	x	x	x	x											Beach	Physical
34				Kentford Avenue	x	x G	x	x											Beach	Physical
35				Leeward Avenue	x	x G	x	x											Beach	Physical
36				Merivale Avenue	x	x	x	x											Beach	Physical
37				Nelson Avenue	x	x	x	x											Beach	Physical
38		x	20	Nelson Avenue Parking Lot	x	x	x	x											Beach	Physical

PART B: Borough Of Beach Haven Bay Access

ID	Signs	Parking / # of Spaces	Street	Badge Req'd	Swim	Fish	Surf	Playg'd	Park	Pier / Gazebo/ Dock/ Walk	Boat/ Kayak Launch	Yacht Club	Marina	Food & Drink Super Market	Rest room	Seats	H/C	Shoreline Type (Ocean, Bay, Beach, Bulkhead)	Access Type (Physical, Visual, Water)
39	X		Twelfth Street			x				Walk							x	Bulkhead	Physical
40	X	228/16 Trailer Spaces	Ninth St./Taylor Ave. Park			x		x	x	G, D, W	Boat	x			x	x	x	Bulkhead	Physical
41	X	8	Eighth Street		x	x				Walk	Kayak							Beach	Physical
42	X	10	Fifth Street		x	x												Beach	Physical
43	X		Fourth Street (Easement)							Dock								Bulkhead	Physical
44	X	56	Second Street/Dock Road			x				Walk,Dock			Lottery Slips		x	x	x	Bulkhead	Physical
45		15	Centre Street			x												Bulkhead	Physical
46		12	Engleside Avenue			x												Bulkhead	Physical
47			Amber Street			x												Bulkhead	Physical
48			Coral Street			x												Bulkhead	Physical
49		5	Pearl Street			x					Kayak					x		bulkhead	Physical
50			Berkeley Avenue			x										x		Bulkhead	Physical
51			Norwood Avenue			x												Bulkhead	Physical
52		1 HC	Belvoir Avenue			x				Walk						x	x	Bulkhead	Physical
53		1 HC	Chatsworth Avenue			x				Walk						x	x	Bulkhead	Physical
54			Dolphin Avenue			x												Bulkhead	Physical
55			Essex Avenue			x				Walk						x	x	Bulkhead	Physical
56			Fairview Avenue			x												Bulkhead	Physical
57			Glendola Avenue			x												Bulkhead	Physical
58			Holyoke Avenue			x												Bulkhead	Physical
59			Iroquios Avenue			x												Bulkhead	Physical
60			Liberty Avenue			x				Walk						x	x	Bulkhead	Physical
61			Pelham Avenue			x										x		Bulkhead	Physical

PART C: Borough Of Beach Haven Island Access

ID	Signs	Parking	# of Parking Spaces	Street	Badge Req'd	Swim	Fish	Surf	Playg'd	Park	Pier / Gazebo	Boat Launch	Yacht Club	Marina	Food & Drink Super Market	Rest room	Seats	H/C	Shoreline Type (Ocean, Bay, Beach, Bulkhead)	Access Type (Physical, Visual, Water)
1				Parker Island																
2				Little Island															Beach	Water
3				Mordecai Island															Beach	Water
																			Beach	Water

APPENDIX 4

Recreation and Open Space Inventory

Open Space Database

Facility Name: If followed by - DM = parcel was entirely directed; if followed by - P/DN = parcel was partially directed; and if followed by - CDM = parcel was a compensation piece for previous direction.

Interest: CR - Conservation Restriction; Fee - Fee Simple; Lease - Leased Land

Type: M - Municipal; C - County; N - Non Profit

County: OCEAN

Municipality: BEACH HAVEN BORO

Block	Lot	Facility Name	Interest	Type
110	4	PUBLIC BEACH	FEF	M
113	1	PUBLIC PARK PLAYGROUND	FEF	M
114	1	WALSH FIELD	FEF	M
123	7	PUBLIC BEACH	FEF	M
124	3	BEACH PAVILLION	FEF	M
125	4.01	PUBLIC BEACH	FEF	M
137	1	VETERANS MEMORIAL PARK	FEF	M
15	1	NELSON AVENUE	FEF	M
15	6	BORO BALLFIELD	FEF	M
179	11	PUBLIC BEACH	FEF	M
179	12	ATLANTIC OCEAN BEACHFRONT	FEF	M
18	21	PUBLIC BEACH	FEF	M
18	3	ATLANTIC OCEAN BEACHFRONT	FEF	M
18	4	ATLANTIC OCEAN BEACHFRONT	FEF	M
181	1	PUBLIC BEACH	FEF	M
187.01	9	TAYLOR AVENUE WATERFRONT	FEF	M
188.01	1	TAYLOR AVENUE WATERFRONT	FEF	M
19	10	ATLANTIC OCEAN BEACHFRONT	FEF	M
19	9	ATLANTIC OCEAN BEACHFRONT	FEF	M
20	10.01	ATLANTIC OCEAN BEACHFRONT	FEF	M
20	11.01	ATLANTIC OCEAN BEACHFRONT	FEF	M
20	12.01	ATLANTIC OCEAN BEACHFRONT	FEF	M
20	13	ATLANTIC OCEAN BEACHFRONT	FEF	M
20	14.01	ATLANTIC OCEAN BEACHFRONT	FEF	M
202	11	TAYLOR AVENUE WATERFRONT	FEF	M
21	6.01	ATLANTIC OCEAN BEACHFRONT	FEF	M
221	1	BIRD SANCTUARY/PARKER ISLAND	FEF	M
224	1	BIRD SANCTUARY/PARKER ISLAND	FEF	M
42	13	ATLANTIC OCEAN BEACHFRONT	FEF	M
67	10	PUBLIC BEACH	FEF	M
71	1	PUBLIC BEACH	FEF	M
71	2	ATLANTIC OCEAN BEACHFRONT	FEF	M
71	3	ATLANTIC OCEAN BEACHFRONT	FEF	M
71	4	ATLANTIC OCEAN BEACHFRONT	FEF	M
88	1	PUBLIC BEACH	FEF	M
89	2	PUBLIC BEACH	FEF	M
90	3	PUBLIC BEACH	FEF	M
ROW		OCEAN FRONT PAVILIONS - CENTRE ST	ROW	M
ROW		PUBLIC DOCK	ROW	M
ROW		OCEAN FRONT PAVILIONS - FIFTH ST	ROW	M
ROW		OCEAN FRONT PAVILIONS - PEARL ST	ROW	M

The above information is the Recreation and Open Space Inventory (ROSI) on file with Green Acres. Please note that Green Acres relies on the accuracy of the information provided to us by the Local Unit(s) in maintaining the accuracy of our database. Since it is the responsibility of the Local Unit(s) to ensure compliance with Green Acres rules, it is strongly recommended that you confirm this information with the Local Unit(s).

APPENDIX 5

Sign Ordinance

The following ordinance has been introduced by the Municipal Council and will be considered for final adoption on the date in bold. The public will be given the opportunity prior to the adoption of the ordinance to air their concerns. Time for public comment immediately preceding the adoption of the ordinance is required.

ORDINANCE #2016-14C

AN ORDINANCE AMENDING AND SUPPLEMENTING Chapter 57-4(C), "Protection of Beaches and Dunes," of the Borough Code of the Borough of Beach Haven, County of Ocean, State of New Jersey, 2000" to regulate the use of dune walkovers.

WHEREAS, the Borough has determined to regulate permitted uses within the beach-dune areas within the Borough; and

WHEREAS, the Borough has enacted beach and dune protection regulations, codified at § 57 of the Code; and

WHEREAS, § 57-4(C) regulates construction of the beach-dune area; and

WHEREAS, § 57-4(C)(2) provides that "No private walkways, ramps, steps or pavilions to provide access to the open beach will be allowed within the Borough of Beach Haven;" and

WHEREAS, it is the intent of the governing body that § 57-4(C)(2) be amended to permit and regulate the construction of private dune walkovers, provided that the owner of any oceanfront lot has executed the perpetual storm damage reduction easement required in order for the United States Army Corps of Engineers to undertake its beach protection and restoration program on Beach Haven's oceanfront.

NOW THEREFORE, THE MAYOR AND COUNCIL OF THE BOROUGH OF BEACH HAVEN DO ORDAIN AS FOLLOWS.

SECTION I

Section 57-4(C)(2) shall be amended as follows (underscores represent additions; ~~strikethroughs~~ represent deletions):

(2) Access to the open beach in this zone shall be obtained ~~only~~ across street ends or along properly installed and approved walkways. The construction of ~~walkovers,~~ ramps, steps and pavilions shall only be permitted at street ends without damage to the dunes themselves. No private walkways, ramps, steps or pavilions to provide access to the open beach will be allowed within the Borough of Beach Haven.

(a) The provisions of Section 57-4(C)(2), above, shall not apply to any oceanfront lot if the owner of that oceanfront lot has executed the perpetual storm damage reduction easement required in order for the United States Army Corps of Engineers to undertake its beach protection and restoration program on Beach Haven's oceanfront. In such cases, the owner of such lot shall only be permitted to install and utilize a rollover beach access walkway between the first of April and the first of November of any year. Such rollover walkways shall be rolled up and safely and securely stored during the period November 1 through March 31 of each year. Such rollover walkways shall be constructed only pursuant to the provisions of this chapter.

(b) Dune Walkways

1. Permit required. Commercial/Multi-Family units (over two units) only are required to obtain written approval from the NJ DEP Division of Land Use Regulation in prior to obtaining a zoning permit from the Borough of Beach Haven. All applicants for a single family/duplex walkways must, before any work of the type described in this section may begin, obtain a zoning permit after submission of plans, including location and dimensions, and a survey to ensure compliance

with the provisions hereof; and the work and progress shall be subject to inspection by the Director of Public Works to assure compliance therewith.

2. Permit Fee. Each application for a permit under the provisions thereof shall be accompanied by a fee of \$100, which sum shall include payment for inspection by the Director of Public Works and the processing of the application for a permit. Each permit holder shall be subject to an annual re-inspection fee of \$75.

3. Construction specifications. After the effective date of this ordinance, *Editor's Note: "this ordinance" refers to Ord. 2016-13C*, all dune walkways shall be constructed of prefabricated rollaway decking or unrolled sand fencing. Such walkways may extend over the complete dune area to the flat beach . No grading, excavating or filling of the dune or beach are allowed. Single family/duplex walkways shall not be greater than four (4) feet in width. Commercial/Multi-Family (over two units) walkways shall not exceed twelve (12) feet in width, however, this width is subject to the written approval from DLUR. In addition to the prefabricated rollaway decking or unrolled sand fencing, signs shall be placed on posts of treated lumber or cedar measuring four (4) inches by four (4) inches extending at least three (3) feet below the surface of the dune at least four (4) feet above the surface of the dune on which the signs shall be placed stating "Cross the dune only on this walkway. No trespassing on the dune." The posts shall be placed on the flat beach end of the walkway with the required signs facing away from the walkway. The flat surface of the sign shall be as close as possible to a ninety-degree angle from the surface of the walkway. Where walkways exist, it shall be suitably bordered on both sides with fences to prevent damage to the dunes or berms which they cross. The walkway fences shall be constructed of materials

matching, similar to, or the same as, such materials existing at a public access point which the walkway intersects, touches, or approaches.

4. Any dune walkways which are required to be removed pursuant to the United States Army Corps of Engineers Beach Storm Damage Reduction Project may only be replaced pursuant to the construction standards hereinabove set forth in Subsection 3 and in compliance with any regulations adopted by the State of New Jersey Department of Environmental Protection and the United States Army Corps of Engineers in connection with such restoration and protection program.

SECTION II

Section 57-4(D) shall be amended to read:

Except as otherwise permitted by Section 57-4(C)(2) of the Code of the Borough of Beach Haven, access to the open beach in this zone shall be obtained only across street ends. Where boardwalks and steps are constructed on street end extensions, access shall be across such boardwalks and steps only.

SECTION III

Section 57-11 shall be added as follows:

§ 57-11. Violations and Penalties. Any person, firm, corporation or public agency that shall be convicted of a violation of a provision of this ordinance shall, upon conviction whereof by any court of competent jurisdiction, be subject to a fine not exceeding one thousand dollars (\$1,000.00) or imprisonment for a term not exceeding ninety (90) days, or both, as such court in its discretion may impose. Each day that such violation exists shall constitute a separate offense.

In addition to the above penalties, the Beach Haven Beach Patrol, Code Enforcement Officer, Zoning Officer, Police Department or other duly authorized officers or employees are hereby empowered to pursue such legal and equitable relief as may be necessary to abate any violation or enforce any condition of this ordinance.

SECTION IV

Repealer. All Ordinances or parts of Ordinances inconsistent herewith are repealed to the extent of such inconsistency. The Clerk of the Borough is authorized to renumber and/or re-codify any sections affected by such repeal to the extent consistent with this Ordinance.

SECTION V

Severability. If any word, phrase, clause, section or provision of this Ordinance shall be found by any Court of competent jurisdiction to be unenforceable, illegal or unconstitutional such word, phrase, clause, section or provision shall be severable from the balance of the Ordinance and the remainder of the Ordinance shall remain in full force and effect.

SECTION VI

Effective Date. This Ordinance shall take effect upon publication thereof after final passage according to law.

NOTICE

Public notice is hereby given that the foregoing ordinance was introduced and passed on first reading at the regular meeting of the Municipal Council of the Borough of Beach Haven, County of Ocean and State of New Jersey on Monday, June 13, 2016.

Further notice is given that said ordinance will be considered for final passage and adoption at a regular meeting of the said Municipal Council of the Borough of Beach Haven to be held Monday, July 11, 2016 at the Municipal Building, 420 Pelham Avenue, Beach Haven, New Jersey.

Sherry Mason, RMC, Municipal Clerk

CERTIFICATION

I, Sherry Mason, RMC, Municipal Clerk of the Borough of Beach Haven, do hereby certify that the foregoing Ordinance was duly adopted on first reading by the Municipal Council of the Borough of Beach Haven at a regular meeting held on the 13th day of June, 2016, a quorum being present and voting in the majority.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal this 13th day of June, 2016.

Sherry Mason, RMC, Municipal Clerk

First Reading: June 13, 2016

Publication: June 23, 2016

Passage: July 11, 2016

Final Publication: July 21, 2016

Effective: August 10, 2016

CIRCULATION ELEMENT

Existing Traffic Patterns

Beach Haven's transportation system is long recognized as one focused mainly on the personal automobile as this well maintained residential community lacks close proximity to major bus depots, airports or train stations. However, regional growth on the island fueled by the replacement of small bungalows with much larger homes that can accommodate many more people, is putting pressure on the local road network and the availability of parking as well as the safety of pedestrians. The Borough must balance the needs of increased municipal traffic and the traffic of those from Holgate in Long Beach Township with the need to protect the character and charm of Beach Haven as a historic coastal community.

The Borough has only one main principal arterial road, Bay Avenue (Long Beach Boulevard), which serves as a feeder road to the regional roadway network once at the Dorland Henderson Bridge and NJSH Route 72 on the mainland in Stafford Township. Typical design of these roads includes fewer curb cuts in an effort to facilitate efficient movement of traffic throughout the area. For this reason, curb cuts are usually offered on the side road of corner lots when available. The Borough's downtown business district is also located directly along Bay Avenue and installing curb cuts results in a decrease in the number of on street parking spaces available to patrons.

The remainder of the streets are collector and local streets which are maintained by the municipality and typically carry between 500 and 3000 vehicles per day. This varies depending on the month in this seasonal community. These streets are often more pleasant to drive and the preservation of these streets is important in the town's efforts to maintain the character of the area.

As the Borough is fully developed, the existing street pattern is expected to continue which will maintain the atmosphere of the town.

Roadway Improvements

No transportation projects by the New Jersey Department of Transportation or the County of Ocean are anticipated to occur in Beach Haven directly, however, there is an on-going roadway and bridge project on the Route 72 bridges and approach roadways which is expected to last through the year 2020.

Prior to the start of construction, all four bridges of the Route 72 span from Stafford Township to Ship Bottom Borough exhibited severe deterioration and were outdated. The recently completed deck resurfacing project was only expected to extend the life of the deck until the existing Manahawkin Bay Bridge rehabilitation was completed after the proposed new parallel Manahawkin Bay Bridge is constructed.

Age and deterioration of the structures, increased marine and highway traffic, and the potential for storms to disrupt normal operations are some of the reasons why these bridges needed to be rehabilitated. The existing Manahawkin Bay Bridge and three trestle bridges along Route 72 are over 50 years old. Their serviceable life without major rehabilitation is limited based on their existing conditions and the increasing expenditures of tax dollars for necessary repairs. The continuing development of fatigue cracks in the floor beams of the Manahawkin Bay Bridge and progression of severe rusting requires replacement of its superstructure. The chipping and cracking of the pier caps of the tree trestle bridges requires extensive retrofitting for these bridges. It was deemed to be more cost effective to perform a major rehabilitation than to continue repairing the bridges as problems develop.

As noted previously, highway traffic on Route 72 to Long Beach Island has increased with additional population and the popularity of the shore areas. The combination of increased recreational and commuter traffic causes more congestion on the bridges and its access roads, which also hampers access for emergency vehicles. The project will provide wider lanes and shoulders on Route 72 and constructing a new parallel Manahawkin Bay Bridge will provide redundancy for the bridge crossing that can be used during a possible emergency and/or for future maintenance and rehabilitation of either of the twin bridges.

Since Route 72 is a coastal evacuation route and is a vital link as the only access point to and from Long Beach Island, the improvements will allow better traffic flow, shoulders for increased safety and emergency access, continuous sidewalk access from the mainland to Long Beach Island, and relief from storm-related drainage issues in Ship Bottom.

The project has been broken down into five different contracts for completion. Construction on Contracts 3 and 5 began in February 2015. Contract 3 will rehabilitate the trestle bridges over East Thorofare and West Thorofare along the Route 72 Causeway between the mainland and Long Beach Island, along with various associated improvements.

Included in Contract 5 will be the environmental mitigations needed to comply with the environmental permit conditions for the entire project. The project includes wetland creation, mitigation for freshwater wetlands and retrofit of two existing stormwater basins within the Barnegat Bay watershed and public access improvements.

A contract to rehabilitate the existing Manahawkin Bay Bridge and the trestle bridge over Hillard's Thorofare will be next and the entire Manahawkin Bay Bridge superstructure will be removed and replaced.

A separate construction contract will address safety and operational issues at the Route 72/Marsha Drive intersection in Stafford Township. This contract will also include operational and drainage improvements in Ship Bottom Borough, on Long Beach Island. Two-way traffic will be restored along Central Avenue and Long Beach Boulevard and traffic signals along 8th and 9th Streets (Route 72) will be improved.

Mass Transportation

Regional Service

Beach Haven is not serviced by any large scale mass transit bus or train network. Regional transportation hubs are available in Atlantic City which is approximately 49 miles away and both bus and trains are available there to Philadelphia and New York City. Connections can then be made to other major cities on the Northeast Corridor as well as to the Philadelphia and Newark International Airports.

Airports

The Atlantic City International Airport is approximately 45 miles from Beach Haven and is served by Spirit Airlines which offers direct flight service to 10 major cities including several in Florida where many residents of Beach Haven spend their winters. The nearest major hub airport is Philadelphia International Airport which is approximately 77 miles from the Borough.

Long Beach Island Shuttle

Long Beach Island Shuttles were introduced in 2014 by Long Beach Township and is free service that runs along all 18 miles of the island. With designated areas to stop, it is easy to find a shuttle or wave one down to get anywhere you need on the island. The service now offers an app for use on wireless cellular devices that enables riders to track the proximity of a bus to their location. This service is sponsored by local business and is gaining in popularity. Its well suited to the island as it decreases the number of personal vehicles being driven on the roads and each shuttle can also be used as an emergency vehicle in the event of a mass evacuation. The Borough should continue to support this mass transit initiative.

Biking Network

A designated bike lane is provided on Atlantic Avenue between Dolphin Avenue and Twelfth Street. During the summer months, this area is greatly utilized by bicycle riders along with walkers, joggers and those pushing baby strollers. The intense use of this 10 FT wide +/- bicycle lane is dangerous as bicycle riders and vehicles have been known to hit pedestrians. Since this type of activity is synonymous with vacationers, the issue is expected to continue and could likely worsen. Its recommended that the Borough explore options of adding bicycle lanes along West Avenue.

Parking and Vehicle Space Striping

The lack of parking on Borough Streets was a primary concern during this master plan process. The limited number of correctly striped parking stalls has led to difficulty by residents and vacationers to find suitable parking in town and resulting in many parking summonses being issued for incorrect vehicle parking. As a result, the Borough has undertaken a town-wide re-striping initiative to stripe and delineate approximately 300 new parking stalls where possible and specifically on:

Amber Street	Marine Street
Bay Avenue	Ninth Street
Centre Street	Ocean Avenue
Coral Street	Pearl Street
Dock Road	Second Street
Engleside Avenue	Taylor Avenue
Fifth Street	Third Avenue
Fourth Street	West Avenue

These spaces should better accommodate the residents and patrons to the downtown businesses and support should continue to assist the Borough's efforts in maximizing the number of available off-street and on-street parking spaces.

In addition, the Beach Haven School with frontage in the Business District operates on a seasonal basis and the existing blacktop parking lot is situated in a way that could easily provide approximately 100 parking spaces. If this lot is utilized as a paid lot, it could provide the school with an additional funding source while also providing additional off-street parking for those visiting the business district July 1st through Labor Day.

Throughout this process, it was realized that Borough mapping was lacking right-of-way widths, parking locations including available lots and spaces as well as travel direction and biking lanes. New mapping should be prioritized so that future planning efforts involve all relevant information available from the field.

COMMUNITY FACILITIES ELEMENT

Borough Government

Since 2010, the legislative function of Beach Haven have been governed by a five-member Borough Council within the Faulkner Act, formally known as the Optional Municipal Charter Law, under the Council-Manager form of government. The Members are elected in non-partisan elections, with either two or three seats available in even-numbered years as part of the November general election in a three-year cycle. At a reorganization meeting held each January, one member is chosen as mayor and another as council president, each serving one-year terms in that position. The Borough's Manager serves as the Chief Administrative Officer and lead of the administrative branch of the Borough's government. The Manager oversees the affairs of the Borough.

The year round population served by the Borough's various departments is approximately 1183 residents but the seasonal variations in residents and visitors substantially increase this number and consequently the demand for services is much higher. The police department is just one of the departments that is directly impacted by the population followed closely by the public works department.

Since Superstorm Sandy in 2012, the Borough's offices have been located within the Emergency Operations Center at 420 Pelham Avenue, however, a new 15,000 SF +/- Municipal Building is under construction at the site of the former building and occupancy is anticipated by late 2017.

Public Safety

The Beach Haven Borough Police Department is a full service municipal law enforcement agency whose goals are to preserve life and property, enforce federal, state and local laws and maintain a safe and peaceful environment for the residents and visitors of Beach Haven. The Department currently employs 12 full-time police officers, and 15 seasonal police officers to enhance the force during the busy summer tourist season. The department and its 911 center occupy space in the current Emergency Operations Center but will move to the new Borough Hall when complete. The department will be constructed to meet the latest design requirements in accordance with NJ DCA—Division of Codes and Standards.

Public Works

The Borough offers its own Public Works Department for service to its residents who are primarily responsible for the maintenance of municipally-owned buildings and grounds, municipal water and sewer utilities as well as storm water drainage and trash refuse pickup. Their office is currently under construction at Engleside Avenue but the administrative offices will be located within the Municipal Building at 300 Engleside Avenue. No additional offices are needed for this department.

The Borough of Beach Haven does not pick up household hazardous waste and the placement of these items on the curb is not permitted. For all permitted mixed rigid plastics, the public works department will pick up these items curbside on a weekly basis.

Recently, the Borough has identified that the existing trash collection trucks are aging and not in good working order. The need to develop a plan for purchasing new trucks has been discussed as has the possibility of privatizing refuse collection. If new trucks are purchased by the town, the possibility of purchasing automated side collecting trash trucks and associated cans has also been discussed. Providing one (1) can to each residence would be a large initial expense to the Borough but additional cans could be purchased by the homeowners for a fee. Many homeowners utilize garbage corrals to keep their trash and recycling cans from being wind swept and these corrals could likely not be used with the automated trash truck. Elimination of the trash corrals though would increase the curb appeal of the homes on the streets and alleviate many of the corrals being within the Borough right of way.

Beach Patrol

The Beach Haven Beach Patrol oversees the safety of users of the Borough's beaches and enforces the regulations of the beach as well as provide assistance to distressed swimmers or injured beach goers. The beach is also monitored by beach badge checkers who are primarily responsible for ensuring that those who are utilizing the oceanfront are in possession of a beach badge, if required. In late spring each year, lifeguard tryouts are held and a staff of guards is assembled. The beaches are guarded by a skeleton crew on select beaches starting Memorial Day weekend and typically are not guarded on a daily basis until late June. Beaches are then guarded again by a skeleton crew after Labor Day Weekend in early September.

After being destroyed by Superstorm Sandy, the Beach Patrol Headquarters was rebuilt in 2014 at the street-end of Centre Street and is expected to adequately meet the needs of the Borough for the foreseeable future.

Beach Haven Public Library

On land at the corner of 3rd Street and Beach Avenue that was donated by the Pharo family, Beach Haven's first residents, the Beach Haven Library was built in 1924 and the interior hasn't changed much since that time. The library provides New York's Times best sellers books, participates in Inter-Library Loans and has a Children's section that includes small tables and chairs as well as a meeting room that is typically available for community groups to use. A DVD collection, computers and a color laser printer are also available. Laptops are also encouraged as the building offers a wireless network. The upstairs area is well used and includes historical documents. The Borough should continue to support the efforts of this local facility.

Beach Haven Volunteer Fire Company

The Beach Haven Volunteer Fire Company #1 is a 100% volunteer organization founded in April of 1883. The Beach Haven Volunteer Fire Company #1 provides volunteer Fire Prevention, suppression and rescue service to the residents of Beach Haven Borough and Long Beach Township from 85th St. south to 13th St. and from Nelson Ave. south into Holgate, or until the end of the Island. The Beach Haven Volunteer Fire Company also provides Mutual-Aid to the surrounding Fire Companies, including automatic Water Rescue dispatch for the entire Island, Forest Fires on the Mainland, structure fires in other towns or to cover another Firehouse while they are tied up on a call. The Beach Haven Borough Council have recognized the Beach Haven Volunteer Fire Company #1 as the primary fire suppression provider for Beach Haven Borough. The Beach Haven Volunteer Fire Company #1 also provides service under contract to Long Beach Township.

Founding members of the Beach Haven Volunteer Fire Company are: Samuel R. Cowperthwaite, John Marshall, James Sprague, Henry Ireland, William H. Butler, Charles R. Cox, Hiram Lamson, George C. Dayton, John T. Fox, and George H. Walker.

The Beach Haven Volunteer Fire Company consists of approximately forty active volunteers, manning a three piece engine company, a tower ladder, one support vehicle, one Water Rescue Truck, one Command Truck, and two Jet-Skis for surface water & ice rescue. Service is provided from a single station located at Amber St. and South Bay Avenue in Beach Haven.

The Department is in need of a new firetruck and the cost of this truck is intended to be funded in thirds by the Beach Haven Fire Department, the Borough of Beach Haven and the Township of Long Beach. Additional funding sources should be explored to help offset the purchase cost to residents.

Beach Haven Volunteer First Aid Squad

The Beach Haven First Aid Squad was started in 1939. It is responsible from the Southern tip of Beach Haven Inlet to the northern boundary of Ship Bottom which is 10 miles of the 18 mile island. There is a board of nine members which consists of five administrative, one captain, and 3 at large members. The squad is funded by the municipalities they serve and by private donations. They handle anywhere from 1100 to 1200 calls a year.

The main issues facing the future of the squad consists of lack of volunteers. At present, there are about 20 -25 summer volunteers. That drops considerably in the winter months to around 10. It is felt this decline is due to the lack of young families moving to the island and the decrease of full time residents.

Since Hurricane Sandy, the availability of affordable housing has declined and little housing stock is available for young families to move to the island and therefore volunteer in their community. This issue needs to be addressed in the future planning of the borough by making affordable housing available.

New Jersey Maritime Museum

Located on Dock Road in the MC-Marine Commercial Zone lies the New Jersey Maritime Museum which is a local gem to this community. Founded by Deb Whitcraft on June 3, 2007, this museum was built upon Deb's quest for knowledge about different wrecks and New Jersey Maritime disasters. Working alongside other New Jersey Maritime Historians and amassing a sizeable collection of shipwreck files and artifacts. In the years since its opening, the museum's contents have grown substantially due in part to donations and loans from the diving community and the general public.

The museum was constructed entirely with private funds, however, it is now a registered non-profit entity and deed restricted to remain. It operates entirely on volunteer staff and is open year round Friday through Sunday in the off-season and seven days per week during the summer.

Beach Haven School

The Beach Haven School District is a community public school that serves students in pre-kindergarten through sixth grade from Beach Haven Borough.

As of the 2014-15 school year, the district and its one school had an enrollment of 105 students and 11.4 classroom teachers for a student-teacher ratio of 9.2.

The district is classified by the New Jersey Department of Education as being in District Factor Group "FG", the fourth-highest of eight groupings. District Factor Groups organize districts statewide to allow comparison by common socioeconomic characteristics of the local districts. From lowest socioeconomic status to highest, the categories are A, B, CD, DE, FG, GH, I and J.

For seventh through twelfth grades, public school students attend the Southern Regional School District, which serves the five municipalities in the Long Beach Island Consolidated School District (Barnegat Light, Harvey Cedars, Long Beach Township, Ship Bottom and Surf City), along with students from Beach Haven and Stafford Township, as well as the sending district of Ocean Township. Schools in the district are Southern Regional Middle School (grades 7 and 8; 937+ students) and Southern Regional High School (grades 9 – 12; 2,064 students). Both schools are in the Manahawkin section of Stafford Township.

HISTORIC PRESERVATION ELEMENT

INTRODUCTION

Historic Preservation Advisory Commission (HPAC)

In 2004 Beach Haven approved the formation of a Historic Preservation Commission. Working under the Land-Use umbrella, its primary purpose is the preservation of the Borough's local heritage, cultural, historical and architectural symbols of the past. In 2007 the Historic District was expanded covering 30 square blocks which contained 384 cottages. Its boundary roughly runs from 5th Street to Chatsworth Avenue and from Bay Avenue to Atlantic Avenue.

The Greater Beach Haven Historic District exhibits the most intact resources of a beachfront residential resort which developed after being established in 1874. Within its boundaries are found Victorian Seaside Cottages, Baymen's Houses, early 1900's Summer Bungalows and plan book, craftsmen houses built after the end of World War II.

Historic Districts are created to guide, not to prevent change. The Historic Preservation Advisory Commission provides assistance to property owners in shaping changes and improvements to properties while meeting the standards of Beach Haven's Zoning Ordinances and preservation guidelines and standards. The Preservation Ordinance establishes a process that ensures that changes to properties in the Historic District are consistent with the spirit and character of the Historic District while meeting owners' and residents' contemporary needs. In the preservation design and review process, plans are examined and evaluated before construction work begins.

The ordinance does not require property owners to make any changes to their homes or buildings. It does not apply to any interior work, nor to routine maintenance of exterior features that do not constitute a change in appearance or materials. However, any exterior alterations, demolition, new construction, additions or relocation of buildings in the Historic District is subject to evaluation and approval by the Commission through the review process. The Commission provides consultation and assistance to property owners about proposed changes to their homes or buildings. In the early planning stages of a project, owners are encouraged to contact the Commission by email at HPAC@beachhaven-nj.gov. Borough ordinances can be found in Chapter 108 of the Beach Haven Code on the Borough's website, www.beachhaven-nj.gov.

VISION AND PURPOSE

The overriding goal of historic preservation is to foster ongoing appreciation, preservation, protection and enhancement of the historic buildings, structures and character of Beach Haven. The town's rich history and extensive inventory of historic resources are essential building blocks of the community's character. Protecting this history helps to retain the authentic sense of place that connects us with our past and informs the future. The Borough's buildings, structures, neighborhoods and landscapes have shaped the community's identity throughout its history. Preserving the significant and unique aspects of the built environment provides a sense of place and helps preserve community values for the future.

The following goals summarize Beach Haven's vision and approach to historic preservation, as articulated by the Historic Preservation Commission and embodied in the preservation ordinance.

- Safeguard the cultural, social, economic and architectural heritage of Beach Haven.
- Identify and catalog the historic and architecturally significant buildings, structures, sites, objects and districts located within the Borough.
- Promote an appreciation of our cultural, physical and architectural heritage, including historic landmarks, by engaging, involving and communicating with stakeholders and all citizens about the importance of preserving Beach Haven's cultural heritage.
- Regulate alterations to historic resources, in an appropriate manner, and discourage unnecessary demolition, destruction or other actions disruptive of historic resources.
- Maintain cohesive neighborhoods by promoting a compatible and harmonious context for historic buildings, structures, sites and districts and by discouraging out of scale and other inappropriate new construction that would be destructive of the character of Beach Haven neighborhoods.

Residents and visitors are attracted to Beach Haven's character and the charm of its physical setting. This charm is a fragile commodity, one that is vulnerable if style and scale are not respected. As the community evolves and changes over time, important aspects of community character may be lost if they are not preserved in a proactive manner. The risks include the disruption of neighborhood cohesiveness when inappropriate new construction violates the scale and rhythm of the street and/or removes long-established landscaping. The slow erosion of the Borough's historic fabric, setting and materials is a subtle but serious threat because insensitive alterations can diminish the quality of historic buildings and landscapes.

Historic preservation efforts seek to anticipate these risks and to develop a range of tools and working partnerships so that an informed and concerned citizenry can maintain and enhance Beach Haven's physical environment and its civic virtues. While formal regulations lay the foundation for historic preservation, outreach and consensus-building are also essential components of successful preservation efforts. These can help allay the concerns of individual property owners and the general public, who sometimes fear a negative impact on property values from regulation of historic buildings. A process of education about the community values reflected in historic resources is critical.

It is the policy of the Borough of Beach Haven to promote and encourage the preservation of those buildings and structures in the Historic District that exemplify its cultural, social, economic, and architectural history. Many of our residential neighborhoods, park landscapes, historic architectural styles, houses of worship, historic sites and intimate downtown streetscape are among the properties that the Borough seeks to preserve for the education, enjoyment and general welfare of its citizens and guests.

POLICIES AND FRAMEWORK

The legal basis for historic preservation in Beach Haven is established through municipal policies and ordinances, the town's master plan, other applicable plans and New Jersey statutes. The overall framework for preservation is also defined by the historic context of the town itself, since that provides the cultural and aesthetic motivations for conducting local preservation activities.

Creation of Beach Haven's Historic Preservation Commission

The Borough of Beach Haven adopted a Historic Preservation Ordinance in 2004 establishing a Historic Preservation Commission. The ordinance provides the authority for local historic sites, buildings and districts to be identified and formally designated; and for the regulation of future development and/or alteration of such sites and in such districts to ensure that inappropriate development will not harm historic character.

Beach Haven is among the approximately 25 percent of New Jersey municipalities that currently have a Historic Preservation Commission. Such commissions are authorized and empowered by the New Jersey Municipal Land Use Law (MLUL). Consequently, a Historic Preservation Commission is a participant in the development of local land use regulations. It is noteworthy that Historic Preservation Commissions are the only bodies among those prescribed by the MLUL for which the membership must include persons technically knowledgeable in the areas of concern, namely building design, construction and architectural history.

The Beach Haven Land Use Board recognizes the dedicated efforts of the Historic Preservation Commission, particularly in assisting the Board in articulating the preservation policies and regulations designed to meet the unique needs of the community.

Certified Local Government Status

Beach Haven's Historic Preservation Commission is one of only a few dozen in New Jersey that have sought and been accepted into the Certified Local Government (CLG) program. This program is administered by the National Park Service through the New Jersey Historic Preservation Office. Eligibility for CLG status requires that the commission membership meets a specified level of expertise and enables the Historic Preservation Commission to serve as a representative of the New Jersey Historic Preservation Office on local issues. Achieving CLG status is indicative of both the competence of the members of Beach Haven's Historic Preservation Commission and the quality of the town's Historic Preservation Ordinance.

Participation in the CLG program allows the Borough to review and comment through Section 106 of the National Historic Preservation Act as a consulting party on federally funded, licensed, permitted and/or assisted projects having potential impact on historic properties. CLG status also makes the Borough eligible to compete for state funded grants for a variety of preservation activities.

Promote Rehabilitation of Historic Properties

In 1999, New Jersey implemented a new Rehabilitation Sub Code for locally designated properties or those listed on the New Jersey or National Registers of Historic Places. The new Sub Code relaxes certain construction code requirements for historic buildings in an effort to make rehabilitation an affordable and realistic alternative to demolition and new construction. This program is now nationally recognized as a stimulus for historic preservation. It has the potential in Beach Haven to help protect the historic fabric of the town and neighborhoods, and to slow unnecessary demolition of historic buildings. HPAC should provide educational materials for property owners regarding rehabilitation options under the new Sub Code.

SURVEYS AND INVENTORIES

Since its inception, the Beach Haven Historic Preservation Commission has devoted significant effort to conducting surveys of historic sites, buildings, monuments and other structures and artifacts. The resulting inventory is valuable in and of itself as a historic record. Moreover, it provides a foundation for subsequent actions by the commission such as the designation of landmarks or historic districts. This information will also be useful in the development of educational materials to help property owners and the general public appreciate and care for the historic resources that contribute to the community's architectural heritage.

The Beach Haven Historic District exhibits the highest concentration of the most intact historic resources of the beachfront resort, which developed very rapidly after being established in 1874. The Beach Haven Historic District is generally bounded on the east by the centerline of Atlantic Avenue, on the north by a line located midway between Fifth and Sixth Streets, on the south side by a line midway between Chatsworth and Dolphin Avenues, and on the west by an irregular line that typically represents the rear lot line of commercial establishments that face Bay Avenue.

The description of the core of the district was prepared by Michael May for the original 1983 National Register District nomination and is reprinted in part below.

The Beach Haven Historic District comprises approximately seven square blocks located one block west of the Atlantic Ocean and one block east of Beach Haven's modern Business District. From the intersection of Atlantic Avenue and Pearl Street, the District extends north along Atlantic Avenue to Second Street and west along Pearl Street to Beach Avenue. The District's building stock consists of late 19th century residential structures, two churches, and a few late nineteenth century commercial buildings. Evidence of several late Victorian styles can be found in the area including the Victorian Queen Anne, the Gothic Revival, the Colonial Revival, the Italianate and the Shingle styles. A majority of the structures are 2-1/2 story, detached homes built near the street, but with large side yards. In general, the buildings employ similar materials and elements even though vernacular and high-style structures co-exist.

The extension of the original National Register-listed District was delineated in a 2006 study by McCabe Associates and adjoins the original National Register-listed District on its north and south. This expanded area was defined as that adjoining residential section of the Borough that retains a preponderance of buildings that contribute to the District's significance because of their dates of construction and their retention of architectural integrity. The following is an inventory of the properties within the district.

The inventories have been compiled through a combination of historic map analysis, archival and deed research, and field observation. The findings are documented in a series of historic sites survey forms, filed with the Borough and the State. The complete published survey results are available for review at the office of the Beach Haven Library Museum.

TIMELINE HISTORY OF BEACH AVEN

1609: Voyage of Captain Henrik Hudson on the Half Moon passes Long Beach Island.

1640-1776: The desolate, nearly treeless barrier island known in colonial times as Long Beach was of little use to anyone but sportsmen and those coastal farmers who allowed their cattle to roam the sand hills. There was plenty of fresh surface water in the numerous bogs and ponds.

1850: Ocean County created out of the southern half of Monmouth, by New Jersey Legislature. At the south end of the island (now Holgate), Captain Thomas Bond owned and operated a hotel called the Long Beach House. Wealthy Philadelphians along with men from Tuckerton and the vicinity around Mount Holly came for fishing and duck hunting. It was there that they began planning a nearby resort for their families. These adventurous men visited sites north of Holgate looking for suitable ground and a natural creek that could be used to ease the transport of building materials.

1871: U.S. Life Saving Service instituted in Ocean County follows rescue work of Captain Bond.

1871: Tuckerton businessman Archelaus Pharo successfully completes his branch railroad to Philadelphia providing this coastal community with a direct rail link to the big city. At the same time, this visionary developer buys 670 acres of Long Beach Island land for \$243. Eventually this acreage becomes the community of Beach Haven. A year later he builds a railroad spur from Tuckerton to Edge Cove on Little Egg Harbor for the convenience of passengers to sail across the bay.

1873: The Tuckerton and Long Beach Building, Land and Improvement Association is incorporated and Pharo completes the transfer of his 670 acres to the Association for \$6,666.66. Newly elected president Charles Parry presides over the first Commission meeting in Tuckerton. Beach Haven is officially founded when the State approves the charger. Pharo's daughter chooses the name, "Beach Haven" for the resort.

1874: First two cottages are built on Second Street by Archelaus Pharo. Charles Parry, also president of the Philadelphia based Baldwin Locomotive Works builds the Parry House hotel on Centre Street. Lloyd Jones builds the Beach Haven House at the end of Mud Hen Creek. It stands until 1967 and is now the site of Buckalews Restaurant.

1875: Robert Engle and his cousin Samuel, Quakers from the vicinity of Mt. Holly, buy land between South Street (now Engleside Avenue) and Amber Street to build the Engleside Hotel. It stood until 1943 when it was destroyed by fire. Thomas Sherbourne, land owner of the entire south end of Beach Haven, builds the farmhouse that will eventually form the nucleus of the sprawling, three-story building on Liberty Avenue, now known as the "Beck Farm". Streets were laid out, leveled and graveled.

1876: Beach Haven Yacht Club founded as a sailing society with Charles Gibbons III as Commodore. A public wharf is built at the end of Mud Hen Creek (Dock Road) to accommodate passengers arriving on catboats and steamboats.

1877: The Magnolia House on Centre Street is established. Hiram Lamson is its owner and operator. It is later sold to the Conklin family. The Acme Hotel (present day Ketch) is constructed on Dock Road at the end of the public wharf by John and Sara Cranmer.

1878-1881: The resort grows as additional summer and year-round houses are built. Quaker inspired houses are constructed on Third Street. Beach Avenue becomes the heart of the business area as small stores are erected along it. Cottage construction does not cross to the protected lands between Atlantic Avenue and the ocean.

1881: In August, the Parry House burns to the ground. No one is injured, but it reemphasizes the town's need for a fire company. Mrs. Charles Parry sponsors the construction of the Holy Innocents Episcopal Church (now the Long Beach Island Historical Association Museum) in gratitude that no lives were lost in the Parry House fire. First service is conducted on July 9, 1882. "Portia Cottage" (123 Coral Street) was built for the Dr. Edward Williams and his family. Both are Shingle-style buildings with Stick-style embellishments designed by notable Philadelphia architect John Allston Wilson.

1883: The Beach Haven Volunteer Fire Company is established on April 28, 1883. The Baldwin Hotel (1883-1960) is built on land between Pearl and Marine Streets. Named for the founder of the Baldwin Locomotive Company, it had a capacity for 400 guests. It was designed by John A. Wilson and commissioned by Charles Parry. The Baldwin Hotel owners operated a small train from the hotel to the bay named the Mercer B and nicknamed the "Beach Haven Flier".

1884: The first Beach Haven School is erected on Third Street and Miss Lilly Bates becomes the first teacher. The building is the present day Baptist Church.

1885: Baymen's cottages are being built on Second Street between Bay and Beach Avenues. The owners make a living by raising oysters, clamming and fishing for the markets. During duck and geese season, they guide sportsmen out to points around the meadows and maintain boats, decoys and duck blinds. Others operate large catboats, party boats or yachts. Work begins on the grading and trestle for the railroad approach over Barnegat Bay from Manahawkin to Ship Bottom. The Pennsylvania Railroad Company lays tracks on Long Beach Island after the company executives become part of the Beach Haven community. The following year, the railroad starts running trains from Philadelphia to Beach Haven- as many as ten trains a day during the summer months.

1887-1889: Most of the seaside cottages are completed on Coral Street for the Philadelphia railroad executives of the Baldwin Locomotive Works. Dr. Edward Williams and John Converse complete their mirror-image "Onion Dome" houses designed by John A. Wilson on Atlantic Avenue. Most of the Queen Anne style houses are built on Centre Street on the former site of the Parry House Hotel. Most of the Queen Anne houses facing the Hotel Baldwin are completed on Pearl Street. Dr. Henry Drinker who became the President of Lehigh University buys "Curlew Cottage" located at 112 Coral Street. Daughter Catherine Drinker Bowen is a celebrated biographer and one of Drinker's sons developed the "iron lung". Famed Impressionist and portraitist Cecilia Beaux often visits her relatives, the Drinker family, and she paints a number of family portraits while here. Curlew Cottage was sold in 1994, after nearly 105 years of Drinker family occupancy. New businesses include Spackman's Seaside Pharmacy, Cox's Ice House and Store, and Hopper's Ice Cream Parlor.

1890: On November 11, the new Borough of Beach Haven is established by the New Jersey Legislature. William L. Butler is elected as the first mayor. The original Kynett Methodist Church was built by G.S. Butler. It is destroyed by fire on Palm Sunday, 1932. A new brick church is built on the same lot and dedicated in August of 1933.

1893: The first chapel of St. Thomas Aquinas Roman Catholic Church, designed by Philadelphia architect Edward Durant is built and consecrated at Fourth Street and Beach Avenue. The Beach Haven Water Works is established. A 75-Foot wooden water tower is erected consolidating the Borough's water system.

1904: The Corinthian Yacht and Gun Club is built on the northwest corner of Marine Street and Beach Avenue. It is unabashedly aristocratic and used for gunning, shooting and other social activities. The club folds in 1911 but was precedent of the Little Egg Harbor Yacht Club founded by Elmer F. Weidner in 1912.

1905: The 1905 New Jersey Census indicated that there were 301 residents living in 78 Beach Haven dwellings.

1909-1911: Sandlot baseball flourishes between Marine and Ocean Streets. Charles Beck buys the old Sherbourne farmhouse on Liberty Avenue. He is a Philadelphia printer and engraver and the man who coined the phrase "Six Miles at Sea", so closely associated with Long Beach Island.

1914: A huge celebration is held in June in honor of the construction of a drawbridge and causeway over the Barnegat Bay and the completion of a boulevard to Beach Haven. Festivities include a luncheon at the Engleside Hotel, baseball games and a dinner at the Baldwin Hotel followed by fireworks.

1920's: The present Beach Haven Library, a Colonial Revival design by R. Brognard Okie, is built in 1924. It is presented to the Borough by Mrs. Elizabeth Pharo in memory of her late husband, W.W. Pharo and his parents. Bungalows are constructed on Belvoir and Berkeley Avenues and on Fourth Street.

In 1923, Floyd L. Cranmer establishes a small building company. This company would go on to build many of the mid-20th Century Colonial Revival style beach houses. The first of the "Seven Sisters" cottages is built on the corner of Atlantic Avenue and Berkeley Street (right). Designed by architecture student Henry Reed, Cranmer's company would build six additional houses in this design by 1936.

1935: Southern branch of the railroad ceased operation when the bridge was washed out by a storm in November.

1940's: On September 14, 1944, a destructive unnamed hurricane hits southern Ocean County and more than 28 houses are destroyed in Beach Haven. Joe Hayes opens his Surfflight Theater on Engleside Avenue in what had once been a tin-roofed garage. This building, later used as a scenery shop is torn down in 2007 to make way for an actors' dormitory.

1962: A devastating March storm results in losses of both life and property. The damage prompts a significant change to local building codes and construction practices. From this time on, new houses would be built on stilts with parking areas, either open or enclosed, at the ground level.

Historic Land Use and Zoning Recommendations

1. Develop an Architectural Review Commission to review and make recommendations for downtown business district. The Historic Preservation Commission can serve as a local resource for technical information on historic preservation, providing guidance for new construction or alterations in historic neighborhoods and commercial districts. The Commission should continue its efforts to develop and sponsor workshops and publish technical bulletins for homeowners about historically appropriate construction and renovation.

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2. Buildings should be designed with reverence to the past by incorporating architectural elements from the older styles into the new buildings.
 3. Encourage recognition and further identification of significant structures and sites that do not fall within any Proposed Districts. As was pointed out in the original survey, there are structures within the Borough that for whatever reason stand as islands upon an island. These properties include the Beck Farm on Liberty Avenue, the Sherbourne Cottage on Liberty and Bay Avenues, the Little Egg Harbor Yacht Club and the Beach Haven School. A new survey will again recognize these structures that are still standing and it is hoped, will also pinpoint other structures and sites within the Borough that do not fall within any designated district. These structures and sites will be recommended for preservation. It is vital that we pinpoint these properties as they are the properties that are at the most risk of loss. They have no current protections and our Master Planning process needs to make provisions for the ongoing protection of these special places.
 4. Promote the Recognition of Streetscapes as Fundamental to the Preservation of Beach Haven's Historic District. A defined streetscape including the following, streets, pedestrian walks and curbs, driveways and off-street parking, fences, street furniture and lighting, signals, and utilities, signage, trash enclosures, and landscaping, it is important for planning purposes that the Borough is looked at as a whole, rather than as a collection of its individual parts. Nowhere is this more important than within the historic district or within any potential historic districts. Relation of the historic structures to the street is part of what helps to create the historic feel that is so important to any historic district. It is essential that all planning for work in the Borough be done in a manner appropriate to the historic character of Beach Haven, while at the same time recognizing that modern amenities and functions still must exist there too. Much of this can be done through inclusion of the aforementioned features, and a decision as to how they should be treated, within the Borough's design guidelines and then sticking to them in an effort to achieve a harmonious appearance.
 5. Prioritize the Revision of the Zoning Ordinances of the Borough of Beach Haven as they relate to the Designated Historic Districts as it is in the best interest of the community to ensure that new development bordering the Historic District of Beach Haven is compatible with and relevant to, the areas in which they are being constructed. Current zoning ordinances, however, tend to influence the architecture of the new construction in a way considered inconsistent with the stated intent and goals of the HPAC. Complying with requirements of both current zoning ordinances and the HPAC might be interpreted by detractors as an undue burden on the property owner.

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6. In reference to Off-street enclosed parking, Streetscape objectives of the HPAC dictate a house elevation that is not consistent with construction that includes parking under the living space of an elevated house. Rear yard setbacks (side and rear) should be re-evaluated and changed to encourage historically compatible detached garages for new construction and also for existing structures with no garage.
 7. Covered porches are an important architectural component for new architecture that is compatible with the historic structures in the district. The current 35% lot coverage restriction, however, results in a penalty for including a covered porch on any project in the Borough of Beach Haven. Covered porches, along with single-story detached garages, should be considered differently in computing lot coverage. Additionally, if the owner of a historic home attempting to restore the structure wanted to replace a covered porch that had once been removed, this would allow for that construction also.
 8. An important attribute of the town's historic structures are the roof lines including the roof pitch. The 35 foot height restriction, as currently worded, is inconsistent with the goals of historic compatibility put forth by the HPAC.

The eye is attracted more to the eaves of a house than its roof height when subjectively evaluating a house's height. The height limit for historically compatible new homes should be based on the eave height and not on the roof height. This would allow desired roof pitch flexibilities, and eliminate the low roof pitch motivation.

9. Buffer Zones and Compatible Zoning in Areas Bordering the Historic District should be as currently, the boundaries of Beach Haven's Historic District touch the Commercial District from Fifth Street to Pearl Street. As a consequence, development on adjacent commercial properties could have an adverse impact on historic properties. They should be protected by creating screening and landscaping requirements and their strict enforcement.
10. Establishment of a Historic Preservation Advisory Commission Technical Review Committee.
 - A. This Committee will be composed of three Commissioners who will meet with the homeowners within the historic district to discuss any major addition or "new" construction before architectural plans are developed.

-
- B The Committee's purpose is to steer residents in the appropriate direction by following the guidelines found in our ordinance and our Standards of Design booklet. They will only act on an informational level. Their recommendations shouldn't have any impact on the Commissioners' vote at a regular scheduled HPAC hearing.
- C. It is this Committee's mission is to clarify the preservation process, explain the visual compatibility standards, and give "many" recommendations. Once established, a flyer could be placed in all 384 mailboxes explaining the purpose of the Technical Review Committee.
11. Steps should be taken to Increase public awareness of the Borough's heritage by encouraging the creation of historic plaques and markers for buildings and landmarks and preserve relics of the past.
 12. Where historic structures must be expanded encourage the sensitive design of additions that retain the integrity of the structure, the preparation of a brochure is recommended to offer residents and real estate professionals examples of how historic homes can be renovated in a manner that is sensitive to the historic context of the building, neighborhood and Borough.
 13. Heritage tourism could be advanced by establishing a Beach Haven Historical District self-guided tour. This would also be an opportunity for favorable interaction with neighboring communities. In this regard, Beach Haven should consider a program to develop and maintain interpretive exhibits and information on historic resources.
 14. In a time of technological advances and offsite archiving, it would be advantageous to develop an automated database of all historical resources in Beach Haven so that this information can be stored and accessed more efficiently and productively by all interested parties. This information would also be kept secure at a location not prone to damage from flood events.
 15. Establish an awards program recognizing homeowners who have restored historic cottages in the District.
 16. An update to the HPAC Ordinance should be considered, if deemed appropriate by the Commission.
 17. Promote The Archive Center located in the Library Museum.

ECONOMIC ELEMENT

As a seasonal resort community, Beach Haven depends upon vacationers and day trippers to support the local economy. This support comes in the way of frequenting local food and beverage establishments, purchasing goods at local shops and also providing rental housing stock for those looking to stay in a private home for the season or month. Over the past years, the Borough has seen a shift in the type of homeowner that owns property here. At one time, the rental housing stock was comprised mostly of second homeowners who rented their homes for the majority of the summer season whereas now, many second homeowners choose to utilize their properties for the summer months and not make them available to rent.

This change in the type of homeowners in the Borough also impacts the Business District which has seen a decline in occupancy of store fronts in recent years. A decrease in the number of weekly or even seasonal vacationers directly affects local storeowners as year round or even full time seasonal residents do not have a need to purchase souvenirs, or even beach essentials like sun hats and umbrellas. Surf-board rental shops are also impacted as this full time seasonal residents own this equipment, store it at home and use it at their leisure.

In addition to the changing demographic, convenient online internet sales also caters to the local resident and vacationers as any items needed can be shipped directly to their door and no vacation time is wasted shopping for essentials.

To facilitate collaboration between businesses, residents and local government and to assist in rejuvenating the Business District. The Beach Haven Economic Development Committee was formed in 2016 with key stakeholders and Borough Council representation. Their mission is to develop an economic growth plan for a modern business district that is reflective to the Borough's customer base and preferences. The Committee will identify necessary improvements and allow discussion that will improve profitability and launch both an immediate and long term marketing plan to attract investment.

The Borough should continue to support the efforts made in the Business District and be open to discussing new ideas and ordinances that will stimulate and sustain the local economy.

UTILITIES PLAN ELEMENT

Existing Infrastructure

The Borough of Beach Haven's utility infrastructure consists of public water, sanitary sewers and storm sewers and is served by natural gas, electric, cable service and solid waste and recycling provided by the municipality. Beach Haven's utility infrastructure is generally adequate to meet the needs of current residents, businesses and vacationers. Numerous infrastructure improvements have been completed in the past years including the installation of water meters in 2009 and a water main replacement project that included 14,000 LF of new distribution line. Since Superstorm Sandy in 2012, the water plant located on Engleside Avenue was reconstructed in 2014 and is built to the 500 year flood elevation for this area, i.e. 11.0 FT. The Borough has its own independent sewerage authority who periodically televises the system when excess flows are noticed. System upgrades are also made in conjunction with the municipal road paving program on an annual basis.

At this time, the Borough should continue its maintenance plan of its water sanitary sewer system and prioritize the replacement of water distribution mains where needed.

Stormwater and Nuisance Flooding

The Borough continues to battle nuisance flooding and stakeholders in the government, business and residential communities agree that it is one of the town's primary problems as it impacts day to day operations as well as the economic climate of the area. Numerous steps have been taken to begin addressing this issue including full participation with the United States Army Corps NJ Back Bays Flood Feasibility Study which is currently underway and expected to be completed by the year 2020. As an additional step, the Borough contracted with their Municipal Engineers, Owen, Little & Associates, Inc, in 2016 to conduct a Stormwater Drainage Study which is included in the Appendix of this document. The study found that possible remedies for flooding range from decreasing runoff to the installation of a large scale pump station. Various approaches to mitigate the flooding impacts exist, however, evaluation of the specific causes and impacts at each individual problem area by performing a complete engineering study will be required before implementing a solution or a combination of solutions. All possible remedies should be examined at each individual location to evaluate the best and most cost effective approach to preventing property damage due to flooding.



Through this preliminary investigation, the Borough does find it necessary to install two stormwater pump stations at 10th Street and 7th Street on the bayside which it plans to construct in the immediate future.

Other Utilities

Utilities and services such as gas, electric and telephone and cable are provided by independent suppliers and service to Borough residents is provided directly from the supplier. The Borough should ensure that these services continue to be available to residents by utility providers as technology changes and are rehabilitation projects are completed in the community.

When feasible, steps should be taken to install utilities below grade as a way to enhance the aesthetic of this coastal community. However, the impact of flooding to these utilities should also be a consideration prior to construction.

Stormwater Management

On January 5, 2004, the New Jersey Department of Environmental Protection adopted new rules to establish and implement a Municipal Stormwater Regulation Program. The rule is part of a Comprehensive approach being taken by the State to address the water quality and the water quantity problems that arise from onpoint pollution and the loss of groundwater recharge areas. The rules at N.J.A.C. 7:8-4.3(a) require that a municipality adopt a municipal stormwater management plan as an integral part of its master plan. The Borough addressed the planning requirement and adopted the stormwater plan in 2006 and then revised the plan in 2007. Within one year of the adoption of the stormwater plan, the Borough was required to adopt stormwater control ordinances to implement the plan. The Borough adopted a stormwater control ordinance in the same year through Ordinance No. 2006-14.

No changes have been made to the stormwater control ordinances or the stormwater management plan and the contents of both remain consistent with N.J.A.C 7:8 and the remainder of the Borough's Master Plan.

New Technology

With technology consistently increasing, the Planning Board should continue to monitor the new technology and adequate resources should be provided to the Board to ensure the members stay current especially in terms of telecommunications technology.

Recommendations

1. Continue coordination with local, state and federal partners to combat storm surge and nuisance flooding impacts.
2. Consider Best Available Sea Level Rise data when designing new utility infrastructure.
3. Implement appropriate actions derived from recommendations relating to studies of storm water drainage, vulnerability and resiliency.
4. Utilize Best Available Technology when upgrading existing utility infrastructure including public water, sanitary sewer and storm water facilities.
5. Encourage bulkheads and living shorelines or other forms of shoreline erosion barriers that will assist to minimize flooding and enhance the natural resources of the waterway.
6. The incorporation of LED lighting within public right of ways should be prioritized to decrease the expense of street lighting to the tax payer.
7. The condition of roadways should continue to be monitored and repaving should occur as necessary.

SUSTAINABILITY ELEMENT

PART 1 - COASTAL VULNERABILITIES ASSESSMENT

Beach Haven is located on the southern end of Long Beach Island, a barrier island which consists of 6 municipalities, off the mainland coast of southern Ocean County. Long Beach Island, like other barrier islands in the southern part of the United States, has only one means of access via NJSH Route 72 and is geographically vulnerable to natural coastal hazards. The Borough encompasses approximately 2.3 square miles of which 0.97 square miles is land and is bordered to the east by approximately 10,000 feet of ocean front on the Atlantic Ocean and to the west by 14,300 LF of Bayfront on the Barnegat Bay and, consequently, suffered devastating damage from Superstorm Sandy in 2012. In 2010, the population of Beach Haven was just 1170 people but in the summer months, the population soars to well over 20,000 people. The Borough is home to multiple attractions including the only amusement park on the island, Fantasy Island, Bay Village Shopping Center, the Beach Haven Maritime Museum, a distinguished Historic District, and many attractive shops and restaurants. There is also a water park, Thundering Surf, and numerous other recreational attractions. The Borough also has its own elementary school, public works, police department, first aid, library and municipal building which is being reconstructed after being destroyed in by Superstorm Sandy and is expected to be ready for occupancy by the end of 2017. The section of the island is only a few blocks wide which makes the ocean and bayfronts easily accessible by anyone from anywhere in the Borough. This convenience is precisely what attracts so many vacationers this area.

On the contrary, this narrow swath of land with grid style streets could be the ingredients for impacts and damage from coastal hazards such as storm surge and Sea Level Rise. Based on the latest Preliminary Work Maps released by the Federal Emergency Management Agency, the majority of Beach Haven lies within the 100-year floodplain and field inspections indicate that most unmitigated residential development sits at 5 FT or below in elevation in relationship to mean sea level. Therefore, a Category 1 hurricane, an extra tropical system like Super Storm Sandy or even a Nor'Easter all pose a significant threat to this community. Since Sandy's impact in 2012, and even prior to, residents of this seashore community have noticed more frequent flooding that occurs after brief heavy rain storms, summer thunder showers or even a strong northeast wind. Any or all of these influences can cause nuisance flooding in the Borough.

Described as a nuisance because the flooding typically impacts the streets and disrupts daily activity such as driving or accessing local businesses on foot, it often can cause more significant problems such as flood water intrusion into residential garages and first floors of businesses.

The only vehicular ingress and egress between the mainland and Beach Haven is via the Route 72 Manahawkin Bay Bridge in Ship Bottom, also commonly referred to as "The Causeway". As a result, residents of Beach Haven need to travel low lying areas of Long Beach Township (Spray Beach, Brant Beach) and Ship Bottom which becomes problematic for traffic attempting to navigate these floodwaters as the number of roads to leave the Borough are limited. As residents and visitors to this shore community do not arrive by way of air, bus or train travel, all means of travel between the barrier island and the mainland occurs by way of personal transportation, making an evacuation a time consuming process. Due to these factors, the island wide Offices of Emergency Management typically start issuing voluntary evacuation orders at least 72 hours in advance of a storm's anticipated impact. In addition, these same agencies will often issue mandatory evacuation orders in advance of County or State Mandated orders realizing the time and resources required to fully evacuate the island.

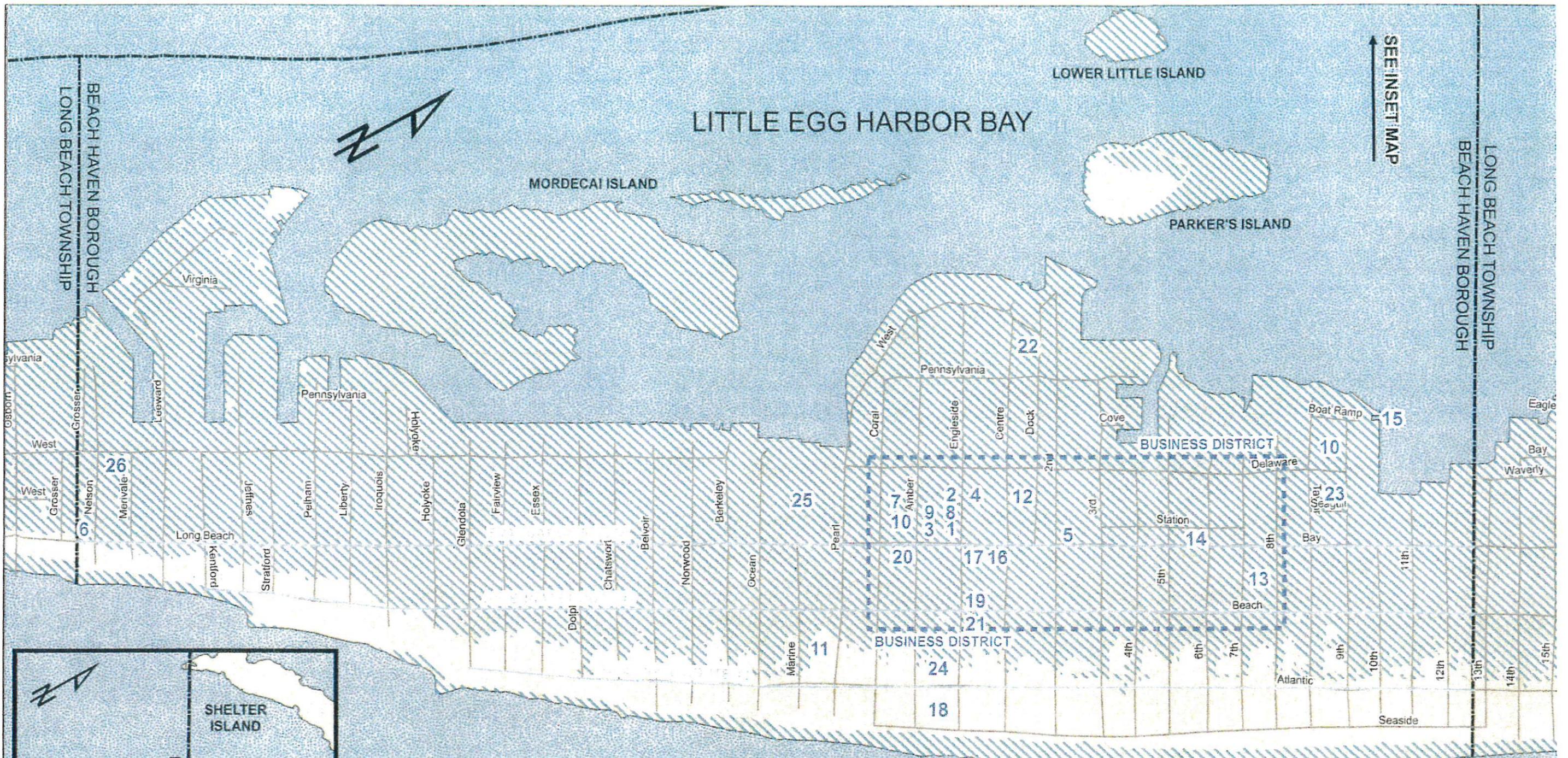
Lastly, the high number of lifelong residents who may have chosen to "ride out" significant storms like the Great Storm of 1962, the Storm of 1992 or even Superstorm Sandy in 2012 may be less inclined to heed the mandatory evacuation orders. These people, if they do not leave, are often the last leaving the island and are often being evacuated by highwater vehicle and not utilizing their own transportation. In our meeting with municipal residents and even some community leaders, we learned there is still very much a mixed view of the necessity to evacuate. Given the extreme damage to the communities south of Surf City, one would anticipate that during the next storm event, those people would certainly leave. Unfortunately, that expectation is not true. Instead, people feel they must protect their property during times of storm event though this is not always rational. With the high number of homes that have been raised well above the desired FEMA Flood Elevations, we foresee the number of people staying in their homes and ignoring mandatory evacuation orders to be higher during the next event which will undoubtedly put a tremendous strain on emergency personnel and resources. Residents that do not evacuate risk many safeties. They risk not being able to have food, water, shelter and/or medical care. They also risk not having law enforcement, fire and rescue protection as services are hampered or overwhelmed. Should there be a prolonged power outage situation, they face a delay in vital Public Information Announcements, further endangering themselves and emergency personnel.

Also, due to the damage caused by Superstorm Sandy, many areas of the island were not able to be permanently occupied in the days after the storm. A mandatory evacuation was ordered on October 28th at 4pm and Superstorm Sandy made landfall at 11:30pm on October 29th near Brigantine, NJ. Contractors were allowed on the island to start making repairs on November 5th and a permanent return of residents to the island, with the exception of Holgate, was permitted at 6am on November 10th if the home was habitable.

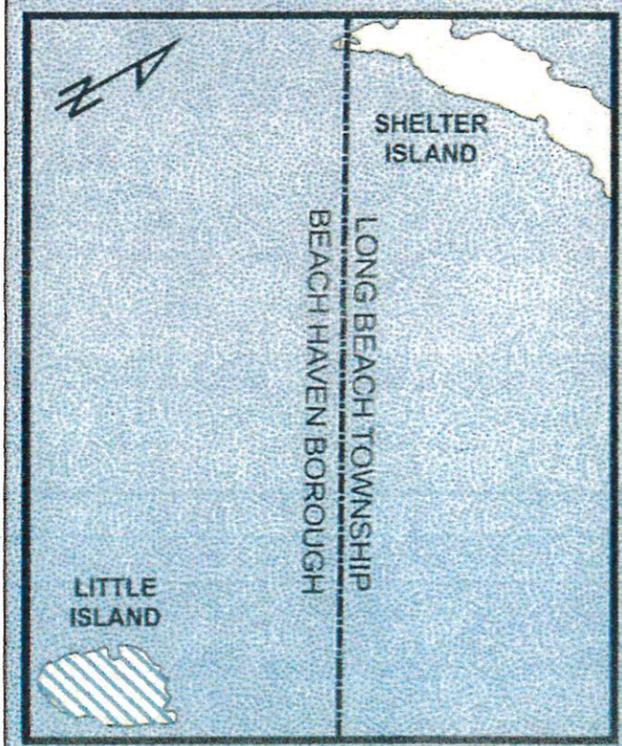
No re-entry to the island was permitted by residents during the 6 day period of time when damage assessment of homes, infrastructure and utilities was being completed and clean up was underway to permit safe travel of the roads. It was during this time that residents feel they may have had an opportunity to limit further damage to their homes by removing water and water logged pieces of the structure as well as furnishings and immediately mitigating the mold. Instead, there was adequate time for mold growth in the flooded homes. In meetings with homeowners after the storm, and even during past storm events like Joaquin and Jonas, there is a significant population that feels they will not evacuate the next storm for fear they will not be permitted to re-enter the island in time to mitigate damage and prevent potentially further destruction. This is a concern for local OEM's as it can be grimly dangerous to occupy the island after a major storm event due to the probable lack of electricity, water and sewer service and natural gas. Local emergency managers are viewing this group as a vulnerable population. It has also been said that due to the time it took to re-enter the island, local officials feel many people, whom own property on LBI as second homes or vacation homes, may actually occupy their homes during a storm event instead of staying at their full time residence elsewhere. If a storm occurs during the off-season, this population is not only increasing the calculated year-round population but may not be familiar with the local geography enough to realize areas that are more prone to flooding thereby increasing their risk.

The shuttle bus service on the island can be utilized during evacuation and stages in the Acme parking lot at 9600 Long Beach Boulevard in Long Beach Township.

This Coastal Vulnerability Assessment will specifically evaluate the Borough's level of exposure of its built environment, natural environment and social environment to storm surge related to a Category 1, 2 and 3 storm events as well as 1 FT, 2 FT and 3 FT of anticipated Sea Level Rise. During a recent unrelated evaluation of the Borough's stormwater management system, these factors were agreed to by both members of the governing body as well as the contracted professionals as the most serious when determining coastal vulnerability of the Borough.



SEE INSET MAP



INSET MAP (SCALE: 1"=700')

- 1 - BOROUGH HALL
- 2 - POLICE DEPARTMENT
- 3 - FIRE DEPARTMENT
- 4 - FIRST AID SQUAD
- 5 - ELECTRICAL SUBSTATION
- 6 - PUMP STATION
- 7 - WELL #9
- 8 - WELL #10
- 9 - WELL #11
- 10 - STAGING AREAS
- 11 - HOLY INNOCENTS EPISCOPAL CHURCH
- 12 - UNITED METHODIST CHURCH
- 13 - BEACH HAVEN ELEMENTARY SCHOOL
- 14 - POST OFFICE
- 15 - PUBLIC BOAT RAMP
- 16 - KAPLER'S PHARMACY
- 17 - MURPHY'S MARKETPLACE
- 18 - ENGLSIDE HOTEL
- 19 - SURFLIGHT THEATRE
- 20 - ROMMEL'S LIQUOR STORE
- 21 - L.B. HISTORICAL MUSEUM
- 22 - MUSEUM OF NJ MARITIME HISTORY
- 23 - TAYLOR AVENUE PARK
- 24 - VETERANS MEMORIAL PARK
- 25 - WALSCH FIELD
- 26 - NELSON AVENUE PARK

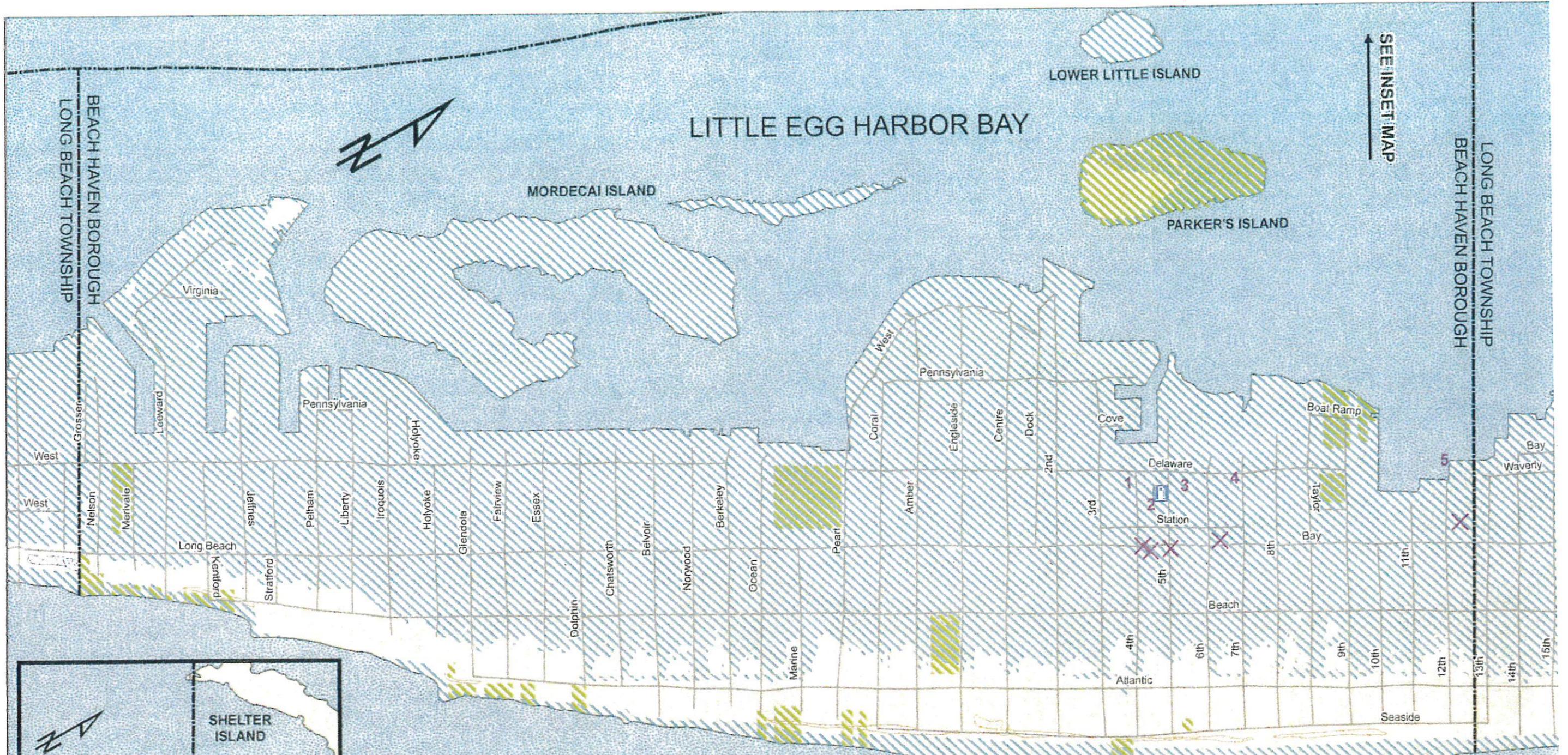
STORM SURGE

BEACH HAVEN BOROUGH

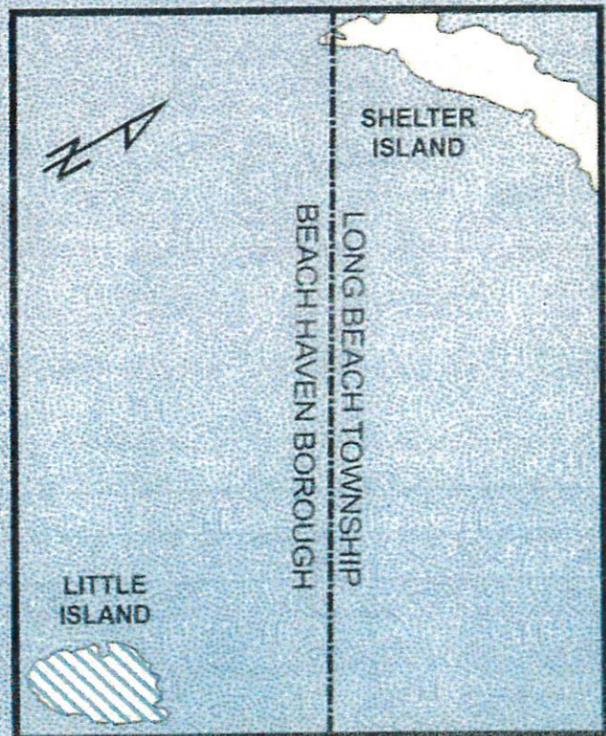
**COASTAL VULNERABILITY ASSESSMENT
BUILT ENVIRONMENT VULNERABILITY
SUPERSTORM SANDY - STORM SURGE**

0 350 700 1,400 Feet

Owen, Little and Associates, Inc.
443 Atlantic City Boulevard
Beachwood, NJ 08722
(732)244-1090



SEE INSET MAP



INSET MAP (SCALE: 1"=700')

STORM SURGE

- CONTAMINATED SITES**
- 1 - FORMER BEACH HAVEN LAUNDROMAT
 - 2 - BANK OF AMERICA
 - 3 - FRIENDLY MANAGEMENT CO.
 - 4 - JACK'S SERVICE CENTER
 - 5 - BEACH HAVEN AUTOMOTIVE

- LEGEND**
- CONTAMINATED SITE
 - GAS STATION
 - BEACH
 - WETLANDS
 - GREEN ACRES LAND

BEACH HAVEN BOROUGH

**COASTAL VULNERABILITY ASSESSMENT
NATURAL ENVIRONMENT VULNERABILITY
SUPERSTORM SANDY - STORM SURGE**

0 350 700 1,400 Feet

Owen, Little and Associates, Inc.
443 Atlantic City Boulevard
Beachwood, NJ 08722
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Vulnerability Assessment Introduction

The Borough of Beach Haven was awarded a grant by the New Jersey Department of Environmental Protection (Department), Division of Coastal and Land Use Planning, with funding through a grant awarded by the National Oceanic and Atmospheric Administration, of the U.S. Department of Commerce, to support the development of a Coastal Vulnerability Assessment (CVA) Report. A Coastal Vulnerability Report is intended to provide coastal communities with the ability to assess their vulnerability to coastal hazards and then identify opportunities to address those mapped concerns.

In addition, the five (5) other municipalities that make up Long Beach Island (LBI) are also analyzing their risks and vulnerabilities to coastal hazards under this program. In doing so and the Department understanding the interconnected resources and challenges the barrier island must contend with during times of significant weather events or federally declared disasters, the Department recommended the development of a Regional Coastal Vulnerability Assessment, which was accepted by all communities, and will address regional hazards and provide recommendations for the barrier island as a whole entity. The Department's objective with promoting a regional CVA Plan is to increase the resiliency of each municipality through consideration of the coastal hazard challenges and potential solutions of the entire island.

An associated component of assessing the Borough's vulnerability was to complete the Getting to Resilience Questionnaire with the technical assistance and support of Jenna Gatto and Lisa Auermueller of the Jacques Cousteau National Estuarine Research Reserve (JC NERR). The GTR questionnaire was initially developed and piloted by the NJDEP's Office of Coastal Management to foster municipal resiliency when confronted with coastal hazards and contains linkages, mitigation and adaptation actions to reduce vulnerability and increase preparedness. At a later date, the GTR process was adapted by the Coastal Training program at JC NERR, converted into a digital format, and placed on an interactive website. JC NERR then added additional linkages to the National Flood Insurance Program's Community Rating System (CRS), Hazard Mitigation Planning and Sustainable Jersey. Jenna Gatto, the region's Community Resilience Specialist, was able to meet with each municipality over the course of at least 2 meetings and provide community specific recommendations based on the outcomes of the questionnaire. All stakeholders are in agreement that this step was an ideal launch pad into the investigation of municipal coastal vulnerability.

Methodology

As noted above, the Borough of Beach Haven received a grant from the NJDEP to complete the GTR process, a Municipal Public Access Plan and a Coastal Vulnerability Assessment. The CVA was developed by Owen, Little and Associates, Inc. (OLA) team of Land Use and Natural Hazard Mitigation Planners, Civil Engineers, GIS Specialists and Certified Floodplain Managers as well as numerous stakeholders from the community including government officials and residents. This firm, Owen, Little & Associates, Inc., holds the professional appointment as Borough Engineer for the community of Beach Haven and has done so for more than two decades. With that, the office has accumulated a significant amount of data that was beneficial and valuable to this process such as base mapping and shapefiles attributed to the built environment including critical facilities and evacuation routes. This already obtained information allowed for an in-field update of the data to be required instead of a new inventory. However, numerous shapefiles had to be created for data sets such as those for water infrastructure. In coordination with JCNERR and assistance from Jennifer Rovito, GISP, at the Environmental Analysis and Communications Group of Edward J. Bloustein School of Planning and Public Policy, Rutgers University, provided data sets including those for Sea Level Rise and storm surge associated with the category 1, 2 and 3 hurricane.

As stated within the Getting to Resiliency Recommendations Report prepared by JC NERR, SLOSH models for Beach Haven indicate that flooding should be expected to be similar to Sandy's flood levels for a powerful Category 1 hurricane and impact increase exponentially the stronger the storm. Also, scientists expect this area to be impacted by 1.5 FT of Sea Level Rise prior to 2050. As Sea Level Rise is anticipated to accelerate due to shrinking land ice and thermal expansion, scientists anticipate that 3.5 FT of Sea Level Rise is very likely before 2100.

	Sea-level rise (feet)		
	Global	Bedrock	Shore
2030 central	0.5	0.7	0.8
2030 low	0.3	0.5	0.6
2030 high	0.7	1	1.1
2030 higher	0.9	1.2	1.4
2050 central	0.8	1.3	1.5
2050 low	0.5	0.9	1.1
2050 high	1.3	1.8	1.9
2050 higher	1.6	2.1	2.3
2100 central	2.5	3.1	3.5
2100 low	1.4	2.2	2.5
2100 high	4	4.6	4.9
2100 higher	4.6	5.5	5.9
2100 collapse	8.7	9.7	10

NJ sea level rise projection ranges and best estimates. K.G. Miller, R.E. Kopp, B.P. Horton, J.V. Browning and A.C. Kemp, 2013, A Geological Perspective on Sea Level Rise and its Impacts along the U.S. Mid Atlantic Coast. Earth's Future 1:3-18, doi:10.1002/2013EF000135

Tides

General tidal fluctuations along the Borough's bayshore, is from elevation -1.0 to elevation +1.5, or so; spring tides are as high as 2.0. Occasionally, maybe once a month, a "blow-out" low tide caused by high pressure and off-shore winds is recorded around elevation -1.5 or lower. Higher tide ranges are experienced at the time of full moons ("spring tides"), and tend to be greater in the winter months when the earth is closer to the moon.

More ominously, storm surge may accompany any severe coastal storm where an extreme low pressure system develops. With some storms a constant easterly wind will "stack up" the ocean waters, causing higher tides, which prevents the bay from emptying out the inlet, and back bay flooding occurs. Stronger and more persistent on-shore winds will mean higher and higher tides. This tends to happen up to four or more times a year and can reach elevations 3 or 4, or higher, flooding roadways and many structures.

The U. S. Geological Survey (U.S.G.S.) recorded Superstorm Sandy's High Water Mark at 7.9 in the Holgate section of Long Beach Township. While no official reading was measured in Beach Haven, the close proximity to the Holgate section of Long Beach Township makes this reading the most relevant comparison to the Beach Haven downtown area. With ground surface elevations around 2 to 3, devastating flooding occurred with great property damage. All elevations stated in this study are in feet and based on NAVD 1988.

Land Coverage and Topography

General topography of the areas west of Bay Avenue is flat, with surface grades of 1 to 2 percent. Road grades are even less with many roads being as low as 0.3 percent. In order to achieve drainage flow, the roads have a "see-saw" profile, where low points are created every other block or so. These low areas create pockets, where storm water collects and will be subject to flooding when excessive rainfall, tidal tailwater or debris clogging may occur. Where streets have been repaved or overlaid, due to the shallow gutter grades, puddling has occurred and runoff is not reaching the inlets.



Areas to the east of Bay Avenue generally are sloped upward towards the Ocean. Elevation change ranges from 2 at the bay area to 12 feet at the eastern street-ends by the beaches.

Stormwater Collection and Disposal

There are no natural drainage ways within the Borough, since most of the Borough has been built on filled lands. Some areas of wetlands still remain along the bayfront, notably to the west of Delaware Avenue between 5th Street and 7th street.

With most of the bayfront properties being filled and having bulkheads, any stormwater runoff from private properties and streets does not naturally drain over the surface into Little Egg Harbor Bay. All stormwater is conveyed to the bay by drainage collection systems.

All of the collected runoff is directed westward through piping systems towards the Bay and outlets through the street-end bulkheads. These drainage collection systems are gravity flow pipe systems, sloping from east to west within the road right-of-ways.

As the Borough grew over the years, the development of the drainage collection system has appeared to be mostly unplanned, and has progressed in a piggyback fashion, with later areas of development simply connecting to the earlier systems, with little upgrade in capacity. Some of the pipe systems may be over 80 years old, and are undersized by today's engineering standards.

It should be noted that the ownership and responsibility for stormwater collection systems are shared by the Borough and Ocean County.

Sea Level Rise Vulnerability

Sea Level Rise is a documented threat to the Borough of Beach Haven and the change in Sea Level Rise has been validated by members of the community over the years. The impending sea level will rise, due to glacial and ice sheet melting, and the risk of flooding will also increase due to the anticipated impacts from storms which may be more severe and more frequent. The historical rate of Sea Level Rise along the New Jersey coast over the past half century was 3-4mm/year or 0.12-0.16 in/year and these rates are expected to increase. In the recent publication entitled "A Geological Perspective on Sea-Level Rise and its Impacts along the U.S. Mid-Atlantic Coast", authors Miller and Kopp state that in the year 2050, the best estimate for Sea Level Rise is 1.5 FT along the Jersey Shore. By the year 2100, the best estimate for Sea Level Rise is 3.5 FT along the same coast. In this context, the term "best" refers to a 50% likelihood of that extent of sea-level rise occurring.

Built Environment

Beach Haven is a coastal resort community located on Long Beach Island, a barrier island, in southern New Jersey and offers an array of residential housing options, countless retail and dining establishments within a well-defined business district and numerous parks and public access points to the ocean and bayfront all of which make this Borough a sought after destination for vacationers and a highly desirable area in which to live seasonally or year-round. There are approximately 38 blocks south to north, and 3 to 4 blocks from the Bay to the Ocean (east to west). The total area of the Borough is approximately 2.32 square miles.

The Borough has 20.93 miles of roadways, of which 17.56 miles are maintained by the Borough and 3.37 miles maintained by Ocean County.

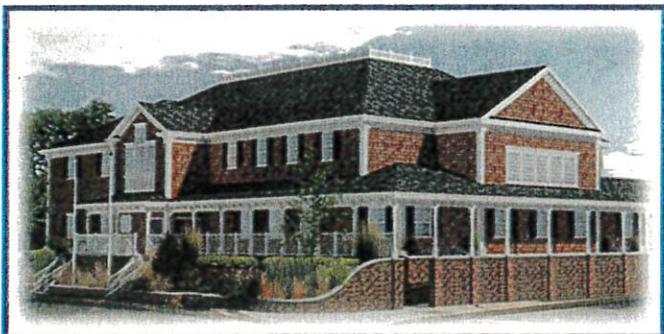
Known on Long Beach Island as the "Queen City," Beach Haven is a late 19th-century beach-front resort originally established in 1873 to house wealthy summer residents from Philadelphia. Although some of the major structures, including several hotels and a boardwalk, were lost to storms in the 1940s including the Hurricane of 1944, a portion of the Borough retains its Victorian and Edwardian character. The Beach Haven Historic District listed in the New Jersey and the National Register of Historic Places in the early 1980s, encompasses the most intact buildings in the center of the Borough.

At the time of the 2010 United States Census, there were 1,170 people, 531 households, and 301 families residing in the borough. The population density was 1,196.0 per square mile and there were 2,667 housing units at an average density of 2,726.2 per square mile. The flux in population season to season greatly affects the economic, social and physical makeup of the Borough and it is often the year-round residents whom are most affected by these conditions. The summer population can reach 20,000 people or more. Beach Haven is considered a fully developed municipality, with the exception of in-fill lots for redevelopment.

The Borough is unique in that it is accessible via only one (1) causeway which also serves five other municipalities. Increased vehicle and pedestrian traffic are concerns for this small community especially during the prime summer months when many vacationers are using the unfamiliar roads to drive, walk or ride bicycles. The grid-style road network in Beach Haven and the composition of its blocks are conducive for further improving the already thriving Borough center which is a goal of the stakeholders in Beach Haven.

There are many older homes and businesses, built prior to the March, 1962 Great Storm, that are not elevated or on pilings, and are only slightly above the existing street elevation. Since Superstorm Sandy

in 2012, many homes have been



elevated, but the remaining properties at grade elevation are susceptible to the threat of flooding from both tidal and rainfall events. However, much of the Borough-owned infrastructure has been mitigated since 2012 and now is built to the 500 year flood elevation as mandated for critical facilities that are financed using Federal HUD disaster relief funding. Specifically, the Water Plant Building at Engleside Avenue was completely rebuilt in 2014 to Elevation 12.0 and the Beach Haven Municipal Building will be completed by the end of 2017 and will also be constructed to Elevation 12.0.

As confirmed during Superstorm Sandy, the majority of the community is susceptible to storm surge inundation of a Category 1 hurricane, and the entire community will likely be submerged under a Category 2 storm. A Category 3 hurricane will be catastrophic to the Borough and most of its infrastructure. Access to any remaining infrastructure will be impossible.

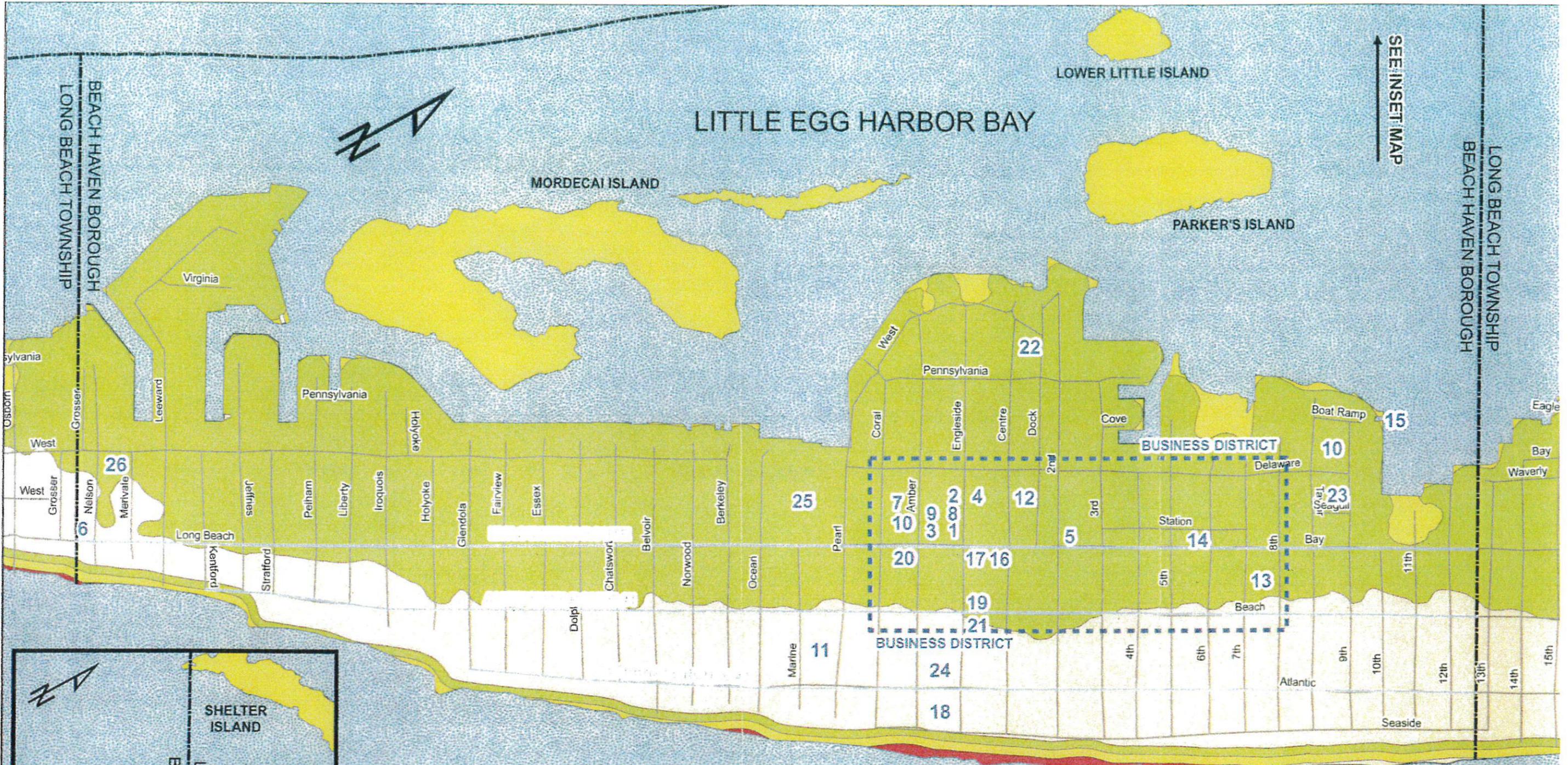
The Borough Fire Department, located at the corner of Amber and Bay Avenues, continues to be a location within the Borough that sees flooding during storm events. The most recent event to affect the Fire Department was during the Blizzard on January 22, 2016 and although the building took on water, floors and walls were rinsed after the floodwaters subsided and normal operations resumed. However, with the sea level continuing to rise, these impacts will be more severe in the future. Specifically, this area will see inundation during high tide events with a projected 2 FT of Sea Level Rise or by about 2060.



The area of Bay Avenue from Ocean Street northward to the Long Beach Township, which includes the Business District, will also see standing water at high tide events by approximately 2060. This is most concerning for the impacts this constant flooding will have on the economy to the businesses in this area. Currently, in 2016, Borough Stakeholders are already cognizant of the impacts to the local economy due to nuisance flooding events and are working with their Borough Engineer's office to conduct a full drainage study of the Borough and suggested recommendations to address the current flooding. Sea Level Rise projections are being incorporated to determine mitigation strategies.



Tropical Storm Joaquin, Fall 2015



SEE INSET MAP



STORM SURGE LEVEL

	0-3 FEET
	3-6 FEET
	6-9 FEET
	>9 FEET

- 1 - BOROUGH HALL
- 2 - POLICE DEPARTMENT
- 3 - FIRE DEPARTMENT
- 4 - FIRST AID SQUAD
- 5 - ELECTRICAL SUBSTATION
- 6 - PUMP STATION
- 7 - WELL #9
- 8 - WELL #10
- 9 - WELL #11
- 10 - STAGING AREAS
- 11 - HOLY INNOCENT'S EPISCOPAL CHURCH
- 12 - UNITED METHODIST CHURCH
- 13 - BEACH HAVEN ELEMENTARY SCHOOL
- 14 - POST OFFICE
- 15 - PUBLIC BOAT RAMP
- 16 - KAPLER'S PHARMACY
- 17 - MURPHY'S MARKETPLACE
- 18 - ENGLSIDE HOTEL
- 19 - SURFLIGHT THEATRE
- 20 - ROMMEL'S LIQUOR STORE
- 21 - L.B. HISTORICAL MUSEUM
- 22 - MUSEUM OF NJ MARITIME HISTORY
- 23 - TAYLOR AVENUE PARK
- 24 - VETERANS MEMORIAL PARK
- 25 - WALSCH FIELD
- 26 - NELSON AVENUE PARK

**BEACH HAVEN
BOROUGH**

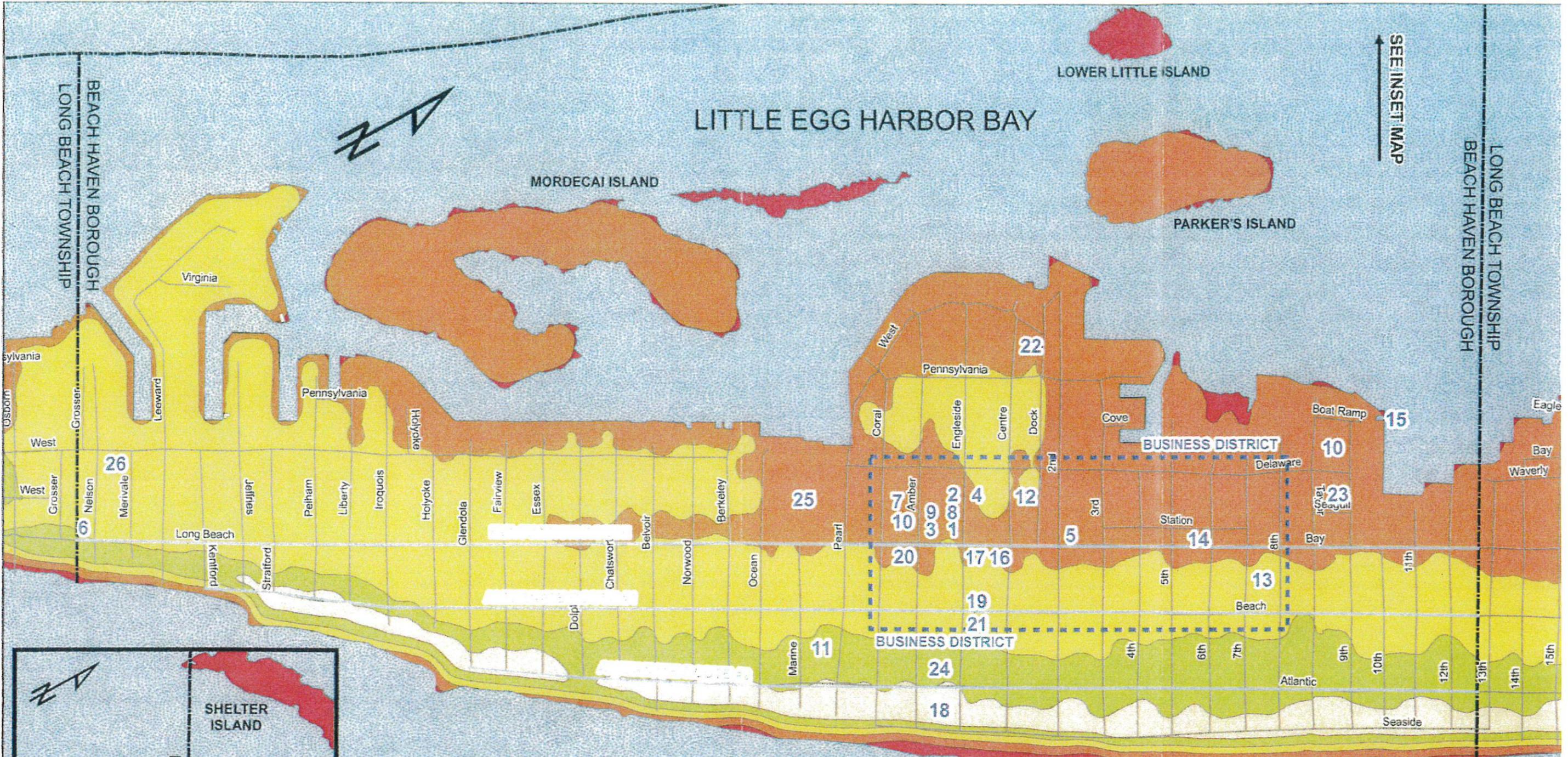
**COASTAL VULNERABILITY ASSESSMENT
BUILT ENVIRONMENT VULNERABILITY
CATEGORY 1 STORM**

Feet

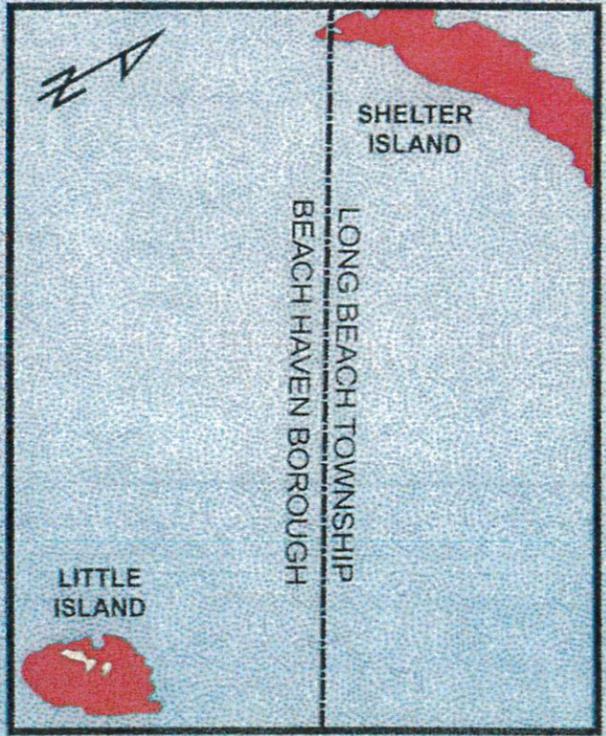
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443 Atlantic City Boulevard
Beachwood, NJ 08722
(732)244-1090

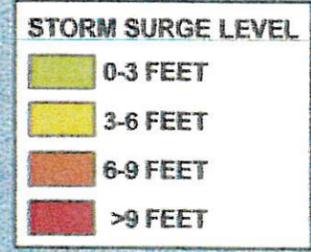




SEE INSET MAP



INSET MAP (SCALE: 1"=700')



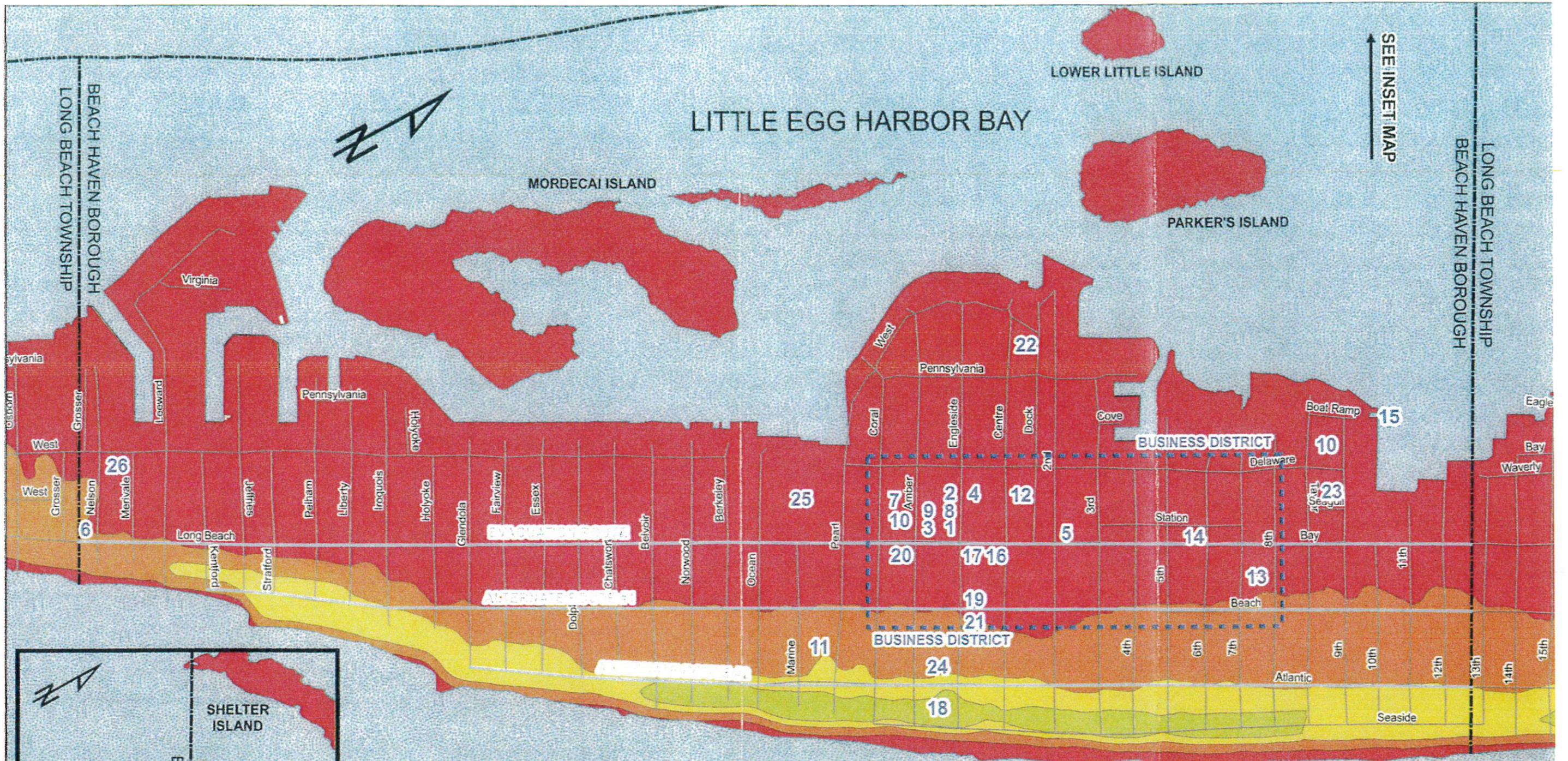
- 1 - BOROUGH HALL
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**BEACH HAVEN
BOROUGH**

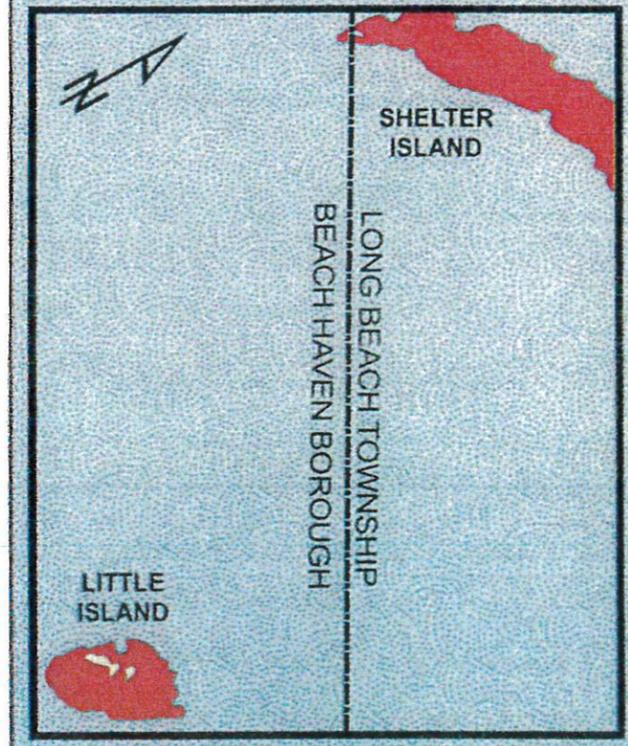
**COASTAL VULNERABILITY ASSESSMENT
BUILT ENVIRONMENT VULNERABILITY
CATEGORY 2 STORM**

0 350 700 1,400 Feet

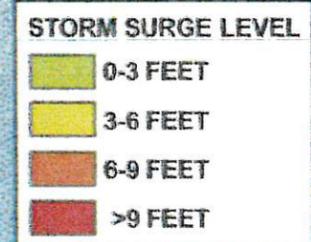
Owen, Little and Associates, Inc.
443 Atlantic City Boulevard
Beachwood, NJ 08722
(732)244-1090



SEE INSET MAP



INSET MAP (SCALE: 1"=700')



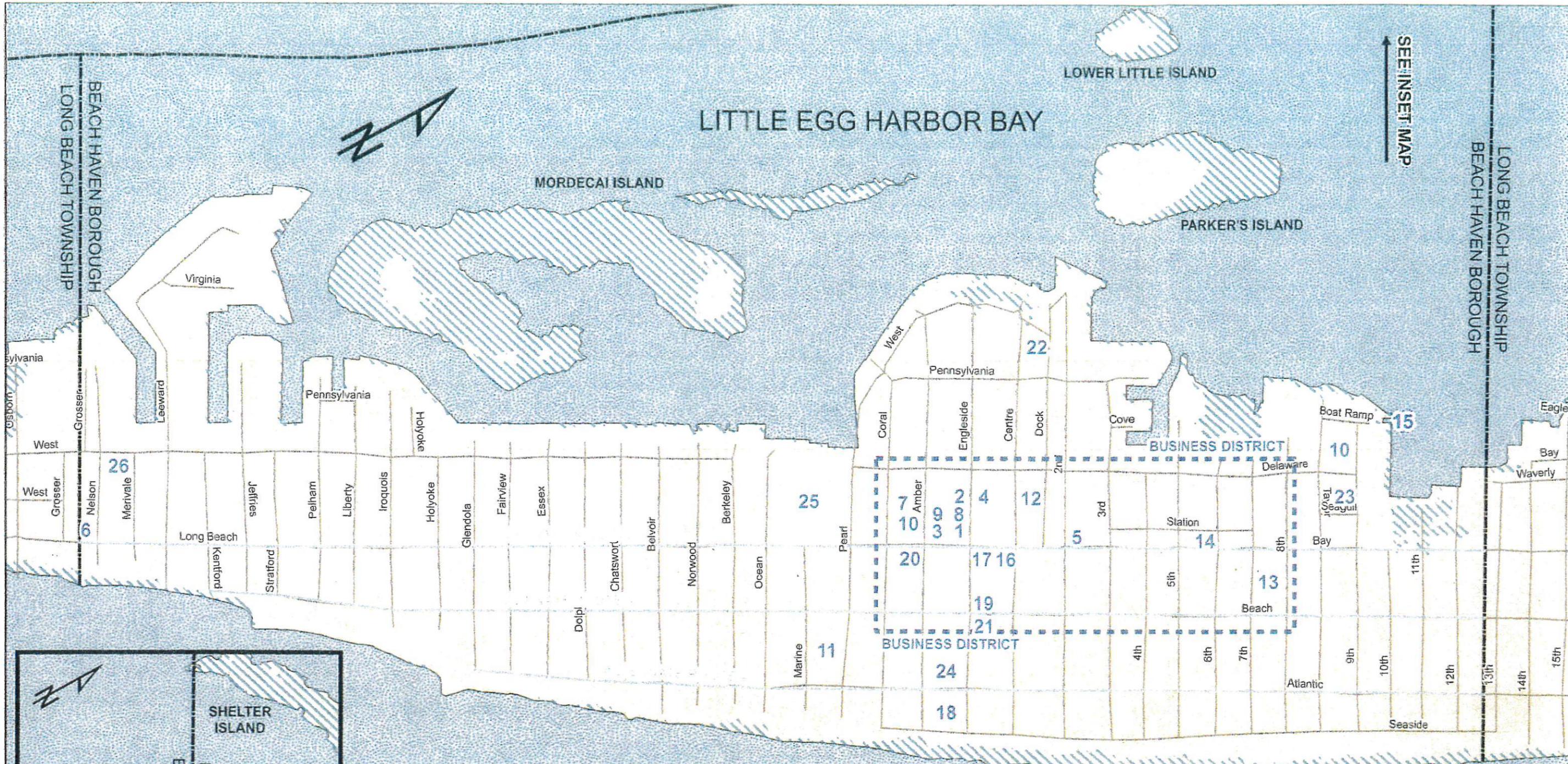
- 1 - BOROUGH HALL
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BEACH HAVEN BOROUGH

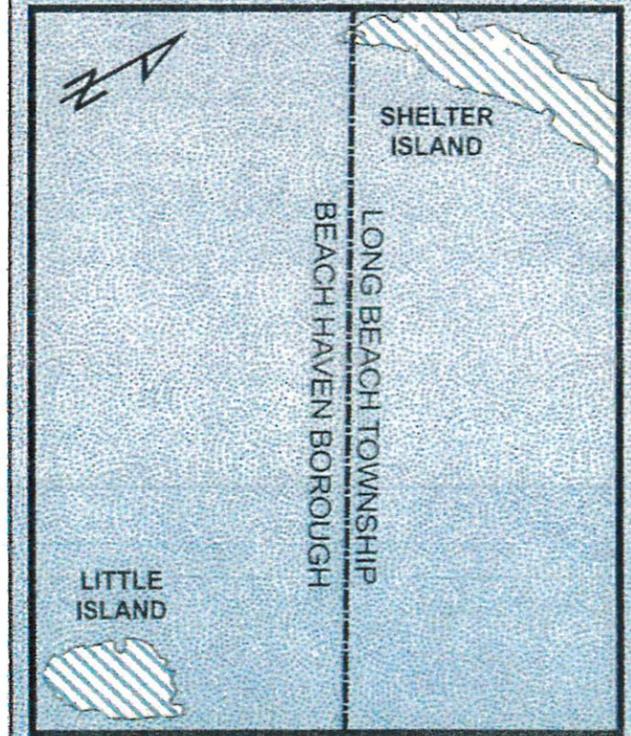
COASTAL VULNERABILITY ASSESSMENT BUILT ENVIRONMENT VULNERABILITY CATEGORY 3 STORM

0 350 700 1,400 Feet

Owen, Little and Associates, Inc.
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(732)244-1090



SEE INSET MAP



INSET MAP (SCALE: 1"=700')

- 1 - BOROUGH HALL
- 2 - POLICE DEPARTMENT
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- 4 - FIRST AID SQUAD
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SEA LEVEL RISE

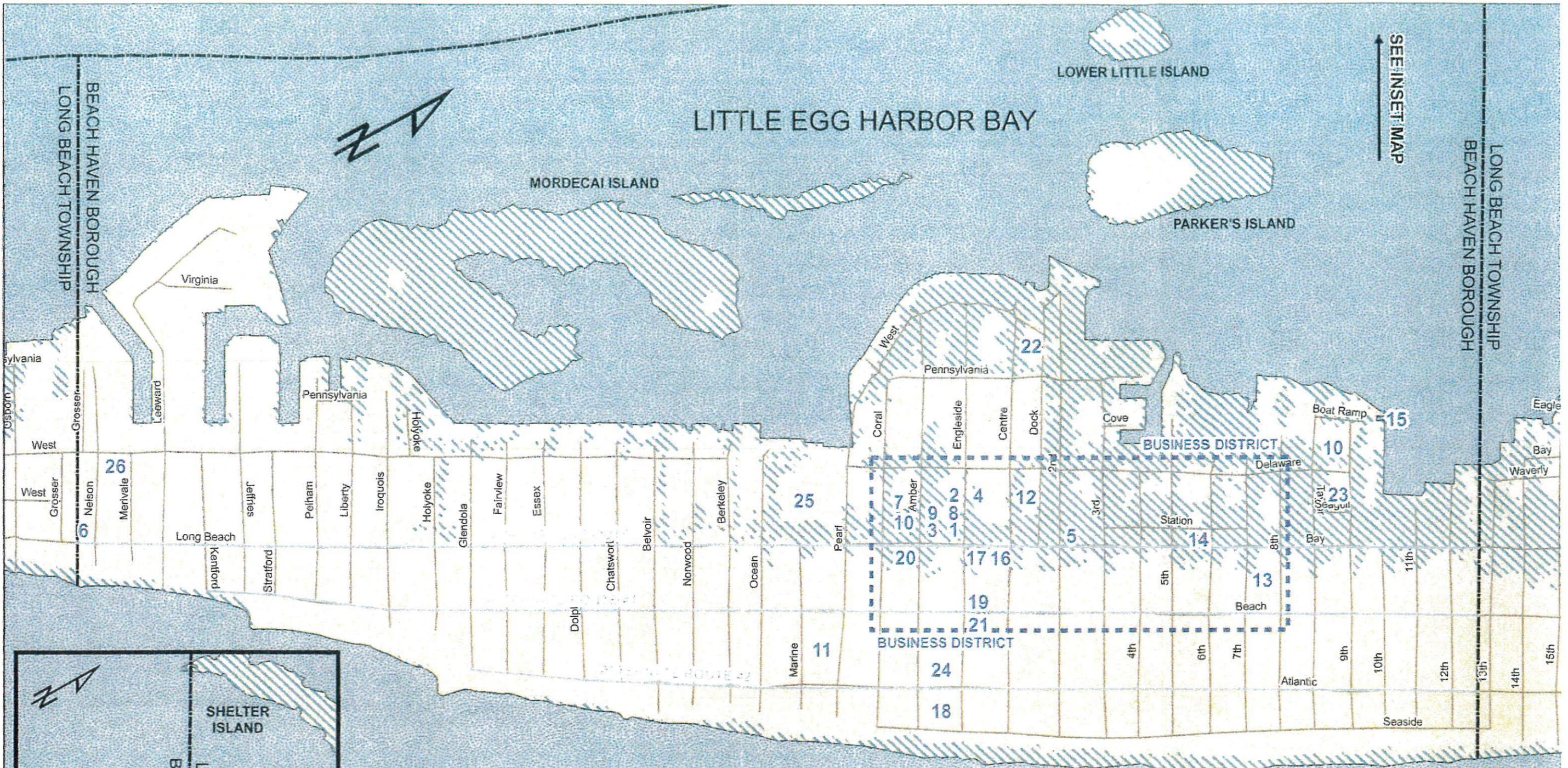
BEACH HAVEN BOROUGH

**COASTAL VULNERABILITY ASSESSMENT
BUILT ENVIRONMENT VULNERABILITY**

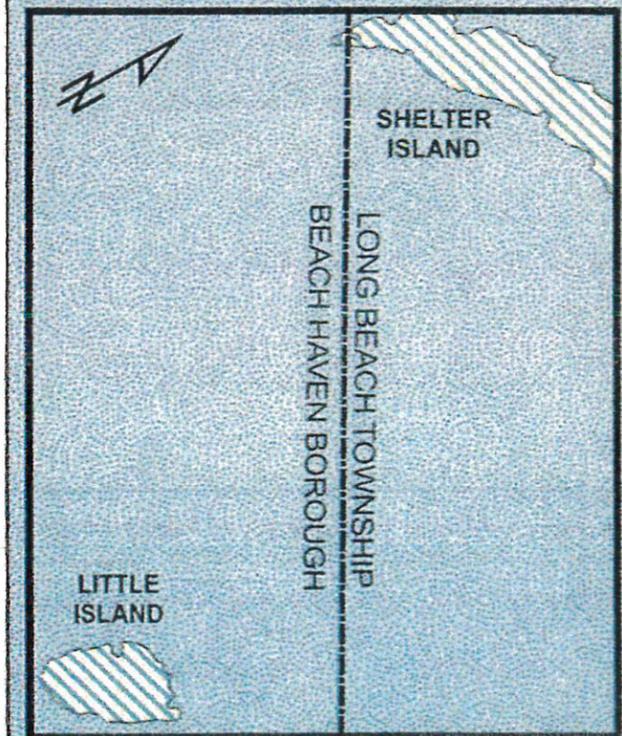
ANTICIPATED SEA LEVEL RISE (1 FOOT)

0 350 700 1,400 Feet

Owen, Little and Associates, Inc.
443 Atlantic City Boulevard
Beachwood, NJ 08722
(732)244-1090



SEE INSET MAP



INSET MAP (SCALE: 1"=700')

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SEA LEVEL RISE

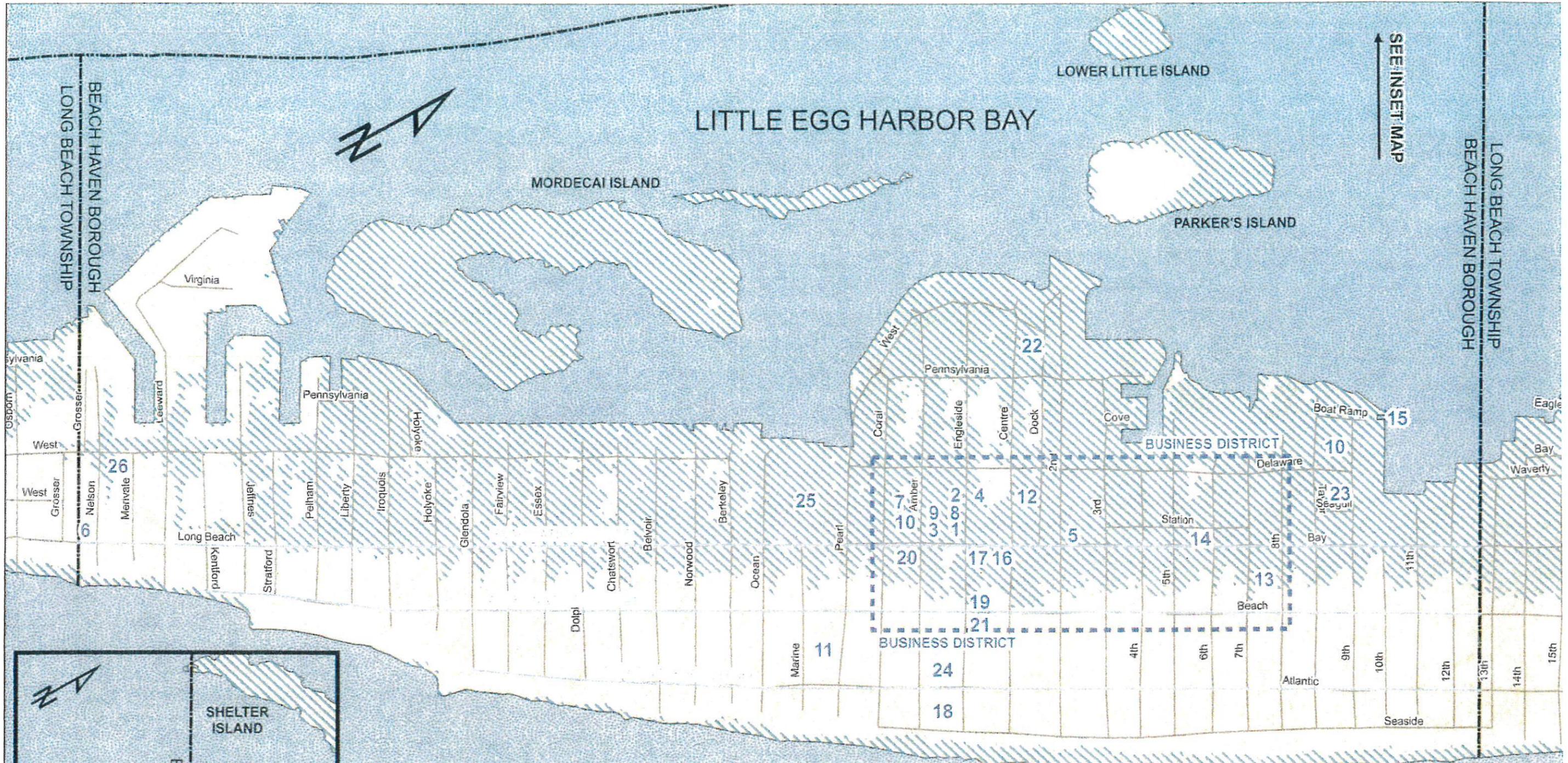
BEACH HAVEN BOROUGH

**COASTAL VULNERABILITY ASSESSMENT
BUILT ENVIRONMENT VULNERABILITY**

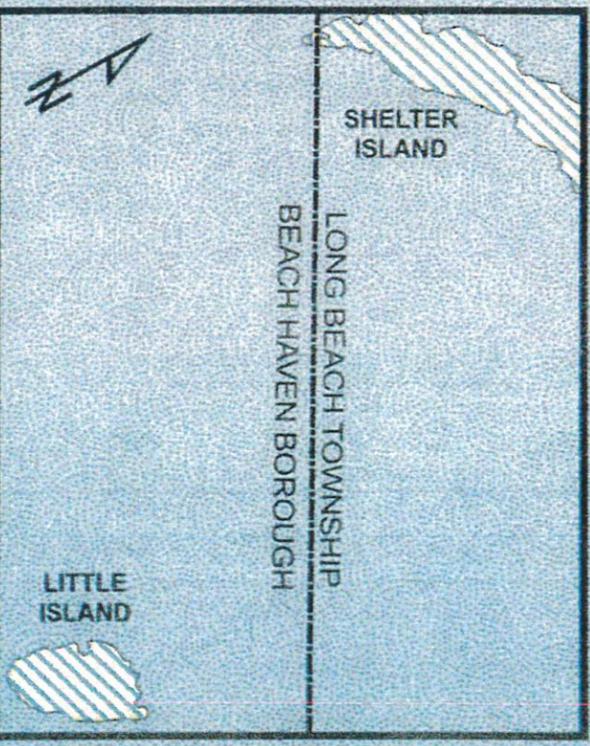
ANTICIPATED SEA LEVEL RISE (2 FEET)

0 350 700 1,400 Feet

Owen, Little and Associates, Inc.
443 Atlantic City Boulevard
Beachwood, NJ 08722
(732)244-1090



SEE INSET MAP



INSET MAP (SCALE: 1"=700')

- 1 - BOROUGH HALL
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SEA LEVEL RISE

BEACH HAVEN BOROUGH

**COASTAL VULNERABILITY ASSESSMENT
BUILT ENVIRONMENT VULNERABILITY**

ANTICIPATED SEA LEVEL RISE (3 FEET)

0 350 700 1,400 Feet

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(732)244-1090

Natural Environment

Beach Haven's location on the barrier island between the Atlantic Ocean and the Barnegat Bay provide ideal habitat for wildlife and native plant species and also offer three islands in the bay. One of these is Mordecai Island which is a 45 acre uninhabited coastal salt marsh island whose uplands, tidal marshes, salt ponds, intertidal zones and eel grass beds support a variety of breeding and migratory bird species. According to the New Jersey Audubon Society, "Mordecai Island is of particular significance to about 50 pairs of state-endangered Black Skimmers and between 4-10 pairs of American Oystercatchers. Nesting colonial waterbirds have established a large colony on the island as well. Additional species breeding or foraging on the island include state-endangered American Bitterns, Least Terns, and Northern Harriers, state-threatened Black-Crowned Night-Herons and Yellow-Crowned Night-Herons, and approximately 150 pairs of state-special concern Common Terns."

The Barnegat Bay is a coastal estuary roughly 40 miles long and one to four miles wide. Barnegat Bay is a place where fresh and salt water combine in shallow, productive and delicately balanced aquatic environment. About 75% of the bay is less than six feet deep at mean low tide, while overall depth varies from three to twenty feet. Beach Haven has six islands off of its west coast. The largest and most notable islands are Little Island and Mordecai Island as well as the Beach Haven Wild Bird Refuge on Parker Island.

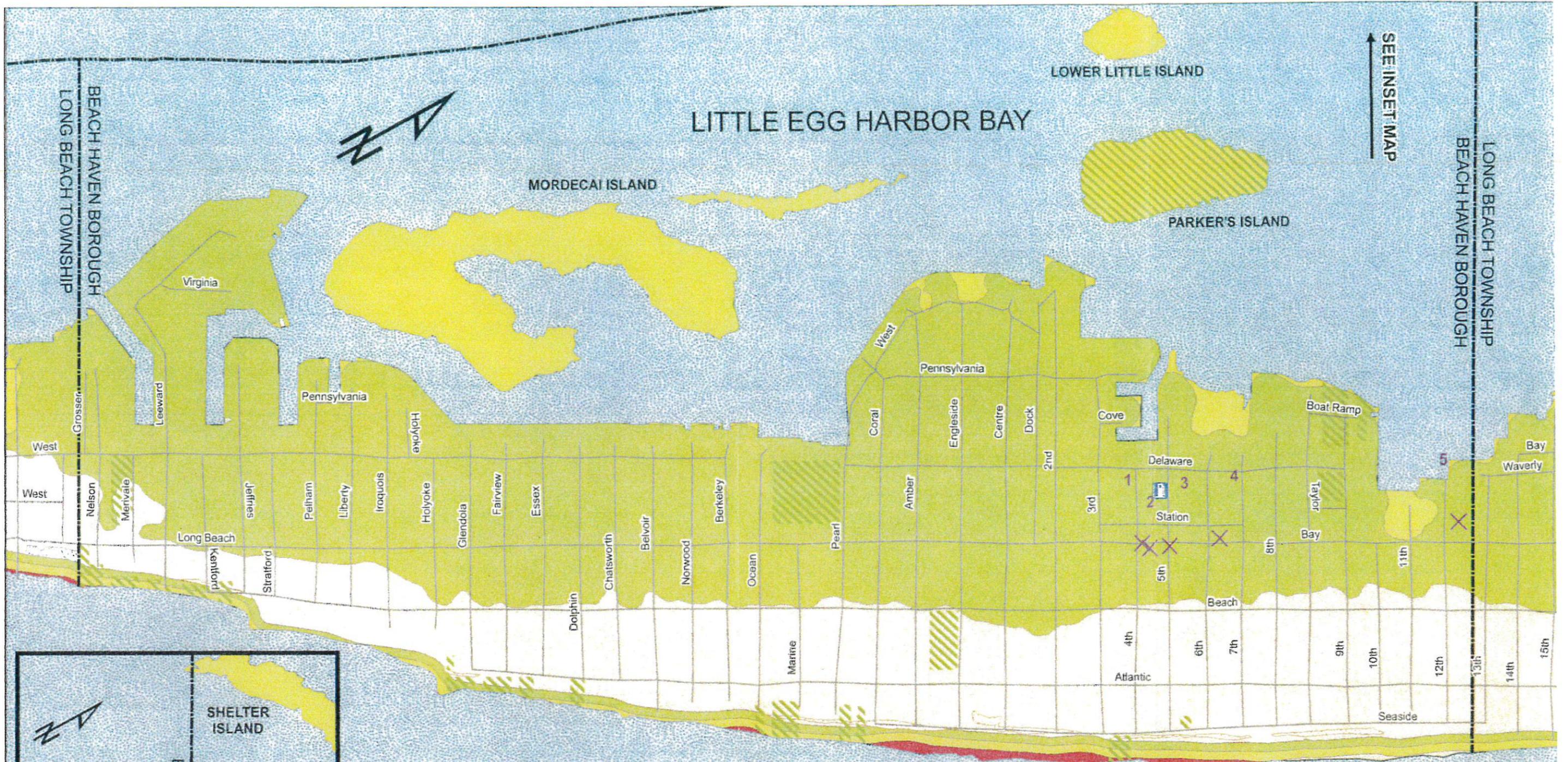
Little Island, is a classic sedge island consisting of just under 5 acres and suffers frequent, periodic immersion. On the northern and western shores, cuts are being formed by wave and tidal action. The island's natural topography is its only protection. The island serves as shelter, resting point or foraging area to many migratory species.

Mordecai Island is the largest island off the Coast of Long Beach Island at 67 acres and is located just to the south of the Beach Haven Wild Bird Refuge. Over 60% of the island is native salt marsh and hosts a variety of nesting birds. The western shores of Mordecai Island have suffered severely since the 1930s and has resulted in a loss of more than 20 acres of wetlands. The NJ Audubon Society states that "Strong tidal currents, wake from vessels traveling the NJ Intracoastal Waterway, Sea Level Rise and increased development along the adjacent barrier island, Long Beach Island, has likely accelerated the loss of marsh and beach habitat." The Mordecai Land Trust was established in 2001 as a community non-profit organization and its members have been working tirelessly since to protect and enhance the natural attributes of this island.

The Land Trust has recently completed a project which added an acre of land to the island and essentially reconnected it where there once was a break. Also, the members have been working to stabilize the northwest corner by completing a living shoreline. At the southwest end, geotubes have been installed which have been amazingly successful in maintaining and also creating land area. The team is now working to establish a natural reef with ribbed mussels. Linda Colgan of the Mordecai Land Trust stressed that a potential Army Corps of Engineers project at the northwest end of the island is most critical. The Borough is eager to partner with the Army Corps of Engineers as well as the NJDEP to complete a \$6.8 million dollar project which will provide this island with established breakwater and associated living shorelines. A meeting was held with the Army Corps of Engineers in early summer 2016 and it was discussed that stabilization of the shoreline should be completed with more than just typical geotubes. Instead, members of the Land Trust feel that the shoreline does need rock but the design should include an approach which involves living shoreline.

Another organization, ReClam the Bay, is a non-profit Barnegat Bay Restoration Program that promotes local environmental involvement and education. This valuable program grows and maintains millions of baby clams and oysters and teaches the importance of how fragile the shellfish population, water quality and environment really are to the area. The current Emergency Operations Center at Pelham Avenue hosts this organization.

At 1, 2 and 3 FT of Sea Level Rise, the islands off the bayside coast of Beach Haven are highly susceptible to inundation. The elevation of Parker Island is higher than the surrounding islands therefore a larger portion of the area may remain dry which could help to maintain the bird habitat. The projections only farther pronounce the need for a shoreline stabilization project at Mordecai Island.



SEE INSET MAP



INSET MAP (SCALE: 1"=700')

STORM SURGE LEVEL

	0-3 FEET
	3-6 FEET
	6-9 FEET
	>9 FEET

CONTAMINATED SITES

- 1 - FORMER BEACH HAVEN LAUNDROMAT
- 2 - BANK OF AMERICA
- 3 - FRIENDLY MANAGEMENT CO.
- 4 - JACK'S SERVICE CENTER
- 5 - BEACH HAVEN AUTOMOTIVE

LEGEND

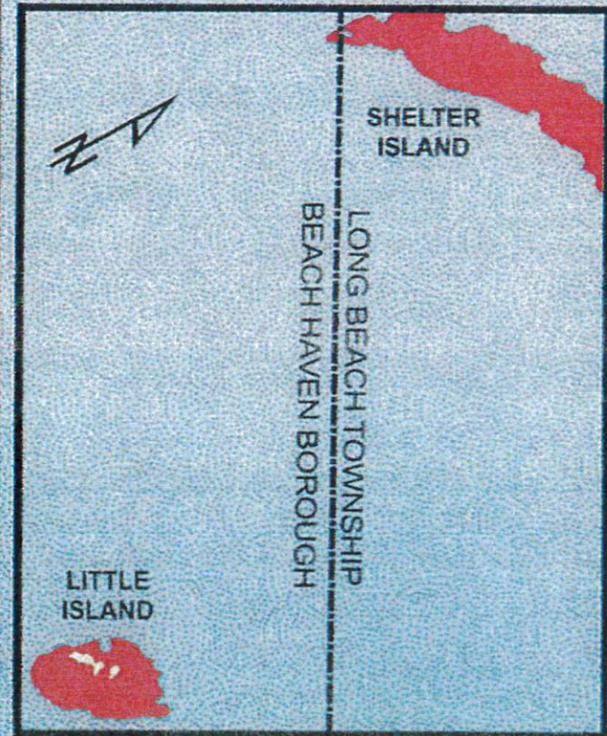
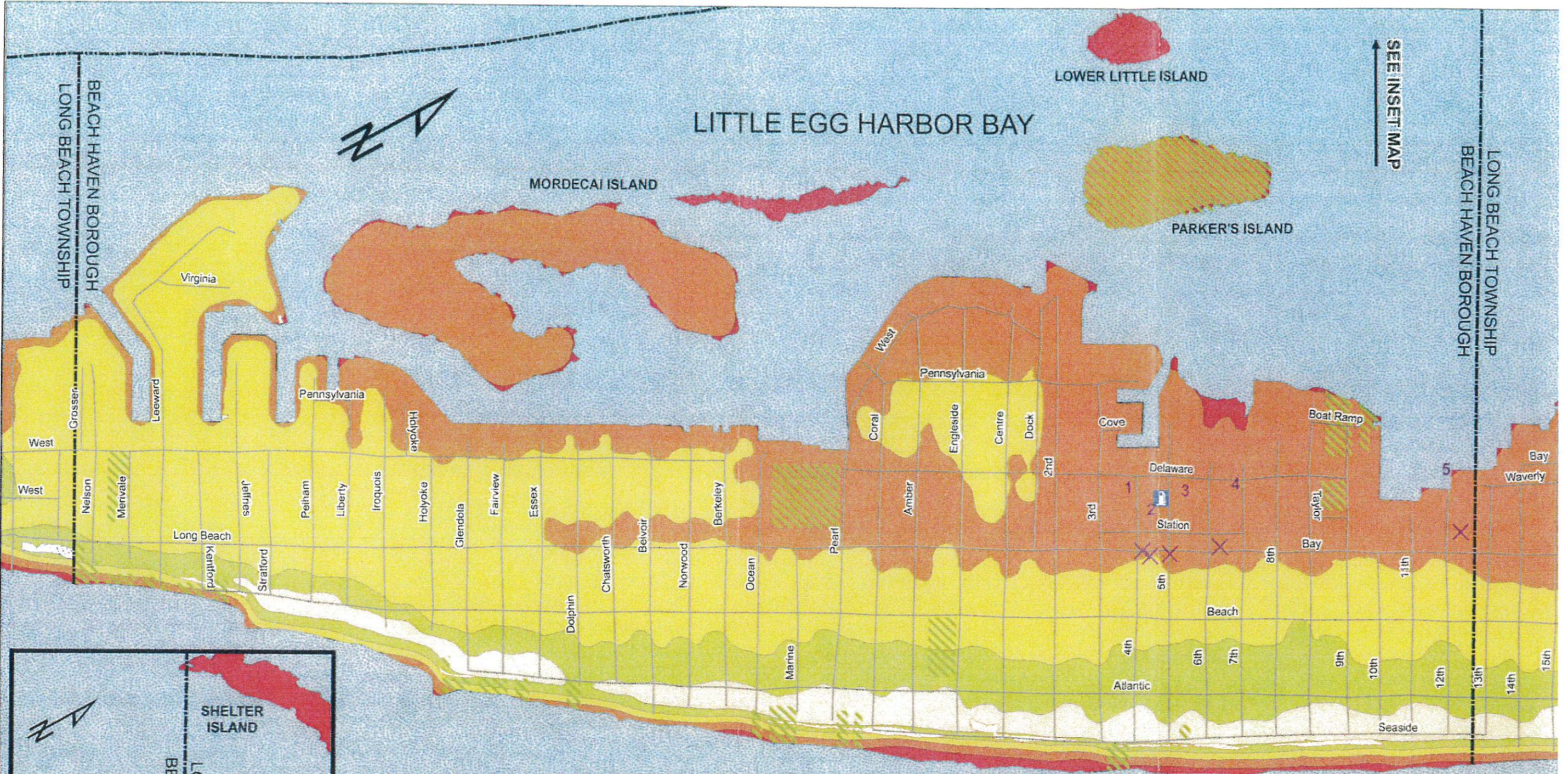
	CONTAMINATED SITE
	GAS STATION
	BEACH
	WETLANDS
	GREEN ACRES LAND

BEACH HAVEN BOROUGH

COASTAL VULNERABILITY ASSESSMENT
NATURAL ENVIRONMENT VULNERABILITY
CATEGORY 1 STORM

0 350 700 1,400 Feet

Owen, Little and Associates, Inc.
443 Atlantic City Boulevard
Beachwood, NJ 08722
(732)244-1090



STORM SURGE LEVEL

Light Green	0-3 FEET
Yellow	3-6 FEET
Orange	6-9 FEET
Red	>9 FEET

- CONTAMINATED SITES**
- 1 - FORMER BEACH HAVEN LAUNDROMAT
 - 2 - BANK OF AMERICA
 - 3 - FRIENDLY MANAGEMENT CO.
 - 4 - JACK'S SERVICE CENTER
 - 5 - BEACH HAVEN AUTOMOTIVE

- LEGEND**
- CONTAMINATED SITE
 - GAS STATION
 - BEACH
 - WETLANDS
 - GREEN ACRES LAND

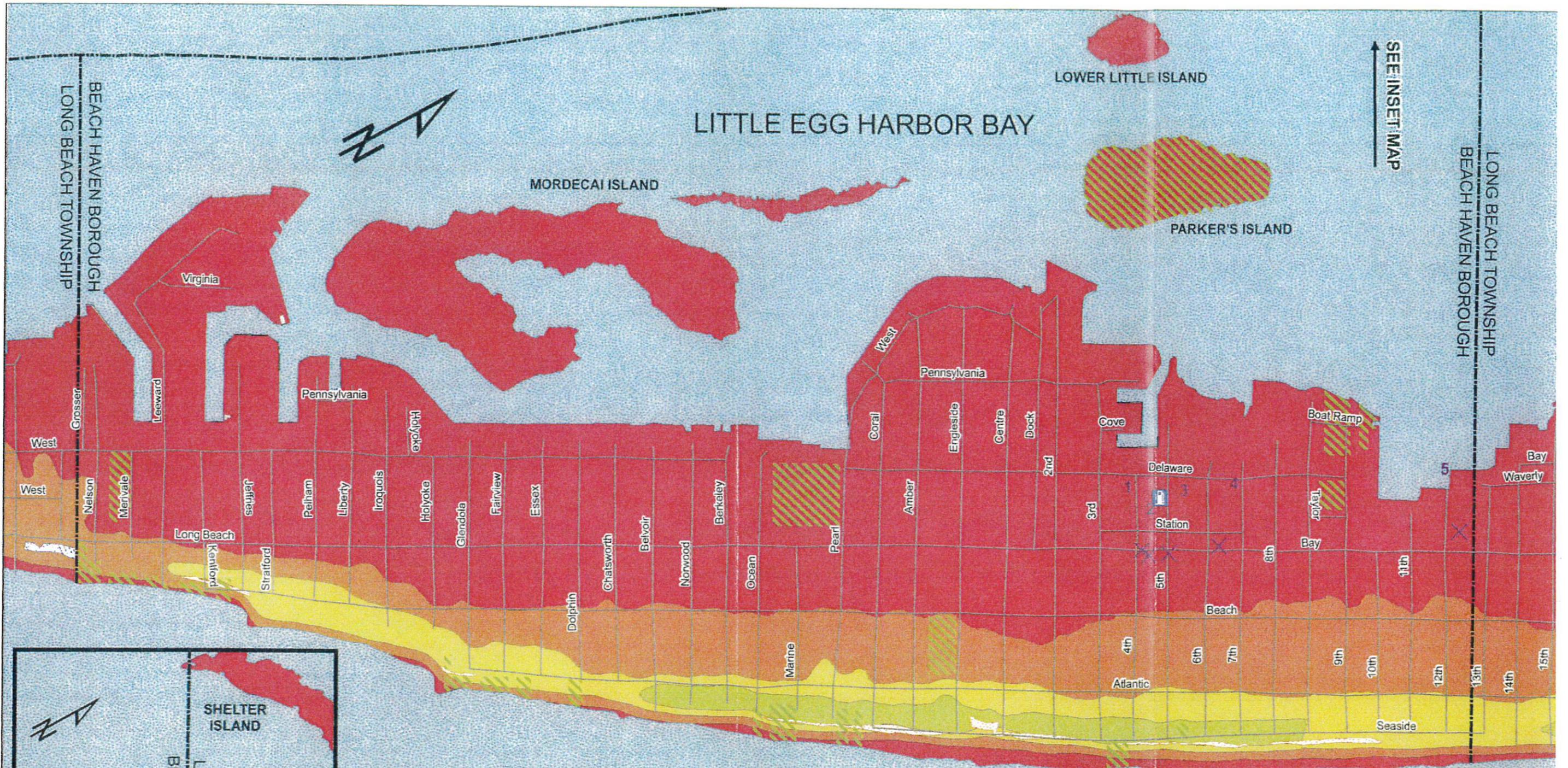
BEACH HAVEN BOROUGH

**COASTAL VULNERABILITY ASSESSMENT
NATURAL ENVIRONMENT VULNERABILITY
CATEGORY 2 STORM**

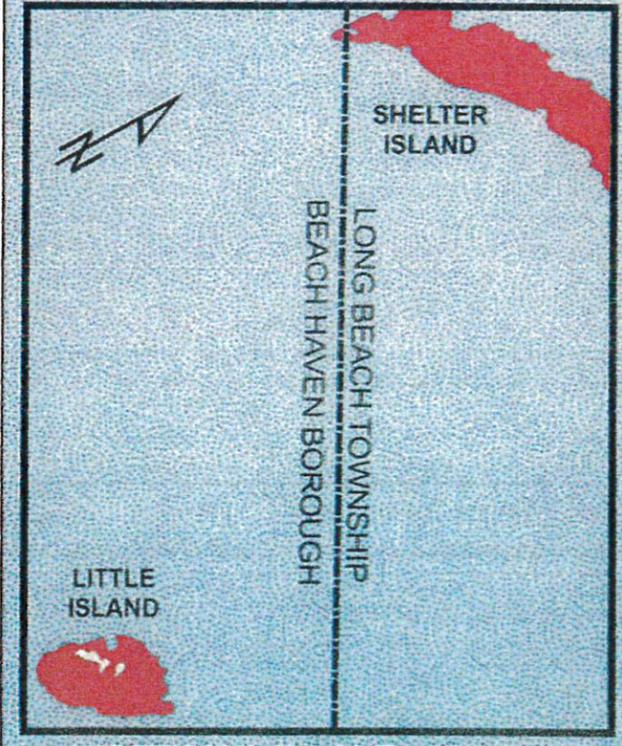
Feet
0 350 700 1,400

Owen, Little and Associates, Inc.
443 Atlantic City Boulevard
Beachwood, NJ 08722
(732)244-1090





SEE INSET MAP



INSET MAP (SCALE: 1"=700')

STORM SURGE LEVEL

Light Green	0-3 FEET
Yellow	3-6 FEET
Orange	6-9 FEET
Red	>9 FEET

CONTAMINATED SITES

- 1 - FORMER BEACH HAVEN LAUNDROMAT
- 2 - BANK OF AMERICA
- 3 - FRIENDLY MANAGEMENT CO.
- 4 - JACK'S SERVICE CENTER
- 5 - BEACH HAVEN AUTOMOTIVE

LEGEND

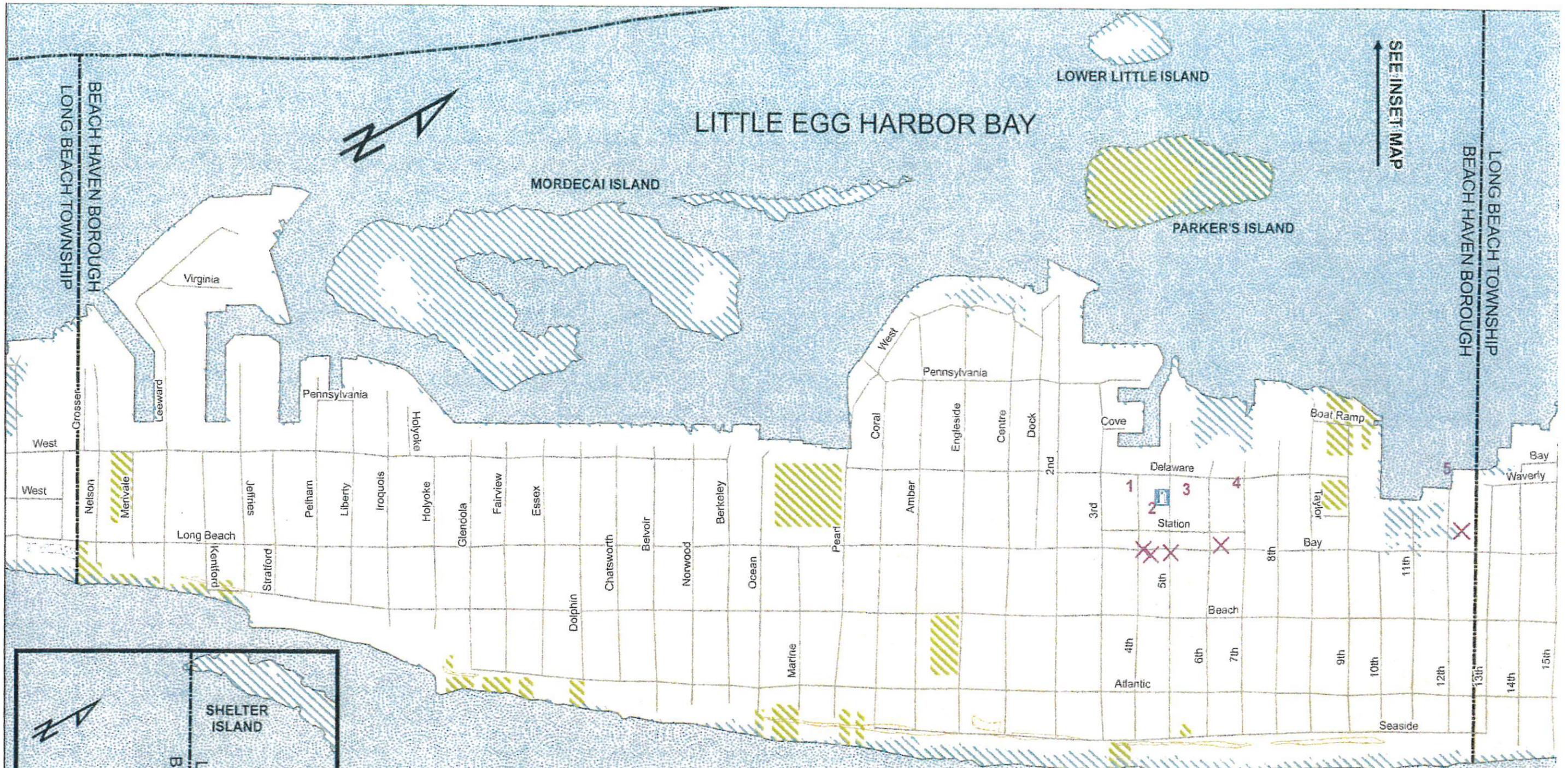
- X CONTAMINATED SITE
- Gas Station Icon GAS STATION
- Orange Box BEACH
- Blue Box WETLANDS
- Green Diagonal Lines GREEN ACRES LAND

BEACH HAVEN BOROUGH

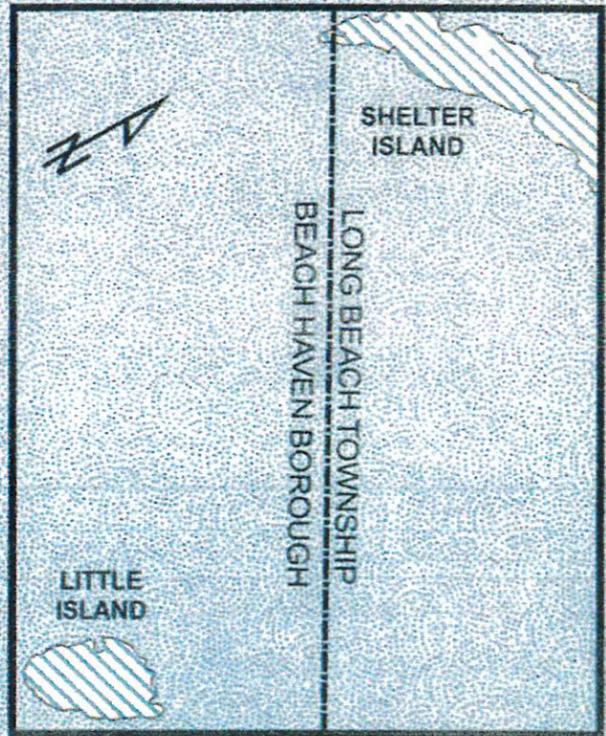
COASTAL VULNERABILITY ASSESSMENT
NATURAL ENVIRONMENT VULNERABILITY
CATEGORY 3 STORM

0 350 700 1,400 Feet

Owen, Little and Associates, Inc.
443 Atlantic City Boulevard
Beachwood, NJ 08722
(732)244-1090



SEE INSET MAP



INSET MAP (SCALE: 1"=700')

LITTLE EGG HARBOR BAY

MORDECAI ISLAND

LOWER LITTLE ISLAND

PARKER'S ISLAND

ATLANTIC OCEAN

- CONTAMINATED SITES**
- 1 - FORMER BEACH HAVEN LAUNDROMAT
 - 2 - BANK OF AMERICA
 - 3 - FRIENDLY MANAGEMENT CO.
 - 4 - JACK'S SERVICE CENTER
 - 5 - BEACH HAVEN AUTOMOTIVE

- LEGEND**
- CONTAMINATED SITE
 - GAS STATION
 - BEACH
 - WETLANDS
 - GREEN ACRES LAND

SEA LEVEL RISE

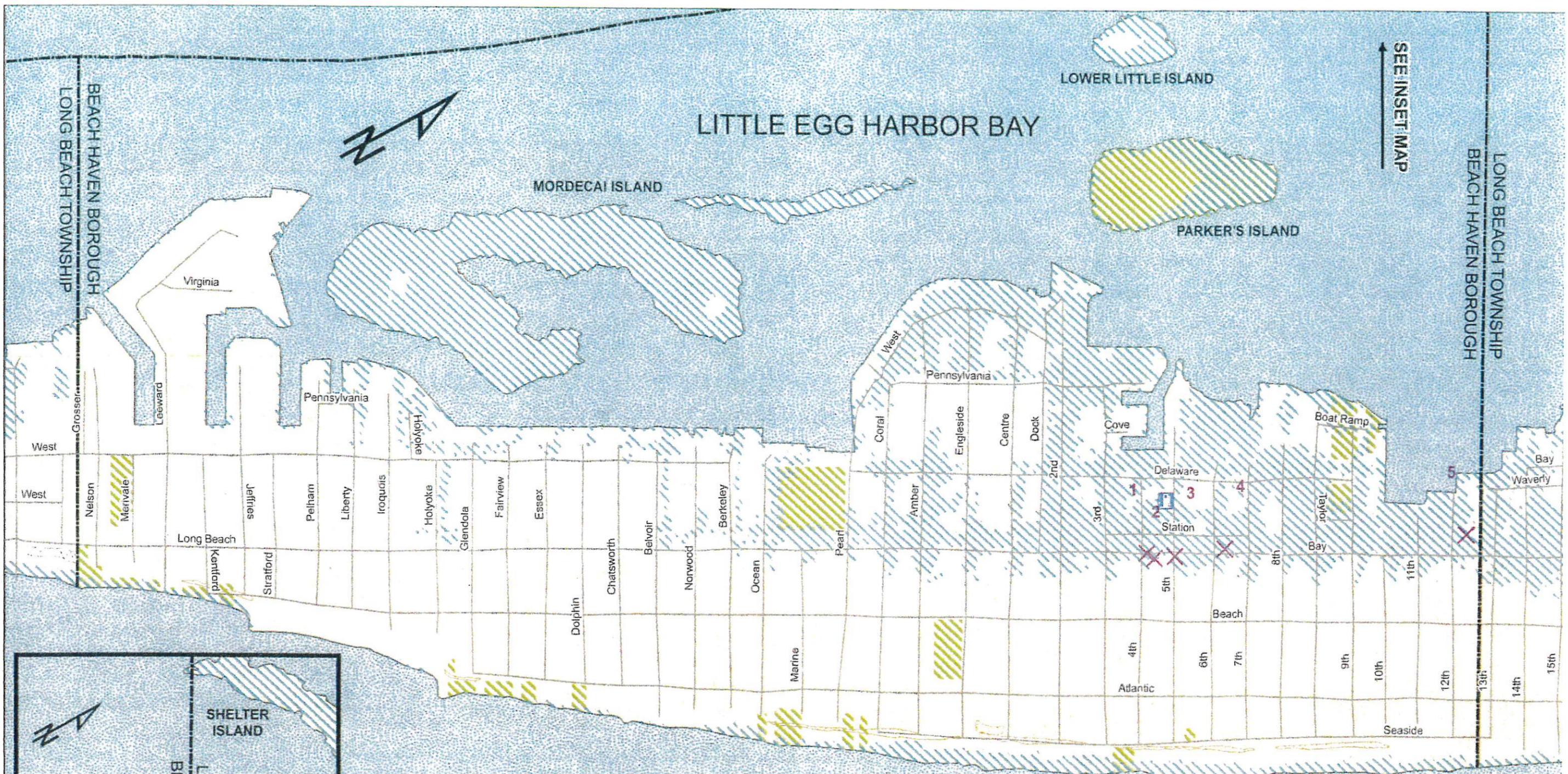
BEACH HAVEN BOROUGH

**COASTAL VULNERABILITY ASSESSMENT
NATURAL ENVIRONMENT VULNERABILITY**

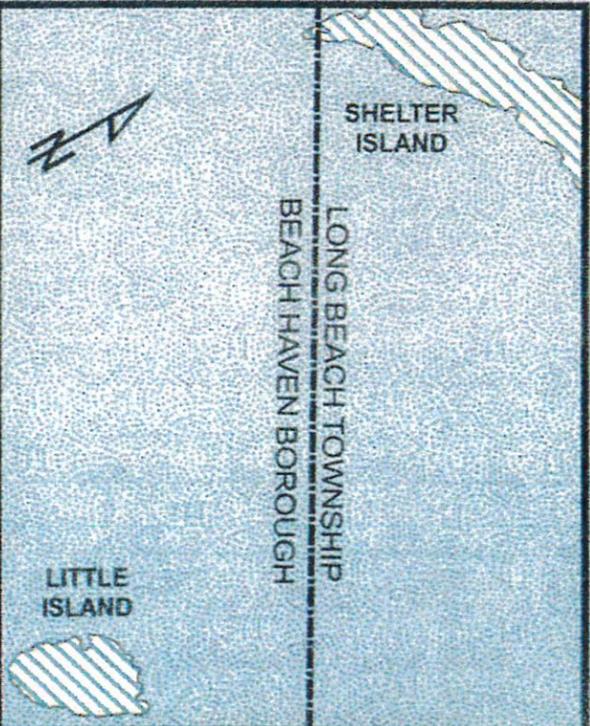
ANTICIPATED SEA LEVEL RISE (1 FOOT)

0 350 700 1,400 Feet

Owen, Little and Associates, Inc.
443 Atlantic City Boulevard
Beachwood, NJ 08722
(732)244-1090



SEE INSET MAP



INSET MAP (SCALE: 1"=700')

LITTLE EGG HARBOR BAY

MORDECAI ISLAND

LOWER LITTLE ISLAND

PARKER'S ISLAND

ATLANTIC OCEAN

- CONTAMINATED SITES**
- 1 - FORMER BEACH HAVEN LAUNDROMAT
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 - 3 - FRIENDLY MANAGEMENT CO.
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- LEGEND**
- CONTAMINATED SITE
 - GAS STATION
 - BEACH
 - WETLANDS
 - GREEN ACRES LAND

SEA LEVEL RISE

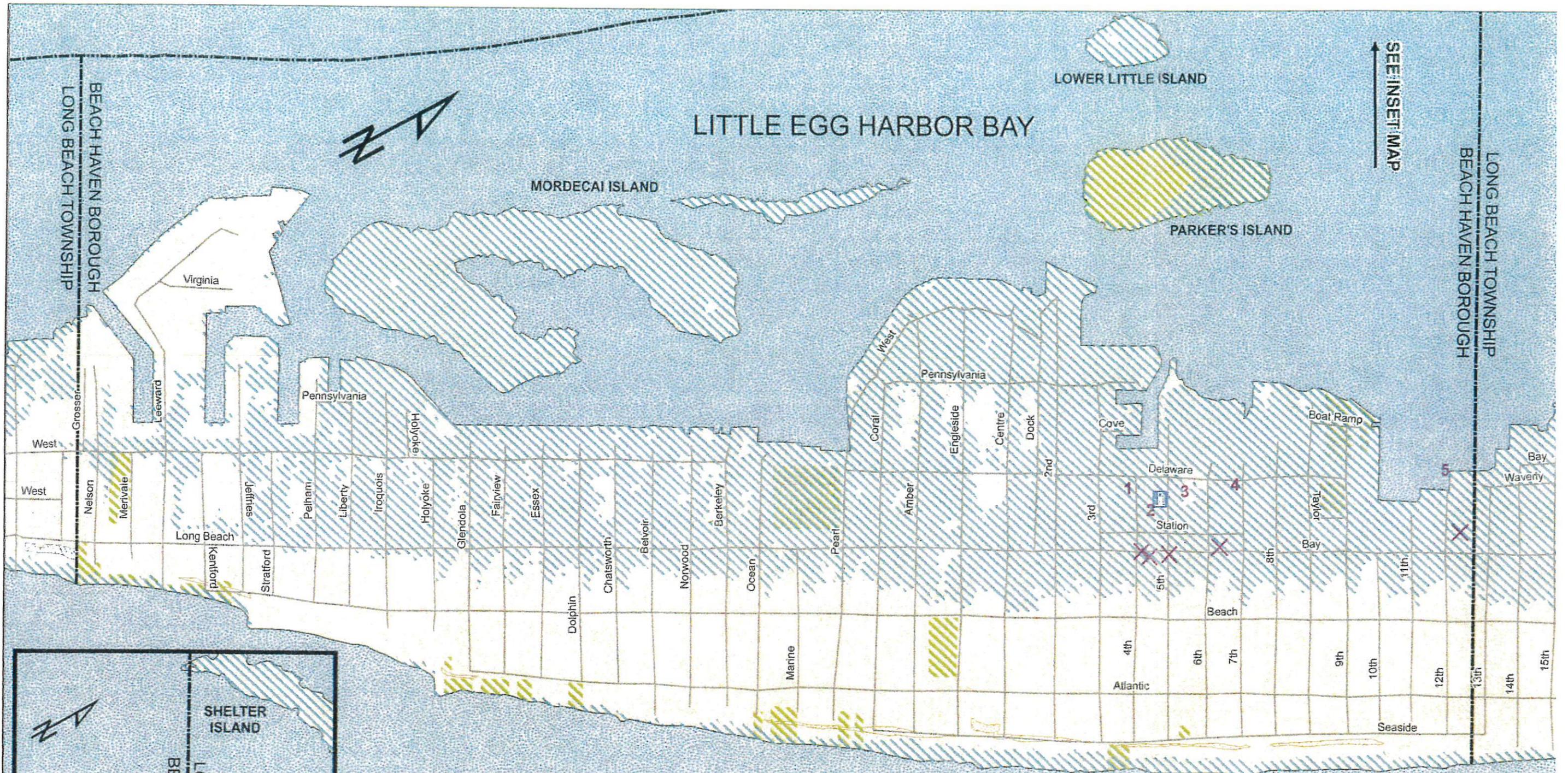
**BEACH HAVEN
BOROUGH**

**COASTAL VULNERABILITY ASSESSMENT
NATURAL ENVIRONMENT VULNERABILITY**

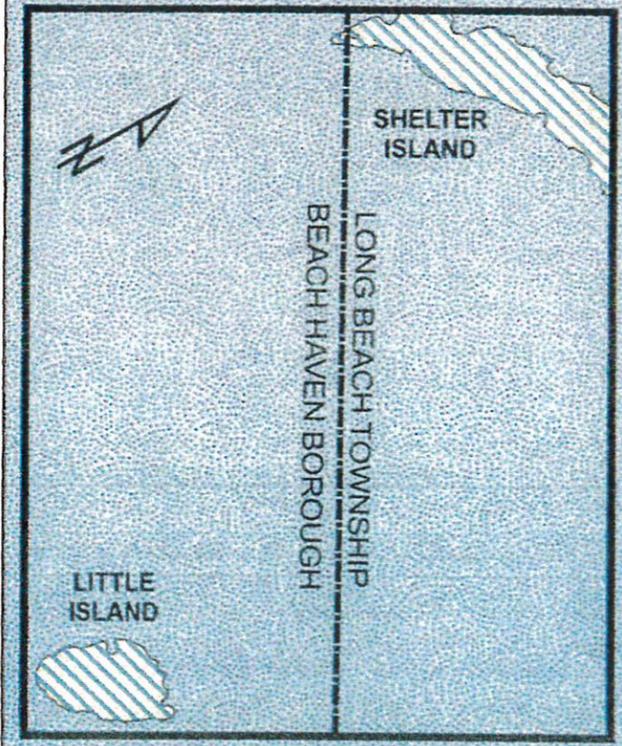
ANTICIPATED SEA LEVEL RISE (2 FEET)

0 350 700 1,400 Feet

Owen, Little and Associates, Inc.
443 Atlantic City Boulevard
Beachwood, NJ 08722
(732)244-1090



SEE INSET MAP



INSET MAP (SCALE: 1"=700')

SEA LEVEL RISE

- CONTAMINATED SITES**
- 1 - FORMER BEACH HAVEN LAUNDROMAT
 - 2 - BANK OF AMERICA
 - 3 - FRIENDLY MANAGEMENT CO.
 - 4 - JACK'S SERVICE CENTER
 - 5 - BEACH HAVEN AUTOMOTIVE

- LEGEND**
- CONTAMINATED SITE
 - GAS STATION
 - BEACH
 - WETLANDS
 - GREEN ACRES LAND

BEACH HAVEN BOROUGH

COASTAL VULNERABILITY ASSESSMENT
NATURAL ENVIRONMENT VULNERABILITY
 ANTICIPATED SEA LEVEL RISE (3 FEET)

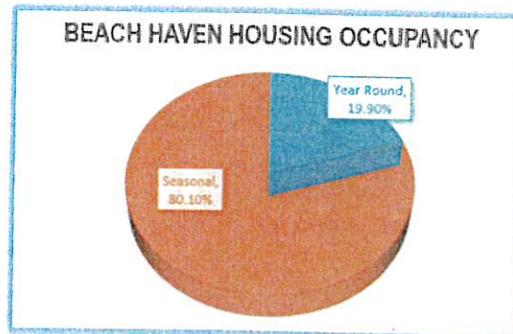
Feet

0 350 700 1,400

Owen, Little and Associates, Inc.
 443 Atlantic City Boulevard
 Beachwood, NJ 08722
 (732)244-1090

Social Environment

Beach Haven is a seasonal community with approximately 1170 year-round residents and upwards of 20,000 seasonal residents. The community is comprised of a diversified age range but a quarter of the total residents are 65 years or older. The Borough also supports its own elementary school which, as of July 2016, has a current enrollment of 68 children. The census data also shows that of the 531 households in the Borough, 13.1% had children under the age of 18 living with them and the average family size was 2.81. In addition, the data indicates that 17.9% of households had someone living alone who was 65 years of age or older. These figures are concerning as they indicate the potential need for more time to evacuate as well as additional resources to assist with the aging population. In addition, the seasonal visitors also pose a risk in terms of general awareness and responsiveness as they may not be cognizant of their geographical location and the associated risk of flooding at their position. This is true especially in Beach Haven where low lying areas and nuisance flooding associated with wind direction and heavy rainfall can quickly become problematic.



Initially, our team of Hazard Mitigation Planners intended to utilize the Social Vulnerability Index (SVI) prepared by the **Agency for Toxic Substances and Disease Registry (ATSDR)**, a federal public health agency of the **U.S. Department of Health and Human Services** based in Atlanta, Georgia, to analyze factors that contribute to a community's social vulnerability. These factors include socioeconomic status, household composition and disability, minority status and language as well as housing and transportation. The principal obstacle with the data set is its restriction to census block only which is a common theme amongst data sets for social factors. Although some communities can utilize field knowledge of the area to supplement the data set, it was determined by the team that the population and community is too small to see a diversity in the category range. With the town being less than one square mile, assigning a range would essentially provide a homogenous outcome.

Next, the team considered creating its own index using information that may be obtained by the local Office of Emergency Management or Health Department anticipating that this source may include homebound residents, those with a disability, or those without vehicles. However, the local agencies in this region no longer maintain a list like this. In addition, the team learned that many people who may be considered vulnerable in a hazardous situation are reluctant to disclose this information to community officials. If the town was to initiate a survey such as this, it would have to be updated frequently as the needs of the contributors change.

With such a small community, both in regards to size and year round population, and without a nursing home, assisted living facility, age restricted housing development or subsidized public housing projects, it's impossible to accurately measure social vulnerability in a map format. Community OEM Coordinators and other municipal officials have a greater understanding and capacity at the local level to assist those who may require additional assistance during a storm event.

Analysis of some social factors, specifically shown below, indicate that there is not a clear population to which the Borough could seek additional outreach programs. However, local knowledge indicates that the aging population has been in place in the Borough for decades and is familiar with storm events and the

Social Vulnerabilities

Housing		
	#	(%)
Total Housing Units	2667	100%
Occupied Housing Units	531	19.90%
Seasonal Use Only	1875	80.10%
In group Quarters	0	0
Mobile Home Housing	0	0

Income	
Below Poverty level	6.10%
Median Household Income	\$76,731

Race	
	(%)
Percent Minority	9.90%
Speak only English	98.20%

Age	
	(%)
Age 5 and under	4.30%
Age 17 and under	8.80%
Age 65-74	38.60%
Age 75 +	18.60%

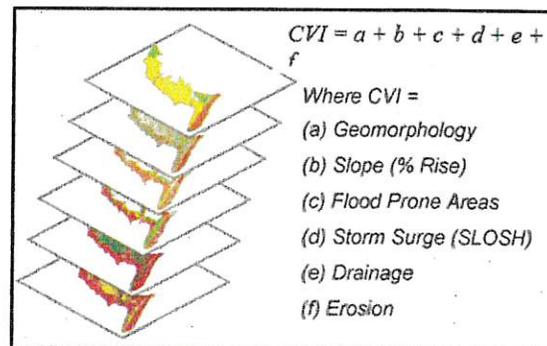
need to evacuate in a timely manner. However, there were instances of people refusing to evacuate, especially the elderly, because of their pets. The County of Ocean has been working since Superstorm Sandy to address this issue as the lack of pet-friendly shelters was the cause for countless people not heeding mandatory evacuation orders. In addition, it was recognized that a

portion of the non-English speaking population, which may be greater than what is reflected in the last census, may not have been aware of the urgency to evacuate the island prior to Sandy.

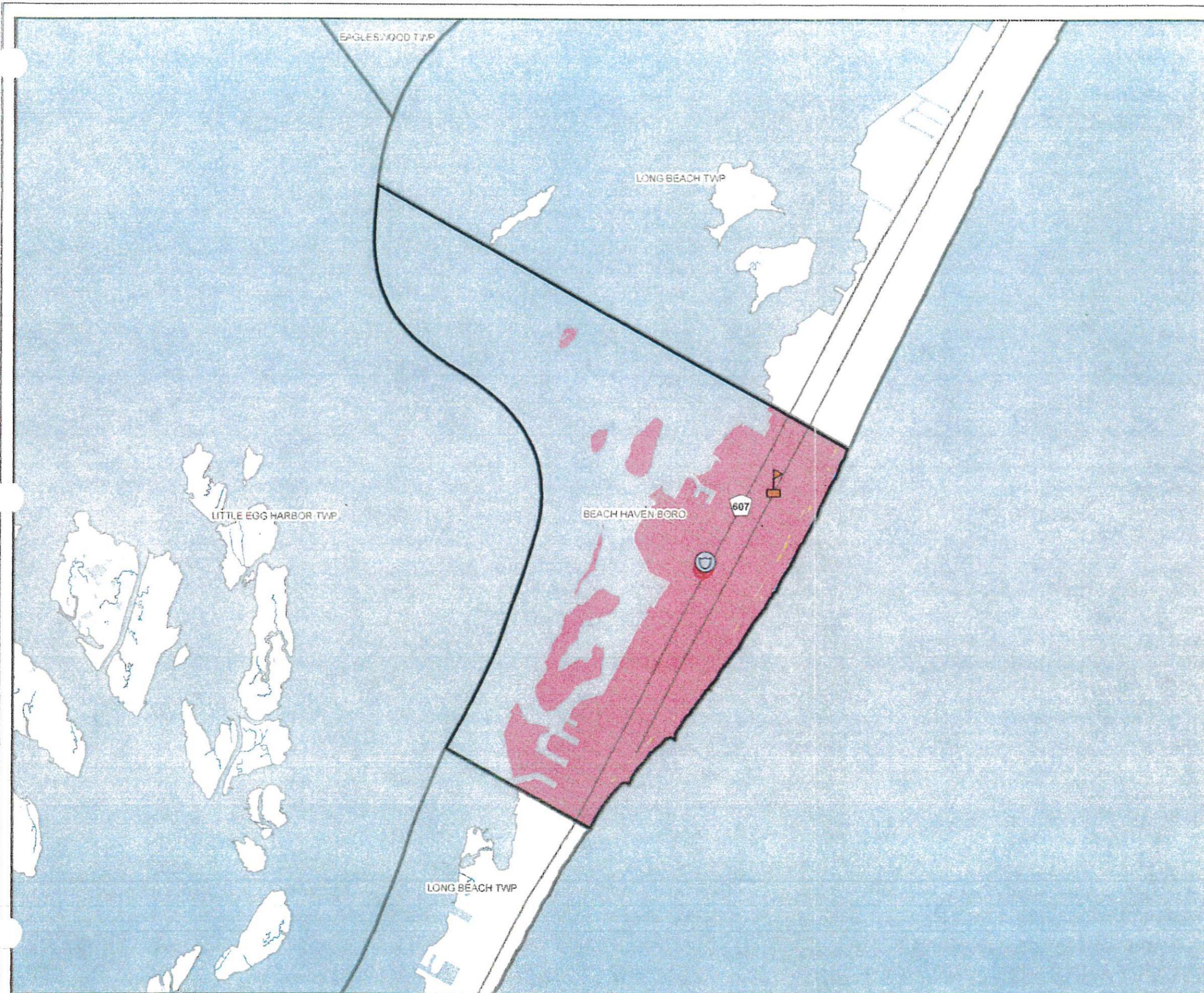
A local official on the island felt concerned when she saw a non-English speaking family doing laundry at a local laundromat during the mandatory evacuation. When she approached them and tried to convey the urgency of the situation, they explained they had no television and no telephone and were not aware they had to leave. Weeks later, this family located the official specifically to thank her for urging them to leave the island. We have provided recommendations to address this population within the report. It should be noted that in the hours prior to the arrival of Superstorm Sandy, the majority of the residents abided by the mandatory evacuation order and there were not significant cases of rescue during the event.

Coastal Vulnerability Index

By definition, a CVI allows for six variables to be related in a quantifiable manner that expresses the relative vulnerability of the coast to physical changes due to future sea-level rise or other coastal hazards. This method yields numerical data that cannot be equated directly with particular physical effects. It does, however, highlight areas where the various effects of coastal hazards may be the greatest. Once each section of coastline is assigned a vulnerability value for each specific data variable, the coastal vulnerability index (CVI) is calculated as the square root of the product of the ranked variables divided by the total number of variables; where, a = geomorphology, b = slope (% Rise) , c = flood prone areas, d = Storm Surge (SLOSH) , e = drainage, and f = erosion. The calculated CVI value is divided into quartile ranges to highlight different vulnerabilities within the park. The CVI ranges (lower – major water) reported here apply only to Beach Haven Borough and may vary from other CVI's prepared by alternate agencies. The CVI Map for Beach Haven is provided on the following page.



Source NJDEP, NJCCVAMP, December 2011



Coastal Vulnerability Index

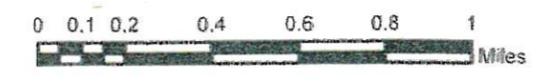
Beach Haven Borough, Ocean County

The Coastal Vulnerability Index (CVI) was developed to help assess the vulnerability and resiliency of New Jersey coastal communities to natural hazards. While storm surge inundation and sea level rise are the primary factors influencing coastal flooding threats, those factors alone may not fully define the risk of coastal communities to both chronic and episodic hazards. As a layer combining data on flood zones, geomorphology, slope, soil erosion, soil drainage, soil flooding frequency, and ground elevation, as well as on storm surge inundation and water elevation changes, the CVI may provide a more complete picture of the flood hazard potential of coastal communities. In this map, the index is used to define three levels of relative vulnerability: Lower, Moderate, and Higher. More risk levels could be used, or break points between levels adjusted, as additional site specific data are examined. This process of fine tuning the CVI will be done by working with individual municipalities through a grant program aimed at improving the resiliency plans of New Jersey's coastal communities.

Legend

- | | | |
|-----------------------|--------------------|-----------------------|
| CVI 2050 | Facilities | Transportation |
| Lower | Fire Stations | Interstates |
| Moderate | Law Enforcement | US Highways |
| Higher | Medical Facilities | NJ Highways |
| Major Water | Rail Station | Toll Routes |
| Water Features | Schools | 500 Routes |
| Streams | | County Routes |
| Waterbodies | | Passenger Rail |
| Municipalities | | |
| | | |

The CVI spatial data set is for informational purposes only. It is a preliminary screening layer for use in conjunction with other community specific data in the development of effective coastal management plans. It is not a final layer defining the actual vulnerability of any community to flooding or storm events, either for present day conditions, or those predicted under sea level rise scenarios. It was generated using the best available information, but has not had rigorous review of its use for modeling site specific coastal conditions. Those reviews may require additional contributing and final generated data sets to be edited to more accurately represent actual conditions. The review and refinement of the data set should be done in conjunction with a wide range of partners, including local municipal experts. Additional data sets not used to prepare the CVI will also be needed to refine the outputs and tailor the data to the specific characteristics of individual communities.



1 inch equals 0.5 miles

September 2014

Getting to Resilience

Beach Haven is governed by a five-member Borough Council within the Faulkner Act under the Council-Manager form of government. At a reorganization meeting held each January, one member is chosen as mayor and another as council president, each serving one-year terms in that position. This Council is dedicated to sustainability, resiliency and addressing coastal hazards impacts in their community. They appear to have the support of residents and business owners to undertake projects to enhance the quality of life surrounding nuisance flooding issues and recognize the significance of addressing current flooding issues now to combat the anticipated conditions in the future.

The Getting to Resilience process had excellent representation from the municipal leaders and department heads including representatives from Public Works, Borough Council, Police Department, Office of Emergency Management, Municipal Clerk, Borough Manager and Borough Engineer/Planner, as well as outside agency support from the NJDEP and Urban Coast Institute/NJ Sea Grant. The group participated in an open discussion about the Borough's strengths and challenges involving resiliency and allowed JCNERR to present associated mapping depicting Sea Level Rise, Storm Surge and Sandy Flooding Extent. The group also completed all 5 sections of the Getting to Resilience questionnaire and JCNERR provided a recommendations report based on linkages from the GTR website, notes taken during the group's discussion, various municipal plans and ordinances, and various mapping from outside agencies.

The following are some of the highlights from the five-part questionnaire.

Risk and Vulnerability Assessments

- Examine municipal plans, strategies and ordinances and reconsider rewriting sections to include the previous recommendations to reflect the risks, hazards, and vulnerabilities explored in the Getting to Resilience Process

Public Engagement

- Develop a pre-flood plan for public information projects that will be implemented during and after a flood
- Develop public presentations about flood zones, flooding risk, building recommendations, etc., to be given annually at public meetings

Planning Integration

- Incorporate Sea Level Rise as a hazard in Borough plans
- Consider bolstering the Continuity of Operations Plan

Emergency Response and Recovery

- Work with Ocean County and neighboring municipalities to expand sheltering options
- Expand the Emergency Operations Plan to include more information

Hazard Mitigation and Implementation

- Create a detailed mitigation plan for areas that experience repetitive loss
- Utilize Sea Level Rise and storm surge mapping to identify possible roadways at risk to Sea Level Rise

Beach Haven Recommendations

In concluding the vulnerability analysis of the Borough of Beach Haven at the local level, we suggest the evaluation of the following recommendations to aid the community in managing their risk to storm surge and Sea Level Rise impacts.

Action Items related to Storm Surge Projections

- It should remain topmost priority to convey to Borough residents, vacationers and business owners that the safest place in the event of any storm in which local officials declare a Mandatory Evacuation is OFF THE BARRIER ISLAND. There is no location within the Borough of Beach Haven that is a designated storm shelter.
- Pursue the design of and seek funding opportunities to complete a LBI Regional Stormwater Pump Installation and Drainage Improvement Project.
- Borough Officials should consider incorporating a parking area at Veterans Memorial Park which could serve as a location for vehicle parking during Nor'easter type events that may not necessitate evacuation but streets and garages could be at risk for flooding.
- Consideration and feasibility of modifications to the existing boat ramp at Taylor Avenue should be made to ensure this facility can be utilized during storm events for supply delivery.
- Consider relocating the Borough Fire Department to a location west of Beach Avenue in the future.
- Consider raising minimum bulkhead heights along commercial and residential streetends as well as along municipal street ends.

-
- Create a coastal conference to provide a means of connecting Borough Officials, Land Use and Construction employees as well as Emergency Management with local business owners and members of the public to discuss recent storm events and exchange knowledge, ideas and experiences to address future coastal hazards.
 - Continue to promote the elevation of homes and businesses.
 - Continue to Prioritize and Complete raising all critical infrastructure in the Borough.
 - Develop an Outreach Campaign that specifically targets young seasonal tenants, elderly residents with pets and the non-English speaking population.
 - Continue to work with Mordecai Land Trust to support projects that will protect the existing island and marshlands.

Action Items related to Sea Level Rise Projections

- Borough Officials should consider incorporating a parking area at Veterans Memorial Park which could serve as a location for vehicle parking during high tide events.
- Pursue the design of and seek funding opportunities to complete a LBI Regional Stormwater Pump Installation and Drainage Improvement Project.
- Consider relocating the Borough Fire Department to a location west of Beach Avenue in the future.
- Review existing evacuation routes and consider modifications to these routes based on projected Sea Level Rise projections.
- Continue to monitor Sea Level Rise projections on a yearly basis, updating mapping and necessary, to plan for the future of the Borough.
- Conserve coastal land and minimize potential loss through acquisition of contiguous storm-prone properties or those contiguous to adjacent municipally owned land or for the purpose of increasing the Borough's Open and Greenspace.

-
- Consider raising minimum bulkhead heights along commercial and residential streetends as well as along municipal street ends.
 - Create a coastal conference to provide a means of connecting Borough Officials, Land Use and Construction employees as well as Emergency Management with local business owners and members of the public to discuss recent storm events and exchange knowledge, ideas and experiences to address future coastal hazards.
 - Continue to promote the elevation of homes and businesses.
 - Continue to Prioritize and Complete raising all critical infrastructure in the Borough.
 - Screen all infrastructure projects for Sea Level Rise impacts.
 - Continue to work with Mordecai Land Trust to support projects that will protect the existing island and marshlands.

PART 2 – SUSTAINABLE NEW JERSEY

Sustainable Jersey is a non-profit organization that provides tools, training and financial incentives to support communities as they pursue sustainability programs. By supporting community efforts to reduce waste, cut greenhouse gas emissions and improve environmental equity, Sustainable Jersey empowers communities to build a better world for future generations.

Beach Haven presently is registered with Sustainable Jersey and has a required “Green Team”, but it not a certified community. The Green Team should prioritize obtaining certification from Sustainable Jersey in the near future.

RELATIONSHIP TO OTHER PLANS

INTRODUCTION

The Municipal Land Use Law requires that all municipal master plans consider the relationship of their Master Plan to Plans of contiguous municipalities, County Plans and the New Jersey State Development and Redevelopment Plan (SDRP). This section reviews the plans and zoning ordinances of the municipalities bordering Beach Haven, the Ocean County Master Plan and the State Development and Redevelopment Plan.

STATE DEVELOPMENT AND REDEVELOPMENT PLAN

The New Jersey State Development and Redevelopment Plan (SDRP) adopted in 2001 has eight goals.

- Revitalize the State's cities and towns.
- Conserve the State's natural resources and systems.
- Promote beneficial economic growth, development and renewal for all residents of New Jersey.
- Protect the environment, prevent and clean up pollution.
- Provide adequate public services and facilities at a reasonable cost.
- Provide adequate housing at a reasonable cost.
- Preserve and enhance areas with historic, cultural, scenic, open space and recreational value.
- Ensure sound and integrated planning and implementation statewide.

The Beach Haven Master Plan is consistent with the State Plan goals by promoting the preservation and enhancement of an existing, long-established seasonal community, protecting Beach Haven's natural resources, particularly the Manahawkin Bay and adjacent islands; promoting the fiscally sound expansion of municipal services and promoting the preservation of Beach Haven's historic, scenic and recreational assets. As called for in the SDRP, the Beach Haven Master plan is also consistent with regional planning efforts, including the Ocean County Master Plan and the Ocean County Hazard Mitigation Plan.

The State Plan Policy Map of the SDRP divides the State into five Planning Areas, each of which has specific policy recommendations associated with it. Beach Haven lies in only one planning area: Environmentally Sensitive Barrier Islands (PA5B) Planning Area.

The State Plan designates PA5B as the Planning area that contains large contiguous land areas with valuable ecosystems, geological features and wildlife habitats. It also recognizes existing centers that remain the focus of residential and commercial growth and public facilities and services for their region as well as supporting the recreation and tourism industries. Beach Haven is almost fully built out. This Master Plan encourages more efficient utilization of land by preserving the existing pattern of development in the Borough.

OCEAN COUNTY MASTER PLAN

The Beach Haven Master Plan is generally in conformance with the Ocean County Comprehensive Master Plan, adopted in December 2011.

The Beach Haven Master Plan will contribute to the achievement of the goals adopted in the County Master Plan in several ways. Beach Haven Plan calls for the expansion of recreation opportunities through rehabilitation of existing parks and open space in the Borough. Beach Haven Master Plan will also encourage quality growth and development by recommending the adoption of land use regulations that ensure high quality development. Also, by maintaining its Historic District, the Borough will continue to protect its heritage as a historic community.

SURROUNDING COMMUNITIES

Beach Haven is bordered to its north and south by Long Beach Township, a municipality characterized both by residential and commercial development that is predominantly used on a seasonal basis. The land uses categories of the two municipalities are substantially compatible.

APPENDIX A

Storm Sewer Inventory, prepared by Owen, Little & Associates, Inc.

STORM SEWER INVENTORY AND MASTER PLAN BOROUGH OF BEACH HAVEN

Executive Summary

Introduction and Overview

Beach Haven

The Borough of Beach Haven is located at the southern end of Long Beach Island, a barrier island along the coast of New Jersey. It is bordered by the Atlantic Ocean to the east, Little Egg Harbor Bay to the west, and sections of Long Beach Township to the south and north.

There are approximately 38 blocks south to north, and 3 to 4 blocks from the Bay to the Ocean (east to west). The total area of the town is approximately 2.32 square miles. The Borough has 20.93 miles of roadways, of which 17.56 miles are maintained by the Borough and 3.37 miles maintained by Ocean County.

Beach Haven was founded in 1874 and has grown to be a residential and commercial community, almost completely developed with very few vacant lots or land areas. There are many older homes and businesses, built prior to the March, 1962 Great Storm, that are not elevated or on pilings, and are only slightly above the existing street elevation. Since Hurricane Sandy in 2012, many homes have been elevated, but the remaining properties at grade elevation are susceptible to the threat of flooding from both tidal and rainfall events.

Thus, a number of natural events and conditions may combine to significantly impact the drainage system on the island. These events such as severe thunder storms, hurricanes and Nor'easters create intense rainfall accompanied by high tides that cause severe flooding within the Borough.

Storm Water Collection and Disposal

There are no natural drainage ways within the Borough, since most of the Borough have been built on filled lands. Some areas of wetlands still remain along the bayfront, notably to the west of Delaware Avenue between 5th Street and 7th street.

With most of the bayfront properties being filled and having bulkheads, any stormwater runoff from private properties and streets does not naturally drain over the surface into Little Egg Harbor Bay. All stormwater is conveyed to the bay by drainage collection systems.

All of the collected runoff is directed westward through piping systems towards the Bay and outlets through the street-end bulkheads. These drainage collection systems are gravity flow pipe systems, sloping from east to west within the road right-of-ways.

As the Borough grew over the years, the development of the drainage collection system has appeared to be mostly unplanned, and has progressed in a piggyback fashion, with later areas of development simply connecting to the earlier systems, with little upgrade

STORM SEWER INVENTORY AND MASTER PLAN BOROUGH OF BEACH HAVEN

in capacity. Some of the pipe systems may be over 80 years old, and are undersized by today's engineering standards.

It should be noted that the ownership and responsibility for stormwater collection systems are shared by the Borough and Ocean County.

Land Coverage and Topography

General topography of the areas west of Bay Avenue is flat, with surface grades of 1 to 2 percent. Road grades are even less with many roads being as low as 0.3 percent. In order to achieve drainage flow, the roads have a "see-saw" profile, where low points are created every other block or so. These low areas create pockets, where storm water collects and will be subject to flooding when excessive rainfall, tidal tailwater or debris clogging may occur. Where streets have been repaved or overlaid, due to the shallow gutter grades, puddling has occurred and runoff is not reaching the inlets.

Areas to the east of Bay Avenue generally are sloped upward towards the Ocean. Elevation change ranges from 2 at the bay area to 12 feet at the eastern street-ends by the beaches.

Flooding

Flooding within the Borough occurs on a regular basis, under two main scenarios: periods of sudden, intense rainfalls, such as during a thunderstorm, creating quick and excessive runoff that the collection systems cannot rapidly dispose of; and by tidal actions where the elevation of the bay waters becomes higher than the tributary lands, such as during a coastal storm event. A combination of both a high tide and significant rainfall will intensify these effects, causing severe and damaging floods.

Minor back bay tidal flooding occurs on average once a month during the full moon cycle. Surface flooding from intense rainfall, such as in thunderstorms, is common in the summer months. On average, during the fall and winter, coastal storms (Nor'easters) will cause severe and damaging flooding 2 or 3 times a year, inundating streets and properties.

Tides

General tidal fluctuations along the Borough's bayshore, is from elevation -1.0 to elevation +1.5, or so; spring tides are as high as 2.0. Occasionally, maybe once a month, a "blow-out" low tide caused by high pressure and off-shore winds is recorded around elevation -1.5 or lower. Higher tide ranges are experienced at the time of full moons ("spring tides"), and tend to be greater in the winter months when the earth is closer to the moon.

More ominously, storm surge may accompany any severe coastal storm where an extreme low pressure system develops. With some storms a constant easterly wind will "stack up" the ocean waters, causing higher tides, which prevents the bay from emptying out the inlet, and back bay flooding occurs. Stronger and more persistent on-shore winds

STORM SEWER INVENTORY AND MASTER PLAN BOROUGH OF BEACH HAVEN

will mean higher and higher tides. This tends to happen up to four or more times a year and can reach elevations 3 or 4, or higher, flooding roadways and many structures.

Superstorm Sandy was recorded as high as elevation 9.0 in the Holgate section of Long Beach Township, and within the Beach Haven downtown area at elevation 7.5. With ground surface elevations around 2 to 3, devastating flooding occurred with great property damage.

Note: All elevations stated in this study are in feet and based on NAVD 1988.

The Future

It has been observed that sea level has risen quickly in the past few decades, and is now forecast to continue to rise in the near future. It is estimated that in the last 100 years the sea level has risen over 1 foot. Because of this, the frequency of tidal inundation of the drainage system and subsequent lessening of pipe flow capacity will only increase. Protection from the tidal effects will become more important. More frequent inundation of the collection system piping and surrounding areas will combine to limit hydraulic efficiency and exacerbate maintenance of the pipe systems by causing more siltation and debris clogging of the piping.

It is conservatively estimated that the sea level rise will continue at the rate of 1 inch per decade, or greater.

Little Egg Harbor Bay Trends

Another factor in the near term is the dredging and opening of Beach Haven and Little Egg Inlets. Removal of shoaling at the inlet and enlarging the boating channels will increase the speed and volume of the tidal flow to the Bay, as there will be a larger cross sectional flow area available. During a storm surge event, such as a Nor'easter or tropical storm, waters will flow faster into the Bay with greater volume, increasing the height and frequency of tidal flooding in the bayfront locations, and the effect will be seen farther to the north.

Regulatory Constraints

Any construction proposed over the tidal waters will require a Waterfront Development Permit from the NJDEP and the Army Corps of Engineers. This may be factor should new outfalls be constructed. Treatment of the water quality of the discharged stormwater may also be required.

STORM SEWER INVENTORY AND MASTER PLAN

BOROUGH OF BEACH HAVEN

Goals and Strategies

Goals of Study

The primary goal of this report is to develop a master plan for the Borough of Beach Haven that evaluates the adequacy of the existing drainage systems, identifies areas of concern due to flooding susceptibility, and recommends a program for the improvement of critical areas that can be applied over a period of years.

The primary objectives are summarized as follows:

- Produce a definitive inventory and map of existing drainage infrastructure suitable to allow evaluation of the existing facilities.
- Identify locations where the drainage system is in disrepair or inadequate in capacity.
- Locate areas of concern due to frequent flooding and evaluate the potential for property damage.
- Develop a system of rating the severity of potential flooding impacts.
- Develop specific engineering solutions to address the various deficiencies that will alleviate the flooding.
- Prepare a 5-year program that targets specific areas of concern including infrastructure repair or replacement and the estimated annual costs thereof.

Strategies

In order to implement this study, the following strategies will be applied:

- Research existing infrastructure mapping, perform field survey and component inspection, video inspections, and review aerial photography in order to compile a definitive Stormwater Collection System Mapping.
- Meet with the County and identify ownership and responsibility for maintenance of the systems.
- From the mapping, list the facilities on a basin by basin basis; including rating of the physical condition of the system components, assessment of overall drainage areas.
- Evaluate the performance of the systems by weighing rate and volume of direct runoff, the pipe and inlet capacities, tidal influences, surface elevations, and the combinations of such effects.
- Evaluate the possible reduction in flooding by constructing pipe replacement, inlet replacements and additions, regrading and/or elevating ground surfaces, installing tide gates and valves, installing pumping facilities, or a combination of all.
- Determine costs associated with the improvements to the systems.
- Recommend a maintenance program for the Borough-owned collection systems including equipment, materials and manpower.

STORM SEWER INVENTORY AND MASTER PLAN

BOROUGH OF BEACH HAVEN

General System Design Parameters

Direct Runoff

Land areas under storm conditions produce an amount of runoff proportional to their tributary drainage area: the greater the area, the greater the runoff. Since the Borough is mostly residential in land use, a generalized runoff coefficient can be used to estimate how much runoff is generated within each of the drainage areas, utilizing various intensity storms.

In general practice, collection systems are designed to carry the 10-year frequency storm runoff from a particular area without overflow. Drainage inlets must be able to capture this amount of runoff without ponding or being by-passed, and the connective piping must be able to convey this runoff to the outlet location without backing up. Low areas or pockets in the system are normally sized to convey the 25-year frequency storm, as this provides a greater factor of safety.

Pipe Hydraulics

Within the storm sewer system, pipe flow is normally carried by the force of gravity, within pipes leading downward toward the outlet area. As additional runoff is introduced into the pipe system from the surface, or at junctions, pipe size or slope is increased to gain capacity. Generally, pipe outlets are unsubmerged and have a "free" outfall, above the elevation of the stream or body of water they empty into.

Should the pipe outlet become submerged, a different pipe flow regimen occurs. Pipes with a submerged outlet will flow under pressure, and their capacity depends on how much pressure is available to force the water through the pipe, much like a water main. This pressure is developed by a change in elevation referred to as "pressure head," which is a function of the elevation change in the system: the greater the change in elevation (head) from upstream to downstream locations, the greater the flow velocity and pipe capacity.

If insufficient head is available to generate the required flow, the system will overflow to the surface, causing standing water and flooding. Since the bayside of the Borough is generally flat in relief, there is very little elevation change in the pipe systems, and therefore, very little available pressure head.

When the pipe outlets become submerged, the collection systems become greatly diminished in capacity, and flooding occurs.

Pump Hydraulics

Pumping within drainage systems are generally used in situations where the outlet water surface elevation frequently has the potential to be higher than the pipe system elevations, such as in tidal or dammed bodies of water. The Meadowlands areas in Northern New Jersey have extensive flood control pumping facilities, for instance.

STORM SEWER INVENTORY AND MASTER PLAN BOROUGH OF BEACH HAVEN

Pump facilities consist of an inlet screen and basin sump, a pump house or chamber, and outlet piping. Basically, the pumps "lift" the stormwater to where it can discharge freely above the receiving body of water's elevation, without causing a backup in the upstream, tributary pipe system. This allows the pipe system to flow freely by gravity, as designed, instead of lessened in capacity under a pressure flow situation. The pump station is normally located at the end of the pipe system, just prior to the discharge point.

The pump system must be large enough to accommodate the peak storm flows to prevent frequent upstream flooding due to the pipe system overflows. The larger the pump capacity, the less frequent the upstream flooding probability.

Water Quality

Although the concern of this study is mainly the reduction of flooding with the Borough, water quality of the discharged waters into the Little Egg Harbor may be a concern, as well. Nutrients are generated in areas where landscaping and lawns are present and fertilizing occurs. Floatables may enter the systems where inlet castings are old and are not to the current standard of a less than 2 inch opening. The use of herbicides to control weed growth where decorative stone surfaces are used for yard cover is common by commercial applicators and homeowners alike.

During severe flooding, overflow of the sanitary sewer system, and large amounts of floatable materials being carried to the Bay may occur.

All of these factors contribute to the degradation of the bay waters.

Treatment of the stormwater can be accomplished with bioretention basins, manufactured treatment devices, and a combination of methods.

STORM SEWER INVENTORY AND MASTER PLAN

BOROUGH OF BEACH HAVEN

General System Constraints

Groundwater Effects

Groundwater is very shallow in the bayside areas, due to the low elevations of the filled properties. Water table may be at the surface in some areas and generally is 1.0 to 3 feet deep from the surface, fluctuating with the tide and rainfall. Groundwater may enter and fill the underground pipe system and limit capacity. In areas to the east of Bay Avenue. Groundwater will tend to be at a greater depth.

There are areas where groundwater “bleeds” out of the ground and onto the property and roadway surfaces for days after rainfall events, causing a continuing nuisance. With the ongoing beach replenishment, a greater area of dune and beach will be available for infiltration of rainwater. Since much of the Town is underlain with old marsh areas (known as meadow mat), which is an impervious material, groundwater is trapped, unable to infiltrate vertically, and flows horizontally either to the ocean or the bay. New, tight, bulkheading material along the bayfront further restricts groundwater flow into the bay as well. Similarly, when tidal flooding occurs, the ground becomes saturated, and groundwater remains elevated for a long period of time, again exacerbating any surface flooding that may follow.

The presence of groundwater near the surface makes pipe installation difficult and expensive.

Other Environmental Concerns

Most land areas of the Borough are developed, excepting the beach and dune areas and a wetlands area at the west side of Delaware Avenue between 7th and 5th Streets.

Pipe outlets are mostly through the bulkheads at the street ends; with a few exceptions, the pipe is extended on bents over wetland area to a point of discharge

Replacement of outfalls, or the installation of new outfalls will require NJDEP permitting for Waterfront Development Permits. It should be noted that construction in the water areas is restricted between April and October.

New or replacement outfalls that extend over the water will also require permitting from the Army Corps of Engineers.

Utilities

Utilities that exist underground in the roadways throughout Beach Haven consist of sanitary sewer, water, and gas lines.

Sanitary sewer is provided to all properties, and is present, with a main pipeline located generally in the roadway centerlines at depths ranging from 4 to 8 feet. The sanitary sewer collection system is owned and operated by the Town. The entire system is under gravity flow; no pumping stations are part of the Borough system.

STORM SEWER INVENTORY AND MASTER PLAN BOROUGH OF BEACH HAVEN

Additionally, the Ocean County Utilities Authority owns and maintains a central trunk sanitary sewer system located with Bay Avenue at depths below 10 feet. This system serves as a collector and runs the length of Long Beach Island, including pumping lift stations located approximately every 2 miles apart.

Water mains of sizes from 4 to 12 inches are located within most streets, generally on the north and east sides of the roadways, at depths from 3 to 5 feet. Individual house services branch from the main. The water system is owned and operated by the Borough.

NJ Natural Gas mains exist throughout the borough, located within the pavement areas, generally on the opposite side of the streets from the water mains. The gas mains range from 2 to 6 inches in diameter and are buried at a depth of 12 inches to 36 inches. House and business services branch from the main.

Electric, Cable and Telephone are mounted on overhead wires. In some locations there may be individual underground services to the buildings.

The presence of underground mains and services for these utilities limit the size of piping, and the vertical depth to avoid conflicts and necessary relocations. Although water and gas crossings can be accomplished by providing bypass piping over or under new stormwater pipes, sanitary sewers operate under gravity and cannot normally be raised or lowered to avoid a conflict.

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Existing Facilities and Conditions

Mapping Data Collection

Data collection began with the review of existing infrastructure mapping and inventory dated 1990 prepared by Owen, Little and Associates Inc. , interviewing Borough staff, and subsequently reviewing construction plans, field surveying and site inspections to assess the current location and conditions of all Borough drainage systems.

The existing infrastructure mapping and inventory from 1990 showed the location of inlets, pipes and outfall; however, over the years since that mapping was completed, there has been much development and the maps have needed to be updated and revised. The maps have been enhanced with current information from recently completed drainage projects, additional field survey, and GPS locations. Site visits were required to confirm plans, reports and elevation data throughout the Municipality.

This proved to be quite difficult, as the inspections of the system revealed many inlets and pipes filled with water and debris, and the locations of manholes shown on the prior mapping were covered by pavement.

Therefore, in order to map the complete, existing drainage system for this study, some pipe sizes, manhole locations, and structure connections in the existing pipe networks were not confirmed in the field. The exact locations, elevations, sizes and materials of the existing system will need to be determined by the use of test pits, die testing, pump and vacuum jetting, and other such methods to be performed at the time of survey for the production of construction plans.

For the purposes of this study, information as compiled will suffice. As portions of the Borough drainage system are selected to be improved, the necessary fieldwork and inspections can be undertaken in the engineering development of the plans. See section entitled, "Proposed Improvements to the Systems" for more information on how to confirm existing system before repairs.

Drainage Basin Identification and Outfalls

Municipal Systems: Each storm sewer system within the Borough was labeled with a numbering system based on the final outfall location. All structures and pipes tributary to that outfall are part of the same identifying number prefix. The designations run from south to north, with the southernmost area being "Drainage Area A," and the northernmost area being "Drainage Area Z."

Nodes within each tributary area consist of drainage structures such as inlets, manholes or inlet or outlet pipes. If a node is located within drainage area A and is the first node from the outfall, then the node name would be A01-1. Some areas have multiple pipe mains connected to one outfall, therefore additional numbers were added as required to label the system such as A01-2, A01-3, A02-1, A02-2 etc., all commencing upstream in the tributary area.

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Ocean County Systems: The numbering of the Ocean County drainage systems is yet to be designated, as ownership and maintenance issues area unsettled.

Drainage System Ownership and Maintenance Responsibility

The Ocean County Engineering Department has supplied mapping that shows which pipes and structures are owned by Ocean County, and which inlets and structures are owned by the Borough of Beach Haven. Generally, the County has claimed responsibility for the drainage systems that have inlets located on the through pavement gutters of the County Roads (Bay Avenue and Beach Avenue).

However, there appears to be some disagreement with previous ownership and maintenance responsibilities, and additional meetings with the Ocean County Engineer are in order to come to terms in this regard.

See Appendix ** for Ocean County's mapping.

Existing Conditions System Inventory

This section reviews the current status of the existing drainage systems within the Borough of Beach Haven. All existing drainage systems are gravity based systems that flow into the Barnegat Bay and have outlets through street end bulkheads and lagoons.

See Appendix***** for the listing of the individual structures and piping.

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Drainage System Remediation and Maintenance

Pipe Condition

It was found during recent video inspections performed in conjunction with roadway repair projects, many pipe runs and inlet structures are failing with large cracks, or entire sections missing, due to a number of factors such as age of the system, corrosion from salt water, damage from debris etc.

All piping within the Borough should be immediately inspected by video means for determination of materials, condition, settlement and debris. Where pipes are constantly submerged and filled with sediment and debris, this may be challenging. The pipe runs will need to be plugged and isolated, and large debris handling pumps must be utilized to remove standing water and allow for the equipment to operate. An outside Contractor will need to be engaged for this pumping, as well as another for the video inspections.

After inspections, further rating of pipe condition and scheduling of replacement lines can be made.

Where streets are slated to be repaved, it is paramount that the pipe and structure conditions be assessed and improvements be made as required prior to the road improvement work.

Pipes that have deteriorated and are causing surface disruptions and are collapsing should be replaced.

Structure Condition

Many of the inlet and manhole structure in the Borough are very old, and are at the end of their useful life. Castings are not up to current standards, are broken, and are in need of replacement. The structure themselves were constructed of brick or block, and are leaking and in disrepair.

These older inlets castings opening within the gutter line of the street and are missing the grate that restricts large debris such as bottles and trash from entering the drainage system. Below are two photos of city inlets, one with a grate to stop debris and one without the grate:

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The picture on the right depicts a city grate that has the proper grate that does not allow large debris to enter into the drainage system. However due to the old condition of many city inlets, this grate is missing, as in the photo on the left, and allow large amounts of debris into the drainage system.

Deficient inlet and manhole castings should be replaced with new, standard, bicycle safe grates that have smaller openings (less than 2 inches) and allow a greater inflow of runoff, while stopping unwanted debris. In some case, this will require the complete replacement of the inlet itself, as the older grates, and therefore, the inlet basin size, is non-standard and will not accept the new casting size.

The older inlets are built of concrete block or brick and mortar. Over time, the inlet walls have deteriorated and are in need of repair. Many of the inlets' concrete block walls are failing and collapsing. Failing structures have a dramatic impact on the capacity of each drainage system by allowing additional groundwater to enter the drainage system through the broken or missing concrete block, as well as allowing additional debris into the structure, further slowing or stopping the flow of storm water.

Where structures are leaking or collapsing, they should be replaced with new precast concrete structures. All inlets within the Borough should be inspected and rated. This will require the ability to clean and pump out filled and submerged structures, which may not always be possible.

It has been found that many manholes have been paved over in the course of roadway improvement. These manholes should be located by metal detector, and reset as required. Deficient manhole casting should be replaced.

Siltation

While newer inlet grates, structures and piping will prevent debris and groundwater from entering the system, eroded and windblown sand and small fine particles will still enter into the system. The siltation of the systems will cause an on-going maintenance problem and if not removed on a regular basis, it can cause erosion of existing pipe bottoms and limiting of flow capacities. See Figure 1***** for examples of both small particle fines

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and large debris found during the video inspection of the Engleside Avenue drainage piping on February 18, 2016.

At least twice a year, and after a major storm event, the inlets and piping of the drainage systems should be cleaned and flushed to remove an siltation or debris. Suitable equipment may need to be purchased or rented to accomplish this.

New drainage inlets should be equipped with sumps in the bottom of the basin which will allow trapping of the sediment prior to entering pipes, and will allow easier cleanout of the system by vacuum means.

Maintenance of the System

The Borough of Beach Haven's Department of Public Works is responsible to maintain the existing drainage systems. Inlets are inspected once a year and are kept on a log by DPW staff.

It is difficult for the DPW staff to properly maintain the system due to a limit of proper equipment, tools, and manpower. DPW Staff have a number of daily jobs that must be completed such as trash pickup, beach maintenance, park maintenance etc. and with limited staff, proper attention to drainage maintenance can be hard to achieve. Also, during peak hours of the summer season when DPW staff is at its greatest, many cars and objects from seasonal population block inlets and street gutters from being cleaned. Note that Beach Haven has a shared services agreement with Long Beach Township for street sweeping.

In order to clean and maintain the collection system, expensive, specialized equipment such as pumps and vacuum trucks are required. Without the proper equipment, it is not possible for the DPW staff to properly clean the system. The Borough does not have a street sweeper, so debris from streets cannot be removed, and ends up within the drainage system. Due to limited staff, tools, and equipment large amounts of sediment and debris has entered the drainage system.

The Borough relies on private contractors to complete cleaning of the pipe systems; however, the difficulty due to tidal water, groundwater, heavy debris and sedimentation hinders the cleaning making it very labor intensive and time consuming. This becomes a considerable expense to the Towns. See Figure 1 for an example of how pipe runs are cleaned and inspected.

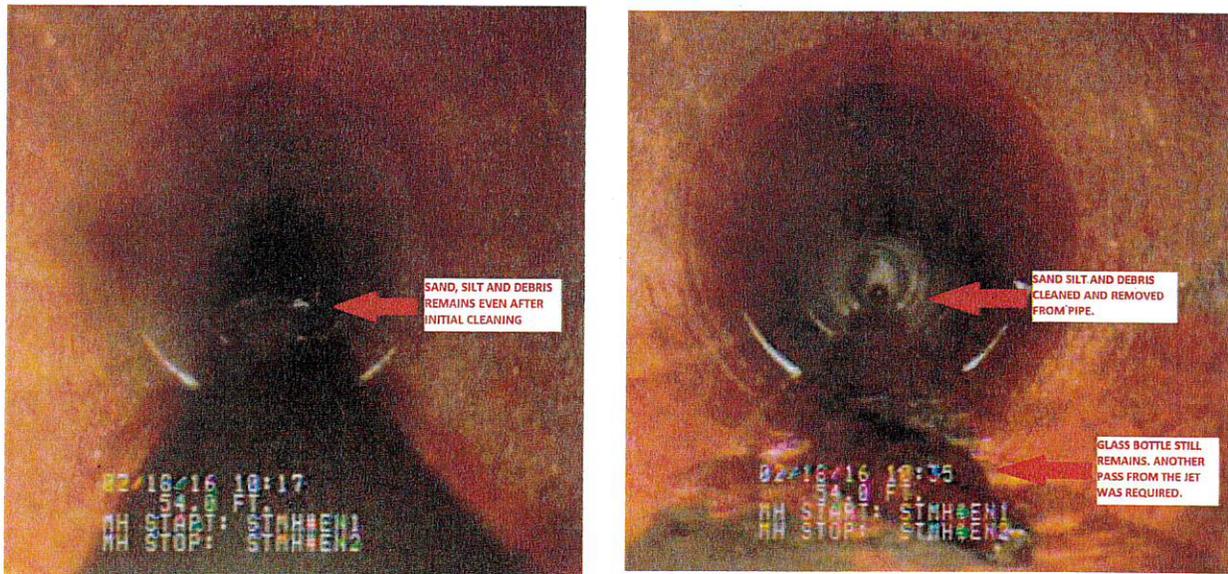
Ocean County Road Department has more advanced pipe and inlet cleaning equipment, and has maintained the existing inlets and manholes adjacent to Bay Ave. However, most of the inlets along Bay Ave flow west to the Barnegat Bay. Therefore debris will flow past the inlets on Bay Ave and block the flow downstream limiting the inlets on Bay Ave from draining.

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Figure 1

Figure #1 show two still frames of the video inspection done on Engleside Ave, performed by American Pipe Cleaning on 2/18/2016. During inspections, heavy cleaning was required by the contractor. Therefore American Pipe Cleaning Procedure to properly clean and video the existing drainage is as follows:

- Using a pump and vacuum truck, the pipes between structures are cleaned using the pressure hose from the truck. This makes all sand silt and debris into a slurry mix that is then sucked out of the downstream structure.
- Installation of temporary inflatable plugs to stop water flow during video inspection.
- Use remote operated camera to inspect the inside of pipe runs. Operator to stop and report all structural cracks, broken pipe, sags, additional debris, lateral locations and all else found during the inspection. If debris are found during video inspection, jet must clean before video can resume.



The still frame on the left shows approximately 50% of the pipe full with sand, silts and debris within the pipe after initial cleaning of the pipe run. This limits the capacity of the pipe and blocks water from properly flowing.

The still frame on the right shows the seconds after the contractor's jet cleaned the sand, silts, and debris from the pipe. Within the picture, a glass bottle is clearly visible and required an additional pass of the jet to be cleaned. Again this shows how labor intensive this type of cleaning can be. However after cleaning, the pipe is visibly clearer and the capacity of the pipe is now again close to 100%.

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System Performance and Evaluations

General

Evaluation of the system areas will require a case by case approach, as the problems encountered are generally a combination of factors such as clogging, low elevation, low ground elevation, insufficient collection points, etc. It may be straightforward to identify the causes of the problems within the various systems; but it will be difficult to resolve the flooding and maintenance issues in an economical manner.

Methodology

In order to evaluate the flooding impacts and rate the severity of problems within the various individual drainage systems, several factors will be taken into consideration:

- Direct runoff land areas to the individual systems and the expected rate of runoff.
- Inlet locations and gutter grading to the collection points.
- Size, condition, depth and slope of the stormwater collection system piping.
- Roadway and ground surface elevations of the system collection structures (grate elevations) and the surrounding grades in relation to the tidal fluctuations.
- Frequency of flooding reported in various locations.
- Impact and severity of flooding observed.

General Evaluation and Performance

It was found that most of the existing drainage systems within the Borough are below engineering standards for the gravity collection of the stormwater runoff. Contributing areas are large and generate a greater runoff than the collection and outlet pipe can handle due to their small sizes and shallow slopes. Thus, at low areas in the Borough topography, excessive runoff beyond the system's ability to collect will pond until an elevation is reached to where overland flow can occur to a downstream area, or to the bay. Some of these flooding depths and areas can be large, and overflow above the curb elevations to private property can occur,

Pipe outlet elevations range from as low as -2.7 to as high as 1.0, which indicate that many pipe outlets are submerged during even normal tides, again, limiting pipe capacity. Upstream land elevations (and therefore inlet grate elevations) can be as low as Elevation 1.5 in some places, and thus are affected frequently by tidal flooding by reverse flow in the pipe systems.

The submergence of the piping system leads to excessive siltation and settlement of debris within the system, which, again, over time limits the pipe capacities. Due to backflow of bay waters during tidal fluctuations, floating debris may enter the pipe ends and lodge within the pipes, as well.

Many of the piping systems in the Borough are the original installations, and may be as old as 80 to 90 years. Many are constructed of vitrified tile pipe (clay) which consist of 4

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foot long sections from joint to joint. These joints were sealed with "oakum," a mixture of rope fiber and tar, which has long since deteriorated and dislodged, allowing soils to enter the piping, creating sink holes and pavement failure. Where the pipe is shallow to the surface, impacts from traffic have cracked and damaged the pipe section, as well.

Later pipe systems are constructed of a mixture of concrete pipes, corrugated steel pipes, cast iron pipes, ductile iron pipes and plastic piping. All these pipes are affected in some way by the saltwater, sand abrasion and traffic impacts.

Some areas of the Borough have "bubbler" systems installed in an attempt to limit the frequency of surface flooding. These bubbler systems inlets are structures that consist of standard drainage inlets connected with solid or perforated piping. The downstream inlet grate elevation is set lower than the upstream inlet grates, and as the piping fills, the water eventually "bubbles" out of the lower grate. The overflowing stormwater will then run along the street gutter to a downstream collection point.

These systems require periodic cleaning to remove sedimentation that will clog the pipe perforation and limit any seepage of collected waters into the ground.

Additionally, the systems have a very limited storage volume, as well as a very limited flow rate, which leads to frequent ponding and overflow. This flooding tends to be more of a nuisance to motorists than damaging to properties, as the ponding will reach the centerline elevation of the roadways, then overtop the roadway and run downstream.

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Flooding Solutions for Beach Haven

General

Various approaches to remedy the flooding impacts exist and are discussed below. Evaluation of the specific causes and impacts at each individual problem area by performing a complete engineering study will be required, before implementing a solution or a combination of solutions.

All possible remedies should be examined at each individual location to evaluate the best and most cost effective approach to preventing property damage due to flooding.

Pipe Cleaning and Inspection

Cleaning and televising the existing system has many benefits. As mentioned in this report, a number of existing outlets are submerged under water. This allows debris to enter the system not only through the inlets but from the Barnegat Bay as well. Deposits like sand, mud and silts collect within the system and cause major problems. By increasing the maintenance and use of a vacuum jet truck, the lines can be cleaned of the debris and can work properly. Since many pipe runs within the Borough have not been properly cleaned over the years, it was found that the debris on the bottom of pipe runs can fill up more than 50% of the pipe diameter and form a thick mud type slurry. This slurry can harden and make cleaning of the existing pipe very difficult and time consuming. Once the debris is cleaned out, and is properly maintained on a yearly basis, this slurry mixture will not form and the pipe runs will drain the surface water more efficiently.

Once cleaned by the Vacuum Jet truck, closed circuit video inspections within the storm sewer system can be completed. From these inspections, we can determine the overall size, length and material of each pipe run; find all unknown structures such as buried manholes or old abandoned doghouse structures; we can determine the condition of the pipe runs and structures; and develop an overall rating system for the condition of pipes to determine where future projects should be planned and prioritized.

Repair Collapsed Piping

Replace damaged pipe runs on a systematic basis with new plastic piping. The use of PVC piping is encouraged, as it is resistant to scour from abrasive particles, is unaffected by saltwater, has tight and long-lasting joints with a longer pipe section length, and is easy to clean.

From the video inspections, the condition of pipe runs can be evaluated, and thus the type of repair may be assessed. Some pipe runs within the Borough will require cleaning, while other pipe runs could require full replacement. Types of repairs and replacements are as follows:

- Open Cut Replacement may be required in areas found with extreme damage, such as broken and missing pipe sections. Open cut method is the

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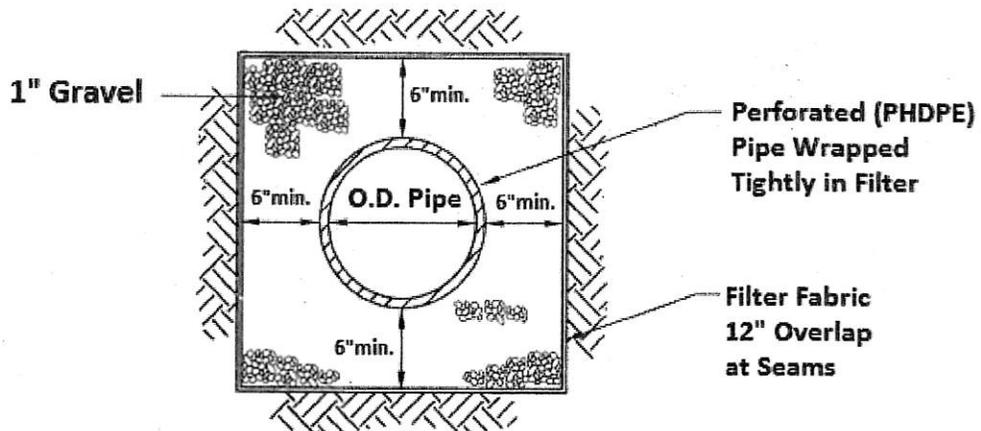
removal and replacement of the existing pipe by excavating the existing surface and material above the pipe, removal and disposal of existing pipe, replacement of new PVC pipe and all restoration required. Once replaced, some studies show that if maintained, the PVC pipe is expected to provide reliable service in excess of 100 years. This will stop infiltration from groundwater from entering the system.

- Cured-In-Place Pipe (CIPP) lining is one method used to repair existing pipe runs. CIPP liners are constructed of a tubular layer(s) of non-woven polyester felt with an exterior polyurethane coating. The CIPP pipe is placed and forced against the inside wall of the existing pipe and left to cure. This is a trenchless method of pipe repairs and is less expensive than the traditional open cut replacement methods. CIPP can be used on any type of pipe and fills the existing pipe curvature. This will reduce infiltration into the system. CIPP cannot be used in cases that have collapsed lines, severe pipe deflection, and where additional pipe capacity is required.
- Pipe bursting is a trenchless method of pipe replacement with a new pipe of the same or larger diameter. This method uses a bursting tool to break the existing pipe and at the same time, pull a new piece of pipe into its place. This method is utilized if the existing pipe has inadequate capacity and has substantial structural defects preventing other trenchless methods from being utilized. However groundwater can cause a problem for the pipe bursting method and a full geotechnical data would be required for the area. Also unexpected heave or settlement can occur at the surface when trying to burst existing pipes with minimal cover. Pipe bursting is difficult within the Borough due to the close proximity of existing utilities that could be damaged.

Recharge Piping

Installation of Recharge Systems may help to limit and reduce the rate and volume of runoff that flows to the downstream systems. Recharge Systems use perforated PCV piping wrapped tightly in filter fabric and installed in a stone trench as shown below. Pipe would be installed where groundwater is deep.

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RECHARGE TRENCH DETAIL
N.T.S.

The filter fabric allows water to pass through but blocks all silts and sands. The holes in the pipes allows water to discharge into the voids within the stone trench allowing for greater capacity. Water can then pass through the filter fabric and drain into the soil below. This will reduce the length of time of surface flooding and also reduce puddling after smaller storms. However there are some constraints on where Recharge Systems can be installed such as Meadow Mat or the depth to the Seasonal High Ground Water Table (SHGWT) or the zone of water saturated soil at the highest average depth. If there is limited space between the existing street level and the SHGWT to install the Recharge System, the system does not work as efficiently as designed. This is due to the groundwater infiltration into the recharge system that will reduce the overall system capacity.

New Pipe Connections to Eliminate Bubbler Basins

Installing new underground piping may be warranted to eliminate surface flooding at bubbler basin system. However, the new piping may exacerbate flooding in the downstream areas by conveying a greater volume of stormwater more rapidly.

Re-grading Roadways and Gutters

In many areas, insufficient gutter and road grade creates ponding, and due to the shallow or negative pitch on the existing pavement the runoff does not reach the inlet grate. Some of these problems are minor and can be addressed by milling and repaving the roadway or gutter, allowing runoff to flow to the existing inlet.

However, in some areas regrading may not be feasible due to the low elevations of the surrounding properties.

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Raising the Elevation of Flood-prone Areas

It may be possible to protect properties by raising areas of low relative elevation. Areas that are below elevation 2 are subject to frequent tidal flooding, and may experience more severe impacts during storm surge events.

Roadway and surrounding area may be able to be raised, and still maintain the existing drainage system. Many factors come into play, and a thorough engineering study of the surrounding areas must be undertaken to ascertain all the possible impacts and costs.

In some areas, eliminating the road curbing by filling the pavement area may be possible. This will limit the depth of roadway flooding, making streets more passable, and can provide steeper gutter grades

Raise Piping System Alone

Where outlet pipe are low and submerged, it may be possible to raise the outlet pipe elevation above the tidal influence levels, if the upland elevations allow it. Conflict with other utilities may be a problem, and limit this solution.

Additional Pipe Outlets and Additional Piping

Constructing pipe outlets in new locations to the bay may be feasible to gain capacity in the upstream system. Pipe capacity and tailwater effects need to be evaluated in conjunction to determine if pressure flow is a factor.

Parallel piping and and/or an over-under pipe configuration may afford the opportunity to gain needed capacity.

Surface Gutter Collection and Perforated Piping

Addition small diameter perforated pipe and stone recharge trench could be installed near the surface along roadway gutters in streets that do not have the sufficient slope to reach existing inlets, thus reducing surface water ponding.

This can relieve the nuisance flooding associated with groundwater bleeding as well.

In some areas, installation of larger diameter perforated piping and stone trench installation can provide upstream detention, retention and infiltration of the storm runoff. Where downstream pipe capacity is insufficient, this may be a viable solution to surface flooding. Utility conflicts may be a problem in installing the underground infiltration piping. This system could be combined with water quality treatment at inlets.

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Install Additional Drainage Inlets

Additional inlets can be installed and connected to the existing pipe system, possibly with recharge trench as explained above.

The new inlets can be placed at regraded gutters where ponding is caused by insufficient grades.

Operation of the pipe system must be ascertained to determine the influence of tidal and flow capacity.

The placement of additional grates may help at areas where an excessive amount of land areas drain to one point and during intense rainfall events the existing inlet grate capacity is exceeded. The design maximum spacing of storm drain access structures whether manholes or inlets that are designed with very flat grades, should be approximately 400 feet apart to restrict the gutter flow width.

The spacing distance between structures becomes critical for very flat graded systems because the flow within the pipe cannot reach the minimum velocity required to move sedimentation. Therefore the sand, silt and debris have a greater chance of building up within the pipe runs and decrease capacity. Providing access every 400 feet will allow the pipe runs to properly cleaned and flushed. Beach Haven has multiple pipe runs that exceed 400 feet and are designed with very low grades and has allowed many pipe runs to be filled with sand, silts and debris that take away 50% or more of the existing pipe's capacity.

Inlet Casting Replacement

Replacing the outdated inlet castings and grates will prevent debris from entering the system, and provide a more efficient collection of surface runoff.

Since many inlet structures with the older grating is not a standard size, it may not be possible to simply replace the casting, and the entire structure must be replaced.

Inlet and Manhole Replacement

Replacing the deficient inlet and manhole structures found by video or direct inspections will stop infiltration of groundwater and provide adequate space and access for future maintenance. Providing a sump below the pipe bottom invert will allow settlement of silt and sands, preventing the siltation of the piping and allowing easier cleaning.

New frames and grates can be installed that will allow greater storm water flow to enter the system along with blocking floatables and debris from entering the system. New manhole rims and covers may also be required for manhole rims that have been paved over.

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Tide Valves and Gates

Inline pipe valves could be installed near, or on, the outlet of the existing structures. Outlet piping must be sound, and of a suitable material, or replaced to allow the installation of the valves.

This inline valve will close when the back pressure from Barnegat Bay is greater than the pressure within the exiting the system. The valve would open when the head pressure within the system is greater than that of the Bay.

This allows flood waters to exit the system but also keep debris and bay water from flowing back into the piping. However, these inline valves require additional maintenance and must be kept clean and free of debris so that it can properly open and close.

However, in areas with a shallow pipe slope and low elevation, the piping may not be able to develop a great enough pressure to force open the valve, and the system may overflow the inlets, causing flooding upstream.

Pumping

Pump stations could be utilized if all other proposed improvements methods are not feasible for a certain drainage system. Flooding in these locations is caused by a combination of rainfall and tidal flooding, and occurs where the areas are typically low in relative elevation with a deep pipe and a submerged outfall. These systems are usually full with water at all times. Groundwater elevation is near the surface.

The use of a pump station may allow the existing deep pipes to remain, and would combine an inline valve to stop the tidal waters from entering the system and a pump within a chamber to remove water from the exiting drainage system to levels below the inlet grates.

A large "regional" pump station may be suitable when the cost of the station is justified, and weighed against the cost of damage repairs and impacts by repeated flooding. Property may need to be acquired and accommodate the structures.

Similarly, a small, self-contained pump station, say in a manhole type structure, may be suitable for areas where flooding is infrequent and shallow, or more of nuisance than damaging.

In considering the use of a pump station, a cost benefit analysis must be made to show the amount of protection from flooding is justified.

Small Pump Station

A small inline pump station, housed in an underground precast concrete structure can be effective to relieve nuisance ponding that may linger during a long, rainy period. The station would consist of two small capacity submersible pumps, have a downstream check valve to prevent backflow from the bay discharge, a level sensor, pump operation control

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and switching panel. Backup generator would not be utilized. A trash filter and grit chamber may be required.

Pump operation would be such that as upstream water levels approach the roadway elevation, the pumps switch on. The pumps are shut down when the water level is lowered to just below the roadway and surrounding ground surface elevation to prevent the pumping of groundwater.

Large Pump Station

In order to provide protection from larger surface flooding events, a large regional-type pumping station would be installed. This would consist of a pump house, inflow well, and a series of high capacity pumps to handle the peak storm runoff rate. The cost of such a station is high, and is in relation to the degree of safety designed for—the greater the storm protection, the larger the pump capacity and cost thereof. The pump station would require available property located near the outlet location.

A large station capable of pumping in the range of, say, even 20 cubic feet per second (9,000 gallons per minute) would require multiple pumps to accommodate varied inflow, a large volume wet well to accommodate the inflow stormwater, valving and discharge piping.

The discharge velocity of the water from the outlet piping may affect bay turbidity (cloudiness or haziness of a fluid caused by large numbers of individual particles that are generally invisible to the naked eye, similar to smoke in air). The outflow velocity should be not greater than 3 feet per second, or a stilling basin, or some sort of a turbidity barrier, may be required to be installed within the waters around the outlet structure.

Bulkhead Drains

In the past, the bulkheads were constructed of vertical timber sheeting that had lap joints that allowed groundwater (and bay water) to pass through. New bulkheading is constructed with tongue and groove joints that are far more restrictive to flow and are almost watertight.

Placing an underdrain pipe within permeable fill behind the bulkhead will permit groundwater to drain into the bay. Such piping should be required on all new and replacement bulkheading. The underdrain pipe should be placed at about mean high tide elevation.

Permitting a free flow of groundwater will limit surface bleeding and restriction of the collection pipe system.

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Water Quality Improvement

The following actions could be taken in all areas:

- Reduce landscaped areas requiring fertilizing and pesticide treatment.
- Provide water quality control structures within the system.
- Use benign building materials (non-leaching of toxic materials and metals).
- Eliminate pesticide and herbicide usage in general.

Water Quality Inlets

The installation of devices that reduce the impact of the stormwater runoff due to degraded water quality may be available in some locations, notably in the higher elevations of the upstream areas of the collections system.

Proprietary manufactured structures include filtration and separation devices that remove pollution laden sediment from entering the collection system, and structures that provide vegetative uptake of dissolved pollutants within the stormwater.

Surface water quality facilities, such as bio-retention basins or rain gardens, were not considered for use, since there is little available lands and the cost of property is great, and there is physically no way of providing surface drainage.

Reducing Runoff

Most of the Borough of Beach Haven is fully developed with asphalt paved streets and impervious surface coverage. Reducing the amount of runoff these impervious surfaces generate will help with the overall drainage within the Borough. Narrowing of the pavement may be feasible in areas where on-street parking is not in great demand.

Replacing parking area surfaces with a permeable or porous paving system may also be an option to reduce runoff.

The following actions could be taken where surface runoff is a cause of flooding:

- Replace impervious paving with pervious paving; provide pervious sidewalks.
- Provide roof drainage dry wells/infiltration piping for all new construction.
- Provide parking area detention to limit the impact of intense rainfalls.
- Limit roof areas size; reduce building coverage.
- Reduce roadway pavement widths.

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Reported Flooding Problem Areas

There are a total of 26 separate drainage areas within the Borough of Beach Haven. Each area can be affected by one or both types of flooding scenarios, heavy rainfall and coastal flooding.

The following is a list of some locations identified by the Borough Department of Public Works, field observations, and homeowner complaints as subject to flooding:

Street	Location	Rainfall Flooding	Tidal Flooding	Comments
Atlantic Ave	Intersection at Dolphin	x		Southwest corner of pavement does not pitch towards to basin.
Atlantic Ave	Intersection at Belvoir	x		East side of street floods with nowhere to drain. No basins at intersection.
Atlantic Ave	Intersection at Norwood	x		East side and southwest of street floods with nowhere to drain. No basins at intersection.
Atlantic Ave	Intersection at Coral	x		Northwest corner of pavement does not pitch towards to basin.
Atlantic Ave	200 block (Coral to Amber)	x		East side of street does not drain to basins on either Coral or Amber.
Atlantic Ave	100 block (Amber to Engleside)	x		West side of street does not drain to basins on either Amber or Engleside.
Atlantic Ave	Intersection at Engleside	x		Northwest side of street does not drain to basin
Atlantic Ave	Intersection of Engleside	x		Small basins, undersized
Atlantic Ave	Intersection of Centre	x		Northeast side of street does not drain to basin.
Atlantic Ave	Intersection of Taylor	x		East side of street floods with nowhere to drain. No basins at intersection.
Atlantic Ave	Intersection of 9th	x		North side of intersection floods with no basins. Southeast side does not drain to basin.
Atlantic Ave	Intersection of 11th	x		East side of street floods with nowhere to drain. No basins at intersection.
Atlantic Ave	Intersection of 12th	x		Southeast side of street floods with nowhere to drain. No basins at intersection.

**STORM SEWER INVENTORY AND MASTER PLAN
BOROUGH OF BEACH HAVEN**

West Ave	Intersection of Leeward	x		Water main runs through center of drainage pipe.
Bay Ave	Intersection of 10th	x	x	Slow draining basins. Bay comes up pipes. Outlet completely submerged.
Bay Ave	Intersection of 7th	x	x	Slow draining basins. Intersection does not drain. Outlet completely submerged and unable to locate.
Delaware Ave	Intersection of Amber	x		Northeast side of street does not drain to basin.
Delaware Ave	Intersection of Coral	x	x	Slow draining basins.
Pennsylvania Ave	Intersection of 3rd	x		Northeast side of street does not drain to basin.
Pennsylvania Ave	Intersection of Coral	x	x	Slow draining basins.
Nelson Ave	300 Block (West Ave to Bay Ave)	x		North and south side of streets flood and does not drain to basin.
Leeward Ave	House #500 thru #412	x		South side of street floods with no basins to available to tie into.
Kentford Ave	House #321	x		Flooding at this location
Pelham Ave	Bay Bulkhead		x	Concrete outlets visible have many cracks and are under water.
Belvoir Ave	Bay Bulkhead		x	Outlet is collapsing and in need of replacement
Norwood Ave	West of West Ave	x		South side of street floods and does not drain to basin.
2nd Street	West of Pennsylvania	x		South side of street floods and does not drain to basin.
9th Street	Boat Ramp		x	Outlet is collapsing and in need of replacement
Bayview Condo	Bay Bulkhead		x	Outlet is collapsing and in need of replacement.

*The table above is a list of several locations within the Borough of Existing Problems Areas. Additional Areas may exist that were unknown at time of inspections.

STORM SEWER INVENTORY AND MASTER PLAN BOROUGH OF BEACH HAVEN

Rating Problem Areas and Systems

A specific program of evaluation of the impact at problem areas, and the adequacy of the pipe systems can be undertaken after the complete inventory of the existing pipe system is completed.

Specific Areas and Projects

The following locations, due to the frequent and severe flooding reported, should be addressed with a complete engineering study and solution to rectify the conditions:

10th and Bay Avenue -- Drainage Area Z

Description of Drainage Area:

This drainage area consists of the lands from oceanfront to bayfront between Taylor Avenue northward to 12th Street, and is mapped as Drainage Area Z. It consists of approximately 40 acres of residential and commercial development, with little open space.

All stormwater discharges through a single outlet pipe at 10th Street to the Shelter Harbor Marina dockage harbor. There appears to be no easement for this piping.

Frequent flooding is observed along Bay Avenue during times of high tides, and during storm events.

Description of Pipe System

The outfall location is located at the westerly terminus of 10th Street, crossing through and underneath the southerly building of the Shelter Harbor Townhouses. The pipe is a single 24 inch diameter pipe. During site inspections on multiple low tides, the outlet pipe is submerged and full of water.

The main trunk pipeline runs north and south on the westerly side of Bay Ave from Taylor Ave to 12th Street. Existing pipe material and condition is undetermined. It has been previously mapped as being 18 inch in diameter.

Beach and Atlantic Avenues have bubbler basins installed at the street intersections from Taylor Avenue to 11th Street. There is no connective underground piping from Beach Avenue westerly to Bay Avenue, or from Atlantic Avenue to Beach Avenue.

Elevations and Topography:

Within this drainage area, there are some of the lowest grade elevations within the Borough, with inlet grates along Bay Avenue as low as elevation 1.2. General road elevations range from 1.5 to 2.0. Ground surfaces are similarly low, with the curb heights at elevation 1.7.

Streets from the oceanfront slope to Bay Avenue.

STORM SEWER INVENTORY AND MASTER PLAN BOROUGH OF BEACH HAVEN

Surface Runoff Flooding

Due to the large drainage area of over 40 acres, even a small rainfall event will cause sudden flooding, and impassable roadways. This flooding will extend all along the Bay Avenue pavement areas from Taylor Avenue to 12th Street.

It appears that pipe capacity is insufficient throughout the system.

For the design 10-year frequency storm, the runoff generated to reach the 10th Street outfall can be estimated to be over 100 cubic feet per second (cfs). The 24 inch diameter outfall pipe, flowing under pressure due to, say, 1.5 feet of water height (normal tide at El. 0, and inlet grate elevation at El. 1.5), has a capacity of about 16 cfs. Should the pipe be partially blocked with sediment or debris, this would be even less.

Some surface flooding is also reported at the various intersections with Atlantic Avenue. The roadway gutter will fill until runoff takes place over the roadway crown and then runs westward down the street gutters.

Tidal Flooding

As roadway elevations are around 1.2 to 1.8, during high tides the area will be frequently flooded. These tides will make the roadway impassable, and the detour of vehicles to the higher in elevation Beach and Atlantic Avenues will be necessary.

Actions:

Right of entry and easement for the maintenance of the drainage outlet piping at the Shelter Harbor Townhouses should be immediately acquired. The exact location of the existing pipe outfall should be ascertained. If the piping is below an existing structure, it should be relocated to where maintenance and future replacement can be accomplished.

Pipe cleaning and inspection: It is recommend the system be completely cleaned and televised so that the pipe condition can be assessed. Any pipe found damaged or collapsed should be replaced.

Replacement of Piping at a higher elevation: Due to the shallow cover, raising the elevation of the pipe system may not have a significant effect on flooding. Raising the pipe system was not considered due to the low land elevations.

New Pipe outfall: Some minor capacity may be gained at the outlet pipe by doubling or replacing the pipe with one of greater size. This impact would be marginal, as at most, due to tidal effects and submergence, the rate of flow under pressure conditions will not be increased that greatly. Again, utility conflict and pipe cover limitations may limit the size of pipe replacements.

Additional Inlets: Surface flooding is more a problem due to pipe capacity not being great enough. More inlets will not alleviate surface flooding caused by lack of pipe capacity. Any drainage structures in need of repair or casting replacement should be addressed after the results of cleaning and inspections are known.

STORM SEWER INVENTORY AND MASTER PLAN BOROUGH OF BEACH HAVEN

Additional pipe outlets and piping: It may be possible to provide new pipe outlets to the bay, preferably from locations where the elevations are higher than at 10th Street. This will relieve surface flooding and provide a greater overall system capacity. An engineering study must be undertaken to locate the possible new outlet locations and the feasibility of new connective piping.

Reduction of runoff: Reducing the amount of runoff entering the system by detention, retention and infiltration can then decrease the severity and frequency of surface flooding in the downstream areas.

Possible methods include the installation of underground detention and infiltration piping, surface detention pond, and connecting individual lot roof drainage to underground infiltration trenches.

Land Regrading: Due to the developed and established commercial development along Bay Avenue, raising the roadway or surrounding lands does not appear to be feasible.

Outlet pipe replacement: A new, larger outlet pipe will provide some additional capacity in the system, but not enough to adequately relieve surface flooding, and will have no effect on tidal flooding.

Flood Valve: Utilizing a flood valve to prevent the backflow of tidal bay waters may be possible at this location. An engineering study must be performed to ascertain surrounding land elevations and the ability to isolate this area from high tidal levels. The valve could be installed at the pipe discharge location, or upstream within a structure to allow easier maintenance, as the discharge area is within private property.

During surface flooding events, a flood valve operated solely by pressure differential may not be feasible in this location, as there may not be a great enough head pressure to open. A power-operated valve can be utilized to allow open outflow during rainfalls when the bay elevation is low.

Pumping: If the effects of the tidal flooding can be alleviated with a flood valve, pumping of surface floodwaters can take place in some manner. Since the contributory drainage area is so large in comparison to the existing pipe collection system, a determination of the ability and the time to relieve the surface flooding must be undertaken. It may not be feasible to lower the flooding during a larger storm event.

A small pump station can be installed at 10th Street that would provide some relief from long term surface flooding. Due to the large flooded area, the time to drain will be long, in the order of 2 to 3 hours.

The use of a large pump station in this location can relieve the surface flooding, but a cost-benefit analysis must be undertaken to determine the feasibility.

**STORM SEWER INVENTORY AND MASTER PLAN
BOROUGH OF BEACH HAVEN**

Three other locations of the Borough have been identified as areas of major concern, where there is frequent tidal and surface flooding, similar to the 10th Street outfall area:

7th Street Area

3rd Street Area

Pearl Street Area

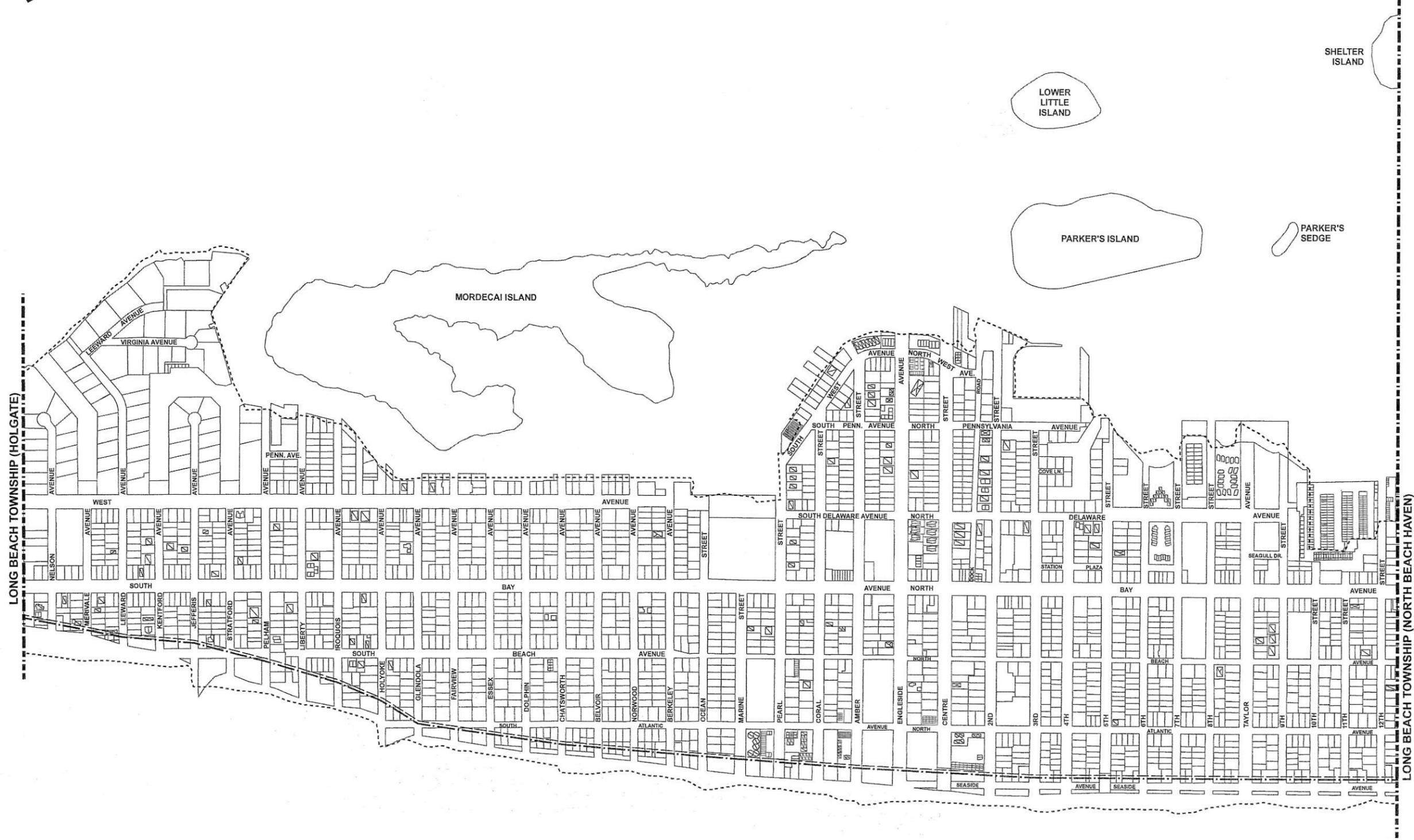
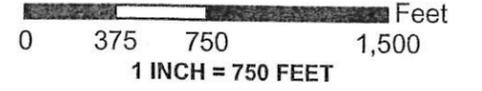
These areas should also be evaluated based on the alternative and solutions presented above for the 10th Street areas.

APPENDIX B

Municipal Mapping, prepared by Owen, Little & Associates, Inc.



**BOROUGH OF
BEACH HAVEN**
OCEAN COUNTY,
NEW JERSEY

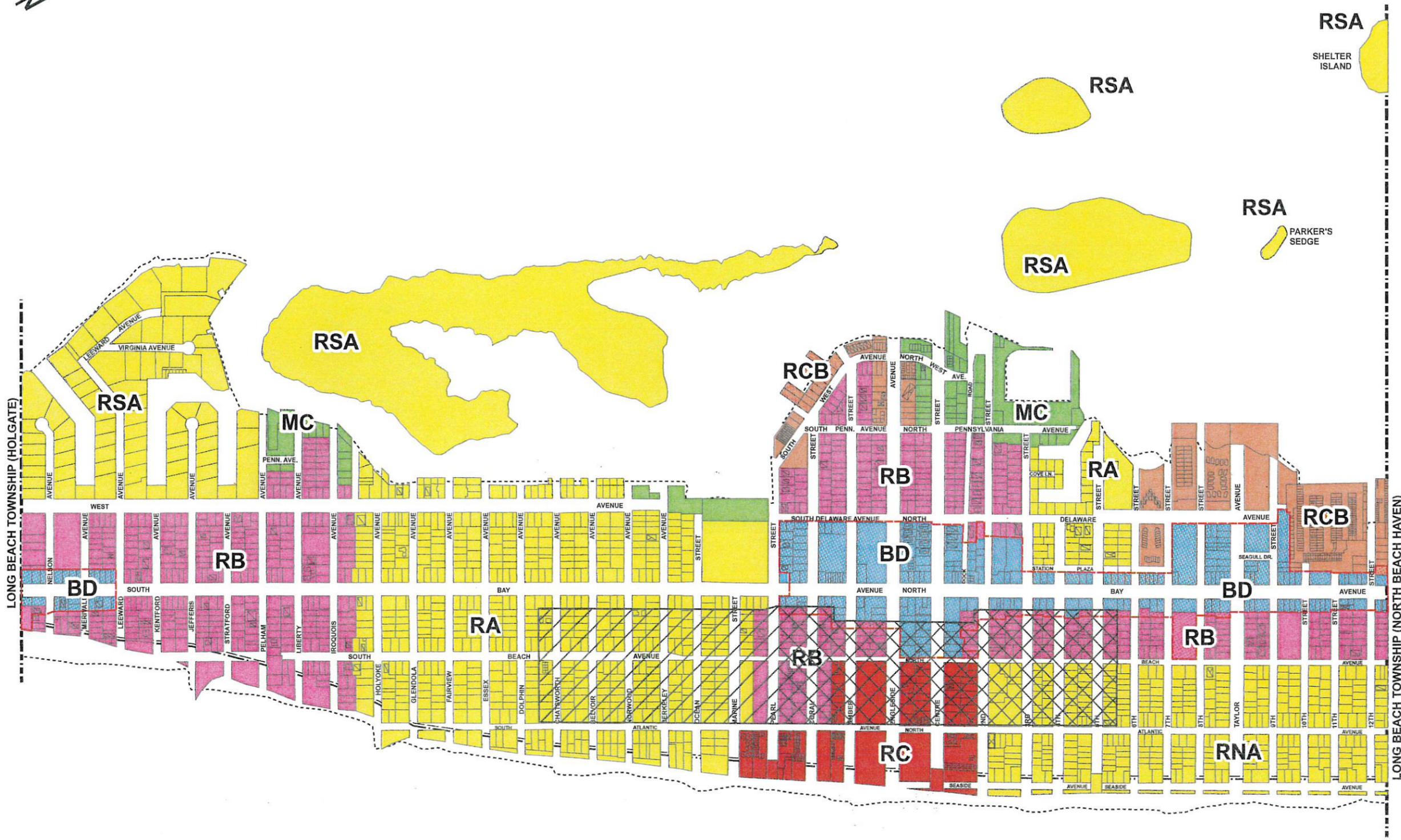
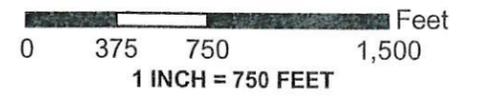


- BUILDING LINE
- BULKHEAD LINE
- SHORELINE



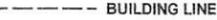
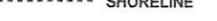
BOROUGH OF BEACH HAVEN

OCEAN COUNTY, NEW JERSEY



ZONING

-  ONE FAMILY RESIDENTIAL
-  ONE FAMILY / TWO FAMILY RESIDENTIAL
-  MULTI-FAMILY RESIDENTIAL
-  MULTI-FAMILY / BAY DISTRICT
-  BUSINESS DISTRICT
-  MARINE COMMERCIAL DISTRICT
-  HISTORIC PRESERVATION ZONE
-  BED AND BREAKFAST OVERLAY ZONE
-  AFFORDABLE HOUSING OVERLAY ZONE

-  BUILDING LINE
-  BULKHEAD LINE
-  SHORELINE



BOROUGH OF BEACH HAVEN

OCEAN COUNTY,
NEW JERSEY

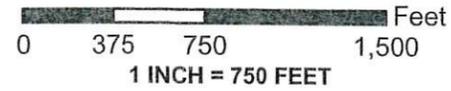
SHELTER ISLAND

LOWER LITTLE ISLAND

PARKER'S ISLAND 5

5 PARKER'S SEDGE

MORDECAI ISLAND



OPEN SPACE

PUBLIC BEACH

PUBLIC PARK

1. NELSON AVENUE PARK
2. WALSH FIELD
3. VETERAN'S MEMORIAL PARK
4. TAYLOR AVENUE WATERFRONT
5. PARKER ISLAND BIRD SANCTUARY
6. OCEANFRONT PAVILION - PEARL STREET
7. OCEANFRONT PAVILION - CENTRE STREET
8. OCEANFRONT PAVILION - FIFTH STREET

LONG BEACH TOWNSHIP (HOLGATE)

LONG BEACH TOWNSHIP (NORTH BEACH HAVEN)

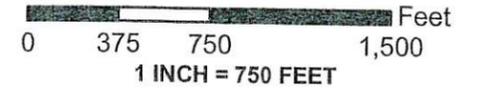


- BUILDING LINE
- - - BULKHEAD LINE
- SHORELINE



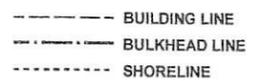
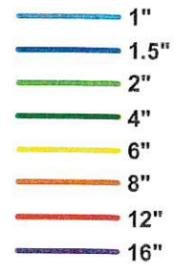
BOROUGH OF BEACH HAVEN

OCEAN COUNTY,
NEW JERSEY



WATER SYSTEM

PIPE SIZES



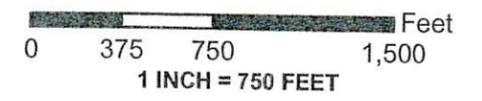


BOROUGH OF BEACH HAVEN

OCEAN COUNTY,
NEW JERSEY

SS
SHELTER ISLAND

PO SS
LOWER LITTLE ISLAND



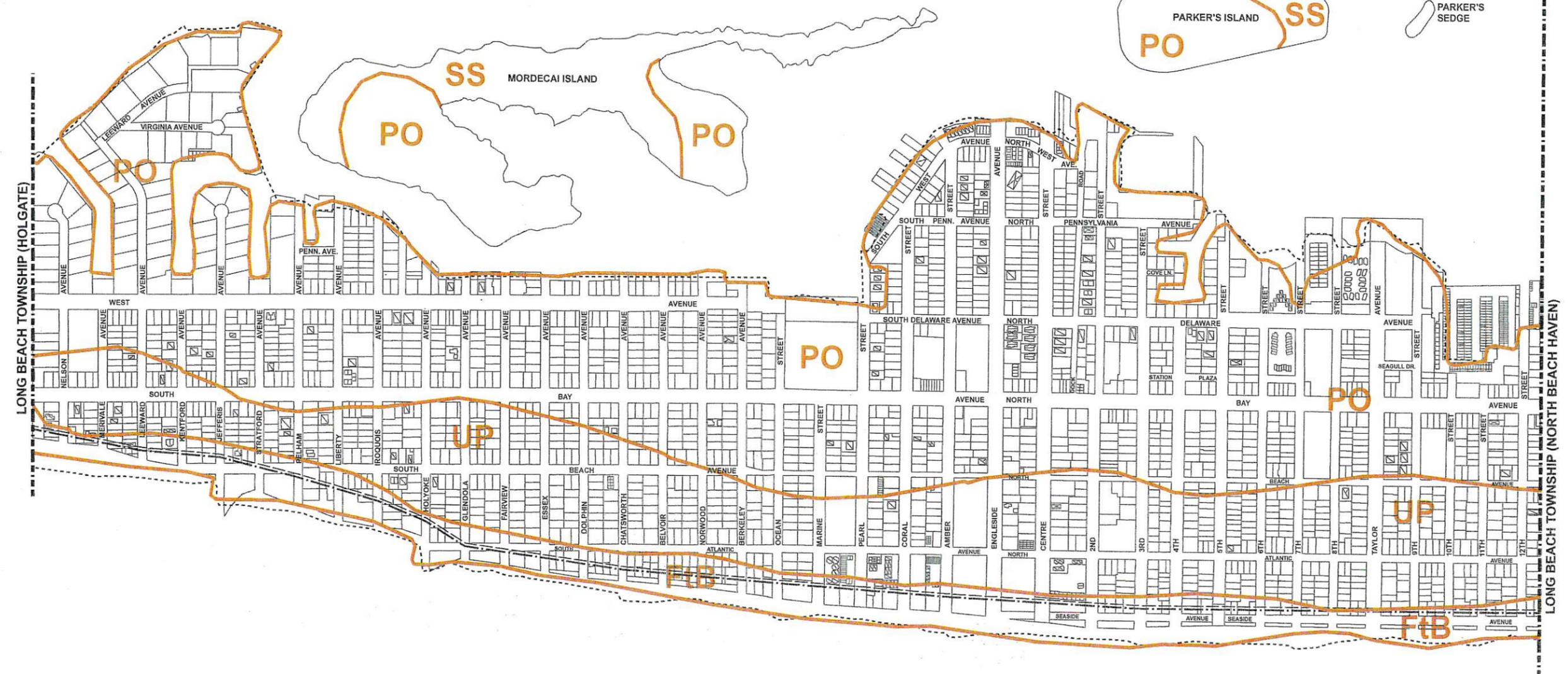
PO SS
PARKER'S ISLAND

PARKER'S SEDGE

SS PO
MORDECAI ISLAND

SOILS

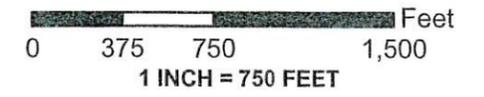
- FtB** FRIPP FINE SAND, 2-10% SLOPES
- PO** PSAMMENTS, SULFIDIC SUBSTRATUM
- SS** SULFAQUENTS/SULFIHEMISTS, FREQUENTLY FLOODED
- UP** URBAN LAND/FRIPP COMPLEX



- BUILDING LINE
- BULKHEAD LINE
- SHORELINE

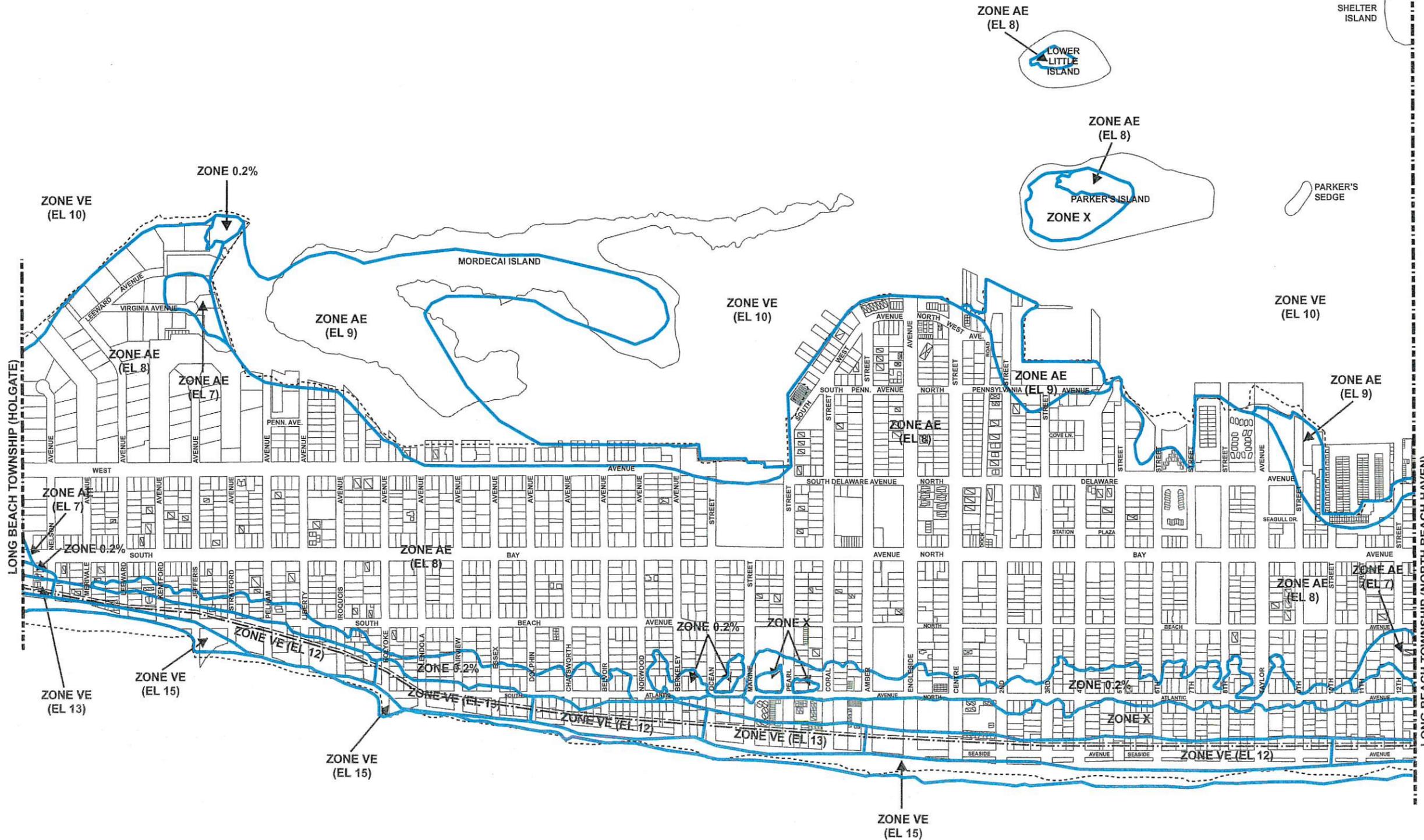
BOROUGH OF BEACH HAVEN

OCEAN COUNTY, NEW JERSEY



FLOOD HAZARD ZONES

- AE** BASE FLOOD ELEVATIONS DETERMINED (ELEVATIONS IN FEET)
- VE** COASTAL FLOOD ZONE WITH VELOCITY HAZARD (WAVE ACTION) - BASE FLOOD ELEVATIONS DETERMINED (ELEVATIONS IN FEET)
- 0.2%** AREAS OF 0.2% ANNUAL CHANCE FLOOD
- X** AREAS DETERMINED TO BE OUTSIDE OF 0.2% ANNUAL CHANCE FLOODPLAIN



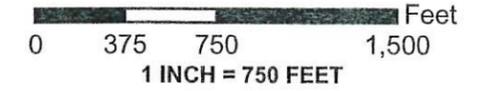
- BUILDING LINE
- BULKHEAD LINE
- SHORELINE



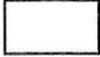


BOROUGH OF BEACH HAVEN

OCEAN COUNTY,
NEW JERSEY



ROADS/TRAFFIC

-  COUNTY ROADS
-  MUNICIPAL ROADS
-  ONE-WAY ROAD
-  TRAFFIC LIGHT

NOTE: ALL ROADS ARE TWO-WAY TRAFFIC UNLESS OTHERWISE MARKED

-  BUILDING LINE
-  BULKHEAD LINE
-  SHORELINE

