



THE TOWNSHIP OF
BRICK, NJ

NEIGHBORHOOD PLAN



Shore Acres, Brick Township, New Jersey



Prepared By:

David G. Roberts, P.P., AICP, LLA, LEED AP ND
Zachary Zeilman, Planner

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TABLE OF CONTENTS

Introduction.....	4
Neighborhood Description	6
Plan Integration, Coordination, and Building Block Approach	11
Planning Coordination and Process	11
Neighborhood Plan Goals and Objectives	12
Public Opinion.....	13
Public Presentation – June 16, 2015.....	13
Notes from the Shore Acres Public Meeting	16
Public Presentation – March 30, 2016.....	16
Neighborhood History	17
Existing Conditions Analysis.....	29
Neighborhood Profile	29
Sub-Neighborhoods	29
Demographics.....	34
Housing.....	37
Impact of Superstorm Sandy	38
Neighborhood Physical Characteristics	48
Connectivity and Mobility.....	48
Signage.....	59
Destinations in Shore Acres	63
Public Utilities and Services	63
Neighborhood Parks, Recreation, and Public Space.....	64
Open Space & Preservation/Conservation Areas	68



THE TOWNSHIP OF
BRICK, NJ

Other Neighborhood Destinations	70
Zoning Analysis	72
B-1 (Neighborhood Business Zone)	73
R-M (Multifamily Residential Zone)	75
R-R-1 (Rural Residential Zone)	76
R-10 (Single-Family Residential Zone)	77
R-5 & R-7.5 (Single-Family Residential Zones)	78
Recommendations	85
Connectivity and Streetscape Recommendations	85
Signage	94
Identification Signage	94
Wayfinding Signage	95
Zoning Recommendations	98
Bulk recommendations	98
Zoning Map Changes	100
Future Neighborhood Growth	103
Design Guidelines	103
Elevation of Buildings	103
Landscaping	105
Public Spaces & Streetscape Design	106
Abandoned Buildings and Empty Lots	109
Public Parks, Open Space, and Conservation Lands	110
Existing Parks and Open Space	111
Recommended Parks and Open Space	114
Street-Ends, Bulkheads, and Right-of-Ways	116



Future Storm and Disaster Preparedness 120

Sustainable Recovery: Leadership In Energy & Environmental Design 121

 LEED For Homes..... 121

 LEED For Neighborhood Development 124

Sea Level Rise And The Future Of Infrastructure 127

 Sea Level Rise..... 127

Action Plan..... 128

Appendix I – Notes from the Shore Acres Public Meeting - June 16, 2015 130

Appendix II – Notes from the Shore Acres Public Meeting – March 30, 2016 131



POST SANDY RECOVERY PHASE II PLANNING

Neighborhood Plan

Shore Acres, Brick Township, New Jersey

INTRODUCTION

In a Resolution #15-00739 on February 18, 2014, the Township Council of the Township of Brick, County of Ocean and State of New Jersey approved the preparation and submission of Post-“Sandy” Planning Studies and Reports, which allowed for the four Brick Neighborhood Plans. The Shore Acres Neighborhood Plan is included in these Planning Studies and is intended to look at a number of factors which will affect the future viability of this area, from the present state of the infrastructure and the ongoing re-building efforts, to methods of providing a sense of unity and community.

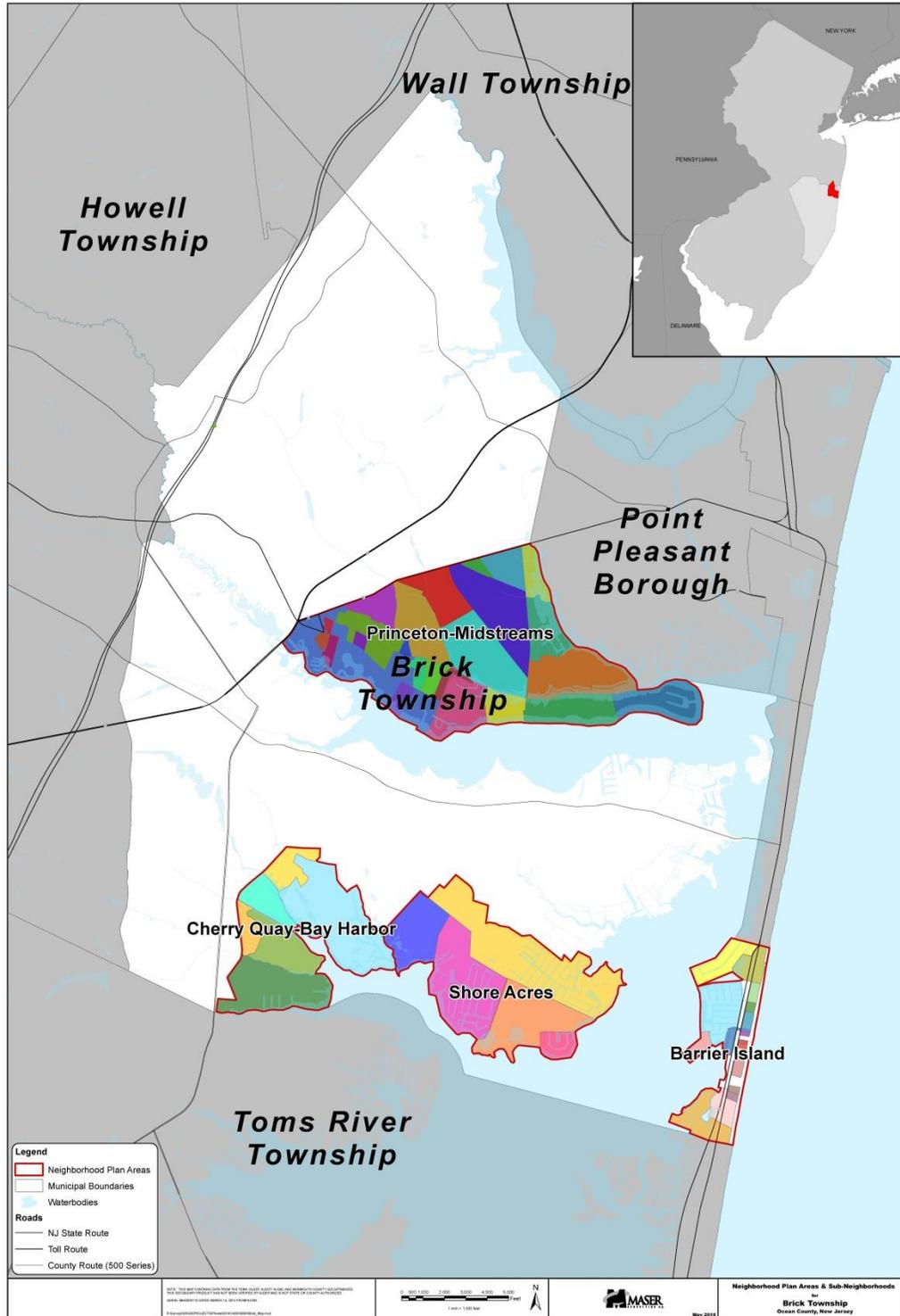
The Shore Acres Plan area extends from Barnegat Bay to the east along the north side of Kettle Creek north of Toms River Township, west to the Cherry Quay neighborhood of Brick Township, and north to Drum Point Road and Reedy Creek. The Neighborhood Plan has been prepared in conjunction with three other Brick Neighborhood Plans and is also intended to complement the Hazard Mitigation Plan (HMP) and Floodplain Management Plan (FMP) prepared by Tetra Tech, Inc. in conjunction with other Post-Sandy Phase II planning projects by the Township.

This Neighborhood Plan provides an overview of the neighborhood and an analysis of the existing development pattern within the Shore Acres Neighborhood and its associated bulk standards to determine specific recommendations for changes that would make the neighborhood more resilient to future storm events comparable to Superstorm Sandy. As noted in the project scope, the Plan uses the sustainable development principles of the Leadership in Energy and Environmental Design (LEED) rating systems; specifically, LEED for Homes (LEED-Home) and LEED for Neighborhood Development (LEED-ND). The LEED-Home standards are applicable for homeowners who are renovating as well as those considering a complete demolition and rebuild. The LEED-ND standards apply to the neighborhood as a whole and relate to maintaining and enhancing connectivity (and thereby “walkability”) within the neighborhood for pedestrians and bicyclists, sustainable stormwater management, and enhancing neighborhood goods and services, parks and open space and schools within walking distance of the homes (1/4 mile or less). The subsequent section of the Neighborhood Plan provides design standards to assist homeowners with renovating and rebuilding.



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Map 1: Four Brick Township Neighborhood Plan Areas





NEIGHBORHOOD DESCRIPTION

The Shore Acres neighborhood is generally located along the southernmost and easternmost portion of the mainland of Brick Township, Ocean County, New Jersey, directly north of Toms River Township. It is located off of Drum Point Road and east of the Cherry Quay neighborhood on the north side of the mouth of Kettle Creek where it meets Barnegat Bay.

The neighborhood is protected from the direct impact of the Atlantic Ocean by the barrier island to the east. Barnegat Bay separates the mainland from the barrier island and is part of the eastern Intercoastal Waterway, which extends from Bay Head, New Jersey in the north to Island Beach State Park, New Jersey in the south. To the north and west, the area is surrounded by wetlands, marshes, and forest, including Reedy Creek and Havens Cove. Kettle Creek forms the southern boundary, separating Shore Acres from Toms River Township, where it intersects with Barnegat Bay. These estuarine waterbodies are form the landmass and the identity of the Shore Acres neighborhood.

There are five sub-neighborhoods within Shore Acres. Although Shore Acres specifically refers to one of the five sub-neighborhoods, it is also used to describe the whole area. The five sub-neighborhoods include: Shore Acres, Waterside Gardens, Baywood, Mandalay Park, and Seawood Harbor. The sub-neighborhoods represent various homeowner, condominium, and neighborhood associations, as well as distinct physical and social geographies.

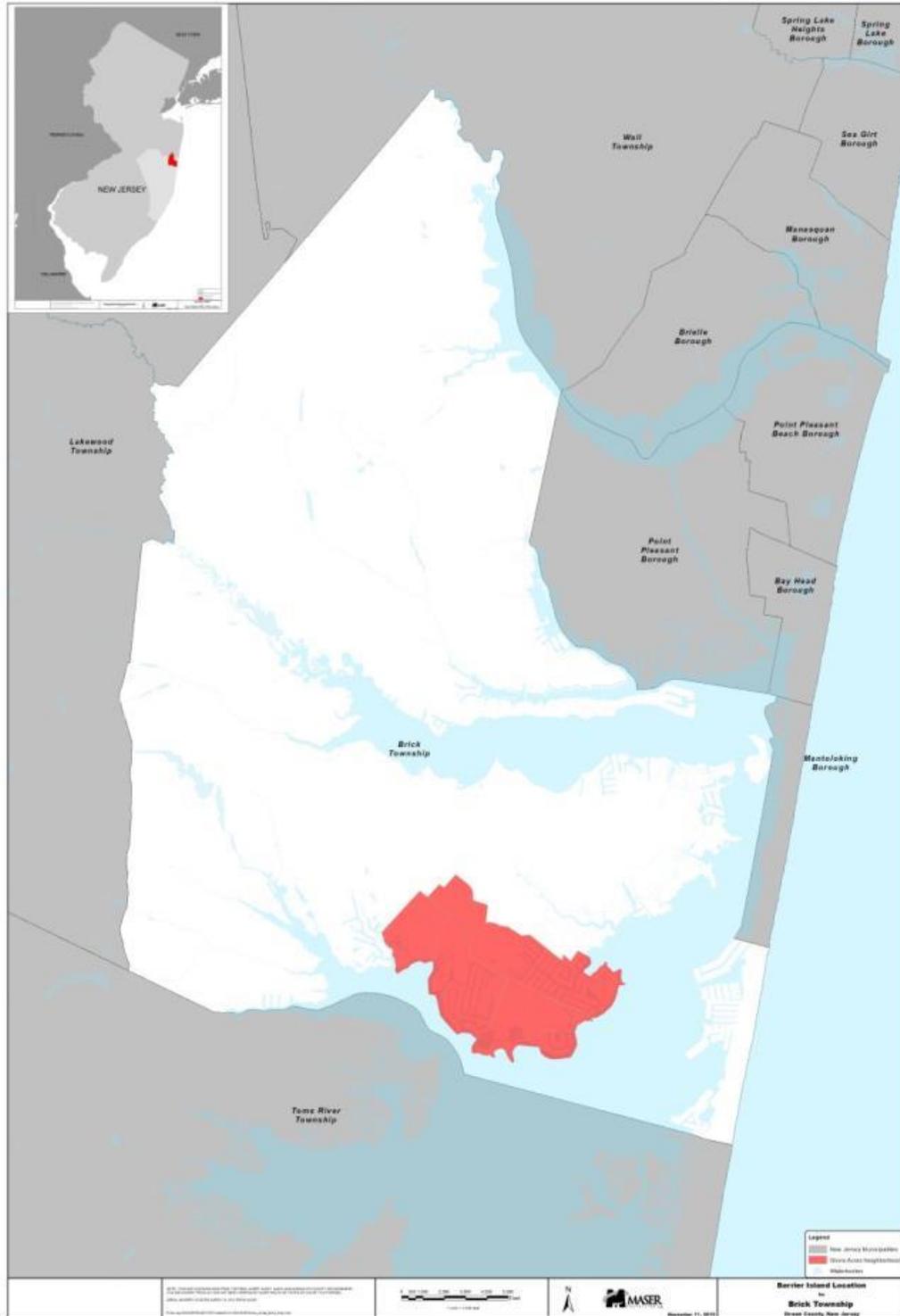
By land, this neighborhood is only accessible via Drum Point Road, which runs east from Hooper Avenue and Brick Boulevard in the west. Drum Point Road extends directly into Shore Acres, although there are several off-shoot roads connecting to other sub-neighborhoods. Baywood Boulevard and Mandalay Road/St. Lawrence Boulevard connect Drum Point Road to Baywood; Mandalay Road connects to Mandalay Park and Seawood Harbor; and Waterside Gardens is also accessible off of Baywood Boulevard. Other than Waterside Gardens, there are very few private roads in Shore Acres, despite having a sense of privacy.

Map 3 below shows a close-up aerial image of the neighborhood, while all of the sub-neighborhoods are listed below in the Existing Conditions section and shown on Map 15.



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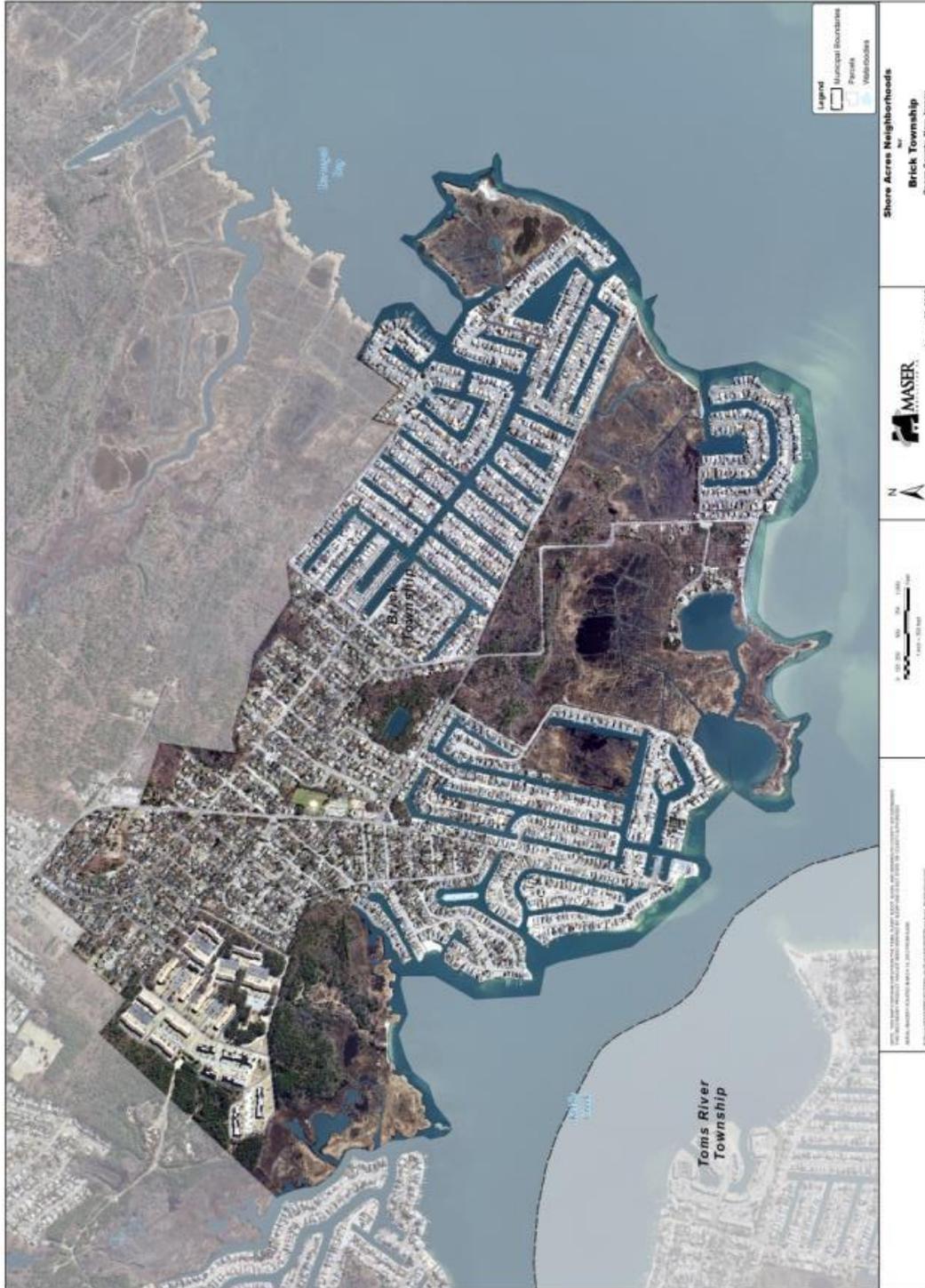
Map 2: Location of the Shore Acres neighborhood within Brick Township





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BRICK, NJ

Map 3: Aerial Map of Shore Acres Neighborhood Plan Area





Much of the neighborhood was built on former wetlands or marshes, which were dredged to create lagoons to allow private boat traffic and mooring for neighborhood residents, while the dredged silt was likely used to build up the land on which the homes and roads were placed. All of the sub-neighborhoods, with the exception of Waterside Gardens, have an extensive network of miles of man-made lagoons which meander deep into the interior of the neighborhood. Therefore, interior parts of the neighborhood are accessible by boat, but are also subject to habitual flooding due to its location on the water and being built on naturally absorbent wetlands.

Although several of the sub-neighborhoods were planned communities, many areas began developing in an ad hoc nature in the early twentieth century when properties were sold as paper lots. The sub-neighborhoods are fairly dispersed from one another due to the now-protected wetlands, but some of the unbuilt paper streets are still visible.

With five sub-neighborhoods covering a total of more than 1,132.8 acres, or 1.77 square miles of land, 5,232 residents in 2010, and over one-quarter of the land devoted to conservation area, the developed area is very densely populated. Shore Acres also experiences a population swell during the summer with part-time residents with second homes and renters, although not as significant as the Barrier Island. Land use in Shore Acres is primarily residential, with a few commercial businesses located on the main connector roads that are mostly auto or marine-related, including several marinas.

In addition to developed areas, there are a number of existing and proposed natural conservation areas in and surrounding Shore Acres, which include: Edwin B. Forsythe National Wildlife Refuge, Long Point Island, Havens Point, and surrounding marshland. Additionally, there is a forested drainage area in the center of the block surrounded by Mandalay Road, Arctic Ocean Drive, Delta Place, and Catalina Drive. Public recreational facilities and amenities include the Drum Point Road Sports Complex and Vanard Beach in Shore Acres.

One major access/exit point on Drum Point Road for the entire community, coupled with the isolated nature of some neighborhoods and long, floodable roads without any outlet, pose a hazard to residents. Mandalay Park and Seawood Harbor sub-neighborhoods, which are the most isolated of the sub-neighborhoods, are particularly problematic because the homes and roads regularly experience flooding, which cuts off access to Mandalay Road and the rest of the Township.

There is a new pedestrian and bicycle path connects Seawood Harbor and Mandalay Park to St. Lawrence Boulevard, which then extends to Mandalay Road. However, there are not currently any other sidewalks in the neighborhood and there are very few crosswalks. Additionally, there is no signage indicating the various sub-neighborhoods, their location, or linking them together in any way.

Shore Acres endured significant devastation from flooding and wind during Superstorm Sandy in 2012, similar to other communities in this region. After the barrier island was breached near the Mantoloking Bridge directly to the east, the water level in Barnegat Bay quickly rose as it filtered inland from the



ocean. Many streets in this neighborhood are already prone to flooding, but were inundated when the marshes and storm drains could no longer absorb any more water. Nearly all of Shore Acres was flooded by the storm surge, except for the most interior section of Baywood and Shore Acres where Drum Point Road intersects with Baywood Boulevard. South and east of that point, the land sits just above sea level. Therefore, the neighborhood is quite vulnerable to the effects of major storm events. Although most experienced moderate to severe damage, several areas were entirely destroyed.



Figure 1: Damage from Sandy (Claudio Foquina Photography, "Drowned by Hurricane Sandy" Nov. 2012, Google Maps)

Shore Acres, like other neighborhoods, is still continuing to rebuild, as well as beginning to implement new adaptive and mitigation measures for future storms and sea level rise. Since the storm, many homes have either been demolished and rebuilt or renovated, and a large number of buildings have been raised to meet BFE requirements in order to qualify for flood insurance or FEMA grant money. The rebuilding has caused some additional issues with meeting the bulk standards as homes are being raised exceptionally high or taking up more lot coverage in order to justify the loss of developable ground floor or to receive more funding.

Nearly all substantially damaged properties from Superstorm Sandy in 2012 are located in areas directly on the canals and near the marshes and included the majority of Shore Acres, Baywood, and Seawood Harbor. According to the Township Flood Prevention Ordinance, "Substantial Damage" is defined as: "Damage of any origin sustained by a structure whereby the cost of restoring the structure to its condition before damage would equal or exceed 50% of the market value of the structure before the damage occurred." In this neighborhood, 1,302 properties suffered substantial damage and the average year that structures on such properties were built is 1972, whereas the average year that homes were built in this neighborhood is also 1972. Newer properties were more likely to already comply with height and lot requirements and generally experienced less damage.



The location of the densely developed and largely impervious neighborhood on wetlands at the intersection of the bay and river makes it particularly vulnerable to water damage from storm events and increased flood levels, as well as erosion from wave action and wind. The ability of these sub-neighborhoods to act together to protect and improve natural and public spaces, infrastructure, connectivity, neighborhood development standards, and storm preparedness, in addition to the actions that are taken by the communities on the barrier island and the Township as a whole, will have a direct impact on the community's resiliency in the future.

PLAN INTEGRATION, COORDINATION, AND BUILDING BLOCK APPROACH

PLANNING COORDINATION AND PROCESS

This Neighborhood Plan is part of the larger initiative taken on by the Township of Brick to better integrate planning processes with community development, local decision-making, and hazard mitigation efforts. This effort included the concurrent development of a series of township-specific working documents that create a framework for reducing vulnerabilities to hazards, increasing safety, and limiting damages to both public and private property. Each plan leverages the findings and analysis of the other planning efforts and fulfills a unique component of a comprehensive approach to hazard mitigation and community resilience. The following documents were developed concurrently with cross-utilization of experts and stakeholders:

- Township of Brick Neighborhood Plans
- Township of Brick Master Plan: Hazard Mitigation Plan Element
- Township of Brick Floodplain Management Plan
- Township of Brick Repetitive Loss Area Analysis
- Township of Brick Capital Improvement Plan
- Township of Brick Master Plan: Green Buildings and Sustainability Element

The development of the Neighborhood Plan was led by the Township's Master Plan Sub-committee consisting of four members of the Planning Commission and supported by a public engagement process that included an open public meeting and presentation. As a result, this plan incorporates a wealth of local knowledge and ensures that recommendations align with the goals and preferences of the community.

The methodology and associated tasks incorporated into the development of the Neighborhood Plan Element are outlined below.

- Review of existing plans and studies, including but not limited to:
 - 2007 Township of Brick Master Plan, inclusive of all Master Plan elements
 - 2014 Township of Brick Strategic Recovery Planning Report
 - 2014 Township of Brick "Getting to Resilience" Recommendations Report



- Ocean County Long Term Community Recovery Plan
- Existing conditions analysis to document trends and the current status of the community, including:
 - Population/Demographics
 - Land Use and Development
 - Regulations and Ordinances
- Public outreach and engagement efforts to incorporate local knowledge and values into the planning process. Public engagement included:
 - Open Houses
 - Meetings
 - Surveys
- Site visits and meetings with local officials.

NEIGHBORHOOD PLAN GOALS AND OBJECTIVES

The planning principles employed in this Neighborhood Plan are based on evaluations by the Township professional staff and interaction with Shore Acres property owners through public meetings and surveys.

- To empower the Shore Acres neighborhood, in partnership with the Township, to implement thoughtful, innovative, and resilient projects that will advance the visual and functional “branding” of Shore Acres as a cohesive bayfront community.
- To provide practical and affordable recommendations to make Shore Acres more resilient to future threats while improving quality of life, access to parks and open space and safety for pedestrians and bicyclists.
- To fully engage stakeholders about the impacts of climate change and to develop pathways to resilience based on sound science.
- To leverage investments to help the community implement the recommendations of this Neighborhood Plan.

PUBLIC OPINION

PUBLIC PRESENTATION – JUNE 16, 2015

A combined open public meeting for the Shore Acres neighborhood and Cherry Quay-Bay Harbor neighborhood was held on June 16, 2015 at Drum Point Elementary School on Drum Point Road. Although the meeting was intended for residents of both neighborhoods, the majority of attendees seemed to be from various Shore Acres sub-neighborhoods.

Township officials and consultants from Maser Consulting, P.A. and Tetra Tech, Inc. were present to share observations of the neighborhood conditions and impact from storm damage. Residents were invited to take part in discussion about the present state, existing conditions, storm damage, and ideas for the future of the neighborhood and wrote comments on poster boards. Below are the visuals created and distributed at this meeting:

Figure 2, Figure 3, and Figure 4 were poster boards that were presented with the intention of getting comments from residents as to their opinions on various design approaches, neighborhood threats, and parks and green spaces concepts. Figure 5 and Figure 6 were presented as visuals to give context and ideas for the comment sheets and boards that were also provided.

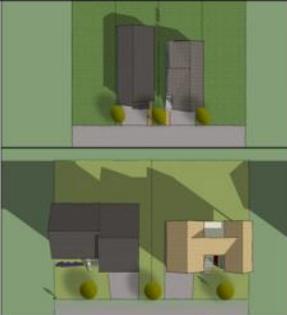
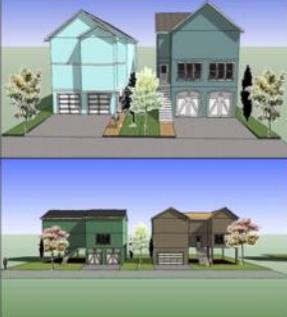
(1) Building Design Approaches					
	Plan View	Context	Approach to Building Elevation	Like (green)/ Dislike (red) No Opinion (yellow)	
				Cherry Quay – Bay Harbor	Shore Acres
Street View		Narrow Lots (25 to 50 ft. wide)	Skirting of pilings and conversion of space for parking		
			Recessed front entry to absorb part of the straight-run stairway into side yard		
			Street tree plantings with vase or columnar habit		
		Larger Lots (50 ft to 100 feet wide)	Control over-building with regulation that limits Sq. Ft based on Lot Size		
			Control over-building by maintaining required setbacks between buildings		
			Use of stone or brick facing on elevated basements in excess of four feet above grade		
		Orientation of entry stairs parallel to the street rather than perpendicular			
		Limit size of garage space and encourage decks and porches			
		Encourage creative grading and landscaping to mask views under homes			
		Street tree plantings of trees with spreading habits			
			Control over-building with regulation that limits Sq. Ft based on Lot Size		
			Control overbuilding by maintaining required setbacks between buildings		

Figure 2: Building Design Approaches comment board presented at June 16, 2015 meeting



(2) Identification of Neighborhood Threats

Context	Description	Enforce Codes (green) Acquire/Provide Assistance (red) No Opinion (yellow)	
		Cherry Quay – Bay Harbor	Shore Acres
	Vacant Buildings Abandoned properties that or where property owners have not taken action		
	Vacant Lots Vacant lots within neighborhoods where the home was destroyed and demolished but where no further action has occurred and the lot has become an eyesore		
	Flood Prone Properties Properties that have deteriorated or have become an eyesore in the neighborhood because they are prone to repetitive losses from periodic flooding		

Figure 3: Identification of Neighborhood Threats comment board presented at June 16, 2015 meeting

(3) Parks & Green Space - Flood Storage

Context	Description and Purpose	Agree (green) Disagree (red) No Opinion (yellow)	
		Cherry Quay – Bay Harbor	Shore Acres
	Use Salt Marsh for Stormwater Management Where possible, use existing freshwater wetlands and tidal marshland to absorb stormwater to reduce reliance on pipes and outfalls		
	Allow parks to act as floodplain for riverine flood events (Kettle Creek) Investigate potential for increased flood water retention in existing parks and open spaces		
	Use Green Infrastructure (rain gardens, bioswales, rain barrels, etc.) to absorb stormwater Incorporate Green Infrastructure into capital improvements - Streetscapes; Stormwater management practices; Homeowner landscaping to encourage rain gardens, bioswales and the capture roof runoff for stormwater absorption and improved water quality in Kettle Creek & Barnegat Bay		

Figure 4: Parks & Green Space – Flood Storage comment board presented at June 16, 2015 meeting



Neighborhood Visual Character – Elevated Homes

Changes in Visual Character:

1. Raised foundations
2. Rebuilds of larger homes
3. More drastic contrasts in height
4. Newer homes are larger and closer together.
5. & 6. Some rebuilds dwarf existing homes.

Design approaches :

7. Skirted pilings
8. Parking underneath w. terraced steps.
9. Split directional stairway



Figure 5: Neighborhood Visual Character – Elevated Homes poster board presented at June 16, 2015

Visual Preferences – Parks & Open Space

Neighborhood Parks

- 10 – Waterfront Access
- 11 – Landscaped Spaces
- 12 – Active Recreation

Water's Edge Spaces

- 13 – Street Ends
- 14 – Coves & Lagoons
- 15 – Vegetated Strips

Open Areas

- 16 – Vacant Lots
- 17 – Naturalized Areas
- 18 – Common Areas



Figure 6: Visual Preferences – Parks & Open Space poster board presented at June 16, 2015 meeting



NOTES FROM THE SHORE ACRES PUBLIC MEETING

Comments during the meeting at Drum Point Elementary School on June 16, 2015 were synthesized and can be found in Appendix I. These comments have helped to inform the Neighborhood Plan below.

In general, residents expressed an affinity for their neighborhood communities and location. Everyone also expressed dismay about consistent flooding problems and that they would like to see something done to protect their properties. However, some people had conceded that this would continue to be the case and have adapted their strategies and expectations.

A few attendees said that most of the houses are rarely flooded, but the roads are known to flood and cut off access to certain low-lying parts of the neighborhood near Barnegat Bay. Additionally, there was a general consensus by residents that the storm drains and catch basins were a primary cause of the flooding issues, although the breaching of the Barrier Island was blamed for the major, unprecedented flooding that occurred during Superstorm Sandy. It was generally agreed upon by these residents that something needed to be done to fix the Barrier Island area in order to help protect the Shore Acres neighborhood.

PUBLIC PRESENTATION – MARCH 30, 2016

A presentation of the draft mainland Neighborhood Plans, including Shore Acres, Princeton-Midstreams, and Cherry Quay-Bay Harbor, was made to the public on March 30, 2016 at the Brick Township Town Hall courtroom and coordinated by the Township. The intention of the meeting was to present the purpose, findings, and action plan in the Neighborhood Plan and to receive additional feedback prior to adoption of the Plan by the Township Planning Board. Members of the public had an opportunity to make comments and ask questions at the end of the presentation, write on comment sheets, or send comments via email. The comments can be found in Appendix II.



NEIGHBORHOOD HISTORY

A series of historic aerial photographs of Shore Acres obtained online at www.historicaerials.com were analyzed to determine changes in the development that took place within the neighborhood study area over the course of the past century. The earliest available photography is dated from 1931. Very little occurred prior to that time and it is not critical for this Plan.

According to the aerials, the subject neighborhood has changed drastically since at least the year 1931. Similar to the Brick Barrier Island and other regional neighborhoods, Shore Acres remained mostly in a state of undisturbed natural wetlands until the mid-twentieth century, although Shore Acres developed much more rapidly and intensely seemingly all at once. Pre-development, Shore Acres likely resembled the way that the surrounding wetlands in Metedeconk Neck or Swan Point State Natural Area exist today to the north. This is a protected natural area and would have had similar features.

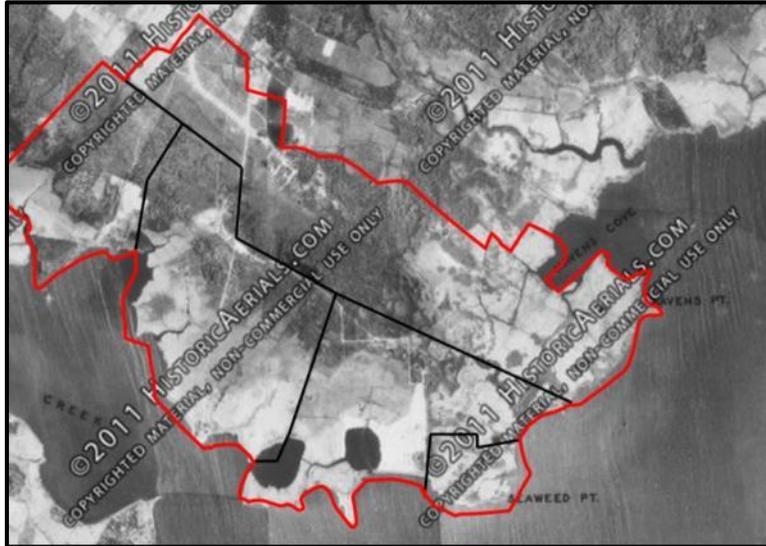
Shore Acres was the first sub-neighborhood of the Shore Acres neighborhood to appear by the early 1940s, but it wasn't until the late-1950s to early 1960s when extensive and dense development became apparent. The wetlands that remain today have existed relatively untouched since that time as a result of the neighborhoods being built around them.

By the 1980s, nearly the entire neighborhood had been developed to its maximum extent, displacing hundreds of acres of wetlands and forest. The neighborhood has generally remained the same since that time, with the exception of major damage caused by Superstorm Sandy in 2012 and the subsequent rebuilding. As a result of the proximity to the beach and the type of sprawling development that characterized much of the mid- to late-twentieth century, Shore Acres, the Barrier Island, and Cherry Quay-Bay Harbor experienced similar development patterns, which generally began and ended around the same time period. However, Shore Acres, being more of a year-round residential neighborhood, began to develop large subdivisions of homes much more rapidly, but also continued to fill in lots much later than the Barrier Island due to a greater extent of open space.

The development of the neighborhood can be traced through the series of images below, which show the neighborhood outlined in red, with the sub-neighborhoods outlined in black.



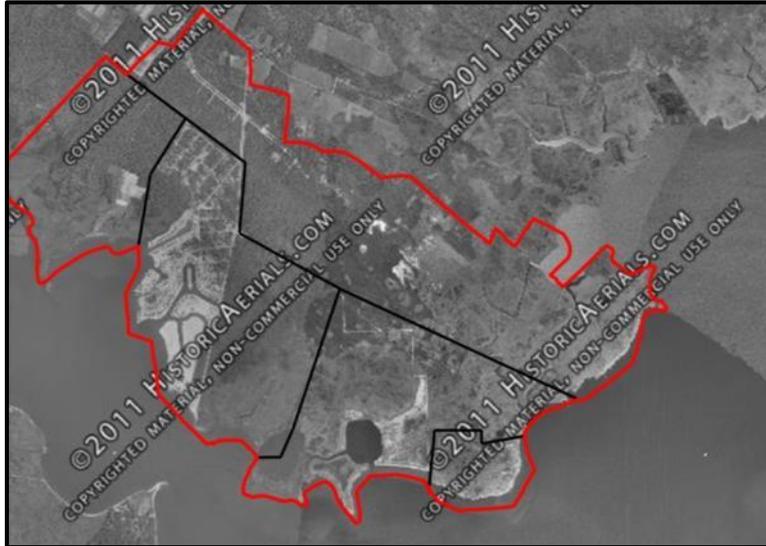
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BRICK, NJ



Map 4: 1931 Historic Aerial (www.historicaerials.com)

In 1931 (Map 4), the Brick Township neighborhood appeared very different from the way that it appears today. Most of the study area was still in a very natural condition, with the exception of a few roads (likely unpaved) and possibly a few homes. Large expanses of undisturbed marshland followed the entire perimeter of the neighborhood along Barnegat Bay and extending inland for a half-mile. The marshland in Mandalay Park, known as Long Point Island off of Bay Shore Drive, which abuts the Bay, was much wider and almost entirely cut off the two ponds from the Bay.

Part of Baywood Boulevard and the full length of Drum Point Road are visible going into Shore Acres and Mandalay Road goes into what is now Mandalay Park; however, very few houses, if any, were in the area at that point. Only some farmland existed in the very northwestern corner of the neighborhood (currently Baywood) and one farm where Waterside Gardens Condominiums are today. None of the sub-neighborhoods existed in 1931.



Map 5: 1940 Historic Aerial (www.historicaerials.com)

Nearly a decade later, in 1940 (Map 5), most of the Shore Acres sub-neighborhood and its lagoons were being developed west of Drum Point Road, although only some roads and homes had been completed. A few homes were also found in the Mandalay Park neighborhood. Although there were only a handful of properties in Baywood, Baywood Boulevard was a wide, tree-lined, split boulevard. The rest of Shore Acres mostly remained as wetlands.



Map 6: 1953 Historic Aerial (www.historicaerials.com)

By 1953 (Map 6), the majority of the wetlands still remained, but it is evident that development was encroaching further from the north and west. Most of the Shore Acres sub-neighborhood was

developed, including the roads and lagoons east of Drum Point Road. Baywood Boulevard had been extended eastward halfway through what would be the Baywood sub-neighborhood, as well as some of the north-south roads off of Baywood Boulevard.



Map 7: 1956 Historic Aerial (www.historicaerials.com)

The neighborhood on the bay had transformed very rapidly between 1953 and 1956 (Map 7), with nearly the full extent of the street grid in Shore Acres, as well as the western half of Baywood and Rochester Drive in Seawood Harbor. Along with the development in Baywood, a large drainage basin was placed in the area behind Mandalay Road and Arctic Ocean Drive. Several more lagoons had been dredged in the Shore Acres and Seawood Harbor sub-neighborhoods, as well, and most of the spoils from the dredging were likely used to fill in some of the wetlands for development.

In that same period of time, the area known as Long Point Island appears to have eroded to a much narrower strip of land than in 1931 or 1940, with wider channels into the lakes.



Map 8: 1963 Historic Aerial (www.historicaerials.com)

Analogous to other Brick neighborhoods, Shore Acres was almost entirely unrecognizable by 1963 (Map 8) from its original state. Except for retaining the same general form, the majority of the two major natural systems that sustained the delicate balance of the neighborhood – the wetlands on the bay side and the inland forest – were compromised beyond recovery. Instead, they had been replaced by new streets and subdivisions, although many of the homes had not yet been built. The lagoons, while they resembled the narrow streams that once wound through the marshes, have completely transformed the coastline and allowed for unrestricted boat access through the critical habitat.



Figure 7: Comparison of 1931 aerial (left) and 1963 aerial (right)

The eastern portion of Baywood with all of its lagoons was developed to its fullest extent virtually all at once, while Shore Acres and Seawood Harbor were near completion, as well. However, the western

portion of Baywood was still sparsely filled with homes. At this point in time, the sub-neighborhoods had their recognizable forms.

By 1972 (Map 9) new development had slowed throughout most of the neighborhood. However, a new street grid and lots are visible within Waterside Gardens, which had been a single farm up until this point.



Map 9: 1972 Historic Aerial (www.historicaerials.com)

The eastern lake along Lake Point Drive and Bay Shore Drive, which had been further breached by the Bay in the 1960s, had a new handlebar-shaped sandbar forming along the southern shore and the passage was beginning to fill with silt and sand.

Additionally, the bridge that had once connected Longpoint Drive to Southview Drive in the southern part of Shore Acres had been removed by 1970 and, instead the isolated peninsula was connected via a new road, Cedar Island Drive, to Mandalay Road with some additional residential development lining Cedar Island Drive (see Figure 8). This change may have eased congestion in the neighborhood, although it further isolated the community and lengthened the means of egress, which extends through more wetlands.



Figure 8: Comparison of 1963 and 1970 historic aerial photos showing new road and demolition of bridge



Map 10: 1986 Historic Aerial (www.historicaerials.com)

In 1986 (Map 10), western Baywood had been filled in with more homes and Waterside Gardens Condominiums had been completed and would come to define its own sub-neighborhood. No trace of a home that had previously been on Bay Shore Drive in Mandalay Park adjacent to the lake and bay was visible any longer, while the spit of land further closed off the lake with only a narrow stream separating the landmasses. The beach was also becoming covered in vegetation. From this point, all of the



wetlands would remain untouched by development, following the 1977 Clean Water Act, Section 404: Protection of Wetlands Executive Order No. 11990 by the United States Environmental Protection Agency.

The Shore Acres neighborhood as a whole was built-out to its current extent and essentially at its maximum capacity by 1995 as Baywood, Seawood Harbor, and Cedar Island Drive in Shore Acres were filled in with the final houses (Map 11). Mandalay Park never became a fully developed neighborhood, but a few more homes were added along Knoll Crest Avenue and Neptune Circle. Additionally, Long Point Island became part of a long peninsula extending from Mandalay Park as sand and eventually vegetation filled in the bay breach to the lake as a narrow isthmus.



Map 11: 1995 Historic Aerial (www.historicaerials.com)



THE TOWNSHIP OF
BRICK, NJ



Map 12: 2002 Historic Aerial (www.historicaerials.com)

By 2002 ([Map 12](#)), the physical layout of the neighborhood remained largely the same as the sub-neighborhoods were well-established, with the exception of some individual homes that may have been knocked down and replaced. The 2007 aerial ([Map 13](#)) and 2013 aerial ([Map 14](#)) illustrate the continuity.



Map 13: 2007 Historic Aerial (www.historicaerials.com)



THE TOWNSHIP OF
BRICK, NJ



Map 14: 2013 Historic Aerial (www.historicaerials.com)



Figure 9: Baywood sub-neighborhood (left to right, top to bottom) 1931, 1956, 1963, and 2013



The images above (Figure 9) illustrate the progression of development and destruction of wetlands after 1963, focusing specifically on the eastern area in Baywood.

Similarly to its neighbors, the bay neighborhood has changed dramatically between the 1930s and 2013. The Brick neighborhood began to be developed around between 1931 and 1940, but accelerated by 1963 to generally occupy the footprint of land that exists today, and continued to be filled in until approximately 1995. The period between 1953 and 1986 saw the most profound structural and ecological transformation in the neighborhood and was the period in which most of the subdivisions, street network, and lagoons were created. While not all of the natural space had yet been developed, development trends in other areas signified a major shift that it could ultimately become that way. However, many of the wetlands in the neighborhood were either unbuildable or already protected by the time that development was accelerating. Due to constraints on available land along the Bay, development densified in the inland Baywood section until the early 2000s. Although homes have historically been small structures on small, single-family lots, they have continued to increase in size while simultaneously occupying smaller lots to accommodate more growth. Overall, the neighborhood appears the same since 1995, with the exception of damage from Superstorm Sandy.

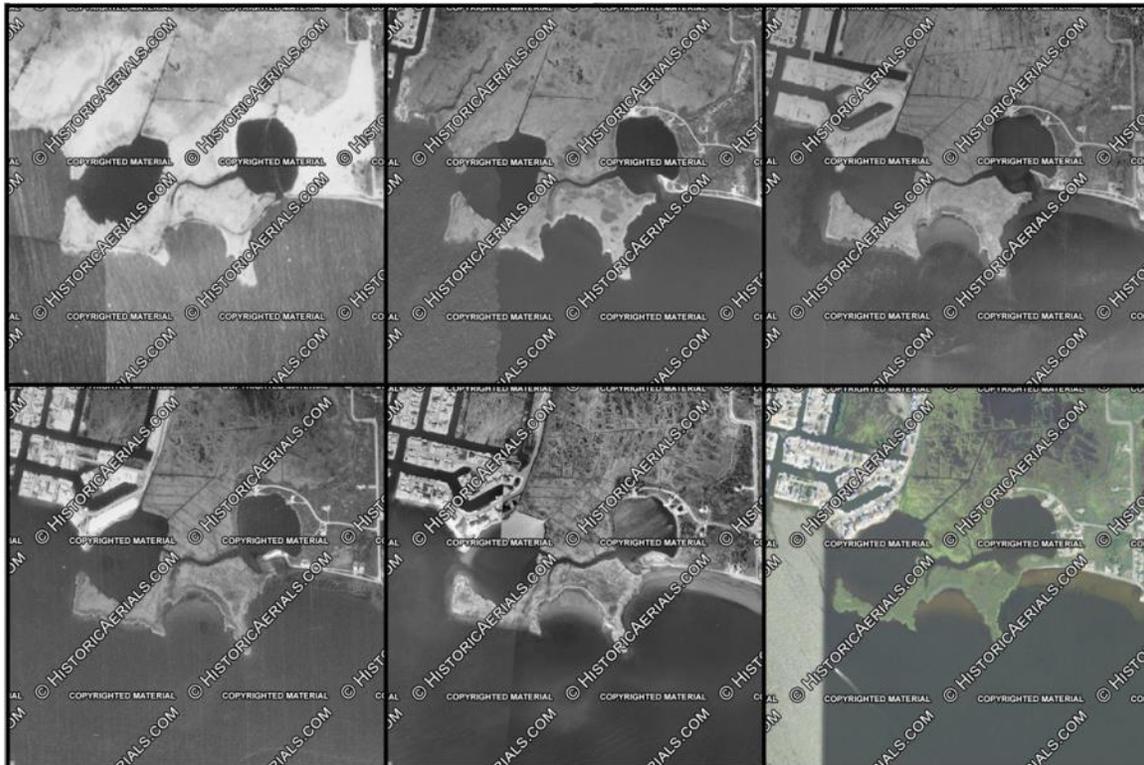


Figure 10: Changes to wetlands (from left to right, top to bottom) in 1931, 1953, 1963, 1972, 1986, and 2013

In addition to the changes to wetlands and development coverage, the historic aerials also indicate the substantial damage from Superstorm Sandy. The 2007 aerial image was taken only five years prior to the



storm and 2013 was only one year after the storm. Despite being taken one year later, much of the recovery process also took place in 2013 and beyond due to the timing and magnitude of the storm. The amount of damage to the neighborhood is still evident. It is clear in the images that many homes were either destroyed, removed, are missing roofs or docks, or have been rebuilt. This is particularly true for properties along Barnegat Bay, Kettle Creek, and other waterfront, where the storm surge and winds caused flooding and inflicted the most damage upon the community.

Unlike the Barrier Island sub-neighborhoods, the Shore Acres sub-neighborhoods are very distinguishable on an aerial map because they vary in density, size, lack connectivity, and are separated by natural areas. On the ground-level, this Plan attempts to address both the similarities and differences in issues of each sub-neighborhood, while making the identity and connectivity of the entire Brick neighborhood seamless.



EXISTING CONDITIONS ANALYSIS

The initial assessment for the Neighborhood Plan involved several site visits of the area with local representatives and an analysis of the information gathered by Township Planners, investigations, historic documents, and U.S. Census and American Community Survey data. From this baseline information, the following facts and observations were identified:

NEIGHBORHOOD PROFILE

The Shore Acres neighborhood encompasses a total of 1,132.8 acres, or nearly 1.77 square miles located on the mainland due west of the barrier island chain, which extends along the eastern coast of the United States, creating the protected channel known as the Intracoastal Waterway.

The Brick Township neighborhood is on a estuarine sub-peninsula surrounded by water with Kettle Creek to the southwest and Barnegat Bay to the south and to the east, on a larger peninsula which is bordered by the Metedeconk River to the north, Kettle Creek, and Barnegat Bay. Due to the strategic location with direct bay access and proximity to the Brick beaches via the Mantoloking Bridge, nature preserves, and to major retail centers, the neighborhood has attracted both year-round and seasonal residents over the past half-century. This location provides residents with plentiful opportunities for recreation, as well as jobs.

Although development is dense within much of the neighborhood, there are a number of remaining ecologically diverse areas interspersed throughout. Most homes sit on properties less than 7,500 square feet, but including all undeveloped/conservation areas, there is 1 unit per 3.25 acres and 1 person per 1.92 acres. However, the surrounding protected wetlands and Barnegat Bay leave little space for expansion of the densely populated neighborhood, with the exception of rebuilding existing lots. Additionally, the wetlands and flood-prone land make development impractical.

The bay neighborhood is only accessible by vehicle via Drum Point Road, which extends west to Hooper Avenue and Brick Boulevard. Baywood Boulevard and Mandalay Road are secondary connector roads that connect some of the sub-neighborhoods. Adamston Road is a connecting road to Mantoloking Road to the north and the Mantoloking Bridge to the east. Much of Shore Acres is accessible by boat.

SUB-NEIGHBORHOODS

The Shore Acres Neighborhood Plan Area is separated from Cherry Quay and other Brick neighborhoods by natural, undeveloped wetlands, which act as a buffer from the Bay. The neighborhood itself is divided into distinct areas, in part due to the undevelopable wetlands in between them, as well as various neighborhood associations and development typologies. There are five resultant “sub-neighborhoods”, which include: Baywood, Mandalay Park, Seawood Harbor, Shore Acres, and Waterside Gardens.



While not all of these sub-neighborhoods are officially designated, some of them self-identify as homeowners, condominium, or neighborhood associations. However, there are some areas of the neighborhood that do not belong to a specified association. Additionally, the overall neighborhood boundary is an estimate based on the delineation of development and guidance from Township officials. The sub-neighborhoods are listed in the sidebar above as they are shown on Map 15 below.

Shore Acres Sub-Neighborhoods
Baywood
Mandalay Park
Seawood
Shore Acres
Waterside Gardens



BAYWOOD

Baywood is the largest sub-neighborhood by area and consists of the largest network of lagoons in Shore Acres. The sub-neighborhood is very long and narrow, extending from Barnegat Bay in the east to the Joe Pal Airport Tract property off of Drum Point Road in the west and nestled between Shore Acres and Mandalay Park to the south and the Metedeconk Neck/Forsythe National Wildlife Refuge protected wetlands to the north.

In addition to the low-lying lagoons in the east, which were built over former wetlands, Baywood also occupies the most inland portion of the neighborhood with the highest elevation, offering a diverse range of properties and the greatest opportunity for growth. While the eastern portion of the sub-neighborhood was largely inundated by floodwater during Superstorm Sandy, the western half received the least flooding in the neighborhood.

The land use in Baywood is primarily residential; however, it also contains a majority of the few commercial properties in Shore Acres, which lie to the northwest along Drum Point Road, as well as a marina, a park, and conservation lands.

MANDALAY PARK

Mandalay Park occupies the southeastern corner of the neighborhood, less Seawood Harbor, at the confluence of Kettle Creek and Barnegat Bay. The sub-neighborhood is the least developed and least populated of the Shore Acres sub-neighborhoods and relative to much of the Township, despite being large in area. There are no man-made lagoons in Mandalay Park as there are in most of the other sub-neighborhoods.

Despite having hundreds of paper lots and an extensive network of paper roads, only a dozen or so residential properties are located in Mandalay Park, whereas the rest of the sub-neighborhood consists of protected wetlands within the Forsythe National Wildlife Refuge. The paper lots were sold in the early- to mid-1900s, but were never developed due to restrictions, lack of access, and poor topography.

The only road access into the sub-neighborhood is via Mandalay Road, which is the only access for Seawood Harbor, as well. The Township recently added a new bicycle path along the Mandalay Park border with Baywood on St. Lawrence Boulevard and extending south into Mandalay Park via Holly Avenue and Knoll Crest Avenue.

Mandalay Park also has a block watch, according to local officials on a tour on April 15, 2015.



SEAWOOD HARBOR

Seawood Harbor is located on Barnegat Bay in the southeastern-most area of Shore Acres. It is the smallest sub-neighborhood of Shore Acres by land area, although similar in developed area and population to Waterside Gardens.

Like Mandalay Park, Seawood Harbor is only accessible via Mandalay Road. However, in contrast, Seawood Harbor is densely developed with residential properties within a small area. The two primary roads in the neighborhood include Rochester Drive and Toronto Drive, although the majority of properties are also accessible by boat via two man-made lagoons. Nearly all land in Seawood Harbor is privately owned, with the exception of two small Brick Township-owned bayside lots on Rochester Drive.

SHORE ACRES

Shore Acres is the second largest sub-neighborhood, although it is also the oldest and most densely developed. The sub-neighborhood is located at the mouth of Kettle Creek where it meets Barnegat Bay, with Mandalay Park to the east, Waterside Gardens to the west, Baywood to the north, and Toms River Township to the south.

Shore Acres is a private neighborhood association. With the exception of a marina, two commercial properties, and a private yacht club, beach, and clubhouse, the neighborhood is almost entirely residential.

The sub-neighborhood is accessible primarily via Drum Point Road, which ends in Shore Acres at Drum Point Marina and Shore Acres Yacht Club on Kettle Creek. Most properties within Shore Acres also have boat access to the man-made lagoons.

WATERSIDE GARDENS

Waterside Gardens is located in the southwestern-most part of Shore Acres along Kettle Creek; west of the Shore Acres sub-neighborhood, south of Baywood, east of Cherry Quay, and north of Toms River Township. It is the only large-scale multi-family housing development east of Brick Boulevard. Waterside Gardens is a private apartment/condominium complex and is one of the most densely populated neighborhoods due to the number of units. There are nineteen (19) individual apartment buildings within the complex.

Despite the density of the sub-neighborhood, it is surrounded by parkland and preserved wetlands that are part of the Joe Pal Airport Tract to the west and south, which also buffer the neighborhood from flooding from Kettle Creek.



The sub-neighborhood is most directly accessible via Holly Court East off of Baywood Boulevard. It is also accessible via paths and bike paths in the adjacent Joe Pal Airport Tract.

DEMOGRAPHICS

Although precise data cannot be determined for the population within the identified Shore Acres boundaries, the population of the two Census Tracts (7142, 7143) used for the demographic data, which cover a slightly larger geographic area, decreased between 2000, 2010, and 2013.

According to the 2000 U.S. Census, the Shore Acres neighborhood of Brick Township had a population of 5,250, based on the aggregated census blocks¹. A population of 5,232 in 2010 represented a very slight decline of 18 persons, or 0.3 percent, from the 2000 Census². Within three years of the 2010 Census, in 2013, the population had dropped by 356 persons, or 6.8 percent, to 4,876 people³. Overall it was not a very large decrease, but it was a dramatic change within the given time period relative to previous years. This sudden decline can almost entirely be attributed to the damage caused by Superstorm Sandy in 2012, which forced many people out of their homes for up to a few years or forced abandonment of homes.

While the decline is not significant and the population data represents a slightly larger area than Shore Acres, the declining population over those thirteen years may signal a general trend of the area.

Additionally, approximately 82.5 percent of residents were homeowners and 17.5 percent rented in 2000, whereas 80 percent were homeowners and 20 percent were renters in 2010. The addition of Waterside Gardens in the 1980s likely added a large number of renters to the area, as well. This may also signal a slight shift in the dynamic of the neighborhood, as well as the ability and desire to sell/buy versus rent property. However, more data is needed for a complete analysis.

Meanwhile, Brick Township as a whole has also been losing some population. Each decade since 1950 through 2000 saw between 10,000 and 20,000 people added to the total population. After rapidly increasing in population for half a century, it began to plateau in 2000 at 76,119. Only another couple thousand people were added to the population by 2000, and by the following year the population lost over 3,000 people. The cause of the sudden decrease in population has not been determined. Since then, the population has hovered around 75,000 (see [Figure 11](#)). The population density of Brick Township in 2000-2005 was estimated to be 2,979 persons per square mile, according to the Township of Brick 2007 Master Plan⁴.

¹ U.S. Census Bureau, 2000. *(Block data used from Tracts 7142 and 7143 within Shore Acres boundaries)*

² U.S. Census Bureau, 2010. *(Block data used from Tracts 7142 and 7143 within Shore Acres boundaries)*

³ U.S. Census Bureau. American Community Survey, 2013 (<http://www.census.gov/geo/maps-data/data/tiger-data.html>)

⁴ Township of Brick, Division of Land Use and Planning. "Township of Brick Master Plan". June 6, 2007.

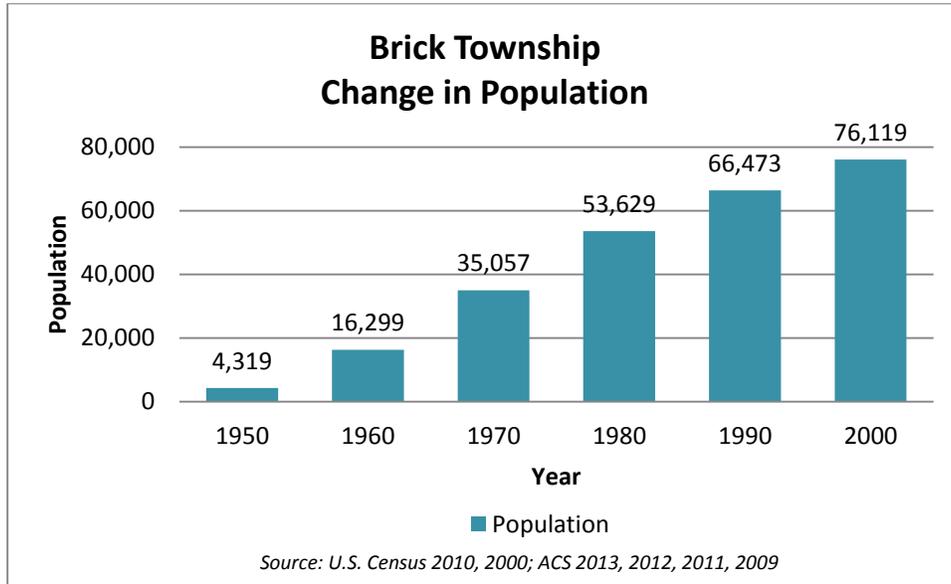


Figure 11: Brick Township, Change in Population 2000-2013

Of the population that lives in the Shore Acres neighborhood, the median age for both sexes was 45.5 years in 2010 – over 17 years younger than that of the Barrier Island neighborhood⁵. The population is relatively well represented within each age bracket grouped by decade, but with the majority of the population in the middle age brackets. The 50 to 59 year old age bracket represents the most represented population at 17.7 percent of the Shore Acres population, while the 40 to 49 age bracket and 30 to 39 each represent 16 percent. The entire population 39 years and younger and the population 40 and older are each approximately 50 percent of the population. This is in direct contrast to neighborhoods such as the Barrier Island, where more than 75 percent of the population is older than 50 years (see Figure 12). According to the 2010 U.S. Census, 13.8 percent of the Shore Acres population is over 65 years old, whereas 17.9 percent of the total Brick population is over 65 years old. This data demonstrates that Shore Acres is a relatively young, but diverse neighborhood within the Township.

⁵ U.S. Census 2010, U.S. Census Bureau

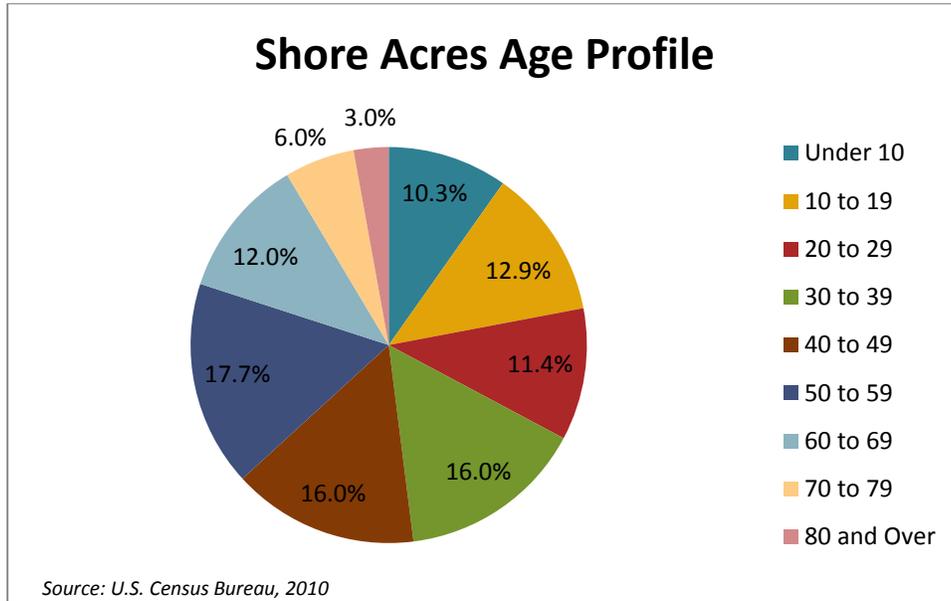


Figure 12: Percentage of Total Neighborhood Population by Age (2010)

Out of the total Shore Acres population in 2010, 2,591 were male and 2,641 were female. Additionally, 4,861 people (93%) are of one race and 56 (1%) are of two or more races. 91 percent, or 4,749 people, identified as White alone, whereas 6 percent, or 315 people, identified as Hispanic or Latino/a, and 1 percent, or 73 people, identified as Black or African-American. Asians, American Indians, and other races were only marginally represented. This data indicates a largely homogenous neighborhood population, but is slightly more diverse than some of the other Brick neighborhoods.

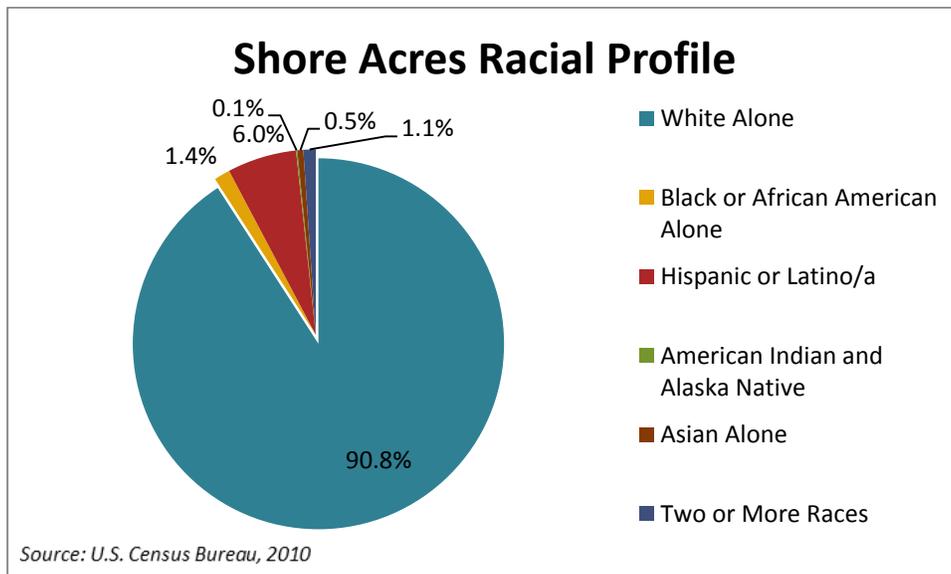


Figure 13: Percentage of Total Neighborhood Population by Race (2010)



HOUSING

In 2010, there were 3,155 total housing units in the Shore Acres neighborhood (using census blocks from Census Tracts 7142 and 7143 configured to the identified Shore Acres neighborhood boundary)⁶. Of those units, 2,440 were occupied housing units, while 715 were vacant. The majority of these vacancies represent units for seasonal or recreational use or rental. 4,180 units are owned, 81 percent of which have a mortgage or loan, and 1,052 units are rentals. Of 1,850 owner-occupied units, nearly 50 percent were valued at \$500,000 or more and the median value was \$598,250 between the two census tracts, although one tract had a median value approximately \$270,000 greater than the other.

By 2012, there were a total of 3,219 housing units with 1,552 (48%) occupied and 1,667 (52%) vacant units⁷. The median value of the 1,473 owner-occupied units had fallen to \$555,750, and only 576 units, or 39 percent, were valued at \$500,000 or more. This was a decrease of \$42,500 in median value and 10 percent fewer units valued over \$500,000. Despite there being more total units in 2012, there were 888 fewer occupied units and 952 more vacant properties than in 2010.

Although precise data is not available exclusively for Shore Acres, combined Census Tracts 7142 and 7143 were at 78 percent occupancy and 22 percent vacancy in 2013 versus 48 percent occupancy and 52 percent vacancy in 2012. Like the change in population between 2010 and 2013, this shift might be due to the damage caused by Superstorm Sandy in 2012, which prevented many people from living in their homes for several years, as well as destroying many homes entirely.

By 2013, many of the destroyed homes were either in the process restored or removed and replaced. In the greater neighborhood area, 530 owner-occupied units were valued at \$500,000 or more (17% of all owner-occupied units) likely consisted of newer construction or restored homes, but was a slight decrease since 2012. The median value dropped significantly to \$335,000, representing a decline of \$220,750 since the prior year and \$263,250 since 2010. Despite these dramatic decreases in values in such a short period of time, the redevelopment of the Shore Acres neighborhood appears to have occurred at a much faster rate than other neighborhoods.

The average built year of all homes in the Shore Acres neighborhood is 1972, although one of the earliest existing structures was built in 1920 in the Shore Acres sub-neighborhood and there are several that have been built between 2013 and 2015. The oldest neighborhood is Shore Acres, where the average year that homes were built is 1966. The newest housing is in Waterside Gardens, condominiums that were built in 1981. Many of the homes that were built prior to the 1980s suffered substantial damage during Superstorm Sandy, including the majority of Shore Acres, Baywood, and Seawood Harbor.

⁶ U.S. Census 2010, U.S. Census Bureau, Tracts 7142, 7143

⁷ U.S. Census Bureau 2012, 5-Year American Community Survey, Tracts 7142, 7143



Table 1: Average Year Built of Structures by Sub-Neighborhood

Sub-Neighborhood	Avg. Year Built
Mandalay Park	1975
Seawood Harbor	1976
Baywood	1980
Shore Acres	1966
Waterside Gardens	1981
Shore Acres (Total)	1972

IMPACT OF SUPERSTORM SANDY

On October 29, 2012, Superstorm Sandy hit the State of New Jersey and caused severe damage along the coastline and waterways due to heavy wind, flooding, and wave action. Damage occurred primarily at the points directly along a waterway and where the storm surge inundated the lowest elevations, causing severe coastal flooding. As a neighborhood built on former wetlands, most of the neighborhood is at a very low elevation. In fact, the entire neighborhood south of Mandalay Road and east of Hollycrest Drive has an elevation below 10 feet above sea level.

The storm surge from the catastrophic weather event was slightly over 10 feet and, therefore, covered a majority of the neighborhood. The neighborhood’s northwest area, north of Woodland Drive in Shore Acres and west of Atlantic Drive in Baywood (see Map 16), which is naturally elevated where the land was originally non-wetlands forest, experienced the least damage. Waterside Gardens, which is set further inland from Kettle Creek, was even flooded by the storm surge, although there was no substantial damage by the Township’s definition.

The majority of the neighborhood, however, is located along the bayside of the peninsula, including streets along coastal lagoons and wetlands, and is extremely vulnerable to major flooding events. Many of the developments are built immediately up to the Bay and lagoons with only the rear yard setbacks from the bulkheads required by the Township zoning ordinance. The removal and impermeable development of the wetlands in the past has drastically reduced natural protective elements and flood control. Fortunately, there remain significant swaths of protected wetlands within and surrounding the neighborhood, which prevent further damage. These, too, continue to be compromised by the generally rising sea level and by ocean breaches to the Barrier Island to the east.

During Superstorm Sandy, Barnegat Bay was breached and opened up to the Atlantic Ocean in several places, allowing water to flow inland, in addition to being high tide and a full moon, which created especially high tide cycles. The excessive amount of water overwhelmed the wetlands, and eventually the bulkheads, roads, storm drains, and properties.



Research found on a blog by “Professor Sak”, a researcher with Rutgers University in partnership with the National Estuarine Research Reserve System (a sub-group of NOAA), provides some insight to the perceived phenomenon of the “reverse surge” from Barnegat Bay. On a June 6, 2013 blog post, data from a weather station in Brick Township that survived and provided data through Sandy was analyzed and described a shift in wind direction that had water rising in the Barnegat Bay through the inlet and driven north by SSE winds from wider areas of the bay to narrower areas during the same period that the ocean surge hit the barrier islands (Figures 15 and 16). While the ocean surge did the damage as it swept across to the bay, the funneled wind driven water in the bay swelled up and exacerbated the flooding of bayfront properties on both the barrier island and the mainland, including Shore Acres, Cherry Quay and Bay Harbor.⁸



Figure 14: Diagram of Wind Surge on Barnegat Bay
(www.professorsak.com)

⁸ Blog entitled “Barrier Islands in Cross Section and How it Plays Out During Storm Surge Events”, posted on June 6, 2013 at <http://professorsak.com>.



THE TOWNSHIP OF
BRICK, NJ

Map 16: Neighborhood Map with Impact of Storm Surge from Superstorm Sandy

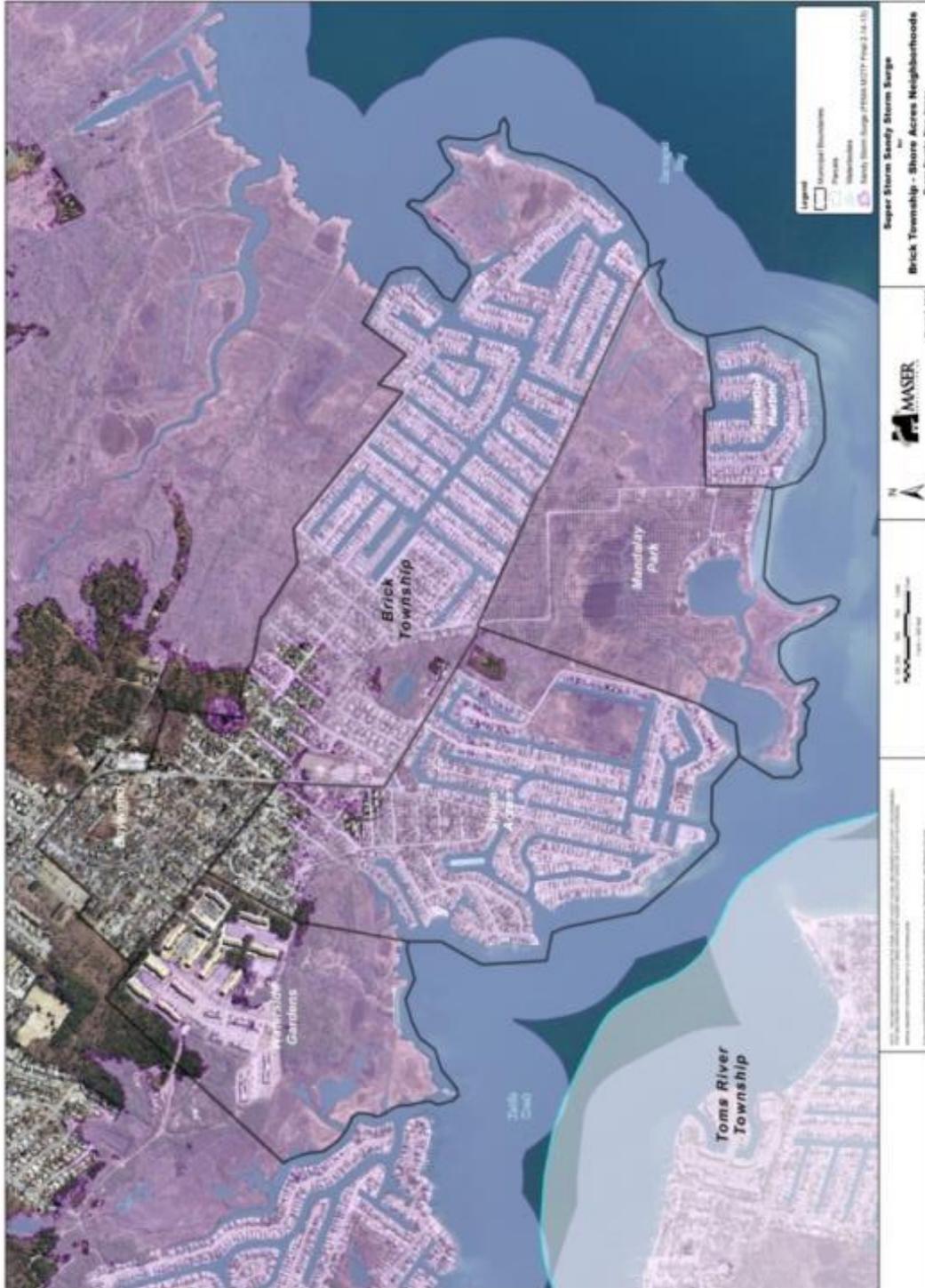




Figure 15 below shows a detailed image comparison of the Shore Acres sub-neighborhood near the Yacht Club and Drum Point Marina (right of the image) between 2010 (pre-Sandy), 2012 (post-Sandy), and 2014. Outside of the Barrier Island, this was one of the hardest hit areas of Brick Township during Superstorm Sandy. Some homes in the neighborhood were almost washed away entirely, while many were leveled, and the majority was gutted. The debris from the storm can be seen in the center image, taken just a few days afterward. Since the storm, a lot of recovery efforts have occurred, although certain parts of the neighborhood, such as this one, have been slow to recover. In the image from 2014 (right), some homes have been rebuilt, while several large empty lots remain.



Figure 15: Focus Area Comparison of Pre-Sandy 2010 (left) and Post-Sandy 2012 (center), 2014 (right) (Google Earth)



Figure 16: Damaged/Gutted home (date: 4-24-15)



Figure 17: Damaged/Gutted home (Google Streetview)

At least 1,301 properties were substantially damaged in the Shore Acres neighborhood alone through 2015, which accounts for more than 40 percent of the 2012 Shore Acres housing stock. Substantial damage is defined in the Township Ordinance as “Damage of any origin sustained by a structure whereby the cost of restoring the structure to its condition before damage would equal or exceed 50% of the market value of the structure before the damage occurred.”⁹ There was more than twice the amount of substantial damage in Shore Acres than on the Barrier Island, although such properties accounted for nearly 44 percent of all Barrier Island properties. This number includes, but is not limited to those properties damaged by Superstorm Sandy.

⁹ Township of Brick, New Jersey. *Chapter 196. Flood Damage Prevention Ordinance*. Thursday, May 28, 2015.



The age of structures, or the year in which they were built, also has a strong correlation to the amount of damage that properties were likely to receive. The base flood elevation (BFE) level requirement, which was first implemented in the Township in 1972, allows homes which are elevated to regulation to qualify for flood insurance. Homes that sit on higher ground or that have been elevated, whether by regulation or by personal decision, are naturally less likely to receive as much flood damage as older homes built before the requirement. Additionally, the BFE has been updated several times and generally increased the requirements in 1984, 1992, 1998, 2006, and 2015 respectively.

Map 17: 1998 Shore Acres FEMA BFE Map



The average year that all properties within Shore Acres were built was 1972. The Shore Acres sub-neighborhood has the oldest average housing stock, built in 1966, while Waterside Gardens has the newest housing stock by average, built in 1981. Similarly, the average built year of all structures that have suffered significant damage is 1977, and most likely due to Superstorm Sandy. Accordingly, the most significant damage overall occurred in the oldest waterfront neighborhood – Shore Acres – while slightly newer low-lying lagoon communities built prior to the most recent BFE regulations were also critically damaged, such as Seawood Harbor and Baywood.

By number of substantially damaged properties, Baywood had the most with 720, followed by Shore Acres with 467, then Seawood Harbor with 102, and Mandalay Park with 12, while Waterside Gardens did not incur any substantial damage. Baywood and Shore Acres also have the greatest total number of



properties, whereas Seawood Harbor and Mandalay Park have significantly fewer properties. However, nearly all of the properties in Seawood Harbor and Mandalay Park were substantially damaged because the sub-neighborhoods are entirely below 10 feet above sea level and within the FEMA Advisory Zone V (see Map 19). The more inland, elevated properties of Shore Acres, Baywood, and Waterside Gardens did not experience as much damage.

The average build year of substantially damaged structures for each sub-neighborhood is between one and six years later than the average build year of all structures in the respective sub-neighborhood. In general, it is unusual that newer properties incur more damage than older properties; however, Brick Township experienced the most waterfront and lagoon development during the late 1960s through the early 1980s. Additionally, the Township’s first BFE requirements were only put into place by the same year as the average build year of all Shore Acres properties and were much less stringent than they are today. Flooding and major storms that affect the low-lying Bay neighborhoods have also become more frequent over the years.

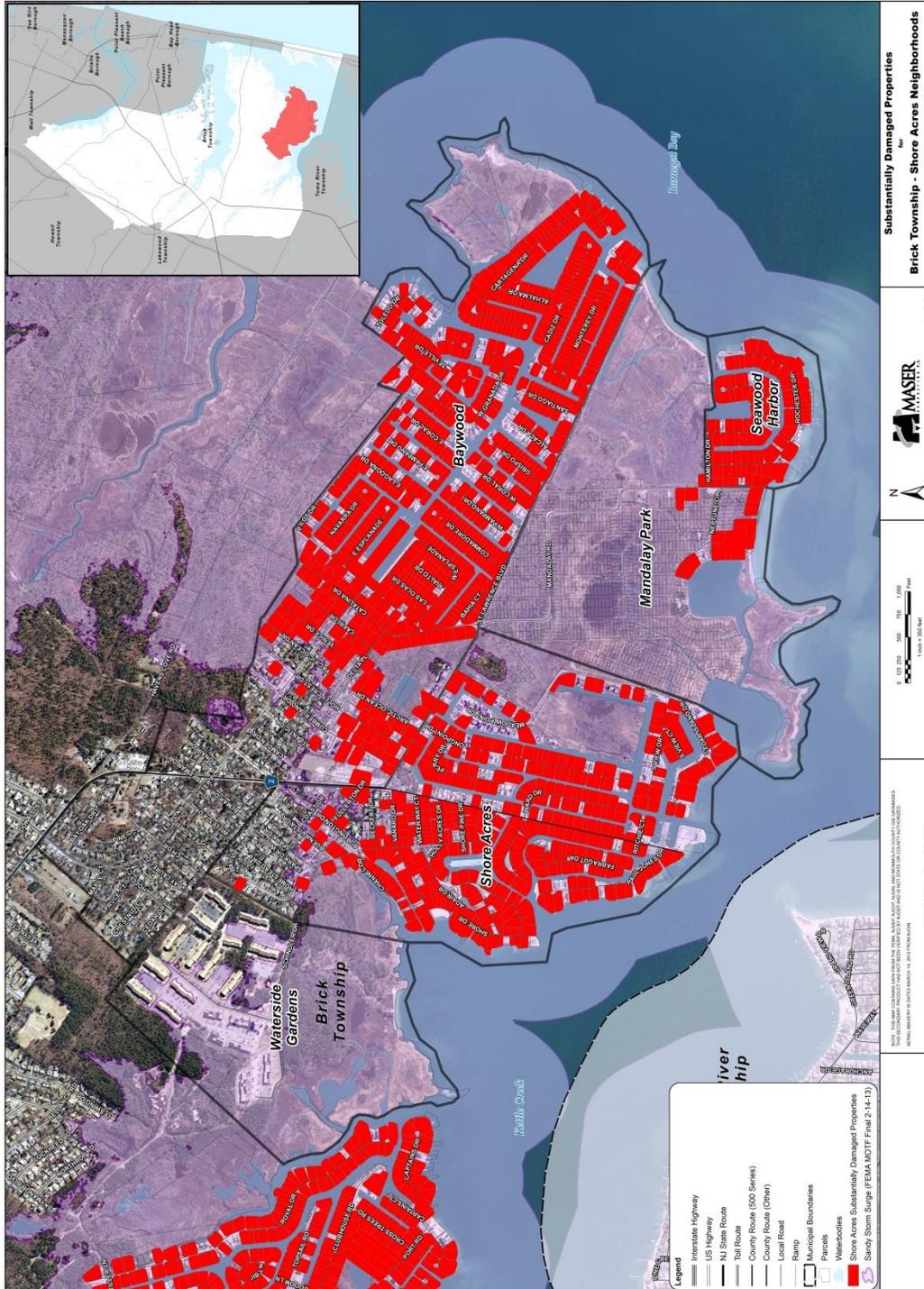
Table 2: Substantially Damaged Properties by Sub-Neighborhood

Sub-Neighborhood	# of Properties Substantially Damaged	Avg. Build Year of Substantially Damaged Properties	Average Build Year of All Properties
Mandalay Park	12	1981	1975
Seawood Harbor	102	1982	1976
Baywood	720	1976	1980
Shore Acres	467	1967	1966
Waterside Gardens	0	N/A	1981
Shore Acres (Total)	1301	1977	1972



THE TOWNSHIP OF
BRICK, NJ

Map 18: Areas with Substantially Damaged Properties (with Buffer)



Despite the apparent correlation, substantial damage faced by homes on the Barrier Island was much more circumstantial than the age and elevation of structures. Location (distance from the breach); type of construction; stillwater versus surge; velocity of water; and debris are also significant factors in considering the causes of substantial damage.¹⁰

After Superstorm Sandy, many residents were unable to move back into their homes or to access the neighborhood for several weeks, if not months, due to the widespread damage. Although access was not as restricted as it was to the Barrier Island neighborhoods, the destruction was vast along the bay shoreline and has taken years to cleanup and rebuild. Not every coastal property was destroyed; however, properties that were slightly more inland and elevated were much more likely to be spared from flooding and wave action. Some residents are continuing to rebuild their homes in 2016.

Following the storm, the Federal Emergency Management Agency (FEMA) revised the base flood elevation levels and advisory flood levels to reflect the approximate levels during Superstorm Sandy. The levels that Sandy reached were closer to what had been considered the 500 Year Flood Plain, but is now used as the 100 Year Flood Plain as major storms are predicted to become more frequent.

Coastal flooding is a result of the storm surge where local sea levels rise often resulting in weakened or destroyed coastal structures. Hurricanes and tropical storms, severe storms, and Nor'easters cause most of the coastal flooding in New Jersey. Much of the damage in Shore Acres was attributed to storm surge and wind-driven wave action due the large size of Barnegat Bay. Superstorm Sandy was also a unique situation in that the Barrier Island was breached between the ocean and the Bay in several locations, including one directly to the northeast of Shore Acres in Mantoloking. With the breach of the ocean and wind-driven Bay water being pushed to the north, Shore Acres was at a juncture that put it at a critical disadvantage. Figure 18 illustrates the effects of water energy dissipation and regeneration of a wave as it moves inland through the V-zone, Coastal A-zone, and A-zone.

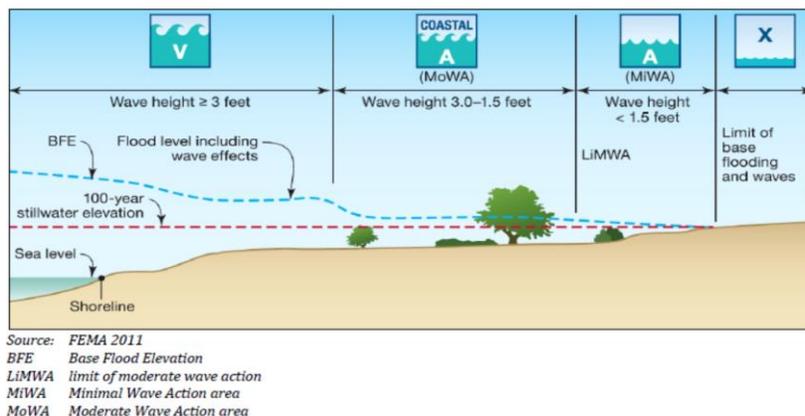


Figure 18: Transect Schematic of Zone V, Coastal A-Zone, and Zone A

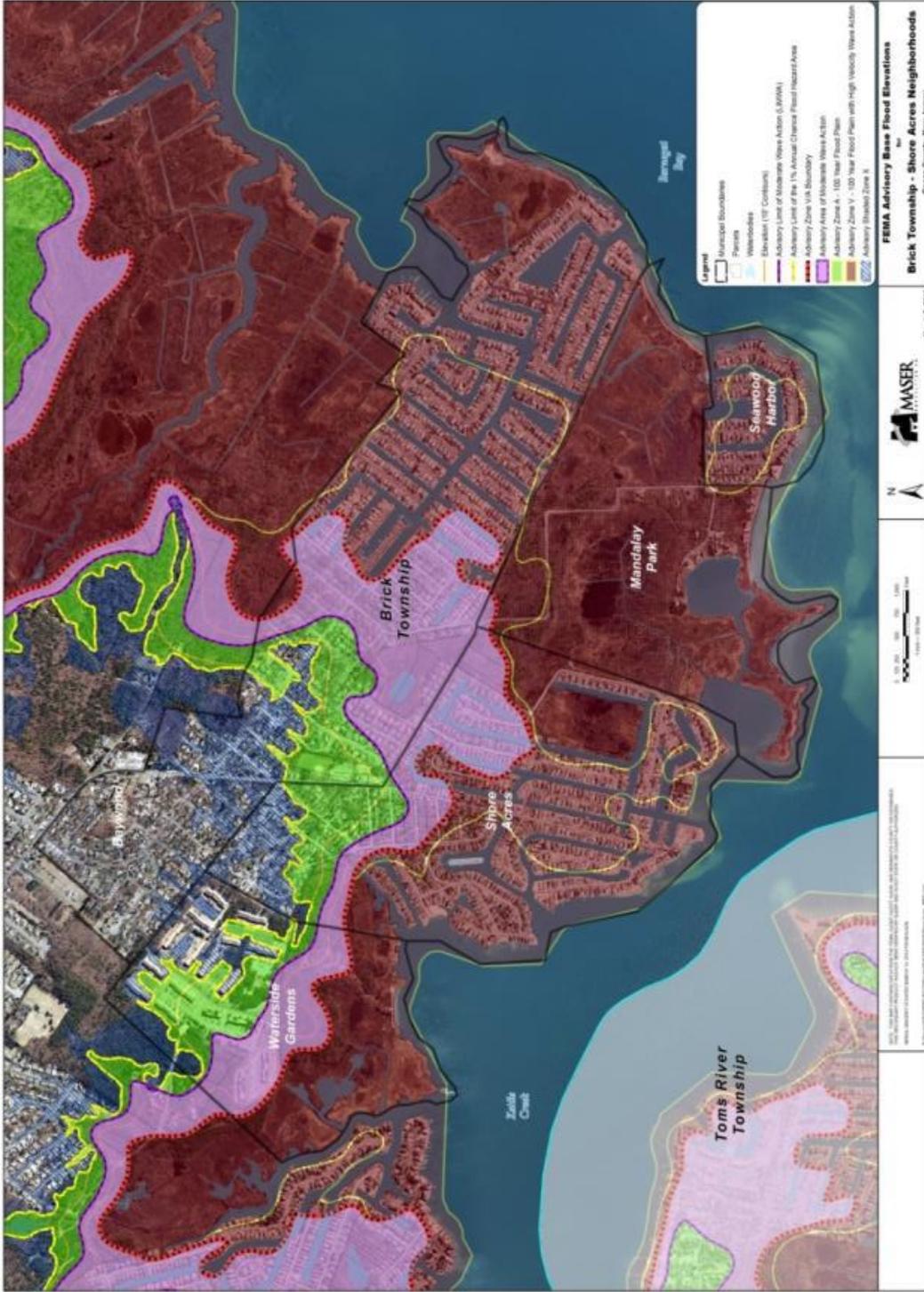
¹⁰ Paxton, Tara B., AICP/PP. "Rebuild or Retreat: The Future of Planning Flood Zones." Spring 2015.



Map 19 below depicts the elevation, 1% Annual Chance Flood Hazard Area, Advisory Zones A, V, and X, and the Limit of Moderate Wave Action (LiMWA) in the Shore Acres area. The interior-most part of the neighborhood (western Baywood) is located outside of a flood zone, but the zones increase moving southeast toward where Kettle Creek and Barnegat Bay meet. About one-third of the neighborhood is located in either the Advisory Zone X, Advisory Zone A, or the Advisory Area of Moderate Wave Action, which each occupies a narrow strip of land. Most of the neighborhood is located in the most vulnerable zone, which is the Advisory Zone V – 100 Year Flood Plain with High Velocity Wave Action, which is the same zone assigned to the ocean side of the Barrier Island. These are the most recent zones, although they have changed over the years.



Map 19: Preliminary FEMA flood levels post-Superstorm Sandy





NEIGHBORHOOD PHYSICAL CHARACTERISTICS

Shore Acres is defined by its location between Barnegat Bay and Kettle Creek, forming a bulbous peninsula, and characterized by its extensive network of penetrating, winding man-made lagoons, stretching deep inland.

Originally built on wetlands, Shore Acres is almost entirely within a ten feet of sea level. To the neighborhood's benefit, the remaining wetlands are protected and continue surrounded and permeate the neighborhood. These wetlands not only divide the sub-neighborhoods into more exclusive and well-defined pockets with individual characteristics, but they also provide valuable open space, natural breeding grounds for local fauna, and help to absorb floodwater.

The neighborhood was built in a way which intends it to be accessed primarily by individual automobiles, although the lagoons also permit boat access to many of the private residences. Boat access, however, is not a primary means of transportation in order to reach a destination, despite the fact that many homeowners also have boats. The arrangement of the lagoon neighborhoods has resulted in most streets to be oriented specifically toward those who live on the street – often entirely residential; with cul-de-sacs or without outlet; without sidewalks; and very low speed limit. Residents tend to enjoy the private nature of the neighborhood, while the restriction on thru traffic and speed creates a safer environment.

CONNECTIVITY AND MOBILITY

However, dead-end streets, especially those separated by flood-prone wetlands and far-removed from emergency evacuation routes, are a particular safety hazard to residents of this neighborhood. The lack of connected sidewalks discourages walking impacts the safety of pedestrians.

In addition to limited pedestrian and bicycle amenities, there is virtually no public transportation available within or in proximity to the neighborhood. Such limited transportation options further restricts access to the neighborhood and any public lands therein, particularly for those residents who may be disabled, elderly, youth, or who do not own a vehicle. While sidewalks and bike paths or shared lanes are not necessarily conducive for getting everyone to every destination, they do provide a considerably safer alternative for pedestrians and cyclists to move around locally, rather than on the shoulder of a road.

Connectivity and accessibility are therefore major issues of concern. Some additional connectivity, public amenities, and design options may improve safety and the overall experience for residents on their own street and throughout the neighborhood.

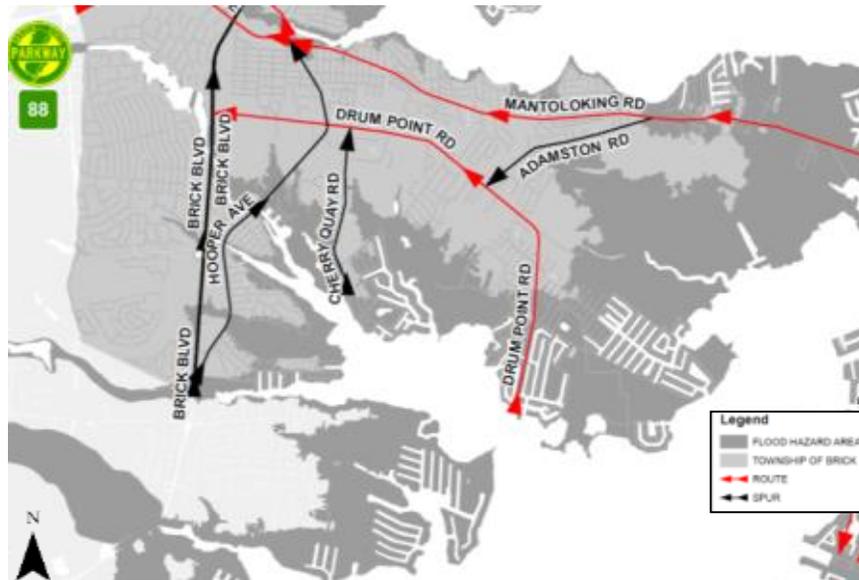


Figure 19: Township Coastal Evacuation Routes identified (Brick Township Master Plan Update & Green Element, 2014)

WALKABILITY

There are no consistent design standards for streetscape treatments and pedestrian sidewalks throughout the Shore Acres neighborhood. Only a few disparate segments of sidewalk exist within the neighborhood, and those that do are somewhat scattered, substandard, and inconsistent.



Figure 20: Inconsistent and non-ADA sidewalks, Mandalay Rd. & Arctic Ocean Dr. (Google Streetview, Sept. 2013)



Figure 21: Substandard and non-ADA sidewalks, Aschby Dr. & Holly Ct. East, Waterside Gardens (Google Streetview, July 2013)



Substandard and inconsistent sidewalks include those which are attached to the curb (5-7' wide); sidewalks with a curb strip; no sidewalk at all; no curbing at all; stone without edging; lack of handicap accessible ramps; et cetera. People are often seen walking and running in the streets and some sidewalks are too narrow or inaccessible for handicapped people. There is a need for a standardization of sidewalk and curb treatments that can be modified to fit various applications. For example, the neighborhood could feature one sidewalk pattern with variations for the smaller and broader crossing streets.



Figure 22: Jogger in the street, Baywood Blvd. (Google Streetview, Aug. 2014)



Figure 24: Pedestrian with stroller walking in street, Rochester Dr. (Google Streetview, July 2013)



Figure 23: Runner and car in the street, Baywood Dr. (Google Streetview, Aug. 2014)

Existing sidewalks are found primarily within the newest condominium sub-neighborhood, Waterside Gardens, as well as some on the outer edges of Baywood and Shore Acres. These are grouped closely enough that a connected network could easily be created. The existing sidewalks are located in the following areas, as shown on Map 20 below:

1. (Boardwalk) West side of Holly Ave., extended, between Pilot Dr. and St. Lawrence Blvd.
2. West side of Cedar Island Dr. between 54 Cedar Island Dr. and 98 Cedar Island Dr.;
3. Meadowpoint Dr. west of Cedar Island Dr., inclusive of all residential parcels (19 through 48 Meadowpoint Dr.);
4. West side of Cedar Island Dr. between Meadowpoint Dr. and Mandalay Rd., inclusive of corner property's side yard on Meadowpoint Dr.;
5. South side of Mandalay Rd. between Cedar Island Dr. and 39 Mandalay Rd.;
6. North side of Mandalay Rd. between Cedar Island Dr. and Arctic Ocean Dr.;
7. East side of Arctic Ocean Dr. in front of 1 Arctic Ocean Dr.;
8. East side of Hollycrest Dr. between 20 and 24 Hollycrest Dr.;

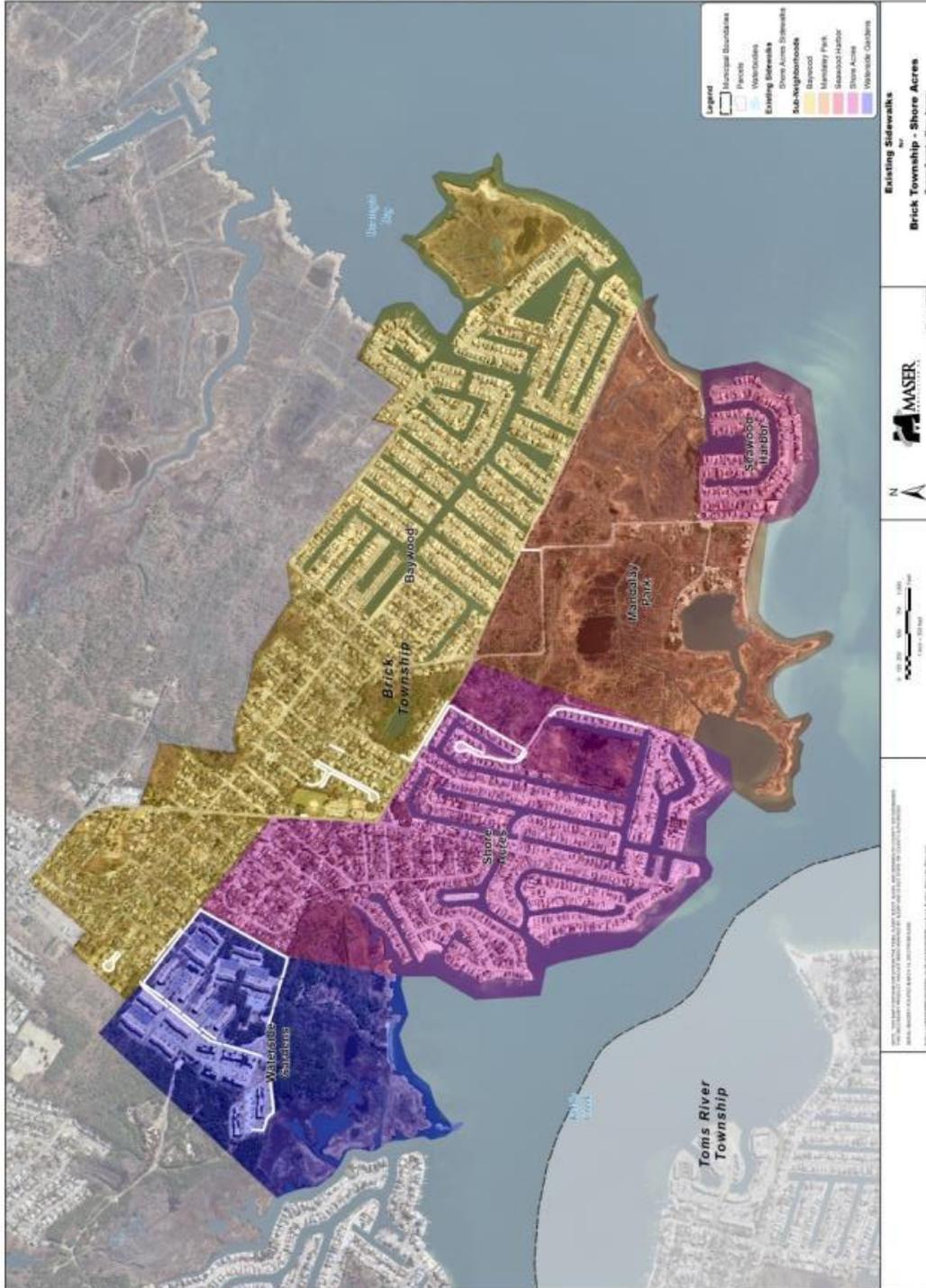


9. West side of Cumberland Dr. between 30 Cumberland Dr. and Atlantic Dr.;
10. East side of Cumberland Dr. between 29 Cumberland Dr. and end of cul-de-sac, excluding dome of cul-de-sac;
11. West side of Cumberland Dr. between Atlantic Dr. and end of cul-de-sac, excluding dome of cul-de-sac;
12. East side of Dunn Point Rd. at northern end of Angela M. Hibbard Park;
13. Chestnut Ct., limited to 64, 65, 68, 69, 72, and 73 Chestnut Ct.;
14. North side of Aschby Dr. between Bay Laurel Dr. and Holly Ct. East;
15. North side of Aschby Dr. from Holly Ct. East west to mid-block;
16. South side of Aschby Dr. between Birch Dr. and Schindler Dr.;
17. West side of Birch Dr. between Aschby Dr. and Finchley Dr.;
18. North side of Finchley Dr. between Birch Dr. and mid-way to Schindler Dr.;
19. North side of Finchley Dr. at dead-end loop between Finchley Dr. west to parking lot;
20. West side of Schindler Dr. just north of Finchley Dr. north to Aschby Dr.;
21. East side of Schindler Dr. from north of southernmost parking lot driveway north to Aschby Dr.



THE TOWNSHIP OF BRICK, NJ

Map 20: Overview of existing sidewalks in Shore Acres neighborhood





In addition to a lack of adequate sidewalks in the neighborhood, there are no crosswalks connecting roads for safe pedestrian crossing or traffic signals anywhere within Shore Acres.

Along Drum Point Road, which is the main access and busiest road in the neighborhood, there are seventeen (17) streets that meet Drum Point Road and four (4) primary crossings. The intersections with Mandalay Road/Shore Acres Plaza, Baywood Boulevard, and Bay View Drive/Burlington Drive are the have the most vehicular traffic and are the most difficult to cross. Additionally, the traffic circle at Mandalay Road, Catalina Drive, and St. Lawrence Boulevard is a hazard for pedestrians and cyclists alike.

Although the speed limit throughout Shore Acres is 35 miles per hour or less, the major thoroughfares have consistent and fast traffic, particularly during the summer months. Although there are no crosswalks or streetlights, few sidewalks, and there is regular traffic, there haven't been any recorded fatal accidents between vehicles or vehicles and pedestrians in Shore Acres between 2012 and 2014, according to data from the National Highway Traffic Safety Administration (NHTSA)¹¹. Most sub-neighborhoods have slower, local traffic with posted speeds around 15 to 25 miles per hour.

BIKEABILITY

With the exception of a new half-mile long bicycle path between Baywood and Mandalay Park/Seawood Harbor along St. Lawrence Boulevard, Holly Avenue, and Knoll Crest Avenue, there are no other existing connections to bicycle paths or lanes in Shore Acres.



Figure 26: Separate bicycle path along St. Lawrence Blvd., Baywood (Google Streetview, August 2014)



Figure 25: New separated bicycle path along Knoll Crest Ave., Mandalay Park (Google Streetview, September 2013)

In addition, there is a designated recreational bicycle route/trail through the adjacent 273-acre Airport Tract, with associated directory signage on Drum Point Road, to the northwest of Waterside Gardens and Baywood. The Township has applied for funding through the State to allow for the expansion of the bike path on the property an additional 1.08 miles and connect the path near Hooper Avenue to Cherry Quay Road. The path would also allow cyclists to connect through Angela Hibbard Park on Drum Point Road in

¹¹ "Location of Fatal Crashes – New Jersey" Map. National Highway Traffic Safety Administration. 2014. http://www-nrd.nhtsa.dot.gov/departments/nrd-30/ncsa/STSI/34_NJ/2014/New%20Jersey_Map_1_GIS_DATA_2014.HTM



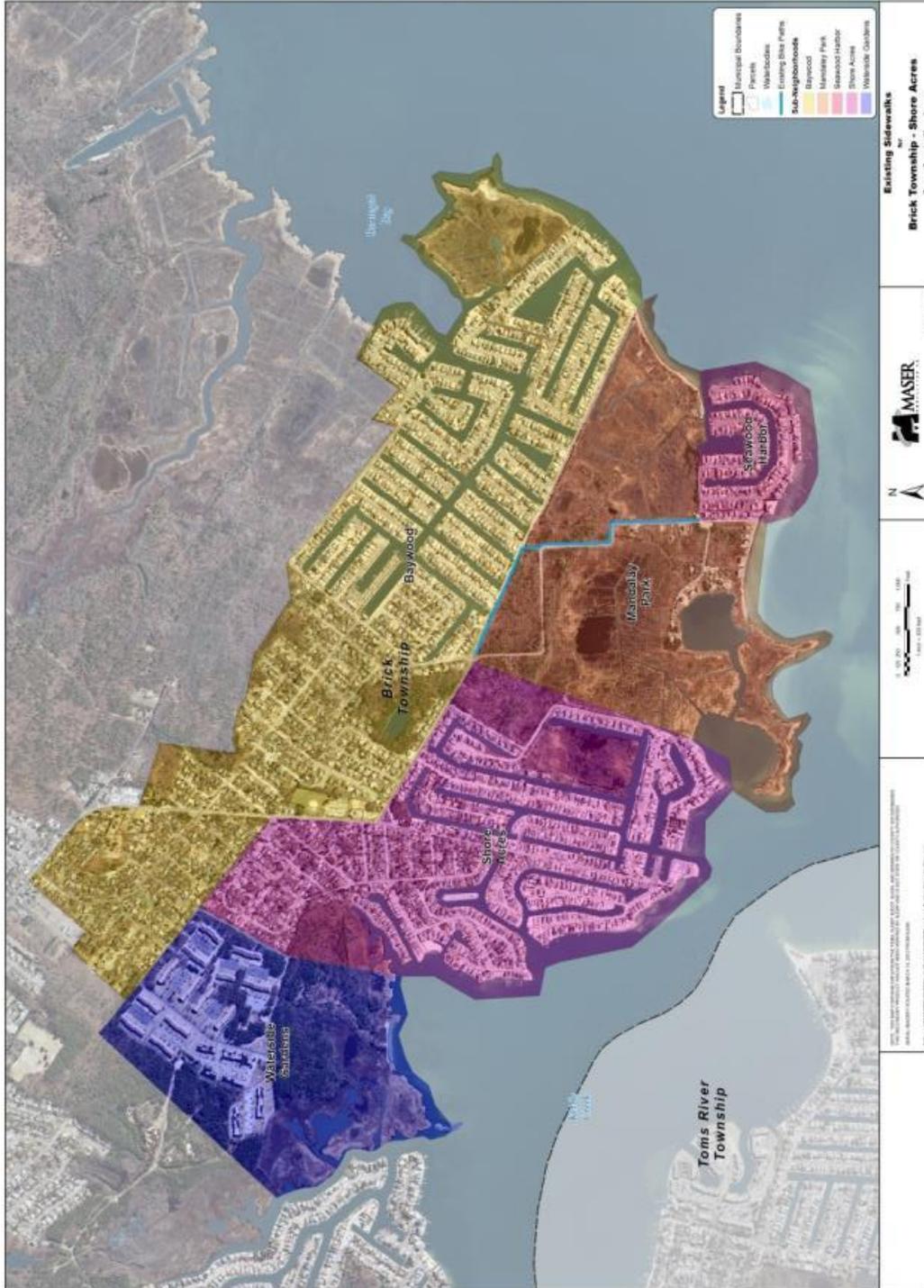
Shore Acres to the main trail. An expanded trail would be funded through the New Jersey Bikeways grant, which the Township Council used to fund the Baywood – Seawood Harbor path in 2013. The long-term goal for the Township is to eventually expand the trail to the Mantoloking Bridge for improved bicycle access to the Barrier Island beaches.¹²

¹² Nee, Daniel. "Brick Hopes to Expand Airport Tract Bike Path." Brick Shorebeat. October 15, 2015. <http://brick.shorebeat.com/2015/10/brick-hopes-to-expand-airport-tract-bike-path/>



THE TOWNSHIP OF
BRICK, NJ

Map 21: Existing Bicycle Facilities (blue lines) in Shore Acres





Despite not having any additional defined bicycle paths, the streets have speed limits that are slow enough to be considered “Bicycle-Friendly” routes by the State of New Jersey Department of Transportation (NJDOT) for shared roads without bicycle facilities. All streets within the neighborhood have a speed limit of 35 miles per hour or less. The only two marked streets at 35 miles per hour are Drum Point Road and Mandalay Road, which are the two major collecting roads in the neighborhood – all other streets are 25 miles per hour or less. However, streets that are greater than 25 miles per hour are not considered bicycle-friendly by U.S. Green Building Council LEED-ND standards.

Table 3: Speed Limits on Shore Acres Roads

Shore Acres Sub-Neighborhood	Road	MPH
Waterside Gardens		
	Unnamed road from woods to Schindler Dr.	N/A
	Schindler Dr. (btwn unnamed and Aschby Dr.)	25
	Aschby Dr. (btwn Schindler Dr. and Holly Ct. E.)	25
Baywood		
	Drum Point (btwn Baywood Blvd & Mandalay Rd.)	25
	Holly Ct. E.	25
	Baywood Blvd.	25
	Baywood Dr.	25
	Atlantic Dr.	25
	Mandalay Rd.	35
	Pilot Dr.	25
	Catalina Dr. (btwn Pilot Dr. and Mandalay Rd.)	25
	Alameda Dr.	25
	St. Lawrence Blvd.	25
Shore Acres		
	Drum Point Rd.	35
	Cedar Island Dr. (btwn Mandalay Rd. and Southview)	25
Mandalay Park		
	Mandalay Rd.	25
	Lake Point Dr.	25
	Neptune Cir.	25
	Knoll Crest Ave. (btwn Neptune Cir. and Bay Shore Dr.)	25
Seawood Harbor		
	Hamilton Dr.	25
	Rochester Dr.	N/A
	Toronto Dr.	N/A

Cyclists are often seen biking against oncoming vehicular traffic on both sides of the roads, including children riding throughout the neighborhood in large groups extending into the roadway, or on the sidewalks where they exist. Narrow shoulders and objects and gravel extending into the street also create hazardous conditions for cyclists. If there are cyclists on both sides of the road or if they are riding in the wrong direction, as shown in the image in Figure 27, this can create confusion amongst drivers and create a dangerous situation for cyclists and pedestrians, regardless of the speed limit. In addition to separate lanes or designated shared lanes, appropriate bicycle signage and education can reduce confusion and the potential for injurious accidents.

Although the shoulders of the roads in Shore Acres that have a speed limit 35 miles per hour are likely too narrow in most places to support separate bicycle lanes, designated shared lanes should be explored, as well as sidewalks in the right-of-way. At minimum, the use of signage to direct cyclists to safer routes could be implemented on Township and County Roads and both signage and shoulder markings added to the shoulders to some of the thru streets.



Figure 27: Children bicycling on Baywood Blvd., Baywood (Google Streetview, August 2014)



Figure 28: Narrow shoulders and hazardous objects for cyclists, Drum Point Rd. (Google Streetview, July 2013)



Figure 29: Narrow shoulders on curved roads, Baywood (Google Streetview, August 2014)

SIGNAGE

Signage is much more prevalent and consistent in Shore Acres than in some other neighborhoods, such as the Princeton-Midstreams. However, the signage tends to consist mostly of monument signs at the entrances to some of the neighborhoods or general road signage, such as posted speed limits. Neighborhood signage regularly utilizes a blue and white color scheme with various fonts and images specific to each sub-neighborhood. Signage includes, but may not be limited to that which is found at the following locations:

1. Three (3) signs owned by the Township of Brick are located at the entrance to the Joe Pal Airport Tract at 419 Drum Point Road intended for identifying the park and bicycle route. These are on the southerly side of Drum Point Road at the western border of Baywood and include the following:
 - a. "Bicycle Route"; green sign
 - b. "Parking" with arrow; white sign
 - c. "Airport Tract - Bicycle Trail - Entrance - Parking lot - Brick Township - New Jersey"; brown wooden picket sign



Figure 30: Associated park signage at entrance (Google Streetview)



Figure 31: Sign location on Drum Point Road (Google Maps)

2. Monument sign for Waterside Gardens located at the northwest intersection of Drum Point Road and Baywood Boulevard across from Peter Place. The blue and white sign with the neighborhood emblem, states the name of the sub-neighborhood, a phone number, and directions. As shown in Figure 32, a flower bed has been planted around the base of the sign. The sign is located approximately 20 feet back from the street and is placed beyond the point where it is necessary to turn in a vehicle. Directional/way-finding signage should be placed closer to the street and prior to making a turn. Monument-type signage should only be permitted at the entrance to the neighborhood, whereas it is currently placed at the entrance to the Baywood sub-neighborhood.



Figure 33: Waterside Gardens sign as seen from Drum Point Road (Google Streetview)



Figure 34: Waterside Gardens sign location at Drum Point Road & Baywood Boulevard (Google Maps)

3. A second, smaller monument sign for Waterside Gardens is located at the entrance to the private community at the intersection of Holly Court East, Aschby Drive, and Fire Lane (private road). The sign is oriented toward traffic from Holly Court East and has an arrow directing traffic toward Schindler Drive (private road). There is some landscaping around the sign and the design of the sign is similar to that of the one on Drum Point Road, but without the emblem or secondary sign with a phone number and directions. Ideally, a monument sign at the entrance of a neighborhood would be larger and more ornamental than the directional signage.



Figure 35: Waterside Gardens sign as seen from Holly Court East at Aschby Drive (Google Streetview)

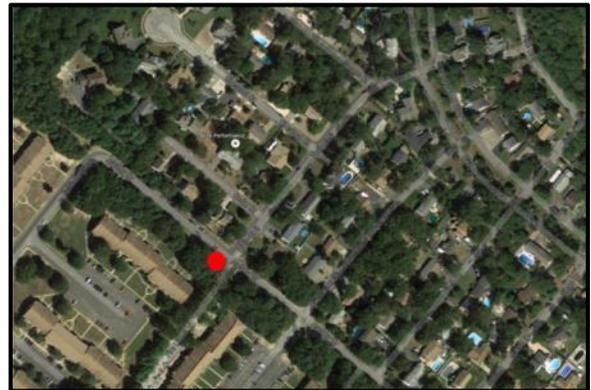


Figure 36: Waterside Gardens sign location at Holly Court East & Aschby Drive (Google Maps)

4. A monument sign for the Shore Acres sub-neighborhood is located at the southerly side of the intersection of Drum Point Road and Bay View Drive across from Burlington Drive. This sign defines the border between Baywood and Shore Acres, which begins immediately south of this point. The sign states "Shore Acres – A Proud Community" and the year established and contains a sailboat emblem specific to the sub-neighborhood. The blue and white sign with yellow and white font is placed within a box planter.



Figure 37: Shore Acres sign as seen from Drum Point Road (Google Streetview)



Figure 38: Shore Acres sign location at Drum Point Road and Bay View Drive (Google Maps)

5. The Baywood sub-neighborhood monument sign is located on the easterly side of the eastern intersection of Baywood Boulevard at Drum Point Road. A sign should be located further west along Drum Point Road where the “border” with Shore Acres and Waterside Gardens is ambiguous. The small wooden sign is currently located behind a large tree and is oriented west to Baywood Boulevard, rendering it invisible to vehicles on Drum Point Road. The sign simply states the name of the sub-neighborhood in yellow font and has a large emblem and has simple landscaping around the base.



Figure 39: Baywood sign as seen from Baywood Boulevard at Drum Point Road (Google Streetview)



Figure 40: Baywood sign location at Drum Point Road and Baywood Boulevard (Google Maps)

6. A small wooden monument sign is located at the entrance of Angela M. Hibbard Park on Drum Point Road, which simply states the name of the park. The sign is placed beyond the park entrance to the south where it may not be easily visible by moving vehicles on southbound Drum Point Road. It should, therefore, be relocated to the north side of the entrance.



Figure 41: Hibbard Park sign as seen from Drum Point Road (Google Streetview)



Figure 42: Hibbard Park sign location at the park entrance on Drum Point Road (Google Maps)

7. Seawood Harbor has a monument sign in shades of blue; yellow, white, and black font; and an anchor emblem. In addition to the name of the sub-neighborhood, the sign makes reference to the year established and to the protected wetlands and the national wildlife preserve area. The sign is located on the southerly side of Mandalay Road at the roundabout intersection of with St. Lawrence Boulevard and Catalina Drive. The sign is oriented to the west for eastbound Mandalay Road traffic; however, the font is small and the sign is placed far back from the road. The curve in the road places vehicular traffic at an angle to the sign, which also makes it illegible. The sign should be oriented more west-northwest. Although it is the access road, the placement of the sign is slightly misleading as one must first pass through Mandalay Park before reaching Seawood Harbor. Therefore, a combined sign for both sub-neighborhoods could be placed in this location.



Figure 43: Seawood Harbor sign as seen from Mandalay Road (Google Streetview)

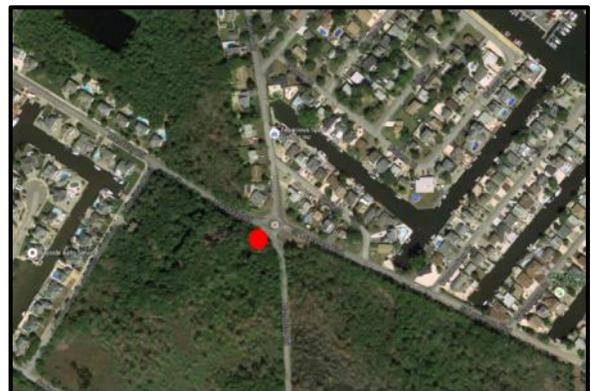


Figure 44: Seawood Harbor sign location at Mandalay Road (Google Maps)

DESTINATIONS IN SHORE ACRES

PUBLIC UTILITIES AND SERVICES

Unlike most of the larger neighborhoods in Brick Township, there are no public safety services or essential facilities in Shore Acres. The nearest fire station is the Pioneer Hose Fire Company 1 on Drum Point Road and Firehouse Road to the west. The nearest school is the Osbornville Elementary School at 218 Drum Point Road to the west near Cherry Quay Road.

MUNICIPAL UTILITY AUTHORITY

The Brick Township Municipal Utility Authority owns Block 286, Lot 27.01 and Block 210, Lot 6.01 on Drum Point Road, adjacent to Angela M. Hibbard Park, which contains a restricted utility building. The land is 0.06 acres in size.



Figure 45 Municipal Utility building on Block 286, Lot 27.01, Drum Point Road (Google Streetview)



Figure 46: Block 286, Lot 27.01 highlighted (Google Maps)

OCEAN COUNTY SEWERAGE AUTHORITY

The Ocean County Sewerage Authority owns a similar lot on Block 299, Lot 175 on Woodland Drive at the northern intersection with Bay View Drive in the northern section of the Shore Acres sub-neighborhood. This property contains a pumping station on a 100' x 220' lot, as shown below.



Figure 47: Ocean County Sewerage Authority building on Block 299, Lot 175, Woodland Drive (Google Streetview)



Figure 48: Block 299, Lot 175 highlighted in red (Google Maps)

NEIGHBORHOOD PARKS, RECREATION, AND PUBLIC SPACE

The number of public and private recreational and park amenities within Shore Acres is very limited. Public amenities include two parks – one of which contains mostly trails and natural land cover and the other which contains active planned recreation. Other amenities, such as a few beaches and marinas, are privately owned and maintained. Most of the recreational space, both public and private tends to be clustered around the western half of the neighborhood in Shore Acres, Baywood, and Waterside Gardens, as shown on the maps below. The Open Space Recreation map from the Township Master Plan also shows several existing and proposed conservation/recreations lots for future planning, which are further expanded upon in the following section.



Map 23: Open Space and Recreation Map of Shore Acres (Brick Township Master Plan, 2007)



There are two major public parks within the borders of Shore Acres as they have been defined in this Plan. However, the majority of the Joe Pal Airport Tract, including the entrance, is located outside of, but directly adjacent to Shore Acres. A significant portion of the property does extend into Waterside Gardens and provides an important asset to the neighborhood. Both properties, which are listed on the State of New Jersey Department of Environmental Protection Green Acres Program ROSI Database, are described below:

JOE PAL/BRICK AIRPORT TRACT

The Joe Pal Airport Tract contains 273 acres of undeveloped open space, owned by the Township of Brick. The expansive property contains trails for walking, hiking, running, and biking and connects the neighborhoods of Cherry Quay and Shore Acres (sub-neighborhoods of Waterside Gardens and



Baywood). The official trailheads are located at 419 Drum Point Road (Block 321, Lots 4 and 4.02) at the western border of Baywood and along Cherry Quay Road to the west.



Figure 49: Entrance to Joe Pal property on Drum Point Road (Google Streetview)

Associated directory signage is located at each entrance, as well as on-site parking in a gravel lot with handicap parking, trash cans, and picnic tables.

Map 24: Joe Pal Airport Tract property within Shore Acres



ANGELA M. HIBBARD PARK

Angela M. Hibbard Park is a Brick Township park located on Drum Point Road on the border between the Shore Acres and Baywood sub-neighborhoods, occupying Block 210, Lots 6 and 7 and Block 286, Lot 7.

Block 210, Lot 6 is currently vacant and borders Mandalay Road to the south. The park also borders Atlantic Drive – a small neighborhood road – to the east. The Brick Township Municipal Utility Authority owns the adjacent Block 286, Lot 27.01 and Block 210, Lot 6.01.



Figure 50: Entrance to Hibbard Park (Google Streetview)



Map 25: Hibbard Park on Township Tax Map (in red)

Whereas the park currently includes a softball field, playground, tennis court, basketball court, swing set, benches, and 32 parking spaces, the remodeling will include two playgrounds, a basketball court, a pickleball court, two dog parks, and a perimeter walking trail.

Map 26: Angela M. Hibbard Park





Table 4: Brick Township Recreational Facilities (Shore Acres facilities highlighted)

 BRICK TOWNSHIP RECREATIONAL FACILITIES FACILITY NAME - STREET LOCATION	Concession	Soccer Fields	Swimming	Basketball	Baseball/Softball	Drinking Water	Tennis Courts	Playground	Fishing	Crabbing	Picnic Tables	Rest Rooms	Volleyball	Bocce	Horseshoe Pit	Walking Trail	
Airport Trail - Drum Point Road / Cherry Quay Road																	
Bay Harbor Beach - Bay Harbor Blvd.																	
Bernard J. Cooke Memorial Park - 44 Burnt Tavern Road																	
Joe Boland Field - 2000 Lanes Mill Road																	
Brick Beach I - 310 Route 35 North																	
Brick Beach II - 354 Route 35 North																	
Brick Beach III - 440 Route 35 North																	
Brick Township Municipal Building - 401 Chambers Bridge Rd																	
Cedar Bridge Manor Park - 73 & 77 Cedar Bridge Manor Drive																	
Colorado Avenue Park - 501 Colorado Avenue																	
Drum Point Sports Complex - 41 & 43 Drum Point Road																	
Angela Hibbard Park - 600 Drum Point Road																	
Edmund Hibbard Park - 56 Tiller Lane																	
Frede Drive Park - 119 Frede Drive																	
Lake Riviera Park - 371 North Lakeshore Drive																	
Mallard Point Park - 41 Tunesbrook Drive																	
Arrowhead Park - 161 Village Way																	
Pinewood Acres Complex - 1351 Route 88 West																	
Sawmill Trail - Burnt Tavern Road																	
Veterans Memorial Complex - Hendrickson Avenue																	
Hank Waltonowski Park - Ashwood Road																	
VFW Park - 154 Duchess Lane																	
Windward Beach Park - 265 Princeton Avenue																	
Midstreams Elementary School Playground - Midstreams Rd.																	
Emma Havens Young School Playground - Drum Point Rd.																	
Traders Cove Marina and Park - 40 Mantoloking Road																	
Bayside Park - 427 Route 35 South																	

OPEN SPACE & PRESERVATION/CONSERVATION AREAS

Shore Acres also contains an abundance of conservation lands and wetlands, which are protected, as shown in Map 23 above and Map 27 below. Preserved/Conservation lands include:

EDWIN B. FORSYTHE NATIONAL WILDLIFE REFUGE

The Forsyth Wildlife Refuge comprises a majority of the wetlands along the eastern side of the larger Brick Township peninsula bordering Barnegat Bay, from Kettle Creek in Mandalay Park north to West Mantoloking at the mouth of the Metedeconk River. The majority of the refuge is located north of the Baywood sub-neighborhood of Shore Acres, although a large portion also comprises most of the Mandalay Park sub-neighborhood. These are valuable natural lands of national significance.



Figure 32: Part of Forsythe Wildlife Refuge wetlands as seen from Holly Ave., Mandalay Park (Google Streetview)

HAVENS COVE

Havens Cove is preserved land that is part of the Ocean County Natural Lands Trust. It is located north of Baywood, abutting the residential streets, and adjacent to the Forsythe National Refuge. There is a small access footpath on Burlington Drive.



Figure 52: Entrance to Havens Cove on Burlington Drive (Google Streetview)



Figure 53: Detail from open space map around Baywood with Havens Cove identified to the north

OTHER NEIGHBORHOOD DESTINATIONS

The Shore Acres neighborhood has several other destinations, primarily of private commercial nature, in addition to the parks and conservation/preservation spaces listed above, although very limited. There are very few neighborhood businesses, in particular, that offer necessary services. Marinas and marine-related businesses are most prominent in Shore Acres, which is a testament to the importance of the



bayside location of the neighborhood. Marinas occupy a unique category bordering recreational and commercial.

In addition to the commercial destinations immediately within the borders of the Shore Acres sub-neighborhoods, there are many commercial, professional, and institutional destinations in the surrounding vicinity, particularly along Drum Point Road to the west. These include various restaurants, convenience stores, a pharmacy, a church, an elementary school, fire department, and parks, among other community and regional destinations.

The following neighborhood destinations in Shore Acres are listed by their location within a sub-neighborhood, but are not necessarily restricted to residents of that sub-neighborhood.

BAYWOOD

1. Drum Point Marina Repair & Service at 500 Drum Point Road
2. Cemetary at Birch Drive (north)
3. Professional Exteriors, Inc. at 513 Drum Point Road
4. Sand Dollar Crumb Cake at 515 Drum Point Road
5. Baywood Marina at 63 Pilot Drive



Figure 54

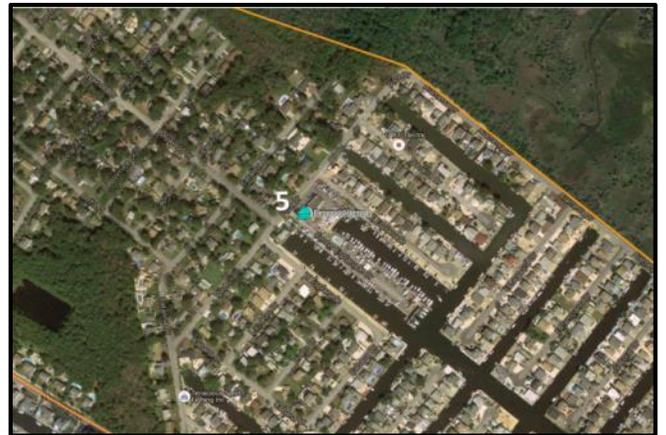


Figure 55

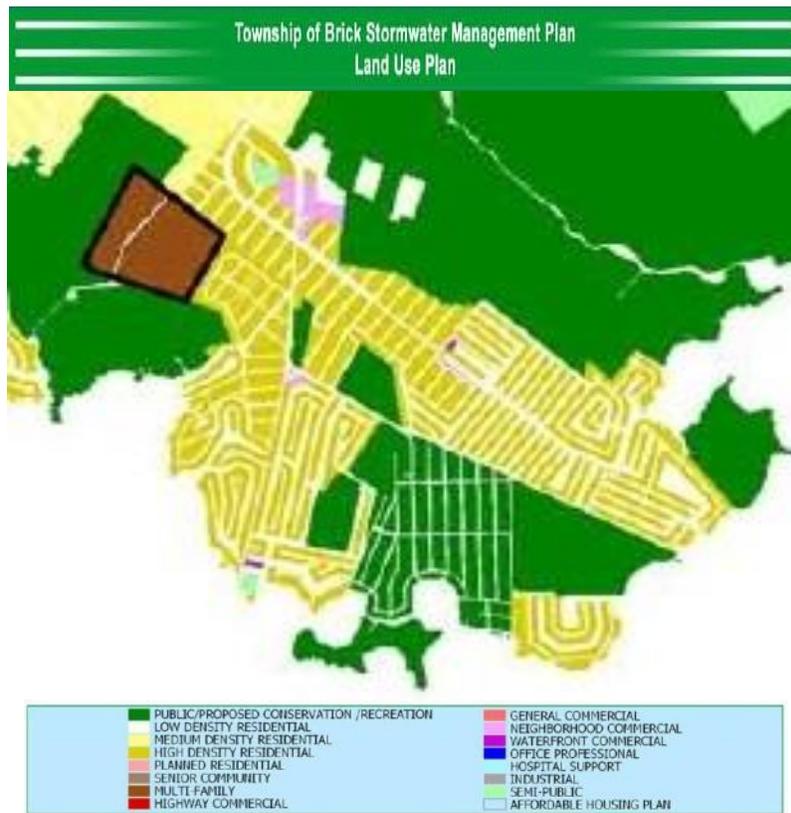
SHORE ACRES

1. Bayside Auto Services at 622 Drum Point Road
2. Shore Acres Club at 159 Shore Drive (restricted to members/neighborhood)
3. Shore Acres Yacht Club at 800 Drum Point Road (restricted to members/neighborhood)
4. Drum Point Marina at 770 Drum Point Road

ZONING ANALYSIS

The majority of the neighborhood falls within a High Density Residential area or Public/Proposed Conservation/Recreation areas. However, the developed part of Waterside Gardens is Multi-Family, and there are a few small areas with Semi-Public parcels, Waterfront Commercial, and Neighborhood Commercial properties, as shown in the Township Land Use Plan on Map 28 below.

Map 28: Land Use Plan for Shore Acres



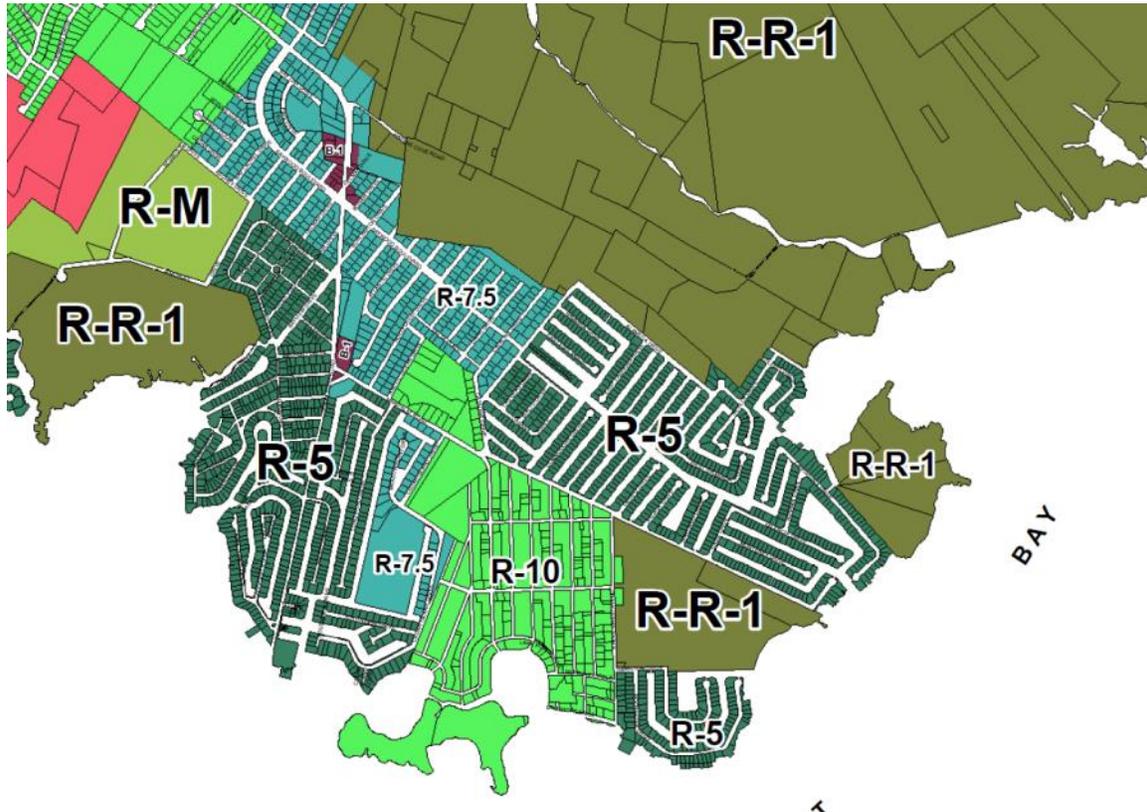
The Township Zoning Map breaks down the land uses further to better define what types of uses are permitted in each area. As shown on Map 29, there are six different zones in the Shore Acres neighborhood – three of which constitute “High Density Residential”. These zones are divided in a similar way to the distinct sub-neighborhoods, following nearly the same boundaries.

The R-5 and R-7.5 Residential Zones cover much of the developed area of the neighborhood and includes the majority of Baywood, Shore Acres, and Seawood Harbor. The other zones include R-10 (Single-Family Residential Zone), R-M (Multifamily Residential Zone), R-R-1 (Rural Residential Zone), and B-1 (Neighborhood Business Zone) and are all described further in this section, referring to Chapter 245: Land Use in the Township Code. R-5, R-7.5, and R-10 have the same permitted uses. This Neighborhood Plan



focuses on design standards and some suggested alterations to the uses and zoning map of the neighborhood.

Map 29: Shore Acres Zoning Map



B-1 (NEIGHBORHOOD BUSINESS ZONE)

The following are permitted uses in the B-1 Zone:

- A. Retail business and personal service establishments which are clearly of a neighborhood service character, such as the following:
 1. Stores selling groceries, meats, baked goods and other such food items.
 2. Drugstores and pharmaceutical stores.
 3. Hardware, household supply and electrical appliance stores.
 4. Package liquor stores.
 5. Stationery, tobacco and newspaper stores.
 6. Luncheonettes, restaurants and confectionery stores.



- 7. Barber- and beauty shops.
 - 8. Shoe repair shops.
 - 9. Tailor shops, dry-cleaning pickup stores and self-service laundries, provided that public sewerage facilities are available.
 - 10. Professional offices, banks and fiduciary institutions.
- B. Municipal buildings, volunteer first aid buildings and firehouses.
 - C. Public libraries.



Figure 33: Typical business property in Shore Acres B-1 Zone, Mandalay Road/Drum Point Road (Google Streetview)

Permitted accessory uses shall be accessory uses as defined in Part 1 of this chapter.

The following uses are defined as conditional uses and may be permitted subject to the requirements as set forth in Article XXXII, § 245-279 et seq.:

- A. Utility installations provided that the requirements of Article XXXII are met.
- B. Commercial recreation, as follows, provided that the requirements of § 245-286 are met.
 - 1. Game rooms and amusement centers.
- C. Places of assembly, parish houses, convents and cemeteries.
- D. Scattered-site affordable housing units.

Table 5: Schedule of Area, Yard and Building Requirements for Zone B-1 (Township of Brick §245 Attachment 5)

Zone		B-1	
Minimum Lot Size	Interior Lots	Area (sf)	10,000
		Width (ft)	100
		Depth (ft)	90
	Corner Lots	Area (sf)	12,500
		Width (ft)	100
		Depth (ft)	125
Minimum Required Yard Depth	Principal Building	Front Yard (ft)	30
		Side Yard, Each (ft)	10
		Aggregate Side (ft)	-
		Rear Yard (ft)	20
	Accessory	Side Yard (ft)	10
		Rear Yard (ft)	20
Maximum Lot Coverage by Building		30%*	
Maximum Building Height		Stories	2
		Eaves (ft)	-
		Feet	35
		Ridge (ft)	38.5
Minimum Floor/Building Area (square feet) 2 stories/1		1,000	



story	
Maximum Allowable Impervious Coverage	60%

*The maximum lot coverage shall refer only to that percentage of an affected lot which is suitable for building.

R-M (MULTIFAMILY RESIDENTIAL ZONE)

The following are permitted uses in the R-M Zone:

- A. Garden apartments and/or condominiums. Garden apartment developments may be permitted in the R-M Zone, provided that the following standards and conditions are complied with:
 - 1. The buildings shall be evenly distributed over the entire property, maintaining the maximum possible separation. No structure shall be so designed or so located in the development that the distance from any window of any room used for human habitation shall be less than 100 feet from the wall of any structure on the site. Such distance may be reduced to not less than 50 feet for one exposure where a room has two exposures or where the room is a bathroom or laundry or utility room or is used as a community or group meeting room or for a similar purpose. No separate freestanding building shall be closer than 100 feet to any other building on the site.
 - 2. No portion of any dwelling unit shall be lower than the outside finished grade. No depressed siting shall be permitted.
 - 3. The total number of dwelling units in the project shall not exceed an average of six units per acre of usable lot area.
 - 4. Not more than 25% of the gross area, if said area is ponds or lakes with a mean depth equal to or greater than four feet, is to be utilized for recreational or aesthetic purposes. Ponds and lakes of depths of less than four feet shall not be utilized in computation of recreation or aesthetic purposes.
- B. Municipal buildings, volunteer first aid buildings and firehouses.
- C. Public libraries.

The following are permitted as accessory uses:

- A. Private garage space for the storage of motor vehicles.
- B. A deck/patio enclosure as defined in § 245-3, provided it satisfies the outlined conditions.
- C. Accessory uses as defined in Part 1 of this chapter.

Conditional uses are permitted subject to the requirements set forth in the Township ordinance and include:

- A. Conversion of nonresidential areas in an existing multifamily residential development to inclusionary multifamily residential units.
- B. Places of assembly, parish houses, convents and cemeteries.



Table 6: Schedule of Area, Yard and Building Requirements for Zone R-M (Township of Brick §245 Attachment 5)

Zone			R-M	
Minimum Lot Size	Interior Lots	Area (sf)	25 acres	
		Width (ft)	350	
		Depth (ft)	200	
	Corner Lots	Area (sf)	-	
		Width (ft)	-	
		Depth (ft)	-	
Minimum Required Yard Depth	Principal Building	Front Yard (ft)	50	
		Side Yard, Each (ft)	50	
		Aggregate Side (ft)	-	
		Rear Yard (ft)	30	
	Accessory	Side Yard (ft)	30	
		Rear Yard (ft)	30	
Maximum Lot Coverage by Building			20%	
Maximum Building Height			Stories	-
			Eaves (ft)	26
			Feet	35
			Ridge (ft)	38.5
Minimum Floor/Building Area (square feet) 2 stories/1 story			-	
Maximum Allowable Impervious Coverage			65%	

R-R-1 (RURAL RESIDENTIAL ZONE)

The following are permitted uses in the R-R-1 Zone:

- A. Customary and conventional farming operations.
- B. One-family dwellings.
- C. Public and accredited private schools and institutions which may be conducted as a business.
- D. Municipal parks, playgrounds and other such municipally owned buildings and uses as are deemed appropriate and necessary by the Township Council of the Township of Brick.
- E. Municipal buildings, volunteer first aid buildings and firehouses.
- F. Public libraries.

The following are permitted as accessory uses:

- A. Customary farm buildings for the storage of products or equipment or for the processing of farm products and which are located on the same parcel as the principal use.
- B. Accessory uses as defined in Part 1 of this chapter of the Code of the Township of Brick.



Conditional uses are permitted subject to the requirements set forth in the Township ordinance and include:

- A. Public utility installation.
- B. Public and quasi-public philanthropic and charitable uses.
- C. Quasi-public buildings and recreation areas.
- D. Golf courses.
- E. Places of assembly, parish houses, convents and cemeteries.

Table 7: Schedule of Area, Yard and Building Requirements for Zone R-R-1 (Township of Brick §245 Attachment 5)

Zone		R-R-1	
Minimum Lot Size	Interior Lots	Area (sf)	40,000
		Width (ft)	150
		Depth (ft)	150
	Corner Lots	Area (sf)	40,000
		Width (ft)	150
		Depth (ft)	150
Minimum Required Yard Depth	Principal Building	Front Yard (ft)	50
		Side Yard, Each (ft)	50
		Aggregate Side (ft)	-
		Rear Yard (ft)	50
	Accessory	Side Yard (ft)	25
		Rear Yard (ft)	25
Maximum Lot Coverage by Building		25%	
Maximum Building Height		Stories	-
		Eaves (ft)	26
		Feet	-
		Ridge (ft)	-

R-10 (SINGLE-FAMILY RESIDENTIAL ZONE)

Permitted uses in the R-10 zone are the same as those zoned for the R-20 Residential zone (§245-112). The permitted uses are as follows:

- A. One-family dwellings
- B. Municipal parks, playgrounds, and other municipal buildings and uses as are deemed appropriate and established by the Township Council. The minimum land area shall not be less than 1/2 acre.
- C. Other public buildings of a governmental or cultural nature.
- D. Volunteer first aid buildings and firehouses.
- E. Public libraries.



The following are permitted as accessory uses (as per R-20 zone):

- A. Private garage space for the storage of motor vehicles.
- B. Accessory uses as defined in Part 1 of this chapter

Conditional uses are permitted subject to the requirements set forth in the Township ordinance and include:

- A. Scattered-site single-family detached affordable housing units.
- B. Public schools and private schools which are not conducted as a business shall be permitted as a conditional use, subject to the conditions and procedures in § 245-298.2.
- C. Places of assembly, parish houses, convents and cemeteries.

Table 8: Schedule of Area, Yard and Building Requirements for Zone R-10 (Township of Brick §245 Attachment 5)

Zone			R-10	
Minimum Lot Size	Interior Lots	Area (sf)	10,000	
		Width (ft)	90	
		Depth (ft)	100	
	Corner Lots	Area (sf)	10,500	
		Width (ft)	100	
		Depth (ft)	100	
Minimum Required Yard Depth	Principal Building	Front Yard (ft)	30	
		Side Yard, Each (ft)	6	
		Aggregate Side (ft)	20	
		Rear Yard (ft)	20	
	Accessory	Side Yard (ft)	5	
		Rear Yard (ft)	5	
Maximum Lot Coverage by Building			30%	
Maximum Building Height			Stories	-
			Eaves (ft)	26
			Feet	35
			Ridge (ft)	38.5

R-5 & R-7.5 (SINGLE-FAMILY RESIDENTIAL ZONES)

Permitted uses in the R-5 and R-7.5 zones are the same as those zoned for the R-20 Residential zone (§245-112). The permitted uses are as follows:

- A. One-family dwellings
- B. Municipal parks, playgrounds, and other municipal buildings and uses as are deemed appropriate and established by the Township Council. The minimum land area shall not be less than 1/2 acre.
- C. Other public buildings of a governmental or cultural nature.
- D. Volunteer first aid buildings and firehouses.
- E. Public libraries.



The following are permitted as accessory uses (as per R-20 zone):

- C. Private garage space for the storage of motor vehicles.
- D. Accessory uses as defined in Part 1 of this chapter

Conditional uses are permitted subject to the requirements set forth in the Township ordinance and include:

- A. Scattered-site single-family detached affordable housing units
- B. Public schools and private schools which are not conducted as a business
- C. Places of assembly, parish houses, convents and cemeteries
- D. Creation of beach cottage community conditional use for structural alteration or rebuilding of these residential buildings only on the following properties; Block 25, Lot 4, Block 26, Lot 4, and Block 36, Lots 12, 13, 24, and 28.

The bulk standards for both zones are very similar because they are high density, although the minimums for the R-5 zone are slightly less than those in the R-7.5 zone. The biggest difference is seen in the lot size, where it is 5,000 square feet in R-5, whereas it is 7,500 square feet in the R-7.5 zone. Additionally, the minimum width is 50 feet for R-5 and 75 feet for R-7.5 and the minimum depth is 75 feet for R-5 and 90 feet for R-7.5. The percent lot coverage is slightly more for the R-5 zone than the R-7.5 zone, but the maximum building heights are the same for both zones.

The present bulk standards for the R-5 and R-7.5 Zones are outlined in Table 5 below:

Table 9: Schedule of Area, Yard and Building Requirements for Zones R-5 & R-7.5 (Township of Brick §245 Attachment 5)

Zone		R-5	R-7.5	
Minimum Lot Size	Interior Lots	Area (sf)	5,000	
		Width (ft)	50	
		Depth (ft)	75	
	Corner Lots	Area (sf)	6,000	9,000
		Width (ft)	50	75
		Depth (ft)	75	90
Minimum Required Yard Depth	Principal Building	Front Yard (ft)	20	
		Side Yard, Each (ft)	5	
		Aggregate Side (ft)	12	
		Rear Yard (ft)	15	
	Accessory	Side Yard (ft)	5	
		Rear Yard (ft)	5	
Maximum Lot Coverage by Building		35%	30%	
Maximum Building Height	Stories	-	-	
	Eaves (ft)	26	26	
	Feet	35	35	
	Ridge (ft)	38.5	38.5	



Despite the above standards, lots vary in size, particularly in the older neighborhoods, which may have been established before the current zoning. Undersized lots (either in width or depth) cannot meet the setback requirements of the ordinance. These issues will only be exacerbated when a homeowner tries to raise their home to avoid the Post-Sandy flood insurance premiums.

When dealing with raising a home to meet the established Base Flood Elevations (“BFEs”), residents typically run into issues with building height, coverage and setbacks. Most towns affected by Sandy amended their zoning standards for height to allow homes to be elevated without height variances. However, on undersized lots the tendency was for applications for relief from yard requirements, mainly because the new construction was a larger home than what was on the lot pre-Sandy. In Toms River Township, the governing body responded to the trend of over-building by adopting an ordinance that established a maximum



Figure 34: Typical neighborhood residential on Paul Jones Dr., Shore Acres in the R-5 Zone (Google Streetview)

“Floor Area Ratio” for single family homes, which linked the maximum size of the home to the size of the lot and elevated any variance relief to that under NJSA 40:55D-70-d, thereby requiring five affirmative votes of the Board rather than a simple majority. Since that ordinance amendment the trend has reportedly subsided. While the lots in Shore Acres are generally larger than those in comparable neighborhoods in Ortley Beach and the Brick Barrier Island Neighborhoods, there were isolated examples of overbuilding which suggest that a similar approach to regulating FAR might be appropriate for the Brick mainland lagoon neighborhoods.

While some residents do not perceive the size of new homes as a Township issue, many residents and Township officials have criticized that overbuilding is changing the character of the neighborhoods and is out of scale with existing homes. In many locations, newly constructed homes are twice the height of older homes and are often much larger in area.



THE TOWNSHIP OF
BRICK, NJ



Figure 58: Examples of large-scale and raised new construction homes next to smaller original homes in Shore Acres (Google Streetview)



Figure 59: Examples of large-scale and raised new construction homes next to smaller original homes in Shore Acres (Google Streetview)



Figure 60: Example of a single property after Superstorm Sandy and rebuilt a couple of years later (Google Streetview)

Another issue that confronts property owners when elevating or reconstructing their homes is the conventional regulations regarding “yards” when the entrances to the homes are a story or more above grade, requiring additional stairs in mostly confined yard areas. Most zoning ordinances define a “yard” as a required open space on a lot between a lot line and building or structure, which is unoccupied and unobstructed from grade to sky. There are a variety of stairway designs to transition from the finished grade of an elevated or reconstructed house to the entrance doors, which are often more than 10 feet above the ground. It would require about 17 steps to cover a rise of 10 feet based on the diagram in Figure 35 below, which would require about 14 feet of run. Straight run of steps to the front door would then frequently require front yard variance relief.

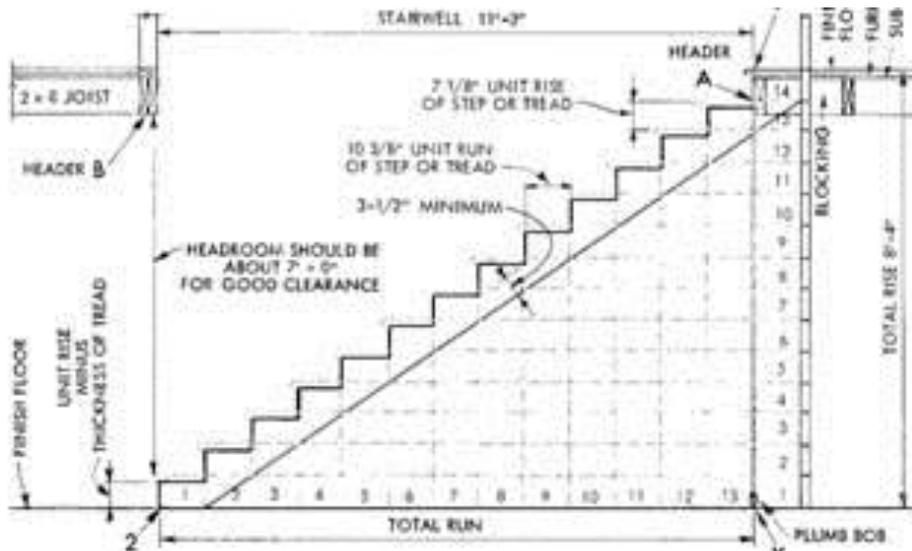


Figure 35: Typical riser and tread dimensions to cover a height of 8.33 feet.

Breaking up the run of entry stairways to elevated homes with one or more landings provides for a more attractive transition, but also requires more space, which often forces stairways into required yards and can generate applications for variance relief to the Zoning Board of Adjustment.



Figure 36: Examples of homes in Shore Acres with various types of entry stairways (Google Streetview)

To facilitate such landings, the Township amended its zoning regulations in §245-Part 2: Article XXXVIII A “Supplemental Land Use and Zoning Regulations in Special Flood Hazard Areas”. The purpose of which is to recognize limitations associated with federal and state construction and reconstruction requirements in special flood hazard areas, and encourage the restoration and reconstruction of existing neighborhoods within the Township of Brick in compliance with Chapter 196, special flood hazard areas, and the Uniform Construction Code. §245-330.4 “Permitted Yard Encroachments” permits:

- A. An access staircase and entry stoop, not to exceed 100 square feet in area, may project no further than 10 feet into a required front yard setback area. The previously referenced entry stoop may be covered or uncovered.
- B. An access staircase and entry stoop, not to exceed 50 square feet in area, may project no further than five feet into a required rear yard setback area. The previously referenced entry stoop may be covered or uncovered.
- C. An access staircase and entry stoop shall maintain a one-foot minimum side yard setback, provided that unobstructed access to the rear of the building is provided on a minimum of one side of the building.
- D. Elevated platforms for mechanical devices serving a building shall maintain a one-foot minimum side yard setback, provided that unobstructed access to the rear of the building is provided on a minimum of one side of the building.
- E. The permitted yard encroachments noted in this section are applicable to all existing and proposed buildings on any parcel of land that is designated to be in a special flood hazard area.

Additional consideration for dealing with transitioning to elevated entrances similar to the provisions made in the current ordinance for handicapped ramps could help to simplify the recovery process for property owners.



The ordinance also provides requirements for “Façade Treatments for Enclosed Spaces” (§245-330.5), as follows:

- A. A building façade with an enclosed ground level must be treated to conceal the block face.
- B. Ground level areas that are below the base flood elevation, enclosed or exposed, are uninhabitable spaces.
- C. An exposed façade area shall be screened from public view. A minimum of 30% of an exposed façade area shall be screened with landscaping, siding, venire, faux window treatments, doors, etc., to visually break up the solid wall.

These changes in the ordinance could work to help homeowners who are trying to raise their home. However, the Design Standards section of this Plan offers additional bulk standard recommendations for consideration by the Township as well as design guidelines.



RECOMMENDATIONS

The initial assessment for the Neighborhood Plan involved site visits of the area with local representatives, gathering feedback from residents, and an analysis of the information from investigations, census data, and historic documents assembled by Township Planners and consultants. From this baseline information, the following ideas emerged:

CONNECTIVITY AND STREETScape RECOMMENDATIONS

As demonstrated in previous sections of this Plan, there is a major lack of public pedestrian infrastructure within and between the sub-neighborhoods of Shore Acres, as well as any connectivity to other neighborhoods in the region. Although there has clearly been some effort with private developers (i.e. Waterside Gardens) and newer developments to implement sidewalks, they are few and far between and often found in subpar condition.

The Township has recently demonstrated a commitment to apply for grant funding to improve circulation for increased bicycle access throughout Brick. The bicycle path along St. Lawrence Boulevard between Baywood and Seawood Harbor has been completed and is one small step towards better connectivity. However, overall this has been slow to manifest and bicycle infrastructure and circulation is still at a minimum throughout the neighborhood and the Township.

Additionally, intra- and inter-neighborhood public transportation options are non-existent. There are several public bus routes which run along major corridors, such as Brick Boulevard, but do not reach the majority of populations in isolated, but dense neighborhoods, such as Shore Acres.

Based upon the analysis of existing conditions the following could be further investigated:

1. The Township should continue to pursue grants for pedestrian and bicycle safety and mobility through all sources, particularly the New Jersey State Department of Transportation (NJDOT) and federal grants.
2. The Township should coordinate pedestrian and bicycle mobility enhancements with improvements made by the County of Ocean on County roads. Opportunities include:
 - a. Enhancing berms along the road with street trees where space permits;
 - b. Extending or connecting existing sidewalks to serve all high traffic areas;
 - c. Coordinating bicycle routes along streets that improve safety and connectivity for bicyclists;
 - d. Adding additional crosswalks to facilitate pedestrian crossing, with priority for pedestrians, and particularly in areas not currently served by crosswalks or traffic lights, that have heavy seasonal traffic, and that have desirable amenities (i.e. public parks, marinas, beaches, restaurants, etc.).



3. Observe pedestrian and cyclist treatments in neighboring towns where mobility is a focus in order to get a better idea of the potential to implement such treatments in this neighborhood. Explore the potential for traffic calming methods to improve roadway safety and increase pedestrian and cyclist mobility options. As a largely residential and recreational neighborhood, it is important that the roadways serve these uses. A traffic and speed study should be conducted, with a focus on Drum Point Road as the primary connector road and access to public space.
4. Develop a comprehensive network of sidewalks and crosswalks throughout the neighborhood that connect and, particularly, that allow safe and efficient pedestrian traffic along Drum Point Road and to major points of interest.
5. Map 30 shows possible sidewalk connections in red that should be priority areas when new sidewalks are installed, with general indication to sides of the street, although a study should be conducted to determine proper location. In the process of making sidewalk and crosswalk recommendations, consideration was given to: the probable traffic level of vehicles and pedestrians; existing sidewalks and crosswalks for potential extensions; difficult intersections; creating the shortest distance between points and fewest road crossings; focusing growth in areas least compromised by the effects of climate change; and moving pedestrians to various points of interest, which are also indicated on the map. Maps 26 through 29 show the neighborhoods in detail.



THE TOWNSHIP OF
BRICK, NJ

Map 30: Shore Acres neighborhood map with existing (white) and recommended (red) sidewalks, and recommended crosswalks (black), and points of interest





THE TOWNSHIP OF
BRICK, NJ

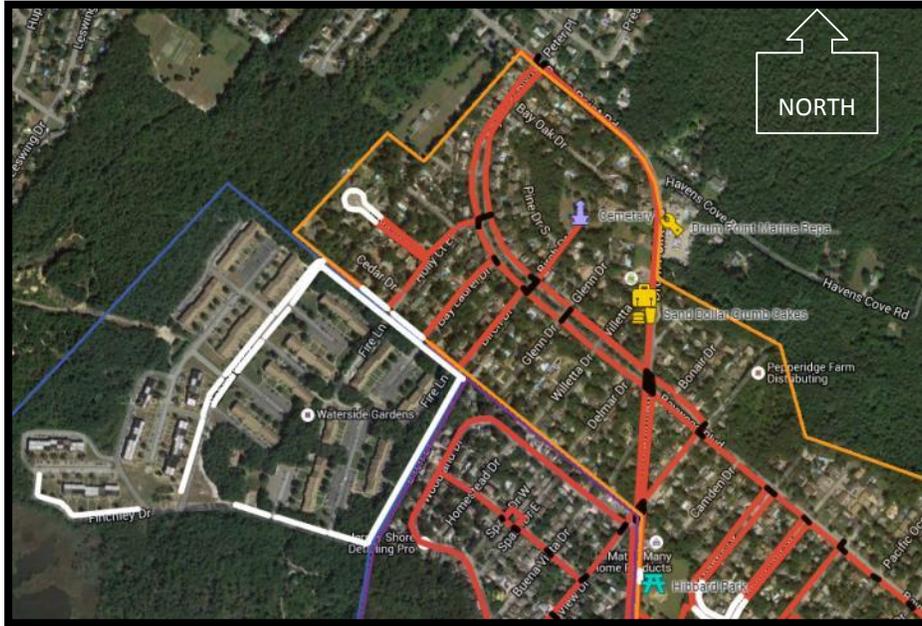
Map 31: Detail of Shore Acres sub-neighborhood map with existing (white) and recommended (red) sidewalks, and recommended crosswalks (black)





THE TOWNSHIP OF
BRICK, NJ

Map 32: Detail of Waterside Gardens and Baywood sub-neighborhoods with existing (white) and recommended (red) sidewalks, and recommended crosswalks (black)



Map 33: Detail of central Baywood sub-neighborhood with existing (white) and recommended (red) sidewalks and recommended crosswalks (black)





THE TOWNSHIP OF
BRICK, NJ

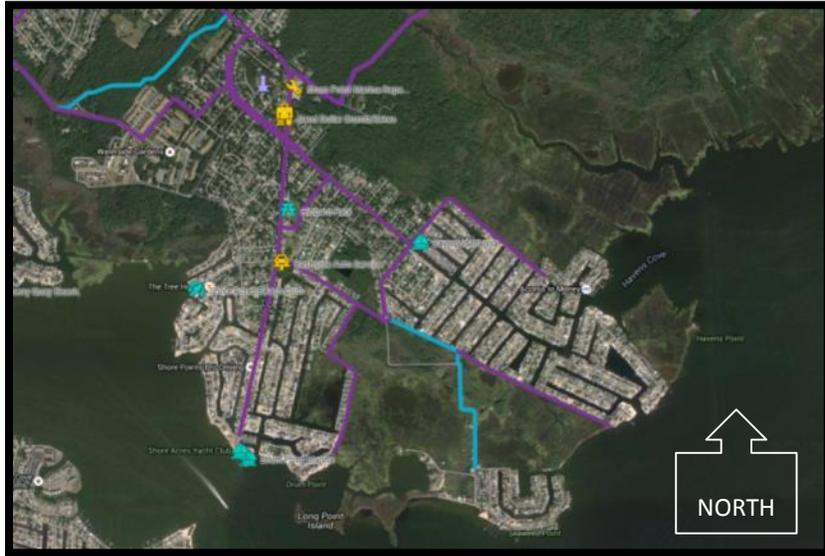
Map 34: Detail of southern Baywood and Mandalay Park sub-neighborhoods with existing (white) and recommended (red) sidewalks, and recommended crosswalks (black)



6. Crosswalks should be placed at minimum at all east to west crossings on Drum Point Road, and other major roads and connections between neighborhoods, parks, and destinations, and at least every half-mile (see Maps 25 through 29 above).
7. Designate “Bicycle Friendly” routes within the Shore Acres neighborhood and continue to build a network of bicycle lanes, shared lanes, and paths between the various neighborhoods and from the Bay to the beaches and to major destinations. Many of the primary and secondary roads in Shore Acres are slow and wide enough to accommodate sidewalks and/or shared bicycle lanes.



Map 35: Shore Acres neighborhood with existing bicycle paths (blue) and recommended (shared) lanes or paths (purple)



We envision a much larger, comprehensive network of bicycle lanes and paths throughout the Township and County in the future that might develop to look similar to that which is pictured in Map 36 below. However, a further study must be conducted to determine precisely the needs and design of a bicycle network. These recommendations have been made based on mapping of existing bicycle lanes, most heavily trafficked roads, destinations, and Master Plan goals.



THE TOWNSHIP OF
BRICK, NJ

Map 36: Bicycle Circulation Plan connecting four Brick neighborhoods with existing bicycle paths (blue) and recommended (shared) lanes or paths (purple)





8. At minimum, a Circulation Plan with a wayfinding system should be further developed and implemented for bicyclists and pedestrians and educational outreach targeted toward children to reduce the risk of accidents.
9. Explore the possibility of extending a bus line into or near Shore Acres and Cherry Quay along Drum Point Road. In coordination with Ocean County Department of Transportation (Ocean Ride), a neighborhood bus stop could be executed. According to the 2010-2014 U.S. Census ACS data, 33.2% of 25 to 44 year-olds and 41.8% of 45 to 54 year-old workers in Brick Township use public transportation. This is an important demographic of workers to cater to due to the size of the population, although younger populations should be encouraged to use public transportation and curb individual automobile use, as well.
10. Sidewalk and curb treatments should be standardized with one pattern for the entire neighborhood, whether a Township standard or unique for the neighborhood, that can be modified to fit various applications. For example, slight variations could be used for smaller and broader crossing streets.
11. Where feasible, raise the street levels in areas that are most prone to flooding and especially those that serve as coastal evacuation routes for sub-neighborhoods, including:
 - a. Seawood Harbor – Rochester Drive; Toronto Drive
 - b. Mandalay Park – Knoll Crest Avenue/Nokomis Drive/Holly Avenue/Pilot Drive/Mandalay Road
 - c. Shore Acres – Drum Point Road (identified evacuation route); Vanard Drive; Shore Drive; Waterway Court/Adair Drive
 - d. Baywood – St. Lawrence Boulevard to Cadiz Drive; Cadiz Drive; Valencia Drive; Alhama Drive; Cartagena Drive; Toledo Drive; Seville Drive; East Granada Drive; West Granada Drive; Alameda Drive to Pilot Drive.
12. Upgrade storm drains along streets to allow more efficient outflow of flood water without “reverse flooding” (water entering through storm drains), to allow emergency access/evacuation.
 - a. Flooding was noted as a severe issue in Seawood Harbor and Mandalay Park (Rochester Drive, Toronto Drive, and Knoll Crest Avenue), according to residents, and that the neighborhoods are often cut off from major roads and emergency services during regular high tide events.
13. Explore the possibility of (re)connecting the street grid between Shore Acres and Baywood, if the opportunity arises. Alternatively, consider public right-of-ways for pedestrian paths between the streets. This will allow a higher density of development without adverse effect on traffic on the two thru-streets, and will increase accessibility to various parts of the neighborhood.



Figure 37: Possible street connections (red lines)

SIGNAGE

IDENTIFICATION SIGNAGE

Overall, the Shore Acres neighborhood has an identity as a relaxed year-round and summer coastal lagoon community surrounded by the nature of the Barnegat Bay and wetlands. Unlike some other neighborhoods in the Township, it is relatively easy to see the distinctions when one is in Shore Acres versus other neighborhoods in Brick Township. The sub-neighborhoods are separated physically by various types of divisions, such as wetlands and main traffic corridors, and each has their own monument sign at a minimum of one location.

However, Shore Acres as a whole (including all sub-neighborhoods) does not have an identity that is recognizable as a brand. The individual signage for the separate sub-neighborhoods simultaneously identify their location, but also create misperception about the connectivity of the neighborhood and whether one has left Shore Acres altogether.

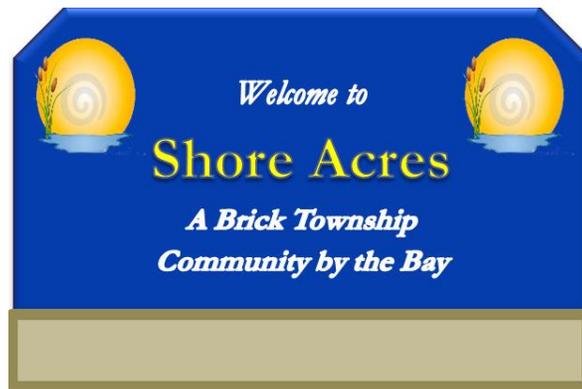
Despite the physical divisions, lack of connectivity, and a handful of signage for the sub-neighborhoods, they are still mostly indistinguishable from one another in built form. This can be viewed as an advantage which can be exploited to make the neighborhood appear more cohesive, if an effort is made to coordinate the overall branding and signage in the neighborhood. This Neighborhood Plan recommends that there be some consistency in the identification message.

A common design theme and graphics for signage should be chosen that also reflects the local character of the neighborhood. A blend of existing Township and neighborhood color schemes, along with the consistent use of a font type and a recognizable, uniform name, discreetly shows relationships and

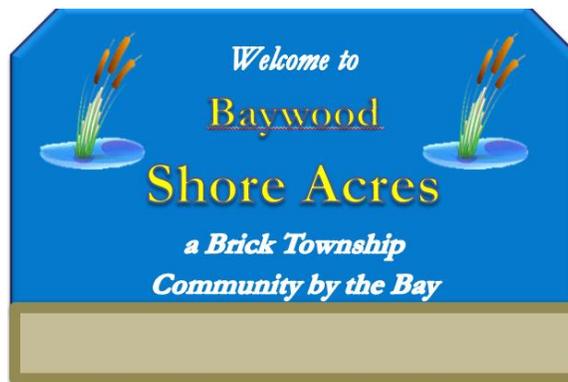


hierarchy among places. As one of the most prominent and familiar sub-neighborhoods in this Plan area, “Shore Acres” could continue to be used to refer to the entirety of the neighborhood. This name identifies the neighborhood by two of its most important attributes, the “Shore” and “Acres” (equating to open space), and is unique and succinct.

Below is a graphic example of unified branding message for new identification and gateway signage, blending typical colors found in Brick Township and within Shore Acres.



Additional signage could be altered slightly for each sub-neighborhood, but might appear like the following:



WAYFINDING SIGNAGE

Wayfinding signage was also identified as a way to navigate to different sub-neighborhoods, businesses, parks, and other destinations, which currently proves to be challenging. One of the challenges is the successive dead-end streets in the lagoon communities. A system of pedestrian-scale wayfinding signage should be coordinated with the gateway signage referenced above in order to reinforce the cohesiveness of the community, as well as to help residents, visitors, and customers find existing and future services, especially during the summer tourism season. Wayfinding signage could also be coordinated on Township-wide level. An example of such a system is shown below in Figure 38 and Map 37.

The following points of interest should be linked by wayfinding signage:

- Sub-Neighborhoods
- Parks
- Beaches
- Business Districts
- Marinas
- Trail Heads
- Other Brick Neighborhoods



Figure 38: (Left) Wayfinding signage is used in downtown Toms River to direct motorists to primary destinations. (Right) Nantucket, MA (June 2015): Image shows a system of wayfinding using plaques purchased by businesses mounted into slots on a standard that matches the antique style of the pedestrian lighting on Main Street and points in the direction of the business.

Signage that clearly identifies destinations should be provided in visible and convenient areas throughout the neighborhood at a distance and orientation which is readable for both pedestrians and vehicles from the road. These would preferably be located at major intersections, crossroads, and destinations. Finally, a color or theme-coded system relating each to a subcategory of places allows for quick and easy dissemination of place descriptors and directions. For example:

- Yellow for sub-neighborhoods
- Green for parks/open space
- Blue for water-related uses
- Red for businesses
- Brown for government/municipal services and buildings

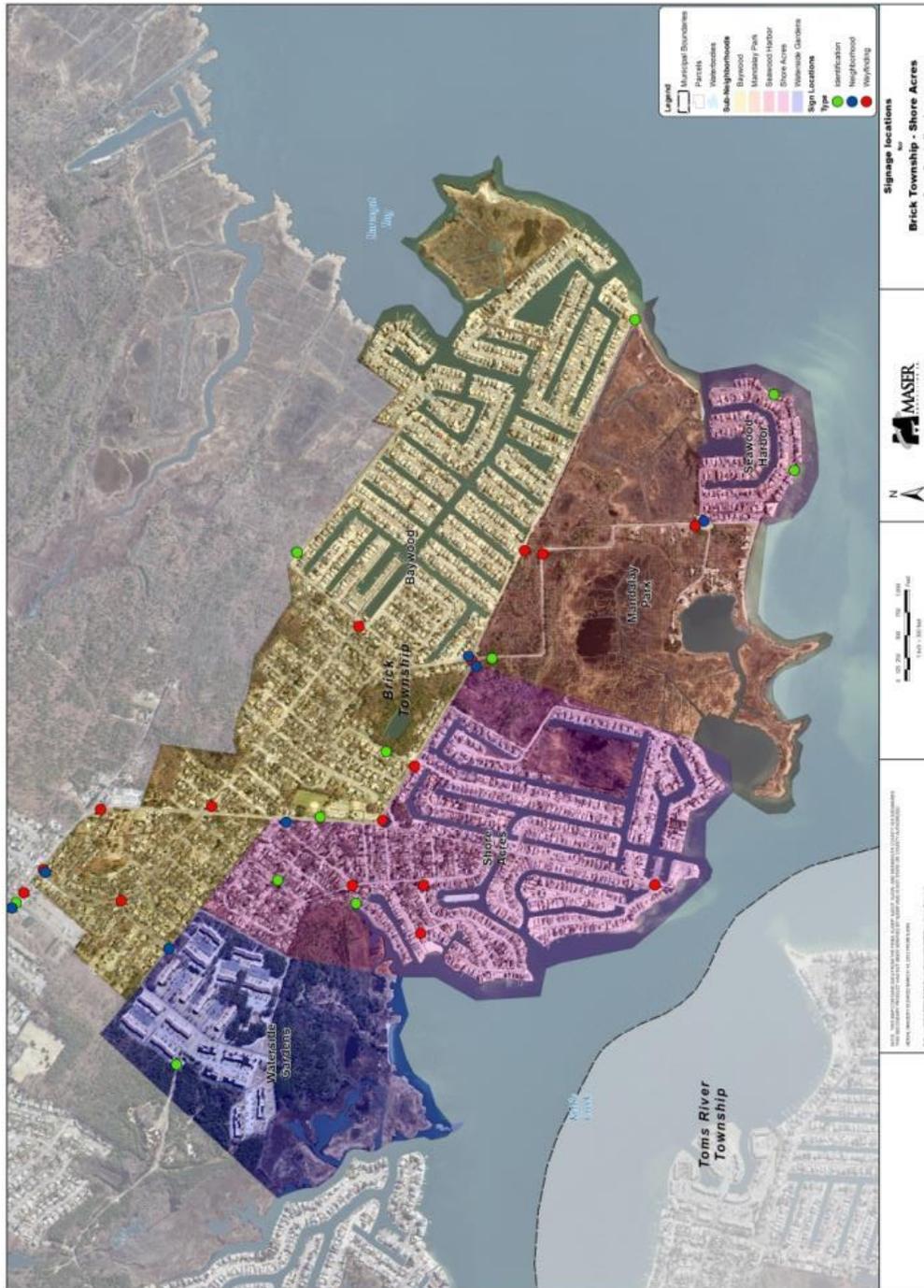
Finally, informational signage could be provided for the neighborhood, landmarks, natural conservation areas, and parks with various facts about local history, important dates, names, ecology, and contact information.



THE TOWNSHIP OF
BRICK, NJ

Map 37: Signage should be considered, replaced, or maintained in the following locations of the recommend types

*(Red refers to Wayfinding signage; Blue refers to neighborhood monument signs; Green refers to identification or information signs, which would be placed at parks, trailheads, and other relevant public spaces)





ZONING RECOMMENDATIONS

Upon consideration of the existing zoning throughout the neighborhood, along with the physical challenges currently faced by the community and future predictions of storms and sea level rise, the following recommendations have been made to maintain and improve the built quality of the neighborhood:

BULK RECOMMENDATIONS

After reviewing the bulk standards, this Neighborhood Plan recommends the following be considered by the Township for the Shore Acres neighborhood:

FLEXIBLE FRONT YARD SETBACKS

Homes are presently required to have a 20 foot front yard and 15 foot rear yard in the R-5 zone, while the R-7.5 zone requires a 25 foot front yard and 15 foot rear yard. However, lot depth varies within the two neighborhood zones, with some well over 200 feet in depth and others as small as 50 feet. Therefore, a lot that is only 50 feet deep cannot meet the rear or front yard setback requirement. In fact, a lot that is 50 feet deep would only be able to construct a house that is 15 feet deep, which is impractical. Many properties do not meet the required yards, which is perhaps a pre-existing condition, allowing the homes to be larger. Some homes and their garages are less than 20 feet from the streetline. Additionally, there are many odd- or triangular-shaped lots which prevent the same kind of build-out. Coupled with the need to elevate homes and add exterior staircases for entrances, the required yard depths can pose significant limitations on density, although the Township has made some strides towards rectifying this issue.

To this end, the Township should amend the front yard setback reducing the minimum requirement for the front yard from 20 feet to the prevailing front setback but in any event the front setback shall be a minimum of two feet, to provide homeowners more flexibility.

FLEXIBLE SIDE YARD SETBACKS

Lot widths vary greatly within Shore Acres, with the smallest lots in the Shore Acres sub-neighborhood, which is the oldest and most dense neighborhood. Presently, the code requires one yard to be 5 feet wide and with the combined yards not less than 12 feet in the R-5 zone. In the R-7.5 zone, one side yard is required to be at least 6 feet and have combined side yards of at least 15 feet. A lot that is 40 feet in width would be restricted to a home that is only 28 feet wide in the R-5 zone and 25 feet wide in the R-7.5 zone, which is not practical or desired in today's residential designs.

Two short-term options are presented for the Township’s consideration. The first is reducing the side yard setbacks for lots with a width less than 40 feet. A sliding scale could be provided to offer homeowners looking to rebuild with variance-free options. Lots between 31 and 39.9 feet (in width) could be permitted side yard setbacks of 4 feet each, for a total of 8 feet. Lots between 20 and 30.9 feet, if any, could be permitted a side yard setback of 0 and 3 feet, for a total of 3 feet.

The second option for the Township’s consideration is a development concept called “zero-lot line”. A zero-lot line home essentially places the home on one side yard line, allowing for a generous side yard on the other side that functions as the home’s outdoor space in conjunction with the rear yard. On lots narrower than 40 feet, the zero-lot line concept provides one useable side yard instead of two unutilized side yards. As shown in Figure 39 the homes are located along one property line. This alternative would provide more flexibility to owners of undersized lots (less than 40 feet wide) and produce usable side yards instead of useless slivers.

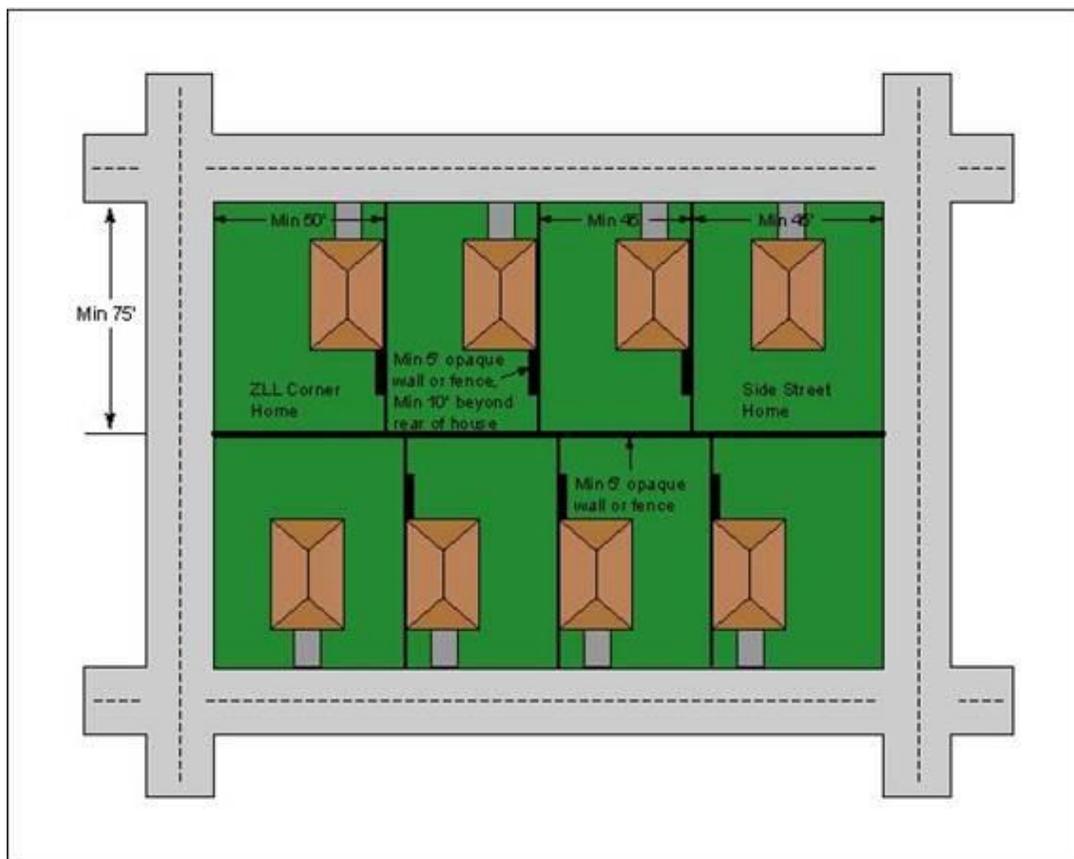


Figure 39: Illustration of Zero-Lot Line Homes

For both zones, the potential amendments to the side yard parameters could include:



Table 10: Amendments to Side Yard Setbacks

Lot Width (ft)	One Side Yard (ft)	Combined Side Yards (Both) (ft)
20 – 30.9 feet	0 and 5	5
31 – 39.9 feet	0 and 8	8
40 – 49.9 feet	0 and 12	12
50 – 50.9 feet	0 and 16	16

Lots that are 60 feet and greater in width could maintain the existing side yard setback requirements with two yards, so that larger homes do not overpower adjacent smaller lots.

FLEXIBLE PRINCIPAL BUILDING COVERAGE

There are some lots within the neighborhood, particularly in Shore Acres, which, when applying the 35% maximum principal building coverage to the lot, significantly restricts the footprint of the home. Existing on-the-ground conditions reveal that undersized lots contain homes that cover much more than 35% of the lot area.

It is recommended that the Township consider allowing lots under a certain size (perhaps lots less than 3,000 square feet) to have a larger maximum principal building coverage, for example, 50% or 55%. This would allow a lot that is 30 feet by 50 feet to construct a home that has a first floor with 750 or 825 square feet.

On the other hand, many homes that occupy larger lots or double lots are oversized and sometimes have a principal building coverage greater than 35% or even greater than 50%. This kind of overbuilding on lots that already meet the zoning requirements should be restricted to prevent unwanted growth and reduce impervious surfaces.

In addition to some of the strides that have already been taken to assist homeowners who are rebuilding, the Township has identified the need to update and amend its Land Use and Development Regulations to address many of these issues and is currently developing recommendations for zoning amendments as one of its Phase II Post Sandy Recovery Planning projects.

ZONING MAP CHANGES

It is recommended that the Township investigate the potential for changes to existing zoning areas, as shown on the Zoning Map,



Map 38 (see Map 29 for comparison). While the R-5 zone involves more undersized lots, consideration of whether a substantial number of them are undeveloped could lead to a possible downzoning to R-7.5 bulk standards or greater to prevent overbuilding and to allow larger yards that will help to reduce impervious surfaces and create greater area for water retention. Lots will be slightly larger (7,500 square feet rather than 5,000 square feet) and reduce the number of properties impacted by flooding. Many of the properties already occupy more than one lot. This approach might trigger applications for lot area variances, but we think its exploration has merit.

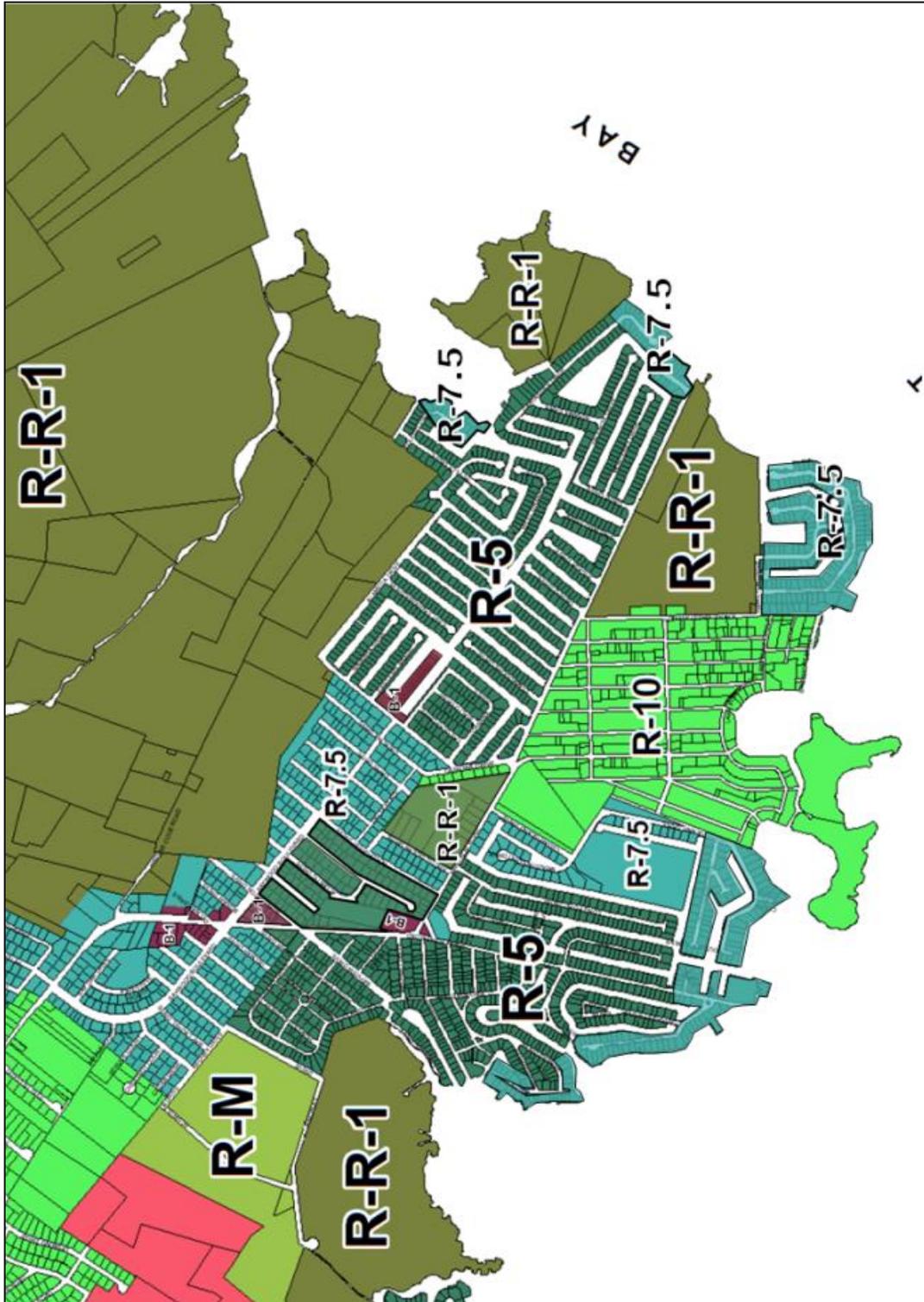
The upzoning of the area around Hibbard Park from R-7.5 to R-5 will maintain the overall neighborhood character, while allowing for marginally more dense development in an area that has public amenities, a walkable street grid, and neighborhood businesses, in addition to being slightly more elevated. Additional parcels along Drum Point Road in proximity to the park should be considered for Neighborhood Commercial (B-1) zoning, as well as rezoning of marinas, which might include shops and restaurants.

Finally, areas around catch basins, such as the one behind Mandalay Road and Arctic Ocean Drive, should be considered for downzoning to the Rural Residential (R-R-1) Zone in order to allow for more absorption of flood water in the basin without affecting private properties and to provide additional public open space with access to the water.



THE TOWNSHIP OF
BRICK, NJ

Map 38: Shore Acres Zoning Map with Recommended Changes





FUTURE NEIGHBORHOOD GROWTH

Consistent with the recommended zoning map changes, bulk recommendations, and predicted impacts of flooding, all future neighborhood growth should be concentrated accordingly.

The R-5, R-7.5, and R-M zones will continue to have the densest residential properties; however, growth should be emphasized in areas of higher elevation away from the coastline to the northwest of Shore Acres. Higher density growth should be encouraged particularly in areas with a primary traffic corridor with a street grid, areas around parks, and areas surrounding commercial zones. This density should promote better accessibility to services and recreation, while removing the largest populations from areas that may sustain the most environmental damage. Similarly, lower density development and conservation areas that can better absorb floodwater should be encouraged along the Barnegat Bay and Kettle Creek coastal areas.

Commercial properties that are not marine-related should be emphasized in the higher density inland areas to better serve the larger population. Currently, businesses occupying B-1 zoned lots in Shore Acres generally do not comply with the permitted uses of that zone. Additional neighborhood commercial businesses that fall within the permitted uses should be encouraged in the B-1 Zones to make the community more inclusive and mixed-use.

DESIGN GUIDELINES

Providing greater resiliency against flooding, storm damage, and demographic shifts in the future greatly depends on the development and design guidelines and planning practices that occur during the post-Sandy recovery process. In particular, the elevation of existing residential buildings as a result of recovery grant programs, as well as the elevation of new construction based on compliance with Flood Damage Prevention, will be significant factors. The following design guidelines are intended to integrate elevated buildings with existing non-elevated residences to soften the visual impact on the neighborhood. Additionally, there are numerous opportunities to introduce new landscaping and street treatments in certain areas that permit more pervious surfaces and stormwater management.

ELEVATION OF BUILDINGS

The raising of residential homes is usually accomplished by either the use pilings or by increasing the height of foundations and crawl spaces by adding courses of masonry block. To the extent that property owners determine to increase the elevation of the lowest habitable floor to the “Design Base Flood Elevation” in the Flood Damage Prevention Ordinance (usually the “Advisory” or “Preliminary” Base Flood Elevation plus freeboard), the height difference between the grade and the first floor can be considerable, causing a design challenge to access the elevated building. Many residents are choosing to upgrade and raise their homes, although there is somewhat of a consensus that new homes are too large for the neighborhood and that the height makes getting inside difficult for emergency purposes and for

elderly or disabled persons. However, residents were not as accepting of having the designs of their homes regulated.



Depending on the size of the lot and the density of the building pattern in the neighborhood, the solutions to the challenge of providing access varies from a straight run of stairs to a progression of porches or landings (see [Figure 66](#)).



Figure 66: Illustrations of various ways to design access to elevated first living floors of residential buildings, some which frame the piles and others that partially or completely "skirt" or wrap the piles for garage/storage space or use raised foundations.

As stated in the 2015 Hazard Mitigation Plan Element:

"Identifying strategies to support additional home elevations is a key opportunity for improved safety and resilience. However new home elevations also come with additional potential risks that must be planned for



and addressed. Ensuring that spaces below elevated homes are used only as storage or garages, and not livable space, is essential to protecting public safety. If illegally converted into bedrooms or living space, these low areas become extremely dangerous during flood events. Newly elevated homes can also sometimes negatively impact the views and other aesthetic considerations for neighboring properties. Design and regulatory measures are currently in place and other controls are being explored that can help maximize the flood safety benefits of home elevations while finding creative solutions that reduce any negative impacts for neighboring properties.”¹³

Additionally, elevated buildings can pose a hindrance and hazard for disabled and elderly persons, as well as emergency services attempting to access persons in the house. For most physically impaired persons, the design guidelines and height requirements limit access almost entirely. Elevators from the ground floor to the first elevated floor, in addition to stairs, are ideal, although restrictive for many due to the high cost. Ramps are also ideal, but generally impractical for most houses that are being lifted to the maximum height, due to the space that they require, where most lots are quite small. However, for outdoor stairways it is recommended that they are not a straight run, but, rather, provide landings and, preferably, with turns in the stairway to allow for resting spots.

The desirability of requiring such design standards as concealing exposed piles with framing or skirting, avoiding straight run stairs without a landing every so many steps will need to be balanced with the eligible costs of elevating homes covered under the various disaster relief programs so that they do not become a financial burden on property owners. If such aesthetic improvements are not covered by insurance or relief funding, the Township would need to seek other grant assistance to supplement the costs.

LANDSCAPING

Another approach to softening the visual impact of newly elevated buildings is to mask the exposed areas around the piles with landscaping. However, the present conditions caused by the elevation of housing and smaller setbacks will require that the installed landscaping not only be able to survive within the seashore environment, but may need to be compact and columnar in nature when used with narrow lot configurations. This may restrict the plant palette that can be used.

It is also recommended that local plant species and xeriscaping techniques (landscaping that reduces or eliminates the need for supplemental water) be used to reduce water and fertilizer needs. Plant beds should be tolerant to the wind, sea salt, water, and overall variable conditions of the Barnegat Bay and estuaries, while also being able to aid in absorption of additional rain or flood waters.

The following are some selections that may work well, but any planting directly in line of prevailing winds will struggle.

¹³ *Hazard Mitigation Plan Element (Draft)*. Page 27. Township of Brick. Prepared by TetraTech & Maser Consulting, P.A. November, 2015.



Table 11: Plant Species for Waterfront Neighborhoods

Plant Type	Species
Small Trees	Red Maple (<i>Acer Rubrum</i>)
	Allegheny service-berry (<i>Amelanchier laevis</i>)
	Pawpaw (<i>Asimina triloba</i>)
	Black Cherry (<i>Prunus serotina</i>)
	American mountain ash (<i>Sorbus americana</i>)
Large Shrubs	Indigo bush (<i>Amorpha fruticosa</i>)
	Coastal sweet pepperbush (<i>Clethra alnifolia</i>)
	Bigleaf Hydrangea (<i>Hydrangea macrophylla</i>)
	Northern bayberry (<i>Morella pensylvanica</i>)
	Beach Plum (<i>Prunus maritima</i>)
Evergreens (for screening)	Atlantic White Cedar (<i>Chamaecyparis thyoides</i>)
	American Holly (<i>Ilex opaca</i>)
	Eastern Red Cedar (<i>Juniperus virginiana</i>)
Perennials (for decorative filler planting)	Yarrow (<i>Achillea</i>)
	Coreopsis
	Daylily (<i>Hemerocallis</i>)
	Lavender (<i>Lavandula</i>)
	Foxglove (<i>Digitalis</i>)
	Summer Phlox (<i>Phlox paniculata</i>)
Ornamental Grasses (for filler and accent)	Stoncrop (<i>Sedum spurium</i>)
	Fescue Grass (<i>Festuca</i>)
	Panicum (Switch Grass)
	Pennisetum (Fountain Grass)

PUBLIC SPACES & STREETScape DESIGN

The plant materials recommended above can also be used in plantings within public spaces such as road medians, tree lawns (the space between the curb and sidewalk or between the sidewalk and a parking lot or front property line), passive park spaces, and similar spaces that are identified as often being overgrown with weeds and unsightly in appearance.

Bioswales are a good design option that can be used in public spaces, especially along streets to function similarly to a rain garden, which absorb water from heavy rains and flooding, while also removing pollution and silt from surface runoff water, providing a buffer from the street, and enhancing the streetscape visually. Bioswales are built with gently sloping sides that are concave toward an area of drainage and gravel and the slopes are vegetated with flood-tolerant plants.



Figure 67: Example of a streetside bioswale (www.kwalliance.org)

The use of the softer palette of plantings such as ornamental grasses and perennials, combined with the use of stone groundcover can help to enhance the coastal theme for these spaces in the sub-neighborhoods and could be relatively easily maintained by individual neighborhood associations or the Township. Private properties could also be encouraged to use similar groundcover, rather than traditional grass lawns. The images that follow are representations of various designs using these plant materials.



Figure 68: Grasses and perennials used with gravel to provide color and definition to public spaces.



THE TOWNSHIP OF
BRICK, NJ



Figure 69: Grasses and groundcovers can be used to soften roadside spaces and add visual interest to the public spaces such as medians.



Figure 70: Where space permits, perennials and ornamental grasses can be combined with conventional shade trees and shrubs to enhance commercial streetscapes.

GENERAL APPEARANCE FROM STREET

Within the residential blocks, every effort should be made to provide designs for the newly elevated homes that will work within the context of the existing lot lines and setbacks to enhance the overall character of the neighborhood. A number of visual ideas are provided below to act as representative examples of what can be done. There have been some examples constructed within the neighborhood as part of the Sandy recovery which embody these ideas.



Figure 71: Upper set of illustrations shows potential streetscape treatment of narrow and deep lots using trees with vase shaped or columnar habit, while lower pair shows wider lots with street trees of spreading habit in larger spaces and narrower habit in more confined spaces between houses. Homes are shown as representative for the size of lots as elevated for flood resiliency.

Residents worry that properties on small lots will look overcrowded and unappealing. Simultaneously, many small homes on small lots are directly adjacent to new homes nearly three times their size. The Township should look at various models that work well in other municipalities and provide guidelines that are appropriate for each neighborhood. Allowing for some variations in the designs for proper entrances and yard space, but maintaining some setbacks and some of the current bulk standards should prevent overcrowding while providing the necessary space to adapt to new regulations.

ABANDONED BUILDINGS AND EMPTY LOTS

Following Superstorm Sandy, many property owners who endured major damage to their homes and/or could not afford the pursuant repairs and insurance were forced to leave their properties behind or have been unable to make improvements. Several years later, there are some properties with homes that remain abandoned, have not been demolished and continue to deteriorate, or that sit empty and have not been rebuilt. These properties rest in a state of limbo because the property owners will not or cannot take responsibility and the Township has not established the necessary conduits for acquiring or selling such properties nor holding the owners accountable. Long-term abandoned or vacant properties pose a serious health and safety risk to residents. Below are some recommendations for properties and buildings that have remained abandoned or in disrepair for a long period of time, in response to concerns raised by residents.

1. There are still several homes that sit abandoned. The Township needs to be more aggressive in taking action and holding property owners accountable.

2. The Township should look into the possibility of acquiring properties when they cannot hold property owners accountable or when property owners are unable to rebuild. Certain properties, particularly repetitive losses, should be strategically held for water retention areas, doubling as public open space, while others that are less strategic could be resold.



Figure 72: Examples of vacant lots in Shore Acres (Google Streetview)

3. The Township could consider downzoning strategic properties where multiple vacancies exist and encourage development of double lots to decrease density and provide more permeable coverage in flood-prone areas, while recovering some of the tax base.
4. The Township should encourage landscaping and public use for any strategic lots that cannot be built upon or improved by the property owner for any reason and that cannot reasonably be sold or acquired by the Township or County.

PUBLIC PARKS, OPEN SPACE, AND CONSERVATION LANDS

All parks, open spaces, and conservation lands within the neighborhood should be considered for their dual role as wetlands to manage stormwater and to provide public amenities and recreation opportunities.

To the extent possible, pervious surfaces and vegetation or plant beds should be used to allow for the absorption of stormwater or flooding. The neighborhood was built on former wetlands between Barnegat Bay, Kettle Creek, and Reedy Creek. Without adequate elevation and building and road height, the neighborhood is very prone to flooding. Asphalt and concrete should be avoided where pervious pavers, gravel, or grass could be used.

The Township should work with the various neighborhood associations to act on opportunities to provide new open public spaces or areas for stormwater management within the neighborhood. If properties are abandoned or deeded to the Township, such lots could be restored to a more natural state or active or passive recreation facilities could be installed for the public to use. If located on the bayside, the property should include new wetlands, whereas if it is on the ocean side, sand dunes should be placed along the beachfront. Such facilities should permit and encourage users from various sub-neighborhoods. Where open space is not practical, other public services could be placed.



It is recommended that the Township develop a comprehensive connectivity plan for sidewalks, crosswalks, and bicycle lanes in the neighborhood, while strategizing how to best move people to various destinations around the island, including public parks and opens spaces. A connectivity plan should serve the neighborhood at its time of peak population and use, which is during the summer.

EXISTING PARKS AND OPEN SPACE

All existing parks, open space, and conservation lands/wetlands with pervious or natural cover are a great way to absorb the impact of future flooding events, as well as providing recreational opportunities for the public. The Joe Pal Airport Tract surrounding Waterside Gardens already functions as a buffer between Kettle Creek and the residential developments, as well as a filter and natural absorption because of the undisturbed wetlands.

Hibbard Park, while not often directly impacted, lies in proximity to the Shore Acres lagoons and the catch basin in Baywood and should be retrofitted to control and retain stormwater when necessary. These two areas, on the other hand, are often overwhelmed by flood water and the catch basin is unable to drain easily. As the park is being renovated, consideration should be given to the transfer of water from other overwhelmed areas into the park and upland areas through pipes or natural streams, as shown in the diagram below. It appears from the Township's tax maps that a drainage easement already exists part way between the pond/drainage basin and Hibbard Park (see Figure 41). However, the easement is missing on Block 210.04, it is unclear whether the drainage currently exists, and if it does, it is likely that it drains in reverse from Hibbard Park to the pond.

The diagram shows abstractly how storm surge and, therefore, floodwater is pushed through the lagoons toward the inner neighborhood without an outlet. Additionally, the catch basin (shown in blue) may fill with rain and floodwater very quickly, encroaching on and posing a risk to the surrounding homes. If a combination of piping and a natural stream were placed between the catch basin, Hibbard Park, and surrounding wetlands (as shown by red arrows), stormwater could be distributed more equally and prevent flooding in certain areas, while also retaining water for later use for the Park.



Figure 40: Diagram displaying how floodwater is pushed into the neighborhood (blue arrows) and is stored (blue) and how water can be redirected to Hibbard Park (green) and surrounding wetlands



Figure 41: Township Tax Map showing drainage easement outlined in red between the park and pond

In addition to stormwater management, the two existing parks can provide an opportunity for better connectivity throughout the neighborhood for pedestrians and cyclists. In particular, designated bicycle paths or lanes should pass by or through the parks. A pedestrian path should be placed from Atlantic Drive to the east into and through Hibbard Park to meet Drum Point Road to the west. This connection will greatly improve access for the Baywood neighborhood immediately east of the park. Although the



Cumberland Drive street-end is currently occupied by private ownership, the Township should work out an agreement with the private owners to allow a public pedestrian/bicycle right-of-way between Cumberland Drive, Hibbard Park, and Drum Point Road/Mandalay Road.

The Township already plans to expand the bicycle trail in the Joe Pal Airport Tract. However, greater effort should be made to connect the bicycle trail to the street network in Shore Acres, to Hibbard Park, and eventually to meet the bicycle path on St. Lawrence Boulevard. This will allow for more and diversified access to public parks, open space, and significant natural vistas.

There are also opportunities to better connect Shore Acres and Waterside Gardens to the Airport Tract and, sequentially, to Cherry Quay. Block 299, Lot 45 at 128 Woodland Drive and the area along the north side of Channel Drive are part of the Airport Tract and are in the ROSI database. The parcels are owned by Ocean County and are tax-exempt. Although signs and chains have been put up in these locations to keep the public out, the Township could coordinate with the County to create trailheads in either of these locations. A public trailhead could also be opened at the western side of Waterside Gardens, where a path already exists, in coordination with both the County and property owner. Signs should also be included to identify the public access and whether parking is available.

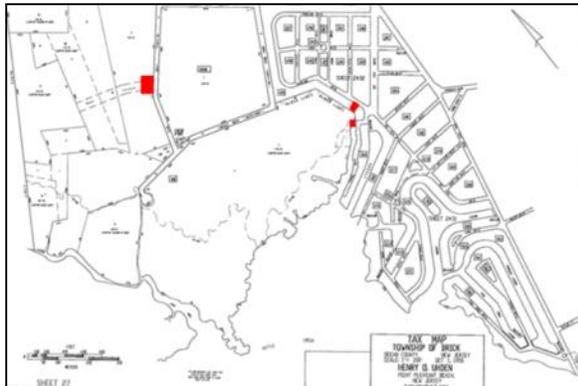


Figure 42: Approximate locations for potential new pathways (Township Tax Map)



Figure 43: Detail of Ocean County properties with access to Airport Tract in Shore Acres (Township Tax Map)



Figure 44: Two Shore Acres access locations to Airport Tract outlined in red on aerial map



Figure 45: Block 299, Lot 45 on Woodland Drive, Shore Acres (Google Streetview)



Figure 46: Potential public access point to Airport Tract on Channel Drive (Google Streetview)

RECOMMENDED PARKS AND OPEN SPACE

There are several parcels or pieces of land in Township or County property in Shore Acres that currently do not have any designated use or any improvements, but that provide optimal opportunity for both additional public open space and for water retention. The larger wooded areas to the north of Baywood and within Mandalay Park may also offer space for more active or passive recreation, if sensitive to the surrounding wetlands and coordinated with various County, State, and Federal agencies. A Municipal Public Access Plan for the Township could help to further determine the needs and possibilities available to the community for expanded public access, particularly to the water. Some smaller and more feasible opportunities are:

In the northern inland section of the Shore Acres sub-neighborhood there is an unnamed square at the intersection of Coast Drive, Spark Drive East, and Spark Drive West. The square is located on Block 293, Lot 1 and is approximately 0.0051 acres, or 222 square feet. Although this square is very small, it may function as a focal point of an improved neighborhood area and provide additional designated



recreational opportunities for the surrounding community. For example, a sidewalk, benches, a playground, and/or a landscaped or community garden are small improvements to make the space more attractive and better utilized.



Figure 47: Unnamed square in northern Shore Acres (Google Streetview)



Figure 48: Square outlined in red in Shore Acres subsection (Google Maps)



Figure 49: Block 293, Lot 1 outlined in red on Township Tax Map

Another possibility for a neighborhood park and public recreation is the land surrounding the pond on Block 210.01, Lot 5.02. In addition to the improvements to the drainage between the pond, wetlands, and Hibbard Park, an improved permeable crushed gravel or dirt walking trail could be provided from Arctic Ocean Drive around the Brick Township-owned side of the pond, as shown on the tax map on Figure 41. There is an existing path leading from Arctic Ocean Drive into the wooded area, which could be opened up to be more visible from the road and expanded.



Figure 50: Existing path from Arctic Ocean Drive onto Lot 5.02 (Google Streetview)



Figure 51: Approximate lot lines of Lot 5.02 on aerial map (Google Maps)



Figure 52: Block 210.01, Lot 5.02 outlined in red on Township Tax Map

STREET-ENDS, BULKHEADS, AND RIGHT-OF-WAYS

Bulkheads, like jetties and other manmade barriers, can often exacerbate erosion and push floodwater elsewhere rather than absorb the water. Bulkheads can interrupt the natural flow and gain of surrounding wetlands. Living shorelines, on the other hand, which include natural wetlands, are a better long-term alternative to impermeable barriers that allows the land and water to coexist while averting major damage during flooding events. Living shorelines use gentle slopes with sediment, sand, and small rocks, anchored by native coastal vegetation.



Figure 53: Example of "Living Shoreline" (courtesy: Virginia Institute of Marine Science, College of William & Mary, 2016)

The Township could study strategic areas for removal of bulkheads that are not directly protecting improved properties in strategic locations and replace them with a natural living shoreline with native vegetation. This should be attempted where it does not interfere with neighboring properties, boat traffic, or boat launching.

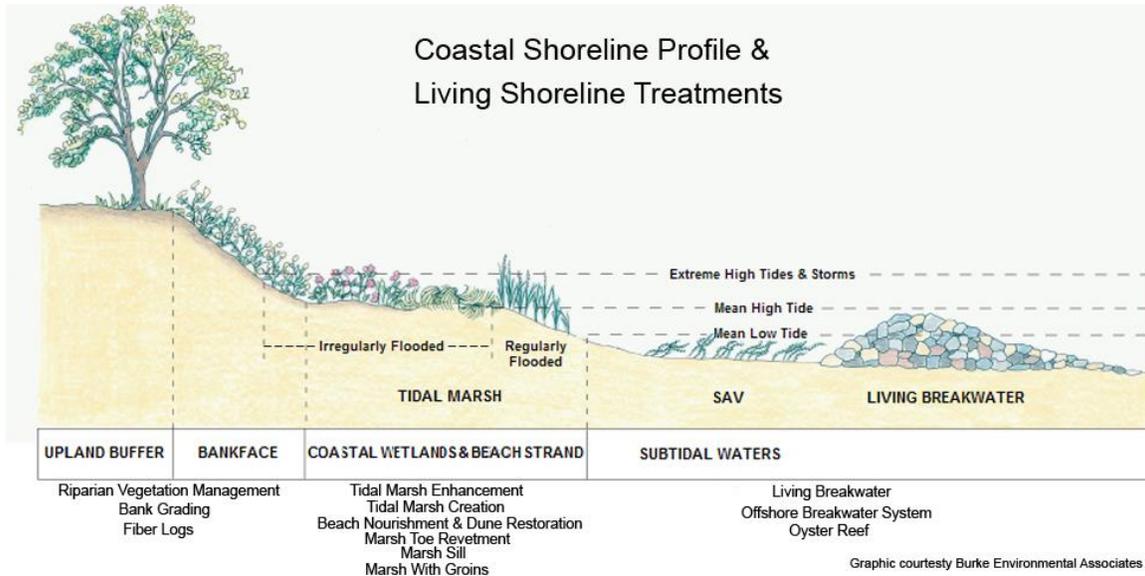


Figure 54: Coastal Shoreline Profile & Living Shorelines Treatments/ © Burke Environmental Associates

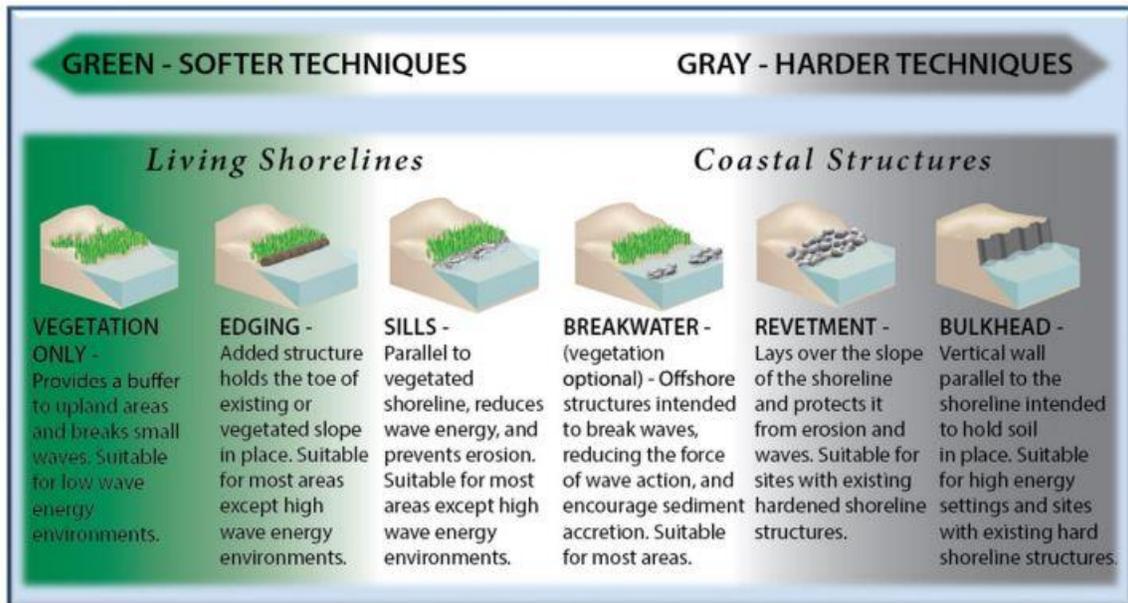


Figure 55: Various shoreline-stabilization methods are shown, ranging from “green” living shorelines to hardened structures shown in gray (Image: NOAA)

Small lots, street-ends, and lands adjacent to bulkheads on which it is insufficient to build, and especially those already owned by the Township, provide an exceptional opportunity to add living shorelines and passive public recreational space. The example below shows various parcels on Rochester Drive in Seawood Harbor that are owned by Brick Township. Block 211.02, Lots 7 and 8 (shown in the image to the left in Figure 70) could be planted, landscaped, and have benches for sitting, whereas the street-end bulkhead could also be planted and have benches, but might be suitable for fishing.



Figure 56: Small lots or street-ends on Rochester Drive, Seawood Harbor, owned by Brick Township (Tax Map)



Figure 57: Images corresponding with lots/street-ends on Rochester Drive, Seawood Harbor shown above from west to east (Google Streetview)

Right-of-way areas along the sides of streets abutting wetlands, lagoons, or the Bay, should also be preserved for public use and enjoyment, as well as protection against flooding in the roads. Raised sidewalks, bike paths, or other types of trails with permeable materials along the road will allow or maintain vistas, public access to recreation, and buffers between the wetlands and the existing road. The examples shown below include Hamilton Drive in Seawood Harbor (left) and St. Lawrence Boulevard in



Baywood (right), which both have views that could be further promoted or enhanced by allowing public pedestrian or bicycle amenities.



Figure 58: Views of wetlands from Hamilton Drive (left) and St. Lawrence Blvd. (right) (Google Streetview)



FUTURE STORM AND DISASTER PREPAREDNESS

After speaking with several representatives and residents and from public feedback, there was a theme of there being a lack of proper communication channels throughout all stages of Superstorm Sandy's destruction – before, during, and in the wake of the storm. In addition to a well-designed built environment that can mitigate the effects of storms and provide physical connections for people, powered and effective communication services are critical to disaster preparedness and relief. Many times, a lack of or poor communication can lead to even more serious and costly consequences than the storm itself.

In addition to measures found in the Hazard Mitigation Plan Element, we recommend that the Township continue to take measures to inform all residents of potential storms and disasters that may affect them, as well to inform them of what steps to take beforehand, and what to do during emergencies. This will require some, if not all, of the following steps:

1. Maintain a database of resident and property owner contact information for reverse emergency warnings. Provide a means for all, including visitors to the extent possible, to give their contact information voluntarily in order to stay informed.
2. Coordinate with all neighborhood and condominium associations, as well as fire, police, and ambulatory services, to establish and inform residents of the best safety practices, evacuation routes, and emergency care and lodging centers.
3. Obtain funding for backup generators and improvements for all communication outlets in case of disaster to prevent power failures.
4. Ensure that neighborhoods are not cut off and that there are central emergency locations that are well-stocked with supplies for all residents, preferably within less than a half-mile.

The Township should also find ways in which to coordinate efforts with adjacent communities, such as Toms River Township and Mantoloking Borough, in order to provide essential services and aid to those in need during disasters. Preparedness Plans and strategies for protecting properties and utilities could also be shared among municipalities.



SUSTAINABLE RECOVERY: LEADERSHIP IN ENERGY & ENVIRONMENTAL DESIGN

Leadership in Energy and Environmental Design (“LEED”) is a recognized green building certification rating system. LEED provides third-party verification that a new or renovated building was designed and built using strategies and materials to lower a building’s carbon footprint. LEED was developed by the U.S. Green Building Council and is a “voluntary rating system that encourages buildings to do better, but does not add significant cost”.¹⁴ LEED has five rating systems for multiple project types that want to achieve LEED certification. The rating systems are:

- Building Design and Construction
- Interior Design and Construction
- Buildings Operations and Maintenance
- Neighborhood Development
- Homes

Within each rating systems there are eight main credit categories:

- Location and transportation
- Sustainable sites
- Water efficiency
- Energy and atmosphere
- Materials and resources
- Indoor environmental quality
- Innovation
- Regional priority

LEED “provides building owners and operators with a framework for identifying and implementing practical and measurable green building design, construction, operations and maintenance solutions”.¹⁵ Furthermore, LEED has been constantly improving its manuals and guidelines to keep up with technology and trends. Presently, there are four levels of LEED certification – certified, silver, gold and platinum.

This Neighborhood Plan focuses on two of the rating systems that could apply – LEED for Homes (LEED-Homes) and LEED for Neighborhood Development (LEED-ND).

LEED FOR HOMES

LEED for Homes is the certification program for single-family home design and construction. LEED-designed homes provide clean indoor air and use less energy and water, which translates to lower utility bills. Homeowners looking to rehabilitate or redevelop their damaged home can use the LEED for Homes

¹⁴ <http://www.usgbc.org/articles/leed-facts>

¹⁵ <http://www.usgbc.org/articles/about-leed>



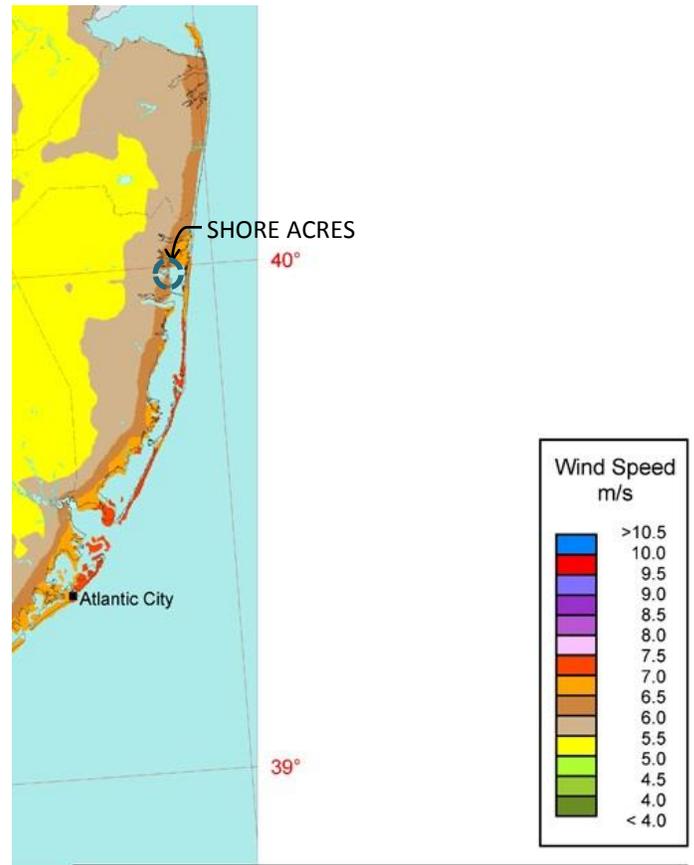
credit system to make smart choices when it comes to water efficiency, energy usage, material selection, air quality and even rainwater management. LEED for Homes is an excellent resource for homeowners, even if they are not seeking LEED Certification.

Credits that are worth noting, and that which could be utilized by the residents of the Brick Beach Neighborhood during rehabilitation and new home construction include:

- Rainwater management
 - Certain sections flood after a hard rain storm, let alone a hurricane. Reducing rainwater runoff is imperative.
 - LEED for Homes recommends the following actions to manage rainwater:
 - Planting areas with native or adapted plant material (e.g. trees shrubs)
 - Installing a vegetated roof
 - Using permeable paving
 - Installing permanent infiltration or collection features (e.g., vegetated swale, rain garden, rainwater cistern or rain barrels to capture roof runoff)
- Low-emitting materials
 - The intent of this LEED credit is to reduce concentrations of chemical contaminants that can impact air quality.
 - The requirement includes the use of low volatile organic compound (“VOC”) paints, floor materials and insulation.
- Quality views
 - Part of the appeal of the Brick Beach Neighborhood is that it is surrounded by waterfront views of both Barnegat Bay and the Atlantic Ocean. The purpose of this LEED credit is to give building occupants a connection to the natural outdoor environment providing quality views.
 - The requirement is to achieve a direct line of sight to the outdoors with glazing (e.g. windows and doors) for 75% of the regularly occupied floor area of the home.
- Green power and carbon offsets
 - LEED for Homes encourages homeowner to reduce their greenhouse gas emissions through the use of grid-source, renewable energy technologies.
 - In order to qualify for the credits, a homeowner must engage in a contract for a minimum of five years, which provides between 50% and 100% of the home’s energy from green power or renewable energy certificates.
- Renewable energy production



- In order to offset the rising costs of homeownership, this LEED credit relies on the sun to power homes. Shore Acres is ideally situated for both solar and wind systems, as the nature of the sea air and high wind levels limits large vegetation in what is largely a grassland (salt marsh/wetlands) ecosystem. Streets are generally oriented so that they run east and west (Shore Acres) or long portions of the blocks face south (Baywood). Optimal solar orientation for temperate climate zones is 17.5 degrees east of due south.¹⁶ LEED-ND Credit 10 under Green Infrastructure and Building (GIB C-10) provides for credit when the long side of the street block is 15 degrees or less east or west of due south, or if the long axis of 75% or more of the buildings are 15 degrees or less east or west of due south. The Shore Acres and Baywood street grids would provide opportunities for optimizing passive solar exposure on new or rehabilitated homes.



Source: Wind resource estimates developed by AWS Truepower, LLC for windNavigator®. Web: <http://www.windnavigator.com> | <http://www.awstruepower.com>. Spatial resolution of wind resource data: 2.5 km. Projection: UTM Zone 17 WGS84.

- Areas with annual average wind speeds around 6.5 meters per second and greater at an 80-m height are generally considered to have a wind resource suitable for wind development. The Wind Speed Map indicates that the neighborhood is between 6.5 and 7.0 meters per second.
- This credit is offered to homeowners if they meet the parameters for solar energy.

- Indoor water use reduction

- The intent of this LEED credit is to reduce indoor water consumption.
- Homeowners can receive up to six points for this line item depending on how much they reduce their water usage.

- Daylight

- Daylighting is important in connecting building occupants to the outdoors, reinforcing circadian rhythms and reducing the use of electrical lighting.

¹⁶ Design With Climate, by Victor Olgyay, Princeton University Press, 1973, page 61.



- The requirement is to achieve at least 55% daylighting for the regularly occupied floor area of the home.
- Outdoor water use reduction
 - The intent of this LEED credit is to reduce outdoor water consumption.
 - Homeowners receive credit if they reduce exterior irrigation between 50% and 100% by installing plants that require no irrigation (e.g. native species) or an efficient irrigation system with a water sense feature.

LEED FOR NEIGHBORHOOD DEVELOPMENT

LEED for Neighborhood Development or LEED-ND is a certification system for a neighborhood-scale project, such as the entire Brick Beach area. LEED-ND incorporates the principles of smart growth, urbanism and green building into a system for neighborhood design, which can be applied to entire neighborhoods, portions of neighborhoods or multiple neighborhoods.

There are five credit categories for LEED-ND:

1. Smart location and linkage
2. Neighborhood pattern and design
3. Green infrastructure and buildings
4. Innovation and design process
5. Regional priority credit



practices. Using the adjacent salt marshes as a potential for managed wetlands for stormwater management is consistent with LEED-ND.

In addition to the overall consistency with LEED-ND, homeowners can also advance the principles of LEED-ND by:

- Improving home energy performance by 5% for new homes or 3% for major building renovations.
- Reduce indoor water usage by 20% with water efficient toilets, faucets and showerheads.
- Reduce outdoor water use through the installation of native plants or smart irrigation systems.
- Reduce rainwater runoff.
- Design and orient new homes for maximum solar orientation.
- Utilize solar power, such as solar panels.

For more information on LEED-ND, go to <http://www.usgbc.org/articles/getting-started-nd>.

SEA LEVEL RISE AND THE FUTURE OF INFRASTRUCTURE

SEA LEVEL RISE

This Neighborhood Plan for Shore Acres has been developed to deal with the immediate recovery needs of the neighborhood, as well as to anticipate measures for improving the resiliency of existing and future development to future storm events. However, it is important to recognize that the evidence for the phenomenon of sea level rise is compelling and that Superstorm Sandy may have been a precursor of more frequent and possibly more severe storm events to come in the future, which coupled with a rising sea level could threaten a repeat of the flooding that occurred during Sandy.

The map above estimates the portion of Shore Acres that would be flooded by a 1% storm event based on seal level rise of 2 ft.

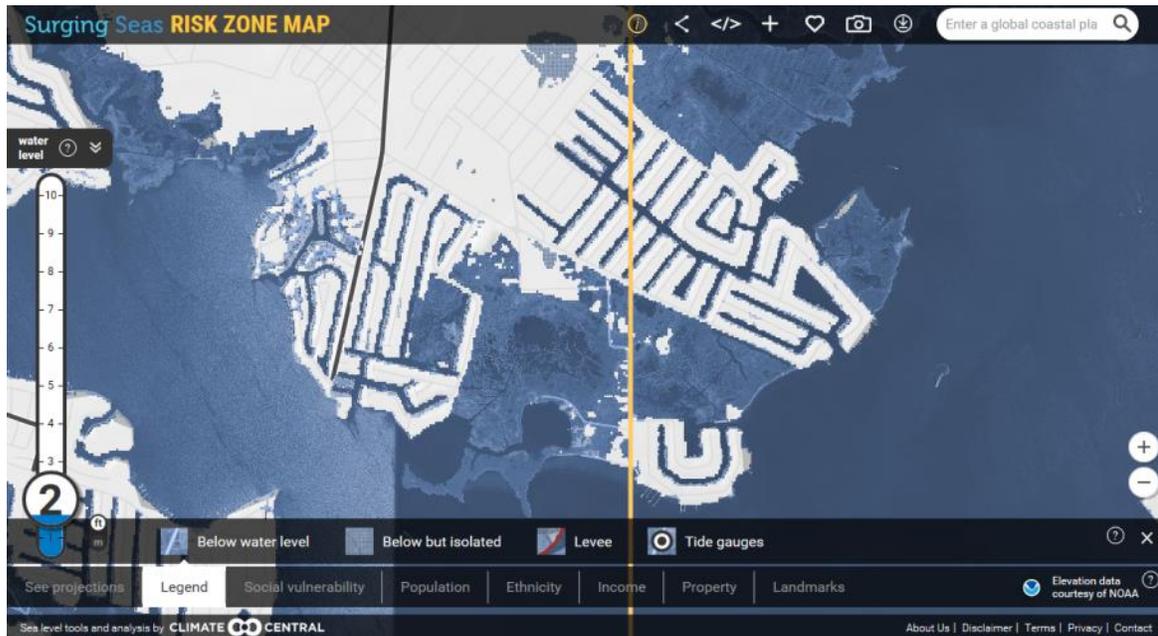


Figure 60: Graphic from www.climatecentral.org Risk Zone Map showing the increase in flood risk due to sea level rise.

Given the above, we believe the emphasis of this Neighborhood Plan on taking actions to elevate buildings, especially residential buildings, and to protect major community facilities and utilities (where applicable) would be consistent with a shorter range strategy, while elevating roads and improving stormwater management facilities would be consistent with a mid-range strategy. The key to protecting all of the mainland neighborhoods of Brick Township, as well as the Barrier Island, will be the coordination of beach dune construction and beach replenishment by the Army Corps of Engineers as soon as possible. This was a major concern of property owners and echoed by residents on both sides of Barnegat Bay during the neighborhood outreach in 2015.



ACTION PLAN

There are a number of relatively low cost actions that can be undertaken through a partnership between the neighborhood associations, private owners, Brick Township, and Ocean County and coordinated with the State of New Jersey Department of Transportation and Department of Environmental Protection and FEMA. The identified actions are also prioritized into high, moderate, and low. The Township should plan to address all high priority projects first, followed by those that are lowest cost and easiest to implement. They are summarized in the table below.

Table 12: Shore Acres Neighborhood Plan – Action Plan

	Project	Responsible Entity	Begin	Estimated Cost			Priority		
				Low	Mod	High	Low	Mod	High
1.	Gateway Signage	Neighborhood associations & Township	Immediate to 1 year	X			X		
2.	Landscape Treatments, including water retention areas	Neighborhood associations with cooperation from Township & County	Immediate to 1 year	X				X	
3.	Update Zoning Map & Regulations	Township Zoning Board	Within 1 year	X				X	
4.	Develop and implement an Impervious Surface Ordinance	Township Planning Board	Within 1 year	X			X		
5.	Wayfinding Signage	Township, NJDOT Grant	Within 2 years	X				X	
6.	Elevate roads for emergency access and evacuation	Brick Township and FEMA with cooperation from Ocean County & NJDOT	Within 2 years			X			
7.	Elevate residential buildings and utility buildings impacted by predicted flooding	Brick Township, FEMA	Within 2 years			X			X
8.	Strategic Plan for acquisition or sale of abandoned properties	Township, State of NJ	Within 2 years	X					X
9.	Conduct study to extend public bus route into or near Shore Acres	Township & Ocean County DOT	Within 2 years	X			X		
10.	Conversion of identified strategic abandoned properties to natural & public space and water retention areas	Township, NJDEP, FEMA	Within 3 years		X			X	
11.	Extension of sidewalk network & pedestrian improvements, including crosswalks (beginning with areas along Drum Point Road and Mandalay Road where some currently exist)	Township & NJDOT Grant	Within 3 years			X		X	
12.	Bike Path network (Lane markings and/or signage on Township roads) to link to bike paths on St. Lawrence Boulevard and Joe Pal Airport Tract.	Township & NJDOT Grant	Within 3 years			X		X	



13.	Expand/Enhance public space and public access opportunities through the development of a Municipal Public Access Plan	Township & NJDEP	Within 5 years		✕			✕	
14.	Capital Improvements to stormwater management infrastructure	Township, FEMA Grants	Within 5 years			✕			✕

*Costs are estimated as low, moderate (“mod”), or high, but actual costs may vary greatly.



APPENDIX I – NOTES FROM THE SHORE ACRES PUBLIC MEETING - JUNE 16, 2015

The observations and ideas summarized above were discussed with the Township professional staff and members of Shore Acres in a public meeting at Drum Point Elementary School on June 16, 2015. The following synthesized comments were brought up during the meeting by the Township professionals and the public:

- “Raise the road along the bike path (Shake Road aka Mandalay) into Seawood Harbor section – that road always floods, hard to get in and out of our development.”
- “Catch basins are needed at Rochester Drive flood.”
- Other general comments:
 - Barrier Island is the problem with all of the major flooding in Shore Acres/Cherry Quay – Barrier Island needs to be fixed first.
 - Shore Acres is a nice neighborhood, but known to flood – usually 6 inches in the street, not 6 feet. That was because of the Barrier Island breach during Sandy. The Bay hardly floods the houses – it’s the water that comes up through the storm drains.
 - Storm drains used to have bevels so water would go out drains and not back in through them – not there anymore.
 - Houses sitting empty for years – damaged badly and moldy – health and safety hazard to the whole neighborhood. Need to do something about it at some point soon, whether it’s the owner or the Township (in Shore Acres).



APPENDIX II – NOTES FROM THE SHORE ACRES PUBLIC MEETING – MARCH 30, 2016

The observations and ideas summarized above were discussed with the Township professional staff and members of Shore Acres in a public meeting at the Brick Township Town Hall on March 30, 2016 or received by email following the meeting. The following comments were brought up during the meeting by the public and have been synthesized or paraphrased:

Comment 1: “We support the idea of creating open space in the neighborhood using abandoned lots or homes. We believe 108 Bay View Drive is owned by the Township or a bank and it has an abandoned home on the lot. The property seems to be a low spot on the lagoon and might be used to reduce flooding in the neighborhood...When we have flooding on our street it comes all the way up and passes the parcel. This might serve as a good piece of 'open space' - as it is on the lagoon.”

Response: “Some of these vacant lots and damaged properties may be awaiting insurance or government assistance to rebuild, but it is possible that others might be abandoned, in which case usually either the mortgage holder forecloses and puts it up for sale or, if there is no mortgage, the Township might end up foreclosing for unpaid property taxes. One follow up that could occur to implement the Action Plan could be for the Township to research properties in the neighborhoods where property tax payments have ceased since Sandy and where either Tax liens or foreclosure actions may be pending. If the Township ends up owning those properties they could be re-purposed as rain gardens or potential mini-parks rather than sold at auction for reconstruction or offered for bid to adjoining property owners to enlarge their properties.”

The Township is applying for grant funding for 108 Bayview Drive to demolish the vacant structure.

Comment 2: Grading and elevation is affecting flooding on streets. Need improved drainage systems and raised roads.

Comment 3: A range of costs should be laid out for Action Plan items.

Comment 4: There has been a decrease in property values. Anything that will increase values should be addressed, such as aesthetics, vacant and abandoned properties, et cetera.

Comment 5: The Barrier Island should be the top priority.

Comment 6: Flooding from the meadows. Need more concrete ideas.

Comment 7: Bulkheads are interrupting the natural flow and gain of wetlands.

Comment 8: Costs and risks will continue to increase. This will only prevent smaller, regular flooding.

Comment 9: Managed wetlands – not enough sediment in Barnegat Bay to sustain existing wetlands.