

LEGISLATIVE COMMITTEE MINUTES

SB122

Bill as
Introduced

SB 122-FN-A - AS INTRODUCED

2023 SESSION

23-0870
10/08

SENATE BILL ***122-FN-A***

AN ACT relative to construction of a public pier on Hampton Beach and making an appropriation therefor.

SPONSORS: Sen. Avard, Dist 12; Sen. Rosenwald, Dist 13; Sen. Birdsell, Dist 19; Rep. Hill, Merr. 2

COMMITTEE: Finance

ANALYSIS

This bill appropriates \$22,000,000 to the department of natural and cultural resources for the siting, permitting, design, and construction of a public pier at Hampton Beach.

Explanation: Matter added to current law appears in ***bold italics***.
 Matter removed from current law appears [~~in brackets and struck through~~].
 Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Twenty Three

AN ACT relative to construction of a public pier on Hampton Beach and making an appropriation therefor.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 1 Department of Natural and Cultural Resources; Hampton Beach Pier Construction;
2 Appropriation.

3 I. The department of natural and cultural resources shall administer the construction of a
4 public pier on Hampton Beach. The siting, permitting, design, and construction shall be completed
5 according to the Hampton Pier Feasibility Study as submitted to the Hampton Beach area
6 commission under RSA 216-J.

7 II. The sum of \$22,000,000 for the biennium ending June 30, 2025, is hereby appropriated to
8 department of natural and cultural resources for the purposes of the Hampton Beach Pier
9 construction. Of such sum \$2,000,000 shall be allocated for siting, permitting, and design, and
10 \$20,000,000 shall be allocated for pier construction. The governor is authorized to draw a warrant
11 for said sum out of any money in the treasury not otherwise appropriated.

12 2 Effective Date. This act shall take effect July 1, 2023.

SB 122-FN-A- FISCAL NOTE
AS INTRODUCED

AN ACT relative to construction of a public pier on Hampton Beach and making an appropriation therefor.

FISCAL IMPACT: State County Local None

STATE:	Estimated Increase / (Decrease)			
	FY 2023	FY 2024	FY 2025	FY 2026
Appropriation	\$0	\$22,000,000	\$0	\$0
Revenue	\$0	\$0	\$0	\$0
Expenditures	\$0	\$0	\$2,000,000	Indeterminable
Funding Source:	<input checked="" type="checkbox"/> General <input type="checkbox"/> Education <input type="checkbox"/> Highway <input checked="" type="checkbox"/> Other - State Park Fund			

METHODOLOGY:

This bill appropriates \$22,000,000, from the General Fund, to the Department of Natural and Cultural Resources for the biennium ending June 30, 2025. The bill allocates \$2,000,000 for siting, permitting, and design with the remaining \$20,000,000 allocated for pier construction.

The Department of Natural and Cultural Resources (DNCR) states a feasibility study submitted to the Hampton Beach Area Commission was completed on October 28, 2022 for the siting, permitting, design and construction of the pier. Per the study, depending on the type of pier constructed, the budgetary cost estimate summary ranged from \$21.7m to \$27.4m. Included in the estimate was a 25% construction contingency based on the high-level stage of design and 40% inflation assuming a 10 year time line for development, design, permitting, funding and construction. The report also stated it assumed a 25-50 year life cycle for the pier with routine inspections and maintenance expected to occur at 5 to 10 year intervals throughout the life of the pier. DNCR states they anticipate the first \$2,000,000 allocated for siting, development and design would be encumbered in FY 2025. However, they do not anticipate encumbering the remaining \$20,000,000 until after FY 2025, at which point the funds would have lapsed and would no longer be available.

DNCR assumes the appropriation does not account for any emergency repairs to the structure caused by unanticipated storm damage, which would be an additional indeterminable expenditure. Lastly, DNCR states there would be an indeterminate expense for security, utilities and programmatic oversight that will be incurred by the State Park Fund.

AGENCIES CONTACTED:

Department of Natural and Cultural Resources

SB 122-FN-A - AS AMENDED BY THE SENATE

03/23/2023 1034s

2023 SESSION

23-0870

10/08

SENATE BILL

122-FN-A

AN ACT

relative to construction of a public pier on Hampton Beach and making an appropriation therefor.

SPONSORS:

Sen. Avard, Dist 12; Sen. Rosenwald, Dist 13; Sen. Birdsell, Dist 19; Rep. Hill, Merr. 2

COMMITTEE:

Finance

AMENDED ANALYSIS

This bill appropriates \$2,000,000 to the department of natural and cultural resources for engineering services, siting, permitting, and final design for a proposed pier at Hampton Beach state park.

Explanation:

Matter added to current law appears in ***bold italics***.

Matter removed from current law appears [~~in brackets and struckthrough~~].

Matter which is either (a) all new or (b) repealed and reenacted appears in regular type.

STATE OF NEW HAMPSHIRE

In the Year of Our Lord Two Thousand Twenty Three

AN ACT relative to construction of a public pier on Hampton Beach and making an appropriation therefor.

Be it Enacted by the Senate and House of Representatives in General Court convened:

1 1 Department of Natural and Cultural Resources; Hampton Beach State Park Pier;
2 Appropriation. The sum of \$2,000,000 for the biennium ending June 30, 2024 is hereby appropriated
3 to the department of natural and cultural resources for the purposes of the engineering services,
4 siting, permitting, and final design for a proposed pier at Hampton Beach state park in accordance
5 with the Pier Feasibility Study as submitted to the Hampton Beach area commission under RSA216-
6 J. The governor is authorized to draw a warrant for said sum out of any money in the treasury not
7 otherwise appropriated.

8 2 Effective Date. This act shall take effect July 1, 2023.

SB 122-FN-A- FISCAL NOTE
AS AMENDED BY THE SENATE (AMENDMENT #2023-1034s)

AN ACT relative to construction of a public pier on Hampton Beach and making an appropriation therefor.

FISCAL IMPACT: State County Local None

STATE:	Estimated Increase / (Decrease)			
	FY 2023	FY 2024	FY 2025	FY 2026
Appropriation	\$0	\$2,000,000	\$0	\$0
Revenue	\$0	\$0	\$0	\$0
Expenditures	\$0	\$2,000,000	\$0	\$0
Funding Source:	<input checked="" type="checkbox"/> General <input type="checkbox"/> Education <input type="checkbox"/> Highway <input checked="" type="checkbox"/> Other State Park Fund			

METHODOLOGY:

This bill appropriates \$2,000,000, from the General Fund to the Department of Natural and Cultural Resources for the biennium ending June 30, 2024 (Note: biennium is typically through June 30, 2025). The bill allocates \$2,000,000 for engineering services, siting, permitting, and final design for a proposed pier at Hampton Beach State Park.

The Department of Natural and Cultural Resources (DNCR) states the \$2,000,000 appropriation will go toward the engineering services, siting, permitting, and final design for a proposed pier at Hampton Beach State Park. The Department also assumes there will be a future request for an appropriation for the construction, repair, and maintenance of the pier. The Department states generally the design and engineering costs account for about 10% of the costs of the construction of the project and therefore, the additional costs for construction would be an additional \$20,000,000.

AGENCIES CONTACTED:

Department of Natural and Cultural Resources

**SB 122-FN-A FISCAL NOTE
AS AMENDED BY THE SENATE (AMENDMENT #2023-1034s)**

AN ACT relative to construction of a public pier on Hampton Beach and making an appropriation therefor.

FISCAL IMPACT: State County Local None

STATE:	Estimated Increase / (Decrease)			
	FY 2023	FY 2024	FY 2025	FY 2026
Appropriation	\$0	\$2,000,000	\$0	\$0
Revenue	\$0	\$0	\$0	\$0
Expenditures	\$0	\$2,000,000	\$0	\$0
Funding Source:	<input checked="" type="checkbox"/> General <input type="checkbox"/> Education <input type="checkbox"/> Highway <input checked="" type="checkbox"/> Other - State Park Fund			

METHODOLOGY:

This bill appropriates \$2,000,000, from the General Fund to the Department of Natural and Cultural Resources for the biennium ending June 30, 2024 (Note: biennium is typically through June 30, 2025). The bill allocates \$2,000,000 for engineering services, siting, permitting, and final design for a proposed pier at Hampton Beach State Park.

The Department of Natural and Cultural Resources (DNCR) states the \$2,000,000 appropriation will go toward the engineering services, siting, permitting, and final design for a proposed pier at Hampton Beach State Park. The Department also assumes there will be a future request for an appropriation for the construction, repair, and maintenance of the pier. The Department states generally the design and engineering costs account for about 10% of the costs of the construction of the project and therefore, the additional costs for construction would be an additional \$20,000,000.

AGENCIES CONTACTED:

Department of Natural and Cultural Resources

Amendments

Sen. Avard, Dist 12
March 10, 2023
2023-0908s
10/08

Amendment to SB 122-FN-A

1 Amend the bill by replacing all after the enacting clause with the following:

2

3 1 Department of Natural and Cultural Resources; Hampton Beach State Park Pier;
4 Appropriation. The sum of \$2,000,000 for the biennium ending June 30, 2024 is hereby appropriated
5 to the department of natural and cultural resources for the purposes of the engineering services,
6 siting, permitting, and final design for a proposed pier at Hampton Beach state park in accordance
7 with the Pier Feasibility Study as submitted to the Hampton Beach area commission under RSA216-
8 J. The governor is authorized to draw a warrant for said sum out of any money in the treasury not
9 otherwise appropriated.

10 2 Effective Date. This act shall take effect July 1, 2023.

2023-0908s

AMENDED ANALYSIS

This bill appropriates \$2,000,000 to the department of natural and cultural resources for engineering services, siting, permitting, and final design for a proposed pier at Hampton Beach state park.

AMENDED ANALYSIS

Senate Finance
March 15, 2023
2023-1034s
10/08

Amendment to SB 122-FN-A

1 Amend the bill by replacing all after the enacting clause with the following:

2

3 1 Department of Natural and Cultural Resources; Hampton Beach State Park Pier;
4 Appropriation. The sum of \$2,000,000 for the biennium ending June 30, 2024 is hereby appropriated
5 to the department of natural and cultural resources for the purposes of the engineering services,
6 siting, permitting, and final design for a proposed pier at Hampton Beach state park in accordance
7 with the Pier Feasibility Study as submitted to the Hampton Beach area commission under RSA216-
8 J. The governor is authorized to draw a warrant for said sum out of any money in the treasury not
9 otherwise appropriated.

10 2 Effective Date. This act shall take effect July 1, 2023.

Amendment to SB 122-FN-A

- Page 2 -

2023-1034s

AMENDED ANALYSIS

This bill appropriates \$2,000,000 to the department of natural and cultural resources for engineering services, siting, permitting, and final design for a proposed pier at Hampton Beach state park.

Committee Minutes

ATTENDANCE

SENATE CALENDAR NOTICE
Finance

43

- ✓ Sen James Gray, Chair
- ✓ Sen Daniel Innis, Vice Chair
- ✓ Sen Jeb Bradley, Member
- ✓ Sen Regina Birdsell, Member
- ✓ Sen Howard Pearl, Member
- ✓ Sen Lou D'Allesandro, Member
- ✓ Sen Cindy Rosenwald, Member

START: 1:30 pm
STOP : 2:13 pm

Date: January 25, 2023

HEARINGS

Tuesday	01/31/2023	
(Day)	(Date)	
Finance	State House 103	1:00 p.m.
(Name of Committee)	(Place)	(Time)
1:00 p.m.	Department of Justice Presentation - Medicaid Enhancement Tax (MET) and the Disproportionate Share Hospital Program (DSH) Senior Assistant Attorney General Laura Lombardi	
2:00 p.m.	SB 122-FN-A	relative to construction of a public pier on Hampton Beach and making an appropriation therefor.
1:30 p.m.	SB 124-FN-A	making an appropriation for the Eastern Slopes Regional Airport.
1:40 p.m.	SB 125-FN-A	relative to annual grants to regional development corporations.
1:55 p.m.	SB 114-FN-LOCAL	relative to payment by the state of a portion of retirement system contributions of political subdivision employers.

EXECUTIVE SESSION MAY FOLLOW

Sponsors:

SB 122-FN-A	Sen. Rosenwald	Sen. Birdsell	Rep. Hill
Sen. Avard			
SB 124-FN-A			
Sen. Bradley			
SB 125-FN-A			
Sen. Gendreau	Sen. Gannon	Sen. Avard	Sen. Bradley
Sen. Birdsell	Sen. Carson	Sen. Pearl	Sen. Lang
SB 114-FN-LOCAL			
Sen. Rosenwald	Sen. Altschiller	Sen. Prentiss	Sen. Fenton
Sen. Perkins Kwoka	Sen. D'Allesandro	Sen. Whitley	Sen. Watters
Sen. Chandley	Sen. Soucy	Rep. Edgar	Rep. O'Brien
Rep. Telerski	Rep. Wilhelm	Rep. Simpson	

Deb Martone 271-4980

James P. Gray
Chairman

Senate Finance Committee

Deb Martone 271-4980

SB 122-FN-A, relative to construction of a public pier on Hampton Beach and making an appropriation therefor.

Hearing Date: January 31, 2023

Time Opened: 1:30 p.m.

Time Closed: 2:13 p.m.

Members of the Committee Present: Senators Gray, Innis, Bradley, Birdsell, Pearl, D'Allesandro and Rosenwald

Bill Analysis: This bill appropriates \$22,000,000 to the department of natural and cultural resources for the siting, permitting, design, and construction of a public pier at Hampton Beach.

Sponsors:

Sen. Avard

Sen. Rosenwald

Sen. Birdsell

Rep. Hill

Who supports the bill: Senators Avard and Rosenwald; Former Senators Nancy Stiles and Tom Sherman; Bob Preston; John Nyhan.

Who opposes the bill: Brianna O'Brien; Aidan Barry; Frances Taylor.

Who is neutral on the bill: Rep. Muns; Brian Wilson.

Summary of testimony presented in support:

Former NH Senator Nancy Stiles, Chair, Hampton Beach Area Commission:

- One of the duties of the commission is to consult and advise the state and the town on implementation strategies for the Hampton Beach master plan including capital improvements.
- In 2009 the state invested \$14.5 million to refurbish the State Parks facilities on the east side of the boulevard. This generated \$300+ million of private investment on the west side of the boulevard. This has greatly improved the DRA's Rooms and Meals tax coffers.
- Senator Avard, prime sponsor of SB 122-FN-A, initiated this project to build a pier over the Hampton Jetty specifically for access for the walking disabled, who wanted to be able to experience the ocean by sitting on it. A study committee moved the recommendation forward.
- A feasibility study was initiated in 2022 looking at the opportunity to build a pier. The commission was identified as the overseer of the project, and the feasibility study was completed in four months.

- This bill looks at the official siting of the project. Three viable locations were identified in which to build a pier. One site was north of Boars Head, the center of the beach near the Seashell area was another, and the third was the state park area at the south end of the beach.
- SB 122-FN-A would continue the project with the official siting, federal permitting, the final design and construction. Uses of the pier may also be identified, such as allowing the walking disabled free access, a small fee for recreational fisherman, and perhaps a discounted price for frequent users.
- Permitting may take longer than estimated currently.
- Senator Stiles suggested amending the bill to make the funds nonlapsing. That would help time wise with the official siting, permitting and construction.
- They are looking at the state park location at the south end of the beach. The proposed pier would help businesses at the south end.
- Senator Rosenwald indicated she shares Senator Avard's premise that state parks should be accessible to all residents. However, she believes the feasibility study went way beyond that purpose, i.e., possible cruise ship docking, yoga classes and festivals. Why did the commission's feasibility study take it that far? Senator Stiles insisted the commission did not do that. They hired an engineering firm, GEI of Portland, ME, who was already working in the area with the commission on the master plan. A 23-member pier advisory committee was also established. One of the residents of the beach made the comment Senator Rosenwald referred to. The vision for the pier is for the walking disabled to be able to be on the water. It would also provide a better opportunity for our recreational fishermen. It could also bring in revenue for the state park.

Senator Kevin Award, Prime Sponsor:

- Senator Avard shared with committee members some of the past interactions he has had with the disabled regarding accessibility at both Hampton Beach and Salisbury Beach.
- Not only would a pier be available for the handicapped, Senator Avard also suggested some type of service station adjacent to the pier which might help with possible rescues at the beach.
- Such an attraction would open up the tourist season a bit longer.
- The disabled community should be able to enjoy the beach as much as everyone else.
- Senator Innis inquired if Senator Avard had any estimates of the economic impact of the project. What might happen to the local community? The Legislature is being asked to make a substantial \$22 million investment. Senator Avard did not have such an estimate available.

Bob Preston, Realtor:

- Mr. Preston is the Chair of the pier advisory committee established by Senator Stiles.
- Hampton Beach State Park is considered one of the "jewels" of our state parks. It raises enough revenue to help the operations of other state parks in the state. An investment in a pier would continue to do that.
- A pier would allow the beach to have a longer season and bring more people to the beach at different times.

- The advisory committee reviewed different locations. It was decided the state park south beach might be the best location. It would extend the beach and is not as crowded.
- The improvements made in Hampton over the last few years, i.e., new condos, Rooms and Meals taxes and transfer taxes, would go a long way to help pay for the pier project.
- Mr. Preston has worked for 60 years to make Hampton a better beach. During the summer months his realty office pays \$200,000 in Rooms and Meals taxes.
- Hampton Beach contributes a significant amount to our state coffers.
- Senator Birdsell inquired about the concern with taxpayers being unfamiliar with the proposal. Mr. Preston stated the advisory committee held four hearings at the beach on the project. As time goes on more people will endorse the project, particularly at the south end of the beach. It won't have an impact on the crowds that the main beach would have. Neither will there be a parking issue. It would be another reason to enjoy the beach.

John Nyhan, President, Hampton Area Chamber of Commerce:

- Outdoor recreational opportunities are very important.
- By adding outdoor recreational opportunities to Hampton's many visitors and residents, including those that are handicapped, will be beneficial to all. This includes the state itself through additional Rooms and Meals tax revenue, and New Hampshire state parks by providing possible additional revenue.
- Over \$175 million has been put back into Hampton Beach through development and redevelopment.
- At the south beach location, there would be an increase in revenue and a return on the investment.

Former Senator Tom Sherman:

- The new proposed location at the state park has much promise.
- A new pier would attract tourists, fishermen, and provide access for the disabled.
- As a way of decreasing state investment in the project, would this project attract federal dollars?

Neutral Information Presented:

Representative Chris Muns:

- Representative Muns' perspective is of someone who has lived in Hampton, three miles down Ocean Boulevard from the main beach, year round for 26 years.
- The proposed pier is not well known in the community. Those who are aware are concerned with what it will do to traffic and the already difficult task of finding parking at the beach.
- Their concerns are greatest with the two proposed locations at the north end of the beach, particularly the one closest to Boars Head. Those two locations are in front of mostly residential properties, far away from the main entertainment and business district, and would therefore, be most disruptive to the residents in those areas.

- Those who live in Hampton year round are also very concerned about the additional burden a pier would place on existing infrastructure, such as roads, wastewater and water systems, police and fire.
- Hampton taxpayers already absorb a share of costs associated with visitors to Hampton Beach State Park that are not commiserate with the share of state revenues they are receiving. They would want to be assured when those costs go up, if a pier is constructed, they would be appropriately compensated.
- Representative Muns' greatest concern is the fact that many homeowners in the Hampton Harbor area are, and have been for many years, experiencing regular and severe flooding during high tides and storms. With his written testimony he provided committee members with pictures of recent flooding. He also provided a link to a 2021 Hampton Harbor Flooding Evaluation Report which identified three significant options: resist (build a barrier), accommodate (raise the elevation of all roadway/buildings in the area), and retreat (abandon the property).
- If the state has \$22 million it wants to invest in Hampton, that money should be invested in ways to permanently address the flooding issue.
- While a pier, if properly sited and constructed, could be a nice addition to Hampton Beach State Park, there are other more pressing priorities that should be addressed first.

Brian Wilson, Director, Division of Parks and Recreation, Department of Natural and Cultural Resources:

- The primary purpose of the feasibility study was to consider the feasibility of constructing a new pier on Hampton Beach for the general public, the mobility impaired and elderly access to the water over the beach, and to provide passive recreational uses such as fishing and viewing.
- Continued implementation of a new pier at Hampton Beach will require further discussion regarding ownership/partnership interests and responsibilities to move the project forward through planning, funding, design development and permitting, construction and long range operations/management.
- The Division of Parks and Recreation supports improvements across the park system to improve accessibility in the outdoors. Specifically, at Hampton Beach State Park the state has improved accessibility through the \$14.5 million redevelopment project in 2012, as well as beach accessibility mats which bring folks down to the high tide line, and a beach wheelchair service implemented by lifeguards.
- While the state park system is operationally self-funded, it relies on capital appropriations to support major improvements in reinvestment in the state's natural, cultural and recreation resources left to its continued stewardship.
- Hampton Beach State Park is one of the few parks that generates more revenue than expense, which supports other parts of the park system that are not self-supporting.
- While Hampton Beach is operationally self-sufficient, portions of its revenue are also contributing to fund the cost of the seawalls owned by the state, which serve little to no recreational value and will continue to be a liability for the Division of Parks and Recreation.

- Whoever would be responsible for managing the pier would likely want to understand any ongoing operating costs, including repair and maintenance over the lifespan of the pier, in order to plan for future replacement and the revenue sources to support those costs. This is particularly important given the impact that winter storms have on structures along the seacoast.
- The Division is working through the Division of Homeland Security and Emergency Management to access FEMA funds to help recover costs of seacoast storm damage that occurred on December 22-25, 2022. It anticipates the cost of those damages along Hampton Beach State Park to be several hundreds of thousands of dollars. It is unknown whether or not FEMA will support reimbursement.
- There are unique challenges associated with piers that should be thoroughly considered before a pier is constructed.
- Other locations along the seacoast outside of the Hampton Beach State Park were not assessed as they were outside of the legislative scope of the feasibility study.
- Senator Gray inquired if any federal dollars were available for the proposed project. Director Wilson agreed potentially there were, such as the National Park Service and the Land and Water Conservation Fund.
- Senator Pearl asked about charging an admission fee to use the pier, or other types of revenue sources with the pier. Director Wilson indicated typically if a capital project is being generated by the Division itself, these considerations would be fleshed out well before making the capital request.
- Senator Rosenwald wondered if this project was a prioritized need request of the Department or a request for the Capital Budget. Director Wilson stated this project is not part of their capital requests for the next three bienniums. Senator Rosenwald inquired how long before the Division would start to use the \$20 million building fund. Director Wilson indicated if the project was fast-tracked and the funding was approved immediately the Division would work the project scope within the Department's in-house shop. Currently, they are grappling with how to utilize the \$30 million ARPA funds they received. The permitting process would take a few years at least. Another item that might potentially implicate the project if the siting were at the south beach area is that it is adjacent to the existing jetty owned by the Army Corps. They have been permitted to reconstruct that next year. There would be a period of ongoing construction. We wouldn't want to interfere with that.

dm

Date Hearing Report completed: February 1, 2023

Speakers

Senate Remote Testify

Finance Committee Testify List for Bill SB122 on 2023-01-31

Support: 1 Oppose: 3

<u>Name</u>	<u>Title</u>	<u>Representing</u>	<u>Position</u>
✓ Rosenwald, Cindy	An Elected Official	SD 13	Support
✓ O'Brien, Brianna	A Member of the Public	Myself	Oppose
✓ Barry, Aidan	A Member of the Public	Myself	Oppose
✓ Taylor, Frances	A Member of the Public	Frances Taylor	Oppose

Testimony



New Hampshire Fish and Game Department

11 Hazen Drive, Concord, NH 03301-6500
Headquarters: (603) 271-3421
Website: www.WildNH.com

TDD Access: Relay NH 1-800-735-2964
Fax: (603) 271-1438
Email: info@wildlife.nh.gov

Scott R. Mason
Executive Director

February 6, 2023

RE: SB122 relative to construction of a public pier on Hampton Beach and making an appropriation therefor

Dear Senate Finance Committee,

My name is Dan Bergeron and I serve as the Chief of the Wildlife Division at the New Hampshire Fish and Game Department (NHFG). The Department does not have an official position on SB122, however because of the sensitive environmental features and existing recreational and commercial activities that occur on the NH seacoast, NHFG would like to offer the following additional information relative to SB122.

A NHFG Commissioner participated on the Pier Advisory Committee of the Hampton Beach New Pier Feasibility Study and two of our wildlife biologists attended a meeting and associated site walk during August 23, 2022 to evaluate and provide input on three potential pier locations. During those meetings, a number of challenges were identified and presented to the Pier Advisory Committee. We've also reviewed the *draft* feasibility study to develop a Hampton Beach Pier dated November 1, 2022¹. Although some of the NHFG comments were reflected in the draft feasibility study, others were not fully or explicitly incorporated so we offer further details below.

Admittedly, there are environmental sensitivities to building a pier anywhere along the coast. However, we identified the southernmost section as the most sensitive (identified as Area 3 in the draft feasibility report). This section of beach and associated sand dune are the most significant habitat for state endangered and federally threatened Piping Plovers and state endangered Least Tern in Hampton NH. Our Department has worked for several decades to recover these species in partnership with the Department of Natural and Cultural Resources State Parks, Towns of Hampton and Seabrook and the United States Fish & Wildlife Service (USFWS). We have also engaged countless dedicated volunteers and supporters to assist with the work over the program's history. Despite unlimited challenges, we have had great success and achieved record numbers of nesting piping plovers during 2023. Area 3 encompasses what has been the long-term stronghold for the species recovery efforts in Hampton NH and placing a pier there could jeopardize decades of investment and success. Piping plovers have also recently nested in Areas 1 and 2 but these areas have had lower densities of nesting plovers to date. All proposed pier areas would require coordination with NHFG and the USFWS if a proposal to build a pier were to proceed due to the presence of these state and federally threatened and endangered species.

¹D.Robbins and T. Pryor. DRAFT Feasibility Study Hampton Beach New Pier. Nov 1, 2022. Submitted to Hampton Beach Area Commission by GEI Consultants, Inc.

In addition to concerns around nesting threatened and endangered shorebirds on Hampton Beach, there is also an observed annual seal haul out site on the north end of Hampton Beach (Area 1). Seals haul out to give birth, rest, and escape predators. They will also climb onto rocks when stressed. Seal pups are often left on beaches alone while the mother is fishing at sea as they are not yet strong enough swimmers to accompany her. The proposed pier locations at the north end of Hampton Beach (Area 1) have the potential to conflict with this particular seal haul out area, which is currently away from the largest concentrations of the general public that recreate in the central area of Hampton Beach (Area 2).

In addition to NHFG's role in the management and recovery of wildlife species, our agency also issues licenses for recreational and commercial fisheries and aquaculture. The Hampton Beach Pier Project will likely conflict with the commercial and recreational lobster fishery in the proposed area slightly north of the Hampton Jetty (Area 3) and the two potential pier locations in the northern portion of Hampton Beach near Church Street and Great Boar's Head (Area 1). During the warmer months, the lobster fishing industry harvests lobster in these areas when the lobster are close to shore. Additionally, there is an aquaculture site with submerged gear located directly off the Seashell Pavilion (Area 2) at approximately 1,600 feet from low water (~2,100 feet from the sidewalk) that may conflict with activities proposed from the pier, such as angling, depending on the distance the pier is from shore.

For the reasons identified above, we encourage continued coordination with our agency and would encourage further analysis of alternatives that extend to areas north of Boars Head, Hampton, where impacts to nesting endangered shorebirds are likely to be significantly reduced or eliminated. Several participants of the Pier Advisory Committee favored a location north of Boars Head because of the availability of existing infrastructure (e.g., parking, restrooms) and potentially reduced environmental concerns but these areas were not evaluated in the Feasibility Report (Feasibility Report Pgs. 3-4).

Thank you for your time and consideration.

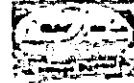
Respectfully,

A handwritten signature in black ink, appearing to read "Dan Bergeron", with a long, sweeping horizontal line extending to the right.

Dan Bergeron
Wildlife Division Chief



HAMPTON BEACH AREA COMMISSION



100 WINNACUNNET ROAD, HAMPTON, NH 03842

Good afternoon, Chairman Innis and Senate Committee Members.

I am Nancy Stiles, Chair of the Hampton Beach Commission authorized to speak with you on their behalf.

Hampton Beach Area Commission (HBAC) was established by the NH Legislature in 2003. RSA 216-J:3,1 identifies one of the duties which is to consult and advise the state and the town on implementation strategies for the Hampton Beach master plan including capital improvements.

In 2009 the state invested \$14.5million to upgrade the State Parks facilities and that initiated \$300+million private money investments on the west side of Rte.1A - increasing local and state revenue. The % increase can be identified for you by DRA that enhanced the Rooms + Meals tax for the state.

Senator Avard had an idea and initiate a project to build a pier over the Hampton Jetty specifically for access for the walking disabled to enjoy the ocean by being out on it to relax and at the same time could provide additional opportunities for recreational fishermen and enhance local and state businesses. Due to the necessary need for .ften repairs to the jetty and federal oversight it was not a viable venture.

In 2022 SB346 initiated a Feasibility Study looking at the opportunity to build a pier south of Boars Head. HBAC was identified as the overseer of that project and hired GEI engineering and the study was completed in the 4-month allotted timeframe. That report was delivered to the Senate Clerk in both electronic and print copy by the November 1st required date. That study researched three areas for possible build, identifying pros and challenges of each site. Discussion since that report has focused on the site north of the Hampton Jetty, with the possibility of additional income opportunities for our State Parks.

SB122 will continue the project by providing the opportunity for the official siting, permitting, final design and construction. It might also identify the uses of the pier – such as opening/closing; allowing the walking disabled free access and perhaps a small fee for “visitors” and recreational fisherman with the opportunity for an annual discounted price for frequent users as is done for our skiers up north.

SB122 is the final two steps to complete this investment project. While I believe that siting and design started in early 2024 budget time frame could be completed in late 2024 allowing for construction to start, unfortunately the federal government permitting process doesn't always work as fast as we do in NH, so my question to you would be: Could SB122 be amended to allow the money to be nonlapsing? This would ensure that construction money would be available when all planning and permitting pieces are completed.

It can be an icon like others we have in the state. I will take questions. Thank you.

Nancy Stiles

Testimony Relative to SB-122-FN-A

By

Representative Chris Muns
Rockingham District 29 (Hampton)

For the record my name is Representative Chris Muns. I serve as one of the four representatives from Hampton in Rockingham County District 29.

I am here to provide you with the perspective of someone who has a 40-year connection to the New Hampshire Seacoast and has lived in Hampton – 3 miles down ocean boulevard from the main beach – year-round for the past 26 years.

The pier you are proposing to appropriate funds for is not well known in my community. The few people who know about it who I have talked to are concerned about what it will do to traffic and to the already difficult task of finding parking at the beach. Our concerns are greatest with regard to the two proposed locations at the north end of the Main Beach, particularly the one closest to Boars Head. Those two locations are also in front of mostly residential properties; far away from the main entertainment and business district and as such are likely to be the most disruptive to the residents of those properties.

Those of us who live in Hampton year-round are also very concerned about the additional burden a pier would place on our existing “hard” (roads, wastewater and water systems) and “soft” (police and fire) infrastructure. The taxpayers of Hampton are already absorbing a share of the costs associated with visitors to Hampton Beach State Park that are not commiserate with the share of state revenues we are receiving. We would want to be assured that when those costs go up if a pier is constructed, we will be appropriately compensated.

My greatest concern, however, is the fact that many homeowners in the Hampton Harbor Area are – and have been for many years – experiencing regular and severe flooding during high tides and storms. Attached to this testimony are some pictures of the flooding that occurred just this month.

In March 2021, the Hampton Harbor Flooding Evaluation was completed. A copy of it can be found at: <https://www.hamptonnh.gov/DocumentCenter/View/4138/Final-Flood-Study-Report-Harbor-HTA?bidId=\> . The report essentially identifies three options:

1. Resist – by building a barrier
2. Accommodate – by raising the elevation of all roadway and buildings in the area
3. Retreat – by abandoning property

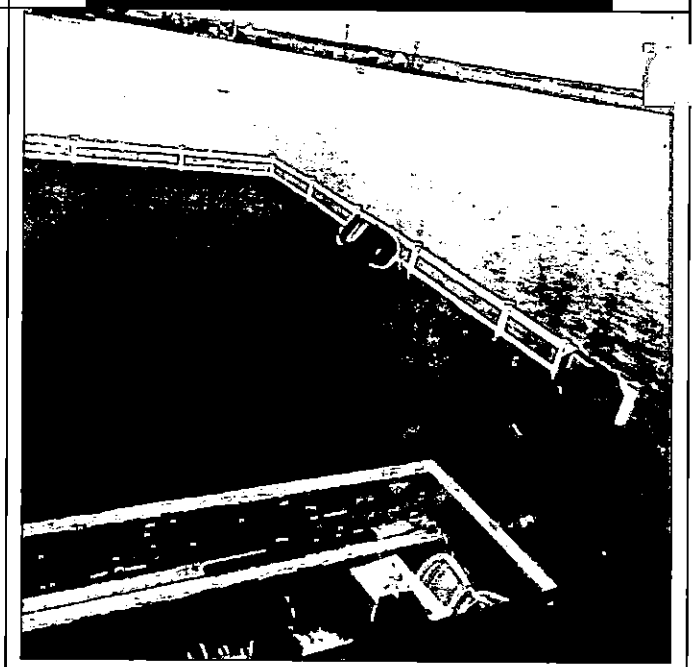
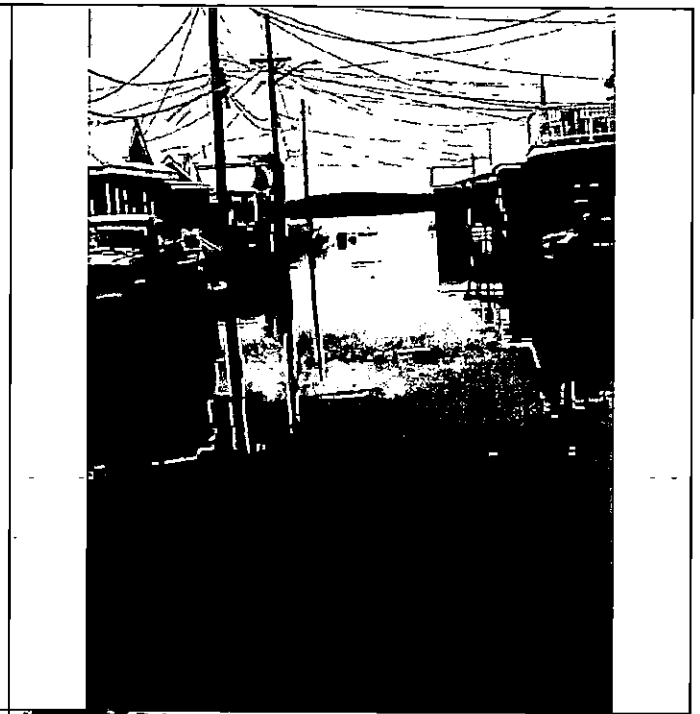
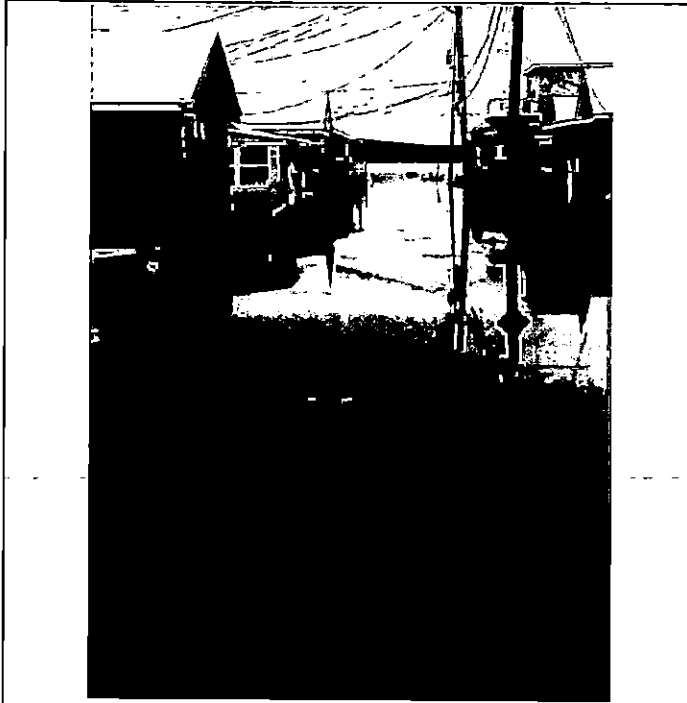
Each of these options has a cost; which is not insignificant.

If the State of New Hampshire has \$22 million it wants to invest in Hampton, then my strong preference and recommendation - AND I believe that of most of the year round residents of Hampton - would be that we invest that money in ways to permanently address this flooding issue. While a pier – if properly sited and constructed – could be a nice addition to the Hampton State Beach Park; we have other more pressing priorities that should be addressed first.

Thank you for your time and I would be happy to answer any questions you might have.

Flooding in the Hampton Harbor Area

January, 2023





Hampton Harbor Flooding Evaluation

March 31, 2021

Prepared by
Hoyle, Tanner
& Associates, Inc.



Photo Credit: David Murty



January 31, 2023

RE: Senate Bill – 122 –FN -A

Honorable Members – NH Senate Finance Committee
NH State House –Room 103
107 N. Main St.
Concord, NH 03301
Dear Senate Members;

I come in front of you today representing the Hampton Area Chamber of Commerce and its 450 business members many of which are located along Hampton Beach. Trying not to duplicate what others have said or will say, I will make my comments brief and to the point on how this pier would benefit outdoor recreational opportunities.

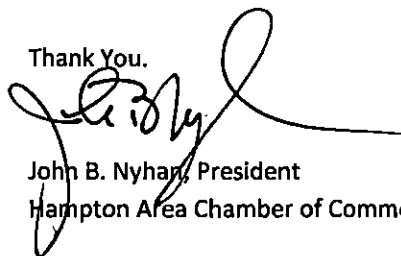
I am here to speak in favor of Senate Bill 122. I have been involved in the discussion around building a pier at Hampton Beach since the beginning and have worked alongside the Hampton Beach Area Commission even before the Senate Bill 346 (providing an appropriation to conduct a feasibility and impact study) was passed last summer.

I believe by adding an additional outdoor recreational opportunity to our many visitors and residents including those that are handicapped will be beneficial to all including the State through additional M&R taxes and the NH State Parks by providing some possible additional revenue. There are many small outdoor recreational businesses at the south end of the beach directly across from the State Parks that would welcome and benefit from this pier. As some of you may recall, the last time the State invested in Hampton Beach with the redevelopment of the Hampton Beach State Park there was a great "return on Investment" back to the State.

(Off script – share our story from Explore New England)

Finally, I realize that there would be many votes yet to take this from conceptual to reality and it would be sad to see the work done to date put on a shelf somewhere collecting dust. The adoption of this bill would be a positive step in the right direction so I urge you all to vote yes and move this bill through the legislative process.

Thank You.



John B. Nyhan, President
Hampton Area Chamber of Commerce



STATE OF NEW HAMPSHIRE
DEPARTMENT of NATURAL and CULTURAL RESOURCES
DIVISION of PARKS and RECREATION
172 Pembroke Road Concord, New Hampshire 03301
Phone: (603) 271-3556 Fax: (603) 271-3553
Web: www.nhstateparks.org

January 31, 2023

The Honorable James Gray
and the Senate Finance Committee
State House, Rm 103
Concord, New Hampshire 03301

RE: SB 122-FN-A relative to construction of a public pier on Hampton Beach and making an appropriation therefor.

Dear Chair Gray and Members of the Committee,

Please accept this testimony on behalf of the Department of Natural and Cultural Resources ("Department"), Division of Parks and Recreation ("Division") regarding SB 122 relative to construction of a public pier on Hampton Beach and making an appropriation therefor. We acknowledge the work of the bill sponsors and the Hampton Beach Area Commission ("HBAC").

Pursuant to RSA 216-J:1, the HBAC is established to assist the Town of Hampton and the State in the long-range planning for the Hampton Beach area by the implementation of the Hampton Beach master plan, including capital improvements and proposed land use developments. The HBAC conducted a feasibility and impact study for the construction of a pier on Hampton Beach, under Chapter 181, Laws of 2022 (SB346). The Feasibility Study was conducted by GEI Consultants Inc. and published on November 1, 2022 ("Study").

The primary purpose of the study "is to consider the feasibility of constructing a new pier on Hampton Beach for general public, ADA, mobility impaired and elderly access to the water over the beach, and to provide for passive recreational uses (fishing, viewing, etc.)" (see Study, p.1). The Study considered three locations for the construction of a new pier within Hampton Beach State Park and GEI conducted its assessment. The Study concluded in its Executive Summary:

"Continued implementation of a new pier at Hampton Beach will require further discussion regarding ownership/partnership interests and responsibilities to move the project forward through planning, funding, design development and permitting, construction and long operations / maintenance. This process is anticipated to take several years and involve various levels of participation from the State Legislature, State Agencies (DNCR, State Parks, Port Authority, DOT, DES), the Hampton Beach Area Commission, The Hampton Village District, Rockingham County, the Town of Hampton and other individual / group stakeholder interests" (see Study, p. 2).

The Division supports improvements across the park system to improve accessibility to the outdoors. Specifically at Hampton Beach State Park, the state has improved accessibility through the \$14.5 million redevelopment project in 2012, beach accessibility mats, and a beach wheelchair service.

While the State Park system is operationally self-funded, we rely on capital appropriations to support major improvements in reinvestment in the State's natural, cultural and recreation resources left to our continued stewardship. Over the last five biennium, the Division has requested \$58,837,500 of capital funds and received \$26,837,840 in capital support through state funds. Over the next three biennium, the Division has identified and requested \$115,478,150 for capital improvements. Hampton Beach State Park is one of the few parks that generates more revenue than expense, which supports other parts of the park system that are not self-supporting. While Hampton Beach is operationally self-sufficient, portions of its revenue are also contributing to fund the cost of the seawalls owned by the state which serve little to no recreational value and will continue to be a liability for the Division.

A pier may provide for an additional attraction that could increase visitation. However, as outlined in the feasibility study, further discussion is needed regarding ownership and partnership interests and responsibilities to move the project forward.

Whoever would be responsible for managing the pier would likely want to understand any ongoing operating costs, including repair and maintenance over the lifespan of the pier, in order to plan for future replacement and the revenue sources to support those costs. This is particularly important given the impact that winter storms have on structures along the seacoast. The Study states:

"Under current effective FEMA 100-Year flood predictions, the majority of the Hampton Beach area would be inundated, including most of the access roads to other parts of the Town of Hampton, and neighboring Hampton Falls, North Hampton and Seabrook. These current risks, along with potential increased flood risks from relative sea level rise and/or increased frequency and severity of coastal storms are something that has been studied extensively in the area and should remain a key consideration for future implementation of a new pier, in light of flood risks to the entire Hampton Beach area" (emphasis added, see Study, p. 61).

"Additionally, project stakeholders should continue to consider the implementation of the pier in light of the predicted coastal risks to the entire community. While the pier will be designed to accommodate a level of protection from coastal environmental risk factors and their predicted future changes, this level of risk protection may likely be above the potential risks to other parts of the Hampton Beach community, including existing beach facilities, adjacent properties, and access roads to and from Hampton Beach to points inland" (emphasis added, see Study, p. 69).

January 31, 2023
Chair Gray and the Senate Finance Committee
Page 3

Even today, the Division is working through the Division of Homeland Security and Emergency Management to access FEMA funds to help recover costs of seacoast storm damage that occurred on December 22-25, 2022. The cost of the damage along NH's seacoast is still being assessed. Under similar circumstances, the Portsmouth Herald reported that the Town of Ogunquit, ME, experienced extensive flood damage at Perkins Cove pier where the pier was "lifted up and torn from its pilings." The estimated cost of repair is \$285,000 (Portsmouth Herald, Jan. 12, 2023).

The feasibility study provided for a chapter titled *Comparable Pier Research*. While these comparisons provide some detail with respect to programmatic use, construction costs, ownership, and other factors, they also illustrate the unique challenges associated with piers that should be thoroughly considered before a pier is constructed. "In addition to the PAC input regarding a new pier at Hampton Beach, there was input from some of the PAC members questioning the need for a new pier at Hampton Beach." Additionally, other locations along the seacoast outside of Hampton Beach State Park were not assessed as they were outside of the legislative scope of the feasibility study.

In consideration of the multi-year process needed for this project, the appropriation of \$22 million for the biennium ending June 30, 2025, for the purposes of the Hampton Beach Pier construction will likely need to be extended beyond June 30, 2025.

Thank you for the opportunity to provide testimony on SB 122. Please let me know if I can provide any additional information.

Sincerely,



Brian J. Wilson
Director

C: Sarah L. Stewart, Commissioner, Department of Natural and Cultural Resources

BJW/ttd-013123



Link to Feasibility Study Hampton Beach New Pier

Debra Martone

From: Kevin Condict
Sent: Tuesday, January 31, 2023 1:04 PM
To: James Gray; Daniel Innis; Regina Birdsell; Howard Pearl; Jeb Bradley; Cindy Rosenwald; Lou D'Allesandro; Debra Martone
Cc: Debra Altschiller
Subject: FW: SB 122 Please submit as testimony and give a copy to Senator Rosenwald

Below I have forwarded Senator Altschiller's testimony for SB 122.

Kevin Condict
Aide to Senator Altschiller
603-271-3469

From: Debra Altschiller <Debra.Altschiller@leg.state.nh.us>
Sent: Tuesday, January 31, 2023 12:50 PM
To: Kevin Condict <Kevin.Condict@leg.state.nh.us>
Subject: SB 122 Please submit as testimony and give a copy to Senator Rosenwald

January 31, 2023

Senate Finance Committee

Testimony in opposition to SB 122

Senator Debra Altschiller, District 24

Thank you Chairman Grey and Honorable Committee members.

My name is Debra Altschiller and I represent Senate District 24 which includes the towns of Exeter, Greenland, Hampton, Hampton Falls, North Hampton, Rye & Stratham. I'm not in full opposition to SB 122, I think there is a considerable amount of work to be done before the state invests \$22 million taxpayer money on a project that has yet to be comprehensively presented to or discussed with the community that would be primarily impacted, Hampton.

I am a resident of Stratham and a weekly visitor to Hampton Beach and the very short shoreline of the Atlantic seacoast. Ocean air soothes the soul. Like many multigenerational families who are drawn to the ocean for recreation, entertainment and we are varying mobilities. I can unload and unfold a walker or a wheelchair in 90 seconds or less. I am not unfamiliar with the beach or the challenges of public accessibility.

In (2021) New Hampshire embarked on a feasibility study enabled by SB 346 passed in 20000 and enacted on June 13, 2022, the study from that was published on October 28, 2022. I have reviewed the study and was struck by the absence of a conclusion. Where in the feasibility study was the **assessment of the necessity or practicality of this project** or a conclusion that the project is needed?

- On pages 3 & 4 the membership of the Pier Advisory Committee is noted, Appendix A addresses some of the topics discussed in meetings, nowhere is the necessity of a pier discussed. It appears the committee operated from a place of forgone conclusion.
- Page 6 notes that Hampton Beach is only 8,000 feet. This is important as many comparisons are made throughout the report to beaches on both coasts that are far longer than NH State Park Beach. Paragraph four outlines the handicapped accessibility for the beach and amenities currently in use.
- Page 31 of the study, (4.1.1 Needs) only discusses potential uses of a pier, no evaluation of need is assessed. Additionally the introduction of accommodating recreational boaters and potentially cruise ships at Hampton beach is noted. This is a drastic change to the beach's current use and needs much more discussion.
- The concern for handicapped access is not reflected in any parking proposals. Page 34 begins by noting there is no public parking immediately adjacent to the seawall and beach. The public parking currently available is blocks away and only allots 2 spaces close to the pier.

- Page 60 begins to address the threats of Sea Level Rise, Coastal Storms and Coastal Flooding. This is a significant problem for the Hampton community and needs much more discussion.

Some issues I have after reading the document submitted by GEI Consulting Engineers and Scientists. *

- The study notes only 10-15 people fish on the beach side at any one time. Hampton is a swimmer's beach and is only 8,000 feet long. Fishing is done on the river not the beach which has a new project underway for accessibility underway.
- Residents of Hampton, who will be most impacted by a multi-year project (and are already about to begin living with the new bridge project about to begin) from one of the proposed sites, particularly Little Boars Head, should be part of this discussion.
- The argument that the pier is needed to provide handicapped access to the beach ignores any other accessibility options to the water and in reality would be 25-30 feet above the water.

A proposed pier may be the next greatest thing to happen for New Hampshire State Parks. Currently though, a \$22 million expenditure is premature and needs more discussion. Respectfully I ask the committee to table this proposal so the state and local community may have more time to consider the necessity and impact of this project.

Thank you

Debra Altschiller (she/her)

State Senator, District 24

Exeter, Greenland, Hampton, Hampton Falls, North Hampton, Rye & Stratham





Consulting
Engineers and
Scientists

Feasibility Study Hampton Beach New Pier

Hampton, New Hampshire

Submitted to:

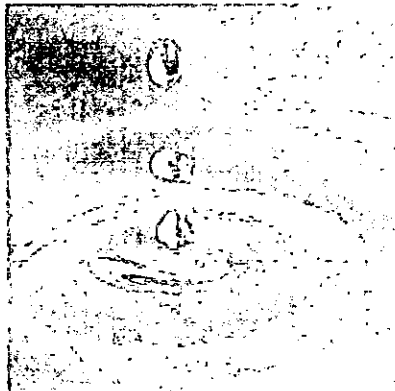
Hampton Beach Area Commission
100 Winnacunnet Road
Hampton, NH 03842

Submitted by:

GEI Consultants, Inc.
5 Milk Street
Portland, ME 04101
207.797.8901

October 28, 2022
Project 2202415

Daniel B. Robbins, P.E.
Sr. Project Manager



Travis Pryor, RIA / LEED-AP
Sr. Project Manager

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DBR/TJP:bdp

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Executive Summary

The New Hampshire State Legislature has commissioned a Feasibility Study that evaluates various options for a new public pier on Hampton Beach, south of Boars Head in the Town of Hampton, New Hampshire. Currently, there is no pier on Hampton Beach. The New Hampshire Department of Natural and Cultural Resources (DNCR) is administering the project funding and the project is being led by the Hampton Beach Area Commission (HBAC). HBAC has organized a Pier Advisory Committee (PAC) to provide input to GEI Consultants Inc. (GEI) who is undertaking the Feasibility Study.

The primary purpose of the study is to consider the feasibility of constructing a new pier on Hampton Beach for general public, ADA, mobility impaired and elderly access to the water over the beach, and to provide for passive recreational uses (fishing, viewing, etc.)

The proposed locations for the pier considered three primary areas along Hampton Beach.

- Area 1 - The north end of Hampton Beach, from the area just south of Boars Head to the NH Marine Memorial, where Ocean Boulevard (Route 1A) transitions from two-way travel to one-way routes including Ashworth Avenue (southbound) in addition to Ocean Boulevard (northbound).
- Area 2 - The middle of Hampton Beach, from the NH Marine Memorial south to Hampton Beach State Park.
- Area 3- The area of Hampton Beach in front of Hampton Beach State Park to the United State Army Corps of Engineers stone jetty and the Hampton River.

(See Appendix B – 02 – Pier Location Map)

The Feasibility Study was informed by a variety of readily available existing site conditions data, concurrent infrastructure and environmental planning studies, implementation initiatives, input from PAC, and technical assessment by GEI. The project background technical assessment information was used to develop alternative implementation options for a new pier at Hampton Beach. This assessment is described in the Feasibility Study report and includes supporting base mapping, conceptual plans, and implementation cost estimates. Comparison of the alternatives developed include review of advantages and disadvantages of pier types, locations, operations and maintenance needs, regulatory impacts, and concept level implementation costs. The alternatives were presented to the PAC for prioritization of preferred options for consideration moving forward.

In addition to the PAC input regarding a new pier on Hampton Beach, there was input from some of the PAC members questioning the need for a new pier at Hampton Beach. Some members of the PAC also suggested the potential to locate a new pier on Town's Bicentennial Park property at the north end of North Beach. This input from the PAC was received by GEI as part of this Feasibility Study, however, these options were not assessed further as they are outside of the State Legislature's Feasibility Study scope of work.

The Feasibility Study for a new pier on Hampton Beach is an initial step in the planning and implementation process.

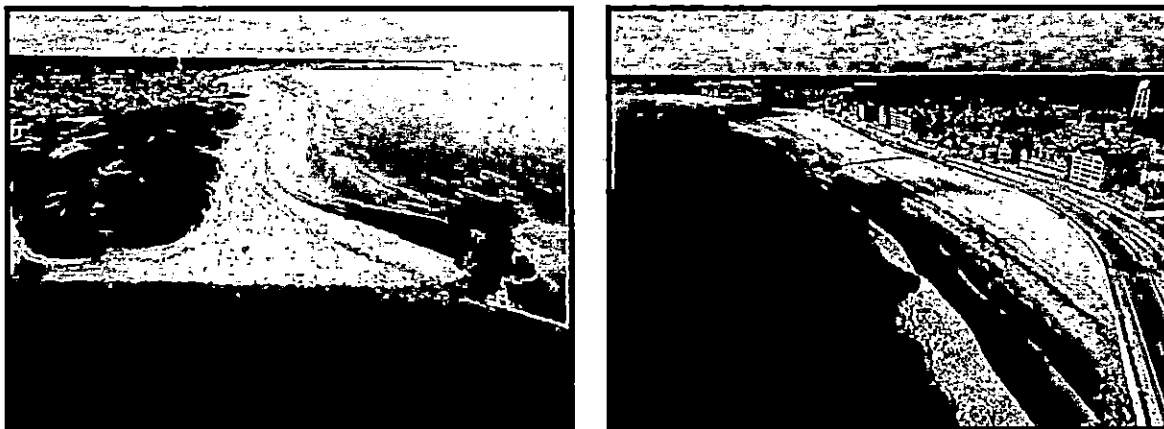
Continued implementation of a new pier at Hampton Beach will require further discussion regarding ownership/partnership interests and responsibilities to move the project forward through planning, funding, design development and permitting, construction and long operations / maintenance. This process is anticipated to take several years and involve various levels of participation from the State Legislature, State Agencies (DNCR, State Parks, Port Authority, DOT, DES), the Hampton Beach Area Commission, The Hampton Village District, Rockingham County, the Town of Hampton and other individual / group stakeholder interests.



Fig. 1 – Portion of 01 – Overview Map

1. Project Background

During June of 2022, State Senate Bill 346-FN-A was passed, directing the HBAC to study the feasibility and impact of building a pier south of Boars Head on State Lands at Hampton Beach in the Town of Hampton, NH. This Feasibility Study is an initial planning step that reviews opportunities and constraints associated with constructing a public pier at Hampton Beach, based on high level discussions about the possibilities of providing this public asset.



Views from South and North Ends of the Hampton Beach Study Area

1.1 Pier Advisory Committee

This Feasibility Study was assisted with guidance and input from the Pier Advisory Committee (PAC). The PAC represented a diverse group of local, regional, and state stakeholder interests at Hampton Beach. The following is a list of all PAC members and their respective roles / interests in the project:

Pier Advisory Committee Member	Role / Interest
Bob Preston	PAC Chair / HBAC Chamber of Commerce Representative / Business Owner / Resident
Alex Loiseau	Hampton Beach Village District / HBAC Village District Representative / Hampton Planning Board / Resident
John Nyhan	Hampton Area Chamber of Commerce
Susan Whicher	Mobility Restricted / Resident

Pier Advisory Committee Member	Role / Interest
Gordon Whicher	Resident
Skip Windemiller	Resident / Business Owner / Hotel Owner / Real Estate (Prior Master Plan Committees, Betterment Committees & HBAC)
Bob Ladd	Hampton Beach Village District / Town Budget Committee
Jim O'Loughlin	Resident
Dave Hobbs	Hampton Police Chief
Keith Lassard	Resident / Hampton Planning Board
Ben Moore	Resident / Hampton Historical Society Trustee
Breanna O'Brien	Hampton Conservation Coordinator
Mike McMahon	Hampton Fire Chief
Tobey Reynolds	NH DOT Project Manager - Ocean Boulevard Project
Meggan Hodgson	Vice Chair of NH Fish & Game Commission Representing Rockingham County
Rene Boudreau	Hampton Recreation Director
Joseph Desmarais	Recreational Fisherman / Mobility Impaired
Geno Marconi	NH Port Authority Director
Patrick Murphy	NH State Beach Patrol, Ocean Lifeguards Chief
Meredith Collins	NH State Parks, Seacoast Region Supervisor
Pat Collins	Resident
Steve LaBranche	Hampton Beach Village District / Resident / CHAT Member (Coastal Hazards Adaptation Team)
Richard Roy	Resident / Business Owner

1.2 Project Approach

To assist in the technical assessment of constructing a new pier on Hampton Beach, GEI's project approach included the following:

- Review of Existing Site Information.
- Facilitation of a Kickoff Meeting with the PAC.
- On-site Inspections.
- Data Research and Assembly of Base Mapping Materials.
- Development of Written Design Basis Findings and Recommendations.
- Development of Conceptual New Pier Design Options.
- Development of Planning Level Implementation Cost Estimates.

During the development of the Feasibility Study, GEI's assessment identified and prioritized options for a new pier on Hampton Beach, with support from the PAC that focused on the following six (6) primary design considerations:

- Pier Use (Needs and Capacity).
- Pier Location (Orientation and Alignment).
- Pier Access (Shore, Beach, and Water).
- Pier Type (Materials, Costs, Life Expectancy, and Operations and Maintenance).
- Site Improvements (Grading, Utilities, Restrooms, and Parking).
- Environmental (Regulations, Physical Conditions, and Potential Coastal Risks).

This Feasibility Study is intended to provide technical information to help the project partners identify and prioritize goals to move forward with implementation of a new pier on Hampton Beach.

GEI's Feasibility Study approach focused on proposed alternatives that assessed the feasibility of providing new pier access to the coast for the entire community, and for all physical abilities, while taking into account the vulnerability of the existing Hampton Beach coastal landscape and infrastructure.

2. Existing Site Description

Hampton Beach is an approximate 8,000-foot-long public beach in Hampton, New Hampshire located along Ocean Boulevard, between Boars Head and the Hampton River. Hampton Beach is part of the New Hampshire State Parks system and is open to the public year-round, with seasonal recreation opportunities including swimming, fishing, and camping at Hampton Beach State Park on the southern end of the beach. The beach varies in width from 100 to 300 feet during high tide, to over 500 feet during low tide.

Hampton Beach consists of two distinct areas. The southern end of Hampton Beach includes the Hampton Beach State Park Campground with sand dunes in between and the Hampton River with bordering stone jetty. The middle and northern beach includes mixed use commercial and residential development and Ocean Boulevard abutting, a sidewalk, seawall and State operated facilities (Bathing facilities locker rooms, restrooms, park store, first aid, visitor's center information, a playground, parking, shade shelters, the NH Marine Memorial and other site amenities.

Some of the main attractions of Hampton Beach include the Seashell Oceanfront Pavilion, hotels, restaurants, and events such as the Sand Sculpture Event, the Seafood Festival, and many other community activities including: fireworks; summer concerts; events at the nearby Casino Ballroom; and movie nights on the beach.

Hampton Beach is accessed from the State Park campground area by at-grade sand paths through the sand dunes. The rest of the Hampton Beach is accessed from twenty-five (25) points between Ocean Boulevard, beach side parking, sidewalks, a seawall and the beach. These access points are mostly concrete staircases, with five (5) locations having ADA accessible ramp access to the beach.

In recent years, improvements have been made to the State's Hampton Beach facilities. In 2009, \$14.5 million was allocated to the redevelopment of the Hampton Beach State Park. Two new bathhouses and a new Seashell building complex were completed in 2012. The Seashell building complex includes public bathhouse facilities (both within the Seashell building and in a standalone building adjacent), shade shelters, ADA access to the beach, a performance pavilion, state park staff offices and conference space, and lifeguard equipment storage and staff operations space, and third floor observation of the entire beach,

The beach receives routine maintenance including grading the beach after the winter storms to prepare for the summer beach season. The grading reduces depressions in the sand from storms, reduces rip currents, removes artificial dunes, and levels the beach to restore ADA access from when the sand piles up on the ramps.

Life safety operations are provided by both the State Park lifeguards and the Town Police and Fire Departments.

The Town's emergency services operate a Polaris 6x6 all-terrain vehicle (ATV) and a Ford 550 Ambulance with an approximate load 6 to 7 tons. Ambulance access to the pier would be helpful, but the Town can perform rescues utilizing the smaller ATV if needed. The ATV is more likely to traverse the beach and has an approximate height of 7 feet. The Ambulance has an approximate height of 10 feet.

The State has four (4) beach rescue ATVs and two Sea-Doo jet skis. The beach rescue ATVs include:

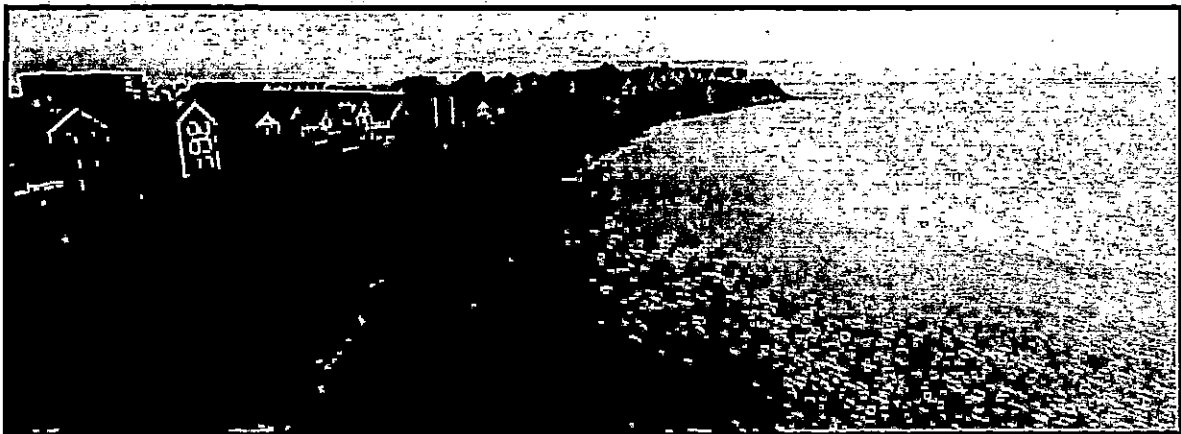
- Two (2) Honda Rubicon TRX 500
- One (1) Honda Pioneer 1000
- One (1) Polaris Ranger Crew 1000

These ATVs with roof racks and loaded surfboards, have a maximum height of approximately 10 feet. The State would like to add a truck with equipment and lights and estimate that it would need 10 to 12 feet of vertical clearance.

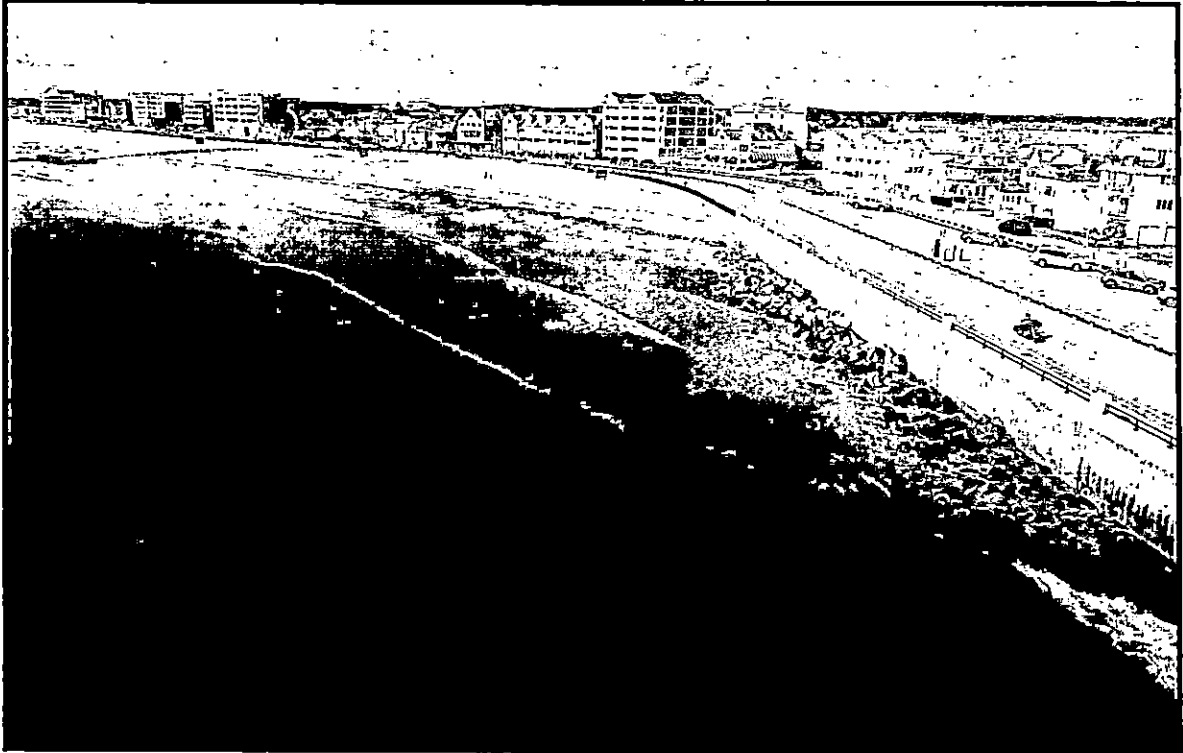
A tractor with beach rake is also used by the State for routine beach grading maintenance.

A stone groin and rock outcrops are present at the north end of the beach, which gradually disappears as Ocean Boulevard curves eastward towards Boars Head and becomes a rocky shore.

In addition to intensive human use during the summer (upwards of 100,000 people on a given day), Piping Plovers, and Gray and Harbor Seals are present, mostly commonly found at the north and south ends of the beach.



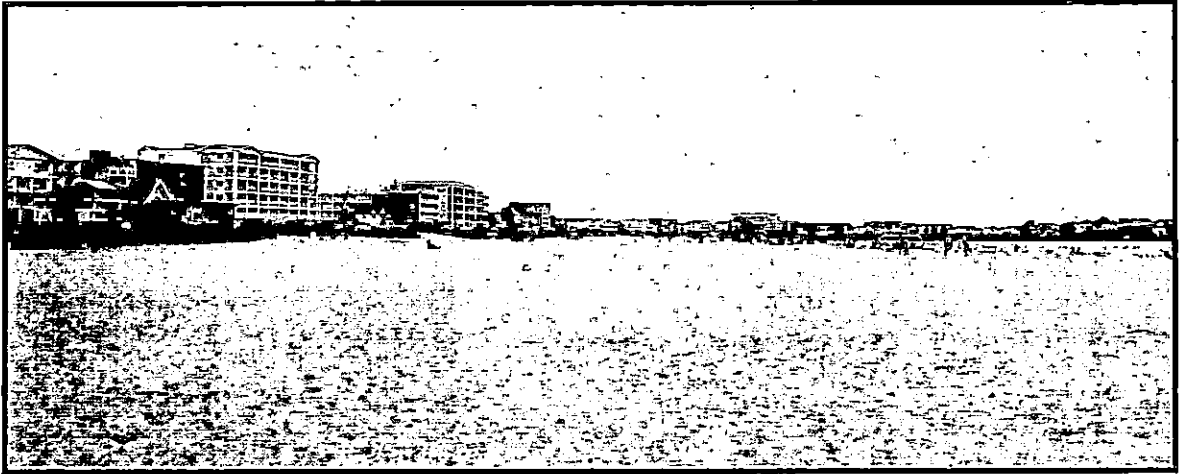
Pier Location Area 1 (North End) Looking at East at Boars Head



Pier Location Area 1 (North End) Looking South



Pier Location Area 2 (Middle) Looking South



Pier Location Area 2 (Middle) Looking North Seashell



Pier Location Area 2 (Middle) Looking South From Seashell



Pier Location Area 2 (Middle) Looking North from State Park



Pier Location Area 3 (State Park) Looking South



Pier Location Area 3 (State Park) Looking North



Pier Location Area 3 (State Park) Looking East at Jetty Along Hampton River

2.1 Soil Properties

The existing soil strata at Hampton Beach which can be found along the beach consists of three main areas. The majority of the soil is classified as “Urban Land – Hoosic complex, 3 to 15 percent slopes.” The area in the middle of the beach around the Seashell building is classified as “Urban Land”. The area near the state park is classified as “Udorthents, smoothed.” The northern portion of the beach, intertidal zone and seabed, as well as the shoreline around Boars Head has large areas of shallow bedrock, large stone cobbles and ledge outcrops, as observed by GEI. The varying location of bedrock will impact the depth that piles can be driven and the potential need for rock sockets/anchors.

After additional planning and preferred pier location, type and geometry are selected to move forward with detailed design, it is recommended that a subsurface geotechnical investigation program be performed to document the existing local subsurface geotechnical conditions. The investigation will be necessary to identify depth to rock in which will influence design of the pier piles, as well as aid in making more refined design decisions on the pier placement and alignment at the preferred location.

(See Appendix B – Figure 8 – Soils and Surficial Geology Map)

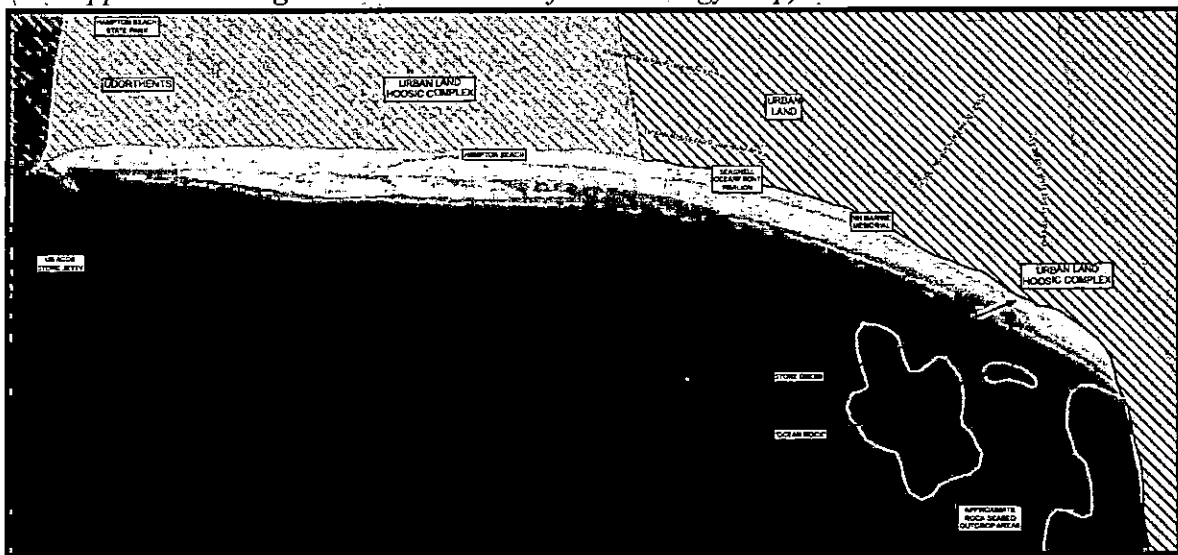


Fig. 2 – Portion of 02 - Soils and Surficial Geology Map



Stone Groin and Ledge Outcrops at North End of Beach

2.2 Land Use Development / Town Zoning and Ordinances

The Hampton beach area is comprised of a mix of residential, commercial and governmental development. The State of New Hampshire owns and operates the State Park and Hampton Beach (including the seawall). NH DOT is responsible for Ocean Boulevard and Ashworth Avenue (Route 1A), Highland Avenue and Church Street (Route 101), as well as the Hampton River Bridge. The middle of the area long Hampton Beach is predominantly commercial / retail, with the surrounding areas comprised of a mix of single-family residences, condominiums, rental units and hotels.

(See Appendix B – Figure 7 – Land Use Map)



Examples of Existing Development Adjacent to Hampton Beach

The Town has a police station and municipal parking. The majority of the beach is located in the Town of Hampton zone BS, Business Seasonal. A small portion of the beach area from Haverhill Ave to Epping Ave is located in RB, Residence B. Lastly, the state campground is located in zone G, General. Construction of the pier within these zones would comply with town zoning and ordinances.

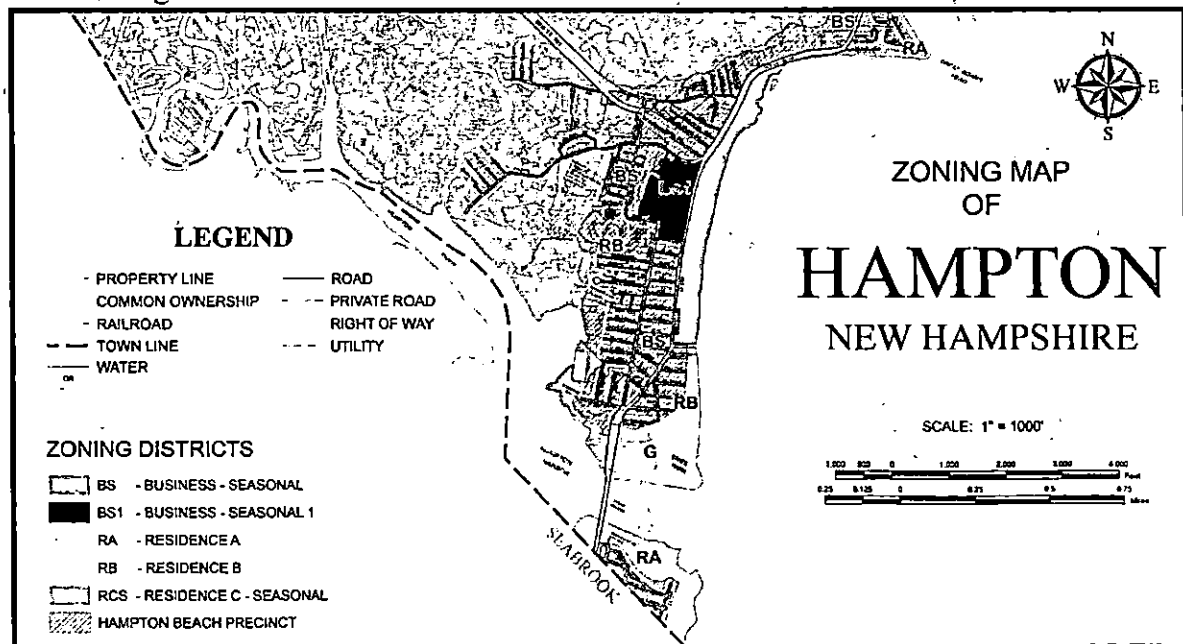


Fig. 3 – Portion of Town of Hampton Zoning Map

2.3 Site Surveys

The Feasibility Study was informed by the following sources of site survey information:

- Visual site inspection was performed by GEI during August 2022.
- Drone aerial survey was performed by GEI during September of 2022.
- 2018 topographic and bathymetric data was obtained from U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration and U.S. Geological Survey's Interagency Working Group-Ocean and Coastal Mapping efforts.
- Additional project area redevelopment plans were reviewed by GEI including:
 - NH DOT Ocean Boulevard
 - DNCR Hampton Beach Redevelopment Project

(See Appendix B – Figure 5 – Topography/Bathymetry Map)

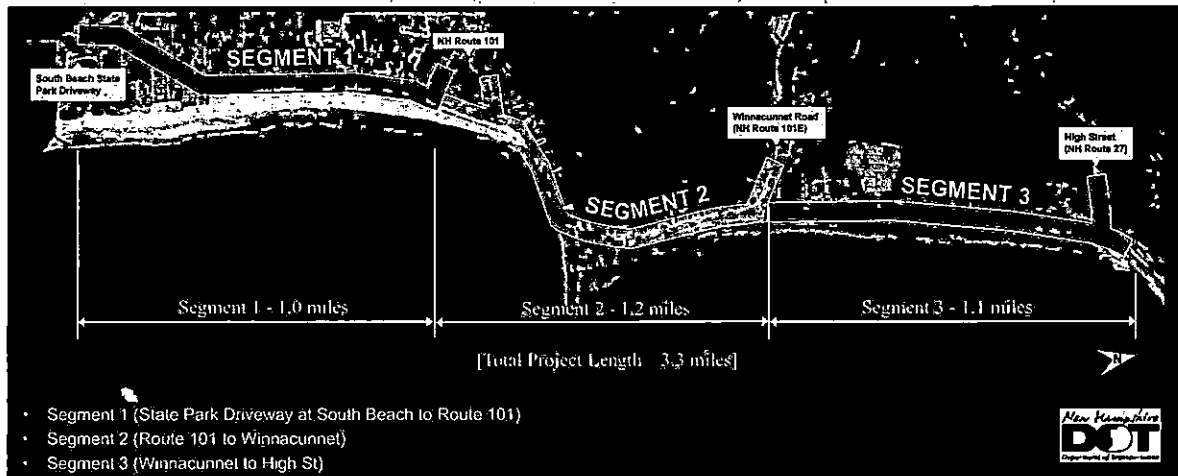


Fig. 4 – Portion of NH DOT Ocean Boulevard Concept Plan Dated May, 2022



GEI Site Visit with PAC and GEI Drone Survey

3. Wind and Wave Analysis

GEI performed a comprehensive wind and wave analysis for the proposed Hampton Beach Pier to estimate wave climate at the site. Nearshore significant wave heights were estimated by developing a Steady-State Spectral Wave (STWAVE) model for Hampton Beach to transform offshore wind and wave conditions to nearshore values. STWAVE is a model developed by the U.S. Army Corps of Engineers (USACE) to simulate depth-induced wave refraction and shoaling, diffraction, and wind-wave growth (USACE, 2011). The model development, boundary conditions, and results are discussed in the following subsection.

3.1 Water Levels and Currents

Water elevations for the site were obtained from NOAA Tidal Benchmark Station ID #8423898 in Fort Point, NH which is the closest active tidal station to Hampton Beach. The tidal datums are shown in **Error! Reference source not found.** and are relative to NAVD88 (ft) datum.

Table 1. Tidal Datums

Tidal Datum	Abbrev.	1983-2001 Tidal Epoch
		NAVD88 (ft)
Sea Level Rise (2120)	SLR 2120	23.90
Sea Level Rise (2070)	SLR 2070	21.50
Base Flood Elevation	BFE	18.00
Highest Observed Tide	HOT	7.38
Highest Astronomical Tide*	HAT*	6.53*
Mean Higher-High Water	MHHW	4.39
Mean High Water	MHW	3.97
North American Vertical Datum of 1988	NAVD88	0.00
Mean Sea Level	MSL	-0.31
Mean Low Water	MLW	-4.66
Mean Lower-Low Water	MLLW	-5.00

*Proposed for 5/19/2034. The present HAT values are based on the time period of 2000-2040

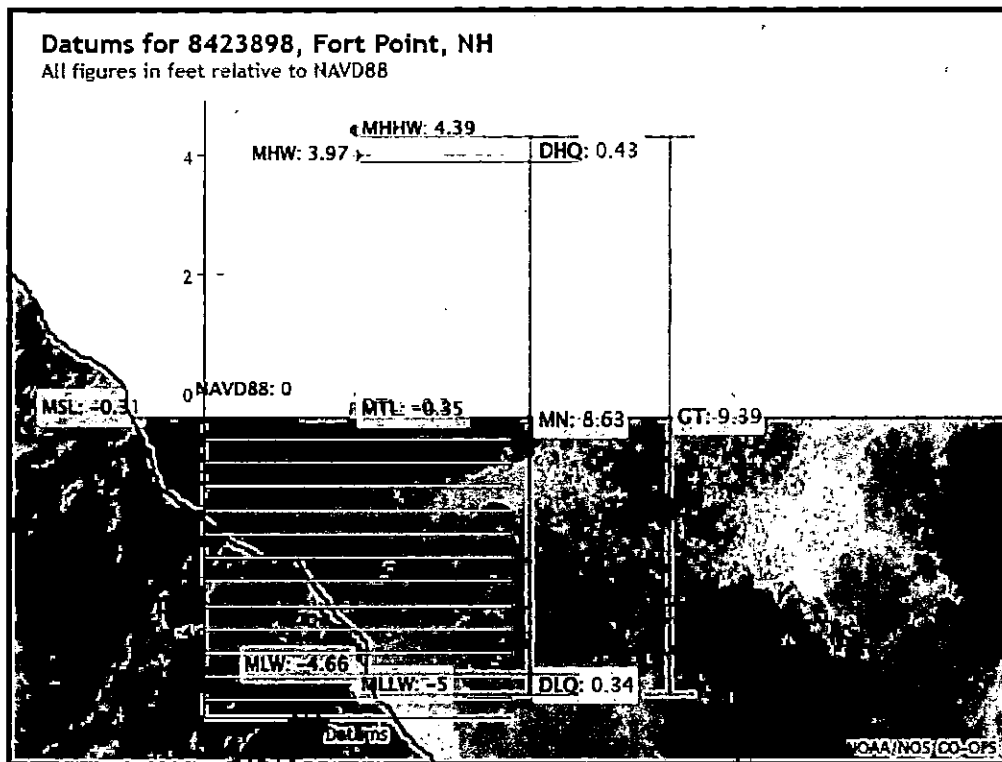


Fig. 5 – Tidal Datums Diagram from NOAA

No current station data was available at Hampton Beach State Park. Discussions with life safety personnel indicate that moderate rip currents can occur parallel to the shoreline. Due to this condition swimmers are requested to only swim chest deep.

The 1% annual chance (“100-yr”) stillwater level (SWEL), or the flood level not including the effects of waves, near Hampton Beach was taken from the Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) for Rockingham County, New Hampshire (FEMA, 2021). The 100-yr SWEL was listed as 8.36 ft near the site.

Sea level rise estimates were taken from “Step 4” of the “NH Coastal Flood Risk Summary Part II: Guidance”. Estimated SWEL values for future timeframes given predicted sea level rise amounts are provided in Table 2 below.

Table 2. Stillwater Levels Adjusted for Sea Level Rise

Year	Present Day “100-yr” SWEL (ft)	RCP 4.5 RSLR (ft)	Future “100-yr” SWEL (ft)
2050	8.36	1.6	10.0
2070	8.36	2.5	10.9

Year	Present Day "100-yr" SWEL (ft)	RCP 4.5 RSLR (ft)	Future "100-yr" SWEL (ft)
2100	8.36	3.8	12.2
2120	8.36	4.9	13.3

Notes: RSLR: Relative Sea Level Rise
 RCP 4.5 taken from the New Hampshire Coastal Flood Risk Summary

3.1.1 Design Elevations

The proposed pier is located within AE and VE flood hazard zones on FEMA Flood Insurance Rate Maps (FIRM). (See Section 7 – Climate Change, Resiliency and Risk)

The equations used to calculate the relative sea level rise adjusted design flood elevation were taken from "Step 4" of the "NH Coastal Flood Risk Summary Part II: Guidance" (source). Shown below in Table , as part of "Step 2" of the guidance, the proposed pier would fall into a level 2 ASCE flood design class. This conclusion came from the structural characteristics having moderate sensitivity to inundation as well as the structural materials being designed to be flooded.

Table 3 on the following page shows the predicted design flood elevation adjusted with relative sea level rise in VE Zone (18) from FEMA Flood Insurance Rate Map for the worst-case scenario flood level along Hampton Beach. By 2070, the adjusted design flood elevation is approximately 21.5 feet and by 2120, the adjusted design flood elevation is approximately 23.9 feet (NAVD88).

Table 3. Relative Sea Level Rise Predictions in VE Zone (18) in NAVD88

VE Zone (18)				
Year	RCP 4.5 RSLR (ft)	BFE from FIRMette (ft)	Required Freeboard (ft)	RSLR adjusted DFE (ft)
2050	1.6	18	1	20.6
2070	2.5	18	1	21.5
2100	3.8	18	1	22.8
2120	4.9	18	1	23.9

RSLR: Relative Sea Level Rise
 RCP 4.5 can be found in the New Hampshire Coastal Flood Risk Summary (2020)
 BFE: Base Flood Elevation
 DFE: Design Flood Elevation

Table 4. Framework for Determining Project Tolerance for Flood Risk from the New Hampshire Coastal Flood Risk Summary (2020)

STEP 2 TABLE. FRAMEWORK FOR DETERMINING PROJECT TOLERANCE FOR FLOOD RISK.					
		HIGH TOLERANCE FOR FLOOD RISK	MEDIUM TOLERANCE FOR FLOOD RISK	LOW TOLERANCE FOR FLOOD RISK	VERY LOW TOLERANCE FOR FLOOD RISK
DESCRIPTION		Decision makers have a High tolerance for flood risk to the project	Decision makers have a Medium tolerance for flood risk to the project	Decision makers have a Low tolerance for flood risk to the project	Decision makers have a Very Low tolerance for flood risk to the project
POSSIBLE PROJECT CHARACTERISTICS <i>Tolerance for flood risk will depend on the mix and importance of these project characteristics.</i>		Low value or cost	Medium value or cost	High value or cost	Very high value or cost
		Easy or likely to adapt	Moderately easy or somewhat likely to adapt	Difficult or unlikely to adapt	Very difficult or very unlikely to adapt
		Little to no implications for public function and/or safety	Moderate implications for public function and/or safety	Substantial implications for public function and/or safety	Critical implications for public function and/or safety
		Low sensitivity to inundation	Moderate sensitivity to inundation	High sensitivity to inundation	Very high sensitivity to inundation
PROJECT EXAMPLES	PLANNING	Updating a local master plan Developing a capital improvement plan			
	REGULATORY	Updating a floodplain zoning ordinance Updating a subdivision site plan regulation Updating state alteration of terrain rules			
	SITE-SPECIFIC	Designing a walking path; Siting a temporary or accessory structure; Upgrading a minor storage facility	Replacing a local culvert; Constructing a residential, commercial, or industrial building	Maintaining a school; Siting a community center or recreational facility; Upgrading a wastewater treatment plant	Renovating a hospital or police/fire station; Siting an emergency shelter or response center; Repairing a power station
CORRESPONDING ASCE 24-14^{14,15} FLOOD DESIGN CLASS		1	2	3	4
RECOMMENDED COASTAL FLOOD RISK PROJECTIONS		Lower magnitude, Higher probability	←————→		Higher magnitude, Lower probability

3.2 Wind Conditions

The wind climate data was based on the closest regional weather station located at PEASE Air Force Base in Newington, New Hampshire. The data was processed using cli-MATE, a software provided by the Midwestern Regional Climate Center (MRCC) and data from the Climate Data Access Portal (Cli-DAP) and is maintained by the NOAA Regional Climate Centers (RCCs). Data was also used from the Northeast Regional Climate Center using data from the Applied Climate Information System (ACIS). The Portsmouth/Pease AFB station has the closest and longest duration wind data to Hampton Beach, dating back to 1956.

A 16-point wind rose was created to summarize the direction that has the most significant wind speeds and percentage of occurrence for wind speed and directions. The data output is shown in “percentage” of observations. They are shown in MPH and are mean wind speeds based on hourly data. Winds come primarily from the west and west-northwest directions with an average speed of 10.4 MPH in the west-northwest direction and 9 MPH in the west direction. Wind direction is typically offshore however varies seasonally. During the winter months wind direction is from the northwest while the winds shift to a south-southwest direction during the summer months.

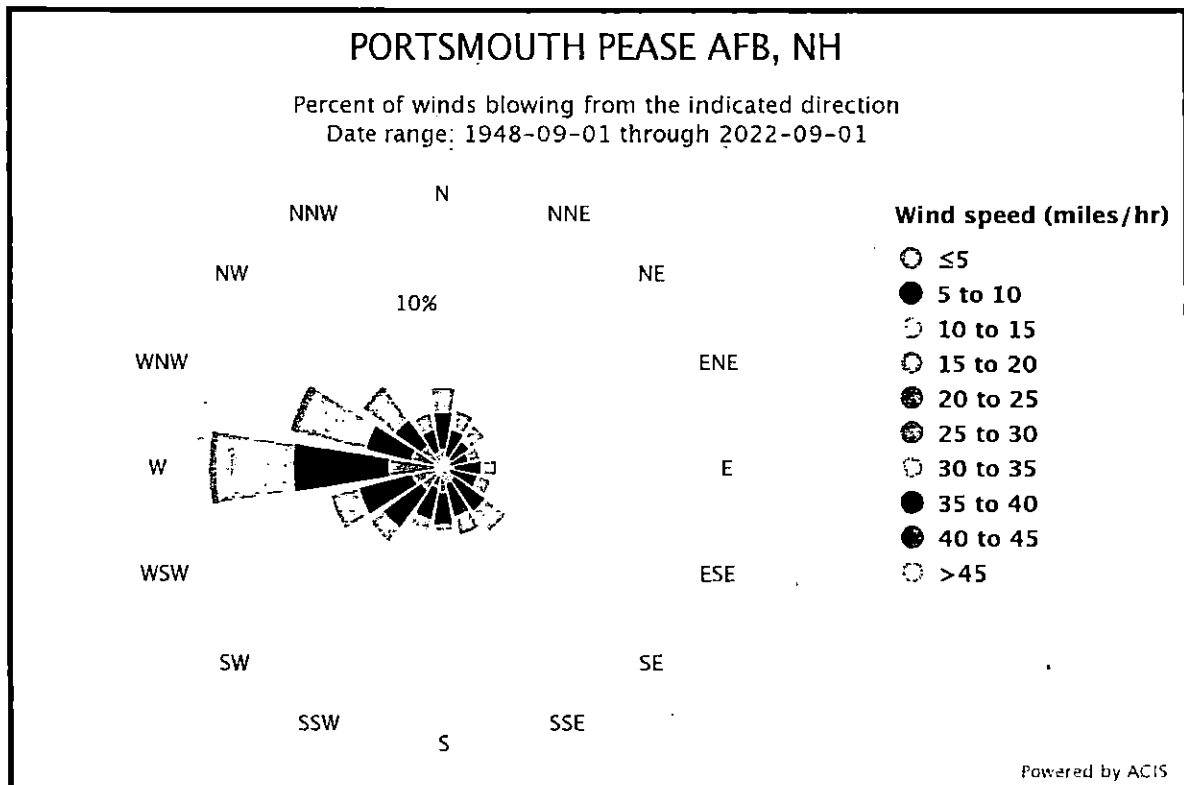


Fig. 6 – Wind Rose (Northeast Regional Climate Center)

Table 5. Wind Frequency Table "Counts"(cli-MATE)

PORTSMOUTH PEASE AFB, NH Wind Frequency Table (percent)												
Wind Direction (compass)	≤5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 to 45	>45	All speeds	Average speed
NNE	0.8	1.7	1.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	3.8	8.8
NE	0.7	1.4	1.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	3.4	9.4
ENE	0.6	1.1	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	2.6	8.7
E	0.8	1.7	0.9	0.1	0.0	0.0	0.0	0.0	0.0	0.0	3.5	8.1
ESE	0.6	1.7	0.8	0.1	0.0	0.0	0.0	0.0	0.0	0.0	3.2	8.2
SE	1.0	2.4	1.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	5.2	8.7
SSE	1.1	2.1	1.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	4.5	8.3
S	1.7	2.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.2	6.3
SSW	1.4	2.0	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	4.2	7.1
SW	1.8	3.0	1.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	6.1	7.3
WSW	2.1	3.6	1.5	0.3	0.1	0.0	0.0	0.0	0.0	0.0	7.5	7.7
W	3.6	6.2	3.9	1.1	0.4	0.1	0.0	0.0	0.0	0.0	15.2	9.0
WNW	2.2	3.0	3.2	1.3	0.5	0.1	0.0	0.0	0.0	0.0	10.3	10.4
NW	1.8	2.0	1.7	0.7	0.3	0.1	0.0	0.0	0.0	0.0	6.6	9.6
NNW	1.1	1.4	0.8	0.2	0.1	0.0	0.0	0.0	0.0	0.0	3.7	8.4
N	1.3	2.3	1.2	0.3	0.1	0.0	0.0	0.0	0.0	0.0	5.2	8.4
Vrb	3.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.9	3.7
Calm	-	-	-	-	-	-	-	-	-	-	6.8	-

Based on a total of 225,168 hourly observations; 423,528 missing.
 Date range: 1948-09-01 through 2022-09-01.
 Wind speed bins (miles/hr) include values greater than the lower end of the interval range and less than or equal to the upper end.

©2022 Northeast Regional Climate Center

Table 6. Wind Frequency Table "Percent" (Northeast Regional Climate Center)

PORTSMOUTH PEASE AFB (NH) - Wind Frequency Table (counts)																	
Range (mph)	Sub Interval Windows																Total
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1.3 - 5	7612	4782	4376	3623	4716	3680	5806	6890	9430	7361	10794	13020	21161	11569	9877	7012	131709
5 - 10	11667	8634	7263	5372	7842	7472	11423	10521	9631	8946	15012	17403	29834	15834	11735	8341	186930
10 - 15	6189	5374	5272	3470	4058	3359	6440	5673	2662	3388	6217	7274	18563	15779	11155	4972	109845
15 - 20	1526	1338	1319	888	601	336	912	1190	356	529	772	1375	5650	6895	5043	1545	30275
20 - 25	318	354	445	324	176	87	184	267	72	85	117	348	1861	2455	1796	485	9374
25 - 30	65	90	156	119	91	46	66	68	22	13	34	84	530	651	479	110	2624
30 - 35	5	6	32	22	10	10	12	4	1	0	2	12	45	66	50	12	289
35 - 40	0	2	5	1	1	3	2	4	0	0	0	1	6	7	2	1	35
40 -	0	1	2	0	1	0	1	0	0	0	1	1	1	0	3	0	10
Total	27382	20581	18870	13819	17496	14993	24846	24617	22174	20322	32949	39518	77650	53259	40137	22478	471091
Calm (<1.3)																	63131
Ave Speed	8.2	8.8	9.1	8.8	8.1	7.9	8.3	8.1	6.5	7.1	7.3	7.5	8.8	10.3	10.1	8.4	7.5

Midwestern Regional Climate Center cli-MATE: MRCC Application Tools Environment Generated at: 9/1/2022 11:27:49 AM CDT

3.2.1 Extremal Wind Analysis

An extremal wind analysis was undertaken to determine 1% annual chance wind velocities near the site. Wind data for this analysis was taken from the USACE Wave Information

Study (WIS) Station ST63045 (USACE, 2019). The 1% annual chance wind velocity was calculated using 39 years' worth of "Online" data, from 1980 to 2019, from USACE WIS Station ST63045. Extreme values were estimated using a Peaks-Over Threshold (POT) analysis, as described by Goda (2000). The POT analysis combines three theoretical extreme value probability distribution functions used to fit the sample of data: the Fisher Tippet Type I (Gumbel) distribution, the Fisher Tippet Type II (Frechet) distribution, and the Weibull distribution. The distribution with the highest correlation was used for the results. Wind velocity data from ST63045 was ranked and filtered to have only one event per 48-hr period to reject duplicate storms as outlined in Melby et al. (2012). A threshold value of 38 mph (17 m/s) was used for the analysis to capture significant extreme events and to optimize curve fitting (FEMA, 2016). The Weibull distribution had the highest correlation of best-fit, r^2 , value of 0.984, for a 1% annual chance wind speed of 59.1 mph.

A wind rose was generated for this site based on the 39 years' worth of available data. The data is in meters per second (m/s) and shows the wind direction generally from the west, but primarily ranging from the south-southwest to northwest.

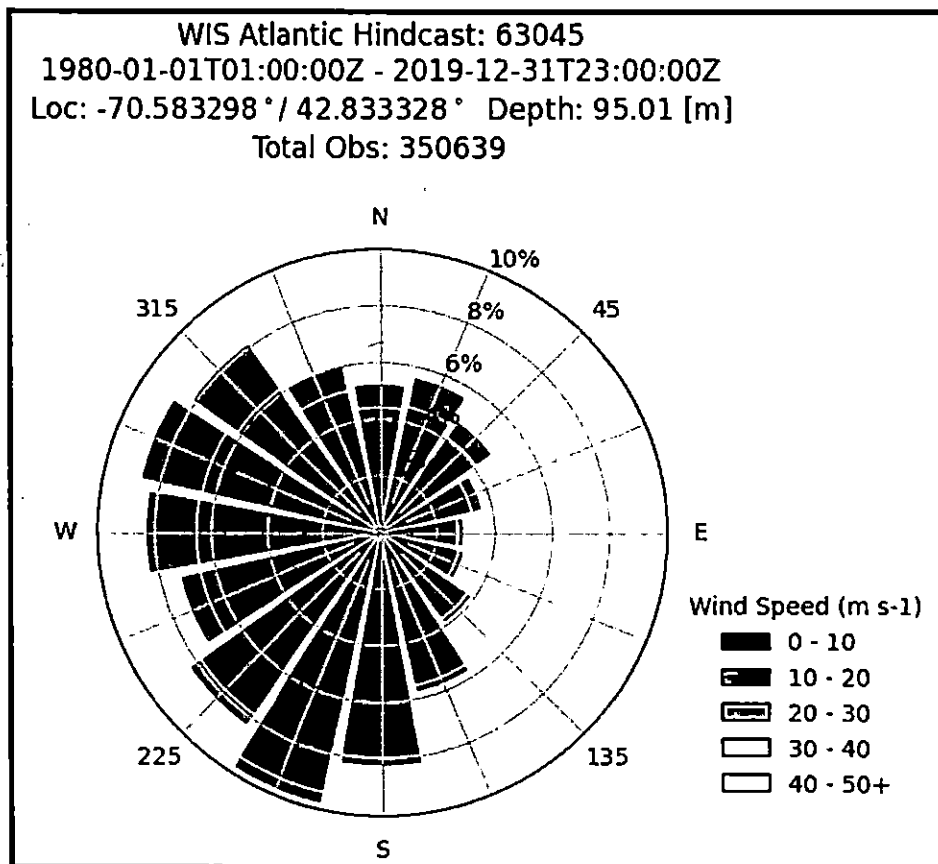


Fig. 7 – Wind Rose (WIS Station ST63045)

The structure would be designed to sustain 113 mph (50.5 m/s) winds based on ASCE 7 design hazard and exposure considerations for the proposed pier locations.

3.3 Nearshore Wave Parameters

Nearshore wave parameters, such as significant wave heights and wave periods, were estimated using a STWAVE model to propagate offshore wind and wave parameters to nearshore conditions. An extremal analysis for wave parameters, similar to the extremal analysis performed for wind velocities, was undertaken to estimate offshore wave heights and wave periods. This is described in the following section.

3.3.1 Extremal Wave Analysis

The 1% annual chance offshore wave height and wave period were calculated using 39 years' worth of "Oneline" data, from 1980 to 2019, from the USACE WIS Station ST63045 (USACE, 2019). Extreme values were estimated using a Peaks-Over Threshold (POT) analysis, as described by Goda (2000). The POT analysis combines three theoretical extreme value probability distribution functions used to fit the sample of data: the Fisher Tippet Type I (Gumbel) distribution, the Fisher Tippet Type II (Frechet) distribution, and the Weibull distribution. The distribution with the highest correlation was used for the results. Wave height and wave period data from ST63045 was ranked and filtered to have only one event per 48-hr period to reject duplicate storms as outlined in Melby et al. (2012). Threshold value of 11 ft and 11 s for wave height and period, respectively, were used for the analysis to capture significant extreme events and to optimize curve fitting (FEMA, 2016). The Weibull distribution had the highest correlation of best-fit, r^2 , for wave height with a value of 0.962 for a 1% annual chance wave height of 25.3 ft. The Fisher-Tippet Type II had the highest correlation of best-fit, r^2 , for wave period with a value of 0.981 for a 1% annual chance wave period of 16.4 s.

A wave rose for WIS Station ST63045 was generated for the 39 years' worth of data available. The wave rose indicates that the predominant wave direction is east-southeast. The wave rose is shown in Fig 8.

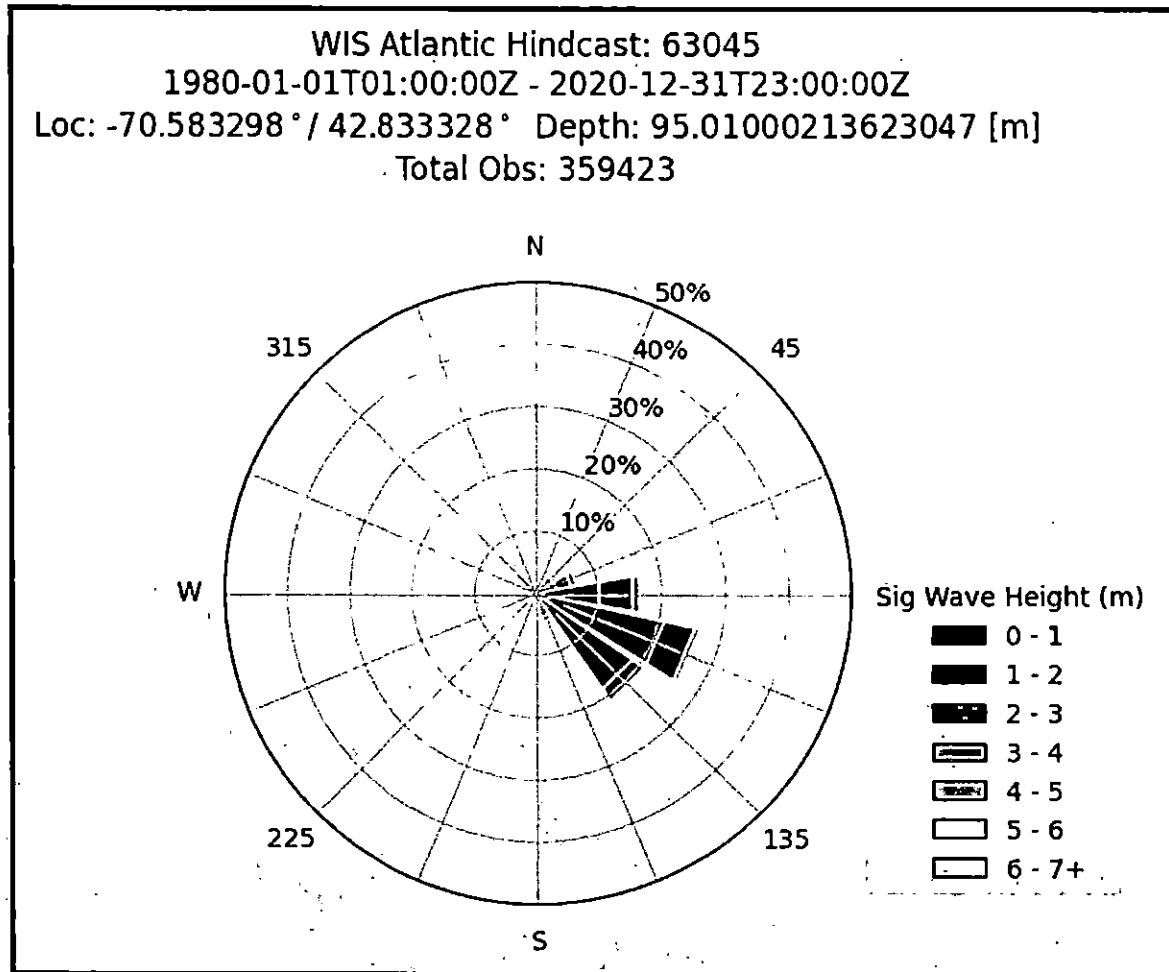


Fig. 8 – WIS Wave Rose ST63045

3.3.2 Model Bathymetry and Topography Data

Bathymetry and topography data for the model domain was downloaded from the National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI) Bathymetric Data Viewer (NOAA, 2022a) and NOAA Digital Coast Coastal Topobathy Lidar websites (NOAA, 2022b). Data was referenced to NAVD88 in ft.

3.3.3 STWAVE Model Setup

A coastal analysis of the 1% annual chance wave conditions at Hampton Beach was performed using STWAVE Version 6.0 (USACE, 2011). STWAVE is available within the Aquaveo Surface-water Modeling System (SMS) program (Aquaveo, 2018). SMS Version 12.3 was used for this study. The STWAVE model simulated the propagation of offshore

waves and a given wind condition to nearshore wave heights and wave periods by taking into consideration depth-induced wave refraction and shoaling, wave breaking, and diffraction.

The STWAVE model simulated wind and waves propagating from the southeast, which represents shore-normal storm conditions for a conservative evaluation of nearshore wave conditions. The STWAVE model was comprised of two grids: a parent grid with 30.0 m x 30.0 m cell sizes, and a nested grid with 5.0 m x 5.0 m cell sizes. The parent grid extended approximately 8.5 miles offshore to the approximate location of WIS station ST63045. The nested grid extended approximately 1.3 miles offshore from the site. The Figure below shows the STWAVE model grid boundaries and orientation for the parent and nested grids.

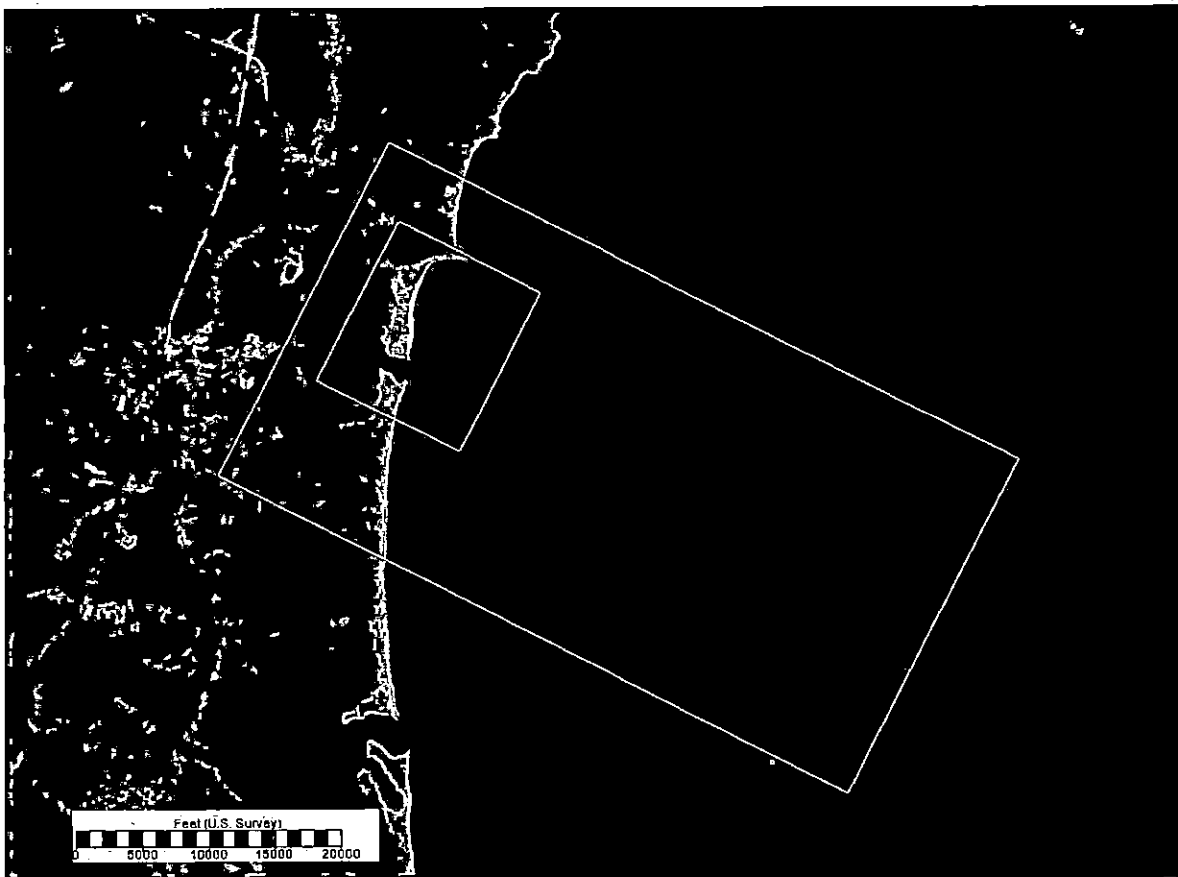


Fig. 9 – STWAVE Model Grid Boundaries & Orientations

The STWAVE model used a spectral boundary condition along the offshore boundary generated using the JONSWAP method by specifying a significant wave height and wave period. A significant wave height of 25.3 ft and wave period of 16.4 s, estimated using the extremal analysis, was used at the offshore boundary. The STWAVE model was run in half-plane mode with a bottom friction set to a JONSWAP constant of 0.0055. A wind field was applied along the long axis of the model grid to estimate conservative wind-wave development towards the shore. A wind speed of 59.1 mph was used in the model.

The model was run for two stillwater level (SWEL) conditions: the present-day SWEL of 8.36 ft and the estimated 2120 SWEL of 13.3 ft due to projected sea level rise amounts.

3.3.4 STWAVE Model Results

The model results suggest that 1% annual chance significant wave heights near the proposed pier locations during present-day sea level conditions range from 12.0 to 14.0 ft in Area 1, 12.0 to 14.0 ft in Area 2, and 9.0 to 10.0 ft in Area 3 shown in Figs. 10 to 12 below.

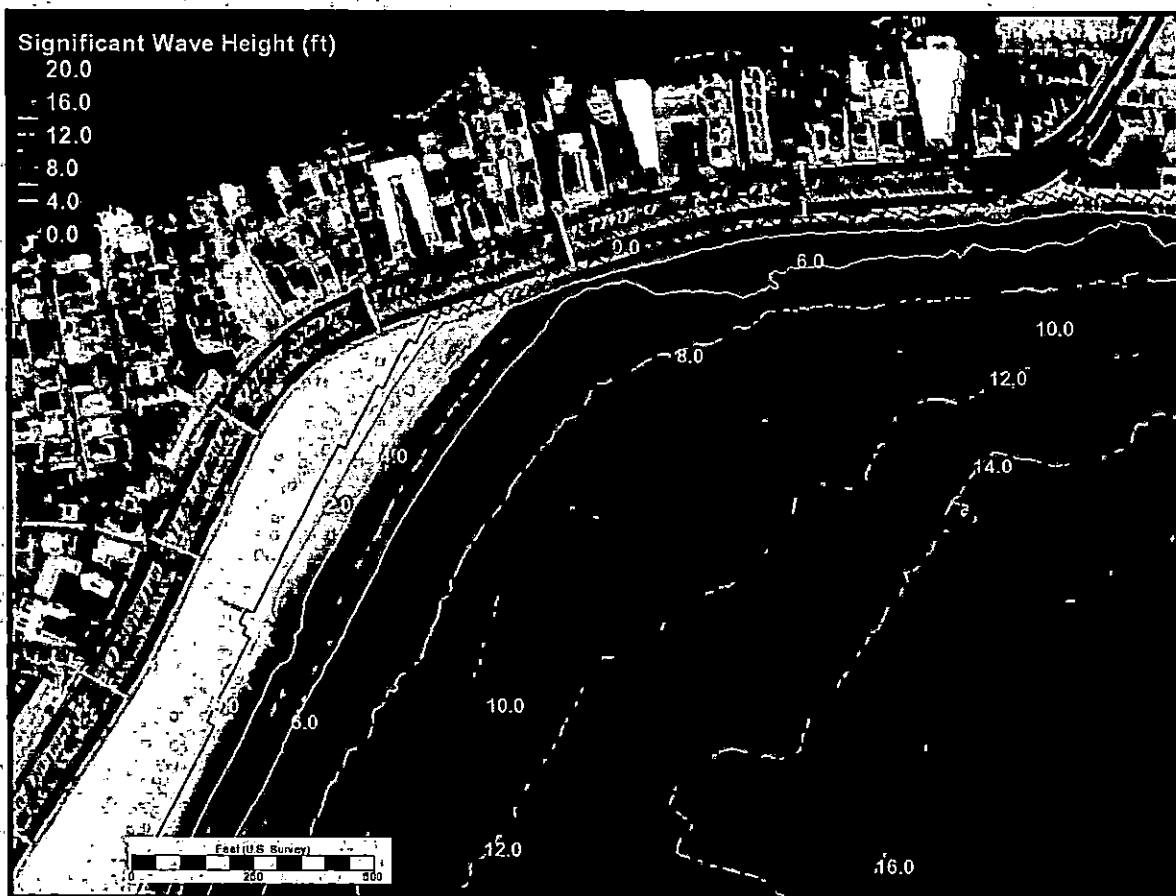


Fig. 10 – Area 1 Significant Wave Heights for Present-Day Sea Level Conditions (ft)

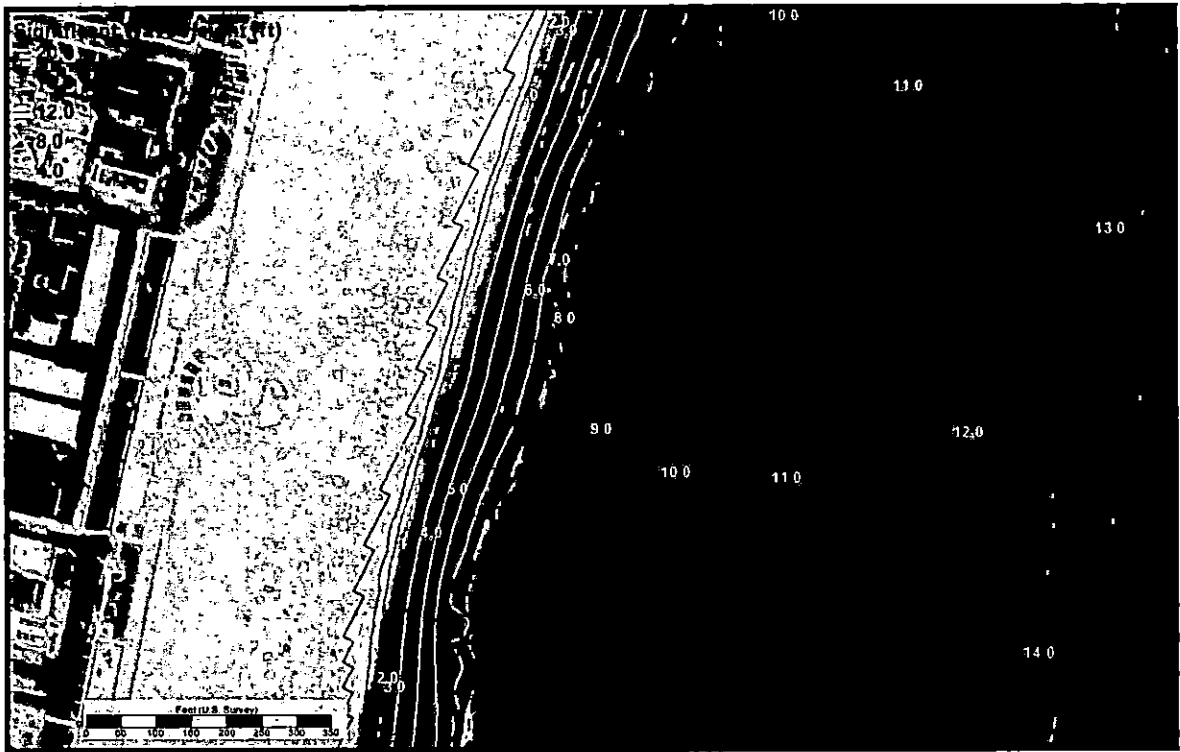


Fig. 12 – Area 2 Significant Wave Heights for Present-Day Sea Level Conditions (ft)

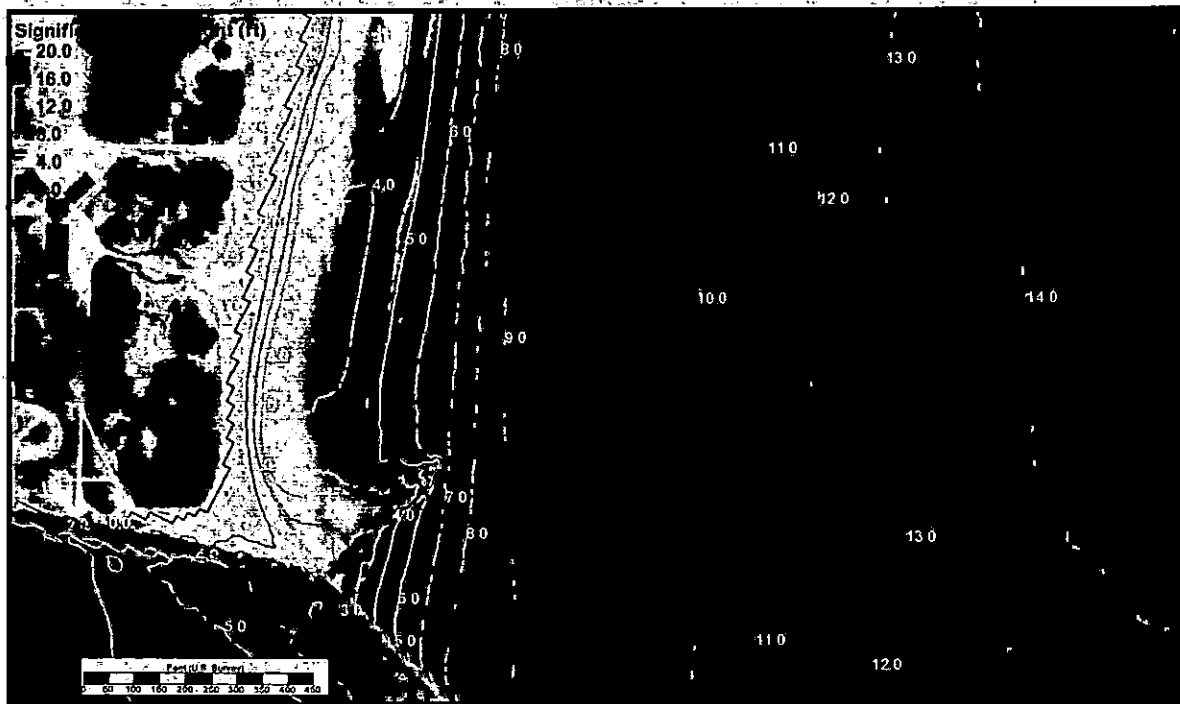


Fig. 12 – Area 3 Significant Wave Heights for Present-Day Sea Level Conditions (ft)

The model results suggest that 1% annual chance significant wave heights near the proposed pier locations during 2120 sea level conditions range from 15.0 to 16.0 ft in Area 1, 15.0 to 17.0 ft in Area 2, and 14.0 to 15.0 ft in Area 3 shown in Figs. 13 to 15 below.

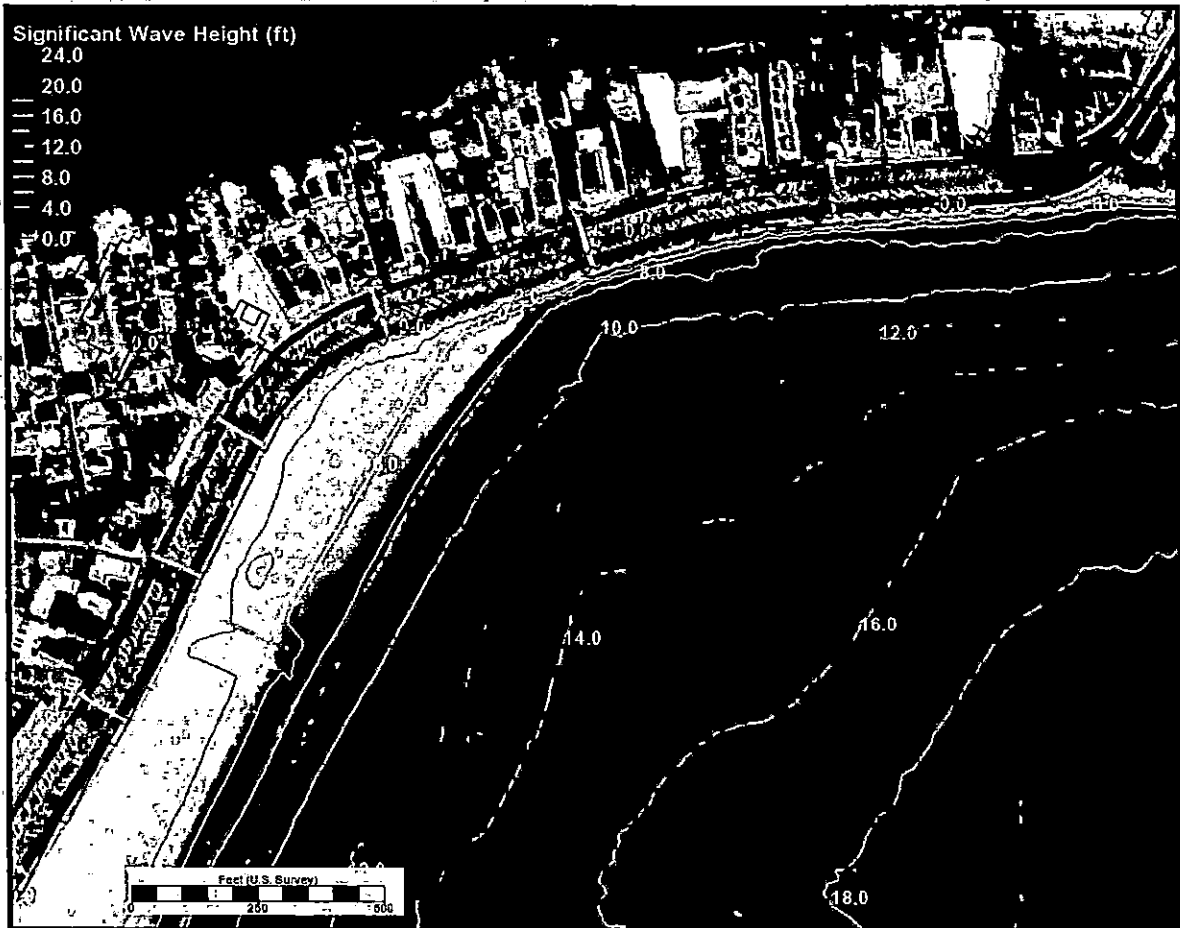


Fig. 13 – Area 1 Significant Wave Heights for 2120 Sea Level Conditions (ft)

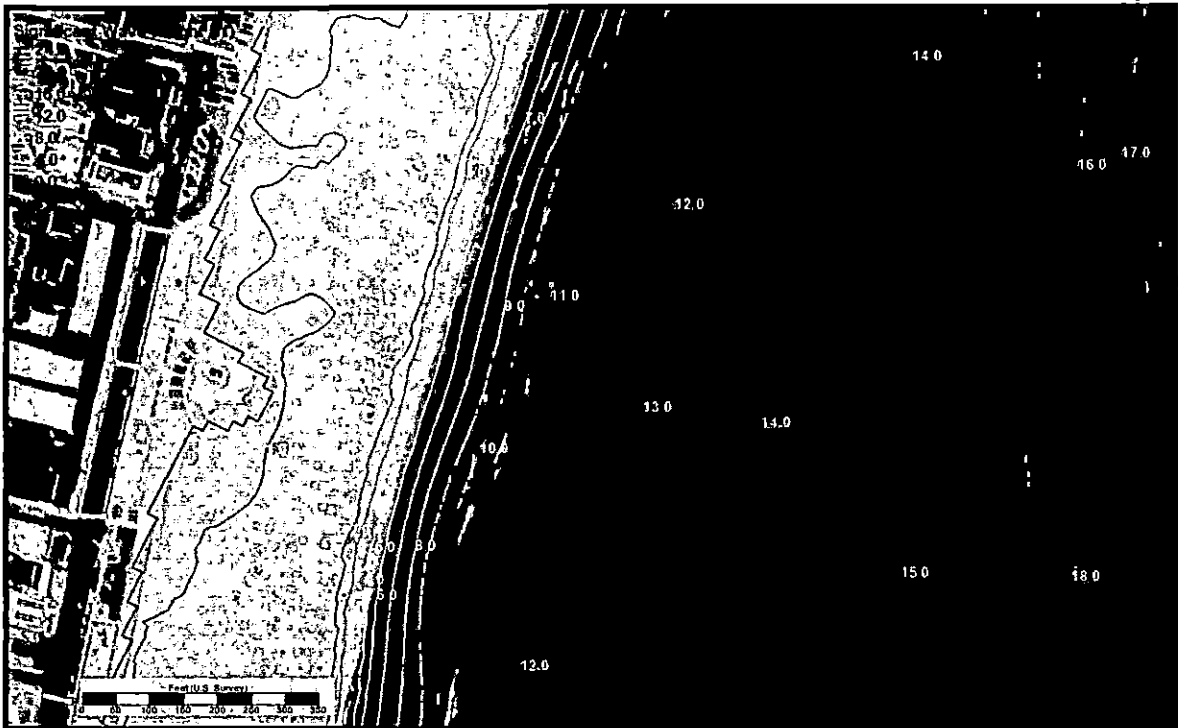


Fig. 15 – Area 2 Significant Wave Heights for 2120 Sea Level Conditions (ft)

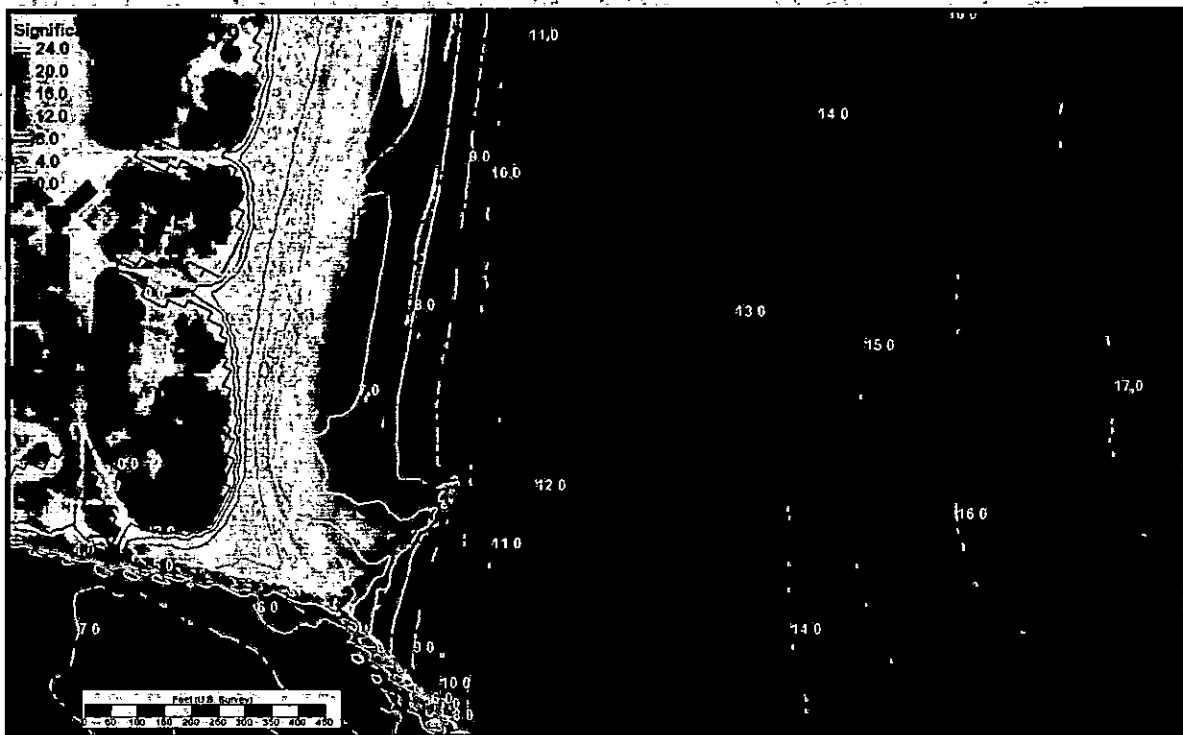


Fig. 15 – Area 3 Significant Wave Heights for 2120 Sea Level Conditions (ft)

Figs. 16 and 17 show the significant wave height model results for the nested grid for present day and 2120 sea level conditions.

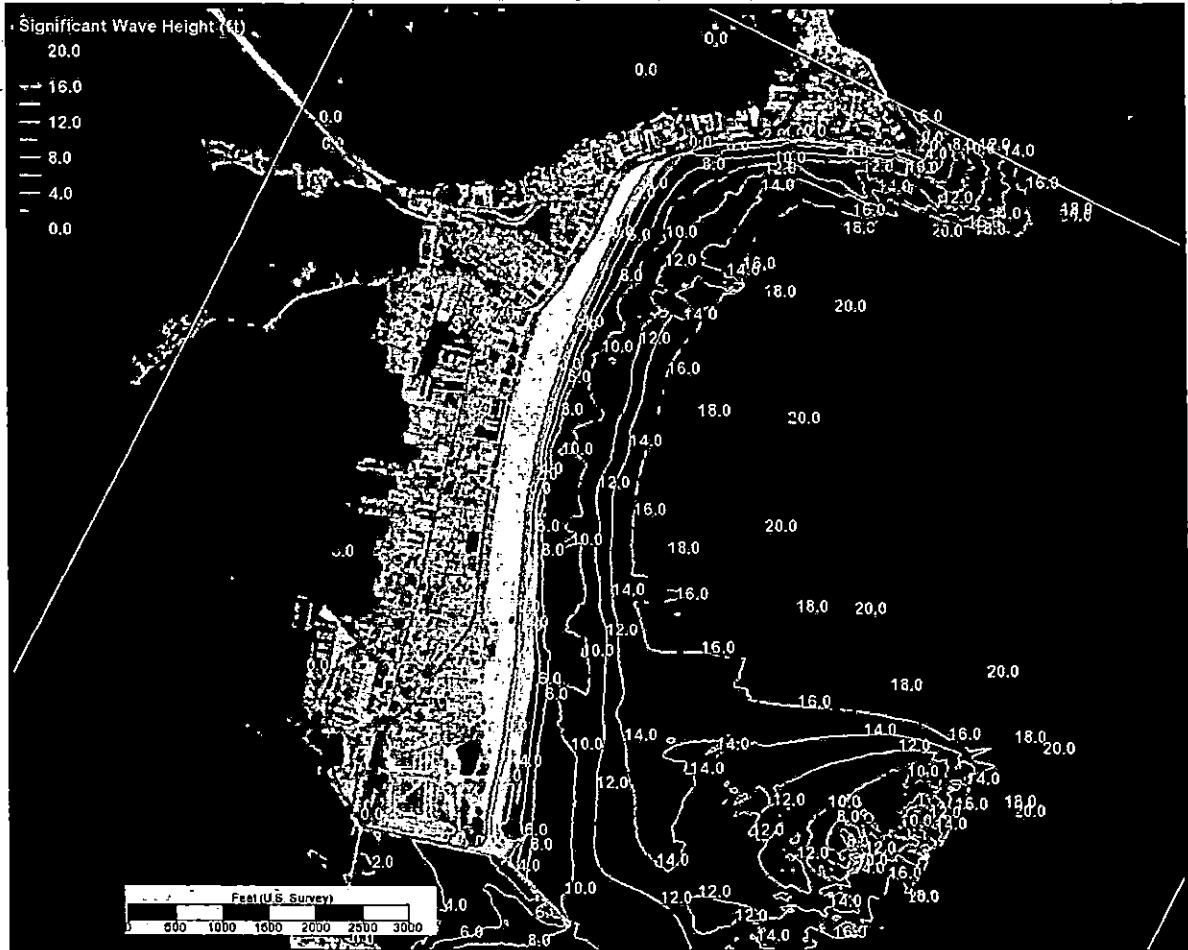


Fig. 16 – STWAVE Significant Wave Height Results for Present-Day Sea Level Conditions (ft)

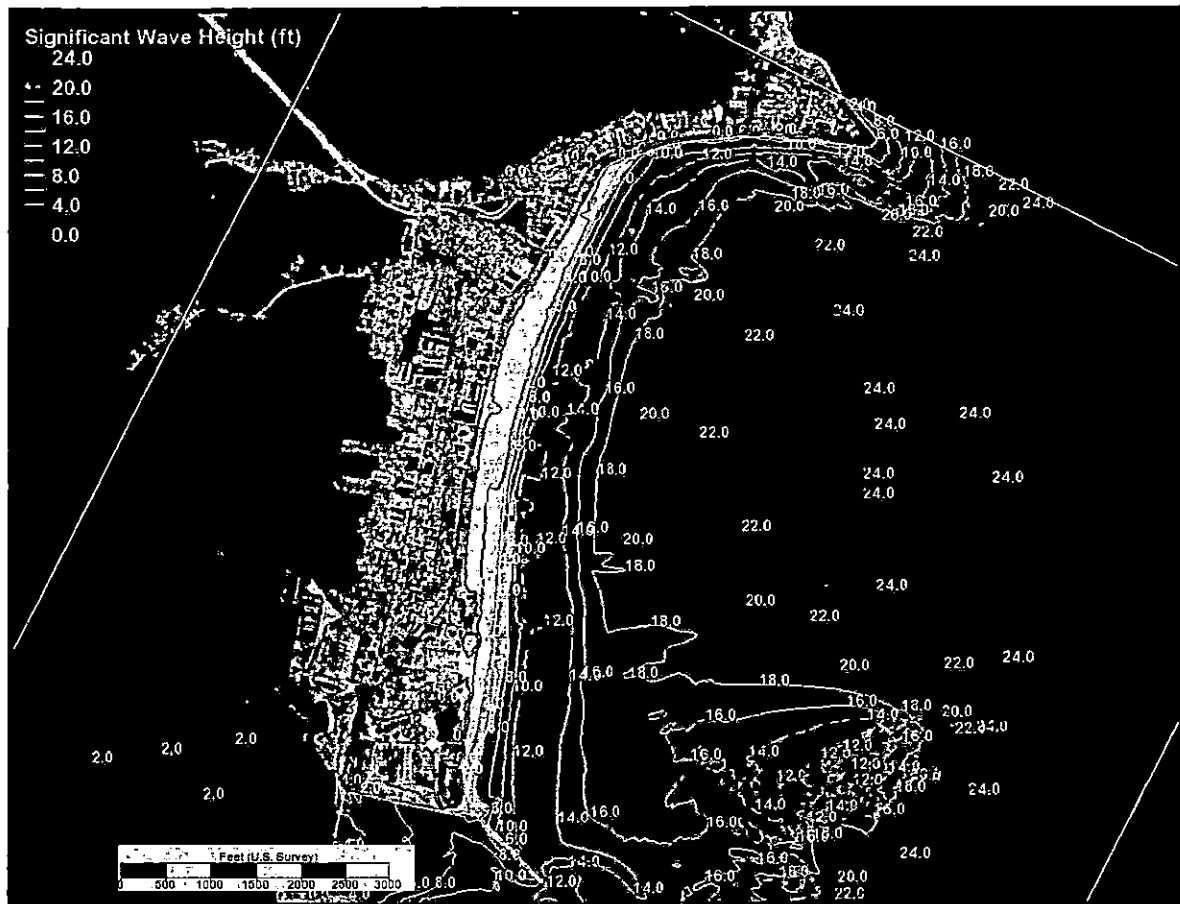


Fig. 17 – STWAVE Significant Wave Height Results for Projected 2120 Sea Level Conditions (ft)

The significant wave height and peak period both typically occur from the East-Southeast. Extremes waves in the Gulf of Maine are typically created by hurricanes and extra-tropical (Nor'easter) storm events. These extra-tropical storm events can also result in barometric pressure changes and wind setup resulting in a temporary rise in the ocean surface often referred to as storm surge.

4. Design Alternatives

The design alternatives were developed based on the site investigations, analysis of site conditions, market research and stakeholder input.

(See Appendix A – Pier Advisory Committee Input Summary)

Through the scope of work the following criteria were identified as priorities for the Hampton Beach New Pier Feasibility Study.

- ADA accessibility for enjoyment of the water.
- ADA accessibility to beach from the pier.
- The pier is intended for recreational uses.
- The pier should be as durable as practical and require minimal maintenance overtime (Typically a 50+ year design life).
- The pier should be designed to consider resiliency measures that reduce risk of potential increases in sea level rise and severity of storm surge.
- The pier should have as little impact on the beach as possible, for beach users, life safety operations and for environmental impacts (Piping plover nesting areas).

The Hampton Beach New Pier Feasibility Study consists of six (6) primary design consideration:

- Pier Use (Needs, Capacity and Configuration).
- Pier Location (Orientation and Alignment).
- Pier Access (Shore, Beach, and Water).
- Pier Type (Materials, Costs, Life Expectancy, and Operations and Maintenance).
- Site Improvements (Grading, Utilities, Restrooms and Parking).
- Environmental (Regulations, Physical Conditions and Potential Coastal Risks).

At the conclusion of the descriptions of the primary design decision components and their associated alternatives a decision matrix is provided to assist with comparison and prioritization of the pier design options.

4.1 Pier Use

4.1.1 Needs

Through stakeholder meetings and surveys with the PAC it was identified that potential uses of the pier included ADA accessibility over the beach and water, viewing, fishing, public gathering, passive recreation and access to the beach. A pier head or platform space to the side of the main pier walkway should be designed to be open and adaptable to the variety of user interests expressed by the PAC to-date, as well as in consideration of future uses that are yet to be identified. Some uses may conflict with beach uses, such as fishing and swimming. It is recommended that a now swim zone of at least 200 feet be considered around a pier used for fishing.

It was also desired that the pier be able to accommodate recreational boaters and/or potential cruise ship operations. Due to the exposed open ocean environment, a pier on Hampton Beach would be a suitable location for vessel berthing or transfer of personnel. Offshore mooring of vessels would likely require transfer of personnel to a more protected location such as at the Hampton State Pier within Hampton Harbor.

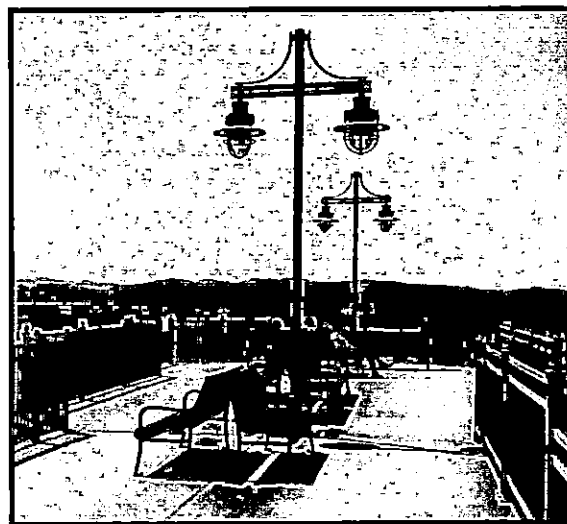
4.1.2 Capacity

It is desired that the pier accommodate up to 200 people at any given time. During public gatherings, there may be assembly on the pier for events such as watching fireworks and festivals. This is most likely to take place at a larger platform space, typically located at the end of the pier. Shapes and sizes of these spaces can vary. (See Section 4.1.3 Configuration) for examples. This pier head area could also accommodate passive activities and users such as for artists, photographers or exercise/fitness classes.

Fishing at the Hampton River jetty sees 5 to 10 fishermen typically and it is estimated that a similar level of interest would be seen at the pier.

Areas for seating and viewing should be dispersed for the entire length, and on both sides of the pier.

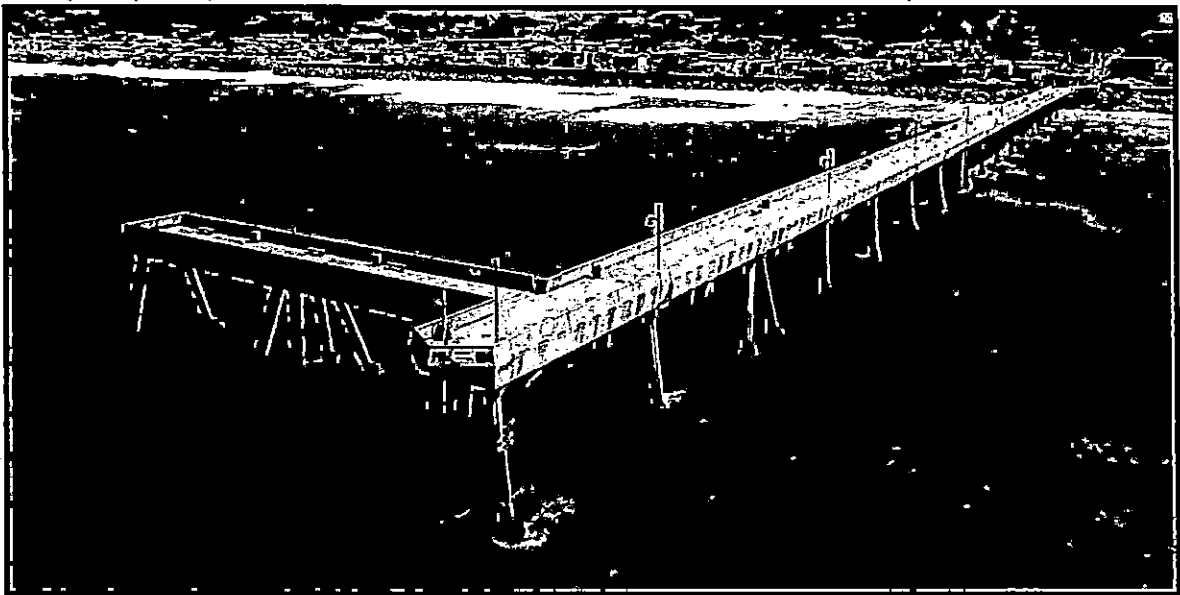
It is estimated that the pier would have an approximate live load capacity of 150 PSF to support pier users and emergency vehicles.



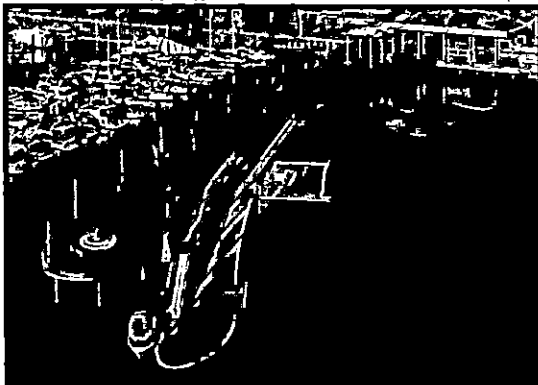
Pier Head Passive Use (Image from Internet)

4.1.3 Configuration

To create visual interest of the pier structure, and/or additional area for people to gather and use the pier, either at the offshore end of the pier or at side platforms over the water elsewhere, various pier shapes are offered for consideration. The pier head and/or side platform areas could be various shapes including an “L”, “T”, octagon, or rectangle. The overall shape of the pier could be a more traditional rectilinear structure, or a more modern curvilinear form. All of these options could meet the needs of a variety of pier users. As noted previously, the successful use of this space will be determined by adequate size and adaptability to accommodate current, and potential future user needs as of yet to be determined.



“L” Shaped Pier (Image from Internet)



Curvilinear Piers (Images from Internet)

See Section 5 – Comparable Pier Research for additional pier configuration examples.

4.2 Pier Location

The proposed locations for the pier considered three primary areas along Hampton Beach. The location of a pier in each of these areas will have varying levels opportunities and constraints on Hampton Beach. The pier would be located within the NH State Park property limits and not require any additional permanent property to be purchased. Temporary considerations will need to be taken into account for construction which are described.

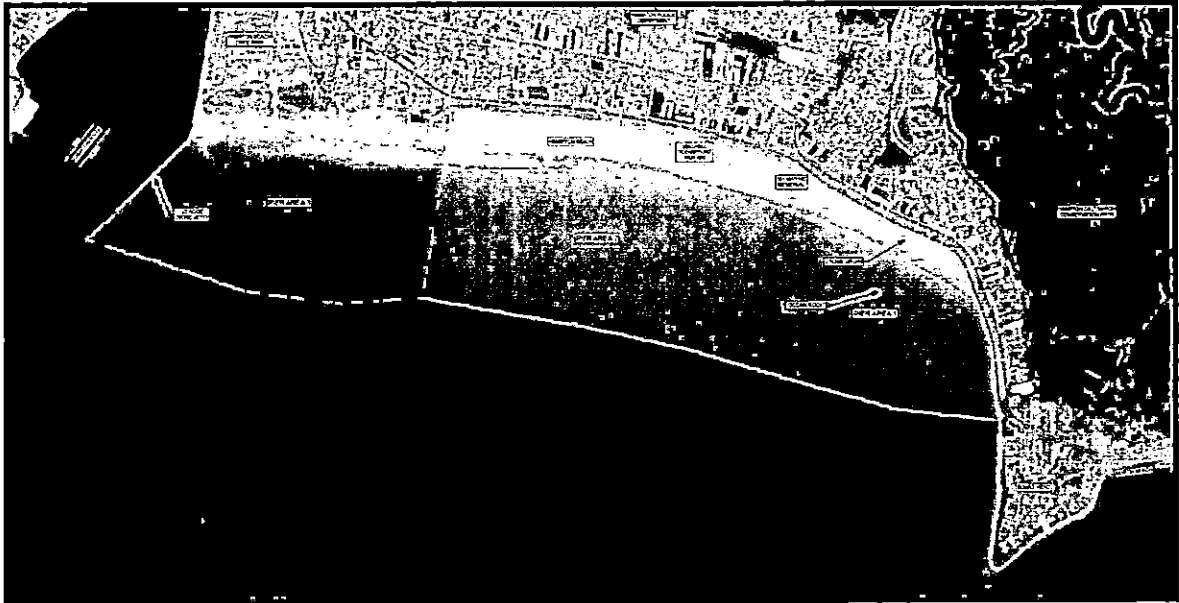


Fig. 18 – Portion of 03 – Pier Locations Map

- Area 1 - The north end of Hampton Beach, from the area just south of Boars Head to the NH Marine Memorial, where Ocean Boulevard (Route 1A) transitions from two-way travel to one-way routes including Ashworth Avenue (southbound) in addition to Ocean Boulevard (northbound). Siting a pier in this area should consider:
 - Significant distance from public restroom facilities and the retail core, located within Area 2, especially for pedestrians. A pier in this area might be well served with a new restroom facility located close to the pier.
 - This area is in close proximity to rocky shore and seabed with potential benefit for fishing, while at the same time potentially impacting areas of importance to marine flora and fauna. (Seals and Piping Plovers).
 - It could be potentially hazardous from a swimmer safety perspective being in close proximity to exposed rock cobbles and outcrops, especially if people dive off the pier.

- While not immediately adjacent to the seawall and beach, there is a fair amount of public parking between the north and south bound lanes of Ocean Boulevard (Rte 1A).
- There are no specific parking spaces dedicated for the handicapped. A pier in this area should consider dedicated handicap parking spaces adjacent to the pier.
- A pier at the north end, especially if located over the rocky shore, would have minimal to no impact directly over the beach.
- If located along the portion of Ocean Boulevard that curves towards Boars Head, it could be shorter in construction to achieve the length to water depths desired, while having less visual impact across Hampton Beach.
- A pier located off of this portion of Ocean Boulevard would have some or all of the pier exposed to wave runup the side of the structure, which is not desirable. A pier at this location should have a curve or “L” shaped alignment so that the head of the pier is facing directly into oncoming waves.
- The north end of Hampton Beach has become increasingly more residential and a pier in this area might encourage more visitors to frequent the north end of the beach, potentially increasing demand for commercial activities.
- On the other hand, the quieter condition of this more residential area might be more compatible with the desired passive recreation uses for the pier (fishing and viewing). Careful thought on promoting the pier and providing accommodations for a variety of potential users will need further planning and prioritization.
- A pier in this location located over the sand beach would have moderate access under the pier.
- The seawall is 3 feet above the sidewalk where Ocean Boulevard curves towards Boars Head. Connecting a pier at the top of the wall in this area will require lengthy transition ramps with railings on either side of the pier to transition to the existing sidewalk.
- This area is currently subject to waves overtopping the seawall and the pier would experience the same conditions at the interface with the shoreline.
- The top of the seawall over the beach in this area has an elevation difference of approximate 8 feet, requiring a lengthy transition ramp for ADA access from the pier to the beach.

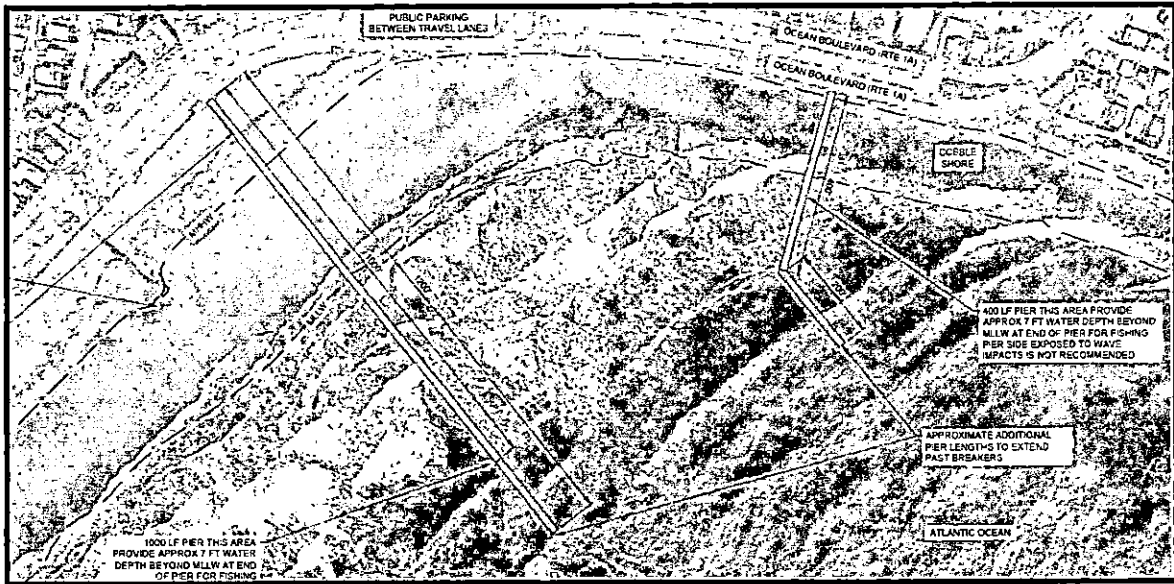


Fig. 19 – Portion of Area 1 (North End) Proposed Pier Location Options Concept Plan

- Area 2 - The middle of Hampton Beach, from the NH Marine Memorial south to Hampton Beach State Park. Siting a pier in this area should consider:
 - A pier in the middle is in closer proximity to the entirety of Hampton beach, versus location of a pier at either end of the beach.
 - A pier in the middle would have the most visual and physical impact to the beach, where the beach width is much greater than the north or south ends, and the top of the seawall is lower than at the north end, starting the pier connection to the shore at a lower elevation and requiring a longer ramped portion of the pier to get to the desired deck design elevation.
 - The top of the seawall over the beach in this area has an elevation difference of approximate 4 feet which would require a shorter transition ramp for ADA access from the pier to the beach.
 - Close proximity to existing public restrooms and parking adjacent to the seawall, including designated handicap parking spaces.
 - Location in the heart of Hampton Beach visitor activities and shopping areas. Hampton Beach is already a very popular destination for beach goers and a pier may have little benefit as an additional visitor attraction in consideration of the beach area that it displaces.

- There is more space for beach maintenance and life safety equipment and operations to access the beach from underneath the pier.
- A pier in the middle of the beach would have the least impacts to environmentally sensitive areas which are located at the north and south ends of the beach
- A pier in the middle of the beach would be the least desirable area to fish from and potentially have the most conflict between fishing and swimming activities.
- A pier in the middle of the beach would be in close proximity to life safety operations headquartered at the Seashell.

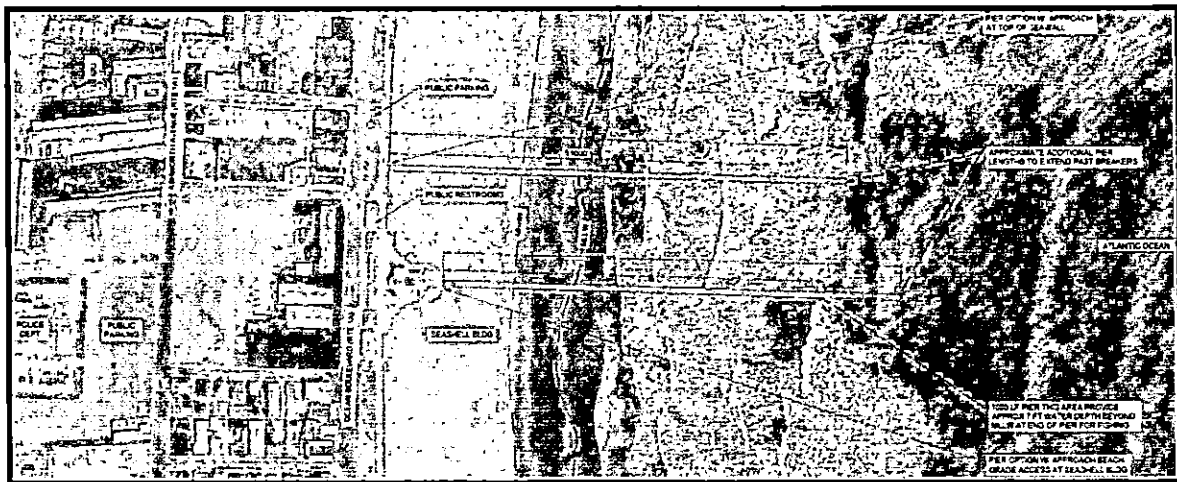


Fig. 20 – Portion of Area 2 (Middle) Proposed Pier Location Options Concept Plan

- Area 3- The area of Hampton Beach in front of Hampton Beach State Park to the United State Army Corps of Engineers stone jetty and the Hampton River. Siting a pier in this area should consider:
 - Close to parking and public restrooms, however these are designated for visitors to Hampton Beach State Park.
 - A pier in this area could be accessed from the rest of the beach in Areas 1 and 2, but it would be at some distance and over the sand beach.
 - A pier in this location would need to start at beach grade, as it would be challenging, and likely prohibited from starting at a higher elevation off of the coastal sand dunes.

- A pier would have a fairly lengthy ramped portion of the pier to reach the desired deck design elevation
- Minimal access underneath the pier.
- Environmental impacts to flora and fauna (Piping Plovers and Sand Dunes).
- Moderate fishing interest, with a likelihood of continued interest to fish in the nearby Hampton River.
- Potential life safety issues regarding swimming around the pier, and diving off the pier, in close proximity to the stone jetty and ledge outcrops in the intertidal zone.
- The pier would have minimal visual impact to abutting properties.
- Lack of visibility behind the dunes, especially when the State Park is closed in the off season could create public safety / security issues.

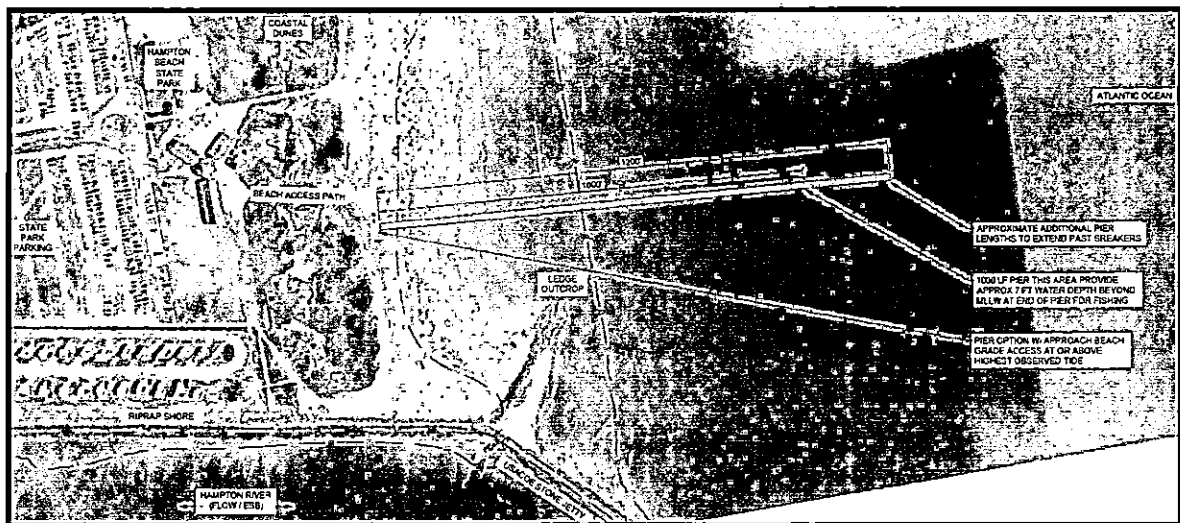
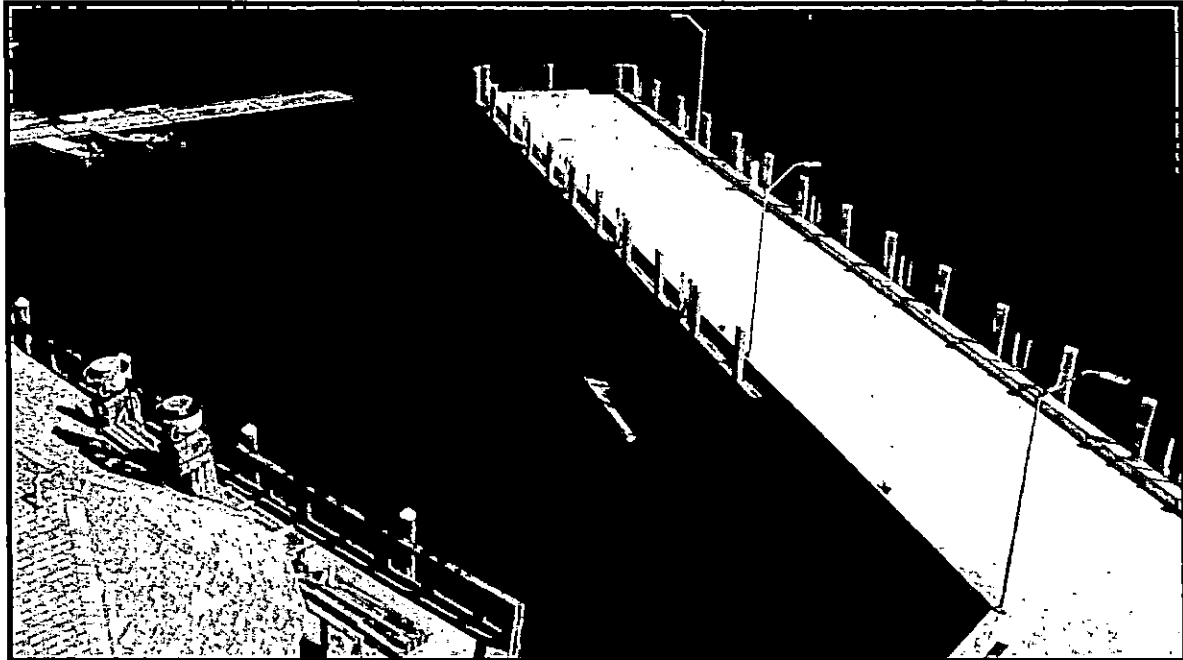


Fig. 21 – Portion of Area 3 (State Park) Proposed Pier Location Options Concept Plan

If the structure were to be built today for sea level rise design flood elevation in 2120, that structure would need a deck elevation of 24.2 feet. This would require a minimum 120-foot long ramped pier section at (1 on 12 slope), plus minimum 60 inch landings every 30 feet to meet ADA standards for a pier connecting to the top of the seawall. For a pier starting at grade with the beach, a minimum 195-foot long ramped pier section is anticipated to meet ADA standards.

See also (*Appendix C – Conceptual Design Figures*) and (*Section 4.7 Decision Matrix*)

It is recommended that the pier be oriented perpendicular to the typical waves so that the least area is exposed, reducing environmental loading and potential for debris impact on the structure. At the northern end of the beach an angled "L" shaped alternative is presented that limits impacts to the beach and reduces the length of structure needed to extend past the wave break.



Angled Pier with Concrete Deck (GEI Project Example)

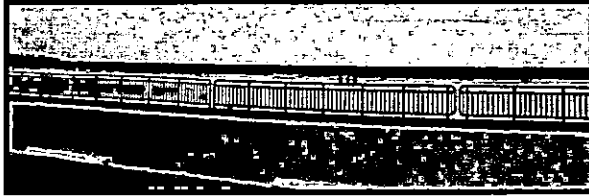
4.3 Pier Access

4.3.1 Shore

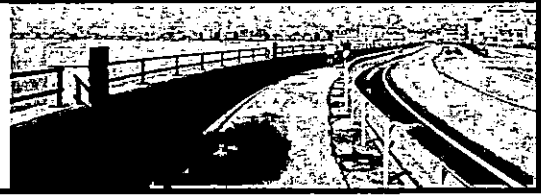
The pier could be accessed from shore either by a connection to the seawall along Ocean Boulevard or at beach grade. Access from the water for boating is not recommended as stated previously in this report. Access to the water for swimming is not recommended based on life safety concerns and due to the potential negative interaction with pier fishing. Emergency access to the water from the pier might be accommodated by gated ladders as desired by the Town and or State emergency service providers.

Access to the pier from the top of the seawall would require an ADA accessible ramp from the top of the seawall to the existing sidewalk grade. Most of the seawall is approximately 8-inches above the adjacent sidewalk grade, with the exception of the wall at the north end of the study area where Ocean Boulevard curves east towards Boars Head. In this area the top of the seawall is approximately 3 feet above the adjacent sidewalk. This area would either require an opening in the seawall so that the pier can tie into the existing sidewalk grades, or

construction of an approximate 40-ft length ADA accessible ramp from the sidewalk to the top of the seawall on both sides of the pier. It was noted by the PAC that water currently overtops the seawall during winter storms, and an opening in the existing seawall would not be desirable.

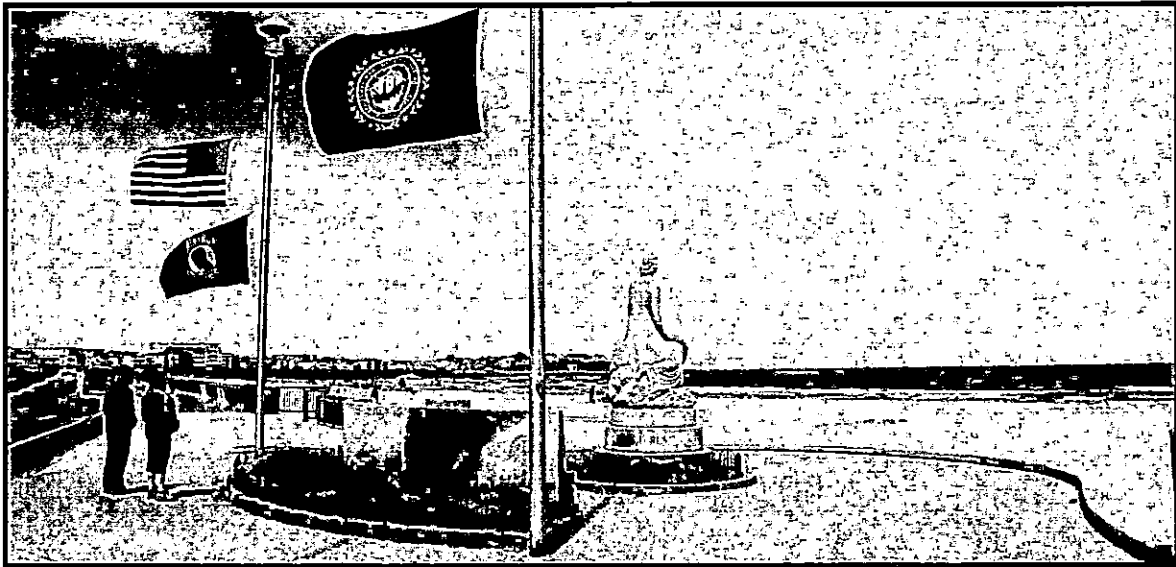


Seawall At Middle of Beach



Seawall At North End Near Boars Head

An alternative option to tying into the Seawall at its current location, would be to provide a new bumped out area like the semicircular gathering areas at the Seashell and the NH Marine Memorial. This added space, at grade with the existing sidewalk and with a perimeter wall matching or exceeding the height of the adjacent seawall, could potentially accommodate restrooms, shade structures, seating, public gathering space, and parking and drop off space immediately adjacent to the pier takeoff from shore. Such an improvement might be most desirable at the north end of Hampton Beach, were many of those facilities are not in close proximity to the potential pier location.



Bumpout Area at the NH Marine Memorial Protruding into the Beach Area

At the north end of the beach, the existing seawall is reportedly in poor structural condition, showing visible evidence of spalling and cracking at the base of the wall. NH DOT has expressed concerns regarding the condition of the wall adjacent to Ocean Boulevard (Rte 1A). This wall is owned by the State Parks and Recreation Department will require their approval to repair. Regardless of either pier access option at the seawall, it is recommended that the seawall be repaired as necessary prior to construction of a pier in this location.

4.3.2 Beach

Currently, at the northern and southern ends of Hampton Beach State Park, there are limited ADA accessible routes to the beach. A new pier could provide ramped access to and from the beach where it connects to the top of the seawall. In other locations, the pier would be at-grade with the beach. Ramps could be constructed on either side of the pier to provide ADA access, as well as vehicular access for life safety and maintenance vehicles to and from the pier in locations where there is limited clearance underneath the proposed pier. The ramps would need to be a minimum length of 120 feet for a pier located at the north end of the beach, where the change in grade from the beach to the top of the seawall is approximately 8 feet. The ramps could be 80 feet or shorter at locations in the middle area of the beach, where the existing seawall is generally 4 feet above beach grade or less.

While beach access underneath the pier will be obstructed horizontally, both by pier support piles as well as pile bracing if a timber pier is constructed, as well as vertically, depending on the variations in beach grade and the elevation of the ramped section of the pier to get to the desired design deck elevation of 24.2 feet. To accommodate under pier passage the pile foundations would need to be spaced approximately of 15 feet on center and have a clear vertical distance to the lowest surface of the pier of approximately 12 feet to provide an adequate distance to accommodate the various emergency service and maintenance vehicles traveling on the beach as well as potential life safety vehicles and regular beachgoers walking under the pier. The by-pass under pier transit location would need to be located inshore of the intertidal area due to restrictions that limit equipment from operating within this zone. Depending on the specific pier location the area above the intertidal zone varies from 100-300 feet to the seawall or beach dunes.

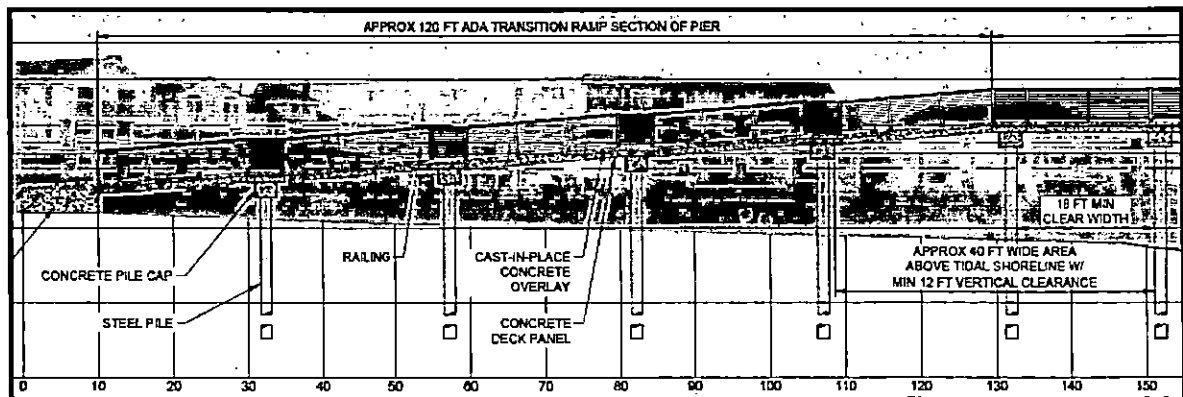


Fig. 22 – Proposed Precast Concrete Pier Profile Off Seawall

See (Appendix C – Conceptual Design Figures) for additional details.

4.4 Pier Type

When deciding on the pier constructability there are many considerations that need to be made about material types, service life, and initial and overall operational costs. The following discussion focuses on possible pier construction methods and materials. Three primary pier types are presented: concrete pier, hybrid pier, and timber pier.

A concrete pier would likely consist of concrete or steel pile foundations with concrete pile caps and a concrete deck. This option would likely have the highest initial constructability cost while also providing the longest expected design life (50+ years anticipated) with minimal required maintenance. Concrete structures can often have service lives of over 100 years with continued maintenance.

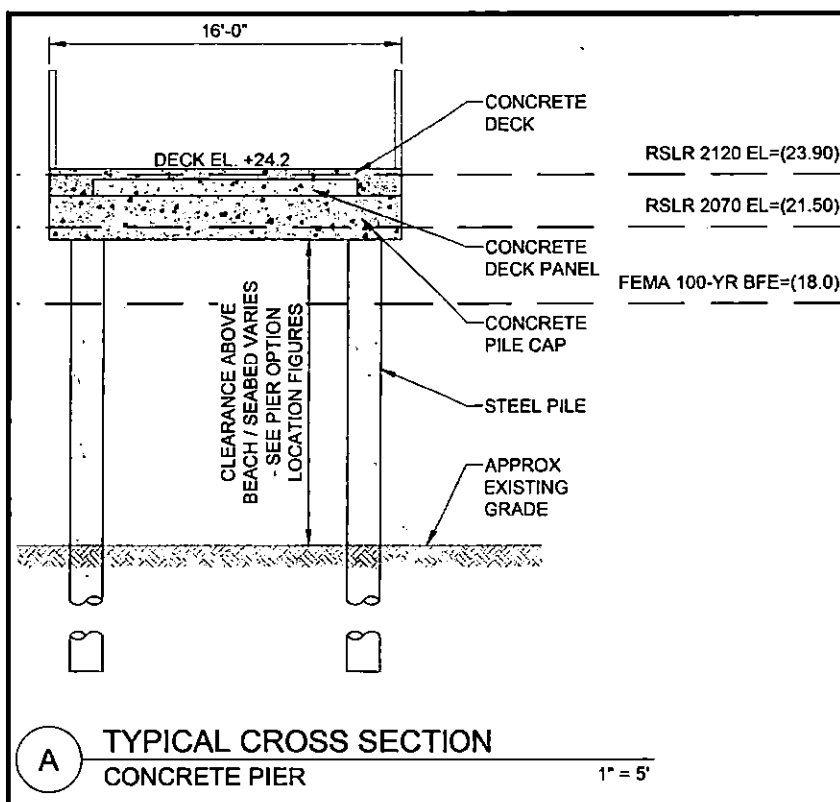


Fig. 23 – Proposed Precast Concrete Pier Conceptual Cross Section

A hybrid pier would likely be similar in construction to a concrete pier with the exception of having a timber deck that would provide a less industrial appearance and be slightly less expensive for initial construction. The design life of a hybrid pier would be 50+ years for the substructure and pile caps while the timber decking would be approximately 25 years. The

timber decking will likely require more routine maintenance and therefore have slightly increased overall service life cost than a concrete pier.

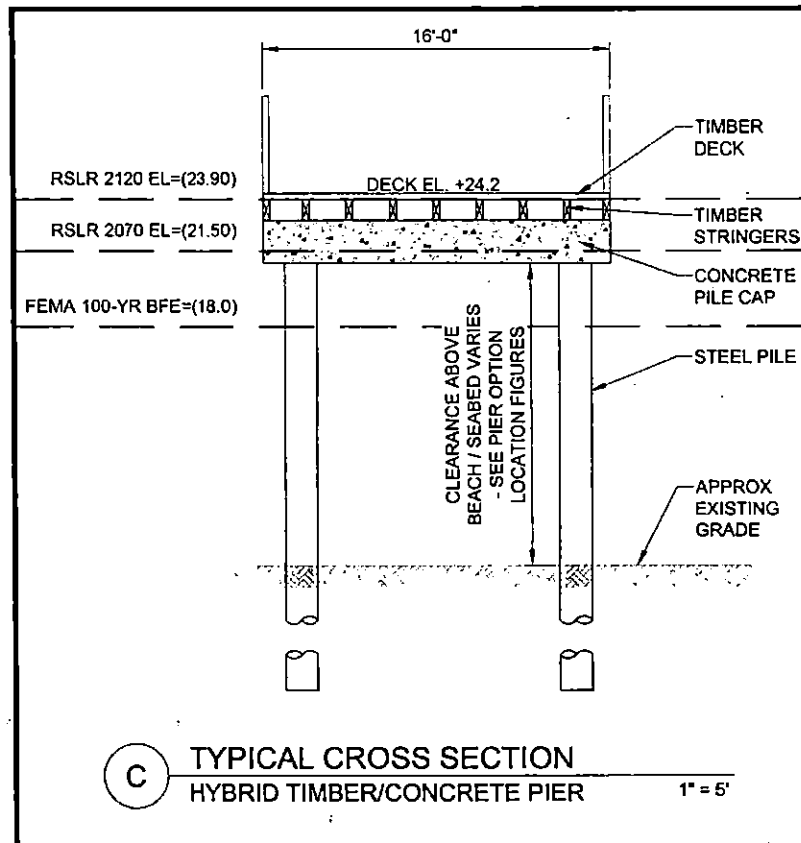


Fig. 24 – Proposed Hybrid Precast Concrete & Timber Pier Conceptual Cross Section

A timber pier would consist of timber pile foundations with timber pile caps, stringers, and decking. A timber pier would likely have the least initial construction cost but require more routine maintenance and have a shorter anticipated design life, typically on the order of 25 years. Timber will require preservative treatments for exposure in the saltwater marine environment. Alternative timber materials such as IPE or greenheart piles may have extended design life compared to treated southern yellow pine timber with the ability to increase design life of elements to up to 50 years. Additionally, a timber pier will require fire protection if it exceeds 5,000 SF in area.

It should be noted that the State of New Hampshire Division of Ports and Harbors has been replacing their existing timber facilities with more durable materials. They have noted that nearby facilities in Hampton and Rye New Hampshire both have seen marine borer activity requiring early replacement of elements.

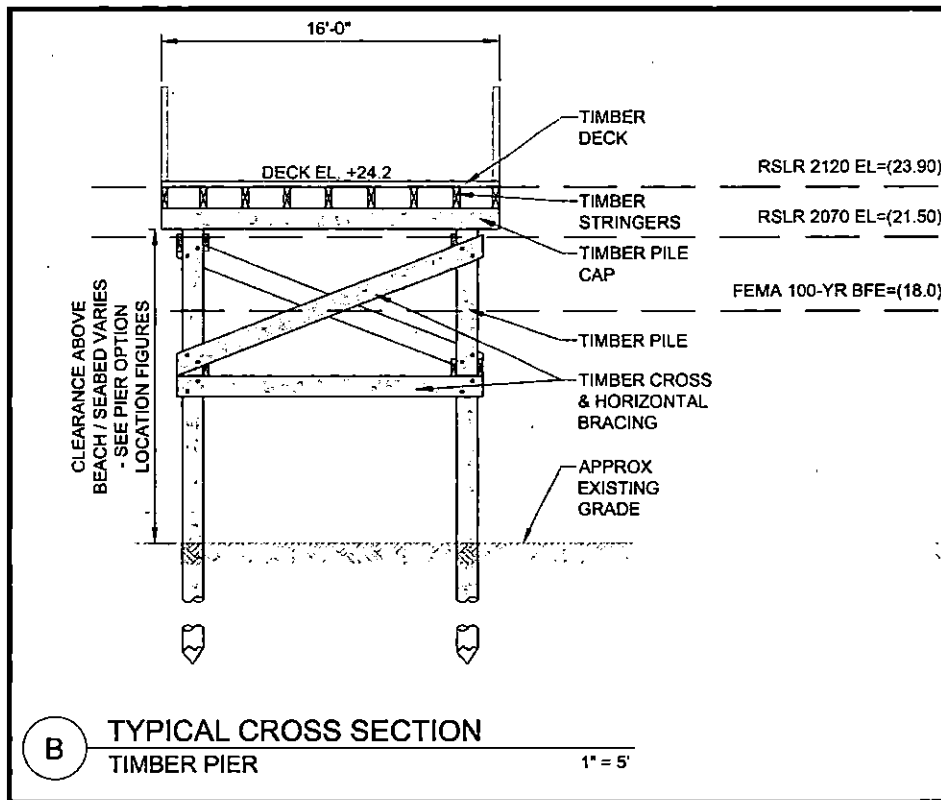


Fig. 25 – Proposed Timber Pier Conceptual Cross Section

The design life of a structure is dependent on the durability of the materials and quality of the construction. It can often be extended through routine maintenance and repairs. Depending on the condition of the structure the structure can often have a continued service life however may require some load restrictions and anticipated increased maintenance costs.

It should be noted that the specific means and methods of construction are unknown at this time, as a contractor has yet to be selected. The project will be a state capital project and must follow public procurement laws. As such, the following discussion provides a description of possible installation methodologies understanding local construction practices, environment, and regulatory processes.

4.4.1 Substructure

Pier foundations would likely consist of piles due to their relatively low impact and cost effectiveness as opposed to a solid fill structure. Piles are often constructed of timber, steel, or concrete with decisions on pile types being selected based on the bent spacing, capacity, and number of piles, properties of the soil, variations in pile lengths, availability of materials, durability, and installation equipment all being important considerations. The piles are typically driven into the ground using vibration or impact hammers to install the pile to the designed depth or resistance.

Timber piles generally have the shortest design life expectancy due to marine borer deterioration, decay, and damage however also generally are the lowest cost. Timber piles typically have span limitations of 10 to 15 feet due to capacity requirements and are limited in size to approximately 65 feet in length 14-inch diameter although larger sizes are possible. These piles typically have a 25-year design life expectancy for treated Southern Yellow Pine or 35 to 50 years for greenheart piles. It should be noted that timber piles may not be feasible if shallow bedrock is encountered as they would not achieve minimum required embedment depths to resist lateral and uplift loading.

Steel or concrete piles provide greater capacity, length, and site options. Often resulting in a reduced quantity of piles required. The spans between piles can typically be 20 feet or greater utilizing these pile types.

Steel piles can be driven open ended with less displacement of soil material or closed ended displacing and compacting the soil around the pile. The small cross-sectional area of steel piles can make them easy to drive for installation. They also allow for flexibility in varying site conditions with ability to add or cut off sections of the pile to achieve the required height. One disadvantage of steel piles is corrosion in the marine environment. Coatings or jackets are often applied to the exterior of the piles to help protect against corrosion however require routine maintenance to reapply the protective coatings every 8 to 10 years.

Concrete piles are less frequently utilized within the northeast due to variability of site conditions and freeze-thaw interaction however concrete piles do provide greater corrosion protection than steel piles.

Depending on the geotechnical properties of the site the foundations shallow bedrock has potential to dictate the need for utilize rock sockets. The piles would be anchored into the bedrock by coring into the rock and grouting the annular space between the pile and rock to provide lateral and uplift capacity. Based on the observed ledge outcroppings at the northern end of the beach it is anticipated that rock socketed piles would be required if a pier were to be sited within this portion of the site.

4.4.2 Superstructure

The superstructure of the pier will consist of the pile caps and stringers supporting the deck and be supported by the pile foundations. The superstructure components could also be constructed of timber steel, concrete, or a combination thereof depending on material preferences, load capacity, span length, constructability, and cost.

Concrete superstructures are often utilized for modern day pier construction due to their durability, constructability, and service life in the marine environment. Precast concrete elements can be constructed offsite in controlled environments and then mobilized reducing the overall length of time required for onsite construction.

Timber superstructure elements have historically been utilized in pier construction due to their availability, flexibility to change, and cost effectiveness. In general, the construction of timber superstructure requires more material and increased onsite construction time over precast elements but require reduced equipment size due to their relatively light weight. They are less expensive compared to other materials. Timber elements will require more regular routine maintenance to replace deteriorated boards and loose connections. The life expectancy of timber deck elements exposed to the weather is typically 15 to 25 years.

4.4.3 Decking and Railing

The pier deck may consist of timber, concrete, or a combination thereof. Due to the limited loading required for the pier both options are viable.

Timber decking provides a softer more natural feel than concrete and typically is more cost efficient however will require more routine maintenance.

Concrete deck elements would likely have a greater initial cost but reduced maintenance and potentially reduced onsite construction time if precast concrete elements were utilized.

The pier will require curbs and railings to protect the pier edges. Varying heights of the railing will be required with railings extending 42 inches above the deck surface typical and 34 inches above the deck surface at periodic points to allow ADA accessible viewing over the rails.

4.5 Site Improvements

In support of a new pier, a variety of site improvements should be considered to provide adequate access to the pier from the seawall, and/or from the beach. Some of these onshore facilities could be accommodated by locating the pier adjacent to areas along the Beach that currently provide them (i.e. near the Seashell which has dedicated handicap parking, bike racks, shade shelters, restrooms, etc.) At other locations, these amenities might be physically added near the new pier, or addressed by designation and enforcement, such as for parking and provision of Handicap and pier user parking spaces. All site improvements should be located in consideration of walking distance to the pier, given the pier itself will be of significant length, and the goals to have the pier be ADA accessible and intended for a variety of passive recreational uses.

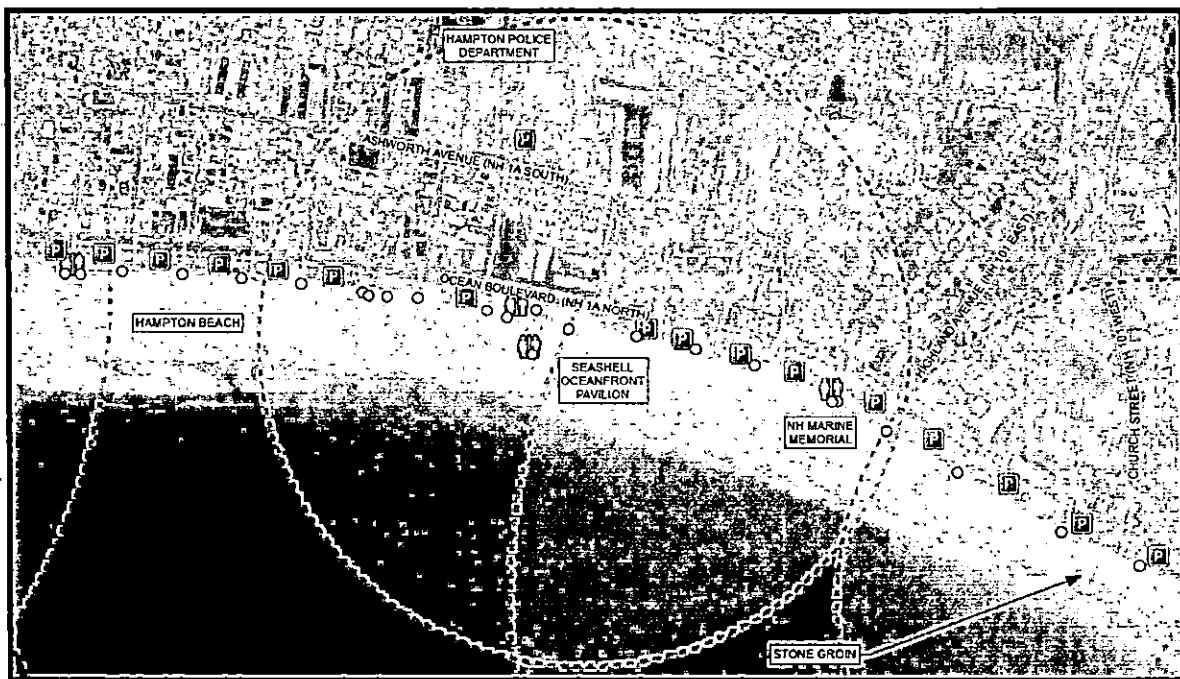


Fig. 26 – Portion of 06 – Site Accessibility Map

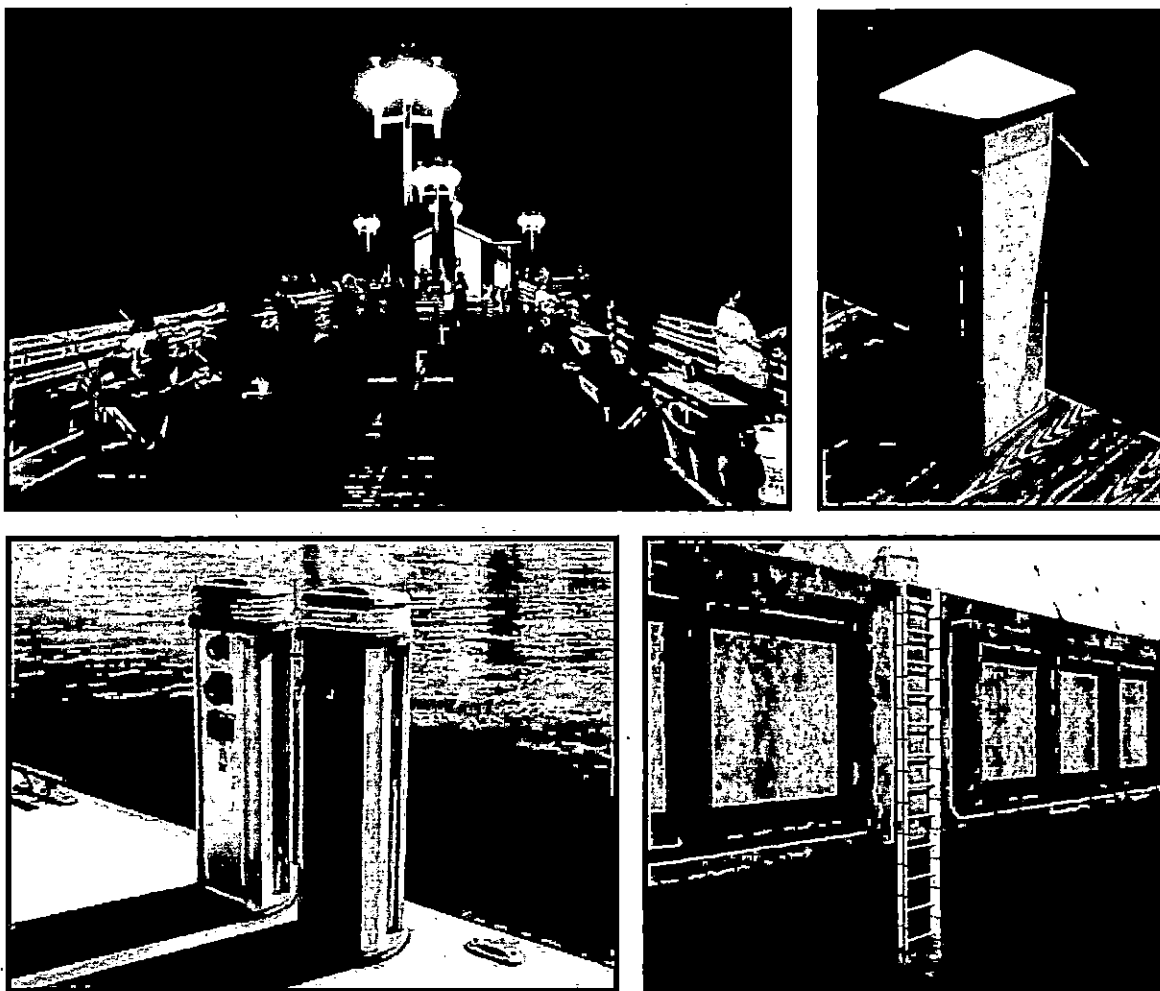
(See Appendix B – 06 – Site Accessibility Map)

4.5.1 Grading

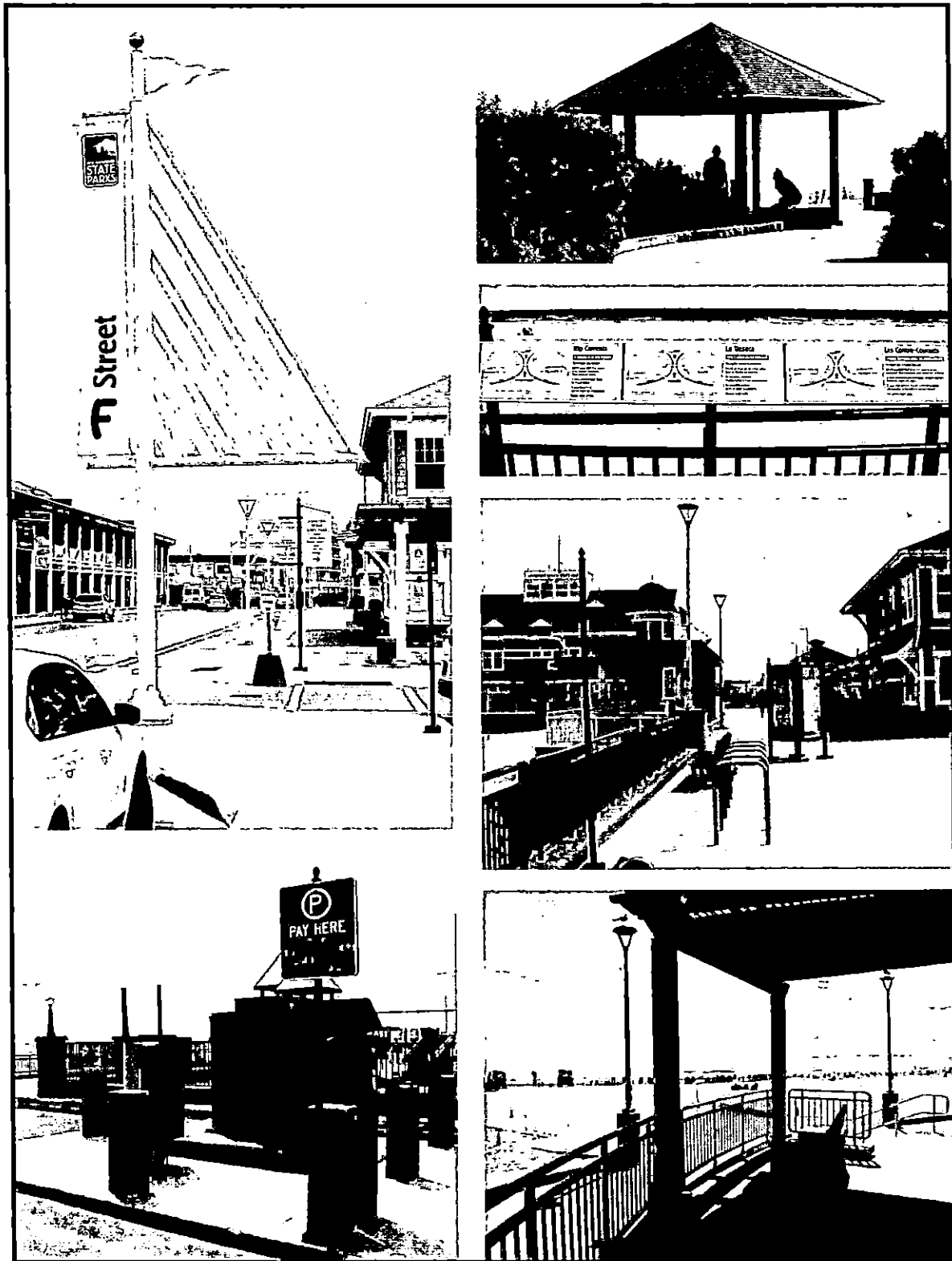
In addition to the prior discussion of ADA access to the pier, and to the pier from the beach nourishment and grading may be required to meet desired finished grades. At a minimum, it is understood that the State regrades a significant amount of sand on average each year after winter storms deposit beach sand up against the seawall. Options to start the pier approach at beach grade should carefully consider the routine movement of sand and changes in elevation of the beach.

4.5.2 Appurtenances

To furnish the site and improve site functionality various appurtenances may want to be considered. These appurtenances could include benches placed along the shoreside interface and on the pier at dispersed locations providing a variety of resting and viewing opportunities, bicycle racks, shade structures, interactive signage, lighting, flag poles, life rings, ladders, trash receptacles, restrooms, fire protection, or other preferred appurtenance options. At this level of conceptual design and planning, costs for these items have been included in the estimates, and space for these features, in addition to pedestrian and vehicular access needs along the pier are generally accommodated. As the planning and design develops further, selection of pier appurtenances to support the prioritized pier uses, and to establish a pier aesthetic that is either unique to the pier structure, or in keeping with the recent State redevelopment project amenities will be decided in greater detail.



Examples of Pier Amenities (Images from Internet)



Examples of Existing Site Amenities at Hampton Beach

4.5.3 Parking

Public parking is readily available along Ocean Boulevard (Rte 1A) where it adjacent to the sidewalk and seawall. Parking is either immediately adjacent to the seawall where Ocean Boulevard is a single lane heading north, from N Street to Highland Avenue, or it is located in between the north and south bound lanes of Ocean Boulevard, from Highland Avenue to Boars Head. Public parking is also at the Town's Police Department parking lot. Parking for Hampton Beach State Park is available for that facility's visitors.



Existing Parking at State Park, Near the Seashell and at the North End

There is little space available to create new parking opportunities along Ocean Boulevard. If parking spaces are desired immediately adjacent to the pier, the pier would either need to be located between N Street Highland Avenue, or new parking spaces would need to be constructed along Ocean Avenue between Highland Avenue and Boars Head.

Adding parking spaces for a pier along the north end of Hampton Beach will require coordination and approvals from NH DOT and NH State Parks and Recreation. It is possible to provide on-street, parallel parking in this area either by adjusting the sidewalk, existing travel lane(s) and middle parking area, or by constructing a bumpout over the beach to accommodate new on-street parallel parking space while leaving the existing Ocean Boulevard travel lanes and middle parking area alone.

If parking is located immediately adjacent to the pier it should include a minimum of two (2) designated "Handicap Parking" spaces, with one of the spaces designated as "Van Accessible". In addition to adding parking spaces adjacent to the pier, space could be provided for a drop off area, with would support a variety of pier user operational needs to load and unload passengers, materials and equipment.

If parking is maintained at its current locations along Ocean Boulevard, it is recommended that the nearest two (2) parking spaces be designated as "Handicap Parking" spaces, with one of the spaces designated as "Van Accessible". Given the popularity of Hampton Beach and

limited parking on peak visitor days, enforcement of the dedicated Handicap Parking spaces may be required.

It may also be desired to dedicate some parking near the pier for “Pier Use Only”. This is a policy decision that needs further discussion with the project stakeholders responsible for owning, operating and maintaining the facility. Dedicated parking may require additional staff to monitor the spaces.

It is recommended that further evaluation of parking and ADA accessible parking be completed in coordination with current NH DOT Ocean Boulevard Improvements project.

4.5.4 Restrooms

Existing public restroom facilities are located at the State Park, and along Ocean Boulevard between N Street and the NH Marine Memorial. A pier located at Hampton Beach State Park or in the middle of the beach would have readily available access to these facilities. A pier located on the north end of the beach would be approximately one-quarter mile at a minimum away from the nearest restroom facility. If a pier is located on the north end of Hampton Beach, consideration should be given to adding a new facility near the pier. It could either be located on a bumpout area off the seawall, or within the median area between the divided Ocean Boulevard travel lanes, which would require displacement of parking spaces.

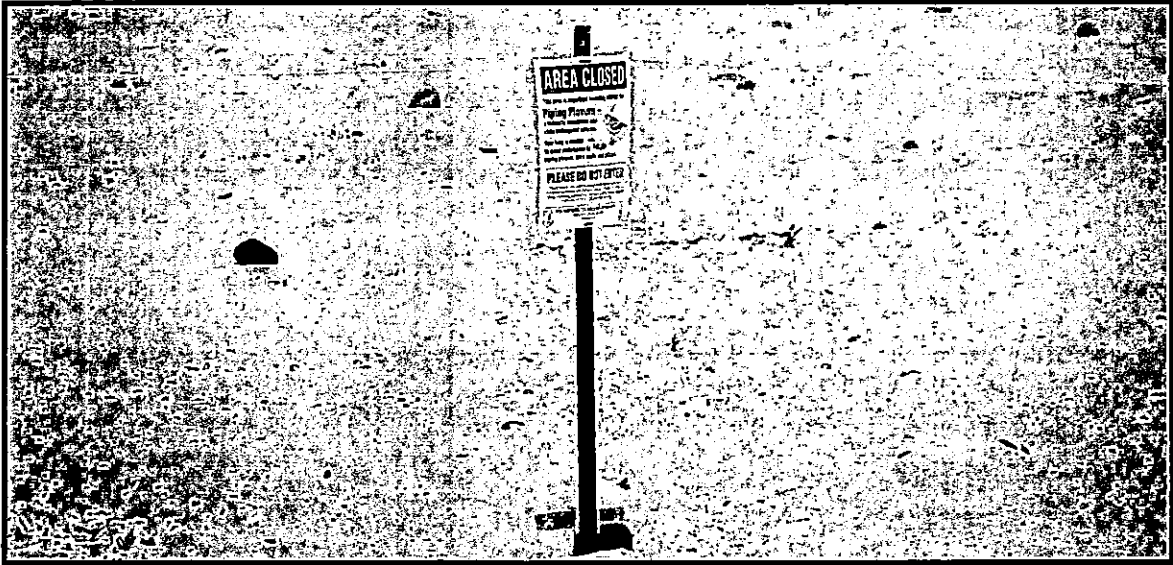
4.6 Environmental

Pier structures are impacted by a diverse assortment of physical environmental factors including: Lateral hydrostatic forces, vertical (buoyant) hydrostatic forces, hydrodynamic forces, surge forces, impact forces of flood-borne debris, breaking wave forces, localized scour, UV exposure, corrosion, sea level rise. All of these factors play into design and selection of material types for piers. By considering these environmental factors, more sustainable pier construction can be provided in the harsh marine environment thereby reducing overall life cycle costs and limiting potential risk of debris damage.

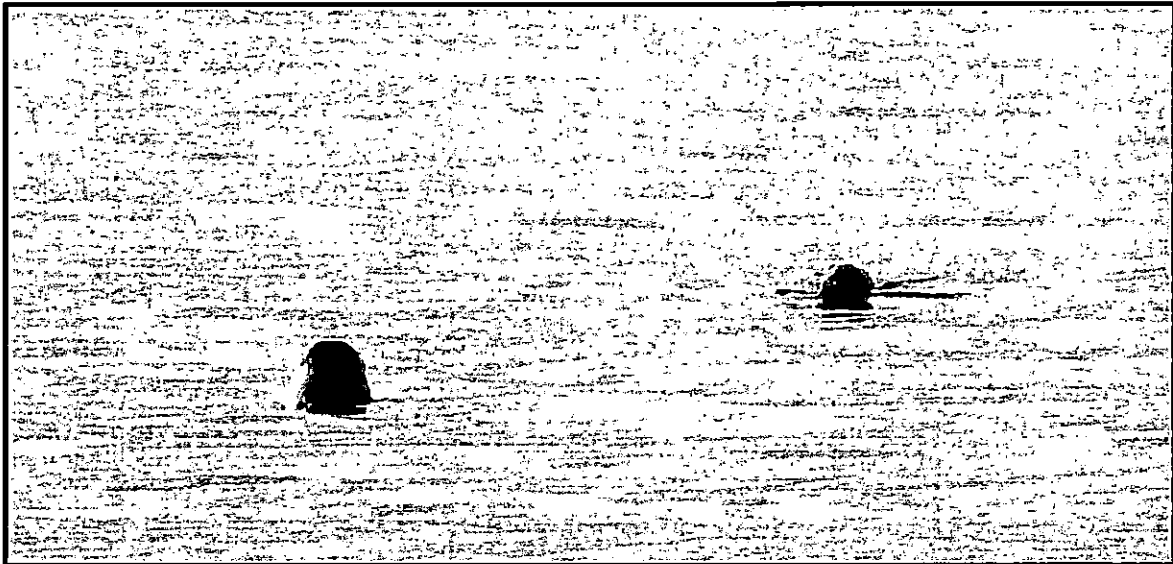
Other environmental factors that will need to be considered in terms of pier location include:

- Visual impacts of the pier from the perspective of abutting properties, and from those using the beach; and
- Physical impacts of the pier to the site (accessibility under the pier), and to flora and fauna habitat (Piping plovers and seal haul out areas)
- Potential risk of pier debris impacting adjacent and nearby properties or adjacent properties impacting the pier.

More detailed discussions regarding environmental regulations, and coastal climate risks are discussed in further detail in *Section 6 – Regulatory Impact Review* and *Section 7 – Climate Change, Resiliency and Risk*.



Seasonally Cordoned Piping Plover Nesting Area on Beach



Seals Near North End of Beach

5. Comparable Pier Research

A new pier at Hampton Beach for public access and with a variety of potential uses is fairly unique to New Hampshire, and New England of late. Given the anticipated range of user needs, as well as those responsible for operating and maintaining the pier and lack of familiarity with such a coastal structure in the area, GEI reached out to several pier facility operators with public piers at locations piers from Maine to Florida. The following piers were chosen for comparison. Varying levels of operator input were received for each pier.

5.1 Old Orchard Beach Pier, Maine

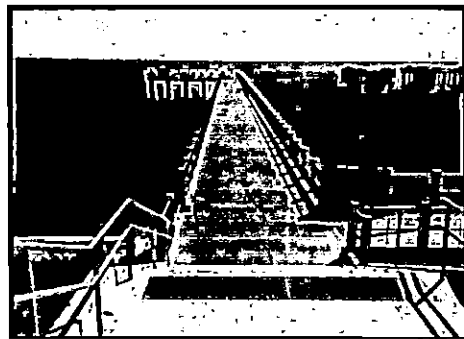
The Old Orchard Beach Pier is located in Old Orchard Beach Maine and was most recently rebuilt in 1980. The pier is privately owned and has souvenir shops, food vendors, and restaurants. The pier is 500 ft long and 28 ft wide and is constructed with timber. Although the pier is not public or built for fishing, this pier was included as it is a popular tourist attraction in New England.



Old Orchard Beach Pier (Image from Internet)

5.2 Oak Bluffs Pier, Massachusetts

The Oak Bluffs pier is public and was constructed in Oak Bluffs Massachusetts in 2014 after the community vocalized a need for a fishing pier. The pier is 317 ft long, 12 ft wide and is “L” shaped. The pier is a hybrid pier with steel piles, concrete pile cap, and timber decking. The project was estimated to cost \$1 million in 2014.



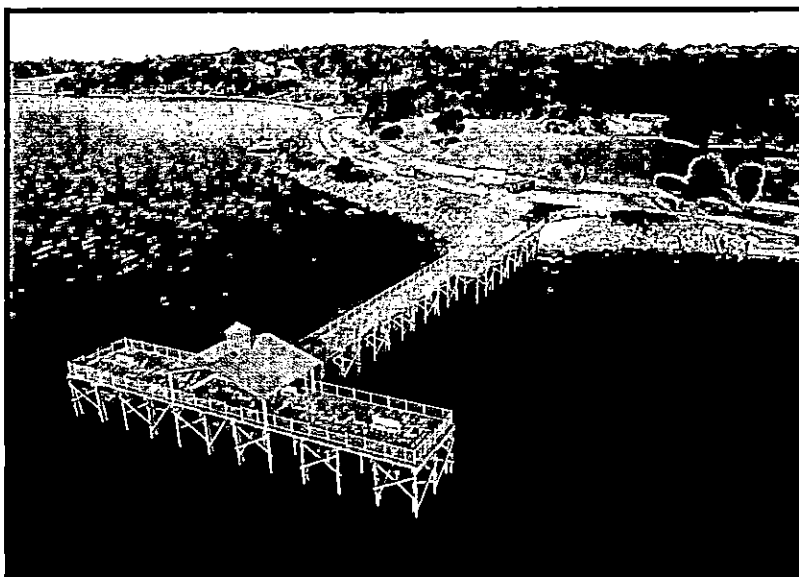
*Oak Bluffs Pier
(Image from Internet - GEI Project)*

5.3 Rocky Point Pier, Rhode Island

The Rocky Point fishing pier was finished in 2020 for \$1.8 million in Warwick, Rhode Island. It is a public fishing pier located on the Rocky Point State Park. The pier is 280 ft long and has a “T” shape to allow for more space to fish from in the deeper water. Majority of the pier was constructed using timber.

GEI Consultants was able to successfully contact someone from the State who was part of the planning process of the pier. Some comments that were brought up about the pier include:

- The pier is not rated for vehicles.
- There are no swimming signs posted, but people still jump off the structure.
- The new structure has already experienced some damage due to improper use of the structure such as people riding bikes into the handrails and damaging grid railing “baluster.”



Rocky Point Fishing Pier (Image from Internet)

5.4 Ventnor City Fishing Pier, New Jersey

Ventnor City fishing pier is located in Ventnor City in New Jersey. The pier is owned by the town and is partially open 24/7 to the public and the rest of the pier is gated for paid fishing access. The pier is longest ocean fishing pier in New Jersey at 1000 ft long, has various widths, and is constructed out of timber. According to the town, the original pier was built in

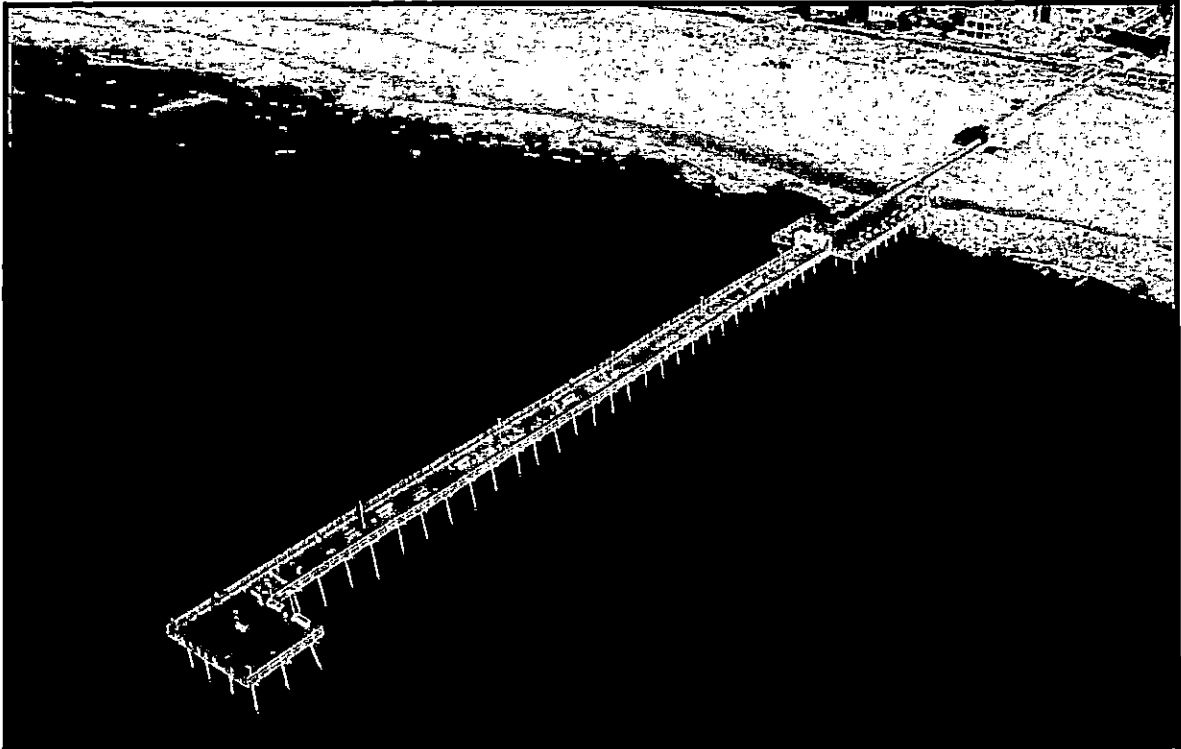
1914, rebuilt after a fire 1940, and rebuilt again after a storm in 1963. The current pier underwent a nine-month renovation in 2007 for \$3.2 million. In June of 2020, the fishing pier reopened after a \$520,000 project was completed to add a pier house which includes bathrooms, a concession stand, and an office for the pier master.

With the pier being open 24/7, a news article cited in July 2021 that Ventnor introduced an ordinance to ban overnight sleeping or camping on the pier and that one must be actively fishing at night. (<https://www.downbeach.com/2021/07/13/ventnor-approves-6-5-million-bond-ordinance-employee-promotions-bans-sleeping-on-the-pier/>)

GEI was able to contact the city about safety and general questions about the pier. The following outlines the responses:

- Access is available under the pier for ATV's and SUV's which are used by the lifeguards.
- Beach equipment, such as a front-end loader and beach rakes, work with the tides and during high tide have to access each side of the pier from the street versus going under the pier during low tide.
- The pier extends from the boardwalk which allows access from the street for safety personnel.
- Regarding incorrect usage of the pier, the pier has a gate halfway out on the pier which limits access only to those with a fishing permit (key).
 - They also have a Pier Master who works at the pier to monitor fishing and for sale of the key.
- Swimming and surfing are restricted within 200 feet of the pier which limits interactions with fishermen.
- The pier is a great asset for Ventnor and the surrounding area and is very popular year-round especially when fish are running along the coast.
- There is a gate at the pier house which is used to restrict access during severe weather.
- Ventnor opens the pier during fireworks for 4th of July celebrations and has a special event called "Pier Night" which has been very successful.

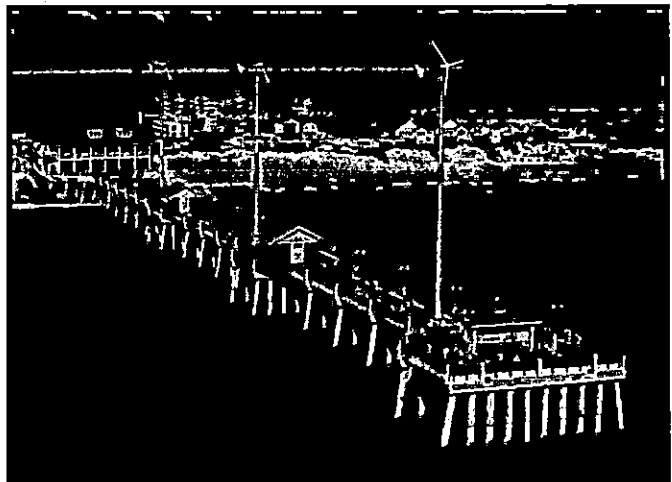
- When asked if the town would change anything about the pier, the response was that they would consider adding a concession stand to the pier.



Ventnor City Fishing Pier (Image from Internet)

5.5 Jennette's Pier, North Carolina

Jennette's pier is located in Nags Head North Carolina. Construction on the pier commenced in 2009 for \$25 million and the pier was opened in May of 2011. The pier is privately owned by the North Carolina Aquariums. It is approximately 980 ft from the end of the pier to the aquarium building and 200 ft to the parking lot. The most narrow part of the pier is about 23 feet and the widest part is at the end of the pier and is approximately 62 feet. The pier is constructed of hybrid materials with concrete piles, concrete pile caps, and timber decking.

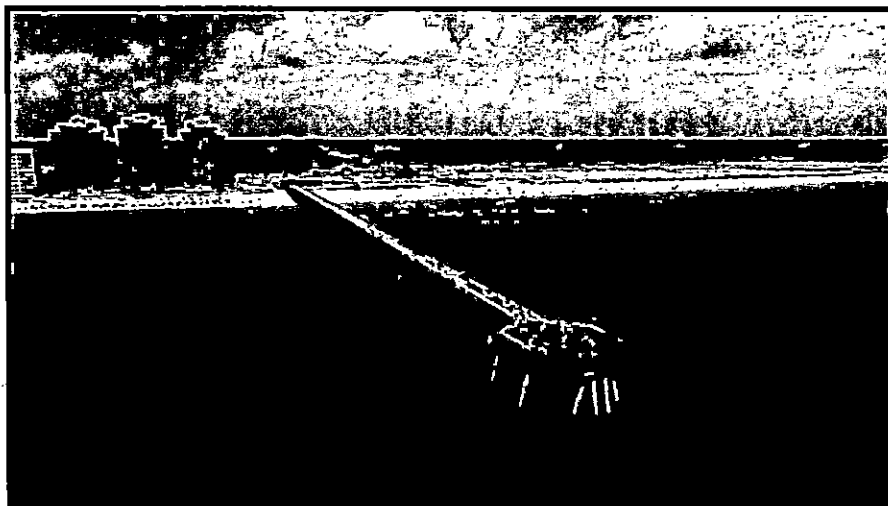


Jennette's Pier (Image from Internet)

5.6 Navarre Beach Fishing Pier, Florida

The Navarre Beach fishing pier is located in Navarre, Santa Rosa County, Florida. The pier construction started in 2009 and was completed with a cost of nearly \$9 million in 2010. The pier is the longest fishing pier in the Gulf of Mexico at 1545 ft long about 22 feet wide and has an octagon shape at the end of the pier. The pier sits on 150 square concrete piles and the octagonal area is 3,800 square feet. The pier is also a hybrid pier with concrete piles, concrete pile caps, and breakaway timber decking.

In 2020 the pier received new decking for \$1.2 million. The new decking is weather resistant and bolted to the pier with six bolts per plank. There are over 800 breakaway panel which can detach during extreme wave action and helps preserve the integrity of the structure which can reduce repair costs. The pier also has seven potable water spigots, 16 handicap accessible fishing railing locations, and nesting turtle friendly lighting.



Navarre Beach Fishing Pier (Image from Internet)

5.7 Jacksonville Beach Fishing Pier, Florida

Jacksonville Fishing Pier is located in Jacksonville Beach Florida. The pier was rebuilt after Hurricane Matthew destroyed the prior pier in 2016. Construction on the pier began in late 2019 and was completed in 2022 for approximately \$10 million. It is approximately 1300 linear feet long extending from the beach. The rebuilt pier was raised 8 feet and had larger precast piles utilized to provide greater resiliency. The pier is constructed of hybrid materials with precast concrete piles, pile caps, beams, and timber decking and railing.



Jacksonville Beach Pier (Image from Internet - Credit: EMT)

6. Regulatory Impact Review

It is anticipated that the following regulatory permits and approvals may be required from The Town of Hampton, the State of New Hampshire, and the Federal Government for the proposed pier.

6.1 Town Permits

6.1.1 Town of Hampton – Wetland Conservation District Zoning Ordinances

The Town of Hampton has established a Wetland Conservation District (WCD) (Section 2.3 of the 2022 Zoning Ordinance and Building Codes of the Town of Hampton, NH) which has jurisdiction over proposed projects in the Atlantic Ocean and Hampton Harbor. The WCD Ordinance also applies a Buffer with extends fifty feet (50 ft.) from the tidal wetland.

An Application for a Wetlands Permit – WCD will need to be filed with the Hampton Planning Board. The Conservation Commission's role in the review of the application is to provide its recommendations to the Planning Board within 40 days of the date on which the application is filed. Any Wetlands Permit is valid for two years from the date of issuance. If the work is initiated during that time, but not completed, the owners may apply for a two-year extension.

The applicant must demonstrate the proposed pier project is consistent with the Town of Hampton Zoning Ordinance for the Wetland Permit. Under 2.3.3 Permitted Uses different types of structures on tidal wetlands specifies that they must be constructed as to permit the unobstructed flow of the tide, preserve natural vegetation and contour of the tidal wetland.

6.2 The State of New Hampshire Permits

6.2.1 Standard Dredge and Fill Wetlands Permit Application

A wetland permit application will need to be filed with the New Hampshire Department of Environmental Services Wetland Bureau (NHDES) to permit the pier because the proposed it falls under the jurisdiction of RSA 482-A; Env-Wt 100-900). Applications are reviewed within 50 days from the issuance of an Administrative Completeness Notice. The State Wetland Permit is valid for five years with the opportunity for one extension of five years.

NHDES recommends conducting a pre-application meeting or telephone call to discuss if the project will be considered a minor or major project, and to discuss the information to be

submitted to support the application. The New Hampshire Natural Heritage Bureau will need to be contacted for a data request of any state or federal rare species. Also, verification if the proposed project is within a designated Prime Wetland must be completed.

6.2.2 Shoreland Protection Permit

An application must be submitted for a Shoreland Protection Permit to NHDES under RSA 483-B; ENV-Wq 1400, the Shoreland Water Quality Protection Act. The Shoreland Permit is for projects involving excavation, fill or construction activities within 250 feet of the water body.

NHDES reviews applications within 30 days of receipt and may issue a request for additional information. Shoreland permits are valid for five years.

During the pre-application meeting with NHDES regarding the Dredge and Fill Permit, the Shoreland Permit should also be discussed to confirm applicability and information needed.

6.2.3 Section 401 of the Clean Water Act Water Quality Certification

A 401 Water Quality Certification (WQC) from NHDES Watershed Management Bureau may be required for the placement of fill below the elevation of the high tide line at the project site. A consultation is recommended to determine if this application is warranted. Applicants for activities that are covered under federal general permits including, but not limited to, the U.S. Army Corps of Engineers Section 404 general permits do not need to apply for WQC unless notified by NHDES. This is because NHDES has already issued a WQC for activities covered under those general permits.

6.3 Federal Permits

6.3.1 Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899

A Section 404 of the Clean Water Act Permit is required for the placement of fill or dredged material below the elevation of the High Tide Line and for the placement of structures within navigable waters from the US Army Corps of Engineers (USACE). The General Permits for the State of New Hampshire were issued September 29, 2022.

A pre-application meeting or telephone call is recommended to discuss with the USACE if the proposed pier can be permitted under General Permit 4, Pile-Supported Structures and Floats with pre-construction notification (PCN) or if an Individual Permit (IP) is required. The review of a complete PCN by the USACE typically requires 60 days. The review of an IP application typically requires 120 or more days, depending on the level of potential impacts. The permit is valid for five years.

7. Climate Change, Resiliency, and Risk

Hampton Beach exists in a dynamic exposed ocean environment along the New Hampshire coastline. There are several key environmental factors that are constantly influencing the physical, social, and economic conditions of the Hampton Beach area. Each of these is important to consider both in terms of historic trends and predicted future changes as next steps towards implementation of a new pier at Hampton Beach move forward are considered. An action plan should be established that considers resiliency measures in preparation for potential increases in flood risk. In addition to the wind, wave and tidal assessment factors noted previously in this study, potential future coastal climate risk factors include:

- Coastal Flooding
- Sea Level Rise
- Coastal Storms

7.1 Flooding

There is an extensive amount of historical flood data that Federal Flood Emergency Management Agency (FEMA) Flood Insurance Rate Maps (FIRM)s and most current regulatory policies are based on.

- The Town of Hampton participates in the National Flood Insurance Program (Community ID #330132). FEMA has recently updated a Flood Insurance Rate Study (FIS) for Rockingham County effective January 29, 2021.
- FEMA has recently developed FIRMs for the Hampton Beach area effective January 29, 2021.

These FEMA 100-Yr BFEs have a 1% annual chance of occurrence within any given year. This prediction is based on historic data and does not consider potential increases in flood elevation or rate of recurrence due to predicted future climate change scenarios. FEMA cannot say with any greater level of certainty that future conditions will be under or exceed these flood levels, nor do they predict changes in the rate of recurrence and annual exceedance probabilities of these flood events over a 100-Yr period.

- Future flood impacts are challenging to predict with exact certainty. A 0.2% or 1% flood, or a 500-Yr BFE or 100-Yr BFE respectively, doesn't sound like something that poses an eminent threat, yet the rate of annual exceedance probability can vary and has been increasing in recent decades. Recent examples of this include the back to back storms (Irene and Sandy) that occurred within one year of each other and exceeded 500-year storm conditions in several areas along

the northeastern seaboard. This past year include record Hurricane Fiona (eastern Canadian maritime provinces) and Hurricane Ian (Florida).

- Hampton Beach has experienced several significant coastal storms over the past couple of decades, often with storm surge on top of astronomic high tide conditions. The most recent was this past January, and there have been eight (8) other storm related flood events since 2000.

- Terms like 100-Yr flood and 500-Yr flood, or 1% and 0.2% chance are often misunderstood and should be looked at more in terms of recurrence intervals (years) and annual exceedance probabilities (%). A 100-Yr flood has a 1% chance of occurring in any given year. Over a 10-year period, there is an approximate 10% chance of a 100-Yr flood occurrence, and so on. Add in the increasing frequency of extreme flood events and SLR over the past couple of decades in

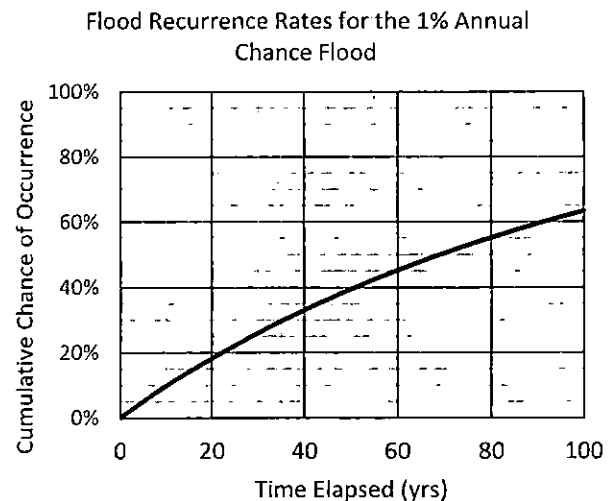


Fig. 20 – Flood Recurrence Rates

comparison to the previous century and the 100-Yr flood probabilities increase as the historic flood of record is less substantial than events we are experiencing more recently and at higher frequencies.

- Often perceived flood risks don't always match actual flood risks, especially when flood elevation estimates and lines on maps are based on historic information only and may not reflect what is occurring today, nor what may become increasingly likely to occur in the future. Having lines drawn on the FEMA FIRMs should not give the community a 100% sense of comfort that those are the limits of flood boundaries.
- There is also an increasing amount of scientific climate change study and predictive storm modeling data that is continually being refined and should be considered further during future pier project planning, design, funding and construction phases.
- Under current effective FEMA 100-Year flood predictions, the majority of the Hampton Beach area would be inundated, including most of the access roads to

other parts of the Town of Hampton, and neighboring Hampton Falls, North Hampton and Seabrook. These current risks, along with potential increased flood risks from relative sea level rise and/or increased frequency and severity of coastal storms are something that has been studied extensively in the area and should remain a key consideration for future implementation of a new pier, in light of flood risks to the entire Hampton Beach area.

(See Appendix B – Figure 4 Coastal Hazards Map)

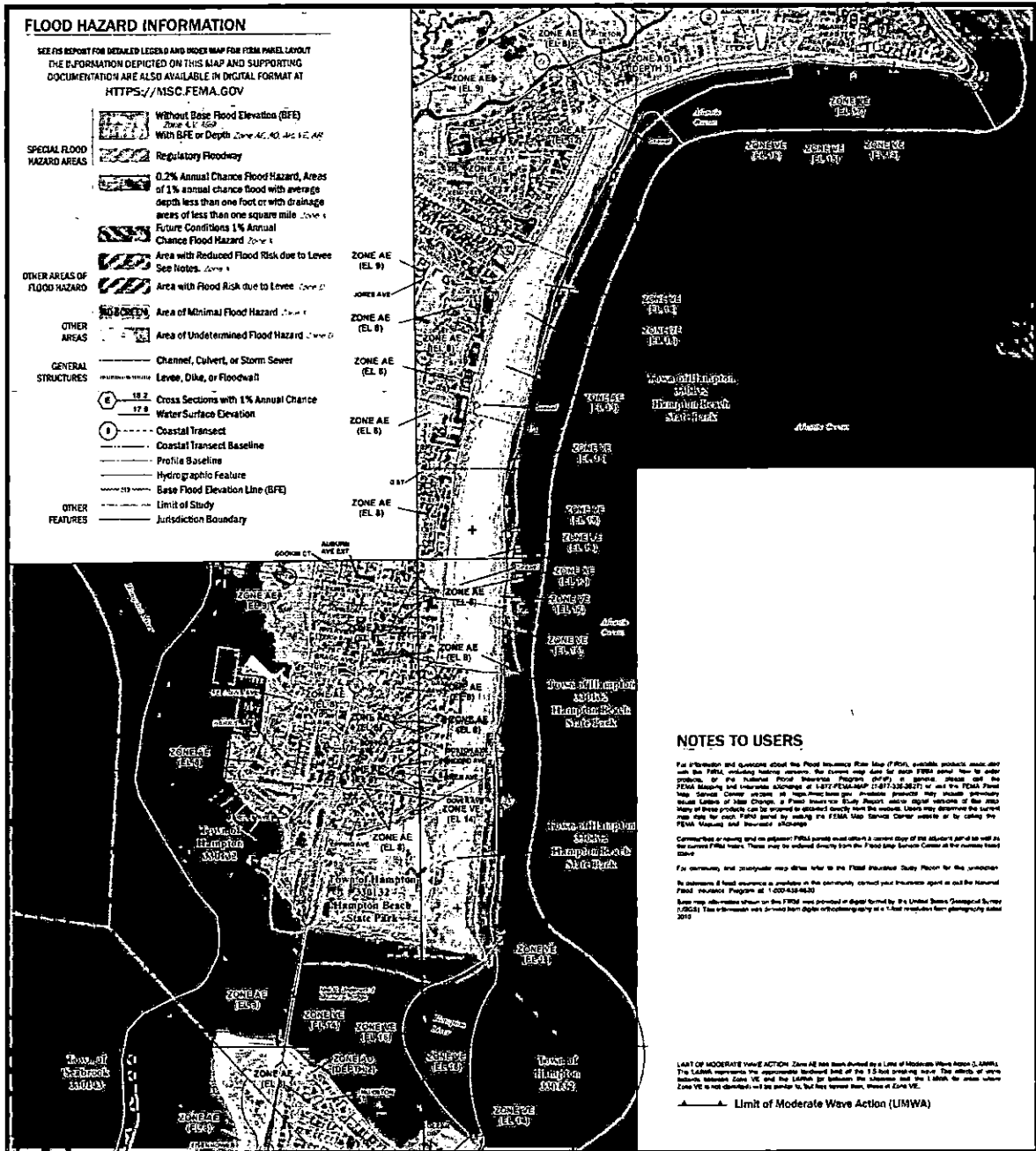


Fig. 21 – Composite Image of FEMA FIRM 33015 Panels 439, 441 & 442

7.2 Sea Level Rise

Advances in predictive scientific modeling of climate change in combination with over a century of historic data indicate that SLR is occurring and is likely to continue to occur over

the next century. As this project may take a decade or more to implement, it is recommended that the latest scientific projects of SLR be considered prior to constructing the pier.

Selection of relative sea level rise scenarios in consideration of the pier conceptual designs are re described in *Section 3.1 – Tide and Currents* above. The tables below show predicted design flood elevations adjusted with relative sea level rise in various FEMA FIRM Zones at Hampton Beach. The VE Zone (18) represents the worst-case scenario flood level along and is recommended for use at any proposed pier location on Hampton Beach.

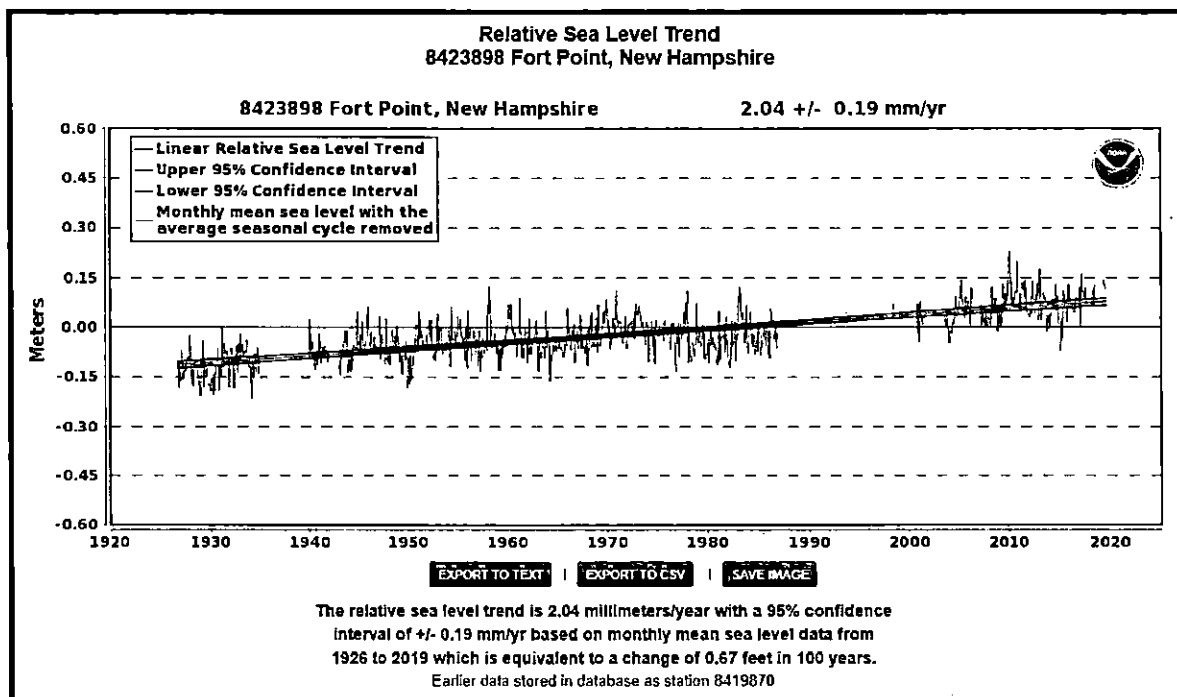


Fig. 22 – NOAA Relative Sea Level Rise Trend for Station 8423898 – Fort Point, NH

Table 7. Relative Sea Level Rise Predictions in AE Zone (12) in NAVD88

Coastal AE Zone (12)				
Year	RCP 4.5 RSLR (ft)	BFE from FIRMette (ft)	Required Freeboard (ft)	RSLR adjusted DFE (ft)
2050	1.6	12	1	14.6
2070	2.5	12	1	15.5
2100	3.8	12	1	16.8
2120	4.9	12	1	17.9

RSLR: Relative Sea Level Rise
 RCP 4.5 can be found in the New Hampshire Coastal Flood Risk Summary (2020)
 BFE: Base Flood Elevation
 DFE: Design Flood Elevation

Table 8. Relative Sea Level Rise Predictions in VE Zone (16) in NAVD88

VE Zone (16)				
Year	RCP 4.5 RSLR (ft)	BFE from FIRMette (ft)	Required Freeboard (ft)	RSLR adjusted DFE (ft)
2050	1.6	16	1	18.6
2070	2.5	16	1	19.5
2100	3.8	16	1	20.8
2120	4.9	16	1	21.9

RSLR: Relative Sea Level Rise
 RCP 4.5 can be found in the New Hampshire Coastal Flood Risk Summary (2020)
 BFE: Base Flood Elevation
 DFE: Design Flood Elevation

Table 9. Relative Sea Level Rise Predictions in VE Zone (18) in NAVD88

VE Zone (18)				
Year	RCP 4.5 RSLR (ft)	BFE from FIRMette (ft)	Required Freeboard (ft)	RSLR adjusted DFE (ft)
2050	1.6	18	1	20.6
2070	2.5	18	1	21.5
2100	3.8	18	1	22.8
2120	4.9	18	1	23.9

RSLR: Relative Sea Level Rise
 RCP 4.5 can be found in the New Hampshire Coastal Flood Risk Summary (2020)
 BFE: Base Flood Elevation
 DFE: Design Flood Elevation

7.3 Coastal Storms

Many of the points noted in the *Flood* section above are also relevant to coastal storm impacts on Hampton Beach.

- The extent and magnitude of flooding from coastal storms depends on their severity, timing and duration. If a storm passes quickly and at low tides, flood damage may be minimal. If it occurs at high tide and for a long duration, then flooding may be more extensive.
- The National Weather Service (NWS) in coordination with NOAA, has developed the Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized numerical model to estimate storm surge heights resulting from historical, hypothetical, or predicted hurricanes. NWS and NOAA use this model to look at predicted worst case storm surge scenarios by modeling the Maximum Envelope of Water (MEOW). In addition to this scenario, NWS and NOAA model the Maximum of the MEOWs (MOM), representing the most conservative storm surge scenario under their scientific modeling predictions. According to SLOSH model, estimates under the MOM scenarios for Category 1, 2 and 3 hurricanes at Hampton Beach could potentially inundate significant portions of the community. Predicted increases in relative sea level rise would likely further increase these impacts from storm surge.

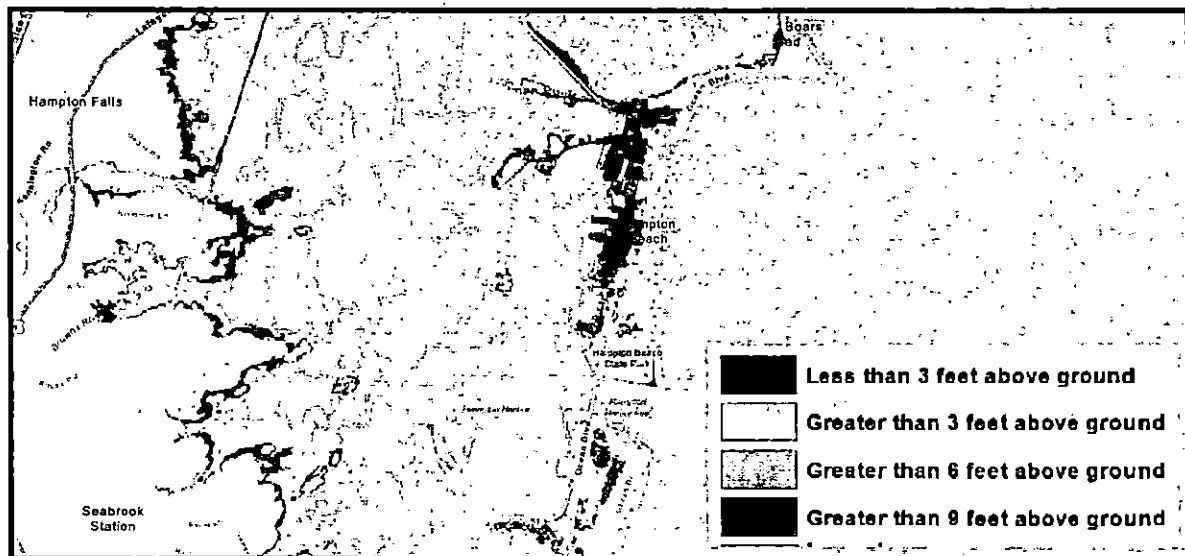


Fig. 23 – National Hurricane Center Storm Surge Risk Map – Category 1 Hurricane

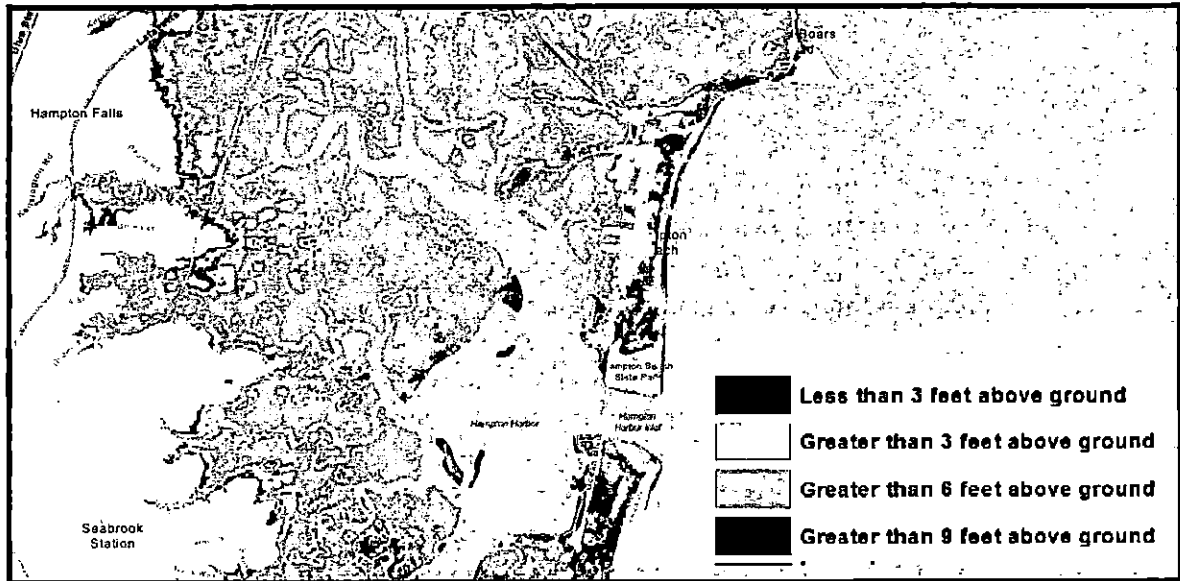


Fig. 25 – National Hurricane Center Storm Surge Risk Map – Category 2 Hurricane

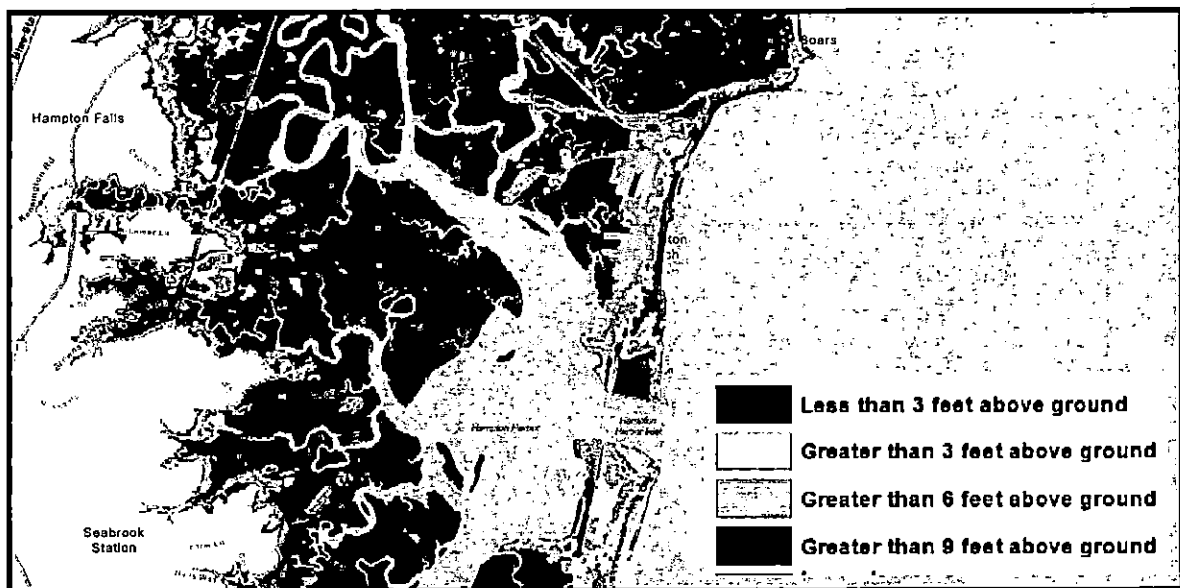


Fig. 24 – National Hurricane Center Storm Surge Risk Map – Category 3 Hurricane

- Nor-Easters are storms along the East Coast of North America that are gaining increased attention in New England where they are much more likely to occur versus hurricanes. They often have longer durations than hurricanes and typically occur between November and April when astronomical high tides routinely coincide. These storms can create significant damage when they last over two consecutive tide cycles. This was the case during the “Blizzard of 1978”, which

brought storm surges of 4 to 6-feet above predicted flood levels at the time, along with extreme wave heights of 10-feet to much of the Northeast coastline.

- Since the late 1800s, the National Hurricane Center's (NHC) hurricane strike data set records indicate that four (4) hurricanes and fourteen (14) tropical storms have passed within 25 miles of Hampton Beach.

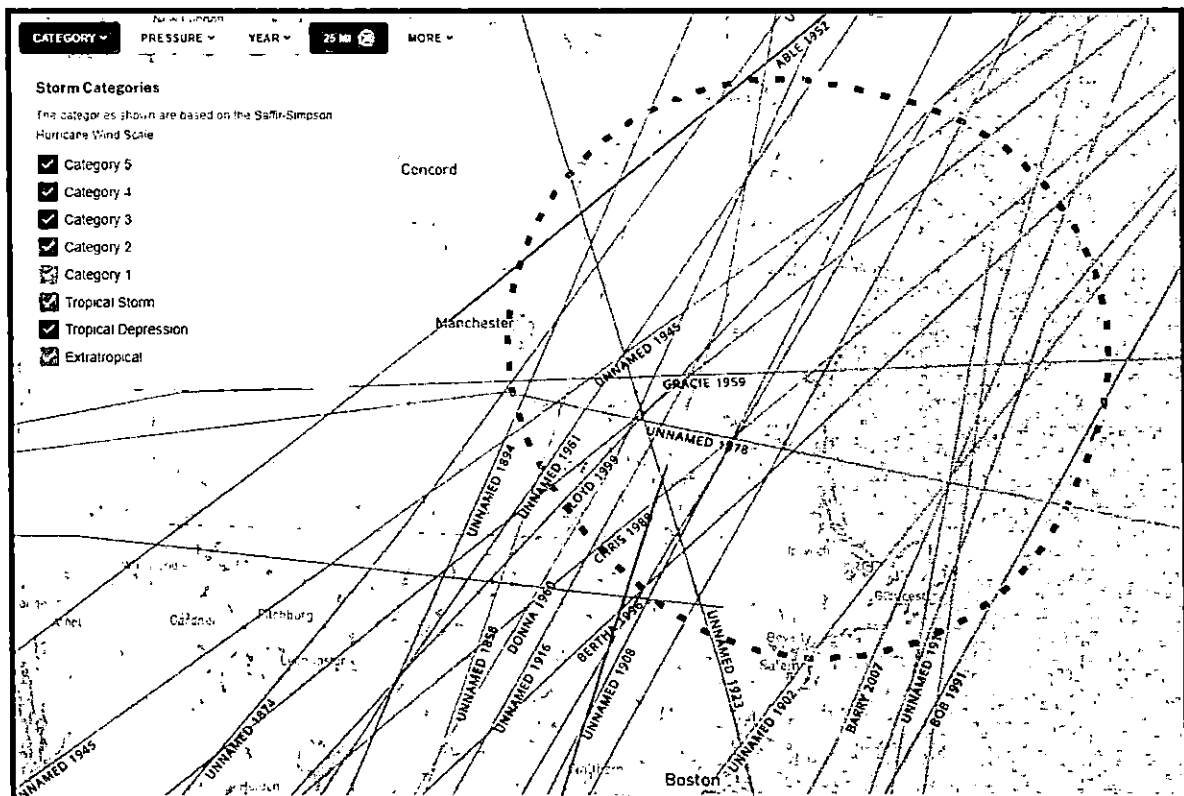


Fig. 26 – National Hurricane Center Historic Hurricane & Tropical Storm Strikes (1858 – 2021)

7.4 General Predicted Climate Change Trends

Predicted climate change trends in the Hampton Beach are identified by a wealth of recent studies in the area are informed by a significant wealth of recent research and study efforts by the Town of Hampton, Rockingham Planning Commission, The University of New Hampshire, CHAT, SHEA, NH DES Coastal Program and others. GEI generally is in agreement with the findings of these efforts.

Again, as noted elsewhere in this report, it is recommended that these studies be considered in light of any new scientific data and predictions, as the pier project moves forward, likely taking a decade or more to implement.

Many of today's governmental regulations are based on policies that pre-date recent climate change discussions and it may take a while still for research and politics to provide support for regulations that guide future planning and development in flood prone areas. The risks of potential climate change forces are not necessarily lessened because policies and regulations don't reflect them. Nor are they lessened by political boundaries between municipalities and states. When investing significant capital funds for a public infrastructure facility like a new pier at Hampton Beach, it is recommended that the pier be designed to reduce the greatest amount of risk to the structure from the coastal environment.

Additionally, project stakeholders should continue to consider the implementation of the pier in light of the predicted coastal risks to the entire community. While the pier will be designed to accommodate a level of protection from coastal environmental risk factors and their predicted future changes, this level of risk protection may likely be above the potential risks to other parts of the Hampton Beach community, including existing beach facilities, adjacent properties, and access roads to and from Hampton Beach to points inland.

Voting Sheets

Senate Finance Committee

EXECUTIVE SESSION

Bill # SB 122-FN-A

Hearing date: 01/31/23

Executive session date: 03/15/23

Motion of: OTF

VOTE: _____

<u>Made by</u> Gray <input type="checkbox"/>	<u>Seconded</u> Gray <input type="checkbox"/>	<u>Reported</u> Gray <input type="checkbox"/>
<u>Senator:</u> Innis <input type="checkbox"/>	<u>by Senator:</u> Innis <input type="checkbox"/>	<u>by Senator:</u> Innis <input type="checkbox"/>
Bradley <input type="checkbox"/>	Bradley <input type="checkbox"/>	Bradley <input type="checkbox"/>
Birdsell <input type="checkbox"/>	Birdsell <input checked="" type="checkbox"/>	Birdsell <input type="checkbox"/>
Pearl <input checked="" type="checkbox"/>	Pearl <input type="checkbox"/>	Pearl <input type="checkbox"/>
D'Allesandro <input type="checkbox"/>	D'Allesandro <input type="checkbox"/>	D'Allesandro <input type="checkbox"/>
Rosenwald <input type="checkbox"/>	Rosenwald <input type="checkbox"/>	Rosenwald <input type="checkbox"/>

Motion of: Move # 0908s

VOTE: 4-3
Innis
D'Allesandro
Rosenwald

<u>Made by</u> Gray <input type="checkbox"/>	<u>Seconded</u> Gray <input type="checkbox"/>	<u>Reported</u> Gray <input type="checkbox"/>
<u>Senator:</u> Innis <input type="checkbox"/>	<u>by Senator:</u> Innis <input type="checkbox"/>	<u>by Senator:</u> Innis <input type="checkbox"/>
Bradley <input type="checkbox"/>	Bradley <input type="checkbox"/>	Bradley <input type="checkbox"/>
Birdsell <input type="checkbox"/>	Birdsell <input checked="" type="checkbox"/>	Birdsell <input type="checkbox"/>
Pearl <input checked="" type="checkbox"/>	Pearl <input type="checkbox"/>	Pearl <input type="checkbox"/>
D'Allesandro <input type="checkbox"/>	D'Allesandro <input type="checkbox"/>	D'Allesandro <input type="checkbox"/>
Rosenwald <input type="checkbox"/>	Rosenwald <input type="checkbox"/>	Rosenwald <input type="checkbox"/>

Committee Member	Present	Yes	No	Reported out by
Senator Gray, Chairman	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Senator Innis, Vice-Chair	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Senator Bradley	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Senator Birdsell	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Senator Pearl	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Senator D'Allesandro	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Senator Rosenwald	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Amendments: #0784s - D'Allesandro - Move
Rosenwald - 2nd
2-5 Fails!

Notes: OTF/A w/0908s 4-3

Committee Report

Docket of SB122

Docket Abbreviations

Bill Title: relative to construction of a public pier on Hampton Beach and making an appropriation therefor.

Official Docket of **SB122**..:

Date	Body	Description
1/19/2023	S	Introduced 01/19/2023 and Referred to Finance; SJ 5
1/25/2023	S	Hearing: 01/31/2023, Room 103, SH, 01:20 pm; SC 8
3/16/2023	S	Committee Report: Ought to Pass with Amendment #2023-1034s , 03/23/2023; SC 14
3/23/2023	S	Committee Amendment #2023-1034s , AA, VV; 03/23/2023; SJ 11
3/23/2023	S	Ought to Pass with Amendment 2023-1034s, MA, VV; 03/23/2023; SJ 11
3/23/2023	S	Sen. Gray Moved Laid on Table, MA, VV; 03/23/2023; SJ 11
3/23/2023	S	Pending Motion OT3rdg; 03/23/2023; SJ 11

NH House

NH Senate

Other Referrals

Senate Inventory Checklist for Archives

Bill Number: SB 122 - FN-A

Senate Committee: FINANCE

Please include all documents in the order listed below and indicate the documents which have been included with an "X" beside

Final docket found on Bill Status

Bill Hearing Documents: (Legislative Aides)

- Bill version as it came to the committee
- All Calendar Notices
- Hearing Sign-up sheet(s)
- Prepared testimony, presentations, & other submissions handed in at the public hearing
- Hearing Report
- Revised/Amended Fiscal Notes provided by the Senate Clerk's Office

Committee Action Documents: (Legislative Aides)

All amendments considered in committee (including those not adopted):

- amendment # 09085 ___ - amendment # _____
- amendment # 10345 ___ - amendment # _____
- Executive Session Sheet
- Committee Report

Floor Action Documents: (Clerk's Office)

All floor amendments considered by the body during session (only if they are offered to the senate):

- ___ - amendment # _____ ___ - amendment # _____
- ___ - amendment # _____ ___ - amendment # _____

Post Floor Action: (if applicable) (Clerk's Office)

- ___ Committee of Conference Report (if signed off by all members. Include any new language proposed by the committee of conference):
- ___ Enrolled Bill Amendment(s)
- ___ Governor's Veto Message

All available versions of the bill: (Clerk's Office)

- as amended by the senate ___ as amended by the house
- ___ final version

Completed Committee Report File Delivered to the Senate Clerk's Office By:

Debra A. Martore
Committee Aide

07/14/23
Date

Senate Clerk's Office HAF AK